

# INSTALLATION INSTRUCTIONS



# UNLEASH.

THE SMARTEST PERFORMANCE TUNING TECHNOLOGY

**ZFI** FUEL MANAGEMENT

**ZFI TC** FUEL + QS + TRACTION CONTROL

**HARLEY DAVIDSON TOURING | 2008-2013**  
**F251 | T251**

## 1 > READ

### WARNINGS > INSTALLING



- We strongly suggest that an experienced technician install this product.
- Read through all instructions before beginning installation.
- This document is intended for use by qualified technicians.
- This is not a replacement for the factory Engine Control Unit (ECU).
- Refer to a factory service manual for more specific stock component identification/location information and removal/assembly procedures.

### WARNINGS > USING



- Use only in race or other closed-course applications and never on public roads.
- Z-Fi products are not certified by the California Air Resource Board (CARB) for use on CA highways.

### GETTING HELP



- Factory support is available in the US at 909-597-8300.
- For fastest support outside of the US, find your local importer at [bazzaz.net](http://bazzaz.net).

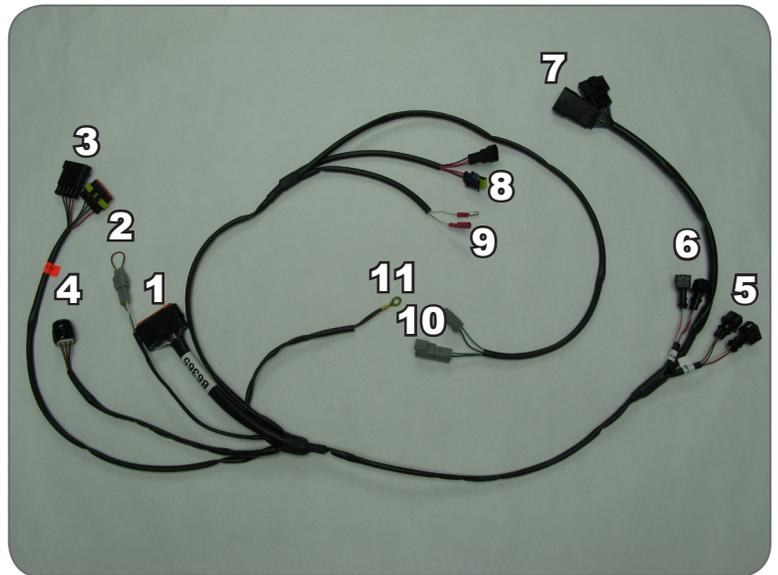
# 2>IDENTIFY

## INCLUDED PARTS

1. Z-Fi/Z-Fi TC control unit
2. Fuel harness
3. Coil harness (For Z-Fi TC only)
4. Shift Switch and mounting hardware (For Z-Fi TC only)
5. USB cable
6. Swingarm stickers
7. Download Bazzaz software from [bazzaz.net/index.php/software-overview](http://bazzaz.net/index.php/software-overview)

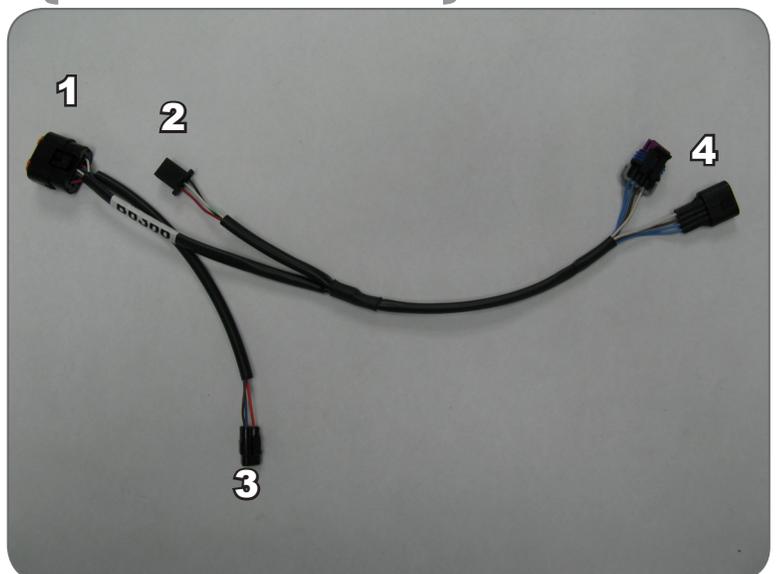
## FUEL HARNESS

1. Main
2. Map Select
3. +12v SW Power
4. Z-AFM
5. Rear Injector
6. Front Injector
7. TPS
8. Speed
9. Neutral
10. CKPS
11. Ground



