

**VEI Systems Installation Instructions**  
**Dual Gauge – Fuel Pressure & Oil Pressure**  
**D1-FPBA-OPBA-Mxy (10.3 Bar fuel, 6.9 Bar oil)**  
**D1-FPBA-OPBB-Mxy ( 10.3 Bar fuel, 10.3 Bar oil)**  
**D1-FPBB-OPBA-Mxy (172 Bar fuel, 6.9 Bar oil)**  
**D1-FPBB-OPBB-Mxy (172 Bar fuel, 10.3 Bar oil)**  
**D1-FPPA-OPPA-Mxy (150 PSI fuel, 100 PSI oil)**  
**D1-FPPA-OPPB-Mxy (150 PSI fuel, 150 PSI oil)**  
**D1-FPPB-OPPA-Mxy (2,500 PSI fuel, 100 PSI oil)**  
**D1-FPPB-OPPB-Mxy (2,500 PSI fuel, 150 PSI oil)**

Please read these instructions completely before beginning installation to ensure that you have the tools and skills necessary for installation and operation of this instrument. If you are not sure that you can perform the installation safely, then consult a qualified installer. Further instructions available at [www.VEISystems.com/technical.html](http://www.VEISystems.com/technical.html) .

**FEATURES**

This dual-function instrument monitors engine oil pressure and fuel pressure and displays them simultaneously on two independent displays on the same gauge. Each of the two functions have upper- and lower-threshold alarms that are user configurable for the specific application vehicle.

**MOUNTING**

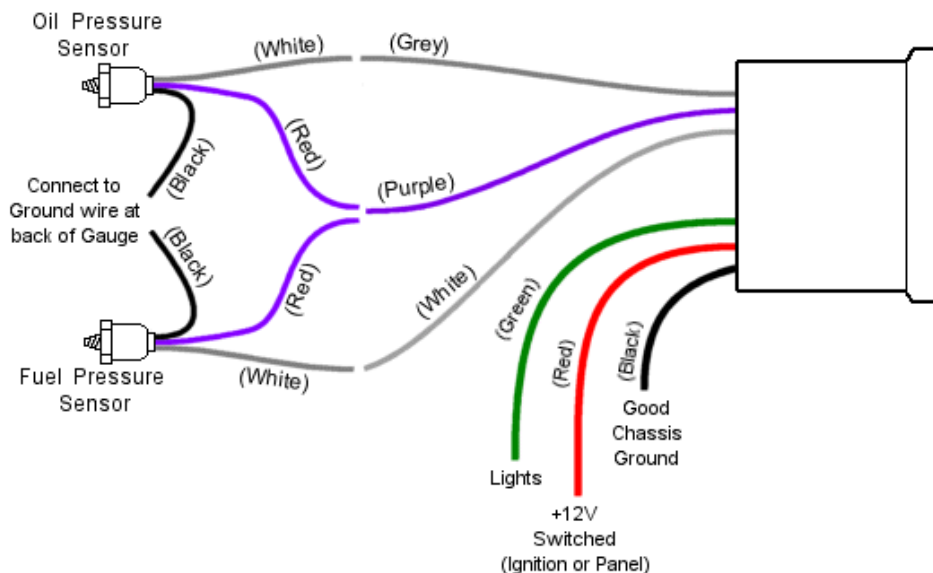
Install the unit through the front of the mounting hole in the dash pod or panel. If you are making a custom dash panel, you will need to drill a 2-1/16" hole. Slide the clamp onto the 2 studs on the back of the instrument. Secure with the 2 thumb-nuts. Use a small drop of threadlocker or nail polish on the thumb-nuts to prevent them from loosening under vibration.

For fuel-pressure, use sender SEN-F151C (150 PSI or 10.3 Bar) or SEN-P2K5 (2,500 PSI or 172 Bar). Mount the sender onto the fuel system in an appropriate location, avoiding high-heat areas such as over exhaust manifolds. Generally, you would need to connect to the fuel-rail near the injectors. In most cases, there will be a fuel-pressure test-port at that point, and you can also use the test port with an appropriate adapter. A typical schrader valve is 1/16" NPT, so a 1/16" NPT male to 1/8" NPT female adapter will be needed for this. Avoid using teflon tape or compound as this may eventually break off and get into the fuel stream, causing blockage in the fuel lines. This can be catastrophic to the engine. If you experience leaks, try tape only on the back half of the threads on the sender. The engine must be well grounded to the chassis & battery.

