

VOLUME 3 GENERAL TECHNICAL ADMINISTRATION**CHAPTER 29 PROVING AND VALIDATION TESTS****Section 2 Safety Assurance System: The Proving and Validation Test Process**

3-2311 TEST PROCESS. All Title 14 of the Code of Federal Regulations (14 CFR) part 121 and 135 applicants will use the 5-phase process found in this chapter. The certification project manager (CPM) selected by the certificate-holding district office (CHDO) will ensure the completion of the Program Tracking and Reporting Subsystem (PTRS) and Safety Assurance System (SAS) entry requirements for all part 121 and 135 applicants. Title 14 CFR part 91K describes the 5-phase test process for all applicants under that part.

NOTE: Use Figure 3-110, General Purpose Proving and Validation Test Job Aid, for all applicants.

3-2312 PHASE ONE. Phase one of the proving and/or validation test process begins when an applicant requests authorization from the Federal Aviation Administration (FAA) to conduct an operation for which proving or validation testing is required. The following steps apply:

A. Initial Contact Meeting. During the initial contact meeting:

1) Determine the need for proving and/or validation testing. Testing is required for:

- Applicants seeking authority to operate new types of aircraft and/or new kinds of operations, such as domestic, flag, commuter, supplemental, and “on-demand” (including part 91K operations), and
- Applicants seeking authorization to conduct operations over proposed routes or areas in compliance with regulatory requirements, (e.g., operations outside U.S. airspace, Class II navigation authorizations, or Special Areas of Operation (SAO)).

NOTE: Contact a regional NextGen (AXX-220) SAO specialist (formerly known as a navigation specialist). Principal operations inspectors (POI) will enter a SAO request into their regional NextGen SharePoint Web site if an SAO is requested. See Volume 3, Chapter 1, Section 1.

2) Advise applicants of all applicable FAA guidance. See Figure 3-110 for more information.

B. Assignment of the FAA Test Team. The certificate management office (CMO) manager or Flight Standards District Office (FSDO) manager, as applicable, designates an FAA test team for all applicants. The Flight Standards National Field Office, AFS-900, will assign additional team members to the Certification Project Team (CPT) for all initial part 121 applicants.

1) Certification Project Manager (CPM). The CPM conducts, coordinates, and evaluates the test. In addition, the CPM represents the administrator on all matters pertaining to the test and speaks for the administrator.

2) Team Personnel. The FAA test team should include the following personnel, as required by the requested type of authorization(s):

- The CPM;
- The Certification Team Leader (CTL) (AFS-900);
- The CPT (AFS-900);
- All assigned principal inspectors (PI);
- An aviation safety inspector (ASI) (operations) qualified on the specific aircraft type, if applicable (see Volume 3, Chapter 29, Section 5, subparagraph 3-2378A and AFS Flight Program Flight Operations Manual (FOM), Figure 200-2, for inspector currency and training requirements.);
- ASIs (maintenance and avionics) trained on the installed equipment;
- Cabin safety inspector (CSI);
- All international operations require a regional NextGen (AXX-220) SAO specialist;
- Dispatch inspector;
- Regional principal security inspector (PSI); and
- Regional hazardous materials (hazmat) branch.

NOTE: If the certification is for a cargo-only operation, the team must consider cabin safety issues if the applicant has provisions or procedures for carrying those persons listed in part 121, § 121.583.

NOTE: If qualified inspectors are not available within the CHDO, the FAA office manager must request assistance from the regional Flight Standards division (RFSD) (see Volume 3, Chapter 29, Section 5, subparagraph 3-2378A4)).

3) Familiarization. All members of the FAA test team must become familiar with the pertinent parts of the applicant's manuals, procedures, training, and policies.

C. Preliminary Coordination. The CPM and the applicant must reach a common understanding of what the applicant must do, what role the FAA will play, and what reports and documents the applicant must prepare during the testing process. Both the test team and the applicant must research applicable regulatory and advisory material.

