

[POWER COMMANDER V]

2008-2013 Harley Davidson Touring Model

Installation Instructions



PARTS LIST

- 1 Power Commander
- 1 USB Cable
- 1 Installation Guide
- 2 Power Commander Decals
- 2 Dynojet Decals
- 2 Velcro strips
- 1 Alcohol swab
- 2 O2 Optimizers

**THE IGNITION MUST BE TURNED
OFF BEFORE INSTALLATION!**

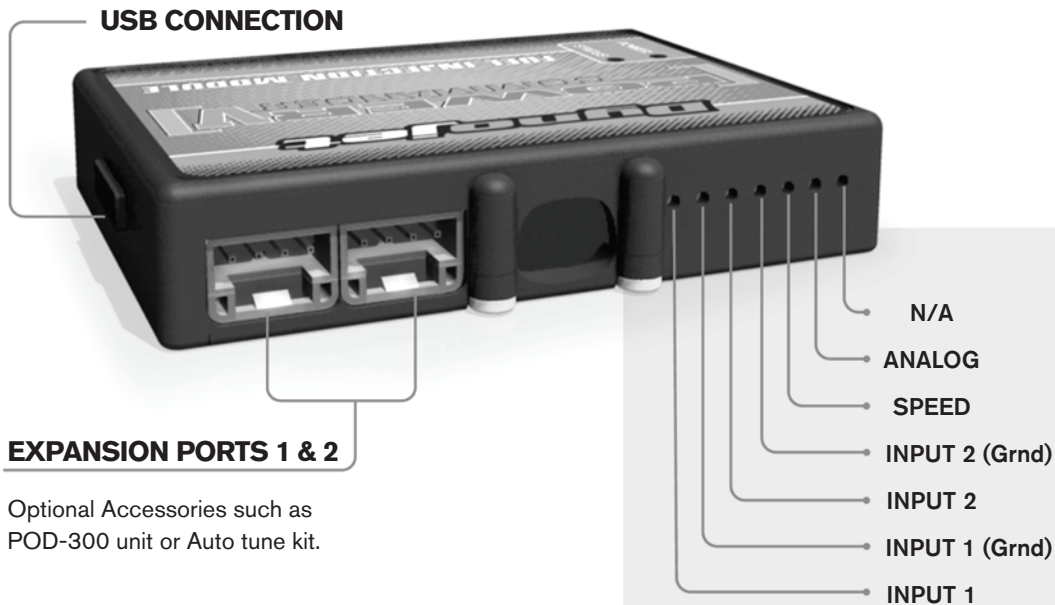
THE LATEST POWER COMMANDER
SOFTWARE AND MAP FILES CAN BE
DOWNLOADED FROM OUR WEB SITE AT:
www.powercommander.com

PLEASE READ ALL DIRECTIONS BEFORE STARTING INSTALLATION

Dynojet

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

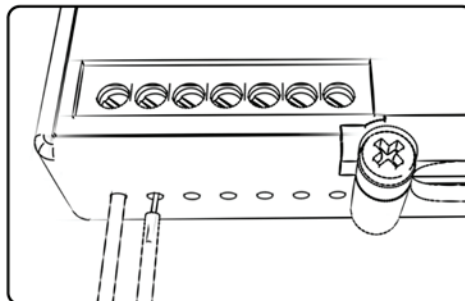
POWER COMMANDER V INPUT ACCESSORY GUIDE



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 -

(Input 1 or 2) 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. (Set to Switch Input #1 by default.)

Shifter-

(Input 1 or 2) Used for clutch-less full throttle upshifts. Insert the wires from the Dynojet quickshifter into either INPUT 1 or INPUT 2. The polarity of the wires is not important. (Set to Switch Input #2 by default.)

