



## Emergency Airworthiness Directive

**AD No.:** 2018-0171-E

**Issued:** 06 August 2018

Note: This Emergency 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:**

AIRBUS

**Type/Model designation(s):**

A380 aeroplanes

**Effective Date:** 08 August 2018

**TCDS Number(s):** EASA.A.110

**Foreign AD:** Not applicable

**Supersedure:** This AD supersedes EASA Emergency AD 2016-0143-E dated 19 July 2016.

### ATA – Airplane Flight Manual – Air Conditioning / Engine Bleed Air System – Amendment

**Manufacturer(s):**

Airbus

**Applicability:**

Airbus A380-841, A380-842 and A380-861 aeroplanes, all manufacturer serial numbers.

**Definitions:**

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

**The AFM TR:** Airbus A380 Airplane Flight Manual (AFM), Temporary Revision TR 204 issue 2 dated 01 August 2018.

**Reason:**

During in-service inspection, damage to a right-hand wing canoe fairing and puncture mark in the skin, extensively exposing the fairing honeycomb core, were detected. Additional inspection accomplished on the affected nacelle and pylon determined that the Left-Hand (LH) forward hinge panel was missing and the LH aft hinge panel was damaged. Investigation results revealed that, during take-off phase of the flight, double and dependent failure of the High Pressure Valve (HPV) and Pressure Regulating Valve (PRV) led to Over Pressure Valve (OPV) closure, as expected by the



design. This event consequently led to an uncontrolled overpressure in the pneumatic system and a rupture of the bleed duct bellow of the engine pylon.

This condition, if not corrected, could lead to rupture of the pneumatic ducting with consequent hot air leakage at critical locations and exposure of the surrounding structure to heat stress, possibly resulting in reduced structural integrity of the wings.

To initially address this potential unsafe condition, Airbus issued AFM TR 204 issue 1 to provide instructions applicable during take-off and climbing with cross-bleed selector in open position. In addition, as the leak isolation could be impaired by cross-bleed switch failure and the cross-bleed selector (and manual mode) might not be regularly checked when operating in normal conditions, it was necessary to check the correct functioning of the cross-bleed selector. Consequently, EASA issued Emergency AD 2016-0143-E to require amendment of the applicable AFM and operating the aeroplane accordingly, and accomplishment of a one-time operational check (OPC) of cross-bleed selector in manual mode.

Since that AD was issued, new cases of engine bleed duct rupture were reported, leading to structural damage in critical area. It was determined that engine bleed air system (EBAS) software standard 6.4, required to be installed by EASA AD 2017-0135, prevents overpressure scenario and bleed duct rupture when the aeroplane takes-off with bleed air supplied by engines and when at least one pack is used. However, the overpressure scenario and bleed duct rupture is not prevented when the aeroplane takes-off with both packs 'OFF' or when bleed air is supplied by the auxiliary power unit (APU). Consequently, Airbus updated the AFM TR 204 to issue 2 accordingly.

For the reasons described above, this AD supersedes EASA AD 2016-0143-E and requires incorporation of the AFM TR 204 issue 2 and operating the aeroplane accordingly. In addition, as the one-time operational check of the crossbleed selector in manual mode was reportedly accomplished on the entire fleet, that action is not retained in this AD.

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:

- (1) Before next flight after the effective date of this AD, amend the Sections LIMITATIONS and NORMAL PROCEDURES of the applicable AFM by removing TR 204 issue 1 (required by EASA AD 2016-0143-E), and incorporating the AFM TR, inform all flight crews, and, thereafter, operate the aeroplane accordingly.
- (2) Amending the applicable AFM to incorporate a later AFM revision, which includes the AFM TR, as required by paragraph (1) of this AD, is acceptable to remain compliant with the requirements of paragraph (1) of this AD.

#### **Ref. Publications:**

Airbus A380 AFM TR 204 issue 2 dated 01 August 2018.



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. The results of the safety assessment have indicated the need for immediate publication and notification, without the full consultation process.
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. 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: AIRBUS SAS - EIANA (Airworthiness Office),  
E-mail: [account.airworth-A380@airbus.com](mailto:account.airworth-A380@airbus.com).

