NASA Technical Memorandum 4488

Wind Tunnel Investigation of Three Axisymmetric Cowls of Different Lengths at Mach Numbers From 0.60 to 0.92

Richard J. Re and William K. Abeyounis
Langley Research Center
Hampton, Virginia

National Aeronautics and Space Administration
Office of Management
Scientific and Technical Information Program
1993

Abstract

Pressure distributions on three inlets having different cowl lengths were obtained in the Langley 16-Foot Transonic Tunnel. The cowl diameter ratio (highlight diameter to maximum diameter) was 0.85, and the cowl length ratios (cowl length to maximum diameter) were 0.337, 0.439, and 0.547. The cowls had identical nondimensionalized (with respect to cowl length) external geometry and identical internal geometry. The internal contraction ratio (highlight area to throat area) was 1.250. The inlets had longitudinal rows of static-pressure orifices on the top and bottom (external) surfaces and on the contraction (internal) and diffuser surfaces. The afterbody was cylindrical in shape, and its diameter was equal to the maximum diameter of the cowl. Depending on the cowl configuration and free-stream Mach number, the mass-flow ratio varied between 0.27 and 0.87 during the tests. Angle of attack varied from 0° to 4.1° at selected Mach numbers and mass-flow ratios, and the Reynolds number varied with the Mach number from 3.2×10^6 to 4.2×10^6 per foot.

Introduction

Jet-powered subsonic transport aircraft generally have engines installed in separate, essentially axisymmetric nacelles. Typically, the nacelle is pylon mounted (displaced from the airframe) to provide the inlet with flow that is not significantly distorted. This installation permits the nacelle cowl design to be developed independent of the rest of the airframe. This independence from the airframe geometry makes the data base for subsonic inlets directly usable (refs. 1 to 10).

Inlets for turbojet and turbofan subsonic aircraft must provide high-quality flow to the engine fan and compressor, produce low external drag, and be low in weight. Low weight implies shortening the internal flow path and cowl as much as possible while maintaining good internal and external performance. The internal flow path is shortened by selecting a large throat diameter and contouring the diffuser so that the flow is of high quality but near the limit for the onset of flow separation. Based on external flow consideration, the cowl drag is minimized by making the cowl maximum diameter and length as small as possible while still obtaining the desired drag-rise Mach number and critical mass-flow ratio. The critical mass-flow ratio occurs while operating below the compressibility drag-rise conditions and is defined as the point at which external drag increases rapidly because of separation or shocks on the cowl forebody when mass flow through the inlet is reduced. For commercial applications, noise suppression should also be considered during diffuser design because it may limit the minimum length of the nacelle forebody.

Many of the subsonic transport nacelle cowls used in the past have been based in part on the cowl contour of the NACA 1-series inlets, which were developed in the 1940's. The relatively small leading-edge radius of the NACA 1-series contour just aft of the highlight (most forward point on the inlet lip) results in good high-speed drag characteristics. The NACA 1-series contour was developed with emphasis on cowl external flow quality and performance with the assumption that internal performance (i.e., contraction section and diffuser shape) would be a separate design endeavor. References 1 to 10 contain some of the published experimental data obtained on the NACA 1-series contours. In practice, compromising the good high-speed external performance of the NACA 1-series contour by increasing the cowl leading-edge radius by blunting the lip has often been necessary to achieve acceptable internal performance at low-speed and static crosswind conditions.

In some investigations of cowls with elliptical longitudinal contours (e.g., ref. 9), flow separation on the cowl forebody was delayed to higher mass-flow ratios and Mach numbers than for comparable NACA 1-series contours because of the significantly blunter forward contour. However, the drag-rise Mach number was lower for a given mass-flow ratio. Based on data such as these, the cowl contour of the present investigation, though not as blunt as an elliptical contour, had a greatly increased nondimensionalized local radius of curvature over the forward 10 percent of the cowl relative to an NACA 1-series contour.

Three cowls having length ratios (cowl length to maximum diameter) of 0.337, 0.439, and 0.547 were investigated to determine the effect of length on cowl static-pressure distribution at various Mach numbers and mass-flow ratios. The cowls had identical nondimensionalized (with respect to cowl length) external geometry and identical internal geometry from the highlight to the end of the diffuser. The internal contraction ratio (highlight area to throat area) was 1.250, and the contraction section longitudinal contour was elliptical.

The investigation was conducted in the Langley 16-Foot Transonic Tunnel. Cowl pressures were obtained at Mach numbers from about 0.60 to 0.92, mass-flow ratios from 0.27 to 0.87, and angles of attack within the range of 0° to 4.1° at selected mass-flow ratios and Mach numbers. Cowl external static pressures were measured in rows on the top and bottom surfaces in the plane of vertical symmetry. Internal contraction section and diffuser wall static pressures were also measured.

Symbols

Symbols in parentheses are used in computer-generated tables.

A		area normal to model centerline, in^2
C_p	(CP)	pressure coefficient, $(p - p_\infty)/q_\infty$
D_{max}	(DMAX)	maximum diameter of model, 18.0 in.
L	(L)	length of cowl from lip (highlight) to start of cylindrical portion of model, in. (see fig. 1)
M		free-stream Mach number
mfr		mass-flow ratio based on inlet area at the highlight, $1/(\rho_\infty A_h V_\infty) \int \rho_r V_r \mathrm{d}A$
p		local static pressure, psi
p_∞		free-stream static pressure, psi
q_∞		free-stream dynamic pressure, psi
R_∞		free-stream Reynolds number, per foot
r		local radius from model axis of symmetry, in.
r_w		local radius from axis of symmetry to outer wall of model duct, 8.40 in.
V		velocity, ft/sec
X	(X)	longitudinal distance measured aft of cowl lip (highlight), in.
y		local thickness of cowl, in.
y_e		local thickness of elliptical cowl, in.
α		angle of attack with respect to forebody centerline, deg
ρ		density, $slug/ft^3$
ϕ	(PHI)	meridian angle, measured from top of model in clockwise direction when looking upstream, deg

Subscripts:

h	highlight, most forward point on cowl lip
max	maximum
r	mass-flow rake pressure measuring station in duct
∞	free-stream conditions

Models

A complete model test installation consisted of an inlet attached to a cylindrical section (D_{max} = 18.0 in.) supported by a force balance and an afterbody (also cylindrical) supported by a rear sting upon which a remote-controlled mass-flow throttle plug was mounted. The throttle plug, which was driven by an internal electric motor, had a range of travel of about 10 in. The open area at the exit of the model (normal to the centerline) varied from 27.5 in^2 to 244.9 in^2 for the throttle plug in its two extreme positions. Figure 1 is a simplified cross-sectional sketch of the model assembly, and figure 2 is a photograph of a typical model installation in the wind tunnel test section.

Three inlets were tested that had cowls of identical nondimensionalized (with respect to cowl length) external geometry and identical internal geometry. The nondimensionalized external and internal coordinates for the cowl are presented in tables I and II. The cowl lengths (L) were 6.0655 in. for the short cowl, 7.8973 in. for the medium cowl, and 9.8420 in. for the long cowl, and the corresponding cowl length ratios (L/D_{max}) were 0.337, 0.439, and

0.547. Figure 3 shows the dimensional differences among the three cowl contours. (Note, the radius scale is twice as large as the longitudinal scale.) Figure 4 shows the ratio of the local cowl thickness to the local thickness of an elliptical longitudinal contour having the same length and maximum thickness ($r_{max} - r_h$). The cowls for the present investigation had a diameter ratio of 0.85 (i.e., highlight diameter to maximum diameter) and a contraction ratio of 1.250 (i.e., highlight area to throat area).

The total model length was 52.00 in. (fig. 1). The forebody had a fixed length of 27.50 in. and was comprised of the cowl and a cylindrical section. The forebody was supported by four struts that connected to a force-balance mounted centerbody. The afterbody had a length of 24.50 in. and a diameter of 18.0 in., and it was supported by four struts attached to the support sting. The 0.10 in. gap between the metric forebody and nonmetric afterbody was spanned by a free-floating flexible strip to inhibit flow leakage. The inlets had longitudinal rows of static-pressure orifices on the top and bottom external surfaces of the cowl and on the contraction (internal) and diffuser surfaces. Three of the four struts supporting the forebody were instrumented with pressure probes (fig. 5) to measure the internal mass flow. These struts were also used to route the tubes from the inlet surface static-pressure orifices to differential pressure-scanning units mounted in the nose of the centerbody. All pressure tubes associated with the afterbody were routed through the four rear support struts, into the sting, and out through the model support system to an externally mounted differential pressure-scanning unit.

Wind Tunnel

The investigation was conducted in the Langley 16-Foot Transonic Tunnel, which is a single-return atmospheric wind tunnel with continuous air exchange. The test section is octagonal with 15.5 ft between opposite walls (equivalent in area to a circle 16 ft in diameter) and has axial slots at the wall vertices. The total width of the eight slots in the vicinity of the model is about 3.7 percent of the test section perimeter. The extreme limits of solid blockage of the model in the test section are between 0.88 percent for no flow through the model and 0.79 percent for the throttle plug area only (i.e., the throttle plug in its most rearward position). The tunnel sting support system pivots in such a manner that the model remains on or near the centerline through the angle-of-attack range. References 11 to 13 contain details of the operation of the tunnel and its flow qualities.

Tests and Methods

Each cowl was tested at Mach numbers up to 0.92 at an angle of attack of 0° and over an angle-of-attack range up to 4.1° at selected Mach numbers and mass-flow ratios. Free-stream Reynolds number varied with Mach number from 3.2×10^6 to 4.2×10^6 (fig. 6). All the data presented herein are for artificially fixed boundary-layer transition on the internal and external surfaces of the model. Boundary-layer transition on the external surface was fixed by applying a 0.10-inch wide circumferential strip of No. 120 silicon carbide particles 0.6 in. aft (streamwise) of the cowl lip. Boundary-layer transition on the internal flow surface was fixed by applying a 0.10-inch wide circumferential strip of No. 120 silicon carbide particles at the geometric throat of each inlet.

Angle of attack of the forebody was computed by correcting the measured pitch angle of the support system for deflection of the sting and force balance (due to aerodynamic forces and moments) and for tunnel flow angularity. Although the test was conducted with the forebody mounted on a force balance, these data are not presented because the balance was damaged during the test and the data are considered inaccurate. Duct mass flow was calculated from the free-stream total temperature, the rake area-weighted stagnation pressures, and the static pressures from the rake, centerbody surface, and duct wall.

No corrections have been made to the pressure data for test section wall interference effects. The presence and geometry of the mass-flow plug did affect the afterbody external flow field. Therefore, the afterbody pressure data presented in the pressure tabulations are considered qualitative, especially for pressures near the model aft end and for large mass-flow ratios.

Presentation of Results

The results of this investigation are presented primarily in tables III to V as local internal and external pressure coefficients. The tables also present the nondimensionalized orifice locations (X/L). The ratio X/L is presented in percentage form in the tables. A negative value of X/L indicates that the orifice is located on the internal surface (downstream of the highlight) of the inlet. The pressures are presented for three meridian angles (ϕ) for the afterbody and forebody of each configuration. The afterbody is the portion of the model located aft of the metric break, and the forebody is the portion of the model located forward of the metric break. Inlet mass-flow ratio and angle of attack are given at the top of each

table. In addition, some data are presented graphically (figs. 7 to 12) to illustrate the variation of pressure coefficient with X/L over the forward portion of the model over a range of Mach numbers, mass-flow ratios, and angles of attack.

Summaries of the tabular and graphical data presentation are contained in the following listings for each cowl length. Each listing includes nominal test condition information and table and figure numbers for the pressure coefficient data.

Inlet With Short Cowl ($L = 6.0655$ in.)

Pressure coefficients				
M	mfr	α	Table	Figure
0.60	0.28	0.0	III(a)	7(a), 8(a)
	.28	2.0		8(a)
	.31	0.0		
	.40	0.0		7(a)
	.45	0.0		
	.49	0.0		7(a), 8(e)
	.50	1.0		
	.50	2.0		8(e)
	.50	3.0		8(e)
	.55	0.0		
	.62	0.0		7(a)
	.69	0.0		8(m)
	.69	2.0		8(m)
	.75	0.0		7(a)
	.81	0.0		7(a), 8(r)
	.81	2.0		8(r)
↓	.87	0.0	↓	
0.64	0.27	0.0	III(b)	7(b)
	.30	0.0		
	.40	0.0		7(b)
	.45	0.0		
	.49	0.0		7(b)
	.55	0.0		
	.62	0.0		7(b)
	.68	0.0		
	.74	0.0		7(b)
	.81	0.0		7(b)
↓	.87	0.0	↓	
0.69	0.27	0.0	III(c)	7(c)
	.31	0.0		
	.40	0.0		7(c)
	.45	0.0		
	.49	0.0		7(c), 8(f)
	.49	2.0		8(f)
	.55	0.0		
	.62	0.0		7(c)
	.68	0.0		
	.74	0.0		7(c)
↓	.81	0.0	↓	7(c)
0.72	0.27	0.0	III(d)	7(d)
	.31	0.0		
	.40	0.0		7(d)
	.45	0.0		
	.48	0.0		7(d)
	.55	0.0		
	.62	0.0		7(d)
	.67	0.0		
	.74	0.0		7(d)
↓	.81	0.0	↓	7(d)

Pressure coefficients				
M	mfr	α	Table	Figure
0.74	0.27	0.0	III(e)	7(e), 8(b)
	.28	1.0		
	.28	2.0		8(b)
	.27	3.0		8(b)
	.32	0.0		
	.40	0.0		7(e)
	.44	0.0		
	.49	0.0		7(e), 8(g)
	.49	1.0		
	.49	2.0		8(g)
	.49	3.1		
	.49	4.1		8(g)
	.56	0.0		
	.62	0.0		7(e)
	.68	0.0		8(n)
	.68	1.0		
	.68	2.0		8(n)
	.68	3.0		8(n)
	.74	0.0		7(e)
	.81	0.0		7(e), 8(s)
	.81	1.0		
	.81	2.0		8(s)
↓	.81	3.0	↓	8(s)
0.77	0.27	0.0	III(f)	7(f)
	.31	0.0		
	.40	0.0		7(f)
	.44	0.0		
	.49	0.0		7(f)
	.55	0.0		
	.62	0.0		7(f)
	.68	0.0		
	.75	0.0		7(f)
↓	.81	0.0	↓	7(f)
0.79	0.28	0.0	III(g)	7(g)
	.32	0.0		
	.40	0.0		7(g)
	.44	0.0		
	.49	0.0		7(g), 8(h)
	.49	2.0		8(h)
	.54	0.0		
	.62	0.0		7(g)
	.68	0.0		
	.74	0.0		7(g)
↓	.81	0.0	↓	7(g)
0.82	0.27	0.0	III(h)	7(h)
	.32	0.0		
	.40	0.0		7(h)
	.45	0.0		
↓	.49	0.0	↓	7(h)

Inlet With Short Cowl (L = 6.0655 in.)—Concluded

Pressure coefficients				
M	mfr	α	Table	Figure
0.82	0.56	0.0	III(h)	
↓	.62	0.0	↓	7(h)
	.68	0.0		
	.74	0.0		7(h)
	.81	0.0		7(h)
0.84	0.28	0.0	III(i)	7(i)
↓	.32	0.0	↓	
	.40	0.0		7(i)
	.45	0.0		
	.49	0.0		7(i), 8(i)
	.49	2.1		8(i)
	.55	0.0		
	.62	0.0		7(i)
	.68	0.0		8(o)
	.68	2.0		8(o)
	.74	0.0		7(i)
0.87	0.27	0.0	III(j)	7(j), 8(c)
↓	.27	2.0	↓	8(c)
	.31	0.0		
	.40	0.0		7(j)
	.45	0.0		
	.49	0.0		7(j), 8(j)
	.49	1.0		
	.49	2.1		8(j)
	.49	3.1		8(j)
	.55	0.0		
	.62	0.0		7(j)
	.68	0.0		8(p)
	.68	2.1		8(p)
	.74	0.0		7(j)
0.89	0.28	0.0	III(k)	7(k)
↓	.31	0.0	↓	
	.40	0.0		7(k)
	.45	0.0		
	.49	0.0		7(k), 8(k)
	.49	2.1		8(k)
	.55	0.0		
	.62	0.0		7(k)
	.68	0.0		
	.74	0.0		7(k)
0.92	0.27	0.0	III(l)	7(l), 8(d)
↓	.27	2.1	↓	8(d)
	.31	0.0		
	.40	0.0		7(l)
	.45	0.0		
	.49	0.0		7(l), 8(l)
	.49	1.1		
	.49	2.1		8(l)
	.49	3.1		8(l)
	.55	0.0		
	.62	0.0		7(l)
	.68	0.0		8(q)
	.68	2.1		8(q)
	.74	0.0		7(l)

Inlet With Medium Cowl ($L = 7.8973$ in.)

Pressure coefficients				
M	mfr	α	Table	Figure
0.60	0.27	0.0	IV(a)	9(a), 10(a)
	.27	2.1		10(a)
	.31	0.0		
	.41	0.0		9(a)
	.46	0.0		
	.50	0.1		9(a), 10(d)
	.50	1.1		
	.50	2.0		10(d)
	.50	3.0		10(d)
	.55	0.0		
	.62	0.0		9(a)
	.69	0.0		10(k)
	.69	1.0		
	.69	2.0		10(k)
	.75	0.0		9(a)
	.82	0.0		9(a), 10(n)
↓	.82	2.0	↓	10(n)
0.64	0.28	0.0	IV(b)	9(b)
	.31	0.0		
	.41	0.0		9(b)
	.46	0.0		
	.50	0.0		9(b)
	.55	0.0		
	.62	0.0		9(b)
	.75	0.0		9(b)
↓	.81	0.0	↓	9(b)
0.69	0.28	0.0	IV(c)	9(c)
	.31	0.0		
	.41	0.0		9(c)
	.46	0.0		
	.49	0.0		9(c), 10(e)
	.50	2.0		10(e)
	.54	0.0		
	.61	0.0		9(c)
	.75	0.0		9(c)
↓	.81	0.0	↓	9(c)
0.74	0.27	0.0	IV(d)	9(d)
	.31	0.0		
	.41	0.0		9(d)
	.46	0.0		
	.50	0.0		9(d)
	.54	0.0		
	.61	0.0		9(d)
	.75	0.0		9(d)
↓	.82	0.0	↓	9(d)

Pressure coefficients				
M	mfr	α	Table	Figure
0.77	0.27	0.0	IV(e)	9(e)
	.32	0.0		
	.41	0.0		9(e)
	.46	0.0		
	.49	0.0		9(e)
	.54	0.0		
	.61	0.0		9(e)
	.74	0.0		9(e)
↓	.80	0.0	↓	9(e)
0.79	0.27	0.0	IV(f)	9(f)
	.33	0.0		
	.41	0.0		9(f)
	.45	0.0		
	.49	0.0		9(f), 10(f)
	.49	2.1		10(f)
	.55	0.0		
	.62	0.0		9(f)
	.74	0.0		9(f)
↓	.80	0.0	↓	9(f)
0.82	0.27	0.0	IV(g)	9(g)
	.32	0.0		
	.41	0.0		9(g)
	.46	0.0		
	.50	0.0		9(g)
	.54	0.0		
	.61	0.0		9(g)
	.74	0.0		9(g)
↓	.80	0.0	↓	9(g)
0.84	0.27	0.0	IV(h)	9(h), 10(b)
	.27	1.1		
	.32	0.0		
	.41	0.0		9(h)
	.46	0.0		
	.50	0.1		9(h), 10(g)
	.50	1.0		
	.49	2.1		10(g)
	.49	3.1		10(g)
	.54	0.0		
	.61	0.0		9(h)
	.68	0.0		9(h), 10(l)
	.68	1.0		
	.68	2.0		10(l)
	.68	3.1		10(l)
↓	.74	0.0	↓	9(h)

Inlet With Medium Cowl
(L = 7.8973 in.)---Concluded

Pressure coefficients				
M	mfr	α	Table	Figure
0.87	0.27	0.1	IV(i)	9(i)
↓	.32	0.0	↓	
	.40	0.0		9(i)
	.46	0.1		
	.50	0.0		9(i), 10(h)
	.50	2.1		10(h)
	.55	0.0		
	.62	0.0		9(i)
	.68	0.0		
↓	.74	0.0	↓	9(i)
0.89	0.27	0.1	IV(j)	9(j)
↓	.32	0.0	↓	
	.40	0.0		9(j)
	.46	0.1		
	.50	0.1		9(j), 10(i)
	.50	2.1		10(i)
	.55	0.0		
	.62	0.0		9(j)
	.68	0.0		
↓	.74	0.0	↓	9(j)
0.92	0.27	0.1	IV(k)	9(k), 10(c)
↓	.27	2.1	↓	10(c)
	.33	0.0		
	.40	0.0		9(k)
	.46	0.1		
	.50	0.1		9(k), 10(j)
	.49	1.1		
	.49	2.2		10(j)
	.50	3.1		10(j)
	.54	0.0		
	.62	0.0		9(k)
	.68	0.0		10(m)
	.68	2.0		10(m)
↓	.74	0.0	↓	9(k)

Inlet With Long Cowl ($L = 9.8420$ in.)

Pressure coefficients				
M	mfr	α	Table	Figure
0.60	0.28	0.0	V(a)	11(a), 12(a)
	.28	2.0		12(a)
	.30	0.0		
	.40	0.0		11(a)
	.44	0.0		
	.49	0.0		11(a), 12(d)
	.49	1.0		
	.49	2.0		12(d)
	.50	3.0		12(d)
	.56	0.0		
	.62	0.0		11(a)
	.69	0.0		12(k)
	.69	2.0		12(k)
	.75	0.0		11(a)
	.77	0.0		
	.81	0.0		11(a), 12(o)
	.81	2.0		12(o)
↓	.88	0.0	↓	
0.64	0.28	0.0	V(b)	11(b)
	.30	0.0		
	.40	0.0		11(b)
	.44	0.0		
	.49	0.0		11(b)
	.55	0.0		
	.61	0.0		11(b)
	.68	0.0		
	.75	0.0		11(b)
	.81	0.0		11(b)
↓	.87	0.0	↓	
0.69	0.28	0.0	V(c)	11(c)
	.30	0.0		
	.40	0.0		11(c)
	.44	0.0		
	.49	0.0		11(c), 12(e)
	.49	2.0		12(e)
	.54	0.0		
	.61	0.0		11(c)
	.68	0.0		
	.75	0.0		11(c)
↓	.81	0.0	↓	11(c)
0.72	0.28	0.0	V(d)	11(d)
	.31	0.0		
	.40	0.0		11(d)
	.44	0.0		
	.49	0.0		11(d)
	.54	0.0		
	.61	0.0		11(d)
	.68	0.0		
↓	.74	0.0	↓	11(d)

Pressure coefficients				
M	mfr	α	Table	Figure
0.72	0.81	0.0	V(d)	11(d)
0.74	0.28	0.0	V(e)	11(e)
	.31	0.0		
	.40	0.0		11(e)
	.44	0.0		
	.49	0.0		11(e), 12(f)
	.49	2.0		12(f)
	.54	0.0		
	.61	0.0		11(e)
	.68	0.0		
	.74	0.0		11(e)
↓	.80	0.0	↓	11(e)
0.77	0.28	0.0	V(f)	11(f)
	.31	0.0		
	.40	0.0		11(f)
	.45	0.0		
	.49	0.0		11(f)
	.54	0.0		
	.61	0.0		11(f)
	.68	0.0		
	.74	0.0		11(f)
↓	.80	0.0	↓	11(f)
0.79	0.28	0.0	V(g)	11(g)
	.31	0.0		
	.40	0.0		11(g)
	.44	0.0		
	.49	0.0		11(g), 12(g)
	.49	2.0		12(g)
	.54	0.0		
	.61	0.0		11(g)
	.68	0.0		
	.74	0.0		11(g)
↓	.80	0.0	↓	11(g)
0.82	0.27	0.0	V(h)	11(h)
	.32	0.0		
	.40	0.0		11(h)
	.44	0.0		
	.49	0.0		11(h)
	.54	0.0		
	.61	0.0		11(h)
	.68	0.0		
	.74	0.0		11(h)
↓	.80	0.0	↓	11(h)
0.84	0.27	0.0	V(i)	11(i)
	.31	0.0		
	.40	0.0		11(i)
	.44	0.0		
	.49	0.0		11(i),12(h)
↓	.49	2.0	↓	12(h)

Inlet With Long Cowl (L = 9.8420 in.)—Concluded

Pressure coefficients				
M	mfr	α	Table	Figure
0.84	0.54	0.0	V(i)	
↓	.61	0.0	↓	11(i)
	.68	0.0		12(l)
	.68	2.1		12(l)
	.74	0.0		11(i)
0.87	0.27	0.0	V(i)	11(j)
↓	.32	0.0	↓	
	.40	0.0		11(j)
	.44	0.0		
	.49	0.0		11(j)
	.54	0.0		
	.61	0.0		11(j)
	.68	0.0		
	.74	0.0		11(j)
0.89	0.27	0.0	V(k)	11(k), 12(b)
↓	.27	1.0	↓	
	.27	2.1		12(b)
	.27	3.1		12(b)
	.31	0.0		
	.40	0.0		11(k)
	.44	0.0		
	.48	0.0		11(k), 12(i)
	.49	1.0		
	.49	2.1		12(i)
	.48	3.0		12(i)
	.54	0.0		
	.61	0.0		11(k)
	.68	0.0		12(m)
	.68	1.0		
	.68	2.1		12(m)
	.68	3.1		12(m)
	.74	0.0		11(k)
0.92	0.27	0.0	V(l)	11(l), 12(c)
↓	.27	2.1	↓	12(c)
	.31	0.0		
	.40	0.0		11(l)
	.44	0.0		
	.49	0.0		11(l), 12(j)
	.49	1.0		
	.49	2.1		12(j)
	.49	3.1		12(j)
	.54	0.0		
	.61	0.0		11(l)
	.68	0.0		12(n)
	.68	2.1		12(n)
	.75	0.0		11(l)

Discussion of Results

This investigation was conducted primarily to obtain cowl pressure distributions under conditions that isolate the nacelle cowl from the influence of a boat-tailed afterbody flow field. Therefore, the model downstream of the cowl was cylindrical with a diameter equal to the cowl maximum diameter (fig. 1). This portion of the model was also used in the tests of reference 10 where the range of mass flow through the model was limited because of the throttle plug geometry. To expand the mass-flow range of the model to encompass lower mass-flow rates, the throttle plug geometry was altered so that it had a larger maximum diameter. The results of reference 9 (last 14 in. of the afterbody boat tailed) and reference 10 (cylindrical afterbody) indicate that no significant effects fed forward to the cowl pressure distributions from the exit plume caused by the mass-flow plug for the range of Mach numbers and mass-flow ratios of this test.

In reference 14, an empirical study performed on the drag of several NACA 1-series inlets found that the drag-rise Mach number of the cowls correlated with the thickness ratio $(r_{max}{}^2 - r_h{}^2)^{0.5}/L$ of an equivalent body of revolution. Thus, this thickness ratio can be used as a design tool to determine a first approximation of cowl length for a desired cruise Mach number. Analysis of wake pressure data in reference 15 indicated that the drag characteristics for the present cowl contour were almost as good as those for an NACA 1-series contour of the same thickness ratio. Therefore, the cowls in this investigation, because of their different lengths and identical nondimensionalized geometry, can be considered to be designs for three different cruise speeds, with the cowl length increasing as the design Mach number increases.

Reference 14 also presented a correlation for critical mass-flow ratio as a function of a cowl lip radius parameter. The critical mass-flow ratio is a measure of cowl performance when operating below the compressibility drag-rise design condition. That is, drag changes only gradually as mass flow is decreased until a critical mass-flow ratio is reached where drag abruptly increases. This drag increase results from flow separation caused by shocks or strong pressure gradients resulting from flow expansion around the initial cowl lip curvature. Relative to an NACA 1-series contour of the same length (fig. 4), the blunter forward portion of the present contour should provide the capability to sustain lower pressures on the cowl leading edge, without flow separation, to lower speeds and mass-flow ratios and yet have the potential to approach the drag-rise Mach number capabilities of the NACA 1-series contour.

The following discussion of results is based only on the graphical data presented in this report. Note the points in this discussion can be refined, if necessary, by examination of the pressure data in tables III to V, which include data for intermediate mass-flow ratios and angles of attack.

Pressure Distributions at Angle of Attack of 0°

Because the internal geometry is identical for the three cowls, any differences in pressure distributions are caused by differences in the external geometry. The effect of cowl length on shock development and the ability to sustain negative pressure peaks without flow separation near the leading edge at low mass-flow ratios are shown by comparison of the data of figures 7, 9, and 11 at similar test conditions. For example, the pressure distribution peaks at the lowest Mach numbers and mass-flow ratios of figures 7(a), 9(a), and 11(a) show that the short cowl sustained the highest negative pressure peak. The data also show that the flow over the long cowl is separated (note the collapsed pressure peak) over the forward 20 percent of its length. Therefore, the long cowl is operating below its critical mass-flow ratio. This high-drag condition occurs at a mass-flow ratio that is typical for a windmilling (nonoperating) engine.

With attached flow near the leading edge, the pressure peaks became less negative, and the pressure distributions over the cowl became more nearly uniform (flat) as mass-flow ratio increased at the lower Mach numbers for all the cowls. (See figs. 7(a), 9(a), and 11(a).) A uniform cowl pressure distribution at large mass-flow ratios is desirable to delay the formation of shocks that can result at local supercritical flow conditions to higher Mach numbers. As Mach number was increased, the pressure distributions over the short cowl became rounded over the forward portion of the cowl at high mass-flow ratios (e.g., compare fig. 7(g) with 7(a)). Extensive areas with positive external pressure coefficients acting over the forward (projected) area of the cowl near the lip indicate pressure drag.

Flow was separated on the forward 20 percent of the medium cowl at Mach numbers of 0.64 and 0.69 (figs. 9(b) and 9(c)) at the lowest mass-flow ratio (0.28). On the long cowl, separated flow was observed at a mass-flow ratio of 0.28 at Mach numbers from 0.59 to 0.79 (figs. 11(a) to 11(g)). The short cowl sustained the most negative pressure peaks near the leading edge. The first evidence of a shock forming during recompression from the leading-edge

suction peak occurred on the short cowl at about 30 percent of its length at a Mach number of 0.69 with a mass-flow ratio of 0.27 (fig. 7(c)). At the lowest mass-flow ratio, where flow separation occurred over the forward portion of the medium and long cowls at low Mach numbers, the data showed no evidence of a downstream shock. For example, the first evidence of a shock on the medium cowl was at a Mach number of 0.74 after a pressure peak was established (no flow separation) and pressure recovery from the pressure peak extended past 20 percent of the cowl length (fig. 9(d)). Likewise, at a mass-flow ratio of 0.27, the long cowl had a shock at about 50 percent of its length at a Mach number of 0.82 (fig. 11(h)). At a mass-flow ratio of 0.40, pressure distributions indicated that all three cowls had a shock at a Mach number of 0.74, and the short cowl had the shock located the farthest aft (compare figs. 7(e), 9(d), and 11(e)). The first signs of the pressure failing to recover to close to free-stream static pressure in the vicinity of the maximum cowl diameter ($X/L =$ 100 percent) occurred at the lowest mass-flow ratio. On the short cowl, this occurred at a Mach number of 0.79 (fig. 7(g)), on the medium cowl at a Mach number of 0.84 (fig. 9(h)), and on the long cowl at a Mach number of 0.89 (fig. 11(k)).

Pressure Distributions at Small Angles of Attack

Pressure distributions over the three cowls at a Mach number of about 0.60 at an angle of attack of 2° at the lowest mass-flow ratio (compare figs. 8(a), 10(a), and 12(a)) showed that the short cowl had the most negative pressure peaks on the top and bottom of the cowl. At an angle of attack of 2° (fig. 8(a)), flow separation occurred on the top ($\phi = 0°$) of the short cowl between 5 and 10 percent of its length with pressure recovery downstream. The medium cowl also showed flow separation at an angle of attack of 2° (fig. 10(a)), but the separation occurred between 15 and 25 percent of the cowl length with pressure recovery downstream. On the long cowl at an angle of attack of 2° (fig. 12(a)), the flow separation extended over the forward 20 percent of the cowl length. In figure 12(a), the bottom row of pressure orifices ($\phi =$ 180°) at an angle of attack of 2° is, for aerodynamic purposes, at an angle of attack of −2°, and the pressures measured there showed no evidence of flow separation at this condition.

At a mass-flow ratio of about 0.50 at angles of attack up to 3° at the lowest Mach number (0.60), the cowls had similar pressure distributions with little indication of flow separation (figs. 8(e), 10(d), and 12(d)). When Mach number was increased to 0.69 at a mass-flow ratio of 0.50 at an angle of attack of 2°, a shock occurred on the top surface of the short and medium cowls (figs. 8(f) and 10(e)). The separation and shock were not evident on the long cowl (fig. 12(e)). At a Mach number of 0.79 and at an angle of attack of 2°, the shock occurred at about 60 percent on the short cowl length (fig. 8(h)), at 40 percent on the medium cowl length (fig. 10(f)), and at 30 percent on the long cowl length (fig. 12(g)). At a Mach number of 0.89 and at a mass-flow ratio of 0.50 only, the long cowl had pressure recovery over its aft portion that approached free-stream static pressure. (See figs. 8(k), 10(i), and 12(i).)

At a Mach number of 0.60 at an angle of attack of 2° at a mass-flow ratio of 0.69, the long cowl (compare figs. 8(m), 10(k), and 12(k)) had the most negative pressure peak, which was followed by a steep pressure recovery between 5 and 20 percent of the cowl length. As shown in figure 8(m), the short cowl had a small pressure peak and a considerable rounding off of the pressure distribution over the first 20 percent of the cowl length on the bottom ($\phi = 180°$). At a Mach number of 0.84 at an angle of attack of 2° at a mass-flow ratio of 0.68, the pressure peak on the short cowl occurred at 90 percent of its length and was followed by a shock and a rapid pressure recovery (fig. 8(o)). At these same conditions, the medium cowl had the most uniform pressure distribution of the three cowls on the top surface ($\phi = 0°$) over the forward 60 percent of the cowl length with a pressure recovery at that location due to a shock (fig. 10(l)). At a Mach number of 0.92, the medium and long cowls had the most uniform pressure distributions, but only the long cowl showed pressure recovery in the vicinity of the maximum cowl diameter. (See figs. 8(q), 10(m), and 12(n).)

At the lowest Mach number (0.60) at an angle of attack of 2° at a mass-flow ratio of 0.81, the short and medium cowls had the most uniform pressure distributions (compare figs. 8(r), 10(n), and 12(o)). However, the short cowl (fig. 8(r)) had positive pressure coefficients over the forward 7 percent of its length on the bottom surface ($\phi = 180°$) at an angle of attack of 2° and a smaller extent of positive pressure coefficients on the top surface.

Concluding Remarks

An investigation has been conducted over a range of subsonic speeds to determine pressure distributions on three isolated cowls of different lengths having the same nondimensionalized geometry. The cowl diameter ratio (highlight diameter to maximum diameter) was 0.85, and the cowl length ratios (cowl

length to maximum diameter) were 0.337, 0.439, and 0.547. Internal geometry was identical for all three cowls, and the contraction ratio was 1.250. Mass-flow ratio was varied at each Mach number, and angle of attack was varied over a small range (up to 4.1°) at selected Mach numbers and mass-flow ratios.

At an angle of attack of 0° at low Mach numbers at low mass-flow ratios, the short cowl sustained the most negative pressure peaks near the leading edge, and the flow was separated over the forward portion of the long cowl and remained so through a Mach number of 0.79. At high mass-flow ratios, the pressure coefficient distributions over the forward portion of the short cowl lost their uniformity (flatness) and became rounded as Mach number was increased. The first appearance of a shock occurred on the short cowl at 30 percent of its length at a Mach number of 0.69 at a mass-flow ratio of 0.27. By a Mach number of 0.74, shocks occurred on all three cowls at the low mass-flow ratios, with the short cowl having the shock located farthest aft at a mass-flow ratio of 0.40.

At small angles of attack (2°), the short cowl had the most negative pressure peaks on the top and bottom surfaces at a Mach number of 0.60 at the lowest mass-flow ratio (0.28). However, it had a short expanse of flow separation on the top surface between 5 and 10 percent of the cowl length, followed by a pressure recovery downstream. The medium cowl had flow separation farther downstream (between 15 and 25 percent of the cowl length), and the long cowl was separated over the forward 20 percent of its length.

NASA Langley Research Center
Hampton, VA 23681-0001
June 1, 1993

References

1. Baals, Donald D.; Smith, Norman F.; and Wright, John B.: *The Development and Application of High-Critical-Speed Nose Inlets.* NACA Rep. 920, 1948. (Supersedes NACA ACR L5F30a.)

2. Nichols, Mark R.; and Keith, Arvid L., Jr.: *Investigation of a Systematic Group of NACA 1-Series Cowlings With and Without Spinners.* NACA Rep. 950, 1949. (Supersedes NACA RM L8A15.)

3. Pendley, Robert E.; and Robinson, Harold L.: *An Investigation of Several NACA 1-Series Nose Inlets With and Without Protruding Central Bodies at High-Subsonic Mach Numbers and at a Mach Number of 1.2.* NACA TN 3436, 1955. (Supersedes NACA RM L9L23a.)

4. Pendley, Robert E.; Robinson, Harold L.; and Williams, Claude V.: *An Investigation of Three Transonic Fuselage Air Inlets At Mach Numbers From 0.4 to 0.94 and at a Mach Number of 1.19.* NACA RM L50H24, 1950.

5. Nichols, Mark R.; and Pendley, Robert E.: *Performance of Air Inlets at Transonic and Low Supersonic Speeds.* NACA RM L52A07, 1952.

6. Pendley, Robert E.; Milillo, Joseph R.; and Fleming, Frank F.: *An Investigation of Three NACA 1-Series Nose Inlets at Subsonic and Transonic Speeds.* NACA RM L52J23, 1953.

7. Pendley, Robert E.; and Smith, Norman F.: *An Investigation of the Characteristics of Three NACA 1-Series Nose Inlets At Subcritical and Supercritical Mach Numbers.* NACA RM L8L06, 1949.

8. Pendley, Robert E.; Milillo, Joseph R.; Fleming, Frank F.; and Bryan, Carroll R.: *An Experimental Study of Five Annular-Air-Inlet Configurations at Subsonic and Transonic Speeds.* NACA RM L53F18a, 1953.

9. Re, Richard J.: *An Investigation of Several NACA 1-Series Axisymmetric Inlets at Mach Numbers From 0.4 to 1.29.* NASA TM X-2917, 1974.

10. Re, Richard J.: *An Investigation of Several NACA 1-Series Inlets at Mach Numbers From 0.4 to 1.29 for Mass-Flow Ratios Near 1.0.* NASA TM X-3324, 1975.

11. Corson, Blake W., Jr.; Runckel, Jack F.; and Igoe, William B.: *Calibration of the Langley 16-Foot Transonic Tunnel With Test Section Air Removal.* NASA TR R-423, 1974.

12. Couch, Lana M.; and Brooks, Cuyler W., Jr.: *Effect of Blockage Ratio on Drag and Pressure Distributions for Bodies of Revolution at Transonic Speeds.* NASA TN D-7331, 1973.

13. Dougherty, N. S., Jr.; and Steinle, Frank W., Jr.: Transition Reynolds Number Comparisons in Several Major Transonic Tunnels. AIAA Paper No. 74-627, July 1974.

14. Butler, S. F. J.: Aircraft Drag Prediction for Project Appraisal and Performance Estimation. *Aerodynamic Drag,* AGARD-CP-124, Apr. 1973, pp. 6-1–6-50. (Appendix on pp. 6-A1–6-A4; refs. on pp. 6-R1–6-R6.)

15. Krivec, D. K.; Ling, R. T.; and Vadyak, J.: Investigation of Transonic Inlet Drag Characteristics. SAE Paper 841539, Oct. 1984.

Table I. Nondimensionalized Cowl Design Ordinates

[Nondimensional coordinates in percent]

X/L	$\frac{r - r_h}{r_{max} - r_h}$	X/L	$\frac{r - r_h}{r_{max} - r_h}$
0.00	0.000	21.54	59.609
.02	1.996	23.16	61.800
.08	3.984	24.87	63.910
.18	5.949	26.68	66.034
.32	7.892	28.59	68.174
.50	9.797	30.60	70.322
.72	11.671	32.74	72.477
.98	13.515	35.01	74.640
1.29	15.321	37.42	76.810
1.63	17.097	40.00	78.988
2.02	18.850	43.00	81.348
2.45	20.595	46.00	83.533
2.92	22.333	49.00	85.559
3.44	24.078	52.00	87.426
4.00	25.854	55.00	89.133
4.61	27.667	58.00	90.704
5.26	29.542	61.00	92.138
5.96	31.446	64.00	93.436
6.71	33.381	67.00	94.605
7.50	35.332	70.00	95.652
8.35	37.297	73.00	96.578
9.25	39.270	76.00	97.397
10.20	41.266	79.00	98.103
11.21	43.269	82.00	98.710
12.27	45.280	85.00	99.211
13.40	47.306	88.00	99.605
14.58	49.340	91.00	99.856
15.83	51.389	94.00	99.970
17.15	53.445	97.00	100.00
18.54	55.517	100.00	100.00
20.00	57.604		

Table II. Nondimensionalized Contraction Section and Diffuser Ordinates

[Nondimensional coordinates in percent]

$X/D_{\max}$	$r/r_{\max}$	$X/D_{\max}$	$r/r_{\max}$
0.00	85.36	12.01	76.36
.01	85.00	12.43	76.38
.04	84.64	12.91	76.40
.08	84.28	13.42	76.44
.14	83.92	13.99	76.49
.23	83.56	14.62	76.55
.33	83.20	15.31	76.64
.45	82.83	16.07	76.74
.59	82.47	16.90	76.88
.76	82.11	17.82	77.04
.94	81.75	18.83	77.23
1.15	81.39	19.94	77.46
1.38	81.03	21.16	77.74
1.64	80.67	22.50	78.07
1.93	80.31	23.98	78.46
2.25	79.95	25.61	78.92
2.61	79.59	27.39	79.46
3.00	79.23	29.36	80.07
3.45	78.87	31.52	80.78
3.94	78.51	33.90	81.59
4.51	78.15	36.52	82.49
5.18	77.77	39.40	83.51
5.86	77.45	42.57	84.62
6.53	77.18	46.05	85.83
7.21	76.95	49.89	87.12
7.88	76.76	54.10	88.46
8.56	76.61	58.74	89.81
9.24	76.49	63.84	91.09
9.91	76.41	69.45	92.21
10.59	76.36	75.62	93.02
11.26	76.35	82.25	93.33
11.62	76.35	89.72	93.33

Table III. Pressure Coefficients on Model With Short Cowl

(a) $M = 0.60$

$M = 0.594$; mfr $= 0.275$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0415	446.79	-.0613	314.90	-.0829	-244.08	1.0439	496.25	-.0516
-223.02	1.0420	496.25	-.0559	364.36	-.0730	-138.76	1.0297	545.71	-.0479
-201.95	1.0404	545.71	-.0543			-33.43	.9941	595.17	-.0516
-170.35	1.0357	595.17	-.0495			-13.37	1.0765	661.12	-.0506
-138.76	1.0252	661.12	-.0500			-2.67	.9106	710.58	-.0565
-117.69	1.0178	710.58	-.0479			.00	-.9296	743.55	-.0409
-96.62	1.0068	743.55	-.0516			.31	-1.8641	760.04	-.0377
-75.56	.9968	760.04	-.0387			.62	-2.0500	776.52	-.0253
-54.49	.9841	776.52	-.0323			1.25	-2.4713	793.01	.0042
-43.96	.9858	793.01	-.0065			1.87	-2.5953		
-33.43	.9971					2.50	-2.6783		
-30.08	1.0030					3.12	-2.5165		
-23.40	1.0220					3.75	-2.5231		
-13.37	1.0759					4.38	-2.5059		
-6.69	1.0829					5.00	-2.4981		
-4.35	1.0214					6.25	-2.5258		
-2.67	.9045					7.50	-2.2977		
-1.17	.5632					8.75	-1.9371		
-.57	.2851					10.00	-1.6512		
.00	-.9256					12.50	-1.3705		
.31	-1.8698					15.00	-1.1510		
.62	-2.0737					17.50	-1.0522		
1.25	-2.5246					20.00	-1.0076		
1.87	-2.5892					30.00	-.8342		
2.50	-2.7042					40.00	-.7577		
3.12	-2.7566					50.00	-.6843		
3.75	-2.5442					60.00	-.6167		
4.38	-2.5770					70.00	-.5551		
5.00	-2.5199					80.00	-.4964		
6.25	-2.4743					90.00	-.4354		
7.50	-2.2896					100.00	-.3412		
8.75	-1.9238					110.00	-.2878		
12.50	-1.3888					314.90	-.0804		
15.00	-1.1957					364.36	-.0755		
17.50	-1.0277								
20.00	-.9954								
30.00	-.8464								
40.00	-.7496								
50.00	-.6748								
60.00	-.6246								
70.00	-.5503								
80.00	-.4940								
90.00	-.4347								
100.00	-.3492								
110.00	-.2889								
314.90	-.0817								
364.36	-.0680								

$M = 0.594$ mfr $= 0.276$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0398	446.79	-.0566	314.90	-.1017	-244.08	1.0493	496.25	-.0528
-223.02	1.0409	496.25	-.0544	364.36	-.0880	-138.76	1.0326	545.71	-.0453
-201.95	1.0388	545.71	-.0576			-33.43	.9810	595.17	-.0517
-170.35	1.0346	595.17	-.0560			-13.37	1.0623	661.12	-.0480
-138.76	1.0261	661.12	-.0555			-2.67	.9780	710.58	-.0463
-117.59	1.0172	710.58	-.0609			.00	-.6615	743.55	-.0367
-96.62	1.0087	743.55	-.0587			.31	-1.5066	760.04	-.0238
-75.56	.9998	760.04	-.0571			.62	-1.7722	776.52	-.0060
-54.49	.9977	776.52	-.0587			1.25	-2.2642	793.01	.0333
-43.96	1.0042	793.01	-.0351			1.87	-2.4873		
-33.43	1.0178					2.50	-2.4554		
-30.08	1.0249					3.12	-2.3562		
-23.40	1.0445					3.75	-2.3101		
-13.37	1.0896					4.38	-2.2605		
-6.69	1.0534					5.00	-2.1433		
-4.35	.9799					6.25	-1.8989		
-2.67	.8379					7.50	-1.3524		
-1.17	.4662					8.75	-1.1826		
-.57	.1555					10.00	-1.0862		
.00	-1.0530					12.50	-1.0510		
.31	-1.9091					15.00	-1.0070		
.62	-1.8555					17.50	-.9462		
1.25	-2.3697					20.00	-.9009		
1.87	-2.3474					30.00	-.7614		
2.50	-2.2027					40.00	-.6819		
3.12	-2.1354					50.00	-.6249		
3.75	-2.0924					60.00	-.5768		
4.38	-2.1439					70.00	-.5216		
5.00	-1.7023					80.00	-.4688		
6.25	-2.0935					90.00	-.4107		
7.50	-2.0882					100.00	-.3145		
8.75	-1.9997					110.00	-.2647		
12.50	-1.7956					314.90	-.0905		
15.00	-1.6355					364.36	-.0892		
17.50	-1.4749								
20.00	-1.3957								
30.00	-1.0822								
40.00	-.9434								
50.00	-.8001								
60.00	-.8558								
70.00	-.5857								
80.00	-.5183								
90.00	-.4374								
100.00	-.3881								
110.00	-.3167								
314.90	-.0973								
364.36	-.0855								

Table III. Continued

(a) Continued

$M = 0.595$; mfr $= 0.311$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0320	446.79	-.0561	314.90	-.0751	-244.08	1.0332	496.25	-.0502
-223.02	1.0341	496.25	-.0513	364.36	-.0651	-138.76	1.0131	545.71	-.0464
-201.95	1.0304	545.71	-.0491			-33.43	.9705	595.17	-.0491
-170.35	1.0246	595.17	-.0464			-13.37	1.0563	661.12	-.0464
-138.76	1.0131	661.12	-.0395			-2.67	.9527	710.58	-.0416
-117.69	1.0026	710.58	-.0389			.00	-.7667	743.55	-.0341
-96.62	.9910	743.55	-.0352			.31	-1.7664	760.04	-.0196
-75.56	.9747	760.04	-.0239			.62	-1.8627	776.52	-.0003
-54.49	.9605	776.52	-.0132			1.25	-2.3745	793.01	.0431
-43.96	.9586	793.01	.0227			1.87	-2.6109		
-33.43	.9722					2.50	-2.5782		
-30.08	.9669					3.12	-2.4598		
-23.40	.9983					3.75	-2.4773		
-13.37	1.0586					4.38	-2.4406		
-6.69	1.0927					5.00	-2.4725		
-4.35	1.0474					6.25	-2.4876		
-2.67	.9412					7.50	-1.9867		
-1.17	.6675					8.75	-1.6006		
-.57	.3501					10.00	-1.4423		
.00	-.8251					12.50	-1.2201		
.31	-1.6921					15.00	-1.0473		
.62	-2.0119					17.50	-.9927		
1.25	-2.4272					20.00	-.9654		
1.87	-2.6229					30.00	-.8266		
2.50	-2.6069					40.00	-.7331		
3.12	-2.5805					50.00	-.6728		
3.75	-2.4774					60.00	-.6041		
4.38	-2.5149					70.00	-.5538		
5.00	-2.4817					80.00	-.4923		
6.25	-2.3850					90.00	-.4308		
7.50	-2.0906					100.00	-.3338		
8.75	-1.5843					110.00	-.2770		
12.50	-1.3809					314.90	-.0751		
15.00	-1.0983					364.36	-.0645		
17.50	-1.0621								
20.00	-.9806								
30.00	-.8288								
40.00	-.7363								
50.00	-.6743								
60.00	-.6047								
70.00	-.5521								
80.00	-.4787								
90.00	-.4357								
100.00	-.3378								
110.00	-.2838								
314.90	-.0732								
364.36	-.0602								

$M = 0.595$; mfr $= 0.403$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9876	446.79	-.0443	314.90	-.0729	-244.08	.9879	496.25	-.0384
-223.02	.9892	496.25	-.0395	364.36	-.0618	-138.76	.9542	545.71	-.0320
-201.95	.9860	545.71	-.0395			-33.43	.8345	595.17	-.0357
-170.35	.9729	595.17	-.0309			-13.37	.9701	661.12	-.0223
-138.76	.9513	661.12	-.0175			-2.67	1.0559	710.58	-.0062
-117.69	.9319	710.58	-.0041			.00	-.3797	743.55	.0227
-96.62	.9082	743.55	.0115			.31	-1.1604	760.04	.0431
-75.56	.8798	760.04	.0340			.62	-1.4251	776.52	.0779
-54.49	.8551	776.52	.0678			1.25	-2.0001	793.01	.1305
-43.96	.8398	793.01	.1015			1.87	-2.3363		
-33.43	.8416					2.50	-2.1807		
-30.08	.8500					3.12	-2.1232		
-23.40	.8666					3.75	-2.0464		
-13.37	.9790					4.38	-1.9876		
-6.69	1.0737					5.00	-1.8428		
-4.35	1.0886					6.25	-1.2838		
-2.67	1.0507					7.50	-1.1236		
-1.17	.8353					8.75	-1.1129		
-.57	.6262					10.00	-1.0850		
.00	-.3760					12.50	-1.0577		
.31	-1.1559					15.00	-.9865		
.62	-1.6099					17.50	-.9419		
1.25	-2.0233					20.00	-.8974		
1.87	-2.3329					30.00	-.7465		
2.50	-2.3699					40.00	-.6908		
3.12	-2.2780					50.00	-.6417		
3.75	-2.1527					60.00	-.5755		
4.38	-2.0592					70.00	-.5216		
5.00	-1.9895					80.00	-.4702		
6.25	-1.3156					90.00	-.4211		
7.50	-1.1395					100.00	-.3092		
8.75	-1.1390					110.00	-.2554		
12.50	-1.0597					314.90	-.0667		
15.00	-1.0157					364.36	-.0661		
17.50	-.9361								
20.00	-.8912								
30.00	-.7718								
40.00	-.6957								
50.00	-.6430								
60.00	-.5852								
70.00	-.5293								
80.00	-.4673								
90.00	-.4186								
100.00	-.3195								
110.00	-.2662								
314.90	-.0748								
364.36	-.0618								

Table III. Continued

(a) Continued

$M = 0.596$; mfr $= 0.448$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9606	446.79	-.0439	314.90	-.0642	-244.08	.9608	496.25	-.0349
-223.02	.9627	496.25	-.0391	364.36	-.0586	-138.76	.9172	545.71	-.0274
-201.95	.9595	545.71	-.0386			-33.43	.7538	595.17	-.0279
-170.35	.9433	595.17	-.0295			-13.37	.8995	661.12	-.0151
-138.76	.9145	661.12	-.0178			-2.67	1.0799	710.58	-.0001
-117.69	.8920	710.58	-.0065			.00	-.1563	743.55	.0373
-96.62	.8611	743.55	.0218			.31	-.8881	760.04	.0672
-75.56	.8218	760.04	.0528			.62	-1.1410	776.52	.1051
-54.49	.7894	776.52	.0821			1.25	-1.7880	793.01	.1656
-43.96	.7650	793.01	.1366			1.87	-1.9298		
-33.43	.7597					2.50	-1.8660		
-30.08	.7597					3.12	-1.7661		
-23.40	.8009					3.75	-1.6880		
-13.37	.9107					4.38	-1.6322		
-6.69	1.0467					5.00	-1.3739		
-4.35	1.0869					6.25	-1.0836		
-2.67	1.0808					7.50	-1.0774		
-1.17	.9496					8.75	-1.0688		
-.57	.7344					10.00	-1.0153		
.00	-.1482					12.50	-.9750		
.31	-.9093					15.00	-.9537		
.62	-1.4464					17.50	-.8739		
1.25	-1.8934					20.00	-.8408		
1.87	-2.0920					30.00	-.7159		
2.50	-2.0420					40.00	-.6522		
3.12	-1.7018					50.00	-.6086		
3.75	-1.7518					60.00	-.5550		
4.38	-1.4743					70.00	-.5125		
5.00	-1.2906					80.00	-.4512		
6.25	-1.1667					90.00	-.4041		
7.50	-1.0978					100.00	-.3068		
8.75	-1.0794					110.00	-.2479		
12.50	-.9856					314.90	-.0604		
15.00	-.9213					364.36	-.0598		
17.50	-.9030								
20.00	-.8491								
30.00	-.7483								
40.00	-.6624								
50.00	-.6090								
60.00	-.5739								
70.00	-.5060								
80.00	-.4508								
90.00	-.4079								
100.00	-.3111								
110.00	-.2503								
314.90	-.0672								
364.36	-.0592								

$M = 0.595$; mfr $= 0.494$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9313	446.79	-.0394	314.90	-.0646	-244.08	.9302	496.25	-.0325
-223.02	.9329	496.25	-.0335	364.36	-.0577	-138.76	.8770	545.71	-.0234
-201.95	.9260	545.71	-.0298			-33.43	.6670	595.17	-.0234
-170.35	.9103	595.17	-.0207			-13.37	.8236	661.12	-.0062
-138.76	.8740	661.12	-.0116			-2.67	1.0845	710.58	.0168
-117.69	.8457	710.58	.0082			.00	.0471	743.55	.0447
-96.62	.8042	743.55	.0447			.31	-.6821	760.04	.0800
-75.56	.7580	760.04	.0607			.62	-.9600	776.52	.1213
-54.49	.7102	776.52	.0929			1.25	-1.4485	793.01	.1857
-43.96	.6740	793.01	.1584			1.87	-1.5665		
-33.43	.6693					2.50	-1.5268		
-30.08	.6693					3.12	-1.4254		
-23.40	.6995					3.75	-1.3578		
-13.37	.8307					4.38	-1.1760		
-6.69	1.0049					5.00	-1.2818		
-4.35	1.0694					6.25	-1.0293		
-2.67	1.0874					7.50	-.9810		
-1.17	.9969					8.75	-.9625		
-.57	.8294					10.00	-.9087		
.00	.0652					12.50	-.8897		
.31	-.6863					15.00	-.8553		
.62	-1.1738					17.50	-.8482		
1.25	-1.6305					20.00	-.7932		
1.87	-1.6722					30.00	-.6703		
2.50	-1.5661					40.00	-.6348		
3.12	-1.4309					50.00	-.5863		
3.75	-1.4219					60.00	-.5396		
4.38	-1.1970					70.00	-.4941		
5.00	-1.2202					80.00	-.4350		
6.25	-1.0719					90.00	-.3871		
7.50	-.9726					100.00	-.2955		
8.75	-1.0138					110.00	-.2375		
12.50	-.9082					314.90	-.0639		
15.00	-.8734					364.36	-.0621		
17.50	-.8150								
20.00	-.7791								
30.00	-.6963								
40.00	-.6284								
50.00	-.5918								
60.00	-.5428								
70.00	-.4971								
80.00	-.4398								
90.00	-.3949								
100.00	-.3027								
110.00	-.2457								
314.90	-.0664								
364.36	-.0571								

Table III. Continued

(a) Continued

$M = 0.597$; mfr $= 0.498$; $\alpha = 1.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9332	446.79	-.0403	314.90	-.0682	-244.08	.9304	496.25	-.0339
-223.02	.9369	496.25	-.0360	364.36	-.0559	-138.76	.8751	545.71	-.0248
-201.95	.9332	545.71	-.0339			-33.43	.6455	595.17	-.0243
-170.35	.9128	595.17	-.0243			-13.37	.7943	661.12	-.0072
-138.76	.8778	661.12	-.0126			-2.67	1.0869	710.58	.0093
-117.69	.8512	710.58	.0029			.00	.1916	743.55	.0482
-96.62	.8135	743.55	.0381			.31	-.4176	760.04	.0834
-75.56	.7691	760.04	.0589			.62	-.7923	776.52	.1260
-54.49	.7242	776.52	.0930			1.25	-1.1570	793.01	.1843
-43.96	.6990	793.01	.1490			1.87	-1.3892		
-33.43	.6879					2.50	-1.2467		
-30.08	.6890					3.12	-1.1995		
-23.40	.7237					3.75	-1.1080		
-13.37	.8716					4.38	-1.0369		
-6.69	1.0183					5.00	-1.0005		
-4.35	1.0763					6.25	-.9113		
-2.67	1.0850					7.50	-.9013		
-1.17	.9720					8.75	-.8454		
-.57	.7695					10.00	-.8376		
.00	-.1127					12.50	-.8265		
.31	-.8130					15.00	-.7888		
.62	-1.3093					17.50	-.7376		
1.25	-1.7833					20.00	-.7064		
1.87	-2.0735					30.00	-.6411		
2.50	-1.8327					40.00	-.5894		
3.12	-1.6756					50.00	-.5576		
3.75	-1.7812					60.00	-.5147		
4.38	-1.4465					70.00	-.4723		
5.00	-1.3162					80.00	-.4288		
6.25	-1.1433					90.00	-.3823		
7.50	-1.1170					100.00	-.2876		
8.75	-1.0745					110.00	-.2293		
12.50	-1.0040					314.90	-.0590		
15.00	-.9680					364.36	-.0596		
17.50	-.9068								
20.00	-.8633								
30.00	-.7508								
40.00	-.6670								
50.00	-.6254								
60.00	-.5744								
70.00	-.5182								
80.00	-.4516								
90.00	-.4064								
100.00	-.3090								
110.00	-.2554								
314.90	-.0658								
364.36	-.0540								

$M = 0.595$; mfr $= 0.498$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9324	446.79	-.0426	314.90	-.0655	-244.08	.9303	496.25	-.0421
-223.02	.9377	496.25	-.0415	364.36	-.0525	-138.76	.8717	545.71	-.0319
-201.95	.9298	545.71	-.0389			-33.43	.6179	595.17	-.0217
-170.35	.9125	595.17	-.0335			-13.37	.7622	661.12	.0024
-138.76	.8788	661.12	-.0174			-2.67	1.0763	710.58	.0255
-117.69	.8520	710.58	-.0008			.00	.2826	743.55	.0603
-96.62	.8168	743.55	.0297			.31	-.3213	760.04	.0903
-75.56	.7780	760.04	.0474			.62	-.5613	776.52	.1310
-54.49	.7412	776.52	.0807			1.25	-.9164	793.01	.2003
-43.96	.7137	793.01	.1402			1.87	-.9860		
-33.43	.7137					2.50	-.9176		
-30.08	.7208					3.12	-.9334		
-23.40	.7604					3.75	-.8838		
-13.37	.9072					4.38	-.8182		
-6.69	1.0354					5.00	-.8021		
-4.35	1.0851					6.25	-.7946		
-2.67	1.0751					7.50	-.7447		
-1.17	.9206					8.75	-.7307		
-.57	.7066					10.00	-.7288		
.00	-.2897					12.50	-.6968		
.31	-1.0250					15.00	-.6814		
.62	-1.5516					17.50	-.6649		
1.25	-2.0044					20.00	-.6335		
1.87	-2.2849					30.00	-.5880		
2.50	-2.2738					40.00	-.5247		
3.12	-2.1396					50.00	-.5300		
3.75	-1.9939					60.00	-.4703		
4.38	-1.9150					70.00	-.4449		
5.00	-1.6773					80.00	-.3988		
6.25	-1.2579					90.00	-.3538		
7.50	-1.1454					100.00	-.2627		
8.75	-1.1444					110.00	-.2060		
12.50	-1.1000					314.90	-.0549		
15.00	-1.0195					364.36	-.0506		
17.50	-.9711								
20.00	-.9136								
30.00	-.7872								
40.00	-.7052								
50.00	-.6396								
60.00	-.5929								
70.00	-.5324								
80.00	-.4651								
90.00	-.4116								
100.00	-.3211								
110.00	-.2613								
314.90	-.0624								
364.36	-.0556								

Table III. Continued

(a) Continued

$M = 0.594$; mfr $= 0.498$; $\alpha = 3.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9309	446.79	-.0271	314.90	-.0695	-244.08	.9274	496.25	-.0319
-223.02	.9356	496.25	-.0309	364.36	-.0646	-138.76	.8706	545.71	-.0233
-201.95	.9298	545.71	-.0276			-33.43	.5843	595.17	-.0174
-170.35	.9109	595.17	-.0212			-13.37	.7027	661.12	-.0029
-138.76	.8772	661.12	-.0088			-2.67	1.0631	710.58	.0185
-117.69	.8519	710.58	.0057			.00	.4619	743.55	.0551
-96.62	.8177	743.55	.0314			.31	-.1474	760.04	.0797
-75.56	.7761	760.04	.0556			.62	-.3474	776.52	.1227
-54.49	.7445	776.52	.0851			1.25	-.7167	793.01	.1975
-43.96	.7211	793.01	.1420			1.87	-.8403		
-33.43	.7318					2.50	-.8257		
-30.08	.7395					3.12	-.8111		
-23.40	.7839					3.75	-.7191		
-13.37	.9239					4.38	-.6694		
-6.69	1.0557					5.00	-.6545		
-4.35	1.0874					6.25	-.5942		
-2.67	1.0650					7.50	-.6332		
-1.17	.8686					8.75	-.6215		
-.57	.6510					10.00	-.6142		
.00	-.3871					12.50	-.6018		
.31	-1.1269					15.00	-.6024		
.62	-1.7242					17.50	-.5745		
1.25	-2.0863					20.00	-.5520		
1.87	-2.3630					30.00	-.5171		
2.50	-2.5636					40.00	-.5082		
3.12	-2.4726					50.00	-.4892		
3.75	-2.3694					60.00	-.4590		
4.38	-2.2561					70.00	-.4217		
5.00	-2.3218					80.00	-.3885		
6.25	-2.1143					90.00	-.3459		
7.50	-1.4465					100.00	-.2635		
8.75	-1.2046					110.00	-.2114		
12.50	-1.1295					314.90	-.0527		
15.00	-1.0829					364.36	-.0453		
17.50	-1.0321								
20.00	-.9781								
30.00	-.8418								
40.00	-.7353								
50.00	-.6750								
60.00	-.6140								
70.00	-.5431								
80.00	-.4779								
90.00	-.4245								
100.00	-.3349								
110.00	-.2661								
314.90	-.0670								
364.36	-.0552								

$M = 0.594$; mfr $= 0.551$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.8944	446.79	-.0336	314.90	-.0594	-244.08	.8956	496.25	-.0303
-223.02	.8987	496.25	-.0298	364.36	-.0495	-138.76	.8279	545.71	-.0217
-201.95	.8908	545.71	-.0255			-33.43	.5448	595.17	-.0180
-170.35	.8666	595.17	-.0132			-13.37	.7225	661.12	-.0003
-138.76	.8234	661.12	.0024			-2.67	1.0822	710.58	.0196
-117.69	.7850	710.58	.0271			.00	.3048	743.55	.0556
-96.62	.7387	743.55	.0625			.31	-.4204	760.04	.0953
-75.56	.6750	760.04	.0910			.62	-.6904	776.52	.1307
-54.49	.6085	776.52	.1291			1.25	-1.1833	793.01	.2050
-43.96	.5738	793.01	.1931			1.87	-1.2050		
-33.43	.5578					2.50	-1.2398		
-30.08	.5525					3.12	-1.1188		
-23.40	.5773					3.75	-1.1179		
-13.37	.7260					4.38	-.9979		
-6.69	.9396					5.00	-.9396		
-4.35	1.0322					6.25	-.8875		
-2.67	1.0807					7.50	-.9206		
-1.17	1.0559					8.75	-.8825		
-.57	.9676					10.00	-.8576		
.00	.2686					12.50	-.8203		
.31	-.3826					15.00	-.7824		
.62	-.8451					17.50	-.7279		
1.25	-1.3361					20.00	-.7314		
1.87	-1.2931					30.00	-.6331		
2.50	-1.2270					40.00	-.5916		
3.12	-1.1476					50.00	-.5543		
3.75	-1.0878					60.00	-.5205		
4.38	-1.0153					70.00	-.4785		
5.00	-.9989					80.00	-.4299		
6.25	-.9444					90.00	-.3754		
7.50	-.8973					100.00	-.2830		
8.75	-.8530					110.00	-.2243		
12.50	-.8099					314.90	-.0283		
15.00	-.7924					364.36	-.0488		
17.50	-.7488								
20.00	-.7091								
30.00	-.6557								
40.00	-.5879								
50.00	-.5704								
60.00	-.5270								
70.00	-.4737								
80.00	-.4269								
90.00	-.3810								
100.00	-.2881								
110.00	-.2299								
314.90	-.0613								
364.36	-.0476								

Table III. Continued

(a) Continued

$M = 0.595$; mfr $= 0.622$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.8395	446.79	-.0248	314.90	-.0532	-244.08	.8387	496.25	-.0221
-223.02	.8432	496.25	-.0189	364.36	-.0476	-138.76	.7507	545.71	-.0146
-201.95	.8353	545.71	-.0146			-33.43	.3460	595.17	-.0103
-170.35	.8028	595.17	-.0028			-13.37	.5433	661.12	.0100
-138.76	.7450	661.12	.0202			-2.67	1.0356	710.58	.0325
-117.69	.6941	710.58	.0496			.00	.5067	743.55	.0759
-96.62	.6310	743.55	.0898			.31	-.0411	760.04	.1074
-75.56	.5507	760.04	.1187			.62	-.3073	776.52	.1503
-54.49	.4521	776.52	.1649			1.25	-.6567	793.01	.2189
-43.96	.3903	793.01	.2264			1.87	-.7934		
-33.43	.3502					2.50	-.8186		
-30.08	.3383					3.12	-.8052		
-23.40	.3726					3.75	-.7938		
-13.37	.5398					4.38	-.7197		
-6.69	.7869					5.00	-.7459		
-4.35	.9171					6.25	-.7556		
-2.67	1.0342					7.50	-.6862		
-1.17	1.0894					8.75	-.6905		
-.57	1.0286					10.00	-.6768		
.00	.5423					12.50	-.6904		
.31	-.0708					15.00	-.6673		
.62	-.4670					17.50	-.6077		
1.25	-.8591					20.00	-.6218		
1.87	-.9244					30.00	-.5551		
2.50	-.8507					40.00	-.5533		
3.12	-.7667					50.00	-.5303		
3.75	-.7384					60.00	-.4818		
4.38	-.6959					70.00	-.4458		
5.00	-.8166					80.00	-.4062		
6.25	-.7027					90.00	-.3542		
7.50	-.7478					100.00	-.2697		
8.75	-.7001					110.00	-.2118		
12.50	-.6764					314.90	-.0476		
15.00	-.6837					364.36	-.0451		
17.50	-.6523								
20.00	-.6279								
30.00	-.5909								
40.00	-.5579								
50.00	-.5316								
60.00	-.4866								
70.00	-.4499								
80.00	-.4048								
90.00	-.3642								
100.00	-.2751								
110.00	-.2156								
314.90	-.0569								
364.36	-.0432								

$M = 0.595$; mfr $= 0.685$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.7796	446.79	-.0163	314.90	-.0465	-244.08	.7794	496.25	-.0169
-223.02	.7838	496.25	-.0120	364.36	-.0354	-138.76	.6699	545.71	-.0088
-201.95	.7717	545.71	-.0061			-33.43	.1304	595.17	-.0024
-170.35	.7375	595.17	.0089			-13.37	.3293	661.12	.0207
-138.76	.6611	661.12	.0336			-2.67	.9447	710.58	.0491
-117.69	.5985	710.58	.0690			.00	.7245	743.55	.0888
-96.62	.5143	743.55	.1119			.31	.1819	760.04	.1275
-75.56	.4028	760.04	.1464			.62	-.0006	776.52	.1711
-54.49	.2782	776.52	.1866			1.25	-.4239	793.01	.2371
-43.96	.1860	793.01	.2521			1.87	-.5356		
-33.43	.1327					2.50	-.5684		
-30.08	.1256					3.12	-.5151		
-23.40	.1487					3.75	-.5648		
-13.37	.3441					4.38	-.5126		
-6.69	.6369					5.00	-.5311		
-4.35	.7860					6.25	-.5418		
-2.67	.9612					7.50	-.5465		
-1.17	1.0887					8.75	-.5393		
-.57	1.0881					10.00	-.5672		
.00	.7291					12.50	-.5660		
.31	.2277					15.00	-.5666		
.62	-.1453					17.50	-.5702		
1.25	-.4721					20.00	-.5524		
1.87	-.5473					30.00	-.5287		
2.50	-.6346					40.00	-.5062		
3.12	-.6015					50.00	-.4849		
3.75	-.5310					60.00	-.4553		
4.38	-.5210					70.00	-.4168		
5.00	-.5247					80.00	-.3801		
6.25	-.5115					90.00	-.3399		
7.50	-.5184					100.00	-.2505		
8.75	-.5604					110.00	-.1936		
12.50	-.5725					314.90	-.0372		
15.00	-.5711					364.36	-.0459		
17.50	-.5436								
20.00	-.5486								
30.00	-.5320								
40.00	-.5033								
50.00	-.4926								
60.00	-.4635								
70.00	-.4245								
80.00	-.3747								
90.00	-.3411								
100.00	-.2567								
110.00	-.2006								
314.90	-.0503								
364.36	-.0385								

Table III. Continued

(a) Continued

$M = 0.596$; mfr $= 0.687$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.7805	446.79	-.0145	314.90	-.0539	-244.08	.7780	496.25	-.0194
-223.02	.7868	496.25	-.0108	364.36	-.0372	-138.76	.6630	545.71	-.0071
-201.95	.7773	545.71	-.0065			-33.43	.0387	595.17	-.0017
-170.35	.7407	595.17	.0074			-13.37	.1790	661.12	.0218
-138.76	.6684	661.12	.0341			-2.67	.8365	710.58	.0480
-117.69	.6075	710.58	.0709			.00	.8518	743.55	.0902
-96.62	.5232	743.55	.1121			.31	.4531	760.04	.1244
-75.56	.4232	760.04	.1431			.62	.2585	776.52	.1704
-54.49	.3148	776.52	.1854			1.25	-.0881	793.01	.2431
-43.96	.2427	793.01	.2495			1.87	-.2122		
-33.43	.2273					2.50	-.2490		
-30.08	.2085					3.12	-.2704		
-23.40	.2291					3.75	-.2856		
-13.37	.4360					4.38	-.2859		
-6.69	.7584					5.00	-.2673		
-4.35	.9038					6.25	-.2958		
-2.67	1.0380					7.50	-.3209		
-1.17	1.0887					8.75	-.3397		
-.57	1.0510					10.00	-.3740		
.00	.5620					12.50	-.3822		
.31	-.0743					15.00	-.3988		
.62	-.4645					17.50	-.4223		
1.25	-.8243					20.00	-.4206		
1.87	-.9778					30.00	-.4271		
2.50	-.9499					40.00	-.4212		
3.12	-.9304					50.00	-.4424		
3.75	-.7724					60.00	-.4070		
4.38	-.8804					70.00	-.3840		
5.00	-.8170					80.00	-.3475		
6.25	-.8086					90.00	-.3168		
7.50	-.7662					100.00	-.2272		
8.75	-.8091					110.00	-.1783		
12.50	-.7400					314.90	-.0384		
15.00	-.7393					364.36	-.0372		
17.50	-.7007								
20.00	-.6793								
30.00	-.6426								
40.00	-.5859								
50.00	-.5572								
60.00	-.5221								
70.00	-.4630								
80.00	-.4102								
90.00	-.3687								
100.00	-.2821								
110.00	-.2184								
314.90	-.0514								
364.36	-.0384								

$M = 0.596$; mfr $= 0.749$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FORFBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.7138	446.79	-.0144	314.90	-.0439	-244.08	.7110	496.25	-.0091
-223.02	.7175	496.25	-.0070	364.36	-.0334	-138.76	.5757	545.71	.0005
-201.95	.7028	545.71	-.0005			-33.43	-.1288	595.17	.0091
-170.35	.6560	595.17	.0177			-13.37	.0684	661.12	.0332
-138.76	.5663	661.12	.0444			-2.67	.8019	710.58	.0642
-117.69	.4902	710.58	.0803			.00	.8744	743.55	.1092
-96.62	.3800	743.55	.1247			.31	.4328	760.04	.1478
-75.56	.2442	760.04	.1575			.62	.2200	776.52	.1944
-54.49	.0784	776.52	.1981			1.25	-.1271	793.01	.2586
-43.96	-.0403	793.01	.2666			1.87	-.2551		
-33.43	-.1519					2.50	-.3532		
-30.08	-.1725					3.12	-.3284		
-23.40	-.1442					3.75	-.3237		
-13.37	.0979					4.38	-.3073		
-6.69	.4232					5.00	-.3863		
-4.35	.6148					6.25	-.4009		
-2.67	.8131					7.50	-.4046		
-1.17	1.0311					8.75	-.3984		
-.57	1.0887					10.00	-.4483		
.00	.8811					12.50	-.4548		
.31	.4493					15.00	-.4589		
.62	.1561					17.50	-.4784		
1.25	-.1441					20.00	-.4713		
1.87	-.3277					30.00	-.4748		
2.50	-.3256					40.00	-.4689		
3.12	-.3114					50.00	-.4660		
3.75	-.3093					60.00	-.4412		
4.38	-.2983					70.00	-.3993		
5.00	-.3717					80.00	-.3674		
6.25	-.3623					90.00	-.3290		
7.50	-.3943					100.00	-.2404		
8.75	-.4268					110.00	-.1902		
12.50	-.4252					314.90	-.0334		
15.00	-.4715					364.36	-.0346		
17.50	-.4656								
20.00	-.4659								
30.00	-.4850								
40.00	-.4641								
50.00	-.4572								
60.00	-.4288								
70.00	-.4034								
80.00	-.3643								
90.00	-.3287								
100.00	-.2353								
110.00	-.1913								
314.90	-.0408								
364.36	-.0278								

Table III. Continued

(a) Continued

$M = 0.594$; mfr $= 0.810$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.6369	446.79	-.0102	314.90	-.0360	-244.08	.6368	496.25	-.0043
-223.02	.6437	496.25	-.0033	364.36	-.0273	-138.76	.4656	545.71	.0075
-201.95	.6227	545.71	.0059			-33.43	-.4514	595.17	.0145
-170.35	.5711	595.17	.0198			-13.37	-.2554	661.12	.0461
-138.76	.4627	661.12	.0510			-2.67	.6054	710.58	.0799
-117.69	.3601	710.58	.0880			.00	1.0013	743.55	.1256
-96.62	.2275	743.55	.1315			.31	.6190	760.04	.1563
-75.56	.0481	760.04	.1654			.62	.4624	776.52	.1998
-54.49	-.1630	776.52	.2100			1.25	.1065	793.01	.2647
-43.96	-.3424	793.01	.2685			1.87	-.0174		
-33.43	-.4656					2.50	-.0824		
-30.08	-.5023					3.12	-.1342		
-23.40	-.4692					3.75	-.1221		
-13.37	-.2044					4.38	-.1423		
-6.69	.1896					5.00	-.1701		
-4.35	.4499					6.25	-.2200		
-2.67	.6775					7.50	-.2915		
-1.17	.9591					8.75	-.2336		
-.57	1.0591					10.00	-.3229		
.00	.9911					12.50	-.3211		
.31	.6353					15.00	-.3833		
.62	.3759					17.50	-.3750		
1.25	.0844					20.00	-.4123		
1.87	-.0430					30.00	-.4153		
2.50	-.0878					40.00	-.4295		
3.12	-.1446					50.00	-.4188		
3.75	-.1951					60.00	-.4070		
4.38	-.1783					70.00	-.3786		
5.00	-.2582					80.00	-.3442		
6.25	-.2730					90.00	-.3081		
7.50	-.2809					100.00	-.2175		
8.75	-.3151					110.00	-.1742		
12.50	-.3277					314.90	-.0242		
15.00	-.3674					364.36	-.0317		
17.50	-.3735								
20.00	-.3879								
30.00	-.4224								
40.00	-.4140								
50.00	-.4150								
60.00	-.4140								
70.00	-.3792								
80.00	-.3438								
90.00	-.3082								
100.00	-.2256								
110.00	-.1762								
314.90	-.0385								
364.36	-.0205								

$M = 0.596$; mfr $= 0.809$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.6330	446.79	-.0022	314.90	-.0426	-244.08	.6332	496.25	-.0049
-223.02	.6440	496.25	.0031	364.36	-.0334	-138.76	.4576	545.71	.0085
-201.95	.6283	545.71	.0111			-33.43	-.5801	595.17	.0159
-170.35	.5739	595.17	.0255			-13.37	-.4452	661.12	.0400
-138.76	.4624	661.12	.0560			-2.67	.5012	710.58	.0715
-117.69	.3703	710.58	.0902			.00	1.0610	743.55	.1233
-96.62	.2384	743.55	.1403			.31	.8253	760.04	.1554
-75.56	.0667	760.04	.1725			.62	.6585	776.52	.1981
-54.49	-.1339	776.52	.2136			1.25	.3704	793.01	.2692
-43.96	-.2743	793.01	.2681			1.87	.2145		
-33.43	-.3763					2.50	.1489		
-30.08	-.4199					3.12	.0927		
-23.40	-.3492					3.75	.0332		
-13.37	-.0593					4.38	.0291		
-6.69	.3512					5.00	.0462		
-4.35	.5973					6.25	-.0482		
-2.67	.7871					7.50	-.0822		
-1.17	1.0177					8.75	-.1286		
-.57	1.0888					10.00	-.1453		
.00	.8860					12.50	-.2024		
.31	.4357					15.00	-.2466		
.62	.0992					17.50	-.2690		
1.25	-.1768					20.00	-.2867		
1.87	-.3202					30.00	-.3244		
2.50	-.3972					40.00	-.3486		
3.12	-.3464					50.00	-.3704		
3.75	-.3396					60.00	-.3574		
4.38	-.3626					70.00	-.3397		
5.00	-.4396					80.00	-.3091		
6.25	-.4851					90.00	-.2843		
7.50	-.4212					100.00	-.1954		
8.75	-.5024					110.00	-.1577		
12.50	-.5081					314.90	-.0321		
15.00	-.5250					364.36	-.0259		
17.50	-.5322								
20.00	-.5231								
30.00	-.5160								
40.00	-.4959								
50.00	-.4846								
60.00	-.4625								
70.00	-.4175								
80.00	-.3692								
90.00	-.3364								
100.00	-.2479								
110.00	-.1936								
314.90	-.0365								
364.36	-.0259								

Table III. Continued

(a) Concluded

$M = 0.596$; mfr $= 0.874$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.5463	446.79	-.0065	314.90	-.0334	-244.08	.5427	496.25	.0025
-223.02	.5510	496.25	.0031	364.36	-.0266	-138.76	.3360	545.71	.0143
-201.95	.5317	545.71	.0116			-33.43	-.9684	595.17	.0212
-176.35	.4568	595.17	.0255			-13.37	-.6547	661.12	.0522
-138.76	.3240	661.12	.0570			-2.67	.4703	710.58	.0858
-117.69	.2005	710.58	.0943			.00	1.0617	743.55	.1296
-96.62	.0336	743.55	.1365			.31	.7889	760.04	.1686
-75.56	-.2083	760.04	.1719			.62	.6459	776.52	.2081
-54.49	-.5049	776.52	.2087			1.25	.3507	793.01	.2711
-43.96	-.7407	793.01	.2679			1.87	.2033		
-33.43	-.9289					2.50	.0909		
-30.08	-1.0317					3.12	.0556		
-23.40	-.9862					3.75	.0178		
-13.37	-.6547					4.38	-.0031		
-6.69	-.1273					5.00	.0155		
-4.35	.1736					6.25	-.1187		
-2.67	.4696					7.50	-.1212		
-1.17	.8189					8.75	-.1941		
-.57	.9795					10.00	-.1600		
.00	1.0712					12.50	-.2036		
.31	.8258					15.00	-.2619		
.62	.5578					17.50	-.3026		
1.25	.3292					20.00	-.3190		
1.87	.1728					30.00	-.3597		
2.50	.1204					40.00	-.3715		
3.12	.0493					50.00	-.3927		
3.75	.0582					60.00	-.3650		
4.38	-.0299					70.00	-.3544		
5.00	-.0649					80.00	-.3267		
6.25	-.1261					90.00	-.2884		
7.50	-.1408					100.00	-.2083		
8.75	-.1910					110.00	-.1618		
12.50	-.2810					314.90	-.0167		
15.00	-.3085					364.36	-.0272		
17.50	-.3396								
20.00	-.3604								
30.00	-.3809								
40.00	-.3920								
50.00	-.3966								
60.00	-.3926								
70.00	-.3567								
80.00	-.3209								
90.00	-.2962								
100.00	-.2120								
110.00	-.1654								
314.90	-.0353								
364.36	-.0241								

Table III. Continued

(b) $M = 0.64$

$M = 0.644$; mfr $= 0.274$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0579	446.79	-.0604	314.90	-.0869	-244.08	1.0609	496.25	-.0523
-223.02	1.0593	496.25	-.0557	364.36	-.0748	-138.76	1.0462	545.71	-.0499
-201.95	1.0593	545.71	-.0533			-33.43	1.0146	595.17	-.0547
-170.35	1.0528	595.17	-.0538			-13.37	1.0903	661.12	-.0542
-138.76	1.0453	661.12	-.0533			-2.67	.9443	710.58	-.0461
-117.69	1.0378	710.58	-.0480			.00	-.7265	743.55	-.0361
-96.62	1.0234	743.55	-.0452			.31	-1.6106	760.04	-.0247
-75.56	1.0131	760.04	-.0457			.62	-1.7751	776.52	-.0200
-54.49	1.0052	776.52	-.0371			1.25	-2.1242	793.01	.0105
-43.96	1.0073	793.01	.0024			1.87	-2.2454		
-33.43	1.0141					2.50	-2.3799		
-30.08	1.0178					3.12	-2.4330		
-23.40	1.0409					3.75	-2.4421		
-13.37	1.0892					4.38	-2.4099		
-6.69	1.0987					5.00	-2.3630		
-4.35	1.0552					6.25	-2.2581		
-2.67	.9306					7.50	-2.2365		
-1.17	.6545					8.75	-2.2052		
-.57	.3507					10.00	-2.1564		
.00	-.7459					12.50	-2.1521		
.31	-1.5402					15.00	-2.0757		
.62	-1.8687					17.50	-1.6628		
1.25	-2.1507					20.00	-.9691		
1.87	-2.2515					30.00	-.7530		
2.50	-2.3688					40.00	-.7361		
3.12	-2.4035					50.00	-.6865		
3.75	-2.4350					60.00	-.6302		
4.38	-2.4401					70.00	-.5634		
5.00	-2.4143					80.00	-.5062		
6.25	-2.3313					90.00	-.4416		
7.50	-2.2412					100.00	-.3502		
8.75	-2.2271					110.00	-.2808		
12.50	-2.1075					314.90	-.0841		
15.00	-1.8747					364.36	-.0753		
17.50	-1.3089								
20.00	-1.1692								
30.00	-.7431								
40.00	-.7259								
50.00	-.6826								
60.00	-.6297								
70.00	-.5682								
80.00	-.4986								
90.00	-.4490								
100.00	-.3443								
110.00	-.2899								
314.90	-.0830								
364.36	-.0682								

$M = 0.644$; mfr $= 0.305$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0503	446.79	-.0519	314.90	-.0884	-244.08	1.0487	496.25	-.0433
-223.02	1.0503	496.25	-.0471	364.36	-.0785	-138.76	1.0319	545.71	-.0376
-201.95	1.0480	545.71	-.0443			-33.43	.9853	595.17	-.0400
-170.35	1.0415	595.17	-.0429			-13.37	1.0723	661.12	-.0348
-138.76	1.0317	661.12	-.0414			-2.67	.9790	710.58	-.0362
-117.69	1.0205	710.58	-.0395			.00	-.6287	743.55	-.0224
-96.62	1.0089	743.55	-.0329			.31	-1.5308	760.04	-.0048
-75.56	.9917	760.04	-.0205			.62	-1.6289	776.52	.0123
-54.49	.9828	776.52	-.0067			1.25	-2.0555	793.01	.0503
-43.96	.9795	793.01	.0317			1.87	-2.2652		
-33.43	.9858					2.50	-2.3433		
-30.08	.9947					3.12	-2.3755		
-23.40	1.0141					3.75	-2.3785		
-13.37	1.0775					4.38	-2.3596		
-6.69	1.1022					5.00	-2.3091		
-4.35	1.0708					6.25	-2.2317		
-2.67	.9762					7.50	-2.2102		
-1.17	.6852					8.75	-2.1646		
-.57	.4260					10.00	-2.1523		
.00	-.6627					12.50	-2.0870		
.31	-1.4842					15.00	-1.7661		
.62	-1.7320					17.50	-1.2009		
1.25	-2.0996					20.00	-.9398		
1.87	-2.2650					30.00	-.7782		
2.50	-2.3554					40.00	-.7409		
3.12	-2.3900					50.00	-.6909		
3.75	-2.3938					60.00	-.6283		
4.38	-2.3619					70.00	-.5696		
5.00	-2.3835					80.00	-.5103		
6.25	-2.2753					90.00	-.4437		
7.50	-2.2290					100.00	-.3472		
8.75	-2.1684					110.00	-.2880		
12.50	-2.0944					314.90	-.0867		
15.00	-1.6124					364.36	-.0807		
17.50	-1.2547								
20.00	-1.0448								
30.00	-.7802								
40.00	-.7363								
50.00	-.6917								
60.00	-.6337								
70.00	-.5496								
80.00	-.5011								
90.00	-.4501								
100.00	-.3498								
110.00	-.2797								
314.90	-.0845								
364.36	-.0730								

Table III. Continued

(b) Continued

$M = 0.644$; mfr $= 0.401$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0067	446.79	-.0480	314.90	-.0736	-244.08	1.0064	496.25	-.0413
-223.02	1.0086	496.25	-.0432	364.36	-.0659	-138.76	.9733	545.71	-.0390
-201.95	1.0025	545.71	-.0394			-33.43	.8565	595.17	-.0366
-170.35	.9927	595.17	-.0337			-13.37	.9917	661.12	-.0251
-138.76	.9712	661.12	-.0223			-2.67	1.0689	710.58	-.0142
-117.69	.9549	710.58	-.0085			.00	-.2798	743.55	.0177
-96.62	.9316	743.55	.0115			.31	-1.0214	760.04	.0382
-75.56	.9017	760.04	.0349			.62	-1.2284	776.52	.0715
-54.49	.8685	776.52	.0606			1.25	-1.7503	793.01	.1310
-43.96	.8586	793.01	.1244			1.87	-2.0161		
-33.43	.8617					2.50	-2.1389		
-30.08	.8728					3.12	-2.1493		
-23.40	.8960					3.75	-2.1205		
-13.37	.9980					4.38	-2.0558		
-6.69	1.0871					5.00	-1.9543		
-4.35	1.1031					6.25	-1.9182		
-2.67	1.0706					7.50	-1.8515		
-1.17	.8704					8.75	-1.8071		
-.57	.6808					10.00	-1.5402		
.00	-.2701					12.50	-.9691		
.31	-.9707					15.00	-.8900		
.62	-1.4687					17.50	-.9069		
1.25	-1.7481					20.00	-.8932		
1.87	-2.0292					30.00	-.7804		
2.50	-2.1948					40.00	-.7250		
3.12	-2.2033					50.00	-.6680		
3.75	-2.0536					60.00	-.6049		
4.38	-2.0456					70.00	-.5434		
5.00	-2.0658					80.00	-.4940		
6.25	-1.9339					90.00	-.4230		
7.50	-1.8842					100.00	-.3342		
8.75	-1.7391					110.00	-.2649		
12.50	-.9477					314.90	-.0675		
15.00	-.9308					364.36	-.0692		
17.50	-.9163								
20.00	-.8846								
30.00	-.7891								
40.00	-.7141								
50.00	-.6652								
60.00	-.6062								
70.00	-.5429								
80.00	-.4761								
90.00	-.4251								
100.00	-.3300								
110.00	-.2664								
314.90	-.0714								
364.36	-.0675								

$M = 0.644$; mfr $= 0.452$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9826	446.79	-.0376	314.90	-.0744	-244.08	.9807	496.25	-.0371
-223.02	.9840	496.25	-.0338	364.36	-.0606	-138.76	.9387	545.71	-.0333
-201.95	.9803	545.71	-.0295			-33.43	.7833	595.17	-.0314
-170.35	.9649	595.17	-.0219			-13.37	.9282	661.12	-.0167
-138.76	.9365	661.12	-.0072			-2.67	1.0976	710.58	-.0005
-117.69	.9136	710.58	.0038			.00	-.0947	743.55	.0332
-96.62	.8829	743.55	.0327			.31	-.7840	760.04	.0632
-75.56	.8456	760.04	.0551			.62	-1.0218	776.52	.1002
-54.49	.8041	776.52	.0917			1.25	-1.6063	793.01	.1663
-43.96	.7849	793.01	.1568			1.87	-1.8181		
-33.43	.7854					2.50	-1.8875		
-30.08	.7849					3.12	-1.9465		
-23.40	.8138					3.75	-1.9875		
-13.37	.9382					4.38	-1.7873		
-6.69	1.0610					5.00	-1.6957		
-4.35	1.1001					6.25	-1.3995		
-2.67	1.0941					7.50	-1.3910		
-1.17	.9680					8.75	-1.0295		
-.57	.7826					10.00	-.9487		
.00	-.0925					12.50	-.9819		
.31	-.7783					15.00	-.9414		
.62	-1.2276					17.50	-.9082		
1.25	-1.6521					20.00	-.8924		
1.87	-1.8536					30.00	-.7434		
2.50	-2.0372					40.00	-.6919		
3.12	-1.9608					50.00	-.6482		
3.75	-1.7922					60.00	-.5925		
4.38	-1.8137					70.00	-.5228		
5.00	-1.8058					80.00	-.4750		
6.25	-1.3850					90.00	-.4137		
7.50	-1.3878					100.00	-.3187		
8.75	-1.0290					110.00	-.2542		
12.50	-.9881					314.90	-.0639		
15.00	-.9663					364.36	-.0595		
17.50	-.9164								
20.00	-.8620								
30.00	-.7581								
40.00	-.6967								
50.00	-.6480								
60.00	-.5978								
70.00	-.5333								
80.00	-.4641								
90.00	-.4201								
100.00	-.3210								
110.00	-.2584								
314.90	-.0667								
364.36	-.0584								

Table III. Continued

(b) Continued

$M = 0.643$; mfr $= 0.494$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9522	446.79	-.0344	314.90	-.0599	-244.08	.9491	496.25	-.0306
-223.02	.9546	496.25	-.0310	364.36	-.0483	-138.76	.8975	545.71	-.0229
-201.95	.9494	545.71	-.0268			-33.43	.6997	595.17	-.0215
-170.35	.9303	595.17	-.0168			-13.37	.8590	661.12	-.0048
-138.76	.8952	661.12	.0014			-2.67	1.1021	710.58	.0133
-117.69	.8663	710.58	.0242			.00	.0841	743.55	.0538
-96.62	.8285	743.55	.0604			.31	-.6210	760.04	.0838
-75.56	.7836	760.04	.0885			.62	-.8471	776.52	.1271
-54.49	.7335	776.52	.1281			1.25	-1.4371	793.01	.1924
-43.96	.7050	793.01	.1919			1.87	-1.6468		
-33.43	.6976					2.50	-1.7205		
-30.08	.6976					3.12	-1.7090		
-23.40	.7208					3.75	-1.5516		
-13.37	.8538					4.38	-1.4872		
-6.69	1.0369					5.00	-1.4450		
-4.35	1.0948					6.25	-1.0629		
-2.67	1.1102					7.50	-.9438		
-1.17	1.0247					8.75	-.9660		
-.57	.8901					10.00	-.9454		
.00	.1226					12.50	-.9697		
.31	-.5354					15.00	-.9190		
.62	-1.0195					17.50	-.8779		
1.25	-1.4872					20.00	-.8262		
1.87	-1.6770					30.00	-.7338		
2.50	-1.7761					40.00	-.6499		
3.12	-1.6019					50.00	-.6320		
3.75	-1.4825					60.00	-.5658		
4.38	-1.4388					70.00	-.5179		
5.00	-1.4224					80.00	-.4527		
6.25	-1.1435					90.00	-.4164		
7.50	-.9890					100.00	-.3024		
8.75	-1.0092					110.00	-.2566		
12.50	-.9702					314.90	-.0610		
15.00	-.9016					364.36	-.0533		
17.50	-.8861								
20.00	-.8312								
30.00	-.7302								
40.00	-.6556								
50.00	-.6176								
60.00	-.5531								
70.00	-.5084								
80.00	-.4532								
90.00	-.4084								
100.00	-.2955								
110.00	-.2440								
314.90	-.0638								
364.36	-.0555								

$M = 0.645$; mfr $= 0.546$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9181	446.79	-.0345	314.90	-.0606	-244.08	.9187	496.25	-.0297
-223.02	.9214	496.25	-.0259	364.36	-.0485	-138.76	.8537	545.71	-.0202
-201.95	.9144	545.71	-.0207			-33.43	.5720	595.17	-.0202
-170.35	.8930	595.17	-.0098			-13.37	.7516	661.12	.0006
-138.76	.8483	661.12	.0130			-2.67	1.0983	710.58	.0310
-117.69	.8162	710.58	.0410			.00	.2876	743.55	.0675
-96.62	.7651	743.55	.0846			.31	-.3179	760.04	.1055
-75.56	.7082	760.04	.1155			.62	-.5983	776.52	.1482
-54.49	.6376	776.52	.1596			1.25	-1.0891	793.01	.2189
-43.96	.6024	793.01	.2274			1.87	-1.2933		
-33.43	.5835					2.50	-1.2971		
-30.08	.5856					3.12	-1.1908		
-23.40	.5977					3.75	-1.1836		
-13.37	.7558					4.38	-1.0779		
-6.69	.9557					5.00	-1.0313		
-4.35	1.0518					6.25	-.9678		
-2.67	1.0996					7.50	-.9241		
-1.17	1.0683					8.75	-.8922		
-.57	.9546					10.00	-.8879		
.00	.3097					12.50	-.8842		
.31	-.3284					15.00	-.8395		
.62	-.7260					17.50	-.7833		
1.25	-1.2730					20.00	-.7807		
1.87	-1.3806					30.00	-.6767		
2.50	-1.3652					40.00	-.6258		
3.12	-1.2422					50.00	-.5907		
3.75	-1.1230					60.00	-.5451		
4.38	-1.0248					70.00	-.4938		
5.00	-1.0720					80.00	-.4451		
6.25	-.9654					90.00	-.3907		
7.50	-.9238					100.00	-.2876		
8.75	-.9027					110.00	-.2274		
12.50	-.8569					314.90	-.0210		
15.00	-.8193					364.36	-.0540		
17.50	-.8017								
20.00	-.7436								
30.00	-.6802								
40.00	-.6247								
50.00	-.5902								
60.00	-.5472								
70.00	-.5022								
80.00	-.4396								
90.00	-.3902								
100.00	-.2946								
110.00	-.2395								
314.90	-.0617								
364.36	-.0496								

Table III. Continued

(b) Continued

$M = 0.644$; mfr = 0.619; $\alpha = 0^\circ$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.8636	446.79	-.0254	314.90	-.0519	-244.08	.8615	496.25	-.0174
-223.02	.8674	496.25	-.0174	364.36	-.0431	-138.76	.7744	545.71	-.0093
-201.95	.8562	545.71	-.0112			-33.43	.3705	595.17	-.0016
-170.35	.8273	595.17	.0055			-13.37	.5727	661.12	.0241
-138.76	.7694	661.12	.0321			-2.67	1.0513	710.58	.0559
-117.69	.7184	710.58	.0650			.00	.5648	743.55	.1016
-96.62	.6541	743.55	.1126			.31	-.0766	760.04	.1421
-75.56	.5719	760.04	.1440			.62	-.2984	776.52	.1897
-54.49	.4786	776.52	.1897			1.25	-.7365	793.01	.2606
-43.96	.4046	793.01	.2577			1.87	-.8517		
-33.43	.3936					2.50	-.8609		
-30.08	.3752					3.12	-.7983		
-23.40	.4036					3.75	-.8419		
-13.37	.5779					4.38	-.7021		
-6.69	.8172					5.00	-.7587		
-4.35	.9483					6.25	-.7335		
-2.67	1.0657					7.50	-.7439		
-1.17	1.1054					8.75	-.7093		
-.57	1.0569					10.00	-.7028		
.00	.5444					12.50	-.7049		
.31	-.0351					15.00	-.6864		
.62	-.4312					17.50	-.6438		
1.25	-.7805					20.00	-.6659		
1.87	-.8335					30.00	-.6028		
2.50	-.8462					40.00	-.5949		
3.12	-.8204					50.00	-.5476		
3.75	-.7927					60.00	-.5119		
4.38	-.7814					70.00	-.4694		
5.00	-.7613					80.00	-.4205		
6.25	-.7265					90.00	-.3749		
7.50	-.7645					100.00	-.2730		
8.75	-.7280					110.00	-.2163		
12.50	-.7040					314.90	-.0348		
15.00	-.7065					364.36	-.0414		
17.50	-.6524								
20.00	-.6658								
30.00	-.6160								
40.00	-.5750								
50.00	-.5507								
60.00	-.5149								
70.00	-.4678								
80.00	-.4119								
90.00	-.3734								
100.00	-.2741								
110.00	-.2166								
314.90	-.0492								
364.36	-.0365								

$M = 0.646$; mfr = 0.681; $\alpha = 0^\circ$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.8085	446.79	-.0167	314.90	-.0484	-244.08	.8049	496.25	-.0091
-223.02	.8104	496.25	-.0091	364.36	-.0358	-138.76	.6987	545.71	.0013
-201.95	.8016	545.71	-.0001			-33.43	.1730	595.17	.0103
-170.35	.7653	595.17	.0141			-13.37	.3729	661.12	.0397
-138.76	.6951	661.12	.0440			-2.67	.9802	710.58	.0753
-117.69	.6333	710.58	.0838			.00	.7435	743.55	.1265
-96.62	.5501	743.55	.1331			.31	.2154	760.04	.1667
-75.56	.4423	760.04	.1677			.62	-.0215	776.52	.2127
-54.49	.3164	776.52	.2132			1.25	-.4425	793.01	.2820
-43.96	.2295	793.01	.2834			1.87	-.5588		
-33.43	.1715					2.50	-.6371		
-30.08	.1600					3.12	-.5484		
-23.40	.1861					3.75	-.5973		
-13.37	.3850					4.38	-.4782		
-6.69	.6777					5.00	-.5675		
-4.35	.8061					6.25	-.5648		
-2.67	.9795					7.50	-.5764		
-1.17	1.0996					8.75	-.5802		
-.57	1.0996					10.00	-.6088		
.00	.7304					12.50	-.6031		
.31	.1984					15.00	-.5900		
.62	-.1078					17.50	-.6083		
1.25	-.4948					20.00	-.5727		
1.87	-.5757					30.00	-.5481		
2.50	-.5738					40.00	-.5330		
3.12	-.5529					50.00	-.5147		
3.75	-.5645					60.00	-.4875		
4.38	-.5222					70.00	-.4415		
5.00	-.6100					80.00	-.4033		
6.25	-.5102					90.00	-.3531		
7.50	-.5627					100.00	-.2668		
8.75	-.6007					110.00	-.1983		
12.50	-.5812					314.90	-.0374		
15.00	-.6120					364.36	-.0423		
17.50	-.5961								
20.00	-.5522								
30.00	-.5692								
40.00	-.5451								
50.00	-.5204								
60.00	-.4869								
70.00	-.4430								
80.00	-.3931								
90.00	-.3582								
100.00	-.2598								
110.00	-.2040								
314.90	-.0467								
364.36	-.0341								

Table III. Continued

(b) Continued

$M = 0.645$; mfr $= 0.741$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.7436	446.79	-.0103	314.90	-.0429	-244.08	.7380	496.25	-.0036
-223.02	.7455	496.25	-.0003	364.36	-.0313	-138.76	.6048	545.71	.0092
-201.95	.7334	545.71	.0040			-33.43	-.1027	595.17	.0206
-170.35	.6890	595.17	.0187			-13.37	.1459	661.12	.0472
-138.76	.6004	661.12	.0530			-2.67	.8639	710.58	.0896
-117.69	.5231	710.58	.0915			.00	.9214	743.55	.1371
-96.62	.4169	743.55	.1442			.31	.4595	760.04	.1784
-75.56	.2766	760.04	.1803			.62	.2361	776.52	.2274
-54.49	.1070	776.52	.2245			1.25	-.1284	793.01	.2979
-43.96	-.0156	793.01	.2912			1.87	-.2751		
-33.43	-.1006					2.50	-.3634		
-30.08	-.1205					3.12	-.3478		
-23.40	-.1122					3.75	-.3838		
-13.37	.1485					4.38	-.3015		
-6.69	.4480					5.00	-.3928		
-4.35	.6600					6.25	-.4061		
-2.67	.8696					7.50	-.4169		
-1.17	1.0655					8.75	-.4391		
-.57	1.1041					10.00	-.4546		
.00	.8750					12.50	-.4751		
.31	.4597					15.00	-.5265		
.62	.1727					17.50	-.4578		
1.25	-.1651					20.00	-.5155		
1.87	-.3039					30.00	-.5102		
2.50	-.3547					40.00	-.5034		
3.12	-.3775					50.00	-.4688		
3.75	-.4223					60.00	-.4567		
4.38	-.3594					70.00	-.4221		
5.00	-.3719					80.00	-.3891		
6.25	-.3882					90.00	-.3356		
7.50	-.4702					100.00	-.2459		
8.75	-.4190					110.00	-.1898		
12.50	-.4633					314.90	-.0341		
15.00	-.4804					364.36	-.0346		
17.50	-.4716								
20.00	-.4837								
30.00	-.5029								
40.00	-.4963								
50.00	-.4749								
60.00	-.4617								
70.00	-.4132								
80.00	-.3753								
90.00	-.3393								
100.00	-.2465								
110.00	-.1893								
314.90	-.0429								
364.36	-.0302								

$M = 0.645$; mfr $= 0.806$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.6645	446.79	-.0059	314.90	-.0409	-244.08	.6618	496.25	-.0002
-223.02	.6706	496.25	.0040	364.36	-.0266	-138.76	.4951	545.71	.0112
-201.95	.6543	545.71	.0169			-33.43	-.4596	595.17	.0221
-170.35	.5988	595.17	.0306			-13.37	-.2090	661.12	.0572
-138.76	.4885	661.12	.0648			-2.67	.6975	710.58	.0967
-117.69	.3949	710.58	.1033			.00	1.0081	743.55	.1466
-96.62	.2528	743.55	.1499			.31	.6241	760.04	.1884
-75.56	.0697	760.04	.1841			.62	.5069	776.52	.2373
-54.49	-.1673	776.52	.2259			1.25	.1469	793.01	.2987
-43.96	-.3438	793.01	.2911			1.87	.0158		
-33.43	-.4680					2.50	-.1037		
-30.08	-.5241					3.12	-.1250		
-23.40	-.5010					3.75	-.1870		
-13.37	-.1582					4.38	-.1538		
-6.69	.1797					5.00	-.2284		
-4.35	.4321					6.25	-.2286		
-2.67	.6682					7.50	-.2788		
-1.17	.9729					8.75	-.3045		
-.57	1.0857					10.00	-.3375		
.00	.9971					12.50	-.3852		
.31	.6366					15.00	-.3972		
.62	.4121					17.50	-.3998		
1.25	.0553					20.00	-.4282		
1.87	-.0160					30.00	-.4339		
2.50	-.1757					40.00	-.4544		
3.12	-.1156					50.00	-.4455		
3.75	-.1515					60.00	-.4449		
4.38	-.1058					70.00	-.3862		
5.00	-.2605					80.00	-.3673		
6.25	-.2125					90.00	-.3107		
7.50	-.2768					100.00	-.2326		
8.75	-.2702					110.00	-.1744		
12.50	-.3224					314.90	-.0134		
15.00	-.4046					364.36	-.0266		
17.50	-.3913								
20.00	-.3952								
30.00	-.4467								
40.00	-.4458								
50.00	-.4495								
60.00	-.4282								
70.00	-.3972								
80.00	-.3556								
90.00	-.3238								
100.00	-.2324								
110.00	-.1794								
314.90	-.0315								
364.36	-.0238								

Table III. Continued

(b) Concluded

$M = 0.644$; mfr $= 0.874$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.5618	446.79	-.0013	314.90	-.0276	-244.08	.5628	496.25	.0106
-223.02	.5693	496.25	.0087	364.36	-.0204	-138.76	.3490	545.71	.0221
-201.95	.5446	545.71	.0197			-33.43	-1.3195	595.17	.0316
-170.35	.4750	595.17	.0363			-13.37	-.6259	661.12	.0678
-138.76	.3397	661.12	.0673			-2.67	.5055	710.58	.1020
-117.69	.2179	710.58	.1082			.00	1.0759	743.55	.1515
-96.62	.0332	743.55	.1568			.31	.7834	760.04	.1925
-75.56	-.2123	760.04	.1891			.62	.6438	776.52	.2391
-54.49	-.5552	776.52	.2315			1.25	.3390	793.01	.3002
-43.96	-.7929	793.01	.2897			1.87	.2182		
-33.43	-1.2057					2.50	.0759		
-30.08	-1.3422					3.12	.0882		
-23.40	-1.0902					3.75	-.0129		
-13.37	-.5702					4.38	.0022		
-6.69	-.0557					5.00	-.0250		
-4.35	.2474					6.25	-.0998		
-2.67	.4976					7.50	-.1264		
-1.17	.8450					8.75	-.2056		
-.57	1.0081					10.00	-.1873		
.00	1.0729					12.50	-.2466		
.31	.8125					15.00	-.2424		
.62	.5814					17.50	-.3259		
1.25	.3267					20.00	-.3175		
1.87	.2002					30.00	-.3900		
2.50	.1036					40.00	-.3774		
3.12	.0658					50.00	-.4168		
3.75	.0388					60.00	-.3711		
4.38	-.0046					70.00	-.3827		
5.00	-.0504					80.00	-.3344		
6.25	-.1470					90.00	-.3097		
7.50	-.1316					100.00	-.2051		
8.75	-.2202					110.00	-.1678		
12.50	-.2748					314.90	-.0182		
15.00	-.3323					364.36	-.0336		
17.50	-.3448								
20.00	-.3500								
30.00	-.3957								
40.00	-.4161								
50.00	-.4176								
60.00	-.4156								
70.00	-.3695								
80.00	-.3434								
90.00	-.3135								
100.00	-.2254								
110.00	-.1638								
314.90	-.0386								
364.36	-.0276								

Table III. Continued

(c) $M = 0.69$

$M = 0.692$; mfr $= 0.274$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0797	446.79	-.0584	314.90	-.0802	-244.08	1.0804	496.25	-.0519
-223.02	1.0780	496.25	-.0549	364.36	-.0683	-138.76	1.0676	545.71	-.0476
-201.95	1.0789	545.71	-.0528			-33.43	1.0330	595.17	-.0506
-170.35	1.0734	595.17	-.0528			-13.37	1.1093	661.12	-.0506
-138.76	1.0641	661.12	-.0481			-2.67	.9810	710.58	-.0498
-117.69	1.0570	710.58	-.0455			.00	-.5399	743.55	-.0378
-96.62	1.0440	743.55	-.0352			.31	-1.3859	760.04	-.0262
-75.56	1.0356	760.04	-.0292			.62	-1.5418	776.52	-.0163
-54.49	1.0292	776.52	-.0150			1.25	-1.8415	793.01	.0184
-43.96	1.0255	793.01	.0201			1.87	-1.9646		
-33.43	1.0345					2.50	-2.0477		
-30.08	1.0406					3.12	-2.1173		
-23.40	1.0619					3.75	-2.1303		
-13.37	1.1097					4.38	-2.1182		
-6.69	1.1153					5.00	-2.1194		
-4.35	1.0721					6.25	-2.0816		
-2.67	.9733					7.50	-2.0311		
-1.17	.6847					8.75	-1.9785		
-.57	.4328					10.00	-1.9869		
.00	-.5787					12.50	-1.9755		
.31	-1.3533					15.00	-1.8976		
.62	-1.6251					17.50	-1.8244		
1.25	-1.8526					20.00	-1.8392		
1.87	-1.9490					30.00	-1.5271		
2.50	-2.0691					40.00	-.6054		
3.12	-2.1033					50.00	-.5878		
3.75	-2.1215					60.00	-.5874		
4.38	-2.1088					70.00	-.5598		
5.00	-2.1329					80.00	-.4980		
6.25	-2.0737					90.00	-.4449		
7.50	-2.0665					100.00	-.3317		
8.75	-2.0255					110.00	-.2782		
12.50	-1.9477					314.90	-.0832		
15.00	-1.8748					364.36	-.0822		
17.50	-1.8289								
20.00	-1.7921								
30.00	-1.1900								
40.00	-.6816								
50.00	-.5660								
60.00	-.5944								
70.00	-.5498								
80.00	-.4928								
90.00	-.4375								
100.00	-.3464								
110.00	-.2790								
314.90	-.0857								
364.36	-.0777								

$M = 0.693$; mfr $= 0.309$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0684	446.79	-.0593	314.90	-.0692	-244.08	1.0682	496.25	-.0499
-223.02	1.0701	496.25	-.0524	364.36	-.0658	-138.76	1.0498	545.71	-.0460
-201.95	1.0680	545.71	-.0503			-33.43	1.0044	595.17	-.0486
-170.35	1.0617	595.17	-.0443			-13.37	1.0914	661.12	-.0430
-138.76	1.0487	661.12	-.0409			-2.67	.9987	710.58	-.0370
-117.69	1.0415	710.58	-.0349			.00	-.4369	743.55	-.0224
-96.62	1.0268	743.55	-.0211			.31	-1.2824	760.04	-.0083
-75.56	1.0142	760.04	-.0134			.62	-1.3949	776.52	.0123
-54.49	.9999	776.52	.0016			1.25	-1.7927	793.01	.0616
-43.96	.9997	793.01	.0406			1.87	-1.9411		
-33.43	1.0068					2.50	-2.0315		
-30.08	1.0134					3.12	-2.0743		
-23.40	1.0332					3.75	-2.0732		
-13.37	1.0957					4.38	-2.0565		
-6.69	1.1267					5.00	-2.0718		
-4.35	1.1009					6.25	-2.0322		
-2.67	1.0091					7.50	-2.0092		
-1.17	.7357					8.75	-1.9842		
-.57	.5158					10.00	-1.9460		
.00	-.4923					12.50	-1.9114		
.31	-1.2298					15.00	-1.8497		
.62	-1.5133					17.50	-1.7880		
1.25	-1.8225					20.00	-1.7870		
1.87	-1.9462					30.00	-.9763		
2.50	-2.0383					40.00	-.5928		
3.12	-2.0806					50.00	-.6180		
3.75	-2.0789					60.00	-.5886		
4.38	-2.0772					70.00	-.5553		
5.00	-2.0700					80.00	-.4979		
6.25	-2.0455					90.00	-.4367		
7.50	-2.0417					100.00	-.3355		
8.75	-1.9826					110.00	-.2726		
12.50	-1.9061					314.90	-.0692		
15.00	-1.8693					364.36	-.0663		
17.50	-1.7824								
20.00	-1.7499								
30.00	-.9603								
40.00	-.5899								
50.00	-.5789								
60.00	-.5864								
70.00	-.5515								
80.00	-.4929								
90.00	-.4416								
100.00	-.3297								
110.00	-.2782								
314.90	-.0732								
364.36	-.0643								

Table III. Continued

(c) Continued

$M = 0.693$; mfr $= 0.401$; $\alpha = 0^\circ$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0280	446.79	-.0477	314.90	-.0669	-244.08	1.0271	496.25	-.0382
-223.02	1.0289	496.25	-.0412	364.36	-.0545	-138.76	.9949	545.71	-.0331
-201.95	1.0259	545.71	-.0348			-33.43	.8930	595.17	-.0331
-170.35	1.0154	595.17	-.0279			-13.37	1.0181	661.12	-.0189
-138.76	.9919	661.12	-.0151			-2.67	1.0890	710.58	-.0065
-117.69	.9755	710.58	.0012			.00	-.1285	743.55	.0278
-96.62	.9549	743.55	.0334			.31	-.7905	760.04	.0565
-75.56	.9255	760.04	.0553			.62	-1.0724	776.52	.0969
-54.49	.8994	776.52	.0926			1.25	-1.4925	793.01	.1603
-43.96	.8840	793.01	.1548			1.87	-1.7526		
-33.43	.8859					2.50	-1.8790		
-30.08	.8921					3.12	-1.8879		
-23.40	.9186					3.75	-1.8709		
-13.37	1.0119					4.38	-1.7917		
-6.69	1.1153					5.00	-1.7973		
-4.35	1.1287					6.25	-1.8086		
-2.67	1.1019					7.50	-1.7717		
-1.17	.9257					8.75	-1.7531		
-.57	.7226					10.00	-1.7418		
.00	-.1134					12.50	-1.6340		
.31	-.8047					15.00	-1.6031		
.62	-1.2291					17.50	-1.4754		
1.25	-1.4908					20.00	-1.1248		
1.87	-1.7499					30.00	-.7116		
2.50	-1.8961					40.00	-.7135		
3.12	-1.8957					50.00	-.6784		
3.75	-1.8809					60.00	-.6252		
4.38	-1.8162					70.00	-.5592		
5.00	-1.8716					80.00	-.5003		
6.25	-1.8158					90.00	-.4310		
7.50	-1.7761					100.00	-.3264		
8.75	-1.7308					110.00	-.2630		
12.50	-1.6852					314.90	-.0590		
15.00	-1.5846					364.36	-.0600		
17.50	-1.5254								
20.00	-1.2686								
30.00	-.6855								
40.00	-.6979								
50.00	-.6800								
60.00	-.6211								
70.00	-.5644								
80.00	-.4859								
90.00	-.4329								
100.00	-.3217								
110.00	-.2677								
314.90	-.0645								
364.36	-.0526								

$M = 0.692$; mfr $= 0.450$; $\alpha = 0^\circ$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0015	446.79	-.0415	314.90	-.0638	-244.08	1.0022	496.25	-.0329
-223.02	1.0057	496.25	-.0333	364.36	-.0518	-138.76	.9596	545.71	-.0265
-201.95	1.0027	545.71	-.0303			-33.43	.8105	595.17	-.0265
-170.35	.9859	595.17	-.0188			-13.37	.9478	661.12	-.0085
-138.76	.9615	661.12	.0010			-2.67	1.1140	710.58	.0104
-117.69	.9392	710.58	.0263			.00	-.0007	743.55	.0512
-96.62	.9098	743.55	.0619			.31	-.6400	760.04	.0838
-75.56	.8732	760.04	.0920			.62	-.8919	776.52	.1297
-54.49	.8412	776.52	.1301			1.25	-1.3813	793.01	.1975
-43.96	.8128	793.01	.1984			1.87	-1.6433		
-33.43	.8128					2.50	-1.7144		
-30.08	.8152					3.12	-1.7420		
-23.40	.8488					3.75	-1.7415		
-13.37	.9568					4.38	-1.7117		
-6.69	1.0898					5.00	-1.6674		
-4.35	1.1241					6.25	-1.6755		
-2.67	1.1171					7.50	-1.6113		
-1.17	.9939					8.75	-1.5387		
-.57	.8046					10.00	-1.5182		
.00	.0151					12.50	-1.4383		
.31	-.6409					15.00	-1.2031		
.62	-1.1099					17.50	-.9256		
1.25	-1.3907					20.00	-.7394		
1.87	-1.6474					30.00	-.7655		
2.50	-1.7789					40.00	-.7222		
3.12	-1.7810					50.00	-.6838		
3.75	-1.7742					60.00	-.6134		
4.38	-1.7209					70.00	-.5612		
5.00	-1.7028					80.00	-.4866		
6.25	-1.6516					90.00	-.4234		
7.50	-1.6029					100.00	-.3212		
8.75	-1.5860					110.00	-.2535		
12.50	-1.4913					314.90	-.0583		
15.00	-1.3653					364.36	-.0533		
17.50	-.8671								
20.00	-.7506								
30.00	-.7792								
40.00	-.7154								
50.00	-.6755								
60.00	-.6113								
70.00	-.5555								
80.00	-.4760								
90.00	-.4295								
100.00	-.3201								
110.00	-.2575								
314.90	-.0608								
364.36	-.0474								

Table III. Continued

(c) Continued

$M = 0.692$; mfr $= 0.492$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9758	446.79	-.0378	314.90	-.0648	-244.08	.9747	496.25	-.0275
-223.02	.9788	496.25	-.0275	364.36	-.0519	-138.76	.9240	545.71	-.0155
-201.95	.9745	545.71	-.0198			-33.43	.7232	595.17	-.0138
-170.35	.9564	595.17	-.0086			-13.37	.8890	661.12	.0051
-138.76	.9228	661.12	.0150			-2.67	1.1211	710.58	.0335
-117.69	.8933	710.58	.0442			.00	.1673	743.55	.0760
-96.62	.8580	743.55	.0854			.31	-.5149	760.04	.1107
-75.56	.8146	760.04	.1172			.62	-.7168	776.52	.1550
-54.49	.7675	776.52	.1623			1.25	-1.3035	793.01	.2288
-43.96	.7360	793.01	.2309			1.87	-1.4725		
-33.43	.7327					2.50	-1.5213		
-30.08	.7303					3.12	-1.6441		
-23.40	.7573					3.75	-1.6529		
-13.37	.8880					4.38	-1.5643		
-6.69	1.0411					5.00	-1.5669		
-4.35	1.1042					6.25	-1.3848		
-2.67	1.1236					7.50	-1.3449		
-1.17	1.0366					8.75	-1.2766		
-.57	.9138					10.00	-1.1985		
.00	.1670					12.50	-1.0383		
.31	-.4745					15.00	-.8624		
.62	-.8959					17.50	-.8234		
1.25	-1.3143					20.00	-.8519		
1.87	-1.5005					30.00	-.7730		
2.50	-1.6668					40.00	-.6984		
3.12	-1.6494					50.00	-.6537		
3.75	-1.6101					60.00	-.6004		
4.38	-1.5813					70.00	-.5296		
5.00	-1.4984					80.00	-.4849		
6.25	-1.4121					90.00	-.4142		
7.50	-1.2504					100.00	-.3085		
8.75	-1.1933					110.00	-.2465		
12.50	-1.1324					314.90	-.0583		
15.00	-.9449					364.36	-.0573		
17.50	-.8261								
20.00	-.8368								
30.00	-.7711								
40.00	-.7004								
50.00	-.6691								
60.00	-.6027								
70.00	-.5377								
80.00	-.4728								
90.00	-.4179								
100.00	-.3138								
110.00	-.2471								
314.90	-.0603								
364.36	-.0524								

$M = 0.693$; mfr $= 0.489$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9771	446.79	-.0213	314.90	-.0656	-244.08	.9787	496.25	-.0307
-223.02	.9804	496.25	-.0217	364.36	-.0542	-138.76	.9247	545.71	-.0170
-201.95	.9750	545.71	-.0165			-33.43	.6931	595.17	-.0170
-170.35	.9595	595.17	-.0067			-13.37	.8165	661.12	.0036
-138.76	.9276	661.12	.0164			-2.67	1.1204	710.58	.0306
-117.69	.8990	710.58	.0464			.00	.3737	743.55	.0742
-96.62	.8684	743.55	.0854			.31	-.2369	760.04	.1128
-75.56	.8281	760.04	.1179			.62	-.4621	776.52	.1595
-54.49	.7914	776.52	.1560			1.25	-.9325	793.01	.2391
-43.96	.7721	793.01	.2151			1.87	-1.1230		
-33.43	.7740					2.50	-1.2127		
-30.08	.7815					3.12	-1.2150		
-23.40	.8141					3.75	-1.0505		
-13.37	.9503					4.38	-1.0325		
-6.69	1.0813					5.00	-.9609		
-4.35	1.1214					6.25	-.8801		
-2.67	1.1086					7.50	-.8120		
-1.17	.9707					8.75	-.8381		
-.57	.7977					10.00	-.7897		
.00	-.0422					12.50	-.8077		
.31	-.6765					15.00	-.7470		
.62	-1.1551					17.50	-.7200		
1.25	-1.4515					20.00	-.7461		
1.87	-1.6870					30.00	-.6389		
2.50	-1.8414					40.00	-.6133		
3.12	-1.8545					50.00	-.5929		
3.75	-1.8077					60.00	-.5484		
4.38	-1.7929					70.00	-.4938		
5.00	-1.7996					80.00	-.4466		
6.25	-1.7849					90.00	-.3908		
7.50	-1.7076					100.00	-.2807		
8.75	-1.7106					110.00	-.2316		
12.50	-1.6376					314.90	-.0552		
15.00	-1.6211					364.36	-.0467		
17.50	-1.5814								
20.00	-1.3832								
30.00	-.6989								
40.00	-.7189								
50.00	-.6866								
60.00	-.6284								
70.00	-.5659								
80.00	-.4874								
90.00	-.4318								
100.00	-.3259								
110.00	-.2634								
314.90	-.0666								
364.36	-.0547								

Table III. Continued

(c) Continued

$M = 0.692$; mfr $= 0.546$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9438	446.79	-.0265	314.90	-.0511	-244.08	.9408	496.25	-.0179
-223.02	.9442	496.25	-.0196	364.36	-.0382	-138.76	.8818	545.71	-.0067
-201.95	.9388	545.71	-.0110			-33.43	.6157	595.17	-.0024
-170.35	.9143	595.17	.0041			-13.37	.8031	661.12	.0208
-138.76	.8756	661.12	.0329			-2.67	1.1201	710.58	.0548
-117.69	.8389	710.58	.0642			.00	.3471	743.55	.1051
-96.62	.7938	743.55	.1107			.31	-.3544	760.04	.1442
-75.56	.7309	760.04	.1459			.62	-.5387	776.52	.1924
-54.49	.6715	776.52	.1919			1.25	-1.0970	793.01	.2663
-43.96	.6361	793.01	.2607			1.87	-1.2414		
-33.43	.6176					2.50	-1.3774		
-30.08	.6176					3.12	-1.4028		
-23.40	.6394					3.75	-1.3774		
-13.37	.7822					4.38	-1.3005		
-6.69	.9913					5.00	-1.1313		
-4.35	1.0749					6.25	-1.1237		
-2.67	1.1182					7.50	-.9542		
-1.17	1.0849					8.75	-1.0786		
-.57	.9893					10.00	-.8423		
.00	.3748					12.50	-.9465		
.31	-.2856					15.00	-.8361		
.62	-.6762					17.50	-.8070		
1.25	-1.1279					20.00	-.7832		
1.87	-1.2126					30.00	-.7104		
2.50	-1.4373					40.00	-.6438		
3.12	-1.3352					50.00	-.6291		
3.75	-1.3335					60.00	-.5532		
4.38	-1.0690					70.00	-.5191		
5.00	-1.2723					80.00	-.4531		
6.25	-1.0961					90.00	-.4104		
7.50	-1.0118					100.00	-.2856		
8.75	-.9490					110.00	-.2415		
12.50	-.9724					314.90	-.0272		
15.00	-.8814					364.36	-.0541		
17.50	-.8478								
20.00	-.7781								
30.00	-.7372								
40.00	-.6574								
50.00	-.6236								
60.00	-.5834								
70.00	-.5162								
80.00	-.4732								
90.00	-.3973								
100.00	-.3114								
110.00	-.2333								
314.90	-.0626								
364.36	-.0501								

$M = 0.693$; mfr $= 0.617$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.8892	446.79	-.0196	314.90	-.0457	-244.08	.8867	496.25	-.0088
-223.02	.8925	496.25	-.0088	364.36	-.0377	-138.76	.8034	545.71	.0019
-201.95	.8824	545.71	-.0003			-33.43	.4163	595.17	.0096
-170.35	.8518	595.17	.0152			-13.37	.6018	661.12	.0418
-138.76	.7988	661.12	.0448			-2.67	1.0804	710.58	.0817
-117.69	.7503	710.58	.0855			.00	.5935	743.55	.1318
-96.62	.6885	743.55	.1340			.31	-.0141	760.04	.1769
-75.56	.6049	760.04	.1743			.62	-.2056	776.52	.2279
-54.49	.5170	776.52	.2206			1.25	-.6556	793.01	.3000
-43.96	.4461	793.01	.2927			1.87	-.8289		
-33.43	.4300					2.50	-.8294		
-30.08	.4011					3.12	-.7987		
-23.40	.4447					3.75	-.8242		
-13.37	.6108					4.38	-.7684		
-6.69	.8558					5.00	-.7529		
-4.35	.9919					6.25	-.7759		
-2.67	1.0872					7.50	-.7434		
-1.17	1.1235					8.75	-.7853		
-.57	1.0748					10.00	-.7472		
.00	.5880					12.50	-.7966		
.31	.0002					15.00	-.7050		
.62	-.4076					17.50	-.7211		
1.25	-.7764					20.00	-.7169		
1.87	-.8665					30.00	-.6442		
2.50	-.9672					40.00	-.6124		
3.12	-.7680					50.00	-.5739		
3.75	-.8006					60.00	-.5378		
4.38	-.7882					70.00	-.4832		
5.00	-.7905					80.00	-.4405		
6.25	-.8015					90.00	-.3827		
7.50	-.7498					100.00	-.2739		
8.75	-.7747					110.00	-.2152		
12.50	-.7756					314.90	-.0283		
15.00	-.7630					364.36	-.0392		
17.50	-.7270								
20.00	-.7055								
30.00	-.6428								
40.00	-.6173								
50.00	-.5951								
60.00	-.5445								
70.00	-.4951								
80.00	-.4310								
90.00	-.3866								
100.00	-.2850								
110.00	-.2218								
314.90	-.0477								
364.36	-.0352								

Table III. Continued

(c) Continued

$M = 0.693$; mfr $= 0.677$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.8325	446.79	-.0140	314.90	-.0416	-244.08	.8322	496.25	-.0029
-223.02	.8375	496.25	-.0046	364.36	-.0312	-138.76	.7266	545.71	.0079
-201.95	.8253	545.71	.0027			-33.43	.2042	595.17	.0203
-170.35	.7882	595.17	.0229			-13.37	.4144	661.12	.0529
-138.76	.7227	661.12	.0589			-2.67	1.0026	710.58	.0953
-117.69	.6609	710.58	.0992			.00	.7554	743.55	.1511
-96.62	.5802	743.55	.1502			.31	.2345	760.04	.1922
-75.56	.4717	760.04	.1884			.62	.0037	776.52	.2437
-54.49	.3486	776.52	.2381			1.25	-.3357	793.01	.3144
-43.96	.2524	793.01	.3084			1.87	-.6067		
-33.43	.2032					2.50	-.6149		
-30.08	.1905					3.12	-.5869		
-23.40	.2203					3.75	-.5428		
-13.37	.4186					4.38	-.5369		
-6.69	.7052					5.00	-.5551		
-4.35	.8671					6.25	-.5933		
-2.67	1.0036					7.50	-.5922		
-1.17	1.1202					8.75	-.5988		
-.57	1.1123					10.00	-.5831		
.00	.7592					12.50	-.5936		
.31	.2679					15.00	-.6601		
.62	-.0966					17.50	-.5979		
1.25	-.3879					20.00	-.6316		
1.87	-.5608					30.00	-.5808		
2.50	-.5406					40.00	-.5637		
3.12	-.5739					50.00	-.5504		
3.75	-.5566					60.00	-.5138		
4.38	-.5169					70.00	-.4659		
5.00	-.6255					80.00	-.4204		
6.25	-.5938					90.00	-.3740		
7.50	-.6289					100.00	-.2666		
8.75	-.6094					110.00	-.2089		
12.50	-.5942					314.90	-.0233		
15.00	-.5884					364.36	-.0347		
17.50	-.6285								
20.00	-.6156								
30.00	-.5769								
40.00	-.5676								
50.00	-.5296								
60.00	-.5131								
70.00	-.4725								
80.00	-.4169								
90.00	-.3665								
100.00	-.2650								
110.00	-.2089								
314.90	-.0402								
364.36	-.0277								

$M = 0.695$; mfr $= 0.744$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.7676	446.79	-.0053	314.90	-.0378	-244.08	.7622	496.25	.0032
-223.02	.7701	496.25	.0024	364.36	-.0279	-138.76	.6328	545.71	.0148
-201.95	.7579	545.71	.0101			-33.43	-.0720	595.17	.0246
-170.35	.7126	595.17	.0298			-13.37	.1580	661.12	.0619
-138.76	.6241	661.12	.0691			-2.67	.8902	710.58	.1077
-117.69	.5481	710.58	.1085			.00	.8808	743.55	.1625
-96.62	.4390	743.55	.1625			.31	.4651	760.04	.2036
-75.56	.3081	760.04	.1993			.62	.2551	776.52	.2562
-54.49	.1339	776.52	.2485			1.25	-.0810	793.01	.3264
-43.96	.0003	793.01	.3174			1.87	-.2048		
-33.43	-.0918					2.50	-.2510		
-30.08	-.1301					3.12	-.3307		
-23.40	-.1055					3.75	-.3498		
-13.37	.1495					4.38	-.3495		
-6.69	.5342					5.00	-.3502		
-4.35	.7028					6.25	-.3624		
-2.67	.8827					7.50	-.4282		
-1.17	1.0731					8.75	-.4487		
-.57	1.1221					10.00	-.4817		
.00	.9246					12.50	-.5144		
.31	.4789					15.00	-.4836		
.62	.2346					17.50	-.4902		
1.25	-.1741					20.00	-.5381		
1.87	-.2715					30.00	-.5201		
2.50	-.3457					40.00	-.5281		
3.12	-.2845					50.00	-.5244		
3.75	-.2891					60.00	-.4708		
4.38	-.3063					70.00	-.4428		
5.00	-.4112					80.00	-.3946		
6.25	-.4045					90.00	-.3502		
7.50	-.4566					100.00	-.2510		
8.75	-.5089					110.00	-.1920		
12.50	-.5410					314.90	-.0274		
15.00	-.5372					364.36	-.0303		
17.50	-.5038								
20.00	-.5026								
30.00	-.5186								
40.00	-.5238								
50.00	-.5194								
60.00	-.4852								
70.00	-.4495								
80.00	-.3907								
90.00	-.3575								
100.00	-.2524								
110.00	-.2010								
314.90	-.0378								
364.36	-.0254								

Table III. Continued

(c) Concluded

$M = 0.693$; mfr $= 0.808$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.6876	446.79	-.0061	314.90	-.0283	-244.08	.6862	496.25	.0068
-223.02	.6930	496.25	.0063	364.36	-.0223	-138.76	.5187	545.71	.0222
-201.95	.6750	545.71	.0175			-33.43	-.5254	595.17	.0325
-170.35	.6191	595.17	.0329			-13.37	-.1939	661.12	.0702
-138.76	.5110	661.12	.0719			-2.67	.7373	710.58	.1161
-117.69	.4114	710.58	.1174			.00	1.0415	743.55	.1701
-96.62	.2727	743.55	.1659			.31	.6407	760.04	.2160
-75.56	.0832	760.04	.2053			.62	.4582	776.52	.2615
-54.49	-.1619	776.52	.2533			1.25	.1804	793.01	.3284
-43.96	-.3434	793.01	.3202			1.87	.0099		
-33.43	-.4855					2.50	-.0709		
-30.08	-.5420					3.12	-.1142		
-23.40	-.5040					3.75	-.1276		
-13.37	-.1423					4.38	-.1305		
-6.69	.2656					5.00	-.2019		
-4.35	.4721					6.25	-.2586		
-2.67	.7248					7.50	-.2700		
-1.17	.9953					8.75	-.3316		
-.57	1.0996					10.00	-.3282		
.00	1.0091					12.50	-.3689		
.31	.7061					15.00	-.3916		
.62	.4051					17.50	-.4091		
1.25	.1391					20.00	-.4513		
1.87	-.0438					30.00	-.4390		
2.50	-.0602					40.00	-.4698		
3.12	-.0946					50.00	-.4537		
3.75	-.1467					60.00	-.4427		
4.38	-.1409					70.00	-.4229		
5.00	-.2312					80.00	-.3812		
6.25	-.2115					90.00	-.3330		
7.50	-.2762					100.00	-.2383		
8.75	-.3279					110.00	-.1811		
12.50	-.3632					314.90	-.0129		
15.00	-.4070					364.36	-.0228		
17.50	-.4195								
20.00	-.4244								
30.00	-.4464								
40.00	-.4497								
50.00	-.4705								
60.00	-.4448								
70.00	-.4238								
80.00	-.3738								
90.00	-.3245								
100.00	-.2432								
110.00	-.1841								
314.90	-.0332								
364.36	-.0184								

Table III. Continued

(d) $M = 0.72$

$M = 0.718$; mfr $= 0.272$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0907	446.79	-.0582	314.90	-.0829	-244.08	1.0920	496.25	-.0509
-223.02	1.0895	496.25	-.0541	364.36	-.0701	-138.76	1.0803	545.71	-.0431
-201.95	1.0875	545.71	-.0541			-33.43	1.0492	595.17	-.0525
-170.35	1.0819	595.17	-.0505			-13.37	1.1185	661.12	-.0484
-138.76	1.0763	661.12	-.0500			-2.67	.9825	710.58	-.0484
-117.69	1.0666	710.58	-.0484			.00	-.4825	743.55	-.0370
-96.62	1.0566	743.55	-.0378			.31	-1.2824	760.04	-.0227
-75.56	1.0442	760.04	-.0313			.62	-1.4993	776.52	-.0064
-54.49	1.0422	776.52	-.0231			1.25	-1.7250	793.01	.0365
-43.96	1.0429	793.01	.0165			1.87	-1.8229		
-33.43	1.0483					2.50	-1.9172		
-30.08	1.0528					3.12	-1.9743		
-23.40	1.0730					3.75	-1.9701		
-13.37	1.1154					4.38	-1.9946		
-6.69	1.1249					5.00	-1.9714		
-4.35	1.0828					6.25	-1.9380		
-2.67	.9798					7.50	-1.8950		
-1.17	.7104					8.75	-1.9069		
-.57	.4815					10.00	-1.8684		
.00	-.4499					12.50	-1.8530		
.31	-1.2519					15.00	-1.7938		
.62	-1.5134					17.50	-1.7784		
1.25	-1.7243					20.00	-1.7332		
1.87	-1.8260					30.00	-1.5614		
2.50	-1.8920					40.00	-1.4099		
3.12	-1.9564					50.00	-.6738		
3.75	-1.9806					60.00	-.4562		
4.38	-1.9781					70.00	-.4556		
5.00	-1.9713					80.00	-.4588		
6.25	-1.9496					90.00	-.4083		
7.50	-1.9162					100.00	-.3209		
8.75	-1.8912					110.00	-.2596		
12.50	-1.8405					314.90	-.0819		
15.00	-1.7956					364.36	-.0706		
17.50	-1.7383								
20.00	-1.7357								
30.00	-1.5762								
40.00	-1.4134								
50.00	-.7392								
60.00	-.5348								
70.00	-.4628								
80.00	-.4372								
90.00	-.4040								
100.00	-.3343								
110.00	-.2681								
314.90	-.0819								
364.36	-.0692								

$M = 0.718$; mfr $= 0.307$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0803	446.79	-.0534	314.90	-.0765	-244.08	1.0796	496.25	-.0481
-223.02	1.0815	496.25	-.0510	364.36	-.0646	-138.76	1.0611	545.71	-.0420
-201.95	1.0811	545.71	-.0497			-33.43	1.0151	595.17	-.0448
-170.35	1.0735	595.17	-.0432			-13.37	1.1025	661.12	-.0359
-138.76	1.0591	661.12	-.0395			-2.67	1.0187	710.58	-.0306
-117.69	1.0527	710.58	-.0375			.00	-.3822	743.55	-.0183
-96.62	1.0398	743.55	-.0248			.31	-1.2015	760.04	.0021
-75.56	1.0266	760.04	-.0118			.62	-1.2949	776.52	.0258
-54.49	1.0118	776.52	.0131			1.25	-1.6546	793.01	.0752
-43.96	1.0102	793.01	.0527			1.87	-1.8100		
-33.43	1.0210					2.50	-1.8780		
-30.08	1.0215					3.12	-1.9449		
-23.40	1.0467					3.75	-1.9381		
-13.37	1.1012					4.38	-1.9227		
-6.69	1.1286					5.00	-1.9472		
-4.35	1.0960					6.25	-1.8850		
-2.67	1.0119					7.50	-1.8753		
-1.17	.7713					8.75	-1.8590		
-.57	.5301					10.00	-1.8282		
.00	-.3965					12.50	-1.8196		
.31	-1.0850					15.00	-1.7735		
.62	-1.4042					17.50	-1.7667		
1.25	-1.6874					20.00	-1.7124		
1.87	-1.8074					30.00	-1.5474		
2.50	-1.8887					40.00	-.8533		
3.12	-1.9189					50.00	-.5662		
3.75	-1.9458					60.00	-.5038		
4.38	-1.9382					70.00	-.5015		
5.00	-1.9330					80.00	-.4721		
6.25	-1.9495					90.00	-.4192		
7.50	-1.8682					100.00	-.3244		
8.75	-1.8835					110.00	-.2618		
12.50	-1.8074					314.90	-.0741		
15.00	-1.7690					364.36	-.0698		
17.50	-1.7346								
20.00	-1.6868								
30.00	-1.5450								
40.00	-1.0698								
50.00	-.6137								
60.00	-.5110								
70.00	-.4608								
80.00	-.4756								
90.00	-.4178								
100.00	-.3279								
110.00	-.2602								
314.90	-.0798								
364.36	-.0736								

Table III. Continued

(d) Continued

$M = 0.719$; mfr $= 0.402$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0392	446.79	-.0423	314.90	-.0751	-244.08	1.0392	496.25	-.0358
-223.02	1.0424	496.25	-.0362	364.36	-.0590	-138.76	1.0050	545.71	-.0289
-201.95	1.0369	545.71	-.0309			-33.43	.8930	595.17	-.0273
-170.35	1.0265	595.17	-.0199			-13.37	1.0203	661.12	-.0126
-138.76	1.0033	661.12	-.0069			-2.67	1.1021	710.58	.0086
-117.69	.9881	710.58	.0151			.00	-.0727	743.55	.0408
-96.62	.9614	743.55	.0518			.31	-.7349	760.04	.0738
-75.56	.9358	760.04	.0786			.62	-.9203	776.52	.1129
-54.49	.9103	776.52	.1169			1.25	-1.3882	793.01	.1797
-43.96	.8939	793.01	.1821			1.87	-1.6105		
-33.43	.8952					2.50	-1.7364		
-30.08	.9011					3.12	-1.7663		
-23.40	.9262					3.75	-1.7391		
-13.37	1.0216					4.38	-1.6891		
-6.69	1.1120					5.00	-1.6899		
-4.35	1.1342					6.25	-1.6453		
-2.67	1.1068					7.50	-1.6489		
-1.17	.9366					8.75	-1.6571		
-.57	.7612					10.00	-1.6520		
.00	-.0493					12.50	-1.5596		
.31	-.6638					15.00	-1.5356		
.62	-1.1046					17.50	-1.5126		
1.25	-1.3692					20.00	-1.4603		
1.87	-1.6052					30.00	-1.0574		
2.50	-1.7566					40.00	-.6041		
3.12	-1.7582					50.00	-.6348		
3.75	-1.7305					60.00	-.6199		
4.38	-1.6996					70.00	-.5771		
5.00	-1.7172					80.00	-.5031		
6.25	-1.6803					90.00	-.4368		
7.50	-1.6281					100.00	-.3219		
8.75	-1.5984					110.00	-.2590		
12.50	-1.5779					314.90	-.0670		
15.00	-1.5493					364.36	-.0633		
17.50	-1.5033								
20.00	-1.4185								
30.00	-.9167								
40.00	-.5937								
50.00	-.6353								
60.00	-.6271								
70.00	-.5640								
80.00	-.4977								
90.00	-.4362								
100.00	-.3245								
110.00	-.2601								
314.90	-.0661								
364.36	-.0595								

$M = 0.717$; mfr $= 0.447$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0157	446.79	-.0373	314.90	-.0626	-244.08	1.0137	496.25	-.0299
-223.02	1.0177	496.25	-.0299	364.36	-.0531	-138.76	.9748	545.71	-.0217
-201.95	1.0157	545.71	-.0234			-33.43	.8280	595.17	-.0193
-170.35	.9997	595.17	-.0132			-13.37	.9667	661.12	.0003
-138.76	.9756	661.12	.0057			-2.67	1.1260	710.58	.0233
-117.69	.9527	710.58	.0367			.00	.0473	743.55	.0637
-96.62	.9227	743.55	.0764			.31	-.5825	760.04	.1002
-75.56	.8882	760.04	.1079			.62	-.8094	776.52	.1456
-54.49	.8545	776.52	.1496			1.25	-1.2711	793.01	.2180
-43.96	.8294	793.01	.2188			1.87	-1.5286		
-33.43	.8285					2.50	-1.6231		
-30.08	.8316					3.12	-1.6453		
-23.40	.8664					3.75	-1.6449		
-13.37	.9721					4.38	-1.5905		
-6.69	1.0922					5.00	-1.5932		
-4.35	1.1325					6.25	-1.5797		
-2.67	1.1263					7.50	-1.5488		
-1.17	1.0008					8.75	-1.5362		
-.57	.8299					10.00	-1.5285		
.00	.0552					12.50	-1.4859		
.31	-.5775					15.00	-1.4179		
.62	-1.0210					17.50	-1.3640		
1.25	-1.2856					20.00	-1.3518		
1.87	-1.5250					30.00	-.6368		
2.50	-1.6815					40.00	-.6984		
3.12	-1.6903					50.00	-.6803		
3.75	-1.6476					60.00	-.6228		
4.38	-1.6041					70.00	-.5662		
5.00	-1.6242					80.00	-.4955		
6.25	-1.5899					90.00	-.4298		
7.50	-1.5456					100.00	-.3149		
8.75	-1.5186					110.00	-.2544		
12.50	-1.4356					314.90	-.0579		
15.00	-1.4341					364.36	-.0560		
17.50	-1.3352								
20.00	-1.3056								
30.00	-.7078								
40.00	-.7016								
50.00	-.6835								
60.00	-.6237								
70.00	-.5594								
80.00	-.4918								
90.00	-.4324								
100.00	-.3188								
110.00	-.2516								
314.90	-.0635								
364.36	-.0503								

Table III. Continued

(d) Continued

$M = 0.719$; mfr $= 0.485$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9924	446.79	-.0307	314.90	-.0635	-244.08	.9886	496.25	-.0222
-223.02	.9924	496.25	-.0218	364.36	-.0535	-138.76	.9430	545.71	-.0116
-201.95	.9884	545.71	-.0173			-33.43	.7561	595.17	-.0103
-170.35	.9684	595.17	-.0018			-13.37	.9020	661.12	.0146
-138.76	.9384	661.12	.0223			-2.67	1.1317	710.58	.0419
-117.69	.9124	710.58	.0541			.00	.2048	743.55	.0904
-96.62	.8732	743.55	.1010			.31	-.4336	760.04	.1288
-75.56	.8301	760.04	.1325			.62	-.6287	776.52	.1782
-54.49	.7832	776.52	.1810			1.25	-1.2011	793.01	.2528
-43.96	.7548	793.01	.2536			1.87	-1.3998		
-33.43	.7516					2.50	-1.4945		
-30.08	.7516					3.12	-1.5317		
-23.40	.7769					3.75	-1.5455		
-13.37	.9074					4.38	-1.5063		
-6.69	1.0552					5.00	-1.4543		
-4.35	1.1142					6.25	-1.4346		
-2.67	1.1275					7.50	-1.3978		
-1.17	1.0486					8.75	-1.3795		
-.57	.9333					10.00	-1.2707		
.00	.2041					12.50	-1.1948		
.31	-.4065					15.00	-1.1709		
.62	-.8351					17.50	-1.0105		
1.25	-1.2112					20.00	-.7963		
1.87	-1.4070					30.00	-.7575		
2.50	-1.5767					40.00	-.7304		
3.12	-1.5461					50.00	-.6807		
3.75	-1.5522					60.00	-.6111		
4.38	-1.5083					70.00	-.5456		
5.00	-1.4762					80.00	-.4873		
6.25	-1.4516					90.00	-.4277		
7.50	-1.4142					100.00	-.3068		
8.75	-1.3431					110.00	-.2455		
12.50	-1.3483					314.90	-.0568		
15.00	-1.2461					364.36	-.0568		
17.50	-1.0599								
20.00	-1.0717								
30.00	-.7205								
40.00	-.7319								
50.00	-.6904								
60.00	-.6198								
70.00	-.5564								
80.00	-.4836								
90.00	-.4270								
100.00	-.3147								
110.00	-.2479								
314.90	-.0606								
364.36	-.0469								

$M = 0.720$; mfr $= 0.548$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9533	446.79	-.0227	314.90	-.0606	-244.08	.9545	496.25	-.0142
-223.02	.9569	496.25	-.0150	364.36	-.0483	-138.76	.8911	545.71	-.0011
-201.95	.9501	545.71	-.0077			-33.43	.6303	595.17	.0046
-170.35	.9266	595.17	.0078			-13.37	.7904	661.12	.0327
-138.76	.8854	661.12	.0363			-2.67	1.1317	710.58	.0702
-117.69	.8511	710.58	.0771			.00	.4032	743.55	.1231
-96.62	.8011	743.55	.1276			.31	-.2568	760.04	.1631
-75.56	.7439	760.04	.1647			.62	-.4472	776.52	.2144
-54.49	.6788	776.52	.2115			1.25	-1.0191	793.01	.2906
-43.96	.6425	793.01	.2841			1.87	-1.1179		
-33.43	.6249					2.50	-1.2623		
-30.08	.6209					3.12	-1.3034		
-23.40	.6465					3.75	-1.3201		
-13.37	.8003					4.38	-1.2554		
-6.69	.9949					5.00	-1.1698		
-4.35	1.0746					6.25	-1.1557		
-2.67	1.1232					7.50	-1.0362		
-1.17	1.0991					8.75	-1.0148		
-.57	1.0119					10.00	-.9523		
.00	.3897					12.50	-.9356		
.31	-.2235					15.00	-.9658		
.62	-.5934					17.50	-.8670		
1.25	-1.0701					20.00	-.8043		
1.87	-1.1613					30.00	-.7216		
2.50	-1.2951					40.00	-.6955		
3.12	-1.3043					50.00	-.6373		
3.75	-1.3244					60.00	-.5948		
4.38	-1.1947					70.00	-.5272		
5.00	-1.1951					80.00	-.4757		
6.25	-1.1279					90.00	-.3995		
7.50	-1.0565					100.00	-.2973		
8.75	-.9778					110.00	-.2281		
12.50	-1.0019					314.90	-.0257		
15.00	-1.0148					364.36	-.0493		
17.50	-.8938								
20.00	-.7894								
30.00	-.7641								
40.00	-.6858								
50.00	-.6568								
60.00	-.6082								
70.00	-.5344								
80.00	-.4651								
90.00	-.4079								
100.00	-.3026								
110.00	-.2347								
314.90	-.0606								
364.36	-.0455								

