

Instruction Sheet HIGH PRESSURE OIL PUMP International T444E / Ford 7.3L 1994-2003

WARNING: To avoid serious personal injury, possible death, or damage to the engine or vehicle, read all safety instructions in the foreword of the corresponding model year service manual.

Identifying Parts

This high-pressure oil pump kit contains the following parts:

- Loctite® 680 Retaining Compound
- 3 o-ring seals for End Plug and Discharge fittings
- 2 o-rings seals for inside of the Discharge fittings
- 1 o-ring seal for IPR to pump housing plug
- 1 o-ring for the HPOP reservoir plug

Description

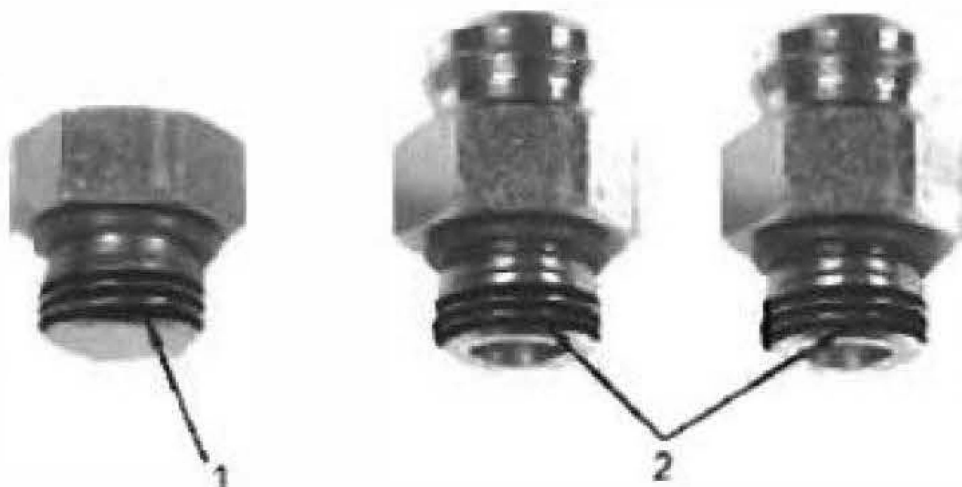


Fig 1 End Plug and Discharge Fittings

1. End plug fitting
2. Discharge fittings (2)

The figure above shows (1) end plug and (2) discharge fittings with the first three threads with Loctite® 680 Retaining Compound.

NOTE: This kit is intended for on vehicle repair with the exception of the “non-serviceable” plug. It contains 7 o-rings and a capsule of Loctite® 680 to be added to only the first three threads.

Removal

WARNING: To avoid serious personal injury, possible death, or damage to the engine or vehicle, make sure the transmission is in neutral, parking brake is set, and wheels are blocked before doing diagnostic or service procedures on engine or vehicle.

1. Prepare to collect engine oil from the back of the high pressure oil pump in the valley area of the engine.
2. Remove end plug from port and discard o-ring

NOTE: Oil will continue to flow out of the port. Use a rag or suitable container to collect the oil.

3. Remove both high pressure oil hoses from the pump. Using special tool, **#6595** quick release tool available from RiffraffDiesel.com (see end of instructions on how to disconnect the quick release fittings).
4. Remove both discharge fittings from the pump.
5. Remove spring and check assemblies with needle nose pliers.
6. Remove fill plug from top of reservoir tank.

Cleaning

1. Clean both fittings and end plug ports with a commercially available brake cleaning product.

NOTE: Important! Be sure both ports in the pump housing are clean and dry.

Installation

CAUTION: Before installing springs into both ports, make sure that the flat poppet end of the spring goes into the pump housing first. If this is not done it will cause damage to the pump.



