REXPO
CUTTING & BLASTING SOLUTIONS

# Minor Repair Kit installation - using kit #1-18973

Hyplex Prime Minor Repair Kit replacement. 1-18973 KIT:HYPLEX PRM MIN

## INTRODUCTION

This is a how-to guide for replacement of 1-18973 Hyplex Prime Minor Repair Kit from Accustream.

### TOOLS:

- Pressure-loading tool (1)
- 9/16" socket (1)
- Check valve clamp tool (1)

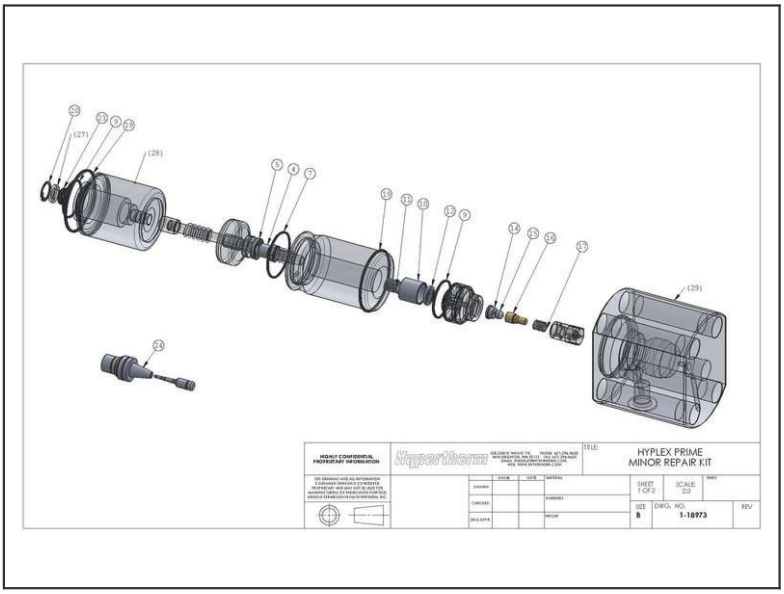
### PARTS:

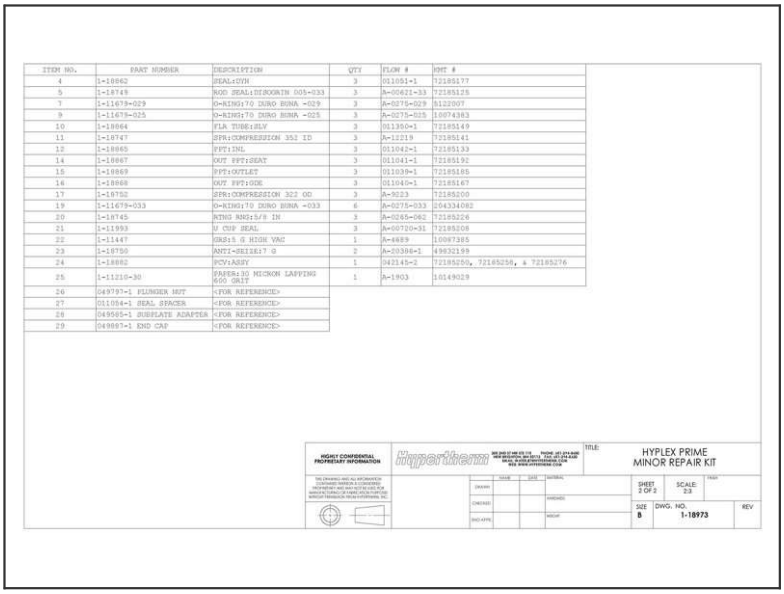
- 1-18973 (1)

## Step 1 — Safety Precautions


- Refer to original equipment manufacturer's safety and maintenance instructions. Failure to do so could result in injury or death.
- **Always remove all stored energy and lock out equipment before beginning any work.**

