

NASA Contractor Report 178414, Part 1

SPACE SHUTTLE PHASE B WIND TUNNEL
MODEL AND TEST INFORMATION

VOLUME 1 - BOOSTER CONFIGURATION

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ABSTRACT

Archived wind tunnel test data are available for flyback booster or other alternate recoverable configurations as well as reusable orbiters studied during initial development (Phase B) of the Space Shuttle. Considerable wind tunnel data were acquired by the competing contractors and the NASA centers for an extensive variety of configurations with an array of wing and body planforms.

All contractor and NASA wind tunnel test data acquired in the Phase B development have been compiled into a database and are available for applying to current winged flyback or recoverable booster aerodynamic studies.

The Space Shuttle Phase B Wind Tunnel Database is structured by vehicle component and configuration type. Basic components include the booster, the orbiter and the launch vehicle.

Booster configuration types include straight and delta wings, canard, cylindrical, retro-glide and twin body.

Orbiter configuration types include straight and delta wings, lifting body, drop tanks and double delta wings.

Launch configuration types include booster and orbiter components in various stacked and tandem combinations.

The digital database consists of 220 files of data containing basic tunnel recorded data. Database structure is documented in a series of reports which include configuration sketches for the various planforms tested.

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BOOSTER AERODYNAMICS

BOOSTER CONFIG. CODE	BOOSTER CONTRACTOR	TYPE TEST	CHRYSLER REPORT DMS-DR #	VOLUME	PART	PAGE
B1	MDAC	FORCE	1035	1	1	94
B1	MDAC	FORCE	1108	3	1	118
B1	MDAC	FORCE	1139	1	1	106
B1	MDAC/MMC	FORCE	1054	1	1	138
B1	MDAC/MMC	FORCE	1066	1	1	157
B1	MDAC/MMC	FORCE	1077	1	1	171
B1	MDAC/MMC	FORCE	1080	1	1	189
B1	MDAC/MMC	FORCE	1116	1	1	203
B1	MDAC/MMC	FORCE	1117	3	1	192
B1	MDAC/MMC	FORCE	1120	1	1	211
B1	MDAC/MMC	FORCE	1190	3	1	217
B1	MSFC	FORCE	1164	1	1	223
B1	MSFC	FORCE	1192	1	1	238
B1	MSFC	FORCE	1212	1	1	253
B1	TBC	FORCE	1148	3	1	225
B1	TBC	FORCE	1160	1	1	265
B2	GD/C	FORCE	1204	3	1	256
B2	GD/C	FORCE	1210	3	1	271
B2	LMSC	FORCE	1242	1	1	280
B2	MSFC	FORCE	123	3	1	285
B2	MSFC	FORCE	1208	1	1	288
B2	MSFC	FORCE	1226	1	1	299
B2	MSFC	FORCE	1240	1	1	311
B2	MSFC	FORCE	1245	1	1	232
B2	MSFC	FORCE	1253	1	1	328
B2	TBC	FORCE	1128	1	1	335
B2	TBC	FORCE	1214	1	1	343
B2	TBC	FORCE	1227	3	1	427
B2	TBC	FORCE	1228	1	1	348
B2	TBC	FORCE	1275	1	1	358
B2	TBC	FORCE	1276	1	1	358
B3	GD/C	FORCE	1029	1	2	386
B3	GD/C	FORCE	1030	1	2	391
B3	GD/C	FORCE	1039	1	2	400
B3	GD/C	FORCE	1052	3	2	440
B3	GD/C	FORCE	1087	1	2	418
B3	GD/C	FORCE	1093	1	2	422
B3	GD/C	FORCE	1102	1	2	429
B3	GD/C	FORCE	1109	1	2	437
B3	GD/C	FORCE	1110	1	2	464
B3	GD/C	FORCE	1121	1	2	484
B3	GD/C	FORCE	1130	1	2	480
B3	GD/C	FORCE	1141	1	2	487
B3	GD/C	FORCE	1150	1	2	492
B3	GD/C	FORCE	1152	1	2	497
B3	GD/C	FORCE	1156	1	2	515

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BOOSTER AERODYNAMICS

BOOSTER CONFIG. CODE	BOOSTER CONTRACTO	TYPE TEST	CHRYSLER REPORT DMS-DR #	VOLUME	PART	PAGE
B3	GD/C	FORCE	1162	3	2	584
B3	GD/C	FORCE	1190	3	1	217
B3	GD/C	FORCE	1210	3	1	271
B3	GD/C	FORCE	1223	1	2	424
B3	GD/C	FORCE	1237	3	1	463
B3	MDAC	FORCE	1014	1	2	541
B3	MSC	FORCE	1213	3	2	485
B3	MSC/MDAC	FORCE	1115	3	2	495
B3	MSFC	FORCE	1038	3	2	513
B3	TBC	FORCE	1001	1	2	546
B3	TBC	FORCE	1183	3	2	524
B3	TBC	FORCE	1209	1	2	553
B3	TBC	FORCE	1220	1	2	572
B4	GD/C	FORCE	1025	1	2	576
B4	GD/C	FORCE	1029	1	2	386
B4	GD/C	FORCE	1030	1	2	391
B4	GD/C	FORCE	1039	1	2	400
B4	GD/C	FORCE	1050	3	2	595
B4	GD/C	FORCE	1051	3	2	601
B4	GD/C	FORCE	1052	3	2	440
B4	GD/C	FORCE	1075	3	2	625
B4	GD/C	FORCE	1100	1	2	580
B4	MSC	FORCE	1033	1	2	588
B4	MSC/MDAC	FORCE	1038	3	2	513
B4	TBC	FORCE	1079	1	2	598
B4	TBC	FORCE	1111	1	2	613
B4	TBC	FORCE	1158	1	2	530
B4	TBC	FORCE	1191	1	2	630
B5	CCSD	FORCE	1046	1	2	639
B5	CCSD	FORCE	1068	1	2	648
B5	CCSD	FORCE	1089	1	2	659
B5	GD/C	FORCE	1006	1	2	665
B5	LARC	FORCE	1015	1	2	668
B5	LARC	FORCE	1017	1	2	673
B5	LARC	FORCE	1019	1	2	678
B5	LARC	FORCE	1193	1	2	682
B5	LARC	FORCE	1197	3	2	671
B5	LARC	FORCE	1198	3	2	678
B5	LARC	FORCE	1200	3	2	682

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BOOSTER AIRLOADS

BOOSTER CONFIG. CODE	BOOSTER CONTRACTO	TYPE TEST	CHRYSLER REPORT DMS-DR #	VOLUME	PART	PAGE
B1	MDAC	PRESSURE	1222	3	2	779
B1	MDAC	PRESSURE	1225	1	2	684
B4	GD/C	PRESSURE	1129	3	2	803
B5	CCSD	PRESSURE	1125	1	2	687

INDEX OF FIGURES

BOOSTER HEAT TRANSFER

BOOSTER CONFIG. CODE	BOOSTER CONTRACTO	TYPE TEST	CHRYSLER REPORT DMS-DR #	VOLUME	PART	PAGE
B1	MDAC	HEATING	1170	3	2	828
B1	MDAC	HEATING	1207	1	2	697
B1	MDAC	HEATING	1262	3	2	857
B1	MDAC/MMC	HEATING	1036	3	2	876
B1	MDAC/MMC	HEATING	1138	1	2	700
B2	GD/C	HEATING	1236	1	2	704
B2	TBC	HEATING	1216	3	2	922
B3	GD/C	HEATING	1020	1	2	707
B3	GD/C	HEATING	1024	1	2	714
B3	GD/C	HEATING	1070	1	2	718
B3	GD/C	HEATING	1098	3	2	946
B3	GD/C	HEATING	1145	3	2	952
B3	GD/C	HEATING	1177	3	2	958
B3	GD/C	HEATING	1179	1	2	725
B3	GD/C	HEATING	1244	1	2	730
B3	GD/C	HEATING	1264	3	2	697
B3	GD/C	HEATING	1020	1	2	707
B3	GD/C	HEATING	1024	1	2	714
B3	GD/C	HEATING	1032	3	2	940
B3	GD/C	HEATING	1134	1	2	732

ACRONYMS FOR TEST FACILITIES AND CONTRACTORS

AEDC -- ARNOLD ENGINEERING DEVELOPMENT CENTER
ARC -- AMES RESEARCH CENTER
CAL -- CORNELL AERONAUTICAL LABORATORY
CCSD -- CHRYSLER CORP. SPACE DIVISION
GAC -- GRUMMAN AEROSPACE CORPORATION
GD/C -- GENERAL DYNAMICS/CONVAIR
JPL -- JET PROPULSION LABORATORY
L&RC -- LANGLEY RESEARCH CENTER
LMSC -- LOCKHEED MISSILES AND SPACE COMPANY
LTV -- LING TEMCO VOUGHT
MAC -- McDONNELL AIRCRAFT COMPANY
MDAC -- McDONNELL DOUGLAS AIRCRAFT CORPORATION
MMC -- MARTIN MARIETTA CORPORATION
MSC -- MANNED SPACECRAFT CENTER
MSFC -- MARSHALL SPACE FLIGHT CENTER
NR -- NORTH AMERICAN ROCKWELL
NRLAD -- NORTH AMERICAN ROCKWELL CORP., LOS ANGELES DIVISION
NSRDC -- NAVAL SHIP RESEARCH AND DEVELOPMENT CENTER
TAM -- TEXAS A&M
TBC -- THE BOEING COMPANY
UW -- UNIVERSITY OF WASHINGTON

1.0 INTRODUCTION

1.1 Space Shuttle Development Phases

Development of the Space Transportation System (STS) encompassed the study of a large number of conceptual designs and an extensive wind tunnel testing program.

Phases of the development program are identified as:

Phase A - Concept Feasibility Studies - 1969-1970

Phase B - Preliminary Design Studies - 1970-1972

Phase C/D - Design and Development - 1972-1983

During the Phase A and B periods, completely reusable systems were studied including the "flyback" booster. However, due to the large cost of the completely reusable concept, NASA decided at the end of the Phase B period to employ an expendable booster design. Phase C/D design and development was then concentrated on a two-stage, parallel-burn booster system concept.

In the development stage (Phase B) of Space Shuttle design, extensive wind tunnel data were acquired for a variety of alternate configurations. These data were accumulated, converted into standard formats, placed in a data bank and documented. This work was performed by the Chrysler Corporation Military Public Electronic

Systems. Michoud Engineering Office under contract to NASA/MSFC.

Developmental configurations considered for early Space Shuttle studies were extremely varied. These included winged "flyback boosters," "Inline" staged launch vehicles and various "parallel staged" orbiter-boost combinations. Wind tunnel models of the various vehicles were tested both in the launch and entry configurations. Aerodynamics, airloads and heat transfer data were collected and compiled from four major contractors and parallel NASA directed studies. Results were documented individually through a series of NASA technical reports, contractor reports and test reports. The digital data and associated descriptive documentation which were archived have been maintained and are available for ongoing applications.

Current advanced launch vehicle studies are focusing on many of the approaches considered during original Space Shuttle studies. Available wind tunnel data for configurations similar to those currently being evaluated can be highly valuable to the preliminary design engineer.

The archived Phase B data are available to the technical community. Extracts of descriptive information,

configuration sketches, and digital test data have been compiled and are reported herein to facilitate use of the large data bank for booster, orbiter and launch configurations.

1.2 Chrysler's Test Database and Archive System

Extensive Chrysler involvement in wind tunnel data application on NASA programs prior to the Space Shuttle resulted in development of complex computer systems for automating these processes. These processes included automating the management and database functions in addition to automating the engineering data applications and computer graphics. These combined functions were reflected in the name DATAMAN.

The Chrysler developed Data Management System (DATAMAN) was used to develop design applicable aerodynamic data, generate extensive plots and cross plots, document, and database wind tunnel test data from the Space Shuttle Phase B test program under contract to the NASA/MSFC.

Chrysler initiated the DATAMAN project in early 1970 and continued through both the Phase B and Phase C/D test programs. Extensive management procedures were devised to effectively identify and track the expected large volumes of data to be generated by a number of

contractors, and a variety of Phase B configurations. Hence, a means of conveying descriptive information relative to the configurations and associated data was required.

A four digit report identifier was assigned as initial test inputs were made to the DATAMAN system to track and report activities on individual tests. For the Phase B test program, these identifiers were DMS-DR-1001 through DMS-DR-1278. Thus, approximately 278 sets of test results were processed, documented, and databased.

The assignment of identifiers was sequential and they are, therefore, chronological throughout the Phase B configuration management. Many other identifiers are associated with individual tests such as configuration type, NASA series number, test facility designations and contractor(s) involved.

Each test was documented in a DATAMAN test data report. Test data were archived in standard DATAMAN formats, and salient tracking information was compiled. All these were disseminated to NASA technical and program management personnel for technical assessment of the data and managing the overall test program.

1.3 Extracting Phase B Test Database Information

The effort involved extracting and compiling Phase B test data contents and descriptive information from the archived test data bank and documentation file.

Digital database files contained a mix of basic tunnel recorded data and calculated analysis data used for graphic displays. These files were reduced to basic tunnel data and structured by configuration tested and contractor. A series of catalog reports were assembled to provide a readily accessible overview of test results available for future space transportation system studies.

These catalog reports are in increasing levels of detail. The first level consists of summary tables and selected sketches. These enable the user to scan for possible applications to his ongoing work.

For a promising or likely candidate configuration, the user can proceed to the second level of detail where all available configuration sketches and test conditions are compiled.

The third level of detail is the digital data files where tunnel recorded data reside .

2.0 COMPILATION OF PHASE B DATABASE ARCHIVE CONTENTS

2.1 Compilation Outline

Results of the Phase B database compilation are contained in the following list.

- 1) Summary catalog report, DMS-DR-01, containing an overview of database contents and availability.
- 2) A three volume catalog report, DMS-DB-02, containing configuration sketches and conditions tested. The three volumes correspond to booster, orbiter and launch test configurations.
- 3) A series of magnetic data tapes containing available digital files. These are also structured by configuration and are described in transmittal documents DMS-TD-01 through 03, corresponding to booster, orbiter and launch test configurations, respectively.

4) A directory database information file formatted for the R-base relational database system.

Documentation of the contents of the database is contained in two reports; DMS-DB-01 and DMS-DB-02.

2.2 Summary Volume

The first document (DMS-DB-01) is a single volume summary report containing planform line drawings of the various configurations tested during the Space Shuttle Phase B program. Tabular information from the directory file is included and is divided by component (booster, orbiter and launch) and by test discipline (aerodynamics, airloads and heat transfer).

2.3 Model and Test Information

The second document (DMS-DB-02) is a three volume report containing extracts from the individual test data reports. All line drawings and collation sheets/run schedules are included. The three volumes correspond to the three component classifications; booster, orbiter and launch, respectively. A series of tabular information from the directory file provide an outline of available test information.

Structure of the tables and sketches is by component and test discipline with sorting by configuration and contractor. Each booster and each orbiter configuration tested are assigned a 2-character code for purposes of grouping and sorting.

These codes are

<u>Code</u>	<u>General Configuration</u>
Booster - B1	Canard
B2	Cylindrical
B3	Delta Wing
B4	Straight Wing
B5	Unique
Orbiter - 01	Delta Body
02	Delta Wing
03	Straight Wing
04	Unique

Launch configurations tested are identified by a combination of the above codes. Test information is also sorted by individual contractors and NASA centers. Acronyms for these contractors and test facilities are presented in the frontispiece.

It should be noted that individual tests may be identified as multiple configurations. For example, booster and orbiter alone data may have been taken along with launch configurations in a single test. The test would appear in the tabular listings for all applicable classifications, but line drawings and run schedules would be included only in the launch section. Cross references are provided in the Index

of Figures for this case and also where multiple booster or orbiter configuration codes were involved in the same test.

Directory information displayed in tables 1, 3, 4 and 6 provide information only for the component documented in that individual volume. Tables 2 and 5 display information for all tests and components. An outline of the contents of the three volumes is illustrated in the Index of Tables.

2.4 Digital Database

The digital database also follows the structure of table 1. Database contents represent data as received from the test facility. However, for some tests an additional, calculated, coefficient schedule is included. These additional schedules are mainly a second axis system or extract data from a multi-balance test. Individual datasets within a file are encoded with the configuration code in the header information.

Test data are stored on five magnetic data tapes. These tapes are 9-track, 6250 FPI, ASCII format.

File contents are:

<u>Tape#</u>	<u>Component</u>	<u>#Files</u>	<u>#Datasets</u>	<u>Config. Codes</u>
1	Booster - Aerodynamics	53	4,216	B1-B5
2	Orbiter - Aerodynamics	89	4,500	01+02
3	Orbiter - Aerodynamics	20	1,962	03+04
4	Launch - Aerodynamics	34	4,034	B1-B3
5	Launch - Aerodynamics	19	637	B4+B5
	- Airloads	4	1,182	ALL
	- Heat Transfer	1	21	ALL
	Total	220	16,552	

Specific test locations on the digital database are shown in table 6.

2.5 Directory File

The directory data file was constructed to assist in the categorization of tests and to generate tabular reports.

Information was extracted from existing administrative reports and from individual test data reports. The file was created using the R-base relational database system by Microrim. A description of the table information is as follows:

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Table: DMS-DR#
Read Password: NO
Modify Password: NO

Column definitions			Description	
#	Name	Type	Length (Characters)	
1	QR#	TEXT	4	DATAMAN Report Number
2	CR#	TEXT	8	Contractor Report Number
3	TMX#	TEXT	12	NASA TMX Report Number
4	NSN	TEXT	14	NASA Test Series Number
5	UVOL	TEXT	1	Number of Report Volumes
6	UOL#	TEXT	1	Report Volume Number
7	PUB. DATE	TEXT	13	Report Publication Date
8	LINE#	TEXT	1	Print Key for Tabular Report
9	TESTTYPE	TEXT	15	Test Discipline
10	COMP	TEXT	7	Test Component
11	BCC	TEXT	3	Booster Configuration Code
12	OCC	TEXT	3	Orbiter Configuration Code
13	B-CODE	TEXT	15	Booster Classification
14	B-CONTRA	TEXT	10	Booster Model Contractor
15	O-CODE	TEXT	15	Orbiter Classification
16	O-CONTRA	TEXT	10	Orbiter Model Contractor
17	FAC	TEXT	5	Test Facility
18	TUN	TEXT	6	Test Wind Tunnel
19	TEST#	TEXT	15	Facility Test Number
20	FAC-TST#	TEXT	26	Facility, Tunnel, Facility Test Number
21	MACH	TEXT	15	Mach Number Range
22	SCALE	TEXT	12	Model Scale
23	DMS-CODE	TEXT	6	Two Character Dataset Identifier
24	B-TYPE	TEXT	23	Booster Configuration Type
25	O-TYPE	TEXT	33	Orbiter Configuration Type
26	CONFIG	TEXT	220	Description of Configurations Tested
27	PURPOSE	TEXT	150	Major Test Purpose
28	TITLE	TEXT	250	Data Report Title
29	PROJ. ENG	TEXT	175	Contractor/NASA Test Engineers
30	DMS-ENG	TEXT	30	DATAMAN Cognizant Engineers
31	COMMENTS	TEXT	150	Directory File Comments/Exceptions

Current number of rows: 488

2.6 Guide to Phase B Database Use

Users of the Chrysler Phase B database have varying levels of detail available for review. A typical application is to investigate similarities between current preliminary configuration designs and configurations tested during Phase B. As an example, current applications may be representative of a winged flyback booster with canards. To research this configuration the user could follow the steps illustrated below:

Step 1 - DMS-DB-01, Summary Report; This report would be reviewed to identify configurations of interest and corresponding configuration types and contractors.

INDEX OF MODEL FIGURES - BOOSTER				
<u>Booster Type</u>	<u>Contractor</u>	<u>PAGE NUMBER</u>		
		<u>Aerodynamics</u>	<u>Airloads</u>	<u>Heat Transfer</u>
CANARD	MDAC	A-1-1	B-1-1	C-1-1
	MDAC/MMC	A-1-4		
	MSFC	A-1-5		
	TBC	A-1-6		
CYLINDRICAL	GD/C	A-1-7		
	LMSC	A-1-8		
	MDAC	A-1-9		

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Step 2 - Table 1, DMS-DB-01, Summary Report; Using the configuration type and contractors identified above, a list of applicable tests is obtained.

Table 1.1.1
Space Shuttle Phase 8 Wind Tunnel Test
Database Summary
Booster Aerodynamics

CODE	CONFIG. I.D.	CONTRACTOR	DMS-OR#	MACH RANGE	FACILITY	MODEL SCALE	CONFIGURATIONS TESTED
B1	CANARD	MDAC	1035	0.15	MAC	0.91	MDAC SPACE SHUTTLE BOOSTER
B1	CANARD	MDAC	1108	2.0-6.0	AEDC	0.99556	MARTIN BOOSTER
B1	CANARD	MDAC	1139	0.35	NEROC	0.915	MDAC DELTA CANARD BOOSTER
B1	CANARD	MDAC/MMC	1054	0.25	MAC	0.93	MDAC/MMC SPACE SHUTTLE BOOSTER
B1	CANARD	MDAC/MMC	1066	0.6-2.0	ARC	0.997	MDAC/MMC SSV CONFIG.-14 BOOSTER (SINGLE BODY, CANARD)
B1	CANARD	MDAC/MMC	1077	0.6-0.20	MAC	0.93	MDAC/MMC SPACE SHUTTLE BOOSTER
B1	CANARD	MDAC/MMC	1080	7.0	ARC	0.997	MDAC/MMC SSV BOOSTER SINGLE BODY CANARD
B1	CANARD	MDAC/MMC	1115				MDAC/MMC SBC BOOSTER

Step 3 - DMS-DB-02, Vol.1, Booster Configuration; Locate the model sketches and test conditions and parameters.

INDEX OF FIGURES
BOOSTER AERODYNAMICS

BOOSTER CONFIG. CODE	BOOSTER CONTRACTOR	DMS-OR #	PAGE NUMBER
B1	MDAC	1035	A-1-1
B1	MDAC	1108	SEE C-1-23
B1	MDAC	1139	A-1-13
B1	MDAC/MMC	1054	A-1-45
B1	MDAC/MMC	1066	A-1-64
B1	MDAC/MMC	1077	A-1-78
B1	MDAC/MMC	1080	A-1-96
B1	MDAC/MMC	1115	A-1-115

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Step 4a- Dataset/Run Number Collation Summary; Examine collation sheets to determine test Mach range, angle of attack/sideslip ranges, configurations and control surfaces/parametric conditions.

CONFIGURATIONS TESTED

FACILITY TEST NUMBER

PARAMETRIC CONDITIONS

MACH NUMBERS

TABLE 1.
TEST NOES 66-66 DATA SET/RUN NUMBER
COLLATION SUMMARY

DELTA WING BOOSTER
GO/C
DR01100 A-1- 204

PRETEST
 POSTTEST

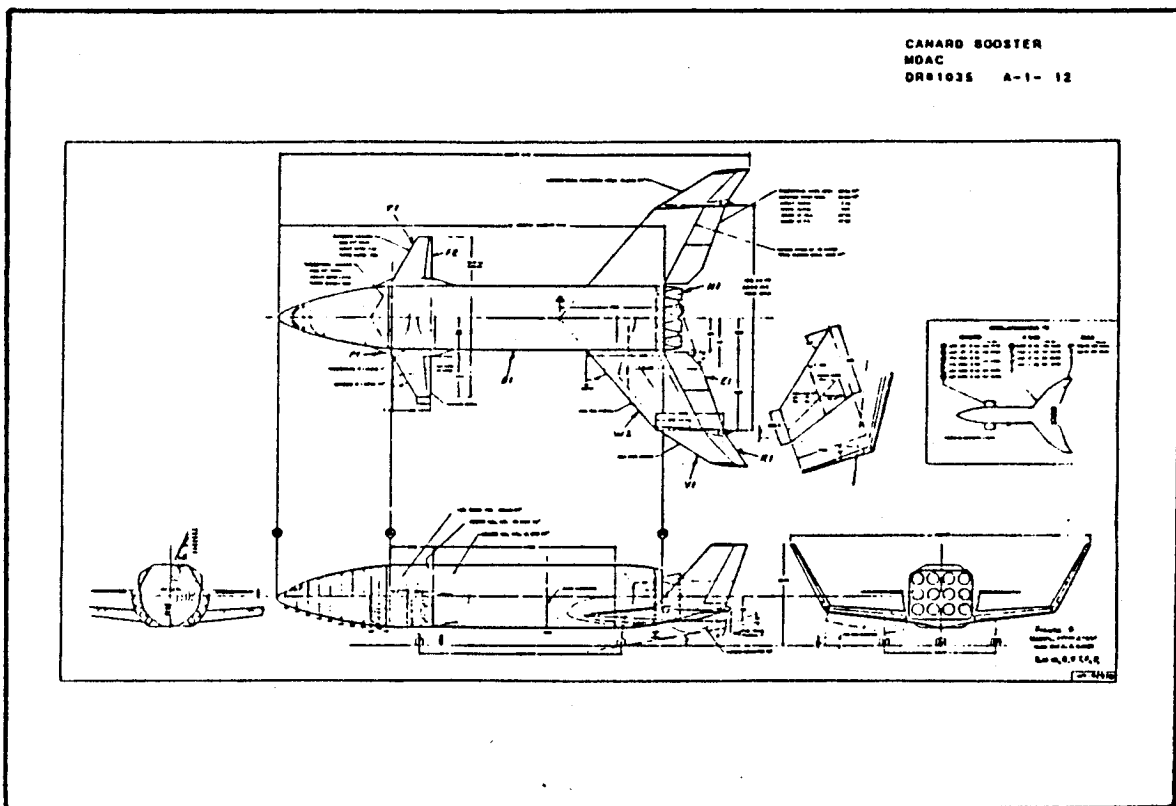
DATA SET IDENTIFIER	CONFIGURATION	SCNO.	CONTROL DEFLECTION								NO. OF WINGS	MACH							
			α	β	α ₁	α ₂	α ₃	α ₄	α ₅	α ₆		0.6	0.9	1.2	1.5	2.0			
118	B22C0819V10P2	A	0	0	0	0	0	0	0	5	5	4	1	2	1				
119			10	0	0	-10				5	10	9	8	7	6				
120			10	10	10	10				5	15	14	13	12	11				
210		B	0	0	0	0	0	0	0	5	20	19	18	17	16				
211			0	0	0	0	0	0	0	5	23	22	21	20	19				
212			20							5	30	29	28	27	26				
213			10							5	33	32	31	30	29				
214			-10							5	40	39	38	37	36				
215			-30							5	45	44	43	42	41				
216			0	-10	-10	-10	-10			5	50	49	48	47	46				
217			-20	-20	-20	-20				5	55	54	53	52	51				
218			10	0	0	-10				5	60	59	58	57	56				
219			0			0	10			5	75	74	73	72	71				
220	B22C0819V10P2		0			0	10			5	80	79	78	77	76				
221	B2219R2V10		-	-	-	-	-			5	81	80	79	78	77				
222	B22V10P2		-	-	-	-	-			5	65	64	63	62	61				
223	B22C0819P2		0	-	-	-	-			5	70	69	68	67	66				
224	B22C0819V10P2		20	0	0	0	0			5	90	89	88	87	86				
225	B22C0819P2	C	0	0	0	0	0			5	95	94	93	92	91				

ANGLE OF ATTACK RANGE TESTED

AERODYNAMIC COEFFICIENTS

TEST RUN NUMBERS

Step 4b- Configuration Sketches; Examine configuration sketches to obtain model and aerodynamic details such as model dimensions, wing type, canard surfaces, tail surfaces, body shape, etc.

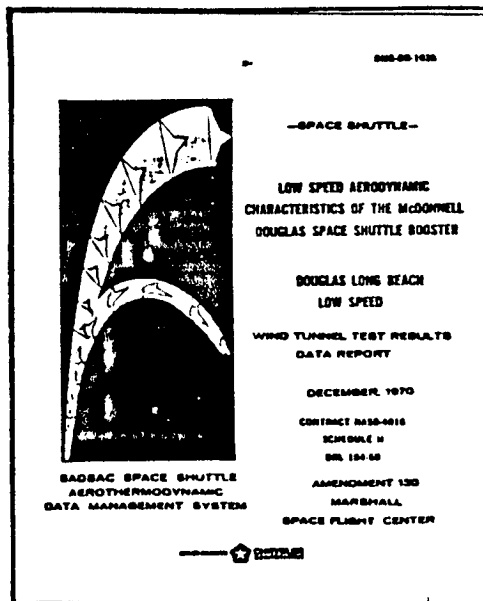


Step 5 - Table 2, DMS-DB-02, Vol.1; Refer to table to determine publication availability: data report, contractor report or NASA publication.

Table 2
Space Shuttle Phase 6 Wind Tunnel
Test Database Listed by Chrysler
DATAM4 Report Number

DMS-DB	NASA SERIES NUMBER	VOLUME NUMBER	NASA CR NUMBER	NASA TM-8 NUMBER	FACILITY TEST NUMBER	VEHICLE COMPONENT
1001	S1002-S1001	1	102.150	--	MEPC 14TWT 451	BOOSTER
1002	S0005	1	--	02.036	ARC 3.0HW 70	ORBITER
1033						BOOSTER
1034	S0232	1	102.160	--	NRLAG LSWT 632	ORBITER
1035	S0004	1	102.101	--	MAC LSWT 1251	BOOSTER
1036	H0001-H0003	1	--	--	LARC SVDMT 147-170.200-222	LAUNCH
					LARC SVDMT 147-170.200-222	BOOSTER

Step 6 - Test Documentation; Refer to test documentation to obtain test procedures, model description and data presentation.



Step 7 - Digital Database, Table 2 in DMS-DB-01 (Table 6 in DMS-DB-02); the user, after determining applicability, can access the test data from the digital database files for further analysis and application.

TABLE 2.1

SPACE SHUTTLE PHASE B
DIGITAL DATABASE
BOOSTER AERODYNAMICS

FILE #	BCC	B-CONTRA	DR#	2-CHAR. CODE	# D/S's	# RECORDS
1	81	MDAC	1035	CC	69	967
2		↓	1132	N2	574	8037
3		MDAC/MMC	1054	CE	208	2185
4			1066	AD	86	1033
5			1077	CØ	95	1057

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3.0 NOMENCLATURE AND AXIS SYSTEMS

A standard set of nomenclature and axis systems definitions for DATAMAN reports were established during the Phase B test period. They were compiled from inputs from the various contractors and test facilities involved in the test program and are shown on the following pages.

Additions to the standards were required for individual tests due to the many configurations investigated. These additions are documented in the individual test data reports.

Numerous reference dimensions and moment reference center locations were used by the various contractors for the many configurations tested. Model reference dimensions and moment center locations for each configuration are described in the individual test data reports. This information is also contained in the header block of each dataset on the digital database.

NOMENCLATURE
General

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
a		speed of sound; m/sec, ft/sec
C _p	CP	pressure coefficient; $(P_1 - P_\infty)/q$
M	MACH	Mach number; V/a
P		pressure; N/m^2 , psf
q	Q(NSM) Q(PSF)	dynamic pressure; $1/2\rho V^2$, N/m^2 , psf
RN/L	RN/L	unit Reynolds number; per m, per ft
V		velocity; m/sec, ft/sec
α	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
ψ	PSI	angle of yaw, degrees
ϕ	PHI	angle of roll, degrees
ρ		mass density; kg/m^3 , slugs/ft ³

Reference & C.G. Definitions

A _b		base area; m^2 , ft^2
b	BREF	wing span or reference span; m, ft
c.g.		center of gravity
$\frac{l}{c}$ _{REF}	LREF	reference length or wing mean aerodynamic chord; m, ft
S	SREF	wing area or reference area; m^2 , ft^2
	MRP	moment reference point
	XMRP	moment reference point on X axis
	YMRP	moment reference point on Y axis
	ZMRP	moment reference point on Z axis

SUBSCRIPTS

b	base
l	local
s	static conditions
t	total conditions
∞	free stream

NOMENCLATURE (Continued)

Body-Axis System

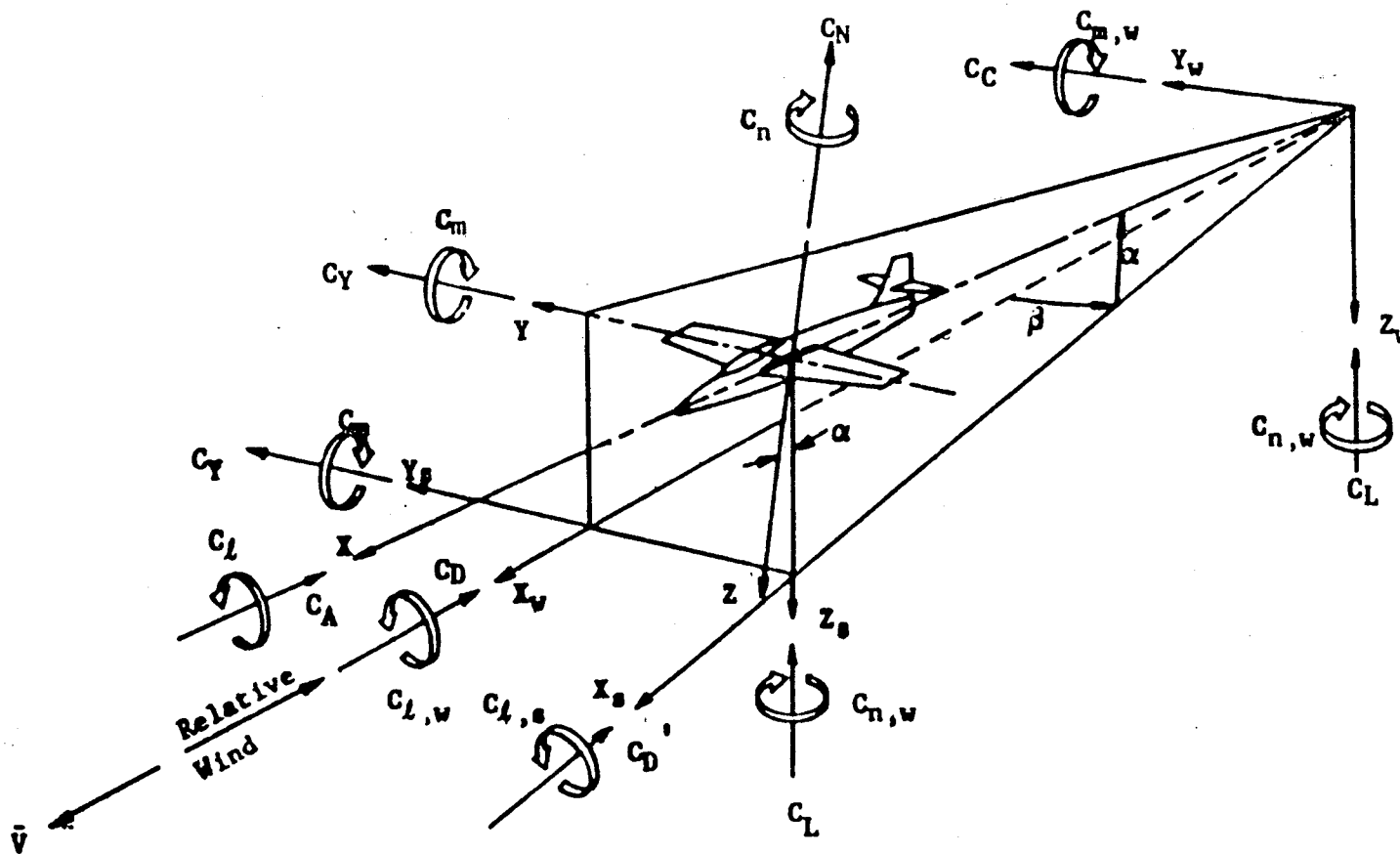
<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
C_N	CN	normal-force coefficient; $\frac{\text{normal force}}{qS}$
C_A	CA	axial-force coefficient; $\frac{\text{axial force}}{qS}$
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C_{A_b}	CAB	base-force coefficient; $\frac{\text{base force}}{qS}$ $-A_b(p_b - p_m)/qS$
C_{A_f}	CAF	forebody axial force coefficient, $C_A - C_{A_b}$
C_m	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS l_{REF}}$
C_n	CYN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS b}$
C_l	CBL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS b}$

Stability-Axis System

C_L	CL	lift coefficient; $\frac{\text{lift}}{qS}$
C_D	CD	drag coefficient; $\frac{\text{drag}}{qS}$
C_{D_b}	CDB	base-drag coefficient; $\frac{\text{base drag}}{qS}$
C_{D_f}	CDF	forebody drag coefficient; $C_D - C_{D_b}$
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C_m	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS l_{REF}}$
C_n	CLN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS b}$
C_l	CBL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS b}$
L/D	L/D	lift-to-drag ratio; C_L/C_D

Notes:

1. Positive directions of force coefficients, moment coefficients, and angles are indicated by arrows.
2. For clarity, origins of wind and stability axes have been displaced from the center of gravity.



Axis systems, showing direction and sense of force and moment coefficients, angle of attack, and sideslip angle

Table 1.1.1
Space Shuttle Phase B Wind Tunnel Test
Database Summary

Booster Aerodynamics

CODE	CONFIG. I.D.	CONTRACTOR	DMS-DR#	MACH RANGE	FACILITY	MODEL SCALE	CONFIGURATIONS TESTED
B1	CANARD	MDAC	1035	0.18	MAC	0.01	MDAC SPACE SHUTTLE BOOSTER
B1	CANARD	MDAC	1108	2.0-6.0	AEDC	0.00556	MARTIN BOOSTER
B1	CANARD	MDAC	1139	0.38	NSRDC	0.015	MDAC DELTA CANARD BOOSTER
B1	CANARD	MDAC/MMC	1054	0.26	MAC	0.03	MDAC/MMC SPACE SHUTTLE BOOSTER
B1	CANARD	MDAC/MMC	1066	0.6-2.0	ARC	0.007	MDC-MMC SSV CONFIG.-14 BOOSTER (SINGLE BODY, CANARD)
B1	CANARD	MDAC/MMC	1077	0.0-0.26	MAC	0.03	MDAC/MMC SPACE SHUTTLE BOOSTER
B1	CANARD	MDAC/MMC	1080	7.4	ARC	0.007	MDC-MMC SSV BOOSTER SINGLE BODY CANARD
B1	CANARD	MDAC/MMC	1116	0.6-2.0	ARC	0.007	MMC/MDC SBC BOOSTER
B1	CANARD	MDAC/MMC	1117	2.3-4.6	LARC	0.007	MDAC/MMC HCR DELTA WING ORBITER, MDAC/MMC SBC BOOSTER
B1	CANARD	MDAC/MMC	1120	0.26	MAC	0.03	MDAC/MMC BOOSTER
B1	CANARD	MDAC/MMC	1190	0.25	LARC	0.0032	MDAC/MMC 256-14 BOOSTER, MDAC 0050B ORBITER, NAR/GDC B-15B-1 BOOSTER, NAR 134D ORBITER
B1	CANARD	MSFC	1164	0.4-1.25	NSRDC	0.015	MSFC PARAMETRIC BOOSTER
B1	CANARD	MSFC	1192	0.4-1.2	NSRDC	0.015	MSFC PARAMETRIC BOOSTER
B1	CANARD	MSFC	1212	0.4-1.1	CAL	0.015	MSFC PARAMETRIC BOOSTER
B1	CANARD	TBC	1148	0.6-5.0	MSFC	0.002456	TBC AR11981-1 BOOSTER WITH GAC G3-A ORBITER, BOEING AR11981-1 BOOSTER
B1	CANARD	TBC	1160	0.6-5.0	MSFC	0.002456	BOEING AR-11981-3 BOOSTER
B2	CYLINDRICAL	GD/C	1204	0.6-5.0	MSFC	0.003366	GD/C B19B BOOSTER WITH MSC 040A ORBITER, GD/C B19B BOOSTER
B2	CYLINDRICAL	GD/C	1210	0.9-4.96	MSFC	0.003366	TWIN PRESSURE FED BOOSTER WITH MSC 040A ORBITER, GD/C B-18E-2 BOOSTER, GD/C B-18E-3 BOOSTER
B2	CYLINDRICAL	LMSC	1242	1.96-4.96	MSFC	0.00227	NASA/MSFC PARAMETRIC BOOSTER

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Table 1.1.1 - Continued
 Space Shuttle Phase B Wind Tunnel Test
 Database Summary

Booster Aerodynamics

CODE	CONFIG.-I.D.	CONTRACTOR	DMS-DR#	MACH RANGE	FACILITY	MODEL SCALE	CONFIGURATIONS TESTED
B2	CYLINDRICAL	MDAC	1230	0.6-4.5	MDAC	0.006	PARALLEL BURN PRESSURE FED AND SRM BOOSTERS, 040A ORBITER
B2	CYLINDRICAL	MSFC	1208	0.6-5.0	MSFC	0.003366	MSFC PRESSURE FED BOOSTER
B2	CYLINDRICAL	MSFC	1226	0.9-4.96	MSFC	0.003366	MSFC PRESSURE FED BOOSTER
B2	CYLINDRICAL	MSFC	1240	0.9-4.96	MSFC	0.0028	MSFC PRESSURE FED BOOSTER
B2	CYLINDRICAL	MSFC	1245	0.9-4.96	MSFC	0.0034	MSFC PUMP-FED BOOSTER
B2	CYLINDRICAL	MSFC	1253	0.6-4.0	MSFC	0.00513	156 INCH SOLID ROCKET MOTOR
B2	CYLINDRICAL	TBC	1128	1.5-4.0	TBC	0.0144	TBC 979-185 SOLID ROCKET MOTOR
B2	CYLINDRICAL	TBC	1214	6.0	LARC	0.0035	TBC PRESSURE FED BOOSTER
B2	CYLINDRICAL	TBC	1227	0.6-4.96	MSFC	0.003366	PRESSURE FED BOOSTER WITH MSC 040A ORBITER, PRESSURE FED BOOSTER
B2	CYLINDRICAL	TBC	1228	0.6-1.1	TBC	0.008899	TBC RECOVERABLE BALLISTIC BOOSTER
B2	CYLINDRICAL	TBC	1228	2.0-4.0	TBC	0.008899	TBC RECOVERABLE BALLISTIC BOOSTER
B2	CYLINDRICAL	TBC	1275	0.35-1.1	TBC	0.008899	PRESSURE FED RECOVERABLE BOOSTER 979-160
B2	CYLINDRICAL	TBC	1275	0.35-1.1	TBC	0.008899	PRESSURE FED RECOVERABLE BOOSTER 979-160
B2	CYLINDRICAL	TBC	1275	1.3-4.0	TBC	0.008899	PRESSURE FED RECOVERABLE BOOSTER 979-160
B2	CYLINDRICAL	TBC	1275	1.3-4.0	TBC	0.008899	PRESSURE FED RECOVERABLE BOOSTER 979-160
B2	CYLINDRICAL	TBC	1276	0.6-1.1	TBC	0.006944	PRESSURE FED RECOVERABLE BOOSTER 979-160
B2	CYLINDRICAL	TBC	1276	1.3-4.0	TBC	0.006944	PRESSURE FED RECOVERABLE BOOSTER 979-160
B3	DELTA WING	GD/C	1029	8.05	GDC	0.0035	MODIFIED CONVAIR (B-88) SPACE SHUTTLE BOOSTER
B3	DELTA WING	GD/C	1030	.184-.318	GDC	0.0175	GD/C SPACE SHUTTLE BOOSTER (STRAIGHT WING), GD/C DELTA WING BOOSTER
B3	DELTA WING	GD/C	1039	.184-.259	GDC	0.0175	GD/C BOOSTER

Table 1.1.1 - Continued
 Space Shuttle Phase B Wind Tunnel Test
 Database Summary

Booster Aerodynamics

CODE	CONFIG. I.D.	CONTRACTOR	DMS-DR#	MACH RANGE	FACILITY	MODEL SCALE	CONFIGURATIONS TESTED
B3	DELTA WING	GD/C	1052	1.1-1.6	GDC	0.0035	GD/C STRAIGHT WING BOOSTER (B8X), GD/C DELTA WING BOOSTER (B-9J), NAR STRAIGHT WING ORBITER (130G), NAR DELTA WING ORBITER (134B)
B3	DELTA WING	GD/C	1087	0.2-0.3	LARC	0.0076	GD/C BOOSTER B15B-1
B3	DELTA WING	GD/C	1093	10.0	LARC	0.0035	GD/C BOOSTER
B3	DELTA WING	GD/C	1102	0.6-5.0	MSFC	0.0035	GD/C BOOSTER B-15B-1
B3	DELTA WING	GD/C	1109	0.2	GDC	0.0175	GD BOOSTER B-15B WITH MODS
B3	DELTA WING	GD/C	1110	0.2	GDC	0.0175	GD BOOSTER B-15B-1
B3	DELTA WING	GD/C	1121	0.6-2.0	ARC	0.0076	GD/C BOOSTER B-15B-1
B3	DELTA WING	GD/C	1130	0.6-5.0	MSFC	0.0035	NR/GD DELTA WING BOOSTER, NR 134D DELTA WING ORBITER
B3	DELTA WING	GD/C	1141	0.6-2.0	ARC	0.0076	GD/C B-9U BOOSTER
B3	DELTA WING	GD/C	1150	0.22-0.253	LARC	0.0076	GD/C BOOSTER B-9U
B3	DELTA WING	GD/C	1152	0.6-4.96	MSFC	0.0035	GD/C B-9U BOOSTER
B3	DELTA WING	GD/C	1155	1.2-4.96	MSFC	0.0035	GD/C BOOSTER B-15B-1
B3	DELTA WING	GD/C	1156	10.0	LARC	0.0035	GD-C B-9U BOOSTER
B3	DELTA WING	GD/C	1162	0.6-4.96	MSFC	0.0031	NR/GD DELTA WING BOOSTER B-15B-1 WITH REUSABLE NUCLEAR STAGE, NAR/GD REUSABLE NUCLEAR STAGE, NAR/GD B-15B-1 DELTA WING BOOSTER
B3	DELTA WING	GD/C	1190	0.25	LARC	0.0029	MDAC/MMC 256-14 BOOSTER, MDAC 0050B ORBITER, NAR/GDC B-15B-1 BOOSTER, NAR 134D ORBITER
B3	DELTA WING	GD/C	1210	0.9-4.96	MSFC	0.0035	TWIN PRESSURE FED BOOSTER WITH MSC 040A ORBITER, GD/C B-18E-2 BOOSTER, GD/C B-18E-3 BOOSTER
B3	DELTA WING	GD/C	1223	0.2	GDC	0.02	GD/C B-18E3 BOOSTER
B3	DELTA WING	GD/C	1237	1.6-2.16	LARC	0.0056	GD/C B9U BOOSTER WITH NR 134D ORBITER, GD/C B9U BOOSTER, NR 134D ORBITER

Table 1.1.1 - Continued
 Space Shuttle Phase B Wind Tunnel Test
 Database Summary

Booster Aerodynamics

CODE	CONFIG. I.D.	CONTRACTOR	DMS-DR#	MACH RANGE	FACILITY	MODEL SCALE	CONFIGURATIONS TESTED
B3	DELTA WING	MDAC	1014	0.18	MAC	0.01	M/DAC DELTA WING BOOSTER
B3	DELTA WING	MMC	1213	0.6-4.96	MSFC	0.0034	MMC RETRO-GLIDE BOOSTER WITH MSC 040A ORBITER, MMC RETRO-GLIDE BOOSTER
B3	DELTA WING	MSC	1115	0.6-1.4	LTV	0.008105	MSC S-13A ORBITER, MSC SB-13A BOOSTER
B3	DELTA WING	MSC/MDAC	1038	0.6-2.0	ARC	0.08	MSC/MDAC STRAIGHT WING BOOSTER, MSC/MDAC STRAIGHT AND DELTA WING ORBITERS, MSC/MDAC DELTA WING BOOSTER
B3	DELTA WING	MSFC	1001	0.3-5.0	MSFC	0.0035	MSFC BOOSTER (B-005)
B3	DELTA WING	TBC	1183	0.6-4.96	MSFC	0.003366	TBC RS-1C BOOSTER WITH MSC 040A ORBITER, TBC RS-1C BOOSTER
B3	DELTA WING	TBC	1209	0.6-4.96	MSFC	0.003366	AR 12161-2 BOOSTER
B3	DELTA WING	TBC	1220	6.0	LARC	0.0035	TBC FLYABLE LOX/RP BOOSTER
B4	STRAIGHT WING	GD/C	1025	0.9-4.6	GDC	0.0035	GD/CONVAIR (B-8B) BOOSTER
B4	STRAIGHT WING	GD/C	1029	8.05	GDC	0.0035	MODIFIED CONVAIR (B-8B) SPACE SHUTTLE BOOSTER
B4	STRAIGHT WING	GD/C	1030	.184-.318	GDC	0.0175	GD/C SPACE SHUTTLE BOOSTER (STRAIGHT WING), GD/C DELTA WING BOOSTER
B4	STRAIGHT WING	GD/C	1039	.184-.259	GDC	0.0175	GD/C BOOSTER
B4	STRAIGHT WING	GD/C	1050	0.6-2.0	ARC	0.0076	NAR/GD STRAIGHT WING BOOSTER WITH NAR/GD STRAIGHT WING AND DELTA WING ORBITERS, NAR/GD STRAIGHT WING BOOSTER
B4	STRAIGHT WING	GD/C	1051	0.6-2.0	MSFC	0.0035	NAR-GD/C STRAIGHT WING BOOSTER (B-8H MODIFIED), NAR-GD/C STRAIGHT WING ORBITER (130G), NAR-GD/C DELTA WING ORBITER (134B)
B4	STRAIGHT WING	GD/C	1052	1.1-1.6	GDC	0.0035	GD/C STRAIGHT WING BOOSTER (B8X), GD/C DELTA WING BOOSTER (B-9J), NAR STRAIGHT WING ORBITER (130G), NAR DELTA WING ORBITER (134B)
B4	STRAIGHT WING	GD/C	1075	0.6-2.0	ARC	0.0076	GD/C B-811-1 BOOSTER, NAR ORBITER
B4	STRAIGHT WING	GD/C	1100	0.25	LARC	0.0076	GD/C B-8H-1 BOOSTER

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Table 1.1.1 - Concluded
Space Shuttle Phase B Wind Tunnel Test
Database Summary

Booster Aerodynamics

CODE	CONFIG. I.D.	CONTRACTOR	DMS-DR#	MACH RANGE	FACILITY	MODEL SCALE	CONFIGURATIONS TESTED
B4	STRAIGHT WING	MSC	1033	.259	TAM	0.0132	MSC 251 BOOSTER MODEL SB-15
B4	STRAIGHT WING	MSC/MDAC	1038	0.6-2.0	ARC	0.08	MSC/MDAC STRAIGHT WING BOOSTER, MSC/MDAC STRAIGHT AND DELTA WING ORBITERS, MSC/MDAC DELTA WING BOOSTER
B4	STRAIGHT WING	TBC	1079	0.10-0.29	UW	0.02992	BOEING BOOSTER
B4	STRAIGHT WING	TBC	1111	0.3-2.0	ARC	0.00667	BAC H-32 BOOSTER
B4	STRAIGHT WING	TBC	1158	8.12	GAC	0.00435	BOEING H-32 BOOSTER
B4	STRAIGHT WING	TBC	1191	0.3-1.1	TBC	0.00667	BOEING H-32 BOOSTER
B5	UNIQUE CONFIGS.	CCSD	1046	0.4-2.0	ARC	0.0055	CCSD SERV I
B5	UNIQUE CONFIGS.	CCSD	1068	2.6-4.64	LARC	0.0055	CCSD SERV VEHICLE
B5	UNIQUE CONFIGS.	CCSD	1089	0.4-2.0	ARC	0.0055	SERV ASCENT VEHICLE WITH PERSONNEL MODULE, SERV ASCENT VEHICLE WITH WINGED ORBITER, SERV REENTRY VEHICLE
B5	UNIQUE CONFIGS.	CCSD	1089	2.6-4.64	LARC	0.0055	SERV ASCENT VEHICLE WITH PERSONNEL MODULE, SERV ASCENT VEHICLE WITH WINGED ORBITER, SERV REENTRY VEHICLE
B5	UNIQUE CONFIGS.	GD/C	1006	10	AEDC	0.0182	SAMSO-GD/CONVAIR T-18 BOOSTER
B5	UNIQUE CONFIGS.	LARC	1015	0.22-0.35	LARC	NONE	TWIN BODY BOOSTER
B5	UNIQUE CONFIGS.	LARC	1017	1.5-2.86	LARC	NONE	TWIN BODY BOOSTER
B5	UNIQUE CONFIGS.	LARC	1019	3.95-4.63	LARC	NONE	TWIN BODY BOOSTER
B5	UNIQUE CONFIGS.	LARC	1193	0.25	LARC	NONE	LARC LOW FINENESS RATIO BOOSTER
B5	UNIQUE CONFIGS.	LARC	1197	1.5-2.16	LARC	0.0076	LARC LOW FINENESS RATIO BOOSTER WITH NAR 134D ORBITER, NASA LOW FINENESS RATIO BOOSTER
B5	UNIQUE CONFIGS.	LARC	1198	10.2	LARC	NONE	LARC LOW FINENESS RATIO BOOSTER WITH NAR 134D ORBITER, LARC LOW FINENESS RATIO BOOSTER
B5	UNIQUE CONFIGS.	LARC	1200	0.4-1.2	LARC	0.0076	LOW FINENESS RATIO BOOSTER WITH NAR 134D ORBITER, LOW FINENESS RATIO BOOSTER

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Table 1.2.1
 Space Shuttle Phase B Wind Tunnel Test
 Database Summary

Booster Airloads

CODE	CONFIG. I.D.	CONTRACTOR	DMS-DR#	MACH RANGE	FACILITY	MODEL SCALE	CONFIGURATIONS TESTED
B1	CANARD	MDAC	1222	0.6-1.3	AEDC	0.00556	MDAC CANARD BOOSTER AND DELTA WING ORBITER
B1	CANARD	MDAC	1225	8.0	AEDC	0.011	MDAC CANARD BOOSTER AND DELTA WING ORBITER, AND NR DELTA WING ORBITER
B4	STRAIGHT WING	GD/C	1129	0.6-2.0	ARC	0.00761	GD/C STRAIGHT WING BOOSTER, GD/C STRAIGHT WING BOOSTER WITH NR DELTA WING ORBITER, GD/C STRAIGHT WING BOOSTER WITH NR STRAIGHT WING ORBITER
B5	UNIQUE CONFIGS.	CCSD	1125	0.0-1.25	AEDC	0.025	SERV

Table 1.3.1
Space Shuttle Phase B Wind Tunnel Test
Database Summary

Booster Heat Transfer

CODE	CONFIG. I.D.	CONTRACTOR	DMS-DR#	MACH RANGE	FACILITY	MODEL SCALE	CONFIGURATIONS TESTED
B1	CANARD	MDAC	1170	7.5-13.0	CAL	0.007	MDAC CANARD BOOSTER WITH MDAC DELTA WING ORBITER, MDAC DELTA WING ORBITER, MDAC CANARD BOOSTER
B1	CANARD	MDAC	1207	8.0	AEDC	0.011	MDAC CANARD BOOSTER AND DELTA WING ORBITER
B1	CANARD	MDAC	1262	8.0	AEDC	0.011	MDAC CANARD BOOSTER AND DELTA WING ORBITER
B1	CANARD	MDAC/MMC	1036	10.0	LARC	0.00325	MDC/MMC PHASE B BASELINE BOOSTER, MDC/MMC PHASE B LOW CROSS RANGE ORBITER, MDC/MMC PHASE B ALTERNATE BOOSTER, MDC/MMC PHASE B HIGH CROSS RANGE ORBITER
B1	CANARD	MDAC/MMC	1036	8.0	LARC	0.00325	MDC/MMC PHASE B BASELINE BOOSTER, MDC/MMC PHASE B LOW CROSS RANGE ORBITER, MDC/MMC PHASE B ALTERNATE BOOSTER, MDC/MMC PHASE B HIGH CROSS RANGE ORBITER
B1	CANARD	MDAC/MMC	1138	8.0	LARC	0.00325	MDC/MMC PHASE B BOOSTER WITH VENTRAL TIP FINS
B2	CYLINDRICAL	GD/C	1236	8.0	LARC	0.0035	GD/C B9V BOOSTER NOSE-FUSELAGE CONFIGURATION
B2	CYLINDRICAL	TBC	1261	8.0	LARC	0.0033	MSC 040A ORBITER WITH CYLINDRICAL BOOSTER 979-160, CYLINDRICAL BOOSTER 979-160
B3	DELTA WING	GD/C	1020	10.0	LARC	0.0035	CONVAIR STRAIGHT WING (B-8B) BOOSTER, CONVAIR DELTA WING (B-9J) BOOSTER
B3	DELTA WING	GD/C	1024	8.0	LARC	0.0035	CONVAIR STRAIGHT WING (B-8B) BOOSTER, CONVAIR DELTA WING (B-9J) BOOSTER
B3	DELTA WING	GD/C	1070	7.80-7.95	LARC	0.0032	DELTA WING BOOSTER WITH CANARD (B-15B)
B3	DELTA WING	GD/C	1098	2.5-3.7	LARC	0.006	GD/C DELTA WING BOOSTER (B-9J), NAR STRAIGHT WING ORBITER, NAR DELTA WING ORBITER
B3	DELTA WING	GD/C	1145	7.80-7.95	LARC	0.003	GD/C BOOSTER B-9U WITH NAR ORBITER 161C, GD/C BOOSTER B-15B-2, GD/C BOOSTER B-9U
B3	DELTA WING	GD/C	1145	7.80-7.95	LARC	0.0033	GD/C BOOSTER B-9U WITH NAR ORBITER 161C, GD/C BOOSTER B-15B-2, GD/C BOOSTER B-9U

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Table 1.3.1 - Concluded
 Space Shuttle Phase B Wind Tunnel Test
 Database Summary

Booster Heat Transfer

CODE	CONFIG. I.D.	CONTRACTOR	DMS-DR#	MACH RANGE	FACILITY	MODEL SCALE	CONFIGURATIONS TESTED
B3	DELTA WING	GD/C	1145	7.80-7.95	LARC	0.004	GD/C BOOSTER B-9U WITH NAR ORBITER 161C, GD/C BOOSTER B-15B-2, GD/C BOOSTER B-9U
B3	DELTA WING	GD/C	1177	8.0	AEDC	0.009	GD/C B-15B-2 BOOSTER, NAR 161B ORBITER
B3	DELTA WING	GD/C	1179	7.4	ARC	0.006	GD/C DELTA WING BOOSTER (B-9J)
B3	DELTA WING	GD/C	1244	6.0	LARC	0.0035	GD/C B-18E3 BOOSTER
B3	DELTA WING	GD/C	1264	8.0	AEQC	0.013	NR DELTA WING ORBITER, GD/C BOOSTER
B4	STRAIGHT WING	GD/C	1020	10.0	LARC	0.0035	CONVAIR STRAIGHT WING (B-8B) BOOSTER, CONVAIR DELTA WING (B-9J) BOOSTER
B4	STRAIGHT WING	GD/C	1024	8.0	LARC	0.0035	CONVAIR STRAIGHT WING (B-8B) BOOSTER, CONVAIR DELTA WING (B-9J) BOOSTER
B4	STRAIGHT WING	GD/C	1032	8.0	LARC	0.0035	CONVAIR STRAIGHT WING (B-8B) AND DELTA WING (B-9J) BOOSTERS, NAR STRAIGHT AND DELTA WING ORBITERS, CONVAIR B-95 BOOSTER WITH NAR DELTA WING ORBITER
B4	STRAIGHT WING	GD/C	1134	7.4	ARC	0.006	GD/C B-8B STRAIGHT WING BOOSTER

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Table 2
 Space Shuttle Phase B Wind Tunnel
 Test Database Listed by Chrysler
 DATAMAN Report Number

DMS-DR#	NASA SERIES NUMBER	VOLUME NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	FACILITY TEST NUMBER	VEHICLE COMPONENT
1001	S1002-S1801	1	103,150	--	MSFC 14TWT 451	BOOSTER
1002	S0005	1	--	62,035	ARC 3.5HWT 78	ORBITER
1003	S1802	1	103,152	--	MSFC 14TWT 453	ORBITER
1004	S0011-S0014	1	--	--	LARC 20HT6 6315	ORBITER
1005	S1809	1	103,153	--	GAC 710SWT 280	ORBITER
1006	S1808	1	103,151	--	AEDC HWTC VT0055	BOOSTER
1007	S0016	1	103,154	--	MAC LSWT 223	ORBITER
1008	S0006	1	103,155	--	TAM 710SWT S-VI	ORBITER
1009	S1206	1	--	--	LARC 22HT 7341-7343	ORBITER
1010	S0201	1	103,156	--	NRLAD LSWT 629	ORBITER
1011	S0009	1	--	--	ARC 66SWT 465	ORBITER
1012	S0036	1	--	--	ARC 11TWT 481-1	ORBITER
1013	S1207	1	--	--	LARC LTPT 50	ORBITER
1014	S1807	1	103,157	--	MAC LSWT 132	BOOSTER
1015	S1201	1	--	--	LARC LTPT 47	BOOSTER
1016	H1201	1	--	--	LARC CFHT 50	LAUNCH
1017	S1204	1	--	--	LARC UPWT 886	BOOSTER
1018	S1205	1	--	--	LARC LTPT 49	ORBITER
1019	S1203	1	--	--	LARC UPWT 913	BOOSTER
1020	H0202	1	--	--	LARC CFHT 52	BOOSTER
1021	S1806	1	--	62,066	ARC 66SWT 484	ORBITER
1022	S1208	1	--	--	LARC 710SWT 905	ORBITER
1023	S1202	1	--	--	LARC 20HT6 6329	ORBITER

Table 2 - Continued
 Space Shuttle Phase B Wind Tunnel
 Test Database Listed by Chrysler
 DATAMAN Report Number

DMS-DR#	NASA SERIES NUMBER	VOLUME NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	FACILITY TEST NUMBER	VEHICLE COMPONENT
1024	H0204	1	--	--	LARC 8VDHT 123-136,180-188	BOOSTER
1025	S0203	1	103,158	--	GDC 4HSWT 291-0	BOOSTER
1026	S0204	1	--	--	ARC 66SWT 503	ORBITER
1027	S0209	1	119,962	--	MSFC 14TWT 468	ORBITER
1028	S0405-S0406	1	--	62,039	ARC 66SWT 514	ORBITER
1029	S0205	1	103,159	--	GDC 18HWT 247-0	BOOSTER
1030	S0202	1	119,963	--	GDC 812SWT 579-0	BOOSTER
1031	S1805	1	--	62,065	ARC 3.5HWT 88	ORBITER
1032	H0205	1	--	--	LARC 8VDHT 137-146,189-205	LAUNCH
1032	H0205	1	--	--	LARC 8VDHT 137-146,189-205	ORBITER
1032	H0205	1	--	--	LARC 8VDHT 137-146,189-205	BOOSTER
1033	S0024	1	103,164	--	TAM 710SWT S-XXIV	BOOSTER
1034	S0232	1	103,160	--	NRLAD LSWT 632	ORBITER
1035	S0404	1	103,161	--	MAC LSWT 1351	BOOSTER
1036	H0401-H0403	1	--	--	LARC 8VDHT 147-179,206-322	LAUNCH
1036	H0401-H0403	1	--	--	LARC 8VDHT 147-179,206-322	BOOSTER
1036	H0401-H0403	1	--	--	LARC CFHT 53	LAUNCH
1036	H0401-H0403	1	--	--	LARC CFHT 53	BOOSTER
1036	H0401-H0403	2	--	--	LARC 8VDHT 147-179,206-322	LAUNCH
1036	H0401-H0403	2	--	--	LARC 8VDHT 147-179,206-322	BOOSTER
1036	H0401-H0403	2	--	--	LARC CFHT 53	LAUNCH
1036	H0401-H0403	2	--	--	LARC CFHT 53	BOOSTER
1037	S0201	1	103,193	--	NRLAD LSWT 630	ORBITER
1038	S0065	1	--	62,069	ARC 66SWT 486	LAUNCH

Table 2 - Continued
 Space Shuttle Phase B Wind Tunnel
 Test Database Listed by Chrysler
 DATAMAN Report Number

DMS-DR*	NASA SERIES NUMBER	VOLUME NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	FACILITY TEST NUMBER	VEHICLE COMPONENT
1038	S0065	1	--	62,069	ARC 66SWT 486	BOOSTER
1039	S0228	1	103,162	--	GDC 812SWT 580-0	BOOSTER
1040	S0407	1	103,163	--	MAC LSWT 235	ORBITER
1041	S0429	1	103,194	--	MAC LSWT 240	ORBITER
1042	S0041	1	--	--	ARC 66SWT 488	LAUNCH
1043	S0235	1	103,085	--	MSFC 14TWT 471	ORBITER
1044	S1044	1	103,195	--	MSFC 14TWT 470	LAUNCH
1045	S1210	1	--	--	LARC LTPT 50-2	ORBITER
1046	S1401	1	--	--	ARC 66SWT 522	BOOSTER
1047	S1209	1	--	--	LARC CFHT 54	LAUNCH
1048	S1213	1	--	--	LARC 20HT6 6355-6329	ORBITER
1049	S0208.01	1	--	--	LARC LTPT 52	ORBITER
1050	S0206	1	--	62,070	ARC 66SWT 505	LAUNCH
1050	S0206	1	--	62,070	ARC 66SWT 505	BOOSTER
1051	S0217	1	103,196	--	MSFC 14TWT 466	LAUNCH
1051	S0217	1	103,196	--	MSFC 14TWT 466	BOOSTER
1052	S0207	1	103,197	--	GDC 4HSWT 304-0	LAUNCH
1052	S0207	1	103,197	--	GDC 4HSWT 304-0	BOOSTER
1052	S0207	1	103,197	--	GDC 4HSWT 304-0	ORBITER
1053	S1803	1	103,198	--	GAC 710SWT 279	ORBITER
1054	S0410-S0411	1	103,199	--	MAC LSWT 239	BOOSTER
1055	S1006	1	103,200	--	MSFC 14TWT 476	LAUNCH
1056	H0201-H0203	1	--	--	LARC CFHT 51	ORBITER
1056	H0201-H0203	1	--	--	LARC BVDHT 1-58	ORBITER

Table 2 - Continued
 Space Shuttle Phase B Wind Tunnel
 Test Database Listed by Chrysler
 DATAMAN Report Number

DMS-DR#	NASA SERIES NUMBER	VOLUME NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	FACILITY TEST NUMBER	VEHICLE COMPONENT
1057	S0018-S0035	1	119,853	--	TAM 710SWT S-18/S-35	ORBITER
1058	S0028	1	119,854	--	LTV HSWT S-28	LAUNCH
1059	S1214	1	--	--	LARC 22HT 7369	ORBITER
1060	S0008	1	119,855	--	TAM 710SWT S-8-1	ORBITER
1061	S1211	1	--	--	LARC CFHT 54	LAUNCH
1062	S0038	1	119,856	--	TAM 710SWT S-38	ORBITER
1063	S0042	1	--	62,072	ARC 66SWT 524	LAUNCH
1064	S0244	1	--	--	LARC LTPT 545	ORBITER
1065	S0414	1	--	--	ARC 66SWT 508	LAUNCH
1065	S0414	2	--	--	ARC 66SWT 508	LAUNCH
1066	S0412	1	--	62,037	ARC 66SWT 504	BOOSTER
1067	S0423	1	119,857	--	MAC LSWT 248	ORBITER
1068	S1402	1	--	--	LARC UPWT 9143	BOOSTER
1069	S1212	1	--	--	LARC UPWT 922	ORBITER
1070	H0214	1	--	--	LARC 8VDHT 703-768	BOOSTER
1071	S0415-S0434	1	--	--	ARC 3.5HWT 111/113	ORBITER
1072	S0413	1	--	--	ARC 3.5HWT 104	ORBITER
1073	S0039	1	119,858	--	TAM 710SWT S-39	ORBITER
1074	S0430	1	119,859	--	MAC LSWT 138	ORBITER
1075	S0219-S0219.01	1	--	--	ARC 66SWT 511	BOOSTER
1075	S0219-S0219.01	1	--	--	ARC 66SWT 511	LAUNCH
1075	S0219-S0219.01	2	--	--	ARC 66SWT 511	BOOSTER
1075	S0219-S0219.01	2	--	--	ARC 66SWT 511	LAUNCH
1076	S0240-S0241	1	119,860	--	MSFC 14TWT 478	ORBITER

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Table 2 - Continued
 Space Shuttle Phase B Wind Tunnel
 Test Database Listed by Chrysler
 DATAMAN Report Number

DMS-DR#	NASA SERIES NUMBER	VOLUME NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	FACILITY TEST NUMBER	VEHICLE COMPONENT
1077	S0419-S0426	1	119,861	--	MAC LSWT 249	BOOSTER
1078	S0214-S0218	1	--	62,044	ARC 66SWT 503/513	ORBITER
1079	S0602	1	119,964	--	UW 812SWT 1021	BOOSTER
1080	S0416	1	--	62,038	ARC 3.5HWT 112	BOOSTER
1081	S0603	1	119,862	--	GAC 710SWT 289	ORBITER
1082	S0204-S0218	1	--	62,045	ARC 66SWT 503/513	ORBITER
1083	S0426	1	--	62,042	ARC 66SWT 527	ORBITER
1084	S0224.01	1	--	--	LARC CFHT 63	ORBITER
1085	S0801	1	--	62,073	ARC 66SWT 542	LAUNCH
1086	S1217	1	--	--	LARC 22HT 7377	ORBITER
1087	S0238	1	--	--	LARC LTPT 59	BOOSTER
1088	S1215	1	--	--	LARC 22HT 7376	ORBITER
1089	S1401-S1402	1	--	--	ARC 66SWT 522	BOOSTER
1089	S1401-S1402	1	--	--	LARC UPWT 9143	BOOSTER
1090	S0408	1	119,965	--	MAC LSWT 237	ORBITER
1091	S1034	1	119,966	--	MSFC 14TWT 485	LAUNCH
1092	S1019	1	119,967	--	AEDC PWT4T TC135	ORBITER
1093	S0231	1	--	--	LARC CFHT 64	BOOSTER
1094	S0428	1	--	62,108	ARC 3.5HWT 125	ORBITER
1095	S0224	1	--	--	LARC 20HT6 6366	ORBITER
1096	S0227	1	--	--	LARC UPWT 951	ORBITER
1097	S1216	1	--	--	LARC 8TPT 574	ORBITER
1098	H0209	1	--	--	LARC UPWT 945	LAUNCH
1098	H0209	1	--	--	LARC UPWT 945	ORBITER

Table 2 - Continued
 Space Shuttle Phase B Wind Tunnel
 Test Database Listed by Chrysler
 DATAMAN Report Number

DMS-DR#	NASA SERIES NUMBER	VOLUME NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	FACILITY TEST NUMBER	VEHICLE COMPONENT
1098	H0209	1	--	--	LARC UPWT 945	BOOSTER
1099	S0433	1	--	62,059	ARC 66SWT 557	LAUNCH
1100	S0220	1	--	--	LARC LTPT 55	BOOSTER
1101	S1219	1	--	--	LARC UPWT 944/961	ORBITER
1102	S0213	1	119,992	--	MSFC 14TWT 481	BOOSTER
1103	S0802	1	--	--	LARC UPWT 955	ORBITER
1104	S0212	1	--	62,067	ARC 3.5HWT 109A	ORBITER
1104	S0212	2	--	62,068	ARC 3.5HWT 109A	ORBITER
1105	S0225	1	--	--	LARC 8TPT 573	ORBITER
1106	S0221	1	--	--	LARC LTPT 57	ORBITER
1107	S1218	1	--	--	LARC LTPT 58	ORBITER
1108	S1023	1	119,973	--	AEDC SWTA 1163	BOOSTER
1108	S1023	1	119,973	--	AEDC SWTA 1163	ORBITER
1108	S1023	1	119,973	--	AEDC SWTA 1163	LAUNCH
1108	S1023	2	119,972	--	AEDC SWTA 1163	BOOSTER
1108	S1023	2	119,972	--	AEDC SWTA 1163	ORBITER
1108	S1023	2	119,972	--	AEDC SWTA 1163	LAUNCH
1108	S1023	3	119,971	--	AEDC SWTA 1163	BOOSTER
1108	S1023	3	119,971	--	AEDC SWTA 1163	ORBITER
1108	S1023	3	119,971	--	AEDC SWTA 1163	LAUNCH
1108	S1023	4	119,968	--	AEDC SWTA 1163	BOOSTER
1108	S1023	4	119,968	--	AEDC SWTA 1163	ORBITER
1108	S1023	4	119,968	--	AEDC SWTA 1163	LAUNCH
1108	S1023	5	119,969	--	AEDC SWTA 1163	BOOSTER

Table 2 - Continued
 Space Shuttle Phase B Wind Tunnel
 Test Database Listed by Chrysler
 DATAMAN Report Number

DMS-DR#	NASA SERIES NUMBER	VOLUME NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	FACILITY TEST NUMBER	VEHICLE COMPONENT
1108	S1023	5	119,969	--	AEDC SWTA 1163	ORBITER
1108	S1023	5	119,969	--	AEDC SWTA 1163	LAUNCH
1108	S1023	6	119,970	--	AEDC SWTA 1163	BOOSTER
1108	S1023	6	119,970	--	AEDC SWTA 1163	ORBITER
1108	S1023	6	119,970	--	AEDC SWTA 1163	LAUNCH
1108	S1023	7	119,985	--	AEDC SWTA 1163	BOOSTER
1108	S1023	7	119,985	--	AEDC SWTA 1163	ORBITER
1108	S1023	7	119,985	--	AEDC SWTA 1163	LAUNCH
1109	S0237	1	119,974	--	GDC 812SWT 587-0	BOOSTER
1110	S0247	1	119,975	--	GDC 812SWT 587-1	BOOSTER
1111	S0612	1	--	62,115	ARC 66SWT 550	BOOSTER
1112	S0608	1	--	62,060	ARC 66SWT 547	ORBITER
1113	S1222	1	--	--	LARC CFHT 62	ORBITER
1114	S1018	1	119,976	--	MSFC 14TWT 477	ORBITER
1115	S0030	1	119,986	--	LTV HSWT S-30	LAUNCH
1115	S0030	1	119,986	--	LTV HSWT S-30	ORBITER
1115	S0030	1	119,986	--	LTV HSWT S-30	BOOSTER
1116	S0431	1	--	62,049	ARC 66SWT 510	BOOSTER
1117	S0424	1	--	--	LARC UPWT 963	LAUNCH
1117	S0424	1	--	--	LARC UPWT 963	ORBITER
1117	S0424	1	--	--	LARC UPWT 963	BOOSTER
1117	S0424	2	--	--	LARC UPWT 963	LAUNCH
1117	S0424	2	--	--	LARC UPWT 963	ORBITER
1117	S0424	2	--	--	LARC UPWT 963	BOOSTER

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Table 2 - Continued
 Space Shuttle Phase B Wind Tunnel
 Test Database Listed by Chrysler
 DATAMAN Report Number

DMS-DR#	NASA SERIES NUMBER	VOLUME NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	FACILITY TEST NUMBER	VEHICLE COMPONENT
1117	S0424	3	--	--	LARC UPWT 963	LAUNCH
1117	S0424	3	--	--	LARC UPWT 963	ORBITER
1117	S0424	3	--	--	LARC UPWT 963	BOOSTER
1118	S0431.01	1	--	--	ARC 66SWT 512	LAUNCH
1118	S0431.01	2	--	--	ARC 66SWT 512	LAUNCH
1119	S0236	1	119,977	--	MSFC.14TWT 489	LAUNCH
1120	S0436	1	119,978	--	MAC LSWT 258	BOOSTER
1121	S0239	1	--	62,048	ARC 66SWT 526	BOOSTER
1122	S0606	1	--	--	ARC 66SWT 546	LAUNCH
1123	S1220	1	--	--	LARC CFHT 61	ORBITER
1124	S0215	1	119,979	--	NRLAD LSWT 633	ORBITER
1125	P1403	1	119,993	--	AEDC PWT16T TF-250	BOOSTER
1126	S0246	1	119,980	--	MSFC 14TWT 484	ORBITER
1127	S0229	1	--	62,063	ARC 66SWT 548	LAUNCH
1128	S0631	1	120,079	--	TBC B4SWT 558	BOOSTER
1129	P0203	1	--	--	ARC 66SWT 509	BOOSTER
1129	P0203	1	--	--	ARC 66SWT 509	ORBITER
1129	P0203	1	--	--	ARC 66SWT 509	LAUNCH
1129	P0203	2	--	--	ARC 66SWT 509	BOOSTER
1129	P0203	2	--	--	ARC 66SWT 509	ORBITER
1129	P0203	2	--	--	ARC 66SWT 509	LAUNCH
1129	P0203	3	--	--	ARC 66SWT 509	BOOSTER
1129	P0203	3	--	--	ARC 66SWT 509	ORBITER
1129	P0203	3	--	--	ARC 66SWT 509	LAUNCH

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Table 2 - Continued
 Space Shuttle Phase 8 Wind Tunnel
 Test Database Listed by Chrysler
 DATAMAN Report Number

OMS-DR#	NASA SERIES NUMBER	VOLUME NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	FACILITY TEST NUMBER	VEHICLE COMPONENT
1130	S0242-S0242.10	1	119,994	--	MSFC 141WT 490	BOOSTER
1130	S0242-S0242.10	1	119,994	--	MSFC 141WT 490	LAUNCH
1130	S0242-S0242.10	2	119,994	--	MSFC 141WT 490	BOOSTER
1130	S0242-S0242.10	2	119,994	--	MSFC 141WT 490	LAUNCH
1130	S0242-S0242.10	3	119,994	--	MSFC 141WT 490	BOOSTER
1130	S0242-S0242.10	3	119,994	--	MSFC 141WT 490	LAUNCH
1130	S0242-S0242.10	4	119,994	--	MSFC 141WT 490	BOOSTER
1130	S0242-S0242.10	4	119,994	--	MSFC 141WT 490	LAUNCH
1131	H0207	1	--	62,078	ARC 3.5HWT 106	ORBITER
1134	H0206	1	--	62,077	ARC 3.5HWT 105	BOOSTER
1136	S1601	1	--	62,062	ARC 66SWT 561	LAUNCH
1136	S1601	1	--	62,062	ARC 66SWT 561	LAUNCH
1136	S1601	1	--	62,062	ARC 66SWT 561	LAUNCH
1137	S0611	1	--	62,061	ARC 66SWT 551	LAUNCH
1138	H0406	1	--	--	LARC 8VDHT 1204-1213	BOOSTER
1139	S1009	1	119,985	--	NSRDC 7101WT 3110	BOOSTER
1139	S1009	2	119,996	--	NSRDC 7101WT 3110	BOOSTER
1139	S1009	3	119,997	--	NSRDC 7101WT 3110	BOOSTER
1139	S1009	4	119,998	--	NSRDC 7101WT 3110	BOOSTER
1140	S1035	1	119,981	--	MSFC 141WT 491	LAUNCH
1141	S0229.01	1	--	62,118	ARC 66SWT 563	BOOSTER
1142	S0610	1	119,982	--	GAC 710SWT 290	ORBITER
1143	H0601	1	--	--	LARC 8VDHT 1075-1107	LAUNCH
1144	S0245	1	--	--	LARC UPWT 9518	ORBITER
1145	H0213	1	--	--	LARC 8VDHT 1297-1297	LAUNCH

Table 2 - Continued
 Space Shuttle Phase B Wind Tunnel
 Test Database Listed by Chrysler
 DATAMAN Report Number

DMS-DR#	NASA SERIES NUMBER	VOLUME NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	FACILITY TEST NUMBER	VEHICLE COMPONENT
1145	H0213	1	--	--	LARC 8VDHT 1237-1297	BOOSTER
1146	H0602-H0603	1	--	--	LARC CFHT 66	ORBITER
1147	S1223	1	--	--	LARC V/STOL 007	ORBITER
1148	S0616	1	119,983	--	MSFC 14TWT 492	LAUNCH
1148	S0616	1	119,983	--	MSFC 14TWT 492	BOOSTER
1149	S1224	1	--	--	LARC LTPT 62	ORBITER
1150	S0230	1	--	--	LARC LTPT 64	BOOSTER
1151	S1221	1	--	--	LARC CFHT 68/71	ORBITER
1152	S0223	1	119,999	--	MSFC 14TWT 493	BOOSTER
1153	S1026	1	120,000	--	MSFC 14TWT 494	ORBITER
1154	H0601	1	119,984	--	GAC 36HWT 017	ORBITER
1155	S0248	1	119,987	--	MSFC 14TWT 495	BOOSTER
1156	S0226	1	--	--	LARC CFHT 70	BOOSTER
1157	S1225	1	--	--	LARC LTPT 63	ORBITER
1158	S0605	1	120,002	--	GAC 36HWT 020	BOOSTER
1159	S0604	1	119,988	--	GAC 36HWT 019	ORBITER
1160	S0617	1	120,003	--	MSFC 14TWT 496	BOOSTER
1161	S0607	1	119,989	--	GAC 26TWT 035	ORBITER
1162	S0249	1	120,004	--	MSFC 14TWT 497	BOOSTER
1162	S0249	1	120,004	--	MSFC 14TWT 497	ORBITER
1162	S0249	1	120,004	--	MSFC 14TWT 497	LAUNCH
1163	S0609	1	119,990	--	GAC 15SWT 022	ORBITER
1164	S1010	1	120,005	--	NSRDC 710TWT 3210	BOOSTER
1165	H0211	1	--	--	LARC 8VDHT 823-887	ORBITER

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Table 2 - Continued
 Space Shuttle Phase B Wind Tunnel
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DMS-DR#	NASA SERIES NUMBER	VOLUME NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	FACILITY TEST NUMBER	VEHICLE COMPONENT
1166	S1040	1	119,991	--	MSFC 14TWT 501	LAUNCH
1167	S0615	1	120,006	--	GAC 710SWT 292	ORBITER
1168	S1228	1	--	--	LARC LTPT 65	ORBITER
1169	S0803	1	--	--	LARC LTPT 69	ORBITER
1170	H0404	1	120,007	--	CAL 96HST H/T MDAC	LAUNCH
1170	H0404	1	120,007	--	CAL 96HST H/T MDAC	ORBITER
1170	H0404	1	120,007	--	CAL 96HST H/T MDAC	BOOSTER
1171	S0437	1	--	--	LARC 8TPT 595	ORBITER
1171	S0437	1	--	--	LARC 44SPT 438	ORBITER
1172	S1229	1	--	--	LARC LTPT 71	ORBITER
1173	S1227	1	--	--	LARC UPWT 942	ORBITER
1174	P1002	1	120,008	--	AEDC SWTA 1163	LAUNCH
1174	P1002	2	120,061	--	AEDC SWTA 1163	LAUNCH
1174	P1002	3	120,062	--	AEDC SWTA 1163	LAUNCH
1174	P1002	4	120,063	--	AEDC SWTA 1163	LAUNCH
1174	P1002	5	120,064	--	AEDC SWTA 1163	LAUNCH
1174	P1002	6	120,065	--	AEDC SWTA 1163	LAUNCH
1175	S1226	1	--	--	LARC 44SPT 432	ORBITER
1176	S1237	1	--	--	LARC 22HT 7386-7390	ORBITER
1177	H1009	1	120,009	--	AEDC HWTB 1162-1	BOOSTER
1177	H1009	1	120,009	--	AEDC HWTB 1162-1	ORBITER
1177	H1009	1	120,009	--	AEDC HWTB 1162-1	LAUNCH
1177	H1029	2	119,987	--	AEDC HWTB 1162-2	BOOSTER
1177	H1029	2	119,987	--	AEDC HWTB 1162-2	ORBITER

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Table 2 - Continued
 Space Shuttle Phase B Wind Tunnel
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 DATAMAN Report Number

DMS-DR#	NASA SERIES NUMBER	VOLUME NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	FACILITY TEST NUMBER	VEHICLE COMPONENT
1177	H1029	2	119,987	--	AEDC HWTB 1162-2	LAUNCH
1177	H1022	3	120,029	--	AEDC HWTB 1162-3	BOOSTER
1177	H1022	3	120,029	--	AEDC HWTB 1162-3	ORBITER
1177	H1022	3	120,029	--	AEDC HWTB 1162-3	LAUNCH
1178	H0603	1	--	--	LARC CFHT 69	LAUNCH
1178	H0603	1	--	--	LARC CFHT 69	ORBITER
1179	H0206	1	--	62,058	ARC 3.5HWT 105	BOOSTER
1180	H0207	1	--	62,057	ARC 3.5HWT 106	ORBITER
1181	S1042	1	120,010	--	MSFC 14TWT 504	LAUNCH
1182	S1044	1	120,011	--	MSFC 14TWT 505	LAUNCH
1182	S1044	1	120,011	--	MSFC 14TWT 505	ORBITER
1183	S0618	1	120,012	--	MSFC 14TWT 506	LAUNCH
1183	S0618	1	120,012	--	MSFC 14TWT 506	BOOSTER
1184	S1236	1	120,013	--	MSFC, 14TWT 507	ORBITER
1185	S0050	1	120,014	--	MSFC 14TWT 509	LAUNCH
1185	S0050	1	120,014	--	MSFC 14TWT 509	ORBITER
1186	S0065	1	120,015	--	MSFC 14TWT 510	ORBITER
1187	S1043	1	120,016	--	MSFC 14TWT 502	LAUNCH
1187	S1043	1	120,016	--	MSFC 14TWT 502	ORBITER
1188	S1041	1	120,017	--	MSFC 14TWT 503	LAUNCH
1189	S1230	1	--	--	LARC LTPT 75	ORBITER
1190	S1238	1	--	--	LARC 22HT 7377-79,7380-90	LAUNCH
1190	S1238	1	--	--	LARC 22HT 7377-79,7380-90	BOOSTER
1190	S1238	1	--	--	LARC 22HT 7377-79,7380-90	ORBITER

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 Space Shuttle Phase B Wind Tunnel
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DMS-DR#	NASA SERIES NUMBER	VOLUME NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	FACILITY TEST NUMBER	VEHICLE COMPONENT
1191	S0619	1	120,018	--	TBC BTWT 1265	BOOSTER
1192	S1036	1	120,019	--	NSRDC 710TWT 3310	BOOSTER
1193	S1239	1	--	--	LARC LTPT 73	BOOSTER
1194	S1231	1	--	--	LARC CFHT 76	ORBITER
1195	S1232	1	--	--	LARC 8TPT 604	ORBITER
1196	S1233	1	156,979	--	LARC UPWT 964	ORBITER
1197	S1240	1	--	--	LARC UPWT 962	LAUNCH
1197	S1240	1	--	--	LARC UPWT 962	BOOSTER
1198	S1242	1	--	--	LARC CFHT 74	LAUNCH
1198	S1242	1	--	--	LARC CFHT 74	BOOSTER
1199	S1241	1	--	--	LARC 44SPT 430	ORBITER
1200	S1243	1	--	--	LARC 8TPT 605	LAUNCH
1200	S1243	1	--	--	LARC 8TPT 605	BOOSTER
1201	S1026.10	1	120,020	--	MSFC 14TWT 498	ORBITER
1202	S0054	1	--	62,112	ARC 66SWT 605	ORBITER
1203	S1234	1	--	--	LARC 20HT6 6392	ORBITER
1204	S0250	1	120,022	--	MSFC 14TWT 512	LAUNCH
1204	S0250	1	120,022	--	MSFC 14TWT 512	BOOSTER
1205	S0008	1	120,023	--	TAM 710SWT S-8-2	ORBITER
1206	H1008	1	120,024	--	AEDC SWTA 1162-F00	ORBITER
1207	H1009	1	120,025	--	AEDC HWTB 1162-4	BOOSTER
1207	H1009	1	120,025	--	AEDC HWTB 1162-4	ORBITER
1207	H1014	2	120,043	--	AEDC HWTB 1162-12	BOOSTER
1207	H1014	2	120,043	--	AEDC HWTB 1162-12	ORBITER

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Table 2 - Continued
 Space Shuttle Phase B Wind Tunnel
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DMS-DR#	NASA SERIES NUMBER	VOLUME NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	FACILITY TEST NUMBER	VEHICLE COMPONENT
1208	S1046	1	120,026	--	MSFC 14TWT 518	BOOSTER
1209	S0621	1	120,027	--	MSFC 14TWT 513	BOOSTER
1210	S0251	1	120,028	--	MSFC 14TWT 514	BOOSTER
1210	S0251	1	120,028	--	MSFC 14TWT 514	LAUNCH
1211	S1235	1	--	--	LARC 22HT 7397	ORBITER
1212	S1037	1	120,030	--	CAL 8TWT 18-063	BOOSTER
1213	S0440	1	120,031	--	MSFC 14TWT 517	LAUNCH
1213	S0440	1	120,031	--	MSFC 14TWT 517	BOOSTER
1214	S0627	1	--	--	LARC 20HT6 6397	BOOSTER
1215	S0051	1	--	--	LARC LTPT 85	ORBITER
1216	S1233	1	--	--	LARC UPWT 964/969	ORBITER
1218	S1244	1	--	--	LARC 22HT 7398	ORBITER
1219	S0056	1	--	--	LARC CFHT 80	ORBITER
1220	S0628	1	--	--	LARC 20HT6 6398	BOOSTER
1221	S0055	1	120,033	--	JPL 20SWT 681	ORBITER
1222	P1001	1	120,034	--	AEDC PWT4T TC174-PC1154	BOOSTER
1222	P1001	1	120,034	--	AEDC PWT4T TC174-PC1154	LAUNCH
1222	P1001	2	120,034	--	AEDC PWT4T TC174-PC1154	BOOSTER
1222	P1001	2	120,034	--	AEDC PWT4T TC174-PC1154	LAUNCH
1223	S0252	1	120,035	--	GDC 812SWT 603-0	BOOSTER
1224	H1030	1	120,036	--	AEDC HWTF 1162-F00	ORBITER
1224	H1031	2	120,045	--	AEDC HWTB 1162-5	ORBITER
1225	P1006	1	120,037	--	AEDC HWTB 1162-5	BOOSTER
1225	P1006	1	120,037	--	AEDC HWTB 1162-5	ORBITER

Table 2 - Continued
 Space Shuttle Phase B Wind Tunnel
 Test Database Listed by Chrysler
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DMS-DR#	NASA SERIES NUMBER	VOLUME NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	FACILITY TEST NUMBER	VEHICLE COMPONENT
1225	P1007	2	120,046	--	AEDC HWTB 1162-7	BOOSTER
1225	P1007	2	120,046	--	AEDC HWTB 1162-7	ORBITER
1225	P1008	3	120,047	--	AEDC HWTB 1162-8	BOOSTER
1225	P1008	3	120,047	--	AEDC HWTB 1162-8	ORBITER
1226	S1047	1	120,038	--	MSFC 14TWT 521	BOOSTER
1227	S0625	1	120,039	--	MSFC 14TWT 523	LAUNCH
1227	S0625	1	120,039	--	MSFC 14TWT 523	BOOSTER
1228	S0622-S0623	1	120,069	--	TBC BTWT 1273	BOOSTER
1228	S0622-S0623	1	120,069	--	TBC B4SWT 553	BOOSTER
1229	S1245	1	--	--	LARC LTPT 72	ORBITER
1230	S0441	1	120,083	--	MDAC 4TWT S-222	BOOSTER
1230	S0441	1	120,083	--	MDAC 4TWT S-222	ORBITER
1230	S0441	1	120,083	--	MDAC 4TWT S-222	LAUNCH
1230	S0441	2	120,084	--	MDAC 4TWT S-222	BOOSTER
1230	S0441	2	120,084	--	MDAC 4TWT S-222	ORBITER
1230	S0441	2	120,084	--	MDAC 4TWT S-222	LAUNCH
1230	S0441	3	120,085	--	MDAC 4TWT S-222	BOOSTER
1230	S0441	3	120,085	--	MDAC 4TWT S-222	ORBITER
1230	S0441	3	120,085	--	MDAC 4TWT S-222	LAUNCH
1230	S0441	4	120,086	--	MDAC 4TWT S-222	BOOSTER
1230	S0441	4	120,086	--	MDAC 4TWT S-222	ORBITER
1230	S0441	4	120,086	--	MDAC 4TWT S-222	LAUNCH
1230	S0441	5	120,087	--	MDAC 4TWT S-222	BOOSTER
1230	S0441	5	120,087	--	MDAC 4TWT S-222	ORBITER

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 Space Shuttle Phase B Wind Tunnel
 Test Database Listed by Chrysler
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DMS-DR#	NASA SERIES NUMBER	VOLUME NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	FACILITY TEST NUMBER	VEHICLE COMPONENT
1230	S0441	5	120,087	--	MDAC 4TWT S-222	LAUNCH
1231	H1028	1	120,048	--	AEDC HWTB 1162-9	ORBITER
1232	S1246	1	--	--	LARC UPWT 968	ORBITER
1232	S1246	1	--	--	LARC LTPT 77	ORBITER
1233	S1247	1	--	--	LARC LTPT 87	ORBITER
1234	H0605	1	--	--	LARC 8VDHT 1948-2000	LAUNCH
1234	H0605	1	--	--	LARC 8VDHT 1948-2000	ORBITER
1235	S1249	1	--	--	LARC UPWT 970	ORBITER
1236	H0216	1	--	--	LARC 6HRNT 489	BOOSTER
1237	S1248	1	--	--	LARC UPWT 966	LAUNCH
1237	S1248	1	--	--	LARC UPWT 966	BOOSTER
1237	S1248	1	--	--	LARC UPWT 966	ORBITER
1238	H1032	1	--	--	LARC 20HT6 6386-6387	LAUNCH
1239	S1250	1	--	--	LARC LTPT 86/88	ORBITER
1240	S1049	1	120,040	--	MSFC 14TWT 524	BOOSTER
1241	S0076	1	120,041	--	MSFC 14TWT 531	LAUNCH
1242	S1048	1	120,042	--	MSFC 14TWT 528	BOOSTER
1243	S0067	1	120,050	--	MSFC 14TWT 528	ORBITER
1244	H0217	1	--	--	LARC 20HT6 1-20	BOOSTER
1245	S1052	1	120,051	--	MSFC 14TWT 529	BOOSTER
1249	S1054	1	120,053	--	MSFC 14TWT 534	LAUNCH
1250	S0066	1	--	62,120	ARC 11TWT 628	ORBITER
1251	S1058	1	120,055	--	MSFC 14TWT 538	LAUNCH
1252	H1601	1	--	62,114	ARC 3.5HWT 131	ORBITER

Table 2 - Continued
Space Shuttle Phase B Wind Tunnel
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DMS-DR#	NASA SERIES NUMBER	VOLUME NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	FACILITY TEST NUMBER	VEHICLE COMPONENT
1253	S1059	1	120,056	--	MSFC 14TWT 541	BOOSTER
1254	S1060	1	120,057	--	MSFC 14TWT 542	ORBITER
1255	P1009	1	120,058	--	MSFC 14TWT 543	LAUNCH
1256	S1055	1	120,059	--	MSFC 14TWT 544	LAUNCH
1258	S1251	1	--	--	LARC UPWT 979	ORBITER
1259	P1010	1	120,066	--	MSFC 14TWT 540	LAUNCH
1259	P1010	1	120,066	--	MSFC 14TWT 540	ORBITER
1260	H1033	1	--	--	LARC CFHT 78	LAUNCH
1261	H0606	1	--	--	LARC 8VDHT 2505-2565	LAUNCH
1261	H0606	1	--	--	LARC 8VDHT 2505-2565	BOOSTER
1262	H1011	1	120,067	--	AEDC HWTB 1162-9	BOOSTER
1262	H1011	1	120,067	--	AEDC HWTB 1162-9	ORBITER
1262	H1011	1	120,067	--	AEDC HWTB 1162-9	LAUNCH
1262	H1011	2	120,067	--	AEDC HWTB 1162-9	BOOSTER
1262	H1011	2	120,067	--	AEDC HWTB 1162-9	ORBITER
1262	H1011	2	120,067	--	AEDC HWTB 1162-9	LAUNCH
1263	H1034	1	--	--	LARC UPWT 967	LAUNCH
1264	H1010	1	120,049	--	AEDC HWTB 1162	BOOSTER
1264	H1010	1	120,049	--	AEDC HWTB 1162	ORBITER
1264	H1010	1	120,049	--	AEDC HWTB 1162	LAUNCH
1264	H1015-H1028	2	120,071	--	AEDC HWTB 1162	BOOSTER
1264	H1015-H1028	2	120,071	--	AEDC HWTB 1162	ORBITER
1264	H1015-H1028	2	120,071	--	AEDC HWTB 1162	LAUNCH
1265	S1254	1	--	--	LARC UPWT 981	LAUNCH

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DMS-DR#	NASA SERIES NUMBER	VOLUME NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	FACILITY TEST NUMBER	VEHICLE COMPONENT
1266	H0019	1	120,072	--	AEDC HWTB 0288	ORBITER
1267	S0079-S0080	1	--	--	ARC 11TWT 629	LAUNCH
1267	S0079-S0080	1	--	--	ARC 97SWT 629	LAUNCH
1268	S1252	1	--	--	LARC LTPT 103	ORBITER
1270	S1253	1	--	--	LARC 22HT 405	ORBITER
1270	S1253	2	--	--	LARC 22HT 405	ORBITER
1272	S1055.1	1	120,074	--	MSFC 14TWT 544X	LAUNCH
1273	P1011	1	120,075	--	MSFC 14TWT 550	LAUNCH
1274	S1062	1	120,076	--	MSFC 14TWT 551	ORBITER
1275	S0629-S0630	1	120,073	--	TBC BTWT 1282	BOOSTER
1275	S0629-S0630	1	120,073	--	TBC B4SWT 557	BOOSTER
1276	S0629-S0630	1	120,078	--	TBC BTWT 1282	BOOSTER
1276	S0629-S0630	1	120,078	--	TBC B4SWT 557	BOOSTER
1277	S1256	1	--	--	LARC CFHT 85	ORBITER
1278	H1035	1	--	--	LARC 8VDHT 2886-2929	LAUNCH

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Table 3.1.1
 Space Shuttle Phase B Wind Tunnel Test
 Database Chrysler DATAMAN Report Titles
 Booster Aerodynamics

DMS-DR#	CONFIG. I.D.	VOLUME NUMBER	REPORT TITLE
1001	DELTA WING	1	MSFC BOOSTER (B-005) LOW SPEED STATIC STABILITY AND LANDING INVESTIGATION, HIGH SPEED GRIT STUDY
1006	UNIQUE CONFIGS.	1	AEDC VON KARMEN TUNNEL C TEST VT0055 SAMSO-GD/CONVAIR T-18 HYPersonic STATIC STABILITY AND CONTROL EFFECTIVENESS INVESTIGATION
1014	DELTA WING	1	M/DAC DELTA WING BOOSTER -- DETERMINATION OF LOW SPEED DIRECTIONAL STABILITY CHARACTERISTICS
1015	UNIQUE CONFIGS.	1	TWIN BODY BOOSTER - TEST NO. 47 -- INVESTIGATION OF SUBSONIC LONGITUDINAL STABILITY AND PERFORMANCE CHARACTERISTICS
1017	UNIQUE CONFIGS.	1	SUPERSONIC AERODYNAMIC AND STATIC STABILITY CHARACTERISTICS OF THE TWIN BODY BOOSTER
1019	UNIQUE CONFIGS.	1	TWIN BODY BOOSTER INVESTIGATION OF SUPERSONIC AERODYNAMIC AND STATIC STABILITY CHARACTERISTICS
1025	STRAIGHT WING	1	LONGITUDINAL AERODYNAMIC CHARACTERISTICS OF THE GD/CONVAIR B8B BOOSTER
1029	STRAIGHT WING	1	LONGITUDINAL AND LATERAL AERODYNAMIC CHARACTERISTICS OF THE CONVAIR B8B SPACE SHUTTLE BOOSTER WITH MODIFICATIONS
1030	STRAIGHT WING	1	GENERAL DYNAMICS/CONVAIR SPACE SHUTTLE BOOSTER -- INVESTIGATION OF SUBSONIC STABILITY AND CONTROL EFFECTIVENESS
1033	STRAIGHT WING	1	INVESTIGATION OF STATIC AERODYNAMIC CHARACTERISTICS OF THE MSC 251 BOOSTER
1035	CANARD	1	LOW SPEED AERODYNAMIC CHARACTERISTICS OF THE MCDONNELL DOUGLAS SPACE SHUTTLE BOOSTER
1038	STRAIGHT WING	1	AERODYNAMIC CHARACTERISTICS OF THE MSC/MDAC SPACE SHUTTLE LAUNCH CONFIGURATION - ORBITER/BOOSTER INTERFERENCE EFFECTS (M = 0.6 TO 2.0)
1039	DELTA WING	1	GENERAL DYNAMICS/CONVAIR SPACE SHUTTLE BOOSTER -- EFFECTS OF CRUISE ENGINE NACELLE ARRANGEMENT AND TAIL SIZE ON STATIC STABILITY AND CONTROL EFFECTIVENESS
1046	UNIQUE CONFIGS.	1	STATIC AERODYNAMIC CHARACTERISTICS OF THE CHRYSLER CORPORATION SPACE DIVISION SERV 1 ASCENT AND REENTRY VEHICLE AT MACH NUMBERS OF 0.4 TO 2.0
1050	STRAIGHT WING	1	AERODYNAMIC CHARACTERISTICS OF THE NAR/GD SPACE SHUTTLE LAUNCH CONFIGURATION ORBITER/BOOSTER INTERFERENCE EFFECTS (M = 0.6 TO 2.0)
1051	STRAIGHT WING	1	STATIC STABILITY AND CONTROL INVESTIGATION OF THE NAR-GD/C STRAIGHT WING BOOSTER (B-8M MODIFIED) WITH THE STRAIGHT WING ORBITER (130G) OR DELTA WING ORBITER (134B)
1052	STRAIGHT WING	1	AERODYNAMIC FORCES AND MOMENT ON ORBITER AND BOOSTER DURING SPACE SHUTTLE ABORT SEPARATION
1054	CANARD	1	SUBSONIC AERODYNAMIC CHARACTERISTICS OF MDAC/MMC SPACE SHUTTLE BOOSTER CONFIGURATION AT MACH NUMBER = 0.26

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Database Chrysler DATAMAN Report Titles

Booster Aerodynamics

DMS-DR#	CONFIG. I.D.	VOLUME NUMBER	REPORT TITLE
1066	CANARD	1	AERODYNAMIC CHARACTERISTICS AND CONTROL EFFECTIVENESS OF THE MDAC-MMC SSV CONFIGURATION-14 BOOSTER (SINGLE BODY, CANARD) M = 0.6 TO 2.0
1068	UNIQUE CONFIGS.	1	STATIC AERODYNAMIC CHARACTERISTICS OF THE CHRYSLER CORPORATION SPACE DIVISION SERV ASCENT AND REENTRY VEHICLE AT MACH NUMBERS OF 2.6 TO 4.6
1075	STRAIGHT WING	1	AERODYNAMIC CHARACTERISTICS OF SPACE SHUTTLE CONFIGURATIONS CONSISTING OF A STRAIGHT WING BOOSTER WITH VEE TAIL AND ORBITERS WITH STRAIGHT AND DELTA WINGS -- ISOLATED BOOSTER
1075	STRAIGHT WING	2	AERODYNAMIC CHARACTERISTICS OF SPACE SHUTTLE CONFIGURATIONS CONSISTING OF A STRAIGHT WING BOOSTER WITH VEE TAIL AND ORBITERS WITH STRAIGHT AND DELTA WINGS -- COMPOSITE CONFIGURATIONS
1077	CANARD	1	MDAC/MMC SPACE SHUTTLE BOOSTER DETERMINATION OF STABILITY AND CONTROL CHARACTERISTICS AND POWER EFFECTS AT SUBSONIC SPEED (M = 0.0 AND 0.26)
1079	STRAIGHT WING	1	STATIC AERODYNAMIC CHARACTERISTICS OF THE BOEING SPACE SHUTTLE BOOSTER CONFIGURATION AT MACH 0.10 TO 0.29
56 1080	CANARD	1	HYPERSONIC AERODYNAMIC CHARACTERISTICS AND CONTROL EFFECTIVENESS OF THE MDAC-MMC SSV CONFIGURATION - 14 BOOSTER (SINGLE BODY, CANARD) M = 7.4
1087	DELTA WING	1	AERODYNAMIC CHARACTERISTICS OF THE GENERAL DYNAMICS / CONVAIR SPACE SHUTTLE BOOSTER B-15B-1 IN LANDING, CRUISE AND TRANSITION CONFIGURATIONS
1089	UNIQUE CONFIGS.	1	STATIC AERODYNAMIC CHARACTERISTICS OF THE CHRYSLER CORPORATION SPACE DIVISION REVISED BASELINE SERV ASCENT AND REENTRY VEHICLE AT MACH NUMBERS OF 0.4 TO 4.64
1089	UNIQUE CONFIGS.	1	STATIC AERODYNAMIC CHARACTERISTICS OF THE CHRYSLER CORPORATION SPACE DIVISION REVISED BASELINE SERV ASCENT AND REENTRY VEHICLE AT MACH NUMBERS OF 0.4 TO 4.64
1093	DELTA WING	1	STATIC AERODYNAMIC STABILITY AND CONTROL CHARACTERISTICS OF THE GD/CONVAIR DELTA WING BOOSTER AT NOMINAL MACH NUMBER = 10.0
1100	STRAIGHT WING	1	LOW SPEED LONGITUDINAL AND LATERAL AERODYNAMIC CHARACTERISTICS OF THE GD/C B-8H-1 BOOSTER
1102	DELTA WING	1	LONGITUDINAL AND LATERAL AERODYNAMIC CHARACTERISTICS OF THE 0.0035-SCALE GD/C AEROSPACE BOOSTER (B-15B-1)
1108	CANARD	1	INVESTIGATION OF THE MCDONNELL-DOUGLAS ORBITER AND BOOSTER SHUTTLE MODELS IN PROXIMITY AT MACH NUMBERS 2.0 TO 6.0 -- MACH NUMBER 5 BOOSTER PROXIMITY DATA
1108	CANARD	2	INVESTIGATION OF THE MCDONNELL-DOUGLAS ORBITER AND BOOSTER SHUTTLE MODELS IN PROXIMITY AT MACH NUMBERS 2.0 TO 6.0 -- MACH NUMBER 5 ORBITER PROXIMITY DATA
1108	CANARD	3	INVESTIGATION OF THE MCDONNELL-DOUGLAS ORBITER AND BOOSTER SHUTTLE MODELS IN PROXIMITY AT MACH NUMBERS 2.0 TO 6.0 -- MACH NUMBER 3 BOOSTER PROXIMITY DATA

Table 3.1.1 - Continued
 Space Shuttle Phase B Wind Tunnel Test
 Database Chrysler DATAMAN Report Titles
 Booster Aerodynamics

DMS-DR#	CONFIG. I.D.	VOLUME NUMBER	REPORT TITLE
1108	CANARD	4	INVESTIGATION OF THE MCDONNELL-DOUGLAS ORBITER AND BOOSTER SHUTTLE MODELS IN PROXIMITY AT MACH NUMBERS 2.0 TO 6.0 -- MACH NUMBER 3 ORBITER PROXIMITY DATA
1108	CANARD	5	INVESTIGATION OF THE MCDONNELL-DOUGLAS ORBITER AND BOOSTER SHUTTLE MODELS IN PROXIMITY AT MACH NUMBERS 2.0 TO 6.0 -- MACH NUMBER 2 BOOSTER PROXIMITY DATA
1108	CANARD	6	INVESTIGATION OF THE MCDONNELL-DOUGLAS ORBITER AND BOOSTER SHUTTLE MODELS IN PROXIMITY AT MACH NUMBERS 2.0 TO 6.0 -- MACH NUMBER 2 ORBITER PROXIMITY DATA
1108	CANARD	7	INVESTIGATION OF THE MCDONNELL-DOUGLAS ORBITER AND BOOSTER SHUTTLE MODELS IN PROXIMITY AT MACH NUMBERS 2.0 TO 6.0 -- PROXIMITY DATA AT MACH 4 AND 6, INTERFERENCE FREE AND LAUNCH VEHICLE DATA
1109	DELTA WING	1	AERODYNAMIC CHARACTERISTICS OF GD B-15B BOOSTER DURING CRUISE AND LANDING M = 0.2
1110	DELTA WING	1	LOW SPEED CRUISE, TAKEOFF AND LANDING AERODYNAMIC CHARACTERISTICS, INCLUDING ENGINE EXHAUST EFFECTS OF THE GD/C B-15B BOOSTER
1111	STRAIGHT WING	1	AERODYNAMIC CHARACTERISTICS OF A SPACE SHUTTLE BOOSTER WITH STRAIGHT WING AND HORIZONTAL TAIL (M = 0.26 TO 2.0)
1115	DELTA WING	1	EFFECT OF ORBITER/BOOSTER PROXIMITY INTERFERENCES ON THE AERODYNAMIC CHARACTERISTICS OF THE LAUNCH CONFIGURATION DURING SEPARATION OR ABORT MANEUVERS M = 0.6 - 1.38
1116	CANARD	1	TRANSONIC/SUPERSONIC AERODYNAMIC CHARACTERISTICS AND CONTROL EFFECTIVENESS OF THE PROPOSED HIGH-WING SINGLE-BODY CANARD SSV BOOSTER VEHICLE M = 0.6 TO 2.0
1117	CANARD	1	SUPERSONIC AERODYNAMIC CHARACTERISTICS OF THE MDAC/MMC SBC BOOSTER, DELTA WING ORBITER, AND ASCENT CONFIGURATIONS
1117	CANARD	2	SUPERSONIC AERODYNAMIC CHARACTERISTICS OF THE MDAC/MMC SBC BOOSTER, DELTA WING ORBITER, AND ASCENT CONFIGURATIONS
1117	CANARD	3	SUPERSONIC AERODYNAMIC CHARACTERISTICS OF THE MDAC/MMC SBC BOOSTER, DELTA WING ORBITER, AND ASCENT CONFIGURATIONS
1120	CANARD	1	STATIC LONGITUDINAL, DIRECTIONAL AND LATERAL CHARACTERISTICS AND CONTROL SURFACE EFFECTIVENESS OF THE MDAC-STC CANARD BOOSTER
1121	DELTA WING	1	AERODYNAMIC CHARACTERISTICS OF A SPACE SHUTTLE BOOSTER WITH DELTA WING AND CANARD AT MACH NUMBERS OF 0.6 TO 2.0 (MARCH 1971 TESTS)
1128	CYLINDRICAL	1	AERODYNAMIC CHARACTERISTICS IN NOSE-FIRST, NOZZLE-FIRST, AND TUMBLING RE-ENTRY MODES AND EFFECTIVENESS OF SEVERAL DRAG DEVICES FOR THE BOEING 0.0144-SCALE PARALLEL-BURN SOLID ROCKET MOTOR, MODEL 979-185

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Table 3.1.1 - Continued
 Space Shuttle Phase B Wind Tunnel Test
 Database Chrysler DATAMAN Report Titles

Booster Aerodynamics

DMS-DR#	CONFIG. I.D.	VOLUME NUMBER	REPORT TITLE
1130	DELTA WING	1	STATIC STABILITY AND CONTROL INVESTIGATION OF NR/GD DELTA WING BOOSTER (B-20) AND DELTA WING ORBITER (134D) -- DELTA WING BOOSTER
1130	DELTA WING	2	STATIC STABILITY AND CONTROL INVESTIGATION OF NR/GD DELTA WING BOOSTER (B-20) AND DELTA WING ORBITER (134D) -- LAUNCH CONFIGURATION PIGGYBACK BASELINE
1130	DELTA WING	3	STATIC STABILITY AND CONTROL INVESTIGATION OF NR/GD DELTA WING BOOSTER (B-20) AND DELTA WING ORBITER (134D) -- LAUNCH CONFIGURATIONS PIGGYBACK, BELLY TO BELLY AND INCIDENCE VARIATIONS
1130	DELTA WING	4	STATIC STABILITY AND CONTROL INVESTIGATION OF NR/GD DELTA WING BOOSTER (B-20) AND DELTA WING ORBITER (134D) -- LAUNCH CONFIGURATIONS COMPONENT DATA BOOSTER, ORBITER BUILD-UP
1139	CANARD	1	STABILITY AND CONTROL EFFECTIVENESS OF THE MDAC PARAMETRIC DELTA CANARD BOOSTER AT MACH 0.38 -- CANARD PARAMETRIC VARIATIONS
1139	CANARD	2	STABILITY AND CONTROL EFFECTIVENESS OF THE MDAC PARAMETRIC DELTA CANARD BOOSTER AT MACH 0.38 -- WING PARAMETRIC VARIATIONS - SIZE AND LOCATION
58 1139	CANARD	3	STABILITY AND CONTROL EFFECTIVENESS OF THE MDAC PARAMETRIC DELTA CANARD BOOSTER AT MACH 0.38 -- WING PARAMETRIC VARIATIONS - INCIDENCE AND DIHEDRAL
1139	CANARD	4	STABILITY AND CONTROL EFFECTIVENESS OF THE MDAC PARAMETRIC DELTA CANARD BOOSTER AT MACH 0.38 -- SURFACE EFFECTIVENESS, MODEL BUILDUP, AND DIRECTIONAL STABILITY AT HIGH ANGLES OF ATTACK
1141	DELTA WING	1	AERODYNAMIC CHARACTERISTICS OF A SPACE SHUTTLE BOOSTER WITH A DELTA WING AND CANARD (M = 0.6 TO 2.0)
1148	CANARD	1	AERODYNAMIC STABILITY AND CONTROL CHARACTERISTICS OF A TBC SPACE SHUTTLE BOOSTER AND GAC ORBITER M = 0.6 - 4.96
1150	DELTA WING	1	AERODYNAMIC CHARACTERISTICS OF THE GD/C B-9U BOOSTER IN LANDING AND CRUISE CONFIGURATIONS
1152	DELTA WING	1	VERIFICATION OF BOOSTER TRANSITION CHARACTERISTICS FOR TRANSONIC AND SUPERSONIC MACH NUMBERS (M = 0.6-5.0)
1155	DELTA WING	1	EFFECT OF CONFIGURATION CHANGES ON THE DIRECTIONAL CHARACTERISTICS OF A GD/C BOOSTER MACH NO. 1.2 - 4.96
1156	DELTA WING	1	AERODYNAMIC STABILITY AND CONTROL CHARACTERISTICS OF A GD/C B-9U DELTA WING BOOSTER M = 10.2
1158	STRAIGHT WING	1	STATIC STABILITY CHARACTERISTICS AND CONTROL SURFACE EFFECTIVENESS OF THE BOEING .00435 SCALE MODEL SPACE SHUTTLE BOOSTER H-32
1160	CANARD	1	INVESTIGATION OF THE AERODYNAMIC STABILITY AND CONTROL CHARACTERISTICS OF THE TBC SHUTTLE BOOSTER AR-11981-3

Table 3.1.1 - Continued
 Space Shuttle Phase B Wind Tunnel Test
 Database Chrysler DATAMAN Report Titles

Booster Aerodynamics

DMS-DR#	CONFIG. I.D.	VOLUME NUMBER	REPORT TITLE
1162	DELTA WING	1	A STATIC STABILITY AND CONTROL INVESTIGATION OF THE NR-GD/C DELTA WING BOOSTER (B-15B-1) AND A REUSABLE NUCLEAR STAGE (RNS) M = 0.6 - 4.96
1164	CANARD	1	EFFECTS OF CRUISE ENGINE LOCATION AND POWER ON INTERFERENCE FOR A MSFC PARAMETRIC BOOSTER (M = 0.40 TO 1.13)
1183	DELTA WING	1	AERODYNAMIC STABILITY AND CONTROL CHARACTERISTICS OF A 0.0036-SCALE BOEING RS-1C/MSC-040A ORBITER AT MACH NUMBERS 0.6 TO 5.0
1190	CANARD	1	HYPERSONIC STATIC LONGITUDINAL AERODYNAMIC CHARACTERISTICS OF PHASE B ASCENT CONFIGURATIONS
1191	STRAIGHT WING	1	VERIFICATION OF TRANSONIC REENTRY CORRIDOR AT HIGH ANGLES OF ATTACK AND DETERMINATION OF TRANSITION AERODYNAMIC CHARACTERISTICS AND SUBSONIC AERODYNAMIC CHARACTERISTICS AT LOW ANGLES OF ATTACK FOR THE BOEING H-32 BOOSTER
1192	CANARD	1	DIRECTIONAL AND LATERAL STABILITY AND INTERFERENCE EFFECTS OF CRUISE ENGINE LOCATION ON A 0.015 SCALE SHUTTLE BOOSTER
1193	UNIQUE CONFIGS.	1	SUBSONIC STABILITY AND PERFORMANCE OF A LOW FINENESS RATIO BOOSTER (M = 0.25)
1197	UNIQUE CONFIGS.	1	SUPERSONIC AERODYNAMIC CHARACTERISTICS OF A LOW FINENESS RATIO BOOSTER WITH DELTA WING ORBITER LAUNCH CONFIGURATION (M = 1.5 TO 2.16)
1198	UNIQUE CONFIGS.	1	AERODYNAMIC CHARACTERISTICS OF A LOW-FINENESS-RATIO BOOSTER AND ASCENT CONFIGURATION AT HYPERSONIC SPEED M = 10.23
1200	UNIQUE CONFIGS.	1	TRANSONIC AERODYNAMIC CHARACTERISTICS OF A LOW FINENESS RATIO BOOSTER AND DELTA WING ORBITER LAUNCH CONFIGURATION (M = 0.4 TO 1.2)
1204	CYLINDRICAL	1	DETERMINATION OF LONGITUDINAL AND LATERAL-DIRECTIONAL AERODYNAMIC CHARACTERISTICS OF THE B19B PRESSURE-FED BOOSTER AND THE B19B BOOSTER/040A ORBITER LAUNCH CONFIGURATION
1208	CYLINDRICAL	1	AERODYNAMIC CHARACTERISTICS OF THE MSFC PRESSURE FED BOOSTERS AT HIGH ANGLES OF ATTACK (M = 0.6 TO 5.0)
1209	DELTA WING	1	FOREBODY AND VERTICAL STABILIZER EFFECTS ON DIRECTIONAL STABILITY OF A REUSABLE LOX/RP (061) BOOSTER AR 12161-2
1210	CYLINDRICAL	1	HIGH ANGLE OF ATTACK TRANSITION AND LOW ANGLE OF ATTACK LAUNCH PHASE AERODYNAMIC STABILITY AND CONTROL OF GD/C B-18E-2, B-18E-3 DELTA WING BOOSTER, AND LAUNCH CONFIGURATION OF MSC-040A ORBITER AND TWIN PRESSURE FED BOOSTERS
1212	CANARD	1	EXPERIMENTAL INVESTIGATIONS FOR BASE DRAG REDUCTION ON A 0.015 SCALE MODEL MSFC PROPOSED SPACE SHUTTLE BOOSTER AT MACH NUMBERS FROM 0.40 TO 1.10

Table 3.1.1 - Continued
 Space Shuttle Phase B Wind Tunnel Test
 Database Chrysler DATAMAN Report Titles

Booster Aerodynamics

DMS-DR*	CONFIG. I.D.	VOLUME NUMBER	REPORT TITLE
1213	DELTA WING	1	AERODYNAMIC CHARACTERISTICS OF 0.003367 SCALE MODELS OF THE MMC RETRO-GLIDE BOOSTER ALONE AND MATED WITH THE MSC 040-A ORBITER
1214	CYLINDRICAL	1	HYPERSONIC PERFORMANCE AND STABILITY OF TBC PROPOSED SPACE SHUTTLE PRESSURE-FED BOOSTER AT HIGH ANGLES OF ATTACK
1220	DELTA WING	1	HYPERSONIC HIGH ANGLE-OF-ATTACK AERODYNAMIC CHARACTERISTICS AND BODY GEOMETRY AND FLYBACK ENGINE LOCATION EFFECTS OF THE 0.0035 SCALE FLYABLE LOX/RP BOOSTER VEHICLE
1223	DELTA WING	1	LOW SPEED AERODYNAMIC CHARACTERISTICS OF THE GD/C B-18E3 BOOSTER
1226	CYLINDRICAL	1	AERODYNAMIC STABILITY AND DRAG CHARACTERISTICS OF THE MSFC PRESSURE FED BOOSTER CONFIGURATIONS AT MACH NUMBERS FROM 0.9 TO 5.0
1227	CYLINDRICAL	1	AERODYNAMIC CHARACTERISTICS OF A COMPOSITE BOOSTER/040A ORBITER LAUNCH CONFIGURATION WITH FIN AND BOOSTER BODY CONFIGURATION EFFECT CONTRIBUTION
1228	CYLINDRICAL	1	RE-ENTRY STABILITY AND PERFORMANCE CHARACTERISTICS IN THE TRANSONIC AND SUPERSONIC FLIGHT REGIMES OF THE BOEING BALLISTIC RECOVERABLE BOOSTER
1228	CYLINDRICAL	1	RE-ENTRY STABILITY AND PERFORMANCE CHARACTERISTICS IN THE TRANSONIC AND SUPERSONIC FLIGHT REGIMES OF THE BOEING BALLISTIC RECOVERABLE BOOSTER
1230	CYLINDRICAL	1	AERODYNAMIC CHARACTERISTICS OF VARIOUS MDAC SPACE SHUTTLE ASCENT CONFIGURATIONS WITH PARALLEL BURN PRESSURE FED AND SRM BOOSTERS -- VOLUME I - ASCENT CONFIGURATION WITH HO CENTERLINE TANKS T1 AND T2
1230	CYLINDRICAL	2	AERODYNAMIC CHARACTERISTICS OF VARIOUS MDAC SPACE SHUTTLE ASCENT CONFIGURATIONS WITH PARALLEL BURN PRESSURE FED AND SRM BOOSTERS -- VOLUME II - ASCENT CONFIGURATION WITH HO CENTERLINE TANK T3
1230	CYLINDRICAL	3	AERODYNAMIC CHARACTERISTICS OF VARIOUS MDAC SPACE SHUTTLE ASCENT CONFIGURATIONS WITH PARALLEL BURN PRESSURE FED AND SRM BOOSTERS -- VOLUME III - ASCENT CONFIGURATION WITH HO CENTERLINE TANK T4
1230	CYLINDRICAL	4	AERODYNAMIC CHARACTERISTICS OF VARIOUS MDAC SPACE SHUTTLE ASCENT CONFIGURATIONS WITH PARALLEL BURN PRESSURE FED AND SRM BOOSTERS -- VOLUME IV - ASCENT CONFIGURATION PLUME STUDIES AND CONFIGURATION BUILDUP
1230	CYLINDRICAL	5	AERODYNAMIC CHARACTERISTICS OF VARIOUS MDAC SPACE SHUTTLE ASCENT CONFIGURATIONS WITH PARALLEL BURN PRESSURE FED AND SRM BOOSTERS -- VOLUME V - ORBITER ALONE, TANKS ALONE, AND BOOSTER ALONE
1237	DELTA WING	1	STATIC AERODYNAMIC CHARACTERISTICS OF STAGE ARRANGEMENTS AT SUPERSONIC SPEEDS FOR A SPACE SHUTTLE (.0056 SCALE MODEL)

