

[POWER COMMANDER V]

FUEL AND IGNITION

2002-2007 Harley Davidson V-Rod Models

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 Zip tie

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

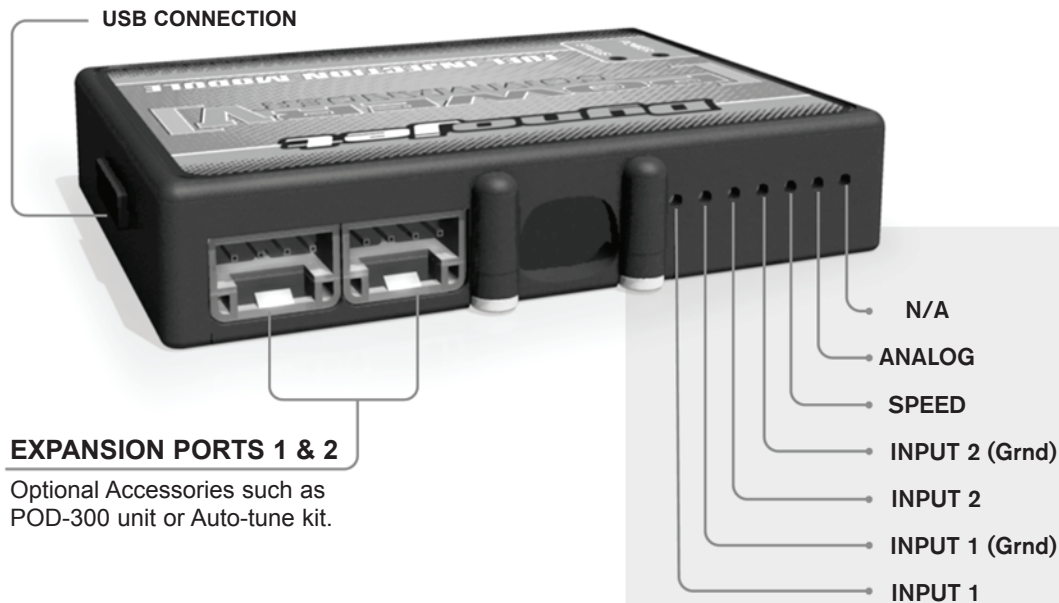
THE LATEST POWER COMMANDER
SOFTWARE AND MAP FILES CAN BE
DOWNLOADED FROM OUR WEB SITE AT:
www.powercommander.com

PLEASE READ ALL DIRECTIONS BEFORE STARTING INSTALLATION

Dynojet

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

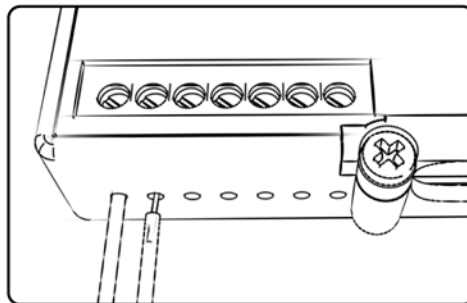
POWER COMMANDER V INPUT ACCESSORY GUIDE



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: It may help to tin the wire with solder before inserting



