

The screenshot shows the top portion of a web browser. On the left is the NASA logo with the text "National Aeronautics and Space Administration". To its right is a navigation menu with links: "+ Home", "+ Site Map", "+ Contact PBMA", and "+ Contact NASA". Further right is a search bar labeled "FIND IT @ PBMA:" with a "+ GO" button. The main content area features the text "PBMA Process Based Mission Assurance Knowledge Management System" and "FLIGHT TEST SAFETY DATABASE" in a stylized font over a background image of an aircraft.

Flight Test Hazard Planning Near the Speed of Light

Bart	Rod
Henwood	Huete
NASA Dryden	FAA NY Office





Concept

- ✓ Hazard Centric database targeted at flight test hazards
- ✓ Appends related data and experience
- ✓ Hosted by NASA
 - ✓ Funded as research effort for a “Handbook”
 - ✓ Enabled/Expanded by web portal technology
 - ✓ Provides a government agency foundation



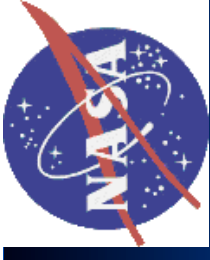
Concept

- v Based on “higher ethical ground”
- v Vision is to look to knowledge management
- v Considered a “Professional’s” database
- v Test community orientation
- v Disclaimer protected
- v Public accessible data (no sign in required)
- v Meaningful/tailored results



Portal Content

- ✓ Essentially 4 Data Sections
 - ✓ Hazard Info
 - ✓ Application Data (Test Reports, videos, etc...)
 - ✓ Reference Data (Definitions, acronyms, Safety Review Board Concepts, HR processes, ...)
 - ✓ Test Community Partners & Expert Contact Info
 - ✓ Gov't, Industry, Consultants, ...
 - ✓ Self declared capability – no gov't

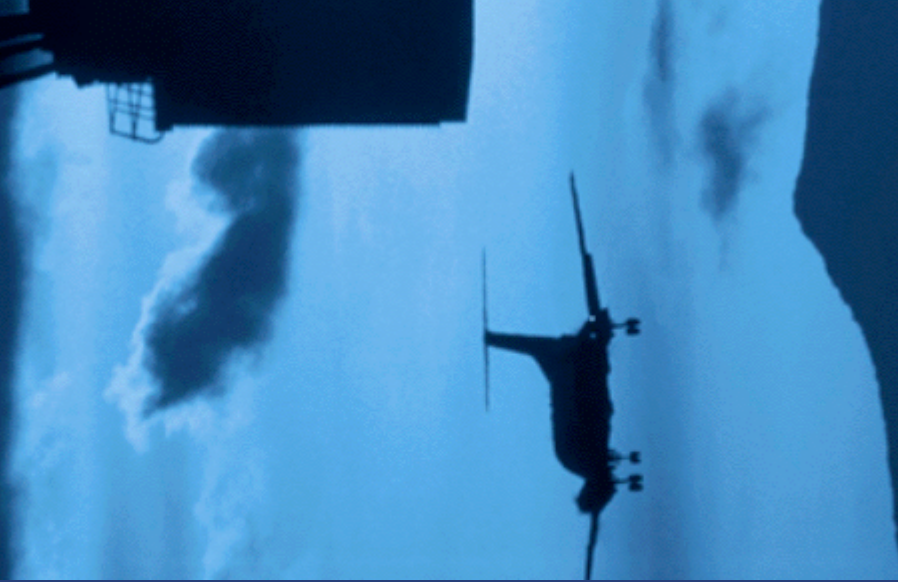


Activity to Date

- ▼ NASA funding development of web portal (~\$900K to date)
 - ▼ April 07: Initial core capability on existing NASA web structure
 - ▼ 132 records for FAR Part 25
 - ▼ Ability to search across hazard records
- ▼ NASA facilitating generation of FAA, FAR Part flight test certification hazard data
 - ▼ FAA Providing Funding (\$165K per year)
 - ▼ Continuing effort; National TPS sub-contractor