Table III. Continued

(d) Continued

$M = 0.718$; mfr $= 0.615$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9021	446.79	-.0169	314.90	-.0509	-244.08	.8992	496.25	-.0067
-223.02	.9049	496.25	-.0080	364.36	-.0396	-138.76	.8185	545.71	.0108
-201.95	.8989	545.71	.0035			-33.43	.4319	595.17	.0186
-170.35	.8705	595.17	.0190			-13.37	.6225	661.12	.0508
-138.76	.8152	661.12	.0521			-2.67	1.0922	710.58	.0921
-117.69	.7667	710.58	.0933			.00	.6088	743.55	.1484
-96.62	.7031	743.55	.1476			.31	.0375	760.04	.1905
-75.56	.6210	760.04	.1864			.62	-.2291	776.52	.2436
-54.49	.5349	776.52	.2362			1.25	-.6480	793.01	.3175
-43.96	.4648	793.01	.3061			1.87	-.7507		
-33.43	.4364					2.50	-.9710		
-30.08	.4229					3.12	-.8833		
-23.40	.4702					3.75	-.8208		
-13.37	.6288					4.38	-.7729		
-6.69	.8599					5.00	-.7512		
-4.35	.9805					6.25	-.7413		
-2.67	1.0840					7.50	-.7878		
-1.17	1.1271					8.75	-.7917		
-.57	1.0826					10.00	-.7407		
.00	.6110					12.50	-.7670		
.31	.0573					15.00	-.7163		
.62	-.3908					17.50	-.7480		
1.25	-.7668					20.00	-.7217		
1.87	-.8574					30.00	-.6778		
2.50	-.8928					40.00	-.6421		
3.12	-.8030					50.00	-.6032		
3.75	-.8239					60.00	-.5539		
4.38	-.7306					70.00	-.5069		
5.00	-.7797					80.00	-.4495		
6.25	-.7382					90.00	-.3839		
7.50	-.7253					100.00	-.2824		
8.75	-.7805					110.00	-.2189		
12.50	-.8702					314.90	-.0329		
15.00	-.7847					364.36	-.0405		
17.50	-.7435								
20.00	-.7285								
30.00	-.6834								
40.00	-.6233								
50.00	-.6202								
60.00	-.5672								
70.00	-.5046								
80.00	-.4455								
90.00	-.3856								
100.00	-.2845								
110.00	-.2165								
314.90	-.0485								
364.36	-.0334								

$M = 0.718$; mfr $= 0.674$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.8505	446.79	-.0107	314.90	-.0365	-244.08	.8482	496.25	-.0001
-223.02	.8545	496.25	-.0001	364.36	-.0271	-138.76	.7449	545.71	.0122
-201.95	.8425	545.71	.0081			-33.43	.2203	595.17	.0240
-170.35	.8095	595.17	.0285			-13.37	.4411	661.12	.0612
-138.76	.7423	661.12	.0641			-2.67	1.0146	710.58	.1066
-117.69	.6786	710.58	.1057			.00	.7851	743.55	.1629
-96.62	.5989	743.55	.1605			.31	.2640	760.04	.2074
-75.56	.4960	760.04	.1997			.62	-.0460	776.52	.2597
-54.49	.3751	776.52	.2520			1.25	-.3761	793.01	.3320
-43.96	.2861	793.01	.3202			1.87	-.6045		
-33.43	.2257					2.50	-.5231		
-30.08	.2081					3.12	-.6347		
-23.40	.2527					3.75	-.5475		
-13.37	.4199					4.38	-.5205		
-6.69	.7505					5.00	-.5444		
-4.35	.9023					6.25	-.5677		
-2.67	1.0187					7.50	-.5552		
-1.17	1.1303					8.75	-.6049		
-.57	1.1256					10.00	-.6050		
.00	.7971					12.50	-.6371		
.31	.2882					15.00	-.6290		
.62	-.0962					17.50	-.6624		
1.25	-.3737					20.00	-.6312		
1.87	-.5827					30.00	-.6317		
2.50	-.4977					40.00	-.5864		
3.12	-.5465					50.00	-.5656		
3.75	-.5589					60.00	-.5281		
4.38	-.5102					70.00	-.4905		
5.00	-.5505					80.00	-.4268		
6.25	-.6217					90.00	-.3779		
7.50	-.5656					100.00	-.2656		
8.75	-.6672					110.00	-.2088		
12.50	-.6221					314.90	-.0238		
15.00	-.6535					364.36	-.0346		
17.50	-.6499								
20.00	-.6394								
30.00	-.6378								
40.00	-.6101								
50.00	-.5714								
60.00	-.5441								
70.00	-.4819								
80.00	-.4299								
90.00	-.3822								
100.00	-.2749								
110.00	-.2071								
314.90	-.0432								
364.36	-.0304								

Table III. Continued

(d) Concluded

$M = 0.719$; mfr $= 0.742$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.7780	446.79	-.0053	314.90	-.0405	-244.08	.7786	496.25	.0069
-223.02	.7852	496.25	.0061	364.36	-.0301	-138.76	.6480	545.71	.0191
-201.95	.7704	545.71	.0175			-33.43	-.0588	595.17	.0318
-170.35	.7252	595.17	.0363			-13.37	.1497	661.12	.0730
-138.76	.6408	661.12	.0734			-2.67	.9015	710.58	.1183
-117.69	.5628	710.58	.1179			.00	.9340	743.55	.1750
-96.62	.4549	743.55	.1734			.31	.5355	760.04	.2174
-75.56	.3161	760.04	.2129			.62	.3218	776.52	.2705
-54.49	.1441	776.52	.2643			1.25	-.1133	793.01	.3398
-43.96	.0137	793.01	.3304			1.87	-.2644		
-33.43	-.0840					2.50	-.3113		
-30.08	-.1110					3.12	-.3240		
-23.40	-.0624					3.75	-.3321		
-13.37	.2100					4.38	-.3121		
-6.69	.5069					5.00	-.3384		
-4.35	.7239					6.25	-.3980		
-2.67	.9052					7.50	-.4060		
-1.17	1.0951					8.75	-.4508		
-.57	1.1310					10.00	-.4413		
.00	.8933					12.50	-.5316		
.31	.4864					15.00	-.5081		
.62	.1669					17.50	-.5217		
1.25	-.0683					20.00	-.5330		
1.87	-.2842					30.00	-.5393		
2.50	-.3270					40.00	-.5551		
3.12	-.3094					50.00	-.5325		
3.75	-.3358					60.00	-.5041		
4.38	-.3238					70.00	-.4593		
5.00	-.3574					80.00	-.4151		
6.25	-.4165					90.00	-.3618		
7.50	-.3972					100.00	-.2555		
8.75	-.4382					110.00	-.1965		
12.50	-.5050					314.90	-.0212		
15.00	-.5404					364.36	-.0235		
17.50	-.5243								
20.00	-.5465								
30.00	-.5540								
40.00	-.5437								
50.00	-.5359								
60.00	-.5187								
70.00	-.4639								
80.00	-.4060								
90.00	-.3586								
100.00	-.2503								
110.00	-.1978								
314.90	-.0344								
364.36	-.0202								

$M = 0.720$; mfr $= 0.808$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.7014	446.79	.0033	314.90	-.0240	-244.08	.7032	496.25	.0033
-223.02	.7098	496.25	.0155	364.36	-.0216	-138.76	.5319	545.71	.0204
-201.95	.6883	545.71	.0167			-33.43	-.5602	595.17	.0367
-170.35	.6336	595.17	.0294			-13.37	-.1851	661.12	.0766
-138.76	.5261	661.12	.0676			-2.67	.7234	710.58	.1292
-117.69	.4299	710.58	.1157			.00	1.0425	743.55	.1813
-96.62	.2897	743.55	.1727			.31	.6834	760.04	.2265
-75.56	.0936	760.04	.2127			.62	.5005	776.52	.2750
-54.49	-.1559	776.52	.2603			1.25	.2055	793.01	.3446
-43.96	-.3608	793.01	.3263			1.87	.0123		
-33.43	-.5169					2.50	-.0970		
-30.08	-.5913					3.12	-.1636		
-23.40	-.5142					3.75	-.1248		
-13.37	-.1491					4.38	-.1556		
-6.69	.2860					5.00	-.1761		
-4.35	.5010					6.25	-.2136		
-2.67	.7572					7.50	-.2304		
-1.17	1.0156					8.75	-.2829		
-.57	1.1123					10.00	-.3311		
.00	1.0413					12.50	-.3685		
.31	.7454					15.00	-.3838		
.62	.4331					17.50	-.4028		
1.25	.1767					20.00	-.4497		
1.87	.0130					30.00	-.4524		
2.50	-.0481					40.00	-.4889		
3.12	-.1008					50.00	-.4844		
3.75	-.1072					60.00	-.4610		
4.38	-.1507					70.00	-.4258		
5.00	-.2006					80.00	-.3838		
6.25	-.2098					90.00	-.3374		
7.50	-.2637					100.00	-.2309		
8.75	-.3252					110.00	-.1783		
12.50	-.3528					314.90	-.0047		
15.00	-.4101					364.36	-.0216		
17.50	-.4354								
20.00	-.4294								
30.00	-.4684								
40.00	-.4802								
50.00	-.4904								
60.00	-.4633								
70.00	-.4258								
80.00	-.3781								
90.00	-.3372								
100.00	-.2367								
110.00	-.1803								
314.90	-.0245								
364.36	-.0150								

Table III. Continued

(e) $M = 0.74$

$M = 0.742$; mfr $= 0.273$; $\alpha = 0°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0992	446.79	-.0612	314.90	-.0929	-244.08	1.1024	496.25	-.0483
-223.02	1.1003	496.25	-.0561	364.36	-.0794	-138.76	1.0882	545.71	-.0440
-201.95	1.1000	545.71	-.0542			-33.43	1.0567	595.17	-.0456
-170.35	1.0957	595.17	-.0503			-13.37	1.1291	661.12	-.0440
-138.76	1.0839	661.12	-.0491			-2.67	.9997	710.58	-.0417
-117.69	1.0781	710.58	-.0468			.00	-.4117	743.55	-.0288
-96.62	1.0670	743.55	-.0405			.31	-1.2064	760.04	-.0116
-75.56	1.0574	760.04	-.0296			.62	-1.3601	776.52	.0025
-54.49	1.0471	776.52	-.0139			1.25	-1.6051	793.01	.0428
-43.96	1.0485	793.01	.0275			1.87	-1.7206		
-33.43	1.0597					2.50	-1.7981		
-30.08	1.0640					3.12	-1.8628		
-23.40	1.0830					3.75	-1.8605		
-13.37	1.1287					4.38	-1.8737		
-6.69	1.1202					5.00	-1.8605		
-4.35	1.0799					6.25	-1.8619		
-2.67	.9785					7.50	-1.8033		
-1.17	.7155					8.75	-1.8010		
-.57	.4914					10.00	-1.7765		
.00	-.4365					12.50	-1.7293		
.31	-1.1216					15.00	-1.7033		
.62	-1.4044					17.50	-1.6704		
1.25	-1.6078					20.00	-1.6522		
1.87	-1.7053					30.00	-1.5046		
2.50	-1.7943					40.00	-1.4206		
3.12	-1.8359					50.00	-1.3384		
3.75	-1.8579					60.00	-.7136		
4.38	-1.8621					70.00	-.5357		
5.00	-1.8509					80.00	-.3950		
6.25	-1.8328					90.00	-.3435		
7.50	-1.8124					100.00	-.2768		
8.75	-1.7966					110.00	-.2259		
12.50	-1.7180					314.90	-.0911		
15.00	-1.7224					364.36	-.0907		
17.50	-1.6475								
20.00	-1.6443								
30.00	-1.5100								
40.00	-1.4504								
50.00	-1.3589								
60.00	-.7595								
70.00	-.5357								
80.00	-.4054								
90.00	-.3371								
100.00	-.2988								
110.00	-.2295								
314.90	-.0920								
364.36	-.0812								

$M = 0.743$; mfr $= 0.277$; $\alpha = 1.0°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1000	446.79	-.0536	314.90	-.0708	-244.08	.9733	496.25	-.0528
-223.02	1.1023	496.25	-.0520	364.36	-.0600	-138.76	.9574	545.71	-.0465
-201.95	1.1008	545.71	-.0528			-33.43	.9207	595.17	-.0473
-170.35	1.0970	595.17	-.0508			-13.37	.9918	661.12	-.0442
-138.76	1.0867	661.12	-.0508			-2.67	.8949	710.58	-.0383
-117.69	1.0775	710.58	-.0465			.00	-.3229	743.55	-.0270
-96.62	1.0702	743.55	-.0411			.31	-1.2463	760.04	-.0102
-75.56	1.0599	760.04	-.0360			.62	-1.2013	776.52	.0101
-54.49	1.0545	776.52	-.0262			1.25	-1.6592	793.01	.0561
-43.96	.9272	793.01	.0089			1.87	-1.6555		
-33.43	.9388					2.50	-1.8641		
-30.08	.9410					3.12	-1.7903		
-23.40	.9565					3.75	-1.9350		
-13.37	1.0039					4.38	-1.7858		
-6.69	1.1409					5.00	-1.9254		
-4.35	1.0930					6.25	-1.7646		
-2.67	.9818					7.50	-1.8632		
-1.17	.6989					8.75	-1.7028		
-.57	.4570					10.00	-1.8334		
.00	-.4999					12.50	-1.8131		
.31	-1.2132					15.00	-1.7603		
.62	-1.4748					17.50	-1.7240		
1.25	-1.6729					20.00	-1.7193		
1.87	-1.7722					30.00	-1.5533		
2.50	-1.8706					40.00	-1.4629		
3.12	-1.8891					50.00	-1.3657		
3.75	-1.8899					60.00	-.7224		
4.38	-1.9033					70.00	-.5754		
5.00	-1.8983					80.00	-.5482		
6.25	-1.8983					90.00	-.5058		
7.50	-1.8726					100.00	-.4332		
8.75	-1.8629					110.00	-.3728		
12.50	-1.8091					314.90	-.0681		
15.00	-1.7623					364.36	-.0645		
17.50	-1.7333								
20.00	-1.6776								
30.00	-1.5775								
40.00	-1.4782								
50.00	-1.1428								
60.00	-.8473								
70.00	-.9026								
80.00	-.5461								
90.00	-.3375								
100.00	-.2489								
110.00	-.2129								
314.90	-.0726								
364.36	-.0600								

Table III. Continued

(e) Continued

$M = 0.742$; mfr $= 0.276$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1032	446.79	-.0526	314.90	-.0831	-244.08	1.0987	496.25	-.0526
-223.02	1.1021	496.25	-.0530	364.36	-.0714	-138.76	1.0866	545.71	-.0479
-201.95	1.1006	545.71	-.0557			-33.43	1.0384	595.17	-.0506
-170.35	1.0986	595.17	-.0538			-13.37	1.1138	661.12	-.0436
-138.76	1.0864	661.12	-.0491			-2.67	1.0431	710.58	-.0424
-117.69	1.0806	710.58	-.0522			.00	-.2260	743.55	-.0260
-96.62	1.0730	743.55	-.0483			.31	-.9749	760.04	-.0073
-75.56	1.0657	760.04	-.0452			.62	-1.0835	776.52	.0169
-54.49	1.0623	776.52	-.0409			1.25	-1.4538	793.01	.0658
-43.96	1.0608	793.01	-.0057			1.87	-1.5975		
-33.43	1.0720					2.50	-1.6861		
-30.08	1.0780					3.12	-1.7279		
-23.40	1.0970					3.75	-1.7466		
-13.37	1.1384					4.38	-1.7243		
-6.69	1.1285					5.00	-1.7293		
-4.35	1.0706					6.25	-1.7144		
-2.67	.9503					7.50	-1.6640		
-1.17	.6419					8.75	-1.6395		
-.57	.3768					10.00	-1.6199		
.00	-.5967					12.50	-1.6009		
.31	-1.3336					15.00	-1.5546		
.62	-1.5877					17.50	-1.5027		
1.25	-1.7463					20.00	-1.4975		
1.87	-1.8460					30.00	-1.3426		
2.50	-1.9291					40.00	-1.1990		
3.12	-1.9496					50.00	-.6483		
3.75	-1.9665					60.00	-.5021		
4.38	-1.9549					70.00	-.5030		
5.00	-1.9465					80.00	-.4666		
6.25	-1.9449					90.00	-.4307		
7.50	-1.9365					100.00	-.3165		
8.75	-1.9137					110.00	-.2535		
12.50	-1.8880					314.90	-.0705		
15.00	-1.8317					364.36	-.0659		
17.50	-1.8317								
20.00	-1.7794								
30.00	-1.6781								
40.00	-1.2049								
50.00	-.9755								
60.00	-.9428								
70.00	-.8828								
80.00	-.7040								
90.00	-.5016								
100.00	-.3805								
110.00	-.2799								
314.90	-.0754								
364.36	-.0691								

$M = 0.744$; mfr $= 0.272$; $\alpha = 3.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1014	446.79	-.0299	314.90	-.0968	-244.08	1.1047	496.25	-.0544
-223.02	1.1045	496.25	-.0322	364.36	-.0819	-138.76	1.0884	545.71	-.0478
-201.95	1.1029	545.71	-.0400			-33.43	1.0377	595.17	-.0470
-170.35	1.0984	595.17	-.0392			-13.37	1.1103	661.12	-.0423
-138.76	1.0888	661.12	-.0466			-2.67	1.0613	710.58	-.0349
-117.69	1.0820	710.58	-.0552			.00	-.1702	743.55	-.0209
-96.62	1.0739	743.55	-.0564			.31	-.8791	760.04	-.0002
-75.56	1.0678	760.04	-.0552			.62	-1.0028	776.52	.0247
-54.49	1.0636	776.52	-.0525			1.25	-1.4033	793.01	.0831
-43.96	1.0674	793.01	-.0252			1.87	-1.5735		
-33.43	1.0820					2.50	-1.6443		
-30.08	1.0850					3.12	-1.6955		
-23.40	1.1026					3.75	-1.6792		
-13.37	1.1395					4.38	-1.6667		
-6.69	1.1252					5.00	-1.6464		
-4.35	1.0625					6.25	-1.6127		
-2.67	.9404					7.50	-1.5676		
-1.17	.6501					8.75	-1.5826		
-.57	.4054					10.00	-1.5382		
.00	-.4925					12.50	-1.5158		
.31	-1.0132					15.00	-1.4426		
.62	-.6944					17.50	-1.4245		
1.25	-.6994					20.00	-1.4081		
1.87	-.6610					30.00	-1.2322		
2.50	-.6499					40.00	-1.1153		
3.12	-.6346					50.00	-.5389		
3.75	-.6235					60.00	-.5652		
4.38	-.6802					70.00	-.5544		
5.00	-.6300					80.00	-.4992		
6.25	-.6104					90.00	-.4402		
7.50	-.6165					100.00	-.3216		
8.75	-.6664					110.00	-.2584		
12.50	-.5981					314.90	-.0756		
15.00	-.5765					364.36	-.0688		
17.50	-.6779								
20.00	-.6570								
30.00	-.7255								
40.00	-.6575								
50.00	-.6181								
60.00	-.7006								
70.00	-.7019								
80.00	-.7258								
90.00	-.7389								
100.00	-.7406								
110.00	-.7301								
314.90	-.0427								
364.36	-.0143								

Table III. Continued

(e) Continued

$M = 0.743$; mfr $= 0.315$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0888	446.79	-.0468	314.90	-.0751	-244.08	1.0872	496.25	-.0464
-223.02	1.0884	496.25	-.0444	364.36	-.0643	-138.76	1.0696	545.71	-.0436
-201.95	1.0861	545.71	-.0468			-33.43	1.0175	595.17	-.0468
-170.35	1.0792	595.17	-.0409			-13.37	1.1031	661.12	-.0413
-138.76	1.0689	661.12	-.0339			-2.67	1.0506	710.58	-.0347
-117.69	1.0555	710.58	-.0206			.00	-.3127	743.55	-.0155
-96.62	1.0437	743.55	.0008			.31	-1.0594	760.04	.0051
-75.56	1.0284	760.04	.0164			.62	-1.1565	776.52	.0332
-54.49	1.0169	776.52	.0469			1.25	-1.5058	793.01	.0867
-43.96	1.0097	793.01	.0933			1.87	-1.6659		
-33.43	1.0162					2.50	-1.7443		
-30.08	1.0209					3.12	-1.7691		
-23.40	1.0420					3.75	-1.7880		
-13.37	1.1057					4.38	-1.7696		
-6.69	1.1451					5.00	-1.7919		
-4.35	1.1248					6.25	-1.7560		
-2.67	1.0548					7.50	-1.7249		
-1.17	.8154					8.75	-1.7029		
-.57	.5998					10.00	-1.7063		
.00	-.2871					12.50	-1.6722		
.31	-.9666					15.00	-1.6493		
.62	-1.2220					17.50	-1.6203		
1.25	-1.5270					20.00	-1.6052		
1.87	-1.6635					30.00	-1.4427		
2.50	-1.7362					40.00	-1.3779		
3.12	-1.7685					50.00	-1.3334		
3.75	-1.7477					60.00	-.6251		
4.38	-1.7712					70.00	-.4514		
5.00	-1.7904					80.00	-.3927		
6.25	-1.7639					90.00	-.3598		
7.50	-1.7566					100.00	-.2821		
8.75	-1.7181					110.00	-.2377		
12.50	-1.6739					314.90	-.0706		
15.00	-1.6177					364.36	-.0652		
17.50	-1.5908								
20.00	-1.5649								
30.00	-1.4478								
40.00	-1.3670								
50.00	-1.1151								
60.00	-.6093								
70.00	-.4523								
80.00	-.3983								
90.00	-.3652								
100.00	-.2933								
110.00	-.2427								
314.90	-.0729								
364.36	-.0611								

$M = 0.743$; mfr $= 0.402$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0505	446.79	-.0388	314.90	-.0658	-244.08	1.0484	496.25	-.0294
-223.02	1.0505	496.25	-.0310	364.36	-.0554	-138.76	1.0174	545.71	-.0238
-201.95	1.0471	545.71	-.0231			-33.43	.9097	595.17	-.0234
-170.35	1.0371	595.17	-.0168			-13.37	1.0295	661.12	-.0082
-138.76	1.0172	661.12	.0043			-2.67	1.1177	710.58	.0164
-117.69	.9985	710.58	.0277			.00	-.0310	743.55	.0542
-96.62	.9752	743.55	.0643			.31	-.6781	760.04	.0874
-75.56	.9507	760.04	.0967			.62	-.8767	776.52	.1287
-54.49	.9216	776.52	.1381			1.25	-1.2771	793.01	.1958
-43.96	.9071	793.01	.2033			1.87	-1.4944		
-33.43	.9105					2.50	-1.6146		
-30.08	.9140					3.12	-1.6374		
-23.40	.9411					3.75	-1.6254		
-13.37	1.0368					4.38	-1.5882		
-6.69	1.1293					5.00	-1.5718		
-4.35	1.1446					6.25	-1.5597		
-2.67	1.1203					7.50	-1.5213		
-1.17	.9603					8.75	-1.5448		
-.57	.7950					10.00	-1.5584		
.00	-.0199					12.50	-1.5208		
.31	-.6223					15.00	-1.4841		
.62	-1.0200					17.50	-1.4128		
1.25	-1.2735					20.00	-1.3972		
1.87	-1.4919					30.00	-1.3035		
2.50	-1.6316					40.00	-1.1608		
3.12	-1.6397					50.00	-.5787		
3.75	-1.6174					60.00	-.5195		
4.38	-1.5943					70.00	-.5208		
5.00	-1.6062					80.00	-.4849		
6.25	-1.5739					90.00	-.4158		
7.50	-1.5739					100.00	-.3142		
8.75	-1.5492					110.00	-.2487		
12.50	-1.4892					314.90	-.0604		
15.00	-1.4515					364.36	-.0636		
17.50	-1.4231								
20.00	-1.3763								
30.00	-1.3208								
40.00	-1.2185								
50.00	-.5461								
60.00	-.5134								
70.00	-.5233								
80.00	-.4814								
90.00	-.4165								
100.00	-.3106								
110.00	-.2505								
314.90	-.0667								
364.36	-.0532								

Table III. Continued

(e) Continued

$M = 0.742$; mfr $= 0.445$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0282	446.79	-.0393	314.90	-.0585	-244.08	1.0259	496.25	-.0264
-223.02	1.0293	496.25	-.0280	364.36	-.0526	-138.76	.9875	545.71	-.0166
-201.95	1.0259	545.71	-.0233			-33.43	.8425	595.17	-.0131
-170.35	1.0128	595.17	-.0084			-13.37	.9784	661.12	.0076
-138.76	.9860	661.12	.0185			-2.67	1.1345	710.58	.0365
-117.69	.9650	710.58	.0447			.00	.1193	743.55	.0803
-96.62	.9347	743.55	.0924			.31	-.5332	760.04	.1170
-75.56	.9021	760.04	.1233			.62	-.7415	776.52	.1648
-54.49	.8719	776.52	.1683			1.25	-1.1985	793.01	.2363
-43.96	.8455	793.01	.2375			1.87	-1.4220		
-33.43	.8425					2.50	-1.5027		
-30.08	.8464					3.12	-1.5398		
-23.40	.8744					3.75	-1.5356		
-13.37	.9888					4.38	-1.4865		
-6.69	1.1032					5.00	-1.4867		
-4.35	1.1416					6.25	-1.4847		
-2.67	1.1357					7.50	-1.4594		
-1.17	1.0157					8.75	-1.4617		
-.57	.8678					10.00	-1.4473		
.00	.0971					12.50	-1.4014		
.31	-.4978					15.00	-1.3815		
.62	-.8976					17.50	-1.3261		
1.25	-1.1804					20.00	-1.2941		
1.87	-1.4088					30.00	-1.1716		
2.50	-1.5652					40.00	-.6734		
3.12	-1.5710					50.00	-.6163		
3.75	-1.5644					60.00	-.6120		
4.38	-1.5047					70.00	-.5661		
5.00	-1.5182					80.00	-.4990		
6.25	-1.4862					90.00	-.4332		
7.50	-1.4705					100.00	-.3150		
8.75	-1.4331					110.00	-.2481		
12.50	-1.4119					314.90	-.0607		
15.00	-1.3651					364.36	-.0598		
17.50	-1.3487								
20.00	-1.2798								
30.00	-1.1704								
40.00	-.6607								
50.00	-.6272								
60.00	-.6170								
70.00	-.5627								
80.00	-.4825								
90.00	-.4284								
100.00	-.3105								
110.00	-.2488								
314.90	-.0594								
364.36	-.0471								

$M = 0.741$; mfr $= 0.488$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0025	446.79	-.0256	314.90	-.0594	-244.08	1.0008	496.25	-.0202
-223.02	1.0040	496.25	-.0202	364.36	-.0449	-138.76	.9532	545.71	-.0096
-201.95	.9987	545.71	-.0131			-33.43	.7613	595.17	-.0049
-170.35	.9829	595.17	-.0014			-13.37	.9134	661.12	.0198
-138.76	.9515	661.12	.0268			-2.67	1.1395	710.58	.0539
-117.69	.9246	710.58	.0644			.00	.2249	743.55	.1052
-96.62	.8885	743.55	.1134			.31	-.3789	760.04	.1463
-75.56	.8474	760.04	.1486			.62	-.6199	776.52	.1968
-54.49	.8059	776.52	.1972			1.25	-1.0862	793.01	.2692
-43.96	.7691	793.01	.2669			1.87	-1.2777		
-33.43	.7604					2.50	-1.3678		
-30.08	.7535					3.12	-1.4306		
-23.40	.7933					3.75	-1.4497		
-13.37	.9130					4.38	-1.3749		
-6.69	1.0646					5.00	-1.4068		
-4.35	1.1145					6.25	-1.3700		
-2.67	1.1390					7.50	-1.3465		
-1.17	1.0742					8.75	-1.3338		
-.57	.9322					10.00	-1.2398		
.00	.2581					12.50	-1.2251		
.31	-.3322					15.00	-1.2589		
.62	-.7644					17.50	-1.2086		
1.25	-1.1122					20.00	-.9748		
1.87	-1.3372					30.00	-.8555		
2.50	-1.4480					40.00	-.6773		
3.12	-1.4083					50.00	-.6981		
3.75	-1.4526					60.00	-.6335		
4.38	-1.3890					70.00	-.5654		
5.00	-1.4272					80.00	-.4995		
6.25	-1.3040					90.00	-.4253		
7.50	-1.2986					100.00	-.3130		
8.75	-1.2855					110.00	-.2412		
12.50	-1.2180					314.90	-.0590		
15.00	-1.2057					364.36	-.0517		
17.50	-1.1678								
20.00	-1.2003								
30.00	-1.0933								
40.00	-.6466								
50.00	-.7000								
60.00	-.6398								
70.00	-.5697								
80.00	-.4901								
90.00	-.4294								
100.00	-.3146								
110.00	-.2463								
314.90	-.0571								
364.36	-.0467								

Table III. Continued

(e) Continued

$M = 0.742$; mfr $= 0.489$; $\alpha = 1.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0028	446.79	-.0231	314.90	-.0605	-244.08	1.0054	496.25	-.0204
-223.02	1.0066	496.25	-.0169	364.36	-.0438	-138.76	.9548	545.71	-.0083
-201.95	1.0001	545.71	-.0094			-33.43	.7456	595.17	-.0016
-170.35	.9829	595.17	.0023			-13.37	.8724	661.12	.0226
-138.76	.9545	661.12	.0304			-2.67	1.1430	710.58	.0582
-117.69	.9269	710.58	.0652			.00	.3083	743.55	.1067
-96.62	.8921	743.55	.1153			.31	-.2508	760.04	.1454
-75.56	.8537	760.04	.1504			.62	-.5157	776.52	.1977
-54.49	.8134	776.52	.1958			1.25	-1.0065	793.01	.2763
-43.96	.7896	793.01	.2618			1.87	-1.1795		
-33.43	.7917					2.50	-1.2633		
-30.08	.7883					3.12	-1.3218		
-23.40	.8168					3.75	-1.3317		
-13.37	.9466					4.38	-1.3073		
-6.69	1.0814					5.00	-1.2992		
-4.35	1.1312					6.25	-1.2310		
-2.67	1.1393					7.50	-1.0909		
-1.17	1.0389					8.75	-1.0730		
-.57	.8904					10.00	-1.0636		
.00	.1723					12.50	-.9714		
.31	-.4578					15.00	-.9688		
.62	-.8496					17.50	-.9350		
1.25	-1.1629					20.00	-.9229		
1.87	-1.3933					30.00	-.7037		
2.50	-1.5269					40.00	-.7356		
3.12	-1.5451					50.00	-.6916		
3.75	-1.5246					60.00	-.6140		
4.38	-1.5007					70.00	-.5575		
5.00	-1.4869					80.00	-.4876		
6.25	-1.4337					90.00	-.4212		
7.50	-1.4430					100.00	-.2965		
8.75	-1.4017					110.00	-.2318		
12.50	-1.4029					314.90	-.0556		
15.00	-1.3809					364.36	-.0524		
17.50	-1.3447								
20.00	-1.3096								
30.00	-1.1783								
40.00	-.8512								
50.00	-.5741								
60.00	-.6088								
70.00	-.5510								
80.00	-.4855								
90.00	-.4235								
100.00	-.3135								
110.00	-.2453								
314.90	-.0632								
364.36	-.0470								

$M = 0.742$; mfr $= 0.487$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0034	446.79	-.0162	314.90	-.0598	-244.08	1.0017	496.25	-.0237
-223.02	1.0053	496.25	-.0143	364.36	-.0498	-138.76	.9524	545.71	-.0100
-201.95	.9988	545.71	-.0088			-33.43	.7181	595.17	-.0022
-170.35	.9842	595.17	.0029			-13.37	.8553	661.12	.0209
-138.76	.9520	661.12	.0311			-2.67	1.1372	710.58	.0542
-117.69	.9286	710.58	.0667			.00	.4138	743.55	.1046
-96.62	.8972	743.55	.1152			.31	-.1648	760.04	.1468
-75.56	.8581	760.04	.1457			.62	-.3878	776.52	.1988
-54.49	.8204	776.52	.1914			1.25	-.8598	793.01	.2825
-43.96	.7953	793.01	.2446			1.87	-.9651		
-33.43	.8005					2.50	-1.1443		
-30.08	.8044					3.12	-1.1828		
-23.40	.8458					3.75	-1.2090		
-13.37	.9653					4.38	-1.1412		
-6.69	1.0976					5.00	-1.0755		
-4.35	1.1388					6.25	-.9497		
-2.67	1.1333					7.50	-.8901		
-1.17	1.0120					8.75	-.8205		
-.57	.8531					10.00	-.8577		
.00	.0871					12.50	-.8681		
.31	-.5499					15.00	-.8802		
.62	-.9788					17.50	-.8624		
1.25	-1.2522					20.00	-.7706		
1.87	-1.4472					30.00	-.7013		
2.50	-1.6013					40.00	-.6845		
3.12	-1.6060					50.00	-.6580		
3.75	-1.5986					60.00	-.5922		
4.38	-1.5532					70.00	-.5390		
5.00	-1.5801					80.00	-.4740		
6.25	-1.5431					90.00	-.4069		
7.50	-1.5296					100.00	-.2917		
8.75	-1.5150					110.00	-.2278		
12.50	-1.4938					314.90	-.0512		
15.00	-1.4818					364.36	-.0453		
17.50	-1.4237								
20.00	-1.3793								
30.00	-1.3211								
40.00	-1.2095								
50.00	-.5622								
60.00	-.5305								
70.00	-.5190								
80.00	-.4695								
90.00	-.4188								
100.00	-.3060								
110.00	-.2441								
314.90	-.0571								
364.36	-.0475								

Table III. Continued

(e) Continued

$M = 0.743$; mfr $= 0.491$; $\alpha = 3.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0030	446.79	-.0036	314.90	-.0713	-244.08	1.0003	496.25	-.0188
-223.02	1.0053	496.25	-.0052	364.36	-.0604	-138.76	.9494	545.71	-.0130
-201.95	1.0011	545.71	-.0013			-33.43	.6932	595.17	-.0079
-170.35	.9854	595.17	.0124			-13.37	.8129	661.12	.0221
-138.76	.9533	661.12	.0405			-2.67	1.1316	710.58	.0553
-117.69	.9307	710.58	.0748			.00	.5269	743.55	.1029
-96.62	.8963	743.55	.1185			.31	.0003	760.04	.1466
-75.56	.8615	760.04	.1494			.62	-.2805	776.52	.1989
-54.49	.8304	776.52	.1864			1.25	-.6902	793.01	.2852
-43.96	.8099	793.01	.2352			1.87	-.8656		
-33.43	.8159					2.50	-1.0528		
-30.08	.8267					3.12	-.8918		
-23.40	.8607					3.75	-.8479		
-13.37	.9857					4.38	-.8052		
-6.69	1.1135					5.00	-.7196		
-4.35	1.1415					6.25	-.6903		
-2.67	1.1280					7.50	-.6885		
-1.17	.9753					8.75	-.7430		
-.57	.8117					10.00	-.7101		
.00	.0171					12.50	-.8151		
.31	-.6540					15.00	-.7814		
.62	-1.0294					17.50	-.6889		
1.25	-1.2987					20.00	-.6772		
1.87	-1.5064					30.00	-.6483		
2.50	-1.6410					40.00	-.6327		
3.12	-1.6645					50.00	-.6197		
3.75	-1.6526					60.00	-.5683		
4.38	-1.6291					70.00	-.5286		
5.00	-1.6472					80.00	-.4603		
6.25	-1.6595					90.00	-.3955		
7.50	-1.6156					100.00	-.2857		
8.75	-1.6214					110.00	-.2194		
12.50	-1.5814					314.90	-.0523		
15.00	-1.5423					364.36	-.0496		
17.50	-1.5437								
20.00	-1.5225								
30.00	-1.4180								
40.00	-1.3633								
50.00	-.8986								
60.00	-.6127								
70.00	-.4547								
80.00	-.4049								
90.00	-.3675								
100.00	-.2999								
110.00	-.2366								
314.90	-.0586								
364.36	-.0519								

$M = 0.744$; mfr $= 0.489$; $\alpha = 4.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0015	446.79	.0021	314.90	-.0694	-244.08	1.0006	496.25	-.0228
-223.02	1.0060	496.25	-.0037	364.36	-.0595	-138.76	.9472	545.71	-.0080
-201.95	1.0018	545.71	-.0002			-33.43	.6743	595.17	-.0053
-170.35	.9873	595.17	.0115			-13.37	.7856	661.12	.0216
-138.76	.9560	661.12	.0368			-2.67	1.1197	710.58	.0555
-117.69	.9316	710.58	.0711			.00	.6030	743.55	.1046
-96.62	.9026	743.55	.1143			.31	.0816	760.04	.1478
-75.56	.8659	760.04	.1392			.62	-.1010	776.52	.2039
-54.49	.8345	776.52	.1735			1.25	-.4559	793.01	.2888
-43.96	.8234	793.01	.2156			1.87	-.6341		
-33.43	.8380					2.50	-.7410		
-30.08	.8359					3.12	-.6836		
-23.40	.8849					3.75	-.6452		
-13.37	1.0084					4.38	-.5536		
-6.69	1.1226					5.00	-.5443		
-4.35	1.1411					6.25	-.5612		
-2.67	1.1158					7.50	-.6043		
-1.17	.9598					8.75	-.6152		
-.57	.7506					10.00	-.5836		
.00	-.0800					12.50	-.6457		
.31	-.7088					15.00	-.5922		
.62	-1.0794					17.50	-.5844		
1.25	-1.3903					20.00	-.6353		
1.87	-1.5842					30.00	-.5814		
2.50	-1.6813					40.00	-.5784		
3.12	-1.6878					50.00	-.5792		
3.75	-1.7017					60.00	-.5288		
4.38	-1.6875					70.00	-.4904		
5.00	-1.6951					80.00	-.4468		
6.25	-1.6967					90.00	-.3834		
7.50	-1.6955					100.00	-.2790		
8.75	-1.6752					110.00	-.2116		
12.50	-1.6422					314.90	-.0446		
15.00	-1.6120					364.36	-.0351		
17.50	-1.6015								
20.00	-1.5917								
30.00	-1.4763								
40.00	-1.4197								
50.00	-.9357								
60.00	-.7641								
70.00	-.5322								
80.00	-.3835								
90.00	-.3280								
100.00	-.2611								
110.00	-.2193								
314.90	-.0541								
364.36	-.0464								

Table III. Continued

(e) Continued

$M = 0.743$; mfr $= 0.561$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9647	446.79	-.0178	314.90	-.0587	-244.08	1.0021	496.25	-.0053
-223.02	.9701	496.25	-.0088	364.36	-.0492	-138.76	.9379	545.71	.0080
-201.95	.9628	545.71	.0025			-33.43	.6761	595.17	.0126
-170.35	.9425	595.17	.0173			-13.37	.8389	661.12	.0419
-138.76	.8989	661.12	.0489			-2.67	1.1705	710.58	.0821
-117.69	.8634	710.58	.0883			.00	.4116	743.55	.1328
-96.62	.8166	743.55	.1430			.31	-.1584	760.04	.1789
-75.56	.7630	760.04	.1789			.62	-.4171	776.52	.2316
-54.49	.6988	776.52	.2300			1.25	-.8767	793.01	.3057
-43.96	.6847	793.01	.3053			1.87	-1.0153		
-33.43	.6787					2.50	-1.1568		
-30.08	.6688					3.12	-1.2199		
-23.40	.6959					3.75	-1.2316		
-13.37	.8531					4.38	-1.2348		
-6.69	1.0081					5.00	-1.1495		
-4.35	1.0794					6.25	-1.1221		
-2.67	1.1332					7.50	-1.0361		
-1.17	1.1133					8.75	-.8850		
-.57	1.0130					10.00	-.8866		
.00	.4131					12.50	-.9476		
.31	-.1768					15.00	-.9074		
.62	-.5230					17.50	-.9164		
1.25	-.9784					20.00	-.9113		
1.87	-1.0873					30.00	-.6805		
2.50	-1.2581					40.00	-.7142		
3.12	-1.2158					50.00	-.6611		
3.75	-1.2388					60.00	-.5824		
4.38	-1.2265					70.00	-.5250		
5.00	-1.2346					80.00	-.4464		
6.25	-1.0973					90.00	-.3853		
7.50	-1.0831					100.00	-.2647		
8.75	-.9818					110.00	-.1976		
12.50	-1.0095					314.90	-.0302		
15.00	-.9879					364.36	-.0524		
17.50	-.9638								
20.00	-.9792								
30.00	-.7196								
40.00	-.7358								
50.00	-.6826								
60.00	-.6389								
70.00	-.5111								
80.00	-.4843								
90.00	-.4150								
100.00	-.3017								
110.00	-.2292								
314.90	-.0614								
364.36	-.0487								

$M = 0.743$; mfr $= 0.616$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9169	446.79	-.0154	314.90	-.0446	-244.08	.9152	496.25	-.0037
-223.02	.9211	496.25	-.0040	364.36	-.0351	-138.76	.8333	545.71	.0124
-201.95	.9116	545.71	.0081			-33.43	.4432	595.17	.0198
-170.35	.8836	595.17	.0245			-13.37	.6273	661.12	.0557
-138.76	.8291	661.12	.0592			-2.67	1.0990	710.58	.1042
-117.69	.7820	710.58	.1050			.00	.6304	743.55	.1620
-96.62	.7200	743.55	.1600			.31	.0650	760.04	.2065
-75.56	.6384	760.04	.2007			.62	-.1663	776.52	.2608
-54.49	.5484	776.52	.2503			1.25	-.5511	793.01	.3323
-43.96	.4876	793.01	.3218			1.87	-.7469		
-33.43	.4548					2.50	-.9056		
-30.08	.4423					3.12	-.9536		
-23.40	.4790					3.75	-.7996		
-13.37	.6363					4.38	-.7447		
-6.69	.8748					5.00	-.7667		
-4.35	1.0037					6.25	-.6828		
-2.67	1.1009					7.50	-.7416		
-1.17	1.1430					8.75	-.7731		
-.57	1.0910					10.00	-.7944		
.00	.6457					12.50	-.8290		
.31	.1087					15.00	-.8710		
.62	-.3062					17.50	-.7831		
1.25	-.6717					20.00	-.8255		
1.87	-.8592					30.00	-.6806		
2.50	-.8908					40.00	-.6897		
3.12	-.8384					50.00	-.6377		
3.75	-.8215					60.00	-.5892		
4.38	-.7264					70.00	-.5252		
5.00	-.7603					80.00	-.4637		
6.25	-.7491					90.00	-.3898		
7.50	-.7406					100.00	-.2812		
8.75	-.7730					110.00	-.2148		
12.50	-.8538					314.90	-.0224		
15.00	-.8963					364.36	-.0355		
17.50	-.7433								
20.00	-.7113								
30.00	-.6929								
40.00	-.6729								
50.00	-.6382								
60.00	-.5849								
70.00	-.5295								
80.00	-.4531								
90.00	-.4001								
100.00	-.2843								
110.00	-.2222								
314.90	-.0383								
364.36	-.0292								

Table III. Continued

(e) Continued

$M = 0.745$; mfr $= 0.677$; $\alpha = 0°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.8624	446.79	-.0092	314.90	-.0397	-244.08	.8626	496.25	.0032
-223.02	.8678	496.25	.0017	364.36	-.0248	-138.76	.7595	545.71	.0184
-201.95	.8575	545.71	.0118			-33.43	.2498	595.17	.0281
-170.35	.8204	595.17	.0313			-13.37	.4495	661.12	.0667
-138.76	.7529	661.12	.0682			-2.67	1.0344	710.58	.1153
-117.69	.6979	710.58	.1141			.00	.8065	743.55	.1748
-96.62	.6133	743.55	.1737			.31	.2975	760.04	.2208
-75.56	.5110	760.04	.2169			.62	.0765	776.52	.2748
-54.49	.3917	776.52	.2671			1.25	-.3347	793.01	.3464
-43.96	.2924	793.01	.3363			1.87	-.4803		
-33.43	.2421					2.50	-.5777		
-30.08	.2357					3.12	-.6201		
-23.40	.2748					3.75	-.5441		
-13.37	.4808					4.38	-.5252		
-6.69	.7348					5.00	-.5027		
-4.35	.8839					6.25	-.6304		
-2.67	1.0299					7.50	-.5781		
-1.17	1.1430					8.75	-.6187		
-.57	1.1322					10.00	-.6277		
.00	.7563					12.50	-.7393		
.31	.3455					15.00	-.6725		
.62	-.0958					17.50	-.6479		
1.25	-.4073					20.00	-.6682		
1.87	-.5070					30.00	-.6040		
2.50	-.6167					40.00	-.6199		
3.12	-.5818					50.00	-.6044		
3.75	-.5753					60.00	-.5635		
4.38	-.4921					70.00	-.4976		
5.00	-.6186					80.00	-.4528		
6.25	-.5358					90.00	-.3838		
7.50	-.5814					100.00	-.2727		
8.75	-.6133					110.00	-.2079		
12.50	-.6685					314.90	-.0239		
15.00	-.6232					364.36	-.0298		
17.50	-.6635								
20.00	-.6398								
30.00	-.6470								
40.00	-.6273								
50.00	-.6006								
60.00	-.5720								
70.00	-.5088								
80.00	-.4466								
90.00	-.3862								
100.00	-.2771								
110.00	-.2106								
314.90	-.0374								
364.36	-.0262								

$M = 0.744$; mfr $= 0.675$; $\alpha = 1.0°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.8625	446.79	-.0023	314.90	-.0430	-244.08	.8635	496.25	.0016
-223.02	.8690	496.25	.0043	364.36	-.0276	-138.76	.7568	545.71	.0187
-201.95	.8560	545.71	.0129			-33.43	.2162	595.17	.0300
-170.35	.8219	595.17	.0327			-13.37	.3878	661.12	.0655
-138.76	.7565	661.12	.0710			-2.67	1.0008	710.58	.1158
-117.69	.6996	710.58	.1177			.00	.8462	743.55	.1735
-96.62	.6217	743.55	.1762			.31	.4252	760.04	.2206
-75.56	.5246	760.04	.2144			.62	.1800	776.52	.2764
-54.49	.4123	776.52	.2651			1.25	-.1094	793.01	.3493
-43.96	.3276	793.01	.3298			1.87	-.2970		
-33.43	.2824					2.50	-.3518		
-30.08	.2923					3.12	-.4254		
-23.40	.3194					3.75	-.3950		
-13.37	.5315					4.38	-.3862		
-6.69	.7871					5.00	-.3950		
-4.35	.9446					6.25	-.4582		
-2.67	1.0660					7.50	-.4800		
-1.17	1.1454					8.75	-.5159		
-.57	1.1093					10.00	-.5185		
.00	.6778					12.50	-.5612		
.31	.2040					15.00	-.5508		
.62	-.2106					17.50	-.5927		
1.25	-.5724					20.00	-.5823		
1.87	-.7361					30.00	-.5647		
2.50	-.7749					40.00	-.5720		
3.12	-.8398					50.00	-.5655		
3.75	-.6577					60.00	-.5431		
4.38	-.6393					70.00	-.4813		
5.00	-.7069					80.00	-.4300		
6.25	-.7046					90.00	-.3657		
7.50	-.6777					100.00	-.2626		
8.75	-.7223					110.00	-.1998		
12.50	-.8041					314.90	-.0155		
15.00	-.8856					364.36	-.0312		
17.50	-.7165								
20.00	-.7185								
30.00	-.6981								
40.00	-.6798								
50.00	-.6420								
60.00	-.5897								
70.00	-.5228								
80.00	-.4537								
90.00	-.3999								
100.00	-.2799								
110.00	-.2152								
314.90	-.0389								
364.36	-.0249								

Table III. Continued

(e) Continued

$M = 0.744$; mfr $= 0.678$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.8632	446.79	.0039	314.90	-.0427	-244.08	.8584	496.25	-.0011
-223.02	.8670	496.25	.0067	364.36	-.0319	-138.76	.7547	545.71	.0160
-201.95	.8586	545.71	.0164			-33.43	.1769	595.17	.0277
-170.35	.8245	595.17	.0336			-13.37	.3378	661.12	.0655
-138.76	.7576	661.12	.0730			-2.67	.9470	710.58	.1127
-117.69	.7011	710.58	.1178			.00	.9266	743.55	.1736
-96.62	.6250	743.55	.1747			.31	.4647	760.04	.2196
-75.56	.5310	760.04	.2137			.62	.3238	776.52	.2749
-54.49	.4247	776.52	.2609			1.25	-.0202	793.01	.3533
-43.96	.3429	793.01	.3241			1.87	-.1664		
-33.43	.3042					2.50	-.2331		
-30.08	.3012					3.12	-.2923		
-23.40	.3520					3.75	-.2753		
-13.37	.5439					4.38	-.3167		
-6.69	.8413					5.00	-.2430		
-4.35	.9681					6.25	-.3288		
-2.67	1.0846					7.50	-.3323		
-1.17	1.1437					8.75	-.3784		
-.57	1.0950					10.00	-.3716		
.00	.6579					12.50	-.3962		
.31	.1239					15.00	-.4450		
.62	-.3077					17.50	-.4683		
1.25	-.7162					20.00	-.5011		
1.87	-.8745					30.00	-.5188		
2.50	-1.0074					40.00	-.5205		
3.12	-.9559					50.00	-.5188		
3.75	-.9563					60.00	-.4972		
4.38	-.7972					70.00	-.4570		
5.00	-.7872					80.00	-.4117		
6.25	-.7830					90.00	-.3642		
7.50	-.8099					100.00	-.2594		
8.75	-.8614					110.00	-.1953		
12.50	-.8945					314.90	-.0314		
15.00	-.9805					364.36	-.0242		
17.50	-.9790								
20.00	-.9585								
30.00	-.7139								
40.00	-.7238								
50.00	-.6827								
60.00	-.6184								
70.00	-.5356								
80.00	-.4635								
90.00	-.4018								
100.00	-.2851								
110.00	-.2200								
314.90	-.0364								
364.36	-.0265								

$M = 0.744$; mfr $= 0.678$; $\alpha = 3.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.8647	446.79	.0146	314.90	-.0483	-244.08	.8618	496.25	-.0018
-223.02	.8708	496.25	.0119	364.36	-.0365	-138.76	.7530	545.71	.0162
-201.95	.8598	545.71	.0162			-33.43	.1289	595.17	.0286
-170.35	.8257	595.17	.0360			-13.37	.2541	661.12	.0657
-138.76	.7565	661.12	.0762			-2.67	.9130	710.58	.1132
-117.69	.7026	710.58	.1202			.00	.9924	743.55	.1721
-96.62	.6304	743.55	.1764			.31	.6055	760.04	.2196
-75.56	.5372	760.04	.2142			.62	.4481	776.52	.2765
-54.49	.4382	776.52	.2609			1.25	.1281	793.01	.3556
-43.96	.3672	793.01	.3190			1.87	-.0632		
-33.43	.3423					2.50	-.0801		
-30.08	.3392					3.12	-.1146		
-23.40	.3917					3.75	-.1209		
-13.37	.6098					4.38	-.1448		
-6.69	.8846					5.00	-.1356		
-4.35	1.0064					6.25	-.2229		
-2.67	1.1070					7.50	-.2534		
-1.17	1.1400					8.75	-.2960		
-.57	1.0723					10.00	-.3059		
.00	.5452					12.50	-.3193		
.31	-.0260					15.00	-.3754		
.62	-.4329					17.50	-.3970		
1.25	-.7828					20.00	-.4186		
1.87	-.9899					30.00	-.4643		
2.50	-1.1624					40.00	-.4441		
3.12	-1.1482					50.00	-.4898		
3.75	-1.1809					60.00	-.4557		
4.38	-1.1017					70.00	-.4350		
5.00	-1.0279					80.00	-.3914		
6.25	-1.0221					90.00	-.3491		
7.50	-.9614					100.00	-.2379		
8.75	-1.0267					110.00	-.1786		
12.50	-1.0605					314.90	-.0207		
15.00	-1.0389					364.36	-.0257		
17.50	-1.0706								
20.00	-1.0254								
30.00	-.9572								
40.00	-.6611								
50.00	-.6872								
60.00	-.6278								
70.00	-.5463								
80.00	-.4693								
90.00	-.4071								
100.00	-.2906								
110.00	-.2246								
314.90	-.0392								
364.36	-.0311								

Table III. Continued

(e) Continued

$M = 0.742$; mfr $= 0.744$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.7906	446.79	-.0012	314.90	-.0318	-244.08	.7906	496.25	.0121
-223.02	.7963	496.25	.0094	364.36	-.0227	-138.76	.6567	545.71	.0289
-201.95	.7818	545.71	.0191			-33.43	-.0707	595.17	.0375
-170.35	.7369	595.17	.0414			-13.37	.1576	661.12	.0774
-138.76	.6540	661.12	.0806			-2.67	.8976	710.58	.1228
-117.69	.5770	710.58	.1283			.00	.9205	743.55	.1874
-96.62	.4722	743.55	.1843			.31	.4896	760.04	.2339
-75.56	.3311	760.04	.2234			.62	.2644	776.52	.2832
-54.49	.1566	776.52	.2742			1.25	-.0215	793.01	.3545
-43.96	.0307	793.01	.3447			1.87	-.2606		
-33.43	-.0966					2.50	-.2555		
-30.08	-.1139					3.12	-.3338		
-23.40	-.0604					3.75	-.3122		
-13.37	.2043					4.38	-.3067		
-6.69	.5190					5.00	-.3434		
-4.35	.7121					6.25	-.3953		
-2.67	.8793					7.50	-.4044		
-1.17	1.0985					8.75	-.4175		
-.57	1.1429					10.00	-.4213		
.00	.9299					12.50	-.4881		
.31	.5585					15.00	-.5110		
.62	.2042					17.50	-.5531		
1.25	-.0505					20.00	-.5336		
1.87	-.2354					30.00	-.5777		
2.50	-.2327					40.00	-.5652		
3.12	-.2630					50.00	-.5747		
3.75	-.2791					60.00	-.5141		
4.38	-.2235					70.00	-.4963		
5.00	-.3569					80.00	-.4222		
6.25	-.3480					90.00	-.3806		
7.50	-.3947					100.00	-.2555		
8.75	-.4155					110.00	-.2029		
12.50	-.5100					314.90	-.0345		
15.00	-.5304					364.36	-.0291		
17.50	-.5250								
20.00	-.5562								
30.00	-.5636								
40.00	-.5562								
50.00	-.5582								
60.00	-.5196								
70.00	-.4768								
80.00	-.4138								
90.00	-.3650								
100.00	-.2592								
110.00	-.1970								
314.90	-.0327								
364.36	-.0227								

$M = 0.744$; mfr $= 0.810$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.7111	446.79	-.0023	314.90	-.0239	-244.08	.7109	496.25	.0140
-223.02	.7153	496.25	.0117	364.36	-.0181	-138.76	.5424	545.71	.0288
-201.95	.6974	545.71	.0245			-33.43	-.5932	595.17	.0425
-170.35	.6435	595.17	.0440			-13.37	-.1597	661.12	.0838
-138.76	.5400	661.12	.0849			-2.67	.7766	710.58	.1325
-117.69	.4419	710.58	.1332			.00	1.0452	743.55	.1913
-96.62	.3005	743.55	.1913			.31	.6829	760.04	.2365
-75.56	.1008	760.04	.2314			.62	.5210	776.52	.2883
-54.49	-.1661	776.52	.2793			1.25	.2113	793.01	.3553
-43.96	-.3788	793.01	.3455			1.87	.0541		
-33.43	-.5885					2.50	-.0350		
-30.08	-.7120					3.12	-.0889		
-23.40	-.5859					3.75	-.0905		
-13.37	-.1756					4.38	-.1263		
-6.69	.2838					5.00	-.1704		
-4.35	.5192					6.25	-.2440		
-2.67	.7457					7.50	-.2491		
-1.17	1.0168					8.75	-.3274		
-.57	1.1277					10.00	-.3103		
.00	1.0659					12.50	-.3970		
.31	.7264					15.00	-.3901		
.62	.4747					17.50	-.4021		
1.25	.1462					20.00	-.4548		
1.87	.0325					30.00	-.4681		
2.50	-.0622					40.00	-.5203		
3.12	-.0611					50.00	-.5143		
3.75	-.1023					60.00	-.4824		
4.38	-.0962					70.00	-.4513		
5.00	-.2024					80.00	-.4039		
6.25	-.2066					90.00	-.3456		
7.50	-.2589					100.00	-.2422		
8.75	-.2845					110.00	-.1808		
12.50	-.3525					314.90	-.0091		
15.00	-.4183					364.36	-.0194		
17.50	-.4246								
20.00	-.4475								
30.00	-.4907								
40.00	-.5002								
50.00	-.5202								
60.00	-.4943								
70.00	-.4435								
80.00	-.4048								
90.00	-.3506								
100.00	-.2445								
110.00	-.1814								
314.90	-.0285								
364.36	-.0109								

Table III. Continued

(e) Continued

$M = 0.744$; mfr $= 0.808$; $\alpha = 1.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.7155	446.79	.0076	314.90	-.0316	-244.08	.7116	496.25	.0103
-223.02	.7197	496.25	.0154	364.36	-.0185	-138.76	.5425	545.71	.0263
-201.95	.7021	545.71	.0267			-33.43	-.7166	595.17	.0419
-170.35	.6471	595.17	.0454			-13.37	-.2515	661.12	.0809
-138.76	.5370	661.12	.0859			-2.67	.6956	710.58	.1316
-117.69	.4418	710.58	.1339			.00	1.0707	743.55	.1916
-96.62	.3018	743.55	.1936			.31	.7391	760.04	.2376
-75.56	.1126	760.04	.2298			.62	.5699	776.52	.2891
-54.49	-.1431	776.52	.2774			1.25	.3298	793.01	.3570
-43.96	-.3395	793.01	.3402			1.87	.1649		
-33.43	-.5179					2.50	.0957		
-30.08	-.5688					3.12	.0302		
-23.40	-.4509					3.75	-.0136		
-13.37	-.0618					4.38	.0465		
-6.69	.3514					5.00	-.0437		
-4.35	.5550					6.25	-.0898		
-2.67	.8061					7.50	-.1323		
-1.17	1.0598					8.75	-.2068		
-.57	1.1375					10.00	-.2283		
.00	1.0103					12.50	-.2756		
.31	.6310					15.00	-.2951		
.62	.3022					17.50	-.3546		
1.25	.0335					20.00	-.3680		
1.87	-.1049					30.00	-.4315		
2.50	-.1168					40.00	-.4544		
3.12	-.1993					50.00	-.4868		
3.75	-.1814					60.00	-.4673		
4.38	-.1997					70.00	-.4367		
5.00	-.2525					80.00	-.3870		
6.25	-.2620					90.00	-.3335		
7.50	-.3519					100.00	-.2378		
8.75	-.3707					110.00	-.1719		
12.50	-.4272					314.90	-.0036		
15.00	-.5124					364.36	-.0217		
17.50	-.4967								
20.00	-.4993								
30.00	-.5675								
40.00	-.5633								
50.00	-.5625								
60.00	-.5295								
70.00	-.4699								
80.00	-.4065								
90.00	-.3661								
100.00	-.2488								
110.00	-.1882								
314.90	-.0275								
364.36	-.0163								

$M = 0.744$; mfr $= 0.806$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.7157	446.79	.0176	314.90	-.0325	-244.08	.6171	496.25	.0102
-223.02	.7203	496.25	.0188	364.36	-.0199	-138.76	.4502	545.71	.0242
-201.95	.7027	545.71	.0289			-33.43	-.9737	595.17	.0390
-170.35	.6457	595.17	.0507			-13.37	-.4237	661.12	.0804
-138.76	.5383	661.12	.0866			-2.67	.5044	710.58	.1303
-117.69	.4413	710.58	.1361			.00	1.1169	743.55	.1880
-96.62	.3025	743.55	.1950			.31	.7811	760.04	.2324
-75.56	.1126	760.04	.2301			.62	.7048	776.52	.2882
-54.49	-.1355	776.52	.2788			1.25	.3332	793.01	.3595
-43.96	-.4167	793.01	.3373			1.87	.3187		
-33.43	-.5480					2.50	.1323		
-30.08	-.5968					3.12	.1174		
-23.40	-.5333					3.75	.0140		
-13.37	-.0815					4.38	.0600		
-6.69	.4600					5.00	-.0342		
-4.35	.6604					6.25	-.0135		
-2.67	.8596					7.50	-.1577		
-1.17	1.0862					8.75	-.0722		
-.57	1.1426					10.00	-.2640		
.00	.9478					12.50	-.3079		
.31	.5800					15.00	-.3256		
.62	.2911					17.50	-.3593		
1.25	-.1225					20.00	-.4008		
1.87	-.2624					30.00	-.4431		
2.50	-.2750					40.00	-.4863		
3.12	-.3210					50.00	-.5186		
3.75	-.3464					60.00	-.5078		
4.38	-.3176					70.00	-.4927		
5.00	-.4198					80.00	-.4530		
6.25	-.4359					90.00	-.4124		
7.50	-.4482					100.00	-.3127		
8.75	-.5428					110.00	-.2592		
12.50	-.5689					314.90	-.0122		
15.00	-.5699					364.36	-.0144		
17.50	-.6085								
20.00	-.5713								
30.00	-.6212								
40.00	-.6055								
50.00	-.5862								
60.00	-.5492								
70.00	-.5886								
80.00	-.4285								
90.00	-.3725								
100.00	-.2605								
110.00	-.2004								
314.90	-.0298								
364.36	-.0176								

Table III. Continued

(e) Concluded

$M = 0.744$; mfr $= 0.808$; $\alpha = 3.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.7111	446.79	.0249	314.90	-.0307	-244.08	.7048	496.25	.0077
-223.02	.7180	496.25	.0237	364.36	-.0253	-138.76	.5354	545.71	.0260
-201.95	.7019	545.71	.0330			-33.43	-1.0606	595.17	.0393
-170.35	.6454	595.17	.0502			-13.37	-.3918	661.12	.0810
-138.76	.5396	661.12	.0891			-2.67	.5518	710.58	.1301
-117.69	.4441	710.58	.1390			.00	1.1282	743.55	.1889
-96.62	.3021	743.55	.1955			.31	.9322	760.04	.2337
-75.56	.1161	760.04	.2341			.62	.7863	776.52	.2878
-54.49	-.1226	776.52	.2781			1.25	.5522	793.01	.3646
-43.96	-.3086	793.01	.3365			1.87	.3694		
-33.43	-.4082					2.50	.3050		
-30.08	-.4522					3.12	.2440		
-23.40	-.3336					3.75	.2306		
-13.37	.0806					4.38	.1772		
-6.69	.5115					5.00	.1550		
-4.35	.7294					6.25	.0663		
-2.67	.9004					7.50	.0406		
-1.17	1.1020					8.75	-.0208		
-.57	1.1467					10.00	-.0363		
.00	.8823					12.50	-.0789		
.31	.4690					15.00	-.1589		
.62	.1180					17.50	-.2066		
1.25	-.1879					20.00	-.2337		
1.87	-.3587					30.00	-.2978		
2.50	-.4170					40.00	-.3379		
3.12	-.4017					50.00	-.4048		
3.75	-.4040					60.00	-.3746		
4.38	-.4113					70.00	-.3767		
5.00	-.5234					80.00	-.3405		
6.25	-.5629					90.00	-.3112		
7.50	-.5437					100.00	-.2001		
8.75	-.6420					110.00	-.1558		
12.50	-.7019					314.90	-.0050		
15.00	-.6726					364.36	-.0095		
17.50	-.6985								
20.00	-.7095								
30.00	-.6789								
40.00	-.6555								
50.00	-.6267								
60.00	-.5749								
70.00	-.5075								
80.00	-.4381								
90.00	-.3779								
100.00	-.2635								
110.00	-.2013								
314.90	-.0230								
364.36	-.0158								

Table III. Continued

(f) $M = 0.77$

$M = 0.767$; mfr $= 0.275$; $\alpha = 0^\circ$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1177	446.79	-.0555	314.90	-.0910	-244.08	1.1145	496.25	-.0495
-223.02	1.1144	496.25	-.0510	364.36	-.0802	-138.76	1.1055	545.71	-.0484
-201.95	1.1122	545.71	-.0529			-33.43	1.0699	595.17	-.0510
-170.35	1.1071	595.17	-.0488			-13.37	1.1427	661.12	-.0480
-138.76	1.0986	661.12	-.0428			-2.67	.9950	710.58	-.0432
-117.69	1.0942	710.58	-.0432			.00	-.2934	743.55	-.0327
-96.62	1.0858	743.55	-.0323			.31	-1.0439	760.04	-.0169
-75.56	1.0766	760.04	-.0222			.62	-1.1752	776.52	.0007
-54.49	1.0748	776.52	-.0072			1.25	-1.4601	793.01	.0437
-43.96	1.0761	793.01	.0329			1.87	-1.6010		
-33.43	1.0761					2.50	-1.6592		
-30.08	1.0869					3.12	-1.7451		
-23.40	1.1026					3.75	-1.7293		
-13.37	1.1447					4.38	-1.7585		
-6.69	1.1407					5.00	-1.7359		
-4.35	1.0947					6.25	-1.7434		
-2.67	.9950					7.50	-1.7040		
-1.17	.7157					8.75	-1.7101		
-.57	.4936					10.00	-1.6919		
.00	-.3492					12.50	-1.6380		
.31	-1.0189					15.00	-1.6438		
.62	-1.3061					17.50	-1.5501		
1.25	-1.5195					20.00	-1.5716		
1.87	-1.5989					30.00	-1.3750		
2.50	-1.6934					40.00	-1.4012		
3.12	-1.7380					50.00	-1.2610		
3.75	-1.7255					60.00	-1.0702		
4.38	-1.7613					70.00	-.7117		
5.00	-1.7502					80.00	-.6030		
6.25	-1.7606					90.00	-.4114		
7.50	-1.7292					100.00	-.3060		
8.75	-1.7055					110.00	-.2285		
12.50	-1.6461					314.90	-.0828		
15.00	-1.5703					364.36	-.0841		
17.50	-1.5258								
20.00	-1.5162								
30.00	-1.4183								
40.00	-1.3660								
50.00	-1.2762								
60.00	-.9991								
70.00	-.7262								
80.00	-.7334								
90.00	-.5847								
100.00	-.5236								
110.00	-.2410								
314.90	-.0823								
364.36	-.0754								

$M = 0.767$; mfr $= 0.314$; $\alpha = 0^\circ$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0981	446.79	-.0500	314.90	-.0740	-244.08	1.0975	496.25	-.0425
-223.02	1.0995	496.25	-.0448	364.36	-.0654	-138.76	1.0797	545.71	-.0399
-201.95	1.0959	545.71	-.0392			-33.43	1.0305	595.17	-.0410
-170.35	1.0907	595.17	-.0354			-13.37	1.1173	661.12	-.0290
-138.76	1.0797	661.12	-.0268			-2.67	1.0598	710.58	-.0212
-117.69	1.0676	710.58	-.0170			.00	-.2341	743.55	-.0009
-96.62	1.0562	743.55	.0096			.31	-.9624	760.04	.0201
-75.56	1.0422	760.04	.0234			.62	-1.0496	776.52	.0490
-54.49	1.0301	776.52	.0550			1.25	-1.4025	793.01	.1019
-43.96	1.0255	793.01	.1094			1.87	-1.5624		
-33.43	1.0313					2.50	-1.6214		
-30.08	1.0321					3.12	-1.6550		
-23.40	1.0553					3.75	-1.6649		
-13.37	1.1177					4.38	-1.6710		
-6.69	1.1513					5.00	-1.6724		
-4.35	1.1344					6.25	-1.6451		
-2.67	1.0636					7.50	-1.6355		
-1.17	.8510					8.75	-1.6117		
-.57	.6287					10.00	-1.5897		
.00	-.2283					12.50	-1.6110		
.31	-.9103					15.00	-1.5544		
.62	-1.1420					17.50	-1.5403		
1.25	-1.4076					20.00	-1.5171		
1.87	-1.5514					30.00	-1.4257		
2.50	-1.6249					40.00	-1.3411		
3.12	-1.6375					50.00	-1.2850		
3.75	-1.6471					60.00	-1.2506		
4.38	-1.6523					70.00	-.6606		
5.00	-1.6571					80.00	-.5327		
6.25	-1.6416					90.00	-.3932		
7.50	-1.6471					100.00	-.2816		
8.75	-1.6253					110.00	-.1974		
12.50	-1.5651					314.90	-.0688		
15.00	-1.5511					364.36	-.0675		
17.50	-1.5160								
20.00	-1.4961								
30.00	-1.3910								
40.00	-1.3172								
50.00	-1.2898								
60.00	-1.2124								
70.00	-.6557								
80.00	-.5312								
90.00	-.3627								
100.00	-.2623								
110.00	-.1929								
314.90	-.0732								
364.36	-.0601								

Table III. Continued

(f) Continued

$M = 0.768$; mfr $= 0.402$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0637	446.79	-.0342	314.90	-.0651	-244.08	1.0620	496.25	-.0260
-223.02	1.0648	496.25	-.0286	364.36	-.0539	-138.76	1.0311	545.71	-.0159
-201.95	1.0604	545.71	-.0211			-33.43	.9266	595.17	-.0151
-170.35	1.0523	595.17	-.0103			-13.37	1.0373	661.12	.0047
-138.76	1.0300	661.12	.0107			-2.67	1.1297	710.58	.0324
-117.69	1.0120	710.58	.0407			.00	.0288	743.55	.0740
-96.62	.9897	743.55	.0811			.31	-.5839	760.04	.1084
-75.56	.9629	760.04	.1099			.62	-.8093	776.52	.1503
-54.49	.9376	776.52	.1514			1.25	-1.1699	793.01	.2206
-43.96	.9221	793.01	.2176			1.87	-1.3770		
-33.43	.9270					2.50	-1.5066		
-30.08	.9225					3.12	-1.5330		
-23.40	.9551					3.75	-1.5024		
-13.37	1.0480					4.38	-1.4669		
-6.69	1.1352					5.00	-1.4726		
-4.35	1.1512					6.25	-1.4531		
-2.67	1.1300					7.50	-1.4312		
-1.17	.9902					8.75	-1.4505		
-.57	.8036					10.00	-1.4536		
.00	.0548					12.50	-1.4180		
.31	-.5593					15.00	-1.3737		
.62	-.9334					17.50	-1.3691		
1.25	-1.1712					20.00	-1.3178		
1.87	-1.3691					30.00	-1.2395		
2.50	-1.5066					40.00	-1.2250		
3.12	-1.5063					50.00	-1.1592		
3.75	-1.5243					60.00	-.8791		
4.38	-1.4838					70.00	-.5055		
5.00	-1.5077					80.00	-.3896		
6.25	-1.4901					90.00	-.3527		
7.50	-1.4525					100.00	-.2774		
8.75	-1.4403					110.00	-.2206		
12.50	-1.4126					314.90	-.0625		
15.00	-1.3990					364.36	-.0625		
17.50	-1.3223								
20.00	-1.3385								
30.00	-1.2832								
40.00	-1.2029								
50.00	-1.1657								
60.00	-1.0236								
70.00	-.4654								
80.00	-.4002								
90.00	-.3488								
100.00	-.2801								
110.00	-.2187								
314.90	-.0677								
364.36	-.0560								

$M = 0.768$; mfr $= 0.444$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0401	446.79	-.0311	314.90	-.0605	-244.08	1.0395	496.25	-.0217
-223.02	1.0434	496.25	-.0221	364.36	-.0484	-138.76	.9994	545.71	-.0109
-201.95	1.0382	545.71	-.0165			-33.43	.8586	595.17	-.0094
-170.35	1.0258	595.17	-.0027			-13.37	.9904	661.12	.0172
-138.76	.9994	661.12	.0258			-2.67	1.1447	710.58	.0512
-117.69	.9803	710.58	.0572			.00	.1609	743.55	.0979
-96.62	.9513	743.55	.1054			.31	-.4718	760.04	.1361
-75.56	.9161	760.04	.1406			.62	-.6445	776.52	.1847
-54.49	.8839	776.52	.1851			1.25	-1.0933	793.01	.2562
-43.96	.8623	793.01	.2577			1.87	-1.3001		
-33.43	.8557					2.50	-1.4055		
-30.08	.8586					3.12	-1.4540		
-23.40	.8883					3.75	-1.4379		
-13.37	.9957					4.38	-1.3722		
-6.69	1.1103					5.00	-1.3939		
-4.35	1.1480					6.25	-1.3675		
-2.67	1.1471					7.50	-1.3728		
-1.17	1.0323					8.75	-1.3640		
-.57	.8803					10.00	-1.3670		
.00	.1599					12.50	-1.3405		
.31	-.4013					15.00	-1.2987		
.62	-.8021					17.50	-1.2846		
1.25	-1.0816					20.00	-1.2597		
1.87	-1.3039					30.00	-1.1645		
2.50	-1.4465					40.00	-1.0720		
3.12	-1.4602					50.00	-1.0331		
3.75	-1.4377					60.00	-.6019		
4.38	-1.3901					70.00	-.4760		
5.00	-1.3898					80.00	-.4354		
6.25	-1.3640					90.00	-.3965		
7.50	-1.3566					100.00	-.2870		
8.75	-1.3393					110.00	-.2299		
12.50	-1.3326					314.90	-.0557		
15.00	-1.3264					364.36	-.0579		
17.50	-1.2888								
20.00	-1.2379								
30.00	-1.1752								
40.00	-1.0879								
50.00	-1.0812								
60.00	-.5676								
70.00	-.4557								
80.00	-.4229								
90.00	-.4017								
100.00	-.2954								
110.00	-.2321								
314.90	-.0549								
364.36	-.0479								

Table III. Continued

(f) Continued

$M = 0.766$; mfr $= 0.488$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0138	446.79	-.0254	314.90	-.0547	-244.08	1.0144	496.25	-.0153
-223.02	1.0164	496.25	-.0164	364.36	-.0426	-138.76	.9659	545.71	-.0063
-201.95	1.0127	545.71	-.0063			-33.43	.7809	595.17	-.0003
-170.35	.9947	595.17	.0087			-13.37	.9344	661.12	.0286
-138.76	.9642	661.12	.0381			-2.67	1.1514	710.58	.0685
-117.69	.9362	710.58	.0748			.00	.2771	743.55	.1210
-96.62	.9028	743.55	.1274			.31	-.3263	760.04	.1634
-75.56	.8615	760.04	.1649			.62	-.5018	776.52	.2140
-54.49	.8152	776.52	.2121			1.25	-.9810	793.01	.2894
-43.96	.7875	793.01	.2868			1.87	-1.2133		
-33.43	.7792					2.50	-1.2906		
-30.08	.7813					3.12	-1.3282		
-23.40	.8132					3.75	-1.3466		
-13.37	.9448					4.38	-1.3325		
-6.69	1.0832					5.00	-1.3138		
-4.35	1.1349					6.25	-1.2926		
-2.67	1.1531					7.50	-1.2789		
-1.17	1.0763					8.75	-1.2549		
-.57	.9473					10.00	-1.2378		
.00	.2518					12.50	-1.1730		
.31	-.2913					15.00	-1.1959		
.62	-.6939					17.50	-1.1680		
1.25	-1.0160					20.00	-1.1427		
1.87	-1.2226					30.00	-.9877		
2.50	-1.3527					40.00	-.9968		
3.12	-1.3512					50.00	-.7476		
3.75	-1.3498					60.00	-.5477		
4.38	-1.2969					70.00	-.5615		
5.00	-1.3390					80.00	-.4862		
6.25	-1.2758					90.00	-.4169		
7.50	-1.2307					100.00	-.3018		
8.75	-1.2348					110.00	-.2337		
12.50	-1.2337					314.90	-.0495		
15.00	-1.2112					364.36	-.0434		
17.50	-1.1638								
20.00	-1.1406								
30.00	-1.0278								
40.00	-.9919								
50.00	-.7737								
60.00	-.5477								
70.00	-.5261								
80.00	-.4875								
90.00	-.4243								
100.00	-.3034								
110.00	-.2369								
314.90	-.0552								
364.36	-.0439								

$M = 0.767$; mfr $= 0.553$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9776	446.79	-.0173	314.90	-.0612	-244.08	1.1416	496.25	-.0080
-223.02	.9820	496.25	-.0080	364.36	-.0486	-138.76	1.0783	545.71	.0063
-201.95	.9746	545.71	.0029			-33.43	.8136	595.17	.0160
-170.35	.9533	595.17	.0171			-13.37	.9733	661.12	.0464
-138.76	.9125	661.12	.0520			-2.67	1.3109	710.58	.0914
-117.69	.8780	710.58	.0951			.00	.4352	743.55	.1506
-96.62	.8334	743.55	.1513			.31	.0473	760.04	.1959
-75.56	.7754	760.04	.1926			.62	-.3594	776.52	.2480
-54.49	.7166	776.52	.2450			1.25	-.6775	793.01	.3226
-43.96	.8182	793.01	.3155			1.87	-1.0180		
-33.43	.8219					2.50	-.9395		
-30.08	.8169					3.12	-1.1565		
-23.40	.8422					3.75	-1.0179		
-13.37	.9890					4.38	-1.1596		
-6.69	1.0173					5.00	-.9706		
-4.35	1.0824					6.25	-1.1258		
-2.67	1.1388					7.50	-.8564		
-1.17	1.1145					8.75	-1.0297		
-.57	1.0268					10.00	-.8539		
.00	.4469					12.50	-.8120		
.31	-.1138					15.00	-.8361		
.62	-.4822					17.50	-.7684		
1.25	-.8774					20.00	-.7796		
1.87	-.9606					30.00	-.6883		
2.50	-1.1572					40.00	-.6738		
3.12	-1.1864					50.00	-.5239		
3.75	-1.1557					60.00	-.4480		
4.38	-1.1564					70.00	-.4127		
5.00	-1.1590					80.00	-.3304		
6.25	-1.0290					90.00	-.2497		
7.50	-1.0242					100.00	-.1356		
8.75	-1.0467					110.00	-.0615		
12.50	-.9679					314.90	-.0273		
15.00	-.9470					364.36	-.0486		
17.50	-.9716								
20.00	-.9439								
30.00	-.9000								
40.00	-.8543								
50.00	-.6975								
60.00	-.6378								
70.00	-.4106								
80.00	-.4902								
90.00	-.4146								
100.00	-.3053								
110.00	-.2292								
314.90	-.0555								
364.36	-.0469								

Table III. Continued

(f) Continued

$M = 0.768$; mfr $= 0.618$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9269	446.79	-.0100	314.90	-.0423	-244.08	.9277	496.25	.0009
-223.02	.9328	496.25	.0005	364.36	-.0284	-138.76	.8455	545.71	.0144
-201.95	.9258	545.71	.0110			-33.43	.4711	595.17	.0282
-170.35	.8954	595.17	.0282			-13.37	.6405	661.12	.0672
-138.76	.8431	661.12	.0687			-2.67	1.1187	710.58	.1132
-117.69	.7962	710.58	.1113			.00	.6483	743.55	.1720
-96.62	.7334	743.55	.1709			.31	.0931	760.04	.2211
-75.56	.6545	760.04	.2128			.62	-.1247	776.52	.2750
-54.49	.5623	776.52	.2656			1.25	-.5348	793.01	.3476
-43.96	.4963	793.01	.3334			1.87	-.7387		
-33.43	.4629					2.50	-.8429		
-30.08	.4563					3.12	-.8684		
-23.40	.4695					3.75	-.7467		
-13.37	.6525					4.38	-.7737		
-6.69	.8794					5.00	-.6509		
-4.35	1.0021					6.25	-.6695		
-2.67	1.1096					7.50	-.6799		
-1.17	1.1530					8.75	-.7577		
-.57	1.1101					10.00	-.7857		
.00	.6651					12.50	-.7674		
.31	.1362					15.00	-.8151		
.62	-.1773					17.50	-.8645		
1.25	-.6084					20.00	-.8064		
1.87	-.7929					30.00	-.6592		
2.50	-.8970					40.00	-.6907		
3.12	-.8505					50.00	-.6837		
3.75	-.7350					60.00	-.6223		
4.38	-.6911					70.00	-.5443		
5.00	-.7520					80.00	-.4710		
6.25	-.6693					90.00	-.4042		
7.50	-.7121					100.00	-.2823		
8.75	-.7199					110.00	-.2151		
12.50	-.7855					314.90	-.0219		
15.00	-.8663					364.36	-.0345		
17.50	-.8453								
20.00	-.8170								
30.00	-.7734								
40.00	-.7192								
50.00	-.6877								
60.00	-.6522								
70.00	-.5464								
80.00	-.4670								
90.00	-.4062								
100.00	-.2845								
110.00	-.2143								
314.90	-.0436								
364.36	-.0271								

$M = 0.769$; mfr $= 0.677$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.8755	446.79	-.0088	314.90	-.0378	-244.08	.8760	496.25	.0047
-223.02	.8806	496.25	.0043	364.36	-.0248	-138.76	.7736	545.71	.0215
-201.95	.8704	545.71	.0159			-33.43	.2587	595.17	.0313
-170.35	.8333	595.17	.0369			-13.37	.4592	661.12	.0728
-138.76	.7685	661.12	.0761			-2.67	1.0402	710.58	.1229
-117.69	.7072	710.58	.1244			.00	.7831	743.55	.1887
-96.62	.6288	743.55	.1872			.31	.3065	760.04	.2343
-75.56	.5258	760.04	.2261			.62	.1068	776.52	.2889
-54.49	.4015	776.52	.2799			1.25	-.2900	793.01	.3611
-43.96	.3168	793.01	.3499			1.87	-.4745		
-33.43	.2719					2.50	-.5488		
-30.08	.2422					3.12	-.5441		
-23.40	.2880					3.75	-.5385		
-13.37	.4666					4.38	-.4629		
-6.69	.7437					5.00	-.5430		
-4.35	.9069					6.25	-.5424		
-2.67	1.0558					7.50	-.5811		
-1.17	1.1511					8.75	-.5838		
-.57	1.1433					10.00	-.6201		
.00	.8183					12.50	-.7112		
.31	.3440					15.00	-.7650		
.62	-.0490					17.50	-.6784		
1.25	-.3643					20.00	-.6548		
1.87	-.5058					30.00	-.6408		
2.50	-.5508					40.00	-.6834		
3.12	-.5132					50.00	-.6561		
3.75	-.4915					60.00	-.6064		
4.38	-.5169					70.00	-.5306		
5.00	-.5711					80.00	-.4706		
6.25	-.5409					90.00	-.3931		
7.50	-.5445					100.00	-.2701		
8.75	-.5862					110.00	-.2052		
12.50	-.7148					314.90	-.0235		
15.00	-.6072					364.36	-.0309		
17.50	-.7119								
20.00	-.6694								
30.00	-.6761								
40.00	-.6629								
50.00	-.6282								
60.00	-.6002								
70.00	-.5393								
80.00	-.4542								
90.00	-.3945								
100.00	-.2715								
110.00	-.2136								
314.90	-.0357								
364.36	-.0218								

Table III. Continued

(f) Concluded

$M = 0.767$; mfr $= 0.746$; $\alpha = 0°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.8049	446.79	.0002	314.90	-.0326	-244.08	.8076	496.25	.0125
-223.02	.8130	496.25	.0118	364.36	-.0235	-138.76	.6732	545.71	.0279
-201.95	.7987	545.71	.0227			-33.43	-.0505	595.17	.0425
-170.35	.7528	595.17	.0425			-13.37	.1786	661.12	.0841
-138.76	.6672	661.12	.0845			-2.67	.9284	710.58	.1366
-117.69	.5926	710.58	.1366			.00	.9823	743.55	.2007
-96.62	.4835	743.55	.1977			.31	.5409	760.04	.2456
-75.56	.3432	760.04	.2378			.62	.3623	776.52	.2989
-54.49	.1690	776.52	.2910			1.25	-.0042	793.01	.3686
-43.96	.0231	793.01	.3585			1.87	-.1732		
-33.43	-.0596					2.50	-.2748		
-30.08	-.0984					3.12	-.2542		
-23.40	-.0761					3.75	-.2387		
-13.37	.2092					4.38	-.2646		
-6.69	.5493					5.00	-.3146		
-4.35	.7372					6.25	-.3343		
-2.67	.9376					7.50	-.3707		
-1.17	1.1125					8.75	-.4261		
-.57	1.1515					10.00	-.4611		
.00	.9497					12.50	-.5296		
.31	.5452					15.00	-.5089		
.62	.2851					17.50	-.5417		
1.25	-.0507					20.00	-.5616		
1.87	-.1715					30.00	-.5479		
2.50	-.3028					40.00	-.6068		
3.12	-.2658					50.00	-.5728		
3.75	-.3268					60.00	-.5583		
4.38	-.3005					70.00	-.4885		
5.00	-.3866					80.00	-.4433		
6.25	-.3600					90.00	-.3690		
7.50	-.3940					100.00	-.2607		
8.75	-.4368					110.00	-.1894		
12.50	-.4741					314.90	-.0204		
15.00	-.5300					364.36	-.0187		
17.50	-.5421								
20.00	-.5374								
30.00	-.5750								
40.00	-.6006								
50.00	-.6030								
60.00	-.5724								
70.00	-.5018								
80.00	-.4430								
90.00	-.3785								
100.00	-.2594								
110.00	-.1947								
314.90	-.0335								
364.36	-.0200								

$M = 0.767$; mfr $= 0.809$; $\alpha = 0°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.7218	446.79	.0051	314.90	-.0238	-244.08	.7202	496.25	.0186
-223.02	.7247	496.25	.0168	364.36	-.0121	-138.76	.5542	545.71	.0321
-201.95	.7082	545.71	.0284			-33.43	-.7664	595.17	.0479
-170.35	.6512	595.17	.0513			-13.37	-.1455	661.12	.0914
-138.76	.5489	661.12	.0940			-2.67	.7512	710.58	.1432
-117.69	.4533	710.58	.1439			.00	1.0518	743.55	.2062
-96.62	.3132	743.55	.2032			.31	.6991	760.04	.2516
-75.56	.1105	760.04	.2419			.62	.5513	776.52	.3034
-54.49	-.1613	776.52	.2925			1.25	.2254	793.01	.3736
-43.96	-.3588	793.01	.3601			1.87	.0783		
-33.43	-.7452					2.50	-.0325		
-30.08	-.7435					3.12	-.0195		
-23.40	-.5562					3.75	-.1095		
-13.37	-.1405					4.38	-.1111		
-6.69	.2933					5.00	-.1182		
-4.35	.5639					6.25	-.1858		
-2.67	.7664					7.50	-.2308		
-1.17	1.0449					8.75	-.2570		
-.57	1.1318					10.00	-.2753		
.00	1.0702					12.50	-.3634		
.31	.6901					15.00	-.4045		
.62	.4750					17.50	-.4211		
1.25	.1554					20.00	-.4693		
1.87	.0395					30.00	-.5163		
2.50	-.0351					40.00	-.5121		
3.12	-.0914					50.00	-.5591		
3.75	-.0480					60.00	-.5080		
4.38	-.0877					70.00	-.4764		
5.00	-.1569					80.00	-.4162		
6.25	-.2342					90.00	-.3576		
7.50	-.2420					100.00	-.2371		
8.75	-.2634					110.00	-.1861		
12.50	-.3555					314.90	-.0160		
15.00	-.3948					364.36	-.0212		
17.50	-.4583								
20.00	-.4694								
30.00	-.4875								
40.00	-.5266								
50.00	-.5344								
60.00	-.5209								
70.00	-.4772								
80.00	-.4074								
90.00	-.3573								
100.00	-.2436								
110.00	-.1845								
314.90	-.0221								
364.36	-.0099								

Table III. Continued

(g) $M = 0.79$

$M = 0.793$; mfr $= 0.278$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1261	446.79	-.0511	314.90	-.0647	-244.08	1.1257	496.25	-.0464
-223.02	1.1250	496.25	-.0479	364.36	-.0585	-138.76	1.1134	545.71	-.0450
-201.95	1.1229	545.71	-.0482			-33.43	1.0832	595.17	-.0482
-170.35	1.1183	595.17	-.0450			-13.37	1.1510	661.12	-.0454
-138.76	1.1095	661.12	-.0378			-2.67	1.0305	710.58	-.0436
-117.69	1.1021	710.58	-.0357			.00	-.2809	743.55	-.0303
-96.62	1.0951	743.55	-.0220			.31	-1.0165	760.04	-.0112
-75.56	1.0824	760.04	-.0087			.62	-1.1450	776.52	.0107
-54.49	1.0774	776.52	.0104			1.25	-1.3994	793.01	.0553
-43.96	1.0749	793.01	.0542			1.87	-1.4860		
-33.43	1.0836					2.50	-1.5658		
-30.08	1.0876					3.12	-1.6152		
-23.40	1.1058					3.75	-1.6080		
-13.37	1.1507					4.38	-1.6276		
-6.69	1.1619					5.00	-1.6223		
-4.35	1.1228					6.25	-1.6031		
-2.67	1.0308					7.50	-1.5949		
-1.17	.7965					8.75	-1.5712		
-.57	.5729					10.00	-1.5610		
.00	-.2963					12.50	-1.5491		
.31	-.9224					15.00	-1.5160		
.62	-1.2044					17.50	-1.4997		
1.25	-1.3773					20.00	-1.4707		
1.87	-1.4903					30.00	-1.3855		
2.50	-1.5658					40.00	-1.3262		
3.12	-1.5895					50.00	-1.2776		
3.75	-1.6055					60.00	-1.2362		
4.38	-1.6243					70.00	-.9910		
5.00	-1.6037					80.00	-.6704		
6.25	-1.6133					90.00	-.6497		
7.50	-1.5920					100.00	-.5514		
8.75	-1.5803					110.00	-.5609		
12.50	-1.5339					314.90	-.0576		
15.00	-1.5010					364.36	-.0610		
17.50	-1.4585								
20.00	-1.4503								
30.00	-1.3911								
40.00	-1.2816								
50.00	-1.2728								
60.00	-1.1392								
70.00	-.7242								
80.00	-.6953								
90.00	-.6247								
100.00	-.5919								
110.00	-.5383								
314.90	-.0672								
364.36	-.0597								

$M = 0.792$; mfr $= 0.317$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1099	446.79	-.0394	314.90	-.0699	-244.08	1.1092	496.25	-.0394
-223.02	1.1113	496.25	-.0376	364.36	-.0574	-138.76	1.0913	545.71	-.0325
-201.95	1.1085	545.71	-.0358			-33.43	1.0432	595.17	-.0405
-170.35	1.1021	595.17	-.0289			-13.37	1.1267	661.12	-.0279
-138.76	1.0901	661.12	-.0214			-2.67	1.0714	710.58	-.0160
-117.69	1.0816	710.58	-.0080			.00	-.1766	743.55	.0121
-96.62	1.0665	743.55	.0175			.31	-.8920	760.04	.0327
-75.56	1.0544	760.04	.0366			.62	-.9884	776.52	.0633
-54.49	1.0421	776.52	.0618			1.25	-1.3129	793.01	.1173
-43.96	1.0377	793.01	.1224			1.87	-1.4566		
-33.43	1.0432					2.50	-1.5140		
-30.08	1.0472					3.12	-1.5577		
-23.40	1.0655					3.75	-1.5630		
-13.37	1.1251					4.38	-1.5519		
-6.69	1.1617					5.00	-1.5602		
-4.35	1.1421					6.25	-1.5523		
-2.67	1.0766					7.50	-1.5307		
-1.17	.8556					8.75	-1.5190		
-.57	.6720					10.00	-1.4980		
.00	-.1493					12.50	-1.4856		
.31	-.8135					15.00	-1.4773		
.62	-1.0238					17.50	-1.4294		
1.25	-1.3053					20.00	-1.4214		
1.87	-1.4402					30.00	-1.3456		
2.50	-1.5123					40.00	-1.2850		
3.12	-1.5435					50.00	-1.2359		
3.75	-1.5453					60.00	-1.2164		
4.38	-1.5499					70.00	-1.0174		
5.00	-1.5559					80.00	-.6575		
6.25	-1.5588					90.00	-.6192		
7.50	-1.5478					100.00	-.5063		
8.75	-1.5346					110.00	-.3842		
12.50	-1.4757					314.90	-.0640		
15.00	-1.4358					364.36	-.0657		
17.50	-1.4331								
20.00	-1.4175								
30.00	-1.3419								
40.00	-1.2630								
50.00	-1.2265								
60.00	-1.2093								
70.00	-.8924								
80.00	-.6505								
90.00	-.5913								
100.00	-.5332								
110.00	-.4415								
314.90	-.0703								
364.36	-.0607								

Table III. Continued

(g) Continued

$M = 0.792$; mfr $= 0.405$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0737	446.79	-.0313	314.90	-.0592	-244.08	1.0724	496.25	-.0248
-223.02	1.0740	496.25	-.0237	364.36	-.0504	-138.76	1.0426	545.71	-.0198
-201.95	1.0726	545.71	-.0180			-33.43	.9392	595.17	-.0154
-170.35	1.0610	595.17	-.0054			-13.37	1.0545	661.12	.0036
-138.76	1.0419	661.12	.0191			-2.67	1.1424	710.58	.0361
-117.69	1.0250	710.58	.0494			.00	.0814	743.55	.0796
-96.62	.9995	743.55	.0930			.31	-.5111	760.04	.1153
-75.56	.9777	760.04	.1232			.62	-.7217	776.52	.1600
-54.49	.9491	776.52	.1639			1.25	-1.1235	793.01	.2273
-43.96	.9336	793.01	.2280			1.87	-1.2813		
-33.43	.9392					2.50	-1.3851		
-30.08	.9416					3.12	-1.4479		
-23.40	.9694					3.75	-1.4098		
-13.37	1.0617					4.38	-1.3834		
-6.69	1.1456					5.00	-1.3651		
-4.35	1.1615					6.25	-1.3630		
-2.67	1.1385					7.50	-1.3600		
-1.17	.9913					8.75	-1.3630		
-.57	.8600					10.00	-1.3779		
.00	.0829					12.50	-1.3464		
.31	-.4628					15.00	-1.3017		
.62	-.8476					17.50	-1.3005		
1.25	-1.0912					20.00	-1.2965		
1.87	-1.2765					30.00	-1.1717		
2.50	-1.4078					40.00	-1.1586		
3.12	-1.4334					50.00	-1.1298		
3.75	-1.4181					60.00	-1.1099		
4.38	-1.4025					70.00	-1.0329		
5.00	-1.4021					80.00	-.5714		
6.25	-1.3851					90.00	-.4046		
7.50	-1.3634					100.00	-.3037		
8.75	-1.3752					110.00	-.2092		
12.50	-1.3233					314.90	-.0567		
15.00	-1.3254					364.36	-.0554		
17.50	-1.2708								
20.00	-1.2564								
30.00	-1.1977								
40.00	-1.1332								
50.00	-1.1380								
60.00	-1.1124								
70.00	-1.0684								
80.00	-.5670								
90.00	-.4039								
100.00	-.3177								
110.00	-.2094								
314.90	-.0592								
364.36	-.0508								

$M = 0.792$; mfr $= 0.445$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0516	446.79	-.0239	314.90	-.0613	-244.08	1.0523	496.25	-.0142
-223.02	1.0545	496.25	-.0157	364.36	-.0513	-138.76	1.0142	545.71	-.0056
-201.95	1.0499	545.71	-.0074			-33.43	.8687	595.17	-.0002
-170.35	1.0357	595.17	.0067			-13.37	1.0086	661.12	.0265
-138.76	1.0117	661.12	.0380			-2.67	1.1553	710.58	.0592
-117.69	.9895	710.58	.0718			.00	.2068	743.55	.1101
-96.62	.9627	743.55	.1209			.31	-.3910	760.04	.1497
-75.56	.9288	760.04	.1573			.62	-.6014	776.52	.1983
-54.49	.8939	776.52	.2016			1.25	-.9965	793.01	.2711
-43.96	.8711	793.01	.2707			1.87	-1.2184		
-33.43	.8659					2.50	-1.3215		
-30.08	.8707					3.12	-1.3599		
-23.40	.9009					3.75	-1.3450		
-13.37	1.0078					4.38	-1.2974		
-6.69	1.1183					5.00	-1.2932		
-4.35	1.1583					6.25	-1.2978		
-2.67	1.1562					7.50	-1.2828		
-1.17	1.0553					8.75	-1.2891		
-.57	.9036					10.00	-1.2872		
.00	.2043					12.50	-1.2728		
.31	-.3332					15.00	-1.2358		
.62	-.7304					17.50	-1.2202		
1.25	-.9877					20.00	-1.2170		
1.87	-1.1964					30.00	-1.0954		
2.50	-1.3345					40.00	-1.0727		
3.12	-1.3537					50.00	-1.0559		
3.75	-1.3640					60.00	-1.0340		
4.38	-1.3000					70.00	-1.0188		
5.00	-1.3328					80.00	-.5072		
6.25	-1.3075					90.00	-.3695		
7.50	-1.2599					100.00	-.2554		
8.75	-1.2546					110.00	-.1928		
12.50	-1.2649					314.90	-.0513		
15.00	-1.2146					364.36	-.0530		
17.50	-1.2159								
20.00	-1.1884								
30.00	-1.1165								
40.00	-1.0728								
50.00	-1.0424								
60.00	-1.0445								
70.00	-.9889								
80.00	-.5012								
90.00	-.3679								
100.00	-.2578								
110.00	-.1916								
314.90	-.0588								
364.36	-.0505								

Table III. Continued

(g) Continued

$M = 0.793$; mfr $= 0.487$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0275	446.79	-.0199	314.90	-.0551	-244.08	1.0293	496.25	-.0106
-223.02	1.0335	496.25	-.0113	364.36	-.0413	-138.76	.9784	545.71	-.0005
-201.95	1.0275	545.71	-.0016			-33.43	.7966	595.17	.0110
-170.35	1.0110	595.17	.0135			-13.37	.9395	661.12	.0401
-138.76	.9803	661.12	.0455			-2.67	1.1627	710.58	.0819
-117.69	.9549	710.58	.0887			.00	.2976	743.55	.1369
-96.62	.9211	743.55	.1423			.31	-.2213	760.04	.1790
-75.56	.8773	760.04	.1797			.62	-.4529	776.52	.2300
-54.49	.8311	776.52	.2304			1.25	-.8861	793.01	.3059
-43.96	.8030	793.01	.2988			1.87	-1.1161		
-33.43	.8002					2.50	-1.1877		
-30.08	.7939					3.12	-1.2195		
-23.40	.8284					3.75	-1.2474		
-13.37	.9403					4.38	-1.1880		
-6.69	1.0832					5.00	-1.2060		
-4.35	1.1385					6.25	-1.2112		
-2.67	1.1598					7.50	-1.1805		
-1.17	1.0902					8.75	-1.1805		
-.57	.9561					10.00	-1.1578		
.00	.3431					12.50	-1.1196		
.31	-.2303					15.00	-1.1395		
.62	-.6228					17.50	-1.0678		
1.25	-.9188					20.00	-1.0790		
1.87	-1.1188					30.00	-1.0423		
2.50	-1.2595					40.00	-.9846		
3.12	-1.2382					50.00	-1.0200		
3.75	-1.2439					60.00	-.9637		
4.38	-1.2421					70.00	-.8889		
5.00	-1.2297					80.00	-.4424		
6.25	-1.1837					90.00	-.3400		
7.50	-1.1837					100.00	-.2539		
8.75	-1.1347					110.00	-.2042		
12.50	-1.1493					314.90	-.0551		
15.00	-1.1497					364.36	-.0559		
17.50	-1.1241								
20.00	-1.1099								
30.00	-1.0316								
40.00	-1.0114								
50.00	-1.0071								
60.00	-.9943								
70.00	-.7702								
80.00	-.4633								
90.00	-.3402								
100.00	-.2614								
110.00	-.2066								
314.90	-.0497								
364.36	-.0422								

$M = 0.794$; mfr $= 0.488$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0311	446.79	-.0069	314.90	-.0547	-244.08	1.0268	496.25	-.0177
-223.02	1.0325	496.25	-.0059	364.36	-.0427	-138.76	.9788	545.71	-.0069
-201.95	1.0297	545.71	.0031			-33.43	.7531	595.17	.0020
-170.35	1.0107	595.17	.0160			-13.37	.8956	661.12	.0351
-138.76	.9801	661.12	.0473			-2.67	1.1615	710.58	.0763
-117.69	.9572	710.58	.0871			.00	.4715	743.55	.1339
-96.62	.9245	743.55	.1349			.31	-.0538	760.04	.1819
-75.56	.8871	760.04	.1690			.62	-.2660	776.52	.2394
-54.49	.8533	776.52	.2089			1.25	-.7412	793.01	.3219
-43.96	.8267	793.01	.2663			1.87	-.8797		
-33.43	.8307					2.50	-1.0037		
-30.08	.8299					3.12	-1.0273		
-23.40	.8735					3.75	-1.0573		
-13.37	.9808					4.38	-1.0132		
-6.69	1.1157					5.00	-.9810		
-4.35	1.1614					6.25	-.9282		
-2.67	1.1606					7.50	-.8891		
-1.17	1.0505					8.75	-.8420		
-.57	.9104					10.00	-.7965		
.00	.2139					12.50	-.8454		
.31	-.3827					15.00	-.7925		
.62	-.7917					17.50	-.8692		
1.25	-1.0083					20.00	-.8168		
1.87	-1.2170					30.00	-.7941		
2.50	-1.3621					40.00	-.8021		
3.12	-1.3770					50.00	-.8199		
3.75	-1.3742					60.00	-.8005		
4.38	-1.3299					70.00	-.7536		
5.00	-1.3604					80.00	-.5131		
6.25	-1.3190					90.00	-.3854		
7.50	-1.2888					100.00	-.2721		
8.75	-1.2962					110.00	-.2101		
12.50	-1.3218					314.90	-.0435		
15.00	-1.3097					364.36	-.0410		
17.50	-1.2825								
20.00	-1.2757								
30.00	-1.1852								
40.00	-1.1733								
50.00	-1.1731								
60.00	-1.1584								
70.00	-.9201								
80.00	-.5566								
90.00	-.4737								
100.00	-.2996								
110.00	-.2504								
314.90	-.0464								
364.36	-.0406								

Table III. Continued

(g) Continued

$M = 0.795$; mfr $= 0.544$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9929	446.79	-.0142	314.90	-.0529	-244.08	.9935	496.25	-.0006
-223.02	.9957	496.25	-.0013	364.36	-.0430	-138.76	.9326	545.71	.0126
-201.95	.9908	545.71	.0080			-33.43	.6677	595.17	.0223
-170.35	.9683	595.17	.0259			-13.37	.8239	661.12	.0589
-138.76	.9296	661.12	.0653			-2.67	1.1609	710.58	.1055
-117.69	.8945	710.58	.1112			.00	.4977	743.55	.1646
-96.62	.8498	743.55	.1660			.31	-.0746	760.04	.2115
-75.56	.7933	760.04	.2069			.62	-.2908	776.52	.2692
-54.49	.7332	776.52	.2588			1.25	-.7271	793.01	.3405
-43.96	.6898	793.01	.3319			1.87	-.8848		
-33.43	.6776					2.50	-1.0086		
-30.08	.6772					3.12	-1.0670		
-23.40	.7013					3.75	-1.0836		
-13.37	.8350					4.38	-1.0749		
-6.69	1.0181					5.00	-1.0447		
-4.35	1.0923					6.25	-1.0579		
-2.67	1.1533					7.50	-.9884		
-1.17	1.1301					8.75	-.9548		
-.57	1.0430					10.00	-.9466		
.00	.5101					12.50	-.9434		
.31	-.0221					15.00	-.9351		
.62	-.4216					17.50	-.9256		
1.25	-.7896					20.00	-.9403		
1.87	-.9416					30.00	-.8779		
2.50	-1.0592					40.00	-.9006		
3.12	-1.1093					50.00	-.8652		
3.75	-1.1051					60.00	-.8772		
4.38	-1.0571					70.00	-.8105		
5.00	-1.0747					80.00	-.4938		
6.25	-.9525					90.00	-.3537		
7.50	-.9698					100.00	-.2553		
8.75	-.9910					110.00	-.1981		
12.50	-.9854					314.90	-.0314		
15.00	-.9635					364.36	-.0463		
17.50	-.9299								
20.00	-.9354								
30.00	-.8943								
40.00	-.8774								
50.00	-.8868								
60.00	-.8944								
70.00	-.8224								
80.00	-.4493								
90.00	-.3538								
100.00	-.2680								
110.00	-.2023								
314.90	-.0529								
364.36	-.0392								

$M = 0.791$; mfr $= 0.620$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9427	446.79	-.0108	314.90	-.0404	-244.08	.9416	496.25	.0054
-223.02	.9462	496.25	.0014	364.36	-.0295	-138.76	.8600	545.71	.0198
-201.95	.9385	545.71	.0155			-33.43	.4837	595.17	.0314
-170.35	.9091	595.17	.0379			-13.37	.6610	661.12	.0714
-138.76	.8560	661.12	.0718			-2.67	1.1152	710.58	.1213
-117.69	.8097	710.58	.1238			.00	.6663	743.55	.1862
-96.62	.7464	743.55	.1862			.31	.1665	760.04	.2335
-75.56	.6672	760.04	.2270			.62	-.0671	776.52	.2883
-54.49	.5759	776.52	.2793			1.25	-.4746	793.01	.3622
-43.96	.5177	793.01	.3503			1.87	-.6977		
-33.43	.4873					2.50	-.8002		
-30.08	.4798					3.12	-.8508		
-23.40	.4957					3.75	-.8102		
-13.37	.6729					4.38	-.5952		
-6.69	.9128					5.00	-.6301		
-4.35	1.0297					6.25	-.6069		
-2.67	1.1266					7.50	-.6692		
-1.17	1.1650					8.75	-.6661		
-.57	1.1208					10.00	-.7271		
.00	.6831					12.50	-.7699		
.31	.1501					15.00	-.7815		
.62	-.1692					17.50	-.8122		
1.25	-.4931					20.00	-.8442		
1.87	-.7317					30.00	-.8262		
2.50	-.8209					40.00	-.7922		
3.12	-.8785					50.00	-.7922		
3.75	-.6993					60.00	-.7843		
4.38	-.7686					70.00	-.5861		
5.00	-.6325					80.00	-.4466		
6.25	-.6662					90.00	-.3767		
7.50	-.6520					100.00	-.2665		
8.75	-.7277					110.00	-.2014		
12.50	-.7715					314.90	-.0212		
15.00	-.8090					364.36	-.0316		
17.50	-.8362								
20.00	-.8061								
30.00	-.8269								
40.00	-.7756								
50.00	-.8003								
60.00	-.7890								
70.00	-.5973								
80.00	-.4461								
90.00	-.3899								
100.00	-.2740								
110.00	-.2051								
314.90	-.0375								
364.36	-.0253								

Table III. Continued

(g) Continued

$M = 0.791$; mfr $= 0.677$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.8878	446.79	.0000	314.90	-.0341	-244.08	.8881	496.25	.0108
-223.02	.8934	496.25	.0094	364.36	-.0237	-138.76	.7850	545.71	.0252
-201.95	.8828	545.71	.0213			-33.43	.2777	595.17	.0404
-170.35	.8478	595.17	.0408			-13.37	.4445	661.12	.0823
-138.76	.7824	661.12	.0830			-2.67	1.0594	710.58	.1353
-117.69	.7240	710.58	.1349			.00	.8311	743.55	.2013
-96.62	.6419	743.55	.1977			.31	.3792	760.04	.2475
-75.56	.5397	760.04	.2432			.62	.1255	776.52	.3042
-54.49	.4159	776.52	.2948			1.25	-.2650	793.01	.3749
-43.96	.3179	793.01	.3648			1.87	-.4488		
-33.43	.2769					2.50	-.5592		
-30.08	.2622					3.12	-.5222		
-23.40	.2801					3.75	-.5172		
-13.37	.4800					4.38	-.4534		
-6.69	.7760					5.00	-.4525		
-4.35	.9189					6.25	-.5255		
-2.67	1.0618					7.50	-.4828		
-1.17	1.1608					8.75	-.5959		
-.57	1.1545					10.00	-.5655		
.00	.8382					12.50	-.6659		
.31	.3685					15.00	-.6686		
.62	.0529					17.50	-.6926		
1.25	-.2507					20.00	-.6555		
1.87	-.4485					30.00	-.6591		
2.50	-.5082					40.00	-.6962		
3.12	-.5118					50.00	-.7202		
3.75	-.4766					60.00	-.7266		
4.38	-.4719					70.00	-.5683		
5.00	-.5228					80.00	-.4525		
6.25	-.5135					90.00	-.3789		
7.50	-.5288					100.00	-.2630		
8.75	-.6025					110.00	-.1967		
12.50	-.6587					314.90	-.0287		
15.00	-.7735					364.36	-.0275		
17.50	-.6939								
20.00	-.7189								
30.00	-.7003								
40.00	-.7460								
50.00	-.7446								
60.00	-.7306								
70.00	-.5871								
80.00	-.4521								
90.00	-.3869								
100.00	-.2704								
110.00	-.2002								
314.90	-.0350								
364.36	-.0199								

$M = 0.792$; mfr $= 0.739$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.8265	446.79	.0088	314.90	-.0319	-244.08	.8236	496.25	.0196
-223.02	.8297	496.25	.0196	364.36	-.0189	-138.76	.6952	545.71	.0336
-201.95	.8159	545.71	.0315			-33.43	-.0456	595.17	.0452
-170.35	.7753	595.17	.0556			-13.37	.2234	661.12	.0938
-138.76	.6902	661.12	.0970			-2.67	.9540	710.58	.1485
-117.69	.6171	710.58	.1496			.00	.9603	743.55	.2116
-96.62	.5091	743.55	.2130			.31	.5430	760.04	.2616
-75.56	.3710	760.04	.2559			.62	.3660	776.52	.3139
-54.49	.1917	776.52	.3074			1.25	-.0039	793.01	.3852
-43.96	.0621	793.01	.3765			1.87	-.1749		
-33.43	-.0397					2.50	-.1980		
-30.08	-.0691					3.12	-.2581		
-23.40	-.0067					3.75	-.2906		
-13.37	.2795					4.38	-.2260		
-6.69	.5766					5.00	-.2902		
-4.35	.7706					6.25	-.3342		
-2.67	.9520					7.50	-.3787		
-1.17	1.1263					8.75	-.4299		
-.57	1.1647					10.00	-.4314		
.00	.9269					12.50	-.5295		
.31	.5747					15.00	-.4876		
.62	.2308					17.50	-.5526		
1.25	-.0251					20.00	-.5737		
1.87	-.1952					30.00	-.5789		
2.50	-.2711					40.00	-.6443		
3.12	-.2300					50.00	-.6643		
3.75	-.2456					60.00	-.6443		
4.38	-.2761					70.00	-.5434		
5.00	-.3283					80.00	-.4621		
6.25	-.3489					90.00	-.3743		
7.50	-.3532					100.00	-.2558		
8.75	-.4174					110.00	-.1884		
12.50	-.4891					314.90	-.0185		
15.00	-.5306					364.36	-.0169		
17.50	-.5306								
20.00	-.5789								
30.00	-.6016								
40.00	-.6392								
50.00	-.6978								
60.00	-.6404								
70.00	-.5658								
80.00	-.4624								
90.00	-.3794								
100.00	-.2577								
110.00	-.1945								
314.90	-.0289								
364.36	-.0198								

Table III. Continued

(g) Concluded

$M = 0.792$; mfr $= 0.806$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.7294	446.79	.0105	314.90	-.0265	-244.08	.7292	496.25	.0220
-223.02	.7336	496.25	.0224	364.36	-.0140	-138.76	.5635	545.71	.0400
-201.95	.7138	545.71	.0335			-33.43	-.8165	595.17	.0541
-170.35	.6630	595.17	.0580			-13.37	-.1209	661.12	.0994
-138.76	.5600	661.12	.1030			-2.67	.7876	710.58	.1552
-117.69	.4661	710.58	.1563			.00	1.0677	743.55	.2189
-96.62	.3204	743.55	.2171			.31	.7137	760.04	.2683
-75.56	.1213	760.04	.2607			.62	.5516	776.52	.3201
-54.49	-.1324	776.52	.3111			1.25	.2247	793.01	.3882
-43.96	-.6136	793.01	.3770			1.87	.0510		
-33.43	-.7555					2.50	.0205		
-30.08	-.7391					3.12	-.0586		
-23.40	-.5191					3.75	-.0939		
-13.37	-.1074					4.38	-.0832		
-6.69	.3453					5.00	-.1086		
-4.35	.5708					6.25	-.1815		
-2.67	.8014					7.50	-.1974		
-1.17	1.0581					8.75	-.2630		
-.57	1.1457					10.00	-.2516		
.00	1.0795					12.50	-.3437		
.31	.7477					15.00	-.3907		
.62	.4848					17.50	-.4078		
1.25	.2579					20.00	-.4796		
1.87	.0575					30.00	-.4924		
2.50	.0162					40.00	-.5864		
3.12	-.0590					50.00	-.5789		
3.75	-.0467					60.00	-.5709		
4.38	-.0872					70.00	-.5111		
5.00	-.1561					80.00	-.4369		
6.25	-.1820					90.00	-.3672		
7.50	-.2246					100.00	-.2424		
8.75	-.2774					110.00	-.1790		
12.50	-.3381					314.90	-.0111		
15.00	-.3956					364.36	-.0111		
17.50	-.4179								
20.00	-.4609								
30.00	-.5024								
40.00	-.5707								
50.00	-.5875								
60.00	-.5873								
70.00	-.5247								
80.00	-.4310								
90.00	-.3714								
100.00	-.2476								
110.00	-.1834								
314.90	-.0219								
364.36	-.0102								

Table III. Continued

(h) $M = 0.82$

$M = 0.816$; mfr $= 0.272$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1380	446.79	-.0418	314.90	-.0625	-244.08	1.1358	496.25	-.0407
-223.02	1.1356	496.25	-.0414	364.36	-.0589	-138.76	1.1254	545.71	-.0387
-201.95	1.1373	545.71	-.0404			-33.43	1.0948	595.17	-.0404
-170.35	1.1309	595.17	-.0366			-13.37	1.1603	661.12	-.0397
-138.76	1.1217	661.12	-.0307			-2.67	1.0534	710.58	-.0317
-117.69	1.1155	710.58	-.0255			.00	-.2287	743.55	-.0175
-96.62	1.1060	743.55	-.0112			.31	-.9405	760.04	.0009
-75.56	1.0961	760.04	.0037			.62	-1.0727	776.52	.0232
-54.49	1.0904	776.52	.0201			1.25	-1.3194	793.01	.0652
-43.96	1.0890	793.01	.0669			1.87	-1.4058		
-33.43	1.0971					2.50	-1.4707		
-30.08	1.1020					3.12	-1.5090		
-23.40	1.1170					3.75	-1.5199		
-13.37	1.1634					4.38	-1.5298		
-6.69	1.1631					5.00	-1.5311		
-4.35	1.1257					6.25	-1.5122		
-2.67	1.0340					7.50	-1.4934		
-1.17	.7971					8.75	-1.4841		
-.57	.5911					10.00	-1.4676		
.00	-.2437					12.50	-1.4599		
.31	-.8885					15.00	-1.4399		
.62	-1.1158					17.50	-1.4191		
1.25	-1.3097					20.00	-1.3895		
1.87	-1.4042					30.00	-1.3194		
2.50	-1.4880					40.00	-1.2367		
3.12	-1.5065					50.00	-1.2194		
3.75	-1.5144					60.00	-1.1886		
4.38	-1.5308					70.00	-1.0278		
5.00	-1.5103					80.00	-.6827		
6.25	-1.5048					90.00	-.6484		
7.50	-1.5024					100.00	-.6250		
8.75	-1.4860					110.00	-.5831		
12.50	-1.4723					314.90	-.0545		
15.00	-1.4343					364.36	-.0633		
17.50	-1.4069								
20.00	-1.3810								
30.00	-1.3182								
40.00	-1.2622								
50.00	-1.2110								
60.00	-1.1786								
70.00	-1.0128								
80.00	-.6830								
90.00	-.6553								
100.00	-.6384								
110.00	-.5851								
314.90	-.0561								
364.36	-.0593								

$M = 0.817$; mfr $= 0.316$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1255	446.79	-.0395	314.90	-.0507	-244.08	1.1225	496.25	-.0353
-223.02	1.1241	496.25	-.0350	364.36	-.0470	-138.76	1.1068	545.71	-.0284
-201.95	1.1218	545.71	-.0322			-33.43	1.0585	595.17	-.0322
-170.35	1.1160	595.17	-.0253			-13.37	1.1401	661.12	-.0197
-138.76	1.1054	661.12	-.0163			-2.67	1.0850	710.58	-.0038
-117.69	1.0942	710.58	.0018			.00	-.1041	743.55	.0209
-96.62	1.0809	743.55	.0271			.31	-.8129	760.04	.0479
-75.56	1.0680	760.04	.0511			.62	-.8845	776.52	.0771
-54.49	1.0561	776.52	.0771			1.25	-1.1999	793.01	.1309
-43.96	1.0536	793.01	.1291			1.87	-1.3583		
-33.43	1.0570					2.50	-1.4052		
-30.08	1.0639					3.12	-1.4613		
-23.40	1.0800					3.75	-1.4559		
-13.37	1.1409					4.38	-1.4669		
-6.69	1.1727					5.00	-1.4559		
-4.35	1.1558					6.25	-1.4437		
-2.67	1.0915					7.50	-1.4240		
-1.17	.8819					8.75	-1.4300		
-.57	.6873					10.00	-1.4109		
.00	-.1216					12.50	-1.3948		
.31	-.7444					15.00	-1.3825		
.62	-.9527					17.50	-1.3597		
1.25	-1.2139					20.00	-1.3440		
1.87	-1.3552					30.00	-1.2395		
2.50	-1.4133					40.00	-1.2287		
3.12	-1.4390					50.00	-1.1619		
3.75	-1.4486					60.00	-1.1523		
4.38	-1.4458					70.00	-1.1331		
5.00	-1.4592					80.00	-.8690		
6.25	-1.4492					90.00	-.6320		
7.50	-1.4438					100.00	-.5901		
8.75	-1.4356					110.00	-.5782		
12.50	-1.3815					314.90	-.0466		
15.00	-1.3607					364.36	-.0507		
17.50	-1.3419								
20.00	-1.3210								
30.00	-1.2543								
40.00	-1.1995								
50.00	-1.1797								
60.00	-1.1598								
70.00	-.9755								
80.00	-.6603								
90.00	-.6107								
100.00	-.6002								
110.00	-.5799								
314.90	-.0519								
364.36	-.0478								

Table III. Continued

(h) Continued

$M = 0.817$; mfr $= 0.403$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0867	446.79	-.0283	314.90	-.0519	-244.08	1.0873	496.25	-.0220
-223.02	1.0891	496.25	-.0220	364.36	-.0467	-138.76	1.0559	545.71	-.0120
-201.95	1.0864	545.71	-.0147			-33.43	.9505	595.17	-.0085
-170.35	1.0765	595.17	-.0009			-13.37	1.0670	661.12	.0158
-138.76	1.0555	661.12	.0224			-2.67	1.1565	710.58	.0463
-117.69	1.0385	710.58	.0571			.00	.1204	743.55	.0921
-96.62	1.0170	743.55	.0983			.31	-.4551	760.04	.1292
-75.56	.9919	760.04	.1334			.62	-.6541	776.52	.1737
-54.49	.9684	776.52	.1768			1.25	-.9898	793.01	.2444
-43.96	.9517	793.01	.2340			1.87	-1.1743		
-33.43	.9525					2.50	-1.2990		
-30.08	.9605					3.12	-1.3338		
-23.40	.9781					3.75	-1.3159		
-13.37	1.0681					4.38	-1.2853		
-6.69	1.1582					5.00	-1.3017		
-4.35	1.1751					6.25	-1.2641		
-2.67	1.1538					7.50	-1.2652		
-1.17	1.0088					8.75	-1.2649		
-.57	.8534					10.00	-1.2587		
.00	.1601					12.50	-1.2521		
.31	-.4323					15.00	-1.2272		
.62	-.7581					17.50	-1.2183		
1.25	-1.0152					20.00	-1.1899		
1.87	-1.1892					30.00	-1.1266		
2.50	-1.3082					40.00	-1.1008		
3.12	-1.3445					50.00	-1.0966		
3.75	-1.3168					60.00	-1.0774		
4.38	-1.2925					70.00	-1.0670		
5.00	-1.3048					80.00	-1.0129		
6.25	-1.2864					90.00	-.5573		
7.50	-1.2724					100.00	-.4862		
8.75	-1.2754					110.00	-.4132		
12.50	-1.2423					314.90	-.0459		
15.00	-1.2389					364.36	-.0450		
17.50	-1.2097								
20.00	-1.2071								
30.00	-1.1427								
40.00	-1.0881								
50.00	-1.0894								
60.00	-1.0629								
70.00	-1.0797								
80.00	-.9912								
90.00	-.5544								
100.00	-.4791								
110.00	-.4494								
314.90	-.0503								
364.36	-.0410								

$M = 0.816$; mfr $= 0.447$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0664	446.79	-.0247	314.90	-.0491	-244.08	1.0637	496.25	-.0133
-223.02	1.0695	496.25	-.0140	364.36	-.0426	-138.76	1.0257	545.71	-.0022
-201.95	1.0661	545.71	-.0074			-33.43	.8830	595.17	.0041
-170.35	1.0518	595.17	.0079			-13.37	1.0137	661.12	.0343
-138.76	1.0276	661.12	.0364			-2.67	1.1695	710.58	.0684
-117.69	1.0051	710.58	.0757			.00	.2562	743.55	.1233
-96.62	.9769	743.55	.1267			.31	-.3354	760.04	.1629
-75.56	.9398	760.04	.1632			.62	-.5335	776.52	.2084
-54.49	.9101	776.52	.2125			1.25	-.9264	793.01	.2803
-43.96	.8926	793.01	.2810			1.87	-1.1175		
-33.43	.8880					2.50	-1.2438		
-30.08	.8934					3.12	-1.2825		
-23.40	.9125					3.75	-1.2645		
-13.37	1.0192					4.38	-1.2266		
-6.69	1.1332					5.00	-1.2214		
-4.35	1.1690					6.25	-1.1833		
-2.67	1.1653					7.50	-1.1810		
-1.17	1.0547					8.75	-1.2049		
-.57	.9369					10.00	-1.2172		
.00	.2514					12.50	-1.1737		
.31	-.2853					15.00	-1.1383		
.62	-.6623					17.50	-1.1587		
1.25	-.9030					20.00	-1.1399		
1.87	-1.1205					30.00	-1.0510		
2.50	-1.2447					40.00	-1.0141		
3.12	-1.2827					50.00	-1.0233		
3.75	-1.2653					60.00	-1.0402		
4.38	-1.2259					70.00	-1.0391		
5.00	-1.2290					80.00	-1.0102		
6.25	-1.2026					90.00	-.5435		
7.50	-1.1855					100.00	-.4261		
8.75	-1.1920					110.00	-.3523		
12.50	-1.1588					314.90	-.0487		
15.00	-1.1865					364.36	-.0471		
17.50	-1.1578								
20.00	-1.1062								
30.00	-1.0687								
40.00	-1.0248								
50.00	-1.0619								
60.00	-1.0163								
70.00	-1.0175								
80.00	-.9979								
90.00	-.5229								
100.00	-.3967								
110.00	-.3377								
314.90	-.0527								
364.36	-.0406								

Table III. Continued

(h) Continued

$M = 0.817$; mfr $= 0.489$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0417	446.79	-.0175	314.90	-.0507	-244.08	1.0435	496.25	-.0064
-223.02	1.0457	496.25	-.0077	364.36	-.0367	-138.76	.9956	545.71	.0082
-201.95	1.0393	545.71	.0020			-33.43	.8049	595.17	.0148
-170.35	1.0257	595.17	.0190			-13.37	.9470	661.12	.0512
-138.76	.9934	661.12	.0537			-2.67	1.1756	710.58	.0932
-117.69	.9692	710.58	.0974			.00	.3750	743.55	.1484
-96.62	.9332	743.55	.1529			.31	-.1781	760.04	.1935
-75.56	.8899	760.04	.1904			.62	-.3911	776.52	.2459
-54.49	.8497	776.52	.2403			1.25	-.8086	793.01	.3201
-43.96	.8183	793.01	.3090			1.87	-1.0143		
-33.43	.8206					2.50	-1.0880		
-30.08	.8164					3.12	-1.1354		
-23.40	.8413					3.75	-1.1445		
-13.37	.9485					4.38	-1.1125		
-6.69	1.0938					5.00	-1.1215		
-4.35	1.1524					6.25	-1.1145		
-2.67	1.1701					7.50	-1.1153		
-1.17	1.1026					8.75	-1.0977		
-.57	.9733					10.00	-1.0661		
.00	.4046					12.50	-1.0527		
.31	-.1782					15.00	-1.0600		
.62	-.5430					17.50	-1.0677		
1.25	-.8365					20.00	-1.0412		
1.87	-1.0280					30.00	-.9812		
2.50	-1.1606					40.00	-.9593		
3.12	-1.1798					50.00	-.9428		
3.75	-1.1887					60.00	-.9659		
4.38	-1.1706					70.00	-.9728		
5.00	-1.1442					80.00	-.9543		
6.25	-1.1316					90.00	-.5439		
7.50	-1.0823					100.00	-.3491		
8.75	-1.0769					110.00	-.2392		
12.50	-1.0830					314.90	-.0463		
15.00	-1.0929					364.36	-.0467		
17.50	-1.0557								
20.00	-1.0620								
30.00	-.9986								
40.00	-.9779								
50.00	-.9893								
60.00	-.9855								
70.00	-.9447								
80.00	-.9807								
90.00	-.5403								
100.00	-.3803								
110.00	-.2360								
314.90	-.0487								
364.36	-.0403								

$M = 0.819$; mfr $= 0.561$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0060	446.79	-.0096	314.90	-.0457	-244.08	1.0058	496.25	.0015
-223.02	1.0088	496.25	.0008	364.36	-.0353	-138.76	.9480	545.71	.0139
-201.95	1.0033	545.71	.0094			-33.43	.6921	595.17	.0278
-170.35	.9823	595.17	.0288			-13.37	.8502	661.12	.0659
-138.76	.9423	661.12	.0676			-2.67	1.1707	710.58	.1157
-117.69	.9094	710.58	.1174			.00	.5292	743.55	.1790
-96.62	.8645	743.55	.1773			.31	.0047	760.04	.2268
-75.56	.8072	760.04	.2188			.62	-.2238	776.52	.2804
-54.49	.7454	776.52	.2735			1.25	-.6682	793.01	.3538
-43.96	.7036	793.01	.3420			1.87	-.8179		
-33.43	.6887					2.50	-.9197		
-30.08	.6936					3.12	-.9642		
-23.40	.7059					3.75	-1.0009		
-13.37	.8559					4.38	-1.0166		
-6.69	1.0418					5.00	-.9860		
-4.35	1.1136					6.25	-.9742		
-2.67	1.1632					7.50	-.9254		
-1.17	1.1452					8.75	-.8870		
-.57	1.0635					10.00	-.8767		
.00	.5283					12.50	-.8929		
.31	.0204					15.00	-.9090		
.62	-.3221					17.50	-.9021		
1.25	-.7000					20.00	-.8698		
1.87	-.8372					30.00	-.8529		
2.50	-.9679					40.00	-.8829		
3.12	-1.0064					50.00	-.8701		
3.75	-.9812					60.00	-.8813		
4.38	-.9494					70.00	-.8875		
5.00	-.9614					80.00	-.8883		
6.25	-.9164					90.00	-.5873		
7.50	-.8522					100.00	-.2917		
8.75	-.9177					110.00	-.1954		
12.50	-.9099					314.90	-.0389		
15.00	-.9082					364.36	-.0401		
17.50	-.8785								
20.00	-.9066								
30.00	-.8573								
40.00	-.8802								
50.00	-.8805								
60.00	-.8962								
70.00	-.8829								
80.00	-.9066								
90.00	-.6124								
100.00	-.3057								
110.00	-.1993								
314.90	-.0425								
364.36	-.0321								

Table III. Continued

(h) Continued

$M = 0.817$; mfr $= 0.619$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9529	446.79	-.0012	314.90	-.0349	-244.08	.9506	496.25	.0099
-223.02	.9583	496.25	.0089	364.36	-.0204	-138.76	.8678	545.71	.0241
-201.95	.9491	545.71	.0207			-33.43	.4914	595.17	.0429
-170.35	.9216	595.17	.0429			-13.37	.6752	661.12	.0818
-138.76	.8708	661.12	.0842			-2.67	1.1261	710.58	.1380
-117.69	.8235	710.58	.1342			.00	.7218	743.55	.2043
-96.62	.7612	743.55	.2005			.31	.1904	760.04	.2511
-75.56	.6820	760.04	.2431			.62	-.0413	776.52	.3067
-54.49	.5939	776.52	.2966			1.25	-.4147	793.01	.3764
-43.96	.5216	793.01	.3639			1.87	-.6147		
-33.43	.4914					2.50	-.7225		
-30.08	.4673					3.12	-.8088		
-23.40	.5121					3.75	-.7871		
-13.37	.6706					4.38	-.6023		
-6.69	.9175					5.00	-.6119		
-4.35	1.0301					6.25	-.5626		
-2.67	1.1313					7.50	-.5784		
-1.17	1.1751					8.75	-.6404		
-.57	1.1345					10.00	-.6949		
.00	.7333					12.50	-.7018		
.31	.2342					15.00	-.7441		
.62	-.1152					17.50	-.7314		
1.25	-.4375					20.00	-.7829		
1.87	-.6324					30.00	-.7775		
2.50	-.7261					40.00	-.7814		
3.12	-.6642					50.00	-.8156		
3.75	-.7316					60.00	-.8394		
4.38	-.6242					70.00	-.8475		
5.00	-.6403					80.00	-.8382		
6.25	-.5856					90.00	-.5169		
7.50	-.6170					100.00	-.2583		
8.75	-.6666					110.00	-.1710		
12.50	-.6875					314.90	-.0280		
15.00	-.7326					364.36	-.0268		
17.50	-.7733								
20.00	-.7635								
30.00	-.7699								
40.00	-.8080								
50.00	-.8169								
60.00	-.8332								
70.00	-.8290								
80.00	-.8344								
90.00	-.4823								
100.00	-.2619								
110.00	-.1672								
314.90	-.0369								
364.36	-.0208								

$M = 0.817$; mfr $= 0.678$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9023	446.79	-.0002	314.90	-.0390	-244.08	.9029	496.25	.0165
-223.02	.9085	496.25	.0140	364.36	-.0249	-138.76	.8009	545.71	.0317
-201.95	.8968	545.71	.0297			-33.43	.2874	595.17	.0463
-170.35	.8635	595.17	.0495			-13.37	.5035	661.12	.0936
-138.76	.7991	661.12	.0929			-2.67	1.0636	710.58	.1519
-117.69	.7426	710.58	.1484			.00	.8325	743.55	.2172
-96.62	.6612	743.55	.2144			.31	.4135	760.04	.2658
-75.56	.5601	760.04	.2589			.62	.1805	776.52	.3204
-54.49	.4307	776.52	.3120			1.25	-.1917	793.01	.3898
-43.96	.3345	793.01	.3798			1.87	-.3625		
-33.43	.2835					2.50	-.4347		
-30.08	.2824					3.12	-.4340		
-23.40	.2996					3.75	-.4444		
-13.37	.5089					4.38	-.4031		
-6.69	.7718					5.00	-.4509		
-4.35	.9266					6.25	-.4568		
-2.67	1.0601					7.50	-.4920		
-1.17	1.1703					8.75	-.5306		
-.57	1.1626					10.00	-.5547		
.00	.8478					12.50	-.5920		
.31	.3970					15.00	-.6363		
.62	.0882					17.50	-.6555		
1.25	-.2651					20.00	-.7059		
1.87	-.3866					30.00	-.6897		
2.50	-.4920					40.00	-.6971		
3.12	-.4927					50.00	-.7428		
3.75	-.3938					60.00	-.7809		
4.38	-.3945					70.00	-.7594		
5.00	-.4294					80.00	-.7778		
6.25	-.4660					90.00	-.4082		
7.50	-.4896					100.00	-.2344		
8.75	-.5269					110.00	-.1647		
12.50	-.6108					314.90	-.0145		
15.00	-.6967					364.36	-.0233		
17.50	-.6823								
20.00	-.6699								
30.00	-.6611								
40.00	-.7024								
50.00	-.7477								
60.00	-.7662								
70.00	-.7732								
80.00	-.7650								
90.00	-.4462								
100.00	-.2305								
110.00	-.1702								
314.90	-.0322								
364.36	-.0221								

Table III. Continued

(h) Concluded

$M = 0.818$; mfr $= 0.744$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.8451	446.79	.0084	314.90	-.0208	-244.08	.8472	496.25	.0227
-223.02	.8498	496.25	.0195	364.36	-.0107	-138.76	.7205	545.71	.0393
-201.95	.8362	545.71	.0345			-33.43	.0011	595.17	.0546
-170.35	.7941	595.17	.0570			-13.37	.2534	661.12	.1038
-138.76	.7128	661.12	.1038			-2.67	.9739	710.58	.1612
-117.69	.6410	710.58	.1615			.00	.9478	743.55	.2292
-96.62	.5363	743.55	.2278			.31	.5819	760.04	.2781
-75.56	.3985	760.04	.2704			.62	.3243	776.52	.3339
-54.49	.2217	776.52	.3218			1.25	.0830	793.01	.4016
-43.96	.0861	793.01	.3873			1.87	-.1468		
-33.43	-.0004					2.50	-.1516		
-30.08	-.0509					3.12	-.2269		
-23.40	.0111					3.75	-.2405		
-13.37	.2614					4.38	-.2281		
-6.69	.6211					5.00	-.2501		
-4.35	.7827					6.25	-.3203		
-2.67	.9634					7.50	-.3438		
-1.17	1.1301					8.75	-.3936		
-.57	1.1767					10.00	-.4273		
.00	.9890					12.50	-.5198		
.31	.5873					15.00	-.5467		
.62	.2700					17.50	-.5210		
1.25	-.0065					20.00	-.5244		
1.87	-.1352					30.00	-.5598		
2.50	-.1277					40.00	-.6155		
3.12	-.1629					50.00	-.7073		
3.75	-.1681					60.00	-.7261		
4.38	-.2221					70.00	-.7519		
5.00	-.3130					80.00	-.6723		
6.25	-.2983					90.00	-.3307		
7.50	-.3571					100.00	-.2209		
8.75	-.4030					110.00	-.1612		
12.50	-.4875					314.90	-.0115		
15.00	-.4525					364.36	-.0176		
17.50	-.4950								
20.00	-.5238								
30.00	-.6030								
40.00	-.6428								
50.00	-.6642								
60.00	-.7258								
70.00	-.7369								
80.00	-.7230								
90.00	-.3670								
100.00	-.2273								
110.00	-.1667								
314.90	-.0209								
364.36	-.0107								

$M = 0.817$; mfr $= 0.806$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.7338	446.79	.0170	314.90	-.0210	-244.08	.7270	496.25	.0309
-223.02	.7325	496.25	.0295	364.36	-.0098	-138.76	.5747	545.71	.0462
-201.95	.7168	545.71	.0451			-33.43	-.7593	595.17	.0632
-170.35	.6665	595.17	.0680			-13.37	-.0749	661.12	.1117
-138.76	.5703	661.12	.1138			-2.67	.8254	710.58	.1700
-117.69	.4703	710.58	.1710			.00	1.0785	743.55	.2324
-96.62	.3350	743.55	.2352			.31	.7228	760.04	.2817
-75.56	.1350	760.04	.2793			.62	.5496	776.52	.3351
-54.49	-.2511	776.52	.3289			1.25	.2451	793.01	.4031
-43.96	-.9283	793.01	.3916			1.87	.0846		
-33.43	-.7167					2.50	.0093		
-30.08	-.6844					3.12	-.0303		
-23.40	-.4743					3.75	-.0718		
-13.37	-.0511					4.38	-.0387		
-6.69	.3818					5.00	-.0806		
-4.35	.5669					6.25	-.1386		
-2.67	.8171					7.50	-.1643		
-1.17	1.0673					8.75	-.2544		
-.57	1.1565					10.00	-.2527		
.00	1.0871					12.50	-.3710		
.31	.7484					15.00	-.3514		
.62	.5213					17.50	-.3783		
1.25	.2476					20.00	-.4359		
1.87	.0650					30.00	-.4597		
2.50	.0340					40.00	-.5815		
3.12	-.0142					50.00	-.6187		
3.75	-.0289					60.00	-.6617		
4.38	-.0561					70.00	-.6710		
5.00	-.1711					80.00	-.5945		
6.25	-.1160					90.00	-.3460		
7.50	-.2244					100.00	-.2242		
8.75	-.2586					110.00	-.1643		
12.50	-.3218					314.90	-.0046		
15.00	-.3958					364.36	-.0094		
17.50	-.3789								
20.00	-.4547								
30.00	-.4924								
40.00	-.6098								
50.00	-.6391								
60.00	-.6711								
70.00	-.6740								
80.00	-.5918								
90.00	-.3475								
100.00	-.2299								
110.00	-.1666								
314.90	-.0210								
364.36	-.0017								

Table III. Continued

(i) $M = 0.84$

$M = 0.842$; mfr $= 0.278$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1505	446.79	-.0336	314.90	-.0189	-244.08	1.0423	496.25	-.0309
-223.02	1.1518	496.25	-.0326	364.36	-.0309	-138.76	1.0290	545.71	-.0289
-201.95	1.1482	545.71	-.0353			-33.43	1.0002	595.17	-.0329
-170.35	1.1442	595.17	-.0309			-13.37	1.0641	661.12	-.0283
-138.76	1.1367	661.12	-.0226			-2.67	.9562	710.58	-.0202
-117.69	1.1301	710.58	-.0159			.00	-.1625	743.55	-.0015
-96.62	1.1219	743.55	.0036			.31	-.9430	760.04	.0183
-75.56	1.1104	760.04	.0193			.62	-.9693	776.52	.0391
-54.49	1.1045	776.52	.0374			1.25	-1.3217	793.01	.0896
-43.96	.9947	793.01	.0846			1.87	-1.2932		
-33.43	1.0013					2.50	-1.4812		
-30.08	1.0050					3.12	-1.4023		
-23.40	1.0213					3.75	-1.5202		
-13.37	1.0656					4.38	-1.4221		
-6.69	1.1885					5.00	-1.5287		
-4.35	1.1540					6.25	-1.3954		
-2.67	1.0640					7.50	-1.4983		
-1.17	.8364					8.75	-1.3787		
-.57	.6226					10.00	-1.4753		
.00	-.1749					12.50	-1.4927		
.31	-.8062					15.00	-1.4608		
.62	-1.0145					17.50	-1.4289		
1.25	-1.2239					20.00	-1.4245		
1.87	-1.3084					30.00	-1.3317		
2.50	-1.3793					40.00	-1.2946		
3.12	-1.4034					50.00	-1.2649		
3.75	-1.4044					60.00	-1.2456		
4.38	-1.4203					70.00	-1.2143		
5.00	-1.4190					80.00	-1.2045		
6.25	-1.4054					90.00	-.8338		
7.50	-1.4081					100.00	-.7396		
8.75	-1.3949					110.00	-.7029		
12.50	-1.3576					314.90	-.0131		
15.00	-1.3323					364.36	-.0255		
17.50	-1.3140								
20.00	-1.2890								
30.00	-1.2192								
40.00	-1.1806								
50.00	-1.1466								
60.00	-1.1360								
70.00	-1.2178								
80.00	-1.0470								
90.00	-.7564								
100.00	-.6186								
110.00	-.5982								
314.90	-.0154								
364.36	-.0228								

$M = 0.843$; mfr $= 0.316$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1372	446.79	-.0319	314.90	-.0243	-244.08	1.1348	496.25	-.0262
-223.02	1.1369	496.25	-.0276	364.36	-.0308	-138.76	1.1182	545.71	-.0212
-201.95	1.1362	545.71	-.0283			-33.43	1.0702	595.17	-.0229
-170.35	1.1313	595.17	-.0202			-13.37	1.1544	661.12	-.0078
-138.76	1.1172	661.12	-.0052			-2.67	1.1005	710.58	.0079
-117.69	1.1090	710.58	.0142			.00	-.0587	743.55	.0390
-96.62	1.0975	743.55	.0417			.31	-.7224	760.04	.0634
-75.56	1.0831	760.04	.0634			.62	-.8030	776.52	.0932
-54.49	1.0726	776.52	.0955			1.25	-1.1040	793.01	.1511
-43.96	1.0636	793.01	.1460			1.87	-1.2726		
-33.43	1.0713					2.50	-1.3231		
-30.08	1.0735					3.12	-1.3503		
-23.40	1.0938					3.75	-1.3586		
-13.37	1.1518					4.38	-1.3418		
-6.69	1.1878					5.00	-1.3564		
-4.35	1.1669					6.25	-1.3345		
-2.67	1.1123					7.50	-1.3245		
-1.17	.9147					8.75	-1.3387		
-.57	.7082					10.00	-1.3183		
.00	-.0580					12.50	-1.2908		
.31	-.6621					15.00	-1.2982		
.62	-.8695					17.50	-1.2685		
1.25	-1.1079					20.00	-1.2644		
1.87	-1.2465					30.00	-1.1859		
2.50	-1.3124					40.00	-1.1655		
3.12	-1.3312					50.00	-1.1085		
3.75	-1.3487					60.00	-1.1070		
4.38	-1.3371					70.00	-1.0785		
5.00	-1.3566					80.00	-1.0774		
6.25	-1.3731					90.00	-.6798		
7.50	-1.3552					100.00	-.7091		
8.75	-1.3358					110.00	-.5835		
12.50	-1.2791					314.90	-.0219		
15.00	-1.2711					364.36	-.0370		
17.50	-1.2428								
20.00	-1.2313								
30.00	-1.1650								
40.00	-1.1334								
50.00	-1.1102								
60.00	-1.1010								
70.00	-1.0929								
80.00	-.9924								
90.00	-.6680								
100.00	-.6074								
110.00	-.5803								
314.90	-.0219								
364.36	-.0289								

Table III. Continued

(i) Continued

$M = 0.840$; mfr $= 0.403$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0987	446.79	-.0211	314.90	-.0411	-244.08	1.0984	496.25	-.0114
-223.02	1.1010	496.25	-.0151	364.36	-.0341	-138.76	1.0687	545.71	-.0013
-201.95	1.0977	545.71	-.0080			-33.43	.9674	595.17	.0007
-170.35	1.0895	595.17	.0095			-13.37	1.0772	661.12	.0276
-138.76	1.0687	661.12	.0360			-2.67	1.1647	710.58	.0622
-117.69	1.0516	710.58	.0699			.00	.1701	743.55	.1093
-96.62	1.0295	743.55	.1150			.31	-.4074	760.04	.1462
-75.56	1.0019	760.04	.1469			.62	-.5655	776.52	.1927
-54.49	.9788	776.52	.1886			1.25	-.9303	793.01	.2582
-43.96	.9633	793.01	.2511			1.87	-1.0977		
-33.43	.9703					2.50	-1.2220		
-30.08	.9700					3.12	-1.2635		
-23.40	.9993					3.75	-1.2339		
-13.37	1.0828					4.38	-1.2185		
-6.69	1.1666					5.00	-1.2004		
-4.35	1.1849					6.25	-1.2049		
-2.67	1.1627					7.50	-1.1848		
-1.17	1.0308					8.75	-1.2057		
-.57	.8822					10.00	-1.2056		
.00	.1790					12.50	-1.2030		
.31	-.3517					15.00	-1.1691		
.62	-.6988					17.50	-1.1539		
1.25	-.9178					20.00	-1.1356		
1.87	-1.1002					30.00	-1.0858		
2.50	-1.2308					40.00	-1.0285		
3.12	-1.2473					50.00	-1.0441		
3.75	-1.2344					60.00	-1.0445		
4.38	-1.2281					70.00	-1.0210		
5.00	-1.2261					80.00	-1.0184		
6.25	-1.2189					90.00	-1.0121		
7.50	-1.1761					100.00	-.5521		
8.75	-1.1963					110.00	-.5053		
12.50	-1.1510					314.90	-.0337		
15.00	-1.1466					364.36	-.0384		
17.50	-1.1453								
20.00	-1.1066								
30.00	-1.0661								
40.00	-1.0364								
50.00	-1.0224								
60.00	-1.0430								
70.00	-1.0244								
80.00	-1.0294								
90.00	-1.0171								
100.00	-.6349								
110.00	-.4955								
314.90	-.0442								
364.36	-.0384								

$M = 0.842$; mfr $= 0.448$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0795	446.79	-.0177	314.90	-.0427	-244.08	1.0788	496.25	-.0047
-223.02	1.0818	496.25	-.0060	364.36	-.0361	-138.76	1.0411	545.71	.0067
-201.95	1.0776	545.71	.0024			-33.43	.9026	595.17	.0178
-170.35	1.0638	595.17	.0185			-13.37	1.0280	661.12	.0473
-138.76	1.0401	661.12	.0517			-2.67	1.1831	710.58	.0862
-117.69	1.0194	710.58	.0922			.00	.3132	743.55	.1378
-96.62	.9928	743.55	.1459			.31	-.2679	760.04	.1790
-75.56	.9566	760.04	.1807			.62	-.4226	776.52	.2256
-54.49	.9220	776.52	.2263			1.25	-.8326	793.01	.2960
-43.96	.9026	793.01	.2930			1.87	-1.0050		
-33.43	.8996					2.50	-1.1251		
-30.08	.9011					3.12	-1.1771		
-23.40	.9237					3.75	-1.1604		
-13.37	1.0269					4.38	-1.1138		
-6.69	1.1431					5.00	-1.1092		
-4.35	1.1804					6.25	-1.1092		
-2.67	1.1784					7.50	-1.1207		
-1.17	1.0860					8.75	-1.1204		
-.57	.9502					10.00	-1.1248		
.00	.3230					12.50	-1.1032		
.31	-.2301					15.00	-1.0732		
.62	-.5708					17.50	-1.0780		
1.25	-.8451					20.00	-1.0665		
1.87	-1.0337					30.00	-.9700		
2.50	-1.1652					40.00	-.9792		
3.12	-1.1784					50.00	-.9718		
3.75	-1.1751					60.00	-.9889		
4.38	-1.1385					70.00	-.9715		
5.00	-1.1431					80.00	-.9922		
6.25	-1.1252					90.00	-.9889		
7.50	-1.0932					100.00	-.6874		
8.75	-1.1011					110.00	-.4687		
12.50	-1.0889					314.90	-.0353		
15.00	-1.1088					364.36	-.0388		
17.50	-1.0757								
20.00	-1.0410								
30.00	-1.0046								
40.00	-.9582								
50.00	-1.0056								
60.00	-.9988								
70.00	-.9893								
80.00	-.9872								
90.00	-1.0010								
100.00	-.7053								
110.00	-.4502								
314.90	-.0419								
364.36	-.0338								

Table III. Continued

(i) Continued

$M = 0.843$; mfr $= 0.487$; $\alpha = 0°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0555	446.79	-.0110	314.90	-.0389	-244.08	1.0570	496.25	-.0010
-223.02	1.0601	496.25	-.0007	364.36	-.0292	-138.76	1.0093	545.71	.0097
-201.95	1.0522	545.71	.0097			-33.43	.8269	595.17	.0198
-170.35	1.0388	595.17	.0291			-13.37	.9680	661.12	.0586
-138.76	1.0089	661.12	.0636			-2.67	1.1851	710.58	.1044
-117.69	.9817	710.58	.1091			.00	.4615	743.55	.1643
-96.62	.9479	743.55	.1656			.31	-.1302	760.04	.2078
-75.56	.9072	760.04	.2037			.62	-.2885	776.52	.2583
-54.49	.8626	776.52	.2546			1.25	-.7507	793.01	.3335
-43.96	.8336	793.01	.3202			1.87	-.9292		
-33.43	.8362					2.50	-.9942		
-30.08	.8369					3.12	-1.0610		
-23.40	.8517					3.75	-1.0679		
-13.37	.9716					4.38	-1.0185		
-6.69	1.1150					5.00	-1.0616		
-4.35	1.1696					6.25	-1.0459		
-2.67	1.1882					7.50	-1.0197		
-1.17	1.1150					8.75	-1.0158		
-.57	1.0170					10.00	-1.0260		
.00	.4182					12.50	-.9845		
.31	-.0686					15.00	-.9764		
.62	-.4566					17.50	-.9964		
1.25	-.7594					20.00	-.9949		
1.87	-.9483					30.00	-.9316		
2.50	-1.0867					40.00	-.8975		
3.12	-1.1115					50.00	-.8778		
3.75	-1.1135					60.00	-.9238		
4.38	-1.0828					70.00	-.9156		
5.00	-1.0587					80.00	-.9419		
6.25	-1.0462					90.00	-.9649		
7.50	-1.0027					100.00	-.7481		
8.75	-1.0182					110.00	-.4303		
12.50	-1.0126					314.90	-.0300		
15.00	-1.0274					364.36	-.0331		
17.50	-1.0106								
20.00	-.9713								
30.00	-.9325								
40.00	-.9257								
50.00	-.9542								
60.00	-.9366								
70.00	-.9267								
80.00	-.9566								
90.00	-.9822								
100.00	-.6603								
110.00	-.4481								
314.90	-.0373								
364.36	-.0276								

