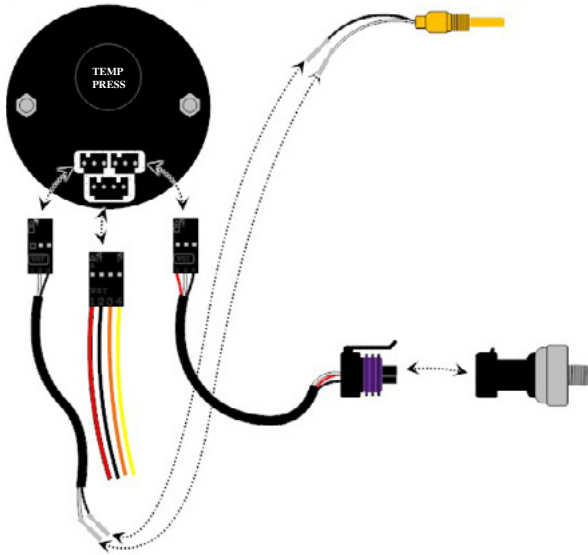


10 Color Digital Series Dual Digital Temperature/Pressure Gauge

Product Number: GS-TCD-TP



Wire Harness Color Code

Red: 12v Switched Source (+)

Black: Vehicle Ground (-)

Orange: 12v Switched Headlamp Source (+)

Yellow: 12v Constant Source (+)

Temperature Sensor Wires (S)

Black: Connects To Black Wire On Sensor

White: Connects To White Wire On Sensor

Temperature Sensor Installation

1. Disconnect the negative battery cable.
2. Depending on where temperature is going to be measured in the vehicle, the included temperature sensor can be installed in many different locations.

Possible Mounting Location

• Water Temperature Monitoring:

- **Coolant Fluid Port:** Locate a coolant fluid port located on the engine and remove the port plug. Directly install the water temperature sensor by threading it into the coolant port. Additional adapters may be required if the coolant port is not threaded to 1/8-27 NPT.
- **Stock Sensor Location:** Use a T-fitting (optional) to "T" off the stock sensor location. This option will permit the use of the installed stock sensor, while also allowing for the use of an aftermarket temperature sensor.
- **Water Sender Hose Attachment:** Purchase a Water Sender Hose Attachment from www.GlowShift.com. Cut the upper radiator hose and install the attachment between the two halves. Install and tighten the hose clamps included in the attachment kit. Wrap the sensors threads with Teflon tape and thread the sensor into the sensor port on the attachment.

• Oil Temperature Monitoring:

- **Oil Gallery Test Port:** Some engine oil galleries will have a test port plug. Using a repair manual, verify

the test port plug's location and thread size. Remove the port plug and thread the supplied temperature sensor into the test port. Additional adapters may be required if the port is not threaded to 1/8-27 NPT.

- **Oil Filter Sandwich Adapter:** Install an Oil Filter Sandwich Adapter between the oil filter and the engine. Sandwich Adapters, available for purchase at www.GlowShift.com, provide 4 ports into which multiple sensors can be installed. Thread the supplied sensors into two of the open ports in the adapter.
- **T-Fitting Installation:** Remove the stock oil temperature sensor and fasten a T-fitting in its place. 1/8-27 NPT T-fittings are available for purchase at www.GlowShift.com. Using a T-fitting, "T" off the port to open up 3 more ports for the stock and GlowShift sensors to be installed and operate simultaneously.
- **Differential Temperature Monitoring:**
 - Install the temperature sensor into the differential case cover. Remove the differential case cover for this procedure. Using a 19/32" drill bit, drill a hole into the differential case cover for placement of a 1/8-27 NPT mild steel weld-in bung (not included). Drill this hole as close as possible to the drain plug or at the bottom of the differential case cover. The weld-in bung can then be welded to the case cover and the temperature sensor can be installed in place. Confirm the sensor is in contact with gear oil. Be sure to use Teflon tape on the sensor threads.
 - **Note:** Some aftermarket case covers may have a 1/8-27 NPT port.

(Instructions Continue On Next Page)

• Transmission Temperature Monitoring:

- **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 sensor fitted in its place. Confirm port and thread size with your owner's manual. A test port extender will be required when installing this sensor into Dodge Ram model years 94-07.5.
- **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.
- **Transmission Cooler T-Fitting Adapter:** Verify Transmission Line Size (Dodge Cummins with 6.7L Cummins Use 1/2" T-fitting and GM Duramax Allison Transmissions will use 5/8"). This allows the T-fitting to be installed to the hot transmission line before the cooler and allows the sensor to be installed into this T-fitting.

