

Items Supplied >

- 1 – Fi2000R Fuel Injection Module
- 1 – Zip Tie 12"
- 1 – .75" Plastic Plug
- 1 – Velcro Strip

Application(s) >

YAMAHA ROADSTAR 2008-2009

Instruction Manual >

92-1771

Page 1 of 3

Cobra recommends the use of the Closed Loop Module 92-1771CL or 92-1771CL-50 if your motorcycle will continue use of the Oxygen Sensors in your exhaust System. This model is intended for motorcycles, which do not have Oxygen Sensors in the exhaust system.

Read all instructions carefully and completely before installing your new Fi2000 module. It is recommended that a qualified mechanic or technician install this product. Before installing the Fi2000 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 10 mm Cap nut and bolt retaining the rear of the fuel tank. Once removed, prop the rear of the fuel tank up with a block of wood, 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. On the fuel injector harness, pull any slack out of it back toward the Fi2000 housing, and install one 12" ziptie around the harness and frame neck, trim off excess zip tie, see Figure 2.
6. Locate the air injection pump and inlet hose at the front of the engine on the right side. To prevent sever trailing throttle backfiring, install the supplied 0.75" plug into the air inlet hose, see Figure 3, push plug in until flush.
7. 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 4.
8. Remove the block supporting the fuel tank, and lower it back into place, reinstall the 10mm cap nut and screw, and tighten securely.
9. Reconnect the two instrument bezel connectors and reinstall the 3-buttonhead screws securing it.
10. 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 5. 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. **CONTINUED TO NEXT PAGE!**

*** 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.**

10. (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 when finished. **NOTE:** Make sure the ignition is turned off before changing any connections.
11. 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 3. 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

The Fi2000R has the ability to efficiently tune the EFI system on your motorcycle for slip-on or full exhaust systems. It comes pre-set from the factory for popular brand name slip-on mufflers. Both dyno testing and on-road exhaust gas analysis have been used to develop the best base settings for drivability and power. Not all slip-on mufflers flow exactly the same. Some eliminate power valves and others don't. Some are made with street baffles, other with race or competition baffles. Full exhaust systems offer even greater variation in construction, features and performance. The Fi2000R has the ability to tune the EFI system on your motorcycle to any of these exhausts by applying a logical and systematic approach to altering the base settings supplied with your Fi2000R. These suggestions should be followed step by step and help you achieve success.

**** Only attempt adjustments on a fully warmed motor ****

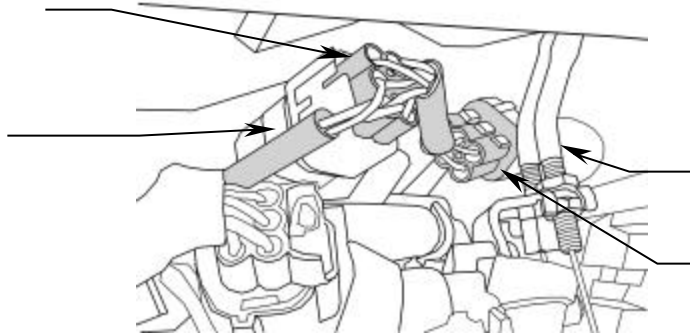
1. Start with the base setting, shown in Figure 5, even if you have a full exhaust system. Adjust and test only *ONE* adjustment pot at a time until you are happy with the result.
2. Start with the left hand or green light pot. This adjustment works either from idle or above idle (varies with bike) to a R.P.M. of about 5000 (also varies with bike) while the bike is driven at a steady throttle or slowly increasing throttle. This is the cruise range and is where the emissions leanness creates issues like choppy on-off throttle application, surging, and backfiring on trailing throttle.
3. Turn this pot back to zero, and make one position increases until you feel the best performance in this range. Do this test a few times to make sure you have it right.
4. The middle or yellow pot is an engine load- triggered fuel adding adjustment. A rapid increase of the throttle at any R.P.M. will add additional fuel and as long as that predetermined load is present, fuel will continue. As engine loads increase in higher gears the acceleration fuel will stay on longer and be more effective. Starting with the base setting, test ride the motorcycle in 4th or 5th gear and perform moderately fast roll-on throttle from a repeating standard R.P.M. or speed. Increase the pot one position at a time and stop as soon as you don't feel any improvement.
5. The right hand or red pot is for the fuel setting required when the engine is maximizing its R.P.M. and power delivery. This pot is similar to the main jet in a carburetor. It will take a combination of a minimum R.P.M. and a predetermined amount of engine load to initiate this fuel. The straightaway on a racetrack or an inertia dyno are the best places to set this pot. Full exhaust systems of high quality construction increase flow characteristics and will increase fuel demands over our base settings. Also, air filters specifically designed for higher than stock airflow can create need for higher fuel setting. Try an additional one-position pot setting at a time.
6. Camshaft changes can alter an engine's volumetric efficiency and create a greater demand on the engine's fuel system than the Fi2000R may have the ability to adjust for.