Federal Aviation
Administration



FTS DATABASE UPDATE FAA PROGRAM

Presented to: FTSW

By: Rod Huete, FAA

Date: May, 2007

OUTLINE

- Risk Management Initiatives
- Part 21 Changes
- Concept for use of Database



FAA Flight Test Risk Management

- As a safety organization we promote best safety practices during certification flight tests
 - We published FAA Order 4040.26A in 2001
 - However, FAA Order 4040.26A is incomplete as a tool for Flight Test Risk Management
 - We are taking a corporate approach to further improve flight test safety by:
 - Modernizing our CFR 14 Part 21 Requirements for flight test safety
 - Providing the tools to implement risk assessments



PART 21 CHANGES

FTS Database Update

May. 2007



Federal Aviation
Administration

CFR 14 Part 21.35 Current

- Para (d) only requires **parachutes and emergency egress provisions** for certification flight tests
- Para (e) **excludes** gliders and manned free balloons in pilot decision to discontinue flight test due to hazards
- These rules are severely outdated

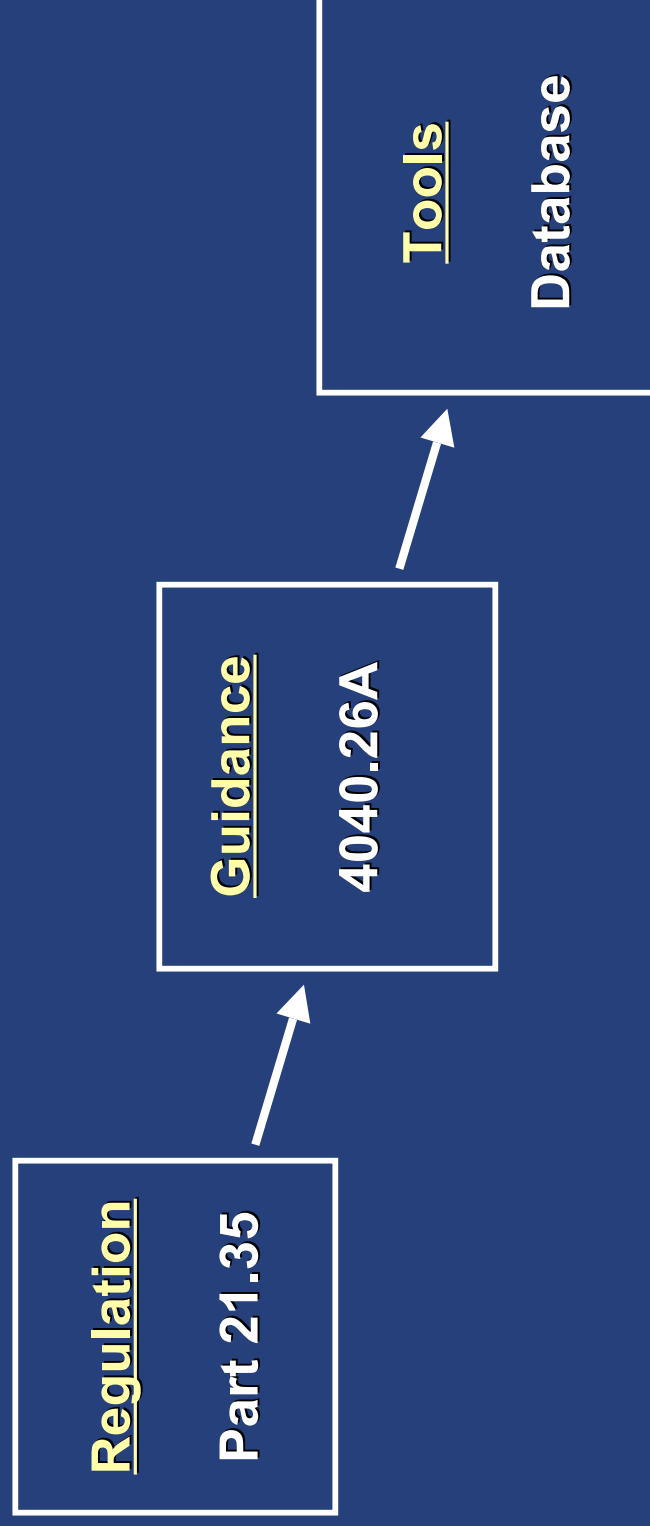


CFR 14 Part 21.35 Proposed Changes

- Para (d) will require a **Risk Assessment** (may include parachutes and/or emergency egress)
- Broader in scope and in line with industry standard
- Para (e) will **include** gliders and manned free balloons in pilot decision to discontinue flight test due to hazards
- Unknown why these were excluded
- Immediately Adopted Rule (IAR) expected in 2007