$M = 0.842$; mfr $= 0.490$; $\alpha = 2.1°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0562	446.79	.0063	314.90	-.0429	-244.08	1.0531	496.25	-.0081
-223.02	1.0591	496.25	.0063	364.36	-.0383	-138.76	1.0049	545.71	.0059
-201.95	1.0539	545.71	.0126			-33.43	.7880	595.17	.0187
-170.35	1.0398	595.17	.0287			-13.37	.9140	661.12	.0552
-138.76	1.0092	661.12	.0642			-2.67	1.1828	710.58	.1034
-117.69	.9853	710.58	.1061			.00	.5477	743.55	.1651
-96.62	.9541	743.55	.1517			.31	.0305	760.04	.2143
-75.56	.9188	760.04	.1831			.62	-.1737	776.52	.2729
-54.49	.8804	776.52	.2200			1.25	-.6080	793.01	.3537
-43.96	.8560	793.01	.2699			1.87	-.6919		
-33.43	.8593					2.50	-.8333		
-30.08	.8634					3.12	-.8718		
-23.40	.8848					3.75	-.8971		
-13.37	1.0112					4.38	-.8958		
-6.69	1.1385					5.00	-.8941		
-4.35	1.1777					6.25	-.8548		
-2.67	1.1789					7.50	-.8118		
-1.17	1.0772					8.75	-.7898		
-.57	.9446					10.00	-.8035		
.00	.2903					12.50	-.8351		
.31	-.2682					15.00	-.7275		
.62	-.5993					17.50	-.8162		
1.25	-.8619					20.00	-.7208		
1.87	-1.0543					30.00	-.7252		
2.50	-1.1656					40.00	-.7623		
3.12	-1.2145					50.00	-.7775		
3.75	-1.2082					60.00	-.8229		
4.38	-1.1682					70.00	-.8351		
5.00	-1.1884					80.00	-.8362		
6.25	-1.1636					90.00	-.8481		
7.50	-1.1101					100.00	-.8440		
8.75	-1.1531					110.00	-.4834		
12.50	-1.1352					314.90	-.0383		
15.00	-1.1621					364.36	-.0336		
17.50	-1.1392								
20.00	-1.1063								
30.00	-1.0956								
40.00	-1.0607								
50.00	-1.0715								
60.00	-1.0607								
70.00	-1.0343								
80.00	-.5982								
90.00	-.5438								
100.00	-.5344								
110.00	-.5029								
314.90	-.0224								
364.36	-.0216								

Table III. Continued

(i) Continued

$M = 0.841$; mfr $= 0.552$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0185	446.79	-.0053	314.90	-.0221	-244.08	1.0230	496.25	.0071
-223.02	1.0247	496.25	.0047	364.36	-.0268	-138.76	.9612	545.71	.0215
-201.95	1.0155	545.71	.0182			-33.43	.7013	595.17	.0343
-170.35	.9958	595.17	.0369			-13.37	.8568	661.12	.0748
-138.76	.9580	661.12	.0769			-2.67	1.1826	710.58	.1275
-117.69	.9234	710.58	.1285			.00	.5764	743.55	.1906
-96.62	.8763	743.55	.1882			.31	.0561	760.04	.2392
-75.56	.8194	760.04	.2322			.62	-.1632	776.52	.2902
-54.49	.7560	776.52	.2828			1.25	-.6076	793.01	.3643
-43.96	.7202	793.01	.3553			1.87	-.7747		
-33.43	.7120					2.50	-.8640		
-30.08	.7120					3.12	-.8998		
-23.40	.7343					3.75	-.9520		
-13.37	.8594					4.38	-.9413		
-6.69	1.0386					5.00	-.9268		
-4.35	1.1272					6.25	-.8975		
-2.67	1.1796					7.50	-.8432		
-1.17	1.1614					8.75	-.8696		
-.57	1.0852					10.00	-.8153		
.00	.5824					12.50	-.8566		
.31	.0638					15.00	-.8488		
.62	-.2989					17.50	-.8458		
1.25	-.6120					20.00	-.8242		
1.87	-.7926					30.00	-.8265		
2.50	-.9258					40.00	-.8465		
3.12	-.9520					50.00	-.8562		
3.75	-.9470					60.00	-.8807		
4.38	-.9050					70.00	-.8632		
5.00	-.8875					80.00	-.8937		
6.25	-.8544					90.00	-.9193		
7.50	-.8042					100.00	-.6785		
8.75	-.8581					110.00	-.3743		
12.50	-.8177					314.90	-.0256		
15.00	-.8758					364.36	-.0330		
17.50	-.8015								
20.00	-.8654								
30.00	-.8455								
40.00	-.8425								
50.00	-.8848								
60.00	-.8654								
70.00	-.8696								
80.00	-.8832								
90.00	-.9229								
100.00	-.7158								
110.00	-.3528								
314.90	-.0318								
364.36	-.0229								

$M = 0.842$; mfr $= 0.616$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9719	446.79	.0004	314.90	-.0310	-244.08	.9723	496.25	.0165
-223.02	.9761	496.25	.0135	364.36	-.0193	-138.76	.8913	545.71	.0353
-201.95	.9666	545.71	.0275			-33.43	.5184	595.17	.0480
-170.35	.9416	595.17	.0500			-13.37	.7102	661.12	.0913
-138.76	.8899	661.12	.0943			-2.67	1.1416	710.58	.1497
-117.69	.8445	710.58	.1497			.00	.7218	743.55	.2141
-96.62	.7857	743.55	.2121			.31	.2356	760.04	.2645
-75.56	.7077	760.04	.2578			.62	.0339	776.52	.3195
-54.49	.6209	776.52	.3091			1.25	-.3451	793.01	.3886
-43.96	.5465	793.01	.3802			1.87	-.5561		
-33.43	.5184					2.50	-.6595		
-30.08	.5184					3.12	-.7437		
-23.40	.5391					3.75	-.6829		
-13.37	.7147					4.38	-.5913		
-6.69	.9219					5.00	-.6097		
-4.35	1.0482					6.25	-.6545		
-2.67	1.1429					7.50	-.5432		
-1.17	1.1868					8.75	-.5855		
-.57	1.1488					10.00	-.6305		
.00	.7281					12.50	-.6584		
.31	.2673					15.00	-.6729		
.62	-.0705					17.50	-.7052		
1.25	-.4224					20.00	-.7156		
1.87	-.5573					30.00	-.7568		
2.50	-.6978					40.00	-.7628		
3.12	-.7392					50.00	-.8092		
3.75	-.6069					60.00	-.8387		
4.38	-.5705					70.00	-.8327		
5.00	-.6012					80.00	-.8639		
6.25	-.5510					90.00	-.8747		
7.50	-.5464					100.00	-.6513		
8.75	-.5768					110.00	-.3180		
12.50	-.6412					314.90	-.0185		
15.00	-.6965					364.36	-.0201		
17.50	-.6998								
20.00	-.7166								
30.00	-.7458								
40.00	-.7771								
50.00	-.8043								
60.00	-.8255								
70.00	-.8535								
80.00	-.8588								
90.00	-.8883								
100.00	-.5600								
110.00	-.3209								
314.90	-.0255								
364.36	-.0158								

Table III. Continued

(i) Continued

$M = 0.841$; mfr $= 0.681$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9183	446.79	.0101	314.90	-.0369	-244.08	.9190	496.25	.0245
-223.02	.9239	496.25	.0215	364.36	-.0241	-138.76	.8176	545.71	.0406
-201.95	.9127	545.71	.0372			-33.43	.3014	595.17	.0597
-170.35	.8788	595.17	.0637			-13.37	.5014	661.12	.1070
-138.76	.8133	661.12	.1077			-2.67	1.0786	710.58	.1671
-117.69	.7571	710.58	.1651			.00	.8705	743.55	.2359
-96.62	.6742	743.55	.2322			.31	.4744	760.04	.2838
-75.56	.5716	760.04	.2755			.62	.2082	776.52	.3369
-54.49	.4433	776.52	.3302			1.25	-.1402	793.01	.4070
-43.96	.3640	793.01	.3956			1.87	-.2897		
-33.43	.3066					2.50	-.4129		
-30.08	.2855					3.12	-.3753		
-23.40	.3211					3.75	-.4096		
-13.37	.5199					4.38	-.3288		
-6.69	.7874					5.00	-.3710		
-4.35	.9466					6.25	-.3804		
-2.67	1.0741					7.50	-.4341		
-1.17	1.1778					8.75	-.4873		
-.57	1.1747					10.00	-.5248		
.00	.8739					12.50	-.5593		
.31	.4108					15.00	-.5801		
.62	.1256					17.50	-.6362		
1.25	-.2134					20.00	-.6478		
1.87	-.3834					30.00	-.6771		
2.50	-.4016					40.00	-.6801		
3.12	-.3824					50.00	-.7184		
3.75	-.3784					60.00	-.7678		
4.38	-.3629					70.00	-.7752		
5.00	-.3837					80.00	-.8023		
6.25	-.4257					90.00	-.8243		
7.50	-.4393					100.00	-.4965		
8.75	-.4846					110.00	-.2517		
12.50	-.5477					314.90	-.0156		
15.00	-.6354					364.36	-.0257		
17.50	-.6430								
20.00	-.6370								
30.00	-.6631								
40.00	-.6955								
50.00	-.7342								
60.00	-.7567								
70.00	-.7812								
80.00	-.8005								
90.00	-.8295								
100.00	-.5277								
110.00	-.2280								
314.90	-.0296								
364.36	-.0214								

$M = 0.843$; mfr $= 0.680$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9196	446.79	.0266	314.90	-.0349	-244.08	.9164	496.25	.0172
-223.02	.9229	496.25	.0296	364.36	-.0217	-138.76	.8140	545.71	.0396
-201.95	.9124	545.71	.0406			-33.43	.2420	595.17	.0524
-170.35	.8796	595.17	.0658			-13.37	.4187	661.12	.1040
-138.76	.8185	661.12	.1113			-2.67	1.0155	710.58	.1633
-117.69	.7620	710.58	.1676			.00	.9849	743.55	.2320
-96.62	.6848	743.55	.2310			.31	.6139	760.04	.2832
-75.56	.5856	760.04	.2685			.62	.3685	776.52	.3429
-54.49	.4775	776.52	.3181			1.25	.0996	793.01	.4183
-43.96	.4025	793.01	.3784			1.87	-.0880		
-33.43	.3803					2.50	-.1555		
-30.08	.3570					3.12	-.1410		
-23.40	.4110					3.75	-.1514		
-13.37	.5992					4.38	-.1170		
-6.69	.8709					5.00	-.1655		
-4.35	1.0117					6.25	-.1820		
-2.67	1.1335					7.50	-.2531		
-1.17	1.1812					8.75	-.3190		
-.57	1.1537					10.00	-.3039		
.00	.7790					12.50	-.4093		
.31	.2814					15.00	-.3644		
.62	-.0949					17.50	-.4264		
1.25	-.3898					20.00	-.4349		
1.87	-.5553					30.00	-.4661		
2.50	-.6791					40.00	-.5440		
3.12	-.7296					50.00	-.6093		
3.75	-.7058					60.00	-.6787		
4.38	-.7560					70.00	-.6976		
5.00	-.6887					80.00	-.7110		
6.25	-.6230					90.00	-.7547		
7.50	-.6500					100.00	-.5432		
8.75	-.6246					110.00	-.2071		
12.50	-.6731					314.90	-.0221		
15.00	-.7560					364.36	-.0151		
17.50	-.7448								
20.00	-.7758								
30.00	-.8181								
40.00	-.8338								
50.00	-.8670								
60.00	-.8946								
70.00	-.9113								
80.00	-.9209								
90.00	-.9324								
100.00	-.4634								
110.00	-.3578								
314.90	-.0237								
364.36	-.0136								

Table III. Continued

(i) Concluded

$M = 0.843$; mfr $= 0.741$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.8601	446.79	.0102	314.90	-.0245	-244.08	.8585	496.25	.0286
-223.02	.8637	496.25	.0266	364.36	-.0106	-138.76	.7340	545.71	.0457
-201.95	.8506	545.71	.0420			-33.43	-.0040	595.17	.0644
-170.35	.8089	595.17	.0661			-13.37	.2436	661.12	.1150
-138.76	.7278	661.12	.1150			-2.67	.9790	710.58	.1776
-117.69	.6546	710.58	.1756			.00	1.0279	743.55	.2469
-96.62	.5528	743.55	.2449			.31	.6191	760.04	.2945
-75.56	.4077	760.04	.2868			.62	.4237	776.52	.3511
-54.49	.2360	776.52	.3387			1.25	.0913	793.01	.4178
-43.96	.0913	793.01	.4047			1.87	-.0551		
-33.43	-.0048					2.50	-.1749		
-30.08	-.0451					3.12	-.1654		
-23.40	.0100					3.75	-.1823		
-13.37	.2942					4.38	-.1886		
-6.69	.6323					5.00	-.2298		
-4.35	.8022					6.25	-.2509		
-2.67	.9570					7.50	-.3132		
-1.17	1.1435					8.75	-.3453		
-.57	1.1888					10.00	-.3670		
.00	.9905					12.50	-.4961		
.31	.6135					15.00	-.4868		
.62	.3256					17.50	-.4968		
1.25	.0200					20.00	-.5050		
1.87	-.0735					30.00	-.5606		
2.50	-.1877					40.00	-.6066		
3.12	-.1296					50.00	-.6485		
3.75	-.2071					60.00	-.7245		
4.38	-.1372					70.00	-.7297		
5.00	-.2395					80.00	-.7486		
6.25	-.2728					90.00	-.7742		
7.50	-.2765					100.00	-.4367		
8.75	-.3695					110.00	-.1786		
12.50	-.4738					314.90	-.0106		
15.00	-.5445					364.36	-.0106		
17.50	-.5052								
20.00	-.4695								
30.00	-.5801								
40.00	-.6018								
50.00	-.6798								
60.00	-.7101								
70.00	-.7486								
80.00	-.7670								
90.00	-.7812								
100.00	-.4370								
110.00	-.2227								
314.90	-.0179								
364.36	-.0067								

Table III. Continued

(j) $M = 0.87$

$M = 0.867$; mfr $= 0.271$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1642	446.79	-.0164	314.90	.0061	-244.08	1.1632	496.25	-.0180
-223.02	1.1642	496.25	-.0177	364.36	-.0142	-138.76	1.1518	545.71	-.0184
-201.95	1.1639	545.71	-.0210			-33.43	1.1238	595.17	-.0242
-170.35	1.1585	595.17	-.0177			-13.37	1.1872	661.12	-.0167
-138.76	1.1502	661.12	-.0077			-2.67	1.0816	710.58	-.0047
-117.69	1.1439	710.58	.0063			.00	-.1299	743.55	.0219
-96.62	1.1359	743.55	.0280			.31	-.7913	760.04	.0478
-75.56	1.1273	760.04	.0455			.62	-.9180	776.52	.0757
-54.49	1.1168	776.52	.0728			1.25	-1.1275	793.01	.1286
-43.96	1.1188	793.01	.1257			1.87	-1.2246		
-33.43	1.1242					2.50	-1.2848		
-30.08	1.1289					3.12	-1.3321		
-23.40	1.1450					3.75	-1.3355		
-13.37	1.1872					4.38	-1.3321		
-6.69	1.1914					5.00	-1.3258		
-4.35	1.1550					6.25	-1.3347		
-2.67	1.0709					7.50	-1.3114		
-1.17	.8508					8.75	-1.3070		
-.57	.6419					10.00	-1.2942		
.00	-.1365					12.50	-1.2863		
.31	-.7303					15.00	-1.2719		
.62	-.9474					17.50	-1.2518		
1.25	-1.1302					20.00	-1.2231		
1.87	-1.2268					30.00	-1.1595		
2.50	-1.2942					40.00	-1.1254		
3.12	-1.3176					50.00	-1.0970		
3.75	-1.3141					60.00	-1.0672		
4.38	-1.3329					70.00	-1.0596		
5.00	-1.3364					80.00	-1.0524		
6.25	-1.3272					90.00	-1.0661		
7.50	-1.3185					100.00	-1.0474		
8.75	-1.3115					110.00	-1.0014		
12.50	-1.3000					314.90	.0162		
15.00	-1.2553					364.36	-.0149		
17.50	-1.2149								
20.00	-1.2313								
30.00	-1.1664								
40.00	-1.1189								
50.00	-1.0727								
60.00	-1.0878								
70.00	-1.0693								
80.00	-1.0691								
90.00	-1.0621								
100.00	-1.0457								
110.00	-.9966								
314.90	.0113								
364.36	-.0119								

$M = 0.868$; mfr $= 0.267$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1645	446.79	.0046	314.90	-.0095	-244.08	1.1649	496.25	-.0272
-223.02	1.1661	496.25	-.0077	364.36	-.0219	-138.76	1.1509	545.71	-.0227
-201.95	1.1641	545.71	-.0149			-33.43	1.1112	595.17	-.0259
-170.35	1.1587	595.17	-.0171			-13.37	1.1724	661.12	-.0146
-138.76	1.1527	661.12	-.0142			-2.67	1.1255	710.58	.0030
-117.69	1.1457	710.58	-.0120			.00	-.0061	743.55	.0347
-96.62	1.1387	743.55	-.0006			.31	-.6276	760.04	.0652
-75.56	1.1311	760.04	.0107			.62	-.7121	776.52	.1015
-54.49	1.1286	776.52	.0237			1.25	-.9985	793.01	.1676
-43.96	1.1281	793.01	.0610			1.87	-1.1541		
-33.43	1.1381					2.50	-1.2096		
-30.08	1.1434					3.12	-1.2398		
-23.40	1.1592					3.75	-1.2434		
-13.37	1.1950					4.38	-1.2436		
-6.69	1.1853					5.00	-1.2365		
-4.35	1.1339					6.25	-1.2241		
-2.67	1.0329					7.50	-1.2035		
-1.17	.7682					8.75	-1.1926		
-.57	.5512					10.00	-1.1906		
.00	-.2547					12.50	-1.1766		
.31	-.8942					15.00	-1.1464		
.62	-1.0868					17.50	-1.1454		
1.25	-1.2351					20.00	-1.1296		
1.87	-1.3249					30.00	-1.0412		
2.50	-1.3830					40.00	-1.0125		
3.12	-1.4025					50.00	-.9838		
3.75	-1.4051					60.00	-.9669		
4.38	-1.4137					70.00	-.9605		
5.00	-1.4137					80.00	-.9676		
6.25	-1.4121					90.00	-.9766		
7.50	-1.4092					100.00	-.9698		
8.75	-1.4016					110.00	-.9048		
12.50	-1.3907					314.90	-.0080		
15.00	-1.3750					364.36	-.0275		
17.50	-1.3351								
20.00	-1.3241								
30.00	-1.2769								
40.00	-1.2222								
50.00	-1.2134								
60.00	-1.1646								
70.00	-1.0915								
80.00	-.8510								
90.00	-.7513								
100.00	-.7151								
110.00	-.6858								
314.90	-.0031								
364.36	.0107								

Table III. Continued

(j) Continued

$M = 0.865$; mfr $= 0.314$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1476	446.79	-.0198	314.90	.0021	-244.08	1.1487	496.25	-.0153
-223.02	1.1505	496.25	-.0182	364.36	-.0137	-138.76	1.1300	545.71	-.0104
-201.95	1.1473	545.71	-.0163			-33.43	1.0841	595.17	-.0117
-170.35	1.1406	595.17	-.0098			-13.37	1.1623	661.12	.0042
-138.76	1.1313	661.12	.0059			-2.67	1.1196	710.58	.0247
-117.69	1.1218	710.58	.0293			.00	.0009	743.55	.0569
-96.62	1.1074	743.55	.0601			.31	-.6458	760.04	.0826
-75.56	1.0950	760.04	.0871			.62	-.7634	776.52	.1213
-54.49	1.0851	776.52	.1183			1.25	-1.0401	793.01	.1850
-43.96	1.0813	793.01	.1814			1.87	-1.1792		
-33.43	1.0927					2.50	-1.2482		
-30.08	1.0902					3.12	-1.2768		
-23.40	1.1078					3.75	-1.2767		
-13.37	1.1645					4.38	-1.2821		
-6.69	1.1943					5.00	-1.2619		
-4.35	1.1773					6.25	-1.2656		
-2.67	1.1062					7.50	-1.2515		
-1.17	.9210					8.75	-1.2551		
-.57	.7316					10.00	-1.2443		
.00	-.0108					12.50	-1.2342		
.31	-.6087					15.00	-1.2180		
.62	-.8404					17.50	-1.2086		
1.25	-1.0597					20.00	-1.1758		
1.87	-1.1731					30.00	-1.1088		
2.50	-1.2394					40.00	-1.0721		
3.12	-1.2574					50.00	-1.0368		
3.75	-1.2772					60.00	-1.0455		
4.38	-1.2843					70.00	-1.0401		
5.00	-1.2817					80.00	-1.0469		
6.25	-1.2830					90.00	-1.0447		
7.50	-1.2708					100.00	-1.0311		
8.75	-1.2596					110.00	-.9594		
12.50	-1.2385					314.90	.0051		
15.00	-1.2205					364.36	-.0084		
17.50	-1.2032								
20.00	-1.1860								
30.00	-1.1250								
40.00	-1.0834								
50.00	-1.0709								
60.00	-1.0623								
70.00	-1.0339								
80.00	-1.0432								
90.00	-1.0533								
100.00	-1.0285								
110.00	-.9849								
314.90	.0006								
364.36	-.0107								

$M = 0.866$; mfr $= 0.404$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1144	446.79	-.0114	314.90	-.0175	-244.08	1.1133	496.25	-.0030
-223.02	1.1156	496.25	-.0059	364.36	-.0227	-138.76	1.0840	545.71	.0045
-201.95	1.1140	545.71	.0003			-33.43	.9796	595.17	.0126
-170.35	1.1023	595.17	.0159			-13.37	1.0915	661.12	.0389
-138.76	1.0832	661.12	.0467			-2.67	1.1796	710.58	.0773
-117.69	1.0669	710.58	.0831			.00	.2227	743.55	.1273
-96.62	1.0469	743.55	.1334			.31	-.3357	760.04	.1652
-75.56	1.0195	760.04	.1672			.62	-.5096	776.52	.2133
-54.49	.9969	776.52	.2084			1.25	-.8277	793.01	.2839
-43.96	.9821	793.01	.2748			1.87	-1.0165		
-33.43	.9850					2.50	-1.1265		
-30.08	.9875					3.12	-1.1778		
-23.40	1.0083					3.75	-1.1467		
-13.37	1.0893					4.38	-1.1238		
-6.69	1.1781					5.00	-1.1197		
-4.35	1.1936					6.25	-1.1250		
-2.67	1.1714					7.50	-1.0967		
-1.17	1.0424					8.75	-1.1351		
-.57	.8943					10.00	-1.1240		
.00	.2615					12.50	-1.0909		
.31	-.2896					15.00	-1.0866		
.62	-.6199					17.50	-1.0532		
1.25	-.8417					20.00	-1.0751		
1.87	-1.0206					30.00	-1.0043		
2.50	-1.1372					40.00	-.9870		
3.12	-1.1634					50.00	-.9697		
3.75	-1.1567					60.00	-.9827		
4.38	-1.1420					70.00	-.9679		
5.00	-1.1468					80.00	-.9625		
6.25	-1.1346					90.00	-.9924		
7.50	-1.1225					100.00	-.9665		
8.75	-1.1269					110.00	-.9320		
12.50	-1.0818					314.90	-.0137		
15.00	-1.0901					364.36	-.0295		
17.50	-1.0495								
20.00	-1.0465								
30.00	-.9915								
40.00	-.9868								
50.00	-.9813								
60.00	-.9894								
70.00	-.9834								
80.00	-.9864								
90.00	-.9985								
100.00	-.9838								
110.00	-.9134								
314.90	-.0167								
364.36	-.0201								

Table III. Continued

(j) Continued

$M = 0.866$; mfr $= 0.449$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0939	446.79	-.0090	314.90	-.0159	-244.08	1.0945	496.25	-.0006
-223.02	1.0948	496.25	-.0009	364.36	-.0174	-138.76	1.0565	545.71	.0098
-201.95	1.0891	545.71	.0072			-33.43	.9153	595.17	.0176
-170.35	1.0783	595.17	.0238			-13.37	1.0465	661.12	.0540
-138.76	1.0537	661.12	.0579			-2.67	1.1945	710.58	.0985
-117.69	1.0334	710.58	.1024			.00	.3036	743.55	.1537
-96.62	1.0054	743.55	.1544			.31	-.1975	760.04	.1995
-75.56	.9726	760.04	.1927			.62	-.3986	776.52	.2463
-54.49	.9410	776.52	.2411			1.25	-.7511	793.01	.3184
-43.96	.9168	793.01	.3057			1.87	-.9528		
-33.43	.9171					2.50	-1.0672		
-30.08	.9211					3.12	-1.1040		
-23.40	.9479					3.75	-1.0956		
-13.37	1.0440					4.38	-1.0357		
-6.69	1.1565					5.00	-1.0313		
-4.35	1.1889					6.25	-1.0413		
-2.67	1.1934					7.50	-1.0223		
-1.17	1.0926					8.75	-1.0230		
-.57	.9621					10.00	-1.0367		
.00	.3527					12.50	-.9975		
.31	-.1749					15.00	-1.0126		
.62	-.5235					17.50	-1.0043		
1.25	-.7508					20.00	-1.0072		
1.87	-.9480					30.00	-.9410		
2.50	-1.0671					40.00	-.9165		
3.12	-1.1074					50.00	-.9489		
3.75	-1.0828					60.00	-.9367		
4.38	-1.0578					70.00	-.9417		
5.00	-1.0735					80.00	-.9460		
6.25	-1.0428					90.00	-.9629		
7.50	-1.0251					100.00	-.9471		
8.75	-1.0274					110.00	-.8906		
12.50	-1.0123					314.90	-.0140		
15.00	-1.0169					364.36	-.0261		
17.50	-.9986								
20.00	-.9967								
30.00	-.9474								
40.00	-.9307								
50.00	-.9272								
60.00	-.9490								
70.00	-.9446								
80.00	-.9479								
90.00	-.9691								
100.00	-.9370								
110.00	-.9013								
314.90	-.0163								
364.36	-.0178								

$M = 0.865$; mfr $= 0.490$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0704	446.79	-.0020	314.90	-.0223	-244.08	1.0674	496.25	.0054
-223.02	1.0707	496.25	.0067	364.36	-.0193	-138.76	1.0233	545.71	.0188
-201.95	1.0662	545.71	.0165			-33.43	.8388	595.17	.0308
-170.35	1.0513	595.17	.0354			-13.37	.9749	661.12	.0695
-138.76	1.0210	661.12	.0738			-2.67	1.1987	710.58	.1190
-117.69	.9964	710.58	.1209			.00	.4547	743.55	.1785
-96.62	.9610	743.55	.1778			.31	-.0751	760.04	.2227
-75.56	.9200	760.04	.2175			.62	-.2653	776.52	.2767
-54.49	.8750	776.52	.2683			1.25	-.6798	793.01	.3473
-43.96	.8457	793.01	.3382			1.87	-.8585		
-33.43	.8435					2.50	-.9351		
-30.08	.8396					3.12	-.9795		
-23.40	.8654					3.75	-.9927		
-13.37	.9785					4.38	-.9506		
-6.69	1.1219					5.00	-.9704		
-4.35	1.1758					6.25	-.9915		
-2.67	1.1950					7.50	-.9643		
-1.17	1.1415					8.75	-.9536		
-.57	1.0308					10.00	-.9697		
.00	.4717					12.50	-.9283		
.31	-.0466					15.00	-.9452		
.62	-.3950					17.50	-.9376		
1.25	-.6882					20.00	-.9563		
1.87	-.8652					30.00	-.8800		
2.50	-.9851					40.00	-.8800		
3.12	-.9873					50.00	-.8767		
3.75	-1.0152					60.00	-.8991		
4.38	-.9931					70.00	-.8987		
5.00	-.9931					80.00	-.9131		
6.25	-.9630					90.00	-.9308		
7.50	-.9421					100.00	-.9279		
8.75	-.9476					110.00	-.8659		
12.50	-.9389					314.90	-.0171		
15.00	-.9438					364.36	-.0239		
17.50	-.9232								
20.00	-.9153								
30.00	-.8610								
40.00	-.8717								
50.00	-.8815								
60.00	-.9108								
70.00	-.9020								
80.00	-.9168								
90.00	-.9380								
100.00	-.9228								
110.00	-.8706								
314.90	-.0212								
364.36	-.0186								

Table III. Continued

(j) Continued

$M = 0.868$; mfr $= 0.491$; $\alpha = 1.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0708	446.79	.0060	314.90	-.0193	-244.08	1.0694	496.25	.0034
-223.02	1.0734	496.25	.0099	364.36	-.0186	-138.76	1.0239	545.71	.0177
-201.95	1.0686	545.71	.0183			-33.43	.8264	595.17	.0290
-170.35	1.0553	595.17	.0358			-13.37	.9567	661.12	.0702
-138.76	1.0251	661.12	.0760			-2.67	1.1989	710.58	.1179
-117.69	1.0012	710.58	.1208			.00	.5072	743.55	.1808
-96.62	.9672	743.55	.1759			.31	.0369	760.04	.2304
-75.56	.9306	760.04	.2129			.62	-.1871	776.52	.2865
-54.49	.8887	776.52	.2582			1.25	-.6114	793.01	.3639
-43.96	.8597	793.01	.3195			1.87	-.7683		
-33.43	.8568					2.50	-.8534		
-30.08	.8626					3.12	-.8968		
-23.40	.8973					3.75	-.9263		
-13.37	1.0135					4.38	-.8927		
-6.69	1.1356					5.00	-.8943		
-4.35	1.1908					6.25	-.8728		
-2.67	1.1983					7.50	-.8807		
-1.17	1.1157					8.75	-.8331		
-.57	1.0035					10.00	-.8645		
.00	.3821					12.50	-.8358		
.31	-.1255					15.00	-.8678		
.62	-.4952					17.50	-.8351		
1.25	-.7247					20.00	-.8193		
1.87	-.9196					30.00	-.7838		
2.50	-1.0336					40.00	-.8093		
3.12	-1.0742					50.00	-.8107		
3.75	-1.0896					60.00	-.8373		
4.38	-1.0295					70.00	-.8455		
5.00	-1.0499					80.00	-.8760		
6.25	-1.0282					90.00	-.8706		
7.50	-1.0042					100.00	-.8703		
8.75	-.9796					110.00	-.8186		
12.50	-1.0218					314.90	-.0148		
15.00	-1.0005					364.36	-.0182		
17.50	-.9921								
20.00	-.9739								
30.00	-.9448								
40.00	-.9215								
50.00	-.9352								
60.00	-.9432								
70.00	-.9550								
80.00	-.9485								
90.00	-.9726								
100.00	-.9226								
110.00	-.8074								
314.90	.0016								
364.36	-.0133								

$M = 0.866$; mfr $= 0.489$; $\alpha = 2.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0712	446.79	.0179	314.90	-.0265	-244.08	1.0682	496.25	-.0012
-223.02	1.0725	496.25	.0186	364.36	-.0220	-138.76	1.0230	545.71	.0137
-201.95	1.0703	545.71	.0235			-33.43	.8026	595.17	.0277
-170.35	1.0525	595.17	.0403			-13.37	.9252	661.12	.0666
-138.76	1.0241	661.12	.0774			-2.67	1.1965	710.58	.1167
-117.69	1.0018	710.58	.1202			.00	.5761	743.55	.1839
-96.62	.9694	743.55	.1641			.31	.0909	760.04	.2329
-75.56	.9331	760.04	.1952			.62	-.0805	776.52	.2927
-54.49	.8974	776.52	.2329			1.25	-.5205	793.01	.3719
-43.96	.8768	793.01	.2764			1.87	-.7127		
-33.43	.8818					2.50	-.7453		
-30.08	.8829					3.12	-.8170		
-23.40	.9109					3.75	-.8172		
-13.37	1.0302					4.38	-.8342		
-6.69	1.1559					5.00	-.8096		
-4.35	1.1893					6.25	-.7918		
-2.67	1.1935					7.50	-.7298		
-1.17	1.0927					8.75	-.7104		
-.57	.9664					10.00	-.7183		
.00	.3235					12.50	-.7172		
.31	-.1982					15.00	-.7309		
.62	-.5576					17.50	-.7280		
1.25	-.7548					20.00	-.7348		
1.87	-.9689					30.00	-.6999		
2.50	-1.1081					40.00	-.7373		
3.12	-1.1411					50.00	-.7643		
3.75	-1.1190					60.00	-.7686		
4.38	-1.1104					70.00	-.7751		
5.00	-1.1087					80.00	-.7945		
6.25	-1.0748					90.00	-.8546		
7.50	-1.0604					100.00	-.8431		
8.75	-1.1027					110.00	-.7870		
12.50	-1.0751					314.90	-.0217		
15.00	-1.0781					364.36	-.0224		
17.50	-1.0598								
20.00	-1.0443								
30.00	-1.0060								
40.00	-1.0124								
50.00	-.9977								
60.00	-1.0109								
70.00	-.9963								
80.00	-.7243								
90.00	-.5531								
100.00	-.5330								
110.00	-.5077								
314.90	.0102								
364.36	.0046								

Table III. Continued

(j) Continued

$M = 0.867$; mfr $= 0.490$; $\alpha = 3.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0690	446.79	.0300	314.90	-.0389	-244.08	1.0682	496.25	-.0021
-223.02	1.0741	496.25	.0271	364.36	-.0299	-138.76	1.0183	545.71	.0167
-201.95	1.0681	545.71	.0310			-33.43	.7924	595.17	.0287
-170.35	1.0547	595.17	.0437			-13.37	.9113	661.12	.0677
-138.76	1.0251	661.12	.0778			-2.67	1.1892	710.58	.1193
-117.69	1.0025	710.58	.1131			.00	.6557	743.55	.1819
-96.62	.9717	743.55	.1547			.31	.1765	760.04	.2358
-75.56	.9341	760.04	.1810			.62	-.0232	776.52	.2958
-54.49	.9007	776.52	.2092			1.25	-.4044	793.01	.3802
-43.96	.8833	793.01	.2510			1.87	-.5795		
-33.43	.8894					2.50	-.7160		
-30.08	.8905					3.12	-.7201		
-23.40	.9288					3.75	-.7682		
-13.37	1.0463					4.38	-.7283		
-6.69	1.1600					5.00	-.6628		
-4.35	1.1949					6.25	-.6226		
-2.67	1.1885					7.50	-.5748		
-1.17	1.0807					8.75	-.5758		
-.57	.9225					10.00	-.5715		
.00	.2657					12.50	-.5582		
.31	-.2744					15.00	-.5906		
.62	-.5997					17.50	-.6032		
1.25	-.8249					20.00	-.6204		
1.87	-1.0040					30.00	-.6254		
2.50	-1.1387					40.00	-.6599		
3.12	-1.1639					50.00	-.6959		
3.75	-1.1537					60.00	-.7189		
4.38	-1.1438					70.00	-.7362		
5.00	-1.1681					80.00	-.7711		
6.25	-1.1524					90.00	-.8059		
7.50	-1.1252					100.00	-.7933		
8.75	-1.1358					110.00	-.7445		
12.50	-1.1387					314.90	-.0251		
15.00	-1.1243					364.36	-.0198		
17.50	-1.1150								
20.00	-1.1018								
30.00	-1.0821								
40.00	-1.0523								
50.00	-1.0546								
60.00	-.9360								
70.00	-.6175								
80.00	-.5964								
90.00	-.5645								
100.00	-.5293								
110.00	-.5469								
314.90	.0117								
364.36	.0132								

$M = 0.867$; mfr $= 0.553$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0375	446.79	.0065	314.90	-.0188	-244.08	1.0355	496.25	.0166
-223.02	1.0385	496.25	.0169	364.36	-.0117	-138.76	.9789	545.71	.0312
-201.95	1.0321	545.71	.0293			-33.43	.7243	595.17	.0468
-170.35	1.0108	595.17	.0478			-13.37	.8747	661.12	.0899
-138.76	.9736	661.12	.0916			-2.67	1.1970	710.58	.1416
-117.69	.9389	710.58	.1448			.00	.6192	743.55	.2081
-96.62	.8950	743.55	.2078			.31	.1219	760.04	.2561
-75.56	.8403	760.04	.2500			.62	-.0735	776.52	.3119
-54.49	.7795	776.52	.3006			1.25	-.5411	793.01	.3817
-43.96	.7386	793.01	.3707			1.87	-.6539		
-33.43	.7340					2.50	-.7823		
-30.08	.7200					3.12	-.8432		
-23.40	.7443					3.75	-.8484		
-13.37	.8783					4.38	-.8417		
-6.69	1.0577					5.00	-.8520		
-4.35	1.1437					6.25	-.8534		
-2.67	1.1914					7.50	-.8132		
-1.17	1.1805					8.75	-.8342		
-.57	1.0986					10.00	-.7830		
.00	.6077					12.50	-.8132		
.31	.1104					15.00	-.7923		
.62	-.2137					17.50	-.7769		
1.25	-.5767					20.00	-.7593		
1.87	-.7206					30.00	-.7643		
2.50	-.8633					40.00	-.7984		
3.12	-.8303					50.00	-.8121		
3.75	-.8726					60.00	-.8416		
4.38	-.8473					70.00	-.8240		
5.00	-.8339					80.00	-.8527		
6.25	-.8268					90.00	-.8739		
7.50	-.7641					100.00	-.8638		
8.75	-.7852					110.00	-.8157		
12.50	-.8044					314.90	-.0109		
15.00	-.8080					364.36	-.0222		
17.50	-.7756								
20.00	-.8076								
30.00	-.7971								
40.00	-.7904								
50.00	-.8339								
60.00	-.8335								
70.00	-.8559								
80.00	-.8627								
90.00	-.8895								
100.00	-.8736								
110.00	-.8156								
314.90	-.0237								
364.36	-.0173								

Table III. Continued

(j) Continued

$M = 0.867$; mfr $= 0.618$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9867	446.79	.0144	314.90	-.0186	-244.08	.9862	496.25	.0299
-223.02	.9898	496.25	.0254	364.36	-.0114	-138.76	.9103	545.71	.0452
-201.95	.9828	545.71	.0410			-33.43	.5419	595.17	.0588
-170.35	.9564	595.17	.0643			-13.37	.7141	661.12	.1049
-138.76	.9058	661.12	.1130			-2.67	1.1639	710.58	.1620
-117.69	.8622	710.58	.1688			.00	.7538	743.55	.2311
-96.62	.8005	743.55	.2347			.31	.2862	760.04	.2801
-75.56	.7248	760.04	.2769			.62	.0832	776.52	.3366
-54.49	.6373	776.52	.3314			1.25	-.2892	793.01	.4077
-43.96	.5755	793.01	.4015			1.87	-.4909		
-33.43	.5454					2.50	-.5731		
-30.08	.5462					3.12	-.6468		
-23.40	.5666					3.75	-.6679		
-13.37	.7309					4.38	-.7026		
-6.69	.9361					5.00	-.6183		
-4.35	1.0683					6.25	-.5505		
-2.67	1.1604					7.50	-.5227		
-1.17	1.1998					8.75	-.5553		
-.57	1.1593					10.00	-.5777		
.00	.7595					12.50	-.5935		
.31	.2951					15.00	-.6122		
.62	-.0360					17.50	-.6273		
1.25	-.3615					20.00	-.6611		
1.87	-.4981					30.00	-.7013		
2.50	-.6398					40.00	-.7283		
3.12	-.6913					50.00	-.7568		
3.75	-.6036					60.00	-.7729		
4.38	-.6158					70.00	-.7974		
5.00	-.5653					80.00	-.8383		
6.25	-.5525					90.00	-.8606		
7.50	-.5822					100.00	-.8480		
8.75	-.5314					110.00	-.7959		
12.50	-.6203					314.90	-.0103		
15.00	-.6558					364.36	-.0141		
17.50	-.6590								
20.00	-.6697								
30.00	-.7003								
40.00	-.7131								
50.00	-.7694								
60.00	-.7896								
70.00	-.8071								
80.00	-.8286								
90.00	-.8570								
100.00	-.8627								
110.00	-.7998								
314.90	-.0163								
364.36	-.0084								

$M = 0.866$; mfr $= 0.681$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9357	446.79	.0133	314.90	-.0185	-244.08	.9347	496.25	.0308
-223.02	.9401	496.25	.0285	364.36	-.0084	-138.76	.8354	545.71	.0493
-201.95	.9287	545.71	.0428			-33.43	.3292	595.17	.0665
-170.35	.8968	595.17	.0682			-13.37	.4988	661.12	.1179
-138.76	.8287	661.12	.1208			-2.67	1.0699	710.58	.1802
-117.69	.7736	710.58	.1783			.00	.9094	743.55	.2504
-96.62	.6956	743.55	.2455			.31	.4410	760.04	.2982
-75.56	.5930	760.04	.2897			.62	.2729	776.52	.3550
-54.49	.4733	776.52	.3446			1.25	-.0582	793.01	.4236
-43.96	.3790	793.01	.4106			1.87	-.2812		
-33.43	.3260					2.50	-.3679		
-30.08	.3149					3.12	-.3942		
-23.40	.3141					3.75	-.3143		
-13.37	.5178					4.38	-.3439		
-6.69	.7965					5.00	-.2924		
-4.35	.9391					6.25	-.3401		
-2.67	1.0922					7.50	-.4003		
-1.17	1.1945					8.75	-.3923		
-.57	1.1896					10.00	-.5107		
.00	.9255					12.50	-.5161		
.31	.5122					15.00	-.5140		
.62	.2201					17.50	-.5686		
1.25	-.1069					20.00	-.5837		
1.87	-.3156					30.00	-.6165		
2.50	-.4037					40.00	-.6330		
3.12	-.3611					50.00	-.6737		
3.75	-.3508					60.00	-.7258		
4.38	-.3204					70.00	-.7302		
5.00	-.3627					80.00	-.7788		
6.25	-.3448					90.00	-.8195		
7.50	-.3902					100.00	-.8130		
8.75	-.4232					110.00	-.7727		
12.50	-.4853					314.90	-.0125		
15.00	-.5777					364.36	-.0151		
17.50	-.6034								
20.00	-.5615								
30.00	-.6447								
40.00	-.6317								
50.00	-.7060								
60.00	-.7548								
70.00	-.7334								
80.00	-.7946								
90.00	-.8062								
100.00	-.8107								
110.00	-.7444								
314.90	-.0185								
364.36	-.0095								

Table III. Continued

(j) Concluded

$M = 0.866$; mfr $= 0.682$; $\alpha = 2.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9344	446.79	.0376	314.90	-.0288	-244.08	.9326	496.25	.0249
-223.02	.9389	496.25	.0383	364.36	-.0183	-138.76	.8329	545.71	.0448
-201.95	.9293	545.71	.0506			-33.43	.2514	595.17	.0646
-170.35	.8978	595.17	.0753			-13.37	.3935	661.12	.1172
-138.76	.8308	661.12	.1228			-2.67	1.0169	710.58	.1793
-117.69	.7760	710.58	.1813			.00	1.0006	743.55	.2515
-96.62	.7002	743.55	.2440			.31	.6237	760.04	.3045
-75.56	.6065	760.04	.2863			.62	.4337	776.52	.3610
-54.49	.4979	776.52	.3354			1.25	.1531	793.01	.4355
-43.96	.4207	793.01	.3929			1.87	-.0085		
-33.43	.3787					2.50	-.0584		
-30.08	.3744					3.12	-.0791		
-23.40	.4204					3.75	-.1034		
-13.37	.6198					4.38	-.1583		
-6.69	.8839					5.00	-.0987		
-4.35	1.0246					6.25	-.1846		
-2.67	1.1285					7.50	-.2214		
-1.17	1.1944					8.75	-.2593		
-.57	1.1616					10.00	-.2758		
.00	.8076					12.50	-.3967		
.31	.2984					15.00	-.3406		
.62	-.0210					17.50	-.3931		
1.25	-.3658					20.00	-.3960		
1.87	-.5106					30.00	-.4727		
2.50	-.6240					40.00	-.5310		
3.12	-.6532					50.00	-.5875		
3.75	-.6692					60.00	-.6264		
4.38	-.5766					70.00	-.6678		
5.00	-.6173					80.00	-.6923		
6.25	-.5807					90.00	-.7297		
7.50	-.6038					100.00	-.7301		
8.75	-.5740					110.00	-.6743		
12.50	-.6708					314.90	-.0126		
15.00	-.6916					364.36	-.0104		
17.50	-.6961								
20.00	-.7081								
30.00	-.7653								
40.00	-.7802								
50.00	-.8147								
60.00	-.8707								
70.00	-.8598								
80.00	-.8932								
90.00	-.9031								
100.00	-.8962								
110.00	-.5820								
314.90	-.0156								
364.36	-.0119								

$M = 0.866$; mfr $= 0.741$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.8756	446.79	.0224	314.90	-.0136	-244.08	.8750	496.25	.0389
-223.02	.8788	496.25	.0367	364.36	-.0035	-138.76	.7487	545.71	.0578
-201.95	.8654	545.71	.0552			-33.43	.0025	595.17	.0744
-170.35	.8233	595.17	.0799			-13.37	.2791	661.12	.1274
-138.76	.7414	661.12	.1310			-2.67	.9658	710.58	.1921
-117.69	.6697	710.58	.1924			.00	1.0208	743.55	.2620
-96.62	.5693	743.55	.2604			.31	.6199	760.04	.3111
-75.56	.4246	760.04	.3046			.62	.4279	776.52	.3670
-54.49	.2500	776.52	.3585			1.25	.1277	793.01	.4346
-43.96	.1133	793.01	.4239			1.87	-.0354		
-33.43	.0219					2.50	-.1102		
-30.08	-.0080					3.12	-.1650		
-23.40	.0158					3.75	-.1628		
-13.37	.3006					4.38	-.1210		
-6.69	.6296					5.00	-.1642		
-4.35	.8213					6.25	-.2127		
-2.67	.9802					7.50	-.1948		
-1.17	1.1650					8.75	-.2536		
-.57	1.1996					10.00	-.3021		
.00	1.0130					12.50	-.4328		
.31	.6573					15.00	-.4656		
.62	.3717					17.50	-.4904		
1.25	.0782					20.00	-.4922		
1.87	-.0874					30.00	-.5221		
2.50	-.1111					40.00	-.5707		
3.12	-.1451					50.00	-.6330		
3.75	-.1538					60.00	-.6867		
4.38	-.1204					70.00	-.7126		
5.00	-.1964					80.00	-.7411		
6.25	-.2319					90.00	-.7800		
7.50	-.2284					100.00	-.7732		
8.75	-.2947					110.00	-.6492		
12.50	-.4338					314.90	.0010		
15.00	-.5041					364.36	-.0072		
17.50	-.4915								
20.00	-.4301								
30.00	-.5348								
40.00	-.6134								
50.00	-.6483								
60.00	-.6945								
70.00	-.7252								
80.00	-.7419								
90.00	-.8069								
100.00	-.7809								
110.00	-.6886								
314.90	-.0121								
364.36	-.0042								

Table III. Continued

(k) $M = 0.89$

$M = 0.891$; mfr $= 0.276$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1758	446.79	.0129	314.90	.0663	-244.08	1.1769	496.25	.0050
-223.02	1.1776	496.25	.0034	364.36	.0423	-138.76	1.1637	545.71	.0003
-201.95	1.1739	545.71	-.0035			-33.43	1.1397	595.17	-.0060
-170.35	1.1733	595.17	-.0026			-13.37	1.1999	661.12	.0050
-138.76	1.1647	661.12	.0056			-2.67	1.0945	710.58	.0195
-117.69	1.1579	710.58	.0220			.00	-.0608	743.55	.0497
-96.62	1.1492	743.55	.0513			.31	-.7223	760.04	.0769
-75.56	1.1436	760.04	.0746			.62	-.8348	776.52	.1131
-54.49	1.1344	776.52	.1081			1.25	-1.0731	793.01	.1727
-43.96	1.1331	793.01	.1673			1.87	-1.1422		
-33.43	1.1407					2.50	-1.1952		
-30.08	1.1421					3.12	-1.2318		
-23.40	1.1595					3.75	-1.2560		
-13.37	1.2005					4.38	-1.2609		
-6.69	1.2105					5.00	-1.2567		
-4.35	1.1751					6.25	-1.2395		
-2.67	1.0981					7.50	-1.2350		
-1.17	.8817					8.75	-1.2322		
-.57	.6827					10.00	-1.2151		
.00	-.0869					12.50	-1.2130		
.31	-.6561					15.00	-1.1956		
.62	-.8857					17.50	-1.1816		
1.25	-1.0618					20.00	-1.1652		
1.87	-1.1581					30.00	-1.0867		
2.50	-1.2202					40.00	-1.0664		
3.12	-1.2323					50.00	-1.0249		
3.75	-1.2441					60.00	-1.0186		
4.38	-1.2497					70.00	-.9966		
5.00	-1.2553					80.00	-.9959		
6.25	-1.2463					90.00	-1.0074		
7.50	-1.2513					100.00	-.9956		
8.75	-1.2432					110.00	-.9561		
12.50	-1.2149					314.90	.0736		
15.00	-1.1896					364.36	.0386		
17.50	-1.1699								
20.00	-1.1586								
30.00	-1.0981								
40.00	-1.0519								
50.00	-1.0369								
60.00	-1.0184								
70.00	-1.0134								
80.00	-1.0123								
90.00	-1.0208								
100.00	-1.0002								
110.00	-.9534								
314.90	.0714								
364.36	.0434								

$M = 0.890$; mfr $= 0.314$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1658	446.79	.0079	314.90	.0575	-244.08	1.1636	496.25	.0050
-223.02	1.1649	496.25	.0031	364.36	.0298	-138.76	1.1480	545.71	.0041
-201.95	1.1624	545.71	-.0007			-33.43	1.1038	595.17	.0025
-170.35	1.1575	595.17	.0060			-13.37	1.1769	661.12	.0195
-138.76	1.1479	661.12	.0252			-2.67	1.1396	710.58	.0457
-117.69	1.1371	710.58	.0517			.00	.0258	743.55	.0861
-96.62	1.1238	743.55	.0880			.31	-.5901	760.04	.1205
-75.56	1.1120	760.04	.1170			.62	-.7193	776.52	.1622
-54.49	1.0996	776.52	.1565			1.25	-.9603	793.01	.2272
-43.96	1.0951	793.01	.2190			1.87	-1.0948		
-33.43	1.1020					2.50	-1.1594		
-30.08	1.1034					3.12	-1.1932		
-23.40	1.1257					3.75	-1.1993		
-13.37	1.1783					4.38	-1.1987		
-6.69	1.2124					5.00	-1.1842		
-4.35	1.1996					6.25	-1.1859		
-2.67	1.1368					7.50	-1.1870		
-1.17	.9519					8.75	-1.1651		
-.57	.7685					10.00	-1.1786		
.00	.0416					12.50	-1.1559		
.31	-.5468					15.00	-1.1451		
.62	-.7658					17.50	-1.1042		
1.25	-.9838					20.00	-1.1000		
1.87	-1.1032					30.00	-1.0574		
2.50	-1.1567					40.00	-1.0361		
3.12	-1.1769					50.00	-.9983		
3.75	-1.1850					60.00	-.9879		
4.38	-1.1906					70.00	-.9896		
5.00	-1.1977					80.00	-.9893		
6.25	-1.1946					90.00	-.9907		
7.50	-1.2068					100.00	-.9784		
8.75	-1.1794					110.00	-.9354		
12.50	-1.1592					314.90	.0634		
15.00	-1.1320					364.36	.0269		
17.50	-1.1072								
20.00	-1.0948								
30.00	-1.0656								
40.00	-1.0066								
50.00	-1.0102								
60.00	-.9927								
70.00	-.9837								
80.00	-.9759								
90.00	-.9959								
100.00	-.9781								
110.00	-.9390								
314.90	.0604								
364.36	.0331								

Table III. Continued

(k) Continued

$M = 0.890$; mfr $= 0.404$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1287	446.79	.0099	314.90	.0331	-244.08	1.1292	496.25	.0115
-223.02	1.1312	496.25	.0112	364.36	.0094	-138.76	1.0996	545.71	.0188
-201.95	1.1278	545.71	.0166			-33.43	1.0003	595.17	.0245
-170.35	1.1185	595.17	.0279			-13.37	1.1076	661.12	.0529
-138.76	1.0990	661.12	.0579			-2.67	1.1954	710.58	.0939
-117.69	1.0839	710.58	.0993			.00	.2589	743.55	.1479
-96.62	1.0613	743.55	.1520			.31	-.2530	760.04	.1902
-75.56	1.0372	760.04	.1883			.62	-.4452	776.52	.2410
-54.49	1.0149	776.52	.2350			1.25	-.7780	793.01	.3095
-43.96	.9954	793.01	.3029			1.87	-.9543		
-33.43	1.0024					2.50	-1.0433		
-30.08	1.0013					3.12	-1.1038		
-23.40	1.0260					3.75	-1.0821		
-13.37	1.1135					4.38	-1.0648		
-6.69	1.1934					5.00	-1.0461		
-4.35	1.2087					6.25	-1.0400		
-2.67	1.1916					7.50	-1.0220		
-1.17	1.0692					8.75	-1.0448		
-.57	.9241					10.00	-1.0510		
.00	.2666					12.50	-1.0419		
.31	-.2371					15.00	-1.0126		
.62	-.5507					17.50	-.9965		
1.25	-.7663					20.00	-1.0003		
1.87	-.9439					30.00	-.9395		
2.50	-1.0625					40.00	-.9217		
3.12	-1.0905					50.00	-.9140		
3.75	-1.0868					60.00	-.8958		
4.38	-1.0653					70.00	-.9164		
5.00	-1.0812					80.00	-.9273		
6.25	-1.0529					90.00	-.9489		
7.50	-1.0413					100.00	-.9273		
8.75	-1.0488					110.00	-.8846		
12.50	-1.0522					314.90	.0360		
15.00	-1.0171					364.36	.0072		
17.50	-.9950								
20.00	-.9835								
30.00	-.9399								
40.00	-.9284								
50.00	-.9240								
60.00	-.9277								
70.00	-.9206								
80.00	-.9339								
90.00	-.9526								
100.00	-.9346								
110.00	-.8833								
314.90	.0393								
364.36	.0149								

$M = 0.891$; mfr $= 0.449$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1072	446.79	.0086	314.90	.0313	-244.08	1.1052	496.25	.0162
-223.02	1.1084	496.25	.0136	364.36	.0138	-138.76	1.0700	545.71	.0256
-201.95	1.1035	545.71	.0196			-33.43	.9301	595.17	.0351
-170.35	1.0936	595.17	.0363			-13.37	1.0522	661.12	.0691
-138.76	1.0686	661.12	.0735			-2.67	1.2064	710.58	.1161
-117.69	1.0488	710.58	.1202			.00	.3838	743.55	.1775
-96.62	1.0238	743.55	.1778			.31	-.1592	760.04	.2213
-75.56	.9904	760.04	.2169			.62	-.3204	776.52	.2733
-54.49	.9591	776.52	.2658			1.25	-.6877	793.01	.3430
-43.96	.9354	793.01	.3326			1.87	-.8701		
-33.43	.9364					2.50	-.9753		
-30.08	.9336					3.12	-1.0057		
-23.40	.9628					3.75	-.9973		
-13.37	1.0539					4.38	-.9564		
-6.69	1.1749					5.00	-.9704		
-4.35	1.2100					6.25	-.9462		
-2.67	1.2107					7.50	-.9589		
-1.17	1.1220					8.75	-.9564		
-.57	.9936					10.00	-1.0007		
.00	.4036					12.50	-.9651		
.31	-.1272					15.00	-.9477		
.62	-.4605					17.50	-.9491		
1.25	-.6743					20.00	-.9460		
1.87	-.8691					30.00	-.8810		
2.50	-.9949					40.00	-.8667		
3.12	-1.0141					50.00	-.8727		
3.75	-1.0219					60.00	-.8765		
4.38	-.9992					70.00	-.8838		
5.00	-.9970					80.00	-.8922		
6.25	-.9865					90.00	-.9145		
7.50	-.9492					100.00	-.8905		
8.75	-.9573					110.00	-.8437		
12.50	-.9610					314.90	.0364		
15.00	-.9517					364.36	.0138		
17.50	-.9312								
20.00	-.8880								
30.00	-.8830								
40.00	-.8574								
50.00	-.8806								
60.00	-.8771								
70.00	-.8894								
80.00	-.8967								
90.00	-.9147								
100.00	-.8880								
110.00	-.8520								
314.90	.0331								
364.36	.0189								

Table III. Continued

(k) Continued

$M = 0.890$; mfr $= 0.493$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0851	446.79	.0123	314.90	.0181	-244.08	1.0833	496.25	.0195
-223.02	1.0863	496.25	.0189	364.36	.0068	-138.76	1.0397	545.71	.0309
-201.95	1.0823	545.71	.0274			-33.43	.8545	595.17	.0422
-170.35	1.0659	595.17	.0451			-13.37	.9892	661.12	.0829
-138.76	1.0384	661.12	.0845			-2.67	1.2122	710.58	.1360
-117.69	1.0143	710.58	.1391			.00	.5021	743.55	.2000
-96.62	.9793	743.55	.2010			.31	-.0215	760.04	.2461
-75.56	.9400	760.04	.2410			.62	-.2094	776.52	.2973
-54.49	.8911	776.52	.2919			1.25	-.6146	793.01	.3708
-43.96	.8677	793.01	.3588			1.87	-.7934		
-33.43	.8618					2.50	-.8327		
-30.08	.8618					3.12	-.8874		
-23.40	.8904					3.75	-.9284		
-13.37	1.0011					4.38	-.8943		
-6.69	1.1364					5.00	-.8854		
-4.35	1.1912					6.25	-.9016		
-2.67	1.2127					7.50	-.8987		
-1.17	1.1550					8.75	-.8910		
-.57	1.0553					10.00	-.8861		
.00	.4926					12.50	-.8662		
.31	-.0091					15.00	-.8931		
.62	-.3528					17.50	-.8599		
1.25	-.5992					20.00	-.8620		
1.87	-.7985					30.00	-.8177		
2.50	-.9052					40.00	-.8201		
3.12	-.9220					50.00	-.8253		
3.75	-.9394					60.00	-.8327		
4.38	-.9005					70.00	-.8533		
5.00	-.9257					80.00	-.8697		
6.25	-.8955					90.00	-.8879		
7.50	-.8787					100.00	-.8767		
8.75	-.8725					110.00	-.8229		
12.50	-.8958					314.90	.0225		
15.00	-.8579					364.36	.0028		
17.50	-.8632								
20.00	-.8670								
30.00	-.8321								
40.00	-.8178								
50.00	-.8246								
60.00	-.8553								
70.00	-.8603								
80.00	-.8593								
90.00	-.8918								
100.00	-.8838								
110.00	-.8364								
314.90	.0177								
364.36	.0086								

$M = 0.890$; mfr $= 0.495$; $\alpha = 2.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0846	446.79	.0389	314.90	.0119	-244.08	1.0838	496.25	.0105
-223.02	1.0886	496.25	.0329	364.36	.0020	-138.76	1.0357	545.71	.0250
-201.95	1.0831	545.71	.0373			-33.43	.8223	595.17	.0389
-170.35	1.0676	595.17	.0547			-13.37	.9511	661.12	.0815
-138.76	1.0407	661.12	.0910			-2.67	1.2071	710.58	.1358
-117.69	1.0172	710.58	.1380			.00	.6119	743.55	.2033
-96.62	.9841	743.55	.1884			.31	.1243	760.04	.2503
-75.56	.9475	760.04	.2203			.62	-.0800	776.52	.3150
-54.49	.9117	776.52	.2626			1.25	-.4691	793.01	.3973
-43.96	.8902	793.01	.3109			1.87	-.5968		
-33.43	.8936					2.50	-.7071		
-30.08	.8916					3.12	-.7517		
-23.40	.9271					3.75	-.7724		
-13.37	1.0378					4.38	-.7560		
-6.69	1.1657					5.00	-.7728		
-4.35	1.2048					6.25	-.7181		
-2.67	1.2092					7.50	-.7113		
-1.17	1.1197					8.75	-.6649		
-.57	.9831					10.00	-.6266		
.00	.3732					12.50	-.6704		
.31	-.1546					15.00	-.6584		
.62	-.4920					17.50	-.6654		
1.25	-.7147					20.00	-.6528		
1.87	-.8991					30.00	-.6633		
2.50	-1.0085					40.00	-.6942		
3.12	-1.0530					50.00	-.7172		
3.75	-1.0495					60.00	-.7347		
4.38	-1.0259					70.00	-.7602		
5.00	-1.0343					80.00	-.7745		
6.25	-1.0163					90.00	-.8056		
7.50	-.9992					100.00	-.7972		
8.75	-1.0010					110.00	-.7574		
12.50	-1.0076					314.90	.0104		
15.00	-1.0127					364.36	.0035		
17.50	-.9930								
20.00	-.9956								
30.00	-.9622								
40.00	-.9313								
50.00	-.9535								
60.00	-.9390								
70.00	-.9562								
80.00	-.9507								
90.00	-.9690								
100.00	-.9543								
110.00	-.8903								
314.90	.0498								
364.36	.0344								

Table III. Continued

(k) Continued

$M = 0.892$; mfr $= 0.555$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0511	446.79	.0184	314.90	.0145	-244.08	1.0515	496.25	.0291
-223.02	1.0542	496.25	.0272	364.36	.0073	-138.76	.9921	545.71	.0416
-201.95	1.0474	545.71	.0391			-33.43	.7357	595.17	.0574
-170.35	1.0295	595.17	.0612			-13.37	.8834	661.12	.1052
-138.76	.9906	661.12	.1065			-2.67	1.2047	710.58	.1631
-117.69	.9554	710.58	.1628			.00	.6347	743.55	.2321
-96.62	.9088	743.55	.2293			.31	.1706	760.04	.2780
-75.56	.8538	760.04	.2711			.62	-.0484	776.52	.3312
-54.49	.7934	776.52	.3221			1.25	-.4510	793.01	.3999
-43.96	.7535	793.01	.3920			1.87	-.6029		
-33.43	.7371					2.50	-.7094		
-30.08	.7416					3.12	-.7661		
-23.40	.7614					3.75	-.7903		
-13.37	.9032					4.38	-.7698		
-6.69	1.0739					5.00	-.7864		
-4.35	1.1476					6.25	-.7752		
-2.67	1.1993					7.50	-.7129		
-1.17	1.1913					8.75	-.7058		
-.57	1.1137					10.00	-.7143		
.00	.6255					12.50	-.7408		
.31	.1658					15.00	-.7624		
.62	-.1696					17.50	-.7223		
1.25	-.4891					20.00	-.7178		
1.87	-.6328					30.00	-.7132		
2.50	-.7715					40.00	-.7457		
3.12	-.7845					50.00	-.7655		
3.75	-.7907					60.00	-.7962		
4.38	-.7361					70.00	-.8004		
5.00	-.7374					80.00	-.8049		
6.25	-.7166					90.00	-.8300		
7.50	-.6719					100.00	-.8199		
8.75	-.7520					110.00	-.7763		
12.50	-.7430					314.90	.0211		
15.00	-.7036					364.36	.0022		
17.50	-.7194								
20.00	-.7403								
30.00	-.7315								
40.00	-.7385								
50.00	-.7579								
60.00	-.7781								
70.00	-.8147								
80.00	-.8170								
90.00	-.8413								
100.00	-.8298								
110.00	-.7833								
314.90	.0164								
364.36	.0065								

$M = 0.892$; mfr $= 0.619$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0050	446.79	.0236	314.90	.0125	-244.08	1.0039	496.25	.0356
-223.02	1.0084	496.25	.0346	364.36	.0092	-138.76	.9278	545.71	.0548
-201.95	1.0013	545.71	.0478			-33.43	.5609	595.17	.0727
-170.35	.9722	595.17	.0715			-13.37	.7346	661.12	.1237
-138.76	.9209	661.12	.1209			-2.67	1.1621	710.58	.1845
-117.69	.8780	710.58	.1826			.00	.7597	743.55	.2563
-96.62	.8209	743.55	.2519			.31	.3034	760.04	.3067
-75.56	.7438	760.04	.2966			.62	.1404	776.52	.3624
-54.49	.6564	776.52	.3517			1.25	-.2121	793.01	.4311
-43.96	.5887	793.01	.4181			1.87	-.4196		
-33.43	.5543					2.50	-.5517		
-30.08	.5494					3.12	-.5989		
-23.40	.5678					3.75	-.6368		
-13.37	.7520					4.38	-.5545		
-6.69	.9658					5.00	-.4053		
-4.35	1.0737					6.25	-.4138		
-2.67	1.1630					7.50	-.4251		
-1.17	1.2122					8.75	-.4542		
-.57	1.1729					10.00	-.5011		
.00	.7780					12.50	-.5315		
.31	.3447					15.00	-.5834		
.62	.0607					17.50	-.5712		
1.25	-.2989					20.00	-.6221		
1.87	-.4277					30.00	-.6472		
2.50	-.5963					40.00	-.6836		
3.12	-.5839					50.00	-.7279		
3.75	-.4755					60.00	-.7334		
4.38	-.4702					70.00	-.7523		
5.00	-.5304					80.00	-.7802		
6.25	-.4798					90.00	-.8154		
7.50	-.4972					100.00	-.8063		
8.75	-.4935					110.00	-.7606		
12.50	-.5528					314.90	.0263		
15.00	-.5600					364.36	.0045		
17.50	-.5944								
20.00	-.6171								
30.00	-.6475								
40.00	-.6891								
50.00	-.6906								
60.00	-.7593								
70.00	-.7620								
80.00	-.7782								
90.00	-.8278								
100.00	-.8055								
110.00	-.7673								
314.90	.0111								
364.36	.0118								

Table III. Continued

(k) Concluded

$M = 0.889$; mfr $= 0.683$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9497	446.79	.0258	314.90	-.0102	-244.08	.9485	496.25	.0410
-223.02	.9531	496.25	.0394	364.36	-.0066	-138.76	.8505	545.71	.0602
-201.95	.9425	545.71	.0574			-33.43	.3360	595.17	.0783
-170.35	.9103	595.17	.0811			-13.37	.5456	661.12	.1317
-138.76	.8471	661.12	.1345			-2.67	1.0968	710.58	.1978
-117.69	.7919	710.58	.1955			.00	.8831	743.55	.2682
-96.62	.7120	743.55	.2663			.31	.4727	760.04	.3172
-75.56	.6088	760.04	.3106			.62	.2619	776.52	.3748
-54.49	.4858	776.52	.3653			1.25	-.0505	793.01	.4440
-43.96	.3939	793.01	.4323			1.87	-.2187		
-33.43	.3402					2.50	-.3085		
-30.08	.3262					3.12	-.3356		
-23.40	.3520					3.75	-.3018		
-13.37	.5575					4.38	-.2337		
-6.69	.7893					5.00	-.2654		
-4.35	.9497					6.25	-.3330		
-2.67	1.0910					7.50	-.3417		
-1.17	1.1957					8.75	-.3885		
-.57	1.1942					10.00	-.4394		
.00	.9202					12.50	-.4534		
.31	.5041					15.00	-.4667		
.62	.2240					17.50	-.5248		
1.25	-.1212					20.00	-.5486		
1.87	-.2564					30.00	-.5913		
2.50	-.2854					40.00	-.6088		
3.12	-.2976					50.00	-.6690		
3.75	-.2533					60.00	-.6856		
4.38	-.2580					70.00	-.7269		
5.00	-.2761					80.00	-.7584		
6.25	-.3078					90.00	-.7801		
7.50	-.3518					100.00	-.7923		
8.75	-.3639					110.00	-.7391		
12.50	-.4568					314.90	.0004		
15.00	-.5357					364.36	-.0073		
17.50	-.5524								
20.00	-.5525								
30.00	-.5902								
40.00	-.6394								
50.00	-.6749								
60.00	-.7168								
70.00	-.7286								
80.00	-.7533								
90.00	-.7961								
100.00	-.7982								
110.00	-.7497								
314.90	-.0077								
364.36	-.0051								

$M = 0.891$; mfr $= 0.739$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.8948	446.79	.0297	314.90	.0061	-244.08	.8952	496.25	.0465
-223.02	.8994	496.25	.0446	364.36	.0130	-138.76	.7717	545.71	.0670
-201.95	.8873	545.71	.0622			-33.43	.0376	595.17	.0878
-170.35	.8468	595.17	.0903			-13.37	.2962	661.12	.1414
-138.76	.7683	661.12	.1433			-2.67	1.0048	710.58	.2079
-117.69	.6988	710.58	.2076			.00	1.0307	743.55	.2824
-96.62	.5955	743.55	.2783			.31	.6620	760.04	.3320
-75.56	.4575	760.04	.3238			.62	.4767	776.52	.3881
-54.49	.2810	776.52	.3777			1.25	.1622	793.01	.4562
-43.96	.1448	793.01	.4414			1.87	-.0172		
-33.43	.0606					2.50	-.0700		
-30.08	.0100					3.12	-.1404		
-23.40	.0724					3.75	-.1301		
-13.37	.3397					4.38	-.0981		
-6.69	.6728					5.00	-.1451		
-4.35	.8624					6.25	-.1884		
-2.67	1.0066					7.50	-.1992		
-1.17	1.1716					8.75	-.2500		
-.57	1.2122					10.00	-.2775		
.00	1.0336					12.50	-.3771		
.31	.6892					15.00	-.4099		
.62	.3722					17.50	-.4253		
1.25	.1367					20.00	-.4567		
1.87	-.0121					30.00	-.4630		
2.50	-.0839					40.00	-.5360		
3.12	-.0684					50.00	-.6013		
3.75	-.0783					60.00	-.6543		
4.38	-.1035					70.00	-.6695		
5.00	-.1906					80.00	-.7030		
6.25	-.2257					90.00	-.7470		
7.50	-.2170					100.00	-.7327		
8.75	-.2708					110.00	-.7163		
12.50	-.3783					314.90	.0145		
15.00	-.4671					364.36	.0094		
17.50	-.4265								
20.00	-.3932								
30.00	-.4874								
40.00	-.5525								
50.00	-.6134								
60.00	-.6472								
70.00	-.6747								
80.00	-.7080								
90.00	-.7570								
100.00	-.7561								
110.00	-.7104								
314.90	.0083								
364.36	.0126								

Table III. Continued

(l) $M = 0.92$

$M = 0.915$; mfr $= 0.267$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1900	446.79	.0657	314.90	.0310	-244.08	1.1919	496.25	.0519
-223.02	1.1930	496.25	.0497	364.36	.0764	-138.76	1.1780	545.71	.0393
-201.95	1.1897	545.71	.0359			-33.43	1.1506	595.17	.0279
-170.35	1.1843	595.17	.0313			-13.37	1.2105	661.12	.0329
-138.76	1.1774	661.12	.0365			-2.67	1.1130	710.58	.0497
-117.69	1.1702	710.58	.0540			.00	-.0232	743.55	.0832
-96.62	1.1645	743.55	.0853			.31	-.6653	760.04	.1138
-75.56	1.1569	760.04	.1114			.62	-.7900	776.52	.1500
-54.49	1.1494	776.52	.1451			1.25	-.9893	793.01	.2117
-43.96	1.1492	793.01	.2037			1.87	-1.0775		
-33.43	1.1543					2.50	-1.1341		
-30.08	1.1587					3.12	-1.1813		
-23.40	1.1736					3.75	-1.1752		
-13.37	1.2136					4.38	-1.1937		
-6.69	1.2158					5.00	-1.1766		
-4.35	1.1781					6.25	-1.1707		
-2.67	1.1000					7.50	-1.1637		
-1.17	.8834					8.75	-1.1593		
-.57	.6933					10.00	-1.1531		
.00	-.0498					12.50	-1.1531		
.31	-.5898					15.00	-1.1171		
.62	-.8256					17.50	-1.1090		
1.25	-.9977					20.00	-1.0873		
1.87	-1.0911					30.00	-1.0206		
2.50	-1.1440					40.00	-.9904		
3.12	-1.1758					50.00	-.9642		
3.75	-1.1800					60.00	-.9703		
4.38	-1.1770					70.00	-.9510		
5.00	-1.1806					80.00	-.9557		
6.25	-1.1927					90.00	-.9479		
7.50	-1.1758					100.00	-.9302		
8.75	-1.1649					110.00	-.9051		
12.50	-1.1274					314.90	.0388		
15.00	-1.1349					364.36	.0792		
17.50	-1.1089								
20.00	-1.0906								
30.00	-1.0470								
40.00	-1.0070								
50.00	-.9814								
60.00	-.9634								
70.00	-.9581								
80.00	-.9570								
90.00	-.9666								
100.00	-.9489								
110.00	-.9049								
314.90	.0452								
364.36	.0838								

$M = 0.917$; mfr $= 0.268$; $\alpha = 2.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1919	446.79	.0982	314.90	.0146	-244.08	1.1929	496.25	.0407
-223.02	1.1940	496.25	.0701	364.36	.0723	-138.76	1.1787	545.71	.0339
-201.95	1.1907	545.71	.0499			-33.43	1.1409	595.17	.0278
-170.35	1.1859	595.17	.0422			-13.37	1.2000	661.12	.0352
-138.76	1.1802	661.12	.0431			-2.67	1.1487	710.58	.0551
-117.69	1.1754	710.58	.0554			.00	.1038	743.55	.0930
-96.62	1.1676	743.55	.0823			.31	-.5170	760.04	.1279
-75.56	1.1610	760.04	.1043			.62	-.6039	776.52	.1699
-54.49	1.1580	776.52	.1331			1.25	-.8689	793.01	.2378
-43.96	1.1578	793.01	.1833			1.87	-1.0046		
-33.43	1.1659					2.50	-1.0734		
-30.08	1.1716					3.12	-1.1051		
-23.40	1.1892					3.75	-1.0934		
-13.37	1.2206					4.38	-1.0888		
-6.69	1.2129					5.00	-1.0867		
-4.35	1.1611					6.25	-1.0563		
-2.67	1.0693					7.50	-1.0656		
-1.17	.8204					8.75	-1.0598		
-.57	.6291					10.00	-1.0494		
.00	-.1452					12.50	-1.0399		
.31	-.7275					15.00	-1.0218		
.62	-.9518					17.50	-1.0055		
1.25	-1.0975					20.00	-.9767		
1.87	-1.1587					30.00	-.9079		
2.50	-1.2209					40.00	-.8733		
3.12	-1.2399					50.00	-.8635		
3.75	-1.2583					60.00	-.8659		
4.38	-1.2556					70.00	-.8628		
5.00	-1.2604					80.00	-.8764		
6.25	-1.2643					90.00	-.8784		
7.50	-1.2435					100.00	-.8561		
8.75	-1.2320					110.00	-.8340		
12.50	-1.2296					314.90	-.0041		
15.00	-1.2125					364.36	.0624		
17.50	-1.2103								
20.00	-1.1790								
30.00	-1.1445								
40.00	-1.0888								
50.00	-1.0749								
60.00	-1.0541								
70.00	-1.0477								
80.00	-1.0223								
90.00	-1.0305								
100.00	-1.0103								
110.00	-.9901								
314.90	.0263								
364.36	.1009								

Table III. Continued

(l) Continued

$M = 0.915$; mfr $= 0.314$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1773	446.79	.0596	314.90	.0652	-244.08	1.1773	496.25	.0491
-223.02	1.1785	496.25	.0470	364.36	.0825	-138.76	1.1604	545.71	.0418
-201.95	1.1758	545.71	.0378			-33.43	1.1157	595.17	.0353
-170.35	1.1710	595.17	.0378			-13.37	1.1915	661.12	.0504
-138.76	1.1617	661.12	.0531			-2.67	1.1468	710.58	.0777
-117.69	1.1518	710.58	.0798			.00	.0730	743.55	.1200
-96.62	1.1418	743.55	.1212			.31	-.5192	760.04	.1571
-75.56	1.1253	760.04	.1519			.62	-.6391	776.52	.1992
-54.49	1.1154	776.52	.1912			1.25	-.8698	793.01	.2664
-43.96	1.1086	793.01	.2550			1.87	-1.0209		
-33.43	1.1184					2.50	-1.0887		
-30.08	1.1204					3.12	-1.1219		
-23.40	1.1387					3.75	-1.1196		
-13.37	1.1956					4.38	-1.1226		
-6.69	1.2246					5.00	-1.1189		
-4.35	1.2097					6.25	-1.1041		
-2.67	1.1475					7.50	-1.1159		
-1.17	.9664					8.75	-1.1084		
-.57	.7759					10.00	-1.0989		
.00	.0691					12.50	-1.0904		
.31	-.4840					15.00	-1.0734		
.62	-.6890					17.50	-1.0568		
1.25	-.9156					20.00	-1.0425		
1.87	-1.0214					30.00	-.9942		
2.50	-1.0894					40.00	-.9667		
3.12	-1.1121					50.00	-.9347		
3.75	-1.1209					60.00	-.9225		
4.38	-1.1227					70.00	-.9286		
5.00	-1.1239					80.00	-.9174		
6.25	-1.1290					90.00	-.9293		
7.50	-1.1272					100.00	-.9191		
8.75	-1.1203					110.00	-.8814		
12.50	-1.0937					314.90	.0574		
15.00	-1.0613					364.36	.0797		
17.50	-1.0516								
20.00	-1.0343								
30.00	-1.0024								
40.00	-.9245								
50.00	-.9434								
60.00	-.9379								
70.00	-.9269								
80.00	-.9287								
90.00	-.9240								
100.00	-.9227								
110.00	-.8895								
314.90	.0478								
364.36	.0850								

$M = 0.915$; mfr $= 0.401$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1440	446.79	.0501	314.90	.0784	-244.08	1.1425	496.25	.0452
-223.02	1.1446	496.25	.0440	364.36	.0720	-138.76	1.1151	545.71	.0452
-201.95	1.1437	545.71	.0412			-33.43	1.0178	595.17	.0486
-170.35	1.1332	595.17	.0523			-13.37	1.1222	661.12	.0777
-138.76	1.1121	661.12	.0817			-2.67	1.2086	710.58	.1232
-117.69	1.0962	710.58	.1250			.00	.2809	743.55	.1799
-96.62	1.0772	743.55	.1796			.31	-.2253	760.04	.2232
-75.56	1.0547	760.04	.2186			.62	-.4027	776.52	.2738
-54.49	1.0312	776.52	.2653			1.25	-.7138	793.01	.3442
-43.96	1.0151	793.01	.3329			1.87	-.8601		
-33.43	1.0199					2.50	-.9717		
-30.08	1.0182					3.12	-1.0172		
-23.40	1.0483					3.75	-1.0145		
-13.37	1.1276					4.38	-.9782		
-6.69	1.2038					5.00	-.9846		
-4.35	1.2237					6.25	-.9584		
-2.67	1.2049					7.50	-.9646		
-1.17	1.0869					8.75	-.9786		
-.57	.9508					10.00	-.9595		
.00	.2997					12.50	-.9690		
.31	-.2147					15.00	-.9465		
.62	-.5026					17.50	-.9180		
1.25	-.7392					20.00	-.9435		
1.87	-.8811					30.00	-.8769		
2.50	-.9997					40.00	-.8840		
3.12	-1.0224					50.00	-.8711		
3.75	-1.0151					60.00	-.8619		
4.38	-1.0015					70.00	-.8680		
5.00	-1.0094					80.00	-.8837		
6.25	-.9967					90.00	-.8762		
7.50	-.9858					100.00	-.8670		
8.75	-.9558					110.00	-.8218		
12.50	-.9710					314.90	.0802		
15.00	-.9580					364.36	.0642		
17.50	-.9232								
20.00	-.9318								
30.00	-.8820								
40.00	-.8572								
50.00	-.8717								
60.00	-.8700								
70.00	-.8779								
80.00	-.8792								
90.00	-.8898								
100.00	-.8778								
110.00	-.8478								
314.90	.0752								
364.36	.0706								

Table III. Continued

(l) Continued

$M = 0.914$; mfr $= 0.448$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1211	446.79	.0455	314.90	.0785	-244.08	1.1214	496.25	.0443
-223.02	1.1244	496.25	.0418	364.36	.0629	-138.76	1.0851	545.71	.0480
-201.95	1.1202	545.71	.0443			-33.43	.9464	595.17	.0559
-170.35	1.1078	595.17	.0578			-13.37	1.0698	661.12	.0903
-138.76	1.0856	661.12	.0959			-2.67	1.2207	710.58	.1404
-117.69	1.0648	710.58	.1453			.00	.4056	743.55	.2025
-96.62	1.0380	743.55	.2031			.31	-.1009	760.04	.2479
-75.56	1.0064	760.04	.2421			.62	-.2703	776.52	.3007
-54.49	.9750	776.52	.2931			1.25	-.6347	793.01	.3702
-43.96	.9508	793.01	.3625			1.87	-.8135		
-33.43	.9569					2.50	-.8973		
-30.08	.9552					3.12	-.9637		
-23.40	.9762					3.75	-.9357		
-13.37	1.0701					4.38	-.9179		
-6.69	1.1855					5.00	-.9061		
-4.35	1.2215					6.25	-.9029		
-2.67	1.2197					7.50	-.9020		
-1.17	1.1276					8.75	-.9008		
-.57	1.0220					10.00	-.9112		
.00	.4306					12.50	-.8996		
.31	-.0489					15.00	-.8891		
.62	-.3973					17.50	-.8769		
1.25	-.6133					20.00	-.8779		
1.87	-.8115					30.00	-.8156		
2.50	-.9335					40.00	-.8051		
3.12	-.9696					50.00	-.8235		
3.75	-.9656					60.00	-.8255		
4.38	-.9472					70.00	-.8320		
5.00	-.9338					80.00	-.8408		
6.25	-.9190					90.00	-.8690		
7.50	-.8978					100.00	-.8435		
8.75	-.9045					110.00	-.8146		
12.50	-.8996					314.90	.0792		
15.00	-.8735					364.36	.0568		
17.50	-.8866								
20.00	-.8660								
30.00	-.8361								
40.00	-.8114								
50.00	-.8173								
60.00	-.8423								
70.00	-.8422								
80.00	-.8540								
90.00	-.8657								
100.00	-.8529								
110.00	-.8109								
314.90	.0813								
364.36	.0664								

$M = 0.914$; mfr $= 0.492$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1010	446.79	.0423	314.90	.0689	-244.08	1.0980	496.25	.0444
-223.02	1.1010	496.25	.0429	364.36	.0505	-138.76	1.0566	545.71	.0512
-201.95	1.0956	545.71	.0475			-33.43	.8783	595.17	.0635
-170.35	1.0826	595.17	.0653			-13.37	1.0155	661.12	.1049
-138.76	1.0522	661.12	.1071			-2.67	1.2244	710.58	.1599
-117.69	1.0272	710.58	.1602			.00	.5084	743.55	.2256
-96.62	.9956	743.55	.2253			.31	.0515	760.04	.2732
-75.56	.9555	760.04	.2680			.62	-.1844	776.52	.3276
-54.49	.9127	776.52	.3175			1.25	-.5393	793.01	.3949
-43.96	.8868	793.01	.3838			1.87	-.7315		
-33.43	.8796					2.50	-.8013		
-30.08	.8746					3.12	-.8319		
-23.40	.9067					3.75	-.8448		
-13.37	1.0138					4.38	-.8113		
-6.69	1.1492					5.00	-.8482		
-4.35	1.2008					6.25	-.8191		
-2.67	1.2193					7.50	-.8564		
-1.17	1.1698					8.75	-.8081		
-.57	1.0561					10.00	-.8210		
.00	.5328					12.50	-.7992		
.31	.0363					15.00	-.8108		
.62	-.2907					17.50	-.7948		
1.25	-.5562					20.00	-.8002		
1.87	-.7236					30.00	-.7754		
2.50	-.8301					40.00	-.7843		
3.12	-.8329					50.00	-.7843		
3.75	-.8762					60.00	-.7996		
4.38	-.8438					70.00	-.8166		
5.00	-.8577					80.00	-.8132		
6.25	-.8362					90.00	-.8397		
7.50	-.8308					100.00	-.8237		
8.75	-.8335					110.00	-.7785		
12.50	-.8205					314.90	.0717		
15.00	-.8241					364.36	.0483		
17.50	-.7941								
20.00	-.8096								
30.00	-.7884								
40.00	-.7514								
50.00	-.7902								
60.00	-.7971								
70.00	-.8118								
80.00	-.8280								
90.00	-.8368								
100.00	-.8298								
110.00	-.7920								
314.90	.0739								
364.36	.0515								

Table III. Continued

(l) Continued

$M = 0.916$; mfr $= 0.492$; $\alpha = 1.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1009	446.79	.0595	314.90	.0742	-244.08	1.0987	496.25	.0409
-223.02	1.1021	496.25	.0525	364.36	.0586	-138.76	1.0554	545.71	.0491
-201.95	1.0979	545.71	.0546			-33.43	.8609	595.17	.0608
-170.35	1.0838	595.17	.0718			-13.37	.9921	661.12	.1034
-138.76	1.0568	661.12	.1110			-2.67	1.2249	710.58	.1613
-117.69	1.0318	710.58	.1637			.00	.5706	743.55	.2291
-96.62	.9985	743.55	.2242			.31	.0948	760.04	.2793
-75.56	.9627	760.04	.2637			.62	-.0868	776.52	.3376
-54.49	.9269	776.52	.3131			1.25	-.4853	793.01	.4124
-43.96	.8985	793.01	.3753			1.87	-.6393		
-33.43	.8947					2.50	-.7260		
-30.08	.8964					3.12	-.7649		
-23.40	.9262					3.75	-.7623		
-13.37	1.0371					4.38	-.7497		
-6.69	1.1698					5.00	-.7264		
-4.35	1.2152					6.25	-.7699		
-2.67	1.2251					7.50	-.7525		
-1.17	1.1519					8.75	-.7455		
-.57	1.0441					10.00	-.6995		
.00	.4689					12.50	-.7233		
.31	-.0353					15.00	-.7196		
.62	-.3583					17.50	-.7274		
1.25	-.6081					20.00	-.7196		
1.87	-.7810					30.00	-.6972		
2.50	-.8942					40.00	-.6904		
3.12	-.9199					50.00	-.7281		
3.75	-.9253					60.00	-.7331		
4.38	-.8981					70.00	-.7525		
5.00	-.9018					80.00	-.7678		
6.25	-.9000					90.00	-.7881		
7.50	-.8704					100.00	-.7864		
8.75	-.8806					110.00	-.7450		
12.50	-.8924					314.90	.0689		
15.00	-.8917					364.36	.0494		
17.50	-.8707								
20.00	-.8694								
30.00	-.8326								
40.00	-.8156								
50.00	-.8444								
60.00	-.8672								
70.00	-.8563								
80.00	-.8683								
90.00	-.8740								
100.00	-.8573								
110.00	-.8266								
314.90	.0873								
364.36	.0675								

$M = 0.915$; mfr $= 0.491$; $\alpha = 2.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0995	446.79	.0707	314.90	.0662	-244.08	1.0993	496.25	.0339
-223.02	1.1037	496.25	.0578	364.36	.0495	-138.76	1.0528	545.71	.0465
-201.95	1.0980	545.71	.0578			-33.43	.8503	595.17	.0572
-170.35	1.0857	595.17	.0729			-13.37	.9651	661.12	.1011
-138.76	1.0553	661.12	.1122			-2.67	1.2196	710.58	.1582
-117.69	1.0324	710.58	.1625			.00	.6607	743.55	.2291
-96.62	1.0017	743.55	.2193			.31	.1819	760.04	.2816
-75.56	.9673	760.04	.2574			.62	-.0150	776.52	.3422
-54.49	.9333	776.52	.3013			1.25	-.3982	793.01	.4214
-43.96	.9129	793.01	.3572			1.87	-.5633		
-33.43	.9143					2.50	-.6447		
-30.08	.9214					3.12	-.6913		
-23.40	.9495					3.75	-.7171		
-13.37	1.0626					4.38	-.6974		
-6.69	1.1751					5.00	-.6930		
-4.35	1.2188					6.25	-.7027		
-2.67	1.2220					7.50	-.6382		
-1.17	1.1260					8.75	-.6098		
-.57	.9985					10.00	-.6199		
.00	.3989					12.50	-.6342		
.31	-.0933					15.00	-.6219		
.62	-.4467					17.50	-.6165		
1.25	-.6383					20.00	-.6304		
1.87	-.8334					30.00	-.6250		
2.50	-.9424					40.00	-.6365		
3.12	-.9974					50.00	-.6549		
3.75	-.9947					60.00	-.7035		
4.38	-.9660					70.00	-.6998		
5.00	-.9636					80.00	-.7276		
6.25	-.9439					90.00	-.7599		
7.50	-.9327					100.00	-.7640		
8.75	-.9354					110.00	-.7219		
12.50	-.9279					314.90	.0594		
15.00	-.9453					364.36	.0435		
17.50	-.9369								
20.00	-.9255								
30.00	-.9018								
40.00	-.8920								
50.00	-.8924								
60.00	-.8966								
70.00	-.9000								
80.00	-.8988								
90.00	-.9212								
100.00	-.9077								
110.00	-.8703								
314.90	.0967								
364.36	.0704								

Table III. Continued

(l) Continued

$M = 0.916$; mfr $= 0.492$; $\alpha = 3.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.1016	446.79	.0893	314.90	.0590	-244.08	1.0982	496.25	.0320
-223.02	1.1040	496.25	.0697	364.36	.0487	-138.76	1.0524	545.71	.0483
-201.95	1.0986	545.71	.0664			-33.43	.8299	595.17	.0599
-170.35	1.0881	595.17	.0795			-13.37	.9344	661.12	.1013
-138.76	1.0595	661.12	.1172			-2.67	1.2166	710.58	.1589
-117.69	1.0352	710.58	.1638			.00	.6818	743.55	.2307
-96.62	1.0054	743.55	.2175			.31	.2565	760.04	.2834
-75.56	.9717	760.04	.2500			.62	.0466	776.52	.3478
-54.49	.9422	776.52	.2920			1.25	-.3130	793.01	.4302
-43.96	.9222	793.01	.3432			1.87	-.4492		
-33.43	.9252					2.50	-.5835		
-30.08	.9327					3.12	-.5979		
-23.40	.9594					3.75	-.6267		
-13.37	1.0737					4.38	-.6192		
-6.69	1.1926					5.00	-.5900		
-4.35	1.2213					6.25	-.5455		
-2.67	1.2188					7.50	-.4963		
-1.17	1.1081					8.75	-.5356		
-.57	.9711					10.00	-.4844		
.00	.3478					12.50	-.4922		
.31	-.1684					15.00	-.4868		
.62	-.4738					17.50	-.5078		
1.25	-.7059					20.00	-.5217		
1.87	-.8763					30.00	-.5506		
2.50	-.9912					40.00	-.5852		
3.12	-1.0313					50.00	-.6196		
3.75	-1.0108					60.00	-.6454		
4.38	-.9924					70.00	-.6658		
5.00	-1.0144					80.00	-.6793		
6.25	-1.0060					90.00	-.7170		
7.50	-.9924					100.00	-.7153		
8.75	-1.0011					110.00	-.6827		
12.50	-.9996					314.90	.0519		
15.00	-.9968					364.36	.0508		
17.50	-.9760								
20.00	-.9716								
30.00	-.9555								
40.00	-.9238								
50.00	-.9489								
60.00	-.9415								
70.00	-.9316								
80.00	-.9511								
90.00	-.9492								
100.00	-.9298								
110.00	-.9008								
314.90	.1036								
364.36	.0891								

$M = 0.916$; mfr $= 0.550$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0658	446.79	.0457	314.90	.0665	-244.08	1.0656	496.25	.0518
-223.02	1.0685	496.25	.0497	364.36	.0520	-138.76	1.0081	545.71	.0622
-201.95	1.0604	545.71	.0586			-33.43	.7578	595.17	.0779
-170.35	1.0424	595.17	.0794			-13.37	.9046	661.12	.1257
-138.76	1.0051	661.12	.1269			-2.67	1.2151	710.58	.1867
-117.69	.9723	710.58	.1858			.00	.6658	743.55	.2550
-96.62	.9303	743.55	.2535			.31	.2170	760.04	.3038
-75.56	.8744	760.04	.2967			.62	.0067	776.52	.3583
-54.49	.8161	776.52	.3488			1.25	-.3738	793.01	.4267
-43.96	.7832	793.01	.4147			1.87	-.5630		
-33.43	.7605					2.50	-.6499		
-30.08	.7591					3.12	-.7223		
-23.40	.7801					3.75	-.6987		
-13.37	.9130					4.38	-.6848		
-6.69	1.0882					5.00	-.7089		
-4.35	1.1634					6.25	-.6965		
-2.67	1.2163					7.50	-.6784		
-1.17	1.2081					8.75	-.6469		
-.57	1.1237					10.00	-.6268		
.00	.6650					12.50	-.6678		
.31	.2221					15.00	-.6821		
.62	-.1183					17.50	-.6977		
1.25	-.4472					20.00	-.6828		
1.87	-.5992					30.00	-.6668		
2.50	-.7231					40.00	-.6835		
3.12	-.7083					50.00	-.7160		
3.75	-.7152					60.00	-.7344		
4.38	-.6914					70.00	-.7483		
5.00	-.7062					80.00	-.7788		
6.25	-.6609					90.00	-.7934		
7.50	-.5902					100.00	-.7782		
8.75	-.6699					110.00	-.7452		
12.50	-.7022					314.90	.0764		
15.00	-.6781					364.36	.0470		
17.50	-.6766								
20.00	-.7000								
30.00	-.6781								
40.00	-.7004								
50.00	-.7234								
60.00	-.7390								
70.00	-.7625								
80.00	-.7896								
90.00	-.8007								
100.00	-.7829								
110.00	-.7394								
314.90	.0729								
364.36	.0541								

Table III. Continued

(l) Continued

$M = 0.915$; mfr $= 0.622$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	1.0167	446.79	.0434	314.90	.0565	-244.08	1.0144	496.25	.0535
-223.02	1.0185	496.25	.0529	364.36	.0423	-138.76	.9412	545.71	.0704
-201.95	1.0110	545.71	.0652			-33.43	.5816	595.17	.0870
-170.35	.9884	595.17	.0910			-13.37	.7623	661.12	.1395
-138.76	.9369	661.12	.1404			-2.67	1.1713	710.58	.2043
-117.69	.8935	710.58	.2043			.00	.8243	743.55	.2777
-96.62	.8366	743.55	.2746			.31	.3614	760.04	.3281
-75.56	.7596	760.04	.3204			.62	.1940	776.52	.3837
-54.49	.6756	776.52	.3735			1.25	-.1845	793.01	.4503
-43.96	.6105	793.01	.4389			1.87	-.3256		
-33.43	.5691					2.50	-.4708		
-30.08	.5725					3.12	-.5512		
-23.40	.6010					3.75	-.5398		
-13.37	.7457					4.38	-.5856		
-6.69	.9727					5.00	-.3579		
-4.35	1.0950					6.25	-.3866		
-2.67	1.1718					7.50	-.3664		
-1.17	1.2269					8.75	-.4114		
-.57	1.1860					10.00	-.4738		
.00	.8393					12.50	-.5106		
.31	.3893					15.00	-.5211		
.62	.0544					17.50	-.5415		
1.25	-.2946					20.00	-.5646		
1.87	-.3930					30.00	-.6188		
2.50	-.5450					40.00	-.6497		
3.12	-.5407					50.00	-.6548		
3.75	-.5465					60.00	-.6990		
4.38	-.3854					70.00	-.7025		
5.00	-.3669					80.00	-.7429		
6.25	-.4620					90.00	-.7572		
7.50	-.3902					100.00	-.7688		
8.75	-.4359					110.00	-.7341		
12.50	-.4856					314.90	.0657		
15.00	-.5356					364.36	.0380		
17.50	-.5453								
20.00	-.5558								
30.00	-.6052								
40.00	-.6495								
50.00	-.6636								
60.00	-.7126								
70.00	-.7324								
80.00	-.7491								
90.00	-.7955								
100.00	-.7786								
110.00	-.7362								
314.90	.0561								
364.36	.0444								

$M = 0.915$; mfr $= 0.682$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9664	446.79	.0465	314.90	.0413	-244.08	.9688	496.25	.0597
-223.02	.9730	496.25	.0585	364.36	.0321	-138.76	.8695	545.71	.0753
-201.95	.9589	545.71	.0723			-33.43	.3646	595.17	.0965
-170.35	.9294	595.17	.1011			-13.37	.5805	661.12	.1515
-138.76	.8658	661.12	.1549			-2.67	1.1166	710.58	.2197
-117.69	.8123	710.58	.2191			.00	.9241	743.55	.2952
-96.62	.7358	743.55	.2906			.31	.5442	760.04	.3450
-75.56	.6317	760.04	.3382			.62	.3025	776.52	.4015
-54.49	.5085	776.52	.3932			1.25	.0306	793.01	.4690
-43.96	.4161	793.01	.4574			1.87	-.1605		
-33.43	.3619					2.50	-.2499		
-30.08	.3477					3.12	-.2730		
-23.40	.3731					3.75	-.2503		
-13.37	.5825					4.38	-.2109		
-6.69	.8372					5.00	-.2428		
-4.35	.9827					6.25	-.2623		
-2.67	1.1086					7.50	-.2843		
-1.17	1.2142					8.75	-.3468		
-.57	1.2138					10.00	-.3608		
.00	.9360					12.50	-.4118		
.31	.5287					15.00	-.4322		
.62	.2768					17.50	-.4672		
1.25	-.0334					20.00	-.4978		
1.87	-.1750					30.00	-.5308		
2.50	-.2401					40.00	-.5740		
3.12	-.2298					50.00	-.6264		
3.75	-.2074					60.00	-.6564		
4.38	-.1989					70.00	-.6808		
5.00	-.2519					80.00	-.6982		
6.25	-.2758					90.00	-.7376		
7.50	-.2755					100.00	-.7451		
8.75	-.3394					110.00	-.7077		
12.50	-.3987					314.90	.0505		
15.00	-.4642					364.36	.0289		
17.50	-.4816								
20.00	-.5202								
30.00	-.5349								
40.00	-.5763								
50.00	-.6200								
60.00	-.6465								
70.00	-.6798								
80.00	-.7089								
90.00	-.7474								
100.00	-.7458								
110.00	-.7080								
314.90	.0438								
364.36	.0335								

Table III. Concluded

(l) Concluded

$M = 0.918$; mfr $= 0.682$; $\alpha = 2.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9706	446.79	.0799	314.90	.0372	-244.08	.9672	496.25	.0517
-223.02	.9733	496.25	.0731	364.36	.0308	-138.76	.8695	545.71	.0731
-201.95	.9643	545.71	.0835			-33.43	.2920	595.17	.0952
-170.35	.9319	595.17	.1077			-13.37	.4511	661.12	.1515
-138.76	.8709	661.12	.1610			-2.67	1.0543	710.58	.2191
-117.69	.8157	710.58	.2256			.00	1.0538	743.55	.2975
-96.62	.7431	743.55	.2935			.31	.6780	760.04	.3498
-75.56	.6489	760.04	.3348			.62	.5024	776.52	.4110
-54.49	.5415	776.52	.3841			1.25	.1998	793.01	.4845
-43.96	.4619	793.01	.4407			1.87	.0390		
-33.43	.4291					2.50	-.0087		
-30.08	.4116					3.12	.0089		
-23.40	.4636					3.75	-.0066		
-13.37	.6774					4.38	-.0169		
-6.69	.9156					5.00	-.0714		
-4.35	1.0428					6.25	-.1053		
-2.67	1.1558					7.50	-.1205		
-1.17	1.2178					8.75	-.1877		
-.57	1.1959					10.00	-.1673		
.00	.8232					12.50	-.2907		
.31	.3744					15.00	-.3117		
.62	.0781					17.50	-.3195		
1.25	-.2398					20.00	-.3561		
1.87	-.3798					30.00	-.3886		
2.50	-.5065					40.00	-.4469		
3.12	-.5080					50.00	-.4856		
3.75	-.5505					60.00	-.5354		
4.38	-.5029					70.00	-.5798		
5.00	-.4998					80.00	-.6164		
6.25	-.4314					90.00	-.6615		
7.50	-.4410					100.00	-.6706		
8.75	-.4793					110.00	-.6167		
12.50	-.5897					314.90	.0450		
15.00	-.5801					364.36	.0277		
17.50	-.5683								
20.00	-.6211								
30.00	-.6440								
40.00	-.6901								
50.00	-.7234								
60.00	-.7389								
70.00	-.7689								
80.00	-.7997								
90.00	-.8244								
100.00	-.8184								
110.00	-.7753								
314.90	.0602								
364.36	.0461								

$M = 0.916$; mfr $= 0.741$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-244.08	.9130	446.79	.0496	314.90	.0417	-244.08	.9130	496.25	.0643
-223.02	.9169	496.25	.0628	364.36	.0375	-138.76	.7929	545.71	.0836
-201.95	.9051	545.71	.0794			-33.43	.0558	595.17	.1039
-170.35	.8652	595.17	.1076			-13.37	.3327	661.12	.1624
-138.76	.7876	661.12	.1646			-2.67	1.0368	710.58	.2314
-117.69	.7155	710.58	.2302			.00	1.0374	743.55	.3063
-96.62	.6184	743.55	.3029			.31	.6798	760.04	.3578
-75.56	.4780	760.04	.3504			.62	.4921	776.52	.4142
-54.49	.3055	776.52	.4028			1.25	.2356	793.01	.4786
-43.96	.1825	793.01	.4688			1.87	.0686		
-33.43	.0772					2.50	-.0590		
-30.08	.0405					3.12	-.0444		
-23.40	.0925					3.75	-.0702		
-13.37	.3723					4.38	-.0674		
-6.69	.6763					5.00	-.0957		
-4.35	.8598					6.25	-.1442		
-2.67	1.0186					7.50	-.1663		
-1.17	1.1915					8.75	-.2470		
-.57	1.2256					10.00	-.2257		
.00	1.0483					12.50	-.3238		
.31	.6972					15.00	-.3615		
.62	.4221					17.50	-.3948		
1.25	.1219					20.00	-.3982		
1.87	-.0237					30.00	-.4467		
2.50	-.0618					40.00	-.5109		
3.12	-.0563					50.00	-.5571		
3.75	-.0403					60.00	-.5948		
4.38	-.0466					70.00	-.6281		
5.00	-.1180					80.00	-.6675		
6.25	-.1488					90.00	-.6937		
7.50	-.1802					100.00	-.7103		
8.75	-.2068					110.00	-.6648		
12.50	-.3525					314.90	.0555		
15.00	-.4138					364.36	.0325		
17.50	-.3509								
20.00	-.4000								
30.00	-.4540								
40.00	-.5087								
50.00	-.5734								
60.00	-.6068								
70.00	-.6234								
80.00	-.6720								
90.00	-.7146								
100.00	-.7063								
110.00	-.6686								
314.90	.0417								
364.36	.0403								

Table IV. Pressure Coefficients on Model With Medium Cowl

(a) $M = 0.60$

$M = 0.597$; mfr $= 0.270$; $\alpha = 0°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0400	343.16	-.0590	279.84	-.0733	-187.46	1.0395	343.16	-.0500
-155.11	1.0375	381.14	-.0559			-106.57	1.0243	381.14	-.0569
-130.84	1.0302	419.13	-.0585			-25.67	.9946	419.13	-.0479
-106.57	1.0250	457.12	-.0543			-10.27	1.0698	457.12	-.0569
-90.39	1.0167	507.77	-.0500			-2.05	.9223	507.77	-.0537
-74.21	1.0048	545.76	-.0516			.00	-.7802	545.76	-.0569
-58.03	.9934	571.08	-.0442			.31	-1.8770	571.08	-.0522
-41.85	.9831	583.74	-.0389			.63	-2.0571	583.74	-.0474
-33.76	.9847	596.41	-.0389			1.25	-1.8939	596.41	-.0300
-25.67	.9946	609.07	-.0062			1.88	-2.0199	609.07	.0002
-23.11	.9992					2.50	-1.8243		
-17.97	1.0185					3.13	-1.8598		
-10.27	1.0710					3.75	-1.8190		
-5.13	1.0835					4.37	-1.9167		
-3.34	1.0419					5.00	-1.8436		
-2.05	.9275					6.25	-1.7676		
-.90	.6551					7.50	-1.7001		
-.44	.3822					8.75	-1.7505		
.00	-.8212					10.00	-1.6533		
.31	-2.2306					15.00	-1.3430		
.63	-2.1696					17.50	-1.1932		
1.25	-2.1056					20.00	-1.1429		
2.50	-1.9149					30.00	-.8311		
3.13	-1.9185					40.00	-.6527		
4.37	-1.8039					50.00	-.5250		
5.00	-1.8128					60.00	-.4521		
6.25	-1.6236					70.00	-.3885		
8.75	-1.6618					80.00	-.3582		
10.00	-1.5538					90.00	-.3104		
12.50	-1.4382					100.00	-.2620		
15.00	-1.3103					110.00	-.2169		
17.50	-1.1980					241.85	-.0873		
20.00	-1.1210								
30.00	-.8036								
40.00	-.6259								
50.00	-.5089								
60.00	-.4362								
70.00	-.3897								
80.00	-.3467								
90.00	-.3098								
100.00	-.2611								
110.00	-.2218								
241.85	-.0892								
279.84	-.0733								

$M = 0.595$; mfr $= 0.269$; $\alpha = 2.1°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0403	343.16	-.0572	279.84	-.0778	-187.46	1.0429	343.16	-.0577
-155.11	1.0372	381.14	-.0577			-106.57	1.0242	381.14	-.0567
-130.84	1.0345	419.13	-.0614			-25.67	.9767	419.13	-.0498
-106.57	1.0252	457.12	-.0577			-10.27	1.0564	457.12	-.0540
-90.39	1.0189	507.77	-.0556			-2.05	.9838	507.77	-.0466
-74.21	1.0064	545.76	-.0636			.00	-.5685	545.76	-.0466
-58.03	1.0018	571.08	-.0636			.31	-1.9366	571.08	-.0381
-41.85	.9945	583.74	-.0630			.63	-2.1841	583.74	-.0253
-33.76	.9996	596.41	-.0583			1.25	-2.0165	596.41	-.0089
-25.67	1.0113	609.07	-.0381			1.88	-2.1195	609.07	.0278
-23.11	1.0172					2.50	-1.9313		
-17.97	1.0377					3.13	-1.9441		
-10.27	1.0834					3.75	-1.8984		
-5.13	1.0769					4.37	-1.8312		
-3.34	1.0155					5.00	-1.7837		
-2.05	.8862					6.25	-1.7319		
-.90	.5770					7.50	-1.6491		
-.44	.2658					8.75	-1.5103		
.00	-.9951					10.00	-1.4561		
.31	-1.8431					15.00	-1.0426		
.63	-1.8065					17.50	-.8177		
1.25	-1.9017					20.00	-.7884		
2.50	-1.7583					30.00	-.5734		
3.13	-1.6668					40.00	-.5060		
4.37	-1.5616					50.00	-.4515		
5.00	-1.7453					60.00	-.4164		
6.25	-1.4652					70.00	-.3824		
8.75	-1.3616					80.00	-.3461		
10.00	-1.3391					90.00	-.2974		
12.50	-1.2093					100.00	-.2435		
15.00	-1.2552					110.00	-.1955		
17.50	-1.2648					241.85	-.0711		
20.00	-1.2349								
30.00	-1.1481								
40.00	-.9246								
50.00	-.7365								
60.00	-.5612								
70.00	-.4521								
80.00	-.3792								
90.00	-.3269								
100.00	-.2667								
110.00	-.2467								
241.85	-.0784								
279.84	-.0680								

Table IV. Continued

(a) Continued

$M = 0.596$; mfr $= 0.313$; $\alpha = 0°$

PHI, DEGREE									
0				90	180				
FOREBODY		AFTERBODY		FOREBODY	FOREBODY		AFTERBODY		
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0285	343.16	-.0552	279.84	-.0748	-187.46	1.0243	343.16	-.0462
-155.11	1.0270	381.14	-.0510			-106.57	1.0062	381.14	-.0526
-130.84	1.0213	419.13	-.0478			-25.67	.9564	419.13	-.0472
-106.57	1.0088	457.12	-.0483			-10.27	1.0518	457.12	-.0494
-90.39	.9979	507.77	-.0414			-2.05	.9775	507.77	-.0446
-74.21	.9828	545.76	-.0356			.00	-.6073	545.76	-.0382
-58.03	.9677	571.08	-.0260			.31	-2.0131	571.08	-.0223
-41.85	.9485	583.74	-.0154			.63	-2.3336	583.74	-.0107
-33.76	.9529	596.41	-.0091			1.25	-2.1689	596.41	-.0006
-25.67	.9547	609.07	.0297			1.88	-2.2227	609.07	.0365
-23.11	.9658					2.50	-1.8621		
-17.97	.9892					3.13	-1.9414		
-10.27	1.0512					3.75	-1.6595		
-5.13	1.0904					4.37	-1.7943		
-3.34	1.0584					5.00	-1.7012		
-2.05	.9792					6.25	-1.7588		
-.90	.7156					7.50	-1.7241		
-.44	.4541					8.75	-1.6393		
.00	-.6875					10.00	-1.5754		
.31	-2.2120					15.00	-1.2982		
.63	-2.3223					17.50	-1.0473		
1.25	-2.1838					20.00	-.8536		
2.50	-2.0521					30.00	-.6195		
3.13	-1.8261					40.00	-.5334		
4.37	-1.9202					50.00	-.4779		
5.00	-1.9045					60.00	-.4211		
6.25	-1.8795					70.00	-.3883		
8.75	-1.6719					80.00	-.3509		
10.00	-1.5977					90.00	-.3070		
12.50	-1.4340					100.00	-.2525		
15.00	-1.1993					110.00	-.2075		
17.50	-1.1151					241.85	-.0785		
20.00	-.9230								
30.00	-.6386								
40.00	-.5318								
50.00	-.4847								
60.00	-.4341								
70.00	-.3883								
80.00	-.3512								
90.00	-.3106								
100.00	-.2536								
110.00	-.2143								
241.85	-.0809								
279.84	-.0699								

$M = 0.594$; mfr $= 0.411$; $\alpha = 0°$

PHI, DEGREE									
0				90	180				
FOREBODY		AFTERBODY		FOREBODY	FOREBODY		AFTERBODY		
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9850	343.16	-.0466	279.84	-.0632	-187.46	.9805	343.16	-.0380
-155.11	.9808	381.14	-.0428			-106.57	.9452	381.14	-.0428
-130.84	.9709	419.13	-.0418			-25.67	.8277	419.13	-.0375
-106.57	.9458	457.12	-.0380			-10.27	.9605	457.12	-.0364
-90.39	.9270	507.77	-.0258			-2.05	1.0627	507.77	-.0210
-74.21	.8999	545.76	-.0109			.00	-.2717	545.76	-.0082
-58.03	.8707	571.08	.0056			.31	-1.7523	571.08	.0194
-41.85	.8446	583.74	.0242			.63	-1.9681	583.74	.0471
-33.76	.8319	596.41	.0620			1.25	-2.4339	596.41	.0775
-25.67	.8277	609.07	.1052			1.88	-2.3587	609.07	.1382
-23.11	.8324					2.50	-2.2506		
-17.97	.8624					3.13	-2.2499		
-10.27	.9629					3.75	-2.1162		
-5.13	1.0711					4.37	-1.8070		
-3.34	1.0902					5.00	-1.5624		
-2.05	1.0631					6.25	-1.3899		
-.90	.9002					7.50	-1.1686		
-.44	.7178					8.75	-1.0413		
.00	-.3100					10.00	-.9291		
.31	-1.8795					15.00	-.7874		
.63	-2.1388					17.50	-.7228		
1.25	-2.4353					20.00	-.6782		
2.50	-2.2620					30.00	-.5754		
3.13	-2.2814					40.00	-.5026		
4.37	-1.8679					50.00	-.4597		
5.00	-1.6140					60.00	-.4121		
6.25	-1.3689					70.00	-.3810		
8.75	-1.0382					80.00	-.3404		
10.00	-.9726					90.00	-.2987		
12.50	-.8684					100.00	-.2318		
15.00	-.7778					110.00	-.1865		
17.50	-.7317					241.85	-.0687		
20.00	-.6989								
30.00	-.5809								
40.00	-.5139								
50.00	-.4593								
60.00	-.4282								
70.00	-.3780								
80.00	-.3475								
90.00	-.2986								
100.00	-.2476								
110.00	-.1977								
241.85	-.0706								
279.84	-.0601								

Table IV. Continued

(a) Continued

$M = 0.598$; mfr $= 0.491$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9555	343.16	-.0413	279.84	-.0611	-187.46	.9544	343.16	-.0355
-155.11	.9504	381.14	-.0366			-106.57	.9078	381.14	-.0371
-130.84	.9380	419.13	-.0318			-25.67	.7313	419.13	-.0334
-106.57	.9064	457.12	-.0255			-10.27	.8938	457.12	-.0281
-90.39	.8811	507.77	-.0176			-2.05	1.0842	507.77	-.0102
-74.21	.8480	545.76	-.0017			.00	-.0623	545.76	.0056
-58.03	.8071	571.08	.0310			.31	-1.4747	571.08	.0373
-41.85	.7668	583.74	.0447			.63	-1.6615	583.74	.0689
-33.76	.7499	596.41	.0779			1.25	-2.2185	596.41	.0958
-25.67	.7482	609.07	.1354			1.88	-2.2777	609.07	.1581
-23.11	.7523					2.50	-1.9976		
-17.97	.7796					3.13	-1.9960		
-10.27	.8997					3.75	-1.9550		
-5.13	1.0378					4.37	-1.4018		
-3.34	1.0866					5.00	-1.1307		
-2.05	1.0823					6.25	-1.0302		
-.90	.9608					7.50	-.9717		
-.44	.8294					8.75	-.9211		
.00	-.1222					10.00	-.8538		
.31	-1.5662					15.00	-.7333		
.63	-1.8922					17.50	-.6955		
1.25	-2.2536					20.00	-.6437		
2.50	-2.1356					30.00	-.5529		
3.13	-2.1460					40.00	-.4964		
4.37	-1.6021					50.00	-.4446		
5.00	-1.1409					60.00	-.4033		
6.25	-1.0384					70.00	-.3655		
8.75	-.9963					80.00	-.3364		
10.00	-.9146					90.00	-.2892		
12.50	-.8234					100.00	-.2275		
15.00	-.7582					110.00	-.1816		
17.50	-.6823					241.85	-.0672		
20.00	-.6635								
30.00	-.5675								
40.00	-.4997								
50.00	-.4527								
60.00	-.4124								
70.00	-.3666								
80.00	-.3312								
90.00	-.2955								
100.00	-.2377								
110.00	-.1884								
241.85	-.0703								
279.84	-.0642								

$M = 0.595$; mfr $= 0.502$; $\alpha = 0.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9269	343.16	-.0521	279.84	-.0544	-187.46	.9235	343.16	-.0261
-155.11	.9207	381.14	-.0447			-106.57	.8713	381.14	-.0356
-130.84	.9066	419.13	-.0420			-25.67	.6517	419.13	-.0223
-106.57	.8701	457.12	-.0340			-10.27	.8124	457.12	-.0197
-90.39	.8420	507.77	-.0165			-2.05	1.0866	507.77	-.0037
-74.21	.7976	545.76	-.0059			.00	.1217	545.76	.0170
-58.03	.7518	571.08	.0255			.31	-1.2752	571.08	.0415
-41.85	.6996	583.74	.0537			.63	-1.4841	583.74	.0877
-33.76	.6775	596.41	.0830			1.25	-2.0162	596.41	.1255
-25.67	.6628	609.07	.1468			1.88	-1.9100	609.07	.1900
-23.11	.6610					2.50	-1.7871		
-17.97	.6980					3.13	-1.8159		
-10.27	.8361					3.75	-1.2935		
-5.13	1.0048					4.37	-1.0517		
-3.34	1.0676					5.00	-.9543		
-2.05	1.0885					6.25	-.9362		
-.90	1.0189					7.50	-.9231		
-.44	.8958					8.75	-.8205		
.00	.0041					10.00	-.7903		
.31	-1.2612					15.00	-.6906		
.63	-1.6633					17.50	-.6565		
1.25	-2.0481					20.00	-.6113		
2.50	-1.8389					30.00	-.5227		
3.13	-1.6717					40.00	-.4635		
4.37	-.9996					50.00	-.4177		
5.00	-1.0206					60.00	-.3848		
6.25	-.9310					70.00	-.3514		
8.75	-.9818					80.00	-.3215		
10.00	-.8885					90.00	-.2751		
12.50	-.7655					100.00	-.2170		
15.00	-.7035					110.00	-.1747		
17.50	-.6612					241.85	-.0649		
20.00	-.6364								
30.00	-.5356								
40.00	-.4776								
50.00	-.4308								
60.00	-.3969								
70.00	-.3549								
80.00	-.3247								
90.00	-.2828								
100.00	-.2237								
110.00	-.1801								
241.85	-.0612								
279.84	-.0550								

Table IV. Continued

(a) Continued

$M = 0.595$; mfr $= 0.503$; $\alpha = 1.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9283	343.16	-.0361	279.84	-.0612	-187.46	.9251	343.16	-.0292
-155.11	.9257	381.14	-.0329			-106.57	.8694	381.14	-.0334
-130.84	.9075	419.13	-.0302			-25.67	.6290	419.13	-.0249
-106.57	.8732	457.12	-.0223			-10.27	.7773	457.12	-.0191
-90.39	.8424	507.77	-.0037			-2.05	1.0851	507.77	-.0031
-74.21	.8034	545.76	.0091			.00	.2357	545.76	.0138
-58.03	.7591	571.08	.0404			.31	-1.0660	571.08	.0505
-41.85	.7123	583.74	.0590			.63	-1.2780	583.74	.0813
-33.76	.6888	596.41	.0930			1.25	-1.7395	596.41	.1211
-25.67	.6771	609.07	.1509			1.88	-1.7246	609.07	.1919
-23.11	.6894					2.50	-1.4184		
-17.97	.7298					3.13	-1.3620		
-10.27	.8671					3.75	-1.1107		
-5.13	1.0211					4.37	-.9412		
-3.34	1.0789					5.00	-.8872		
-2.05	1.0838					6.25	-.7974		
-.90	.9762					7.50	-.8556		
-.44	.8336					8.75	-.7771		
.00	-.1163					10.00	-.7184		
.31	-1.5160					15.00	-.6364		
.63	-1.8688					17.50	-.5965		
1.25	-2.2060					20.00	-.5620		
2.50	-2.0548					30.00	-.4823		
3.13	-2.1437					40.00	-.4365		
4.37	-1.3328					50.00	-.4043		
5.00	-1.2725					60.00	-.3733		
6.25	-1.0239					70.00	-.3445		
8.75	-1.0249					80.00	-.3158		
10.00	-.9307					90.00	-.2777		
12.50	-.8347					100.00	-.2115		
15.00	-.7710					110.00	-.1711		
17.50	-.7124					241.85	-.0619		
20.00	-.6892								
30.00	-.5723								
40.00	-.5078								
50.00	-.4583								
60.00	-.4193								
70.00	-.3662								
80.00	-.3416								
90.00	-.2953								
100.00	-.2359								
110.00	-.1865								
241.85	-.0705								
279.84	-.0594								

$M = 0.597$; mfr $= 0.502$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9265	343.16	-.0333	279.84	-.0621	-187.46	.9229	343.16	-.0328
-155.11	.9265	381.14	-.0307			-106.57	.8657	381.14	-.0349
-130.84	.9084	419.13	-.0318			-25.67	.6016	419.13	-.0206
-106.57	.8736	457.12	-.0212			-10.27	.7406	457.12	-.0238
-90.39	.8425	507.77	-.0053			-2.05	1.0736	507.77	-.0058
-74.21	.8051	545.76	.0095			.00	.3656	545.76	.0159
-58.03	.7626	571.08	.0355			.31	-.8651	571.08	.0492
-41.85	.7231	583.74	.0566			.63	-1.0759	583.74	.0836
-33.76	.7043	596.41	.0868			1.25	-1.4694	596.41	.1286
-25.67	.7119	609.07	.1408			1.88	-1.3529	609.07	.1965
-23.11	.7084					2.50	-1.1639		
-17.97	.7552					3.13	-1.1780		
-10.27	.8902					3.75	-.9500		
-5.13	1.0466					4.37	-.8545		
-3.34	1.0840					5.00	-.7839		
-2.05	1.0760					6.25	-.7326		
-.90	.9492					7.50	-.7080		
-.44	.7978					8.75	-.6486		
.00	-.2141					10.00	-.5988		
.31	-1.6508					15.00	-.5626		
.63	-2.0411					17.50	-.5520		
1.25	-2.3844					20.00	-.5071		
2.50	-2.2430					30.00	-.4598		
3.13	-2.2680					40.00	-.4119		
4.37	-2.1309					50.00	-.3798		
5.00	-1.7051					60.00	-.3552		
6.25	-1.2298					70.00	-.3342		
8.75	-1.0827					80.00	-.2992		
10.00	-.9830					90.00	-.2594		
12.50	-.8860					100.00	-.2063		
15.00	-.8214					110.00	-.1602		
17.50	-.7552					241.85	-.0627		
20.00	-.7295								
30.00	-.6074								
40.00	-.5469								
50.00	-.4792								
60.00	-.4391								
70.00	-.3821								
80.00	-.3508								
90.00	-.3049								
100.00	-.2428								
110.00	-.1970								
241.85	-.0688								
279.84	-.0639								

Table IV. Continued

(a) Continued

$M = 0.597$; mfr $= 0.504$; $\alpha = 3.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9268	343.16	-.0300	279.84	-.0678	-187.46	.9233	343.16	-.0384
-155.11	.9268	381.14	-.0316			-106.57	.8644	381.14	-.0353
-130.84	.9066	419.13	-.0300			-25.67	.5776	419.13	-.0263
-106.57	.8750	457.12	-.0257			-10.27	.7060	457.12	-.0205
-90.39	.8449	507.77	-.0083			-2.05	1.0628	507.77	-.0019
-74.21	.8112	545.76	.0065			.00	.4480	545.76	.0176
-58.03	.7697	571.08	.0319			.31	-.6179	571.08	.0531
-41.85	.7329	583.74	.0547			.63	-.8359	583.74	.0880
-33.76	.7253	596.41	.0822			1.25	-1.0768	596.41	.1271
-25.67	.7276	609.07	.1324			1.88	-1.1091	609.07	.2018
-23.11	.7381					2.50	-.9175		
-17.97	.7761					3.13	-.8420		
-10.27	.9163					3.75	-.7878		
-5.13	1.0537					4.37	-.7122		
-3.34	1.0898					5.00	-.6640		
-2.05	1.0690					6.25	-.6136		
-.90	.9134					7.50	-.6576		
-.44	.7150					8.75	-.5848		
.00	-.3422					10.00	-.5543		
.31	-1.8867					15.00	-.4848		
.63	-2.2048					17.50	-.4702		
1.25	-2.4968					20.00	-.4720		
2.50	-2.2982					30.00	-.4165		
3.13	-2.3435					40.00	-.3728		
4.37	-2.1762					50.00	-.3617		
5.00	-1.9237					60.00	-.3290		
6.25	-1.6964					70.00	-.3144		
8.75	-1.2245					80.00	-.2910		
10.00	-1.2871					90.00	-.2514		
12.50	-.9539					100.00	-.1942		
15.00	-.8727					110.00	-.1480		
17.50	-.8187					241.85	-.0556		
20.00	-.7618								
30.00	-.6233								
40.00	-.5499								
50.00	-.4921								
60.00	-.4391								
70.00	-.3885								
80.00	-.3484								
90.00	-.3106								
100.00	-.2436								
110.00	-.1991								
241.85	-.0660								
279.84	-.0562								

$M = 0.594$; mfr $= 0.553$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.8869	343.16	-.0344	279.84	-.0694	-187.46	.8872	343.16	-.0254
-155.11	.8843	381.14	-.0286			-106.57	.8214	381.14	-.0270
-130.84	.8603	419.13	-.0222			-25.67	.5316	419.13	-.0163
-106.57	.8190	457.12	-.0126			-10.27	.6990	457.12	-.0126
-90.39	.7778	507.77	.0055			-2.05	1.0852	507.77	.0087
-74.21	.7225	545.76	.0241			.00	.3072	545.76	.0294
-58.03	.6599	571.08	.0577			.31	-.8851	571.08	.0523
-41.85	.5976	583.74	.0928			.63	-1.1811	583.74	.0827
-33.76	.5628	596.41	.1200			1.25	-1.6747	596.41	.1125
-25.67	.5287	609.07	.1946			1.88	-1.5274	609.07	.1856
-23.11	.5234					2.50	-1.3850		
-17.97	.5698					3.13	-1.3373		
-10.27	.7167					3.75	-1.0825		
-5.13	.9165					4.37	-.9142		
-3.34	1.0200					5.00	-.9239		
-2.05	1.0817					6.25	-.8421		
-.90	1.0663					7.50	-.9203		
-.44	.9948					8.75	-.7934		
.00	.2668					10.00	-.7505		
.31	-.9607					15.00	-.6718		
.63	-1.3192					17.50	-.6031		
1.25	-1.6373					20.00	-.5931		
2.50	-1.3050					30.00	-.4909		
3.13	-1.2809					40.00	-.4503		
4.37	-1.0771					50.00	-.3986		
5.00	-.9444					60.00	-.3975		
6.25	-.8378					70.00	-.3381		
8.75	-.8973					80.00	-.3423		
10.00	-.7574					90.00	-.2659		
12.50	-.7392					100.00	-.2383		
15.00	-.6707					110.00	-.1606		
17.50	-.6437					241.85	-.0559		
20.00	-.6145								
30.00	-.5367								
40.00	-.4665								
50.00	-.4401								
60.00	-.3994								
70.00	-.3352								
80.00	-.3149								
90.00	-.2961								
100.00	-.2107								
110.00	-.1697								
241.85	-.0565								
279.84	-.0454								

Table IV. Continued

(a) Continued

$M = 0.596$; mfr $= 0.623$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.8352	343.16	-.0273	279.84	-.0486	-187.46	.8353	343.16	-.0220
-155.11	.8310	381.14	-.0215			-106.57	.7458	381.14	-.0236
-130.84	.7984	419.13	-.0136			-25.67	.3419	419.13	-.0146
-106.57	.7450	457.12	-.0024			-10.27	.5351	457.12	-.0130
-90.39	.6910	507.77	.0208			-2.05	1.0349	507.77	.0081
-74.21	.6247	545.76	.0473			.00	.5083	545.76	.0319
-58.03	.5411	571.08	.0917			.31	-.5272	571.08	.0753
-41.85	.4415	583.74	.1234			.63	-.8484	583.74	.1081
-33.76	.4032	596.41	.1626			1.25	-1.0401	596.41	.1488
-25.67	.3466	609.07	.2288			1.88	-1.1968	609.07	.2214
-23.11	.3460					2.50	-.9874		
-17.97	.3653					3.13	-.9408		
-10.27	.5433					3.75	-.8774		
-5.13	.7930					4.37	-.7841		
-3.34	.9247					5.00	-.7484		
-2.05	1.0343					6.25	-.6530		
-.90	1.0876					7.50	-.7583		
-.44	1.0417					8.75	-.6518		
.00	.5125					10.00	-.5990		
.31	-.6199					15.00	-.5774		
.63	-.8481					17.50	-.5424		
1.25	-1.0542					20.00	-.5056		
2.50	-.9270					30.00	-.4548		
3.13	-.9661					40.00	-.3918		
4.37	-.7889					50.00	-.3853		
5.00	-.7817					60.00	-.3562		
6.25	-.6915					70.00	-.3334		
8.75	-.7314					80.00	-.3048		
10.00	-.6235					90.00	-.2639		
12.50	-.5919					100.00	-.1992		
15.00	-.5722					110.00	-.1560		
17.50	-.5463					241.85	-.0535		
20.00	-.5232								
30.00	-.4535								
40.00	-.4215								
50.00	-.3949								
60.00	-.3646								
70.00	-.3264								
80.00	-.2972								
90.00	-.2699								
100.00	-.2084								
110.00	-.1657								
241.85	-.0584								
279.84	-.0486								

$M = 0.595$; mfr $= 0.687$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.7732	343.16	-.0215	279.84	-.0425	-187.46	.7686	343.16	-.0188
-155.11	.7690	381.14	-.0141			-106.57	.6596	381.14	-.0183
-130.84	.7289	419.13	-.0082			-25.67	.1240	419.13	-.0077
-106.57	.6597	457.12	.0072			-10.27	.3216	457.12	-.0035
-90.39	.5966	507.77	.0364			-2.05	.9597	507.77	.0210
-74.21	.5045	545.76	.0698			.00	.7174	545.76	.0465
-58.03	.3874	571.08	.1112			.31	-.1232	571.08	.0884
-41.85	.2646	583.74	.1457			.63	-.4089	583.74	.1213
-33.76	.1984	596.41	.1862			1.25	-.7748	596.41	.1713
-25.67	.1293	609.07	.2499			1.88	-.8203	609.07	.2350
-23.11	.1059					2.50	-.8140		
-17.97	.1234					3.13	-.6648		
-10.27	.3433					3.75	-.6289		
-5.13	.6092					4.37	-.6322		
-3.34	.7948					5.00	-.5592		
-2.05	.9548					6.25	-.5946		
-.90	1.0808					7.50	-.6183		
-.44	1.0906					8.75	-.5644		
.00	.7013					10.00	-.4883		
.31	-.2982					15.00	-.4877		
.63	-.4585					17.50	-.4643		
1.25	-.7608					20.00	-.4420		
2.50	-.7754					30.00	-.4321		
3.13	-.6911					40.00	-.3647		
4.37	-.5948					50.00	-.3594		
5.00	-.5980					60.00	-.3383		
6.25	-.5464					70.00	-.3120		
8.75	-.5777					80.00	-.2874		
10.00	-.5183					90.00	-.2505		
12.50	-.4934					100.00	-.1930		
15.00	-.4821					110.00	-.1495		
17.50	-.4549					241.85	-.0591		
20.00	-.4643								
30.00	-.4169								
40.00	-.3727								
50.00	-.3612								
60.00	-.3432								
70.00	-.3038								
80.00	-.2817								
90.00	-.2492								
100.00	-.1907								
110.00	-.1487								
241.85	-.0480								
279.84	-.0369								

Table IV. Continued

(a) Continued

$M = 0.597$; mfr $= 0.687$; $\alpha = 1.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.7734	343.16	-.0201	279.84	-.0421	-187.46	.7720	343.16	-.0228
-155.11	.7703	381.14	-.0143			-106.57	.6583	381.14	-.0196
-130.84	.7294	419.13	-.0069			-25.67	.0861	419.13	-.0101
-106.57	.6641	457.12	.0068			-10.27	.2769	457.12	-.0022
-90.39	.5951	507.77	.0348			-2.05	.9069	507.77	.0174
-74.21	.5117	545.76	.0650			.00	.7780	545.76	.0470
-58.03	.4024	571.08	.1120			.31	-.0172	571.08	.0872
-41.85	.2904	583.74	.1421			.63	-.3004	583.74	.1247
-33.76	.2279	596.41	.1898			1.25	-.5118	596.41	.1729
-25.67	.1789	609.07	.2501			1.88	-.5881	609.07	.2395
-23.11	.1491					2.50	-.6232		
-17.97	.1742					3.13	-.5435		
-10.27	.3877					3.75	-.4891		
-5.13	.6985					4.37	-.5061		
-3.34	.8631					5.00	-.4745		
-2.05	1.0038					6.25	-.4755		
-.90	1.0870					7.50	-.5229		
-.44	1.0791					8.75	-.4712		
.00	.6351					10.00	-.4424		
.31	-.4273					15.00	-.4459		
.63	-.6293					17.50	-.4127		
1.25	-.9675					20.00	-.3853		
2.50	-.8381					30.00	-.3928		
3.13	-.8402					40.00	-.3392		
4.37	-.8065					50.00	-.3433		
5.00	-.6931					60.00	-.3158		
6.25	-.6946					70.00	-.3018		
8.75	-.7231					80.00	-.2756		
10.00	-.6195					90.00	-.2371		
12.50	-.5791					100.00	-.1800		
15.00	-.5208					110.00	-.1450		
17.50	-.5236					241.85	-.0538		
20.00	-.4976								
30.00	-.4615								
40.00	-.4088								
50.00	-.3770								
60.00	-.3599								
70.00	-.3141								
80.00	-.2924								
90.00	-.2578								
100.00	-.2018								
110.00	-.1537								
241.85	-.0538								
279.84	-.0421								

$M = 0.598$; mfr $= 0.686$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.7741	343.16	-.0149	279.84	-.0429	-187.46	.7668	343.16	-.0233
-155.11	.7680	381.14	-.0117			-106.57	.6553	381.14	-.0217
-130.84	.7318	419.13	-.0064			-25.67	.0338	419.13	-.0091
-106.57	.6674	457.12	.0094			-10.27	.1813	457.12	-.0064
-90.39	.5976	507.77	.0351			-2.05	.8395	507.77	.0183
-74.21	.5156	545.76	.0651			.00	.8565	545.76	.0499
-58.03	.4124	571.08	.1099			.31	.1227	571.08	.0893
-41.85	.2994	583.74	.1451			.63	-.1076	583.74	.1251
-33.76	.2568	596.41	.1852			1.25	-.3937	596.41	.1695
-25.67	.1935	609.07	.2484			1.88	-.5097	609.07	.2431
-23.11	.2098					2.50	-.4494		
-17.97	.2226					3.13	-.3861		
-10.27	.4550					3.75	-.3826		
-5.13	.7359					4.37	-.3501		
-3.34	.9028					5.00	-.3461		
-2.05	1.0151					6.25	-.3519		
-.90	1.0876					7.50	-.4274		
-.44	1.0583					8.75	-.3733		
.00	.5089					10.00	-.3292		
.31	-.5875					15.00	-.3217		
.63	-.8594					17.50	-.3246		
1.25	-1.1062					20.00	-.3466		
2.50	-1.0138					30.00	-.3379		
3.13	-1.0884					40.00	-.3135		
4.37	-.8744					50.00	-.3205		
5.00	-.8372					60.00	-.3008		
6.25	-.7820					70.00	-.2903		
8.75	-.7882					80.00	-.2642		
10.00	-.6933					90.00	-.2334		
12.50	-.6479					100.00	-.1742		
15.00	-.6549					110.00	-.1340		
17.50	-.5695					241.85	-.0490		
20.00	-.5755								
30.00	-.4968								
40.00	-.4391								
50.00	-.4214								
60.00	-.3806								
70.00	-.3339								
80.00	-.3069								
90.00	-.2719								
100.00	-.2149								
110.00	-.1649								
241.85	-.0575								
279.84	-.0417								

Table IV. Continued

(a) Continued

$M = 0.597$; mfr $= 0.749$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.7055	343.16	-.0180	279.84	-.0403	-187.46	.7070	343.16	-.0127
-155.11	.6972	381.14	-.0096			-106.57	.5644	381.14	-.0127
-130.84	.6532	419.13	-.0017			-25.67	-.1321	419.13	-.0001
-106.57	.5641	457.12	.0152			-10.27	.0876	457.12	.0073
-90.39	.4819	507.77	.0437			-2.05	.7839	507.77	.0342
-74.21	.3738	545.76	.0770			.00	.8481	545.76	.0680
-58.03	.2290	571.08	.1223			.31	.1761	571.08	.1139
-41.85	.0645	583.74	.1583			.63	-.1692	583.74	.1477
-33.76	-.0249	596.41	.1969			1.25	-.3964	596.41	.1937
-25.67	-.1286	609.07	.2602			1.88	-.5456	609.07	.2644
-23.11	-.1728					2.50	-.4598		
-17.97	-.1460					3.13	-.5395		
-10.27	.0537					3.75	-.3958		
-5.13	.4150					4.37	-.4131		
-3.34	.6135					5.00	-.4668		
-2.05	.8328					6.25	-.4008		
-.90	1.0240					7.50	-.5018		
-.44	1.0900					8.75	-.3953		
.00	.9035					10.00	-.4290		
.31	.1638					15.00	-.4086		
.63	-.1658					17.50	-.3952		
1.25	-.3835					20.00	-.3877		
2.50	-.4585					30.00	-.3684		
3.13	-.4564					40.00	-.3335		
4.37	-.4332					50.00	-.3335		
5.00	-.3995					60.00	-.3131		
6.25	-.3918					70.00	-.2974		
8.75	-.4916					80.00	-.2747		
10.00	-.4316					90.00	-.2386		
12.50	-.4166					100.00	-.1763		
15.00	-.4155					110.00	-.1414		
17.50	-.4254					241.85	-.0391		
20.00	-.3862								
30.00	-.3757								
40.00	-.3512								
50.00	-.3380								
60.00	-.3200								
70.00	-.2863								
80.00	-.2730								
90.00	-.2413								
100.00	-.1881								
110.00	-.1394								
241.85	-.0482								
279.84	-.0384								

$M = 0.598$; mfr $= 0.816$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.6269	343.16	-.0108	279.84	-.0319	-187.46	.6248	343.16	-.0060
-155.11	.6159	381.14	-.0039			-106.57	.4528	381.14	-.0060
-130.84	.5571	419.13	.0061			-25.67	-.5060	419.13	.0061
-106.57	.4528	457.12	.0213			-10.27	-.2671	457.12	.0134
-90.39	.3449	507.77	.0524			-2.05	.6231	507.77	.0445
-74.21	.2091	545.76	.0877			.00	.9883	545.76	.0829
-58.03	.0223	571.08	.1330			.31	.3634	571.08	.1240
-41.85	-.2250	583.74	.1646			.63	.1712	583.74	.1619
-33.76	-.3374	596.41	.2110			1.25	-.2067	596.41	.2042
-25.67	-.4786	609.07	.2737			1.88	-.2471	609.07	.2700
-23.11	-.5606					2.50	-.2567		
-17.97	-.5216					3.13	-.2898		
-10.27	-.2648					3.75	-.3101		
-5.13	.1821					4.37	-.2428		
-3.34	.4323					5.00	-.2846		
-2.05	.6871					6.25	-.2959		
-.90	.9164					7.50	-.3700		
-.44	1.0407					8.75	-.2989		
.00	1.0037					10.00	-.3281		
.31	.3831					15.00	-.3456		
.63	.1570					17.50	-.3200		
1.25	-.1367					20.00	-.3293		
2.50	-.2642					30.00	-.3148		
3.13	-.2302					40.00	-.3096		
4.37	-.3287					50.00	-.3014		
5.00	-.2844					60.00	-.2962		
6.25	-.3143					70.00	-.2776		
8.75	-.4015					80.00	-.2596		
10.00	-.3091					90.00	-.2195		
12.50	-.3138					100.00	-.1672		
15.00	-.3154					110.00	-.1248		
17.50	-.3308					241.85	-.0331		
20.00	-.3215								
30.00	-.3406								
40.00	-.3208								
50.00	-.3071								
60.00	-.3050								
70.00	-.2741								
80.00	-.2465								
90.00	-.2250								
100.00	-.1745								
110.00	-.1341								
241.85	-.0410								
279.84	-.0294								

Table IV. Continued

(a) Concluded

$M = 0.598$; mfr $= 0.816$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.6273	343.16	.0005	279.84	-.0339	-187.46	.6224	343.16	-.0117
-155.11	.6168	381.14	.0041			-106.57	.4473	381.14	-.0075
-130.84	.5589	419.13	.0094			-25.67	-.6475	419.13	.0057
-106.57	.4576	457.12	.0252			-10.27	-.4422	457.12	.0105
-90.39	.3553	507.77	.0574			-2.05	.4613	507.77	.0411
-74.21	.2220	545.76	.0932			.00	1.0564	545.76	.0722
-58.03	.0421	571.08	.1396			.31	.6533	571.08	.1154
-41.85	-.1672	583.74	.1682			.63	.4198	583.74	.1613
-33.76	-.2746	596.41	.2141			1.25	.1617	596.41	.1999
-25.67	-.4061	609.07	.2711			1.88	.0217	609.07	.2674
-23.11	-.4288					2.50	-.0251		
-17.97	-.3660					3.13	-.0382		
-10.27	-.0443					3.75	-.0530		
-5.13	.3171					4.37	-.0577		
-3.34	.5968					5.00	-.0710		
-2.05	.7775					6.25	-.1071		
-.90	1.0155					7.50	-.1850		
-.44	1.0900					8.75	-.1572		
.00	.8531					10.00	-.1461		
.31	.1077					15.00	-.2112		
.63	-.2473					17.50	-.2327		
1.25	-.4225					20.00	-.2199		
2.50	-.5124					30.00	-.2508		
3.13	-.5129					40.00	-.2601		
4.37	-.4700					50.00	-.2694		
5.00	-.4773					60.00	-.2572		
6.25	-.5186					70.00	-.2438		
8.75	-.5445					80.00	-.2351		
10.00	-.4917					90.00	-.2019		
12.50	-.4685					100.00	-.1496		
15.00	-.4514					110.00	-.1129		
17.50	-.4354					241.85	-.0327		
20.00	-.4416								
30.00	-.4096								
40.00	-.3775								
50.00	-.3574								
60.00	-.3409								
70.00	-.2967								
80.00	-.2799								
90.00	-.2426								
100.00	-.1901								
110.00	-.1429								
241.85	-.0388								
279.84	-.0290								

Table IV. Continued

(b) $M = 0.64$

$M = 0.644$; mfr $= 0.278$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0592	343.16	-.0622	279.84	-.0714	-187.46	1.0579	343.16	-.0556
-155.11	1.0573	381.14	-.0603			-106.57	1.0454	381.14	-.0584
-130.84	1.0513	419.13	-.0593			-25.67	1.0137	419.13	-.0494
-106.57	1.0449	457.12	-.0584			-10.27	1.0075	457.12	-.0527
-90.39	1.0356	507.77	-.0523			-2.05	.9549	507.77	-.0476
-74.21	1.0255	545.76	-.0622			.00	-.6095	545.76	-.0542
-58.03	1.0135	571.08	-.0504			.31	-1.7047	571.08	-.0424
-41.85	1.0051	583.74	-.0476			.63	-1.5660	583.74	-.0282
-33.76	1.0075	596.41	-.0424			1.25	-1.7654	596.41	-.0198
-25.67	1.0163	609.07	-.0146			1.88	-1.7785	609.07	.0033
-23.11	1.0179					2.50	-1.6823		
-17.97	1.0387					3.13	-1.6342		
-10.27	1.0896					3.75	-1.6885		
-5.13	1.1023					4.37	-1.6478		
-3.34	1.0657					5.00	-1.5779		
-2.05	.9621					6.25	-1.5711		
-.90	.7084					7.50	-1.6217		
-.44	.4589					8.75	-1.6440		
.00	-.6613					10.00	-1.6040		
.31	-1.9763					15.00	-1.3864		
.63	-2.0404					17.50	-1.3749		
1.25	-1.5182					20.00	-1.2648		
2.50	-1.5721					30.00	-.9171		
3.13	-1.7947					40.00	-.6635		
4.37	-1.2818					50.00	-.5143		
5.00	-1.2726					60.00	-.4311		
6.25	-1.5247					70.00	-.3755		
8.75	-1.4583					80.00	-.3489		
10.00	-1.3167					90.00	-.3032		
12.50	-1.3315					100.00	-.2538		
15.00	-1.3614					110.00	-.2163		
17.50	-1.3450					241.85	-.0774		
20.00	-1.2585								
30.00	-1.0068								
40.00	-.8257								
50.00	-.5541								
60.00	-.4469								
70.00	-.3833								
80.00	-.3225								
90.00	-.3088								
100.00	-.2614								
110.00	-.2123								
241.85	-.0856								
279.84	-.0692								

$M = 0.645$; mfr $= 0.314$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0454	343.16	-.0577	279.84	-.0667	-187.46	1.0439	343.16	-.0478
-155.11	1.0440	381.14	-.0544			-106.57	1.0241	381.14	-.0525
-130.84	1.0371	419.13	-.0520			-25.67	.9732	419.13	-.0459
-106.57	1.0246	457.12	-.0464			-10.27	1.0657	457.12	-.0454
-90.39	1.0145	507.77	-.0468			-2.05	1.0033	507.77	-.0388
-74.21	.9983	545.76	-.0473			.00	-.4429	545.76	-.0369
-58.03	.9863	571.08	-.0379			.31	-1.7395	571.08	-.0341
-41.85	.9715	583.74	-.0308			.63	-1.9517	583.74	-.0054
-33.76	.9696	596.41	-.0129			1.25	-1.8964	596.41	.0092
-25.67	.9815	609.07	.0318			1.88	-1.8745	609.07	.0563
-23.11	.9805					2.50	-1.8813		
-17.97	1.0085					3.13	-1.7956		
-10.27	1.0688					3.75	-1.7013		
-5.13	1.1077					4.37	-1.7907		
-3.34	1.0794					5.00	-1.6486		
-2.05	.9922					6.25	-1.6726		
-.90	.7844					7.50	-1.6476		
-.44	.5554					8.75	-1.6421		
.00	-.5595					10.00	-1.6168		
.31	-1.8956					15.00	-1.3796		
.63	-1.7012					17.50	-1.3098		
1.25	-2.0294					20.00	-1.1543		
2.50	-1.8571					30.00	-.7553		
3.13	-1.7481					40.00	-.5872		
4.37	-1.6850					50.00	-.4765		
5.00	-1.6590					60.00	-.4267		
6.25	-1.6989					70.00	-.3898		
8.75	-1.6683					80.00	-.3581		
10.00	-1.5898					90.00	-.3051		
12.50	-1.5165					100.00	-.2542		
15.00	-1.4621					110.00	-.2106		
17.50	-1.3309					241.85	-.0809		
20.00	-1.1254								
30.00	-.7850								
40.00	-.5732								
50.00	-.4640								
60.00	-.4375								
70.00	-.3778								
80.00	-.3485								
90.00	-.3131								
100.00	-.2597								
110.00	-.2143								
241.85	-.0814								
279.84	-.0722								

Table IV. Continued

(b) Continued

$M = 0.645$; mfr $= 0.414$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0015	343.16	-.0498	279.84	-.0651	-187.46	1.0009	343.16	-.0394
-155.11	.9992	381.14	-.0422			-106.57	.9650	381.14	-.0422
-130.84	.9871	419.13	-.0394			-25.67	.8490	419.13	-.0352
-106.57	.9664	457.12	-.0342			-10.27	.9780	457.12	-.0361
-90.39	.9460	507.77	-.0276			-2.05	1.0892	507.77	-.0225
-74.21	.9197	545.76	-.0077			.00	-.1637	545.76	-.0139
-58.03	.8897	571.08	.0106			.31	-1.5039	571.08	.0106
-41.85	.8570	583.74	.0370			.63	-1.6886	583.74	.0478
-33.76	.8511	596.41	.0713			1.25	-2.1324	596.41	.0831
-25.67	.8485	609.07	.1165			1.88	-2.2284	609.07	.1340
-23.11	.8574					2.50	-2.1058		
-17.97	.8861					3.13	-2.0798		
-10.27	.9910					3.75	-2.1199		
-5.13	1.0849					4.37	-2.0972		
-3.34	1.1077					5.00	-2.0467		
-2.05	1.0865					6.25	-1.7164		
-.90	.9257					7.50	-1.5503		
-.44	.7473					8.75	-1.2029		
.00	-.2418					10.00	-1.2384		
.31	-1.6181					15.00	-.8124		
.63	-1.9319					17.50	-.7246		
1.25	-2.2071					20.00	-.6855		
2.50	-2.1017					30.00	-.5742		
3.13	-2.1184					40.00	-.5186		
4.37	-2.0896					50.00	-.4724		
5.00	-2.0544					60.00	-.4283		
6.25	-1.8566					70.00	-.3857		
8.75	-1.2091					80.00	-.3545		
10.00	-1.0611					90.00	-.3057		
12.50	-.9357					100.00	-.2423		
15.00	-.8688					110.00	-.1908		
17.50	-.7562					241.85	-.0689		
20.00	-.6855								
30.00	-.5893								
40.00	-.5221								
50.00	-.4777								
60.00	-.4408								
70.00	-.3836								
80.00	-.3519								
90.00	-.3147								
100.00	-.2527								
110.00	-.1984								
241.85	-.0771								
279.84	-.0634								

$M = 0.645$; mfr $= 0.462$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9724	343.16	-.0428	279.84	-.0603	-187.46	.9722	343.16	-.0371
-155.11	.9733	381.14	-.0380			-106.57	.9270	381.14	-.0395
-130.84	.9548	419.13	-.0343			-25.67	.7607	419.13	-.0319
-106.57	.9276	457.12	-.0244			-10.27	.9114	457.12	-.0315
-90.39	.9009	507.77	-.0103			-2.05	1.1046	507.77	-.0164
-74.21	.8686	545.76	.0109			.00	.0226	545.76	-.0018
-58.03	.8294	571.08	.0391			.31	-1.3068	571.08	.0316
-41.85	.7879	583.74	.0655			.63	-1.5349	583.74	.0603
-33.76	.7737	596.41	.0956			1.25	-1.9859	596.41	.1012
-25.67	.7675	609.07	.1633			1.88	-2.1529	609.07	.1662
-23.11	.7617					2.50	-2.0511		
-17.97	.7929					3.13	-2.0176		
-10.27	.9228					3.75	-1.9891		
-5.13	1.0605					4.37	-1.9942		
-3.34	1.1019					5.00	-2.0026		
-2.05	1.1003					6.25	-1.5059		
-.90	1.0049					7.50	-1.1583		
-.44	.8606					8.75	-.9716		
.00	-.0357					10.00	-.8508		
.31	-1.4108					15.00	-.7320		
.63	-1.6094					17.50	-.7012		
1.25	-1.9855					20.00	-.6575		
2.50	-2.0295					30.00	-.5744		
3.13	-1.9178					40.00	-.5069		
4.37	-1.9521					50.00	-.4554		
5.00	-1.8909					60.00	-.4191		
6.25	-1.7137					70.00	-.3817		
8.75	-.9590					80.00	-.3407		
10.00	-.8667					90.00	-.2997		
12.50	-.7809					100.00	-.2322		
15.00	-.7346					110.00	-.1891		
17.50	-.6928					241.85	-.0701		
20.00	-.6661								
30.00	-.5634								
40.00	-.5066								
50.00	-.4610								
60.00	-.4210								
70.00	-.3729								
80.00	-.3388								
90.00	-.2995								
100.00	-.2374								
110.00	-.1888								
241.85	-.0662								
279.84	-.0608								

