



## Seal Replacement - Main Rotor Transmission- F-28/280 Series Aircraft

A. Replace the upper mast seal as follows:

- (1) Remove the main rotor hub .
- (2) Remove the slinger from the mast.
- (3) Remove the seal from the transmission housing.

### NOTE

Wrap a piece of shim stock around the upper portion of the mast to protect the seal from damage during installation. Reposition the shim stock to the lower end of the mast when installing the seal into the transmission housing.

- (4) Lubricate the lip of the new seal (STP). Install the seal into the transmission housing. Tap the seal into the housing as required to seat the seal.
- (5) Install the slinger into position and secure in place using RTV-732 Sealant or equivalent.
- (6) Reinstall the main rotor hub.

B. Replace the pinion seal as follows:

- (1) Remove the upper pulley assembly.
- (2) Raise the aircraft using the ground handling wheels. Block the aft end of the skid tubes so the aircraft will not rock back onto the tail rotor guard.

### NOTE

Later production transmissions incorporate a seal retainer with a retaining ring to secure the pinion seal. Transmissions returned to Enstrom for overhaul/repair will have the new seal retainer incorporated.

- (3) Remove the retaining ring and pinion seal from the seal retainer.

## **NOTE**

Wrap a piece of shim stock around the bearing adapter in the pinion assembly to protect the seal from damage during installation.

(4) Lubricate the lip of the new seal (STP). Install the seal onto the pinion shaft and install the seal into the seal retainer. Tap as required to seat the seal in the retainer and install the retaining ring. If not equipped with a retaining ring, use RTV-732 Sealant or equivalent to secure the seal.

(5) Reinstall the upper pulley assembly.

C. Replace the lower mast seals as follows:

## **NOTE**

It is recommended to remove the main rotor transmission from the aircraft to replace the lower mast seals. If the main rotor transmission is not to be removed, install the lifting sling onto the main rotor hub assembly and hoist the aircraft until the skids are lightly touching ground before removing the seal retainer from the main rotor transmission.

- (1) Drain the fuel from the fuel tanks.
- (2) Remove the fuel tanks from the aircraft.
- (3) Drain the main rotor transmission.
- (4) Remove the lower swashplate assembly.
- (5) Remove the upper swashplate and guidetube assembly.

## **CAUTION**

Use extreme care when removing the nuts that secure the seal retainer. The transmission will have to be returned for repair if any of the retaining bolts are pushed into the transmission.

## **CAUTION**

Use extreme care when removing the seal retainer from the bottom of the transmission. If the shim(s) located between the seal retainer and spacer are damaged, they must be replaced with the correct thickness of shims.

## **NOTE**

A set of replacement shims is usually sent with the replacement seals.

- (6) Remove the nuts securing the seal retainer and remove the retainer.
- (7) Remove the seals from the retainer.
- (8) Install the new seals in the retainer.

**NOTE**

Wrap a piece of shim stock around the mast retaining nut to protect the seal from damage during installation.

(9) Lubricate the lips of the new seals (STP). Apply a bead of sealant (Loctite 587 or equivalent) to the seal retainer flange.

(10) Install the seal retainer. Install the retaining nuts and torque in a crossing pattern to standard torque.

- (11) Service the main rotor transmission.
- (12) Install the upper swashplate and guidetube assembly.
- (13) Install the lower swashplate assembly.
- (14) Install the fuel tanks.
- (15) Service the fuel tanks.