POWER COMMANDER V

2015 Harley Davidson Street 500
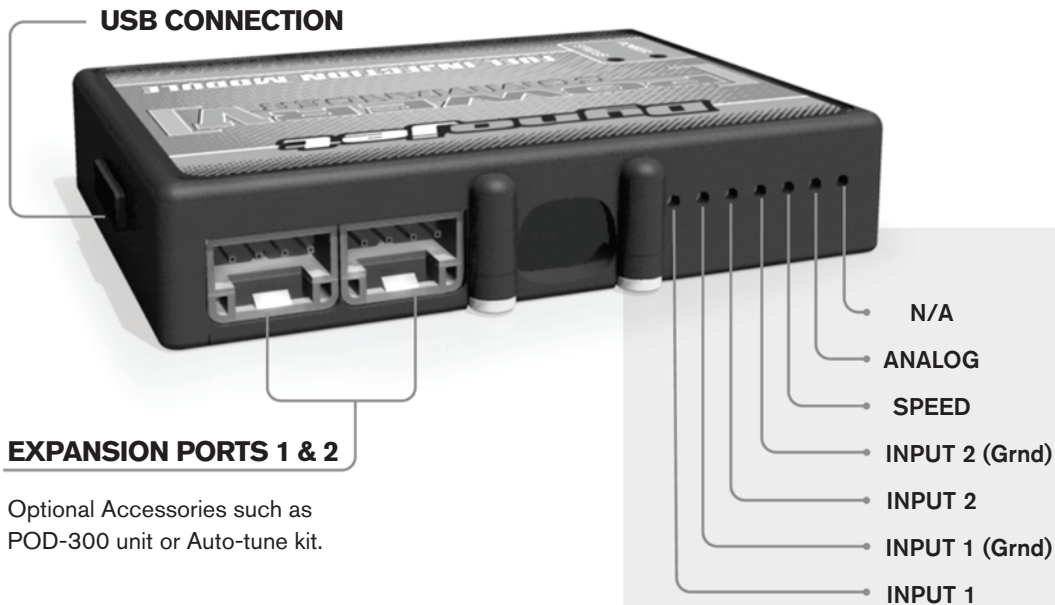
Installation Instructions

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

POWER COMMANDER V
INPUT ACCESSORY GUIDE

ACCESSORY INPUTS

USB CONNECTION

N/A

ANALOG

SPEED

INPUT 2 (Grnd)

INPUT 2

INPUT 1 (Grnd)

INPUT 1

EXPANSION PORTS 1 & 2

Optional Accessories such as POD-300 unit or Auto-tune kit.