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-

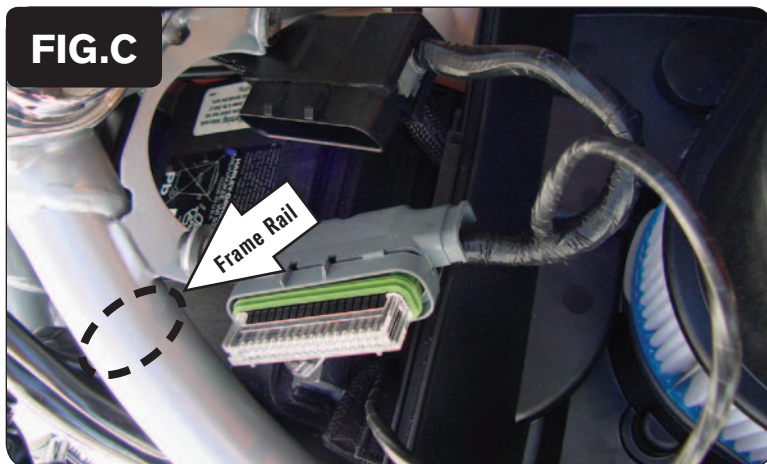
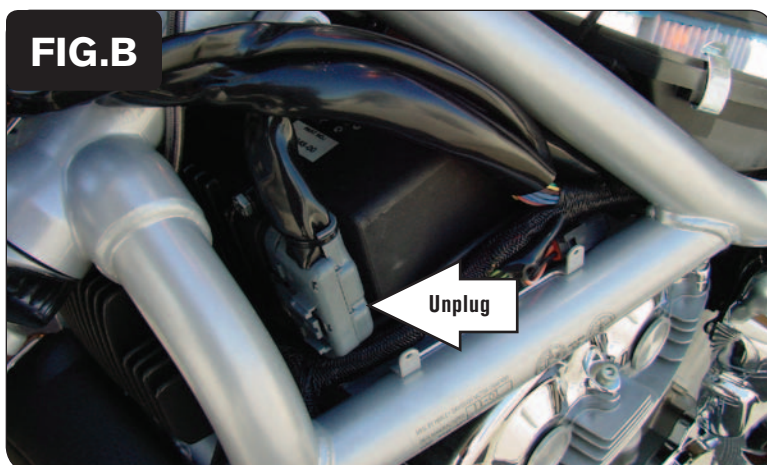
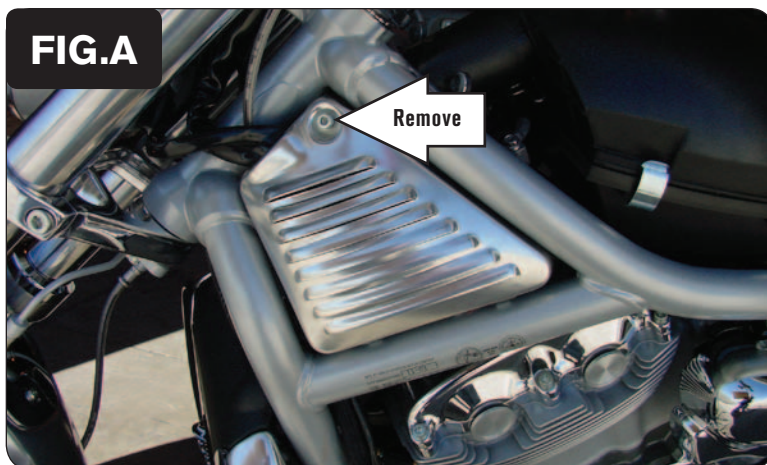
Not needed on Harley applications as the speed signal wire is built into the main wiring harness of the PCV.

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.

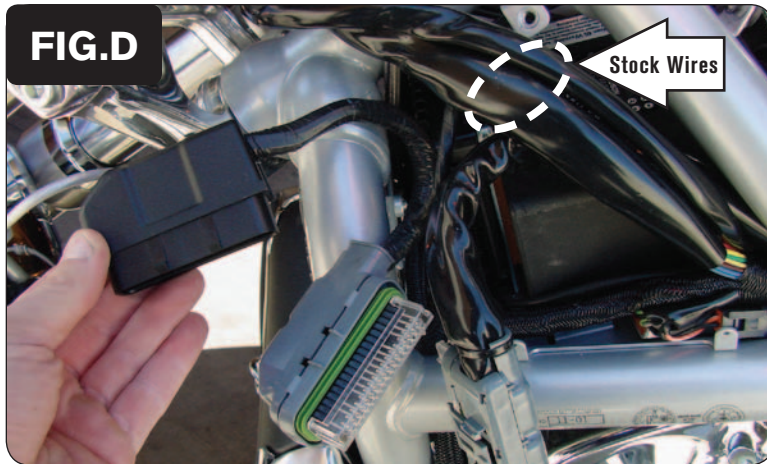
Launch-

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.

