

# [POWER COMMANDER V]

## **2012 John Deere XUV 825i**

### **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 Posi-tap

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

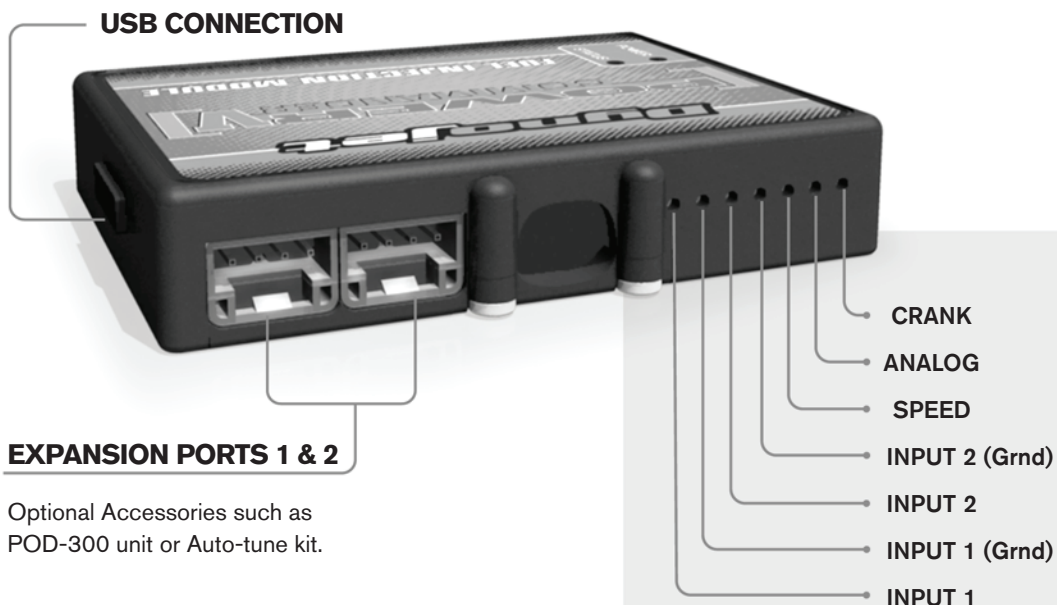
THE LATEST POWER COMMANDER  
SOFTWARE AND MAP FILES CAN BE  
DOWNLOADED FROM OUR WEB SITE AT:  
[www.powercommander.com](http://www.powercommander.com)

**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



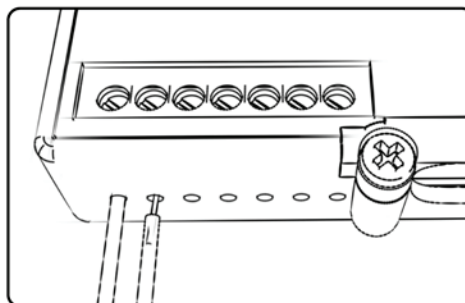
## EXPANSION PORTS 1 & 2

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

## PCV Wire Connections

1. Remove the rubber plug on the backside of the unit and loosen the screw for the corresponding input.
2. Using a 22-24 gauge wire, strip about 10mm from its end.
3. Push the wire into the hole of the PCV until it stops and then tighten the screw.
4. 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) 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. (Set to Switch Input #2 by default.)

### 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.

### 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-

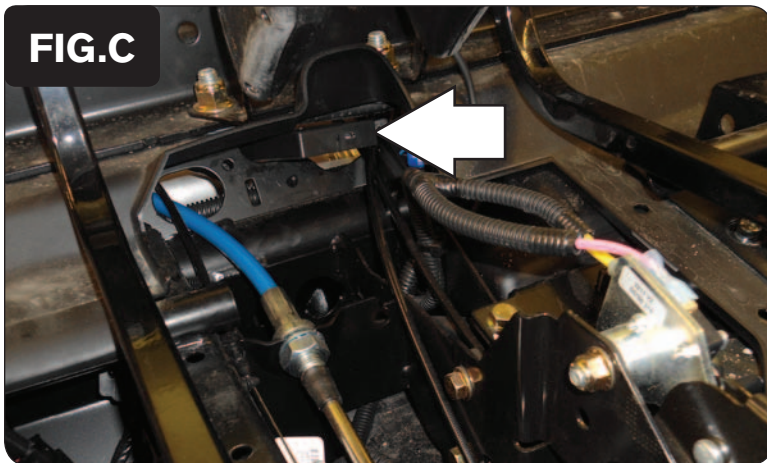
Do **NOT** connect anything to this port unless instructed to do so by Dynojet. It is used to transfer crank trigger data from one module to another.



