

**OWNERS  
MANUAL**  
**WITH INSTALLATION  
INSTRUCTIONS**

**banks<sup>®</sup>**  
**DYNAFACT<sup>®</sup>**  
**BOOST GAUGE**

THIS MANUAL IS FOR USE WITH SYSTEMS **64050-64054**

**banks<sup>®</sup>**

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# GENERAL INSTALLATION PRACTICES

**1.** This manual is an installation guide for all Banks DynaFact boost gauges. For ease of installation and to determine what additional tools or materials you will need, read the entire 8-page manual before starting any work. *NOTE* there are portions of the installation procedure and certain illustrations matched to specific vehicle types. **For proper installation, select the text and illustrations that closest correspond to your vehicle. If you cannot correspond your vehicle to the text provided, please contact Customer Service at (626) 969-9600 for assistance.**

**2. IMPORTANT!** Anytime the vehicle is raised off its wheels, it should be supported by safety stands or ramps of adequate capacity for the vehicle's weight. Never perform any work under a vehicle supported only by its service jack or a hydraulic jack. Do not use concrete blocks or other masonry items that may collapse under the vehicle weight.

**3.** Position wires and hoses away from exhaust heat, moving parts, and sharp edges that may cause cuts or other damage. Route or tie all wires a minimum of 6 inches from hot exhaust parts; eight or more inches is recommended where possible.

# INSTALLATION PROCEDURE

## GAUGE PANEL INSTALLATION

Choose a suitable location under the lower edge of the dash panel for mounting the instrument panel, or on top of the dash for the molded instrument console. Be certain the instruments can be viewed conveniently by the driver.

**UNDER DASH** — Using the panel as a template, drill two  $\frac{3}{16}$ " diameter holes in the dash and mount the panel with two 10 x  $\frac{1}{2}$ " machine screws, nuts, and star-washers provided.

**ON TOP OF DASH** — Wipe the dash-top with an alcohol pad or other surface cleaner. Remove the backing from the adhesive Velcro tape on the bottom of the console adapter, position the console adapter and press down firmly. Once the gauges are wired and secured to the console according to the following instructions, attach the console assembly to the console adapter using the two machine screws provided.

## BOOST GAUGE ADAPTER FITTING LOCATION

Boost levels vary widely, depending on the engine and turbocharger configuration. Refer to the Owners Manual for your Banks system to determine maximum boost specifications for your specific application.

**Chevrolet/GMC 6.2L/6.5L diesel with Banks Sidewinder turbo** — Locate the  $\frac{1}{8}$ " NPT threaded hole in the pressure chamber. Install the straight fitting provided into the threaded hole with Teflon thread-sealer.

**Chevrolet/GMC 6.5L diesel with factory turbo** — Loosen the hose clamp on the compressor discharge of the turbocharger. Remove the connecting strap between turbocharger and air inlet casting.

Unbolt and remove the air inlet casting from the top of intake manifold. **WARNING! Foreign matter in the intake manifold can cause serious engine and/or turbocharger damage upon engine start-up.** Cover the intake manifold opening to prevent foreign objects or debris from falling into engine.

