



ENSTROM HELICOPTER CORPORATION

Reaming and installation procedures for 28-16143-3 rod ends (Doglegs)



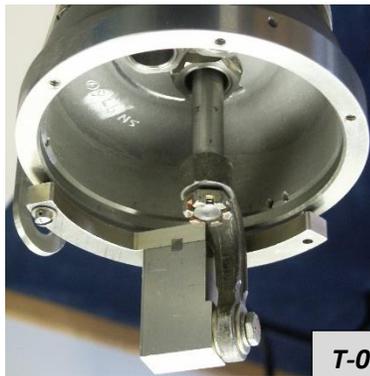
Special tools required:



NPN



T-0045



T-0054

NOTE:

- Reaming new 28-16143-3 rod end assembly (dogleg) will be necessary for installation.
- Rod ends (doglegs) will be match taper reamed to the push-pull rods, 28-16143-3 rod end so rod ends may not fit correctly on other push-pull rods.
- All procedure to be performed in accordance with the Enstrom TH-28/480 series Maintenance Manual and F28F/280FX Maintenance Manual.

Procedure as Follows:

NOTE:

Mark all components so they can be properly indexed on reassembly.

1. Remove lower swashplate (MM, para. 12-76 T), (12-45 P).
2. Remove main rotor push-pull rods (MM, para. 12-86.2 T), (12-45 P).
3. Clean and inspect main rotor push-pull rods in accordance with (MMtable 12-3.1. T), (SIL T-019).
4. Install new rod end (dogleg) onto tapered end of the push-pull rod.
5. Install nut and torque to 130-140 inch lbs.

6. Slip fit cotter pin
 - a. Torque nut to 130 in-lbs. if the cotter pin hole is not lined up, the torque on the nut may be increased to 140 in-lbs. do not back off the torque to line up the cotter pin hole. If the hole cannot be lined up, install a new nut and repeat process.

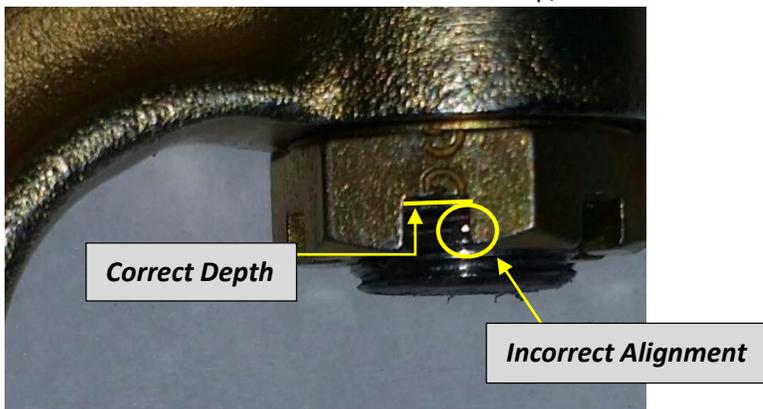


Figure 1

- b. Repeat process on remaining doglegs.

NOTE:

***If the cotter pins can be slip fit proceed to step. (9)
If the cotter pins cannot be slip proceed to step. (7)***

7. If the rod end assembly does not seat on the push-pull rod sufficiently to install the cotter pin, the rod end assembly requires reaming.
 - a. Remove dogleg from push-pull rod using T-0045.

