
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/FU24/53 Amdt 1 and issues the following AD under subregulation 39.001(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.

Airparts (NZ) Ltd. FU 24 Series Aeroplanes

**AD/FU24/53
Amdt 2**

Flap Control Torque Tube - Inspection

5/2006

Applicability: All models.

- Requirement:
1. For FU 24 models engaged only in agricultural operations, inspect the Flap Control Torque Tube in accordance with NZ Aerospace SB No. ASB/FU/033, issued on 30 May 1977.
 2. For FU 24 models engaged only in operations other than agricultural, inspect the Flap Control Torque Tube in accordance with NZ Aerospace SB No. ASB/FU/033.
 3. For FU 24 models engaged in mixed usage operations (i.e. a combination of agricultural and non-agricultural operations), inspect the Flap Control Torque Tube in accordance with NZ Aerospace SB No. ASB/FU/033.

Accomplishment of Department of Aviation (now CASA) approved SuperAir Engineering Order S46 Issue 1, approved 17 April 1980 is terminating action for all of the requirements of this AD.

Note 1: SuperAir Engineering Order S46 Issue 1 modifies the torque tube outer attachment lugs, by welding re-inforcement strips to the existing lug material, providing greater cross sectional area and stiffness and eliminating susceptibility to fatigue cracking.

Note 2: Other CAR 35 approved modifications may be considered acceptable for the purposes of terminating the inspection requirements of this AD, however, the only modification that has demonstrated in service reliability is the approved SuperAir Engineering Order S46. Other approved modifications may be considered as terminating modifications after consultation with CASA and only after demonstrating sufficient in service reliability.

Note 3: New Zealand AD DCA/FU24/164 refers.

- Compliance:
1. Every 100 flight hours.
 2. Every 220 flight hours.
 3. Every 100 flight hours.

Airparts (NZ) Ltd. FU 24 Series Aeroplanes

AD/FU24/53 Amdt 2 (continued)

This Amendment becomes effective on 11 May 2006.

Background: This amendment introduces a terminating action (modification) for the inspection requirements of the AD. The modification involves strengthening the flap torque tube outer attachment lugs, thus eliminating their susceptibility to fatigue cracking. The effectiveness of this modification in preventing cracking has been proven over 25 years, with no reports of cracking in any aircraft that has the modification per DoA (now CASA) approved SuperAir Engineering Order # S46 Issue 1.

Amendment 1, effective 20 March 2003, was issued to make a distinction between aircraft engaged in agricultural operations and aircraft engaged in non-agricultural operations. It has been shown that fatigue in the flap control torque tube is a function of the number of flight cycles (i.e. flap deployments). Aircraft engaged in agricultural operations are generally subjected to an order of magnitude more cycles than non-agricultural operations, causing accelerated fatigue of the flap control torque tube. This amendment allows aircraft engaged predominantly in non-agricultural operations to inspect the torque tube at 220 hourly intervals rather than 100 hourly intervals as specified in the original issue of this AD. The inspection procedure remained unchanged from the previous issue of this AD.

The original issue of this AD became effective on 01 August, 1977.



David Villiers
Delegate of the Civil Aviation Safety Authority

29 March 2006