TSB DXX 0008

TECHNICAL SERVICE BULLETIN

INSTALLING PULLEYSHAFT SEALS ON A JCSS-PRODUCED GEARBOX

1-800-278-3353 · www.jcsteele.com

SAFETY

J.C. Steele and Sons equipment is designed to process large amounts of heavy products. To accomplish many of the required operations of our customers, high horsepower and heavy components are required. A great deal of time and effort has been invested into our equipment to make them as safe as practically possible. The safety features are no substitute of caution and common sense. A careless moment is all that is needed to cause a serious accident. Please refer to the machine's Owner's Manual for a detailed list of safety precautions.

GENERAL DESCRIPTION

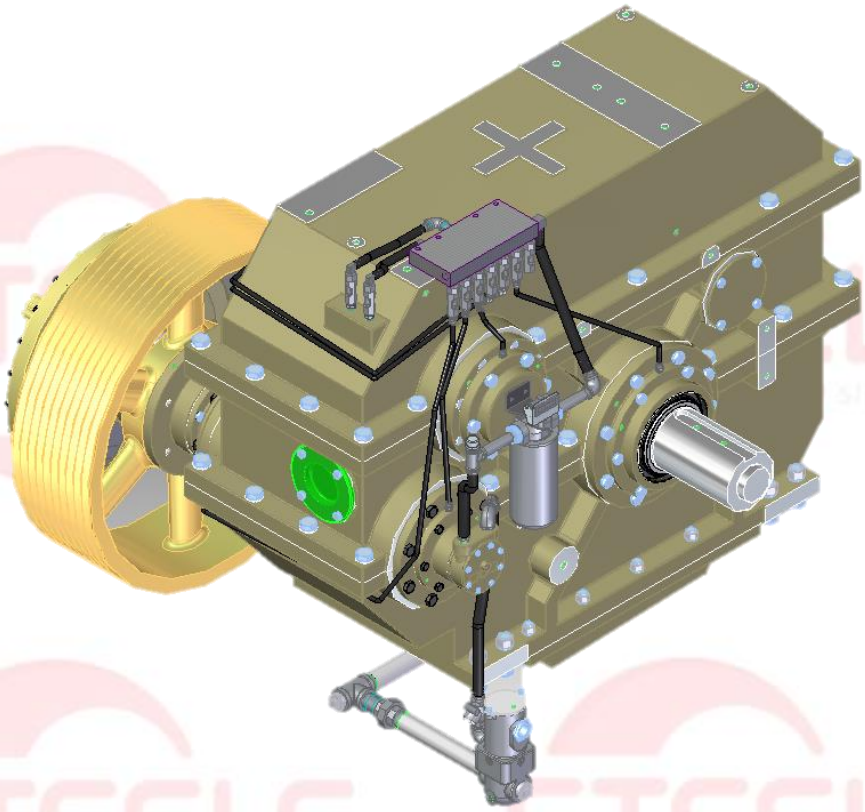

FIG 1: 90BDPS Gearbox

This Technical Service Bulletin outlines the procedure to install the pulley shaft seals on the 90BDPS, 75ADEX, 75ADC, and 75ADPS, although all the diagrams utilize the 90BDPS model. To combat a reoccurring leak emanating from the input shaft of the machines using the double reduction gearbox, several modifications to the existing seal set must be performed.

SPECIAL TOOLS NEEDED

- Round file or die grinder
- Loctite 545 removable pipe sealant
- Silicone sealant
- Lifting device

MANPOWER ESTIMATE

This procedure will require 2 people for 4 hours, depending on ease of access.

