

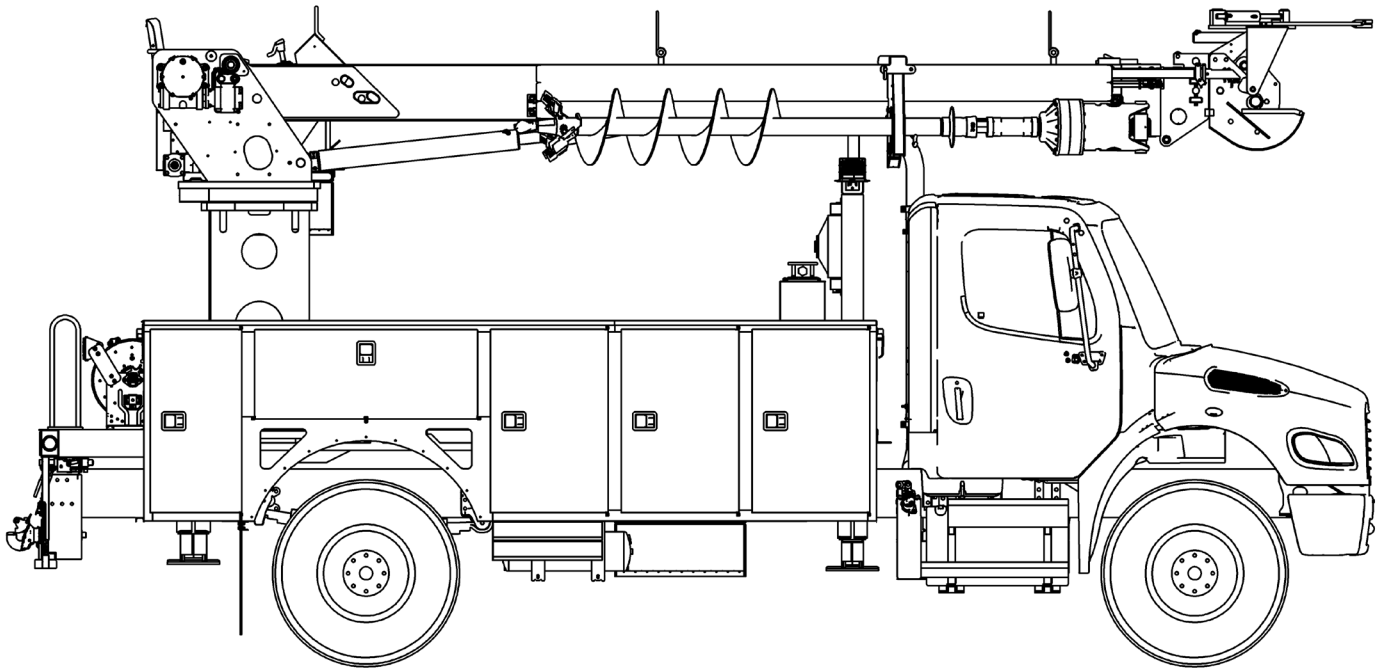


TEREX®

TECH TIPS

REPLACING A WORM GEAR ROTATION GEARBOX END CAP SEAL

NO. 160



SERVICE CALL:
REPLACING A WORM GEAR
ROTATION GEARBOX END CAP
SEAL



MODEL(S):
C4000 AND C5000



TOOLS NEEDED:
ALLEN WRENCH SET
SEAL PULLER/REMOVER
HAMMER
SEAL INSTALLER

TEREX UTILITIES TECHNICAL SUPPORT TEAM

PHONE: 1-844-TEREX4U (1-844-837-3948) | EMAIL: UTILITIES.SERVICE@TEREX.COM



DANGER

Failure to obey the instructions and safety rules in the appropriate Operator's Manual and Service Manual for your machine will result in death or serious injury.

Many of the hazards identified in the Operator's Manual are also safety hazards when maintenance and repair procedures are performed.

DO NOT PERFORM MAINTENANCE UNLESS:

- ✓ You are trained and qualified to perform maintenance on this machine.
- ✓ You read, understand and obey:
 - manufacturer's instructions and safety rules
 - employer's safety rules and worksite regulations
 - applicable governmental regulations
- ✓ You have the appropriate tools, lifting equipment and a suitable workshop.