- 1 Remove the seat.

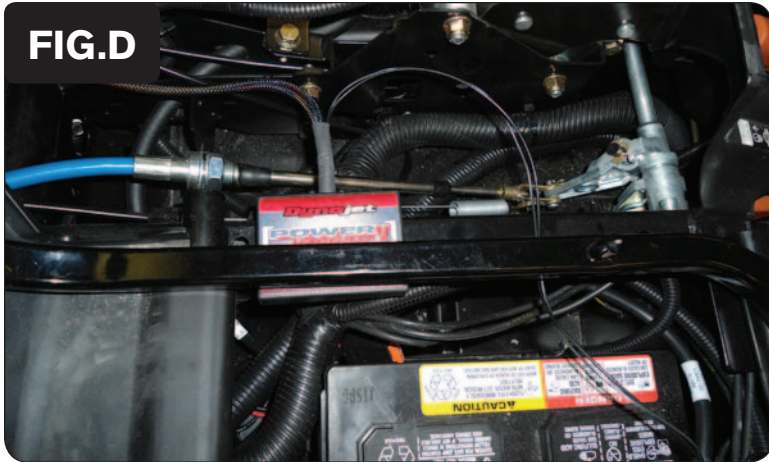


- 2 Open the dump box to expose the engine compartment.



- 3 Pass the PCV through the firewall from the engine side into the seat area through the opening shown in Figure C.  
Follow the routing of the throttle cable to find this opening.



**FIG.D**

- 4 Using the supplied velcro, secure the PCV to the top of the frame spar as shown in Figure D.

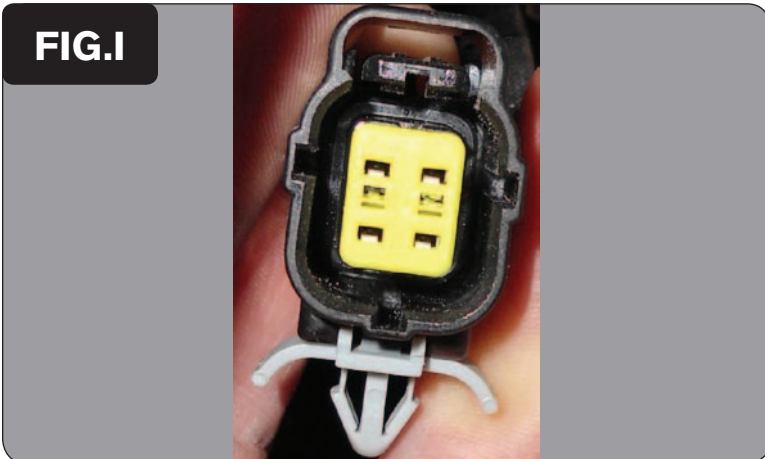
Make sure to clean both surfaces with the alcohol swab before attaching.

**FIG.E**

- 5 Remove the nut from the negative battery terminal.
- 6 Attach the PCV ground lug to the negative terminal of the battery and reattach the nut as shown in Figure E.

**FIG.F**

- 7 Locate and unplug each injector connector.  
The injector connectors are located below the fuel rail and in front of the intake manifold in the engine compartment.
- 8 Attach the PCV harness in-line of the stock connectors as shown in Figure F.  
Attach the orange wires to the injector behind the driver.  
Attach the yellow wires to the middle injector.  
Attach the green wires to the injector behind the passenger.