Table 3.1.1 - Concluded
 Space Shuttle Phase B Wind Tunnel Test
 Database Chrysler DATAMAN Report Titles

Booster Aerodynamics

DMS-DR#	CONFIG. I.D.	VOLUME NUMBER	REPORT TITLE
1240	CYLINDRICAL	1	AERODYNAMIC STATIC STABILITY CHARACTERISTICS, FIN EFFECTIVENESS, AND FIN LOCATION OF THE MSFC 33-FOOT PRESSURE FED BOOSTER AT HIGH ANGLES OF ATTACK
1242	CYLINDRICAL	1	AERODYNAMIC CHARACTERISTICS OF CONE-CYLINDER-FLARE-FIN CONFIGURATIONS AT MACH NUMBERS OF 1.96, 2.74, AND 4.96 AND ANGLES OF ATTACK FROM 50 TO 90 DEGREES
1245	CYLINDRICAL	1	AERODYNAMIC STATIC STABILITY CHARACTERISTICS OF THE MSFC 33-FOOT PUMP FED BOOSTER AT HIGH ANGLES OF ATTACK
1253	CYLINDRICAL	1	AERODYNAMIC CHARACTERISTICS OF A 156-INCH SOLID ROCKET MOTOR AT ANGLES OF ATTACK FROM -10 DEG. TO 190 DEG.
1275	CYLINDRICAL	1	STABILITY AND CONTROL EFFECTIVENESS AT HIGH AND LOW ANGLES OF ATTACK AND EFFECTS OF VARIATIONS IN ENGINE SHROUD, FIN, AND DRAG PETAL CONFIGURATIONS FOR THE BOEING 0.008899-SCALE PRESSURE-FED BALLISTIC RECOVERABLE BOOSTER, MODEL 979-160
1275	CYLINDRICAL	1	STABILITY AND CONTROL EFFECTIVENESS AT HIGH AND LOW ANGLES OF ATTACK AND EFFECTS OF VARIATIONS IN ENGINE SHROUD, FIN, AND DRAG PETAL CONFIGURATIONS FOR THE BOEING 0.008899-SCALE PRESSURE-FED BALLISTIC RECOVERABLE BOOSTER, MODEL 979-160
1276	CYLINDRICAL	1	RE-ENTRY STABILITY IN NOSE-FORWARD AND BASE SHIELD-FORWARD ORIENTATIONS AND THE EFFECTIVENESS OF DRAG DEVICES FOR THE BOEING 0.006944-SCALE BALLISTIC RECOVERABLE BOOSTER, MODEL 979-071
1276	CYLINDRICAL	1	RE-ENTRY STABILITY IN NOSE-FORWARD AND BASE SHIELD-FORWARD ORIENTATIONS AND THE EFFECTIVENESS OF DRAG DEVICES FOR THE BOEING 0.006944-SCALE BALLISTIC RECOVERABLE BOOSTER, MODEL 979-071

Table 3.2.1
Space Shuttle Phase B Wind Tunnel Test
Database Chrysler DATAMAN Report Titles

Booster Airloads

DMS-DR#	CONFIG. I.D.	VOLUME NUMBER	REPORT TITLE
1125	UNIQUE CONFIGS.	1	STATIC PRESSURE DISTRIBUTION ON CHRYSLER CORPORATION SPACE DIVISION SERV BOOSTER CONFIGURATION
1129	STRAIGHT WING	1	PRESSURE TESTS OF MODELS OF A STRAIGHT-WING ORBITER, DELTA-WING ORBITER, AND A STRAIGHT-WING BOOSTER (MACH NUMBER 0.6 TO 2.2) -- STRAIGHT-WING BOOSTER
1129	STRAIGHT WING	2	PRESSURE TESTS OF MODELS OF A STRAIGHT-WING ORBITER, DELTA-WING ORBITER, AND A STRAIGHT-WING BOOSTER (MACH NUMBER 0.6 TO 2.2) -- DELTA-WING ORBITER
1129	STRAIGHT WING	3	PRESSURE TESTS OF MODELS OF A STRAIGHT-WING ORBITER, DELTA-WING ORBITER, AND A STRAIGHT-WING BOOSTER (MACH NUMBER 0.6 TO 2.2) -- STRAIGHT-WING ORBITER
1222	CANARD	1	PRESSURE INVESTIGATION OF A SPACE SHUTTLE LAUNCH CONFIGURATION CONSISTING OF A DELTA-WING ORBITER AND A SWEEPED-WING BOOSTER WITH CANARD AND TIP FINS (M = 0.6 TO 1.3)
1222	CANARD	2	PRESSURE INVESTIGATION OF A SPACE SHUTTLE LAUNCH CONFIGURATION CONSISTING OF A DELTA-WING ORBITER AND A SWEEPED-WING BOOSTER WITH CANARD AND TIP FINS (M = 0.6 TO 1.3)
1225	CANARD	1	SURFACE PRESSURE AND INVISCID FLOW FIELD PROPERTIES OF THE MCDONNELL-DOUGLAS DELTA-WING ORBITER FOR NOMINAL MACH NUMBER OF 8
1225	CANARD	2	SURFACE PRESSURE AND INVISCID FLOW FIELD PROPERTIES OF THE NORTH AMERICAN ROCKWELL DELTA-WING ORBITER FOR NOMINAL MACH NUMBER OF 8
1225	CANARD	3	SURFACE PRESSURE AND INVISCID FLOW FIELD PROPERTIES OF THE MCDONNELL-DOUGLAS BOOSTER AT NOMINAL MACH NUMBER OF 8

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Table 3.3.1

Space Shuttle Phase B Wind Tunnel Test
Database Chrysler DATAMAN Report Titles

Booster Heat Transfer

DMS-DR#	CONFIG. I.D.	VOLUME NUMBER	REPORT TITLE
1020	STRAIGHT WING	1	CONVAIR STRAIGHT-WING (B-8B) AND DELTA-WING (B-9J) BOOSTERS -- AERODYNAMIC HEAT TRANSFER TO THE SPACE SHUTTLE BOOSTER SURFACES AT HYPERSONIC SPEEDS
1024	STRAIGHT WING	1	CONVAIR STRAIGHT-WING (B-8B) AND DELTA-WING (B-9J) BOOSTERS -- AERODYNAMIC HEAT TRANSFER TO THE SPACE SHUTTLE BOOSTER SURFACES AT HYPERSONIC SPEEDS
1032	STRAIGHT WING	1	CONVAIR STRAIGHT WING (B-8B) AND DELTA WING (B-9J) BOOSTERS WITH NAR STRAIGHT WING AND DELTA WING ORBITERS -- INTERFERENCE HEAT TRANSFER TO SPACE SHUTTLE VEHICLE SURFACES IN CLOSE PROXIMITY AT HYPERSONIC VELOCITY
1036	CANARD	1	THERMAL MAPPING INVESTIGATION MDAC/MMC PHASE B SPACE SHUTTLE VEHICLES
1036	CANARD	1	THERMAL MAPPING INVESTIGATION MDAC/MMC PHASE B SPACE SHUTTLE VEHICLES
1036	CANARD	2	THERMAL MAPPING INVESTIGATION MDAC/MMC PHASE B SPACE SHUTTLE VEHICLES -- CONTOUR TRACINGS
1036	CANARD	2	THERMAL MAPPING INVESTIGATION MDAC/MMC PHASE B SPACE SHUTTLE VEHICLES -- CONTOUR TRACINGS
1070	DELTA WING	1	DEFINITION OF REGIONS OF HIGH HEAT TRANSFER AND DETERMINATION OF LOCAL HEAT TRANSFER COEFFICIENTS ON THE DELTA WING BOOSTER WITH CANARDS (B-15B)
1098	DELTA WING	1	HEAT TRANSFER RESULTS ON SPACE SHUTTLE PHASE B LAUNCH CONFIGURATION AT MACH NUMBERS OF 2.5 AND 3.7
1134	STRAIGHT WING	1	AERODYNAMIC HEATING OF A SPACE SHUTTLE STRAIGHT WING BOOSTER
1138	CANARD	1	THERMAL MAPPING INVESTIGATION OF A 0.0035 SCALE MDC/MMC PHASE B BOOSTER CONFIGURATION WITH VENTRAL TIP FINS
1145	DELTA WING	1	HEAT TRANSFER TEST TO DETERMINE THERMAL PROTECTION SYSTEM DESIGN REQUIREMENTS FOR BOOSTERS B-9U, B-15B-2, AND BOOSTER/ORBITER B-9U/161C
1170	CANARD	1	AERODYNAMIC HEATING TESTS OF THE MDAC DELTA WING ORBITER AND CANARD BOOSTER
1177	DELTA WING	1	HEAT TRANSFER RATE MEASUREMENTS ON CONVAIR BOOSTER (B-15B-2) AND NORTH AMERICAN ROCKWELL ORBITER (161B) AT NOMINAL MACH NUMBER OF 8
1177	DELTA WING	2	HEAT TRANSFER RATE MEASUREMENTS ON CONVAIR BOOSTER (B-15B-2) AT NOMINAL MACH NUMBER OF 8
1177	DELTA WING	3	HEAT TRANSFER RATE MEASUREMENTS ON NORTH AMERICAN ROCKWELL ORBITER (161B) AT NOMINAL MACH NUMBER OF 8
1179	DELTA WING	1	AERODYNAMIC HEATING OF A SPACE SHUTTLE DELTA-WING BOOSTER AT M = 7.4

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Table 3.3.1 - Concluded
 Space Shuttle Phase B Wind Tunnel Test
 Database Chrysler DATAMAN Report Titles

Booster Heat Transfer

DMS-DR*	CONFIG. I.D.	VOLUME NUMBER	REPORT TITLE
1207	CANARD	1	HEAT TRANSFER RATE DISTRIBUTIONS ON MCDONNELL-DOUGLAS DELTA WING ORBITER DETERMINED BY PHASE-CHANGE PAINT TECHNIQUE FOR NOMINAL MACH NUMBER OF 8
1207	CANARD	2	HEAT TRANSFER RATE DISTRIBUTIONS ON MCDONNELL-DOUGLAS BOOSTER DETERMINED BY PHASE-CHANGE TECHNIQUE FOR NOMINAL MACH NUMBER OF 8
1236	CYLINDRICAL	1	AERODYNAMIC HEATING ON SPACE SHUTTLE BOOSTER NOSE-FUSELAGE CONFIGURATIONS AT M = 6
1244	DELTA WING	1	AERODYNAMIC HEATING DATA ON THE SPACE SHUTTLE B-18E3 BOOSTER CONFIGURATION AT M = 6
1261	CYLINDRICAL	1	AN EVALUATION OF ORBITER INDUCED INTERFERENCE HEATING ON THE BOOSTER, ORBITER TANK, AND INTERSTAGE FAIRINGS FOR BOTH LOW AND HIGH-ALPHA RE-ENTRY
1262	CANARD	1	HEAT TRANSFER TESTS OF THE MCDONNELL-DOUGLAS DELTA WING ORBITER MATED WITH -17A BOOSTER AT MACH NUMBER 8
1262	CANARD	2	HEAT TRANSFER TESTS OF THE MCDONNELL-DOUGLAS DELTA WING ORBITER AND THE -17A BOOSTER (NOT MATED) AT MACH NUMBER 8
1264	DELTA WING	1	ASCENT HEAT TRANSFER RATE DISTRIBUTION ON THE NR DELTA WING ORBITER AND THE GD/C BOOSTER AT MACH NUMBER OF 8 (MATED)
1264	DELTA WING	2	ASCENT HEAT TRANSFER RATE DISTRIBUTION ON THE NR DELTA WING ORBITER AND THE GD/C BOOSTER AT MACH NUMBER OF 8 (NOT MATED)

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Table 4.1.1
Space Shuttle Phase B Wind Tunnel Test
Database Test Engineers and Test Purposes

Booster Aerodynamics

DMS-DR#	CONFIG. I.D	FACILITY TEST NUMBER	TEST ENGINEERS	PURPOSE
1001	DELTA WING	MSFC 14TWT 451	D. E. HEIM, P. E. RAMSEY /MSFC	LANDING CHARACTERISTICS
1006	UNIQUE CONFIGS.	AEDC HWTC VT0055	W. H. GALLAHER, C. J. SPURLIN /GD/C	RE-ENTRY CHARACTERISTICS, CONTROL EFFECTIVENESS
1014	DELTA WING	MAC LSWT 132	C. M. FINCH /MDAC-W	LOW SPEED AERO CHARACTERISTICS
1015	UNIQUE CONFIGS	LARC LTPT 47	B. SPENCER, G. M. WARE /LARC	CONFIGURATION VARIATION EFFECTS
1017	UNIQUE CONFIGS.	LARC UPWT 886	E. B. GRAVES /LARC	WING CONFIGURATION AND SPAN, HORIZONTAL STABILIZER DIHEDRAL ANGLE EFFECTS
1019	UNIQUE CONFIGS.	LARC UPWT 913	E. B. GRAVES /LARC	WING CONFIGURATION AND SPAN EFFECTS
1025	STRAIGHT WING	GDC 4HSWT 291-0	W. V. CARTER, M. J. LANFRANCO /GD/C	NOSE, AFTERBODY VARIATIONS, WING AND TAIL ASSEMBLY CONFIGURATIONS, TAIL DEFLECTION EFFECTS
1029	STRAIGHT WING	GDC 18HWT 247-0	H. ROBINSON, W. GALLAHER /GD/C	BODY LENGTH, CRUISE ENGINE AND TAIL CONFIGURATION EFFECTS
1029	DELTA WING	GDC 18HWT 247-0	H. ROBINSON, W. GALLAHER /GD/C	BODY LENGTH, CRUISE ENGINE AND TAIL CONFIGURATION EFFECTS
1030	STRAIGHT WING	GDC 812SWT 579-0	W. ZOMBEK /GD/C	LOW SPEED CONTROL EFFECTIVENESS - CONFIGURATION STUDY
1030	DELTA WING	GDC 812SWT 579-0	W. ZOMBEK /GD/C	LOW SPEED CONTROL EFFECTIVENESS - CONFIGURATION STUDY
1033	STRAIGHT WING	TAM 710SWT S-XXIV	R. H. MOORE /MSC	EVALUATION OF LOW SPEED STATIC-AERO CHARACTERISTICS
1035	CANARD	MAC LSWT 1351	C. M. FINCH /MDAC-W	CONFIGURATION DEVELOPMENT, JET FLAP INTERFERENCE EFFECTS
1038	STRAIGHT WING	ARC 66SWT 486	J. J. BROWNSON /ARC - A. M. WHITNAH /MSC	WING CONFIGURATION AND INTERFERENCE EFFECTS, LAUNCH CONFIGURATION
1038	DELTA WING	ARC 66SWT 486	J. J. BROWNSON /ARC - A. M. WHITNAH /MSC	WING CONFIGURATION AND INTERFERENCE EFFECTS, LAUNCH CONFIGURATION
1039	DELTA WING	GDC 812SWT 580-0	W. ZOMBEK, W. GOLDBERG, J. RAUSCH /GD/C	STABILITY AND CONTROL EFFECTIVENESS, CONFIGURATION VARIATIONS

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Table 4.1.1 - Continued
 Space Shuttle Phase B Wind Tunnel Test
 Database Test Engineers and Test Purposes

Booster Aerodynamics

DMS-DR#	CONFIG. I.D.	FACILITY TEST NUMBER	TEST ENGINEERS	PURPOSE
1039	STRAIGHT WING	GDC 812SWT 580-0	W ZOMBKE, W. GOLDBERG, J. RAUSCH /GD/C	STABILITY AND CONTROL EFFECTIVENESS, CONFIGURATION VARIATIONS
1046	UNIQUE CONFIGS.	ARC 66SWT 522	J. MELLENTHIN /ARC - R. A. MEYER, E. A. RAWLS /CCSD	STATIC STABILITY CHARACTERISTICS, ASCENT AND DESCENT
1050	STRAIGHT WING	ARC 66SWT 505	J. J. BROWNSON /ARC - L. CLARKE /NR	INTERFERENCE EFFECTS, POSITION AND INCIDENCE ANGLE
1051	STRAIGHT WING	MSFC 14TWT 466	E. C. ALLEN, J. F. HARDESTY /NR - F. W. EDER /GD/C	STATIC STABILITY AND CONTROL ABILITY
1052	STRAIGHT WING	GDC 4HSWT 304-0	J. M. DEBEVOISE /GD/C	ABORT SEPARATION EFFECTS
1052	DELTA WING	GDC 4HSWT 304-0	J. M. DEBEVOISE /GD/C	ABORT SEPARATION EFFECTS
1054	CANARD	MAC LSWT 239	D. MICHNA, G. HOLLE /MMC	POWER EFFECTS, CANARD AND WING FLAP VARIATION EFFECTS
1066	CANARD	ARC 66SWT 504	D. L. CIFFONE /ARC - W. S. COX /MDAC-W	AERODYNAMIC CHARACTERISTICS AND CONTROL EFFECTIVENESS
1068	UNIQUE CONFIGS.	LARC UPWT 9143	E. GRAVES /LARC - R. A. MEYER, E. A. RAWLS /CCSD	STABILITY CHARACTERISTICS, ASCENT AND RE-ENTRY VERSIONS
1075	STRAIGHT WING	ARC 66SWT 511	J. J. BROWNSON /ARC	TRANSITION CHARACTERISTICS
1077	CANARD	MAC LSWT 249	D. MICHNA, E. LAYS /MMC - C. FINCH, R. ROENSCH /MDAC-W	STABILITY AND CONTROL CHARACTERISTICS, CONFIGURATION VARIATION
1079	STRAIGHT WING	UW 812SWT 1021	J. HOUSER /TBC	LOW SPEED PERFORMANCE, STABILITY AND CONTROL DATA, CONFIGURATION BUILD-UP
1080	CANARD	ARC 3.5HWI 112	D. L. CIFFONE /ARC - D. SARVER /MMC	HYPERSONIC AERO-CHARACTERISTICS
1087	DELTA WING	LARC LTPT 59	W. D. REEDER, W. S. ZOMBKE /GD/C	STATIC AERODYNAMIC CHARACTERISTICS, LANDING AND CRUISE CONDITIONS
1089	UNIQUE CONFIGS.	ARC 66SWT 522	J. MELLENTHIN /ARC - E. GRAVES /LARC - E. A. RAWLS, R. A. MEYER, J. J. HULL /CCSD	STATIC AERO CHARACTERISTICS
1089	UNIQUE CONFIGS.	LARC UPWT 9143	J. MELLENTHIN /ARC - E. GRAVES /LARC - E. A. RAWLS, R. A. MEYER, J. J. HULL /CCSD	STATIC AERO CHARACTERISTICS

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Table 4.1.1 - Continued
 Space Shuttle Phase B Wind Tunnel Test
 Database Test Engineers and Test Purposes

Booster Aerodynamics

DMS-DR#	CONFIG I.D.	FACILITY TEST NUMBER	TEST ENGINEERS	PURPOSE
1093	DELTA WING	LARC CFHT 64	T. BLACKSTOCK /LARC - D. L. GROSS, W. RISTER /GD/C	STABILITY AND CONTROL CHARACTERISTICS, BUILD-UP DATA
1100	STRAIGHT WING	LARC LTPT 55	G. M. WARE /LARC - H. L. ROBINSON /GD/C	LANDING-CRUISE AND OTHER LOW SPEED CHARACTERISTICS
1102	DELTA WING	MSFC 14TWT 481	J. M. DEBEVOISE, R. F. MCGINNIS /GD/C	LONGITUDINAL AND LATERAL AERODYNAMIC CHARACTERISTICS, RE-ENTRY TO CRUISE TRANSITION INFORMATION
1108	CANARD	AEDC 9WTA 1163	L. L. TRIMMER, R. H. BURT /ARO - D. A. LOVE, J. M. RAMPY /LMSC - J. P. DECKER /LARC - K. L. BLACKWELL /MSFC	SEPARATION AERODYNAMICS
1109	DELTA WING	GDC 812SWT 587-0	J. J. WALKER, E. BURNS, W. H. GALLAHER /GD/C	CRUISE AND LANDING CHARACTERISTICS, COMPONENT VARIATION
1110	DELTA WING	GDC 812SWT 587-1	J. J. WALKER, E. BURNS, W. H. GALLAHER /GD/C	CRUISE, TAKEOFF AND LANDING CHARACTERISTICS - INCLUDES EXHAUST EFFECTS
1111	STRAIGHT WING	ARC 66SWT 550	J. J. BROWNSON /ARC - R. M. MILLER, J. HOUSER /TBC	TRANSONIC, SUPERSONIC AERODYNAMIC DATA
1115	DELTA WING	LTV HSWT S-30	P. R. ROMERE, I. H. FOSSLER /MSC	AERO CHARACTERISTICS DURING SEPARATION OR ABORT
1116	CANARD	ARC 66SWT 510	D. L. CIFFONE /ARC - D. SARVER /MMC	TRANSONIC/SUPERSONIC AERODYNAMIC CHARACTERISTICS AND CONTROL EFFECTIVENESS, CONFIGURATION BUILD-UP
1117	CANARD	LARC UPWT 963	E. B. GRAVES /LARC - G. HOLLE /MMC	AERODYNAMIC CHARACTERISTICS, INTERFERENCE EFFECTS
1120	CANARD	MAC LSWT 258	T. W. JARRETT /MDAC-W	STATIC AERODYNAMIC STABILITY AND CONTROL CHARACTERISTICS
1121	DELTA WING	ARC 66SWT 526	J. J. BROWNSON /ARC - H. L. ROBINSON, P. R. PEARSON /GD/C - M. WHITCOMB /ARO	TRANSONIC/SUPERSONIC AERODYNAMIC CHARACTERISTICS
1128	CYLINDRICAL	TBC B4SWT 558	T. L. GROW, R. L. HANSON, J. HOUSER, M. Y. OIYE /TBC	AERODYNAMIC CHARACTERISTICS OF RE-ENTRY MODES, DRAG DEVICE EFFECTIVENESS
1130	DELTA WING	MSFC 14TWT 490	E. C. ALLEN /NR - F. W. EDER /GD/C	STATIC STABILITY AND CONTROL INVESTIGATION

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Table 4.1.1 - Continued
 Space Shuttle Phase B Wind Tunnel Test
 Database Test Engineers and Test Purposes

Booster Aerodynamics

DMS-DR*	CONFIG. I D.	FACILITY TEST NUMBER	TEST ENGINEERS	PURPOSE
1139	CANARD	NSRDC 710TWT 3110	D. BRADLEY, R. BUCHHOLTZ /LMSC	STABILITY AND CONTROL EFFECTIVENESS, COMPONENT VARIATIONS
1141	DELTA WING	ARC 66SWT 563	J. BROWNSON /ARC - W. GALLAHER, J. DEBEVOISE /GD/C	VERIFICATION OF LOW SUPERSONIC CHARACTERISTICS
1148	CANARD	MSFC 14TWT 492	J. JOHNSON, L. L. WATTS /TBC	STABILITY AND CONTROL CHARACTERISTICS
1150	DELTA WING	LARC LTPT 64	W. D. REEDER, W. S. ZOMBEK /GD/C	RE-ENTRY STABILITY AND CONTROL CHARACTERISTICS
1152	DELTA WING	MSFC 14TWT 493	W. V. CARTER, R. F. MCGINNIS /GD/C	ELEVON, CANARD, RUDDER, AILERON, BODY FLAP EFFECTIVENESS
1155	DELTA WING	MSFC 14TWT 495	J. BRICKEY, T. BRICE, K. E. MARKS /GD/C	EFFECTS OF CONFIGURATION VARIABLES ON LATERAL-DIRECTIONAL CHARACTERISTICS
1156	DELTA WING	LARC CFHT 70	D. L. GROSS, W. RISTER /GD/C	CONFIGURATION BUILD-UP, CANARD AND ELEVON VARIATIONS
1158	STRAIGHT WING	GAC 36HWT 020	J. HOUSER, W. H. RUNCIMAN /TBC	HYPERSONIC STABILITY CHARACTERISTICS AND CONTROL EFFECTIVENESS
1160	CANARD	MSFC 14TWT 496	E. R. PHELPS, L. L. WATTS, R. W. AINSWORTH /TBC	AERODYNAMIC STABILITY AND CONTROL CHARACTERISTICS
1162	DELTA WING	MSFC 14TWT 497	E. C. ALLEN /NR	AERODYNAMIC FORCE AND MOMENT DATA, CONTROL EFFECTIVENESS
1164	CANARD	NSRDC 710TWT 3210	D. BRADLEY /LMSC	INTERFERENCE EFFECTS OF CRUISE ENGINE LOCATIONS, PARAMETRIC VARIATIONS
1183	DELTA WING	MSFC 14TWT 506	L. L. WATTS, R. AINSWORTH, S. VANDERLEEST /TBC	REENTRY AND TRANSITIONAL GLIDE AERODYNAMIC DATA
1190	CANARD	LARC 22HT 7377-79,7380-90	J. P. ARRINGTON /LARC	STATIC AERODYNAMIC CHARACTERISTICS, ASCENT INTERFERENCE EFFECTS
1190	DELTA WING	LARC 22HT 7377-79,7380-90	J. P. ARRINGTON /LARC	STATIC AERODYNAMIC CHARACTERISTICS, ASCENT INTERFERENCE EFFECTS
1191	STRAIGHT WING	TBC 5TWT 1265	J. HOUSER, L. J. JOHNSON, M. OIYE, W. RUNCIMAN /TBC	TRANSONIC REENTRY CORRIDOR, SUBSONIC AERODYNAMIC CHARACTERISTICS

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Table 4.1.1 - Continued
Space Shuttle Phase B Wind Tunnel Test
Database Test Engineers and Test Purposes
Booster Aerodynamics

DMS-DR#	CONFIG I.D.	FACILITY TEST NUMBER	TEST ENGINEERS	PURPOSE
1192	CANARD	NSRDC 710TWT 3310	R. BUCHHOLTZ /LMSC	EFFECTS OF VARYING WING POSITION, DIHEDRAL, CRUISE ENGINE LOCATION, AND COMBINATIONS OF WING-TIP AND CENTERLINE DORSAL FINS
1193	UNIQUE CONFIGS	LARC LTPT 73	D. C. FREEMAN /LARC	SUBSONIC LONGITUDINAL AND LATERAL-DIRECTIONAL CHARACTERISTICS
1197	UNIQUE CONFIGS	LARC UPWT 962	D. C. FREEMAN, W. A. CORLETT /LARC	SUPERSONIC AERODYNAMIC CHARACTERISTICS
1198	UNIQUE CONFIGS	LARC CFHT 74	P. T. BERNOT /LARC	HYPERSONIC AERODYNAMIC CHARACTERISTICS, COMPONENT BREAKDOWN DATA
1200	UNIQUE CONFIGS	LARC 8TPT 605	D. C. FREEMAN /LARC	LONGITUDINAL AND LATERAL-DIRECTIONAL FORCE DATA
1204	CYLINDRICAL	MSFC 14TWT 512	R. F. MCGINNIS, F. W. EDER /GD/C	LONGITUDINAL AND LATERAL DIRECTIONAL CHARACTERISTICS
1208	CYLINDRICAL	MSFC 14TWT 518	J. BAKER /LMSC	AERODYNAMIC STATIC STABILITY CHARACTERISTICS
1209	DELTA WING	MSFC 14TWT 513	C. E. ROTH, L. L. WATTS, R. W. AINSWORTH /TBC	EFFECTS OF FOREBODY AND VERTICAL STABILIZER ON DIRECTIONAL STABILITY
1210	CYLINDRICAL	MSFC 14TWT 514	J. M. DEBEVOISE, R. F. MCGINNIS /GD/C	LAUNCH-PHASE STABILITY AND CONTROL
1210	DELTA WING	MSFC 14TWT 514	J. M. DEBEVOISE, R. F. MCGINNIS /GD/C	LAUNCH-PHASE STABILITY AND CONTROL
1212	CANARD	CAL 8TWT 18-063	D. BRADLEY /LMSC	BASE DRAG REDUCTION INVESTIGATION
1213	DELTA WING	MSFC 14TWT 517	D. J. MICHNA, D. ALLAYAUD /MMC	LAUNCH CONFIGURATION AND BOOSTER REENTRY CONFIGURATION STABILITY AND CONTROL DATA
1214	CYLINDRICAL	LARC 20HT6 6397	M. Y. OIYE, E. R. PHELPS /TBC - J. C. EMERY, T. F. GOLDBERG /LARC	HYPERSONIC PERFORMANCE AND STABILITY CHARACTERISTICS, COMPONENT VARIATION EFFECTS
1220	DELTA WING	LARC 20HT6 6398	M. Y. OIYE, E. R. PHELPS /TBC - J. C. EMERY, T. J. GOLDBERG /LARC	HYPERSONIC PERFORMANCE, STABILITY AND CONTROL EFFECTIVENESS, EFFECTS OF BODY GEOMETRY AND FLYBACK ENGINE PLACEMENT

Table 4.1.1 - Continued
 Space Shuttle Phase B Wind Tunnel Test
 Database Test Engineers and Test Purposes
 Booster Aerodynamics

DMS-DR#	CONFIG. I.D.	FACILITY TEST NUMBER	TEST ENGINEERS	PURPOSE
1223	DELTA WING	GDC 812SWT 603-0	W. V. CARTER, W. H. GALLAHER /GD/C	LOW SPEED AERODYNAMIC CHARACTERISTICS, CONFIGURATION BUILD-UP
1226	CYLINDRICAL	MSFC 14TWT 521	J. BAKER /LMSC	SIX COMPONENT AERODYNAMIC FORCE AND MOMENT DATA
1227	CYLINDRICAL	MSFC 14TWT 523	R. W. AINSWORTH, J. C. JOHNSON, L. L. WATTS /TBC	FIN CONFIGURATION AND BODY CONFIGURATION EFFECTS
1228	CYLINDRICAL	TBC BTWT 1273	J. HOUSER, S. VANDERLEEST /TBC	RE-ENTRY TRANSONIC AND SUPERSONIC STABILITY AND PERFORMANCE CHARACTERISTICS
1228	CYLINDRICAL	TBC B4SWT 553	J. HOUSER, S. VANDERLEEST /TBC	RE-ENTRY TRANSONIC AND SUPERSONIC STABILITY AND PERFORMANCE CHARACTERISTICS
1230	CYLINDRICAL	MDAC 4TWT S-222	T. W. JARRETT /MDAC	AERODYNAMIC CHARACTERISTICS, INDIVIDUAL CONTRIBUTIONS DURING ASCENT, AND RELATIVE ORBITER AND BOOSTER POSITION INTERFERENCE EFFECTS
1237	DELTA WING	LARC UPWT 966	W. I. SCALLION, R. H. FOURNIER /LARC	FORCES AND MOMENTS, INTERFERENCE EFFECTS, COMPONENT EFFECTS
1240	CYLINDRICAL	MSFC 14TWT 524	T. HAMILTON /NSI	SIX COMPONENT AERODYNAMIC FORCE AND MOMENT DATA
1242	CYLINDRICAL	MSFC 14TWT 526	D. BRADLEY, R. ELLIS /LMSC	HIGH ALPHA FORCE AND STATIC STABILITY DATA
1245	CYLINDRICAL	MSFC 14TWT 529	T. HAMILTON /NSI	SIX COMPONENT AERODYNAMIC FORCE AND MOMENT DATA
1253	CYLINDRICAL	MSFC 14TWT 541	R. E. BUCHHOLTZ, D. J. ELDER /LMSC	REYNOLDS NUMBER EFFECT ON AERODYNAMIC STABILITY AND CONTROL
1275	CYLINDRICAL	TBC BTWT 1282	R. L. HANSON, R. G. O'BRIEN, M. Y. OIYE, S. VANDERLEEST /TBC	2-COMPONENT, 6-COMPONENT FORCE DATA AND BASE PRESSURE DATA
1275	CYLINDRICAL	TBC BTWT 1282	R. L. HANSON, R. G. O'BRIEN, M. Y. OIYE, S. VANDERLEEST /TBC	2-COMPONENT, 6-COMPONENT FORCE DATA AND BASE PRESSURE DATA
1275	CYLINDRICAL	TBC B4SWT 557	R. L. HANSON, R. G. O'BRIEN, M. Y. OIYE, S. VANDERLEEST /TBC	2-COMPONENT, 6-COMPONENT FORCE DATA AND BASE PRESSURE DATA

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Table 4.1.1 - Concluded
 Space Shuttle Phase B Wind Tunnel Test
 Database Test Engineers and Test Purposes
 Booster Aerodynamics

DMS-DR#	CONFIG. I.D.	FACILITY TEST NUMBER	TEST ENGINEERS	PURPOSE
1275	CYLINDRICAL	TBC B4SWT 557	R. L. HANSON, R. G. O'BRIEN, M. Y. OIYE, S. VANDERLEEST /TBC	2-COMPONENT, 6-COMPONENT FORCE DATA AND BASE PRESSURE DATA
1276	CYLINDRICAL	TBC BTWT 1282	R. L. HANSON, R. G. O'BRIEN, M. Y. OIYE, S. VANDERLEEST /TBC	6-COMPONENT FORCE DATA AND BASE PRESSURE DATA
1276	CYLINDRICAL	TBC B4SWT 557	R. L. HANSON, R. G. O'BRIEN, M. Y. OIYE, S. VANDERLEEST /TBC	6-COMPONENT FORCE DATA AND BASE PRESSURE DATA

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Table 4.2.1
 Space Shuttle Phase B Wind Tunnel Test
 Database Test Engineers and Test Purposes
 Booster Airloads

DMS-DR*	CONFIG. I D.	FACILITY TEST NUMBER	TEST ENGINEERS	PURPOSE
1125	UNIQUE CONFIGS	AEDC PWT16T TF-250	E. A. PRICE /ARO - J. J. HULL, E. A. RAWLS /CCSD	DRAG AND FOREBODY STATIC PRESSURE DISTRIBUTIONS
1129	STRAIGHT WING	ARC 66SWT 509	J. A. MELLENTHIN /ARC - B. W. CAMERON, C. R. LEEF /NR	PRESSURE DATA PERTINENT TO AERODYNAMIC LOADING CHARACTERISTICS
1222	CANARD	AEDC PWT4T TC174-PC1154	J. M. RAMPY /NSI - K. L. BLACKWELL /MSFC - G. R. GOMILLION /ARO	LAUNCH CONFIGURATION PRESSURE DATA AT TRANSONIC SPEEDS
1225	CANARD	AEDC HWTB 1162-5	J. D. WARBROD /MSFC - W. R. MARTINDALE, R. K. MATTHEWS /ARO	SURFACE PRESSURE AND FLOW FIELD TESTS

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Table 4.3.1
Space Shuttle Phase B Wind Tunnel Test
Database Test Engineers and Test Purposes

Booster Heat Transfer

DMS-DR*	CONFIG. I.D.	FACILITY TEST NUMBER	TEST ENGINEERS	PURPOSE
1020	STRAIGHT WING	LARC CFHT 52	A. M. ROBERGE, W. R. GINSKY /GD/C	HYPERSONIC AERO HEATING OF SURFACES
1020	DELTA WING	LARC CFHT 52	A. M. ROBERGE, W. R. GINSKY /GD/C	HYPERSONIC AERO HEATING OF SURFACES
1024	STRAIGHT WING	LARC 8VDHT 123-136,180-188	R. A. JONES, W. GINSKY /GD/C	HYPERSONIC AERO HEATING OF SURFACES
1024	DELTA WING	LARC 8VDHT 123-136,180-188	R. A. JONES, W. GINSKY /GD/C	HYPERSONIC AERO HEATING OF SURFACES
1032	STRAIGHT WING	LARC 8VDHT 137-146,189-205	W. R. GINSKY /GD/C - R. RAPARELLI /NR	EVALUATION OF INTERFERENCE HEATING RATES
1036	CANARD	LARC 8VDHT 147-179,206-322	P. L. CLICK, D. SCHMITT /MMC	THERMAL MAPPING
1036	CANARD	LARC CFHT 53	P. L. CLICK, D. SCHMITT /MMC	THERMAL MAPPING
1070	DELTA WING	LARC 8VDHT 703-766	R. O. DOUGHTY, R. C. ERICKSON /GD/C	CANARD ANGLE-OF-ATTACK AND CONFIGURATION VARIATION EFFECTS
1098	DELTA WING	LARC UPWT 945	R. L. STALLINGS /LARC - A. M. ROBERGE /GD/C - H. GOROWITZ /NR	ASCENT HEAT TRANSFER DISTRIBUTIONS, INTERFERENCE HEATING INFORMATION
1134	STRAIGHT WING	ARC 3.5HWT 105	W. K. LOCKMAN, C. E. DEROSE /ARC	DETAILED AERO HEATING DISTRIBUTIONS
1138	CANARD	LARC 8VDHT 1204-1213	D. A. SCHMITT /MMC	THERMAL MAPPING INVESTIGATION, PHASE CHANGE PAINT TEST
1145	DELTA WING	LARC 8VDHT 1237-1297	R. O. DOUGHTY, R. C. ERICKSON /GD/C	THERMAL PROTECTION SYSTEM REQUIREMENTS
1145	DELTA WING	LARC 8VDHT 1237-1297	R. O. DOUGHTY, R. C. ERICKSON /GD/C	THERMAL PROTECTION SYSTEM REQUIREMENTS
1145	DELTA WING	LARC 8VDHT 1237-1297	R. O. DOUGHTY, R. C. ERICKSON /GD/C	THERMAL PROTECTION SYSTEM REQUIREMENTS
1170	CANARD	CAL 96HST H/T MDAC	T. L. ANDRESEN /MDAC-E	THERMAL ENVIRONMENT DATA FOR THERMAL PROTECTION SYSTEM DESIGN
1177	DELTA WING	AEDC HWTB 1162-1	J. D. WARMBROD /MSFC - W. R. MARTINDALE, R. K. MATTHEWS /ARO	ASCENT AND REENTRY HEATING DATA
1179	DELTA WING	ARC 3.5HWT 105	C. E. DEROSE, W. K. LOCKMAN /ARC - A. ROBERGE, N. NICODEMOS /GD/C	DETAILED AERODYNAMIC HEATING DISTRIBUTIONS
1207	CANARD	AEDC HWTB 1162-4	J. D. WARMBROD /MSFC, - W. R. MARTINDALE, R. K. MATTHEWS /ARO	HEAT TRANSFER RESULTS

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Table 4.3.1 - Concluded
 Space Shuttle Phase B Wind Tunnel Test
 Database Test Engineers and Test Purposes

Booster Heat Transfer

DMS-DR#	CONFIG. I.D.	FACILITY TEST NUMBER	TEST ENGINEERS	PURPOSE
1236	CYLINDRICAL	LARC 6HRNT 489	C. STAINBACK /LARC - E. SCHWARTZ, A. ROBERGE /GD/C	LAMINAR, TRANSITIONAL AND TURBULENT FLOW HEAT TRANSFER DATA
1244	DELTA WING	LARC 20HT6 1-20	J. C. EMERY /LARC - R. OTWELL, A. M. ROBERGE, E. SCHWARTZ /GD/C	EFFECTS OF CONFIGURATION ON HEAT TRANSFER RATES
1261	CYLINDRICAL	LARC 8VDHT 2505-2565	J. HOUSER, A. PERLBACHS /TBC - L. E. CLARK /LARC	INTERFERENCE HEATING, RE-ENTRY HEATING
1262	CANARD	AEDC HWTB 1162-9	R. K. MATTHEWS, W. R. MARTINDALE /ARO - J. D. WARMBROD /MSFC	INTERFERENCE HEATING DATA
1264	DELTA WING	AEDC HWTB 1162	R. K. MATTHEWS, W. R. MARTINDALE /ARO - J. D. WARMBROD /MSFC	INTERFERENCE HEATING DATA

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Table 5

Space Shuttle Phase B Facility
Wind Tunnel Summary

FACILITY	SUBFACILITY	FACILITY TEST NUMBER	VEHICLE COMPONENT	TEST DISCIPLINE	DMS-DR#	PUB. DATE	DATASET CODE
AEDC	HWTB	0288	ORBITER	HEAT-TRANSFER	1266	07/72	N/A
AEDC	HWTB	1162	ORBITER	HEAT-TRANSFER	1264	07/72	N/A
AEDC	HWTB	1162	LAUNCH	HEAT-TRANSFER	1264	07/72	N/A
AEDC	HWTB	1162	BOOSTER	HEAT-TRANSFER	1264	07/72	N/A
AEDC	HWTB	1162-1	ORBITER	HEAT-TRANSFER	1177	11/71	N/A
AEDC	HWTB	1162-1	LAUNCH	HEAT-TRANSFER	1177	11/71	N/A
AEDC	HWTB	1162-1	BOOSTER	HEAT-TRANSFER	1177	11/71	N/A
AEDC	HWTB	1162-4	BOOSTER	HEAT-TRANSFER	1207	08/72 REV. 01	N/A
AEDC	HWTB	1162-4	ORBITER	HEAT-TRANSFER	1207	08/72 REV. 01	N/A
AEDC	HWTB	1162-5	ORBITER	AIRLOADS	1225	01/72	N/A
AEDC	HWTB	1162-5	BOOSTER	AIRLOADS	1225	01/72	N/A
AEDC	HWTB	1162-9	ORBITER	HEAT-TRANSFER	1231	04/72	N/A
AEDC	HWTB	1162-9	ORBITER	HEAT-TRANSFER	1262	06/72	N/A
AEDC	HWTB	1162-9	LAUNCH	HEAT-TRANSFER	1262	06/72	N/A
AEDC	HWTB	1162-9	BOOSTER	HEAT-TRANSFER	1262	06/72	N/A
AEDC	HWTB	VF0055	BOOSTER	AERODYNAMICS	1006	07/70	T4
AEDC	HWTF	1162-F00	ORBITER	HEAT-TRANSFER	1224	04/72	N/A
AEDC	PWT16T	TF-250	BOOSTER	AIRLOADS	1125	10/71	T7
AEDC	PWT4T	TC135	ORBITER	AERODYNAMICS	1092	07/71	RT
AEDC	PWT4T	TC174-PC1154	LAUNCH	AIRLOADS	1222	02/73	TC
AEDC	PWT4T	TC174-PC1154	BOOSTER	AIRLOADS	1222	02/73	TC
AEDC	SWTA	1162-F00	ORBITER	HEAT-TRANSFER	1206	05/72	N/A

Table 5 - Continued

Space Shuttle Phase B Facility
Wind Tunnel Summary

FACILITY	SUBFACILITY	FACILITY TEST NUMBER	VEHICLE COMPONENT	TEST DISCIPLINE	DMS-DR#	PUB. DATE	DATASET CODE
AEDC	SWTA	1163	LAUNCH	AERODYNAMICS	1108	07/71	T8
AEDC	SWTA	1163	LAUNCH	AIRLOADS	1174	06/72	T8
AEDC	SWTA	1163	BOOSTER	AERODYNAMICS	1108	07/71	T8
AEDC	SWTA	1163	ORBITER	AERODYNAMICS	1108	07/71	T8
ARC	11TWT	481-1	ORBITER	AERODYNAMICS	1012	09/70	A5
ARC	11TWT	628	ORBITER	AERODYNAMICS	1250	04/72	BF
ARC	11TWT	629	LAUNCH	AERODYNAMICS	1267	09/72	BG
ARC	3 SHWT	104	ORBITER	AERODYNAMICS	1072	03/71	AJ
ARC	3 SHWT	105	BOOSTER	HEAT-TRANSFER	1179	10/71	N/A
ARC	3 SHWT	105	BOOSTER	HEAT-TRANSFER	1134	01/72	D0
ARC	3 SHWT	106	ORBITER	HEAT-TRANSFER	1131	01/72	C0
ARC	3 SHWT	106	ORBITER	HEAT-TRANSFER	1180	10/71	N/A
ARC	3 SHWT	109A	ORBITER	AERODYNAMICS	1104	08/71	AK
ARC	3 SHWT	111/113	ORBITER	AERODYNAMICS	1071	03/71	AH
ARC	3 SHWT	112	BOOSTER	AERODYNAMICS	1080	04/71	AL
ARC	3 SHWT	125	ORBITER	AERODYNAMICS	1094	01/72	AX
ARC	3 SHWT	131	ORBITER	HEAT-TRANSFER	1252	04/72	N/A
ARC	3 SHWT	78	ORBITER	AERODYNAMICS	1002	06/70	A6
ARC	3 SHWT	88	ORBITER	AERODYNAMICS	1031	11/70	A4
ARC	66SWT	465	ORBITER	AERODYNAMICS	1011	09/70	A7
ARC	66SWT	484	ORBITER	AERODYNAMICS	1021	10/70	A3
ARC	66SWT	486	BOOSTER	AERODYNAMICS	1038	09/72 REV. 01	AA
ARC	66SWT	486	LAUNCH	AERODYNAMICS	1038	09/72 REV. 01	AA

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Table 5 - Continued
 Space Shuttle Phase B Facility
 Wind Tunnel Summary

FACILITY	SUBFACILITY	FACILITY TEST NUMBER	VEHICLE COMPONENT	TEST DISCIPLINE	DMS-DR#	PUB. DATE	DATASET CODE
ARC	66SWT	488	LAUNCH	AERODYNAMICS	1042	12/70	AN
ARC	66SWT	503	ORBITER	AERODYNAMICS	1026	10/70	AE
ARC	66SWT	503/513	ORBITER	AERODYNAMICS	1082	06/71	AF
ARC	66SWT	503/513	ORBITER	AERODYNAMICS	1078	06/71	AF
ARC	66SWT	504	BOOSTER	AERODYNAMICS	1066	02/71	AD
ARC	66SWT	505	BOOSTER	AERODYNAMICS	1050	01/71	AG
ARC	66SWT	505	LAUNCH	AERODYNAMICS	1050	01/71	AG
ARC	66SWT	508	LAUNCH	AERODYNAMICS	1065	04/71	AB
ARC	66SWT	509	ORBITER	AIRLOADS	1129	08/72	AX
ARC	66SWT	509	LAUNCH	AIRLOADS	1129	08/72	AX
ARC	66SWT	509	BOOSTER	AIRLOADS	1129	08/72	AX
ARC	66SWT	510	BOOSTER	AERODYNAMICS	1116	08/71	AR
ARC	66SWT	511	LAUNCH	AERODYNAMICS	1075	10/72	AH
ARC	66SWT	511	BOOSTER	AERODYNAMICS	1075	10/72	AH
ARC	66SWT	512	LAUNCH	AERODYNAMICS	1118	12/72	AC
ARC	66SWT	514	ORBITER	AERODYNAMICS	1028	12/70	A9
ARC	66SWT	522	BOOSTER	AERODYNAMICS	1089	05/71	RL
ARC	66SWT	522	BOOSTER	AERODYNAMICS	1046	01/71	AO
ARC	66SWT	524	LAUNCH	AERODYNAMICS	1063	03/71	AO
ARC	66SWT	526	BOOSTER	AERODYNAMICS	1121	08/71 REV. 01	AS
ARC	66SWT	527	ORBITER	AERODYNAMICS	1083	06/71	AT
ARC	66SWT	542	LAUNCH	AERODYNAMICS	1085	05/71	AV
ARC	66SWT	546	LAUNCH	AERODYNAMICS	1122	05/72	AW
ARC	66SWT	547	ORBITER	AERODYNAMICS	1112	12/71	BB

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Space Shuttle Phase B Facility
Wind Tunnel Summary

FACILITY	SUBFACILITY	FACILITY TEST NUMBER	VEHICLE COMPONENT	TEST DISCIPLINE	DMS-DR#	PUB. DATE	DATASET CODE
ARC	66SWT	548	LAUNCH	AERODYNAMICS	1127	09/72	AZ
ARC	66SWT	550	BOOSTER	AERODYNAMICS	1111	04/72	BD
ARC	66SWT	551	LAUNCH	AERODYNAMICS	1137	12/71	BC
ARC	66SWT	557	LAUNCH	AERODYNAMICS	1099	02/72	AY
ARC	66SWT	561	LAUNCH	AERODYNAMICS	1136	02/72	BC
ARC	66SWT	561	LAUNCH	AIRLOADS	1136	02/72	BC
ARC	66SWT	563	BOOSTER	AERODYNAMICS	1141	05/72	BA
ARC	66SWT	605	ORBITER	AERODYNAMICS	1202	02/72	BE
ARC	97SWT	629	LAUNCH	AERODYNAMICS	1267	09/72	BG
CAL	8TWT	18-063	BOOSTER	AERODYNAMICS	1212	02/72	U9
CAL	96HST	H/T MDAC	ORBITER	HEAT-TRANSFER	1170	01/72	N/A
CAL	96HST	H/T MDAC	BOOSTER	HEAT-TRANSFER	1170	01/72	N/A
CAL	96HST	H/T MDAC	LAUNCH	HEAT-TRANSFER	1170	01/72	N/A
GAC	15SWT	022	ORBITER	AERODYNAMICS	1163	09/71	CS
GAC	26TWT	035	ORBITER	AERODYNAMICS	1161	08/71	CR
GAC	36HWT	017	ORBITER	HEAT-TRANSFER	1154	07/71	N/A
GAC	36HWT	019	ORBITER	AERODYNAMICS	1159	09/71	CT
GAC	36HWT	020	BOOSTER	AERODYNAMICS	1158	11/71	CX
GAC	710SWT	279	ORBITER	AERODYNAMICS	1053	01/71	CL
GAC	710SWT	280	ORBITER	AERODYNAMICS	1005	07/70	C3
GAC	710SWT	289	ORBITER	AERODYNAMICS	1081	04/71	CO
GAC	710SWT	290	ORBITER	AERODYNAMICS	1142	09/71	CW
GAC	710SWT	292	ORBITER	AERODYNAMICS	1167	11/71	DI
GDC	18HWT	247-0	BOOSTER	AERODYNAMICS	1029	12/70	C9

Table 5 - Continued

Space Shuttle Phase B Facility
Wind Tunnel Summary

FACILITY	SUBFACILITY	FACILITY TEST NUMBER	VEHICLE COMPONENT	TEST DISCIPLINE	DMS-DR*	PUB. DATE	DATASET CODE
GDC	4HSWT	291-0	BOOSTER	AERODYNAMICS	1025	10/70	C6
GDC	4HSWT	304-0	LAUNCH	AERODYNAMICS	1052	03/71	CA
GDC	4HSWT	304-0	ORBITER	AERODYNAMICS	1052	03/71	CA
GDC	4HSWT	304-0	BOOSTER	AERODYNAMICS	1052	03/71	CA
GDC	812SWT	579-0	BOOSTER	AERODYNAMICS	1030	11/70	C7
GDC	812SWT	580-0	BOOSTER	AERODYNAMICS	1039	01/71	C8
GDC	812SWT	587-0	BOOSTER	AERODYNAMICS	1109	08/71	CM
GDC	812SWT	587-1	BOOSTER	AERODYNAMICS	1110	08/71	CV
GDC	812SWT	603-0	BOOSTER	AERODYNAMICS	1223	04/72	D4
JPL	20SWT	681	ORBITER	AERODYNAMICS	1221	05/72	GB
LARC	20HT6	1-20	BOOSTER	HEAT-TRANSFER	1244	03/72	N/A
LARC	20HT6	6315	ORBITER	AERODYNAMICS	1004	07/70	L1
LARC	20HT6	6329	ORBITER	AERODYNAMICS	1023	11/70	LA
LARC	20HT6	6355-6329	ORBITER	AERODYNAMICS	1048	01/71	LA
LARC	20HT6	6366	ORBITER	AERODYNAMICS	1095	06/71	LU
LARC	20HT6	6386-6387	LAUNCH	HEAT-TRANSFER	1238	08/72	HT
LARC	20HT6	6392	ORBITER	AERODYNAMICS	1203	03/72 REV. 01	MR
LARC	20HT6	6397	BOOSTER	AERODYNAMICS	1214	12/71	O4
LARC	20HT6	6398	BOOSTER	AERODYNAMICS	1220	02/72	O2
LARC	22HT	405	ORBITER	AERODYNAMICS	1270	08/72	ON
LARC	22HT	7341-7343	ORBITER	AERODYNAMICS	1009	09/70	L2
LARC	22HT	7369	ORBITER	AERODYNAMICS	1059	02/71	LH
LARC	22HT	7376	ORBITER	AERODYNAMICS	1068	04/71	LV
LARC	22HT	7377	ORBITER	AERODYNAMICS	1086	06/71	LZ

Table 5 - Continued

Space Shuttle Phase B Facility
Wind Tunnel Summary

FACILITY	SUBFACILITY	FACILITY TEST NUMBER	VEHICLE COMPONENT	TEST DISCIPLINE	DMS-DR#	PUB. DATE	DATASET CODE
LARC	22HT	7377-79,7380-90	BOOSTER	AERODYNAMICS	1190	02/72	MU
LARC	22HT	7377-79,7380-90	ORBITER	AERODYNAMICS	1190	02/72	MU
LARC	22HT	7377-79,7380-90	LAUNCH	AERODYNAMICS	1190	02/72	MU
LARC	22HT	7386-7390	ORBITER	AERODYNAMICS	1176	01/72	MT
LARC	22HT	7397	ORBITER	AERODYNAMICS	1211	02/72	MS
LARC	22HT	7398	ORBITER	AERODYNAMICS	1218	06/72	O6
LARC	44SPT	430	ORBITER	AERODYNAMICS	1199	05/72	MX
LARC	44SPT	432	ORBITER	AERODYNAMICS	1175	01/72	LY
LARC	44SPT	438	ORBITER	AERODYNAMICS	1171	12/71	MJ
LARC	6HRNT	489	BOOSTER	HEAT-TRANSFER	1236	02/72	N/A
LARC	710SWT	905	ORBITER	AERODYNAMICS	1022	10/70	LB
LARC	8TPT	573	ORBITER	AERODYNAMICS	1105	09/71	LO
LARC	8TPT	574	ORBITER	AERODYNAMICS	1097	06/71	MO
LARC	8TPT	595	ORBITER	AERODYNAMICS	1171	12/71	NJ
LARC	8TPT	604	ORBITER	AERODYNAMICS	1195	12/71	MN
LARC	8TPT	605	BOOSTER	AERODYNAMICS	1200	03/72	MZ
LARC	8TPT	605	LAUNCH	AERODYNAMICS	1200	03/72	MZ
LARC	8VDHT	1-58	ORBITER	HEAT-TRANSFER	1056	01/71	N/A
LARC	8VDHT	1075-1107	LAUNCH	HEAT-TRANSFER	1143	06/71	N/A
LARC	8VDHT	1204-1243	BOOSTER	HEAT-TRANSFER	1138	07/71	N/A
LARC	8VDHT	123-136,180-188	BOOSTER	HEAT-TRANSFER	1024	10/70	N/A
LARC	8VDHT	1237-1297	LAUNCH	HEAT-TRANSFER	1145	07/71	N/A
LARC	8VDHT	1237-1297	BOOSTER	HEAT-TRANSFER	1145	07/71	N/A
LARC	8VDHT	137-146,189-205	ORBITER	HEAT-TRANSFER	1032	11/70	N/A

Table 5 - Continued

Space Shuttle Phase B Facility
Wind Tunnel Summary

FACILITY	SUBFACILITY	FACILITY TEST NUMBER	VEHICLE COMPONENT	TEST DISCIPLINE	DMS-DR#	PUB. DATE	DATASET CODE
LARC	8VDHT	137-146,189-205	BOOSTER	HEAT-TRANSFER	1032	11/70	N/A
LARC	8VDHT	137-146,189-205	LAUNCH	HEAT-TRANSFER	1032	11/70	N/A
LARC	8VDHT	147-179,206-322	BOOSTER	HEAT-TRANSFER	1036	12/70	N/A
LARC	8VDHT	147-179,206-322	LAUNCH	HEAT-TRANSFER	1036	12/70	N/A
LARC	8VDHT	1948-2000	LAUNCH	HEAT-TRANSFER	1234	04/72	N/A
LARC	8VDHT	1948-2000	ORBITER	HEAT-TRANSFER	1234	04/72	N/A
LARC	8VDHT	2505-2565	BOOSTER	HEAT-TRANSFER	1261	06/72	N/A
LARC	8VDHT	2505-2565	LAUNCH	HEAT-TRANSFER	1261	06/72	N/A
LARC	8VDHT	2886-2929	LAUNCH	HEAT-TRANSFER	1278	10/72	N/A
LARC	8VDHT	703-766	BOOSTER	HEAT-TRANSFER	1070	03/71	N/A
LARC	8VDHT	823-887	ORBITER	HEAT-TRANSFER	1165	08/71	N/A
LARC	CFHT	50	LAUNCH	HEAT-TRANSFER	1016	09/70	N/A
LARC	CFHT	51	ORBITER	HEAT-TRANSFER	1056	01/71	N/A
LARC	CFHT	52	BOOSTER	HEAT-TRANSFER	1020	10/70	N/A
LARC	CFHT	53	BOOSTER	HEAT-TRANSFER	1036	12/70	N/A
LARC	CFHT	53	LAUNCH	HEAT-TRANSFER	1036	12/70	N/A
LARC	CFHT	54	LAUNCH	AERODYNAMICS	1047	01/71	LB
LARC	CFHT	54	LAUNCH	AERODYNAMICS	1061	02/71	LC
LARC	CFHT	61	ORBITER	AERODYNAMICS	1123	01/72	LT
LARC	CFHT	62	ORBITER	AERODYNAMICS	1113	07/71	M9
LARC	CFHT	63	ORBITER	AERODYNAMICS	1084	08/71	LO
LARC	CFHT	64	BOOSTER	AERODYNAMICS	1093	05/71	LG
LARC	CFHT	66	ORBITER	HEAT-TRANSFER	1146	07/71	N/A
LARC	CFHT	68/71	ORBITER	AERODYNAMICS	1151	11/71	M0

Table 5 - Continued
 Space Shuttle Phase B Facility
 Wind Tunnel Summary

FACILITY	SUBFACILITY	FACILITY TEST NUMBER	VEHICLE COMPONENT	TEST DISCIPLINE	DMS-DR#	PUB. DATE	DATASET CODE
LARC	CFHT	69	LAUNCH	HEAT-TRANSFER	1178	10/71	N/A
LARC	CFHT	69	ORBITER	HEAT-TRANSFER	1178	10/71	N/A
LARC	CFHT	70	BOOSTER	AERODYNAMICS	1156	12/71	MB
LARC	CFHT	74	LAUNCH	AERODYNAMICS	1198	01/72	MY
LARC	CFHT	74	BOOSTER	AERODYNAMICS	1198	01/72	MY
LARC	CFHT	76	ORBITER	AERODYNAMICS	1194	12/71	MQ
LARC	CFHT	78	LAUNCH	HEAT-TRANSFER	1260	09/72	OK
LARC	CFHT	80	ORBITER	AERODYNAMICS	1219	05/72	O5
LARC	CFHT	85	ORBITER	AERODYNAMICS	1277	09/72	OO
LARC	LTPT	103	ORBITER	AERODYNAMICS	1268	08/72	OH
LARC	LTPT	47	BOOSTER	AERODYNAMICS	1015	09/70	L6
LARC	LTPT	49	ORBITER	AERODYNAMICS	1018	10/70	L7
LARC	LTPT	50	ORBITER	AERODYNAMICS	1013	09/70	L3
LARC	LTPT	50-2	ORBITER	AERODYNAMICS	1045	01/71	LF
LARC	LTPT	52	ORBITER	AERODYNAMICS	1049	11/71	L9
LARC	LTPT	545	ORBITER	AERODYNAMICS	1064	03/71	LD
LARC	LTPT	55	BOOSTER	AERODYNAMICS	1100	07/71	LE
LARC	LTPT	57	ORBITER	AERODYNAMICS	1106	07/71	LN
LARC	LTPT	58	ORBITER	AERODYNAMICS	1107	06/71	M1
LARC	LTPT	59	BOOSTER	AERODYNAMICS	1087	07/71	LS
LARC	LTPT	62	ORBITER	AERODYNAMICS	1149	08/71	MF
LARC	LTPT	63	ORBITER	AERODYNAMICS	1157	09/71	MG
LARC	LTPT	64	BOOSTER	AERODYNAMICS	1150	10/71	MC
LARC	LTPT	65	ORBITER	AERODYNAMICS	1168	11/71	M5

Table 5 - Continued

Space Shuttle Phase B Facility
Wind Tunnel Summary

FACILITY	SUBFACILITY	FACILITY TEST NUMBER	VEHICLE COMPONENT	TEST DISCIPLINE	DMS-DR#	PUB. DATE	DATASET CODE
LARC	LTPT	69	ORBITER	AERODYNAMICS	1169	04/72	MI
LARC	LTPT	71	ORBITER	AERODYNAMICS	1172	12/71	ML
LARC	LTPT	72	ORBITER	AERODYNAMICS	1229	05/72	O7
LARC	LTPT	73	BOOSTER	AERODYNAMICS	1193	05/72	MV
LARC	LTPT	75	ORBITER	AERODYNAMICS	1189	12/71	MN
LARC	LTPT	77	ORBITER	AERODYNAMICS	1232	06/72	O9
LARC	LTPT	85	ORBITER	AERODYNAMICS	1215	01/72	O1
LARC	LTPT	86/88	ORBITER	AERODYNAMICS	1239	04/72	OE
LARC	LTPT	87	ORBITER	AERODYNAMICS	1233	04/72	EO
LARC	UPWT	886	BOOSTER	AERODYNAMICS	1017	10/70	L4
LARC	UPWT	913	BOOSTER	AERODYNAMICS	1019	09/70	L5
LARC	UPWT	9143	BOOSTER	AERODYNAMICS	1089	05/71	RL
LARC	UPWT	9143	BOOSTER	AERODYNAMICS	1068	03/71	RL
LARC	UPWT	922	ORBITER	AERODYNAMICS	1069	03/71	LI
LARC	UPWT	942	ORBITER	AERODYNAMICS	1173	12/71	MK
LARC	UPWT	944/961	ORBITER	AERODYNAMICS	1101	06/71	M7
LARC	UPWT	945	BOOSTER	HEAT-TRANSFER	1098	06/71	N/A
LARC	UPWT	945	LAUNCH	HEAT-TRANSFER	1098	06/71	N/A
LARC	UPWT	945	ORBITER	HEAT-TRANSFER	1098	06/71	N/A
LARC	UPWT	951	ORBITER	AERODYNAMICS	1096	05/71	LP
LARC	UPWT	9518	ORBITER	AERODYNAMICS	1144	09/71	MD
LARC	UPWT	955	ORBITER	AERODYNAMICS	1103	06/71	M2
LARC	UPWT	962	LAUNCH	AERODYNAMICS	1197	03/72	MW
LARC	UPWT	962	BOOSTER	AERODYNAMICS	1197	03/72	MW

Table 5 - Continued

Space Shuttle Phase B Facility
Wind Tunnel Summary

FACILITY	SUBFACILITY	FACILITY TEST NUMBER	VEHICLE COMPONENT	TEST DISCIPLINE	DMS-DR#	PUB. DATE	DATASET CODE
LARC	UPWT	963	ORBITER	AERODYNAMICS	1117	09/71	LR
LARC	UPWT	963	BOOSTER	AERODYNAMICS	1117	09/71	LR
LARC	UPWT	963	LAUNCH	AERODYNAMICS	1117	09/71	LR
LARC	UPWT	964	ORBITER	AERODYNAMICS	1196	01/72	MN
LARC	UPWT	964/969	ORBITER	AERODYNAMICS	1216	05/72	MO
LARC	UPWT	966	LAUNCH	AERODYNAMICS	1237	05/72	OB
LARC	UPWT	966	ORBITER	AERODYNAMICS	1237	05/72	OB
LARC	UPWT	966	BOOSTER	AERODYNAMICS	1237	05/72	OB
LARC	UPWT	967	LAUNCH	HEAT-TRANSFER	1263	09/72 REV. A	OL
LARC	UPWT	968	ORBITER	AERODYNAMICS	1232	06/72	O9
LARC	UPWT	970	ORBITER	AERODYNAMICS	1235	05/72	OC
LARC	UPWT	979	ORBITER	AERODYNAMICS	1258	05/72	OF
LARC	UPWT	981	LAUNCH	AERODYNAMICS	1265	01/73	OH
LARC	V/STOL	007	ORBITER	AERODYNAMICS	1147	09/71	ME
LTV	HSWT	S-28	LAUNCH	AERODYNAMICS	1058	02/71	CH
LTV	HSWT	S-30	ORBITER	AERODYNAMICS	1115	08/71	CU
LTV	HSWT	S-30	BOOSTER	AERODYNAMICS	1115	08/71	CU
LTV	HSWT	S-30	LAUNCH	AERODYNAMICS	1115	08/71	CU
MAC	LSWT	132	BOOSTER	AERODYNAMICS	1014	10/70	C2
MAC	LSWT	1351	BOOSTER	AERODYNAMICS	1035	12/70	CC
MAC	LSWT	138	ORBITER	AERODYNAMICS	1074	04/71	CN
MAC	LSWT	223	ORBITER	AERODYNAMICS	1007	08/70	C1
MAC	LSWT	235	ORBITER	AERODYNAMICS	1040	12/70	CB
MAC	LSWT	237	ORBITER	AERODYNAMICS	1090	05/71	CD

Table 5 - Continued
 Space Shuttle Phase B Facility
 Wind Tunnel Summary

FACILITY	SUBFACILITY	FACILITY TEST NUMBER	VEHICLE COMPONENT	TEST DISCIPLINE	DMS-DR#	PUB. DATE	DATASET CODE
MAC	LSWT	239	BOOSTER	AERODYNAMICS	1054	02/71	CE
MAC	LSWT	240	ORBITER	AERODYNAMICS	1041	01/71	CF
MAC	LSWT	248	ORBITER	AERODYNAMICS	1067	03/71	CP
MAC	LSWT	249	BOOSTER	AERODYNAMICS	1077	04/71	CO
MAC	LSWT	258	BOOSTER	AERODYNAMICS	1120	08/71	CZ
MDAC	4TWT	S-222	LAUNCH	AERODYNAMICS	1230	11/72	D7
MDAC	4TWT	S-222	BOOSTER	AERODYNAMICS	1230	11/72	D7
MDAC	4TWT	S-222	ORBITER	AERODYNAMICS	1230	11/72	D7
MSFC	14TWT	451	BOOSTER	AERODYNAMICS	1001	06/70	19
MSFC	14TWT	453	ORBITER	AERODYNAMICS	1003	07/70	17
MSFC	14TWT	466	LAUNCH	AERODYNAMICS	1051	03/71	22
MSFC	14TWT	466	BOOSTER	AERODYNAMICS	1051	03/71	22
MSFC	14TWT	468	ORBITER	AERODYNAMICS	1027	10/70	21
MSFC	14TWT	470	LAUNCH	AERODYNAMICS	1044	02/71	24
MSFC	14TWT	471	ORBITER	AERODYNAMICS	1043	02/71	23
MSFC	14TWT	476	LAUNCH	AERODYNAMICS	1055	02/71	25
MSFC	14TWT	477	ORBITER	AERODYNAMICS	1114	09/71	26
MSFC	14TWT	478	ORBITER	AERODYNAMICS	1076	04/71	27
MSFC	14TWT	481	BOOSTER	AERODYNAMICS	1102	03/72	28
MSFC	14TWT	484	ORBITER	AERODYNAMICS	1126	09/71	29
MSFC	14TWT	485	LAUNCH	AERODYNAMICS	1091	05/71	30
MSFC	14TWT	489	LAUNCH	AERODYNAMICS	1119	07/71	31
MSFC	14TWT	490	LAUNCH	AERODYNAMICS	1130	03/72	32
MSFC	14TWT	490	BOOSTER	AERODYNAMICS	1130	03/72	32

Table 5 - Continued

Space Shuttle Phase B Facility
Wind Tunnel Summary

FACILITY	SUBFACILITY	FACILITY TEST NUMBER	VEHICLE COMPONENT	TEST DISCIPLINE	DMS-DR#	PUB. DATE	DATASET CODE
MSFC	14TWT	491	LAUNCH	AERODYNAMICS	1140	08/71	33
MSFC	14TWT	492	BOOSTER	AERODYNAMICS	1148	09/71	34
MSFC	14TWT	492	LAUNCH	AERODYNAMICS	1148	09/71	34
MSFC	14TWT	493	BOOSTER	AERODYNAMICS	1152	09/71	35
MSFC	14TWT	494	ORBITER	AERODYNAMICS	1153	10/71	36
MSFC	14TWT	495	BOOSTER	AERODYNAMICS	1155	09/71	37
MSFC	14TWT	496	BOOSTER	AERODYNAMICS	1160	10/72	38
MSFC	14TWT	497	BOOSTER	AERODYNAMICS	1162	10/71	39
MSFC	14TWT	497	LAUNCH	AERODYNAMICS	1162	10/71	39
MSFC	14TWT	497	ORBITER	AERODYNAMICS	1162	10/71	39
MSFC	14TWT	498	ORBITER	AERODYNAMICS	1201	03/72	41
MSFC	14TWT	501	LAUNCH	AERODYNAMICS	1166	09/71	43
MSFC	14TWT	502	LAUNCH	AERODYNAMICS	1187	07/72	44
MSFC	14TWT	502	ORBITER	AERODYNAMICS	1187	07/72	44
MSFC	14TWT	503	LAUNCH	AERODYNAMICS	1188	02/72	45
MSFC	14TWT	504	LAUNCH	AERODYNAMICS	1181	01/72	46
MSFC	14TWT	505	LAUNCH	AERODYNAMICS	1182	02/72	47
MSFC	14TWT	505	ORBITER	AERODYNAMICS	1182	02/72	47
MSFC	14TWT	506	LAUNCH	AERODYNAMICS	1183	10/71	48
MSFC	14TWT	506	BOOSTER	AERODYNAMICS	1183	10/71	48
MSFC	14TWT	507	ORBITER	AERODYNAMICS	1184	06/72	49
MSFC	14TWT	509	LAUNCH	AERODYNAMICS	1185	02/72	51
MSFC	14TWT	509	ORBITER	AERODYNAMICS	1185	02/72	51
MSFC	14TWT	510	ORBITER	AERODYNAMICS	1186	11/71	52

Table 5 - Continued
 Space Shuttle Phase B Facility
 Wind Tunnel Summary

FACILITY	SUBFACILITY	FACILITY TEST NUMBER	VEHICLE COMPONENT	TEST DISCIPLINE	DMS-DR#	PUB. DATE	DATASET CODE
MSFC	14TWT	512	BOOSTER	AERODYNAMICS	1204	12/71	50
MSFC	14TWT	512	LAUNCH	AERODYNAMICS	1204	12/71	50
MSFC	14TWT	513	BOOSTER	AERODYNAMICS	1209	04/72	53
MSFC	14TWT	514	BOOSTER	AERODYNAMICS	1210	02/72	58
MSFC	14TWT	514	LAUNCH	AERODYNAMICS	1210	02/72	58
MSFC	14TWT	517	LAUNCH	AERODYNAMICS	1213	02/72	56
MSFC	14TWT	517	BOOSTER	AERODYNAMICS	1213	02/72	56
MSFC	14TWT	518	BOOSTER	AERODYNAMICS	1208	01/72	54
MSFC	14TWT	521	BOOSTER	AERODYNAMICS	1226	05/72	55
MSFC	14TWT	523	LAUNCH	AERODYNAMICS	1227	02/72	57
MSFC	14TWT	523	BOOSTER	AERODYNAMICS	1227	02/72	57
MSFC	14TWT	524	BOOSTER	AERODYNAMICS	1240	04/72	59
MSFC	14TWT	526	BOOSTER	AERODYNAMICS	1242	06/72	61
MSFC	14TWT	528	ORBITER	AERODYNAMICS	1243	03/72	62
MSFC	14TWT	529	BOOSTER	AERODYNAMICS	1245	04/72	63
MSFC	14TWT	531	LAUNCH	AERODYNAMICS	1241	06/72	60
MSFC	14TWT	534	LAUNCH	AERODYNAMICS	1249	04/72	65
MSFC	14TWT	538	LAUNCH	AERODYNAMICS	1251	04/72	66
MSFC	14TWT	540	LAUNCH	AIRLOADS	1259	01/73	67
MSFC	14TWT	540	ORBITER	AIRLOADS	1259	01/73	67
MSFC	14TWT	541	BOOSTER	AERODYNAMICS	1253	08/72	68
MSFC	14TWT	542	ORBITER	AERODYNAMICS	1254	08/72	69
MSFC	14TWT	543	LAUNCH	AIRLOADS	1255	03/73	70
MSFC	14TWT	544	LAUNCH	AERODYNAMICS	1256	03/72	71

Table 5 - Continued

Space Shuttle Phase B Facility
Wind Tunnel Summary

FACILITY	SUBFACILITY	FACILITY TEST NUMBER	VEHICLE COMPONENT	TEST DISCIPLINE	DMS-DR#	PUB. DATE	DATASET CODE
MSFC	14TWT	544X	LAUNCH	AERODYNAMICS	1272	10/72	71
MSFC	14TWT	550	LAUNCH	AIRLOADS	1273	01/73	73
MSFC	14TWT	551	ORBITER	AERODYNAMICS	1274	09/72	74
NRLAD	LSWT	629	ORBITER	AERODYNAMICS	1010	08/70	C4
NRLAD	LSWT	630	ORBITER	AERODYNAMICS	1037	01/71	C5
NRLAD	LSWT	632	ORBITER	AERODYNAMICS	1034	11/70	CG
NRLAD	LSWT	633	ORBITER	AERODYNAMICS	1124	07/71	CJ
NSRDC	710TWT	3110	BOOSTER	AERODYNAMICS	1139	10/71	N2
NSRDC	710TWT	3210	BOOSTER	AERODYNAMICS	1164	02/72	N3
NSRDC	710TWT	3310	BOOSTER	AERODYNAMICS	1192	05/72	N4
TAM	710SWT	S-18/S-35	ORBITER	AERODYNAMICS	1057	02/71	G3
TAM	710SWT	S-38	ORBITER	AERODYNAMICS	1062	02/71	G7
TAM	710SWT	S-39	ORBITER	AERODYNAMICS	1073	04/71	G2
TAM	710SWT	S-8-1	ORBITER	AERODYNAMICS	1060	03/71	G6
TAM	710SWT	S-8-2	ORBITER	AERODYNAMICS	1205	10/72	RG
TAM	710SWT	S-V1	ORBITER	AERODYNAMICS	1008	08/70	G1
TAM	710SWT	S-XXIV	BOOSTER	AERODYNAMICS	1033	12/70	G4
TBC	B4SWT	553	BOOSTER	AERODYNAMICS	1228	06/72	D4
TBC	B4SWT	557	BOOSTER	AERODYNAMICS	1276	09/72	D9
TBC	B4SWT	557	BOOSTER	AERODYNAMICS	1275	11/72	D8
TBC	B4SWT	558	BOOSTER	AERODYNAMICS	1128	08/72	DC
TBC	BTWT	1265	BOOSTER	AERODYNAMICS	1191	02/72	D2
TBC	BTWT	1273	BOOSTER	AERODYNAMICS	1228	06/72	D4
TBC	BTWT	1282	BOOSTER	AERODYNAMICS	1276	09/72	D9

Table 5 - Concluded
 Space Shuttle Phase B Facility
 Wind Tunnel Summary

FACILITY	SUBFACILITY	FACILITY TEST NUMBER	VEHICLE COMPONENT	TEST DISCIPLINE	DMS-DR#	PUB. DATE	DATASET CODE
TBC	BTWT	1282	BOOSTER	AERODYNAMICS	1275	11/72	08
UW	812SWT	1021	BOOSTER	AERODYNAMICS	1079	07/71 REV. 01	U1

SPACE SHUTTLE PHASE B
DIGITAL DATABASE
BOOSTER AERODYNAMICS

TABLE 6.1

FILE #	BCC	B-CONTRA	DR#	2-CHAR. CODE	# D/S's	# RECORDS	
1	B1	MDAC	1035	CC	69	967	
2			1139	N2	574	8037	
3	B2	MDAC/MMC	1054	CE	208	2185	
4			1066	AD	86	1033	
5			1077	C0	96	1057	
6		MSFC	MSFC	1080	AL	126	1387
7				1116	AR	76	799
8		B3	LMSC	1120	CZ	180	1981
9				1164	N3	207	2899
10				1212	U9	132	1849
11		B3/B4	MSFC	1242	61	112	1569
12				1208	54	70	876
13	TBC		MSFC	1226	55	33	463
14				1240	59	45	631
15				1245	63	15	211
16	B3		TBC	1253	68	56	673
17				1128	DC	33	430
18	B3/B4		GD/C	1214	04	22	254
19				1228	D4	48	673
20				1275	D8	104	1249
21	B3	GD/C	1276	D9	16	209	
22			1029	C9	39	547	
23	B3/B4	GD/C	1030	C7	134	1877	
24			1039	C8	108	1513	
25			1087	LS	68	753	
26	B3	GD/C	1093	LG	88	1013	
27			1102	28	106	1326	
28	B3/B4	GD/C	1109	CM	109	1527	

TABLE 6.1 (Concluded)
 SPACE SHUTTLE PHASE B
 DIGITAL DATABASE
 BOOSTER AERODYNAMICS

FILE #	BCC	B-CONTRA	DR#	2-CHAR. CODE	# D/S's	# RECORDS
29	<u>B3</u>	<u>GD/C</u>	1110	CV	90	1261
30			1121	AS	34	409
31			1141	BA	38	438
32	↓	↓	1152	35	26	365
33			1155	37	84	1009
34			1156	MB	78	937
35			1223	D6	96	1345
36	↓	↓	1014	C2	17	239
37			1001	19	107	1392
38			1209	53	85	1191
39	<u>B4</u>	<u>TBC</u>	1220	Ø2	18	253
40			1025	C6	72	757
41	↓	↓	1100	LE	35	491
42			1033	G4	25	351
43			1079	U1	46	553
44			1111	BØ	20	221
45	↓	↓	1158	CX	70	806
46			1191	D2	46	576
47	<u>B5</u>	<u>CCSD</u>	1046	AQ	14	169
48			1068	LL	12	169
49			1006	T4	70	946
50	↓	↓	1015	L6	29	233
51			1017	L4	80	921
52			1019	L5	34	392
53	↓	↓	1193	MV	30	361

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APPENDEK
MODEL FIGURES

PRECEDING PAGE BLANK NOT FILMED

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)								
		A	B	δ_e	δ_f	Ω	Λ		δ_{14}	δ_{13}	δ_{12}	δ_a			0.16	0.18	
RCC068	<u>BINI</u>	A	0	-	-	-	-		-	-	-	-				9	
069	↓		-6	-	-	-	-		-	-	-	-				10	
064	<u>BINITIF2PI</u>		0	-	0	-	-		-	-	3	-				26	
065	↓		-6	-	0	-	-		-	-	↓	-				27	
066	↓		0	-	20	-	-		-	-	↓	-				42	
067	↓		0	-	40	-	-		-	-	↓	-				43	
062	<u>BINIJI</u>		0	-	-	-	-		-	3	-	-				12	
063	↓		-6	-	-	-	-		-	3	-	-				11	
058	<u>BINLWIEI</u>		0	0	-	-	-		3	-	-	0				8	
059	↓		-6	0	-	-	-		↓	-	-	↓				7	22
052	<u>BINIWIETIF2PI</u>		0	0	0	-	-		↓	-	3	↓				29	
053	↓		-6	↓	0	-	-		↓	-	3	↓				28	
050	<u>BINIWIEIJI</u>		0	↓	-	-	-		↓	3	-	↓				5	
051	↓		-6	↓	-	-	-		↓	3	-	↓				6	
033	<u>BINIWIEIVI</u>		0	↓	-	6	25		↓	-	-	↓				33	
034	↓		-6	↓	↓	↓	↓		↓	-	-	↓				32	
035	↓		0	-15	-	↓	↓		↓	-	-	↓				36	
036	↓		0	-30	-	↓	↓		↓	-	-	↓				34	
037	↓		0	15	-	↓	↓		↓	-	-	↓				35	

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1	7	13	19	25	31	37	43	49	55	61	67	7576
CN	CLM	CY	CYN	CRL	CA	CAF	CLF	CDF	L/D			

COEFFICIENTS:

4 OF 6
SCHEDULES

A) -6, -4, -2, 0, 2, 4, 6, 8, 10, 12, 14, 16

Ω FIN TOE-IN ANGLE

Λ FIN ROLL OUT ANGLE

CANARD BOOSTER
MDAC
DR#1035 A-1-1

TEST MDAC-W LSWT 1351 DATA SET COLLATION SHEET

CANARD BOOSTER
MDAC
DR#1035 A-1-2
SHEET 2 of 4

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)								
		α	β	δ_e	δ_F	Ω	Λ		δ_{TW}	δ_{IT}	δ_{IT}	δ_a			0.16	0.18	
RCC005	<u>BINIWIEIVITIF2PI</u>	A	0	0	0	6	25		3	-	3	0				30	
006			-6	0	0					-		0				31	
007			0	0	40					-		0				53	
008			0	0	0					-		15			66		
009			0	-15	0					-		0				39	
010			0	-15	20					-						38	
011			0	-15	40					-						37	
012			0	-30	0					-						54	
013			0	15	0					-						40	
014			0	0	0	0				-						64	
015			-6	0	0	0				-						65	
016			0	-15	0	0				-						71	
017	<u>BINIWIEIV4TIF2PI</u>		0	0	0	6				-						59	
018			-6	0	0					-						60	
001	<u>BINIWIEIVI J1</u>		0	0	-					3	-					2	
002			-6	0	-					-	-					1	
003			0	-15	-					-	-					4	
004			0	-30	-					-	-					3	
046	<u>BINIWIEIV3</u>		0	0	-	-	-			-	-					58	
047			-6	0	-	-	-			-	-					57	

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1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CLM	ICY	FYN	CRL	CA	CAF	CLF	CDF	L/D				

COEFFICIENTS:

α OF β
SCHEDULES

AH-4-2, 0.2, 4, 6, 8, 10, 12, 14, 16

Ω FIN TEE-IN ANGLE
 Λ FIN ROLL OUT ANGLE

KASA-MFC-140

PRETEST

POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETER/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)					
		A	B	de	SE	Ω	Δ		Sim	Str	Str	Str		
RCC 043	BINWIEI3TIF2PI	A	0	0	0	-	-	3	-	3	0	0.18	0.16	
044				-6	0	0	-		-	-				
045				0	-15	0	-		-	-				
RCC 060	BINWZEI	A	0	0	0	-	-	3	-	-	0			
061				-6	0	-	-		-	-				
056	BINWZEITIF2PI			0	0	0	-		-	-				
057				-6	0	0	-		-	-				
054	BINWZEIJI			0	0	-	-		-	-				
055				-6	0	-	-		-	-				
038	BINWZEIVI			0	0	-	-	6	25					
039				-6	0	-	-		-	-				
040				0	-15	-	-		-	-				
041				0	-30	-	-		-	-				
042				0	15	-	-		-	-				
019	BINWZEIYJI			0	0	-	-		-	-				
020				-6	0	-	-		-	-				
021				0	-15	-	-		-	-				

1	7	13	19	25	31	37	43	49	55	61	67	7576
CN	CLM	CY	CYN	CRL	CA	CAF	CLF	CDF	L/D			

COEFFICIENTS: ← IDPVAR(1)|IDPVAR(2)|NDV

n or b SCHEDULES

A) -6, -4, -2, 0, 2, 4, 6, 8, 10, 12, 14, 16

2 FIN TOR-IN ANGLE

1 FIN ROLL-OUT ANGLE

CANARD BOOSTER
MDAC
DR#1035 A-1-

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TEST MDAC-W, LSWT 1351 DATA SET COLLATION SHEET

CANARD BOOSTER
MDAC
DR#1035 A-1- 4
SHEET 4 of 4

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)								
		u	B	δ_e	δ_f	Ω	Λ		δ_{TW}	δ_{IT}	δ_{IT}	δ_a			0.16	0.18	
RCC022	BINIW2EIVITIF2PI	A	0	0	0	6	25		3	-	3	0				18	
023			-6	0	0					-						19	
024			0	-15	0					-						46	
025			0	-15	20					-						45	
026			0	-15	40					-						44	
027			0	-30	0					-						48	
028			0	15	0					-						47	
029			0	0	0	0				-						67	
030			-6	0	0					-						68	
031			0	-15	0					-						70	52
032			-6	-15	0					-						69	
048	BINIW2EIV3		0	0	-	-	-			-						55	
049			-6	0	-	-	-			-						56	

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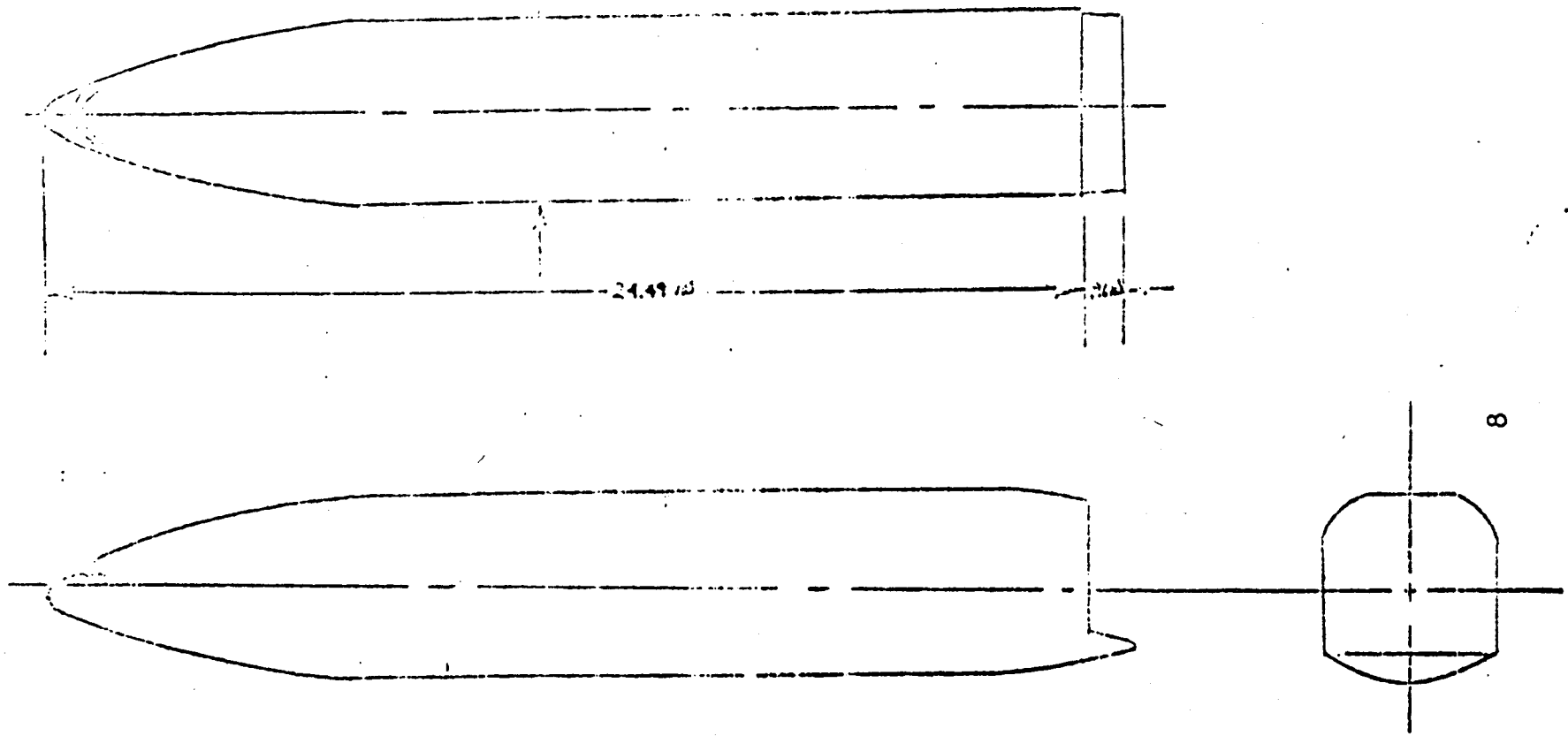
1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CLM	CY	CYN	CRL	CA	CAF	CLF	CDF	L/D				

COEFFICIENTS: _____ IDPVAR(1) IDPVAR(2) INDV

U OF B SCHEDULES A -6 -4 -2 0 2 4 6 8 10 12 14 16

Ω Fin Top-In Angle
 Λ Fin Roll-out Angle

-108 IN



98

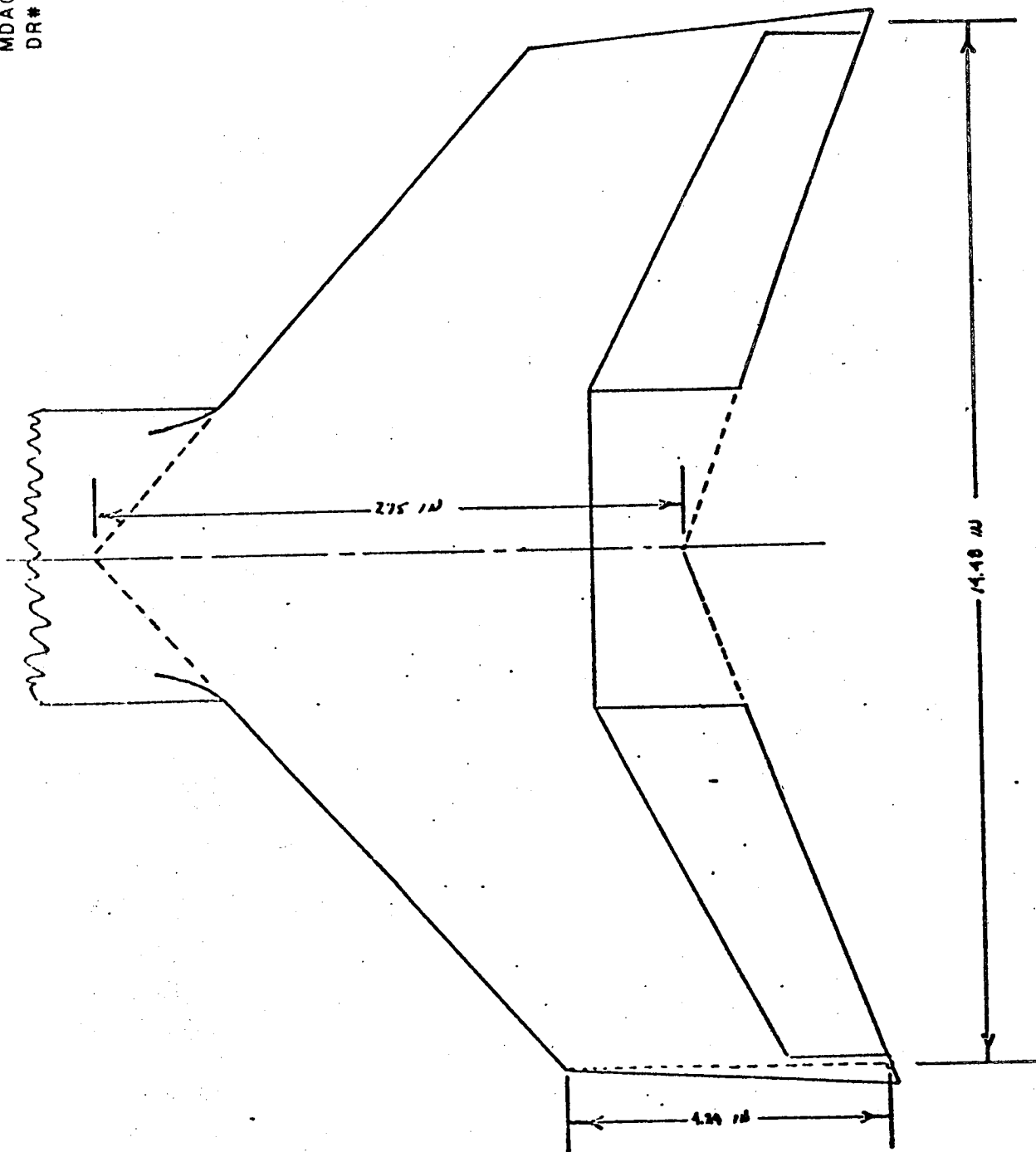
FIGURE 1. BODY (0.01)
B1

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BOOSTER WING (0.01)

W1 WING
E1 ELEVON

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FIGURE 2 BOOSTER WING (W₁) with
ELEVON (E₁)

BOOSTER AERODYNAMIC CANARD (0.01)

T1 AERODYNAMIC CANARD

F2 FLAP

CANARD BOOSTER
MDAC
DR#1035 A-1-7

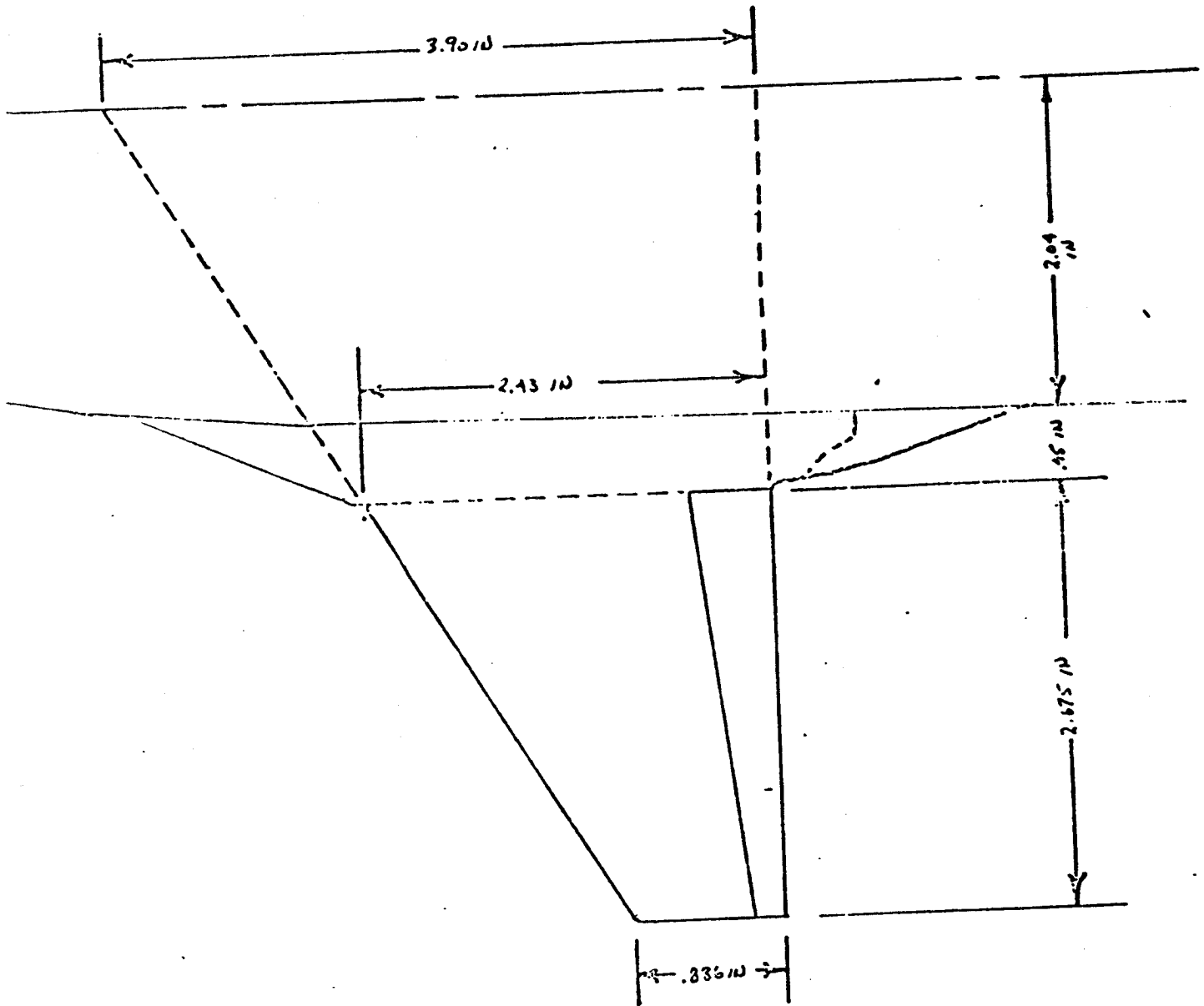


FIGURE 3 AERODYNAMIC CANARD (T₁)
with FLAP (F₂)

BOOSTER SIMULATED SET FLAP CANARD
I1 SET CANARD (0.01)

CANARD BOOSTER
MDAC
DR#1035 A-1- 8

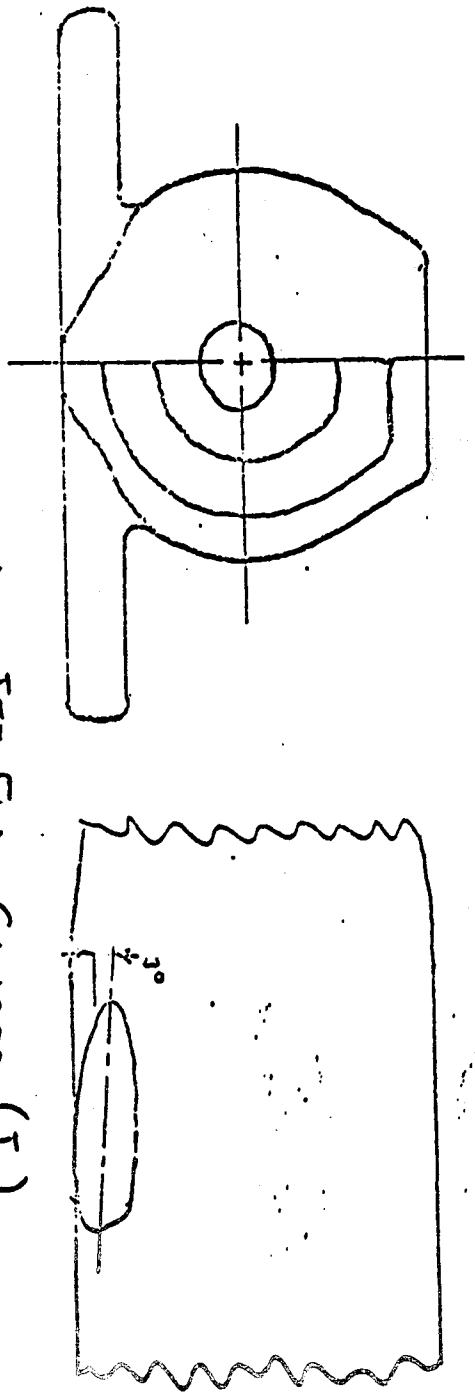
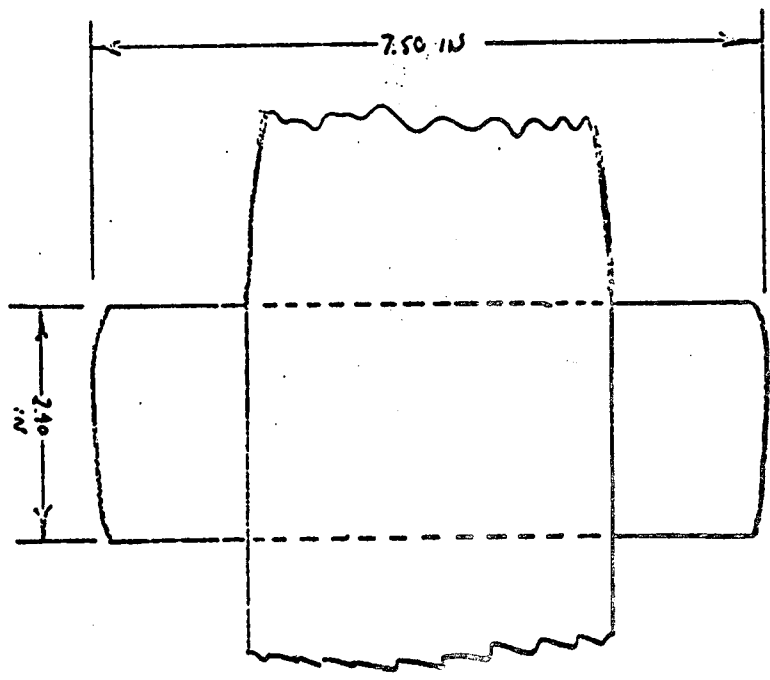


FIGURE 4. SET FLAP CANARD (I1)

BOOSTER WING TIP VERTICAL (0.01)

V1 VERTICAL

AIRFOIL SECTION: NACA 64A009

V4 VERTICAL

AIRFOIL SECTION: NACA 4415

CANARD BOOSTER
MDAC
DR#1035 A-1-9

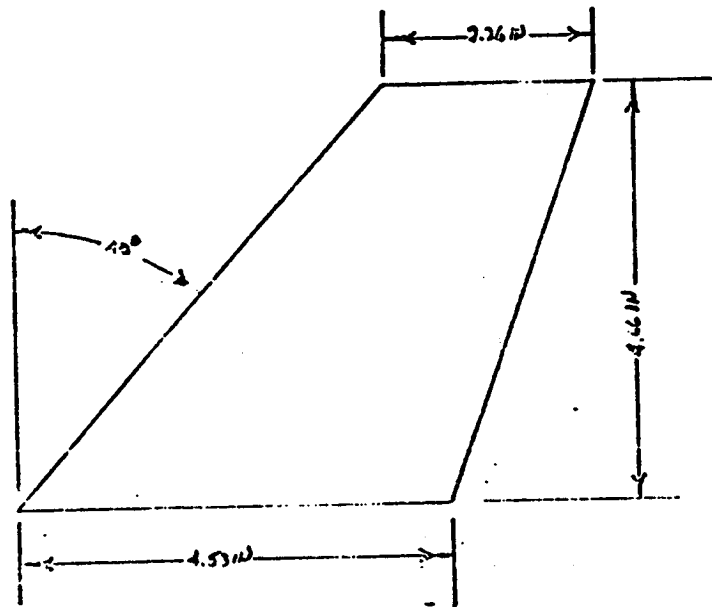


FIGURE 5. WING TIP VERTICAL FIN (V1), (V4)

CANARD BOOSTER
MDAC
DR#1035 A-1-10

BOOSTER CENTER VERTICAL FIN (0.01)

V3
VERTICAL
CENTER VERTICAL FIN

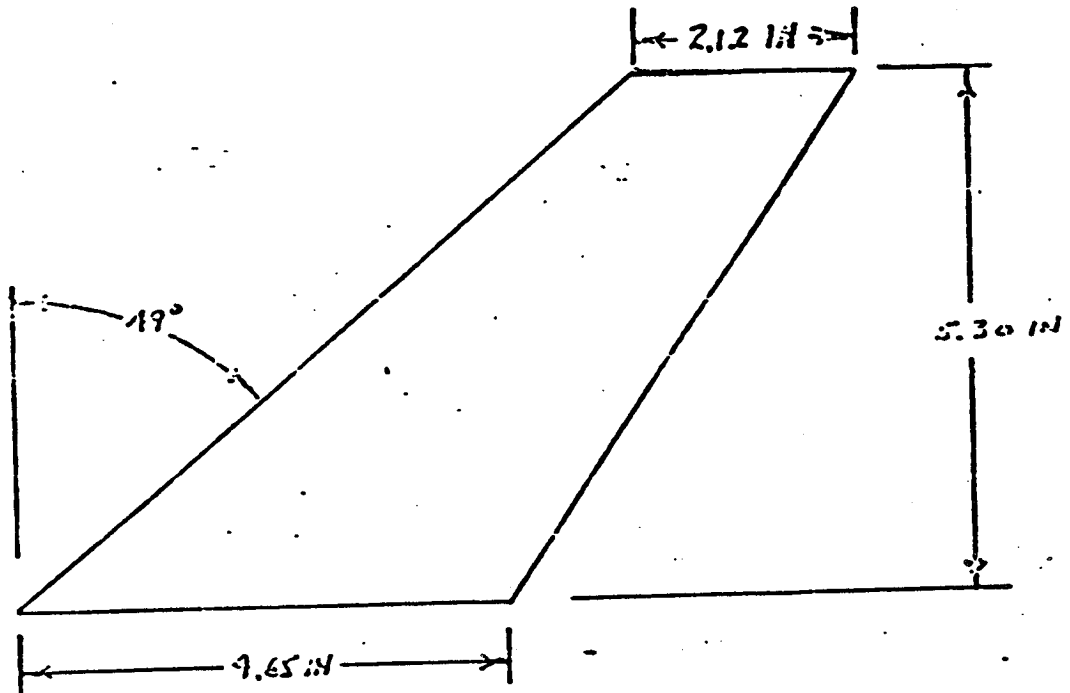
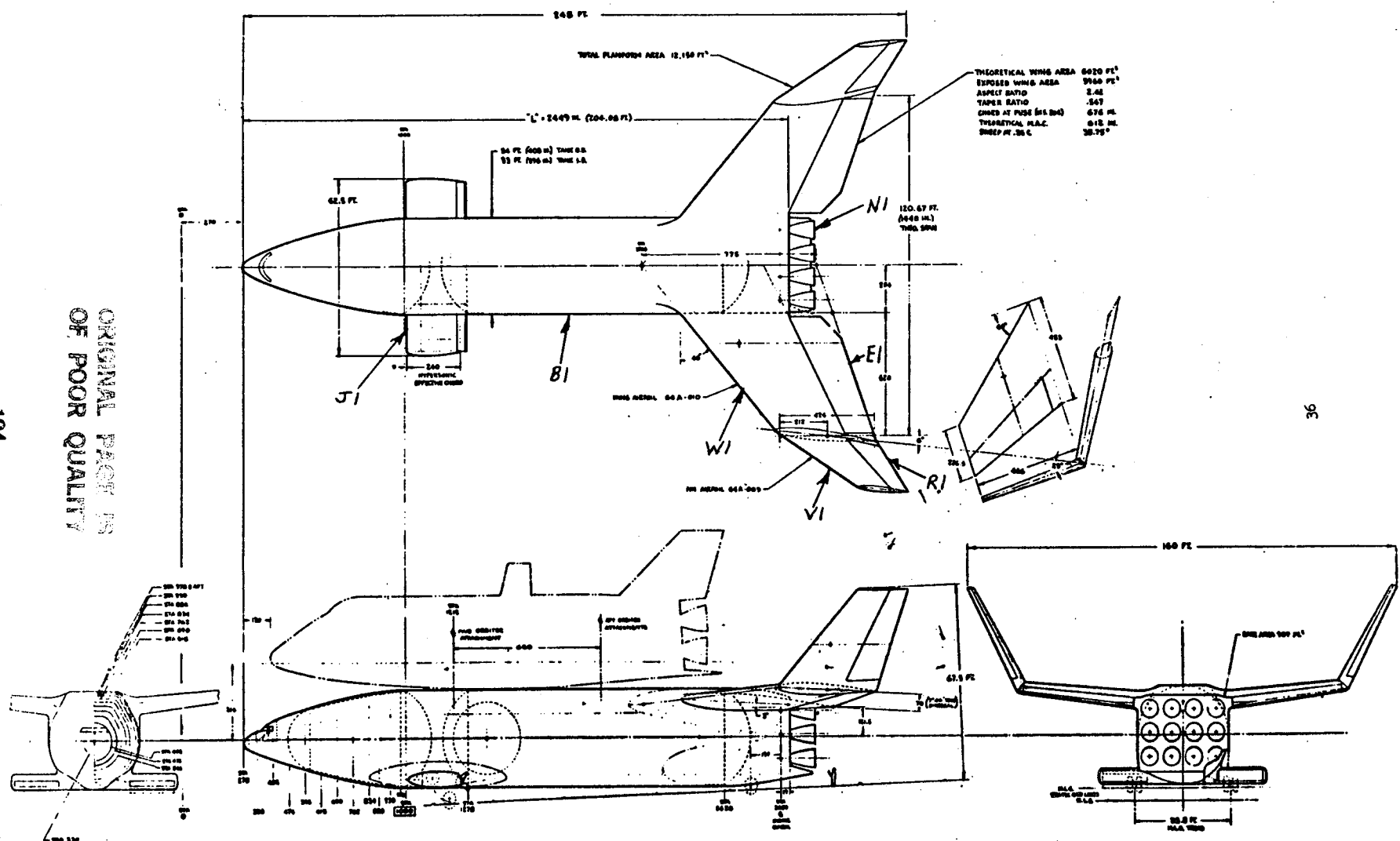


FIGURE 6 BODY CENTERLINE VERTICAL FIN (V3)

104

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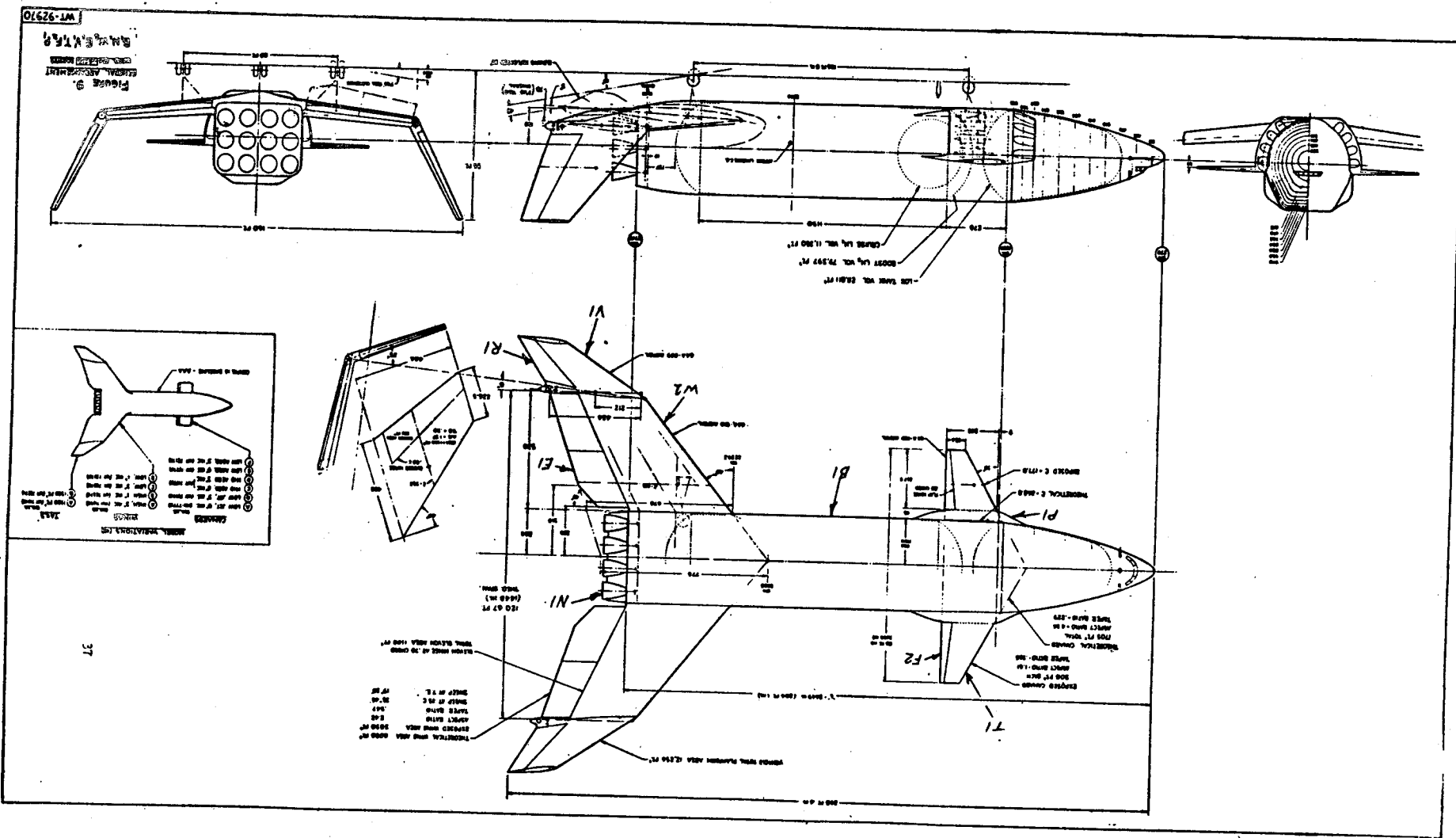
FIGURE 8.
GENERAL ARRANGEMENT
MODEL 236 (14) BOOSTER
B, N, W, E, V, J,

WT-71070

CANARD BOOSTER

MDAC

DR#1035 A-1- 11



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CANARD BOOSTER
MDAC
DR#1035 A-1-12

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES								
		a	b	0.4				Se	Sc	Sa	Sr	Tw	ic	Iw	CAB POS	WAG POS
RN2001	BIC2 FLYWIV1	A	0	38			1	0	0	0	0	7°40	3	0	1	1
002		0	A	39												
003		6		40												
004		15	Y	41								Y				
005		A	0	42								15				
006		0	A	43												
007		6		44												
008		15	Y	45										Y		
009		A	0	46											2	
010		0	A	47												
011		6		48												
012		15	Y	49												
013		A	0	50								15				
014		0	A	51												
015		6		52												
016		15	Y	53										Y		Y
017		A	0	54											1	2
018		0	A	55								3				
019		6		56												
020		15	Y	57												

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1	7	13	19	25	31	37	43	49	55	61	67	7576
CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D	CAB			L3
CAE	B.P.(1)	B.P.(2)										

COEFFICIENTS:

a or b
SCHEDULES

CA = -4, 0, 2, 4, 6, 8, 10, 15, 20

BA = -6, -3, 0, 3, 6

→ IDPVAR(1) | IDPVAR(2) | NDV

CANARD BOOSTER

MDAC

DR#1139 A-1- 13

TEST NSRDC-3110 DATASET COLLATION SHEET

CANARD BOOSTER
MDAC
DR#1139 A-1- 14

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER				NO. of RUNS	PARAMETRIC VALUES								
		a	b	0.4					S_e	S_c	S_u	S_r	Γ_w	L_c	L_w	CND POS	WING POS
RN2021	BIC2FIW1VI	A	0	0.4				1	0	0	0	0	7°40'	15	0	1	2
022		0	A	0.4													
023		6		0.4													
024		15		0.4													
025		A	0	0.4									3		2		
026		0	A	0.4													
027		6		0.4													
028		15		0.4													
029		A	0	0.4									15				
030		0	A	0.4													
031		6		0.4													
032		15		0.4													
033		A	0	0.4									3	3	1	1	
034		0	A	0.4													
035		6		0.4													
036		15		0.4													
037		A	0	0.4									15				
038		0	A	0.4													
039		6		0.4													
040		15		0.4													

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1	7	13	19	25	31	37	43	49	55	61	67	75 76
CN	CA	CLM	CHL	CYN	CY	GL	CD	L/D	KAB			
C.A.E.	B.P.(1)	B.P.(3)								MACH		13

COEFFICIENTS: $\alpha A = -4, 0, 3, 4, 6, 8, 10, 15, 20$ IDPVAR(1) IDPVAR(2) INDV
 a or b
 SCHEDULES $BA = -6, -3, 0, 3, 6$

NASA-MSPC-MAF

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER				NO. of RUNS	PARAMETRIC VALUES									
		a	b	0.4					Se	Sc	Sa	Sr	Pw	lc	lw	CND POS	WING POS	
RN2041	BIC2FIWIVI	A	0	13	0			1	0	0	0	0	740	3	3	2	1	
042		0	A	13	0													
043		6		13	0													
044		15		13	0													
045		A	0	14	0							15						
046		0	A	14	0													
047		6		14	0													
048		15		14	0													
049		A	0	14	0							3		1	2			
050		0	A	14	0													
051		6		14	0													
052		15		14	0													
053		A	0	14	0							15						
054		0	A	14	0													
055		6		14	0													
056		15		14	0													
057		A	0	14	0							3		2				
058		0	A	14	0													
059		6		14	0													
060		15		14	0													

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7	13	19	25	31	37	43	49	55	61	67	75	76
CA	CLM	CHL	KYN	CV	KL	CD	L/D	CAB	MACH			

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$ → IDPVAR(1) | IDPVAR(2) | NDV
 a or b _____
 SCHEDULES $BA = -6, -3, 0, 3, 6$

CANARD BOOSTER
 MDAC
 DR#1139 A-1- 15

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES								
		a	B	0.4				Se	Sc	Sa	Sr	TW	Lc	LW	CND POS	WING POS
RN2061	BIC2FIWIVI	A	0	180			1	0	0	0	0	7°40'	15	3	2	2
062		0	A	181												
063		6		182												
064		15		183												
065	BIC1FIWIVI	A	0	33								3	0	1	1	
066		0	A	34												
067		6		35												
068		15		36												
069		A	0	37								15				
070		0	A	38												
071		6		39												
072		15		40												
073		A	0	41								3		2		
074		0	A	42												
075		6		43												
076		15		44												
077		A	0	45								15				
078		0	A	46												
079		6		47												
080		15		48												

ORIGINAL PAGE IS OF POOR QUALITY

1	7	13	19	25	31	37	43	49	55	61	67	73	79
CA	CA	SLM	CHL	CYN	CY	CL	CO	L/D	CAB				
CAF	BPL(1)	BPL(3)								MACH			

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$ IDPVAR(1) IDPVAR(2) NDV
 SCHEDULES: $BA = -6, -3, 0, 3, 6$

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES										
		a	b	0.4				S _c	S _c	S _a	S _r	T _w	L _c	L _w	CND D _{0.5}	WING P _{0.5}		
RN2081	BICI FLWI VI	A	0	3/1			1	0	0	0	0	740	3	0	1	2		
082		0	A	3/2														
083		6		3/1														
084		15	Y	3/2								Y						
085		A	0	3/1								15						
086		0	A	3/1														
087		6		3/1														
088		15	Y	3/1								Y			Y			
089		A	0	4/0								3			2			
090		0	A	4/1														
091		6		4/0														
092		15	Y	3/1								Y						
093		A	0	3/1								15						
094		0	A	3/1														
095		6		3/0														
096		15	Y	3/1								Y	Y		Y	Y		
097		A	0	3/1								3	3		1	1		
098		0	A	3/1														
Y 099	Y	6		3/0				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
100		15	Y	3/1				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

ORIGINAL PAGE IS OF POOR QUALITY

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CHL	CYN	CV	CL	CD	L/D	GAB				
C.A.E.	B.P.(1)	B.P.(3)								MACH			13

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$ IDPVAR(1) IDPVAR(2) NDV
 a or b
 SCHEDULES $BA = -6, -3, 0, 3, 6$

CANARD BOOSTER
 MDAC
 DR#1139 A-1- 17

TEST NSRDC-3110 DATASET COLLATION SHEET

CANARD BOOSTER
MDAC
DR#1139 A-1- 18

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER		NO. of RUNS	PARAMETRIC VALUES									
		a	e	0.4			Se	Sc	Sa	Sr	Γ_w	lc	lw	CND POS	WING POS	
RN2101	BIGFIWIVI	A	0	114		1	0	0	0	0	740	15	3	1	1	
102		0	A	117												
103		6		118												
104		15		119												
105		A	0	131												
106		0	A	132								3	2	1		
107		6		137												
108		15		140												
109		A	0	144												
110		0	A	150								15				
111		6		151												
112		15		154												
113		A	0	155												
114		0	A	157								3	1	2		
115		6		160												
116		15		161												
117		A	0	171												
118		0	A	174								15				
119		6		174												
120		15		179												

ORIGINAL PAGE IS
OF POOR QUALITY

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CHL	CYN	CV	CL	CD	L/D	GAB				
C.A.E.	B.P.(1)	B.P.(3)								MACH			23

COEFFICIENTS:

a or b
SCHEDULES

$\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$

$\beta A = -6, -3, 0, 3, 6$

IDPVAR(1) IDPVAR(2) NDV

NASA-MSFC-24F

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER	NO. of RUNS	PARAMETRIC VALUES										
		a	β			S _c	S _c	S _a	S _r	Γ _w	L _c	L _w	CND PDS	WING REF		
RN2.121	BICIFWIV1	A	0	11	1	0	0	0	0	740	3	3	2	2		
122		0	A	12												
123		6		13												
124		15		14												
125		A	0	15						15						
126		0	A	16												
127		6		17												
128		15		18												
129	BICIFWIV2.D1	A	0	19							3	0	1	1		
130		0	A	20												
131		6		21												
132		15		22												
133		A	0	23						15						
134		0	A	24												
135		6		25												
136		15		26												
137		A	0	27							3		2			
138		0	A	28												
139		6		29												
140		15		30												

1	7	13	19	25	31	37	43	49	55	61	67	7576
C.N	CA	CLM	CHL	CYN	KV	CL	CO	L/D	CAB			
C.A.F.	B.P.(1)	B.P.(3)								M.A.C.H.		13

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$ → IDPVAR(1) | IDPVAR(2) | NDV
 a or β
 SCHEDULES $\beta A = -6, -3, 0, 3, 6$

ORIGINAL PAGE IS OF POOR QUALITY

CANARD BOOSTER
 MDAC
 DR#1139 A-1- 19

TEST NSRDC-3110 DATASET COLLATION SHEET

CANARD BOOSTER
MDAC
DR#1139 A-1- 20

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER				NO. of RUNS	PARAMETRIC VALUES								
		a	B	0.4					Sc	Sc	Sc	Sc	Lw	Lc	Lw	CND POS	WING POS
RN2141	BICIFWIV2.D1	A	0	0				1	0	0	0	0	740	15	0	2	1
192		0	A	0													
193		6		0													
194		15		0													
195		A	0	0									3		1	2	
196		0	A	0													
197		6		0													
198		15		0													
199		A	0	0									15				
150		0	A	0													
151		6		0													
152		15		0													
153		A	0	0									3		2		
154		0	A	0													
155		6		0													
156		15		0													
157		A	0	0									15				
158		0	A	0													
159		6		0													
160		15		0													

ORIGINAL PAGE IS
OF POOR QUALITY

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CA	CA	CLM	CHL	CYN	CY	CL	GD	L/D	CAB				
C.A.F.	B.P.L.I.	B.A.L.S.								MACH.			