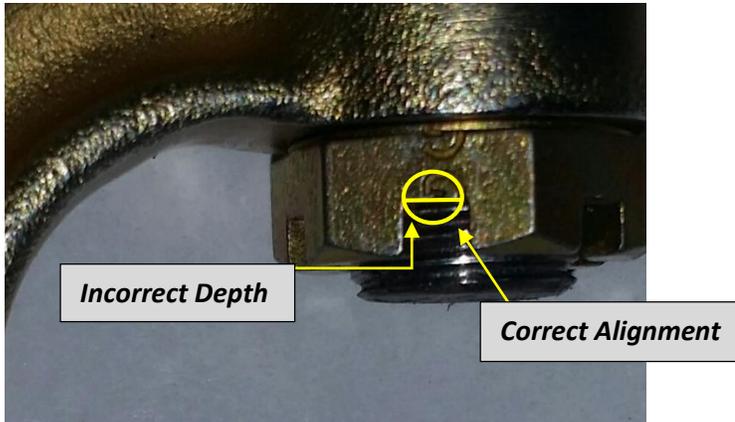


Figure 2

- b. Secure dogleg in padded vise, with large ID facing out Fig. (3)

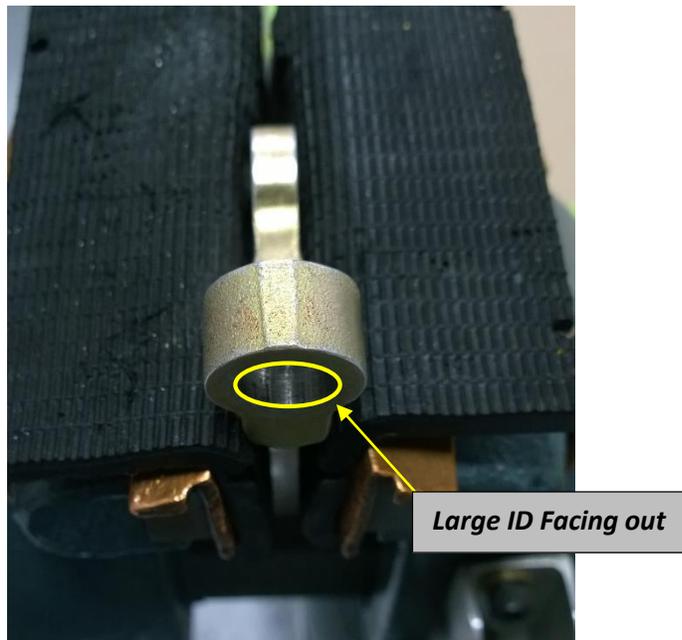
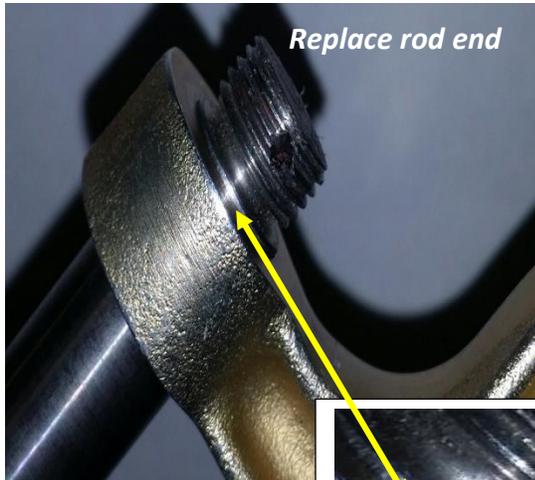


Figure 3



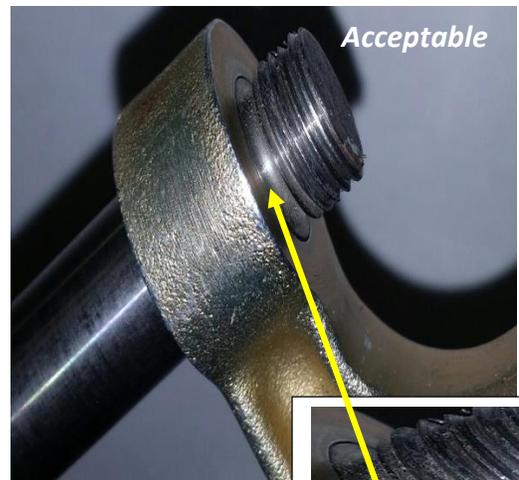
Caution:

