

ISSPRO EV2 Gauge Installation



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IMPORTANT: Before starting installation, please be sure that all items which were supplied with the kit are accounted for.

Parts:

[-RPD Triple Gauge Kit- RDPPKG-1](#)

- OEM Color Matched Triple Pillar Pod
- ISSPRO Dimmer/Wiring Harness
- RPD Pyrometer Drill/Tap set
- RPD AIH Delete Fitting w/boost port
- ISSPRO EV2 Gauges
 - 0-40 psi Boost
 - 1600°F Pyrometer
 - 100°-280°F Transmission Temperature
- Corrugated Wire Loom (Optional)



Recommended Tools:

- Drill & bits (1 1/32" or "R")
- Standard and Metric Wrenches and Sockets
- Common and Phillips Screwdrivers
- Tap Handle or Tap Socket
- 3/16" Drill Bit
- Uni-Bit® step drill

Installation Instructions:

- 1) Disconnect the ground cables from each battery.
- 2) Remove the lower dash panel to gain access to the fuse block.
- 3) Remove the side dash panel, by prying from the aft edge. (Fig 1)
- 4) Pull the door seal from the area around the pillar. (Fig 2)
- 5) Remove the pillar grab handle (if installed).
- 6) Pulling straight aft, Remove the pillar cover from the pillar. Pillar is held in place by spring clips. (Fig 3)
- 7) Locate the gauge pod onto the pillar cover (align top edge). Hold in place with tape or clamps. Drill (4) 3/16" holes (2 at the lower & 2 at the upper) ends of the pillar pod. These will be used to retain the pod onto the pillar cover later on.
- 8) Determine the gauge layout in the pillar. Usually the most critical gauge is located highest (closest to eye level) and then the less critical gauges are installed in subsequent lower positions. The Pyrometer and Transmission Temperature are normally the most critical, but it is up to you on how they are arranged.
- 9) The pillar surround will need to be drilled to allow the wires to pass from under the dash to the pod. Use a drill bit (Uni-Bit's® provide the cleanest holes in the plastic). Drill at least a 3/4" hole for the wires to pass through. Multiple smaller holes also work.



Fig 1



Fig 2



Fig 3

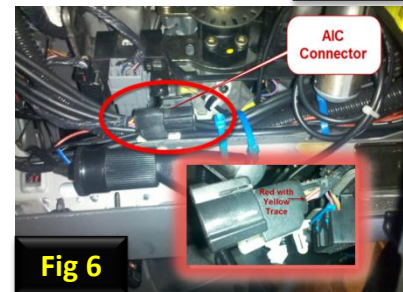
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- 10) Remove the light switch assy. Use a small common screwdriver to pry from the lower edge. Once the clips release, disconnect the wire connectors from the back. Place the switch to the side for now. (Fig 4)
- 11) Uncoil the ISSPRO Dimmer Switch. There are two different length wires on the switch. The shorter (48") wires are where you will pick-up your power, ground and light control. The longer (96") wires will be used to power each of the gauges.
- 12) Find a suitable location to mount the dimmer switch and drill a minimum 3/8" hole to mount the switch. Insert the switch and tighten down the retaining nut and insert the knob on the shaft. (Fig 5)
- 13) Route the longer wires up to the pillar area. Route the shorter wires to the fuse panel area.
- 14) Determine where you are going to be getting your ignition switched power from. It is suggested to use the Auxiliary Idle Control (AIC) connector located under the dash (Fig 6). Locate the connector under the center of the dash below the steering column. The wire you want to take power from is the red wire with the yellow trace. You can cut or splice into this wire with the shorter red wire on the ISSPRO dimmer switch supplied in the kit.
- 15) Route the shorter black wire from the ISSPRO dimmer switch to a good ground location. There are a couple good ones in the kick panel on the drivers side. Just remove the kick panel and the grounds will be right there. Install a ring post crimp connector and bolt to one of the existing grounds. (Fig 7)
- 16) On the light switch connector, locate the blue wire with the red trace (Fig 8). This is the dimmer control wire. Splice into that wire with the orange with a black trace wire on the ISSPRO dimmer switch. If you do not want to utilize the factory dimmer control along with the ISSPRO dimmer switch, simply hook up the orange wire with the black trace to the switched ignition source in step 14.
- 17) Use the figure below for a basic wire splice. You can use this method to make a long lasting splice that will not give you an troubles. This method should be used when possible. (Fig 9)