The information contained in this Tech Tip is a supplement to the Service Manual. Consult the appropriate Service Manual of your machine for safety rules and hazards.



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INTRODUCTION

A leaking worm gear rotation gearbox end cap seal can be caused by the following:

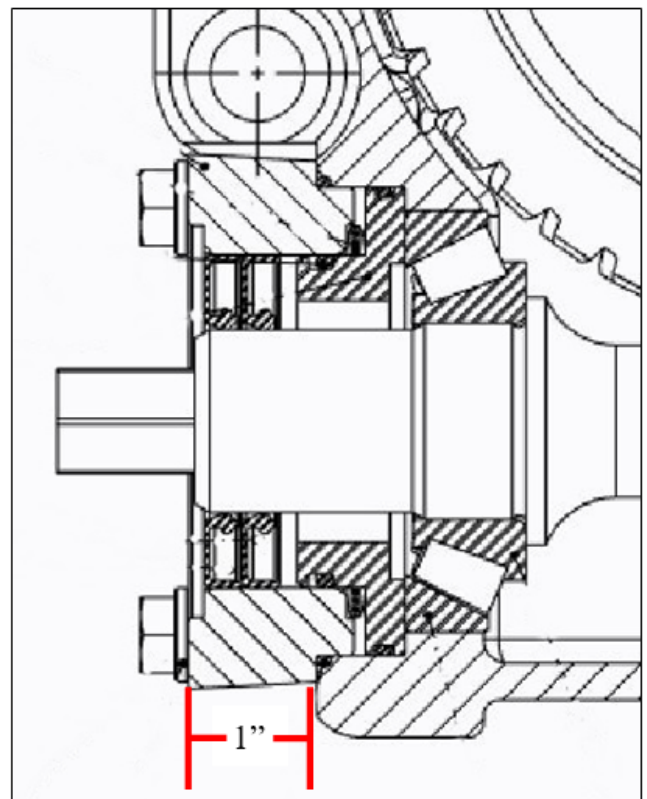
- Improper storage of the digger derrick into the boom rest, creating a side load on the rotation gearbox
- A hydraulic leak from the motor or HOP system that fills the gearbox with hydraulic oil
- Overfilling the gearbox with gear oil
- Over greasing the top pinion shaft bushing

Once the seal begins to leak, replacement will be required.

Beginning mid-year 2021, a production change was made to add a second seal to the endcap for additional leak protection.

A second seal can be installed in an older gearbox if it is equipped with a 1-inch endcap.

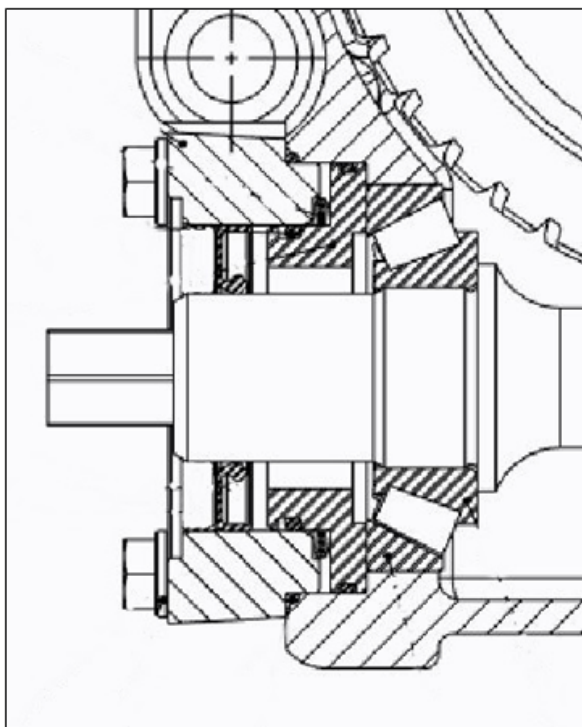
The photo and drawing below show where to measure to confirm the dimension.