COEFFICIENTS: αA = -4, 0, 2, 4, 6, 8, 10, 15, 20 → IDPVAR(3) IDPVAR(2) NDV

a or B
SCHEDULES

BA = -6, -3, 0, 3, 6

NASA-MSFC-MAF

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES									
		a	B	0,4				S _c	S _c	S _a	S _r	Γ _w	L _c	L _w	CND POS	WING POS	
RN2.161	BICIFWV2.D1	A	0	15			1	0	0	0	0	740	3	3	1	1	
162		0	A	15													
163		6		15													
164		15		15													
165		A	0	15							15						
166		0	A	15													
167		6		15													
168		15		15													
169		A	0	15							3		2				
170		0	A	15													
171		6		15													
172		15		15													
173		A	0	15							15						
174		0	A	15													
175		6		15													
176		15		15													
177		A	0	15							3		1	2			
178		0	A	15													
179		6		15													
180		15		15													

ORIGINAL PAGE IS OF POOR QUALITY

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CHL	CYN	CV	CL	CD	L/D	CAB				63
C.A.F.	S.P.L.L.	B.P.(3)											

COEFFICIENTS: SA = -4, 0, 2, 4, 6, 8, 10, 15, 20
a or B
SCHEDULES BA = -6, -3, 0, 3, 6

CANARD BOOSTER
MDAC
DR#1139 A-1- 21

TEST NSRDC-3110 DATASET COLLATION SHEET

CANARD BOOSTER
MDAC
DR#1139 A-1- 22

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES										
		a	B	0.4				Sc	Sc	Sc	Sr	TW	Lc	LW	CND PAS	WING PAS		
RN2 181	BIC1FWIV2.D1	A	0	53			1	0	0	0	0	7.46	15	3	1	2		
182		0	A	55														
183		6		57														
184		15	Y	60									Y		Y			
185		A	0	113														
186		0	A	172									3		2			
187		6		175														
188		15	Y	177										Y				
189		A	0	500														
190		0	A	51									15					
191		6		52														
192		15	Y	503										Y	Y	Y	Y	
193	BIC2FWIV2.D1	A	0	417										3	0	1	1	
194		0	A	471														
195		6		474														
196		15	Y	476														
197		A	0	431														
198		0	A	426										15				
199		6		471														
200		15	Y	442														

ORIGINAL PAGE IS OF POOR QUALITY

1	7	13	19	25	31	37	43	49	55	61	67	73
CN	CA	CLM.	CHL	CYN	KV	CL	CD	L/D	CAB			
C.A.F.	B.P.(1)	B.P.(3)								MACH.		

COEFFICIENTS: αA = -4, 0, 2, 4, 6, 8, 10, 15, 20 → IDPVAR(1) IDPVAR(2) INDV

a or b

SCHEDULES BA = -6, -3, 0, 3, 6

NASA-NSFC-MAF

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. OF RUNS	PARAMETRIC VALUES									
		a	B	0.4				Se	Sc	Sa	Sr	Tw	Lc	LW	CND POS	WIND POS	
RN2201	BIC2FINWY2.01	A	0	0.4			1	0	0	0	0	0	740	3	0	2	1
202		0	A	0.7													
203		6		70													
204		15		70													
205		A	0	0.9													
206		0	A	0.5								15					
207		6		66													
208		15		67													
209		A	0	9.1													
210		0	A	9.2								3		1	2		
211		6		9.3													
212		15		9.4													
213		A	0	9.9													
214		0	A	9.4								15					
215		6		9.6													
216		15		9.6													
217		A	0	9.6													
218		0	A	9.3								3		2			
219		6		9.3													
220		15		9.9													

ORIGINAL PAGE IS OF POOR QUALITY

1	7	13	19	25	31	37	43	49	55	61	67	75
CN	CA	CLM	CAL	CYN	CY	CL	CD	LTD	CAA			
C.A.E.	B.P.L.	B.P.L.								MACH.		

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 9, 10, 15, 20$ → IDPVAR(1) | IDPVAR(2) | NDV

SCHEDULES: $BA = -6, -3, 0, 3, 6$

CANARD BOOSTER
 MDAC
 DR#1139 A-1- 23

TEST NSRDC-3110 DATASET COLLATION SHEET

CANARD BOOSTER

MDAC

DR#1139

A-1- 24

PRETEST

POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES								
		a	B	0.4				S _c	S _c	S _a	S _r	T _w	L _c	L _w	CND POS	WING POS
RN2221	BIC2FIWIV2.D1	A	0	0.4			1	0	0	0	0	740	15	0	2	2
222		0	A	0.4												
223		6		0.4												
224		15	Y	0.4								Y	Y	Y	Y	
225		A	0	0.4								3	3	1	1	
226		0	A	0.4												
227		6	Y	0.4												
228		15	Y	0.4								Y				
229		A	0	0.4								15				
230		0	A	0.4												
231		6	Y	0.4												
232		15	Y	0.4								Y		Y		
233		A	0	0.4								3		2		
234		0	A	0.4												
235		6	Y	0.4												
236		15	Y	0.4								Y				
237		A	0	0.4								15				
238		0	A	0.4												
239		6	Y	0.4												
240		15	Y	0.4								Y	Y	Y	Y	Y

ORIGINAL PAGE IS OF POOR QUALITY

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CAL	CYN	CV	CL	CD	L/D	CAB				
C.A.F.	B.P.(1)	B.P.(3)								M.G.H.			

COEFFICIENTS: αA = -3, 0, 2, 4, 6, 9, 10, 15, 20 → IDPVAR(1) | IDPVAR(2) | NDV

SCHEDULES: BA = -6, -3, 0, 3, 6

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST

POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES								
		a	B	0.4				Sc	Sc	Sc	Sr	TW	Lc	LW	CND POS	WING POS
RN2241	BIC2FIWIV2.D1	A	0	157			1	0	0	0	0	740	3	3	1	2
242		0	A	328												
243		6		327												
244		15		325												
245		A	0	507							15					
246		0	A	500												
247		6		501												
248		15		502												
249		A	0	472							3		2			
250		0	A	473												
251		6		474												
252		15		475												
253		A	0	446							15					
254		0	A	447												
255		6		448												
256		15		449												
257	BIC2FIW2.D1	A	0	553							3	0	1	1		
258		0	A	554												
259		6		555												
260		15		556												

ORIGINAL PAGE IS OF POOR QUALITY

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CHL	CYN	CV	GL	GD	L/D	CAB				AL
C.A.F.	B.P.(1)	B.P.(3)											MACH

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$

a or B

SCHEDULES: $BA = -6, -3, 0, 3, 6$

CANARD BOOSTER
MDAC
DR#1139 A-1- 25

TEST NSRDC-3110 DATASET COLLATION SHEET

CANARD BOOSTER
MDAC
DR#1139 A-1- 26

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES									
		a	b	0.4					Se	Sc	Sa	Sr	TW	Lc	Iw	CND PDS	WNO PDS
RN2261	BIC2FIW2DI	A	0	570			1	0	0	0	0	7.40	15	0	1	1	
262		0	A	570													
263		6		572													
264		15		573													
265		A	0	575								3		2			
266		0	A	576													
267		6		577													
268		15		578													
269		A	0	579								15					
270		0	A	580													
271		6		581													
272		15		582													
273		A	0	584										1	2		
274		0	A	585													
275		6		586													
276		15		587													
277		A	0	588								3		2			
278		0	A	589													
279		6		590													
280		15		591													

ORIGINAL PAGE IS OF POOR QUALITY

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CAN	CA	CLM	CHL	CYN	CV	CL	CD	L/D	CAB	MACH			
C.A.F.	B.P.(1)	B.P.(3)											

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$ → IDPVAR(1) | IDPVAR(2) | NDV

G or B SCHEDULES $BA = -6, -3, 0, 3, 6$

NASA-MSFC-MAF

TEST NSRDC-3110 DATASET COLLATION SHEET

21

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES								
		a	B	0.4				Se	Sc	Sa	Sr	Tw	Lc	Lw	CND PDS	WNO PDS
RN2281	BIG2FIW2DI	A	0	57			1	0	0	0	0	790	15	0	2	2
282		0	A	58												
283		6		59												
284		15		60												
285		A	0	61								3	3	1	1	
286		0	A	62												
287		6		63												
288		15		64												
289		A	0	65								15				
290		0	A	66												
291		6		67												
292		15		68												
293		A	0	69								3		2		
294		0	A	70												
295		6		71												
296		15		72												
297		A	0	73								15				
298		0	A	74												
299		6		75												
300		15		76												

ORIGINAL PAGE IS OF POOR QUALITY

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CHL	CYN	CY	CL	CD	L/D	CBA				
C.A.E.	B.P.(1)	B.P.(3)									MACH		17

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$ IDPVAR(1) IDPVAR(2) NDV
 a or B
 SCHEDULES
 $BA = -6, -3, 0, 3, 6$

CANARD BOOSTER
MDAC
DR#1139 A-1- 27

TEST NSRDC-3110 DATASET COLLATION SHEET

CANARD BOOSTER
MDAC
DR#1139 A-1- 28

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES								
		a	B	0.4				Se	Sc	Sc	Sr	TW	lc	LW	CND POS	WNG POS
RN2301	ALC2FW2DI	A	0	83			1	0	0	0	0	740	3	3	1	2
302		0	A	83												
303		6		83												
304		15		83												
305		A	0	83								15				
306		0	A	83												
307		6		83												
308		15		83												
309		A	0	83												
310		0	A	83								3		2		
311		6		83												
312		15		83												
313		A	0	83								15				
314		0	A	83												
315		6		83												
316		15		83												
317	B1	A	0	83												
318		0	A	83												
319		6		83												
320		15		83												

ORIGINAL PAGE IS OF POOR QUALITY

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CAL	CYN	CY	CL	CD	L/D	CAB				
C.A.F.	B.P.(1)	R.P.(1)								WACH			73

COEFFICIENTS:

a or B
SCHEDULES

$\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$

$BA = -6, -3, 0, 3, 6$

→ IDPVAR(1) IDPVAR(2) INDV

NASA-MSPC-MAP

TEST NSRDC-3110 DATASET COLLATION SHEET

23

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER		NO. of RUNS	PARAMETRIC VALUES								
		a	E	0.4			Se	Sc	Sa	Sr	Tw	Lc	Lw	CHO POS	WNG POS
RN2321	BIC2F2WIVI	A	0	0.4		1	0	10	0	0	790	3	0	1	1
322		0	A	0.4											
323		6		0.4											
324		15		0.4											
325		A	0	0.4				20							
326		0	A	0.4											
327		6		0.4											
328		15		0.4											
329	BIC2F1WIVI	A	0	0.4			20	0							
330		0	A	0.4											
331		6		0.4											
332		15		0.4											
333	BIC2F2WIVI	A	0	0.4				10							
334		0	A	0.4											
335		6		0.4											
336		15		0.4											
337		A	0	0.4				20							
338		0	A	0.4											
339		6		0.4											
340		15		0.4											

ORIGINAL PAGE IS
OF POOR QUALITY

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	KAL	CYN	CY	CL	CD	LTD	CAB				
C.A.E.	B.P.L.1.	A.P.L.3.								MACH			73

COEFFICIENTS:

$\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$

a or B

SCHEDULES

$\beta A = -6, -3, 0, 3, 6$

CANARD BOOSTER
MDAC
DR#1139 A-1- 29

TEST NSRDC-3110 DATASET COLLATION SHEET

CANARD BOOSTER
MDAC
DR#1139 A-1- 30

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER				NO. of RUNS	PARAMETRIC VALUES															
		a	B	0.4					Se	Sc	Sc	Sr	TW	Ic	LW	CNO POS	WAG POS							
RN2341	BIG2FIWIVI	A	0	0.4				1	-10	0	0	0	7%	3	0	1	1							
342		0	A	0.6																				
343		6		0.7																				
344	Y	15	Y	0.8																				
345	BIG2 F2 WIVI	A	0	0.9																				
346		0	A	1.0																				
347		6		1.1																				
348		15	Y	1.2																				
349		A	0	1.3																				
350		0	A	1.4																				
351		6		1.5																				
352		15	Y	1.6																				
353	BIG2FIWIVI	A	0	1.7																				
354		0	A	1.8																				
355		6		1.9																				
356		15	Y	2.0																				
357	BIG2.F2.WIVI	A	0	2.1																				
358		0	A	2.2																				
359		6		2.3																				
360		15	Y	2.4																				

ORIGINAL PAGE IS OF POOR QUALITY

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CA	CA	CLM	CAL	CYN	CY	CL	CD	CTD	CAB				
C.A.E.	A.P.(L)	B.P.(L)											WACH

COEFFICIENTS: SA = -2.0, 2, 4, 6, 8, 10, 15, 20 → IDPVAR(1) IDPVAR(2) NDV
 a or B
 SCHEDULES SA = -6, -3.0, 3.6

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER				NO. of RUNS	PARAMETRIC VALUES								
		a	B	0.4					Se	Sc	Sa	Sr	Tw	Ic	LW	CND POS	WNG POS
RN2361	BIC2F2W1VI	A	0	0.4				1	10	20	0	0	7%	3	0	1	1
362	↓	0	A	0.85													
363	↓	6	↓	0.46													
364	↓	15	↓	0.57					↓	↓							
365	BIC2FIW1VI	A	0	0.71					20	0							
366	↓	0	A	0.46													
367	↓	6	↓	0.21													
368	↓	15	↓	0.23													
369	BIC2F2W1VI	A	0	0.48						10							
370	↓	0	A	0.65													
371	↓	6	↓	0.70													
372	↓	15	↓	0.71													
373	↓	A	0	0.96						20							
374	↓	0	A	0.97													
375	↓	6	↓	0.97													
376	↓	15	↓	0.97					↓	↓							
377	BIC2FIW1VI	A	0	0.65					30	0							
378	↓	0	A	0.67													
379	↓	6	↓	0.64													
380	↓	15	↓	0.63				↓	↓	↓	↓	↓	↓	↓	↓	↓	↓

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1	7	13	19	25	31	37	43	49	55	61	67	7576
C.N	CA	CLM	CHL	CYN	CY	CL	CD	L/D	CAB			13
C.A.F.	B.P.L.J.	B.P.L.J.									MACH	

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$ → IDPVAR(1) IDPVAR(2) NDV
 a or B
 SCHEDULES $\beta A = -6, -3, 0, 3, 6$

CANARD BOOSTER
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 DR#1139 A-1- 31

TEST NSRDC-3110 DATASET COLLATION SHEET

CANARD BOOSTER

MDAC

DR#1139

A-1- 32

PRETEST

POSTTEST

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OF POOR QUALITY

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER		NO. of RUNS	PARAMETRIC VALUES									
		a	B	04			Se	Sc	Sc	Sr	TW	Lc	LN	CNO POS	WNG POS	
RN2381	BIG2F2W1VI	A	0	04		1	30	10	0	0	7'40"	3	0	1	1	
382		0	A	04												
383		6		04												
384		15		04												
385		A	0	04												
386		0	A	04												
387		6		04												
388		15		04												
389		A	0	04												
390		0	A	04												
391		6		04												
392		15		04												
393		A	0	04												
394		0	A	04												
395		6		04												
396		15		04												
397		A	0	04												
398		0	A	04												
399		6		04												
400		15		04												

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CBL	CYN	CY	CL	CD	LTD	CAB	MACH			
C.A.F.	B.P.L.W.	B.P.L.L.											

COEFFICIENTS: αA = -4, 0, 2, 4, 6, 8, 10, 15, 20 IDPVAR(1) IDPVAR(2) NDV

a or B
SCHEDULES βA = -6, -3, 0, 3, 6

MASA-MSFC-WAF

TEST NSPEC-1110 DATASET COLLATION SHEET

CANARD BOOSTER
MDAC
DR#1139 A-1- 34

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES									
		a	B	0.9				Se	Sc	Sc	Sr	TN	Lc	LW	CNO POS	WNG POS	
RN2921	BIG2F2W1V1	A	0	73			1	-10	20	-10	0	7'40"	3	0	1	1	
422		0	A	73													
423		6		73													
424		15		74													
425		A	0	75						20							
426		0	A	75													
427		6		75													
428		15		76													
429		A	0	76													
430		0	A	76				10		10							
431		6		77													
432		15		78													
433		A	0	78													
434		0	A	79						20							
435		6		79													
436		15		79													
437	BIG2F1	A	0	81				-	0	-	-	-	-	-	-	-	
438		0	A	81				-	-	-	-	-	-	-	-	-	
439		6		81				-	-	-	-	-	-	-	-	-	
440		15		81				-	-	-	-	-	-	-	-	-	

ORIGINAL PAGE IS OF POOR QUALITY

1	7	13	19	25	31	37	43	49	55	61	67	73	76
CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D	CAB				
C.A.F.	B.P.L.V.	R.P.C.J.								WACH			

COEFFICIENTS: αA = -4, 0, 2, 4, 6, 8, 10, 15, 20 → IDPVAR(1) IDPVAR(2) NDV

a or B SCHEDULES BA = -6, -3, 0, 3, 6

NASA-NSPEC-1110

TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES									
		a	B	0.4				Se	Sc	Sa	Sr	Tw	Lc	Lw	CND POS	WNG POS	
RN2441	BIC2F1	A	0	711			1	-	10	-	-	-	-	3	-	1	-
442		0	A	712				-		-	-	-	-				
443		6		713				-		-	-	-	-				
444		15		714				-		-	-	-	-				
445		A	0	715				-	20	-	-	-	-				
446		0	A	716				-		-	-	-	-				
447		6		717				-		-	-	-	-				
448		15		718				-		-	-	-	-				
449	BIC2F2	A	0	719				-		-	-	-	-				
450		0	A	720				-		-	-	-	-				
451		6		721				-		-	-	-	-				
452		15		722				-		-	-	-	-				
453		A	0	723				-	10	-	-	-	-				
454		0	A	724				-		-	-	-	-				
455		6		725				-		-	-	-	-				
456		15		726				-		-	-	-	-				
457	BIWIVI	A	0	727				-20	-	0	0	720	-	0	-	1	
458		0	A	728													
459		6		729													
460		15		730													

ORIGINAL PAGE IS OF POOR QUALITY

1	7	13	19	25	31	37	43	49	55	61	67	73	79
CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D	CAB				
C.A.F.	B.P.L.W.	R.P.C.											MACH

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$ → IDPVAR(1) | IDPVAR(2) | NDV
 a or B
 SCHEDULES $BA = -6, -3, 0, 3, 6$

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 DR#1139 A-1- 35

TEST NSRDC-3110 DATASET COLLATION SHEET

CANARD BOOSTER
MDAC
DR#1139 A-1- 36

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER		NO. of RUNS	PARAMETRIC VALUES										
		a	B	0.4			Se	Sc	Se	Sr	Tv	Lc	Lw	CNO POS	WNG POS		
RN2461	BIWIVI	A	0	0.47		1	-10	-	0	0	1'40"	-	0	-	1		
462		0	A	0.43													
463		6		0.46													
464		15	Y	0.47			Y										
465		A	0	0.36			0										
466		0	A	0.37													
467		6		0.31													
468		15	Y	0.37			Y										
469		A	0	0.40			10										
470		0	A	0.41													
471		6		0.42													
472		15	Y	0.47			Y										
473		A	0	0.43			20										
474		0	A	0.47													
475		6		0.50													
476		15	Y	0.50			Y										
477		A	0	0.56			30										
478		0	A	0.57													
479		6		0.58													
480		15	Y	0.57													

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CBL	CYN	CY	CL	CD	LTD	CAB				VS
C.A.F.	B.P.W.	R.P.(3)							MACH				

COEFFICIENTS: αA = -4, 0, 2, 4, 6, 8, 10, 15, 20 → IDPVAR(1) | IDPVAR(2) | NDV

a or B
SCHEDULES

BA = -6, -3, 0, 3, 6

NASA-MSFC-MAP

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TEST NSRDC-3110 DATASET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER			NO. of RUNS	PARAMETRIC VALUES										
		a	B	0.4				Se	Sc	Sc	Sr	TW	Lc	Lv	CNO POS	WNO POS		
RN2481	BIWIVI	A	0	285			1	0	-	10	0	740	-	0	-	1		
482		0	A	286														
483		6		287														
484		15	Y	288														
485		A	0	289							20							
486		0	A	290														
487		6		291														
488		15	Y	292				Y	-	Y								
489		A	0	293				-10	-	10								
490		0	A	294														
491		6		295														
492		15	Y	296				Y	-	Y								
493		A	0	297				-10	-	20								
494		0	A	298														
495		6		299														
496		15	Y	300				Y	-	Y								
497		A	0	301				10	-	10								
498		0	A	302														
499		6		303														
500		15	Y	304				Y	Y	-	Y	Y	-	Y	-	Y	-	Y

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1	7	13	19	25	31	37	43	49	55	61	67	75	76
CA	CA	CLM	CBL	CVN	CV	CL	CO	L/D	CAB	WACH			
C.A.F.	C.P.C.W.	C.P.C.J.											

COEFFICIENTS:

$\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$

a or B

SCHEDULES

$\beta A = -6, -3, 0, 3, 6$

CANARD BOOSTER
MDAC

DR#1139 A-1- 37

TEST NSRDC-3110 DATASET COLLATION SHEET

CANARD BOOSTER
MDAC
DR#1139 A-1- 38

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER	NO. of RUNS	PARAMETRIC VALUES										
		a	B			0.4	Se	Sc	Se	Sr	Tw	Le	Lw	CND POS	WFB POS	
RN2501	BIWIVI	A	0	171	1	10	-	20	0	7°40'	-	0	-	1		
502		0	A	174												
503		6		175												
504		15		176												
505		0		183		0	-	0	-5							
506		6		184												
507		15		184												
508		0		185												
509		6		187						-10						
510		15		188												
511	BIC2FIWIVI	0		191				0		-5	3		1			
512		6		192												
513		15		191												
514		0		190						-10						
515		6		191												
516		15	Y	194												
517		A	0	191						0	15°					
518		0	A	194												
519		6		193												
520		15	Y	194												

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1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CBL	CYN	CV	CL	CD	L/D	CAB				
C.A.E.	B.P.L.J.	B.P.L.J.								WACH			13

COEFFICIENTS: $\alpha A = -9, 0, 2, 4, 6, 8, 10, 15, 20$ IDPVAR(1) IDPVAR(2) NDV
 a or B
 SCHEDULES $\beta A = -6, -3, 0, 3, 6$

NSRDC-MSFC-1147

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER				NO. of RUNS	PARAMETRIC VALUES										
		a	B	0.4					Se	Sc	Sc	Sr	TW	Lc	LW	CNO. POS	WING POS		
RN251	BIC2FIWVI	A	0	515				1	0	0	0	0	15	3	0	2	1		
522		0	A	516															
523		6		517															
524	↓	15	Y	518															
525	BIC2FIWV2D1	A	0	519												1			
526		0	A	520															
527		6		521															
528		15	Y	522															
529		A	0	523															
530		0	A	524															
531		6		525															
532	↓	15	Y	526															
533	BIC2FIW2D1	A	0	527												3	1		
534		0	A	528															
535		6		529															
536		15	Y	530															
537		A	0	531															
538		0	A	532															
539		6		533															
540	↓	15	Y	534					Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

ORIGINAL PAGE IS OF POOR QUALITY

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D	CAB				
C.A.F.	B.P.L.W.	A.P.C.S.								WACH			

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$ → IDPVAR(1) | IDPVAR(2) | NDV
 a or B
 SCHEDULES $\beta A = -6, -3, 0, 3, 6$

CANARD BOOSTER
 MDAC
 DR#1139 A-1- 39

TEST NSRDC-3110 DATASET COLLATION SHEET

CANARD BOOSTER
MDAC
DR#1139 A-1- 40

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER	NO. of RUNS	PARAMETRIC VALUES										
		A	B			Se	Sc	Sc	Sr	TW	Lc	Ld	CND POS	WNG POS		
RN2541	BIC2FIW1	A	0	0.4	1	0	10	0	0	7.40	3	0	1	1		
542		0	A	0.4												
543		6		0.4												
544		15		0.4												
545		A	0	0.4												
546		0	A	0.4												
547		6		0.4												
548		15		0.4												
549	BIC2F2W1	A	0	0.4									2			
550		0	A	0.4												
551		6		0.4												
552		15		0.4												
553	BIC2FIW1V2	A	0	0.4									1			
554		0	A	0.4												
555		6		0.4												
556		15		0.4												
557	BIC2FIW1	A	0	0.4												
558		0	A	0.4												
559		6		0.4												
560		15		0.4												

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1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CAL	CYN	CY	CL	CD	LTA	CAB	MACH			
G.A.F.	B.P.L.W.	R.P.C.L.											

COEFFICIENTS: $\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 20$ IDPVAR(1) | IDPVAR(2) | NDV

0 OF 8
SCHEDULES

$\beta A = -6, -3, 0, 3, 6$

NASA-USFC-448

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		RUN NUMBER				NO. of RUNS	PARAMETRIC VALUES																
		a	B	0.4					Se	Sc	Se	St	TW	ic	LN	CNO ADS	MAG PLS								
RN2561	B1C2.F1W1V1D2	A	0	847				1	0	0	0	0	7'40'	3	0	1	1								
562	↓	0	A	847																					
563	↓	6		847																					
564	↓	15		856																					
565	B1C3.F3W1V1	A	0	831																					
566	↓	0	A	842																					
567	↓	6		841																					
568	↓	15		842																					
569	B1C2.F1W1V1D3	A	0	852																					
570	↓	0	A	852																					
571	↓	6		851																					
572	↓	15		852																					
573	B2C2.F1W1V1	A	0	851																					
574	↓	0	A	852																					
575	↓	6		852																					
576	↓	15		850					↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓

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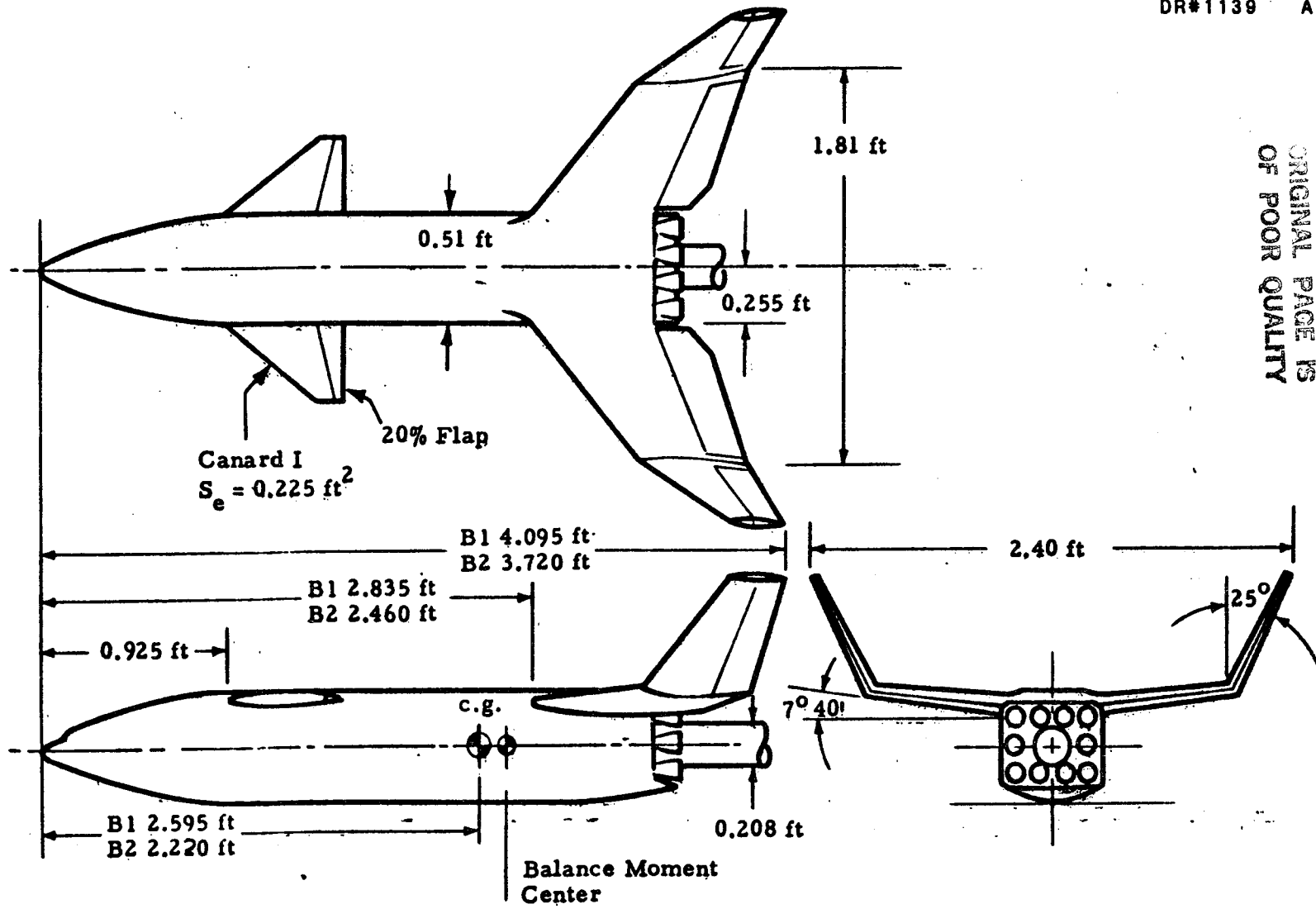
1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CAL	CYN	CY	CL	CD	L/D	CAB	MACH.			73
C.A.F.	B.P.C.W.	B.P.C.J.											

COEFFICIENTS: αA = -4, 0, 2, 4, 6, 8, 10, 15, 20

a or B

SCHEDULES BA = -6, -3, 0, 3, 6

CANARD BOOSTER
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DR#1139 A-1- 41



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LMSC-HREC D162856-A

Fig. 2. General Arrangement of a Typical High Wing - High Canard Configuration

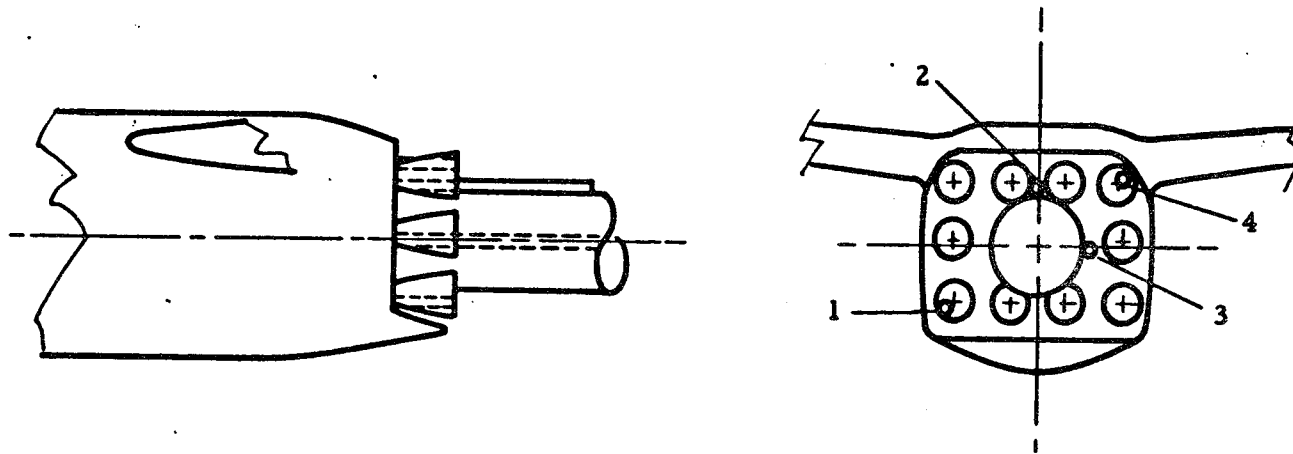
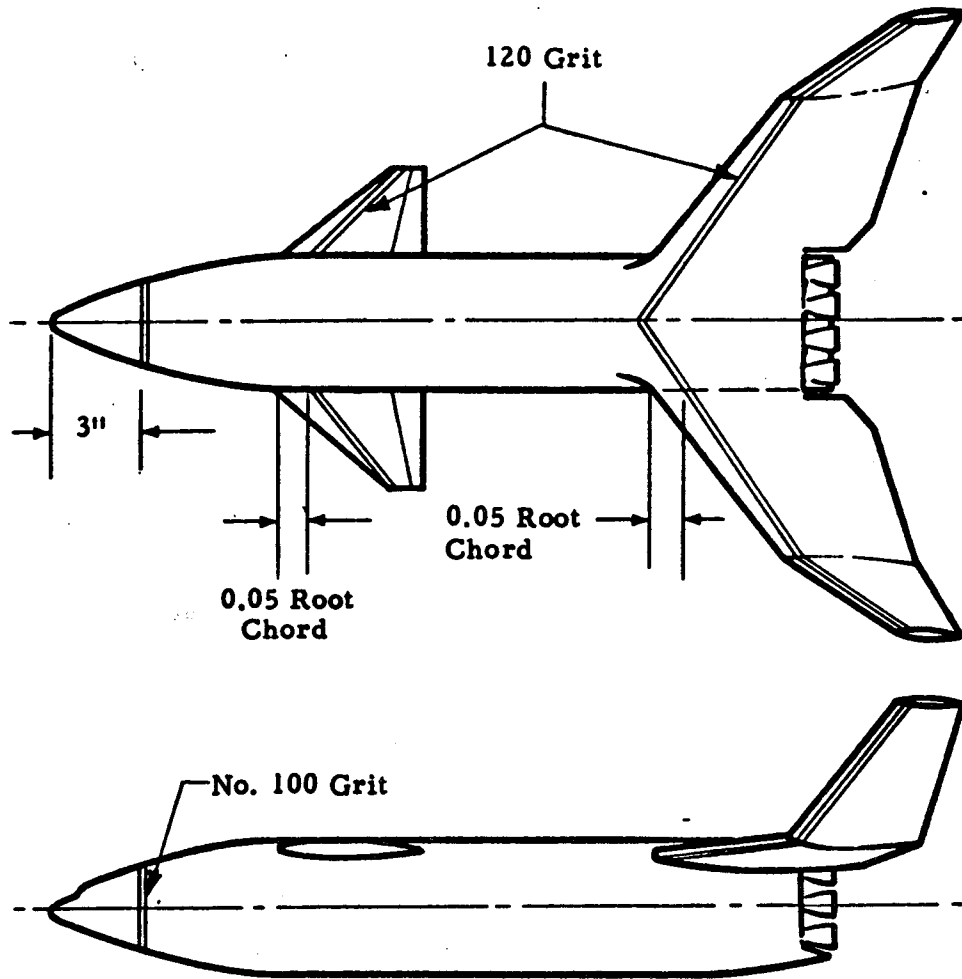


Fig. 4. - Location and Identification of Base Pressure Tubes

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20-A
11-A
CANARD BOOSTER
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DR#1139 A-1- 43



Note: Grit is Carborundum
All strips are 1/8" wide

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LMSC-HREC D162856-A

Fig. 5. - Typical Transition Grit Installation on Body, Wing and Canard

TEST MDAC LGWT 259 DATA SET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCH.	C VALUE / RUN#			NO. of RUNS	PARAMETERS / VALUES											
			0	5	10		0	1	2	3	4	5	6	7	8	9	10	
025 019	BIN2T1PIW2	A	26	104	105	X	2	757	0	-	-	-	0	0	0	0	-	0
026	BIN2T1PIW2V1			87	88	89	5	0	3									0
027				92	91	90	3	757										0
028				93	X	X	1	1										
023	BIN2T1PIW2V1G2			95	X	X	1	3										
024	BIN2T2PIW2			101	102	X	2			0		-	-					-
025	BIN2T2PIW2V1			97	98	X	2			0		3	65					0
026				96	X	X	1			3								
027	BIN1T1PIW3V1			76	77	78	3											
028	BIN3T1PIW3V1			30	X	81	2											
029	BIN9T1PIW3V1			82	X	X	1											
020	BIN2T1PIW4V1			85	X	X	1											
031	BIN1WI V1			117	118	X	2											
032	BIN1JI WI V1			124	125	126	3			-	3							-
087	BIN2T1PIW2V1	E		2322	2323		2			3	-			60	3.03			0
088	BIN2JI W2 V5			331	335	336	3			-	3	-	-	0	0			
089	BIN1JI WI V5			337	340	341	3			-	3	-	-	0	0			

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7	13	19	25	31	37	43	49	55	61	57	75	76	
C6	102	CLM	CV	CLM	CSL	CSL				BETA	ALPHA		
COEFFICIENTS:											IDPVAR(1)	IDPVAR(2)	NDV
a or b													
SCHEDULES													

of SCHEDULE 1: -6-4-7, 9, 3, 4, 6, 10, 11, 14, 15, 20, 24
of SCHEDULE 2: -6-4-7, 9, 3, 4, 6, 10, 11, 14, 16

Revised 1/16

TEST MDAC/MMC 15017 233 DATA SET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHED.		CONTROL DEFLECTION				NO. of RUNS	PARAMETERS / VALUES															
		α	β	δ_r	δ_c	δ_v	δ_n		δ_{xy}	δ_{yz}	δ_{zx}	δ_{zy}	δ_{yx}	δ_{xy}	δ_{yz}	δ_{zx}	δ_{zy}	δ_{yx}	δ_{xy}	δ_{yz}	δ_{zx}	δ_{zy}	δ_{yx}	
033	BIN1T1P1W1V1	0	3	0	0	0	0	1	3	7.67	3	-	3	65	0	.26	0							47
034	PLN1T1P1W1V1	0				0							3	65										47
035	BIN1T1P1W1	10				-							0											107
036	BIN1T2P1W1					-																		110
037	ELN1T2P1W1V1						0							3	65									111
038	BIN2T1P1W2					-																		106
039	BIN2T2P1W2					-																		105
040	PLN2T2P1W2V1						0							3	65									45
041	BIN1J1W1V1	0			15								-	3			3.14	2.36						215
042		5			15												3.14	2.36						215
045	BIN2J1W1V5	10			0												0	0						337
046	BIN1J1W1V5	10			0												0	0						342

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1	7	13	19	25	31	37	43	49	55	61	67	75	76	
CL	CD	CLY	CY	CLN	CSL	CSZ							ALPHA BETA	
COEFFICIENTS:												IDPVAR(1)	IDPVAR(2)	IDV
a or b SCHEDULES		A: -10, -8, -6, -4, -2, 0, 2, 4, 6, 8, 10												

CANARD BOOSTER
 MDAC/MMC
 DR#1054 A-1- 47

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CANARD BOOSTER
MDAC/MMC
DR#1054 A-1-48

PRETEST

POSTTEST

TEST MDAC LEWT 239DATA SET COLLATION SHEET
 * INDICATES CONFIGURATION WITH $\sigma_y = 3^\circ$, $\tau_y = 2.67^\circ$, $\sigma_{yz} = 5^\circ$, $\tau_{yz} = 5^\circ$
 $\sigma_x = 3^\circ$ AND $\tau_x = 65^\circ$

DATA SET IDENTIFIER	CONFIGURATION **	COND.	NO. CONTROL DEFLECTIONS	NO. OF RUNS	PT/a VALUES / RUN NO.
RCE 013 BIA(DJW)Y1		a	0	0	2.50 2.86 3.03
		b	0	0	2.64 2.75 2.87
		c	0	0	2.52 2.70 2.75
		d	0	0	2.34 2.52 2.59
		e	0	0	2.02 2.19 2.24
		f	0	0	1.85 2.02 2.19
		g	0	0	1.67 1.85 1.92
		h	0	0	1.49 1.67 1.74
		i	0	0	1.31 1.49 1.56
		j	0	0	1.13 1.31 1.38
		k	0	0	0.95 1.13 1.20
		l	0	0	0.77 0.95 1.02
		m	0	0	0.59 0.77 0.84
		n	0	0	0.41 0.59 0.66
		o	0	0	0.23 0.41 0.48
		p	0	0	0.05 0.23 0.30

DATA SET IDENTIFIER	CONFIGURATION **	COND.	NO. CONTROL DEFLECTIONS	NO. OF RUNS	PT/a VALUES / RUN NO.
RCE 013 BIA(DJW)Y1		a	0	0	2.50 2.86 3.03
		b	0	0	2.64 2.75 2.87
		c	0	0	2.52 2.70 2.75
		d	0	0	2.34 2.52 2.59
		e	0	0	2.02 2.19 2.24
		f	0	0	1.85 2.02 2.19
		g	0	0	1.67 1.85 1.92
		h	0	0	1.49 1.67 1.74
		i	0	0	1.31 1.49 1.56
		j	0	0	1.13 1.31 1.38
		k	0	0	0.95 1.13 1.20
		l	0	0	0.77 0.95 1.02
		m	0	0	0.59 0.77 0.84
		n	0	0	0.41 0.59 0.66
		o	0	0	0.23 0.41 0.48
		p	0	0	0.05 0.23 0.30

CL	CD	CLM	CY	CLN	CST	CD3	CD4	CD5	CD6	CD7	CD8	CD9	CD10	CD11	CD12	CD13	CD14	CD15	CD16	CD17	CD18	CD19	CD20	CD21	CD22	CD23	CD24	CD25	CD26	CD27	CD28	CD29	CD30

COEFFICIENTS: IDPAR(1) IDPAR(2) IDV

a or B
SCHEDULES

Reverse of page
p. 16

TEST MDAC UNIT 229 DATA SET COLLATION SHEET

* INDICATES CONFIGURATION WITH $\delta_{10} = 3^\circ$, $\Gamma_{10} = 7.67^\circ$, $\delta_{17} = 3^\circ$
 $\delta_{17} = 3^\circ$ AND $\Gamma_{17} = 65^\circ$

NOTE: AT M=0 THE COEFFICIENTS ARE REDUCED USING $P=100$ PSF

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION **	SCHD.		CONTROL COLLECTION			NO. of RUNS	PST/P ₀ VALUES / RUN NO.							M	
		a	B	C ₀	C ₁	C ₂		0	202	236	250	264	305	320		
065	BIN2J3 W2 VI	E	0	0	30	0	3	233	X	2215	X	X	X	2216		.26
066							2	X	X	2217	X	X	X	2218		0
067	BIN2J4 W2 VI						1	X	X	2219	X	X	X	X		0
068							2	236	X	2250	X	X	X	X		.26
069	BINIJ5 W1 VI						4	144	X	2253	2252	X	2251			
070					45		4	133	X	2254	2255	X	2254			
071					60		4	132	X	2259	2258	X	2257			
072					30		3	X	X	2260	2267	X	2266		0	
073					45		3	X	X	2265	2264	X	2263		0	
074					60		3	X	X	2262	2261	X	2260		0	
075	BINLTIPI W1 VI				0		2	X	2275	X	X	X	2276			
076							3	314	2277	X	X	X	2278		.26	
077	BINLTIPI W1 VI						2	308	X	X	X	X	2209			
079	BIN6TIPI W1 VI						2	314	X	X	X	X	2315			
080	BIN2TIPI W2 VI						3	87	2321	X	X	X	2372			
081							2	X	2316	X	X	X	2319		0	
082	BIN5TIPI W1 VI						2	312	X	X	X	X	2313		.26	

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1 7 13 19 25 31 37 43 49 55 61 67 75 76
 CL CD CLM CY CLN CSL CD RPT P3 ALPHA

COEFFICIENTS: IDPVAR(1) IDPVAR(2) NDV

a or B
 SCHEDULES: α SCHEDULE E: -6, -4, -2, 0, 2, 4, 6, 8, 10, 12, 14, 16

Revised 11/80
 REC

TEST MDAC LSNT 239 DATA SET COLLATION SHEET

* INDICATES CONFIGURATION WITH $\delta_{11} = 3^\circ$, $\Gamma_{11} = 7.67^\circ$, δ_{21} OR $\delta_{12} = 3^\circ$
 $\delta_{22} = 3^\circ$ AND $\Gamma_{22} = 65^\circ$

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION *	SCHD.		PARAMETERS				NO. OF RUNS	ELEVON DEFLECTIONS δ_E										
		A	B	δ_R	δ_F	Γ_{12}	Γ_{21}		-30	-20	-10	0	10	20	30				
RCE 090	BIN1J1Y1Y1	E	0	0	0	2.70	2.6	3	2219	2225	2207								
091						15	2.70	3		2209	2153	2216							
092						30	2.20	3		2210	2146	2215							
093						45	2.30	4		2211	2136	2214	2218						
094						60	1.80	4		2212	2150	2212	2217						
095	BIN1T1P1Y1Y1					0	2.00	1				2277							
096						0	3.03	4	2200	2294	2292	2273							
097						10		4		2286	2250	2280	2302						
098						20		3			2288	2262	2304						
099						30		3			2285	2284	2305						
100						0	0	4	299	293	291	45							
101						10		4		295	289	279	301						
102						20		5	293	297	287	231	303						
103						30		3			285	283	305						
105	BIN2T1P1W2Y1					0		2			324	90							
106						20		1			326								
107						0	3.03	3	2328	2325	2322								
108						20	3.03	1			2327								

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1 7 13 19 25 31 37 43 49 55 61 67 75 76

CL 1C0 1CL 1Y 1CLN 1SL 1D2 ELEV ALPHA

COEFFICIENTS:

α or β

SCHEDULES

SCHEDULE E: -6, -4, -2, 0, 2, 4, 6, 8, 10, 12, 14, 16

IDPVAR(1) | IDPVAR(2) | NDV

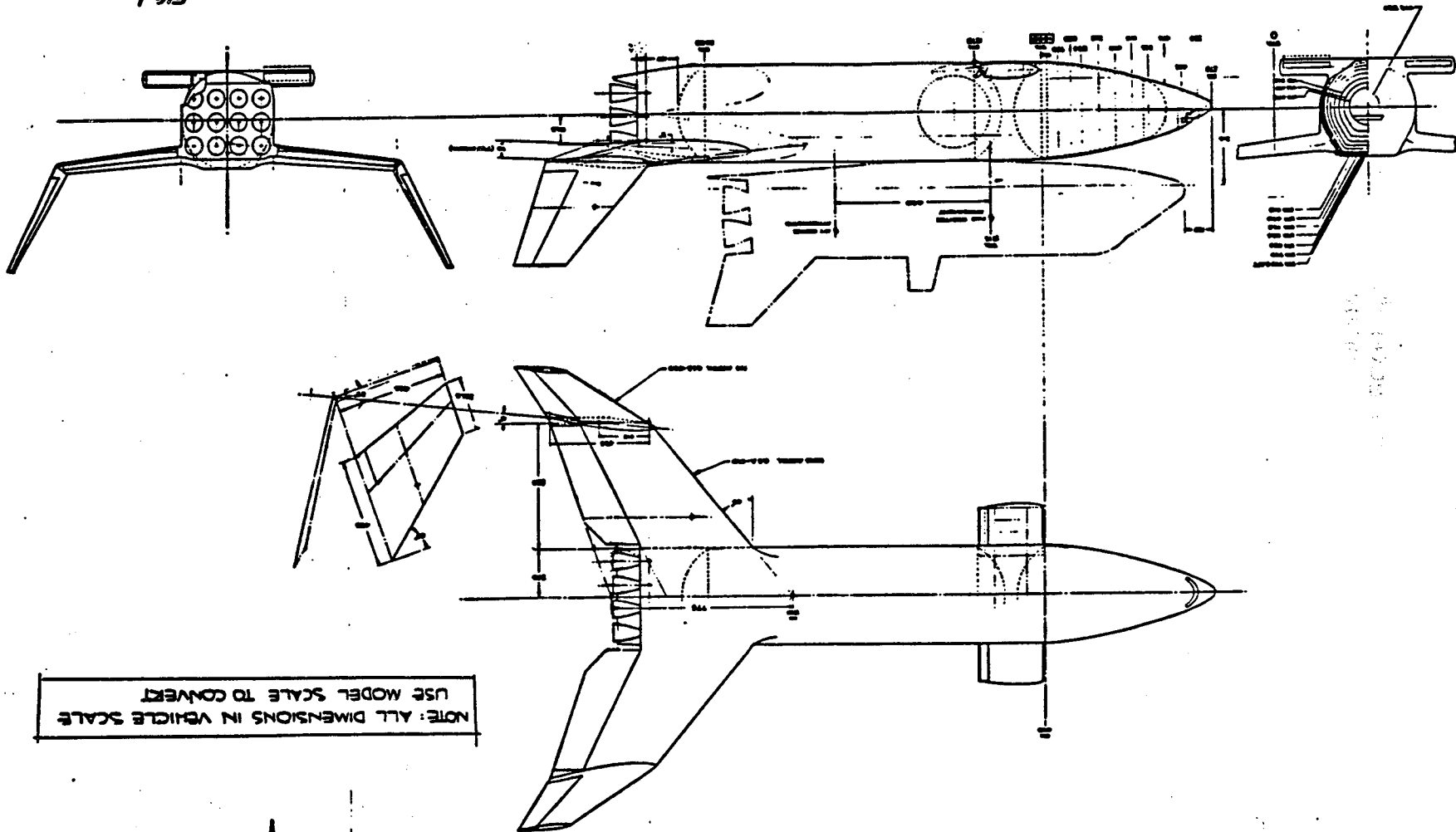
CANARD BOOSTER

MDAC/MMC

DR#1054 A-1- 51

WT-71078

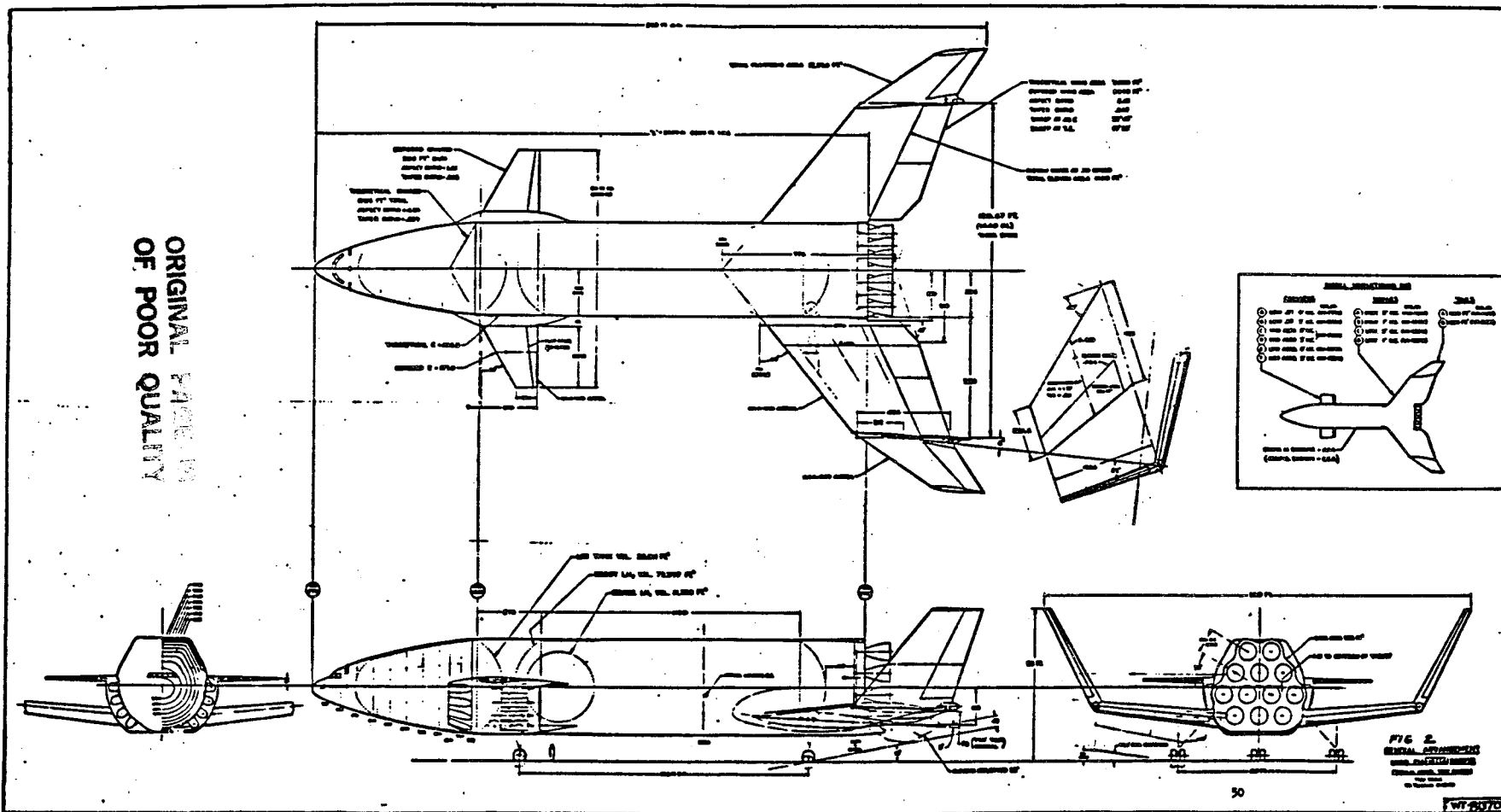
Fig 1
BRAIN ATTACHMENT
DETAIL



NOTE: ALL DIMENSIONS IN VEHICLE SCALE
USE MODEL SCALE TO CONVERT

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CANARD BOOSTER
MDAC/MMC
DR#1054 A-1-52



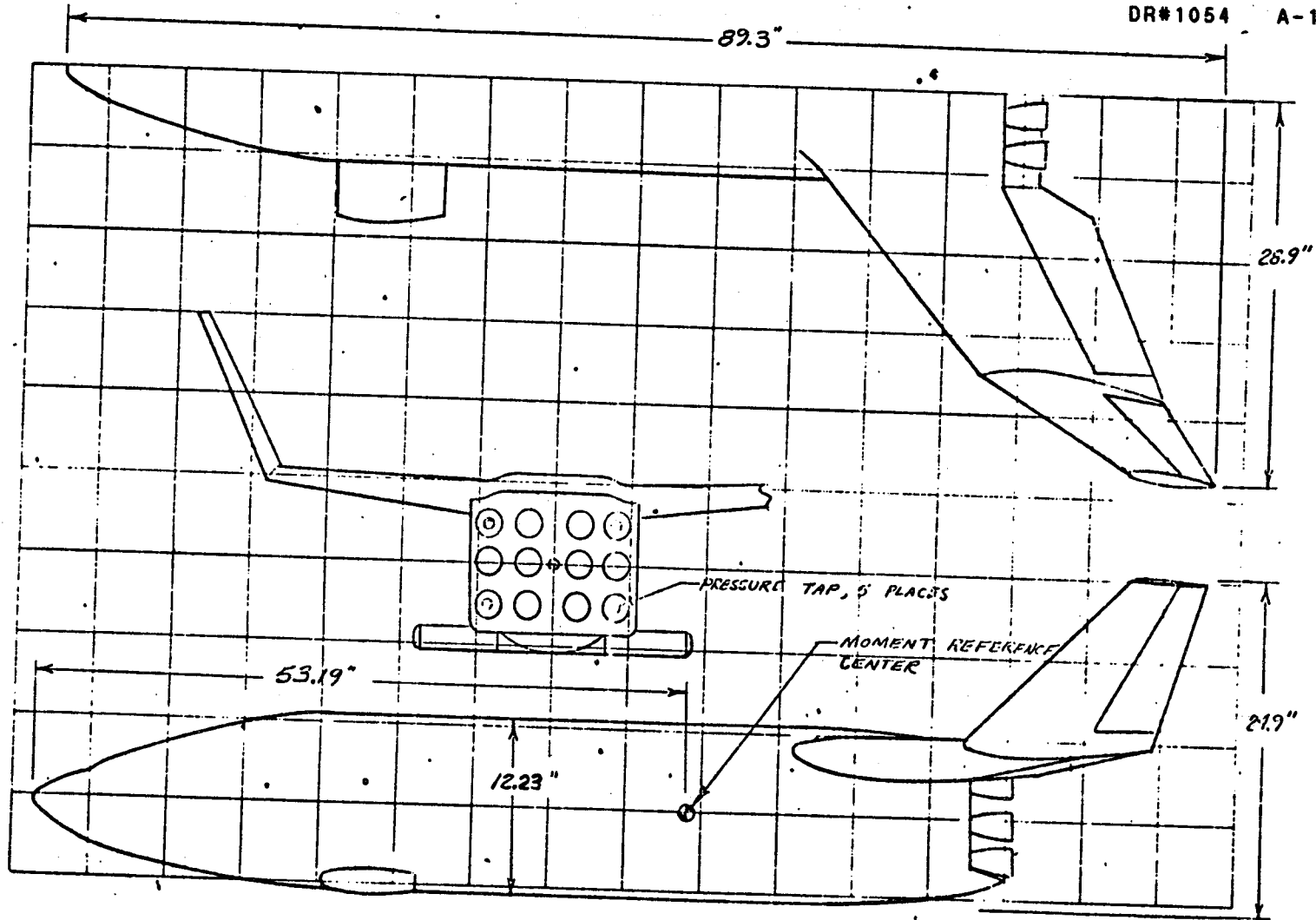
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FIG. 2
CANARD BOOSTER
MDAC/MMC
DR#1054

FW 6070

CANARD BOOSTER
MDAC/MMC
DR#1054 A-1- 53

CANARD BOOSTER
MDAC/MMC
DR#1054 A-1- 54



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Figure 3 BASELINE MODEL CONFIGURATION

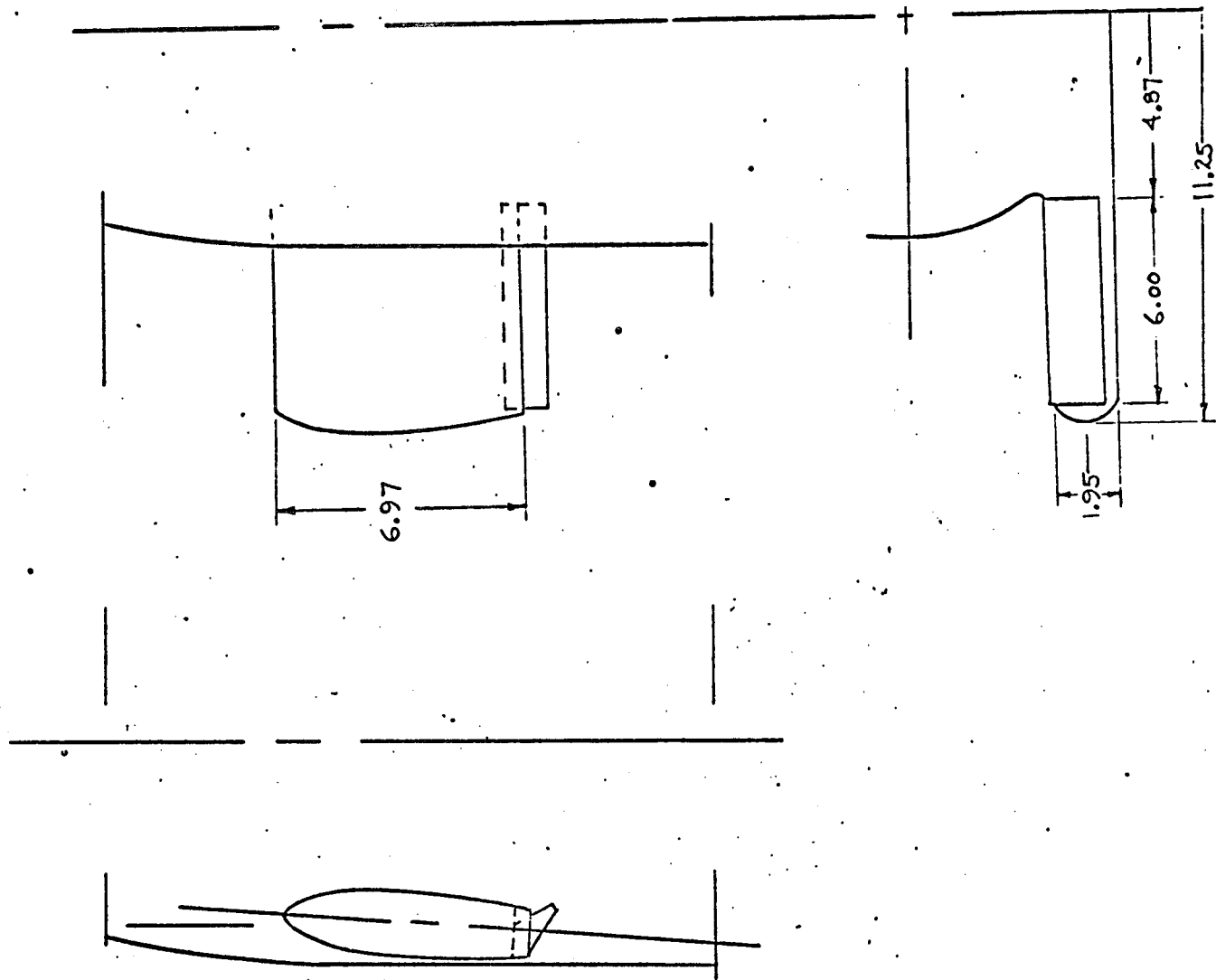


FIG 4a PROPULSIVE CANARD

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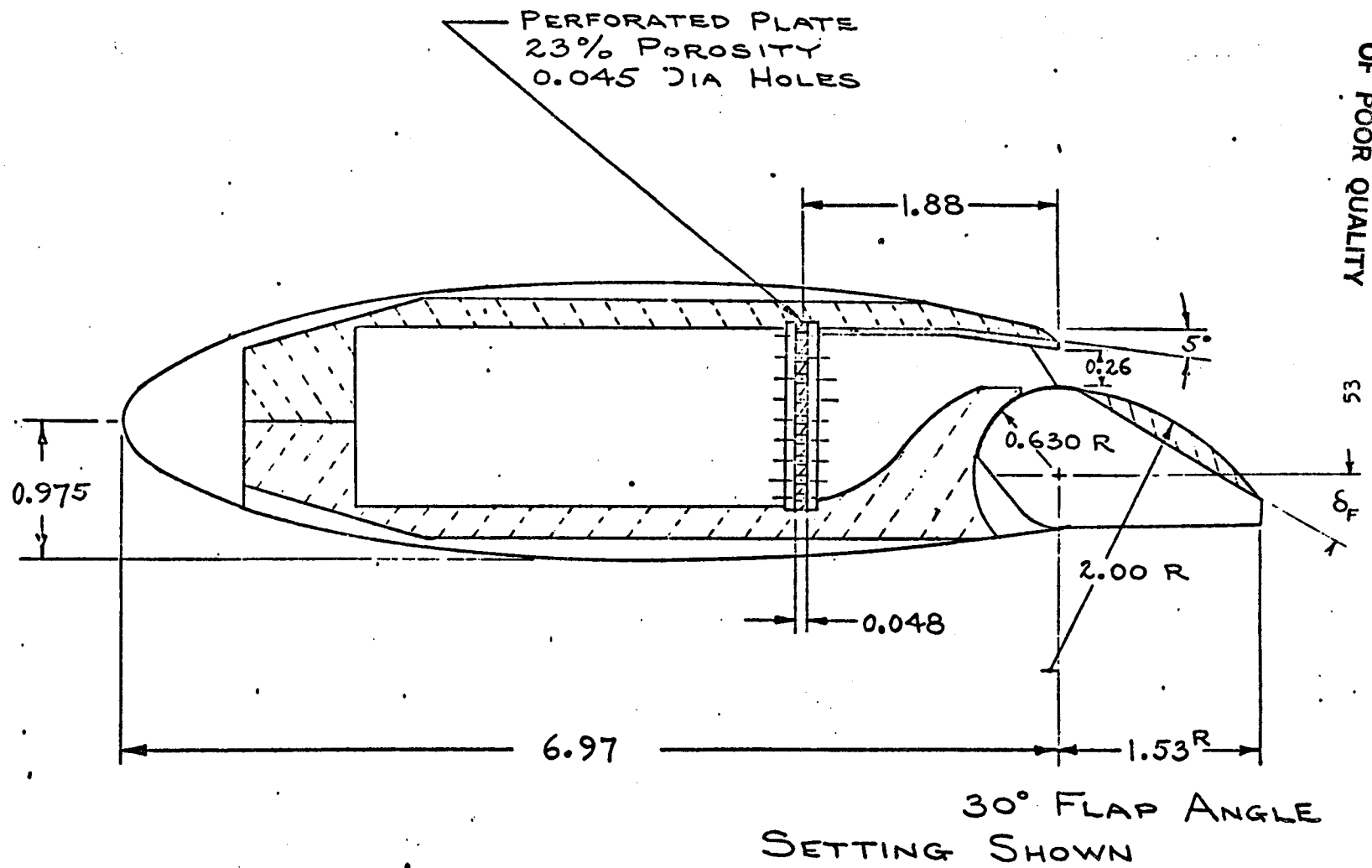
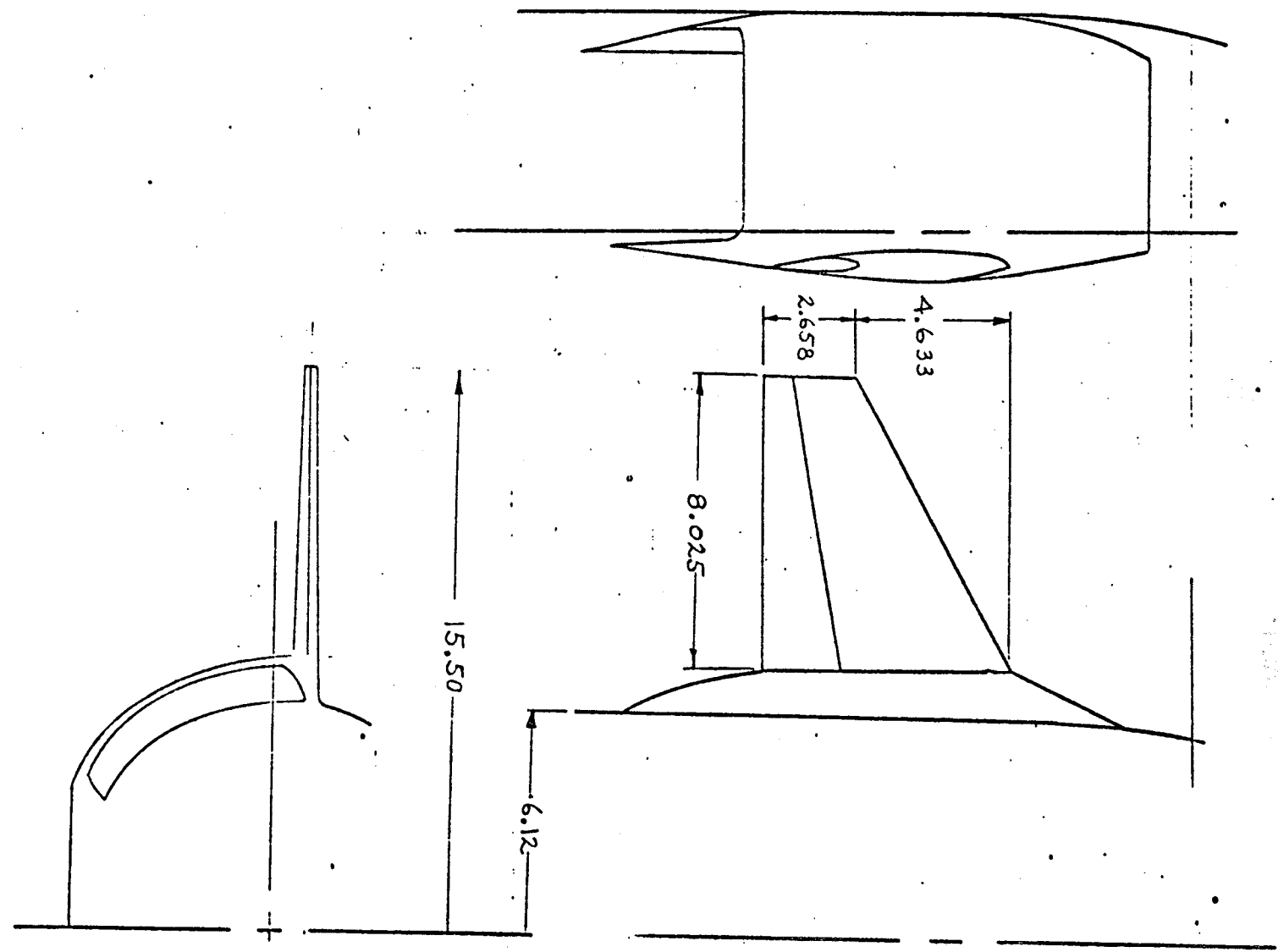


FIG 4b PROPULSIVE CANARD INTERNAL DETAILS

FIG 4C MID AERO CANARD AND PODDED ENGINES

54



CANARD BOOSTER
MDAC/MMC
DR#1054 A-1- 57

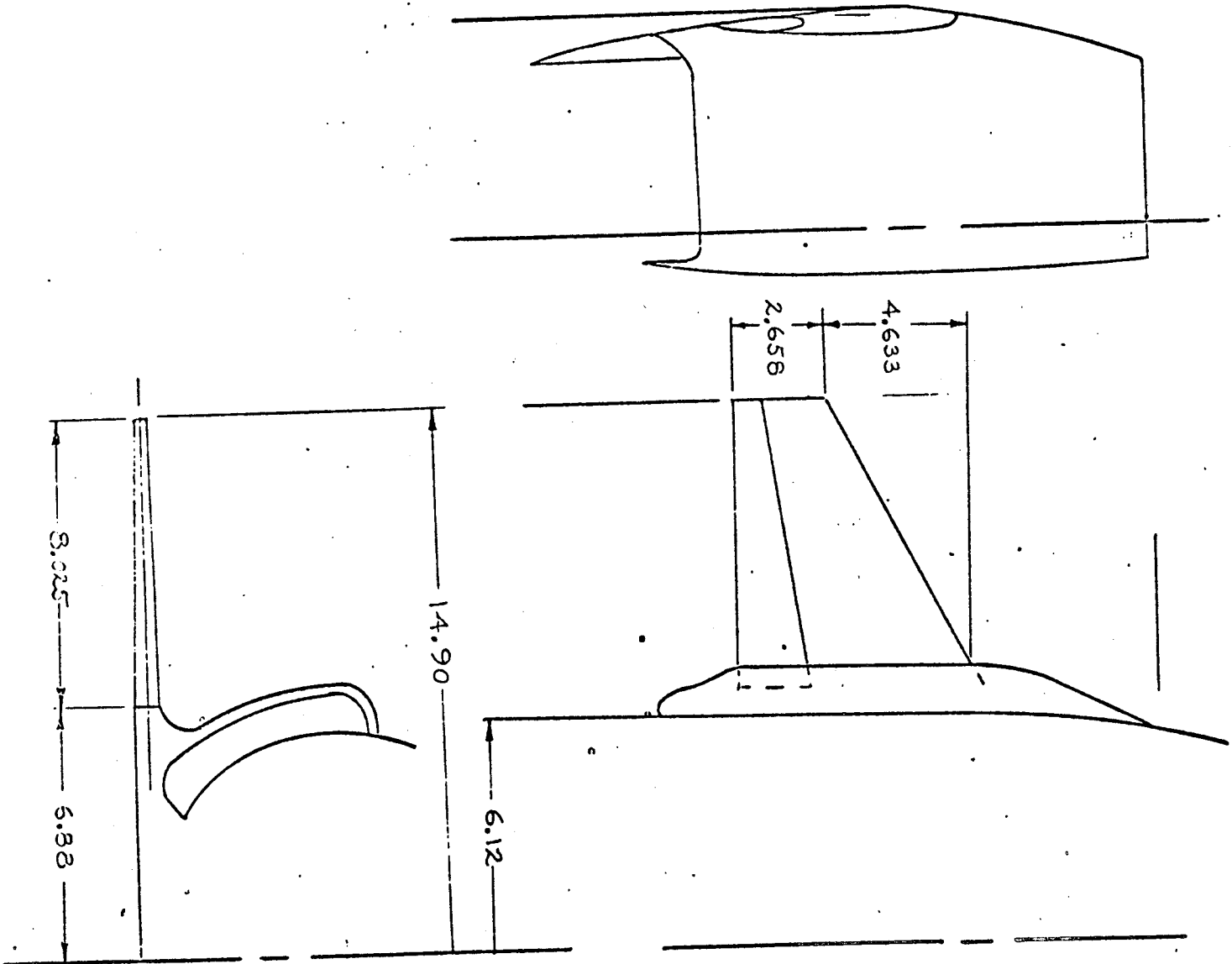
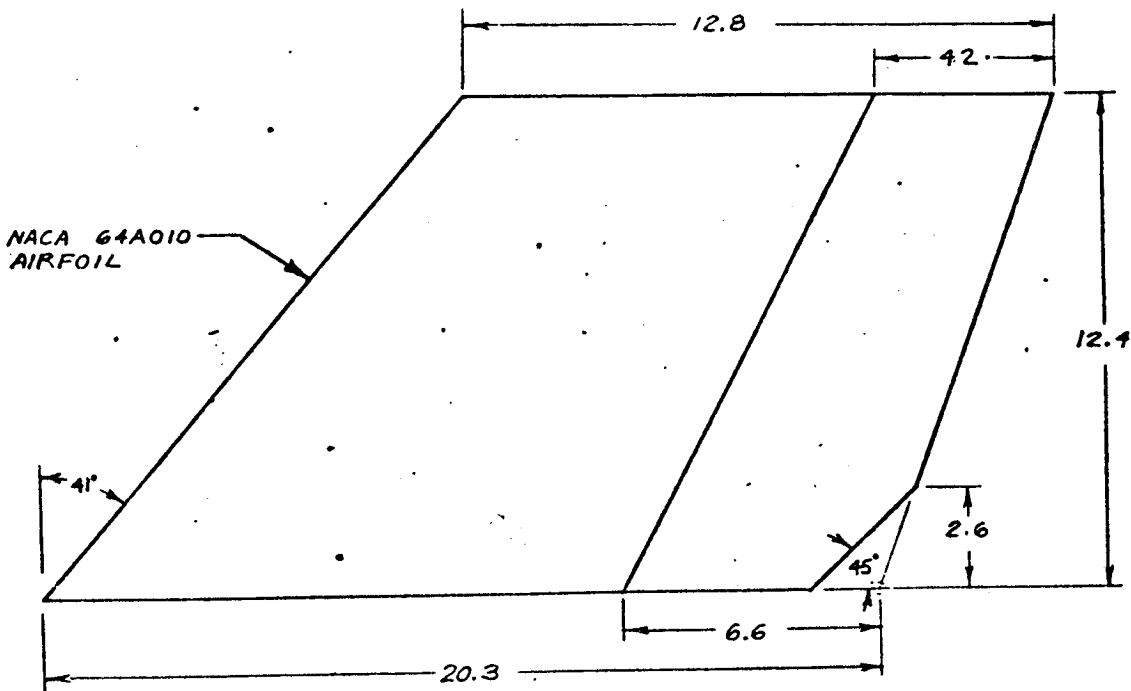
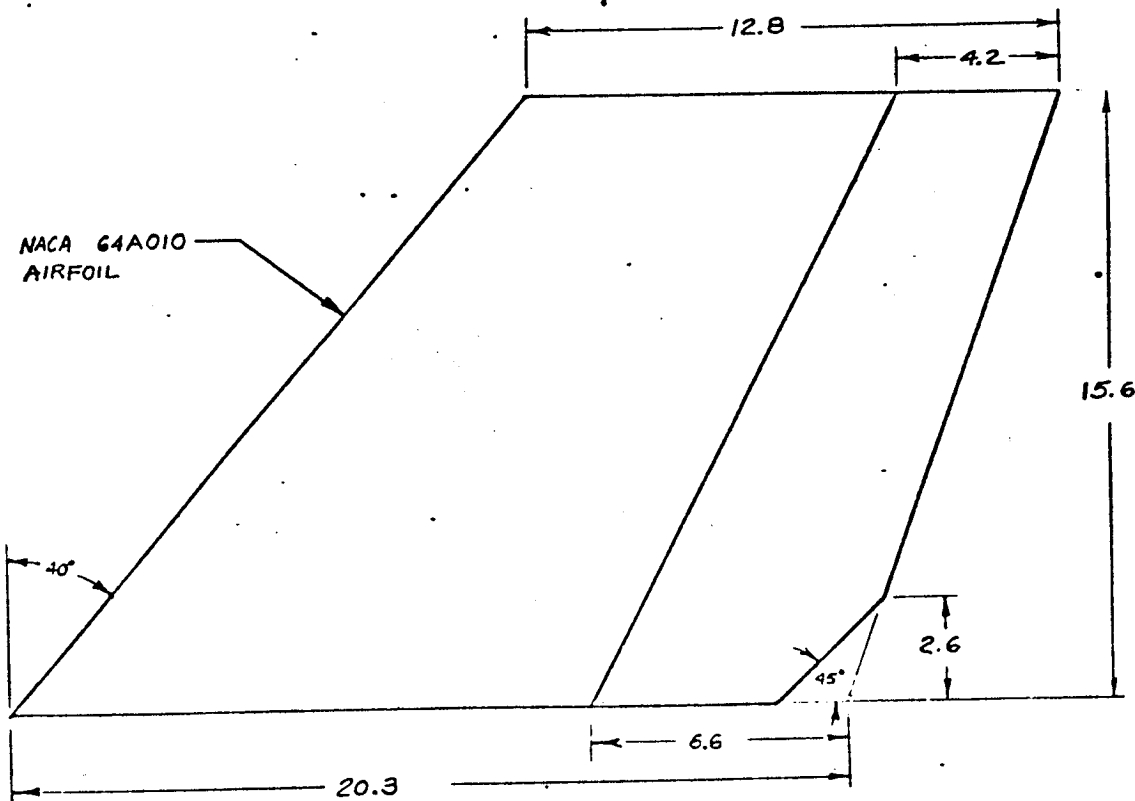


FIG 4D LOW AERO CANARD AND PODDED ENGINES



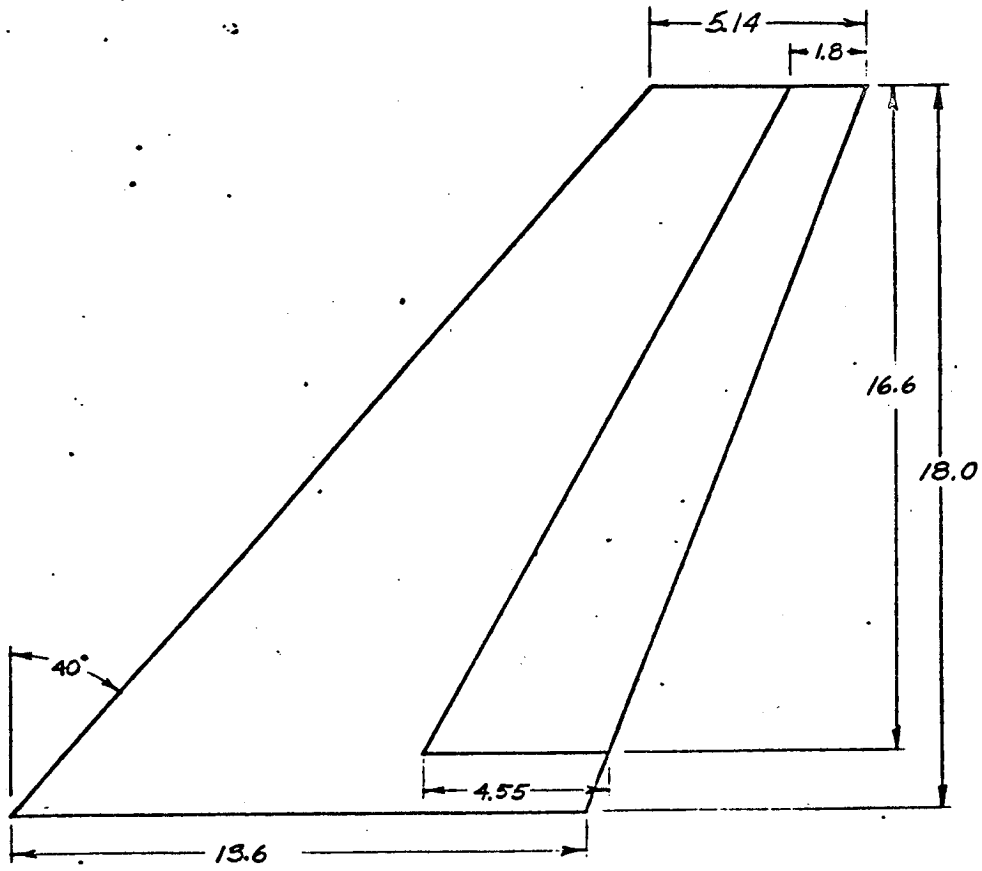
WING PANEL W3 & W4

DIMENSIONS ARE IN INCHES



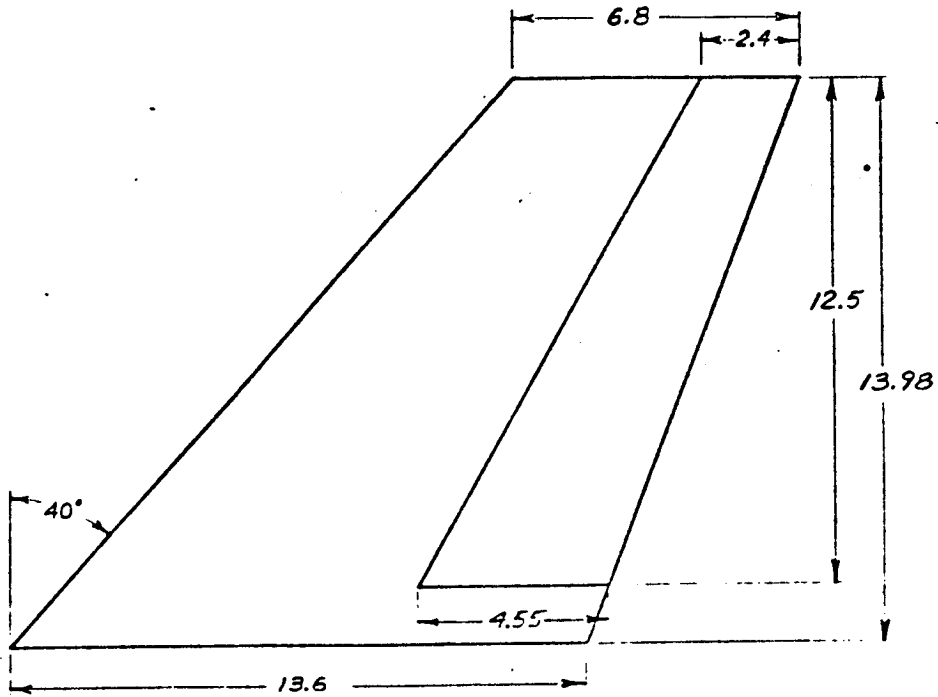
WING PANEL W1 & W2

FIG 4e



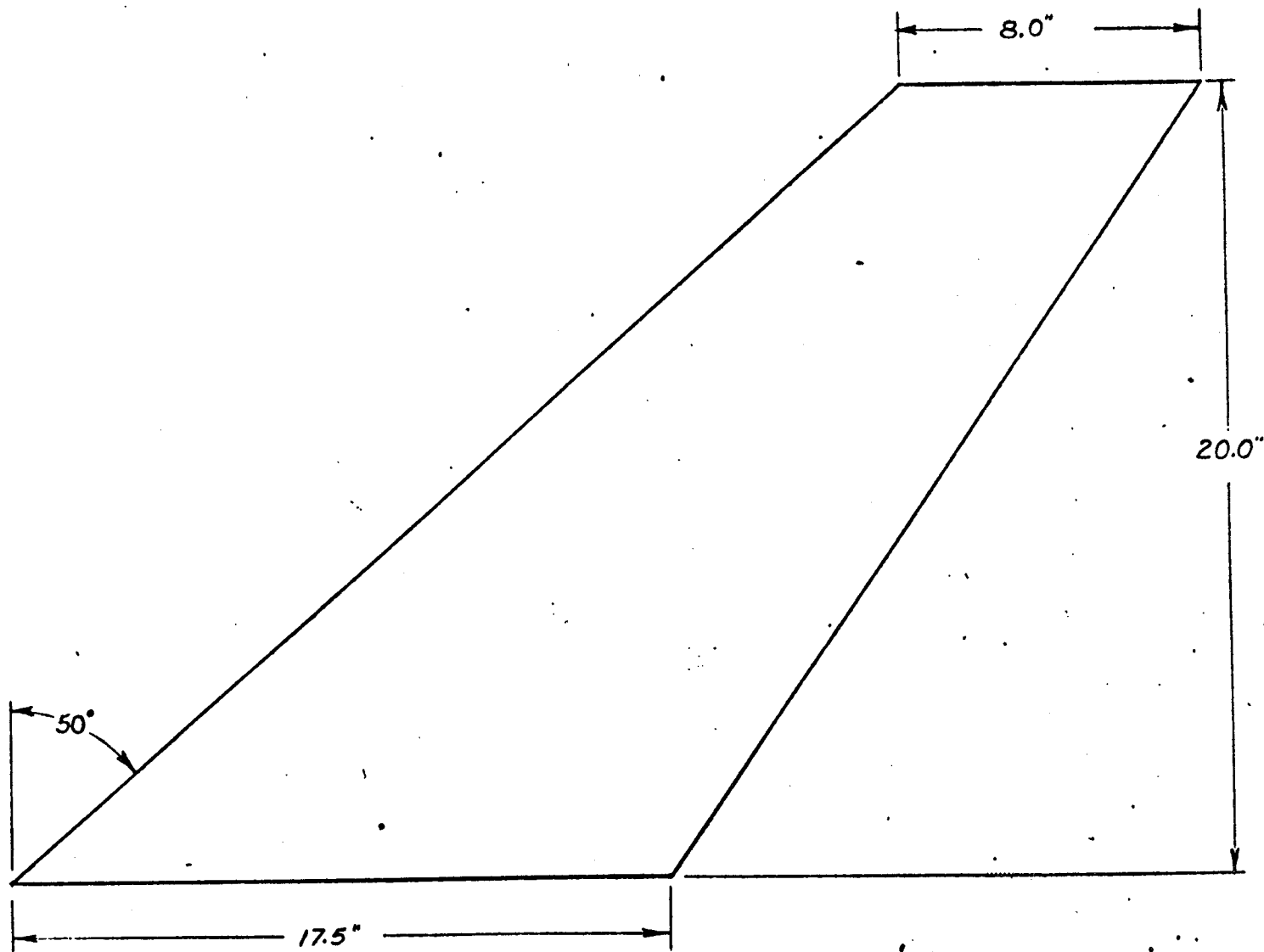
TIP FIN V2

DIMENSIONS ARE IN INCHES



TIP FIN VI

FIG 4f



SINGLE CENTER FIN V5

Fig 4.8

CANARD BOOSTER
MDAC/MMC
DR#1054 A-1- 61

CANARD BOOSTER
MDAC/MMC
DR#1054 A-1-6

NOTES:

1. BASE PRESSURE TAPS ARE NUMBERED 1 THRU 16.
2. ALL PRESSURE TAPS ARE FLUSH WITH BASE PLATE, EXCEPT FOR NOS. 2, 3, 4 AND 5 WHICH EXTEND APPROX. .95 IN.
3. SEE COMPONENT NOMENCLATURE FOR DIFFERENCES BETWEEN: N1, N3, N4, N5, N6, N7, N9, N20, N30 AND N40.

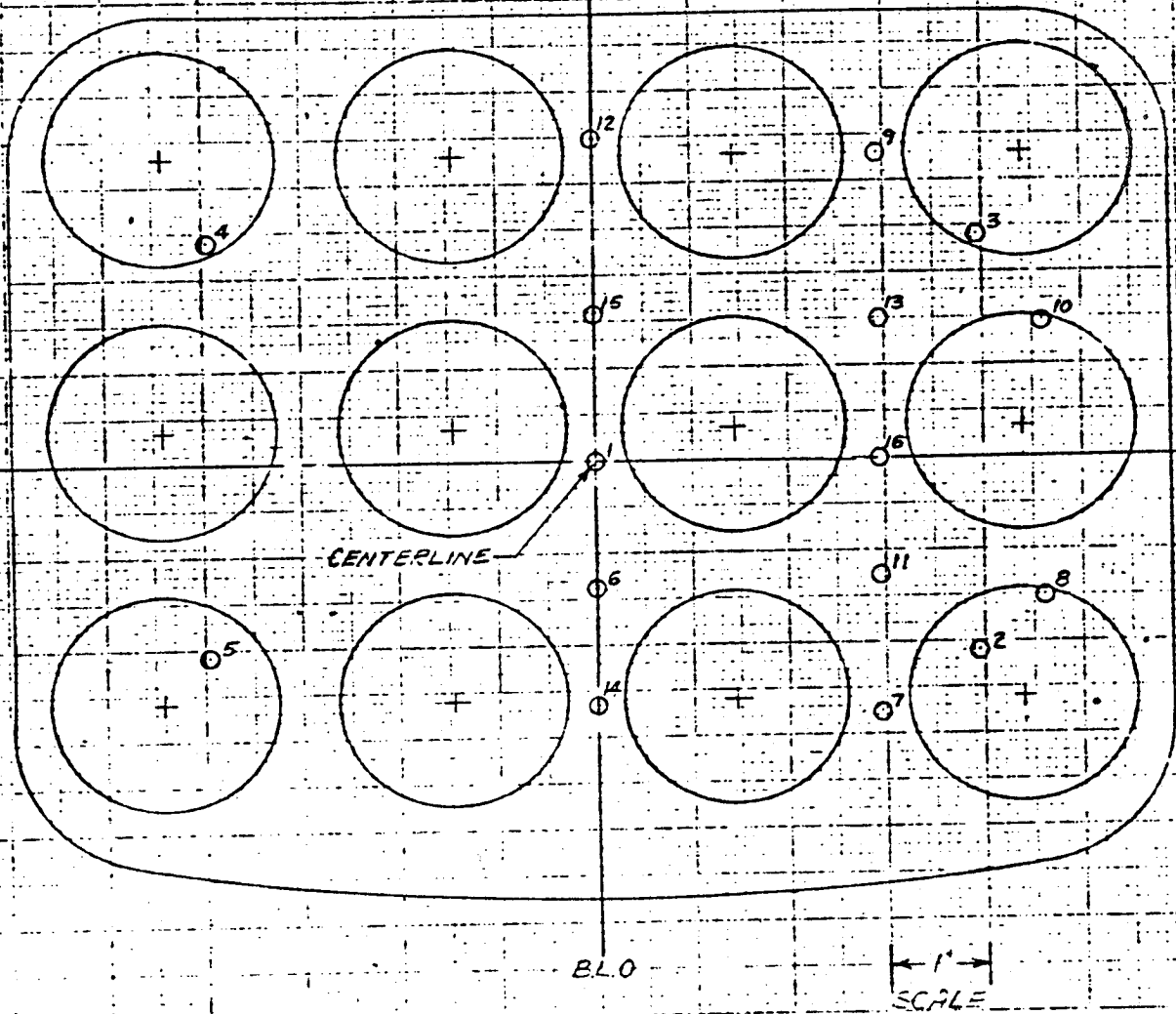


FIG 4h BASE NOZZLE ARRANGEMENT ON HIGH WING CONFIGS.

NOTES:

- 1. BASE PRESSURE TAPS ARE NUMBERED 1 THRU 16.
- 2. ALL PRESSURE TAPS ARE FLUSH WITH BASE PLATE, EXCEPT FOR NOS. 2, 3, 4 AND 5 WHICH EXTEND APPROX. .95 IN.
- 3. SEE COMPONENT NOMENCLATURE FOR DIFFERENCES BETWEEN N2, N8 AND N20.

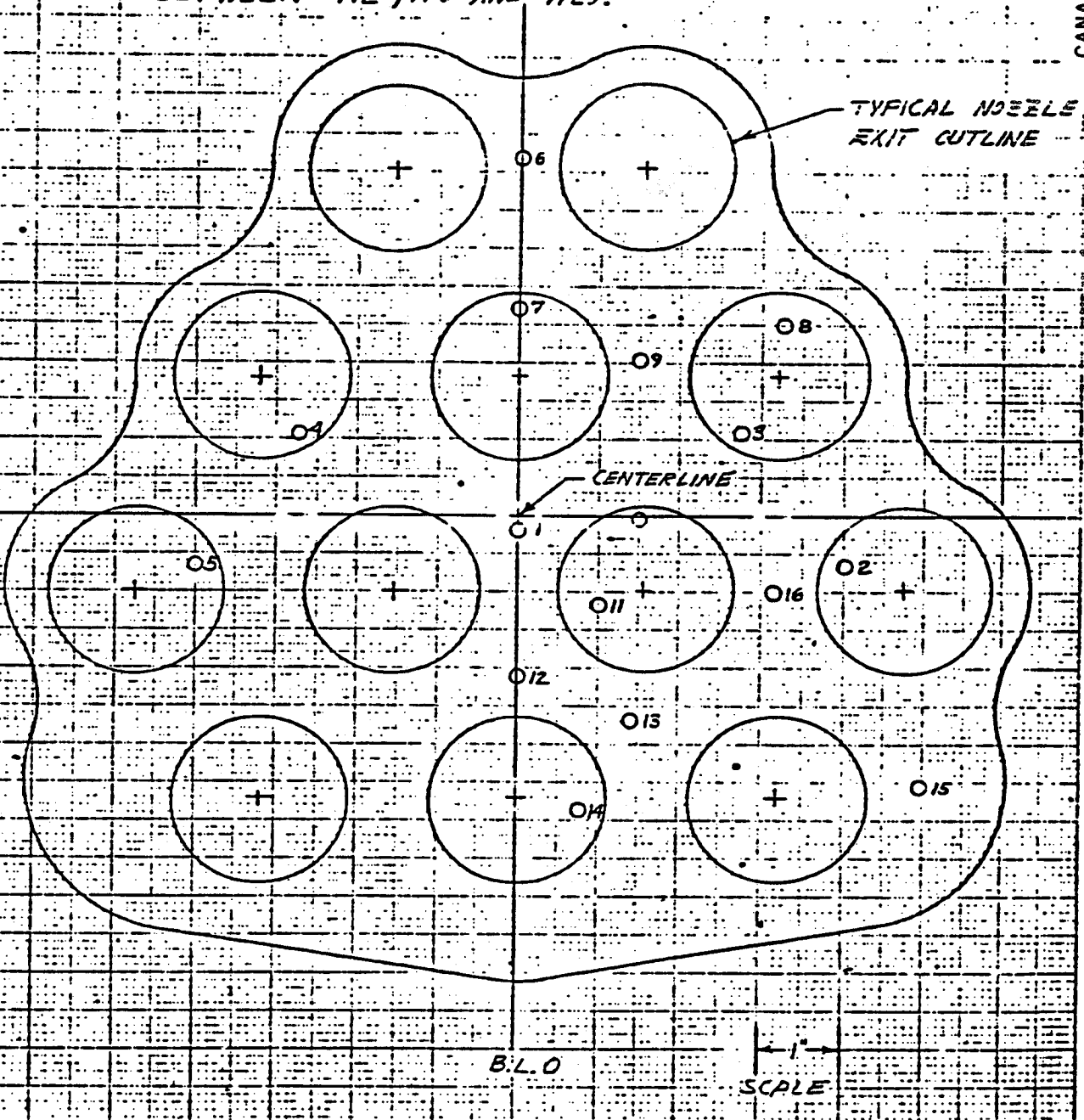


FIG 4: BASE NOZZLE ARRANGEMENT ON LOW WING CONFIGS.

Table 7

TEST Ames - 504 DATA SET COLLATION SHEET
MCD BOOSTER

CANARD BOOSTER
MDAC/MMC
DR#1066 A-1- 64

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)							
		a	B	Se	So	sr	Stw			SF	# of runs	0.6	0.85	1.1	1.2	1.5
RAD011	B ₁	A	0	-	-	-	-	-	4	4		3		2	1	
012	✓	C	0	-	-	-	-	-	4		40	39	38	37		
013	✓	0	D	-	-	-	-	-	5	36	35	34		33	32	
014	✓	50	D	-	-	-	-	-	5	78		77	76	75	74	
021	B ₁ W ₁ E ₁	A	0	0	0	-	3.0	-	5	9	8	7		6	5	
051	B ₁ N ₃ W ₁ E ₁	C	0	0	0	-	3.0	-	3			43	42	41		
041	B ₁ N ₁ W ₁ E ₁ J ₁	0	D	0	0	-	3.0	0.0	3	31		30			29	
042	✓	A	0	0	0	-	3.0	0.0	5	161	163	160		162	159	
101	B ₁ N ₃ W ₁ E ₁ J ₁	50	D	0	0	-	3.0	0.0	3				63	62	61	
031	B ₁ N ₁ W ₁ E ₁ V ₁ R ₁ J ₁	A	0	0	0	0	3.0	0.0	5	14	13	12		11	10	
032	✓					-10			3	17		16			15	
033	✓					-20			3	104		103			102	
034	✓					10			3	107		106			105	

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65

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CAB	CLM	CY	CYN	CBL	CNC				MACH	ALPHA	B

COEFFICIENTS: A = -1.5 0. 3 5 8 12 16 20 24 28
 a or B C = 32 35 40 45 50 55 60
 SCHEDULES D = -11.5 -10 -5 0 2 5 8 13
 E = -10 -5 -3 0 2 5 8 13

Table 7 (Cont.)

TEST Ames - 504 DATA SET COLLATION SHEET

②

PRETEST

POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)							
		a	B	S _e	S _a	S _r	S _{TM}		S _E	# of runs	0.6	0.85	1.10	1.20	1.50	2.0
RAD035	B ₁ N ₁ W ₁ E ₁ V ₁ R ₁ J ₁	A	0	0	0	0	1	0	0	3	110		109			108
036	✓	A	5	0	0	0	3			5	143	142	141		140	139
037	✓	0	D	0	0	0				5	22	21	20		19	18
038	✓	0	D	0	10	0				3	25		24			23
039	✓	0	D	0	0	10				3	28		27			26
091	B ₁ N ₁ W ₁ E ₁ V ₁ R ₁ J ₁	C	0	0	0	0				5	48		47	46	45	44
092	✓	C	0	-20	0	0				3				51	50	49
093	✓	C	5	0	0	0				4	82			81	80	79
094	✓	50	D	0	0	0				5	60		59	58	57	56
095	✓	50	D	0	0	10				3				55	54	53
081	B ₁ N ₁ W ₁ E ₁ V ₁ R ₁ T ₂ F ₂ P ₁	A	0	0	0	0			0	3	113			112		111
082	✓	A	0	0	0	0			20	3	116			115		114
111	B ₁ N ₁ W ₁ E ₁ V ₁ R ₁ T ₁ F ₂ P ₁	A	0	0	0	0			0	3	119			118		117
112		0	E	0	0	0	3	0	0	3	147			146		145

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1 7 13 19 25 31 37 43 49 55 61 67 75 76

CN CA CAB CLM CY CYN CBL CNE MACH ALPHA B

COEFFICIENTS: _____ IDPVAR(1) IDPVAR(2) NDV

a or B _____

SCHEDULES _____

CANARD BOOSTER
MDAC/MMC
DR#1066 A-1- 65

CANARD BOOSTER

MDAC/MMC

DR#1066 A-1-66

TEST *Runs - 504* DATA SET COLLATION SHEET

PRETEST

POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	PARAMETERS/VALUES						NO. OF BONDS	SIC	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)							
		a	B	S ₁	S ₂	S ₃	S ₄			# of runs	0.6	0.85	1.10	1.20	1.50	2.0	
RAD061	B,N,W,E,V,R,T,E,R	C	0	0	0	0	3	0	0	5	101	100	99	98	97		
062		50	D	0	0	0				3			66	65	64		
121	B,N,W,E,V,R,T,E,R	A	0	0	0	0				5	124	123	122	121	120		
122		A	0	0	0	0				20	127	126	125	124	123		
123		A	0	0	0	0				-20	130	129	128	127	126		
124		A	0	-20	0	0				0	2	135	134	133	132		
125		A	5	0	0	0				0	3	138	137	136	135		
126		O	E	0	10	0				0	3	150	149	148	147		
127		O	E	0	0	0				0	5	155	154	153	152	151	
128		A	0	0	0	0		3		0	3	133	132	131	130		
071	B,N,W,E,V,R,T,E,R	C	0	0	0	0				0	4	90	89	88	87		
072		C	0	0	0	0				0	20	3	96	95	94		
073		C	0	20	0	0				0	3	93	92	91	90		
074		C	5	0	0	0				0	4	86	85	84	83		
075		50	D	0	0	0				0	4	70	69	68	67		
076		50	D	-30	10	0				0	3		73	72	71		

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CN	CA	CAB	CLM	CY	CYN	CBL	CNC	MACH	ALPHA	B			
1	7	13	19	25	31	37	43	49	55	61	67	75	76

COEFFICIENTS: _____
a or B _____
SCHEDULES _____

Table 7 (Cont.)

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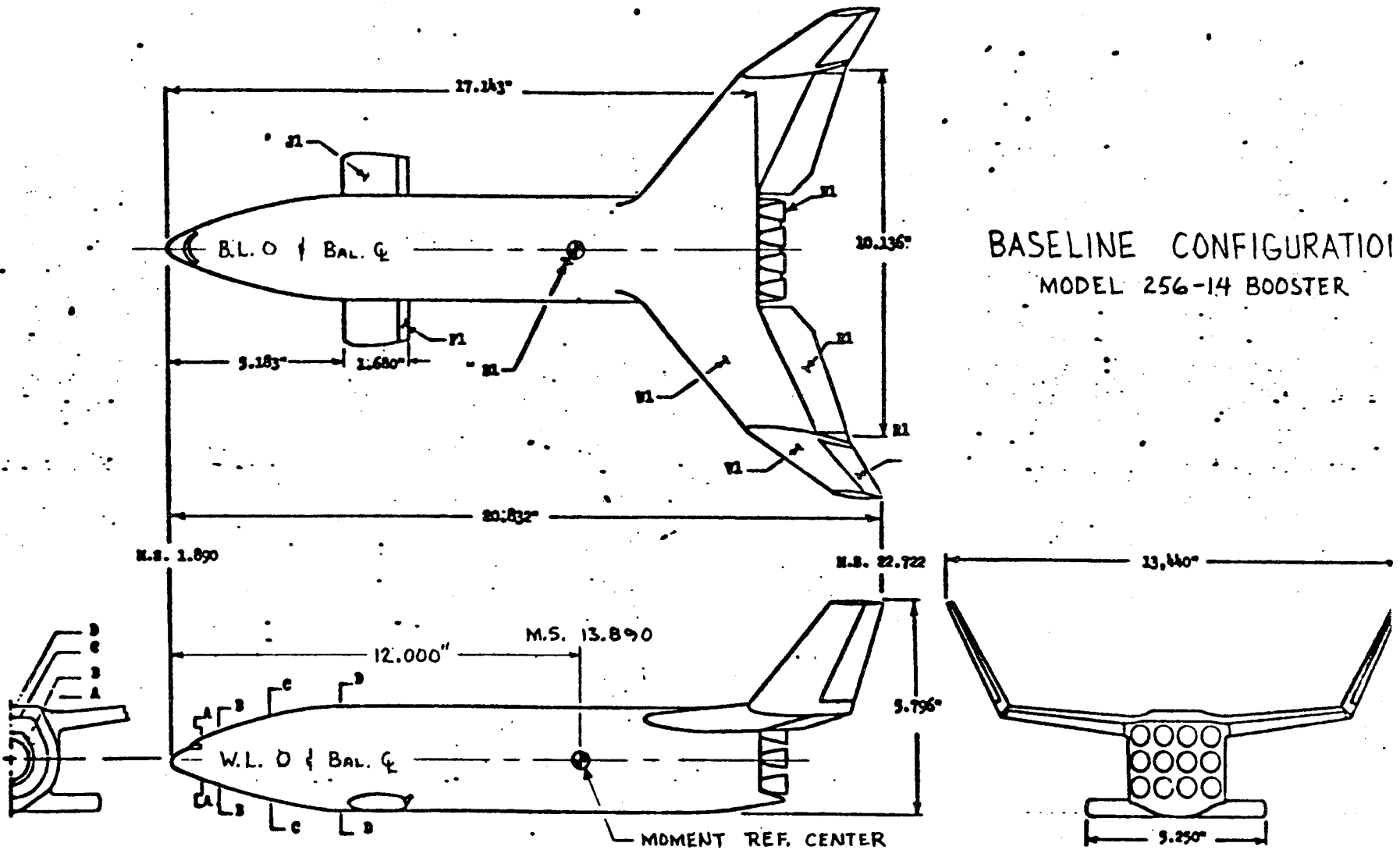
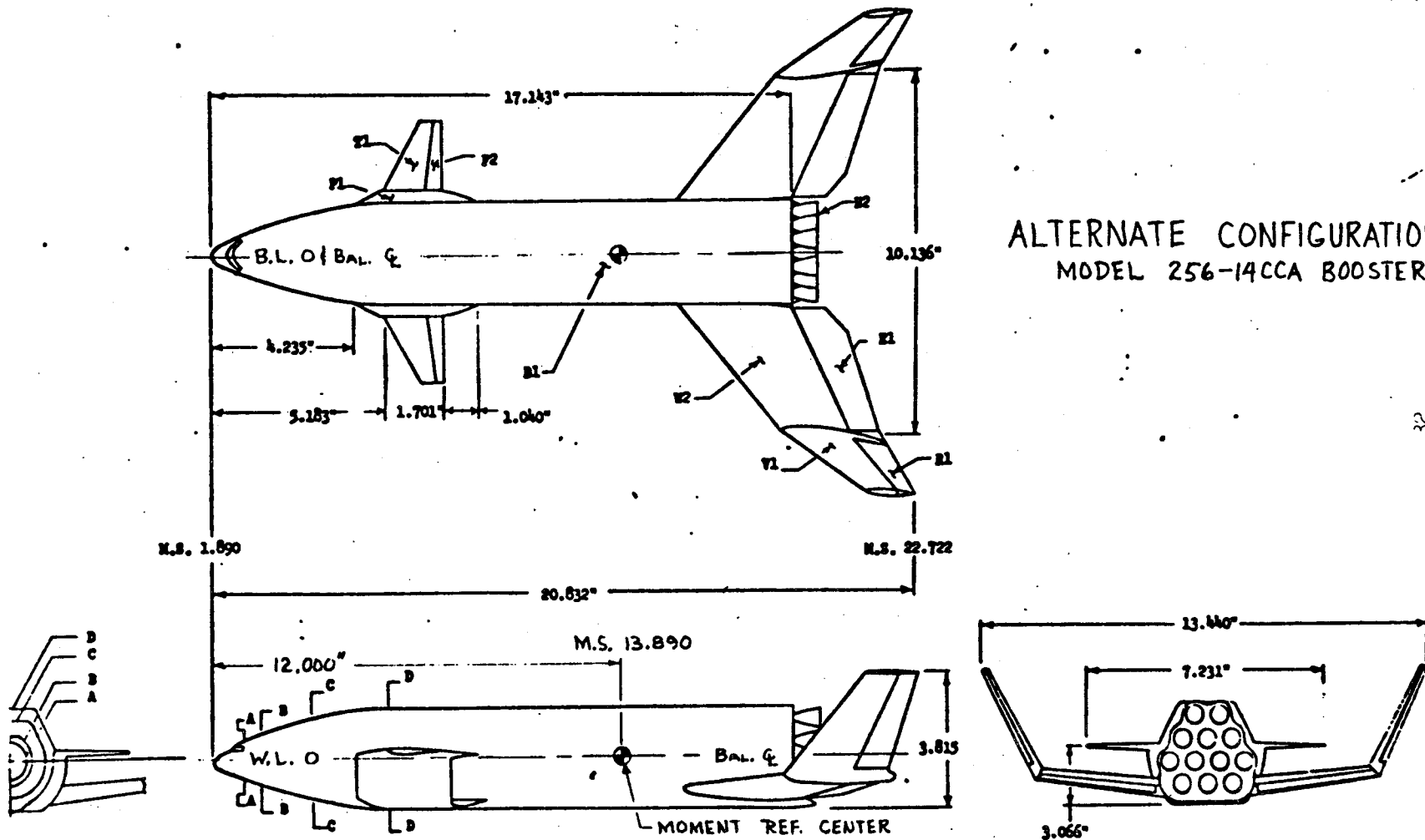


Fig. 2 THREE VIEW LAYOUT; MDC-MMC 0.007-SCALE MODEL
SSV BOOSTER, MODEL 256-14.

