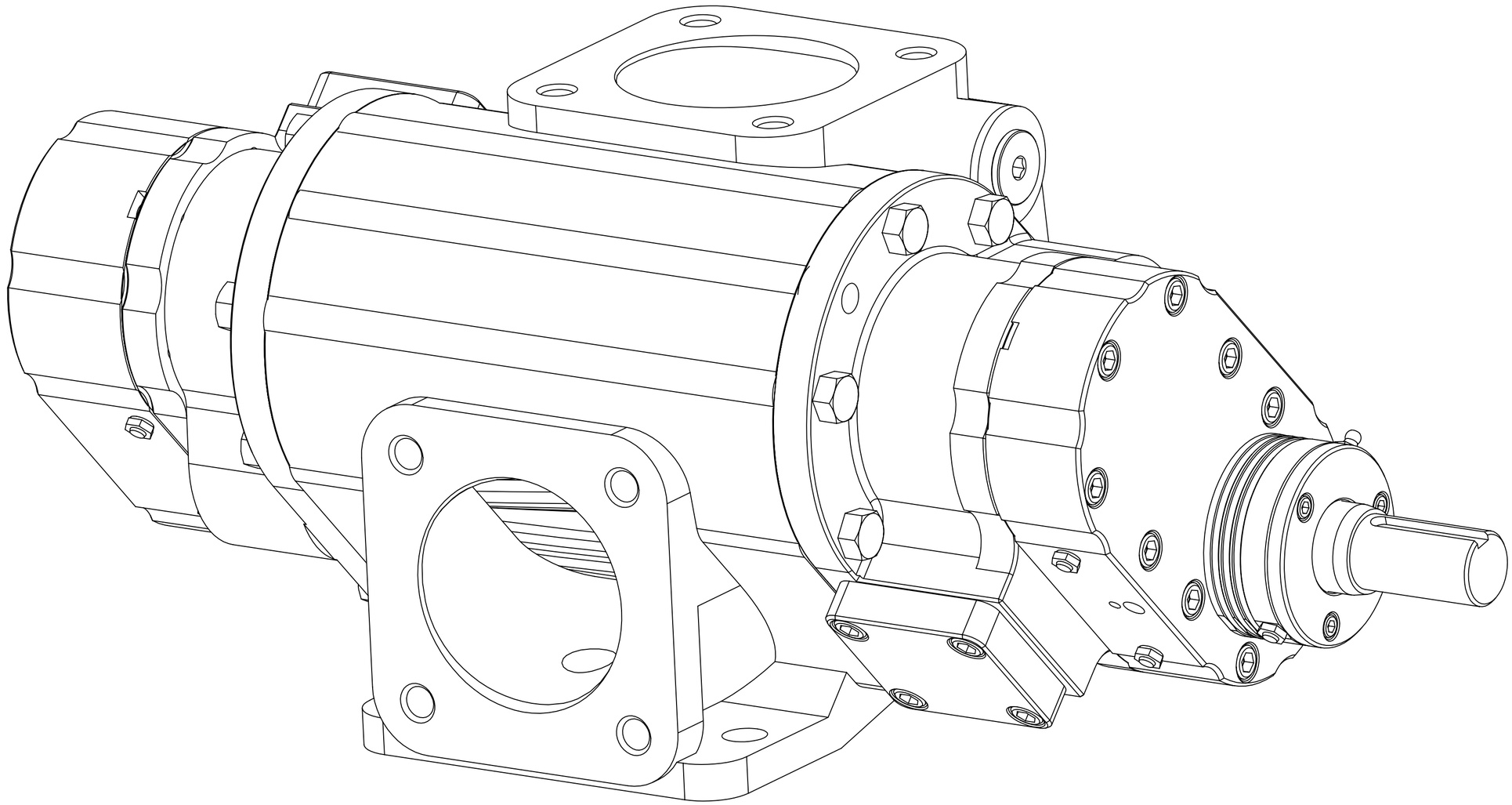
BearCat Pumps

600S Product Manual

9-10-2024 Ver 1.6



Building a Model Number

Displacement
- 600 = 0.60 Gal/Rev

Shaft Seal
- C = Cooling Spacer (standard)

Configuration
- LL = Left Low (standard)