## COIL HARNESS (Z-FI TC ONLY)

1. Main
2. Shift Switch
3. TC Adjust Switch
4. Coils

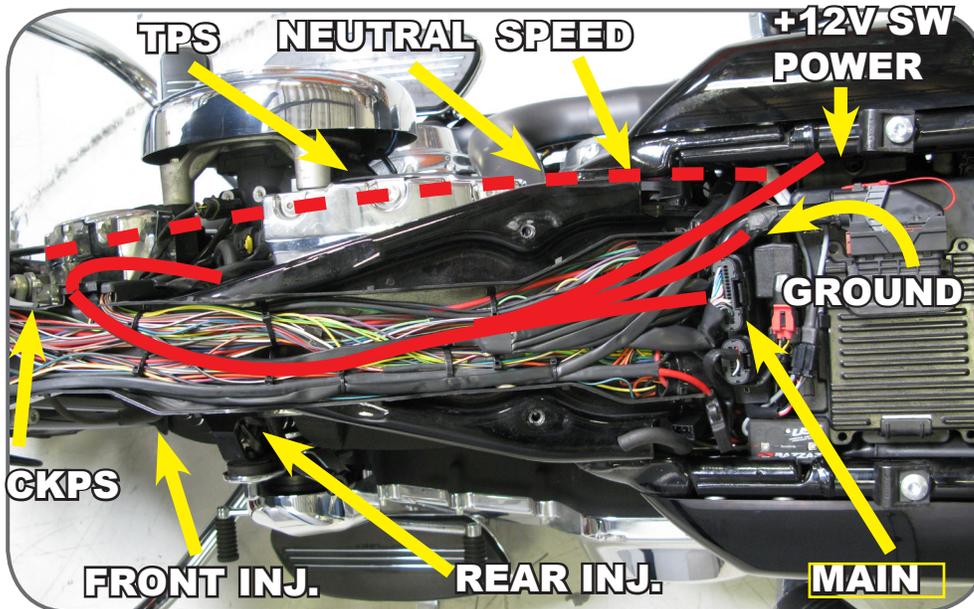


# 3>REMOVE

1. Rider seat
2. Fuel tank
3. Right side battery box cover
4. Black plastic wiring cover

# 4>SECURE

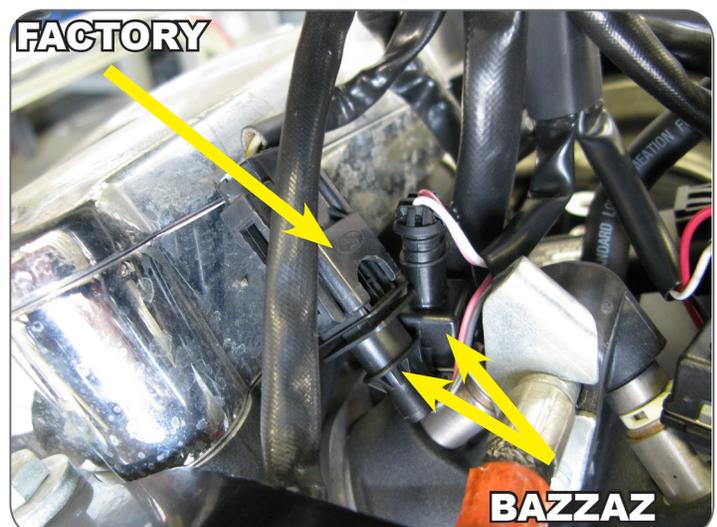
1. Place the control unit in front of the battery.
2. Connect the main connector of the Bazzaz fuel harness to the control unit and begin to route accordingly.



