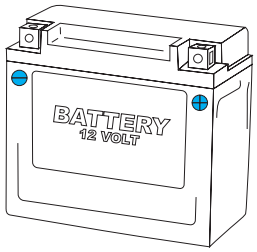
VAPOR SENSORS INSTALLATION
POWER | TEMPERATURE | RPM

POWER INSTALLATION:



Wired to Vehicle Battery: Connect the power wire to the vehicle battery and to Vapor. A 0.5A fuse (not provided) should be used between the power cable and positve battery terminal when connecting directly to a battery. Vapor is polarity independent, so it cannot be installed backwards. Use zip-ties to secure the cable to the bike as it is routed to Vapor.

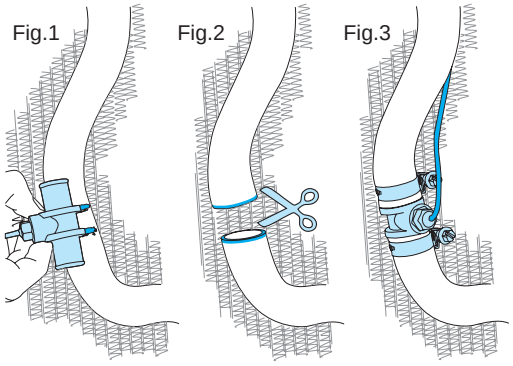
System Tap: It is possible to tap into the vehicle electrical system anywhere in the circuit. Possible points are at the lights, ignition, or CDI. When tapping into the electrical system, connect to a circuit protected by fuse. It is best to connect so power is not interuppted by key switch.

MX Bikes: Motocross bikes do not have 12 volt power. For connection to an MX bike, connect power leads to ignition power leads from stator. Use caution, as this is a high voltage option.

Vapor will operate in the range of 6.0-400 VAC/VDC, but will not draw enough power to drain a vehicle battery.

RADIATOR TEMPERATURE SENSOR INSTALLATION:

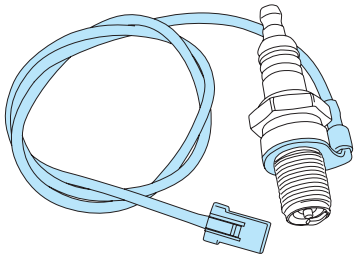
1. Drain fluid from the radiator. To drain the fluid, remove the lower bolt from the water pump housing. It can be found by looking for the bolt with a copper washer. Remove the radiator cap to let the coolant flow (fast) from the water pump housing.
2. Fig.1: Use the sensor to mark on the radiator hose where to make two cuts. (Use the left hose to measure hot fluid, or the right hose to measure fluid after it's been cooled.) The cuts should be about ¾" apart from each other and in a straight section of the hose.
3. Fig 2: Cut radiator hose. Use a pair of good scissors or cutters.
4. Fig 3: Install sensor in hose. Slide a provided hose clamp on each end of the newly cut radiator hose. Insert Radiator Hose Sensor to join the two halves of the radiator hose. Tighten the hose clamps as shown in Fig.3.
5. Connect sensor wire connector to Vapor.
6. Refill the radiator with fluid.
7. Perform a two button reset (<LEFT> + <MODE>.) Vapor will not display temperature until the reset is performed (telling Vapor to look for a sensor.)
   Vapor will display "- - -" for engine temperature until it reaches 100°F (38°C).
8. Test the system. Make sure there is no fluid leakage.
9. Use zip-ties to secure the sensor wire along bike as it is routed to Vapor.



Radiator Hose Temperature Sensor
1: Mark hose, 2: Cut Hose, 3: Install Sensor

AIR-COOLED TEMPERATURE SENSOR INSTALLATION:

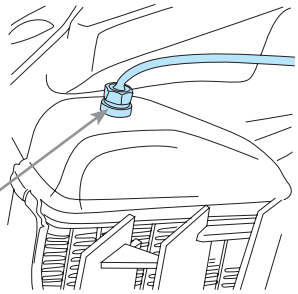
1. Remove spark plug.
2. Remove the crush washer from spark plug and discard.
3. Screw on the air-cooled temperature sensor (it looks like a ring terminal) where the crush washer was located.
4. Reinstall spark plug.
5. Connect sensor wire connector to Vapor.
6. Perform a two button reset (<LEFT> + <MODE>.) Vapor will not display temperature until the reset is performed (telling Vapor to look for a sensor.)
   Vapor will display "- - -" for engine temperature until it reaches 100°F (38°C).
7. Test the system.
8. Use zip-ties to secure the sensor wire along bike as it is routed to Vapor.



Air-Cooled Temperature Sensor on Spark Plug
Ready to be installed in bike.

THERMISTOR BOLT TEMP SENSOR INSTALLATION:

1. Remove the M6 pressure relief bolt from top of radiator.
2. Install Vapor M6 Temperature Thermistor in pressure bolt hole. Tighten to no more than finger tight +¼ turn. Note that sensor is hollow brass and can break easily. Use silicone gasket sealer to prevent leaks.
3. Connect sensor wire connector to Vapor.
4. Perform a two button reset (<LEFT> + <MODE>.) Vapor will not display temperature until the reset is performed (telling Vapor to look for a sensor.)
   Vapor will display "- - -" for engine temperature until it reaches 100°F (38°C).
   If the water level drops below the level of the thermistor bolt, the temperature reading may become innaccurate.
5. Test the system.
6. Use zip-ties to secure the sensor wire along bike as it is routed to Vapor.



