

EV3 SEALED FUEL PRESSURE GAUGE AND SENSOR INSTALLATION INSTRUCTIONS



ICON KEY

CAUTION Tools may be required Shown in picture

1 PRESSURE SENSOR INSTALLATION

Disconnect batteries. Do not reconnect battery power until system is fully configured to avoid risk of shock or fire.

2 Find a location where fuel pressure can be measured such as a test port on the fuel pressure regulator or aftermarket lift pump. This may require adapter fittings to accommodate the 1/8" NPT sensor threads. See engine-specific notes on the next pages for details.

DO NOT attempt to install in a location exposed to fuel rail pressure on common rail systems, as these systems typically operate at over 20,000 PSI.

3 Install the new sensor. Pressure sensor threads are 1/8" NPT.

Many Emission Control Devices are connected to OEM sensors or switches. Be careful not to disable these when installing a sensor.

4 If leakage occurs at the sensor, tighten one-quarter turn at a time until leakage stops. If necessary, thread sealant such as Teflon tape may be used.

When using a torque wrench, tighten approximately 4.4 – 6.6 lb-ft [6-9Nm]. Do not use the body of the sensor to tighten! Use only the hex and the correct wrench. Do not over tighten!

5 Connect the pressure sensor to the pressure sensor harness by pressing the connector into the slot.

Figure 1: Pressure sensor and harness.



6 Route the pressure sensor harness' black, green, and red/yellow wires to and through the firewall to the intended gauge location. Grommets usage is recommended.

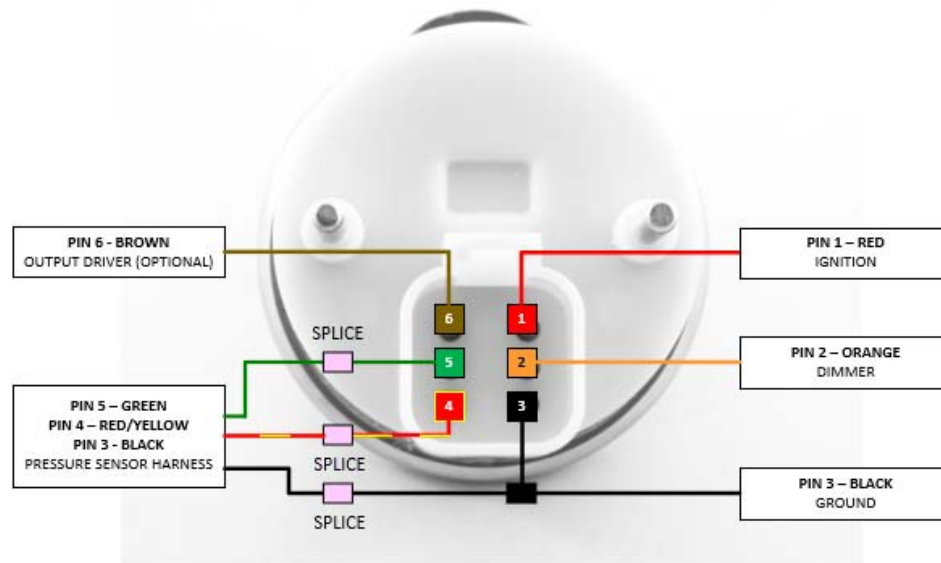
7 GAUGE INSTALLATION


Connect the 6-pin sealed connector to the back of the gauge (with the gauge near its final mounting location), then route the sensor portion of the harness towards the firewall and the red, orange, black and brown wires with cut ends towards the fuse panel or other area where the power, dimmer, ground and optional output relay connections will be made, leaving enough length at the 6-pin connector to allow you to remove the gauge from the mount without unplugging it from the gauge.



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Wires are connected as follows:



PIN 1 – Red: Ignition; Connect to one wire of the included fuse holder using the included crimp splice, and the other wire of the fuse holder connected to a circuit that switches on with the key switch. Install the included 1-amp fuse in the fuse holder.  **Use only 1-amp fuses, higher amperage fuse may cause damage to the gauge or to the vehicle.**

PIN 2 – Orange: Dimmer; Connect to the factory gauge dimmer circuit by either tapping into the in-cab fuse block or by connecting directly to the wire running from the dimmer on the headlight switch. **NOTE:** The gauge backlighting will only illuminate if both the ignition AND the dimmer circuits are on

PIN 3 – Black: Ground; Connect 1 black wire to clean ground on the vehicle such as the battery negative terminal or a factory ground bolt. Splice the second black wire to the black pressure sensor harness.


PIN 4 – Red/Yellow: Pressure Sensor; Splice to the Red/Yellow pressure harness wire

PIN 5 – Green: Pressure Sensor; Splice to the Green pressure harness wire

PIN 6 – Brown: Programmable Output Driver can switch devices that draw up to 1.3 Amps (60V) so a 1A (1 Amp) fuse should be used. **Devices** include customer supplied Relay Coils, Solenoids, Warning Buzzers, and Lamps. These devices are not included in gauge kits. The Output Driver activates these devices at a programmed level. When wiring to polarized devices always wire pin 6 to the negative side of the device.