CONCEPT



Database

- **FAA needs a database to complete the process**
- **We joined forces with NASA's Lessons Learned Handbook process**
- **We established an MOU with NASA**
- **NASA contracted with NTPS for populating the data**
- **We provided funding for initial data development for civil certification CFR Parts 23, 25, 27, 29, 31**
- **Part 25 THA's "complete"**
- **Part 23/27/29/31 under construction**



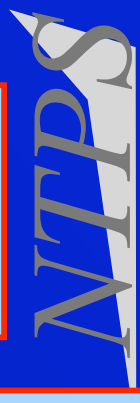
An Online Resource for Flight Test Safety Planning

Greg Lewis
National Test Pilot School



Test Hazard Analysis Worksheet

Test Title:	Subjective Probability of Occurrence																							
Aircraft/System:	high	probable	uncertain	remote																				
	improbable																							
Hazard:	<table border="1"> <tr> <td>catastrophic</td> <td>high</td> <td>probable</td> <td>uncertain</td> <td>remote</td> </tr> <tr> <td>critical</td> <td>high</td> <td>probable</td> <td>uncertain</td> <td>remote</td> </tr> <tr> <td>marginal</td> <td>high</td> <td>probable</td> <td>uncertain</td> <td>remote</td> </tr> <tr> <td>negligible</td> <td>high</td> <td>probable</td> <td>uncertain</td> <td>remote</td> </tr> </table>				catastrophic	high	probable	uncertain	remote	critical	high	probable	uncertain	remote	marginal	high	probable	uncertain	remote	negligible	high	probable	uncertain	remote
catastrophic	high	probable	uncertain	remote																				
critical	high	probable	uncertain	remote																				
marginal	high	probable	uncertain	remote																				
negligible	high	probable	uncertain	remote																				
Hazard:	<div style="border: 2px solid red; padding: 5px; text-align: center; font-size: 2em; font-weight: bold; color: red;">Hazard</div>																							
Cause:	<div style="border: 2px solid red; padding: 5px; text-align: center; font-size: 2em; font-weight: bold; color: red;">Cause</div>																							
Effect:	<div style="border: 2px solid red; padding: 5px; text-align: center; font-size: 2em; font-weight: bold; color: red;">Effect</div>																							
Minimizing Procedures:	<div style="border: 2px solid red; padding: 5px; text-align: center; font-size: 2em; font-weight: bold; color: red;">Minimizing Procedures</div>																							
Emergency Procedures:	<div style="border: 2px solid red; padding: 5px; text-align: center; font-size: 2em; font-weight: bold; color: red;">EP'S</div>																							
Risk Level (after minimizing procedures taken into account):	<div style="border: 2px solid red; padding: 5px; text-align: center; font-size: 2em; font-weight: bold; color: red;">Residual Risk</div>																							
High ___ Medium ___ Low ___	<div style="border: 2px solid red; padding: 5px; text-align: center; font-size: 2em; font-weight: bold; color: red;">Residual Risk</div>																							





Data Gathering

- **NTPS THA's**
 - Demonstration of classic Flight Test Techniques
 - Conservative limits
- **Added inputs from the FAA**
 - Aircraft Certification Offices in New York and Atlanta
- **Next collected data from manufacturer's**
 - Boeing Long Beach, Gulfstream, Lockheed, Bombardier, Cessna, Raytheon, Boeing Seattle, Schweizer, Tiger, Boeing Rotary Systems, New Piper and Sikorsky
 - data still coming in
- **All existing safety planning info, freely shared**



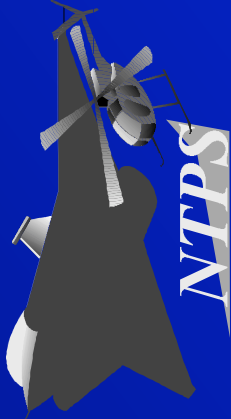
NTPS Role (cont'd)

