

AIRWORTHINESS DIRECTIVE

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Inspection and/or modifications described below are mandatory. No person may operate a product to which this Airworthiness Directive applies except in accordance with the requirements of this Airworthiness Directive.

Translation of 'Consigne de Navigabilité' ref. : 98-097(B)
In case of any difficulty, reference should be made to the French original issue.

CFM INTERNATIONAL

Turbo Fan engines CFM56-5, -5B, -5C all models

Accessory gear box (AGB) and transfer gear box (TGB)

1) Applicability :

Warning : Some engines may be in several lists.

List 1A : (First batch of CFM56-5 engines with suspect gearshaft cluster spur assy 31x71 teeth (line 2) in the accessory gear box (AGB)). Engines serial numbers 731951, 731954, 731955, 731959, 731960, 731962, 731963, 731966, 731969. (See Service Bulletin CFM56-5 S/B 72-523 Revision 1).

List 1B : (Second batch of CFM56-5 engines with suspect gearshaft cluster spur assy 31x71 teeth (line 2) in the accessory gear box (AGB)). Engines serial numbers 731943 to 731948, 731952, 731953, 731956 to 731958, 731973. (See Service Bulletin CFM56-5 S/B 72-523 Revision 1).

List 2A : (First batch of CFM56-5B engines with suspect gearshaft cluster spur assy 31x71 teeth (line 2) in the accessory gear box (AGB)). Engines serial numbers 779316, 779318, 779322, 779323, 779330, 779332, 779339. (See Service Bulletin CFM56-5B S/B 72-211 Revision 1).

List 2B : (Second batch of CFM56-5B engines with suspect gearshaft cluster spur assy 31x71 teeth (line 2) in the accessory gear box (AGB)). Engines serial numbers 779307 to 779315, 779317, 779327. (See Service Bulletin CFM56-5B S/B 72-211 Revision 1).

List 3A : (First batch of CFM56-5C engines with suspect gearshaft cluster spur assy 31x71 teeth (line 2) in the accessory gear box (AGB)). Engines serial numbers 741666, 741668, 741670 to 741674, 741676, 741677, 741680, 741682, 741684. (See Service Bulletin CFM56-5C S/B 72-350 Revision 1).

List 3B : (Second batch of CFM56-5C engines with suspect gearshaft cluster spur assy 31x71 teeth (line 2) in the accessory gear box (AGB)). Engines serial numbers 741653, 741655, 741665, 741667, 741669, 741675, 741678, 741679, 741681. (See Service Bulletin CFM56-5C S/B 72-350 Revision 1).

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2) Reason :

Three in Flight Shut Downs were experienced on CFM56-3 engines due to failure of starter gearshaft in the accessory gear box (AGB). The first analysis results show also a risk of failure of others gearshafts of the transfer gear box (TGB) or the accessory gear box (AGB) on CFM56-5, -5B or -5C engines, which could lead to an in Flight Shut Down.

3) Mandatory actions :

Excepted if already done, accomplish the following :

- a) Remove from service the gearshaft cluster spur assy (31x71 teeth) in the accessory gear box (AGB) of engines in the above lists 1A and 1B. (See Service Bulletin CFM56-5 S/B 72-523 Revision 1) under the schedule of paragraph 4 hereafter.
- b) Remove from service the gearshaft cluster spur assy (31x71 teeth) in the accessory gear box (AGB) of engines in the above lists 2A and 2B. (See Service Bulletin CFM56-5B S/B 72-211 Revision 1) under the schedule of paragraph 4 hereafter.
- c) Remove from service the gearshaft cluster spur assy (31x71 teeth) in the accessory gear box (AGB) of engines in the above lists 3A and 3B. (See Service Bulletin CFM56-5C S/B 72-350 Revision 1) under the schedule of paragraph 4 hereafter.

4) Dates of compliance :

- a) For twin engines planes which have two engines in the above lists replace **before the next flight** all the suspect gearshafts on one engine performing the above mandatory actions 3A and 3B.

For four engines planes which have more than one engine in the above list 3A replace **before the next flight** the suspect gearshafts performing the above mandatory action 3C in order to keep in use a maximum of one concerned engine.

- b) For the installed engines of list 1A perform before January 15, 1998 (applicable date of CN 97-354(B) Revision 3) above mandatory action 3A.

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- c) For the installed engines of list 2A perform before January 15, 1998 (applicable date of CN 97-354(B) Revision 3) above mandatory action 3B.
- d) For the installed engines of list 3A perform before January 15, 1998 (applicable date of CN 97-354(B) Revision 3) above mandatory action 3C.
- e) For the installed engines of list 1B perform before March 1st, 1998 above mandatory action 3A.
- f) For the installed engines of list 2B perform before March 1st, 1998 above mandatory action 3B.
- g) For the installed engines of list 3B perform before March 1st, 1998 above mandatory action 3C.

5) **Note** :

The present Airworthiness Directive re-opens and completes the requirements of AD 97-354(B) Revision 3 dated December 17, 1997 (which is cancelled by - Revision 4) for CFM56-5, -5B and -5C engines.

6) **References** :

CFM56-5 S/B 72-523 R1
-5B S/B 72-211 R1
-5C S/B 72-350 R1

EFFECTIVE DATE : UPON RECEIPT