

**Items Supplied >**

1 – Fi2000R FUEL INJECTION MODULE  
1 – 6" 18# TEST ZIP TIE  
1 – VELCRO STRIPE

**Application(s) >**

Kawasaki Vulcan 900

06-19

**Instruction Manual >**

92-1968

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**Read all instructions carefully and completely before installing your new Fi2000R module.**

**It is recommended that a qualified mechanic or technician install this product.**

**Before installing the Fi2000R it is recommended that the gas tank be low on fuel.**

1. Remove the seat. Remove the outer chrome air cleaner cover, and then remove the air filter element by removing the Phillips screw at the top of the filter. Now remove the five Allen head bolts around the air intake boot and remove the two lower Allen head bolts holding the back housing on, see Figure 1. Pull the housing far enough forward to access and unplug the large breather hose, the intake air sensor wire plug, and the idle control cable. Now lower the housing out of the way.
2. Remove the two bolts at the rear of the gas tank and lift the tank about three inches and securely prop it in that position. Remove the two screws that retain the battery cover / tool kit tray and remove it.
3. Route the Fi2000R harness forward from the battery area, under the frame through the opening where the stock harness is routed. Feed the harness forward on the left side of the engine, and then route it back under the frame (just ahead of the rear cylinder head) to the throttle bodies.
4. Locate and unplug the stock fuel injectors on the top of the throttle body. Plug the matching Fi2000R connectors onto the injectors; the longer female Fi2000R connector plugs onto the forward injector see Figure 2. Now plug the original female connectors into the corresponding black male Fi2000R connectors. Ziptie the Fi2000R harness to the main harness, see Figure 2.
5. Attach the black ground wire to the negative post of the battery and Velcro the Fi2000R module to the battery cover / tool kit tray as shown in Figure 3. Prior to reinstalling the seat, verify connections and proper LED Functions.
6. Remove the door from the Fi2000R module to expose the LED's. Verify the wire connections by turning the ignition on, prior to starting, and see if all three LEDs are on steady 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.

**Continue to next page!**

**\* 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. Visit COBRAUSA.COM to choose the correct Fi2000 for your vehicle.**

7. After achieving a steady light from all three LEDs, start the motorcycle and let it idle. While the bike is idling all three LEDs should be on steady. When the RPMs go above 1500 the yellow and red LEDs will turn off and the green LED will stay on steady. To check this, wait at least 10 seconds after starting the engine and then raise the engine speed to 1500-2000RPMs. If the green LED is the only LED on steady, then all connections have been made correctly.
8. If all three LED's are still on after start up verify the injector connectors are correctly attached. Reattach the access door when finished and install remaining components. **NOTE:** Make sure the ignition is turned off before changing any connection.

**ADVANCED TUNING**

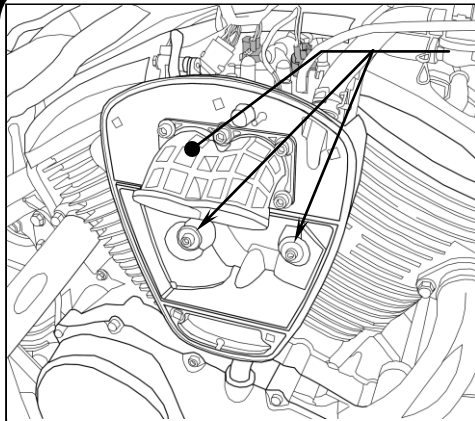
The Fi2000R has the ability to efficiently tune the EFI system on your motorcycle for slip-on or full exhaust systems. It comes pre-set from the factory for popular brand name slip-on mufflers. Both dyno testing and on-road exhaust gas analysis have been used to develop the best base settings for drivability 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, others 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 engine \*\***

1. Start with the base setting; see Figure 4, 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 correct.
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 4<sup>th</sup> or 5<sup>th</sup> 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 do not 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 6, in the installation body of these instructions.**



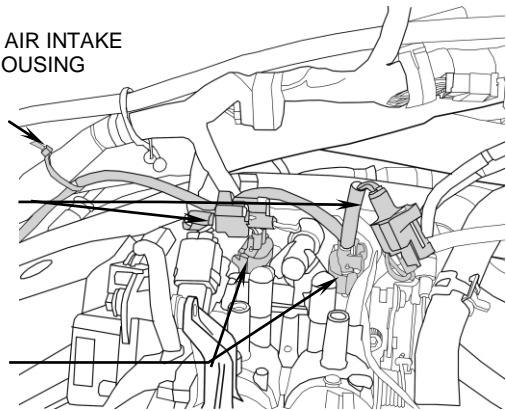
**FIGURE 1: LEFT SIDE INJECTOR**

REMOVE 5 BOLTS FROM AIR INTAKE  
BOOT AND 2 FROM HOUSING

ZIP TIE TO STOCK  
HARNESS

MALE FI2000R  
CONNECTOR  
ATTACHED TO  
FACTORY FEMALE  
CONNECTOR

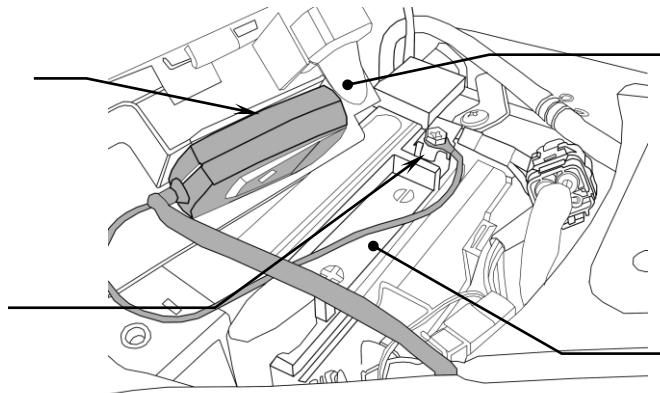
FEMALE FI2000R  
CONNECTOR  
ATTACHED TO  
FUEL INJECTOR



**FIGURE 2: RIGHT SIDE INJECTOR**

FI2000R BOX  
INSTALLATION  
LOCATION

GROUND  
WIRE  
CONNECTION  
LOCATION



BATTERY COVER /  
TOOL KIT TRAY  
(UNBOLTED)

BATTERY

**FIGURE 3: Fi2000R ECU INSTALLATION LOCATION**

Default Pot Settings:

4 2 0

(G)

(Y)

(R)



Green



Yellow



Red

**FIGURE 4**