



SYSTEMS, INC.

ENGINEERING NOTICE

Date: 5/3/07

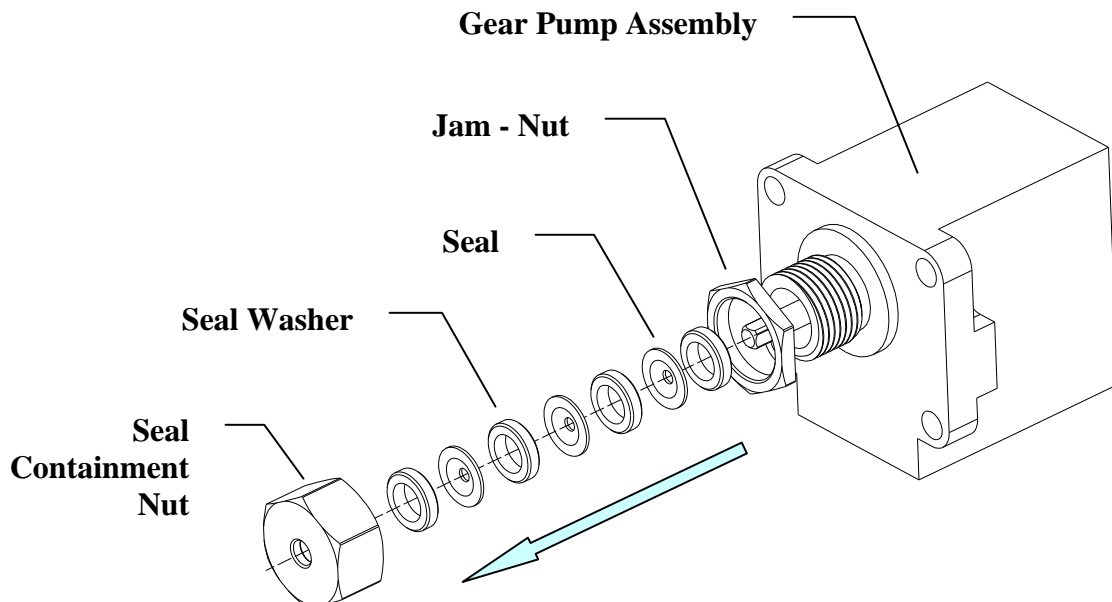
Subject: Gear Pump Seal Replacement
Packing Body Assembly – EFC PN: 19-1A29

Summary: This document will describe the procedures that need to be taken to remove the existing seals from a Kawasaki gear pump and replace them with an EFC packing assembly.

Procedures: OEM Seal Removal

The original gear pump housing contains approximately seven (7) seals and seal washers that need to be removed before installing the EFC packing assembly.

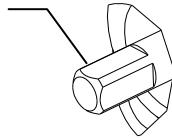
Start by removing the seal containment nut, jam-nut and the seal and seal washers.



EFC Packing Installation

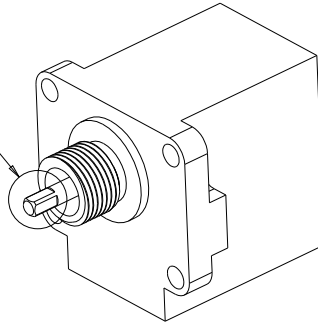
Make certain that any debris located on the gear pump shaft has been removed, especially around the flats on the shaft.