Fig 2 Spring poppet orientation

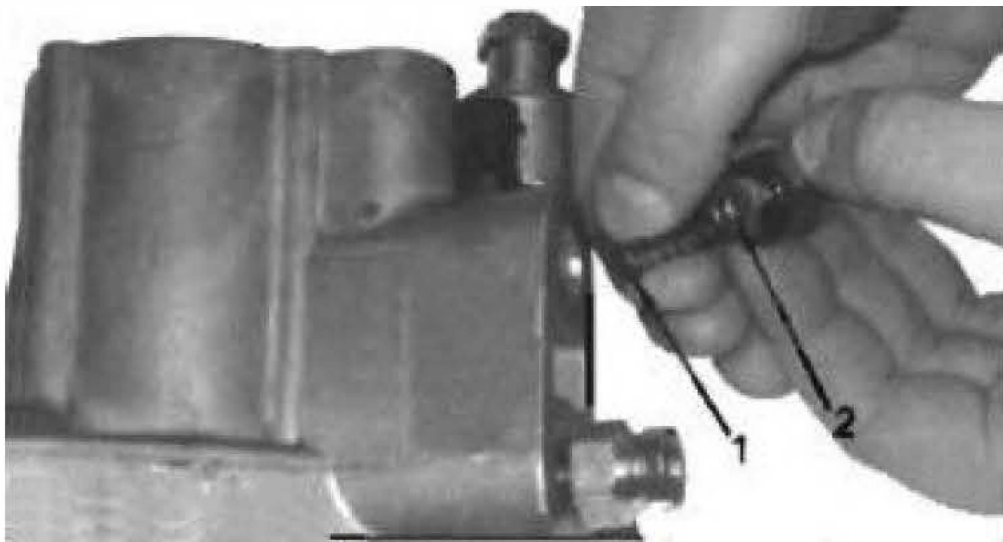


Fig 3 Installing spring and discharge fitting

1. Poppet end
2. Recess seat in fitting

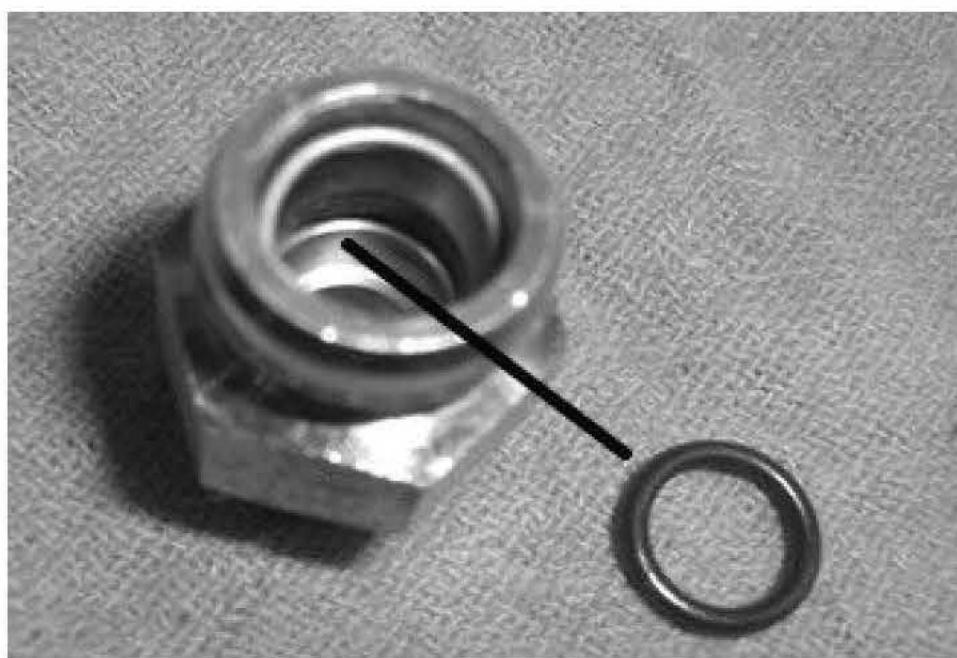


Fig 4 Internal o-ring on Discharge fitting

1. Install internal o-ring in discharge fittings using care not to nick or score the o-rings or discharge fittings. **NOTE: The o-ring is located about half way down the fitting. Sitting above the o-ring is a white nylon spacer. Be careful that you do not remove or damage this nylon space when removing the o-ring.**
2. Install new o-rings on the threaded end of both discharge fittings and end plug
3. Clean the threads with Brake Clean and apply the Loctite® to only the first three threads on both discharge fittings and end plug.
4. Install both discharge fittings to the pump housing and torque to 34 N-m (25 lb-ft)
5. Install both high pressure hoses.

NOTE: Make sure that all oil film has been removed from the port prior to installation of the plug.

6. Install end plug and torque to 34 N-m (25 lb-ft).
7. Install new o-ring of reservoir plug and install.
8. Recommended cure time for the Loctite® 680 retaining compound is a **minimum of two to three hours** before starting the engine.
9. After allowing the Loctite to cure, start engine and check for oil leaks.
10. Check and correct the engine oil and reservoir

levels as necessary. Reservoir level should be within $\frac{3}{4}$ inch from the top.

IPR O-ring

This kit includes a new o-ring to re-seal the IPR valve to the HPOP.

1. Remove the old o-ring from the IPR threads and install the new o-rings.
2. Torque the IPR to the HPOP to 35 lb-ft and the IPR tin nut to 53 lb-in.

