# 3 Gauge Diesel Set Instructions

**The following instructions are for the installation of your Diesel Gauge Package, which includes a Boost Gauge, Exhaust Gas Temperature Gauge and Transmission Temperature Gauge. Before you begin, lay out all items and ensure there are no missing parts. If any items are missing, please STOP immediately and contact GlowShift Gauges or your Authorized GlowShift Dealer.**

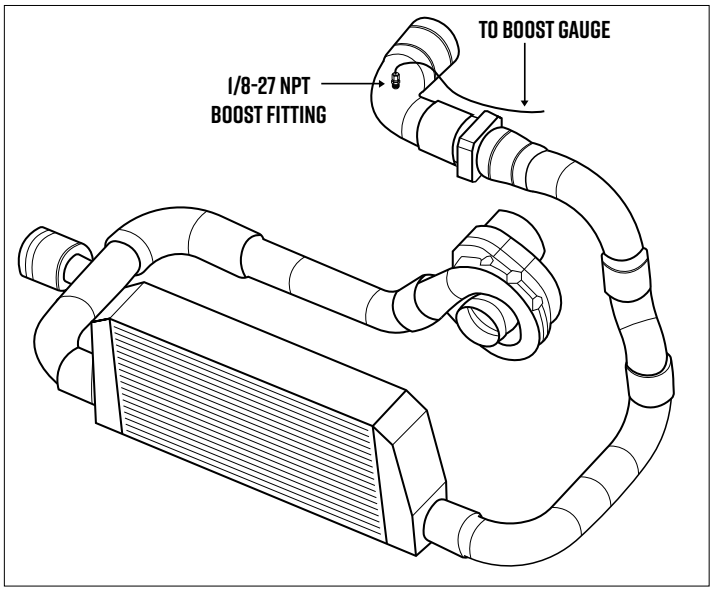
## What's Included in Your DS1/ DS10 Set

- Boost Pressure Gauge, Compression Fittings, Boost Hose, Visor, Mounting Bracket
- Exhaust Temperature Gauge, Probe, Sensor & Power Harness, Visor, Mounting Bracket
- Transmission Temperature Gauge, Temperature Sensor, Sensor & Power Harness, Visor, Mounting Bracket

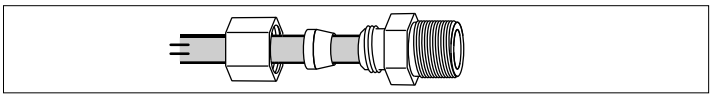
**⚠WARNING Disconnect negative battery terminals before starting any work on the vehicle.**

## Boost Gauge

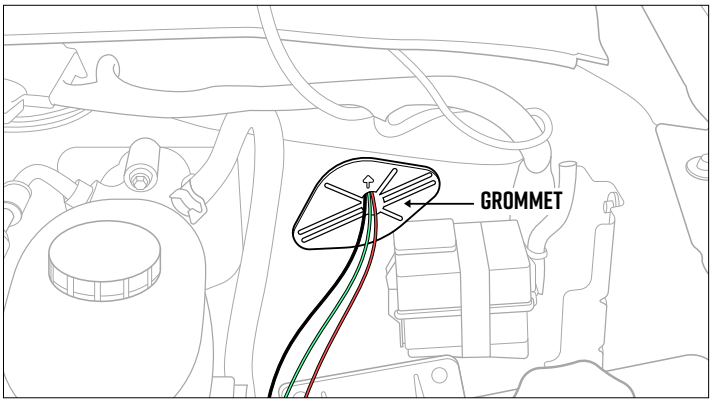
1. Determine the location in which you will install the Boost Line. In some applications a Boost Adapter can be used and in others you may have to drill and tap the vehicle's Intake Manifold to 1/8-27 NPT. Popular adapters are listed below;
   - **Adapters for Power Stroke:**
     Intake Heater Plug Adapter
     Map Line T-fitting
   - **Adapter for Cummins:**
     Boost Bolt Adapter
   - **Adapters for Duramax:**
     Intake Heater Plug Adapter
     Map Line T-fitting




2. Wrap Teflon tape counter clockwise on the male pipe threads of the Boost Ferrule Fitting Adapter.
3. Thread the Boost Ferrule Fitting Adapter into the Boost Adapter or the tapped hole and tighten with an **11mm wrench**.
4. Slide the Ferrule Fitting Cap onto the Boost Line followed by the Ferrule with the Cone facing the Male Threads on the Ferrule Fitting. Seat the Boost Line all of the way down and tighten the Ferrule Cap using a **3/8" wrench**.