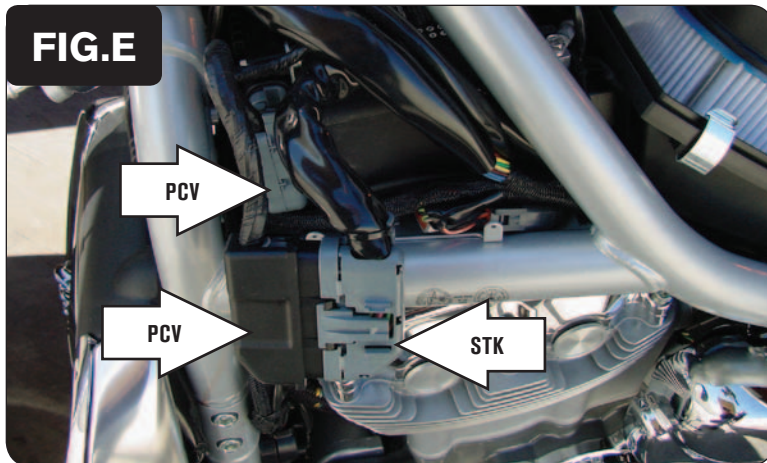


Follow These Instructions for 2002-2006 Models

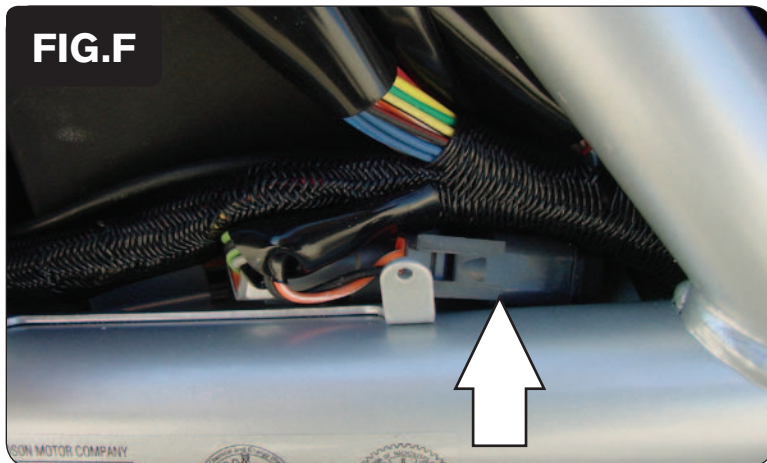
- 1 Remove the seat, airbox shell, and airbox cover.
- 2 Remove the left hand side cover by removing the 5mm allen bolt (Fig. A).
- 3 Unplug the stock wiring harness from the ECM (Fig. B).
- 4 Route the PCV wiring harness under the frame rail and go towards the location of the ECM (Fig. C).



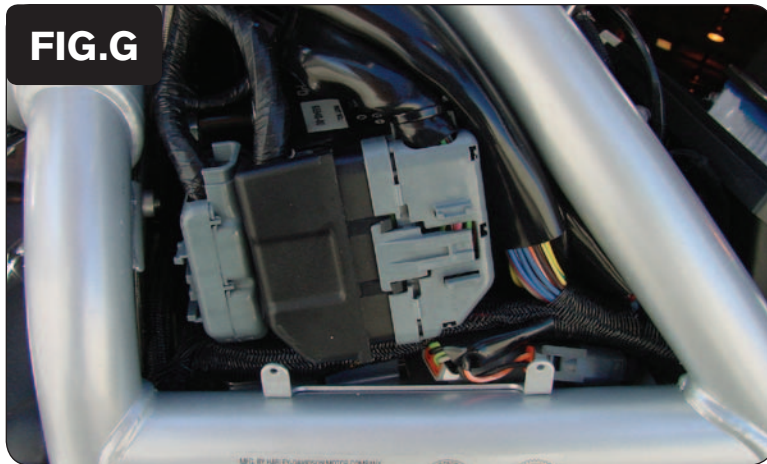
- 5 Route the PCV wiring harness behind the stock wires (Fig. D).



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



- 7 Tuck the two stock connectors into the lower right corner of the frame opening (Fig. F).