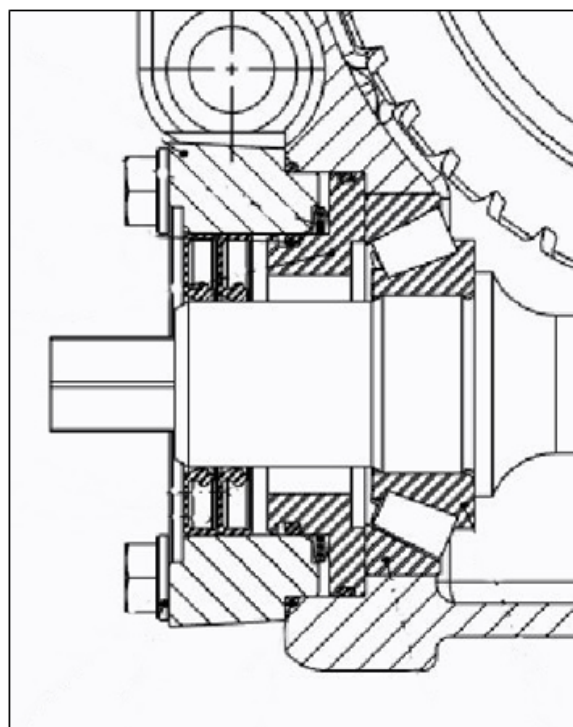
This tech tip will explain how to install the second seal in the gearbox, even if it was not originally equipped with one.

If only a single seal is desired, then the first seal can be installed by following the tech-tip instructions while not adding the second seal.

The drawings below show the gearbox endcap with the single seal and the double seal.



Single Seal

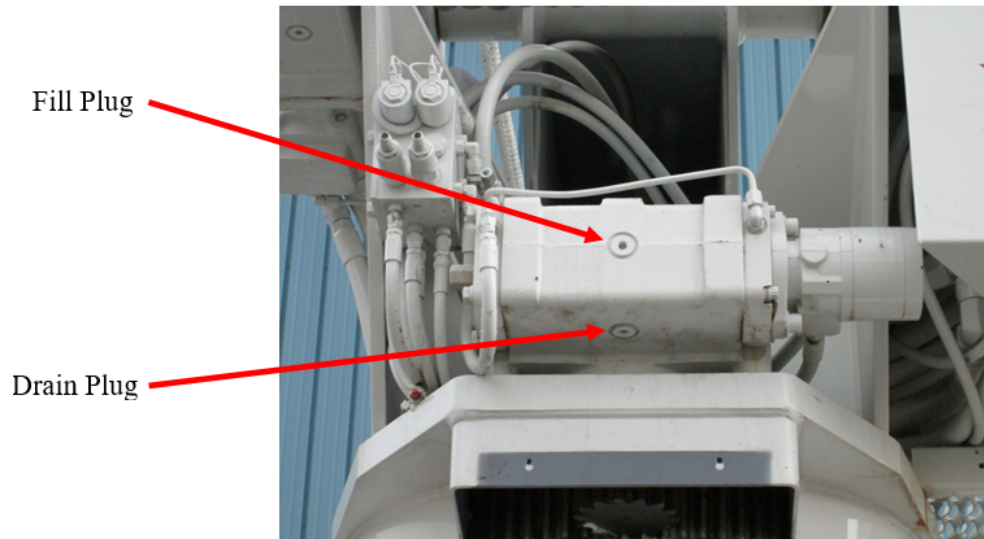


Double Seal

STEP 1

Remove the fill plug (as shown in the photo below) on the back side of the gearbox and verify that it is not filled with hydraulic oil. Leave the drain plug out.

If the gearbox is filled with hydraulic oil, the cause must be repaired prior to replacing the output seal.



