

# Northern's Factory Overhaul Program

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## **NORTHERN'S GUARANTEED FACTORY REBUILD SERVICE**

The skilled mechanics at the **NORTHERN** factory are at your service to recondition pumps which have already served a long, useful life. Our mechanics carefully disassemble and inspect the pump to determine which parts need replacement or reconditioning. After we have been authorized to proceed with the rebuild, we will reassemble the pump with the necessary new and reconditioned parts. Our dynamic test breaks in the pump by slowly ramping up to the rated speed and pressure. This testing simulates the actual field duty conditions. We also verify the pump capacity and horsepower requirements. This testing guarantees that the repaired pump will have *new pump performance*.

## **Why to choose Northern's Factory Rebuild Program**

- All rebuilt pumps carry a full new pump warranty.
- Rebuilding your NORTHERN pump can save money over buying a new pump.
- Many repairs are completed and shipped back to you in less than 3 weeks

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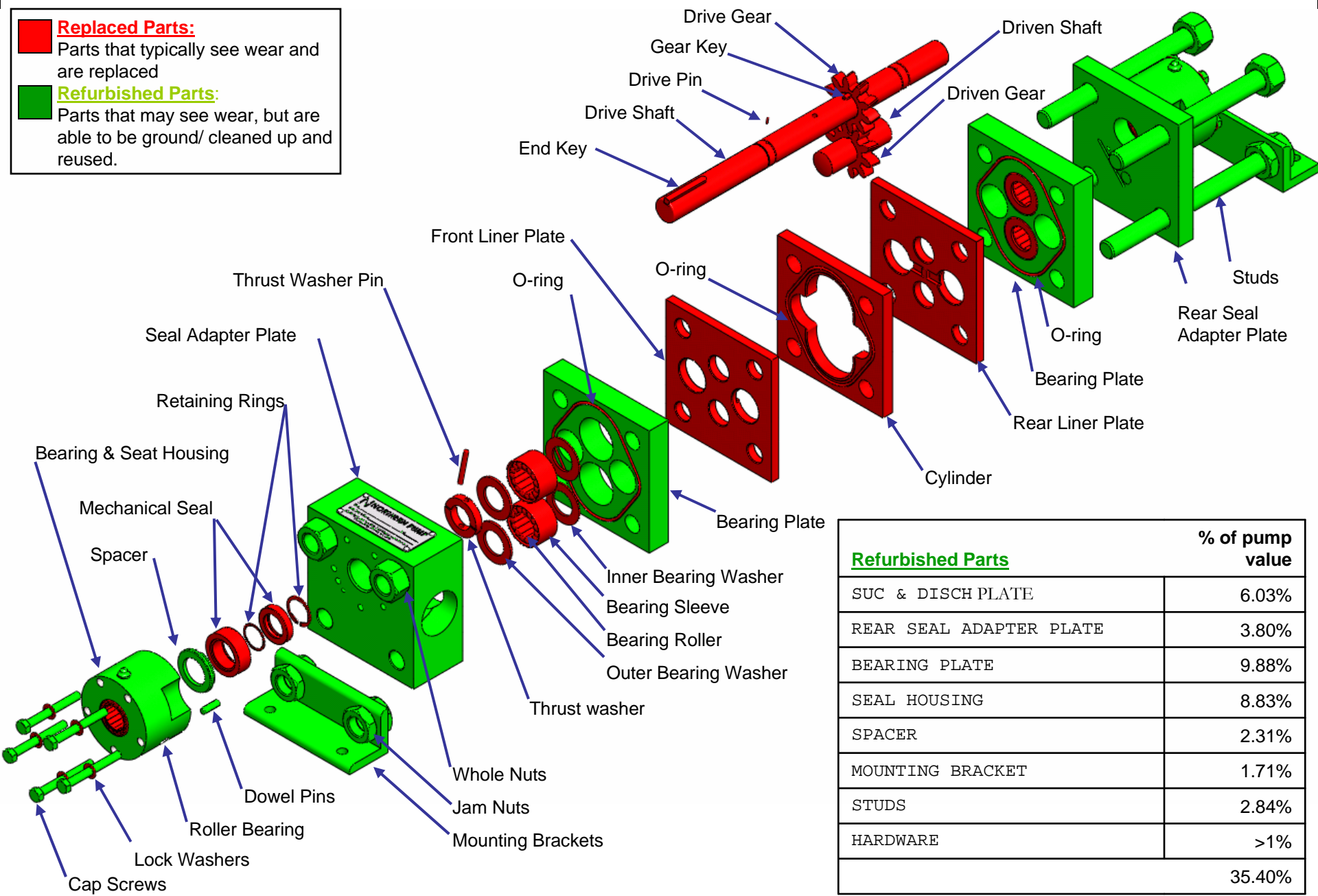
## **Factory Overhaul Process**

1. For tracking purposes, an MRL number is assigned before the pump is returned.
  - a. Call you Northern representative or fill out our [maintenance form](#) on our website with the pump model number and serial number.
2. Ship pumps back to our facility and the provided MRL form.
3. Pump is received in house
4. Our factory technician will visually inspect the pump for external damage, missing or customer installed parts, and evaluation of rotation of the drive shaft.
5. The factory technician disassembles the pump for inspection and evaluation of parts. A piece part visual inspection is completed as well dimensional inspection.
6. Proposal is created and sent to the customer for the price to repair the part. We will not proceed with the repair until we have your authorization to move forward with the repair. If a new pump or the overhaul is not ordered you will be invoiced for a charge of \$200 for an open & inspect fee.
7. Customer send purchase order for factory overhaul.
8. Assembly technician will refurbish all salvageable parts, replace all non-refurbished parts, and reassembly and test the pump.
9. Pump is painted, packaged, and shipped back to the customer.

Example of parts breakdown in repair, pump model and configurations can verify.

**Replaced Parts:**  
Parts that typically see wear and are replaced

**Refurbished Parts:**  
Parts that may see wear, but are able to be ground/ cleaned up and reused.



<b>Refurbished Parts</b>		<b>% of pump value</b>
SUC & DISCH PLATE		6.03%
REAR SEAL ADAPTER PLATE		3.80%
BEARING PLATE		9.88%
SEAL HOUSING		8.83%
SPACER		2.31%
MOUNTING BRACKET		1.71%
STUDS		2.84%
HARDWARE		>1%
		35.40%