CANARD BOOSTER
MDAC/MMC
DR#1066 A-1- 67

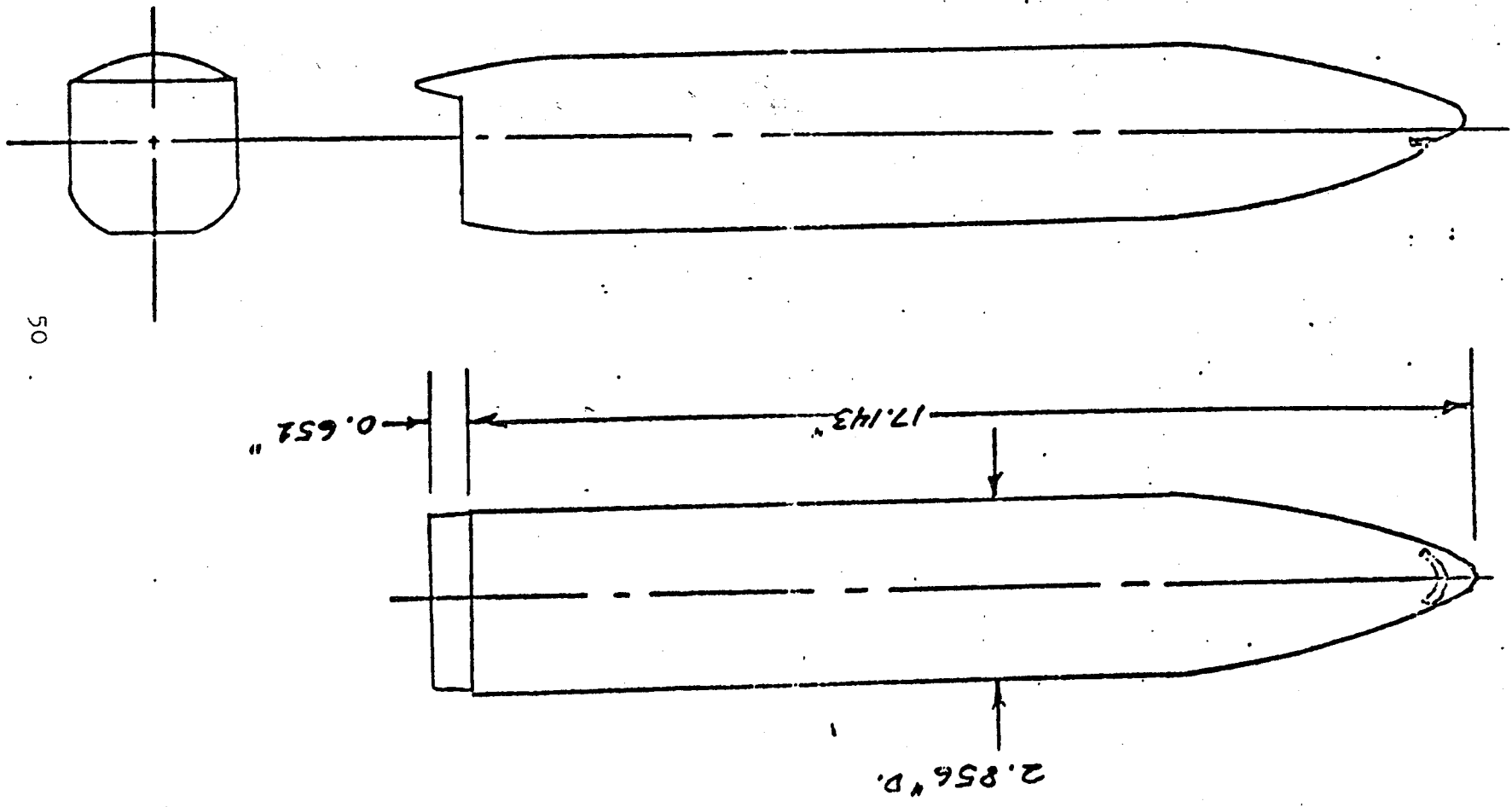


ALTERNATE CONFIGURATION
 MODEL 256-14CCA BOOSTER

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Fig. 3 THREE VIEW LAYOUT; MDC-MMC 0.007-SCALE MODEL
 SSV BOOSTER MODEL 256-14CCA

Fig. 8 SKETCH OF BASIC BODY, B₁



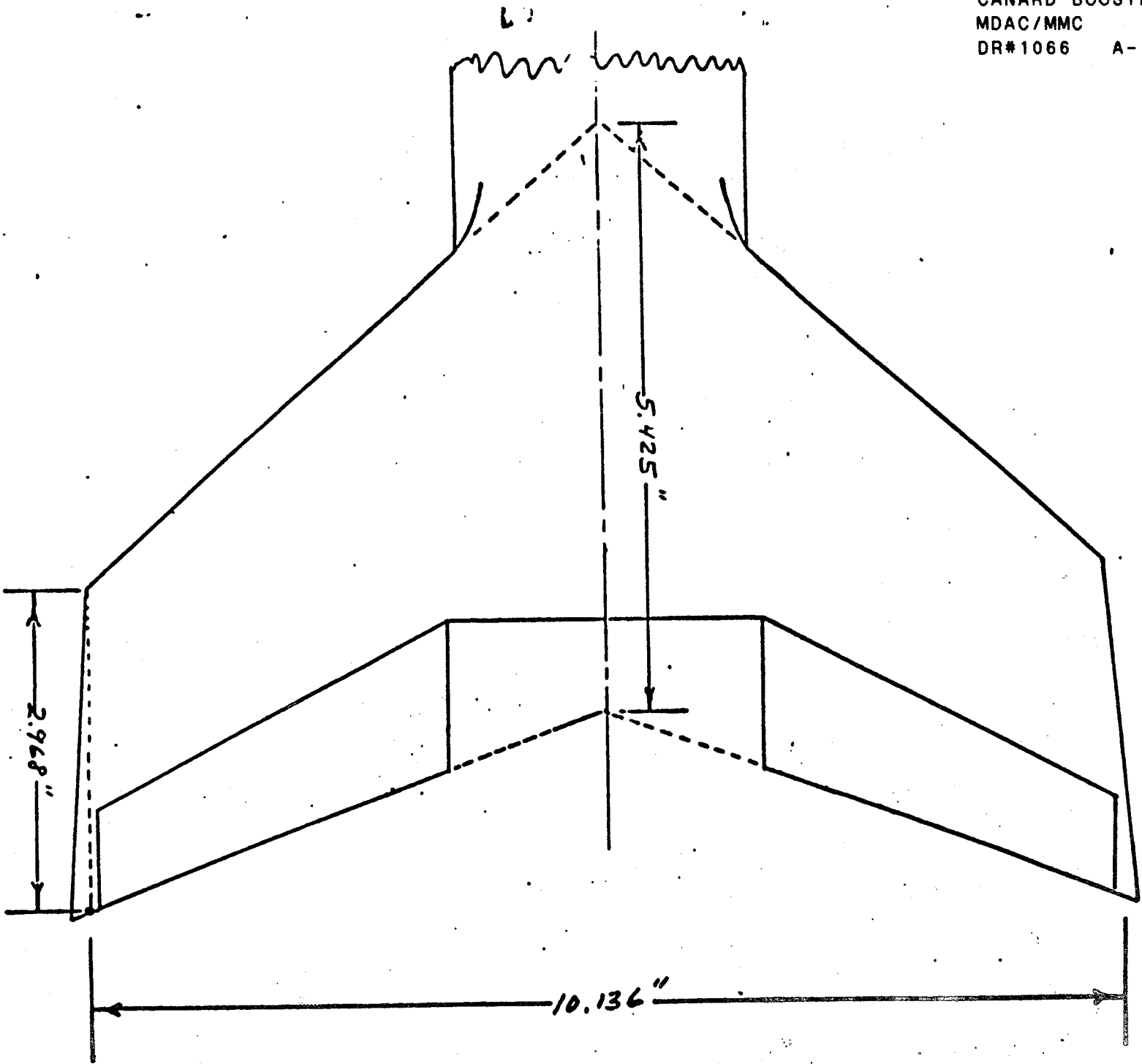
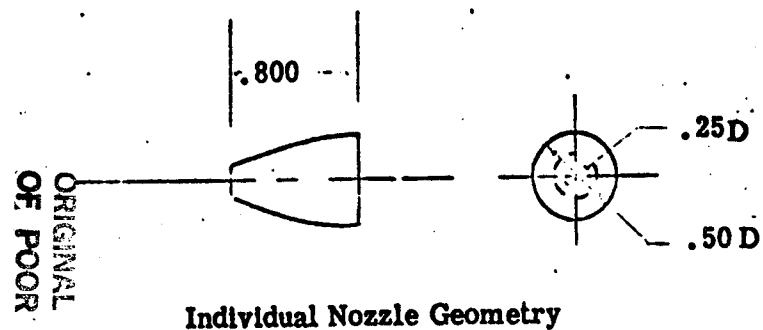
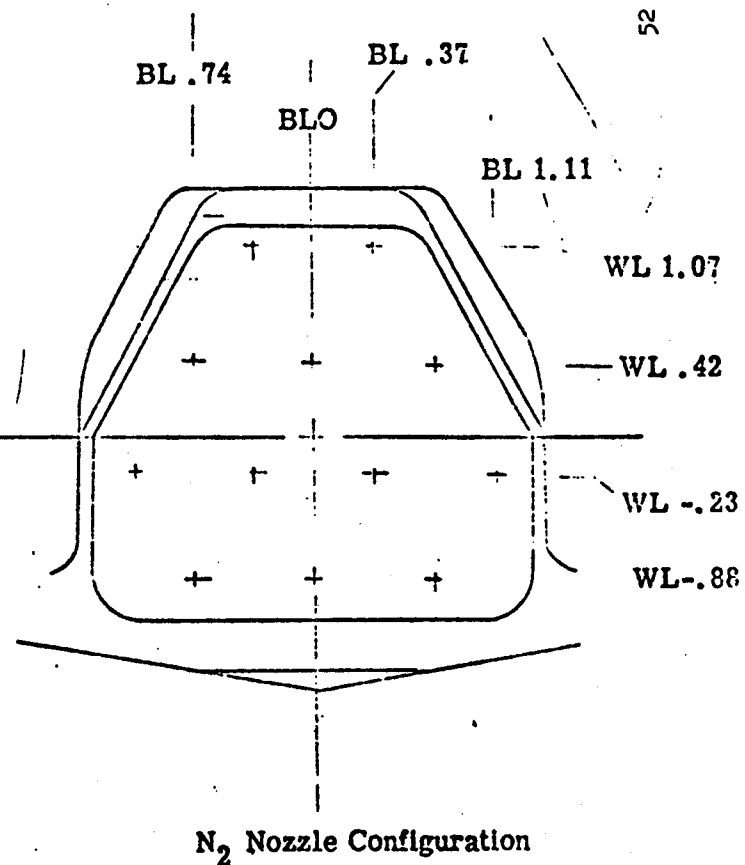
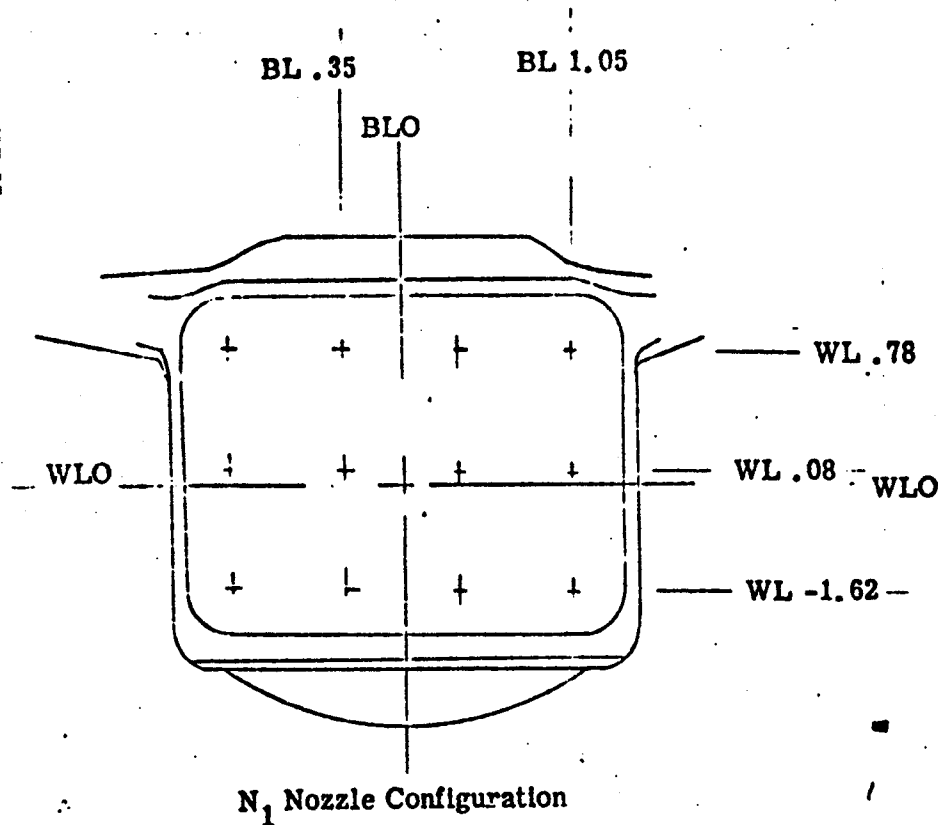


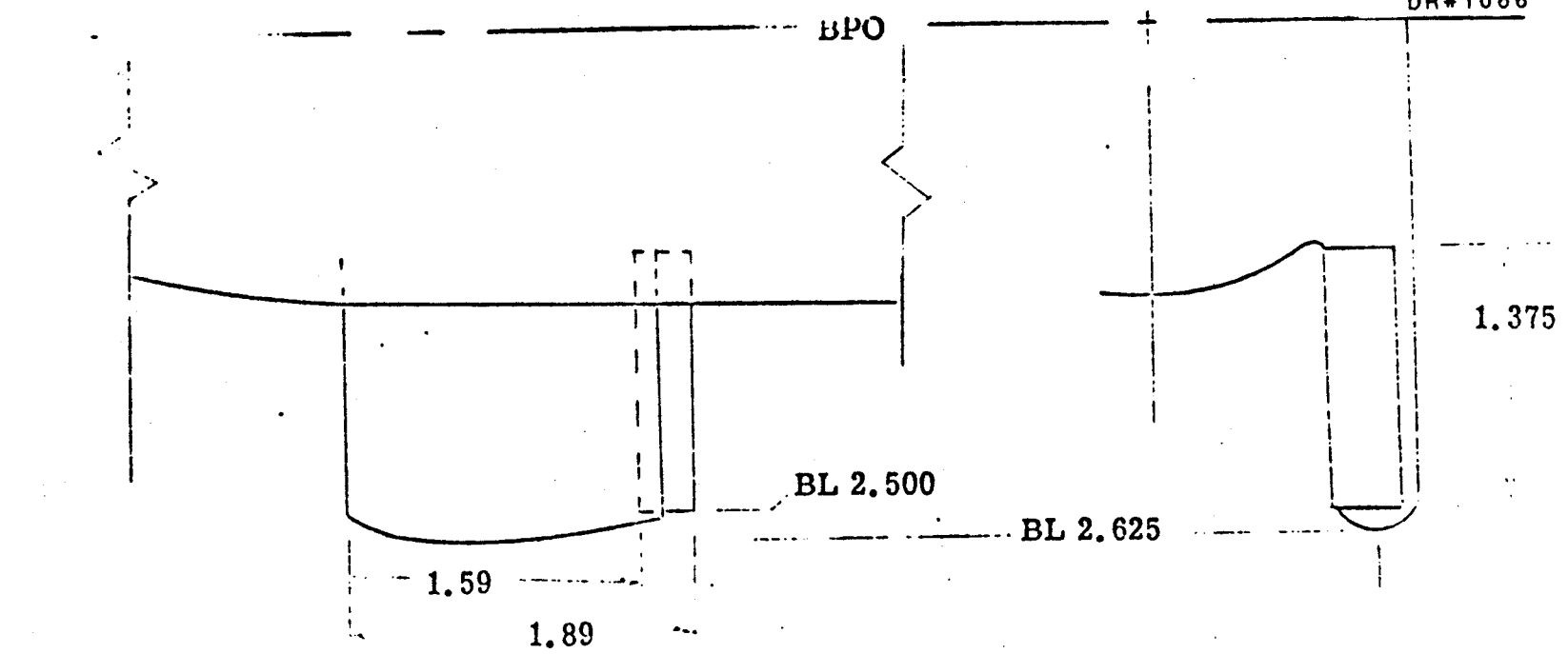
Fig. 9 SKETCH OF HIGH WING AND ELEVON, W/E



Note: ○ Dimensions in Inches
Model Scale
○ Nozzle ζ 's Shown

FIGURE 10 SKETCH OF
MODEL BASE END CONFIGURATIONS WITH
N₁ & N₂

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Note: All Dimensions
in Inches
Model Scale

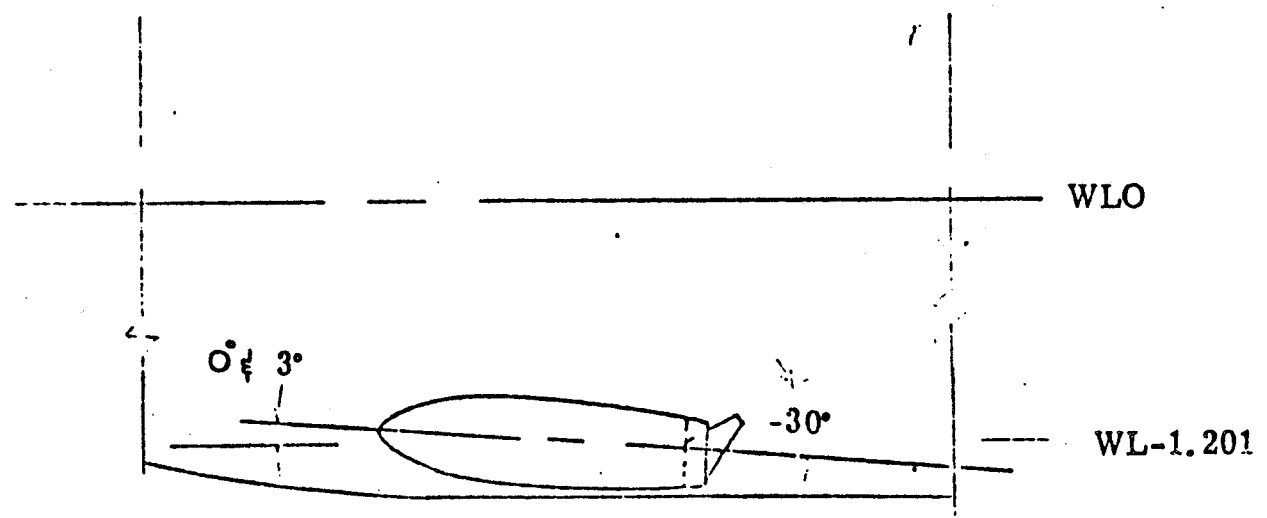


FIGURE II SKETCH OF
JET FLAP CANARD,
J₁

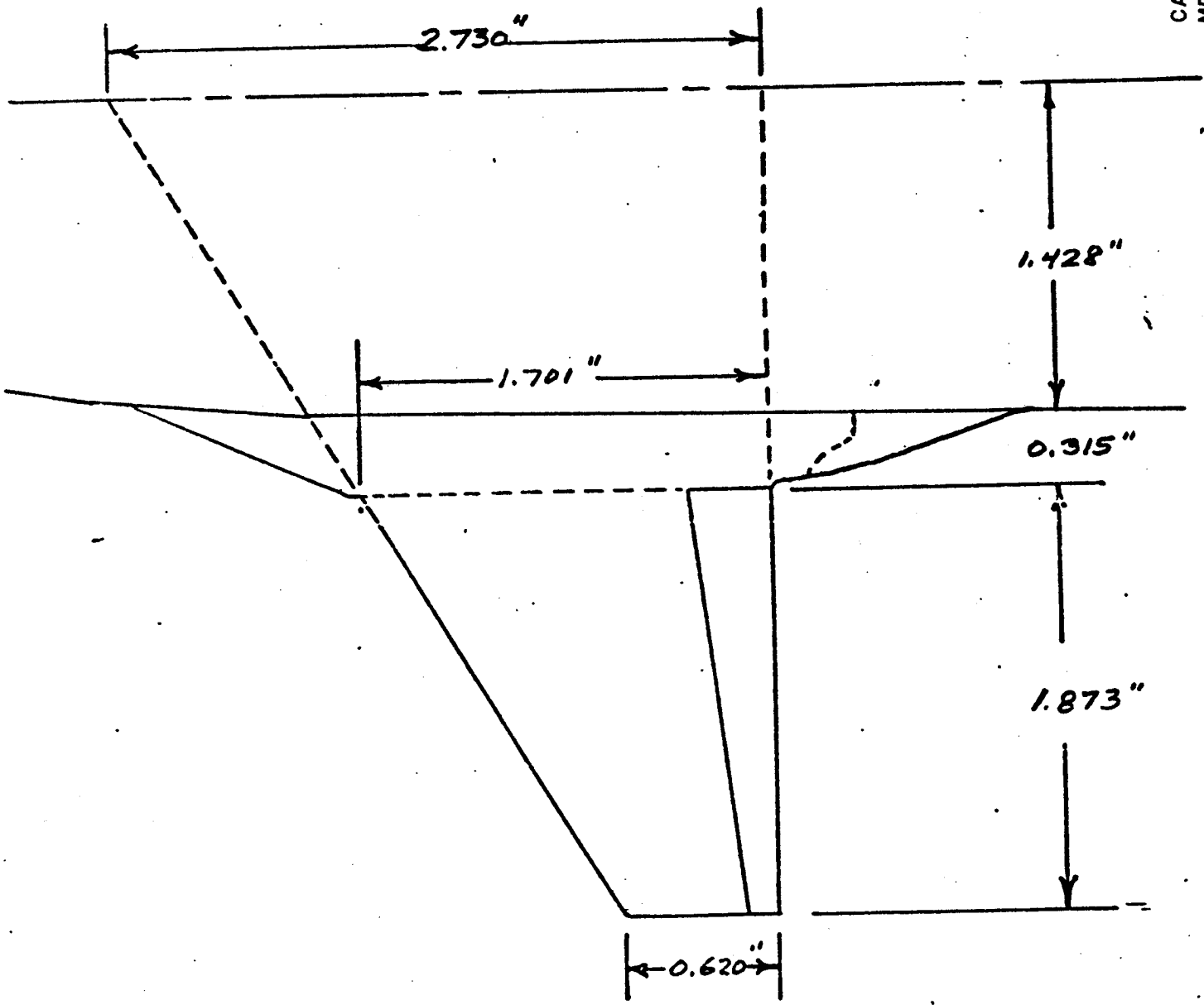
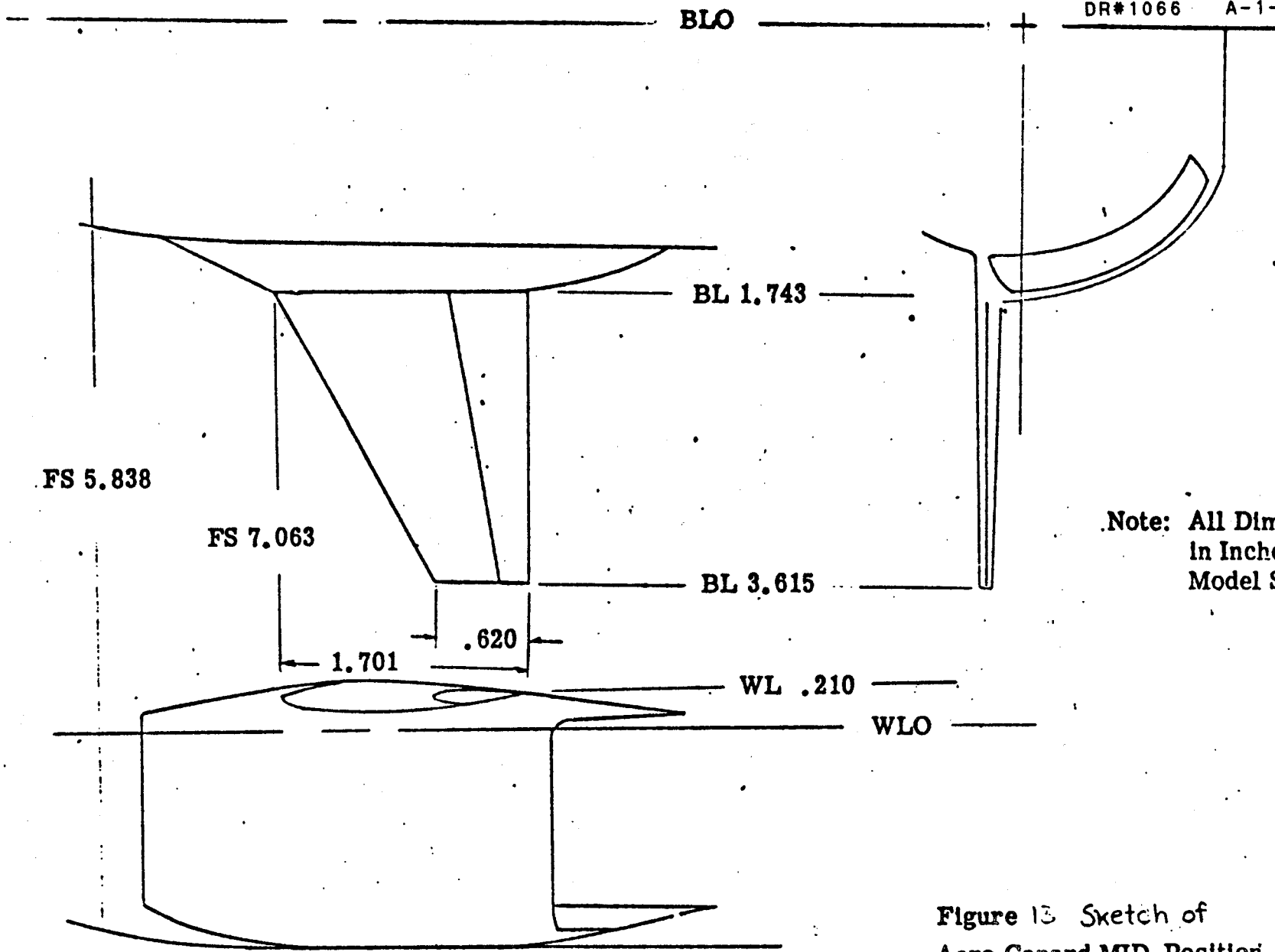


Fig. 12 SKETCH OF MID-BODY AERODYNAMIC CANARD
WITH FLAP, T₁F₂

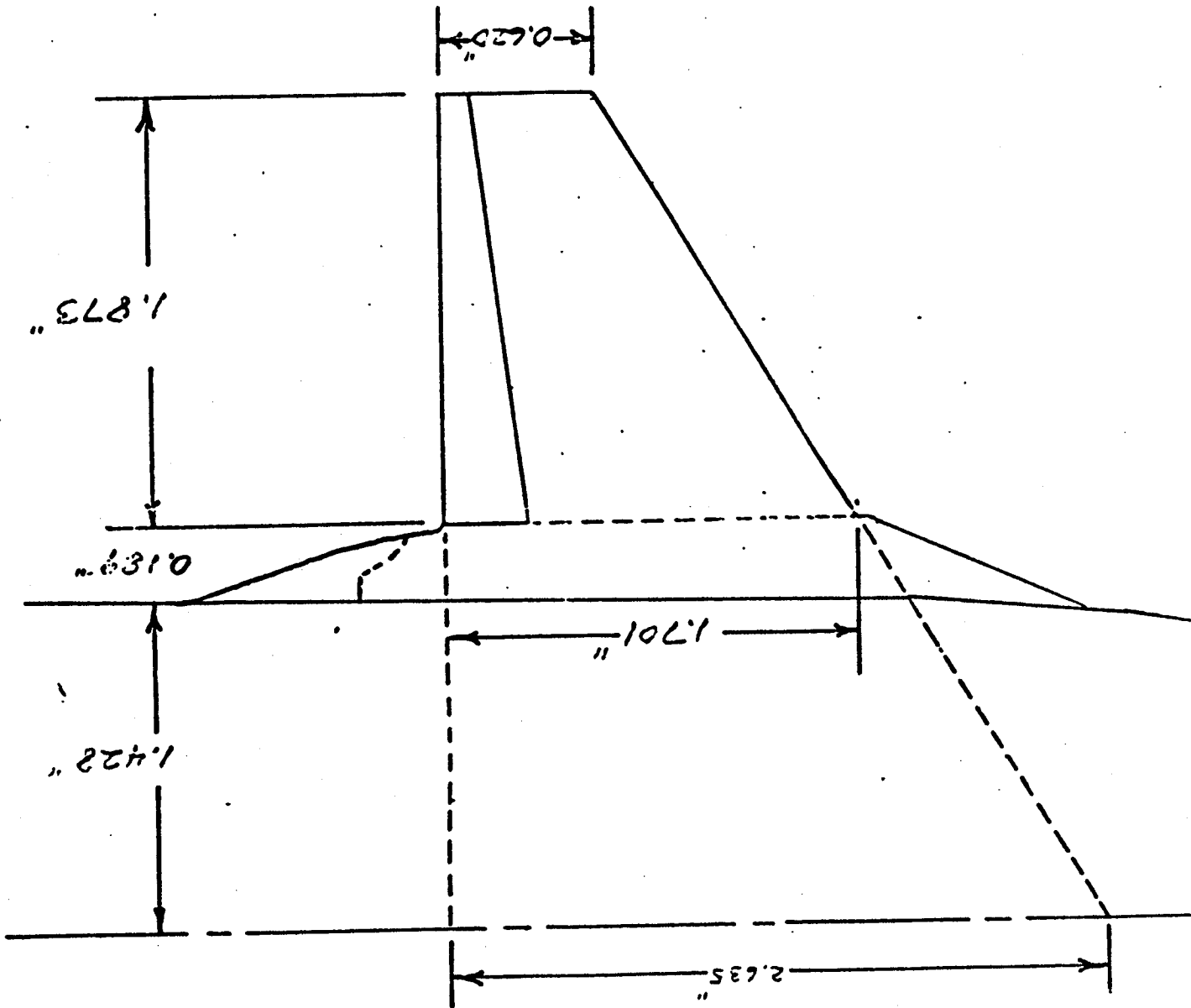


Note: All Dimensions
in Inches
Model Scale

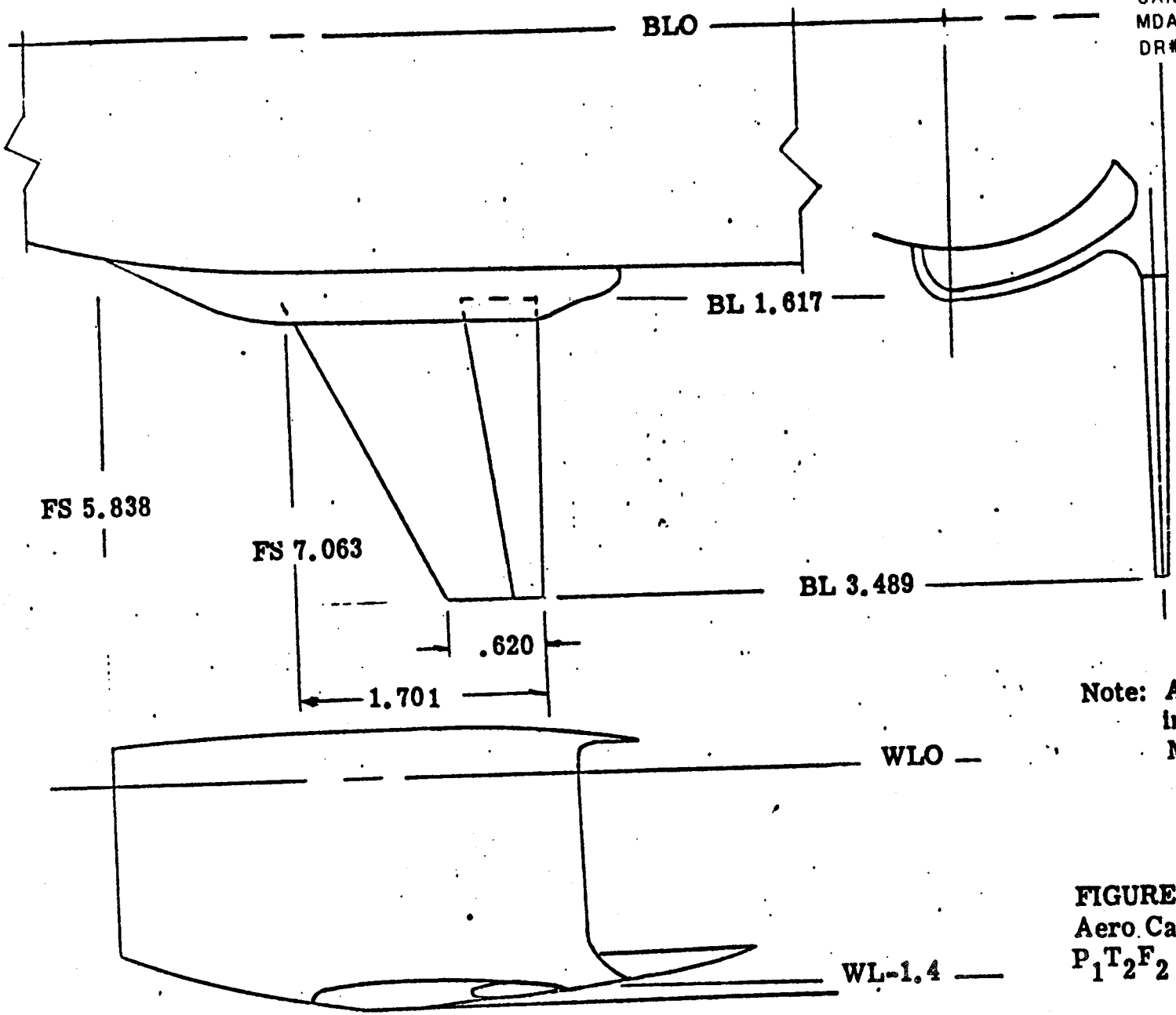
Figure 13 Sketch of
Aero Canard MID-Position,
P₁T₁F₂

55

FIG. 14 SKETCH OF LOW AERODYNAMIC CANARD WITH FLAP, $T_2 F_2$



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Note: All Dimensions
in Inches
Model Scale

FIGURE 15 Sketch of
Aero Canard Low Position,
P₁T₂F₂

57

NOTE: All Dimensions in Inches Model Scale.
V₂R₂ Not Used In These Tests.

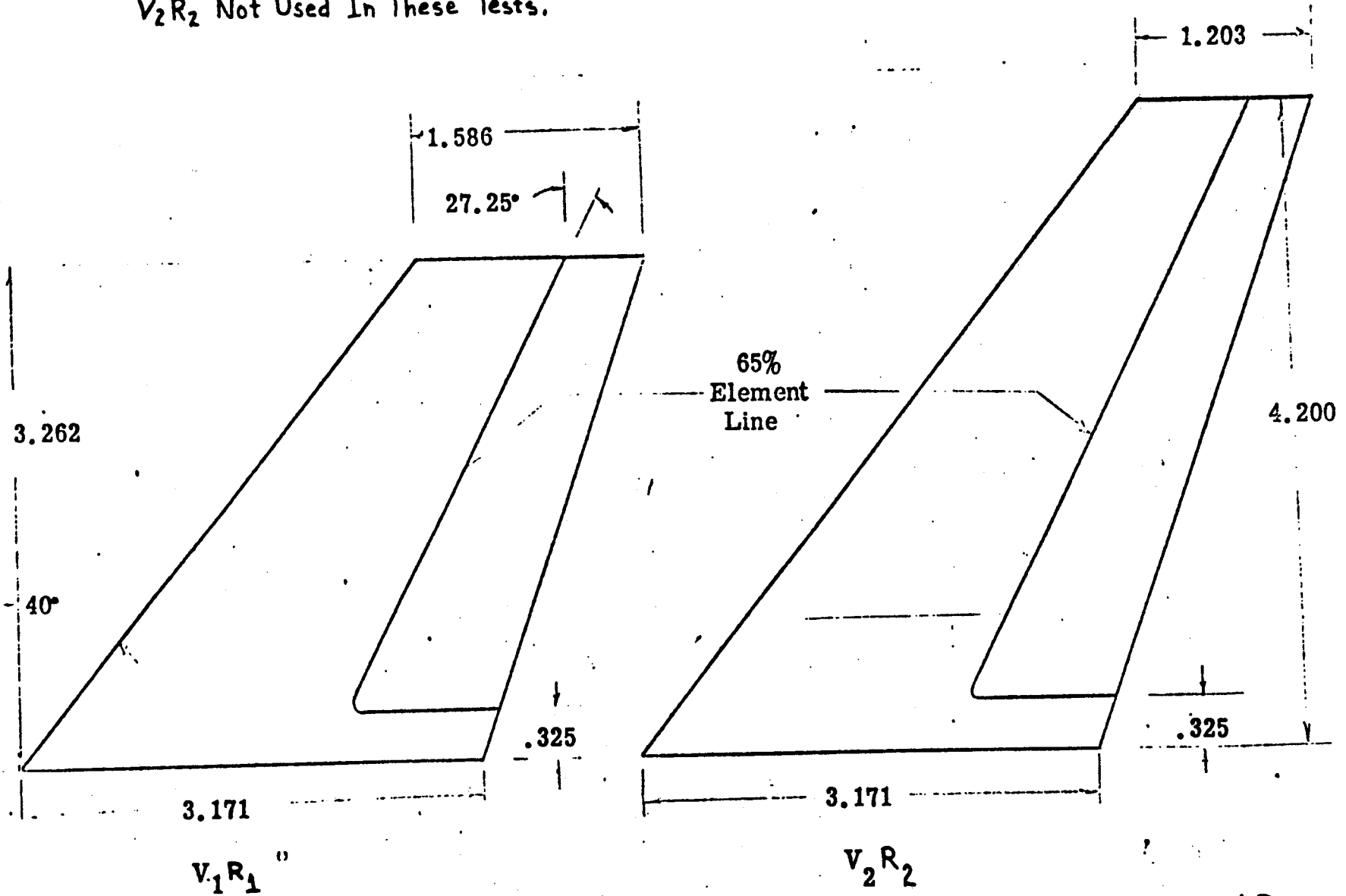


Fig. 16 SKETCH OF VERTICAL STABILIZER AND RUDDER, V₁R₁ & V₂R₂

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MDAC/MMC
DR#1066 A-1- 77

TEST MDAC LSMT 249 DATA SET COLLATION SHEET

CANARD BOOSTER
MDAC/MMC
DR#1077 A-1- 78

PRETEST
 POSTTEST

RPJTPΦ

DATA SET IDENTIFIER	CONFIGURATION	α SWEEPS		β SWEEPS						M	CONTROL DEFLECTION				NO. OF RUNS		
		SCHD	β / RUN	β	α VALUE / RUN NO.						δ _E	δ _R	δ _A	δ _{UF}			
					SCHD	0											
RCΦ 001	B3NIIW5V6	C	20								26	1.0	0	0	0	0	1
002	B3NIIW5		25										0	0	0	0	
003	B3NII		66										0	0	0	0	
004	B3NIIJ6		61										0	0	0	0	
005	B3NIIJ6W5		33										0	0	0	0	
006	B3NIIJ6W5V6		40										0	0	0	0	
008	B3NIIW5V7		27										0	0	0	0	
010	B3NIIJ9W5V6		82										0	0	0	0	
011	B3NIIJ9		71										0	0	0	0	
012	B3NIIJ9W5		75										0	0	0	0	
013	B3NIIJ9		70										0	0	0	0	
014	B3NIIJ8V5V6		83										0	0	0	0	
015	B3NIIJ7		64										0	0	0	0	
016	B3NIIJ7W5V6		47										0	0	0	0	

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1 7 13 19 25 31 37 43 49 55 61 67 73 79

BETA CL CD CLM CY CLN CSL CAB BETA ALPHA

COEFFICIENTS: α SCHEDULE C: -6, -4, -2, 0, 2, 4, 6, 8, 10, 12, 14, & 16 → IDPVAR(1) IDPVAR(2) NDV
 a or B β SCHEDULE D: -10, -8, -6, -4, -2, 0, 2, 4, 6, 8 & 10

TEST MDAC LEVIT 249 DATA SET COLLATION SHEET

DATA SET IDENTIFIER	CONFIGURATION	α SWEEPS		β SWEEPS							M	RPJTPθ	CONTROL DEFLECTION				NO. of RUNS
		SCHED	B/RUN	SCHED	α VALUE / RUN NO.					SE			SR	SA	SUF		
					0	4	6	8	10								
RCφ 101	B3N11			D	67			68				.26	1.0	—	—	—	—
102	B3N11J6				62			63						—	—	—	0
109	B2N11W5				88	89		90						0	—	0	—
103	B3N11J6W5				34	35	36	37	38					0	—	0	0
102	B3N11W5V6				85	86		87						0	0	0	—
104	B3N11J6W5V6				41	42	44	43	45					0	0	0	0
105					99	100	101	102	103					0	-10	0	0
106					49	50	51	52	53					0	0	10	0
107	↓				55	56	57	58	59					-10	-10	0	0
110	B3N11J6W5V7				28	29		30	31					0	0	0	0
111					93	94		95						0	0	10	0
112	↓				96	97		98						0	-10	0	0
113	B3N11J9				72			73						—	—	—	0
114	B3N11J9W5				76	77	78	79	80					0	—	0	0

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1 7 14 17 24 31 37 43 49 55 61 67 75 76

ALPHA CL CD CLM CY CLN CSL CAB ALPHA BETA

COEFFICIENTS: α SCHEDULE C: -5, -4, -2, 0, 2, 4, 6, 8, 10, 12, 14, 16 → IDPVAR(1) IDPVAR(2) INDV

α or β SCHEDULE D: -10, -8, -6, -4, -2, 0, 2, 4, 6, 8, 10

CANARD BOOSTER
MDAC/MMC
DR#1077 A-1- 79

TEST MDAC LSMT 249 DATA SET COLLATION SHEET

CANARD BOOSTER

MDAC/MMC

DR#1077 A-1- 80

PRETEST

POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		CONTROL DEFLECTION			NO. of PUNS	ELEVON DEFLECTION / RUN NO								RPJTPG	M			
		A	B	δ_R	δ_A	δ_{JE}		-40	-30	-20	-10	0	10	20	30					
RC0 201	B3NIIW5V6	C	0	0	0	-						21	20	22	23			1.0	.26	
202	B3NIIJ6W5V6			0	0	0						54	40	48						
203	B3NIIW5V7			0	0	-						92	27	91						

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1 7 11 15 21 27 33 39 45 51 57 63 69 75 76

BETA CL CD CLM CY CLN CSL CAB ELEVON ALPHA

COEFFICIENTS: α SCHEDULE C: -6, -4, -2, 0, 2, 4, 6, 8, 10, 12, 14 & 16 IDPVAR(1) IDPVAR(2) NDV

a or B _____
 SCHEDULES _____

TEST MDAC LSWT 249 DATA SET COLLATION SHEET

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PRETEST

POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		CONTROL DEFLECTION			NO. of RUNS	JET FLAP DEFLECTION / RUN NO.						P _{1/2}	M	
		a	B	δ _E	δ _R	δ _A		-15	0	15	30	45	60			
301	B3N11J10W5V6	C	0	0	0	0		105	108	111	162				1.86	0
302								106	109	112	161				2.20	
303				Y	Y	Y		107	110	113	-				2.54	Y
304	B3N11J10			-	-	-		141	136	132	155				1.0	26
305								142	137	133	156				1.86	
306								143	138	134	157				2.20	
307								-	-	135	-				2.37	
308	Y			Y	Y	Y		144	140	-	-				2.54	
309	B3N11J10W5V6			0	0	0		122	118	114	162				1.0	
310								123	119	115	163				1.86	
311								124	120	116	164				2.20	
312								-	-	129	-				2.37	
313	Y			Y	Y	Y		125	121	117	-				2.54	Y
314	B3N11J10			-	-	-		145	148	151	158				1.86	0
315								146	149	152	159				2.20	
316								-	-	153	-				2.37	
317	Y			Y	Y	Y		147	150	-	-				2.54	Y

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7 11 12 25 31 37 43 49 55 61 67 7576
 BETA CL CD CLM CY CLN CSL CAB CANFLP ALPHA

COEFFICIENTS:

α SCHEDULE C: -6, -4, -2, 0, 2, 4, 6, 8, 10, 12, 14, & 16

a or B SCHEDULES

→ IDPVAR(1) | IDPVAR(2) | NDV

TEST. MDAC LSWT 249 DATA SET COLLATION SHEET

CANARD BOOSTER
MDAC/MMC
DR#1077 A-1- 82

PRETEST
 POSTTEST

RPJTPΦ

DATA SET IDENTIFIER	CONFIGURATION	α SWEEPS		β SWEEPS						M	RPJTPΦ	CONTROL DEFLECTION:				NO. of RUNS	
		α	β/RUN	β	α VALUE / RUN NO.							δE	δR	δA	δUF		
		SCHD	0	SCHD	0	4	6	8	10								
RCΦ 501	B3N11			D	67			68			26	1.0	-	-	-	-	
502	B3N11JG				62			63					-	-	-	0	
503	B3N11W5				88	89		90					0	-	0	-	
504	B3N11JGV15				34	35	36	37	38				0	-	0	0	
505	B3N11W5VG				85	86		87					0	0	0	-	
506	B3N11JGV5VG				41	42	44	43	45				0	0	0	0	
507					99	100	101	102	103				0	-10	0	0	
508					49	50	51	52	53				0	0	10	0	
509					55	56	57	58	59				-10	-10	0	0	
510	B3N11JGV5V7				28	29		30	31				0	0	0	0	
511					93	94		95					0	0	10	0	
512					96	97		98					0	-10	0	0	
513	B3N11J9				72			73					-	-	-	0	
514	B3N11J9W5				76	77	78	79	80				0	-	0	0	

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7 1 19 25 31 37 43 49 55 61 67 73 79

CP1 CP2 CP3 CP4 CP5 CP6 ALPHA BETA

COEFFICIENTS: α SCHEDULE C: -6, -4, -2, 0, 2, 4, 6, 8, 10, 12, 14, 16
β SCHEDULE D: -10, -8, -6, -4, -2, 0, 2, 4, 6, 8, 10

→ IDPVAR(1) IDPVAR(2) NOV

TEST MDAC LSWT 249 DATA SET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	α SWEEPS		β SWEEPS						RPJTP	CONTROL DEFLECTION				NO. of RUNS			
		α	β / RUN	β	α VALUE / RUN NO.						δ _E	δ _R	δ _A	δ _{JF}				
					SCHD	0	SCHD	0	4							6	8	10
RC0 515	B3N11			D	67			68				.26	1.0	—	—	—	—	
516	B3N11J6				62			63						—	—	—	0	
517	B3N11W5				88	89		90						0	—	0	—	
518	B3N11J6W5				34	35	36	37	38					0	—	0	0	
519	B3N11W5V6				85	86		87						0	0	0	—	
520	B3N11J6W5V6				41	42	44	43	45					0	0	0	0	
521					99	100	101	102	103					0	-10	0	0	
522					49	50	51	52	53					0	0	10	0	
523					55	56	57	58	59					-10	-10	0	0	
524	B3N11J6W5V7				28	29		30	31					0	0	0	0	
525					93	94		95						0	0	10	0	
526					96	97		98						0	-10	0	0	
527	B3N11J9				72			73						—	—	—	0	
528	B3N11J9W5				76	77	78	79	80					0	—	0	0	

1 7 11 19 25 31 37 43 49 55 61 67 75 75

CP7 CP8 CP9 CP10 CP11 ALPHA BETA

COEFFICIENTS: α SCHEDULE C: -6, -4, -2, 0, 2, 4, 6, 8, 10, 12, 14, & 16
 α or β SCHEDULES β SCHEDULE D: -10, -8, -6, -4, -2, 0, 2, 4, 6, 8 & 10

→ IDPVAR(1) | IDPVAR(2) | NDV

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TEST MOAC LSWT 249 DATA SET COLLATION SHEET

CANARD BOOSTER
MDAC/MMC
DR#1077 A-1- 84

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHID.		CONTROL DEFLECTION			NO. of RUNS	ELEVON DEFLECTION / RUN NO								M	
		u	R	S _R	S _A	Δ _{UE}		-40	-30	-20	-10	0	10	20	30		
RCØ 529	B3NIIW5V6	C	O	0	0	—					21	20	22	23		1.0	.26
530	B3NIIJ6W5V6			0	0	0					54	40	48				
531	B3NIIW5V7			0	0	—					92	27	91				

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1	7	13	19	25	31	37	43	49	55	61	67	75.75		
CP1	CP2	CP3	CP4	CP5	CP6	ELEVON ALPHA						IDPVAR(1)	IDPVAR(2)	NDV

COEFFICIENTS: α SCHEDULE C: -6, -1, -2, 0, 2, 4, 6, 8, 10, 12, 14, 16

u or s _____

SCHEDULES: _____

TEST MDAC LSWT 249 DATA SET COLLATION SHEET

CANARD BOOSTER
MDAC/MMC
DR#1077 A-1- 86

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	A SWEEPS		B SWEEPS								M	RPJTP	CONTROL DEFLECTION				NO. of RUNS		
		A	B/RUN	B	A VALUE / RUN NO.									δ_E	δ_R	δ_A	δ_{JE}			
		SCHD	0	SCHD	0															
RC ϕ 535	B3NIIW5V6	C	20																	
536	B3NIIW5		25									.26	1.0	0	0	0	+			1
537	B3NII		66											0	-	0	+			
538	B3NIIJ6		61											0	-	0	+			
539	B3NIIJ6W5		33											0	-	0	0			
540	B3NIIJ6W5V6		40											0	0	0	0			
541	B3NIIW5V7		27											0	0	0	0			
542	B3NIIJ9W5V6		82											0	0	0	0			
543	B3NIIJ9		71											0	0	0	0			
544	B3NIIJ9W5		75											0	0	0	0			
545	B3NIIJ8		70											0	0	0	0			
546	B3NIIJ8W5V6		83											0	0	0	0			
547	B3NIIJ7		64											0	0	0	0			
548	B3NIIJ7W5V6		47											0	0	0	0			

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CPI CP2 CP3 CP4 CP5 CP6 BETA ALPHA

COEFFICIENTS:

a or b
SCHEDULES

A SCHEDULE C: -6, -4, -2, 0, 2, 4, 6, 8, 10, 12, 14, & 16
B SCHEDULE D: -10, -8, -6, -4, -2, 0, 2, 4, 6, 8 & 10

IDPVAR(1) IDPVAR(2) NDV

TEST MDAC LSWT 249 DATA SET COLLATION SHEET

28

DATA SET IDENTIFIER	CONFIGURATION	α SWEEPS		β SWEEPS						M	RPJTPΦ	CONTROL DEFLECTION				NO. of RUNS		
		α SCHED	β / RUN	β SCHED	α VALUE / RUN NO.							δ _E	δ _R	δ _A	δ _{JE}			
					0	0												
RCΦ 549	B3NIIW5V6	C	20									.26	1.0	0	0	0	+	1
550	B3NIIW5		25											0	-	0	+	
551	B3NII		66											-		-	+	
552	B3NIIJ6		61											-		-	0	
553	B3NIIJ6W5		33											0		0	0	
554	B3NIIJ6W5V6		40											0		0	0	
555	B3NIIW5V7		27											0	0	0	0	
556	B3NIIJ9W5V6		82											0	0	0	-	
557	B3NIIJ9		71											0	0	0	0	
558	B3NIIJ9W5		75											-	-	-	+	
559	B3NIIJ8		70											0		0	+	
560	B3NIIJ8W5V6		83											-		-	+	
561	B3NIIJ7		64											0	0	0	+	
562	B3NIIJ7W5V6		47											0	0	0	+	

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4 7 11 15 19 23 27 31 35 39 43 47 51 55 59 63 67 71 75

CP7 CP8 CP9 CP10 CP11 BETA ALPHA

COEFFICIENTS: α SCHEDULE C: -6, -4, -2, 0, 2, 4, 6, 8, 10, 12, 14, & 16 → IDPVAR(1) IDPVAR(2); ADV

a or β β SCHEDULE D: -10, -8, -6, -4, -2, 0, 2, 4, 6, 8 & 10

SCHEDULES

CANARD BOOSTER
MDAC/MMC
DR#1077 A-1- 87

TEST MDAC LSWT 249 DATA SET COLLATION SHEET

CANARD BOOSTER
MDAC/MMC
DR#1077 A-1- 88

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		CONTROL DEFLECTION			NO. of RUNS	JET FLIP DEFLECTION / RUN NO.						R _J	M	
		A	B	δ _E	δ _R	δ _A		-15	0	15	30	45	60			
RCØ 563	B3NIIJOW5V6	C	0	0	0	0		105	108	111	160				1.86	0
564								106	109	112	161				2.20	
565								107	110	113	—				2.54	
566	B3NIIJIO			—	—	—		141	136	132	155				1.0	.26
567								142	137	133	156				1.86	
568								143	138	134	157				2.20	
569								—	—	135	—				2.37	
570								144	140	—	—				2.54	
571	B3NIIJOW5V6			0	0	0		122	118	114	162				1.0	
572								123	119	115	163				1.86	
573								124	120	116	164				2.20	
574								—	—	129	—				2.37	
575								125	121	117	—				2.54	
576	B3NIIJIO			—	—	—		145	148	151	158				1.86	0
577								146	149	152	159				2.20	
578								—	—	153	—				2.37	
579								147	150	—	—				2.54	

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7	11	17	25	31	37	47	49	55	61	67	75-76
CP1	CP2	CP3	CP4	CP5	CP6						CANFLP, ALPHA

COEFFICIENTS: a or 5 SCHEDULES: OX SCHEDULE C: -6, -4, -2, 0, 2, 4, 6, 8, 10, 12, 14, & 16

* JET TAKES RUN AT M=0, WITH NO PRESSURE COEFFICIENTS CALCULATED

TEST MDAC LSWT 249 DATA SET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCID.		CONTROL DEFLECTION			NO. of RUNS	JET FLIP DEFLECTION / RUN NO.								P ₅₀	M	
		a	B	δ _E	δ _R	δ _A		-15	0	15	30	45	60					
RC 580	B3NIIJ10W5V6	C	0	0	0	0		105	108	111	160						1.86	0
581								106	109	112	161						2.20	
582								107	110	113	—						2.54	
533	B3NIIJ10			—	—	—		141	136	132	155						1.0	.26
584								142	137	133	156						1.86	
535								143	138	134	157						2.20	
586								—	—	135	—						2.37	
587								144	140	—	—						2.54	
533	B3NIIJ10W5V6			0	0	0		122	118	114	162						1.0	
589								123	119	115	163						1.86	
590								124	120	116	164						2.20	
571								—	—	129	—						2.37	
592								125	121	117	—						2.54	
593	B3NIIJ10			—	—	—		145	148	151	158						1.86	0
594								146	149	152	159						2.20	
575								—	—	153	—						2.37	
576								147	150	—	—						2.54	

ORIGINAL PAGE IS OF POOR QUALITY

7 11 12 25 31 37 41 44 55 61 67 75 76
 CP7 CP8 CP9 CP10 CP11 CANFLP ALPHA

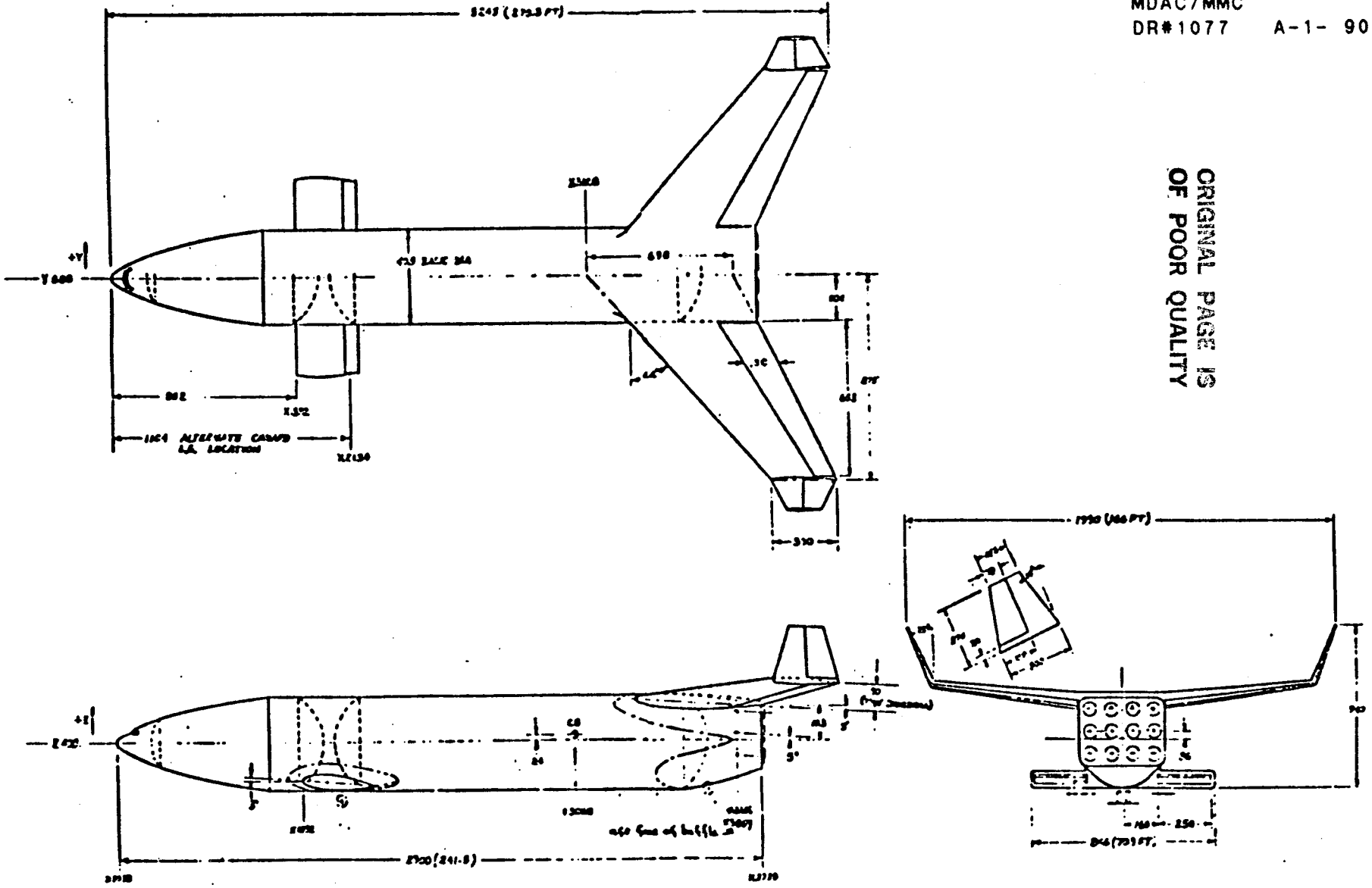
COEFFICIENTS:
 a or B
 SCHEDULES

α SCHEDULE C: -6, -4, -2, 0, 2, 4, 6, 8, 10, 12, 14, & 16

IDPVAR(1) IDPVAR(2) IDV
 *JET TARES RUN AT M=0,
 WITH NO PRESSURE
 COEFFICIENTS CALCULATED

CANARD BOOSTER
 MDAC/MMC
 DR#1077 A-1- 89

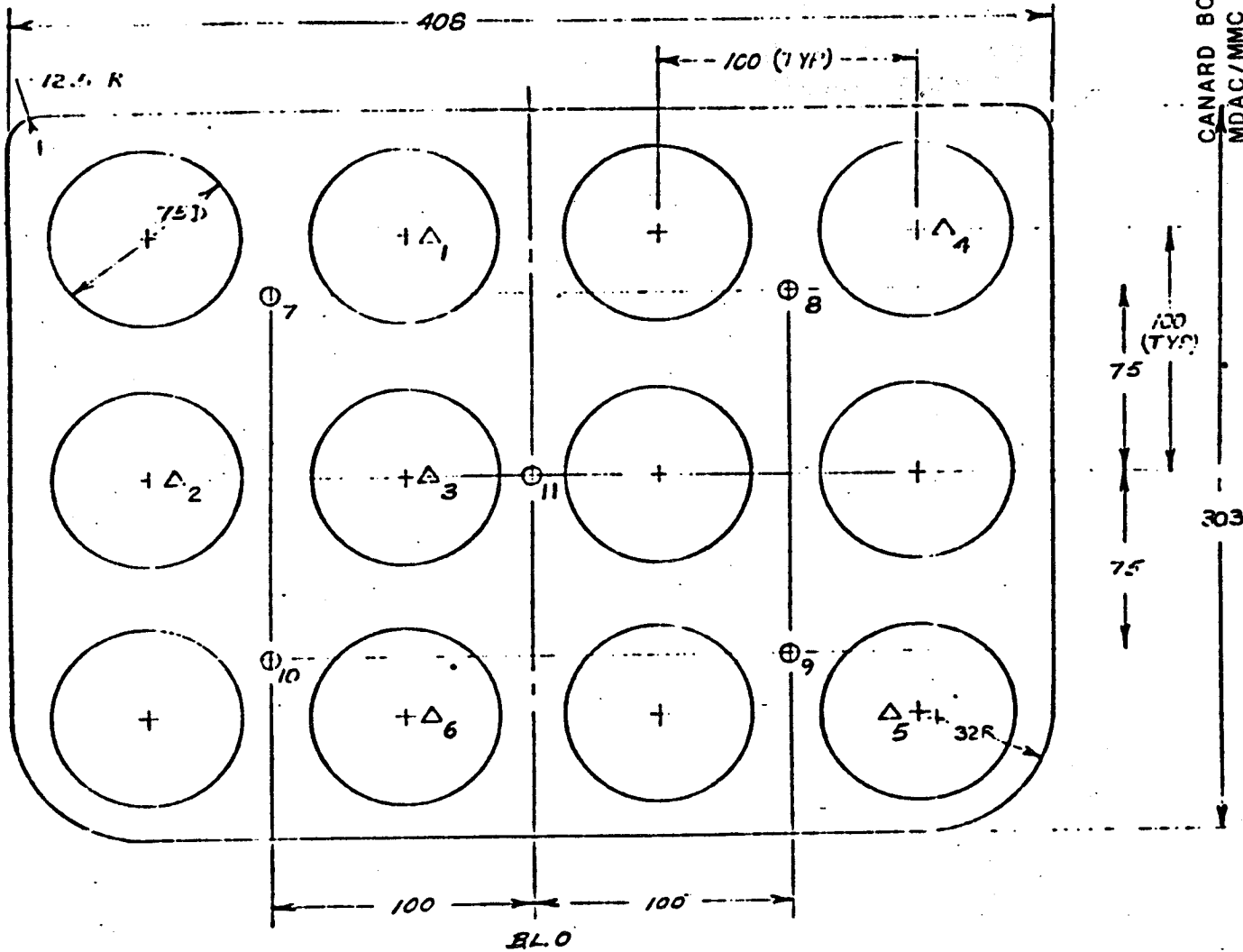
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GENERAL ARRANGEMENT LOW SPEED TEST CONFIGURATION
 FULL SCALE DIMENSIONS SHOWN
 D. MCNAMA 1-8-71
 FIG 1

DM
1-1-71

CANARD BOOSTER
MDAC/MMC
DR#1077 A-1-91

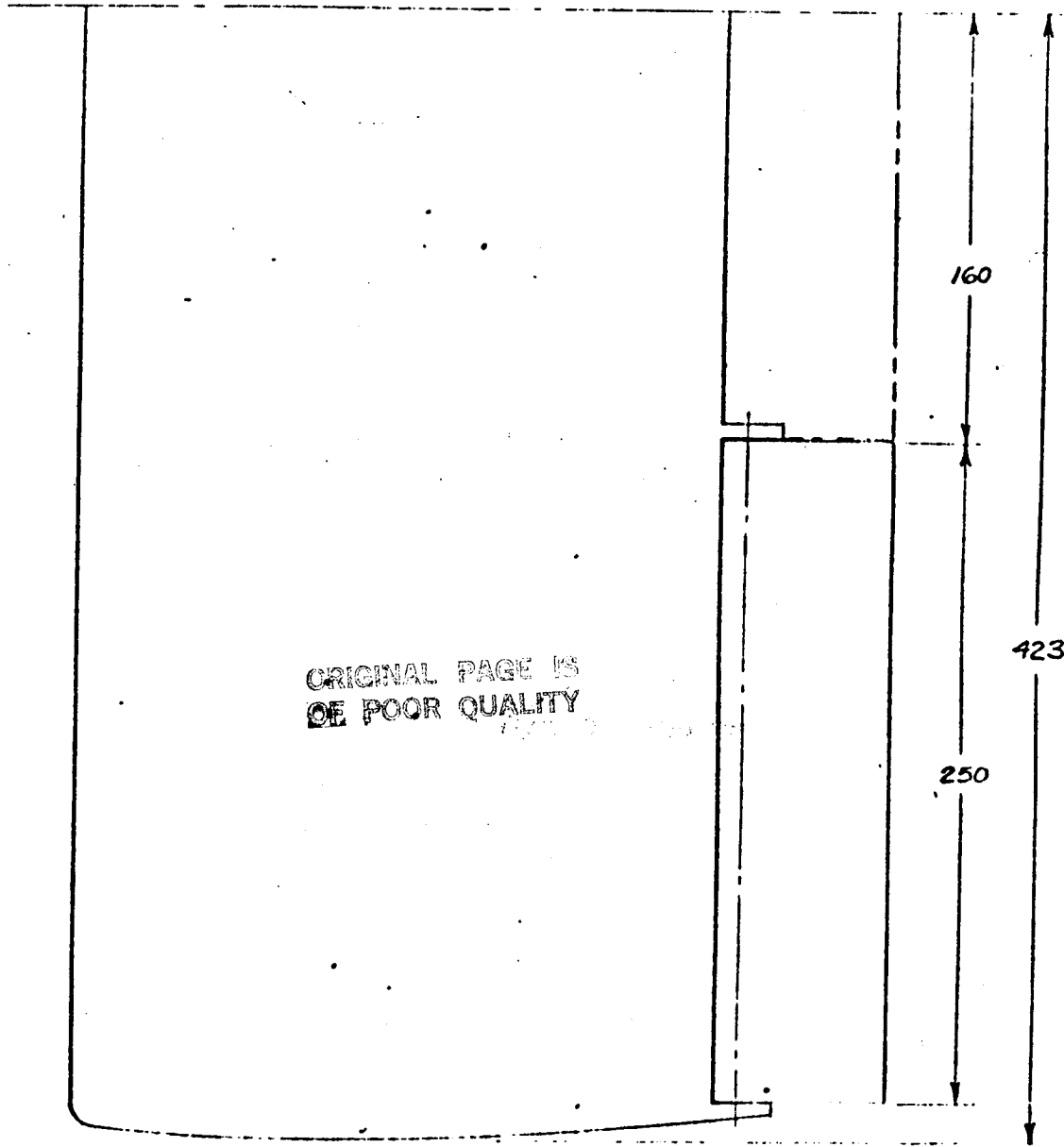


- PRESSURE TAPS ON BASE PLATE ARE NOS. 7 THRU 11.
- △ PRESSURE TAPS ON NOZZLE EXITS ARE NOS. 1 THRU 6. THESE SIX TAPS LOCATED APPROXIMATELY AS SHOWN AND AS NEAR NOZZLE CENTERS AS PRACTICAL.

DIMENSIONS SHOWN ARE FULL SCALE IN INCHES
 BASE AREA = 856 FT² , NOZZLE EXIT AREA IS 368 FT²

FIG. 3. BASE - NOZZLE ARRANGEMENT, NII, AND
BASE PRESSURE TAP LOCATIONS ON
SECOND SERIES 3% BOOSTER MODEL

CANARD BOOSTER
MDAC/MMC
DR#1077 A-1- 92



X 2134 FOR J9
X 1892 FOR J6

DIMENSIONS ARE FOR FULL SCALE
IN INCHES

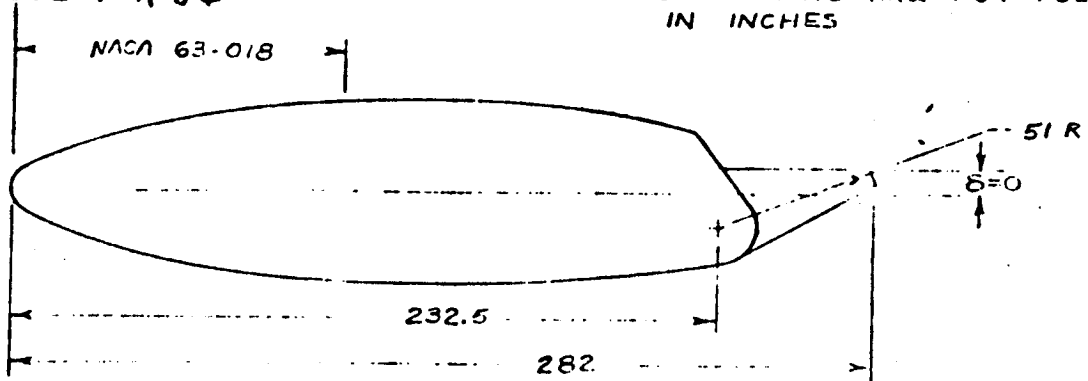
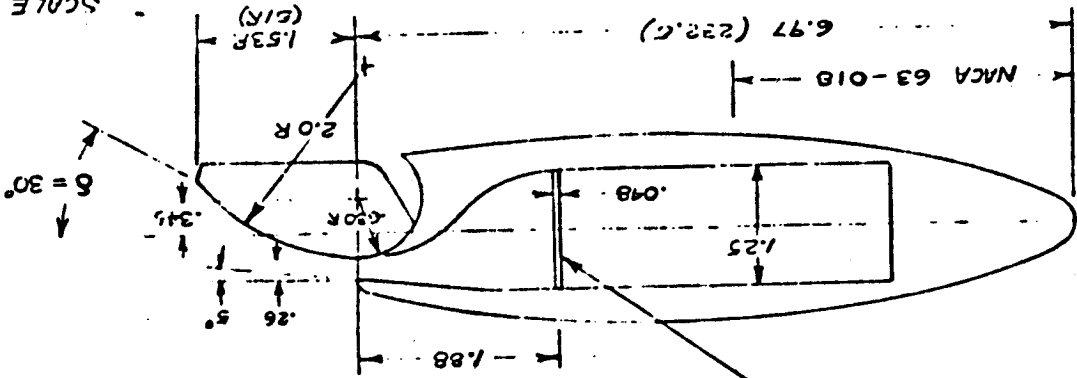


FIG. 4 DETAILS FOR JET CANARD J6 AND J9

FIG. 5 JET CANARD DETAILS, J7, J8 AND J10

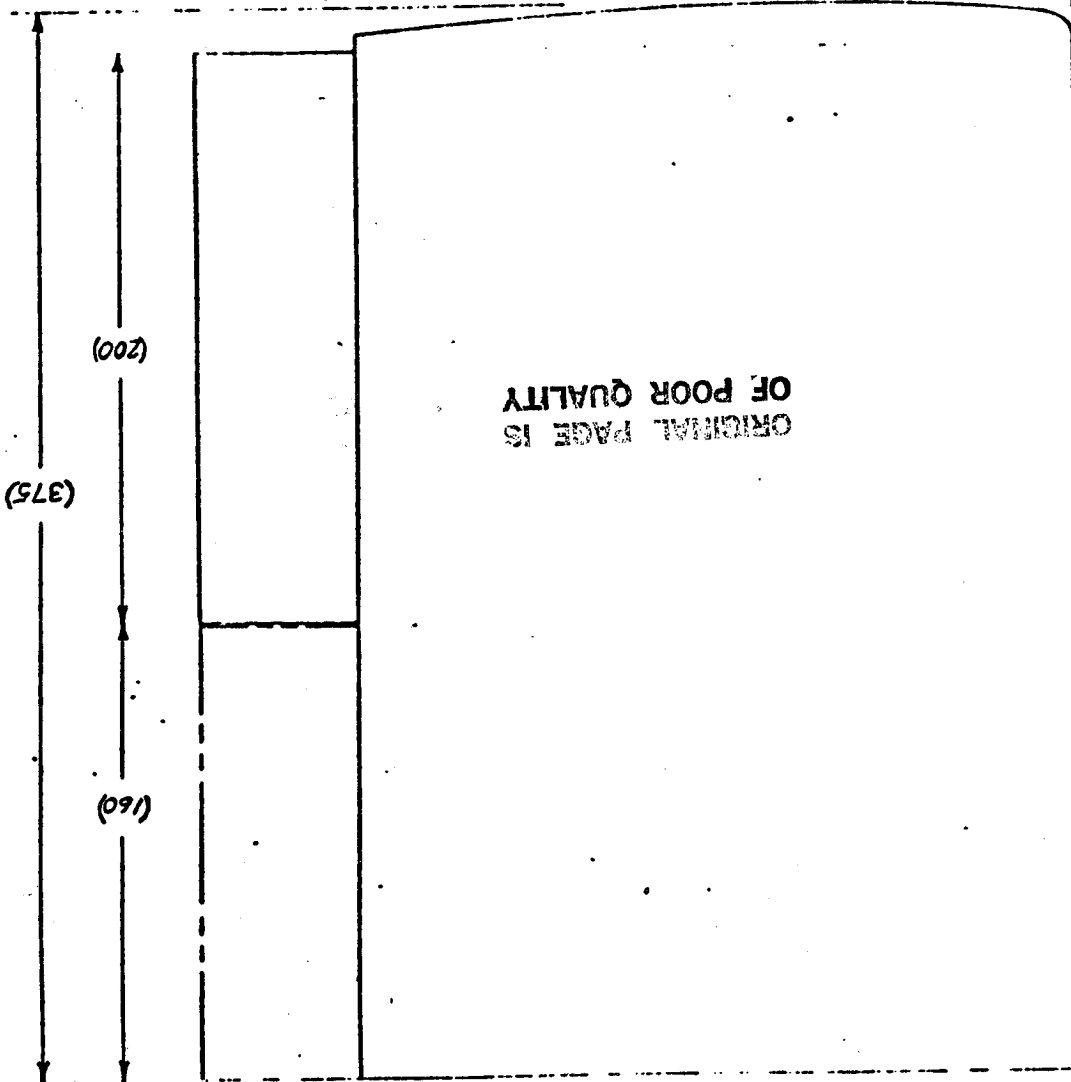


SCALE: 1/2 MODEL SIZE

NOTE: DIMENSIONS ARE IN INCHES. DIMENSIONS IN PARENTHESES ARE FULL SCALE.

X1892 FOR J7
X2134 FOR J8 AND J10

23% OPEN FOCUS PLATE
.045 IN. DIA HOLES



CANARD BOOSTER
MDAC/MMC
DR#1077 A-1-93

CANARD BOOSTER
MDAC/MMC
DR#1077 A-1-94

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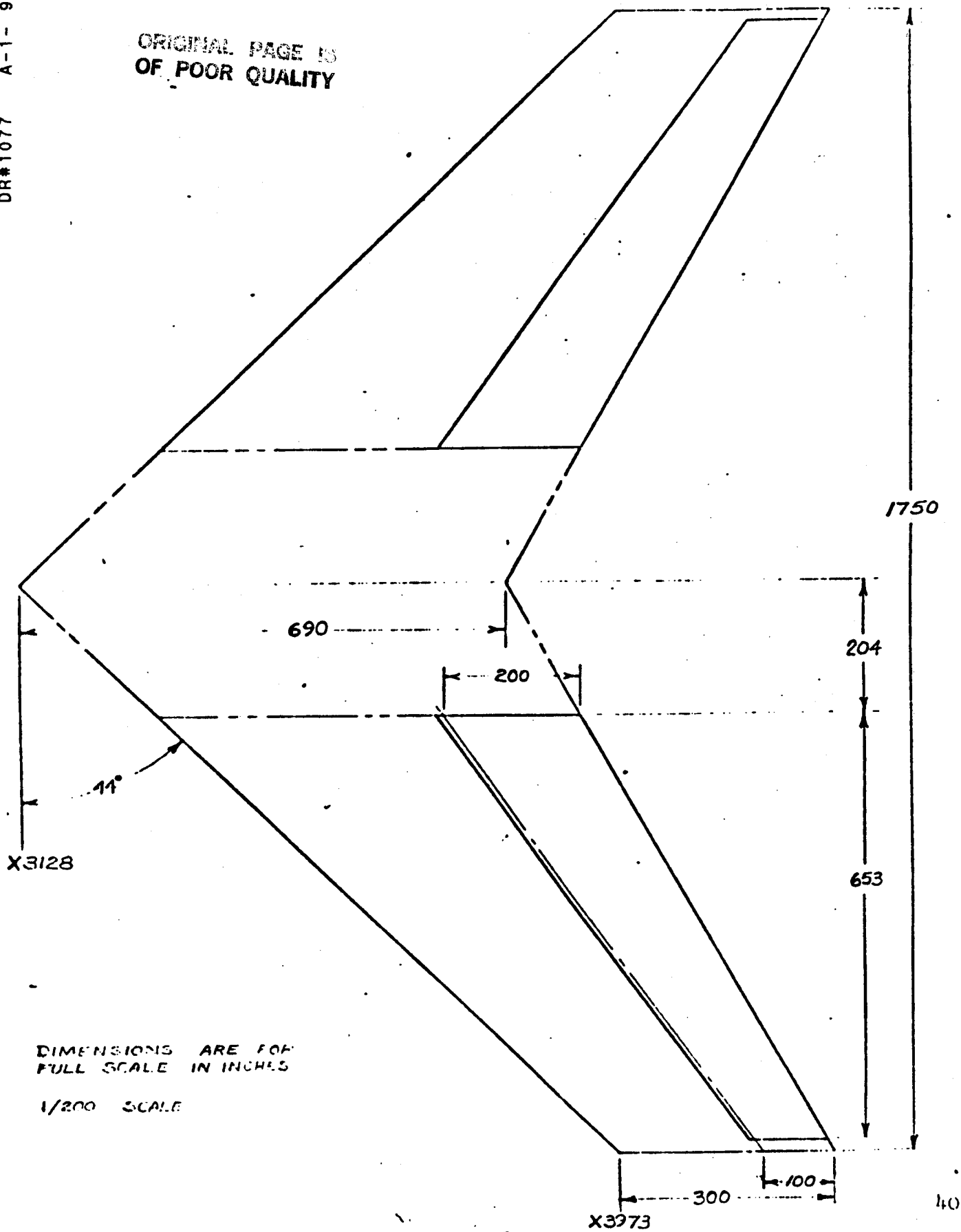
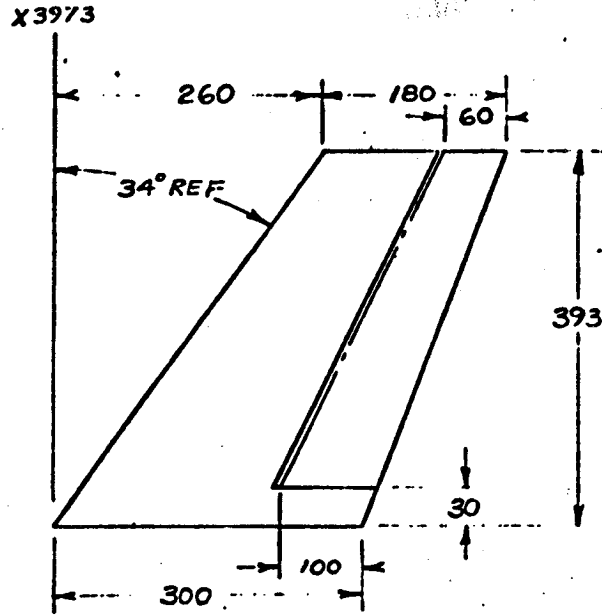


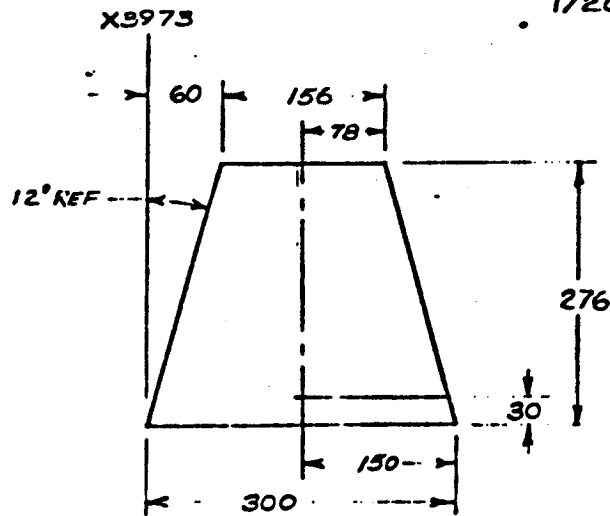
FIG 6 DETAILS OF WING W5



TIP FIN V7

DIMENSIONS ARE FOR
FULL SCALE IN INCHES

1/200 SCALE



TIP FIN V6

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FIG 7 DETAILS OF TIP FIN S

TABLE 7

PRETEST
 POSTTEST

TEST SET NUMBER	CONFIGURATION	SCHD.		PARAMETERS				NO. OF RUNS	ELEVON										
		A	B	M	Sq	OF	SPC		EW	ER	RF	SV	OFF	-40	-20	-10	0	+10	+20
RAL 021	B ₁ N ₃ J ₁ W ₁ E ₁ V ₁ R ₁	B	0	7.4	10	-	3	1	3	0	10	0					36		
RAL 022	↓	C	1		↓					1	↓	↓					11		
RAL 023	B ₁ N ₃ J ₁ W ₁ E ₁ V ₁ R ₁ SV=6	B	1		0						0	6					37		
RAL 024		C	↓														12		
RAL 025		B	-10														54		
RAL 026		50	C							↓							61		
RAL 027		B	-10								-10						55		
RAL 028	↓	50	C							↓		↓					60		
RAL 029	B ₁ N ₃ J ₁ W ₁ E ₁ V ₂ R ₂	B	-10								0	0					56		
RAL 030		50	C							↓							59		
RAL 031		B	-10								-10						57		
RAL 032	↓	50	C														58		
RAL 033	B ₁ N ₃ J ₁ W ₁ E ₁ V ₁ R ₁	B	0														31		
RAL																			
RAL																			
RAL																			
RAL																			
RAL																			
RAL																			
RAL																			

54

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CA	CLM	CY	ICYN	CBL	L/D	CAB						ELEVON ALPHA

CONSTANTS:

6 OF 8 SCHEDULES

α: B = 30 → 50
C = 50 → 68
 β: C = -10 → +8

* WHEN ELEVON IS OFF:
 IDPVAR(1) = MACH
 IDPVAR(2) = BETA

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TEST ARC 3.5#112 DAT SET COLLATION SHEET

CANARD BOOSTER
MDAC/MMC
DR#1080 A-1- 98
 PRETEST
 POSTTEST

TABLE 7

DATA SET IDENTIFIER	CONFIGURATION	SCHED. PARAMETERS						NO. OF RUNS	ELEVATION												
		A	B	CA	CB	CC	CD		1	2	3	4	5	6	7	8	9	10	11	12	
RAL01	E_1, W_2, E_1	B	0	-	3	-	-	1	3	-	-	-	-	-	-	-	-	-	44	-	-
RAL02		C																	19		
RAL03	$B, N_4, P, T, F_2, W_2, E_1$	B				0	3												43		
RAL04		C																	15		
RAL05		B	-10																50		
RAL06	✓	C	-10					✓	✓	✓	✓								26		
RAL07	$F_1, N_4, P, T, F_2, W_2, E_1, W_2$	B	0					2	0	10	0								46	45	
RAL08		C						1											17	16	
RAL09		B	-10					1													
RAL10		C	-10																		
RAL11		B	-10						-10	0										47	
RAL12		C	-10																	28	
RAL13										0	10									47	
RAL14	✓		✓	✓	✓	0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			18
RAL																					
RAL																					
RAL																					
RAL																					
RAL																					

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1	7	13	19	25	31	37	43	49	55	61	67	75	76
CM	CA	CLM	CY	CYN	CBL	L/D	CAS						

COEFFICIENTS: CC: B:
 # OF B SCHEDULES B = 30 → 48 C = -9 → +10
 * WHEN ELEVATION IS OFF IDPVAR(1) = MACH
 # FOR 2 SWEEP S IDPVAR(2) = BETA

TABLE 7

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHED.		PARAMETERS			NO. OF RUNS	PARAMETERS				ELEVON						
		a	β	M	α	-β		α	β	OFF	SV	OFF	-40	-20	10	0	10	20
RAL 1	E.P.O.	3	0	7.4	-	-	1	-	-	-	-	41	✓	✓				
RAL 2	+	C										13	✓					
RAL 122	F.P.T.F.	B					3					42	✓	✓	✓	✓	✓	✓
RAL 13	↓	C			Y			Y				14	✓	✓	✓	✓	✓	✓
RAL 14	B.N.W.E.	C	-10		0			3	↓	↓	↓							20
RAL 15	B.N.W.E.W.R.								0	10	0							21
RAL 16	↓								-10	0	↓							22
RAL 17																		
RAL 18																		
RAL 19																		
RAL 20																		
RAL 21																		
RAL 22																		
RAL 23																		
RAL 24																		
RAL 25																		
RAL 26																		
RAL 27																		
RAL 28																		
RAL 29																		
RAL 30																		

56

1	7	13	19	25	31	37	43	49	55	61	67	7576
CLM	CA	CLM	CY	CYN	CBL	L/D	CAB					ELEVON OFF

COEFFICIENTS:
 a or β
 SCHEDULES

α: R = 30 → 49
 C = 50 → 68
 β: α = 0 → 18
 C = -10 → +8

* WHEN ELEVON IS OFF:
 IDPVAR(1) = MACH
 & FOR Q SWEEPS
 IDPVAR(2) = BETA

CANARD BOOSTER
 MDAC/MMC
 DR#1080 A-1- 99

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TEST ARC 3.5^{11/2} DATA SET COLLATION SHEET

CANARD BOOSTER
MDAC/MMC
DR#1080 A-1- 100
 PRETEST
 POSTTEST

TABLE 7

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS				NO. OF RUNS	PARAMETERS				ELEVATION					
		a	B	M	α	β	γ		SR	SRF	AV	OFF	-40	-20	-10	0	10	20
RAL 201	B ₁ N ₃ J ₁ WIEI	50	C	7.4	0	-	3	1	3	-	-	-				64		
RAL 202	↓	60	A				↓			↓	↓	↓				66		
RAL 203	B ₁ N ₃ WIEI V ₁ R ₁	C	0			↓	-			0	10	0				72		
RAL 204	B ₁ N ₃ P ₁ T ₁ WIEI V ₁ R ₁					0	3									73		
RAL 205	↓	↓	↓			20										74		
RAL 206	B ₁ N ₃ J ₁ WIEI V ₁ R ₁	50	C		10	-										65		
RAL 207	↓	60	A			↓										67		
RAL 208	↓				0					↓	↓					68		
RAL 209	↓									-10	0	↓				69		
RAL 210	B ₁ N ₃ J ₁ WIEI V ₁ R ₁ S ₁ =6									0		6				70		
RAL 211	↓	↓	↓	↓	↓	↓	↓	↓	↓	-10	↓	↓				71		
RAL																		
RAL																		
RAL																		
RAL																		
RAL																		
RAL																		
RAL																		
RAL																		
RAL																		

1 7 13 19 25 31 37 43 49 55 61 67 75 75

CM CA CLM CY CYN CBL L/D CAB ELEVON ALPHA

COEFFICIENTS: α: β: * WHEN ELEVON IS OFF: IDPVAR(1) | IDPVAR(2) | NDV

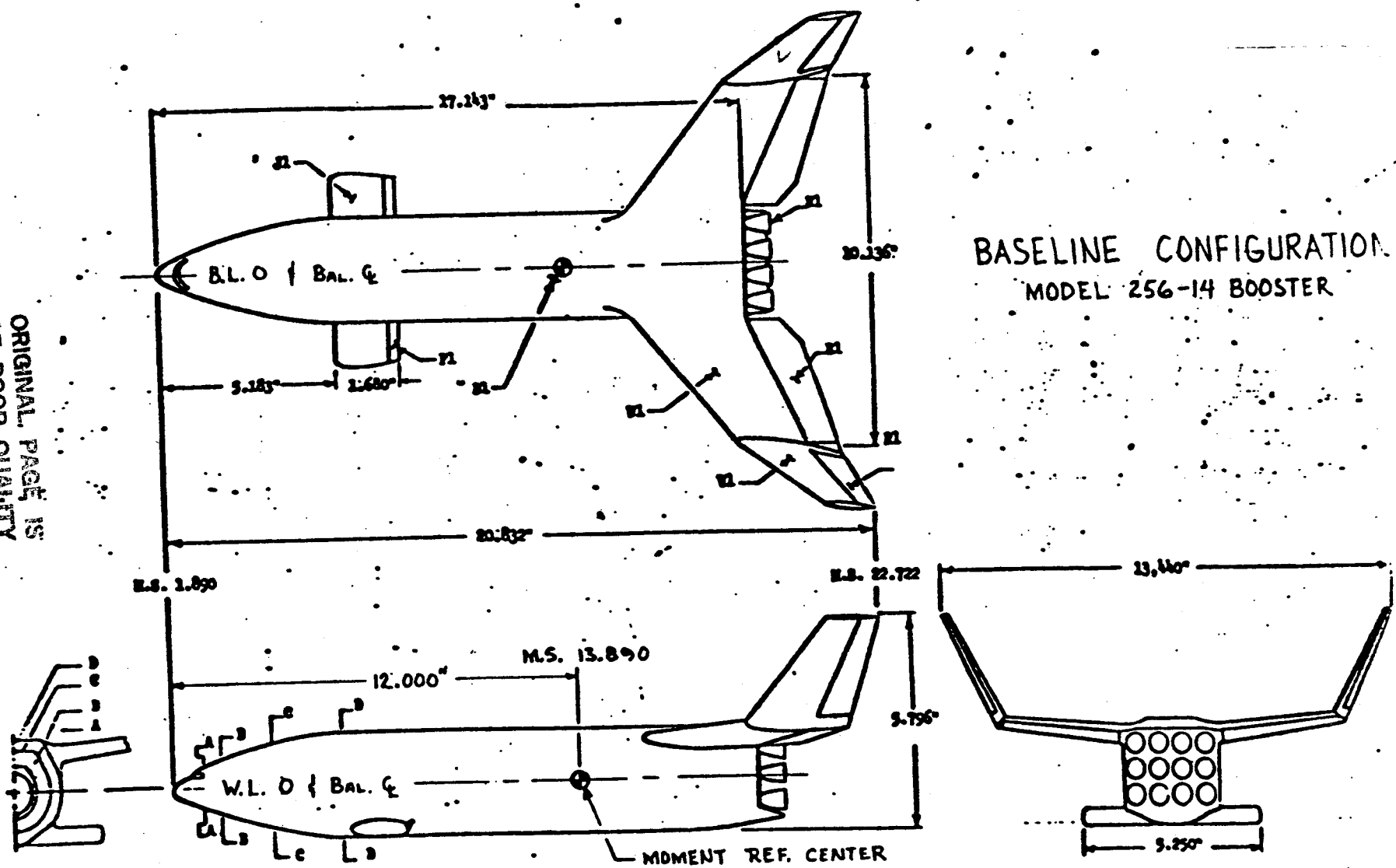
α or β B = 30 → 48 C = -10 → +8 IDPVAR(1) = MACH

SCHEDULES C = 50 → 68 † FOR Q SWEEPS: IDPVAR(2) = BETA

15

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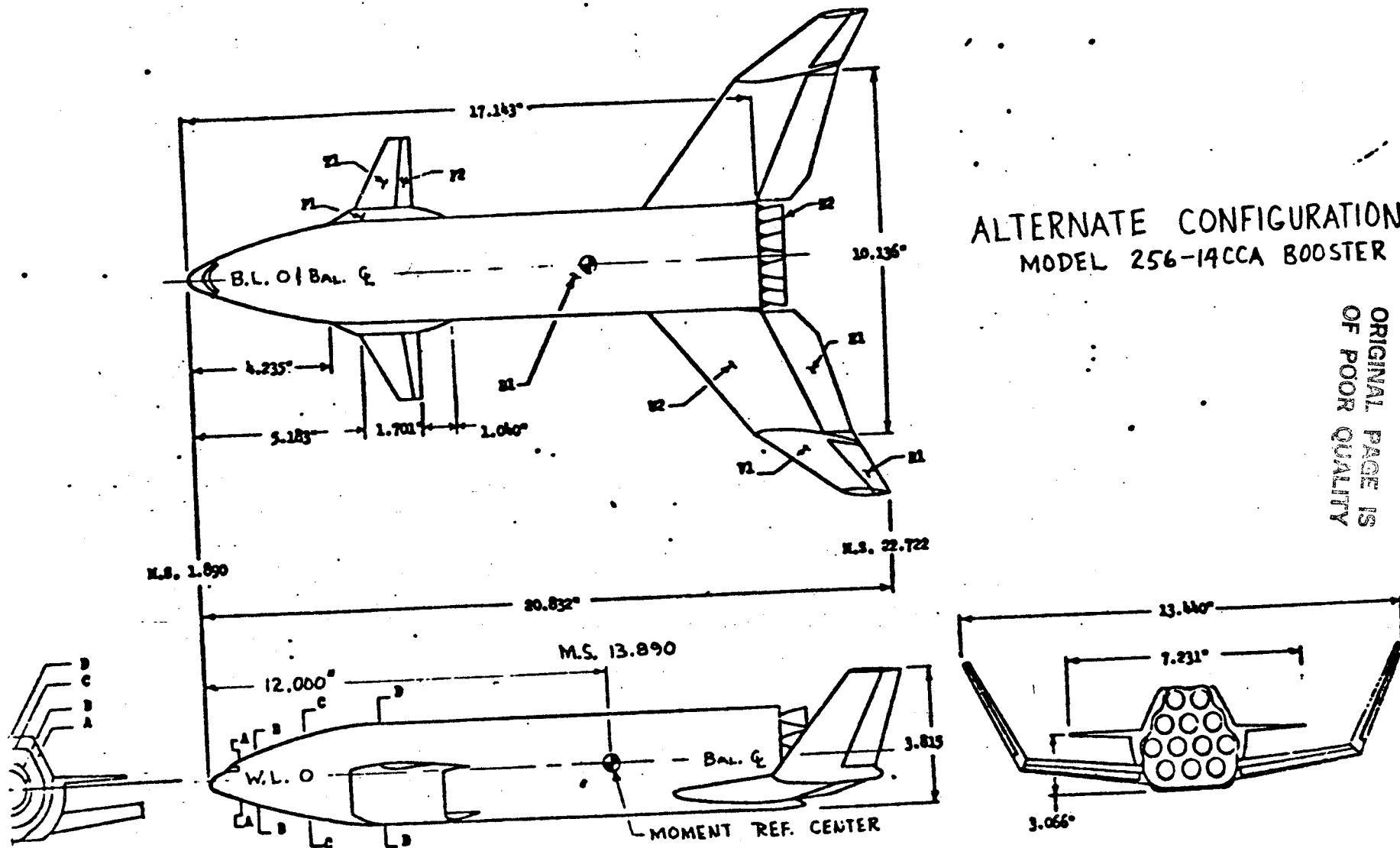
BASELINE CONFIGURATION
MODEL 256-14 BOOSTER

Fig. 1 THREE VIEW LAYOUT; MDC-MMC 0.007 - SCALE MODEL
SSV BOOSTER, MODEL 256-14.

CANARD BOOSTER
MDAC/MMC
DR#1080 A-1- 101

ALTERNATE CONFIGURATION
 MODEL 256-14CCA BOOSTER

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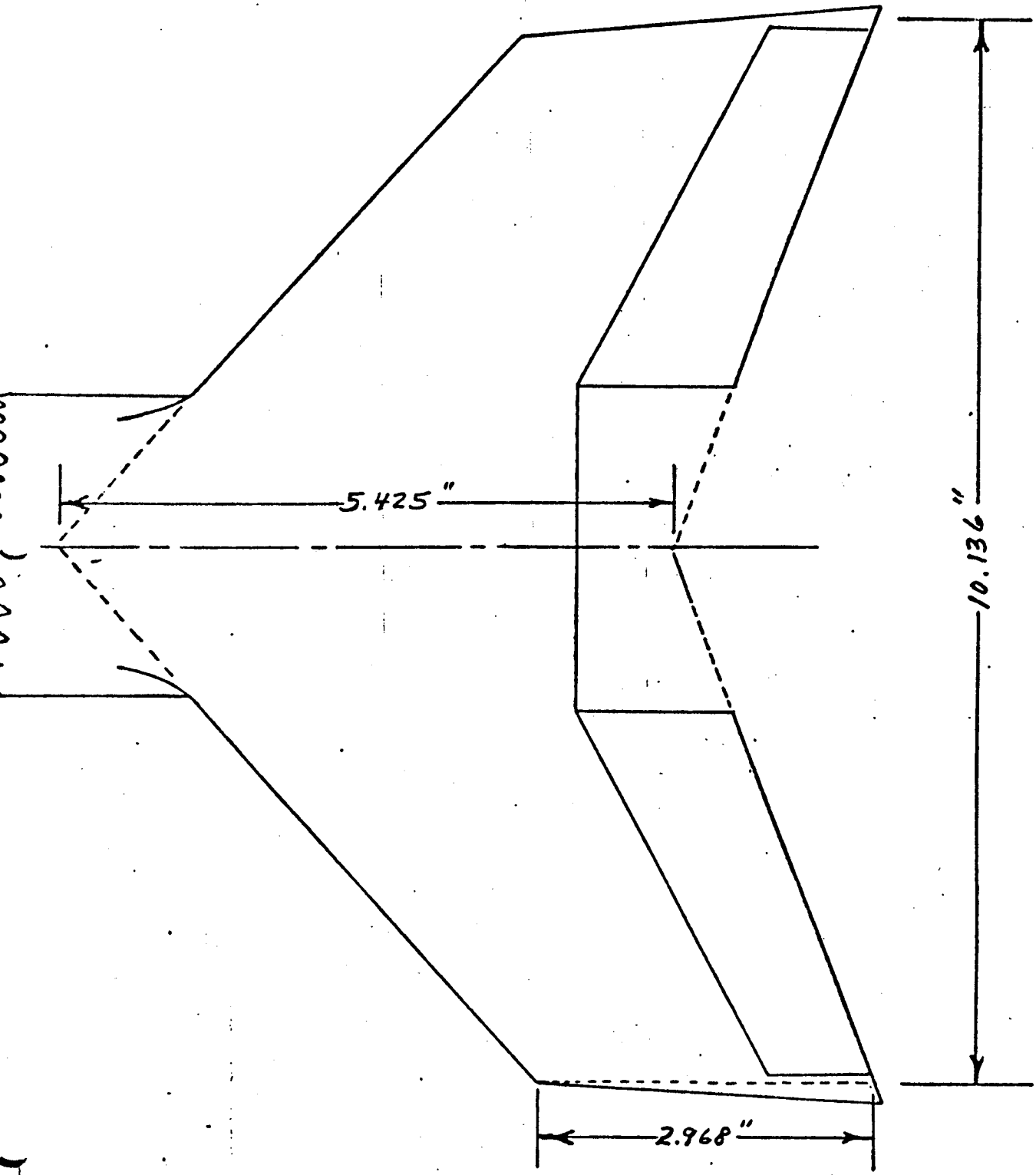
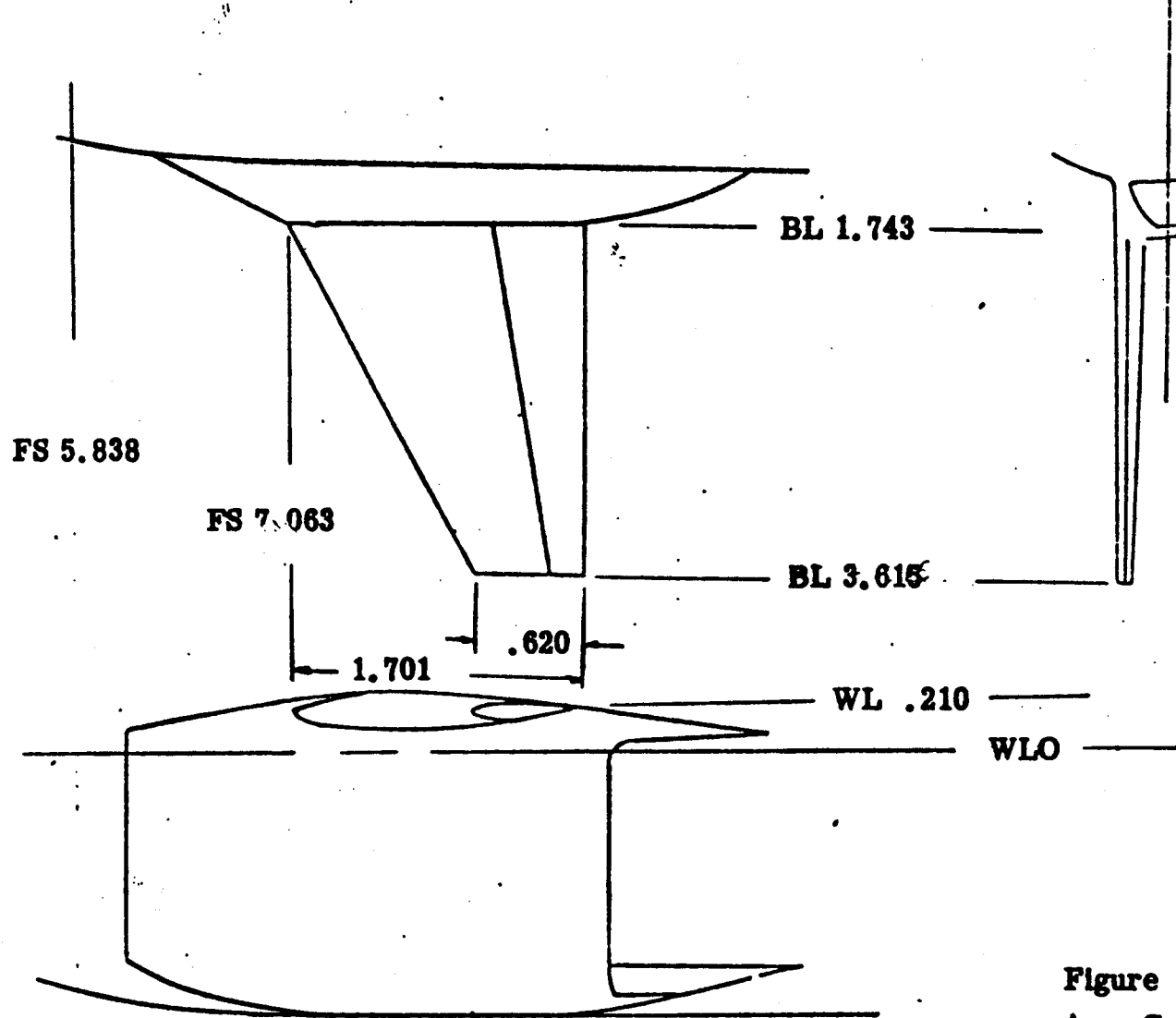


Fig. 10 SKETCH OF HIGH WING AND ELEVON, W_1E_1

BLO



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Note: All Dimensions
in Inches
Model Scale

33

Figure 11 Sketch of
Aero Canard MID-Position,
 $P_1 T_1 F_2$

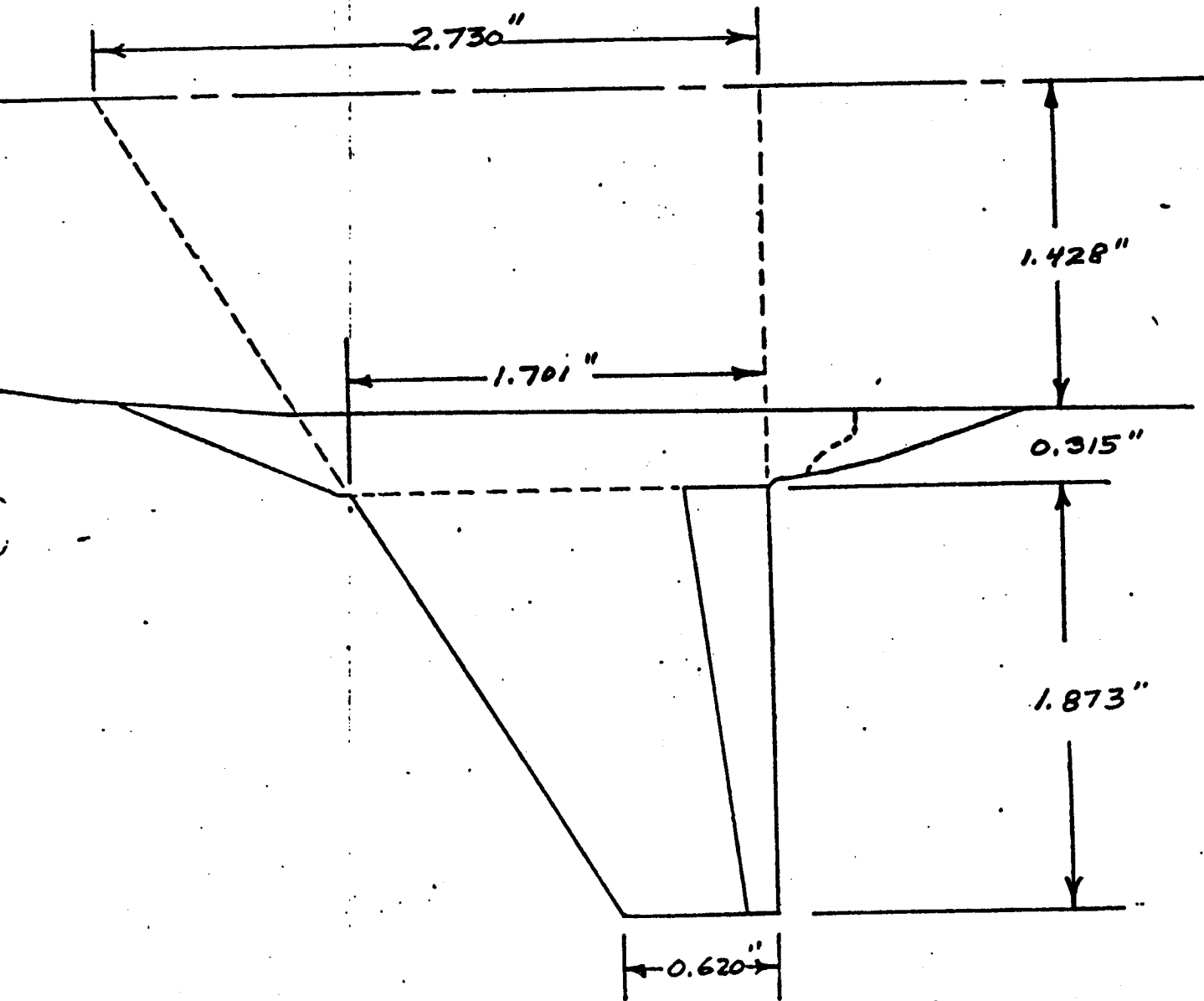
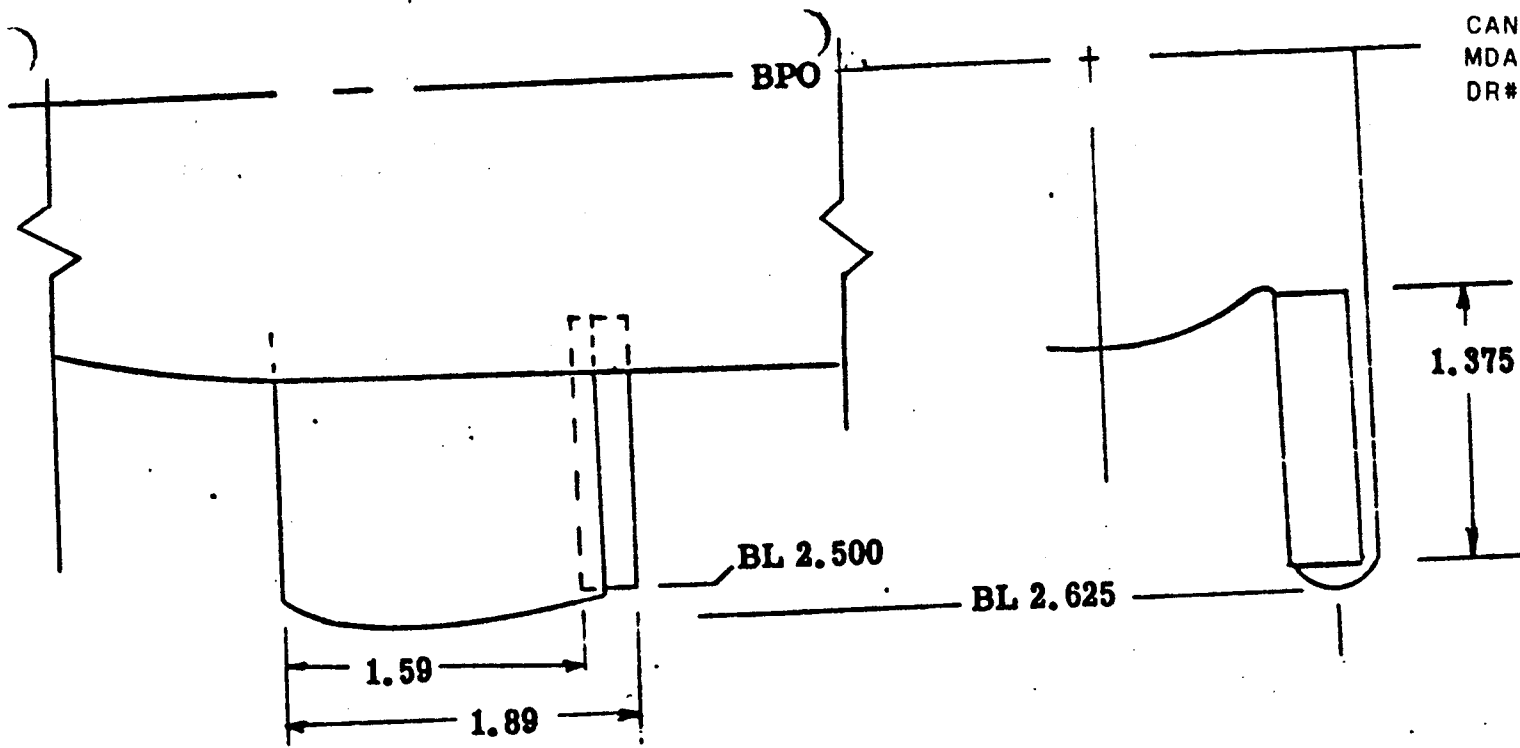


Fig. 12 SKETCH OF MID-BODY AERODYNAMIC CANARD
WITH FLAP, T₁F₂



Fs 7.063

Note: All Dimensions
in Inches
Model Scale

34

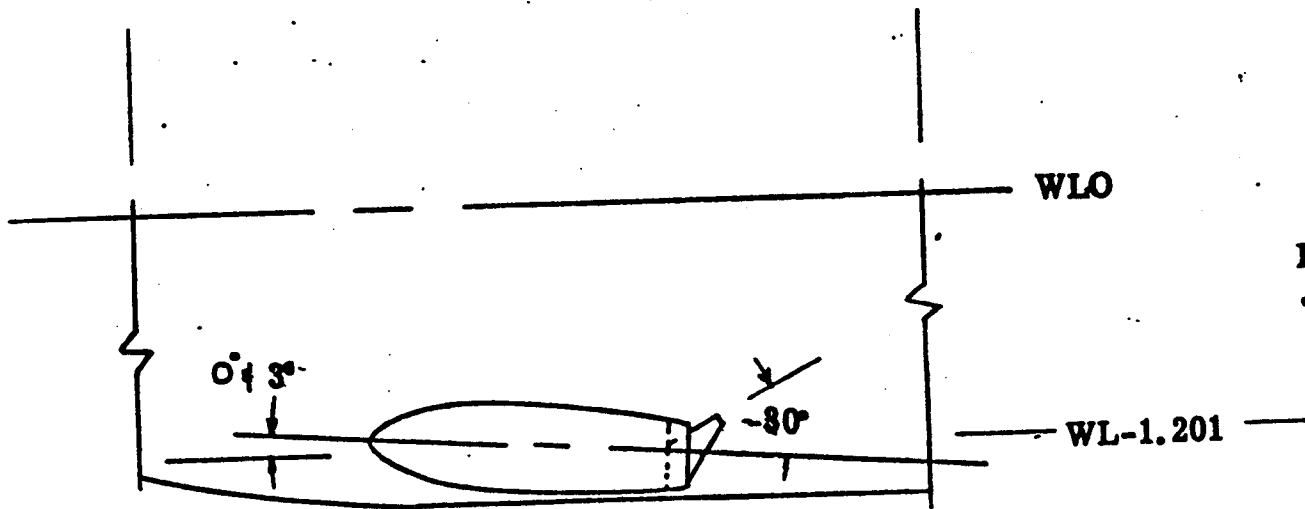
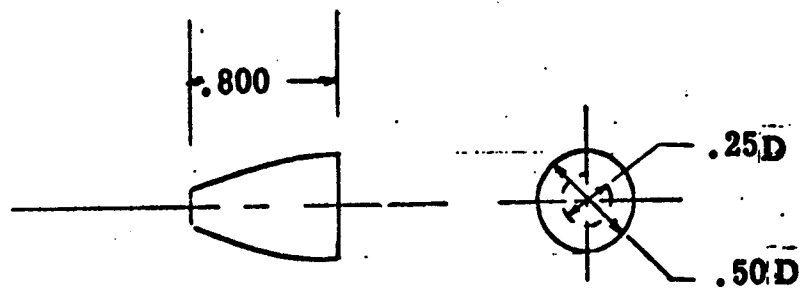
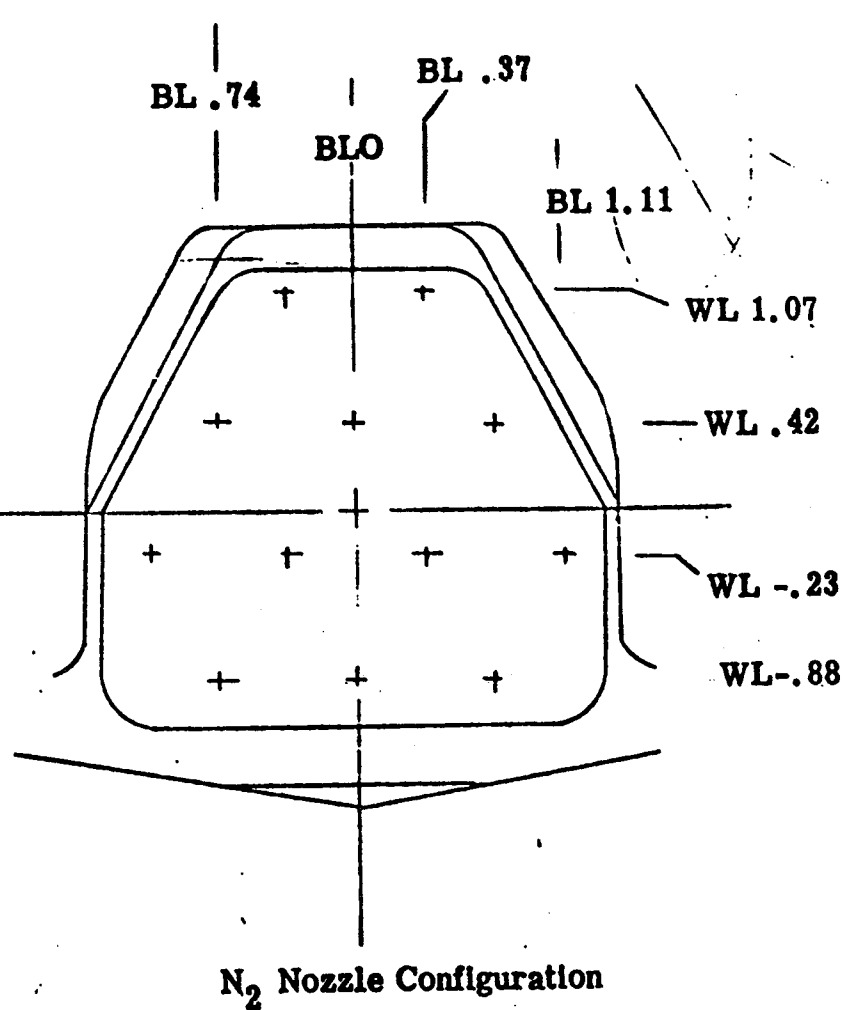
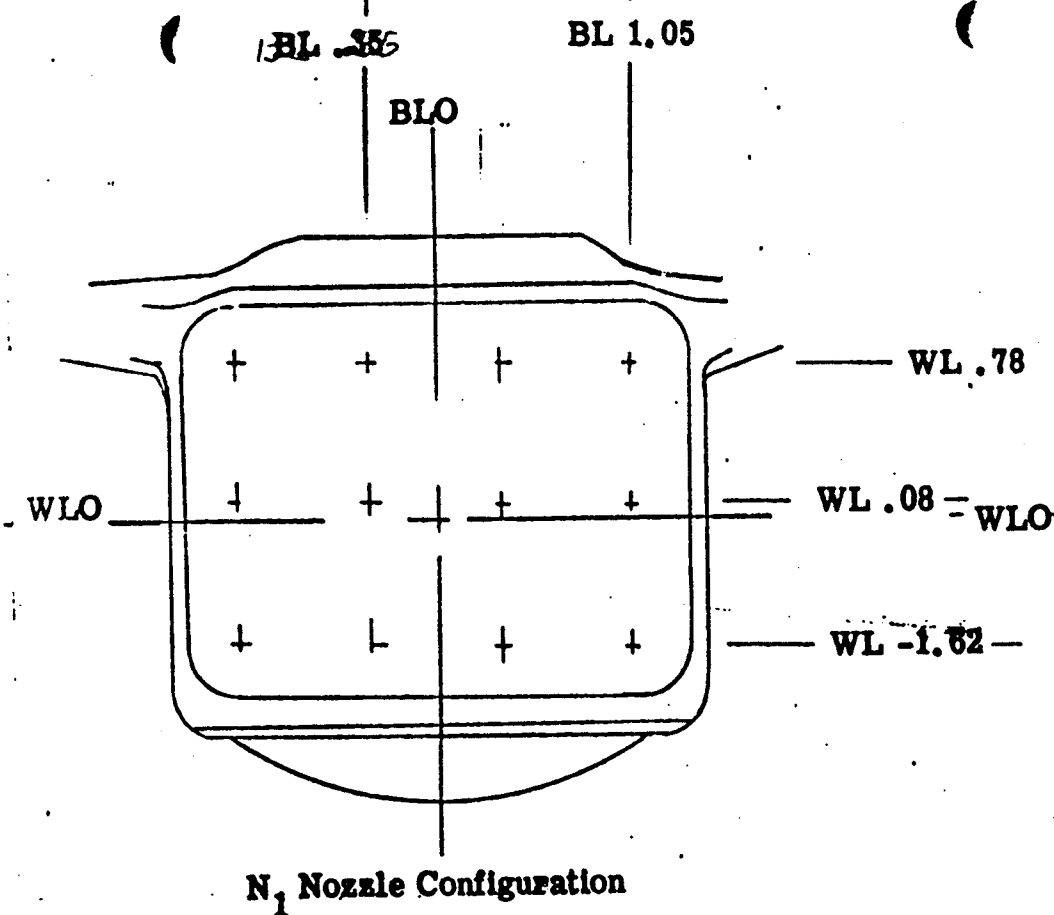


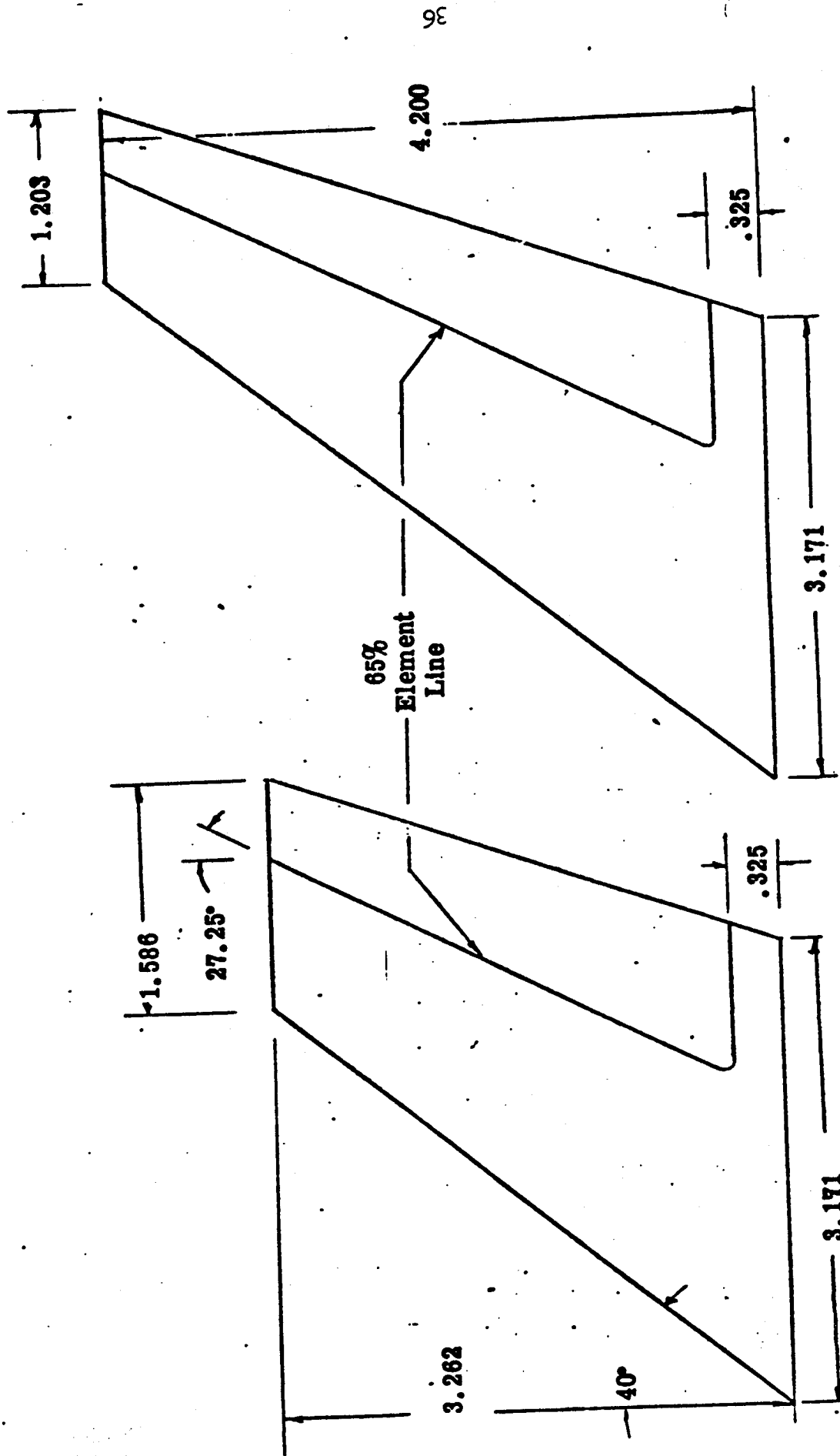
FIGURE 13 SKETCH OF
JET FLAP CANARD,
J₁



Note: ● Dimensions in Inches
Model Scale
● Nozzle C_L 's Shown

**FIGURE 14 SKETCH OF,
MODEL BASE END CONFIGURATIONS WITH
N₁ & N₂ (OR N₃ & N₄ RESP.)**

NOTE: All Dimensions in Inches Model Scale



36

$V_1 R_1$
 $V_2 R_2$
Fig. 15 SKETCH, OF VERTICAL STABILIZER AND RUDDER, $V_1 R_1$ & $V_2 R_2$.

