

[POWER COMMANDER V]

2009 Harley Davidson Sportster 1200

Installation Instructions



PARTS LIST

- 1 Power Commander
- 1 USB Cable
- 1 CD-ROM
- 1 Installation Guide
- 2 Power Commander Decals
- 2 Dynojet Decals
- 2 Velcro
- 1 Alcohol swab
- 1 Zip tie
- 2 O2 optimizers

**The ignition MUST be turned
OFF before installation!**

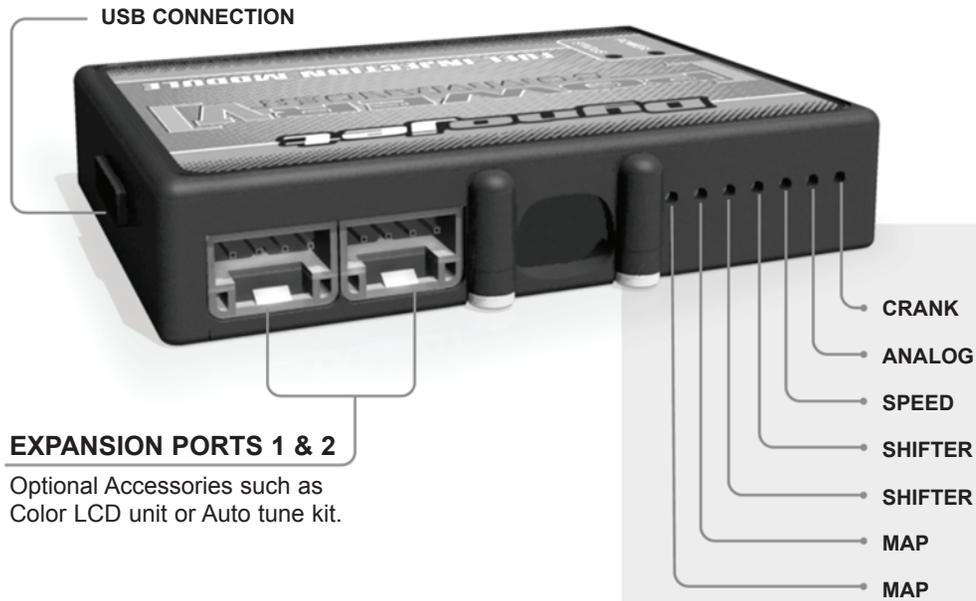
YOU CAN ALSO DOWNLOAD THE
POWER COMMANDER SOFTWARE AND
LATEST MAPS FROM OUR WEB SITE AT:
WWW.POWERCOMMANDER.COM

PLEASE READ ALL DIRECTIONS BEFORE STARTING INSTALLATION

Dynojet

2191 Mendenhall Drive North Las Vegas, NV 89081 (800) 992-4993 www.powercommander.com

POWER COMMANDER V INPUT ACCESSORY GUIDE



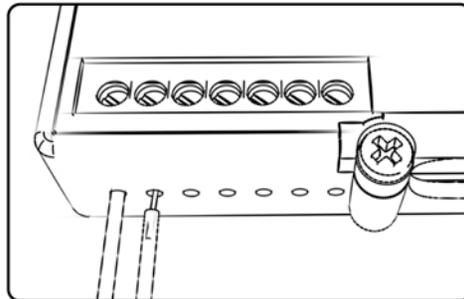
EXPANSION PORTS 1 & 2

Optional Accessories such as Color LCD unit or Auto tune kit.

Wire connections:

To input wires into the PCV first remove the rubber plug on the backside of the unit and loosen the screw for the corresponding input. Using a 22-24 gauge wire strip about 10mm from its end. Push the wire into the hole of the PCV until it stops and then tighten the screw. Make sure to reinstall the rubber plug.

NOTE: If you tin the wires with solder it will make inserting them easier.



ACCESSORY INPUTS

Map -

The PCV has the ability to hold 2 different base maps. You can switch on the fly between these two base maps when you hook up a switch to the MAP inputs. You can use any open/close type switch. The polarity of the wires is not important. When using the Autotune kit one position will hold a base map and the other position will let you activate the learning mode. When the switch is "CLOSED" Autotune will be activated.