- Too many ways of saying nearly the same thing
- “Mature” the data
 - To make the database useful to a user, there must be some integration of inputs
 - Mitigations consolidated by
 - Hazard (e.g. Loss of Control) and by
 - Maneuver (e.g. Stalls)
 - Mine the data to:
 - Extract the unique safety suggestions in each area
 - Remove duplication
 - Make the database easier to use



Example Maturation

Part 25 Stall Hazards





Many Varied Inputs

- Six different organizations submitted inputs for stalls
- Total of 66 different THA's
 - M
 - Used
 - Used
 - A ple
 - Hun
 - Again many were redundant

“There is a risk of stall/departure from controlled flight when increasing angle-of-attack at low airspeeds.”



Matured Stall Hazards

- In the end, six stall hazards were identified
 1. Loss of control
 2. Loss of operating engine(s)
 3. Stall/spin chute fails to deploy
 4. Stall/spin chute fails to jettison when commanded
 5. Recovery chute uncommanded deployment
 6. Departing runway surface
(During ground test of stall spin chute)



NTPS



Loss of Control Mitigations

- “Loss of Control” mitigations matured into just twelve
- The matured mitigations include:
 1. Do stall testing in a **buildup approach**:
 - a. from least risk to highest risk
 - i. forward cg, mid cg, aft cg
 - ii. Power off before power on
 - iii. Wings level before turning
 - iv. 1 kt/sec before 3 kt/sec
 - b. **terminate buildup** if FAR limits on bank angle are exceeded at any point of the buildup



Mitigations (continued)

2. **Establish minimum altitudes** for:
 - a. entry,
 - b. recovery initiation,
 - c. recovery chute deployment and
 - d. manual bailout.
3. Perform **pre-flight checks** of stall warning and stick pusher, as applicable.
4. **Anti-spin chute** must be installed, functional and armed. Perform pre-flight and pre-maneuver checks of chute as applicable.
5. **Minimum crew** onboard.
6. **Emergency Egress system** must be installed and armed. Perform pre-flight and pre-maneuver checks of egress system as applicable.



Mitigations (continued)

7. Crew to wear **helmets and parachutes**.
8. **Surface winds** must be less than xx kts (parachute dependent).
9. **No aggravated input stalls**. All stalls will be ball centered.
10. **No asymmetric power stalls**.
11. If departing controlled flight retard **throttles to idle** and **centralize controls**.
12. **Do not add power** during recovery until airspeed is increasing above 1.2 Vs.



NTPS



SETP - Welcome to The Society Of Experimental Test Pilots - Mozilla Firefox

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http://www.setp.org/

Flight Test Safety Database

NTPS - Welcome To The Nation...

SETP - Welcome to The Soci...

THE SOCIETY OF EXPERIMENTAL TEST PILOTS

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Welcome to SETP

The Society of Experimental Test Pilots is an international organization that seeks to promote air safety and contributes to aeronautical advancement by promoting sound aeronautical design and development; interchanging ideas, thoughts and suggestions of the members, assisting in the professional development of experimental pilots, and providing [scholarships](#) and aid to members and the families of deceased members.

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1

2

25

Look for "Test Hazard Database"

3





FAA Access

A screenshot of the FAA website homepage. The browser address bar shows 'http://www.faa.gov/'. The page features the FAA logo and navigation tabs for 'Pilots', 'Travelers', 'Mechanics', and 'More'. A search bar is present with a 'Go' button. A red arrow points to the 'Quick Find' dropdown menu, which is currently set to 'Safety'. Below the search bar, there are several news items under the heading 'News & Updates'. The first item is titled 'Get On Board for Commercial Human Space Flight' and dated 'April 19'. Below the news items, there are four links: 'Airport Status and Delays', 'Jobs at FAA', 'Accident and Incident Data', and 'FAA Offices'.