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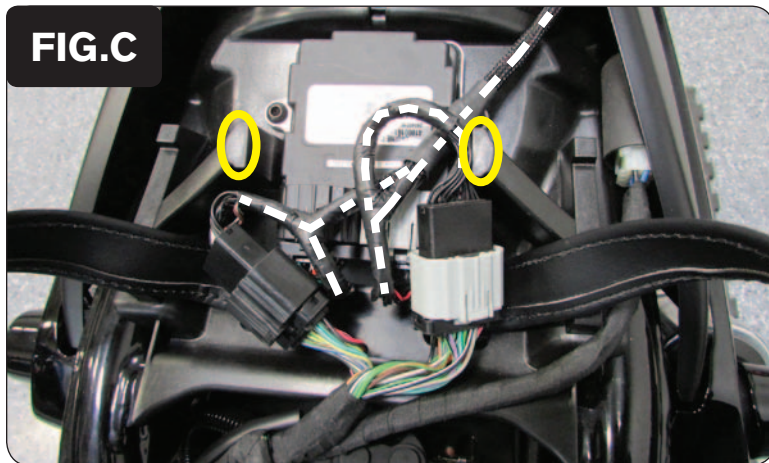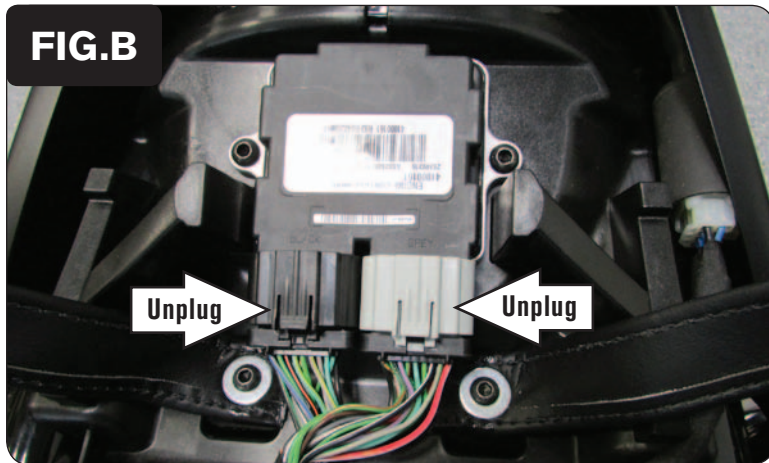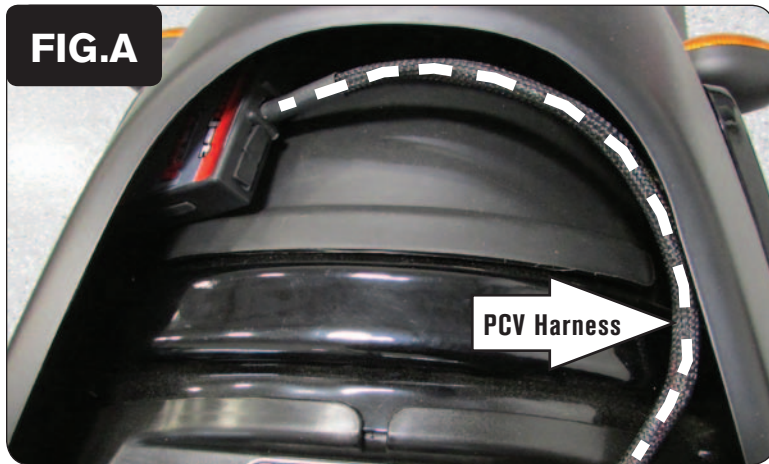
Speed- Not needed on Harley applications as the speed signal wire is built into the main wiring harness of the PCV.

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.

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 is 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.

FIG.A

PCV Harness →

FIG.B

← Unplug   Unplug →

FIG.C

1. Remove the seat and the left and right hand side covers.

2. Using the supplied Dual Lock Velcro, secure the PCV module to the rear fender under the seat (Fig. A).

   Use the supplied alcohol swab to clean both surfaces prior to applying the Velcro adhesive.

3. Route the wiring harness forward toward the bike's ECM.

4. Unplug both of the stock connector's from the bike's ECM (Fig. B).

5. Plug the PCV wiring harness in-line of the bike's ECM and both of the stock wiring harness connectors for the ECM (Fig. C).

   Keep *the extra set of connectors laying as low and flat as possible. Use zip ties to secure the wiring and connectors if necessary. Be sure they are not protruding higher than the seat support points highlighted with the small circles in Figure C.*
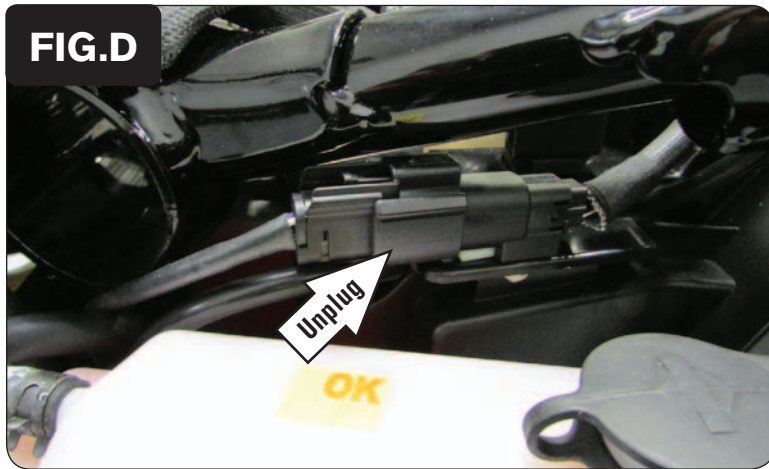
FIG.D

6   Locate and unplug the stock connector for the bike's rear cylinder O2 sensor (Fig. D).

This is a BLACK 4-pin connector located behind the left hand side cover. You can trace the cable from the rear O2 sensor to this connector.