Speed-

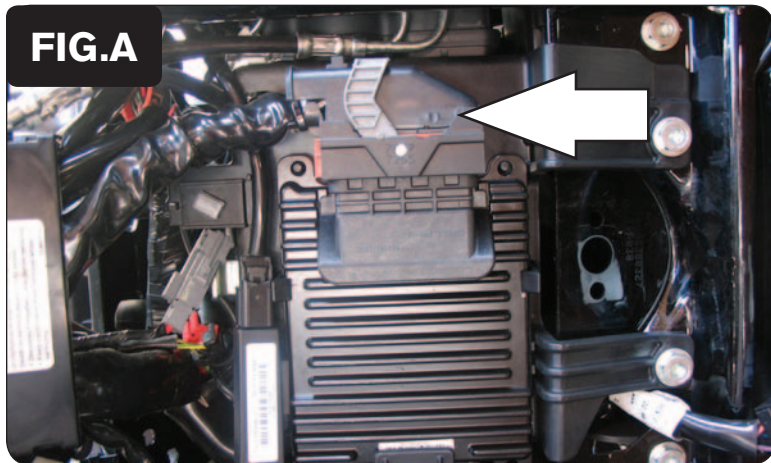
Not needed on Harley applications as the speed signal wire is built into the main wiring harness of the PCV.

Analog-

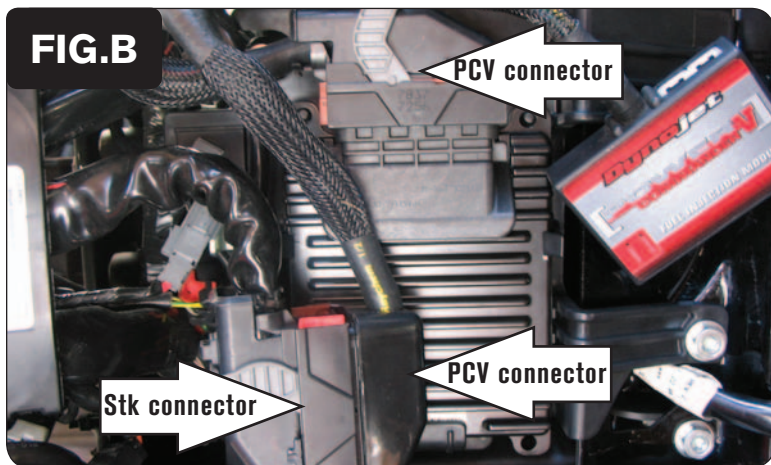
This input is for a 0-5v signal such as engine temp, boost, etc. Once this input is established you can alter your fuel curve based on this input in the control center software.

Launch-

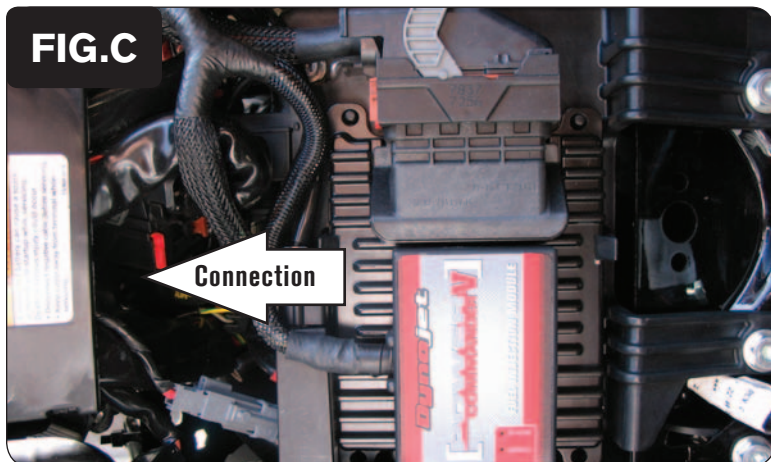
You can connect a wire to either input 1 or 2 and then the other end to a switch. This switch when engaged (continuity) will only allow the RPM to be raised to a certain limit (Set in the software). When released you will have full RPM.