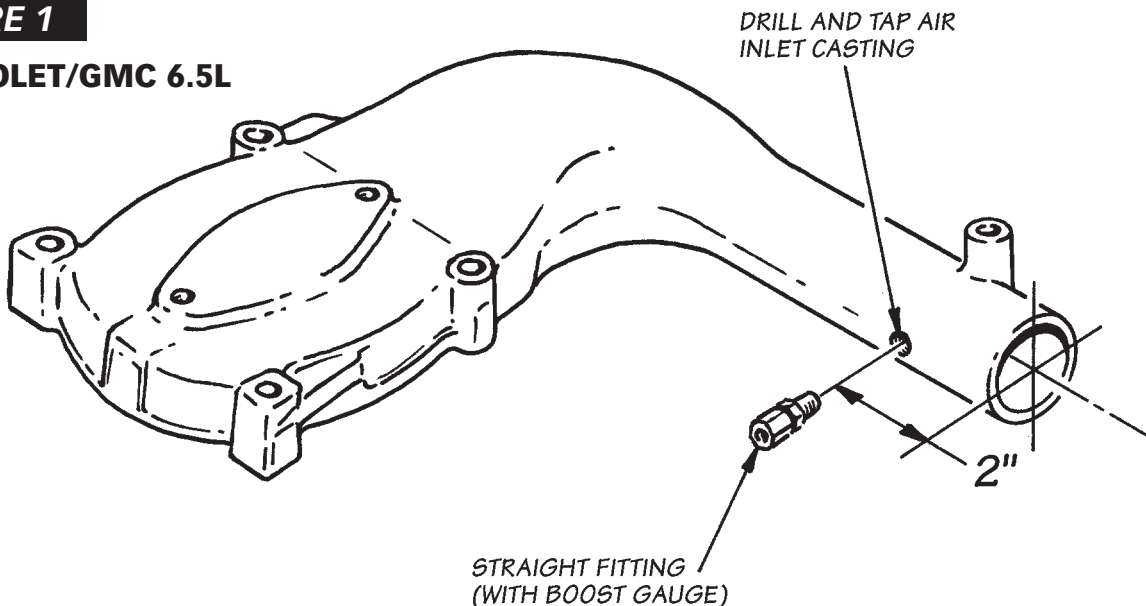
Measure and mark the air inlet casting as shown in **Figure 1**. Center-punch this location and drill through the casting wall with a 0.399-diameter letter R drill. Tap the hole with a  $\frac{1}{8}$ " NPT tap. Clean all chips from inside the casting.

Use of a new gasket is recommend for reinstallation of the air inlet casting on intake manifold. Tighten loose clamps and reinstall the brace. Install straight fitting, supplied, into hole tapped in air inlet casting. Use a Teflon thread-sealer on fitting pipe threads.

**Cummins B5.9L/C8.3L diesel with factory turbo** — Locate and remove the  $\frac{1}{8}$ " NPT pipe plug on the side of the intake manifold as shown in **Figure 2**. *NOTE: In Dodge pickups this plug is on the driver-side. In pusher motorhomes, it is on the passenger-side.* Install the straight fitting at this location, using Teflon thread-sealer on the pipe thread end of the adapter fitting. On some Cummins C8.3L applications, it may be necessary to remove a  $\frac{1}{2}$ " NPT pipe plug from the inlet casting and install a reducer bushing.

**FIGURE 1**

## CHEVROLET/GMC 6.5L



**Ford/Navistar 6.9L/7.3L IDI diesel with Banks Sidewinder turbo** — Locate the 1/8" NPT threaded hole in the pressure chamber. Install the straight fitting provided into the threaded hole with Teflon thread-sealer.

**Ford/Navistar 7.3L IDI diesel with factory turbo** — Locate the 1/8" NPT pipe plug in the spiral pressure chamber. Remove the plug and install the straight fitting provided into the threaded hole with Teflon thread-sealer.

**Ford/Navistar 7.3L Power Stroke diesel with factory turbo** — Locate the rubber hose connecting the intake manifold on the passenger-side of the engine to the manifold pressure sensor mounted on the firewall. Cut through this hose at a point three inches below the sensor.

Install the plastic tee fitting and the spring band clamps, provided, between the cut ends of the hose. See **Figure 3**.

Install one 90-degree elbow fitting onto the threaded end of the tee. Sparingly apply Teflon thread-sealer to the male pipe threads, and adjust the 90-degree elbow fitting to point toward the firewall, as shown in **Figure 3**. Do not over-tighten the plastic fitting. Do not allow sealant to cover the small hole in the fitting.

## TUBING INSTALLATION

All gauge tubing should be routed away from heat sources such as exhaust manifolds or piping, and away from sharp edges. Avoid sharp bends or kinks. Secure the tubing to other tubing inside the engine compartment with cable ties.

