Fi2000®

23801 E. La Palma Ave., Yorba Linda, Ca 92887 Ph. 714.692.8180, Fax. 714.692.5016

www.fi2000r.com

Items Supplied >

1 – Fi2000CL Fuel Injection Module
2 – Zip Ties 6”
1 – Zip Tie 8”
1 – Velcro Strip

Application(s) >

HARLEY V-ROD	2008 - 2010

Instruction Manual > **692-1613CL**

Read all instructions carefully and completely before installing your new Fi2000 module. It is recommended that a qualified mechanic or technician install this product.

1. Flip up seat, to gain access to radiator reservoir area.
2. Remove Dzus fastener to remove simulated fuel tank cover, over airbox housing. Depending on which model V-Rod is being worked on, the front shrouds covering the upper front frame section may also need to be removed.
3. Place Fi2000 in under-seat area, run fuel injector connector harness up right side frame rail between top right frame rail, and radiator overflow tank, see Figure 1. At the rear of the airbox, route the harness below the airbox, and downward next to the inner radiator hose. Unplug both stock fuel injector connectors, on the front and rear injectors between the engine cylinders, see Figure 2. These are disconnected, by depressing the metal springs that are on the end of each female connector. The stock female connectors are marked “F” and “R”, noting which connector goes to the front and rear injector, be sure to pay attention to this. Now connect the longer male Fi2000 connector to the front female H.D. connector. Plug shorter Fi2000 male connector into the stock rear female H.D. connector. Then plug the longer female Fi2000 connector onto the front stock H.D. injector. Plug the shorter Fi2000 female connector onto the rear injector. Each injector connector pair should rest underneath each respective injector.
4. Locate the rear oxygen sensor connector and follow the harness up to the under-seat area behind the radiator overflow tank. Pull the stock connectors up from below the overflow tank and disconnect, see Figure 1. The shorter Fi2000 Oxygen sensor harness with male and female connectors will plug into each of these stock male and female connectors. Tuck the connectors back underneath the bracket behind the radiator overflow tank.
5. Route the front oxygen sensor harness along the right upper frame rail as was previously done with the fuel injector connector harness. Continue routing the harness forward along the frame rail past the radiator overflow tank, and up past the airbox. Route the harness in front of the airbox, and over the top of the airbox intake snorkel, behind the headstay. Remove the left front frame/tank cover to gain access to the electrical connections above the front cylinderhead; removal of this cover may vary depending on which model V-Rod is having the module installed on it. Route the front Fi2000 O_2 sensor harness from the headstay area, down towards, the left front frame rail, and continue routing the harness along the inside of the frame rail towards the radiator and left footpeg mounting boss. Now locate the front oxygen sensor on the front headpipe, and trace the oxygen sensor harness back to the connectors tucked between the left front frame rail and plastic radiator shroud, see Figure 3.

Continued to next page!

**** Cobra® recommends you always wear a helmet while riding. Please never operate your motorcycle while under the influence of alcohol and/or drugs. Enjoy the new look of your motorcycle and please ride safely.***

5. Continued: Pull these connectors out, and disconnect them. Plug the corresponding Fi2000 connectors into each of the stock male and female connectors, and tuck the connectors back in between the frame rail and plastic shroud. Zip tie harness to left front frame rail to secure harness, see Figure 4, and reinstall the frame tank cover previously removed.
6. Route ground wire from Fi2000 module along fuel injector harness to left rear side of rear cylinder head, remove bolt from valve cover, and place through wire eyelet and reinstall bolt, being sure to torque to factory specifications.
7. Remove the backing from the Velcro and attach the Fi2000 to the frame cross member as shown in Figure 1.
8. Ziptie the Fi2000 Fuel injector and Oxygen sensor harness to the existing harness along the upper right frame rail and radiator overflow tank.
9. Before re-installing the simulated fuel tank cover and lowering seat verify your connections. Remove the door from the Fi2000 box to expose the LED's. **NOTE:** The Fi2000 base pot settings come preset from the factory for the V-Rod configured with stock air cleaner and aftermarket exhaust, shown in Figure 5. If the motorcycle is different then this configuration, use the advance tuning section to determine the proper settings. Verify the wire connections by (1) turning the ignition on, prior to starting, and see if all three LED's are on steady then cycle off after a few seconds. If you have no light, your ground connection (BLACK wire) has not made proper contact or your front injector connection is not complete. (2) After achieving a steady light from all three LED's, start the motorcycle, wait 15 seconds and let it idle, the green light should now be the only LED on. If all three LED's are still on after start up, verify you have attached the injector connectors correctly. Reattach the door when finished. Note: Make sure the ignition is turned off before changing any connection.
10. Reinstall the simulated fuel tank cover and tighten Dzus fastener. Lower the seat and be sure all hardware is tightened to factory specifications.

ADVANCED TUNING

Your Cobra Fi2000 fuel injection module has been tested and preset for best function and rideabilty on a motorcycle with aftermarket air cleaner and Cobra exhaust. The Fi2000 does however, have 3 important adjustments that allow you to tune the module for optimum performance, especially if you have performed other changes to your motorcycle. These adjustments also allow you to resolve drivability issues if our stock settings are not exactly right for your bike. Make sure your motorcycle is up to normal operating temperature (15 minutes of riding should be sufficient) before making any adjustments. Remove the door to expose the pots shown in Figure 5.