Address http://www.faa.gov/ Go

Federal Aviation Administration

FAA Home About FAA Jobs News Library
Pilots Travelers Mechanics More

Aircraft Airports & Air Traffic Data & Statistics Education & Research Licenses & Certificates Regulations & Policies Safety

Search: Go **Powered by Google** Quick Find: Go

News & Updates

Get On Board for Commercial Human Space Flight

April 19 – Today, the *Wall Street Journal Online* published a conversation with FAA Associate Administrator for Commercial Space Transportation Patricia G. Smith and

[Airport Status and Delays](#)
[Jobs at FAA](#)
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[FAA Offices](#)



NTPS



FAA Access

A screenshot of a Microsoft Internet Explorer browser window. The title bar reads "FAA - Safety - Microsoft Internet Explorer". The address bar shows "http://www.faa.gov/safety/". The main content area displays a list of links under the heading "Data and Statistics". A red arrow points to the word "Programs" at the bottom of the list.

File Edit View Favorites Tools Help

Back Forward Stop Search Favorites Home

Address <http://www.faa.gov/safety/>

- [Safety Alerts for Operators \(SAFO\)](#)
- [CertAlerts for Certificated Airports](#)
- [Traffic Collision Avoidance System \(TCAS\) Safety Bulletin \(PDF\)](#)

Data and Statistics

- [Aviation Safety Information Analysis and Sharing \(ASIAS\)](#)
- **Note:** This replaces National Aviation Safety Data Analysis Center (NASDAC)
- [Accident and Incident Data](#)
- [Aviation Accident Reports and Statistics \(NTSB\)](#)
- [Runway Incursion Data and Statistics](#)
- [Weather](#)
- [More » Data & Statistics](#)
- **Programs**

Trusted sites



NTPS



FAA Access

A screenshot of a Microsoft Internet Explorer browser window. The title bar reads "FAA - Data & Statistics - Microsoft Internet Explorer". The address bar shows "http://www.faa.gov/safety/data_statistics/". The browser interface includes a menu bar (File, Edit, View, Favorites, Tools, Help), a toolbar with icons for Back, Forward, Home, Search, Favorites, and a Go button. The main content area displays a navigation menu on the left with categories: Safety Topics, Awards, Data & Statistics (highlighted), National Transportation Safety Board, Programs, and Security & Hazardous Materials. The "Data & Statistics" section contains a list of links: Administrator's Fact Book, Aviation Safety Information Analysis and Sharing (ASIAS), a note about the National Aviation Safety Data Analysis Center (NASDAC), Aviation Safety Statistical Handbook (PDF), FAA Quarterly Enforcement Report, National Wildlife Aircraft Strike Database, Safety Data Library, Safety Record of Airlines and Aircraft, and NASA/FAA Flight Test Safety Database. A red arrow points to the "NASA/FAA Flight Test Safety Database" link. On the right side of the page, there are utility links: "faa.gov Tools", "Print this page", and "Email this page". At the bottom right, there is a "Trusted sites" indicator with a green checkmark.



NTPS



NASA PBMA Website Link

<http://pbma.nasa.gov/ftsdb/home.aspx>

Flight Test Safety Database - Microsoft Internet Explorer

File Edit View Favorites Tools Help Search

Address <http://pbma.nasa.gov/ftsdb/home.aspx>

NASA National Aeronautics and Space Administration

PBMA Process Based Mission Assurance Knowledge Management System

FLIGHT TEST SAFETY DATABASE

Partners Welcome Featured Aircraft Portal | Advanced Search





The screenshot shows a web browser window displaying the PBMA Flight Test Safety Database website. The browser's address bar shows the URL http://pbma.nasa.gov/ftsdb/. The website has a blue header with the PBMA logo and the text "Process Based Mission Assurance Knowledge Management System". Below the header is a large banner with the text "FLIGHT TEST SAFETY DATABASE" and an image of a test aircraft. The main content area is divided into several sections: "Partners" featuring the NAV AIR logo; "Welcome" with a paragraph about the portal's purpose; "Featured Aircraft" with an image of a test aircraft; "Enter Portal Here" with a paragraph about registration and login; and "Registered User Sign In (optional)" with a login form. At the bottom, there is a footer with the text "Last Update of Test Hazard Analyses 4/20/2007".