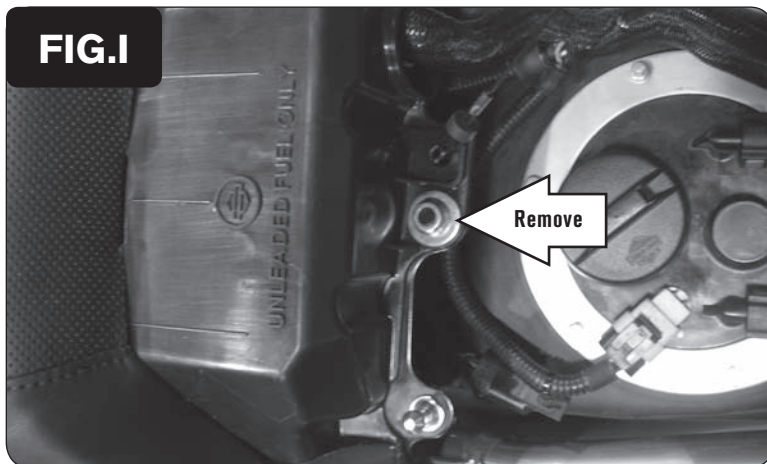


- 8 Place the connectors and wires as shown in Figure G.

The cover will not fit back into place unless the connectors are laid out exactly as shown. For additional information on this placement, see the V-rod installation video on the PCV CD-ROM or our website (www.powercommander.com).

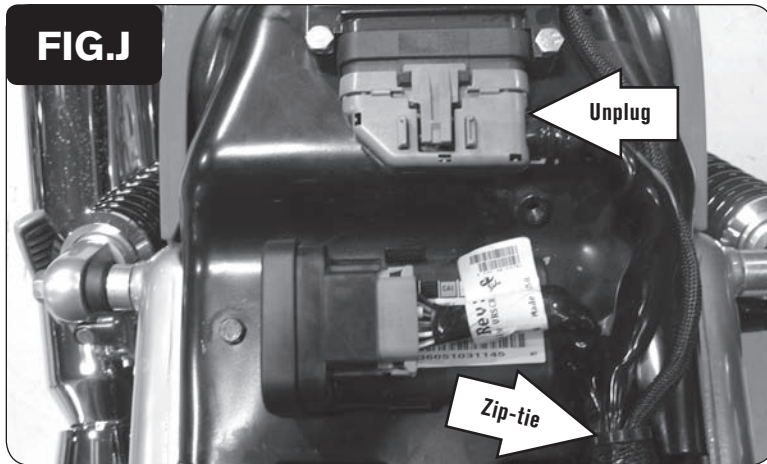


- 9 Install the PCV module between the battery and the airbox (Fig. H).
- 10 Reinstall the seat, airbox shell, airbox cover, and the left hand side cover.

