

Bundesamt (LBA), which is the airworthiness authority for Germany, notified the FAA that an unsafe condition may exist on RRD models Tay 650–15 and 651–54 turbofan engines. The LBA advises that they have received reports of two separate Tay 650–15 low pressure (LP) compressor fan blade failures since 1997. The most recent failure occurred on September 15, 2001 and resulted in the release of the LP compressor assembly, penetration of the fuselage, and a fatality. Investigations indicate that fatigue cracks initiated in the fan blade root section due to fan flutter is caused by the engine operating in a stabilized manner between idle reverse thrust and emergency maximum reverse thrust for Tay 650–15 engines or between idle reverse thrust and maximum reverse thrust for Tay 651–54 engines. The airplane flight manuals have already been revised to prohibit operating in a stabilized manner within these ranges. However, inadvertent stabilized operations in the prohibited ranges could result in fan blade failure. This condition, if not corrected, could result in fan blade failure, which can result in an uncontained engine failure, engine fire, and damage to the airplane.

Since AD 2001–22–18 was issued, RRD has updated the prohibited ranges of engine operation regarding this condition for the models Tay 650–15 and 651–54 turbofan engines, by defining the conditions as to when inspections and dispositioning of fan blades and fan discs are required, based on whether or not an airplane-installed N1 alert system is used.

Manufacturer's Service Information

RRD has issued Service Bulletin (SB) Tay–72–1447, Revision 4, dated May 8, 2002, that describes procedures for recording engine operation within updated prohibited engine operating ranges, and specifies conditions for performing initial and repetitive ultrasonic inspections of fan blades. That SB also recognizes the introduction of Fokker SB F100–31–060, which installs an N1 Alert System in Fokker Model F.28 Mark O100 airplanes. This N1 Alert System is designed to set a maintenance message that instructs inspection action if the engine is operated in prohibited operating ranges. The LBA classified this service bulletin as mandatory and issued AD No. 2002–090, dated May 8, 2002, in order to assure the airworthiness of these RRD Tay 650–15 and 651–54 turbofan engines in Germany.

Bilateral Agreement Information

These engine models are manufactured in the U.K. and are type certificated for operation in the United States under the provisions of Section 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. However, the primary type certificates have been transferred from Rolls-Royce plc in the U.K. to Rolls-Royce Deutschland Ltd & Co KG in Germany. Pursuant to this bilateral airworthiness agreement, the LBA has kept the FAA informed of the situation described above. The FAA has examined the findings of the LBA, reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operation in the United States.

Proposed Requirements of This AD

Since an unsafe condition has been identified that is likely to exist or develop on other RRD Tay 650–15 and 651–54 turbofan engines of the same type design that are used on airplanes registered in the United States, the proposed AD would require recording instances when engines are operated inadvertently in reverse thrust in prohibited ranges. The proposed AD would also require ultrasonic inspections of roots of Tay 650–15 fan blades, part numbers (P/Ns) JR31911, JR31912, JR33865, JR33866, JR35120, or JR35121, installed in fan discs P/N JR31198A, and of Tay 651–54 fan blades P/Ns JR31911, JR31912, JR33865, or JR33866, installed in fan discs P/N JR34563A, and if necessary, dispositioning of fan blades and fan discs, before further flight if certain reverse thrust events occur. The actions would be required to be done in accordance with the service bulletin described previously.

Economic Analysis

There are approximately 713 RRD Tay 650–15 and 651–54 engines of the affected design in the worldwide fleet. The FAA estimates that 451 engines installed on airplanes of U.S. registry would be affected by this proposed AD. Based on the current utilization and shop visit rates for the affected engine models, the FAA estimates that the number of shop visits and inspections for the U.S. fleet would be approximately 140 per year. It would take approximately 5 work hours per engine to do the actions at a labor rate of \$60 per work hour. Assuming that five percent of these inspections result in a rejected fan blade set at a cost of

approximately \$100,000 per set, the annual cost of this proposed AD on U.S. operators is estimated to be \$742,000. The current inspection failure rate is below one percent and this cost estimate is believed to be conservatively high.

Regulatory Analysis

This proposed rule does not have federalism implications, as defined in Executive Order 13132, because it would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Accordingly, the FAA has not consulted with state authorities prior to publication of this proposed rule.

For the reasons discussed above, I certify that this proposed regulation (1) is not a “significant regulatory action” under Executive Order 12866; (2) is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) if promulgated, will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the draft regulatory evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption **ADDRESSES**.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

The Proposed Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by removing Amendment 39–12497, (66 FR 56755), and by adding a new airworthiness directive:

Rolls-Royce plc: Docket No. 98–ANE–68–AD. Supersedes AD 2001–22–18, Amendment 39–12497.

Applicability: This airworthiness directive (AD) is applicable to Rolls-Royce plc (RR) models Tay 650–15 turbofan engines with fan blades, part numbers (P/Ns) JR31911,