



**適航指令發布單**  
**Airworthiness Directive Issuance Form**

民航局 AD 編號 AD number	CAA-2018-10-024B	發布日期 Date issued	2019/9/20
適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable)	Airbus A350-941 and A350-1041 aeroplanes, all manufacturer serial numbers.		
主旨摘要	Exhaust - Thrust Reverser Actuators - Greasing / Master Minimum Equipment List Restriction - Amendment		
民航局 CAA <input type="checkbox"/> 本國產品 Native products <input type="checkbox"/> 其他個案 Other	設計國民航主管機構 Original Authorities <input type="checkbox"/> FAA <input checked="" type="checkbox"/> EASA <input type="checkbox"/> Brazil <input type="checkbox"/> Transport Canada Civil Aviation <input type="checkbox"/> DGAC <input type="checkbox"/> Germany LBA <input type="checkbox"/> CAA-NL <input type="checkbox"/> UK CAA <input type="checkbox"/> Japan CAB <input type="checkbox"/> CAA of Israel <input type="checkbox"/> Other _____		
	設計國 AD 編號 Original AD number	2018-0234R2	
	1. 直接採用原 AD 之內容?(Is the original AD directly adopted?) <input checked="" type="checkbox"/> 是(Yes) <input type="checkbox"/> 否(No) _ a. 生效日期另訂為(Re-specify the effective date as) : _____ b. 執行時限另訂為(Re-specify the compliance time or period as) : _____ 2. 使用人是否需要將 AD 執行結果向民航局提出報告?(Do Users need to report the status of compliance to the CAA?) <input type="checkbox"/> 是(Yes) <input checked="" type="checkbox"/> 否(No)		
備註 Note	ATA 78. This AD revises EASA AD 2018-0234R1(CAA-2018-10-024A) dated 13 November 2018. Ref. Publications: Airbus AOT A78P001-18 Revision 01 dated 16 October 2018, or Revision 02 dated 29 April 2019, or Revision 03 dated 29 July 2019.		
註： 1. AD 內容後附。 2. 航空器產品使用人得向民航局提出豁免、替代符合方法、執行時限之展延之申請。 3. 如有任何問題，請聯絡交通部民用航空局初始適航科。Tel：(02)2349-6331~3, Fax：(02)2545-8464, e-mail： <a href="mailto:adcaa@mail.caa.gov.tw">adcaa@mail.caa.gov.tw</a> Note： 1. The AD text is enclosed. 2. Exemption, an alternative method of compliance or adjustment of the compliance time may be proposed to the CAA for approval. 3. For further information, please contact Civil Aeronautics Administration on Tel:(02)2349-6331~3, Fax:(02)2545-8464, e-mail： <a href="mailto:adcaa@mail.caa.gov.tw">adcaa@mail.caa.gov.tw</a>			



## Airworthiness Directive

**AD No.:** 2018-0234R2

**Issued:** 17 September 2019

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, 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 (EU) 2018/1139, Article 71 exemption].

### Design Approval Holder's Name:

AIRBUS

### Type/Model designation(s):

A350 aeroplanes

**Effective Date:** Revision 2: 24 September 2019  
Original Issue and Revision 1: 13 November 2018

**TCDS Number(s):** EASA.A.151

**Foreign AD:** Not applicable

**Revision:** This AD revises EASA AD 2018-0234R1 dated 13 November 2018.

## ATA 78 – Exhaust – Thrust Reverser Actuators – Greasing / Master Minimum Equipment List Restriction – Amendment

### Manufacturer(s):

Airbus

### Applicability:

Airbus A350-941 and A350-1041 aeroplanes, all manufacturer serial numbers.

### Definitions:

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

**Affected TRA Batch 01:** Thrust reverser actuators (TRA), having Part Number (P/N) 351D9908-657, P/N 351D9908-659 or P/N 351D9908-661.

**Affected TRA Batch 02:** TRA, having P/N 351D9908-689, P/N 351D9908-691 or P/N 351D9908-693.

**Serviceable TRA:** An affected TRA Batch 01 or Batch 02 that is new (never installed), or has been refurbished; or an affected TRA Batch 01 that has not exceeded the limits specified in Table 3 of this AD, as applicable, depending on the TRA condition.



**Refurbished:** Repaired in-shop by (or by a company authorized by) Goodrich, a process including replacement of the ball and re-setting the TRA's time in service to zero (0) FC.

**The AOT:** Airbus Alert Operators Transmission (AOT) A78P001-18.

**The FOT:** Flight Operators Transmission (FOT) Ref. 999.0083/18.

**The MER:** Airbus A350 Master Minimum Equipment List (MMEL), Major Event Revision (MER), dated 22 October 2018.

**The Goodrich SB:** Goodrich Service Bulletin (SB) RA35078-048.

**Airbus date of manufacture:** The date of transfer of title (ownership) of the aeroplane upon delivery by Airbus to the first operator.

#### Reason:

Operators of A350 aeroplanes have reported some occurrences of TRA jamming. Further investigation results indicated that the ball bearings inside the TRA are suffering from corrosion due to lack of grease and are degrading with time.

This condition, if not corrected, could lead to an inadvertent thrust reverser sleeve deployment, possibly resulting in reduced control or performance of the aeroplane.

To address this potential unsafe condition, Airbus issued the AOT to provide instructions for repetitive TRA greasing to prevent actuator ball bearings degradation, and the MER that incorporates temporary restrictions of the MMEL items related to thrust reverser actuation system. The AOT also provides instructions to replace certain affected TRA, depending on condition and previously applied greasing.

For the reasons described above, this AD requires implementation of certain dispatch restrictions. This AD also requires repetitive greasing of each affected TRA and a one-time replacement of certain affected TRA, depending on condition.