## Step 2 — BOM

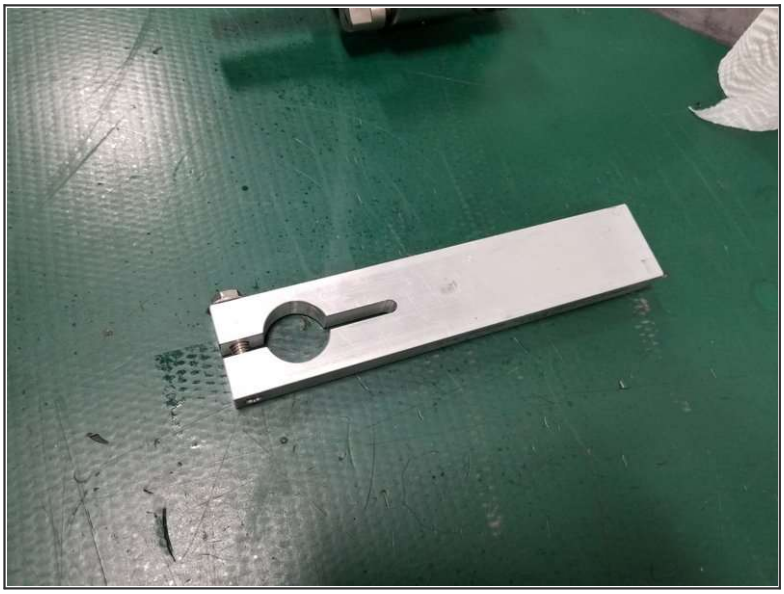


| ITEM NO. | PART NUMBER | DESCRIPTION | QTY | FLOW # | KMT # |
|---|---|---|---|---|---|
| 4 | 1-10862 | SEAL:GVH | 3 | 011051-1 | 72185177 |
| 5 | 1-18749 | ROD SEAL:DINOORIN 005-033 | 3 | A-00621-33 | 72185125 |
| 7 | 1-11679-029 | O-RING:70 DURO BUNA -029 | 3 | A-0275-029 | 8122007 |
| 9 | 1-11679-025 | O-RING:70 DURO BUNA -025 | 3 | A-0275-025 | 10074383 |
| 10 | 1-10864 | FLA TUBE:SLV | 3 | 011350-1 | 72185149 |
| 11 | 1-10747 | SPR:COMPRESSION 352 ID | 3 | A-12219 | 72185141 |
| 12 | 1-10865 | PPT:INL | 3 | 011042-1 | 72185133 |
| 14 | 1-10867 | OUT PPT:SEAT | 3 | 011041-1 | 72185192 |
| 15 | 1-10869 | PPT:OUTLET | 3 | 011039-1 | 72185185 |
| 16 | 1-10868 | OUT PPT:SIDE | 3 | 011040-1 | 72185167 |
| 17 | 1-10752 | SPR:COMPRESSION 322 OD | 3 | A-9223 | 72185200 |
| 19 | 1-11679-033 | O-RING:70 DURO BUNA -033 | 6 | A-0275-033 | 204334082 |
| 20 | 1-18745 | RING RNG:5/8 IN | 3 | A-0265-062 | 72185226 |
| 21 | 1-11993 | U CUP SEAL | 3 | A-00720-31 | 72185208 |
| 22 | 1-11447 | SR2i5 G HIGH VAC | 1 | A-4889 | 10987385 |
| 23 | 1-10750 | ANTI-SEIZE17 G | 2 | A-20396-1 | 49832199 |
| 24 | 1-18882 | PCV:ASSY | 1 | 042145-2 | 72185250, 7216525 |
| 25 | 1-11210-30 | PAPER:30 MICRON LAPPING 600 GRIT | 1 | A-1903 | 10149029 |
| 26 | 049797-1 PLUNGER NUT | <FOR REFERENCE> | | | |
| 27 | 011054-1 SEAL SPACER | <FOR REFERENCE> | | | |
| 28 | 049585-1 SUBPLATE ADAPTER | <FOR REFERENCE> | | | |
| 29 | 049887-1 END CAP | <FOR REFERENCE> | | | |

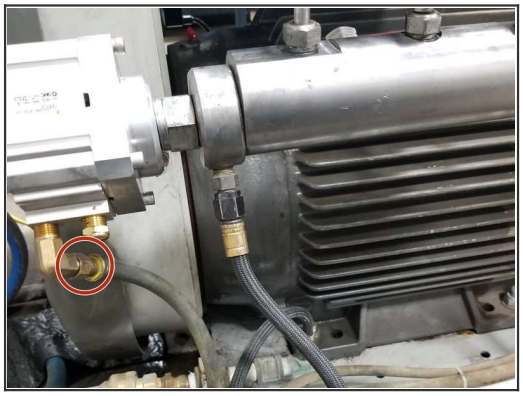
- Insert wisdom here.

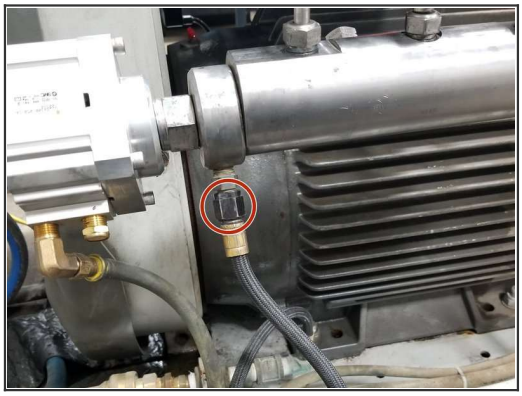
## Step 3 — Special tools (OEM)