“Non-servicable” Plug repair

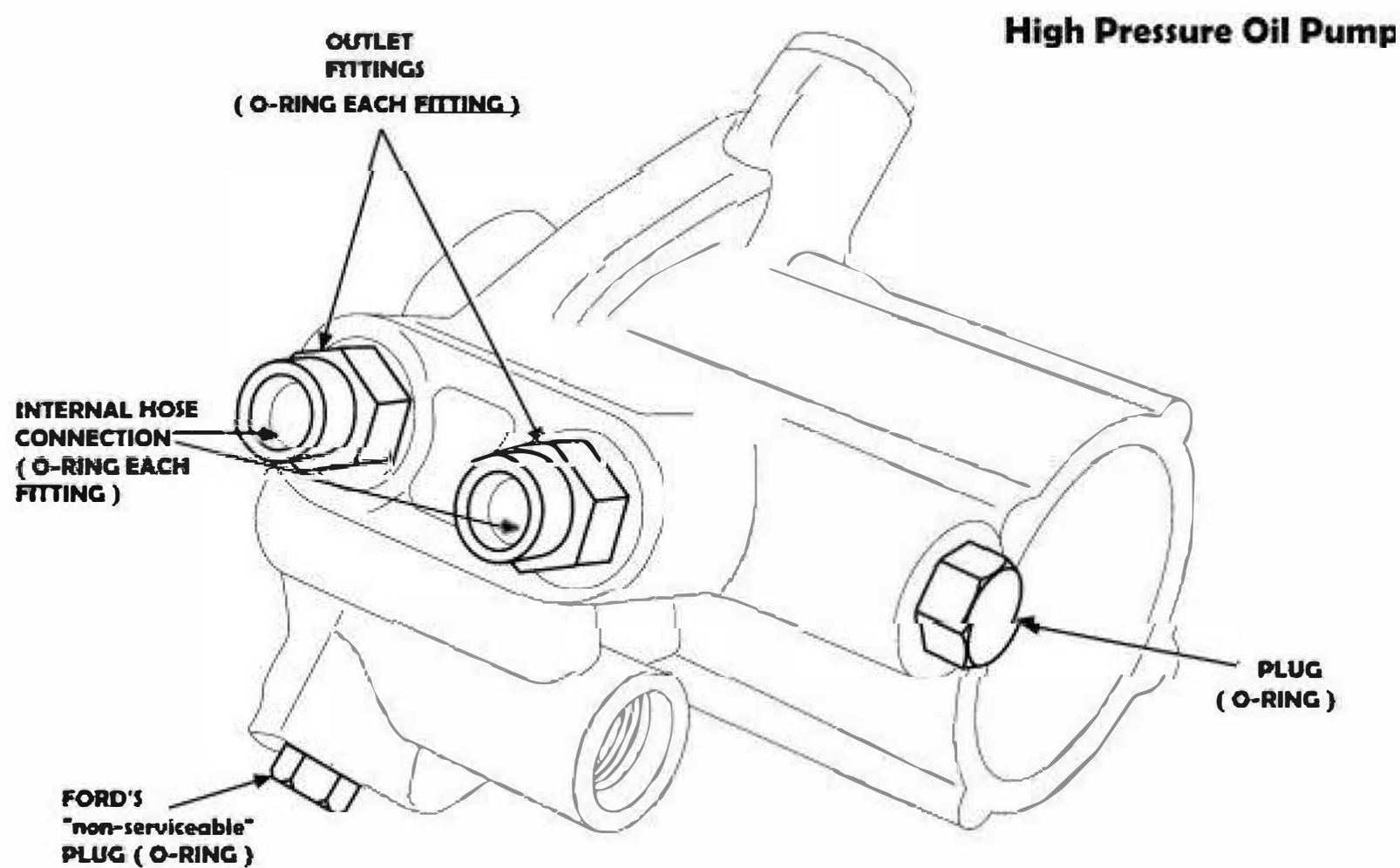
⚠ WARNING: The HPOP must be removed from the truck to perform this service as there is a small plastic ball behind the plug that will reposition itself or fall out if not performed properly.

If your “non-servicable” plug is leaking, see our “Serviceable” plug kit #GZ-8-007 instruction sheet for our “long threaded” plug. The instruction sheet available for download in PDF format includes instructions on how to remove the HPOP from the engine so it can be properly serviced on the bench. The kit contains a new “long threaded” serviceable plug, o-ring and packet of Loctite 680 Retaining Compound.



RiffraffDiesel.com Kit #GZ-8-007
plug “Long Threaded” plug

The major cause that the HPOP “non-servicable” plug begins to leak is due to an engineering defect that allows the short threaded plug to tear the soft aluminum threads from the HPOP body. The “long threaded plug” allows 85% more holding power in the HPOP threaded port.