TROUBLE SHOOTING

If you have any problems refer to: Step 9, in the installation body of these instructions.

MALE FI2000
CONNECTOR

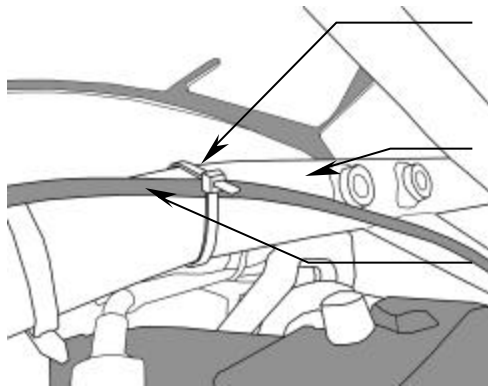
ROADSTAR
FEMALE
CONNECTOR



MALE
ROADSTAR
CONNECTOR

FEMALE
FI2000
CONNECTOR

FIGURE 1



12" ZIP TIE
TRIMMED
AFTER
INSTALLATION

TOP FRAME
RAIL UNDER
FUEL TANK

FI2000 FUEL
INJECTOR
HARNESS

FIGURE 2

AIR INJECTION
INLET HOSE

ENGINE
FRONT
CYLINDER

.75" PLUG
INSTALLED
HERE

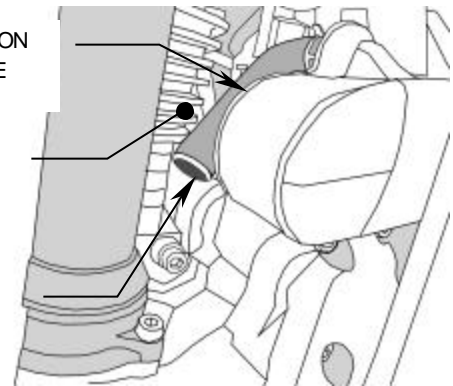
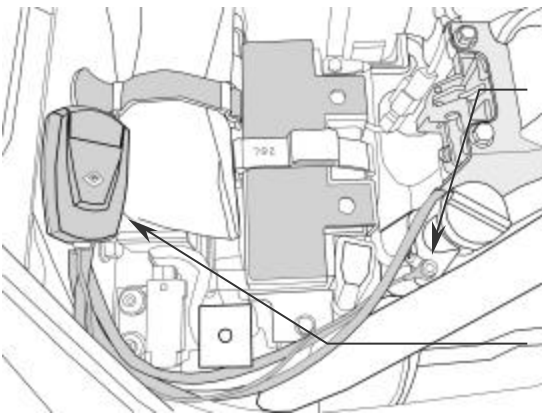


FIGURE 3



GROUND
WIRE
FASTENING
LOCATION

FI2000
INSTALLATION
LOCATION

FIGURE 4

Default Pot Settings:

1 3.5 0

G

Y

R



Green

Yellow

Red

FIGURE 5