- Pressure Loading tool
- Check valve clamp tool

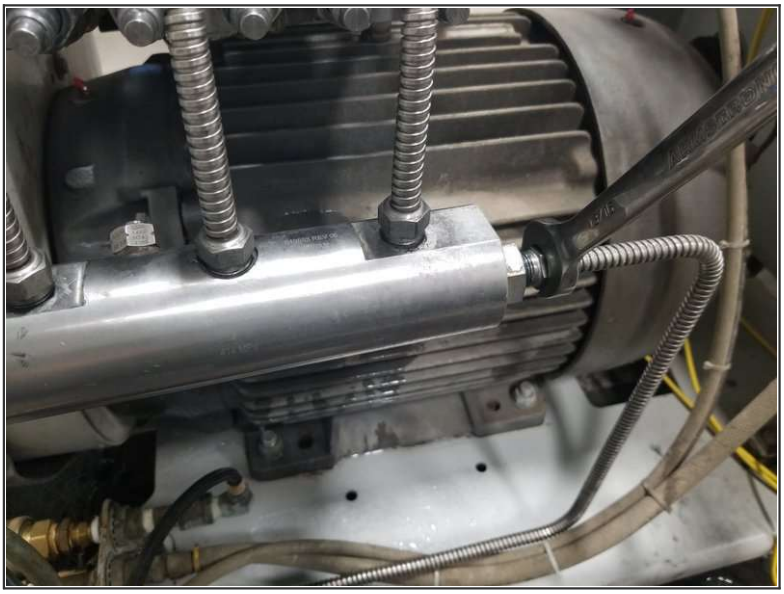
## Step 4 — Remove hoses





- Remove inlet water hoses from the bottom of the end cap
- Disconnect air line from actuator
- Disconnect PCV drain line

## Step 5 — Remove high-pressure lines



- Remove high-pressure tube from manifold using a 13/16" open end wrench
- Remove high-pressure inlets from all end caps using 13/16" open end wrench while supporting the manifold

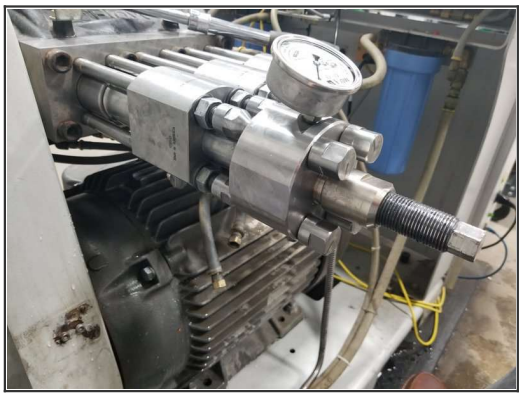
## Step 6 — Check pressure loading tool

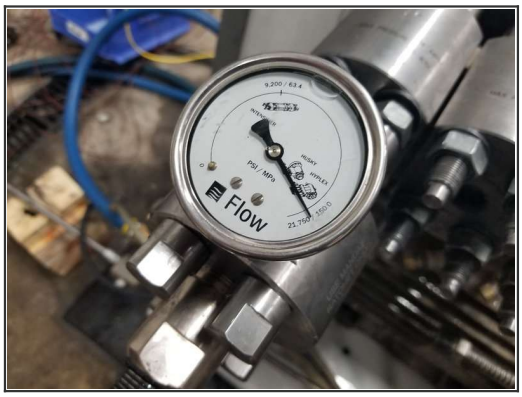

- Ensure oil is full. Open the 3/16" hex screw located on the contact face to check/fill using ATF fluid
- Ensure pressure loading tool screw is fully retracted
- Ensure piston is fully retracted

## Step 7 — Pressure loading tool


- Keep screw lubricated with MOLYKOTE® BR-2 Plus or similar
- Wipe stud threads clean and apply Loctite 8150 anti-seize (#1-18750)

## Step 8 — Attach pressure loading tool






- Attach pressure loading tool to each set of studs, rotating each tool stud by hand until tight
- Once snug, back out the tool studs 1/4 turn. Place a radial line with a permanent marker to make this easier to see
- Use a 3/4" (19mm) ratcheting socket to pressurize the tool by rotating screw clockwise. Pressurize per manufacturers recommended gauge pressure

## Step 9 — Remove pressure loading tool

- While tool is pressurized, loosen the four nuts a few turns by hand
- Turn the 3/4" socket counter-clockwise to reduce the pressure in the tool
- Back off each of the four tool studs and remove the pressure loading tool

