



### 適航指令發布單

## Airworthiness Directive Issuance Form

民航局 AD 編號 AD number	CAA-2019-09-009	發布日期 Date issued	2019/9/23
適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable)	Trent XWB-75, Trent XWB-79, Trent XWB-79B and Trent XWB-84 engines, all engine serial numbers (ESN). These engines are known to be installed on, but not limited to, Airbus A350 aeroplanes.		
主旨摘要	Engine - Front Engine Mount Support Structure - Inspection		
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	2019-0234	
	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 72. Ref. Publications: Rolls-Royce Alert NMSB TRENT XWB 72-AK188 original issue dated 13 August 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.:** 2019-0234

**Issued:** 19 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:

ROLLS-ROYCE DEUTSCHLAND Ltd & Co KG

### Type/Model designation(s):

Trent XWB series engines

**Effective Date:** 26 September 2019

**TCDS Number(s):** EASA.E.111

**Foreign AD:** Not applicable

**Supersedure:** None

## ATA 72 – Engine – Front Engine Mount Support Structure – Inspection

### Manufacturer(s):

Rolls-Royce plc

### Applicability:

Trent XWB-75, Trent XWB-79, Trent XWB-79B and Trent XWB-84 engines, all engine serial numbers (ESN).

These engines are known to be installed on, but not limited to, Airbus A350 aeroplanes.

### Definitions:

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

**The NMSB:** Rolls-Royce Alert Non-Modification Service Bulletin (NMSB) TRENT XWB 72-AK188.

Where, in this AD, reference is made to a Rolls-Royce SB with an 'A' (Alert) in the number, it should be recognised that a later revision may not have that 'A'. This kind of change does not effectively alter the publication references for the purpose of this AD.

### Reason:

The purpose of the engine mount is to position the engine relative to the pylon and to transfer all loads and rotational moments between the engine and pylon. The front engine mount support



structure (EMSS) consists of the low pressure compressor (LPC) outlet guide vane (OGV) assembly and OGV outer mount ring assembly. Revised analysis of these parts, when the front engine mount (FEM) is engaged in the fail-safe condition, has now been undertaken using more advanced modelling techniques. This analysis predicts that, once the FEM is in the fail-safe condition, the most highly stressed LPC OGV has a life that could be substantially less than one shop visit interval.

This condition, if not detected and corrected, could lead to failure of the EMSS, possibly resulting in engine separation and reduced control of the aeroplane.

To address this potential unsafe condition, Rolls-Royce introduced inspections to protect against the FEM entering the failsafe condition following a failure of the OGV outer mount ring assembly lugs, and published the NMSB to provide instructions.

For the reason described above, this AD requires repetitive inspections of the OGV outer mount ring assembly lug fillet area and, depending on findings, accomplishment of applicable corrective action(s).

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

Required as indicated, unless accomplished previously:

#### Inspection(s):

- (1) Within the compliance time specified in Table 1 of this AD, as applicable, and, thereafter, at intervals not to exceed 1 000 flight cycles (FC), accomplish an inspection of the OGV outer mount ring assembly in accordance with the instructions of section 3.A (on-wing) or section 3.B (in-shop) of the NMSB.

Table 1 – Initial Inspection (see Note 1 of this AD)

ESN	FC accumulated	Compliance Time
ESN 21021, 21032, 21033, 21038, 21041, 21043, 21044, 21065, 21088 and 21188	Not applicable	Within 3 months after the effective date of this AD
All other ESN	1 700 FC or more	Within 300 FC or 8 months, whichever occurs first after the effective date of this AD
	Less than 1 700 FC	Before exceeding 2 000 FC

Note 1: Unless indicated otherwise, the FC specified in table 1 of this AD are those accumulated, on the effective date of this AD, by the engine since first installation on an aeroplane.

#### Corrective Action(s):

- (2) If, during any inspection as required by paragraph (1) of this AD, any discrepancy is detected affecting the accept/reject criteria as specified in the NMSB, re-inspect within the applicable interval as specified in the NMSB; or before next flight or before release to service of the engine, as applicable, replace the OGV outer mount ring assembly with a new part.



- (3) If, during any re-inspection as required by paragraph (2) of this AD, any discrepancy is detected that indicates rejection of the OGV outer mount ring, as specified in the NMSB, before next flight, or before release to service of the engine, as applicable, replace the OGV outer mount ring assembly with a new part.

**Terminating Action:**

- (4) None.

**Ref. Publications:**

Rolls-Royce Alert NMSB TRENT XWB 72-AK188 original issue dated 13 August 2019.

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 15 August 2019 as PAD 19-157 for consultation until 29 August 2019. 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 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 your designated Rolls-Royce representative, or download the publication from your Rolls-Royce Care account at <https://customers.rolls-royce.com>.

If you do not have a designated representative or Rolls-Royce Care account, please contact **Corporate Communications** at **Rolls-Royce plc**, P.O. Box 31, Derby, DE24 8BJ, United Kingdom Telephone +44 (0)1332 242424, or

send an email through [http://www.rolls-royce.com/contact/civil\\_team.jsp](http://www.rolls-royce.com/contact/civil_team.jsp) identifying the correspondence as being related to **Airworthiness Directives**.

