

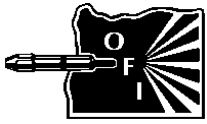
DPA Pump Installation Instructions

These are basic instruction for the timing and installation of the Delphi (C.A.V., Lucas) DPA model pump. Since the procedure may vary depending on the engine, please refer to the correct engine service manual for your engine. In an emergency however, if the timing marks are clearly marked on the engine and pump mounting flange, most injection pumps can be installed as follows.

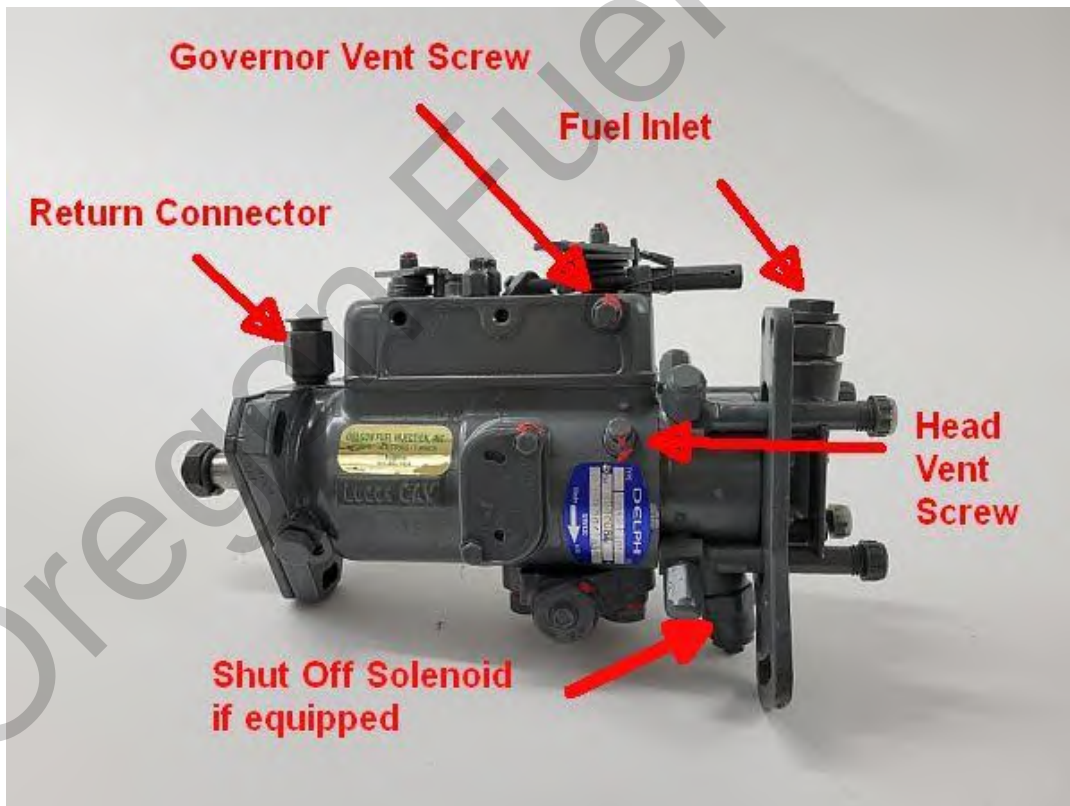
INSTALLATION

1. Turn the pump drive shaft so that the master spline or keyway is in alignment with the master spline on the engine.
2. Insert the drive shaft into the engine coupling as the pump is pushed onto the mounting studs.
3. Push the pump snugly against the mounting face. Secure lightly with the three holding nuts, or with the lock washer and nut on the tapered shaft style pump.
4. Rotate the injection pump on the mounting studs until the timing mark scribed on the pump mounting flange is aligned with the timing mark on the engine.
5. Tighten the retaining nuts.
6. Connect and tighten the return fuel pipe. The fuel line grommets are mainly used on Perkins engine applications.
7. Connect the fuel inlet pipe, leave loose until bleeding procedure.
8. Connect the shut off lever, if it is equipped with a shut off solenoid, connect that later during the priming process.
9. Connect the throttle lever and ensure that the lever has full travel when the throttle is operated. Set the vehicle throttle linkage stops so that pressure from the linkage is not transmitted to the maximum speed stop on the injection pump.

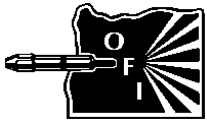
Note: Do not attempt to start the engine until the pump has been primed with fuel.



Earlier style DPA pump with three bolt drive hub.



Later style DPA pump with tapered shaft and keyway.



PRIMING and STARTING

1. Use the primer pump to prime the fuel filter. Caution: Do not fill the fuel filter with fuel, because the filter will remove contamination that you can't see. Slacken the filter outlet, or the fuel pump inlet, whichever one is higher. Allow fuel to flow until it is free from air. Tighten connections
2. Loosen the head vent screw on the injection pump and operate the primer until fuel free flows from the head vent screw. Then tighten the vent screw.
3. Open the throttle lever and ensure the shutoff is in the run position, or the wire is connected to the shut off solenoid.
4. Loosen **one** high pressure outlet line and crank the engine over until fuel free from air flows from the line. Tighten the injection line.
5. Repeat step 4, one line at a time until the engine starts.
6. With the engine running at idle speed, loosen the governor vent screw. When fuel free from air flows from the vent, tighten the vent screw. Sometimes it is necessary to run at a faster rpm than idle to vent the governor.

Note: If you have multiple injection lines open during priming, it is possible to cause an air lock. Air locks can be difficult to purge and require cycling the shut off while cranking. Have only one injection line open at a time, during priming