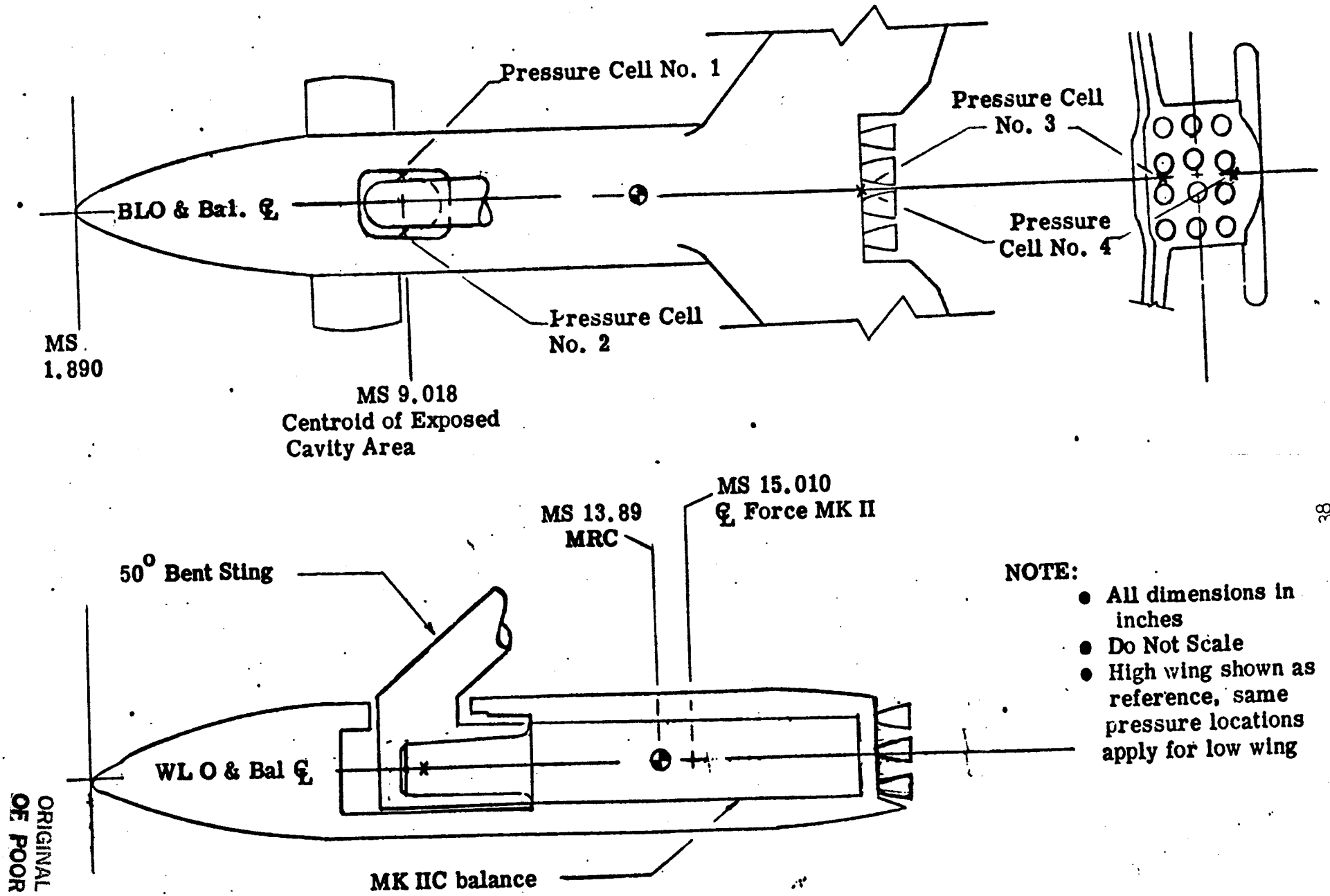
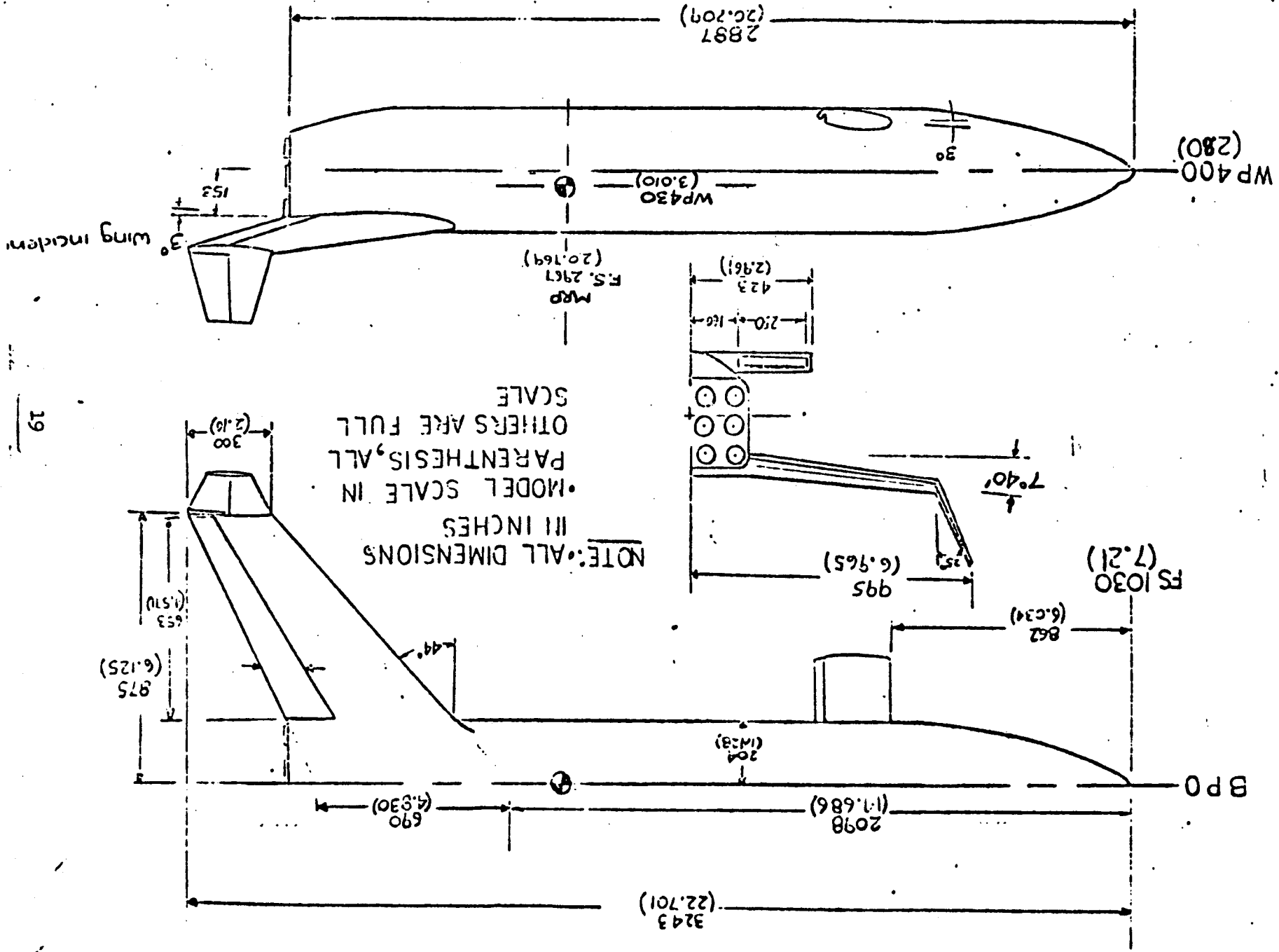


FIGURE 17 MODEL FORCE AND PRESSURE LOCATIONS

CANARD BOOSTER
 MDAC/MMC
 DR#1080 A-1- 109

CONFIGURATION B₃N₁₂J₆F₄W_{5E}V₆R₆ (GENERAL ARRANGEMENT)

FIGURE A

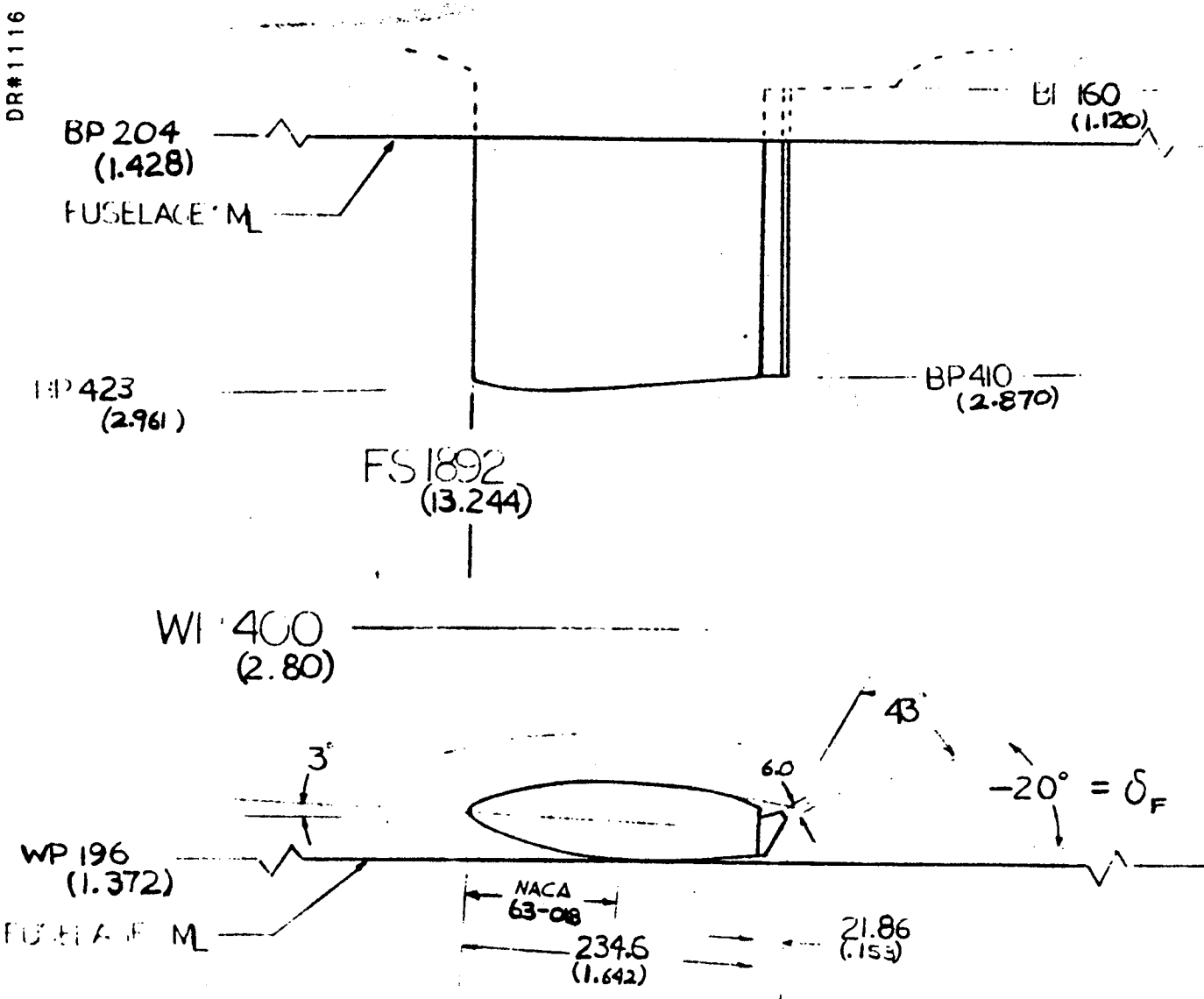


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CANARD BOOSTER
MDAC/MMC
DR#11116 A-1- 112

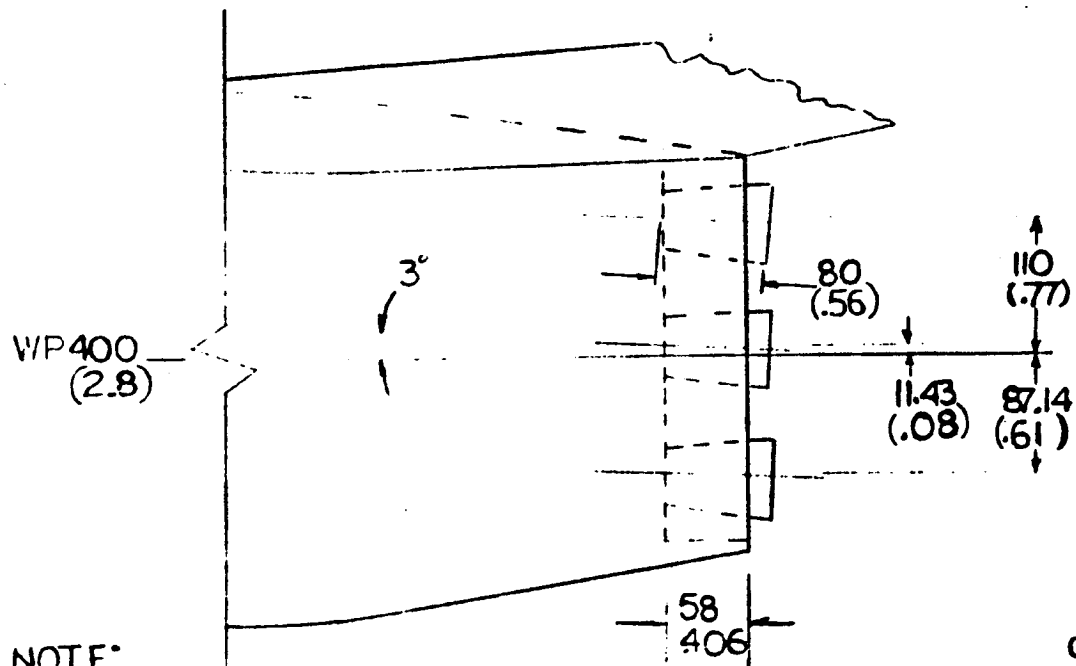
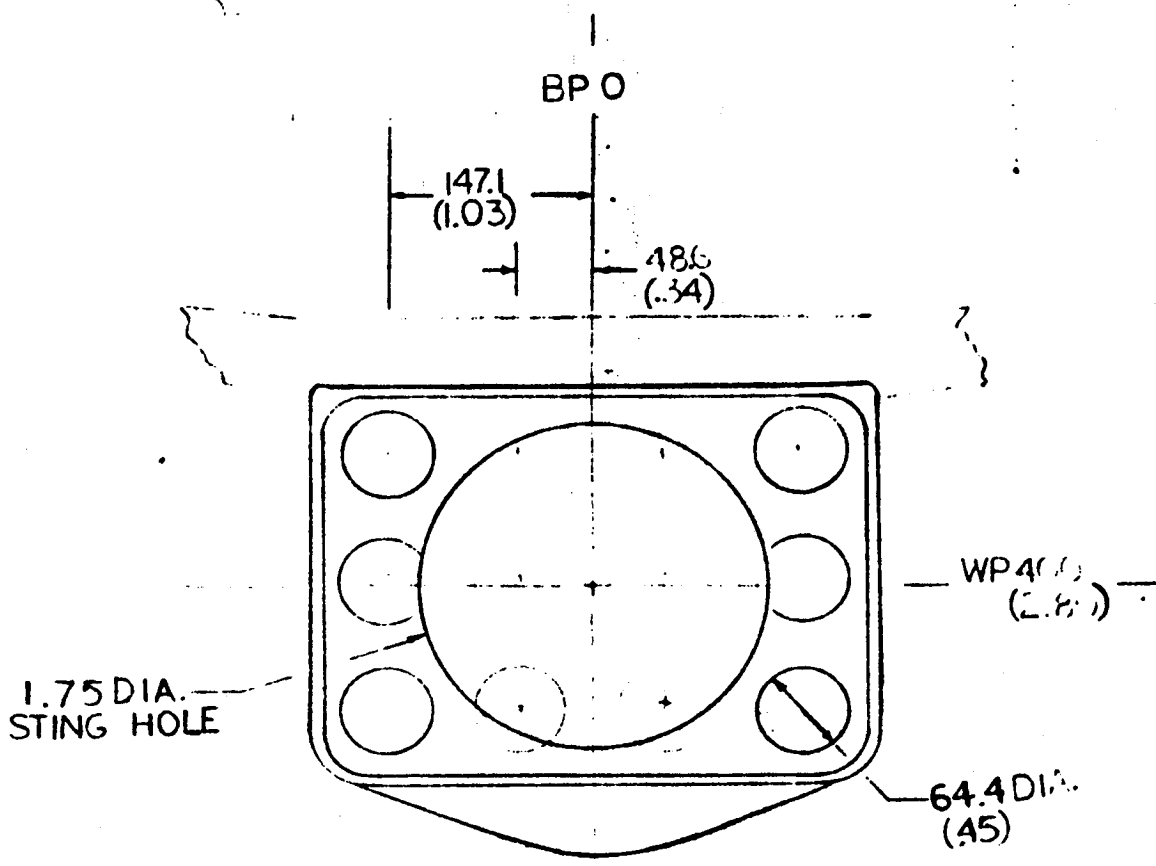
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NOTE • ALL DIMENSIONS IN INCHES
• MODEL DIMENSIONS IN PARENTHESIS ALL OTHERS FULL SCALE
• FUSELAGE NOSE AT FS 1030

FIGURE B JET FLAP CANARD ~J₆F₄



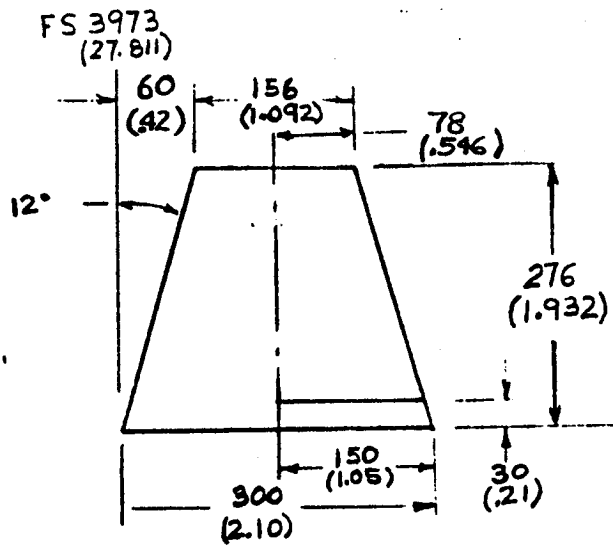
NOTE:

- ALL DIM. IN INCHES
- MODEL DIM. IN PARENTHESIS
- ALL OTHERS FULL SCALE
- FUSELAGE NOSE AT FS 1030

FS 3917
 (27.419)

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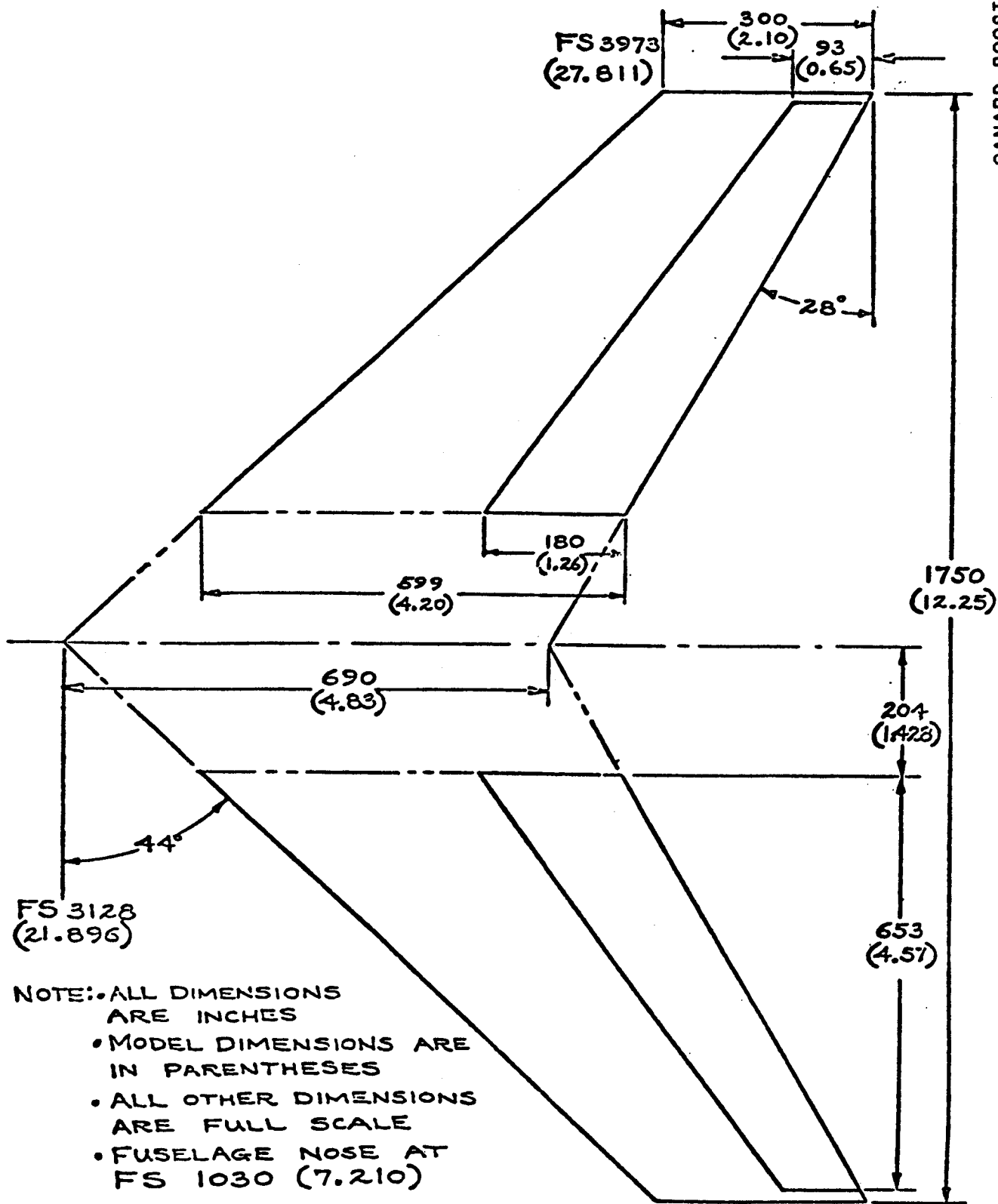
FIGURE C BASE END CONFIGURATION ~ N₁₂



- NOTE:
- ALL DIMENSIONS IN INCHES
 - MODEL DIMENSIONS IN PARENTHESIS, ALL OTHERS FULL SCALE
 - FUSELAGE NOSE AT FS 1030

FIGURE D

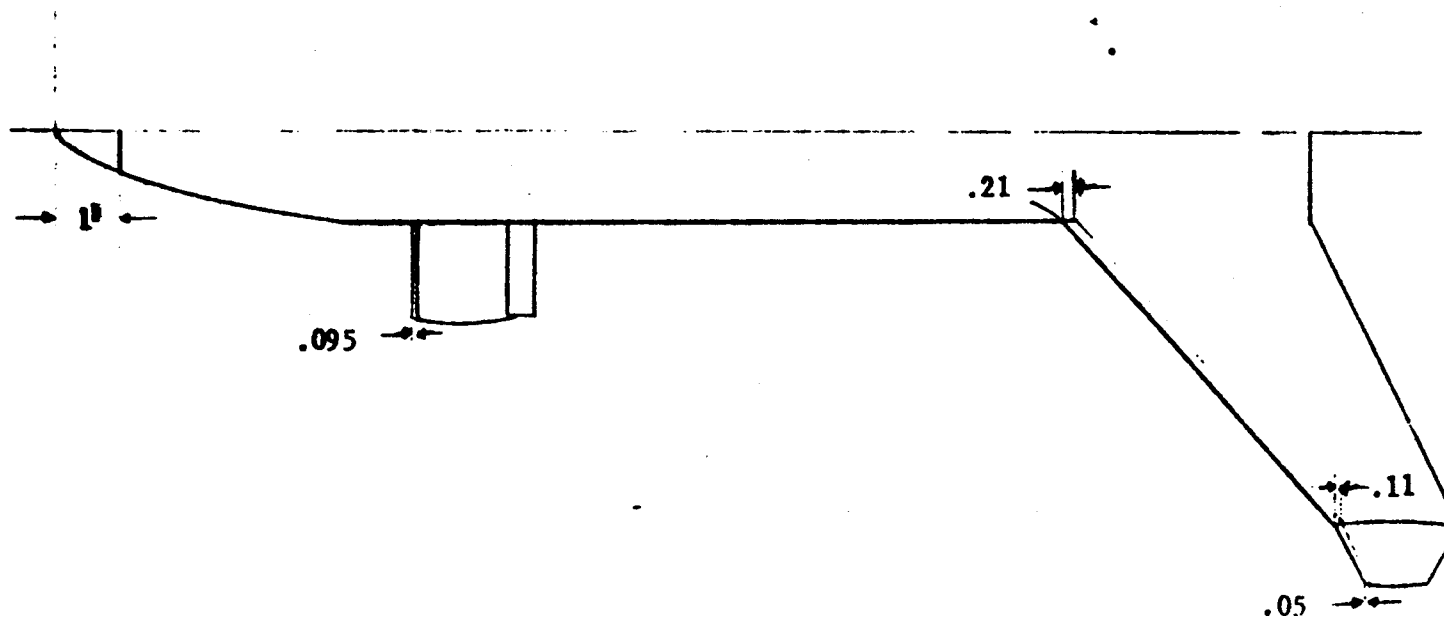
TIP FIN ~ V₆R₆



NOTE: • ALL DIMENSIONS ARE INCHES
 • MODEL DIMENSIONS ARE IN PARENTHESES
 • ALL OTHER DIMENSIONS ARE FULL SCALE
 • FUSELAGE NOSE AT FS 1030 (7.210)

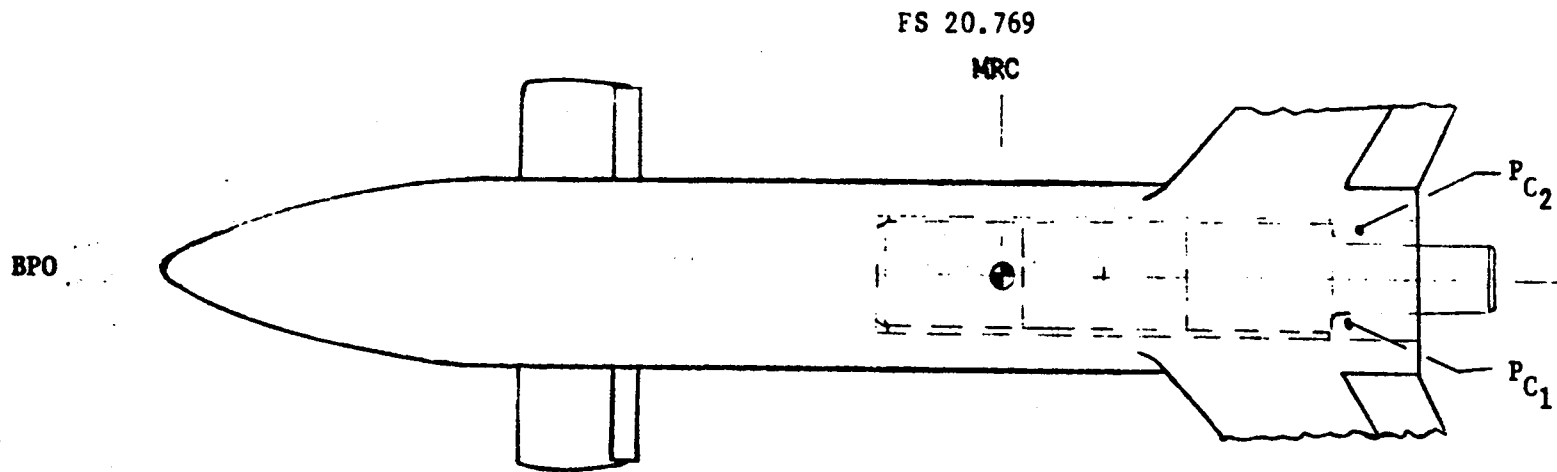
FIGURE E DETAILS OF WING W5 E3

- NOTE:
- ALL DIMENSIONS IN INCHES
 - NO. 120 CARBORUNDUM GRIT USED
 - ALL STRIPS 3/32 INCHES WIDE
 - STRIPS LOCATED AT 5% LOCAL CHORD OF WING,
CANARD, AND VERTICAL TAILS
 - GRIT LOCATED ON BOTH UPPER AND LOWER SURFACES

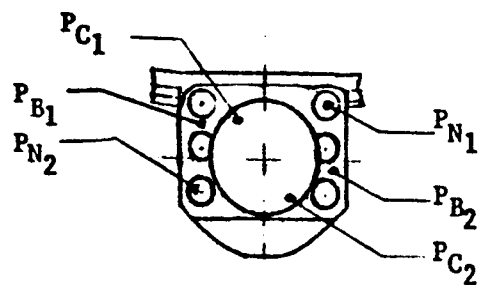


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FIGURE K BOUNDARY LAYER TRANSITION STRIP LOCATIONS



FS 7.21



Note: ● All dimensions in inches
● Ames MK IIC balance utilized

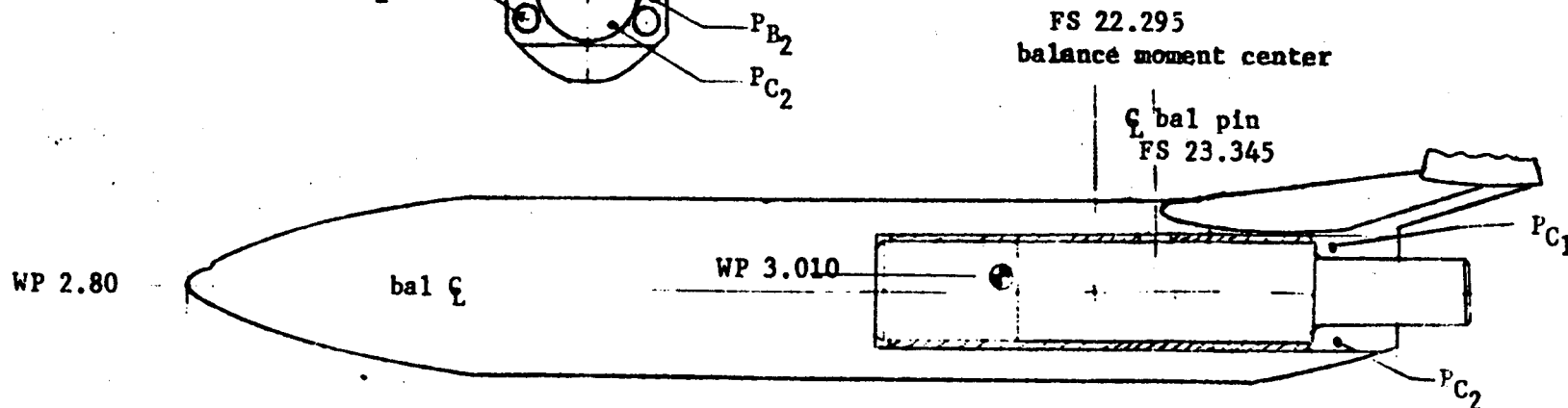


FIGURE 4 MODEL INSTRUMENTATION

CANARD BOOSTER
MDAC/MMC
DR#1116 A-1- 117

TEST 75-T-258 DATA SET COLLATION SHEET

PRETEST
 POSTTEST

1 of 6

DATA SET IDENTIFIER	CONFIGURATION	SCHD.	CONTROL DEFLECTION			NO. OF RUNS	MACH NUMBERS
			A	B	F		
RZ001 B3N1W576		-4 E	0	0	0	1	3
502		0	0	0	0	1	4
003		4	0	0	0	1	5
004		6	0	0	0	1	6
005		8	0	0	0	1	7
006		10	0	0	0	1	8
007		-4	0	20	0	1	9
008		0	0	20	0	1	10
009		4	0	20	0	1	11
010		6	0	20	0	1	12
011		8	0	20	0	1	13
012		10	0	20	0	1	14
013		0	5	30	0	1	15
014		4	5	30	0	1	16
015		6	5	30	0	1	17
016		8	5	30	0	1	18

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9

1	7	13	19	25	31	37	43	49	55	61	67	75 76
CD	CL	CLN	FL	CLN	CSL	CAB					MACH BETA	
IDPVAR(1) IDPVAR(2) INDV												

COEFFICIENTS:

a or B
SCHEDULES

$$E = -10, -8, -5, -4, -2, 0, 2, 4, 6, 10$$

MCAIR-
TEST LSM7-258 DATA SET COLLATION SHEET

PRETEST

POSTTEST

2 of 6

DATA SET IDENTIFIER	CONFIGURATION	SCHD. NO.	CONTROL DEFLECTION	FEEDBACK	FEEDFORWARD	NO. OF RUNS	MACH NUMBERS
RCZ021	B3N11W5TG19	-4E	0	0	0	1	25
022		0	0	0	0	1	26
023		4	0	0	0	1	27
024		6	0	0	0	1	28
025		8	0	0	0	1	29
026		10	0	0	0	1	30
027		4	0	20	0	1	31
028		0	0	20	0	1	32
029		4	0	20	0	1	33
030		6	0	20	0	1	34
031		8	0	20	0	1	35
032		10	0	20	0	1	36
034	B3N11W5TG19	0E	5	30	0	1	33
035		4	5	30	0	1	34
036		6	5	30	0	1	35
037		8	5	30	0	1	36

CD	CL	CLM	CY	CLN	CSL	CAB	MACH	BETA
7	13	19	25	31	37	43	49	55
61	67	73	79	85	91	97	103	109

COEFFICIENTS:

a or b
SCHEDULES

IDPVAR(1)|IDPVAR(2)|NDV

CANARD BOOSTER
MDAC/MMC
DR#1120 A-1-119

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MC AIR- TEST LS WT-258 DATA SET COLLATION SHEET

PRETEST
 POSTTEST

4 of 6

DATA SET IDENTIFIER	CONFIGURATION	SCHD.	CONTROL DEFLECTION			NO. OF RUNS	MACH NUMBERS	
			0.8	5.8	5.8			
RCZ061	B3N11W576V9	0 E	0	20	10	0	1	39
062		4	0	20	10	0	1	40
063		6	0	20	10	0	1	41
064		8	0	20	10	0	1	42
065		10	0	20	10	0	1	43
066		-4	0	-20	10	0	1	44
067		0	0	-20	10	0	1	45
068		4	0	-20	10	0	1	46
069		6	0	-20	10	0	1	47
070		8	0	-20	10	0	1	48
071		10	0	-20	10	0	1	49
072		0	0	0	10%	0	1	56
073		4	0	0	10%	0	1	57
074		6	0	0	10%	0	1	58
075		8	0	0	10%	0	1	59
076		10	0	0	10%	0	1	60
B3N11W579		0 E	0	0	0	0	1	75

R6/R8 DEFLECTION = 58

CD CLM CLN FSL FCB MACH BETA 7
 COEFFICIENTS: IDPVAR(1) IDPVAR(2) IDV

a or b SCHEDULES

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CANARD BOOSTER MDAC/MMC DR#1120 A-1-121

MCAR -
TEST LSWT-258
DATA SET COLLATION SHEET

PRETEST
 POSTTEST

5 of 6

DATA SET IDENTIFIER	CONFIGURATION	SCID.	CONTROL DEFLECTION	NO. OF RUNS	MACH NUMBERS
082031	B3N11W5V9	4	0 0 0	1	76
082		6	0 0 0	1	77
083		8	0 0 0	1	78
084		0	0 20 0	1	79
085		4	0 20 0	1	80
087	B3N11W5V9	8	0 20 0	1	81
088		0	0 0 10	1	82
089		4	0 0 10	1	83
091		8	0 0 10	1	84
092	B3N11W5V8	0	0 0 0	1	87
093		4	0 0 0	1	88
094		8	0 0 0	1	89
095		0	0 20 0	1	90
096		4	0 20 0	1	91
097		8	0 20 0	1	92
098		0	0 0 10	1	93
099		4	0 0 10	1	94
100		8	0 0 10	1	95

CD	CL	CLM	CY	CLN	FSL	FAB	MACH	BETA	7
1	7	13	19	25	31	37	43	49	55
55	61	67	75	76					

COEFFICIENTS:

a or B
SCHEDULES

$$A = -4, -2, 0, 2, 4, 6$$

IDPVAR(1) | IDPVAR(2) | NDV

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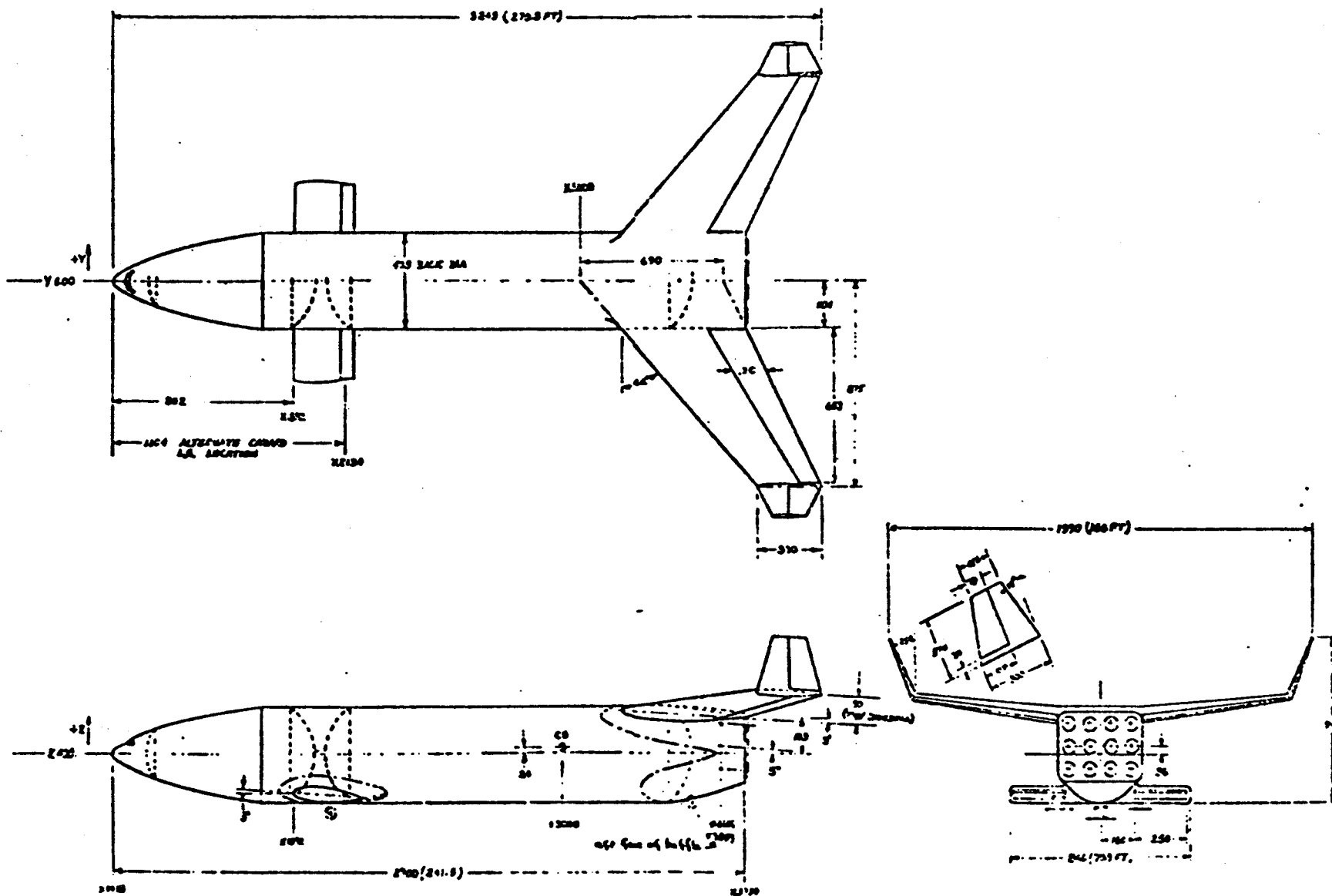
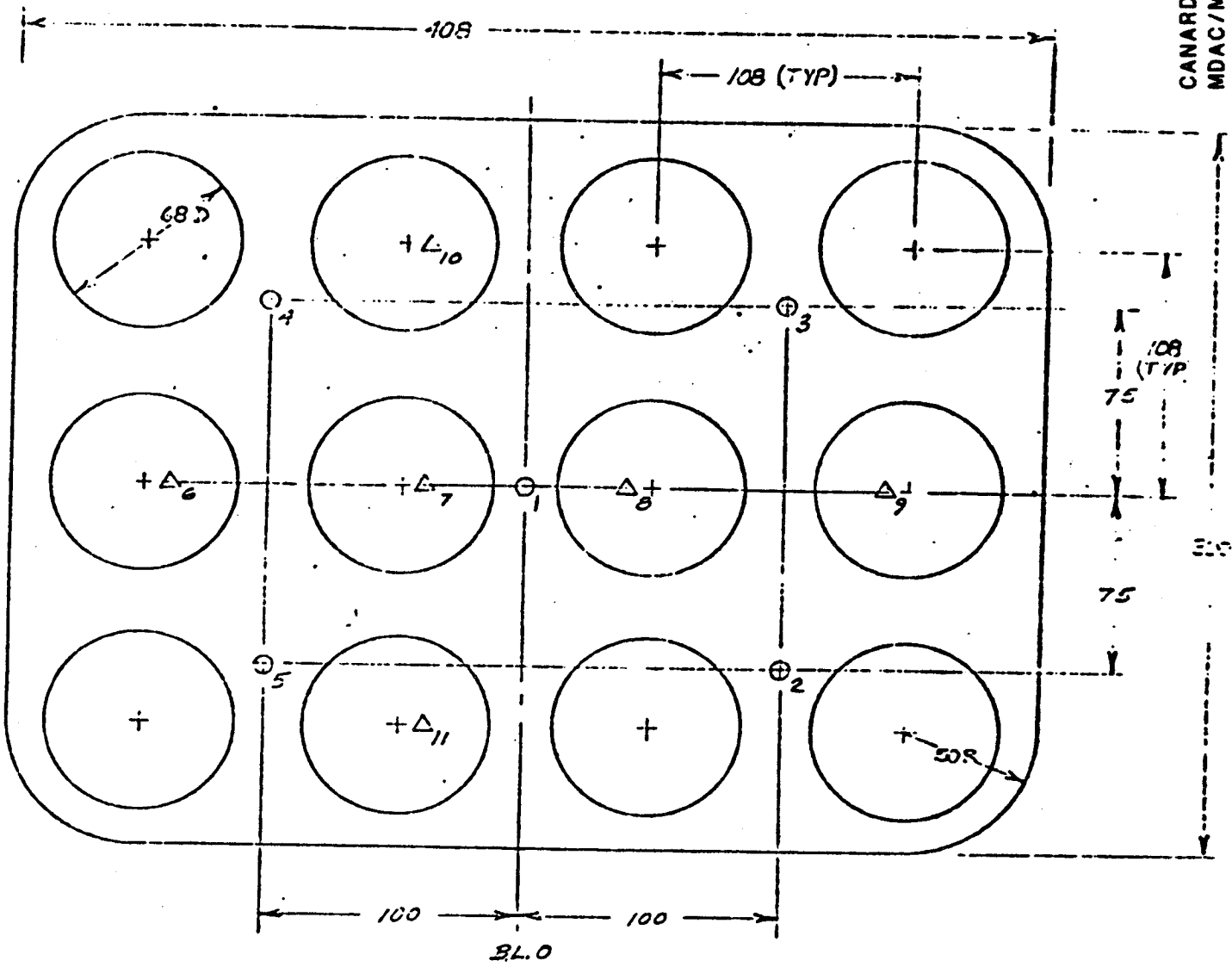


FIGURE 2. BOOSTER GENERAL ARRANGEMENT

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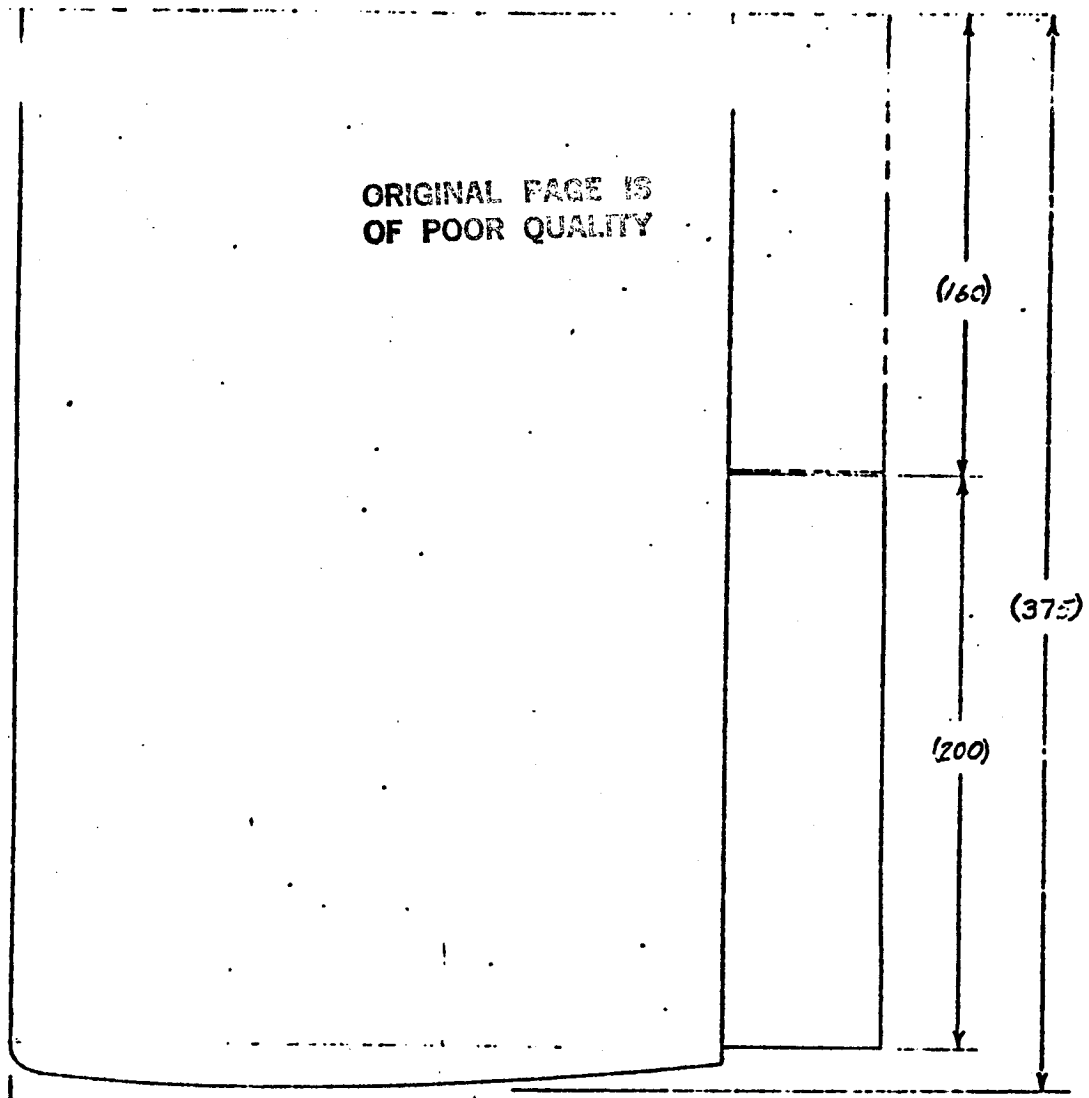
- PRESSURE TAPS ON BASE PLATE. TAPS 1 THRU 5.
- △ PRESSURE TAPS ON NOZZLE EXITS. TAPS 6 THRU 11.

DIMENSIONS SHOWN ARE FULL SCALE IN INCHES
 BASE AREA = 834 FT² , NOZZLE EXIT AREA IS 303 FT²

FIGURE 3. BASE PRESSURE TAP LOCATIONS

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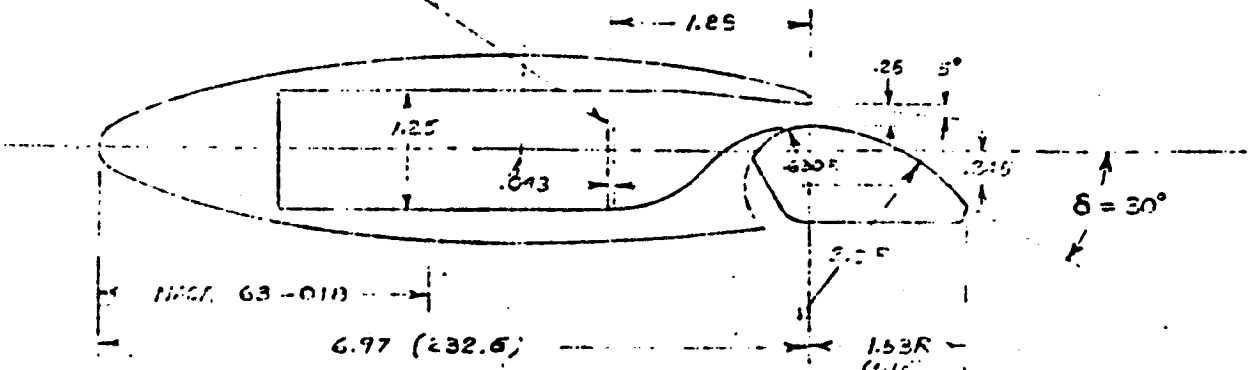
CANARD BOOSTER
 MDAC/MMC
 DR#1120 A-1- 126



X 1392 FOR J7
 X 2174 FOR J8

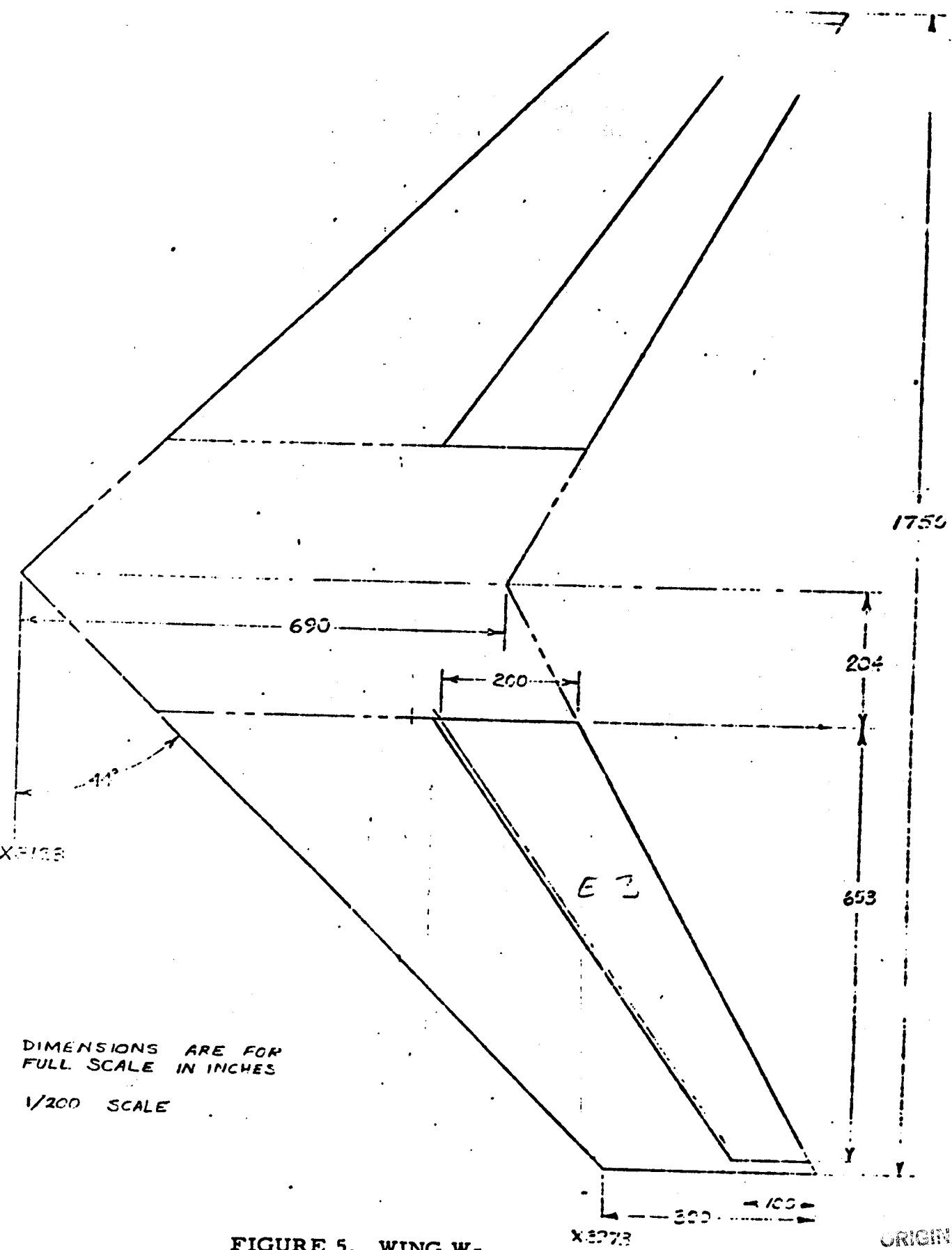
NOTE: DIMENSIONS ARE IN INCHES
 DIMENSIONS IN PARENTHESES
 ARE FULL SCALE.

22 1/2 OREN PERFORATED PLATE
 .045 IN. DIA HOLES



SCALE: 1/2 INCH
 SIZE

FIGURE 4. JET CANARD, J7 AND J8



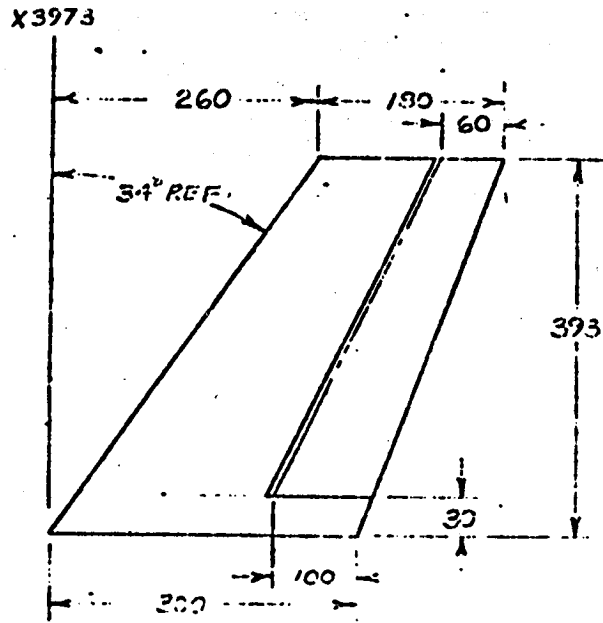
DIMENSIONS ARE FOR
FULL SCALE IN INCHES
1/200 SCALE

FIGURE 5. WING W₅

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DR#1120 A-1-128

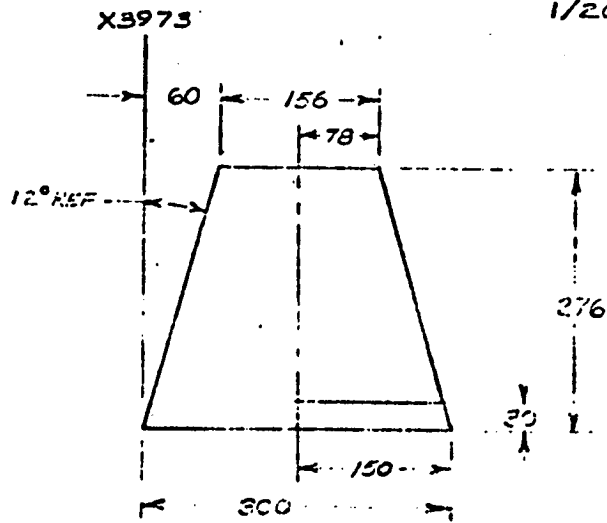
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TIP FIN V7

DIMENSIONS ARE FOR
FULL SCALE IN INCHES

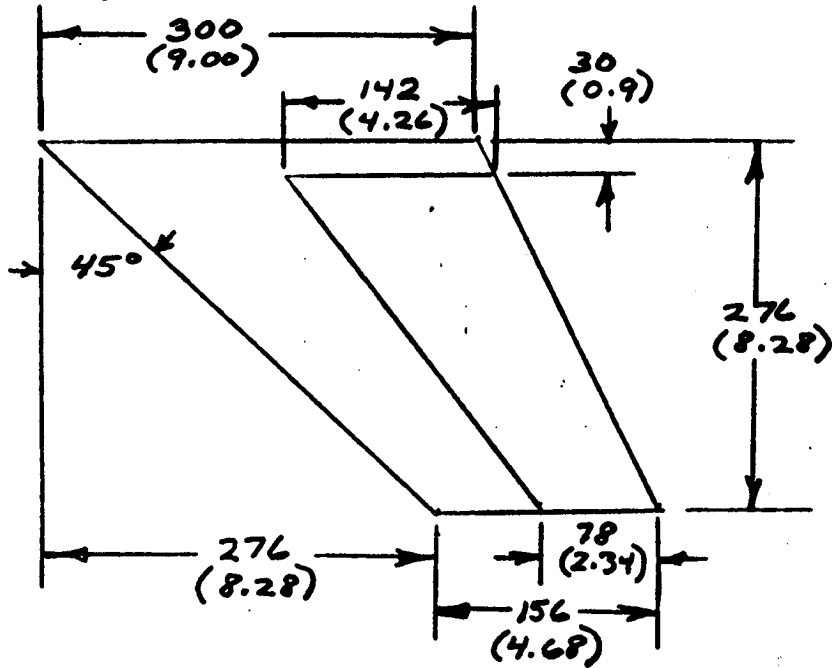
1/200 SCALE



TIP FIN V6

FIGURE 6. WING TIP FINS V6, V7

FS 3973
(119.19)



CANARD BOOSTER
MDAC/MMC
DR#1120 A-1- 129

NOTES:

- ALL DIMENSIONS IN INCHES
- MODEL DIMENSIONS IN PARENTHESES,
ALL OTHERS FULL SCALE
- FUSELAGE NOSE AT F.S. 1030

FIGURE 7. VENTRAL TIP FIN V₈R₈

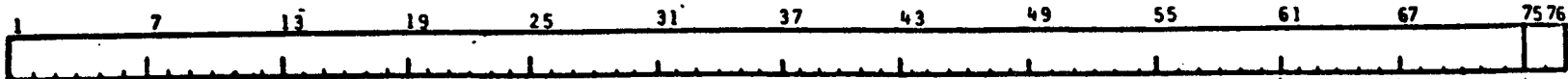
TEST NSROC-3210 DATA SET/RUN NUMBER
COLLATION SUMMARY

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	Parameters/Values				Mach Numbers						
		a	B	e	c	B	r		POS	POS	i _c	i _w	.7	.8	.9	1.0	1.125		
AN3021	BIC2F2W1VI	A	0	0	10	0	0	5	1	1	3°	0°			232	236	240	244	248
22		0	A	T	T	T	T							233	237	241	245	249	
23		6	T											234	238	242	246	250	
24		15	T					4						235	239	243	247	-	
25		A	0					5						83	87	91	95	99	
26		0	A	10										84	88	92	96	100	
27		6	T	T										85	89	93	97	101	
28		15	T					4						86	90	94	98	-	
29		A	0	20				5						199	203	207	211	215	
30		0	A	T										200	204	208	212	216	
31	1	6	T					4						201	205	209	213	-	
32		15	T					4						202	206	210	214	-	
33		A	0	0	20			5						251	255	259	263	267	
34		0	A	T	T									252	256	260	264	268	
35		6	T											253	257	261	265	269	
36		15	T					4						254	258	262	266	-	
37		A	0		0	10		5						164	168	172	176	180	
38		0	A	T	T									165	169	173	177	181	
39		6	T											166	170	174	178	182	
40		15	T					4						167	171	175	179	-	

TEST RUN NUMBERS

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COEFFICIENTS: ALPHA SCHEDULE A: -9, 0, 2, 4, 6, 8, 10, 15, 20
 a or B BETA SCHEDULE A: -6, -3, 0, 3, 6
 SCHEDULES

IDPVAR(1) IDPVAR(2) NDV

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MSFC
DR#1164 A-1- 131

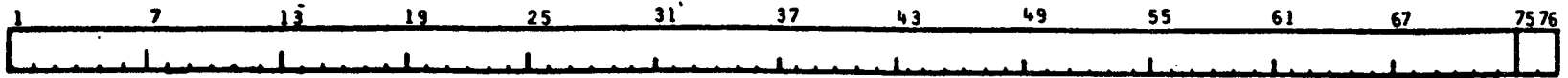
TEST NSRDC 3210 DATA SET/RUN NUMBER
COLLATION SUMMARY

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	Parameters/Values											Mach Numbers			
		a	B	e	c	B	r		CND POS	WNG POS	i _c	i _w	m	.4	.5	.7	.8	.9	1.0	1.125			
<u>RN3062</u>	<u>BIWI V2</u>	0	A	0	-	0	-	5	-	1	-	0°	-	-	-	272	276	280	284	288			
63		6	T	T	T	T	T	T	T	T	T	T	T	T	-	-	273	277	281	285	289		
64		15													-	-	274	278	282	286	290		
65	<u>BIWI VI</u>	A	0												-	-	291	295	299	303	307		
66		0	A												-	-	292	296	300	304	308		
67		6	T												-	-	293	297	301	305	309		
68		15						1							-	-	294	-	-	-	-		
69	<u>B</u>	A		-		-		3							-	-	-	-	307	308	309		
70	<u>BIC2F2W1V1E3P</u>	A	0	0	0	0	0	1	1	1	3°	0°	0	-	310	-	-	-	-	-			
71		0	A	T	T	T	T	T	T	T	T	T	T	-	311	-	-	-	-	-			
72		6	T											-	312	-	-	-	-	-			
73		15												-	313	-	-	-	-	-			
74		A	0										.732	-	314	-	-	-	-	-			
75		0	A									T		-	315	-	-	-	-	-			
76		6	T											-	316	-	-	-	-	-			
77		15												-	317	-	-	-	-	-			
78		A	0									0	318	-	318	-	-	-	-	-			
79		0	A									T	319	-	319	-	-	-	-	-			
80		6	T											320	-	320	-	-	-	-			
81		15												321	-	321	-	-	-	-			

TEST RUN NUMBERS

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COEFFICIENTS: ALPHA SCHEDULE A: -4, 0, 2, 4, 6, 8, 10, 15, 20 IDPVAR(1) IDPVAR(2) INDV
 a or B BETA SCHEDULE A: -6, -3, 0, 3, 6
 SCHEDULES

CANARD BOOSTER
MSFC
DR#1164 A-1- 133

TEST NSDOC 3210 DATA SET/RUN NUMBER
COLLATION SUMMARY

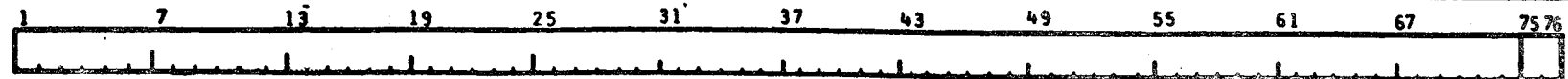
01

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	Parameters/Values					Mech Numbers					
		a	B	e	c	a	r		CND POS	WNG POS	i _c	i _w	m	.5					
RN3082	BIC2F2WIVIE3P	A	0	0	0	0	0	1	1	1	3	0	.753		322				
083		0	A	T	T	T	T	T	T	T	T	T	T		323				
084		6	T												324				
085		15	T												325				
086	BIC2F2WIVIE3	A	0										0		326				
087		0	A										T		327				
088		6	T												328				
089		15	T												329				
090		A	0										.763		330				
091		0	A										T		331				
092		6	T												332				
093		15	T												333				
094		A	0										0		334				
095		0	A										T		335				
096		6	T												336				
097		15	T												337				
098		A	0										.760		341				
099		0	A										T		342				
100		6	T												343				
101		15	T												344				

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TEST RUN NUMBERS



COEFFICIENTS: ALPHA SCHEDULE A: -9, 0, 2, 4, 6, 8, 10, 15, 20 IDPVAR(1) IDPVAR(2) NDV
 a or B BETA SCHEDULE A: -6, -3, 0, 3, 6
 SCHEDULES

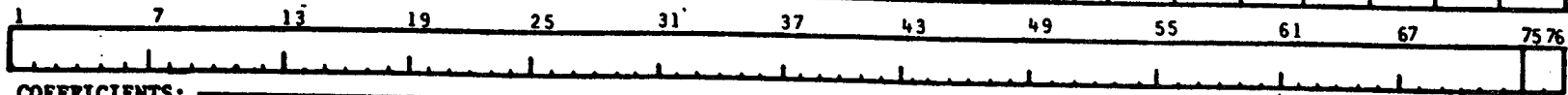
TEST NSROC 3210 DATA SET/RUN NUMBER
COLLATION SUMMARY

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	Parameters/Values					Mach Number					
		a	B	δ_e	δ_c	δ_a	δ_r		CND POS	WNG POS	l_c	l_w	m	.4	.5				
<u>BN3102</u>	<u>BIC2F2WVIE4</u>	A	0	0	0	0	0	1	1	1	3°	0°	0	345	-				
03		0	A	T	T	T	T	T	T	T	T	T	T	346	-				
04		6	T											347	-				
05		10	T											348	-				
06		A	0											349	-				
07		0	A										.781	350	-				
08		6	T											351	-				
09		10	T											352	-				
10		A	0										0	-	354				
11		0	A											-	355				
12		6	T											-	356				
13		10	T											-	357				
14		A	0											-	358				
15		0	A										.717	-	359				
16		6	T											-	360				
17		10	T											-	361				
18	<u>BIC2F2WVIE2</u>	A	0										0	362	-				
19		0	A											363	-				
20		6	T											364	-				
21		10	T											365	-				

TEST RUN NUMBERS

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COEFFICIENTS: ALPHA SCHEDULE A: -4, 0, 2, 4, 6, 8, 10, 15, 20 IDPVAR(1) | IDPVAR(2) | NDV
BETA SCHEDULE A: -6, -3, 0, 3, 6

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DR#1164 A-1- 135

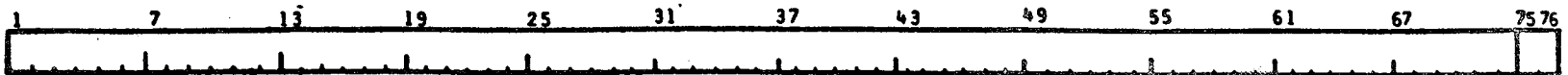
TEST NSRDC 310 DATA SET/RUN NUMBER
COLLATION SUMMARY

13

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	Parameters/Values					Mach Number	
		α	β	δ_e	δ_c	δ_a	δ_r		CND POS	WNG POS	i_c	i_v	m	.4	.5
<u>RK3142</u>	<u>B1C2F2W1V1E1</u>	A	0	0	0	0	0	1	2	1	3'	0'	0	392	-
43		0	A	—	—	—	—	—	—	—	—	—	—	393	-
44		6	T	—	—	—	—	—	—	—	—	—	—	394	-
45		10	T	—	—	—	—	—	—	—	—	—	—	395	-
46		A	0	—	—	—	—	—	—	—	—	—	.335	396	-
47		0	A	—	—	—	—	—	—	—	—	—	—	397	-
48		6	T	—	—	—	—	—	—	—	—	—	—	398	-
49		10	T	—	—	—	—	—	—	—	—	—	—	399	-
50		A	0	—	—	—	—	—	—	—	—	0	-	401	-
51		0	A	—	—	—	—	—	—	—	—	—	—	-	402
52		6	T	—	—	—	—	—	—	—	—	—	—	-	403
53		15	T	—	—	—	—	—	—	—	—	—	—	-	404
54		A	0	—	—	—	—	—	—	—	—	—	.459	-	405
55		0	A	—	—	—	—	—	—	—	—	—	—	-	406
56		6	T	—	—	—	—	—	—	—	—	—	—	-	407
57		15	T	—	—	—	—	—	—	—	—	—	—	-	408
58	<u>B1C2F2W1V1</u>	A	0	—	—	—	—	—	—	—	—	—	-	-	410
59		0	A	—	—	—	—	—	—	—	—	—	—	-	411
60		6	T	—	—	—	—	—	—	—	—	—	—	-	412
61		15	T	—	—	—	—	—	—	—	—	—	—	-	413

TEST RUN NUMBERS



COEFFICIENTS: ALPHA SCHEDULE A: -4, 0, 2, 4, 6, 8, 10, 15, 20 IDPVAR(1) IDPVAR(2) NDV
 0 OF 8 BETA SCHEDULE B: -6, -3, 0, 3, 6
 SCHEDULES

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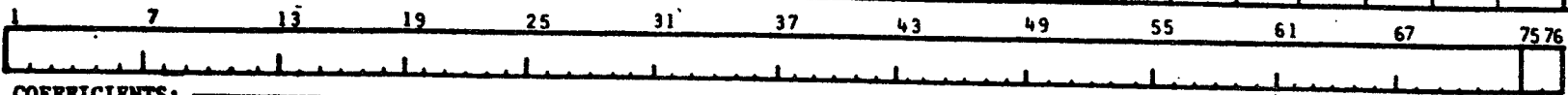
TEST ASROC-3210 DATA SET/RUN NUMBER
COLLATION SUMMARY

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHED.		PARAMETERS/VALUES				NO. of RUNS	Parameters/Values				Mach Number					
		α	β	δ_e	δ_c	δ_a	δ_r		CND POS	WNG POS	i_c	i_w	.4	.5				
<u>PK3162</u>	<u>BIC2F2WIV1</u>	A	0	0	0	0	0	1	1	1	3'	0'	-	413				
63		0	A	~	~	~	~	~	~	~	~	~	-	414				
64		6	~										-	415				
65		15											-	416				
66	<u>BIC2F2WIV1B3P</u>	A	0										417	-				
67		0	A										418	-				
68		6	~										419	-				
69		15											420	-				
70		A	0										-	421				
71		0	A										-	422				
72		6	~										-	423				
73		15											-	424				
74	<u>BIC2F2WIV163</u>	A	0										425	-				
75		0	A										426	-				
76		6	~										427	-				
77		15											428	-				
78		A	0										-	429				
79		0	A										-	430				
80		6	~										-	431				
81		15											-	432				

TEST RUN NUMBERS

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COEFFICIENTS: ALPHA SCHEDULE A: -4, 0, 2, 4, 6, 8, 10, 15, 20 IDPVAR(1) IDPVAR(2) NDV
 α or β BETA SCHEDULE A: -6, -3, 0, 3, 6
 SCHEDULES

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DR#1164 A-1- 137

TEST MSRDC 3210 DATA SET/RUN NUMBER
COLLATION SUMMARY

51

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	Parameters/Values					Mach Number					
		α	B	δ_e	δ_c	δ_a	δ_r		CND POS	WNG POS	l_c	l_w		.4	.5	.7	.8	.9	1.0
<u>182</u>	<u>BIC2F2WIVIG4</u>	A	0	0	0	0	0	1	1	1	3	0		433	434	435	-	436	438
183		0	A											-	-	-	-	437	-
184		A	0											433	-	-	-	-	-
185		0	A											451	-	-	-	-	-
186		6	T											452	-	-	-	-	-
187		15	T											453	-	-	-	-	-
188		A	0											-	431	-	-	-	-
189		0	A											-	454	-	-	-	-
190		6	T											-	455	-	-	-	-
191		15	T											-	456	-	-	-	-
192	<u>BIC2F2WIVIG2</u>	A	0											439	-	-	-	-	-
193		0	A											445	-	-	-	-	-
194		6	T											446	-	-	-	-	-
195		15	T											447	-	-	-	-	-
196		A	0											-	440	-	-	-	-
197		0	A											-	448	-	-	-	-
198		6	T											-	449	-	-	-	-
199		15	T											-	450	-	-	-	-
200		A	0											439	440	441	-	442	444
201		0	A											-	-	-	-	443	-

TEST RUN NUMBERS

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1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICIENTS:

α OF β
SCHEDULES

ALPHA SCHEDULE A: -9, 0, 2, 4, 6, 8, 10, 15, 20
BETA SCHEDULE A: -6, -3, 0, 3, 6

IDPVAR(1) IDPVAR(2) NDV

TEST NSRDC 3210 DATA SET/RUN NUMBER
COLLATION SUMMARY

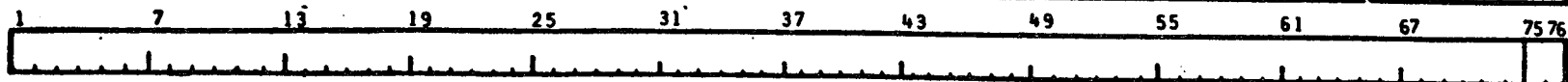
PRETEST

POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	Parameters/Values					Mach Number				
		α	β	δ_e	δ_c	δ_a	δ_r		CND POS	WNG POS	i_c	i_w	.4	.5				
<u>RK3202</u>	<u>BIC2F2WVI G1</u>	A	0	0	0	0	0	1	1	1	3	0	461	-				
3		0	A	T	T	T	T	T	T	T	T	T	462	-				
4		6	T										463	-				
5		15	T										464	-				
6		A	0										-	457				
7		0	A										-	458				
8		6	T										-	459				
9		15	T										-	460				

TEST RUN NUMBERS

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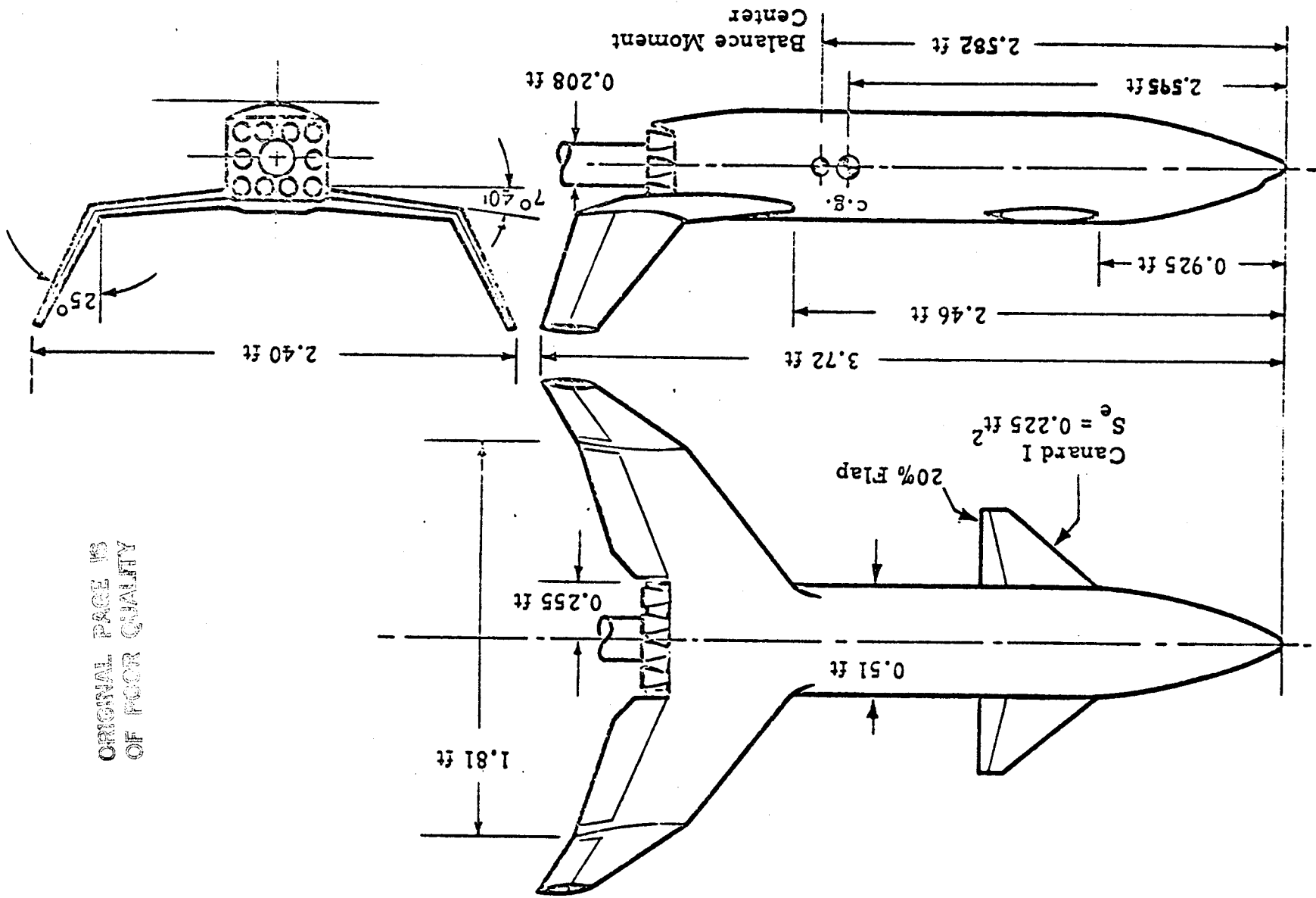


COEFFICIENTS: ALPHA SCHEDULE A: -4, 0, 2, 4, 6, 8, 10, 15, 20
 α or β BETA SCHEDULE A: -6, -3, 0, 3, 6
 SCHEDULES

IDPVAR(1) IDPVAR(2) NDV

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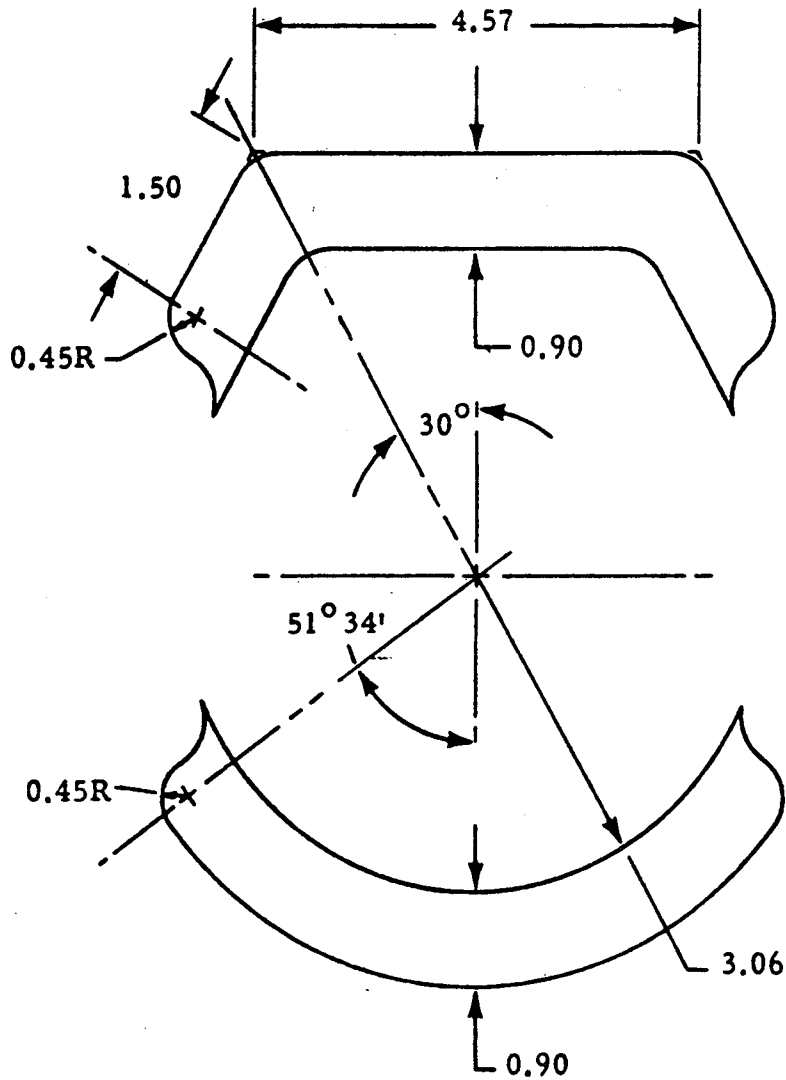
Fig. 2. - General Arrangement of a Typical High Wing - High Canard Configuration



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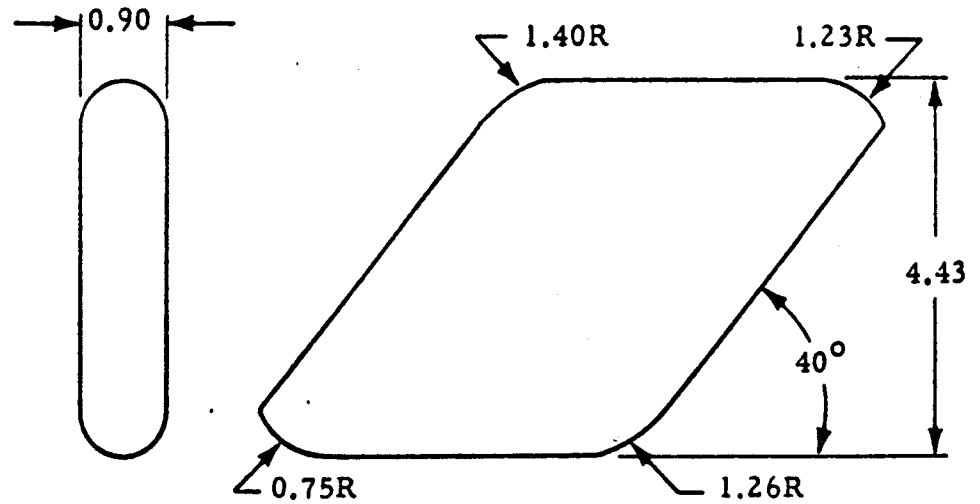
Top Body Mount

Note: All dimensions are in inches (model scale)



Bottom Body Mount

Wing Mount



Wing Pylon

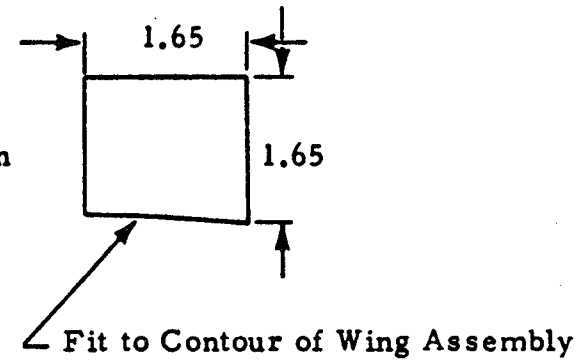


Figure 3. - Sketch of Dummy Engine Pods

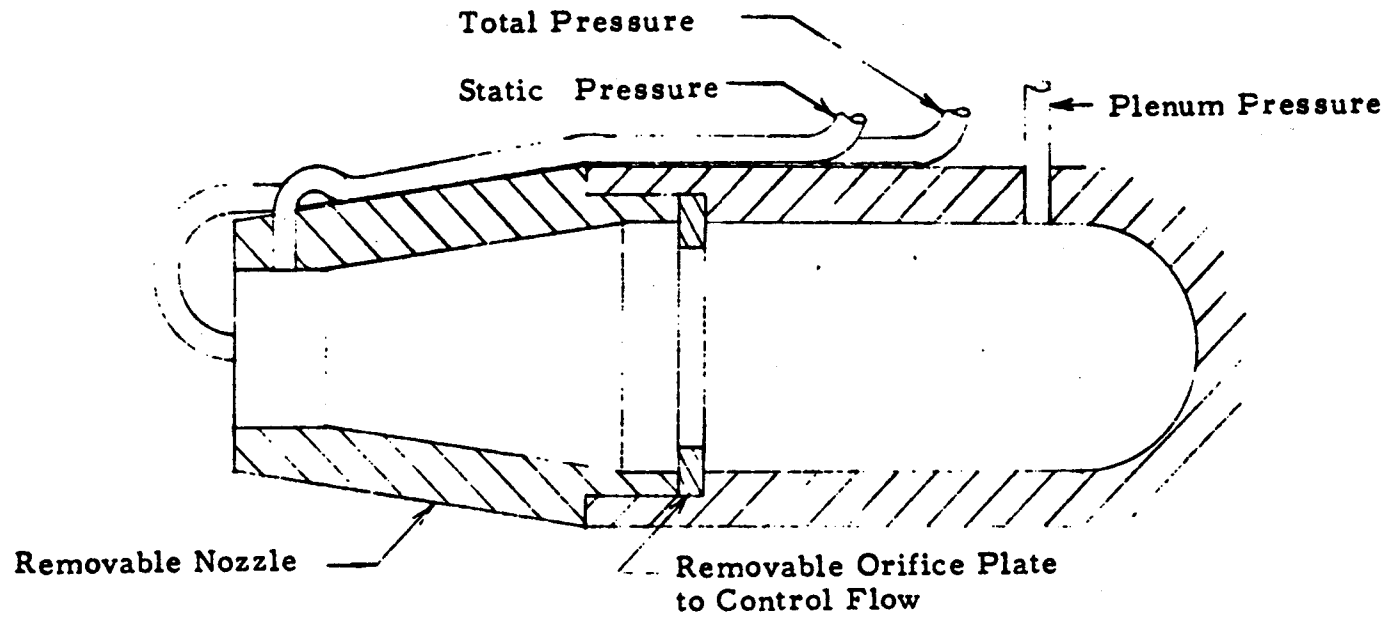


Figure 4. - Nozzle Instrumentation

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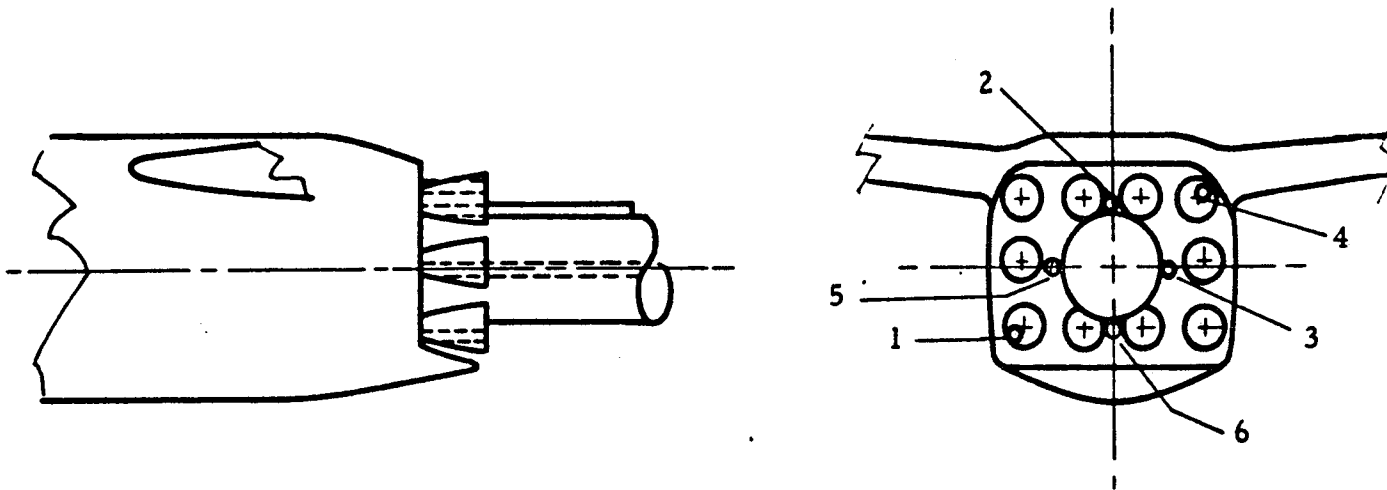


Figure 5. - Location and Identification of Base Pressure Tubes

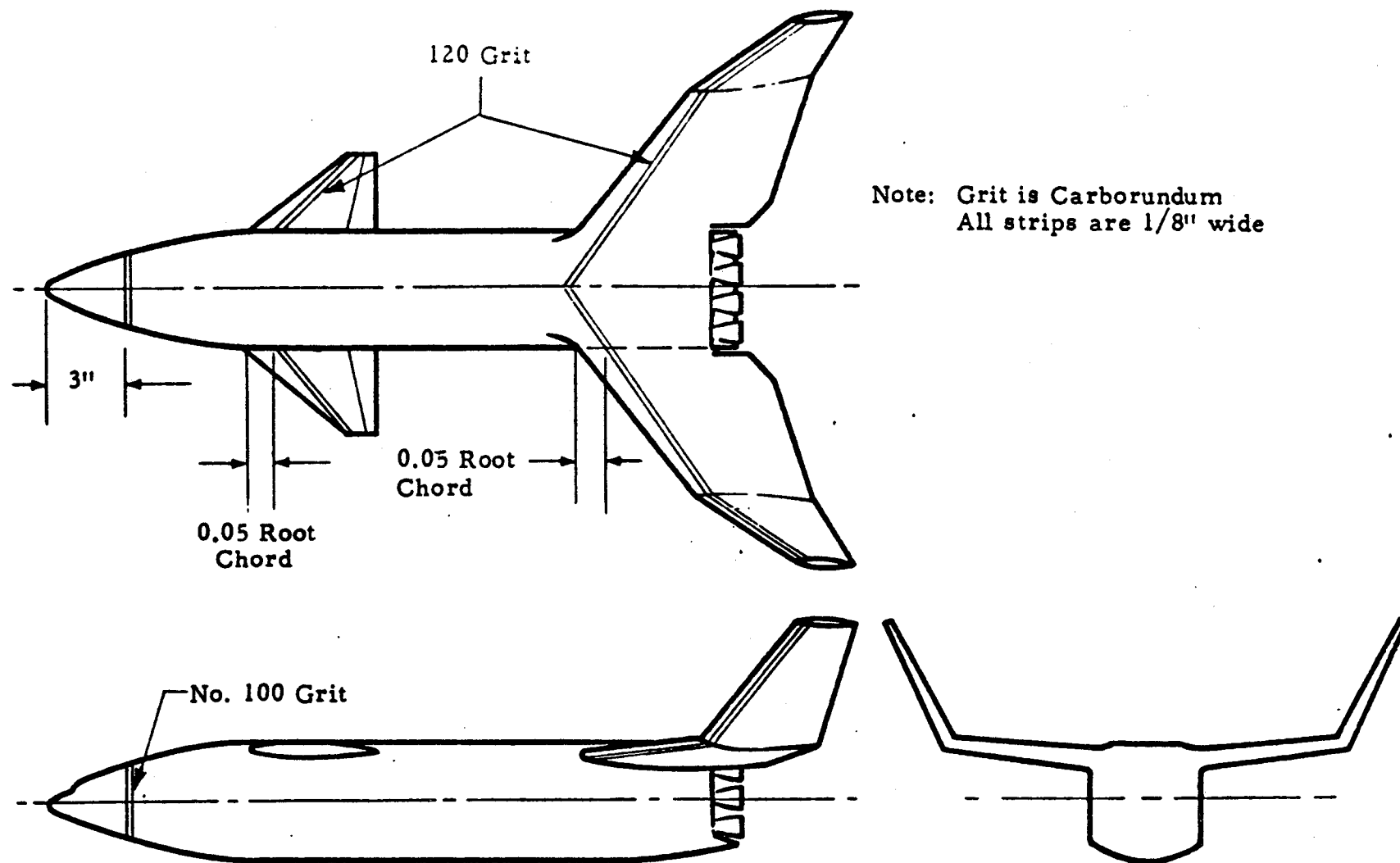


Figure 6. - Typical Transition Grit Installation on Body, Wing and Canard

TEST NSRDC 3310 DATA SET COLLATION SHEET

TABLE II.

PRETEST POSTTEST
 MACH NUMBERS POSTTEST
 PARAMETERS/VALUES

DATA SET IDENTIFIER	CONFIGURATION	SCHD.	PARAMETERS/VALUES						NO. OF RUNS	CND POS	WNC POS	LC	LV	FW	0.4	0.7	0.8	0.9	1.0
			A	B	C	D	E	F											
RV4 001	BIGZFW1VZ	A	0	0	0	0	0	1											
022		A	0	0	0	0	0	1											
023		L	0	0	0	0	0	1											
024		15	0	0	0	0	0	1											
025	BIGZFW1VZD1	A	0	0	0	0	0	1											
026		A	0	0	0	0	0	1											
027		6	0	0	0	0	0	1											
028		15	0	0	0	0	0	1											
029		6	0	0	0	0	0	1											
030		A	0	0	0	0	0	1											
031		A	0	0	0	0	0	1											
032		15	0	0	0	0	0	1											
033	BIGZFW1V1	A	0	0	0	0	0	1											
034		L	0	0	0	0	0	1											
035		6	0	0	0	0	0	1											
036		15	0	0	0	0	0	1											
037		6	0	0	0	0	0	1											
038		15	0	0	0	0	0	1											
039	BIGZFW1V2	A	0	0	0	0	0	1											
040		C	0	0	0	0	0	1											
041		A	0	0	0	0	0	1											
042		15	0	0	0	0	0	1											
043		6	0	0	0	0	0	1											
044		15	0	0	0	0	0	1											
045		6	0	0	0	0	0	1											
046		15	0	0	0	0	0	1											
047		6	0	0	0	0	0	1											
048		15	0	0	0	0	0	1											
049		6	0	0	0	0	0	1											
050		15	0	0	0	0	0	1											

COEFFICIENTS: $\beta A = -4.0, 2.4, 6.8, 10.15, 18$
 $\beta A = -6.3, 0.6$
 CANARD BOOSTER MSFC DR#1192 A-1-145

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TABLE II. (Continued)

TEST NSRDC 3310 DATA SET COLLATION SHEET

PRETEST

PARAMETERS/VALUES | MACH NUMBERS POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS											
		a	B	δ_c	δ_e	δ_a	δ_r		CND POS	WNG POS	i_c	i_w	Γ_w	0.4						
061	31CZF1W1V1	A	0	10	0	0	0	1	1	2	3°	0°	7°40'	110/0						
062		0	A											111/0						
063		6												112/0						
064	↓	15	Y											113/0						
065	81CZFZW1V1	A	0		20									114/0						
066		0	A											115/0						
067		6												116/0						
068	↓	15	Y	Y	Y									117/0						
069	51CZF1W1V1	A	0	20	0									119/0						
070		0	A											120/0						
071		6												121/0						
072		15	Y	Y	Y									122/0						
073		A	0	30	0									123/0						
074		0	A											124/0						
075		6												125/0						
076		15	Y	Y	Y	Y								126/0						
077		A	0	0	0	10								127/0						
078		0	A											128/0						
079		6												129/0						
080	↓	15	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	130/0						

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1	7	13	19	25	31	37	43	49	55	61	67	7576	
CLM	CLM	CLM	CLM	CLM	CLM	CLM	CLM	CLM	CLM	CLM	CLM	CLM	
EP(1)	EP(1)	EP(1)	EP(1)	EP(1)	EP(1)	EP(1)	EP(1)	EP(1)	EP(1)	EP(1)	EP(1)	EP(1)	
EP(3)	EP(3)	EP(3)	EP(3)	EP(3)	EP(3)	EP(3)	EP(3)	EP(3)	EP(3)	EP(3)	EP(3)	EP(3)	
											IDPVAR(1)	IDPVAR(2)	NDV

COEFFICIENTS: 2A = -4, 0, 2, 4, 6, 8, 10, 15, 18

a or B SCHEDULES BA = -6, -3, 0, 3, 6

TABLE II. (Continued)
 TEST NSRDC 3310 DATA SET COLLATION SHEET

PRETEST

PARAMETERS/VALUES | MACH NUMBERS POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	PARAMETERS/VALUES						
		a	B	δ_a	δ_c	δ_e	δ_r		CND POS	WNG POS	α_c	α_w	Γ_w	0.4	
081	F1C2F1W1V1	A	0	0	0	20	0	1	1	2	3°	0°	7°40'	131/0	
082		B	A											137/0	
083		6												138/0	
084		15	Y			Y	Y							139/0	
085		A	0			0	-5							135/0	
086		0	B											136/0	
087		6												137/0	
088		15					Y							138/0	
089		0					-10							139/0	
090		6												140/0	
091	Y	15	Y	Y			Y	Y			Y			141/0	
092	B1C2F1W1V2D1	A	0	-20			0		1			-7°40'		142/0	
093		0	A											143/0	
094		6												144/0	
095		15	Y	Y										145/0	
096		A	0	-10										150/0	
097		0	A											151/0	
098		6												152/0	
099	Y	15	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	153/0	

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1	7	13	19	25	31	37	43	49	55	61	67	75	76
LV	CA	CLM	CEL	EYN	CY	CL	CD	L/D	CAR				

COEFFICIENTS:

$\alpha A = -4, 0, 2, 4, 6, 8, 10, 15, 18$
 $\beta A = -6, -3, 0, 3, 6$
 $\beta B = -6, 0, 6$

→ IDPVAR(1) | IDPVAR(2) | NDV

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TABLE II. (Continued)
TEST N5RDC 3310 DATA SET COLLATION SHEET

PRETEST

PARAMETERS/VALUES | MACH NUMBERS POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	PARAMETERS/VALUES									
		a	B	δa	δc	δe	δr		CND Pos	WNG POS	μ_L	μ_W	Γ_y	0.4				
V4100	51C2F1W1V2D1	A	0	10	0	0	0	1	1	1	3°	0°	-7°40'	154				
101		0	A											155				
102		6												156				
103		15	Y											157				
104	31C2F2W1V2Df	A	0		20									158				
105		0	A											159				
106		6												160				
107		15	Y	Y										161				
108	51C2F1W1V2D1	A	0	20	0									162				
109		0	A											163				
110		6												164				
111		15	Y	Y										165				
112		A	0	30										166				
113		0	A											167				
114		6												168				
115		15	Y	Y										169				
116		A	0	0	10									170				
117		0	A											171				
118		6												172				
119		15	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	173				

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1	7	13	19	25	31	37	43	49	55	61	67	7576
ICA	CLM	CRS	CYN	CY	CL	CD	L/O	CAB				1.3
B2(1)	B2(3)											

COEFFICIENTS: VA = -4, 0, 2, 4, 6, 8, 10, 15, 18

a or B _____

SCHEDULES BA = -6, -3, 0, 3, 6

IDPVAR(1) | IDPVAR(2) | NDV

TABLE II. (Continued)

TEST NSRDC 3310 DATA SET COLLATION SHEET

PRETEST

POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.	PARAMETERS/VALUES						NO. OF RUNS	CND	MNC	Lc	Lw	Fw	0.4	0.7	0.8	0.9
			A	B	5	6	5a	6a										
5ND153	81G2F1W1V4	A	0	0	0	0	0	0	1	1	1	3	0	-7%	0			
179		D	A															
180		6	I															
181		15	I															
182	81G2F1W1	A	0											7%	0			
193		0	A															
194		6	I															
195		15	I															
146	81G2F1W1V1G5	A	0															
147		0	A															
148		6	I															
149		15	I															
150	81G2F1W1V4	A	0															
151		0	A															
152		6	I															
153		15	I															

1	7	13	19	25	31	37	43	49	55	61	67	7576
LN	CA	CLM	CL	CYN	CV	CL	CD	L/D	CAB			

COEFFICIENTS:

$\mu A = -4.02 \times 10^{-15}$

8 OF 8
SCHEDULES

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TABLE II. (Continued)

TEST NSRDC 3210 DATA SET/RUN NUMBER
COLLATION SUMMARY

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)										
		a	B	β_e	β_c	β_a	β_r		CND POS	WNC POS	i_c	i_w	0.4	0.5	0.7	0.8	0.9	1.0	1.125
RN3001	BIC2F2W1V1	A	0	0	0	0	0	5	1	1	3°	0°			5	9	13	17	21
002		0	A					5							6	10	14	18	22
003		6	A					5							7	11	15	19	23
004		15	A					5							8	12	16	20	24
193	BIC2F2W1VIG2	0	A					1					445						
194		6	A					1					446						
195		15	A					1					447						
200		A	0					5					439	440	441		442	444	
202	BIC2F2W1VIG1	A	0					1					461						
203		0	A					1					462						
204		6	A					1					463						
205		15	A	↓	↓	↓	↓	1	↓	↓	↓	↓	464						

TEST RUN NUMBERS

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICIENTS:

a or B SCHEDULES

Alpha Schedule A: -4, 0, 2, 4, 6, 8, 10, 15, 20
Beta Schedule A: -6, -3, 0, 3, 6

→ IDPVAR(1) | IDPVAR(2) | NDV

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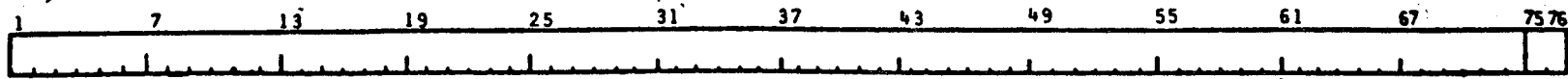
DR#1192 A-1- 153

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TABLE II. (Continued)
 TEST NSRDC-3110 DATA SET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)													
		a	B	δ_c	δ_e	δ_a	δ_r		CND POS	WNC POS	i_c	i_w	T_w									
RN2553	BIC2FIWIV2	A	0	0	0	0	-		1	1	3°	0°	7'40"								0.4	426
54		0	A																			427
55		6	A																			428
56		15	A																			429
57	BIC2FIWIVI	A	0				0															557
58		0	A																			558
59		6	A																			559
60		15	A																			560
61	BIC2FIWIV102	A	0																			847
62		0	A																			848
63		6	A																			849
64		15	A																			850

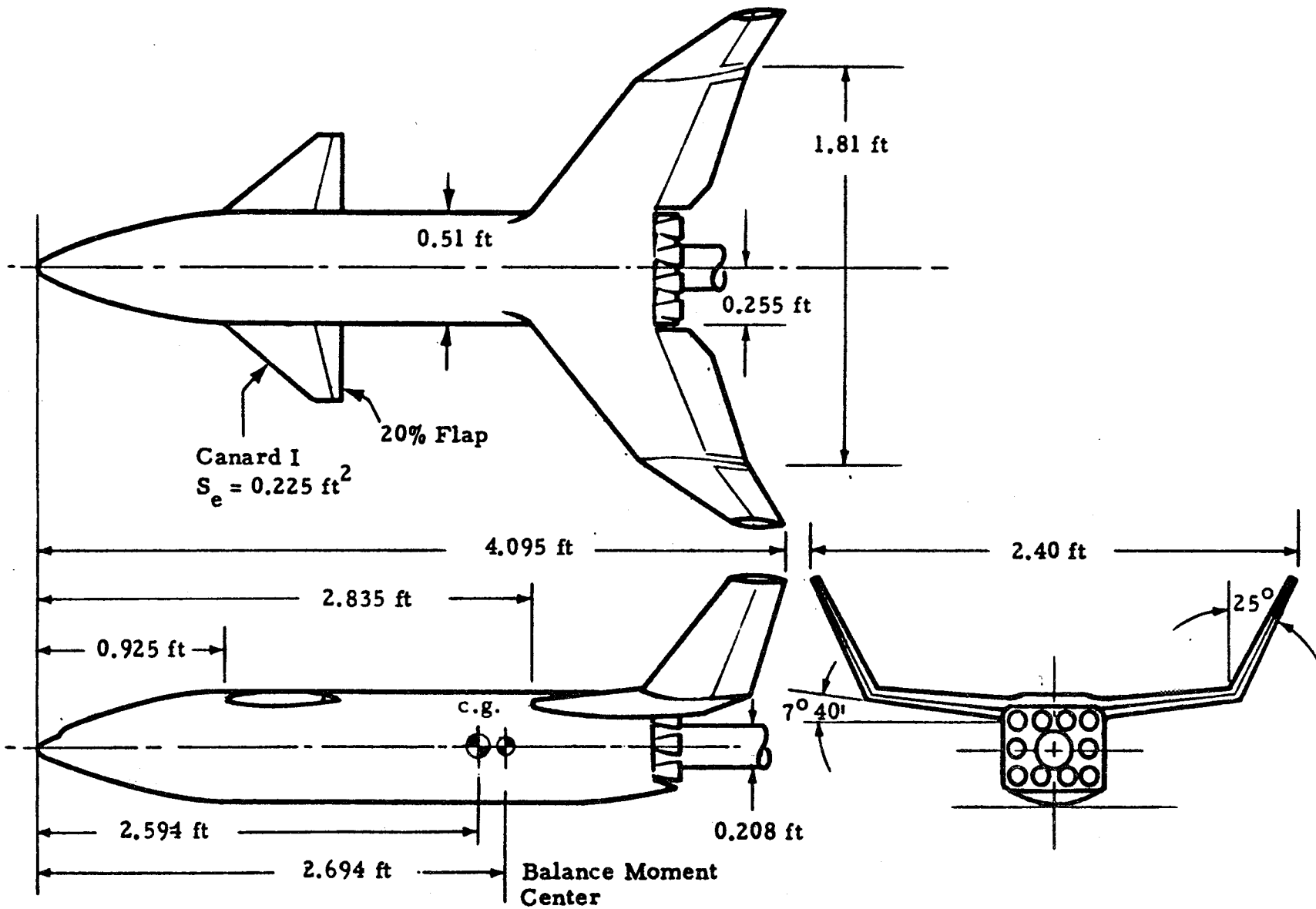


COEFFICIENTS: Alpha Schedule: A -4, 0, 2, 4, 6, 8, 10, 15, 20
Beta Schedule: A -6, -3, 0, 3, 6

→ IDPVAR(1) IDPVAR(2) IDV

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Fig. 2- General Arrangement of a Typical High Wing - High Canard Configuration

NOTE:
Dimensions in inches

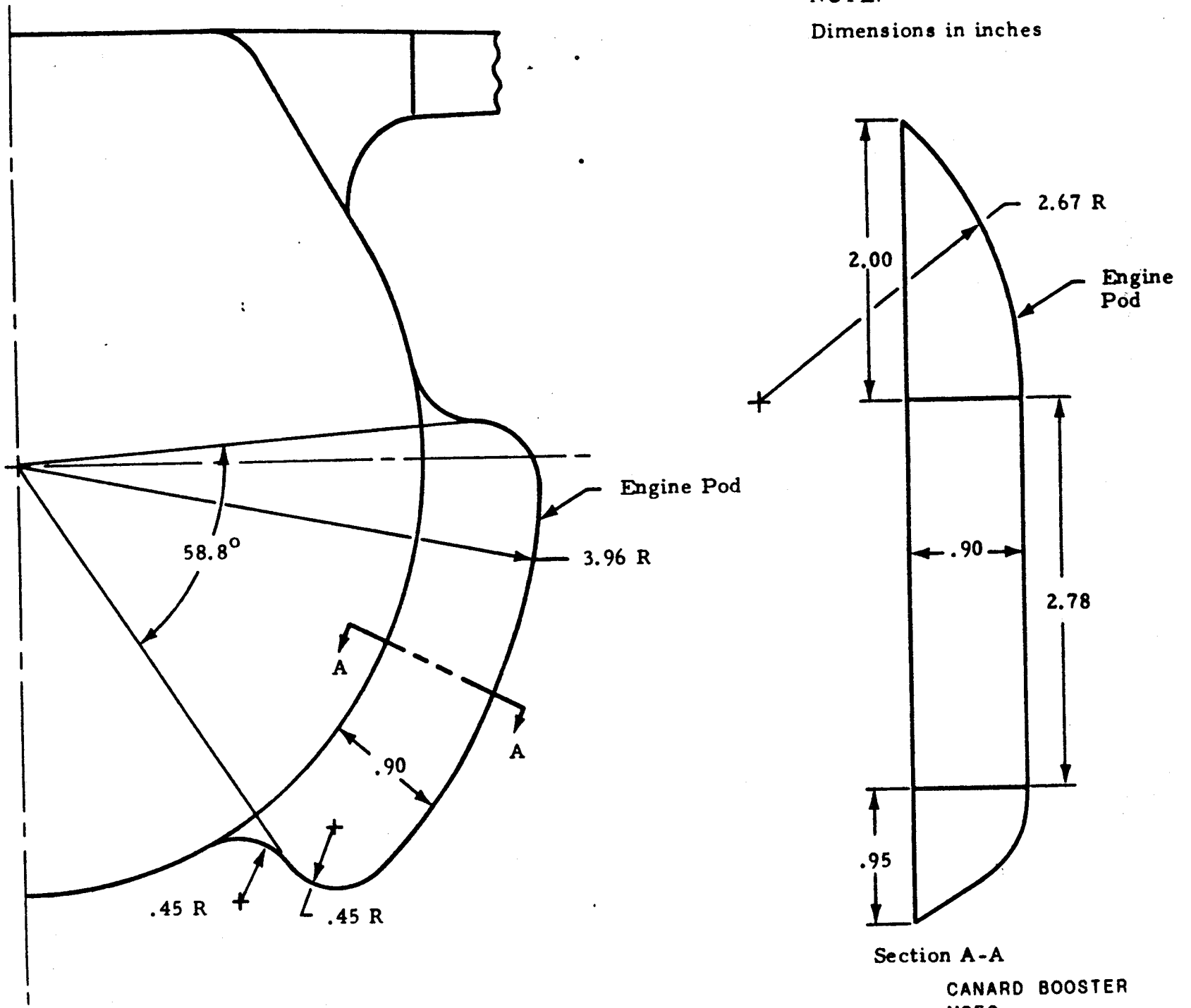


Fig. 3 - Configuration and Location of Dummy Engine Pods

Section A-A
CANARD BOOSTER
MSFC
DR#1192 A-1- 157

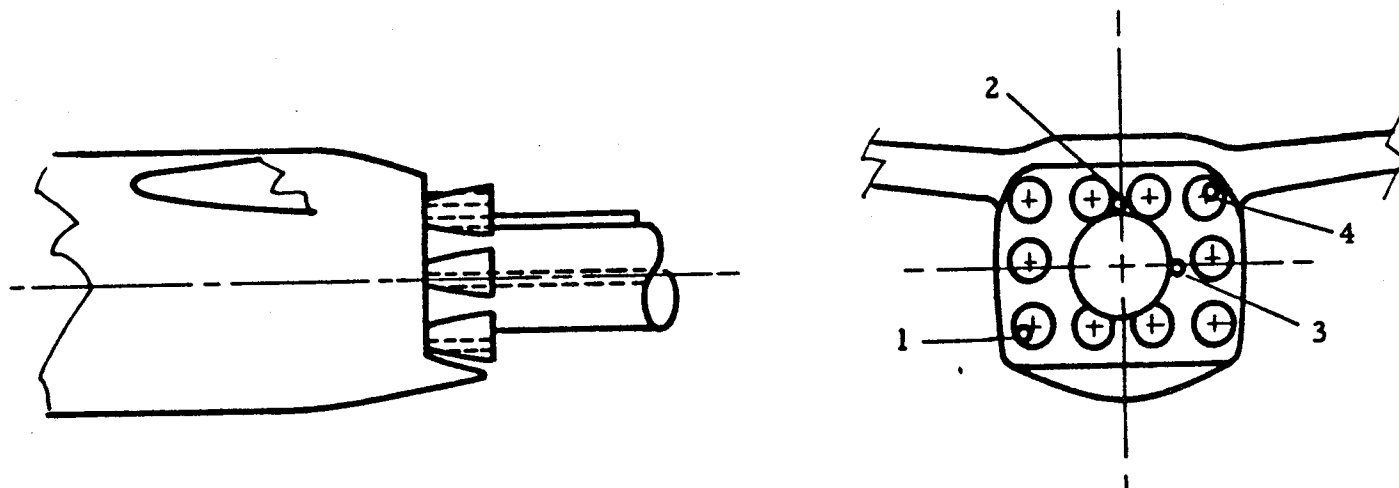
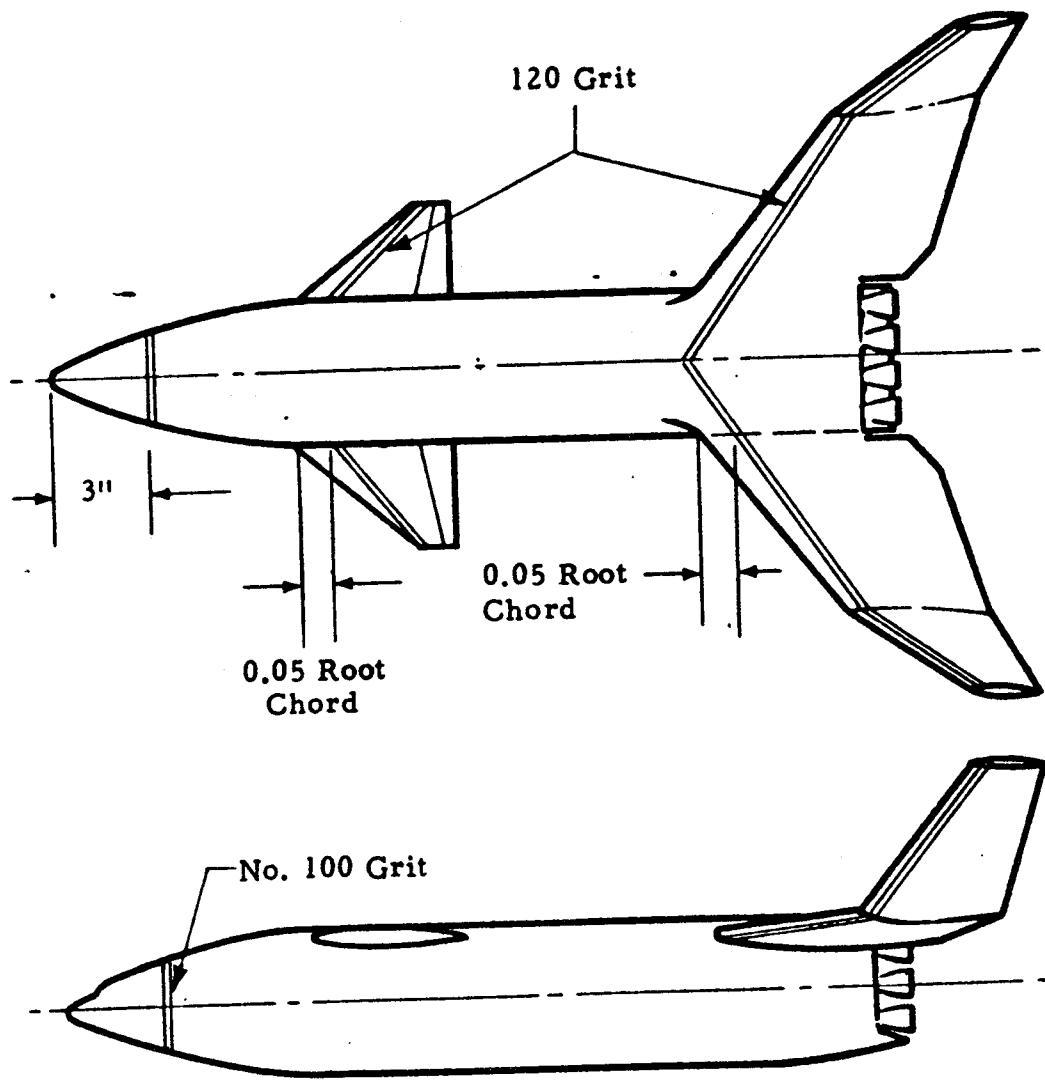


Fig. 4 - Location and Identification of Base Pressure Tubes



Note: Grit is Carborundum
All strips are 1/8" wide

Fig. 5 - Typical Transition Grit Installation on Body, Wing and Canard

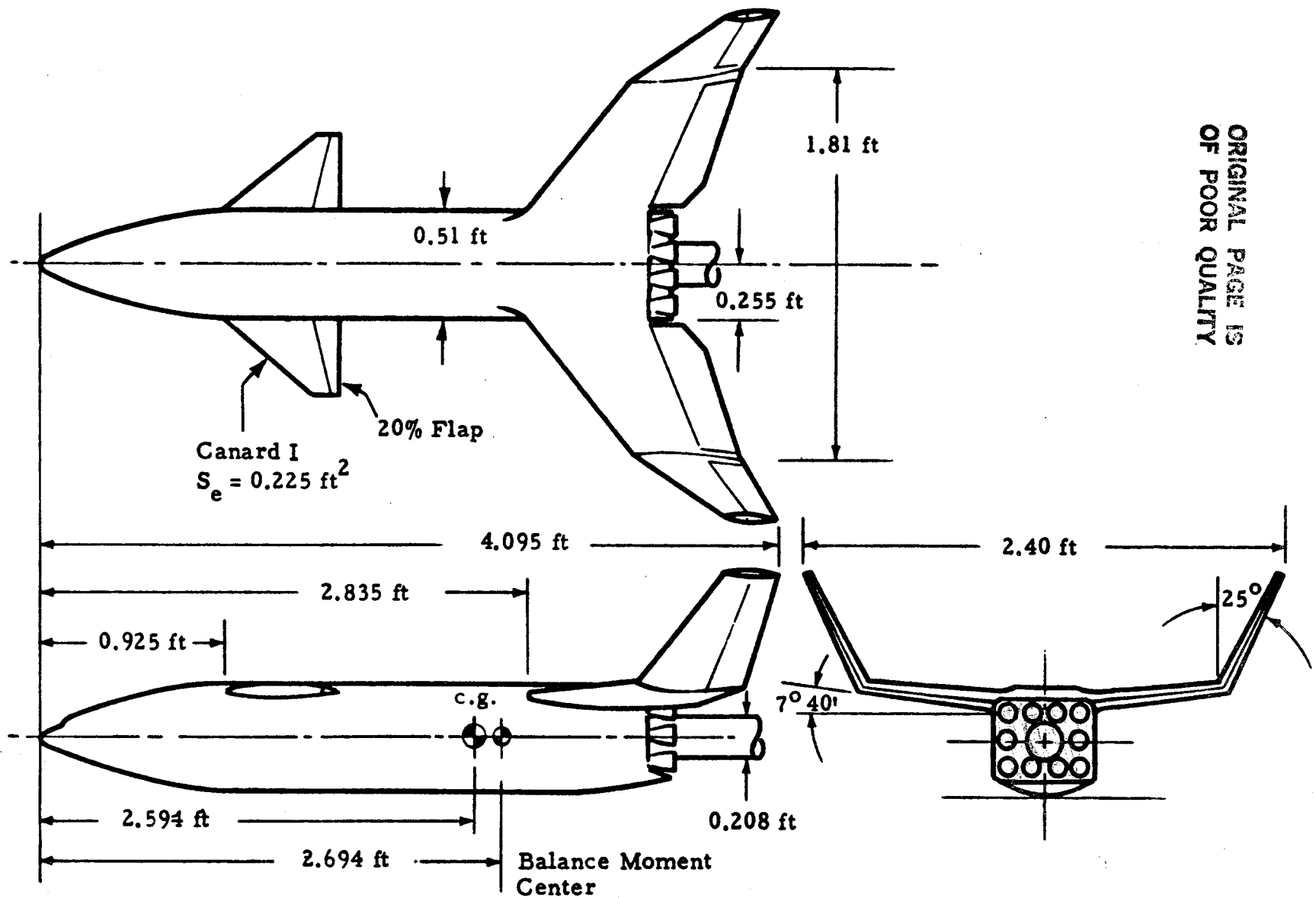
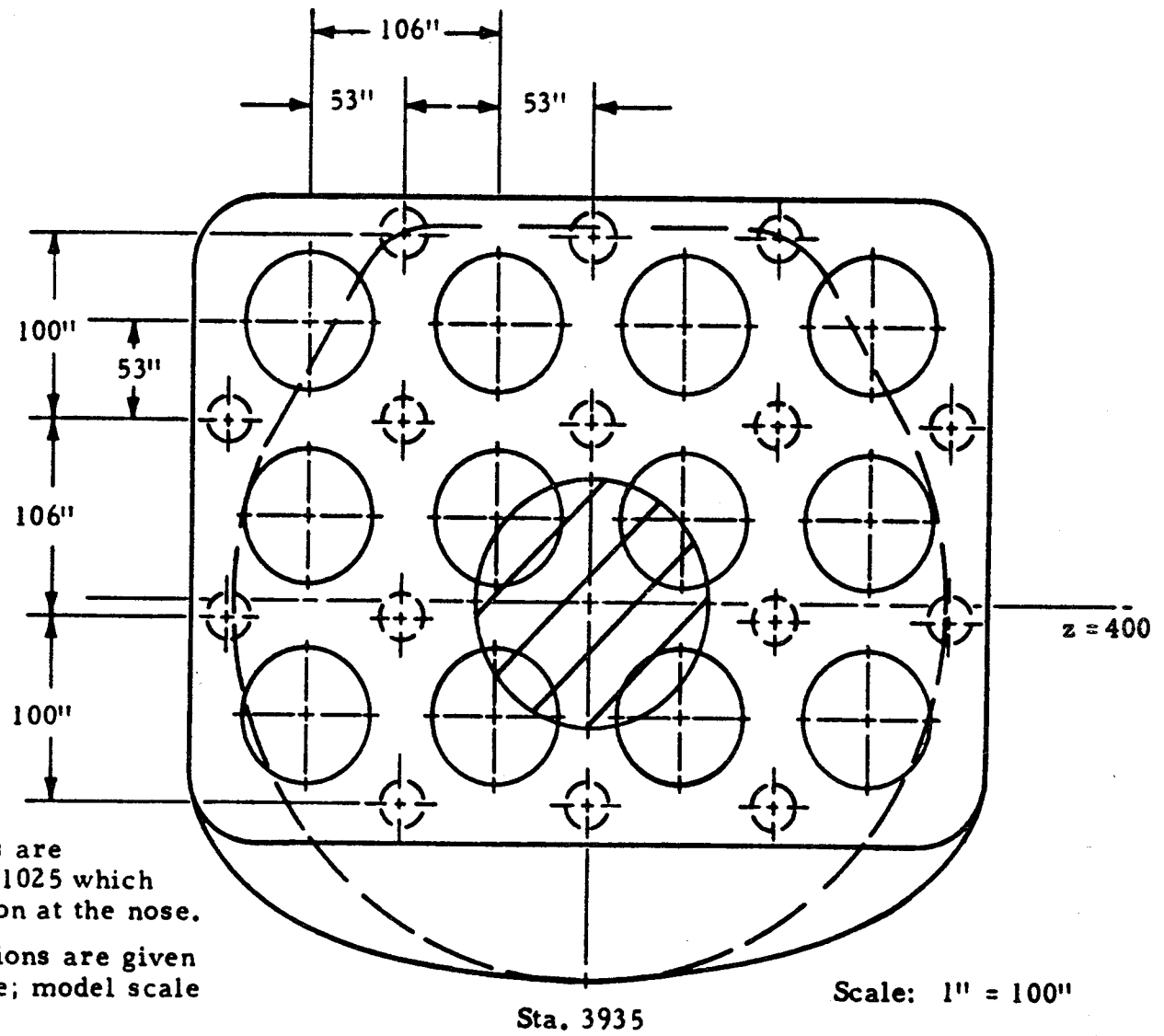


Fig. 2 - General Arrangement of the Baseline Model



- Note: (1) All stations are relative to 1025 which is the station at the nose.
- (2) All dimensions are given in full scale; model scale is 0.015.

