

Electronic Jet Kit™ Instructions



Thank you for choosing the Techclusion Electronic Jet Kit, the TFI. This TFI model is **ONLY** usable for the following Harley Davidson models:

➤ 2008-2011 V-ROD Models

This controller should only be used on high horsepower/ high compression engine builds. The controller has double the fuel range of the standard version. It is designed to give the tuner the ability to add far more fuel than usual.

This is an Electronic Jet Kit. Like jet kits in the past, the more you modify, the more responsibility you take in getting your fuel curve right. Go to www.DobeckPerformance.com will help you obtain better high horsepower tuning.

Due to the complexity of the newer motorcycles, dealer install may be required.

If you have any questions during installation or tuning please call tech support.

Toll Free: 877-764-3337

USA: 406-388-2377

Business Hours: 8am-5pm MST Monday-Friday

INSTALLATION PREP

- **Install Time:** 60 minutes
- **Required Tools for:**
 - Disconnecting the negative terminal of the battery
 - Removing your seat
 - Removing your air box cover.
 - Fuel adjustments (small screwdriver)
 - Access to the O2 sensor(s)



INSTALLATION

1. Remove tank shell, left and right front frame covers and horn assembly.
2. Locate and disconnect IAT sensor. (fig 1)
3. Use a screwdriver to disengage the 8 clips retaining the airbox lid. The front clip is not visible and must be reached from left side. (fig 2)
4. Remove plastic nut, air filter cover and filter. (see figure 3)
5. Locate and disconnect rear crankcase breather hose inside air box and push through air box floor.
6. Slide the large O rings up the stacks to access the stack mounting screws. (The O rings retain the screws should they become loose.) Remove the 6 screws and the velocity stacks. (fig 4)
7. Disengage front crankcase breather hose and remove airbox floor. There is no clamp on this hose. (fig 5)
8. View from left, stock. (fig 6)
9. View from right. Depress locking bails and remove injector connectors. Rear first, then front. Do not pull the wires. (fig 7,8)
10. Feed factory injector harness out left side. (fig 9)
11. Route TFI harness between frame and OEM harness that goes over the battery negative. (fig 10)
12. Continue pulling TFI harness through, routing it on top of main (plastic braid covered) harness. Route connectors inside the frame, down through the engine V and out where stock injector harness is. (fig 11)
13. Connect TFI harness to stock harness. Pay attention to color-coding. The TFI harness with yellow and white leads is for the front injector. It is essential the connectors be installed properly at the front and rear injectors. (fig 12)
14. Feed TFI injector connectors under throttle body and connect them to their respective injectors. (fig 13)
IMPORTANT: Make sure connection is firmly secure and allow a little slack at the connection to prevent engine vibration from damaging/breaking a wire on the harness.
15. The front factory O2 connector is located inside the left radiator cover. Remove screw located on bottom of cover and slide cover away from radiator to access O2 connector. Disconnect factory O2 connector and plug in TFI bypass. The factory O2 sensor can be removed from exhaust pipe used with a pipe plug or tuck connectors inside the radiator cover. Reinstall the fastener.
IMPORTANT: Make sure connection is firmly secure and allow a little slack at the connection to prevent engine vibration from damaging/breaking a wire on the harness.
16. The rear factory O2 connector is located at the left rear of the tank shell. With shell removed it should be visible under existing wiring. Disconnect factory O2 connector and plug in TFI bypass. The factory O2 sensor can be removed from exhaust pipe and replaced with a pipe plug and/or leave O2 installed and coil up original harness and secure.
17. Install horn.
18. Pull excess slack in TFI harness back to front. (fig 14)
19. Connect TFI ground wire to battery negative cable as shown (fig 15)
20. Cable tie TFI harness and ground lead to main wiring harness. Reinstall airbox floor, crankcase breathers, velocity stacks, O rings, air filter assembly and airbox lid. Make sure you reconnect the IAT sensor.
21. Use velcro provided to mount TFI to the top of battery.
22. With the rubber plug removed from the TFI, turn the motorcycle key switch to the “ON” position. As the bikes electrical system goes through initial start up mode you “may” see LED’s flashing on the TFI for a few seconds then go out, this is normal
23. Start the motorcycle. The green LED should now be on steady and the yellow will flash rapidly for up to 15 seconds, and then go out. If the green or red LEDs continue flashing after startup please refer to the “**TFI**” section in the troubleshooting guide.



