Australian Government
Civil Aviation Safety Authority

AIRWORTHINESS BULLETIN

Aerostar (Piper/Ted Smith) 600 and 700 Series Aeroplanes - Inspections

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1. Applicability

This Bulletin refers to Piper Aerostar and Ted Smith Aerostar aircraft and would be of interest to:

- the owners of Aerostar aircraft,
- approved maintenance organisations that carry out maintenance on Aerostar aircraft, and
- licensed Aircraft Maintenance Engineers who carry out maintenance on Aerostar aircraft.

2. Purpose

The purpose of this Bulletin is to recommend that Registered Operators and maintainers of Aerostar aircraft consider the need to continue performing some maintenance operations previously mandated by AD.

3. Background

In 2009 a review was conducted of all Airworthiness Directives applicable to Aerostar aircraft. Three of these Directives specified routine maintenance tasks and were cancelled because they were not based on foreign Airworthiness Directives. The Directives had been in force for many years so had been used in planning the routine maintenance of Aerostar aircraft.

4. Maintenance

<u>At each issue of a Maintenance Release:</u>

Hydraulic system internal leak check

Each aircraft not fitted with an auxiliary hydraulic pump system should be raised on jacks and the undercarriage fully retracted. With the flap selector lever in neutral and hydraulic pressure selected off, the landing gear should remain in the fully retracted position for at least 30 minutes. If an internal leak is present in the hydraulic system and the right engine fails in flight the landing gear may automatically extend to the locked-down position.

(Previously AD/TSA-600/34)

Lower wing skin and spar caps

1. Visually inspect the lower wing skin and accessible areas of the 35% and 55% lower spar caps for cracks in the area surrounding the MLG cutout from WS 54 to WS 58.

2. Gain access as necessary and inspect the 35% and 55% lower spar caps in the immediate vicinity of any skin crack, paying particular attention to possible scoring of the lower surface of the spar cap. Fretting action against wing skin cracks may cause scoring.

Note 1: For aircraft which have external wing skin doublers installed, access to the lower wing skin can be gained from within the MLG well. Spar cap access is also available from within the MLG well. The area concerned should be thoroughly cleaned prior to inspection.

Note 2: Particular attention should be paid to skin cracks emanating from the aft outboard corner radius of the MLG cutout, which could propagate rearwards and outboard towards the engine nacelle.

Note 3: Service experience has shown that skin cracks may propagate underneath external wing skin doubler installations around the MLG cutout.

Note 4: Repair of skin cracks may be deferred provided they do not exceed 70 mm in length and are stop-drilled. The removal of external wing skin doublers may be required to ascertain skin crack lengths. Any spar cap cracks or score must be repaired before further flight.

(Previously AD/TSA-600/37)

<u>At two yearly intervals:</u>

Rear Spar Corrosion

Inspect the upper skin of the left and right mainplanes in the area above the rear spars for evidence of bulging, paying particular attention to the area between the mainplane root end and the nacelle. Evidence of bulging could indicate severe corrosion of the spar, and will require further investigation.

(Previously AD/TSA-600/42 Amendment 1.)

5. Recommendation

Owners and maintainers of Aerostar aircraft should remain aware of these maintenance tasks and consider them carefully when planning maintenance.

6. Enquiries

Enquiries with regard to the content of this Airworthiness Bulletin should be made via the direct link e-mail address:

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