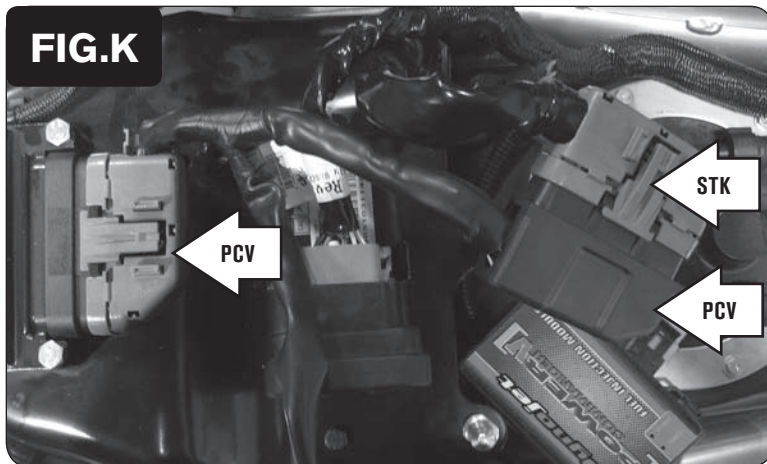


Follow These Instructions for 2005-2006 Street Rod Models

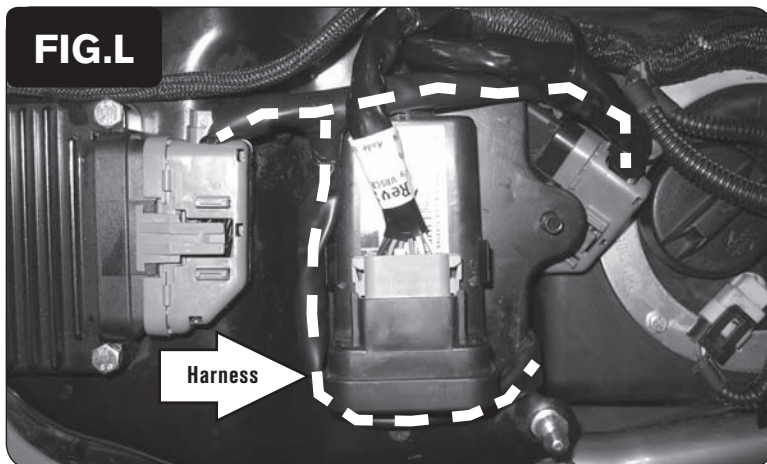
- 1 Remove the passenger seat by removing the nut (Fig. I).
- 2 Remove the cosmetic airbox cover.



- 3 Unplug the stock wiring harness from the ECM (Fig. J).
- 4 Cut the zip-tie shown in Figure J.



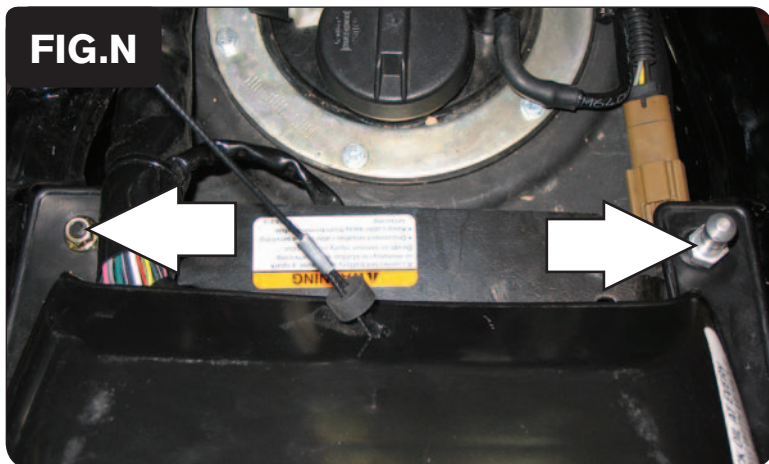
- 5 Plug the PCV wiring harness in-line of the stock wiring harness and the ECM (Fig. K).



- 6 Route the PCV wiring harness as shown in Figure L. Use the supplied zip-tie to secure the PCV wiring harness and stock wiring harness in place. Route the zip-tie through the hole in the frame where the stock zip-tie was located.

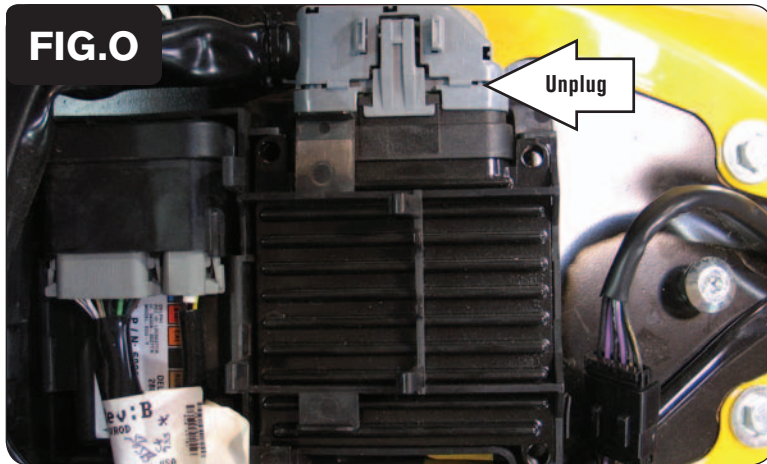


- 7 Mount the PCV to the inner rear fender using the supplied Velcro (Fig. M).
Be sure to clean both surfaces with the supplied alcohol swab prior to attaching the Velcro.
- 8 Reinstall the cosmetic airbox cover and the passenger seat.

