

## Items Supplied >

- 1 – Fi2000CL Fuel Injection Module
- 2 – Zip Tie 6"
- 1 – Zip Tie 12"
- 1 – .75" Plastic Plug
- 1 – Velcro Strip

## Application(s) >

YAMAHA ROADSTAR 1700 2008-2013

## Instruction Manual >

92-1771CL

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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. Before installing the Fi2000CL it is recommended that the fuel tank be low on fuel.**

1. Remove the seat by turning the ignition key entirely to the left side. Then first remove the painted left then right hand side cover from behind the engine, secured with large button head screws on each side. There is a M6 Hex screw hidden between the covers, which must be removed before removing the right cover.
2. Remove the three buttonhead screws retaining the instrument cluster on top of the fuel tank, once the bezel is free disconnect the two harness connectors located just to the front of the fuel tank, remove the bezel entirely to prevent it from scratching the fuel tank.
3. Remove the 10mm Cap nut and bolt retaining the rear of the fuel tank. Once removed, prop the rear of the fuel tank up with a block, to gain access to the top of the engine area and six-pin fuel injector connector.
4. Position the Fi2000 to the rear of the tool kit on the flat frame member (under the seat) and feed the six pin connector harness around the right side frame rail, and up underneath the fuel tank, locate the stock six pin connector on top of the fuel injector area, disconnect it by prying up the tab on the female connector. Once disconnected, mate the corresponding male and female Fi2000 connectors with the stock connectors, be sure they seat firmly when pressed together, see Figure 1.
5. Route the two oxygen sensor harnesses along the upper right frame rail, and then underneath it directly behind the oil fill neck and ground connection, see Figure 2. Route both connectors behind the insulated relay cover; you may need to pull it outward slightly, to fit the harnesses behind it.
6. Locate the rear oxygen sensor connector mounted on the side of the relay cover. On the female connector pull the retaining tang outward to release the male connector. Insert the corresponding male and female Fi2000 connectors into the stock connectors from the shorter of the two oxygen sensor harnesses, be sure the connectors seat properly when pressed together. Tuck the excess harness beneath the relay cover; see Figure 2.
7. Route the longer Fi2000 oxygen sensor harness, along the right rear frame rail, just in front of the swing arm, continue routing it along the lower frame rail forward toward the front stock oxygen sensor connector. Disconnect the stock oxygen sensor connector, and mate the corresponding Fi2000 male and female connectors to it, be sure they seat properly when pressed together, see Figure 3.
8. On the front oxygen sensor harness, pull any extra slack out of it back towards the insulated relay cover. Install two 6" zip ties along the frame rail as indicated in Figure 4, to prevent the harness from getting too close to the exhaust.
9. On the fuel injector harness, pull any slack out of it back toward the Fi2000 housing, and install one 12" zip tie around the harness and frame neck, trim off excess zip tie, see Figure 5.
10. Locate the air injection pump and inlet hose at the front of the engine on the right side. To prevent severe trailing throttle backfiring, install the supplied 0.75" plug into the air inlet hose, see Figure 6, push plug in until flush.

**\* It is recommended that you always wear a helmet while riding. Please never operate your motorcycle while under the influence of alcohol and/or drugs. Enjoy the new power of your motorcycle and please ride safely.**

11. Remove the socket head screw retaining the ground wire to the oil fill neck, and attach the Fi2000 ground wire to the same location, reinstall the screw and tighten securely, see Figure 7.
12. Remove the block supporting the fuel tank, and lower it back into place, reinstall the 10mm cap nut and screw, and tighten securely.
13. Reconnect the two instrument bezel connectors and reinstall the 3-buttonhead screws securing it.
14. Remove the door from the Fi2000 module to expose the LED's. **NOTE:** The Fi2000 base pot settings come preset from the factory for the Roadstar, shown in Figure 8. Verify the wire connections by, (1), turning the ignition on while watching the 3 LED's. They will all light up for a few seconds, and then go off. This is correct. If there are no lights visible, make sure the side stand is up, bike is in neutral, clutch is in and handlebar engine switch is set to run. If there are still no lights visible, re-check that all connectors are fully engaged and the ground wire is connected correctly. (2), after achieving a steady light from all three LED's, start the motorcycle; the green light should now be the only LED on. If all three LED's are still on after start up, verify the injector connectors are correctly attached. Reattach the access door. **NOTE:** Make sure the ignition is turned off before changing any connections.
15. Once it has been confirmed that the Fi2000 is functioning properly, remove the double sticky tape from the Velcro on the back of the Fi2000 Module and attach it in place on the flat frame rail, where it was previously resting, as in Figure 6. Install the side covers and tighten all screws/bolts securely, install the seat and confirm all removed or loosened components have been reinstalled properly.