Note: Some vehicles may require additional adapters to complete the installation of this sensor.

Pressure Sensor Installation

Listed below are three options which have multiple ways to connect to your vehicle. Please use this as a guide to choose an option.

Boost Pressure Sensor Installation

1. Install the electronic boost pressure sensor by drilling and tapping your intake manifold. Drill and tap the intake manifold to 1/8-27 NPT, and directly install the sensor.
 - **Note:** You may also remove the top of your intake manifold before drilling for extra protection against drill shavings.
 - **Note:** If you are installing this gauge into a Dodge Ram, model years 1998-2017, you can install a boost bolt directly to your intake manifold. Installing a boost bolt does not require any drilling or tapping. Boost bolts can be purchased at www.GlowShift.com.

Oil Pressure Sensor Installation

2. Install the oil pressure sensor. There are three common types of oil pressure sensor installations:
 - **Oil Gallery Test Port:** Some engine oil galleries will have a test port plug. Check your repair manual

to verify the location and thread size. Remove the port plug and install the supplied pressure sensor. Additional adapters may be required if the port is not threaded to 1/8-27 NPT.

- **Oil Filter Adapter Installation:** You can purchase an Oil Filter Sandwich Adapter from www.GlowShift.com. This adapter installs between your oil filter and engine block, providing you with 4 sensor ports in which you can install the oil pressure sensor to.
- **T-Fitting Installation:** Remove your stock oil pressure sensor and fasten a T-fitting in its place. 1/8-27 NPT T-fittings are available for purchase at www.GlowShift.com. Using a T-fitting allows you to "T" off of the port and opens up 3 more, which then allows for the stock and GlowShift sensors to be installed and operate simultaneously.

Fuel Pressure Sensor Installation

3. Install and connect the 1/8-27 NPT fuel pressure sensor to your vehicle's fuel system. We recommend installing the sensor to your fuel filter housing, fuel rail, or lift pump. (See Page 2).
 - **Note:** Some vehicles may require additional adapters to complete the installation of this sensor. Please visit www.GlowShift.com for various installation accessories and adapters that may be required or helpful for vehicle specific installations on this fuel pressure gauge.

Connecting the Wire Harness

1. Connect the temperature sensor wire harness to the back of the gauge into the left port.
2. Connect the pressure sensor wire harness to the back of the gauge into the right port.
 - **Note:** Once the wires are connected, label them to avoid confusion when connecting to the sensors.
3. Once the wires are connected to the back of the gauge, run them to both sensor mounting locations and connect them to the sensors. The white wire on the temperature harness connects to the white wire on the temperature sensor, while the black wire on the temperature harness connects to the black wire on the temperature sensor. When passing the sensor wires through the firewall be sure there is a grommet installed, so the wires do not get cut or pinched.
 - **Note:** When extending the sensor wires, use 18 gauge automotive grade wire.



INSTALLATION INSTRUCTIONS

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- For this step, we recommend using GlowShift's Expandable Circuit to power the gauges. Locate the fuse panel and remove a fuse that does not exceed 15 amps for a switched 12 volt power source. Crimp the lead power wire to the Expandable Circuit's butt connector. Insert the fuse removed from the fuse panel into the open slot in the Expandable Circuit, then plug the Expandable Circuit into the open slot in the fuse panel. The Expandable Circuit is available for purchase at www.GlowShift.com.
- Using 18 gauge automotive grade wiring, connect the **yellow wire** to a positive 12 volt **constant (unswitched)** source. It may be connected to the fuse panel or to the vehicle's battery. If connecting to the battery, you must install a 3 amp fuse within 6-8 inches of the battery connection.
- Using 18 gauge automotive grade wiring, connect the **red wire** to a positive 12 volt **ignition (switched)** source. It may be connected to the fuse panel, an accessory wire, or any positive 12 volt source that turns on and off with the ignition.
- Using 18 gauge automotive grade wiring, connect the **black wire** to any good, clean **ground connection**. Alternatively, the black wire can be connected directly to the negative side of the vehicle's battery.
- Connect the **orange wire** to the positive 12 volt **headlamp** source. This wire enables the Nighttime Dimming feature which decreases the brightness of the gauge face by 50% when the headlights are turned on. This step is optional and will not affect the operation of the gauge if it is omitted.
 - Note:** Do not connect the orange wire to a dimmer wheel. This will cause the gauge lighting to flicker.
- Reconnect the negative battery cable.

