



PLEASE READ AND UNDERSTAND ALL INSTRUCTIONS BEFORE BEGINNING INSTALLATION.

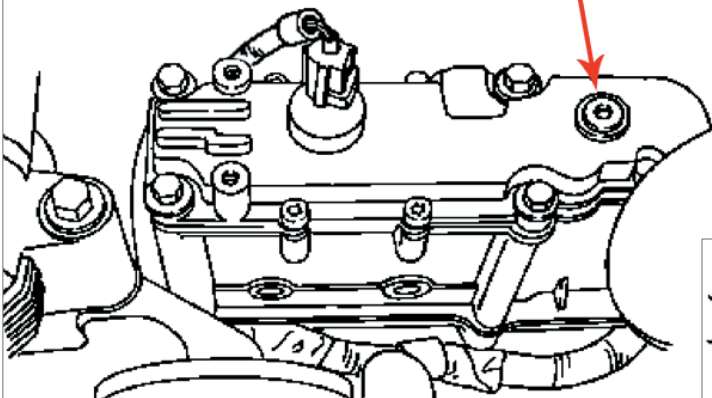
* Locate the set of o-rings supplied with your new Adrenaline HPOP. There are two o-rings for the fittings into the pump and three replacement o-rings for your IPR. If you are reusing your IPR we recommend replacing all of the o-rings supplied. Also, the installation sketches may differ from your truck depending on the model year. 1994-1997 trucks can use these instructions as a guideline, but their install will differ slightly.

Remove your existing High Pressure Oil Pump - HPOP

If you still have your factory fuel bowl/water separator, you will need to remove it in order to install your new Adrenaline HPOP. Loosen the compression nuts on all 4 fuel lines. Remove the rubber drain line off the back of the fuel bowl. Unplug the electrical sensor on the back of the fuel bowl.

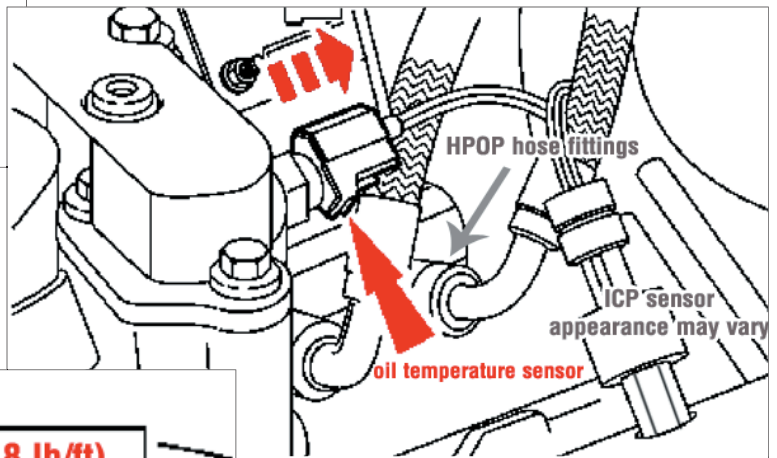
HPOP Reservoir

High Pressure Oil Pump Reservoir Plug



Remove the high-pressure oil pump reservoir plug using a 3/16" allen wrench. Using an oil suction device, remove the oil from the high-pressure oil pump reservoir. If you do not remove the oil before removing the reservoir, it will not harm anything. However, it will make a mess as you will dump about 3/4 quart of oil all over your engine.

