B-764
115067
Rev 3: 10/13/05

Installation Instructions

Speedometer 3-3/8" and 5"

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.

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 (11-20 VDC operating voltage range for the speedometer, 11-16 VDC for the Light bulb).
- ❑ Input: 4,000 to 200,000 Pulses Per Mile, Hall effect sensor or magnetic sender.

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SPEEDOMETER MOUNTING (Figure 1 & 2):

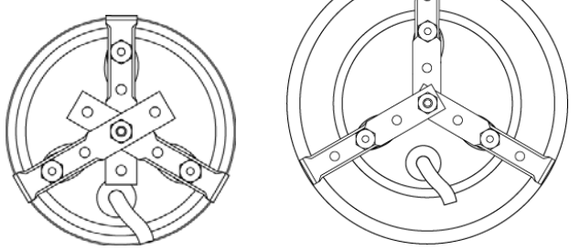
NOTE: Instructions apply to 3-3/8" & 5" speedometer.

- ❑ Recommended panel cutout (hole size) for 3-3/8" speedometer is 3-3/8".
- ❑ Recommended panel cutout (hole size) for 5" speedometer is 4-5/8" if recessed to the bezel, or 3-3/8" if recessed to the step.
- ❑ Secure the speedometer in the hole using the supplied bracket for the 3-3/8" and the 5". Remove the 3 Torx screws using a T10 Torx driver. Insert the 3 studs and install lock washers and nuts to secure the rear cover. Install the bracket as shown in figure 1 and tighten the 3 locking nuts (5 in. Lb. max).

WARNING: When installing the studs for the dash mounting kit, only turn studs in 8 turns.

- ❑ When mounting on the dash or roll cage or steering column, use the cushioned strap & bracket as shown in figure 2.

Figure 1



3-3/8" Installation **5" Installation**

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SPEEDOMETER WIRING (Figure 2, 3 & 4):

1. Disconnect negative (**-**) battery cable.
2. Using 18-ga. wire, connect the (**BLACK**) wire to a clean (rust/paint-free) ground, preferably battery negative terminal.
3. Using 18-ga. wire, connect the (**RED**) wire to a switched +12V source, like the ignition wire.
4. Using 18-ga. wire, connect the (**GREEN**) wire the speedometer sender or magnetic sensor (refer to figure 3 and 4 for sender wiring). Factory speedometer senders may be used as well. Refer to the vehicle service manual or your dealer for factory speedometer sender wiring information.
5. Mount the ***CALIBRATION/TRIP*** button in a convenient location that is easily within reach of the driver.
6. Connect the (**LONG WHITE**) wire to one of the ***CALIBRATION/TRIP*** button terminals and connect the other terminal to a good chassis ground.
7. There are two (2) wires for the lighting. Connect the (**SHORT WHITE**) lighting wire to the dash lighting circuit or to a +12V switched circuit. Connect the (**SHORT BLACK**) lighting wire to a chassis ground.
8. Reconnect the negative (**-**) battery cable.
9. Calibrate the speedometer. Refer to the calibration set-up section. Test instrument to ensure that it is working properly.

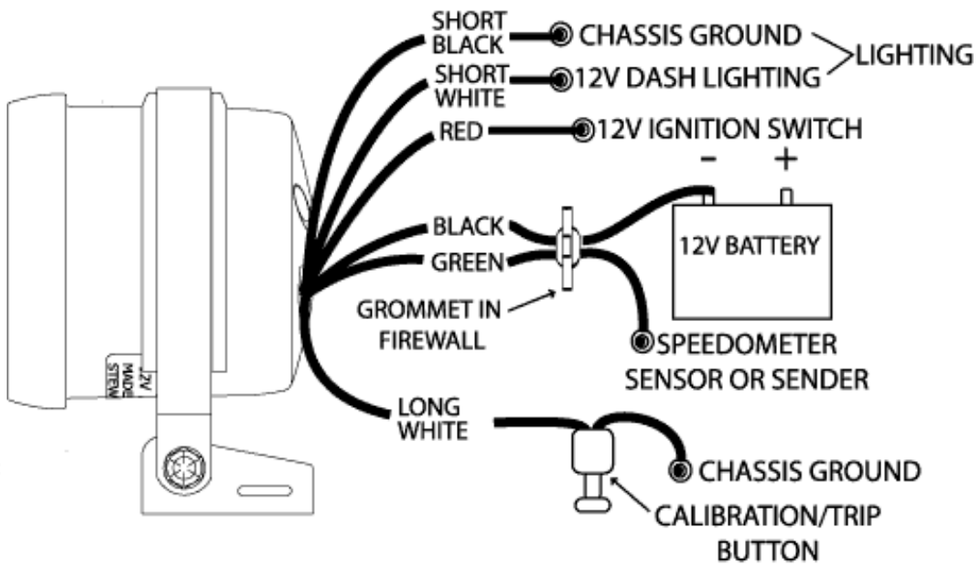

Figure 2

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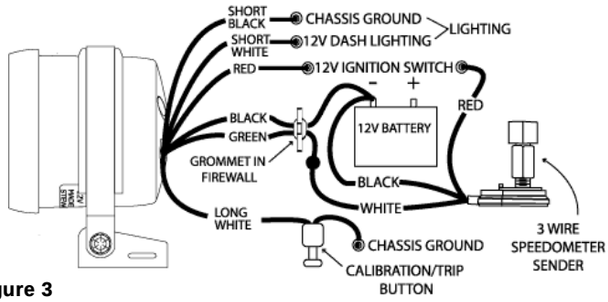