1999-2007 Ford Super Duty Power Stroke Diesel:	<ul style="list-style-type: none">You can install the pressure sensor into the fuel filter housing using one of our 7.3L or 6.0L Fuel Pressure Adapters.
1994 -2010 Dodge Cummins Diesel:	<ul style="list-style-type: none">You can install the pressure sensor into the fuel filter housing using one of our Banjo Bolt Adapters.A snubber valve is required to install.
2010 -2017 Dodge Cummins Diesel:	<ul style="list-style-type: none">A Big Line Kit is required to enable a fuel pressure sensor to be installed.A snubber valve is required to install.
Chevrolet /GMC Duramax 6.6L Diesel:	<ul style="list-style-type: none">An aftermarket lift pump will be REQUIRED in order for the fuel pressure gauge to read the pressure.
Fuel Hose Fitting	<ul style="list-style-type: none">3/8" and 1/2" Fuel Line T-Fitting AdaptersAllows you to "T" off the fuel line for reliable fuel pressure readings directly from the source featuring either 3/8" or 1/2" barbed push lock fittings.
8mm Fuel Line T-Fitting Adapter	<ul style="list-style-type: none">Allows you to "T" off the fuel line for reliable fuel pressure readings directly from the source featuring 8mm barbed push lock fittings.
3/8" Quick-Connect EFI Fuel Line Adapter	<ul style="list-style-type: none">Allows you to install a fuel pressure sensor between the fuel line and fuel rail of your modern electronic fuel injection vehicle.
-4 AN Fuel Rail Adapter	<ul style="list-style-type: none">Designed to replace the Schrader valve on your fuel rail which allows you to easily install your fuel pressure sender. Easily fits into any GM 5.3L & 6.0L Fuel Rail



10-Color Mode

1. Press the color changing button to cycle between the ten different color options of both displays. The color will change each time the button is pressed.
2. To set a different color on the upper display than what is on the lower display, press the color changing button until the preferred color is set on the lower display. Then, hold the color changing button until the upper display starts to flash. While flashing, press the color changing button to cycle between the ten different color options of the upper display. When satisfied with the color of the upper display, wait for the gauge to stop flashing and the selected colors will be set.
3. The sequence of display colors is: blue, green, red, yellow, white, teal, purple, pink, amber, and orange. After orange, there are two automatic color-changing functions on the gauge that begin with the color blue. They are the 10 Color Cycle Mode and the 10 Color Fade Mode.

Additional Installation Information & Material Requirements

- **GlowShift Gauges Approved Conductor Wires:** Successfully installing GlowShift Gauges may require additional lengths of wire (sizes and quantity depend on vehicle, gauge type, gauge location and/or sensor location). For accurate and proper GlowShift Gauge installation and operation, we recommend the use of 18-20 Gauge (wire diameter) automotive grade conductor wire with sheathing for one or more gauges per vehicle. Be sure to always use a rubber grommet when routing wires from the engine compartment to the inside of the vehicle cabin to prevent and deter the stripping of the power supply and/or sensor wires, as these are necessary to deliver vital statistics about your engine to your GlowShift gauges. Never use wire nuts when fastening or bounding vehicle, gauge, or sensor wiring, we recommend always using automotive crimp connectors or solder individual wires together for optimum gauge installation and operation.
- **GlowShift Gauges Approved Installation Accessories:** Installations may require additional products, accessories, or adapters for a complete installation and efficient operation of a gauge or sensor. We recommend verifying the need for any additional parts specific for your vehicle before beginning the installation process to ensure a smooth install.
- **GlowShift Gauges Installation Instructions:** Installation documents are solely to provide a guide for individuals that are mechanically and electronically able to install products. If you are unsure about the correct procedure of installation for a product or device, you should consult a professional mechanic or an Authorized GlowShift Installer.



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 nontransferable 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.

All software and accompanying documentation furnished with, or as part of the Product is furnished "AS IS" (i.e., without any warranty of any kind), except where expressly provided otherwise in any documentation or license agreement furnished with the Product.

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.

DISCLAIMER OF WARRANTY

EXCEPT FOR THE FOREGOING WARRANTIES, GLOWSHIFT HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY WITH REGARD TO ANY CLAIM OF INFRINGEMENT THAT MAY BE PROVIDED IN SECTION 2312(3) OF THE UNIFORM COMMERCIAL CODE OR IN ANY OTHER STATE STATUTE.

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.

GOVERNING LAW: This nontransferable limited warranty shall be governed by the law of the State of New Jersey, U.S.A., and the United States of America, excluding their conflicts of laws principles. The courts of Camden County, New Jersey, shall have the exclusive jurisdiction over any legal action with respect to this warranty.

This limited warranty gives specific legal rights. You may also have other rights that may vary from state to state or from country to country. Some states or countries do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you. You are advised to consult applicable state or country laws for a full determination of rights.