PBMA Process Based Mission Assurance Knowledge Management System



Portal | Advanced Search

Partners



Welcome

For years the International Flight Test community has had a need for easy access to flight test maneuver descriptions, test hazards, and hazard mitigation techniques. This portal is a step in that direction, and builds on similar efforts by the Flight Test Safety Committee, the Society of Experimental Test Pilots, and the Society of Flight Test Engineers, and other professional organizations. Our objective is to identify and document hazards and mitigations associated with flight testing and provide a compilation of the flight test industry's corporate knowledge regarding flight test safety risk assessment. Where applicable, the database cross-references FAR guidance from Parts 23, 25 and other flight-test-related sections. It also discusses typical industry risk levels assigned to specific types of tests. All data has been reviewed by at least two persons with extensive Flight Test and/or Aviation Safety Experience. We hope you find this tool helpful, and solicit your feedback and contributions as we work to keep it up to date.

Featured Aircraft



Enter Portal Here

Use of the FTSDB Portal does not require you to register and login. However, as this Portal evolves, registration will provide you with a number of benefits in relation to what you can access and view in the Portal, as well as customization and privileges.

Please enjoy the Portal as our guest and come back often to see what new features have been added.

Nonregistered users enter Portal here

Registered User Sign In (optional)

User Name:

Password:

[Register](#)
[Forgot Password](#)

Last Update of Test Hazard Analyses

4/20/2007



National Aeronautics and Space Administration

- + Home
- + Site Map
- + Contact PBMA
- + Contact NASA

FIND IT @ PBMA :

+ GO

PBMA Process Based Mission Assurance Knowledge Management System



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Home | Portal | Search | Change Password | Log out

Reference Materials



- Acronyms
- Terminology
- Centers of Expertise
- Awareness and Safety Review Process
- FAR Parts
- Subject Matter Experts (SMEs)

Hazard Search

Search Hazard Information from FAA Certification (FAR), Military Development, and Research data



Search Page

FTSDB Key-Word Search



Keyword Search Page

Favorites

Favorites

Data Submission



Submit Additional Flight Test Data

Collaborative Tools



- Event Calendar
- Discussion Forum
- Document Management
- Instant Messaging

Announcements and Meetings

Announcements

Internet Search



Google Search





Step 1: Select Flight Test Areas

Select at least one of the flight test area checkboxes below. The flight test area pull-down menus provide control over your search by narrowing the results of your Test Hazard Analysis search to data that includes the flight test areas you select.

FAA Certification (FAR): Number: Title:

Military Development:  

Research:

Step 2: Select Test Hazard Analysis Parameters

Optionally select the test hazard analysis parameters below. The test hazard analysis parameters provide control over your search by narrowing the results of your Test Hazard Analysis search to data that includes the test hazard analysis parameters you select.

The Locate Entry boxes below assist you in finding the best matches in the associated pull-down menu.

Test Discipline:

Test Maneuver:

Hazard:

Aircraft Type:

Aircraft Power Plant:

Uninhabited: (Both) Yes No

Step 3: Enter Keyword Search

Optionally enter one or more keywords into the text box below. If you enter a keyword, be sure to select at least one of the analysis fields (i.e., Maneuver, Hazard, Reference Number, or Reference Title). The results of this keyword search is limited to the records that also satisfy any criteria you selected above in Steps 1 and 2.

Select fields for your search: [Select all](#) | [Deselect all](#)

Test Maneuver Hazard Reference Number Reference Title

Keyword(s):





FAR Reference Search

Step 1: Select Flight Test Areas

Select at least one of the flight test area checkboxes below. The flight test area pull-down menus provide control over your search by narrowing the results of your Test Hazard Analysis search to data that includes the flight test areas you select.

- FAA Certification (FAR):**
- Military Development:**
- Research:**

Number	Title
25.201	Stall Demonstration
25.201	(All)
25.203	(All)
25.207	(All)
25.253(a)3	(All)
25.831	
25.854	
25.855	
25.857	
25.858	
25.1301	
25.1329(f)	

Step 2: Select Test Hazard Analysis Parameters

Optionally select the test hazard analysis parameters below. The test hazard analysis parameters pull-down menus provide control over your search by narrowing the results of your Test Hazard Analysis search to data that includes the test hazard analysis parameters you select.

The Locate Entry boxes below assist you in finding the associated pull-down menu.





Record Field Search

Step 2: Select Test Hazard Analysis Parameters

Optionally select the test hazard analysis parameters below. The test hazard analysis parameters provide control over your search by narrowing the results of your Test Hazard Analysis search to data that includes the test hazard analysis parameters you select.