Table IV. Continued

(b) Continued

$M = 0.643$; mfr $= 0.501$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9449	343.16	-.0456	279.84	-.0395	-187.46	.9434	343.16	-.0423
-155.11	.9444	381.14	-.0404			-106.57	.8902	381.14	-.0437
-130.84	.9245	419.13	-.0390			-25.67	.6798	419.13	-.0187
-106.57	.8921	457.12	-.0291			-10.27	.8389	457.12	-.0068
-90.39	.8619	507.77	-.0097			-2.05	1.1036	507.77	.0078
-74.21	.8161	545.76	.0168			.00	.1537	545.76	.0300
-58.03	.7697	571.08	.0537			.31	-1.1392	571.08	.0570
-41.85	.7215	583.74	.0835			.63	-1.3867	583.74	.0877
-33.76	.7116	596.41	.1203			1.25	-1.8534	596.41	.1331
-25.67	.7090	609.07	.1884			1.88	-2.0509	609.07	.2026
-23.11	.6976					2.50	-1.8691		
-17.97	.7221					3.13	-1.8685		
-10.27	.8530					3.75	-1.8068		
-5.13	1.0132					4.37	-1.7336		
-3.34	1.0811					5.00	-1.5298		
-2.05	1.1036					6.25	-.8678		
-.90	1.0335					7.50	-.8846		
-.44	.9196					8.75	-.8296		
.00	.1146					10.00	-.7752		
.31	-1.1697					15.00	-.6794		
.63	-1.4506					17.50	-.6846		
1.25	-1.8058					20.00	-.6078		
2.50	-1.8137					30.00	-.5468		
3.13	-1.8207					40.00	-.4665		
4.37	-1.8999					50.00	-.4519		
5.00	-1.6343					60.00	-.3814		
6.25	-.7884					70.00	-.3835		
8.75	-.9263					80.00	-.3214		
10.00	-.8532					90.00	-.3042		
12.50	-.7544					100.00	-.2067		
15.00	-.6985					110.00	-.1915		
17.50	-.6482					241.85	-.0636		
20.00	-.6247								
30.00	-.5388								
40.00	-.4660								
50.00	-.4243								
60.00	-.4156								
70.00	-.3428								
80.00	-.3461								
90.00	-.2867								
100.00	-.2460								
110.00	-.1653								
241.85	-.0734								
279.84	-.0636								

$M = 0.646$; mfr $= 0.549$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9154	343.16	-.0345	279.84	-.0529	-187.46	.9110	343.16	-.0270
-155.11	.9127	381.14	-.0270			-106.57	.8487	381.14	-.0317
-130.84	.8846	419.13	-.0214			-25.67	.5785	419.13	-.0190
-106.57	.8486	457.12	-.0110			-10.27	.7532	457.12	-.0176
-90.39	.8086	507.77	.0134			-2.05	1.1039	507.77	.0026
-74.21	.7583	545.76	.0402			.00	.2888	545.76	.0294
-58.03	.6938	571.08	.0849			.31	-.8011	571.08	.0684
-41.85	.6260	583.74	.1168			.63	-1.1228	583.74	.1055
-33.76	.6028	596.41	.1577			1.25	-1.6167	596.41	.1492
-25.67	.5764	609.07	.2273			1.88	-1.8005	609.07	.2211
-23.11	.5676					2.50	-1.6750		
-17.97	.6127					3.13	-1.6485		
-10.27	.7543					3.75	-1.5397		
-5.13	.9598					4.37	-1.2336		
-3.34	1.0480					5.00	-.9166		
-2.05	1.1029					6.25	-.8286		
-.90	1.0866					7.50	-.8677		
-.44	1.0034					8.75	-.8085		
.00	.2883					10.00	-.7683		
.31	-.8595					15.00	-.6861		
.63	-1.2561					17.50	-.6196		
1.25	-1.5882					20.00	-.6030		
2.50	-1.4210					30.00	-.5174		
3.13	-1.3649					40.00	-.4423		
4.37	-1.2167					50.00	-.4334		
5.00	-1.0179					60.00	-.3873		
6.25	-.8025					70.00	-.3619		
8.75	-.9341					80.00	-.3261		
10.00	-.8025					90.00	-.2841		
12.50	-.7437					100.00	-.2198		
15.00	-.6543					110.00	-.1767		
17.50	-.6438					241.85	-.0573		
20.00	-.6064								
30.00	-.5162								
40.00	-.4638								
50.00	-.4222								
60.00	-.4007								
70.00	-.3536								
80.00	-.3251								
90.00	-.2854								
100.00	-.2244								
110.00	-.1771								
241.85	-.0583								
279.84	-.0496								

Table IV. Continued

(b) Continued

$M = 0.645$; mfr $= 0.617$; $\alpha = 0°$

PHI, DEGREE												
0				90		180						
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY				
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP			
-187.46	.8619	343.16	-.0274	279.84	-.0452	-187.46	.8591	343.16	-.0199			
-155.11	.8582	381.14	-.0175			-106.57	.7744	381.14	-.0203			
-130.84	.8255	419.13	-.0100			-25.67	.3788	419.13	-.0076			
-106.57	.7739	457.12	.0041			-10.27	.5883	457.12	-.0025			
-90.39	.7195	507.77	.0323			-2.05	1.0556	507.77	.0243			
-74.21	.6572	545.76	.0675			.00	.5359	545.76	.0586			
-58.03	.5716	571.08	.1122			.31	-.4358	571.08	.1037			
-41.85	.4827	583.74	.1423			.63	-.7881	583.74	.1418			
-33.76	.4426	596.41	.1897			1.25	-1.2431	596.41	.1883			
-25.67	.3788	609.07	.2588			1.88	-1.2810	609.07	.2630			
-23.11	.3783					2.50	-1.1359					
-17.97	.4197					3.13	-1.0900					
-10.27	.5686					3.75	-.9184					
-5.13	.8330					4.37	-.8913					
-3.34	.9538					5.00	-.7930					
-2.05	1.0506					6.25	-.7067					
-.90	1.1077					7.50	-.7826					
-.44	1.0713					8.75	-.6801					
.00	.5605					10.00	-.6629					
.31	-.5294					15.00	-.5821					
.63	-.9107					17.50	-.5867					
1.25	-1.0964					20.00	-.5380					
2.50	-1.0130					30.00	-.4804					
3.13	-.9732					40.00	-.4094					
4.37	-.8190					50.00	-.4000					
5.00	-.8315					60.00	-.3720					
6.25	-.7264					70.00	-.3440					
8.75	-.7944					80.00	-.3135					
10.00	-.6464					90.00	-.2678					
12.50	-.6321					100.00	-.2030					
15.00	-.6034					110.00	-.1610					
17.50	-.5584					241.85	-.0518					
20.00	-.5305											
30.00	-.4810											
40.00	-.4304											
50.00	-.4087											
60.00	-.3842											
70.00	-.3326											
80.00	-.3075											
90.00	-.2673											
100.00	-.2123											
110.00	-.1627											
241.85	-.0572											
279.84	-.0447											

$M = 0.644$; mfr $= 0.746$; $\alpha = 0°$

PHI, DEGREE												
0				90		180						
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY				
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP			
-187.46	.7341	343.16	-.0099	279.84	-.0328	-187.46	.7272	343.16	-.0057			
-155.11	.7253	381.14	-.0033			-106.57	.5962	381.14	-.0052			
-130.84	.6766	419.13	.0061			-25.67	-.0776	419.13	.0127			
-106.57	.5962	457.12	.0231			-10.27	.1248	457.12	.0169			
-90.39	.5121	507.77	.0565			-2.05	.8256	507.77	.0485			
-74.21	.3999	545.76	.0942			.00	.8809	545.76	.0909			
-58.03	.2561	571.08	.1423			.31	.1107	571.08	.1395			
-41.85	.0869	583.74	.1791			.63	-.1682	583.74	.1829			
-33.76	-.0042	596.41	.2229			1.25	-.5109	596.41	.2300			
-25.67	-.1223	609.07	.2905			1.88	-.5645	609.07	.2971			
-23.11	-.1291					2.50	-.5426					
-17.97	-.1072					3.13	-.5034					
-10.27	.1071					3.75	-.4594					
-5.13	.4715					4.37	-.4712					
-3.34	.6337					5.00	-.4703					
-2.05	.8411					6.25	-.4800					
-.90	1.0572					7.50	-.5301					
-.44	1.1003					8.75	-.4166					
.00	.8972					10.00	-.4287					
.31	.0643					15.00	-.4105					
.63	-.1636					17.50	-.4266					
1.25	-.3595					20.00	-.4110					
2.50	-.4722					30.00	-.3959					
3.13	-.5092					40.00	-.3559					
4.37	-.4159					50.00	-.3491					
5.00	-.4343					60.00	-.3340					
6.25	-.3900					70.00	-.3070					
8.75	-.5332					80.00	-.2799					
10.00	-.4385					90.00	-.2451					
12.50	-.4524					100.00	-.1858					
15.00	-.4423					110.00	-.1426					
17.50	-.4034					241.85	-.0405					
20.00	-.4123											
30.00	-.3817											
40.00	-.3735											
50.00	-.3553											
60.00	-.3315											
70.00	-.3018											
80.00	-.2769											
90.00	-.2463											
100.00	-.1896											
110.00	-.1455											
241.85	-.0432											
279.84	-.0317											

Table IV. Continued

(b) Concluded

$M = 0.645$; mfr $= 0.812$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.6535	343.16	-.0112	279.84	-.0251	-187.46	.6458	343.16	-.0004
-155.11	.6411	381.14	-.0022			-106.57	.4813	381.14	-.0004
-130.84	.5835	419.13	.0090			-25.67	-.5006	419.13	.0133
-106.57	.4802	457.12	.0274			-10.27	-.2183	457.12	.0227
-90.39	.3737	507.77	.0650			-2.05	.6650	507.77	.0598
-74.21	.2345	545.76	.0989			.00	.9769	545.76	.0993
-58.03	.0445	571.08	.1497			.31	.3999	571.08	.1525
-41.85	-.1980	583.74	.1826			.63	.1497	583.74	.1915
-33.76	-.3366	596.41	.2282			1.25	-.0834	596.41	.2343
-25.67	-.4866	609.07	.2941			1.88	-.2435	609.07	.3017
-23.11	-.5510					2.50	-.2977		
-17.97	-.5312					3.13	-.2773		
-10.27	-.1701					3.75	-.2858		
-5.13	.1894					4.37	-.2893		
-3.34	.4519					5.00	-.2552		
-2.05	.7150					6.25	-.3301		
-.90	.9671					7.50	-.3880		
-.44	1.0792					8.75	-.3154		
.00	.9865					10.00	-.3449		
.31	.3857					15.00	-.3543		
.63	.1423					17.50	-.3589		
1.25	-.1215					20.00	-.3403		
2.50	-.2183					30.00	-.3491		
3.13	-.2842					40.00	-.3221		
4.37	-.3170					50.00	-.3299		
5.00	-.2778					60.00	-.3060		
6.25	-.2999					70.00	-.2899		
8.75	-.3861					80.00	-.2718		
10.00	-.3294					90.00	-.2271		
12.50	-.3336					100.00	-.1716		
15.00	-.3274					110.00	-.1265		
17.50	-.3276					241.85	-.0338		
20.00	-.3421								
30.00	-.3451								
40.00	-.3367								
50.00	-.3151								
60.00	-.3187								
70.00	-.2832								
80.00	-.2582								
90.00	-.2284								
100.00	-.1732								
110.00	-.1349								
241.85	-.0343								
279.84	-.0213								

Table IV. Continued

(c) $M = 0.69$

$M = 0.692$; mfr $= 0.275$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0804	343.16	-.0577	279.84	-.0688	-187.46	1.0800	343.16	-.0496
-155.11	1.0770	381.14	-.0543			-106.57	1.0668	381.14	-.0530
-130.84	1.0724	419.13	-.0539			-25.67	1.0368	419.13	-.0492
-106.57	1.0645	457.12	-.0505			-10.27	1.1091	457.12	-.0484
-90.39	1.0566	507.77	-.0522			-2.05	.9898	507.77	-.0462
-74.21	1.0457	545.76	-.0513			.00	-.4627	545.76	-.0560
-58.03	1.0345	571.08	-.0505			.31	-1.5090	571.08	-.0407
-41.85	1.0249	583.74	-.0475			.63	-1.6911	583.74	-.0309
-33.76	1.0297	596.41	-.0390			1.25	-1.6254	596.41	-.0173
-25.67	1.0363	609.07	-.0118			1.88	-1.6395	609.07	.0219
-23.11	1.0368					2.50	-1.5882		
-17.97	1.0537					3.13	-1.5471		
-10.27	1.1077					3.75	-1.5325		
-5.13	1.1226					4.37	-1.4950		
-3.34	1.0852					5.00	-1.5358		
-2.05	.9886					6.25	-1.5284		
-.90	.7672					7.50	-1.5231		
-.44	.5291					8.75	-1.4540		
.00	-.5278					10.00	-1.4288		
.31	-1.6360					15.00	-1.3646		
.63	-1.7741					17.50	-1.4482		
1.25	-1.5219					20.00	-1.3227		
2.50	-1.4544					30.00	-1.1351		
3.13	-1.6844					40.00	-.8357		
4.37	-1.5525					50.00	-.6933		
5.00	-1.4493					60.00	-.5009		
6.25	-1.3192					70.00	-.4252		
8.75	-1.4707					80.00	-.3726		
10.00	-1.3466					90.00	-.3181		
12.50	-1.2647					100.00	-.2538		
15.00	-1.2918					110.00	-.2232		
17.50	-1.2537					241.85	-.1082		
20.00	-1.2411								
30.00	-1.0943								
40.00	-.8693								
50.00	-.7062								
60.00	-.5551								
70.00	-.4299								
80.00	-.3986								
90.00	-.3148								
100.00	-.2575								
110.00	-.2092								
241.85	-.0673								
279.84	-.0619								

$M = 0.694$; mfr $= 0.308$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0651	343.16	-.0659	279.84	-.0696	-187.46	1.0654	343.16	-.0493
-155.11	1.0668	381.14	-.0599			-106.57	1.0444	381.14	-.0527
-130.84	1.0572	419.13	-.0536			-25.67	.9980	419.13	-.0442
-106.57	1.0472	457.12	-.0519			-10.27	1.0874	457.12	-.0489
-90.39	1.0372	507.77	-.0480			-2.05	1.0271	507.77	-.0438
-74.21	1.0219	545.76	-.0429			.00	-.3143	545.76	-.0400
-58.03	1.0073	571.08	-.0290			.31	-1.4840	571.08	-.0234
-41.85	.9965	583.74	-.0213			.63	-1.7130	583.74	-.0069
-33.76	.9910	596.41	-.0060			1.25	-1.6095	596.41	.0190
-25.67	.9999	609.07	.0331			1.88	-1.6032	609.07	.0590
-23.11	1.0013					2.50	-1.7758		
-17.97	1.0275					3.13	-1.5459		
-10.27	1.0907					3.75	-1.4742		
-5.13	1.1258					4.37	-1.5802		
-3.34	1.0988					5.00	-1.6358		
-2.05	1.0305					6.25	-1.5689		
-.90	.8260					7.50	-1.5738		
-.44	.6109					8.75	-1.5292		
.00	-.4073					10.00	-1.4840		
.31	-1.6324					15.00	-1.3815		
.63	-1.8018					17.50	-1.3688		
1.25	-1.8725					20.00	-1.3129		
2.50	-1.8988					30.00	-.9624		
3.13	-1.5446					40.00	-.6594		
4.37	-1.5914					50.00	-.5174		
5.00	-1.6395					60.00	-.4380		
6.25	-1.6186					70.00	-.3964		
8.75	-1.6378					80.00	-.3491		
10.00	-1.5780					90.00	-.3023		
12.50	-1.4861					100.00	-.2517		
15.00	-1.4041					110.00	-.2054		
17.50	-1.3552					241.85	-.0784		
20.00	-1.2978								
30.00	-.9968								
40.00	-.7616								
50.00	-.5258								
60.00	-.4297								
70.00	-.3959								
80.00	-.3497								
90.00	-.3075								
100.00	-.2495								
110.00	-.2177								
241.85	-.0799								
279.84	-.0657								

Table IV. Continued

(c) Continued

$M = 0.695$; mfr $= 0.412$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0225	343.16	-.0458	279.84	-.0597	-187.46	1.0209	343.16	-.0377
-155.11	1.0213	381.14	-.0403			-106.57	.9869	381.14	-.0415
-130.84	1.0080	419.13	-.0382			-25.67	.8785	419.13	-.0360
-106.57	.9881	457.12	-.0284			-10.27	.9971	457.12	-.0352
-90.39	.9698	507.77	-.0107			-2.05	1.1017	507.77	-.0208
-74.21	.9437	545.76	.0096			.00	-.0661	545.76	-.0035
-58.03	.9126	571.08	.0377			.31	-1.2903	571.08	.0261
-41.85	.8865	583.74	.0635			.63	-1.4614	583.74	.0588
-33.76	.8719	596.41	.0969			1.25	-1.8620	596.41	.0943
-25.67	.8761	609.07	.1540			1.88	-1.9888	609.07	.1582
-23.11	.8747					2.50	-2.0925		
-17.97	.9088					3.13	-2.0856		
-10.27	1.0013					3.75	-2.0672		
-5.13	1.1052					4.37	-2.0352		
-3.34	1.1273					5.00	-1.9810		
-2.05	1.0989					6.25	-1.9282		
-.90	.9704					7.50	-1.8602		
-.44	.8010					8.75	-1.8221		
.00	-.0692					10.00	-1.7917		
.31	-1.3523					15.00	-1.0505		
.63	-1.6521					17.50	-.6770		
1.25	-1.9198					20.00	-.5921		
2.50	-2.0746					30.00	-.5500		
3.13	-2.0433					40.00	-.5172		
4.37	-2.0450					50.00	-.4830		
5.00	-2.0250					60.00	-.4353		
6.25	-1.9215					70.00	-.4021		
8.75	-1.8635					80.00	-.3662		
10.00	-1.7902					90.00	-.3069		
12.50	-1.5729					100.00	-.2420		
15.00	-.9242					110.00	-.1935		
17.50	-.7826					241.85	-.0695		
20.00	-.6095								
30.00	-.5578								
40.00	-.5176								
50.00	-.4807								
60.00	-.4482								
70.00	-.3970								
80.00	-.3606								
90.00	-.3163								
100.00	-.2489								
110.00	-.2006								
241.85	-.0695								
279.84	-.0588								

$M = 0.692$; mfr $= 0.459$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9947	343.16	-.0396	279.84	-.0579	-187.46	.9925	343.16	-.0320
-155.11	.9913	381.14	-.0324			-106.57	.9498	381.14	-.0350
-130.84	.9767	419.13	-.0273			-25.67	.7928	419.13	-.0294
-106.57	.9509	457.12	-.0183			-10.27	.9385	457.12	-.0243
-90.39	.9250	507.77	.0034			-2.05	1.1160	507.77	-.0052
-74.21	.8937	545.76	.0272			.00	.0990	545.76	.0178
-58.03	.8545	571.08	.0638			.31	-1.1281	571.08	.0527
-41.85	.8140	583.74	.0936			.63	-1.3315	583.74	.0881
-33.76	.7904	596.41	.1332			1.25	-1.7335	596.41	.1332
-25.67	.7965	609.07	.1996			1.88	-1.8985	609.07	.1996
-23.11	.7993					2.50	-1.9767		
-17.97	.8242					3.13	-1.9959		
-10.27	.9470					3.75	-1.9753		
-5.13	1.0704					4.37	-1.8917		
-3.34	1.1168					5.00	-1.8867		
-2.05	1.1182					6.25	-1.7843		
-.90	1.0192					7.50	-1.7683		
-.44	.8817					8.75	-1.7268		
.00	.0490					10.00	-1.6071		
.31	-1.2002					15.00	-.6161		
.63	-1.4344					17.50	-.5958		
1.25	-1.7814					20.00	-.6010		
2.50	-1.9451					30.00	-.5675		
3.13	-1.9585					40.00	-.5157		
4.37	-1.8939					50.00	-.4732		
5.00	-1.8380					60.00	-.4295		
6.25	-1.7595					70.00	-.3943		
8.75	-1.6589					80.00	-.3553		
10.00	-1.5901					90.00	-.3032		
12.50	-.8973					100.00	-.2351		
15.00	-.6557					110.00	-.1825		
17.50	-.6032					241.85	-.0658		
20.00	-.6115								
30.00	-.5717								
40.00	-.5185								
50.00	-.4660								
60.00	-.4364								
70.00	-.3858								
80.00	-.3477								
90.00	-.3078								
100.00	-.2432								
110.00	-.1910								
241.85	-.0668								
279.84	-.0539								

Table IV. Continued

(c) Continued

$M = 0.695$; mfr $= 0.495$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9722	343.16	-.0346	279.84	-.0559	-187.46	.9708	343.16	-.0265
-155.11	.9701	381.14	-.0253			-106.57	.9203	381.14	-.0282
-130.84	.9531	419.13	-.0236			-25.67	.7186	419.13	-.0193
-106.57	.9215	457.12	-.0092			-10.27	.8692	457.12	-.0155
-90.39	.8891	507.77	.0175			-2.05	1.1227	507.77	.0052
-74.21	.8513	545.76	.0431			.00	.2263	545.76	.0359
-58.03	.8044	571.08	.0880			.31	-.9702	571.08	.0770
-41.85	.7549	583.74	.1206			.63	-1.1810	583.74	.1164
-33.76	.7312	596.41	.1617			1.25	-1.5950	596.41	.1621
-25.67	.7298	609.07	.2308			1.88	-1.7709	609.07	.2338
-23.11	.7168					2.50	-1.8635		
-17.97	.7546					3.13	-1.7793		
-10.27	.8771					3.75	-1.8443		
-5.13	1.0478					4.37	-1.7200		
-3.34	1.1047					5.00	-1.7376		
-2.05	1.1243					6.25	-1.6657		
-.90	1.0655					7.50	-1.6203		
-.44	.9417					8.75	-1.4714		
.00	.2073					10.00	-.8801		
.31	-1.0820					15.00	-.6534		
.63	-1.2700					17.50	-.6412		
1.25	-1.6205					20.00	-.6195		
2.50	-1.8365					30.00	-.5609		
3.13	-1.7859					40.00	-.5050		
4.37	-1.7839					50.00	-.4609		
5.00	-1.7087					60.00	-.4239		
6.25	-1.6761					70.00	-.3879		
8.75	-1.5804					80.00	-.3496		
10.00	-1.1104					90.00	-.3010		
12.50	-.7153					100.00	-.2280		
15.00	-.6233					110.00	-.1756		
17.50	-.6200					241.85	-.0633		
20.00	-.6282								
30.00	-.5648								
40.00	-.5166								
50.00	-.4671								
60.00	-.4309								
70.00	-.3762								
80.00	-.3426								
90.00	-.3008								
100.00	-.2361								
110.00	-.1837								
241.85	-.0613								
279.84	-.0500								

$M = 0.694$; mfr $= 0.498$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9740	343.16	-.0222	279.84	-.0588	-187.46	.9715	343.16	-.0366
-155.11	.9711	381.14	-.0209			-106.57	.9189	381.14	-.0323
-130.84	.9519	419.13	-.0192			-25.67	.6727	419.13	-.0205
-106.57	.9241	457.12	-.0086			-10.27	.8112	457.12	-.0166
-90.39	.8941	507.77	.0177			-2.05	1.1152	507.77	.0050
-74.21	.8584	545.76	.0505			.00	.4114	545.76	.0352
-58.03	.8147	571.08	.0895			.31	-.7354	571.08	.0781
-41.85	.7740	583.74	.1188			.63	-.8567	583.74	.1171
-33.76	.7686	596.41	.1553			1.25	-1.3989	596.41	.1616
-25.67	.7668	609.07	.2117			1.88	-1.5141	609.07	.2427
-23.11	.7677					2.50	-1.4803		
-17.97	.8066					3.13	-1.4106		
-10.27	.9424					3.75	-1.4055		
-5.13	1.0771					4.37	-1.3248		
-3.34	1.1199					5.00	-1.1574		
-2.05	1.1150					6.25	-.7543		
-.90	1.0074					7.50	-.7331		
-.44	.8727					8.75	-.7038		
.00	-.0182					10.00	-.6837		
.31	-1.2862					15.00	-.6287		
.63	-1.5623					17.50	-.5995		
1.25	-1.8262					20.00	-.5638		
2.50	-2.0530					30.00	-.4943		
3.13	-2.0170					40.00	-.4544		
4.37	-2.0090					50.00	-.4193		
5.00	-1.9947					60.00	-.3902		
6.25	-1.9186					70.00	-.3551		
8.75	-1.8685					80.00	-.3242		
10.00	-1.7961					90.00	-.2741		
12.50	-1.6610					100.00	-.2170		
15.00	-1.0111					110.00	-.1683		
17.50	-.8358					241.85	-.0603		
20.00	-.6288								
30.00	-.5531								
40.00	-.5352								
50.00	-.4862								
60.00	-.4480								
70.00	-.3916								
80.00	-.3541								
90.00	-.3072								
100.00	-.2426								
110.00	-.1908								
241.85	-.0593								
279.84	-.0515								

Table IV. Continued

(c) Continued

$M = 0.696$; mfr $= 0.545$; $\alpha = 0°$

PHI, DEGREE									
0				90	180				
FOREBODY		AFTERBODY		FOREBODY	FOREBODY		AFTERBODY		
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9417	343.16	-.0330	279.84	-.0433	-187.46	.9400	343.16	-.0195
-155.11	.9375	381.14	-.0246			-106.57	.8792	381.14	-.0212
-130.84	.9147	419.13	-.0170			-25.67	.6189	419.13	-.0094
-106.57	.8758	457.12	.0008			-10.27	.7938	457.12	-.0034
-90.39	.8410	507.77	.0270			-2.05	1.1215	507.77	.0253
-74.21	.7904	545.76	.0625			.00	.3450	545.76	.0587
-58.03	.7327	571.08	.1145			.31	-.6762	571.08	.1065
-41.85	.6672	583.74	.1479			.63	-1.0021	583.74	.1475
-33.76	.6361	596.41	.1936			1.25	-1.4691	596.41	.1978
-25.67	.6100	609.07	.2646			1.88	-1.6122	609.07	.2701
-23.11	.6058					2.50	-1.7126		
-17.97	.6604					3.13	-1.7011		
-10.27	.7864					3.75	-1.5997		
-5.13	.9937					4.37	-1.6137		
-3.34	1.0720					5.00	-1.4911		
-2.05	1.1190					6.25	-1.4462		
-.90	1.1078					7.50	-1.2780		
-.44	1.0206					8.75	-1.0631		
.00	.3613					10.00	-.6790		
.31	-.7890					15.00	-.6748		
.63	-1.1412					17.50	-.6603		
1.25	-1.4842					20.00	-.6228		
2.50	-1.6297					30.00	-.5353		
3.13	-1.5230					40.00	-.4599		
4.37	-1.4080					50.00	-.4539		
5.00	-1.4522					60.00	-.4105		
6.25	-1.3033					70.00	-.3783		
8.75	-.9653					80.00	-.3312		
10.00	-.7252					90.00	-.2901		
12.50	-.7065					100.00	-.2178		
15.00	-.6783					110.00	-.1688		
17.50	-.6410					241.85	-.0536		
20.00	-.6275								
30.00	-.5331								
40.00	-.4922								
50.00	-.4482								
60.00	-.4159								
70.00	-.3657								
80.00	-.3326								
90.00	-.2911								
100.00	-.2205								
110.00	-.1747								
241.85	-.0551								
279.84	-.0424								

$M = 0.696$; mfr $= 0.613$; $\alpha = 0°$

PHI, DEGREE									
0				90	180				
FOREBODY		AFTERBODY		FOREBODY	FOREBODY		AFTERBODY		
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.8876	343.16	-.0207	279.84	-.0379	-187.46	.8865	343.16	-.0106
-155.11	.8839	381.14	-.0123			-106.57	.8040	381.14	-.0106
-130.84	.8541	419.13	-.0034			-25.67	.4368	419.13	.0017
-106.57	.8032	457.12	.0101			-10.27	.6283	457.12	.0110
-90.39	.7556	507.77	.0443			-2.05	1.0726	507.77	.0427
-74.21	.6880	545.76	.0819			.00	.5356	545.76	.0807
-58.03	.6085	571.08	.1360			.31	-.3998	571.08	.1343
-41.85	.5182	583.74	.1723			.63	-.7093	583.74	.1799
-33.76	.4731	596.41	.2213			1.25	-1.2041	596.41	.2276
-25.67	.4335	609.07	.2927			1.88	-1.2958	609.07	.3032
-23.11	.4307					2.50	-1.2658		
-17.97	.4619					3.13	-1.2030		
-10.27	.6185					3.75	-1.1494		
-5.13	.8575					4.37	-.9903		
-3.34	.9910					5.00	-.8973		
-2.05	1.0853					6.25	-.7381		
-.90	1.1230					7.50	-.7705		
-.44	1.0917					8.75	-.6996		
.00	.5758					10.00	-.6994		
.31	-.4651					15.00	-.6297		
.63	-.8248					17.50	-.6012		
1.25	-1.1524					20.00	-.5731		
2.50	-1.1153					30.00	-.5034		
3.13	-1.1769					40.00	-.4297		
4.37	-1.0038					50.00	-.4236		
5.00	-.8789					60.00	-.3924		
6.25	-.8160					70.00	-.3542		
8.75	-.8314					80.00	-.3229		
10.00	-.7602					90.00	-.2694		
12.50	-.6661					100.00	-.2050		
15.00	-.6259					110.00	-.1612		
17.50	-.5845					241.85	-.0488		
20.00	-.5630								
30.00	-.5029								
40.00	-.4610								
50.00	-.4270								
60.00	-.3940								
70.00	-.3476								
80.00	-.3119								
90.00	-.2742								
100.00	-.2131								
110.00	-.1637								
241.85	-.0503								
279.84	-.0379								

Table IV. Continued

(c) Concluded

$M = 0.694$; mfr $= 0.745$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.7610	343.16	-.0113	279.84	-.0254	-187.46	.7587	343.16	-.0036
-155.11	.7531	381.14	-.0011			-106.57	.6236	381.14	-.0011
-130.84	.7061	419.13	.0099			-25.67	-.1003	419.13	.0129
-106.57	.6235	457.12	.0285			-10.27	.1577	457.12	.0252
-90.39	.5393	507.77	.0667			-2.05	.8690	507.77	.0628
-74.21	.4342	545.76	.1082			.00	.8857	545.76	.1048
-58.03	.2865	571.08	.1602			.31	.1633	571.08	.1624
-41.85	.1070	583.74	.1979			.63	-.0941	583.74	.2034
-33.76	.0184	596.41	.2458			1.25	-.4774	596.41	.2547
-25.67	-.0975	609.07	.3148			1.88	-.5974	609.07	.3250
-23.11	-.1190					2.50	-.5618		
-17.97	-.0793					3.13	-.5220		
-10.27	.1651					3.75	-.4961		
-5.13	.5281					4.37	-.4623		
-3.34	.7062					5.00	-.4989		
-2.05	.8842					6.25	-.4550		
-.90	1.0774					7.50	-.5416		
-.44	1.1215					8.75	-.4560		
.00	.8864					10.00	-.4456		
.31	.1456					15.00	-.4246		
.63	-.1756					17.50	-.4292		
1.25	-.3824					20.00	-.4101		
2.50	-.4996					30.00	-.4026		
3.13	-.5179					40.00	-.3648		
4.37	-.4558					50.00	-.3657		
5.00	-.4962					60.00	-.3372		
6.25	-.4629					70.00	-.3194		
8.75	-.6051					80.00	-.2867		
10.00	-.4629					90.00	-.2498		
12.50	-.4762					100.00	-.1849		
15.00	-.4633					110.00	-.1414		
17.50	-.4567					241.85	-.0376		
20.00	-.4432								
30.00	-.4214								
40.00	-.3819								
50.00	-.3745								
60.00	-.3520								
70.00	-.3092								
80.00	-.2883								
90.00	-.2537								
100.00	-.1878								
110.00	-.1433								
241.85	-.0422								
279.84	-.0298								

$M = 0.694$; mfr $= 0.812$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.6778	343.16	-.0023	279.84	-.0200	-187.46	.6752	343.16	.0066
-155.11	.6670	381.14	.0061			-106.57	.5046	381.14	.0057
-130.84	.6043	419.13	.0142			-25.67	-.5755	419.13	.0205
-106.57	.5022	457.12	.0366			-10.27	-.2195	457.12	.0324
-90.39	.3967	507.77	.0684			-2.05	.6626	507.77	.0701
-74.21	.2588	545.76	.1112			.00	.9903	545.76	.1167
-58.03	.0574	571.08	.1675			.31	.4443	571.08	.1688
-41.85	-.2026	583.74	.2040			.63	.1776	583.74	.2116
-33.76	-.3691	596.41	.2505			1.25	-.0793	596.41	.2578
-25.67	-.5704	609.07	.3162			1.88	-.2379	609.07	.3319
-23.11	-.6065					2.50	-.2569		
-17.97	-.5343					3.13	-.2722		
-10.27	-.1779					3.75	-.2513		
-5.13	.2222					4.37	-.2340		
-3.34	.4836					5.00	-.2980		
-2.05	.7196					6.25	-.2860		
-.90	.9854					7.50	-.3835		
-.44	1.0997					8.75	-.2845		
.00	1.0284					10.00	-.3181		
.31	.4212					15.00	-.3443		
.63	.1578					17.50	-.3742		
1.25	-.0909					20.00	-.3597		
2.50	-.2350					30.00	-.3742		
3.13	-.2765					40.00	-.3349		
4.37	-.2781					50.00	-.3471		
5.00	-.2258					60.00	-.3200		
6.25	-.2989					70.00	-.2985		
8.75	-.4035					80.00	-.2751		
10.00	-.3163					90.00	-.2344		
12.50	-.3645					100.00	-.1671		
15.00	-.3718					110.00	-.1246		
17.50	-.3454					241.85	-.0293		
20.00	-.3698								
30.00	-.3558								
40.00	-.3374								
50.00	-.3437								
60.00	-.3252								
70.00	-.2915								
80.00	-.2683								
90.00	-.2383								
100.00	-.1786								
110.00	-.1320								
241.85	-.0333								
279.84	-.0215								

Table IV. Continued

(d) $M = 0.74$

$M = 0.742$; mfr $= 0.272$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0993	343.16	-.0565	279.84	-.0743	-187.46	1.0992	343.16	-.0468
-155.11	1.0993	381.14	-.0538			-106.57	1.0863	381.14	-.0538
-130.84	1.0940	419.13	-.0550			-25.67	1.0560	419.13	-.0472
-106.57	1.0853	457.12	-.0515			-10.27	1.1278	457.12	-.0538
-90.39	1.0777	507.77	-.0480			-2.05	1.0128	507.77	-.0484
-74.21	1.0686	545.76	-.0538			.00	-.3215	545.76	-.0484
-58.03	1.0579	571.08	-.0406			.31	-1.4456	571.08	-.0352
-41.85	1.0484	583.74	-.0344			.63	-1.6063	583.74	-.0201
-33.76	1.0496	596.41	-.0182			1.25	-1.9160	596.41	-.0050
-25.67	1.0568	609.07	.0179			1.88	-2.0053	609.07	.0369
-23.11	1.0628					2.50	-2.0701		
-17.97	1.0812					3.13	-2.0783		
-10.27	1.1265					3.75	-2.0787		
-5.13	1.1404					4.37	-2.0470		
-3.34	1.1005					5.00	-2.0413		
-2.05	1.0193					6.25	-2.0040		
-.90	.7828					7.50	-1.9860		
-.44	.5732					8.75	-1.9609		
.00	-.3738					10.00	-1.9190		
.31	-1.4759					15.00	-1.8366		
.63	-1.7157					17.50	-1.7636		
1.25	-1.9713					20.00	-1.7100		
2.50	-2.0565					30.00	-1.0512		
3.13	-2.0787					40.00	-.7451		
4.37	-2.0516					50.00	-.3661		
5.00	-2.0343					60.00	-.3310		
6.25	-2.0133					70.00	-.3395		
8.75	-1.9690					80.00	-.3258		
10.00	-1.9239					90.00	-.2903		
12.50	-1.8873					100.00	-.2368		
15.00	-1.8217					110.00	-.1911		
17.50	-1.7811					241.85	-.0769		
20.00	-1.7138								
30.00	-1.0599								
40.00	-.7405								
50.00	-.4637								
60.00	-.3390								
70.00	-.3177								
80.00	-.3094								
90.00	-.2907								
100.00	-.2377								
110.00	-.1996								
241.85	-.0819								
279.84	-.0711								

$M = 0.744$; mfr $= 0.313$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0885	343.16	-.0568	279.84	-.0662	-187.46	1.0886	343.16	-.0483
-155.11	1.0892	381.14	-.0533			-106.57	1.0707	381.14	-.0537
-130.84	1.0821	419.13	-.0506			-25.67	1.0259	419.13	-.0448
-106.57	1.0684	457.12	-.0475			-10.27	1.1103	457.12	-.0510
-90.39	1.0578	507.77	-.0394			-2.05	1.0596	507.77	-.0432
-74.21	1.0457	545.76	-.0286			.00	-.2079	545.76	-.0386
-58.03	1.0317	571.08	-.0115			.31	-1.3612	571.08	-.0235
-41.85	1.0215	583.74	.0047			.63	-1.5240	583.74	-.0011
-33.76	1.0187	596.41	.0310			1.25	-1.8355	596.41	.0244
-25.67	1.0255	609.07	.0769			1.88	-1.9469	609.07	.0723
-23.11	1.0272					2.50	-2.0087		
-17.97	1.0528					3.13	-2.0027		
-10.27	1.1103					3.75	-2.0057		
-5.13	1.1441					4.37	-1.9817		
-3.34	1.1262					5.00	-1.9659		
-2.05	1.0552					6.25	-1.9456		
-.90	.8652					7.50	-1.9116		
-.44	.6587					8.75	-1.8867		
.00	-.2633					10.00	-1.8530		
.31	-1.3847					15.00	-1.7525		
.63	-1.6352					17.50	-1.6947		
1.25	-1.8886					20.00	-1.6579		
2.50	-1.9826					30.00	-1.1649		
3.13	-1.9781					40.00	-.5281		
4.37	-1.9621					50.00	-.3660		
5.00	-1.9617					60.00	-.3528		
6.25	-1.9084					70.00	-.3489		
8.75	-1.8605					80.00	-.3306		
10.00	-1.8479					90.00	-.2912		
12.50	-1.8087					100.00	-.2316		
15.00	-1.7578					110.00	-.1860		
17.50	-1.7155					241.85	-.0756		
20.00	-1.6400								
30.00	-.9706								
40.00	-.6456								
50.00	-.4214								
60.00	-.3513								
70.00	-.3498								
80.00	-.3290								
90.00	-.2996								
100.00	-.2401								
110.00	-.1967								
241.85	-.0747								
279.84	-.0689								

Table IV. Continued

(d) Continued

$M = 0.744$; mfr $= 0.411$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0442	343.16	-.0430	279.84	-.0574	-187.46	1.0445	343.16	-.0337
-155.11	1.0453	381.14	-.0357			-106.57	1.0113	381.14	-.0364
-130.84	1.0343	419.13	-.0291			-25.67	.8990	419.13	-.0237
-106.57	1.0131	457.12	-.0175			-10.27	1.0330	457.12	-.0241
-90.39	.9938	507.77	.0034			-2.05	1.1239	507.77	-.0059
-74.21	.9699	545.76	.0262			.00	.0612	545.76	.0173
-58.03	.9399	571.08	.0644			.31	-1.1006	571.08	.0552
-41.85	.9134	583.74	.0950			.63	-1.2652	583.74	.0861
-33.76	.9075	596.41	.1336			1.25	-1.6230	596.41	.1298
-25.67	.9045	609.07	.1964			1.88	-1.7248	609.07	.1964
-23.11	.9007					2.50	-1.8281		
-17.97	.9310					3.13	-1.8280		
-10.27	1.0296					3.75	-1.8217		
-5.13	1.1267					4.37	-1.7842		
-3.34	1.1455					5.00	-1.7780		
-2.05	1.1218					6.25	-1.7436		
-.90	1.0076					7.50	-1.7202		
-.44	.8335					8.75	-1.7150		
.00	.0230					10.00	-1.6539		
.31	-1.1425					15.00	-1.5426		
.63	-1.3935					17.50	-1.5052		
1.25	-1.6763					20.00	-1.4367		
2.50	-1.7956					30.00	-.5521		
3.13	-1.7735					40.00	-.3949		
4.37	-1.7819					50.00	-.4283		
5.00	-1.7762					60.00	-.4215		
6.25	-1.7206					70.00	-.3919		
8.75	-1.7049					80.00	-.3560		
10.00	-1.6252					90.00	-.3089		
12.50	-1.6374					100.00	-.2363		
15.00	-1.5537					110.00	-.1881		
17.50	-1.4812					241.85	-.0641		
20.00	-1.4644								
30.00	-.6615								
40.00	-.4023								
50.00	-.4153								
60.00	-.4233								
70.00	-.3851								
80.00	-.3536								
90.00	-.3105								
100.00	-.2459								
110.00	-.1941								
241.85	-.0668								
279.84	-.0551								

$M = 0.744$; mfr $= 0.456$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0212	343.16	-.0306	279.84	-.0518	-187.46	1.0189	343.16	-.0225
-155.11	1.0197	381.14	-.0256			-106.57	.9780	381.14	-.0256
-130.84	1.0031	419.13	-.0186			-25.67	.8252	419.13	-.0186
-106.57	.9803	457.12	-.0046			-10.27	.9695	457.12	-.0131
-90.39	.9530	507.77	.0236			-2.05	1.1371	507.77	.0097
-74.21	.9235	545.76	.0530			.00	.1809	545.76	.0426
-58.03	.8860	571.08	.0978			.31	-.9518	571.08	.0835
-41.85	.8492	583.74	.1295			.63	-1.1284	583.74	.1229
-33.76	.8346	596.41	.1732			1.25	-1.4997	596.41	.1720
-25.67	.8265	609.07	.2404			1.88	-1.6437	609.07	.2412
-23.11	.8282					2.50	-1.7412		
-17.97	.8623					3.13	-1.7437		
-10.27	.9725					3.75	-1.7262		
-5.13	1.0952					4.37	-1.6892		
-3.34	1.1381					5.00	-1.6632		
-2.05	1.1390					6.25	-1.6365		
-.90	1.0482					7.50	-1.6122		
-.44	.9189					8.75	-1.6097		
.00	.1486					10.00	-1.5681		
.31	-.9929					15.00	-1.4295		
.63	-1.2592					17.50	-1.4021		
1.25	-1.5167					20.00	-1.1615		
2.50	-1.6848					30.00	-.4210		
3.13	-1.7027					40.00	-.4625		
4.37	-1.6806					50.00	-.4625		
5.00	-1.6798					60.00	-.4343		
6.25	-1.6185					70.00	-.4005		
8.75	-1.5595					80.00	-.3555		
10.00	-1.5308					90.00	-.3114		
12.50	-1.4626					100.00	-.2308		
15.00	-1.4391					110.00	-.1843		
17.50	-1.3438					241.85	-.0635		
20.00	-1.2078								
30.00	-.4733								
40.00	-.4497								
50.00	-.4554								
60.00	-.4345								
70.00	-.3902								
80.00	-.3586								
90.00	-.3103								
100.00	-.2389								
110.00	-.1871								
241.85	-.0635								
279.84	-.0491								

Table IV. Continued

(d) Continued

$M = 0.744$; mfr $= 0.495$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9952	343.16	-.0299	279.84	-.0485	-187.46	.9965	343.16	-.0202
-155.11	.9956	381.14	-.0218			-106.57	.9461	381.14	-.0210
-130.84	.9771	419.13	-.0156			-25.67	.7551	419.13	-.0098
-106.57	.9471	457.12	.0006			-10.27	.9039	457.12	-.0025
-90.39	.9183	507.77	.0273			-2.05	1.1428	507.77	.0273
-74.21	.8831	545.76	.0644			.00	.2868	545.76	.0601
-58.03	.8346	571.08	.1127			.31	-.8104	571.08	.1100
-41.85	.7872	583.74	.1503			.63	-1.0189	583.74	.1507
-33.76	.7670	596.41	.1990			1.25	-1.3862	596.41	.1994
-25.67	.7546	609.07	.2674			1.88	-1.5542	609.07	.2759
-23.11	.7589					2.50	-1.6414		
-17.97	.7845					3.13	-1.6503		
-10.27	.9209					3.75	-1.6410		
-5.13	1.0669					4.37	-1.6142		
-3.34	1.1277					5.00	-1.5879		
-2.05	1.1412					6.25	-1.5373		
-.90	1.0834					7.50	-1.5370		
-.44	.9688					8.75	-1.4900		
.00	.2484					10.00	-1.4299		
.31	-.8688					15.00	-1.3096		
.63	-1.0818					17.50	-1.2052		
1.25	-1.4003					20.00	-.7099		
2.50	-1.5930					30.00	-.5027		
3.13	-1.6139					40.00	-.4972		
4.37	-1.5957					50.00	-.4711		
5.00	-1.5766					60.00	-.4252		
6.25	-1.5541					70.00	-.4003		
8.75	-1.4943					80.00	-.3520		
10.00	-1.4357					90.00	-.3006		
12.50	-1.4094					100.00	-.2230		
15.00	-1.3355					110.00	-.1752		
17.50	-1.1579					241.85	-.0498		
20.00	-.6018								
30.00	-.5061								
40.00	-.4897								
50.00	-.4703								
60.00	-.4375								
70.00	-.3836								
80.00	-.3527								
90.00	-.3087								
100.00	-.2365								
110.00	-.1783								
241.85	-.0578								
279.84	-.0471								

$M = 0.743$; mfr $= 0.544$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9659	343.16	-.0185	279.84	-.0447	-187.46	.9677	343.16	-.0126
-155.11	.9655	381.14	-.0134			-106.57	.9061	381.14	-.0134
-130.84	.9412	419.13	-.0045			-25.67	.6532	419.13	-.0014
-106.57	.9056	457.12	.0114			-10.27	.8105	457.12	.0067
-90.39	.8669	507.77	.0431			-2.05	1.1402	507.77	.0411
-74.21	.8206	545.76	.0864			.00	.4224	545.76	.0806
-58.03	.7594	571.08	.1363			.31	-.5632	571.08	.1344
-41.85	.6976	583.74	.1758			.63	-.8599	583.74	.1789
-33.76	.6785	596.41	.2234			1.25	-1.2653	596.41	.2293
-25.67	.6489	609.07	.2962			1.88	-1.4296	609.07	.3044
-23.11	.6545					2.50	-1.5405		
-17.97	.6794					3.13	-1.5413		
-10.27	.8186					3.75	-1.5161		
-5.13	1.0001					4.37	-1.4877		
-3.34	1.0919					5.00	-1.4517		
-2.05	1.1403					6.25	-1.3902		
-.90	1.1201					7.50	-1.4093		
-.44	1.0381					8.75	-1.2900		
.00	.4191					10.00	-1.2426		
.31	-.6619					15.00	-.6794		
.63	-.9213					17.50	-.5100		
1.25	-1.2524					20.00	-.5096		
2.50	-1.4340					30.00	-.5512		
3.13	-1.4886					40.00	-.4792		
4.37	-1.4340					50.00	-.4706		
5.00	-1.3826					60.00	-.4303		
6.25	-1.3593					70.00	-.3909		
8.75	-1.2951					80.00	-.3557		
10.00	-1.3188					90.00	-.2915		
12.50	-1.1460					100.00	-.2214		
15.00	-.7391					110.00	-.1672		
17.50	-.5249					241.85	-.0496		
20.00	-.5187								
30.00	-.5569								
40.00	-.5138								
50.00	-.4711								
60.00	-.4367								
70.00	-.3775								
80.00	-.3467								
90.00	-.2961								
100.00	-.2298								
110.00	-.1743								
241.85	-.0514								
279.84	-.0388								

Table IV. Continued

(d) Continued

$M = 0.744$; mfr $= 0.612$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9200	343.16	-.0082	279.84	-.0379	-187.46	.9128	343.16	-.0055
-155.11	.9154	381.14	.0007			-106.57	.8323	381.14	-.0032
-130.84	.8897	419.13	.0130			-25.67	.4685	419.13	.0084
-106.57	.8386	457.12	.0288			-10.27	.6458	457.12	.0192
-90.39	.7897	507.77	.0632			-2.05	1.1038	507.77	.0563
-74.21	.7242	545.76	.1030			.00	.5847	545.76	.1003
-58.03	.6482	571.08	.1597			.31	-.2723	571.08	.1589
-41.85	.5585	583.74	.1960			.63	-.5785	583.74	.2045
-33.76	.4992	596.41	.2481			1.25	-1.0531	596.41	.2601
-25.67	.4622	609.07	.3192			1.88	-1.1462	609.07	.3319
-23.11	.4587					2.50	-1.2918		
-17.97	.4847					3.13	-1.2363		
-10.27	.6504					3.75	-1.2965		
-5.13	.8937					4.37	-1.2144		
-3.34	1.0166					5.00	-1.1404		
-2.05	1.1020					6.25	-1.0481		
-.90	1.1435					7.50	-.9976		
-.44	1.1105					8.75	-.8965		
.00	.6232					10.00	-.7291		
.31	-.4146					15.00	-.6496		
.63	-.6627					17.50	-.6248		
1.25	-1.0977					20.00	-.5820		
2.50	-1.1639					30.00	-.5474		
3.13	-1.2327					40.00	-.4525		
4.37	-1.0500					50.00	-.4555		
5.00	-.9838					60.00	-.4059		
6.25	-1.0280					70.00	-.3743		
8.75	-.9032					80.00	-.3367		
10.00	-.8944					90.00	-.2859		
12.50	-.6148					100.00	-.2135		
15.00	-.6419					110.00	-.1547		
17.50	-.6091					241.85	-.0450		
20.00	-.5990								
30.00	-.5463								
40.00	-.4862								
50.00	-.4455								
60.00	-.4189								
70.00	-.3615								
80.00	-.3292								
90.00	-.2869								
100.00	-.2171								
110.00	-.1571								
241.85	-.0481								
279.84	-.0352								

$M = 0.744$; mfr $= 0.747$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.7869	343.16	-.0048	279.84	-.0252	-187.46	.7845	343.16	.0029
-155.11	.7816	381.14	.0060			-106.57	.6508	381.14	.0064
-130.84	.7358	419.13	.0195			-25.67	-.1226	419.13	.0218
-106.57	.6514	457.12	.0373			-10.27	.1585	457.12	.0361
-90.39	.5701	507.77	.0759			-2.05	.8684	507.77	.0743
-74.21	.4574	545.76	.1253			.00	.9225	545.76	.1253
-58.03	.3151	571.08	.1812			.31	.2419	571.08	.1855
-41.85	.1354	583.74	.2225			.63	-.0176	583.74	.2318
-33.76	.0422	596.41	.2715			1.25	-.4176	596.41	.2854
-25.67	-.0894	609.07	.3422			1.88	-.4828	609.07	.3564
-23.11	-.1038					2.50	-.5168		
-17.97	-.0711					3.13	-.4855		
-10.27	.1904					3.75	-.4249		
-5.13	.5578					4.37	-.4561		
-3.34	.7358					5.00	-.4339		
-2.05	.9060					6.25	-.4587		
-.90	1.1026					7.50	-.5364		
-.44	1.1428					8.75	-.4173		
.00	.9228					10.00	-.4420		
.31	.1453					15.00	-.4565		
.63	-.1165					17.50	-.4475		
1.25	-.3904					20.00	-.4369		
2.50	-.5076					30.00	-.4219		
3.13	-.5327					40.00	-.3834		
4.37	-.4345					50.00	-.3877		
5.00	-.4730					60.00	-.3552		
6.25	-.4711					70.00	-.3283		
8.75	-.6513					80.00	-.3014		
10.00	-.5167					90.00	-.2533		
12.50	-.5300					100.00	-.1856		
15.00	-.4819					110.00	-.1405		
17.50	-.4946					241.85	-.0319		
20.00	-.4694								
30.00	-.4524								
40.00	-.4137								
50.00	-.3973								
60.00	-.3691								
70.00	-.3283								
80.00	-.3031								
90.00	-.2652								
100.00	-.1941								
110.00	-.1441								
241.85	-.0328								
279.84	-.0252								

Table IV. Continued

(d) Concluded

$M = 0.744$; mfr $= 0.816$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.7037	343.16	-.0015	279.84	-.0176	-187.46	.6989	343.16	.0070
-155.11	.6893	381.14	.0104			-106.57	.5297	381.14	.0097
-130.84	.6299	419.13	.0201			-25.67	-.7203	419.13	.0247
-106.57	.5311	457.12	.0433			-10.27	-.1538	457.12	.0375
-90.39	.4250	507.77	.0830			-2.05	.7160	507.77	.0796
-74.21	.2785	545.76	.1305			.00	1.0234	545.76	.1297
-58.03	.0706	571.08	.1885			.31	.4508	571.08	.1901
-41.85	-.2121	583.74	.2260			.63	.1961	583.74	.2345
-33.76	-.3910	596.41	.2781			1.25	-.0631	596.41	.2854
-25.67	-.7811	609.07	.3418			1.88	-.2113	609.07	.3557
-23.11	-.8217					2.50	-.2506		
-17.97	-.6173					3.13	-.2189		
-10.27	-.1849					3.75	-.2408		
-5.13	.2600					4.37	-.1809		
-3.34	.5238					5.00	-.2693		
-2.05	.7510					6.25	-.2913		
-.90	1.0059					7.50	-.3542		
-.44	1.1115					8.75	-.3194		
.00	1.0527					10.00	-.3363		
.31	.4246					15.00	-.3671		
.63	.2191					17.50	-.3782		
1.25	-.0421					20.00	-.3521		
2.50	-.1754					30.00	-.3748		
3.13	-.2590					40.00	-.3547		
4.37	-.2749					50.00	-.3594		
5.00	-.2564					60.00	-.3367		
6.25	-.3006					70.00	-.3183		
8.75	-.4292					80.00	-.2906		
10.00	-.3470					90.00	-.2454		
12.50	-.3835					100.00	-.1730		
15.00	-.3707					110.00	-.1270		
17.50	-.3816					241.85	-.0234		
20.00	-.3743								
30.00	-.3877								
40.00	-.3667								
50.00	-.3577								
60.00	-.3360								
70.00	-.3085								
80.00	-.2850								
90.00	-.2454								
100.00	-.1800								
110.00	-.1356								
241.85	-.0270								
279.84	-.0109								

Table IV. Continued

(e) $M = 0.77$

$M = 0.768$; mfr $= 0.274$: $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1102	343.16	-.0622	279.84	-.0643	-187.46	1.1122	343.16	-.0496
-155.11	1.1091	381.14	-.0573			-106.57	1.0971	381.14	-.0547
-130.84	1.1047	419.13	-.0577			-25.67	1.0684	419.13	-.0410
-106.57	1.0964	457.12	-.0529			-10.27	1.1372	457.12	-.0421
-90.39	1.0883	507.77	-.0514			-2.05	1.0250	507.77	-.0429
-74.21	1.0792	545.76	-.0473			.00	-.2787	545.76	-.0414
-58.03	1.0662	571.08	-.0328			.31	-1.3607	571.08	-.0291
-41.85	1.0611	583.74	-.0210			.63	-1.4951	583.74	-.0173
-33.76	1.0614	596.41	-.0043			1.25	-1.7800	596.41	.0017
-25.67	1.0750	609.07	.0444			1.88	-1.8764	609.07	.0500
-23.11	1.0737					2.50	-1.9392		
-17.97	1.0889					3.13	-1.9390		
-10.27	1.1376					3.75	-1.9350		
-5.13	1.1514					4.37	-1.9107		
-3.34	1.1136					5.00	-1.9042		
-2.05	1.0263					6.25	-1.8888		
-.90	.8178					7.50	-1.8734		
-.44	.5968					8.75	-1.8524		
.00	-.3320					10.00	-1.8125		
.31	-1.3690					15.00	-1.7298		
.63	-1.5912					17.50	-1.6649		
1.25	-1.8374					20.00	-1.6583		
2.50	-1.9238					30.00	-1.4848		
3.13	-1.9370					40.00	-.9745		
4.37	-1.9169					50.00	-.6990		
5.00	-1.9022					60.00	-.3751		
6.25	-1.8711					70.00	-.2841		
8.75	-1.8521					80.00	-.2722		
10.00	-1.8188					90.00	-.2365		
12.50	-1.7807					100.00	-.1955		
15.00	-1.7133					110.00	-.1660		
17.50	-1.6709					241.85	-.0746		
20.00	-1.6194								
30.00	-1.4034								
40.00	-.9924								
50.00	-.6983								
60.00	-.5977								
70.00	-.3463								
80.00	-.2449								
90.00	-.2168								
100.00	-.2036								
110.00	-.1590								
241.85	-.0759								
279.84	-.0686								

$M = 0.769$; mfr $= 0.322$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0955	343.16	-.0465	279.84	-.0594	-187.46	1.0948	343.16	-.0350
-155.11	1.0940	381.14	-.0395			-106.57	1.0748	381.14	-.0395
-130.84	1.0871	419.13	-.0376			-25.67	1.0200	419.13	-.0309
-106.57	1.0755	457.12	-.0309			-10.27	1.1128	457.12	-.0350
-90.39	1.0620	507.77	-.0132			-2.05	1.0756	507.77	-.0284
-74.21	1.0497	545.76	-.0039			.00	-.1095	545.76	-.0154
-58.03	1.0326	571.08	.0205			.31	-1.2323	571.08	.0083
-41.85	1.0214	583.74	.0387			.63	-1.3959	583.74	.0361
-33.76	1.0208	596.41	.0691			1.25	-1.6951	596.41	.0672
-25.67	1.0269	609.07	.1235			1.88	-1.8008	609.07	.1246
-23.11	1.0286					2.50	-1.8569		
-17.97	1.0543					3.13	-1.8591		
-10.27	1.1160					3.75	-1.8528		
-5.13	1.1526					4.37	-1.8373		
-3.34	1.1389					5.00	-1.8216		
-2.05	1.0750					6.25	-1.7922		
-.90	.8995					7.50	-1.7769		
-.44	.7099					8.75	-1.7704		
.00	-.1964					10.00	-1.7177		
.31	-1.2545					15.00	-1.6447		
.63	-1.5058					17.50	-1.5873		
1.25	-1.7476					20.00	-1.5561		
2.50	-1.8191					30.00	-1.4265		
3.13	-1.8293					40.00	-.8155		
4.37	-1.8242					50.00	-.5774		
5.00	-1.8246					60.00	-.3062		
6.25	-1.7979					70.00	-.2939		
8.75	-1.7395					80.00	-.2865		
10.00	-1.7271					90.00	-.2672		
12.50	-1.6691					100.00	-.2082		
15.00	-1.6181					110.00	-.1792		
17.50	-1.6074					241.85	-.0851		
20.00	-1.5513								
30.00	-1.3587								
40.00	-.7445								
50.00	-.5103								
60.00	-.3640								
70.00	-.2652								
80.00	-.2754								
90.00	-.2638								
100.00	-.2198								
110.00	-.1688								
241.85	-.0890								
279.84	-.0765								

Table IV. Continued

(e) Continued

$M = 0.769$; mfr $= 0.408$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0604	343.16	-.0326	279.84	-.0588	-187.46	1.0589	343.16	-.0241
-155.11	1.0582	381.14	-.0263			-106.57	1.0274	381.14	-.0297
-130.84	1.0466	419.13	-.0223			-25.67	.9211	419.13	-.0186
-106.57	1.0285	457.12	-.0108			-10.27	1.0434	457.12	-.0171
-90.39	1.0085	507.77	.0085			-2.05	1.1374	507.77	.0048
-74.21	.9849	545.76	.0363			.00	.1184	545.76	.0289
-58.03	.9548	571.08	.0785			.31	-1.0075	571.08	.0692
-41.85	.9322	583.74	.1089			.63	-1.1718	583.74	.1074
-33.76	.9235	596.41	.1540			1.25	-1.5147	596.41	.1500
-25.67	.9284	609.07	.2182			1.88	-1.6391	609.07	.2197
-23.11	.9264					2.50	-1.7091		
-17.97	.9460					3.13	-1.7016		
-10.27	1.0405					3.75	-1.6935		
-5.13	1.1368					4.37	-1.6845		
-3.34	1.1552					5.00	-1.6566		
-2.05	1.1299					6.25	-1.6297		
-.90	1.0089					7.50	-1.5988		
-.44	.8648					8.75	-1.5796		
.00	.0798					10.00	-1.5569		
.31	-1.0719					15.00	-1.4921		
.63	-1.2852					17.50	-1.4417		
1.25	-1.5411					20.00	-1.3833		
2.50	-1.6846					30.00	-1.2402		
3.13	-1.6879					40.00	-.4918		
4.37	-1.6989					50.00	-.3441		
5.00	-1.6711					60.00	-.3457		
6.25	-1.6310					70.00	-.3605		
8.75	-1.5948					80.00	-.3367		
10.00	-1.5956					90.00	-.2961		
12.50	-1.5093					100.00	-.2264		
15.00	-1.4564					110.00	-.1757		
17.50	-1.4444					241.85	-.0652		
20.00	-1.3981								
30.00	-1.2581								
40.00	-.5987								
50.00	-.3628								
60.00	-.3432								
70.00	-.3359								
80.00	-.3304								
90.00	-.2956								
100.00	-.2363								
110.00	-.1787								
241.85	-.0613								
279.84	-.0528								

$M = 0.767$; mfr $= 0.459$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0322	343.16	-.0295	279.84	-.0517	-187.46	1.0316	343.16	-.0221
-155.11	1.0307	381.14	-.0217			-106.57	.9894	381.14	-.0243
-130.84	1.0161	419.13	-.0158			-25.67	.8404	419.13	-.0124
-106.57	.9928	457.12	-.0009			-10.27	.9795	457.12	-.0080
-90.39	.9670	507.77	.0266			-2.05	1.1497	507.77	.0184
-74.21	.9356	545.76	.0616			.00	.2492	545.76	.0542
-58.03	.8985	571.08	.1092			.31	-.8709	571.08	.1014
-41.85	.8675	583.74	.1427			.63	-1.0420	583.74	.1412
-33.76	.8465	596.41	.1891			1.25	-1.4094	596.41	.1921
-25.67	.8465	609.07	.2561			1.88	-1.5299	609.07	.2601
-23.11	.8461					2.50	-1.6273		
-17.97	.8789					3.13	-1.6355		
-10.27	.9816					3.75	-1.6194		
-5.13	1.1083					4.37	-1.5952		
-3.34	1.1483					5.00	-1.5819		
-2.05	1.1505					6.25	-1.5535		
-.90	1.0631					7.50	-1.5300		
-.44	.9379					8.75	-1.5054		
.00	.2038					10.00	-1.4831		
.31	-.9329					15.00	-1.3781		
.63	-1.1814					17.50	-1.3703		
1.25	-1.4360					20.00	-1.3020		
2.50	-1.5984					30.00	-.7593		
3.13	-1.5980					40.00	-.3760		
4.37	-1.5896					50.00	-.4201		
5.00	-1.5596					60.00	-.4098		
6.25	-1.5475					70.00	-.3896		
8.75	-1.4955					80.00	-.3567		
10.00	-1.4695					90.00	-.3027		
12.50	-1.4291					100.00	-.2282		
15.00	-1.3675					110.00	-.1749		
17.50	-1.3430					241.85	-.0556		
20.00	-1.2846								
30.00	-.7391								
40.00	-.3956								
50.00	-.4079								
60.00	-.4137								
70.00	-.3768								
80.00	-.3467								
90.00	-.3123								
100.00	-.2351								
110.00	-.1817								
241.85	-.0621								
279.84	-.0479								

Table IV. Continued

(e) Continued

$M = 0.768$; mfr $= 0.494$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0113	343.16	-.0233	279.84	-.0471	-187.46	1.0101	343.16	-.0125
-155.11	1.0099	381.14	-.0144			-106.57	.9624	381.14	-.0144
-130.84	.9917	419.13	-.0081			-25.67	.7712	419.13	-.0018
-106.57	.9626	457.12	.0068			-10.27	.9133	457.12	.0019
-90.39	.9320	507.77	.0435			-2.05	1.1542	507.77	.0327
-74.21	.8967	545.76	.0780			.00	.3438	545.76	.0699
-58.03	.8505	571.08	.1285			.31	-.7320	571.08	.1229
-41.85	.8020	583.74	.1641			.63	-.9106	583.74	.1649
-33.76	.7888	596.41	.2158			1.25	-1.2791	596.41	.2173
-25.67	.7732	609.07	.2837			1.88	-1.4274	609.07	.2882
-23.11	.7822					2.50	-1.5386		
-17.97	.8076					3.13	-1.5475		
-10.27	.9289					3.75	-1.5439		
-5.13	1.0766					4.37	-1.5158		
-3.34	1.1295					5.00	-1.4852		
-2.05	1.1535					6.25	-1.4558		
-.90	1.0908					7.50	-1.4371		
-.44	.9828					8.75	-1.4381		
.00	.3028					10.00	-1.3831		
.31	-.7876					15.00	-1.2693		
.63	-1.0236					17.50	-1.2701		
1.25	-1.3379					20.00	-1.1957		
2.50	-1.5197					30.00	-.4684		
3.13	-1.5340					40.00	-.4343		
4.37	-1.4963					50.00	-.4569		
5.00	-1.4788					60.00	-.4347		
6.25	-1.4104					70.00	-.3953		
8.75	-1.4122					80.00	-.3598		
10.00	-1.3848					90.00	-.3056		
12.50	-1.3467					100.00	-.2283		
15.00	-1.3090					110.00	-.1747		
17.50	-1.2303					241.85	-.0522		
20.00	-1.1860								
30.00	-.5571								
40.00	-.4033								
50.00	-.4389								
60.00	-.4385								
70.00	-.3891								
80.00	-.3562								
90.00	-.3090								
100.00	-.2353								
110.00	-.1787								
241.85	-.0565								
279.84	-.0406								

$M = 0.770$; mfr $= 0.545$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9821	343.16	-.0190	279.84	-.0399	-187.46	.9818	343.16	-.0105
-155.11	.9785	381.14	-.0105			-106.57	.9218	381.14	-.0105
-130.84	.9556	419.13	-.0005			-25.67	.6705	419.13	.0025
-106.57	.9176	457.12	.0158			-10.27	.8259	457.12	.0095
-90.39	.8832	507.77	.0499			-2.05	1.1503	507.77	.0491
-74.21	.8368	545.76	.0931			.00	.4511	545.76	.0913
-58.03	.7802	571.08	.1501			.31	-.4625	571.08	.1519
-41.85	.7175	583.74	.1933			.63	-.7732	583.74	.1959
-33.76	.6966	596.41	.2403			1.25	-1.1460	596.41	.2499
-25.67	.6733	609.07	.3098			1.88	-1.3028	609.07	.3238
-23.11	.6656					2.50	-1.3785		
-17.97	.6884					3.13	-1.4216		
-10.27	.8308					3.75	-1.4010		
-5.13	1.0158					4.37	-1.3891		
-3.34	1.1027					5.00	-1.3539		
-2.05	1.1519					6.25	-1.3084		
-.90	1.1348					7.50	-1.3449		
-.44	1.0590					8.75	-1.2678		
.00	.4652					10.00	-1.2123		
.31	-.5969					15.00	-1.1492		
.63	-.8137					17.50	-1.1198		
1.25	-1.1818					20.00	-.8941		
2.50	-1.3472					30.00	-.4531		
3.13	-1.3752					40.00	-.4748		
4.37	-1.3730					50.00	-.4768		
5.00	-1.3209					60.00	-.4363		
6.25	-1.2860					70.00	-.3982		
8.75	-1.2612					80.00	-.3634		
10.00	-1.2317					90.00	-.2971		
12.50	-1.1861					100.00	-.2194		
15.00	-1.0812					110.00	-.1647		
17.50	-1.0160					241.85	-.0523		
20.00	-.9685								
30.00	-.4704								
40.00	-.5007								
50.00	-.4802								
60.00	-.4431								
70.00	-.3941								
80.00	-.3504								
90.00	-.3024								
100.00	-.2317								
110.00	-.1770								
241.85	-.0480								
279.84	-.0403								

Table IV. Continued

(e) Continued

$M = 0.770$; mfr $= 0.613$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9307	343.16	-.0129	279.84	-.0348	-187.46	.9292	343.16	-.0055
-155.11	.9256	381.14	-.0044			-106.57	.8497	381.14	-.0026
-130.84	.8959	419.13	.0048			-25.67	.4814	419.13	.0133
-106.57	.8488	457.12	.0237			-10.27	.6649	457.12	.0244
-90.39	.7972	507.77	.0618			-2.05	1.1043	507.77	.0637
-74.21	.7375	545.76	.1091			.00	.6329	545.76	.1150
-58.03	.6556	571.08	.1686			.31	-.2320	571.08	.1731
-41.85	.5643	583.74	.2108			.63	-.4997	583.74	.2215
-33.76	.5193	596.41	.2651			1.25	-.9552	596.41	.2784
-25.67	.4822	609.07	.3357			1.88	-1.1078	609.07	.3505
-23.11	.4614					2.50	-1.2099		
-17.97	.5067					3.13	-1.2017		
-10.27	.6629					3.75	-1.2078		
-5.13	.8948					4.37	-1.1385		
-3.34	1.0164					5.00	-1.1342		
-2.05	1.1139					6.25	-1.0510		
-.90	1.1550					7.50	-1.0444		
-.44	1.1161					8.75	-.8878		
.00	.6447					10.00	-.9380		
.31	-.3381					15.00	-.5577		
.63	-.6161					17.50	-.5861		
1.25	-.9614					20.00	-.5971		
2.50	-1.1345					30.00	-.5557		
3.13	-1.0744					40.00	-.4660		
4.37	-1.0889					50.00	-.4624		
5.00	-1.0492					60.00	-.4251		
6.25	-.9807					70.00	-.3785		
8.75	-.9020					80.00	-.3445		
10.00	-.9990					90.00	-.2913		
12.50	-.7137					100.00	-.2095		
15.00	-.6124					110.00	-.1565		
17.50	-.5541					241.85	-.0377		
20.00	-.5898								
30.00	-.5633								
40.00	-.4989								
50.00	-.4608								
60.00	-.4254								
70.00	-.3768								
80.00	-.3383								
90.00	-.2900								
100.00	-.2149								
110.00	-.1644								
241.85	-.0446								
279.84	-.0271								

$M = 0.767$; mfr $= 0.740$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.8116	343.16	.0005	279.84	-.0206	-187.46	.8066	343.16	.0083
-155.11	.8028	381.14	.0091			-106.57	.6801	381.14	.0102
-130.84	.7556	419.13	.0191			-25.67	-.0361	419.13	.0269
-106.57	.6803	457.12	.0407			-10.27	.2299	457.12	.0399
-90.39	.5974	507.77	.0830			-2.05	.9126	507.77	.0822
-74.21	.4909	545.76	.1327			.00	.9074	545.76	.1330
-58.03	.3523	571.08	.1938			.31	.1853	571.08	.1968
-41.85	.1695	583.74	.2365			.63	-.0799	583.74	.2450
-33.76	.0891	596.41	.2899			1.25	-.4719	596.41	.2977
-25.67	-.0251	609.07	.3566			1.88	-.5716	609.07	.3685
-23.11	-.0635					2.50	-.5389		
-17.97	-.0128					3.13	-.5164		
-10.27	.2528					3.75	-.5113		
-5.13	.5527					4.37	-.4530		
-3.34	.7739					5.00	-.4777		
-2.05	.9439					6.25	-.5009		
-.90	1.1122					7.50	-.6153		
-.44	1.1505					8.75	-.4787		
.00	.9211					10.00	-.4871		
.31	.1335					15.00	-.4920		
.63	-.1330					17.50	-.4982		
1.25	-.3597					20.00	-.4604		
2.50	-.4573					30.00	-.4502		
3.13	-.5015					40.00	-.4046		
4.37	-.5059					50.00	-.4099		
5.00	-.4931					60.00	-.3799		
6.25	-.4939					70.00	-.3483		
8.75	-.6051					80.00	-.3196		
10.00	-.4913					90.00	-.2695		
12.50	-.4727					100.00	-.1933		
15.00	-.4949					110.00	-.1368		
17.50	-.4675					241.85	-.0288		
20.00	-.4795								
30.00	-.4569								
40.00	-.4166								
50.00	-.4109								
60.00	-.3806								
70.00	-.3446								
80.00	-.3103								
90.00	-.2683								
100.00	-.1980								
110.00	-.1461								
241.85	-.0348								
279.84	-.0232								

Table IV. Continued

(e) Concluded

$M = 0.768$; mfr $= 0.799$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.7325	343.16	.0069	279.84	-.0180	-187.46	.7305	343.16	.0177
-155.11	.7209	381.14	.0184			-106.57	.5689	381.14	.0199
-130.84	.6668	419.13	.0317			-25.67	-.5892	419.13	.0362
-106.57	.5720	457.12	.0529			-10.27	-.0809	457.12	.0466
-90.39	.4681	507.77	.0918			-2.05	.7897	507.77	.0899
-74.21	.3311	545.76	.1448			.00	1.0097	545.76	.1396
-58.03	.1324	571.08	.2048			.31	.4176	571.08	.2033
-41.85	-.1317	583.74	.2430			.63	.1571	583.74	.2500
-33.76	-.2818	596.41	.2960			1.25	-.1753	596.41	.3038
-25.67	-.5793	609.07	.3623			1.88	-.2372	609.07	.3697
-23.11	-.5937					2.50	-.3409		
-17.97	-.5030					3.13	-.2980		
-10.27	-.0756					3.75	-.3335		
-5.13	.3523					4.37	-.3412		
-3.34	.5733					5.00	-.3093		
-2.05	.7926					6.25	-.3545		
-.90	1.0522					7.50	-.4353		
-.44	1.1269					8.75	-.3832		
.00	1.0323					10.00	-.3725		
.31	.4190					15.00	-.3992		
.63	.1825					17.50	-.4172		
1.25	-.1284					20.00	-.4012		
2.50	-.2109					30.00	-.4123		
3.13	-.3334					40.00	-.3770		
4.37	-.2728					50.00	-.3930		
5.00	-.2856					60.00	-.3577		
6.25	-.3126					70.00	-.3376		
8.75	-.4949					80.00	-.3081		
10.00	-.3564					90.00	-.2609		
12.50	-.4123					100.00	-.1868		
15.00	-.3995					110.00	-.1348		
17.50	-.4112					241.85	-.0278		
20.00	-.3978								
30.00	-.4185								
40.00	-.3875								
50.00	-.3824								
60.00	-.3708								
70.00	-.3216								
80.00	-.2963								
90.00	-.2578								
100.00	-.1900								
110.00	-.1346								
241.85	-.0317								
279.84	-.0175								

Table IV. Continued

(f) $M = 0.79$

$M = 0.792$; mfr $= 0.269$; $\alpha = 0^\circ$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1239	343.16	-.0500	279.84	-.0638	-187.46	1.1233	343.16	-.0449
-155.11	1.1228	381.14	-.0475			-106.57	1.1103	381.14	-.0500
-130.84	1.1193	419.13	-.0507			-25.67	1.0836	419.13	-.0446
-106.57	1.1092	457.12	-.0439			-10.27	1.1505	457.12	-.0500
-90.39	1.1025	507.77	-.0403			-2.05	1.0461	507.77	-.0442
-74.21	1.0934	545.76	-.0321			.00	-.2121	545.76	-.0392
-58.03	1.0812	571.08	-.0171			.31	-1.2712	571.08	-.0267
-41.85	1.0749	583.74	-.0042			.63	-1.3956	583.74	-.0067
-33.76	1.0757	596.41	.0179			1.25	-1.6774	596.41	.0179
-25.67	1.0808	609.07	.0657			1.88	-1.7624	609.07	.0718
-23.11	1.0883					2.50	-1.8162		
-17.97	1.1029					3.13	-1.8230		
-10.27	1.1513					3.75	-1.8324		
-5.13	1.1618					4.37	-1.7904		
-3.34	1.1233					5.00	-1.7980		
-2.05	1.0497					6.25	-1.7702		
-.90	.8314					7.50	-1.7514		
-.44	.6283					8.75	-1.7294		
.00	-.2859					10.00	-1.6948		
.31	-1.2546					15.00	-1.6232		
.63	-1.4784					17.50	-1.5639		
1.25	-1.7146					20.00	-1.5362		
2.50	-1.8090					30.00	-1.4129		
3.13	-1.8216					40.00	-1.2993		
4.37	-1.7935					50.00	-1.1597		
5.00	-1.7970					60.00	-.6278		
6.25	-1.7680					70.00	-.5155		
8.75	-1.7174					80.00	-.3621		
10.00	-1.6928					90.00	-.2063		
12.50	-1.6713					100.00	-.1427		
15.00	-1.6319					110.00	-.1112		
17.50	-1.5974					241.85	-.0696		
20.00	-1.5585								
30.00	-1.4112								
40.00	-1.3139								
50.00	-.9044								
60.00	-.6241								
70.00	-.5871								
80.00	-.3717								
90.00	-.2698								
100.00	-.1440								
110.00	-.1237								
241.85	-.0671								
279.84	-.0613								

$M = 0.795$; mfr $= 0.329$; $\alpha = 0^\circ$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1068	343.16	-.0430	279.84	-.0553	-187.46	1.1081	343.16	-.0366
-155.11	1.1086	381.14	-.0380			-106.57	1.0873	381.14	-.0412
-130.84	1.0999	419.13	-.0380			-25.67	1.0352	419.13	-.0355
-106.57	1.0873	457.12	-.0302			-10.27	1.1242	457.12	-.0366
-90.39	1.0778	507.77	-.0160			-2.05	1.0952	507.77	-.0231
-74.21	1.0628	545.76	.0018			.00	-.0536	545.76	-.0060
-58.03	1.0485	571.08	.0310			.31	-1.1221	571.08	.0242
-41.85	1.0367	583.74	.0566			.63	-1.2720	583.74	.0544
-33.76	1.0273	596.41	.0893			1.25	-1.5676	596.41	.0878
-25.67	1.0352	609.07	.1480			1.88	-1.6759	609.07	.1516
-23.11	1.0395					2.50	-1.7244		
-17.97	1.0599					3.13	-1.7281		
-10.27	1.1242					3.75	-1.7161		
-5.13	1.1665					4.37	-1.7018		
-3.34	1.1529					5.00	-1.6968		
-2.05	1.0940					6.25	-1.6764		
-.90	.9202					7.50	-1.6617		
-.44	.7494					8.75	-1.6414		
.00	-.0880					10.00	-1.6141		
.31	-1.1435					15.00	-1.5401		
.63	-1.3668					17.50	-1.4920		
1.25	-1.6086					20.00	-1.4545		
2.50	-1.6952					30.00	-1.3344		
3.13	-1.7180					40.00	-1.2336		
4.37	-1.7046					50.00	-1.1095		
5.00	-1.7032					60.00	-.5601		
6.25	-1.6759					70.00	-.3631		
8.75	-1.6444					80.00	-.2328		
10.00	-1.6146					90.00	-.1855		
12.50	-1.5599					100.00	-.1540		
15.00	-1.5272					110.00	-.1234		
17.50	-1.5055					241.85	-.0603		
20.00	-1.4413								
30.00	-1.3219								
40.00	-1.2211								
50.00	-1.0095								
60.00	-.5530								
70.00	-.4545								
80.00	-.2848								
90.00	-.1875								
100.00	-.1472								
110.00	-.1218								
241.85	-.0661								
279.84	-.0570								

Table IV. Continued

(f) Continued

$M = 0.794$; mfr $= 0.408$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0711	343.16	-.0328	279.84	-.0494	-187.46	1.0720	343.16	-.0250
-155.11	1.0704	381.14	-.0246			-106.57	1.0405	381.14	-.0260
-130.84	1.0586	419.13	-.0168			-25.67	.9348	419.13	-.0168
-106.57	1.0397	457.12	-.0061			-10.27	1.0511	457.12	-.0132
-90.39	1.0230	507.77	.0188			-2.05	1.1478	507.77	.0121
-74.21	.9992	545.76	.0502			.00	.1613	545.76	.0430
-58.03	.9720	571.08	.0943			.31	-.9194	571.08	.0879
-41.85	.9465	583.74	.1260			.63	-1.0900	583.74	.1249
-33.76	.9359	596.41	.1716			1.25	-1.4081	596.41	.1712
-25.67	.9395	609.07	.2389			1.88	-1.5182	609.07	.2435
-23.11	.9410					2.50	-1.5887		
-17.97	.9678					3.13	-1.5926		
-10.27	1.0551					3.75	-1.5796		
-5.13	1.1480					4.37	-1.5766		
-3.34	1.1657					5.00	-1.5729		
-2.05	1.1455					6.25	-1.5412		
-.90	1.0226					7.50	-1.5173		
-.44	.8787					8.75	-1.5026		
.00	.1111					10.00	-1.4739		
.31	-.9806					15.00	-1.3955		
.63	-1.2137					17.50	-1.3655		
1.25	-1.4340					20.00	-1.3277		
2.50	-1.5639					30.00	-1.1821		
3.13	-1.5822					40.00	-1.1261		
4.37	-1.5664					50.00	-.5980		
5.00	-1.5594					60.00	-.3264		
6.25	-1.5173					70.00	-.2672		
8.75	-1.5001					80.00	-.2735		
10.00	-1.4899					90.00	-.2557		
12.50	-1.4456					100.00	-.1942		
15.00	-1.3837					110.00	-.1556		
17.50	-1.3263					241.85	-.0573		
20.00	-1.3182								
30.00	-1.1835								
40.00	-1.1192								
50.00	-.6058								
60.00	-.3297								
70.00	-.2758								
80.00	-.2590								
90.00	-.2618								
100.00	-.1965								
110.00	-.1621								
241.85	-.0610								
279.84	-.0519								

$M = 0.794$; mfr $= 0.453$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0469	343.16	-.0267	279.84	-.0466	-187.46	1.0472	343.16	-.0168
-155.11	1.0465	381.14	-.0168			-106.57	1.0064	381.14	-.0178
-130.84	1.0319	419.13	-.0086			-25.67	.8618	419.13	-.0079
-106.57	1.0092	457.12	.0064			-10.27	.9938	457.12	-.0025
-90.39	.9837	507.77	.0377			-2.05	1.1630	507.77	.0277
-74.21	.9537	545.76	.0740			.00	.2652	545.76	.0654
-58.03	.9182	571.08	.1249			.31	-.7808	571.08	.1167
-41.85	.8784	583.74	.1608			.63	-.9368	583.74	.1558
-33.76	.8700	596.41	.2081			1.25	-1.3022	596.41	.2078
-25.67	.8606	609.07	.2775			1.88	-1.4256	609.07	.2836
-23.11	.8669					2.50	-1.5103		
-17.97	.8873					3.13	-1.5107		
-10.27	1.0001					3.75	-1.5138		
-5.13	1.1202					4.37	-1.4811		
-3.34	1.1597					5.00	-1.4583		
-2.05	1.1622					6.25	-1.4363		
-.90	1.0748					7.50	-1.3980		
-.44	.9550					8.75	-1.4079		
.00	.2386					10.00	-1.3728		
.31	-.8579					15.00	-1.3113		
.63	-1.0211					17.50	-1.2605		
1.25	-1.3062					20.00	-1.2057		
2.50	-1.4759					30.00	-1.1139		
3.13	-1.4889					40.00	-1.0225		
4.37	-1.4657					50.00	-.4053		
5.00	-1.4517					60.00	-.3080		
6.25	-1.4426					70.00	-.3269		
8.75	-1.4149					80.00	-.3277		
10.00	-1.3269					90.00	-.2785		
12.50	-1.3318					100.00	-.2130		
15.00	-1.2791					110.00	-.1642		
17.50	-1.2494					241.85	-.0540		
20.00	-1.2409								
30.00	-1.1442								
40.00	-1.0588								
50.00	-.3887								
60.00	-.3173								
70.00	-.2978								
80.00	-.3272								
90.00	-.2740								
100.00	-.2179								
110.00	-.1671								
241.85	-.0557								
279.84	-.0425								

Table IV. Continued

(f) Continued

$M = 0.794$; mfr $= 0.492$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0258	343.16	-.0190	279.84	-.0394	-187.46	1.0235	343.16	-.0108
-155.11	1.0223	381.14	-.0115			-106.57	.9770	381.14	-.0118
-130.84	1.0056	419.13	-.0022			-25.67	.7869	419.13	.0003
-106.57	.9784	457.12	.0142			-10.27	.9354	457.12	.0070
-90.39	.9487	507.77	.0455			-2.05	1.1642	507.77	.0412
-74.21	.9127	545.76	.0893			.00	.3626	545.76	.0836
-58.03	.8687	571.08	.1427			.31	-.5581	571.08	.1388
-41.85	.8229	583.74	.1815			.63	-.8143	583.74	.1826
-33.76	.8041	596.41	.2328			1.25	-1.1804	596.41	.2382
-25.67	.7955	609.07	.3047			1.88	-1.3231	609.07	.3079
-23.11	.7888					2.50	-1.4304		
-17.97	.8226					3.13	-1.4141		
-10.27	.9393					3.75	-1.4285		
-5.13	1.0801					4.37	-1.3853		
-3.34	1.1448					5.00	-1.3788		
-2.05	1.1654					6.25	-1.3276		
-.90	1.1151					7.50	-1.3334		
-.44	.9997					8.75	-1.3104		
.00	.3576					10.00	-1.2833		
.31	-.7476					15.00	-1.2313		
.63	-.9281					17.50	-1.1654		
1.25	-1.2208					20.00	-1.1505		
2.50	-1.4163					30.00	-1.0014		
3.13	-1.3833					40.00	-.5711		
4.37	-1.4103					50.00	-.3435		
5.00	-1.3903					60.00	-.3794		
6.25	-1.3489					70.00	-.3830		
8.75	-1.2910					80.00	-.3435		
10.00	-1.2783					90.00	-.2970		
12.50	-1.2601					100.00	-.2189		
15.00	-1.1845					110.00	-.1673		
17.50	-1.1794					241.85	-.0476		
20.00	-1.1590								
30.00	-1.0274								
40.00	-.8196								
50.00	-.3573								
60.00	-.3474								
70.00	-.3727								
80.00	-.3408								
90.00	-.2959								
100.00	-.2256								
110.00	-.1710								
241.85	-.0526								
279.84	-.0394								

$M = 0.794$; mfr $= 0.493$; $\alpha = 2.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0259	343.16	-.0014	279.84	-.0461	-187.46	1.0233	343.16	-.0263
-155.11	1.0249	381.14	-.0024			-106.57	.9728	381.14	-.0174
-130.84	1.0074	419.13	-.0010			-25.67	.7507	419.13	-.0028
-106.57	.9812	457.12	.0175			-10.27	.8824	457.12	.0068
-90.39	.9526	507.77	.0510			-2.05	1.1597	507.77	.0368
-74.21	.9197	545.76	.0888			.00	.5159	545.76	.0809
-58.03	.8820	571.08	.1429			.31	-.3837	571.08	.1387
-41.85	.8425	583.74	.1729			.63	-.6447	583.74	.1853
-33.76	.8313	596.41	.2192			1.25	-1.0353	596.41	.2427
-25.67	.8313	609.07	.2795			1.88	-1.1869	609.07	.3279
-23.11	.8286					2.50	-1.2582		
-17.97	.8577					3.13	-1.2840		
-10.27	.9846					3.75	-1.2633		
-5.13	1.1175					4.37	-1.1791		
-3.34	1.1612					5.00	-1.2104		
-2.05	1.1625					6.25	-1.1750		
-.90	1.0717					7.50	-1.1974		
-.44	.9334					8.75	-1.1001		
.00	.2081					10.00	-1.0625		
.31	-.8955					15.00	-.9926		
.63	-1.0952					17.50	-.9563		
1.25	-1.3681					20.00	-.8253		
2.50	-1.5389					30.00	-.4504		
3.13	-1.5259					40.00	-.5025		
4.37	-1.5266					50.00	-.4898		
5.00	-1.5231					60.00	-.4441		
6.25	-1.4960					70.00	-.4125		
8.75	-1.4612					80.00	-.3671		
10.00	-1.4370					90.00	-.3075		
12.50	-1.4113					100.00	-.2152		
15.00	-1.3755					110.00	-.1647		
17.50	-1.3674					241.85	-.0502		
20.00	-1.3211								
30.00	-1.2330								
40.00	-1.1437								
50.00	-.5631								
60.00	-.4007								
70.00	-.2830								
80.00	-.2422								
90.00	-.2467								
100.00	-.1854								
110.00	-.1603								
241.85	-.0535								
279.84	-.0415								

Table IV. Continued

(f) Continued

$M = 0.795$; mfr $= 0.546$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9958	343.16	-.0168	279.84	-.0356	-187.46	.9954	343.16	-.0036
-155.11	.9944	381.14	-.0075			-106.57	.9357	381.14	-.0057
-130.84	.9728	419.13	.0038			-25.67	.6785	419.13	.0095
-106.57	.9345	457.12	.0230			-10.27	.8518	457.12	.0181
-90.39	.8996	507.77	.0572			-2.05	1.1624	507.77	.0554
-74.21	.8518	545.76	.1019			.00	.4937	545.76	.1019
-58.03	.7961	571.08	.1638			.31	-.4155	571.08	.1623
-41.85	.7362	583.74	.2050			.63	-.6981	583.74	.2100
-33.76	.7024	596.41	.2566			1.25	-1.0654	596.41	.2658
-25.67	.6832	609.07	.3291			1.88	-1.2084	609.07	.3394
-23.11	.6734					2.50	-1.3205		
-17.97	.7169					3.13	-1.3344		
-10.27	.8388					3.75	-1.3165		
-5.13	1.0353					4.37	-1.2688		
-3.34	1.1152					5.00	-1.2574		
-2.05	1.1629					6.25	-1.2195		
-.90	1.1522					7.50	-1.2393		
-.44	1.0753					8.75	-1.1986		
.00	.5177					10.00	-1.1433		
.31	-.4695					15.00	-1.0630		
.63	-.7715					17.50	-1.0441		
1.25	-1.0850					20.00	-.9661		
2.50	-1.2455					30.00	-.7938		
3.13	-1.2487					40.00	-.4096		
4.37	-1.2497					50.00	-.4234		
5.00	-1.2431					60.00	-.4375		
6.25	-1.1975					70.00	-.3915		
8.75	-1.2024					80.00	-.3561		
10.00	-1.1799					90.00	-.3025		
12.50	-1.1551					100.00	-.2167		
15.00	-1.1087					110.00	-.1581		
17.50	-1.0486					241.85	-.0405		
20.00	-1.0130								
30.00	-.9208								
40.00	-.4205								
50.00	-.4086								
60.00	-.4414								
70.00	-.3915								
80.00	-.3606								
90.00	-.3070								
100.00	-.2226								
110.00	-.1662								
241.85	-.0450								
279.84	-.0364								

$M = 0.794$; mfr $= 0.615$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9413	343.16	-.0078	279.84	-.0273	-187.46	.9411	343.16	.0001
-155.11	.9375	381.14	.0015			-106.57	.8614	381.14	.0022
-130.84	.9120	419.13	.0115			-25.67	.4974	419.13	.0172
-106.57	.8604	457.12	.0310			-10.27	.6776	457.12	.0278
-90.39	.8139	507.77	.0716			-2.05	1.1171	507.77	.0698
-74.21	.7508	545.76	.1218			.00	.6562	545.76	.1218
-58.03	.6702	571.08	.1819			.31	-.1882	571.08	.1847
-41.85	.5809	583.74	.2264			.63	-.4354	583.74	.2339
-33.76	.5374	596.41	.2812			1.25	-.8932	596.41	.2911
-25.67	.4974	609.07	.3520			1.88	-1.0478	609.07	.3644
-23.11	.4927					2.50	-1.1332		
-17.97	.5268					3.13	-1.1522		
-10.27	.6839					3.75	-1.1403		
-5.13	.9166					4.37	-1.1070		
-3.34	1.0369					5.00	-1.0655		
-2.05	1.1251					6.25	-1.0371		
-.90	1.1655					7.50	-.9941		
-.44	1.1370					8.75	-.9545		
.00	.6747					10.00	-.9294		
.31	-.2602					15.00	-.8301		
.63	-.5449					17.50	-.7710		
1.25	-.8833					20.00	-.6835		
2.50	-1.0767					30.00	-.5874		
3.13	-1.0774					40.00	-.4916		
4.37	-1.0163					50.00	-.4920		
5.00	-1.0441					60.00	-.4341		
6.25	-.9872					70.00	-.3975		
8.75	-.9522					80.00	-.3506		
10.00	-.9687					90.00	-.2978		
12.50	-.8788					100.00	-.2095		
15.00	-.8509					110.00	-.1591		
17.50	-.8020					241.85	-.0409		
20.00	-.7009								
30.00	-.5022								
40.00	-.5053								
50.00	-.4832								
60.00	-.4576								
70.00	-.3892								
80.00	-.3495								
90.00	-.2973								
100.00	-.2204								
110.00	-.1607								
241.85	-.0425								
279.84	-.0343								

Table IV. Continued

(f) Concluded

$M = 0.793$; mfr $= 0.737$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.8279	343.16	.0007	279.84	-.0213	-187.46	.8271	343.16	.0238
-155.11	.8227	381.14	.0103			-106.57	.7011	381.14	.0224
-130.84	.7774	419.13	.0213			-25.67	.0082	419.13	.0427
-106.57	.7020	457.12	.0445			-10.27	.2776	457.12	.0573
-90.39	.6256	507.77	.0861			-2.05	.9563	507.77	.1010
-74.21	.5185	545.76	.1445			.00	.9294	545.76	.1526
-58.03	.3807	571.08	.2113			.31	.2434	571.08	.2181
-41.85	.2139	583.74	.2584			.63	-.0312	583.74	.2627
-33.76	.1174	596.41	.3107			1.25	-.3876	596.41	.3139
-25.67	.0102	609.07	.3794			1.88	-.5713	609.07	.3869
-23.11	-.0220					2.50	-.5109		
-17.97	.0075					3.13	-.5137		
-10.27	.2815					3.75	-.4341		
-5.13	.6013					4.37	-.4368		
-3.34	.8017					5.00	-.4569		
-2.05	.9788					6.25	-.4989		
-.90	1.1289					7.50	-.5807		
-.44	1.1639					8.75	-.5828		
.00	.9278					10.00	-.4995		
.31	.1783					15.00	-.5255		
.63	-.0470					17.50	-.5090		
1.25	-.3164					20.00	-.5078		
2.50	-.4760					30.00	-.4924		
3.13	-.5212					40.00	-.4286		
4.37	-.5437					50.00	-.4357		
5.00	-.4707					60.00	-.4002		
6.25	-.4890					70.00	-.3710		
8.75	-.6339					80.00	-.3327		
10.00	-.6676					90.00	-.2752		
12.50	-.4865					100.00	-.1928		
15.00	-.5170					110.00	-.1402		
17.50	-.5041					241.85	-.0267		
20.00	-.4952								
30.00	-.4728								
40.00	-.4549								
50.00	-.4360								
60.00	-.4072								
70.00	-.3327								
80.00	-.3271								
90.00	-.2729								
100.00	-.2083								
110.00	-.1286								
241.85	-.0333								
279.84	-.0197								

$M = 0.793$; mfr $= 0.802$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.7423	343.16	.0140	279.84	-.0131	-187.46	.7396	343.16	.0236
-155.11	.7305	381.14	.0240			-106.57	.5798	381.14	.0254
-130.84	.6743	419.13	.0375			-25.67	-.6951	419.13	.0407
-106.57	.5815	457.12	.0620			-10.27	-.0777	457.12	.0563
-90.39	.4779	507.77	.1052			-2.05	.8088	507.77	.0995
-74.21	.3365	545.76	.1561			.00	1.0214	545.76	.1579
-58.03	.1457	571.08	.2202			.31	.4891	571.08	.2234
-41.85	-.1261	583.74	.2604			.63	.1988	583.74	.2693
-33.76	-.2685	596.41	.3127			1.25	-.1531	596.41	.3216
-25.67	-.6951	609.07	.3796			1.88	-.2688	609.07	.3896
-23.11	-.6769					2.50	-.3304		
-17.97	-.4707					3.13	-.3218		
-10.27	-.0534					3.75	-.2721		
-5.13	.3368					4.37	-.3124		
-3.34	.5742					5.00	-.2524		
-2.05	.8166					6.25	-.3272		
-.90	1.0461					7.50	-.3652		
-.44	1.1347					8.75	-.3950		
.00	1.0519					10.00	-.3604		
.31	.4266					15.00	-.3883		
.63	.2050					17.50	-.4297		
1.25	-.0535					20.00	-.4045		
2.50	-.2093					30.00	-.4368		
3.13	-.2391					40.00	-.3923		
4.37	-.2704					50.00	-.4211		
5.00	-.2847					60.00	-.3757		
6.25	-.2637					70.00	-.3588		
8.75	-.4317					80.00	-.3131		
10.00	-.3945					90.00	-.2737		
12.50	-.3612					100.00	-.1838		
15.00	-.3835					110.00	-.1386		
17.50	-.3854					241.85	-.0288		
20.00	-.4016								
30.00	-.4152								
40.00	-.4053								
50.00	-.3889								
60.00	-.3954								
70.00	-.3276								
80.00	-.3177								
90.00	-.2598								
100.00	-.1989								
110.00	-.1286								
241.85	-.0391								
279.84	-.0226								

Table IV. Continued

(g) $M = 0.82$

$M = 0.817$; mfr $= 0.270$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1369	343.16	-.0451	279.84	-.0555	-187.46	1.1352	343.16	-.0351
-155.11	1.1362	381.14	-.0444			-106.57	1.1242	381.14	-.0441
-130.84	1.1308	419.13	-.0448			-25.67	1.0961	419.13	-.0413
-106.57	1.1241	457.12	-.0400			-10.27	1.1617	457.12	-.0434
-90.39	1.1160	507.77	-.0324			-2.05	1.0612	507.77	-.0358
-74.21	1.1065	545.76	-.0265			.00	-.1550	545.76	-.0286
-58.03	1.0957	571.08	-.0038			.31	-1.1724	571.08	-.0104
-41.85	1.0910	583.74	.0134			.63	-1.2923	583.74	.0130
-33.76	1.0904	596.41	.0364			1.25	-1.5709	596.41	.0388
-25.67	1.0995	609.07	.0846			1.88	-1.6491	609.07	.0914
-23.11	1.1021					2.50	-1.7053		
-17.97	1.1188					3.13	-1.7079		
-10.27	1.1625					3.75	-1.7045		
-5.13	1.1744					4.37	-1.6852		
-3.34	1.1401					5.00	-1.6825		
-2.05	1.0605					6.25	-1.6650		
-.90	.8494					7.50	-1.6394		
-.44	.6737					8.75	-1.6149		
.00	-.2294					10.00	-1.6059		
.31	-1.1645					15.00	-1.5331		
.63	-1.3971					17.50	-1.4829		
1.25	-1.6107					20.00	-1.4516		
2.50	-1.6833					30.00	-1.3319		
3.13	-1.7084					40.00	-1.2489		
4.37	-1.6843					50.00	-1.1788		
5.00	-1.6833					60.00	-1.0916		
6.25	-1.6585					70.00	-.6105		
8.75	-1.6242					80.00	-.5293		
10.00	-1.5934					90.00	-.4589		
12.50	-1.5564					100.00	-.2897		
15.00	-1.5335					110.00	-.1842		
17.50	-1.4934					241.85	-.0547		
20.00	-1.4655								
30.00	-1.3297								
40.00	-1.2564								
50.00	-1.1797								
60.00	-.8643								
70.00	-.5907								
80.00	-.5483								
90.00	-.4556								
100.00	-.3667								
110.00	-.2833								
241.85	-.0579								
279.84	-.0503								

$M = 0.818$; mfr $= 0.324$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1210	343.16	-.0414	279.84	-.0533	-187.46	1.1175	343.16	-.0307
-155.11	1.1187	381.14	-.0359			-106.57	1.1012	381.14	-.0352
-130.84	1.1106	419.13	-.0324			-25.67	1.0490	419.13	-.0280
-106.57	1.0998	457.12	-.0225			-10.27	1.1350	457.12	-.0293
-90.39	1.0879	507.77	-.0063			-2.05	1.1100	507.77	-.0122
-74.21	1.0762	545.76	.0132			.00	-.0027	545.76	.0043
-58.03	1.0597	571.08	.0466			.31	-1.0380	571.08	.0407
-41.85	1.0472	583.74	.0716			.63	-1.1901	583.74	.0702
-33.76	1.0437	596.41	.1073			1.25	-1.4714	596.41	.1087
-25.67	1.0497	609.07	.1699			1.88	-1.5716	609.07	.1754
-23.11	1.0539					2.50	-1.6277		
-17.97	1.0762					3.13	-1.6207		
-10.27	1.1327					3.75	-1.6312		
-5.13	1.1785					4.37	-1.6017		
-3.34	1.1654					5.00	-1.5957		
-2.05	1.1089					6.25	-1.5696		
-.90	.9407					7.50	-1.5600		
-.44	.7653					8.75	-1.5406		
.00	-.0330					10.00	-1.5223		
.31	-1.0717					15.00	-1.4584		
.63	-1.2884					17.50	-1.4132		
1.25	-1.5034					20.00	-1.3812		
2.50	-1.5846					30.00	-1.2614		
3.13	-1.6083					40.00	-1.1990		
4.37	-1.5964					50.00	-1.1209		
5.00	-1.6062					60.00	-1.0388		
6.25	-1.5700					70.00	-.5967		
8.75	-1.5440					80.00	-.4176		
10.00	-1.5034					90.00	-.3430		
12.50	-1.4756					100.00	-.1913		
15.00	-1.4334					110.00	-.0893		
17.50	-1.4085					241.85	-.0529		
20.00	-1.3763								
30.00	-1.2627								
40.00	-1.1822								
50.00	-1.1113								
60.00	-1.0751								
70.00	-.5800								
80.00	-.4286								
90.00	-.3227								
100.00	-.1946								
110.00	-.1010								
241.85	-.0572								
279.84	-.0517								

Table IV. Continued

(g) Continued

$M = 0.819$; mfr $= 0.406$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0853	343.16	-.0297	279.84	-.0487	-187.46	1.0856	343.16	-.0208
-155.11	1.0853	381.14	-.0204			-106.57	1.0534	381.14	-.0225
-130.84	1.0749	419.13	-.0136			-25.67	.9508	419.13	-.0136
-106.57	1.0530	457.12	.0012			-10.27	1.0712	457.12	-.0070
-90.39	1.0389	507.77	.0266			-2.05	1.1590	507.77	.0191
-74.21	1.0137	545.76	.0606			.00	.2107	545.76	.0513
-58.03	.9888	571.08	.1062			.31	-.8361	571.08	.0990
-41.85	.9619	583.74	.1419			.63	-.9986	583.74	.1412
-33.76	.9534	596.41	.1868			1.25	-1.3049	596.41	.1892
-25.67	.9584	609.07	.2564			1.88	-1.4138	609.07	.2626
-23.11	.9576					2.50	-1.4952		
-17.97	.9833					3.13	-1.4875		
-10.27	1.0720					3.75	-1.4872		
-5.13	1.1623					4.37	-1.4622		
-3.34	1.1778					5.00	-1.4671		
-2.05	1.1584					6.25	-1.4237		
-.90	1.0392					7.50	-1.4329		
-.44	.9010					8.75	-1.4107		
.00	.1475					10.00	-1.3828		
.31	-.8837					15.00	-1.3098		
.63	-1.1159					17.50	-1.2795		
1.25	-1.3279					20.00	-1.2347		
2.50	-1.4642					30.00	-1.1237		
3.13	-1.4716					40.00	-1.0952		
4.37	-1.4831					50.00	-1.0048		
5.00	-1.4631					60.00	-.9505		
6.25	-1.4331					70.00	-.4015		
8.75	-1.4148					80.00	-.2720		
10.00	-1.3898					90.00	-.1869		
12.50	-1.3641					100.00	-.1371		
15.00	-1.3037					110.00	-.1033		
17.50	-1.2663					241.85	-.0530		
20.00	-1.2419								
30.00	-1.1666								
40.00	-1.0830								
50.00	-1.0395								
60.00	-.9669								
70.00	-.4156								
80.00	-.2944								
90.00	-.2105								
100.00	-.1336								
110.00	-.1077								
241.85	-.0467								
279.84	-.0399								

$M = 0.819$; mfr $= 0.456$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0621	343.16	-.0212	279.84	-.0430	-187.46	1.0574	343.16	-.0126
-155.11	1.0617	381.14	-.0122			-106.57	1.0222	381.14	-.0140
-130.84	1.0469	419.13	-.0057			-25.67	.8736	419.13	-.0037
-106.57	1.0200	457.12	.0121			-10.27	1.0077	457.12	.0063
-90.39	.9985	507.77	.0454			-2.05	1.1763	507.77	.0365
-74.21	.9689	545.76	.0832			.00	.3263	545.76	.0784
-58.03	.9339	571.08	.1384			.31	-.7035	571.08	.1316
-41.85	.8969	583.74	.1770			.63	-.8568	583.74	.1763
-33.76	.8835	596.41	.2257			1.25	-1.1962	596.41	.2288
-25.67	.8736	609.07	.2950			1.88	-1.3121	609.07	.3012
-23.11	.8774					2.50	-1.4057		
-17.97	.9005					3.13	-1.4104		
-10.27	1.0066					3.75	-1.3981		
-5.13	1.1347					4.37	-1.3882		
-3.34	1.1728					5.00	-1.3738		
-2.05	1.1744					6.25	-1.3624		
-.90	1.0917					7.50	-1.3391		
-.44	.9721					8.75	-1.3073		
.00	.2985					10.00	-1.2969		
.31	-.7741					15.00	-1.2019		
.63	-.9444					17.50	-1.1935		
1.25	-1.2404					20.00	-1.1589		
2.50	-1.3839					30.00	-1.0407		
3.13	-1.3883					40.00	-.9974		
4.37	-1.3632					50.00	-.9419		
5.00	-1.3815					60.00	-.6647		
6.25	-1.3446					70.00	-.3153		
8.75	-1.3172					80.00	-.2420		
10.00	-1.2715					90.00	-.2112		
12.50	-1.2529					100.00	-.1648		
15.00	-1.2466					110.00	-.1302		
17.50	-1.2035					241.85	-.0474		
20.00	-1.1672								
30.00	-1.0912								
40.00	-1.0265								
50.00	-.9674								
60.00	-.6612								
70.00	-.3172								
80.00	-.2374								
90.00	-.2220								
100.00	-.1652								
110.00	-.1293								
241.85	-.0474								
279.84	-.0386								

Table IV. Continued

(g) Continued

$M = 0.820$; mfr $= 0.495$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0401	343.16	-.0142	279.84	-.0412	-187.46	1.0399	343.16	-.0070
-155.11	1.0371	381.14	-.0042			-106.57	.9921	381.14	-.0073
-130.84	1.0196	419.13	.0033			-25.67	.8079	419.13	.0060
-106.57	.9938	457.12	.0202			-10.27	.9475	457.12	.0137
-90.39	.9645	507.77	.0565			-2.05	1.1771	507.77	.0517
-74.21	.9286	545.76	.0997			.00	.4177	545.76	.0956
-58.03	.8848	571.08	.1573			.31	-.4756	571.08	.1542
-41.85	.8439	583.74	.1963			.63	-.7532	583.74	.2011
-33.76	.8185	596.41	.2491			1.25	-1.0864	596.41	.2546
-25.67	.8072	609.07	.3177			1.88	-1.2443	609.07	.3304
-23.11	.8068					2.50	-1.3249		
-17.97	.8333					3.13	-1.3528		
-10.27	.9509					3.75	-1.3165		
-5.13	1.1019					4.37	-1.2950		
-3.34	1.1499					5.00	-1.2945		
-2.05	1.1769					6.25	-1.2732		
-.90	1.1269					7.50	-1.2509		
-.44	1.0236					8.75	-1.2360		
.00	.4091					10.00	-1.2027		
.31	-.5885					15.00	-1.1460		
.63	-.8217					17.50	-1.1054		
1.25	-1.1220					20.00	-1.1001		
2.50	-1.2980					30.00	-.9783		
3.13	-1.3071					40.00	-.8636		
4.37	-1.3000					50.00	-.8731		
5.00	-1.2892					60.00	-.4164		
6.25	-1.2362					70.00	-.2730		
8.75	-1.2422					80.00	-.2703		
10.00	-1.2031					90.00	-.2403		
12.50	-1.1666					100.00	-.1803		
15.00	-1.1369					110.00	-.1359		
17.50	-1.1149					241.85	-.0456		
20.00	-1.1037								
30.00	-.9953								
40.00	-.9604								
50.00	-.8750								
60.00	-.4511								
70.00	-.2783								
80.00	-.2440								
90.00	-.2402								
100.00	-.1874								
110.00	-.1483								
241.85	-.0472								
279.84	-.0325								

$M = 0.819$; mfr $= 0.544$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0101	343.16	-.0100	279.84	-.0331	-187.46	1.0106	343.16	-.0028
-155.11	1.0067	381.14	-.0021			-106.57	.9526	381.14	-.0021
-130.84	.9865	419.13	.0083			-25.67	.7007	419.13	.0135
-106.57	.9502	457.12	.0255			-10.27	.8590	457.12	.0244
-90.39	.9149	507.77	.0642			-2.05	1.1708	507.77	.0649
-74.21	.8697	545.76	.1147			.00	.5515	545.76	.1161
-58.03	.8146	571.08	.1771			.31	-.3504	571.08	.1792
-41.85	.7560	583.74	.2214			.63	-.6296	583.74	.2262
-33.76	.7269	596.41	.2739			1.25	-.9814	596.41	.2849
-25.67	.7129	609.07	.3443			1.88	-1.1248	609.07	.3560
-23.11	.7042					2.50	-1.2307		
-17.97	.7390					3.13	-1.2108		
-10.27	.8780					3.75	-1.2163		
-5.13	1.0482					4.37	-1.2167		
-3.34	1.1171					5.00	-1.1809		
-2.05	1.1747					6.25	-1.1176		
-.90	1.1576					7.50	-1.1592		
-.44	1.0773					8.75	-1.1097		
.00	.5013					10.00	-1.0995		
.31	-.4793					15.00	-1.0338		
.63	-.7006					17.50	-1.0296		
1.25	-1.0084					20.00	-1.0308		
2.50	-1.1749					30.00	-.9194		
3.13	-1.1969					40.00	-.6256		
4.37	-1.2182					50.00	-.5933		
5.00	-1.1441					60.00	-.3238		
6.25	-1.1002					70.00	-.3245		
8.75	-1.1360					80.00	-.3333		
10.00	-1.0924					90.00	-.2854		
12.50	-1.0443					100.00	-.1994		
15.00	-1.0225					110.00	-.1546		
17.50	-.9739					241.85	-.0450		
20.00	-.9686								
30.00	-.8576								
40.00	-.8484								
50.00	-.7405								
60.00	-.3433								
70.00	-.3337								
80.00	-.3127								
90.00	-.2832								
100.00	-.2105								
110.00	-.1569								
241.85	-.0418								
279.84	-.0311								

Table IV. Continued

(g) Continued

$M = 0.819$; mfr $= 0.615$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9583	343.16	-.0081	279.84	-.0230	-187.46	.9556	343.16	.0025
-155.11	.9529	381.14	.0032			-106.57	.8803	381.14	.0073
-130.84	.9253	419.13	.0183			-25.67	.5200	419.13	.0241
-106.57	.8786	457.12	.0416			-10.27	.7122	457.12	.0382
-90.39	.8301	507.77	.0831			-2.05	1.1362	507.77	.0807
-74.21	.7693	545.76	.1345			.00	.7056	545.76	.1356
-58.03	.6892	571.08	.2021			.31	-.1470	571.08	.2025
-41.85	.6065	583.74	.2446			.63	-.3794	583.74	.2515
-33.76	.5635	596.41	.2985			1.25	-.8140	596.41	.3098
-25.67	.5192	609.07	.3719			1.88	-.9496	609.07	.3822
-23.11	.5071					2.50	-1.0351		
-17.97	.5483					3.13	-1.0482		
-10.27	.7065					3.75	-1.0419		
-5.13	.9460					4.37	-1.0419		
-3.34	1.0452					5.00	-.9770		
-2.05	1.1366					6.25	-.9515		
-.90	1.1791					7.50	-.9891		
-.44	1.1493					8.75	-.9515		
.00	.6822					10.00	-.8869		
.31	-.2117					15.00	-.8671		
.63	-.4902					17.50	-.8113		
1.25	-.8371					20.00	-.7733		
2.50	-.9588					30.00	-.6332		
3.13	-.9767					40.00	-.5348		
4.37	-.9895					50.00	-.4558		
5.00	-.9926					60.00	-.4592		
6.25	-.9243					70.00	-.4224		
8.75	-.9710					80.00	-.3646		
10.00	-.9321					90.00	-.2951		
12.50	-.8780					100.00	-.2074		
15.00	-.8347					110.00	-.1516		
17.50	-.7944					241.85	-.0326		
20.00	-.7673								
30.00	-.7613								
40.00	-.6306								
50.00	-.4561								
60.00	-.4539								
70.00	-.4076								
80.00	-.3529								
90.00	-.3012								
100.00	-.2146								
110.00	-.1542								
241.85	-.0357								
279.84	-.0234								

$M = 0.818$; mfr $= 0.737$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.8446	343.16	.0048	279.84	-.0156	-187.46	.8422	343.16	.0140
-155.11	.8379	381.14	.0161			-106.57	.7169	381.14	.0185
-130.84	.7952	419.13	.0319			-25.67	.0076	419.13	.0374
-106.57	.7192	457.12	.0549			-10.27	.2839	457.12	.0542
-90.39	.6425	507.77	.1012			-2.05	.9603	507.77	.1029
-74.21	.5396	545.76	.1602			.00	.9666	545.76	.1602
-58.03	.3984	571.08	.2267			.31	.2638	571.08	.2277
-41.85	.2054	583.74	.2703			.63	.0332	583.74	.2799
-33.76	.1264	596.41	.3238			1.25	-.3593	596.41	.3348
-25.67	.0023	609.07	.3910			1.88	-.5358	609.07	.4030
-23.11	-.0057					2.50	-.5432		
-17.97	.0318					3.13	-.4585		
-10.27	.3024					3.75	-.5793		
-5.13	.6158					4.37	-.4220		
-3.34	.8308					5.00	-.4137		
-2.05	.9654					6.25	-.4316		
-.90	1.1442					7.50	-.5208		
-.44	1.1787					8.75	-.5286		
.00	.9429					10.00	-.5451		
.31	.1805					15.00	-.4953		
.63	-.0616					17.50	-.5117		
1.25	-.2888					20.00	-.5143		
2.50	-.4863					30.00	-.5307		
3.13	-.5177					40.00	-.4782		
4.37	-.4295					50.00	-.4513		
5.00	-.4268					60.00	-.4345		
6.25	-.5015					70.00	-.3848		
8.75	-.5715					80.00	-.3464		
10.00	-.6215					90.00	-.2727		
12.50	-.5089					100.00	-.1937		
15.00	-.5960					110.00	-.1356		
17.50	-.4795					241.85	-.0212		
20.00	-.4989								
30.00	-.5519								
40.00	-.4728								
50.00	-.4677								
60.00	-.4431								
70.00	-.3662								
80.00	-.3341								
90.00	-.2757								
100.00	-.1954								
110.00	-.1374								
241.85	-.0260								
279.84	-.0121								

Table IV. Continued

(g) Concluded

$M = 0.820$; mfr = 0.800; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.7567	343.16	.0105	279.84	-.0075	-187.46	.7515	343.16	.0222
-155.11	.7393	381.14	.0246			-106.57	.5967	381.14	.0263
-130.84	.6900	419.13	.0393			-25.67	-.6684	419.13	.0441
-106.57	.5956	457.12	.0646			-10.27	-.0454	457.12	.0619
-90.39	.4977	507.77	.1108			-2.05	.8207	507.77	.1091
-74.21	.3611	545.76	.1673			.00	1.0428	545.76	.1701
-58.03	.1685	571.08	.2341			.31	.4460	571.08	.2378
-41.85	-.0858	583.74	.2775			.63	.2318	583.74	.2857
-33.76	-.7529	596.41	.3289			1.25	-.0850	596.41	.3408
-25.67	-.6779	609.07	.3970			1.88	-.2434	609.07	.4090
-23.11	-.6293					2.50	-.2756		
-17.97	-.4143					3.13	-.2502		
-10.27	-.0341					3.75	-.2544		
-5.13	.4193					4.37	-.1960		
-3.34	.6452					5.00	-.2673		
-2.05	.8462					6.25	-.2818		
-.90	1.0856					7.50	-.3912		
-.44	1.1545					8.75	-.3581		
.00	1.0758					10.00	-.3355		
.31	.4493					15.00	-.3912		
.63	.1896					17.50	-.4421		
1.25	-.0020					20.00	-.4197		
2.50	-.1930					30.00	-.4698		
3.13	-.3117					40.00	-.4300		
4.37	-.2743					50.00	-.4379		
5.00	-.2561					60.00	-.4132		
6.25	-.3164					70.00	-.3685		
8.75	-.5303					80.00	-.3291		
10.00	-.3616					90.00	-.2669		
12.50	-.3975					100.00	-.1801		
15.00	-.4166					110.00	-.1251		
17.50	-.4255					241.85	-.0219		
20.00	-.4308								
30.00	-.4491								
40.00	-.4288								
50.00	-.4369								
60.00	-.4217								
70.00	-.3586								
80.00	-.3205								
90.00	-.2702								
100.00	-.1877								
110.00	-.1332								
241.85	-.0211								
279.84	-.0075								

Table IV. Continued

(h) $M = 0.84$

$M = 0.843$; mfr $= 0.266$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1501	343.16	-.0343	279.84	-.0387	-187.46	1.1506	343.16	-.0283
-155.11	1.1514	381.14	-.0353			-106.57	1.1377	381.14	-.0353
-130.84	1.1442	419.13	-.0366			-25.67	1.1107	419.13	-.0346
-106.57	1.1371	457.12	-.0330			-10.27	1.1736	457.12	-.0379
-90.39	1.1293	507.77	-.0220			-2.05	1.0795	507.77	-.0273
-74.21	1.1221	545.76	-.0078			.00	-.0901	545.76	-.0180
-58.03	1.1101	571.08	.0141			.31	-1.0730	571.08	.0088
-41.85	1.1039	583.74	.0310			.63	-1.1931	583.74	.0324
-33.76	1.1041	596.41	.0569			1.25	-1.4562	596.41	.0596
-25.67	1.1121	609.07	.1104			1.88	-1.5464	609.07	.1160
-23.11	1.1158					2.50	-1.5940		
-17.97	1.1333					3.13	-1.5966		
-10.27	1.1725					3.75	-1.5973		
-5.13	1.1897					4.37	-1.5897		
-3.34	1.1521					5.00	-1.5723		
-2.05	1.0699					6.25	-1.5506		
-.90	.8824					7.50	-1.5389		
-.44	.6792					8.75	-1.5280		
.00	-.1384					10.00	-1.5032		
.31	-1.0776					15.00	-1.4379		
.63	-1.2918					17.50	-1.3992		
1.25	-1.4918					20.00	-1.3775		
2.50	-1.5821					30.00	-1.2482		
3.13	-1.5949					40.00	-1.1909		
4.37	-1.5857					50.00	-1.1186		
5.00	-1.5841					60.00	-1.0788		
6.25	-1.5514					70.00	-1.0348		
8.75	-1.5160					80.00	-.6273		
10.00	-1.5052					90.00	-.5065		
12.50	-1.4676					100.00	-.4517		
15.00	-1.4348					110.00	-.4054		
17.50	-1.4088					241.85	-.0314		
20.00	-1.3751								
30.00	-1.2423								
40.00	-1.1912								
50.00	-1.1279								
60.00	-1.0895								
70.00	-.9308								
80.00	-.5484								
90.00	-.4972								
100.00	-.4503								
110.00	-.4438								
241.85	-.0245								
279.84	-.0395								

$M = 0.841$; mfr $= 0.273$; $\alpha = 1.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1492	343.16	-.0230	279.84	-.0403	-187.46	1.1487	343.16	-.0323
-155.11	1.1489	381.14	-.0257			-106.57	1.1358	381.14	-.0360
-130.84	1.1447	419.13	-.0317			-25.67	1.1021	419.13	-.0307
-106.57	1.1368	457.12	-.0283			-10.27	1.1670	457.12	-.0317
-90.39	1.1310	507.77	-.0200			-2.05	1.0933	507.77	-.0227
-74.21	1.1215	545.76	-.0117			.00	-.0399	545.76	-.0097
-58.03	1.1127	571.08	.0052			.31	-1.0292	571.08	.0162
-41.85	1.1082	583.74	.0142			.63	-1.1531	583.74	.0421
-33.76	1.1116	596.41	.0328			1.25	-1.4162	596.41	.0777
-25.67	1.1179	609.07	.0787			1.88	-1.5146	609.07	.1396
-23.11	1.1212					2.50	-1.5591		
-17.97	1.1391					3.13	-1.5633		
-10.27	1.1780					3.75	-1.5591		
-5.13	1.1824					4.37	-1.5491		
-3.34	1.1405					5.00	-1.5377		
-2.05	1.0500					6.25	-1.5157		
-.90	.8529					7.50	-1.4873		
-.44	.6292					8.75	-1.4854		
.00	-.2390					10.00	-1.4457		
.31	-1.1255					15.00	-1.3768		
.63	-1.3395					17.50	-1.3448		
1.25	-1.5328					20.00	-1.3058		
2.50	-1.6351					30.00	-1.2173		
3.13	-1.6388					40.00	-1.1352		
4.37	-1.6325					50.00	-1.0693		
5.00	-1.5502					60.00	-1.0189		
6.25	-1.6070					70.00	-1.0008		
8.75	-1.5827					80.00	-.8852		
10.00	-1.5647					90.00	-.5692		
12.50	-1.5253					100.00	-.3616		
15.00	-1.4961					110.00	-.3575		
17.50	-1.4434					241.85	-.0442		
20.00	-1.4374								
30.00	-1.3326								
40.00	-1.2188								
50.00	-.9662								
60.00	-.7133								
70.00	-.6421								
80.00	-.6149								
90.00	-.5592								
100.00	-.5627								
110.00	-.4861								
241.85	-.0161								
279.84	-.0291								

Table IV. Continued

(h) Continued

$M = 0.844$; mfr $= 0.323$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1321	343.16	-.0360	279.84	-.0395	-187.46	1.1336	343.16	-.0230
-155.11	1.1324	381.14	-.0293			-106.57	1.1131	381.14	-.0273
-130.84	1.1256	419.13	-.0254			-25.67	1.0611	419.13	-.0184
-106.57	1.1139	457.12	-.0161			-10.27	1.1471	457.12	-.0184
-90.39	1.1025	507.77	.0038			-2.05	1.1255	507.77	-.0025
-74.21	1.0895	545.76	.0254			.00	.0499	545.76	.0187
-58.03	1.0745	571.08	.0619			.31	-.9523	571.08	.0573
-41.85	1.0628	583.74	.0878			.63	-1.0943	583.74	.0915
-33.76	1.0608	596.41	.1253			1.25	-1.3700	596.41	.1286
-25.67	1.0637	609.07	.1896			1.88	-1.4633	609.07	.1929
-23.11	1.0714					2.50	-1.5155		
-17.97	1.0893					3.13	-1.5140		
-10.27	1.1478					3.75	-1.5269		
-5.13	1.1891					4.37	-1.5017		
-3.34	1.1810					5.00	-1.4979		
-2.05	1.1215					6.25	-1.4660		
-.90	.9563					7.50	-1.4494		
-.44	.7866					8.75	-1.4423		
.00	-.0147					10.00	-1.4038		
.31	-.9901					15.00	-1.3505		
.63	-1.1997					17.50	-1.3285		
1.25	-1.4184					20.00	-1.2932		
2.50	-1.4939					30.00	-1.2003		
3.13	-1.5184					40.00	-1.1291		
4.37	-1.4998					50.00	-1.0699		
5.00	-1.5079					60.00	-1.0240		
6.25	-1.4563					70.00	-1.0067		
8.75	-1.4442					80.00	-.8352		
10.00	-1.4328					90.00	-.4748		
12.50	-1.3998					100.00	-.4263		
15.00	-1.3752					110.00	-.3176		
17.50	-1.3354					241.85	-.0357		
20.00	-1.3205								
30.00	-1.1876								
40.00	-1.1326								
50.00	-1.0856								
60.00	-1.0346								
70.00	-1.0045								
80.00	-.6054								
90.00	-.4628								
100.00	-.4230								
110.00	-.3461								
241.85	-.0372								
279.84	-.0364								

$M = 0.844$; mfr $= 0.406$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1005	343.16	-.0225	279.84	-.0345	-187.46	1.0997	343.16	-.0115
-155.11	1.0986	381.14	-.0142			-106.57	1.0690	381.14	-.0148
-130.84	1.0885	419.13	-.0085			-25.67	.9665	419.13	-.0036
-106.57	1.0693	457.12	.0067			-10.27	1.0811	457.12	.0017
-90.39	1.0537	507.77	.0336			-2.05	1.1762	507.77	.0322
-74.21	1.0326	545.76	.0718			.00	.2457	545.76	.0668
-58.03	1.0047	571.08	.1238			.31	-.7612	571.08	.1202
-41.85	.9793	583.74	.1599			.63	-.9054	583.74	.1609
-33.76	.9705	596.41	.2070			1.25	-1.2246	596.41	.2087
-25.67	.9698	609.07	.2756			1.88	-1.3244	609.07	.2826
-23.11	.9749					2.50	-1.3916		
-17.97	1.0005					3.13	-1.3921		
-10.27	1.0877					3.75	-1.3908		
-5.13	1.1727					4.37	-1.3726		
-3.34	1.1896					5.00	-1.3545		
-2.05	1.1735					6.25	-1.3343		
-.90	1.053					7.50	-1.3339		
-.44	.933					8.75	-1.3022		
.00	.1866					10.00	-1.2947		
.31	-.8126					15.00	-1.2213		
.63	-1.0348					17.50	-1.2161		
1.25	-1.2478					20.00	-1.1706		
2.50	-1.3720					30.00	-1.0898		
3.13	-1.3824					40.00	-1.0322		
4.37	-1.3661					50.00	-.9800		
5.00	-1.3664					60.00	-.9404		
6.25	-1.3292					70.00	-.9239		
8.75	-1.3092					80.00	-.7696		
10.00	-1.3099					90.00	-.3640		
12.50	-1.2896					100.00	-.2700		
15.00	-1.2375					110.00	-.1132		
17.50	-1.2203					241.85	-.0399		
20.00	-1.1785								
30.00	-1.0972								
40.00	-1.0222								
50.00	-1.0191								
60.00	-.9709								
70.00	-.9459								
80.00	-.6970								
90.00	-.3835								
100.00	-.2922								
110.00	-.1872								
241.85	-.0430								
279.84	-.0361								

Table IV. Continued

(h) Continued

$M = 0.844$; mfr $= 0.456$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0760	343.16	-.0138	279.84	-.0338	-187.46	1.0753	343.16	-.0091
-155.11	1.0740	381.14	-.0058			-106.57	1.0369	381.14	-.0098
-130.84	1.0601	419.13	-.0002			-25.67	.8963	419.13	.0041
-106.57	1.0363	457.12	.0167			-10.27	1.0236	457.12	.0134
-90.39	1.0126	507.77	.0519			-2.05	1.1869	507.77	.0473
-74.21	.9833	545.76	.0927			.00	.3775	545.76	.0910
-58.03	.9473	571.08	.1494			.31	-.6256	571.08	.1487
-41.85	.9157	583.74	.1895			.63	-.7828	583.74	.1938
-33.76	.9018	596.41	.2403			1.25	-1.0884	596.41	.2480
-25.67	.8999	609.07	.3096			1.88	-1.2288	609.07	.3222
-23.11	.8941					2.50	-1.3107		
-17.97	.9204					3.13	-1.3169		
-10.27	1.0298					3.75	-1.3114		
-5.13	1.1439					4.37	-1.2935		
-3.34	1.1850					5.00	-1.2828		
-2.05	1.1850					6.25	-1.2533		
-.90	1.1143					7.50	-1.2456		
-.44	.9792					8.75	-1.2449		
.00	.3174					10.00	-1.2052		
.31	-.6860					15.00	-1.1516		
.63	-.8681					17.50	-1.1295		
1.25	-1.1267					20.00	-1.1108		
2.50	-1.2849					30.00	-1.0091		
3.13	-1.2816					40.00	-.9720		
4.37	-1.2970					50.00	-.8993		
5.00	-1.2770					60.00	-.9044		
6.25	-1.2613					70.00	-.8732		
8.75	-1.2293					80.00	-.5625		
10.00	-1.2090					90.00	-.2892		
12.50	-1.1626					100.00	-.1496		
15.00	-1.1402					110.00	-.0817		
17.50	-1.1047					241.85	-.0407		
20.00	-1.1015								
30.00	-1.0178								
40.00	-.9736								
50.00	-.9067								
60.00	-.9065								
70.00	-.8809								
80.00	-.5238								
90.00	-.2973								
100.00	-.1556								
110.00	-.0963								
241.85	-.0419								
279.84	-.0338								

$M = 0.843$; mfr $= 0.497$; $\alpha = 0.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0507	343.16	-.0103	279.84	-.0325	-187.46	1.0528	343.16	-.0007
-155.11	1.0514	381.14	-.0017			-106.57	1.0044	381.14	-.0024
-130.84	1.0351	419.13	.0059			-25.67	.8213	419.13	.0089
-106.57	1.0068	457.12	.0275			-10.27	.9612	457.12	.0228
-90.39	.9795	507.77	.0637			-2.05	1.1879	507.77	.0588
-74.21	.9434	545.76	.1128			.00	.4467	545.76	.1099
-58.03	.8987	571.08	.1709			.31	-.4084	571.08	.1716
-41.85	.8542	583.74	.2131			.63	-.6820	583.74	.2204
-33.76	.8407	596.41	.2655			1.25	-1.0119	596.41	.2754
-25.67	.8282	609.07	.3353			1.88	-1.1506	609.07	.3489
-23.11	.8304					2.50	-1.2343		
-17.97	.8594					3.13	-1.2433		
-10.27	.9740					3.75	-1.2453		
-5.13	1.1128					4.37	-1.2357		
-3.34	1.1677					5.00	-1.2123		
-2.05	1.1896					6.25	-1.1877		
-.90	1.1358					7.50	-1.1697		
-.44	1.0416					8.75	-1.1601		
.00	.4127					10.00	-1.1219		
.31	-.5639					15.00	-1.0755		
.63	-.7769					17.50	-1.0465		
1.25	-1.0428					20.00	-1.0362		
2.50	-1.2067					30.00	-.9539		
3.13	-1.2342					40.00	-.8866		
4.37	-1.2188					50.00	-.8616		
5.00	-1.2011					60.00	-.8278		
6.25	-1.1848					70.00	-.8175		
8.75	-1.1616					80.00	-.4238		
10.00	-1.1328					90.00	-.2158		
12.50	-1.1207					100.00	-.1286		
15.00	-1.0803					110.00	-.0871		
17.50	-1.0687					241.85	-.0394		
20.00	-1.0416								
30.00	-.9551								
40.00	-.9143								
50.00	-.8619								
60.00	-.8660								
70.00	-.8260								
80.00	-.4078								
90.00	-.2201								
100.00	-.1360								
110.00	-.0856								
241.85	-.0371								
279.84	-.0309								

Table IV. Continued

(h) Continued

$M = 0.842$; mfr $= 0.495$; $\alpha = 1.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0522	343.16	.0002	279.84	-.0336	-187.46	1.0505	343.16	-.0128
-155.11	1.0512	381.14	.0035			-106.57	1.0035	381.14	-.0072
-130.84	1.0343	419.13	.0095			-25.67	.8077	419.13	.0085
-106.57	1.0050	457.12	.0267			-10.27	.9371	457.12	.0204
-90.39	.9796	507.77	.0620			-2.05	1.1866	507.77	.0577
-74.21	.9447	545.76	.1112			.00	.5017	545.76	.1066
-58.03	.9020	571.08	.1674			.31	-.3549	571.08	.1734
-41.85	.8606	583.74	.2079			.63	-.6275	583.74	.2202
-33.76	.8480	596.41	.2564			1.25	-.9552	596.41	.2787
-25.67	.8469	609.07	.3209			1.88	-1.0794	609.07	.3555
-23.11	.8436					2.50	-1.1926		
-17.97	.8766					3.13	-1.1943		
-10.27	.9910					3.75	-1.1967		
-5.13	1.1244					4.37	-1.1582		
-3.34	1.1778					5.00	-1.1654		
-2.05	1.1882					6.25	-1.1220		
-.90	1.1178					7.50	-1.1271		
-.44	1.0227					8.75	-1.0913		
.00	.3627					10.00	-1.0244		
.31	-.6350					15.00	-.9824		
.63	-.8670					17.50	-.9622		
1.25	-1.1323					20.00	-.9151		
2.50	-1.2709					30.00	-.8500		
3.13	-1.2922					40.00	-.8110		
4.37	-1.2942					50.00	-.7770		
5.00	-1.2837					60.00	-.7395		
6.25	-1.2577					70.00	-.7321		
8.75	-1.2138					80.00	-.3273		
10.00	-1.2125					90.00	-.2161		
12.50	-1.1968					100.00	-.1575		
15.00	-1.1632					110.00	-.1123		
17.50	-1.1546					241.85	-.0386		
20.00	-1.1320								
30.00	-1.0589								
40.00	-.9934								
50.00	-.9544								
60.00	-.9132								
70.00	-.8985								
80.00	-.4129								
90.00	-.2577								
100.00	-.1526								
110.00	-.0834								
241.85	-.0359								
279.84	-.0305								

$M = 0.841$; mfr $= 0.494$; $\alpha = 2.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0519	343.16	.0070	279.84	-.0370	-187.46	1.0521	343.16	-.0223
-155.11	1.0509	381.14	.0083			-106.57	1.0021	381.14	-.0100
-130.84	1.0343	419.13	.0153			-25.67	.7822	419.13	.0063
-106.57	1.0069	457.12	.0319			-10.27	.9140	457.12	.0180
-90.39	.9802	507.77	.0693			-2.05	1.1817	507.77	.0566
-74.21	.9472	545.76	.1132			.00	.5837	545.76	.1049
-58.03	.9097	571.08	.1664			.31	-.2400	571.08	.1678
-41.85	.8702	583.74	.1990			.63	-.5109	583.74	.2197
-33.76	.8626	596.41	.2426			1.25	-.8856	596.41	.2809
-25.67	.8571	609.07	.3052			1.88	-1.0018	609.07	.3628
-23.11	.8608					2.50	-1.0915		
-17.97	.8931					3.13	-1.1302		
-10.27	1.0080					3.75	-1.1147		
-5.13	1.1358					4.37	-1.0917		
-3.34	1.1812					5.00	-1.0491		
-2.05	1.1839					6.25	-1.0018		
-.90	1.1007					7.50	-1.0458		
-.44	.9793					8.75	-.9776		
.00	.3104					10.00	-.9368		
.31	-.7183					15.00	-.8789		
.63	-.9616					17.50	-.8531		
1.25	-1.2060					20.00	-.8233		
2.50	-1.3526					30.00	-.7355		
3.13	-1.3431					40.00	-.7061		
4.37	-1.3378					50.00	-.6755		
5.00	-1.3267					60.00	-.6538		
6.25	-1.3129					70.00	-.5915		
8.75	-1.2880					80.00	-.3567		
10.00	-1.2666					90.00	-.2735		
12.50	-1.2469					100.00	-.1861		
15.00	-1.2329					110.00	-.1364		
17.50	-1.2174					241.85	-.0405		
20.00	-1.1898								
30.00	-1.1141								
40.00	-1.0733								
50.00	-1.0328								
60.00	-1.0095								
70.00	-.6239								
80.00	-.4271								
90.00	-.3670								
100.00	-.3045								
110.00	-.2254								
241.85	-.0343								
279.84	-.0274								

Table IV. Continued

(h) Continued

$M = 0.842$; mfr $= 0.494$; $\alpha = 3.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0518	343.16	.0176	279.84	-.0459	-187.46	1.0495	343.16	-.0293
-155.11	1.0492	381.14	.0133			-106.57	1.0006	381.14	-.0114
-130.84	1.0339	419.13	.0162			-25.67	.7661	419.13	.0069
-106.57	1.0078	457.12	.0322			-10.27	.8839	457.12	.0186
-90.39	.9804	507.77	.0659			-2.05	1.1750	507.77	.0599
-74.21	.9481	545.76	.1104			.00	.6230	545.76	.1048
-58.03	.9139	571.08	.1590			.31	-.1949	571.08	.1703
-41.85	.8815	583.74	.1876			.63	-.4239	583.74	.2195
-33.76	.8732	596.41	.2302			1.25	-.8153	596.41	.2824
-25.67	.8754	609.07	.2827			1.88	-.9220	609.07	.3686
-23.11	.8776					2.50	-1.0289		
-17.97	.9173					3.13	-1.0499		
-10.27	1.0319					3.75	-1.0182		
-5.13	1.1542					4.37	-1.0184		
-3.34	1.1880					5.00	-.9574		
-2.05	1.1792					6.25	-.9323		
-.90	1.0794					7.50	-.9376		
-.44	.9573					8.75	-.9066		
.00	.2330					10.00	-.8067		
.31	-.7902					15.00	-.7500		
.63	-1.0459					17.50	-.7515		
1.25	-1.2701					20.00	-.6793		
2.50	-1.3918					30.00	-.6466		
3.13	-1.3901					40.00	-.6035		
4.37	-1.3891					50.00	-.5810		
5.00	-1.3862					60.00	-.5957		
6.25	-1.3688					70.00	-.5832		
8.75	-1.3603					80.00	-.4686		
10.00	-1.3256					90.00	-.2896		
12.50	-1.3121					100.00	-.1960		
15.00	-1.2931					110.00	-.1433		
17.50	-1.2735					241.85	-.0421		
20.00	-1.2566								
30.00	-1.1964								
40.00	-1.1232								
50.00	-.8715								
60.00	-.5830								
70.00	-.5515								
80.00	-.5057								
90.00	-.4706								
100.00	-.4047								
110.00	-.3542								
241.85	-.0332								
279.84	-.0205								

$M = 0.843$; mfr $= 0.545$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0229	343.16	-.0113	279.84	-.0223	-187.46	1.0222	343.16	.0043
-155.11	1.0220	381.14	.0003			-106.57	.9657	381.14	.0043
-130.84	.9999	419.13	.0123			-25.67	.7198	419.13	.0219
-106.57	.9657	457.12	.0318			-10.27	.8783	457.12	.0348
-90.39	.9299	507.77	.0741			-2.05	1.1829	507.77	.0780
-74.21	.8840	545.76	.1251			.00	.5532	545.76	.1271
-58.03	.8316	571.08	.1875			.31	-.2648	571.08	.1951
-41.85	.7718	583.74	.2333			.63	-.5686	583.74	.2442
-33.76	.7476	596.41	.2907			1.25	-.9028	596.41	.2993
-25.67	.7150	609.07	.3608			1.88	-1.0527	609.07	.3740
-23.11	.7190					2.50	-1.1343		
-17.97	.7516					3.13	-1.1454		
-10.27	.8907					3.75	-1.1490		
-5.13	1.0607					4.37	-1.1523		
-3.34	1.1399					5.00	-1.1129		
-2.05	1.1817					6.25	-1.0765		
-.90	1.1714					7.50	-1.0945		
-.44	1.0969					8.75	-1.0316		
.00	.5340					10.00	-1.0266		
.31	-.3856					15.00	-.9759		
.63	-.6364					17.50	-.9601		
1.25	-.9173					20.00	-.9571		
2.50	-1.0770					30.00	-.8660		
3.13	-1.1077					40.00	-.7888		
4.37	-1.0763					50.00	-.7958		
5.00	-1.0737					60.00	-.7458		
6.25	-1.0753					70.00	-.6907		
8.75	-1.0708					80.00	-.2770		
10.00	-1.0207					90.00	-.1953		
12.50	-1.0551					100.00	-.1501		
15.00	-.9745					110.00	-.1072		
17.50	-.9641					241.85	-.0312		
20.00	-.9105								
30.00	-.8363								
40.00	-.8227								
50.00	-.7879								
60.00	-.7801								
70.00	-.7340								
80.00	-.2819								
90.00	-.2021								
100.00	-.1477								
110.00	-.1020								
241.85	-.0373								
279.84	-.0262								

Table IV. Continued

(h) Continued

$M = 0.844$; mfr $= 0.615$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9731	343.16	-.0009	279.84	-.0277	-187.46	.9713	343.16	.0107
-155.11	.9698	381.14	.0101			-106.57	.8943	381.14	.0121
-130.84	.9439	419.13	.0243			-25.67	.5385	419.13	.0283
-106.57	.8954	457.12	.0461			-10.27	.7230	457.12	.0422
-90.39	.8474	507.77	.0941			-2.05	1.1497	507.77	.0898
-74.21	.7854	545.76	.1501			.00	.7307	545.76	.1498
-58.03	.7082	571.08	.2163			.31	-.0913	571.08	.2193
-41.85	.6203	583.74	.2633			.63	-.3287	583.74	.2712
-33.76	.5721	596.41	.3169			1.25	-.7265	596.41	.3278
-25.67	.5309	609.07	.3874			1.88	-.8843	609.07	.4010
-23.11	.5239					2.50	-.9704		
-17.97	.5677					3.13	-.9722		
-10.27	.7379					3.75	-.9722		
-5.13	.9412					4.37	-.9252		
-3.34	1.0608					5.00	-.9286		
-2.05	1.1458					6.25	-.8629		
-.90	1.1884					7.50	-.9363		
-.44	1.1589					8.75	-.8824		
.00	.6962					10.00	-.8373		
.31	-.1668					15.00	-.8013		
.63	-.4294					17.50	-.7870		
1.25	-.7420					20.00	-.7434		
2.50	-.8715					30.00	-.7027		
3.13	-.8996					40.00	-.6954		
4.37	-.8781					50.00	-.6452		
5.00	-.8826					60.00	-.6627		
6.25	-.8591					70.00	-.5660		
8.75	-.8614					80.00	-.3061		
10.00	-.8239					90.00	-.2478		
12.50	-.7985					100.00	-.1712		
15.00	-.8147					110.00	-.1269		
17.50	-.8145					241.85	-.0227		
20.00	-.7566								
30.00	-.7319								
40.00	-.6954								
50.00	-.6855								
60.00	-.6610								
70.00	-.6506								
80.00	-.3023								
90.00	-.2445								
100.00	-.1834								
110.00	-.1273								
241.85	-.0277								
279.84	-.0197								

$M = 0.842$; mfr $= 0.680$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9165	343.16	.0064	279.84	-.0178	-187.46	.9169	343.16	.0167
-155.11	.9133	381.14	.0187			-106.57	.8169	381.14	.0194
-130.84	.8783	419.13	.0317			-25.67	.3464	419.13	.0383
-106.57	.8185	457.12	.0592			-10.27	.5156	457.12	.0562
-90.39	.7566	507.77	.1067			-2.05	1.0690	507.77	.1027
-74.21	.6733	545.76	.1635			.00	.8396	545.76	.1645
-58.03	.5701	571.08	.2326			.31	.1090	571.08	.2346
-41.85	.4402	583.74	.2781			.63	-.1499	583.74	.2858
-33.76	.3786	596.41	.3312			1.25	-.5655	596.41	.3429
-25.67	.3119	609.07	.3983			1.88	-.7088	609.07	.4109
-23.11	.2841					2.50	-.7740		
-17.97	.3090					3.13	-.7828		
-10.27	.5318					3.75	-.8016		
-5.13	.7819					4.37	-.7245		
-3.34	.9511					5.00	-.7324		
-2.05	1.0779					6.25	-.7030		
-.90	1.1786					7.50	-.6777		
-.44	1.1855					8.75	-.5882		
.00	.8598					10.00	-.5762		
.31	.0122					15.00	-.6056		
.63	-.1595					17.50	-.6310		
1.25	-.4953					20.00	-.6210		
2.50	-.6566					30.00	-.6328		
3.13	-.6524					40.00	-.6232		
4.37	-.6762					50.00	-.6199		
5.00	-.6628					60.00	-.6078		
6.25	-.6190					70.00	-.4600		
8.75	-.5679					80.00	-.3018		
10.00	-.6550					90.00	-.2702		
12.50	-.6069					100.00	-.1842		
15.00	-.6369					110.00	-.1272		
17.50	-.6530					241.85	-.0267		
20.00	-.6392								
30.00	-.6137								
40.00	-.6082								
50.00	-.6065								
60.00	-.5848								
70.00	-.4685								
80.00	-.3244								
90.00	-.2743								
100.00	-.1905								
110.00	-.1349								
241.85	-.0247								
279.84	-.0120								

Table IV. Continued

(h) Continued

$M = 0.842$; mfr $= 0.677$; $\alpha = 1.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9177	343.16	.0199	279.84	-.0214	-187.46	.9148	343.16	.0073
-155.11	.9121	381.14	.0256			-106.57	.8167	381.14	.0173
-130.84	.8795	419.13	.0352			-25.67	.2652	419.13	.0375
-106.57	.8197	457.12	.0601			-10.27	.4424	457.12	.0545
-90.39	.7582	507.77	.1089			-2.05	1.0412	507.77	.1026
-74.21	.6814	545.76	.1663			.00	.9180	545.76	.1640
-58.03	.5816	571.08	.2344			.31	.1894	571.08	.2367
-41.85	.4696	583.74	.2775			.63	-.0399	583.74	.2848
-33.76	.4076	596.41	.3316			1.25	-.4077	596.41	.3455
-25.67	.3424	609.07	.3963			1.88	-.5489	609.07	.4192
-23.11	.3395					2.50	-.5936		
-17.97	.3783					3.13	-.6156		
-10.27	.5626					3.75	-.4911		
-5.13	.8693					4.37	-.5198		
-3.34	1.0095					5.00	-.4529		
-2.05	1.1028					6.25	-.4577		
-.90	1.1866					7.50	-.4995		
-.44	1.1785					8.75	-.4961		
.00	.8197					10.00	-.5139		
.31	-.0310					15.00	-.5804		
.63	-.3170					17.50	-.5624		
1.25	-.6326					20.00	-.5469		
2.50	-.7913					30.00	-.5054		
3.13	-.8341					40.00	-.5590		
4.37	-.7907					50.00	-.5455		
5.00	-.8358					60.00	-.5668		
6.25	-.8466					70.00	-.4720		
8.75	-.8518					80.00	-.3521		
10.00	-.7821					90.00	-.2808		
12.50	-.7265					100.00	-.1838		
15.00	-.7231					110.00	-.1335		
17.50	-.7108					241.85	-.0226		
20.00	-.7089								
30.00	-.7314								
40.00	-.6870								
50.00	-.6591								
60.00	-.6743								
70.00	-.5025								
80.00	-.2776								
90.00	-.2502								
100.00	-.1768								
110.00	-.1312								
241.85	-.0291								
279.84	-.0191								

$M = 0.844$; mfr $= 0.679$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9198	343.16	.0283	279.84	-.0218	-187.46	.9148	343.16	-.0051
-155.11	.9149	381.14	.0290			-106.57	.8147	381.14	.0137
-130.84	.8811	419.13	.0386			-25.67	.2341	419.13	.0353
-106.57	.8217	457.12	.0628			-10.27	.4154	457.12	.0548
-90.39	.7627	507.77	.1095			-2.05	.9926	507.77	.1049
-74.21	.6851	545.76	.1684			.00	.9682	545.76	.1641
-58.03	.5860	571.08	.2353			.31	.2827	571.08	.2340
-41.85	.4757	583.74	.2770			.63	.1135	583.74	.2866
-33.76	.4292	596.41	.3287			1.25	-.2614	596.41	.3489
-25.67	.3904	609.07	.3907			1.88	-.4146	609.07	.4241
-23.11	.3740					2.50	-.4894		
-17.97	.4084					3.13	-.3855		
-10.27	.6302					3.75	-.3721		
-5.13	.9003					4.37	-.3178		
-3.34	1.0326					5.00	-.3299		
-2.05	1.1365					6.25	-.3339		
-.90	1.1917					7.50	-.4366		
-.44	1.1672					8.75	-.4303		
.00	.7409					10.00	-.4777		
.31	-.1300					15.00	-.4399		
.63	-.3673					17.50	-.4073		
1.25	-.7178					20.00	-.4630		
2.50	-.9185					30.00	-.4766		
3.13	-.9192					40.00	-.4989		
4.37	-.9312					50.00	-.5015		
5.00	-.8836					60.00	-.4868		
6.25	-.9071					70.00	-.4538		
8.75	-.9185					80.00	-.3578		
10.00	-.8875					90.00	-.2973		
12.50	-.8774					100.00	-.1861		
15.00	-.8347					110.00	-.1304		
17.50	-.8569					241.85	-.0214		
20.00	-.7742								
30.00	-.7727								
40.00	-.7761								
50.00	-.7482								
60.00	-.7287								
70.00	-.4340								
80.00	-.2685								
90.00	-.2188								
100.00	-.1645								
110.00	-.1186								
241.85	-.0256								
279.84	-.0156								