This AD is revised to introduce an extended interval for repetitive greasing of certain affected TRA (Batch 02).

This AD is still considered to be an interim action and further AD action may follow.

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

Required as indicated, unless accomplished previously:

#### MMEL Changes / Dispatch Restrictions:

- (1) Within 30 days after 13 November 2018 [the effective date of the original issue of this AD], implement the MMEL changes, as specified in the FOT, in accordance with the instructions of the MER, inform all flight crews, and, thereafter, operate the aeroplane accordingly.



**Concurrent Maintenance Requirement:**

- (2) Concurrently with the MMEL update as required by paragraph (1) of this AD, implement or replace the related MP listed in Table 1 of this AD which have been temporarily revised, inform all maintenance staff, and, thereafter, accomplish maintenance on the aeroplane accordingly.

Table 1 – Updated MP related to MMEL Item 78-09-01A (see Note 1 of this AD)

MP Task No.	MP Task Description
A350-A-78-3X-XX-05001-560A-A	Confirmation of the T/R Tertiary Lock Monitoring System Functionality
A350-A-78-3X-XX-03001-560A-A	Deactivation of the T/R Locking System
A350-A-78-3X-XX-03001-760A-A	Reactivation of the T/R Locking System

Note 1: The tasks specified in Table 1 of this AD were available under Airbus AirNav as temporary revision since 19 October 2018, before EASA AD 2018-0234 original issue was published. These were subsequently integrated with the November 2018 revision.

**Repetitive Greasing:**

- (3) Within the compliance time specified in Table 2 of this AD, as applicable to affected TRA, and, thereafter, at intervals not exceeding the values specified in Table 2 of this AD, accomplish greasing (see Note 2 of this AD) of each affected TRA in accordance with the instructions of the AOT and the instructions of the Goodrich SB.

Table 2 – Greasing

Affected TRA	Compliance Time (whichever occurs later, A or B)	Inspection interval
Batch 01	<b>A:</b> Before exceeding 250 flight cycles (FC) since Airbus date of manufacture or since installation	4 months or 250 FC, whichever occurs first
	<b>B:</b> Within 250 FC after 13 November 2018 [the effective date of original issue of this AD]	
Batch 02	<b>A:</b> Before exceeding 500 FC since Airbus date of manufacture, or since installation	8 months or 500 FC, whichever occurs first
	<b>B:</b> Within 500 FC after last greasing in accordance with instructions of the Goodrich SB or the AOT, as applicable.	

Note 2: The initial and repetitive greasing of an affected TRA as required by paragraph (3) of this AD can also be accomplished in-shop in accordance with the instructions of the Goodrich SB.



**Affected TRA Batch 01 Replacement:**

- (4) Within the compliance time specified in Table 3 of this AD, as applicable, replace each affected TRA with a serviceable TRA, as defined in this AD. For replacement of an actuator, the Airbus A350 MP tasks as specified in Table 4 can be used.

Table 3 – One-time Replacement (see Note 3 of this AD) for Affected TRA Batch 01

Condition of Affected TRA Batch 01		Compliance Time
1	First greasing was performed before 500 FC, in accordance with instructions of Goodrich SB or the AOT, as applicable thereafter repeated at intervals not exceeding 250 FC	None (no replacement required)
2	First greasing was performed before 500 FC, in accordance with instructions of Goodrich SB or the AOT, as applicable thereafter repeated at intervals not exceeding 500 FC	Before exceeding 3 500 FC
3	Condition other than described in 1 or 2 above	Whichever occurs later, <b>A</b> or <b>B</b> :
		<b>A</b> : Before exceeding 2400 FC
		<b>B</b> : Within 250 FC or 4 months, whichever occurs first after 13 November 2018 [the effective date of the original issue of this AD]

Note 3: Unless specified otherwise, the FC indicated in Table 3 of this AD are those accumulated by an affected TRA since first installation of that TRA on an aeroplane.

Table 4 – Replacement of Thrust Reverser (T/R) Actuators MP tasks

Actuator	MP Task No.	Action
Locking actuator	A350-A-78-35-64-00001-520A-A	T/R Primary-Lock Actuator Removal
	A350-A-78-35-64-00001-720A-A	T/R Primary-Lock Actuator Installation
Non Locking actuator	A350-A-78-35-65-00001-520A-A	T/R and Manual Drive Actuator Removal
	A350-A-78-35-65-00001-720A-A	T/R and Manual Drive Actuator Installation
Locking Feedback actuator	A350-A-78-35-66-00001-520A-A	T/R Primary-Lock Actuator Removal
	A350-A-78-35-66-00001-720A-A	T/R Primary-Lock Actuator Installation



**Terminating Action:**

(5) None.

**Ref. Publications:**

Airbus AOT A78P001-18 Revision 01 dated 16 October 2018, or Revision 02 dated 29 April 2019, or Revision 03 dated 29 July 2019.

Airbus A350 MMEL MER dated 22 October 2018.

Airbus FOT Ref. 999.0083/18 original issue dated 22 October 2018.

Goodrich SB RA35078-048 original issue dated 22 June 2018, or Revision 1 dated 26 October 2018, or Revision 2 dated 25 April 2019, or Revision 3 dated 29 July 2019.

MP Task No. A350-A-78-3X-XX-05001-560A-A issue date 02 November 2018.

MP Task No. A350-A-78-3X-XX-03001-560A-A issue date 02 November 2018.

MP Task No. A350-A-78-3X-XX-03001-760A-A issue date 02 November 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. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication.
3. Enquiries regarding this AD should be referred to the EASA Programming and Continued Airworthiness Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto: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](#).
5. For any question concerning the technical content of the requirements in this AD, please contact: [continued-airworthiness.a350@airbus.com](mailto:continued-airworthiness.a350@airbus.com).

