B-806
113944
Rev 1: 8/27/03

Installation Instructions

Exhaust Temperature Gauge 2-1/16"

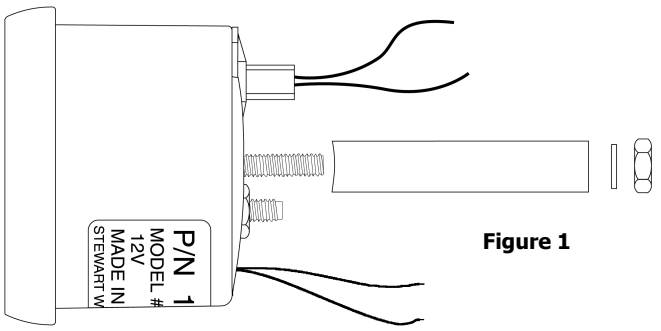


Figure 1

1

PRECAUTIONS:

- ❑ Read ALL instructions before installing instrument.
- ❑ Follow ALL safety precautions when working on vehicle-wear safety glasses!
- ❑ ALWAYS disconnect (-) negative battery cable before making electrical connections.
- ❑ Exhaust components can reach dangerously high temperatures. Allow sufficient time for components to cool before attempting any work.

HELP?:

- ❑ If after reading these instructions you don't fully understand how to install your instrument(s), contact your local Stewart Warner distributor, or contact our Technical Support Team toll free at **1-866-797-7223 (SWP-RACE)**.
- ❑ Additional applications information may be found at ***www.SW-Performance.com***.

GENERAL APPLICATION:

- ❑ 12-volt DC negative (-) ground electrical systems (11-16 VDC operating voltage.
- ❑ Input: Type K thermocouple.

2

GAUGE MOUNTING (Figure 1):

NOTE: Instructions apply to 2-1/16 gauges (nominal SAE diameters). Be careful when making panel cut-out!

- ❑ Recommended panel cut-out (hole size) for 2-1/16" nominal gauge is 2.098" +/- .02".
- ❑ Secure the gauge in the hole using the supplied retaining bracket, lock washers and #8-32 nuts. Maximum torque for mounting screws is 6 in. lbs.

TIP: *It may be easier to pre-wire gauge before installing!*

THREADED TYPE THERMOCOUPLE (Figure 2):

WARNING: Remove all components before drilling so the chips created during drilling don't damage any components, such as turbochargers or sensors.

1. Find a suitable location to mount the thermocouple probe. Contact to your engine builder for advice regarding thermocouple probe placement.

NOTE: Stewart Warner Performance recommends placing the probe after any turbochargers.

2. For installation in a manifold, drill and tap a 1/8" NPT hole where the probe is to be installed.
3. For installation into an exhaust pipe, drill a 9/16" hole in the pipe, insert, and weld in a bung with a 1/8" NPT hole.
4. Install the adapter in the 1/8" NPT hole.
5. Insert the probe and tighten the retaining nut.

3

EXHAUST TEMP GAUGE WIRING (Figure 2):

1. Disconnect negative (**-**) battery cable.
2. Using 18-ga. wire, connect the **BLACK** wire to a clean (rust/paint-free) engine ground.
3. Using 18-ga. wire, connect the **RED** wire to a switched +12V source.
4. Connect the (**S**) terminal to **YELLOW Thermocouple** extension wire.
5. Connect the (**+**) terminal to **RED Thermocouple** extension wire.

NOTE: Thermocouple extension wire must be used between the gauge and the probe. The length of the extension wire should not be altered, as it may change the calibration of the gauge.

6. Using the supplied 6-32 screws and nuts, connect **RED Thermocouple** probe wire to the **RED Thermocouple** extension wire.
7. Using the supplied 6-32 screws and nuts, connect **YELLOW Thermocouple** probe wire to the **YELLOW Thermocouple** extension wire.
8. Slide the provided heat shrink tubing over the probe-extension wire connection and shrink using a heat gun.
9. Connect one (1) of the light wires (WHITE) to the dash lighting circuit or to a +12V switched circuit.
10. Connect other light wire (BLACK) to chassis ground.
11. Reconnect the negative (**-**) battery cable & test instrument to ensure that it is working.

