

# [POWER COMMANDER V]

## FUEL AND IGNITION

### 2016 Harley Davidson Softail

#### 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
- 1 O2 Optimizer (front)
- 1 O2 Optimizer (rear)

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

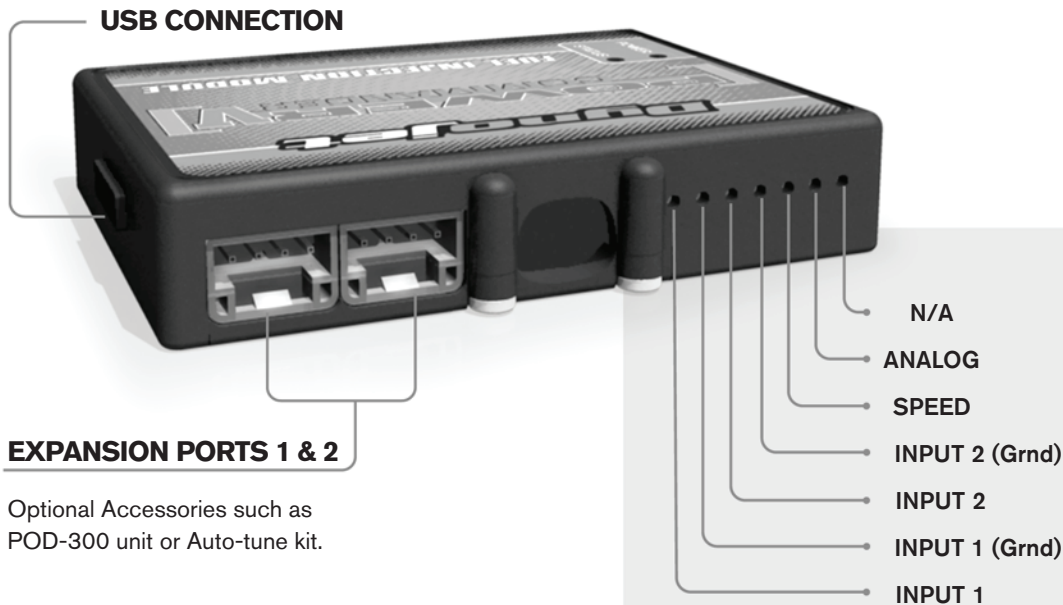
THE LATEST POWER COMMANDER SOFTWARE AND MAP FILES CAN BE DOWNLOADED FROM OUR WEB SITE AT:  
[www.powercommander.com](http://www.powercommander.com)

**PLEASE READ ALL DIRECTIONS BEFORE STARTING INSTALLATION**

**Dynojet**

2191 Mendenhall Drive North Las Vegas, NV 89081 (800) 992-4993 [www.powercommander.com](http://www.powercommander.com)

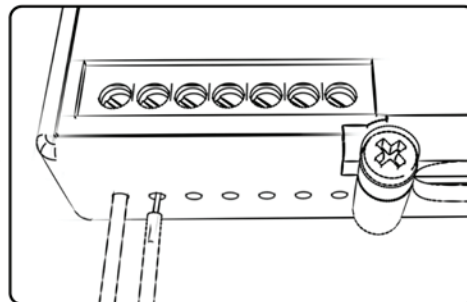
# POWER COMMANDER V INPUT ACCESSORY GUIDE