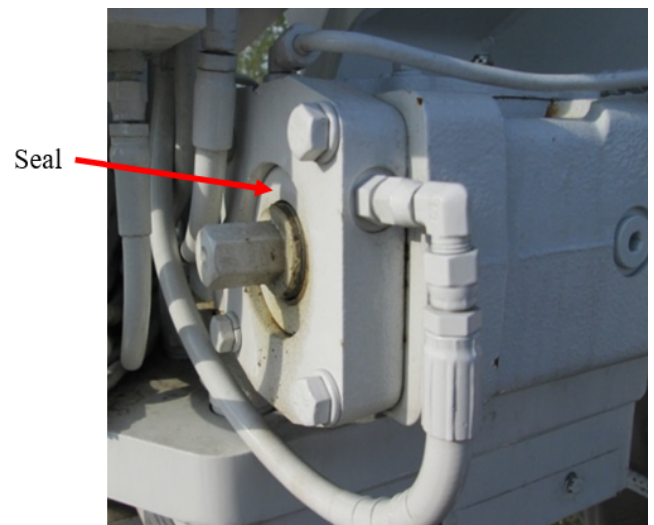
STEP 2

Drain the gearbox completely by removing the drain plug (as shown in the photo above) on the bottom of the gearbox. Reinstall the drain plug once the gearbox is empty.

STEP 3

Remove the seal(s) using a seal puller/remover and clean the bore where the seal rests and the worm shaft to remove any oil and contaminants.

Note: If installing only one seal proceed to Step 4, if installing two seals proceed to Step 5



STEP 4

If installing only one seal drive the seal to a depth of 1/4 inch below the outside surface of the endplate. Verify that the seal is recessed evenly around the entire bore.

Continue to Step 7 to complete the Tech Tip.

STEP 5

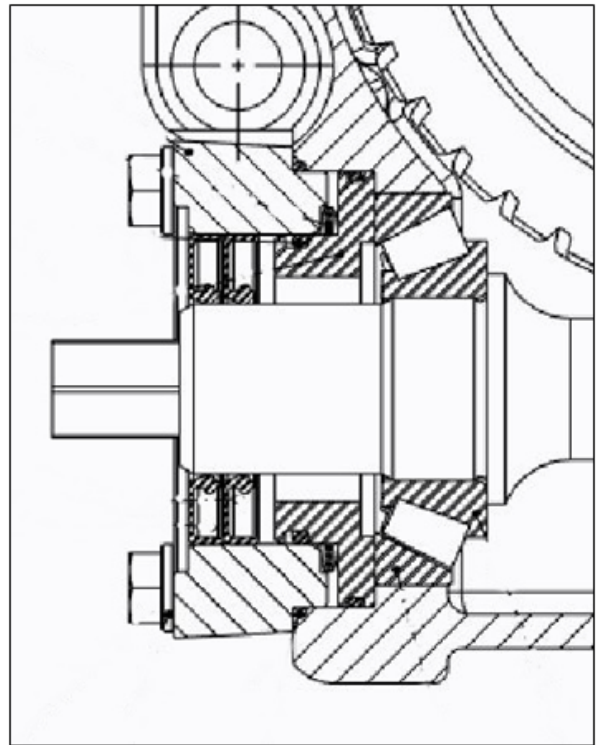
Install the first seal to a depth of approximately 3/8-inch below the outside surface of the endplate. Verify that the seal is recessed evenly around the entire bore.

Do not sink this seal any more than 1/2-inch below the face of the endcap. Driving the seal further in could affect the rotation HOP system operation.

STEP 6

Install the second seal recessed approximately 1/8 inch from the face of the endplate. Both seals will be installed the same direction.

The drawing below shows both seals installed in the endcap recessed approximately 1/8-inch face of the endplate. The photo shows the depth of the finished seal installation.



STEP 7

Refill the gearbox with Mobilux EP-023 or equivalent gear lube. Fill the gearbox so that the gear lube level is approximately 1/8" below the fill plug opening. This will keep the oil level below the lip of the seal and reduce the chance of future leaks.

EP-023 Equivalents:

- Chevron Multifak EP 000
- Phillips 66 Dynalife 220

Note: The grease zerk located on the top of the gearbox is only used to grease the top pinion shaft bushing. One pump every 90 days is enough to lubricate the bushing.

STEP 8

Test the rotation gearbox and check for leaks before returning to service.



FOR FURTHER ASSISTANCE,
CONTACT THE TEREX UTILITIES TECHNICAL SUPPORT TEAM
PHONE: **1-844-TEREX4U (1-844-837-3948)** | EMAIL: [**UTILITIES.SERVICE@TEREX.COM**](mailto:UTILITIES.SERVICE@TEREX.COM)
