Fuel Pressure Needle Valve

The Needle Valve regulates, normalizes and eliminates fuel pressure spikes that are present during the initial startup of your Diesel Engine. The Needle Valve manages these high pressure spikes by restricting the flow of fuel past the needle plunger. High pressure fuel system spikes during startup are harmful and may cause early and unexpected failure of electronic fuel pressure sensors and/or sending units for fuel pressure gauges.

1. The Needle Valve should be installed in-line between the banjo bolt on your fuel filter housing and your fuel pressure sensor, or directly into your aftermarket fuel pump's test port.

   - Screw the 1/8-27 NPT male threads of the fuel pressure sensor into the female end of the needle valve. **Note:** Be sure not to overtighten any of the fittings.

2. There are two locations where you can install the needle valve; this depends on what type of fuel system you have and where you are planning to install your fuel pressure sensor.
   - **Location 1: Fuel Filter Housing**
      - With your fuel pressure sensor attached, connect the male end of the needle valve into the female end of the banjo bolt.
      - **Note:** Be sure to use Teflon tape on the threads to ensure a tight seal.
   - **Location 2: Aftermarket Fuel Pump**
      - With your fuel pressure sensor attached, connect the male end of the needle valve into the service port located on your aftermarket fuel pump.
      - **Note:** If the service port is not threaded to 1/8-27 NPT an additional adapter will be required.
      - **Note:** Be sure to use Teflon tape on the threads to ensure a tight seal and **do not** overtighten any of the fittings.
3. Tighten the Needle Valve completely.
4. Follow the manufacturer's steps to prime the fuel system and start the vehicle.
5. Check for leaks and crack open the needle valve slightly.
6. Cycle the key and watch the gauge: pressure should increase in a slow and smooth manor. If the needle rises or jumps quickly, close the valve slightly and then recheck.

NEEDLE VALVE →

1/8-27 NPT SENSOR