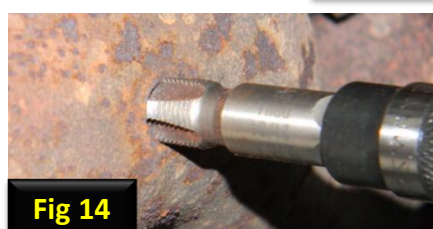
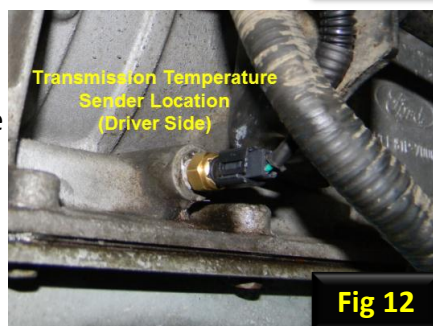
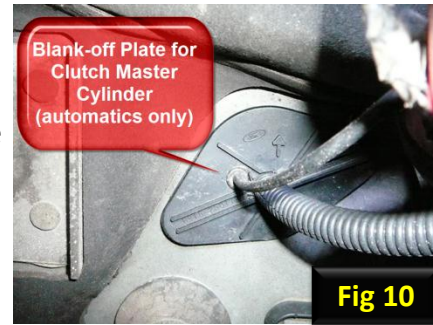
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- 18) If you have an automatic truck, you can use the clutch master cylinder cutout as a wire penetration point (Fig 10). Since there is not a clutch master cylinder there is a plastic plug installed on the firewall that makes a great pass through for your wires. If you have a manual truck, you can drill a hole in the firewall near the factory penetrations and install a grommet to protect the wires. (Fig 11)
- 19) Remove the AIH and install the RDP AIH Delete Fitting into the spider using [RDP AIH Delete Instructions](#).
- 20) Install the ISSPRO Boost Gauge sender into the AIH Delete plug. Use a small amount of thread sealing tape or compound on the threads. Tighten the sender to 15 in-lb.
- 21) Route the included harness to the firewall and into the cab. You may find it helpful to use a piece of tape or heat shrink on the wires to mark them and keep the wires together while routing.
- 22) At the transmission, locate the pressure port plug on the drivers side of the transmission, just forward of the shift cable (automatic trucks only) (Fig 12). Remove the plug and install the ISSPRO Temperature Sender into the port. Use a small amount of thread sealant tape or compound to ensure no leaks. Tighten to 15 in-lb.
- 23) Route the included harness to the firewall and into the cab.
- 25) At the drivers side exhaust manifold or up-pipe, you need to locate the pyrometer probe. Depending on your installation you will need to drill a hole and tap it with threads with a 1/8"-27 NPT tap. The hole size for this thread is a letter "R", 11/32" or 0.343". It is best to drill this hole in small steps. The manifold casting is pretty soft and drills easily. Starting with a 3/16" drill then going to 5/16" and then drilling the final size of 11/32" will ensure the hole is sized properly for the threads to be cut correctly.
- 26) It is not required to remove the manifold for this step. Careful drilling and using a vacuum will allow you to remove any small chips that may be in the exhaust. After the hole is drilled, place a vacuum at the hole to suck any loose chips out. When tapping a pipe thread you do not need to run the tap all the way in. Pipe threads are tapered and only require a portion of the tap to enter the material. If you are unsure, test fit the pyrometer probe after you have tapped a portion then if it is not enough engagement, remove and tap the hole a little deeper and recheck. When complete use a vacuum again to collect any loose metal in the manifold. (Fig 13 & 14)



