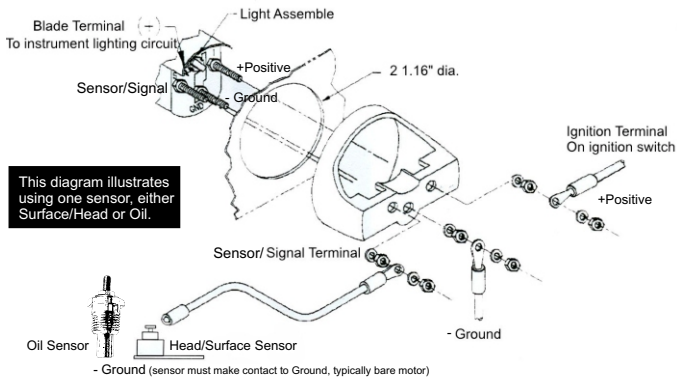
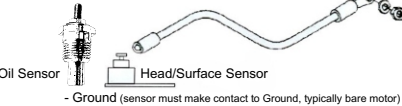


Installation Instruction: Head/Oil Temperature Gauge in Glide Bike Fairing or Rocker Box Mount with Head and/or Oil Sensor(s)



This diagram illustrates using one sensor, either Surface/Head or Oil.



CAUTION: Disconnect the battery before installation.

Fairing installation and basic wiring of gauge and sensors.

It is strongly recommended that you bench wire the gauge and sensors as a test to make sure you are confident in the wire connections and that all parts are functioning normally. (once you have everything connected you can use a hair drier to test the assembly.)

NOTE: Customer Supplied Materials

Due to varying installations we are relying on the customer to supply their own wire and terminals. You will want to use quality insulated ring terminals on the ends of the wire you choose. Be certain to use stranded insulated wire, not lighter than 18 gauge. There are also two copper washers on the gauge posts that the clean stripped wire can go between if you choose not to use ring terminals.

The sender/sensor(s) use a blade type terminal that is supplied. There is also a black boot that should go over the surface mounted sender/sensor. (oil sender/sensor does not use a black boot)

Tighten nuts on the back of gauge only slightly more than you can tighten with your fingers, over tightening could result in damaging instrument and may void your warranty. Six inch-pounds of torque is sufficient.

Note: Do Not use existing wires in the fairing from any removed gauge, those wires may be routed through other systems and may alter temp gauge performance.

1. Remove the windshield and outer fairing from your bike.
2. Remove gauge or gauge plug in fairing to be replaced.
3. Install gauge using supplied bracket and hardware (shown above)
4. Connect one wire to the gauge stud marked "S" (signal) and secure with nut and lock washer. Connect the opposite end to the sending unit and secure.

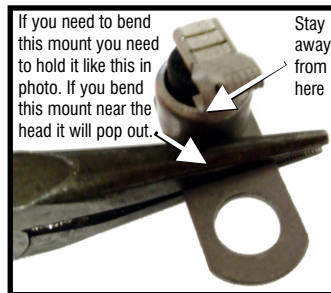
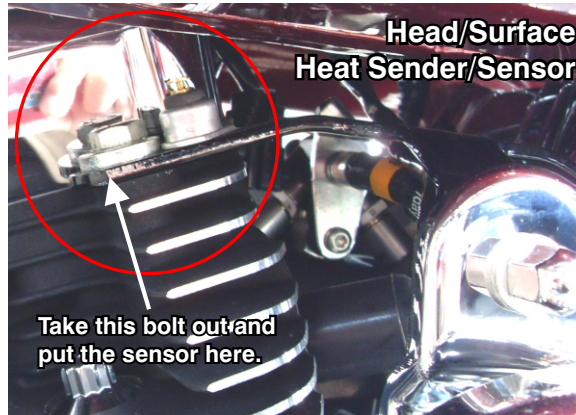
CAUTION - Be certain wire insulation is not in danger of melting from engine or exhaust heat or interfering with moving mechanical parts.

5. Connect a wire to the gauge stud marked "GND" (ground) and secure with nut and lock washer. Connect opposite end to the motorcycle electrical ground, generally available from several locations.

6. Connect a wire to the gauge stud marked "I" (ignition) and secure with nut and lock washer. Connect opposite end to a 12VDC + circuit that is activated by the ignition switch.
7. Connect the blade terminal adjacent to the twist-out light assembly to the positive "+" side of the instrument lighting circuit. No separate ground is required for lighting.
8. Make sure that you have a fuse block in place on the + wire.
9. Reconnect the battery.

NOTE: To change the light bulb, twist black socket assembly one-eighth turn counterclockwise until it pops out. Pull bulb out of socket assembly. It is a GE No. 16 instrument lamp.