If dogleg is reamed too deeply, the dogleg will need to be replaced



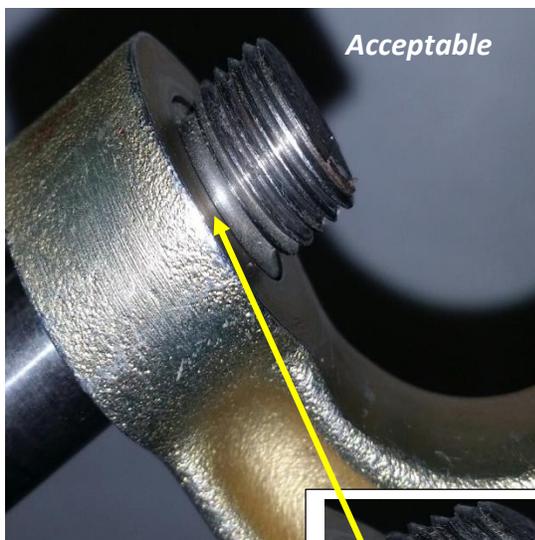
*Tapered rod end shoulder is above the surface of the dogleg. ACTION: **Replace dogleg.***

Figure 4



*Tapered rod end shoulder is flush with the surface of the dogleg. ACTION: **Torque nut and install cotter pin.***

Figure 5



*Tapered rod end shoulder is below the surface of the dogleg. ACTION: **Torque nut and install cotter pin.***

Figure 6

Caution:

Ream as little as possible from ID of doglegs. ½ turns of the ream at a time.

- *Do not use drills or power tools of any kind to ream doglegs.*
- **HAND REAM ONLY!**

NOTE

A Piece of tape can be used instead of the ream stop tool. Using the tape method can be accomplished by following the same steps in this work aid.

8. Reaming inner diameter of dogleg using Enstrom depth stop tool/ tape, or locally purchased number 5 Brown & Sharp, tapered finish ream or equivalent.
 - a. Insert ream into the dogleg being replaced.
 - b. Loosen set screw on ream stop, move ream stop forward to contact dogleg.

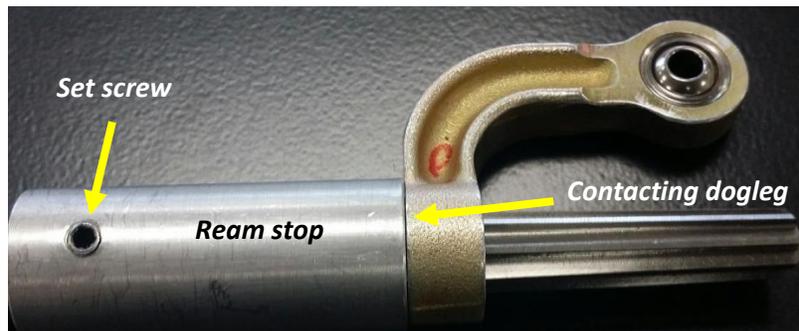


Figure 6

- c. Remove dogleg, using a pair of calipers or machinist ruler, move ream stop or tape forward .150 inches towards the narrow end of the ream, and tighten set screw.



Figure 7

- d. Ream dogleg

NOTE

Enstrom recommends moving the ream stop or tape back by .010 inch each time that reaming process in the work aid is repeated.

- e. Using clean cloth wipe any shavings left in the ID of dogleg from reaming process.



f. Reinstall dogleg repeat process (step 4 through 7, and step 8 c, d, e) as necessary until cotter pin can be slip fit.

9. Reinstall main rotor push-pull rods (MM para. 12-86.4 T) (12-63 P)

10. Install doglegs. (MM para. 12-86.4 T) (12-63 P)

11. Install lower swashplate. (MM para. 12-80 T) (12-64 P)

12. Perform a limited maintenance test flight (MM para. 4-61 T) (12-63 P)