PROCEDURE

1. Remove the **clutch** and the **hub**.

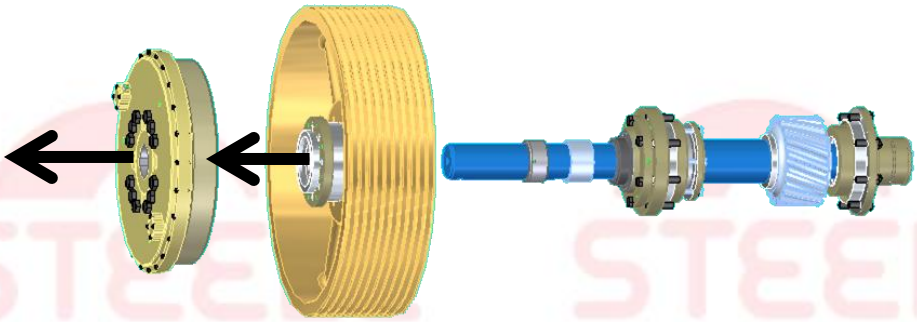

FIG 2: Removing the clutch and hub from the pulley shaft

2. Remove the **sleeve (21W)**.

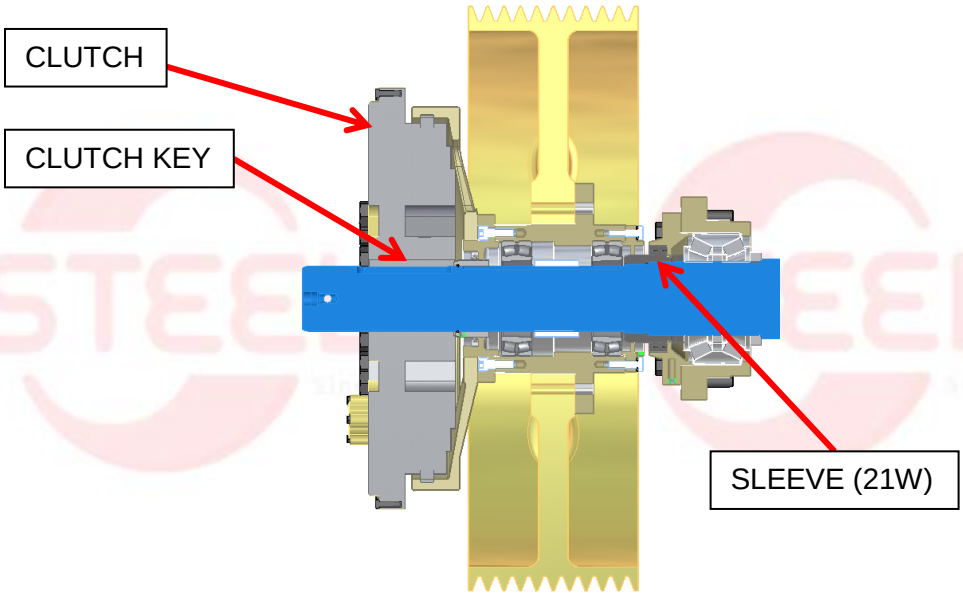

FIG 3: Cross-section of pulley shaft assembly showing the sleeve (21W)

3. Disconnect the **oil line**.
4. Remove the **bearing cap (13X)**.

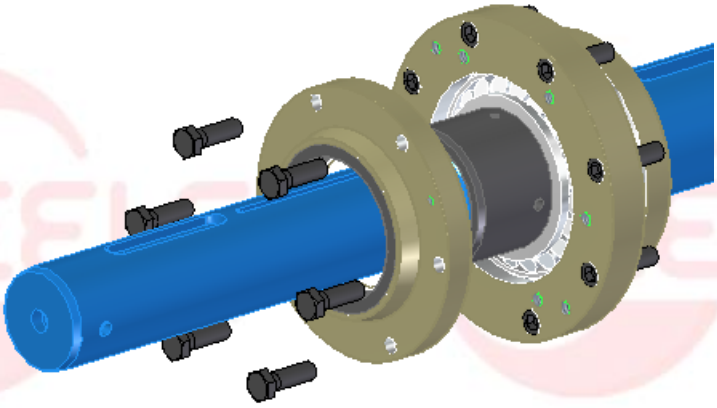

FIG 4: Removing the bearing cap (13X)