Head/Surface Sensor Suggested Placement



Two images above show places to attach the Surface mounted temperature sender/sensor. You can be creative and get temps from various locations. Third image stresses not to bend surface mounted bracket to close to the workings or you will damage it. You need to put the sending unit where it will sit flat on the rocker box or an engine mount coming from the heads under the gas tank left hand side. You will need a little longer allen screw and you will need to get a spacer that will allow the sensor to sit flush to the valve cover, and will allow you to tighten the screw properly.

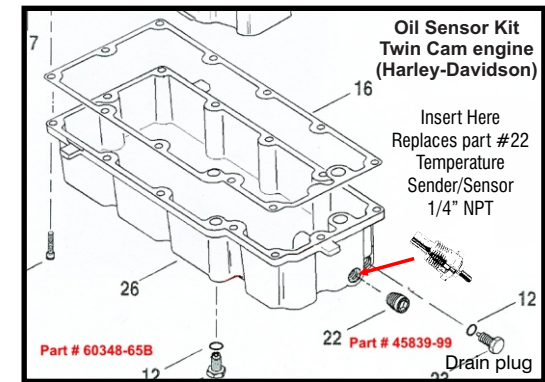
Info from a good customer, will help head sensor work faster

Last week I noticed that the mount bolt where I had the temp sensor was a little loose and sending erratic readings. I decided to back it almost all the way out and put some blue Loctite on it. My son in law who is a computer systems designer asked me what that part was, and I told him it was kind of a thermocouple heat sensor. He told me to try some Thermal Grease on the sensor part as they use it all the time to make sure there is a perfect heat conduction between the mother board HEAT SINK and the main processor. I went to Radio Shack and they had

several different types. FIRST IT HAS TO BE NON CONDUCTIVE, which left the ceramic based grease, or the Silver Oxide based grease. The ceramic is about \$6 and is pretty small but appears to be enough for about 6-8 installations. The Silver Oxide based is about \$10 a tube. I figured I would try the ceramic type first. I was absolutely amazed at the way the sensor behaved. It showed the head temp change almost immediately, after startup, and was right in-line with the oil temperature. I guess it did what it was supposed to do, fill any minute gaps in the flat surfaces with a material that eliminates any air gaps between the parts, no matter how invisible they may be.

Oil Sensor Placement

Multi-sensor with switch wiring installation

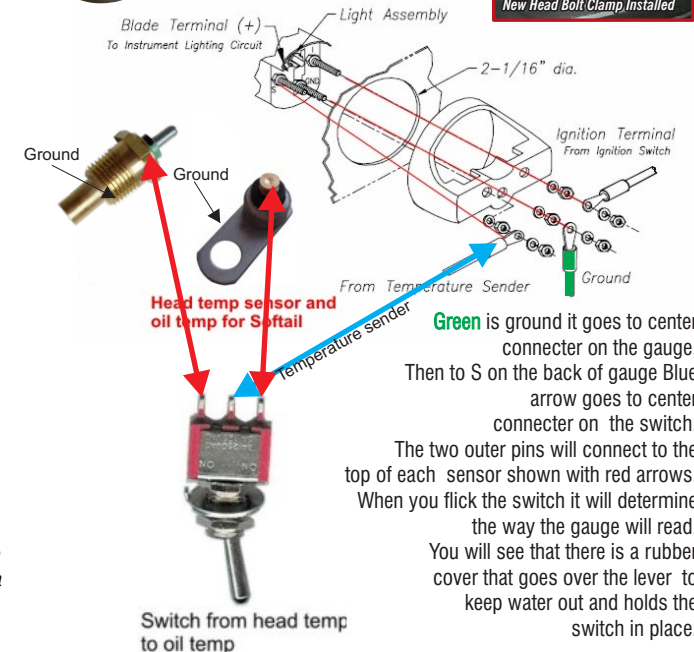


TRY THIS OUT..
New Head Bolt Clamp

Add \$20.00 to item # 500301 or 500304 for addition of head bolt clamp

NEW

New Head Bolt Clamp Installed



Green is ground it goes to center connector on the gauge, Then to S on the back of gauge Blue arrow goes to center connector on the switch. The two outer pins will connect to the top of each sensor shown with red arrows. When you flick the switch it will determine the way the gauge will read. You will see that there is a rubber cover that goes over the lever to keep water out and holds the switch in place.