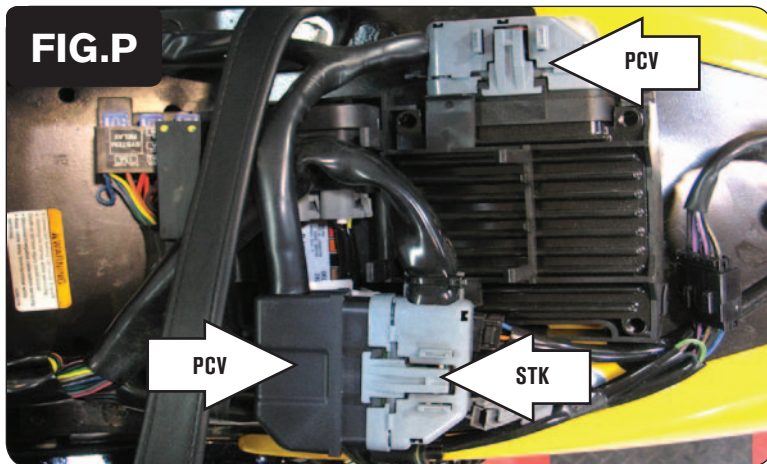


Follow These Instructions for 2007 Models

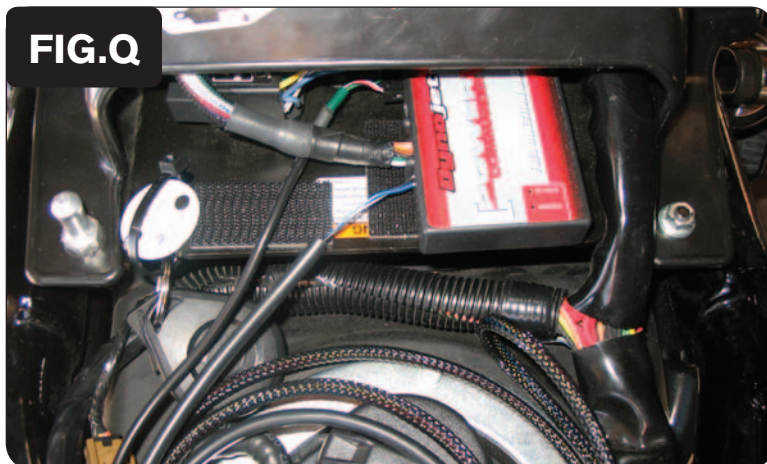
- 1 Open the main seat compartment.
- 2 Remove the rear seat by removing the two nuts (Fig. N).



- 3 Unplug the stock wiring harness from the ECM (Fig. O).



- 4 Connect the PCV wiring harness in-line of the stock harness and ECM (Fig. P)



- 5 Install the PCV near the fuse box (Fig. Q).
Use the supplied Velcro to secure the PCV in place. Make sure to clean both surfaces with the alcohol swab before attaching.
- 6 Reinstall seats.

Follow These Instructions when Installing the Autotune Kit (PN: AT-100B)

Note: Assuming the bike has an exhaust system specifically designed for a 2002-2007 model year V-rod, it should NOT have 18mm x 1.5 O2 sensor bungs in the header pipes to accommodate the Auto-tune kit's wideband O2 sensors. In this case, you will need to weld bungs into the header pipes to use Auto-tune. The Auto-tune kits with a part number ending in "B" come with weld-in mild steel bungs supplied.

- 1 Lift the main seat up. Remove the cosmetic cover over the air box.
- 2 Using the supplied Velcro install the Autotune module (Fig R.)
- 3 Remove the right hand side cover by the steering stem (Fig. S).
- 4 Remove the rubber plug for the diagnostic connector. Using the **OPTIONAL (PN: 76950159)** V-rod extension lead, plug one end of the lead into the stock diagnostic connector (Fig. T).
- 5 Route the Autotune harness along the right side of the airbox and plug the other end into the Autotune kit.

ATTENTION

If you do not have the **OPTIONAL (PN: 76950159)** Power Extension Lead cut off the connector from the Autotune module. Connect the **RED** wire to a switched 12v source. Connect the **BLACK** wire to Ground.