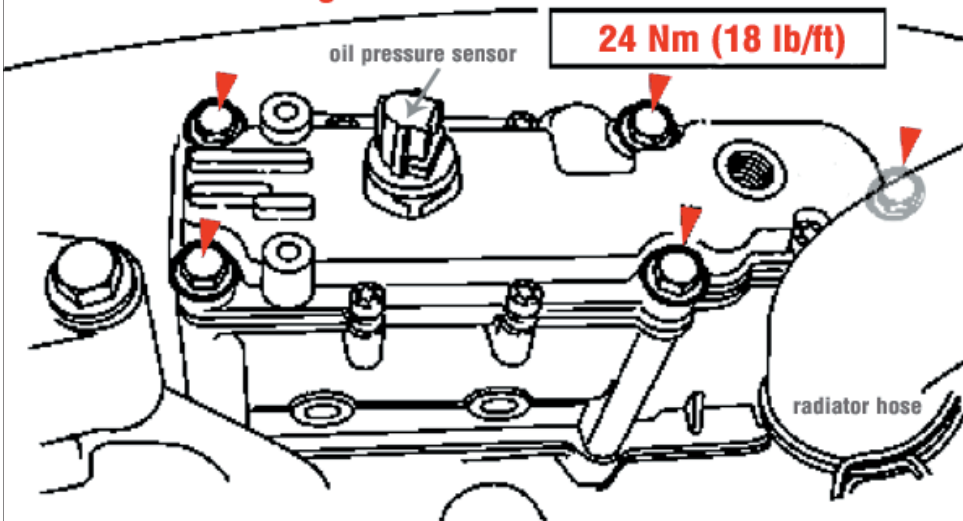
Disconnect the oil temperature sender from the reservoir. Disconnect the electrical connector from the oil pressure switch found on top of the reservoir.



Reservoir Mounting Bolts

oil pressure sensor

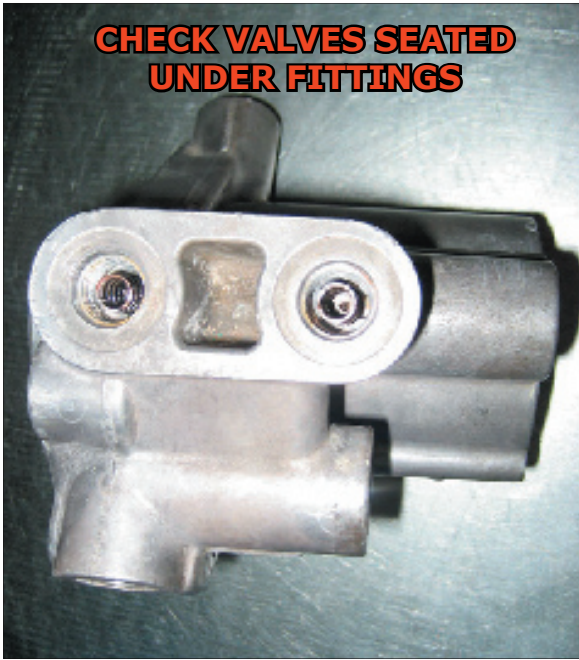
24 Nm (18 lb/ft)



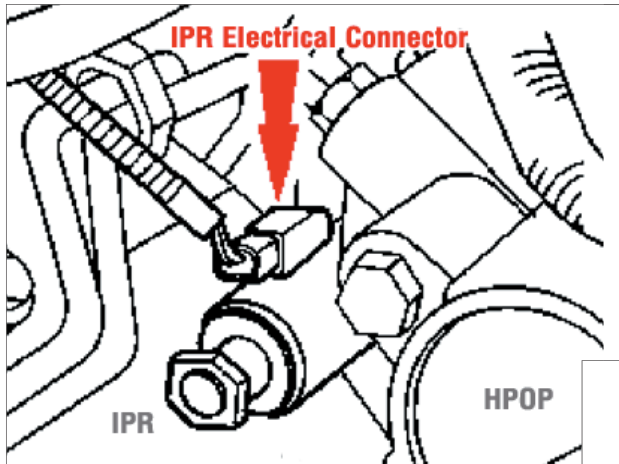
Remove the (3) 10mm bolts and (2) 13mm bolts holding down the reservoir. Remove the reservoir with the fuel bowl attached.

*Our CPR fuel systems are designed to remove your factory fuel bowl as it is replaced with a more efficient pre-pump filter.

