

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



CEN22FA317

AIRWORTHINESS

Group Chair's Factual Report - Attachment #5

T53 Engine S/N LE-23701RX Work Order No.1157, page 5

December 8, 2023



Engine #: 1-000-060-23 Model #: T53-L-703 S/N: LE-23701RX W.O. #: 1157

TASK	TECHNICIAN INITIALS & DATE	INSPECTOR STAMP & DATE
19. Insert splined tool (part of holding device), turn <u>clockwise</u> , and tighten nut 420 to 540 inch-pounds torque. Torque Wrench #: <u>1290000 7160</u>	FEB 09 2018 [Redacted]	2018 OAW INSP 111
20. Install holding fixture LTCT4904 on gearbox cover assembly and in spline of accessory drive gear assembly (74).	FEB 09 2018 [Redacted]	[Redacted]
21. Install cover gasket (68) with sealant (Hylomar or equivalent).	FEB 09 2018 [Redacted]	[Redacted]
22. NOTE: Access plug must be removed from test fixture LTCT207 prior to installing backlash gauge. Inner line of LTCT2099 flag is used for accessory gearbox backlash check. Install backlash gauge LTCT2099 in outer pinion gearshaft assembly (82).	FEB 09 2018 [Redacted]	[Redacted]
23. Using a dial indicator, check outer pinion gearshaft assembly (82) and accessory drive gear assembly (74) backlash. Backlash must be 0.006 to 0.012 inch. If backlash exceeds limits, remove and disassemble pinion gearshaft and bearing assembly (83), and select a more suitable shim (84). Reassemble pinion gearshaft and bearing assembly, install, and repeat backlash check until limits are obtained. Actual Backlash: <u>0.011</u>	FEB 09 2018 [Redacted]	2018 OAW INSP 111
24. When acceptable backlash is established, remove holding fixture LTCT4904 and test fixture LTCT207. Remove pinion gearshaft and bearing assembly (83) from gearbox housing, and examine tooth pattern on outer pinion gearshaft assembly (82) and accessory drive gear assembly (74). (See SPM, SP B102, 70-55-01 for acceptable gear tooth patten.)	FEB 09 2018 [Redacted]	2018 OAW INSP 111
25. When correct backlash and gear pattern are established, proceed as follows: A. Position holding device LTCT115 on cover mounting pad studs, check tangs of holding device, and engage slots of spanner nut (33).	FEB 09 2018 [Redacted]	[Redacted]
B. Insert splined tool into holding device and into accessory drive gear assembly (74) splines.	FEB 09 2018 [Redacted]	[Redacted]
C. Using suitable wrench, turn splined tool clockwise to remove spanner nut (33). Remove holding device.	FEB 09 2018 [Redacted]	[Redacted]
D. Remove nut, lock cup (34), and seal spacer (35).	FEB 09 2018 [Redacted]	[Redacted]