## **Fi2000**®

## Items Supplied >

- 1 Fi2000 Fuel Injection Module
- 6 Zip Ties 6"
- 1 Velcro Strip

### Application(s) >

92-1612CL

HARLEY DRESSER CLOSED LOOP FLHT/ FLHR/ FLTR/ FLHX 2008-2009

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## Instruction Manual >

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. Remove the seat by removing the Phillips head screw at the rear of the seat and sliding it back. Remove the right side panel by pulling it out of the three retaining grommets.
- 2. Place the FI2000 module on top of the ECU, see Figure 1. Run the two oxygen sensor harnesses inside the right side frame rail and plastic housing for the stock wiring. Look for the fuel tank vent hose and follow it.
- 3. Locate and unplug the connector for the rear oxygen sensor. Plug the male connector of the shorter oxygen sensor harness into the connector on the oxygen sensor. Now plug the female pigtailed connector into the connector on the motorcycle's stock harness, see Figure 2.
- 4. Route the longer front oxygen sensor harness along the lower frame rail with the stock wiring harness. Using the supplied zip ties secure the harness to the lower frame rail. Make sure it is clear of any moving or hot parts.
- 5. Locate and unplug the connector for the front oxygen senor. Plug the male connector of the oxygen sensor harness into the connector on the oxygen sensor. Now plug the female pigtailed connector into the connector on the motorcycle's stock harness, see Figure 3. Using the supplied zip ties secure the oxygen sensor connector to the small frame brace.
- 6. Remove the two bolts at the back of the fuel tank and raise the fuel tank as far as possible. Use a small block of wood to prop up the tank. **Note:** The handlebars must be turned to one side to perform this step.
- 7. Route the injector harness forward up the right side of the motorcycle and under the fuel tank so it ends at the same location the stock wiring drops down to the throttle body. Tuck the harness between the right frame rail and plastic wiring housing.
- 8. Locate the factory connector on each fuel injector. Depress the tab on either side of the connector and pull the connector free from the injector. Move it out of the way, see Figure 4. **Note:** A pair of needle nose pliers and a long flat blade screwdriver helps with this job.
- 9. Plug the longer of the two female fuel injector connectors onto the furthest most forward fuel injector. Plug the stock injector connector onto the pigtailed male connector. Repeat this step on the rear fuel injector.
- 10. Attach the ground wire to the ground lug and Velcro the FI2000 module to the top of the stock ECU, see Figure 1.

\* For California riders we offer Air Resources Board approved Fi2000 ARB units with Executive Order number D-633-2. All other Fi2000 models are not legal for street use in California.

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- 11. Before lowering the fuel tank, and replacing the seat, verify your connections. Remove the door from the Fi2000 box to expose the LED's. Verify the wire connections by (1) turning the ignition on, prior to starting, and see if all three LED's are on steady. 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.
- 12. Lower the fuel tank and replace the two mounting bolts. Then replace the right side panel and seat.

#### **ADVANCED TUNING**

Your Fi2000 fuel injection module has been tested and preset for best function and rideability on a motorcycle with aftermarket aircleaner and a performance aftermarket 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 4.

GREEN LED POT (left pot) – With the Closed Loop function of this module you do not need to adjust this setting, leave it at 1.5. 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.

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. You can generally, if you are using quality performance engine upgrades, in a sensible combination equate the numbers evenly from 2 up to 10 based on horsepower gains.

### **TUNING NOTES**

Typically 2 into 1 exhaust systems 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. The installation of a complete exhaust system is recommended.

### **TROUBLE SHOOTING**

If you have any problems refer to Step 11 in the main body of the instructions.

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# **Fi2000**®