# 5>CONNECT

## 5.1

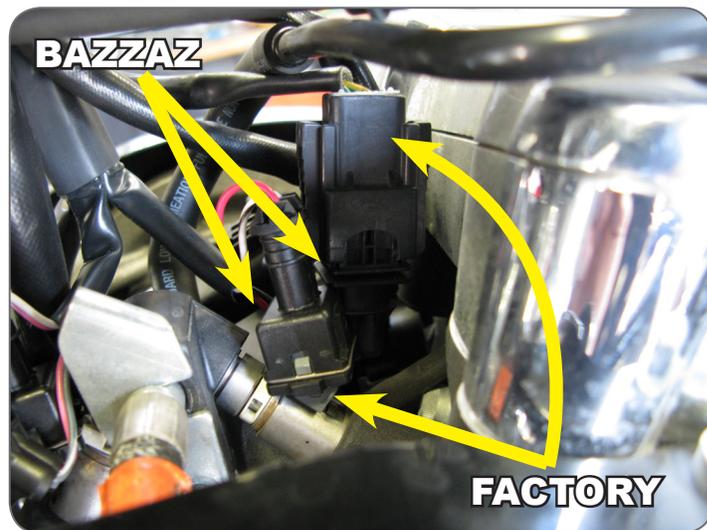
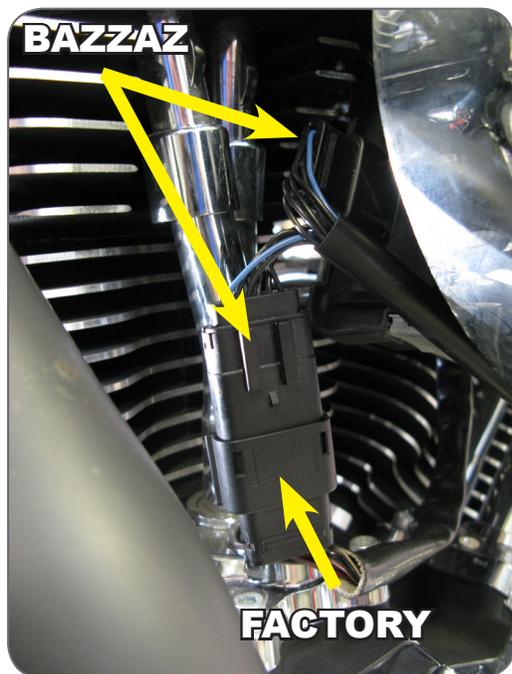
1. Route the Bazzaz injector and TPS connector leads up towards the middle of the cylinders.
2. Locate the factory front cylinder injector, and can be found between the two cylinders.
3. Disconnect the factory injector connector and install the Bazzaz front cylinder connector inline.



# 5>CONNECT (CONT.)

## 5.2

1. Locate the factory rear injector connector, which can be found between the two cylinders.
2. Disconnect the factory injector connector, and install the Bazzaz rear injector connectors inline.