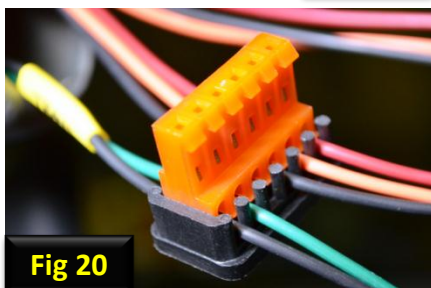
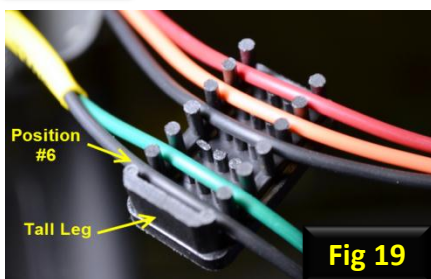
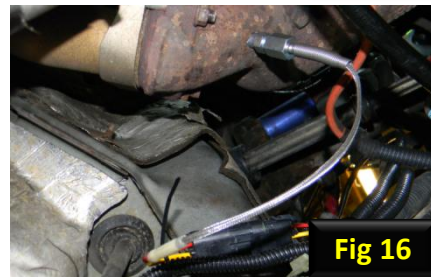
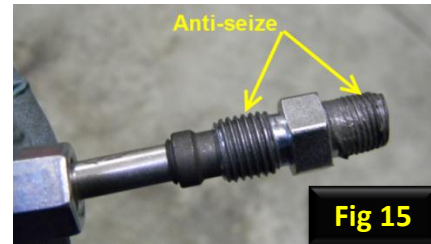
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- 27) Apply a small amount of anti-seize compound to the threads of the pyrometer probe adapter. Thread it in to the exhaust manifold until tight. (Fig 15)
- 28) Apply anti-seize to the clamp nut threads. Install the clamp nut onto the adapter and insert the pyrometer paying attention to how far it is inserted. It should be roughly into the center of the exhaust flow. Tighten the nut to no more than one full turn from finger tight. (Fig 16)
- 29) Connect the Delphi® connector on the harness to the pyrometer connector. Route the pyrometer wire harness up to the firewall and into the cab.
- 30) If you opted for a coolant temperature gauge over a transmission temperature gauge, hook-up is identical as they use the same sensor. Install the coolant temperature sensor into the water pump housing or if you have a coolant filter, you can normally utilize one of the plugs on the filter head. (Fig 17)
- 31) Route the sender wires from the firewall up to the pillar area. You should keep them organized and neat to avoid tangles or binding under the dash area.
- 32) Place the gauge pod onto the pillar surround. Make sure there is enough room to get all the wires to pass through the pillar surround and up to the gauge locations.
- 33) Route each of the sender wires and GPR LED wires to the appropriate gauge hole and allow the wires to extend out of the hole. (Fig 18)
- 34) Route the ignition power, ground and lighting wire into the lower gauge hole, Then loop it around and repeat in the center hole, then repeat again to the upper hole. This will allow you to “daisy chain” the gauges together for a clean installation. (Fig 18)
- 35) Attach an 18 GA wire to the red lead and one to the black lead of the GPR LED. The black wire will be routed to a common ground. The red wire will be routed to the Glow Plug Relay on the passenger head in the valley. Connect it to the large post with the yellow and brown wires. You will need a 5/16” ring post terminal. It is recommended to install a 3 amp fuse in this circuit.
- 36) Install the gauge pod onto the pillar surround and insert the (4) 3/16” plastic push rivets to secure the pod to the pillar surround.
- 37) Carefully install the pillar surround and gauge pod into the (3) slots and allow the retaining clips to engage. Make sure the wiring remains in it’s intended locations.
- 38) Reinstall the rubber door trim onto the metal flange surround.



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- 39) Using the wiring diagram at the end of these instructions and the instructions that came with the gauges, insert the wires into the ISSPRO Wire Tool in the order they are shown on the instructions for the specific gauge. Insert the connector onto the tool and squeeze with pliers to fully seat the wires in the connectors.
- 40) Repeat step 39 for the remaining gauges. The pyrometer wire can be trimmed to fit. Carefully cut the insulation back without cutting into the three wires it is protecting. Once removed, hook up the three wires similar to the previous steps.
- 41) Once all the connectors are fully seated onto the wires, Install the white dust covers onto the back of the connectors.
- 42) Plug in your wire harness to each gauge in the pod, snap the gauge into the pod and center up the gauge. (Fig 21)
- 43) Reconnect the ground cables from each battery.
- 44) Install the lower dash panel.
- 45) Install the side dash panel. (Fig 1)
- 46) You can now test the gauges by turning the ignition on and turning the light switch to on. Make sure you rotate the dimmer control on the OEM switch to full bright. Also turn the ISSPRO dimmer switch fully clockwise for full brightness. Verify the GPR LED illuminates and turns off within two minutes.
- 47) All the gauges should be fully illuminated. (Fig 22) Start the engine and you should see the EGT gauge rise to around 300° at idle. Boost will not register on the gauge until you are driving with a load on the engine. Transmission temperature will slowly rise as you drive.
- 48) Check the transmission sensor for leaks.
- 49) Drive the truck and verify the gauges react as expected. Max boost on a stock truck will be around 16 psi (highway cruise 4-5 psi). EGT's will climb as the accelerator pedal is applied. At highway cruising speed it will be in the 600°-900° range depending on speed, acceleration and incline of the road. Transmission temperature will be anywhere from 100°-160° unloaded depending on external temperatures and load.