FIG.E

7   Plug the supplied BLACK O2 Optimizer into the bike's wiring harness in-place of the stock O2 sensor (Fig. E).
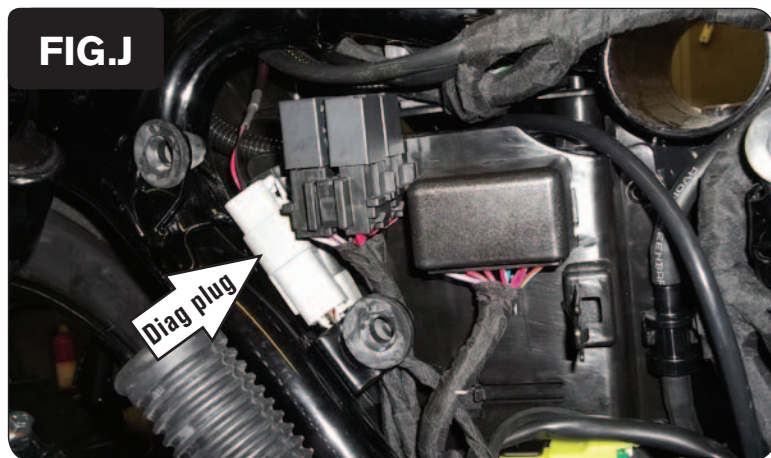
There is a BLACK O2 Optimizer (rear) and a WHITE O2 Optimizer (front) in the kit. They are indexed so they can NOT be connected incorrectly.

The stock O2 sensor will no longer be used. It can be removed from the exhaust if desired and if you have a way to plug the hole left in the exhaust.
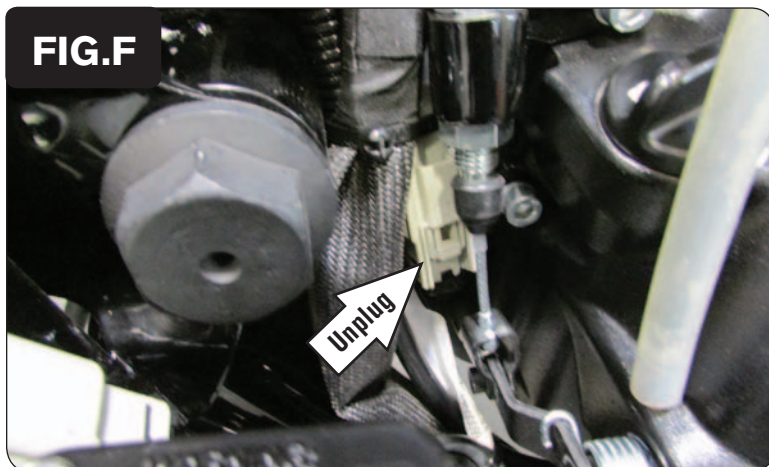
FIG.F

8   Locate and unplug the stock connector for the bike's front O2 sensor (Fig. F).

This is a WHITE 4-pin connector located on the right side of the bike between the swingarm pivot shaft and the engine case.