Figure 3

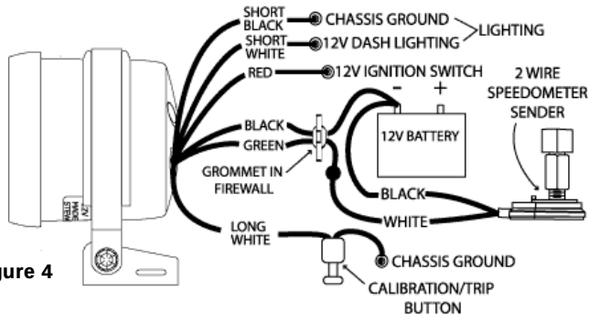

Figure 4

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CALIBRATION (Pulses Per Mile):

Pulses per mile (PPM) are the number of pulses that the speedometer receives for one (1) mile driven. The speedometer needs to know this information to accurately indicate speed. Stewart Warner Performance speedometers accept a very wide range of PPM (4,000 to 200,000 PPM). This is very convenient when making changes to differential gear ratios and tire sizes. Just recalibrate the speedometer whenever changes are made and the speedometer will automatically adjust for the changes and accurately indicate speed.

SIGNAL INTERFACING:

Stewart Warner Performance speedometers are designed to work with both hall effect senders and magnetic pickup sensors. The input level can range from TTL 5V square wave (hall effect) to AC sign wave signals (magnetic pickup).

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SPEEDOMETER OPERAION

Stewart Warner Performance speedometers have an odometer and 2 separate trip odometers (TRIP 1 & TRIP 2) that can be individually reset. Interfacing with the speedometer is done through the ***CALIBRATION/TRIP*** button.

- ❑ The speedometer will always display the odometer at power-up.
- ❑ Momentarily press the ***CALIBRATION/TRIP*** button once to display TRIP 1, which will be displayed until the speedometer is powered down or the ***CALIBRATION/TRIP*** button is pressed again.
- ❑ Momentarily press the ***CALIBRATION/TRIP*** button a second time to display TRIP 2, which will be displayed until the speedometer is powered down or the ***CALIBRATION/TRIP*** button is pressed again.
- ❑ Momentarily press the ***CALIBRATION/TRIP*** button a third time to return to the odometer display.
- ❑ The speedometer will retain the TRIP 1 & TRIP 2 values even when powered down.
- ❑ To clear TRIP 1 or TRIP 2, momentarily press the ***CALIBRATION/TRIP*** button until the desired TRIP is displayed, then press and hold the ***CALIBRATION/TRIP*** button for approximately 3 seconds until the TRIP resets to 0.

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CALIBRATION SET-UP:

1. With the ignition off, press and hold the ***CALIBRATION/TRIP*** button.
2. Turn the ignition on. After approximately 5 seconds the odometer/trip display will indicate **CAL** to verify that calibration mode has been accessed. Release the ***CALIBRATION/TRIP*** button.
3. When ready to start the 1-mile calibration drive, momentarily press the ***CALIBRATION/TRIP*** button.
4. Drive the vehicle EXACTLY one (1) measured mile, then Press and release the ***CALIBRATION/TRIP*** button again to complete the calibration.
5. The number of pulses counted is displayed at this point.
6. If the number of PPM is between 4,000 to 200,000 the odometer/trip display will indicate the actual pulses counted by the speedometer for five (5) seconds. This indicates a successful calibration.
7. If the number of PPR is below 4,000 at the end of one mile, the odometer/trip display will indicate ERRL for five (5) seconds after the button is pressed. The calibration will not be updated, and the original calibration will be maintained. Correct the problem and recalibrate the speedometer.
8. If the number of PPR is above 200,000 at the end of one mile, the odometer/trip display will indicate ERRH for five (5) seconds after the button is pressed. The calibration will not be updated, and the original calibration will be maintained. Correct the problem and recalibrate the speedometer.

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TROUBLESHOOTING:

Q: My speedometer does not respond at all, what do I do?

A: Check all of the wiring connections and power to the speedometer.

1. If the speedometer needle *goes* to zero when powered up, but does not respond when the vehicle is at speed, there is no signal to the green wire. Check to ensure that the green wire is hooked to the proper location for a valid signal.
2. If the speedometer needle does not go to zero when powered up, the speedometer is not grounded properly or does not have power to the (**RED**) wire. Check to ensure a good chassis ground. Verify that the (**RED**) wire has a 12VDC supply.

Q: My speedometer does not read correctly, what do I do?

A: Recalibrate the speedometer.

1. Be sure that you are driving exactly one (1) mile. The speedometer calibration accuracy is dependent upon driving exactly one (1) mile.
2. Spinning the tires will skew calibration and the speedometer will not be accurate.

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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)
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