

McNally Boost EGT Combo Gauges
Installation and Operation
Rev 9 July 14, 2008

Introduction

You have purchased one of the McNally Electronics EGT or Boost PSI or Boost/EGT Combo gauges for your automobile. This document explains how to hook it up and use it. The EGT gauge measures exhaust gas temperature using a Type K thermocouple and displays degrees F or degrees C on the 240 degree deflection dial and on the three digit blue LED display. The Boost PSI gauge reads an external pressure sensor and displays PSI of boost on the dial and blue LED display. The Combo gauge reads EGT and boost pressure and displays boost on the dial and EGT on the LED.

Installation

The gauge is supplied with a connector and pigtails for power and ground, and the EGT and Combo gauges come with the pinned thermocouple and external pressure sensor and pinned cable. Mount the gauge in the desired location, connect the black wire from rear connector pin 6 to ground, and connect the red wire, pin 8 to switched 12V under the dash. Mount the thermocouple in the desired location and route the two leads up to the rear of the gauge. Connect thermocouple and pressure sensor to gauge rear connector using the pinned cables provided.

Thermocouple

The thermocouple is supplied with a compression fitting threaded with 1/8th inch NPT threads. It screws into a tapped hole in the exhaust manifold. Use drill use letter R drill or .3390" and tap 1/8-27 NPT. Route the thermocouple wire through the firewall to the gauge. Note the ends of the wires have the correct pin crimped on the wire to fit in the rear connector. Once you have the leads for the thermocouple in position near the gauge in its installed location, insert the pins rear connector. Make sure the tabs on the pins face the little square holes on the outside of the white connector. This tiny pin is somewhat fragile, so route the cable carefully. Thermocouple T- is the Red wire. Plug this into the pigtail in hole 1, bottom right. The little barb on the pin installs on the outside to click into the hole. Insert the yellow wire T+ in hole 5, top right. The pins should lock into position.

External Pressure Sensor

If using the external pressure sensor, you must drill and tap the hole for this sensor. Same drill size as the thermocouple. It comes with a pinned connector. Red is regulated 5V to the sensor from pin 4 on the rear connector, Blue is signal to gauge pin 2, Black goes to a local ground. A good ground is essential for proper pressure reading. Caution: DO NOT POWER UP the gauge and sensor without hooking the black ground wire from the sensor to ground, or the sensor output will be severely stressed perhaps to the point of failure!

Oil Pressure

The Oil Pressure and Temperature gauge uses an external pressure sensor and a thermocouple. We have an aluminum manifold that screws into the pressure switch hole on the Beetle, and the manifold accepts the pressure sensor and the thermocouple. If you are using the adaptor manifold, remove the OEM pressure switch from below the oil filter. Install the manifold in the OEM switch position. Screw the manifold in clockwise. This can be a little tricky with all the stuff in the way but you can do it. Use the copper crush gasket and Teflon tape to get a good seal between the manifold and where it screws into the oil filter housing. Once it is hand tight, as best as possible orient the block vertically so you can easily re-install the pressure sensor and the OEM switch on the top side. Then install the compression fitting for the thermocouple on the end loosely. Then slide the 3" Thermocouple through the compression fitting all the way into the manifold. You have to kind of slide the TC back under the alternator to do this. Tighten all fittings run the engine and check for leaks. Checking for leaks is a critical step. Caution: Don't tighten the manifold tighter than hand tight plus about ¼ turn, like a sparkplug. The aluminum nipple will strip!

Volts and Water Temperature

The volts are read internally and displayed on the needle. The temperature is from a thermocouple like the other temperature gauges, and can be mounted in the most convenient location.

Operation

The gauge has two modes... mode 0 is 'normal' and displays the current value of the measured parameters (EGT and Boost PSI) on the needle and LED display. Mode 1 is 'peak' and displays the highest reading since power on or reset on both the needle and on the LED display. The pushbutton toggles between mode 0 and mode 1, and holding it in for 4 seconds will reset the peak value.

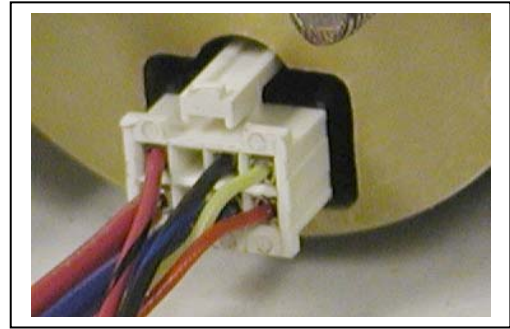
Rear connector pin location:

Rear view of connector. Pin number locations

8	7	6	5
4	3	2	1

Pin function:

- 1 thermocouple T- Red wire
- 2 0-5V analog input from external sensor – Blue wire
- 3 RS232 tx used for factory cal
- 4 internal regulated 5V to external sensor Red wire
- 5 thermocouple T+ Yellow wire
- 6 ground
- 7 RS232 rx used for factory cal
- 8 +12V from ignition on circuit



If you purchased a full kit the typical contents should include:

- Gauge of your choice
- Gauge bracket, nuts & washers in bag
- Thermocouple if you purchased an EGT or EGT combo gauge
- Compression fitting for thermocouple
- Power cable for gauge with white connector
- Pressure Sensor
- Pressure sensor wire harness
- This Instruction sheet (dl the pdf from the web site to see color photos)



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