Grant Robinson

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Sent: Thursday, June 01, 2017 12:45 PM
To: Grant Robinson
Cc: Mrazik, Philip; Atiporn Chiwcharoen
Subject: S-76D MLG Door Hinge and Fitting Bushing Clarification

Grant

Per the request of Russ and Gary, following is the CSR response to my FTR requesting clarification of the correct S-76D door hinge and fitting bushing installation.

Case Number: C0061323
Customer: Thai Aviation Services Limited
Aircraft S/N: 761XXX
Aircraft Model: S-76D
ATA: 32
Part Number: 76207-10106-013
Case Subject: MLG Door Bushing P/N-Request For Mixed Dash Numbers
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Issue Description:
Reference FTR 65516T007 CRM Log ID 80244
S-76D IPC CH 32-10-04 Figure 1 IPC Item 3 – Door fitting

According to the IPC effectivity all D models built to date were constructed with the P/N 76209-02019-053 door fitting (eff 10041099).

Ambiguously, the IPC also calls out fitting P/N 76209-02019-056 but does not assign a production cut-in A/C S/N.

According to the drawing Parts List, the two fittings consist of the following:
- 76209-02019-053 Fitting Assembly
    - 76209-02019-111 Fitting (Qty 01)
    - 76209-02019-112 Bushing (Qty 02)

- 76209-02019-056 Fitting Assembly
    - 76209-02019-111 Fitting (Qty 01)
    - 76209-02019-113 Bushing (Qty 02)

Field Mod Drawing 76070-02019 upgrades the -053 fitting assembly to -056 by installation of -113 bushings.

Note 10 of the drawing states to coat the ID of the bushing bore and OD of the bolt shank with MIL-L-21260 during assembly.

Flag Note 13 states that after modification, no reidentification of the part is required.

IPC Item 16 – Airframe fitting – Per the IPC, P/N 76209-02019-054 L/H and -055 R/H airframe fitting assemblies use only P/N 76209-02019-113 bushings by virtue of having been already upgraded by Field Mod Dwg No. 76070-02019-012/-013.

Please advise the following
1. Is it the IPC intent to permit mixed bushings such as -113 on the A/F fitting and -112 on the hinge fitting?
2. Note 10 on 76070-20107 states to coat the ID of the -113 bushing bore and OD of the bolt with MIL-L-21260 during assembly. Does this requirement also apply to mixed bushing configurations?

3. Will the data in M/K Dwg 76070-20107 be published to the field to permit upgrading of the -053 fitting assembly having -112 bushings to the -056 configuration with -113 bushings?
4. TAS request a Sikorsky No Technical Objection to continue operation with mixed -112 / -113 bushings until such time as SCI can provide adequate replacement bushings to permit standardization on -113. EoM

Problem Resolution:
Q1. Is it the IPC intent to permit mixed bushings such as -113 on the A/F fitting and -112 on the hinge fitting?
A1. Sikorsky does not recommend the mixing of fittings but it is not prohibited. The recommendation is to replace by hinge the 4 bushings with an -113 along with the bolt and other hardware as described below. This will result in an improvement in wear rates which is the goal of introducing the -113. Mixing is expected to give uneven wear rates but no worse than the old -112 bushing with the old bolts.

Q2. Note 10 on 76070-20107 states to coat the ID of the -113 bushing bore and OD of the bolt with MIL-L-21260 during assembly. Does this requirement also apply to mixed bushing configurations?
A2. Yes, it is recommended.

Q3. Will the data in M/K Dwg 76070-20107 be published to the field to permit upgrading of the -053 fitting assembly having -112 bushings to the -056 configuration with -113 bushings?
A3. A SoundOff was submitted, adding the upgrade with the proper bushings configuration.

Q4. TAS request a Sikorsky No Technical Objection to continue operation with mixed -112 / -113 bushings until such time as SCI can provide adequate replacement bushings to permit standardization on -113.
A4. Sikorsky will allow the mixing of bushing (-112/-113) and bolt (NAS6704-13/NAS6704CD13) in any combination with the understanding that to achieve a slower wear rate that both four new bushings (-113) and the new bolt (NAS6704CD13) need to be used at each hinge.

The total parts need for each of the four hinges is shown below. An aircraft retrofit requires the below quantities times four.

AN320-4 Nut
MS24665-134 Cotter Pin
(2) NAS1149D463K Washer
NAS6704CD13 Bolt
(4) 76209-02019-113 Bushing

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