FIG.G

O2 Optimizer

FIG.H

Diag plug

Rear O2 cable

Front O2 cable

FIG.J

Diag plug

9   Plug the supplied WHITE O2 Optimizer into the bike's wiring harness in-place of the stock O2 sensor (Fig. G).
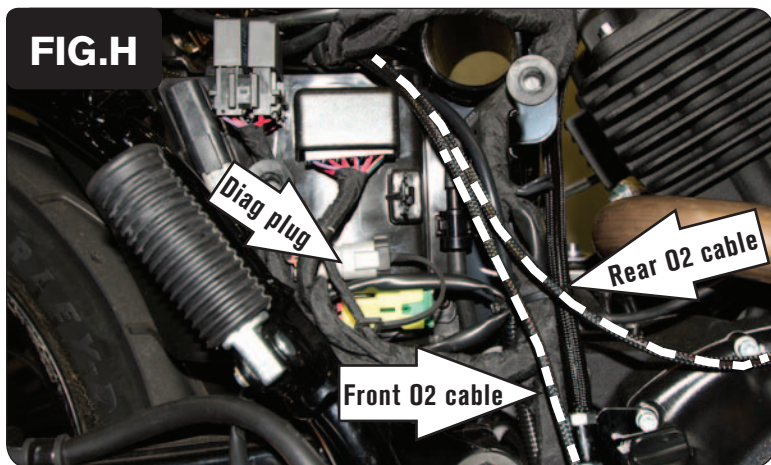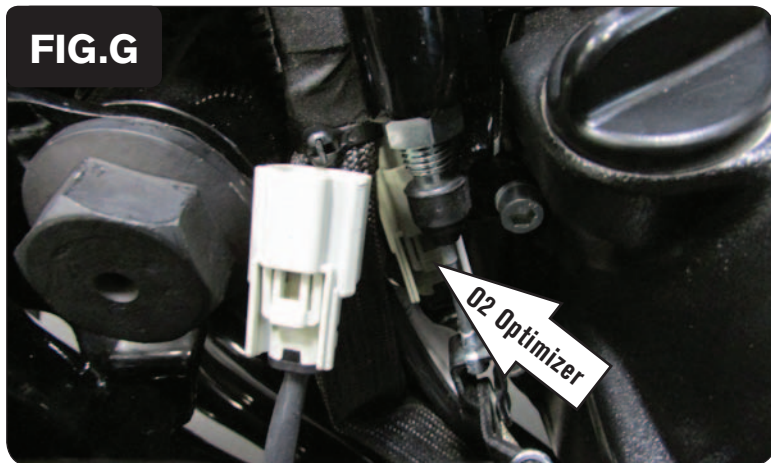
There is a BLACK O2 Optimizer (rear) and a WHITE O2 Optimizer (front) in the kit. They are indexed so they can NOT be connected incorrectly.

The stock O2 sensor will no longer be used. It can be removed from the exhaust if desired and if you have a way to plug the hole left in the exhaust.

10   Reinstall the side covers and the seat (unless you are also installing the Auto-tune accessory).

IF INSTALLING THE AUTO-TUNE KIT (PN: AT-101B) FOLLOW THESE STEPS:

11   Install the Auto-tune wideband O2 sensors into the exhaust pipes (for a more detailed explanation, see the Auto-tune install guide).

The stock O2 sensor bung size is not the same that the Auto-tune wideband O2 sensors require (18mm x 1.5). You will likely need to weld the supplied bungs to the exhaust to use Auto-tune.

12   Connect the O2 sensor cables to the wideband O2 sensors in the exhaust and route the cables towards the PCV under the seat (Fig. H).
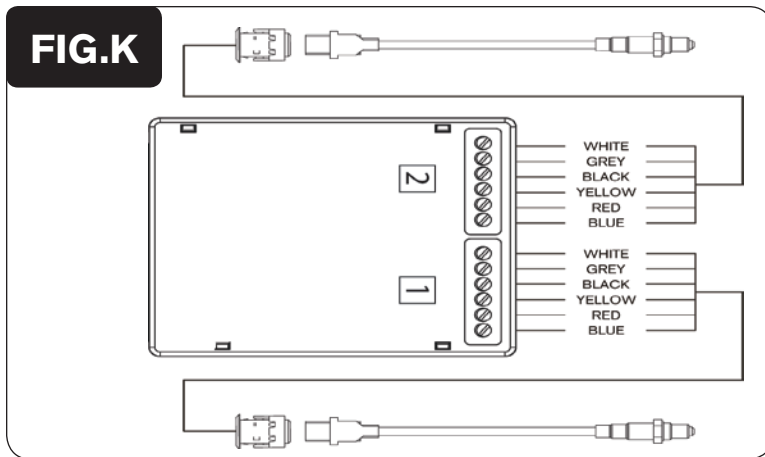
Use the longer (52") cable for the front cylinder O2 sensor and the shorter cable (24") for the rear cylinder O2 sensor. Route the front cylinder cable down and to the rear of the bike following alongside the stock wiring harness that is along the lower right frame rail. Then come back upwards along with the stock harness to beneath the right side cover and then under the seat and towards the PCV.

13   Relocate the stock 6-pin diagnostic connector to the location shown in Figure J.

The original location can be seen in Figure H.