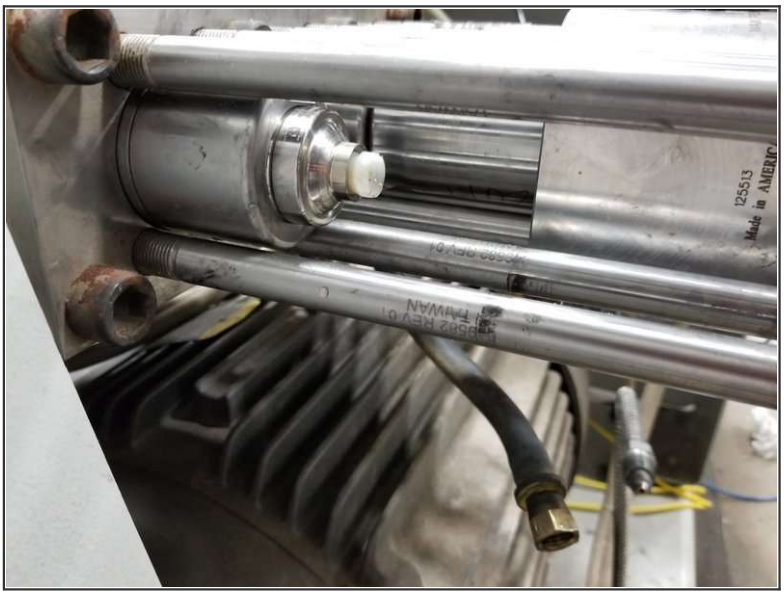
## Step 10 — Remove end cap

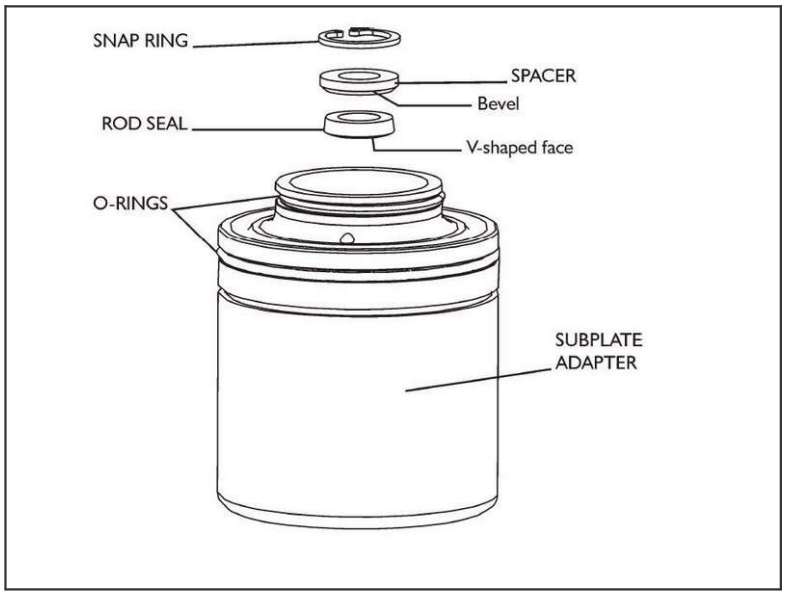
- Remove the fours nuts and washers
- Carefully slide the end cap off, being careful not to lose any of the high-pressure components

## Step 11 — Remove HP cylinder, filler tube, inlet poppet

- HP cylinder and filler tube may come out with end cap
- Use a screwdriver to remove seal carrier, if necessary