## ADVANCED TUNING

Your Cobra® Fi2000 fuel injection module has been tested and preset for best function and rideability on a motorcycle with aftermarket aircleaner 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 8.

**GREEN LED POT (left pot)** – With the Closed Loop function of this module you do not need to adjust this setting, leave it at 1.0. 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.

**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

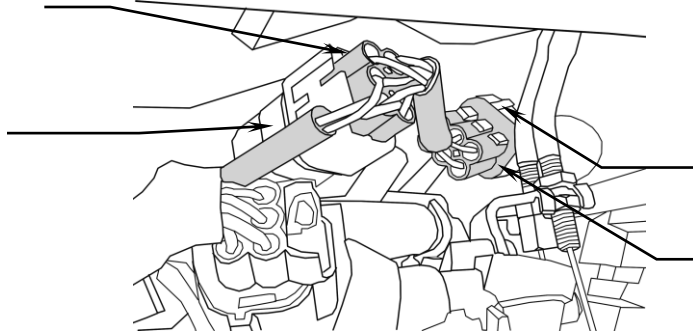
Typically 2 into 1 or our speedster exhaust system require one additional position, on the yellow and red pots, over slip-ons or staggered duals. On high performance motors, slip-on mufflers do not flow well enough and create fuel setting problems and detonation. Cobra recommends the installation of any of its complete exhaust systems.

## TROUBLE SHOOTING

If you have any problems refer to: Step 13, in the installation body of these instructions.