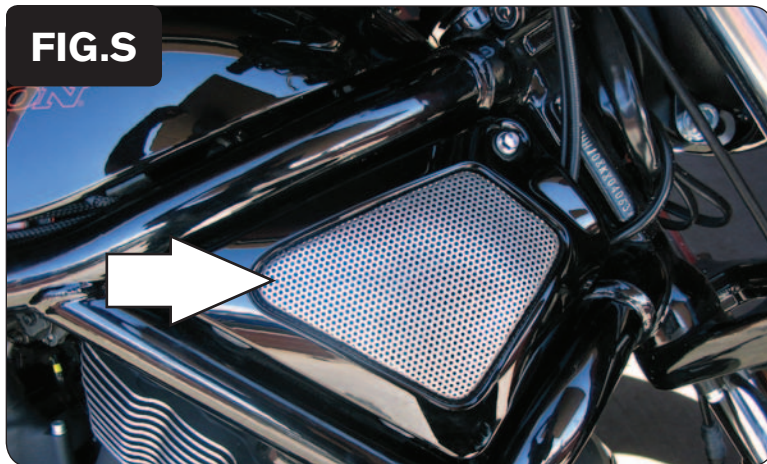
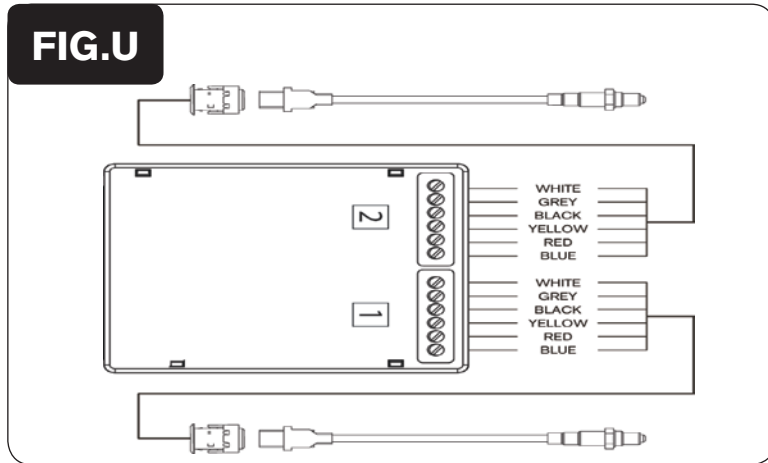
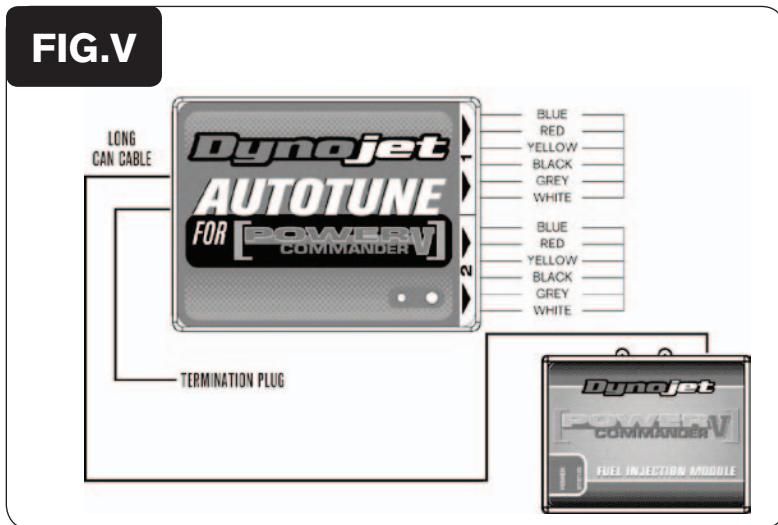


FIG.U

- 6 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 the Autotune module. Wire the harness to the #1 input on the module per Figure U. The harness can be cut to length if desired.
- 7 Repeat step 6 for the rear cylinder. Wire the harness to Autotune Module sensor input #2. The harness can be cut to length if desired.

FIG.V

- 8 Use the CAN bus cable to connect one Autotune module to the PCV. It does not matter what ports are used.
- 9 Install the CAN termination plug into the open port of the Autotune module.
This is the BLACK HARD PLASTIC plug provided in the Auto-tune kit.
- 10 Secure the harnesses in place as to not contact the exhaust.
- 11 Reinstall the side cover.

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