Table IV. Continued

(h) Concluded

$M = 0.843$; mfr $= 0.681$; $\alpha = 3.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9196	343.16	.0394	279.84	-.0212	-187.46	.9147	343.16	-.0110
-155.11	.9170	381.14	.0337			-106.57	.8134	381.14	.0122
-130.84	.8812	419.13	.0440			-25.67	.1891	419.13	.0370
-106.57	.8214	457.12	.0653			-10.27	.3541	457.12	.0533
-90.39	.7658	507.77	.1147			-2.05	.9469	507.77	.1014
-74.21	.6858	545.76	.1714			.00	1.0043	545.76	.1614
-58.03	.5944	571.08	.2350			.31	.4317	571.08	.2314
-41.85	.4885	583.74	.2758			.63	.2007	583.74	.2838
-33.76	.4475	596.41	.3226			1.25	-.1606	596.41	.3455
-25.67	.4054	609.07	.3817			1.88	-.2006	609.07	.4268
-23.11	.4049					2.50	-.2444		
-17.97	.4500					3.13	-.2059		
-10.27	.6571					3.75	-.2466		
-5.13	.9310					4.37	-.2289		
-3.34	1.0557					5.00	-.2114		
-2.05	1.1479					6.25	-.2523		
-.90	1.1883					7.50	-.3399		
-.44	1.1579					8.75	-.2886		
.00	.6982					10.00	-.3164		
.31	-.2514					15.00	-.3417		
.63	-.4668					17.50	-.3832		
1.25	-.8426					20.00	-.3539		
2.50	-.9992					30.00	-.4401		
3.13	-1.0228					40.00	-.4526		
4.37	-.9992					50.00	-.4552		
5.00	-.9802					60.00	-.4566		
6.25	-.9975					70.00	-.4214		
8.75	-1.0064					80.00	-.3678		
10.00	-.9766					90.00	-.2955		
12.50	-.9537					100.00	-.1845		
15.00	-.9476					110.00	-.1298		
17.50	-.9368					241.85	-.0247		
20.00	-.9119								
30.00	-.8874								
40.00	-.8599								
50.00	-.8325								
60.00	-.8249								
70.00	-.5357								
80.00	-.2258								
90.00	-.1863								
100.00	-.1362								
110.00	-.1027								
241.85	-.0189								
279.84	-.0132								

$M = 0.843$; mfr $= 0.738$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.8595	343.16	.0142	279.84	-.0115	-187.46	.8567	343.16	.0245
-155.11	.8511	381.14	.0265			-106.57	.7323	381.14	.0288
-130.84	.8053	419.13	.0420			-25.67	-.0136	419.13	.0450
-106.57	.7328	457.12	.0677			-10.27	.2970	457.12	.0643
-90.39	.6531	507.77	.1164			-2.05	.9737	507.77	.1171
-74.21	.5481	545.76	.1761			.00	.9635	545.76	.1771
-58.03	.4138	571.08	.2447			.31	.2791	571.08	.2460
-41.85	.2402	583.74	.2891			.63	.0645	583.74	.2978
-33.76	.1342	596.41	.3433			1.25	-.3943	596.41	.3549
-25.67	.0340	609.07	.4126			1.88	-.4341	609.07	.4222
-23.11	.0032					2.50	-.5416		
-17.97	.0501					3.13	-.4490		
-10.27	.3234					3.75	-.4380		
-5.13	.6394					4.37	-.3315		
-3.34	.8199					5.00	-.3642		
-2.05	.9969					6.25	-.4023		
-.90	1.1559					7.50	-.4692		
-.44	1.1858					8.75	-.4831		
.00	.9594					10.00	-.5118		
.31	.2464					15.00	-.5368		
.63	-.0215					17.50	-.5143		
1.25	-.2991					20.00	-.4879		
2.50	-.4563					30.00	-.5207		
3.13	-.4704					40.00	-.5423		
4.37	-.4550					50.00	-.5699		
5.00	-.4566					60.00	-.5143		
6.25	-.4089					70.00	-.4857		
8.75	-.5165					80.00	-.3330		
10.00	-.5665					90.00	-.2757		
12.50	-.5831					100.00	-.1801		
15.00	-.5683					110.00	-.1320		
17.50	-.5430					241.85	-.0219		
20.00	-.4460								
30.00	-.5351								
40.00	-.5334								
50.00	-.5619								
60.00	-.5042								
70.00	-.4104								
80.00	-.3230								
90.00	-.2762								
100.00	-.1851								
110.00	-.1294								
241.85	-.0338								
279.84	-.0234								

Table IV. Continued

(i) $M = 0.87$

$M = 0.867$; mfr $= 0.273$; $\alpha = 0.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1621	343.16	-.0158	279.84	-.0109	-187.46	1.1637	343.16	-.0113
-155.11	1.1618	381.14	-.0200			-106.57	1.1488	381.14	-.0229
-130.84	1.1584	419.13	-.0238			-25.67	1.1228	419.13	-.0203
-106.57	1.1489	457.12	-.0200			-10.27	1.1867	457.12	-.0238
-90.39	1.1429	507.77	-.0113			-2.05	1.0895	507.77	-.0145
-74.21	1.1350	545.76	.0045			.00	-.0491	545.76	.0013
-58.03	1.1243	571.08	.0325			.31	-.9816	571.08	.0273
-41.85	1.1180	583.74	.0495			.63	-1.1225	583.74	.0556
-33.76	1.1168	596.41	.0791			1.25	-1.3767	596.41	.0871
-25.67	1.1225	609.07	.1331			1.88	-1.4483	609.07	.1457
-23.11	1.1275					2.50	-1.5035		
-17.97	1.1456					3.13	-1.5048		
-10.27	1.1853					3.75	-1.5060		
-5.13	1.1979					4.37	-1.4948		
-3.34	1.1669					5.00	-1.4790		
-2.05	1.0921					6.25	-1.4669		
-.90	.9010					7.50	-1.4537		
-.44	.7125					8.75	-1.4264		
.00	-.1005					10.00	-1.4173		
.31	-1.0003					15.00	-1.3554		
.63	-1.2147					17.50	-1.3244		
1.25	-1.4129					20.00	-1.2873		
2.50	-1.4859					30.00	-1.2022		
3.13	-1.5147					40.00	-1.1312		
4.37	-1.4871					50.00	-1.0628		
5.00	-1.4862					60.00	-1.0365		
6.25	-1.4596					70.00	-1.0076		
8.75	-1.4309					80.00	-.9859		
10.00	-1.4265					90.00	-.9456		
12.50	-1.3900					100.00	-.7314		
15.00	-1.3428					110.00	-.4468		
17.50	-1.3149					241.85	.0137		
20.00	-1.2927								
30.00	-1.1960								
40.00	-1.1206								
50.00	-1.0542								
60.00	-1.0484								
70.00	-1.0080								
80.00	-.9893								
90.00	-.8799								
100.00	-.5619								
110.00	-.4445								
241.85	.0160								
279.84	-.0094								

$M = 0.867$; mfr $= 0.322$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1456	343.16	-.0179	279.84	-.0175	-187.46	1.1447	343.16	-.0125
-155.11	1.1434	381.14	-.0166			-106.57	1.1266	381.14	-.0179
-130.84	1.1364	419.13	-.0157			-25.67	1.0780	419.13	-.0134
-106.57	1.1263	457.12	-.0073			-10.27	1.1575	457.12	-.0109
-90.39	1.1181	507.77	.0117			-2.05	1.1380	507.77	.0088
-74.21	1.1027	545.76	.0400			.00	.1014	545.76	.0329
-58.03	1.0875	571.08	.0761			.31	-.8797	571.08	.0751
-41.85	1.0771	583.74	.1067			.63	-1.0179	583.74	.1092
-33.76	1.0733	596.41	.1446			1.25	-1.2833	596.41	.1524
-25.67	1.0815	609.07	.2052			1.88	-1.3709	609.07	.2171
-23.11	1.0819					2.50	-1.4398		
-17.97	1.1042					3.13	-1.4382		
-10.27	1.1629					3.75	-1.4312		
-5.13	1.2015					4.37	-1.4189		
-3.34	1.1907					5.00	-1.4134		
-2.05	1.1303					6.25	-1.3854		
-.90	.9745					7.50	-1.3803		
-.44	.8150					8.75	-1.3598		
.00	.0207					10.00	-1.3517		
.31	-.8912					15.00	-1.2819		
.63	-1.1244					17.50	-1.2434		
1.25	-1.3392					20.00	-1.2230		
2.50	-1.4246					30.00	-1.1239		
3.13	-1.4236					40.00	-1.0722		
4.37	-1.4224					50.00	-1.0019		
5.00	-1.4239					60.00	-.9973		
6.25	-1.3852					70.00	-.9659		
8.75	-1.3630					80.00	-.9474		
10.00	-1.3541					90.00	-.9299		
12.50	-1.3094					100.00	-.4782		
15.00	-1.2828					110.00	-.4111		
17.50	-1.2688					241.85	-.0056		
20.00	-1.2114								
30.00	-1.1305								
40.00	-1.0883								
50.00	-1.0285								
60.00	-.9945								
70.00	-.9538								
80.00	-.9536								
90.00	-.8214								
100.00	-.6152								
110.00	-.3891								
241.85	.0034								
279.84	-.0167								

Table IV. Continued

(i) Continued

$M = 0.868$; mfr $= 0.404$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1134	343.16	-.0094	279.84	-.0229	-187.46	1.1136	343.16	-.0023
-155.11	1.1131	381.14	-.0039			-106.57	1.0827	381.14	-.0084
-130.84	1.1014	419.13	-.0011			-25.67	.9812	419.13	.0009
-106.57	1.0857	457.12	.0137			-10.27	1.0930	457.12	.0086
-90.39	1.0652	507.77	.0469			-2.05	1.1867	507.77	.0411
-74.21	1.0444	545.76	.0848			.00	.2909	545.76	.0787
-58.03	1.0192	571.08	.1359			.31	-.6957	571.08	.1308
-41.85	.9952	583.74	.1732			.63	-.8339	583.74	.1761
-33.76	.9865	596.41	.2176			1.25	-1.1345	596.41	.2273
-25.67	.9833	609.07	.2907			1.88	-1.2345	609.07	.3023
-23.11	.9883					2.50	-1.3009		
-17.97	1.0103					3.13	-1.2913		
-10.27	1.0905					3.75	-1.3119		
-5.13	1.1817					4.37	-1.2820		
-3.34	1.2003					5.00	-1.2746		
-2.05	1.1843					6.25	-1.2527		
-.90	1.0767					7.50	-1.2585		
-.44	.9449					8.75	-1.2430		
.00	.2769					10.00	-1.2208		
.31	-.7660					15.00	-1.1609		
.63	-.9473					17.50	-1.1320		
1.25	-1.1857					20.00	-1.1082		
2.50	-1.2846					30.00	-1.0206		
3.13	-1.2954					40.00	-.9860		
4.37	-1.2827					50.00	-.9290		
5.00	-1.2853					60.00	-.9052		
6.25	-1.2482					70.00	-.8842		
8.75	-1.2285					80.00	-.8842		
10.00	-1.2219					90.00	-.8543		
12.50	-1.2038					100.00	-.4760		
15.00	-1.1475					110.00	-.3139		
17.50	-1.1154					241.85	-.0162		
20.00	-1.0974								
30.00	-1.0370								
40.00	-.9781								
50.00	-.9391								
60.00	-.9272								
70.00	-.8888								
80.00	-.8740								
90.00	-.8728								
100.00	-.4742								
110.00	-.3188								
241.85	-.0151								
279.84	-.0169								

$M = 0.870$; mfr $= 0.456$; $\alpha = 0.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0929	343.16	-.0048	279.84	-.0227	-187.46	1.0891	343.16	.0045
-155.11	1.0894	381.14	.0029			-106.57	1.0541	381.14	.0009
-130.84	1.0759	419.13	.0080			-25.67	.9022	419.13	.0105
-106.57	1.0514	457.12	.0282			-10.27	1.0353	457.12	.0218
-90.39	1.0284	507.77	.0654			-2.05	1.2006	507.77	.0593
-74.21	.9998	545.76	.1106			.00	.4115	545.76	.1058
-58.03	.9652	571.08	.1671			.31	-.5600	571.08	.1664
-41.85	.9341	583.74	.2068			.63	-.7038	583.74	.2110
-33.76	.9234	596.41	.2586			1.25	-1.0325	596.41	.2659
-25.67	.9156	609.07	.3330			1.88	-1.1266	609.07	.3404
-23.11	.9135					2.50	-1.2169		
-17.97	.9408					3.13	-1.2244		
-10.27	1.0448					3.75	-1.2208		
-5.13	1.1602					4.37	-1.1889		
-3.34	1.1966					5.00	-1.1874		
-2.05	1.1977					6.25	-1.1737		
-.90	1.1272					7.50	-1.1607		
-.44	1.0143					8.75	-1.1559		
.00	.3573					10.00	-1.1248		
.31	-.6297					15.00	-1.0701		
.63	-.8235					17.50	-1.0527		
1.25	-1.0588					20.00	-1.0307		
2.50	-1.1963					30.00	-.9561		
3.13	-1.1973					40.00	-.9060		
4.37	-1.2045					50.00	-.8634		
5.00	-1.1925					60.00	-.8744		
6.25	-1.1774					70.00	-.8460		
8.75	-1.1574					80.00	-.8332		
10.00	-1.1322					90.00	-.8069		
12.50	-1.0866					100.00	-.5308		
15.00	-1.0892					110.00	-.2534		
17.50	-1.0357					241.85	-.0175		
20.00	-1.0276								
30.00	-.9601								
40.00	-.9350								
50.00	-.8906								
60.00	-.8790								
70.00	-.8680								
80.00	-.8460								
90.00	-.8447								
100.00	-.4832								
110.00	-.2915								
241.85	-.0223								
279.84	-.0197								

Table IV. Continued

(i) Continued

$M = 0.867$; mfr $= 0.496$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0672	343.16	-.0059	279.84	-.0253	-187.46	1.0659	343.16	.0051
-155.11	1.0656	381.14	.0044			-106.57	1.0203	381.14	.0028
-130.84	1.0473	419.13	.0112			-25.67	.8370	419.13	.0176
-106.57	1.0189	457.12	.0331			-10.27	.9780	457.12	.0292
-90.39	.9918	507.77	.0740			-2.05	1.2005	507.77	.0682
-74.21	.9599	545.76	.1242			.00	.4895	545.76	.1181
-58.03	.9128	571.08	.1841			.31	-.3618	571.08	.1831
-41.85	.8740	583.74	.2262			.63	-.6162	583.74	.2307
-33.76	.8544	596.41	.2794			1.25	-.9195	596.41	.2868
-25.67	.8388	609.07	.3528			1.88	-1.0621	609.07	.3618
-23.11	.8416					2.50	-1.1665		
-17.97	.8644					3.13	-1.1544		
-10.27	.9791					3.75	-1.1579		
-5.13	1.1228					4.37	-1.1466		
-3.34	1.1775					5.00	-1.1209		
-2.05	1.1973					6.25	-1.1031		
-.90	1.1593					7.50	-1.1130		
-.44	1.0542					8.75	-1.0663		
.00	.4741					10.00	-1.0663		
.31	-.5152					15.00	-1.0096		
.63	-.6843					17.50	-.9922		
1.25	-.9794					20.00	-.9779		
2.50	-1.1378					30.00	-.8927		
3.13	-1.1314					40.00	-.8485		
4.37	-1.1381					50.00	-.8228		
5.00	-1.1184					60.00	-.8068		
6.25	-1.1057					70.00	-.8040		
8.75	-1.0930					80.00	-.7965		
10.00	-1.0505					90.00	-.7409		
12.50	-1.0521					100.00	-.4021		
15.00	-1.0197					110.00	-.1714		
17.50	-.9943					241.85	-.0241		
20.00	-.9699								
30.00	-.9067								
40.00	-.8576								
50.00	-.8452								
60.00	-.8445								
70.00	-.8314								
80.00	-.8122								
90.00	-.6840								
100.00	-.3131								
110.00	-.2315								
241.85	-.0245								
279.84	-.0201								

$M = 0.867$; mfr $= 0.495$; $\alpha = 2.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0667	343.16	.0158	279.84	-.0287	-187.46	1.0646	343.16	-.0170
-155.11	1.0652	381.14	.0145			-106.57	1.0166	381.14	-.0032
-130.84	1.0491	419.13	.0216			-25.67	.8067	419.13	.0155
-106.57	1.0222	457.12	.0400			-10.27	.9292	457.12	.0274
-90.39	.9951	507.77	.0770			-2.05	1.1946	507.77	.0712
-74.21	.9648	545.76	.1247			.00	.6083	545.76	.1237
-58.03	.9269	571.08	.1800			.31	-.2082	571.08	.1874
-41.85	.8859	583.74	.2132			.63	-.4809	583.74	.2396
-33.76	.8770	596.41	.2579			1.25	-.8196	596.41	.3001
-25.67	.8767	609.07	.3139			1.88	-.9468	609.07	.3810
-23.11	.8763					2.50	-1.0343		
-17.97	.9090					3.13	-1.0487		
-10.27	1.0255					3.75	-1.0350		
-5.13	1.1502					4.37	-.9910		
-3.34	1.1920					5.00	-.9718		
-2.05	1.1968					6.25	-.9669		
-.90	1.1208					7.50	-.9590		
-.44	1.0097					8.75	-.9334		
.00	.3393					10.00	-.8988		
.31	-.6561					15.00	-.8574		
.63	-.8673					17.50	-.8025		
1.25	-1.0818					20.00	-.7694		
2.50	-1.2326					30.00	-.7505		
3.13	-1.2462					40.00	-.6873		
4.37	-1.2503					50.00	-.6741		
5.00	-1.2313					60.00	-.6716		
6.25	-1.2078					70.00	-.6955		
8.75	-1.2015					80.00	-.6727		
10.00	-1.1888					90.00	-.6777		
12.50	-1.1751					100.00	-.3989		
15.00	-1.1235					110.00	-.1397		
17.50	-1.1354					241.85	-.0328		
20.00	-1.1053								
30.00	-1.0469								
40.00	-1.0197								
50.00	-.9600								
60.00	-.9620								
70.00	-.9355								
80.00	-.6690								
90.00	-.4124								
100.00	-.3715								
110.00	-.3451								
241.85	-.0134								
279.84	-.0157								

Table IV. Continued

(i) Continued

$M = 0.867$; mfr $= 0.546$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0391	343.16	-.0006	279.84	-.0186	-187.46	1.0383	343.16	.0090
-155.11	1.0350	381.14	.0110			-106.57	.9819	381.14	.0113
-130.84	1.0168	419.13	.0222			-25.67	.7431	419.13	.0264
-106.57	.9815	457.12	.0456			-10.27	.8990	457.12	.0399
-90.39	.9466	507.77	.0877			-2.05	1.1952	507.77	.0864
-74.21	.9034	545.76	.1436			.00	.5892	545.76	.1442
-58.03	.8493	571.08	.2084			.31	-.2348	571.08	.2116
-41.85	.7930	583.74	.2531			.63	-.4985	583.74	.2599
-33.76	.7629	596.41	.3074			1.25	-.8379	596.41	.3148
-25.67	.7417	609.07	.3780			1.88	-.9492	609.07	.3892
-23.11	.7381					2.50	-1.0587		
-17.97	.7753					3.13	-1.0645		
-10.27	.9008					3.75	-1.0644		
-5.13	1.0799					4.37	-1.0452		
-3.34	1.1524					5.00	-1.0327		
-2.05	1.1962					6.25	-.9814		
-.90	1.1862					7.50	-1.0313		
-.44	1.1212					8.75	-1.0018		
.00	.5890					10.00	-.9616		
.31	-.3422					15.00	-.9236		
.63	-.5748					17.50	-.8923		
1.25	-.8371					20.00	-.8902		
2.50	-1.0150					30.00	-.8198		
3.13	-1.0289					40.00	-.7853		
4.37	-1.0336					50.00	-.7743		
5.00	-1.0042					60.00	-.7743		
6.25	-1.0118					70.00	-.7611		
8.75	-1.0058					80.00	-.7426		
10.00	-.9669					90.00	-.7280		
12.50	-.9232					100.00	-.3021		
15.00	-.8984					110.00	-.1313		
17.50	-.9210					241.85	-.0216		
20.00	-.8531								
30.00	-.8096								
40.00	-.7953								
50.00	-.7682								
60.00	-.7630								
70.00	-.7633								
80.00	-.7459								
90.00	-.6951								
100.00	-.2734								
110.00	-.1665								
241.85	-.0260								
279.84	-.0145								

$M = 0.868$; mfr $= 0.616$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9845	343.16	.0105	279.84	-.0165	-187.46	.9863	343.16	.0160
-155.11	.9830	381.14	.0208			-106.57	.9073	381.14	.0195
-130.84	.9553	419.13	.0333			-25.67	.5681	419.13	.0369
-106.57	.9077	457.12	.0581			-10.27	.7266	457.12	.0529
-90.39	.8620	507.77	.1059			-2.05	1.1530	507.77	.1062
-74.21	.8003	545.76	.1669			.00	.7494	545.76	.1656
-58.03	.7273	571.08	.2356			.31	-.0312	571.08	.2383
-41.85	.6382	583.74	.2781			.63	-.2732	583.74	.2890
-33.76	.6012	596.41	.3340			1.25	-.6639	596.41	.3472
-25.67	.5639	609.07	.4017			1.88	-.7793	609.07	.4178
-23.11	.5561					2.50	-.8720		
-17.97	.5858					3.13	-.8947		
-10.27	.7503					3.75	-.9026		
-5.13	.9570					4.37	-.8509		
-3.34	1.0655					5.00	-.8378		
-2.05	1.1659					6.25	-.7949		
-.90	1.2012					7.50	-.8499		
-.44	1.1730					8.75	-.7897		
.00	.7345					10.00	-.7457		
.31	-.1192					15.00	-.7884		
.63	-.3693					17.50	-.7486		
1.25	-.6928					20.00	-.6909		
2.50	-.8182					30.00	-.6841		
3.13	-.8846					40.00	-.6962		
4.37	-.8593					50.00	-.6749		
5.00	-.8090					60.00	-.6976		
6.25	-.7713					70.00	-.6738		
8.75	-.8106					80.00	-.6674		
10.00	-.7811					90.00	-.6269		
12.50	-.7194					100.00	-.1581		
15.00	-.7059					110.00	-.0909		
17.50	-.7672					241.85	-.0225		
20.00	-.7437								
30.00	-.7083								
40.00	-.6958								
50.00	-.6427								
60.00	-.6910								
70.00	-.6589								
80.00	-.6769								
90.00	-.6029								
100.00	-.1894								
110.00	-.1012								
241.85	-.0254								
279.84	-.0162								

Table IV. Continued

(i) Concluded

$M = 0.869$; mfr $= 0.680$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9327	343.16	.0147	279.84	-.0093	-187.46	.9327	343.16	.0240
-155.11	.9298	381.14	.0275			-106.57	.8343	381.14	.0259
-130.84	.8927	419.13	.0419			-25.67	.3638	419.13	.0432
-106.57	.8354	457.12	.0669			-10.27	.5419	457.12	.0660
-90.39	.7754	507.77	.1187			-2.05	1.0861	507.77	.1203
-74.21	.6955	545.76	.1803			.00	.8896	545.76	.1835
-58.03	.5879	571.08	.2511			.31	.1712	571.08	.2566
-41.85	.4694	583.74	.2973			.63	-.1027	583.74	.3060
-33.76	.4055	596.41	.3515			1.25	-.4210	596.41	.3615
-25.67	.3308	609.07	.4187			1.88	-.6189	609.07	.4321
-23.11	.3231					2.50	-.7032		
-17.97	.3553					3.13	-.7038		
-10.27	.5656					3.75	-.6762		
-5.13	.8195					4.37	-.7004		
-3.34	.9676					5.00	-.5781		
-2.05	1.0947					6.25	-.6045		
-.90	1.1957					7.50	-.5291		
-.44	1.1965					8.75	-.5504		
.00	.8666					10.00	-.5835		
.31	.1058					15.00	-.5465		
.63	-.1683					17.50	-.5909		
1.25	-.4280					20.00	-.5792		
2.50	-.5724					30.00	-.5966		
3.13	-.6680					40.00	-.6179		
4.37	-.6312					50.00	-.5984		
5.00	-.5892					60.00	-.6296		
6.25	-.5939					70.00	-.6410		
8.75	-.5914					80.00	-.6374		
10.00	-.6344					90.00	-.5739		
12.50	-.5857					100.00	-.1753		
15.00	-.5985					110.00	-.0793		
17.50	-.5980					241.85	-.0149		
20.00	-.5882								
30.00	-.5961								
40.00	-.6082								
50.00	-.6366								
60.00	-.6415								
70.00	-.6357								
80.00	-.6389								
90.00	-.5133								
100.00	-.1831								
110.00	-.0842								
241.85	-.0178								
279.84	-.0089								

$M = 0.868$; mfr $= 0.739$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.8759	343.16	.0213	279.84	-.0034	-187.46	.8747	343.16	.0300
-155.11	.8683	381.14	.0341			-106.57	.7501	381.14	.0328
-130.84	.8265	419.13	.0508			-25.67	.0136	419.13	.0534
-106.57	.7513	457.12	.0768			-10.27	.3219	457.12	.0749
-90.39	.6730	507.77	.1288			-2.05	1.0025	507.77	.1276
-74.21	.5723	545.76	.1933			.00	.9853	545.76	.1956
-58.03	.4270	571.08	.2636			.31	.3425	571.08	.2662
-41.85	.2495	583.74	.3082			.63	.0750	583.74	.3162
-33.76	.1456	596.41	.3634			1.25	-.2394	596.41	.3728
-25.67	.0323	609.07	.4273			1.88	-.3944	609.07	.4401
-23.11	-.0094					2.50	-.4828		
-17.97	.0426					3.13	-.4115		
-10.27	.3184					3.75	-.4039		
-5.13	.6620					4.37	-.3625		
-3.34	.8229					5.00	-.3129		
-2.05	1.0061					6.25	-.3466		
-.90	1.1588					7.50	-.4035		
-.44	1.2030					8.75	-.4341		
.00	1.0005					10.00	-.4444		
.31	.2807					15.00	-.5130		
.63	.0665					17.50	-.4974		
1.25	-.2114					20.00	-.5098		
2.50	-.3417					30.00	-.5077		
3.13	-.3689					40.00	-.5592		
4.37	-.4043					50.00	-.5567		
5.00	-.3651					60.00	-.5738		
6.25	-.3470					70.00	-.5915		
8.75	-.4603					80.00	-.5837		
10.00	-.5024					90.00	-.4622		
12.50	-.5267					100.00	-.1441		
15.00	-.5305					110.00	-.0840		
17.50	-.4834					241.85	-.0153		
20.00	-.5239								
30.00	-.5137								
40.00	-.5546								
50.00	-.5646								
60.00	-.5924								
70.00	-.5787								
80.00	-.5850								
90.00	-.4220								
100.00	-.1569								
110.00	-.0880								
241.85	-.0157								
279.84	-.0042								

Table IV. Continued

(j) $M = 0.89$

$M = 0.893$; mfr $= 0.269$; $\alpha = 0.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1781	343.16	.0147	279.84	.0370	-187.46	1.1776	343.16	.0212
-155.11	1.1787	381.14	.0050			-106.57	1.1652	381.14	.0028
-130.84	1.1726	419.13	-.0025			-25.67	1.1380	419.13	.0006
-106.57	1.1640	457.12	-.0012			-10.27	1.2017	457.12	-.0053
-90.39	1.1591	507.77	.0091			-2.05	1.1105	507.77	.0047
-74.21	1.1496	545.76	.0271			.00	.0018	545.76	.0215
-58.03	1.1396	571.08	.0599			.31	-.9130	571.08	.0570
-41.85	1.1347	583.74	.0857			.63	-1.0324	583.74	.0879
-33.76	1.1349	596.41	.1200			1.25	-1.2804	596.41	.1281
-25.67	1.1432	609.07	.1802			1.88	-1.3590	609.07	.1918
-23.11	1.1470					2.50	-1.4084		
-17.97	1.1607					3.13	-1.4072		
-10.27	1.2003					3.75	-1.4146		
-5.13	1.2122					4.37	-1.4026		
-3.34	1.1822					5.00	-1.3870		
-2.05	1.0988					6.25	-1.3604		
-.90	.9155					7.50	-1.3590		
-.44	.7310					8.75	-1.3414		
.00	-.0754					10.00	-1.3294		
.31	-.9224					15.00	-1.2748		
.63	-1.1243					17.50	-1.2300		
1.25	-1.3165					20.00	-1.2016		
2.50	-1.3992					30.00	-1.1108		
3.13	-1.4078					40.00	-1.0566		
4.37	-1.4075					50.00	-1.0011		
5.00	-1.3989					60.00	-.9769		
6.25	-1.3701					70.00	-.9435		
8.75	-1.3599					80.00	-.9230		
10.00	-1.3402					90.00	-.9127		
12.50	-1.3067					100.00	-.8909		
15.00	-1.2632					110.00	-.8395		
17.50	-1.2496					241.85	.0659		
20.00	-1.2131								
30.00	-1.1243								
40.00	-1.0630								
50.00	-1.0010								
60.00	-.9841								
70.00	-.9504								
80.00	-.9322								
90.00	-.9172								
100.00	-.9005								
110.00	-.8558								
241.85	.0706								
279.84	.0403								

$M = 0.892$; mfr $= 0.322$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1604	343.16	.0092	279.84	.0245	-187.46	1.1582	343.16	.0163
-155.11	1.1613	381.14	.0051			-106.57	1.1410	381.14	.0020
-130.84	1.1543	419.13	.0029			-25.67	1.0928	419.13	.0035
-106.57	1.1436	457.12	.0095			-10.27	1.1754	457.12	.0026
-90.39	1.1332	507.77	.0313			-2.05	1.1544	507.77	.0241
-74.21	1.1215	545.76	.0591			.00	.1216	545.76	.0541
-58.03	1.1056	571.08	.1044			.31	-.8066	571.08	.1006
-41.85	1.0934	583.74	.1349			.63	-.9419	583.74	.1396
-33.76	1.0879	596.41	.1800			1.25	-1.2011	596.41	.1878
-25.67	1.0952	609.07	.2471			1.88	-1.2900	609.07	.2571
-23.11	1.0996					2.50	-1.3439		
-17.97	1.1213					3.13	-1.3430		
-10.27	1.1727					3.75	-1.3498		
-5.13	1.2158					4.37	-1.3311		
-3.34	1.2038					5.00	-1.3193		
-2.05	1.1514					6.25	-1.3051		
-.90	.9963					7.50	-1.2841		
-.44	.8240					8.75	-1.2809		
.00	.0909					10.00	-1.2561		
.31	-.8418					15.00	-1.2066		
.63	-1.0423					17.50	-1.1717		
1.25	-1.2488					20.00	-1.1368		
2.50	-1.3285					30.00	-1.0542		
3.13	-1.3318					40.00	-1.0068		
4.37	-1.3281					50.00	-.9692		
5.00	-1.3312					60.00	-.9376		
6.25	-1.2989					70.00	-.9155		
8.75	-1.2768					80.00	-.8972		
10.00	-1.2666					90.00	-.8834		
12.50	-1.2365					100.00	-.8726		
15.00	-1.1944					110.00	-.8149		
17.50	-1.1811					241.85	.0519		
20.00	-1.1648								
30.00	-1.0798								
40.00	-1.0036								
50.00	-.9608								
60.00	-.9466								
70.00	-.9300								
80.00	-.9008								
90.00	-.8990								
100.00	-.8824								
110.00	-.8377								
241.85	.0577								
279.84	.0317								

Table IV. Continued

(j) Continued

$M = 0.891$; mfr $= 0.404$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1274	343.16	.0064	279.84	.0083	-187.46	1.1278	343.16	.0142
-155.11	1.1252	381.14	.0086			-106.57	1.0975	381.14	.0067
-130.84	1.1169	419.13	.0130			-25.67	1.0002	419.13	.0164
-106.57	1.0986	457.12	.0255			-10.27	1.1092	457.12	.0223
-90.39	1.0823	507.77	.0576			-2.05	1.1964	507.77	.0573
-74.21	1.0588	545.76	.1008			.00	.3223	545.76	.0995
-58.03	1.0346	571.08	.1565			.31	-.6337	571.08	.1568
-41.85	1.0131	583.74	.1958			.63	-.7679	583.74	.2021
-33.76	1.0029	596.41	.2458			1.25	-1.0612	596.41	.2549
-25.67	1.0019	609.07	.3177			1.88	-1.1563	609.07	.3308
-23.11	1.0053					2.50	-1.2329		
-17.97	1.0253					3.13	-1.2372		
-10.27	1.1120					3.75	-1.2211		
-5.13	1.1937					4.37	-1.2198		
-3.34	1.2121					5.00	-1.1858		
-2.05	1.1955					6.25	-1.1837		
-.90	1.0901					7.50	-1.1785		
-.44	.9675					8.75	-1.1697		
.00	.2796					10.00	-1.1412		
.31	-.6623					15.00	-1.0837		
.63	-.8690					17.50	-1.0602		
1.25	-1.1077					20.00	-1.0481		
2.50	-1.2142					30.00	-.9547		
3.13	-1.2173					40.00	-.9182		
4.37	-1.2108					50.00	-.8798		
5.00	-1.2093					60.00	-.8753		
6.25	-1.1813					70.00	-.8484		
8.75	-1.1539					80.00	-.8456		
10.00	-1.1588					90.00	-.8324		
12.50	-1.1154					100.00	-.8179		
15.00	-1.0892					110.00	-.7702		
17.50	-1.0663					241.85	.0282		
20.00	-1.0513								
30.00	-.9681								
40.00	-.9296								
50.00	-.8930								
60.00	-.8938								
70.00	-.8577								
80.00	-.8530								
90.00	-.8440								
100.00	-.8271								
110.00	-.7799								
241.85	.0314								
279.84	.0105								

$M = 0.891$; mfr $= 0.456$; $\alpha = 0.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1047	343.16	.0066	279.84	.0005	-187.46	1.1015	343.16	.0150
-155.11	1.1037	381.14	.0132			-106.57	1.0663	381.14	.0116
-130.84	1.0875	419.13	.0197			-25.67	.9238	419.13	.0260
-106.57	1.0648	457.12	.0379			-10.27	1.0511	457.12	.0329
-90.39	1.0418	507.77	.0748			-2.05	1.2129	507.77	.0716
-74.21	1.0152	545.76	.1235			.00	.4257	545.76	.1214
-58.03	.9817	571.08	.1836			.31	-.5045	571.08	.1839
-41.85	.9468	583.74	.2264			.63	-.6475	583.74	.2314
-33.76	.9366	596.41	.2793			1.25	-.9560	596.41	.2871
-25.67	.9300	609.07	.3534			1.88	-1.0665	609.07	.3640
-23.11	.9235					2.50	-1.1499		
-17.97	.9531					3.13	-1.1524		
-10.27	1.0466					3.75	-1.1433		
-5.13	1.1693					4.37	-1.1297		
-3.34	1.2062					5.00	-1.1260		
-2.05	1.2102					6.25	-1.1008		
-.90	1.1436					7.50	-1.1014		
-.44	1.0364					8.75	-1.0809		
.00	.4297					10.00	-1.0495		
.31	-.5629					15.00	-1.0145		
.63	-.7454					17.50	-1.0003		
1.25	-.9897					20.00	-.9684		
2.50	-1.1379					30.00	-.9168		
3.13	-1.1228					40.00	-.8711		
4.37	-1.1382					50.00	-.8493		
5.00	-1.1121					60.00	-.8137		
6.25	-1.1096					70.00	-.8123		
8.75	-1.0963					80.00	-.8019		
10.00	-1.0578					90.00	-.8088		
12.50	-1.0427					100.00	-.7821		
15.00	-1.0127					110.00	-.7288		
17.50	-.9980					241.85	.0178		
20.00	-.9906								
30.00	-.9133								
40.00	-.8718								
50.00	-.8464								
60.00	-.8317								
70.00	-.8102								
80.00	-.8147								
90.00	-.8014								
100.00	-.7898								
110.00	-.7389								
241.85	.0185								
279.84	.0034								

Table IV. Continued

(j) Continued

$M = 0.892$; mfr $= 0.492$; $\alpha = 0.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0810	343.16	.0129	279.84	.0010	-187.46	1.0818	343.16	.0179
-155.11	1.0801	381.14	.0192			-106.57	1.0355	381.14	.0157
-130.84	1.0639	419.13	.0288			-25.67	.8575	419.13	.0301
-106.57	1.0360	457.12	.0469			-10.27	.9939	457.12	.0416
-90.39	1.0109	507.77	.0881			-2.05	1.2133	507.77	.0834
-74.21	.9770	545.76	.1406			.00	.5348	545.76	.1381
-58.03	.9365	571.08	.2037			.31	-.3008	571.08	.2049
-41.85	.8903	583.74	.2458			.63	-.5280	583.74	.2539
-33.76	.8730	596.41	.3017			1.25	-.8727	596.41	.3123
-25.67	.8599	609.07	.3735			1.88	-.9654	609.07	.3888
-23.11	.8616					2.50	-1.0756		
-17.97	.8895					3.13	-1.0657		
-10.27	1.0021					3.75	-1.0791		
-5.13	1.1330					4.37	-1.0502		
-3.34	1.1915					5.00	-1.0511		
-2.05	1.2139					6.25	-1.0271		
-.90	1.1702					7.50	-1.0297		
-.44	1.0812					8.75	-1.0152		
.00	.4879					10.00	-.9585		
.31	-.4447					15.00	-.9421		
.63	-.6183					17.50	-.9148		
1.25	-.9176					20.00	-.8937		
2.50	-1.0764					30.00	-.8340		
3.13	-1.0570					40.00	-.8056		
4.37	-1.0567					50.00	-.7780		
5.00	-1.0601					60.00	-.7901		
6.25	-1.0345					70.00	-.7603		
8.75	-1.0010					80.00	-.7738		
10.00	-.9942					90.00	-.7520		
12.50	-.9641					100.00	-.7469		
15.00	-.9571					110.00	-.6933		
17.50	-.9293					241.85	.0086		
20.00	-.9275								
30.00	-.8684								
40.00	-.8154								
50.00	-.8035								
60.00	-.8010								
70.00	-.7769								
80.00	-.7844								
90.00	-.7832								
100.00	-.7603								
110.00	-.7192								
241.85	.0104								
279.84	.0017								

$M = 0.892$; mfr $= 0.498$; $\alpha = 2.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0824	343.16	.0364	279.84	-.0045	-187.46	1.0796	343.16	-.0067
-155.11	1.0806	381.14	.0299			-106.57	1.0334	381.14	.0077
-130.84	1.0659	419.13	.0342			-25.67	.8205	419.13	.0267
-106.57	1.0402	457.12	.0530			-10.27	.9428	457.12	.0389
-90.39	1.0133	507.77	.0926			-2.05	1.2051	507.77	.0832
-74.21	.9814	545.76	.1423			.00	.6220	545.76	.1401
-58.03	.9437	571.08	.1988			.31	-.1568	571.08	.2088
-41.85	.9097	583.74	.2344			.63	-.4225	583.74	.2606
-33.76	.8935	596.41	.2819			1.25	-.7382	596.41	.3216
-25.67	.8928	609.07	.3347			1.88	-.8435	609.07	.4027
-23.11	.8932					2.50	-.9685		
-17.97	.9193					3.13	-.9795		
-10.27	1.0413					3.75	-.9470		
-5.13	1.1651					4.37	-.9416		
-3.34	1.2070					5.00	-.9097		
-2.05	1.2113					6.25	-.8976		
-.90	1.1390					7.50	-.8820		
-.44	1.0252					8.75	-.8428		
.00	.3841					10.00	-.8322		
.31	-.5706					15.00	-.7665		
.63	-.7633					17.50	-.7852		
1.25	-1.0252					20.00	-.7168		
2.50	-1.1505					30.00	-.6926		
3.13	-1.1628					40.00	-.6593		
4.37	-1.1668					50.00	-.6575		
5.00	-1.1603					60.00	-.6520		
6.25	-1.1462					70.00	-.6760		
8.75	-1.1323					80.00	-.6638		
10.00	-1.1108					90.00	-.6684		
12.50	-1.0945					100.00	-.6663		
15.00	-1.0766					110.00	-.6264		
17.50	-1.0582					241.85	-.0041		
20.00	-1.0275								
30.00	-.9871								
40.00	-.9524								
50.00	-.9316								
60.00	-.9182								
70.00	-.8917								
80.00	-.8857								
90.00	-.8617								
100.00	-.7353								
110.00	-.3875								
241.85	.0363								
279.84	.0212								

Table IV. Continued

(j) Continued

$M = 0.893$; mfr $= 0.547$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0527	343.16	.0163	279.84	-.0010	-187.46	1.0520	343.16	.0266
-155.11	1.0524	381.14	.0232			-106.57	.9963	381.14	.0247
-130.84	1.0310	419.13	.0337			-25.67	.7573	419.13	.0397
-106.57	.9962	457.12	.0581			-10.27	.9144	457.12	.0543
-90.39	.9629	507.77	.1045			-2.05	1.2099	507.77	.1017
-74.21	.9194	545.76	.1621			.00	.6394	545.76	.1599
-58.03	.8660	571.08	.2282			.31	-.1698	571.08	.2285
-41.85	.8076	583.74	.2724			.63	-.3897	583.74	.2796
-33.76	.7834	596.41	.3267			1.25	-.7611	596.41	.3367
-25.67	.7649	609.07	.4003			1.88	-.8718	609.07	.4109
-23.11	.7545					2.50	-.9902		
-17.97	.7872					3.13	-.9880		
-10.27	.9051					3.75	-.9954		
-5.13	1.0894					4.37	-.9722		
-3.34	1.1622					5.00	-.9688		
-2.05	1.2095					6.25	-.9333		
-.90	1.1990					7.50	-.9374		
-.44	1.1348					8.75	-.9344		
.00	.6405					10.00	-.8719		
.31	-.2681					15.00	-.8567		
.63	-.4871					17.50	-.8525		
1.25	-.7857					20.00	-.8246		
2.50	-.9494					30.00	-.7335		
3.13	-.9472					40.00	-.7439		
4.37	-.9736					50.00	-.7176		
5.00	-.9570					60.00	-.7380		
6.25	-.9174					70.00	-.7173		
8.75	-.9180					80.00	-.7221		
10.00	-.8870					90.00	-.7252		
12.50	-.8563					100.00	-.7200		
15.00	-.8459					110.00	-.6572		
17.50	-.8235					241.85	.0019		
20.00	-.8307								
30.00	-.7648								
40.00	-.7436								
50.00	-.7289								
60.00	-.7199								
70.00	-.7242								
80.00	-.7303								
90.00	-.7408								
100.00	-.7253								
110.00	-.6760								
241.85	.0012								
279.84	.0005								

$M = 0.895$; mfr $= 0.617$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0056	343.16	.0186	279.84	.0005	-187.46	1.0033	343.16	.0304
-155.11	1.0034	381.14	.0329			-106.57	.9292	381.14	.0329
-130.84	.9748	419.13	.0460			-25.67	.5954	419.13	.0519
-106.57	.9281	457.12	.0727			-10.27	.7563	457.12	.0668
-90.39	.8833	507.77	.1234			-2.05	1.1621	507.77	.1209
-74.21	.8224	545.76	.1855			.00	.8047	545.76	.1852
-58.03	.7481	571.08	.2554			.31	.0226	571.08	.2573
-41.85	.6606	583.74	.3015			.63	-.1923	583.74	.3084
-33.76	.6150	596.41	.3572			1.25	-.5867	596.41	.3674
-25.67	.5862	609.07	.4258			1.88	-.7108	609.07	.4377
-23.11	.5642					2.50	-.7792		
-17.97	.6009					3.13	-.8289		
-10.27	.7577					3.75	-.8187		
-5.13	.9761					4.37	-.8182		
-3.34	1.0841					5.00	-.7747		
-2.05	1.1780					6.25	-.7578		
-.90	1.2161					7.50	-.7878		
-.44	1.1881					8.75	-.6986		
.00	.7828					10.00	-.7327		
.31	-.0171					15.00	-.6910		
.63	-.2928					17.50	-.6562		
1.25	-.6237					20.00	-.6355		
2.50	-.7750					30.00	-.6108		
3.13	-.7655					40.00	-.6680		
4.37	-.7940					50.00	-.6280		
5.00	-.7560					60.00	-.6948		
6.25	-.7147					70.00	-.6497		
8.75	-.7438					80.00	-.6631		
10.00	-.7122					90.00	-.6756		
12.50	-.6476					100.00	-.6687		
15.00	-.6997					110.00	-.5812		
17.50	-.6678					241.85	.0019		
20.00	-.6595								
30.00	-.6700								
40.00	-.6483								
50.00	-.6623								
60.00	-.6649								
70.00	-.6610								
80.00	-.6663								
90.00	-.6746								
100.00	-.6778								
110.00	-.6326								
241.85	-.0009								
279.84	.0045								

Table IV. Continued

(j) Concluded

$M = 0.893$; mfr $= 0.682$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9493	343.16	.0231	279.84	.0039	-187.46	.9475	343.16	.0334
-155.11	.9450	381.14	.0362			-106.57	.8509	381.14	.0397
-130.84	.9116	419.13	.0534			-25.67	.3802	419.13	.0605
-106.57	.8493	457.12	.0795			-10.27	.5579	457.12	.0795
-90.39	.7910	507.77	.1353			-2.05	1.0931	507.77	.1359
-74.21	.7143	545.76	.2007			.00	.8907	545.76	.2020
-58.03	.6077	571.08	.2718			.31	.1987	571.08	.2746
-41.85	.4861	583.74	.3173			.63	-.0385	583.74	.3251
-33.76	.4077	596.41	.3722			1.25	-.3839	596.41	.3825
-25.67	.3403	609.07	.4382			1.88	-.5551	609.07	.4507
-23.11	.3197					2.50	-.6141		
-17.97	.3640					3.13	-.6548		
-10.27	.5707					3.75	-.6141		
-5.13	.8398					4.37	-.5788		
-3.34	.9841					5.00	-.5902		
-2.05	1.0959					6.25	-.5447		
-.90	1.2045					7.50	-.5792		
-.44	1.2110					8.75	-.5183		
.00	.9009					10.00	-.5119		
.31	.1578					15.00	-.4943		
.63	-.0958					17.50	-.5340		
1.25	-.3747					20.00	-.5406		
2.50	-.5574					30.00	-.5557		
3.13	-.5322					40.00	-.5982		
4.37	-.5328					50.00	-.5958		
5.00	-.5921					60.00	-.6075		
6.25	-.5651					70.00	-.6285		
8.75	-.5672					80.00	-.6230		
10.00	-.5506					90.00	-.6527		
12.50	-.5559					100.00	-.6330		
15.00	-.5508					110.00	-.4605		
17.50	-.5448					241.85	-.0025		
20.00	-.5580								
30.00	-.5795								
40.00	-.5792								
50.00	-.6060								
60.00	-.6141								
70.00	-.6227								
80.00	-.6357								
90.00	-.6505								
100.00	-.6559								
110.00	-.5024								
241.85	-.0015								
279.84	.0007								

$M = 0.894$; mfr $= 0.741$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.8932	343.16	.0316	279.84	.0038	-187.46	.8881	343.16	.0382
-155.11	.8865	381.14	.0450			-106.57	.7686	381.14	.0438
-130.84	.8435	419.13	.0640			-25.67	.0204	419.13	.0631
-106.57	.7718	457.12	.0905			-10.27	.3031	457.12	.0858
-90.39	.6937	507.77	.1459			-2.05	.9980	507.77	.1437
-74.21	.5899	545.76	.2113			.00	1.0078	545.76	.2113
-58.03	.4489	571.08	.2826			.31	.3865	571.08	.2860
-41.85	.2658	583.74	.3280			.63	.1522	583.74	.3367
-33.76	.1653	596.41	.3818			1.25	-.1651	596.41	.3921
-25.67	.0393	609.07	.4470			1.88	-.3359	609.07	.4591
-23.11	.0200					2.50	-.4316		
-17.97	.0579					3.13	-.4000		
-10.27	.3508					3.75	-.3213		
-5.13	.6557					4.37	-.3252		
-3.34	.8486					5.00	-.3647		
-2.05	1.0168					6.25	-.3392		
-.90	1.1801					7.50	-.3661		
-.44	1.2140					8.75	-.3690		
.00	1.0086					10.00	-.3934		
.31	.3403					15.00	-.4619		
.63	.0962					17.50	-.4788		
1.25	-.1406					20.00	-.4609		
2.50	-.3450					30.00	-.4857		
3.13	-.3879					40.00	-.5464		
4.37	-.3603					50.00	-.5340		
5.00	-.3606					60.00	-.5660		
6.25	-.3253					70.00	-.5788		
8.75	-.3907					80.00	-.5991		
10.00	-.4462					90.00	-.6181		
12.50	-.4671					100.00	-.6163		
15.00	-.4989					110.00	-.2902		
17.50	-.5054					241.85	-.0005		
20.00	-.4752								
30.00	-.5149								
40.00	-.5187								
50.00	-.5612								
60.00	-.5507								
70.00	-.5895								
80.00	-.5902								
90.00	-.6196								
100.00	-.6082								
110.00	-.4376								
241.85	-.0002								
279.84	.0077								

Table IV. Continued

(k) $M = 0.92$

$M = 0.917$; mfr $= 0.274$; $\alpha = 0.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1916	343.16	.0647	279.84	.0766	-187.46	1.1892	343.16	.0717
-155.11	1.1910	381.14	.0507			-106.57	1.1788	381.14	.0477
-130.84	1.1875	419.13	.0356			-25.67	1.1534	419.13	.0383
-106.57	1.1779	457.12	.0322			-10.27	1.2113	457.12	.0286
-90.39	1.1747	507.77	.0404			-2.05	1.1239	507.77	.0359
-74.21	1.1646	545.76	.0589			.00	.0612	545.76	.0559
-58.03	1.1562	571.08	.0948			.31	-.8464	571.08	.0920
-41.85	1.1482	583.74	.1209			.63	-.9634	583.74	.1257
-33.76	1.1480	596.41	.1564			1.25	-1.2036	596.41	.1655
-25.67	1.1547	609.07	.2178			1.88	-1.2840	609.07	.2284
-23.11	1.1601					2.50	-1.3233		
-17.97	1.1714					3.13	-1.3282		
-10.27	1.2140					3.75	-1.3357		
-5.13	1.2235					4.37	-1.3188		
-3.34	1.1912					5.00	-1.3125		
-2.05	1.1159					6.25	-1.2991		
-.90	.9317					7.50	-1.2775		
-.44	.7569					8.75	-1.2693		
.00	-.0207					10.00	-1.2540		
.31	-.8600					15.00	-1.1831		
.63	-1.0384					17.50	-1.1683		
1.25	-1.2421					20.00	-1.1477		
2.50	-1.3227					30.00	-1.0613		
3.13	-1.3418					40.00	-1.0166		
4.37	-1.3302					50.00	-.9349		
5.00	-1.3146					60.00	-.9154		
6.25	-1.3029					70.00	-.8959		
8.75	-1.2739					80.00	-.8740		
10.00	-1.2619					90.00	-.8686		
12.50	-1.2311					100.00	-.8450		
15.00	-1.2040					110.00	-.7926		
17.50	-1.1724					241.85	.0549		
20.00	-1.1475								
30.00	-1.0450								
40.00	-.9988								
50.00	-.9602								
60.00	-.9329								
70.00	-.8922								
80.00	-.8799								
90.00	-.8872								
100.00	-.8651								
110.00	-.8082								
241.85	.0321								
279.84	.0858								

$M = 0.916$; mfr $= 0.272$; $\alpha = 2.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1900	343.16	.0924	279.84	.0722	-187.46	1.1889	343.16	.0374
-155.11	1.1876	381.14	.0633			-106.57	1.1765	381.14	.0307
-130.84	1.1861	419.13	.0429			-25.67	1.1396	419.13	.0277
-106.57	1.1793	457.12	.0365			-10.27	1.2003	457.12	.0216
-90.39	1.1721	507.77	.0405			-2.05	1.1580	507.77	.0316
-74.21	1.1659	545.76	.0560			.00	.1433	545.76	.0532
-58.03	1.1581	571.08	.0870			.31	-.7576	571.08	.0940
-41.85	1.1566	583.74	.1095			.63	-.8809	583.74	.1313
-33.76	1.1557	596.41	.1402			1.25	-1.1276	596.41	.1763
-25.67	1.1678	609.07	.1910			1.88	-1.2182	609.07	.2491
-23.11	1.1691					2.50	-1.2667		
-17.97	1.1869					3.13	-1.2624		
-10.27	1.2208					3.75	-1.2573		
-5.13	1.2131					4.37	-1.2371		
-3.34	1.1702					5.00	-1.2334		
-2.05	1.0796					6.25	-1.2122		
-.90	.8773					7.50	-1.2018		
-.44	.6734					8.75	-1.1791		
.00	-.1470					10.00	-1.1671		
.31	-.9396					15.00	-1.1041		
.63	-1.1278					17.50	-1.0761		
1.25	-1.3044					20.00	-1.0287		
2.50	-1.3891					30.00	-.9580		
3.13	-1.4059					40.00	-.8836		
4.37	-1.4041					50.00	-.8606		
5.00	-1.3918					60.00	-.8132		
6.25	-1.3831					70.00	-.8115		
8.75	-1.3640					80.00	-.7728		
10.00	-1.3469					90.00	-.7862		
12.50	-1.3229					100.00	-.7610		
15.00	-1.2873					110.00	-.7145		
17.50	-1.2761					241.85	.0368		
20.00	-1.2378								
30.00	-1.1803								
40.00	-1.1025								
50.00	-1.0466								
60.00	-1.0211								
70.00	-.9950								
80.00	-.9719								
90.00	-.9582								
100.00	-.9410								
110.00	-.8971								
241.85	.0438								
279.84	.0979								

Table IV. Continued

(k) Continued

$M = 0.918$; mfr $= 0.326$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1752	343.16	.0636	279.84	.0808	-187.46	1.1741	343.16	.0682
-155.11	1.1764	381.14	.0497			-106.57	1.1577	381.14	.0479
-130.84	1.1690	419.13	.0394			-25.67	1.1108	419.13	.0433
-106.57	1.1577	457.12	.0418			-10.27	1.1855	457.12	.0385
-90.39	1.1464	507.77	.0591			-2.05	1.1727	507.77	.0567
-74.21	1.1377	545.76	.0909			.00	.1776	545.76	.0894
-58.03	1.1223	571.08	.1392			.31	-.7371	571.08	.1386
-41.85	1.1113	583.74	.1725			.63	-.8612	583.74	.1789
-33.76	1.1078	596.41	.2169			1.25	-1.1181	596.41	.2275
-25.67	1.1145	609.07	.2818			1.88	-1.2054	609.07	.2976
-23.11	1.1142					2.50	-1.2595		
-17.97	1.1356					3.13	-1.2556		
-10.27	1.1911					3.75	-1.2626		
-5.13	1.2280					4.37	-1.2503		
-3.34	1.2150					5.00	-1.2431		
-2.05	1.1598					6.25	-1.2212		
-.90	1.0214					7.50	-1.2088		
-.44	.8542					8.75	-1.1945		
.00	.1159					10.00	-1.1793		
.31	-.7712					15.00	-1.1288		
.63	-.9565					17.50	-1.0922		
1.25	-1.1757					20.00	-1.0734		
2.50	-1.2561					30.00	-.9770		
3.13	-1.2408					40.00	-.9508		
4.37	-1.2600					50.00	-.8994		
5.00	-1.2600					60.00	-.8786		
6.25	-1.2349					70.00	-.8570		
8.75	-1.1969					80.00	-.8499		
10.00	-1.1855					90.00	-.8372		
12.50	-1.1539					100.00	-.8140		
15.00	-1.1381					110.00	-.7687		
17.50	-1.1162					241.85	.0618		
20.00	-1.0866								
30.00	-.9986								
40.00	-.9524								
50.00	-.9224								
60.00	-.8833								
70.00	-.8735								
80.00	-.8507								
90.00	-.8489								
100.00	-.8342								
110.00	-.7912								
241.85	.0660								
279.84	.0839								

$M = 0.918$; mfr $= 0.403$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1455	343.16	.0504	279.84	.0680	-187.46	1.1431	343.16	.0583
-155.11	1.1419	381.14	.0453			-106.57	1.1160	381.14	.0429
-130.84	1.1312	419.13	.0429			-25.67	1.0162	419.13	.0450
-106.57	1.1146	457.12	.0526			-10.27	1.1224	457.12	.0495
-90.39	1.0970	507.77	.0847			-2.05	1.2161	507.77	.0817
-74.21	1.0765	545.76	.1314			.00	.3644	545.76	.1284
-58.03	1.0539	571.08	.1887			.31	-.5634	571.08	.1896
-41.85	1.0301	583.74	.2304			.63	-.7071	583.74	.2367
-33.76	1.0209	596.41	.2819			1.25	-.9760	596.41	.2919
-25.67	1.0236	609.07	.3514			1.88	-1.0593	609.07	.3662
-23.11	1.0226					2.50	-1.1409		
-17.97	1.0433					3.13	-1.1535		
-10.27	1.1257					3.75	-1.1463		
-5.13	1.2119					4.37	-1.1311		
-3.34	1.2284					5.00	-1.1083		
-2.05	1.2102					6.25	-1.1020		
-.90	1.1093					7.50	-1.0986		
-.44	.9780					8.75	-1.0765		
.00	.3333					10.00	-1.0603		
.31	-.5994					15.00	-1.0032		
.63	-.8030					17.50	-.9877		
1.25	-1.0302					20.00	-.9847		
2.50	-1.1211					30.00	-.8967		
3.13	-1.1331					40.00	-.8721		
4.37	-1.1361					50.00	-.8342		
5.00	-1.1265					60.00	-.8154		
6.25	-1.1047					70.00	-.8063		
8.75	-1.0891					80.00	-.7791		
10.00	-1.0739					90.00	-.7737		
12.50	-1.0557					100.00	-.7717		
15.00	-1.0159					110.00	-.7327		
17.50	-.9803					241.85	.0824		
20.00	-.9756								
30.00	-.8999								
40.00	-.8634								
50.00	-.8460								
60.00	-.8297								
70.00	-.8033								
80.00	-.7958								
90.00	-.8027								
100.00	-.7867								
110.00	-.7396								
241.85	.0852								
279.84	.0705								

Table IV. Continued

(k) Continued

$M = 0.917$; mfr $= 0.457$; $\alpha = 0.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.1201	343.16	.0453	279.84	.0573	-187.46	1.1198	343.16	.0532
-155.11	1.1159	381.14	.0429			-106.57	1.0826	381.14	.0404
-130.84	1.1040	419.13	.0435			-25.67	.9462	419.13	.0477
-106.57	1.0817	457.12	.0599			-10.27	1.0671	457.12	.0550
-90.39	1.0597	507.77	.0981			-2.05	1.2226	507.77	.0951
-74.21	1.0317	545.76	.1497			.00	.4678	545.76	.1485
-58.03	.9987	571.08	.2138			.31	-.4435	571.08	.2141
-41.85	.9641	583.74	.2557			.63	-.5776	583.74	.2636
-33.76	.9536	596.41	.3106			1.25	-.8900	596.41	.3207
-25.67	.9519	609.07	.3830			1.88	-.9831	609.07	.3969
-23.11	.9479					2.50	-1.0720		
-17.97	.9780					3.13	-1.0827		
-10.27	1.0765					3.75	-1.0915		
-5.13	1.1835					4.37	-1.0602		
-3.34	1.2204					5.00	-1.0501		
-2.05	1.2236					6.25	-1.0360		
-.90	1.1568					7.50	-1.0182		
-.44	1.0570					8.75	-1.0104		
.00	.4221					10.00	-.9778		
.31	-.4963					15.00	-.9455		
.63	-.7058					17.50	-.9300		
1.25	-.9162					20.00	-.9105		
2.50	-1.0664					30.00	-.8476		
3.13	-1.0536					40.00	-.7999		
4.37	-1.0697					50.00	-.7841		
5.00	-1.0548					60.00	-.7515		
6.25	-1.0311					70.00	-.7619		
8.75	-1.0257					80.00	-.7495		
10.00	-.9946					90.00	-.7559		
12.50	-.9943					100.00	-.7454		
15.00	-.9438					110.00	-.7098		
17.50	-.9485					241.85	.0741		
20.00	-.9094								
30.00	-.8536								
40.00	-.8213								
50.00	-.7905								
60.00	-.7799								
70.00	-.7764								
80.00	-.7519								
90.00	-.7710								
100.00	-.7498								
110.00	-.7199								
241.85	.0738								
279.84	.0566								

$M = 0.916$; mfr $= 0.497$; $\alpha = 0.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0974	343.16	.0412	279.84	.0425	-187.46	1.0979	343.16	.0452
-155.11	1.0974	381.14	.0418			-106.57	1.0522	381.14	.0388
-130.84	1.0798	419.13	.0461			-25.67	.8711	419.13	.0507
-106.57	1.0518	457.12	.0655			-10.27	1.0076	457.12	.0610
-90.39	1.0265	507.77	.1093			-2.05	1.2280	507.77	.1041
-74.21	.9931	545.76	.1646			.00	.5536	545.76	.1610
-58.03	.9522	571.08	.2307			.31	-.2544	571.08	.2298
-41.85	.9108	583.74	.2757			.63	-.4948	583.74	.2805
-33.76	.8929	596.41	.3292			1.25	-.7891	596.41	.3389
-25.67	.8861	609.07	.4021			1.88	-.9216	609.07	.4137
-23.11	.8791					2.50	-1.0016		
-17.97	.9086					3.13	-1.0115		
-10.27	1.0180					3.75	-1.0039		
-5.13	1.1555					4.37	-.9830		
-3.34	1.2023					5.00	-.9884		
-2.05	1.2256					6.25	-.9592		
-.90	1.1840					7.50	-.9534		
-.44	1.0967					8.75	-.9412		
.00	.5305					10.00	-.9204		
.31	-.3942					15.00	-.8729		
.63	-.5725					17.50	-.8577		
1.25	-.8183					20.00	-.8480		
2.50	-.9905					30.00	-.8049		
3.13	-.9914					40.00	-.7564		
4.37	-1.0055					50.00	-.7386		
5.00	-.9761					60.00	-.7443		
6.25	-.9504					70.00	-.7362		
8.75	-.9639					80.00	-.7191		
10.00	-.9339					90.00	-.7463		
12.50	-.9012					100.00	-.7312		
15.00	-.8867					110.00	-.6706		
17.50	-.8599					241.85	.0671		
20.00	-.8607								
30.00	-.7931								
40.00	-.7726								
50.00	-.7541								
60.00	-.7551								
70.00	-.7568								
80.00	-.7491								
90.00	-.7532								
100.00	-.7393								
110.00	-.7061								
241.85	.0657								
279.84	.0495								

Table IV. Continued

(k) Continued

$M = 0.915$; mfr $= 0.493$; $\alpha = 1.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0973	343.16	.0530	279.84	.0409	-187.46	1.0945	343.16	.0299
-155.11	1.0967	381.14	.0469			-106.57	1.0498	381.14	.0320
-130.84	1.0806	419.13	.0503			-25.67	.8585	419.13	.0457
-106.57	1.0523	457.12	.0691			-10.27	.9897	457.12	.0591
-90.39	1.0270	507.77	.1105			-2.05	1.2241	507.77	.1038
-74.21	.9951	545.76	.1628			.00	.5973	545.76	.1607
-58.03	.9556	571.08	.2283			.31	-.1794	571.08	.2301
-41.85	.9172	583.74	.2706			.63	-.4479	583.74	.2833
-33.76	.9021	596.41	.3235			1.25	-.7224	596.41	.3438
-25.67	.8978	609.07	.3898			1.88	-.8808	609.07	.4214
-23.11	.8928					2.50	-.9468		
-17.97	.9310					3.13	-.9617		
-10.27	1.0357					3.75	-.9633		
-5.13	1.1707					4.37	-.9290		
-3.34	1.2074					5.00	-.9236		
-2.05	1.2257					6.25	-.8892		
-.90	1.1686					7.50	-.9192		
-.44	1.0689					8.75	-.8769		
.00	.4753					10.00	-.8309		
.31	-.4641					15.00	-.8272		
.63	-.6682					17.50	-.7686		
1.25	-.8742					20.00	-.7891		
2.50	-1.0329					30.00	-.7234		
3.13	-1.0401					40.00	-.6921		
4.37	-1.0548					50.00	-.6891		
5.00	-1.0419					60.00	-.6867		
6.25	-1.0073					70.00	-.6935		
8.75	-1.0253					80.00	-.6763		
10.00	-.9690					90.00	-.6982		
12.50	-.9564					100.00	-.6931		
15.00	-.9455					110.00	-.6349		
17.50	-.9312					241.85	.0557		
20.00	-.9251								
30.00	-.8548								
40.00	-.8214								
50.00	-.8110								
60.00	-.8084								
70.00	-.7985								
80.00	-.7884								
90.00	-.7816								
100.00	-.7806								
110.00	-.7396								
241.85	.0736								
279.84	.0508								

$M = 0.918$; mfr $= 0.494$; $\alpha = 2.2°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0988	343.16	.0731	279.84	.0428	-187.46	1.0960	343.16	.0167
-155.11	1.0973	381.14	.0591			-106.57	1.0511	381.14	.0282
-130.84	1.0809	419.13	.0588			-25.67	.8465	419.13	.0437
-106.57	1.0565	457.12	.0746			-10.27	.9623	457.12	.0564
-90.39	1.0303	507.77	.1138			-2.05	1.2205	507.77	.1019
-74.21	.9994	545.76	.1663			.00	.6608	545.76	.1611
-58.03	.9622	571.08	.2270			.31	-.1107	571.08	.2334
-41.85	.9286	583.74	.2689			.63	-.3382	583.74	.2871
-33.76	.9138	596.41	.3156			1.25	-.6759	596.41	.3502
-25.67	.9165	609.07	.3784			1.88	-.7967	609.07	.4294
-23.11	.9098					2.50	-.8890		
-17.97	.9483					3.13	-.8980		
-10.27	1.0524					3.75	-.8758		
-5.13	1.1773					4.37	-.8528		
-3.34	1.2198					5.00	-.8275		
-2.05	1.2230					6.25	-.8090		
-.90	1.1580					7.50	-.8416		
-.44	1.0423					8.75	-.7883		
.00	.4353					10.00	-.7435		
.31	-.5295					15.00	-.7247		
.63	-.7397					17.50	-.7092		
1.25	-.9360					20.00	-.6437		
2.50	-1.0820					30.00	-.6292		
3.13	-1.0796					40.00	-.6202		
4.37	-1.1059					50.00	-.6094		
5.00	-1.0921					60.00	-.6299		
6.25	-1.0715					70.00	-.6192		
8.75	-1.0485					80.00	-.6366		
10.00	-1.0497					90.00	-.6460		
12.50	-.9997					100.00	-.6336		
15.00	-1.0061					110.00	-.5892		
17.50	-.9985					241.85	.0474		
20.00	-.9833								
30.00	-.9419								
40.00	-.8924								
50.00	-.8708								
60.00	-.8651								
70.00	-.8328								
80.00	-.8427								
90.00	-.8265								
100.00	-.8097								
110.00	-.7696								
241.85	.0894								
279.84	.0646								

Table IV. Continued

(k) Continued

$M = 0.915$; mfr $= 0.496$; $\alpha = 3.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0961	343.16	.0825	279.84	.0293	-187.46	1.0929	343.16	.0018
-155.11	1.0949	381.14	.0612			-106.57	1.0471	381.14	.0225
-130.84	1.0796	419.13	.0578			-25.67	.8208	419.13	.0417
-106.57	1.0549	457.12	.0724			-10.27	.9320	457.12	.0557
-90.39	1.0307	507.77	.1135			-2.05	1.2111	507.77	.1004
-74.21	1.0000	545.76	.1652			.00	.7116	545.76	.1588
-58.03	.9641	571.08	.2221			.31	-.0369	571.08	.2316
-41.85	.9307	583.74	.2583			.63	-.2807	583.74	.2848
-33.76	.9226	596.41	.2997			1.25	-.6133	596.41	.3491
-25.67	.9219	609.07	.3564			1.88	-.7307	609.07	.4319
-23.11	.9289					2.50	-.8181		
-17.97	.9655					3.13	-.8175		
-10.27	1.0734					3.75	-.8350		
-5.13	1.1845					4.37	-.7971		
-3.34	1.2218					5.00	-.7656		
-2.05	1.2162					6.25	-.7325		
-.90	1.1281					7.50	-.7764		
-.44	1.0048					8.75	-.7082		
.00	.3523					10.00	-.6736		
.31	-.5935					15.00	-.6318		
.63	-.8085					17.50	-.6163		
1.25	-1.0131					20.00	-.5910		
2.50	-1.1261					30.00	-.5384		
3.13	-1.1492					40.00	-.5593		
4.37	-1.1432					50.00	-.5502		
5.00	-1.1402					60.00	-.5674		
6.25	-1.1237					70.00	-.5802		
8.75	-1.1025					80.00	-.5862		
10.00	-1.0959					90.00	-.6021		
12.50	-1.0893					100.00	-.6017		
15.00	-1.0658					110.00	-.5603		
17.50	-1.0308					241.85	.0349		
20.00	-1.0348								
30.00	-.9795								
40.00	-.9456								
50.00	-.9279								
60.00	-.9128								
70.00	-.9037								
80.00	-.8696								
90.00	-.8778								
100.00	-.8674								
110.00	-.8262								
241.85	.0954								
279.84	.0764								

$M = 0.915$; mfr $= 0.543$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0686	343.16	.0380	279.84	.0380	-187.46	1.0667	343.16	.0489
-155.11	1.0686	381.14	.0434			-106.57	1.0130	381.14	.0428
-130.84	1.0481	419.13	.0534			-25.67	.7761	419.13	.0586
-106.57	1.0129	457.12	.0747			-10.27	.9239	457.12	.0726
-90.39	.9802	507.77	.1227			-2.05	1.2192	507.77	.1212
-74.21	.9364	545.76	.1828			.00	.6522	545.76	.1825
-58.03	.8857	571.08	.2518			.31	-.1268	571.08	.2536
-41.85	.8259	583.74	.2985			.63	-.3602	583.74	.3055
-33.76	.8089	596.41	.3532			1.25	-.6976	596.41	.3635
-25.67	.7815	609.07	.4255			1.88	-.8334	609.07	.4358
-23.11	.7794					2.50	-.9027		
-17.97	.7965					3.13	-.9318		
-10.27	.9306					3.75	-.9286		
-5.13	1.0957					4.37	-.8994		
-3.34	1.1706					5.00	-.8893		
-2.05	1.2184					6.25	-.8934		
-.90	1.2093					7.50	-.8943		
-.44	1.1456					8.75	-.8292		
.00	.6532					10.00	-.8217		
.31	-.2090					15.00	-.7783		
.63	-.4074					17.50	-.7817		
1.25	-.6951					20.00	-.7534		
2.50	-.8816					30.00	-.7073		
3.13	-.8912					40.00	-.6946		
4.37	-.8996					50.00	-.6976		
5.00	-.8783					60.00	-.6774		
6.25	-.8316					70.00	-.6912		
8.75	-.8451					80.00	-.6952		
10.00	-.8229					90.00	-.7100		
12.50	-.8472					100.00	-.6976		
15.00	-.8162					110.00	-.6482		
17.50	-.7966					241.85	.0538		
20.00	-.7763								
30.00	-.7454								
40.00	-.7019								
50.00	-.7137								
60.00	-.7012								
70.00	-.6902								
80.00	-.6963								
90.00	-.7047								
100.00	-.7054								
110.00	-.6586								
241.85	.0556								
279.84	.0398								

Table IV. Continued

(k) Continued

$M = 0.917$; mfr $= 0.618$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	1.0200	343.16	.0387	279.84	.0303	-187.46	1.0173	343.16	.0517
-155.11	1.0162	381.14	.0475			-106.57	.9446	381.14	.0493
-130.84	.9888	419.13	.0611			-25.67	.6202	419.13	.0687
-106.57	.9444	457.12	.0878			-10.27	.7816	457.12	.0860
-90.39	.8984	507.77	.1412			-2.05	1.1737	507.77	.1394
-74.21	.8407	545.76	.2056			.00	.7971	545.76	.2059
-58.03	.7657	571.08	.2772			.31	.0621	571.08	.2790
-41.85	.6809	583.74	.3236			.63	-.1571	583.74	.3315
-33.76	.6366	596.41	.3806			1.25	-.5226	596.41	.3897
-25.67	.6005	609.07	.4487			1.88	-.6609	609.07	.4602
-23.11	.5931					2.50	-.7444		
-17.97	.6055					3.13	-.7632		
-10.27	.7692					3.75	-.7629		
-5.13	.9875					4.37	-.7380		
-3.34	1.1017					5.00	-.7098		
-2.05	1.1867					6.25	-.6798		
-.90	1.2268					7.50	-.7300		
-.44	1.2018					8.75	-.6546		
.00	.8142					10.00	-.6440		
.31	-.0071					15.00	-.6759		
.63	-.2051					17.50	-.6362		
1.25	-.5551					20.00	-.6430		
2.50	-.6833					30.00	-.5811		
3.13	-.7407					40.00	-.6168		
4.37	-.7156					50.00	-.6178		
5.00	-.6959					60.00	-.6205		
6.25	-.6863					70.00	-.6336		
8.75	-.6839					80.00	-.6406		
10.00	-.6594					90.00	-.6537		
12.50	-.6711					100.00	-.6483		
15.00	-.6264					110.00	-.6053		
17.50	-.6436					241.85	.0412		
20.00	-.6574								
30.00	-.5954								
40.00	-.6135								
50.00	-.6038								
60.00	-.6384								
70.00	-.6362								
80.00	-.6469								
90.00	-.6594								
100.00	-.6626								
110.00	-.6140								
241.85	.0436								
279.84	.0307								

$M = 0.918$; mfr $= 0.681$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9666	343.16	.0451	279.84	.0274	-187.46	.9652	343.16	.0554
-155.11	.9622	381.14	.0578			-106.57	.8703	381.14	.0575
-130.84	.9303	419.13	.0739			-25.67	.4130	419.13	.0772
-106.57	.8733	457.12	.1018			-10.27	.5898	457.12	.1006
-90.39	.8089	507.77	.1566			-2.05	1.1147	507.77	.1569
-74.21	.7326	545.76	.2232			.00	.9214	545.76	.2244
-58.03	.6295	571.08	.2944			.31	.2078	571.08	.2990
-41.85	.5074	583.74	.3423			.63	.0183	583.74	.3505
-33.76	.4454	596.41	.3963			1.25	-.3742	596.41	.4072
-25.67	.3625	609.07	.4629			1.88	-.5020	609.07	.4741
-23.11	.3535					2.50	-.6134		
-17.97	.3909					3.13	-.5622		
-10.27	.5758					3.75	-.5751		
-5.13	.8488					4.37	-.5563		
-3.34	.9926					5.00	-.5312		
-2.05	1.1097					6.25	-.4821		
-.90	1.2181					7.50	-.5610		
-.44	1.2240					8.75	-.5034		
.00	.9398					10.00	-.4564		
.31	.1737					15.00	-.4691		
.63	-.0578					17.50	-.4842		
1.25	-.3364					20.00	-.4835		
2.50	-.4886					30.00	-.5238		
3.13	-.4985					40.00	-.5624		
4.37	-.4713					50.00	-.5533		
5.00	-.4997					60.00	-.5724		
6.25	-.4788					70.00	-.6016		
8.75	-.4940					80.00	-.6056		
10.00	-.5164					90.00	-.6295		
12.50	-.5128					100.00	-.6282		
15.00	-.4635					110.00	-.5791		
17.50	-.5244					241.85	.0358		
20.00	-.5104								
30.00	-.5529								
40.00	-.5391								
50.00	-.5606								
60.00	-.5878								
70.00	-.5905								
80.00	-.6095								
90.00	-.6296								
100.00	-.6249								
110.00	-.5845								
241.85	.0344								
279.84	.0302								

Table IV. Concluded

(k) Concluded

$M = 0.916$; mfr $= 0.683$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9666	343.16	.0694	279.84	.0238	-187.46	.9634	343.16	.0266
-155.11	.9630	381.14	.0654			-106.57	.8669	381.14	.0460
-130.84	.9297	419.13	.0757			-25.67	.2882	419.13	.0703
-106.57	.8728	457.12	.1055			-10.27	.4724	457.12	.0915
-90.39	.8140	507.77	.1598			-2.05	1.0464	507.77	.1498
-74.21	.7402	545.76	.2236			.00	1.0224	545.76	.2181
-58.03	.6440	571.08	.2934			.31	.4074	571.08	.2949
-41.85	.5343	583.74	.3368			.63	.1853	583.74	.3468
-33.76	.4777	596.41	.3874			1.25	-.1449	596.41	.4084
-25.67	.4315	609.07	.4479			1.88	-.2520	609.07	.4822
-23.11	.4218					2.50	-.3193		
-17.97	.4727					3.13	-.2531		
-10.27	.6693					3.75	-.2521		
-5.13	.9307					4.37	-.2285		
-3.34	1.0656					5.00	-.2058		
-2.05	1.1630					6.25	-.2636		
-.90	1.2255					7.50	-.2914		
-.44	1.2115					8.75	-.3064		
.00	.8404					10.00	-.3244		
.31	.0136					15.00	-.3476		
.63	-.2131					17.50	-.3456		
1.25	-.5542					20.00	-.3591		
2.50	-.6708					30.00	-.4088		
3.13	-.7088					40.00	-.4639		
4.37	-.6951					50.00	-.4595		
5.00	-.6971					60.00	-.4962		
6.25	-.7112					70.00	-.5183		
8.75	-.7088					80.00	-.5365		
10.00	-.7160					90.00	-.5603		
12.50	-.6705					100.00	-.5593		
15.00	-.6967					110.00	-.5197		
17.50	-.6965					241.85	.0270		
20.00	-.6739								
30.00	-.6541								
40.00	-.6805								
50.00	-.6846								
60.00	-.6851								
70.00	-.6925								
80.00	-.6868								
90.00	-.7091								
100.00	-.7005								
110.00	-.6562								
241.85	.0438								
279.84	.0333								

$M = 0.918$; mfr $= 0.741$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-187.46	.9103	343.16	.0470	279.84	.0255	-187.46	.9095	343.16	.0543
-155.11	.9032	381.14	.0594			-106.57	.7881	381.14	.0579
-130.84	.8601	419.13	.0773			-25.67	.0519	419.13	.0812
-106.57	.7882	457.12	.1082			-10.27	.3630	457.12	.1040
-90.39	.7131	507.77	.1661			-2.05	1.0041	507.77	.1634
-74.21	.6111	545.76	.2328			.00	1.0237	545.76	.2325
-58.03	.4727	571.08	.3037			.31	.4248	571.08	.3089
-41.85	.2911	583.74	.3504			.63	.1881	583.74	.3598
-33.76	.1854	596.41	.4046			1.25	-.1190	596.41	.4161
-25.67	.0674	609.07	.4689			1.88	-.2647	609.07	.4826
-23.11	.0221					2.50	-.3310		
-17.97	.0935					3.13	-.3344		
-10.27	.3744					3.75	-.2663		
-5.13	.6861					4.37	-.2651		
-3.34	.8511					5.00	-.2689		
-2.05	1.0265					6.25	-.2528		
-.90	1.1792					7.50	-.3273		
-.44	1.2266					8.75	-.3176		
.00	1.0277					10.00	-.3435		
.31	.3722					15.00	-.4425		
.63	.1120					17.50	-.4516		
1.25	-.1489					20.00	-.4402		
2.50	-.3019					30.00	-.4526		
3.13	-.2666					40.00	-.5200		
4.37	-.2965					50.00	-.5083		
5.00	-.3061					60.00	-.5418		
6.25	-.2621					70.00	-.5546		
8.75	-.3467					80.00	-.5774		
10.00	-.3897					90.00	-.5875		
12.50	-.4127					100.00	-.5945		
15.00	-.4227					110.00	-.5526		
17.50	-.4437					241.85	.0297		
20.00	-.4405								
30.00	-.4658								
40.00	-.5088								
50.00	-.4993								
60.00	-.5413								
70.00	-.5576								
80.00	-.5777								
90.00	-.6012								
100.00	-.6082								
110.00	-.5645								
241.85	.0297								
279.84	.0262								

Table V. Pressure Coefficients on Model With Long Cowl

(a) $M = 0.60$

$M = 0.594$; mfr $= 0.282$; $\alpha = 0°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0341	275.35	-.0554	224.55	-.0668	-150.43	1.0385	275.35	-.0522
-137.44	1.0346	305.83	-.0517			-85.51	1.0244	305.83	-.0522
-124.46	1.0336	336.31	-.0501			-20.60	.9893	336.31	-.0517
-104.99	1.0305	366.80	-.0432			-8.24	1.0701	366.80	-.0570
-85.51	1.0201	407.44	-.0416			-1.65	.9408	407.44	-.0581
-72.53	1.0097	437.92	-.0448			.00	-.8848	437.92	-.0623
-59.55	.9993	458.24	-.0342			.31	-2.0069	458.24	-.0496
-46.57	.9889	468.40	-.0342			.62	-1.9250	468.40	-.0400
-33.58	.9790	478.56	-.0241			1.25	-1.6328	478.56	-.0379
-27.09	.9858	488.72	-.0024			1.87	-1.8277	488.72	.0013
-20.60	.9917					2.50	-1.6405		
-18.54	.9969					3.13	-1.5378		
-14.42	1.0168					3.75	-1.0935		
-8.24	1.0701					4.38	-1.5464		
-4.12	1.0828					5.00	-1.3937		
-2.68	1.0373					6.25	-1.2223		
-1.65	.9287					7.50	-1.2140		
-.72	.6314					8.75	-1.3112		
-.35	.4085					10.00	-1.2117		
.00	-.8806					15.00	-1.2105		
.31	-1.1439					17.50	-1.1524		
.62	-1.3582					20.00	-1.1346		
1.25	-1.1685					30.00	-.8167		
1.87	-1.2165					50.00	-.4908		
2.50	-1.1632					60.00	-.3861		
3.13	-1.1967					70.00	-.3182		
3.75	-1.2050					80.00	-.2738		
4.38	-1.2510					90.00	-.2346		
5.00	-1.1716					100.00	-.1878		
6.25	-1.1841					110.00	-.1684		
7.50	-1.2009					194.07	-.0852		
8.75	-1.2547								
10.00	-1.2197								
12.50	-1.3597								
15.00	-1.2579								
17.50	-1.2171								
20.00	-1.2187								
30.00	-.8728								
40.00	-.6570								
50.00	-.4107								
60.00	-.3248								
70.00	-.2960								
80.00	-.2425								
90.00	-.2261								
100.00	-.1854								
110.00	-.1699								
194.07	-.0913								
224.55	-.0692								

$M = 0.594$; mfr $= 0.283$; $\alpha = 2.0°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0380	275.35	-.0585	224.55	-.0669	-150.43	1.0404	275.35	-.0521
-137.44	1.0369	305.83	-.0569			-85.51	1.0252	305.83	-.0543
-124.46	1.0375	336.31	-.0590			-20.60	.9748	336.31	-.0474
-104.99	1.0323	366.80	-.0553			-8.24	1.0556	366.80	-.0495
-85.51	1.0239	407.44	-.0574			-1.65	.9976	407.44	-.0474
-72.53	1.0140	437.92	-.0638			.00	-.7645	437.92	-.0426
-59.55	1.0036	458.24	-.0590			.31	-2.2607	458.24	-.0357
-46.57	.9979	468.40	-.0590			.62	-2.1399	468.40	-.0198
-33.58	.9896	478.56	-.0580			1.25	-2.2061	478.56	-.0076
-27.09	.9959	488.72	-.0410			1.87	-2.0725	488.72	.0275
-20.60	1.0070					2.50	-1.8598		
-18.54	1.0164					3.13	-1.8034		
-14.42	1.0369					3.75	-1.7088		
-8.24	1.0825					4.38	-1.6150		
-4.12	1.0755					5.00	-1.4189		
-2.68	1.0184					6.25	-1.4293		
-1.65	.8733					7.50	-1.2697		
-.72	.5433					8.75	-1.2540		
-.35	.2864					10.00	-1.3020		
.00	-1.0155					15.00	-1.1551		
.31	-1.3539					17.50	-1.0833		
.62	-1.3906					20.00	-.9428		
1.25	-.9873					30.00	-.5756		
1.87	-1.2296					50.00	-.3683		
2.50	-1.0197					60.00	-.3156		
3.13	-1.2615					70.00	-.2828		
3.75	-1.0291					80.00	-.2565		
4.38	-1.2636					90.00	-.2295		
5.00	-1.0616					100.00	-.1786		
6.25	-1.2845					110.00	-.1521		
7.50	-1.0025					194.07	-.0736		
8.75	-1.0657								
10.00	-1.0929								
12.50	-1.2824								
15.00	-1.1210								
17.50	-1.2970								
20.00	-1.1136								
30.00	-1.0150								
40.00	-.9015								
50.00	-.6343								
60.00	-.4320								
70.00	-.3431								
80.00	-.2876								
90.00	-.2201								
100.00	-.2249								
110.00	-.1769								
194.07	-.0878								
224.55	-.0663								

Table V. Continued

(a) Continued

$M = 0.595$; mfr $= 0.295$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0334	275.35	-.0563	224.55	-.0715	-150.43	1.0367	275.35	-.0505
-137.44	1.0355	305.83	-.0531			-85.51	1.0174	305.83	-.0537
-124.46	1.0334	336.31	-.0537			-20.60	.9736	336.31	-.0473
-104.99	1.0235	366.80	-.0478			-8.24	1.0607	366.80	-.0505
-85.51	1.0157	407.44	-.0441			-1.65	.9613	407.44	-.0484
-72.53	1.0022	437.92	-.0468			.00	-.8396	437.92	-.0484
-59.55	.9918	458.24	-.0372			.31	-1.8342	458.24	-.0362
-46.57	.9773	468.40	-.0330			.62	-1.9948	468.40	-.0303
-33.58	.9659	478.56	-.0256			1.25	-1.7943	478.56	-.0208
-27.09	.9695	488.72	.0041			1.87	-1.7903	488.72	.0179
-20.60	.9712					2.50	-1.6369		
-18.54	.9753					3.13	-1.5038		
-14.42	.9987					3.75	-1.6181		
-8.24	1.0595					4.38	-1.5724		
-4.12	1.0888					5.00	-1.6234		
-2.68	1.0587					6.25	-1.5614		
-1.65	.9661					7.50	-1.5724		
-.72	.6942					8.75	-1.4181		
-.35	.4741					10.00	-1.3294		
.00	-.7837					15.00	-1.2074		
.31	-1.1319					17.50	-1.1510		
.62	-1.2984					20.00	-1.0971		
1.25	-1.0624					30.00	-.6135		
1.87	-1.0196					50.00	-.3978		
2.50	-1.0985					60.00	-.3218		
3.13	-1.0953					70.00	-.2942		
3.75	-1.1047					80.00	-.2573		
4.38	-1.1298					90.00	-.2281		
5.00	-1.0358					100.00	-.1866		
6.25	-1.0713					110.00	-.1603		
7.50	-1.1329					194.07	-.0807		
8.75	-1.0750								
10.00	-1.1590								
12.50	-1.1162								
15.00	-1.1360								
17.50	-1.1653								
20.00	-1.1543								
30.00	-.9271								
40.00	-.6757								
50.00	-.4488								
60.00	-.3205								
70.00	-.2532								
80.00	-.2285								
90.00	-.1994								
100.00	-.1714								
110.00	-.1475								
194.07	-.0880								
224.55	-.0653								

$M = 0.595$; mfr $= 0.397$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9892	275.35	-.0446	224.55	-.0649	-150.43	.9882	275.35	-.0372
-137.44	.9877	305.83	-.0425			-85.51	.9562	305.83	-.0404
-124.46	.9851	336.31	-.0399			-20.60	.8354	336.31	-.0372
-104.99	.9737	366.80	-.0356			-8.24	.9748	366.80	-.0341
-85.51	.9530	407.44	-.0251			-1.65	1.0542	407.44	-.0230
-72.53	.9327	437.92	-.0134			.00	-.5296	437.92	-.0097
-59.55	.9114	458.24	.0008			.31	-2.0384	458.24	.0146
-46.57	.8787	468.40	.0156			.62	-2.4858	468.40	.0384
-33.58	.8549	478.56	.0447			1.25	-1.9008	478.56	.0685
-27.09	.8488	488.72	.0854			1.87	-2.1375	488.72	.1198
-20.60	.8500					2.50	-1.8323		
-18.54	.8471					3.13	-1.7496		
-14.42	.8832					3.75	-1.7808		
-8.24	.9842					4.38	-1.7472		
-4.12	1.0782					5.00	-1.7414		
-2.68	1.0899					6.25	-1.5847		
-1.65	1.0440					7.50	-1.4552		
-.72	.8591					8.75	-1.2109		
-.35	.6662					10.00	-1.0921		
.00	-.6266					15.00	-.7297		
.31	-2.2048					17.50	-.6334		
.62	-2.1704					20.00	-.6194		
1.25	-2.1798					30.00	-.4514		
1.87	-2.1667					50.00	-.3785		
2.50	-2.0125					60.00	-.3196		
3.13	-1.9327					70.00	-.2815		
3.75	-1.8290					80.00	-.2541		
4.38	-1.7185					90.00	-.2278		
5.00	-1.6664					100.00	-.1724		
6.25	-1.4465					110.00	-.1508		
7.50	-1.3527					194.07	-.0753		
8.75	-1.2364								
10.00	-1.0910								
12.50	-.9893								
15.00	-.8113								
17.50	-.7697								
20.00	-.6110								
30.00	-.4790								
40.00	-.4090								
50.00	-.3576								
60.00	-.3189								
70.00	-.2868								
80.00	-.2540								
90.00	-.2348								
100.00	-.1885								
110.00	-.1513								
194.07	-.0820								
224.55	-.0692								

Table V. Continued

(a) Continued

$M = 0.594$; mfr $= 0.441$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9610	275.35	-.0456	224.55	-.0592	-150.43	.9642	275.35	-.0329
-137.44	.9636	305.83	-.0430			-85.51	.9221	305.83	-.0371
-124.46	.9610	336.31	-.0393			-20.60	.7675	336.31	-.0287
-104.99	.9454	366.80	-.0377			-8.24	.9233	366.80	-.0308
-85.51	.9230	407.44	-.0154			-1.65	1.0730	407.44	-.0138
-72.53	.8955	437.92	-.0006			.00	-.3908	437.92	.0042
-59.55	.8659	458.24	.0122			.31	-1.9018	458.24	.0334
-46.57	.8316	468.40	.0334			.62	-2.4171	468.40	.0594
-33.58	.7947	478.56	.0647			1.25	-2.0110	478.56	.0890
-27.09	.7833	488.72	.1362			1.87	-2.1960	488.72	.1341
-20.60	.7798					2.50	-1.9687		
-18.54	.7874					3.13	-1.8976		
-14.42	.8098					3.75	-1.7474		
-8.24	.9174					4.38	-1.5294		
-4.12	1.0533					5.00	-1.5195		
-2.68	1.0871					6.25	-1.2115		
-1.65	1.0674					7.50	-1.0925		
-.72	.9060					8.75	-1.0125		
-.35	.7604					10.00	-.7924		
.00	-.4415					15.00	-.6046		
.31	-2.0408					17.50	-.5865		
.62	-2.3626					20.00	-.5362		
1.25	-2.2665					30.00	-.4484		
1.87	-2.2310					50.00	-.3800		
2.50	-2.1881					60.00	-.3156		
3.13	-1.9534					70.00	-.2998		
3.75	-1.7334					80.00	-.2559		
4.38	-1.5536					90.00	-.2261		
5.00	-1.5165					100.00	-.1756		
6.25	-1.3059					110.00	-.1517		
7.50	-1.1857					194.07	-.0770		
8.75	-.9474								
10.00	-1.0163								
12.50	-.7372								
15.00	-.6997								
17.50	-.5943								
20.00	-.5412								
30.00	-.4525								
40.00	-.3920								
50.00	-.3490								
60.00	-.3122								
70.00	-.2869								
80.00	-.2545								
90.00	-.2247								
100.00	-.1772								
110.00	-.1488								
194.07	-.0788								
224.55	-.0586								

$M = 0.594$; mfr $= 0.495$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9338	275.35	-.0409	224.55	-.0580	-150.43	.9341	275.35	-.0314
-137.44	.9354	305.83	-.0367			-85.51	.8809	305.83	-.0335
-124.46	.9297	336.31	-.0335			-20.60	.6644	336.31	-.0239
-104.99	.9130	366.80	-.0261			-8.24	.8417	366.80	-.0245
-85.51	.8777	407.44	-.0075			-1.65	1.0902	407.44	-.0112
-72.53	.8476	437.92	.0063			.00	-.2134	437.92	.0137
-59.55	.8091	458.24	.0375			.31	-1.6004	458.24	.0455
-46.57	.7603	468.40	.0672			.62	-2.0463	468.40	.0773
-33.58	.7120	478.56	.0942			1.25	-2.2187	478.56	.1176
-27.09	.6965	488.72	.1494			1.87	-2.0806	488.72	.1744
-20.60	.6684					2.50	-2.0941		
-18.54	.6831					3.13	-1.6992		
-14.42	.7187					3.75	-1.3493		
-8.24	.8423					4.38	-1.0507		
-4.12	1.0197					5.00	-.9248		
-2.68	1.0731					6.25	-.8731		
-1.65	1.0878					7.50	-.7839		
-.72	.9792					8.75	-.7424		
-.35	.8509					10.00	-.7160		
.00	-.2806					15.00	-.5880		
.31	-1.7451					17.50	-.5505		
.62	-2.2085					20.00	-.5073		
1.25	-2.2210					30.00	-.4254		
1.87	-2.1072					50.00	-.3593		
2.50	-2.1380					60.00	-.3061		
3.13	-2.0941					70.00	-.2768		
3.75	-1.5131					80.00	-.2429		
4.38	-.9650					90.00	-.2154		
5.00	-.9969					100.00	-.1644		
6.25	-.8801					110.00	-.1375		
7.50	-.8178					194.07	-.0703		
8.75	-.7845								
10.00	-.7232								
12.50	-.6396								
15.00	-.5925								
17.50	-.5492								
20.00	-.5103								
30.00	-.4339								
40.00	-.3760								
50.00	-.3424								
60.00	-.3140								
70.00	-.2786								
80.00	-.2489								
90.00	-.2207								
100.00	-.1710								
110.00	-.1418								
194.07	-.0727								
224.55	-.0604								

Table V. Continued

(a) Continued

$M = 0.595$; mfr $= 0.494$; $\alpha = 1.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9339	275.35	-.0368	224.55	-.0657	-150.43	.9334	275.35	-.0342
-137.44	.9360	305.83	-.0347			-85.51	.8791	305.83	-.0342
-124.46	.9298	336.31	-.0347			-20.60	.6453	336.31	-.0241
-104.99	.9132	366.80	-.0262			-8.24	.8096	366.80	-.0241
-85.51	.8794	407.44	-.0125			-1.65	1.0905	407.44	-.0050
-72.53	.8483	437.92	.0071			.00	-.0798	437.92	.0172
-59.55	.8094	458.24	.0421			.31	-1.3750	458.24	.0484
-46.57	.7689	468.40	.0564			.62	-1.9204	468.40	.0812
-33.58	.7258	478.56	.0871			1.25	-2.0723	478.56	.1231
-27.09	.7066	488.72	.1389			1.87	-1.8298	488.72	.1777
-20.60	.7031					2.50	-1.7263		
-18.54	.7049					3.13	-1.4144		
-14.42	.7417					3.75	-.9417		
-8.24	.8797					4.38	-.8615		
-4.12	1.0293					5.00	-.8639		
-2.68	1.0832					6.25	-.7560		
-1.65	1.0795					7.50	-.7249		
-.72	.9502					8.75	-.6892		
-.35	.8025					10.00	-.6373		
.00	-.4251					15.00	-.5496		
.31	-1.8674					17.50	-.5181		
.62	-2.3089					20.00	-.4831		
1.25	-2.2661					30.00	-.3925		
1.87	-2.1967					50.00	-.3470		
2.50	-2.2051					60.00	-.2890		
3.13	-2.1169					70.00	-.2668		
3.75	-1.7161					80.00	-.2370		
4.38	-1.5574					90.00	-.2090		
5.00	-1.3774					100.00	-.1570		
6.25	-1.1968					110.00	-.1284		
7.50	-.8542					194.07	-.0639		
8.75	-.8744								
10.00	-.7981								
12.50	-.7079								
15.00	-.6254								
17.50	-.6093								
20.00	-.5568								
30.00	-.4578								
40.00	-.3981								
50.00	-.3523								
60.00	-.3170								
70.00	-.2866								
80.00	-.2570								
90.00	-.2293								
100.00	-.1785								
110.00	-.1458								
194.07	-.0829								
224.55	-.0602								

$M = 0.597$; mfr $= 0.494$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9332	275.35	-.0329	224.55	-.0621	-150.43	.9308	275.35	-.0366
-137.44	.9358	305.83	-.0339			-85.51	.8761	305.83	-.0355
-124.46	.9327	336.31	-.0318			-20.60	.6277	336.31	-.0250
-104.99	.9135	366.80	-.0244			-8.24	.7777	366.80	-.0208
-85.51	.8836	407.44	-.0113			-1.65	1.0884	407.44	-.0060
-72.53	.8510	437.92	.0077			.00	.0434	437.92	.0140
-59.55	.8180	458.24	.0283			.31	-1.2740	458.24	.0493
-46.57	.7741	468.40	.0478			.62	-1.5486	468.40	.0852
-33.58	.7332	478.56	.0789			1.25	-1.8262	478.56	.1205
-27.09	.7288	488.72	.1289			1.87	-1.5260	488.72	.1949
-20.60	.7248					2.50	-1.4520		
-18.54	.7271					3.13	-1.0603		
-14.42	.7608					3.75	-.8521		
-8.24	.9040					4.38	-.7812		
-4.12	1.0493					5.00	-.7544		
-2.68	1.0901					6.25	-.6903		
-1.65	1.0700					7.50	-.6526		
-.72	.9169					8.75	-.6397		
-.35	.7684					10.00	-.5974		
.00	-.4977					15.00	-.5078		
.31	-2.0505					17.50	-.4473		
.62	-2.3782					20.00	-.4334		
1.25	-2.2536					30.00	-.3520		
1.87	-2.2437					50.00	-.3264		
2.50	-2.1222					60.00	-.2769		
3.13	-2.0022					70.00	-.2548		
3.75	-1.7590					80.00	-.2281		
4.38	-1.6260					90.00	-.2060		
5.00	-1.5626					100.00	-.1477		
6.25	-1.4726					110.00	-.1238		
7.50	-1.4046					194.07	-.0591		
8.75	-1.1756								
10.00	-1.0965								
12.50	-.9027								
15.00	-.6909								
17.50	-.6852								
20.00	-.5956								
30.00	-.4678								
40.00	-.4180								
50.00	-.3618								
60.00	-.3265								
70.00	-.2897								
80.00	-.2618								
90.00	-.2315								
100.00	-.1807								
110.00	-.1473								
194.07	-.0780								
224.55	-.0548								

Table V. Continued

(a) Continued

$M = 0.595$; mfr $= 0.498$; $\alpha = 3.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9343	275.35	-.0326	224.55	-.0683	-150.43	.9304	275.35	-.0416
-137.44	.9353	305.83	-.0326			-85.51	.8743	305.83	-.0363
-124.46	.9312	336.31	-.0278			-20.60	.5949	336.31	-.0262
-104.99	.9130	366.80	-.0241			-8.24	.7328	366.80	-.0225
-85.51	.8824	407.44	-.0119			-1.65	1.0764	407.44	-.0061
-72.53	.8544	437.92	.0029			.00	.2070	437.92	.0161
-59.55	.8202	458.24	.0235			.31	-.9178	458.24	.0527
-46.57	.7781	468.40	.0426			.62	-1.2268	468.40	.0849
-33.58	.7428	478.56	.0654			1.25	-1.4403	478.56	.1225
-27.09	.7369	488.72	.1130			1.87	-1.2592	488.72	.1978
-20.60	.7345					2.50	-1.1588		
-18.54	.7369					3.13	-.9461		
-14.42	.7900					3.75	-.7483		
-8.24	.9228					4.38	-.6666		
-4.12	1.0555					5.00	-.6473		
-2.68	1.0892					6.25	-.6065		
-1.65	1.0622					7.50	-.5468		
-.72	.8886					8.75	-.5496		
-.35	.7079					10.00	-.4902		
.00	-.5845					15.00	-.4376		
.31	-2.1363					17.50	-.3815		
.62	-2.4348					20.00	-.3809		
1.25	-2.1290					30.00	-.3255		
1.87	-2.2584					50.00	-.3074		
2.50	-1.7913					60.00	-.2599		
3.13	-1.9045					70.00	-.2330		
3.75	-1.6844					80.00	-.2184		
4.38	-1.6620					90.00	-.1898		
5.00	-1.5507					100.00	-.1425		
6.25	-1.3895					110.00	-.1156		
7.50	-1.4119					194.07	-.0554		
8.75	-1.3436								
10.00	-1.3441								
12.50	-1.1619								
15.00	-1.0727								
17.50	-.9213								
20.00	-.8206								
30.00	-.5170								
40.00	-.4172								
50.00	-.3598								
60.00	-.3275								
70.00	-.2873								
80.00	-.2558								
90.00	-.2325								
100.00	-.1854								
110.00	-.1495								
194.07	-.0763								
224.55	-.0603								

$M = 0.594$; mfr $= 0.557$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.8871	275.35	-.0339	224.55	-.0545	-150.43	.8841	275.35	-.0264
-137.44	.8876	305.83	-.0291			-85.51	.8168	305.83	-.0280
-124.46	.8834	336.31	-.0232			-20.60	.5222	336.31	-.0217
-104.99	.8574	366.80	-.0121			-8.24	.7153	366.80	-.0169
-85.51	.8148	407.44	.0033			-1.65	1.0802	407.44	.0017
-72.53	.7752	437.92	.0224			.00	.0358	437.92	.0266
-59.55	.7253	458.24	.0579			.31	-1.2446	458.24	.0547
-46.57	.6561	468.40	.0903			.62	-1.6988	468.40	.0898
-33.58	.5900	478.56	.1333			1.25	-1.8880	478.56	.1280
-27.09	.5637	488.72	.1971			1.87	-1.7380	488.72	.1976
-20.60	.5262					2.50	-1.6589		
-18.54	.5169					3.13	-1.2175		
-14.42	.5637					3.75	-.9049		
-8.24	.7230					4.38	-.8398		
-4.12	.9366					5.00	-.8036		
-2.68	1.0263					6.25	-.7680		
-1.65	1.0828					7.50	-.7269		
-.72	1.0582					8.75	-.6832		
-.35	.9525					10.00	-.6268		
.00	-.0753					15.00	-.5390		
.31	-1.2873					17.50	-.5003		
.62	-1.7601					20.00	-.4716		
1.25	-1.8668					30.00	-.3944		
1.87	-1.6440					50.00	-.3446		
2.50	-1.5965					60.00	-.2878		
3.13	-1.4280					70.00	-.2667		
3.75	-.9661					80.00	-.2369		
4.38	-.8103					90.00	-.2140		
5.00	-.8051					100.00	-.1600		
6.25	-.7693					110.00	-.1325		
7.50	-.7355					194.07	-.0662		
8.75	-.6985								
10.00	-.6559								
12.50	-.6132								
15.00	-.5215								
17.50	-.5030								
20.00	-.4767								
30.00	-.4016								
40.00	-.3532								
50.00	-.3126								
60.00	-.2955								
70.00	-.2632								
80.00	-.2390								
90.00	-.2163								
100.00	-.1652								
110.00	-.1294								
194.07	-.0693								
224.55	-.0564								

Table V. Continued

(b) Continued

$M = 0.645$; mfr $= 0.492$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9521	275.35	-.0375	224.55	-.0626	-150.43	.9537	275.35	-.0285
-137.44	.9548	305.83	-.0314			-85.51	.9014	305.83	-.0328
-124.46	.9461	336.31	-.0248			-20.60	.6932	336.31	-.0314
-104.99	.9286	366.80	-.0145			-8.24	.8693	366.80	-.0276
-85.51	.8983	407.44	.0021			-1.65	1.1038	407.44	-.0129
-72.53	.8688	437.92	.0246			.00	-.0642	437.92	.0105
-59.55	.8307	458.24	.0616			.31	-1.3837	458.24	.0438
-46.57	.7815	468.40	.0874			.62	-1.8948	468.40	.0757
-33.58	.7346	478.56	.1273			1.25	-2.1299	478.56	.1165
-27.09	.7217	488.72	.1869			1.87	-2.0746	488.72	.1826
-20.60	.6974					2.50	-1.9994		
-18.54	.6963					3.13	-1.9625		
-14.42	.7352					3.75	-1.8628		
-8.24	.8600					4.38	-1.6378		
-4.12	1.0303					5.00	-1.4799		
-2.68	1.0906					6.25	-1.1050		
-1.65	1.1063					7.50	-.9198		
-.72	1.0211					8.75	-.8487		
-.35	.8745					10.00	-.7769		
.00	-.1553					15.00	-.6020		
.31	-1.5134					17.50	-.5596		
.62	-1.8911					20.00	-.5466		
1.25	-2.0854					30.00	-.4245		
1.87	-1.9560					50.00	-.3722		
2.50	-1.9467					60.00	-.3205		
3.13	-1.9818					70.00	-.2884		
3.75	-1.8847					80.00	-.2579		
4.38	-1.6998					90.00	-.2289		
5.00	-1.5064					100.00	-.1704		
6.25	-1.0700					110.00	-.1409		
7.50	-1.0112					194.07	-.0680		
8.75	-.8314								
10.00	-.7467								
12.50	-.6607								
15.00	-.5988								
17.50	-.5536								
20.00	-.5194								
30.00	-.4387								
40.00	-.3880								
50.00	-.3490								
60.00	-.3158								
70.00	-.2899								
80.00	-.2561								
90.00	-.2276								
100.00	-.1766								
110.00	-.1475								
194.07	-.0751								
224.55	-.0588								

$M = 0.644$; mfr $= 0.547$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9170	275.35	-.0310	224.55	-.0530	-150.43	.9136	275.35	-.0281
-137.44	.9179	305.83	-.0258			-85.51	.8497	305.83	-.0295
-124.46	.9105	336.31	-.0183			-20.60	.5767	336.31	-.0197
-104.99	.8921	366.80	-.0065			-8.24	.7500	366.80	-.0173
-85.51	.8497	407.44	.0147			-1.65	1.0993	407.44	.0029
-72.53	.8091	437.92	.0410			.00	.0625	437.92	.0288
-59.55	.7616	458.24	.0847			.31	-1.1727	458.24	.0640
-46.57	.7013	468.40	.1129			.62	-1.6251	468.40	.0998
-33.58	.6278	478.56	.1553			1.25	-1.9176	478.56	.1426
-27.09	.6119	488.72	.2235			1.87	-1.9479	488.72	.2150
-20.60	.5709					2.50	-1.8056		
-18.54	.5663					3.13	-1.7544		
-14.42	.6140					3.75	-1.6107		
-8.24	.7635					4.38	-.8335		
-4.12	.9704					5.00	-.8710		
-2.68	1.0482					6.25	-.7575		
-1.65	1.1005					7.50	-.7242		
-.72	1.0695					8.75	-.7010		
-.35	.9737					10.00	-.6545		
.00	-.0075					15.00	-.5600		
.31	-1.2342					17.50	-.5211		
.62	-1.7048					20.00	-.4977		
1.25	-1.8934					30.00	-.4080		
1.87	-1.8003					50.00	-.3608		
2.50	-1.8267					60.00	-.3026		
3.13	-1.7391					70.00	-.2814		
3.75	-1.4021					80.00	-.2466		
4.38	-1.0205					90.00	-.2181		
5.00	-1.0483					100.00	-.1594		
6.25	-.7187					110.00	-.1335		
7.50	-.7423					194.07	-.0655		
8.75	-.7043								
10.00	-.6617								
12.50	-.6064								
15.00	-.5475								
17.50	-.5303								
20.00	-.5029								
30.00	-.4229								
40.00	-.3781								
50.00	-.3298								
60.00	-.2997								
70.00	-.2772								
80.00	-.2474								
90.00	-.2164								
100.00	-.1652								
110.00	-.1353								
194.07	-.0704								
224.55	-.0508								

Table V. Continued

(b) Continued

$M = 0.646$; mfr $= 0.612$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.8728	275.35	-.0265	224.55	-.0475	-150.43	.8700	275.35	-.0199
-137.44	.8732	305.83	-.0190			-85.51	.7873	305.83	-.0209
-124.46	.8622	336.31	-.0111			-20.60	.4083	336.31	-.0072
-104.99	.8343	366.80	.0031			-8.24	.6020	366.80	-.0044
-85.51	.7852	407.44	.0316			-1.65	1.0635	407.44	.0227
-72.53	.7329	437.92	.0616			.00	.2732	437.92	.0531
-59.55	.6673	458.24	.1102			.31	-.8257	458.24	.1008
-46.57	.5861	468.40	.1448			.62	-1.3131	468.40	.1392
-33.58	.4953	478.56	.1888			1.25	-1.6577	478.56	.1850
-27.09	.4651	488.72	.2599			1.87	-1.5434	488.72	.2585
-20.60	.4130					2.50	-1.4086		
-18.54	.4068					3.13	-1.2218		
-14.42	.4202					3.75	-.8832		
-8.24	.6144					4.38	-.7143		
-4.12	.8745					5.00	-.6981		
-2.68	.9866					6.25	-.6759		
-1.65	1.0798					7.50	-.6603		
-.72	1.1020					8.75	-.6056		
-.35	1.0570					10.00	-.5994		
.00	.2247					15.00	-.4998		
.31	-.8546					17.50	-.4652		
.62	-1.2106					20.00	-.4539		
1.25	-1.5495					30.00	-.3749		
1.87	-1.4352					50.00	-.3398		
2.50	-1.2415					60.00	-.2835		
3.13	-1.3393					70.00	-.2619		
3.75	-.8316					80.00	-.2304		
4.38	-.6779					90.00	-.2046		
5.00	-.6872					100.00	-.1478		
6.25	-.6802					110.00	-.1189		
7.50	-.6398					194.07	-.0513		
8.75	-.6526								
10.00	-.5834								
12.50	-.5339								
15.00	-.5009								
17.50	-.4940								
20.00	-.4376								
30.00	-.3766								
40.00	-.3412								
50.00	-.3069								
60.00	-.2892								
70.00	-.2614								
80.00	-.2269								
90.00	-.2029								
100.00	-.1493								
110.00	-.1234								
194.07	-.0594								
224.55	-.0340								

$M = 0.644$; mfr $= 0.682$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.8038	275.35	-.0197	224.55	-.0404	-150.43	.8016	275.35	-.0141
-137.44	.8070	305.83	-.0108			-85.51	.6926	305.83	-.0126
-124.46	.7941	336.31	.0005			-20.60	.1523	336.31	-.0009
-104.99	.7559	366.80	.0160			-8.24	.3854	366.80	.0071
-85.51	.6946	407.44	.0481			-1.65	.9890	407.44	.0381
-72.53	.6262	437.92	.0782			.00	.5221	437.92	.0759
-59.55	.5391	458.24	.1328			.31	-.4804	458.24	.1215
-46.57	.4289	468.40	.1666			.62	-.7917	468.40	.1643
-33.58	.3104	478.56	.2117			1.25	-1.0917	478.56	.2094
-27.09	.2457	488.72	.2781			1.87	-1.0513	488.72	.2805
-20.60	.1694					2.50	-.8953		
-18.54	.1336					3.13	-.8254		
-14.42	.1767					3.75	-.6396		
-8.24	.3947					4.38	-.5997		
-4.12	.7088					5.00	-.5395		
-2.68	.8434					6.25	-.5360		
-1.65	1.0078					7.50	-.5271		
-.72	1.0994					8.75	-.5344		
-.35	1.0999					10.00	-.5089		
.00	.4645					15.00	-.4259		
.31	-.4047					17.50	-.4083		
.62	-.8575					20.00	-.4000		
1.25	-1.1004					30.00	-.3341		
1.87	-1.0216					50.00	-.3237		
2.50	-.8649					60.00	-.2630		
3.13	-.7792					70.00	-.2474		
3.75	-.7278					80.00	-.2153		
4.38	-.6901					90.00	-.1945		
5.00	-.5942					100.00	-.1404		
6.25	-.5135					110.00	-.1119		
7.50	-.5347					194.07	-.0519		
8.75	-.5458								
10.00	-.4868								
12.50	-.4771								
15.00	-.4408								
17.50	-.4255								
20.00	-.3858								
30.00	-.3481								
40.00	-.3193								
50.00	-.2918								
60.00	-.2675								
70.00	-.2433								
80.00	-.2180								
90.00	-.1940								
100.00	-.1445								
110.00	-.1110								
194.07	-.0585								
224.55	-.0355								

Table V. Continued

(b) Continued

$M = 0.645$; mfr $= 0.750$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.7317	275.35	-.0137	224.55	-.0296	-150.43	.7294	275.35	.0013
-137.44	.7354	305.83	-.0025			-85.51	.5913	305.83	-.0029
-124.46	.7267	336.31	.0074			-20.60	-.1389	336.31	.0088
-104.99	.6756	366.80	.0238			-8.24	.0930	366.80	.0186
-85.51	.5915	407.44	.0575			-1.65	.8464	407.44	.0514
-72.53	.5051	437.92	.0960			.00	.7776	437.92	.0894
-59.55	.4008	458.24	.1452			.31	-.1191	458.24	.1391
-46.57	.2486	468.40	.1803			.62	-.3375	468.40	.1803
-33.58	.0849	478.56	.2267			1.25	-.5749	478.56	.2338
-27.09	.0050	488.72	.2929			1.87	-.6561	488.72	.2981
-20.60	-.1248					2.50	-.6137		
-18.54	-.1404					3.13	-.5872		
-14.42	-.1353					3.75	-.4601		
-8.24	.1302					4.38	-.4992		
-4.12	.4795					5.00	-.4430		
-2.68	.6685					6.25	-.4634		
-1.65	.8809					7.50	-.3908		
-.72	1.0741					8.75	-.3847		
-.35	1.1088					10.00	-.3866		
.00	.6783					15.00	-.3644		
.31	-.0851					17.50	-.3706		
.62	-.4151					20.00	-.3365		
1.25	-.6863					30.00	-.3116		
1.87	-.7029					50.00	-.2941		
2.50	-.6609					60.00	-.2454		
3.13	-.6118					70.00	-.2320		
3.75	-.5966					80.00	-.2066		
4.38	-.4813					90.00	-.1860		
5.00	-.4275					100.00	-.1280		
6.25	-.4023					110.00	-.1093		
7.50	-.4087					194.07	-.0454		
8.75	-.4036								
10.00	-.4216								
12.50	-.3875								
15.00	-.3396								
17.50	-.3416								
20.00	-.3445								
30.00	-.3039								
40.00	-.2740								
50.00	-.2529								
60.00	-.2457								
70.00	-.2284								
80.00	-.2050								
90.00	-.1803								
100.00	-.1403								
110.00	-.1016								
194.07	-.0530								
224.55	-.0318								

$M = 0.644$; mfr $= 0.810$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.6631	275.35	-.0043	224.55	-.0353	-150.43	.6598	275.35	-.0141
-137.44	.6686	305.83	.0061			-85.51	.5004	305.83	-.0080
-124.46	.6497	336.31	.0150			-20.60	-.5344	336.31	.0037
-104.99	.5854	366.80	.0347			-8.24	-.2270	366.80	.0136
-85.51	.4773	407.44	.0680			-1.65	.6697	407.44	.0492
-72.53	.3697	437.92	.1036			.00	.8811	437.92	.0914
-59.55	.2294	458.24	.1496			.31	.0987	458.24	.1425
-46.57	.0478	468.40	.1819			.62	-.0972	468.40	.1824
-33.58	-.1910	478.56	.2228			1.25	-.3885	478.56	.2293
-27.09	-.3098	488.72	.2843			1.87	-.3676	488.72	.2984
-20.60	-.5303					2.50	-.3595		
-18.54	-.5500					3.13	-.3258		
-14.42	-.5168					3.75	-.2767		
-8.24	-.2048					4.38	-.2900		
-4.12	.2146					5.00	-.2767		
-2.68	.4650					6.25	-.2362		
-1.65	.6812					7.50	-.3052		
-.72	.9898					8.75	-.2715		
-.35	1.0783					10.00	-.3181		
.00	.8522					15.00	-.3248		
.31	.2032					17.50	-.2632		
.62	-.1569					20.00	-.3078		
1.25	-.3652					30.00	-.2436		
1.87	-.4383					50.00	-.2638		
2.50	-.3427					60.00	-.2358		
3.13	-.4126					70.00	-.1985		
3.75	-.3059					80.00	-.2063		
4.38	-.2939					90.00	-.1499		
5.00	-.2806					100.00	-.1292		
6.25	-.3068					110.00	-.0748		
7.50	-.2999					194.07	-.0179		
8.75	-.3041								
10.00	-.3165								
12.50	-.3353								
15.00	-.2938								
17.50	-.3096								
20.00	-.2894								
30.00	-.2797								
40.00	-.2656								
50.00	-.2503								
60.00	-.2487								
70.00	-.2374								
80.00	-.2096								
90.00	-.1804								
100.00	-.1320								
110.00	-.1123								
194.07	-.0527								
224.55	-.0353								

Table V. Continued

(b) Concluded

$M = 0.645$; mfr $= 0.873$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.5608	275.35	-.0032	224.55	-.0260	-150.43	.5525	275.35	.0034
-137.44	.5603	305.83	.0057			-85.51	.3439	305.83	.0034
-124.46	.5387	336.31	.0170			-20.60	-1.4133	336.31	.0156
-104.99	.4693	366.80	.0348			-8.24	-.5951	366.80	.0273
-85.51	.3443	407.44	.0662			-1.65	.4935	407.44	.0625
-72.53	.2133	437.92	.1028			.00	1.0078	437.92	.1018
-59.55	.0336	458.24	.1487			.31	.4433	458.24	.1529
-46.57	-.2170	468.40	.1825			.62	.1907	468.40	.1895
-33.58	-.5570	478.56	.2251			1.25	-.0199	478.56	.2354
-27.09	-.7589	488.72	.2853			1.87	-.1633	488.72	.2970
-20.60	-1.3505					2.50	-.1616		
-18.54	-1.3691					3.13	-.1519		
-14.42	-1.0851					3.75	-.1456		
-8.24	-.5956					4.38	-.1231		
-4.12	-.0330					5.00	-.1916		
-2.68	.2363					6.25	-.1937		
-1.65	.5257					7.50	-.2035		
-.72	.8307					8.75	-.2290		
-.35	1.0197					10.00	-.2170		
.00	.9846					15.00	-.2103		
.31	.4082					17.50	-.2315		
.62	.1526					20.00	-.2237		
1.25	-.0828					30.00	-.2444		
1.87	-.1935					50.00	-.2599		
2.50	-.1710					60.00	-.2170		
3.13	-.1522					70.00	-.2056		
3.75	-.2124					80.00	-.1891		
4.38	-.2018					90.00	-.1632		
5.00	-.1425					100.00	-.1130		
6.25	-.2059					110.00	-.0851		
7.50	-.2294					194.07	-.0341		
8.75	-.2386								
10.00	-.2335								
12.50	-.2583								
15.00	-.2653								
17.50	-.2422								
20.00	-.2485								
30.00	-.2579								
40.00	-.2371								
50.00	-.2372								
60.00	-.2149								
70.00	-.2092								
80.00	-.1850								
90.00	-.1646								
100.00	-.1215								
110.00	-.0920								
194.07	-.0439								
224.55	-.0200								

Table V. Continued

(c) $M = 0.69$

$M = 0.693$; mfr $= 0.280$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0759	275.35	-.0508	224.55	-.0655	-150.43	1.0810	275.35	-.0529
-137.44	1.0772	305.83	-.0508			-85.51	1.0656	305.83	-.0563
-124.46	1.0739	336.31	-.0470			-20.60	1.0301	336.31	-.0529
-104.99	1.0693	366.80	-.0444			-8.24	1.1072	366.80	-.0580
-85.51	1.0598	407.44	-.0423			-1.65	.9974	407.44	-.0558
-72.53	1.0515	437.92	-.0440			.00	-.5425	437.92	-.0613
-59.55	1.0398	458.24	-.0389			.31	-1.5032	458.24	-.0516
-46.57	1.0303	468.40	-.0364			.62	-1.3188	468.40	-.0355
-33.58	1.0212	478.56	-.0326			1.25	-1.3844	478.56	-.0266
-27.09	1.0282	488.72	.0034			1.87	-1.2645	488.72	.0026
-20.60	1.0334					2.50	-1.4018		
-18.54	1.0399					3.13	-1.2620		
-14.42	1.0549					3.75	-1.3933		
-8.24	1.1077					4.38	-1.3770		
-4.12	1.1201					5.00	-1.3779		
-2.68	1.0843					6.25	-1.3462		
-1.65	.9848					7.50	-1.2874		
-.72	.7298					8.75	-1.2043		
-.35	.5297					10.00	-1.2447		
.00	-.5955					15.00	-1.1716		
.31	-1.3281					17.50	-1.1294		
.62	-1.2780					20.00	-1.1448		
1.25	-1.2200					30.00	-1.0106		
1.87	-1.3982					50.00	-.6087		
2.50	-1.1186					60.00	-.4896		
3.13	-1.2433					70.00	-.3784		
3.75	-1.0301					80.00	-.3247		
4.38	-1.2183					90.00	-.2597		
5.00	-1.1595					100.00	-.2223		
6.25	-1.0693					110.00	-.1667		
7.50	-1.2112					194.07	-.0803		
8.75	-1.1574								
10.00	-1.1962								
12.50	-1.2062								
15.00	-1.1789								
17.50	-1.1332								
20.00	-1.1368								
30.00	-1.0155								
40.00	-.7860								
50.00	-.6574								
60.00	-.5214								
70.00	-.3854								
80.00	-.2916								
90.00	-.2487								
100.00	-.2052								
110.00	-.1657								
194.07	-.0822								
224.55	-.0704								

$M = 0.695$; mfr $= 0.304$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0709	275.35	-.0427	224.55	-.0732	-150.43	1.0719	275.35	-.0554
-137.44	1.0713	305.83	-.0385			-85.51	1.0542	305.83	-.0575
-124.46	1.0676	336.31	-.0381			-20.60	1.0068	336.31	-.0541
-104.99	1.0631	366.80	-.0465			-8.24	1.0933	366.80	-.0541
-85.51	1.0494	407.44	-.0503			-1.65	1.0147	407.44	-.0461
-72.53	1.0428	437.92	-.0474			.00	-.4838	437.92	-.0432
-59.55	1.0292	458.24	-.0457			.31	-1.6227	458.24	-.0398
-46.57	1.0147	468.40	-.0351			.62	-1.5330	468.40	-.0200
-33.58	1.0044	478.56	-.0174			1.25	-1.4307	478.56	-.0103
-27.09	1.0003	488.72	.0192			1.87	-1.1588	488.72	.0353
-20.60	1.0082					2.50	-1.2930		
-18.54	1.0147					3.13	-1.4482		
-14.42	1.0398					3.75	-1.4486		
-8.24	1.0952					4.38	-1.4536		
-4.12	1.1235					5.00	-1.4626		
-2.68	1.0996					6.25	-1.3494		
-1.65	1.0132					7.50	-1.3822		
-.72	.7739					8.75	-1.3835		
-.35	.5714					10.00	-1.2968		
.00	-.5088					15.00	-1.2515		
.31	-1.4914					17.50	-1.2039		
.62	-1.4369					20.00	-1.1160		
1.25	-1.2170					30.00	-.9442		
1.87	-1.4448					50.00	-.5112		
2.50	-1.4141					60.00	-.3911		
3.13	-1.3887					70.00	-.3273		
3.75	-1.2873					80.00	-.2734		
4.38	-1.3892					90.00	-.2189		
5.00	-1.2644					100.00	-.1892		
6.25	-1.1248					110.00	-.1678		
7.50	-1.3646					194.07	-.0844		
8.75	-1.2669								
10.00	-1.2773								
12.50	-1.3335								
15.00	-1.2343								
17.50	-1.2337								
20.00	-1.1769								
30.00	-.8995								
40.00	-.6912								
50.00	-.5229								
60.00	-.4267								
70.00	-.3380								
80.00	-.2704								
90.00	-.2362								
100.00	-.1943								
110.00	-.1681								
194.07	-.0840								
224.55	-.0688								

Table V. Continued

(c) Continued

$M = 0.694$; mfr $= 0.398$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0290	275.35	-.0476	224.55	-.0682	-150.43	1.0286	275.35	-.0391
-137.44	1.0299	305.83	-.0417			-85.51	.9969	305.83	-.0417
-124.46	1.0274	336.31	-.0370			-20.60	.8868	336.31	-.0345
-104.99	1.0137	366.80	-.0307			-8.24	1.0183	366.80	-.0324
-85.51	.9946	407.44	-.0163			-1.65	1.0985	407.44	-.0201
-72.53	.9780	437.92	-.0028			.00	-.2877	437.92	-.0079
-59.55	.9527	458.24	.0238			.31	-1.5272	458.24	.0183
-46.57	.9225	468.40	.0411			.62	-1.9020	468.40	.0453
-33.58	.8985	478.56	.0720			1.25	-1.9137	478.56	.0745
-27.09	.8925	488.72	.1232			1.87	-2.0406	488.72	.1329
-20.60	.8939					2.50	-1.7227		
-18.54	.8971					3.13	-1.7574		
-14.42	.9293					3.75	-1.6825		
-8.24	1.0193					4.38	-1.4762		
-4.12	1.1110					5.00	-1.7790		
-2.68	1.1222					6.25	-1.5494		
-1.65	1.0880					7.50	-1.5342		
-.72	.9173					8.75	-1.4840		
-.35	.7583					10.00	-1.3933		
.00	-.3197					15.00	-1.0966		
.31	-1.6329					17.50	-.9722		
.62	-1.8974					20.00	-.8252		
1.25	-1.8607					30.00	-.5448		
1.87	-1.7857					50.00	-.3894		
2.50	-1.8774					60.00	-.3246		
3.13	-1.7666					70.00	-.3003		
3.75	-1.7915					80.00	-.2635		
4.38	-1.6683					90.00	-.2383		
5.00	-1.6308					100.00	-.1833		
6.25	-1.5583					110.00	-.1535		
7.50	-1.4659					194.07	-.0774		
8.75	-1.4043								
10.00	-1.3130								
12.50	-1.1906								
15.00	-1.1087								
17.50	-.9856								
20.00	-.8841								
30.00	-.5959								
40.00	-.4258								
50.00	-.3703								
60.00	-.3249								
70.00	-.2873								
80.00	-.2633								
90.00	-.2332								
100.00	-.1919								
110.00	-.1483								
194.07	-.0814								
224.55	-.0657								

$M = 0.693$; mfr $= 0.436$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0078	275.35	-.0399	224.55	-.0524	-150.43	1.0085	275.35	-.0382
-137.44	1.0095	305.83	-.0336			-85.51	.9688	305.83	-.0382
-124.46	1.0045	336.31	-.0306			-20.60	.8239	336.31	-.0306
-104.99	.9904	366.80	-.0200			-8.24	.9683	366.80	-.0315
-85.51	.9671	407.44	-.0001			-1.65	1.1145	407.44	-.0158
-72.53	.9426	437.92	.0214			.00	-.1651	437.92	.0075
-59.55	.9169	458.24	.0532			.31	-1.3883	458.24	.0418
-46.57	.8779	468.40	.0765			.62	-1.8060	468.40	.0739
-33.58	.8426	478.56	.1137			1.25	-2.0236	478.56	.1103
-27.09	.8361	488.72	.1709			1.87	-2.1190	488.72	.1705
-20.60	.8300					2.50	-2.1136		
-18.54	.8282					3.13	-2.0750		
-14.42	.8660					3.75	-2.0255		
-8.24	.9623					4.38	-2.0007		
-4.12	1.0912					5.00	-1.9519		
-2.68	1.1235					6.25	-1.8647		
-1.65	1.1078					7.50	-1.5993		
-.72	.9867					8.75	-1.3267		
-.35	.8162					10.00	-.9824		
.00	-.1883					15.00	-.7405		
.31	-1.5197					17.50	-.7081		
.62	-1.8460					20.00	-.5759		
1.25	-1.9959					30.00	-.4938		
1.87	-2.0430					50.00	-.3971		
2.50	-1.9950					60.00	-.3158		
3.13	-1.9490					70.00	-.3046		
3.75	-1.9028					80.00	-.2612		
4.38	-1.8706					90.00	-.2369		
5.00	-1.9057					100.00	-.1767		
6.25	-1.5477					110.00	-.1510		
7.50	-1.4338					194.07	-.0779		
8.75	-1.2398								
10.00	-1.2264								
12.50	-1.0862								
15.00	-.7746								
17.50	-.7141								
20.00	-.6167								
30.00	-.4757								
40.00	-.3999								
50.00	-.3496								
60.00	-.3181								
70.00	-.3000								
80.00	-.2563								
90.00	-.2260								
100.00	-.1828								
110.00	-.1526								
194.07	-.0828								
224.55	-.0632								

Table V. Continued

(c) Continued

$M = 0.692$; mfr $= 0.490$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9731	275.35	-.0358	224.55	-.0502	-150.43	.9759	275.35	-.0302
-137.44	.9786	305.83	-.0290			-85.51	.9235	305.83	-.0298
-124.46	.9736	336.31	-.0222			-20.60	.7259	336.31	-.0205
-104.99	.9569	366.80	-.0116			-8.24	.8925	366.80	-.0162
-85.51	.9233	407.44	.0117			-1.65	1.1238	407.44	.0041
-72.53	.8933	437.92	.0424			.00	.0013	437.92	.0297
-59.55	.8596	458.24	.0835			.31	-1.2542	458.24	.0712
-46.57	.8122	468.40	.1111			.62	-1.6654	468.40	.1086
-33.58	.7657	478.56	.1544			1.25	-1.9073	478.56	.1484
-27.09	.7493	488.72	.2180			1.87	-2.0017	488.72	.2171
-20.60	.7343					2.50	-2.0102		
-18.54	.7413					3.13	-1.9556		
-14.42	.7713					3.75	-1.9473		
-8.24	.8968					4.38	-1.8453		
-4.12	1.0423					5.00	-1.8566		
-2.66	1.0992					6.25	-1.7360		
-1.65	1.1233					7.50	-1.4196		
-.72	1.0275					8.75	-.8460		
-.35	.9042					10.00	-.6797		
.00	-.0820					15.00	-.5561		
.31	-1.3257					17.50	-.5321		
.62	-1.7072					20.00	-.5204		
1.25	-1.9325					30.00	-.4402		
1.87	-1.9868					50.00	-.3798		
2.50	-1.9764					60.00	-.3148		
3.13	-1.9182					70.00	-.2984		
3.75	-1.8944					80.00	-.2572		
4.38	-1.8497					90.00	-.2305		
5.00	-1.8100					100.00	-.1697		
6.25	-1.6929					110.00	-.1430		
7.50	-1.4186					194.07	-.0654		
8.75	-.8729								
10.00	-.7667								
12.50	-.6304								
15.00	-.5731								
17.50	-.5346								
20.00	-.5329								
30.00	-.4379								
40.00	-.3965								
50.00	-.3497								
60.00	-.3209								
70.00	-.2676								
80.00	-.2600								
90.00	-.2296								
100.00	-.1774								
110.00	-.1377								
194.07	-.0713								
224.55	-.0561								

$M = 0.694$; mfr $= 0.491$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9758	275.35	-.0241	224.55	-.0585	-150.43	.9760	275.35	-.0339
-137.44	.9787	305.83	-.0241			-85.51	.9233	305.83	-.0313
-124.46	.9725	336.31	-.0191			-20.60	.6836	336.31	-.0220
-104.99	.9584	366.80	-.0085			-8.24	.8285	366.80	-.0182
-85.51	.9290	407.44	.0130			-1.65	1.1200	407.44	.0029
-72.53	.9013	437.92	.0419			.00	.1652	437.92	.0300
-59.55	.8669	458.24	.0782			.31	-.9516	458.24	.0727
-46.57	.8267	468.40	.1023			.62	-1.3968	468.40	.1112
-33.58	.7837	478.56	.1382			1.25	-1.6662	478.56	.1560
-27.09	.7782	488.72	.1906			1.87	-1.7947	488.72	.2375
-20.60	.7740					2.50	-1.7181		
-18.54	.7768					3.13	-1.6098		
-14.42	.8192					3.75	-1.6400		
-8.24	.9419					4.38	-1.5566		
-4.12	1.0845					5.00	-1.3648		
-2.68	1.1202					6.25	-.7198		
-1.65	1.1070					7.50	-.6207		
-.72	.9764					8.75	-.6027		
-.35	.8296					10.00	-.5893		
.00	-.2184					15.00	-.5262		
.31	-1.5069					17.50	-.4916		
.62	-1.8705					20.00	-.4696		
1.25	-2.0405					30.00	-.3824		
1.87	-1.8997					50.00	-.3554		
2.50	-1.9051					60.00	-.2934		
3.13	-1.7935					70.00	-.2747		
3.75	-1.7302					80.00	-.2449		
4.38	-1.7456					90.00	-.2211		
5.00	-1.6451					100.00	-.1596		
6.25	-1.5623					110.00	-.1269		
7.50	-1.4986					194.07	-.0599		
8.75	-1.4028								
10.00	-1.3253								
12.50	-1.1816								
15.00	-1.0029								
17.50	-.9863								
20.00	-.8165								
30.00	-.5339								
40.00	-.4264								
50.00	-.3538								
60.00	-.3281								
70.00	-.2952								
80.00	-.2655								
90.00	-.2271								
100.00	-.1832								
110.00	-.1505								
194.07	-.0717								
224.55	-.0585								

Table V. Continued

(c) Continued

$M = 0.694$; mfr $= 0.543$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9430	275.35	-.0313	224.55	-.0484	-150.43	.9426	275.35	-.0195
-137.44	.9463	305.83	-.0220			-85.51	.8786	305.83	-.0224
-124.46	.9401	336.31	-.0152			-20.60	.6109	336.31	-.0102
-104.99	.9165	366.80	-.0009			-8.24	.7830	366.80	-.0051
-85.51	.8776	407.44	.0288			-1.65	1.1188	407.44	.0224
-72.53	.8403	437.92	.0626			.00	.1483	437.92	.0550
-59.55	.7914	458.24	.1083			.31	-1.0006	458.24	.1024
-46.57	.7362	468.40	.1463			.62	-1.4437	468.40	.1425
-33.58	.6732	478.56	.1903			1.25	-1.7608	478.56	.1919
-27.09	.6487	488.72	.2566			1.87	-1.8158	488.72	.2579
-20.60	.6100					2.50	-1.8390		
-18.54	.6170					3.13	-1.7753		
-14.42	.6375					3.75	-1.7346		
-8.24	.8049					4.38	-1.7021		
-4.12	.9897					5.00	-1.6162		
-2.68	1.0744					6.25	-1.2333		
-1.65	1.1209					7.50	-.7123		
-.72	1.0827					8.75	-.6045		
-.35	1.0049					10.00	-.5872		
.00	.0638					15.00	-.5489		
.31	-1.0486					17.50	-.5245		
.62	-1.4431					20.00	-.5072		
1.25	-1.7260					30.00	-.4180		
1.87	-1.8214					50.00	-.3700		
2.50	-1.8389					60.00	-.3112		
3.13	-1.7302					70.00	-.2809		
3.75	-1.7406					80.00	-.2539		
4.38	-1.6276					90.00	-.2161		
5.00	-1.6468					100.00	-.1681		
6.25	-1.5814					110.00	-.1298		
7.50	-.7778					194.07	-.0567		
8.75	-.6357								
10.00	-.6181								
12.50	-.5823								
15.00	-.5469								
17.50	-.5240								
20.00	-.4966								
30.00	-.4160								
40.00	-.3778								
50.00	-.3398								
60.00	-.3127								
70.00	-.2833								
80.00	-.2466								
90.00	-.2168								
100.00	-.1677								
110.00	-.1331								
194.07	-.0665								
224.55	-.0493								

$M = 0.693$; mfr $= 0.607$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.8939	275.35	-.0175	224.55	-.0454	-150.43	.8945	275.35	-.0103
-137.44	.8976	305.83	-.0103			-85.51	.8114	305.83	-.0107
-124.46	.8902	336.31	-.0035			-20.60	.4408	336.31	.0024
-104.99	.8624	366.80	.0121			-8.24	.6378	366.80	.0104
-85.51	.8114	407.44	.0452			-1.65	1.0845	407.44	.0427
-72.53	.7633	437.92	.0841			.00	.3527	437.92	.0829
-59.55	.7040	458.24	.1383			.31	-.7166	458.24	.1336
-46.57	.6210	468.40	.1712			.62	-1.0891	468.40	.1742
-33.58	.5369	478.56	.2195			1.25	-1.4371	478.56	.2262
-27.09	.5070	488.72	.2901			1.87	-1.6275	488.72	.2977
-20.60	.4422					2.50	-1.5958		
-18.54	.4431					3.13	-1.4776		
-14.42	.4860					3.75	-1.3555		
-8.24	.6532					4.38	-1.3636		
-4.12	.8895					5.00	-.8295		
-2.68	1.0071					6.25	-.6278		
-1.65	1.0933					7.50	-.6280		
-.72	1.1207					8.75	-.6097		
-.35	1.0727					10.00	-.6037		
.00	.2731					15.00	-.5348		
.31	-.7833					17.50	-.4852		
.62	-1.2064					20.00	-.4871		
1.25	-1.4378					30.00	-.3960		
1.87	-1.5975					50.00	-.3512		
2.50	-1.5549					60.00	-.2994		
3.13	-1.4120					70.00	-.2682		
3.75	-1.4445					80.00	-.2378		
4.38	-1.2902					90.00	-.2108		
5.00	-.7695					100.00	-.1496		
6.25	-.5736					110.00	-.1216		
7.50	-.6273					194.07	-.0488		
8.75	-.6148								
10.00	-.6127								
12.50	-.5686								
15.00	-.5223								
17.50	-.4715								
20.00	-.4730								
30.00	-.3981								
40.00	-.3682								
50.00	-.3289								
60.00	-.3036								
70.00	-.2616								
80.00	-.2442								
90.00	-.2169								
100.00	-.1600								
110.00	-.1170								
194.07	-.0567								
224.55	-.0410								

Table V. Continued

(c) Continued

$M = 0.694$; mfr $= 0.682$; $\alpha = 0°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.8285	275.35	-.0187	224.55	-.0275	-150.43	.8261	275.35	-.0128
-137.44	.8322	305.83	-.0099			-85.51	.7194	305.83	-.0103
-124.46	.8243	336.31	.0007			-20.60	.1876	336.31	.0020
-104.99	.7858	366.80	.0184			-8.24	.4030	366.80	.0210
-85.51	.7195	407.44	.0556			-1.65	1.0019	407.44	.0598
-72.53	.6558	437.92	.0944			.00	.5847	437.92	.1024
-59.55	.5726	458.24	.1503			.31	-.3967	458.24	.1600
-46.57	.4669	468.40	.1870			.62	-.7618	468.40	.2022
-33.58	.3349	478.56	.2364			1.25	-1.0877	478.56	.2524
-27.09	.2929	488.72	.3061			1.87	-1.1667	488.72	.3204
-20.60	.1890					2.50	-.9002		
-18.54	.1681					3.13	-.9897		
-14.42	.2258					3.75	-.7808		
-8.24	.4216					4.38	-.6218		
-4.12	.6991					5.00	-.5371		
-2.68	.8869					6.25	-.5682		
-1.65	1.0160					7.50	-.5343		
-.72	1.1206					8.75	-.5243		
-.35	1.1186					10.00	-.4941		
.00	.5196					15.00	-.4382		
.31	-.3697					17.50	-.4363		
.62	-.8254					20.00	-.4051		
1.25	-1.0930					30.00	-.3627		
1.87	-1.1642					50.00	-.3310		
2.50	-.9964					60.00	-.2714		
3.13	-.7941					70.00	-.2555		
3.75	-.8587					80.00	-.2206		
4.38	-.6626					90.00	-.2010		
5.00	-.5511					100.00	-.1358		
6.25	-.5422					110.00	-.1176		
7.50	-.5640					194.07	-.0452		
8.75	-.4981								
10.00	-.5389								
12.50	-.4620								
15.00	-.4369								
17.50	-.3962								
20.00	-.4017								
30.00	-.3515								
40.00	-.3268								
50.00	-.2873								
60.00	-.2667								
70.00	-.2485								
80.00	-.2134								
90.00	-.1863								
100.00	-.1371								
110.00	-.1061								
194.07	-.0506								
224.55	-.0339								

$M = 0.694$; mfr $= 0.750$; $\alpha = 0°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.7591	275.35	-.0097	224.55	-.0277	-150.43	.7561	275.35	.0016
-137.44	.7628	305.83	.0004			-85.51	.6192	305.83	.0004
-124.46	.7504	336.31	.0105			-20.60	-.1278	336.31	.0168
-104.99	.7036	366.80	.0295			-8.24	.1181	366.80	.0257
-85.51	.6221	407.44	.0654			-1.65	.8795	407.44	.0624
-72.53	.5402	437.92	.1097			.00	.7643	437.92	.1067
-59.55	.4305	458.24	.1633			.31	-.0827	458.24	.1638
-46.57	.2787	468.40	.2009			.62	-.4104	468.40	.2081
-33.58	.1004	478.56	.2494			1.25	-.5734	478.56	.2562
-27.09	.0011	488.72	.3156			1.87	-.7419	488.72	.3266
-20.60	-.1269					2.50	-.6028		
-18.54	-.1409					3.13	-.5719		
-14.42	-.1236					3.75	-.5111		
-8.24	.1479					4.38	-.4632		
-4.12	.5253					5.00	-.4658		
-2.68	.7150					6.25	-.4724		
-1.65	.8983					7.50	-.4328		
-.72	1.0853					8.75	-.4192		
-.35	1.1254					10.00	-.4151		
.00	.7164					15.00	-.3690		
.31	-.0759					17.50	-.3513		
.62	-.3650					20.00	-.3560		
1.25	-.6256					30.00	-.3029		
1.87	-.6705					50.00	-.3038		
2.50	-.6240					60.00	-.2559		
3.13	-.5978					70.00	-.2377		
3.75	-.5195					80.00	-.2079		
4.38	-.4862					90.00	-.1879		
5.00	-.4684					100.00	-.1325		
6.25	-.4506					110.00	-.0999		
7.50	-.4489					194.07	-.0331		
8.75	-.4320								
10.00	-.4171								
12.50	-.3976								
15.00	-.3811								
17.50	-.3741								
20.00	-.3440								
30.00	-.3253								
40.00	-.2896								
50.00	-.2748								
60.00	-.2530								
70.00	-.2354								
80.00	-.2066								
90.00	-.1867								
100.00	-.1392								
110.00	-.1003								
194.07	-.0376								
224.55	-.0228								

Table V. Continued

(c) Concluded

$M = 0.692$; mfr $= 0.813$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.6828	275.35	-.0078	224.55	-.0233	-150.43	.6770	275.35	.0053
-137.44	.6840	305.83	.0032			-85.51	.5088	305.83	.0049
-124.46	.6695	336.31	.0147			-20.60	-.5973	336.31	.0180
-104.99	.6101	366.80	.0351			-8.24	-.2250	366.80	.0296
-85.51	.5076	407.44	.0728			-1.65	.7026	407.44	.0690
-72.53	.4043	437.92	.1155			.00	.8906	437.92	.1121
-59.55	.2610	458.24	.1676			.31	.2274	458.24	.1701
-46.57	.0601	468.40	.2015			.62	-.1165	468.40	.2078
-33.58	-.1948	478.56	.2527			1.25	-.3530	478.56	.2578
-27.09	-.3259	488.72	.3145			1.87	-.3916	488.72	.3264
-20.60	-.5486					2.50	-.3988		
-18.54	-.6484					3.13	-.2896		
-14.42	-.5284					3.75	-.3338		
-8.24	-.1806					4.38	-.2666		
-4.12	.2327					5.00	-.3138		
-2.68	.5165					6.25	-.2975		
-1.65	.7367					7.50	-.3226		
-.72	.9701					8.75	-.2994		
-.35	1.1006					10.00	-.2965		
.00	.8842					15.00	-.3058		
.31	.1402					17.50	-.3007		
.62	-.1181					20.00	-.3035		
1.25	-.3708					30.00	-.2853		
1.87	-.4534					50.00	-.2946		
2.50	-.3331					60.00	-.2455		
3.13	-.2953					70.00	-.2297		
3.75	-.3036					80.00	-.2002		
4.38	-.3293					90.00	-.1759		
5.00	-.2795					100.00	-.1217		
6.25	-.3355					110.00	-.0900		
7.50	-.3239					194.07	-.0336		
8.75	-.2878								
10.00	-.3069								
12.50	-.3235								
15.00	-.3210								
17.50	-.3069								
20.00	-.3181								
30.00	-.2961								
40.00	-.2823								
50.00	-.2596								
60.00	-.2420								
70.00	-.2245								
80.00	-.1973								
90.00	-.1728								
100.00	-.1282								
110.00	-.0940								
194.07	-.0385								
224.55	-.0233								

Table V. Continued

(d) $M = 0.72$

$M = 0.719$; mfr $= 0.276$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0871	275.35	-.0572	224.55	-.0666	-150.43	1.0882	275.35	-.0500
-137.44	1.0847	305.83	-.0536			-85.51	1.0758	305.83	-.0544
-124.46	1.0871	336.31	-.0540			-20.60	1.0403	336.31	-.0475
-104.99	1.0804	366.80	-.0504			-8.24	1.1149	366.80	-.0492
-85.51	1.0705	407.44	-.0455			-1.65	1.0167	407.44	-.0492
-72.53	1.0622	437.92	-.0487			.00	-.4798	437.92	-.0455
-59.55	1.0524	458.24	-.0431			.31	-1.4270	458.24	-.0383
-46.57	1.0429	468.40	-.0314			.62	-1.4629	468.40	-.0282
-33.58	1.0322	478.56	-.0246			1.25	-1.2785	478.56	-.0141
-27.09	1.0367	488.72	.0108			1.87	-1.3228	488.72	.0140
-20.60	1.0416					2.50	-1.3187		
-18.54	1.0487					3.13	-1.3275		
-14.42	1.0673					3.75	-1.3392		
-8.24	1.1171					4.38	-1.3168		
-4.12	1.1349					5.00	-1.3058		
-2.68	1.1000					6.25	-1.3773		
-1.65	1.0030					7.50	-1.2548		
-.72	.7578					8.75	-1.2875		
-.35	.5658					10.00	-1.2642		
.00	-.5009					15.00	-1.1969		
.31	-1.1801					17.50	-1.1274		
.62	-1.1639					20.00	-1.1443		
1.25	-1.1770					30.00	-.9603		
1.87	-1.1417					50.00	-.6816		
2.50	-1.1131					60.00	-.5193		
3.13	-1.1659					70.00	-.4190		
3.75	-1.0972					80.00	-.3301		
4.38	-1.2647					90.00	-.2772		
5.00	-1.1960					100.00	-.2257		
6.25	-1.2397					110.00	-.1773		
7.50	-1.1666					194.07	-.0722		
8.75	-1.1587								
10.00	-1.2358								
12.50	-1.0766								
15.00	-1.1513								
17.50	-1.1028								
20.00	-1.1159								
30.00	-.9941								
40.00	-.8796								
50.00	-.7045								
60.00	-.5603								
70.00	-.4047								
80.00	-.3168								
90.00	-.2679								
100.00	-.2224								
110.00	-.1575								
194.07	-.0778								
224.55	-.0638								