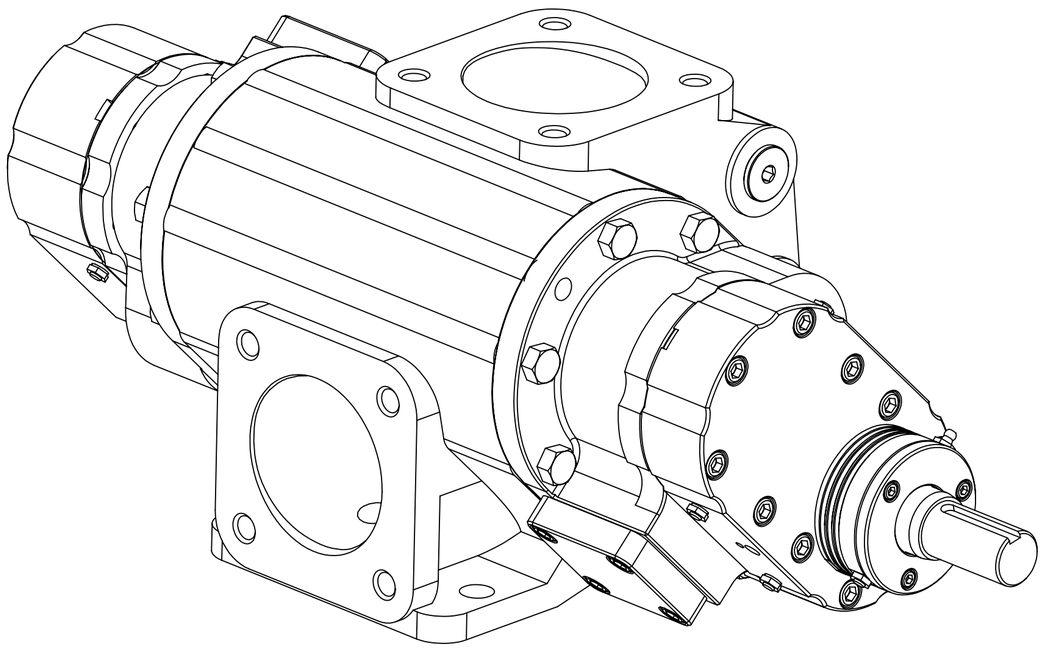
600 S C H - L L - 8 8 - x

Pump Style
- S = Bearing, RV, No Heat

Drive Shaft Type
- X = Extended
- H = Hydraulic (standard)

Relief Valve
- 88 = #80 RV F/R (standard)

Option Items (one or more)
- O = Outboard Bearing
- E = Electric Heat
- T = Truck Heat Fittings
- L = Hydraulic Mount
- x = NA