M6 Radiator
Thermistor Bolt
Sensor Installed

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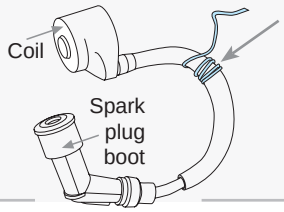
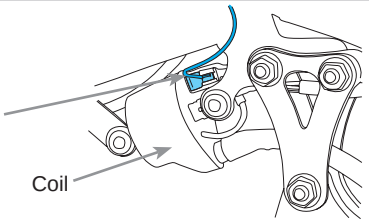
RPM SENSOR INSTALLATION:

OPTION 1:
Capacitive coupling to spark plug wire:
1. To install RPM sensor wire, wrap the red half of the sensor wire around the spark plug wire 5 times.
2. Proper grounding is important. Read below for instructions.



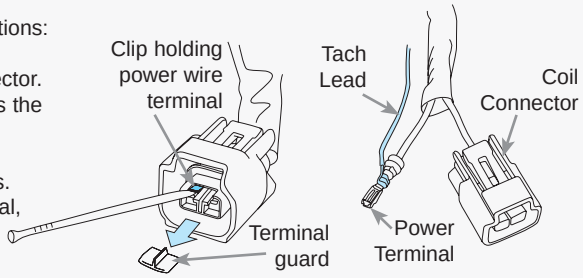
Option 1: RPM sensor wire wrapped around spark plug wire 5 times.
- If tachometer signal is intermittent, increase number of wraps (12 maximum.)
- If tachometer bounces more than +/-100 RPM, reduce number of wraps (1 minimum.)

OPTION 2:
Direct connect to coil spade connector:
1. To install RPM sensor wire, insert the red half of the sensor wire into the spade connector that connects the stator wire to the coil.
2. Proper grounding is important. Read below for instructions.

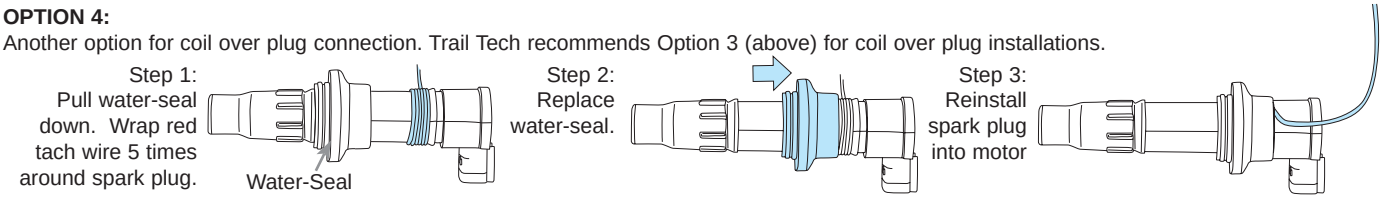


OPTION 3:
Coil over plug connection: If there are two wires and they are smaller than a pencil, then the coil is likely over the top of the spark plug. Another clear sign is the presence of a connector on top of the spark plug.

Installation for "coil over plug" tachometer connections:
1. Disconnect coil connector from coil.
2. Remove terminal guard from inside of connector.
3. Use a small nail to release the clip that holds the power wire terminal in the connector.
4. Remove power terminal from coil connector.
5. Strip the red tach wire back about 1.5 inches.
6. Wrap red tach wire around the power terminal, reinsert terminal, and reconnect to coil.
7. See below for grounding instructions.



OPTION 4:
Another option for coil over plug connection. Trail Tech recommends Option 3 (above) for coil over plug installations.

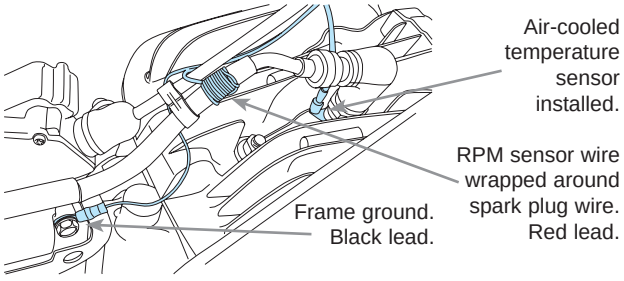


RPM SENSOR GROUND WIRE INSTALLATION:

The wire for the RPM sensor is strip wire so that the red lead can be wrapped around the spark plug wire, and the black lead can go to a ground source.

Stock Ground Wire Colors:
- Yamaha:Black
- Honda:Green
- Polaris:Brown
- Suzuki:Black w/White Tracer

Note: On a 'floated' ground lighting system (e.g. Trail Tech rewound stator with Trail Tech regulator/rectifier), you must go to frame ground for the tachometer. A good option for this is to scratch the paint behind a bolt, wrap the negative lead securely around the bolt (with a ring terminal), then retighten bolt.



POWER CONNECTION:

- Connect power wire directly to vehicle 12V battery.
- As an alternative to running wires all the way to the battery, it is possible to tap into the electrical system. It is best to connect so power is not interrupted by key switch.
- Power wire and RPM sensor wire are identical, except some kits contain a resistor RPM sensor or extra long power wire.