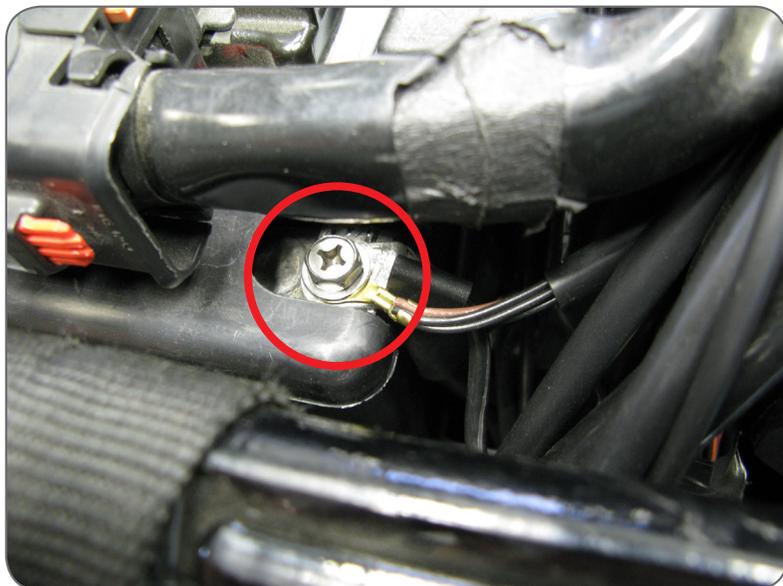


## 5.3

1. Route the Bazzaz TPS connector over the air intake and around towards the factory TPS on the back side of the factory air intake.
2. Disconnect the factory connectors, and plug the Bazzaz TPS connectors inline.

## 5.4

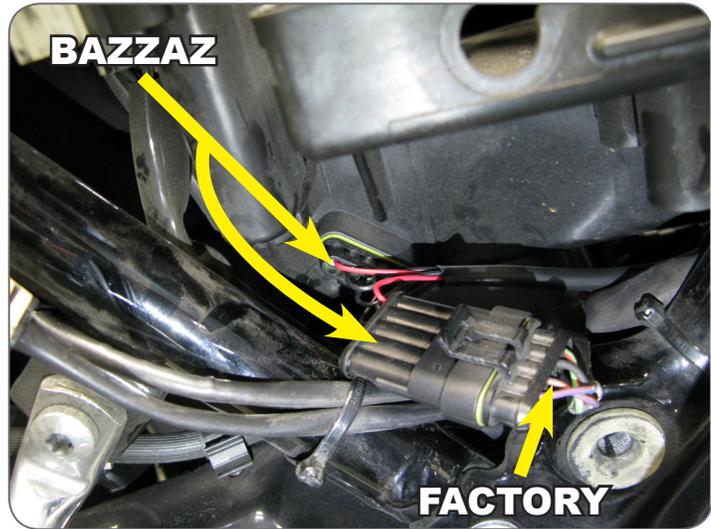
1. Route the remaining portion of the Bazzaz harness down towards the oil fill cap/dipstick on the right hand side of the bike.
2. Locate the Bazzaz ground lug, and connect to the negative battery terminal.



# 5>CONNECT (CONT.)

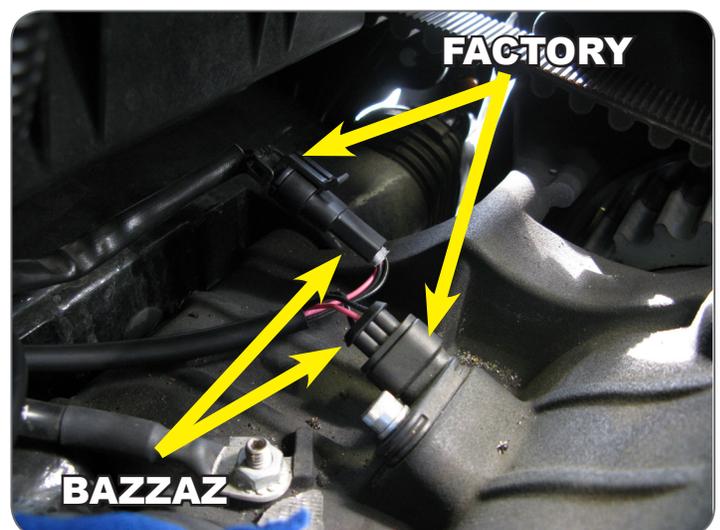
## 5.5

1. Locate the factory 5 pin connector, plugged into the dummy plug on the right hand side of the bike at the bottom of the factory battery box.
2. Disconnect and install the Bazzaz +12v SW connector inline.



