

Items Supplied >

- 1 – Fi2000CL Fuel Injection Module
- 4 – Zip Ties 6"
- 1 – Zip Tie 4"
- 1 – Velcro Stripe

Application(s) >

HARLEY DYNA CLOSED LOOP
(except 16-17 FXDLS)
2012-2017

Instruction Manual >

92-1616CL

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Read all instructions carefully and completely before installing your new Fi2000CL module. It is recommended that a qualified mechanic or technician install this product.

1. Remove the seat, and air cleaner assembly, remove both front and rear gas tank mounting bolts. Prop the rear of the gas tank up approximately 2"-4" with a small block.
2. Remove left side cover by pressing plastic tab upward and pulling bottom of steel cover outward and up to release from upper retaining tabs, see Figure 1.
3. Pull engine ECU outward by releasing from retaining tab to allow for Fi2000 wire harness installation, Figure 2.
4. Pull existing wire harnesses out from under the seat frame area. Place the Fi2000 tuner and harness in the area which is under the seat, see Figure 3. Route the two longer Fi2000 harnesses through the left side cover area where the ECU was pulled out, see Figure 2, and continue routing both through the hole at the front of the left side cover inner housing, be sure to REVIEW in Figure 2! The longest harness must be routed to the right side of the motorcycle next to the starter, and ground lug on case. The other harness will go to the injectors. Once harnesses have been pulled into place, be sure to reinstall engine ECU back into place, being sure none of the harnesses get stuck on the other electrical components, it must snap back into place under the tab.
5. Route the injector harness to the front and rear fuel injectors located between the cylinder heads, along the right side of the upper frame backbone. Place the harness in the plastic harness channel provided along the frame. Locate the factory connector on each fuel injector. Depress the clip on the connector and pull the connector free and move it out of the way. **Note:** A pair of needle nose pliers and a long flat blade screwdriver helps with this job. Attach the pair of Fi2000 module's injector connectors labeled "FRONT" to the front injector. Take the original HD connector and insert the corresponding Fi2000 connector into it, refer to Figure 4.
6. Attach the Fi2000 module's remaining injector connectors labeled "REAR" onto the rear injector. Then take the original HD connector and insert the corresponding Fi2000 connector into it, refer to Figure 4. Secure the Fi2000 injector harness to one of the existing HD harnesses, at the front of the plastic harness tray, along the frame rail, under the tank, using the supplied 4" zip tie.
7. Remove right side cover by removing Phillips screw at bottom of cover and lifting bottom of cover outward and up to release from upper tabs. Route the black ground wire from the Fi2000 through the gap just under the frame and to the rear of the battery box. Attach the ring terminal to the negative post of the battery.
8. Route the longest Fi2000 oxygen sensor harness from rear of engine area to below battery and next to starter. Remove the nut securing ground wire and pull off ground wire to allow connectors to pass through between rear of transmission case and harness sheath in front of swingarm, see Figure 5. Reinstall nut securely!

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9. Continue routing connectors and harness forward along lower right frame rail, be sure to keep clear of brake rod and linkage. Route forward to voltage regulator. Remove the two Allen bolts holding the voltage regulator onto the lower front frame, see Figure 6. Let it drop down, then directly behind that is a black plastic panel. Hinge that panel down to access the plugs behind it. Locate the front oxygen sensor connection, slide it off its holding pin and unplug the connector. Plug the Fi2000 O₂ sensor harness male connector into the O₂ sensor female connector and slide them back onto stock plastic panel location. Mate the stock male harness connector with the female Fi2000 connector, place this set of connectors between connectors attached to plastic panel, be sure Fi2000 harness exits on the right side between panel and frame. Reinstall the panel and the voltage regulator. Leave a small amount of slack in harness at connector and zip tie along lower right frame rail in 3 locations.
10. Locate the black waterproof connector in the wire harness bundle that was tucked down into the open area under the seat, see Figure 3. Unplug the female connector that comes from the rear oxygen sensor, and mate it with the male connector from the shorter Fi2000 O₂ sensor harness. Mate the stock male connector with the female Fi2000 connector. Be sure connectors are fully seated.
11. Remove the block propping up the fuel tank and lower fuel tank back into proper position.
12. Before reinstalling the fuel tank bolts and the seat, verify your connections. Remove the door from the Fi2000 box to expose the LED's. The pot settings on the Fi2000 must be set to match the proper intake and exhaust configuration, Refer to Figure 7 and the **Advanced Tuning** section below to determine the proper configuration. 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 the injector connections are 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.
13. Remove the backing from the Velcro and attach the Velcro pad down between the back of the battery and the ECU on the flat area of the frame. Apply the mating Velcro to the back of the Fi2000 and attach, see Figure 3.
14. Reinstall the right side cover. Be sure the Phillips screw is properly secured. Reinstall left side cover and be sure that it is properly secured by the tab which keeps it in place. Reinstall fuel tank bolts.
15. Reinstall seat and air cleaner. Secure any fasteners loosened during assembly.