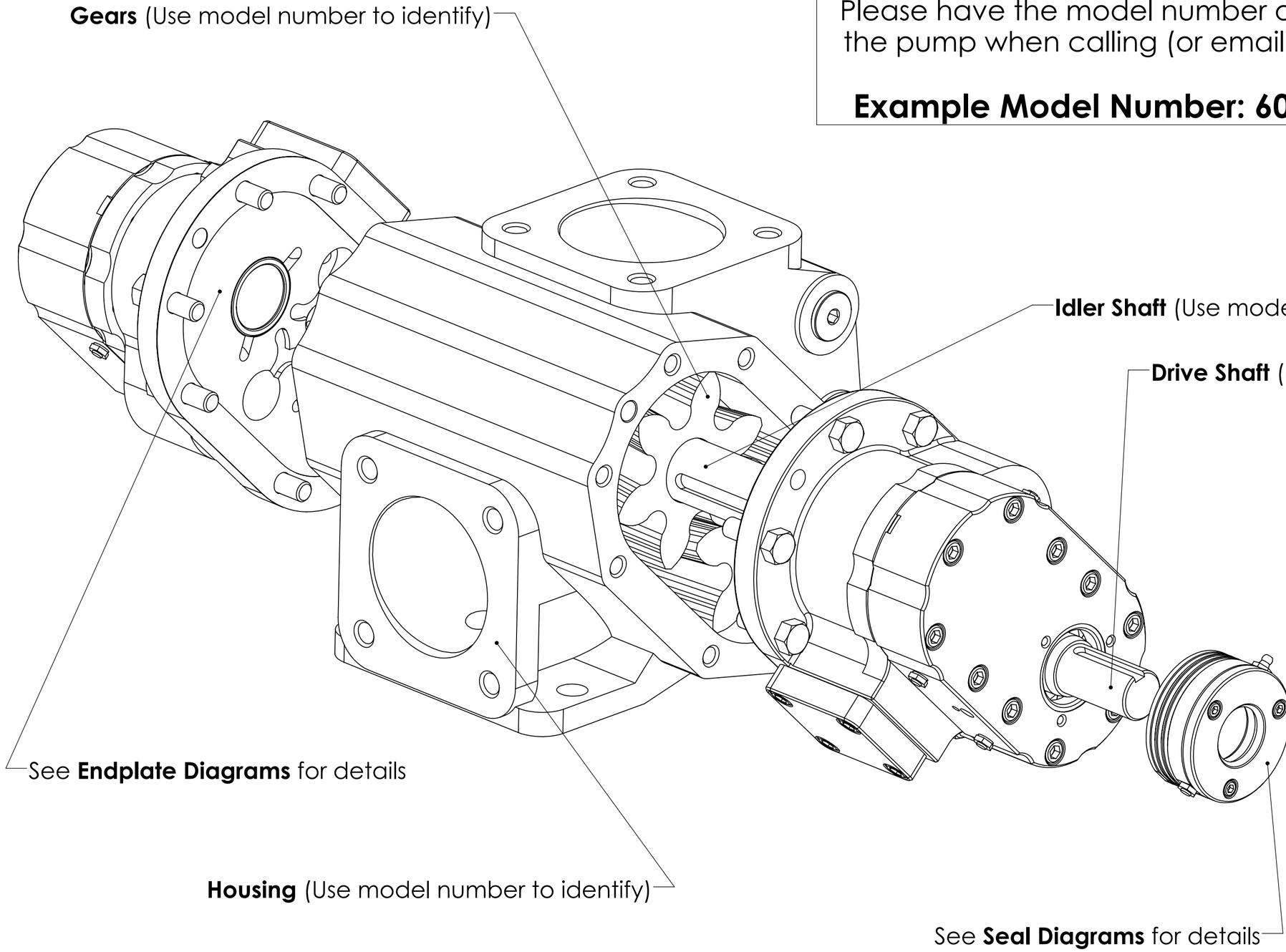


Base Component Diagram

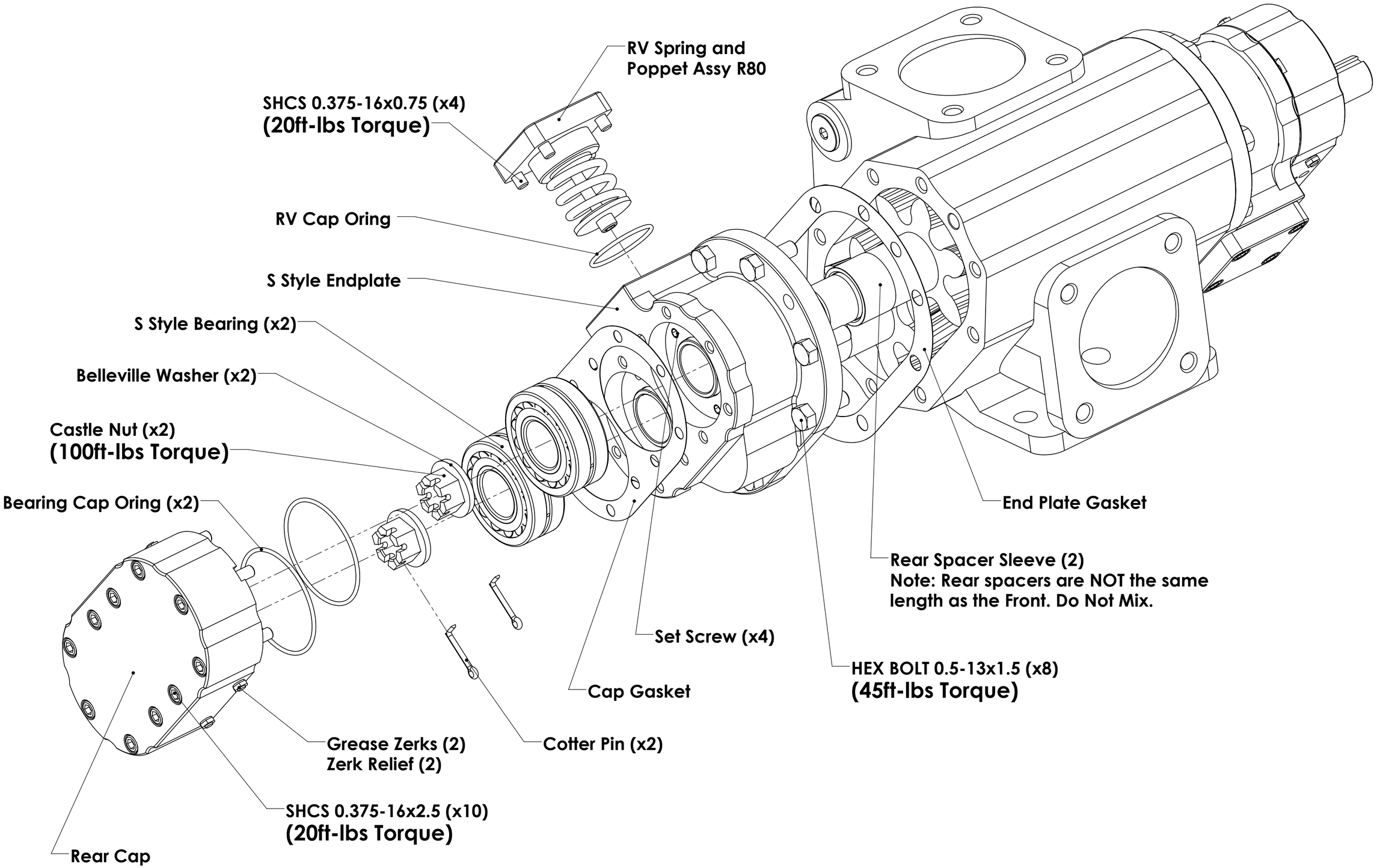
Pump Parts Diagrams

Refer to the diagrams to identify the part you need. Please have the model number or a clear photo of the pump when calling (or emailing)for assistance.