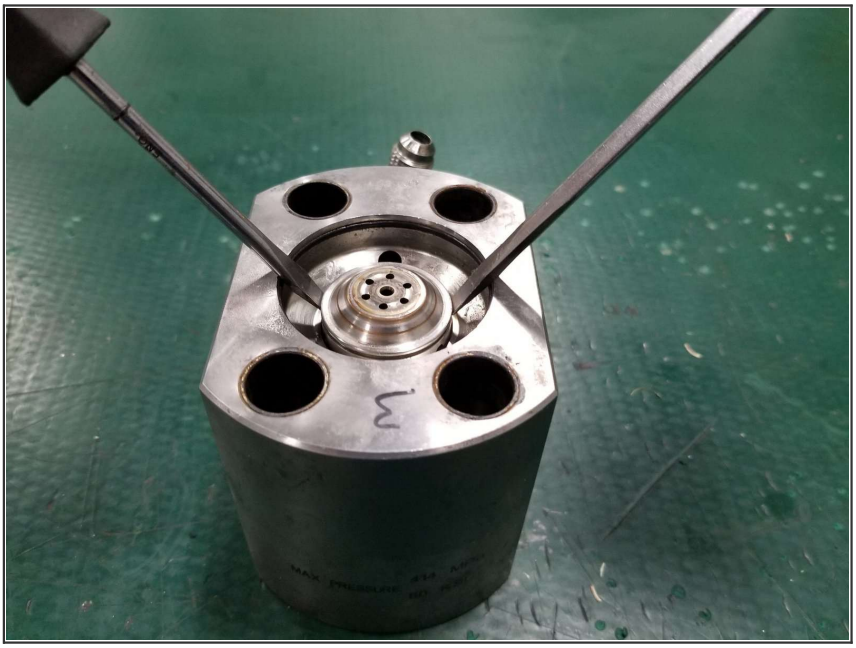
## Step 12 — Remove subplate adapter





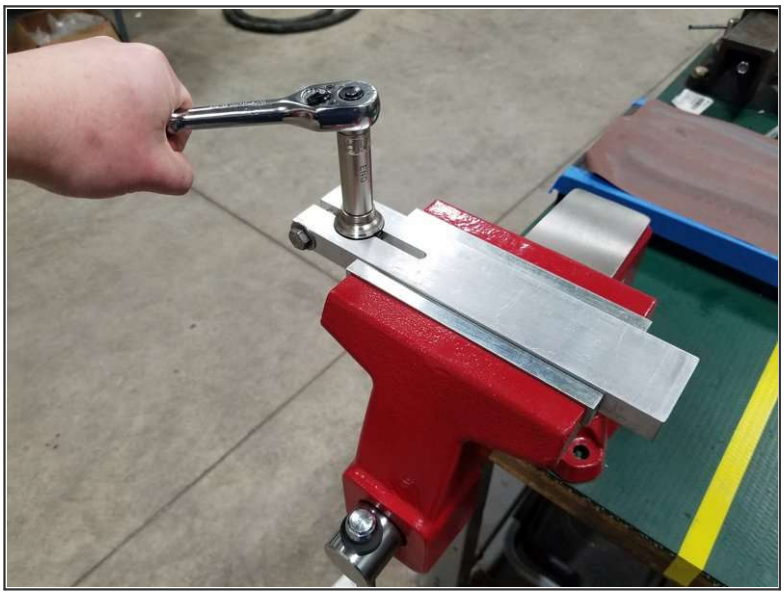

- Remove subplate adapter (gently pry groove if necessary)
- Remove snap ring and rod seal, install new rod seal (1-11993) and snap ring (1-18745). Inspect and replace spacer with bevel down

## Step 13 — Remove check valve assembly from end cap



- Carefully lift the check valve assembly using two flathead screwdrivers in the groove on the check valve body

## Step 14 — Check valve

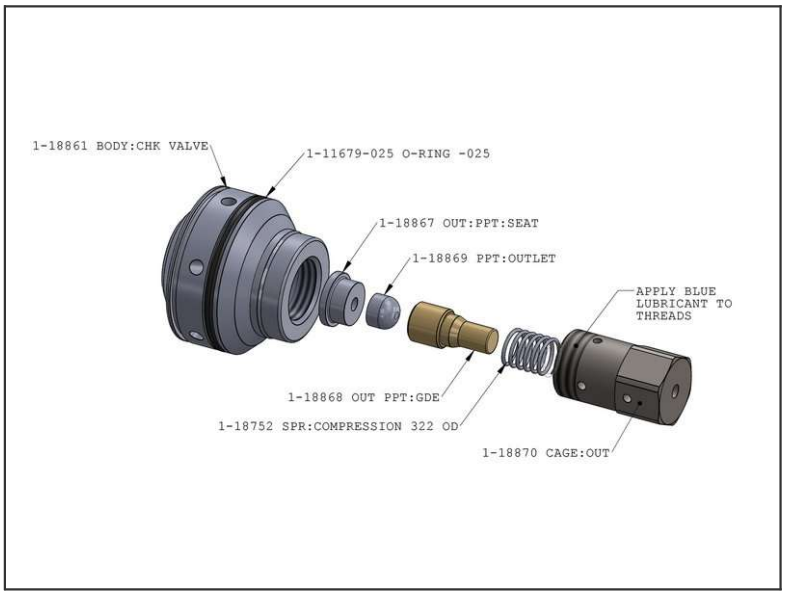


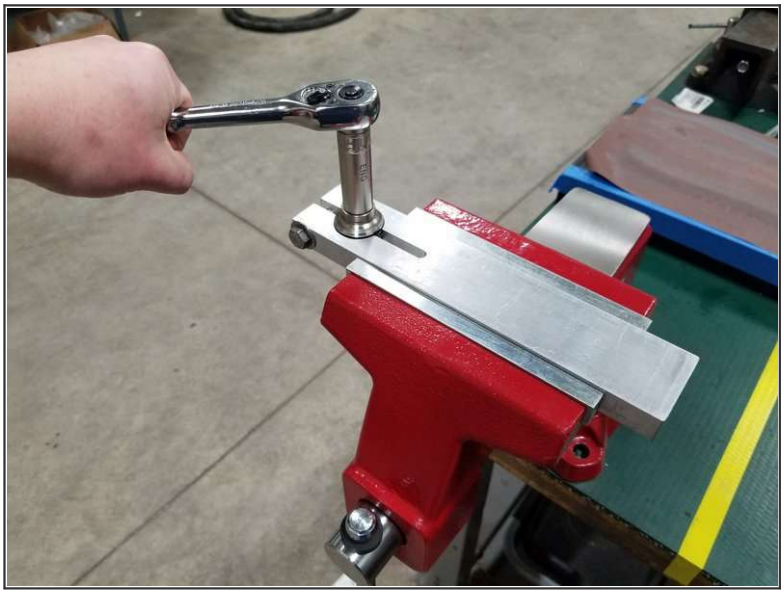
- Insert check valve body clamp tool into bench vise
- Use a 9/16" socket to tighten the clamp onto the check valve body
- Remove the Outlet Cage using the 9/16" socket - be careful not to lose the internal components
- Inspect check valve body and outlet cage for excessive wear or failure

## Step 15 — Lap check valve components

- Secure lapping paper to a hard, flat surface such as the glass plate that came with your system, or a granite surface plate
  - 1-13281 **Granite Surface plate, 9" x 12" x 2"**
- Wet paper and lap the check valve body on the inlet face poppet face using a figure 8 pattern.
- After 10-12 cycles, rotate check valve body by 45 degrees and repeat process until face is smooth and free from defects.

