

AIRWORTHINESS DIRECTIVE

released by DIRECTION GÉNÉRALE DE L'AVIATION CIVILE

Inspections and/or modifications described below are mandatory. No person may operate a product to which this Airworthiness Directive applies except in accordance with the requirements of this Airworthiness Directive.

Translation of "Consigne de Navigabilité"
Réf. : 89-017-017(B)R2
In case of any difficulty, reference should
be made to the French original issue.

ATR 42 aircraft

Modifications to structure prompted by fatigue test findings

This Airworthiness Directive applies to ATR 42 aircraft - all types - from serial numbers 3 to 152 inclusive.

Subsequent to damage discovered during fatigue tests, the following requirements are rendered mandatory.

A) Fuselage frame 26

In order to prevent initiation and development of the damage noted during fatigue tests, perform as follows :

- 1) Involves ATR 42 aircraft, serial numbers 035, 041, 059 and 063, having received embodiment of mod 1092 and having not received embodiment of mod 1491 (or 2132) prior to accumulating 4 000 flights from the first flight.
 - a) Inspection of frame 26 shall be performed as directed in ATR.SB 42-53-0046 prior to accumulating 6 000 flights or within the next 300 flights, whichever occurs later,
 - b) Replacement and reinforcement of frame 26 shall be performed as directed in ATR.SB 42-53-0042 (mod 2132) prior to accumulating 10 000 flights.
- 2) Involves all types of ATR 42 aircraft, serial numbers 003 to 151, except for aircraft 035, 041, 059 and 063 :
 - reinforcement of frame 26 shall be performed as directed in ATR.SB 42-53-0042 (mod 2132) prior to accumulating 10 000 flights.

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October 31st,1989

ATR 42 aircraft

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B) Fuselage - other areas

Prior to accumulating 10 000 flights, act as follows :

1 - Fuselage secondary frames

Involves all types of ATR 42 aircraft, serial numbers 3 to 32 inclusive, 34 and 35.

Reinforcement of frames shall be performed as directed in ATR S.B. 42-53-0023 (Mod. 1104) to prevent initiation and development of the damage noted during fatigue tests on the fuselage secondary frames.

2 - Outer wings - junction of lower skin / front and rear spars

Involves all types of ATR 42 aircraft, serial numbers 3 to 59 inclusive.

Cold expansion of attach fastener holes shall be performed as directed in ATR S.B. 42-57-0010 (Mod. 1339) to prevent initiation and development of the damage noted during fatigue tests on outer wings at the longitudinal junction of the front and rear spars with the lower skin panel as well as at the leading edge strips.

3 - Fuselage - frames 24 and 28

Involves all types of ATR 42 aircraft, serial numbers 3 to 71 inclusive.

Reinforcements shall be performed as defined in ATR S.B. 42-53-0004 (Mod. 1571) to prevent initiation and development of damage noted during fatigue tests on frames 24 and 28.

4 - Wing / fuselage junction - pick-up fittings and main frames

Involves all types of ATR 42 aircraft, serial numbers 3 to 84, 86, 87, 89 to 93 inclusive.

Cold expansion of attach holes and reinforcement of fittings by adding radius fillers shall be performed as directed in ATR S.B. 42-53-0031 (Mod. 1572) to prevent initiation and development of damage noted during fatigue tests on the wing/fuselage rod pick-up fittings and relevant main frames 25 and 27.

5 - Outer wings - front spar

Involves all types of ATR 42 aircraft, serial number 3 to 119 inclusive.

Cold expansion of attach holes (front and rear spars) shall be performed as directed in ATR S.B. 42-57-0021 (Mod. 1804) to prevent initiation and development of damage noted during fatigue tests on the front spar splice between ribs 13 and 14.

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6 - Wing center box

Involves all types of ATR 42 aircraft, serial numbers 3 to 151 inclusive.

Replacement of the wing center box by an improved design center box shall be performed as directed in ATR S.B. 42-57-0027 (Mod. 8019 or 1931 - production solution) to prevent initiation and development of damage noted during fatigue tests on the wing center box at the wing / fuselage junction at rib 2.

Ref. : ATR 42 S.B. 42-53-0023, 57-0010, 53-0042,
53-0004, 53-0031, 57-0021, 57-0027, 53-0046

This revision 2 cancels and replaces AD 89-017-017(B)R1 dated May 31, 1989

EFFECTIVE DATE : NOVEMBER 10, 1989