4

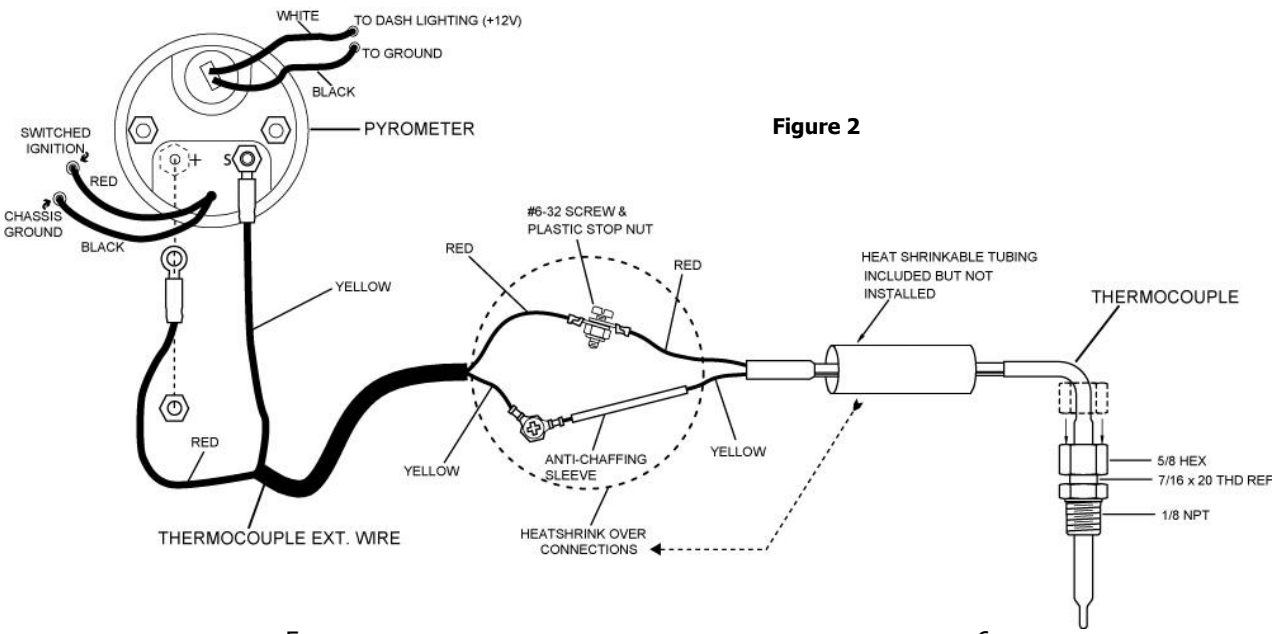


Figure 2

5

6

CLAMP TYPE THERMOCOUPLE (Figure 3):

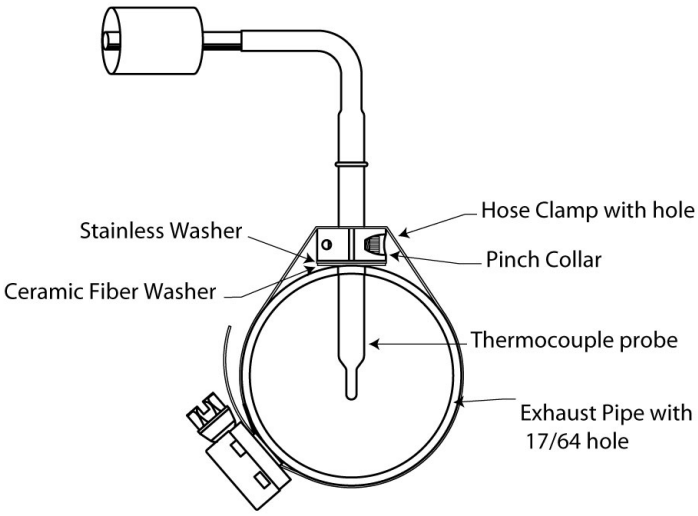
WARNING: Remove all components before drilling so the chips created during drilling don't damage any components, such as turbochargers or sensors.

1. Find a suitable location to mount the thermocouple probe. Contact to your engine builder for advice regarding thermocouple probe placement.

