

## 4.0 PTO DRIVELINE INTERMEDIATE SHAFTS

When installing/assembling the PTO driveline intermediate shafts, follow this procedure:

1. Assemble the front jack shaft:
  - a. Lay out the shaft bearings and spacers on work bench.
  - b. Remove the plastic mesh sleeves over splines.
  - c. Use a file or emery cloth to clean burrs and rust from the bearing surfaces on shaft.
  - d. Slide the wide spacer on each end of the shaft against the shoulder on the shaft.
  - e. Slide the narrow spacer on each end of the shaft up against the wide spacer.



**Lay-Out**



**Spacers**

**FIG 4-1 FRONT JACK SHAFT**

2. Install bearings on shaft:
  - a. Remove bearings from their boxes.
  - b. Remove covers over grease zerks.
  - c. Turn set screws out.
  - d. Slide bearing over shaft with the flange toward the center.
  - e. Use sleeve over the shaft to slide or tap the bearing into position.
  - f. Repeat with the other bearing.



**Set Screws**



**Bearing Install**



**Sleeve**



**Installed**

**FIG 4-2 BEARING INSTALLATION**

3. Prepare shaft for mounting into front hitch bracket.
  - a. Tilt the lower part of bearing together.



**Tilted**

- b. Place the assembly on top of the hitch bracket with the grease zerks facing to the right side of the machine.



**On Brackets**

- c. Bring the mounting bolts to the assembly area.



**Bolts**

**FIG 4-3 SHAFT PREPARATION**

4. Move the shaft into position in the brackets:
  - a. Tap the bottom side of the bearing housings with a hammer so the housings fit between the brackets.



**Hammer**



**Positioned**

- b. Install the bearing housing mounting bolts.
- c. Use the thin spacer to check the clearance between the bearing hub and spacer shoulder.

**NOTE**

If the thin spacer can slide between the shoulder and spacer or spacer and hub, the assembly must be disassembled and another spacer added.



**Bolts**

- d. Disassemble and return to step 1 to install another spacer if required.

**NOTE**

Always install the extra spacer on the front of the shaft assembly.



**Clearance**

- e. Tighten mounting bolts to their specified torque.



**Tightened**

**FIG 4-4 SHAFT INSTALLED**

5. Secure hubs to shaft:
  - a. Remove the set screws from hub and apply 243 Loctite to its threads.



**Loctite 243**

- b. Install set screws into hub.
    - c. Repeat with all 4 set screws.



**Mounting**

- d. Tighten all 4 set screws to their specified torque.



**Tightened**

**FIG 4-5 SET SCREWS**

6. Grease each bearing:
  - a. Attach a tool to spline end to turn shaft/bearings.
  - b. Attach grease gun to zerk and turn shaft while greasing bearings to distribute grease to the entire circumference of bearing.
  - c. Repeat with the other bearing.

**NOTE**

Some grease will come out around the bearings during the greasing.



**Front**



**Rear**

**FIG 4-6 GREASING**

7. Assemble the rear jack shaft assembly:
  - a. Lay out parts on the work bench.
  - b. Remove caps from grease zerks.



**Lay-Out**

- c. Slide the bearing over the shaft with the large hub against the shoulder.



**Bearings**

- d. Slide or tap into place with a hammer on a sleeve over the shaft.



**First Bearing**

- e. Repeat with the other bearing.



**Second Bearing**

**FIG 4-7 ASSEMBLING REAR JACK SHAFT**

8. Mount rear jack shaft to the bracket:
  - a. Bring mounting components to work bench and lay out.
  - b. Install mounting bolts through mounting bracket.



**Components**

- c. Attach assembly to bracket and tighten bolts.

**IMPORTANT**

Move the bearing housings and their mounting bolts to keep the bearing hubs against their shoulders. They must be tight against their respective shoulder.

- d. Use a thin spacer to check if hub(s) are against shoulder(s).



**Bolts**



**Attached**

- e. Disassemble jack shaft and install a thin spacer if required.



**Spacing**

- f. Reassemble with additional spacer and tighten mounting bolts to their specified torque.



**Spacer Installed**



**Assembled**

**FIG 4-8 MOUNTING REAR JACK SHAFT**

9. Secure bearing hubs to shaft:
  - a. Remove set screws from hub.
  - b. Apply 243 Loctite to threads.
  - c. Install set screw and tighten to specified torque.
  - d. Repeat with the other 3 set screws.



**Loctite**



**Tightened**

**FIG 4-9 SET SCREWS**

10. Grease the bearings:
  - a. Turn the shaft while greasing:
    - Front bearing.
    - Rear bearing.



**Front**



**Rear**

**FIG 4-10 GREASING BEARINGS**

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