## 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-

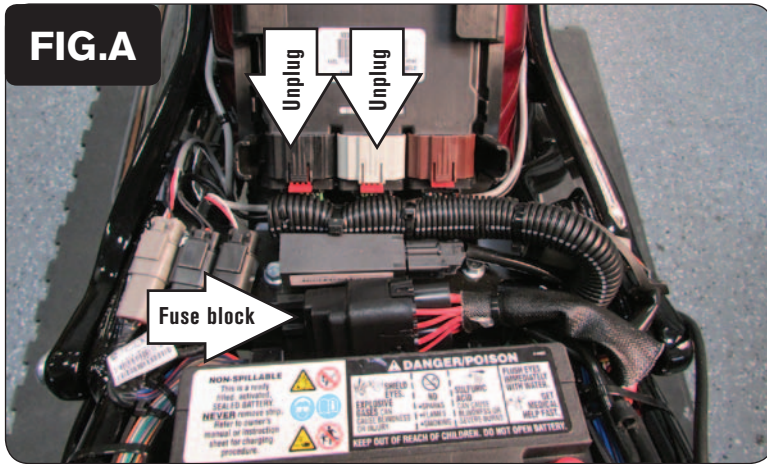
Not needed on Harley applications as the speed signal wire is built into the main wiring harness of the PCV.

### 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.

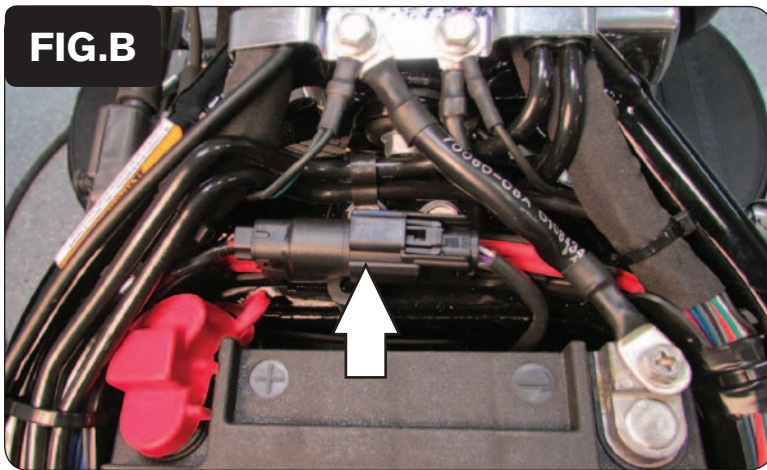
### Launch-

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.

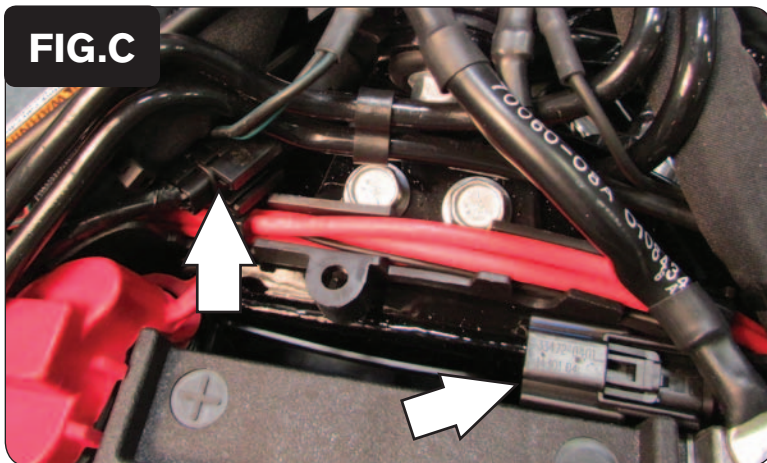


- 1 Remove the seat.
- 2 Unplug the GREY and BLACK connector from the ECM (Fig. A).
- 3 Slide the fuse block off of its mounting tab.

*Slide to the side to release.*



- 4 Cut the tape securing the stock O2 connector in place (Fig. B).
- 5 Unplug the O2 connector and plug the BLACK supplied O2 Optimizer into the stock wiring harness