CHECK VALVES SEATED UNDER FITTINGS

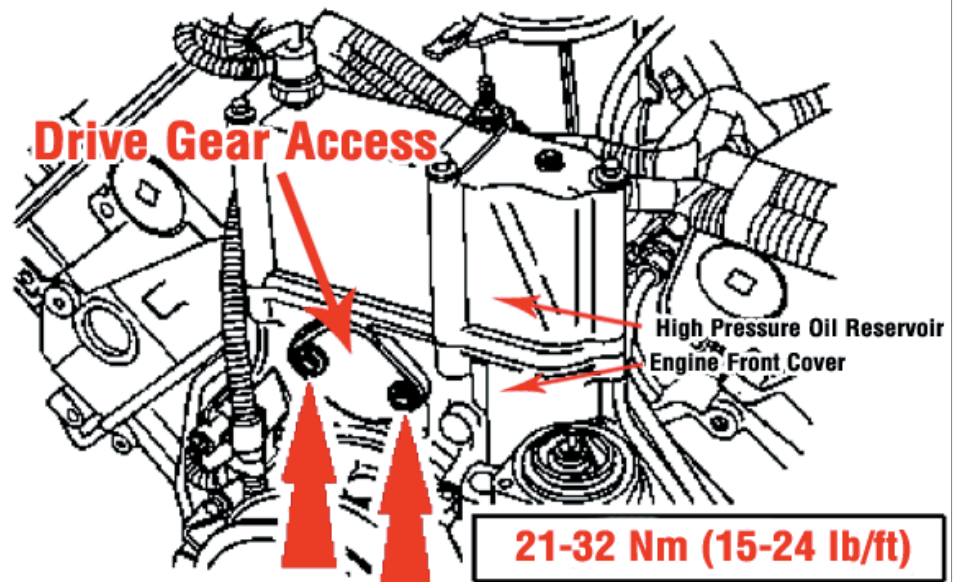
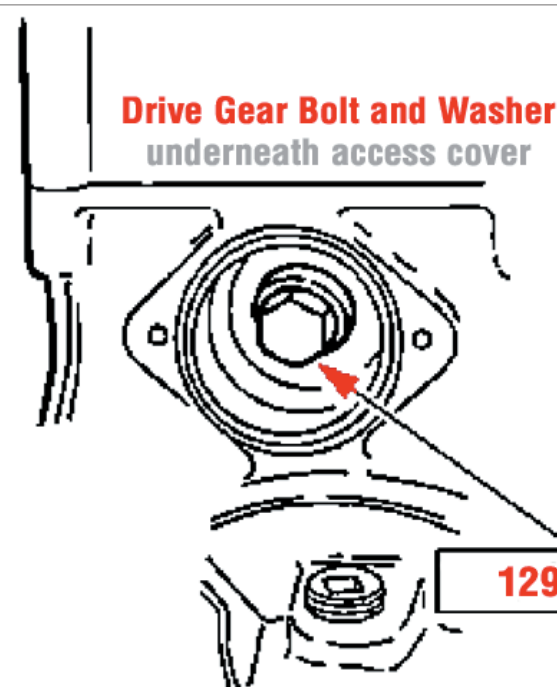


Remove the hoses from the high-pressure oil pump. Remove the two springs (check valves) found under the hose fittings. **DO NOT reinstall the spring check valves into the new pump.** Removal of the two check valves will balance oil in the heads right in the pump output now. Remove any aftermarket high pressure crossover line - if you have ever installed one. There is no need for it any longer and as such there is no need for unnecessary failure down the road of a part that is no longer needed. You will use the two o-rings supplied with your pump for the fittings when reinstalling these lines into your new Adrenaline HPOP.



Disconnect the electrical connector from the injector pressure regulator.

Remove the bolts and the cover from the engine front cover using 8mm socket. Position the wiring harness aside.

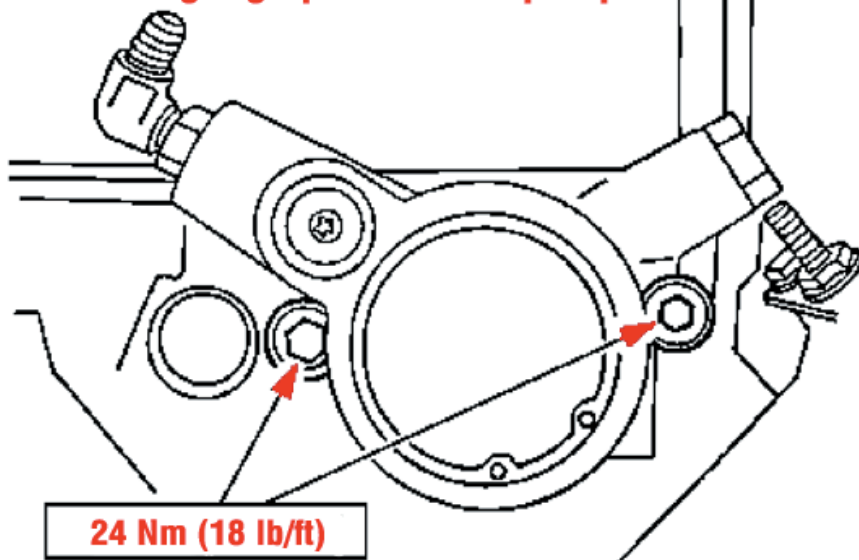


Remove the drive gear bolt (18mm) and washer from the drive gear.