The *Locate Entry* boxes below assist you in finding the best matches in the associated pull-down menu.

Test Discipline:	(All)	Locate Entry
Test Maneuver:	Stall	st
Hazard:	(All)	
Aircraft Type:	(All)	
Aircraft Power Plant:	(All)	
Uninhabited:	<input checked="" type="radio"/> (Both) <input type="radio"/> Yes <input type="radio"/> No	



Step 1: Select Flight Test Areas

Select at least one of the flight test area checkboxes below. The flight test area pull-down menus provide control over your search by narrowing the results of your Test Hazard analysis search to data that includes the flight test areas you select.

FAA Certification (FAR):
 Military Development:
 Research:

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Note: Locate Entry boxes below assist you in finding the best matches in the associated pull-down menu.

(Both) Yes No

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Select fields for your search: [Select all](#) | [Deselect all](#)

Test Maneuver Hazard Reference Number Reference Title
 Keyword(s):





Keyword Search

Step 3: Enter Keyword Search

Optionally enter one or more keywords into the text box below. If you enter a keyword, be sure to select at least one of the analysis fields (i.e., Maneuver, Hazard, Reference Number, or Reference Title). The results of this keyword search is limited to the records that also satisfy any criteria you selected above in Steps 1 and 2.

Select fields for your search: [Select all](#) | [Deselect all](#)

Test Maneuver Hazard Reference Number Reference Title

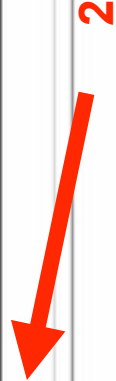
Keyword(s):

Stall

Clear Keywords

Submit

Clear





Results of FAR Reference Search

Flight Test Safety Database - Mozilla Firefox
 File Edit View History Bookmarks Tools Help
 http://pbma.nasa.gov/fstodb/results.aspx

FLIGHT TEST SAFETY DATABASE

Home | Portal | Search | Change Password | Log out

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Search Results
 FAA Reference No.: 25.201
 FAA Reference Title: Stall Demonstration

Check top box to select ALL records
 OR
 Check individual box(es) for desired records

<input type="checkbox"/>	Maneuver	Hazard	Discipline	Aircraft Type	Aircraft Power Plant	Uninhabited
<input type="checkbox"/>	Recovery Chute Functional Test	Departing runway surface				No
<input checked="" type="checkbox"/>	Stall	Loss of Operating Engine(s)				No
<input type="checkbox"/>	Stall	Recovery chute uncommanded deployment				No
<input checked="" type="checkbox"/>	Stall	Loss of Control				No
<input type="checkbox"/>	Stall	Stall/spin chute fails to deploy when commanded				No
<input type="checkbox"/>	Stall	Stall/spin chute fails to jettison				No

View Selected Records Sequentially **Combine Selected Records**

Done



ATPS

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Combined Test Hazard Analysis

Reference No.: 25.201 **Reference Title:** Stall Demonstration **Risk Level:** High

Maneuver Title: Stall

Maneuver Details:

As per AC 25-7A Section 6 "Stalls" Para 29

- 1) Trim hands off between 1.13 and 1.3 Vsr1
- 2) 1 kt/sec decel wings level
- 3) 1 and 3 kt/sec turning
- 4) Power off and power on;
- 5) Power on = PLF at MLGW and 1.5 Vsr1, flaps approach
- 6) Stall defined by nose down pitch not readily arrested; deterrent buffet; stick pusher; or stick at the aft stop (2 sec min)

Test Details

Hazard(s):

Loss of Operating Engine(s)

Loss of Control

Hazards

Note: The following Causes and Mitigations are listed in order of the hazards above.

Cause(s):

1. Inlet distortion leading to compressor stall
1. Unpredicted aerodynamic response.
2. Stick Pusher fails to prevent aircraft from reaching a
3. Improper control inputs.