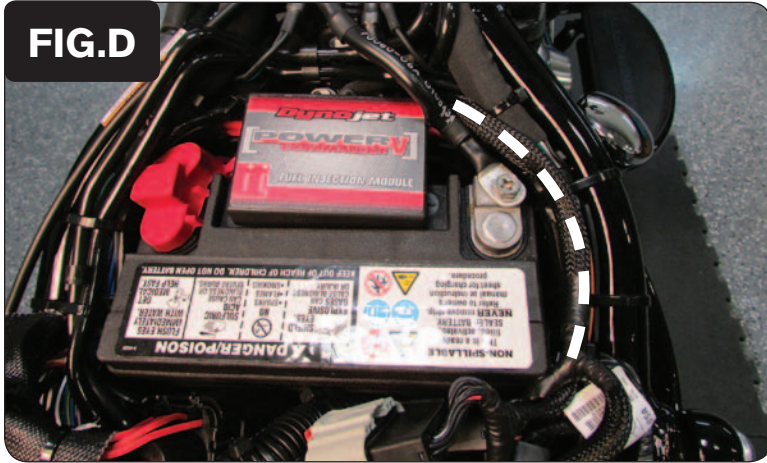


- 6 Tuck this connector to the left side of the frame (Fig. C).
- 7 Position the female stock connector in front of the battery as shown in Figure C.

*The stock O2 sensor will no longer be connected to anything and can be removed from the exhaust if desired.*



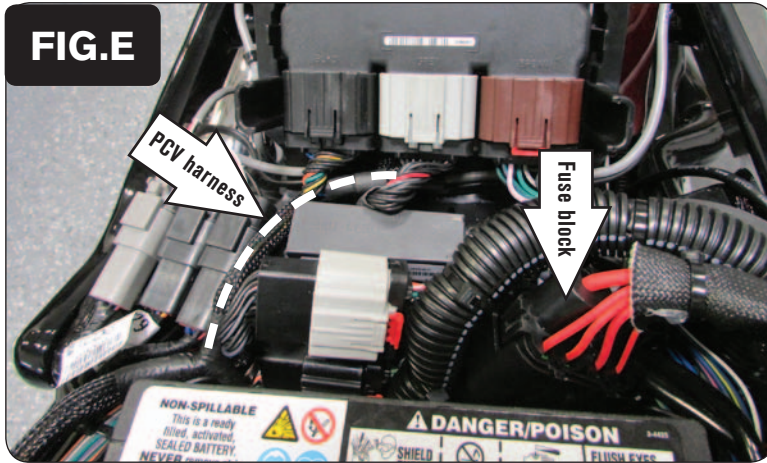
**FIG.D**



- 8 Route the PCV harness along the right side of the frame (Fig. D).

*For the cleanest install remove the battery ground cable and route the PCV harness underneath it. If doing so make sure to remove the Positive cable first to prevent any sparks.*

**FIG.E**

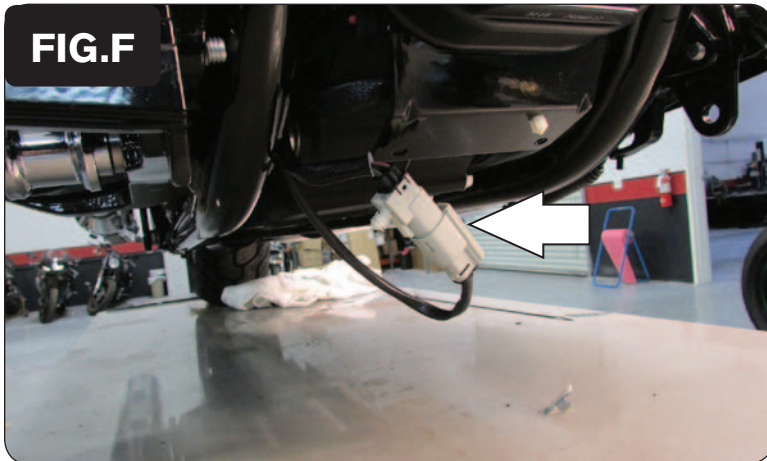


- 9 Plug the PCV harness in-line of the stock wiring harness and ECM (Fig. E).

*The connectors are keyed so that they cannot be plugged in incorrectly*

- 10 Position the set of connectors vertically behind the battery. Move the fuse block from step 1 and position as in Figure E.