$M = 0.718$; mfr $= 0.309$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0762	275.35	-.0501	224.55	-.0683	-150.43	1.0792	275.35	-.0468
-137.44	1.0790	305.83	-.0460			-85.51	1.0596	305.83	-.0505
-124.46	1.0766	336.31	-.0444			-20.60	1.0150	336.31	-.0436
-104.99	1.0703	366.80	-.0424			-8.24	1.0988	366.80	-.0501
-85.51	1.0596	407.44	-.0428			-1.65	1.0422	407.44	-.0464
-72.53	1.0458	437.92	-.0400			.00	-.4058	437.92	-.0388
-59.55	1.0331	458.24	-.0323			.31	-1.6067	458.24	-.0234
-46.57	1.0212	468.40	-.0174			.62	-1.5923	468.40	-.0125
-33.58	1.0086	478.56	-.0020			1.25	-1.4123	478.56	.0101
-27.09	1.0079	488.72	.0351			1.87	-1.5065	488.72	.0545
-20.60	1.0115					2.50	-1.3148		
-18.54	1.0164					3.13	-1.4911		
-14.42	1.0418					3.75	-1.4136		
-8.24	1.0975					4.38	-1.4417		
-4.12	1.1349					5.00	-1.3269		
-2.68	1.1102					6.25	-1.3880		
-1.65	1.0307					7.50	-1.4261		
-.72	.8091					8.75	-1.3376		
-.35	.6072					10.00	-1.3390		
.00	-.4127					15.00	-1.2369		
.31	-1.1966					17.50	-1.2012		
.62	-1.3531					20.00	-1.1270		
1.25	-1.1907					30.00	-.9288		
1.87	-1.3996					50.00	-.5314		
2.50	-1.2878					60.00	-.3808		
3.13	-1.3801					70.00	-.3558		
3.75	-1.3145					80.00	-.2730		
4.38	-1.3455					90.00	-.2315		
5.00	-1.2082					100.00	-.1928		
6.25	-1.2222					110.00	-.1594		
7.50	-1.1871					194.07	-.0730		
8.75	-1.3487								
10.00	-1.3069								
12.50	-1.2731								
15.00	-1.2271								
17.50	-1.2150								
20.00	-1.1483								
30.00	-.9416								
40.00	-.7294								
50.00	-.5688								
60.00	-.4170								
70.00	-.3327								
80.00	-.2755								
90.00	-.2267								
100.00	-.1937								
110.00	-.1606								
194.07	-.0856								
224.55	-.0674								

Table V. Continued

(d) Continued

$M = 0.717$; mfr $= 0.396$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0373	275.35	-.0471	224.55	-.0703	-150.43	1.0399	275.35	-.0419
-137.44	1.0405	305.83	-.0378			-85.51	1.0074	305.83	-.0415
-124.46	1.0361	336.31	-.0346			-20.60	.9007	336.31	-.0350
-104.99	1.0246	366.80	-.0273			-8.24	1.0292	366.80	-.0362
-85.51	1.0072	407.44	-.0111			-1.65	1.1010	407.44	-.0196
-72.53	.9901	437.92	.0079			.00	-.2249	437.92	-.0043
-59.55	.9652	458.24	.0358			.31	-1.4058	458.24	.0256
-46.57	.9402	468.40	.0580			.62	-1.7861	468.40	.0543
-33.58	.9129	478.56	.0916			1.25	-2.0039	478.56	.0851
-27.09	.9056	488.72	.1450			1.87	-2.0578	488.72	.1442
-20.60	.9016					2.50	-2.0837		
-18.54	.9115					3.13	-2.0256		
-14.42	.9342					3.75	-1.9986		
-8.24	1.0315					4.38	-1.9812		
-4.12	1.1178					5.00	-1.9713		
-2.68	1.1318					6.25	-1.9182		
-1.65	1.1004					7.50	-1.8168		
-.72	.9337					8.75	-1.7360		
-.35	.7844					10.00	-1.6108		
.00	-.2686					15.00	-.8519		
.31	-1.5282					17.50	-.8049		
.62	-1.8068					20.00	-.6586		
1.25	-1.9013					30.00	-.5649		
1.87	-1.8965					50.00	-.3939		
2.50	-1.8546					60.00	-.3431		
3.13	-1.7601					70.00	-.3087		
3.75	-1.7992					80.00	-.2708		
4.38	-1.8000					90.00	-.2289		
5.00	-1.7617					100.00	-.1865		
6.25	-1.5262					110.00	-.1433		
7.50	-1.4780					194.07	-.0703		
8.75	-1.4310								
10.00	-1.3852								
12.50	-1.2549								
15.00	-1.1153								
17.50	-1.0425								
20.00	-.8481								
30.00	-.6277								
40.00	-.4526								
50.00	-.3795								
60.00	-.3344								
70.00	-.2945								
80.00	-.2609								
90.00	-.2270								
100.00	-.1879								
110.00	-.1564								
194.07	-.0783								
224.55	-.0596								

$M = 0.719$; mfr $= 0.438$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0169	275.35	-.0343	224.55	-.0606	-150.43	1.0195	275.35	-.0355
-137.44	1.0201	305.83	-.0263			-85.51	.9794	305.83	-.0351
-124.46	1.0165	336.31	-.0214			-20.60	.8415	336.31	-.0283
-104.99	1.0019	366.80	-.0093			-8.24	.9839	366.80	-.0259
-85.51	.9794	407.44	.0104			-1.65	1.1266	407.44	-.0053
-72.53	.9569	437.92	.0342			.00	-.1086	437.92	.0177
-59.55	.9276	458.24	.0721			.31	-1.2837	458.24	.0535
-46.57	.8953	468.40	.0950			.62	-1.6802	468.40	.0918
-33.58	.8644	478.56	.1329			1.25	-1.9097	478.56	.1293
-27.09	.8477	488.72	.1934			1.87	-1.9904	488.72	.1902
-20.60	.8410					2.50	-1.9726		
-18.54	.8353					3.13	-1.9797		
-14.42	.8748					3.75	-1.9552		
-8.24	.9914					4.38	-1.8796		
-4.12	1.1020					5.00	-1.8873		
-2.68	1.1319					6.25	-1.8247		
-1.65	1.1230					7.50	-1.7516		
-.72	1.0068					8.75	-1.6761		
-.35	.8500					10.00	-1.6606		
.00	-.1799					15.00	-.8963		
.31	-1.3698					17.50	-.6967		
.62	-1.7226					20.00	-.4128		
1.25	-1.8914					30.00	-.3985		
1.87	-1.9630					50.00	-.3887		
2.50	-1.9908					60.00	-.3251		
3.13	-1.9347					70.00	-.3011		
3.75	-1.9279					80.00	-.2665		
4.38	-1.8855					90.00	-.2344		
5.00	-1.8783					100.00	-.1789		
6.25	-1.7846					110.00	-.1437		
7.50	-1.7361					194.07	-.0676		
8.75	-1.7226								
10.00	-1.6777								
12.50	-1.4123								
15.00	-.7382								
17.50	-.6586								
20.00	-.4375								
30.00	-.4032								
40.00	-.3924								
50.00	-.3600								
60.00	-.3364								
70.00	-.3016								
80.00	-.2640								
90.00	-.2356								
100.00	-.1837								
110.00	-.1479								
194.07	-.0708								
224.55	-.0513								

Table V. Continued

(d) Continued

$M = 0.718$; mfr $= 0.490$; $\alpha = 0^\circ$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9887	275.35	-.0304	224.55	-.0559	-150.43	.9914	275.35	-.0244
-137.44	.9915	305.83	-.0224			-85.51	.9412	305.83	-.0260
-124.46	.9868	336.31	-.0159			-20.60	.7440	336.31	-.0167
-104.99	.9654	366.80	-.0026			-8.24	.9015	366.80	-.0123
-85.51	.9358	407.44	.0240			-1.65	1.1351	407.44	.0179
-72.53	.9093	437.92	.0538			.00	.0403	437.92	.0457
-59.55	.8734	458.24	.0978			.31	-1.1335	458.24	.0881
-46.57	.8271	468.40	.1309			.62	-1.5378	468.40	.1273
-33.58	.7813	478.56	.1760			1.25	-1.7739	478.56	.1712
-27.09	.7720	488.72	.2373			1.87	-1.8648	488.72	.2385
-20.60	.7520					2.50	-1.8868		
-18.54	.7427					3.13	-1.8513		
-14.42	.7881					3.75	-1.8399		
-8.24	.9046					4.38	-1.7977		
-4.12	1.0595					5.00	-1.7395		
-2.68	1.1169					6.25	-1.6751		
-1.65	1.1337					7.50	-1.6198		
-.72	1.0604					8.75	-1.5433		
-.35	.9254					10.00	-1.4979		
.00	-.0058					15.00	-.5048		
.31	-1.2021					17.50	-.4476		
.62	-1.5781					20.00	-.4552		
1.25	-1.7951					30.00	-.4204		
1.87	-1.8586					50.00	-.3860		
2.50	-1.8543					60.00	-.3224		
3.13	-1.8312					70.00	-.2935		
3.75	-1.8352					80.00	-.2606		
4.38	-1.7963					90.00	-.2277		
5.00	-1.7474					100.00	-.1685		
6.25	-1.6775					110.00	-.1369		
7.50	-1.5956					194.07	-.0610		
8.75	-1.5813								
10.00	-1.4696								
12.50	-.7777								
15.00	-.5205								
17.50	-.4435								
20.00	-.4358								
30.00	-.4232								
40.00	-.3901								
50.00	-.3555								
60.00	-.3276								
70.00	-.2922								
80.00	-.2623								
90.00	-.2255								
100.00	-.1725								
110.00	-.1385								
194.07	-.0671								
224.55	-.0526								

$M = 0.717$; mfr $= 0.543$; $\alpha = 0^\circ$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9541	275.35	-.0266	224.55	-.0455	-150.43	.9533	275.35	-.0166
-137.44	.9572	305.83	-.0166			-85.51	.8900	305.83	-.0170
-124.46	.9505	336.31	-.0061			-20.60	.6271	336.31	-.0044
-104.99	.9268	366.80	.0077			-8.24	.8022	366.80	.0016
-85.51	.8915	407.44	.0359			-1.65	1.1279	407.44	.0279
-72.53	.8547	437.92	.0723			.00	.1860	437.92	.0678
-59.55	.8069	458.24	.1223			.31	-.9287	458.24	.1171
-46.57	.7474	468.40	.1574			.62	-1.3316	468.40	.1599
-33.58	.6845	478.56	.2067			1.25	-1.6217	478.56	.2103
-27.09	.6668	488.72	.2741			1.87	-1.7355	488.72	.2806
-20.60	.6222					2.50	-1.7608		
-18.54	.6236					3.13	-1.7318		
-14.42	.6721					3.75	-1.6884		
-8.24	.8053					4.38	-1.5829		
-4.12	.9966					5.00	-1.6352		
-2.68	1.0807					6.25	-1.5237		
-1.65	1.1270					7.50	-1.4680		
-.72	1.0961					8.75	-1.1753		
-.35	1.0092					10.00	-.5799		
.00	.1335					15.00	-.5035		
.31	-.9455					17.50	-.4901		
.62	-1.4003					20.00	-.4937		
1.25	-1.5889					30.00	-.4168		
1.87	-1.7047					50.00	-.3784		
2.50	-1.7414					60.00	-.3169		
3.13	-1.7199					70.00	-.2848		
3.75	-1.6896					80.00	-.2541		
4.38	-1.5889					90.00	-.2198		
5.00	-1.5921					100.00	-.1619		
6.25	-1.5094					110.00	-.1320		
7.50	-1.4310					194.07	-.0562		
8.75	-1.0338								
10.00	-.7322								
12.50	-.5030								
15.00	-.4855								
17.50	-.4815								
20.00	-.4818								
30.00	-.4298								
40.00	-.3754								
50.00	-.3429								
60.00	-.3142								
70.00	-.2839								
80.00	-.2563								
90.00	-.2222								
100.00	-.1679								
110.00	-.1296								
194.07	-.0623								
224.55	-.0445								

Table V. Continued

(d) Continued

$M = 0.721$; mfr $= 0.609$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9115	275.35	-.0170	224.55	-.0376	-150.43	.9105	275.35	-.0106
-137.44	.9146	305.83	-.0086			-85.51	.8295	305.83	-.0090
-124.46	.9048	336.31	.0023			-20.60	.4549	336.31	.0059
-104.99	.8761	366.80	.0175			-8.24	.6714	366.80	.0159
-85.51	.8269	407.44	.0512			-1.65	1.1071	407.44	.0468
-72.53	.7781	437.92	.0917			.00	.3740	437.92	.0909
-59.55	.7132	458.24	.1468			.31	-.6538	458.24	.1472
-46.57	.6393	468.40	.1853			.62	-1.0789	468.40	.1921
-33.58	.5512	478.56	.2366			1.25	-1.3776	478.56	.2419
-27.09	.5177	488.72	.3064			1.87	-1.4705	488.72	.3141
-20.60	.4527					2.50	-1.5331		
-18.54	.4615					3.13	-1.4372		
-14.42	.4938					3.75	-1.4322		
-8.24	.6710					4.38	-1.3575		
-4.12	.9007					5.00	-1.3305		
-2.68	1.0109					6.25	-.9728		
-1.65	1.0996					7.50	-.5355		
-.72	1.1307					8.75	-.5375		
-.35	1.0922					10.00	-.5422		
.00	.3081					15.00	-.5133		
.31	-.7289					17.50	-.4880		
.62	-1.1022					20.00	-.4782		
1.25	-1.3747					30.00	-.3867		
1.87	-1.4968					50.00	-.3575		
2.50	-1.5087					60.00	-.3021		
3.13	-1.5024					70.00	-.2760		
3.75	-1.3814					80.00	-.2472		
4.38	-1.2723					90.00	-.2123		
5.00	-1.3632					100.00	-.1556		
6.25	-.9069					110.00	-.1176		
7.50	-.6016					194.07	-.0432		
8.75	-.5252								
10.00	-.5660								
12.50	-.5538								
15.00	-.5218								
17.50	-.4928								
20.00	-.4634								
30.00	-.3979								
40.00	-.3633								
50.00	-.3302								
60.00	-.2992								
70.00	-.2729								
80.00	-.2411								
90.00	-.2126								
100.00	-.1546								
110.00	-.1214								
194.07	-.0543								
224.55	-.0371								

$M = 0.718$; mfr $= 0.682$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.8413	275.35	-.0092	224.55	-.0328	-150.43	.8400	275.35	.0013
-137.44	.8445	305.83	.0009			-85.51	.7328	305.83	.0021
-124.46	.8378	336.31	.0114			-20.60	.2054	336.31	.0130
-104.99	.7990	366.80	.0300			-8.24	.4410	366.80	.0235
-85.51	.7341	407.44	.0659			-1.65	1.0173	407.44	.0570
-72.53	.6708	437.92	.1090			.00	.5840	437.92	.1030
-59.55	.5877	458.24	.1655			.31	-.3636	458.24	.1583
-46.57	.4718	468.40	.2044			.62	-.6797	468.40	.2060
-33.58	.3503	478.56	.2540			1.25	-1.0854	478.56	.2584
-27.09	.2922	488.72	.3246			1.87	-1.2037	488.72	.3314
-20.60	.1965					2.50	-1.2109		
-18.54	.1858					3.13	-1.0312		
-14.42	.2393					3.75	-.8507		
-8.24	.4259					4.38	-.6745		
-4.12	.7233					5.00	-.5602		
-2.68	.9037					6.25	-.5785		
-1.65	1.0215					7.50	-.5826		
-.72	1.1312					8.75	-.5436		
-.35	1.1312					10.00	-.5401		
.00	.5529					15.00	-.4752		
.31	-.3032					17.50	-.4484		
.62	-.7952					20.00	-.4238		
1.25	-1.0752					30.00	-.3583		
1.87	-1.1722					50.00	-.3369		
2.50	-1.1491					60.00	-.2880		
3.13	-.9778					70.00	-.2541		
3.75	-.8484					80.00	-.2292		
4.38	-.7339					90.00	-.2029		
5.00	-.5585					100.00	-.1375		
6.25	-.5370					110.00	-.1117		
7.50	-.5597					194.07	-.0403		
8.75	-.5334								
10.00	-.5481								
12.50	-.4945								
15.00	-.4555								
17.50	-.4506								
20.00	-.4271								
30.00	-.3657								
40.00	-.3417								
50.00	-.3040								
60.00	-.2781								
70.00	-.2550								
80.00	-.2262								
90.00	-.1984								
100.00	-.1458								
110.00	-.1102								
194.07	-.0482								
224.55	-.0286								

Table V. Continued

(d) Concluded

$M = 0.717$; mfr $= 0.742$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.7827	275.35	-.0072	224.55	-.0273	-150.43	.7789	275.35	.0021
-137.44	.7855	305.83	.0021			-85.51	.6475	305.83	.0017
-124.46	.7724	336.31	.0082			-20.60	-.0863	336.31	.0175
-104.99	.7286	366.80	.0284			-8.24	.1818	366.80	.0263
-85.51	.6486	407.44	.0683			-1.65	.9000	407.44	.0671
-72.53	.5663	437.92	.1116			.00	.7460	437.92	.1124
-59.55	.4568	458.24	.1721			.31	-.1340	458.24	.1737
-46.57	.3171	468.40	.2100			.62	-.4057	468.40	.2189
-33.58	.1506	478.56	.2596			1.25	-.7756	478.56	.2705
-27.09	.0717	488.72	.3282			1.87	-.7925	488.72	.3395
-20.60	-.0681					2.50	-.7269		
-18.54	-.0917					3.13	-.5991		
-14.42	-.0472					3.75	-.5106		
-8.24	.2085					4.38	-.4961		
-4.12	.5646					5.00	-.4436		
-2.68	.7497					6.25	-.4276		
-1.65	.9370					7.50	-.4547		
-.72	1.1058					8.75	-.4197		
-.35	1.1338					10.00	-.4163		
.00	.6972					15.00	-.3949		
.31	-.1386					17.50	-.3739		
.62	-.4721					20.00	-.3713		
1.25	-.7155					30.00	-.3196		
1.87	-.8240					50.00	-.3169		
2.50	-.7119					60.00	-.2662		
3.13	-.6642					70.00	-.2439		
3.75	-.5620					80.00	-.2101		
4.38	-.5237					90.00	-.1923		
5.00	-.4824					100.00	-.1326		
6.25	-.4593					110.00	-.1037		
7.50	-.4701					194.07	-.0334		
8.75	-.4422								
10.00	-.4355								
12.50	-.4088								
15.00	-.3913								
17.50	-.3890								
20.00	-.3796								
30.00	-.3273								
40.00	-.3119								
50.00	-.2830								
60.00	-.2684								
70.00	-.2417								
80.00	-.2175								
90.00	-.1881								
100.00	-.1319								
110.00	-.1022								
194.07	-.0394								
224.55	-.0231								

$M = 0.717$; mfr $= 0.812$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.6944	275.35	.0037	224.55	-.0261	-150.43	.6909	275.35	.0053
-137.44	.6975	305.83	.0134			-85.51	.5191	305.83	.0082
-124.46	.6793	336.31	.0239			-20.60	-.6285	336.31	.0231
-104.99	.6216	366.80	.0428			-8.24	-.1887	366.80	.0376
-85.51	.5196	407.44	.0808			-1.65	.7505	407.44	.0747
-72.53	.4140	437.92	.1231			.00	.9077	437.92	.1183
-59.55	.2700	458.24	.1800			.31	.2635	458.24	.1780
-46.57	.0640	468.40	.2159			.62	-.0336	468.40	.2215
-33.58	-.2163	478.56	.2639			1.25	-.3343	478.56	.2728
-27.09	-.3632	488.72	.3292			1.87	-.4398	488.72	.3409
-20.60	-.5887					2.50	-.3561		
-18.54	-.6620					3.13	-.3138		
-14.42	-.5364					3.75	-.3721		
-8.24	-.1816					4.38	-.2713		
-4.12	.2668					5.00	-.3187		
-2.68	.5110					6.25	-.3087		
-1.65	.7591					7.50	-.3116		
-.72	1.0104					8.75	-.3456		
-.35	1.1141					10.00	-.3000		
.00	.8949					15.00	-.2844		
.31	.1850					17.50	-.3022		
.62	-.1547					20.00	-.3094		
1.25	-.3108					30.00	-.2884		
1.87	-.4007					50.00	-.2978		
2.50	-.4126					60.00	-.2519		
3.13	-.3603					70.00	-.2270		
3.75	-.3263					80.00	-.2101		
4.38	-.3401					90.00	-.1794		
5.00	-.3152					100.00	-.1251		
6.25	-.3120					110.00	-.0922		
7.50	-.3409					194.07	-.0369		
8.75	-.3160								
10.00	-.3195								
12.50	-.3156								
15.00	-.3535								
17.50	-.3302								
20.00	-.3152								
30.00	-.3002								
40.00	-.2905								
50.00	-.2737								
60.00	-.2466								
70.00	-.2275								
80.00	-.2050								
90.00	-.1772								
100.00	-.1335								
110.00	-.0946								
194.07	-.0406								
224.55	-.0210								

Table V. Continued

(e) $M = 0.74$

$M = 0.741$; mfr $= 0.280$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0953	275.35	-.0548	224.55	-.0604	-150.43	1.0998	275.35	-.0483
-137.44	1.0983	305.83	-.0537			-85.51	1.0832	305.83	-.0514
-124.46	1.0964	336.31	-.0545			-20.60	1.0499	336.31	-.0479
-104.99	1.0992	366.80	-.0537			-8.24	1.1225	366.80	-.0517
-85.51	1.0813	407.44	-.0459			-1.65	1.0282	407.44	-.0471
-72.53	1.0745	437.92	-.0529			.00	-.4183	437.92	-.0459
-59.55	1.0631	458.24	-.0429			.31	-1.4152	458.24	-.0382
-46.57	1.0517	468.40	-.0371			.62	-1.4226	468.40	-.0243
-33.58	1.0430	478.56	-.0285			1.25	-1.2914	478.56	-.0104
-27.09	1.0474	488.72	.0064			1.87	-1.3413	488.72	.0234
-20.60	1.0512					2.50	-1.2640		
-18.54	1.0572					3.13	-1.2189		
-14.42	1.0747					3.75	-1.1556		
-8.24	1.1233					4.38	-1.2832		
-4.12	1.1424					5.00	-1.1419		
-2.68	1.1133					6.25	-1.2310		
-1.65	1.0161					7.50	-.8490		
-.72	.7770					8.75	-1.2832		
-.35	.5853					10.00	-1.1530		
.00	-.4205					15.00	-1.1718		
.31	-1.0243					17.50	-1.1868		
.62	-1.1566					20.00	-1.1367		
1.25	-1.1505					30.00	-1.0250		
1.87	-1.1818					50.00	-.7299		
2.50	-1.2603					60.00	-.5401		
3.13	-1.1223					70.00	-.4583		
3.75	-1.1707					80.00	-.3654		
4.38	-1.1818					90.00	-.2953		
5.00	-1.1002					100.00	-.2517		
6.25	-1.2207					110.00	-.1830		
7.50	-1.0937					194.07	-.0734		
8.75	-1.1048								
10.00	-1.1117								
12.50	-1.0742								
15.00	-1.1059								
17.50	-1.0700								
20.00	-1.1113								
30.00	-1.0209								
40.00	-.8878								
50.00	-.7320								
60.00	-.5751								
70.00	-.5106								
80.00	-.3669								
90.00	-.3047								
100.00	-.2233								
110.00	-.2179								
194.07	-.0725								
224.55	-.0564								

$M = 0.745$; mfr $= 0.311$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0896	275.35	-.0534	224.55	-.0657	-150.43	1.0905	275.35	-.0441
-137.44	1.0907	305.83	-.0495			-85.51	1.0726	305.83	-.0480
-124.46	1.0900	336.31	-.0518			-20.60	1.0243	336.31	-.0441
-104.99	1.0839	366.80	-.0464			-8.24	1.1142	366.80	-.0457
-85.51	1.0685	407.44	-.0411			-1.65	1.0612	407.44	-.0388
-72.53	1.0598	437.92	-.0365			.00	-.3550	437.92	-.0365
-59.55	1.0478	458.24	-.0234			.31	-1.4628	458.24	-.0211
-46.57	1.0346	468.40	-.0157			.62	-1.6027	468.40	-.0045
-33.58	1.0210	478.56	.0020			1.25	-1.4816	478.56	.0147
-27.09	1.0205	488.72	.0504			1.87	-1.5040	488.72	.0631
-20.60	1.0255					2.50	-1.3273		
-18.54	1.0277					3.13	-1.2783		
-14.42	1.0552					3.75	-1.4905		
-8.24	1.1117					4.38	-1.4578		
-4.12	1.1466					5.00	-1.5178		
-2.68	1.1235					6.25	-1.4338		
-1.65	1.0468					7.50	-1.2405		
-.72	.8313					8.75	-1.3876		
-.35	.6376					10.00	-1.2988		
.00	-.3722					15.00	-1.2460		
.31	-1.2961					17.50	-1.1280		
.62	-1.3291					20.00	-1.1557		
1.25	-1.2308					30.00	-.9401		
1.87	-1.2748					50.00	-.6113		
2.50	-1.1956					60.00	-.4809		
3.13	-1.2096					70.00	-.4064		
3.75	-1.2596					80.00	-.3003		
4.38	-1.2661					90.00	-.2533		
5.00	-1.2464					100.00	-.1939		
6.25	-1.2950					110.00	-.1650		
7.50	-1.2813					194.07	-.0741		
8.75	-1.2539								
10.00	-1.2740								
12.50	-1.1569								
15.00	-1.2005								
17.50	-1.1255								
20.00	-1.1054								
30.00	-1.0030								
40.00	-.8259								
50.00	-.6137								
60.00	-.5420								
70.00	-.3344								
80.00	-.2990								
90.00	-.2542								
100.00	-.2028								
110.00	-.1520								
194.07	-.0813								
224.55	-.0652								

Table V. Continued

(e) Continued

$M = 0.743$; mfr $= 0.396$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0505	275.35	-.0404	224.55	-.0657	-150.43	1.0535	275.35	-.0331
-137.44	1.0539	305.83	-.0346			-85.51	1.0203	305.83	-.0358
-124.46	1.0482	336.31	-.0338			-20.60	.9146	336.31	-.0269
-104.99	1.0372	366.80	-.0246			-8.24	1.0369	366.80	-.0269
-85.51	1.0179	407.44	-.0029			-1.65	1.1178	407.44	-.0114
-72.53	.9986	437.92	.0176			.00	-.1555	437.92	.0106
-59.55	.9778	458.24	.0542			.31	-1.2981	458.24	.0419
-46.57	.9498	468.40	.0816			.62	-1.6618	468.40	.0727
-33.58	.9267	478.56	.1132			1.25	-1.8571	478.56	.1101
-27.09	.9155	488.72	.1711			1.87	-1.9311	488.72	.1688
-20.60	.9181					2.50	-1.9443		
-18.54	.9236					3.13	-1.9329		
-14.42	.9475					3.75	-1.9229		
-8.24	1.0340					4.38	-1.8659		
-4.12	1.1277					5.00	-1.8733		
-2.68	1.1447					6.25	-1.7937		
-1.65	1.1112					7.50	-1.7811		
-.72	.9562					8.75	-1.7206		
-.35	.8096					10.00	-1.6784		
.00	-.1688					15.00	-1.5443		
.31	-1.3860					17.50	-1.3810		
.62	-1.6872					20.00	-.8549		
1.25	-1.8622					30.00	-.3407		
1.87	-1.9200					50.00	-.3638		
2.50	-1.9519					60.00	-.3194		
3.13	-1.9420					70.00	-.2985		
3.75	-1.9143					80.00	-.2678		
4.38	-1.8819					90.00	-.2334		
5.00	-1.8340					100.00	-.1750		
6.25	-1.8001					110.00	-.1440		
7.50	-1.7739					194.07	-.0693		
8.75	-1.7298								
10.00	-1.7096								
12.50	-1.5762								
15.00	-1.5547								
17.50	-1.4042								
20.00	-.8914								
30.00	-.3228								
40.00	-.3418								
50.00	-.3357								
60.00	-.3226								
70.00	-.2959								
80.00	-.2677								
90.00	-.2392								
100.00	-.1841								
110.00	-.1458								
194.07	-.0778								
224.55	-.0581								

$M = 0.744$; mfr $= 0.442$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0284	275.35	-.0312	224.55	-.0587	-150.43	1.0287	275.35	-.0324
-137.44	1.0292	305.83	-.0258			-85.51	.9904	305.83	-.0324
-124.46	1.0258	336.31	-.0189			-20.60	.8442	336.31	-.0212
-104.99	1.0118	366.80	-.0069			-8.24	.9879	366.80	-.0177
-85.51	.9880	407.44	.0151			-1.65	1.1366	407.44	.0082
-72.53	.9654	437.92	.0436			.00	-.0270	437.92	.0324
-59.55	.9364	458.24	.0855			.31	-1.1772	458.24	.0748
-46.57	.9028	468.40	.1144			.62	-1.5490	468.40	.1086
-33.58	.8677	478.56	.1533			1.25	-1.7875	478.56	.1517
-27.09	.8591	488.72	.2133			1.87	-1.8252	488.72	.2164
-20.60	.8523					2.50	-1.8694		
-18.54	.8553					3.13	-1.8399		
-14.42	.8812					3.75	-1.8327		
-8.24	.9930					4.38	-1.7754		
-4.12	1.1081					5.00	-1.7658		
-2.68	1.1407					6.25	-1.7020		
-1.65	1.1344					7.50	-1.6289		
-.72	1.0101					8.75	-1.6233		
-.35	.8950					10.00	-1.5624		
.00	-.0957					15.00	-1.4540		
.31	-1.2826					17.50	-.8796		
.62	-1.5725					20.00	-.7329		
1.25	-1.7755					30.00	-.3081		
1.87	-1.8271					50.00	-.3819		
2.50	-1.8408					60.00	-.3260		
3.13	-1.8397					70.00	-.2971		
3.75	-1.8142					80.00	-.2648		
4.38	-1.7739					90.00	-.2334		
5.00	-1.7531					100.00	-.1760		
6.25	-1.6821					110.00	-.1395		
7.50	-1.6662					194.07	-.0649		
8.75	-1.6404								
10.00	-1.6226								
12.50	-1.5018								
15.00	-1.4342								
17.50	-.9807								
20.00	-.6850								
30.00	-.3370								
40.00	-.3698								
50.00	-.3495								
60.00	-.3271								
70.00	-.2992								
80.00	-.2647								
90.00	-.2357								
100.00	-.1808								
110.00	-.1425								
194.07	-.0712								
224.55	-.0507								

Table V. Continued

(e) Continued

$M = 0.743$; mfr $= 0.489$; $\alpha = 0°$

PHI, DEGREE									
0				90	180				
FOREBODY		AFTERBODY		FOREBODY	FOREBODY		AFTERBODY		
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0010	275.35	-.0272	224.55	-.0554	-150.43	1.0014	275.35	-.0207
-137.44	1.0018	305.83	-.0195			-85.51	.9529	305.83	-.0199
-124.46	.9991	336.31	-.0114			-20.60	.7596	336.31	-.0076
-104.99	.9810	366.80	.0032			-8.24	.9149	366.80	-.0025
-85.51	.9526	407.44	.0333			-1.65	1.1448	407.44	.0248
-72.53	.9216	437.92	.0653			.00	.0848	437.92	.0584
-59.55	.8857	458.24	.1139			.31	-1.0510	458.24	.1066
-46.57	.8403	468.40	.1472			.62	-1.4130	468.40	.1457
-33.58	.7979	478.56	.1927			1.25	-1.6662	478.56	.1935
-27.09	.7825	488.72	.2567			1.87	-1.7601	488.72	.2598
-20.60	.7617					2.50	-1.7696		
-18.54	.7685					3.13	-1.7352		
-14.42	.7987					3.75	-1.7179		
-8.24	.9217					4.38	-1.6920		
-4.12	1.0760					5.00	-1.6833		
-2.68	1.1260					6.25	-1.6096		
-1.65	1.1412					7.50	-1.5684		
-.72	1.0631					8.75	-1.5132		
-.35	.9553					10.00	-1.5025		
.00	.0438					15.00	-1.1633		
.31	-1.1314					17.50	-.7015		
.62	-1.4523					20.00	-.4707		
1.25	-1.6629					30.00	-.3823		
1.87	-1.7367					50.00	-.3866		
2.50	-1.7440					60.00	-.3324		
3.13	-1.7459					70.00	-.2957		
3.75	-1.7093					80.00	-.2638		
4.38	-1.6747					90.00	-.2306		
5.00	-1.6865					100.00	-.1697		
6.25	-1.6028					110.00	-.1344		
7.50	-1.5758					194.07	-.0594		
8.75	-1.5793								
10.00	-1.5249								
12.50	-1.4934								
15.00	-.7578								
17.50	-.6580								
20.00	-.3898								
30.00	-.3998								
40.00	-.3836								
50.00	-.3591								
60.00	-.3261								
70.00	-.2944								
80.00	-.2645								
90.00	-.2341								
100.00	-.1721								
110.00	-.1377								
194.07	-.0715								
224.55	-.0487								

$M = 0.742$; mfr $= 0.491$; $\alpha = 2.0°$

PHI, DEGREE									
0				90	180				
FOREBODY		AFTERBODY		FOREBODY	FOREBODY		AFTERBODY		
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0015	275.35	-.0156	224.55	-.0478	-150.43	1.0003	275.35	-.0322
-137.44	1.0031	305.83	-.0148			-85.51	.9513	305.83	-.0264
-124.46	.9977	336.31	-.0086			-20.60	.7192	336.31	-.0137
-104.99	.9807	366.80	.0037			-8.24	.8766	366.80	-.0102
-85.51	.9538	407.44	.0316			-1.65	1.1415	407.44	.0211
-72.53	.9265	437.92	.0675			.00	.2578	437.92	.0551
-59.55	.8913	458.24	.1088			.31	-.7948	458.24	.1034
-46.57	.8515	468.40	.1378			.62	-1.1864	468.40	.1460
-33.58	.8144	478.56	.1769			1.25	-1.4895	478.56	.1963
-27.09	.8105	488.72	.2237			1.87	-1.5606	488.72	.2755
-20.60	.7990					2.50	-1.6210		
-18.54	.8028					3.13	-1.5646		
-14.42	.8344					3.75	-1.5581		
-8.24	.9641					4.38	-1.4776		
-4.12	1.1028					5.00	-1.4865		
-2.68	1.1399					6.25	-1.4133		
-1.65	1.1350					7.50	-1.3372		
-.72	1.0191					8.75	-1.3057		
-.35	.8928					10.00	-.6476		
.00	-.0916					15.00	-.4318		
.31	-1.3253					17.50	-.4588		
.62	-1.6000					20.00	-.4571		
1.25	-1.8164					30.00	-.3972		
1.87	-1.8918					50.00	-.3638		
2.50	-1.8968					60.00	-.3112		
3.13	-1.8884					70.00	-.2817		
3.75	-1.8903					80.00	-.2502		
4.38	-1.8316					90.00	-.2208		
5.00	-1.8198					100.00	-.1649		
6.25	-1.7498					110.00	-.1261		
7.50	-1.7734					194.07	-.0567		
8.75	-1.7150								
10.00	-1.6914								
12.50	-1.6221								
15.00	-1.5584								
17.50	-1.2709								
20.00	-.9034								
30.00	-.3478								
40.00	-.3400								
50.00	-.3383								
60.00	-.3244								
70.00	-.2979								
80.00	-.2573								
90.00	-.2294								
100.00	-.1785								
110.00	-.1442								
194.07	-.0661								
224.55	-.0482								

Table V. Continued

(e) Continued

$M = 0.744$; mfr $= 0.541$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9686	275.35	-.0155	224.55	-.0448	-150.43	.9660	275.35	-.0163
-137.44	.9693	305.83	-.0063			-85.51	.9069	305.83	-.0155
-124.46	.9621	336.31	.0026			-20.60	.6430	336.31	-.0044
-104.99	.9422	366.80	.0141			-8.24	.8165	366.80	.0045
-85.51	.9041	407.44	.0464			-1.65	1.1378	407.44	.0364
-72.53	.8683	437.92	.0818			.00	.2205	437.92	.0795
-59.55	.8204	458.24	.1367			.31	-.8248	458.24	.1329
-46.57	.7634	468.40	.1749			.62	-1.2075	468.40	.1749
-33.58	.7047	478.56	.2218			1.25	-1.5028	478.56	.2260
-27.09	.6816	488.72	.2883			1.87	-1.5953	488.72	.2979
-20.60	.6507					2.50	-1.6336		
-18.54	.6464					3.13	-1.5984		
-14.42	.6778					3.75	-1.5800		
-8.24	.8119					4.38	-1.5316		
-4.12	1.0149					5.00	-1.5249		
-2.68	1.0982					6.25	-1.4610		
-1.65	1.1396					7.50	-1.4236		
-.72	1.1062					8.75	-1.3913		
-.35	1.0283					10.00	-1.3397		
.00	.2067					15.00	-.4667		
.31	-.9214					17.50	-.4015		
.62	-1.2568					20.00	-.4173		
1.25	-1.4899					30.00	-.4003		
1.87	-1.5907					50.00	-.3773		
2.50	-1.6654					60.00	-.3275		
3.13	-1.6245					70.00	-.2765		
3.75	-1.6044					80.00	-.2621		
4.38	-1.5688					90.00	-.2150		
5.00	-1.5199					100.00	-.1632		
6.25	-1.4975					110.00	-.1182		
7.50	-1.4373					194.07	-.0443		
8.75	-1.4433								
10.00	-1.2879								
12.50	-1.1352								
15.00	-.4740								
17.50	-.4002								
20.00	-.4078								
30.00	-.4226								
40.00	-.3950								
50.00	-.3544								
60.00	-.3252								
70.00	-.2960								
80.00	-.2572								
90.00	-.2279								
100.00	-.1713								
110.00	-.1363								
194.07	-.0661								
224.55	-.0470								

$M = 0.743$; mfr $= 0.607$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9215	275.35	-.0164	224.55	-.0365	-150.43	.9200	275.35	-.0055
-137.44	.9226	305.83	-.0074			-85.51	.8409	305.83	-.0059
-124.46	.9173	336.31	.0041			-20.60	.4764	336.31	.0095
-104.99	.8878	366.80	.0222			-8.24	.6725	366.80	.0215
-85.51	.8391	407.44	.0562			-1.65	1.1124	407.44	.0531
-72.53	.7910	437.92	.1024			.00	.4349	437.92	.1005
-59.55	.7325	458.24	.1587			.31	-.5552	458.24	.1548
-46.57	.6527	468.40	.1961			.62	-.9859	468.40	.2019
-33.58	.5688	478.56	.2493			1.25	-1.2635	478.56	.2554
-27.09	.5279	488.72	.3198			1.87	-1.4215	488.72	.3287
-20.60	.4751					2.50	-1.4799		
-18.54	.4845					3.13	-1.4393		
-14.42	.5015					3.75	-1.4376		
-8.24	.6776					4.38	-1.3329		
-4.12	.9054					5.00	-1.3365		
-2.68	1.0201					6.25	-1.2327		
-1.65	1.1120					7.50	-1.1639		
-.72	1.1388					8.75	-.6765		
-.35	1.0933					10.00	-.5616		
.00	.3588					15.00	-.4877		
.31	-.6407					17.50	-.4800		
.62	-1.0160					20.00	-.4753		
1.25	-1.3014					30.00	-.4045		
1.87	-1.3800					50.00	-.3626		
2.50	-1.4541					60.00	-.3046		
3.13	-1.4750					70.00	-.2766		
3.75	-1.4439					80.00	-.2485		
4.38	-1.3420					90.00	-.2136		
5.00	-1.2782					100.00	-.1558		
6.25	-1.2224					110.00	-.1183		
7.50	-1.2064					194.07	-.0458		
8.75	-.5418								
10.00	-.6832								
12.50	-.4867								
15.00	-.4997								
17.50	-.4860								
20.00	-.4699								
30.00	-.4032								
40.00	-.3697								
50.00	-.3283								
60.00	-.3033								
70.00	-.2753								
80.00	-.2422								
90.00	-.2115								
100.00	-.1556								
110.00	-.1178								
194.07	-.0556								
224.55	-.0360								

Table V. Continued

(e) Continued

$M = 0.744$; mfr $= 0.684$; $\alpha = 0°$

PHI, DEGREE									
0				90	180				
FOREBODY		AFTERBODY		FOREBODY	FOREBODY		AFTERBODY		
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.8546	275.35	-.0155	224.55	-.0227	-150.43	.8528	275.35	.0142
-137.44	.8576	305.83	-.0039			-85.51	.7450	305.83	.0096
-124.46	.8470	336.31	.0069			-20.60	.1973	336.31	.0299
-104.99	.8116	366.80	.0249			-8.24	.4253	366.80	.0430
-85.51	.7459	407.44	.0649			-1.65	1.0231	407.44	.0784
-72.53	.6833	437.92	.1103			.00	.6068	437.92	.1249
-59.55	.5917	458.24	.1723			.31	-.3424	458.24	.1811
-46.57	.4921	468.40	.2176			.62	-.6814	468.40	.2277
-33.58	.3669	478.56	.2724			1.25	-1.0940	478.56	.2812
-27.09	.3080	488.72	.3431			1.87	-1.1553	488.72	.3512
-20.60	.2380					2.50	-1.0434		
-18.54	.2155					3.13	-1.0250		
-14.42	.2414					3.75	-.9305		
-8.24	.4406					4.38	-.8633		
-4.12	.7391					5.00	-.6492		
-2.68	.9146					6.25	-.5335		
-1.65	1.0536					7.50	-.5371		
-.72	1.1440					8.75	-.5677		
-.35	1.1413					10.00	-.5286		
.00	.5932					15.00	-.4681		
.31	-.3431					17.50	-.4430		
.62	-.6681					20.00	-.4332		
1.25	-1.0287					30.00	-.3769		
1.87	-1.0586					50.00	-.3547		
2.50	-1.1107					60.00	-.2756		
3.13	-1.0192					70.00	-.2756		
3.75	-.9415					80.00	-.2243		
4.38	-1.0238					90.00	-.2222		
5.00	-.6871					100.00	-.1326		
6.25	-.4523					110.00	-.1267		
7.50	-.5554					194.07	-.0405		
8.75	-.5247								
10.00	-.5535								
12.50	-.4762								
15.00	-.4482								
17.50	-.4337								
20.00	-.4135								
30.00	-.3514								
40.00	-.3349								
50.00	-.2984								
60.00	-.2730								
70.00	-.2425								
80.00	-.2316								
90.00	-.1928								
100.00	-.1545								
110.00	-.0929								
194.07	-.0628								
224.55	-.0449								

$M = 0.745$; mfr $= 0.744$; $\alpha = 0°$

PHI, DEGREE									
0				90	180				
FOREBODY		AFTERBODY		FOREBODY	FOREBODY		AFTERBODY		
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.7977	275.35	-.0072	224.55	-.0256	-150.43	.7924	275.35	.0047
-137.44	.7999	305.83	.0024			-85.51	.6605	305.83	.0055
-124.46	.7886	336.31	.0155			-20.60	-.0542	336.31	.0235
-104.99	.7416	366.80	.0373			-8.24	.1782	366.80	.0362
-85.51	.6599	407.44	.0769			-1.65	.9221	407.44	.0773
-72.53	.5793	437.92	.1241			.00	.7706	437.92	.1257
-59.55	.4723	458.24	.1810			.31	-.1071	458.24	.1848
-46.57	.3327	468.40	.2236			.62	-.3382	468.40	.2302
-33.58	.1545	478.56	.2759			1.25	-.7165	478.56	.2840
-27.09	.0683	488.72	.3447			1.87	-.7033	488.72	.3539
-20.60	-.0682					2.50	-.6326		
-18.54	-.0749					3.13	-.5636		
-14.42	-.0605					3.75	-.5514		
-8.24	.1917					4.38	-.4443		
-4.12	.5655					5.00	-.4395		
-2.68	.7683					6.25	-.4722		
-1.65	.9401					7.50	-.4633		
-.72	1.1188					8.75	-.4478		
-.35	1.1451					10.00	-.4548		
.00	.7596					15.00	-.4302		
.31	-.0899					17.50	-.4208		
.62	-.3684					20.00	-.3944		
1.25	-.7781					30.00	-.3386		
1.87	-.7452					50.00	-.3288		
2.50	-.7331					60.00	-.2750		
3.13	-.7161					70.00	-.2529		
3.75	-.5899					80.00	-.2216		
4.38	-.5203					90.00	-.1927		
5.00	-.4813					100.00	-.1355		
6.25	-.4718					110.00	-.0978		
7.50	-.4423					194.07	-.0341		
8.75	-.4408								
10.00	-.4703								
12.50	-.4385								
15.00	-.3866								
17.50	-.3969								
20.00	-.3706								
30.00	-.3472								
40.00	-.3178								
50.00	-.2909								
60.00	-.2729								
70.00	-.2453								
80.00	-.2227								
90.00	-.1964								
100.00	-.1403								
110.00	-.0997								
194.07	-.0430								
224.55	-.0212								

Table V. Continued

(e) Concluded

$M = 0.743$; mfr $= 0.803$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.7204	275.35	-.0005	224.55	-.0194	-150.43	.7156	275.35	.0080
-137.44	.7223	305.83	.0126			-85.51	.5503	305.83	.0115
-124.46	.7060	336.31	.0249			-20.60	-.5725	336.31	.0272
-104.99	.6513	366.80	.0411			-8.24	-.1373	366.80	.0407
-85.51	.5551	407.44	.0835			-1.65	.7734	407.44	.0823
-72.53	.4519	437.92	.1301			.00	.9214	437.92	.1281
-59.55	.3142	458.24	.1883			.31	.1869	458.24	.1894
-46.57	.1167	468.40	.2279			.62	-.0471	468.40	.2345
-33.58	-.1415	478.56	.2761			1.25	-.3490	478.56	.2872
-27.09	-.2979	488.72	.3438			1.87	-.4774	488.72	.3542
-20.60	-.5278					2.50	-.4792		
-18.54	-.5956					3.13	-.3800		
-14.42	-.4671					3.75	-.3349		
-8.24	-.0927					4.38	-.3493		
-4.12	.3565					5.00	-.3055		
-2.68	.5691					6.25	-.3387		
-1.65	.7970					7.50	-.3571		
-.72	1.0392					8.75	-.3511		
-.35	1.1310					10.00	-.3435		
.00	.8771					15.00	-.3345		
.31	.2145					17.50	-.3332		
.62	-.1570					20.00	-.3307		
1.25	-.3280					30.00	-.3009		
1.87	-.4358					50.00	-.3030		
2.50	-.4233					60.00	-.2533		
3.13	-.4081					70.00	-.2320		
3.75	-.3884					80.00	-.2125		
4.38	-.3485					90.00	-.1836		
5.00	-.3341					100.00	-.1275		
6.25	-.3432					110.00	-.0969		
7.50	-.3288					194.07	-.0315		
8.75	-.3675								
10.00	-.3398								
12.50	-.3607								
15.00	-.3369								
17.50	-.3326								
20.00	-.3280								
30.00	-.3087								
40.00	-.3040								
50.00	-.2762								
60.00	-.2621								
70.00	-.2278								
80.00	-.2139								
90.00	-.1853								
100.00	-.1230								
110.00	-.0898								
194.07	-.0386								
224.55	-.0172								

Table V. Continued

(f) $M = 0.77$

$M = 0.766$; mfr $= 0.277$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1096	275.35	-.0511	224.55	-.0531	-150.43	1.1125	275.35	-.0444
-137.44	1.1096	305.83	-.0492			-85.51	1.0990	305.83	-.0478
-124.46	1.1070	336.31	-.0504			-20.60	1.0647	336.31	-.0444
-104.99	1.1027	366.80	-.0478			-8.24	1.1354	366.80	-.0489
-85.51	1.0940	407.44	-.0481			-1.65	1.0385	407.44	-.0467
-72.53	1.0863	437.92	-.0481			.00	-.3575	437.92	-.0470
-59.55	1.0751	458.24	-.0385			.31	-1.4783	458.24	-.0381
-46.57	1.0620	468.40	-.0341			.62	-1.4217	468.40	-.0259
-33.58	1.0573	478.56	-.0237			1.25	-1.3342	478.56	-.0074
-27.09	1.0573	488.72	.0163			1.87	-1.3870	488.72	.0312
-20.60	1.0618					2.50	-1.3367		
-18.54	1.0700					3.13	-1.3840		
-14.42	1.0941					3.75	-1.3551		
-8.24	1.1374					4.38	-1.3656		
-4.12	1.1516					5.00	-1.3125		
-2.68	1.1225					6.25	-1.3665		
-1.65	1.0401					7.50	-1.3182		
-.72	.7968					8.75	-1.3279		
-.35	.6174					10.00	-1.2932		
.00	-.3940					15.00	-1.1799		
.31	-1.1529					17.50	-1.1274		
.62	-1.1799					20.00	-1.0760		
1.25	-1.0353					30.00	-.9649		
1.87	-1.1953					50.00	-.7528		
2.50	-1.0718					60.00	-.5857		
3.13	-.9604					70.00	-.5024		
3.75	-1.0773					80.00	-.4400		
4.38	-1.2153					90.00	-.3530		
5.00	-1.1675					100.00	-.2615		
6.25	-1.1876					110.00	-.2026		
7.50	-1.1558					194.07	-.0700		
8.75	-1.1032								
10.00	-1.1489								
12.50	-.9977								
15.00	-1.0788								
17.50	-1.0664								
20.00	-1.0830								
30.00	-.9706								
40.00	-.8977								
50.00	-.7577								
60.00	-.6738								
70.00	-.5713								
80.00	-.4303								
90.00	-.3406								
100.00	-.2758								
110.00	-.2173								
194.07	-.0682								
224.55	-.0518								

$M = 0.768$; mfr $= 0.310$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0982	275.35	-.0486	224.55	-.0589	-150.43	1.1016	275.35	-.0438
-137.44	1.1011	305.83	-.0442			-85.51	1.0816	305.83	-.0475
-124.46	1.0985	336.31	-.0427			-20.60	1.0359	336.31	-.0449
-104.99	1.0931	366.80	-.0398			-8.24	1.1219	366.80	-.0475
-85.51	1.0819	407.44	-.0324			-1.65	1.0628	407.44	-.0409
-72.53	1.0714	437.92	-.0254			.00	-.2999	437.92	-.0379
-59.55	1.0598	458.24	-.0099			.31	-1.4209	458.24	-.0243
-46.57	1.0439	468.40	.0031			.62	-1.5280	468.40	-.0065
-33.58	1.0326	478.56	.0245			1.25	-1.1587	478.56	.0149
-27.09	1.0306	488.72	.0718			1.87	-1.3671	488.72	.0618
-20.60	1.0368					2.50	-1.5502		
-18.54	1.0392					3.13	-1.5084		
-14.42	1.0637					3.75	-1.4786		
-8.24	1.1223					4.38	-1.3987		
-4.12	1.1554					5.00	-1.4537		
-2.68	1.1349					6.25	-1.3710		
-1.65	1.0609					7.50	-1.2749		
-.72	.8602					8.75	-1.4264		
-.35	.6704					10.00	-1.4188		
.00	-.3173					15.00	-1.2074		
.31	-1.3535					17.50	-1.2340		
.62	-1.3164					20.00	-1.1567		
1.25	-1.2096					30.00	-.9149		
1.87	-1.2468					50.00	-.6338		
2.50	-1.2085					60.00	-.4833		
3.13	-1.1656					70.00	-.4302		
3.75	-1.2184					80.00	-.3405		
4.38	-1.1751					90.00	-.2857		
5.00	-1.1754					100.00	-.2228		
6.25	-1.1441					110.00	-.1824		
7.50	-1.1525					194.07	-.0743		
8.75	-1.1925								
10.00	-1.1641								
12.50	-1.1641								
15.00	-1.1248								
17.50	-1.0884								
20.00	-1.0616								
30.00	-.9853								
40.00	-.8478								
50.00	-.7200								
60.00	-.5653								
70.00	-.4105								
80.00	-.3563								
90.00	-.2496								
100.00	-.2312								
110.00	-.1663								
194.07	-.0739								
224.55	-.0606								

Table V. Continued

(f) Continued

$M = 0.766$; mfr $= 0.399$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0611	275.35	-.0376	224.55	-.0573	-150.43	1.0617	275.35	-.0294
-137.44	1.0626	305.83	-.0316			-85.51	1.0311	305.83	-.0309
-124.46	1.0611	336.31	-.0235			-20.60	.9263	336.31	-.0205
-104.99	1.0499	366.80	-.0090			-8.24	1.0491	366.80	-.0175
-85.51	1.0303	407.44	.0088			-1.65	1.1280	407.44	.0017
-72.53	1.0121	437.92	.0343			.00	-.0830	437.92	.0240
-59.55	.9907	458.24	.0718			.31	-1.2202	458.24	.0606
-46.57	.9638	468.40	.0973			.62	-1.5528	468.40	.0925
-33.58	.9416	478.56	.1347			1.25	-1.7410	478.56	.1314
-27.09	.9292	488.72	.1914			1.87	-1.8074	488.72	.1926
-20.60	.9353					2.50	-1.8408		
-18.54	.9349					3.13	-1.8301		
-14.42	.9587					3.75	-1.8092		
-8.24	1.0552					4.38	-1.7830		
-4.12	1.1413					5.00	-1.7545		
-2.68	1.1529					6.25	-1.6743		
-1.65	1.1220					7.50	-1.6614		
-.72	.9743					8.75	-1.6362		
-.35	.8281					10.00	-1.5961		
.00	-.1505					15.00	-1.4829		
.31	-1.2893					17.50	-1.4414		
.62	-1.5720					20.00	-1.3896		
1.25	-1.7478					30.00	-.6422		
1.87	-1.8073					50.00	-.3134		
2.50	-1.8168					60.00	-.2954		
3.13	-1.8197					70.00	-.2860		
3.75	-1.8226					80.00	-.2601		
4.38	-1.7693					90.00	-.2339		
5.00	-1.7562					100.00	-.1734		
6.25	-1.7087					110.00	-.1464		
7.50	-1.6806					194.07	-.0736		
8.75	-1.6342								
10.00	-1.5990								
12.50	-1.5432								
15.00	-1.4752								
17.50	-1.4530								
20.00	-1.3510								
30.00	-.5788								
40.00	-.2722								
50.00	-.2851								
60.00	-.2876								
70.00	-.2790								
80.00	-.2538								
90.00	-.2355								
100.00	-.1779								
110.00	-.1363								
194.07	-.0792								
224.55	-.0612								

$M = 0.768$; mfr $= 0.448$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0395	275.35	-.0321	224.55	-.0522	-150.43	1.0409	275.35	-.0239
-137.44	1.0417	305.83	-.0239			-85.51	1.0013	305.83	-.0243
-124.46	1.0362	336.31	-.0173			-20.60	.8573	336.31	-.0125
-104.99	1.0236	366.80	-.0032			-8.24	.9980	366.80	-.0091
-85.51	.9993	407.44	.0252			-1.65	1.1485	407.44	.0178
-72.53	.9768	437.92	.0597			.00	.0355	437.92	.0475
-59.55	.9464	458.24	.1014			.31	-1.0613	458.24	.0929
-46.57	.9142	468.40	.1347			.62	-1.4346	468.40	.1291
-33.58	.8801	478.56	.1790			1.25	-1.6512	478.56	.1757
-27.09	.8699	488.72	.2407			1.87	-1.7293	488.72	.2396
-20.60	.8614					2.50	-1.7408		
-18.54	.8650					3.13	-1.7062		
-14.42	.8854					3.75	-1.7109		
-8.24	.9985					4.38	-1.6686		
-4.12	1.1166					5.00	-1.6680		
-2.68	1.1525					6.25	-1.6119		
-1.65	1.1431					7.50	-1.5783		
-.72	1.0374					8.75	-1.5299		
-.35	.9162					10.00	-1.4907		
.00	-.0228					15.00	-1.3945		
.31	-1.1622					17.50	-1.3418		
.62	-1.4368					20.00	-1.2529		
1.25	-1.6383					30.00	-.4355		
1.87	-1.7098					50.00	-.3475		
2.50	-1.7189					60.00	-.3061		
3.13	-1.7065					70.00	-.2938		
3.75	-1.7039					80.00	-.2594		
4.38	-1.6583					90.00	-.2300		
5.00	-1.6452					100.00	-.1652		
6.25	-1.5833					110.00	-.1399		
7.50	-1.5768					194.07	-.0611		
8.75	-1.5407								
10.00	-1.5058								
12.50	-1.4343								
15.00	-1.3911								
17.50	-1.3068								
20.00	-1.2592								
30.00	-.3757								
40.00	-.2938								
50.00	-.3138								
60.00	-.3105								
70.00	-.2950								
80.00	-.2588								
90.00	-.2311								
100.00	-.1716								
110.00	-.1395								
194.07	-.0680								
224.55	-.0500								

Table V. Continued

(f) Continued

$M = 0.767$; mfr $= 0.487$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0145	275.35	-.0250	224.55	-.0465	-150.43	1.0162	275.35	-.0180
-137.44	1.0178	305.83	-.0176			-85.51	.9671	305.83	-.0195
-124.46	1.0124	336.31	-.0106			-20.60	.7811	336.31	-.0054
-104.99	.9949	366.80	.0057			-8.24	.9384	366.80	-.0002
-85.51	.9670	407.44	.0346			-1.65	1.1555	407.44	.0294
-72.53	.9398	437.92	.0724			.00	.1277	437.92	.0679
-59.55	.9045	458.24	.1242			.31	-.9170	458.24	.1187
-46.57	.8588	468.40	.1624			.62	-1.3165	468.40	.1602
-33.58	.8140	478.56	.2069			1.25	-1.5644	478.56	.2103
-27.09	.8031	488.72	.2732			1.87	-1.6307	488.72	.2773
-20.60	.7860					2.50	-1.6472		
-18.54	.7819					3.13	-1.6242		
-14.42	.8154					3.75	-1.6345		
-8.24	.9405					4.38	-1.5780		
-4.12	1.0821					5.00	-1.5721		
-2.68	1.1370					6.25	-1.5096		
-1.65	1.1520					7.50	-1.4635		
-.72	1.0800					8.75	-1.4457		
-.35	.9684					10.00	-1.4244		
.00	.0703					15.00	-1.3309		
.31	-1.0353					17.50	-1.2349		
.62	-1.3446					20.00	-.7566		
1.25	-1.5614					30.00	-.2999		
1.87	-1.6312					50.00	-.3717		
2.50	-1.6579					60.00	-.3192		
3.13	-1.6181					70.00	-.2901		
3.75	-1.6170					80.00	-.2630		
4.38	-1.5965					90.00	-.2245		
5.00	-1.5851					100.00	-.1653		
6.25	-1.5041					110.00	-.1321		
7.50	-1.5103					194.07	-.0529		
8.75	-1.4607								
10.00	-1.4453								
12.50	-1.3771								
15.00	-1.2810								
17.50	-1.2635								
20.00	-.8265								
30.00	-.3080								
40.00	-.3340								
50.00	-.3456								
60.00	-.3242								
70.00	-.2946								
80.00	-.2617								
90.00	-.2303								
100.00	-.1760								
110.00	-.1348								
194.07	-.0628								
224.55	-.0460								

$M = 0.767$; mfr $= 0.543$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9772	275.35	-.0218	224.55	-.0403	-150.43	.9771	275.35	-.0092
-137.44	.9798	305.83	-.0122			-85.51	.9158	305.83	-.0114
-124.46	.9769	336.31	-.0014			-20.60	.6642	336.31	.0026
-104.99	.9529	366.80	.0156			-8.24	.8414	366.80	.0130
-85.51	.9170	407.44	.0511			-1.65	1.1486	407.44	.0482
-72.53	.8804	437.92	.0933			.00	.2769	437.92	.0937
-59.55	.8339	458.24	.1481			.31	-.7727	458.24	.1492
-46.57	.7794	468.40	.1877			.62	-1.1089	468.40	.1903
-33.58	.7174	478.56	.2381			1.25	-1.4153	478.56	.2459
-27.09	.6985	488.72	.3066			1.87	-1.5211	488.72	.3188
-20.60	.6650					2.50	-1.5458		
-18.54	.6642					3.13	-1.5424		
-14.42	.7022					3.75	-1.5200		
-8.24	.8345					4.38	-1.4474		
-4.12	1.0239					5.00	-1.4548		
-2.68	1.1076					6.25	-1.3850		
-1.65	1.1504					7.50	-1.3469		
-.72	1.1183					8.75	-1.3282		
-.35	1.0489					10.00	-1.2949		
.00	.2243					15.00	-1.1834		
.31	-.7980					17.50	-.4959		
.62	-1.1817					20.00	-.4016		
1.25	-1.3719					30.00	-.3794		
1.87	-1.5134					50.00	-.3868		
2.50	-1.5495					60.00	-.3208		
3.13	-1.5342					70.00	-.2963		
3.75	-1.5254					80.00	-.2606		
4.38	-1.4725					90.00	-.2254		
5.00	-1.4419					100.00	-.1568		
6.25	-1.4262					110.00	-.1286		
7.50	-1.3963					194.07	-.0493		
8.75	-1.3638								
10.00	-1.3252								
12.50	-1.2343								
15.00	-.8018								
17.50	-.5582								
20.00	-.4618								
30.00	-.3765								
40.00	-.3763								
50.00	-.3535								
60.00	-.3225								
70.00	-.2913								
80.00	-.2605								
90.00	-.2285								
100.00	-.1671								
110.00	-.1269								
194.07	-.0609								
224.55	-.0355								

Table V. Continued

(f) Continued

$M = 0.768$; mfr $= 0.607$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9337	275.35	-.0111	224.55	-.0376	-150.43	.9326	275.35	-.0004
-137.44	.9355	305.83	-.0023			-85.51	.8539	305.83	-.0008
-124.46	.9268	336.31	.0066			-20.60	.4892	336.31	.0151
-104.99	.9000	366.80	.0258			-8.24	.6825	366.80	.0269
-85.51	.8522	407.44	.0658			-1.65	1.1244	407.44	.0636
-72.53	.8046	437.92	.1102			.00	.4393	437.92	.1113
-59.55	.7438	458.24	.1712			.31	-.5088	458.24	.1704
-46.57	.6651	468.40	.2118			.62	-.8994	468.40	.2163
-33.58	.5864	478.56	.2650			1.25	-1.2331	478.56	.2740
-27.09	.5406	488.72	.3350			1.87	-1.3261	488.72	.3446
-20.60	.5104					2.50	-1.3654		
-18.54	.4888					3.13	-1.3603		
-14.42	.5083					3.75	-1.3051		
-8.24	.6755					4.38	-1.2971		
-4.12	.9366					5.00	-1.2359		
-2.68	1.0390					6.25	-1.2369		
-1.65	1.1348					7.50	-1.0672		
-.72	1.1524					8.75	-1.1599		
-.35	1.1194					10.00	-1.0635		
.00	.4227					15.00	-.4048		
.31	-.5459					17.50	-.4007		
.62	-.9022					20.00	-.4605		
1.25	-1.2137					30.00	-.4102		
1.87	-1.2998					50.00	-.3778		
2.50	-1.3690					60.00	-.3181		
3.13	-1.3435					70.00	-.2881		
3.75	-1.3420					80.00	-.2476		
4.38	-1.3479					90.00	-.2182		
5.00	-1.2309					100.00	-.1513		
6.25	-1.2295					110.00	-.1158		
7.50	-1.1514					194.07	-.0457		
8.75	-1.1915								
10.00	-.8705								
12.50	-.5065								
15.00	-.4147								
17.50	-.4249								
20.00	-.4527								
30.00	-.4238								
40.00	-.3746								
50.00	-.3535								
60.00	-.3135								
70.00	-.2754								
80.00	-.2482								
90.00	-.2242								
100.00	-.1618								
110.00	-.1130								
194.07	-.0551								
224.55	-.0393								

$M = 0.767$; mfr $= 0.684$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.8729	275.35	-.0050	224.55	-.0267	-150.43	.8672	275.35	-.0002
-137.44	.8736	305.83	.0069			-85.51	.7643	305.83	.0050
-124.46	.8646	336.31	.0180			-20.60	.2296	336.31	.0194
-104.99	.8265	366.80	.0365			-8.24	.4730	366.80	.0298
-85.51	.7647	407.44	.0786			-1.65	1.0547	407.44	.0738
-72.53	.7005	437.92	.1278			.00	.6392	437.92	.1241
-59.55	.6174	458.24	.1864			.31	-.2384	458.24	.1860
-46.57	.5075	468.40	.2260			.62	-.5876	468.40	.2349
-33.58	.3787	478.56	.2804			1.25	-.9819	478.56	.2896
-27.09	.3198	488.72	.3500			1.87	-1.0995	488.72	.3600
-20.60	.2214					2.50	-1.1299		
-18.54	.2173					3.13	-1.0961		
-14.42	.2431					3.75	-1.0274		
-8.24	.4599					4.38	-.8870		
-4.12	.7563					5.00	-.8061		
-2.68	.9149					6.25	-.5338		
-1.65	1.0446					7.50	-.4880		
-.72	1.1531					8.75	-.4752		
-.35	1.1510					10.00	-.5237		
.00	.5942					15.00	-.4852		
.31	-.2695					17.50	-.4748		
.62	-.6141					20.00	-.4568		
1.25	-.9589					30.00	-.3867		
1.87	-1.0807					50.00	-.3638		
2.50	-1.1223					60.00	-.3056		
3.13	-1.0727					70.00	-.2765		
3.75	-1.0738					80.00	-.2400		
4.38	-.8816					90.00	-.2118		
5.00	-.9100					100.00	-.1441		
6.25	-.6210					110.00	-.1134		
7.50	-.5204					194.07	-.0396		
8.75	-.5146								
10.00	-.5394								
12.50	-.5040								
15.00	-.4701								
17.50	-.4537								
20.00	-.4453								
30.00	-.3788								
40.00	-.3504								
50.00	-.3132								
60.00	-.2987								
70.00	-.2695								
80.00	-.2414								
90.00	-.2054								
100.00	-.1441								
110.00	-.1082								
194.07	-.0430								
224.55	-.0229								

Table V. Continued

(f) Concluded

$M = 0.767$; mfr $= 0.743$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.8085	275.35	.0002	224.55	-.0280	-150.43	.8094	275.35	.0094
-137.44	.8150	305.83	.0109			-85.51	.6759	305.83	.0116
-124.46	.8020	336.31	.0213			-20.60	-.0639	336.31	.0268
-104.99	.7581	366.80	.0461			-8.24	.2087	366.80	.0391
-85.51	.6748	407.44	.0857			-1.65	.9228	407.44	.0827
-72.53	.5979	437.92	.1345			.00	.7633	437.92	.1352
-59.55	.4899	458.24	.1958			.31	-.0456	458.24	.1995
-46.57	.3459	468.40	.2376			.62	-.3408	468.40	.2439
-33.58	.1687	478.56	.2891			1.25	-.6800	478.56	.2983
-27.09	.0874	488.72	.3590			1.87	-.8081	488.72	.3689
-20.60	-.0619					2.50	-.7357		
-18.54	-.0839					3.13	-.5880		
-14.42	-.0215					3.75	-.5735		
-8.24	.2250					4.38	-.5124		
-4.12	.5907					5.00	-.4678		
-2.68	.7898					6.25	-.4761		
-1.65	.9538					7.50	-.4478		
-.72	1.1212					8.75	-.4381		
-.35	1.1571					10.00	-.4523		
.00	.7516					15.00	-.4216		
.31	-.0669					17.50	-.4085		
.62	-.4074					20.00	-.4097		
1.25	-.6629					30.00	-.3565		
1.87	-.7551					50.00	-.3405		
2.50	-.7522					60.00	-.2872		
3.13	-.6509					70.00	-.2561		
3.75	-.5427					80.00	-.2259		
4.38	-.5413					90.00	-.1965		
5.00	-.4541					100.00	-.1316		
6.25	-.4705					110.00	-.1014		
7.50	-.4665					194.07	-.0344		
8.75	-.4665								
10.00	-.4916								
12.50	-.4501								
15.00	-.4283								
17.50	-.4056								
20.00	-.4040								
30.00	-.3619								
40.00	-.3297								
50.00	-.3073								
60.00	-.2818								
70.00	-.2557								
80.00	-.2267								
90.00	-.1970								
100.00	-.1428								
110.00	-.1010								
194.07	-.0370								
224.55	-.0246								

$M = 0.767$; mfr $= 0.805$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.7344	275.35	.0054	224.55	-.0173	-150.43	.7306	275.35	.0165
-137.44	.7369	305.83	.0158			-85.51	.5681	305.83	.0169
-124.46	.7202	336.31	.0284			-20.60	-.6610	336.31	.0310
-104.99	.6630	366.80	.0520			-8.24	-.1242	366.80	.0454
-85.51	.5651	407.44	.0942			-1.65	.7697	407.44	.0897
-72.53	.4632	437.92	.1407			.00	.9322	437.92	.1426
-59.55	.3266	458.24	.2022			.31	.2531	458.24	.2037
-46.57	.1323	468.40	.2425			.62	-.0444	468.40	.2499
-33.58	-.1410	478.56	.2957			1.25	-.3007	478.56	.3031
-27.09	-.2884	488.72	.3589			1.87	-.4569	488.72	.3719
-20.60	-.6049					2.50	-.4248		
-18.54	-.7122					3.13	-.3404		
-14.42	-.4899					3.75	-.3404		
-8.24	-.0900					4.38	-.3263		
-4.12	.3748					5.00	-.3350		
-2.68	.6149					6.25	-.3386		
-1.65	.8419					7.50	-.3506		
-.72	1.0453					8.75	-.3237		
-.35	1.1433					10.00	-.3355		
.00	.9095					15.00	-.3416		
.31	.1877					17.50	-.3350		
.62	-.0982					20.00	-.3400		
1.25	-.3707					30.00	-.3105		
1.87	-.4531					50.00	-.3150		
2.50	-.4203					60.00	-.2569		
3.13	-.3761					70.00	-.2409		
3.75	-.3532					80.00	-.2172		
4.38	-.4047					90.00	-.1870		
5.00	-.3262					100.00	-.1242		
6.25	-.3710					110.00	-.0924		
7.50	-.3412					194.07	-.0297		
8.75	-.3754								
10.00	-.3350								
12.50	-.4032								
15.00	-.3455								
17.50	-.3536								
20.00	-.3489								
30.00	-.3182								
40.00	-.3100								
50.00	-.2814								
60.00	-.2643								
70.00	-.2458								
80.00	-.2152								
90.00	-.1874								
100.00	-.1270								
110.00	-.0964								
194.07	-.0397								
224.55	-.0195								

Table V. Continued

(g) $M = 0.79$

$M = 0.792$; mfr $= 0.278$; $\alpha = 0°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1229	275.35	-.0415	224.55	-.0493	-150.43	1.1257	275.35	-.0330
-137.44	1.1240	305.83	-.0412			-85.51	1.1116	305.83	-.0423
-124.46	1.1208	336.31	-.0430			-20.60	1.0775	336.31	-.0380
-104.99	1.1156	366.80	-.0387			-8.24	1.1493	366.80	-.0445
-85.51	1.1062	407.44	-.0362			-1.65	1.0551	407.44	-.0487
-72.53	1.0971	437.92	-.0366			.00	-.2880	437.92	-.0498
-59.55	1.0901	458.24	-.0252			.31	-1.3749	458.24	-.0401
-46.57	1.0776	468.40	-.0113			.62	-1.4646	468.40	-.0309
-33.58	1.0716	478.56	-.0013			1.25	-1.3323	478.56	-.0145
-27.09	1.0731	488.72	.0374			1.87	-1.5509	488.72	.0250
-20.60	1.0779					2.50	-1.3599		
-18.54	1.0841					3.13	-1.4144		
-14.42	1.1018					3.75	-1.3331		
-8.24	1.1497					4.38	-1.3642		
-4.12	1.1638					5.00	-1.3832		
-2.68	1.1308					6.25	-1.3836		
-1.65	1.0439					7.50	-1.3690		
-.72	.8218					8.75	-1.3580		
-.35	.6384					10.00	-1.3477		
.00	-.3228					15.00	-.9899		
.31	-1.1382					17.50	-1.2133		
.62	-1.0365					20.00	-1.0076		
1.25	-1.0942					30.00	-.8806		
1.87	-1.1003					50.00	-.7356		
2.50	-1.0817					60.00	-.5862		
3.13	-1.0586					70.00	-.5315		
3.75	-1.0235					80.00	-.5059		
4.38	-1.2287					90.00	-.4751		
5.00	-1.0474					100.00	-.3028		
6.25	-1.1361					110.00	-.2339		
7.50	-1.1470					194.07	-.0617		
8.75	-1.1599								
10.00	-1.1017								
12.50	-1.0895								
15.00	-1.0872								
17.50	-1.0383								
20.00	-1.0913								
30.00	-1.0137								
40.00	-.9066								
50.00	-.8180								
60.00	-.6817								
70.00	-.5342								
80.00	-.5083								
90.00	-.4220								
100.00	-.2958								
110.00	-.2354								
194.07	-.0699								
224.55	-.0563								

$M = 0.791$; mfr $= 0.314$; $\alpha = 0°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1081	275.35	-.0459	224.55	-.0595	-150.43	1.1095	275.35	-.0377
-137.44	1.1088	305.83	-.0420			-85.51	1.0914	305.83	-.0437
-124.46	1.1064	336.31	-.0398			-20.60	1.0403	336.31	-.0391
-104.99	1.0983	366.80	-.0348			-8.24	1.1276	366.80	-.0384
-85.51	1.0892	407.44	-.0216			-1.65	1.0863	407.44	-.0270
-72.53	1.0798	437.92	-.0063			.00	-.2246	437.92	-.0152
-59.55	1.0641	458.24	.0208			.31	-1.3097	458.24	.0101
-46.57	1.0521	468.40	.0418			.62	-1.5953	468.40	.0354
-33.58	1.0395	478.56	.0682			1.25	-1.7599	478.56	.0661
-27.09	1.0411	488.72	.1225			1.87	-1.8347	488.72	.1235
-20.60	1.0411					2.50	-1.8388		
-18.54	1.0481					3.13	-1.8388		
-14.42	1.0737					3.75	-1.8416		
-8.24	1.1272					4.38	-1.8063		
-4.12	1.1650					5.00	-1.7725		
-2.68	1.1473					6.25	-1.7359		
-1.65	1.0759					7.50	-1.7045		
-.72	.8756					8.75	-1.6601		
-.35	.6998					10.00	-1.6343		
.00	-.2499					15.00	-1.5257		
.31	-1.3967					17.50	-1.4798		
.62	-1.6455					20.00	-1.4415		
1.25	-1.7636					30.00	-1.2643		
1.87	-1.8188					50.00	-.4642		
2.50	-1.8553					60.00	-.1988		
3.13	-1.8511					70.00	-.1795		
3.75	-1.8346					80.00	-.2008		
4.38	-1.7988					90.00	-.1834		
5.00	-1.7851					100.00	-.1496		
6.25	-1.7330					110.00	-.1248		
7.50	-1.7087					194.07	-.0702		
8.75	-1.6866								
10.00	-1.6452								
12.50	-1.5897								
15.00	-1.5595								
17.50	-1.5151								
20.00	-1.4533								
30.00	-1.2642								
40.00	-.6681								
50.00	-.4435								
60.00	-.2155								
70.00	-.1795								
80.00	-.1912								
90.00	-.1870								
100.00	-.1512								
110.00	-.1261								
194.07	-.0785								
224.55	-.0615								

Table V. Continued

(g) Continued

$M = 0.792$; mfr $= 0.400$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0757	275.35	-.0358	224.55	-.0588	-150.43	1.0765	275.35	-.0266
-137.44	1.0774	305.83	-.0287			-85.51	1.0451	305.83	-.0280
-124.46	1.0746	336.31	-.0209			-20.60	.9410	336.31	-.0202
-104.99	1.0638	366.80	-.0088			-8.24	1.0628	366.80	-.0145
-85.51	1.0436	407.44	.0162			-1.65	1.1460	407.44	.0083
-72.53	1.0255	437.92	.0425			.00	-.0213	437.92	.0354
-59.55	1.0021	458.24	.0869			.31	-1.1140	458.24	.0773
-46.57	.9770	468.40	.1175			.62	-1.4089	468.40	.1118
-33.58	.9536	478.56	.1588			1.25	-1.6277	478.56	.1538
-27.09	.9489	488.72	.2211			1.87	-1.6879	488.72	.2186
-20.60	.9450					2.50	-1.6954		
-18.54	.9509					3.13	-1.7064		
-14.42	.9733					3.75	-1.6887		
-8.24	1.0655					4.38	-1.6575		
-4.12	1.1517					5.00	-1.6407		
-2.68	1.1633					6.25	-1.5926		
-1.65	1.1357					7.50	-1.5555		
-.72	.9894					8.75	-1.5137		
-.35	.8630					10.00	-1.5044		
.00	-.0729					15.00	-1.3882		
.31	-1.1561					17.50	-1.3365		
.62	-1.4566					20.00	-1.3180		
1.25	-1.6168					30.00	-1.1167		
1.87	-1.6757					50.00	-.2351		
2.50	-1.7149					60.00	-.2225		
3.13	-1.7040					70.00	-.2469		
3.75	-1.6816					80.00	-.2332		
4.38	-1.6522					90.00	-.2123		
5.00	-1.6431					100.00	-.1611		
6.25	-1.5782					110.00	-.1258		
7.50	-1.5694					194.07	-.0596		
8.75	-1.5256								
10.00	-1.4958								
12.50	-1.4485								
15.00	-1.3954								
17.50	-1.3608								
20.00	-1.2946								
30.00	-1.1221								
40.00	-.4617								
50.00	-.2372								
60.00	-.2082								
70.00	-.2300								
80.00	-.2337								
90.00	-.2112								
100.00	-.1659								
110.00	-.1273								
194.07	-.0695								
224.55	-.0534								

$M = 0.792$; mfr $= 0.443$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0517	275.35	-.0283	224.55	-.0484	-150.43	1.0546	275.35	-.0194
-137.44	1.0562	305.83	-.0212			-85.51	1.0142	305.83	-.0204
-124.46	1.0503	336.31	-.0112			-20.60	.8799	336.31	-.0091
-104.99	1.0371	366.80	.0034			-8.24	1.0071	366.80	-.0030
-85.51	1.0134	407.44	.0311			-1.65	1.1578	407.44	.0254
-72.53	.9924	437.92	.0653			.00	.0851	437.92	.0589
-59.55	.9639	458.24	.1140			.31	-.9711	458.24	.1051
-46.57	.9301	468.40	.1478			.62	-1.3301	468.40	.1467
-33.58	.8931	478.56	.1940			1.25	-1.5493	478.56	.1929
-27.09	.8885	488.72	.2581			1.87	-1.6206	488.72	.2560
-20.60	.8819					2.50	-1.6293		
-18.54	.8776					3.13	-1.6050		
-14.42	.9093					3.75	-1.6198		
-8.24	1.0071					4.38	-1.5763		
-4.12	1.1295					5.00	-1.5674		
-2.68	1.1620					6.25	-1.5015		
-1.65	1.1538					7.50	-1.4635		
-.72	1.0504					8.75	-1.4522		
-.35	.9169					10.00	-1.4162		
.00	.0486					15.00	-1.3264		
.31	-1.0691					17.50	-1.2826		
.62	-1.3640					20.00	-1.2208		
1.25	-1.5295					30.00	-.9987		
1.87	-1.6024					50.00	-.2628		
2.50	-1.6129					60.00	-.2632		
3.13	-1.6034					70.00	-.2660		
3.75	-1.5922					80.00	-.2502		
4.38	-1.5799					90.00	-.2195		
5.00	-1.5403					100.00	-.1633		
6.25	-1.4860					110.00	-.1315		
7.50	-1.4740					194.07	-.0558		
8.75	-1.4575								
10.00	-1.4179								
12.50	-1.3752								
15.00	-1.3005								
17.50	-1.2602								
20.00	-1.2110								
30.00	-1.0362								
40.00	-.3346								
50.00	-.2488								
60.00	-.2800								
70.00	-.2672								
80.00	-.2553								
90.00	-.2218								
100.00	-.1649								
110.00	-.1275								
194.07	-.0669								
224.55	-.0468								

Table V. Continued

(g) Continued

$M = 0.793$; mfr $= 0.489$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0311	275.35	-.0239	224.55	-.0456	-150.43	1.0325	275.35	-.0129
-137.44	1.0335	305.83	-.0122			-85.51	.9843	305.83	-.0151
-124.46	1.0276	336.31	-.0048			-20.60	.7972	336.31	-.0012
-104.99	1.0105	366.80	.0073			-8.24	.9529	366.80	.0073
-85.51	.9816	407.44	.0453			-1.65	1.1674	407.44	.0393
-72.53	.9534	437.92	.0837			.00	.1947	437.92	.0816
-59.55	.9186	458.24	.1388			.31	-.8551	458.24	.1345
-46.57	.8772	468.40	.1754			.62	-1.2062	468.40	.1778
-33.58	.8301	478.56	.2240			1.25	-1.4498	478.56	.2283
-27.09	.8184	488.72	.2888			1.87	-1.5256	488.72	.2959
-20.60	.7957					2.50	-1.5505		
-18.54	.8012					3.13	-1.5227		
-14.42	.8333					3.75	-1.5379		
-8.24	.9544					4.38	-1.4792		
-4.12	1.1007					5.00	-1.4718		
-2.68	1.1501					6.25	-1.4160		
-1.65	1.1657					7.50	-1.3978		
-.72	1.0945					8.75	-1.3367		
-.35	.9854					10.00	-1.3321		
.00	.1254					15.00	-1.2494		
.31	-.9509					17.50	-1.2030		
.62	-1.2570					20.00	-1.1334		
1.25	-1.4520					30.00	-.5805		
1.87	-1.5215					50.00	-.3215		
2.50	-1.5316					60.00	-.2967		
3.13	-1.5194					70.00	-.2849		
3.75	-1.5229					80.00	-.2554		
4.38	-1.4527					90.00	-.2247		
5.00	-1.4699					100.00	-.1606		
6.25	-1.4069					110.00	-.1226		
7.50	-1.4041					194.07	-.0546		
8.75	-1.3897								
10.00	-1.3789								
12.50	-1.3102								
15.00	-1.2542								
17.50	-1.2049								
20.00	-1.1537								
30.00	-.5303								
40.00	-.2704								
50.00	-.2795								
60.00	-.2962								
70.00	-.2806								
80.00	-.2572								
90.00	-.2273								
100.00	-.1636								
110.00	-.1250								
194.07	-.0608								
224.55	-.0452								

$M = 0.793$; mfr $= 0.489$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0301	275.35	-.0066	224.55	-.0459	-150.43	1.0296	275.35	-.0297
-137.44	1.0329	305.83	-.0059			-85.51	.9798	305.83	-.0198
-124.46	1.0288	336.31	.0015			-20.60	.7601	336.31	-.0045
-104.99	1.0120	366.80	.0154			-8.24	.8954	366.80	.0044
-85.51	.9831	407.44	.0449			-1.65	1.1645	407.44	.0335
-72.53	.9591	437.92	.0861			.00	.3118	437.92	.0776
-59.55	.9256	458.24	.1316			.31	-.6871	458.24	.1334
-46.57	.8876	468.40	.1647			.62	-1.0281	468.40	.1800
-33.58	.8504	478.56	.2091			1.25	-1.2906	478.56	.2358
-27.09	.8456	488.72	.2622			1.87	-1.3760	488.72	.3183
-20.60	.8373					2.50	-1.4253		
-18.54	.8385					3.13	-1.3764		
-14.42	.8738					3.75	-1.3863		
-8.24	.9963					4.38	-1.3353		
-4.12	1.1240					5.00	-1.3079		
-2.68	1.1631					6.25	-1.2737		
-1.65	1.1574					7.50	-1.2229		
-.72	1.0483					8.75	-1.1952		
-.35	.9231					10.00	-1.1737		
.00	.0104					15.00	-1.0572		
.31	-1.1081					17.50	-.8366		
.62	-1.3874					20.00	-.6252		
1.25	-1.5731					30.00	-.3441		
1.87	-1.6344					50.00	-.3772		
2.50	-1.6551					60.00	-.3177		
3.13	-1.6456					70.00	-.2913		
3.75	-1.6344					80.00	-.2618		
4.38	-1.6243					90.00	-.2291		
5.00	-1.6078					100.00	-.1626		
6.25	-1.5661					110.00	-.1203		
7.50	-1.5475					194.07	-.0488		
8.75	-1.5248								
10.00	-1.5069								
12.50	-1.4550								
15.00	-1.4060								
17.50	-1.3804								
20.00	-1.3316								
30.00	-1.0825								
40.00	-.4872								
50.00	-.2440								
60.00	-.2092								
70.00	-.2236								
80.00	-.2281								
90.00	-.2114								
100.00	-.1574								
110.00	-.1227								
194.07	-.0554								
224.55	-.0434								

Table V. Continued

(g) Continued

$M = 0.792$; mfr $= 0.542$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9920	275.35	-.0108	224.55	-.0395	-150.43	.9920	275.35	-.0061
-137.44	.9945	305.83	-.0033			-85.51	.9325	305.83	-.0051
-124.46	.9900	336.31	.0060			-20.60	.6782	336.31	.0092
-104.99	.9687	366.80	.0242			-8.24	.8527	366.80	.0195
-85.51	.9313	407.44	.0616			-1.65	1.1590	407.44	.0544
-72.53	.8960	437.92	.1043			.00	.3182	437.92	.1029
-59.55	.8503	458.24	.1634			.31	-.7106	458.24	.1617
-46.57	.7933	468.40	.2026			.62	-1.0404	468.40	.2069
-33.58	.7346	478.56	.2530			1.25	-1.3281	478.56	.2601
-27.09	.7084	488.72	.3210			1.87	-1.4097	488.72	.3360
-20.60	.6805					2.50	-1.4520		
-18.54	.6742					3.13	-1.4270		
-14.42	.7179					3.75	-1.3960		
-8.24	.8346					4.38	-1.3706		
-4.12	1.0274					5.00	-1.3715		
-2.68	1.1174					6.25	-1.3281		
-1.65	1.1603					7.50	-1.2803		
-.72	1.1384					8.75	-1.2474		
-.35	1.0597					10.00	-1.2531		
.00	.3036					15.00	-1.1418		
.31	-.7189					17.50	-1.0531		
.62	-1.0922					20.00	-.9260		
1.25	-1.2861					30.00	-.2989		
1.87	-1.4062					50.00	-.3724		
2.50	-1.4487					60.00	-.3182		
3.13	-1.4009					70.00	-.2946		
3.75	-1.4195					80.00	-.2591		
4.38	-1.3718					90.00	-.2243		
5.00	-1.3641					100.00	-.1534		
6.25	-1.3279					110.00	-.1255		
7.50	-1.3068					194.07	-.0469		
8.75	-1.2577								
10.00	-1.2587								
12.50	-1.2145								
15.00	-1.1322								
17.50	-1.0894								
20.00	-.9519								
30.00	-.3055								
40.00	-.3234								
50.00	-.3439								
60.00	-.3193								
70.00	-.2902								
80.00	-.2625								
90.00	-.2349								
100.00	-.1682								
110.00	-.1243								
194.07	-.0556								
224.55	-.0403								

$M = 0.794$; mfr $= 0.607$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9482	275.35	-.0100	224.55	-.0335	-150.43	.9491	275.35	.0038
-137.44	.9513	305.83	.0017			-85.51	.8701	305.83	.0024
-124.46	.9437	336.31	.0113			-20.60	.5055	336.31	.0184
-104.99	.9166	366.80	.0312			-8.24	.6960	366.80	.0298
-85.51	.8700	407.44	.0709			-1.65	1.1333	407.44	.0709
-72.53	.8220	437.92	.1208			.00	.4832	437.92	.1212
-59.55	.7622	458.24	.1818			.31	-.4692	458.24	.1839
-46.57	.6876	468.40	.2244			.62	-.7906	468.40	.2343
-33.58	.5979	478.56	.2800			1.25	-1.0851	478.56	.2907
-27.09	.5606	488.72	.3495			1.87	-1.2304	488.72	.3608
-20.60	.5149					2.50	-1.2579		
-18.54	.5039					3.13	-1.2681		
-14.42	.5489					3.75	-1.2524		
-8.24	.7038					4.38	-1.1972		
-4.12	.9352					5.00	-1.1857		
-2.68	1.0451					6.25	-1.1477		
-1.65	1.1384					7.50	-1.0930		
-.72	1.1650					8.75	-1.0911		
-.35	1.1224					10.00	-1.0844		
.00	.4411					15.00	-.9238		
.31	-.4548					17.50	-.6537		
.62	-.8996					20.00	-.3600		
1.25	-1.0736					30.00	-.3847		
1.87	-1.2123					50.00	-.3828		
2.50	-1.2864					60.00	-.3219		
3.13	-1.2529					70.00	-.2890		
3.75	-1.2560					80.00	-.2541		
4.38	-1.2368					90.00	-.2164		
5.00	-1.1864					100.00	-.1536		
6.25	-1.1543					110.00	-.1129		
7.50	-1.1183					194.07	-.0430		
8.75	-1.0911								
10.00	-1.0606								
12.50	-1.0194								
15.00	-.7464								
17.50	-.7658								
20.00	-.3696								
30.00	-.3871								
40.00	-.3655								
50.00	-.3503								
60.00	-.3143								
70.00	-.2898								
80.00	-.2537								
90.00	-.2214								
100.00	-.1559								
110.00	-.1148								
194.07	-.0462								
224.55	-.0302								

Table V. Continued

(g) Continued

$M = 0.793$; mfr $= 0.683$; $\alpha = 0°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.8870	275.35	-.0008	224.55	-.0242	-150.43	.8827	275.35	.0070
-137.44	.8877	305.83	.0088			-85.51	.7808	305.83	.0088
-124.46	.8797	336.31	.0202			-20.60	.2425	336.31	.0209
-104.99	.8448	366.80	.0400			-8.24	.4746	366.80	.0383
-85.51	.7821	407.44	.0848			-1.65	1.0619	407.44	.0834
-72.53	.7184	437.92	.1378			.00	.6426	437.92	.1357
-59.55	.6362	458.24	.1978			.31	-.2327	458.24	.2017
-46.57	.5299	468.40	.2447			.62	-.5239	468.40	.2500
-33.58	.3962	478.56	.2973			1.25	-.9142	478.56	.3054
-27.09	.3413	488.72	.3673			1.87	-1.0255	488.72	.3787
-20.60	.2484					2.50	-1.0712		
-18.54	.2445					3.13	-1.0649		
-14.42	.2782					3.75	-1.0559		
-8.24	.4907					4.38	-.9582		
-4.12	.7932					5.00	-.9390		
-2.68	.9284					6.25	-.9139		
-1.65	1.0618					7.50	-.7734		
-.72	1.1666					8.75	-.7505		
-.35	1.1629					10.00	-.4519		
.00	.6166					15.00	-.4877		
.31	-.2207					17.50	-.4822		
.62	-.5867					20.00	-.4712		
1.25	-.8734					30.00	-.3898		
1.87	-.9908					50.00	-.3728		
2.50	-1.0674					60.00	-.3119		
3.13	-1.0632					70.00	-.2745		
3.75	-1.0020					80.00	-.2441		
4.38	-.9687					90.00	-.2131		
5.00	-.9624					100.00	-.1447		
6.25	-.8678					110.00	-.1079		
7.50	-.6696					194.07	-.0337		
8.75	-.8031								
10.00	-.4869								
12.50	-.4831								
15.00	-.4837								
17.50	-.4617								
20.00	-.4706								
30.00	-.3874								
40.00	-.3635								
50.00	-.3332								
60.00	-.3081								
70.00	-.2769								
80.00	-.2404								
90.00	-.2092								
100.00	-.1452								
110.00	-.1063								
194.07	-.0411								
224.55	-.0230								

$M = 0.792$; mfr $= 0.744$; $\alpha = 0°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.8234	275.35	.0013	224.55	-.0192	-150.43	.8205	275.35	.0120
-137.44	.8254	305.83	.0145			-85.51	.6923	305.83	.0145
-124.46	.8115	336.31	.0290			-20.60	-.0627	336.31	.0326
-104.99	.7708	366.80	.0479			-8.24	.2218	366.80	.0454
-85.51	.6997	407.44	.0919			-1.65	.9530	407.44	.0912
-72.53	.6095	437.92	.1449			.00	.7961	437.92	.1477
-59.55	.5047	458.24	.2070			.31	.0310	458.24	.2145
-46.57	.3616	468.40	.2518			.62	-.2961	468.40	.2632
-33.58	.1818	478.56	.3054			1.25	-.5879	478.56	.3179
-27.09	.0944	488.72	.3740			1.87	-.7852	488.72	.3879
-20.60	-.0490					2.50	-.7369		
-18.54	-.0584					3.13	-.7381		
-14.42	-.0447					3.75	-.5800		
-8.24	.2347					4.38	-.4848		
-4.12	.6126					5.00	-.4930		
-2.68	.7624					6.25	-.4750		
-1.65	.9722					7.50	-.4726		
-.72	1.1408					8.75	-.4828		
-.35	1.1650					10.00	-.4443		
.00	.7805					15.00	-.4242		
.31	.0631					17.50	-.4144		
.62	-.3032					20.00	-.4112		
1.25	-.6197					30.00	-.3585		
1.87	-.7720					50.00	-.3448		
2.50	-.7804					60.00	-.2866		
3.13	-.7566					70.00	-.2696		
3.75	-.6319					80.00	-.2334		
4.38	-.5896					90.00	-.2035		
5.00	-.5133					100.00	-.1344		
6.25	-.4138					110.00	-.1042		
7.50	-.4975					194.07	-.0298		
8.75	-.4699								
10.00	-.4860								
12.50	-.4727								
15.00	-.4360								
17.50	-.4393								
20.00	-.4151								
30.00	-.3669								
40.00	-.3519								
50.00	-.3105								
60.00	-.2928								
70.00	-.2622								
80.00	-.2379								
90.00	-.2051								
100.00	-.1389								
110.00	-.0998								
194.07	-.0397								
224.55	-.0200								

Table V. Continued

(g) Concluded

$M = 0.793$; mfr $= 0.802$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.7423	275.35	.0136	224.55	-.0184	-150.43	.7393	275.35	.0161
-137.44	.7437	305.83	.0260			-85.51	.5767	305.83	.0214
-124.46	.7253	336.31	.0352			-20.60	-.7986	336.31	.0356
-104.99	.6759	366.80	.0572			-8.24	-.0826	366.80	.0476
-85.51	.5777	407.44	.1030			-1.65	.7969	407.44	.0980
-72.53	.4775	437.92	.1541			.00	.9632	437.92	.1520
-59.55	.3355	458.24	.2180			.31	.2500	458.24	.2177
-46.57	.1367	468.40	.2607			.62	.0528	468.40	.2653
-33.58	-.1277	478.56	.3122			1.25	-.3173	478.56	.3203
-27.09	-.2795	488.72	.3785			1.87	-.3710	488.72	.3881
-20.60	-.7306					2.50	-.4365		
-18.54	-.6952					3.13	-.3041		
-14.42	-.4636					3.75	-.3516		
-8.24	-.0818					4.38	-.3201		
-4.12	.3750					5.00	-.3362		
-2.68	.6052					6.25	-.3624		
-1.65	.8226					7.50	-.3598		
-.72	1.0660					8.75	-.3492		
-.35	1.1486					10.00	-.3759		
.00	.9324					15.00	-.3673		
.31	.2067					17.50	-.3402		
.62	-.0918					20.00	-.3657		
1.25	-.3685					30.00	-.3043		
1.87	-.4497					50.00	-.3224		
2.50	-.5375					60.00	-.2839		
3.13	-.4091					70.00	-.2493		
3.75	-.4157					80.00	-.2237		
4.38	-.3237					90.00	-.1911		
5.00	-.3878					100.00	-.1335		
6.25	-.3430					110.00	-.0912		
7.50	-.3752					194.07	-.0242		
8.75	-.3391								
10.00	-.3944								
12.50	-.3598								
15.00	-.3492								
17.50	-.3325								
20.00	-.3349								
30.00	-.3402								
40.00	-.3103								
50.00	-.2936								
60.00	-.2808								
70.00	-.2552								
80.00	-.2250								
90.00	-.1953								
100.00	-.1339								
110.00	-.0971								
194.07	-.0328								
224.55	-.0139								

Table V. Continued

(h) $M = 0.82$

$M = 0.818$; mfr $= 0.274$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1342	275.35	-.0480	224.55	-.0525	-150.43	1.1374	275.35	-.0336
-137.44	1.1359	305.83	-.0480			-85.51	1.1235	305.83	-.0428
-124.46	1.1325	336.31	-.0446			-20.60	1.0917	336.31	-.0353
-104.99	1.1285	366.80	-.0401			-8.24	1.1605	366.80	-.0370
-85.51	1.1205	407.44	-.0312			-1.65	1.0626	407.44	-.0298
-72.53	1.1127	437.92	-.0250			.00	-.2547	437.92	-.0213
-59.55	1.1040	458.24	-.0011			.31	-1.2924	458.24	-.0042
-46.57	1.0926	468.40	.0134			.62	-1.5368	468.40	.0189
-33.58	1.0845	478.56	.0428			1.25	-1.6789	478.56	.0456
-27.09	1.0876	488.72	.0928			1.87	-1.7639	488.72	.0993
-20.60	1.0966					2.50	-1.7763		
-18.54	1.0997					3.13	-1.7770		
-14.42	1.1189					3.75	-1.7668		
-8.24	1.1639					4.38	-1.7414		
-4.12	1.1736					5.00	-1.7175		
-2.68	1.1426					6.25	-1.6702		
-1.65	1.0487					7.50	-1.6493		
-.72	.6246					8.75	-1.6180		
-.35	.6470					10.00	-1.5951		
.00	-.2820					15.00	-1.4941		
.31	-1.3556					17.50	-1.4532		
.62	-1.5739					20.00	-1.4062		
1.25	-1.6911					30.00	-1.2598		
1.87	-1.7485					50.00	-1.0743		
2.50	-1.7738					60.00	-.4656		
3.13	-1.7765					70.00	-.3477		
3.75	-1.7519					80.00	-.1603		
4.38	-1.7239					90.00	-.0982		
5.00	-1.7036					100.00	-.0710		
6.25	-1.6736					110.00	-.0589		
7.50	-1.6495					194.07	-.0640		
8.75	-1.6198								
10.00	-1.6026								
12.50	-1.5426								
15.00	-1.5020								
17.50	-1.4653								
20.00	-1.4043								
30.00	-1.2496								
40.00	-1.1112								
50.00	-1.0153								
60.00	-.5229								
70.00	-.3238								
80.00	-.1843								
90.00	-.1081								
100.00	-.0782								
110.00	-.0652								
194.07	-.0699								
224.55	-.0584								

$M = 0.818$; mfr $= 0.316$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1221	275.35	-.0418	224.55	-.0571	-150.43	1.1237	275.35	-.0322
-137.44	1.1241	305.83	-.0380			-85.51	1.1048	305.83	-.0387
-124.46	1.1201	336.31	-.0363			-20.60	1.0580	336.31	-.0322
-104.99	1.1154	366.80	-.0291			-8.24	1.1430	366.80	-.0302
-85.51	1.1043	407.44	-.0120			-1.65	1.0988	407.44	-.0151
-72.53	1.0932	437.92	.0054			.00	-.1691	437.92	.0000
-59.55	1.0787	458.24	.0359			.31	-1.2219	458.24	.0277
-46.57	1.0643	468.40	.0578			.62	-1.4826	468.40	.0558
-33.58	1.0542	478.56	.0924			1.25	-1.6289	478.56	.0900
-27.09	1.0527	488.72	.1493			1.87	-1.7078	488.72	.1527
-20.60	1.0580					2.50	-1.7188		
-18.54	1.0595					3.13	-1.7244		
-14.42	1.0844					3.75	-1.7119		
-8.24	1.1400					4.38	-1.6880		
-4.12	1.1742					5.00	-1.6676		
-2.68	1.1572					6.25	-1.6061		
-1.65	1.0898					7.50	-1.5871		
-.72	.9014					8.75	-1.5579		
-.35	.7238					10.00	-1.5261		
.00	-.1948					15.00	-1.4533		
.31	-1.2750					17.50	-1.3964		
.62	-1.5207					20.00	-1.3535		
1.25	-1.6503					30.00	-1.1919		
1.87	-1.7027					50.00	-.9939		
2.50	-1.7280					60.00	-.4003		
3.13	-1.7101					70.00	-.2433		
3.75	-1.7115					80.00	-.1617		
4.38	-1.6801					90.00	-.1128		
5.00	-1.6642					100.00	-.0954		
6.25	-1.6304					110.00	-.0800		
7.50	-1.5886					194.07	-.0567		
8.75	-1.5450								
10.00	-1.5410								
12.50	-1.5042								
15.00	-1.4446								
17.50	-1.4096								
20.00	-1.3841								
30.00	-1.2125								
40.00	-1.1005								
50.00	-.9762								
60.00	-.4250								
70.00	-.2771								
80.00	-.1371								
90.00	-.1030								
100.00	-.0979								
110.00	-.0758								
194.07	-.0674								
224.55	-.0539								

Table V. Continued

(h) Continued

$M = 0.817$; mfr $= 0.396$; $\alpha = 0°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0862	275.35	-.0317	224.55	-.0476	-150.43	1.0889	275.35	-.0166
-137.44	1.0902	305.83	-.0224			-85.51	1.0575	305.83	-.0228
-124.46	1.0842	336.31	-.0128			-20.60	.9579	336.31	-.0139
-104.99	1.0768	366.80	-.0002			-8.24	1.0753	366.80	-.0070
-85.51	1.0579	407.44	.0270			-1.65	1.1543	407.44	.0171
-72.53	1.0401	437.92	.0558			.00	.0009	437.92	.0483
-59.55	1.0206	458.24	.1011			.31	-1.0330	458.24	.0935
-46.57	.9927	468.40	.1323			.62	-1.3313	468.40	.1337
-33.58	.9689	478.56	.1765			1.25	-1.5198	478.56	.1772
-27.09	.9620	488.72	.2375			1.87	-1.5650	488.72	.2458
-20.60	.9586					2.50	-1.6042		
-18.54	.9643					3.13	-1.5844		
-14.42	.9847					3.75	-1.5886		
-8.24	1.0707					4.38	-1.5472		
-4.12	1.1597					5.00	-1.5316		
-2.68	1.1751					6.25	-1.4803		
-1.65	1.1481					7.50	-1.4689		
-.72	1.0099					8.75	-1.4323		
-.35	.8825					10.00	-1.3790		
.00	-.0038					15.00	-1.2996		
.31	-1.1112					17.50	-1.2795		
.62	-1.3487					20.00	-1.2152		
1.25	-1.5279					30.00	-1.1081		
1.87	-1.5759					50.00	-.5449		
2.50	-1.5915					60.00	-.2235		
3.13	-1.5938					70.00	-.1673		
3.75	-1.5638					80.00	-.1639		
4.38	-1.5398					90.00	-.1765		
5.00	-1.5225					100.00	-.1316		
6.25	-1.5002					110.00	-.1093		
7.50	-1.4566					194.07	-.0567		
8.75	-1.4340								
10.00	-1.4238								
12.50	-1.3612								
15.00	-1.3444								
17.50	-1.2761								
20.00	-1.2791								
30.00	-1.1436								
40.00	-1.0199								
50.00	-.5003								
60.00	-.2949								
70.00	-.1715								
80.00	-.1721								
90.00	-.1643								
100.00	-.1317								
110.00	-.1096								
194.07	-.0650								
224.55	-.0499								

$M = 0.818$; mfr $= 0.445$; $\alpha = 0°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0658	275.35	-.0261	224.55	-.0402	-150.43	1.0677	275.35	-.0138
-137.44	1.0685	305.83	-.0155			-85.51	1.0296	305.83	-.0148
-124.46	1.0642	336.31	-.0083			-20.60	.8931	336.31	-.0011
-104.99	1.0514	366.80	.0075			-8.24	1.0175	366.80	.0058
-85.51	1.0269	407.44	.0404			-1.65	1.1716	407.44	.0360
-72.53	1.0061	437.92	.0822			.00	.1173	437.92	.0753
-59.55	.9776	458.24	.1301			.31	-.8971	458.24	.1270
-46.57	.9440	468.40	.1677			.62	-1.2304	468.40	.1681
-33.58	.9078	478.56	.2143			1.25	-1.4465	478.56	.2143
-27.09	.9067	488.72	.2817			1.87	-1.5073	488.72	.2862
-20.60	.8954					2.50	-1.5292		
-18.54	.8977					3.13	-1.5156		
-14.42	.9245					3.75	-1.5011		
-8.24	1.0228					4.38	-1.4721		
-4.12	1.1416					5.00	-1.4658		
-2.68	1.1726					6.25	-1.4132		
-1.65	1.1698					7.50	-1.3942		
-.72	1.0624					8.75	-1.3681		
-.35	.9624					10.00	-1.3070		
.00	.0975					15.00	-1.2486		
.31	-.9491					17.50	-1.2160		
.62	-1.2558					20.00	-1.1742		
1.25	-1.4391					30.00	-1.0465		
1.87	-1.4985					50.00	-.4258		
2.50	-1.5046					60.00	-.1918		
3.13	-1.5093					70.00	-.1850		
3.75	-1.4938					80.00	-.2043		
4.38	-1.4472					90.00	-.1918		
5.00	-1.4438					100.00	-.1399		
6.25	-1.4155					110.00	-.1137		
7.50	-1.3834					194.07	-.0608		
8.75	-1.3709								
10.00	-1.3365								
12.50	-1.2882								
15.00	-1.2335								
17.50	-1.2103								
20.00	-1.1691								
30.00	-1.0361								
40.00	-.8463								
50.00	-.2560								
60.00	-.1934								
70.00	-.2073								
80.00	-.2084								
90.00	-.1931								
100.00	-.1511								
110.00	-.1075								
194.07	-.0691								
224.55	-.0517								

Table V. Continued

(h) Continued

$M = 0.818$; mfr $= 0.488$; $\alpha = 0^\circ$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0425	275.35	-.0181	224.55	-.0400	-150.43	1.0434	275.35	-.0079
-137.44	1.0452	305.83	-.0092			-85.51	.9973	305.83	-.0092
-124.46	1.0392	336.31	.0017			-20.60	.8120	336.31	.0021
-104.99	1.0221	366.80	.0172			-8.24	.9628	366.80	.0142
-85.51	.9945	407.44	.0539			-1.65	1.1761	407.44	.0491
-72.53	.9687	437.92	.0943			.00	.2413	437.92	.0943
-59.55	.9334	458.24	.1525			.31	-.7824	458.24	.1519
-46.57	.8898	468.40	.1912			.62	-1.1368	468.40	.1947
-33.58	.8494	478.56	.2419			1.25	-1.3496	478.56	.2471
-27.09	.8362	488.72	.3102			1.87	-1.4210	488.72	.3184
-20.60	.8184					2.50	-1.4611		
-18.54	.8135					3.13	-1.4237		
-14.42	.8513					3.75	-1.4221		
-8.24	.9568					4.38	-1.3668		
-4.12	1.1093					5.00	-1.3659		
-2.68	1.1616					6.25	-1.3205		
-1.65	1.1759					7.50	-1.2870		
-.72	1.1093					8.75	-1.2726		
-.35	1.0097					10.00	-1.2586		
.00	.1978					15.00	-1.1834		
.31	-.8472					17.50	-1.1432		
.62	-1.1606					20.00	-1.1113		
1.25	-1.3557					30.00	-.9915		
1.87	-1.4297					50.00	-.2364		
2.50	-1.4304					60.00	-.2265		
3.13	-1.4270					70.00	-.2345		
3.75	-1.4216					80.00	-.2341		
4.38	-1.4054					90.00	-.2125		
5.00	-1.3835					100.00	-.1491		
6.25	-1.3338					110.00	-.1154		
7.50	-1.3257					194.07	-.0511		
8.75	-1.3095								
10.00	-1.2771								
12.50	-1.2301								
15.00	-1.1831								
17.50	-1.1626								
20.00	-1.0845								
30.00	-.9910								
40.00	-.7497								
50.00	-.2292								
60.00	-.2229								
70.00	-.2401								
80.00	-.2301								
90.00	-.2110								
100.00	-.1569								
110.00	-.1178								
194.07	-.0554								
224.55	-.0368								

$M = 0.816$; mfr $= 0.543$; $\alpha = 0^\circ$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0068	275.35	-.0090	224.55	-.0358	-150.43	1.0082	275.35	-.0042
-137.44	1.0108	305.83	.0014			-85.51	.9465	305.83	-.0022
-124.46	1.0014	336.31	.0134			-20.60	.6967	336.31	.0127
-104.99	.9833	366.80	.0312			-8.24	.8636	366.80	.0243
-85.51	.9466	407.44	.0682			-1.65	1.1676	407.44	.0628
-72.53	.9113	437.92	.1152			.00	.3559	437.92	.1097
-59.55	.8662	458.24	.1739			.31	-.6249	458.24	.1735
-46.57	.8117	468.40	.2185			.62	-.9574	468.40	.2219
-33.58	.7505	478.56	.2686			1.25	-1.2168	478.56	.2789
-27.09	.7269	488.72	.3393			1.87	-1.3149	488.72	.3506
-20.60	.7001					2.50	-1.3555		
-18.54	.6997					3.13	-1.3014		
-14.42	.7307					3.75	-1.3324		
-8.24	.8560					4.38	-1.2856		
-4.12	1.0367					5.00	-1.2872		
-2.68	1.1246					6.25	-1.2165		
-1.65	1.1710					7.50	-1.2069		
-.72	1.1448					8.75	-1.1761		
-.35	1.0674					10.00	-1.1682		
.00	.3305					15.00	-1.1002		
.31	-.6953					17.50	-1.0455		
.62	-1.0044					20.00	-.9976		
1.25	-1.2245					30.00	-.8148		
1.87	-1.3189					50.00	-.2936		
2.50	-1.3388					60.00	-.2970		
3.13	-1.3398					70.00	-.2845		
3.75	-1.3175					80.00	-.2548		
4.38	-1.2942					90.00	-.2267		
5.00	-1.2793					100.00	-.1553		
6.25	-1.2323					110.00	-.1199		
7.50	-1.2185					194.07	-.0445		
8.75	-1.1779								
10.00	-1.1914								
12.50	-1.1397								
15.00	-1.0731								
17.50	-1.0304								
20.00	-.9950								
30.00	-.8962								
40.00	-.2674								
50.00	-.2666								
60.00	-.3050								
70.00	-.2788								
80.00	-.2599								
90.00	-.2283								
100.00	-.1628								
110.00	-.1178								
194.07	-.0568								
224.55	-.0346								

Table V. Continued

(h) Continued

$M = 0.817$; mfr $= 0.609$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9649	275.35	-.0082	224.55	-.0292	-150.43	.9611	275.35	.0025
-137.44	.9645	305.83	.0038			-85.51	.8866	305.83	.0038
-124.46	.9588	336.31	.0151			-20.60	.5231	336.31	.0210
-104.99	.9313	366.80	.0371			-8.24	.7107	366.80	.0350
-85.51	.8839	407.44	.0813			-1.65	1.1377	407.44	.0772
-72.53	.8382	437.92	.1303			.00	.5171	437.92	.1317
-59.55	.7794	458.24	.1961			.31	-.4014	458.24	.1989
-46.57	.7028	468.40	.2411			.62	-.7116	468.40	.2459
-33.58	.6181	478.56	.2935			1.25	-1.0129	478.56	.3045
-27.09	.5813	488.72	.3641			1.87	-1.1365	488.72	.3761
-20.60	.5348					2.50	-1.2076		
-18.54	.5178					3.13	-1.1832		
-14.42	.5549					3.75	-1.1753		
-8.24	.7168					4.38	-1.1551		
-4.12	.9613					5.00	-1.1325		
-2.68	1.0569					6.25	-1.0719		
-1.65	1.1494					7.50	-1.0451		
-.72	1.1752					8.75	-1.0085		
-.35	1.1371					10.00	-1.0155		
.00	.4767					15.00	-.8944		
.31	-.4365					17.50	-.8876		
.62	-.7807					20.00	-.7772		
1.25	-1.0452					30.00	-.3144		
1.87	-1.1388					50.00	-.3866		
2.50	-1.1871					60.00	-.3267		
3.13	-1.1649					70.00	-.2905		
3.75	-1.1865					80.00	-.2572		
4.38	-1.1537					90.00	-.2196		
5.00	-1.1111					100.00	-.1490		
6.25	-1.0817					110.00	-.1088		
7.50	-1.0550					194.07	-.0360		
8.75	-1.0773								
10.00	-.9855								
12.50	-.9594								
15.00	-.9325								
17.50	-.8895								
20.00	-.8390								
30.00	-.3041								
40.00	-.3370								
50.00	-.3440								
60.00	-.3264								
70.00	-.2959								
80.00	-.2559								
90.00	-.2193								
100.00	-.1510								
110.00	-.1139								
194.07	-.0443								
224.55	-.0289								

$M = 0.817$; mfr $= 0.676$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9069	275.35	.0005	224.55	-.0214	-150.43	.9049	275.35	.0088
-137.44	.9096	305.83	.0122			-85.51	.8048	305.83	.0133
-124.46	.8999	336.31	.0259			-20.60	.2922	336.31	.0304
-104.99	.8652	366.80	.0485			-8.24	.5236	366.80	.0444
-85.51	.8054	407.44	.0941			-1.65	1.0781	407.44	.0913
-72.53	.7437	437.92	.1492			.00	.6913	437.92	.1489
-59.55	.6648	458.24	.2133			.31	-.1424	458.24	.2167
-46.57	.5590	468.40	.2598			.62	-.4745	468.40	.2646
-33.58	.4338	478.56	.3154			1.25	-.8498	478.56	.3226
-27.09	.3853	488.72	.3846			1.87	-.9660	488.72	.3941
-20.60	.2930					2.50	-.9667		
-18.54	.2696					3.13	-1.0206		
-14.42	.3293					3.75	-1.0084		
-8.24	.5213					4.38	-.9316		
-4.12	.8052					5.00	-.8775		
-2.68	.9491					6.25	-.9098		
-1.65	1.0848					7.50	-.8555		
-.72	1.1740					8.75	-.8136		
-.35	1.1748					10.00	-.7922		
.00	.6416					15.00	-.4398		
.31	-.1779					17.50	-.4341		
.62	-.5642					20.00	-.4224		
1.25	-.8319					30.00	-.4193		
1.87	-.9497					50.00	-.3818		
2.50	-1.0101					60.00	-.3222		
3.13	-.9784					70.00	-.2855		
3.75	-1.0030					80.00	-.2535		
4.38	-.9743					90.00	-.2164		
5.00	-.8849					100.00	-.1454		
6.25	-.8734					110.00	-.1034		
7.50	-.8579					194.07	-.0301		
8.75	-.7916								
10.00	-.7795								
12.50	-.6438								
15.00	-.5177								
17.50	-.4709								
20.00	-.4457								
30.00	-.4311								
40.00	-.3820								
50.00	-.3542								
60.00	-.3290								
70.00	-.2877								
80.00	-.2491								
90.00	-.2171								
100.00	-.1494								
110.00	-.1048								
194.07	-.0392								
224.55	-.0178								

Table V. Continued

(h) Concluded

$M = 0.815$; mfr $= 0.741$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.8421	275.35	.0069	224.55	-.0149	-150.43	.8412	275.35	.0151
-137.44	.8465	305.83	.0182			-85.51	.7112	305.83	.0182
-124.46	.8327	336.31	.0329			-20.60	-.0173	336.31	.0343
-104.99	.7887	366.80	.0532			-8.24	.2706	366.80	.0515
-85.51	.7116	407.44	.1017			-1.65	.9794	407.44	.1006
-72.53	.6325	437.92	.1576			.00	.8096	437.92	.1573
-59.55	.5304	458.24	.2228			.31	.0346	458.24	.2260
-46.57	.3861	468.40	.2696			.62	-.2924	468.40	.2778
-33.58	.2071	478.56	.3221			1.25	-.5812	478.56	.3324
-27.09	.1118	488.72	.3894			1.87	-.7580	488.72	.4032
-20.60	-.0264					2.50	-.8002		
-18.54	-.0468					3.13	-.7310		
-14.42	.0028					3.75	-.6964		
-8.24	.2532					4.38	-.6187		
-4.12	.6033					5.00	-.4705		
-2.68	.7953					6.25	-.4764		
-1.65	.9809					7.50	-.4743		
-.72	1.1471					8.75	-.4784		
-.35	1.1793					10.00	-.4777		
.00	.8082					15.00	-.4960		
.31	.0428					17.50	-.4496		
.62	-.3140					20.00	-.4732		
1.25	-.6083					30.00	-.3911		
1.87	-.7305					50.00	-.3706		
2.50	-.6950					60.00	-.3059		
3.13	-.7079					70.00	-.2812		
3.75	-.6253					80.00	-.2447		
4.38	-.6012					90.00	-.2055		
5.00	-.4937					100.00	-.1374		
6.25	-.4136					110.00	-.1006		
7.50	-.5251					194.07	-.0296		
8.75	-.4165								
10.00	-.4920								
12.50	-.5190								
15.00	-.4375								
17.50	-.4354								
20.00	-.4279								
30.00	-.3664								
40.00	-.3594								
50.00	-.3299								
60.00	-.3098								
70.00	-.2755								
80.00	-.2412								
90.00	-.2114								
100.00	-.1409								
110.00	-.0995								
194.07	-.0340								
224.55	-.0145								

$M = 0.817$; mfr $= 0.800$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.7472	275.35	.0144	224.55	-.0165	-150.43	.7465	275.35	.0182
-137.44	.7489	305.83	.0254			-85.51	.5893	305.83	.0254
-124.46	.7361	336.31	.0404			-20.60	-.8000	336.31	.0455
-104.99	.6841	366.80	.0627			-8.24	-.0442	366.80	.0589
-85.51	.5864	407.44	.1130			-1.65	.8278	407.44	.1092
-72.53	.4901	437.92	.1667			.00	.9468	437.92	.1695
-59.55	.3525	458.24	.2318			.31	.2640	458.24	.2348
-46.57	.1565	468.40	.2759			.62	.0136	468.40	.2824
-33.58	-.1156	478.56	.3284			1.25	-.3200	478.56	.3369
-27.09	-.8515	488.72	.3941			1.87	-.3868	488.72	.4057
-20.60	-.6840					2.50	-.3500		
-18.54	-.6556					3.13	-.3520		
-14.42	-.4178					3.75	-.3522		
-8.24	-.0291					4.38	-.3161		
-4.12	.4173					5.00	-.2984		
-2.68	.6447					6.25	-.3635		
-1.65	.8672					7.50	-.3337		
-.72	1.0856					8.75	-.3580		
-.35	1.1617					10.00	-.3606		
.00	.9315					15.00	-.3594		
.31	.2756					17.50	-.3837		
.62	-.0797					20.00	-.3670		
1.25	-.3789					30.00	-.3257		
1.87	-.4274					50.00	-.3492		
2.50	-.4504					60.00	-.2882		
3.13	-.4315					70.00	-.2608		
3.75	-.3714					80.00	-.2312		
4.38	-.3792					90.00	-.1948		
5.00	-.3465					100.00	-.1300		
6.25	-.3485					110.00	-.0914		
7.50	-.3272					194.07	-.0205		
8.75	-.3610								
10.00	-.3967								
12.50	-.3967								
15.00	-.3797								
17.50	-.3600								
20.00	-.3758								
30.00	-.3590								
40.00	-.3362								
50.00	-.3114								
60.00	-.2852								
70.00	-.2619								
80.00	-.2287								
90.00	-.1976								
100.00	-.1314								
110.00	-.0932								
194.07	-.0292								
224.55	-.0141								

Table V. Continued

(i) $M = 0.84$

$M = 0.844$; mfr $= 0.273$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1474	275.35	-.0420	224.55	-.0458	-150.43	1.1497	275.35	-.0301
-137.44	1.1474	305.83	-.0397			-85.51	1.1373	305.83	-.0361
-124.46	1.1477	336.31	-.0384			-20.60	1.1078	336.31	-.0295
-104.99	1.1416	366.80	-.0338			-8.24	1.1734	366.80	-.0338
-85.51	1.1344	407.44	-.0212			-1.65	1.0837	407.44	-.0248
-72.53	1.1273	437.92	-.0103			.00	-.1847	437.92	-.0129
-59.55	1.1169	458.24	.0184			.31	-1.1979	458.24	.0125
-46.57	1.1085	468.40	.0383			.62	-1.4289	468.40	.0376
-33.58	1.1024	478.56	.0677			1.25	-1.5820	478.56	.0681
-27.09	1.1019	488.72	.1236			1.87	-1.6495	488.72	.1259
-20.60	1.1096					2.50	-1.6658		
-18.54	1.1165					3.13	-1.6549		
-14.42	1.1318					3.75	-1.6475		
-8.24	1.1719					4.38	-1.6350		
-4.12	1.1864					5.00	-1.6161		
-2.68	1.1523					6.25	-1.5893		
-1.65	1.0648					7.50	-1.5469		
-.72	.8409					8.75	-1.5053		
-.35	.6772					10.00	-1.4899		
.00	-.2140					15.00	-1.4013		
.31	-1.2714					17.50	-1.3585		
.62	-1.4654					20.00	-1.3233		
1.25	-1.5856					30.00	-1.1796		
1.87	-1.6390					50.00	-1.0219		
2.50	-1.6585					60.00	-.9381		
3.13	-1.6761					70.00	-.8777		
3.75	-1.6549					80.00	-.3669		
4.38	-1.6286					90.00	-.2682		
5.00	-1.6123					100.00	-.1225		
6.25	-1.5758					110.00	-.0439		
7.50	-1.5530					194.07	-.0389		
8.75	-1.5227								
10.00	-1.4992								
12.50	-1.4602								
15.00	-1.4140								
17.50	-1.3664								
20.00	-1.3385								
30.00	-1.1694								
40.00	-1.0804								
50.00	-1.0069								
60.00	-.9438								
70.00	-.8690								
80.00	-.3904								
90.00	-.2755								
100.00	-.1786								
110.00	-.0561								
194.07	-.0462								
224.55	-.0408								

$M = 0.841$; mfr $= 0.314$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1352	275.35	-.0307	224.55	-.0426	-150.43	1.1351	275.35	-.0244
-137.44	1.1349	305.83	-.0284			-85.51	1.1190	305.83	-.0314
-124.46	1.1330	336.31	-.0257			-20.60	1.0711	336.31	-.0241
-104.99	1.1278	366.80	-.0188			-8.24	1.1541	366.80	-.0234
-85.51	1.1174	407.44	-.0029			-1.65	1.1113	407.44	-.0068
-72.53	1.1067	437.92	.0200			.00	-.1081	437.92	.0147
-59.55	1.0937	458.24	.0505			.31	-1.1340	458.24	.0465
-46.57	1.0787	468.40	.0753			.62	-1.3788	468.40	.0767
-33.58	1.0713	478.56	.1095			1.25	-1.5432	478.56	.1121
-27.09	1.0689	488.72	.1738			1.87	-1.6104	488.72	.1771
-20.60	1.0707					2.50	-1.6221		
-18.54	1.0740					3.13	-1.6192		
-14.42	1.0978					3.75	-1.6045		
-8.24	1.1522					4.38	-1.5889		
-4.12	1.1872					5.00	-1.5660		
-2.68	1.1738					6.25	-1.5330		
-1.65	1.1063					7.50	-1.5084		
-.72	.9259					8.75	-1.4733		
-.35	.7560					10.00	-1.4493		
.00	-.1344					15.00	-1.3726		
.31	-1.1987					17.50	-1.3212		
.62	-1.4247					20.00	-1.2819		
1.25	-1.5554					30.00	-1.1575		
1.87	-1.5972					50.00	-.9989		
2.50	-1.6233					60.00	-.9204		
3.13	-1.6223					70.00	-.5702		
3.75	-1.6073					80.00	-.3030		
4.38	-1.5792					90.00	-.2153		
5.00	-1.5645					100.00	-.0964		
6.25	-1.5161					110.00	-.0235		
7.50	-1.4968					194.07	-.0414		
8.75	-1.4707								
10.00	-1.4635								
12.50	-1.4165								
15.00	-1.3589								
17.50	-1.3388								
20.00	-1.3018								
30.00	-1.1526								
40.00	-1.0564								
50.00	-.9768								
60.00	-.9270								
70.00	-.5442								
80.00	-.3152								
90.00	-.2193								
100.00	-.0878								
110.00	-.0255								
194.07	-.0537								
224.55	-.0426								

Table V. Continued

(i) Continued

$M = 0.840$; mfr $= 0.400$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0999	275.35	-.0210	224.55	-.0504	-150.43	1.1013	275.35	-.0106
-137.44	1.1025	305.83	-.0149			-85.51	1.0717	305.83	-.0143
-124.46	1.0983	336.31	-.0076			-20.60	.9724	336.31	-.0057
-104.99	1.0881	366.80	.0043			-8.24	1.0874	366.80	-.0033
-85.51	1.0706	407.44	.0348			-1.65	1.1669	407.44	.0245
-72.53	1.0540	437.92	.0700			.00	.0542	437.92	.0610
-59.55	1.0322	458.24	.1201			.31	-.9503	458.24	.1085
-46.57	1.0104	468.40	.1516			.62	-1.2405	468.40	.1493
-33.58	.9860	478.56	.1985			1.25	-1.4252	478.56	.1938
-27.09	.9782	488.72	.2648			1.87	-1.4802	488.72	.2662
-20.60	.9727					2.50	-1.4924		
-18.54	.9782					3.13	-1.5078		
-14.42	1.0031					3.75	-1.4942		
-8.24	1.0900					4.38	-1.4480		
-4.12	1.1755					5.00	-1.4538		
-2.68	1.1863					6.25	-1.3934		
-1.65	1.1648					7.50	-1.3781		
-.72	1.0311					8.75	-1.3517		
-.35	.8946					10.00	-1.3348		
.00	.0187					15.00	-1.2392		
.31	-1.0015					17.50	-1.2002		
.62	-1.2730					20.00	-1.1899		
1.25	-1.4261					30.00	-1.0551		
1.87	-1.4813					50.00	-.9547		
2.50	-1.4977					60.00	-.8153		
3.13	-1.4957					70.00	-.3118		
3.75	-1.4692					80.00	-.1766		
4.38	-1.4470					90.00	-.1026		
5.00	-1.4333					100.00	-.0696		
6.25	-1.4029					110.00	-.0512		
7.50	-1.3885					194.07	-.0481		
8.75	-1.3594								
10.00	-1.3292								
12.50	-1.2874								
15.00	-1.2482								
17.50	-1.2203								
20.00	-1.1803								
30.00	-1.0541								
40.00	-.9740								
50.00	-.9278								
60.00	-.7608								
70.00	-.3081								
80.00	-.1723								
90.00	-.0989								
100.00	-.0619								
110.00	-.0538								
194.07	-.0562								
224.55	-.0419								

$M = 0.842$; mfr $= 0.445$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0811	275.35	-.0143	224.55	-.0386	-150.43	1.0814	275.35	-.0060
-137.44	1.0827	305.83	-.0063			-85.51	1.0452	305.83	-.0063
-124.46	1.0775	336.31	.0023			-20.60	.9096	336.31	.0059
-104.99	1.0668	366.80	.0175			-8.24	1.0376	366.80	.0149
-85.51	1.0438	407.44	.0520			-1.65	1.1830	407.44	.0483
-72.53	1.0210	437.92	.0901			.00	.1728	437.92	.0898
-59.55	.9928	458.24	.1467			.31	-.8300	458.24	.1438
-46.57	.9600	468.40	.1832			.62	-1.1468	468.40	.1865
-33.58	.9305	478.56	.2328			1.25	-1.3489	478.56	.2368
-27.09	.9246	488.72	.3004			1.87	-1.4119	488.72	.3037
-20.60	.9085					2.50	-1.4277		
-18.54	.9118					3.13	-1.3978		
-14.42	.9355					3.75	-1.4189		
-8.24	1.0394					4.38	-1.3721		
-4.12	1.1494					5.00	-1.3742		
-2.68	1.1835					6.25	-1.3190		
-1.65	1.1816					7.50	-1.2979		
-.72	1.0807					8.75	-1.2739		
-.35	.9672					10.00	-1.2455		
.00	.1315					15.00	-1.1627		
.31	-.9046					17.50	-1.1484		
.62	-1.1658					20.00	-1.1234		
1.25	-1.3440					30.00	-.9998		
1.87	-1.4103					50.00	-.8968		
2.50	-1.4057					60.00	-.7669		
3.13	-1.4184					70.00	-.2374		
3.75	-1.3992					80.00	-.1529		
4.38	-1.3629					90.00	-.1229		
5.00	-1.3633					100.00	-.0932		
6.25	-1.3254					110.00	-.0756		
7.50	-1.3029					194.07	-.0481		
8.75	-1.2820								
10.00	-1.2529								
12.50	-1.2163								
15.00	-1.1966								
17.50	-1.1645								
20.00	-1.1204								
30.00	-1.0045								
40.00	-.9311								
50.00	-.8821								
60.00	-.7256								
70.00	-.1918								
80.00	-.1346								
90.00	-.1177								
100.00	-.0891								
110.00	-.0723								
194.07	-.0547								
224.55	-.0401								

Table V. Continued

(i) Continued

$M = 0.840$; mfr $= 0.487$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0555	275.35	-.0128	224.55	-.0357	-150.43	1.0561	275.35	-.0028
-137.44	1.0585	305.83	-.0035			-85.51	1.0086	305.83	-.0025
-124.46	1.0507	336.31	.0068			-20.60	.8285	336.31	.0091
-104.99	1.0364	366.80	.0217			-8.24	.9786	366.80	.0184
-85.51	1.0072	407.44	.0650			-1.65	1.1861	407.44	.0587
-72.53	.9809	437.92	.1091			.00	.2880	437.92	.1061
-59.55	.9475	458.24	.1693			.31	-.7221	458.24	.1637
-46.57	.9082	468.40	.2108			.62	-1.0375	468.40	.2104
-33.58	.8624	478.56	.2627			1.25	-1.2417	478.56	.2647
-27.09	.8500	488.72	.3306			1.87	-1.3454	488.72	.3362
-20.60	.8317					2.50	-1.3514		
-18.54	.8336					3.13	-1.3332		
-14.42	.8558					3.75	-1.3287		
-8.24	.9735					4.38	-1.3041		
-4.12	1.1169					5.00	-1.2883		
-2.68	1.1702					6.25	-1.2621		
-1.65	1.1882					7.50	-1.2197		
-.72	1.1203					8.75	-1.2081		
-.35	1.0272					10.00	-1.1933		
.00	.2398					15.00	-1.1127		
.31	-.7862					17.50	-1.0947		
.62	-1.0551					20.00	-1.0687		
1.25	-1.2422					30.00	-.9484		
1.87	-1.3368					50.00	-.8031		
2.50	-1.3548					60.00	-.2479		
3.13	-1.3367					70.00	-.1698		
3.75	-1.3325					80.00	-.1647		
4.38	-1.3042					90.00	-.1614		
5.00	-1.2999					100.00	-.1192		
6.25	-1.2513					110.00	-.0913		
7.50	-1.2321					194.07	-.0464		
8.75	-1.2200								
10.00	-1.2099								
12.50	-1.1515								
15.00	-1.1132								
17.50	-1.0682								
20.00	-1.0264								
30.00	-.9389								
40.00	-.8642								
50.00	-.7755								
60.00	-.2460								
70.00	-.1706								
80.00	-.1596								
90.00	-.1603								
100.00	-.1141								
110.00	-.0949								
194.07	-.0506								
224.55	-.0341								

$M = 0.841$; mfr $= 0.490$; $\alpha = 2.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0574	275.35	.0053	224.55	-.0359	-150.43	1.0538	275.35	-.0229
-137.44	1.0584	305.83	.0043			-85.51	1.0075	305.83	-.0100
-124.46	1.0558	336.31	.0142			-20.60	.7899	336.31	.0072
-104.99	1.0383	366.80	.0304			-8.24	.9205	366.80	.0175
-85.51	1.0133	407.44	.0665			-1.65	1.1855	407.44	.0559
-72.53	.9868	437.92	.1101			.00	.3906	437.92	.1032
-59.55	.9563	458.24	.1621			.31	-.5354	458.24	.1683
-46.57	.9161	468.40	.1981			.62	-.8792	468.40	.2173
-33.58	.8817	478.56	.2421			1.25	-1.0898	478.56	.2755
-27.09	.8698	488.72	.3023			1.87	-1.2005	488.72	.3579
-20.60	.8614					2.50	-1.2338		
-18.54	.8636					3.13	-1.2222		
-14.42	.9070					3.75	-1.2107		
-8.24	1.0184					4.38	-1.1691		
-4.12	1.1465					5.00	-1.1701		
-2.68	1.1810					6.25	-1.1221		
-1.65	1.1806					7.50	-1.0737		
-.72	1.0834					8.75	-1.0590		
-.35	.9585					10.00	-1.0554		
.00	.1137					15.00	-.9536		
.31	-.9117					17.50	-.9196		
.62	-1.2064					20.00	-.8910		
1.25	-1.3564					30.00	-.7613		
1.87	-1.4258					50.00	-.3186		
2.50	-1.4515					60.00	-.2702		
3.13	-1.4437					70.00	-.2710		
3.75	-1.4313					80.00	-.2596		
4.38	-1.4007					90.00	-.2259		
5.00	-1.4026					100.00	-.1493		
6.25	-1.3430					110.00	-.1116		
7.50	-1.3466					194.07	-.0455		
8.75	-1.3414								
10.00	-1.3270								
12.50	-1.2824								
15.00	-1.2494								
17.50	-1.2233								
20.00	-1.1829								
30.00	-1.0764								
40.00	-1.0212								
50.00	-.9560								
60.00	-.4126								
70.00	-.3017								
80.00	-.1403								
90.00	-.0867								
100.00	-.0662								
110.00	-.0454								
194.07	-.0451								
224.55	-.0314								

Table V. Continued

(i) Continued

$M = 0.842$; mfr $= 0.542$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0224	275.35	-.0068	224.55	-.0312	-150.43	1.0195	275.35	.0028
-137.44	1.0224	305.83	.0028			-85.51	.9627	305.83	.0031
-124.46	1.0198	336.31	.0141			-20.60	.7169	336.31	.0190
-104.99	.9980	366.80	.0356			-8.24	.8783	366.80	.0309
-85.51	.9630	407.44	.0794			-1.65	1.1810	407.44	.0744
-72.53	.9273	437.92	.1297			.00	.3971	437.92	.1261
-59.55	.8863	458.24	.1919			.31	-.5552	458.24	.1936
-46.57	.8328	468.40	.2366			.62	-.8649	468.40	.2406
-33.58	.7666	478.56	.2890			1.25	-1.1252	478.56	.2982
-27.09	.7486	488.72	.3589			1.87	-1.2180	488.72	.3685
-20.60	.7205					2.50	-1.2399		
-18.54	.7143					3.13	-1.2455		
-14.42	.7556					3.75	-1.2395		
-8.24	.8853					4.38	-1.1970		
-4.12	1.0581					5.00	-1.1864		
-2.68	1.1356					6.25	-1.1399		
-1.65	1.1836					7.50	-1.1199		
-.72	1.1579					8.75	-1.0978		
-.35	1.0843					10.00	-1.0844		
.00	.3490					15.00	-1.0349		
.31	-.5868					17.50	-.9960		
.62	-.9317					20.00	-.9645		
1.25	-1.1136					30.00	-.8776		
1.87	-1.2160					50.00	-.4902		
2.50	-1.2536					60.00	-.2027		
3.13	-1.2431					70.00	-.2123		
3.75	-1.2451					80.00	-.2196		
4.38	-1.2072					90.00	-.1983		
5.00	-1.1779					100.00	-.1392		
6.25	-1.1550					110.00	-.1092		
7.50	-1.1289					194.07	-.0419		
8.75	-1.1312								
10.00	-1.1221								
12.50	-1.0594								
15.00	-.9972								
17.50	-.9670								
20.00	-.9708								
30.00	-.8541								
40.00	-.7833								
50.00	-.3207								
60.00	-.2022								
70.00	-.1928								
80.00	-.2298								
90.00	-.1984								
100.00	-.1388								
110.00	-.1037								
194.07	-.0523								
224.55	-.0324								

$M = 0.843$; mfr $= 0.609$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9769	275.35	-.0010	224.55	-.0243	-150.43	.9778	275.35	.0079
-137.44	.9812	305.83	.0141			-85.51	.9005	305.83	.0112
-124.46	.9734	336.31	.0241			-20.60	.5347	336.31	.0283
-104.99	.9475	366.80	.0468			-8.24	.7189	366.80	.0465
-85.51	.8999	407.44	.0924			-1.65	1.1506	407.44	.0918
-72.53	.8558	437.92	.1497			.00	.5519	437.92	.1493
-59.55	.7968	458.24	.2147			.31	-.3154	458.24	.2187
-46.57	.7187	468.40	.2603			.62	-.6611	468.40	.2682
-33.58	.6345	478.56	.3156			1.25	-.9155	478.56	.3265
-27.09	.6004	488.72	.3856			1.87	-1.0207	488.72	.3975
-20.60	.5519					2.50	-1.1047		
-18.54	.5446					3.13	-1.1023		
-14.42	.5621					3.75	-1.1018		
-8.24	.7422					4.38	-1.0642		
-4.12	.9610					5.00	-1.0294		
-2.68	1.0707					6.25	-.9951		
-1.65	1.1618					7.50	-.9737		
-.72	1.1859					8.75	-.9619		
-.35	1.1465					10.00	-.9598		
.00	.5020					15.00	-.8618		
.31	-.3446					17.50	-.8285		
.62	-.6781					20.00	-.7827		
1.25	-.9602					30.00	-.6942		
1.87	-1.0560					50.00	-.2938		
2.50	-1.1045					60.00	-.2971		
3.13	-1.1038					70.00	-.2891		
3.75	-1.1061					80.00	-.2624		
4.38	-1.0797					90.00	-.2290		
5.00	-1.0735					100.00	-.1481		
6.25	-1.0181					110.00	-.1061		
7.50	-1.0064					194.07	-.0343		
8.75	-.9865								
10.00	-.9439								
12.50	-.9201								
15.00	-.8664								
17.50	-.8533								
20.00	-.7981								
30.00	-.7557								
40.00	-.4606								
50.00	-.2531								
60.00	-.2846								
70.00	-.2814								
80.00	-.2583								
90.00	-.2192								
100.00	-.1488								
110.00	-.1017								
194.07	-.0381								
224.55	-.0232								

Table V. Continued

(i) Continued

$M = 0.840$; mfr $= 0.678$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9183	275.35	.0091	224.55	-.0175	-150.43	.9183	275.35	.0167
-137.44	.9215	305.83	.0203			-85.51	.8180	305.83	.0187
-124.46	.9127	336.31	.0356			-20.60	.3088	336.31	.0369
-104.99	.8798	366.80	.0591			-8.24	.5174	366.80	.0558
-85.51	.8180	407.44	.1062			-1.65	1.0838	407.44	.1049
-72.53	.7585	437.92	.1640			.00	.7095	437.92	.1640
-59.55	.6782	458.24	.2314			.31	-.1008	458.24	.2344
-46.57	.5739	468.40	.2778			.62	-.4253	468.40	.2854
-33.58	.4567	478.56	.3322			1.25	-.7635	478.56	.3425
-27.09	.4051	488.72	.4019			1.87	-.8920	488.72	.4128
-20.60	.3213					2.50	-.9414		
-18.54	.3011					3.13	-.9219		
-14.42	.3359					3.75	-.8973		
-8.24	.5412					4.38	-.8714		
-4.12	.8117					5.00	-.8900		
-2.68	.9650					6.25	-.8231		
-1.65	1.1024					7.50	-.7334		
-.72	1.1869					8.75	-.7683		
-.35	1.1812					10.00	-.7407		
.00	.6571					15.00	-.5648		
.31	-.1517					17.50	-.6621		
.62	-.4842					20.00	-.5042		
1.25	-.7831					30.00	-.3650		
1.87	-.8972					50.00	-.4219		
2.50	-.9325					60.00	-.3462		
3.13	-.9400					70.00	-.3076		
3.75	-.9465					80.00	-.2632		
4.38	-.9524					90.00	-.2228		
5.00	-.8727					100.00	-.1449		
6.25	-.8400					110.00	-.1041		
7.50	-.7772					194.07	-.0294		
8.75	-.7563								
10.00	-.7631								
12.50	-.7739								
15.00	-.7419								
17.50	-.7036								
20.00	-.6425								
30.00	-.4862								
40.00	-.3831								
50.00	-.3643								
60.00	-.3383								
70.00	-.2970								
80.00	-.2674								
90.00	-.2187								
100.00	-.1517								
110.00	-.1004								
194.07	-.0352								
224.55	-.0164								

$M = 0.841$; mfr $= 0.678$; $\alpha = 2.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9218	275.35	.0296	224.55	-.0205	-150.43	.9167	275.35	-.0061
-137.44	.9237	305.83	.0277			-85.51	.8169	305.83	.0121
-124.46	.9149	336.31	.0393			-20.60	.2429	336.31	.0340
-104.99	.8817	366.80	.0619			-8.24	.4200	366.80	.0519
-85.51	.8226	407.44	.1103			-1.65	1.0155	407.44	.1023
-72.53	.7628	437.92	.1669			.00	.8362	437.92	.1596
-59.55	.6874	458.24	.2349			.31	.0743	458.24	.2302
-46.57	.5883	468.40	.2776			.62	-.2453	468.40	.2826
-33.58	.4710	478.56	.3273			1.25	-.5074	478.56	.3453
-27.09	.4280	488.72	.3874			1.87	-.6463	488.72	.4235
-20.60	.3712					2.50	-.7104		
-18.54	.3610					3.13	-.5816		
-14.42	.4233					3.75	-.7262		
-8.24	.6343					4.38	-.4383		
-4.12	.8869					5.00	-.4582		
-2.68	1.0250					6.25	-.3793		
-1.65	1.1356					7.50	-.3991		
-.72	1.1882					8.75	-.4023		
-.35	1.1632					10.00	-.4153		
.00	.5369					15.00	-.4285		
.31	-.3288					17.50	-.4318		
.62	-.6947					20.00	-.4277		
1.25	-.9332					30.00	-.3665		
1.87	-1.0388					50.00	-.3881		
2.50	-1.0783					60.00	-.3202		
3.13	-1.0839					70.00	-.2986		
3.75	-1.0940					80.00	-.2527		
4.38	-1.0692					90.00	-.2215		
5.00	-1.0796					100.00	-.1385		
6.25	-1.0287					110.00	-.1047		
7.50	-1.0031					194.07	-.0286		
8.75	-.9829								
10.00	-.9652								
12.50	-.9407								
15.00	-.9101								
17.50	-.8924								
20.00	-.8654								
30.00	-.7748								
40.00	-.4892								
50.00	-.2367								
60.00	-.2817								
70.00	-.2762								
80.00	-.2530								
90.00	-.2060								
100.00	-.1427								
110.00	-.0984								
194.07	-.0347								
224.55	-.0194								

Table V. Continued

(i) Concluded

$M = 0.841$; mfr $= 0.741$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.8595	275.35	.0097	224.55	-.0112	-150.43	.8566	275.35	.0210
-137.44	.8621	305.83	.0253			-85.51	.7313	305.83	.0256
-124.46	.8497	336.31	.0402			-20.60	-.0180	336.31	.0455
-104.99	.8066	366.80	.0637			-8.24	.2833	366.80	.0646
-85.51	.7313	407.44	.1166			-1.65	.9793	407.44	.1113
-72.53	.6514	437.92	.1762			.00	.8444	437.92	.1742
-59.55	.5466	458.24	.2445			.31	.0594	458.24	.2468
-46.57	.4067	468.40	.2905			.62	-.1410	468.40	.2954
-33.58	.2282	478.56	.3447			1.25	-.5737	478.56	.3537
-27.09	.1401	488.72	.4127			1.87	-.6752	488.72	.4226
-20.60	-.0045					2.50	-.7028		
-18.54	-.0374					3.13	-.6094		
-14.42	.0306					3.75	-.6115		
-8.24	.2997					4.38	-.5444		
-4.12	.6574					5.00	-.5073		
-2.68	.8268					6.25	-.4672		
-1.65	1.0051					7.50	-.4795		
-.72	1.1607					8.75	-.4756		
-.35	1.1890					10.00	-.5066		
.00	.7972					15.00	-.4820		
.31	.0264					17.50	-.4751		
.62	-.2909					20.00	-.4982		
1.25	-.5824					30.00	-.3838		
1.87	-.6675					50.00	-.3992		
2.50	-.8098					60.00	-.3298		
3.13	-.7394					70.00	-.2895		
3.75	-.7001					80.00	-.2540		
4.38	-.6528					90.00	-.2085		
5.00	-.6476					100.00	-.1356		
6.25	-.4391					110.00	-.0981		
7.50	-.5397					194.07	-.0243		
8.75	-.4796								
10.00	-.4975								
12.50	-.4893								
15.00	-.4886								
17.50	-.4792								
20.00	-.4572								
30.00	-.4270								
40.00	-.3811								
50.00	-.3605								
60.00	-.3314								
70.00	-.2840								
80.00	-.2514								
90.00	-.2120								
100.00	-.1383								
110.00	-.0915								
194.07	-.0296								
224.55	-.0097								

Table V. Continued

(j) $M = 0.87$

$M = 0.869$; mfr $= 0.271$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1631	275.35	-.0227	224.55	-.0143	-150.43	1.1624	275.35	-.0115
-137.44	1.1606	305.83	-.0249			-85.51	1.1525	305.83	-.0214
-124.46	1.1602	336.31	-.0230			-20.60	1.1197	336.31	-.0169
-104.99	1.1549	366.80	-.0185			-8.24	1.1853	366.80	-.0201
-85.51	1.1458	407.44	-.0048			-1.65	1.0908	407.44	-.0099
-72.53	1.1396	437.92	.0080			.00	-.1255	437.92	.0026
-59.55	1.1308	458.24	.0349			.31	-1.1199	458.24	.0327
-46.57	1.1239	468.40	.0589			.62	-1.3418	468.40	.0611
-33.58	1.1173	478.56	.0889			1.25	-1.4752	478.56	.0937
-27.09	1.1155	488.72	.1466			1.87	-1.5510	488.72	.1520
-20.60	1.1236					2.50	-1.5662		
-18.54	1.1264					3.13	-1.5606		
-14.42	1.1419					3.75	-1.5513		
-8.24	1.1892					4.38	-1.5321		
-4.12	1.1971					5.00	-1.5149		
-2.68	1.1675					6.25	-1.4804		
-1.65	1.0846					7.50	-1.4614		
-.72	.8772					8.75	-1.4350		
-.35	.7001					10.00	-1.4115		
.00	-.1694					15.00	-1.3240		
.31	-1.1757					17.50	-1.2818		
.62	-1.3658					20.00	-1.2545		
1.25	-1.4932					30.00	-1.1068		
1.87	-1.5417					50.00	-.9545		
2.50	-1.5688					60.00	-.8989		
3.13	-1.5720					70.00	-.8670		
3.75	-1.5600					80.00	-.8291		
4.38	-1.5323					90.00	-.7742		
5.00	-1.5058					100.00	-.3533		
6.25	-1.4762					110.00	-.2375		
7.50	-1.4639					194.07	.0046		
8.75	-1.4260								
10.00	-1.3954								
12.50	-1.3674								
15.00	-1.3341								
17.50	-1.2854								
20.00	-1.2484								
30.00	-1.1048								
40.00	-1.0262								
50.00	-.9585								
60.00	-.9114								
70.00	-.8362								
80.00	-.8216								
90.00	-.7687								
100.00	-.3146								
110.00	-.2224								
194.07	-.0039								
224.55	-.0143								

$M = 0.868$; mfr $= 0.316$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1483	275.35	-.0193	224.55	-.0207	-150.43	1.1490	275.35	-.0068
-137.44	1.1493	305.83	-.0183			-85.51	1.1320	305.83	-.0180
-124.46	1.1477	336.31	-.0155			-20.60	1.0886	336.31	-.0119
-104.99	1.1423	366.80	-.0068			-8.24	1.1684	366.80	-.0113
-85.51	1.1307	407.44	.0114			-1.65	1.1275	407.44	.0079
-72.53	1.1201	437.92	.0316			.00	-.0555	437.92	.0310
-59.55	1.1088	458.24	.0700			.31	-1.0473	458.24	.0668
-46.57	1.0950	468.40	.0953			.62	-1.2895	468.40	.1001
-33.58	1.0865	478.56	.1360			1.25	-1.4395	478.56	.1386
-27.09	1.0822	488.72	.1969			1.87	-1.5030	488.72	.2065
-20.60	1.0875					2.50	-1.5282		
-18.54	1.0882					3.13	-1.5233		
-14.42	1.1105					3.75	-1.5122		
-8.24	1.1663					4.38	-1.4830		
-4.12	1.1983					5.00	-1.4789		
-2.68	1.1857					6.25	-1.4220		
-1.65	1.1224					7.50	-1.4129		
-.72	.9414					8.75	-1.3757		
-.35	.7730					10.00	-1.3555		
.00	-.0800					15.00	-1.2749		
.31	-1.0834					17.50	-1.2402		
.62	-1.3169					20.00	-1.2033		
1.25	-1.4489					30.00	-1.1097		
1.87	-1.4953					50.00	-.9551		
2.50	-1.5199					60.00	-.8866		
3.13	-1.5186					70.00	-.8671		
3.75	-1.5073					80.00	-.8246		
4.38	-1.4842					90.00	-.4555		
5.00	-1.4555					100.00	-.2770		
6.25	-1.4381					110.00	-.2129		
7.50	-1.4103					194.07	.0011		
8.75	-1.3892								
10.00	-1.3646								
12.50	-1.3195								
15.00	-1.2755								
17.50	-1.2510								
20.00	-1.2137								
30.00	-1.0808								
40.00	-.9962								
50.00	-.9303								
60.00	-.8834								
70.00	-.8381								
80.00	-.8186								
90.00	-.4676								
100.00	-.2781								
110.00	-.1889								
194.07	-.0119								
224.55	-.0185								