ADVANCED TUNING

Your Fi2000 fuel injection module has been tested and preset for best function and rideability on a motorcycle with stock air cleaner and an aftermarket performance slip-on mufflers. The Fi2000 does 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.

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.

ADVANCED TUNING CONTINUED

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.

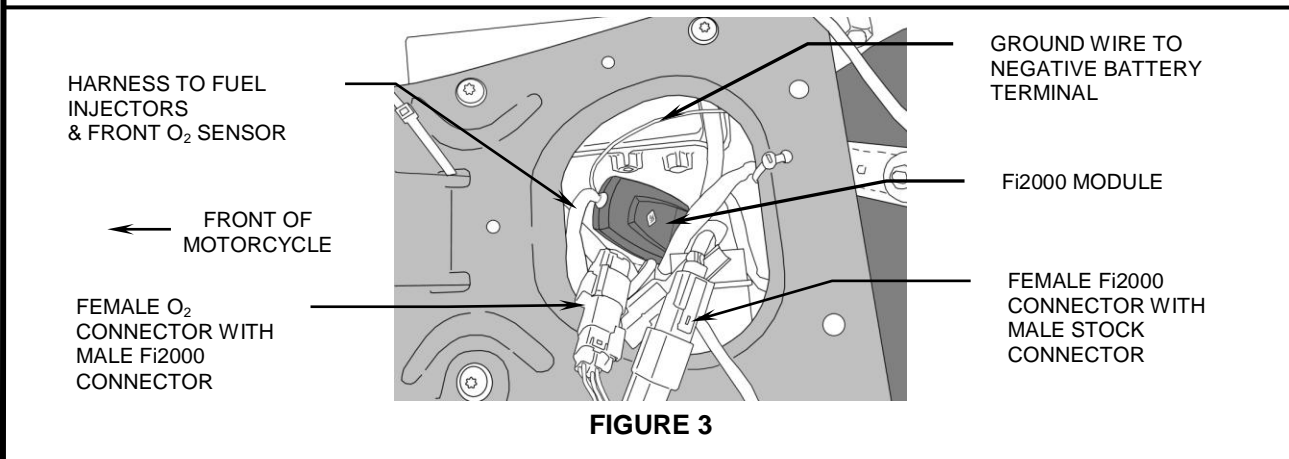
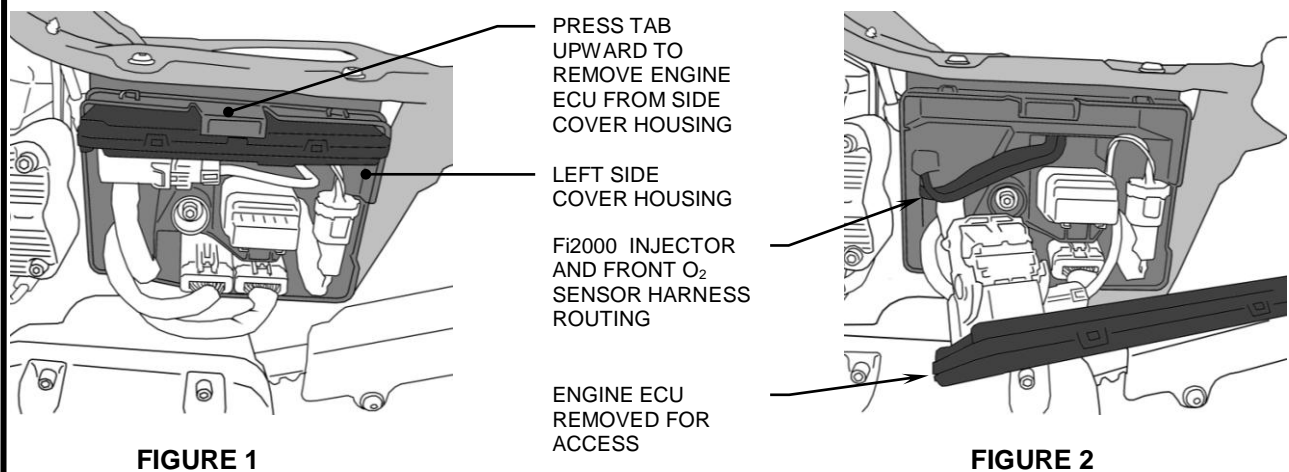
RED LED POT (right pot) - this adjustment is the top end or power fuel adjustment. Just like the main jet in a carburetor, it starts to control fuel as you demand maximum power from your bike and takes over completely above 4000 R.P.M. As performance gains are added to your motorcycle, such as big bore 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. 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.