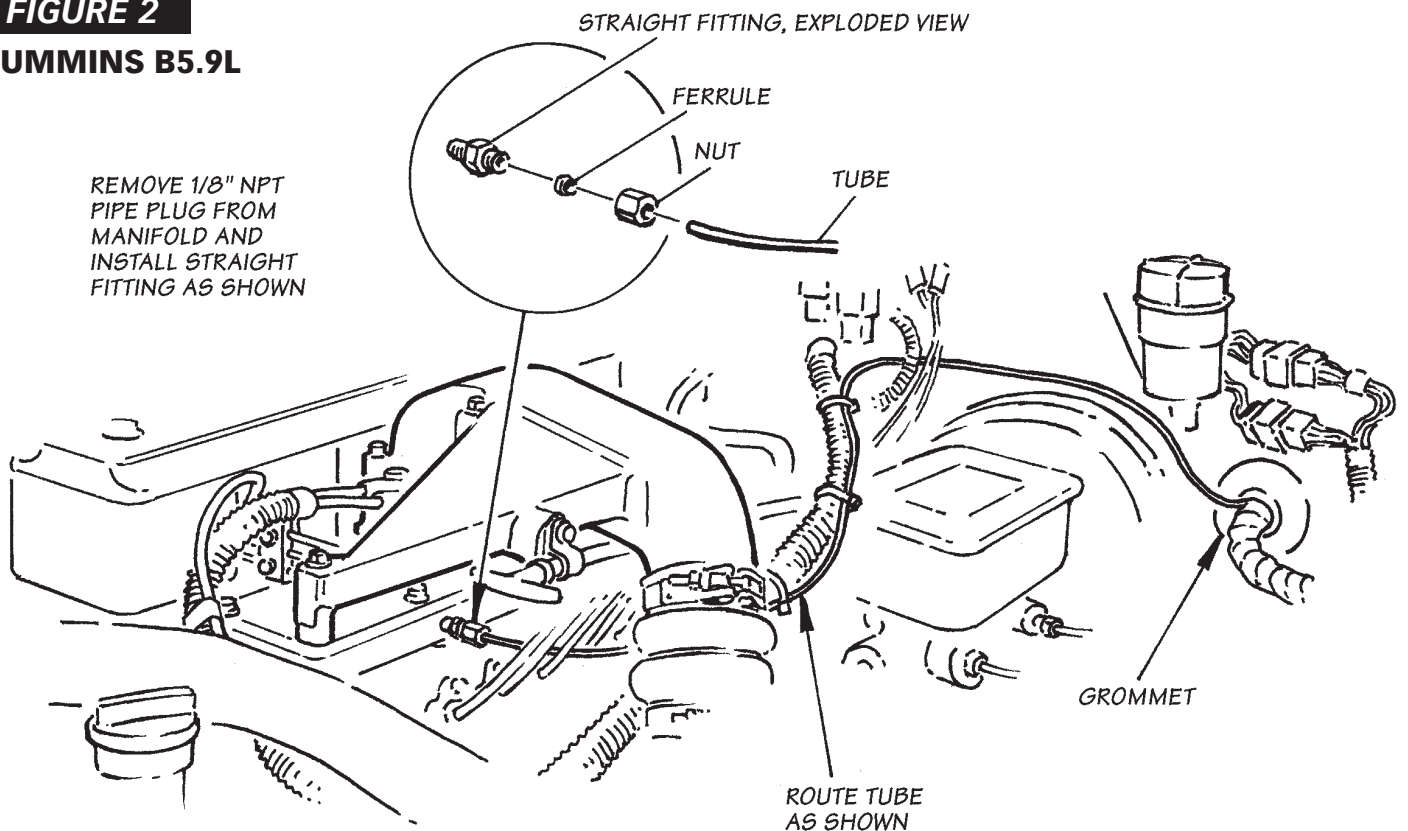
When passing through the firewall, either make a hole in a factory grommet or drill a hole and use a new grommet. If a hole needs to be drilled, drill a 5/16" hole and deburr it on both sides, so that the tubing does not get cut as it passes through the hole. For added protection, wrap the tubing with several layers of electrical tape in the area where it passes through the hole. When drilling, check the backside to make sure that there are no components blocking the back side of the hole that would be damaged by drilling.