Shifter-

These inputs are for use with the Dynojet quickshifter. Insert the wires from the Dynojet quickshifter into the SHIFTER inputs. The polarity of the wires is not important.

Speed-

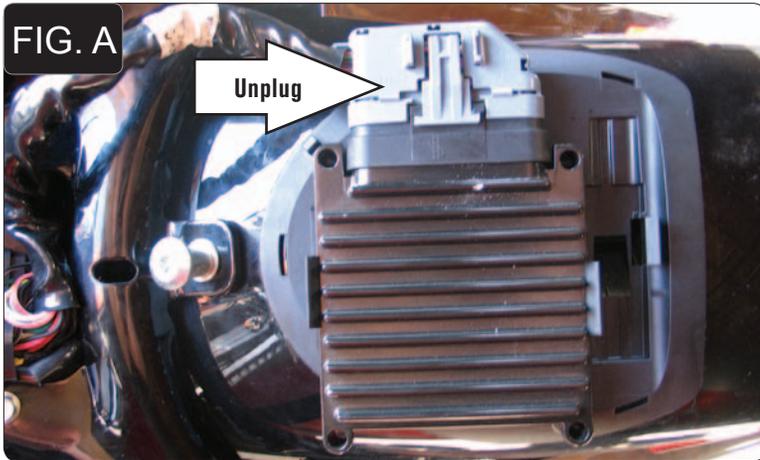
If your application has a speed sensor then you can tap into the signal side of the sensor and run a wire into this input. This will allow you to calculate gear position in the Control Center Software. Once gear position is setup you can alter your map based on gear position and setup gear dependent kill times when using a quickshifter. **NOTE:** Harley Davidson models have this feature enabled internally - do **NOT** use this input for HD models.

Analog-

This input is for a 0-5v signal such as engine temp, boost, etc. Once this input is established you can alter your fuel curve based on this input in the control center software.

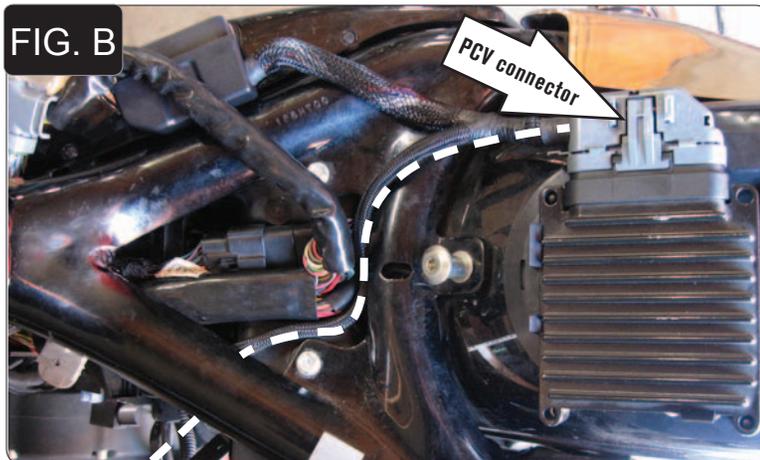
Crank-

Do **NOT** connect anything to this port unless instructed to do so by Dynojet. It is used to transfer crank trigger data from one module to another.

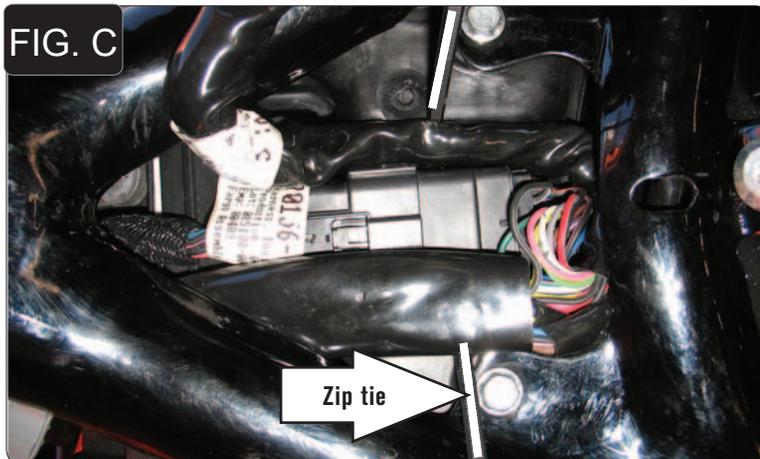


WARNING! This install is intended to be used with the stock seat. This install may NOT work with aftermarket seats.