**Clean Shaft
Flats**



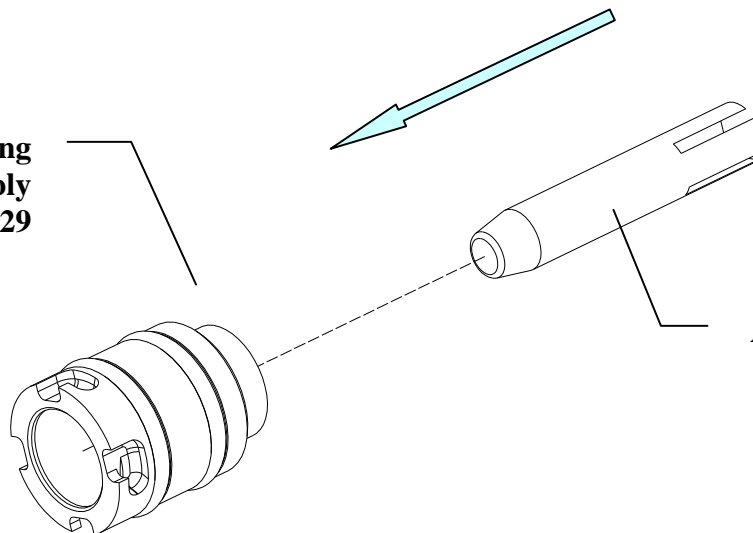
DETAIL A
SCALE 3.000

SEE DETAIL A



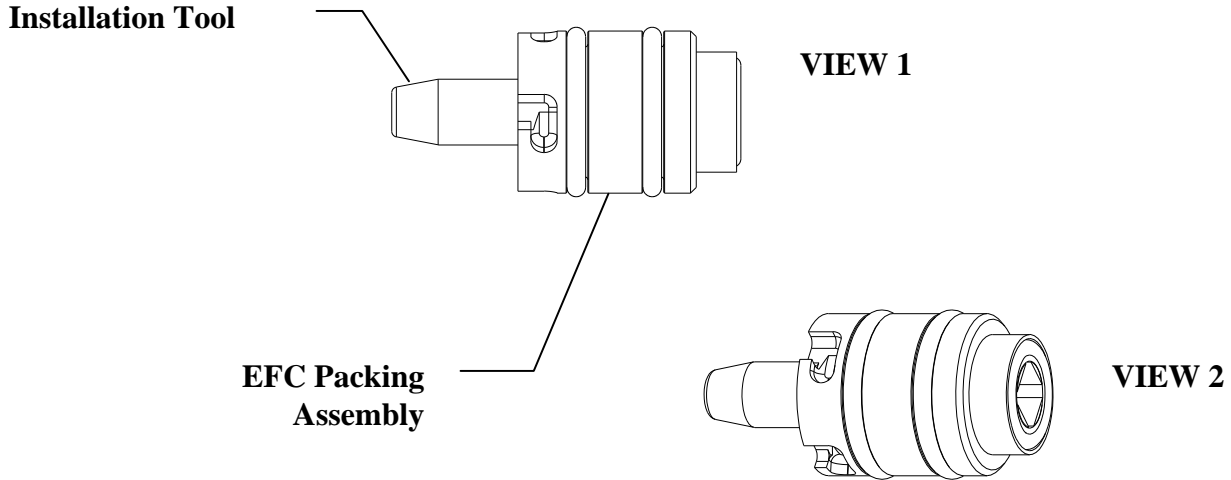
Apply a very thin film of pure Vaseline to the installation sleeve. Then slide the installation sleeve into the new EFC packing assembly, oriented as shown.