For battery connection: Wire pin 6 to one side of the **device (see above)** with the other side of the device wired to a positive battery connection fused for no more than 1A.

For ignition connection: Wire pin 6 to one side of the **device (see above)** with the other side of the device wired to a connection that switches on with the key switch fused for no more than 1A.

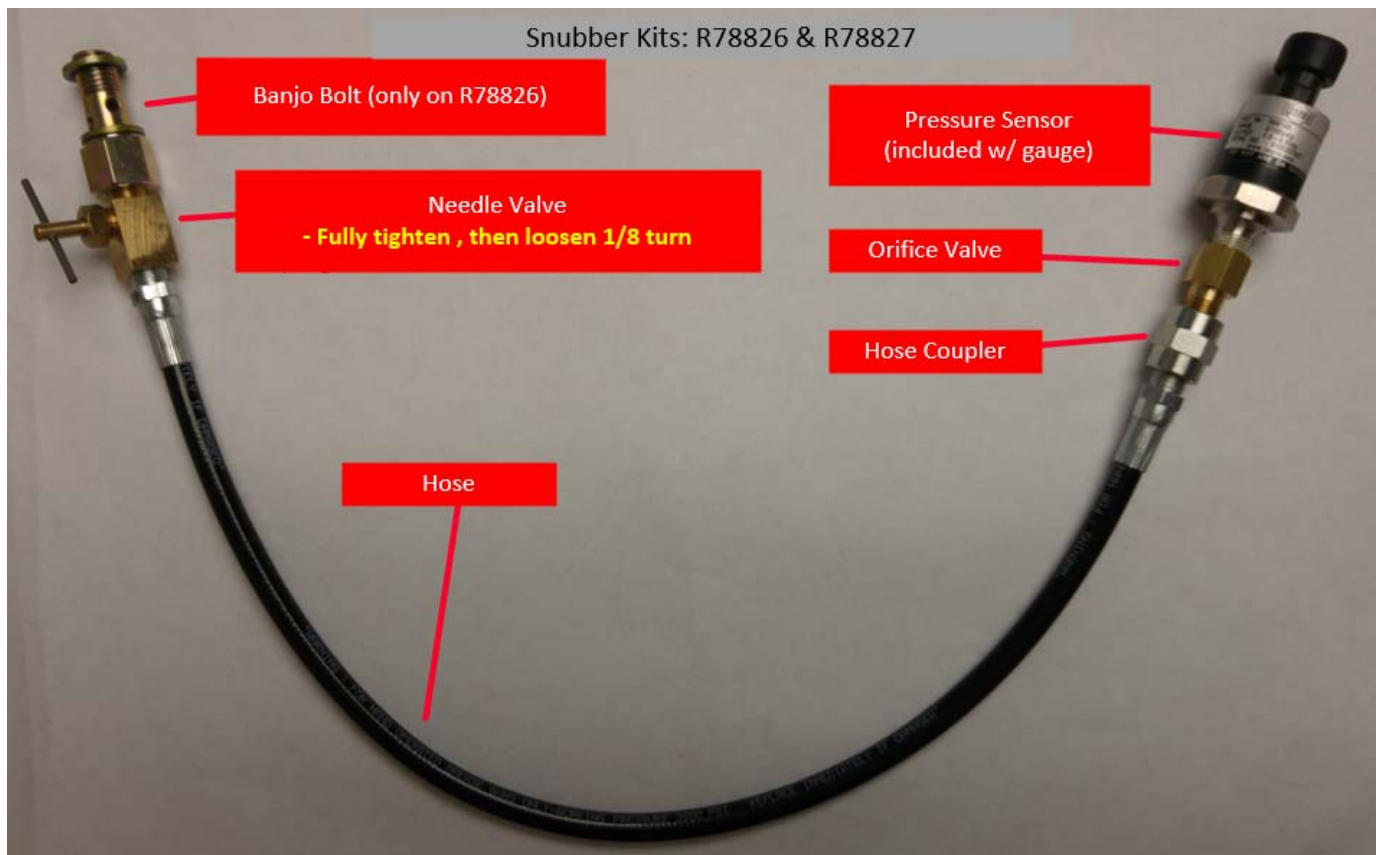
- 9  Secure all wiring so that it does not interfere with moving parts or chafe on sharp edges. This may be accomplished by routing the wiring within the factory wire harness sheath, using wire ties, and sheathing, and using appropriate grommets when passing through the firewall.