1) The POI must consult the regional NextGen (AXX-220) SAO specialist if international operations are part of the application. The consultation should include, but is not limited to the following:

- The number of validation test flight(s);
- Representative routes;
- Required navigation and communication equipment;

- Specific training for crewmembers and dispatchers, flight followers, and flight locators; and
- Inclusion of appropriate procedures in the operator's manuals.

D. PTRS Entry. The CPM opens a PTRS record for the applicant following the assignment and formation of the test team. Keep this PTRS entry open until the team completes its assignment. Enter the record number of this entry in the "Miscellaneous" field in all subsequent PTRS entries associated with the project. This procedure creates a complete record of proving and validation, and eliminates the need for a manually written report. (See Volume 3, Chapter 29, Section 6, for step-by-step instructions for developing the PTRS record.)

NOTE: For all part 121 and 135 proving/validation testing, the CPM follows SAS guidance located in Volume 10 and Volume 2, Chapter 3 (for part 121) or Chapter 4 (for part 135), in addition to using the PTRS reporting process.

3-2313 PHASE TWO. Phase two begins when the applicant submits the formal test plan to the FAA for evaluation. The following steps apply:

A. Formal Test Plan. The test plan must include at least the following information:

- Identification of the company coordinator,
- Detailed schedule of all proposed flights,
- List of names and positions of flightcrew members on each flight,
- Names, titles, and company affiliation of all noncrewmembers on each flight, and
- Applicant's plan for reducing test hours (if applicable).

B. FAA Test Team Initial Review. Before the test team analyzes the plan in phase three, the CPM ensures completeness and acceptability of the plan. In addition, the CPM updates the master PTRS record and SAS Data Collection Tool (DCT), as applicable. See Volume 3, Chapter 29, Section 4, Planning the Proving Test, for further guidance.

3-2314 PHASE THREE. Phase three begins when the FAA test team starts an indepth review and analysis of the applicant's test plan. During this phase, the FAA must plan to coordinate its activities with the demonstrations that the applicant will conduct during phase four.

A. FAA Test Team Indepth Review of Test Plan. The FAA test team should review the test plan for:

- 1) Regulatory compliance.
- 2) Safe operating practices.
- 3) Logic of sequence.
- 4) Other areas (e.g., training programs, crew/dispatcher qualifications, operational control issues, acceptable participants, schedules).

5) The presence of competent/appropriately trained company personnel located at key points along the proposed route. Part 121 company-trained personnel are only required at planned stopping points. Part 135 does not require trained company personnel along the route or at the end points for on-demand operations.

6) The applicant has appropriately trained outsourced service providers under contract (if required) in at least, but not limited to, the following areas:

- Aircraft handling and proper servicing,
- Cargo loading and control,
- Deicing when appropriate,
- Flight operations,
- Applicant's maintenance procedures, and
- Preventative maintenance of the applicant's aircraft and auxiliary equipment.

B. Emergency Evacuation or Ditching. If an emergency evacuation demonstration or ditching demonstration is required, the team also needs to review those associated test plans during this phase.

NOTE: See Figure 3-110 for a list of applicable company manuals and programs.

C. CPM Responsibilities. The CPM's responsibilities include:

- Notifying the RFSO of proving and/or validation flight dates, times, and flight itineraries (the RFSO will notify other RFSOs affected by the proposed flights and any resulting scheduled operations proposed by the applicant);
- Assigning appropriate sections of the test plan to inspectors or specialists for review and comment;
- Coordinating with the representative of the Transportation Security Administration (TSA) (the PSI) to obtain security inspector assistance;
- Coordinating with the regional hazmat branch;
- Ensuring that administrative requirements, such as visas and country clearances, are obtained in a timely manner; and
- Updating the master PTRS record and SAS DCT (as applicable).

D. Team Member Responsibilities. Team members are responsible for:

- Performing assigned tasks,
- Keeping the CPM informed of all actions,
- Ensuring that the CPM concurs with all agreements made with the applicant, and
- Recording each activity accurately and completely in their individual PTRS and SAS DCT (as applicable) and placing the assigned number in the "Miscellaneous" field.