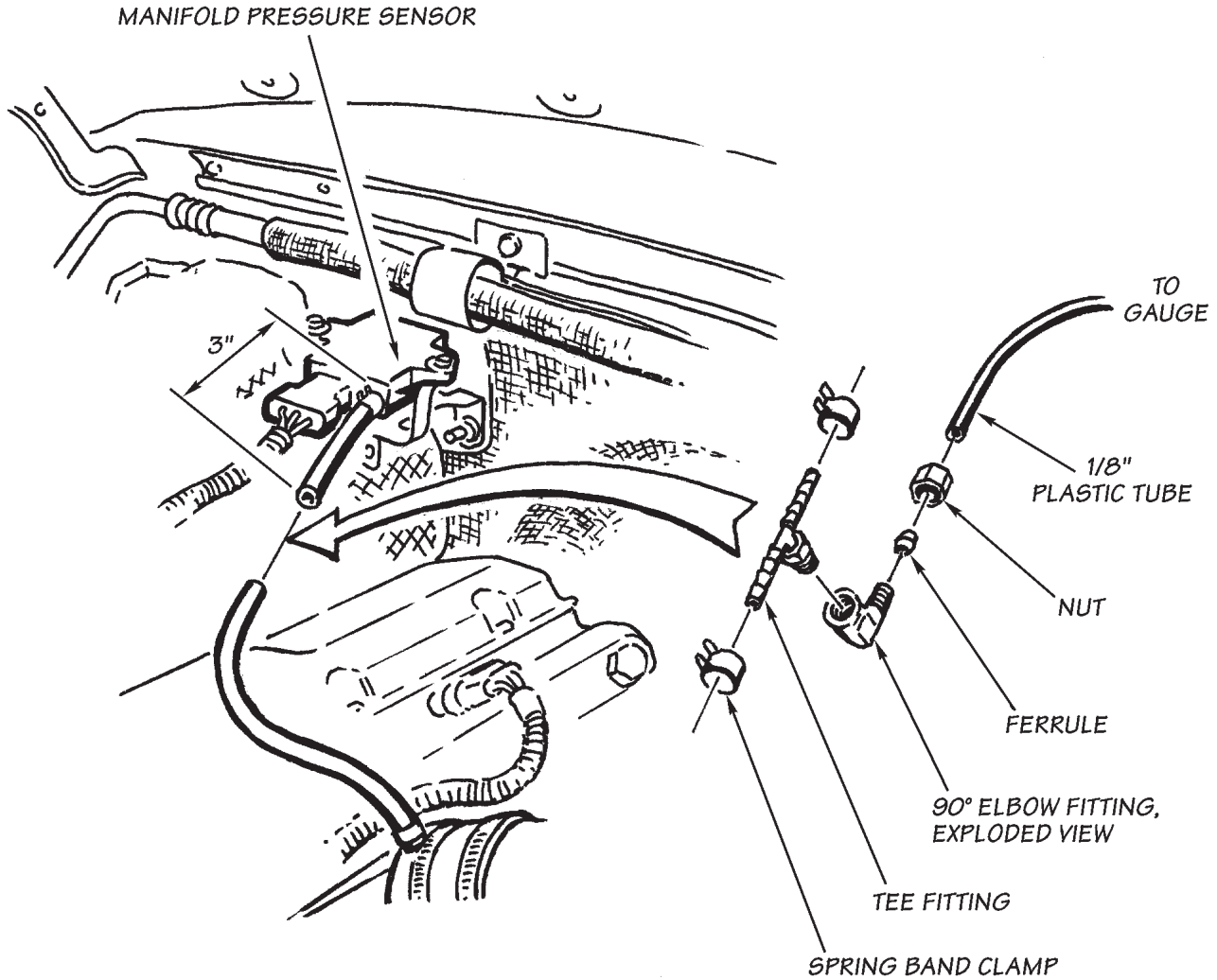
Install one end of the 1/8" diameter plastic tube, provided, in the nut and ferrule on the adapter fitting, and tighten the nut. Check that the plastic tube cannot be pulled out of the ferrule. Do not over-tighten the nut. Route the plastic tube toward the firewall.

*NOTE: If the boost gauge appears to stick after installation, trim about 1/2" from each end of the plastic tube and reinstall, being careful not to over-tighten.*

**FIGURE 2**

### CUMMINS B5.9L



**FIGURE 3****FORD/NAVISTAR POWER STROKE 7.3L****GAUGE INSTALLATION**

Install the gauge through the panel or console using the U-clamp and two hex nuts provided with the gauge.