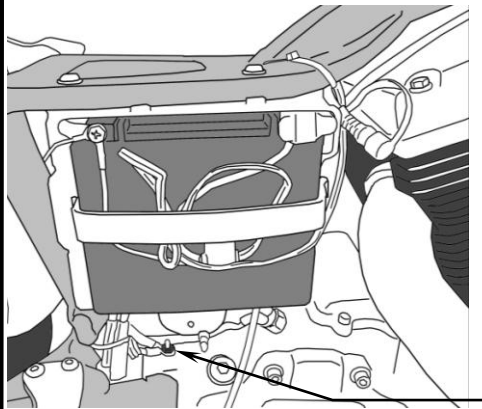
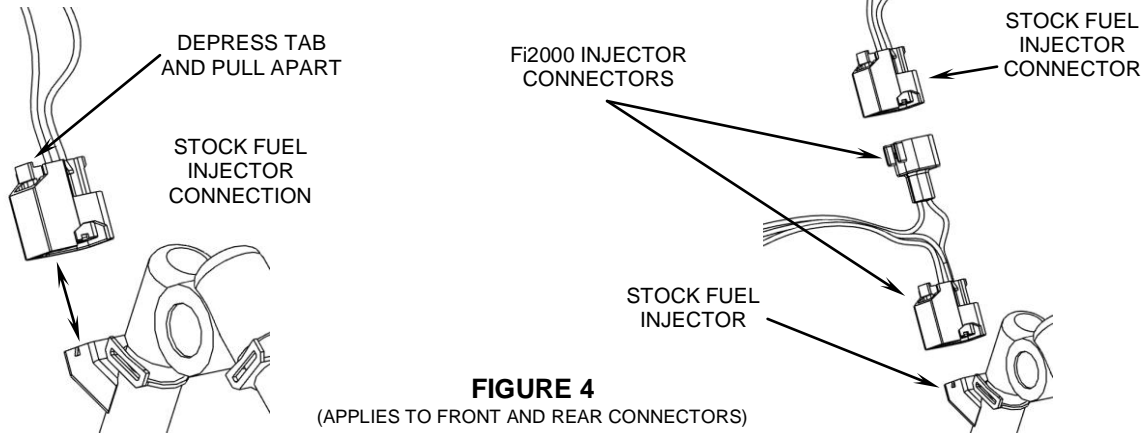
TUNING NOTES

Typically 2 into 1 exhaust systems require one additional increase, 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.

These settings have been tested for stock motorcycles that have popular aftermarket slip-on exhaust systems installed. This Fi2000 will also work in combination with an aftermarket air intake system and various complete exhaust systems.

TROUBLE SHOOTING: If you have any problems refer to Step 12 in the main body of the instructions.



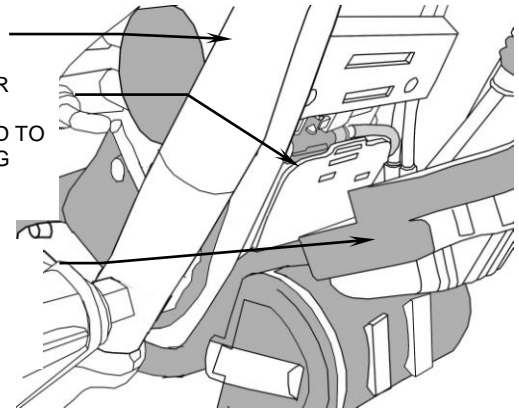


RIGHT FRONT FRAME RAIL

FEMALE O₂ CONNECTOR WITH MALE Fi2000 CONNECTOR ATTACHED TO PLASTIC PANEL, MATING CONNECTOR SECURED NEXT TO IT.

VOLTAGE REGULATOR BOLTS REMOVED AND REGULATOR LOWERED FOR ACCESS TO O₂ CONNECTORS

REMOVE GROUND NUT FOR FRONT Fi2000 O₂ HARNESS INSTALLATION



Stock w/ Slip-on Mufflers

Default Pot Settings:

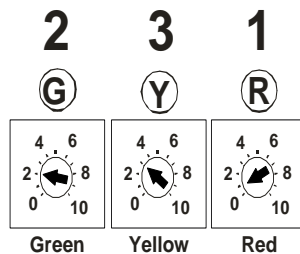


FIGURE 7

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