Fig. 6 - Base Plenum Orifice Location (End View)

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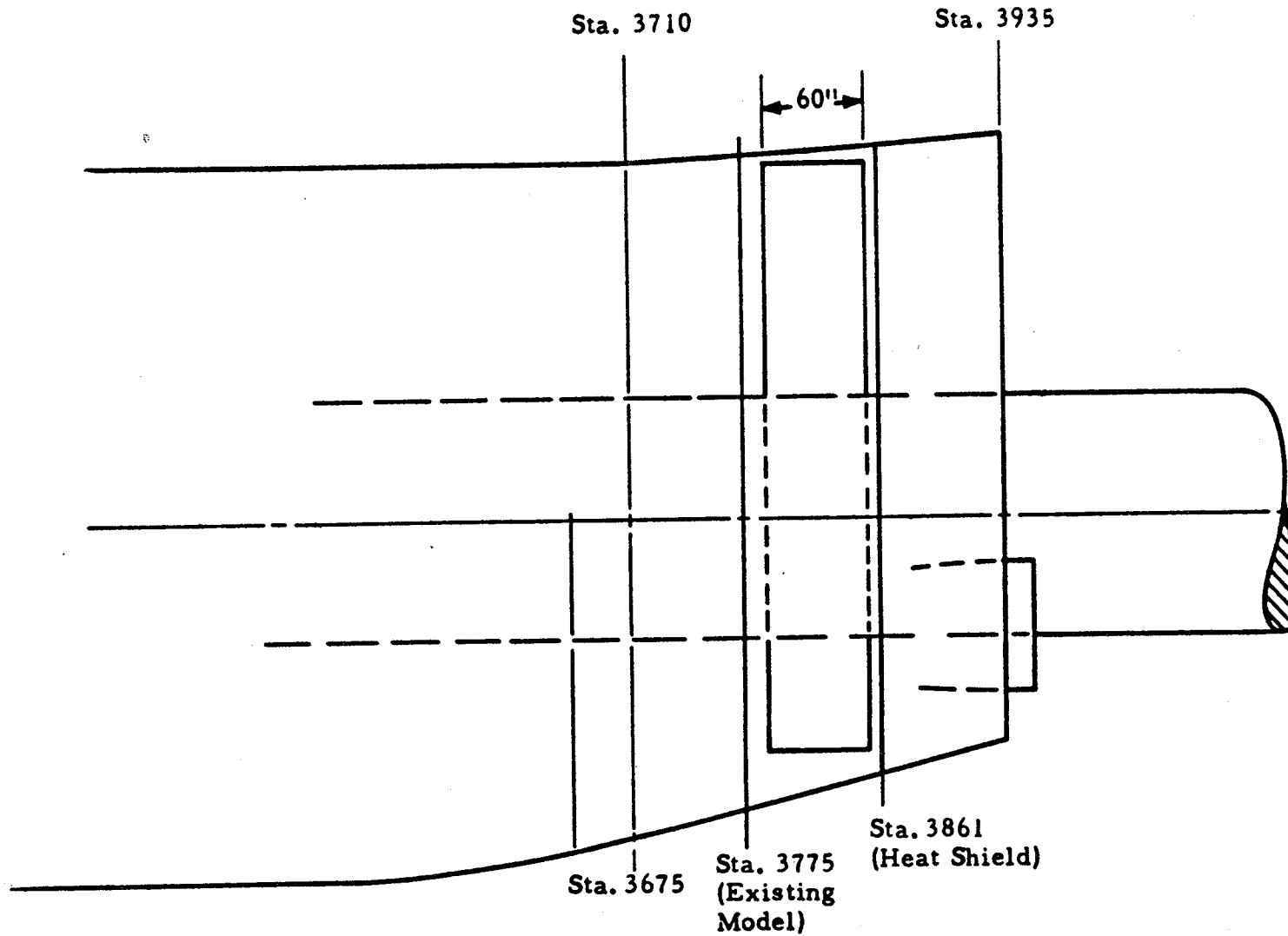


Fig. 7 - Base Plenum Orifice Location (Side View)

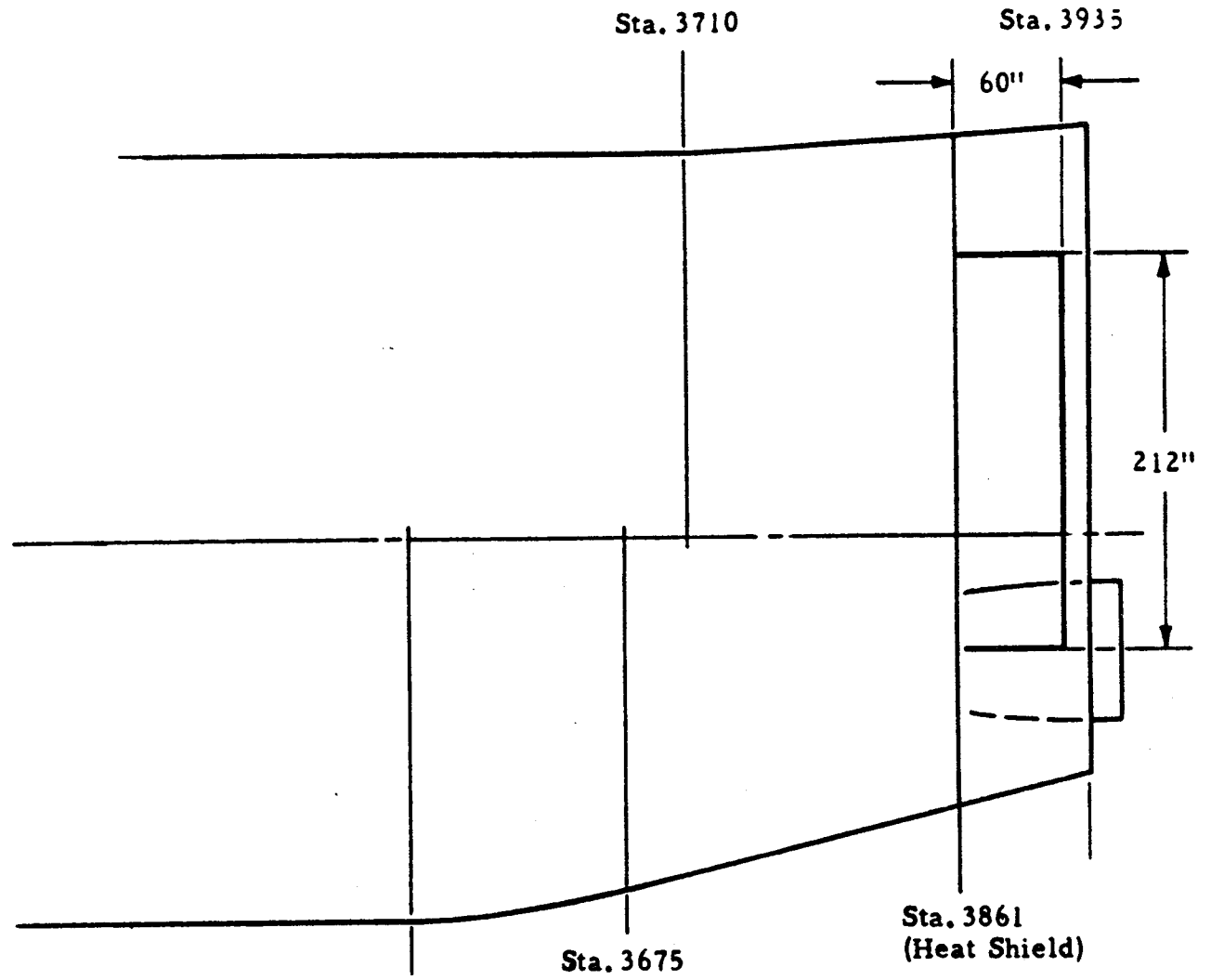


Fig. 8 - Base Venting (Side View)

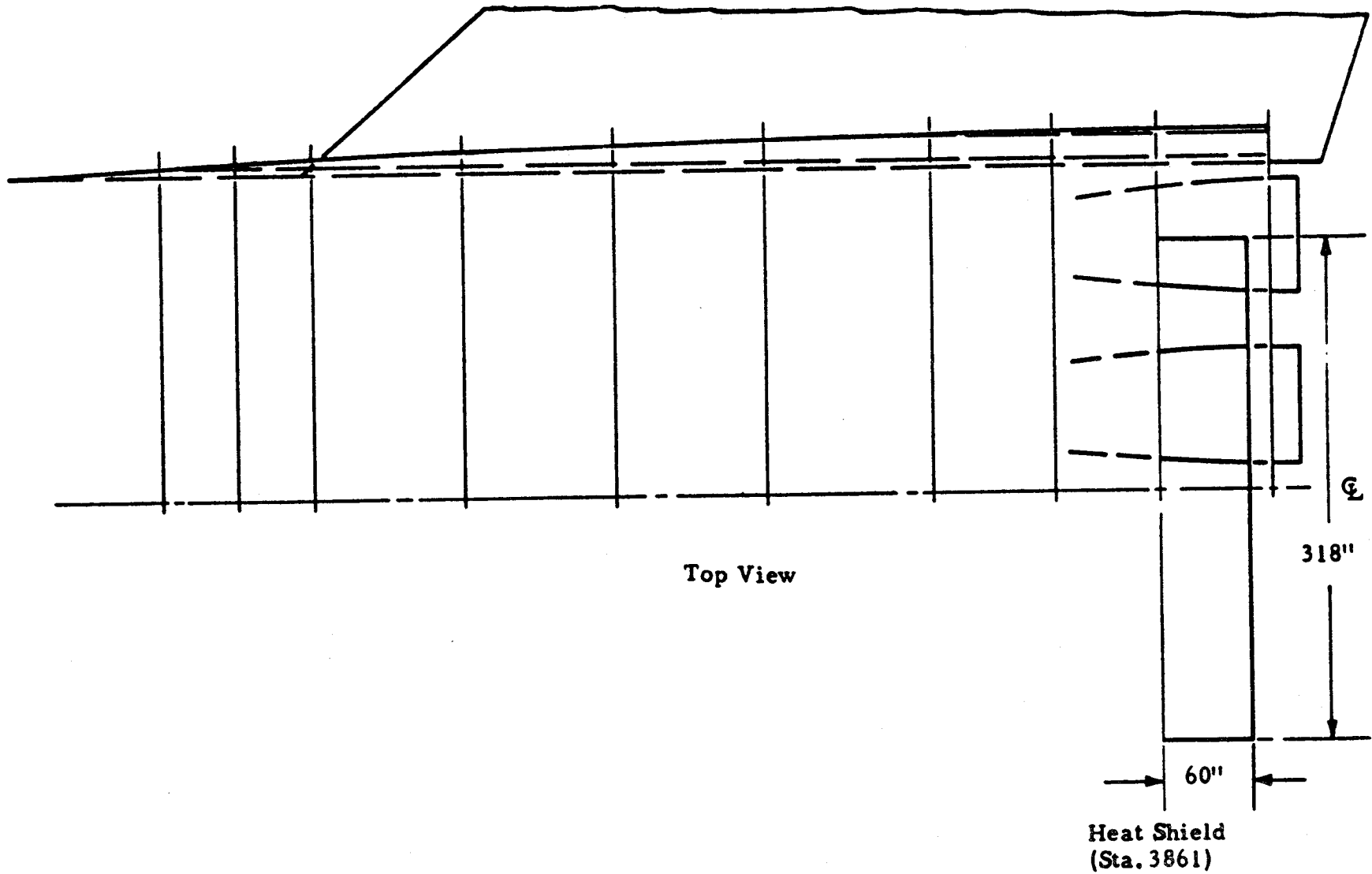
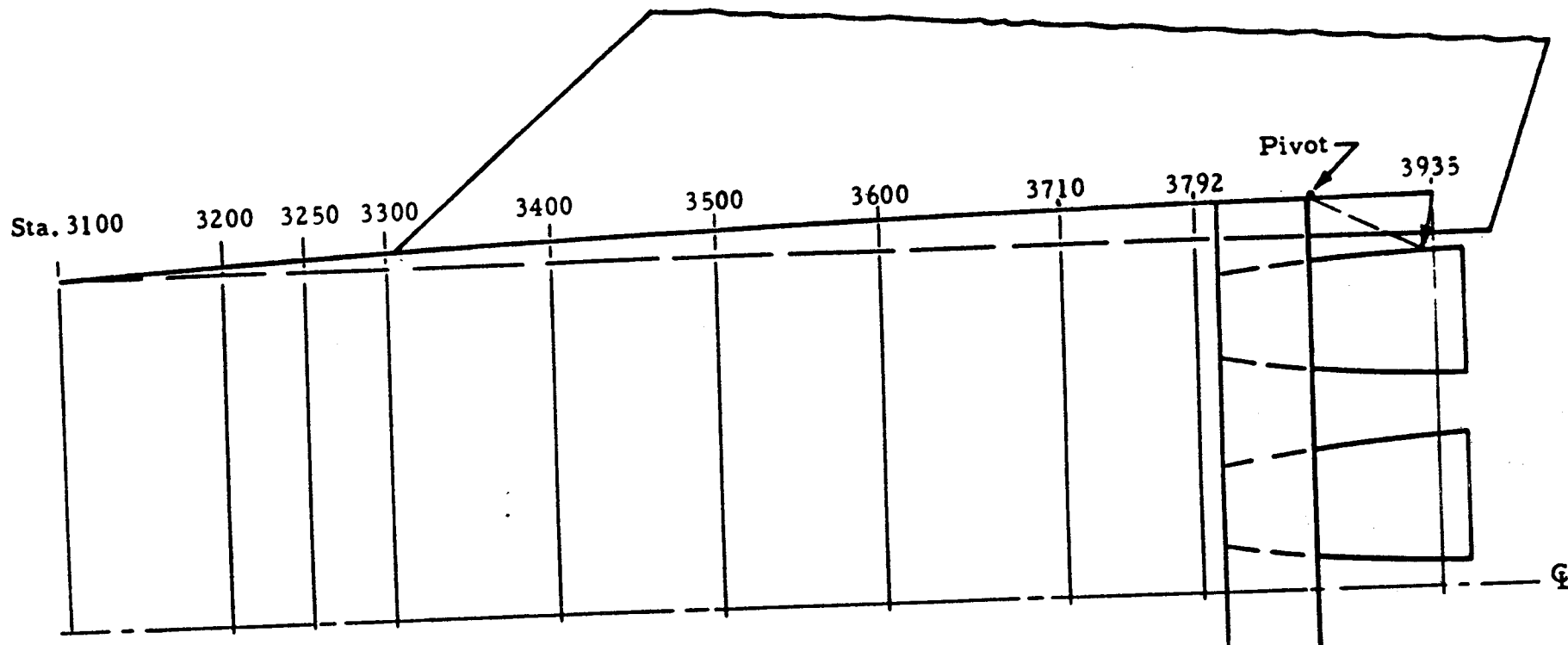


Fig. 9 - Base Venting (Top View)



Top View

Fig. 10 - Body Flaps (Top View)

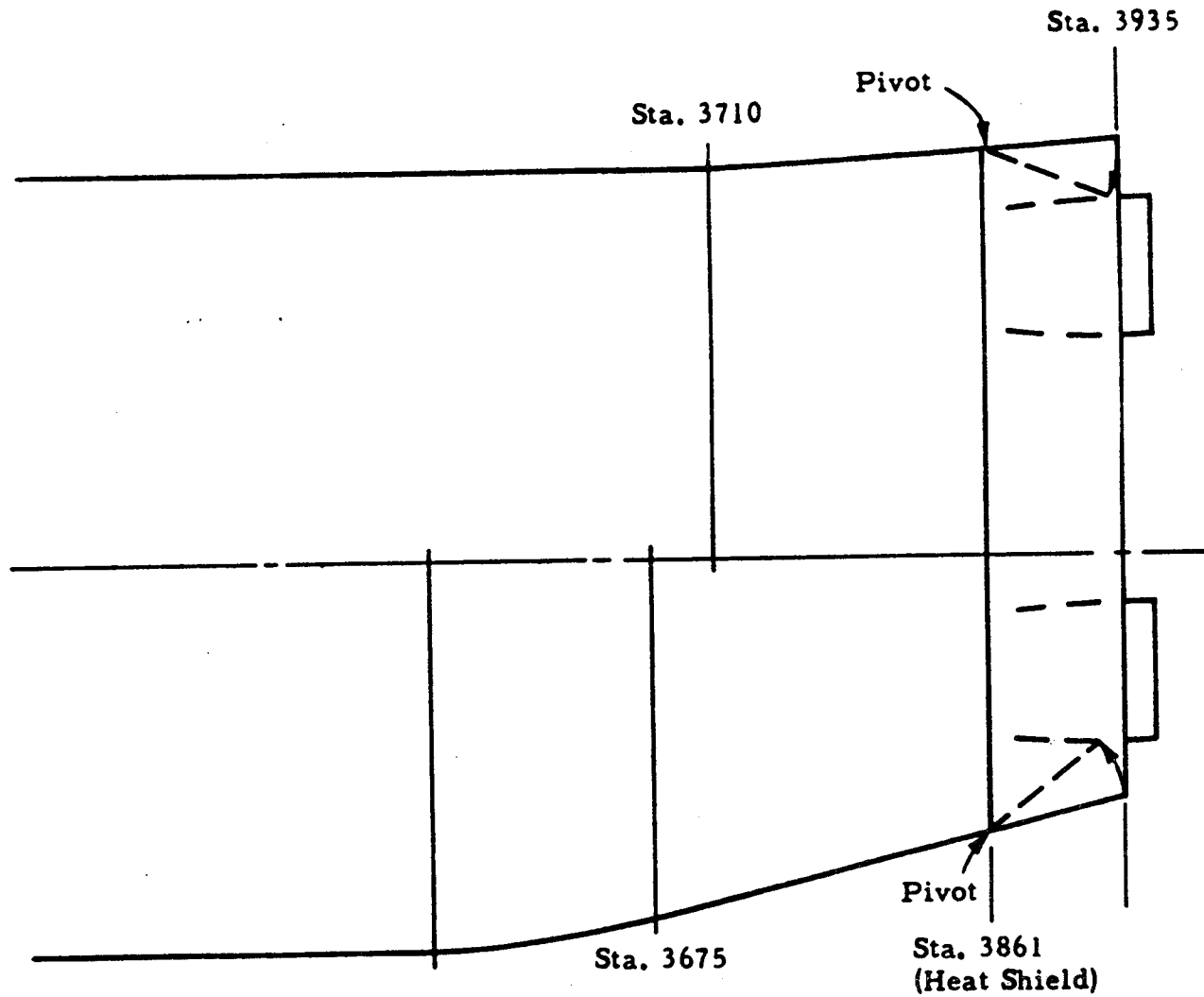


Fig. 11 - Body Flaps (Side View)

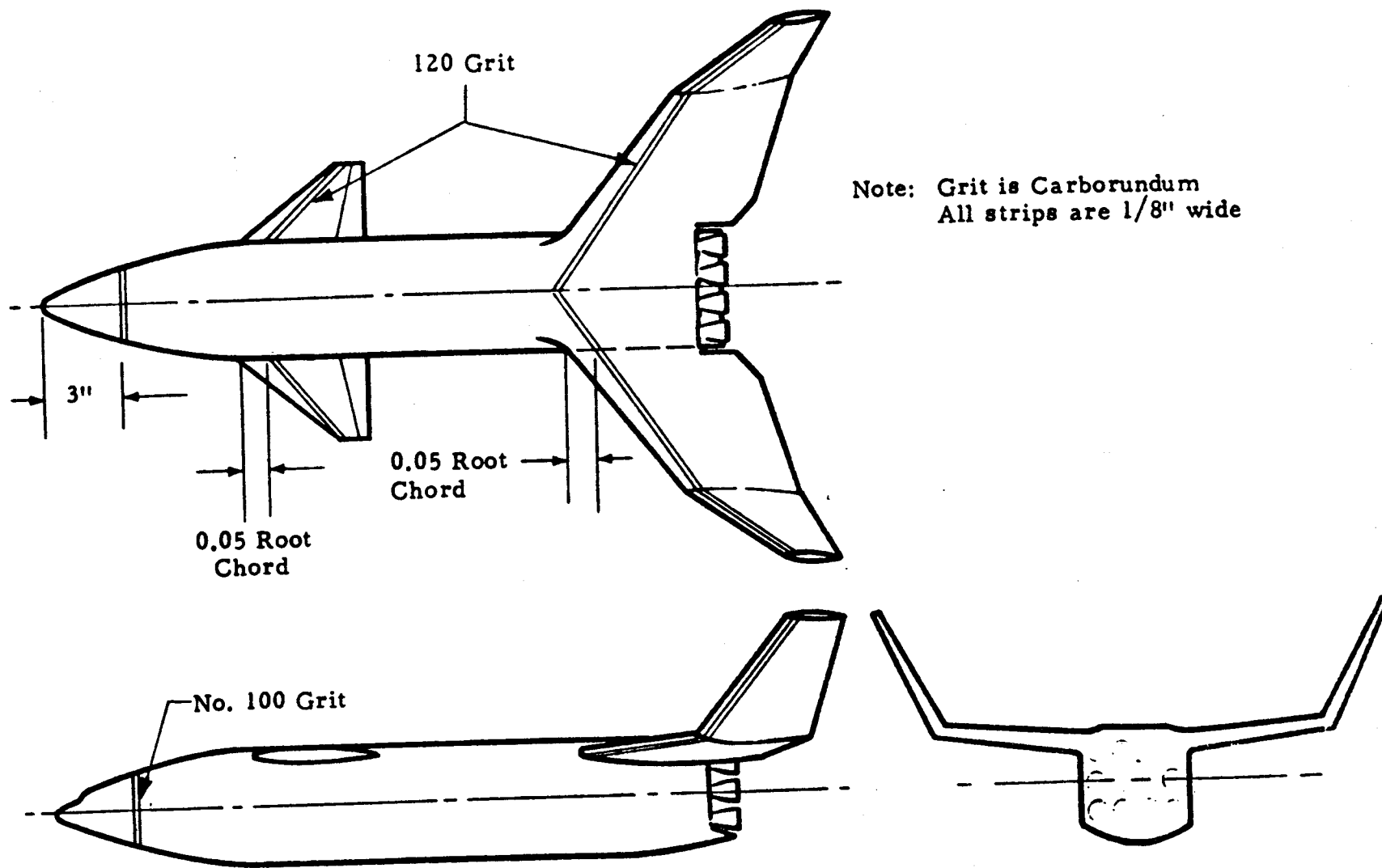


Fig.12- Typical Transition Grit Installation on Body, Wing and Canard

TABLE II.

TEST TWT #496 DATA SET COLLATION SHEET

$$\delta_e = \delta_{eL} / \delta_{eR}$$

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)									
		A	B	δ_e	δ_c	E	i_w		0.6	0.9	1.0	1.2	1.96	3.5	4.76			
R3B01A	B ₂	A	0	-	-	10	0	4	074/0	075/0		076/0	032/0					
01M	↓	M						6	146/0	145/0		144/0	151/0	221/0	222/0			
01K	↓	K						6	147/0	148/0		149/0	150/0	225/0	224/0			
02A	B ₂ V ₂	A			0			3	079/0	078/0		077/0						
04M	↓	M			-40			1					152/0					
05K	↓	K			-60			1							226/0			
03H	↓	15	F		-20			1					031/0					
04I	↓	30	F		-40			1							223/0			
06M	W ₆ B ₂	M	0	0	-			3				143/0	153/0		220/0			
06K	↓	K	0					4				141/0	157/0	216/0	215/0			
06G	↓	10	F					3	073/0	072/0		071/0						
06F	↓	15	F					1					034/0					
06I	↓	30	F					2					154/0	217/0				
08A	W ₆ B ₂ V ₂	A	0	110/0				3	066/0			067/0	037/0					
11A	↓	A		-30/0				3		069/0		068/0	038/0					
09M	↓	M		0				4				131/0	165/0	196/0	197/0			
07M	↓	M		+30/0				2				132/0	163/0					
10M	↓	M		-30/0				4				133/0	162/0	199/0	200/0			
09K	↓	K		0				4				135/0	159/0	206/0	207/0			
R3B09U	(NO. 54 GRIT)	K		0				1					158/0					

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1	7	13	17	25	31	37	43	49	55	61	67	75	76
CLM	CM	CY	CBL	CYN	CAF	CAB	CPBI	CL	CDF				10
COEFFICIENTS:										IDPVAR(1) IDPVAR(2) INDV			
αA = 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20 DEG.													
αM = 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40 DEG.													
αK = 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60 DEG.													
βF = -10, -8, -6, -4, -2, 0, 2, 4, 6, 8, 10 DEG.													

TEST TWT #496 DATA SET COLLATION SHEET

PRETEST
 POSTTEST

$$\delta_e = \frac{\delta_c}{\delta_{ex}}$$

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)							
		A	B	δ_e	δ_c	ϵ	i_w		0.6	0.9	1.0	1.2	1.96	3.5	4.96	
R3807K	W ₆ B ₂ V ₂	K	0	+30%	-	10	0	3				136/0	160/0	208/0		
12K		K	0	OFF	-			4				137/0	161/0	202/0	201/0	
09A		A	0	0	-			1					236/0			
13G	W ₆ B ₂ C ₁ ²	10	F	0	0			1					235/0			
14H		15			+20			3				070/0	033/0	008/0		
15I		30			-40			4				142/0	155/0	218/0	219/0	
16J		50			-60			3					158/0	213/0	214/0	
17A	W ₆ B ₂ G ² V ₂	A	0		0			3	063/0			062/0		004/0		
17S	(MAX FAIRINGS ON CANARD LE)	A			0			3	064/0			065/0		005/0		
18A		A			-20			3				061/0	039/0	003/0		
18M		M			-20			3				134/0	164/0	198/0		
19M		M			-40			3				130/0	165/0	195/1		
19K		K			-40			4				138/0	163/0	207/0	210/0	
20K		K			-60			4				139/0	169/0	205/0	204/0	
17E		0	F		0			3		058/0		057/0		003/0		
18E		15			-20			4	059/0			060/0	040/0	007/0		
19I		30			-40			4				129/0	167/0	193/1	194/1	
20J		50			-60			4				140/0	170/0	212/0	211/0	
21K		K	0	OFF	-60			1							203/0	
R3819T	(NO TRIP STRIPS)	30	F	0	-40			1							242/0	

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13

1 7 13 19 25 31 37 43 49 55 61 67 75 76

CLM CN CY CBL CYN CAF CAB CPBI CL CDF IDPVAR(1) IDPVAR(2) NDV

COEFFICIENTS: _____

 a or b _____
 SCHEDULES _____

NASA-MSFC-MAP

CANARD BOOSTER
 TBC
 DR#1160 A-1- 173

TABLE II (CONTINUED)

TEST TWT#496 DATA SET COLLATION SHEET

$$\delta_e = \delta_{el} / \delta_{er}$$

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)										
		a	B	δ_e	δ_c	E	λ_w		0.6	0.9	1.0	1.2	1.96	3.5	4.96				
R3841C	$W_6 B_2 O_1 C_1^2 V_2$	C	O	0	0	10	0	4		044/0	043/0		042/0		001/0				
41F		O	F					6	046/0	045/0	047/0	048/0	044/0		002/0				
41G		10						4	053/0	054/0	055/0	056/0							
41L		-10						4	052/0	051/0	050/0	049/0							
37A	$W_6^H B_2 C_1^2 V_2$	A	O					5	101/0	102/0		103/0	023/0	012/0					
37F		O	F					3	097/0	098/0			022/0						
37G		10						2	100/0	099/0									
38H		15				-20		1					020/0						
39I		30				-40		1						239/0					
40J		50				-60		1							237/0				
33F	$W_6^H B_2 C_1^2$	O				0		2	096/0	095/0									
33G		10				0		2	093/0	094/0									
34H		15				-20		1					081/0						
35I		30				-40		1						235/0					
R3836J		50				-60		1							236/0				

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7 13 19 25 31 37 43 49 55 61 67 75 76

CLM CN KY CBL CYN CAF CAB CPBI CL CDF 10

COEFFICIENTS. $\lambda_c = -10, -8, -6, -4, -2, 0, 2, 4, 6, 8, 10$ DEG. \rightarrow IDPVAR(1) IDPVAR(2) NDV

a or B

SCHEDULES

TEST TWT #496 DATA SET COLLATION SHEET

$$\delta_e = \delta_{eL} / \delta_{eR}$$

PRETEST

POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)											
		a	B	δ_e	δ_c	ϵ	λ_w		0.6	0.9	1.0	1.2	1.96	3.5	4.96					
R3823A	W ₉ B ₂ V ₁	A	0	0	-	10	0	5	088/0	089/0		090/0	024/0	011/0						
23M		M						6	126/0	127/0		128/0	177/0	186/0	187/0					
23K		K	↓					6	121/0	122/0		123/0	179/0	184/0	183/0					
23F		O	F					4	082/0	083/0		084/0	027/0							
23G		10						2	087/0	086/0										
23H		15						3				085/0	026/0	010/0						
23I		30						4				125/0	176/0	189/0	188/0					
23J		50	↓					4				124/0	180/0	181/1	182/0					
24A	W ₉ B ₂ C ₁ ² V ₁	A	0			0		1	091/0					178/0	192/0					
26M		M				-40		2								185/0				
27K		K	↓			-60		1						028/0						
24F		O	F			0		1												
24G		10				0		1	092/0											
25H		15				-20		1						025/0						
26I		30				-40		1												
22F	W ₉ B ₂	0				-		2	081/0					029/0						
22G		10						1	080/0											
22H		15						2						020/0	009/0					
R3822I		30	↓					2						175/0	170/0					

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1 7 13 19 25 31 37 43 49 55 61 67 75 76

CLM CN CY CBL CYN CAE CAB CPBL CL CDF IDPVAR(1) | IDPVAR(2) | NDV

COEFFICIENTS:

a or B

SCHEDULES

NASA-MSFC-MAP

CANARD BOOSTER

TBC

DR#1160

A-1- 175

TABLE II. (CONCLUDED)

TEST TWT*496 DATA SET COLLATION SHEET

$$\delta_e = \frac{\delta_{eL}}{\delta_{eR}}$$

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)										
		A	B	δ_e	δ_c	E	LW		0.6	0.9	1.0	1.2	1.96	3.5	4.96				
R3828A	W4B2V2	A	0	0	-	10	0	2	113/0					017/0					
	28I	M						3						173/0	240/0	239/0			
	28K	K						2							241/0	229/0			
	28F	O	F					2	111/0					016/0					
	28G	10						1	112/0										
	28H	15						1						018/0					
	28I	30						1											234/0
	28J	50						1											243/0
	29A	A	0		0			5	106/0	105/0		104/0	014/0	013/0					
	31M	M			-40			6	114/0	115/0		116/0	172/0	231/0	230/0				
	32K	K			-60			6	120/0	119/0		118/0	171/0	228/0	227/0				
	29F	O	F		0			2	110/0				015/0						
	29G	10			0			3	107/0	108/0		109/0							
	30I	15			-20			1					019/0						
R3831I		30			-40			4				117/0	174/0	232/0	233/0				

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1 7 13 19 25 31 37 43 49 55 61 67 75 76

CLM CN CY CBL CYN CAF CAB CPBL CL CDF 10

COEFFICIENTS:

a or b

SCHEDULES

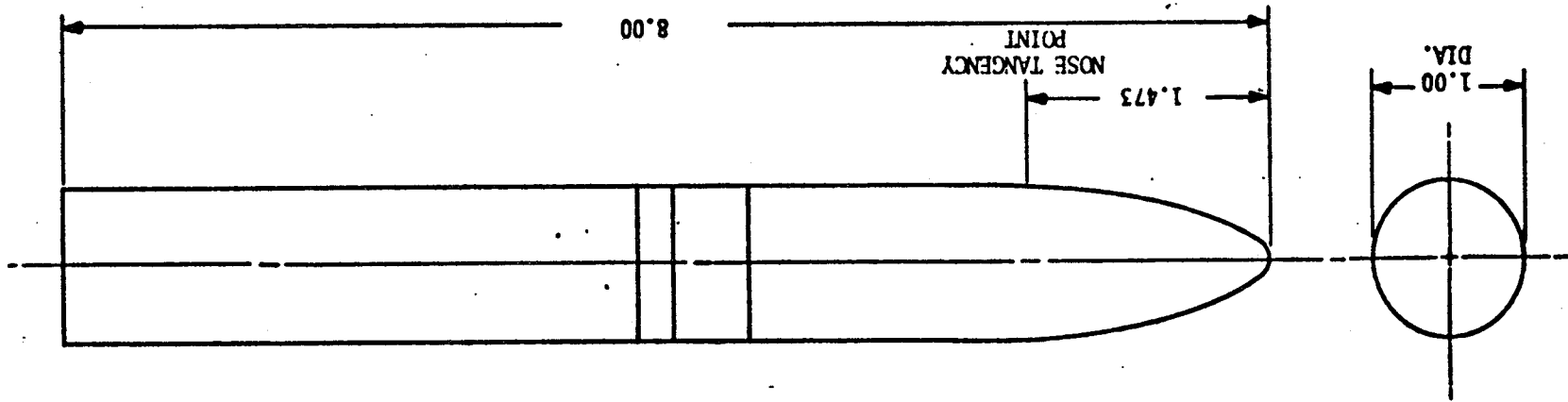
IDPVAR(1) IDPVAR(2) NDV

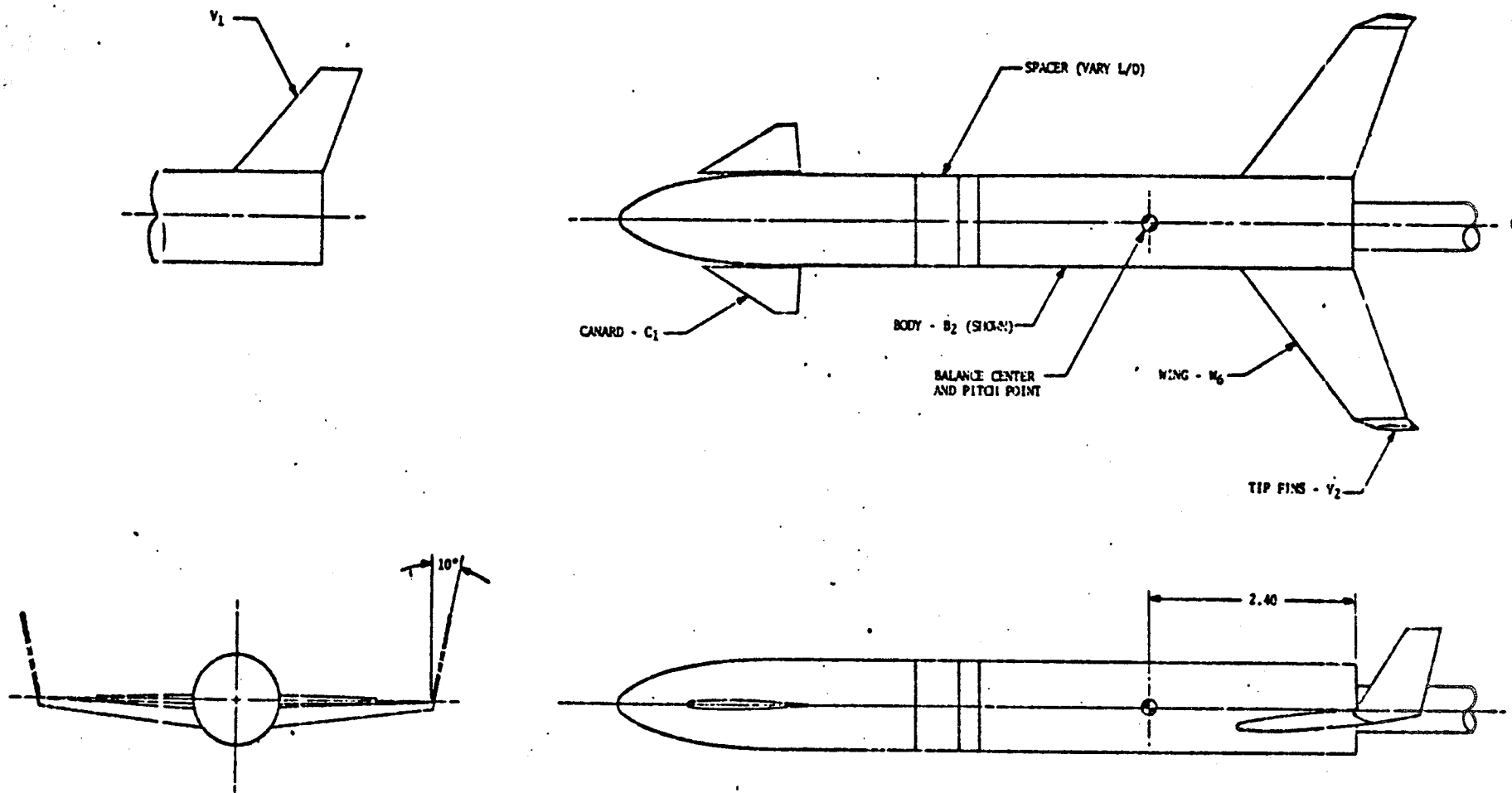
CANARD BOOSTER
TBC
DR#1160 A-1-177

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Figure 2. AR-1198 Body B₂

AR-1198 BODY B₂

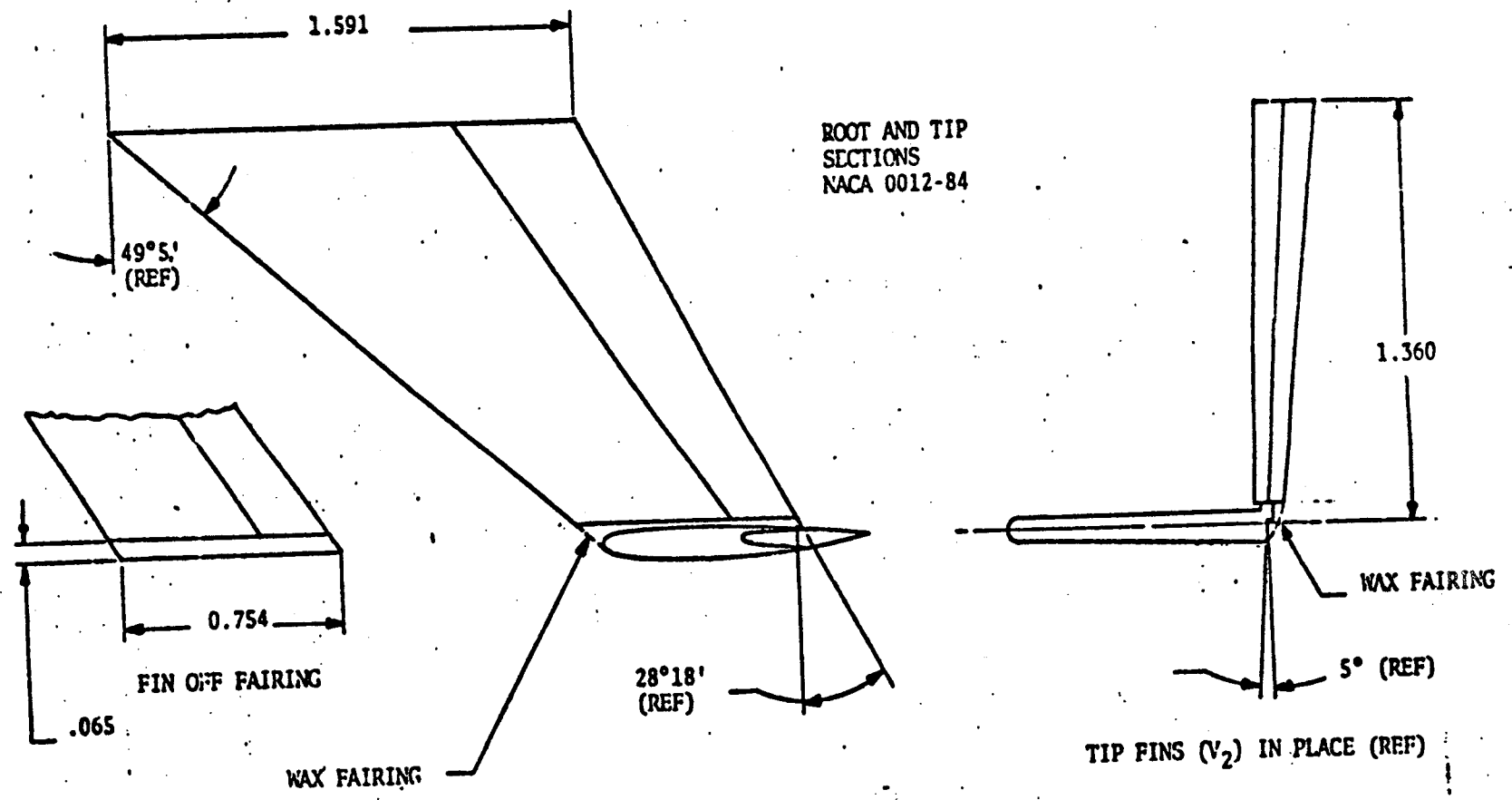




0.002456 SCALE AR1198 BOOSTER MODEL

Figure 3. 0.002456 Scale AR-1198 Booster Model

NOTE: ZERO ROLL-OUT
SHOWN FOR CLARITY.



ROOT AND TIP
SECTIONS
NACA 0012-84

Figure 5. Wing, W_4

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NOTE: ZERO ROLL-OUT
SHOWN FOR CLARITY.

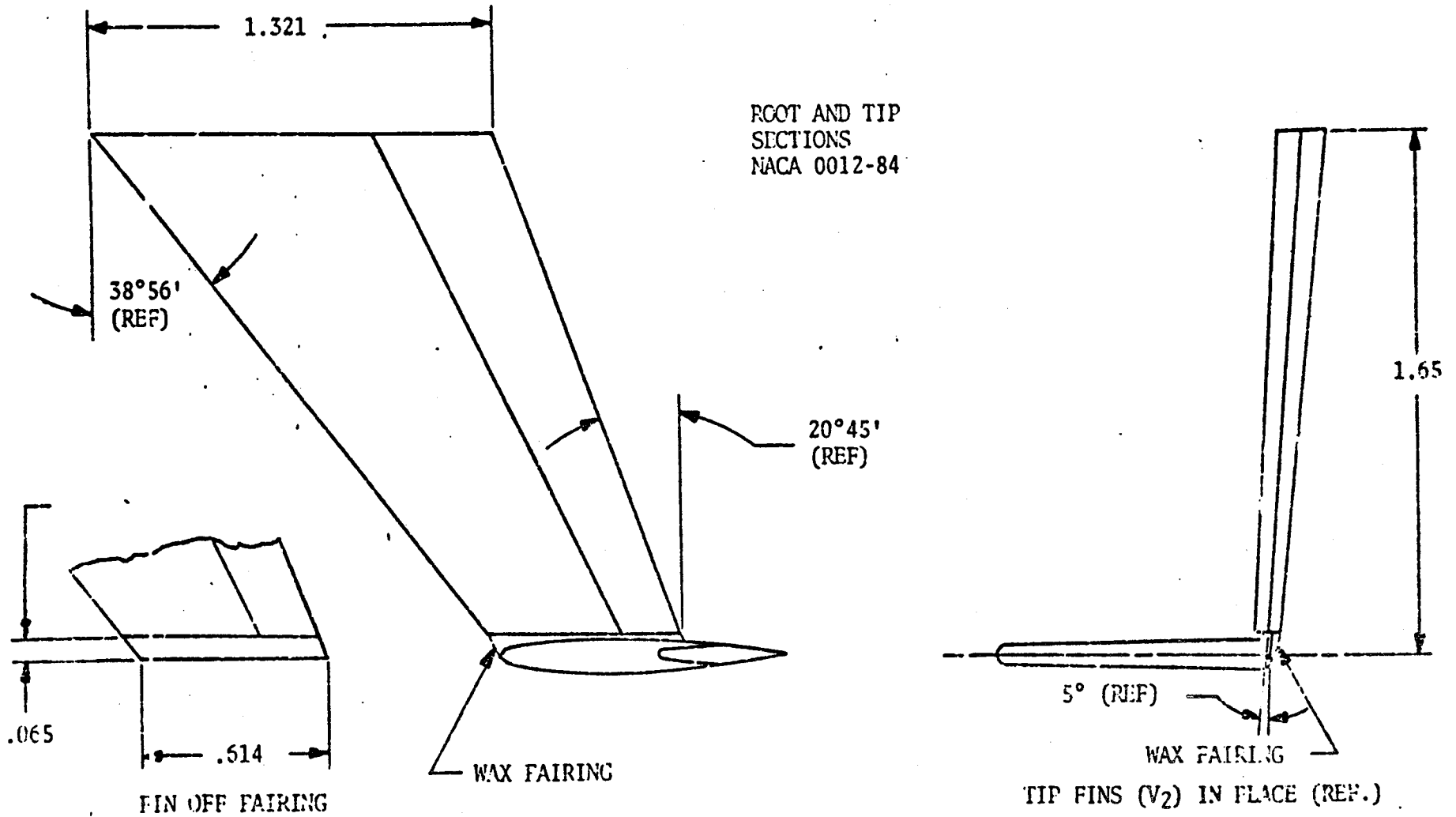
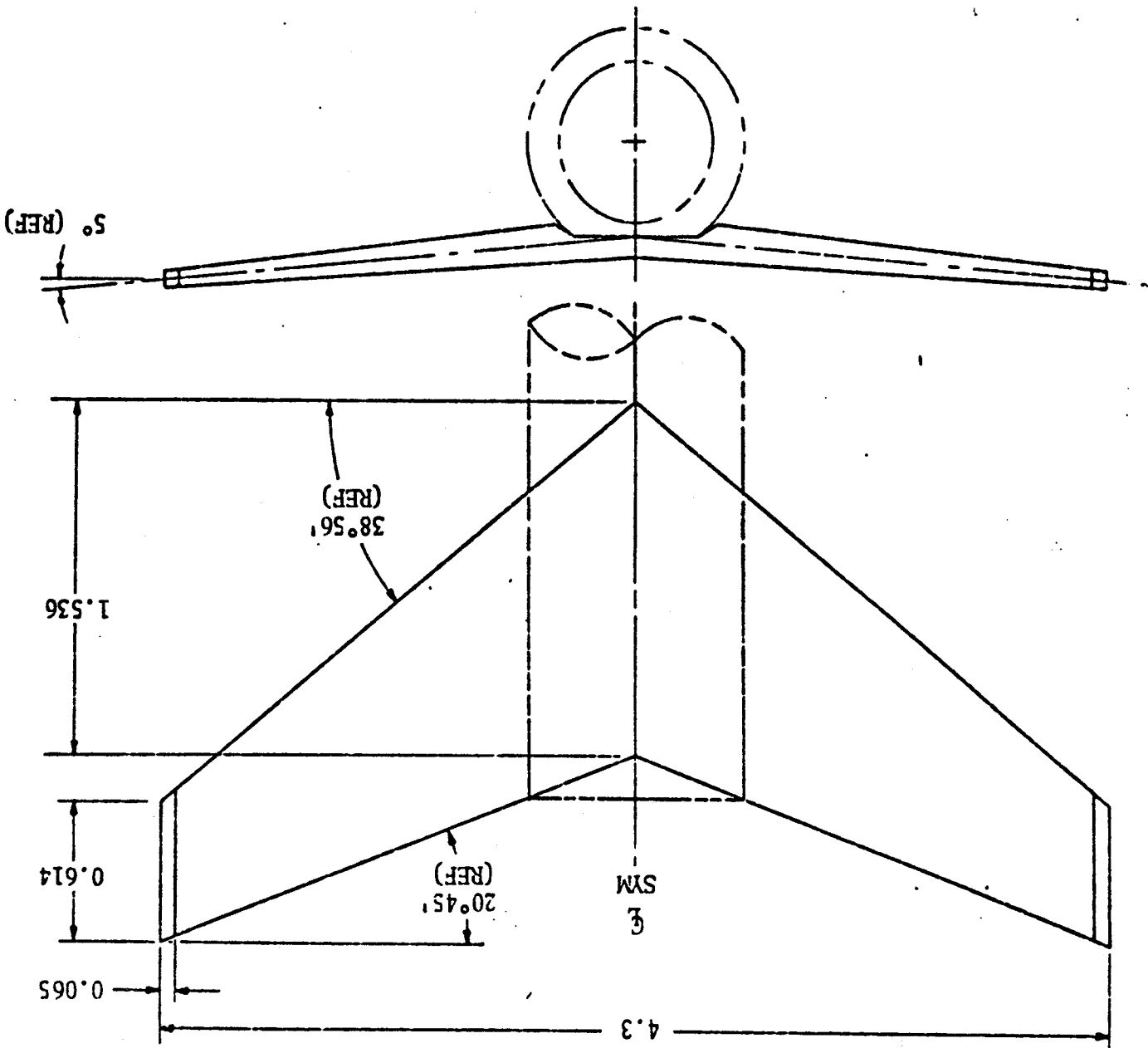


Figure 6. Wing, W₆

Figure 7. Wing, W⁶_H



5% B₁ -
CONVEX

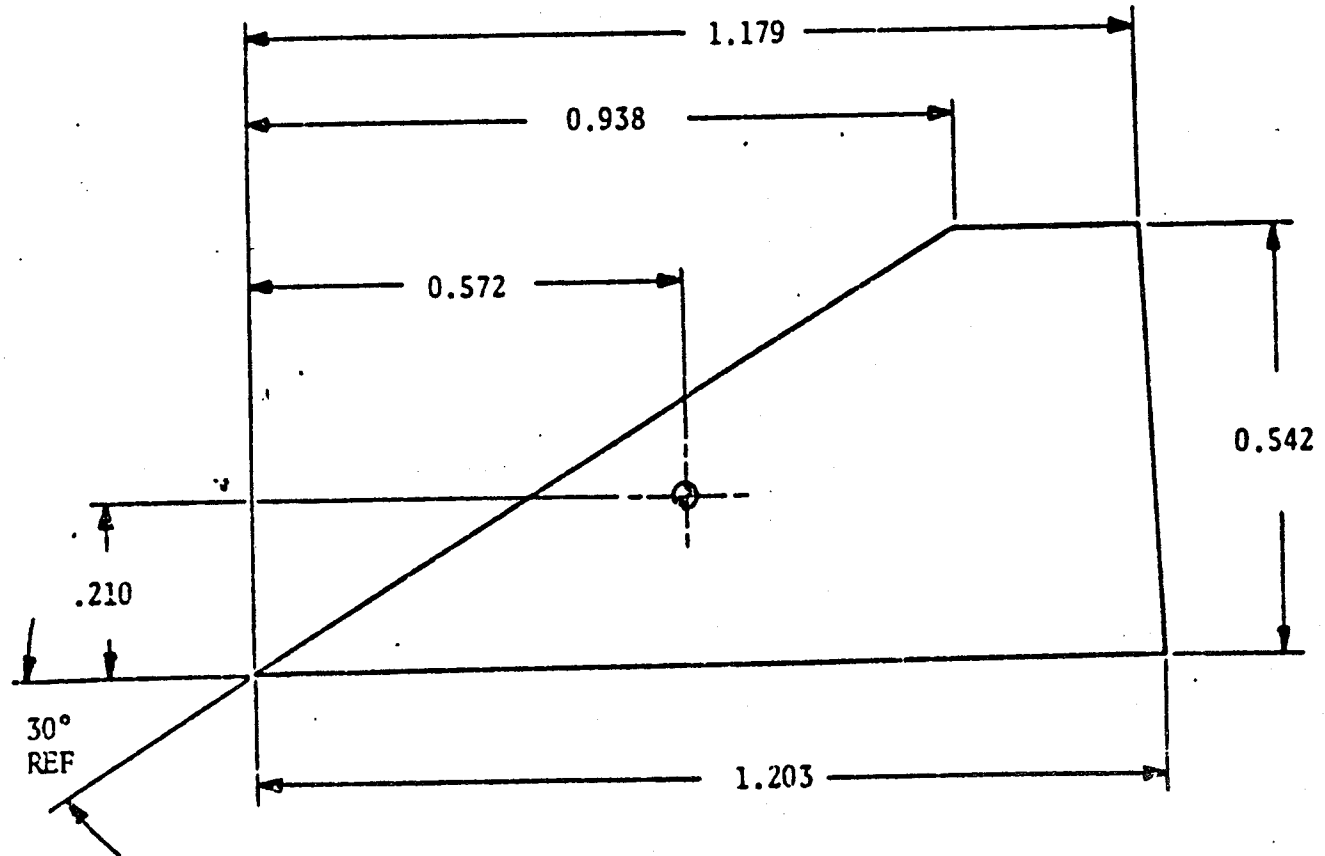
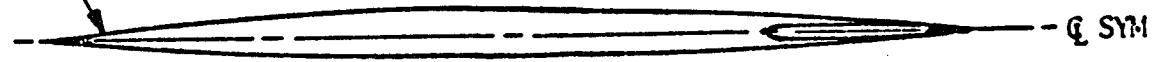


Figure 9. Canard, C₁

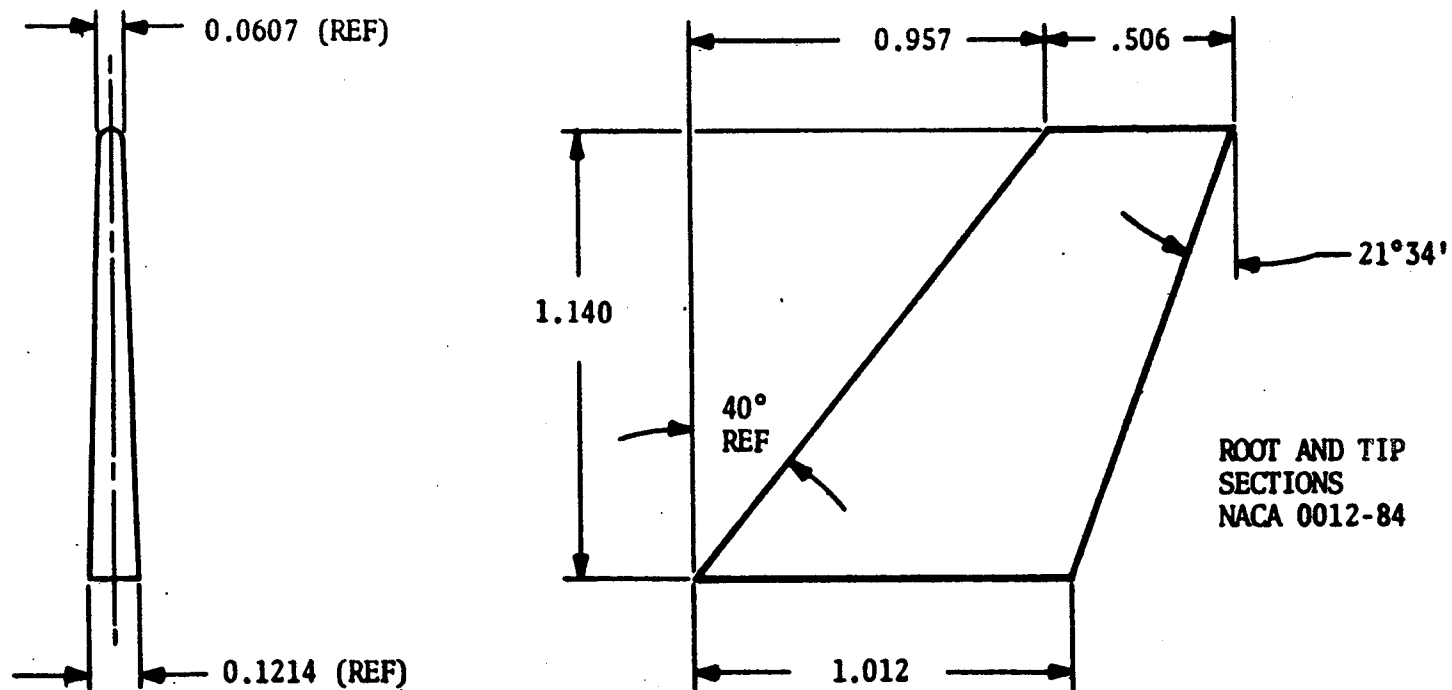


Figure 10. Vertical Tail, V₁

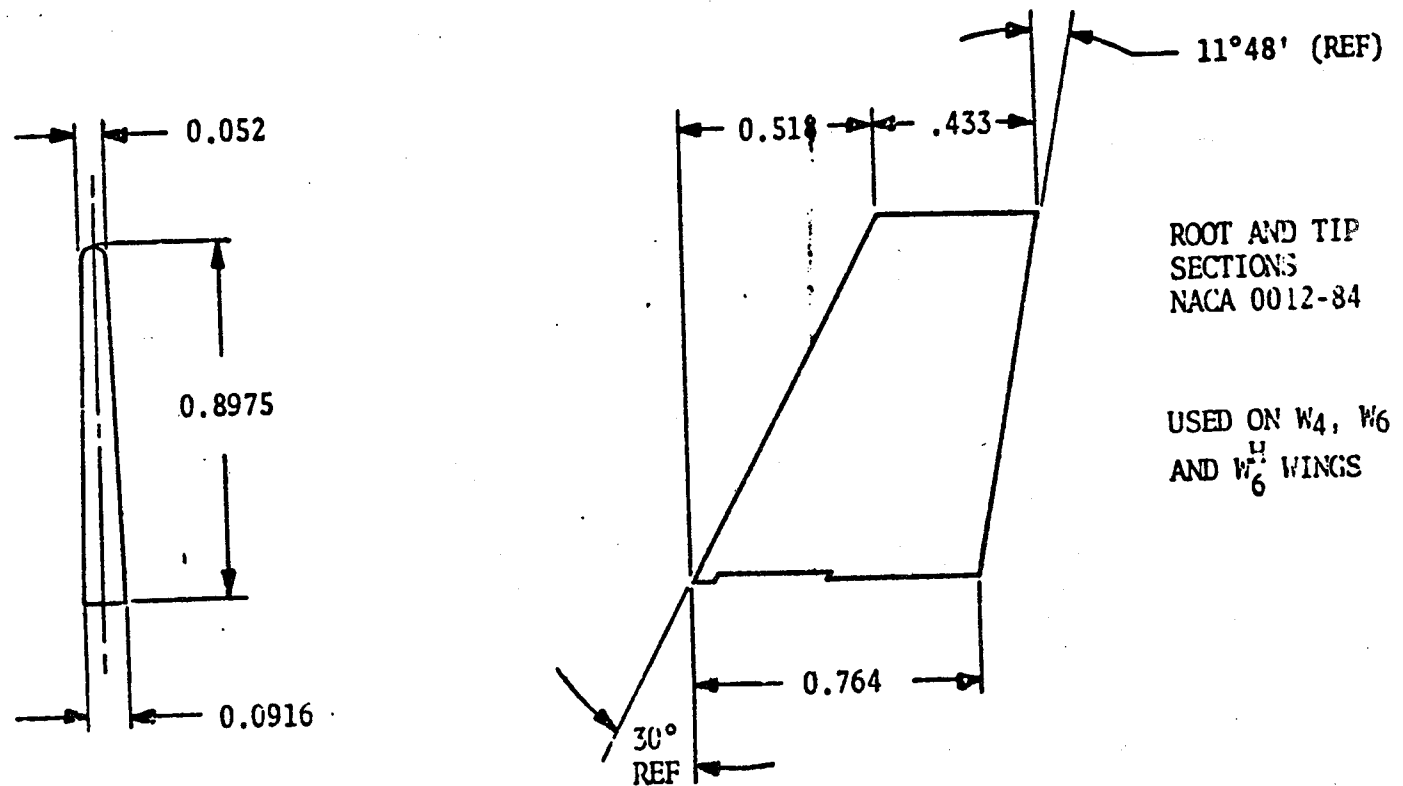


Figure 11. Wing Tip Fins, V₂

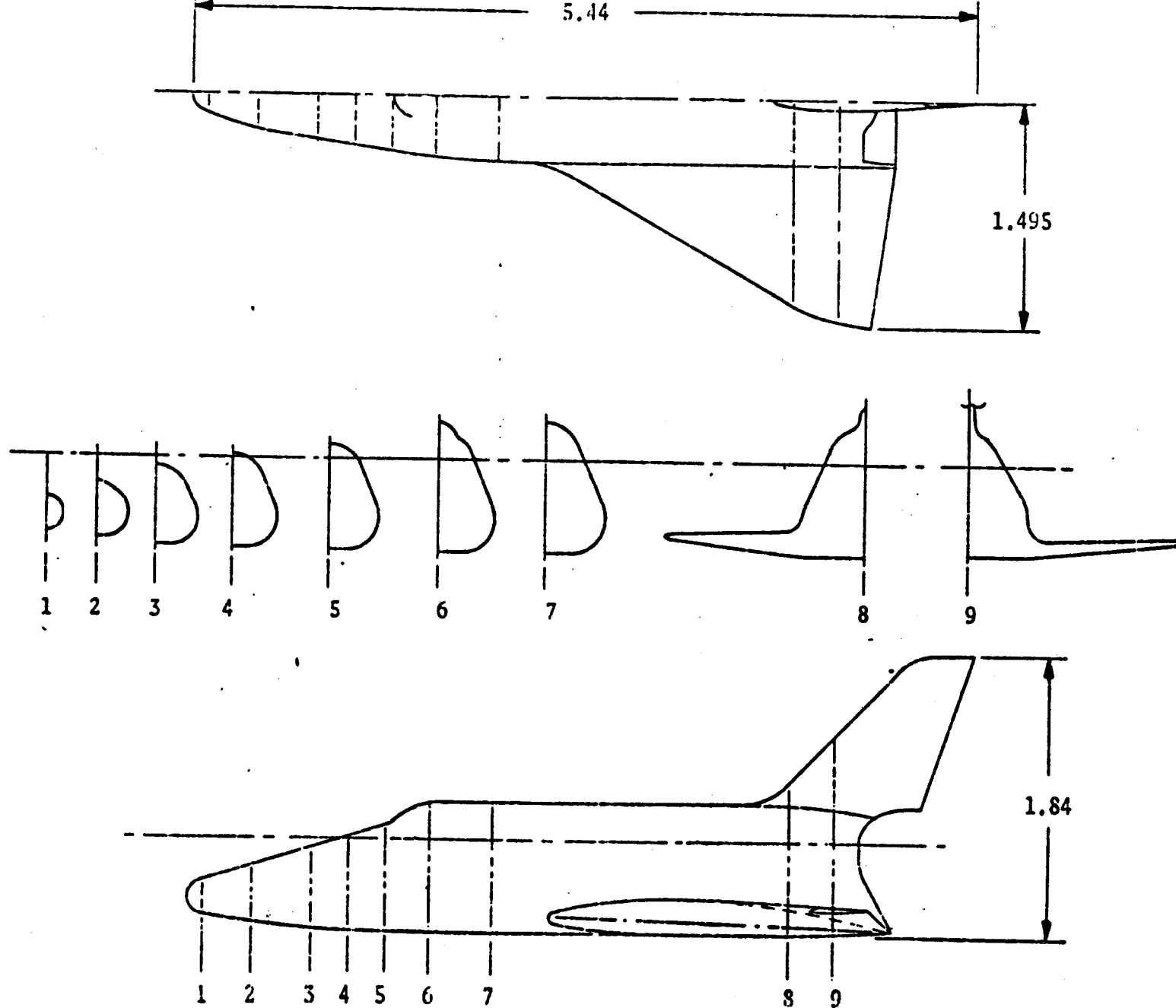
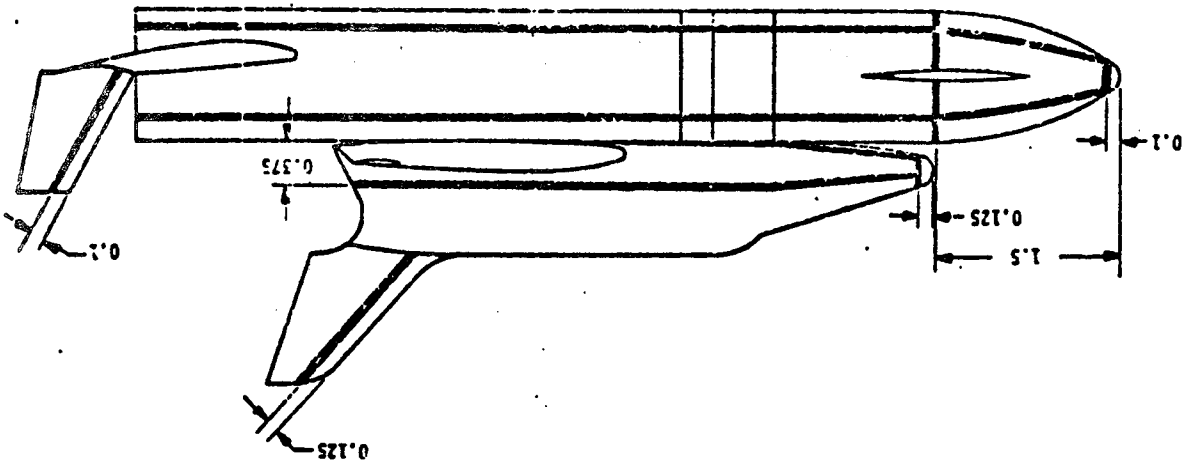
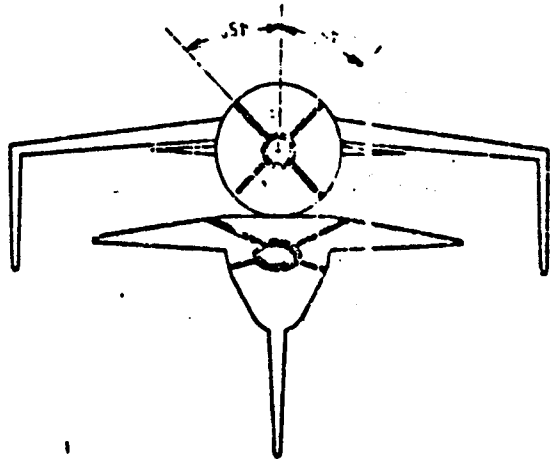


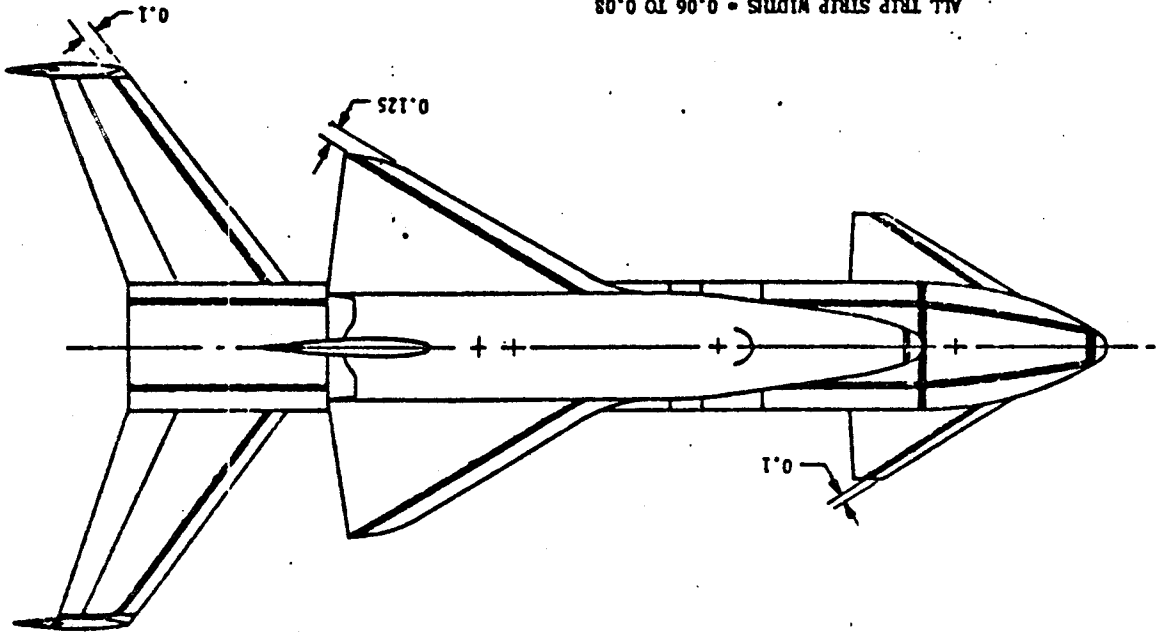
Figure 12. Grumman G3-A Orbiter Body

CANARD BOOSTER
 TBC
 DR#1160 A-1- 185

Figure 14. Trip Strip Chart - AR-1198 Booster



ALL TRIP STRIP WIDTHS = 0.06 TO 0.08



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CANARD BOOSTER
TBC
DR#1160 A-1 - 186

TABLE II.
TEST MSFC TWT526 DATA SET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.	PARAMETERS/VALUES					NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)												
			α	β	α_1	α_2	α_3		1.96	2.74	4.96										
R61001	N3C1F0	D 0	25.	24.57	0.	0.	3	096	003	004											
002		E 0					3	073	002	001											
003		60 A					3	095	006	005											
004	N3C1F0	D 0	40.				3	097	010	009											
005		E 0					3	065	063	064											
006		60 A					3	086	007	001											
007	N3C1F1	D 0			7.5		3	088	011	012											
008		E 0					3	066	062	061											
009		60 A					3	089	014	013											
010	N3C1F2	D 0			15.		3	092	019	020											
011		E 0					3	067	059	060											
012	N3C1F3	D 0	25.		20.		3	210	022	021											
013		E 0					3	049	051	057											
014		60 A					3	238	023	024											
015	N3C1F3	D 0	40.				3	091	018	017											
016		E 0					3	068	055	056											
017		60 A					3	090	015	016											
018	N3C1F0T1	D 0			0.424		3	098	027	028											
019		E 0					3	070	054	053											
020		60 A					3	081	026	025											

1 7 13 19 25 31 37 43 49 55 61 67 7375
 CLM IGN KY KBL KYN CA CAB CPB1 CPC CPB2 | 19

COEFFICIENTS:

α : D = 50 TO 70 DEG, $\Delta\alpha = 2$ DEG; E = 70 TO 90 DEG, $\Delta\alpha = 2$ DEG

0 OR 1
SCHEDULES

β : A = -10 TO 10 DEG, $\Delta\beta = 2$ DEG

→ IDPVAR(1) | IDPVAR(2) | NDV

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TABLE II. (Continued)
 TEST MSFC TWT 526 DATA SET COLLATION SHEET

CYLINDRICAL BOOSTER
 LMSC
 DR#1242 A-1- 188

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MAG. NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)							
		a	B	α	β	γ	δ		ϵ	1.96	2.74	4.96				
R61021	N3C1FOT2	D	0	40.	2.257	0.	.948	3	093	090	029					
022	↓	E	0					3	071	051	052					
023	↓	60	A					3	092	071	032					
024	N3C1FOT3	D	0				1.272	3	014	2.035	016					
025	↓	E	0					3	072	050	049					
026	↓	60	A					3	015	034	033					
027	N3C2FO	D	0	3.357			0.	3	079	038	037					
028	↓	E	0					3	074	047	048					
029	↓	60	A					3	078	039	040					
030	N3C2F3	D	0				20.	3	076	043	044					
031	↓	E	0					3	075	046	045					
032	↓	60	A					3	077	042	041					
033	N1C3FO	D	0	25.	4.257	0.		3	101	243	244					
034	↓	E	0					3	115	242	241					
035	↓	60	A					3	114	240	240					
036	N3C3FO	D	0	40.				2	097	255						
037	↓	E	0					2	110	259						
038	↓	60	A					3	098	258	257					
039	N3C3F1	D	0				7.5	3	104	282	281					
040	↓	E	0					3	20	304	305					

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1 7 13 19 25 31 37 43 49 55 61 67 73 75

CLM ICN ICY CBL ICYN CA CAB CPB1 CPC CPB2 10

COEFFICIENTS: α : D=50 TO 70 DEG, $\Delta\alpha$ =2 DEG; E=70 TO 90 DEG, $\Delta\alpha$ =2 DEG
 0 OR B
 SCHEDULES β : A=-10 TO 10 DEG, $\Delta\beta$ =2 DEG

TEST MSFC TWT 526 DATA SET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHED.		PARAMETERS/VALUES				NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)								
		a	B	α	β	α/β	S_T		1.96	2.74	4.96						
R61 041	N3C3F1	60	A	40.	1.25T	7.5	0.	3	111	259	260						
042	N3C3F2	D	0			15.		3	105	273	280						
043		E	0					3	121	303	302						
044	N1C3F3	D	0	25.		20.		3	108	296	299						
045		E	0					3	124	135	301						
046		60	A					3	109	262	261						
047	N2C3F3	D	0	33.				3	107	297	294						
048		E	0					3	123	139	300						
049		60	A					0	-	-	-						
050	N3C3F3	D	0	40.				2	106	265							
051		E	0					2	122	132							
052		60	A					3	110	263	264						
053	N3C3F0T1	D	0			0.	0.424	3	102	290	283						
054		E	0					3	117	127	126						
055		60	A					3	112	268	267						
056	N3C3F0T2	D	0				0.848	3	100	291	292						
057		E	0					3	118	128	129						
058		60	A					3	095	273	274						
059	N3C3F0T3	D	0				1.272	2	103	294							
060		E	0					2	119	131							

1 7 13 19 25 31 37 43 49 55 61 67 73

CLM CN CY CBL CYN CA CAB CPB1 CPC CPB2 110

COEFFICIENTS: α : D = 50 to 70 Deg., $\Delta\alpha = 2$ Deg.; E = 70 to 90 Deg., $\Delta\alpha = 2$ Deg.,
a or B
SCHEDULES β : A = -10 to 10 Deg., $\Delta\beta = 2$ Deg.,
= IDPVAR(1) IDPVAR(2) IDV

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TABLE II. (Continued)
 TEST M3C TWT 526 DATA SET COLLATION SHEET

CYLINDRICAL BOOSTER
 LMSC
 DR#1242 A-1- 190

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)								
		α	β	$\Delta\alpha$	$\Delta\beta$	$\Delta\alpha$	$\Delta\beta$		1.96	2.74	4.96						
R61 061	N3C3F0T3	60	A	40.	1.257	0.	1.272	3	113	274	275						
062	N1C1F1	D	0	25.	2.457	7.5	0.	1	093	-	-						
063		E	0					0	-	-	-						
064		60	A					1	094	-	-						
065	N2C1F0	D	0	33.		0.		3	231	137	136						
066		E	0					3	226	162	161						
067		60	A					0	-	-	-						
068	N2C1F3	D	0	33.		20.		3	232	138	139						
069		E	0					3	227	159	160						
070		60	A					0	-	-	-						
071	N3C1F1T2	D	0	40.		7.5	.848	3	233	152	140						
072		E	0					3	228	158	157						
073		60	A					3	234	142	143						
074	N3C1F1T1	D	0				.424	3	235	146	147						
075		E	0					3	230	155	156						
076		60	A					3	235	145	144						
077	N3C1F1T3	D	0				1.272	3	237	149	148						
078		E	0					2	-	154	153						
079		60	A					3	238	150	151						
080	N3C2F1	D	0		3.357		0.	3	218	201	202						

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1 7 13 19 25 31 37 43 49 55 61 67 73 76

CLM CN CY CBL CYN CA CAB CPB1 CPC CPB2 10

COEFFICIENTS: α : D = 50 TO 70 DEG., $\Delta\alpha = 2$ DEG.; E = 70 TO 90 DEG., $\Delta\alpha = 2$ DEG.
 β : A = -10 TO 10 DEG., $\Delta\beta = 2$ DEG.
 IDPVAR(1) IDPVAR(2) NDV

PRETEST

POSTTEST

TABLE II. (Continued)
TEST MSFC 1W1 526 DATA SET COLLATION SHEET

DATA SET IDENTIFIER	CONFIGURATION	ECHD.		PARAMETERS/VALUES			NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)
		a	b	α	β	γ		
R61101	N2C3F0	D	0	35	4.257	0.	3	325 2.50 324 2.51 323 2.52
102	↑	E	0				3	322 2.47 321 2.48
103	↑	6	A				3	320 2.49 319 2.50
104	N3C3FIT1	D	0	40.	7.5	1.24	2	318 2.57 317 2.58
105	↑	E	0				2	316 2.97 315 2.98
106	↑	6	A				3	314 2.70 313 2.71
107	N3C3FIT2	D	0			0.818	2	312 2.83 311 2.84
108	↑	E	0				2	310 2.95 309 2.96
109	↑	6	A				3	308 2.72 307 2.71
110	N3C3FIT3	D	0			1.272	1	306 2.99 305 2.98
111	↑	E	0				1	304 3.11 303 3.12
112	↑	6	A				3	302 2.77 301 2.78
113	N3C3F0 + T.5.	D	0	0.	0.	0.	1	300 3.18 299 3.19
114	↑	E	0				1	298 3.19 297 3.20
115	N3C3FO T3 + T.5.	D	0			1.272	1	296 3.17 295 3.18
116	↑	E	0				1	294 3.29 293 3.30

1	GLM	
2	CM	
3	CY	
4	CBL	
5	CYN	
6	CA	
7	CAB	
8	CPB1	
9	CPC	
10	CPB2	
11	IDPVAR(1)	IDPVAR(2)

COEFFICIENTS:

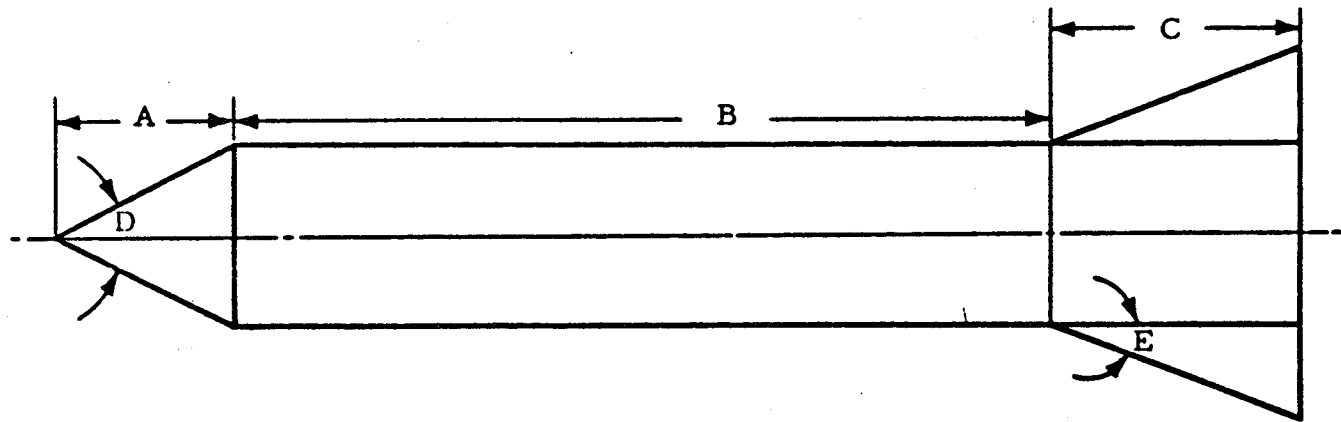
α = 50 to 70 Dec, Δ = 2 Dec, E = 70 to 80 Dec, Δ = 2 Dec.

β : A = -10 to 10 Dec, Δ = 2 Dec.

SCHEDULES

a or b

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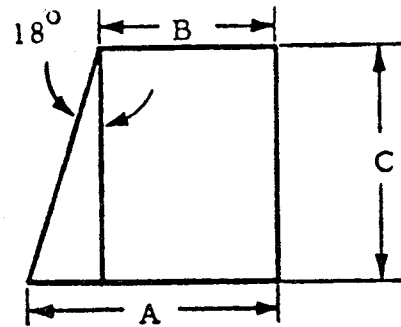


	A	B		C		D (deg)		E (deg)	
N1	.9648	C1	2.457	F0	1.35	N1	50	F0	0
N2	.6929	C2	3.357	F1	1.35	N2	66	F1	7.5
N3	.5363	C3	4.257	F2	1.35	N3	80	F2	15
				F3	1.35			F3	20

NOTE: All dimensions in inches (Model Scale)

Fig. 2 - Model Geometry
(a) Cones, Cylinders and Flares

Planform View of Fin



NOTE: All dimensions in inches (Model Scale)

Fin	A	B	C
T1	0.691	0.45	0.743
T2	0.868	0.45	1.287
T3	1.013	0.45	1.734

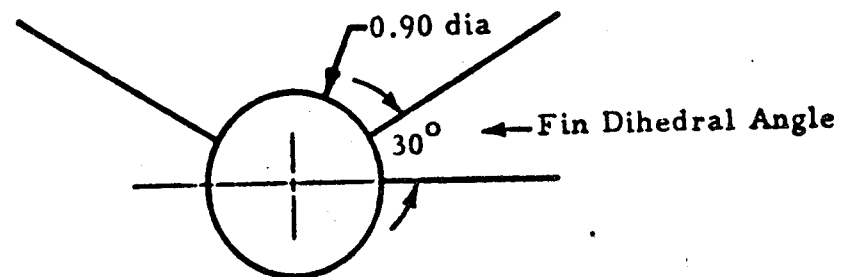


Fig. 2- Concluded
 (b) Fins

COLLATION SUMMARY

PRETEST

POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)										
		α	β	Γ					0.6	0.8	0.9	1.0	1.1	1.2	1.46	1.96	2.74	3.5	4.96
R54 001	N ₁ B ₁	A	0	-				7	001/0		002/0		003/0	004/0		063/0	064/0		065/0
002	↓	B	0	-				6			007/0		006/0	005/0		062/0	067/0		066/0
003	N ₁ B ₁ F ₂	A	0	30				3	009/0		012/0			011/0					
004	↓	B	0	↑				3	013/0		008/0			010/0					
005	↓	50	C	↑				2			014/0			015/0					
006	↓	30	C	↑				3	018/0		017/0			016/0					
007	N ₁ B ₁ F ₆	A	0	↑				3	042/0		041/0			043/0					
008	↓	B	0	↑				3			040/0			039/0					072/0
009	↓	50	C	↓				2			046/0			047/0					
010	↓	30	C	↓				2			045/0			044/0					
011	N ₁ B ₁ F ₂	A	0	0				1						030/0					
012	↓	B	0	↑				1						029/0					
013	N ₁ B ₁ F ₂ F ₃	30	C	↑				1						031/0					
014	N ₁ B ₁ F ₆	A	0	↑				3	036/0		035/0			034/0					
015	↓	B	0	↑				2			037/0			038/0					
016	N ₁ B ₁ F ₆ F ₄	30	C	↓				1						033/0					
017	N ₁ B ₁ F ₂	A	0	45				1						027/0					
018	↓	B	0	↑				1						028/0					
019	↓	30	C	↓				1						026/0					
020	↓	50	C	↓				1						025/0					

TEST RUN NUMBERS

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1	7	13	19	25	31	37	43	49	55	61	67	75	76
CLM	CN	CY	CBL	CYN	CA	CAB	CAF	CAC	XCP				10

COEFFICIENTS: A: $\alpha = 20^\circ$ to 40° → IDPVAR(1) IDPVAR(2) NDV
 α or β B: $\alpha = 40^\circ$ to 60°
 SCHEDULES C: $\beta = -10^\circ$ to $+10^\circ$

CYLINDRICAL BOOSTER
 MSFC
 DR#1208 A-1- 195

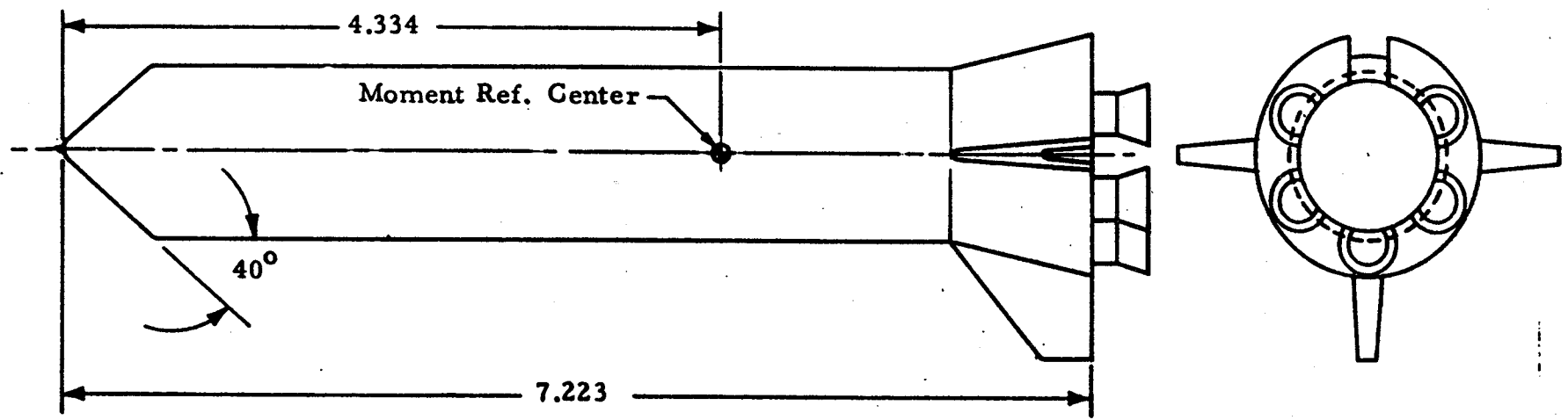


Figure 3. MSFC Pressure Fed Booster
Moment Reference Center Location

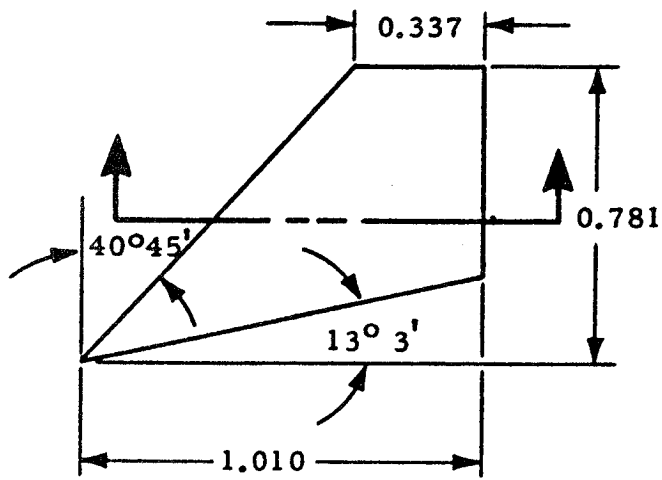
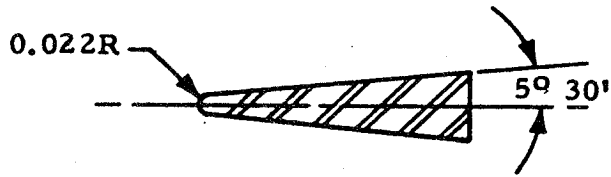


Figure 4 - Fins F2, F3

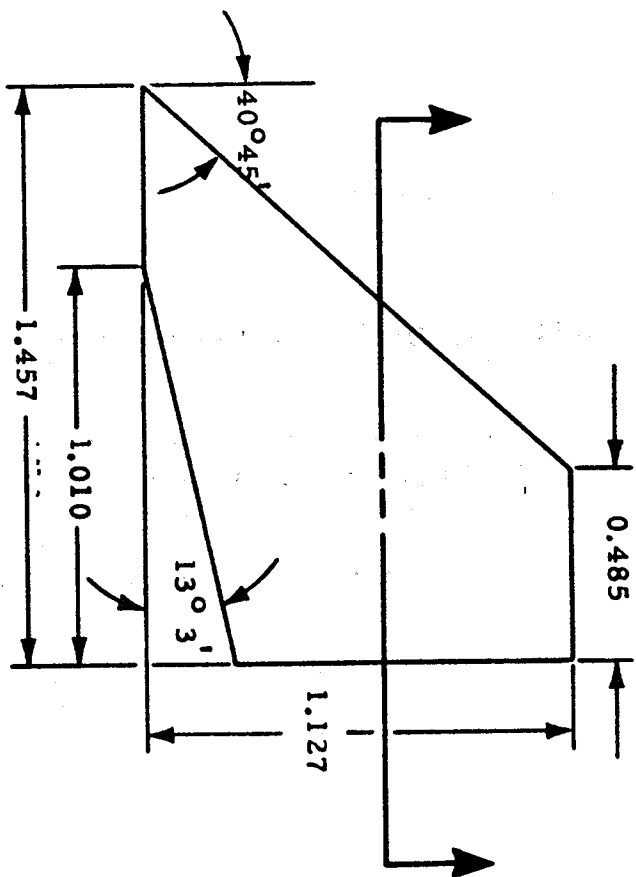
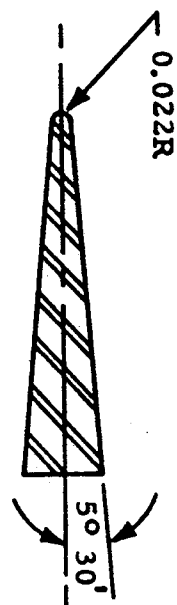
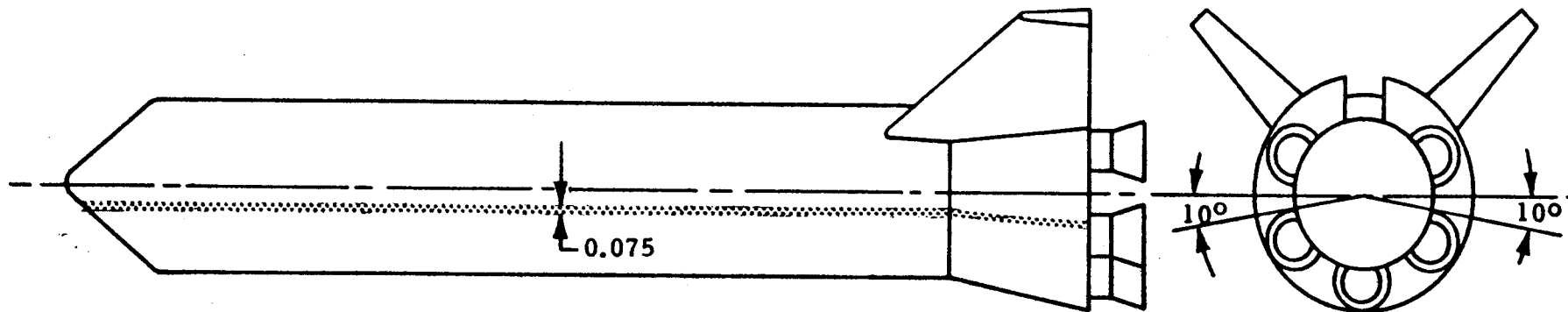


Figure 5 - Fins F4, F6



Transition strip No. 120 carborundum grit

Figure 6 - Transition Strip

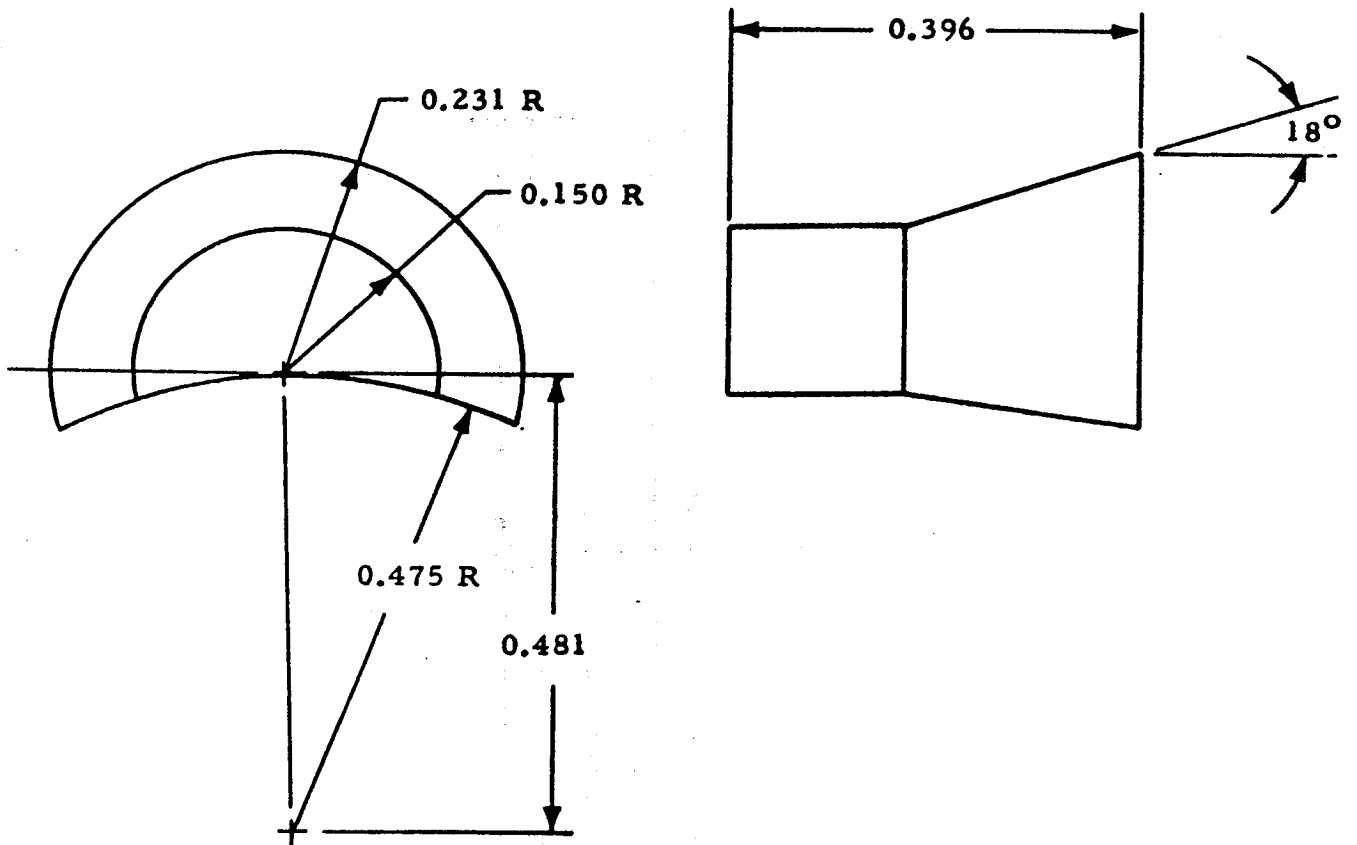


Figure. 7 - Rocket Engines for N1B1

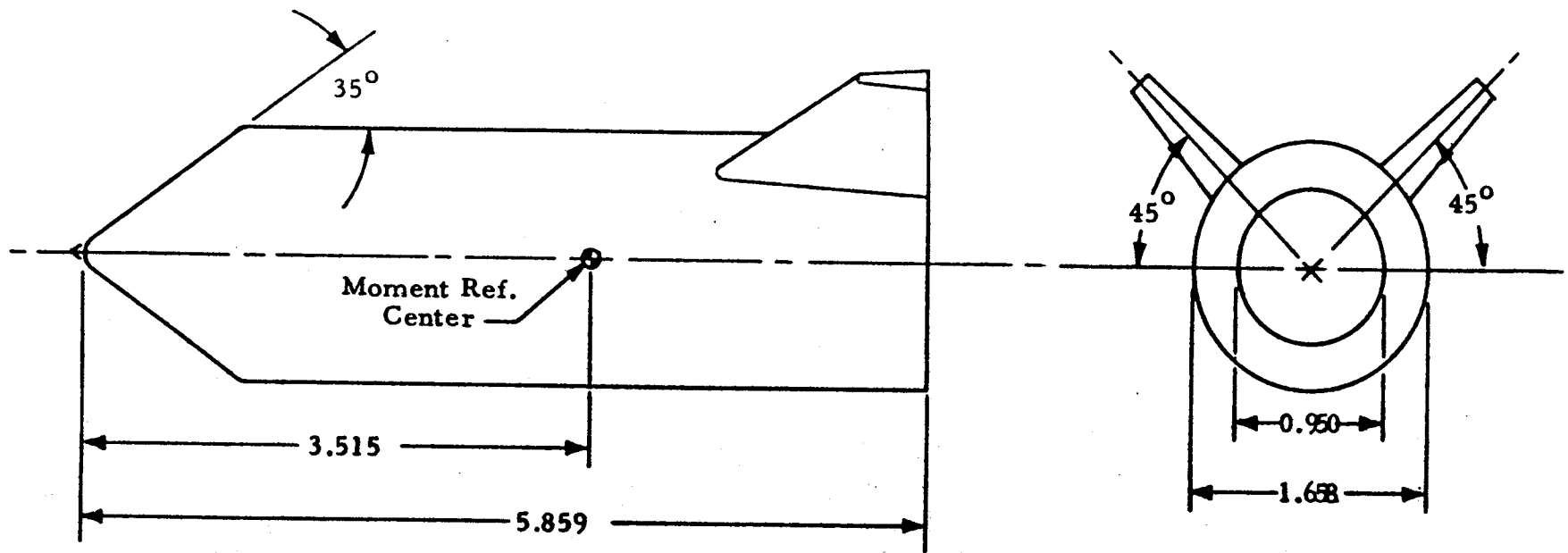
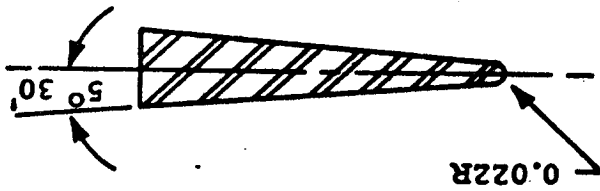
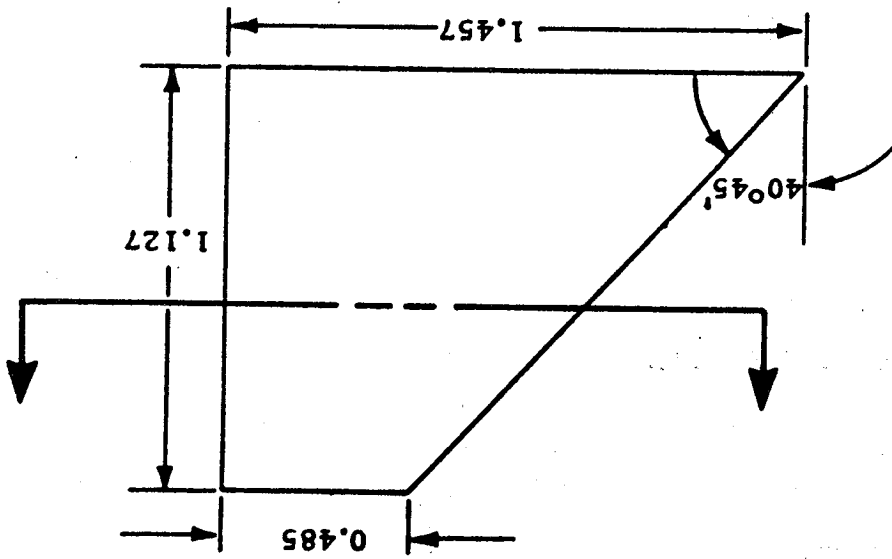


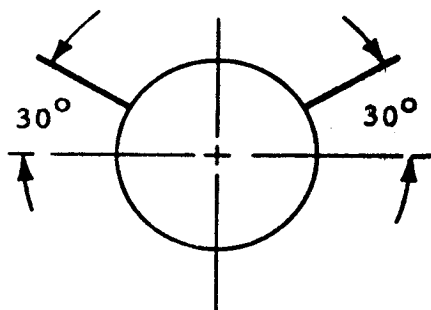
Figure 9 - MSFC Pressure Fed Booster Configuration X
Moment Reference Center Location

CYLINDRICAL BOOSTER
MSFC
DR#1208 A-1- 203

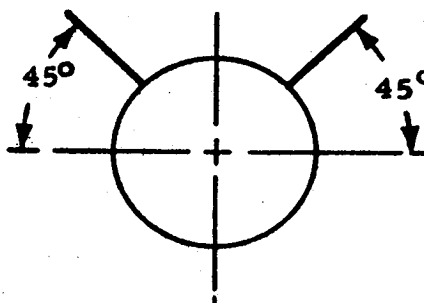
Figure 10. Fins F7



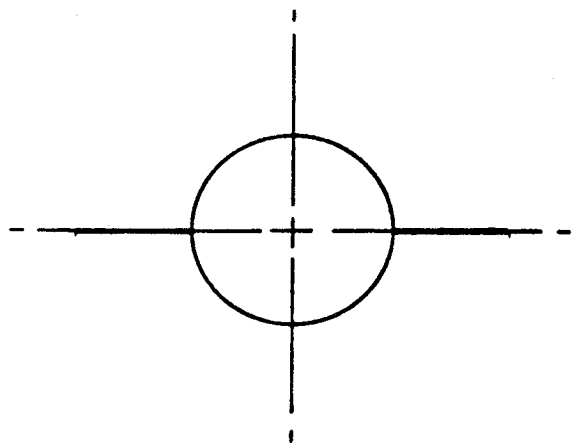
CYLINDRICAL BOOSTER
MSFC
DR#1208 A-1-204



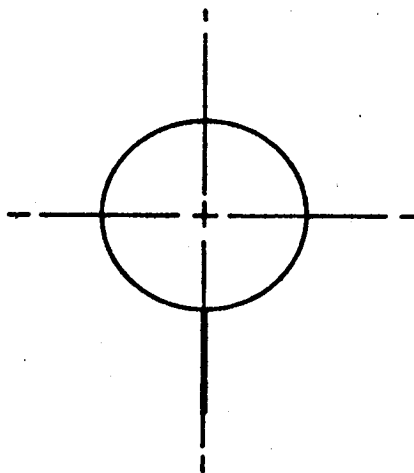
F2, F6, F7 30° Dihedral



F2, F6, F7 45° Dihedral



F2, F6, F7 0° Dihedral



F3, F4 Fin Vertical

Figure 11. Fin Positions

CYLINDRICAL BOOSTER

TEST MSFC TWT 521 DATA SET COLLATION SHEET MSFC DR#1226 A-1 - 206

PRETEST

POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD. NO.	PARAMETERS/VALUES	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLES)
R55 001	N1E	0	C	3	0.74 0.9%
002		30	C	6	0.6%
003		31	C	6	0.64%
004	N1B1F2	30	B	4	0.16% 0.17% 0.15%
005		30	C	4	0.21% 0.23% 0.27%
006		31	C	4	0.21% 0.24% 0.19%
007	N1B1F2	0	D	3	0.71% 0.75% 0.68%
008		8	0	4	0.79% 0.15% 0.14% 0.13%
009		0	C	3	0.76% 0.75% 0.68%
010		30	C	4	0.11% 0.12% 0.17%
011		31	C	4	0.11% 0.08% 0.07%
R55 012	N1B2	0	D	1	0.9%
013		11	0	7	1.2%
014		8	0	6	0.54%
015		0	E	4	0.5%
016		0	C	3	0.53% 0.5%
017		30	C	6	0.47% 0.47% 0.27% 0.26% 0.25%
018		31	C	6	0.51% 0.51% 0.41% 0.41% 0.27% 0.27%
019	N1B1F1	0	D	3	0.21%

1	7	13	19	25	31	37	43	49	55	61	67	7575
CLM	ICN	ICY	KBL	ICYN	ICA	KAR	ICAF	ICAC	IXCP			10

COEFFICIENTS:

C: $\beta = -10.7$ $\Delta\beta = 2^\circ$ $\Delta\alpha = 2^\circ$ $\Delta\gamma = 2^\circ$
 B: $\alpha = 40.7$ $\Delta\alpha = 2^\circ$ $\Delta\beta = 2^\circ$ $\Delta\gamma = 2^\circ$
 D: $\alpha = -10.7$ $\Delta\alpha = 2^\circ$ $\Delta\beta = 2^\circ$ $\Delta\gamma = 2^\circ$

SCHEDULES

a or B

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TEST MSFC TWT 521 DATA SET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES	NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)											
		a	B			0.6	0.8	0.9	1.0	1.1	1.2	1.76	1.96	2.77	3.93	4.96	
R55 020	N ₁ B ₃ F ₁₂	A	0	30	7			117%			118%	117%	119%	113%	117%	111%	
021		B	0		4								114%	114%	115%	116%	
022		E	0		4								101%	104%	103%	102%	
023		O	C		3			081%			082%	083%					
024		30	C		6			059%			060%		047%	049%	049%	047%	
025		51	C		4								047%	034%	032%	031%	
R55 026	N ₂ B ₂	E	0	-	4								091%	015%	097%	076%	
027	N ₂ B ₂ F ₇	E	0	30	4								094%	092%	099%	075%	
R55 028	N ₂ B ₄	A	0	-	4								125%	134%	131%	130%	
029		B	0	-	4								126%	127%	123%	127%	
030		E	0	-	4								137%	130%	121%	121%	
031	N ₂ B ₅	A	0	-	1												133%
032		B	0	-	1												134%
033		E	0	-	2											140%	135%

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CLM	KN	ICY	ICEL	ICYN	CA	CAB	CAF	CAC	XCP				10

COEFFICIENTS: A: $\alpha = 20^\circ$ TO 30° $\Delta\alpha = 2^\circ$ C: $\beta = -10^\circ$ TO 10° $\Delta\beta = 2^\circ$
 a or B R: $\alpha = 40^\circ$ TO 60° $\Delta\alpha = 2^\circ$
 SCHEDULES E: $\alpha = 60^\circ$ TO 80° $\Delta\alpha = 2^\circ$

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CYLINDRICAL BOOSTER
 MSFC
 DR#1226 A-1- 207

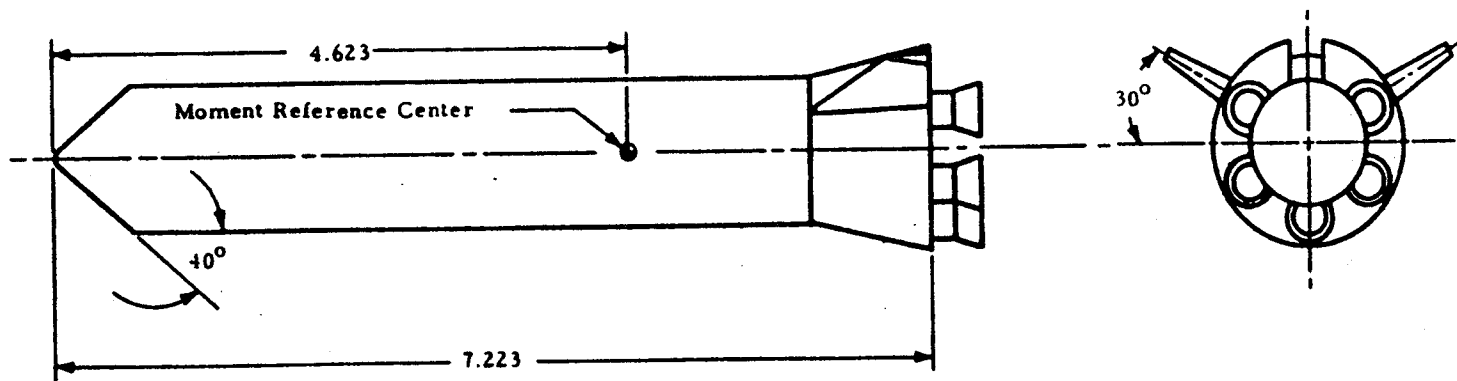


Fig. 2. MSFC Pressure Fed Booster N1B1F2 Moment Reference Center Location

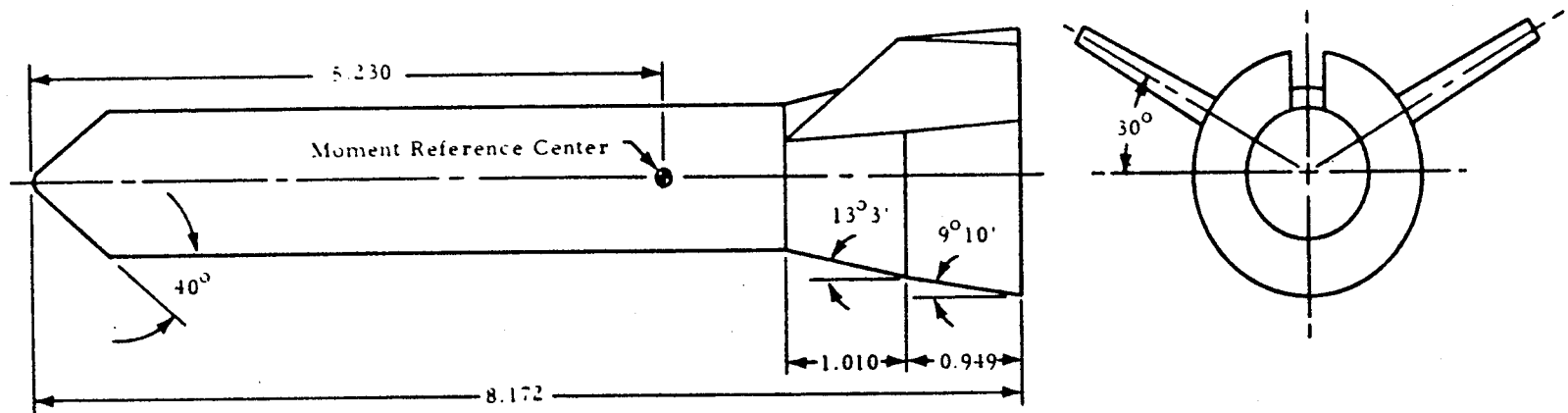


Fig. 3 - MSFC Pressure Fed Booster N1B3F12 Moment Reference Center Location

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MSFC
DR#1226 A-1- 209

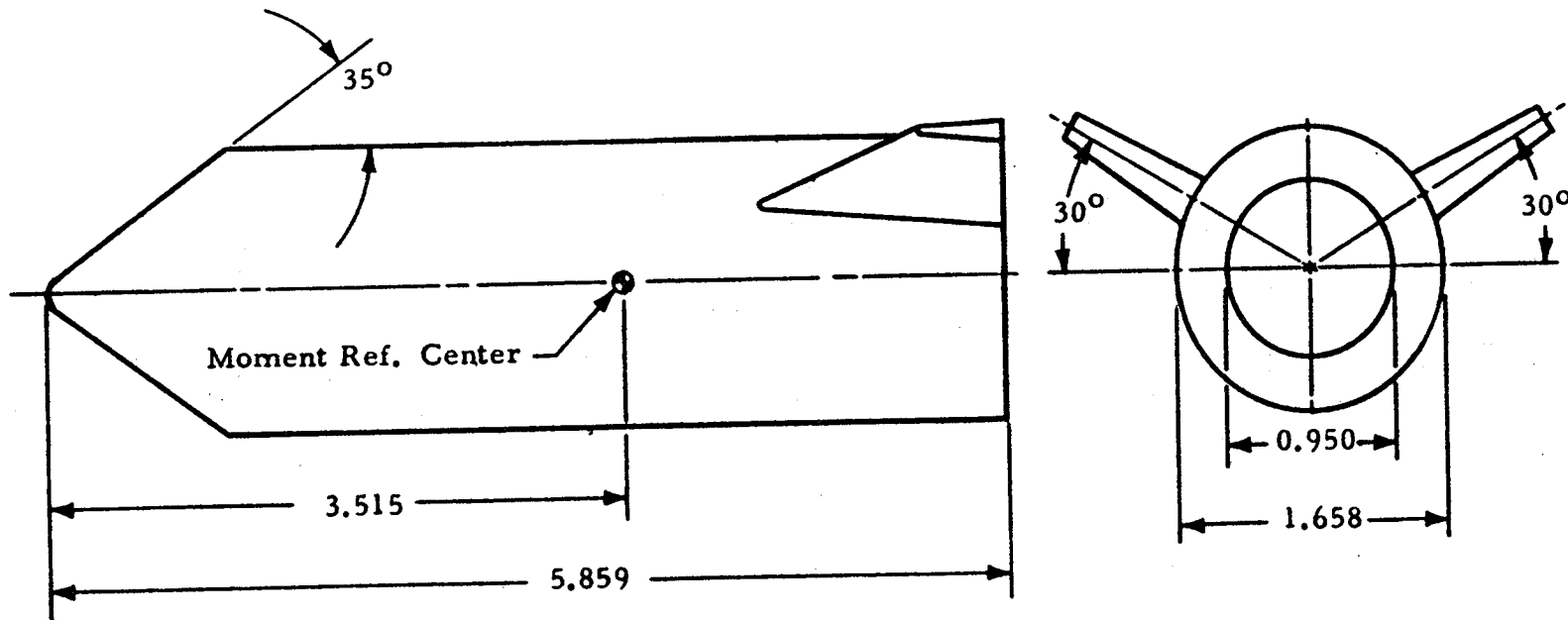


Fig. 4 - MSFC Pressure Fed Booster N2B2F7 Moment Reference Center Location

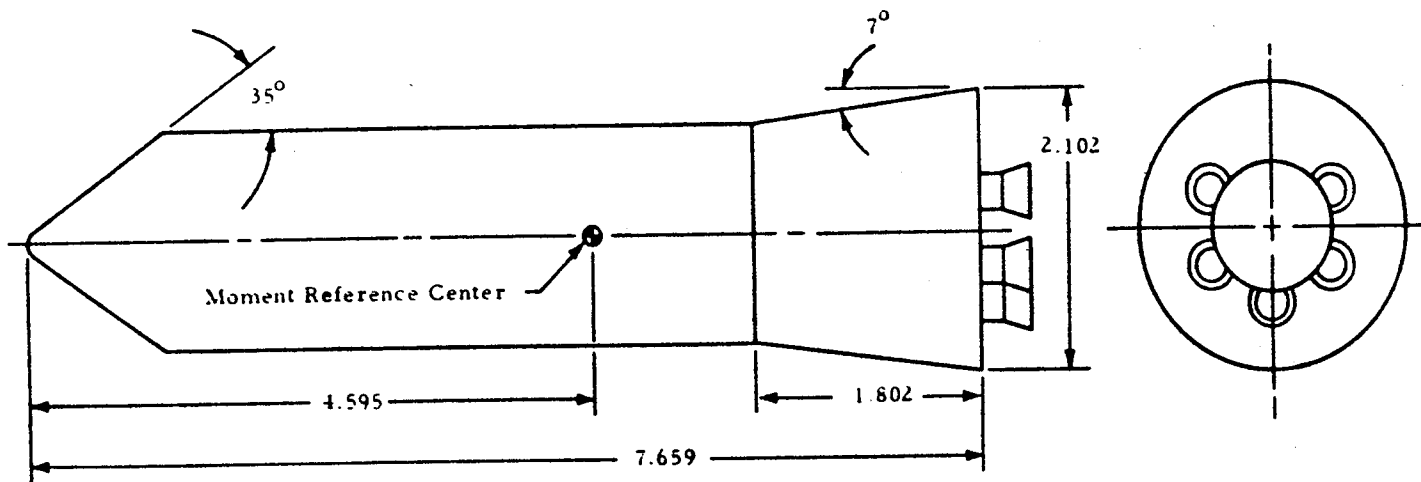


Fig. 5 - MSFC Pressure Fed Booster N2B4 Moment Reference Center Location

CYLINDRICAL BOOSTER
 MSFC
 DR#1226 A-1- 211

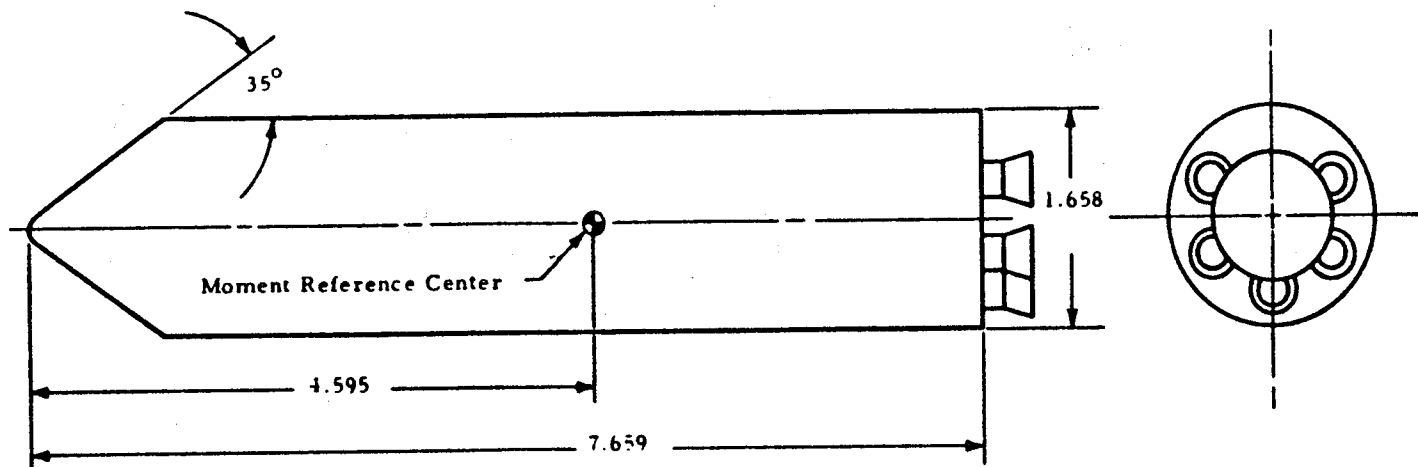


Fig. 6 - MSFC Pressure Fed Booster N2B5 Moment Reference Center Location

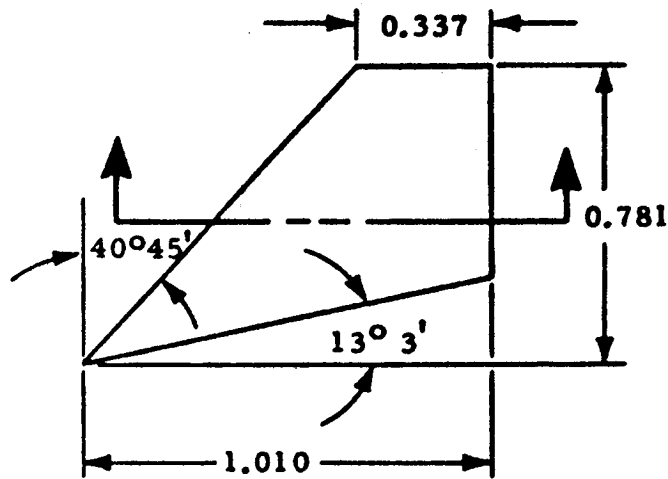
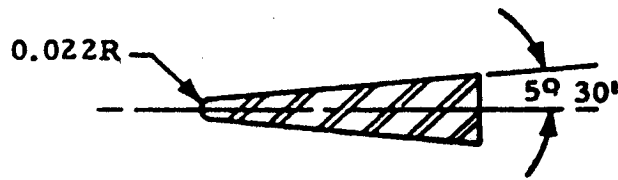


FIGURE 7. FINS F2

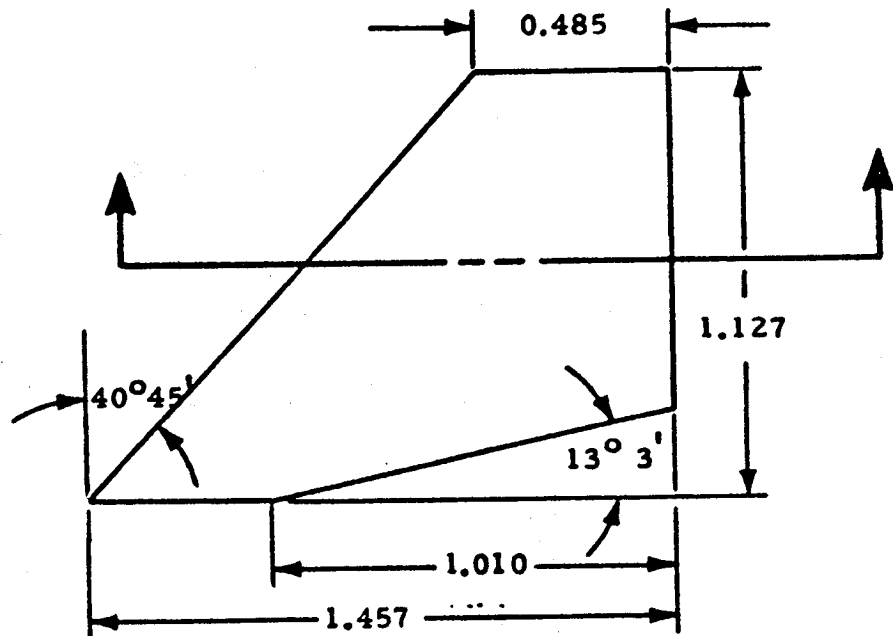
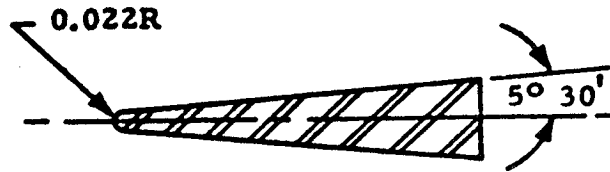


FIGURE 8. FINS F6

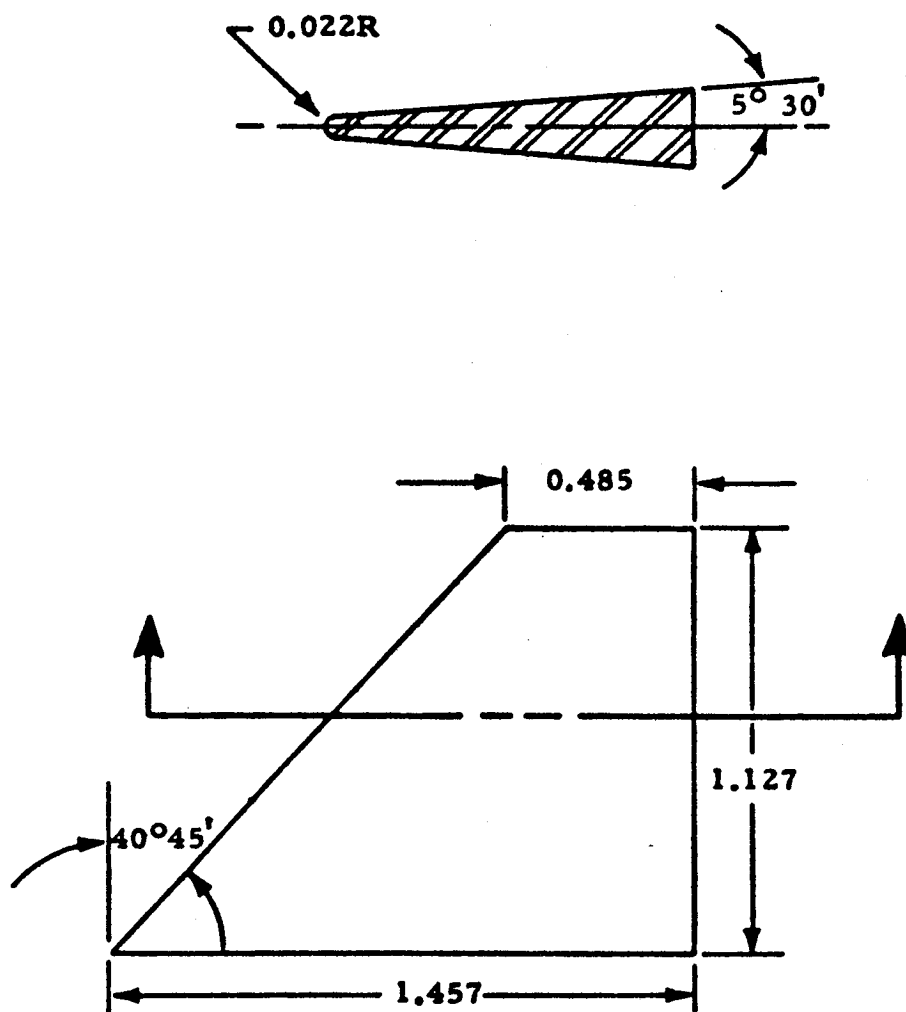


FIGURE 9. FINS F7

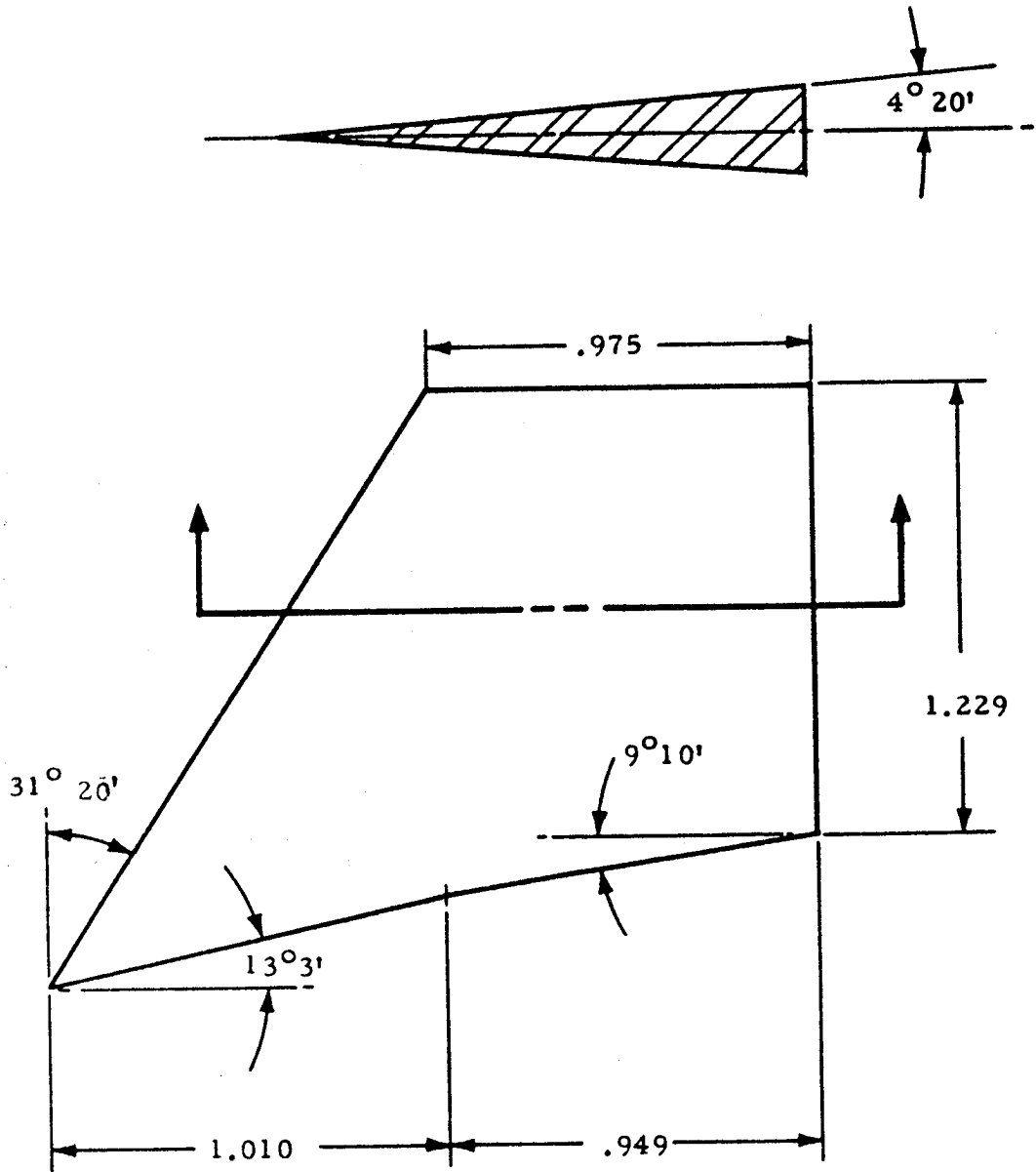


Fig. 10- Fins F12

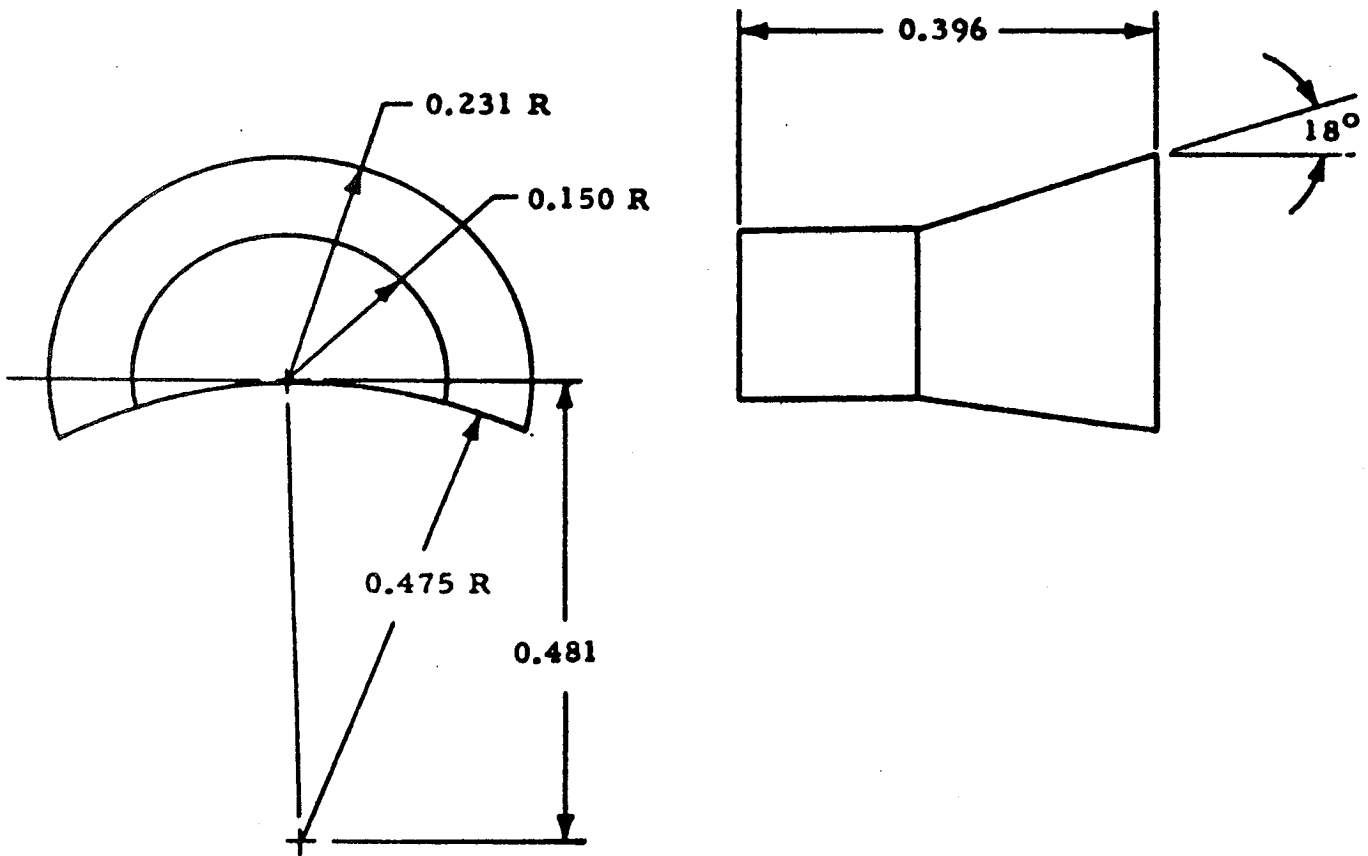


Fig. 11. Rocket Engines for N1B1, N2B4 and N2B5

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.			PARAMETERS			NO. RUNS	MACH NUMBERS				
		a	b	6	LOC	T	1		2	3	4		
R59 021	N ₂ B,R,X,F ₂	C	0	15°	2	30°	3	123	90	41			4.96
022		C	0	0°			5	125	85	55	56	40	
023		C	0	-15°			3	122	98		44		
024		C	0	-30°			5	118	99	50	49	45	
025		C	0	-45°			3	119	101		48		
026		D	0	15°			3	124	91		42		
027		D	0	0°			5	125	87	54	53	43	
028		D	0	-15°			3	121	97		43		
029		D	0	-30°			5	117	100	51	52	46	
030		D	0	-45°			3	120	101		47		
031		60	E	0°			5	127	89	58	57	37	
032		80	E	0°			5	125	88	59	60	39	
033	N ₂ B,R,X,F ₂	60	E	-30°	1		1						
034		C	0	30°			1						
035		D	0	30°			1						
036		C	0	0°	3		1						
037		D	0	0°			1						
038	N ₂ B,R,(BUS OFF)	C	0				2						
039		D	0				2						
040		80	E				1						

COEFFICIENTS
a or b
SCHEDULES

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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CYLINDRICAL BOOSTER
MSFC
DR#1240 A-1-219

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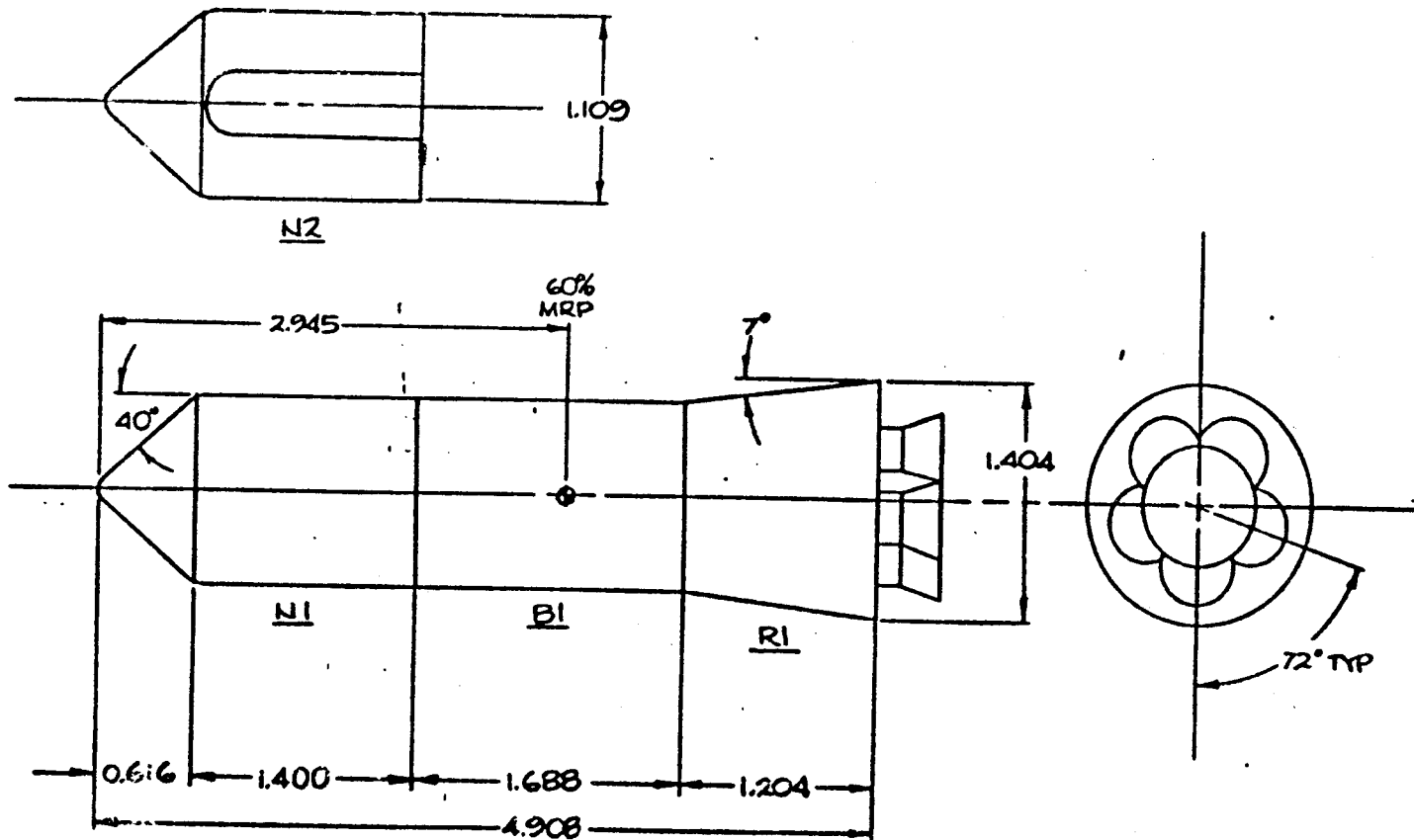


FIGURE 2. MSFC IN-HOUSE PRESSURE FED BOOSTER

VERTICAL POSITION OF FINNS
(750 FT² FIN ILLUS)

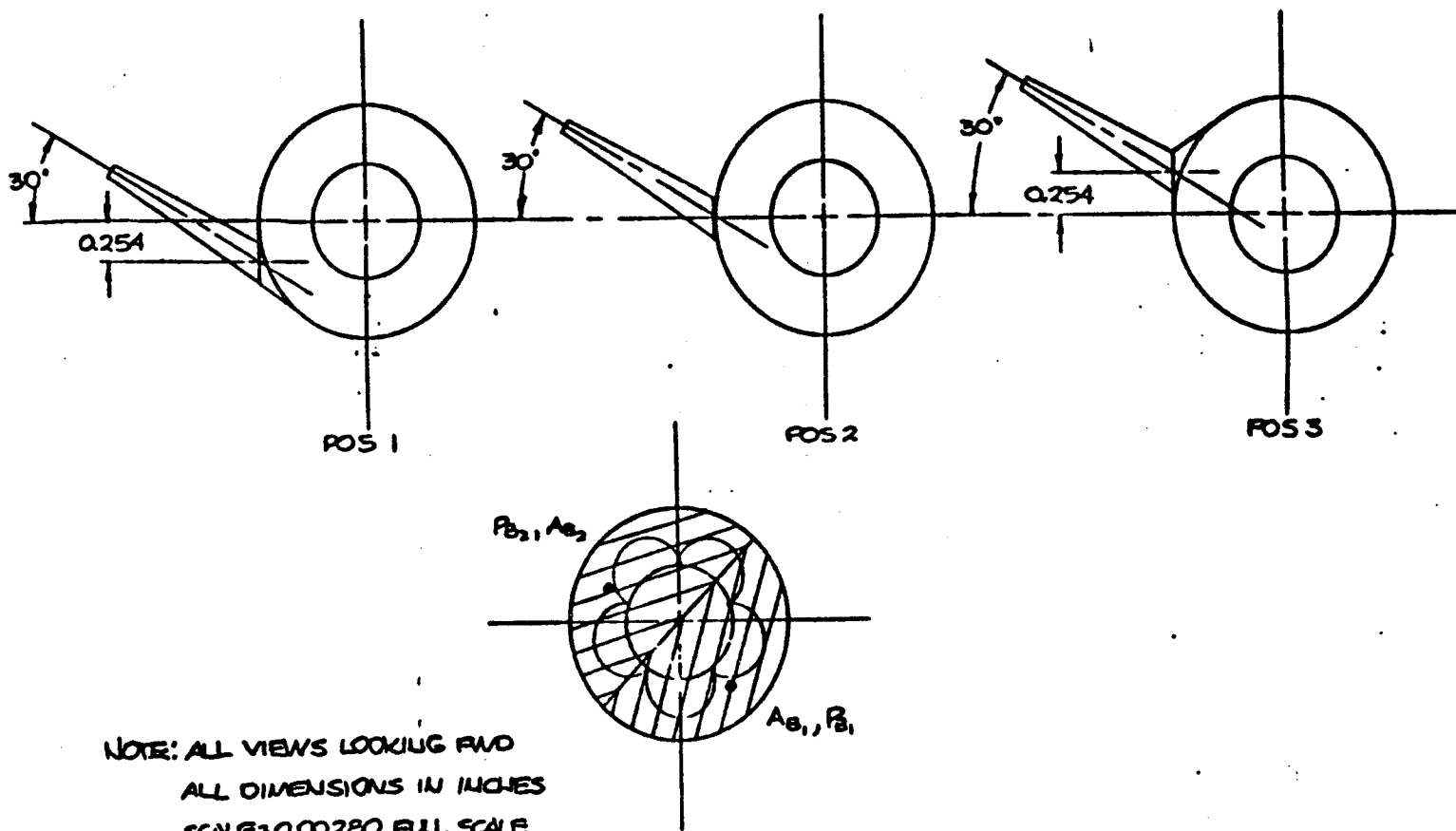


FIGURE 3. BASE PRESSURE AND AREA LOCATIONS

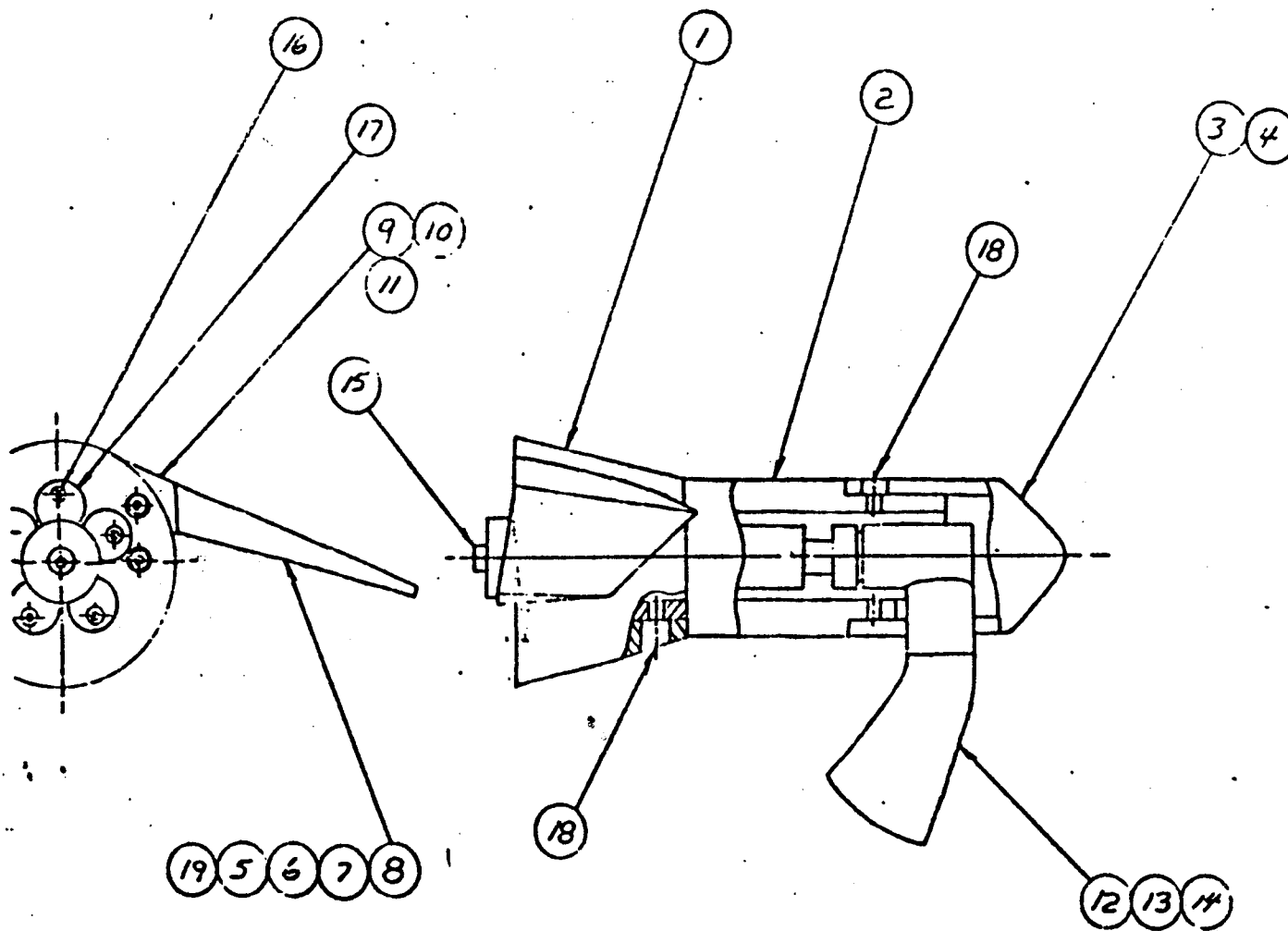
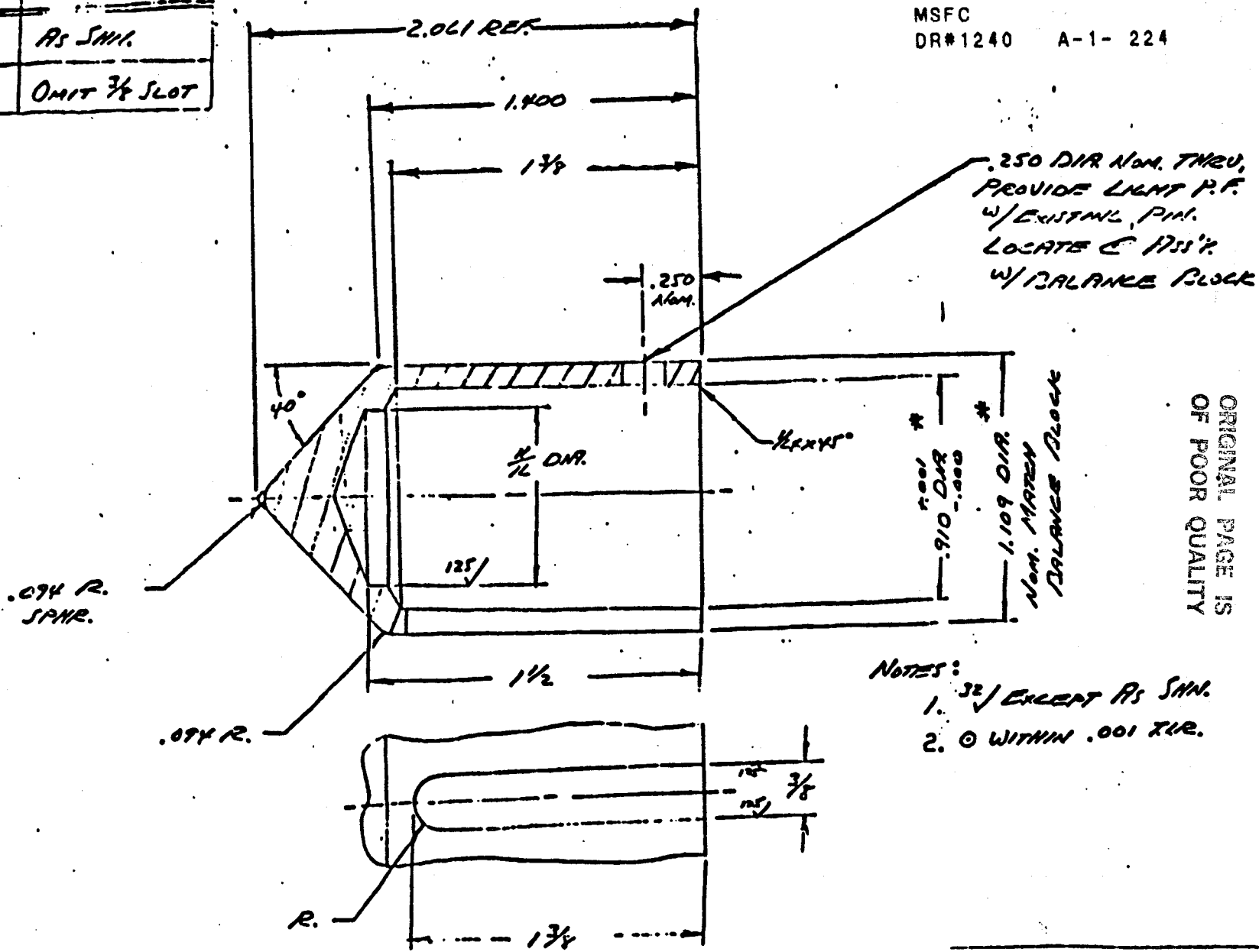


FIGURE 4a. PRESSURE FED BOOSTER SHOWING MODEL PARTS

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Dr. No.	AN.
315 #1	AS SHN.
315 #2	OMIT 3/8 SLOT

CYLINDRICAL BOOSTER
MSFC
DR#1240 A-1- 224



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- NOTES:
1. 32/ EXCEPT AS SHN.
 2. © WITHIN .001 TIR.