Tuning – For reference, the pots are numbered from left to right on the TFI

POT #1 - GREEN LED: AIR FUEL MIXTURE SCREW ADJUSTMENT

With the TFI installed, bike fully warmed up, and screwdriver in hand, locate the GREEN LED and the first pot, which is right below it. Using the throttle, raise the RPM to a high idle or about 2000 RPM. Once there, slowly turn the green pot clockwise from the 1:00 position (off) until you achieve the highest RPM and smoothest running sound (like a mixture screw on a carburetor). You should find the best setting between 2:30 and 4:00 o'clock. If you turn the green pot clockwise and the engine does not accept any more fuel (RPM drops when adding fuel) you may have one or more of these problems (See troubleshooting Motorcycle).

POT #2 – YELLOW LED ACCELERATION FUEL ADJUSTMENT

Anytime the LED is on, this pot is adding fuel. In neutral raise the RPM slowly up through the mid range and see no yellow LED. However, opening the throttle quickly from idle you “should” see the yellow LED come on. Fine tuning: Start with the suggested setting and then add one clock position at a time until the bike says too much (hesitation) then back off 2 clock positions, if adding makes it worse go opposite direction. The yellow pot adds its fuel below 70% of maximum RPM. If no yellow LED there is not enough load to turn it on. At that point the street or dyno will be able to show the difference.

POT #3 – RED LED: MAIN FUEL ADJUSTMENT

The TFI adds about 5 points of main jet fuel with every clock position. For example, one clock position is the same as 150 to 155 main jets. Fine tuning: Start with the suggested setting and then add one clock position at a time until the bike says too much (hesitation) then back off 1 clock position, if adding makes it worse go opposite direction. The red pot adds most of its fuel above 70% of maximum RPM.

POT #4 – RPM SWITCH POINT - SETS RPM THE RED LED (main jet fuel) TURNS ON

One clock position is roughly 1000 RPM. This pot should be set to about 70% of redline. (For example: Harley Softail redlines at 5600 rpm and 4000 is roughly 70% of redline which would be 4:00 o'clock). Verify setting by raising the RPM in neutral, look for GREEN and YELLOW LEDs to shut off and the red to turn on at the chosen RPM. Refer to suggested settings if you have no tachometer.



TROUBLESHOOTING

Motorcycle

Fuel injected bikes all have the same exact fuel curve and is corrected everyday by the on board weather station. Nothing is leaner than a stock fuel injection map. With our box installes and the bike fully warmed up, if you slowly turn on the green pot and the engine does not accept any more fuel (RPM drops when adding fuel) then you “may” have one or more of these problems:

1. Engine not fully warmed up.
2. A vacuum leak on the intake.
3. High lift cams affecting map at light loads and low RPM.
4. The loss of TPS and ECU sync.
5. Cylinder head temp sensor malfunction.

NOTE: The listed problems are ordered from most common to least common

TFI

If just the GREEN or RED LEDs “FLASH” after startup or no LEDs are visible or bike doesn’t start then please confirm/check connections and retry. If you still experience a problem call tech support.

If needed call tech support.

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POOR MILEAGE

Solution:

1. Check your green pot settings. In the hundreds of installs performed, we have never gone beyond the 4:00 settings. Try backing down the settings slightly.
2. The RPM pot is adjusted too low. Make sure it’s at least at the 7:00 setting, this means the main comes in at around 6800 rpm.
Make sure your engine passes the 2000 rpm test at the beginning of the troubleshooting chapter.

If you still have mileage issues call tech support for further assistance.

Some vehicles modifications with Techclusion Inc. products must not be used on public roads and in some cases may be restricted to close course competition. Those products not identified as US EPA legal are intended for off-road or marine applications only. Not intended for use on emission controlled vehicles.