Switch from head temp to oil temp



CRITICAL INFORMATION GAUGES

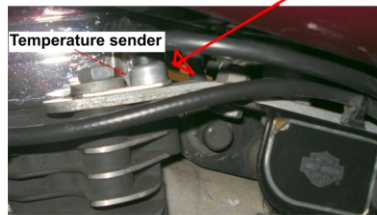
No matter what model air cooled V-Twin engine you have, your cylinder head temperature is a vital statistic.

Rocker Box Installation

The wiring, gauge and sensor setups are the same for the rocker box as on the previous page for the fairing except for the following:

1. You must make sure that the 3 legs on the back of the gauge will not hit the inside of the outer cup the gauge fits into, use the black caps supplied with the kit to prevent contact. If you are just using the gauge, make sure that the 3 legs with the wire will be insulated properly.
2. When using ring terminals you will need to bend down the ring terminals so they will not hit the side of the outer cup or you will have a short. There are also two copper washers on the gauge posts that the clean stripped wire can go between if you choose not to use ring terminals.
3. The temp gauge will be held in place by pushing on the chrome ring on the gauge and the rubber will hold the gauge in place in the cup just fine. For rocker box mount only to remove the temp gauge from the cup, push a long allen wrench in the bottom hole or the hole on the side, and push the gauge out. If you have the mount with the oil gauge put the set screw through the cup and then tighten it against the oil gauge and that will hold that in place. You will put the temp gauge cup in the mount the way it is best for you and tighten the set screw against the cup to hold it in place.

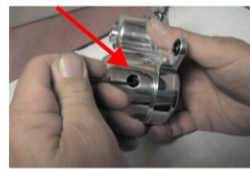
This is one of many places to install the sensor



Temperature sender

To remove gauge from cup use an allen wrench put in in the hole and push it out.

Rubber is for a compression fit



Push on chrome ring to put gauge in place.

Keep A Close Eye On Your Engine's Vital Signs

Add \$20.00 to item # 500301 or 500304 for addition of head bolt clamp



NEW

NOTE: Oil pressure gauge is optional with Dual mount kits. Oil gauge diameter needed is 1 1/2" All specifications, materials and price subject to change without notice

- Oil Sensor and Surface Sensor available separately.
- Surface sensor can be connected to #1 or #2 cylinder head or any area temp readings are important, use new bolt clamp for best results
- Oil sensor is easy to install on most touring bikes



New Head Bolt Clamp



Rubber Mount for Dual Cams

1. First take the cork washer and put in place
2. Next put the metal washer in place
3. Take the mount and put that in place
4. Now take the allen bolt and chrome washer put those in place.



Shown with surface sensor installed on leading bolt

CAUTION: Please make sure that the rocker box bolts are not too long for your installation or you will leak oil

Head heat sensor



TECH

Marlin Corporation

Cylinder Head and Oil Temperature Gauge

Story and Photos by Mark Chryst

A long haul across a desert expanse or a long wait at a traffic light or train crossing can really cause your engine to heat up. If it heats up too much you are going to have problems. The Marlin's Cylinder Head Temperature Gauge gives you an easy way to check the temperature of your cylinders and your oil to make sure that you're always running in the safe zone. The gauge mounts directly into the fairing for a clean look.



Marlin's Cylinder Head and Oil Temperature Gauge kit includes the gauge, an oil sensor, a head sensor, and a toggle switch that allows you to switch between the two on the same gauge.



Here is a Harley-Davidson® fairing with the stock gauges in place. We will be replacing the ambient air temperature gauge with the Marlin's gauge.



Our bike is equipped with an Oil Bud Oil Cooler so we are unable to install the oil sensor in the standard location on the oil pan.



We removed our oil filter and installed the oil sensor in the Oil Bud Oil Cooler regulator. After tightening, we re-installed the filter.



Install the head temperature sensor on the cylinder head and carefully secure it.



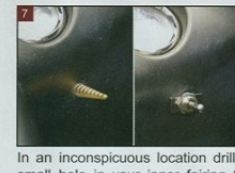
Remove the windshield and outer fairing from your bike.



Disconnect the wires, then remove the ambient temperature gauge.



Install your new Marlin's temperature gauge and tighten it in place.



In an inconspicuous location drill a small hole in your inner fairing for the switch.



Install the switch in the hole and tighten the mounting hardware.



Mount the outer fairing and windshield back on the bike and you are all set to go.



MARLIN CORPORATION
Cylinder Head Temperature Gauge
Oil Sensor Kit
800.777.5543
www.marlins-motorcycles.com

Like our tech? Like the products?
Want to see something specific?
Write to us at
letters@americancyclemag.com



Now that the sensors, gauge and switch are installed you can easily see your oil and your cylinder head temperatures on the Marlin's Gauge just by flipping the switch.