Remove the hpop mounting bolts (10mm) and then remove the high-pressure oil pump from the engine front cover.

Remove and discard the mounting gasket.

Bolts holding high pressure oil pump to front cover



IPR INSTALLATION INSTRUCTIONS:

If you are reusing your IPR: Once the HPOP is out of the truck and sitting on your workbench, remove the IPR - Injector Pressure Regulator - from the pump and transfer it to your new Adrenaline HPOP. Replace the o-rings supplied with your new pump when reinstalling your IPR. Do not reuse your IPR o-rings. DO NOT FORGET THIS STEP. Most problems arise from not replacing the o-rings on old reused IPRs.

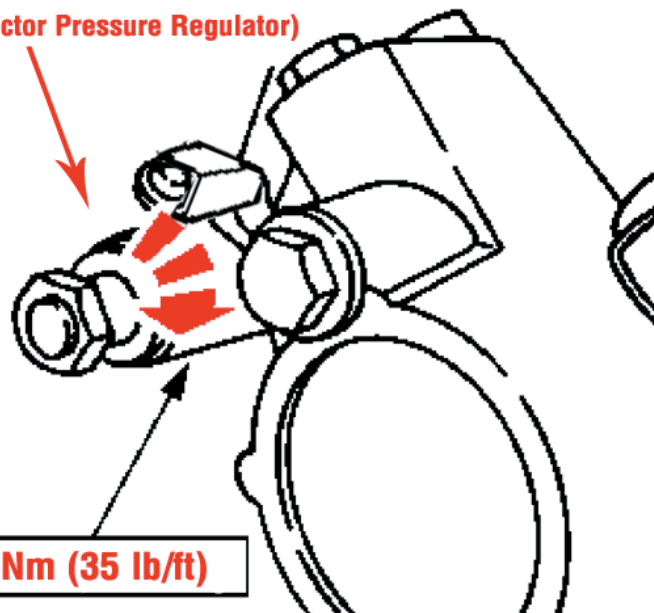
If you ordered a rebuilt IPR, remove it from the shipping tube and install it into your pump. You will need to transfer your solenoid and nut onto your new pump.

If you ordered a new IPR, you will need to install it into the Adrenaline before installing the new pump.

The nut on the end of the IPR may sometimes wiggle loose and land in the valley of your engine. Make sure the tabs on the nut are tight on the threads. If they do not get tight you can purchase an o-ring seal kit for the IPR from your local dealership, or you can find it at www.dieselsite.com.

CAUTION: No matter what option you have chosen for your IPR, keep the IPR very clean at all times. DO NOT wrap it in a dirty or heavy lint laden rag. Any dirt or lint can cause your IPR to malfunction upon reinstallation.