**FIG.G****FIG.H****FIG.I**

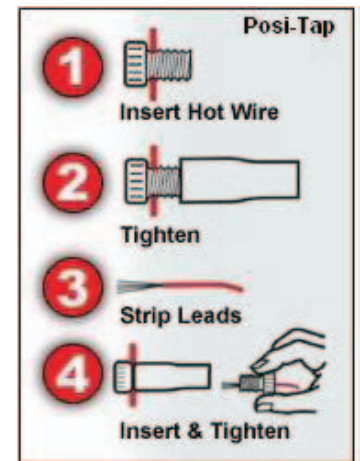
- 9 Locate the Throttle Position Sensor (TPS) connector.

The TPS connector is located on the right-hand side of the machine near the throttle body.

- 10 Unplug the TPS connector.

- 11 Using the supplied posi-tap, attach the grey wire from the PCV harness to the red wire on the stock TPS connector as shown in Figure H.

- 12 Plug the TPS connector back into the stock TPS.



- 13 Locate and unplug the O2 sensor from the exhaust manifold as shown in Figure I.

Leave the O2 sensor unplugged and secured out of the way.

- 14 Zip tie the PCV harness where necessary within the engine compartment. Keep the wires away from moving parts and hot surfaces.

- 15 Close the dump box and reinstall the seat.

Visit [www.powercommander.com](http://www.powercommander.com) to download software tutorials.

## EFI Tuning with PCV

The Power Commander makes fueling changes off of the numbers in the map stored in the Power Commander. The UTV Power Commanders are shipped with a Zero Map. With a Zero Map, the UTV will run the stock fueling programmed in the ECU. When a map is loaded into the Power Commander, the UTV will be fueled according to the numbers in the map. The Power Commander does not make changes to the ECU programming.

The numbers in the Power Commander map add or subtract a percentage of the fuel the ECU is supplying for a particular load condition. For example, if the Power Commander map shows a 10 in a given cell, the Power Commander increases the amount of fuel the ECU is supplying by 10%. If the Power Commander map shows a -10 in a given cell, the Power Commander reduces the amount of fuel the ECU is supplying by 10%.

When tuning, always start with a setting where the motor runs rich. Slowly trim fuel out to find the desired exhaust gas temperature (EGT) or air-to-fuel ratio (A/F).

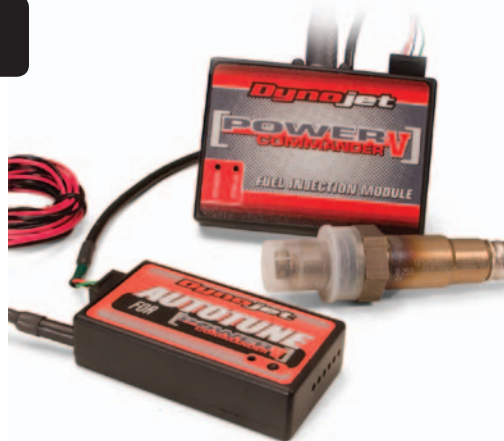
The PCV gives you the freedom to subtract up to 99% and add up to 250% of the fuel the ECU is supplying for a particular condition. When adding fuel with the Power Commander, the injector duty cycle may reach 100% (always open) before the Power Commander value reaches 100%. For example, if the ECU is running the injectors at 67% duty cycle (injectors open 67% of the time) then adding 50% fuel with the Power Commander will max out the injectors. In this case, the amount of fuel that can be added will be limited by the injectors.

### Fuel Subtraction

The PCV gives you the ability to trim fuel out of the map to correct rich conditions.

**Caution:** Engine failure can result from running the engine in a lean state.

FIG.J



### Additional Features and Accessories for the Power Commander V

The PCV can be combined with the Dynojet Autotune kit (P/N AT-200) allowing you to tune as you ride. The Autotune feature uses a target AFR table where the user specifies a target AFR based on TP and RPM. After enabling Autotune, the user rides as normal and the PCV calculates a trim table as you ride. Once the system has calculated a trim table for the specified conditions, the user can accept the trims as a base map and turn the Autotune feature off.

Autotune is a very powerful feature allowing the user to build custom maps for any modifications made to the UTV, including big bore kits, aftermarket pipes, and intakes. The Autotune kit may also be used to smooth out a stock UTV's fuel map eliminating midrange flat spots and improving throttle response.