MALE Fi2000  
CONNECTOR

ROADSTAR  
FEMALE  
CONNECTOR



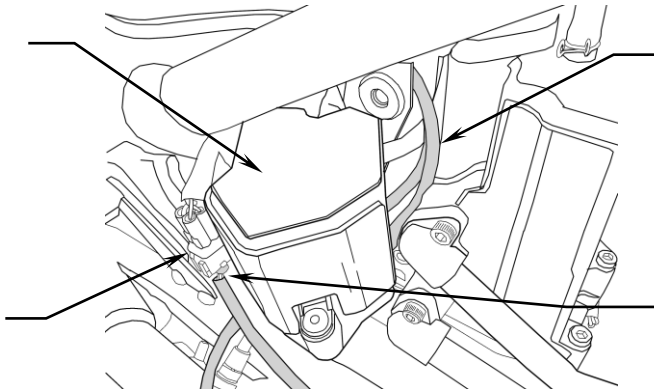
ROADSTAR  
MALE  
CONNECTOR

FEMALE  
Fi2000  
CONNECTOR

**FIGURE 1**

INSULATED RELAY  
COVER ON RIGHT SIDE  
BEHIND ENGINE, SIDE  
COVER MUST BE  
REMOVED TO GAIN  
ACCESS

ROADSTAR REAR  
FEMALE O<sub>2</sub> SENSOR  
CONNECTOR

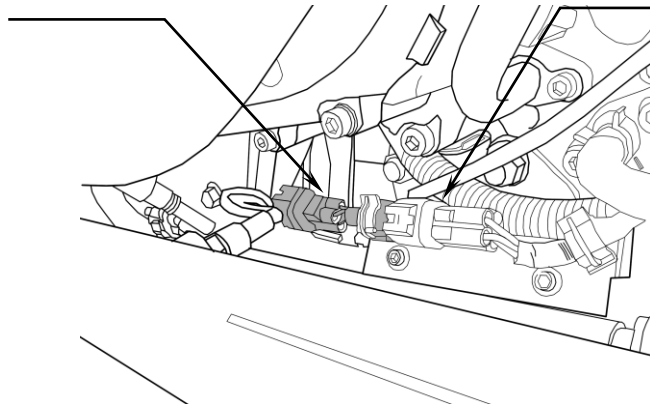


HARNESS ROUTED  
BEHIND INSULATED  
RELAY COVER

REAR MALE Fi2000 O<sub>2</sub>  
CONNECTOR

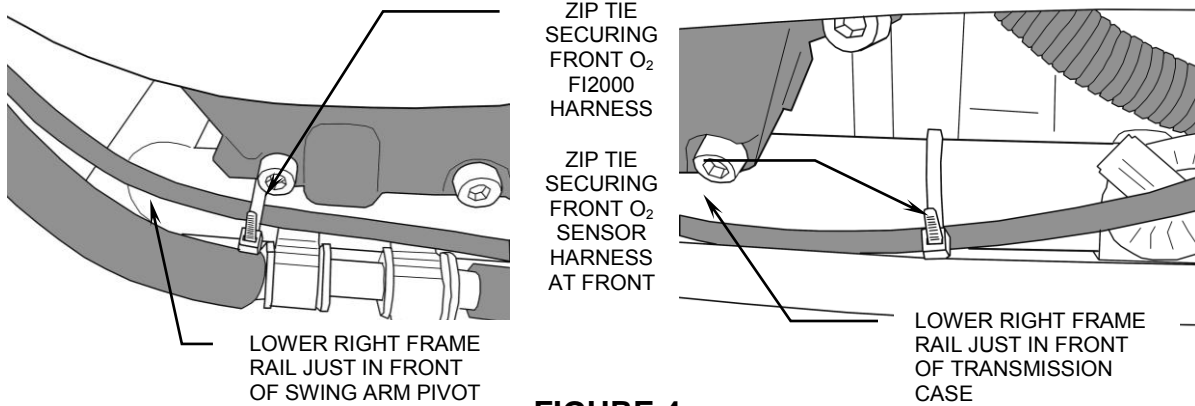
**FIGURE 2**

FEMALE Fi 2000  
O<sub>2</sub> CONNECTOR  
WITH STOCK  
MALE O<sub>2</sub>  
CONNECTOR

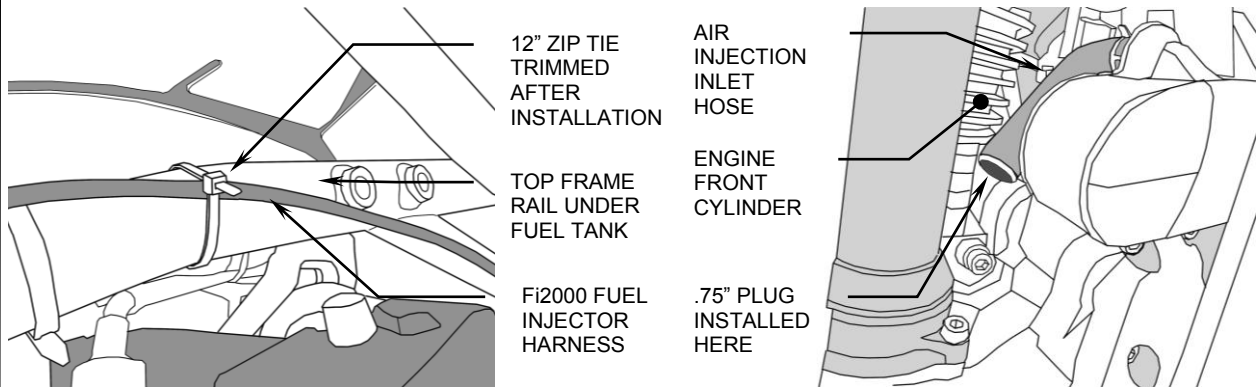


STOCK FEMALE  
CONNECTOR WITH  
MALE Fi2000  
CONNECTOR

**FIGURE 3**

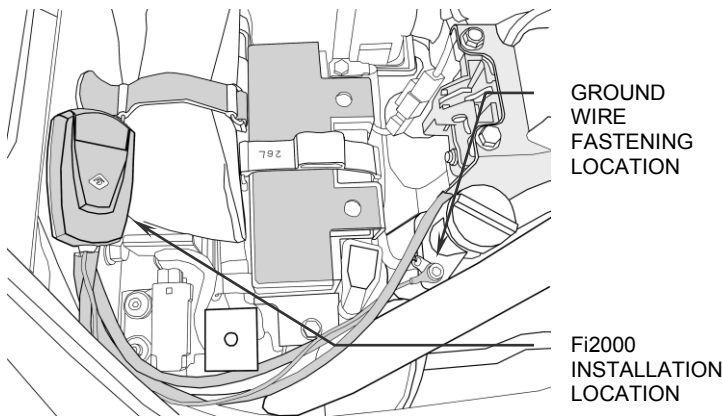


**FIGURE 4**



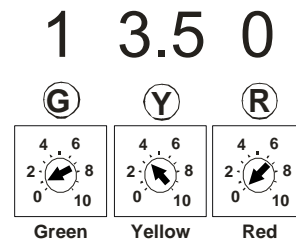
**FIGURE 5**

**FIGURE 6**



**FIGURE 7**

**Default Pot Settings:**



**FIGURE 8**