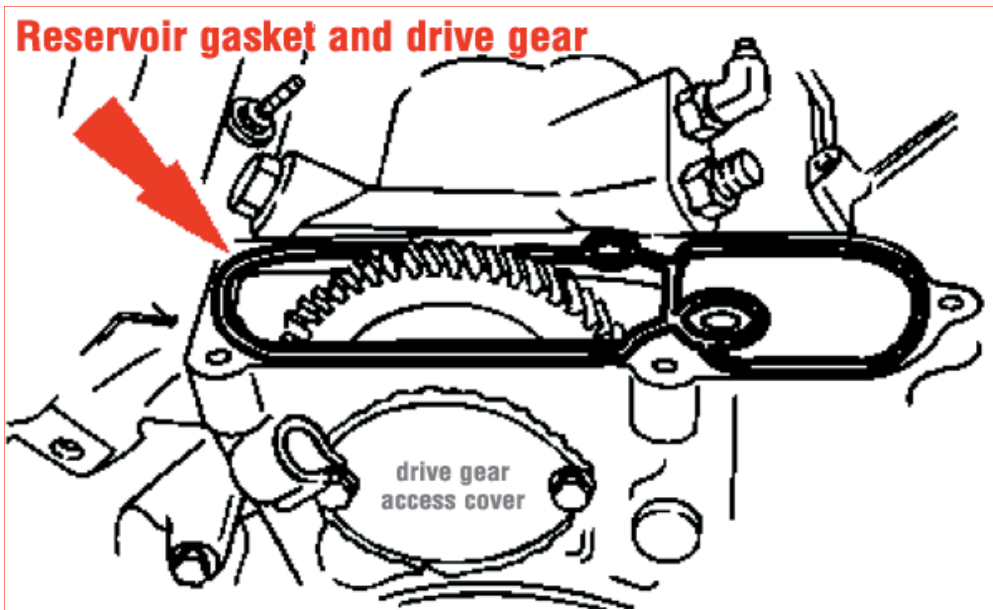
IPR (Injector Pressure Regulator)



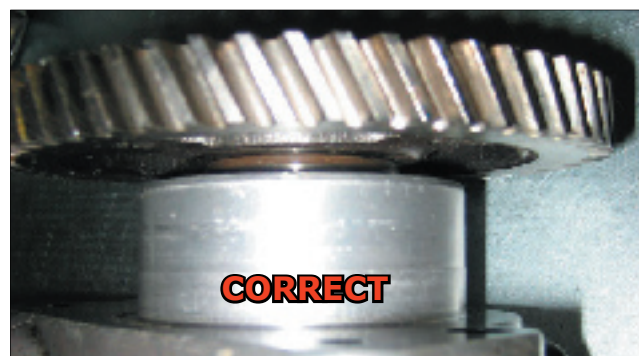
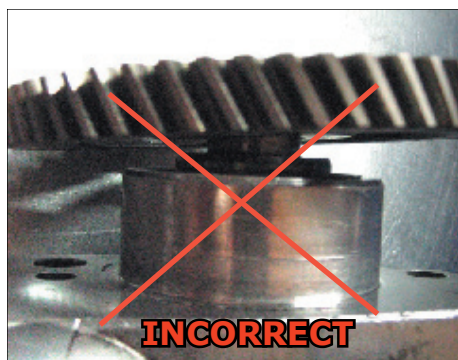
Installation of your new Adrenaline HPOP

Follow the removal procedure in reverse order.

Place the Adrenaline in your truck with the new mounting gasket that was supplied. Reposition the drive gear and reinstall the bolt, washer and access cover. The access cover is sealed onto the front cover with RTV gasket sealant.

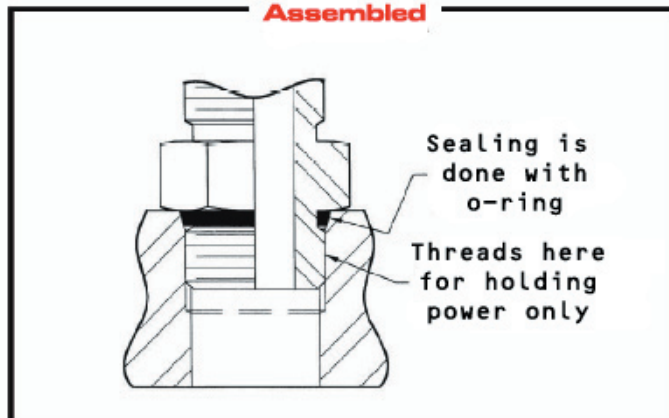
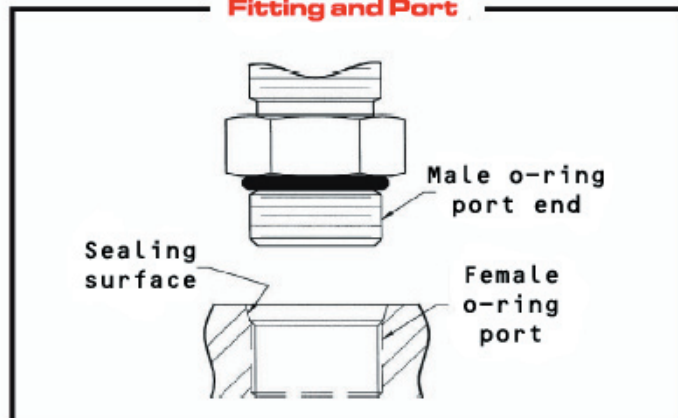