**FIG.F**



- 11 Locate the stock O2 sensor connection and unplug it

*This connection is located underneath the front of the engine near the regulator/rectifier (Fig. F).*



- 12 Plug the supplied GREY O2 Optimizer into the stock wiring harness (Fig. G).  
*The stock O2 sensor will no longer be connected to anything and can be removed from the exhaust if desired.*

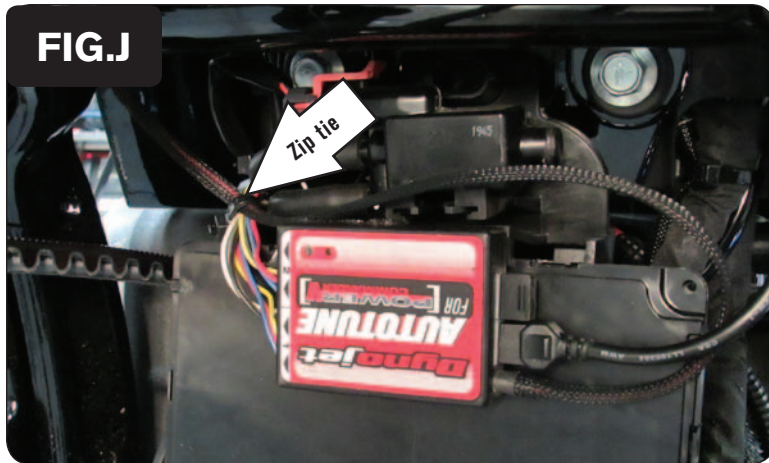


**IF INSTALLING THE AUTO TUNE KIT FOLLOW THESE STEPS:**

- 13 Remove the bolt holding the rear mudflap in place (Fig. H).  
*This bolt is located in front of the rear tire.*
- 14 Pull the mudflap away from the frame.



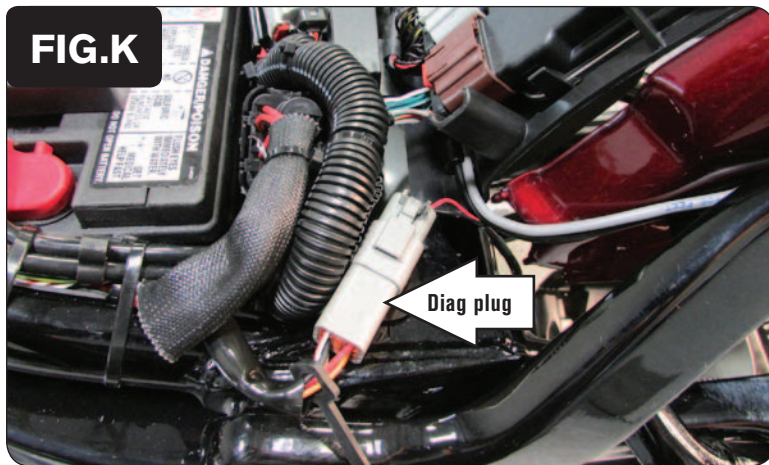
- 15 Install the O2 sensors into the exhaust (see Auto tune install guide).
- 16 Plug the wiring harnesses from the kit into each sensor and route the wires towards the rear fender going along the left side of the oil tank.
- 17 Connect the wires from the O2 sensors into the Auto tune module (Fig. I).  
*Make sure to wire the front O2 sensor into #1.*



- 18 Attach the Auto tune module to the body control module in front of the mudflap (Fig. J).

*Make sure to clean the surface with the alcohol swab before attaching.*

- 19 Attach the CAN cable to one of the ports of the Autotune module and route it thru the fender on the right side.
- 20 Use a zip tie to secure the O2 sensor cables away from the belt (Fig. J).



- 21 Route the power wires from the Autotune thru the hole in left side of the fender and plug into the stock diagnostic plug near the ECM (Fig. K).
- 22 Plug the other end of the CAN cable into one of the open ports of the PCV.
- 23 Reinstall the mudflap.