5. Route the Boost Pressure Line through the firewall from the engine bay, keeping it clear of any moving parts, heat sources, and kinks.
   - **Note:** Be sure to use a grommet when routing the line through the firewall to protect it from being cut or damaged. Make sure it is large enough to run all the Sensor Wiring and Boost Line into the vehicle's cabin. If one is not available you will need to drill a hole and install a grommet.



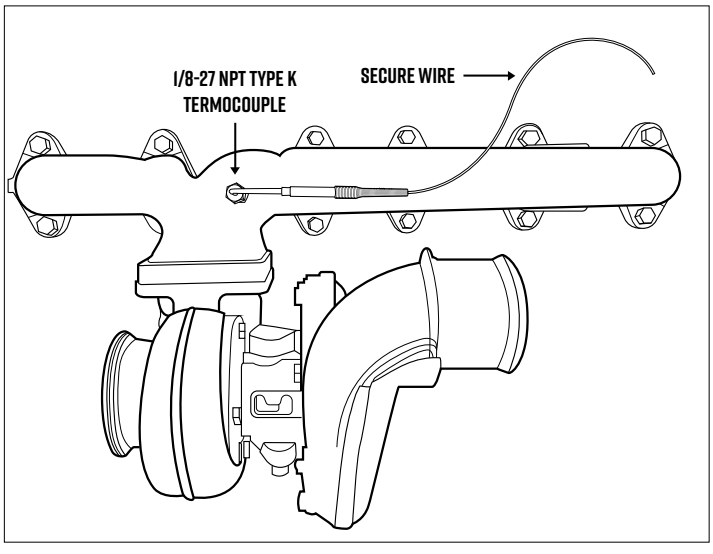
6. Wrap Teflon tape counter clockwise around the threads on the back of the gauge. Thread on the Boost Ferrule Fitting Adapter and tighten with a **14mm wrench**.

Slide the Ferrule Fitting Cap onto the Boost Line followed by the Ferrule with the Cone facing the Male Threads on the Ferrule Fitting. Seat the Boost Line all of the way down and tighten the Ferrule Cap using a **3/8" wrench**.

## Exhaust Gas Temperature (EGT) Gauge

We recommend installing the probe pre-turbo for the most accurate reading. Locate a flat portion on the Exhaust Manifold. Make sure to find a location on the manifold where all cylinders flow into one before the turbo.

1. Use a punch to mark the location for drilling. Some vehicles may require removal of the Inner Fender Well, or to be raised by a lift for easier access.
    - **Note:** Some aftermarket Exhaust Manifolds may already include Exhaust Probe Ports, eliminating the need for drilling.