14   From under the seat, route the 6-pin 12v power supply connector from the Auto-tune module under the frame rail to the right hand side of the bike and connect the 6-pin connector from the Auto-tune module to the stock 6-pin diagnostic connector (Fig. J).

FIG.K

```
2
    WHITE
    GREY
    BLACK
    YELLOW
    RED
    BLUE

1
    WHITE
    GREY
    BLACK
    YELLOW
    RED
    BLUE
```


FIG.L

LONG CAN CABLE

Dynojet AUTOTUNE FOR POWER COMMANDER V

```
    BLUE
    RED
    YELLOW
    BLACK
    GREY
    WHITE

    BLUE
    RED
    YELLOW
    BLACK
    GREY
    WHITE
```

TERMINATION PLUG

Dynojet Power Commander V
FUEL INJECTION MODULE

FIG.M

15   Store the Auto-tune module under the seat temporarily. Connect the O2 sensor cables to the Auto-tune module as shown in Figure K.

Be sure to connect the front cylinder sensor cable to AT sensor input #1. Likewise, the rear cylinder sensor cable must go to AT sensor input #2.
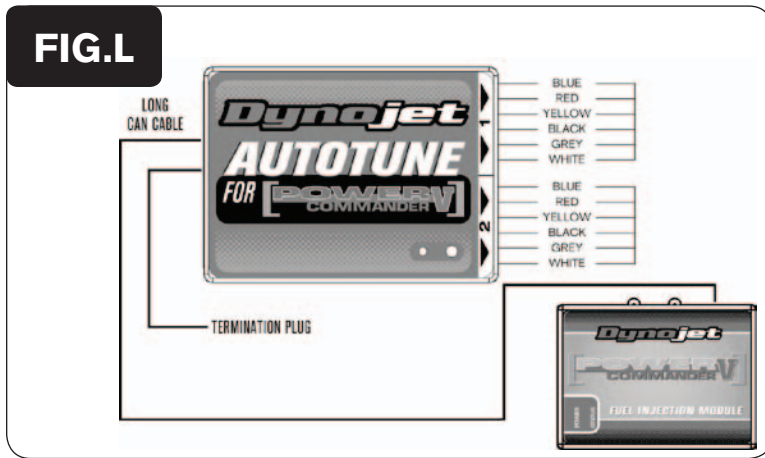
16   Use the supplied CAN link cable to connect either Auto-tune module expansion port to either PCV module expansion port. It does not matter which ports are used.

17   Install the supplied CAN termination plug into the open port of the Auto-tune module (Fig. L).

   This is a small BLACK hard plastic connector provided in the Auto-tune kit (PN: 76423025). It is critical that this be installed and it is often overlooked.
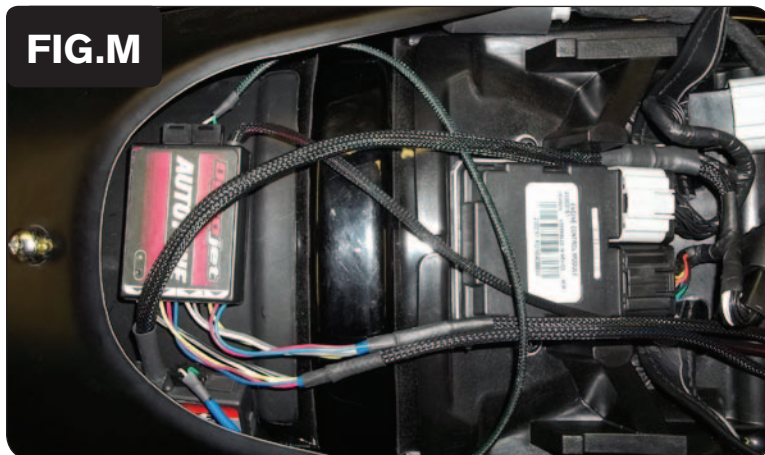
18   Using the supplied Velcro, secure the Auto-tune module to the rear fender and under the seat near the PCV module.

Use the supplied alcohol swab to clean both surfaces prior to applying the Velcro adhesive.

19   Use zip ties to secure the wiring harness routing where you may see fit to keep the wiring clear of any hot or moving parts.

20   Reinstall the seat and side covers.

   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.