**EFC Packing
Assembly
PN: 19-1A29**

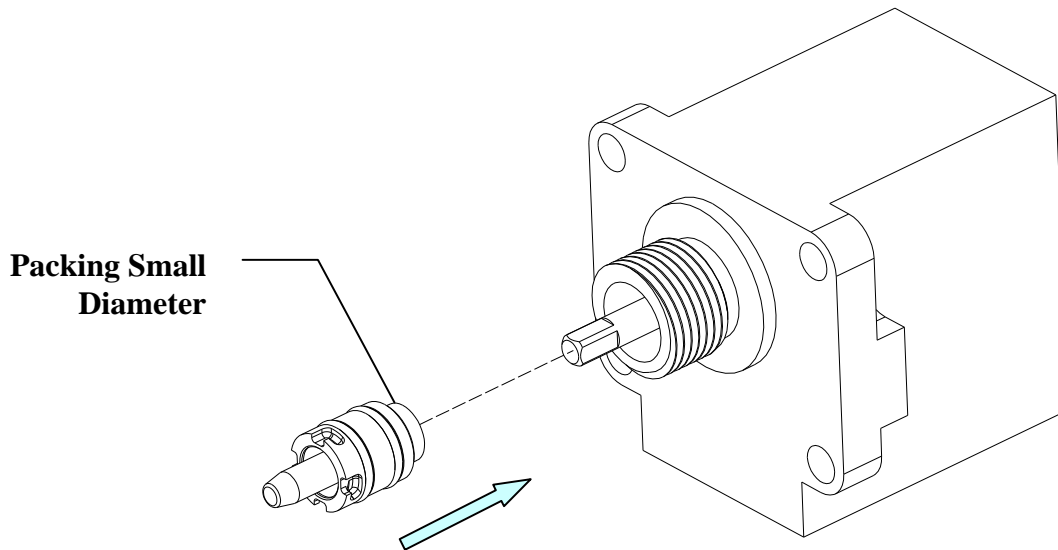


**Add Small Amount
of Pure Vaseline to
Installation Tool
EFC PN: TL-1A89**

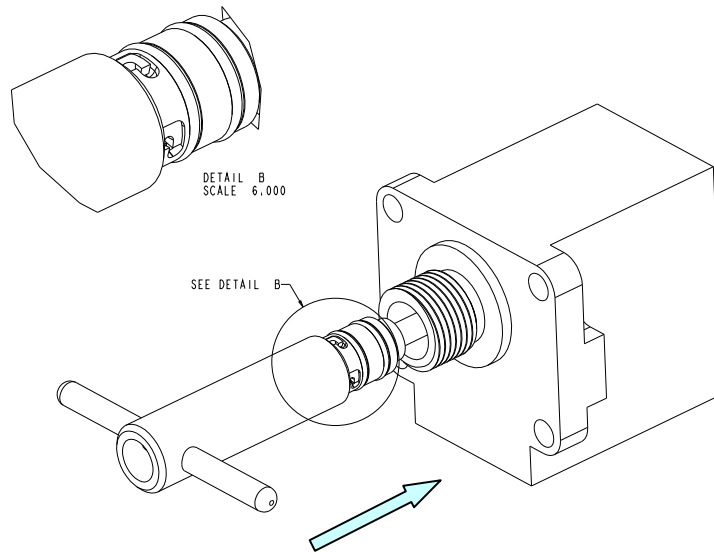
Insert the installation sleeve completely into the packing assembly.



Next, slide the EFC packing assembly and installation sleeve over the pump shaft, aligning the slots on the installation sleeve with the corners of the shaft. The smaller diameter on the packing body will be inserted into the gear pump housing first.

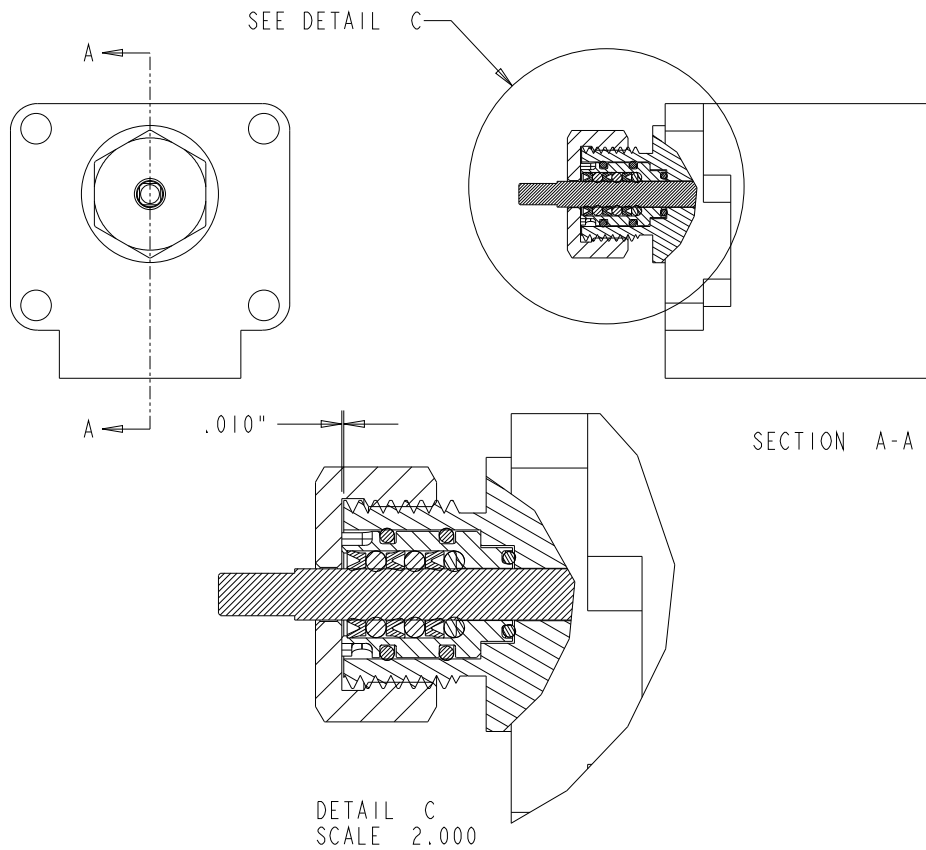


Using the installation tool, align the four teeth on the tool with the four slots on the packing body and *gently* push the packing assembly into the gear pump housing.



After the packing is pushed into place, remove the installation sleeve.

When the packing assembly is properly installed, it will be protruding approximately .010” above the end of the pump housing, allowing that much compression when the containment nut is reinstalled. Reinstall the containment nut. The jam-nut should no longer be needed.



EFC Packing Removal

To remove the packing assembly, first remove the containment nut.

Insert the toothed end of the packing installation tool into the slots on the packing body. Twist the tool clockwise, just a few degrees until the tool locks into the body of the packing.

Carefully pull the packing body out of the pump housing.