- 1 Remove the stock seat.
- 2 Remove the left hand side cover.
- 3 Remove the battery.
- 4 Unplug the stock wiring harness from the ECM (Fig. A) .

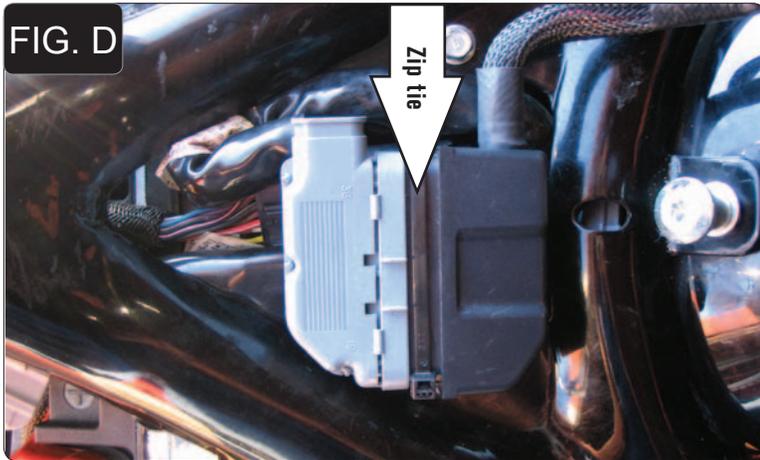


- 5 Connect the GREY connector of the PCV to the stock ECM (Fig. B).
- 6 Route the PCV underneath the left hand side of the frame.

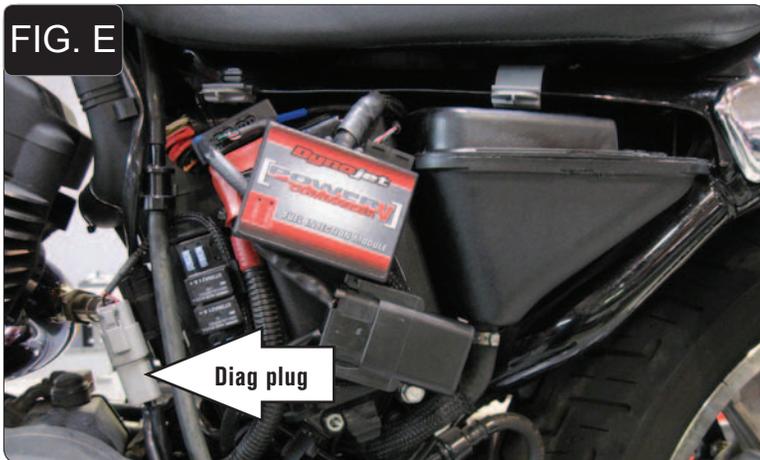


- 7 Run a zip tie behind the wiring harness (Fig. C).
- 8 Route the stock wiring harness as shown in Fig. D. Due to the lack of room on this bike this step needs to be exact or the install will not fit properly.

Make sure that the harness coming from the GREY connector is flush against the battery box. A couple inches of this harness will be tucked underneath the frame.



- 9 Plug the BLACK connector from the PCV into the stock wiring harness. (Fig. E).
- 10 Secure these connectors to the stock wiring harness with the zip tie (Fig. E).

