ENSTROM HELICOPTER CORPORATION
2209 22ND STREET, P.O. BOX 490, MENOMINEE, MICHIGAN 49858-0490 USA

SERVICE DIRECTIVE BULLETIN

DATE: February 15, 2002

1. SUBJECT: Oil Cooler Impeller Assembly Inspection

2. MODEL: TH-28 and 480

3. EFFECTIVITY: All serial numbers equipped with an impeller shaft assembly, P/N 4129101-905 or 4129101-907 (Refer to Figure 1)

4. BACKGROUND:

During an unscheduled disassembly of an oil cooler impeller shaft assembly, P/N 4129101-905, Enstrom found that the taper pin that secures the drive hub to the impeller shaft and the taper pin hole in the shaft were excessively worn. The total time on the impeller shaft assembly was approximately 135 hours, and Enstrom does not know if a manufacturing problem or other factors contributed to the excessive wear.

5. COMPLIANCE:

At or before the next 100 hour/annual inspection, inspect the taper pin securing the drive hub for wear in accordance with paragraph 5.1.

NOTE

This SDB only applies to impeller shaft assemblies, P/Ns 4129101-905 & -907, with externally mounted drive hubs (Refer to Figure 1).

5.1. INSPECTION:

NOTE

Perform all maintenance in accordance with the TH-28/480 Series Maintenance Manual.

1. Remove the engine oil cooler inlet ducting, the left side inlet air transfer duct, and the intermediate shaft from between the lower pulley assembly and the impeller assembly.

NOTE

To aid reinstallation of the intermediate shaft, document the washer and spacer stack-ups used on the intermediate shaft flex packs.

2. Inspect the drive hub for looseness on the impeller shaft.

3. Using the taper pin removal tool (T-0092) or other suitable device, remove the taper pin securing the drive hub to the impeller shaft, and inspect the taper pin for a groove worn into its surface.

4. Index mark the drive hub and impeller shaft and remove the drive hub.

5. Inspect the taper pin hole in the impeller shaft for elongation.

6. If the drive hub is not loose on the impeller shaft, the taper pin does not have a groove worn into its surface, and the taper pin hole in the impeller shaft is not elongated, reinstall the drive hub onto the impeller shaft and install the taper pin Reinstall the intermediate shaft, air transfer duct, and oil cooler inlet ducting

7. If the drive hub is loose on the impeller shaft, the taper pin does have a groove worn into its surface, or the taper pin hole in the impeller shaft is elongated, remove the impeller assembly from the helicopter. Install and align an airworthy impeller assembly. Reinstall the intermediate shaft, air transfer duct, and oil cooler inlet ducting.

5.2. PARTS:

The impeller assembly with an externally mounted drive hub, P/N 4129101-905 or -907, is superceded by an impeller assembly with an internally mounted drive hub, P/N 4129101-9 or -101. The TH-28/480 Series Illustrated Parts Catalog (IPC), dated November 16, 2001, includes the latest configuration of the impeller assembly.

6. SPECIAL TOOLS: Taper Pin Removal Tool, T-0092

7. MAN-HOURS: 1 Man-hour per inspection
3 Man-hours for impeller replacement

8. WARRANTY: Per Enstrom Warranty Policy

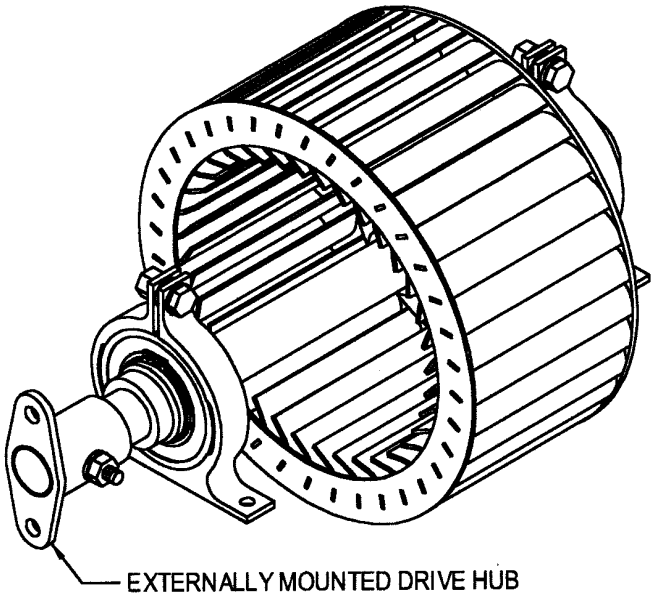
9. WEIGHT CHANGE: N/A

10. LOG BOOK ENTRY:

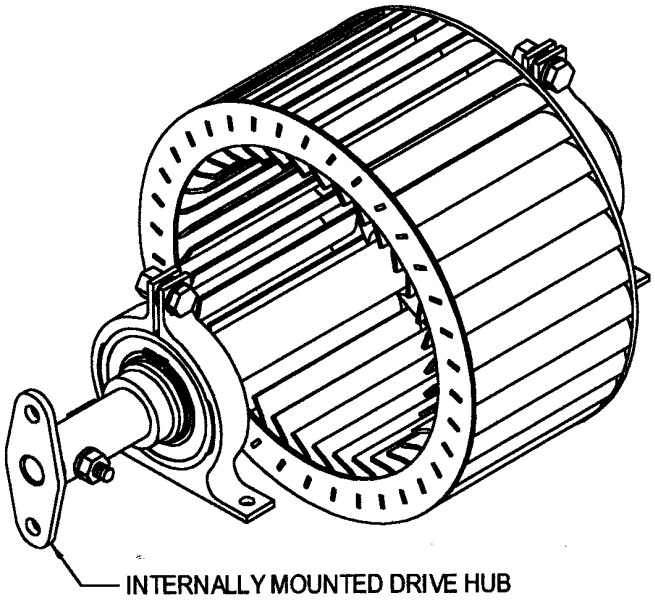
Enter compliance with this SDB and as required for maintenance actions.

11. REPETITIVE INSPECTIONS:

Perform the inspection requirements of paragraph 5.1 during the 100 hour/annual inspection.



IMPELLER ASSEMBLY, P/N 4129101-905 &-907



IMPELLER ASSEMBLY, P/N 4129101-9 &-101

FIGURE 1