



For Harley-Davidson® Softails, Road Kings, Baggers, Dynas, Sportsters and V-Rod motorcycles

READ ALL THE DIRECTIONS CAREFULLY BEFORE STARTING THIS INSTALLATION. DO NOT APPLY FORCE WHEN INSTALLING THE SENSOR CONNECTORS TO THE SENSORS. THIS WILL RESULT IN BENDING THE ALIGNMENT OF THE TERMINAL PINS LOCATED IN THE CONNECTORS AND SENSORS.

DO NOT REMOVE THE EO label that is placed on top of the module. On the Sportsters, Dynas and Softails, place module under the seat, with the EO label clearly visible. On Touring Models, place module under the right hand side cover or under the seat with the EO label clearly visible.

Step 1 Locate the battery and disconnect the negative battery cable:

Mount the RCX-Celerator underneath the seat area on Softail Models and under the right side cover on FL Models. V-Rods need to be mounted by air box or factory ECU. You may mount the RCX-Celerator in this area.

Step 2 Throttle Position Sensor connector installation:

Remove the air cleaner assembly and unplug the TPS sensor connector at the TPS sensor. Route the RCX-Celerator harness which includes two TPS connectors under the gas tank into the harness loom to the TPS sensor. The TPS sensor is located on the left side of the throttle body. Plug the two TPS connectors from the RCX-Celerator in between the TPS sensor and to the factory TPS connector.

Step 3 Crank Position Sensor connector installation:

Unplug the Crank Position Sensor connector at the sensor which is located at the lower front crank case area (V-rod located at left side radiator cover.) Route the RCX-Celerator harness which includes two CPS connectors underneath the bottom of the motorcycle's frame along with the main harness loom. Plug the two CPS connectors from the RCX-Celerator in between the CPS sensor and the factory CPS connector. On Magneti-Marelli, solder our **WHITE** wire to pin #28, which should be a **RED** wire.

On some early Delphi FI models the CPS connector is under the right side panel behind factory ECU.

Step 4 O₂ Sensor connector installation:

For systems that are equipped with factory O₂ sensors: Unplug the rear O₂ sensor connector from the factory harness which is located at the rear exhaust pipe.

Route the RCX-Celerator harness which includes two O₂ sensor connectors and connect one connector to the rear O₂ sensor and connect the other connector to the main factory O₂ sensor connector. Unplug the front O₂ sensor connector from the factory harness which is located at the front exhaust pipe. Route the RCX-Celerator harness which includes two O₂ sensor connectors, and connect one connector to the front O₂ sensor and connect the other connector to the main factory O₂ sensor connector.

Exhaust systems that are not equipped with factory O₂ sensors: A variety of factory and aftermarket exhaust systems are now coming equipped with O₂ sensor bungs which are plugged, but these plugs can be removed to accept an O₂ sensor. These bungs have a thread size of 18mm x 1.5mm.

Exhaust systems that are not equipped with O₂ sensor bungs: Would need to have a bung with an 18mm x 1.5mm thread size welded to the exhaust pipe in order to install an O₂ sensor. The RCX-Celerator systems prefers to receive information from the O₂ sensor from an area that is not contaminated from atmospheric air. This air may enter through the tail pipe of an unrestricted or un-baffled exhaust pipe. We prefer the O₂ sensor bung be installed 3 to 6 inches away from the rear cylinder exhaust port and in front of the exhaust torque tube pipe area. We recommend that the bung **NOT** be installed in the area of "5 to 7 o'clock". In this targeted area the gases which contain moisture exiting from the cylinder exhaust port will harm the O₂ sensor's ceramic shell element.

After welding the bung to the exhaust pipe, **clean the bung threads with an 18mm x 1.5mm tap.** Route the RCX-Celerator harness which includes an O₂ sensor to the sensor's bung location and install the sensor. Then torque the O₂ sensor nut to allow the crush washer to "flatten" this will allow the washer to seal the O₂ sensor and washer to the bung's surface.

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INSTR-RCX1

Step 5 Power Source - Switched key-on +12 Volts:

The power source should only be a key-on fused + 12 volt ignition source. With the variety of key-on switched power sources for the different model years we have a few recommended location points to obtain power sources from. On all harnesses we have two power wires, connect **RED** wire to the Data-Link connector and connect the **RED WITH WHITE TRACER** wire to the **POSITIVE** side of the battery.

1995 to 2001 Magneti-Marelli ECU: It appears that there are limited options to where to connect up to the power, our recommendation is its switched power source located at pin #26 with is a **WHITE** wire. The ECU can be removed from its mounting bracket and by removing the one screw which will allow you to slide back the pin protection cover. This will allow access to the identification numbering of the correct pin location. With the supplied T-Tap and Blade-Terminal, connect the **RED** wire from the RCX-Celerator to the **WHITE** wire which is pin #26 switched key-on + 12 volts.

Data-Link Connector Power Source, 2001 to 2007 Delphi ECU: Has a switched power source located at the Data-Link connector pin #4 which is a switched key-on + 12 volts. The wire color for **2001 to 2003 Delphi ECU** is **WHITE/BLACK** and for **2004 to 2007 Delphi ECU** it is **GRAY** in color.

With the supplied T-Tap and Blade-Terminal, connect the **RED** wire from the RCX-Celerator to the **WHITE/BLACK OR GRAY** wire which is pin #4 switched key-on + 12 volts at the Data-Link connector.

Connections being made with the supplied T-Tap and Blade-Terminal can be substituted by soldering and heat-shrinking the connection.

Step 6 Ground Source:

All models with factory O₂ sensors: no ground is required.

Route the RCX-Celerator **BLACK** wire which has an eye-let connector and fasten it to the negative battery post bolt, then reconnect the negative battery cable to complete the installation.

Functions and Operations of the RCX-Celerator module:

The LED light is located at the top right side of the front of the module.

The LED light will blink **RED** with key-on.

The LED light will turn **GREEN** after your motorcycle has been running for approximately 90 seconds.

****If light does not turn green, first check all plugs and connectors.***

****When installing the RCX-Celerator harness, make sure you leave enough slack that the wires have room to move around when the engine is running.***

The RCX-Celerator begins learning and tuning your motorcycle immediately and within the first 50 miles your motorcycle will be running better than ever as it learns how you ride.

**For Tech Support, Call Toll Free: 1-888-721-6495
or email rcx-hausttech@rccomponents.com**