1 1/4 ± .005 ± 0°5'

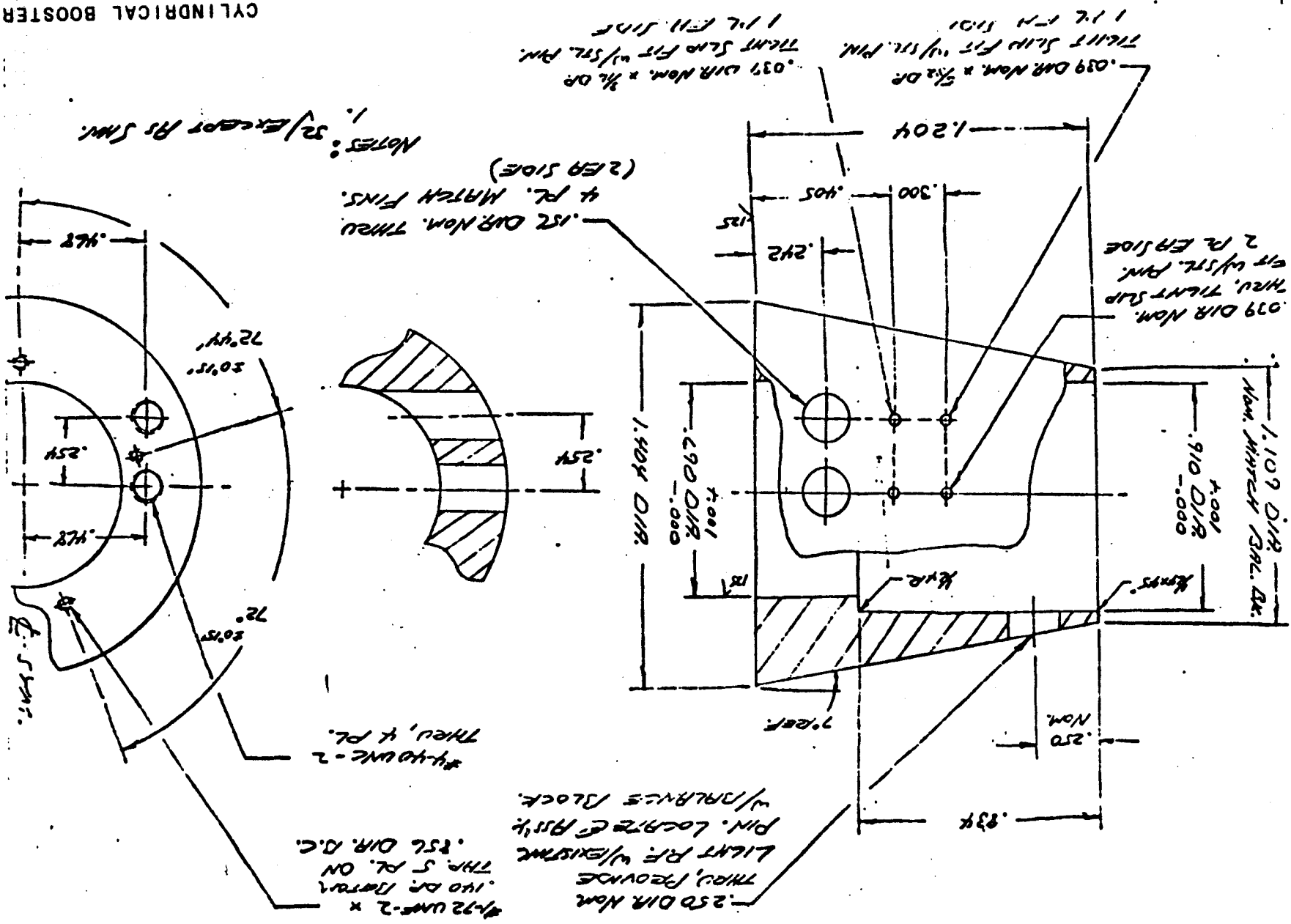
1 1/2 ± .005 TYPE OUT

FIGURE 6. NOSE NUMBER 1 AND 2

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CYLINDRICAL BOOSTER
MSFC
DR#1240 A-1-225

FIGURE 8. SHROUD



NOTES: 32/EXCEPT AS SHW.

NO.	H	B	C	U	E	Q	1 RS SHN. 1/2	1 ORR SHND	4" N
1	.491	1.406	.070	1.467	40°	15.01'	"	"	4.59"
2	"	1.055	"	1.116	45°	13.27'	"	"	5.56"
3	"	.703	"	.764	50°	2.53'	"	"	5.1"
4	.156	1.218	.032	1.279	45°	9.20'	"	"	"

H	.276
	.254
	.216
	.246

NOTES: 32
1. P. FORM SHARP EDGES.
2.

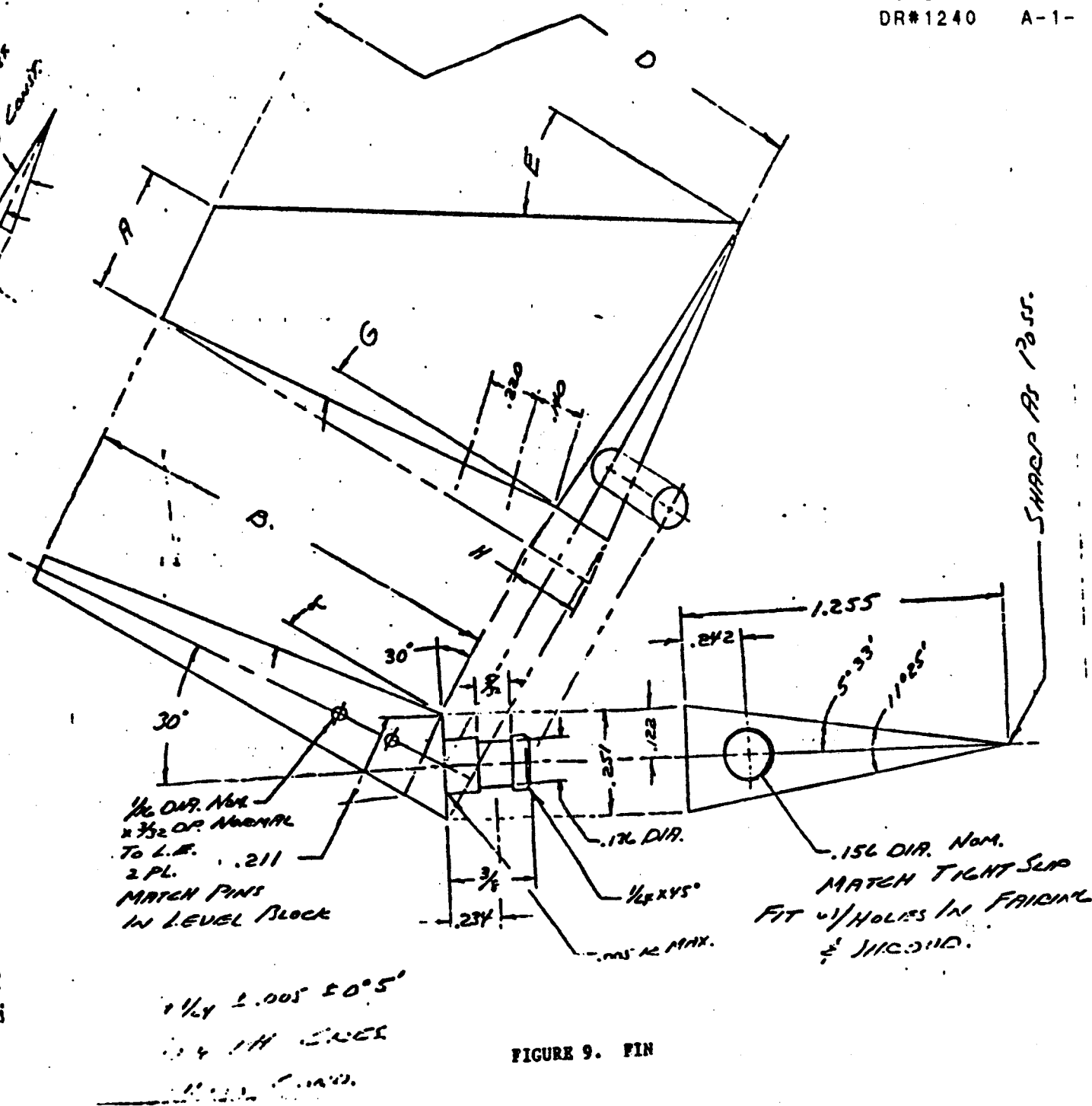
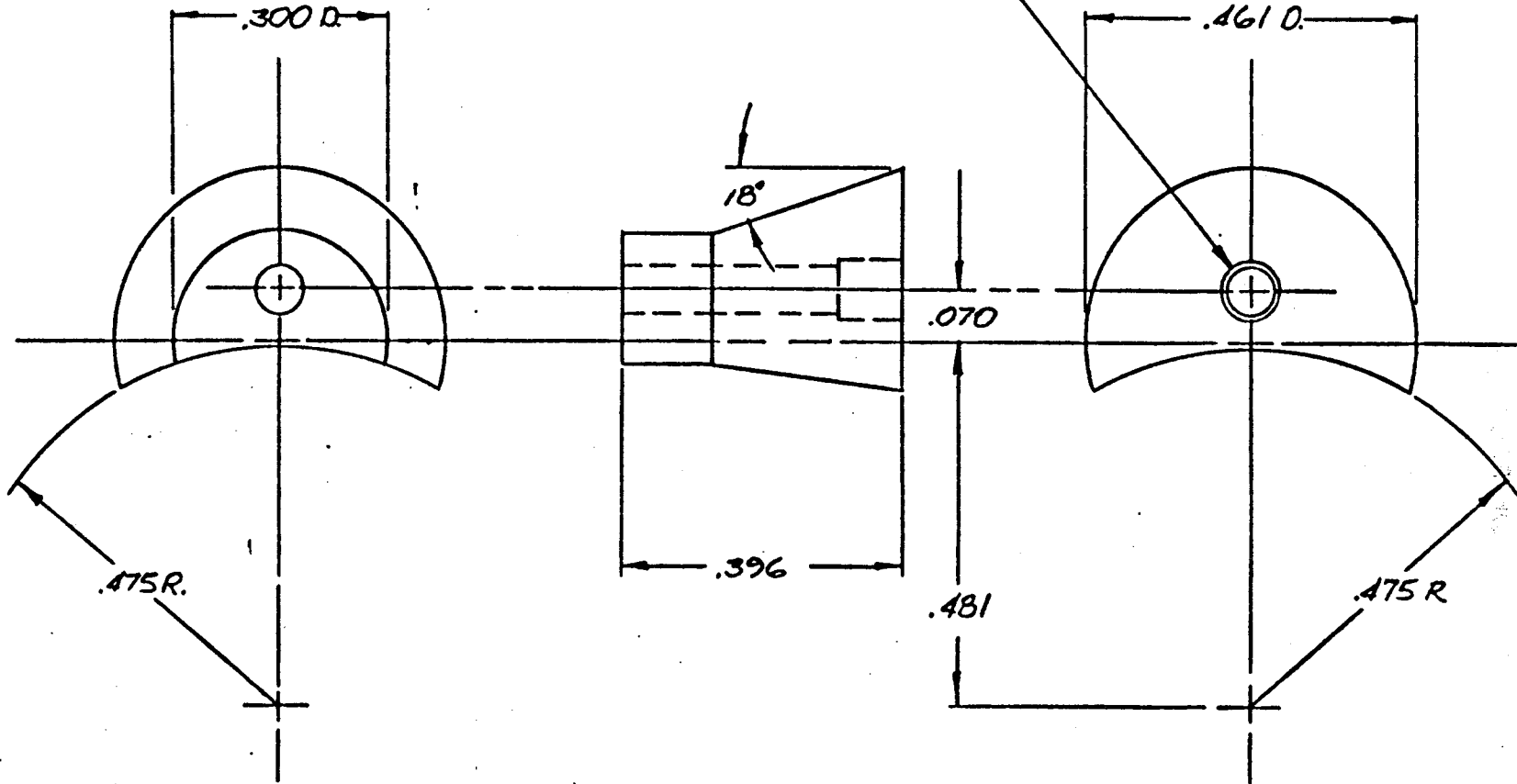


FIGURE 9. PIN

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2521 85 20485

DRILL & C'T BORE FOR
#1-72 SOCKET HD CAP SCR



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OF POOR QUALITY

MATERIAL -17-07H HT HXX

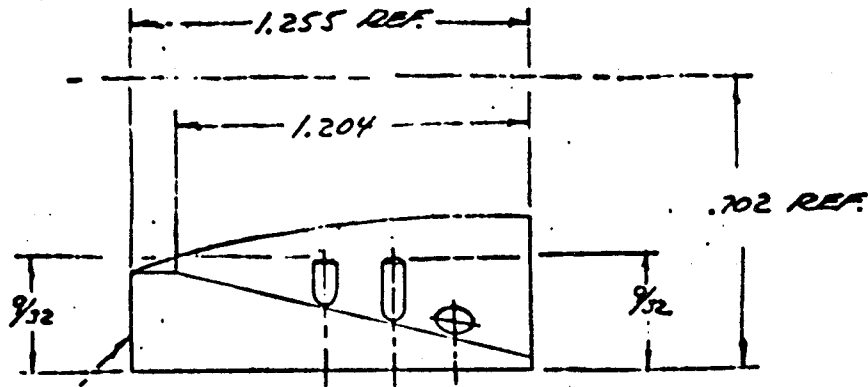
CYLINDRICAL BOOSTER
MSFC
DR#1240 A-1- 227

FIGURE 10. ENGINE

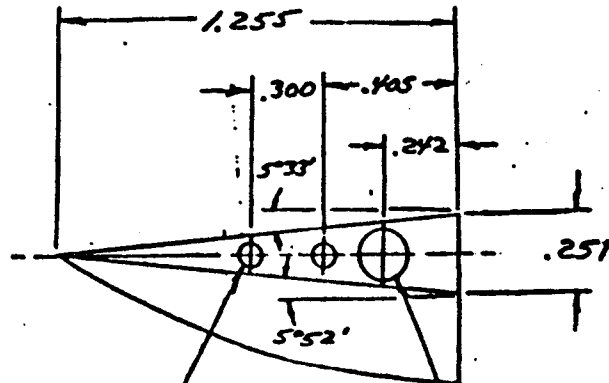
CYLINDRICAL BOOSTER

Pr. No.	DES.	MSFC DR#1240
1	AS SHN.	
2	OPP. HAND	

A-1- 228



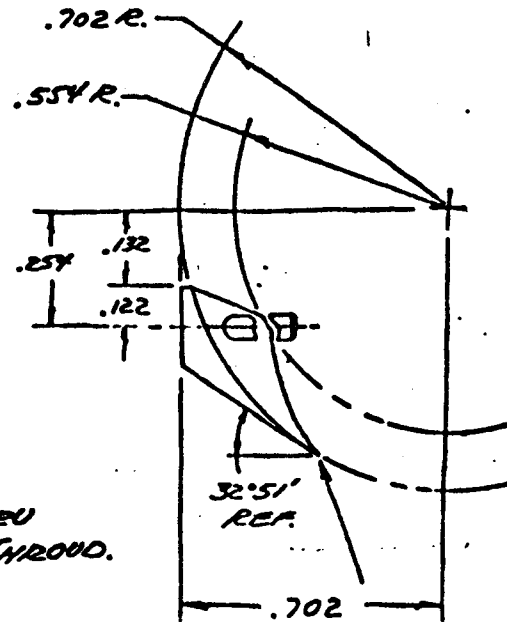
SHARP AS POSS.



.156 DIA. NOM. THRU MATCH FINS & SHROUD.

.039 DIA. STL. PIN P.F. FLUIN THIS SIDE, 2 PL.

Notes:
1. 32/



FAIR TANGENT To .702 R. OF SHROUD

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$\pm 1/4 \pm .005 \pm 0.15'$
METAL, 1.1445 OUT.

FIGURE 11a. PAIRING X1

TABLE II.
TEST MSFC TWT 529 DATA SET COLLATION SHEET

CYLINDRICAL BOOSTER
MSFC
DR#1245 A-1- 230

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES		NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)													
		a	B	Γ	LOC		0.6	0.9	1.2	1.46	2.74	4.96								
R63001	N ₁ B ₆	C	O	—	—		45	44	43	49	70	71								
002	↓	D	O	↓	↓		46	47	48	42	73	72								
003	N ₁ B ₆ F ₃	D	O	30	2					41										
004	N ₁ B ₇	C	O	—	—		13	14	15	34	12	11								
005	↓	D	O	↓	↓		18	17	16	33	9	10								
006	↓	60	E	↓	↓					35										
007	↓	80	E	↓	↓					36										
008	N ₁ B ₇ F ₃	C	O	30	2		23	21	22	31	4	1								
009	↓	D	O	↓	↓		19	20		32	3	2								
010	↓	60	E	↓	↓		24	25	26	30	5	6								
011	↓	80	E	↓	↓		28	27		29	8	7								
012	N ₁ B ₇ F ₃	C	O	↓	↓		50	51	52	39	69	68								
013	↓	D	O	↓	↓		53	54	55	40	66	67								
014	↓	60	E	↓	↓		59	60	61	38	62	63								
015	↓	80	E	↓	↓		58	57	56	37	65	64								

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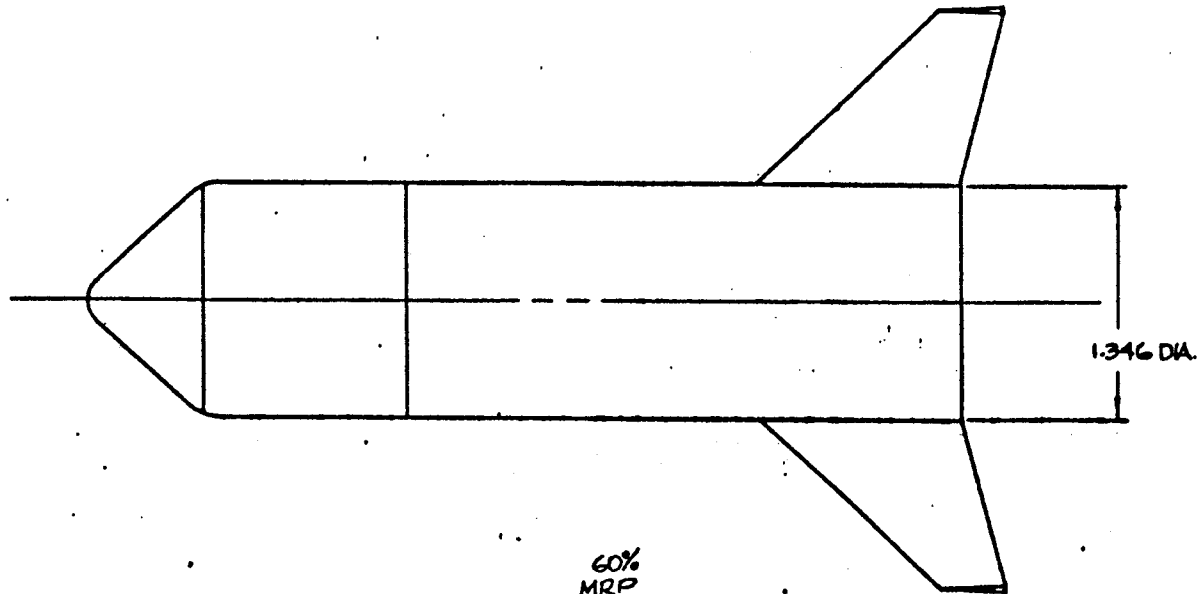
1 7 13 19 25 31 37 43 49 55 61 67 75 76

CLM CN CY CBL CYN CL CDT CAT 8

COEFFICIENTS:

a or B
SCHEDULES

C: $\alpha = 50^\circ$ TO 70° $\Delta\alpha = 2^\circ$ E: $\beta = -10^\circ$ TO 10° $\Delta\beta = 2^\circ$
D: $\alpha = 70^\circ$ TO 90° $\Delta\alpha = 2^\circ$



SCALE = 0.0034 FULL SCALE
 CONF. N1, B7, F2

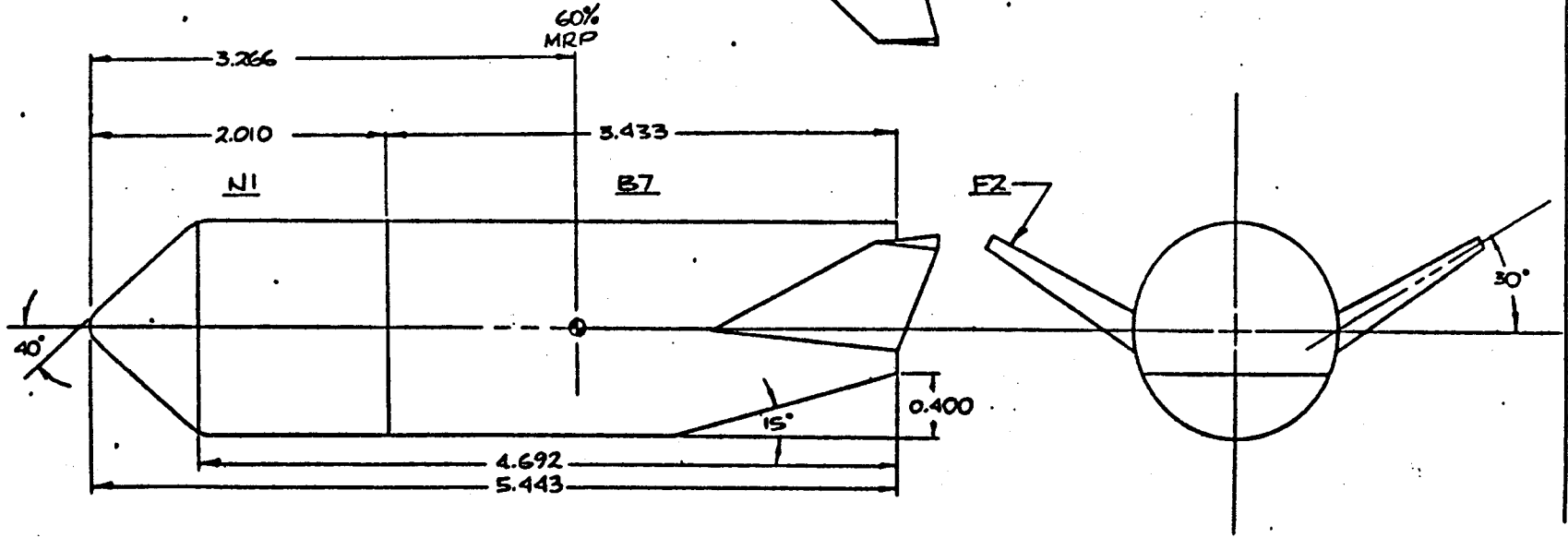
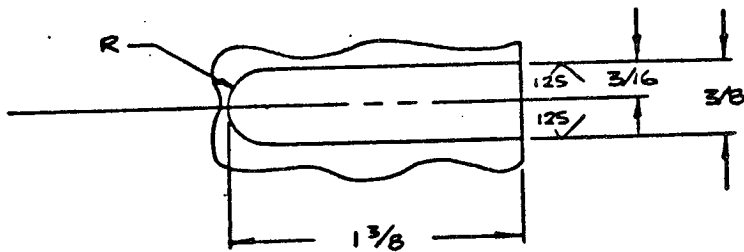
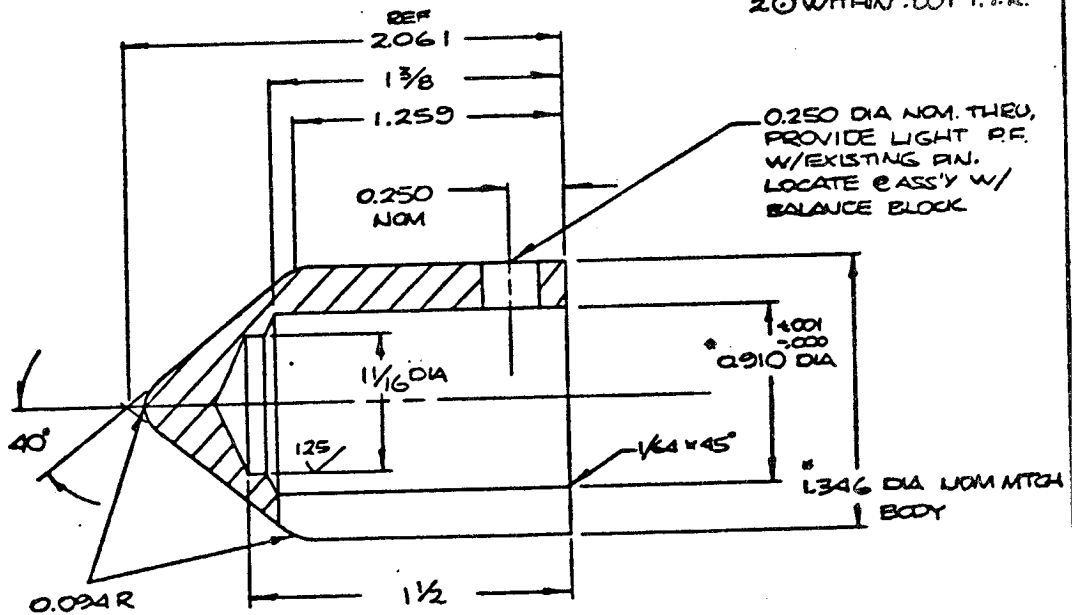


FIGURE 2. MSFC PUMP FED BOOSTER

CYLINDRICAL BOOSTER
 MSFC
 DR#1245 A-1- 231

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NOTES:
 1. $\sqrt{32}$ EXCEPT AS SHOWN
 2. ϕ WITHIN .001 T.I.R.



NOSE N₁

ALAL OR CRES TYPE OPT

± 1/16 ± .005 ± 0°5'

FIGURE 3. NOSE N₁

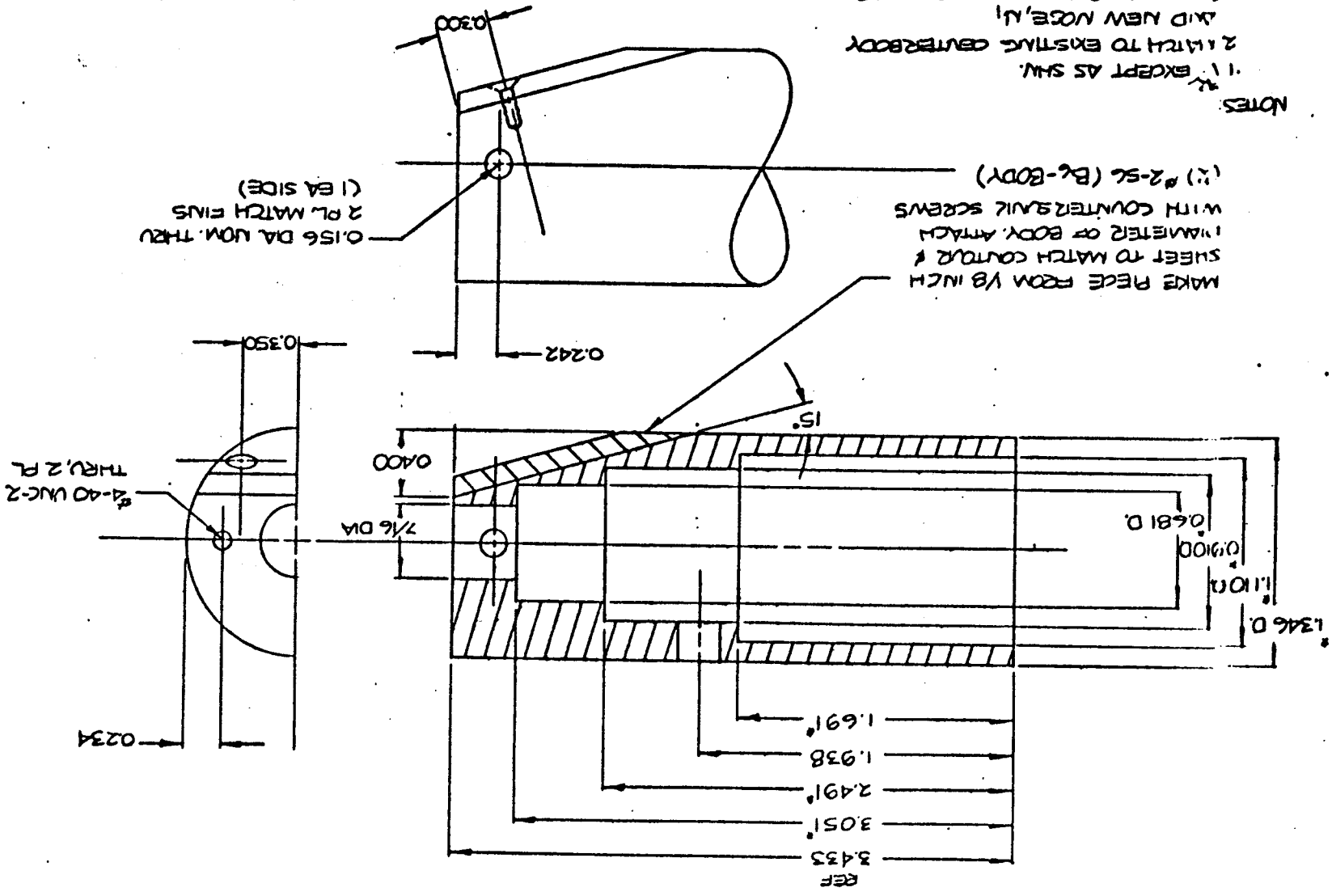
MSFC
AL AL OR CRES TYPE OPT
±.005 ±.05
CYLINDRICAL BOOSTER

BODY B₆, B₇

NOTES:
1. EXCEPT AS SHW.
2. MATCH TO EXISTING CENTERBODY
AND NEW NOSE, U₁
3. CONCENTRIC WITHIN .001 TIR

MAKE PIECE FROM 1/8 INCH
SHEET TO MATCH CONTOUR &
DIAMETER OF BODY. ATTACH
WITH COUNTERSINK SCREWS
(2) #2-56 (B₆-BODY)

0.156 DIA UOM THRU
2 PL MATCH FINIS
(1 BA SIDE)



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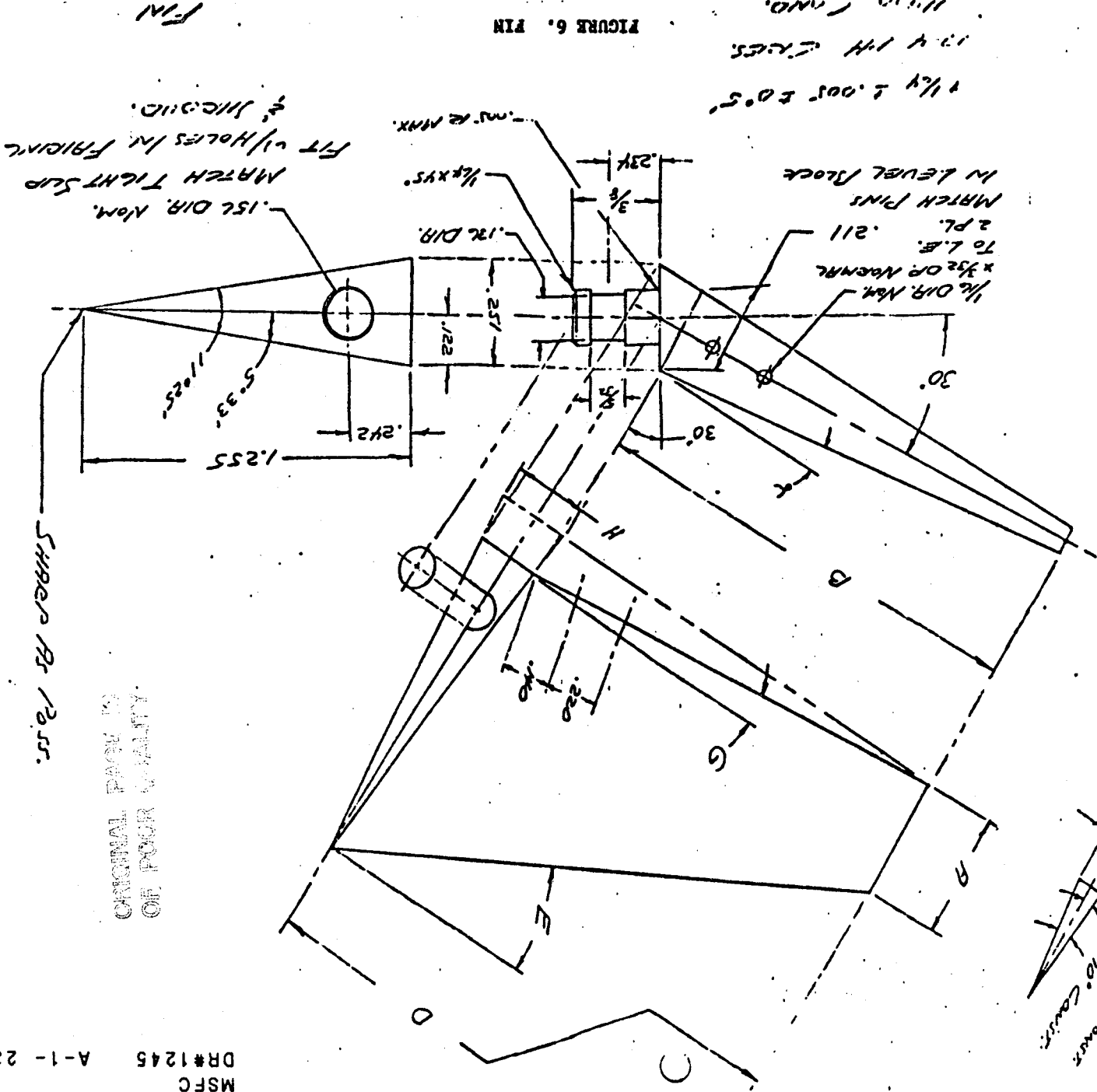


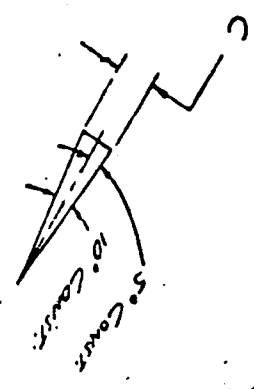
FIGURE 6. PIN

297

1 1/4 ± .005 ± 0.5°
 1 3/4 IN. CIRCLES
 1 1/2 IN. (AND)

1	.401	1.406	.070	1.447	40°	15° 1'	1 RS SW. 1/2	1 OR 2 HAND	4° 11'
2	"	1.055	"	1.116	45°	13° 27'	"	"	4° 59'
3	"	.703	"	.764	50°	2° 53'	"	"	5° 56'
4	.156	1.218	.032	1.279	45°	9° 20'	"	"	5° 1'
H									
.276									
.254									
.216									
.246									

NOTES: 34
 1. REEPE SHARP EDGES.
 2. REEPE



TEST TWI 541 DATA SET COLLATION SHEET

PRETEST
 POSTTEST

NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)				
	6	9	11	12	14
	3.0	4.0			

DATA SET IDENTIFIER	CONFIGURATION	SCHD.	PARAMETERS/VALUES					NO. of RUNS							
			A	B	φ	α	β								
R68 001	N1B1E1	A	0	0	0	8	1	2	3	4	3	97	75	112	111
002						5	71	72	73	76	77	110			
003						5	70	69	68	70	77	109			
004						5	65	66	67	68	83	108			
005		B				8	52	53	55	54	98	103	102		
006						5	59	60	61	62	79	105			
007						5	58	57	56	62	78	106			
008						5	64	63	62	62	82	107			
009						5	51	50	49	49	81	104			
010		C				8	8/1	7/1	5/3	6/2	99	100	101		
011	N2B1E2	H				8	29	28	30	27	93	119	118		
012		I				8	22	21	19	20	95	120	121		
013						5	45	44	43	43	90	122			
014						5	40	41	42	42	89	123			
015						5	39	38	37	37	88	124			
016						5	46	47	48	48	92	125			
017		J				8	23	24	26	25	96	113	114		
018						5	12	13	14	14	85	115			
019						5	33	32	31	31	86	116			
020						5	34	35	36	36	87	117			

1	2	7	13	19	25	31	37	43	49	55	61	67	75
CLM	CN	CY	CBL	CYN	FA	CAB	CL	CD	CDB				

COEFFICIENTS:
 A = 10° to 10° by Δx = 2; B = 10° to 30° by Δx = 5; C = 30° to 60° by Δx = 5
 H = 130° to 150° by Δx = 5; I = 150° to 170° by Δx = 5; J = 170° to 190° by Δx = 5
 K = 190° to 210° by Δx = 5
 SHADOWGRAPH
 at Δx = 5
 NASA-USPC-MAR

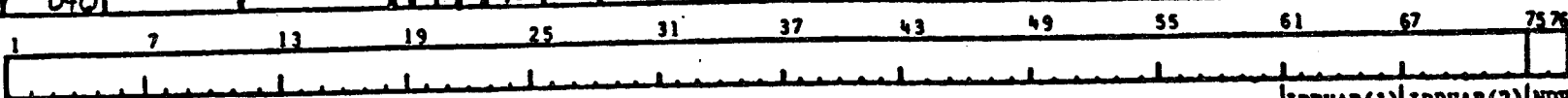
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TABLE II. (Continued)
TEST TWT54 DATA SET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES	NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)							
		a	B			.6	.9	1.1	1.2	1.4	1.6	3.0	4.0
RG8021	N1B1E2	D	0°	0°	8	164	163	162	161	150	216	237	236
022				90°	5	165	166		167		217		235
023				-90°	5	170	169		168		218		234
024				45°	5	171	172		173		219		233
025		60°	A	0°	5	158	159		160		220		226
026		80°	A	0°	5	157	156		155		221		227
027		E	0°	0°	8	143/1	142	141	140	151	222	229	228
028				90°	5	144	145		146		223/1		230
029				-90°	5	149	148		147		224		231
030				45°	5	152	153		154		225/1		232
031		F	0°	0°	8	196	195/1	194	193/1	138	212	134	133
032				90°	5	197	196		199		213		135
033				-90°	5	202	201		200		214		136
034				45°	5	203	204		205		215		137
035		100°	A	0°	5	190	191		192		211		132
036		120°	A	0°	5	189	188		187		210		131
037		G	0°	0°	8	177	176	175	174	139	206	127	126
038				90°	5	178	179		180		207		128
039				-90°	5	183	182		181		208		129
040				45°	5	184	185		186		209		130

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COEFFICIENTS:

a or B
SCHEDULES

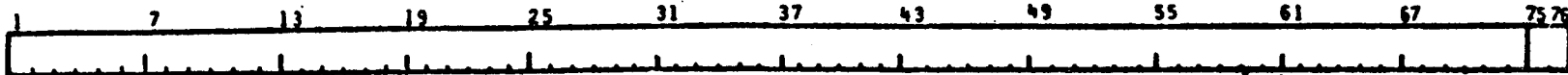
D: 50° to 70° by Δα = 5° ; E = 70° to 90° by Δα = 5° and 80° to 90° by Δα = 2°
F = 90° to 100° by Δα = 2° and 100° to 110° by Δα = 5° ; G = 110° to 130° by Δα = 5°
β: A = -10° to 10° by Δα = 5°

⊗ Shadow graph
at α = 6°

TEST TWT 541 DATA SET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES			NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)									
		α	β	ϕ				0.6	0.9	1.1	1.2	1.4	1.96	3.0	4.0		
R6B 041	N2B1E2 + Trip Strip	I	0°	0°			3	9 ^x	10 ^x		11 ^x						
↓ 042	(Hysteresis)	K	0°	0°			3	15 ^x	16 ^x		17 ^x						
	N1B1E1 (Schlieren)	A		0°													
		A		90°													
	N2B1E2	J		0°													
		J		90°													
	(shadowgraph)	I		0°				⊙		⊙		⊙					
		I		90°				⊙		⊙		⊙					
	N1B1E1	B		0°				⊙		⊙		⊙					
		B		90°				⊙		⊙		⊙					
R6B 043	N1B1E2	D	0°	0°			1										238
044	N1B1E2	E					1										239
045		E					2	18									240
046	↓	D					1										241
047	N1B1	D	0°	-			1										242
048	N1B1	E	0°	-			1										243



COEFFICIENTS: α : I = 150° to 170° by $\Delta\alpha = 5^\circ$; K = 150° to 130° by $\Delta\alpha = 5^\circ$ IDPVAR(1) IDPVAR(2) NDV
 α or β $A = 70^\circ$ to 10° ; $B = 10^\circ$ to 30° ; $J = 170^\circ$ to 190°
 SCHEDULES shadowgraphs and ~~for~~ Schlieren are at $\Delta\alpha = 5^\circ$
 MSFC - Form 348-2 (February 1975)

CYLINDRICAL BOOSTER
 MSFC
 DR#1253 A-1- 237

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PRETEST

POSTTEST

TEST 707541 DATA SET COLLATION SHEET

TABLE II. (Concluded)

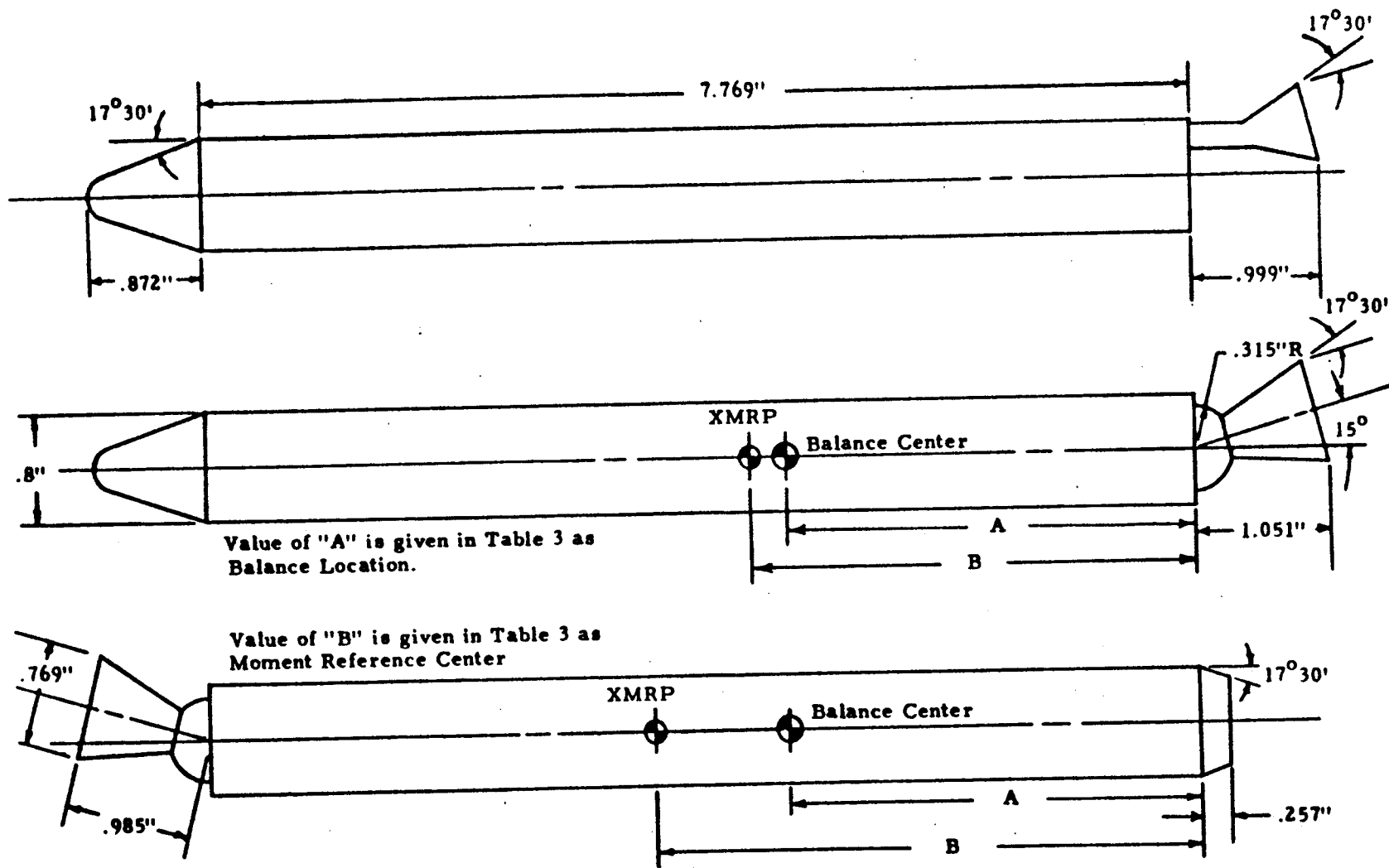
DATA SET IDENTIFIER	CONFIGURATION	SCHD.	PARAMETERS/VALUES			NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)								
			a	B	φ		1	2	3	4	5	6			
R68049	N1 BAEZ S1	E	0°	90°	0°	4	269	270	253	244					
050	52c				0°	4	264	263	254	245					
051					15°	4	265	266	255	246					
052					30°	4	268	267	256	247					
053	52A				15°	4	261	262	257	248					
054	52B				30°	4	260	259	258	249					
055	N1B1E2	E	0°	90°	-	4	272	271	253/1	250					
056	N1B1E2	F	0°	90°	-	4	273	274	252	251					

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COEFFICIENTS: IDPVAR(1) | IDPVAR(2) | IDV

9 OF 8
SCHEDULES

MSFC - FORM 200-2 (February 1973)



Value of "A" is given in Table 3 as Balance Location.

Value of "B" is given in Table 3 as Moment Reference Center

Fig. 1 - 0.00513 Scale 156-Inch SRM Geometry (MSFC Model 446)

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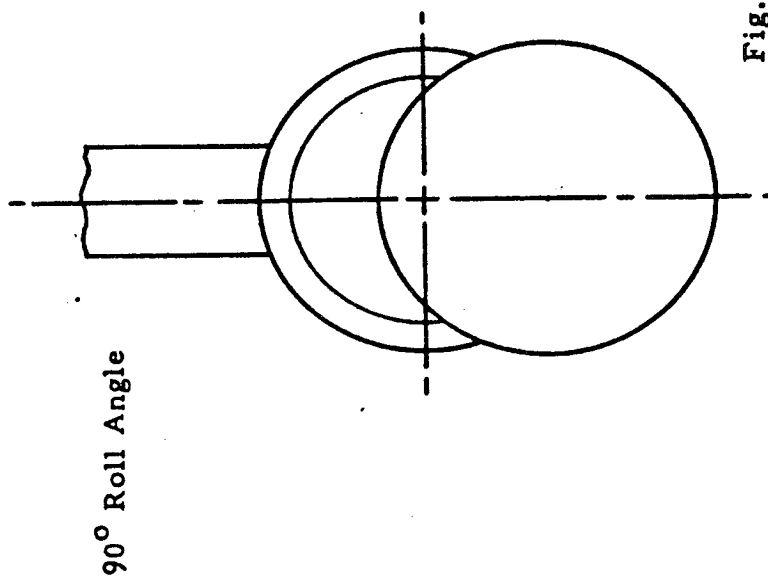
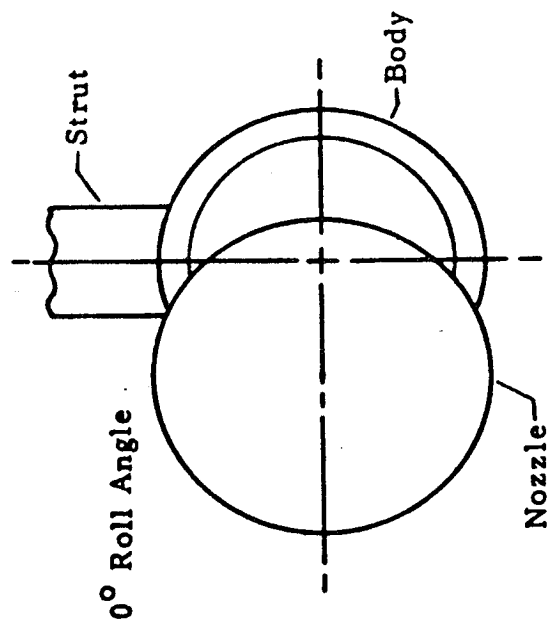
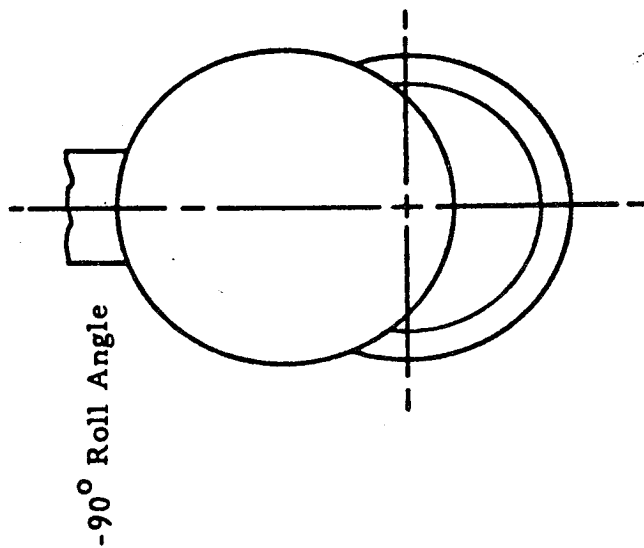
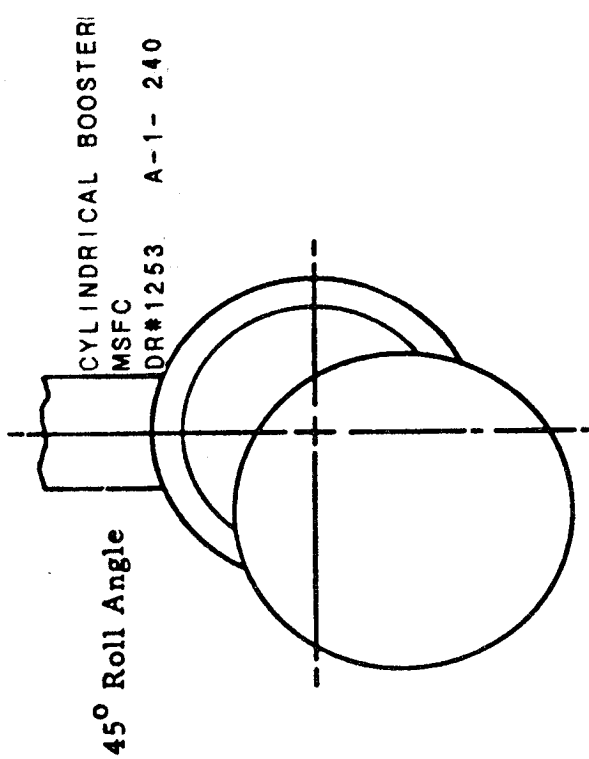


Fig. 2 - Nozzle Roll Sign Convention

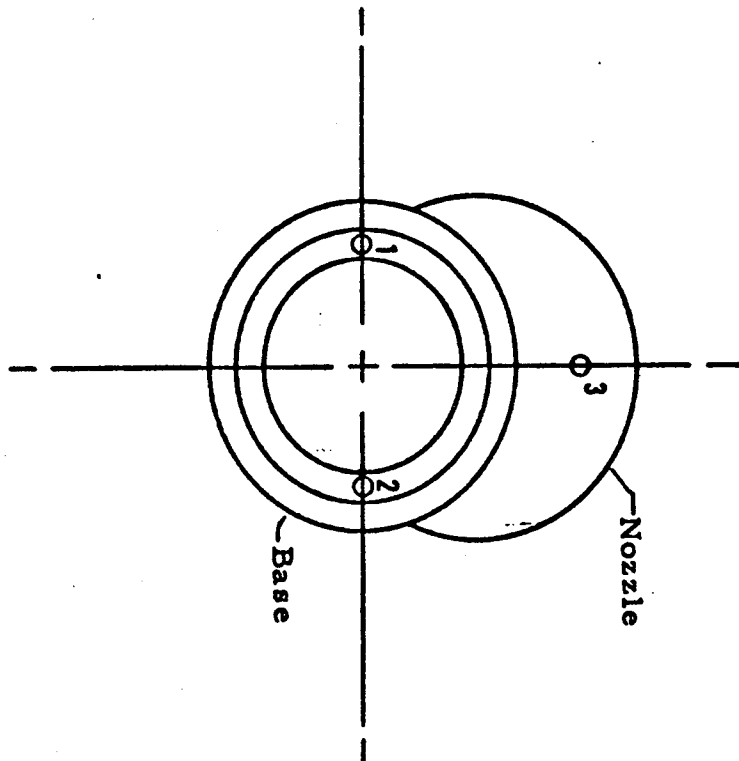


Fig. 7 - Base Pressure Locations

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PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES	NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)														
		a	b			15	22	30	40											
RDC099	B ₁ N ₁ E ₁	J	O		3	38	71		57											
09A		K			2	35			62											
09C	↓	M			2	34			66											
101	B ₂ N ₁ E ₁	A			1	32														
112	B ₁ N ₁ E ₁ D _{3N}	B			1				68											
113		C			1				60											
114		D			2			69	59											
115		E			1				52											
116		F			1				51											
118		H			1				53											
119		J			2			70	58											
↓ 11A	↓	K	↓		1				61											
RDC11C	B ₁ N ₁ E ₁ D _{3N}	M	O		1				67											

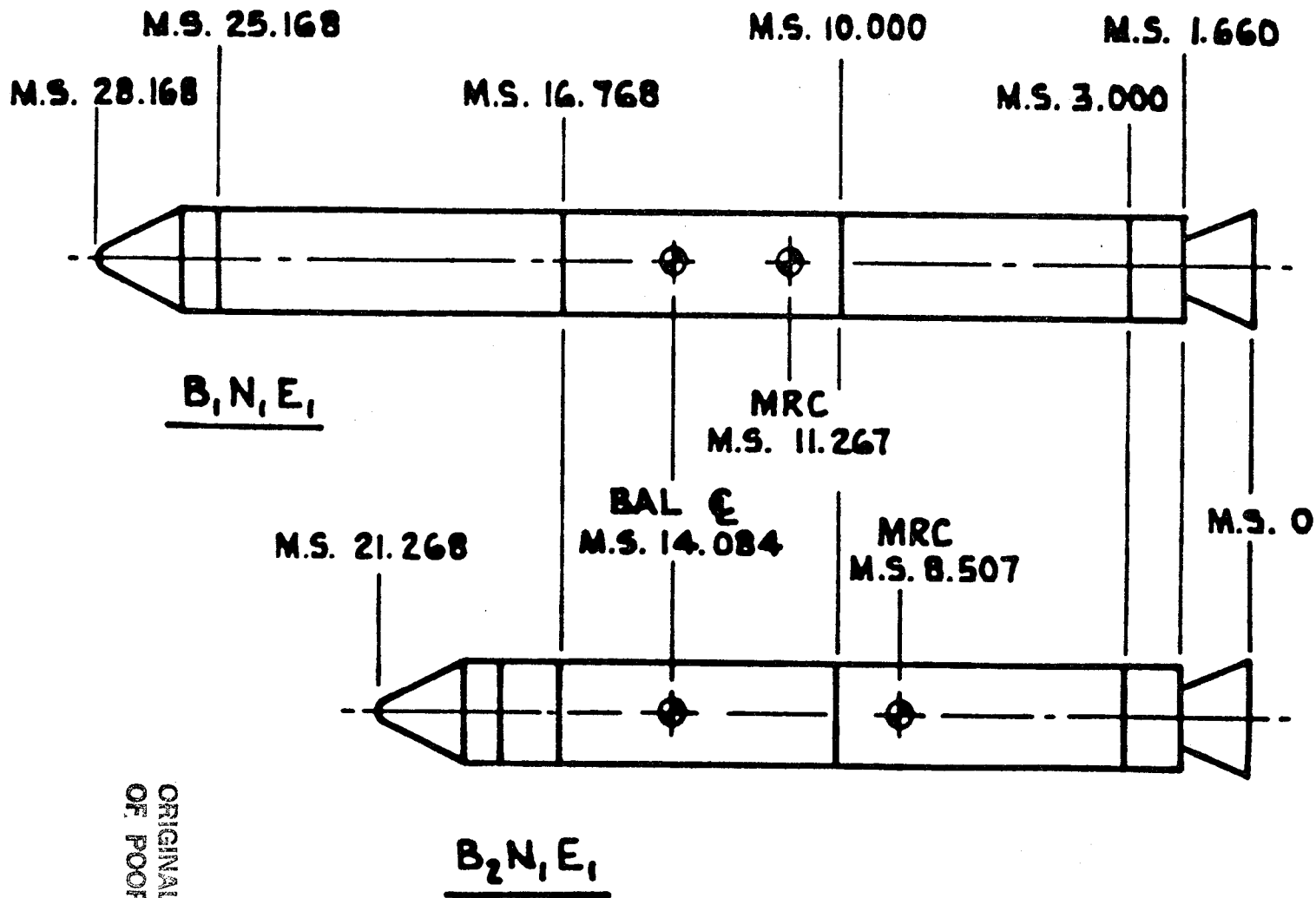
1	7	11	19	25	31	37	43	49	55	61	67	75	76
CL	CD	CN	CA	CLM									

COEFFICIENTS: A: -12 to 18; B: -7 to 23; C: 11 to 41 D: 33 to 63
 SCHEDULES E: 55 to 85; F: 78 to 108, G: 102 to 72 H: 125 to 95
 J: 147 to 117; K: 170 to 140; L: 187 to 157 M: 192 to 162

NASA-MSFC-MAF

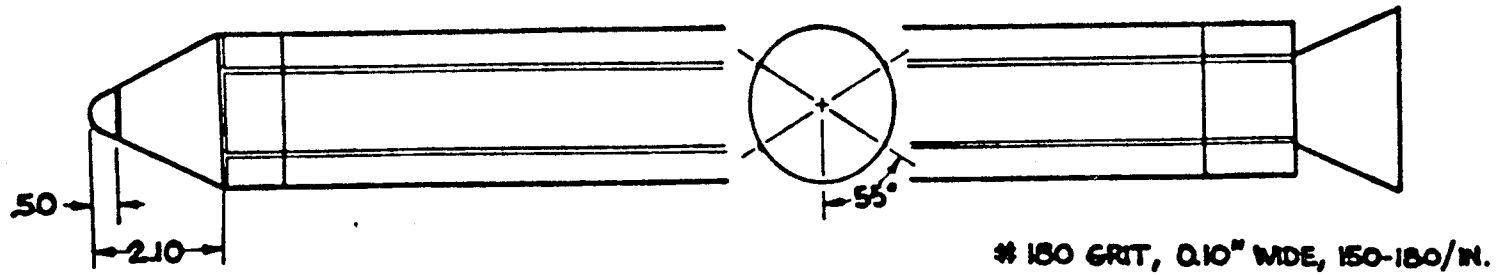
CYLINDRICAL BOOSTER
 TBC
 DR#1128 A-1- 243

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Figure 1. Configurations $B_1N_1E_1$ and $B_2N_1E_1$



TRIP STRIP DEFINITION

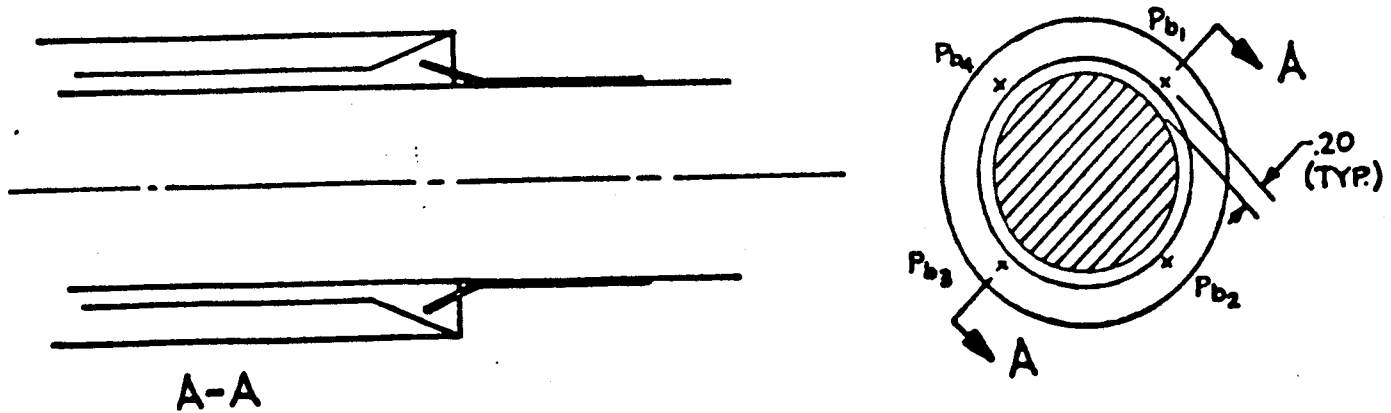


Figure 2. Trip Strip Definition and Base Pressure Locations

CYLINDRICAL BOOSTER
 TBC
 DR#1128 A-1- 245

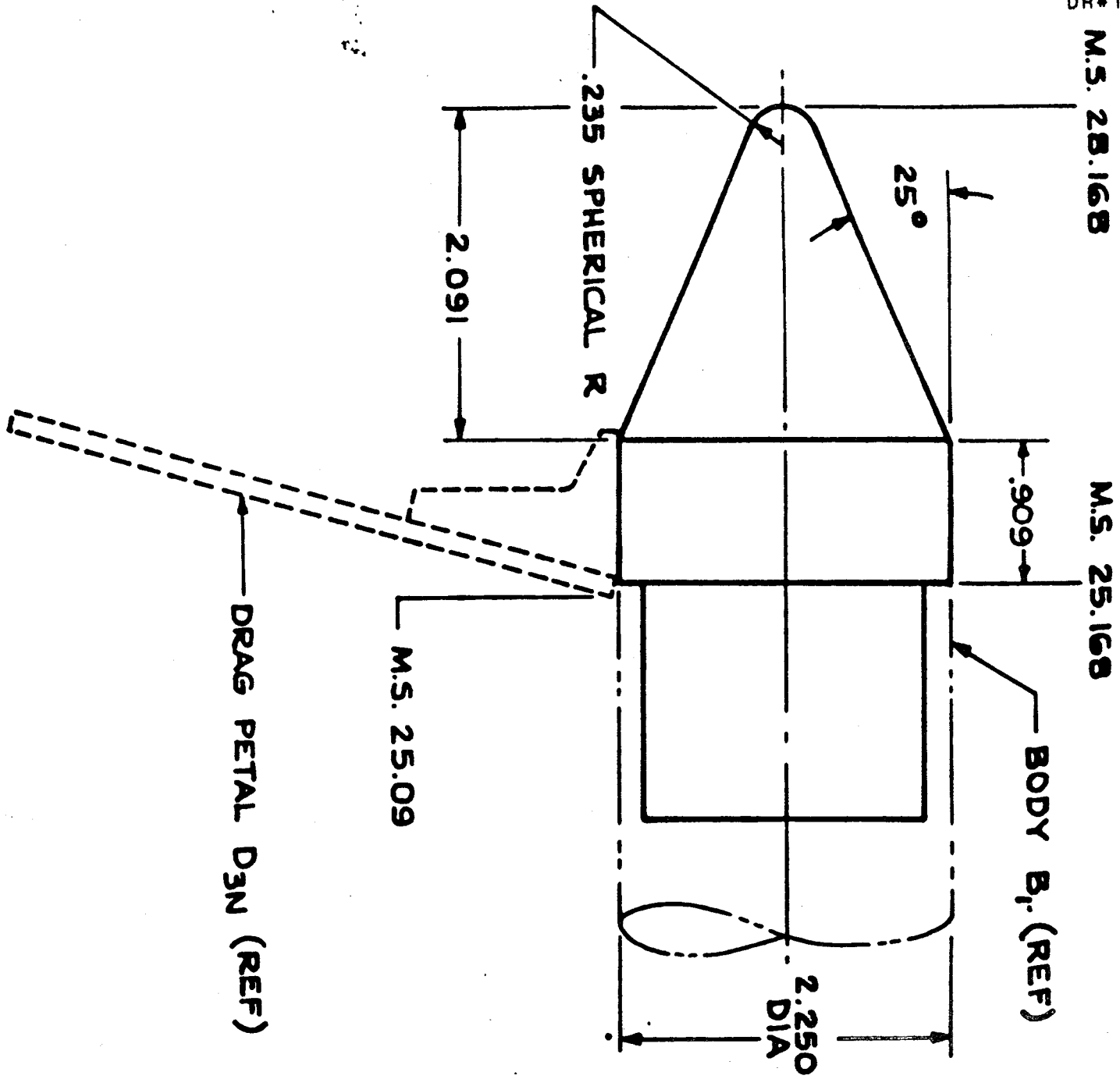


Figure 7. Nose Component N₁

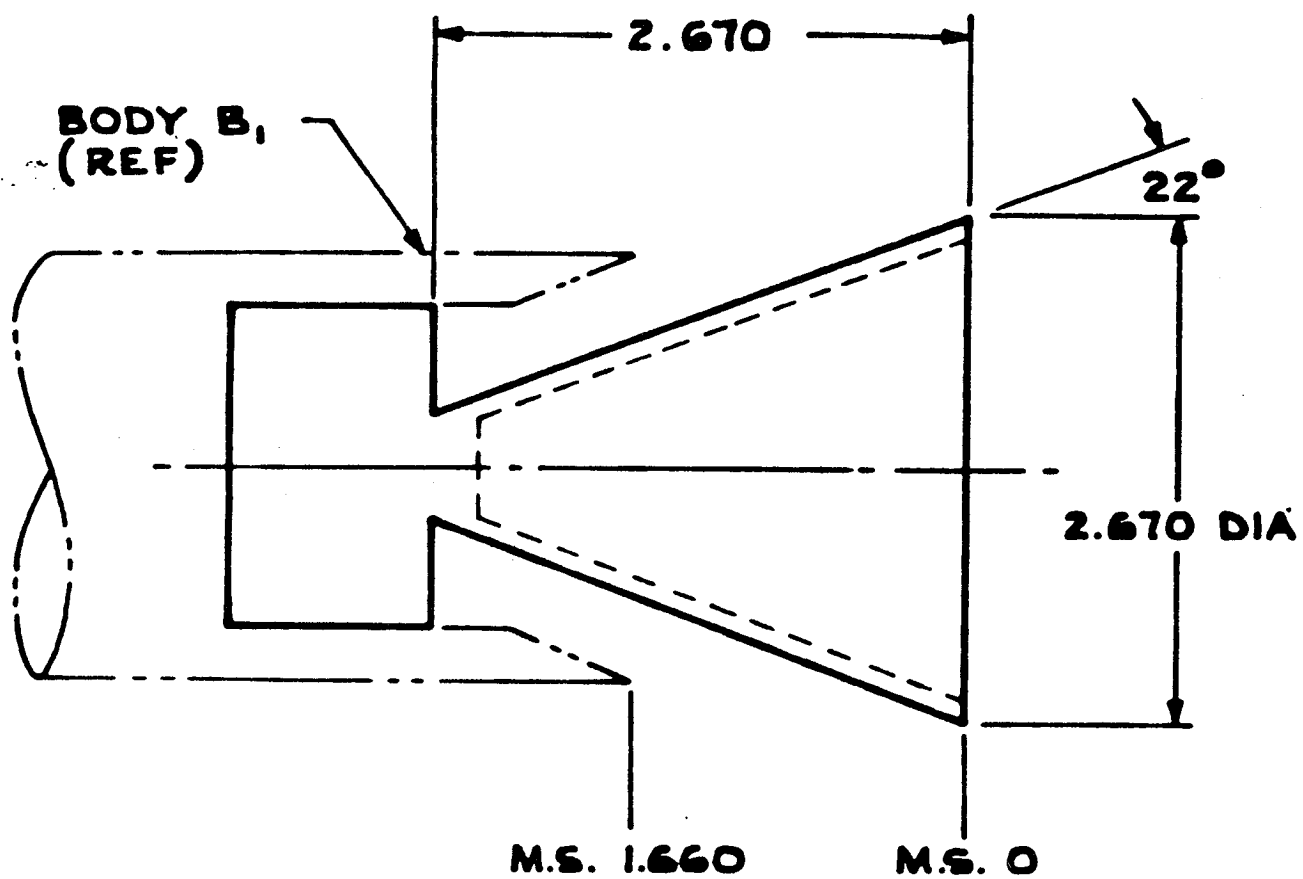


Figure 8. Nozzle Component E₁

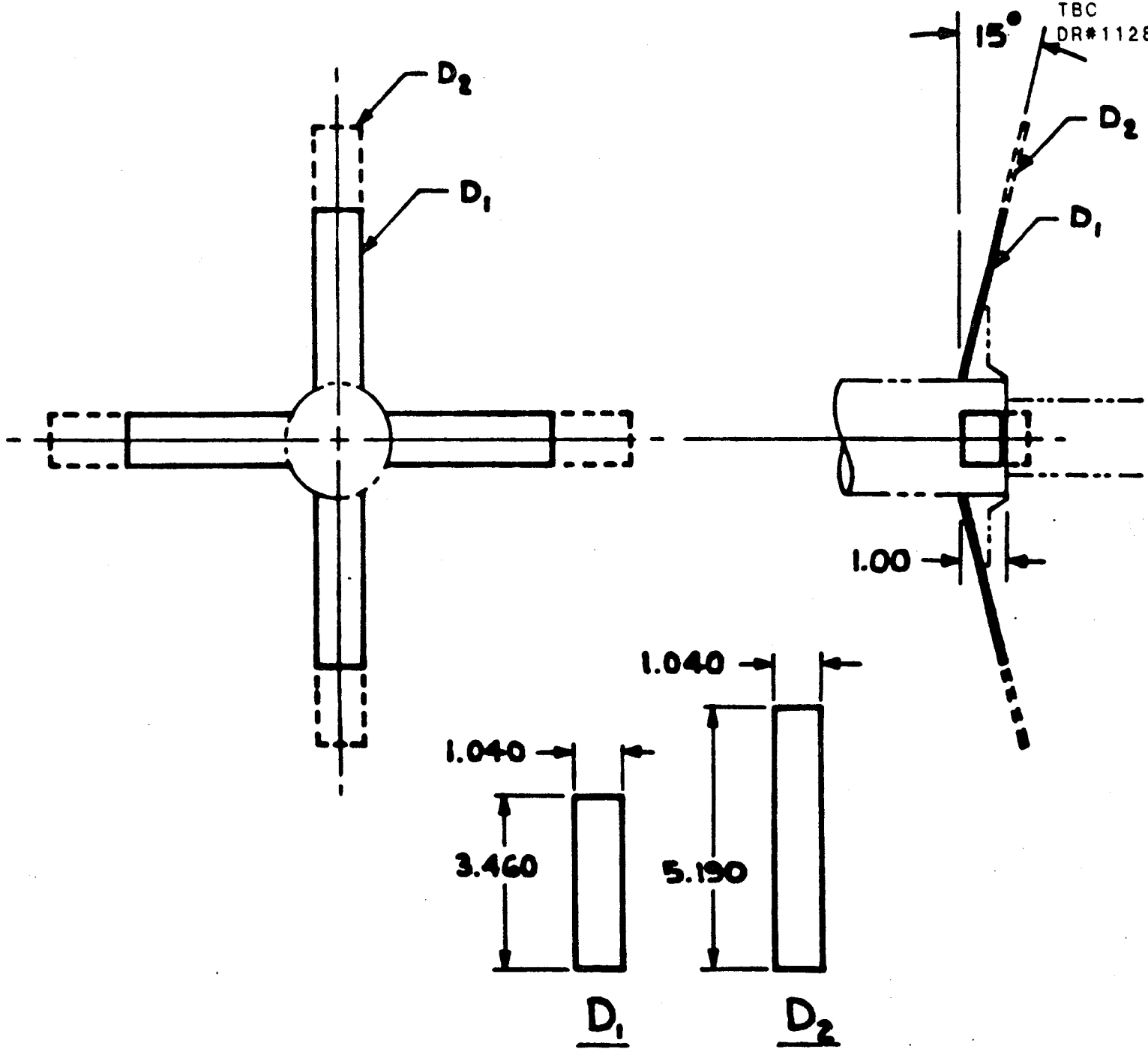
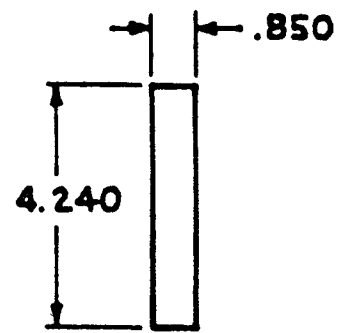
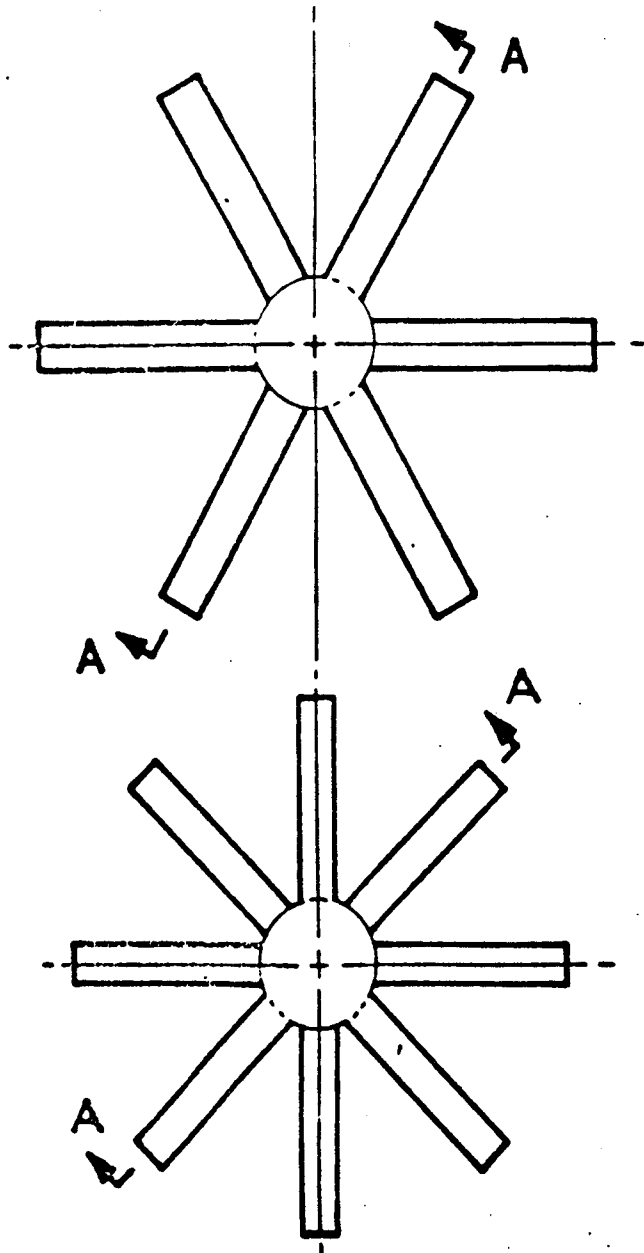
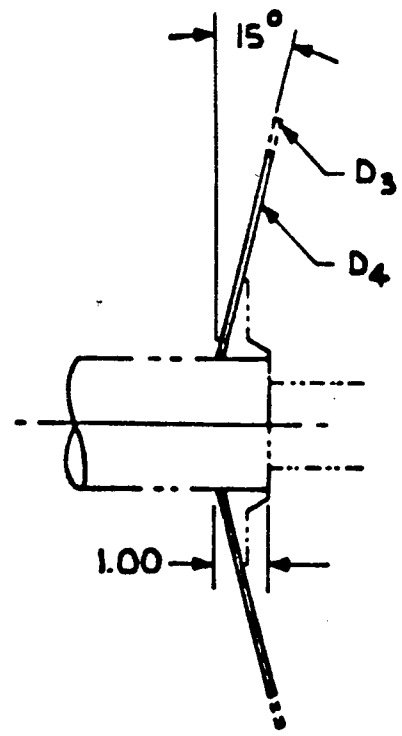


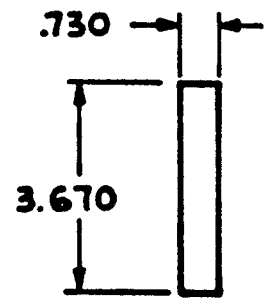
Figure 9. Drag Petals Sting Mount, D₁ and D₂



D₃



SECTION A-A



D₄

Figure 10. Drag Petals Sting Mount, D₃ and D₄

AX 1230 I - 1

MODEL ASSEMBLY (TYP)
BASE LINE CONFIGURATION B₁S₁V₁³⁰

CYLINDRICAL BOOSTER
TBC
DR#1214 A-1-251

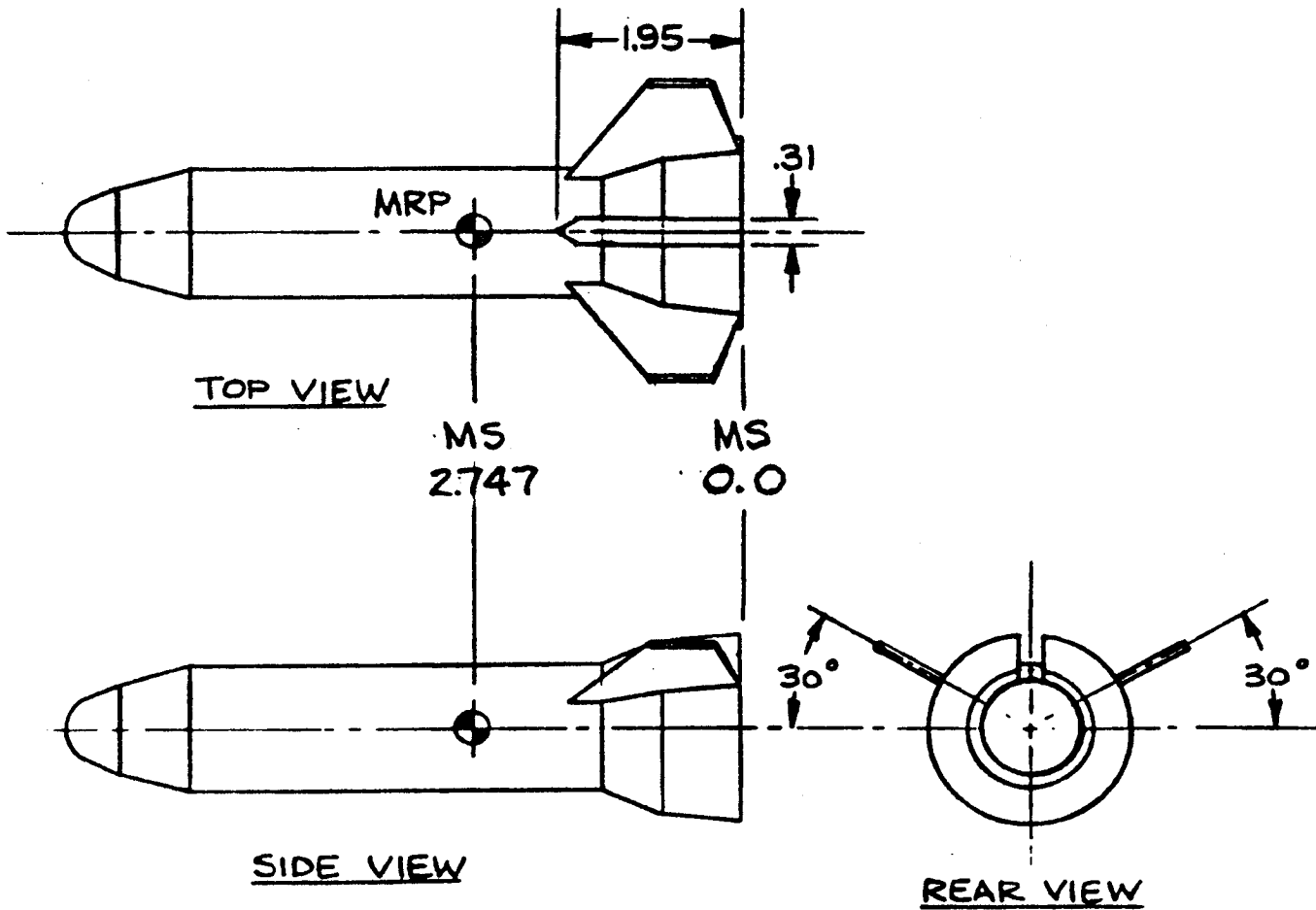


Figure 2.

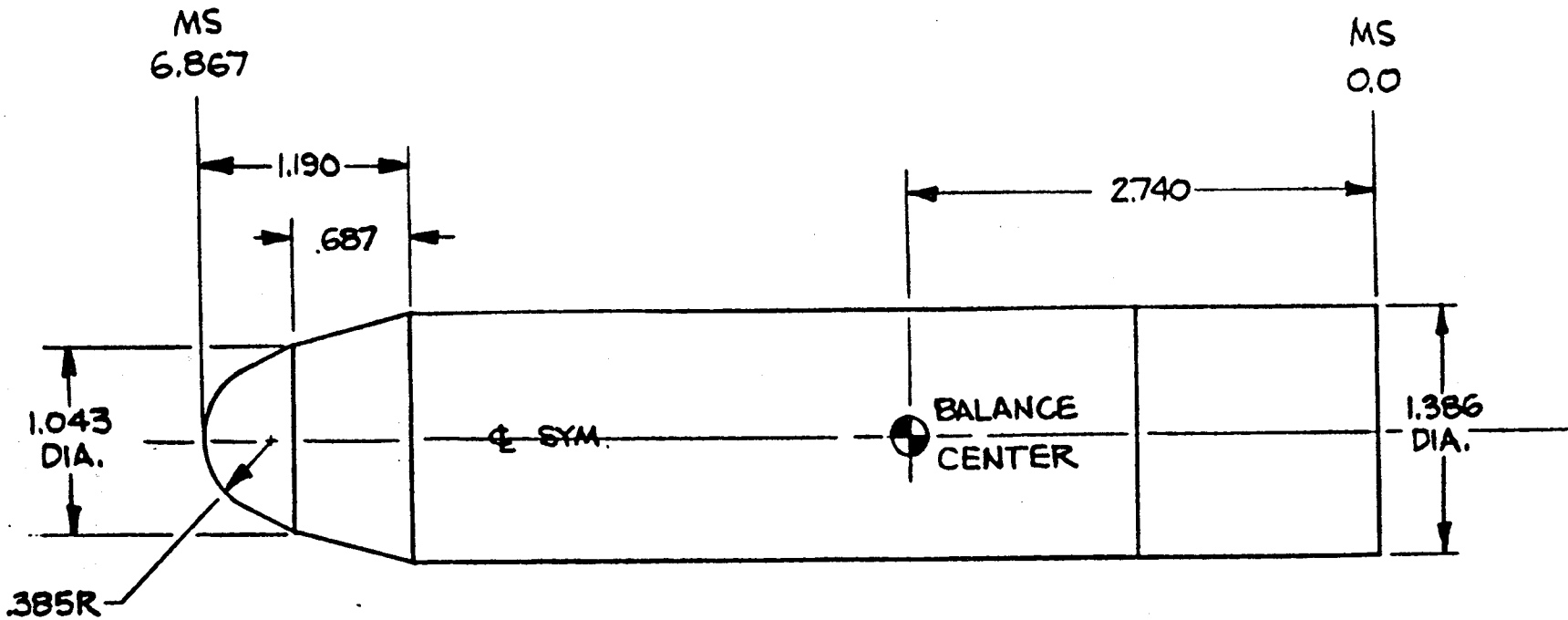


Figure 4. AX 1230I-1
BODY B₁

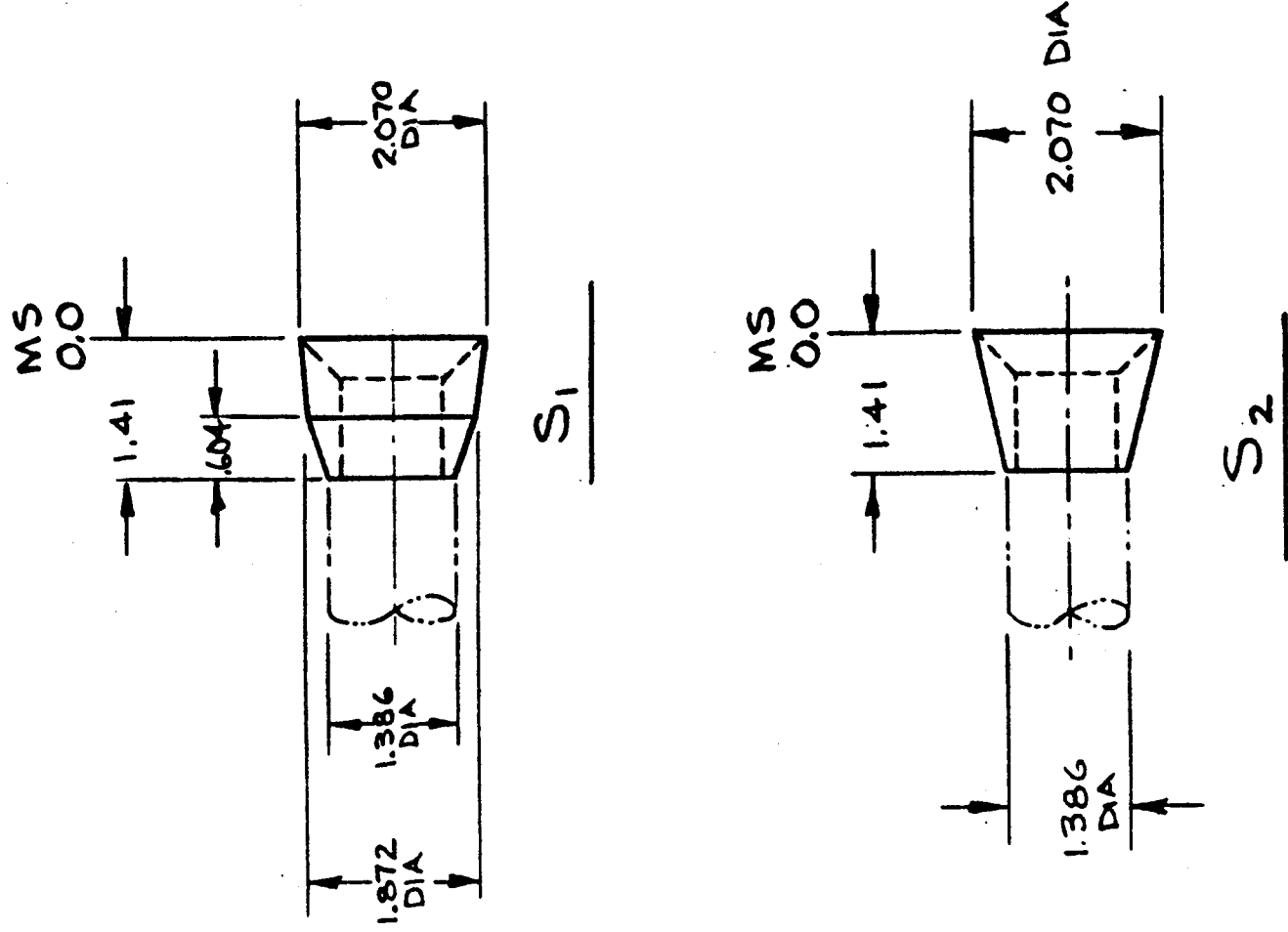


Figure 5. AX1230I-1
SKIRTS

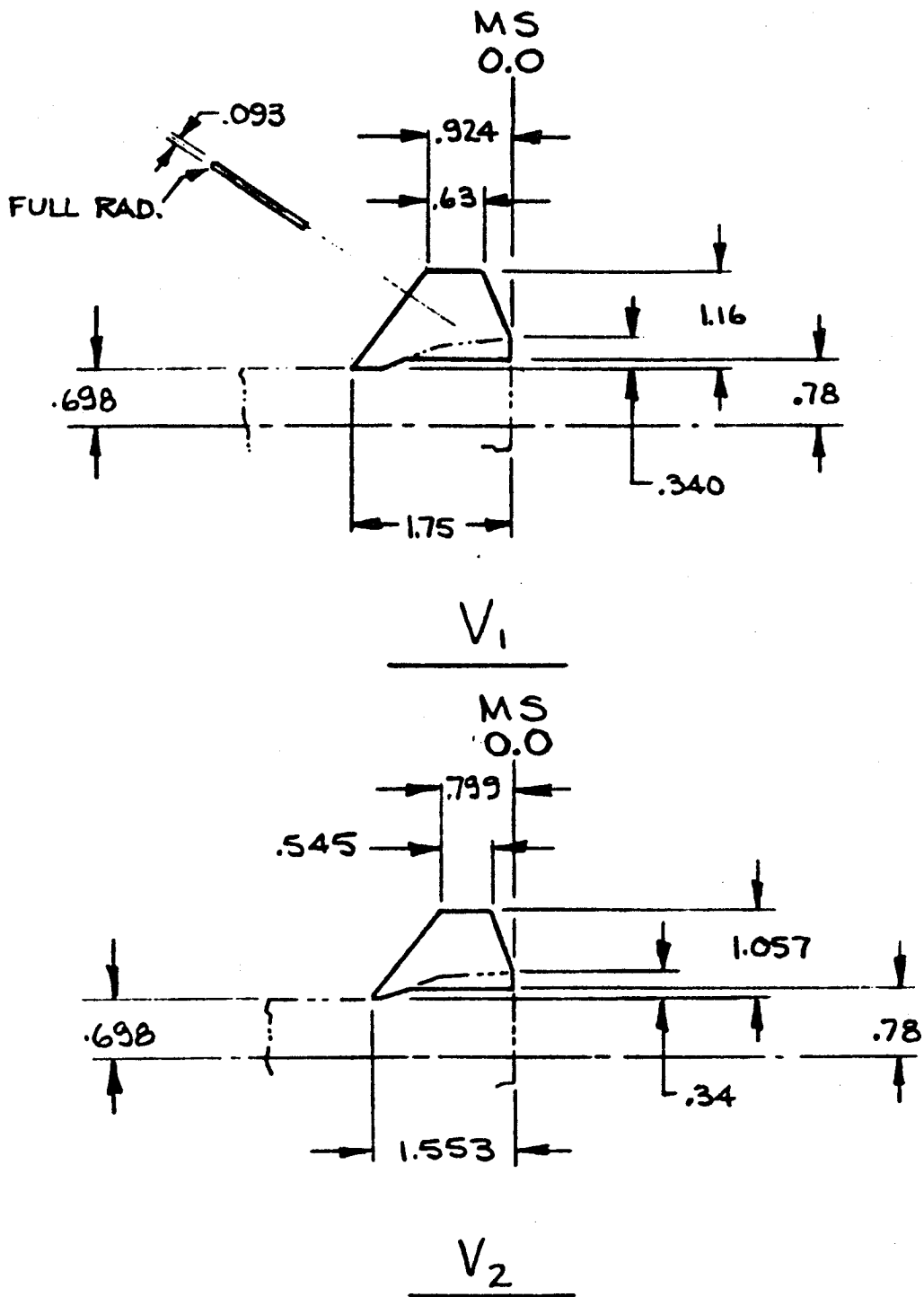


Figure 6.

AX 1230I - 1

FINS

BTWT-1273
 TEST BSWT-533 DATA SET COLLATION SHEET

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES	NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)											
		a	B			.6	.8	.9	.95	1.0	1.05	1.1	2.0	2.7	3.5	4.0	
RDAD11	B ₁	A	0°		9		39	42	41		40	38	5	22	35	37	
013	B ₁		75° C		2									23	34		
021	B ₁ S ₁	A	0°		9		33	36	35		34	32	6	21	31	40	
023	B ₁ S ₁		75° C		3								7	20	33		
024	B ₁ S ₁		70° C		3		24		25		23						
031	B ₁ S ₁ V ₁	A	0°		10	80	76	79	78		77	75	9	17	29	41	
032	B ₁ S ₁ V ₁		50° C		8		109	112	111		110	108	53	50	45		
033	B ₁ S ₁ V ₁		75° C		3								8	16	28		
034	B ₁ S ₁ V ₁		70° C		6		18	20	23	19	17	22					
035	B ₁ S ₁ V ₁		77.5° C		3								54	49	46		
036	B ₁ S ₁ V ₁		55° C		5		115	118	117		116	114					
041	B ₁ S ₁ V ₂	A	0°		10	87	82	86	85		84	81	10	18	26	43	
042	B ₁ S ₁ V ₂		50° C		8		103	106	105		102	104	52	51	44		
043	B ₁ S ₁ V ₂		75° C		3								11	19	27		
044	B ₁ S ₁ V ₂		70° C		5		89	92	91		40	88					
045	B ₁ S ₁ V ₂		77.5° C		3								55	48	47		
046	B ₁ S ₁ V ₂		55° C		5		95	98	97		96	94					
051	B ₂ S ₁ V ₁	A	0°		9	65	61	64	63		62	59	13	19		42	
053	B ₂ S ₁ V ₁		75° C		2								12	15			
RDAD54	B ₂ S ₁ V ₁		70° C		5		67	70	69		68	66					

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1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	ICA	FLM	FY	ICYN	CBL	CAB	CLMB	EYNB					9

COEFFICIENTS: DA: 50° to 85° → IDPVAR(1) IDPVAR(2) NDV
BC: -17.5° to 15°
 a or B SCHEDULES

NASA-MSFC-MAF

CYLINDRICAL BOOSTER
 TBC
 DR#1228 A-1- 255

TABLE II (Continued)

TEST BSWT-1273 BSWT-553 DATA SET COLLATION SHEET

CYLINDRICAL BOOSTER
 TBC
 DR#1228 A-1- 256
 PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHED.		PARAMETERS/VALUES	NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)										
		α	β			.6	.8	.9	.95	1.0	1.05	1.1	2.0	2.7	3.5	4.0
RD4061	B.Ve	A	0		7		45		46			44	58	62	65	66
D64	B.Ve	70	C		6		48		49		47		59	63	64	
071	B.Ve	A	0		8	58	53	57	56		54	52	60	61		
RD4081	B.L.S.Ve	A	0		1										25	

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1 7 13 19 25 31 37 43 49 55 61 67 75 76

CN CA CLM CY CYN CBL CAB CLMB CYNB IDPVAR(1) | IDPVAR(2) | NDV

COEFFICIENTS: α : 50° to 85°
 β : -17.5° to +15°
 SCHEDULES _____

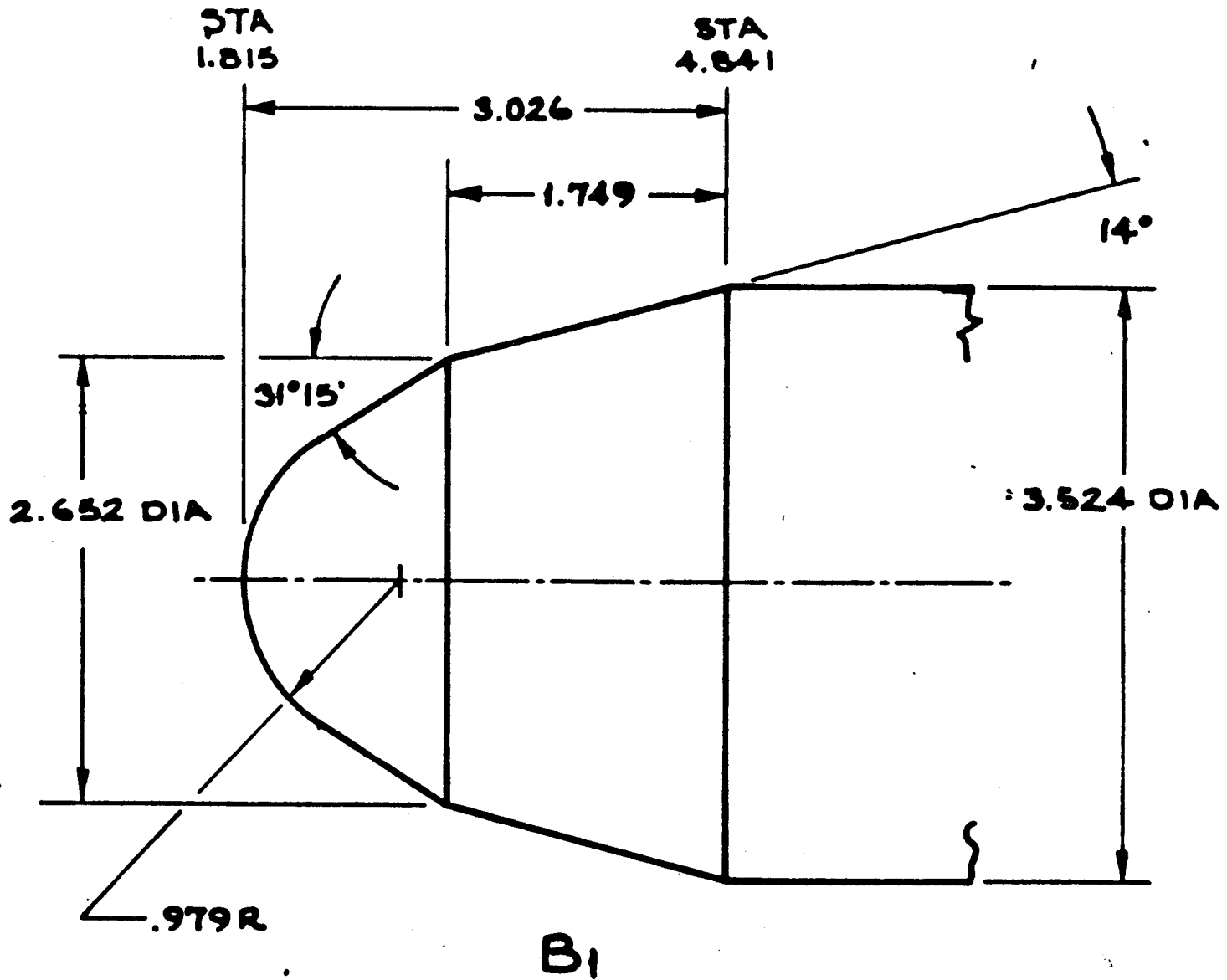


FIGURE 2. MODEL COMPONENT B1

CYLINDRICAL BOOSTER
 TBC
 DR#1228 A-1- 257

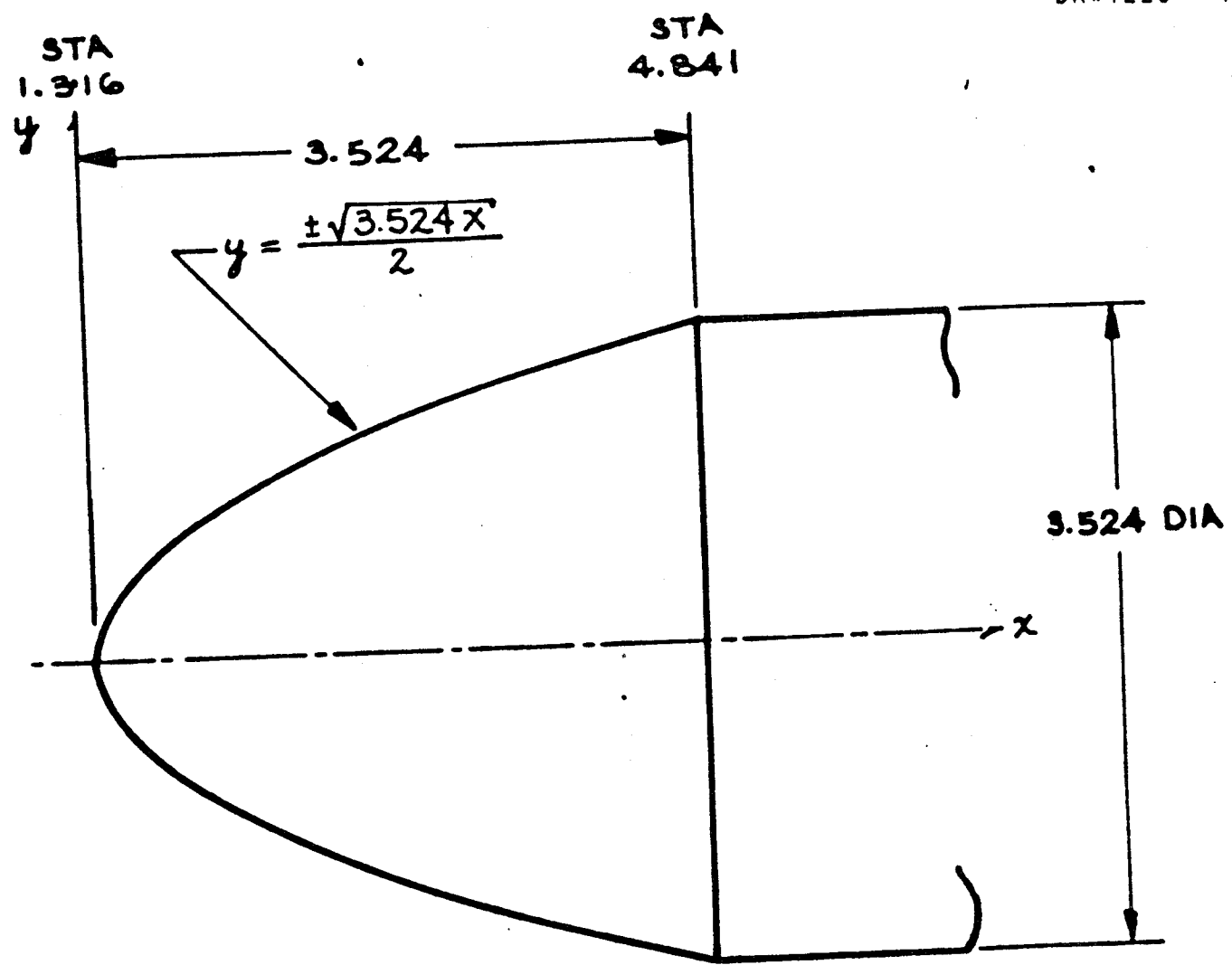
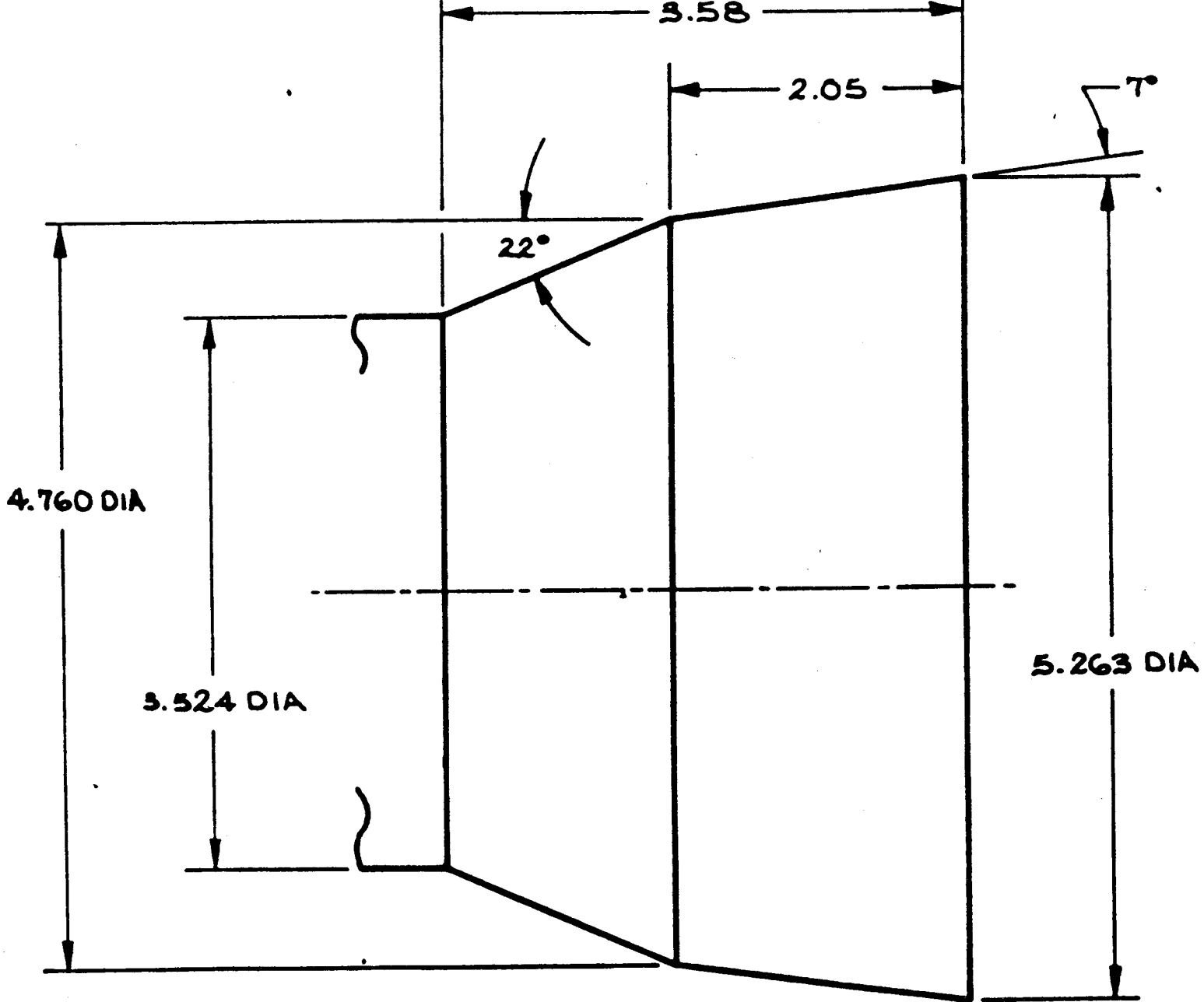


FIGURE 3. MODEL COMPONENT B2



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FIGURE 4. MODEL COMPONENT S1

CYLINDRICAL BOOSTER
 TBC
 DR#1228 A-1- 259

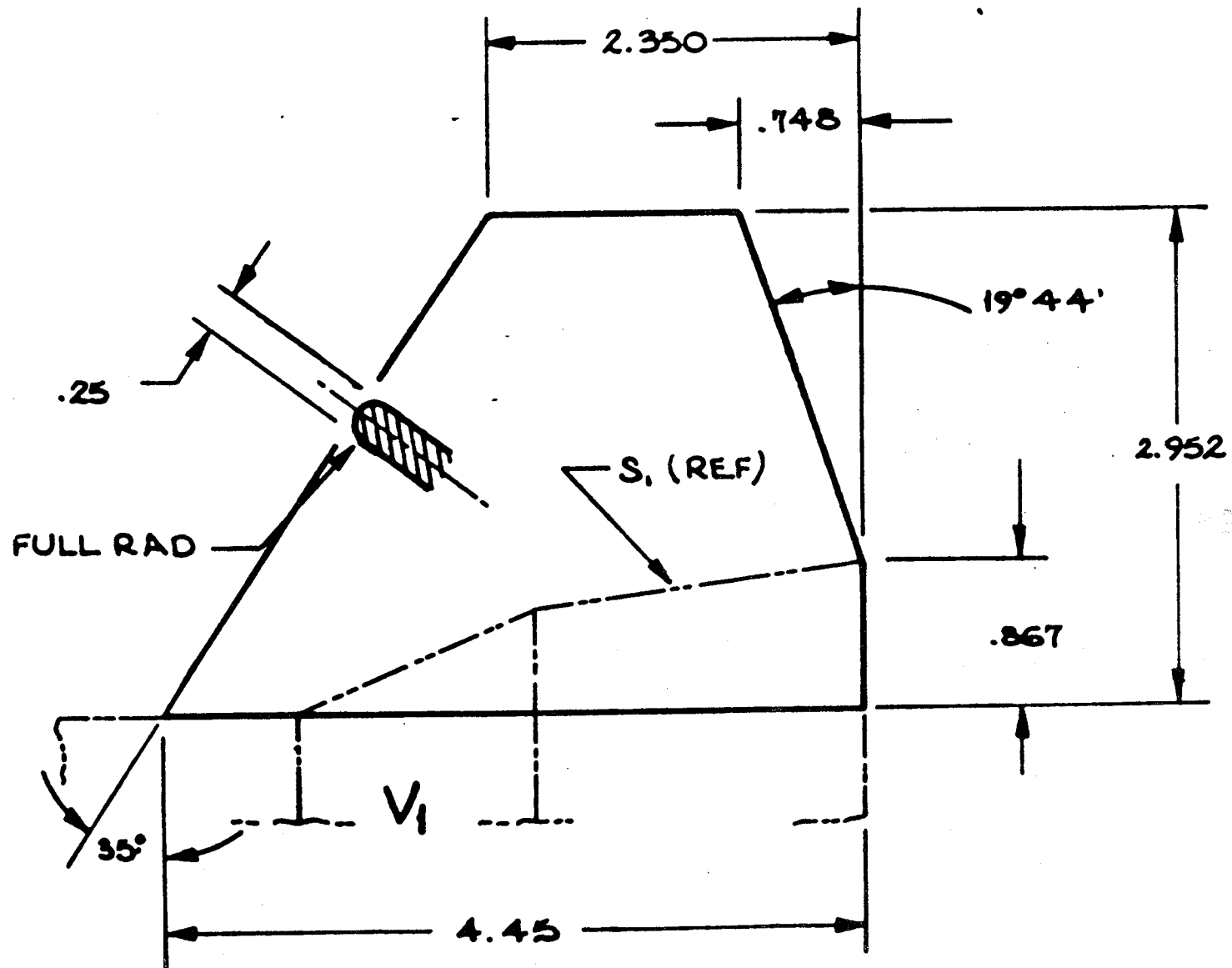


FIGURE 5. MODEL COMPONENT V1

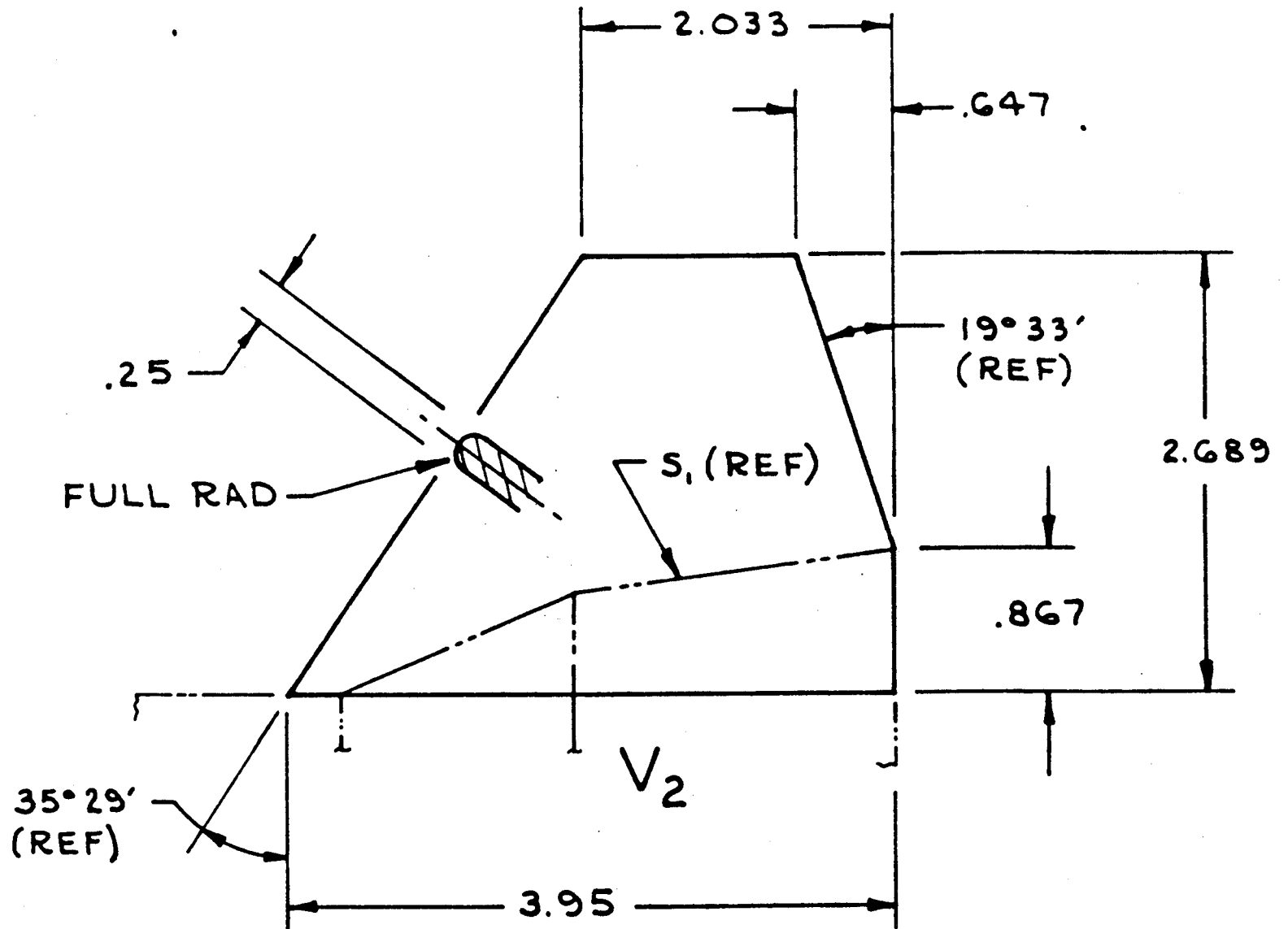
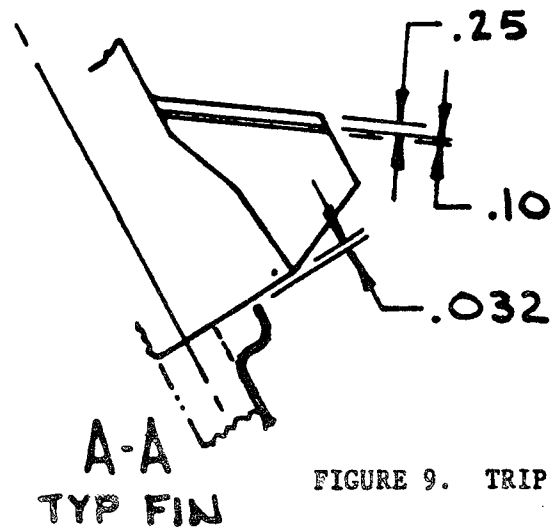
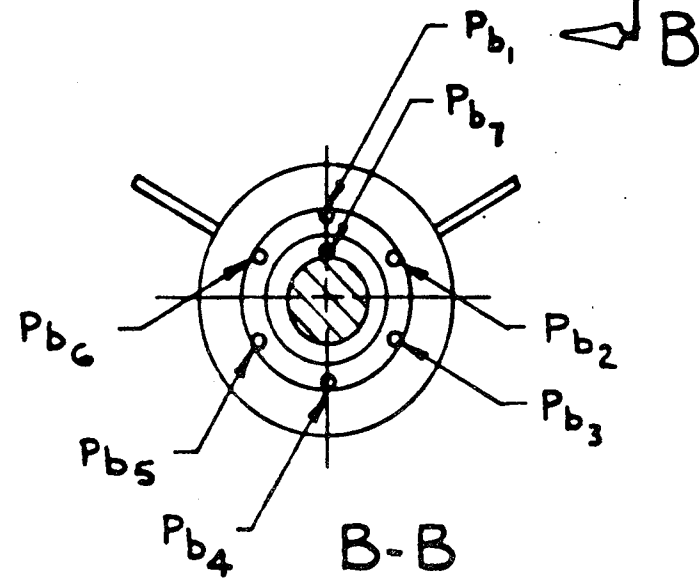
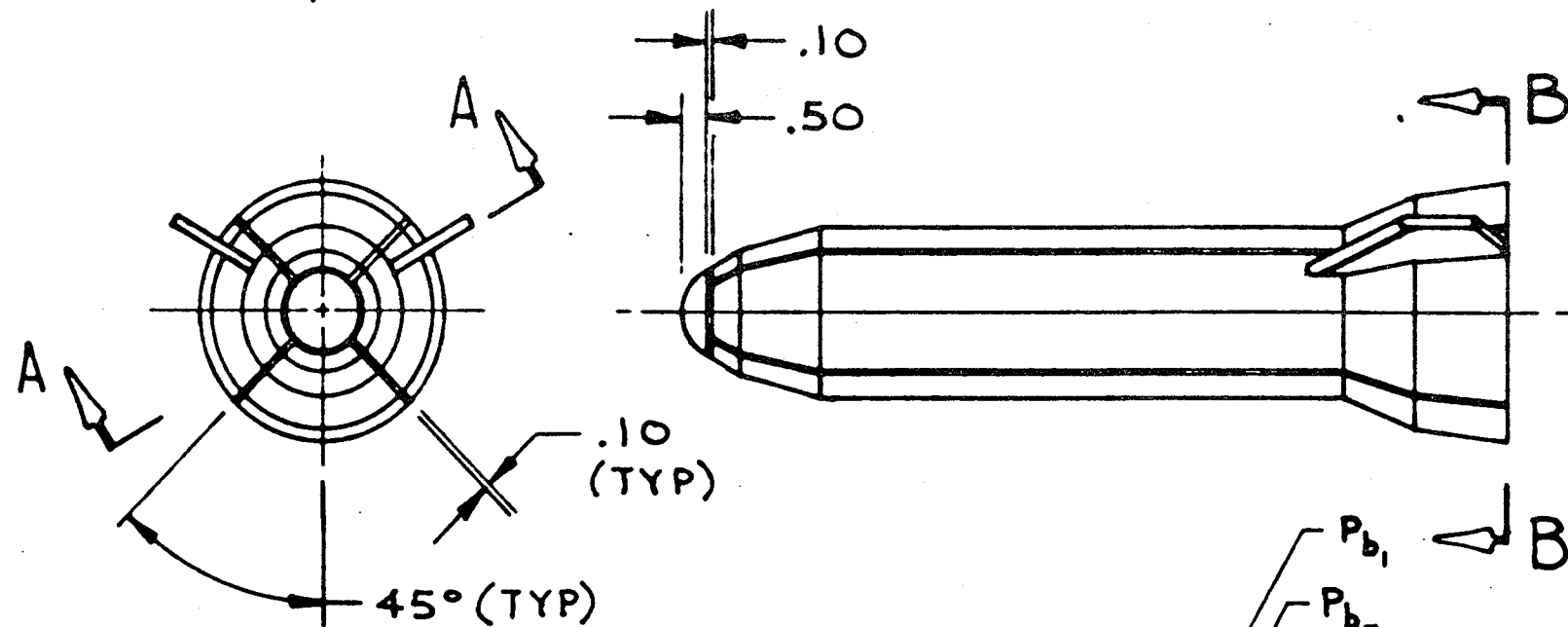


FIGURE 6. MODEL COMPONENT V2

CYLINDRICAL BOOSTER
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 DR#1228 A-1- 261

* 180 GRIT: 40-60 GRAINS/IN.



