Airworthiness Directive

AD No.: 2023-0080

Issued: 17 April 2023

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 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, or Annex Vb Part ML.A.301, as applicable, 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 Annex Vb Part ML.A.303, as applicable] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:

DAHER AEROSPACE

Type/Model designation(s):

MS 880, MS 890 and RALLYE aeroplanes

Effective Date: 01 May 2023

TCDS Number(s): EASA.A.377 and EASA.A.379

Foreign AD: Not applicable

Revision : This AD supersedes EASA AD 2015-0203 dated 07 October 2015.

ATA 32 – Landing Gear – Nose Wheel Axle and Attachment Screws – Inspection / Replacement / Modification

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Manufacturer(s):

Compagnie DAHER, formerly SOCATA, EADS SOCATA, Société de Construction d'Avions de Tourisme et d'Affaires.

Applicability:

MS 880 B, MS 880 B-D, MS 881, MS 883, MS 884, MS 885, MS 886, MS 887, MS 890 A, MS 890 B, MS 892 A.150, MS 892 B.150, MS 892 E.150, MS 892 E-D.150, MS 893 A, MS 893 B, MS 893 E, MS 893 E-D, MS 894 A, MS 894 E, RALLYE 100 S, RALLYE 100 S-D, RALLYE 100 ST, RALLYE 100 ST-D, RALLYE 110 ST, RALLYE 150 ST, RALLYE 150 ST-D, RALLYE 150 T, RALLYE 150 T-D, RALLYE 150 SV, RALLYE 150 SVS, RALLYE 180 T, RALLYE 180 TS, RALLYE 180 T-D, RALLYE 235 A, RALLYE 235 F, RALLYE 235 E and RALLYE 235 E-D aeroplanes, all manufacturer serial numbers.

Definitions:

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

The SB: DAHER AEROSPACE (DAHER) Service Bulletin (SB) 150-32 Revision (Rev.) 4.

Affected parts: Nose Landing gear (NLG) wheel axle having Part Number (P/N) 8954200270 and NLG wheel spacer having P/N 8954200260.

Affected NLG: Any NLG having affected parts installed.

Serviceable parts: NLG wheel axle having P/N AV-RAL-001-01 and NLG wheel spacer having P/N AV-RAL-002-01.

Groups: Group 1 aeroplanes are those that have an affected part installed. Group 2 aeroplanes are those that do not have an affected part installed.

Reason:

An NLG wheel axle rupture occurred in service. The results of the technical investigations revealed that this failure was due to premature wear.

This condition, if not detected and corrected, could lead to cracks in the axle and detachment of axle and wheel, possibly resulting in failure of the NLG with consequent damage to the aeroplane and injury to occupants.

To address this potential unsafe condition, DGAC France issued AD 91-163(A) (later revised twice) to require repetitive detailed inspections (DET) of the NLG wheel axle and replacement of the NLG wheel axle attachment screws in accordance with the instructions of the SOCATA SB 150-32 at Revision 2.

After DGAC France AD 91-163(A)R2 was issued, new findings led to an adjustment of the inspection interval and, SOCATA issued Revision 3 of the SB 150-32. Consequently, EASA issued AD 2015-0203 retaining the requirements of DGAC France AD 91-163(A)R2, which was superseded, but requiring these actions to be accomplished within reduced intervals.

Since EASA AD 2015-0203 was issued, DAHER published the SB, as defined in this AD, that introduced new design of the NLG wheel axle as a terminating action for the repetitive DET and modified the inspection method.

For the reasons described above, this AD retains the requirement of EASA AD 2015-0203, which is superseded, introducing a new inspection method and a new design of the NLG wheel axle as a terminating action for the repetitive DET.

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

Required as indicated, unless accomplished previously:

Repetitive Inspections:

(1) For Group 1 aeroplanes: Within the compliance time as defined in Table 1 of this AD, as applicable and, thereafter, at intervals not to exceed 200 flight hours (FH), accomplish a DET of the NLG wheel axle and attachment screws in accordance with the instructions of the SB.

Table 1 – Initial DET

Compliance Time (**A** or **B**, whichever occurs later)	
A	Before exceeding 200 FH since aeroplane first flight, or since last inspection in accordance with the instructions of SOCATA SB 150-32 Rev. 2 or Rev. 3, as applicable.
B	Within 50 FH after 21 October 2015 [the effective date of EASA AD 2015-0203] or within 500 FH since last inspection in accordance with the instructions of SOCATA SB 150-32 Rev. 2, whichever occurs first.

(2) If, during any DET as required by paragraph (1) of this AD, any discrepancy, as defined in the SB, is detected, before next flight, accomplish the applicable corrective action(s) (further inspections and/or modification) in accordance with the instructions of the SB.

Repetitive replacement:

(3) For Group 1 and Group 2 aeroplanes: Within the compliance time as defined in Table 2 of this AD, as applicable, and, thereafter, at intervals not to exceed 2 000 FH, replace the NLG wheel axle attachment screws with new ones in accordance with the instructions of the SB.

Table 2 – Initial Attachment Screws Replacement

Compliance Time (**A** or **B,** whichever occurs later)	
A	Before exceeding 2 000 FH since aeroplane first flight, or since last attachment screws replacement with new ones, as applicable.
B	Within 50 FH after 09 April 1994 [the effective date of DGAC France AD 91-163(A)R2].

Terminating Action(s):

(4) For Group 1 aeroplanes: Modification of an aeroplane by installing serviceable parts in accordance with the instructions of paragraph C of the SB constitutes terminating action for the repetitive DET as required by paragraph (1) of this AD for that aeroplane.

Part(s) Installation:

(5) For Group 1 aeroplanes: From the effective date of this AD, it is allowed to replace an affected NLG with an affected NLG, or to replace an affected NLG wheel axle with an affected NLG wheel axle, provided that:
- The NLG wheel axle is new or, prior to installation, the NLG wheel axle passed an inspection (no discrepancies found) in accordance with the instructions of the SB (see Notes 1 and 2 and paragraph (6.1) of this AD), and
- The NLG wheel axle attachment screws are replaced with new ones.

Note 1: In showing compliance with the inspection requirement of paragraph (5) of this AD, credit may be taken from an inspection of an NLG wheel axle performed in accordance with the SOCATA SB 150-32 at Revision 2 or later, within 200 FH before the installation.

Note 2: Removal of an affected NLG (or of an affected NLG wheel axle) from an aeroplane and subsequent reinstallation of that affected NLG (affected NLG wheel axle) on the same aeroplane, accomplished during a single maintenance visit, is not considered as 'installation' as specified in paragraph (5) of this AD.

(6) Do not install an affected part on any aeroplane, as required by paragraph (6.1) or (6.2) of this AD, as applicable:

(6.1) For Group 1 aeroplanes: After modification of the aeroplane as referenced in paragraph (4) of this AD.

(6.2) For Group 2 aeroplanes: From the effective date of this AD.

Ref. Publications:

SOCATA SB 150-32 Revision 2 dated January 1994, or Revision 3 dated September 2015, or DAHER SB 150-32 Revision 4 dated January 2023.

The use of later approved revisions of the above-mentioned document 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 16 March 2023 as PAD 23-034 for consultation until 13 April 2023. 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. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, can be reported to the EU aviation safety reporting system. This may include reporting on the same or similar components, other than those covered by the design to which this AD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.

5. For any question concerning the technical content of the requirements in this AD, please contact: TBM Care, Tel: +1 833 826 2273, Email: tbmcare@daher.com.