

AIRWORTHINESS DIRECTIVE

released by DIRECTION GENERALE DE L'AVIATION CIVILE

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.: 97-354(B)R3

In case of any difficulty, reference should be made to the French original issue.

CFM INTERNATIONAL

Turbo Fan engines CFM56-3, CFM56-5, CFM56-5B, CFM56-5C 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 CFM56-3 engines with suspect starter gearshaft (line 5) in the accessory gearbox (AGB)) Engines serial numbers 858619 to 858622, 858624, 858627 to 858635, 858638, 858640, 858641, 858644, 858647, 858657. (See Service Bulletin 72-863 Revision 1).

List 1B : (Second batch of CFM56-3 engines with suspect starter gearshaft (line 5) in the accessory gearbox (AGB)) Engines serial numbers 858639, 858642, 858643, 858646, 858648 to 858656, 858658, 858660, 858662 to 858665, 858670, 858671, 858673, 858676, 858678. (See Service Bulletin 72-863 Revision 1).

List 2A : (CFM56-3 engines with suspect 26 teeth input bevel gear (line 1) in the transfer gear box (TGB)) Engines serial numbers 858568, 858571, 858576, 858624, 858625, 858630 to 858639, 858641 to 858643, 858646 to 858651, 858654 to 858657, 858660 to 858662, 858665 to 858668, 858673, 858687, 858688, 858701, 722201. (See Service Bulletin 72-865).

List 2B : (CFM56-3 engines with suspect 27 teeth output bevel gear (line 2) in the transfer gear box (TGB)) Engines serial numbers 858635 to 858637, 858642, 858643, 858646, 858648, 858656, 858657, 858662, 858663, 858665 to 858669, 858671 to 858677, 858679 to 858681, 858684, 858686, 858688, 858689, 858691, 858700. (See Service Bulletin 72-865).

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December 17, 1997

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List 3 : (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 72-523).

List 4 : (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, 779330, 779332, 779339. (See Service Bulletin 72-211).

List 5 : (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 72-350).

2) Reason :

Three in flight shut downs were experienced 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) which could lead to an in flight shut down.

3) Mantatory actions :

- a) For engines in above lists 1A, 1B, 2A and 2B perform a daily check of the AGB and TGB magnetic chip detector (MCD). If magnetic particles are found, remove from service AGB and TGB. (See Service Bulletin 72-A861 Revision 2).
- b) Remove from service the starter gearshaft in the AGB of engines in the above list 1A and list 1B. (See Service Bulletin 72-863 Revision 1).
- c) Remove from service the input bevel gearshaft in the TGB of engines in the above list 2A. (See Service Bulletin 72-865).
- d) Remove from service the output bevel gearshaft in the TGB of engines in the above list 2B. (See Service Bulletin 72-865).
- e) Remove from service the gearshaft cluster spur assy (31x71 teeth) in the accessory gear box (AGB) of engines in the above list 3. (See Service Bulletin 72-523).
- f) Remove from service the gearshaft cluster spur assy (31x71 teeth) in the accessory gear box (AGB) of engines in the above list 4. (See Service Bulletin 72-211).
- g) Remove from service the gearshaft cluster spur assy (31x71 teeth) in the accessory gear box (AGB) of engines in the above list 5. (See Service Bulletin 72-350).

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4) Dates of compliance :

- a) For twin engines planes which have the two engines in the sum of the above lists replace before the next flight all the suspect gearshafts on one engine performing the above mandatory actions 3A, 3B, 3C, 3D, 3E and 3F.
For four engines planes which have more than one engine in the above list 5 replace before the next flight the suspect gearshafts performing the above mandatory action 3G in order to keep in use a maximum of one concerned engine.
- b) For the installed engines of list 1A perform before December 12, 1997 above mandatory action 3B.
- c) For the installed engines of list 1B perform before January 20, 1998 above mandatory action 3B.
- d) For the installed engines of list 2A perform before December 20, 1997 above mandatory action 3C.
- e) For the installed engines of list 2B perform before January 20, 1998 above mandatory action 3D.
- f) For the installed engines of list 3 perform before January 15, 1998 above mandatory action 3E.
- g) For the installed engines of list 4 perform before January 15, 1998 above mandatory action 3F.
- h) For the installed engines of list 5 perform before January 15, 1998 above mandatory action 3G.

This Airworthiness Directive 97-354(B)R3 was issued telegraphically on December 1st, 1997, effective on receipt ; the Telegraphic AD T97-354 dated October 31, 1997 and its Revision 1 dated November 07, 1997 and Revision 2 dated November 21, 1997 have not been disseminated as paperwork.

EFFECTIVE DATE : On receipt

of the telegraphic AD issued on DECEMBER 1st, 1997