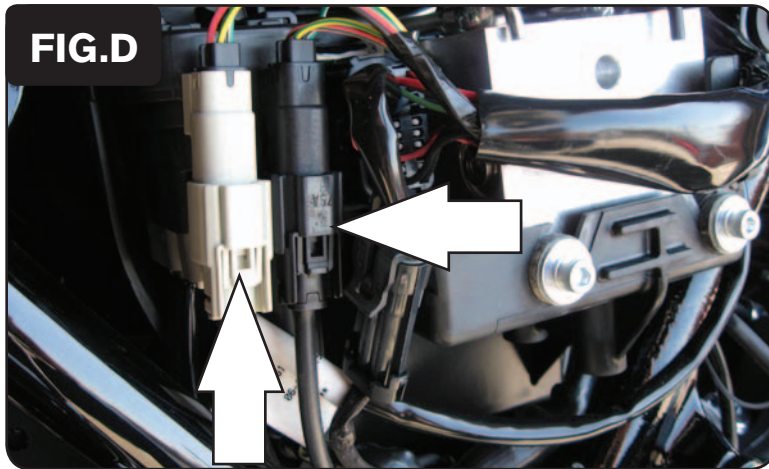
- 1 Remove the stock seat.
- 2 Unplug the stock wiring harness from the ECM (Fig. A) .



- 3 Plug the PCV connectors in-line of the stock ECM and wiring harness (Fig. B).



- 4 Tuck the PCV to wiring harness connection into the opening in front of the battery box (Fig. C).
- 5 Using the supplied Velcro, attach the PCV to the top of the ECM (Fig. C).
Clean both surfaces with the supplied alcohol swab prior to applying the Velcro adhesive.

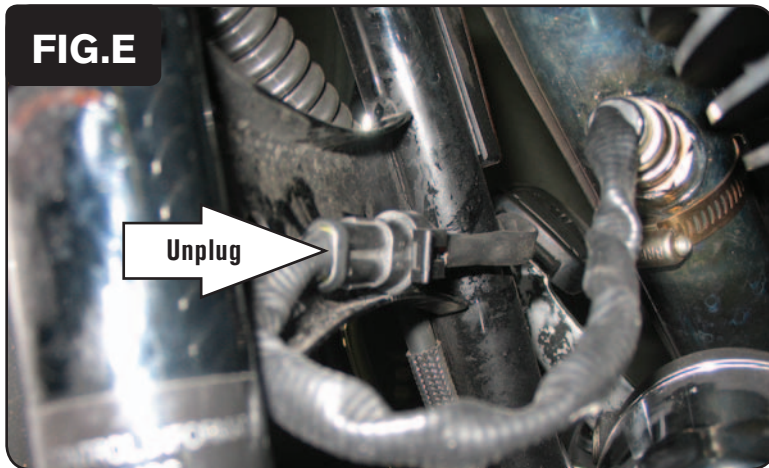


Note: Figure D along with Steps 6 & 7 only apply to 2010-2013 models. If installing to a 2008-2009 model, proceed to Figures E-F and Steps 8-11.

- 6 Remove the right hand saddlebag and sidecover.
- 7 Locate the stock O2 sensor connections and unplug both connectors (Fig. D)

The stock O2 sensors will NOT be connected to anything at this time. The sensors can be removed from the exhaust if you have a way to plug the hole.

Unplugging the sensors does NOT cause an engine light but will cause a historic code in the ECM for non-active O2 sensor. This is not causing any issues with the running of the bike.