Install the 90-degree elbow fitting onto the connection at the back of the gauge. Use Teflon thread-sealer on the male threads of the gauge nipple. Do not allow any sealant to cover the pin-sized hole in the end of the gauge nipple.

Insert the tube into the nut and ferrule on the adapter fitting at the gauge, then tighten the nut against the tube and ferrule. Do not over-tighten.

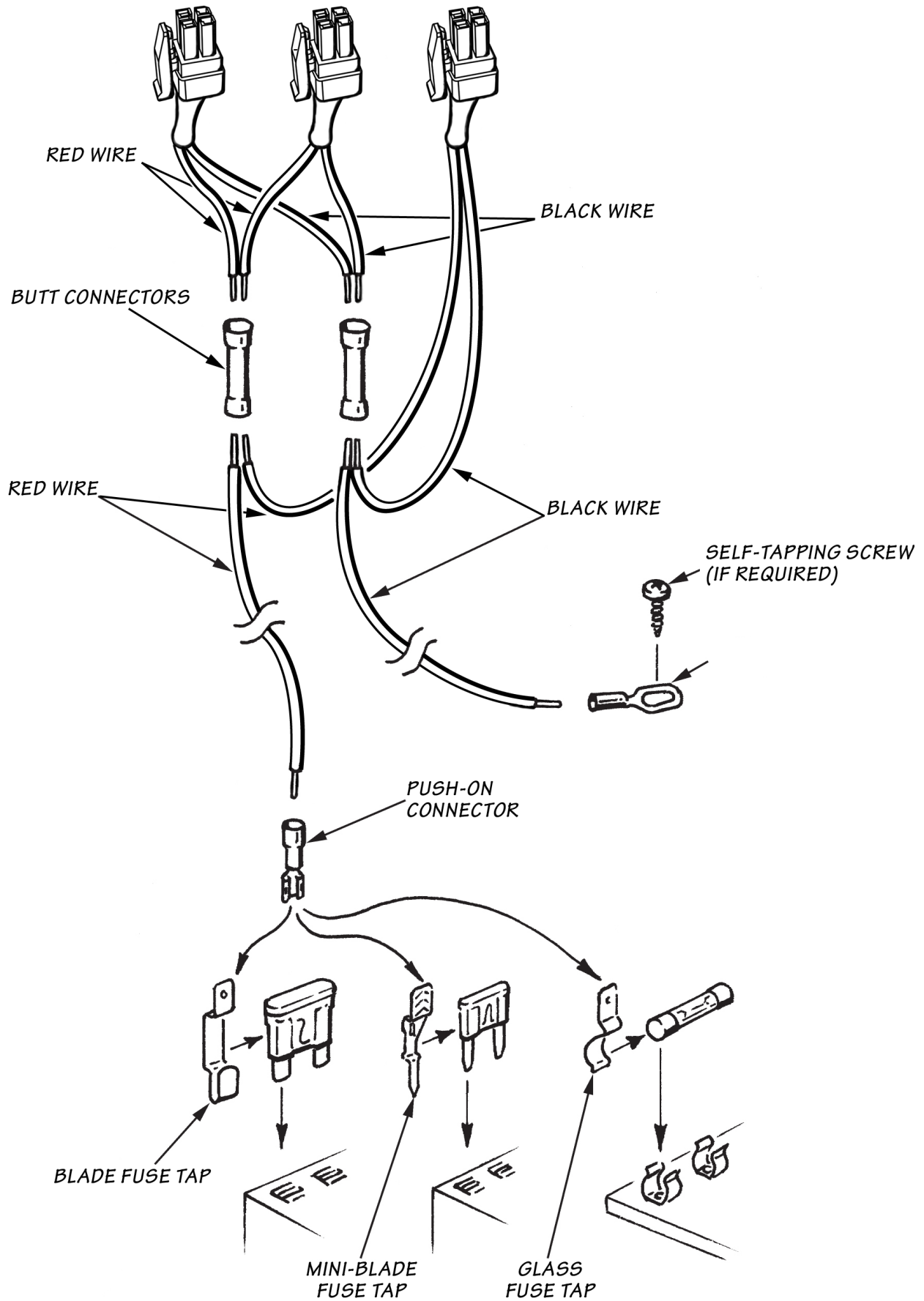
**GAUGE LIGHTING**

Using the wiring kit provided, strip and connect one end of each of the six-foot wires to wires on the 4-pin connector with the butt connectors, using an appropriate crimp tool. Make sure to connect the red wires to the (+) terminal and the black wires to the