Table V. Continued

(j) Continued

$M = 0.865$; mfr $= 0.397$; $\alpha = 0^\circ$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1165	275.35	-.0156	224.55	-.0262	-150.43	1.1165	275.35	-.0060
-137.44	1.1168	305.83	-.0111			-85.51	1.0885	305.83	-.0098
-124.46	1.1137	336.31	-.0034			-20.60	.9895	336.31	-.0008
-104.99	1.1033	366.80	.0107			-8.24	1.1023	366.80	.0072
-85.51	1.0860	407.44	.0412			-1.65	1.1817	407.44	.0371
-72.53	1.0677	437.92	.0804			.00	.1214	437.92	.0743
-59.55	1.0491	458.24	.1306			.31	-.8772	458.24	.1274
-46.57	1.0265	468.40	.1672			.62	-1.1566	468.40	.1679
-33.58	1.0025	478.56	.2151			1.25	-1.3386	478.56	.2167
-27.09	.9930	488.72	.2819			1.87	-1.3927	488.72	.2880
-20.60	.9955					2.50	-1.4087		
-18.54	.9952					3.13	-1.4090		
-14.42	1.0196					3.75	-1.3991		
-8.24	1.1051					4.38	-1.3722		
-4.12	1.1850					5.00	-1.3632		
-2.68	1.1983					6.25	-1.3225		
-1.65	1.1727					7.50	-1.2881		
-.72	1.0432					8.75	-1.2679		
-.35	.9238					10.00	-1.2536		
.00	.0710					15.00	-1.1810		
.31	-.9281					17.50	-1.1302		
.62	-1.1827					20.00	-1.1046		
1.25	-1.3347					30.00	-.9796		
1.87	-1.3854					50.00	-.8939		
2.50	-1.4053					60.00	-.8512		
3.13	-1.4012					70.00	-.7950		
3.75	-1.3968					80.00	-.5520		
4.38	-1.3718					90.00	-.2187		
5.00	-1.3654					100.00	-.1343		
6.25	-1.3100					110.00	-.0411		
7.50	-1.2993					194.07	-.0236		
8.75	-1.2629								
10.00	-1.2584								
12.50	-1.2078								
15.00	-1.1718								
17.50	-1.1479								
20.00	-1.1058								
30.00	-1.0105								
40.00	-.9343								
50.00	-.8803								
60.00	-.8445								
70.00	-.7964								
80.00	-.6574								
90.00	-.2486								
100.00	-.1427								
110.00	-.0425								
194.07	-.0310								
224.55	-.0240								

$M = 0.866$; mfr $= 0.443$; $\alpha = 0^\circ$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0941	275.35	-.0118	224.55	-.0282	-150.43	1.0939	275.35	.0007
-137.44	1.0951	305.83	-.0044			-85.51	1.0581	305.83	-.0025
-124.46	1.0916	336.31	.0039			-20.60	.9249	336.31	.0097
-104.99	1.0815	366.80	.0213			-8.24	1.0532	366.80	.0197
-85.51	1.0567	407.44	.0579			-1.65	1.1951	407.44	.0546
-72.53	1.0372	437.92	.1031			.00	.2154	437.92	.1005
-59.55	1.0092	458.24	.1592			.31	-.7494	458.24	.1564
-46.57	.9777	468.40	.1993			.62	-1.0731	468.40	.1977
-33.58	.9482	478.56	.2492			1.25	-1.2725	478.56	.2524
-27.09	.9366	488.72	.3165			1.87	-1.3259	488.72	.3239
-20.60	.9253					2.50	-1.3464		
-18.54	.9267					3.13	-1.3282		
-14.42	.9617					3.75	-1.3169		
-8.24	1.0570					4.38	-1.2915		
-4.12	1.1643					5.00	-1.2849		
-2.68	1.1956					6.25	-1.2481		
-1.65	1.1911					7.50	-1.2149		
-.72	1.0993					8.75	-1.1951		
-.35	.9990					10.00	-1.1718		
.00	.1586					15.00	-1.1022		
.31	-.8133					17.50	-1.0890		
.62	-1.1084					20.00	-1.0581		
1.25	-1.2503					30.00	-.9380		
1.87	-1.3126					50.00	-.8634		
2.50	-1.3174					60.00	-.8112		
3.13	-1.3139					70.00	-.7735		
3.75	-1.3123					80.00	-.4334		
4.38	-1.2867					90.00	-.1775		
5.00	-1.2772					100.00	-.0844		
6.25	-1.2209					110.00	-.0265		
7.50	-1.2171					194.07	-.0238		
8.75	-1.2130								
10.00	-1.1798								
12.50	-1.1416								
15.00	-1.1095								
17.50	-1.0837								
20.00	-1.0549								
30.00	-.9445								
40.00	-.8755								
50.00	-.8338								
60.00	-.7944								
70.00	-.7547								
80.00	-.4136								
90.00	-.1807								
100.00	-.0764								
110.00	-.0185								
194.07	-.0341								
224.55	-.0271								

Table V. Continued

(j) Continued

$M = 0.867$; mfr $= 0.488$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0722	275.35	-.0036	224.55	-.0246	-150.43	1.0706	275.35	.0028
-137.44	1.0722	305.83	.0041			-85.51	1.0277	305.83	.0028
-124.46	1.0672	336.31	.0144			-20.60	.8514	336.31	.0147
-104.99	1.0521	366.80	.0336			-8.24	.9958	366.80	.0278
-85.51	1.0257	407.44	.0719			-1.65	1.1994	407.44	.0703
-72.53	.9977	437.92	.1212			.00	.3141	437.92	.1206
-59.55	.9650	458.24	.1841			.31	-.6539	458.24	.1847
-46.57	.9235	468.40	.2271			.62	-.9703	468.40	.2316
-33.58	.8753	478.56	.2788			1.25	-1.1730	478.56	.2868
-27.09	.8702	488.72	.3500			1.87	-1.2590	488.72	.3577
-20.60	.8529					2.50	-1.2732		
-18.54	.8571					3.13	-1.2638		
-14.42	.8819					3.75	-1.2643		
-8.24	.9898					4.38	-1.2234		
-4.12	1.1383					5.00	-1.2277		
-2.68	1.1836					6.25	-1.1801		
-1.65	1.1996					7.50	-1.1676		
-.72	1.1357					8.75	-1.1293		
-.35	1.0481					10.00	-1.1041		
.00	.2790					15.00	-1.0508		
.31	-.6872					17.50	-1.0203		
.62	-.9885					20.00	-.9759		
1.25	-1.1548					30.00	-.8884		
1.87	-1.2582					50.00	-.8202		
2.50	-1.2598					60.00	-.7542		
3.13	-1.2535					70.00	-.7331		
3.75	-1.2430					80.00	-.2557		
4.38	-1.2196					90.00	-.1324		
5.00	-1.2098					100.00	-.0528		
6.25	-1.1684					110.00	-.0233		
7.50	-1.1564					194.07	-.0324		
8.75	-1.1611								
10.00	-1.1428								
12.50	-1.0979								
15.00	-1.0489								
17.50	-1.0277								
20.00	-.9714								
30.00	-.9300								
40.00	-.8194								
50.00	-.7902								
60.00	-.7328								
70.00	-.7186								
80.00	-.2539								
90.00	-.1092								
100.00	-.0609								
110.00	-.0295								
194.07	-.0409								
224.55	-.0224								

$M = 0.867$; mfr $= 0.543$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0387	275.35	.0091	224.55	-.0252	-150.43	1.0378	275.35	.0069
-137.44	1.0415	305.83	.0181			-85.51	.9808	305.83	.0101
-124.46	1.0362	336.31	.0306			-20.60	.7330	336.31	.0238
-104.99	1.0164	366.80	.0456			-8.24	.8967	366.80	.0382
-85.51	.9806	407.44	.0901			-1.65	1.1954	407.44	.0828
-72.53	.9473	437.92	.1437			.00	.4457	437.92	.1430
-59.55	.9042	458.24	.2093			.31	-.4709	458.24	.2090
-46.57	.8493	468.40	.2535			.62	-.8156	468.40	.2599
-33.58	.7881	478.56	.3086			1.25	-1.0388	478.56	.3166
-27.09	.7719	488.72	.3804			1.87	-1.1328	488.72	.3888
-20.60	.7390					2.50	-1.1534		
-18.54	.7359					3.13	-1.1661		
-14.42	.7638					3.75	-1.1598		
-8.24	.9059					4.38	-1.1232		
-4.12	1.0770					5.00	-1.1055		
-2.68	1.1568					6.25	-1.0658		
-1.65	1.1965					7.50	-1.0313		
-.72	1.1765					8.75	-1.0224		
-.35	1.0990					10.00	-1.0196		
.00	.3829					15.00	-.9756		
.31	-.4910					17.50	-.8767		
.62	-.8146					20.00	-.8848		
1.25	-1.0208					30.00	-.8299		
1.87	-1.1291					50.00	-.7405		
2.50	-1.1556					60.00	-.6932		
3.13	-1.1480					70.00	-.4854		
3.75	-1.1553					80.00	-.1544		
4.38	-1.1139					90.00	-.1128		
5.00	-1.0855					100.00	-.0848		
6.25	-1.0874					110.00	-.0518		
7.50	-1.0779					194.07	-.0300		
8.75	-1.0647								
10.00	-1.0287								
12.50	-.9975								
15.00	-.9166								
17.50	-.9280								
20.00	-.8918								
30.00	-.8333								
40.00	-.7587								
50.00	-.7060								
60.00	-.6838								
70.00	-.5939								
80.00	-.1554								
90.00	-.1083								
100.00	-.0766								
110.00	-.0537								
194.07	-.0371								
224.55	-.0245								

Table V. Continued

(j) Continued

$M = 0.868$; mfr $= 0.611$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9940	275.35	.0053	224.55	-.0158	-150.43	.9925	275.35	.0142
-137.44	.9958	305.83	.0184			-85.51	.9183	305.83	.0190
-124.46	.9893	336.31	.0353			-20.60	.5668	336.31	.0376
-104.99	.9626	366.80	.0590			-8.24	.7541	366.80	.0545
-85.51	.9152	407.44	.1080			-1.65	1.1747	407.44	.1064
-72.53	.8716	437.92	.1663			.00	.5882	437.92	.1660
-59.55	.8113	458.24	.2373			.31	-.2598	458.24	.2379
-46.57	.7357	468.40	.2808			.62	-.5919	468.40	.2888
-33.58	.6494	478.56	.3375			1.25	-.8897	478.56	.3474
-27.09	.6205	488.72	.4047			1.87	-.9764	488.72	.4178
-20.60	.5658					2.50	-1.0422		
-18.54	.5626					3.13	-1.0208		
-14.42	.5951					3.75	-1.0400		
-8.24	.7533					4.38	-.9894		
-4.12	.9804					5.00	-.9724		
-2.68	1.0856					6.25	-.9328		
-1.65	1.1680					7.50	-.9178		
-.72	1.1991					8.75	-.9472		
-.35	1.1713					10.00	-.8674		
.00	.5534					15.00	-.7870		
.31	-.2893					17.50	-.7781		
.62	-.6401					20.00	-.7739		
1.25	-.8610					30.00	-.7036		
1.87	-.9663					50.00	-.6583		
2.50	-1.0225					60.00	-.5605		
3.13	-1.0194					70.00	-.2127		
3.75	-1.0049					80.00	-.1861		
4.38	-.9907					90.00	-.1800		
5.00	-.9663					100.00	-.1209		
6.25	-.9540					110.00	-.0840		
7.50	-.9152					194.07	-.0284		
8.75	-.9282								
10.00	-.8957								
12.50	-.8465								
15.00	-.8300								
17.50	-.7837								
20.00	-.7775								
30.00	-.7137								
40.00	-.6661								
50.00	-.6486								
60.00	-.5386								
70.00	-.2020								
80.00	-.2102								
90.00	-.1811								
100.00	-.1282								
110.00	-.0843								
194.07	-.0336								
224.55	-.0147								

$M = 0.867$; mfr $= 0.680$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9367	275.35	.0098	224.55	-.0122	-150.43	.9369	275.35	.0223
-137.44	.9411	305.83	.0258			-85.51	.8369	305.83	.0268
-124.46	.9301	336.31	.0419			-20.60	.3278	336.31	.0464
-104.99	.8974	366.80	.0685			-8.24	.5484	366.80	.0659
-85.51	.8355	407.44	.1194			-1.65	1.0897	407.44	.1182
-72.53	.7778	437.92	.1822			.00	.7166	437.92	.1838
-59.55	.6989	458.24	.2518			.31	-.0843	458.24	.2559
-46.57	.5940	468.40	.2985			.62	-.3319	468.40	.3069
-33.58	.4756	478.56	.3552			1.25	-.6937	478.56	.3652
-27.09	.4176	488.72	.4215			1.87	-.8126	488.72	.4334
-20.60	.3214					2.50	-.8616		
-18.54	.3119					3.13	-.8367		
-14.42	.3557					3.75	-.8502		
-8.24	.5639					4.38	-.8186		
-4.12	.8287					5.00	-.7779		
-2.68	.9588					6.25	-.7719		
-1.65	1.1002					7.50	-.7523		
-.72	1.1996					8.75	-.6920		
-.35	1.1970					10.00	-.7178		
.00	.6888					15.00	-.6586		
.31	-.0935					17.50	-.6189		
.62	-.4111					20.00	-.5767		
1.25	-.7089					30.00	-.5678		
1.87	-.8017					50.00	-.4897		
2.50	-.8500					60.00	-.2960		
3.13	-.8396					70.00	-.2678		
3.75	-.8418					80.00	-.2687		
4.38	-.8229					90.00	-.2119		
5.00	-.7916					100.00	-.1325		
6.25	-.7067					110.00	-.0931		
7.50	-.7534					194.07	-.0211		
8.75	-.7061								
10.00	-.6749								
12.50	-.6752								
15.00	-.6536								
17.50	-.6588								
20.00	-.6103								
30.00	-.5993								
40.00	-.5244								
50.00	-.4269								
60.00	-.3452								
70.00	-.2818								
80.00	-.2616								
90.00	-.2223								
100.00	-.1380								
110.00	-.0954								
194.07	-.0252								
224.55	-.0108								

Table V. Continued

(j) Concluded

$M = 0.867$; mfr $= 0.743$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.8751	275.35	.0226	224.55	-.6049	-150.43	.8745	275.35	.0280
-137.44	.8794	305.83	.0364			-85.51	.7481	305.83	.0332
-124.46	.8641	336.31	.0549			-20.60	-.0111	336.31	.0492
-104.99	.8227	366.80	.0818			-8.24	.2965	366.80	.0713
-85.51	.7477	407.44	.1350			-1.65	1.0055	407.44	.1270
-72.53	.6683	437.92	.1962			.00	.8673	437.92	.1933
-59.55	.5675	458.24	.2666			.31	.1076	458.24	.2666
-46.57	.4254	468.40	.3098			.62	-.1103	468.40	.3168
-33.58	.2415	478.56	.3655			1.25	-.4979	478.56	.3755
-27.09	.1450	488.72	.4305			1.87	-.6050	488.72	.4414
-20.60	-.0051					2.50	-.6428		
-18.54	-.0331					3.13	-.6657		
-14.42	.0451					3.75	-.5985		
-8.24	.3322					4.38	-.6328		
-4.12	.6842					5.00	-.5103		
-2.68	.8440					6.25	-.4845		
-1.65	1.0133					7.50	-.4745		
-.72	1.1687					8.75	-.4897		
-.35	1.2035					10.00	-.4557		
.00	.8126					15.00	-.4514		
.31	.1172					17.50	-.4670		
.62	-.2276					20.00	-.4833		
1.25	-.4844					30.00	-.4848		
1.87	-.5958					50.00	-.4798		
2.50	-.7129					60.00	-.3305		
3.13	-.6697					70.00	-.3167		
3.75	-.6393					80.00	-.2653		
4.38	-.6046					90.00	-.2125		
5.00	-.5970					100.00	-.1295		
6.25	-.5062					110.00	-.0898		
7.50	-.5021					194.07	-.0197		
8.75	-.5305								
10.00	-.4605								
12.50	-.4866								
15.00	-.4634								
17.50	-.4800								
20.00	-.4808								
30.00	-.4728								
40.00	-.4723								
50.00	-.4586								
60.00	-.3354								
70.00	-.2667								
80.00	-.2589								
90.00	-.2131								
100.00	-.1328								
110.00	-.0893								
194.07	-.0300								
224.55	-.0056								

Table V. Continued

(k) $M = 0.89$

$M = 0.891$; mfr $= 0.273$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1731	275.35	.0081	224.55	.0326	-150.43	1.1752	275.35	.0171
-137.44	1.1737	305.83	.0000			-85.51	1.1629	305.83	.0000
-124.46	1.1755	336.31	-.0053			-20.60	1.1347	336.31	-.0028
-104.99	1.1667	366.80	-.0025			-8.24	1.1955	366.80	-.0084
-85.51	1.1609	407.44	.0096			-1.65	1.1176	407.44	.0037
-72.53	1.1536	437.92	.0258			.00	-.0839	437.92	.0215
-59.55	1.1481	458.24	.0573			.31	-1.0354	458.24	.0538
-46.57	1.1365	468.40	.0821			.62	-1.2559	468.40	.0859
-33.58	1.1298	478.56	.1176			1.25	-1.3983	478.56	.1204
-27.09	1.1303	488.72	.1759			1.87	-1.4712	488.72	.1821
-20.60	1.1368					2.50	-1.4751		
-18.54	1.1426					3.13	-1.4791		
-14.42	1.1591					3.75	-1.4699		
-8.24	1.1982					4.38	-1.4601		
-4.12	1.2112					5.00	-1.4369		
-2.68	1.1795					6.25	-1.4047		
-1.65	1.0926					7.50	-1.3859		
-.72	.8894					8.75	-1.3339		
-.35	.7233					10.00	-1.3338		
.00	-.1105					15.00	-1.2494		
.31	-1.1030					17.50	-1.2097		
.62	-1.2987					20.00	-1.1797		
1.25	-1.4046					30.00	-1.0623		
1.87	-1.4546					50.00	-.9254		
2.50	-1.4880					60.00	-.8575		
3.13	-1.4846					70.00	-.8127		
3.75	-1.4727					80.00	-.7910		
4.38	-1.4573					90.00	-.7848		
5.00	-1.4325					100.00	-.7517		
6.25	-1.4012					110.00	-.7007		
7.50	-1.3801					194.07	.0617		
8.75	-1.3592								
10.00	-1.3395								
12.50	-1.3024								
15.00	-1.2555								
17.50	-1.2107								
20.00	-1.1926								
30.00	-1.0625								
40.00	-.9654								
50.00	-.9105								
60.00	-.8698								
70.00	-.8251								
80.00	-.7936								
90.00	-.7797								
100.00	-.7630								
110.00	-.7055								
194.07	.0589								
224.55	.0308								

$M = 0.892$; mfr $= 0.273$; $\alpha = 1.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1767	275.35	.0213	224.55	.0293	-150.43	1.1768	275.35	.0054
-137.44	1.1767	305.83	.0064			-85.51	1.1645	305.83	-.0048
-124.46	1.1746	336.31	-.0020			-20.60	1.1284	336.31	-.0048
-104.99	1.1718	366.80	-.0002			-8.24	1.1950	366.80	-.0070
-85.51	1.1630	407.44	.0110			-1.65	1.1295	407.44	.0085
-72.53	1.1569	437.92	.0257			.00	-.0458	437.92	.0285
-59.55	1.1511	458.24	.0543			.31	-1.0002	458.24	.0624
-46.57	1.1398	468.40	.0761			.62	-1.2292	468.40	.0950
-33.58	1.1377	478.56	.1062			1.25	-1.3613	478.56	.1330
-27.09	1.1353	488.72	.1626			1.87	-1.4291	488.72	.1987
-20.60	1.1429					2.50	-1.4474		
-18.54	1.1473					3.13	-1.4374		
-14.42	1.1662					3.75	-1.4436		
-9.24	1.2033					4.38	-1.4082		
-4.12	1.2082					5.00	-1.3999		
-2.68	1.1740					6.25	-1.3612		
-1.65	1.0781					7.50	-1.3448		
-.72	.8602					8.75	-1.3033		
-.35	.6778					10.00	-1.2766		
.00	-.1586					15.00	-1.2079		
.31	-1.1545					17.50	-1.1452		
.62	-1.3336					20.00	-1.1214		
1.25	-1.4434					30.00	-.9902		
1.87	-1.4811					50.00	-.8823		
2.50	-1.5164					60.00	-.8099		
3.13	-1.5179					70.00	-.7820		
3.75	-1.5035					80.00	-.7634		
4.38	-1.4882					90.00	-.7462		
5.00	-1.4728					100.00	-.7152		
6.25	-1.4360					110.00	-.6690		
7.50	-1.4235					194.07	.0491		
8.75	-1.3953								
10.00	-1.3900								
12.50	-1.3409								
15.00	-1.3001								
17.50	-1.2692								
20.00	-1.2450								
30.00	-1.1149								
40.00	-1.0232								
50.00	-.9527								
60.00	-.9182								
70.00	-.8712								
80.00	-.8388								
90.00	-.8180								
100.00	-.7827								
110.00	-.7192								
194.07	.0700								
224.55	.0430								

Table V. Continued

(k) Continued

$M = 0.892$; mfr $= 0.274$; $\alpha = 2.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1765	275.35	.0346	224.55	.0223	-150.43	1.1766	275.35	-.0090
-137.44	1.1765	305.83	.0162			-85.51	1.1636	305.83	-.0096
-124.46	1.1735	336.31	.0053			-20.60	1.1200	336.31	-.0046
-104.99	1.1701	366.80	.0044			-8.24	1.1866	366.80	-.0090
-85.51	1.1637	407.44	.0115			-1.65	1.1437	407.44	.0050
-72.53	1.1573	437.92	.0243			.00	.0148	437.92	.0255
-59.55	1.1497	458.24	.0483			.31	-.9413	458.24	.0632
-46.57	1.1412	468.40	.0651			.62	-1.1796	468.40	.0987
-33.58	1.1378	478.56	.0859			1.25	-1.3352	478.56	.1407
-27.09	1.1419	488.72	.1283			1.87	-1.3978	488.72	.2085
-20.60	1.1488					2.50	-1.4065		
-18.54	1.1543					3.13	-1.3950		
-14.42	1.1732					3.75	-1.3955		
-8.24	1.2082					4.38	-1.3702		
-4.12	1.2015					5.00	-1.3614		
-2.68	1.1622					6.25	-1.3105		
-1.65	1.0582					7.50	-1.2890		
-.72	.8269					8.75	-1.2448		
-.35	.6575					10.00	-1.2418		
.00	-.2180					15.00	-1.1467		
.31	-1.1862					17.50	-1.0843		
.62	-1.3690					20.00	-1.0784		
1.25	-1.4711					30.00	-.9296		
1.87	-1.5103					50.00	-.8203		
2.50	-1.5465					60.00	-.7731		
3.13	-1.5459					70.00	-.7284		
3.75	-1.5336					80.00	-.7215		
4.38	-1.5140					90.00	-.7115		
5.00	-1.4996					100.00	-.6877		
6.25	-1.4711					110.00	-.6294		
7.50	-1.4613					194.07	.0335		
8.75	-1.4560								
10.00	-1.4263								
12.50	-1.3926								
15.00	-1.3493								
17.50	-1.3202								
20.00	-1.2767								
30.00	-1.1610								
40.00	-1.0337								
50.00	-1.0144								
60.00	-.9654								
70.00	-.9272								
80.00	-.8835								
90.00	-.8534								
100.00	-.4912								
110.00	-.3651								
194.07	.0446								
224.55	.0590								

$M = 0.892$; mfr $= 0.268$; $\alpha = 3.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1741	275.35	.0492	224.55	-.0012	-150.43	1.1743	275.35	-.0220
-137.44	1.1738	305.83	.0327			-85.51	1.1612	305.83	-.0155
-124.46	1.1744	336.31	.0187			-20.60	1.1139	336.31	-.0102
-104.99	1.1701	366.80	.0119			-8.24	1.1787	366.80	-.0096
-85.51	1.1634	407.44	.0122			-1.65	1.1582	407.44	.0060
-72.53	1.1555	437.92	.0165			.00	.0427	437.92	.0271
-59.55	1.1503	458.24	.0318			.31	-.8796	458.24	.0688
-46.57	1.1427	468.40	.0430			.62	-1.1368	468.40	.1042
-33.58	1.1412	478.56	.0532			1.25	-1.3016	478.56	.1490
-27.09	1.1451	488.72	.0884			1.87	-1.3550	488.72	.2222
-20.60	1.1537					2.50	-1.3749		
-18.54	1.1575					3.13	-1.3575		
-14.42	1.1770					3.75	-1.3512		
-8.24	1.2079					4.38	-1.3162		
-4.12	1.1969					5.00	-1.3078		
-2.68	1.1447					6.25	-1.2600		
-1.65	1.0416					7.50	-1.2337		
-.72	.8065					8.75	-1.2047		
-.35	.6243					10.00	-1.1748		
.00	-.2515					15.00	-1.0787		
.31	-1.2144					17.50	-1.0619		
.62	-1.3892					20.00	-1.0133		
1.25	-1.4992					30.00	-.8775		
1.87	-1.5301					50.00	-.7894		
2.50	-1.5657					60.00	-.7198		
3.13	-1.5617					70.00	-.6875		
3.75	-1.5571					80.00	-.6758		
4.38	-1.5396					90.00	-.6675		
5.00	-1.5252					100.00	-.6447		
6.25	-1.5148					110.00	-.6016		
7.50	-1.4897					194.07	.0236		
8.75	-1.4872								
10.00	-1.4701								
12.50	-1.4379								
15.00	-1.4002								
17.50	-1.3723								
20.00	-1.3352								
30.00	-1.2144								
40.00	-1.1404								
50.00	-1.0672								
60.00	-1.0018								
70.00	-.7271								
80.00	-.6413								
90.00	-.4621								
100.00	-.4290								
110.00	-.4223								
194.07	-.0640								
224.55	.0269								

Table V. Continued

(k) Continued

$M = 0.891$; mfr $= 0.311$; $\alpha = 0°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1614	275.35	.0057	224.55	.0223	-150.43	1.1600	275.35	.0153
-137.44	1.1599	305.83	.0032			-85.51	1.1449	305.83	.0019
-124.46	1.1605	336.31	.0013			-20.60	1.0978	336.31	.0035
-104.99	1.1553	366.80	.0078			-8.24	1.1786	366.80	.0041
-85.51	1.1428	407.44	.0287			-1.65	1.1432	407.44	.0222
-72.53	1.1324	437.92	.0545			.00	.0061	437.92	.0499
-59.55	1.1214	458.24	.0962			.31	-.9685	458.24	.0913
-46.57	1.1059	468.40	.1249			.62	-1.2023	468.40	.1286
-33.58	1.0979	478.56	.1676			1.25	-1.3512	478.56	.1713
-27.09	1.0951	488.72	.2320			1.87	-1.4102	488.72	.2401
-20.60	1.0992					2.50	-1.4325		
-18.54	1.1037					3.13	-1.4267		
-14.42	1.1243					3.75	-1.4191		
-8.24	1.1806					4.38	-1.3976		
-4.12	1.2144					5.00	-1.3836		
-2.68	1.1999					6.25	-1.3354		
-1.65	1.1376					7.50	-1.3205		
-.72	.9598					8.75	-1.2977		
-.35	.8150					10.00	-1.2781		
.00	-.0380					15.00	-1.2087		
.31	-1.0277					17.50	-1.1791		
.62	-1.2532					20.00	-1.1418		
1.25	-1.3680					30.00	-1.0257		
1.87	-1.4076					50.00	-.8677		
2.50	-1.4376					60.00	-.8360		
3.13	-1.4337					70.00	-.8098		
3.75	-1.4275					80.00	-.8060		
4.38	-1.4042					90.00	-.7733		
5.00	-1.3858					100.00	-.7505		
6.25	-1.3462					110.00	-.5816		
7.50	-1.3179					194.07	.0500		
8.75	-1.2888								
10.00	-1.2830								
12.50	-1.2376								
15.00	-1.1897								
17.50	-1.1719								
20.00	-1.1415								
30.00	-.9961								
40.00	-.9433								
50.00	-.8740								
60.00	-.8462								
70.00	-.8102								
80.00	-.7891								
90.00	-.7871								
100.00	-.7438								
110.00	-.6506								
194.07	.0374								
224.55	.0244								

$M = 0.893$; mfr $= 0.398$; $\alpha = 0°$

PHI,DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1325	275.35	.0068	224.55	.0099	-150.43	1.1316	275.35	.0186
-137.44	1.1337	305.83	.0078			-85.51	1.1042	305.83	.0093
-124.46	1.1294	336.31	.0115			-20.60	1.0091	336.31	.0211
-104.99	1.1208	366.80	.0249			-8.24	1.1175	366.80	.0274
-85.51	1.1032	407.44	.0584			-1.65	1.1940	407.44	.0584
-72.53	1.0861	437.92	.0973			.00	.1427	437.92	.1008
-59.55	1.0666	458.24	.1520			.31	-.7928	458.24	.1545
-46.57	1.0429	468.40	.1902			.62	-1.0623	468.40	.1971
-33.58	1.0221	478.56	.2397			1.25	-1.2403	478.56	.2459
-27.09	1.0115	488.72	.3093			1.87	-1.3014	488.72	.3177
-20.60	1.0088					2.50	-1.3146		
-18.54	1.0156					3.13	-1.3039		
-14.42	1.0393					3.75	-1.3046		
-8.24	1.1213					4.38	-1.2838		
-4.12	1.1996					5.00	-1.2527		
-2.68	1.2118					6.25	-1.2178		
-1.65	1.1902					7.50	-1.2159		
-.72	1.0647					8.75	-1.1818		
-.35	.9351					10.00	-1.1577		
.00	.1157					15.00	-1.0885		
.31	-.8560					17.50	-1.0675		
.62	-1.1041					20.00	-1.0396		
1.25	-1.2407					30.00	-.9305		
1.87	-1.2913					50.00	-.8596		
2.50	-1.3148					60.00	-.7952		
3.13	-1.3145					70.00	-.7732		
3.75	-1.2986					80.00	-.7419		
4.38	-1.2631					90.00	-.7391		
5.00	-1.2616					100.00	-.6724		
6.25	-1.2233					110.00	-.5670		
7.50	-1.1991					194.07	.0332		
8.75	-1.1862								
10.00	-1.1783								
12.50	-1.1286								
15.00	-1.1050								
17.50	-1.0805								
20.00	-1.0432								
30.00	-.9285								
40.00	-.8748								
50.00	-.8342								
60.00	-.8012								
70.00	-.7663								
80.00	-.7451								
90.00	-.7276								
100.00	-.7046								
110.00	-.2151								
194.07	.0217								
224.55	.0106								

Table V. Continued

(k) Continued

$M = 0.890$; mfr $= 0.443$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1112	275.35	.0036	224.55	-.0037	-150.43	1.1081	275.35	.0136
-137.44	1.1100	305.83	.0079			-85.51	1.0762	305.83	.0083
-124.46	1.1076	336.31	.0151			-20.60	.9412	336.31	.0223
-104.99	1.0935	366.80	.0316			-8.24	1.0682	366.80	.0326
-85.51	1.0712	407.44	.0697			-1.65	1.2086	407.44	.0694
-72.53	1.0517	437.92	.1183			.00	.2363	437.92	.1164
-59.55	1.0260	458.24	.1782			.31	-.6780	458.24	.1763
-46.57	.9939	468.40	.2172			.62	-.9937	468.40	.2206
-33.58	.9655	478.56	.2680			1.25	-1.1734	478.56	.2730
-27.09	.9564	488.72	.3356			1.87	-1.2419	488.72	.3472
-20.60	.9491					2.50	-1.2556		
-18.54	.9519					3.13	-1.2333		
-14.42	.9712					3.75	-1.2272		
-8.24	1.0748					4.38	-1.2066		
-4.12	1.1799					5.00	-1.2037		
-2.68	1.2084					6.25	-1.1605		
-1.65	1.2019					7.50	-1.1392		
-.72	1.1012					8.75	-1.1191		
-.35	1.0048					10.00	-1.0771		
.00	.1983					15.00	-1.0384		
.31	-.7801					17.50	-1.0139		
.62	-1.0090					20.00	-.9821		
1.25	-1.1876					30.00	-.9013		
1.87	-1.2358					50.00	-.8316		
2.50	-1.2413					60.00	-.7674		
3.13	-1.2604					70.00	-.7491		
3.75	-1.2266					80.00	-.7090		
4.38	-1.2254					90.00	-.6925		
5.00	-1.1980					100.00	-.4732		
6.25	-1.1556					110.00	-.1383		
7.50	-1.1464					194.07	.0121		
8.75	-1.1443								
10.00	-1.1067								
12.50	-1.0821								
15.00	-1.0572								
17.50	-1.0179								
20.00	-1.0097								
30.00	-.8950								
40.00	-.8551								
50.00	-.8053								
60.00	-.7813								
70.00	-.7477								
80.00	-.7287								
90.00	-.7042								
100.00	-.3728								
110.00	-.1658								
194.07	.0075								
224.55	.0010								

$M = 0.891$; mfr $= 0.485$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0876	275.35	.0118	224.55	-.0055	-150.43	1.0882	275.35	.0177
-137.44	1.0903	305.83	.0193			-85.51	1.0435	305.83	.0171
-124.46	1.0830	336.31	.0301			-20.60	.8688	336.31	.0273
-104.99	1.0693	366.80	.0491			-8.24	1.0082	366.80	.0407
-85.51	1.0418	407.44	.0927			-1.65	1.2122	407.44	.0840
-72.53	1.0153	437.92	.1427			.00	.3596	437.92	.1371
-59.55	.9833	458.24	.2057			.31	-.5846	458.24	.2016
-46.57	.9452	468.40	.2501			.62	-.8839	468.40	.2498
-33.58	.9006	478.56	.3024			1.25	-1.0867	478.56	.3058
-27.09	.8929	488.72	.3708			1.87	-1.1693	488.72	.3799
-20.60	.8764					2.50	-1.1683		
-18.54	.8815					3.13	-1.1621		
-14.42	.9045					3.75	-1.1728		
-8.24	1.0209					4.38	-1.1341		
-4.12	1.1436					5.00	-1.1359		
-2.68	1.1990					6.25	-1.0813		
-1.65	1.2124					7.50	-1.0636		
-.72	1.1414					8.75	-1.0317		
-.35	1.0650					10.00	-1.0271		
.00	.2866					15.00	-.9833		
.31	-.6421					17.50	-.9557		
.62	-.9285					20.00	-.9336		
1.25	-1.0836					30.00	-.8375		
1.87	-1.1766					50.00	-.7728		
2.50	-1.1907					60.00	-.7290		
3.13	-1.1873					70.00	-.7046		
3.75	-1.1668					80.00	-.6863		
4.38	-1.1527					90.00	-.6760		
5.00	-1.1410					100.00	-.3431		
6.25	-1.1076					110.00	-.1106		
7.50	-1.0781					194.07	.0038		
8.75	-1.0674								
10.00	-1.0410								
12.50	-1.0162								
15.00	-.9867								
17.50	-.9754								
20.00	-.9310								
30.00	-.8531								
40.00	-.7980								
50.00	-.7650								
60.00	-.7240								
70.00	-.7063								
80.00	-.6819								
90.00	-.6908								
100.00	-.3268								
110.00	-.1257								
194.07	-.0088								
224.55	-.0030								

Table V. Continued

(k) Continued

$M = 0.890$; mfr $= 0.488$; $\alpha = 1.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0861	275.35	.0178	224.55	-.0089	-150.43	1.0851	275.35	.0025
-137.44	1.0883	305.83	.0194			-85.51	1.0406	305.83	.0091
-124.46	1.0837	336.31	.0275			-20.60	.8483	336.31	.0243
-104.99	1.0684	366.80	.0465			-8.24	.9869	366.80	.0396
-85.51	1.0409	407.44	.0889			-1.65	1.2116	407.44	.0801
-72.53	1.0189	437.92	.1372			.00	.4018	437.92	.1372
-59.55	.9847	458.24	.1999			.31	-.5053	458.24	.2030
-46.57	.9465	468.40	.2407			.62	-.8333	468.40	.2532
-33.58	.9100	478.56	.2913			1.25	-1.0250	478.56	.3109
-27.09	.8999	488.72	.3549			1.87	-1.1251	488.72	.3885
-20.60	.8882					2.50	-1.1459		
-18.54	.8944					3.13	-1.1103		
-14.42	.9226					3.75	-1.1193		
-8.24	1.0361					4.38	-1.0895		
-4.12	1.1537					5.00	-1.0657		
-2.68	1.2035					6.25	-1.0347		
-1.65	1.2100					7.50	-1.0060		
-.72	1.1273					8.75	-1.0034		
-.35	1.0219					10.00	-.9746		
.00	.2398					15.00	-.9173		
.31	-.7280					17.50	-.8948		
.62	-.9799					20.00	-.8582		
1.25	-1.1410					30.00	-.7913		
1.87	-1.2212					50.00	-.7136		
2.50	-1.2264					60.00	-.6703		
3.13	-1.2393					70.00	-.6541		
3.75	-1.2116					80.00	-.6417		
4.38	-1.1929					90.00	-.6300		
5.00	-1.1766					100.00	-.3110		
6.25	-1.1471					110.00	-.0572		
7.50	-1.1367					194.07	-.0068		
8.75	-1.1216								
10.00	-1.1115								
12.50	-1.0758								
15.00	-1.0538								
17.50	-1.0101								
20.00	-.9896								
30.00	-.9258								
40.00	-.8643								
50.00	-.8235								
60.00	-.7919								
70.00	-.7619								
80.00	-.7339								
90.00	-.6484								
100.00	-.2232								
110.00	-.1358								
194.07	.0022								
224.55	-.0010								

$M = 0.891$; mfr $= 0.488$; $\alpha = 2.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0872	275.35	.0314	224.55	-.0080	-150.43	1.0868	275.35	-.0103
-137.44	1.0896	305.83	.0252			-85.51	1.0393	305.83	.0056
-124.46	1.0866	336.31	.0318			-20.60	.8347	336.31	.0240
-104.99	1.0701	366.80	.0510			-8.24	.9628	366.80	.0392
-85.51	1.0448	407.44	.0927			-1.65	1.2111	407.44	.0815
-72.53	1.0191	437.92	.1397			.00	.4509	437.92	.1351
-59.55	.9871	458.24	.1973			.31	-.4303	458.24	.2054
-46.57	.9517	468.40	.2359			.62	-.7299	468.40	.2574
-33.58	.9221	478.56	.2811			1.25	-.9673	478.56	.3178
-27.09	.9133	488.72	.3396			1.87	-1.0513	488.72	.4003
-20.60	.9023					2.50	-1.0786		
-18.54	.9040					3.13	-1.0750		
-14.42	.9442					3.75	-1.0603		
-8.24	1.0487					4.38	-1.0207		
-4.12	1.1730					5.00	-.9917		
-2.68	1.2101					6.25	-.9595		
-1.65	1.2065					7.50	-.9390		
-.72	1.1146					8.75	-.9157		
-.35	1.0055					10.00	-.9032		
.00	.2064					15.00	-.8460		
.31	-.7582					17.50	-.8101		
.62	-1.0462					20.00	-.7743		
1.25	-1.1873					30.00	-.6858		
1.87	-1.2618					50.00	-.6522		
2.50	-1.2769					60.00	-.5999		
3.13	-1.2726					70.00	-.5861		
3.75	-1.2551					80.00	-.5782		
4.38	-1.2486					90.00	-.5878		
5.00	-1.2336					100.00	-.3931		
6.25	-1.2103					110.00	-.0795		
7.50	-1.1833					194.07	-.0120		
8.75	-1.1741								
10.00	-1.1680								
12.50	-1.1365								
15.00	-1.0991								
17.50	-1.0683								
20.00	-1.0599								
30.00	-.9655								
40.00	-.8981								
50.00	-.8717								
60.00	-.8521								
70.00	-.8132								
80.00	-.7805								
90.00	-.4156								
100.00	-.2754								
110.00	-.2057								
194.07	.0139								
224.55	.0092								

Table V. Continued

(k) Continued

$M = 0.890$; mfr $= 0.485$; $\alpha = 3.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0869	275.35	.0478	224.55	-.0193	-150.43	1.0821	275.35	-.0205
-137.44	1.0866	305.83	.0365			-85.51	1.0391	305.83	.0038
-124.46	1.0854	336.31	.0406			-20.60	.8139	336.31	.0222
-104.99	1.0704	366.80	.0583			-8.24	.9359	366.80	.0344
-85.51	1.0444	407.44	.0985			-1.65	1.2073	407.44	.0795
-72.53	1.0200	437.92	.1428			.00	.5113	437.92	.1341
-59.55	.9901	458.24	.1954			.31	-.3380	458.24	.2029
-46.57	.9562	468.40	.2269			.62	-.6532	468.40	.2568
-33.58	.9262	478.56	.2624			1.25	-.9004	478.56	.3208
-27.09	.9187	488.72	.3155			1.87	-.9793	488.72	.4033
-20.60	.9194					2.50	-1.0067		
-18.54	.9191					3.13	-1.0139		
-14.42	.9597					3.75	-.9984		
-8.24	1.0670					4.38	-.9627		
-4.12	1.1823					5.00	-.9622		
-2.68	1.2101					6.25	-.9321		
-1.65	1.1989					7.50	-.8822		
-.72	1.0889					8.75	-.8756		
-.35	.9821					10.00	-.8463		
.00	.1448					15.00	-.7659		
.31	-.8238					17.50	-.7369		
.62	-1.0916					20.00	-.6931		
1.25	-1.2409					30.00	-.6371		
1.87	-1.2946					50.00	-.5971		
2.50	-1.3216					60.00	-.5170		
3.13	-1.3275					70.00	-.5301		
3.75	-1.2992					80.00	-.5260		
4.38	-1.3094					90.00	-.5384		
5.00	-1.2694					100.00	-.4922		
6.25	-1.2599					110.00	-.0753		
7.50	-1.2440					194.07	-.0197		
8.75	-1.2341								
10.00	-1.2089								
12.50	-1.1970								
15.00	-1.1518								
17.50	-1.1383								
20.00	-1.1017								
30.00	-1.0109								
40.00	-.9652								
50.00	-.9307								
60.00	-.8882								
70.00	-.8570								
80.00	-.5185								
90.00	-.3776								
100.00	-.3198								
110.00	-.2781								
194.07	.0433								
224.55	.0178								

$M = 0.893$; mfr $= 0.544$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0527	275.35	.0092	224.55	-.0091	-150.43	1.0527	275.35	.0219
-137.44	1.0557	305.83	.0213			-85.51	.9961	305.83	.0213
-124.46	1.0524	336.31	.0337			-20.60	.7547	336.31	.0368
-104.99	1.0317	366.80	.0561			-8.24	.8957	366.80	.0554
-85.51	.9964	407.44	.1054			-1.65	1.2083	407.44	.1017
-72.53	.9638	437.92	.1639			.00	.4932	437.92	.1611
-59.55	.9199	458.24	.2291			.31	-.4055	458.24	.2313
-46.57	.8690	468.40	.2748			.62	-.7311	468.40	.2810
-33.58	.8084	478.56	.3307			1.25	-.9611	478.56	.3385
-27.09	.7901	488.72	.3987			1.87	-1.0476	488.72	.4118
-20.60	.7568					2.50	-1.0687		
-18.54	.7564					3.13	-1.0810		
-14.42	.7994					3.75	-1.0728		
-8.24	.9159					4.38	-1.0419		
-4.12	1.0899					5.00	-1.0299		
-2.68	1.1623					6.25	-.9988		
-1.65	1.2087					7.50	-.9666		
-.72	1.1882					8.75	-.9543		
-.35	1.1271					10.00	-.9163		
.00	.4360					15.00	-.8826		
.31	-.4467					17.50	-.8812		
.62	-.7782					20.00	-.8337		
1.25	-.9589					30.00	-.7656		
1.87	-1.0443					50.00	-.7048		
2.50	-1.0749					60.00	-.6675		
3.13	-1.0768					70.00	-.6565		
3.75	-1.0725					80.00	-.6318		
4.38	-1.0327					90.00	-.6018		
5.00	-1.0232					100.00	-.1502		
6.25	-.9883					110.00	-.0493		
7.50	-.9693					194.07	-.0059		
8.75	-.9926								
10.00	-.9659								
12.50	-.9534								
15.00	-.9030								
17.50	-.8704								
20.00	-.8653								
30.00	-.7743								
40.00	-.7247								
50.00	-.7042								
60.00	-.6704								
70.00	-.6452								
80.00	-.6277								
90.00	-.6056								
100.00	-.1483								
110.00	-.0327								
194.07	-.0123								
224.55	-.0055								

Table V. Continued

(k) Continued

$M = 0.891$; mfr $= 0.611$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0075	275.35	.0146	224.55	-.0054	-150.43	1.0065	275.35	.0301
-137.44	1.0090	305.83	.0273			-85.51	.9324	305.83	.0301
-124.46	1.0020	336.31	.0429			-20.60	.5810	336.31	.0504
-104.99	.9766	366.80	.0687			-8.24	.7737	366.80	.0709
-85.51	.9311	407.44	.1211			-1.65	1.1776	407.44	.1217
-72.53	.8884	437.92	.1824			.00	.6090	437.92	.1845
-59.55	.8286	458.24	.2542			.31	-.1943	458.24	.2567
-46.57	.7570	468.40	.3004			.62	-.5788	468.40	.3075
-33.58	.6730	478.56	.3567			1.25	-.7965	478.56	.3663
-27.09	.6425	488.72	.4220			1.87	-.9143	488.72	.4357
-20.60	.5889					2.50	-.9620		
-18.54	.5810					3.13	-.9531		
-14.42	.6212					3.75	-.9489		
-8.24	.7757					4.38	-.9186		
-4.12	.9950					5.00	-.9051		
-2.68	1.0934					6.25	-.8431		
-1.65	1.1838					7.50	-.8616		
-.72	1.2130					8.75	-.8578		
-.35	1.1784					10.00	-.8196		
.00	.5708					15.00	-.7789		
.31	-.2297					17.50	-.7245		
.62	-.5967					20.00	-.7431		
1.25	-.7991					30.00	-.6682		
1.87	-.8991					50.00	-.6600		
2.50	-.9144					60.00	-.6031		
3.13	-.9503					70.00	-.6176		
3.75	-.9316					80.00	-.5666		
4.38	-.9307					90.00	-.2232		
5.00	-.9157					100.00	-.0651		
6.25	-.8733					110.00	-.0198		
7.50	-.8635					194.07	-.0143		
8.75	-.8690								
10.00	-.8310								
12.50	-.8191								
15.00	-.7719								
17.50	-.7408								
20.00	-.7262								
30.00	-.6733								
40.00	-.6442								
50.00	-.6230								
60.00	-.6040								
70.00	-.5941								
80.00	-.5731								
90.00	-.3352								
100.00	-.0654								
110.00	-.0174								
194.07	-.0215								
224.55	-.0071								

$M = 0.890$; mfr $= 0.681$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9532	275.35	.0202	224.55	-.0048	-150.43	.9511	275.35	.0323
-137.44	.9557	305.83	.0364			-85.51	.8535	305.83	.0370
-124.46	.9471	336.31	.0532			-20.60	.3426	336.31	.0578
-104.99	.9135	366.80	.0825			-8.24	.5685	366.80	.0781
-85.51	.8527	407.44	.1376			-1.65	1.0982	407.44	.1348
-72.53	.7935	437.92	.2002			.00	.7517	437.92	.2024
-59.55	.7165	458.24	.2725			.31	-.0090	458.24	.2760
-46.57	.6121	468.40	.3217			.62	-.3080	468.40	.3270
-33.58	.4939	478.56	.3759			1.25	-.6389	478.56	.3862
-27.09	.4317	488.72	.4432			1.87	-.7665	488.72	.4516
-20.60	.3522					2.50	-.7814		
-18.54	.3409					3.13	-.8086		
-14.42	.3656					3.75	-.7718		
-8.24	.5863					4.38	-.7640		
-4.12	.8632					5.00	-.7618		
-2.68	.9995					6.25	-.7075		
-1.65	1.1200					7.50	-.7007		
-.72	1.2119					8.75	-.6240		
-.35	1.2101					10.00	-.6500		
.00	.7138					15.00	-.6148		
.31	-.0227					17.50	-.5938		
.62	-.3416					20.00	-.5607		
1.25	-.6272					30.00	-.5496		
1.87	-.7361					50.00	-.5596		
2.50	-.7948					60.00	-.5227		
3.13	-.8043					70.00	-.5169		
3.75	-.7794					80.00	-.4965		
4.38	-.7918					90.00	-.1701		
5.00	-.7456					100.00	-.0764		
6.25	-.7420					110.00	-.0467		
7.50	-.6919					194.07	-.0170		
8.75	-.7217								
10.00	-.6520								
12.50	-.6619								
15.00	-.5981								
17.50	-.6204								
20.00	-.6064								
30.00	-.5792								
40.00	-.5322								
50.00	-.5265								
60.00	-.5160								
70.00	-.5044								
80.00	-.4988								
90.00	-.2542								
100.00	-.0753								
110.00	-.0494								
194.07	-.0232								
224.55	-.0023								

Table V. Continued

(k) Continued

$M = 0.891$; mfr $= 0.680$; $\alpha = 1.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9543	275.35	.0339	224.55	-.0042	-150.43	.9516	275.35	.0189
-137.44	.9577	305.83	.0416			-85.51	.8520	305.83	.0320
-124.46	.9467	336.31	.0578			-20.60	.3108	336.31	.0535
-104.99	.9124	366.80	.0840			-8.24	.5190	366.80	.0746
-85.51	.8529	407.44	.1388			-1.65	1.0842	407.44	.1310
-72.53	.7977	437.92	.2020			.00	.8108	437.92	.1995
-59.55	.7223	458.24	.2724			.31	.0748	458.24	.2742
-46.57	.6216	468.40	.3185			.62	-.2192	468.40	.3256
-33.58	.5071	478.56	.3717			1.25	-.5315	478.56	.3866
-27.09	.4564	488.72	.4353			1.87	-.6745	488.72	.4561
-20.60	.3785					2.50	-.7036		
-18.54	.3644					3.13	-.7160		
-14.42	.4455					3.75	-.6939		
-8.24	.6211					4.38	-.6645		
-4.12	.8760					5.00	-.6359		
-2.68	1.0180					6.25	-.6055		
-1.65	1.1410					7.50	-.5560		
-.72	1.2142					8.75	-.5570		
-.35	1.2030					10.00	-.4112		
.00	.6701					15.00	-.4977		
.31	-.1000					17.50	-.4670		
.62	-.5017					20.00	-.4605		
1.25	-.6883					30.00	-.4719		
1.87	-.8054					50.00	-.5077		
2.50	-.8383					60.00	-.4753		
3.13	-.8441					70.00	-.4901		
3.75	-.8481					80.00	-.4681		
4.38	-.8592					90.00	-.3315		
5.00	-.8147					100.00	-.0860		
6.25	-.7895					110.00	-.0457		
7.50	-.7778					194.07	-.0125		
8.75	-.7515								
10.00	-.7527								
12.50	-.7591								
15.00	-.6846								
17.50	-.6935								
20.00	-.7210								
30.00	-.6610								
40.00	-.6077								
50.00	-.5787								
60.00	-.5918								
70.00	-.5715								
80.00	-.4937								
90.00	-.1163								
100.00	-.0542								
110.00	-.0315								
194.07	-.0175								
224.55	-.0089								

$M = 0.892$; mfr $= 0.681$; $\alpha = 2.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9508	275.35	.0493	224.55	-.0023	-150.43	.9525	275.35	.0055
-137.44	.9584	305.83	.0477			-85.51	.8483	305.83	.0272
-124.46	.9468	336.31	.0617			-20.60	.2675	336.31	.0514
-104.99	.9145	366.80	.0875			-8.24	.4674	366.80	.0732
-85.51	.8554	407.44	.1418			-1.65	1.0438	407.44	.1322
-72.53	.8000	437.92	.2059			.00	.8555	437.92	.1956
-59.55	.7254	458.24	.2742			.31	.1624	458.24	.2730
-46.57	.6267	468.40	.3164			.62	-.0740	468.40	.3276
-33.58	.5165	478.56	.3674			1.25	-.4324	478.56	.3885
-27.09	.4657	488.72	.4283			1.87	-.5387	488.72	.4634
-20.60	.4136					2.50	-.6067		
-18.54	.4016					3.13	-.5369		
-14.42	.4513					3.75	-.5177		
-8.24	.6598					4.38	-.4971		
-4.12	.9289					5.00	-.4375		
-2.68	1.0619					6.25	-.3510		
-1.65	1.1642					7.50	-.3546		
-.72	1.2152					8.75	-.3592		
-.35	1.1933					10.00	-.3831		
.00	.6218					15.00	-.3697		
.31	-.1925					17.50	-.3817		
.62	-.5241					20.00	-.4104		
1.25	-.7574					30.00	-.4196		
1.87	-.8631					50.00	-.4767		
2.50	-.9408					60.00	-.4327		
3.13	-.9234					70.00	-.4492		
3.75	-.9234					80.00	-.4650		
4.38	-.9271					90.00	-.4145		
5.00	-.8961					100.00	-.0965		
6.25	-.8958					110.00	-.0515		
7.50	-.8833					194.07	-.0109		
8.75	-.8735								
10.00	-.8134								
12.50	-.8487								
15.00	-.8147								
17.50	-.7794								
20.00	-.7537								
30.00	-.7283								
40.00	-.6855								
50.00	-.6855								
60.00	-.6406								
70.00	-.6174								
80.00	-.5075								
90.00	-.1475								
100.00	-.0450								
110.00	-.0091								
194.07	-.0105								
224.55	-.0023								

Table V. Continued

(k) Concluded

$M = 0.890$; mfr = 0.682; $\alpha = 3.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9525	275.35	.0614	224.55	-.0114	-150.43	.9489	275.35	-.0092
-137.44	.9565	305.83	.0521			-85.51	.8489	305.83	.0219
-124.46	.9461	336.31	.0611			-20.60	.2452	336.31	.0446
-104.99	.9143	366.80	.0857			-8.24	.4114	366.80	.0686
-85.51	.8563	407.44	.1402			-1.65	1.0021	407.44	.1234
-72.53	.7989	437.92	.2028			.00	.9128	437.92	.1938
-59.55	.7248	458.24	.2698			.31	.2473	458.24	.2698
-46.57	.6334	468.40	.3118			.62	.0227	468.40	.3246
-33.58	.5312	478.56	.3597			1.25	-.3043	478.56	.3884
-27.09	.4909	488.72	.4190			1.87	-.4171	488.72	.4660
-20.60	.4331					2.50	-.3705		
-18.54	.4341					3.13	-.3732		
-14.42	.4820					3.75	-.2943		
-8.24	.6853					4.38	-.2833		
-4.12	.9586					5.00	-.2509		
-2.68	1.0743					6.25	-.2488		
-1.65	1.1728					7.50	-.3043		
-.72	1.2117					8.75	-.2955		
-.35	1.1814					10.00	-.3178		
.00	.5791					15.00	-.3305		
.31	-.2612					17.50	-.3312		
.62	-.6077					20.00	-.3329		
1.25	-.8548					30.00	-.3543		
1.87	-.9400					50.00	-.4254		
2.50	-.9989					60.00	-.4065		
3.13	-.9965					70.00	-.4089		
3.75	-.9858					80.00	-.4196		
4.38	-.9710					90.00	-.3143		
5.00	-.9698					100.00	-.1019		
6.25	-.9459					110.00	-.0616		
7.50	-.9437					194.07	-.0103		
8.75	-.9492								
10.00	-.9127								
12.50	-.9020								
15.00	-.8646								
17.50	-.8667								
20.00	-.8336								
30.00	-.8148								
40.00	-.7671								
50.00	-.7347								
60.00	-.7067								
70.00	-.6902								
80.00	-.4578								
90.00	-.1207								
100.00	-.0459								
110.00	-.0012								
194.07	-.0096								
224.55	.0040								

$M = 0.893$; mfr = 0.744; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.8917	275.35	.0295	224.55	-.0050	-150.43	.8887	275.35	.0329
-137.44	.8932	305.83	.0447			-85.51	.7653	305.83	.0425
-124.46	.8804	336.31	.0646			-20.60	.0165	336.31	.0590
-104.99	.8375	366.80	.0900			-8.24	.3342	366.80	.0813
-85.51	.7629	407.44	.1500			-1.65	1.0093	407.44	.1416
-72.53	.6878	437.92	.2162			.00	.8795	437.92	.2121
-59.55	.5827	458.24	.2870			.31	.1906	458.24	.2870
-46.57	.4439	468.40	.3326			.62	-.0811	468.40	.3391
-33.58	.2594	478.56	.3872			1.25	-.4190	478.56	.3947
-27.09	.1652	488.72	.4500			1.87	-.5460	488.72	.4609
-20.60	-.0004					2.50	-.6019		
-18.54	-.0100					3.13	-.5887		
-14.42	.0443					3.75	-.5998		
-8.24	.3071					4.38	-.5011		
-4.12	.6799					5.00	-.5225		
-2.68	.8809					6.25	-.5090		
-1.65	1.0240					7.50	-.4221		
-.72	1.1862					8.75	-.4090		
-.35	1.2124					10.00	-.4169		
.00	.8807					15.00	-.4396		
.31	.1513					17.50	-.4156		
.62	-.1560					20.00	-.4561		
1.25	-.4556					30.00	-.4582		
1.87	-.5676					50.00	-.5074		
2.50	-.6204					60.00	-.4908		
3.13	-.6393					70.00	-.4613		
3.75	-.5508					80.00	-.4853		
4.38	-.5649					90.00	-.1411		
5.00	-.5113					100.00	-.0764		
6.25	-.5557					110.00	-.0540		
7.50	-.4361					194.07	-.0029		
8.75	-.4504								
10.00	-.4287								
12.50	-.4321								
15.00	-.4323								
17.50	-.4455								
20.00	-.4649								
30.00	-.4567								
40.00	-.4789								
50.00	-.4801								
60.00	-.4954								
70.00	-.4981								
80.00	-.4753								
90.00	-.2255								
100.00	-.0742								
110.00	-.0433								
194.07	-.0176								
224.55	-.0011								

Table V. Continued

(l) $M = 0.92$

$M = 0.917$; mfr $= 0.273$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1875	275.35	.0641	224.55	.0764	-150.43	1.1926	275.35	.0698
-137.44	1.1914	305.83	.0471			-85.51	1.1769	305.83	.0468
-124.46	1.1899	336.31	.0341			-20.60	1.1512	336.31	.0372
-104.99	1.1842	366.80	.0320			-8.24	1.2113	366.80	.0287
-85.51	1.1768	407.44	.0408			-1.65	1.1339	407.44	.0359
-72.53	1.1703	437.92	.0583			.00	-.0351	437.92	.0568
-59.55	1.1602	458.24	.0922			.31	-.9657	458.24	.0910
-46.57	1.1510	468.40	.1191			.62	-1.1831	468.40	.1231
-33.58	1.1466	478.56	.1551			1.25	-1.3182	478.56	.1597
-27.09	1.1462	488.72	.2166			1.87	-1.3778	488.72	.2223
-20.60	1.1509					2.50	-1.3935		
-18.54	1.1569					3.13	-1.3935		
-14.42	1.1743					3.75	-1.3855		
-8.24	1.2130					4.38	-1.3523		
-4.12	1.2229					5.00	-1.3577		
-2.68	1.1941					6.25	-1.3146		
-1.65	1.1118					7.50	-1.3024		
-.72	.9174					8.75	-1.2559		
-.35	.7555					10.00	-1.2498		
.00	-.0734					15.00	-1.1862		
.31	-1.0369					17.50	-1.1530		
.62	-1.2258					20.00	-1.1185		
1.25	-1.3335					30.00	-.9912		
1.87	-1.3735					50.00	-.8652		
2.50	-1.4024					60.00	-.8210		
3.13	-1.4009					70.00	-.7794		
3.75	-1.3943					80.00	-.7566		
4.38	-1.3738					90.00	-.7499		
5.00	-1.3568					100.00	-.7221		
6.25	-1.3228					110.00	-.6739		
7.50	-1.3010					194.07	.0166		
8.75	-1.2784								
10.00	-1.2619								
12.50	-1.2157								
15.00	-1.1800								
17.50	-1.1573								
20.00	-1.1223								
30.00	-.9888								
40.00	-.9175								
50.00	-.8654								
60.00	-.8287								
70.00	-.7754								
80.00	-.7540								
90.00	-.7514								
100.00	-.7250								
110.00	-.6796								
194.07	.0365								
224.55	.0306								

$M = 0.917$; mfr $= 0.272$; $\alpha = 2.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1887	275.35	.0900	224.55	.0692	-150.43	1.1899	275.35	.0386
-137.44	1.1899	305.83	.0628			-85.51	1.1762	305.83	.0313
-124.46	1.1893	336.31	.0453			-20.60	1.1365	336.31	.0283
-104.99	1.1831	366.80	.0380			-8.24	1.1979	366.80	.0235
-85.51	1.1771	407.44	.0434			-1.65	1.1619	407.44	.0332
-72.53	1.1721	437.92	.0574			.00	.0500	437.92	.0564
-59.55	1.1650	458.24	.0870			.31	-.8608	458.24	.0967
-46.57	1.1555	468.40	.1094			.62	-1.1051	468.40	.1330
-33.58	1.1499	478.56	.1400			1.25	-1.2606	478.56	.1754
-27.09	1.1555	488.72	.1896			1.87	-1.3096	488.72	.2465
-20.60	1.1649					2.50	-1.3259		
-18.54	1.1689					3.13	-1.3162		
-14.42	1.1869					3.75	-1.3219		
-8.24	1.2193					4.38	-1.2830		
-4.12	1.2158					5.00	-1.2790		
-2.68	1.1720					6.25	-1.2289		
-1.65	1.0705					7.50	-1.2062		
-.72	.8466					8.75	-1.1716		
-.35	.6809					10.00	-1.1624		
.00	-.1538					15.00	-1.0813		
.31	-1.1040					17.50	-1.0501		
.62	-1.2883					20.00	-1.0022		
1.25	-1.3932					30.00	-.8786		
1.87	-1.4254					50.00	-.7891		
2.50	-1.4617					60.00	-.7402		
3.13	-1.4588					70.00	-.7006		
3.75	-1.4498					80.00	-.6966		
4.38	-1.4385					90.00	-.6765		
5.00	-1.4191					100.00	-.6480		
6.25	-1.3983					110.00	-.6156		
7.50	-1.3786					194.07	.0210		
8.75	-1.3625								
10.00	-1.3440								
12.50	-1.3026								
15.00	-1.2816								
17.50	-1.2488								
20.00	-1.2128								
30.00	-1.1046								
40.00	-1.0167								
50.00	-.9650								
60.00	-.9142								
70.00	-.8786								
80.00	-.8367								
90.00	-.8227								
100.00	-.7850								
110.00	-.7351								
194.07	.0207								
224.55	.0934								

Table V. Continued

(l) Continued

$M = 0.917$; mfr $= 0.314$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1747	275.35	.0587	224.55	.0756	-150.43	1.1752	275.35	.0659
-137.44	1.1753	305.83	.0457			-85.51	1.1588	305.83	.0457
-124.46	1.1753	336.31	.0366			-20.60	1.1137	336.31	.0402
-104.99	1.1687	366.80	.0390			-8.24	1.1925	366.80	.0360
-85.51	1.1584	407.44	.0566			-1.65	1.1605	407.44	.0529
-72.53	1.1498	437.92	.0853			.00	.0515	437.92	.0832
-59.55	1.1340	458.24	.1283			.31	-.8859	458.24	.1286
-46.57	1.1237	468.40	.1609			.62	-1.1080	468.40	.1649
-33.58	1.1106	478.56	.2025			1.25	-1.2723	478.56	.2106
-27.09	1.1101	488.72	.2663			1.87	-1.3324	488.72	.2802
-20.60	1.1157					2.50	-1.3454		
-18.54	1.1191					3.13	-1.3447		
-14.42	1.1394					3.75	-1.3353		
-8.24	1.1932					4.38	-1.3164		
-4.12	1.2259					5.00	-1.3018		
-2.68	1.2123					6.25	-1.2643		
-1.65	1.1569					7.50	-1.2459		
-.72	.9757					8.75	-1.2213		
-.35	.8328					10.00	-1.1996		
.00	.0058					15.00	-1.1248		
.31	-.9358					17.50	-1.1044		
.62	-1.1693					20.00	-1.0572		
1.25	-1.2743					30.00	-.9784		
1.87	-1.3265					50.00	-.8407		
2.50	-1.3590					60.00	-.7830		
3.13	-1.3513					70.00	-.7576		
3.75	-1.3382					80.00	-.7448		
4.38	-1.3176					90.00	-.7405		
5.00	-1.2964					100.00	-.6926		
6.25	-1.2898					110.00	-.6762		
7.50	-1.2400					194.07	.0568		
8.75	-1.2272								
10.00	-1.1973								
12.50	-1.1836								
15.00	-1.1408								
17.50	-1.1043								
20.00	-1.0734								
30.00	-.9605								
40.00	-.8772								
50.00	-.8538								
60.00	-.8042								
70.00	-.7639								
80.00	-.7472								
90.00	-.7389								
100.00	-.7203								
110.00	-.6623								
194.07	.0543								
224.55	.0791								

$M = 0.918$; mfr $= 0.395$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1444	275.35	.0502	224.55	.0644	-150.43	1.1445	275.35	.0586
-137.44	1.1452	305.83	.0435			-85.51	1.1175	305.83	.0423
-124.46	1.1435	336.31	.0405			-20.60	1.0250	336.31	.0441
-104.99	1.1343	366.80	.0520			-8.24	1.1345	366.80	.0475
-85.51	1.1180	407.44	.0840			-1.65	1.2075	407.44	.0780
-72.53	1.0999	437.92	.1260			.00	.2071	437.92	.1233
-59.55	1.0813	458.24	.1816			.31	-.7407	458.24	.1816
-46.57	1.0576	468.40	.2210			.62	-.9884	468.40	.2270
-33.58	1.0356	478.56	.2703			1.25	-1.1624	478.56	.2775
-27.09	1.0290	488.72	.3395			1.87	-1.2140	488.72	.3503
-20.60	1.0284					2.50	-1.2324		
-18.54	1.0314					3.13	-1.2318		
-14.42	1.0554					3.75	-1.2247		
-8.24	1.1342					4.38	-1.1888		
-4.12	1.2109					5.00	-1.1930		
-2.68	1.2252					6.25	-1.1364		
-1.65	1.2056					7.50	-1.1323		
-.72	1.0793					8.75	-1.1134		
-.35	.9617					10.00	-1.0848		
.00	.1668					15.00	-1.0332		
.31	-.7789					17.50	-1.0038		
.62	-1.0238					20.00	-.9683		
1.25	-1.1721					30.00	-.8625		
1.87	-1.2144					50.00	-.8059		
2.50	-1.2377					60.00	-.7554		
3.13	-1.2338					70.00	-.7226		
3.75	-1.2085					80.00	-.7095		
4.38	-1.1942					90.00	-.6955		
5.00	-1.1903					100.00	-.6604		
6.25	-1.1561					110.00	-.6269		
7.50	-1.1287					194.07	.0696		
8.75	-1.1117								
10.00	-1.0902								
12.50	-1.0590								
15.00	-1.0247								
17.50	-.9966								
20.00	-.9779								
30.00	-.8850								
40.00	-.8176								
50.00	-.7801								
60.00	-.7523								
70.00	-.7320								
80.00	-.7003								
90.00	-.7044								
100.00	-.6710								
110.00	-.6276								
194.07	.0616								
224.55	.0644								

Table V. Continued

(l) Continued

$M = 0.917$; mfr $= 0.443$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1251	275.35	.0417	224.55	.0544	-150.43	1.1253	275.35	.0501
-137.44	1.1263	305.83	.0395			-85.51	1.0916	305.83	.0402
-124.46	1.1218	336.31	.0426			-20.60	.9614	336.31	.0459
-104.99	1.1117	366.80	.0580			-8.24	1.0823	366.80	.0541
-85.51	1.0892	407.44	.0949			-1.65	1.2224	407.44	.0922
-72.53	1.0694	437.92	.1445			.00	.2938	437.92	.1427
-59.55	1.0433	458.24	.2050			.31	-.6084	458.24	.2065
-46.57	1.0127	468.40	.2474			.62	-.9075	468.40	.2543
-33.58	.9852	478.56	.3009			1.25	-1.0974	478.56	.3075
-27.09	.9761	488.72	.3677			1.87	-1.1706	488.72	.3801
-20.60	.9604					2.50	-1.1745		
-18.54	.9687					3.13	-1.1660		
-14.42	.9941					3.75	-1.1540		
-8.24	1.0893					4.38	-1.1266		
-4.12	1.1932					5.00	-1.1185		
-2.68	1.2226					6.25	-1.0696		
-1.65	1.2226					7.50	-1.0585		
-.72	1.1252					8.75	-1.0424		
-.35	1.0219					10.00	-1.0334		
.00	.2495					15.00	-.9487		
.31	-.6739					17.50	-.9377		
.62	-.9378					20.00	-.9146		
1.25	-1.0773					30.00	-.8308		
1.87	-1.1575					50.00	-.7675		
2.50	-1.1760					60.00	-.7229		
3.13	-1.1718					70.00	-.6948		
3.75	-1.1530					80.00	-.6767		
4.38	-1.1170					90.00	-.6791		
5.00	-1.1175					100.00	-.6493		
6.25	-1.0797					110.00	-.6067		
7.50	-1.0764					194.07	.0715		
8.75	-1.0642								
10.00	-1.0529								
12.50	-1.0036								
15.00	-.9966								
17.50	-.9422								
20.00	-.9078								
30.00	-.8615								
40.00	-.7985								
50.00	-.7702								
60.00	-.7283								
70.00	-.7109								
80.00	-.6846								
90.00	-.6808								
100.00	-.6556								
110.00	-.6129								
194.07	.0704								
224.55	.0561								

$M = 0.917$; mfr $= 0.485$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1032	275.35	.0379	224.55	.0410	-150.43	1.1018	275.35	.0461
-137.44	1.1041	305.83	.0394			-85.51	1.0593	305.83	.0382
-124.46	1.0955	336.31	.0458			-20.60	.8817	336.31	.0491
-104.99	1.0854	366.80	.0660			-8.24	1.0249	366.80	.0603
-85.51	1.0599	407.44	.1087			-1.65	1.2246	407.44	.1042
-72.53	1.0332	437.92	.1622			.00	.3872	437.92	.1613
-59.55	1.0015	458.24	.2285			.31	-.5053	458.24	.2291
-46.57	.9621	468.40	.2720			.62	-.8165	468.40	.2787
-33.58	.9205	478.56	.3262			1.25	-1.0051	478.56	.3356
-27.09	.9034	488.72	.3961			1.87	-1.0731	488.72	.4091
-20.60	.8928					2.50	-1.1140		
-18.54	.8911					3.13	-1.0954		
-14.42	.9181					3.75	-1.0842		
-8.24	1.0216					4.38	-1.0595		
-4.12	1.1589					5.00	-1.0548		
-2.68	1.2096					6.25	-1.0189		
-1.65	1.2250					7.50	-1.0121		
-.72	1.1655					8.75	-.9945		
-.35	1.0696					10.00	-.9709		
.00	.3583					15.00	-.9096		
.31	-.5538					17.50	-.8785		
.62	-.8396					20.00	-.8540		
1.25	-1.0272					30.00	-.7700		
1.87	-1.0922					50.00	-.7361		
2.50	-1.1047					60.00	-.6919		
3.13	-1.0997					70.00	-.6725		
3.75	-1.0856					80.00	-.6477		
4.38	-1.0758					90.00	-.6414		
5.00	-1.0648					100.00	-.6216		
6.25	-1.0380					110.00	-.5873		
7.50	-1.0260					194.07	.0595		
8.75	-1.0126								
10.00	-.9944								
12.50	-.9530								
15.00	-.9319								
17.50	-.9062								
20.00	-.8609								
30.00	-.8152								
40.00	-.7456								
50.00	-.7291								
60.00	-.6928								
70.00	-.6685								
80.00	-.6579								
90.00	-.6515								
100.00	-.6341								
110.00	-.5866								
194.07	.0581								
224.55	.0445								

Table V. Continued

(l) Continued

$M = 0.917$; mfr $= 0.488$; $\alpha = 1.0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1016	275.35	.0520	224.55	.0393	-150.43	1.1006	275.35	.0281
-137.44	1.1046	305.83	.0447			-85.51	1.0561	305.83	.0317
-124.46	1.0998	336.31	.0502			-20.60	.8742	336.31	.0450
-104.99	1.0844	366.80	.0683			-8.24	1.0024	366.80	.0586
-85.51	1.0583	407.44	.1098			-1.65	1.2258	407.44	.1019
-72.53	1.0343	437.92	.1633			.00	.4301	437.92	.1591
-59.55	1.0032	458.24	.2265			.31	-.4536	458.24	.2283
-46.57	.9655	468.40	.2686			.62	-.7347	468.40	.2801
-33.58	.9281	478.56	.3198			1.25	-.9702	478.56	.3400
-27.09	.9156	488.72	.3827			1.87	-1.0528	488.72	.4163
-20.60	.9033					2.50	-1.0574		
-18.54	.9046					3.13	-1.0472		
-14.42	.9416					3.75	-1.0470		
-8.24	1.0491					4.38	-1.0179		
-4.12	1.1681					5.00	-.9897		
-2.68	1.2151					6.25	-.9766		
-1.65	1.2214					7.50	-.9451		
-.72	1.1510					8.75	-.9389		
-.35	1.0596					10.00	-.9016		
.00	.2914					15.00	-.8570		
.31	-.6432					17.50	-.8225		
.62	-.9068					20.00	-.8205		
1.25	-1.0516					30.00	-.7177		
1.87	-1.1360					50.00	-.6905		
2.50	-1.1569					60.00	-.6447		
3.13	-1.1339					70.00	-.6138		
3.75	-1.1184					80.00	-.6162		
4.38	-1.1208					90.00	-.6169		
5.00	-1.1071					100.00	-.5963		
6.25	-1.0683					110.00	-.5474		
7.50	-1.0755					194.07	.0474		
8.75	-1.0442								
10.00	-1.0439								
12.50	-1.0045								
15.00	-.9763								
17.50	-.9619								
20.00	-.9239								
30.00	-.8435								
40.00	-.7962								
50.00	-.7722								
60.00	-.7529								
70.00	-.7137								
80.00	-.6946								
90.00	-.6914								
100.00	-.6666								
110.00	-.6139								
194.07	.0673								
224.55	.0481								

$M = 0.916$; mfr $= 0.488$; $\alpha = 2.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1024	275.35	.0668	224.55	.0335	-150.43	1.0996	275.35	.0153
-137.44	1.1030	305.83	.0532			-85.51	1.0554	305.83	.0262
-124.46	1.0977	336.31	.0541			-20.60	.8544	336.31	.0413
-104.99	1.0849	366.80	.0704			-8.24	.9776	366.80	.0559
-85.51	1.0594	407.44	.1119			-1.65	1.2222	407.44	.1001
-72.53	1.0354	437.92	.1645			.00	.5027	437.92	.1573
-59.55	1.0048	458.24	.2242			.31	-.3741	458.24	.2293
-46.57	.9716	468.40	.2638			.62	-.6554	468.40	.2817
-33.58	.9356	478.56	.3107			1.25	-.8813	478.56	.3432
-27.09	.9295	488.72	.3701			1.87	-.9474	488.72	.4255
-20.60	.9198					2.50	-.9979		
-18.54	.9215					3.13	-.9988		
-14.42	.9596					3.75	-.9933		
-8.24	1.0686					4.38	-.9359		
-4.12	1.1857					5.00	-.9383		
-2.68	1.2187					6.25	-.8942		
-1.65	1.2190					7.50	-.8753		
-.72	1.1290					8.75	-.8858		
-.35	1.0137					10.00	-.8414		
.00	.2306					15.00	-.7814		
.31	-.7078					17.50	-.7489		
.62	-.9692					20.00	-.7090		
1.25	-1.1264					30.00	-.6547		
1.87	-1.1916					50.00	-.6071		
2.50	-1.2039					60.00	-.5699		
3.13	-1.1986					70.00	-.5648		
3.75	-1.1944					80.00	-.5595		
4.38	-1.1729					90.00	-.5628		
5.00	-1.1502					100.00	-.5568		
6.25	-1.1213					110.00	-.5166		
7.50	-1.1195					194.07	.0398		
8.75	-1.1133								
10.00	-1.0900								
12.50	-1.0691								
15.00	-1.0296								
17.50	-1.0229								
20.00	-.9859								
30.00	-.9188								
40.00	-.8652								
50.00	-.8235								
60.00	-.7945								
70.00	-.7754								
80.00	-.7501								
90.00	-.7415								
100.00	-.7085								
110.00	-.6571								
194.07	.0817								
224.55	.0573								

Table V. Continued

(l) Continued

$M = 0.917$; mfr $= 0.488$; $\alpha = 3.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.1032	275.35	.0848	224.55	.0341	-150.43	1.1013	275.35	-.0007
-137.44	1.1068	305.83	.0646			-85.51	1.0545	305.83	.0241
-124.46	1.1032	336.31	.0631			-20.60	.8320	336.31	.0428
-104.99	1.0902	366.80	.0773			-8.24	.9561	366.80	.0591
-85.51	1.0614	407.44	.1184			-1.65	1.2204	407.44	.1039
-72.53	1.0380	437.92	.1671			.00	.5489	437.92	.1622
-59.55	1.0084	458.24	.2221			.31	-.2795	458.24	.2330
-46.57	.9755	468.40	.2571			.62	-.5401	468.40	.2853
-33.58	.9449	478.56	.2995			1.25	-.8182	478.56	.3479
-27.09	.9354	488.72	.3533			1.87	-.8896	488.72	.4310
-20.60	.9368					2.50	-.9350		
-18.54	.9388					3.13	-.9166		
-14.42	.9735					3.75	-.9093		
-8.24	1.0810					4.38	-.8900		
-4.12	1.1971					5.00	-.8678		
-2.68	1.2251					6.25	-.8470		
-1.65	1.2146					7.50	-.7944		
-.72	1.1121					8.75	-.8006		
-.35	.9966					10.00	-.7867		
.00	.1951					15.00	-.7188		
.31	-.7661					17.50	-.6542		
.62	-1.0025					20.00	-.6458		
1.25	-1.1663					30.00	-.5774		
1.87	-1.2048					50.00	-.5530		
2.50	-1.2500					60.00	-.5319		
3.13	-1.2304					70.00	-.4995		
3.75	-1.2313					80.00	-.5169		
4.38	-1.2164					90.00	-.5246		
5.00	-1.1878					100.00	-.5219		
6.25	-1.1538					110.00	-.4754		
7.50	-1.1607					194.07	.0358		
8.75	-1.1473								
10.00	-1.1416								
12.50	-1.0951								
15.00	-1.0685								
17.50	-1.0418								
20.00	-1.0294								
30.00	-.9530								
40.00	-.8882								
50.00	-.8680								
60.00	-.8442								
70.00	-.8065								
80.00	-.7988								
90.00	-.7831								
100.00	-.7437								
110.00	-.4056								
194.07	.0970								
224.55	.0795								

$M = 0.916$; mfr $= 0.544$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0711	275.35	.0344	224.55	.0281	-150.43	1.0690	275.35	.0419
-137.44	1.0726	305.83	.0413			-85.51	1.0145	305.83	.0398
-124.46	1.0654	336.31	.0531			-20.60	.7747	336.31	.0556
-104.99	1.0465	366.80	.0755			-8.24	.9304	366.80	.0719
-85.51	1.0120	407.44	.1240			-1.65	1.2197	407.44	.1215
-72.53	.9803	437.92	.1833			.00	.4926	437.92	.1830
-59.55	.9399	458.24	.2520			.31	-.3633	458.24	.2536
-46.57	.8853	468.40	.2971			.62	-.6811	468.40	.3035
-33.58	.8283	478.56	.3525			1.25	-.8980	478.56	.3628
-27.09	.8088	488.72	.4221			1.87	-.9668	488.72	.4348
-20.60	.7797					2.50	-1.0093		
-18.54	.7861					3.13	-1.0133		
-14.42	.8085					3.75	-1.0069		
-8.24	.9400					4.38	-.9640		
-4.12	1.0979					5.00	-.9543		
-2.68	1.1744					6.25	-.9172		
-1.65	1.2228					7.50	-.9171		
-.72	1.1972					8.75	-.9017		
-.35	1.1394					10.00	-.8845		
.00	.4511					15.00	-.8349		
.31	-.3735					17.50	-.8037		
.62	-.6874					20.00	-.7608		
1.25	-.8873					30.00	-.7297		
1.87	-.9831					50.00	-.6935		
2.50	-1.0102					60.00	-.6274		
3.13	-1.0294					70.00	-.6378		
3.75	-1.0021					80.00	-.6117		
4.38	-.9831					90.00	-.6218		
5.00	-.9613					100.00	-.5895		
6.25	-.9347					110.00	-.5587		
7.50	-.9139					194.07	.0435		
8.75	-.9156								
10.00	-.8995								
12.50	-.8861								
15.00	-.8276								
17.50	-.8154								
20.00	-.7940								
30.00	-.7593								
40.00	-.6835								
50.00	-.6603								
60.00	-.6528								
70.00	-.6368								
80.00	-.6156								
90.00	-.6164								
100.00	-.6076								
110.00	-.5508								
194.07	.0386								
224.55	.0274								

Table V. Continued

(l) Continued

$M = 0.917$; mfr $= 0.612$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	1.0271	275.35	.0351	224.55	.0186	-150.43	1.0233	275.35	.0439
-137.44	1.0271	305.83	.0475			-85.51	.9526	305.83	.0481
-124.46	1.0215	336.31	.0632			-20.60	.5982	336.31	.0653
-104.99	.9966	366.80	.0889			-8.24	.7734	366.80	.0865
-85.51	.9506	407.44	.1422			-1.65	1.1807	407.44	.1395
-72.53	.9079	437.92	.2060			.00	.6531	437.92	.2063
-59.55	.8505	458.24	.2773			.31	-.1419	458.24	.2804
-46.57	.7754	468.40	.3245			.62	-.4441	468.40	.3320
-33.58	.6948	478.56	.3807			1.25	-.7107	478.56	.3904
-27.09	.6629	488.72	.4491			1.87	-.8276	488.72	.4603
-20.60	.6102					2.50	-.8744		
-18.54	.6046					3.13	-.8720		
-14.42	.6379					3.75	-.8721		
-8.24	.7947					4.38	-.8391		
-4.12	1.0052					5.00	-.8313		
-2.68	1.1113					6.25	-.8067		
-1.65	1.1950					7.50	-.7854		
-.72	1.2272					8.75	-.7487		
-.35	1.1943					10.00	-.7596		
.00	.6092					15.00	-.7238		
.31	-.1907					17.50	-.6592		
.62	-.5250					20.00	-.6960		
1.25	-.7274					30.00	-.6063		
1.87	-.8332					50.00	-.6157		
2.50	-.8803					60.00	-.5828		
3.13	-.8722					70.00	-.5650		
3.75	-.8654					80.00	-.5630		
4.38	-.8436					90.00	-.5650		
5.00	-.8660					100.00	-.5399		
6.25	-.8150					110.00	-.4800		
7.50	-.8123					194.07	.0291		
8.75	-.7953								
10.00	-.7753								
12.50	-.7450								
15.00	-.6928								
17.50	-.6731								
20.00	-.6701								
30.00	-.6138								
40.00	-.6160								
50.00	-.5793								
60.00	-.5846								
70.00	-.5697								
80.00	-.5737								
90.00	-.5784								
100.00	-.5625								
110.00	-.4080								
194.07	.0280								
224.55	.0207								

$M = 0.916$; mfr $= 0.681$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9723	275.35	.0331	224.55	.0155	-150.43	.9692	275.35	.0461
-137.44	.9744	305.83	.0488			-85.51	.8731	305.83	.0491
-124.46	.9634	336.31	.0670			-20.60	.3756	336.31	.0685
-104.99	.9310	366.80	.0945			-8.24	.5839	366.80	.0927
-85.51	.8729	407.44	.1530			-1.65	1.1212	407.44	.1499
-72.53	.8145	437.92	.2210			.00	.7779	437.92	.2216
-59.55	.7359	458.24	.2933			.31	.0391	458.24	.2951
-46.57	.6315	468.40	.3408			.62	-.2601	468.40	.3478
-33.58	.5049	478.56	.3959			1.25	-.5653	478.56	.4056
-27.09	.4501	488.72	.4618			1.87	-.7012	488.72	.4718
-20.60	.3770					2.50	-.7272		
-18.54	.3609					3.13	-.6879		
-14.42	.3860					3.75	-.7489		
-8.24	.6040					4.38	-.6704		
-4.12	.8746					5.00	-.7000		
-2.68	1.0045					6.25	-.6316		
-1.65	1.1370					7.50	-.6270		
-.72	1.2263					8.75	-.6114		
-.35	1.2238					10.00	-.6008		
.00	.7427					15.00	-.5700		
.31	-.0036					17.50	-.5225		
.62	-.2788					20.00	-.5402		
1.25	-.5522					30.00	-.5034		
1.87	-.6655					50.00	-.5476		
2.50	-.7054					60.00	-.5282		
3.13	-.7186					70.00	-.5168		
3.75	-.7108					80.00	-.5121		
4.38	-.7335					90.00	-.5235		
5.00	-.6956					100.00	-.5178		
6.25	-.6426					110.00	-.2602		
7.50	-.6437					194.07	.0166		
8.75	-.6408								
10.00	-.5922								
12.50	-.5677								
15.00	-.5590								
17.50	-.5695								
20.00	-.5611								
30.00	-.5164								
40.00	-.5146								
50.00	-.5200								
60.00	-.5118								
70.00	-.5131								
80.00	-.5094								
90.00	-.5326								
100.00	-.5125								
110.00	-.3148								
194.07	.0065								
224.55	.0197								

Table V. Concluded

(l) Concluded

$M = 0.915$; mfr $= 0.681$; $\alpha = 2.1°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9702	275.35	.0630	224.55	.0127	-150.43	.9661	275.35	.0164
-137.44	.9729	305.83	.0609			-85.51	.8685	305.83	.0397
-124.46	.9643	336.31	.0739			-20.60	.2990	336.31	.0655
-104.99	.9304	366.80	.1009			-8.24	.4791	366.80	.0882
-85.51	.8749	407.44	.1569			-1.65	1.0513	407.44	.1472
-72.53	.8158	437.92	.2227			.00	.9000	437.92	.2169
-59.55	.7449	458.24	.2917			.31	.1801	458.24	.2950
-46.57	.6463	468.40	.3368			.62	-.0768	468.40	.3480
-33.58	.5317	478.56	.3877			1.25	-.3454	478.56	.4095
-27.09	.4955	488.72	.4486			1.87	-.5166	488.72	.4831
-20.60	.4230					2.50	-.5600		
-18.54	.4223					3.13	-.5316		
-14.42	.4641					3.75	-.5634		
-8.24	.6770					4.38	-.4232		
-4.12	.9456					5.00	-.4578		
-2.68	1.0606					6.25	-.3483		
-1.65	1.1683					7.50	-.3192		
-.72	1.2265					8.75	-.3227		
-.35	1.2047					10.00	-.3316		
.00	.6489					15.00	-.3334		
.31	-.1371					17.50	-.3575		
.62	-.4580					20.00	-.3756		
1.25	-.6851					30.00	-.4004		
1.87	-.8075					50.00	-.4504		
2.50	-.8505					60.00	-.4521		
3.13	-.8615					70.00	-.4571		
3.75	-.8780					80.00	-.4581		
4.38	-.8430					90.00	-.4796		
5.00	-.8222					100.00	-.4735		
6.25	-.8087					110.00	-.3344		
7.50	-.8272					194.07	.0109		
8.75	-.8207								
10.00	-.7917								
12.50	-.7403								
15.00	-.7527								
17.50	-.7272								
20.00	-.7153								
30.00	-.7036								
40.00	-.6611								
50.00	-.6568								
60.00	-.6155								
70.00	-.6070								
80.00	-.5837								
90.00	-.5929								
100.00	-.4938								
110.00	-.1168								
194.07	.0162								
224.55	.0211								

$M = 0.915$; mfr $= 0.746$; $\alpha = 0°$

PHI, DEGREE									
0				90		180			
FOREBODY		AFTERBODY		FOREBODY		FOREBODY		AFTERBODY	
X/L	CP	X/L	CP	X/L	CP	X/L	CP	X/L	CP
-150.43	.9047	275.35	.0365	224.55	.0118	-150.43	.9043	275.35	.0496
-137.44	.9094	305.83	.0541			-85.51	.7782	305.83	.0550
-124.46	.8970	336.31	.0729			-20.60	.0026	336.31	.0786
-104.99	.8566	366.80	.1026			-8.24	.3214	366.80	.1023
-85.51	.7815	407.44	.1625			-1.65	1.0146	407.44	.1622
-72.53	.7060	437.92	.2304			.00	.8867	437.92	.2304
-59.55	.6030	458.24	.3043			.31	.2171	458.24	.3076
-46.57	.4581	468.40	.3513			.62	-.0641	468.40	.3588
-33.58	.2767	478.56	.4043			1.25	-.3291	478.56	.4142
-27.09	.1720	488.72	.4691			1.87	-.4976	488.72	.4812
-20.60	.0093					2.50	-.5599		
-18.54	-.0021					3.13	-.5658		
-14.42	.0586					3.75	-.5518		
-8.24	.3471					4.38	-.5186		
-4.12	.6917					5.00	-.4667		
-2.68	.8671					6.25	-.3982		
-1.65	1.0297					7.50	-.4301		
-.72	1.1960					8.75	-.3562		
-.35	1.2255					10.00	-.3956		
.00	.8836					15.00	-.3778		
.31	.2325					17.50	-.4097		
.62	-.1025					20.00	-.4123		
1.25	-.3840					30.00	-.4335		
1.87	-.4822					50.00	-.5166		
2.50	-.5444					60.00	-.4814		
3.13	-.5793					70.00	-.4915		
3.75	-.4416					80.00	-.4965		
4.38	-.4882					90.00	-.5039		
5.00	-.4595					100.00	-.4757		
6.25	-.4148					110.00	-.1084		
7.50	-.4166					194.07	.0118		
8.75	-.3986								
10.00	-.4234								
12.50	-.3966								
15.00	-.4259								
17.50	-.4043								
20.00	-.4248								
30.00	-.4601								
40.00	-.4598								
50.00	-.4816								
60.00	-.4811								
70.00	-.4838								
80.00	-.4815								
90.00	-.4983								
100.00	-.4818								
110.00	-.1058								
194.07	.0027								
224.55	.0150								

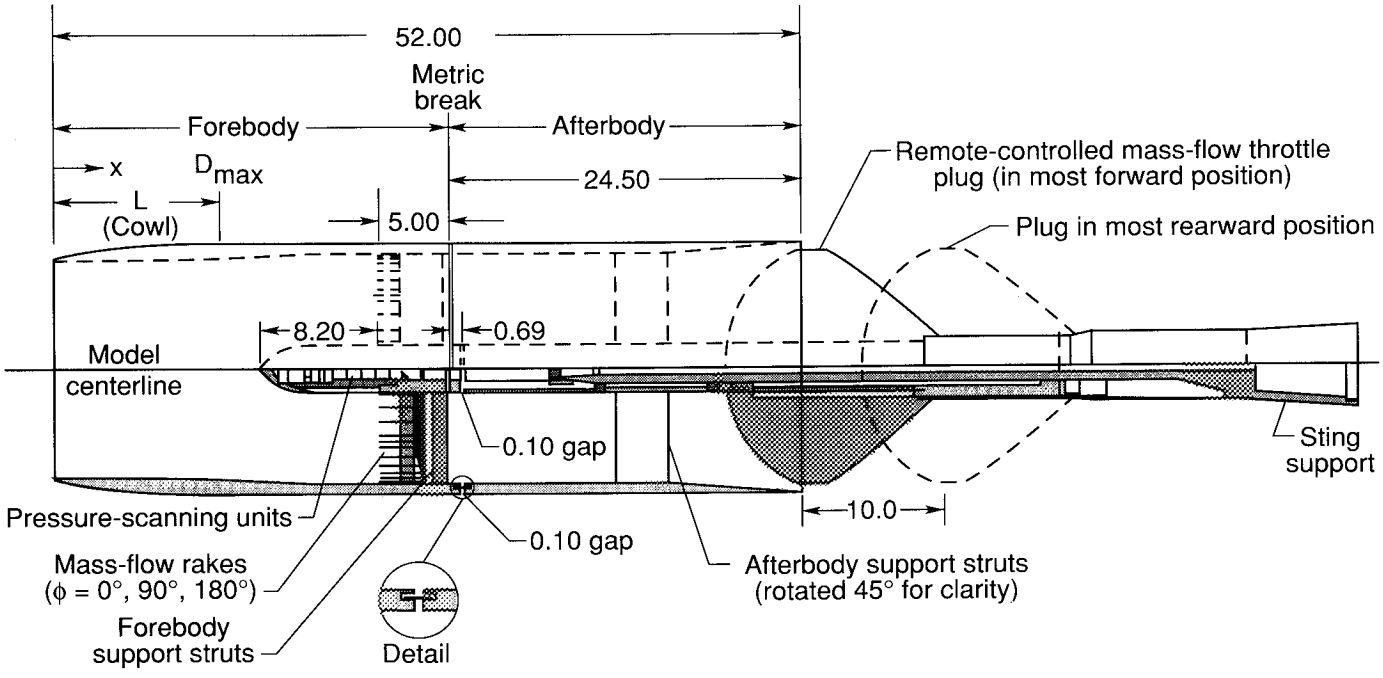
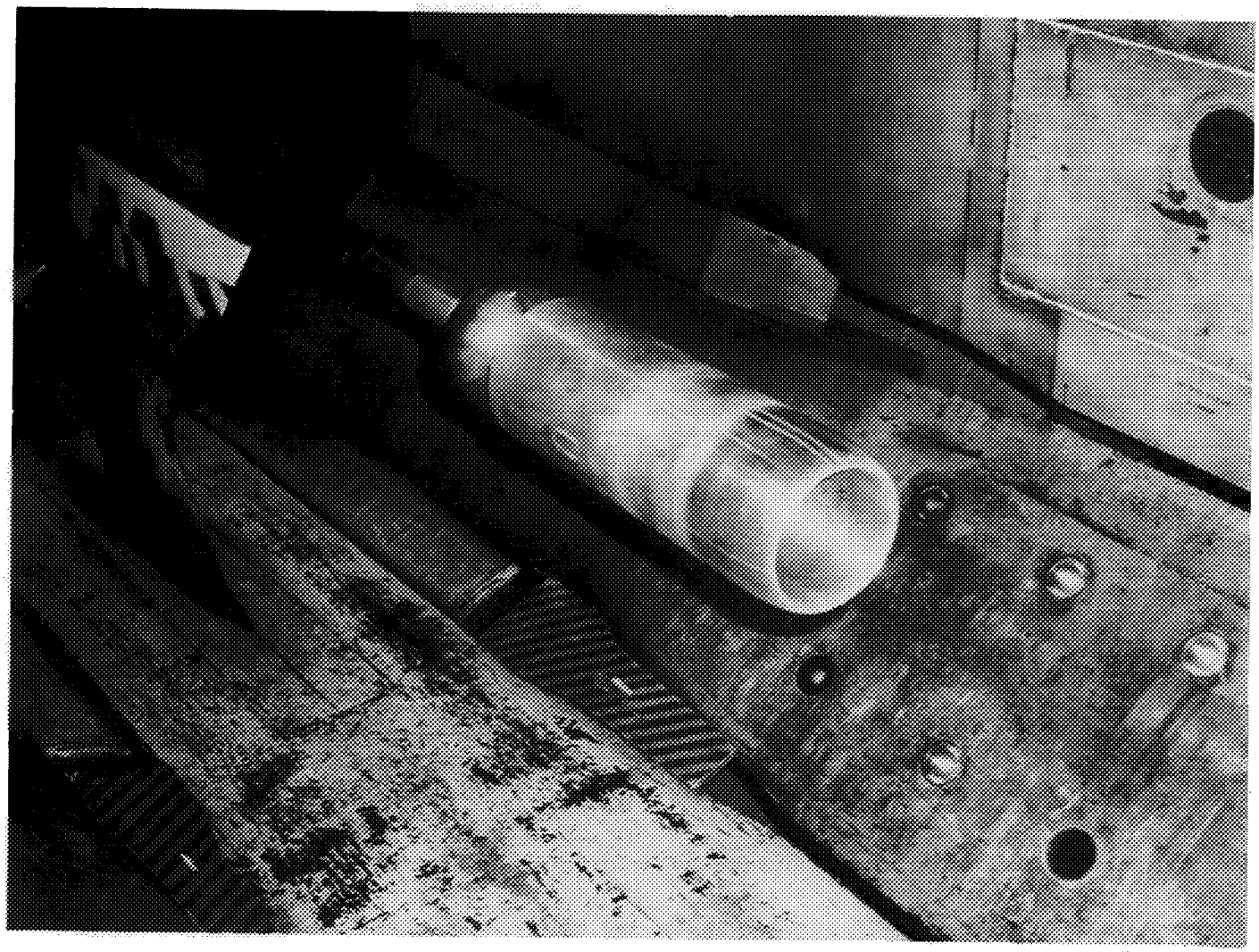


Figure 1. Simplified cross-sectional sketch of complete model. Linear dimensions are in inches.



L-82-11463

Figure 2. Complete model installed in 16-Foot Transonic Tunnel test section.

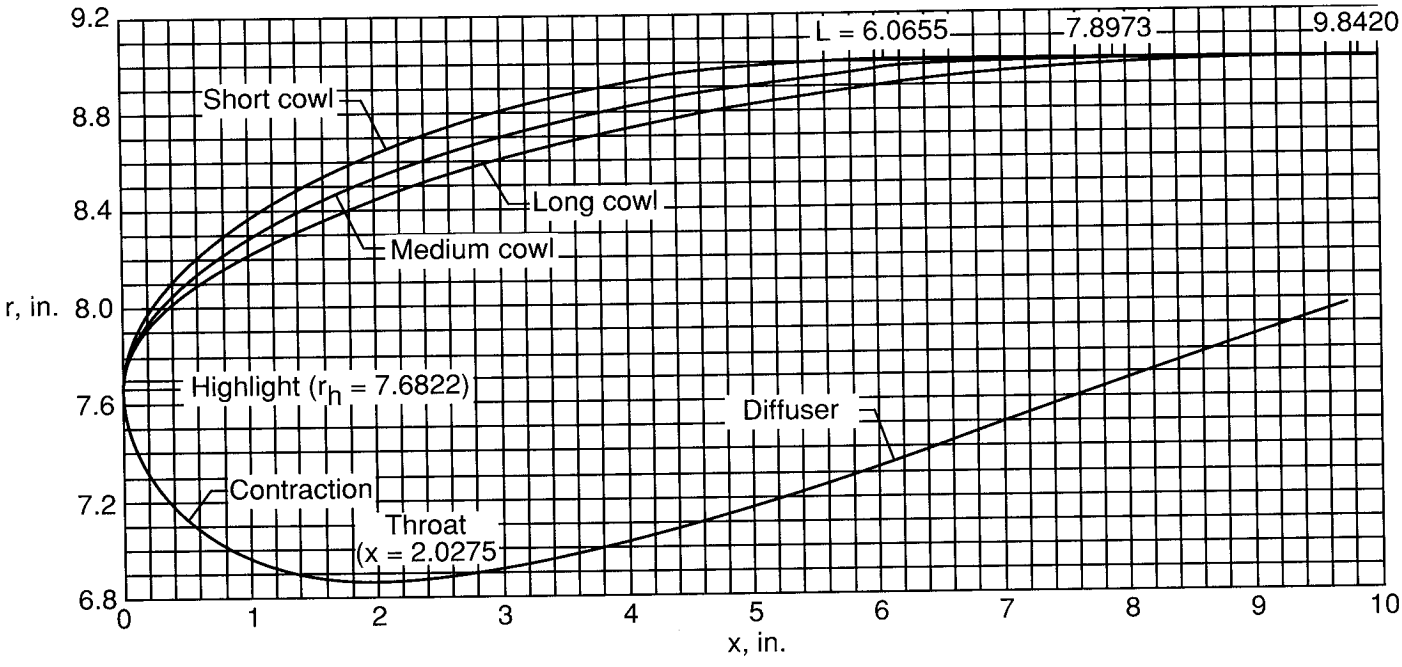


Figure 3. Comparison of cowl contours in dimensional coordinates. (Radius scale is twice as large as longitudinal scale.)

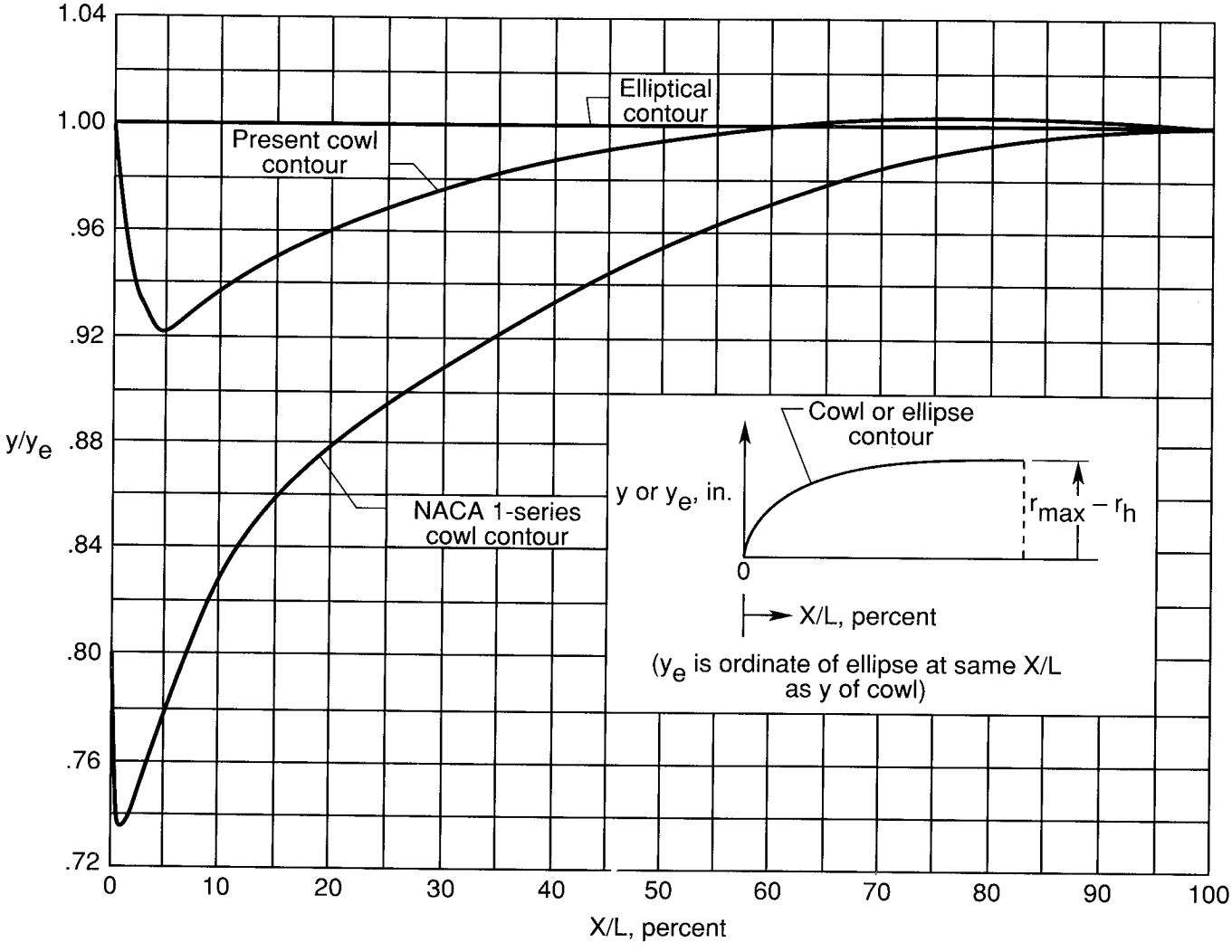


Figure 4. Comparison of local thickness of cowls of present investigation and the NACA 1-series contour with an elliptical contour.

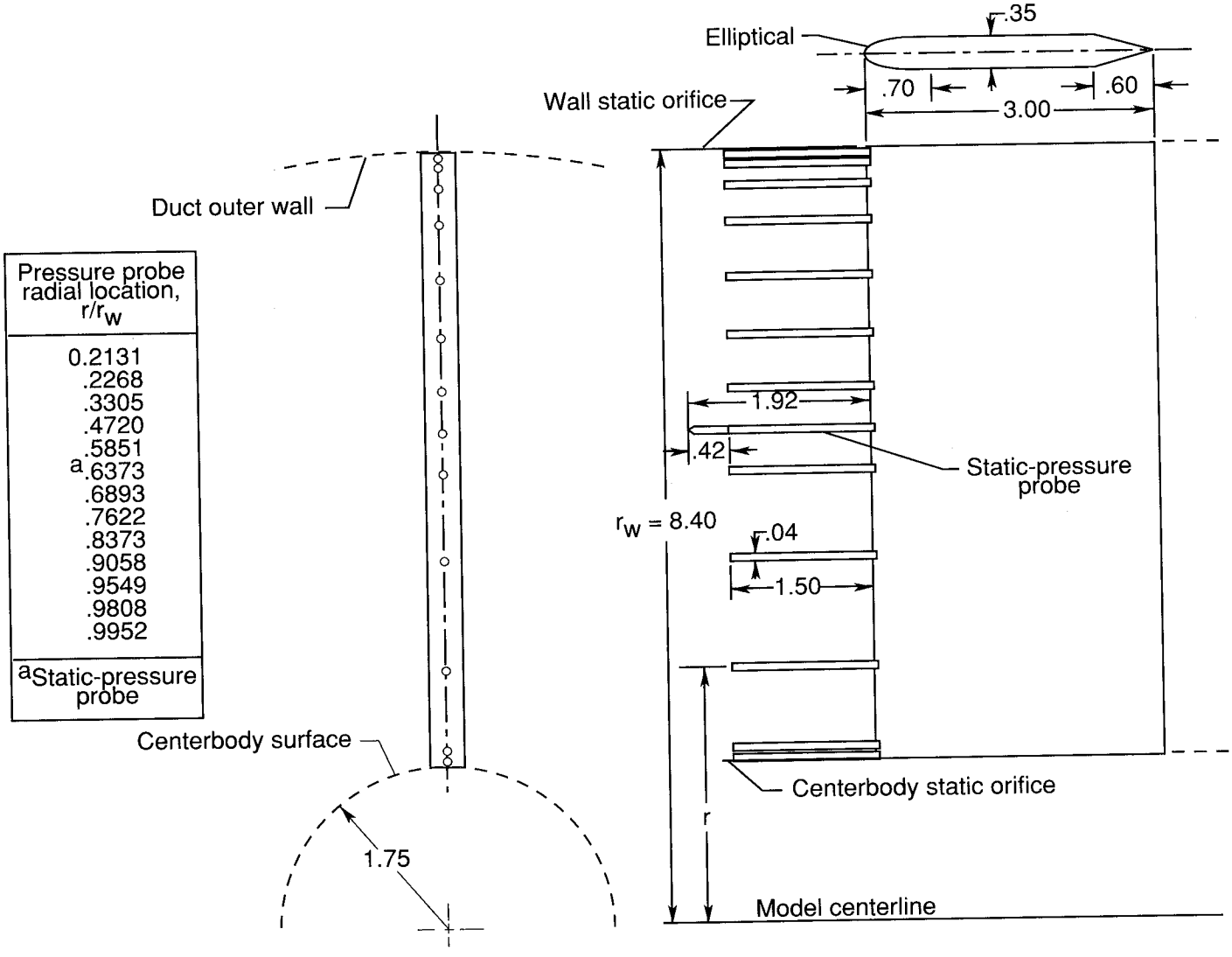


Figure 5. Pressure instrumentation (on struts at $\phi = 0°$, 90°, and 180°) used to obtain data for mass-flow computations. Linear dimensions are in inches.

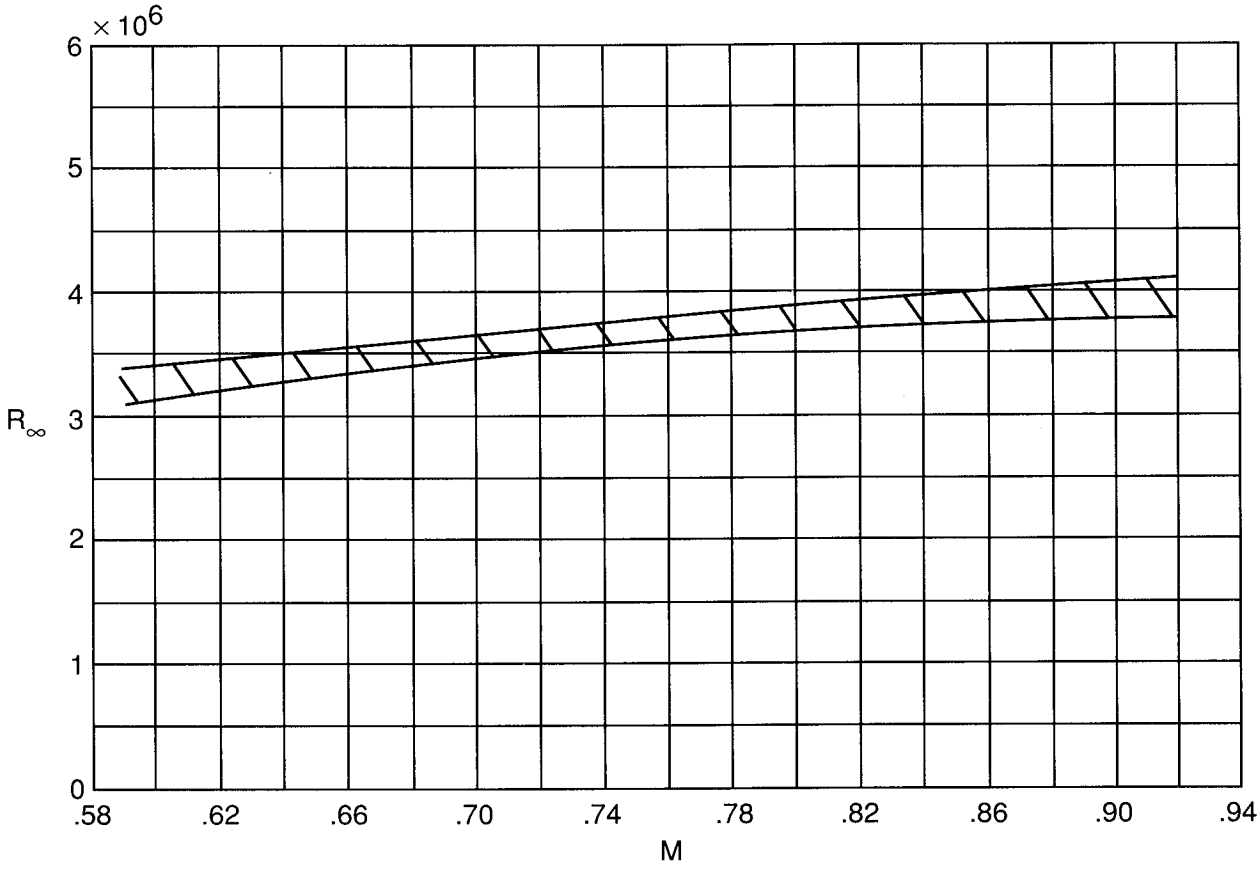
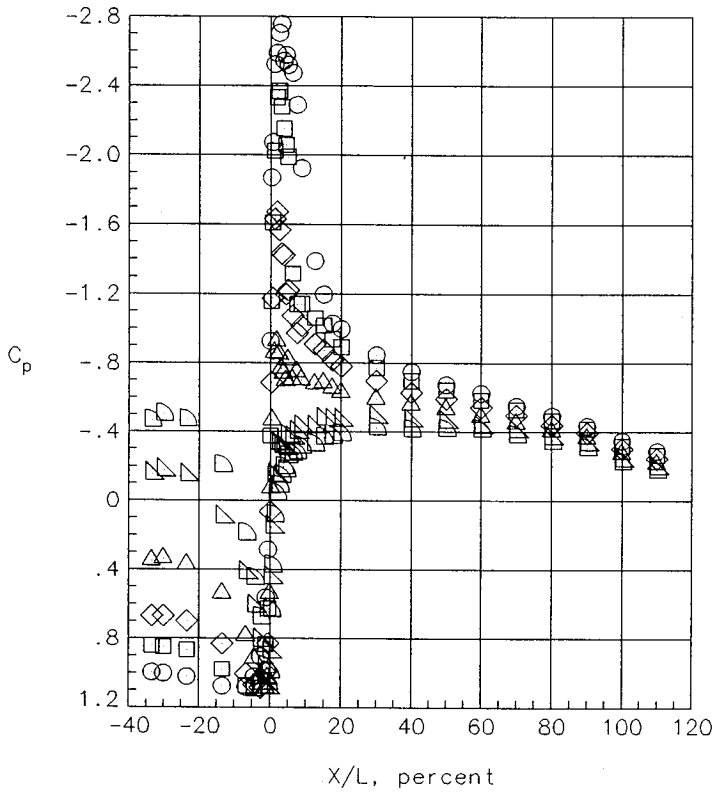
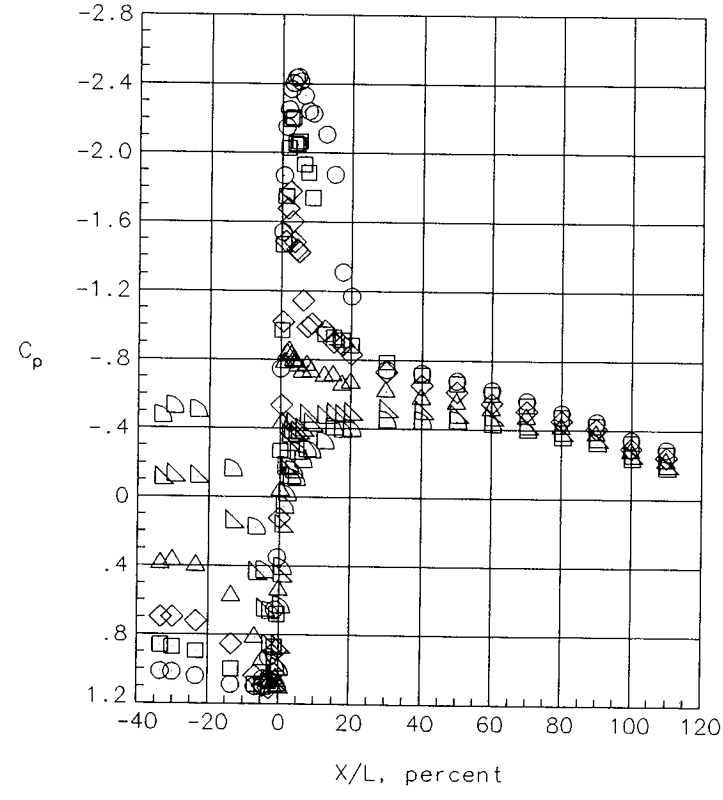


Figure 6. Variation of test Reynolds number with free-stream Mach number.

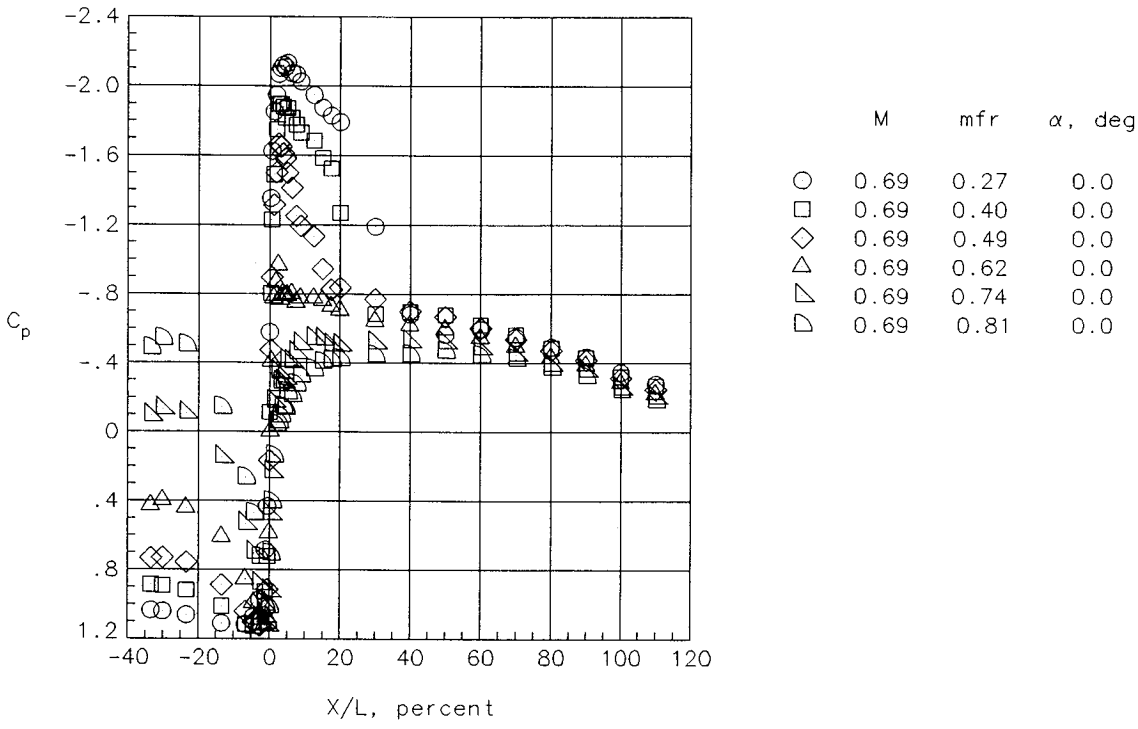


(a) $M = 0.60$.

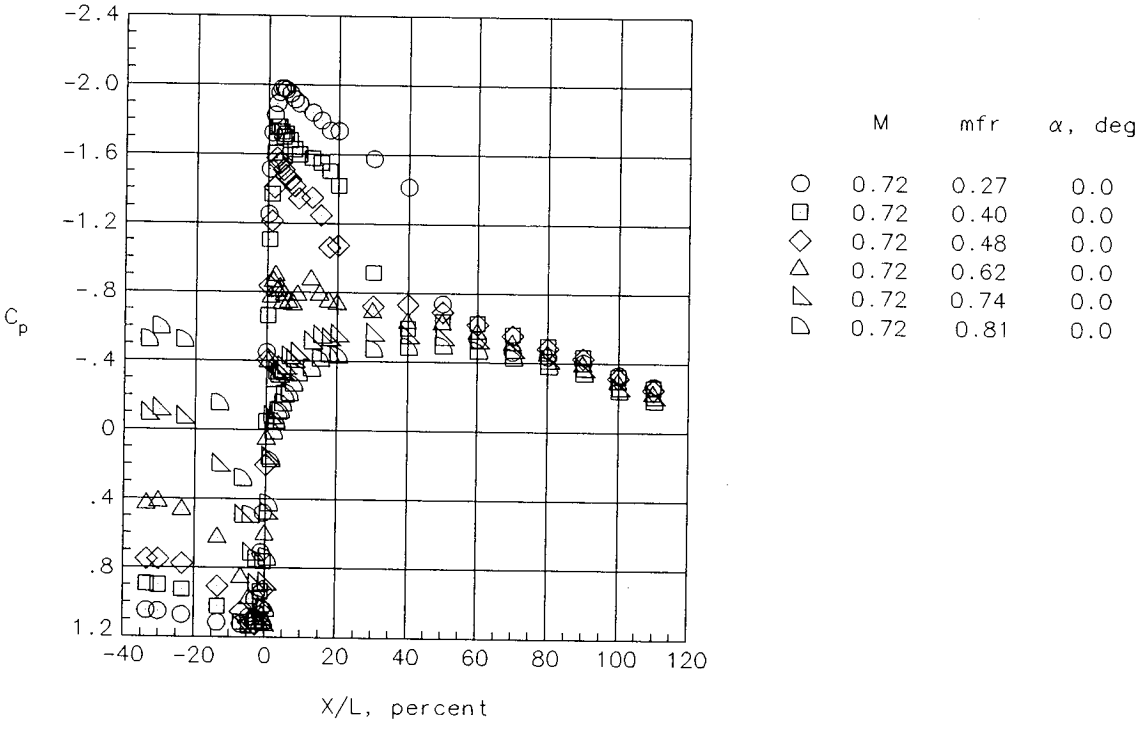


(b) $M = 0.64$.

Figure 7. Pressure coefficient variation with X/L for inlet with short cowl for various mass-flow ratios at $\alpha = 0°$.

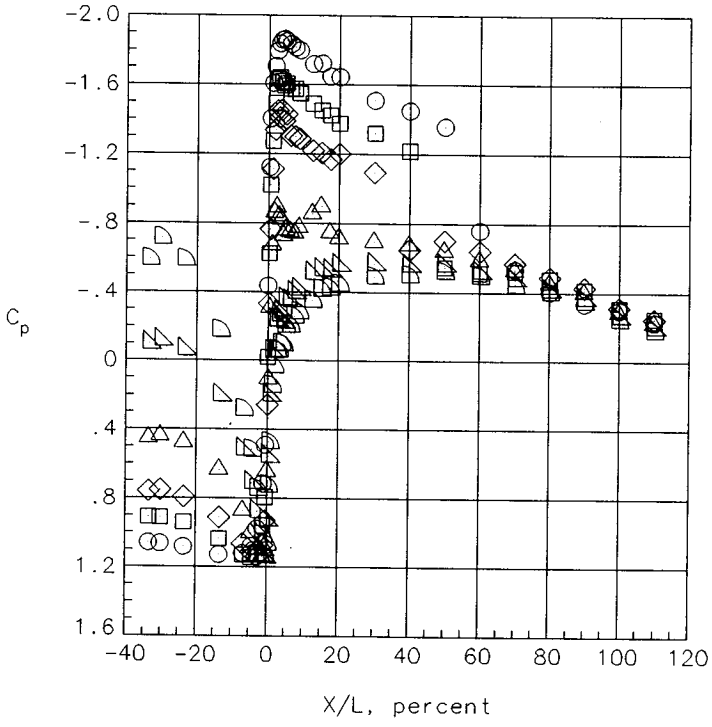


(c) $M = 0.69$.

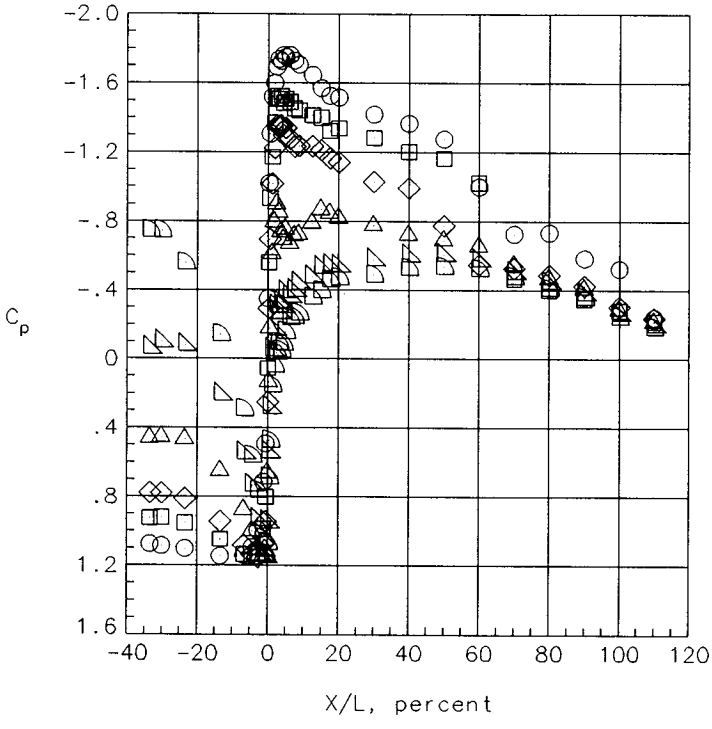


(d) $M = 0.72$.

Figure 7. Continued.

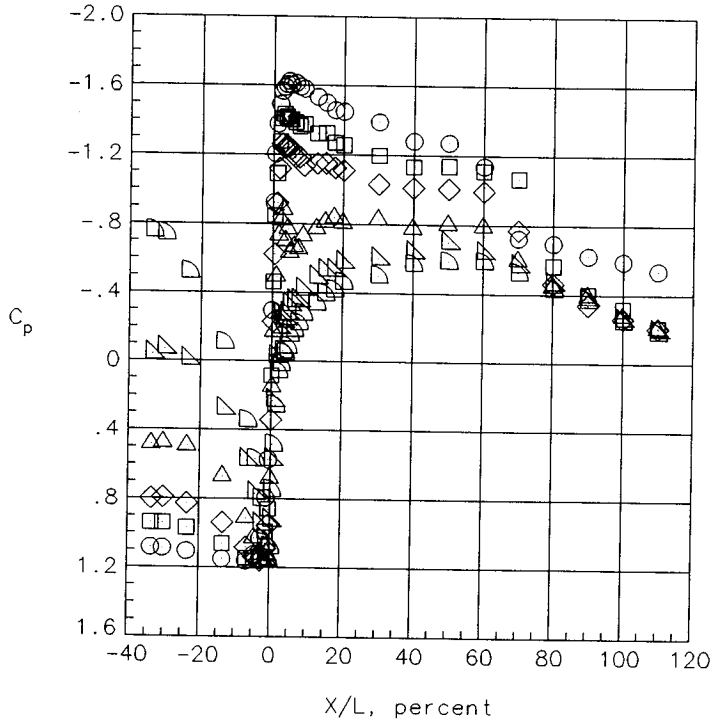


(e) $M = 0.74$.

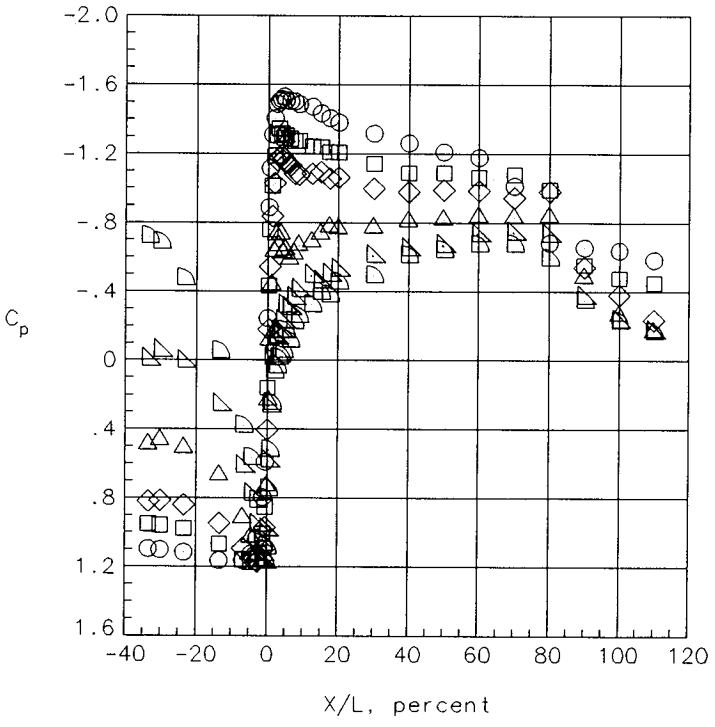


(f) $M = 0.77$.

Figure 7. Continued.

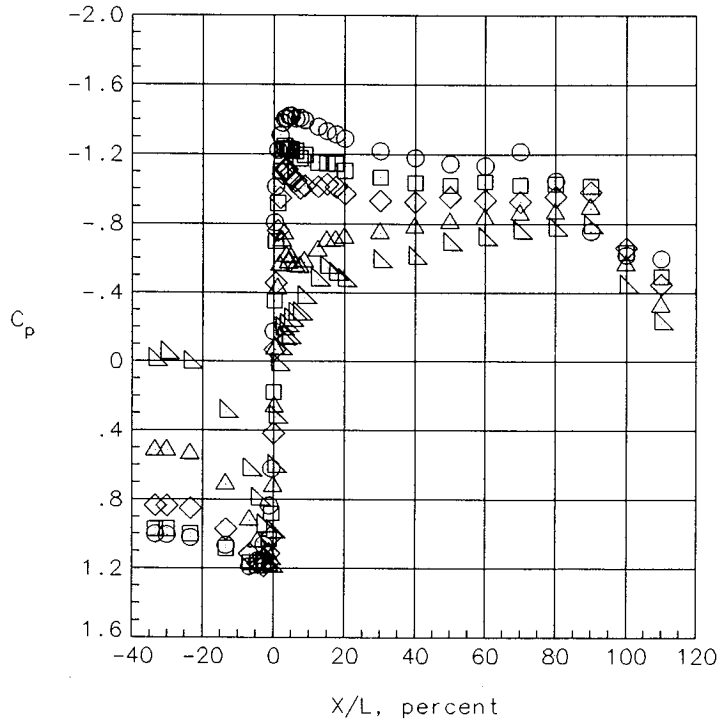


(g) $M = 0.79$.



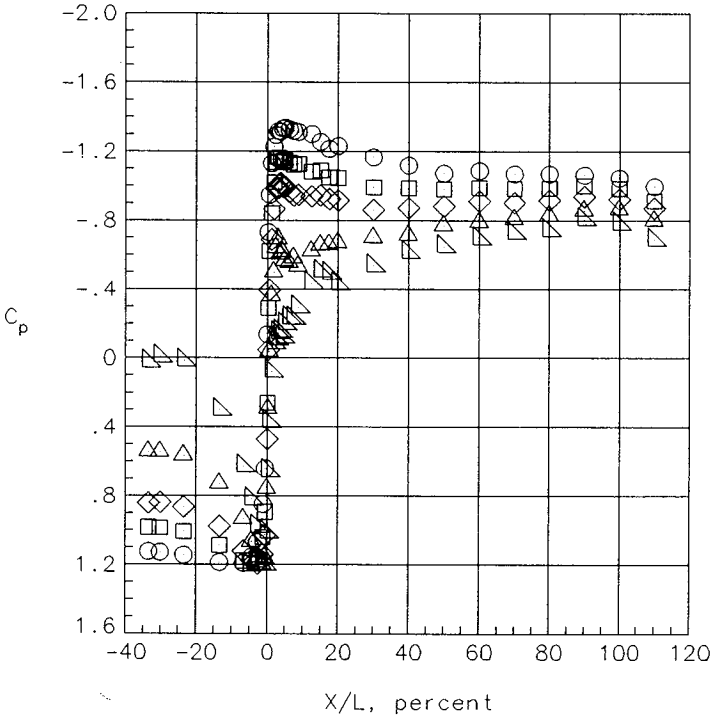
(h) $M = 0.82$.

Figure 7. Continued.



	M	mfr	α, deg
○	0.84	0.28	0.0
□	0.84	0.40	0.0
◇	0.84	0.49	0.0
△	0.84	0.62	0.0
◺	0.84	0.74	0.0

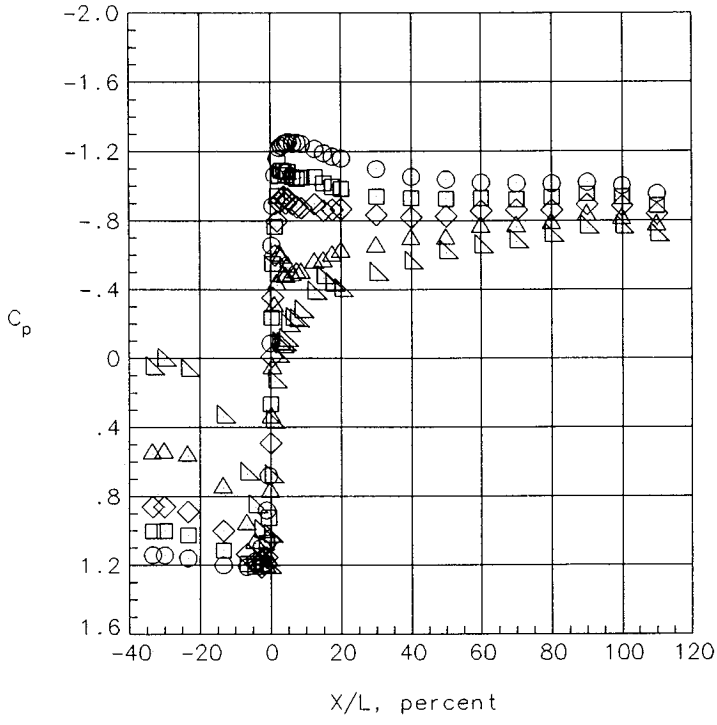
(i) $M = 0.84$.



	M	mfr	α, deg
○	0.87	0.27	0.0
□	0.87	0.40	0.0
◇	0.87	0.49	0.0
△	0.87	0.62	0.0
◺	0.87	0.74	0.0

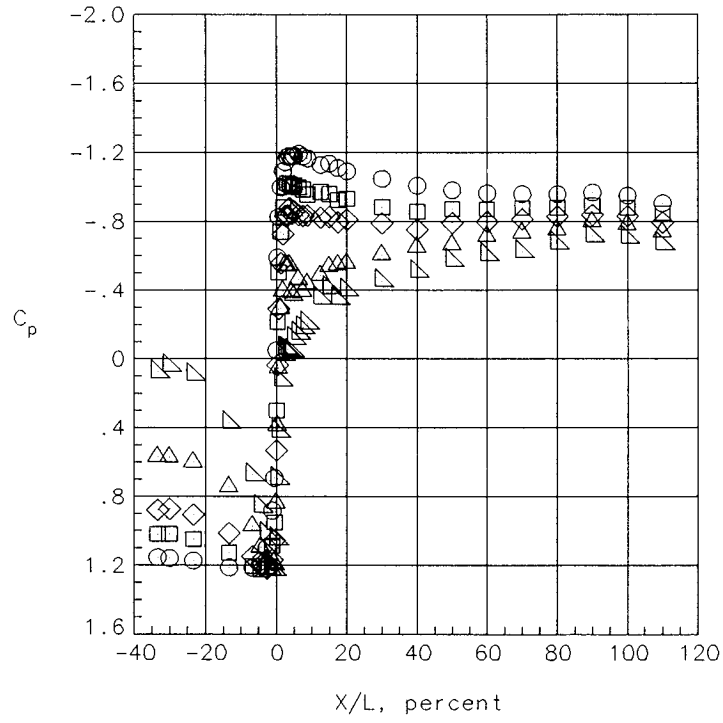
(j) $M = 0.87$.

Figure 7. Continued.



	M	mfr	α, deg
○	0.89	0.28	0.0
□	0.89	0.40	0.0
◇	0.89	0.49	0.0
△	0.89	0.62	0.0
◺	0.89	0.74	0.0

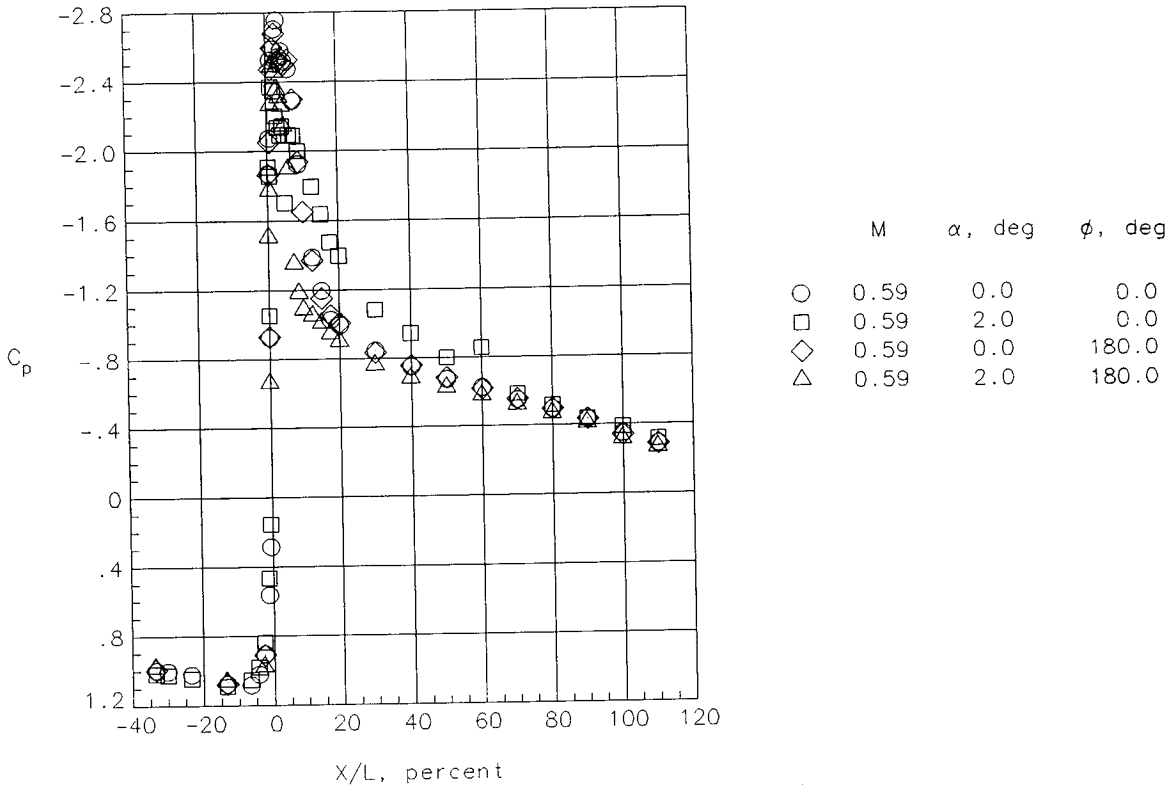
(k) $M = 0.89$.



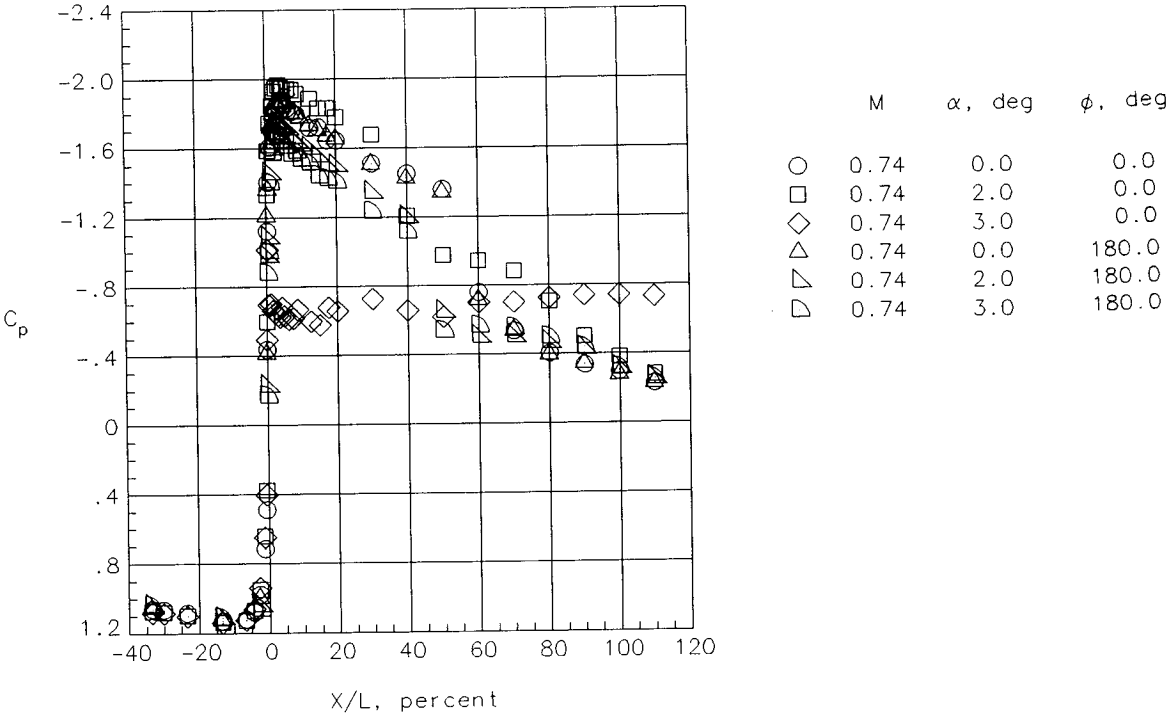
	M	mfr	α, deg
○	0.92	0.27	0.0
□	0.91	0.40	0.0
◇	0.91	0.49	0.0
△	0.91	0.62	0.0
◺	0.92	0.74	0.0

(l) $M = 0.92$.

Figure 7. Concluded.

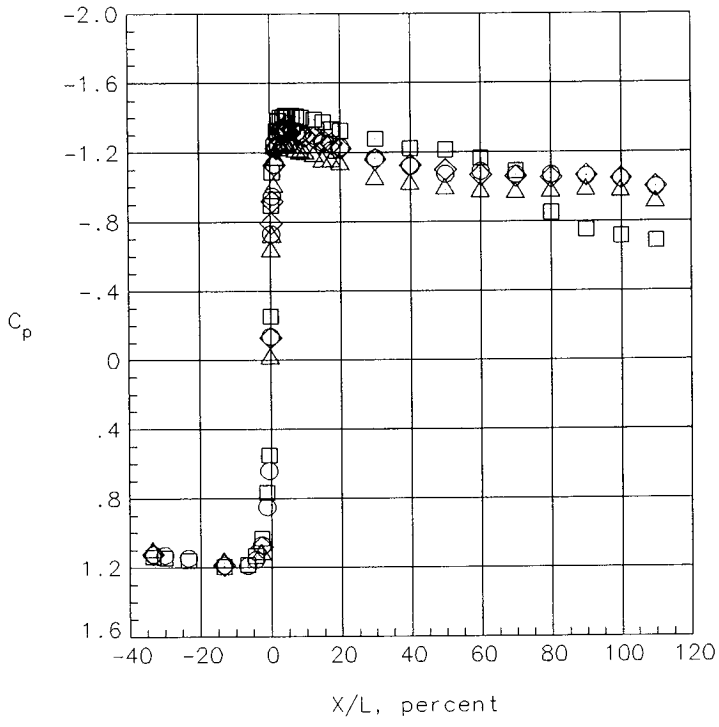


(a) $M = 0.59$ and mfr $= 0.28$.

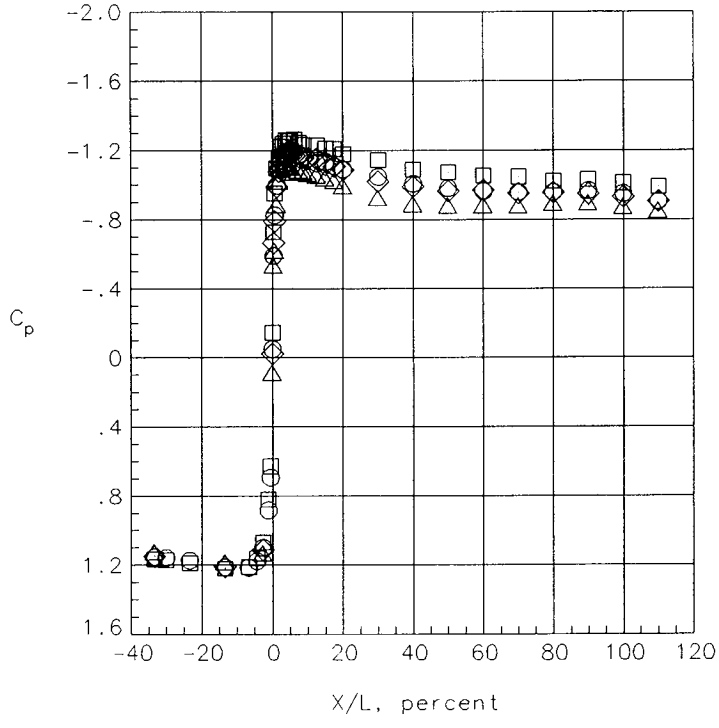


(b) $M = 0.74$ and mfr $= 0.27$.

Figure 8. Pressure coefficient variation with X/L on short cowl at various angles of attack.

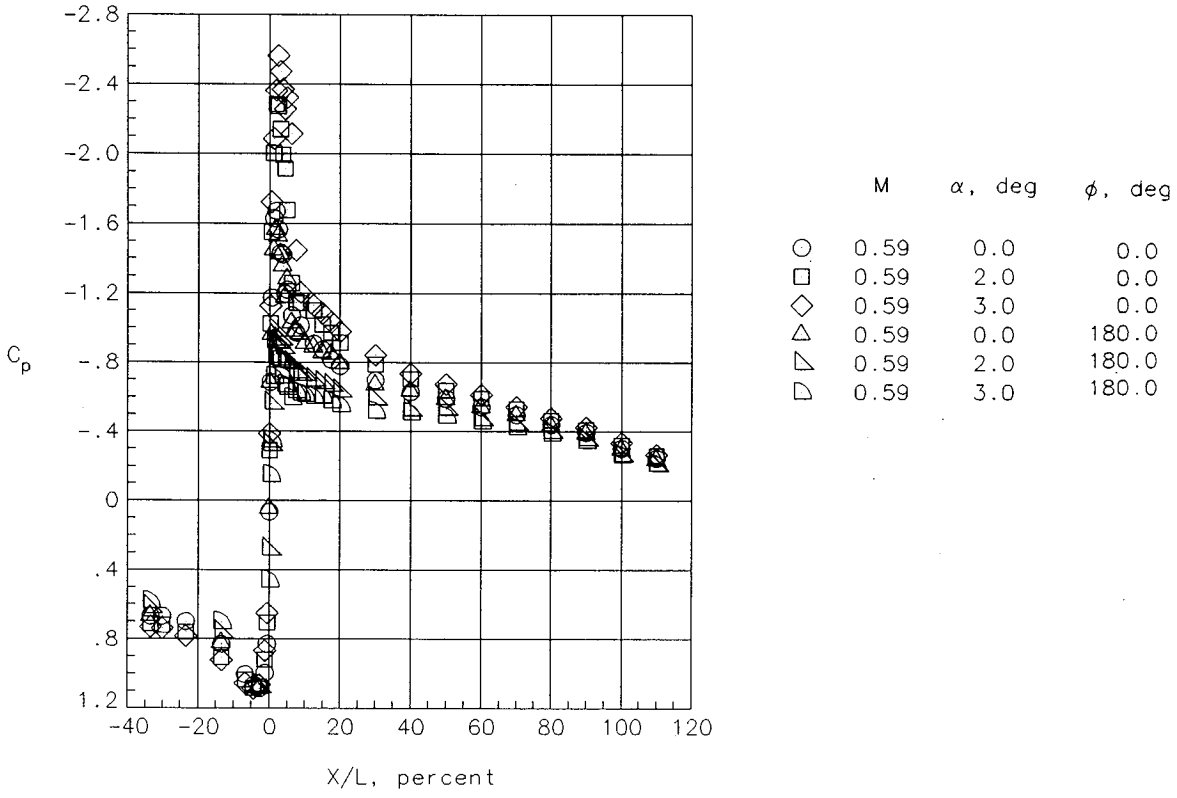


(c) $M = 0.87$ and mfr $= 0.27$.

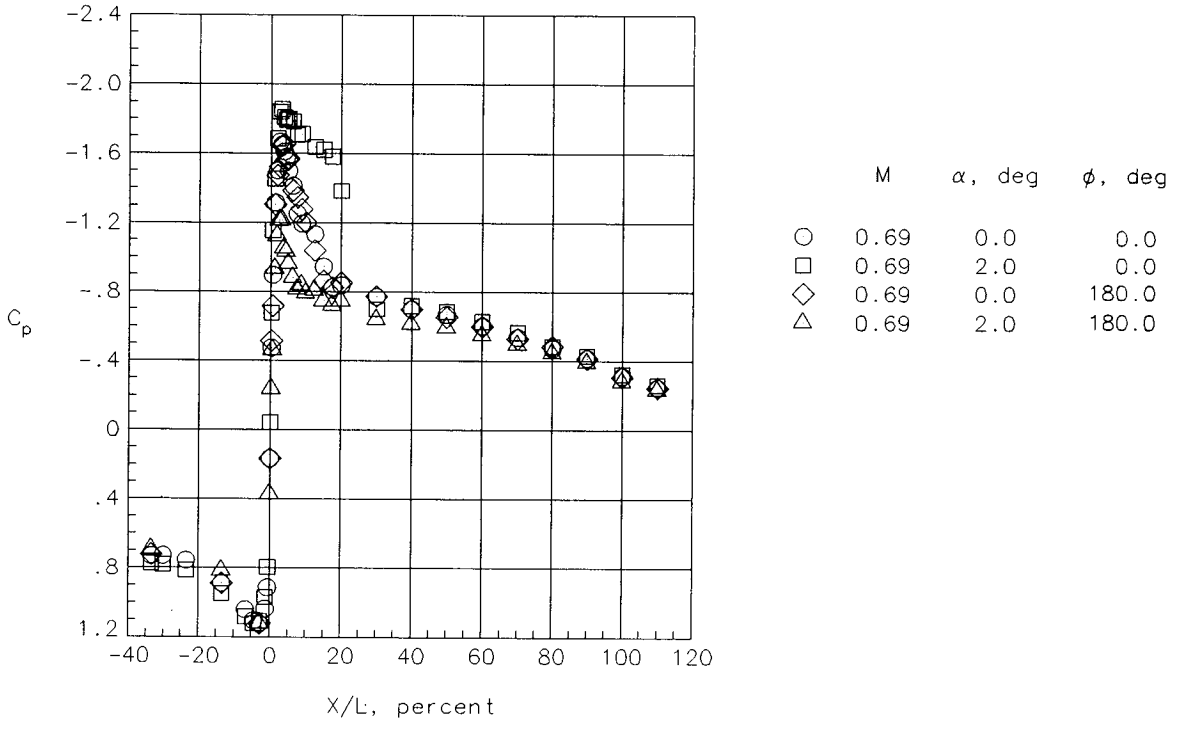


(d) $M = 0.92$ and mfr $= 0.27$.