5. Remove the **oil line** that supplied the **cap**.
6. Remove the **old seals** from the **cap**.

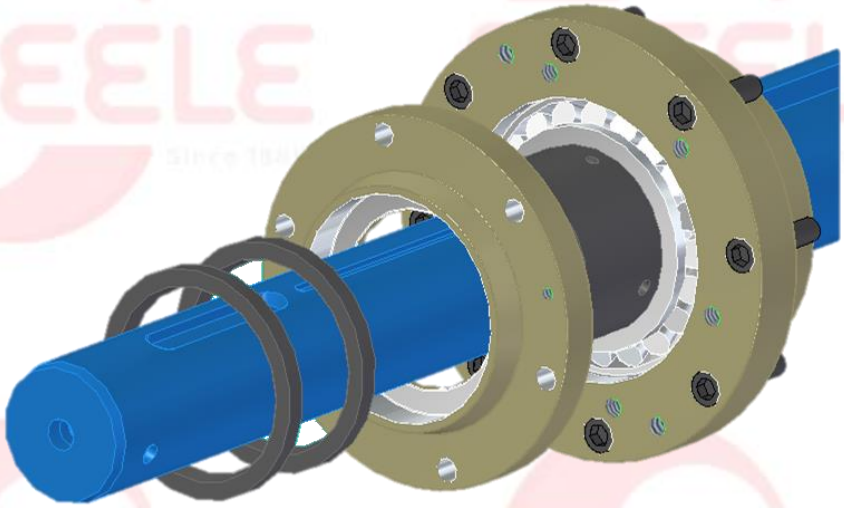

FIG 5: Removing the old oil seals

7. Using a **round file** or a **die grinder**, make a **notch** about **⅝" wide** and **¼" deep** in the small **bore**. Place the **notch** in line with the **oil inlet hole**.
8. Repeat Step 7 about 180º from the first **notch**.

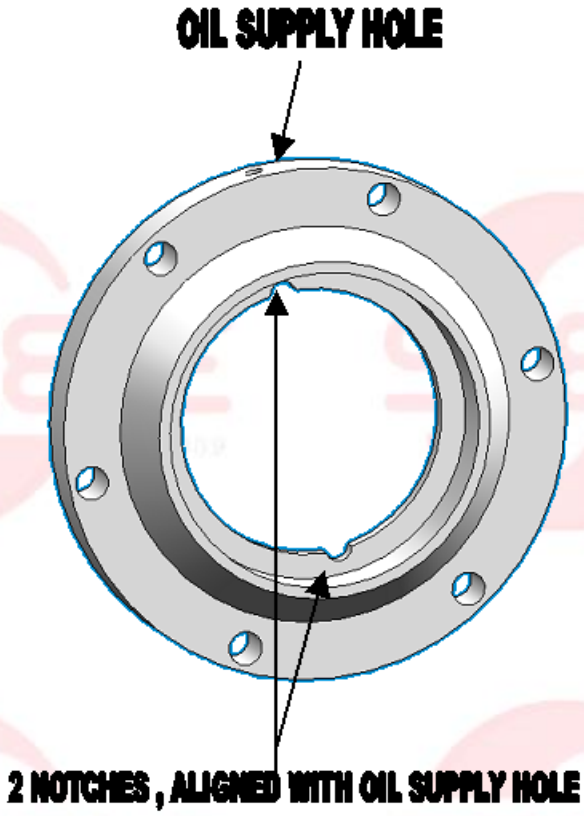

FIG 6: Location of notches in bearing cap

9. Carefully clean out the **bearing cap (13X)**. Be sure to remove all the **chips**, **burrs**, and **debris** from the cap, especially around the **oil supply hole**.
10. Press one of the **new seals** into the **bearing cap** with the **lip** facing the **inner flange**.
11. Find the **thin metal ring** and lay it on top of the **seal** that was just pressed into the **bearing cap**.
12. Press the **second seal** into the **cap** with the **lip** facing the **metal ring**.
    - At this time both **seals** should have their **lips** facing in the same direction toward the **inner flange** of the **bearing cap**.
13. Inspect the **sleeve (21W)** for any **burrs** especially around the **spanner holes** and **threads**. Carefully remove any **burrs** and thoroughly clean the **sleeve**.
14. Install the **sleeve (21W)**.
    - This must be sealed at the **threads** with **Loctite 545 removable pipe sealant**.
    - Be sure that it solidly butts against the **bearing**.
    - If the **spanner holes** are deformed, remove any of the **burrs** that might cut the **seals** during installation.
    - Make sure that no **filings** can contaminate the **bearing**.

15. Install the **bearing cap** with the **oil supply line** on the bottom.
    - Look at the **cap** and the **extruder** and determine how you wish to run the **oil line**.
    - Thread the **new fitting** into the **bearing cap** turn it until it faces the desired direction.
    - Do not use any Teflon tape or string on the pipe threads.
16. Put bead of **silicone sealant** $^{3}/_{16}$" to $^{1}/_{4}$" diameter into the corner between the **outer flange** and the **pilot** of the **bearing cap (13X)**.
17. Install the **bearing cap** with the **oil inlet** on the bottom.
    - **Silicone sealant** should be seen extruding from everywhere under the **flange**.
    - Use a **diagonal tightening pattern** and gradually tighten the **bolts** to 120 ft.-lbs. (163 Nm).
18. Install the **new oil line**.
19. Double check all of the **fittings** and **bolts**.