## 5.6

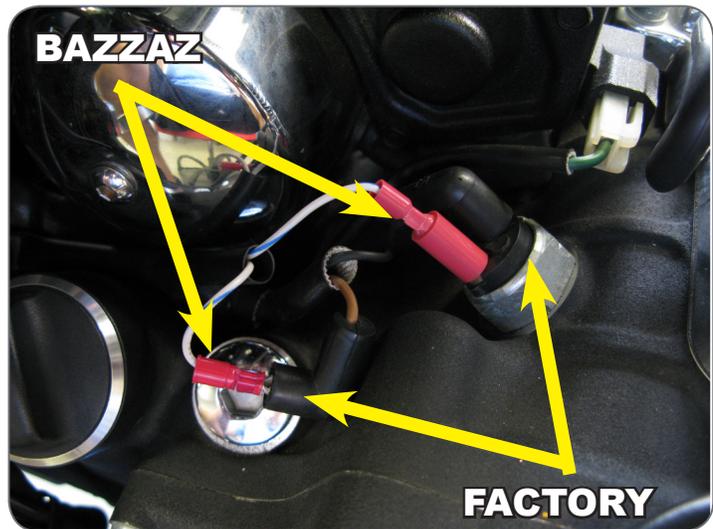
1. Disconnect the factory negative battery terminal.
2. Remove the engine oil filler cap/dipstick, and cover with a clean shop cloth to keep dirt and debris out.
3. Remove the battery cable from the top of the starter motor, and then remove the front and rear mounting bolts.
4. Carefully remove the starter, and use caution to avoid losing the ring dowels.
5. Once removed, locate the factory speed sensor connector and install the Bazzaz speed sensor connector inline.
6. Before reinstalling the starter, verify that the two ring dowels are installed on the primary chaincase, or starter flange.
7. Apply a drop of blue Loctite tread locker onto the threads of the starter mounting bolts. Move the starter into position, and start both mounting bolts. Tighten the starter mounting bolts to 25-27 ft-lbs (33.9-36.6 nm).
8. Remove the shop cloth from the engine oil filler cap-dipstick, and reinstall the cap.
9. Install the battery cable back onto the starter and tighten it to 70-90 in-lbs (7.9-10.2 nm).
10. Reconnect the factory negative ground terminal and Bazzaz ground lug to the negative battery terminal.



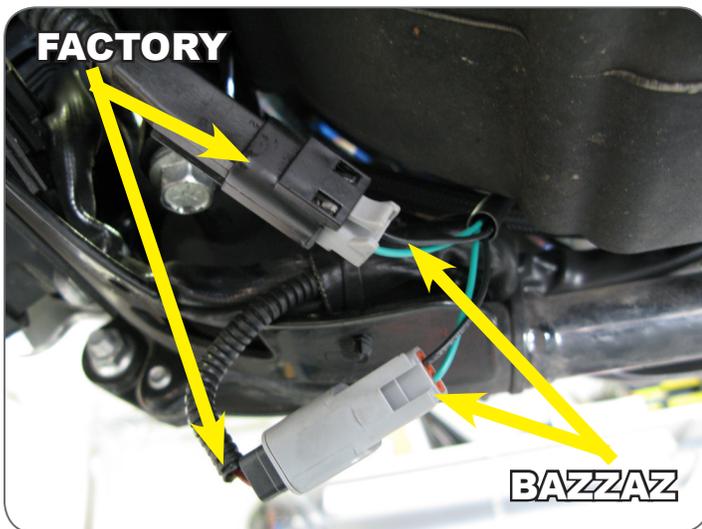
# 5>CONNECT (CONT.)

## 5.7

1. Locate the factory neutral switch near the starter.
2. Remove the brown wire from the sensor, and connect the Bazzaz neutral connectors inline.