GREEN LED POT (left pot) - With the Closed Loop function of this module you do not need to adjust this setting, leave it at 2.0. Without a closed loop system this adjustment would affect idle and cruise fuel. If you had cruising issues, this is where you would try a different setting. Generally, surging and uneven running while cruising is a lean fuel condition, so adding a small increase in fuel by turning this adjustment clockwise with a small flat blade screwdriver a 1/2 of a position would help. The bike would need to be Test-driven to feel an improvement and only the setting would need to be increased until the surge went away. Also, backfiring or popping on trailing throttle is generally a lean symptom (or an exhaust gasket leak). The same small increases as above would be tried just until the backfiring would disappear.

YELLOW LED POT (middle pot) - this adjustment affects acceleration and power fuel. If you have a hesitation or bogging on acceleration, this is where you would try a different setting. Aftermarket air cleaner assemblies generally lean out fuel mixtures, so try small clockwise increases as above until a smooth acceleration returns.

Continued to Next Page!

RED LED POT (right pot) - this adjustment is the top end or power fuel adjustment. Just like the main jet in a carburetor, it starts to control fuel, as you demand maximum power from your bike and takes over completely above 4000 R.P.M. As performance gains are added to your motorcycle, such as big bore kits, camshafts, flowed cylinder heads, etc., each component will increase the fuel demand of the system. With the red pot turned to its maximum (10) position, the Fi2000 will cope with nearly 100 R.W. horsepower. An all-stock motor will only require a 2 position. In general if you are using quality performance engine upgrades, in a sensible combination you may equate the numbers evenly from 2 up to 10 based on horsepower gains.

TUNING NOTES

Typically 2 into 1 on our speedster exhaust system require one additional position, on the yellow and red pots, over slip-ons or staggered duals.

On high performance motors, slip-on mufflers do not flow well enough and create fuel setting problems and detonation. Cobra recommends the installation of any of its complete exhaust systems.

TROUBLE SHOOTING

If you have any problems refer to Step 9 in the main body of the instructions.

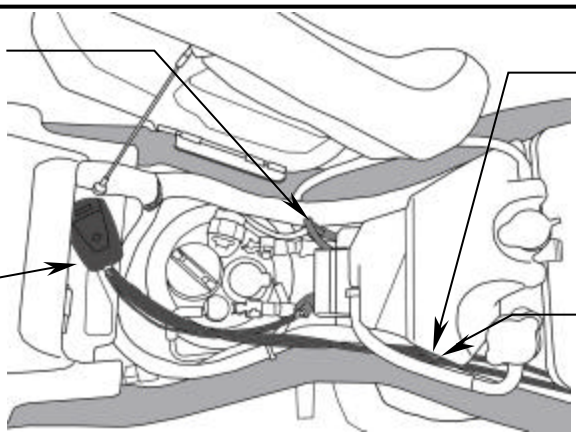


FIGURE 1

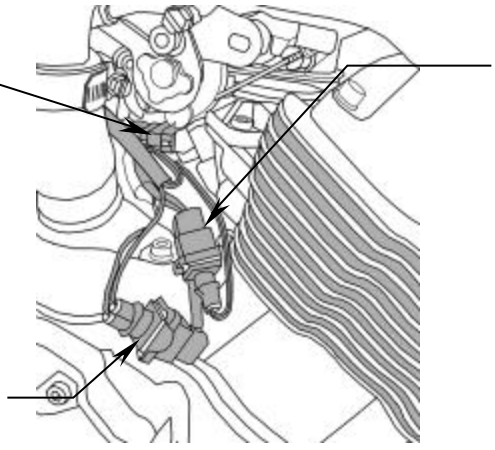


FIGURE 2

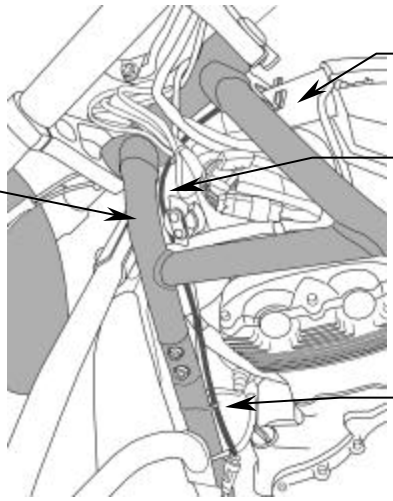


FIGURE 3

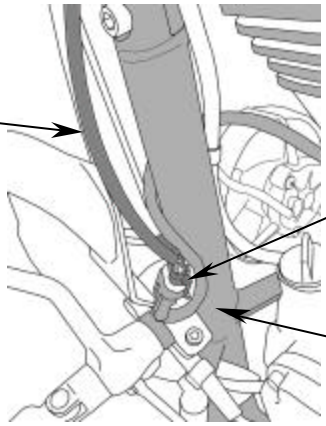


FIGURE 4

Stock Air Cleaner, Aftermarket Full Exhaust

Pot Settings:

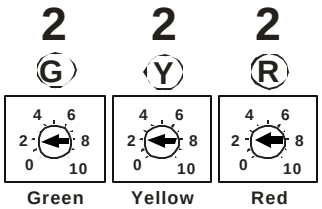


FIGURE 5

Fi2000 Default pot setting