10 Engine specific information

Cummins 1989-2002

Use ISSPRO Snubber Kit R78826 if using factory fuel filter housing with banjo bolt connections. The kit consists of a tapped banjo bolt, a needle valve (fully tighten handle then loosened 1/8-turn), a section of hose, a female-female coupler, and an orifice valve which are installed in the above listed order. If using the stock fuel filter housing, the banjo bolt should be installed on fuel filter output banjo fitting (for the hose which runs to the injection pump, typically on the bottom of the fuel filter housing). Installing on the other (injection pump) side of the same hose will place the sensor too close to the pulsations of the injection pump. After installation and tightening of fittings, secure the hose and sensor to existing hoses, brackets or wiring to protect them from damage and interference with moving parts.

If using an aftermarket fuel filter system such as a FASS or Airdog with self-contained fuel filters, use Snubber Kit R78827 (same as above kit R78826 but without the banjo bolt) with the needle valve installed in the test port of the fuel system (typically in the main block near the outlet). If installing it in a tee-fitting in the fuel supply hose, use the same kit and install the tee as far from the injection pump as possible.

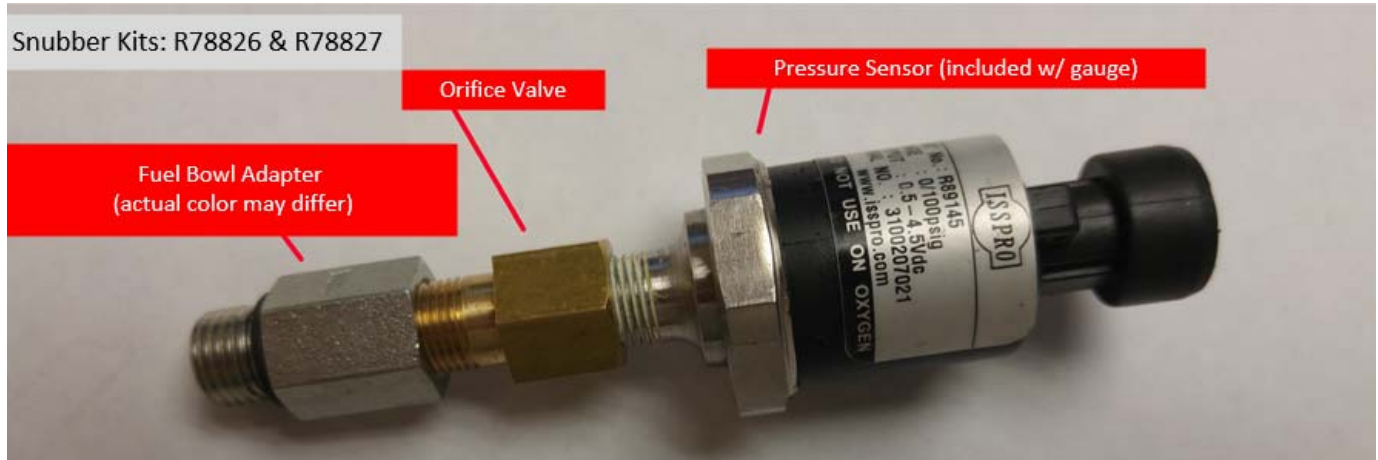


Powerstroke 1994.5-1997

Install Snubber Kit R78827 as shown above, with the needle valve installed in the test port of the fuel pressure regulator.

Powerstroke 1999-2003

Install Snubber Kit R78828 with the 7/16-20 SAE O-ring adapter threaded into the test port on the fuel bowl, followed by the orifice valve and the pressure sensor. Additional adapter fittings such as 45° angle 1/8" NPT fittings may be required to clear other items on engine.



Powerstroke 2003.5-2007

Install Snubber Kit R78829 with the M12x1.5 O-ring adapter threaded into the test port on the fuel bowl, followed by the orifice valve and the pressure sensor. Additional adapter fittings such as 45° angle 1/8" NPT fittings may be required to clear other items on engine.

Cummins 2003-2012

If using stock fuel supply lines with a banjo bolt, use tapped banjo bolt R7743 for installing the sensor. If using an aftermarket fuel filter system such as a FASS or Airdog with self-contained fuel filters, install the sensor in the test port on the aftermarket fuel system.

Cummins 2012 – present

If using stock fuel supply lines, a tee fitting must be added for installing the sensor. If using an aftermarket fuel filter system such as a FASS or Airdog with self-contained fuel filters, install the sensor in the test port on the aftermarket fuel system.

Duramax 2001-present

A fuel pressure gauge is only used with an aftermarket lift pump; install the pressure sensor in the test port of the lift pump.

11 EV3 ATTRIBUTE PROGRAMMER INSTALLATION

Android - Open the Google Play Store application. In the Search box, type “Attribute Programmer”. Select the **EV3 Attribute Programmer** from ISSPRO and install it on your device.

iOS (Apple) - Open the App Store. In the Search box, type “Attribute Programmer”. Select the **EV3 Attribute Programmer** from ISSPRO and install it on your device.

ONCE INSTALLED - APP INSTRUCTIONS ARE LOCATED IN “EXTRAS”

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