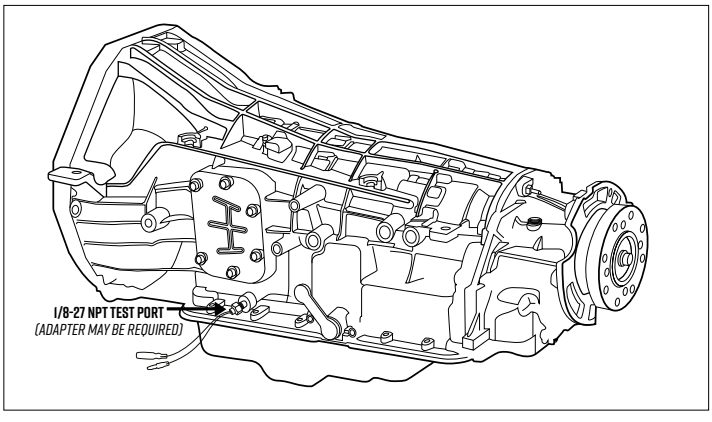

2. Starting with a **1/8" Drill Bit** drill a hole at the marked location stepping up to a size **"R" Drill Bit**.
3. Use Cutting Oil to tap the drilled hole to 1/8-27 NPT. Take caution while tapping and tap a little at a time, backing the tap up clearing any shavings that could possibly get in the way.
4. When you are done tapping, clean out all of the shavings inside the manifold or pipe using a magnet and a shop vacuum.
5. Brush Silver Grade Anti-Seize onto the treads of the Exhaust Temperature Probe Fitting and thread into the tapped hole. Tighten using a **14mm wrench**.
6. Install the Exhaust Temperature Probe into the manifold ensuring the tip of the probe is roughly halfway inside the manifold and tighten using a **14mm wrench**.
7. Plug the Exhaust Temperature Sensor Wire into the Exhaust Temperature Probe Connector.
8. Route the Exhaust Temperature Sensor Harness through the engine bay, through the firewall, using a grommet, keeping it clear of any moving parts.
9. Plug the Exhaust Temperature Sensor Harness into the back of the exhaust temperature gauge.

## Transmission Temperature Gauge

There are several different ways to connect a Transmission Temperature Gauge to your vehicle. In some cases an adapter is needed to adapt the 1/8-27 NPT Sensor to your transmission. Please take a look at GlowShift.com for available adapters including Thread Adapter, Test Port Extenders and T-Fittings.

### Temperature Sensor Installation

1. To install the Transmission Temperature Sensor, start by applying Teflon tape to the Temperature Sensor.




2. There are four common types of Transmission Temperature Sensor installations. GlowShift recommends installing the sensor to a Test Port, Stock Sensor Location, Cooler Line, or Transmission Pan. If the thread size does not match, or if the sensor is too long, a Thread Adapter is required:
    - **Transmission Test Port:** Most vehicle transmissions come equipped with a Test Port Location. This may be located on either the driver or passenger sides of the transmission near the Transmission Oil Pan. The bolt in this port should be removed and the depth of the Test Port should be verified to ensure there is a minimum of 7/8" for the Transmission Temperature Sensor to clear. If there is not enough clearance a Test Port Extender may be used in some applications.

        **Note:** A Test Port Extender is needed on all 94-07.5 Dodge Ram trucks with a 48RE Transmission.

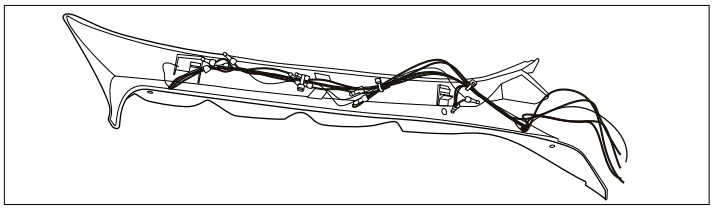
    - **Stock Sensor Location**: Use a T-Fitting (optional) to "T" off your stock sensor location. This will allow you to keep your stock sensor installed, while also allowing you to install an Aftermarket Temperature Sensor.
    - **Cooler Line:** Most vehicle transmissions have two Cooler Lines. Measure your vehicle's Cooler Line to

determine what size adapter will be required. Common diameters are 5/16", 3/8", 1/2", 5/8"
- Make sure to have a Catch Pan available to catch any lost transmission fluid.

3. Install the 1/8th-27 NPT Temperature Sensor to your vehicle's transmission system using one of the above methods that will work best for your application, tightening the sensor using a **14mm wrench**.
4. Attach the Female Silver Connector and the Longer Rubber Cover to a piece of 18 Gauge Automotive Grade Wire and connect to the **White Wire** of the Transmission Temperature Sensor. Attach the Male Silver Connector and short Rubber Cover to a piece of 18 Gauge Automotive Grade Wire and connect to the Black Wire from the sensor.
5. Route the wire that is connected to the White Transmission Temperature Sensor wire through the engine bay, through the firewall, using a grommet, keeping it clear of any moving parts.
6. Connect that wire to the Green Signal Wire on the Gauge Power Harness using a Splice Connector.
7. Connect the Black Transmission Temperature Sensor Wire to a solid ground source.
8. Plug the Transmission Temperature Sensor Harness into the back of the Transmission Temperature Gauge.
9. Before starting the vehicle be sure to refill the transmission following the manufacturer's recommended procedures.