Example Model Number: 600SCH-LL-88-xx

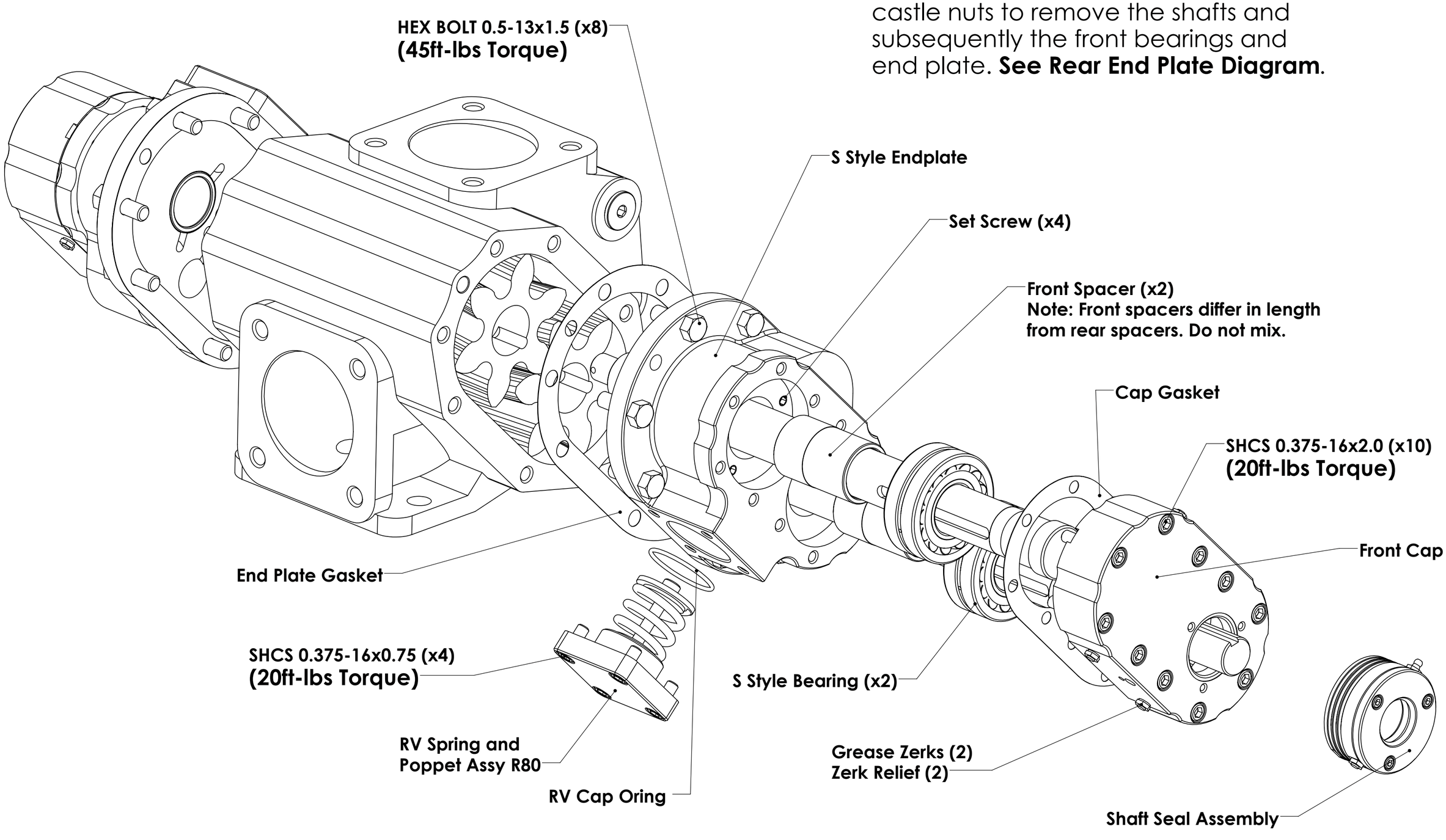


Rear End Plate S Diagram



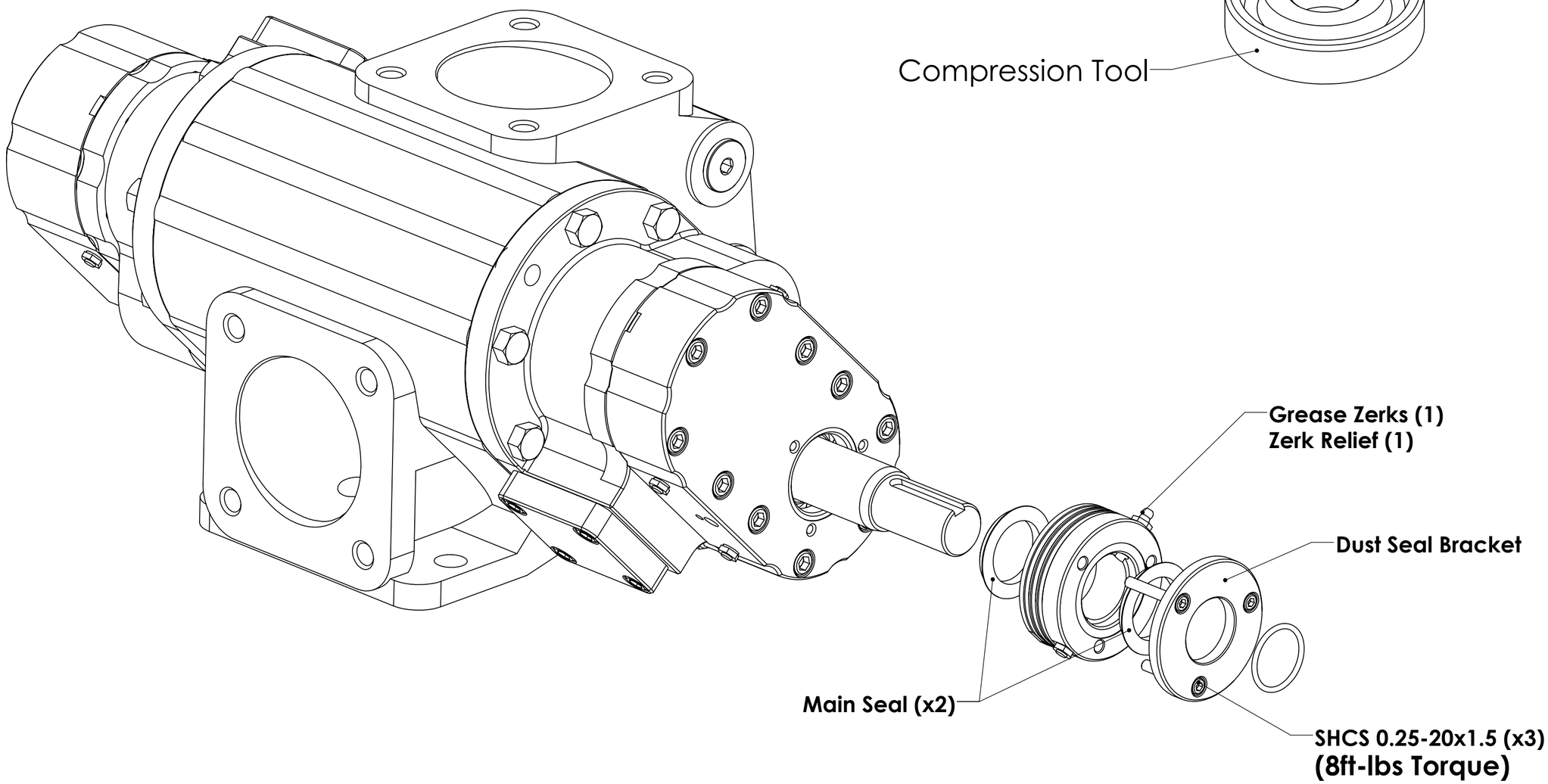
Front End Plate S Diagram

NOTE: You must remove the rear castle nuts to remove the shafts and subsequently the front bearings and end plate. **See Rear End Plate Diagram**.