Causes

Mitigation(s):

1. Conduct approach to stall maneuvers at idle thrust before power on maneuvers.
2. At first onset of compressor distress, reduce AOA and reduce power to IDLE (if not already set to IDLE)
3. Shut down engine(s) if unable to prevent "locked-in" surge.
4. Conduct tests with APU running whenever possible.
5. Critical engineer parameters will be monitored real-time using teler knock-it-off calls.
6. Initial stall should be done with engine ignition and bleeds on.
7. All stalls should be done ball centered with symmetric power and if possible, sideslip should be monitored in real time and kept less than 5 degrees prior to stall (pre-brief CRM and knock it off calls).

Mitigations



Flight Test Safety Database - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://pbma.nasa.gov/ftsdb/combination.aspx

to stall (pre-mer crew and knock it out calls).

1. Do stall testing in a buildup approach:
 - a. from least risk to highest risk
 - i. forward cg, mid cg, aft cg
 - ii. Power off before power on
 - iii. Wings level before turning
 - iv. 1 kt/sec before 3 kt/sec
- b. terminate buildup if FAR limits on bank angle are exceeded at any point of the buildup
2. Establish minimum altitudes for:
 - a. entry,
 - b. recovery initiation,
 - c. recovery chute deployment and
 - d. manual bailout.
3. Perform pre-flight checks of stall warning and stick pusher, as applicable.
4. Anti-spin chute must be installed, functional and armed. Perform pre-flight and pre-maneuver checks of chute as applicable.
5. Minimum crew onboard.
6. Emergency Egress system must be installed and armed. Perform pre-flight and pre-maneuver checks of egress system as applicable.
7. Crew to wear helmets and parachutes.
8. Surface winds must be less than xx kts (parachute dependent).
9. No aggravated input stalls. All stalls will be ball centered.
10. No asymmetric power stalls.
11. If departing controlled flight retard throttles to idle and centralize controls.
12. Do not add power during recovery until airspeed is increasing above 1.2 Vs.

Factor(s):

Corrective Action(s):



In Conclusion

- The matured THA database **IS** a wide array of test safety ideas and suggestions
 - But it is **NOT** an FAA-mandated solution
 - It is **NOT** a government-approved solution
 - And it is **NOT** an auto-safety planning device
 - The matured hazards, causes and mitigations are necessarily generic
 - Your test will have unique problems and will require unique solutions
 - The THA database can be an **excellent starting point**

In Conclusion

- **Military/Research Database Status**
 - Data under development at monthly Webex/telecon meetings

Test Area	Date/Time	Lead
Fixed Wing Icing	3 rd Wednesday at 0900 PST	Kurt Blankenship (Glen Research Center)
Rotary Wing Icing	1 st Thursday at 0900 PST	Kim Hanks (Army Test & Training Center)
Propulsion	4 th Thursday at 0900 PST	Brian Markowich (NAVAIR Pax River)

- **Contact Joe Orwat**
FTS Database Update
(x3866) or Bart Henwood (x5746)
May 2017

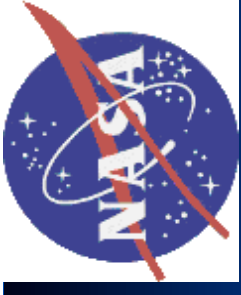




In Conclusion

- ✦ Military/Research Database Status
- ✦ Data under development at monthly Webex/telecon meetings

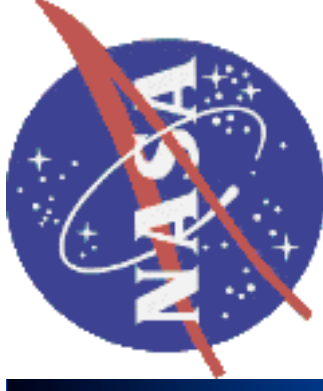
Test Area	Date/Time	Lead
Fixed Wing Icing	3 rd Wednesday at 0900 PST	Kurt Blankenship (Glen Research Center)
Rotary Wing Icing	1 st Thursday at 0900 PST	Kim Hanks (Army Test & Training Center)
Propulsion	4 th Thursday at 0900 PST	Brian Markowich (NAVAIR Pax River)



Next Year's activity

- Initiate DDC for research/military flight test
 - High AoA
- Continue portal development activity
 - Input/Data Submission Module
 - Create reference information
 - Airworthiness and flight safety review process
 - Hazard management process

Come Join Us!



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Flight Test Safety



Questions?

Suggestions?