## Gauge Wiring

1. With all of the sensor wires connected, place the gauges in the mounting location.
2. Using the optional three gauge wiring kit or 18 gauge Wire;
   - Connect all of the **Yellow Wires** together using a Butt or Splice Connector.
   - Connect all of the **Red Wires** together using a Butt or Splice Connector.
   - Connect all of the **Orange Wires** together using a Butt or Splice Connector.
   - Connect all of the **Black Wires** together using a Butt or Splice Connector.
   - Use Zip Ties to clean up the wires.

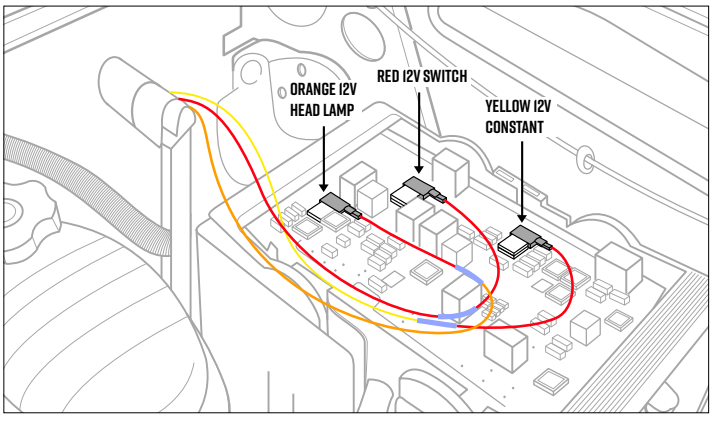


3. In order to test for power, reconnect the Negative Battery Terminals.
4. It may be needed to remove Vehicle Trim and/or Kick Panels in order to gain access to the vehicle's Fuse Box.
5. Use a Test Light to locate a Constant 12-volt Power Source in the vehicle's Fuse Panel. Locate a fuse that receives 12-volt power when the ignition is turned on.

   **Note:** Through the use of the optional add-on Expandable Circuit, you can connect the **Yellow Wire** of each gauge to the Constant 12-volt Power Source. Repeat the same step for the **Red Switched** 12-volt Power Source.

6. Connect the **Orange Wire** of the Gauge Wiring Kit to the Headlight Switch Power Source using a Splice Connector.

   **Note:** Make sure that the connection source does not dim. If the voltage is reduced when you lower the Dimmer Wheel it could cause the gauges to flash from not having enough voltage.




7. Locate a clean, reliable grounding source and connect the **Black Wire** from the gauges.
8. Reinstall any panels that may have been removed.
9. After all wiring is complete, turn the vehicle's key to the "On" position and ensure your gauges illuminate.
10. Press the **COLOR** Changing Button on your gauge and scroll through the 7 Color options to match your factory dash as well as a Color Change and a Color Fade option, allowing you to have the Gauge Face change between all of the colors automatically.
11. Turn on the headlights to ensure that the gauges are dimming.
12. Start vehicle and check for leaks, and top off any fluids if necessary.
13. Test drive your vehicle to ensure all gauges are functioning properly.

    **Note:** The Boost Gauge will only read while under a load. Make sure to drive the vehicle in order to check the operation of the Boost Gauge.

## ONE YEAR NON-TRANSFERRABLE LIMITED WARRANTY & DISCLAIMER

GlowShift Gauges, LLC ("GlowShift") warrants to the original retail consumer purchaser, and not any other purchaser or subsequent owner, that this Product will be free from defects in material or workmanship for a period of **one (1) year** from the purchase date.

For a period of **one (1) year** from the date of purchase, at no charge to the Purchaser, GlowShift will repair or replace this Product if it is determined by GlowShift to be defective. After the warranty period, the Purchaser must pay all charges for parts and labor.

Coverage under this warranty is only valid within the United States, including its territories, as well as in certain other countries. Purchasers should check our website, **www.GlowShift.com**, to determine the warranty coverage in the countries in which they are located.