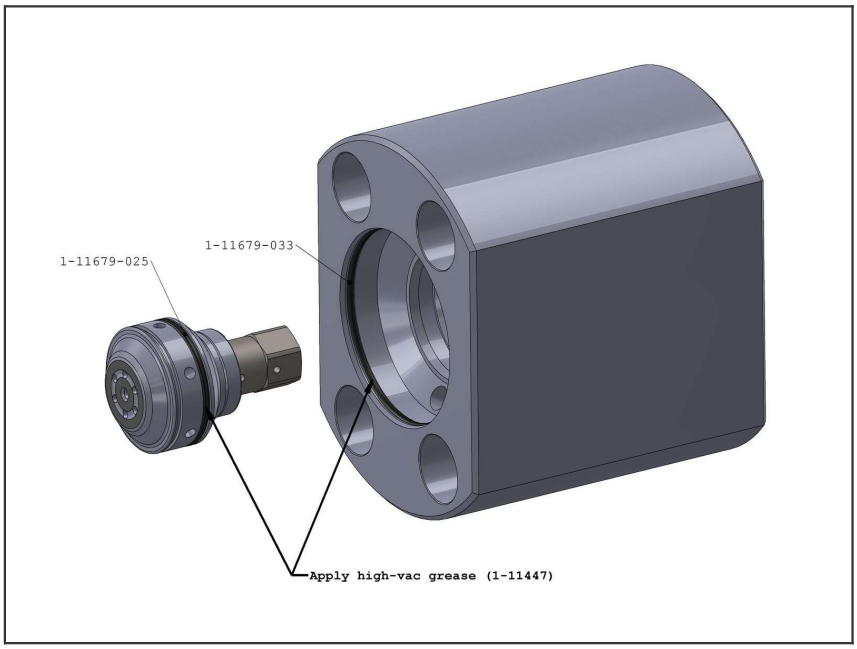
## Step 16 — Check Valve Assembly



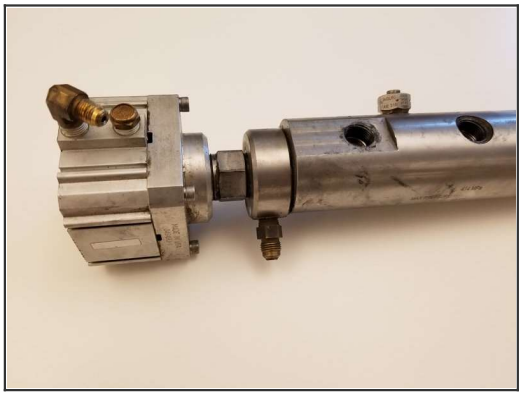
- Re-use check valve body and cage, assuming they are in acceptable condition. Replace the following:
  - 1-11679-025 O-ring
  - 1-18867
  - 1-18868
  - 1-18869
  - 1-18752
- Maintain alignment of internal components while hand-tightening the Outlet Cage. Torque outlet cage to 30 ft-lb (41 N-m) while clamped in the Outlet Cage Clamp tool

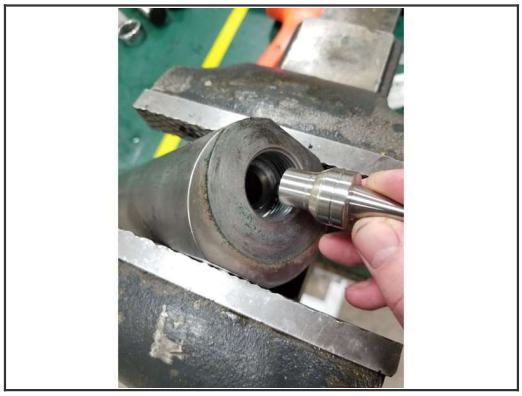
## Step 17 — Check valve continued




- Install new End Cap o-ring
- Apply high-vac grease (1-11447) to both o-rings
- Insert check valve assembly into end cap