NOTE: Stewart Warner Performance recommends placing the probe after any turbochargers.

2. Drill a 17/64" hole where the probe is to be installed.
3. Assemble the probe assembly by inserting the probe through the hose clamp, then through the pinch collar, then through the stainless steel washer, followed by the ceramic fiber washer.
4. Insert the probe assembly into the 17/64" hole in the exhaust pipe.
5. Tighten the hose clamp slightly, adjust the probe to the desired height (the tip of the probe should be centered in the exhaust flow), tighten the pinch collar, and then finish tightening the hose clamp.

Figure 3



7 8

THREADED TYPE RACING THERMOCOUPLE (Figure 4):

WARNING: Remove all components before drilling so the chips created during drilling don't damage any components, such as turbochargers or sensors.

1. Find a suitable location to mount the thermocouple probe. Contact to your engine builder for advice regarding thermocouple probe placement.

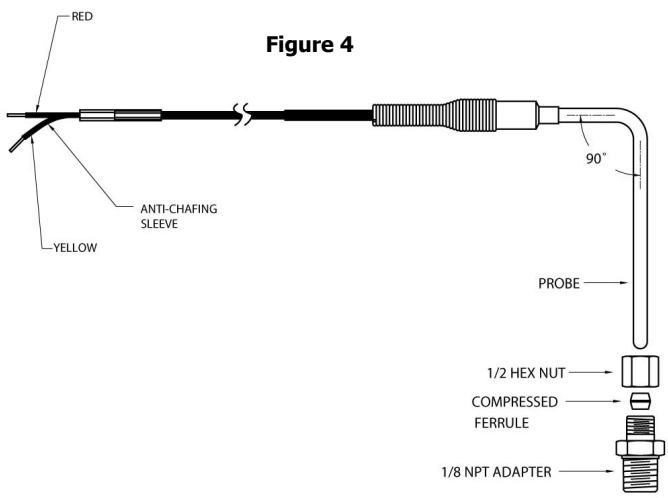
NOTE: Stewart Warner Performance recommends placing the probe after any turbochargers.

2. For installation in a manifold, drill and tap a 1/8" NPT hole where the probe is to be installed.
3. For installation into an exhaust pipe, drill a 9/16" hole in the pipe, insert, and weld in a bung with a 1/8" NPT hole.
4. Install the adapter in the 1/8" NPT hole.
5. Assemble the probe by first sliding the retaining nut onto the probe, then the crush ferrule.
6. Insert the probe assembly into the adapter. Adjust the probe to the proper height and hand-tighten the retaining nut.
7. Tighten the nut 1-1/4 turns to secure the probe assembly.
8. Carefully route the thermocouple wire to the gauge and connect using the supplied crimp-on connectors (Figure 2).

NOTE: When using the racing thermocouple probe, the thermocouple extension wire is not required.

NOTE: Do not solder the thermocouple wire to the crimp connector.

Figure 4



9 10

INSTALLATION & TECHNICAL TIPS:

- ❑ The thermocouple probe tip should be positioned in the middle 2/3 of the passage being measured.
- ❑ If you are using more than one probe to compare multiple cylinders or cylinder banks, the probes should be the same distance from the head. This will provide the best temperature comparisons.
- ❑ Do not alter the length of the thermocouple wire, as this can change the calibration of the gauge.
- ❑ Do not make tight radius bends with the thermocouple wire, make large radius bends.
- ❑ Use wire ties to secure the thermocouple wire away from hot and/or moving parts.

CLEANING DIRECTIONS:

- ❑ For proper cleaning of instrumentation/accessories, use a glass cleaner or mild detergent with a spray on and wipe method.

WARRANTY INFORMATION:

TWO (2) YEAR LIMITED WARRANTY. SWP products are warranted against defects in workmanship and materials for a period of two (2) years from the date of purchase. Proof-of-purchase is required; otherwise, the warranty period shall default to two (2) years from date-of-manufacture (as indicated by the date code on the product). See detailed Warranty Policy for other Terms & Conditions.

STEWART WARNER PERFORMANCE
1-866-SWP-RACE (797-7223)
www.SW-Performance.com

MADE IN USA

11 12