THE ENSTROM HELICOPTER CORPORATION
TWIN COUNTY AIRPORT, P.O. BOX 490, MENOMINEE, MICHIGAN 49858

SERVICE INFORMATION LETTER

Date: February 14, 1980

Subject: Over-Running Clutch Lubrication

Models: All

Frequency: Preflight Visual and Others as Noted

There have been several clutch failures attributed to insufficient lubrication or improper lubricant being used. The total fluid amount in this unit is less than one ounce, a significant portion of which can be lost very quickly through a leaking seal. The clutch area should be looked at frequently to determine if any leaks exist. When a service check is required, proceed as follows.

Turn clutch until two screws are horizontal and the third screw is above. Remove top screw and one of the side screws. If clutch is properly serviced, oil will seep from the side hole. Add oil through top hole. Because of location of the drilled oil passage, it is possible for the sprags to partially block the hole so that the clutch will take oil very slowly. Adding oil under pressure, using a spring type oiler, can speed servicing. Add oil until a positive stream of oil comes from side hole. Rotate side hole slightly above horizontal and refill again. Reference: Service Instructions, Maintenance Manual, pg. MM 3-4, and lubricants listed below.

If complete loss of oil is suspected, refer to Service Directive Bulletin No. 0027 for inspection procedures. After inspection, if clutch is considered serviceable, proceed as follows before flight:

1. Service clutch as described above.

2. Ground-run helicopter until normal operating temperatures are reached.

3. Increase power until helicopter is light on skids. Split needles and allow rotor RPM to decay to 200. Re-engage normally and repeat a minimum of three times, observing clutch response.

4. If all functions are normal, inspect for leakage and proper oil level before returning helicopter to service.

Replacement seals may be purchased from Enstrom Customer Service.

Note: When ordering seals, specify the dash number of clutch. Dash numbers can be found on face of clutch.

Before servicing the clutch, determine the type of oil previously used. If unable to determine, it is recommended that the clutch be drained, purged with kerosene, and then serviced per instructions. Clutch assemblies leaving the factory since 1973 have been serviced with Aeroshell 500 turbine oil (MIL-L-7808). Oils meeting necessary approval for use in this clutch are qualified under MIL-L-7808 and MIL-L-23699. Mixing of these two Mil Spec oils is permissible.

Note: All turbo oils meeting MIL-L-7808 or MIL-L-23699 are approved for use. Listed are some approved oils by brand name:

Aeroshell 500 Turbine Oil
Mobil Jet Oil #2
Turbo Oil Exxon #2380
Turbo Oil Exxon #15
Mobil Avrex 5 Turbo #256