

Subject: Fan blades – Life Limitation**Ref. Publications:**

CFM International S.A. Service Bulletin (S/B) CFM56-7B S/B 72-1050 original issue dated 13 June 2019.

[EASA Airworthiness Directive \(AD\) 2019-0018](#) original issue dated 30 January 2019.

Applicability:

CFM 56-7B engines, all serial numbers.

These engines are known to be installed on, but not limited to, Boeing 737-600, 737-700, 737-800 and 737-900 aeroplanes.

Description:

Two occurrences were reported of fan blade failure on CFM56-7B engines. In each event, the released fan blades were initially contained by the engine case, but there was subsequent forward release of debris and separation of the inlet cowl. Investigation determined that the events were due to fracture in the fan blade root dovetail, which had initiated from a fatigue mechanism.

To address this potential unsafe condition, CFM International issued various S/Bs and EASA issued AD 2019-0018 (hereafter referred to as “the AD”) requiring repetitive inspections of fan blades, and, depending on findings, accomplishment of applicable corrective actions.

Since the AD was issued, and following further investigation, CFM International determined that implementation of a fan blade life limit, which leads to removal from service of the most susceptible fan blades, will contribute significant benefit towards reducing the number of cracked fan blades, thus increasing the safety level of the fleet.

CFM International issued CFM56-7B S/B 72-1050 (hereafter referred to as “the S/B”) to provide recommended fan blade life limits and instructions to estimate the fan blade cycles since new (FBCSN) when this datum is unknown.

While EASA agrees that implementation of a recommended fan blade life limit will have a safety benefit, analysis shows that the inspection programme required by the AD is expected to timely detect any cracked fan blades, and the predicted risk level has been shown to be acceptable to regulatory requirements, even without consideration of the further benefits of the recommended fan blade life limit as specified in the S/B.

This is information only. Recommendations are not mandatory.



At this time, the safety concern described in this SIB is not considered to be an unsafe condition that would warrant AD action under Regulation (EU) [748/2012](#), Part 21.A.3B.

Recommendation(s):

EASA recommends to remove engine fan blades from service before exceeding the applicable recommended life limit, as specified in the S/B. EASA also recommends not to (re)install spare fan blades that have exceeded the applicable recommended life limit, as specified in the S/B.

Contact(s):

For further information contact the EASA Programming and Continued Airworthiness Information Section, Certification Directorate, E-mail: ADs@easa.europa.eu.

For any question concerning the technical content of this SIB, please contact:

CFM International S.A., Customer Support Centre, Telephone: +33 1 64 14 88 66, Fax: +33 1 64 79 85 55, E-mail: cfm.csc@safrangroup.com;

or

CFM Inc. Aviation Operations Centre, Telephone: +1 513-552-3272, or +1 877-432-3272, Fax: +1 877-432-3329, E-mail: geae.aoc@ge.com, or aviation.fleetsupport@ge.com.

This is information only. Recommendations are not mandatory.