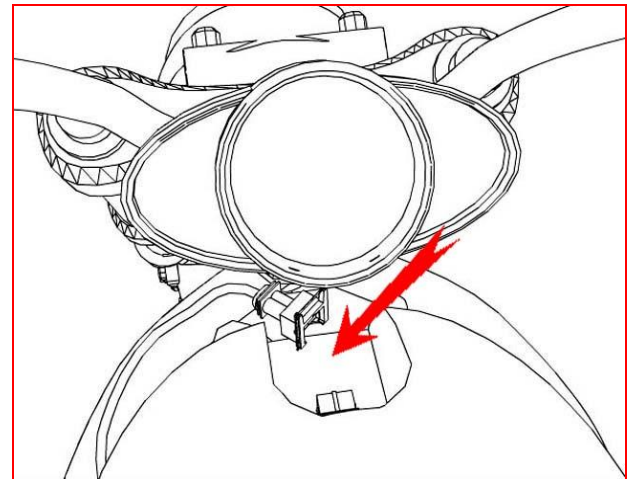
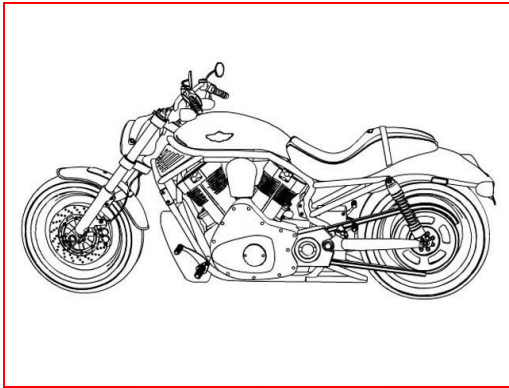