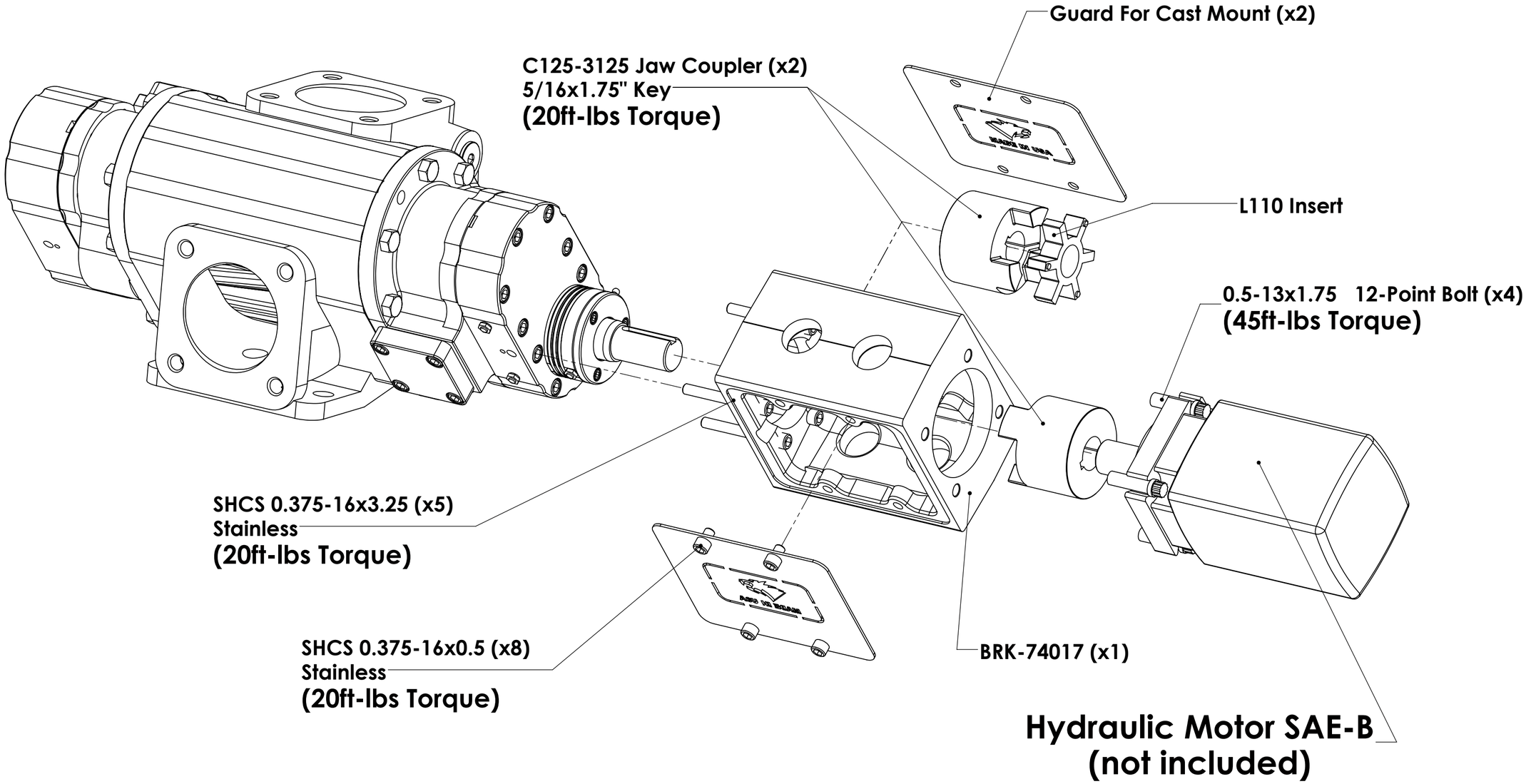
Seal Assembly

Installing the Main Seal:
Carefully guide the seal's edge into the bore of the housing. A factory-provided compression tool can help pre-form the seal for easier installation.

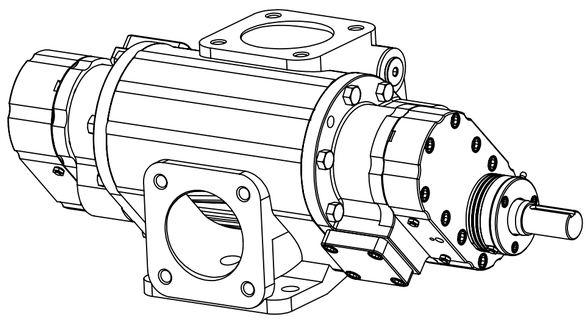


Option (L) - Hydraulic Mount

Example 600SCH - LL - 88 - (**L**)
Option 'L' will include the following items.



Operational Guidelines
Tips for Optimal Pump Performance



Orientation:
For optimal pump performance, mount the pump with the intake on the side and the discharge on top. This setup improves priming, ensures lubrication during startup, and prevents air bubbles from getting trapped, which can cause a loss of prime.

Corrosion Mitigation:
To reduce corrosion when handling corrosive fluids, keep the pump below the waterline. Oxidation, which leads to corrosion, typically occurs at the waterline. Positioning the pump below it, like a plumber’s trap, minimizes exposure to air, reducing corrosion risk and enhancing the pump's durability and reliability.

Greasing:
Greasing needs vary based on the fluid type. For non-abrasive, non-corrosive fluids like virgin asphalt or certain oils, greasing might not be necessary. However, it's crucial when dealing with abrasive or corrosive conditions.

Key Points:

Temperature: Use high-temperature grease for hot liquids.
Solvency: Test grease compatibility by mixing it with the fluid; if it turns cloudy, they aren't compatible.
Caution: Use a hand-operated grease gun to avoid overpressurizing, which can damage bearing seals.

Once you find compatible grease, start with weekly greasing. Check grease coverage by inspecting the rollers, then adjust the frequency as needed.