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FIGURE 9. TRIP STRIPS AND BASE PRESSURE TUBES

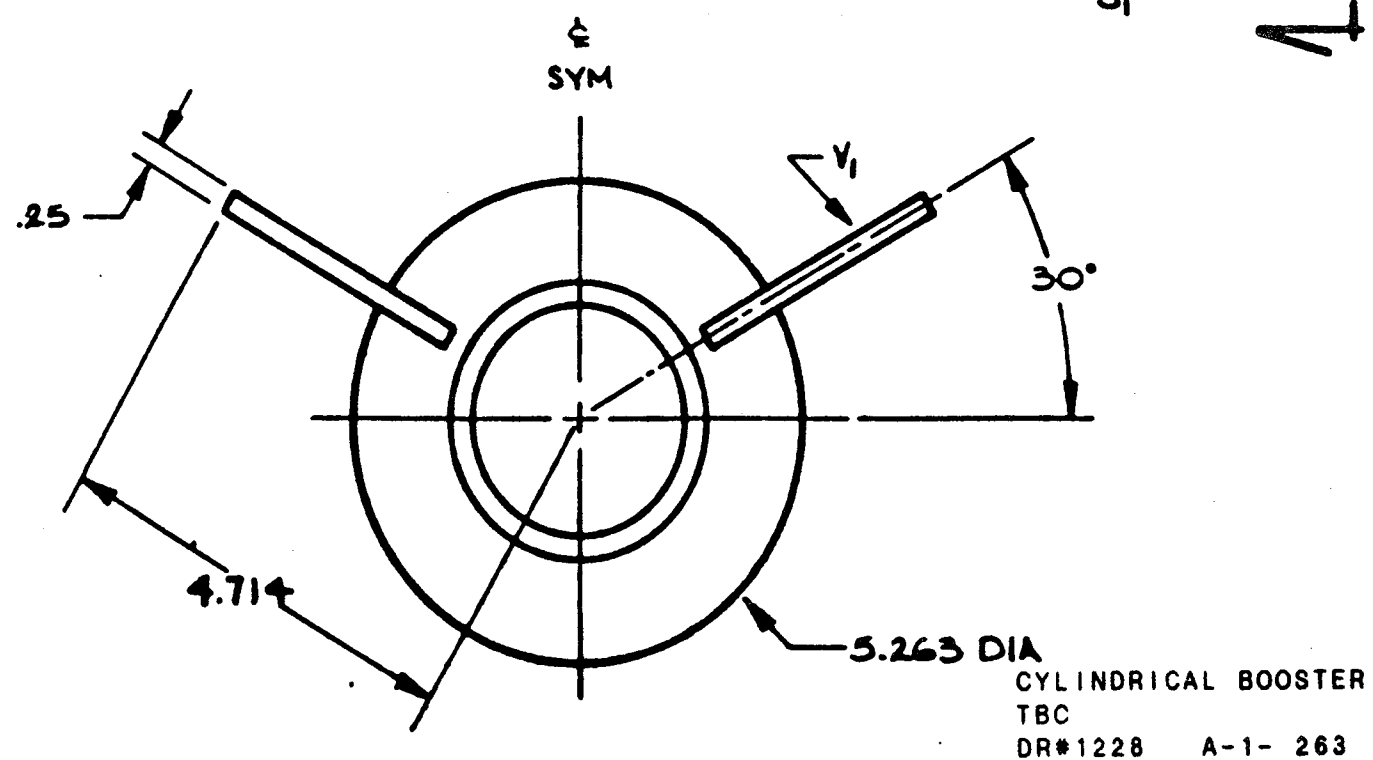
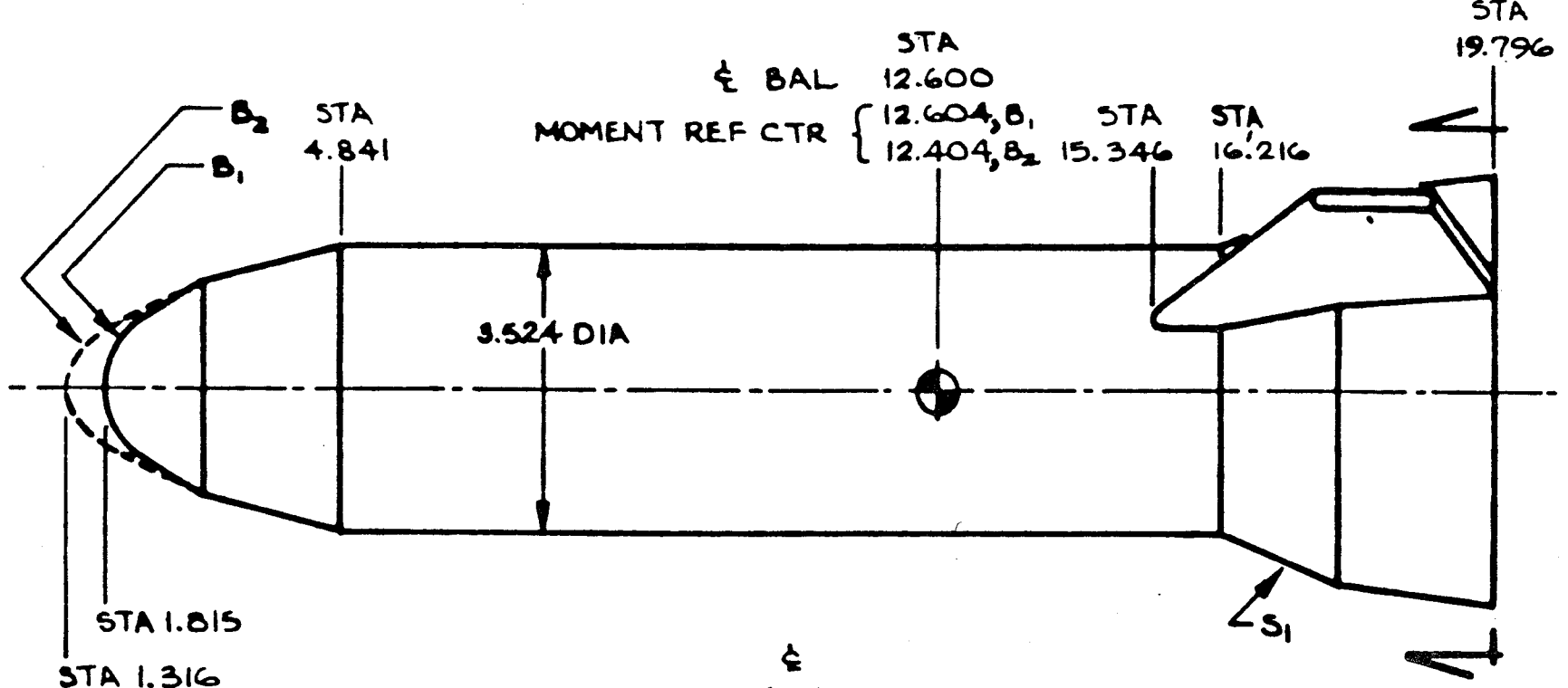


FIGURE 10. MODEL ASSEMBLY

CYLINDRICAL BOOSTER

TBC

DR#1228 S

V₂ A-1-264

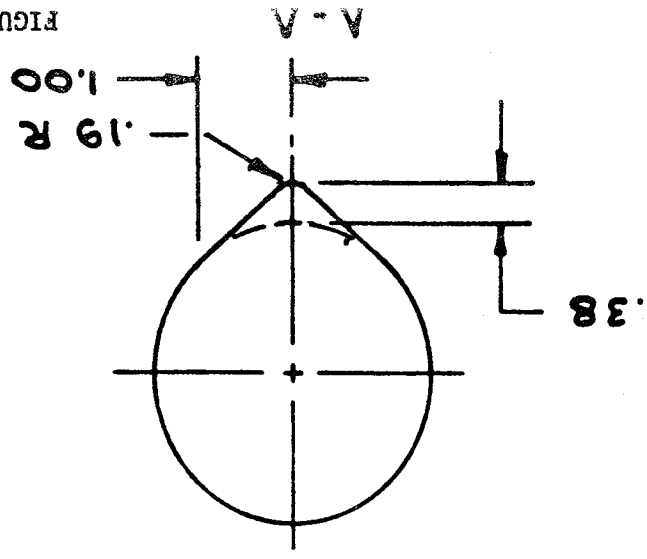
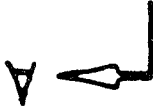
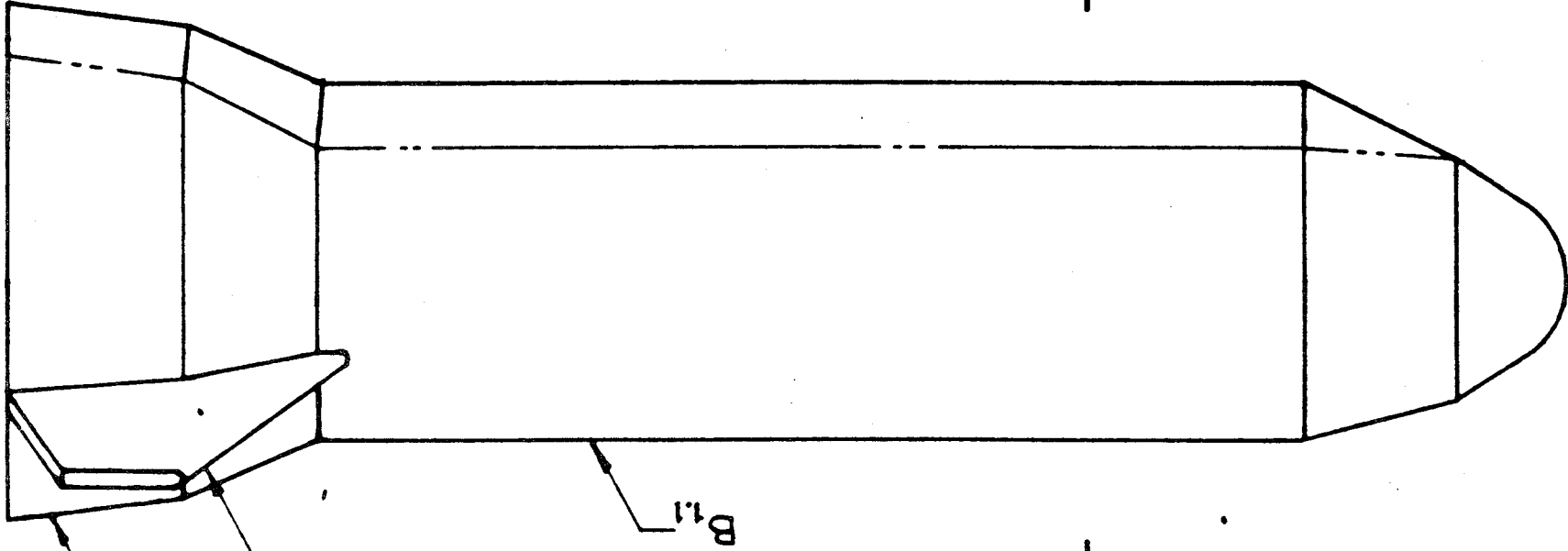


FIGURE 11. CONFIGURATION B₁, S₁, V₂

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TABLE II

TEST BTWT 1282/BSWT 557 DATA SET COLLATION SHEET

BTWT ← | → BSWT

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)															
		α	β	δv					33/1.1	.35	.6	.8	.9	.95	1.0	1.05	1.1	1.3	1.4	1.6	2.0	2.7	3.5	4.0
RD8001	B ₅ S ₃	A	O					7			54		53			52		5			4	3		7
002		B	O					5												54	59	60	81	65
007		2.5	C					2												211			206	
009		O	O					1	55															
011	D ₁	A	O					2										28						8
021	D ₂							2										29						9
031	D ₃							1																11
041	D ₄							2										27						12
051	D ₅	↓	↓					7			61		60			59		26			42	23		13
059	D ₅	O	O					1	62															
061	D ₆	A	O					0																82
071	D ₇							2										91						83
081	D ₈							2										90						84
091	D _{1.1}							2										32						19
101	D _{3.1}							4										31			39	20		10
111	D _{5.1}							7			58		57			56		25			41	24		14
121	D _{1.2}							4										33			37	21		15
131	D _{3.2}							4										34			38	22		16
↓ 141	↓ D _{6.2}							2										88						87
RD8151	B ₅ S ₃ D _{1.3}	↓	↓					3										35			36			18

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CN	CAF	ICLM	CY	CYN	CBL	CNFIN	CLMH						

COEFFICIENTS:

 αA : -5 → +25 α or β αB : 55 → 85

SCHEDULES

 βC : -10 → +10

IDPVAR(1) | IDPVAR(2) | NDV

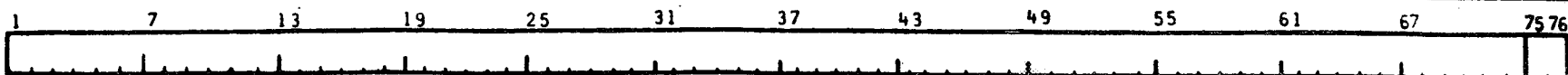
CYLINDRICAL BOOSTER
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DR#1275 A-1- 265

TEST BTWT 1282/BSWT 557 DATA SET COLLATION SHEET

BTWT ← | → BSWT
 PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)																
		α	β	δv					35/11	.35	.6	.8	.9	.95	1.0	1.05	1.1	1.3	1.4	1.6	2.0	2.7	3.5	4.0	
RD8161	B ₅ S ₃ D ₃₃	A	O					1																	17
171	D _{5.3}							8		64		63			65		44	45		43	46				47
181	D _{7.3}							2									51								50
191	D _{8.3}							2									89								86
201	D _{9.4}							2									93								100
301	D _{9.4} V _{6.1}	↓	↓	O				3									94		101						99
304	D _{9.4} V _{6.1}	7.7	C					1									95								
311	V _{6.1}	A	O					2									97								98
314	V _{6.1}	7.7	C					1									96								
321	↓ D _{10.4} V _{6.1}	A	O					5		97	94	96			95	93									
325	↓	10	C					5		103	100	102			101	99									
328	↓	-10	C					5		108	105	107			106	104									
329	↓	O	O					1	98																
331	D _{10.5} V _{6.1}	A	O					2									176								165
333	↓	O	C					2									174								168
334	↓	7.7	C					2									175								166
341	D _{10.6} V _{6.1}	A	O					6		117	114	116		115			172								170
343	↓	O	C					2									173								169
349	↓	O	O					1	113																
RD8351	B ₅ S ₃ D _{4.5} V ₆	A	O	↓				10		122	119	121		120	123	118	240	233						232	241



COEFFICIENTS: αA : -5 → +25
 α or β αB : 55 → 85
 SCHEDULES βC : -10 → +10

IDPVAR(1) | IDPVAR(2) | NDV

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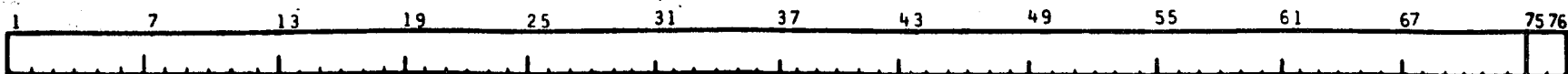
TEST BTWT 1282/BSWT 557 DATA SET COLLATION SHEET

BTWT ← | → BSWT
 PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES	NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)																
		α	β			δv	35	35	.6	.8	.9	.95	1.0	1.05	1.1	1.3	1.4	1.6	2.0	2.7	3.5	4.0
RD8353	B ₅ S ₃ D4.5V ₆	0	C	0	4												239	234			231	242
359	D4.5V ₆	0	0		1	124																
361	D1.5V ₆	A	0		1																	247
364		7.7	C		1																	246
365		10	C		3		75		74				73									
369		0	0		0																	
371	D4.7V ₆	A	0		5		129	126	128				127	125								
379	D4.7V ₆	0	0		1	130																
381	D1.7V ₆	A	0		5		135	132	134				133	131								
389	D1.7V ₆	0	0		1	136																
401	V ₆	A	0		4											237	236			229	244	
402		B	0		5												55	58	61	80	64	
403		0	C		4											238	235			230	243	
404		7.7	C		1																245	
406		67.5	C		4												56	57	62	67		
412		B	0	-40	2												70			69		
416		67.5	C	-40	2												71			68		
422		B	0	-60	2												73			78		
426		67.5	C	-60	2												72			79		
RD8432		B	0	-80	2												74			77		

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COEFFICIENTS:

αA: -5 → +25

α or β

αB: +55 → +85

SCHEDULES

βC: -10 → +10

IDPVAR(1) | IDPVAR(2) | NDV

CYLINDRICAL BOOSTER

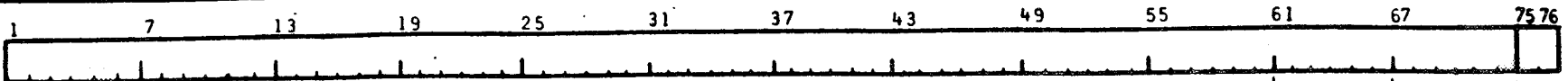
TBC

DR#1275 A-1- 267

TEST BTWT 1282/BSWT 557 DATA SET COLLATION SHEET

BTWT ← | → BSWT
 PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)															
		a	β	δV					35	.6	.8	.9	.95	1.0	1.05	1.1	1.3	1.4	1.6	2.0	2.7	3.5	4.0	
RD8436	B ₅ S ₃ V ₆	67.5	C	-80				2											75			76		
501	V _{6F}	A	0	0				3			35		34				33							
502		B	0					11		14		9	11	13	12	10	8			191	204	203	199	
505		10	C					3			38		37			36								
507		72.5	C					7		32		29	30		31		28			193			200	
512		B	0	-40				11		21		16	18	20	19	17	15			194	205	202	201	
522		B	0	-60				7		26		23	24		25		22			195			198	
532		B	0	-80				2												196			197	
541	D10.4 V _{6F}	A	0	0				3			44		43			42								
545	D10.4 V _{6F}	10	C					3			41		40			39								
551	D1.5 V _{6F}	A	0					3			47		46			45								
555	D1.5 V _{6F}	10	C					2					50			49								
602	V ₈	B	0					1																182
612	V _{9A}	B	0					2												213				183
614		7.7	C					1												253				
617		72.5	C					2													214			184
622	V _{9B}	B	0					2													209			208
627	V _{9B}	72.5	C					2													210			207
632	V _{9C}	B	0					2													216			186
RD8637	B ₅ S ₃ V _{9C}	72.5	C					2													215			185



COEFFICIENTS:

αA: -5 → +25

α or β

αB: 55 → 85

SCHEDULES

βC: -10 → +10

IDPVAR(1) | IDPVAR(2) | NDV

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TEST BWT 1282/BSWT 557 DATA SET COLLATION SHEET

PRETEST POSTTEST

BTWT ← → BSWT

DATA SET IDENTIFIER	CONFIGURATION	SCHD.	PARAMETERS/VALUES	NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)
		a	B	BT	
				35	

R08642	B5S3 V9D	B	O																	2						188
647	V9D	Z	S	C																2						189
651	V9AF3	A	O																	6						248
654		7	C																	2						249
655		10	C																	3						
659		O	O																	1						
701	B6S3	A	O																	1						49
711	B6S3 D53																			1						48
801	B5S2 V3																			2						161
811	V3F2.1																			2						160
821	V3F1																			2						159
831	V3.2																			2						162
841	V3.2 F1																			3						
845	V3.2 F1	10	C																	3						
851	V3.3 F1	A	O																	2						158
854	V3.3 F1	7	C																	2						157
902	B5S4 V7	B	O																	1						178
907		7	S	C																1						179
912	T1.30	B	O																	1						180
R08922	T2.75	B	O																	1						181

1	7	13	19	25	31	37	43	49	55	61	67	73	76
---	---	----	----	----	----	----	----	----	----	----	----	----	----

COEFFICIENTS:
 a or B
 SCHEDULES

QA: -5 → +25
 QB: 55 → 85
 QC: -10 → +10

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 DR#1275 A-1 - 269

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TEST BTWT 1282/BSWT 557 DATA SET COLLATION SHEET

CYLINDRICAL BOOSTER
TBC
DR#1275 A-1- 270

BTWT ← | → BSWT
 PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHED.		PARAMETERS/VALUES				NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)																		
		a	B	δv					35/11	.35	.6	.8	.9	.95	1.0	1.05	1.1	1.3	1.4	1.6	2.0	2.7	3.5	4.0			
RD8932	B ₅ S ₅	B	O					2											221							222	
RD8942	B ₅ S ₅ V ₈	B	O					1																		226	
RD8952	B ₅ S ₅ V ₉	B	O					2													220					224	
RD8006	B ₅ S ₃	6/5	C					1																		66	
RD8405	B ₅ S ₃ V ₆	10	C	O				0																			
RD8559	B ₅ S ₃ D _{1.5} V _{6F}	O	O	O				1	48																		
RD8322	D _{10.4} V _{6.1}	A	O	O				2																	177		164
RD8842	B ₅ S ₂ V _{3.2} F ₁	A	O					2																	150		163

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1 7 13 19 25 31 37 43 49 55 61 67 75 76

	IDPVAR(1)	IDPVAR(2)	NDV
--	-----------	-----------	-----

COEFFICIENTS: αA: -5 → +25
 a or β αB: 55 → 85
 SCHEDULES βC: -10 → +10

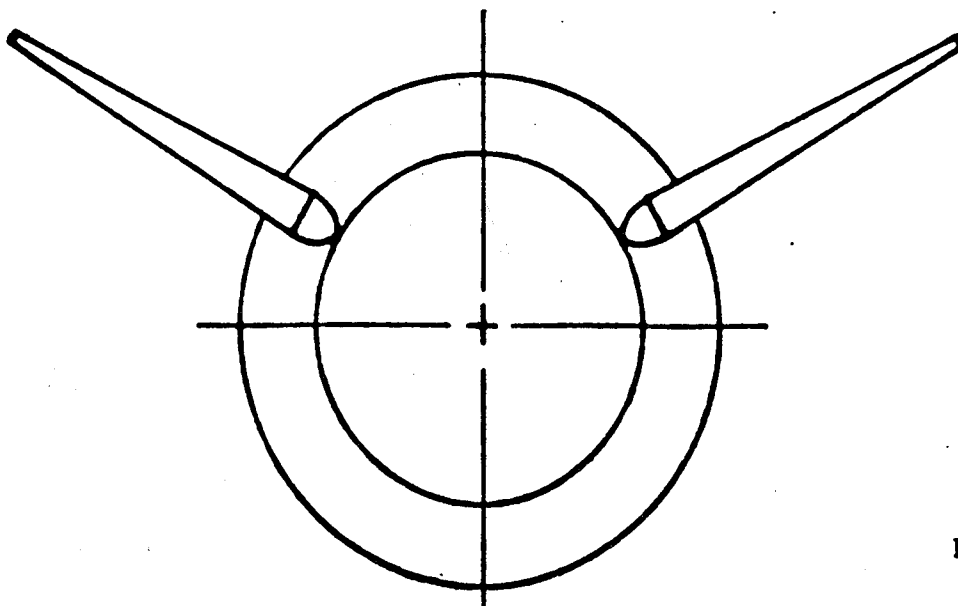
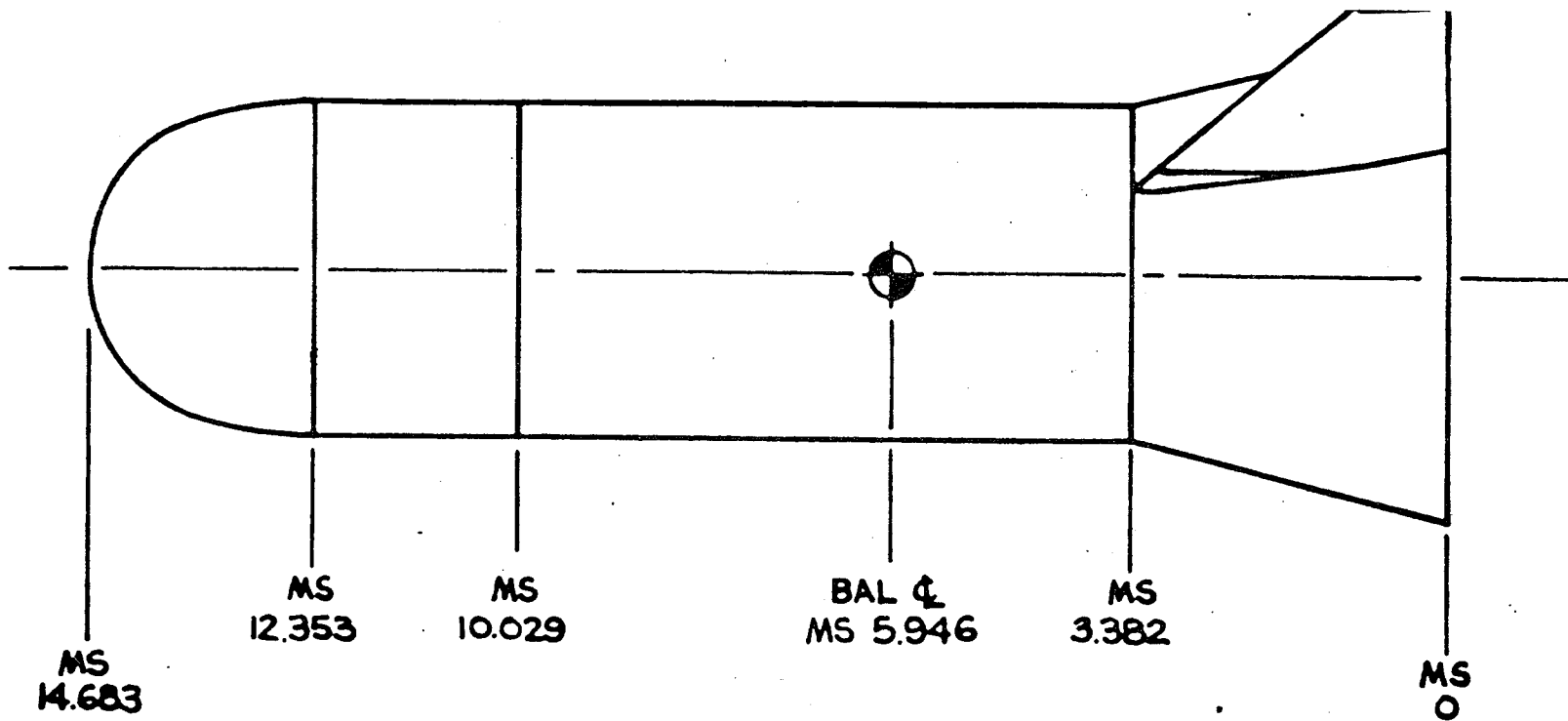


Figure 3. CONFIG. B₅S₃V₆ CYLINDRICAL BOOSTER
TBC
DR#1275 A-1- 271

T.S. : *180 GRIT ; 150-180 GRAINS/IN.

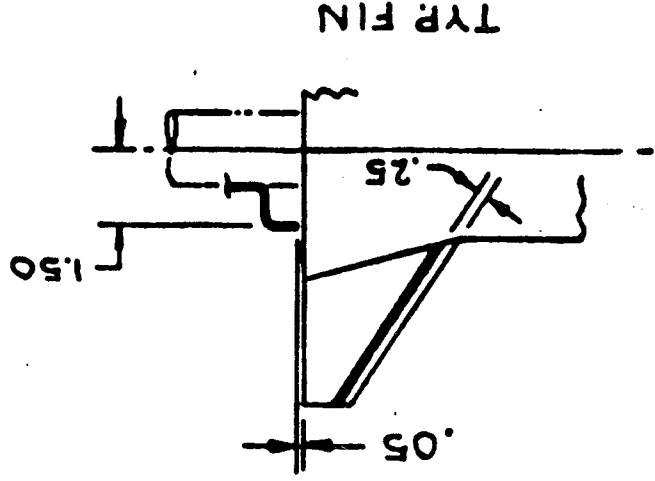
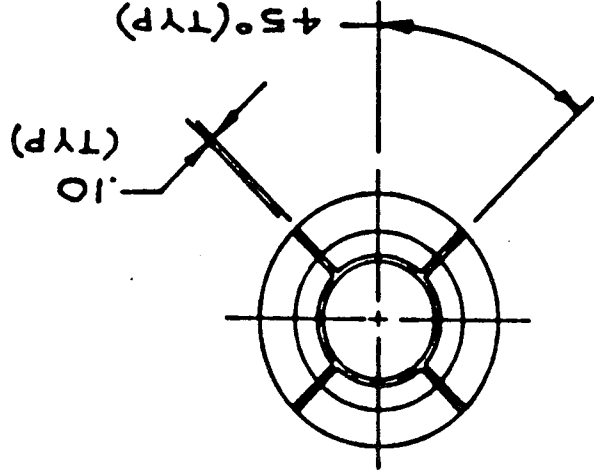
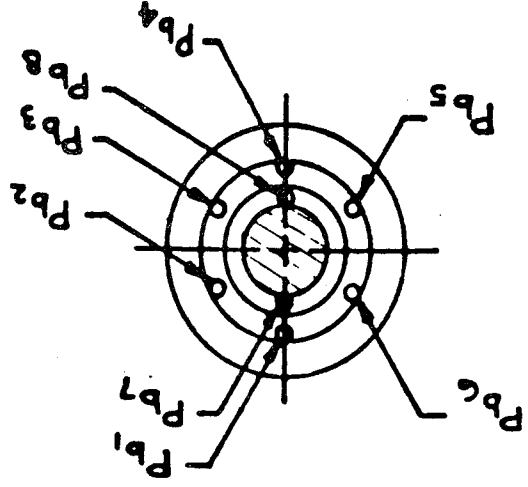
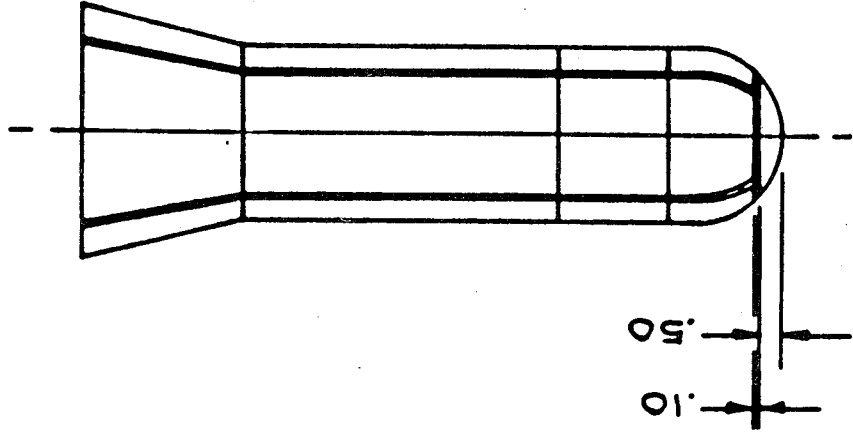


Figure 4. Trip Strips and Base Pressures

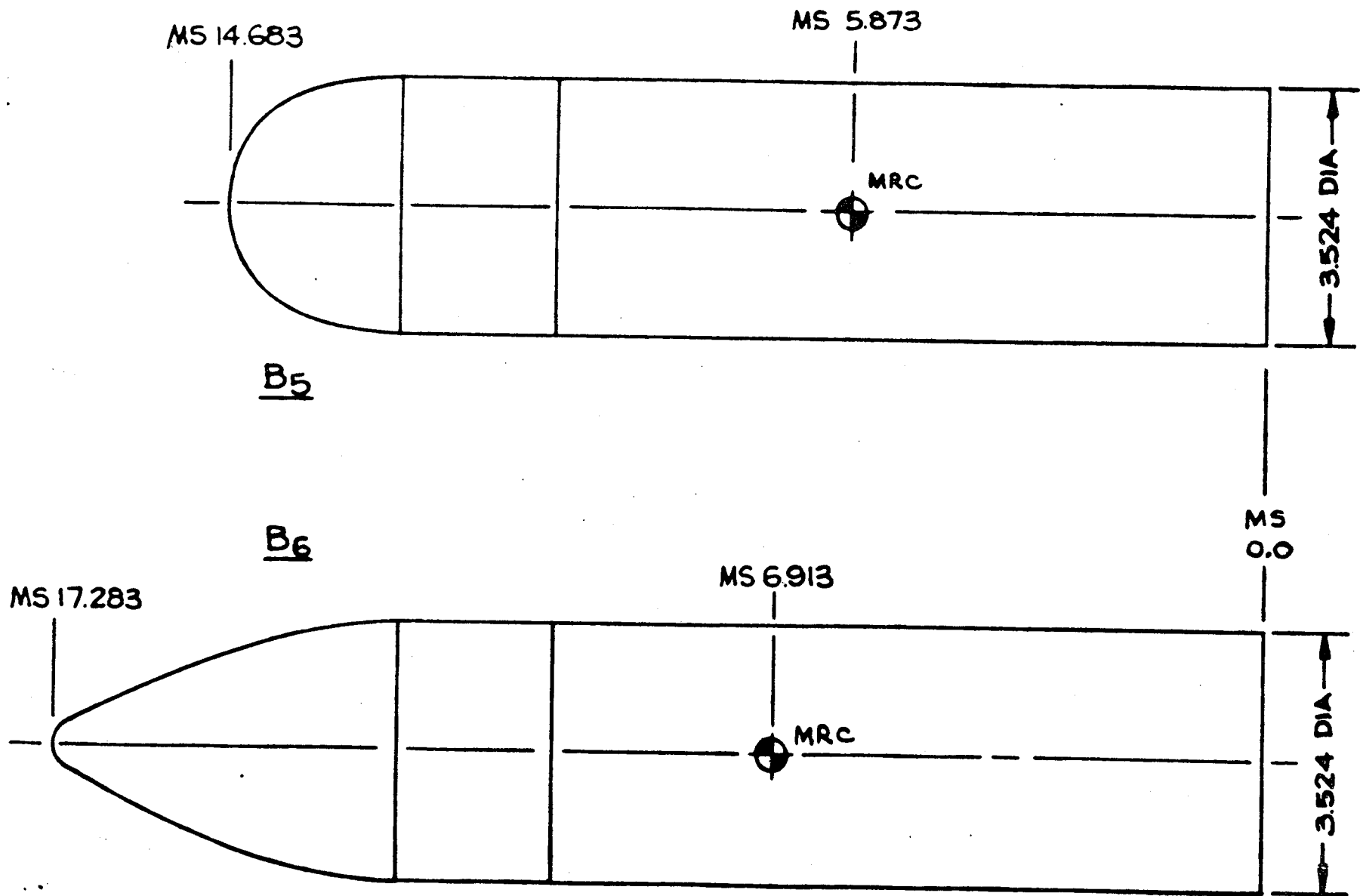
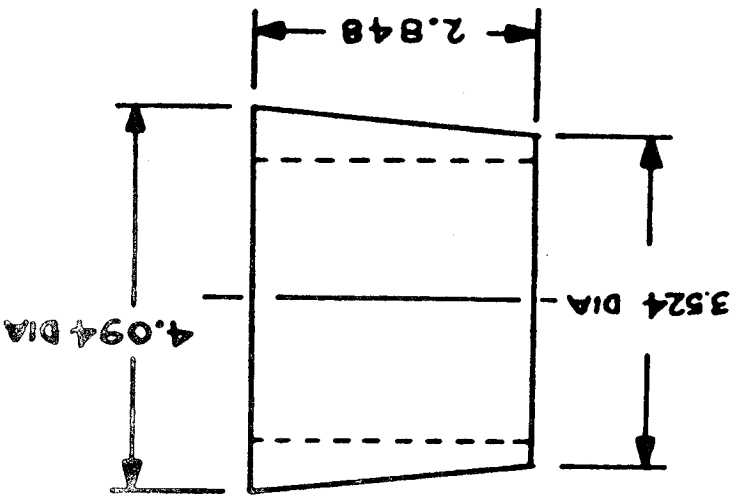
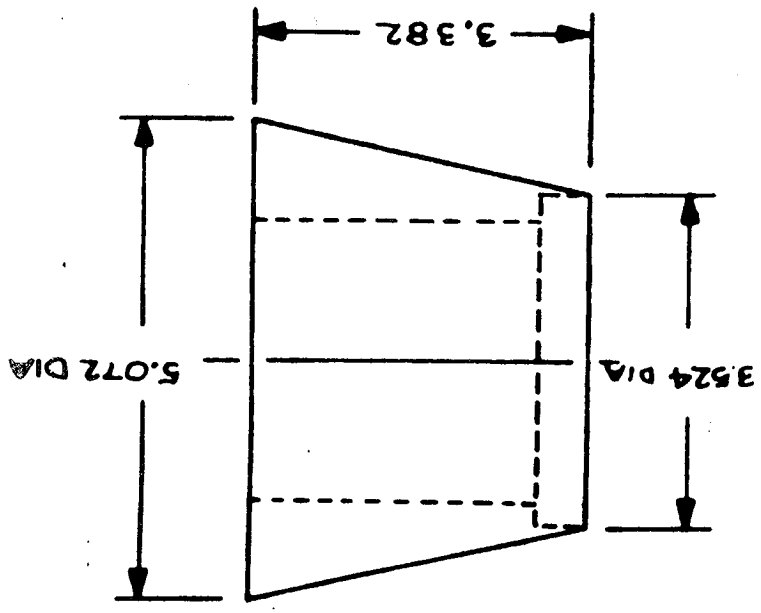
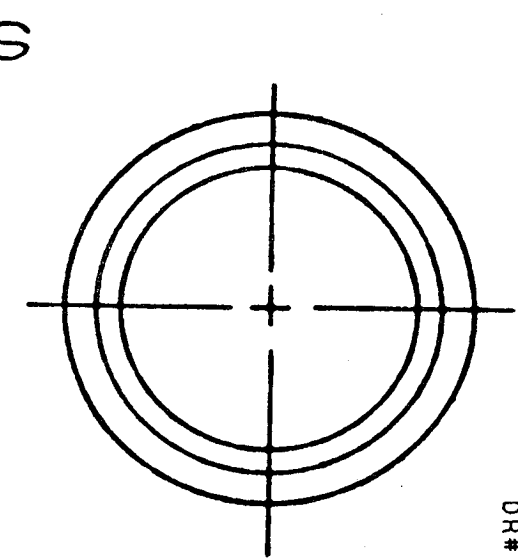
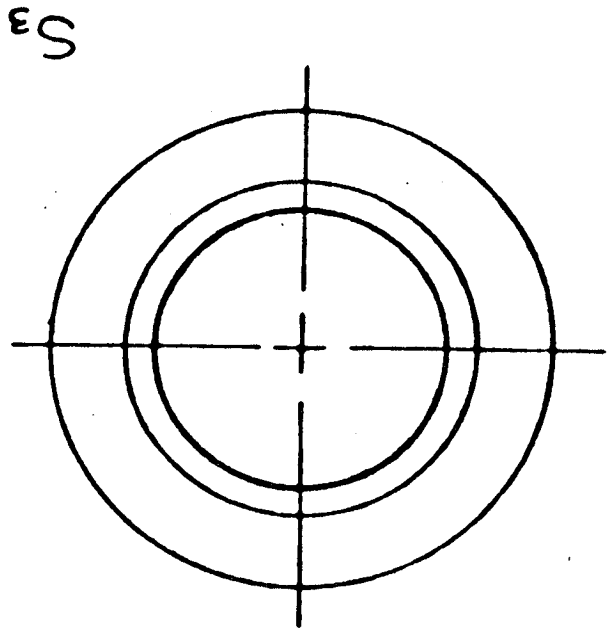


Figure 5. Bodies B5 and B6

CYLINDRICAL BOOSTER
 TBC
 DR#1275 A-1- 273

Figure 6. ENGINE SHROUDS S2 & S3



CYLINDRICAL BOOSTER
TBC
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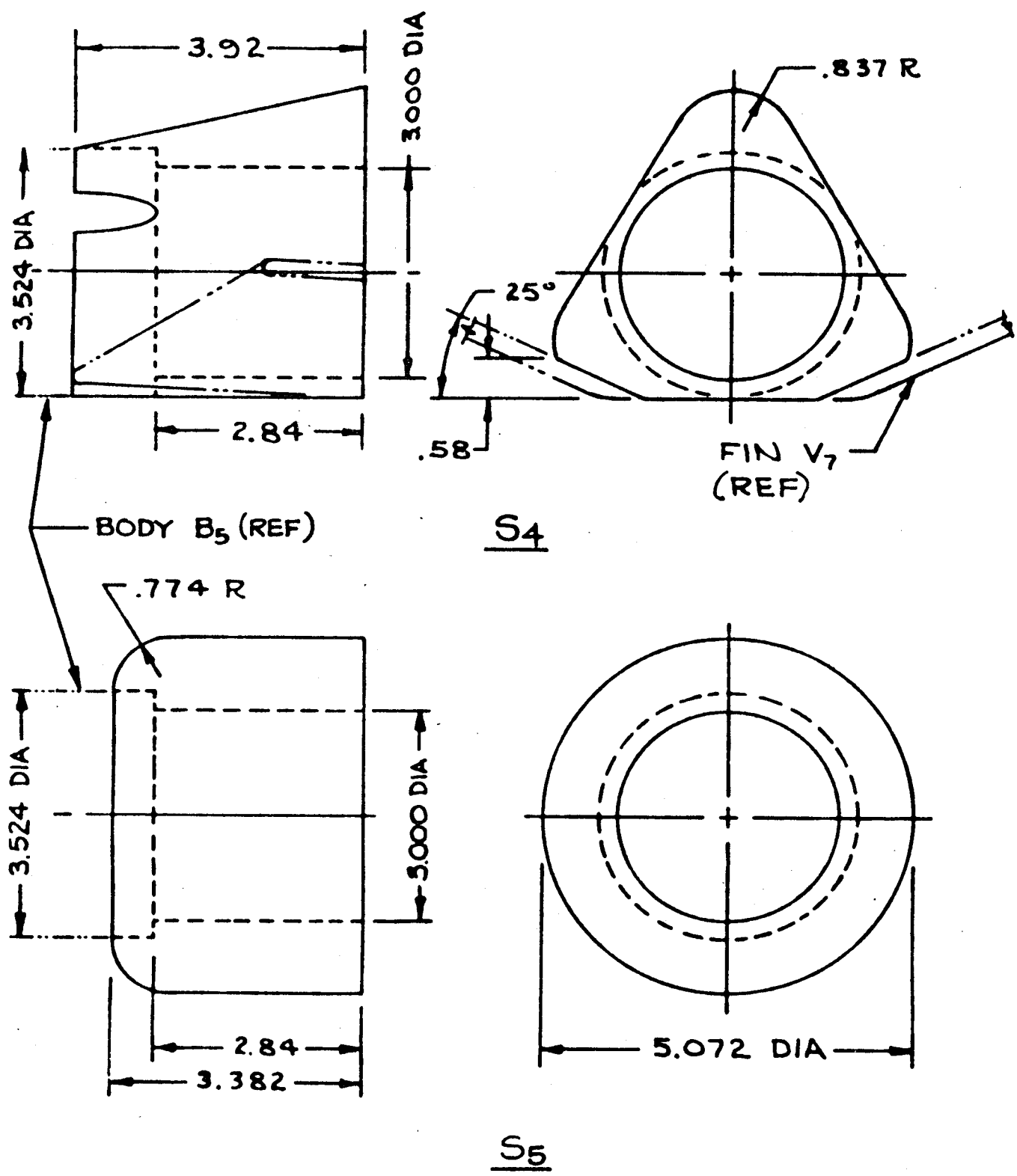


Figure 7. Engine Shrouds S₄ & S₅

CYLINDRICAL BOOSTER
TBC
DR#1275 A-1- 276

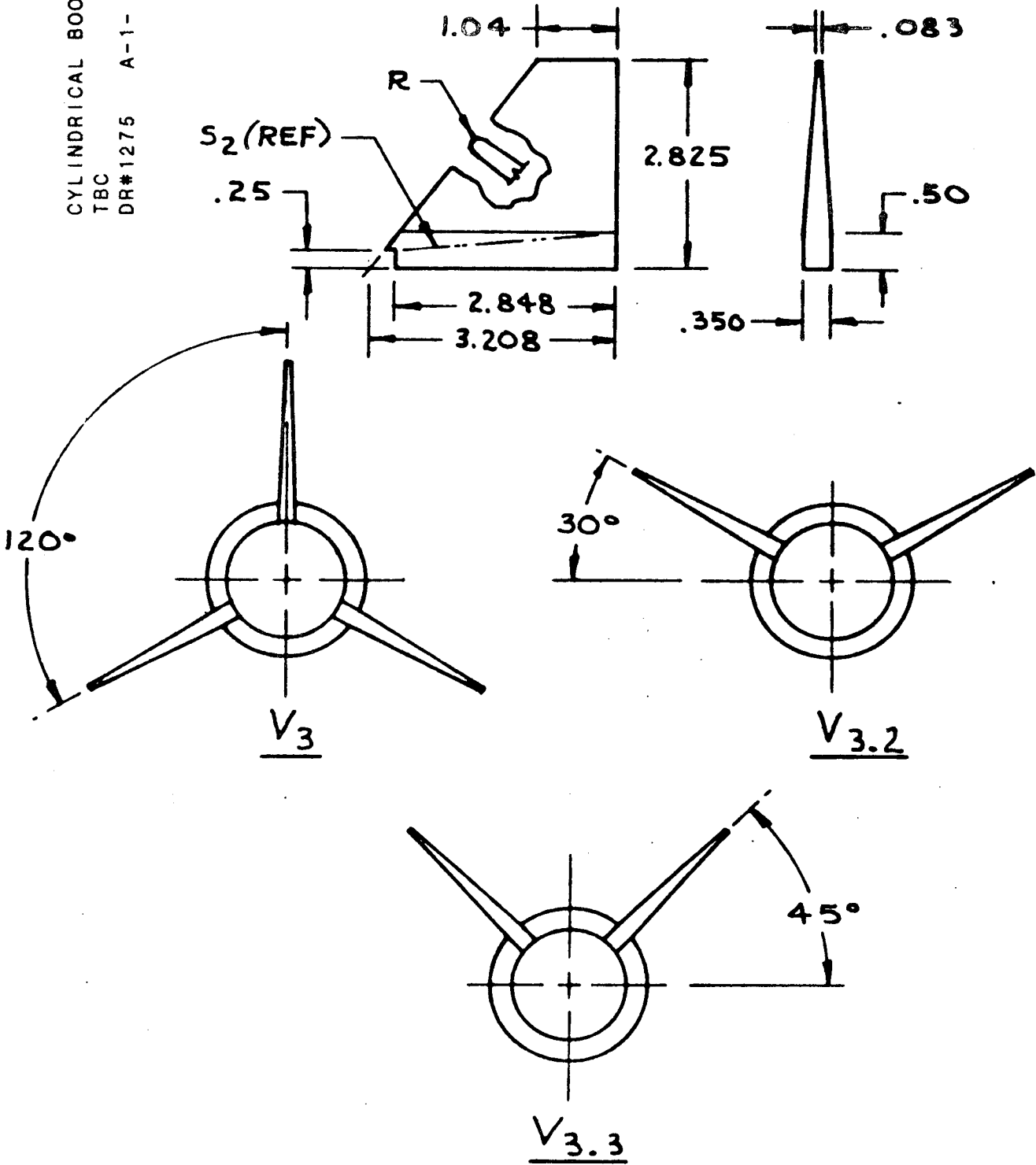


Figure 8. Fin V₃

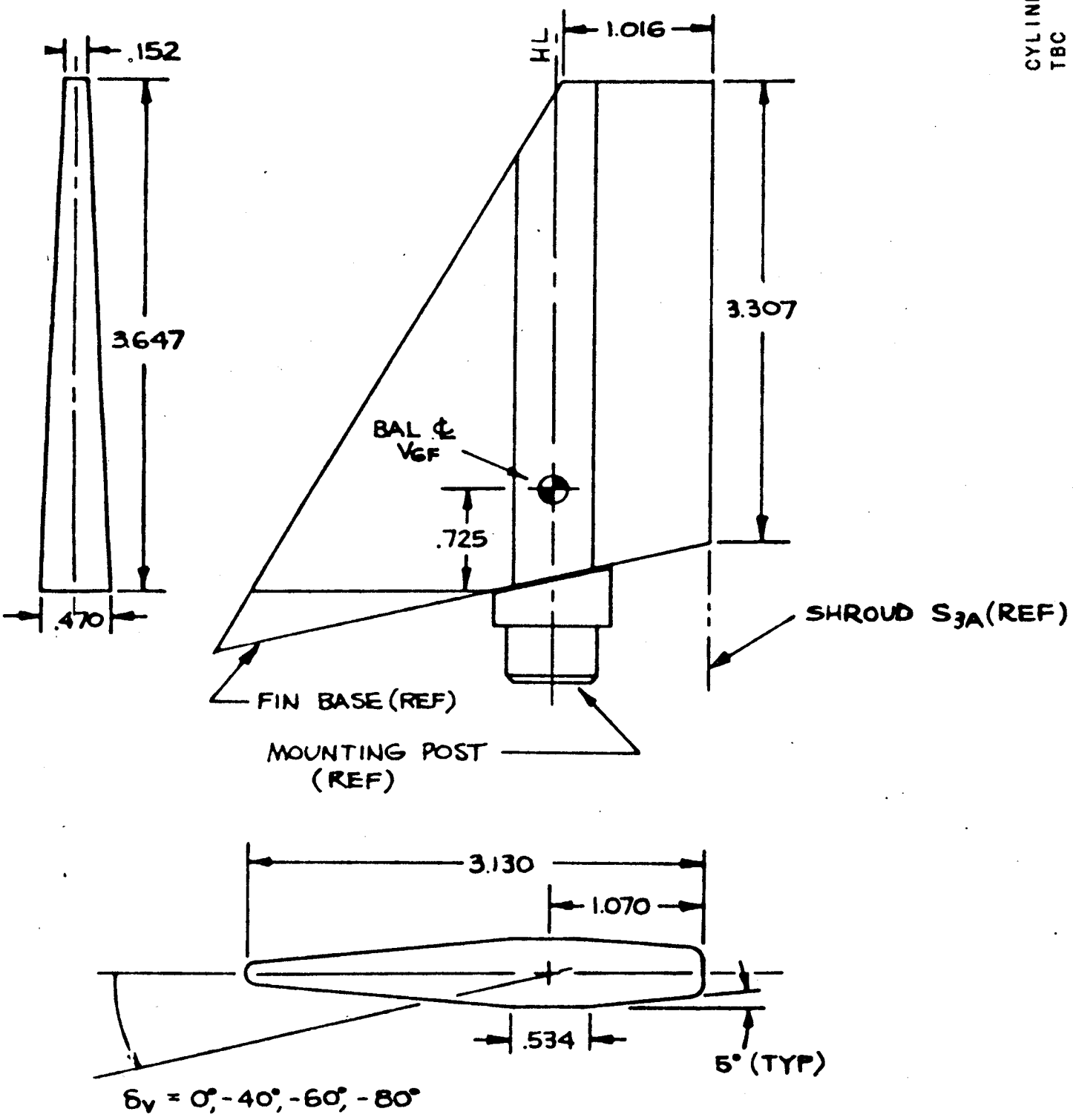


Figure 9. Pin V₆ & V_{6F}

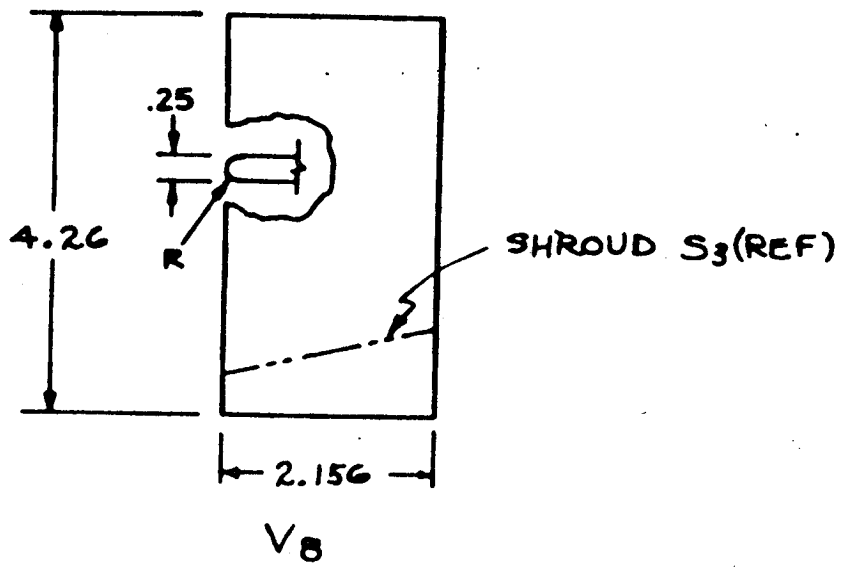
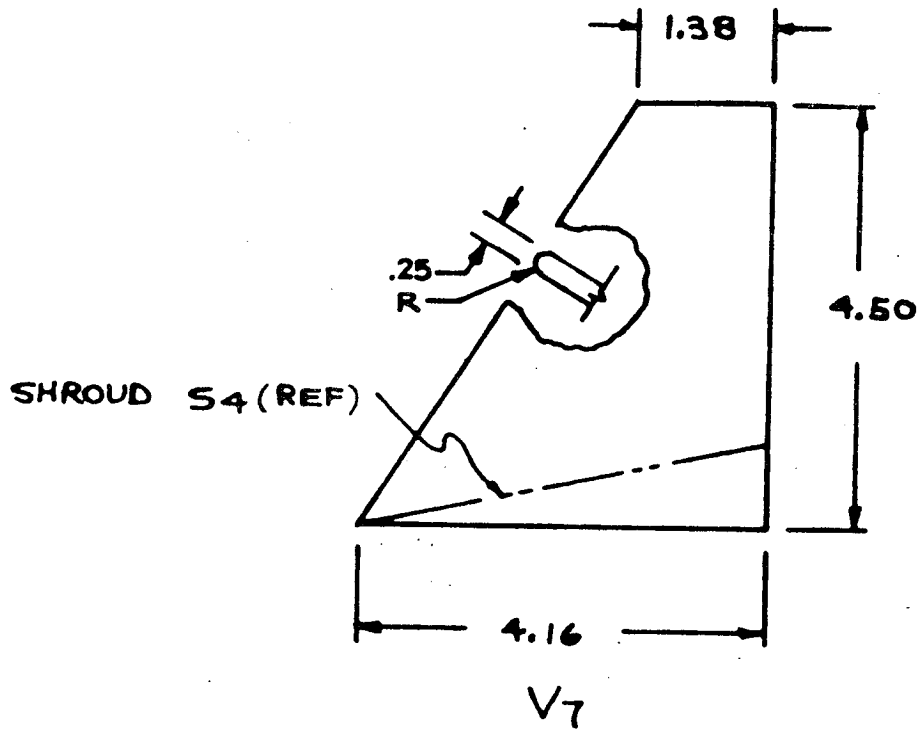


Figure 10. Fins V7 & V8

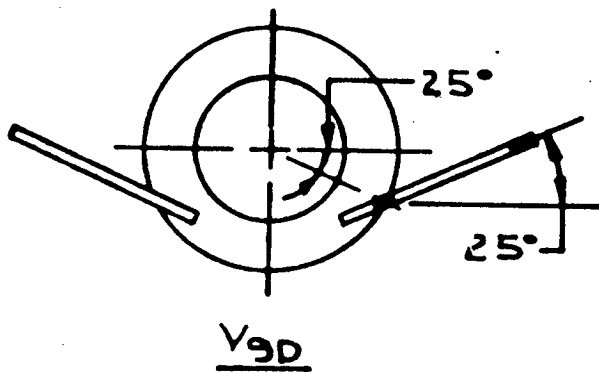
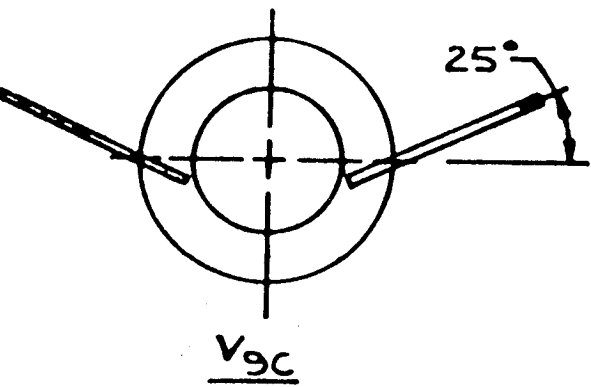
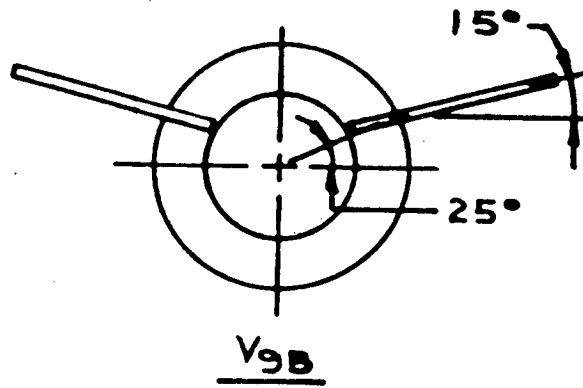
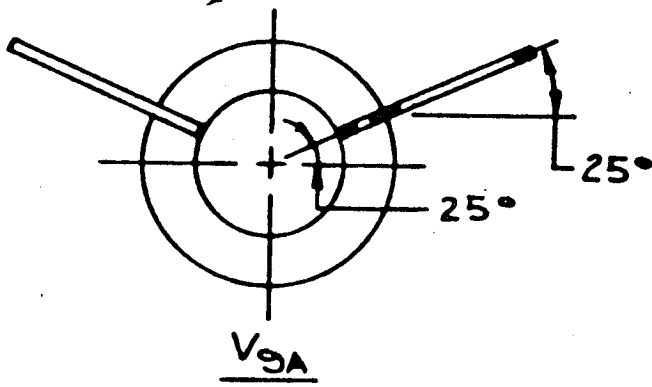
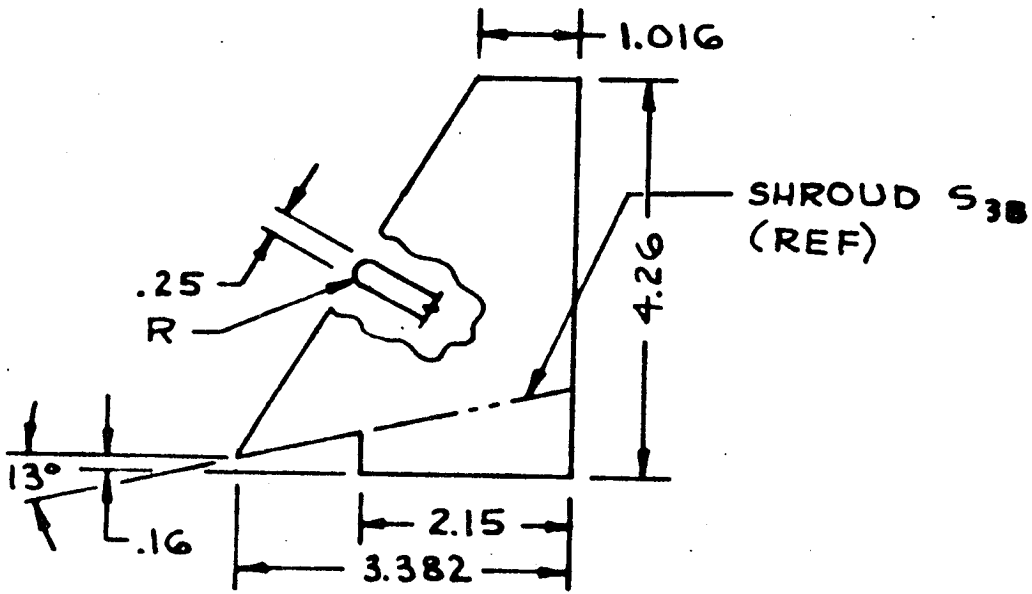


Figure 11. Fin V₉

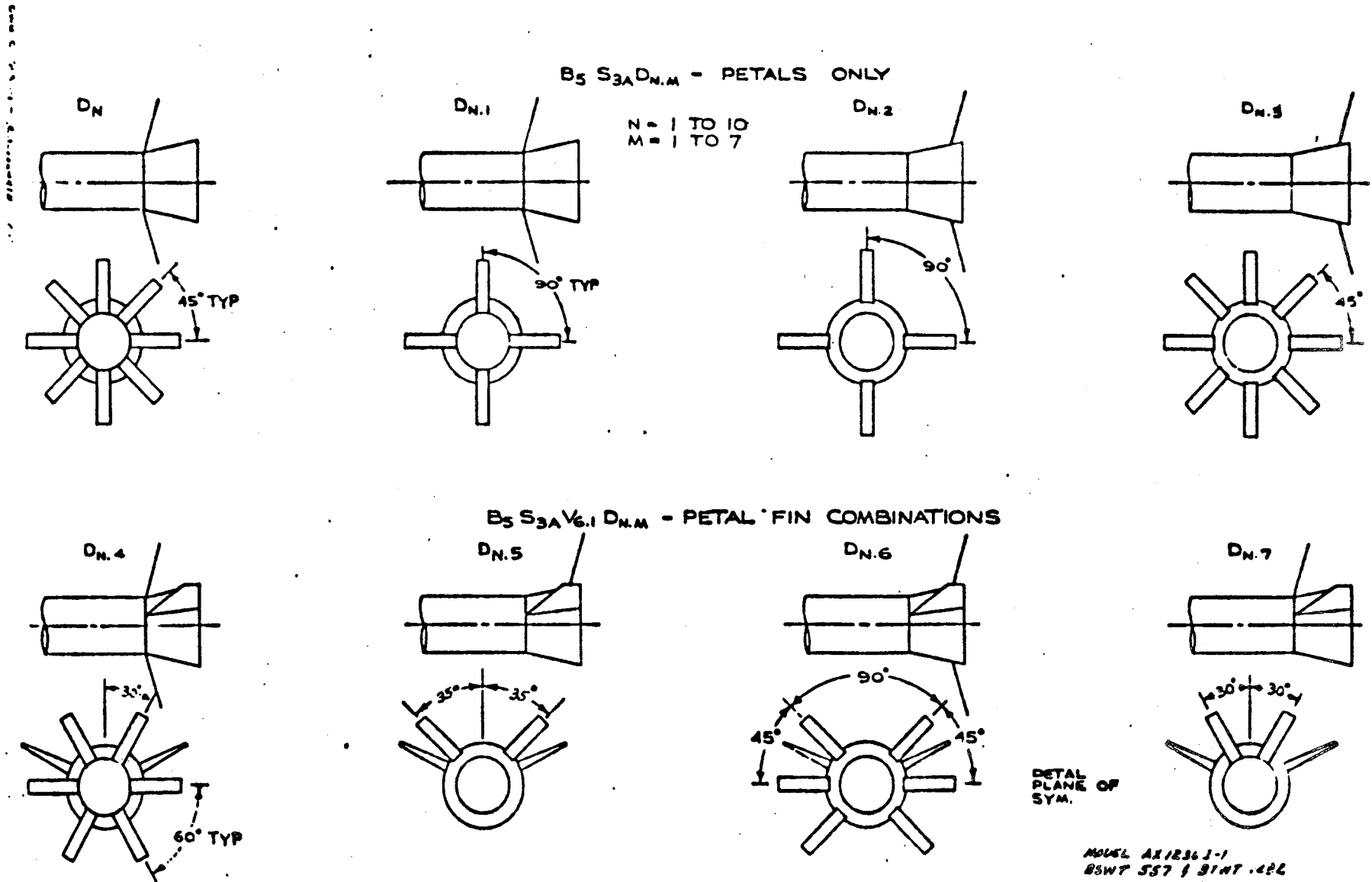
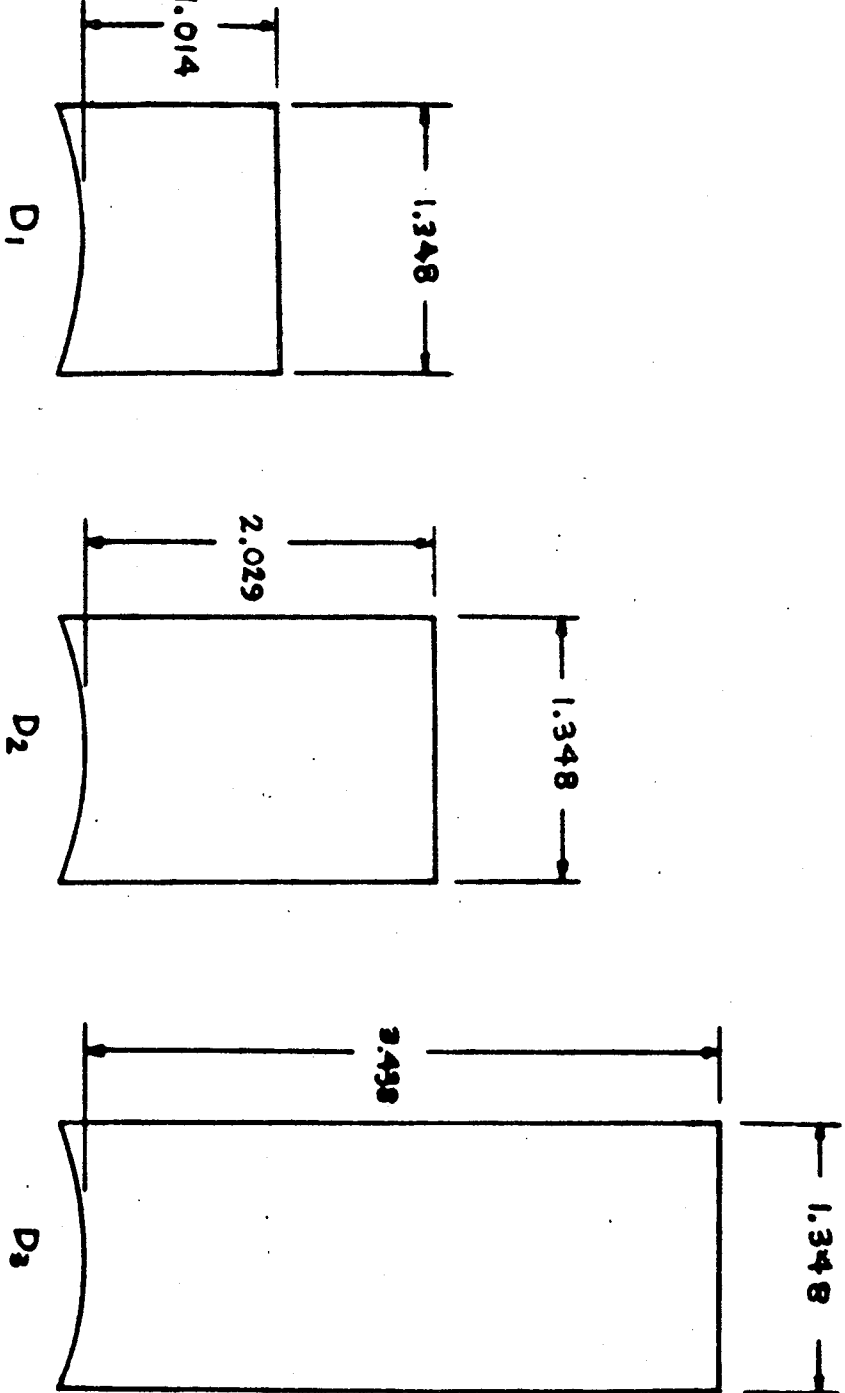


Figure 12. Drag Petal Axial Location & Arrangement



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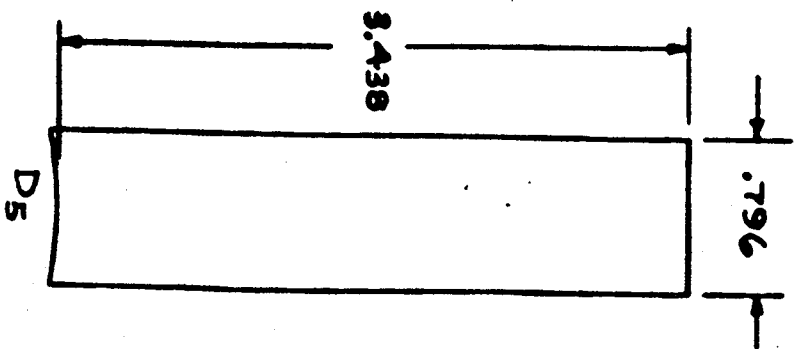
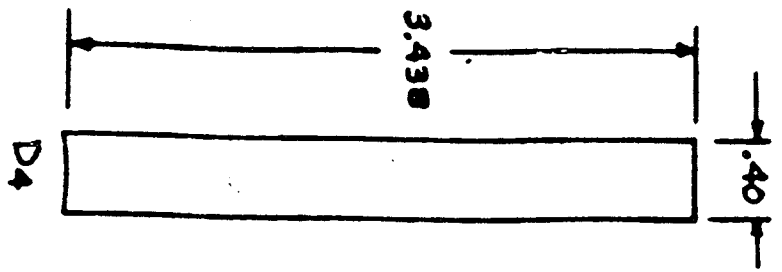


Figure 13. Drag Petal Platforms D₁ through D₅
 374

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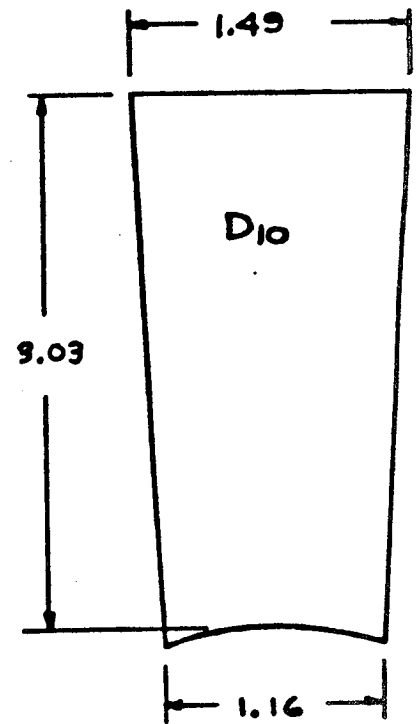
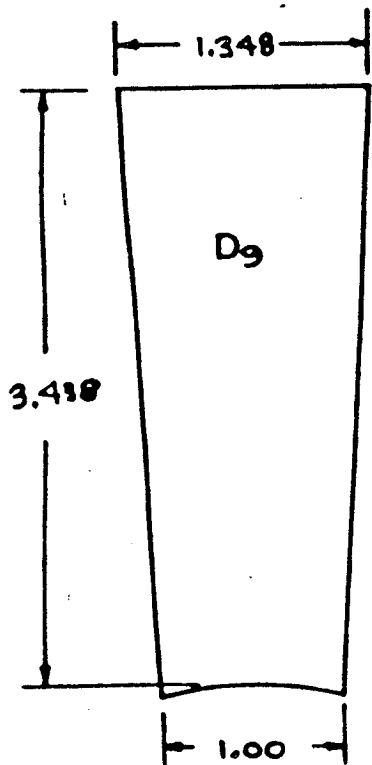
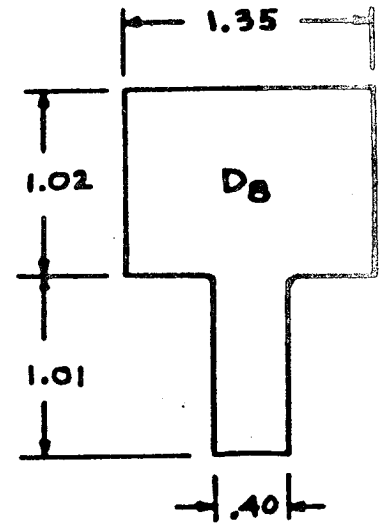
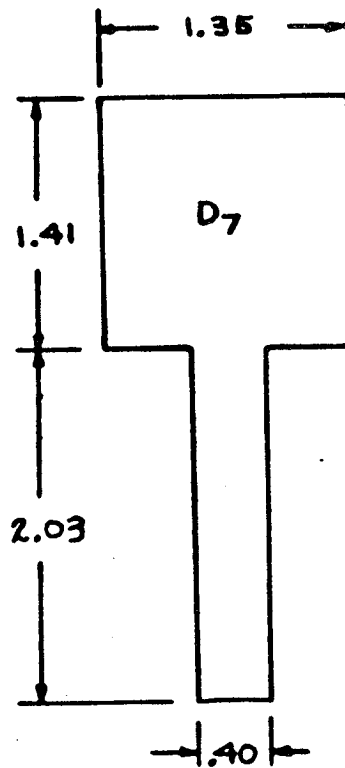
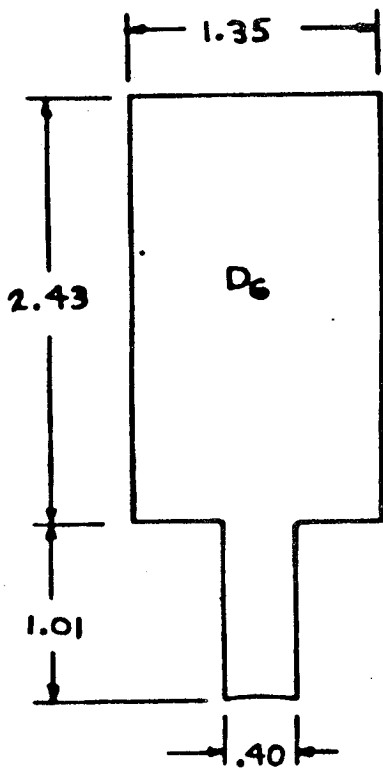


Figure 14. Drag Petal Planforms D₆ through D₁₀

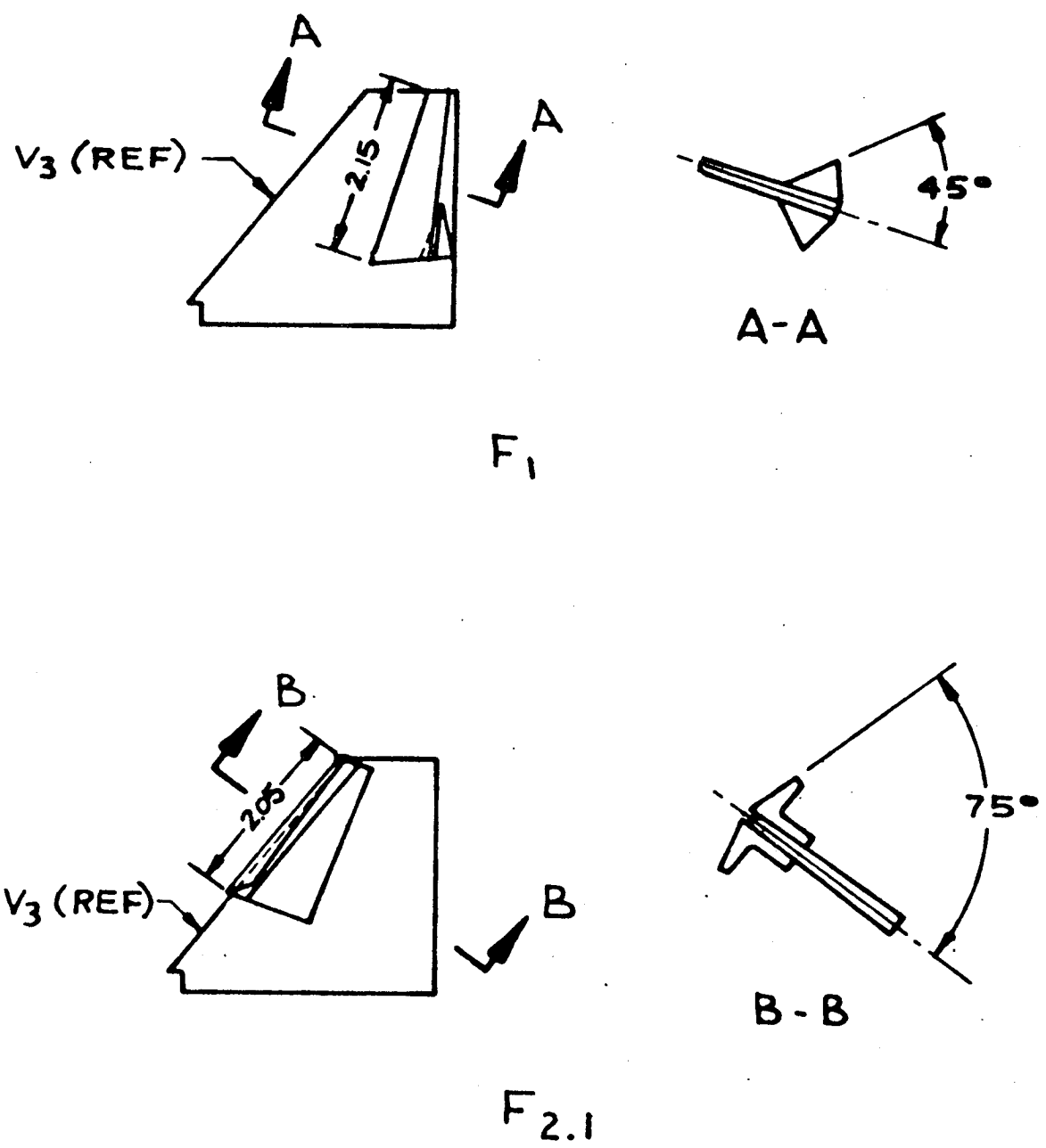
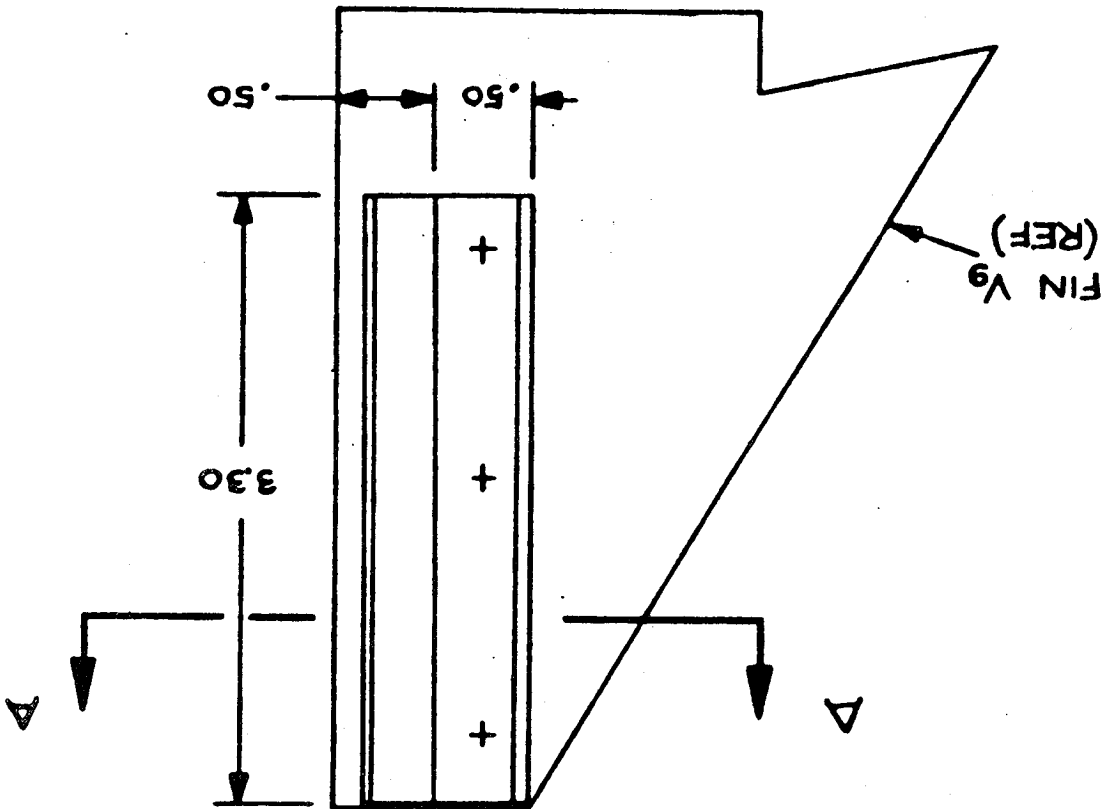
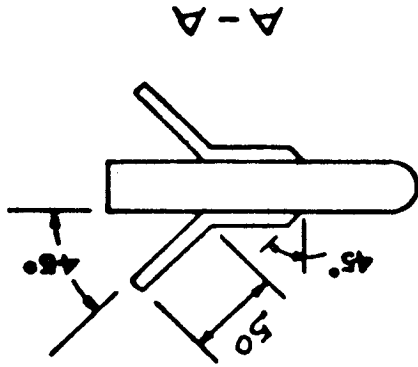


Figure 15. F_1 and $F_{2.1}$ Fin Flarings

Figure 16. F₃ Fin Flairings



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TEST BTWT 1282/BSWT DATA SET COLLATION SHEET
557

BTWT ← | → BSWT

PRETEST
 POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES	NO. of RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)											
		α	β			SWEEP 6→1.1	0.6	0.9	1.05	1.3	1.4	2.0	2.7	4.0			
RD9111	B ₁ S _{1.1}	A	0		2							109					132
121	B ₁ S _{1.2}				2							110					131
131	B ₁ S _{1.3}				5		151	150	149			111					130
141	B _{1.1} S _{1.1}				3								119	145			124
151	D _{2.3}				2								121				122
161	D _{5.3}				2								120				123
211	B ₂ S _{2.1}				3							107	148				134
221	B ₂ S _{2.2}				3							106	147				135
231	B ₂ S _{2.3}	↓	↓		7		148	147	146			108	149	258			133
232		7.7	B		2								257	259			
233		0	0		1	79											
241	B _{2.1} S _{2.1}	A	0		8		139	138	137			112	116	142	141		125
251	D ₂				2								114				126
261	D ₅				2								115				127
271	D _{2.3}				7		145	143	144				118	143	140		136
RD9281	D _{5.3}	↓	↓		7		142	140	141				117	144	139		138

ORIGINAL PAGE IS OF POOR QUALITY

1	7	13	19	25	31	37	43	49	55	61	67	75	76
CL	CDF	CN	CAF	CLM	CY	CYN	CBL	CAB					

COEFFICIENTS: αA: -5 → +25
 α or β βB: -10 → +10
 SCHEDULES

IDPVAR(1) IDPVAR(2) NDV

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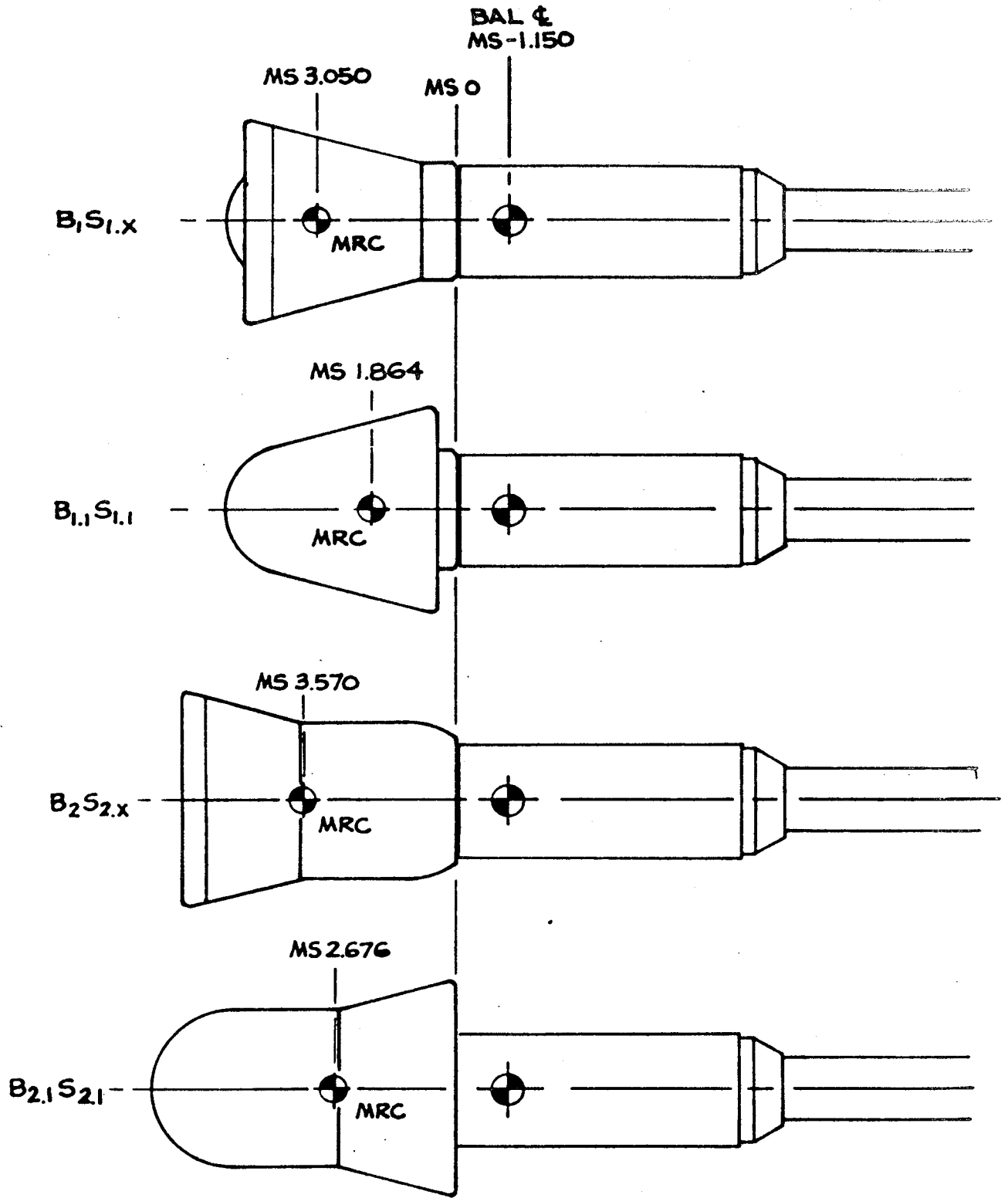


Figure 3. Model Comparison

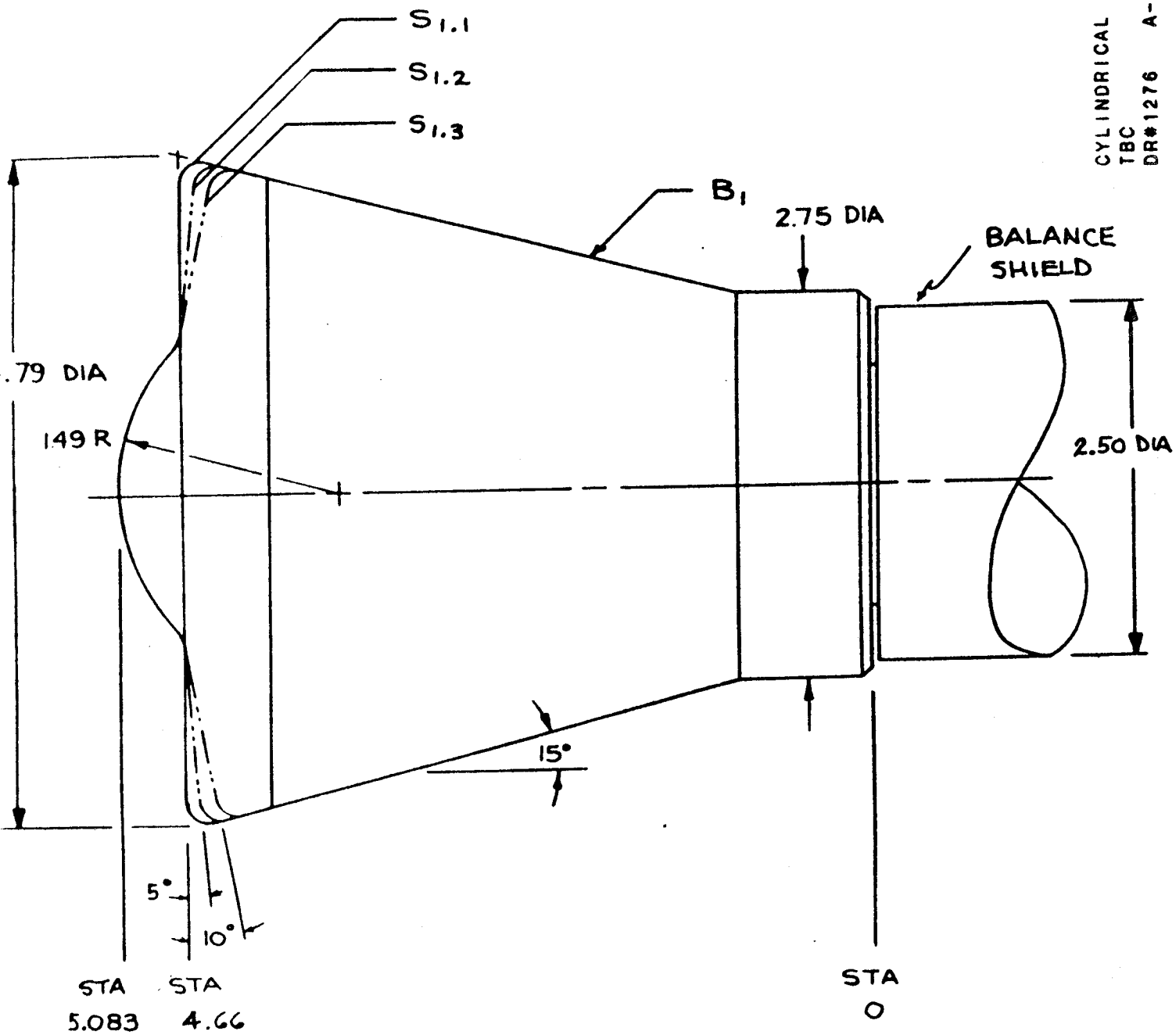


Figure 4. Configurations $B_1S_{1.n}$, $n = 1, 2, 3$

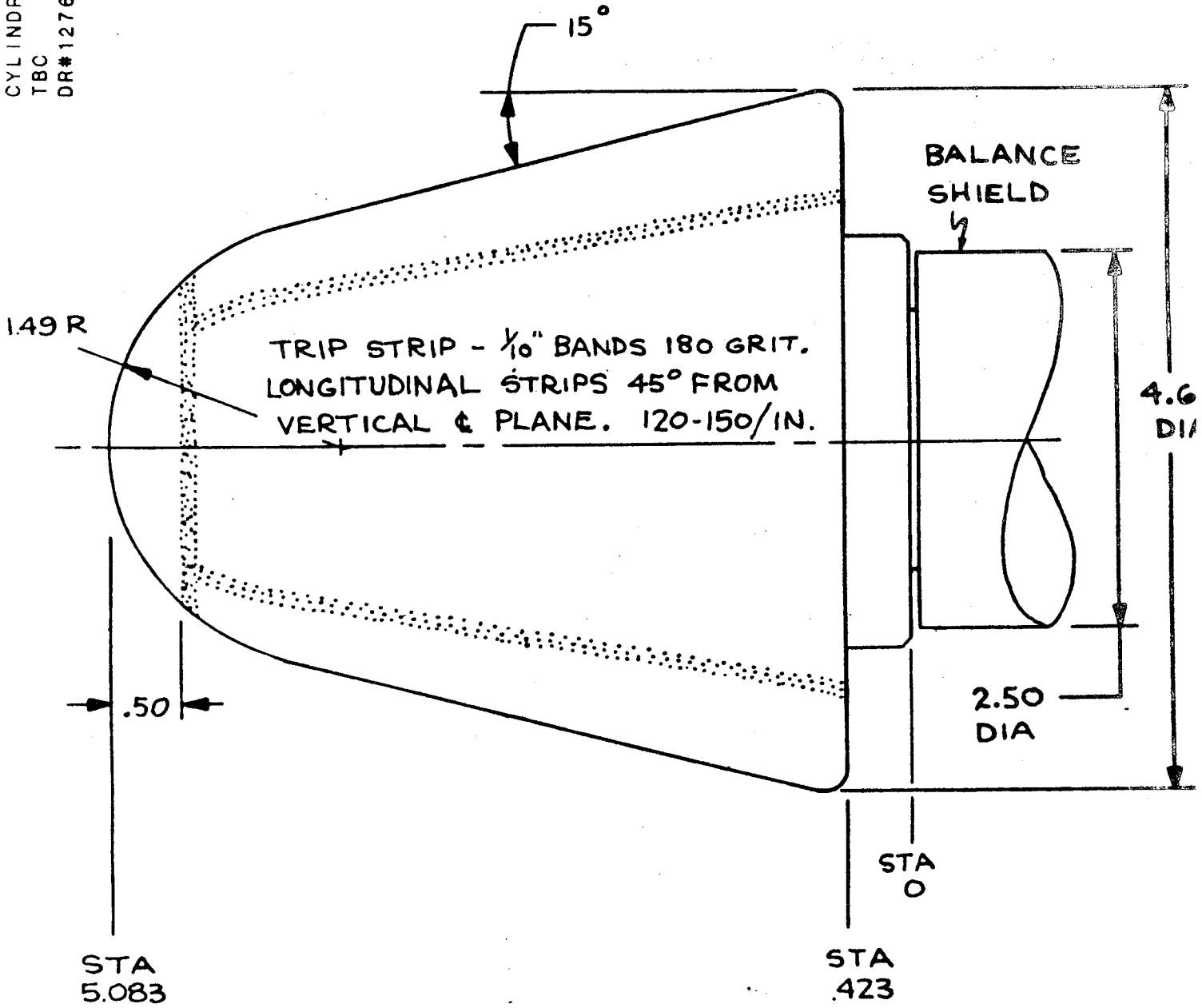


Figure 5. Configuration B_{1.1}S_{1.1} Showing Trip Strip

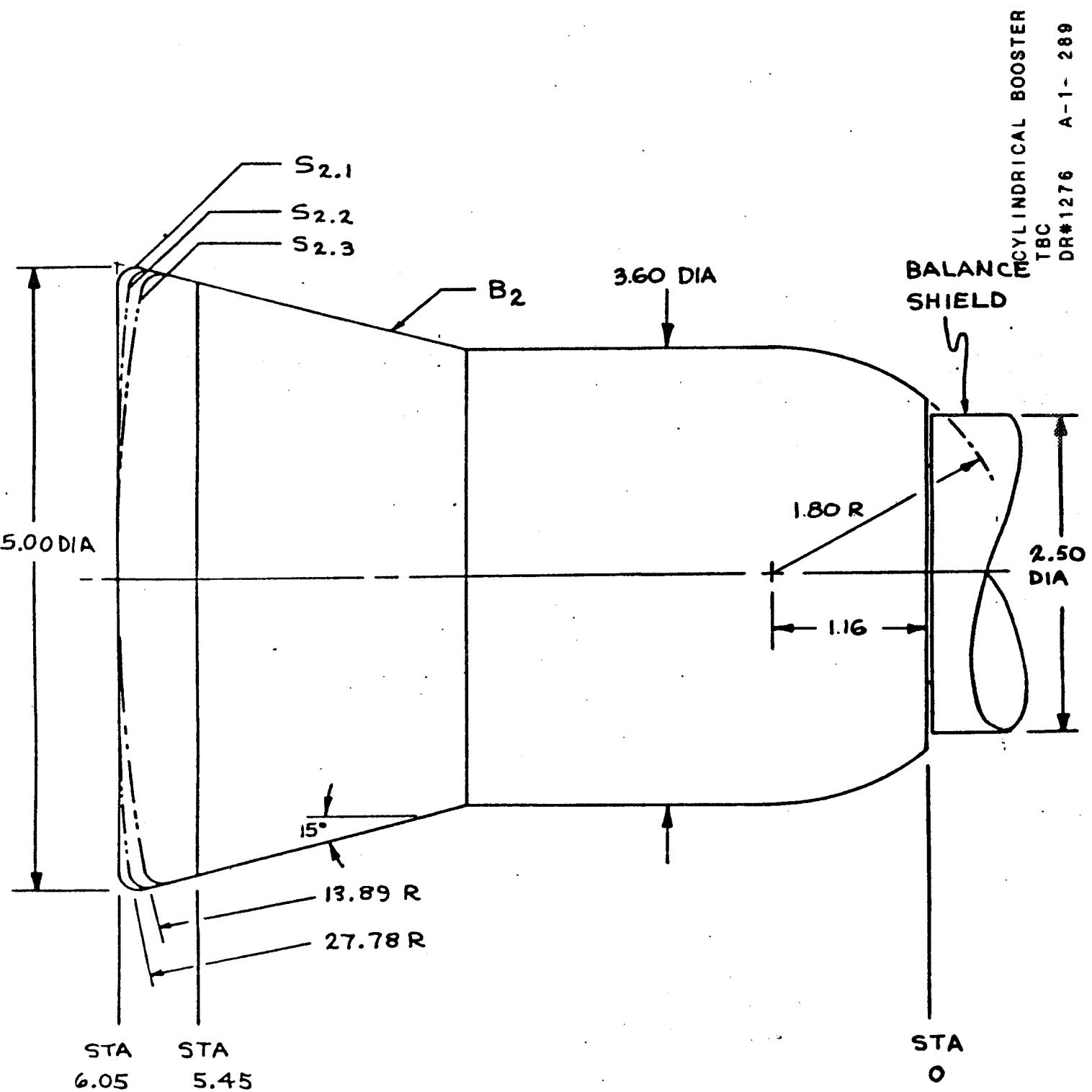
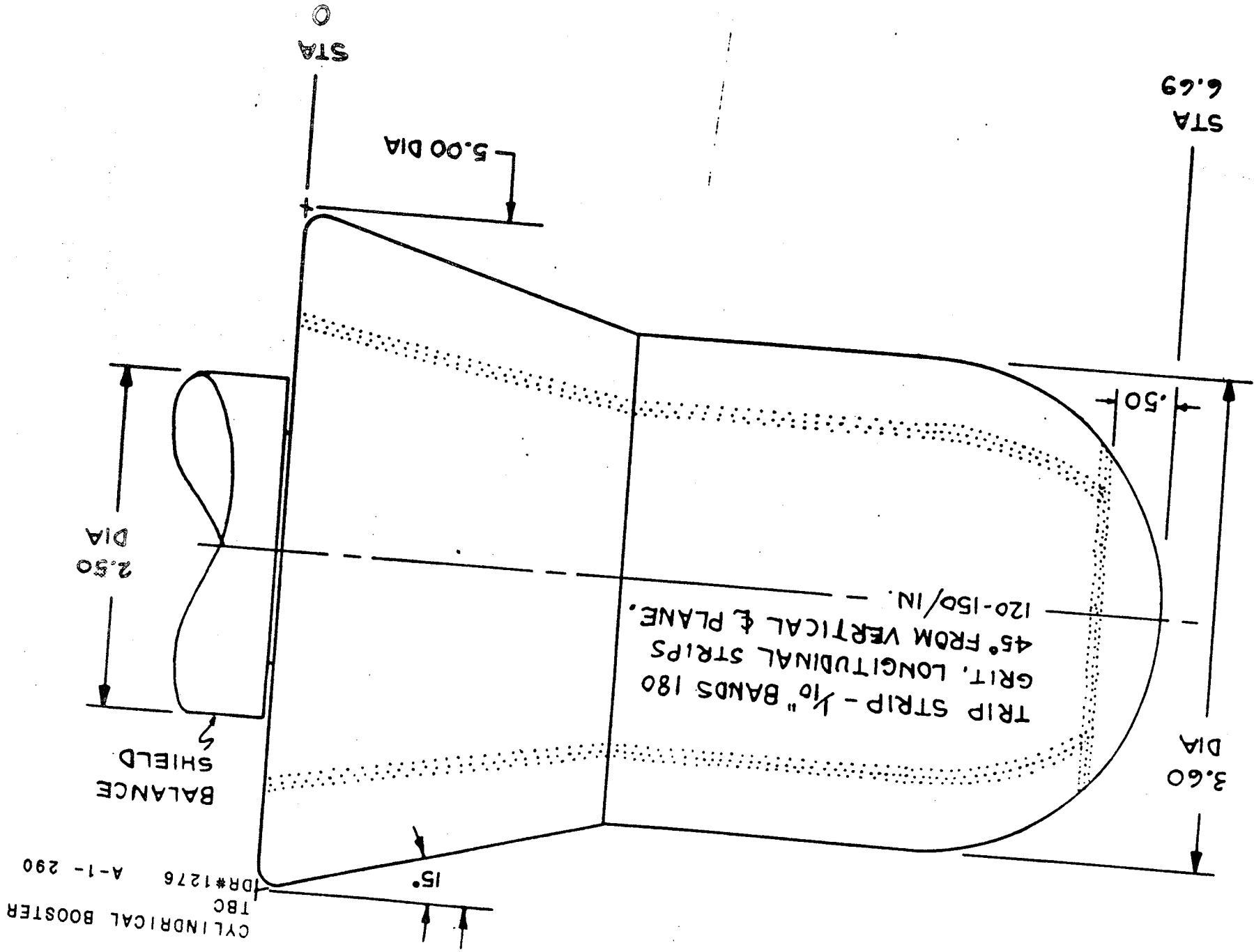


Figure 6. Configurations B₂S_{2.n}, n = 1, 2, 3



DRAG PETALS MOUNTED AT 8 PLACES EQUALLY SPACED:

AT BODY STA. 2.74 OR 1.12 ON $B_{2.1} S_{2.1}$

AT BODY STA. 0.88 ON $B_{1.1} S_{1.1}$

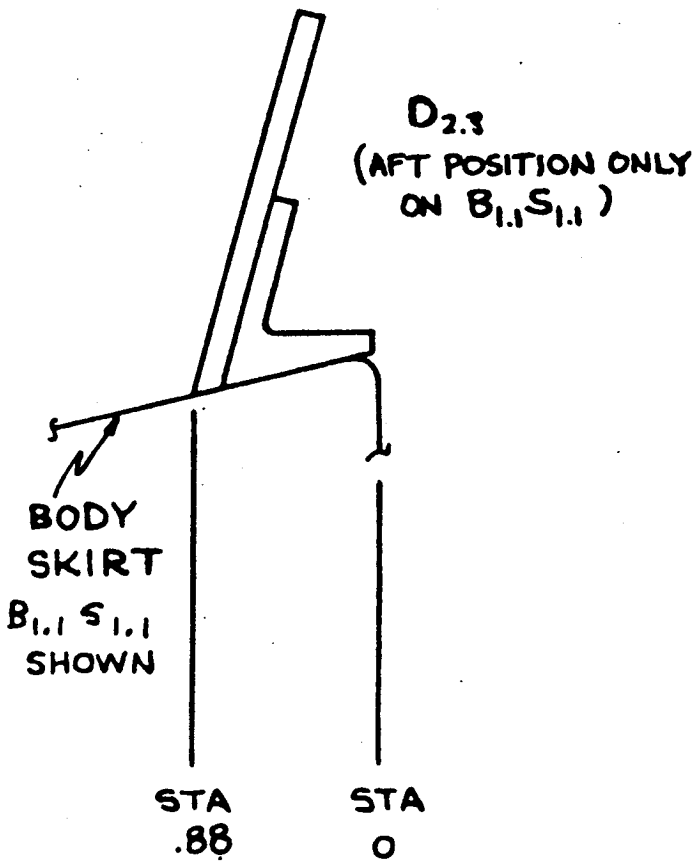
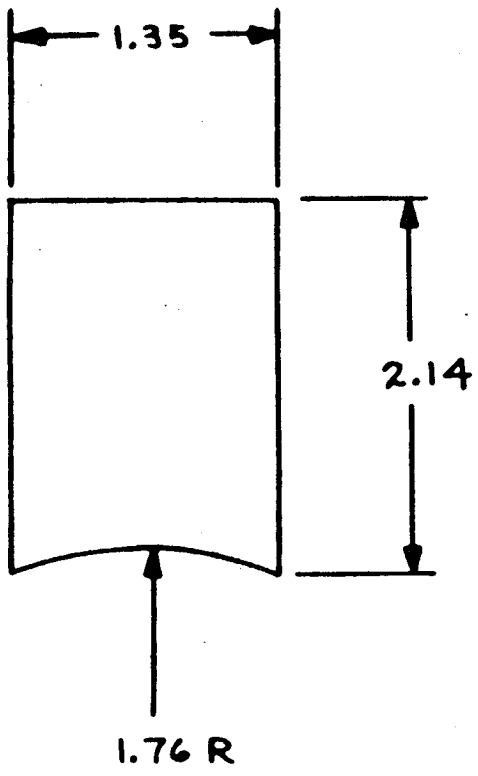


Figure 8. Drag Petal D_2

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DRAG PETALS MOUNTED AT 8 PLACES EQUALLY SPACED:
AT BODY STA 2.74 OR 1.12 ON B_{2.1} S_{2.1}
AT BODY STA 0.88 ON B_{1.1} S_{1.1}

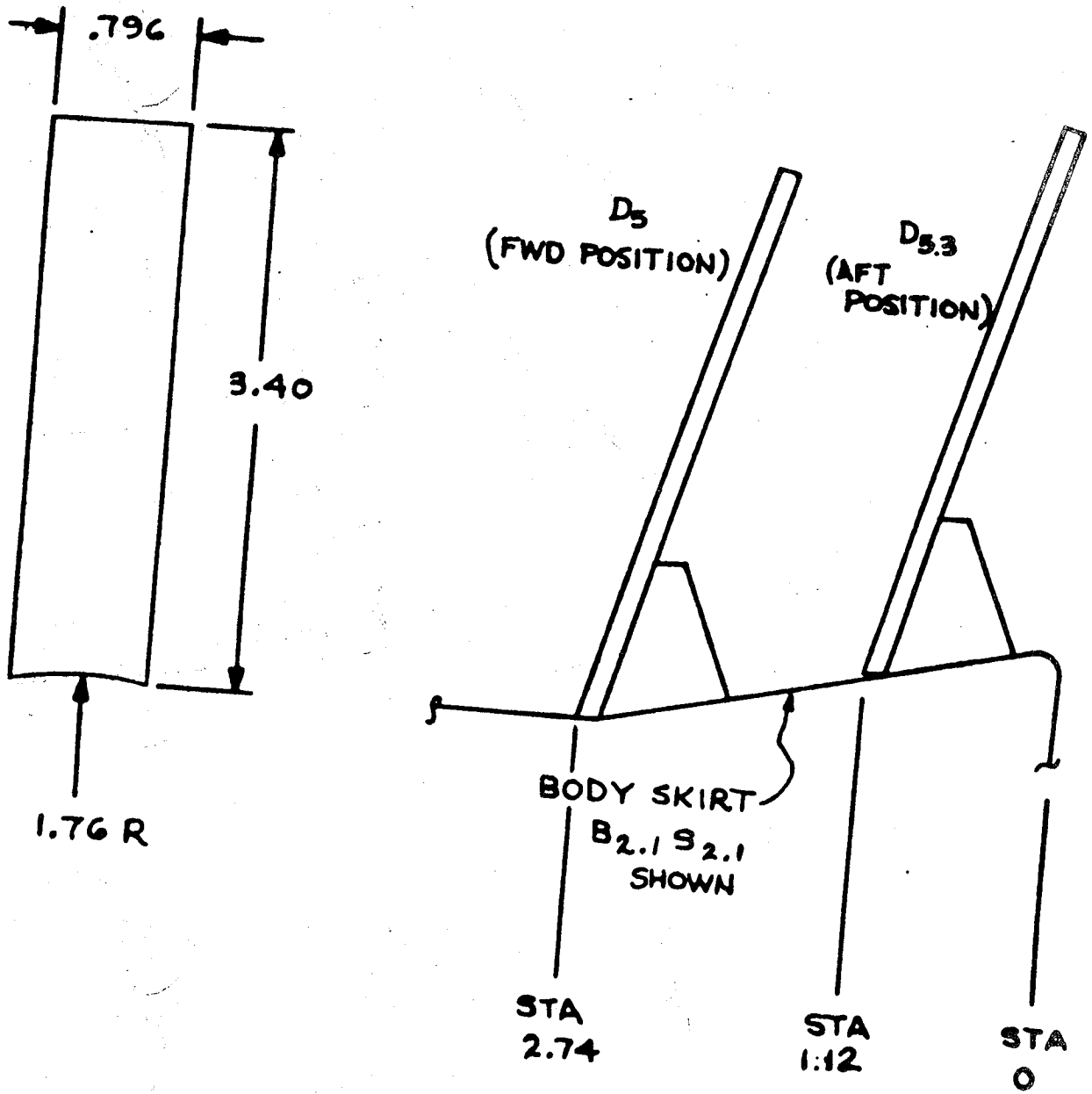


Figure 9. Drag Petal D₅

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16. Abstract <p>Archived wind tunnel test data are available for flyback booster or other alternate recoverable configurations as well as reusable orbiters studied during initial development (Phase B) of the Space Shuttle. Considerable wind tunnel data was acquired by the competing contractors and the NASA centers for an extensive variety of configurations with an array of wing and body planforms.</p> <p>All contractor and NASA wind tunnel test data acquired in the Phase B development have been compiled into a database and are available for applying to current winged flyback or recoverable booster aerodynamic studies.</p> <p>The Space Shuttle Phase B Wind Tunnel Database is structured by vehicle component and configuration type. Basic components include the booster, the orbiter and the launch vehicle.</p> <p>Booster configuration types include straight and delta wings, canard, cylindrical, retro-glide and twin body.</p> <p>Orbiter configuration types include straight and delta wings, lifting body, drop tanks and double delta wings.</p> <p>Launch configuration types include booster and orbiter components in various stacked and tandem combinations.</p>					
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