AD/CFM56/12 Accessory and Transfer Gearbox Replacement 6/98 TX

Applicability: CFM International (CFMI) CFM56-3, all models, turbofan engines with serial numbers as listed below (Warning: some engines may appear in more than one list):

List 1A: (First batch of CFM56-3 engines with suspect starter gearshaft (line 5) in the accessory gearbox): Engine Serial Number (ESN): 858619 to 858622, 858624, 858627 to 858635, 858638, 858640, 858641, 858644, 858647, 858657 (See Service Bulletin CFM56-3/ -3B/ -3C S/B 72-863 revision 1).

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

List 2A: (CFM56-3 Engines with suspect 26 teeth input bevel gear (line 1) in the transfer gear box). ESN: 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 CFM56-3/ -3B/ -3C S/B 72-865).

List 2B: (CFM56-3 Engines with suspect 27 teeth output bevel gear (line 2) in the transfer gear box): ESN: 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 CFM56-3/ -3B/ -3C S/B 72-865).

List 3: (CFM56-3 engines with suspect intermediate gearshaft 44x73 teeth (line 9)in the accessory gearbox). ESN 858619 to 858622, 858624, 858627 to 858642, 858644 to 858652, 858654, 858657 to 858660, 858666, 858668. (See Service Bulletin CFM56-3/ -3B/ -3C S/B 72-873 Revision 1).

Requirement:

1. For all engines in Lists 1A, 1B, 2A and 2B above, check the AGB and TGB magnetic chip detector (MCD). If magnetic particles are found, remove the AGB and TGB from service in accordance with Service Bulletin CFM56-3/ -3B/ -3C S/B 72-A861 Revision 3.

2. For all engines in Lists 1A and 1B, remove from service the starter gearshaft in the AGB in accordance with Service Bulletin CFM56-3/ -3B/ -3C S/B 72-863 Revision 1.

3. For all engines in List 2A, remove from service the input bevel gearshaft in the TGB in accordance with Service Bulletin CFM56-3/ -3B/ -3C S/B 72-865.

4. For all engines in List 2B, remove from service the output bevel gearshaft in the TGB in accordance with Service Bulletin CFM56-3/ -3B/ -3C S/B 72-865.

5. For all engines in List 3, remove from service the intermediate gearshaft cluster (44x73 teeth) in the AGB in accordance with Service Bulletin CFM56-3/ -3B/ -3C S/B 72-873.

6. For twin engined aircraft which have both engines in one or more of the applicability lists, all the suspect gearshafts (as identified in items 2 - 5 above) on one engine must be replaced.

Note 1: Actions listed above which have already been completed under AD/CFM-56/8 need not be repeated under this directive.

Note 2: DGAC T98-096 (B) dated 25 February 1998 refers.

Compliance:

1. Daily.

2. For engines in List 1A, before 20 December 1997. For engines in List 1 B, before 20 January 1998.

3. Before 20 December 1997.

4. Before 20 January 1998.

5. Before 15 April 1998.

6. Before next flight.

This airworthiness directive becomes effective on 26 March 1998.

Background: Three in flight shut downs were experienced due to failure of starter gearshafts in the accessory gearbox (AGB). The first analysis results shows also a risk of failure of the conical gearshafts of the transfer gearbox (TGB) which could lead to an in flight shut down. This directive supersedes the CFM56-3 requirements of AD/CFM-56/8 which has been cancelled.