VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 10 OPERATIONAL EMPHASIS ITEMS

Section 2 Operational Emphasis Item—Uncommanded High Thrust

3-280 REPORTING SYSTEM(S). Use Safety Assurance System (SAS) Activity Recording (AR) and use activity code 3045 or 3460, as appropriate.

3-281 PURPOSE. This section supports the overall Thrust Control Malfunction Airworthiness Program implemented to support the safety recommendation issued by the National Transportation Safety Board (NTSB). This section also requests aviation safety inspectors (ASI) assigned to any operator of turbine-powered aircraft to share this information.

3-282 BACKGROUND. As a result of the Saudi Arabian Airlines Boeing 737-200 accident and associated NTSB recommendation A98-70, a joint Aerospace Industries Association (AIA)/European Aerospace Manufacturer’s Association (AECMA) committee, with support from the U.S., European, and Canadian airworthiness authorities, studied the risk associated with uncommanded high thrust failure on turbofan-powered transport category aircraft.

A. Inability to Reduce Excess Engine Thrust/Power. These uncommanded high thrust failure conditions result in the flightcrew being unable to reduce excess engine thrust/power through normal means (e.g., throttle lever stuck or disconnected, fuel metering valve malfunctioning, engine control in “failed fixed” mode, etc.). Compliance with applicable airworthiness regulations has traditionally been based in part on accepting an assertion that the flightcrew can recognize and safely accommodate uncommanded high thrust conditions, including shutting down the affected engine via an independent fuel shutoff, as required.

B. Uncommanded High Thrust Failure Conditions. Most traditional transport category turbine-powered airplane type designs have some anticipated uncommanded high thrust failure conditions. Some trends, both in design and operation, are tending to increase the risks associated with uncommanded high thrust failures.

C. Fuel Control Unit (FCU) and Full-Authority Digital Engine Control (FADEC). For transport category airplanes, the flightcrew normally controls engine thrust/power, either directly by means of a thrust/power/throttle lever through direct connection to the FCU or by a fly-by-wire FADEC system, or indirectly by means of an autothrottle.

D. The Effect of Traffic and Congestion. Increased traffic and congestion, as well as the increased use of parallel taxiways and runways, have increased the potential for an airplane experiencing uncontrollable thrust asymmetry to impact another airplane, ground support equipment, or terminal. The Federal Aviation Administration (FAA) is concerned that such a failure on one airplane could potentially affect the occupants of multiple airplanes, terminal spaces, and/or ground support personnel.

3-283 APPLICABILITY. This section applies to all ASIs.
3-284 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Volume 1, Chapter 3, Section 1, Safety Assurance System: Responsibilities of Aviation Safety Inspectors.
- Volume 10, Safety Assurance System Policy and Procedures.
- Volume 14, Chapter 1, Section 2, Flight Standards Service Compliance Action Decision Procedure.

B. Forms. None.

C. Job Aids. None.

3-285 ACTION. All Principal Maintenance Inspectors (PMI) associated with air carriers operating under Title 14 of the Code of Federal Regulations (14 CFR) parts 121, 125, and 135 with aircraft certificated under 14 CFR part 25, and PMIs with responsibility for repair stations under 14 CFR part 145 that repair or overhaul FCUs, will do the following:

A. Service Difficulty Report (SDR) Requirements. Encourage operators to report instances of uncommanded high thrust in accordance with the SDR requirements of part 121, § 121.703(a)(16) and (c); part 125, § 125.409; and part 135, § 135.415(a)(16) and (c). The operator should file the report with the FAA no later than 5 business-days after the occurrence. The repair station management should forward reports that are in accordance with part 145, § 145.221 to the air carrier/air operator’s responsible Flight Standards office for further processing in accordance with the Service Difficulty Reporting System (SDRS).

B. Reporting Airplane Failure Modes. Report all related information using SAS AR, as detailed in paragraph 3-286.

1) Operators must report information concerning the airplane failure modes identified that could lead to uncommanded high thrust.

2) If reporting information on FCUs or FADEC components, include:

- Part number of the component,
- Part number of the item that failed,
- Original discrepancy that led to repair,
- Final corrective action,
- Total time and cycle of the component (if known),
- Time since last shop visit, and
- Please provide the last teardown summary report, if available.

3-286 REPORTING FOR THE FAA.

A. Documentation. PMIs should document that they have read and conveyed this information to the appropriate operator and/or repair station accountable manager.
1) Use activity code 3045 (special projects).

2) Enter “8900UHT” (without quotes) into the “National Use” field.

B. Information for Identifying Uncommanded High Thrust. Please report all failure modes and other information needed to identify uncommanded high thrust.

1) Use activity code 3460 (aircraft/equipment/certification support).

2) Enter “8900UHT” (without quotes) into the “National Use” field.

3) The reported information will be available to the Aircraft Certification Service (AIR) for analysis.

3-287 REPORTING FOR THE AIR CARRIER OR AIR OPERATOR. The air carrier or air operator should document each incident in accordance with §§ 121.703, 125.409, and 135.415 and SDRSs, and use § 121.703(a)(16) as a reporting vehicle.

3-288 TASK OUTCOMES.

A. Conduct Debriefing. Brief the certificate holder on the results. Discuss all deficiencies, certificate holder corrective actions, and FAA actions. The ASI can find instructions for conducting briefings in Volume 1, Chapter 3, Section 1.

B. Compliance and Enforcement Action. If safety issues and/or regulatory noncompliance are identified, follow the process contained in Volume 14, Chapter 1, Section 2 to determine the appropriate FAA compliance or enforcement action.

C. Complete the Task. Follow Volume 10 for completion of SAS AR.

3-289 FUTURE ACTIVITIES. Follow Volume 10 to plan future risk-based surveillance in SAS.

RESERVED. Paragraph 3-290.