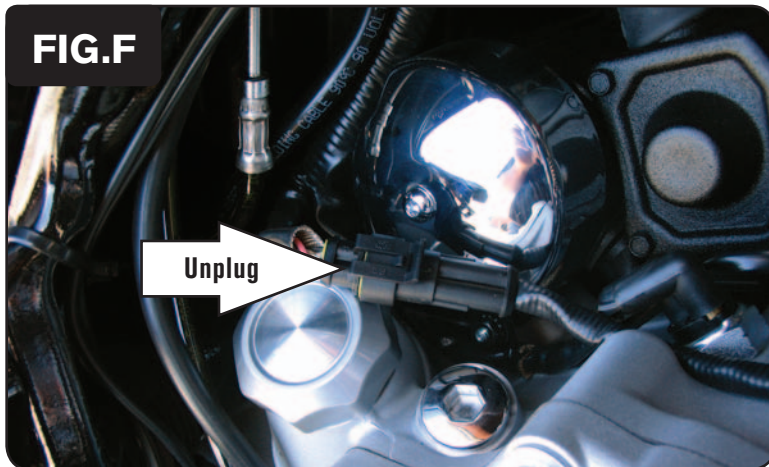


Note: Figure E-F along with steps 8-11 only apply to 2008-2009 models.

- 8 Locate and unplug the front stock O2 sensor connection (Fig. E).

This connector is located directly in front of the engine. You can trace the wires from the front O2 sensor to this connector.

- 9 Plug one of the supplied O2 Optimizers into the stock wiring harness in place of the stock front O2 sensor.

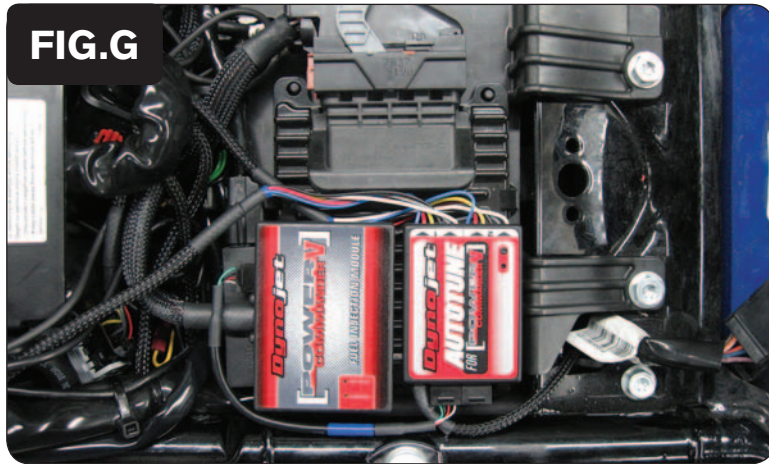


- 10 Locate and unplug the stock rear O2 sensor connection (Fig. F).

This connection is located near the right-hand side of the starter.

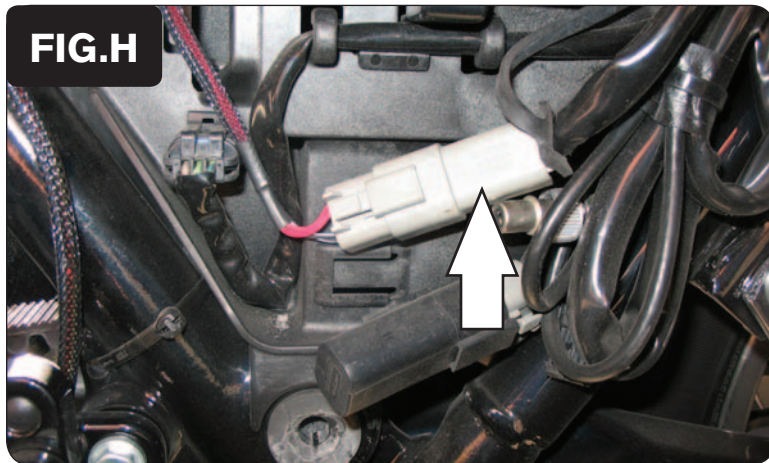
- 11 Plug one of the supplied O2 Optimizers into the stock wiring harness in place of the stock rear O2 sensor.

The stock O2 sensors will no longer be connected to anything. If using the Auto-tune (PN: AT-100) remove the stock O2 sensors from the exhaust, and install the Dynojet wideband O2 sensors in their place.