3-2315 PHASE FOUR. Phase four is the inspection and demonstration phase of the test process.

A. Proving/Validation Flights. For proving and/or validation flights, the applicant must satisfactorily complete the en route flight segment and the maintenance test portion of the proving and/or validation test plan.

B. Tests Not Requiring Flights. For validation tests not requiring flights, the applicant must satisfactorily accomplish all test objectives.

NOTE: For all part 121 applicants, ensure that the applicant has received an Order to Show Cause from the Department of Transportation (DOT) before commencing the proving flights.

C. CMO/FSDO Manager Concurrence. Before concluding phase four, the CPM obtains the concurrence of both the CMO/FSDO manager and the RFSD. See Volume 3, Chapter 29, Section 5, The Demonstration Phase, for further guidance.

3-2316 PHASE FIVE. The successful completion or termination of the proving or validation tests marks the accomplishment of phase five. In this phase, the FAA CPM:

- Ensures the applicant has received final economic authority from the DOT (if applicable);
- Coordinates through the regional NextGen (AXX-220) SAO specialist for all international operations and recommends to the PI the approval and issuance of the appropriate operations specifications (OpSpecs)/management specifications (MSpecs); or
- Sends a letter to the applicant terminating the proving test (if applicable) (see Volume 3, Chapter 29, Section 5, Figure 3-112, Example of Letter to Applicant Terminating Proving Test);
- Completes the report by closing the original PTRS record (opened in phase one) or takes appropriate action in the SAS DCT; and
- Ensures all team members have closed their individual PTRS records and SAS DCT (as applicable).

Figure 3-110. General Purpose Proving and Validation Test Job Aid

Operator/Program Manager Official Name/Cert. Number:					
PHASE ONE. REQUEST FOR AUTHORIZATION					
PTRS/ DCT CODE		INSP.'S INITIAL	DATE REC'D	DATE ACCEP'D	NOTES
	1. Applicant Request (if applicable)				
	2. Contact regional NextGen (AXX-220) Special Areas of Operation (SAO) specialist (formerly known as navigation specialist) for all international operations.				
	3. Initial Contact Meeting				
	a. Determine need for proving and/or validation testing				
	b. Applicant advised of applicable guidance, to include this job aid				
	4. Assign Federal Aviation Administration (FAA) Test Team				
	5. Internal FAA Coordination				
	6. Open Master Program Tracking and Reporting Subsystem (PTRS) Record #				
	7. Safety Assurance System (SAS) Data Collection Tool (DCT) (as applicable)				
	8. SAO request should be entered by PI into the AFS-400 SAO tracking tool				

PHASE TWO. PROVING/VALIDATION TEST PLAN					
PTRS/ DCT CODE		INSP.'S INITIAL	DATE REC'D	DATE ACCEP'D	NOTES
	1. Applicant Submits Formal Test Plan				
	a. Identification of company coordinator				
	b. Detailed schedule of all proposed flights				
	c. List of names & positions of flight crewmembers on each flight				
	d. Names, titles & company affiliation of all noncrewmembers on each flight				
	e. Applicant's plan for reducing test hours (if applicable)				
	2. FAA Test Team Leader Initial Review of Test Plan				
	3. Update Master PTRS record				
	4. SAS DCT (as applicable)				