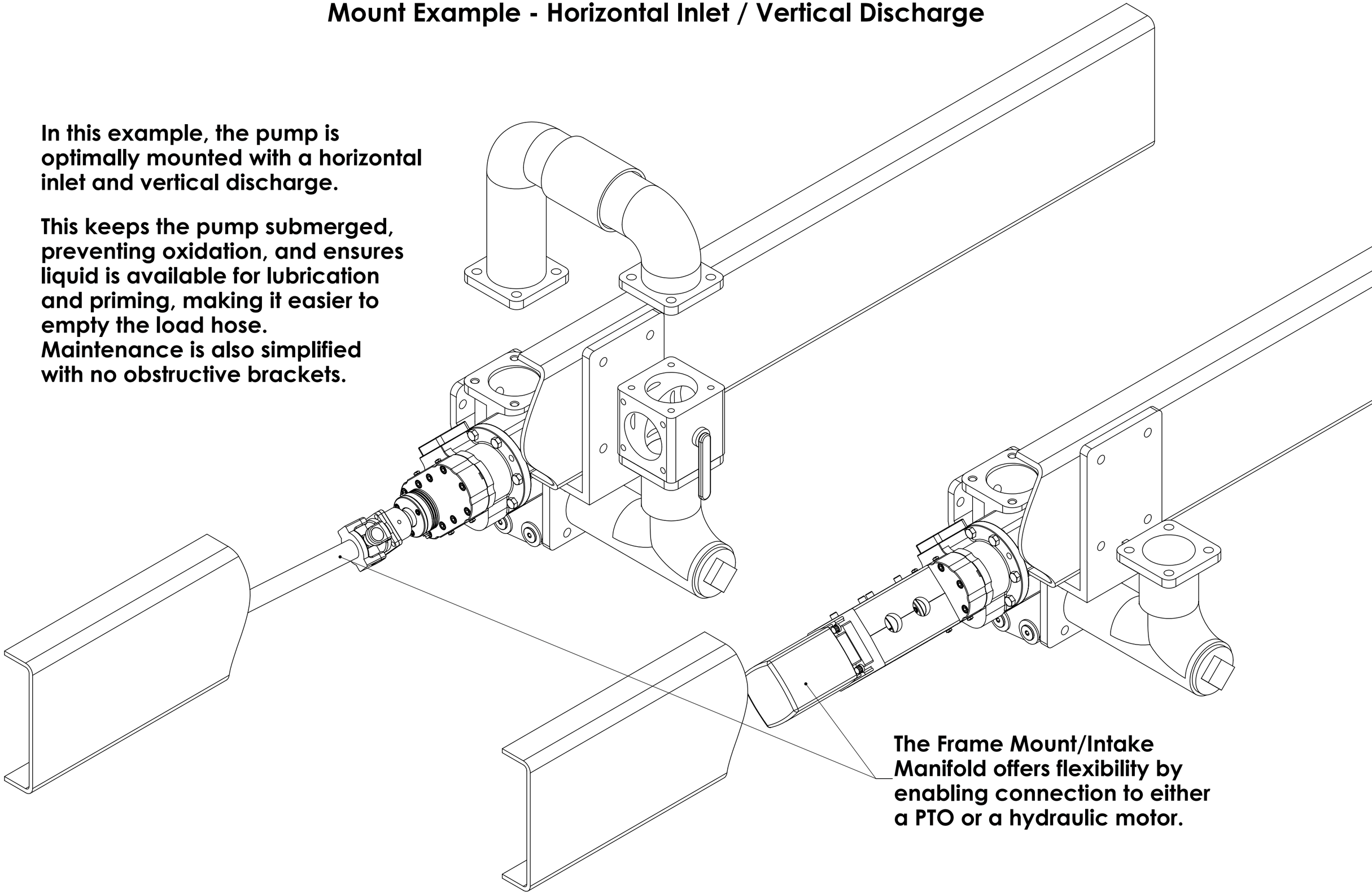
Pumping Efficiency:
Noise often indicates reduced pumping efficiency, possibly due to cavitation. To check for cavitation, compare the theoretical flow rate with the actual flow rate. If there's a significant difference and noise is present, reduce pump speed by up to 50% and observe changes. Gradually increase speed until noise returns, then set the operating speed 5-10% below that point.

Addendum 1 - Best Practice

Mount Example - Horizontal Inlet / Vertical Discharge

In this example, the pump is optimally mounted with a horizontal inlet and vertical discharge.

This keeps the pump submerged, preventing oxidation, and ensures liquid is available for lubrication and priming, making it easier to empty the load hose. Maintenance is also simplified with no obstructive brackets.



The Frame Mount/Intake Manifold offers flexibility by enabling connection to either a PTO or a hydraulic motor.