



Installation Instructions

Water Temperature Gauge

(see www.bmracing.com for the latest technical product information)

Part Number 80227

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Your new B&M water temperature gauge will accurately monitor water temperature and warn you before excessive heat causes damage to your engine. Most engines run best right about 200°F. Any thing above 220°F may cause engine and/or cylinder head damage. This gauge will work with all 12 volt negative ground electrical systems.

STEP 1. Disconnect positive terminal battery cable to prevent accidental shorts and/or damage. Mount temperature gauge.

Mounting panel: Install panel in position and secure using the two sheet metal screws supplied with the kit.

Dashboard or console: Drill 2 1/16" hole into surface you wish to mount the gauge in.

Gauge pod: Gauge will press-fit into 2 1/16" gauge pod and the mounting bracket will not be used

Position gauge in mounting hole. Install mounting bracket, nuts and lock washers in position. (see Fig. 1) Install one

brass flat washer, one lock washer and one nut on each stud. Rotate gauge until it is properly aligned and tighten each nut finger tight.

STEP 2. The water temperature gauge can be installed in various locations on your domestic or import vehicle. The most popular locations are into the intake manifold or cylinder head. Note: This location is recommended to monitor the true water/coolant temperature.

STEP 3. Choose the proper coupler/adaptor size, if needed to install in your vehicle:

- 1/8" NPT Sender Unit (most Import cylinder heads)
- 3/8" NPT Coupler
- 1/2" NPT Coupler (most Domestic intakes)

Place a small amount of sealer on the threads of the temperature gauge sender unit. Install the proper coupler size and tighten securely, if needed. Install the 1/8" NPT sender unit and **TIGHTEN VERY LIGHTLY!**

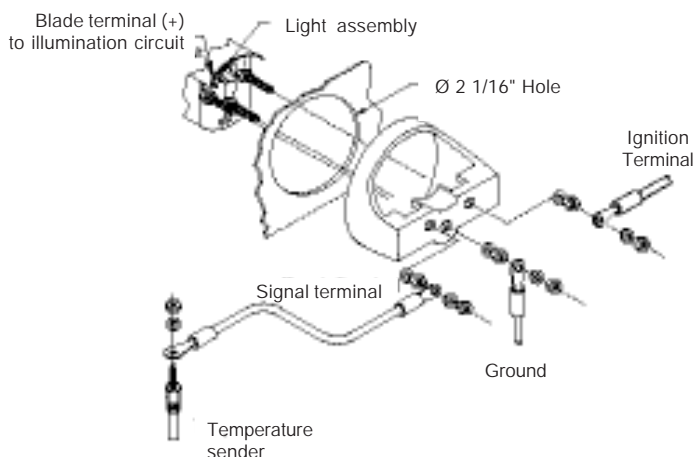


Figure 1

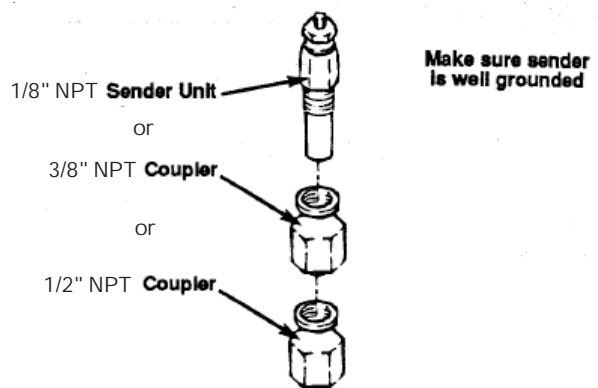


Figure 2

STEP 4. Run a length of wire from the temperature gauge to the sender unit using the wire supplied with the kit. Bare 1/4" of the end of the wire supplied at the sender unit. Install an eyelet terminal supplied with the kit on the end of the wire and crimp it tightly with a pair of pliers. Install the terminal onto the sender unit stud. Install nut on to the stud and tighten securely. Be sure the terminal does not touch the body of the sender. Tape the wire in position so it cannot touch any hot engine components. Be sure that the base of the sending unit is properly grounded. A sending unit installed in a rubber cooler line is not properly grounded. Improper grounding will cause a false reading. Install another eyelet terminal on the end of the temperature gauge wire. Remove the nut and lock washer from the left-hand stud on the temperature gauge (see Figure 1). Install the terminal onto the stud and install lock washer and nut. Tighten nut snugly. DO NOT OVER-TIGHTEN AS THIS COULD DISTORT BRACKET OR DAMAGE GAUGE.

STEP 5. Run a length of wire from the temperature gauge to the ignition switch or fuse block using the wire supplied with the kit. Bare 1/4" of the end of the wire at the temperature gauge. Install an eyelet terminal on the end of the wire and crimp it tightly with a pair of pliers. Remove the nut and lock washer from the right-hand stud on the temperature gauge (see Figure 1). Install the terminal onto

the stud and install lock washer and nut. Tighten nut snugly. DO NOT OVER-TIGHTEN AS THIS COULD DISTORT BRACKET OR DAMAGE GAUGE. Connect other end of wire to an accessory or ignition circuit that is "hot" when the ignition key is on. DO NOT ALLOW "HOT" WIRE TO TOUCH SENDER TERMINAL ON TEMPERATURE GAUGE.

STEP 6. Tighten nut and lock washer on center ground terminal snugly. Note: If you have mounted the gauge on an insulated panel such as a plastic dashboard, you will have to run a ground wire from the center terminal to chassis ground (frame or body). DO NOT OVER-TIGHTEN AS THIS COULD DISTORT BRACKET OR DAMAGE GAUGE.

STEP 7. Run a length of wire from the temperature gauge to the dashboard instrument light wires or terminal board. Bare 1/4" of the end of wire at the temperature gauge. Install the female spade connector furnished and crimp tightly with a pair of pliers. Slip connector onto gauge spade terminal (see Figure 1). Tape or fasten all wires up out of the way from heat or any moving parts to prevent damage.

STEP 8. Re-connect battery cable. Turn ignition key on. Gauge will read water temperature. Start engine and check for leaks. As water temperature warms up, the gauge will indicate properly. Turn on lights to check operation of illumination bulb.

Tool List

7/16" Wrench
 1/2" Wrench
 9/16" Wrench
 5/8" Wrench
 3/8" Socket or Nut driver
 Pliers
 Wire strippers
 Tubing cutter
 Small file
 Phillips Screwdriver
 1/8" Drill bit
 Drill

Parts List

Temperature Gauge
 Bracket
 Eyelet terminals (3)
 Spade terminal
 Brass washers (3)
 Lock washers (4)
 Nuts (3)
 Hook-up wire
 Mounting screws (2)
 Mounting panel
 3/8" NPT to 1/8" NPT Adapter
 1/2" NPT to 1/8" NPT Adapter
 Sender Unit (1/8" NPT)

TROUBLE SHOOTING GUIDE

Malfunction	Probable Cause
Gauge shows no reading	-Gauge is not hooked to power, or is not grounded properly
Gauge shows false reading	-Sending unit not properly grounded
Reading too high	-Power and ground wire reversed
Needle goes to extreme right	-Lead to sender assembly accidentally grounded