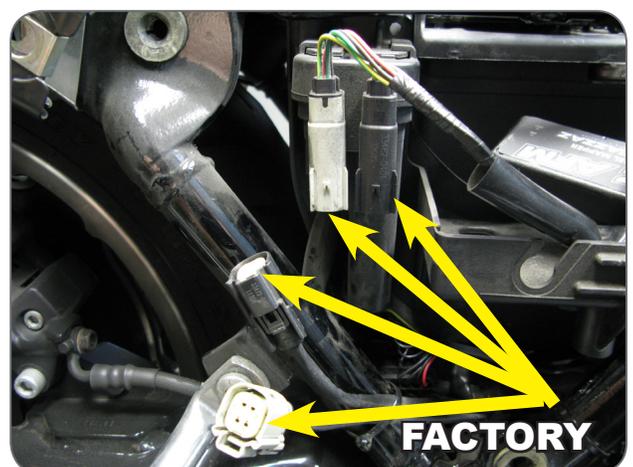
## 5.8



1. Route the Bazzaz CKPS connectors towards the front of the motor along the bottom right frame rail.
2. Locate the factory CKPS connector, which will be connected to the frame along the bottom right frame rail.
3. Disconnect the factory CKPS connectors, and install the Bazzaz CKPS connectors inline.

# 6>O2 ELIMINATION

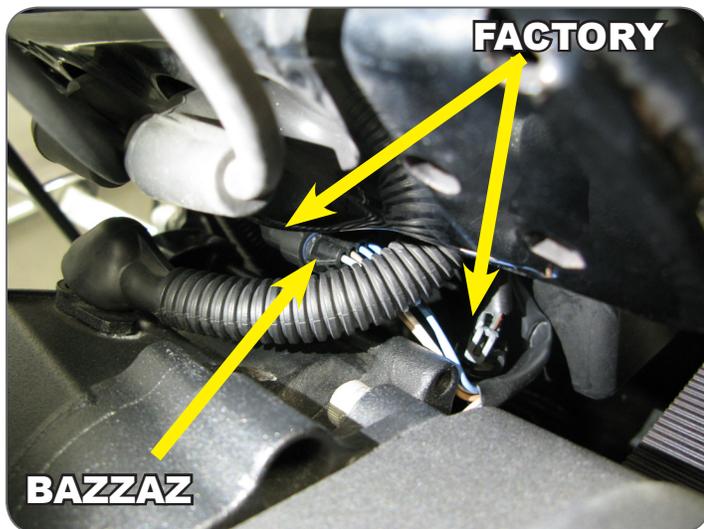
1. Locate the factory O2 sensor connectors, which can be found near the +12v Sw power connectors.
2. Disconnect both O2 sensors, and secure away from any hot or moving components.



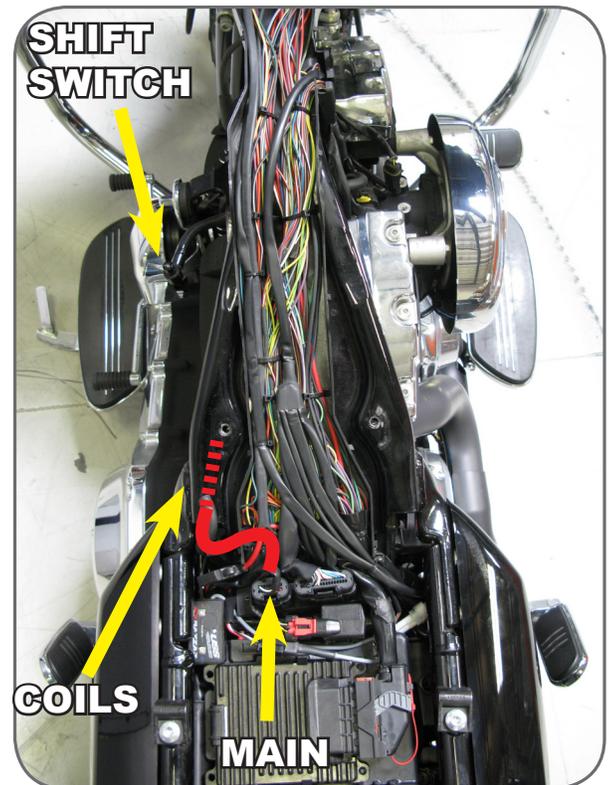
**SECTION 7>CONNECT, AND 8>QUICKSHIFT ARE FOR USE WITH THE BAZZAZ Z-FI TC ONLY!! FOR Z-FI, PLEASE SKIP FORWARD TO SECTION 9>SECURE**

# 7>CONNECT

1. Connect the main connector of the coil harness to the control unit, and route the harness down towards the starter motor on the left hand side of the bike.
2. Disconnect the factory coil connector, and install the Bazzaz coil connector inline.



