



## Airworthiness Directive

**AD No.:** 2017-0172

**Issued:** 07 September 2017

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:** 21 September 2017

**TCDS Number(s):** EASA A.084

**Foreign AD:** Not applicable

**Supersedure:** None

## ATA 32 – Landing Gear – Main Landing Gear Universal Joint – Inspection / Replacement

### Manufacturer(s):

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

### 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.

### Reason:

Occurrences were reported of finding cracked universal joints (U-joints) Part Number (P/N) D56805, P/N D56805-2, P/N D61036 and P/N D62050. Subsequent investigation identified a batch of affected U-joints which were subjected to a possible non-detected thermal abuse done 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, SAFRAN Landing Systems (SLS), published Service Bulletin (SB) 631-32-249 for MLGs fitted on ATR 42-200, ATR 42-300 and ATR 42-320; SB 631-32-250 for MLGs fitted on ATR 42-400 and ATR42-500; and SB 631-32-251 for MLGs fitted on ATR 72 (all models), to provide inspection instructions.

For the reasons described above, this AD requires repetitive detailed visual inspections (DVI) of the affected U-joints for cracks, and, depending on findings, replacement with a serviceable part.

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

Required as indicated, unless accomplished previously:

Note 1: SLS SB 631-32-249, SB 631-32-250 and SB 631-32-251, are hereafter collectively referred to as “the applicable SB” in this AD.

Note 2: For the purpose of this AD, the affected U-joints are listed by P/N and serial number (s/n) in the applicable SB.

Note 3: For the purpose of this AD, a “serviceable part” is an ‘affected’ U-joint (see Note 2 of this AD), released to service by SLS, free of defect, with the letter “V” added on the part (on the identification plate, or in the vicinity of the P/N marking); or a new (never installed) U-joint; or a U-joint repaired in accordance with SLS Component Maintenance Manual (CMM) 32-18-28 Rev. 10 or CMM 32-18-30 (both for ATR 42-200/300/320) Rev. 8; 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 the repair should be available in the EASA Form 1 of the part filled by the affected authorized repair company.

#### **Inspection:**

- (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 (see Note 2 of this AD) in accordance with the instructions of the applicable SB.

#### **Corrective Action(s):**

- (2) If, during any inspection as required by paragraph (1) of this AD, a U-joint is found damaged, before next flight, replace the U-joint of the affected MLG with a serviceable part (see Note 3 of this AD) in accordance with the instructions of the applicable SB.

#### **Terminating Action:**

- (3) Replacement on an aeroplane of all affected U-joints with serviceable parts (see Note 3 of this AD) 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 a MLG U-joint is allowed, provided the MLG U-joint is a serviceable part (see Note 3 of this AD).



**Ref. Publications:**

SAFRAN Landing Systems SB 631-32-249 Rev. 01 dated 26 June 2017.

SAFRAN Landing Systems SB 631-32-250 Rev. 01 dated 26 June 2017.

SAFRAN Landing Systems SB 631-32-251 Rev. 01 dated 26 June 2017.

SAFRAN Landing Systems CMM 32-18-28 Rev. 10 dated 02 June 2017.

SAFRAN Landing Systems CMM 32-18-30 Rev. 8 dated 02 June 2017.

SAFRAN Landing Systems CMM 32-18-45 Rev. 5 dated 02 June 2017.

SAFRAN Landing Systems CMM 32-18-63 Rev. 6 dated 02 June 2017.

SAFRAN Landing Systems CMM 32-18-34 Rev. 9 dated 02 June 2017.

The use of later approved revisions of these 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 06 July 2017 as PAD 17-093 for consultation until 03 August 2017. The Comment Response Document can be found in the [EASA Safety Publications Tool](#), in the compressed (zipped) file attached to the record for this AD.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto: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](mailto:continued.airworthiness@atr-aircraft.com).