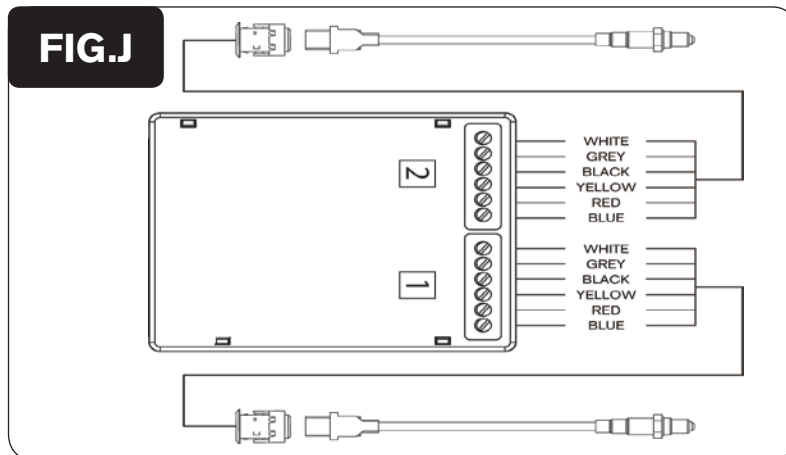


Follow these instructions when using the Auto-tune kit - part #AT-100 or AT-100B.

- 1 Remove the left hand side cover.
- 2 Place the Auto-tune module next to the PCV as shown in Figure G.



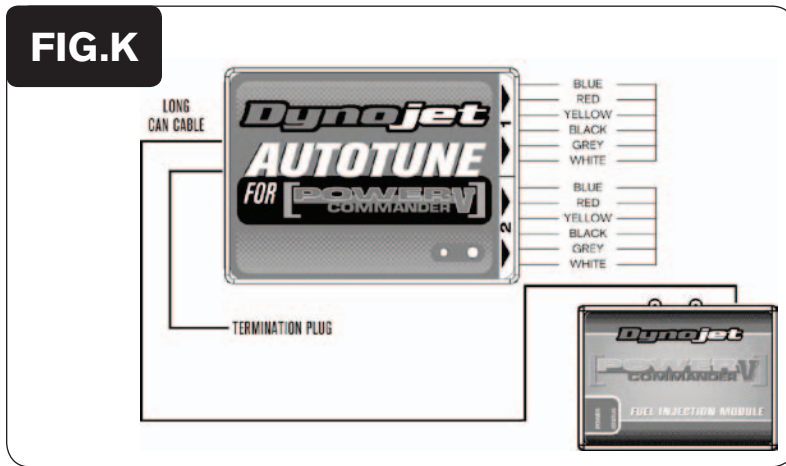
- 3 Remove the rubber plug for the diagnostic connector. Plug the lead from the Auto-tune kit into the stock diagnostic connector (Fig. H). This connection is under the LH sidecover. DO NOT connect to the accessory connection in front of the battery.
- 4 Reinstall the sidecover.



- 5 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 Auto-tune module AT#1. Wire the harness to the module per Figure J. The harness can be cut to length if desired.
- 6 Repeat step 4 for the rear cylinder. Wire the harness to Auto-tune Module AT#2. The harness can be cut to length if desired.

If your exhaust does not accept the 18mm x 1.5 size O2 sensor you will need to install the supplied O2 bungs with the Auto-tune kit into your exhaust (AT-100B kit only). See Auto-tune instructions for more information.

FIG.K



- 7 Use the CAN bus cable to connect the Auto-tune module to the PCV. It does not matter what ports are used.
- 8 Install the CAN termination plug into the open port of the Auto-tune module. ***This is the BLACK hard plastic connector in the Auto-tune kit (PN: 76423025). It is CRITICAL that this be installed and it is often overlooked.***
- 9 Secure the harnesses in place as to not contact the exhaust.
- 10 Reinstall the side cover.

In the PCV software go to Power Commander Tools - Configure - Features, Enables, and Input Selections to enable and configure the Auto-tune feature.

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