(FOR USE WITH Z-FI TC ONLY!)



# 8>QUICKSHIFT

(FOR USE WITH Z-FI TC ONLY!)

1. Measure and note your shift pedal height, so that you may reposition the shift pedal once complete.
2. Remove the factory shift rod.
3. Install the Bazzaz shift switch and shift rods. The shift switch will be mounted between the two supplied shift rods.
4. Tighten each lock nut once your desired shift pedal height is obtained.
5. Route the Bazzaz sensitivity box and wires up towards the factory battery.
6. Connect the shift switch to the mating coil harness connector.



# 11>SECURE



Use the supplied cable ties to secure the harness neatly along the routing path **free of any moving or hot components** (which could cause damage or failure of the system).

# 12>CHECK



1. In order to check that the system is installed correctly, download the Bazzaz Z-Fi Mapper software at [bazzaz.net](http://bazzaz.net).
2. Plug the USB cable into the control unit and computer.
3. Locate and open the Z-Fi Mapper software.
4. Check that the pre-programmed map matches the model of your bike on the fuel map page within the software. You can switch from map 1 to map 2 by unplugging the map select jumper on the Bazzaz fuel harness. Map 1 will be pre-programmed; depending on your model, there may be a pre-programmed map in the map 2 slot. If map 2 is blank, stock ECU settings are used. Make sure that the jumper is left plugged in or unplugged, depending on which map you choose.
5. Start the vehicle and begin to check that the following inputs read correctly on the fuel map page.
  - RPM - Make sure that the RPM is reading near what the vehicle is idling at.
  - GPS - The vehicle should read neutral (or whichever gear it is in). For motorcycles that use a Gear Position Sensor, the bike does not need to be running to do this. For motorcycles that use a speed sensor, the wheel must be spinning to read gear properly. This can be checked on a dynamometer or by using a rear stand. Use caution when testing componentry.
  - TPS - When throttle is applied, the TPS should read accordingly. Fly-by-wire models must be running to check TPS. Normal cable operated throttles can be checked with just the key on, not running.

## Also use software to:

- View and/or make adjustments to fuel maps
- Activate Z-AFM self mapper (sold separately)
- Save and load new fuel maps
- Re-calibrate throttle position sensor after throttle modifications
- View diagnostics for troubleshooting
- Change quickshift settings
- Make traction control adjustments



If any problem is found, please carefully follow through the installation steps again.



If problem still persists, please contact Bazzaz tech support

- Factory support is available in the US at 909-597-8300.
- For fastest support outside of the US, find your local importer at [bazzaz.net](http://bazzaz.net)

# 13>REINSTALL

After it is determined that everything is correct, reinstall the components removed in step 3.

# 14>USE



**MAP 1**



**MAP 2**

## MAPS

The Bazzaz controller is capable of storing two maps.

Switch maps by connecting or disconnecting the map select jumper supplied with the kit.

Or use the optional handlebar-mounted switch to switch maps on the fly (sold separately).

# 15>NEXT LEVEL MAP SELECT SWITCH

Purchased separately.

Switch maps on the fly with this handlebar-mounted switch.

Weatherproof toggle and easy installation.

**79.95**



## Z AFM

## SELF MAPPER

Purchased separately.

Build race-level fuel maps for your specific modifications, fuel type, engine, and atmospheric conditions simply while riding.

O2 sensor mounts into exhaust and control box easily plugs in to any Bazzaz Z-Fi product.

**299.95**



# MAP SELECT/ TC ADJUST SWITCH

Purchased separately.

Switch maps on the fly with this handlebar-mounted switch. Quickly adjust traction control settings using a 10-point dial. Weatherproof toggle and easy installation.

**129.95**



# TC ACTIVE LIGHT

Purchased separately.

Illuminates when traction control is engaged. Helpful in determining when and where traction control is being actuated.

**79.95**





**THE SMARTEST PERFORMANCE TUNING TECHNOLOGY**



Proudly made in the  
**United States**

**F251 | T251**