



Airworthiness Directive

AD No.: 2018-0080

Issued: 11 April 2018

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [Regulation (EC) 216/2008, Article 14(4) exemption].

Design Approval Holder's Name:

ATR-GIE AVIONS de TRANSPORT RÉGIONAL

Type/Model designation(s):

ATR 42 and ATR 72 aeroplanes

Effective Date: 25 April 2018

TCDS Number(s): EASA.A.084

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2017-0172 dated 07 September 2017.

ATA 32 – Landing Gear – Main Landing Gear Universal Joints – Inspection / Replacement

Manufacturer(s):

ATR-GIE Avions de Transport Régional (formerly EADS ATR – Alenia, Aerospatiale ATR – ALENIA, Aerospatiale – Alenia, Aerospatiale – Aeritalia)

Applicability:

ATR 42-200, ATR 42-300, ATR 42-320, ATR 42-400 and ATR 42-500 aeroplanes, all manufacturer serial numbers (MSN); and

ATR 72-101, ATR 72-102, ATR 72-201, ATR 72-202, ATR 72-211, ATR 72-212 and ATR 72-212A aeroplanes, all MSN.

Definition(s):

For the purpose of this AD, the following definitions apply:

The applicable SB: SAFRAN Landing Systems (SLS) Service Bulletin (SB) 631-32-249 for main landing gear (MLG) on ATR 42-200, ATR 42-300 and ATR 42-320; SB 631-32-250 for MLG on ATR 42-400 and ATR 42-500; and SB 631-32-251 for MLG on ATR 72, as applicable.

The affected U-joints: MLG universal joints (U-joints), having a Part Number (P/N) and serial number (s/n) as listed in the applicable SB at Revision 02.



Serviceable part: (1) An affected U-joint, released to service, free of defect, with the letter “V” on the identification plate, or in the vicinity of the P/N marking; or (2) any other U-joint with chrome plated faces that were never stripped or repaired; or (3) any other U-joint with chrome plated faces that were stripped and repaired in accordance with SLS Component Maintenance Manual (CMM) 32-18-28 Rev. 10, or CMM 32-18-30 Rev. 8 (both for ATR 42-200/300/320), or CMM 32-18-45 Rev. 5 or CMM 32-18-63 Rev. 6 (both for ATR 42-400/500), or CMM 32-18-34 Rev. 9 (for ATR 72), as applicable, or later revision. The information of CMM revision used for repair should be available in the EASA Form 1 (or equivalent document) of the part, as provided by the affected authorized repair company.

Reason:

Occurrences were reported of finding cracks in certain MLG U-joints. Subsequent investigation identified a batch of affected U-joints which have possibly been subjected to non-detected thermal abuse during the grinding process by the U-joint manufacturer in production, or by a maintenance organization during overhaul and/or repair.

This condition, if not detected and corrected, could lead to MLG structural failure and subsequent collapse of the MLG, possibly resulting in damage to the aeroplane and injury to the occupants.

To address this potential unsafe condition, SLS published the applicable SB to provide inspection instructions. Consequently, EASA issued AD 2017-0172 to require repetitive detailed visual inspection (DVI) of the affected U-joints for cracks, and, depending on findings, replacement.

Since that AD was issued, SLS identified that certain s/n of affected U-joints were inadvertently not included in the list of the original issue of the applicable SB. Consequently, SLS issued Revision 02 of the applicable SB to clarify the s/n tables of P/N D56805 and P/N D56805-2, and to add those missed s/n of affected U-joints.

For the reasons described above, this AD retains the requirements of EASA AD 2017-0172, which is superseded, and includes reference to Revision 02 of the applicable SB.

Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

Repetitive Inspections:

- (1) Within 3 months or 500 flight cycles (FC), whichever occurs first after the effective date of this AD, and, thereafter, at intervals not to exceed 500 FC, inspect each affected U-joint in accordance with the instructions of the applicable SB at Revision 02.

Corrective Action(s):

- (2) If, during any inspection as required by paragraph (1) of this AD, an affected U-joint is found cracked, before next flight, replace the cracked U-joint and associated attachment pins and broaching pins in accordance with the instructions of the applicable SB.



Terminating Action:

- (3) Replacement on an aeroplane of all affected U-joints with serviceable parts constitutes terminating action for the repetitive inspections as required by paragraph (1) of this AD for that aeroplane.

Part(s) Installation:

- (4) From the effective date of this AD, installation on an aeroplane of an MLG U-joint is allowed, provided the MLG U-joint is a serviceable part.

Credit:

- (5) Inspections and corrective action(s) of all affected U-joints on an aeroplane, accomplished before the effective date of this AD, in accordance with the instructions of the applicable SB at Revision 01, are acceptable to comply with the initial requirements of paragraphs (1) and (2) of this AD for that aeroplane, except for the additional s/n of affected U-joints as listed in Revision 02 of the applicable SB.

Ref. Publications:

SAFRAN Landing Systems SB 631-32-249 Revision 01 dated 26 June 2017, and Revision 02 dated 13 February 2018.

SAFRAN Landing Systems SB 631-32-250 Revision 01 dated 26 June 2017, and Revision 02 dated 13 February 2018.

SAFRAN Landing Systems SB 631-32-251 Revision 01 dated 26 June 2017, and Revision 02 dated 13 February 2018.

The use of later approved revisions of the above-mentioned documents is acceptable for compliance with the requirements of this AD.

Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. This AD was posted on 20 March 2018 as PAD 18-042 for consultation until 04 April 2018. No comments were received during the consultation period.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. For any question concerning the technical content of the requirements in this AD, please contact: ATR - GIE Avions de Transport Régional, Continued Airworthiness Service, Tel.: +33 (0)5 62 21 62 21 - Fax: +33 (0) 5 62 21 67 18; E-mail: continued.airworthiness@atr-aircraft.com.