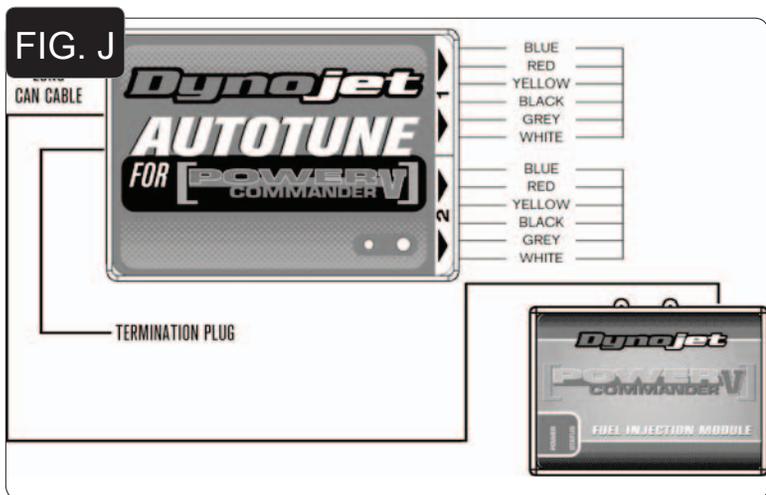
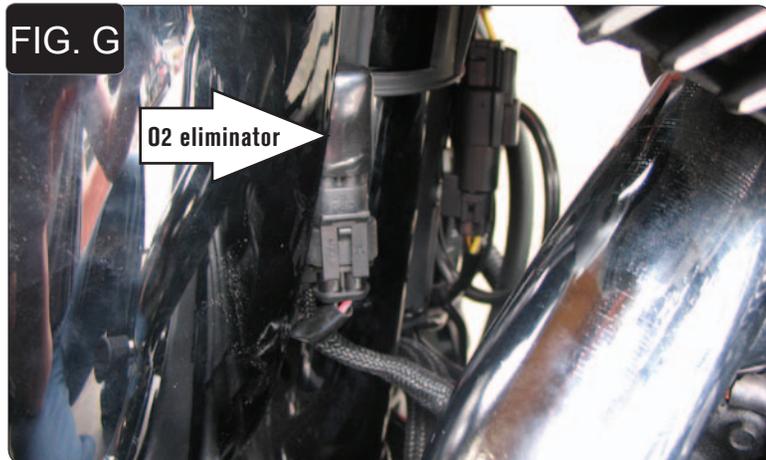


- 11 Reinstall the battery.
- 12 Relocate the diagnostic connector to the front of the fuse box.
- 13 Using the supplied velcro attach the PCV to the side of the battery (Fig. E). Make sure to use the alcohol swab to clean both surfaces before attaching.



- 14 Locate the front stock O2 sensor connection. This is located in front of the oil filter. Unplug the O2 sensor from the wiring harness.
- 15 Plug one of the Dynojet O2 sensor eliminators into the stock wiring harness (Fig. F).

The stock O2 sensor does not need to be connected to anything. The sensor can be removed completely from the motorcycle if desired. If using the Autotune kit remove the stock sensor and install the Dynojet O2 sensor into the exhaust.



16 Locate the rear stock O2 sensor connection. This is located behind the rear exhaust pipe. Unplug the O2 sensor from the wiring harness.

17 Plug one of the Dynojet O2 sensor eliminators into the stock wiring harness (Fig. G).

The stock O2 sensor does not need to be connected to anything. The sensor can be removed completely from the motorcycle if desired. If using the Autotune kit remove the stock sensor and install the Dynojet O2 sensor into the exhaust.

Follow these instructions when installing the Autotune kit (part #AT-100)

- 1 Remove the left hand side cover.
- 2 Using the supplied velcro install the Autotune module on top of the battery.
- 3 Remove the rubber plug for the diagnostic connector. Plug the lead from the Autotune kit into the stock diagnostic connector
- 4 Connect the longer harness to the front O2 sensor. Route the harness along the front down tube and along the backbone of the frame to Autotune module AT#1. Wire the harness to the module per Figure J. The harness can be cut to length if desired
- 5 Repeat step 4 for the rear cylinder using the shorter harness and connect to AT#2.
- 6 Plug the CAN bus cable to the Autotune module and to the PCV. It does not matter what ports are used.
- 7 Install the CAN termination plug into the open port of the Autotune module.
- 8 Secure the harnesses in place as to not contact the exhaust.
- 9 Reinstall the side cover.

Go to www.powercommander.com for maps and software updates.