Figure 8. Continued.

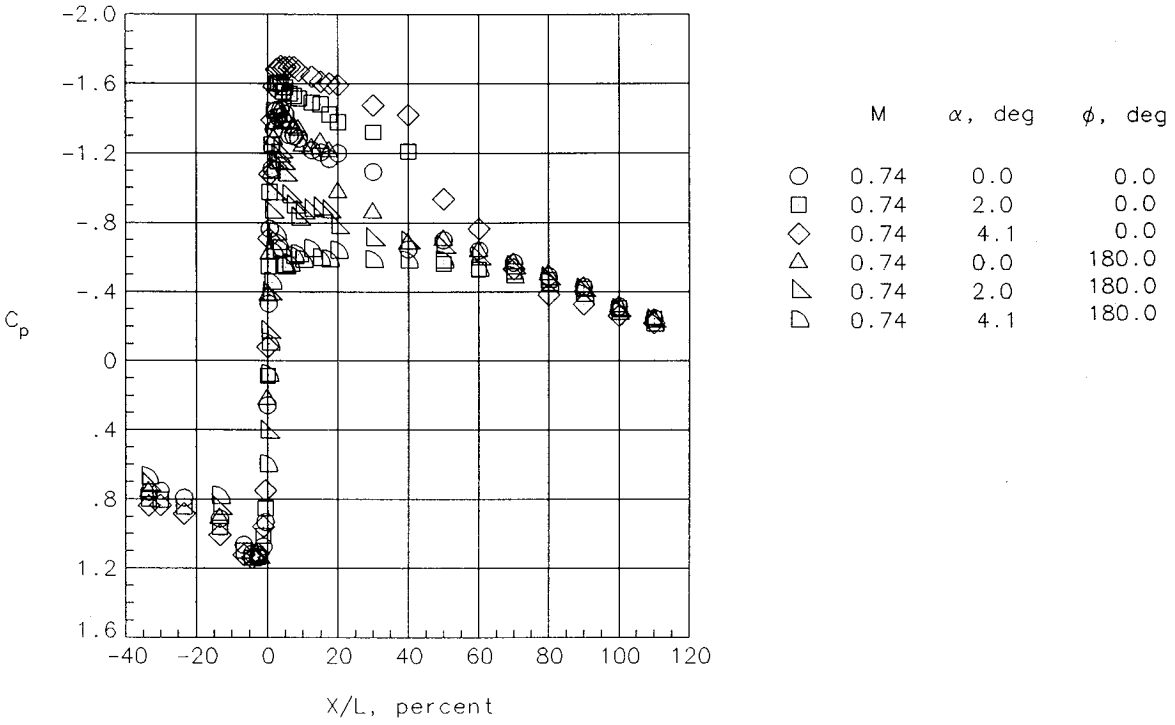


(e) $M = 0.60$ and mfr $= 0.50$.

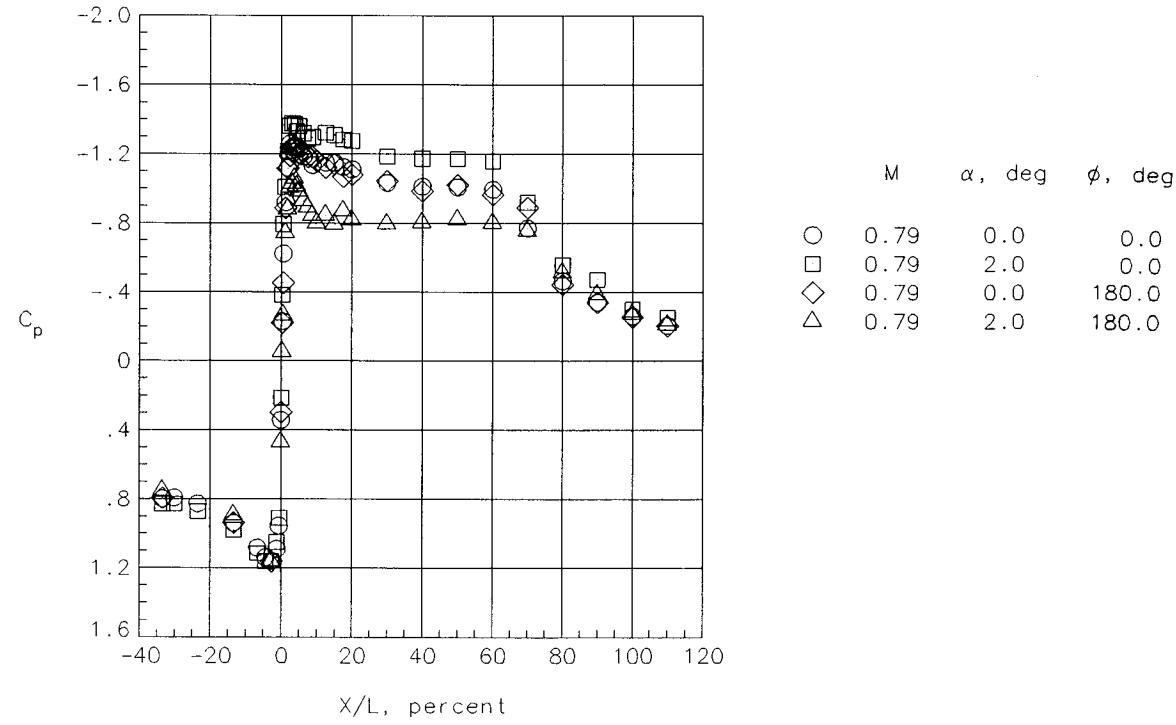


(f) $M = 0.69$ and mfr $= 0.49$.

Figure 8. Continued.

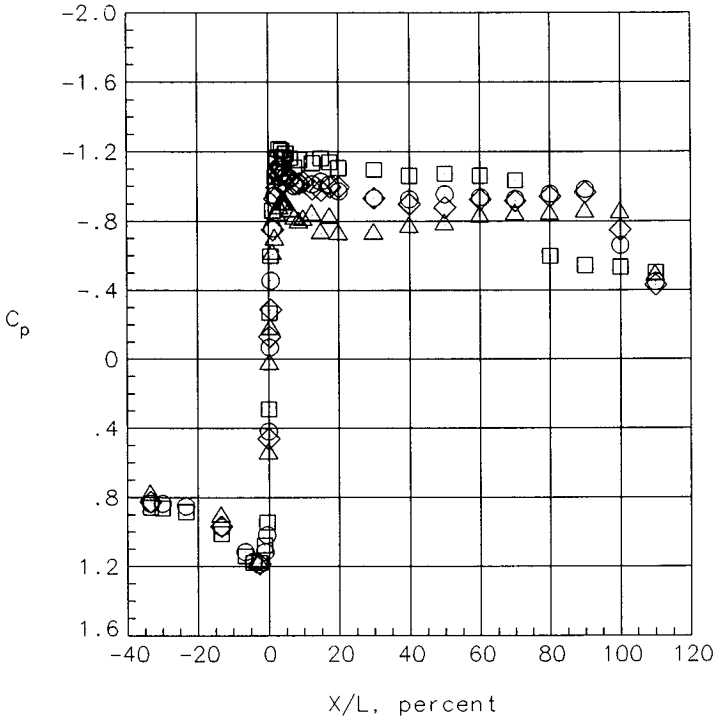


(g) $M = 0.74$ and mfr $= 0.49$.

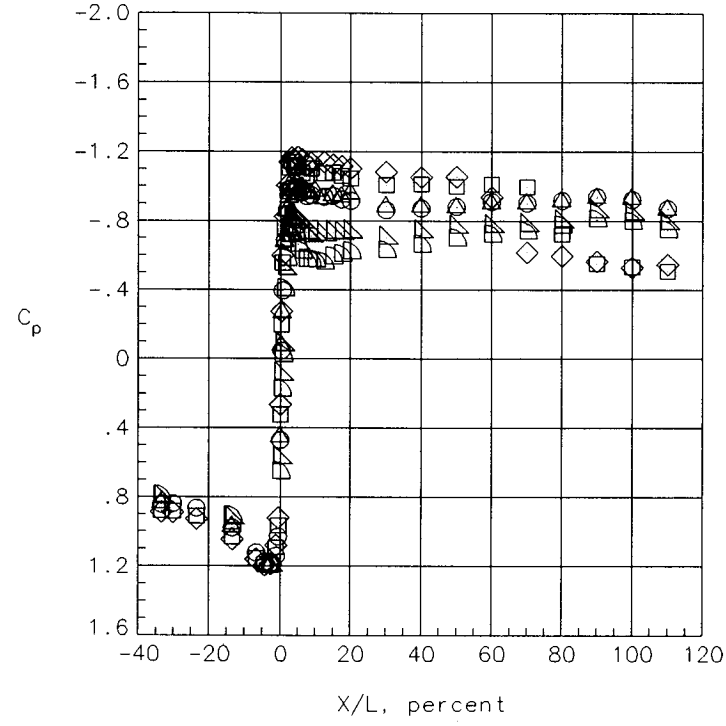


(h) $M = 0.79$ and mfr $= 0.49$.

Figure 8. Continued.

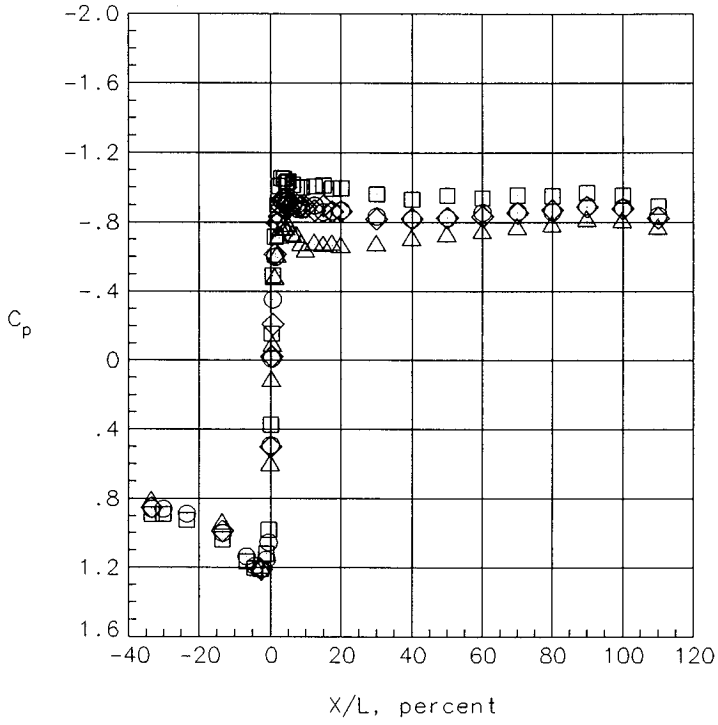


(i) $M = 0.84$ and mfr $= 0.49$.

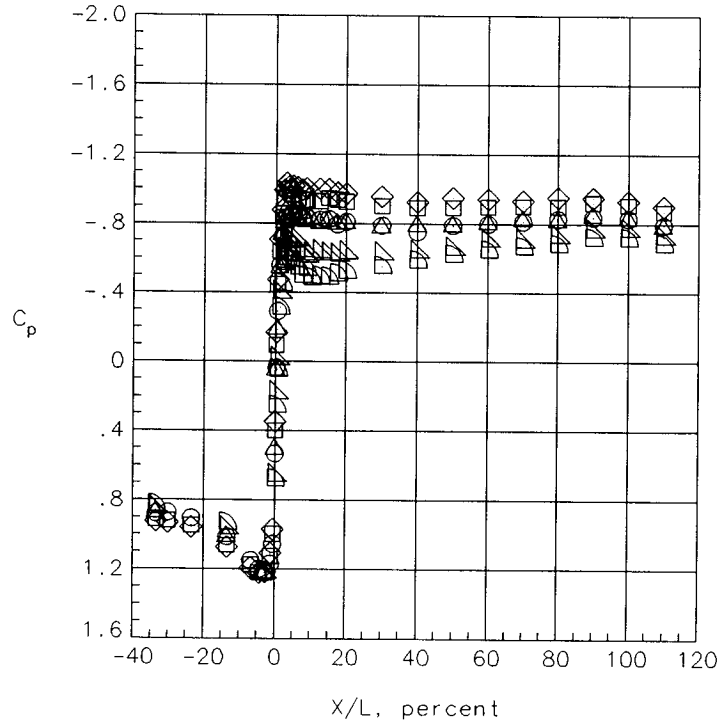


(j) $M = 0.87$ and mfr $= 0.49$.

Figure 8. Continued.

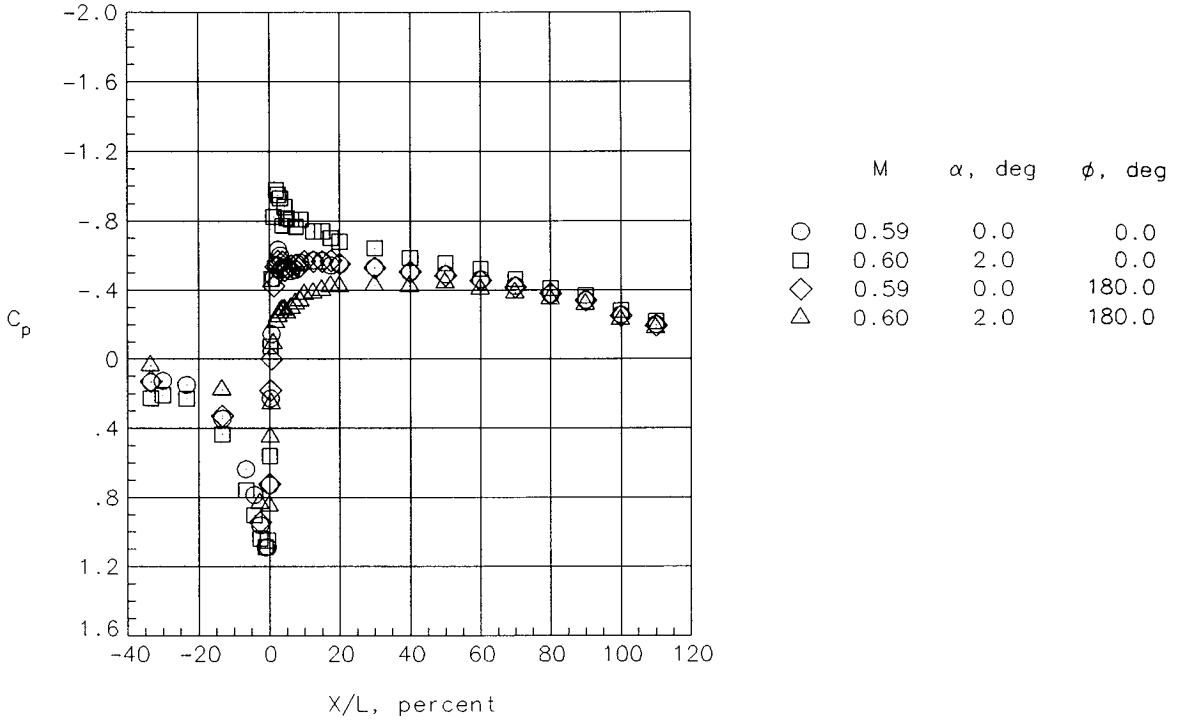


(k) $M = 0.89$ and mfr $= 0.49$.

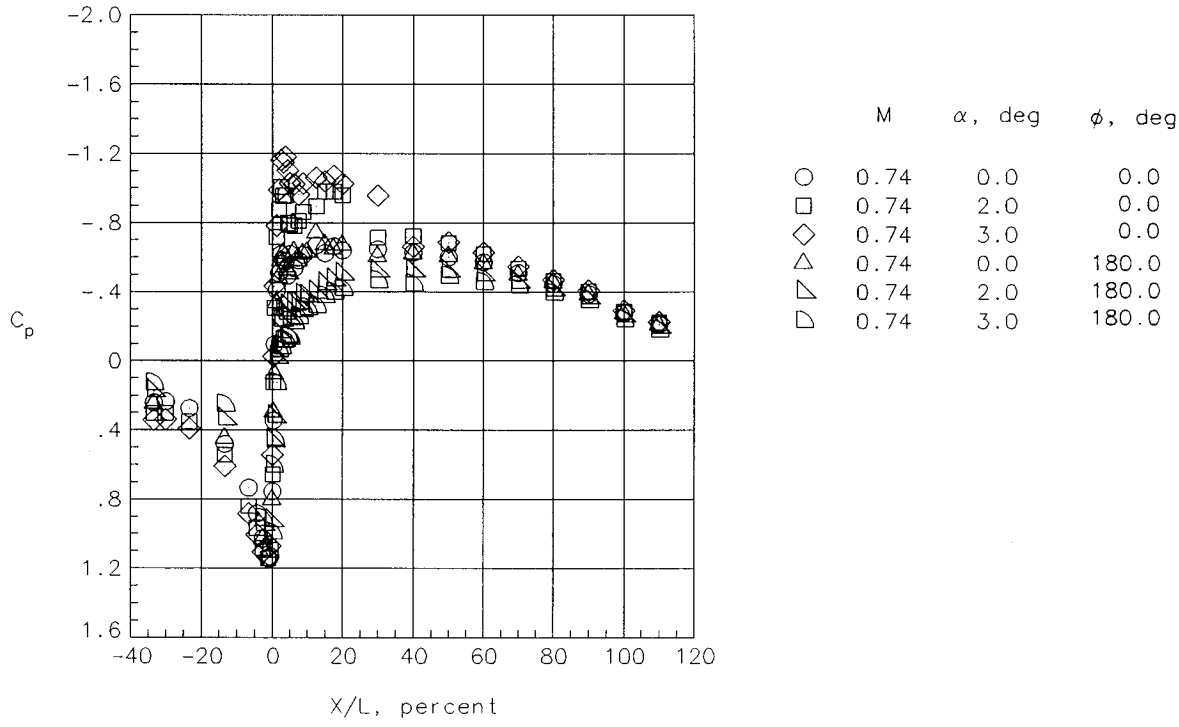


(l) $M = 0.92$ and mfr $= 0.49$.

Figure 8. Continued.

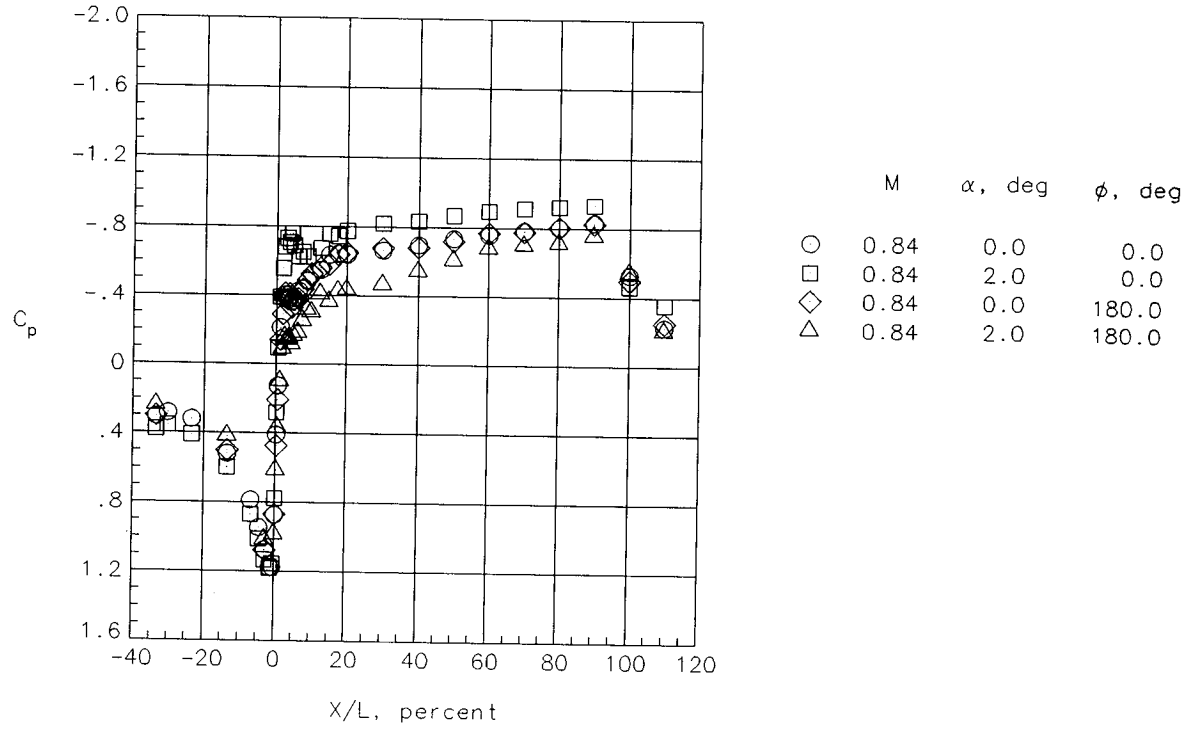


(m) $M = 0.60$ and mfr $= 0.69$.

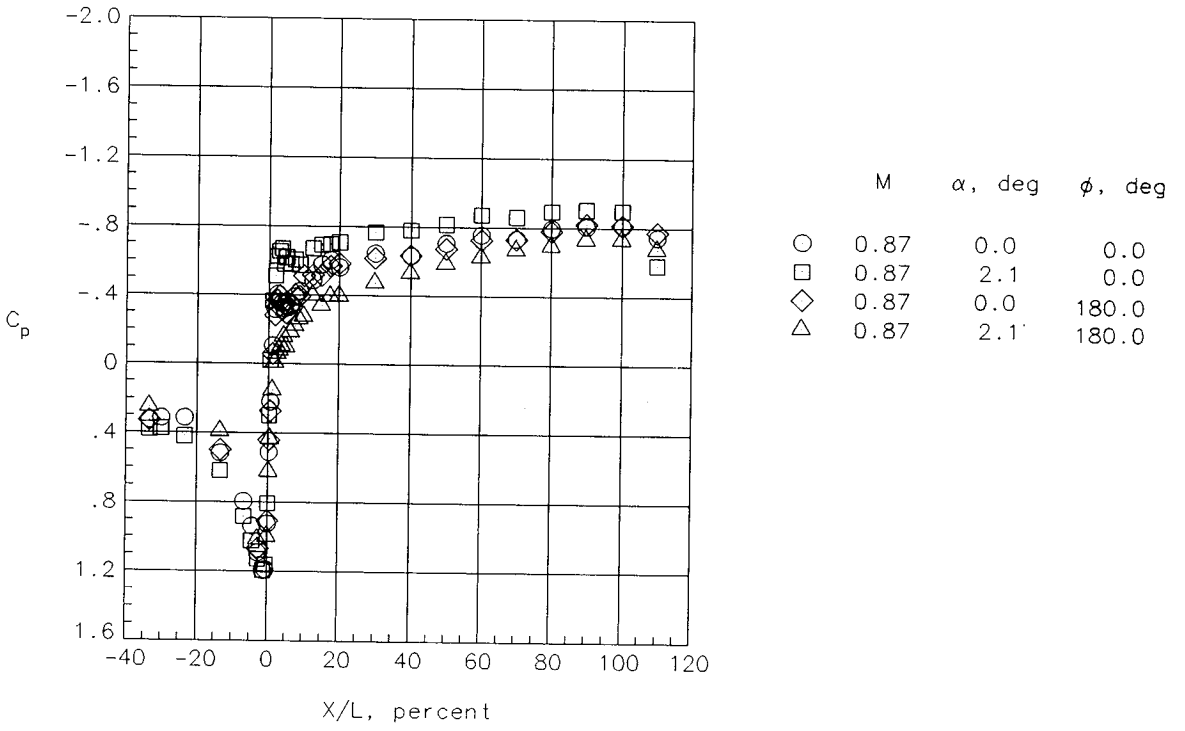


(n) $M = 0.74$ and mfr $= 0.68$.

Figure 8. Continued.

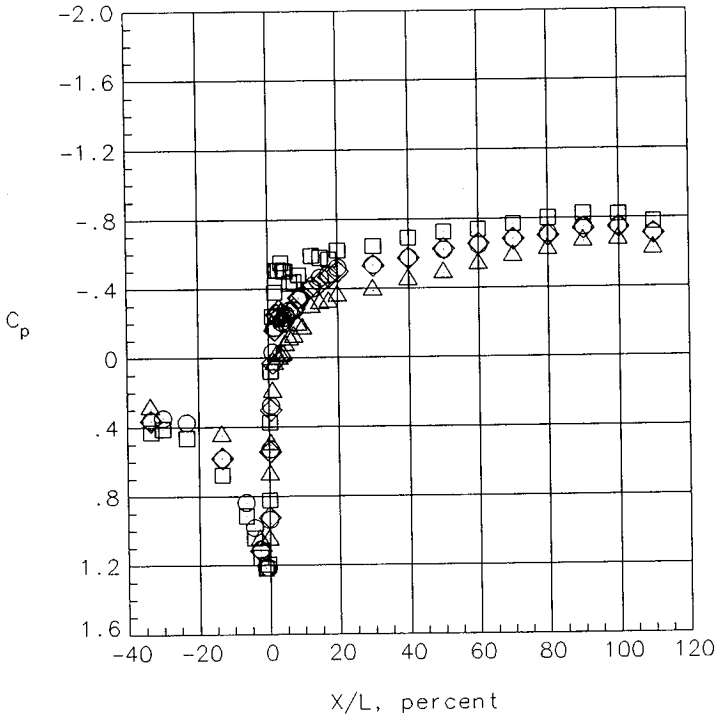


(o) $M = 0.84$ and mfr $= 0.68$.

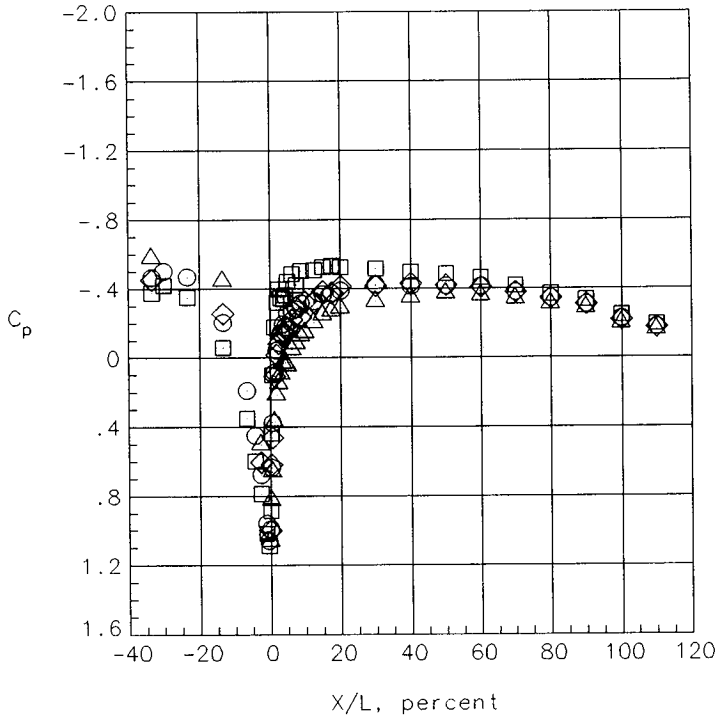


(p) $M = 0.87$ and mfr $= 0.68$.

Figure 8. Continued.

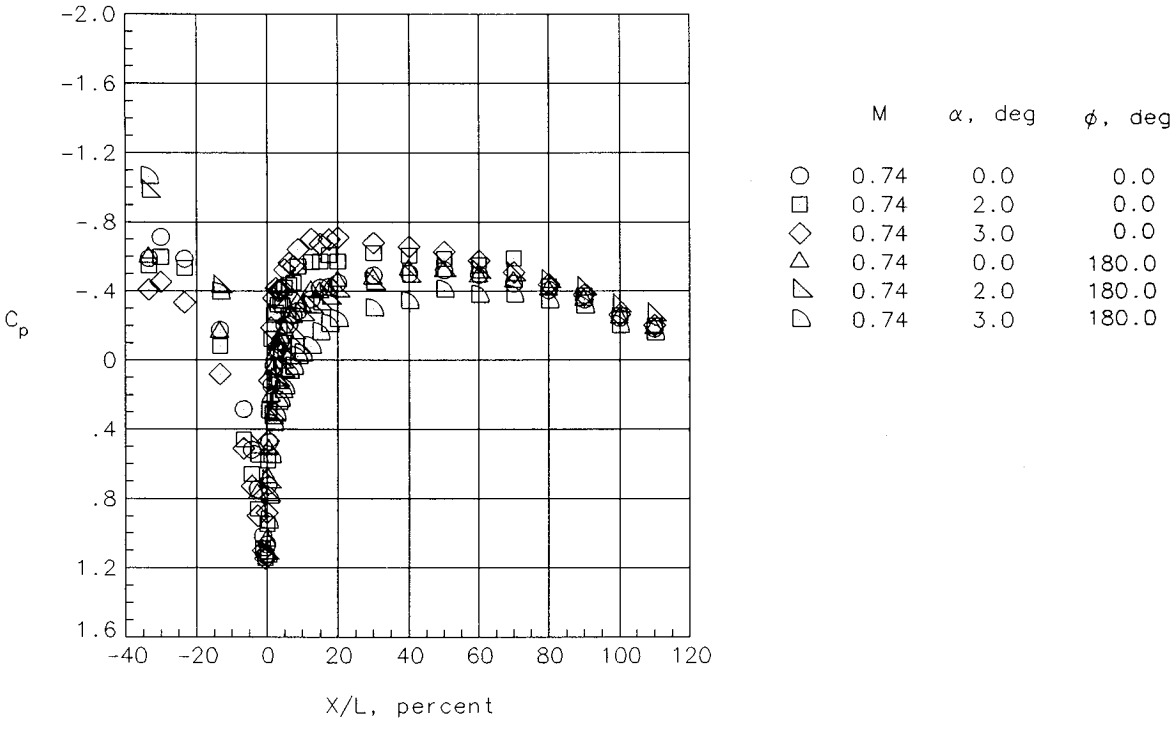


(q) $M = 0.92$ and mfr $= 0.68$.



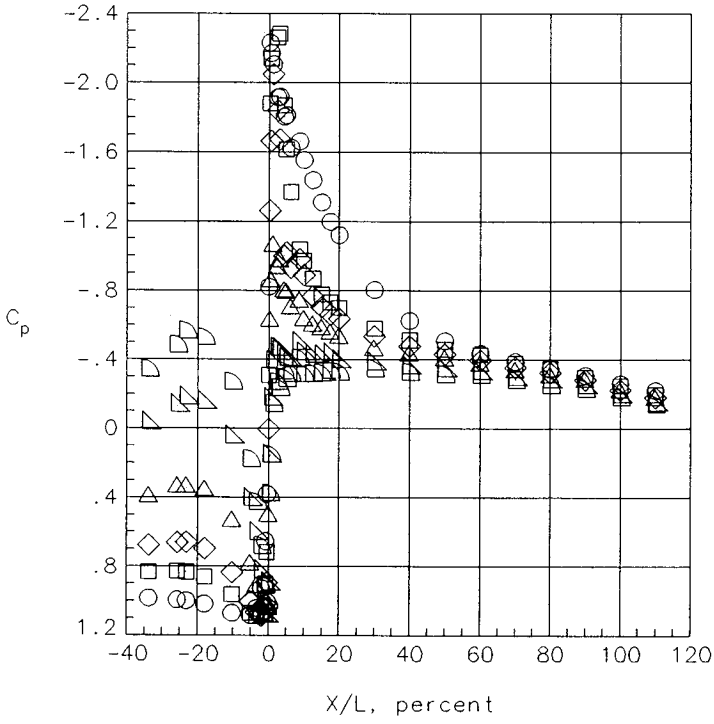
(r) $M = 0.59$ and mfr $= 0.81$.

Figure 8. Continued.



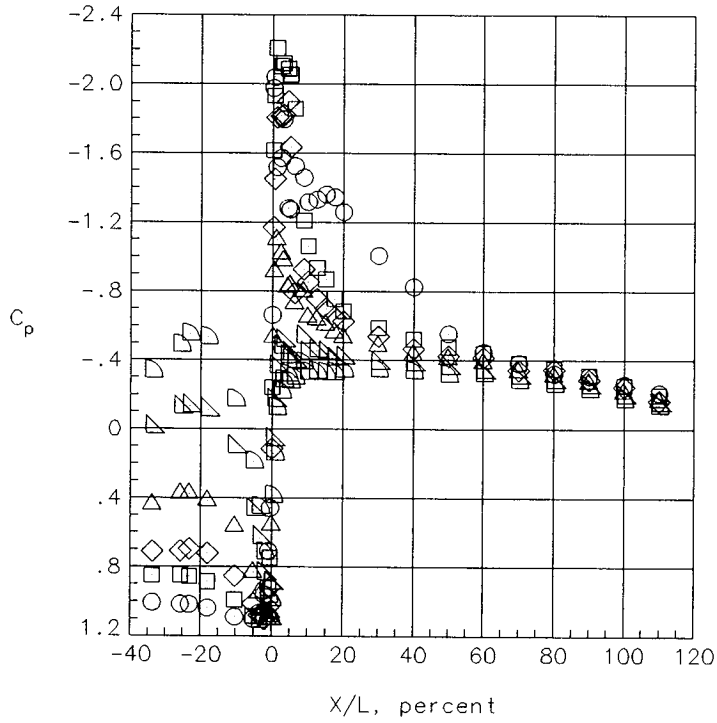
(s) $M = 0.74$ and mfr $= 0.81$.

Figure 8. Concluded.



	M	mfr	α, deg
○	0.60	0.27	0.0
□	0.59	0.41	0.0
◇	0.59	0.50	0.1
△	0.60	0.62	0.0
◺	0.60	0.75	0.0
◺	0.60	0.82	0.0

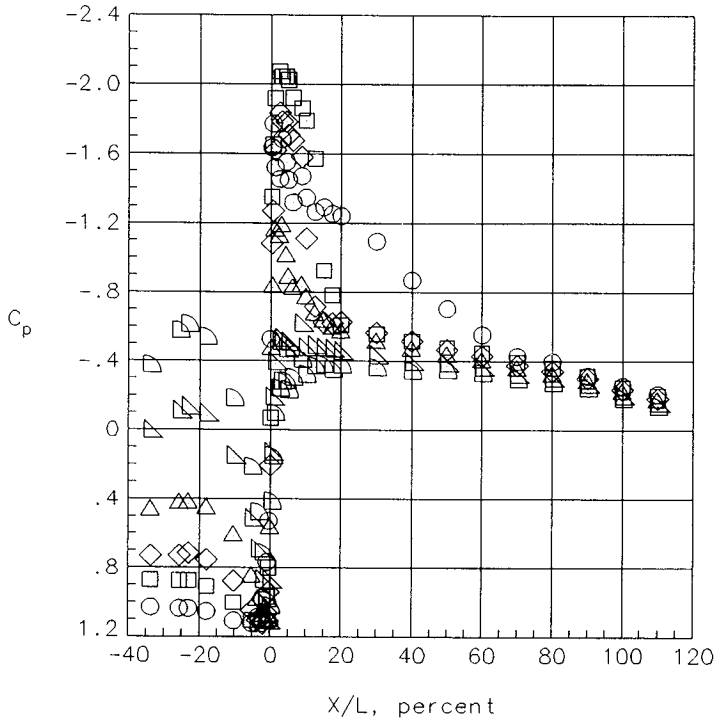
(a) $M = 0.60$.



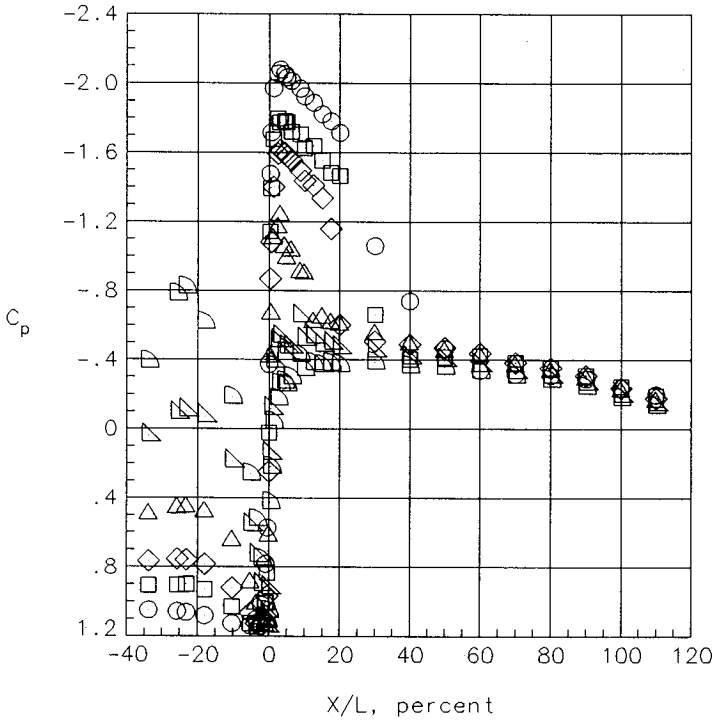
	M	mfr	α, deg
○	0.64	0.28	0.0
□	0.64	0.41	0.0
◇	0.64	0.50	0.0
△	0.65	0.62	0.0
◺	0.64	0.75	0.0
◺	0.64	0.81	0.0

(b) $M = 0.64$.

Figure 9. Pressure coefficient variation with X/L for inlet with medium cowl for various mass-flow ratios at $\alpha = 0°$.

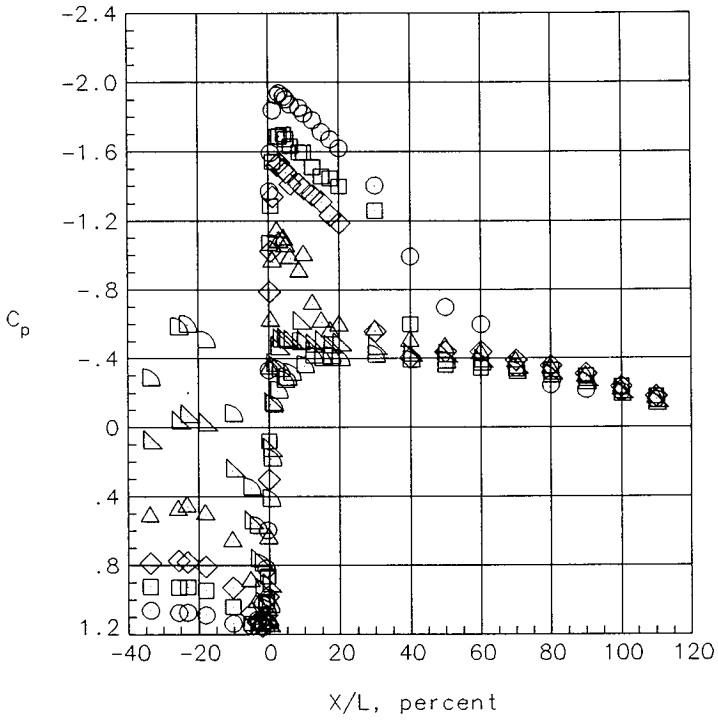


(c) $M = 0.69$.



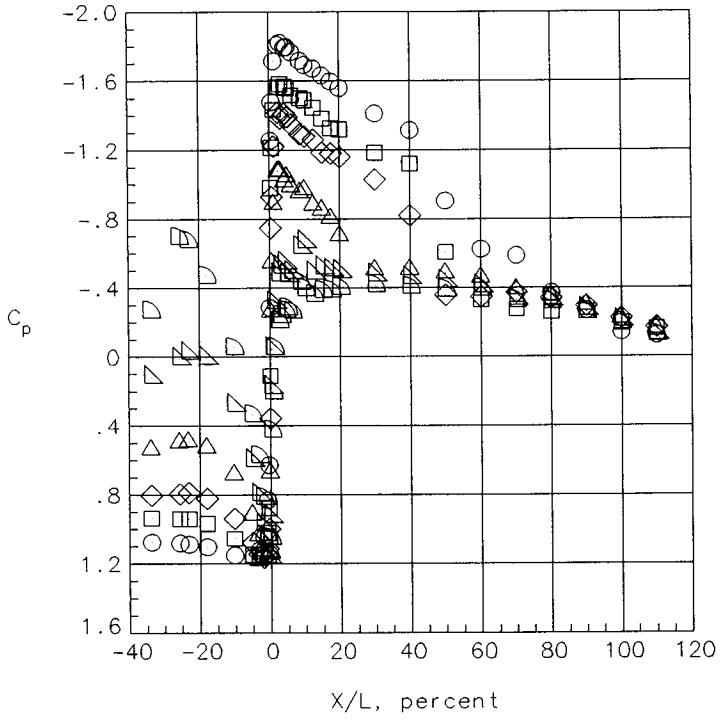
(d) $M = 0.74$.

Figure 9. Continued.



	M	mfr	α, deg
○	0.77	0.27	0.0
□	0.77	0.41	0.0
◇	0.77	0.49	0.0
△	0.77	0.61	0.0
◺	0.77	0.74	0.0
◺	0.77	0.80	0.0

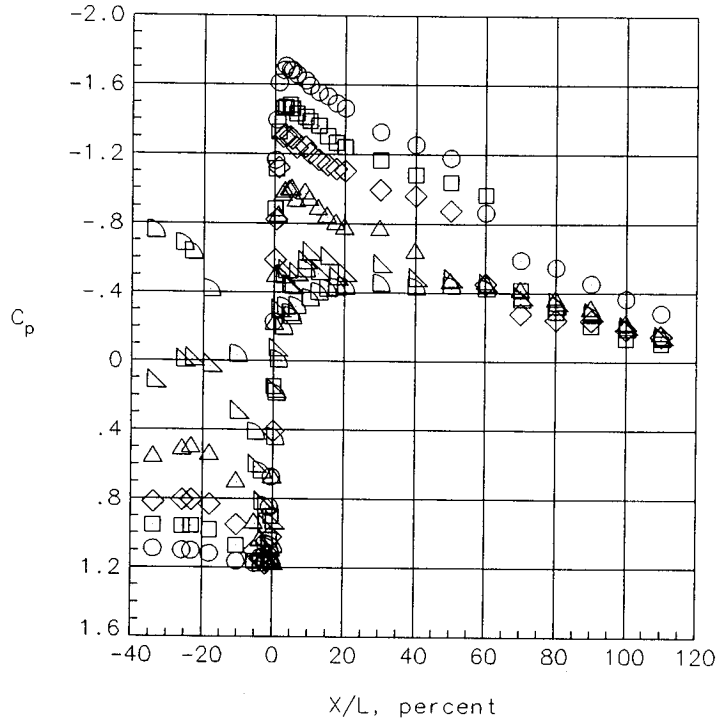
(e) $M = 0.77$.



	M	mfr	α, deg
○	0.79	0.27	0.0
□	0.79	0.41	0.0
◇	0.79	0.49	0.0
△	0.79	0.62	0.0
◺	0.79	0.74	0.0
◺	0.79	0.80	0.0

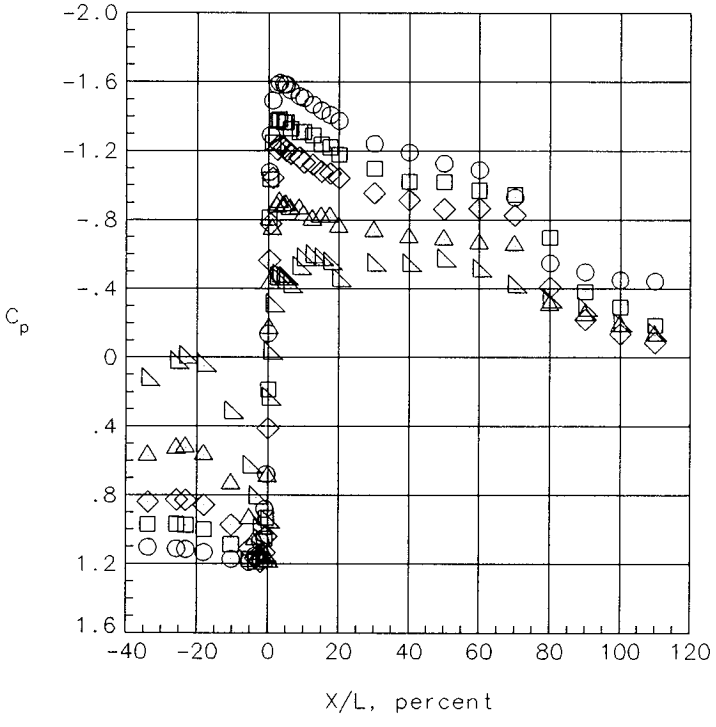
(f) $M = 0.79$.

Figure 9. Continued.



	M	mfr	α, deg
○	0.82	0.27	0.0
□	0.82	0.41	0.0
◇	0.82	0.50	0.0
△	0.82	0.61	0.0
◺	0.82	0.74	0.0
◺	0.82	0.80	0.0

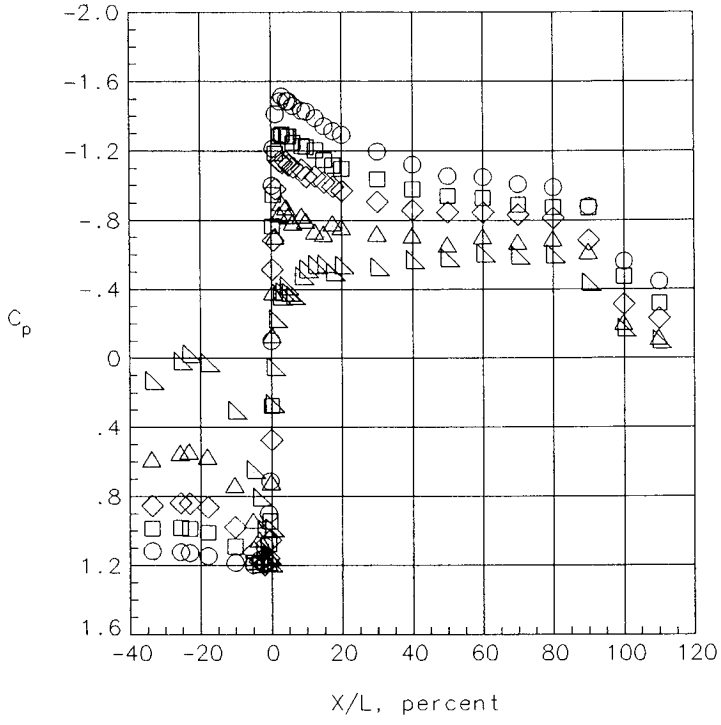
(g) $M = 0.82$.



	M	mfr	α, deg
○	0.84	0.27	0.0
□	0.84	0.41	0.0
◇	0.84	0.50	0.1
△	0.84	0.61	0.0
◺	0.84	0.74	0.0

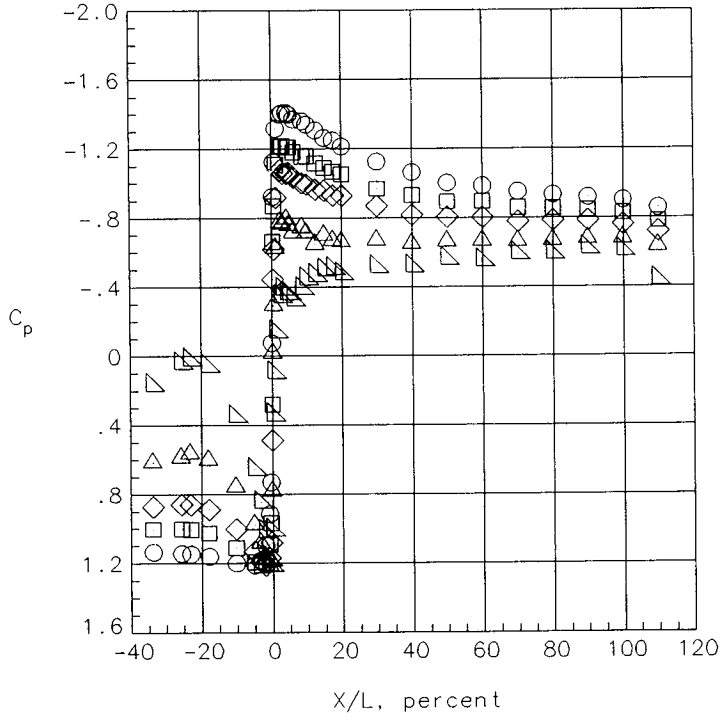
(h) $M = 0.84$.

Figure 9. Continued.



	M	mfr	α, deg
○	0.87	0.27	0.1
□	0.87	0.40	0.0
◇	0.87	0.50	0.0
△	0.87	0.62	0.0
◺	0.87	0.74	0.0

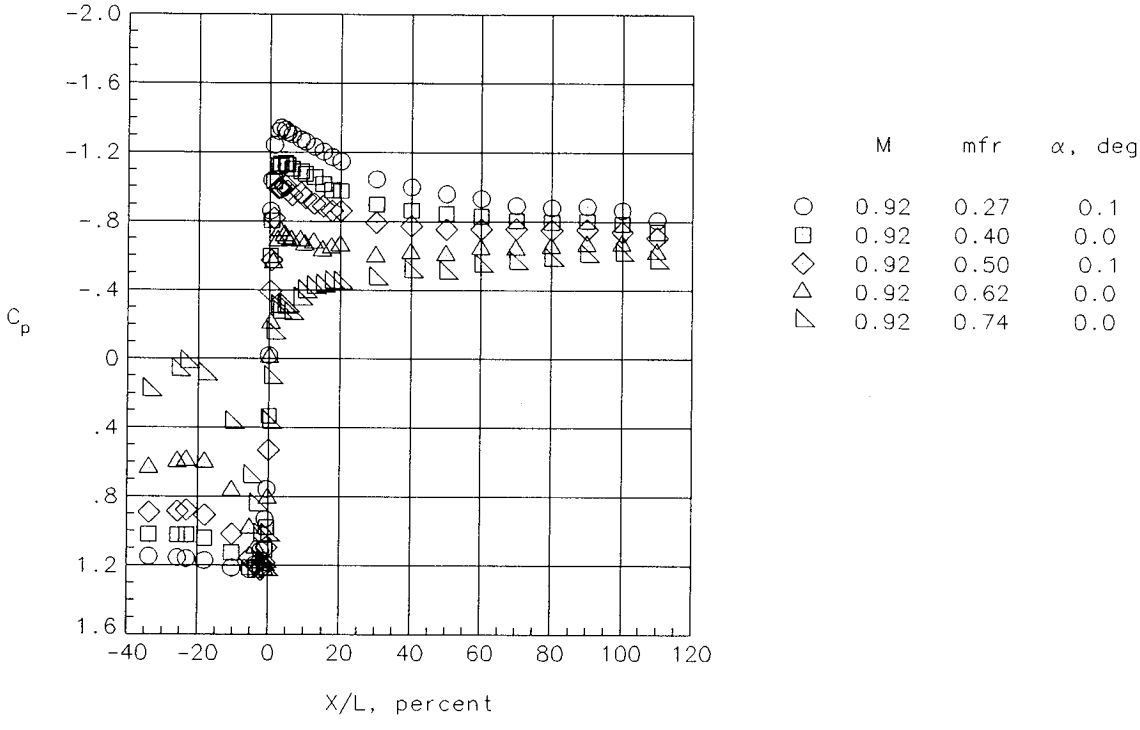
(i) $M = 0.87$.



	M	mfr	α, deg
○	0.89	0.27	0.1
□	0.89	0.40	0.0
◇	0.89	0.50	0.1
△	0.90	0.62	0.0
◺	0.89	0.74	0.0

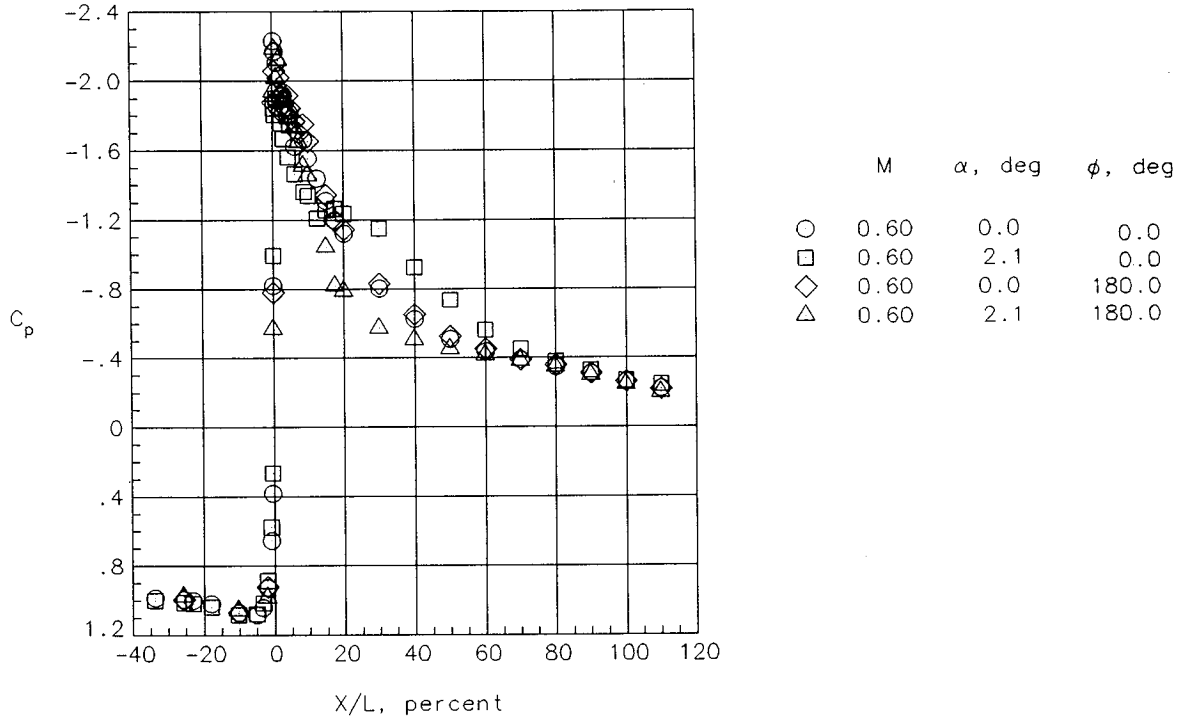
(j) $M = 0.89$.

Figure 9. Continued.

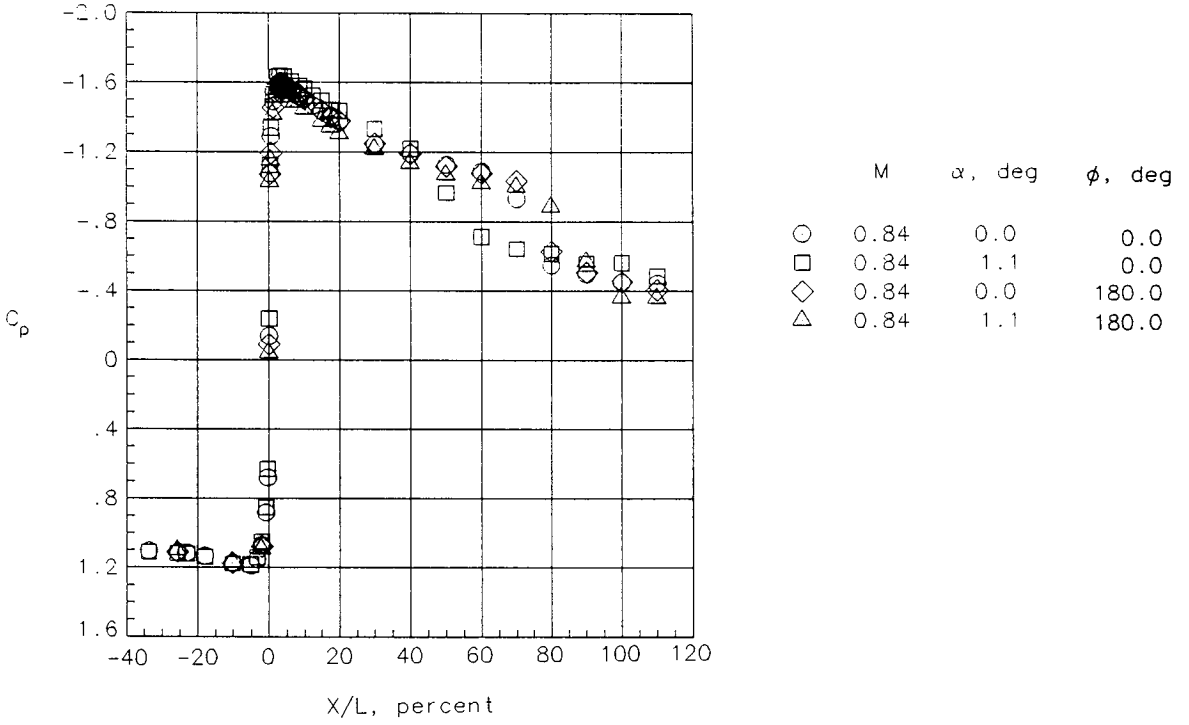


(k) $M = 0.92$.

Figure 9. Concluded.

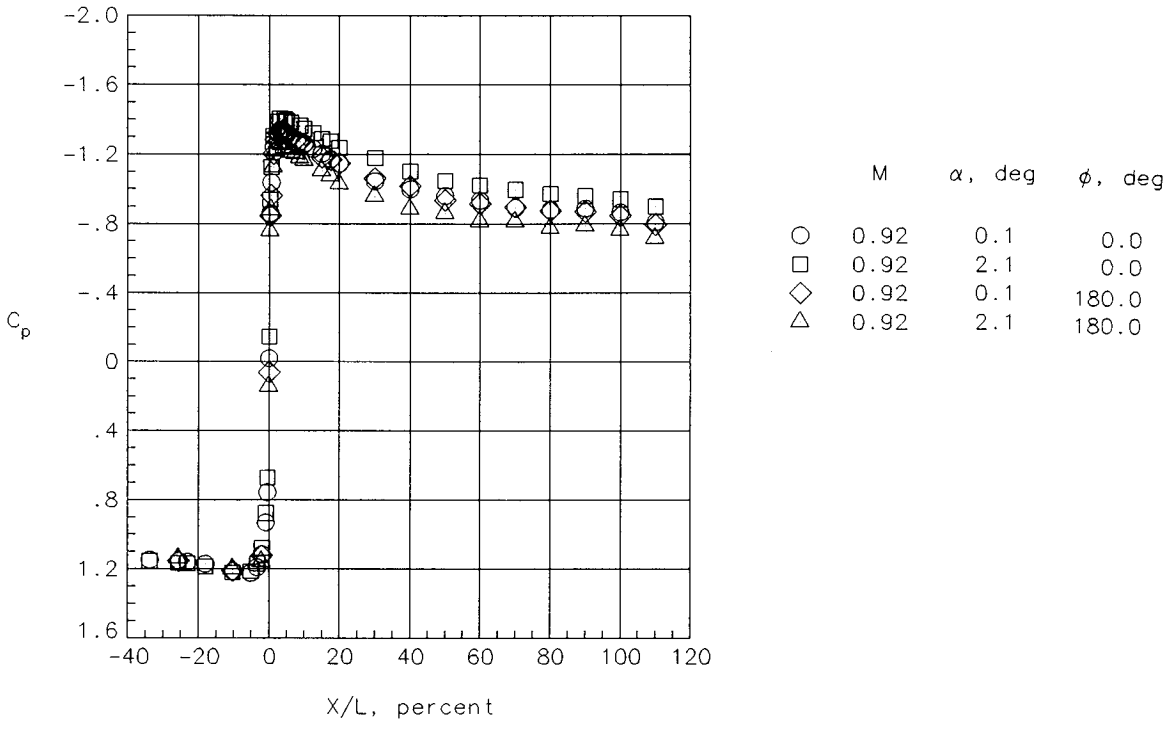


(a) $M = 0.60$ and mfr = 0.27.

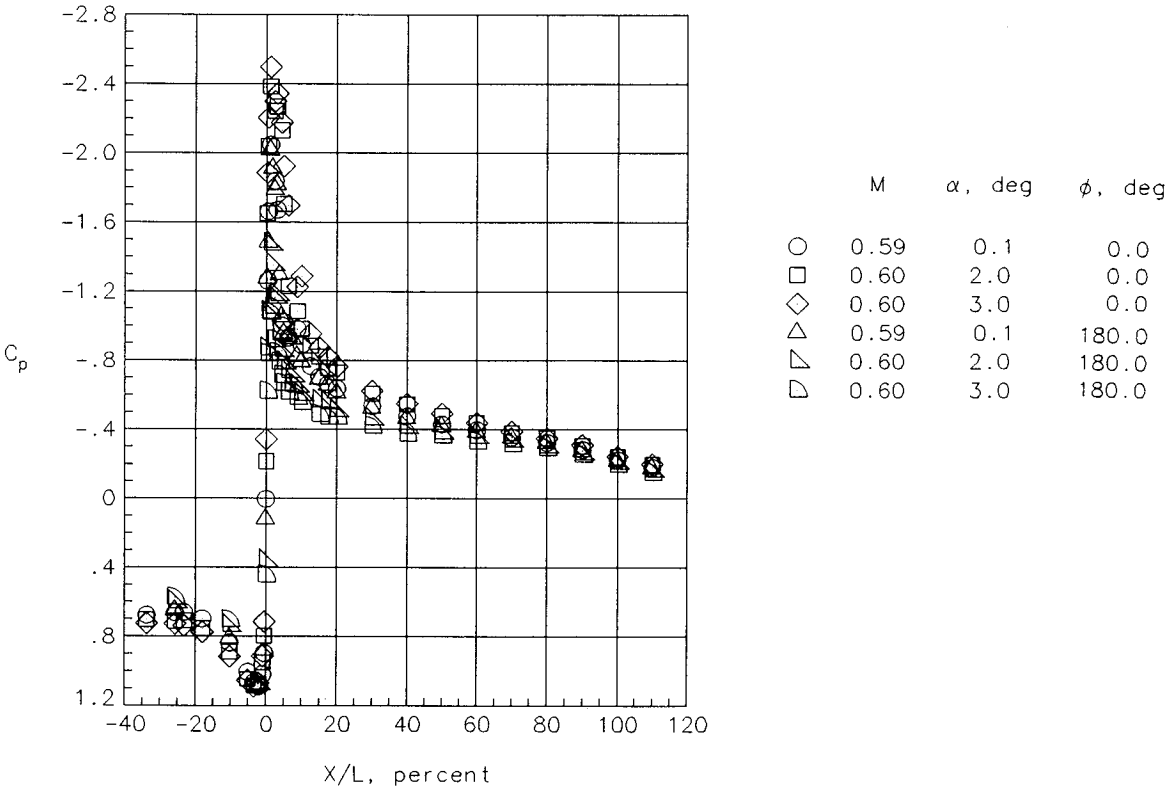


(b) $M = 0.84$ and mfr = 0.27.

Figure 10. Pressure coefficient variation with X/L on medium cowl at various angles of attack.

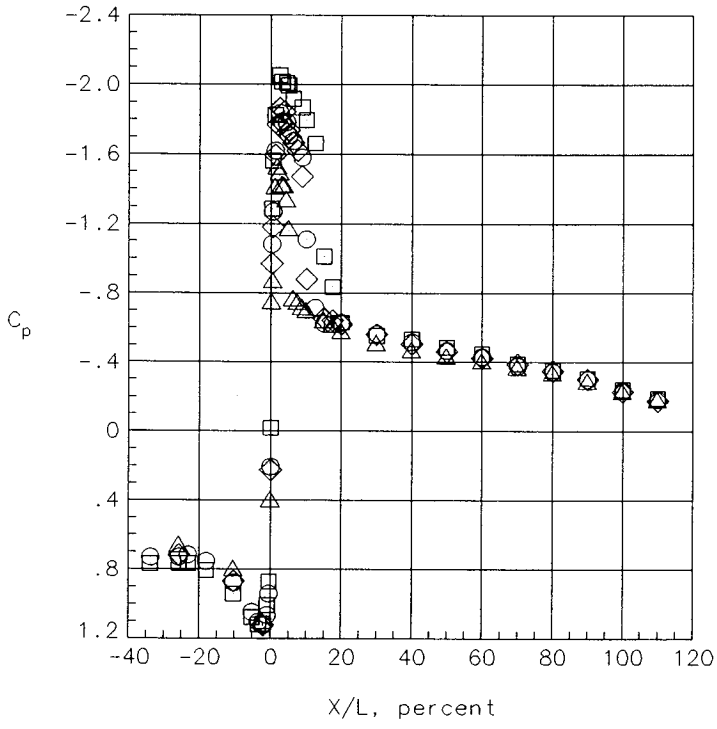


(c) $M = 0.92$ and mfr $= 0.27$.

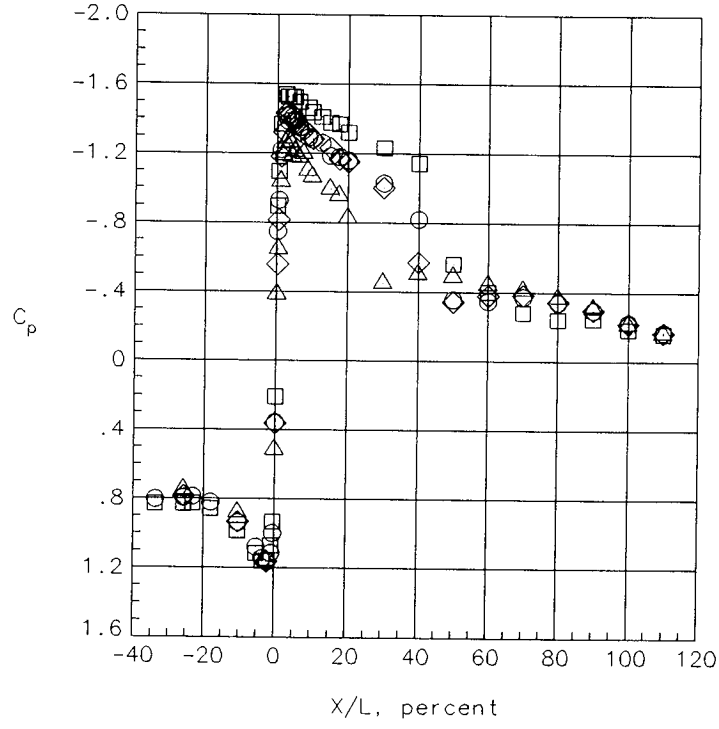


(d) $M = 0.60$ and mfr $= 0.50$.

Figure 10. Continued.

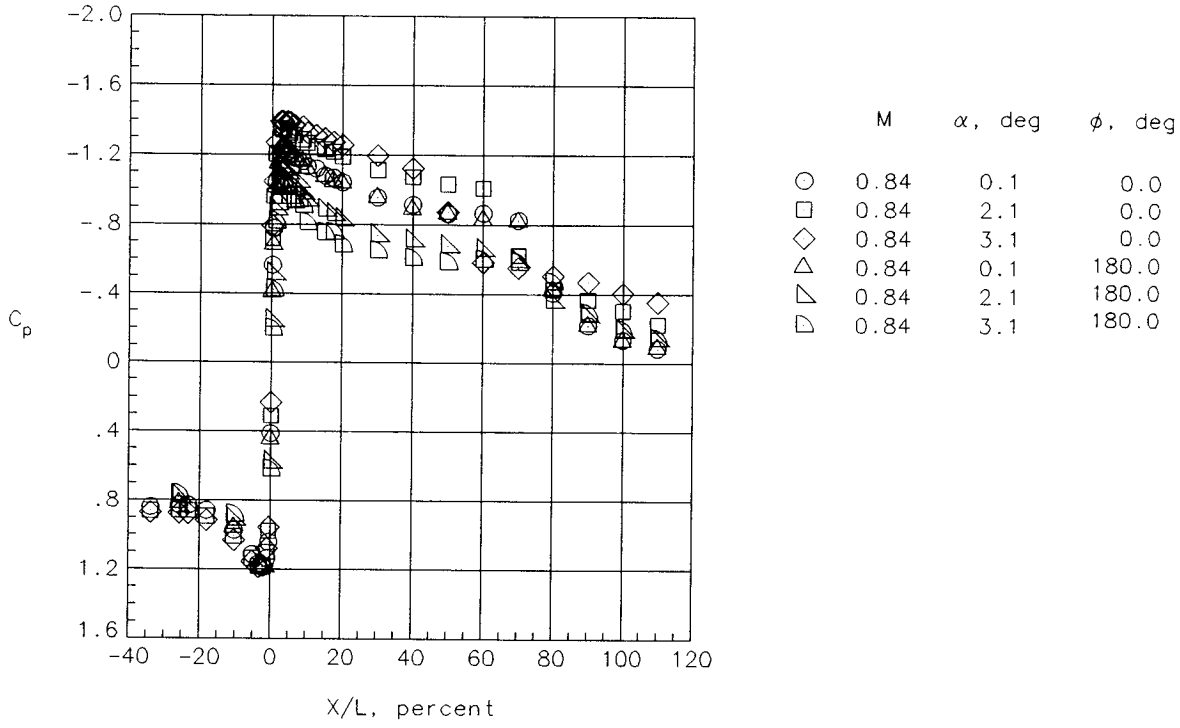


(e) $M = 0.69$ and mfr $= 0.50$.

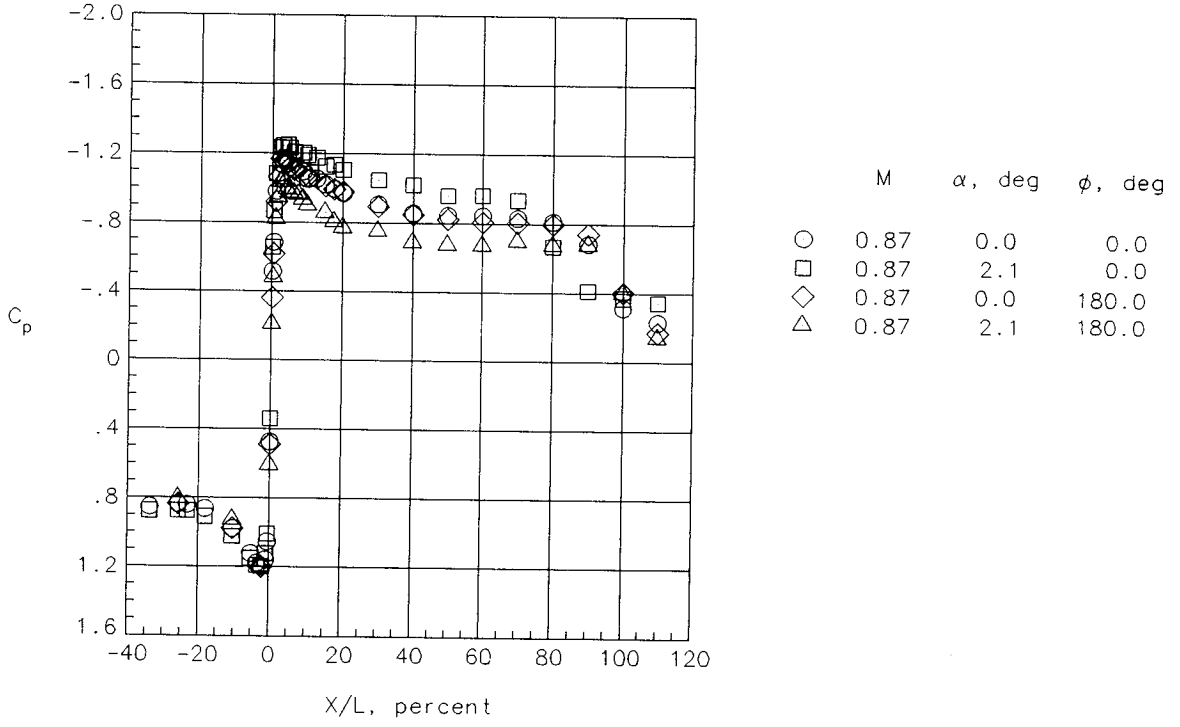


(f) $M = 0.79$ and mfr $= 0.49$.

Figure 10. Continued.

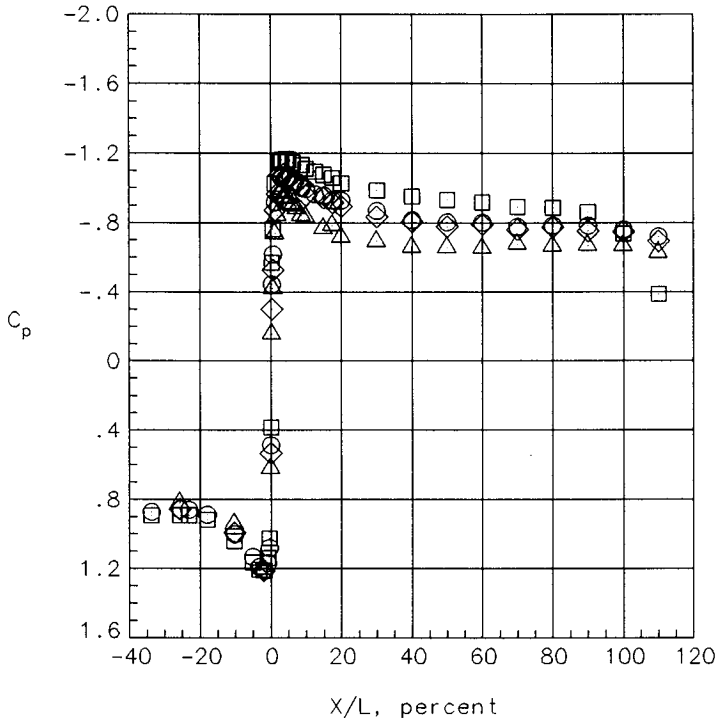


(g) $M = 0.84$ and mfr $= 0.49$.

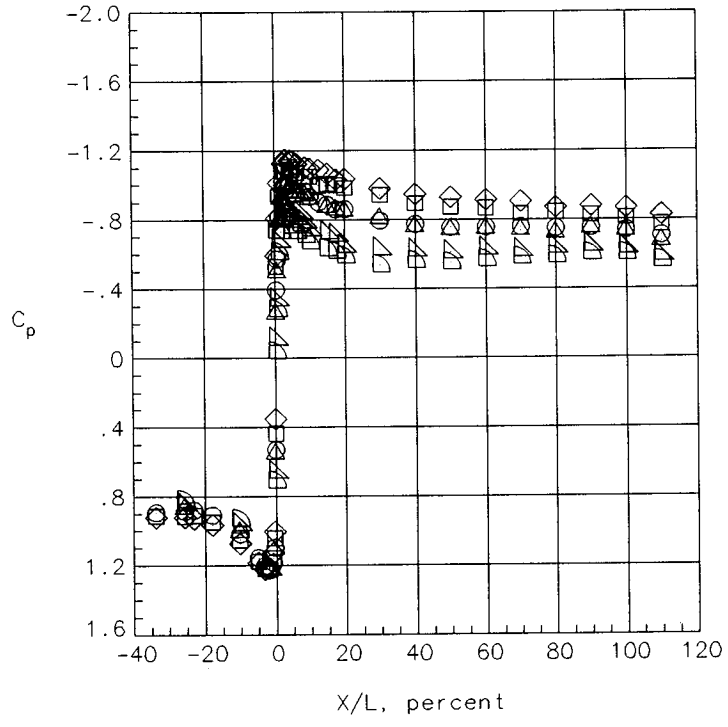


(h) $M = 0.87$ and mfr $= 0.50$.

Figure 10. Continued.

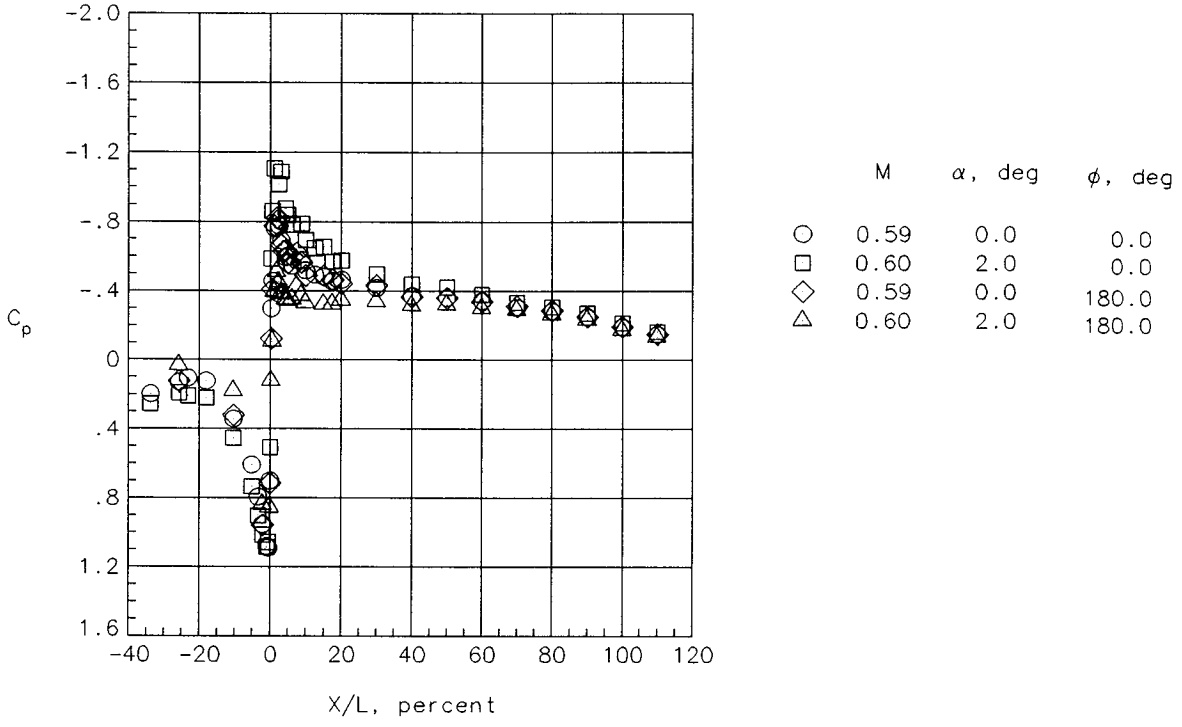


(i) $M = 0.89$ and mfr $= 0.49$.

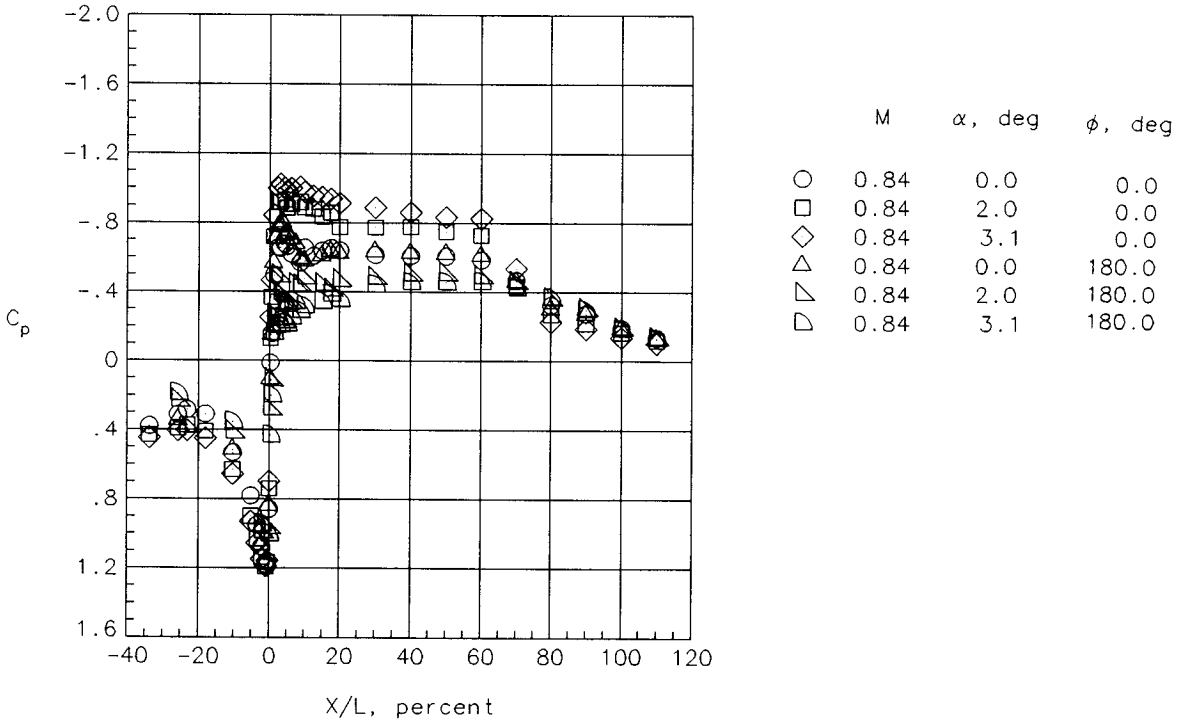


(j) $M = 0.92$ and mfr $= 0.50$.

Figure 10. Continued.

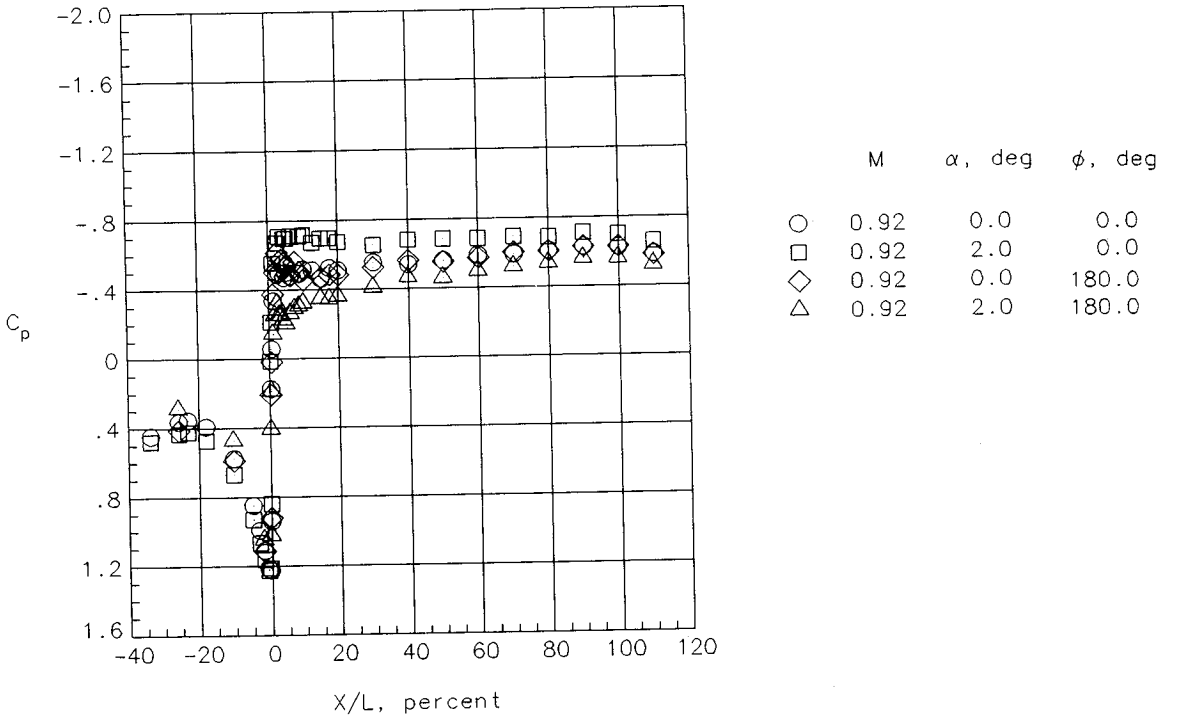


(k) $M = 0.60$ and mfr $= 0.69$.

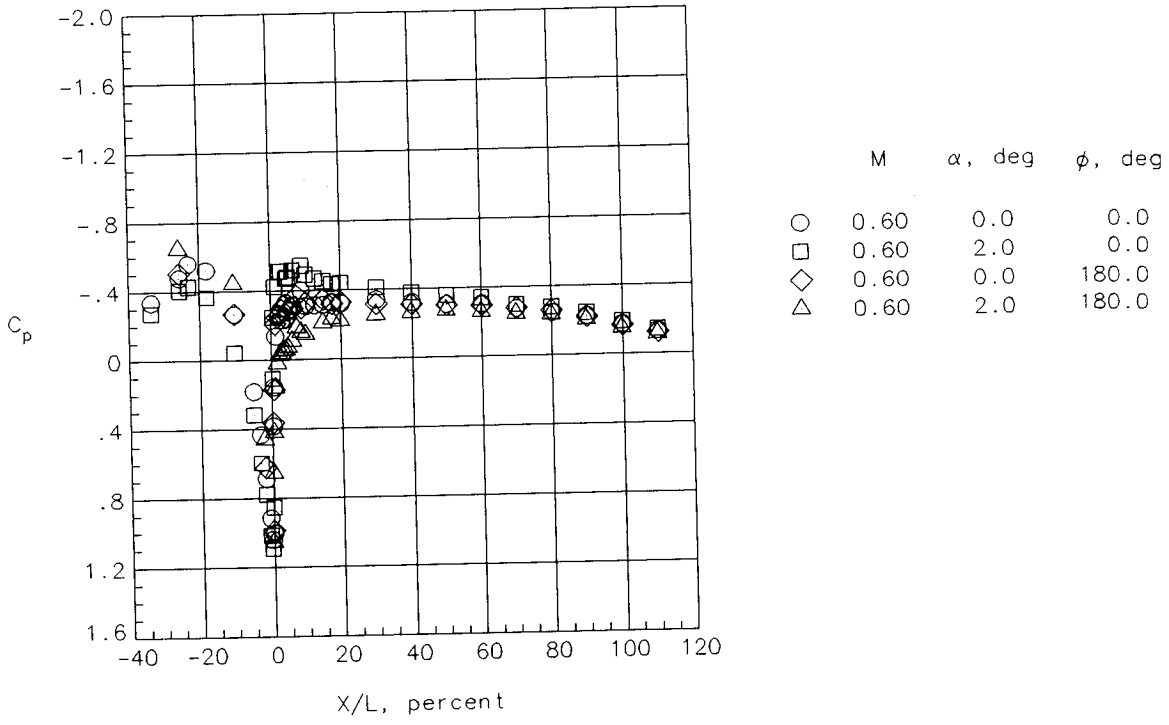


(l) $M = 0.84$ and mfr $= 0.68$.

Figure 10. Continued.

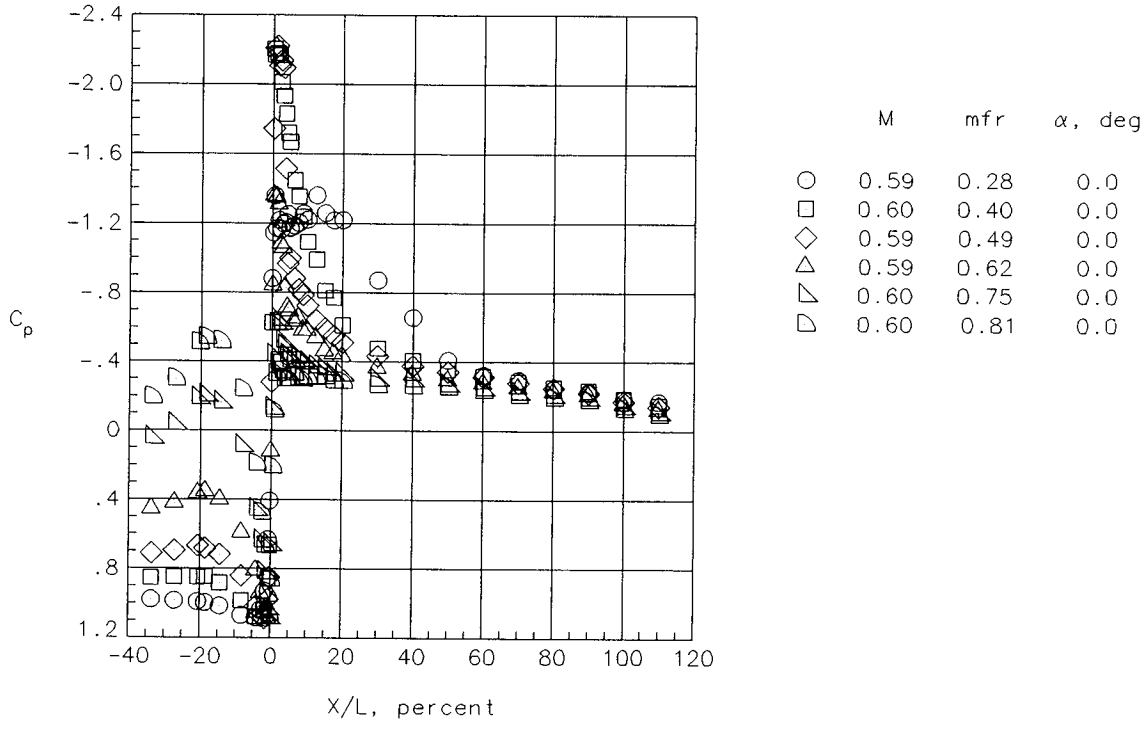


(m) $M = 0.92$ and mfr $= 0.68$.

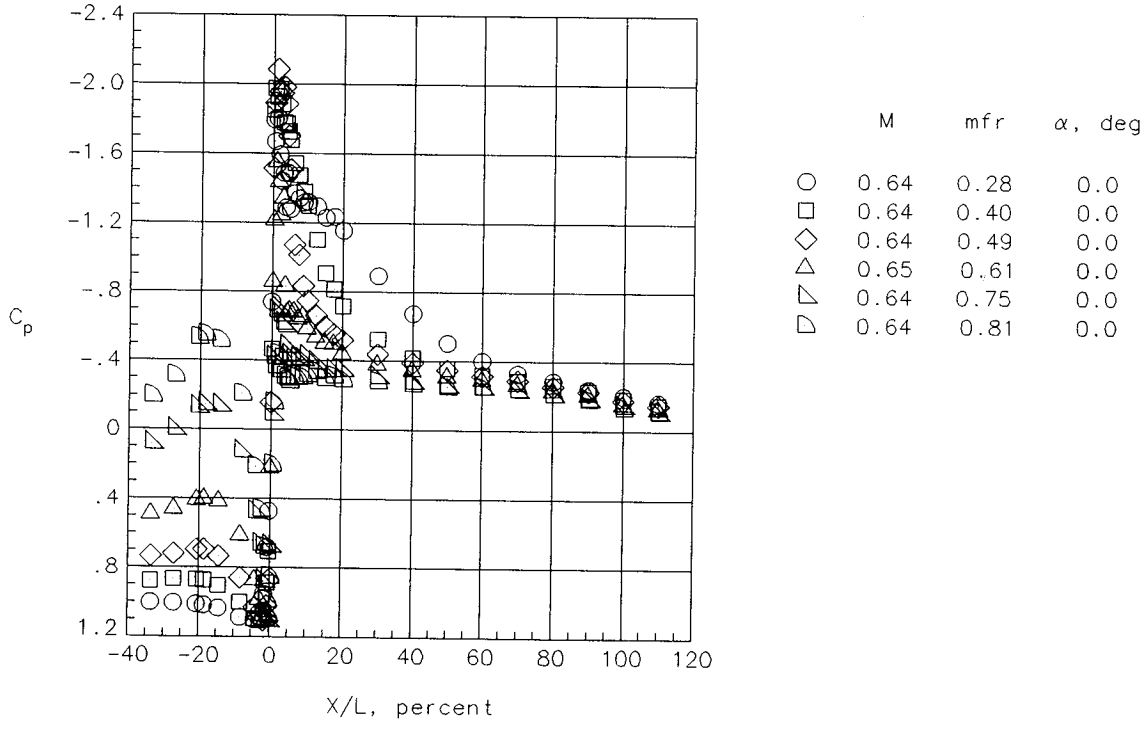


(n) $M = 0.60$ and mfr $= 0.82$.

Figure 10. Concluded.

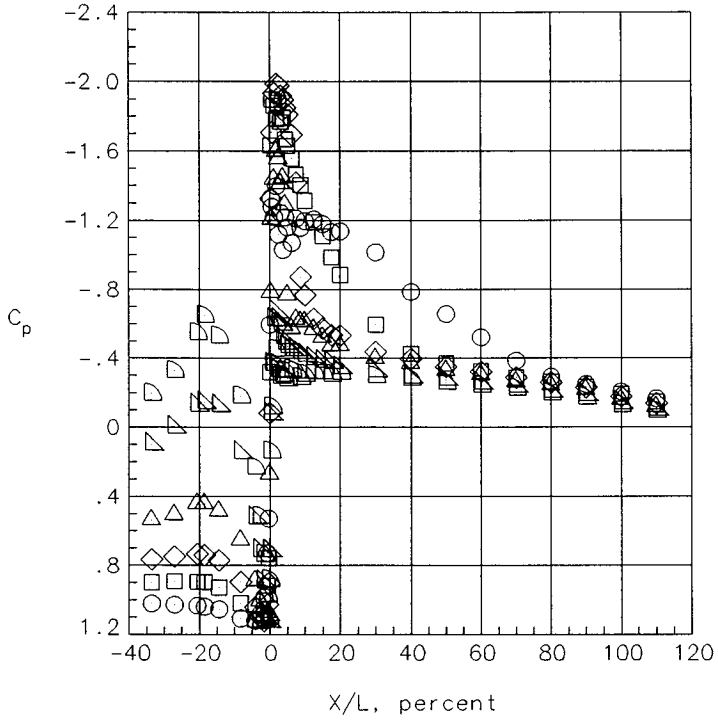


(a) $M = 0.59$.

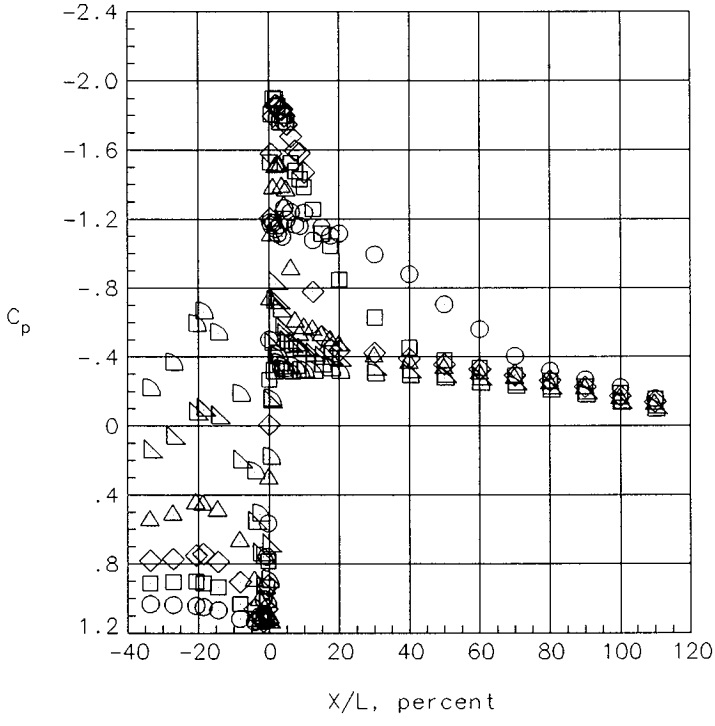


(b) $M = 0.64$.

Figure 11. Pressure coefficient variation with X/L for inlet with long cowl for various mass-flow ratios at $\alpha = 0°$.

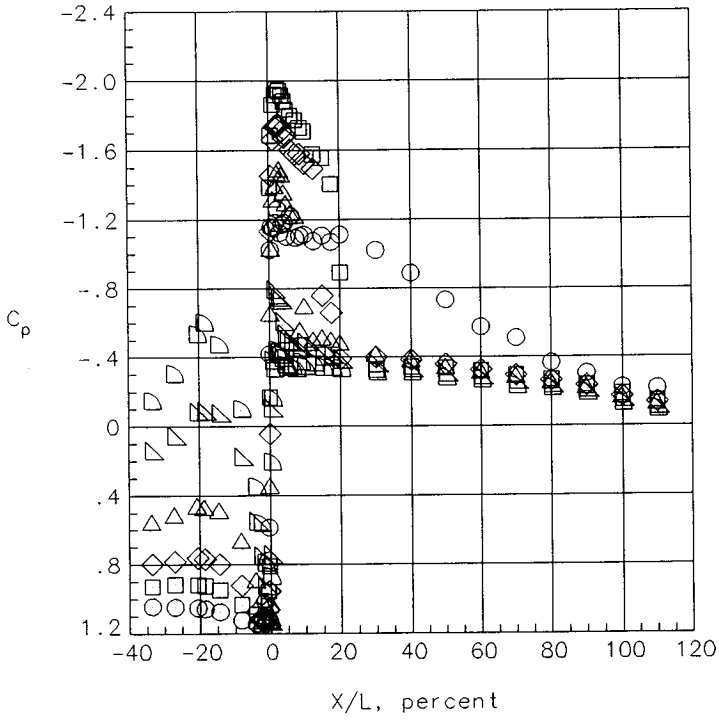


(c) $M = 0.69$.



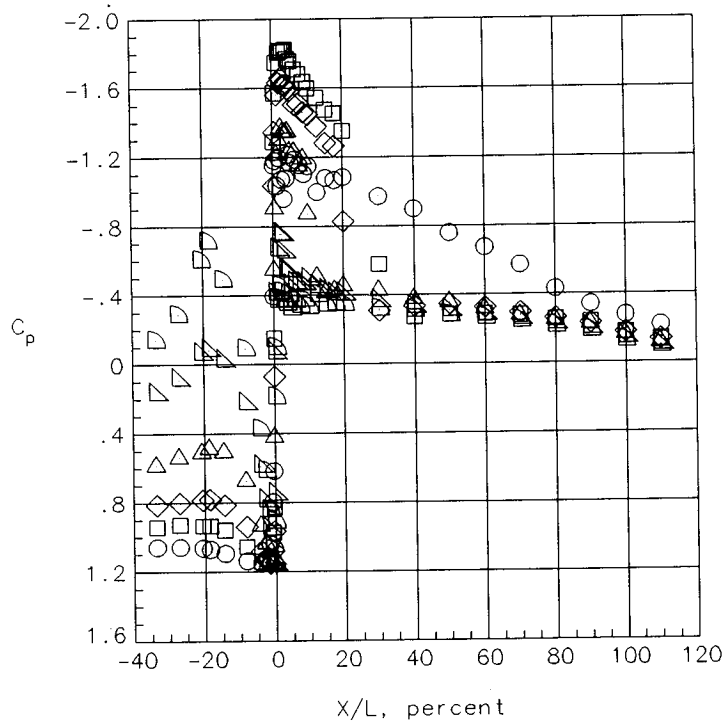
(d) $M = 0.72$.

Figure 11. Continued.



	M	mfr	α, deg
○	0.74	0.28	0.0
□	0.74	0.40	0.0
◇	0.74	0.49	0.0
△	0.74	0.61	0.0
◺	0.74	0.74	0.0
◻	0.74	0.80	0.0

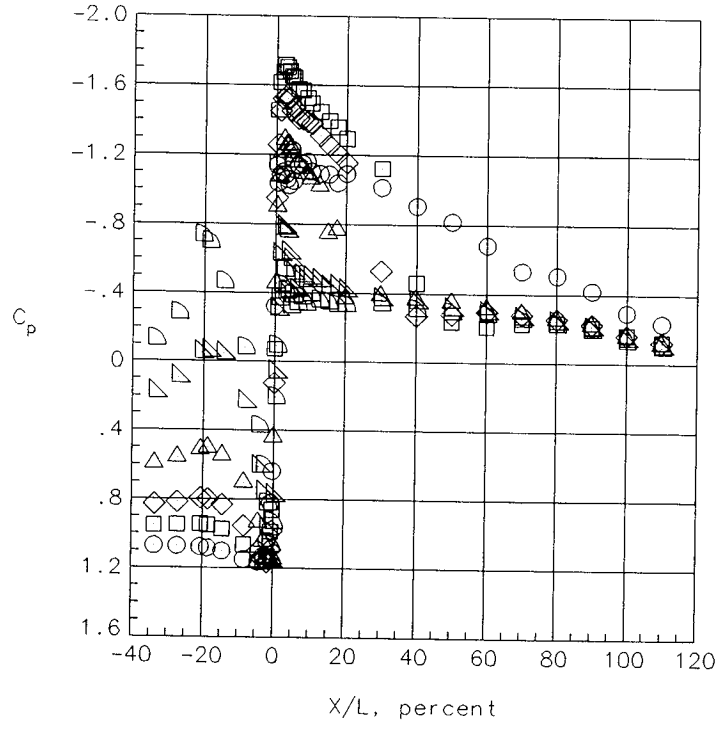
(e) $M = 0.74$.



	M	mfr	α, deg
○	0.77	0.28	0.0
□	0.77	0.40	0.0
◇	0.77	0.49	0.0
△	0.77	0.61	0.0
◺	0.77	0.74	0.0
◻	0.77	0.80	0.0

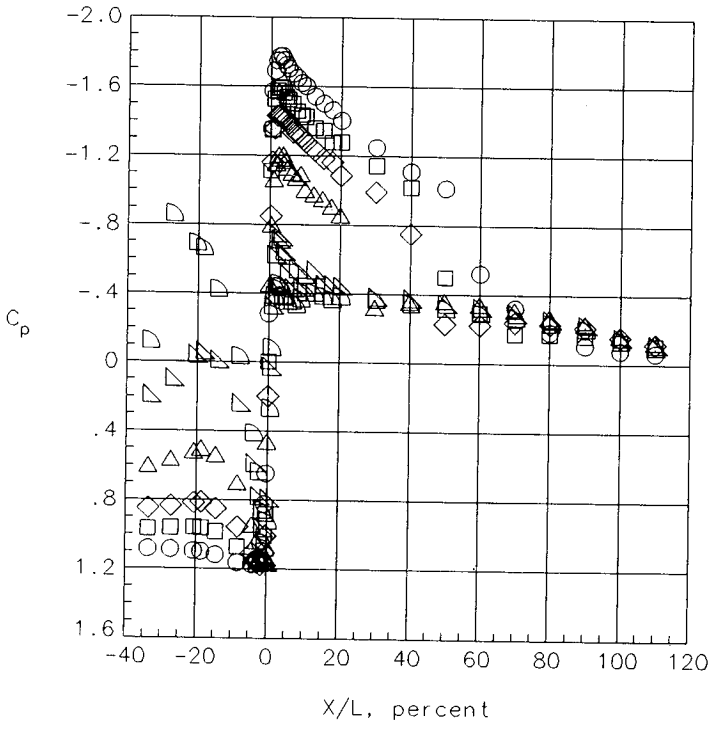
(f) $M = 0.77$.

Figure 11. Continued.



	M	mfr	α, deg
○	0.79	0.28	0.0
□	0.79	0.40	0.0
◇	0.79	0.49	0.0
△	0.79	0.61	0.0
◺	0.79	0.74	0.0
◸	0.79	0.80	0.0

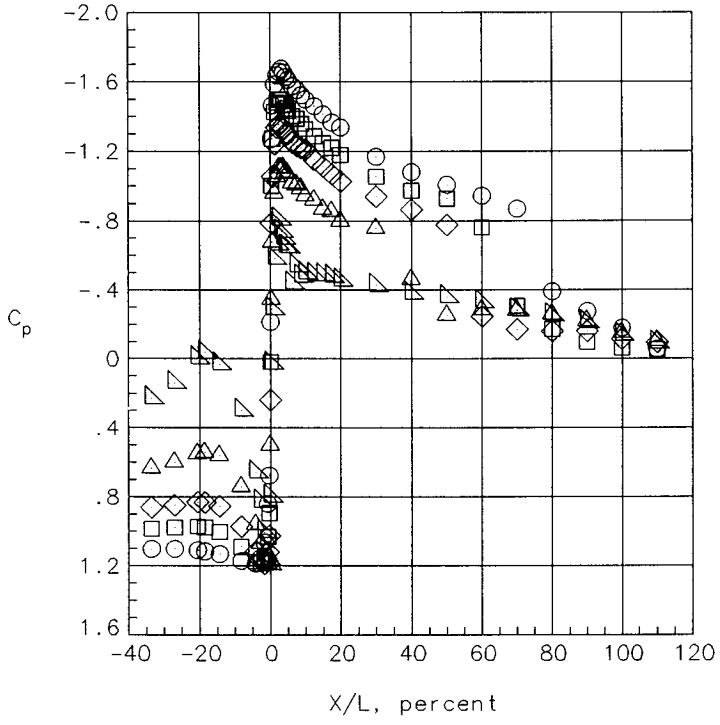
(g) $M = 0.79$.



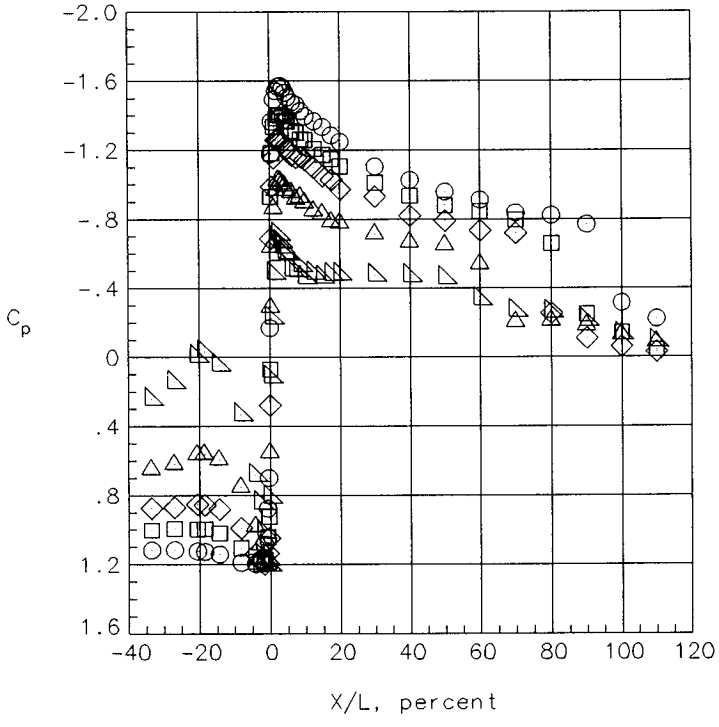
	M	mfr	α, deg
○	0.82	0.27	0.0
□	0.82	0.40	0.0
◇	0.82	0.49	0.0
△	0.82	0.61	0.0
◺	0.82	0.74	0.0
◸	0.82	0.80	0.0

(h) $M = 0.82$.

Figure 11. Continued.

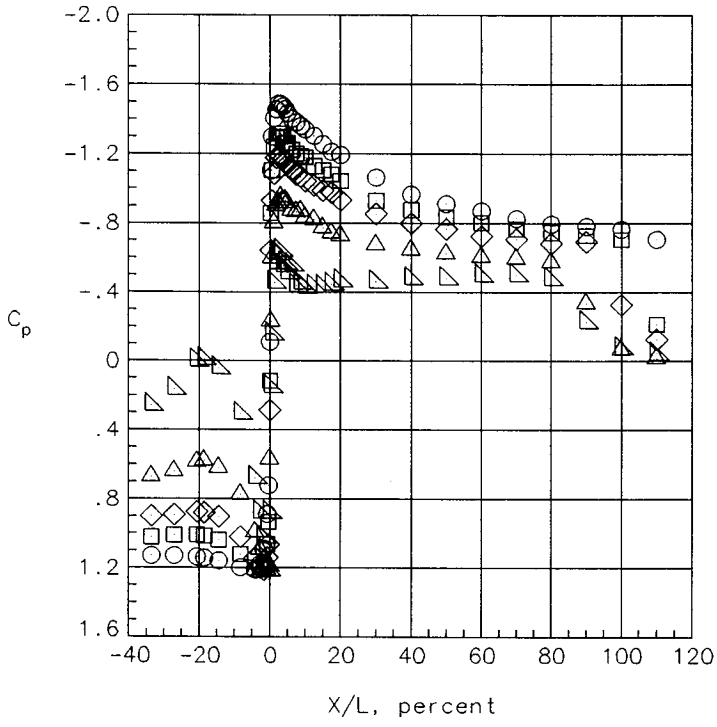


(i) $M = 0.84$.

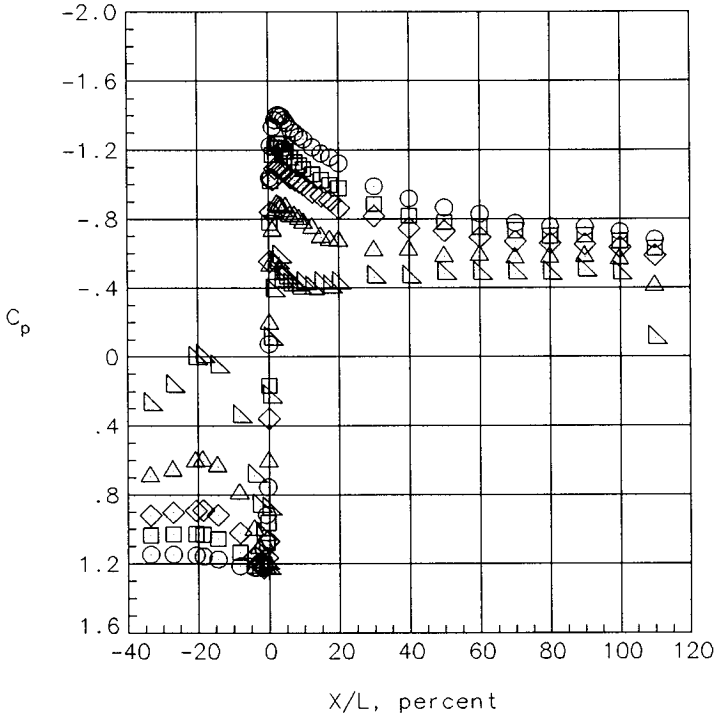


(j) $M = 0.87$.

Figure 11. Continued.

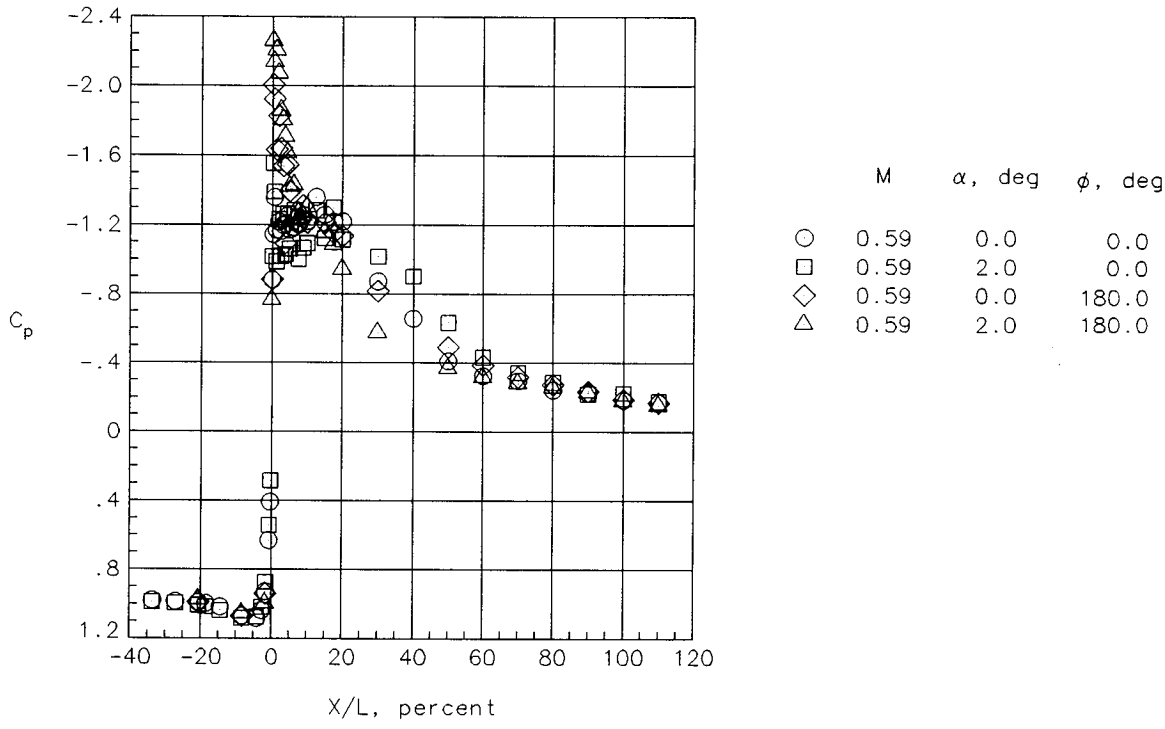


(k) $M = 0.89$.

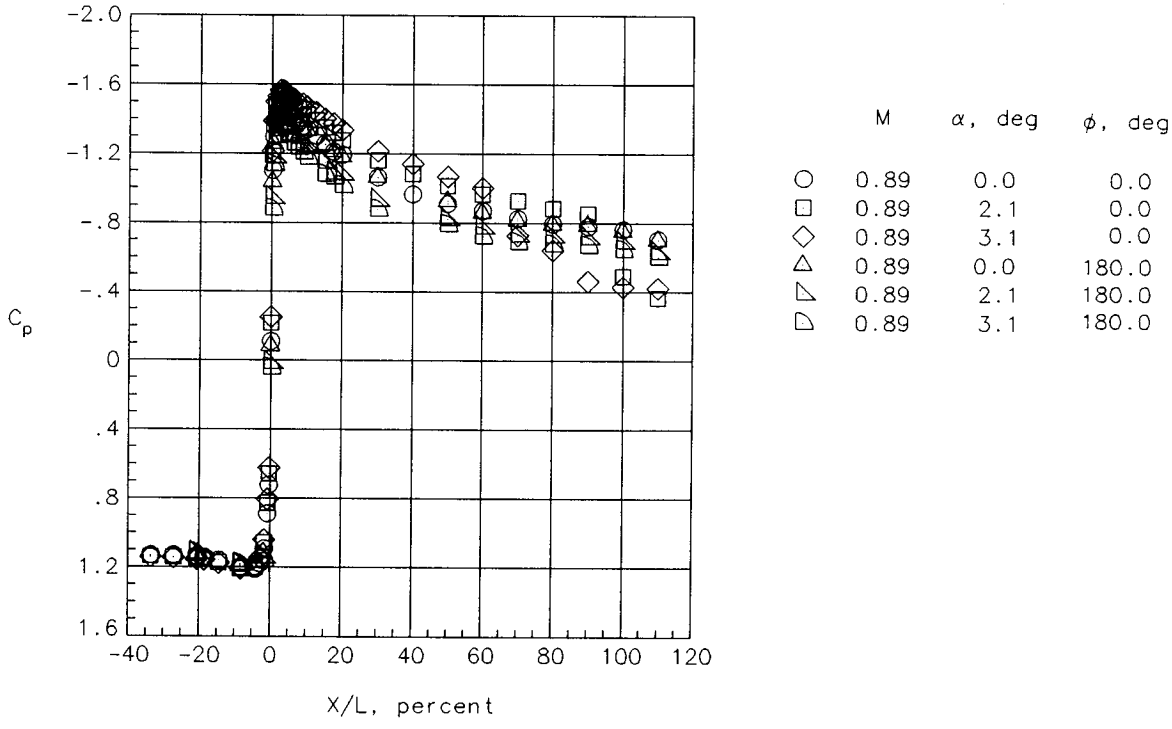


(l) $M = 0.92$.

Figure 11. Concluded.

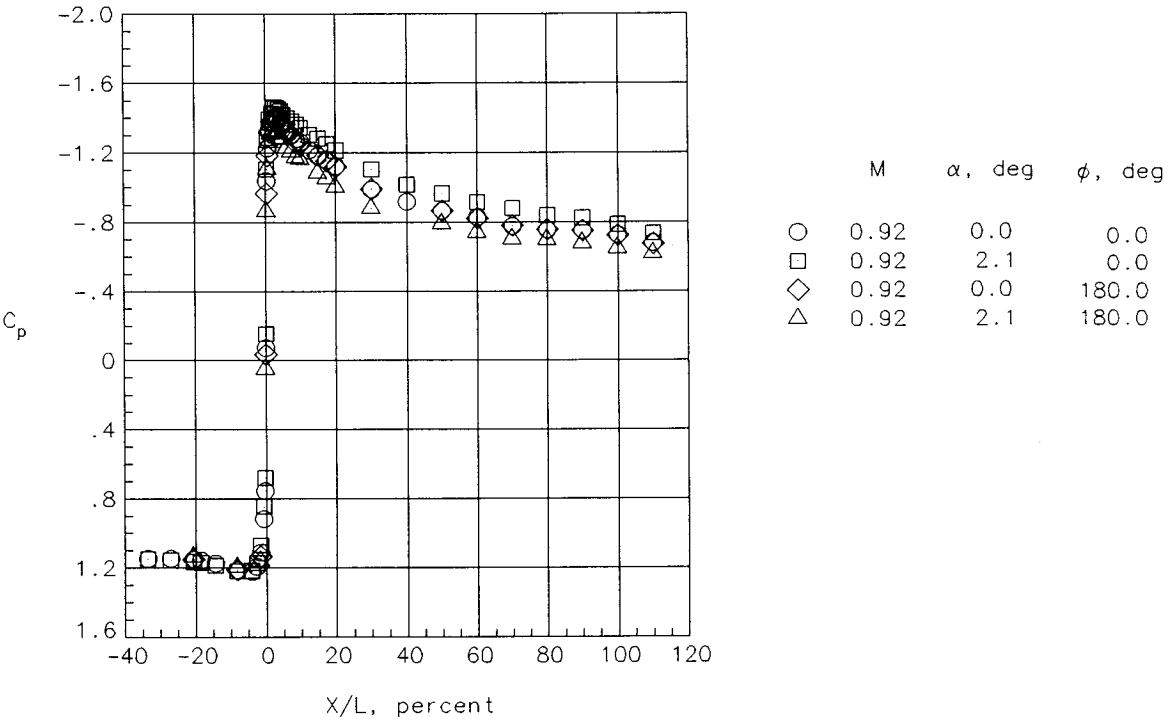


(a) $M = 0.59$ and mfr $= 0.28$.

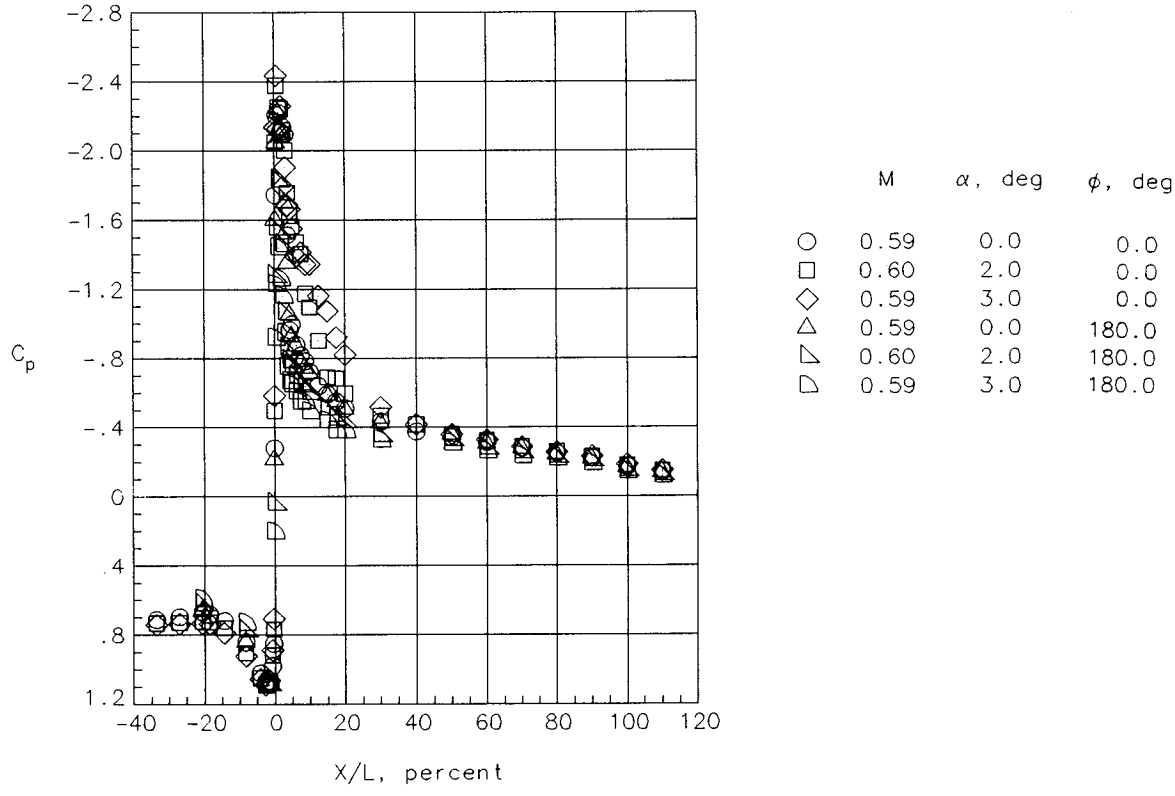


(b) $M = 0.89$ and mfr $= 0.27$.

Figure 12. Pressure coefficient variation with X/L on long cowl at various angles of attack.

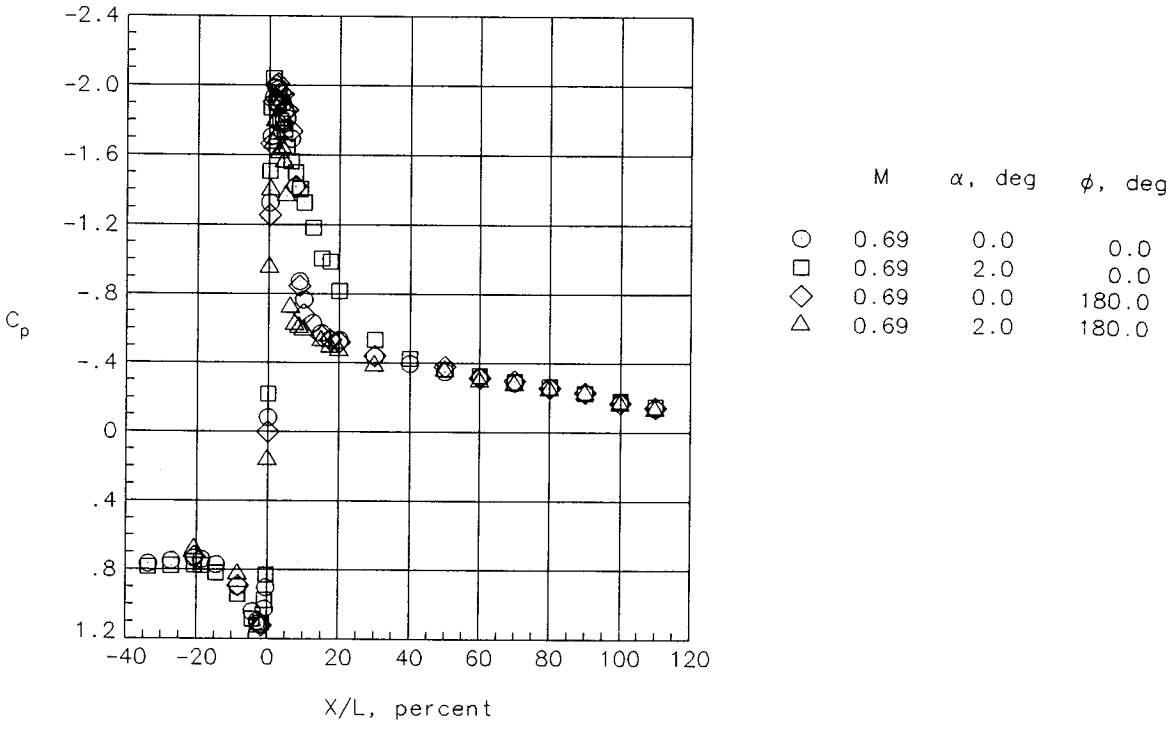


(c) $M = 0.92$ and mfr $= 0.27$.

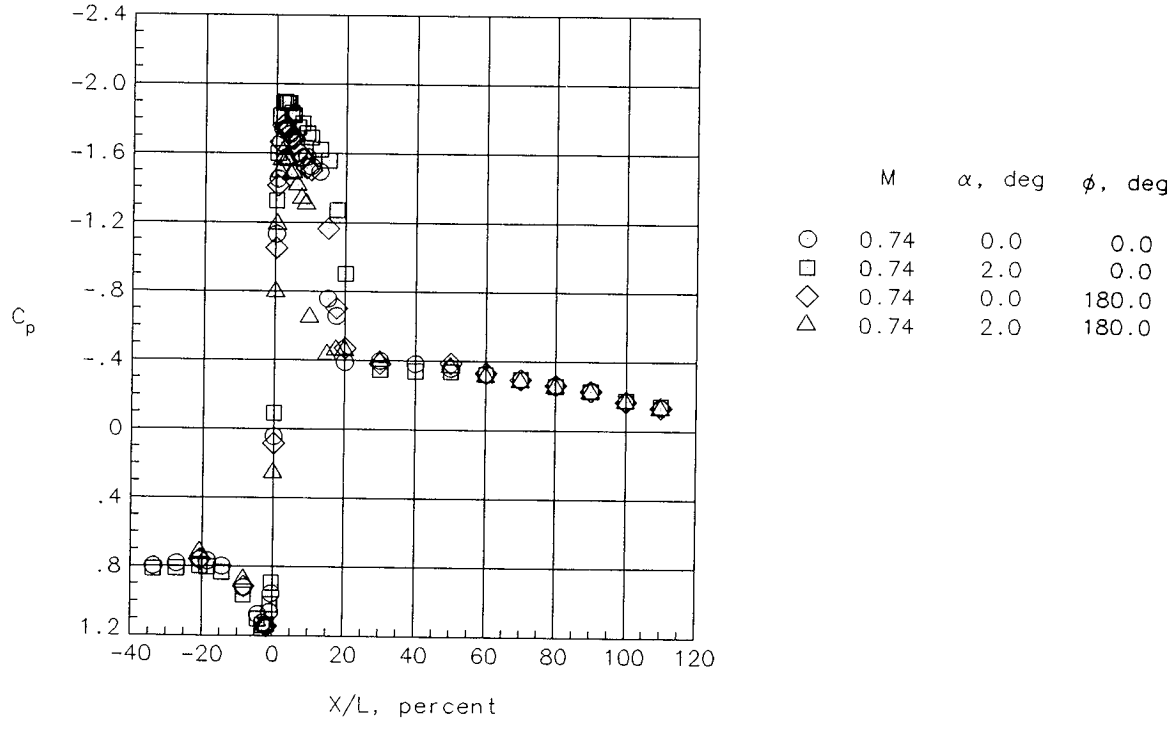


(d) $M = 0.59$ and mfr $= 0.50$.

Figure 12. Continued.

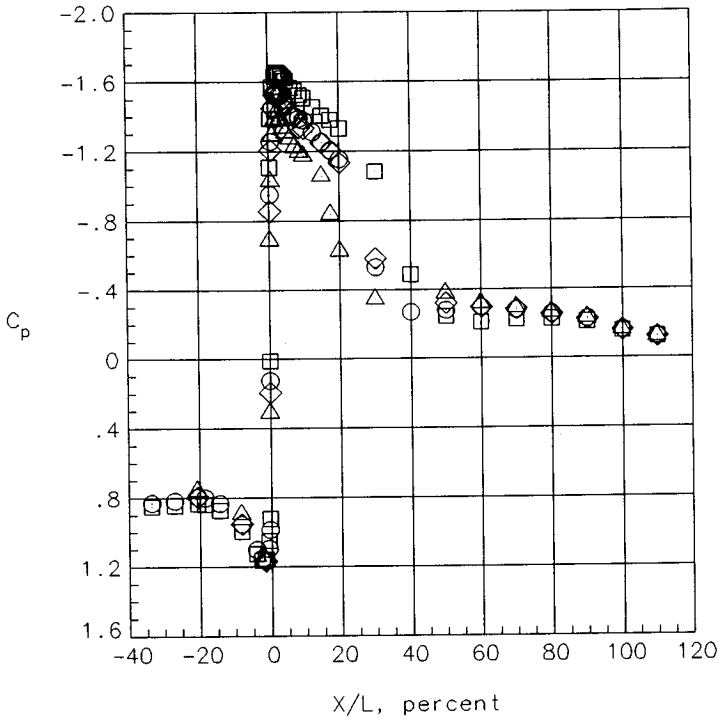


(e) $M = 0.69$ and mfr $= 0.49$.

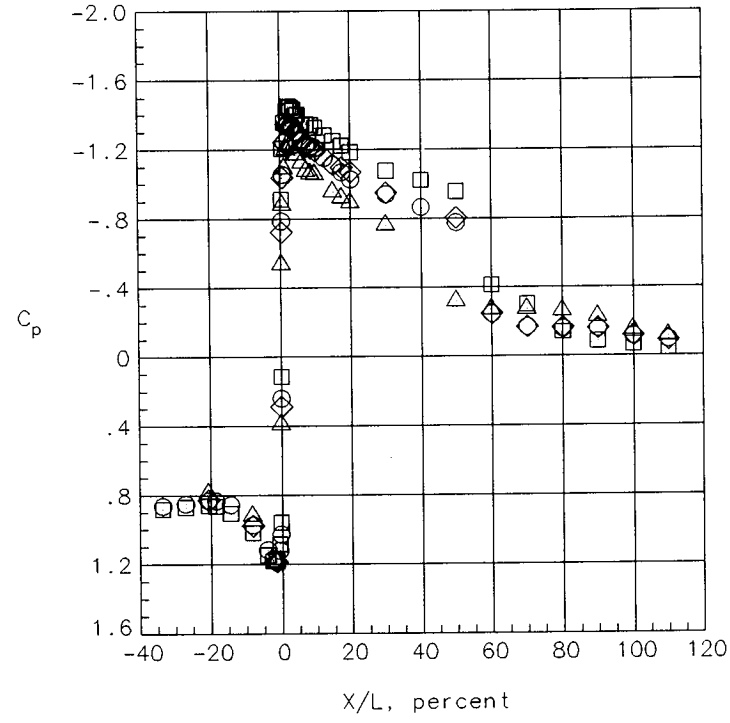


(f) $M = 0.74$ and mfr $= 0.49$.

Figure 12. Continued.

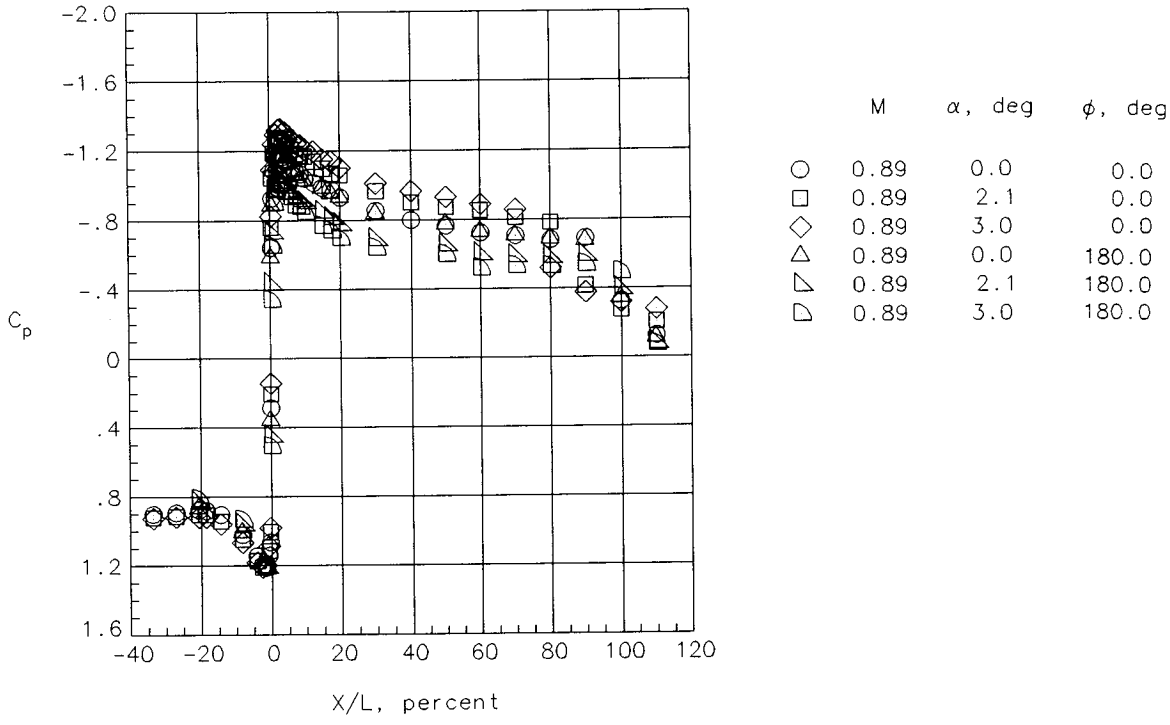


(g) $M = 0.79$ and mfr $= 0.49$.

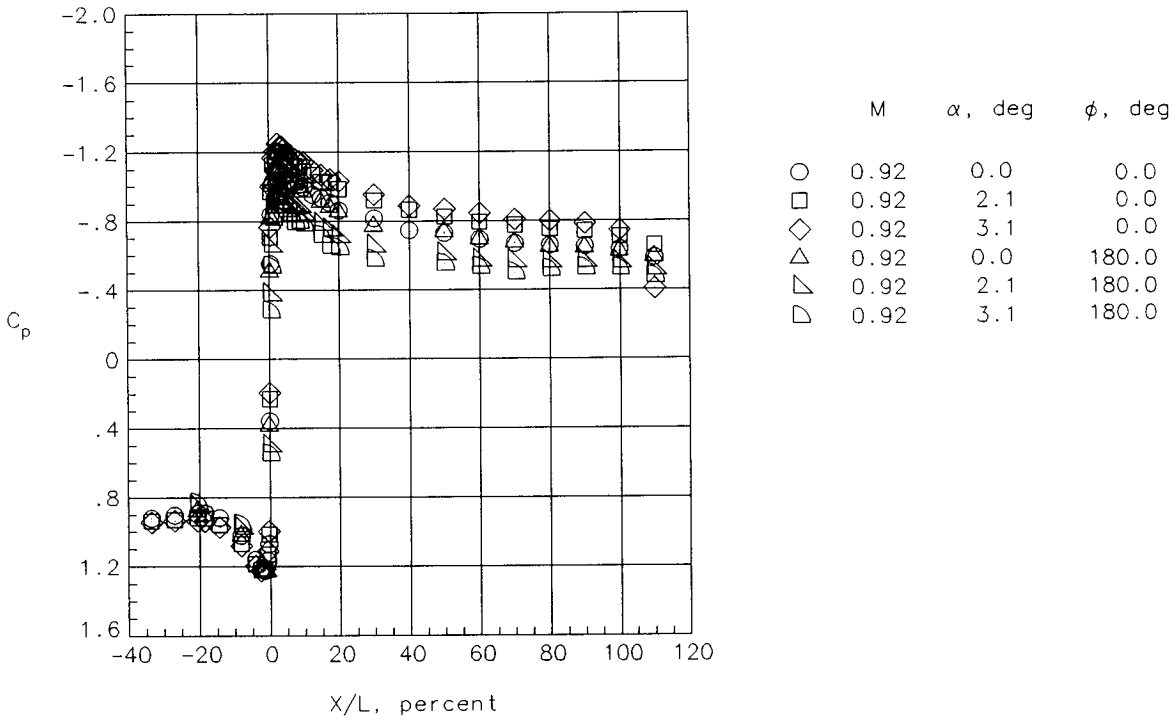


(h) $M = 0.84$ and mfr $= 0.49$.

Figure 12. Continued.

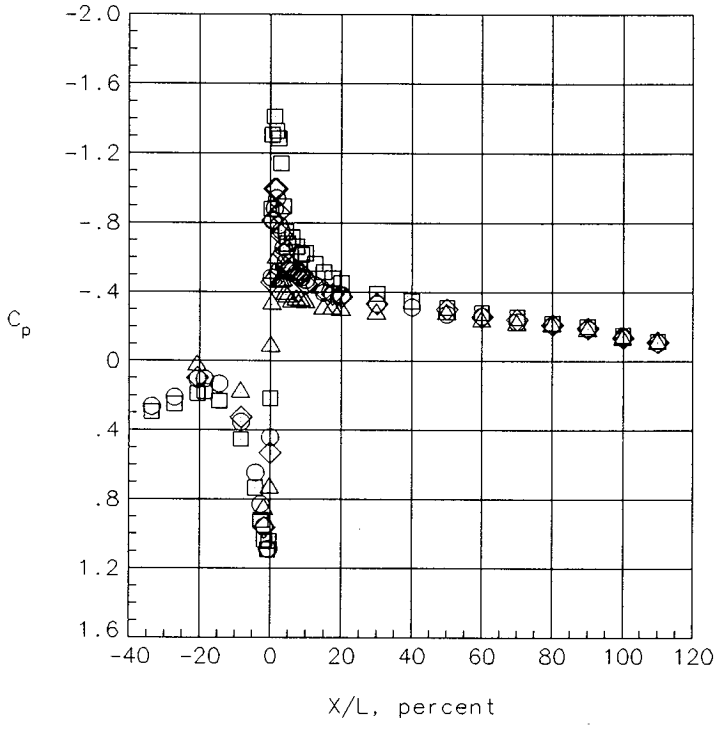


(i) $M = 0.89$ and mfr $= 0.49$.

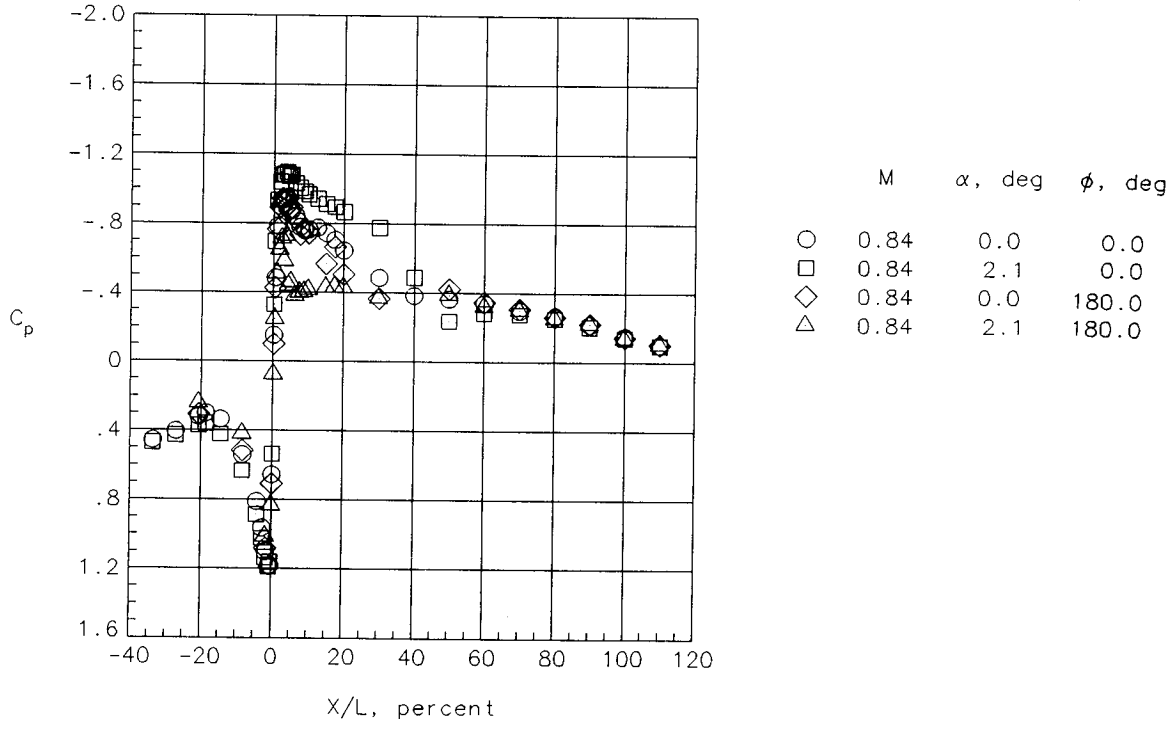


(j) $M = 0.92$ and mfr $= 0.49$.

Figure 12. Continued.

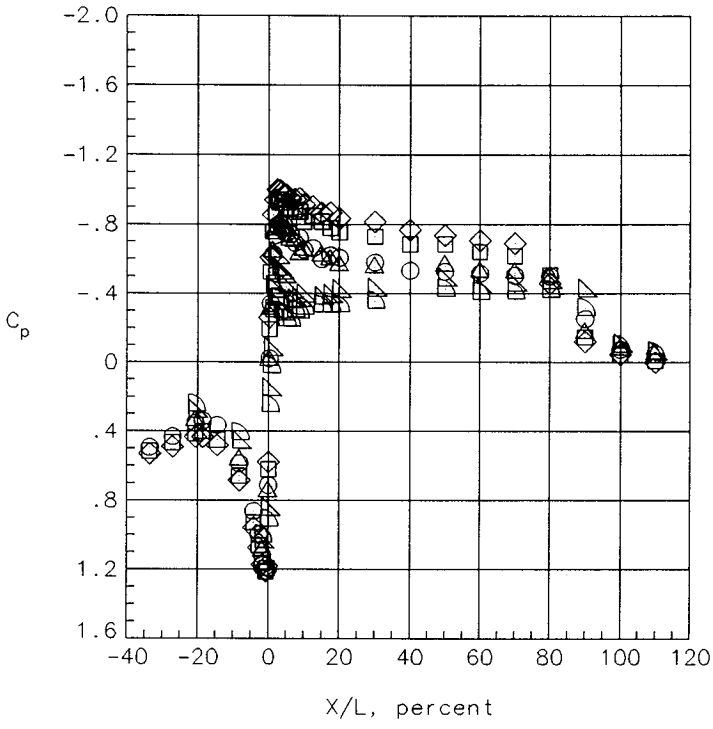


(k) $M = 0.59$ and mfr $= 0.69$.



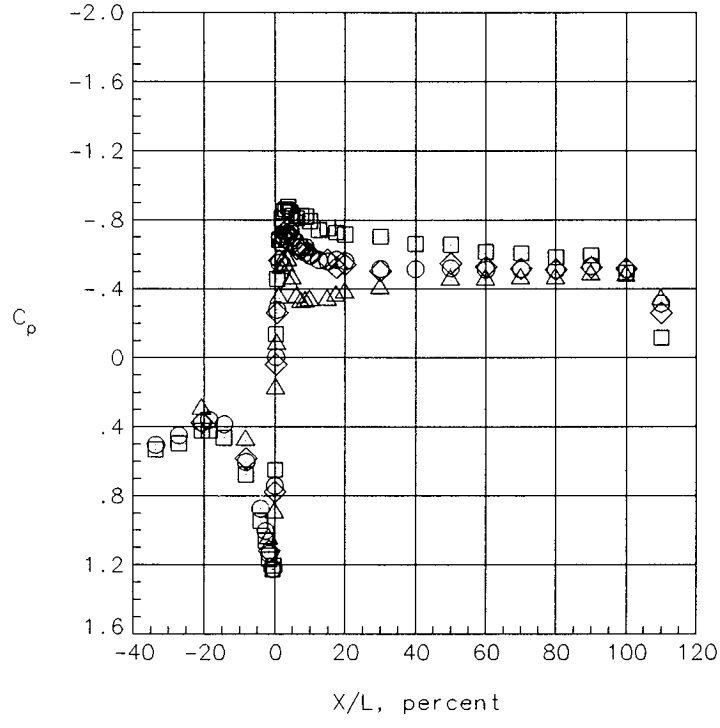
(l) $M = 0.84$ and mfr $= 0.68$.

Figure 12. Continued.



	M	α, deg	ϕ, deg
○	0.89	0.0	0.0
□	0.89	2.1	0.0
◇	0.89	3.1	0.0
△	0.89	0.0	180.0
◺	0.89	2.1	180.0
◺	0.89	3.1	180.0

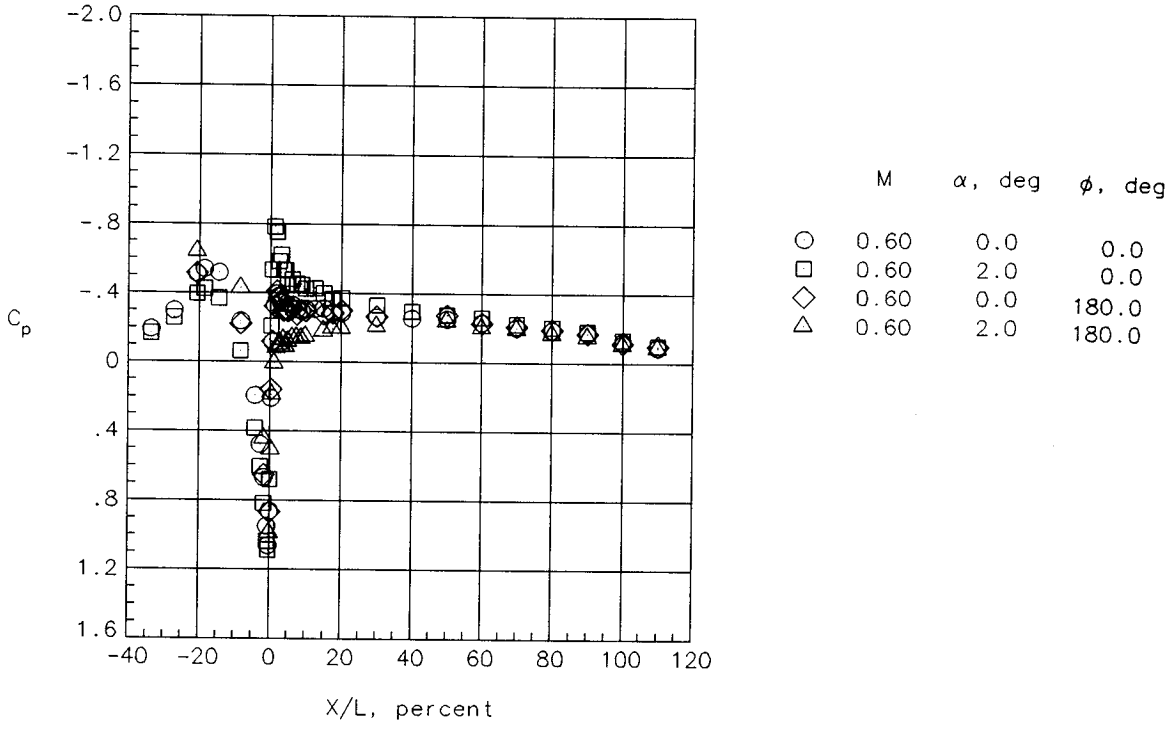
(m) $M = 0.89$ and mfr $= 0.68$.



	M	α, deg	ϕ, deg
○	0.92	0.0	0.0
□	0.92	2.1	0.0
◇	0.92	0.0	180.0
△	0.92	2.1	180.0

(n) $M = 0.92$ and mfr $= 0.68$.

Figure 12. Continued.



(o) $M = 0.60$ and mfr $= 0.81$.

Figure 12. Concluded.

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	September 1993	Technical Memorandum

4. TITLE AND SUBTITLE
Wind Tunnel Investigation of Three Axisymmetric Cowls of Different Lengths at Mach Numbers From 0.60 to 0.92

5. FUNDING NUMBERS
WU 535-03-10-01

6. AUTHOR(S)
Richard J. Re and William K. Abeyounis

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
NASA Langley Research Center
Hampton, VA 23681-0001

8. PERFORMING ORGANIZATION REPORT NUMBER
L-17191

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
National Aeronautics and Space Administration
Washington, DC 20546-0001

10. SPONSORING/MONITORING AGENCY REPORT NUMBER
NASA TM-4488

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT
Unclassified—Unlimited

Subject Category 02

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*
Pressure distributions on three inlets having different cowl lengths were obtained in the Langley 16-Foot Transonic Tunnel. The cowl diameter ratio (highlight diameter to maximum diameter) was 0.85, and the cowl length ratios (cowl length to maximum diameter) were 0.337, 0.439, and 0.547. The cowls had identical nondimensionalized (with respect to cowl length) external geometry and identical internal geometry. The internal contraction ratio (highlight area to throat area) was 1.250. The inlets had longitudinal rows of static-pressure orifices on the top and bottom (external) surfaces and on the contraction (internal) and diffuser surfaces. The afterbody was cylindrical in shape, and its diameter was equal to the maximum diameter of the cowl. Depending on the cowl configuration and free-stream Mach number, the mass-flow ratio varied between 0.27 and 0.87 during the tests. Angle of attack varied from 0° to 4.1° at selected Mach numbers and mass-flow ratios, and the Reynolds number varied with the Mach number from 3.2×10^6 to 4.2×10^6 per foot.

14. SUBJECT TERMS
Inlets; Cowls; Intakes

15. NUMBER OF PAGES
283

16. PRICE CODE
A13

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	