## Step 18 — PCV Replacement



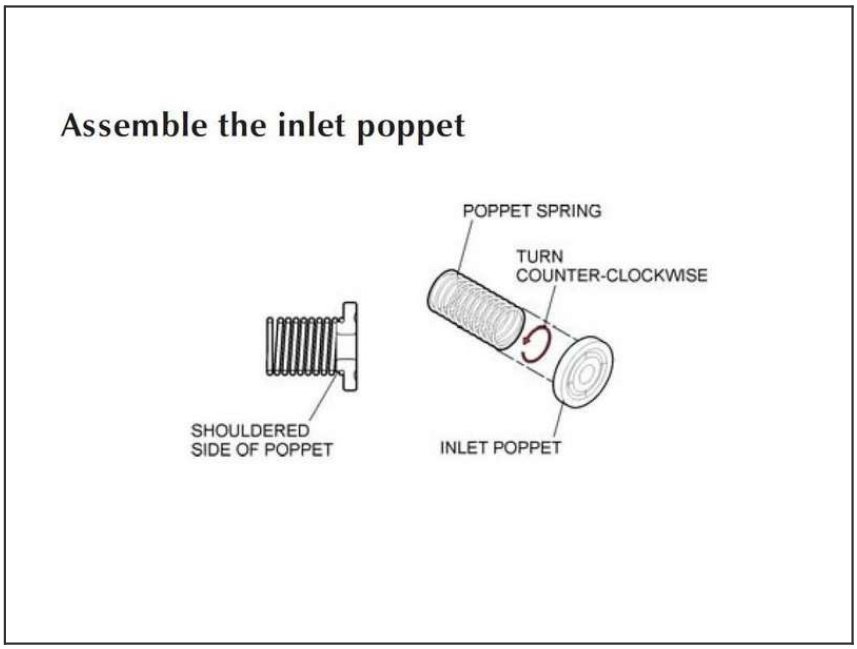


- With manifold removed from pump, place manifold in a heavy bench vise
- Remove the PCV body using a 1-1/4" (32 mm) wrench

## Step 19 — PCV Replacement

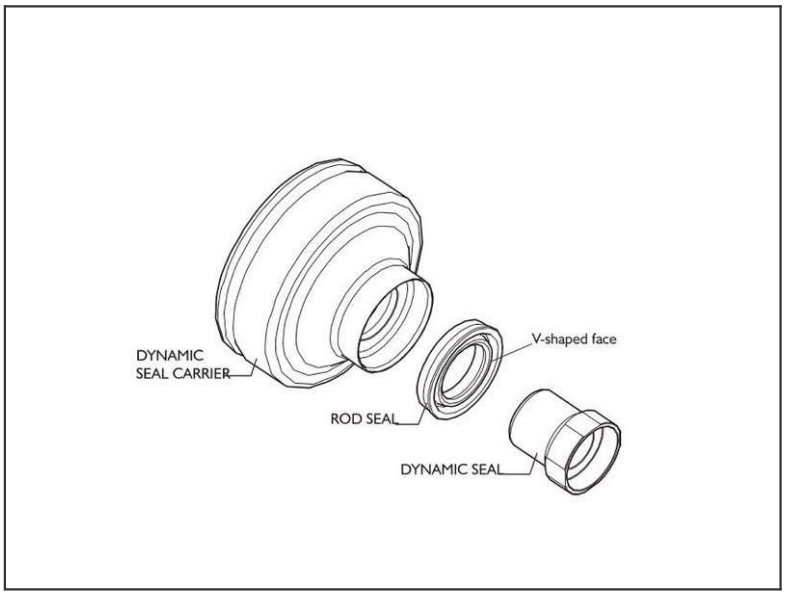
- Apply blue lubricant to threads and both faces of the PCV adapter
- Install new PCV Ring onto new PCV Seat, and insert PCV Poppet into seat. Insert PCV assembly into PCV body
- Thread manifold onto PCV Adapter. Torque to 190 ft-lb (258 N-m)