Special thanks to Ken (Woodnthings on FTE) for the pictures and instructions.

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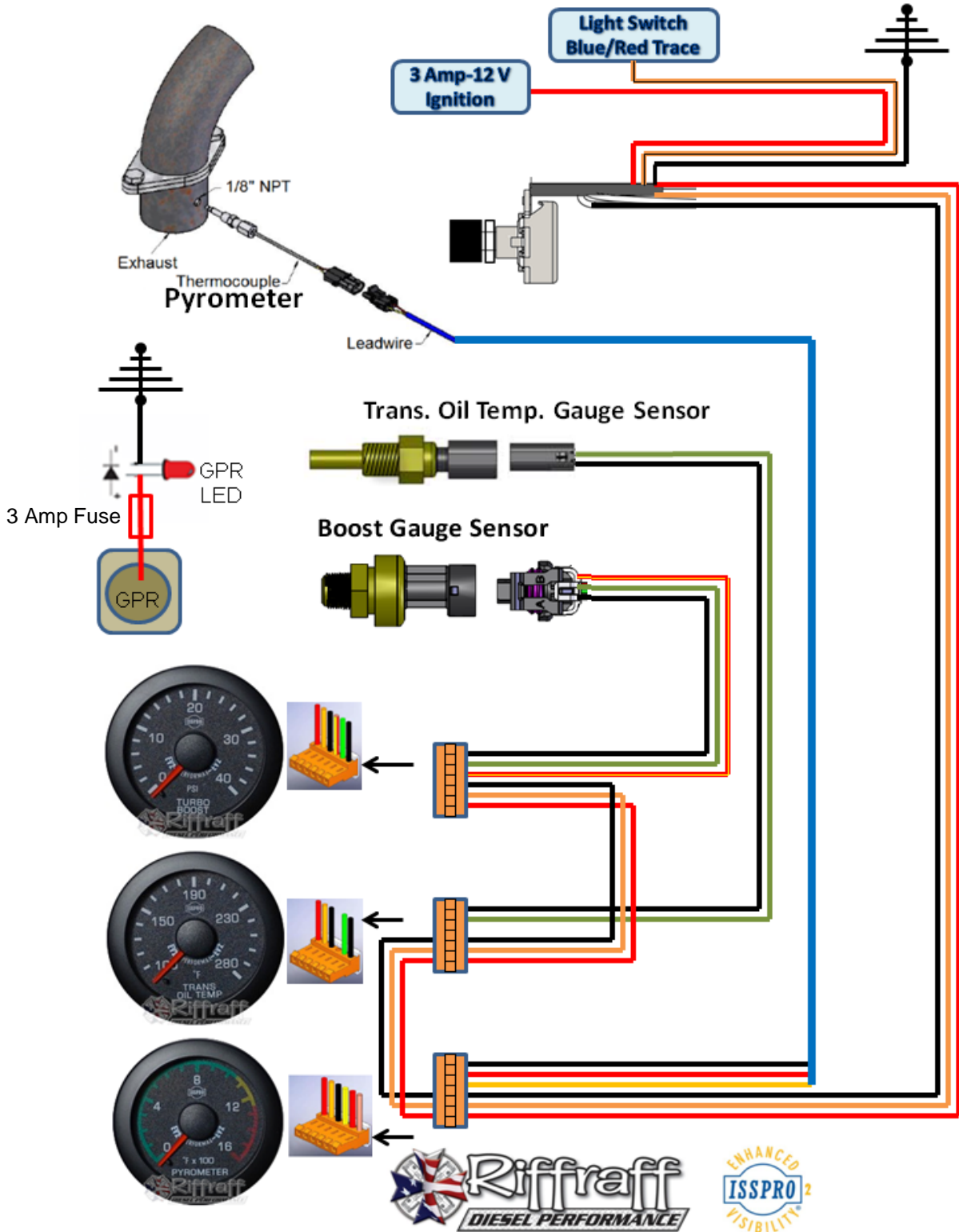
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