CAUTION: Make sure that the drive gear is fully seated on the high-pressure oil pump before installing the bolt and washer. Otherwise, the drive gear may not seat properly, causing binding or slippage resulting in a no oil flow condition. Do not assume the bolt will pull it tight and flush.



Reconnect the oil lines to the new pump using the new o-rings that we supplied with the pump. The fittings for the hoses are ORB (O-Ring Boss). These rely on the o-ring to seal, not the threads. These fittings need only be snug. Once the metal touches metal, and the o-ring is seated, the installation is complete. Do not overtighten these as you will only damage the threads. Overtightening does not make them seal any better. Improper installation is 100% of the reason for fittings blowing out of pumps.

Straight Thread O-Ring Boss - DO NOT OVERTIGHTEN - The o-ring seals the fitting.



Reinstall the reservoir and fuel bowl assembly. We highly recommend the installation of a **new** reservoir gasket. You can purchase from Ford or through our website, www.dieselsite.com.

Fill the reservoir with about 3/4 quart of oil. Your truck will take care of filling it the rest of the way after startup. Trying to fill the reservoir completely will be a futile effort as **the reservoir will only fill to about 1" from the top**. Any additional oil will just run down into the oil pan because of an overflow hole found inside the reservoir that you cannot see.

Install the reservoir plug. Start the truck. Check for leaks. Let the truck idle for 5 minutes or so to circulate the oil through the system. Then take it out for a brief run - about 10 minutes. This will force any air in the heads to accumulate at the highest point. The engine is tilted in the compartment and the high point is the front of the engine. Your driver's side head contains the ICP sensor in the first port. It is typical that a nice air bubble finds its way right under that sensor and can wreak havoc on the entire install.

PURGE THE AIR FROM OIL RAILS IN THE HEADS: Remove the ICP sensor to make sure that the oil rail is full. The ICP sensor is located in the first port of the oil rail in the driver's side head. Use a small funnel to fill. Reinstall the sensor. Repeat on the passenger side with the first oil rail plug on that side. Once you have removed and reinstalled both plugs and have insured that both rails are full of oil, restart the truck.

It should be very smooth now. If no leaks are found, take your truck out for another test drive. Unless programming is severely limiting your ICP pressures you should be grinning from ear to ear by the time you get back home. There should be a considerable difference in the performance of your truck. If not, please contact us to help you figure out what might be limiting your truck from using the larger oil volume. If you love it, please call and let us know too!

Starts may seem slow if the air is not bled out of your system. Once bled you will notice slightly faster starts than with your stock pump.

If purging the rails doesn't clear up all rough idle symptoms, you can shut the truck off and disconnect the ICP sensor. This will force the truck into a default setting (and will throw a harmless code). If the truck idles smoothly with the sensor disconnected then your sensor is bad or there is still an air bubble underneath it. Make sure that rail is full. But since you have already purged your bubble, a bad sensor will likely be the culprit and it is not unusual to need a new one. We have seen trucks have to replace this sensor after the swap.

If disconnecting the sensor doesn't fix the rough idle issue: CALL US - at any time - 888-414-3457. We'll run through some more complex troubleshooting with you.

The Adrenaline is quiet and smooth and should idle smooth as butter for you. If it doesn't, then your truck has an issue. Sometimes a FUEL system problem can be highlighted with the new pump install and your issues are related to fuel and not oil. That is rare, but it happens.

It is important to remember that PUMPS MAKE VOLUME, they DO NOT MAKE PRESSURE. Installation of the Adrenaline will allow you to reach ICP pressures that were not possible with your stock pump - but only if your program is requesting them. You can never build too much pressure to hurt your truck with a pump change only, unless your programming is calling for higher pressures that would be harmful. Please check with your tuner to verify your ICP pressure limits are between 2800 and 3200 psi. Never use excessive pressures!!