PHASE THREE. FAA TEST TEAM PLAN REVIEW					
PTRS/ DCT CODE		INSP.'S INITIAL	DATE REC'D	DATE ACCEP'D	NOTES
	1. Evaluate Test Plan for Regulatory Compliance, Safe Operating Practices, Logic of Sequence, Etc.				
	2. Manuals/Procedures (as applicable):				
	a. General Operations Manual (GOM) or Program Operating Manual (POM)				
	b. General Maintenance Manual (GMM)				
	c. Maintenance technical manuals				
	d. Cockpit normal/abnormal/emergency checklists and procedures				
	e. FAA-approved Airplane Flight Manual (AFM)				
	f. Flight Attendant (F/A) manual				
	g. Company emergency manual				
	h. Passenger briefing cards				
	i. Aircraft fueling				
	j. International operations				
	k. Dispatch/flight following/flight locating				
	l. Weight and Balance (W&B)				
	m. Hazardous material (hazmat) recognition and/or acceptance				
	n. Minimum equipment list (MEL)/Configuration Deviation List (CDL)				
	o. Flight planning				
	p. Deicing/anti-icing				
	q. Carry-on baggage				
	r. Exit seating				
	s. Aircraft cargo loading manuals and specific cargo handling manuals				
	t. Station operations manual				
	u. Enhanced Weather Information Systems (EWINS)				
	3. Training Manuals/Programs/Procedures (as applicable):				
	a. Flightcrew training				
	b. F/A training				
	c. Dispatch/flight following/flight locating training				
	d. Maintenance training				
	e. Ground personnel				
	f. Destination/alternate airport analysis				
	4. Other Inspections/Reviews (as applicable):				
	a. Aircraft conformity				
	b. Operational control (lease agreements & doing business as (DBA)				
	c. Cargo evaluations				
	d. Service/contract agreements				
	e. Environmental Assessment (EA)				

	f. Exemption/deviation/waiver requests				
	g. W&B training				
	h. Cargo loading and handling training				
	i. Ground handling procedures training (if new aircraft or station)				
	5. Emergency Evacuation Demonstration Plan (as applicable)				
	6. Ditching Demonstration Plan (as applicable)				
	7. Notify Regional Flight Standards Division (RFSD) of Proving/Validation Flight Dates, Times, Locations, Etc.				
	8. Make Test Team Member Assignments				
	9. Coordinate With TSA Regarding: Security Procedures and Training				
	10. Coordinate With FAA Hazmat Division				
	11. Ensure Administrative Requirements (e.g., passport, visas, country clearance(s), travel authorization (fund cite))				
	12. Review Draft OpSpecs/MSpecs (coordinate with regional NextGen (AXX-220) SAO specialist formerly known as navigation specialist)				
	13. Letter of Authorization (LOA) (if required)				
	14. Update Master PTRS Record				
	15. SAS DCT (as applicable)				
NOTE: During initial air operator certification or program manager authorization, the above manuals/programs may have already been reviewed.					

PHASE FOUR. INSPECTION AND DEMONSTRATION				
PTRS/ DCT CODE		INSP.'S INITIAL	DATE OBJECTIVE ACHIEVED	NOTES
	1. Order to Show Cause from Department of Transportation (DOT) (part 121 applicants)			
	2. Emergency Evacuation Demonstration (as applicable)			
	3. Ditching Demonstration (as applicable)			
	4. Proving and/or Validation Flight			
	a. Table-top demonstrations			
	b. Flight preparation			
	c. Preflight			
	d. En route			
	e. Post flight			
	f. Applicant recordkeeping			
	5. Validation Testing			
	a. Table-top demonstrations			
	b. Indepth review of:			
	(1) Applicant's proposed procedures			
	(2) Training programs			

	(3) Manuals			
	(4) Facilities			
	(5) Maintenance programs			
	6. Update Master PTRS Record			
	7. SAS DCT (as appropriate)			

PHASE FIVE. APPROVAL/DISAPPROVAL			
	INSP.'S INITIAL	DATE	NOTES
1. Final Economic Authority (DOT) (if applicable)			
2. Principal Inspector (PI) Approves/Issues OpSpecs/MSpecs (coordinate with regional NextGen (AXX-220) SAO specialist)			
3. Letter of Disapproval (if applicable)			
4. Test Team – Complete Individual PTRS Records			
5. Certification Project Manager (CPM) Completes/Closes Master PTRS Record			
6. CPM Complete SAS DCT (as applicable)			

RESERVED. Paragraphs 3-2317 through 3-2330.