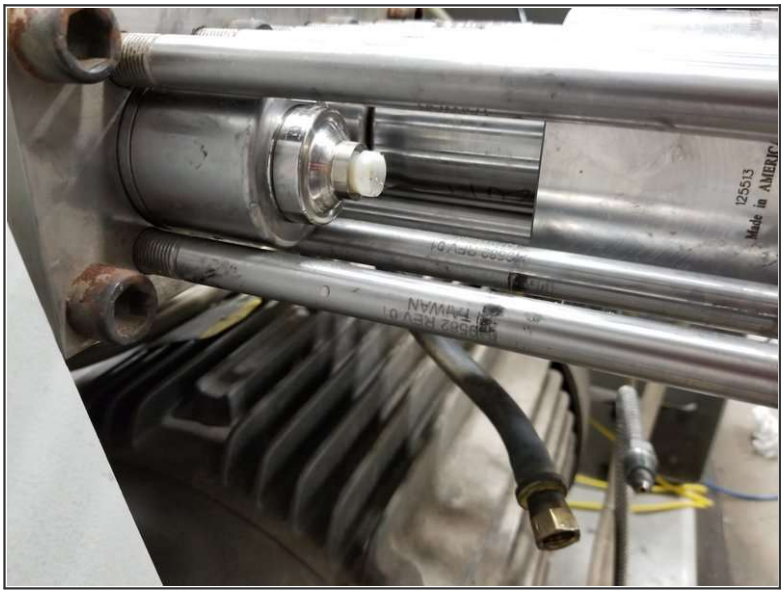
## Step 20 — Assemble Inlet Poppets




- Attach 1-18747 spring to 1-18865 Inlet Poppet

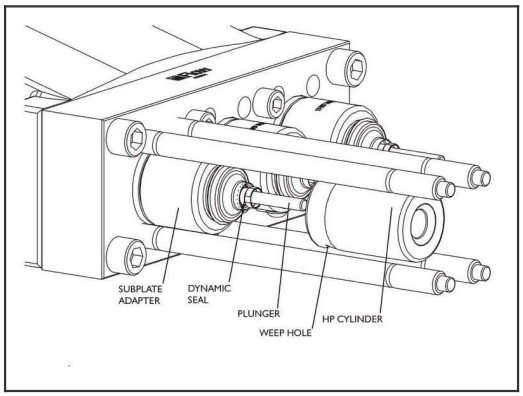
## Step 21 — Replace HP seals

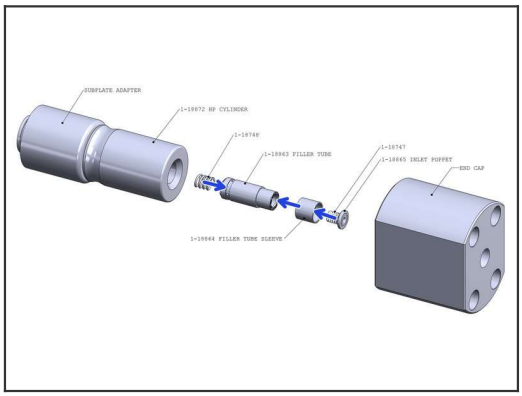


- Insert dynamic seal and rod seal into new seal carrier (slight pressure is required to seat dynamic seal)
- Install rebuilt subplate adapter
- Slide seal assembly over plunger up to subplate adapter

## Step 22 — Install HP Cylinder, filler tube

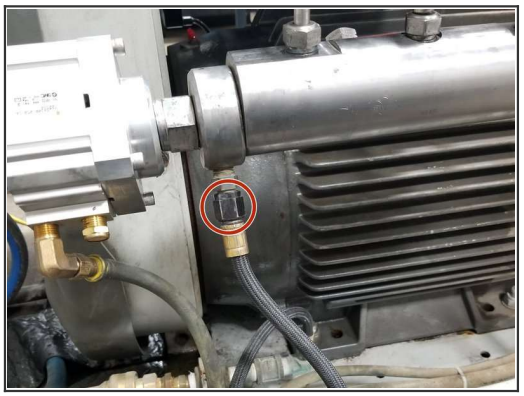

- Insert new o-ring into HP Cylinder. Apply a small amount of high-vac grease to o-ring
- Carefully slide HP cylinder over the seal carrier, keeping the weep hole facing down
- Insert 1-18748 spring into Filler Tube. Slide filler tube sleeve onto filler tube, insert poppet assembly into filler tube
- Insert assembly into HP Cylinder

## Step 23 — Attach end caps


- Slide End Cap onto tie rods and align with HP Cylinder
- Place washers and nuts on tie rods, hand tighten until snug
- Attach and pressurize the pressure loading tool. Tighten nuts by hand until they are snug against the end cap
- Remove pressure from pressure loading tool
- Repeat for all three lines

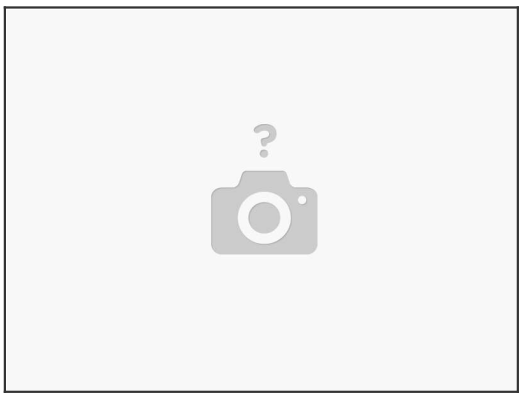
## Step 24 — Install manifold





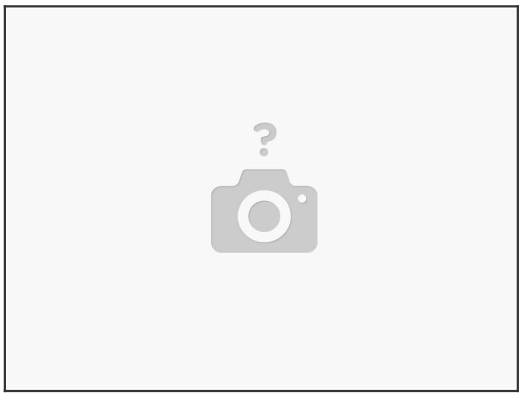
- Apply blue lubricant to high-pressure fittings
- Torque high-pressure glands to: 40 ft-lbs (54 N-m)
- Attach manifold/high-pressure glands, air line, PCV drain line, and inlet lines

## Step 25 — Other considerations



- Check oil level and quality. Change oil per the recommendation of your specific system
- Check belt quality and tension
- Replace water filters as necessary
  - 1-11390 - 1 micron
  - 1-11402 - .45 micron

## Step 26 — Energize the system



- When complete, unlock system and restore energy
- Start pump and check for any leaks