For oil pressure, use sender SEN-P101C (100 PSI or 6.9 Bar) or SEN-F151C (150 PSI or 10.3 Bar). Mount the sender on the engine block in an appropriate location. This will generally be where there was an existing oil-pressure switch or sender. You can tee off the existing sender or switch if you need to keep both. Avoid using teflon tape or compound as this may eventually break off and get into the oil stream, causing blockage in the oil passages. This can be catastrophic to the engine. If you experience leaks, try tape only on the back half of the threads on the sender.

**WIRING**

The wires should be connected as below using crimp-on butt-splice connectors, or soldered and sealed with heat-shrink tubing. Before connecting any wires, you should either disconnect the battery power, or carefully connect the wires in the order shown. If not, you may damage the instrument. Use an existing fuse in the fuse panel, or an external fuse to supply power to the instrument. The D1 series instruments use approx. 130mA of current average and approx. 210mA maximum, so ensure the fuse is sized appropriately. For a typical 6- or 7-gauge setup, a single 5 Amp fuse is good.



- BLACK -- connect to a solid chassis ground under the dash, or directly to the battery. You may need to expose the metal connection point under the dash by scraping or lightly sanding it. A ring terminal and a screw should work well in most cases.
- RED -- connect this to a source of **switched** +12V power. This will usually be found at or near the ignition switch, and will usually have a relay wired through the ignition switch. An alternate source of this is a switched power line from a nearby light or accessory (radio, etc). If you are unsure that the wire can support the power required for the instrument, then use an external relay.
- GREEN – connect this wire to the positive line (+12V) from the headlight switch. When this line receives a positive voltage, the gauge will use the “park-lights” brightness setting. Alternatively, if setting up a racing-mode display, this can be connected to a separate mode switch (12V or 0V signal).
- WHITE -- connect this wire to the white wire on the FUEL-pressure sender.
- GREY -- connect this wire to white wire on the OIL-pressure sender.
- PURPLE – connect this wire to the purple wire on the both the fuel-pressure sender and the oil pressure sender. CAUTION, this wire supplies a positive voltage to the fuel-pressure sender – it must NOT be accidentally allowed to touch any other wire while powered up.
- BLACK (on SENSORS) – connect the black wire of both sensors to ground, as the same point that the gauge is grounded. It is important to be connected at the **same point**.

## OPERATION

Press and hold the button for a few seconds to change the mode. Press and release quickly (tap the button) to change the setting in any mode. Modes are as follows:

MODE	DISPLAY	SETTINGS
Normal	(Pressure)	Shows oil pressure in upper display and fuel pressure in lower display, unless display channels were swapped (explained below).
Channel swap	Ch1 / Ch2	Allows you to swap the position of the upper & lower displays if required. Note, wiring does not change if the displays are swapped using this feature.
Set low fuel-pressure alarm	L1 . 20	Sets the low FUEL-pressure alarm threshold in PSI.
Set high fuel-pressure alarm	H1 . 70	Sets the high FUEL-pressure alarm threshold in PSI.
Set low oil-pressure alarm	L2 . 40	Sets the low OIL-pressure alarm threshold from 1 to 40 PSI.
Set high oil-pressure alarm	H2 . 50	Sets the high OIL-pressure alarm threshold from 50 to 99 PSI.
Brightness Regular	Br . 9	Last digit shows regular brightness level from 1 to 9.
Brightness park-lights on	BP . 1	Last digit shows brightness level with lights on from 1 to 9.
Configuration mode	Cfg. Off	This mode is used to configure the gauge to indicate which sensors are being used. This will come preset from the factory, so should generally not need to be accessed. If necessary, to configure the sensor selection, turn this on, then power cycle the gauge and it will enter sensor configuration mode. Power cycling again will return to normal operation.

## WARRANTY & LIABILITY

Neither VEI Systems, nor its dealers or agents shall be liable in any way, for any damage, loss, injury or other claims, resulting from the installation or use of this product. By purchasing or installing this product, you assume all liability of any kind connected with the use and/or application of this product. If you are unsure that you can safely install and use this product, consult a qualified installer or mechanic. The warranty on this product covers only the product itself for a period of 1 year from the date of purchase, and it will be at our discretion to repair or replace the affected parts. No user serviceable parts inside. Warranty void if product enclosure opened.