GlowShift does **not warrant the installation** of the Product, which is the sole responsibility of the Purchaser. Installation should be done by licensed professionals. Improper installation may cause damage to the Product and any vehicle in which it is installed, and may cause burns and electrical injury to individuals. GlowShift's warranty does not cover any expenses incurred in removing Products that are defective or reinstalling replacement Products in their place.

During the warranty period, to have the Product repaired or replaced, the Purchaser must return the Product, freight prepaid by the Purchaser, to GlowShift (but for customers in the contiguous United States, GlowShift will pay the shipping charges if any Product fails during the first thirty (30) days after purchase). The Product must be returned in its original carton or in a similar package affording an equal degree of protection. GlowShift will return the repaired or replaced Product, freight prepaid, to the Purchaser. GlowShift does not provide Purchasers with temporary replacement units during the warranty period or at any other time.

This limited warranty is nontransferrable and will automatically terminate if the original retail consumer purchaser resells the Product or transfers the vehicle in which the Product is installed. An "original retail consumer purchaser" is a person who originally purchases the Product, or a gift recipient of a new Product that is in its original packaging and unopened.

This limited warranty is subject to all of the following terms and conditions:

## TERMS & CONDITIONS

1. **NOTIFICATION OF CLAIMS; WARRANTY SERVICE:** If Purchaser believes that a Product is defective in material or workmanship, written notice with an explanation of the claim shall be given promptly by Purchaser to GlowShift. All warranty claims must be made within the warranty period, and any Products returned to GlowShift must be shipped in accordance with GlowShift's procedures (including use of RMA numbers supplied by GlowShift after notification). The repair or replacement of any Product or part thereof shall not extend the original warranty period. The specific warranty on the repaired part only (not including gauge sensors) shall be in effect for a period of ninety (90) days following the repair or replacement of that part, or the remaining period of the Product warranty, whichever is greater. GlowShift does not provide a warranty on replacement gauge sensors.

2. **EXCLUSIVE REMEDY; ACCEPTANCE:** Purchaser's exclusive remedy and GlowShift's sole obligation is to supply (or pay for) all labor necessary to repair any Product found to be defective within the repair or replacement fails to remedy the defect. Purchaser's failure to make a claim as provided in paragraph 1 above or continued use of the Product shall constitute an unqualified acceptance of such Product and a waiver by Purchaser of all claims thereto.

3. **EXCEPTIONS TO LIMITED WARRANTY:** GlowShift shall have no obligation to Purchaser with respect to any Product that is subjected to any of the following: abuse, improper use, negligence, accident, modification, failure to follow the operating procedures outlined in the user's manual, failure to follow the maintenance procedures in the service manual for the Product, attempted repair by nonqualified personnel, operation of the Product outside of the published environmental and electrical parameters, or if the Product's original identification (trademark, serial number) markings have been defaced, altered, or removed. GlowShift excludes from warranty coverage Products sold AS IS and/or WITH ALL FAULTS. GlowShift also excludes from warranty coverage any consumable items such as fuses and batteries.

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4. **PROOF OF PURCHASE; REGISTRATION:** The Purchaser's dated bill of sale must be retained as evidence of the date of purchase and to establish warranty eligibility. Registration of any Product or of this limited warranty is voluntary, and failure to register will not diminish any rights available under this warranty.

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## LIMITATION OF LIABILITY

THE LIABILITY OF GLOWSHIFT, IF ANY, AND PURCHASER'S SOLE AND EXCLUSIVE REMEDY FOR DAMAGES FOR ANY CLAIM OF ANY KIND WHATSOEVER, REGARDLESS OF THE LEGAL THEORY AND WHETHER ARISING IN TORT OR CONTRACT, SHALL NOT BE GREATER THAN THE ACTUAL PURCHASE PRICE OF THE PRODUCT FOR WHICH SUCH CLAIM IS MADE. IN NO EVENT SHALL GLOWSHIFT BE LIABLE TO PURCHASER FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION, REIMBURSEMENT OR DAMAGES ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS OR FOR ANY OTHER REASON WHATSOEVER.

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