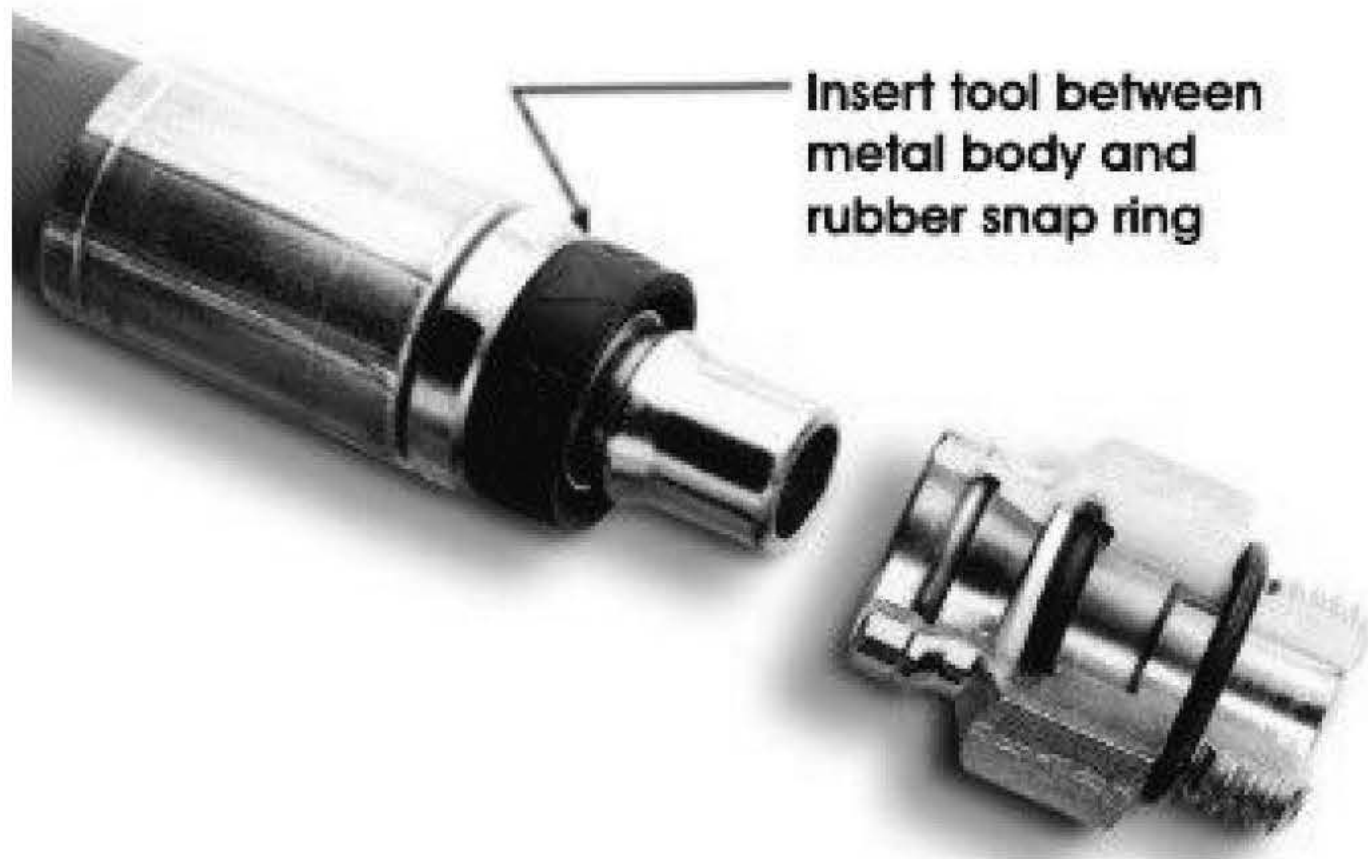
Special Purchase on RiffraffDiesel.com Quick Disconnect HPOP hose tool

RiffraffDiesel.com **Quick Disconnect tool #6595** Our HPOP hose tool is made from high grade 7075 Aircraft aluminum alloy, the same aluminum that is used in manufacturing rock climbing equipment, hang glider airframes and even the M-16 military rifles. The aluminum is strong, has the ability to flex and return to its original shape. The tool is finished with a rich black anodized coating and will never rust.

This tool is superior to any HPOP Quick Release tool available and was engineered to hold up to the daily usage that a professional mechanic demands from a quality hand tool.



Riffraff Diesel Quick Release Tool
And can be purchased at RiffraffDiesel.com
MADE IN THE USA



To release the line from the fitting:

While firmly pushing the line straight into the fitting with one hand,
Insert the tool behind the black release sleeve and gently pull on the line.

To connect the line to the fitting:

Push the line into the fitting until you hear/feel the snap ring “grab” the line.
Insure connection by pulling on the line.

Note: Whenever the high pressure system is opened, air enters the system and the
Vehicle needs to be driven to remove the air.