Figure 1

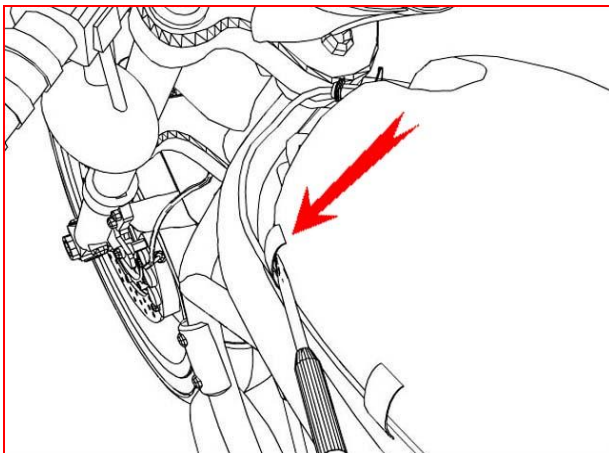


Figure 2

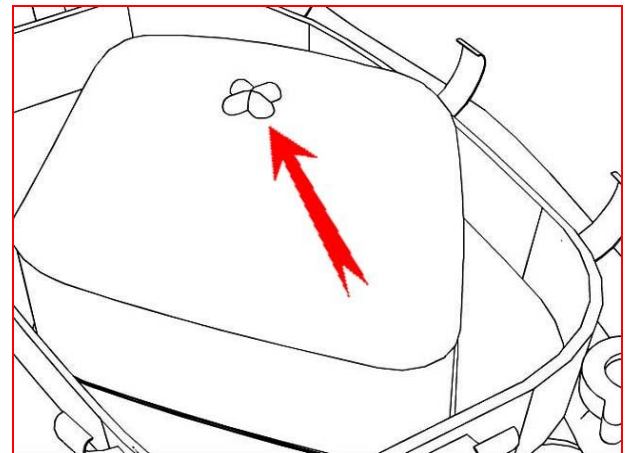


Figure 3

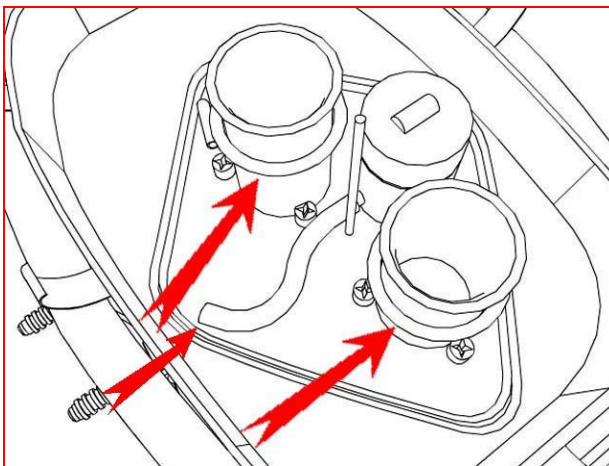


Figure 4

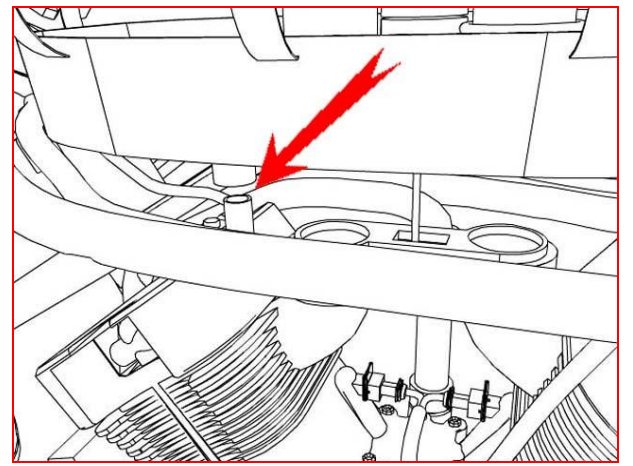


Figure 5

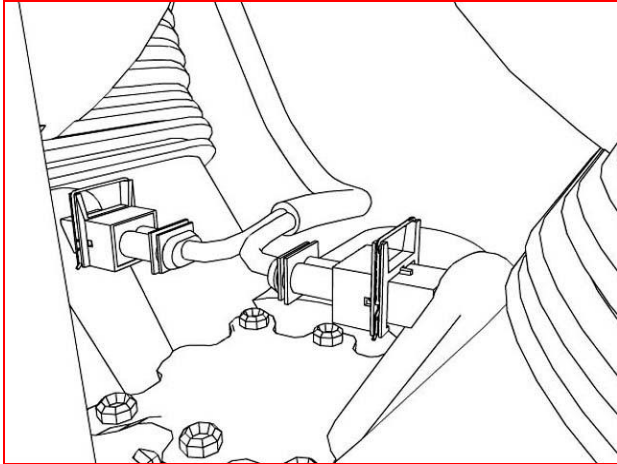


Figure 6

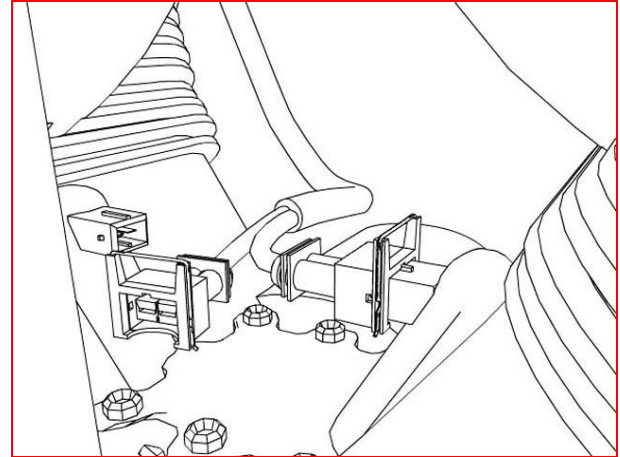


Figure 7

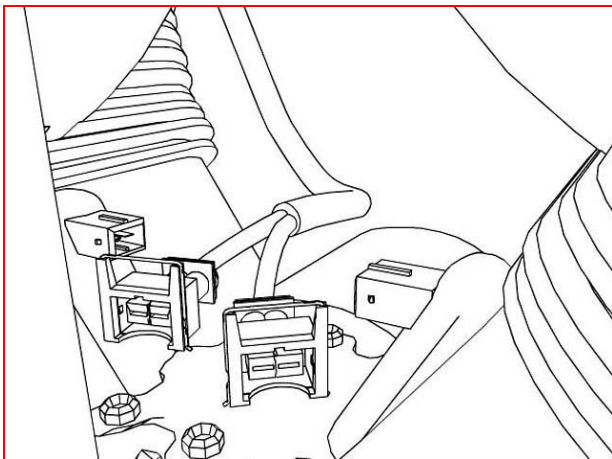


Figure 8

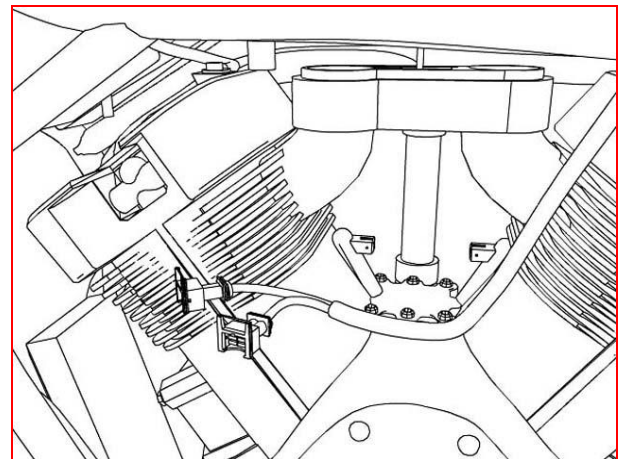


Figure 9

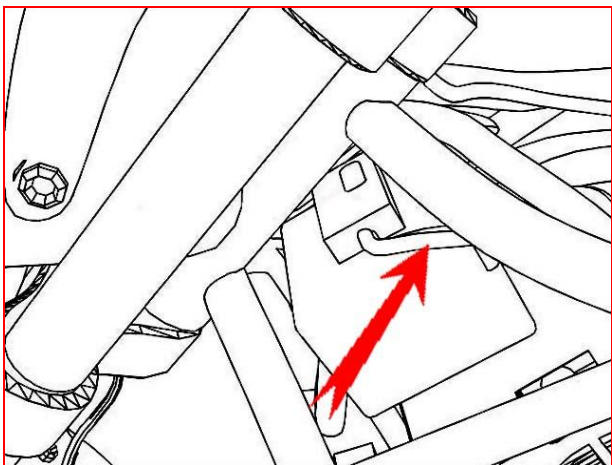


Figure 10

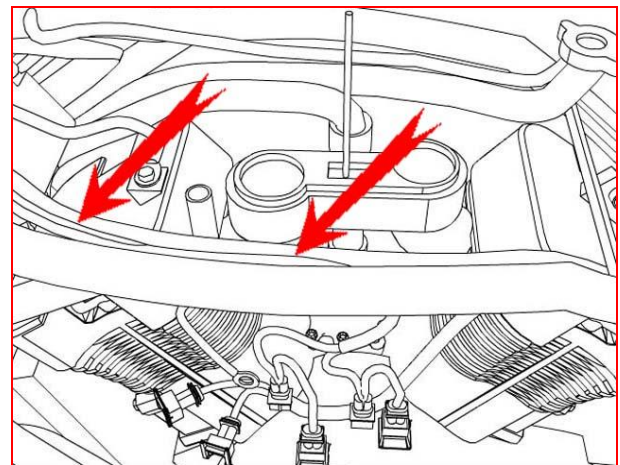


Figure 11

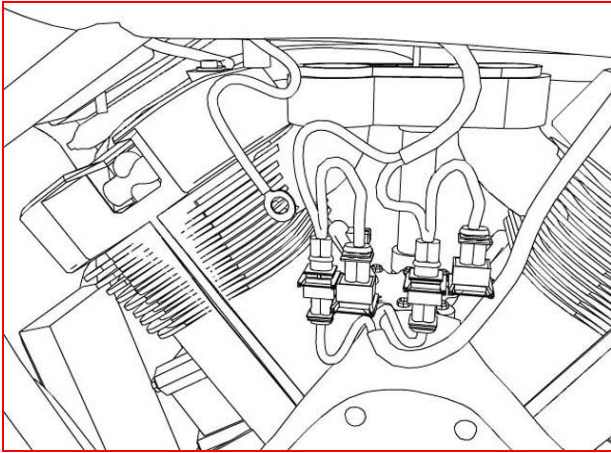


Figure 12

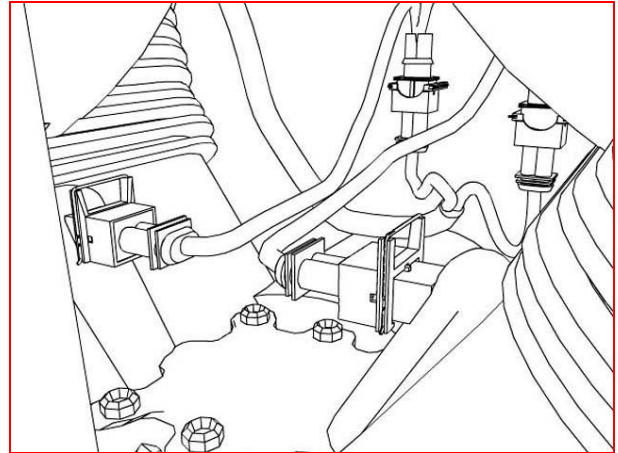


