






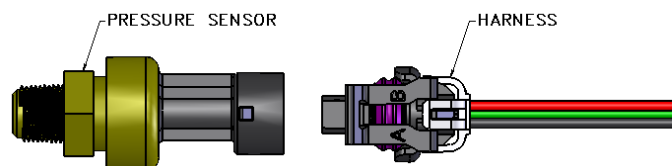
EXHAUST BACKPRESSURE GAUGE AND SENSOR INSTALLATION INSTRUCTIONS





-  **Disconnect batteries.** Do not reconnect battery power until system is fully configured to avoid risk of shock or fire.
- Find a location where exhaust backpressure can be measured without the sensor exceeding 275° F. This typically requires at least a 24" length of metal tubing (typically 3/16" or larger copper) connected to a tapped hole in the exhaust manifold, with the sensor installed in the other end of the tubing. ISSPRO kit R78855 includes the tubing and necessary fittings. When tubing is installed, all tubing including coils should be oriented such that the path is always uphill from the exhaust to the sensor, with no low spots. The coils of tubing should be oriented vertically to prevent low spots (which contribute to soot clogging). If a factory Exhaust Backpressure sensor is used, you may be able to install a Tee fitting (obtain from your local automotive supply store) to accommodate this sensor in the same location.
- Install the new sensor. Pressure sensor threads are 1/8" NPT/NPTF.
 Many Emission Control Devices are connected to OEM sensors or switches. Be careful not to disable these when installing a sensor.
- 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 1.69nm/15 lb-in. or slightly more, if leakage occurs. Do not use the body of the sensor to tighten! Use only the hex and the correct wrench. Do not over tighten!
-   Connect the pressure sensor to the pressure sensor harness by pressing the connector into the slot.

ICON KEY	
	CAUTION
	Tools may be required
	Shown in picture


Figure 1: Pressure sensor and harness.




- Route the sensor harness to the intended gauge mounting location, using grommets as appropriate when passing through the firewall. Connect the sensor harness to the gauge connector as follows:
-   Trim sensor harness wires to desired length, leaving enough length to allow the gauge to be pulled from the pod or mounting location without disconnecting the connector.

Form No. IS179 (Rev. H 05/26/2015)

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 Install the three sensor harness wires along with the individual red, orange and black wires into the orange insulation displacement connector (see Fig.2 for positions), using the included wire insertion tool (R72023). Follow the directions with the tool. **DO NOT** strip the wire ends, the connector will pierce the wire insulation, and the insulation helps hold the wire into the connector. Each wire must be pushed completely to the bottom of its groove in the connector to ensure a good electrical connection. Note that the 3 sensor harness wires run only between the gauge and the sensor, not connecting to any other power or ground. Connect the other end of each of the remaining wires as follows:

- *Ignition* – The red wire should be connected 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 fuses may cause damage to the gauge or to the vehicle.**
- *Dimmer* – Connect the orange/black wire 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.
- *Ground* – The black wire should connect to a clean ground on the vehicle such as the battery negative terminal or a factory ground bolt.

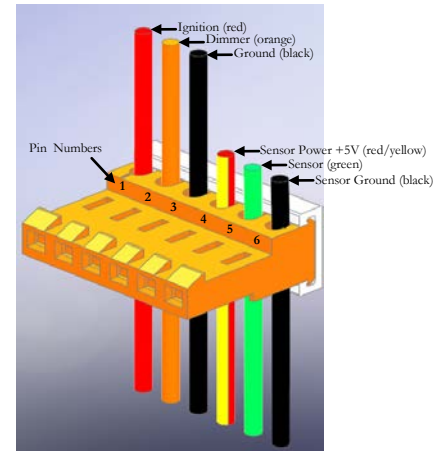


Figure 2: Connector.


1	Red	Ignition
2	Orange	Dimmer
3	Black	Ground
4	Red/Yellow	Sensor Power +5V
5	Green	Sensor
6	Black	Sensor Ground

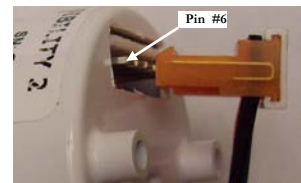
Slide the white dust cover over the orange connector once the wires are securely installed.

NOTE: The gauge backlighting will only illuminate if both the ignition supply AND the backlighting circuits are on.

OPTIONAL: Daisy Chain Your Gauges – If multiple Performax EV² gauges are being installed in one location (such as a pod), you may use a single set of the Ignition, Ground, and Dimmer wires to connect all of the gauges. Simply pass the wires from one orange connector to the next one in a “daisy chain” configuration. A single 1-amp fuse will protect up to 12 EV² gauges.


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 Install the connector onto the back of the gauge (angled portion on end of connector pointing up as shown in photo), and then secure the gauge in its mounting location. If drilling a mounting hole in a panel to mount this gauge, the hole size should be 2.040”. Mounting Kit R19999 is available for larger mounting holes up to 2.200”.



 **NOTE!!!** The orange connector **MUST** be installed in the direction shown. It is possible to force it in backwards far enough to make an electrical connection which may damage the gauge!

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 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.