ground. Incorrect wiring will result in a non-working LED. See **Figure 4**. If more than one gauge is being used, the wires from other 4-pin connectors may be doubled up in the connectors. No more than two wires should be in either end of the butt connector. Route the red wire to the fuse panel. Identify the circuit for the dashboard lights and remove the fuse. Install the appropriate fuse tap under the non-powered leg of the fuse. This is the socket that has no power when the dash light switch is on, as tested with a test-light or multi-meter. Cut and strip the red wire to an appropriate length and install the female push-on connector. Connect the wire to the fuse tap. Route the black wire to a location where a good ground can be found. Cut and strip the wire to an appropriate length and crimp the ring terminal to the wire. Install the ring terminal under an existing bolt or washer, or use the self-tapping screw provided to connect to ground. Connect the 4-pin male connector to the female connector on the back of the gauge.

**FIGURE 4**

4-PIN CONNECTORS TO GAUGE LED



# BILL OF MATERIALS

## DynaFact – Boost Gauge

<b>COMPONENT</b>	<b>64050</b>	<b>64051</b>	<b>64052</b>	<b>64053</b>	<b>64054</b>
BOOST GAUGE 0-15 psi p/n 63435	✓	-	-	-	-
BOOST GAUGE 0-50 psi p/n 63436	-	✓	✓	✓	✓
FITTING, straight p/n 92301	✓	✓	-	✓	✓
FITTING, 90° elbow p/n 92303	✓	✓	-	✓	✓
(2) FITTING, 90° elbow p/n 92303	-	-	✓	-	-
FITTING, tee p/n 92011	-	-	✓	-	-
HOSE, 11 ½' p/n 94445	✓	✓	✓	-	-
HOSE, 55' p/n 94445	-	-	-	✓	✓
(2) CLAMP, spring band p/n 92877	-	-	✓	-	-
(6) CABLE TIE, 5" p/n 62001	-	-	✓	-	-
WIRING KIT, lighting p/n 62150	✓	✓	✓	✓	✓
OWNERS MANUAL p/n 96327	✓	✓	✓	✓	✓

### OPTIONAL INSTRUMENT CONSOLES

#### Chevrolet/GMC

3-GAUGE ADAPTER ('79-87) p/n 63110
2-GAUGE ADAPTER ('88-94) p/n 63111
3-GAUGE ADAPTER ('88-94) p/n 63112
2-GAUGE CONSOLE & ADAPTER ('95-98) p/n 63119
3-GAUGE CONSOLE & ADAPTER ('95-98) p/n 63121

#### Dodge/Cummins

2-GAUGE ADAPTER ('89-93) p/n 63108
3-GAUGE ADAPTER ('89-93) p/n 63106
4-GAUGE ADAPTER ('89-93) p/n 63113
4-GAUGE ADAPTER ('94-97) p/n 63117
2-GAUGE CONSOLE & ADAPTER ('94-97) p/n 63119
3-GAUGE CONSOLE & ADAPTER ('94-97) p/n 63121
4-GAUGE CONSOLE & ADAPTER ('94-97) p/n 63123
2-GAUGE CONSOLE & ADAPTER ('98) p/n 63120
3-GAUGE CONSOLE & ADAPTER ('98) p/n 63122

#### Ford

2-GAUGE ADAPTER ('87-91) p/n 63102
3-GAUGE ADAPTER ('87-91) p/n 63104
2-GAUGE ADAPTER ('92-97) p/n 63109
3-GAUGE ADAPTER ('92-97) p/n 63107

#### Universal (for flat surfaces)

2-GAUGE ADAPTER p/n 63115
3-GAUGE ADAPTER p/n 63116

### OPTIONAL INSTRUMENT MOUNTING PANELS

1-GAUGE p/n 63001
2-GAUGE p/n 63002
3-GAUGE p/n 63003
4-GAUGE p/n 63004



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