
AIRWORTHINESS DIRECTIVE

On the effective date specified below, and for the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/F100/50 Amdt 1 and issues the following AD under subregulation 39.1 (1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Fokker F100 (F28 Mk 100) Series Aeroplanes

AD/F100/50 Engine - Reverse Thrust Operations Limitations 13/2004 Amdt 2

Applicability: All Fokker 100 (F28 Mk 100) Series aeroplanes with Rolls Royce Tay 650-15 engines installed.

Requirement: Amend the Fokker 100 Airplane Flight Manual, Part 1, Limitations Section, 2.06.01 opposite to page 2 and read as continuation of "THRUST REVERSER" paragraph, to include the following.

1. For aircraft **not** embodying modification per Fokker SB F100-31-060 (N1 alerting system), **or** the N1 alerting system is inoperative.
 - a. Use of reverse thrust above idle is prohibited in normal operations, except for approved powerback as described below in para 1.c. If it is used, then it must be recorded in the aircraft technical log.
 - b. If reverse thrust above idle has been used, the instructions detailed in Section 3.A of Rolls Royce SB TAY-72-1447 Rev 5 must be accomplished before next flight unless it can be demonstrated by means of flight data recorder information that the engine has not been operated in the N1 speed range 57 to 75 percent for 7.5 seconds or more. Exchange the complete set of fan blades and the fan rotor if a cracked fan blade is found during the inspections.
 - c. Powerback is prohibited unless specifically approved by Rolls Royce. Powerback shall not be used above 55 percent N1 speed. If powerback results in operation of the engine between 57 and 75 percent N1 speed, the instructions detailed in Section 3.B of the Rolls Royce SB TAY-72-1447 Rev 5 must be accomplished before next flight unless it can be shown by means of flight data recorder information that the engine has not been operated in the N1 speed range 57 to 75 percent for 7.5 seconds or more. Exchange the complete set of fan blades and the fan rotor if a cracked fan blade is found during the inspections.

Fokker F100 (F28 Mk 100) Series Aeroplanes

AD/F100/50 Amdt 2 (continued)

2. For aircraft embodying modification per Fokker SB F100-31-060 (N1 alerting system) **and** the alerting system is operative. Requirement 1 is applicable when the alerting system is inoperative.
 - a. Use of reverse thrust in a stabilised condition between 57 and 75 percent N1 speed is prohibited.
 - b. If reverse thrust is used between 57 and 75 percent N1 speed for greater than 7.5 seconds the N1 alerting system will instruct a fan blade inspection and the instructions detailed in Section 3.A of Rolls Royce SB TAY-72-1447 Rev 4 must be accomplished before next flight. Exchange the complete set of fan blades and the fan rotor if a cracked fan blade is found during the inspections.
 - c. Powerback is prohibited unless specifically approved by Rolls Royce. Power back shall not be used above 55 percent N1 speed. If use of powerback results in operation of the engine between 57 and 75 percent N1 speed for greater than 7.5 seconds the N1 alerting system will instruct a fan blade inspection and the instructions detailed in Section 3.B of Rolls Royce SB TAY-72-1447 Rev 4 must be accomplished before next flight. Exchange the complete set of fan blades and the fan rotor if a cracked fan blade is found during the inspections.

Note: LBA AD 2002-090R1 EASA Approval No. 2004-9948 refers.

Compliance: Not later than 21 January 2005.

This Amendment becomes effective on 23 December 2004.

Background: This amendment reflects the latest revision of the requirement document that introduces changes to the inspection requirements for fan blades following exceedances as detailed in the requirements section of this Directive.

The latest failure of the LP Compressor resulted in penetration of the aircraft fuselage resulting in a fatality. This failure was caused by fan blade resonance when operated at speeds outside the limits specified in the requirements section.

The original issue of this AD became effective on 16 May 2002 and refers to CASA AD/TAY/1 for inspection requirements when the thrust reverser operating limits are exceeded. This amendment includes the fan inspection requirements detailed in Rolls Royce SB TAY-72-1447 Rev 4 and hence AD/TAY/1 is cancelled.

Fokker F100 (F28 Mk 100) Series Aeroplanes

AD/F100/50 Amdt 2 (continued)

Amendment 1 of this Airworthiness Directive became effective on 8 August 2002.



James Coyne
Delegate of the Civil Aviation Safety Authority

9 November 2004