Figure 13

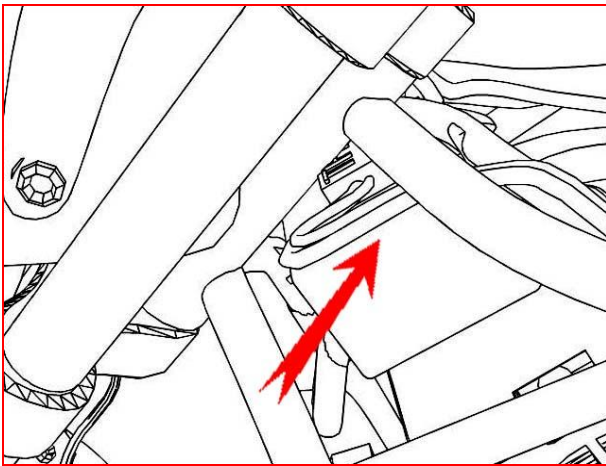


Figure 14

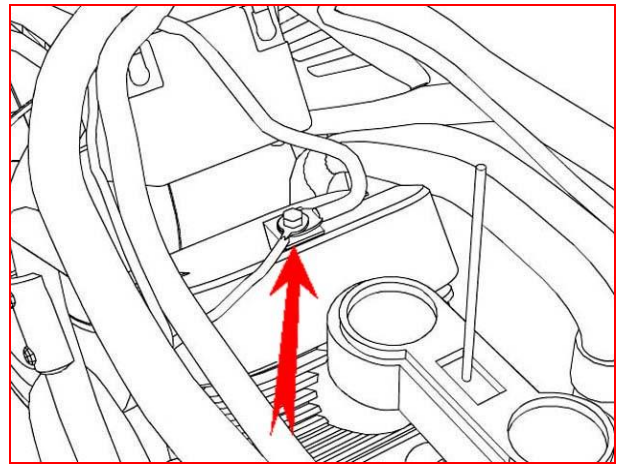


Figure 15



RECOMMENDED POT SETTINGS:

HIGHLY MODIFIED – NO HD DOWNLOADS

GRN: 2:00
YEL: 5:00
RED: 3:00
RPM: 7:00

HIGHLY MODIFIED – WITH HD DOWNLOAD

GRN: 2:00
YEL: 3:00
RED: 2:30
RPM: 7:00

ALL SETTINGS ARE GIVEN AS ACTUAL WALL CLOCK SETTINGS. PLEASE IGNORE THE NUMBERS ON THE POTS!!

Due to various engine packages additional tuning will be required and the settings are only given as a starting point.

Techlusion Corporation dba Dobeck Performance warrants that this product carries a warranty for 2 years from date of purchase against original defects in materials and workmanship to the original purchaser. Should this product fail to perform for either of the above reasons, Techlusion will repair or replace it with an equivalent product at no charge except for postage.

To obtain the benefits of this warranty, the purchaser must first call Techlusion to obtain a Return Merchandise Authorization (RMA) number. The purchaser can then send the product with proof of purchase date to:

**Dobeck Performance
Attn: Warranty Department
157 Progressive Drive
Belgrade, MT 59714**

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