



Thank you for choosing the Free Spirits Fuel Injection Module.

The module is "only" usable for the following models:

- Street Triple 2008-2011
- Speed Triple 2005-2011

This product is a great fit for stock bikes with exhaust and intake mods. This is an Electronic Jet Kit. Like jet kits in the past, the more you modify, the more responsibility you take in getting your fuel curve right. .

INSTALLATION PREP

- Install Time: 60 minutes
- Required Tools for:
 - Disconnecting the negative terminal of the battery.
 - Removing your seat
 - Loosening and propping up the fuel tank

I veicoli modificati con i prodotti Techlusion Inc. non possono essere usati su strade pubbliche e in qualche caso possono essere limitati per le sole competizioni. I prodotti non identificati con il marchio US EPA sono legali solo per l'uso fuori strada o su motori marini. Non idonei per i veicoli ad emissioni controllate.



INSTALLATION - Please call technical support for any installation question.

1. Make sure the vehicle is completely cool before starting the installation. Also make sure the vehicle is secure and will not roll around.
2. Remove the seat assembly .
3. Remove tank bolts.
4. Gently rotate fuel tank toward the rear and support.
5. Disconnect the fuel line and vent pipes.
6. Remove fuel tank.
7. Before installing the TFI you must first disconnect the negative lead from the battery.
8. Determine a location for the TFI unit. Suggested locations are as follows: Under the seat, behind a side cover or tail section
9. Locate the factory fuel injectors (see owners manual if you are not sure)*.
Some models are equipped with two sets of injectors (primary and secondary) the unit is designed to interface with the primary injectors. If the TFI harness does not match your injectors do not proceed and call tech support at 877-764-3337.
10. Disconnect the factory injector connectors from the fuel injectors and replace with the TFI injector connectors from the TFI unit, basically unhook the factory injector connector and plug the matching TFI connector (female) to the injector and then connect the factory injector connector to the TFI connector that simulates the injector (male). There is no order to hook up the TFI harness to the factory harness just make sure the original factory connector goes to its' original cylinder. **It is a good idea to make sure there is a little slack in the harness to prevent engine vibration from damaging/breaking a wire on the connectors.**
11. Secure the TFI controller with velcro provided. Avoid compressing the wiring under the tank.
IMPORTANT: Make sure all connections are firmly secure and allow a little slack at the connections to prevent engine vibration from damaging/breaking a wire on the harness
12. Attach the black ground wire from the TFI controller's to the negative terminal of the battery.
13. Re-assemble any removed parts to complete the installation.
14. With the rubber plug removed from the TFI, turn the motorcycle key switch to the "ON" position. As the bikes electrical system goes through initial start up mode you might see LED's flashing on the TFI for a few seconds then go out, this is normal.
15. Start the motorcycle. The green LED should now be on steady and the yellow will flash rapidly for about 15 seconds, and then go out. All Led's might flash at idle this is normal. This means the bike is idling just below our starting RPM in the software. If just the green or red LEDs continue flashing after startup please refer to the "TFI" section in the troubleshooting guide

PREPARAZIONE ED ISTRUZIONI PER PROGRAMMARE

- The TFI controller can be adjusted “on the fly” to tune your vehicle. No computer or other external device is needed to make tuning adjustments. All that is required is for your vehicle to be running which provides power to the TFI controller.
- To program your controller the bike must be running.
- Always make sure your bike is at normal operating temperature when making tuning adjustments
- All TFI controllers come pre-programmed to the recommended base light settings which represents a typical stage 1 (air filter + exhaust) vehicle modification.

It is recommended to install the TFI controller and take a test ride first before making any mode adjustments.

Green light pot(1st): Is an air fuel mixture screw adjustment.

So, with our box on and the bike fully warmed up, with a screwdriver in hand, locate the green light and the pot right below it. Raise the RPM up to a high idle or about 2000 RPM. Once there, slowly turn the green pot clockwise from the 1:00 position (or off) until you achieve the highest RPM and smoothest running sound (just like you would if you had a mixture screw on a carburetor). You should find that the best setting should be between 2:30 and 4:00. If you slowly turn on the green pot and the engine does not accept any more fuel (RPMs drop when adding fuel) then you may have one or more of these problems. (see troubleshooting Motorcycle)

Yellow LED pot(2nd): Fuel addition during acceleration.(functions like an accelerator pump)

Tuning for this mode depends greatly upon your individual bike and can vary widely from the base setting. After market high flow exhaust systems and high flow air filters “MAY” cause you to tune differently from the base settings. Note that this adjustment is only for hard acceleration. This fuel adjustment adds fuel into the fuel map whenever the throttle is opened rapidly. This function needs to be adjusted from test riding, by performing brisk roll-ons in a specific gear, and by always starting at the exact same rpm. Try one position increases YELLOW pot between roll-on tests until you can't feel any more improvement, and then go back to the last setting that improvement was noticed. The yellow pot adds most of its fuel below 75% of maximum RPM. If no yellow LED there is not enough load to turn it on.

RED light pot (3rd) - Fuel addition during full throttle. (functions like a main jet on a carburetor)

This adjustment deals with adding fuel for primarily 4000 RPM and up to red line, Is generally required when either air intake or quality exhaust system. Similar to the road test procedure listed above in yellow fuel. For example, running to red line in 1st shifting, running to red line in 2nd shifting, and continuing this all the way through the gear range, until it is an ideal situation.

This mode could vary widely from the base settings depending on the set up of your bike.

Mode has the largest affect on tuning for the vehicle's top horsepower value.

RPM switch pot(4th): Countless hours of testing resulted in the suggested setting that comes in the instructions, in some cases where the volumetric efficiency has been increased by various engine modifications the need to target a slightly different percentage of fuel may be needed.

Metric V-twins/Metric Triples. Sets the rpm that the green and yellow fuel turns off and the red (main jet) turns on. This adjustment is achieved by setting the pot to about 70% of redline (for Daytona 955i redline is 10700 rpm and 7490 is 70% of redline) which would be 7:30 o'clock. Verify this setting by revving the bike in neutral and watching for the green and yellow light to go out at the chosen rpm.

TROUBLESHOOTING

If the green LED is flashing by itself there is an incomplete connection with the injector connectors with the yellow & white lead from the TFI. If the red LED is flashing, there is an incomplete connection with the injector connectors with green & gray leads and/or the injector connectors with the pink & blue leads from the TFI. Please confirm that the connectors and wires are firmly in place.

Motorcycle

First it is important that you understand that all modern day fuel injected bikes have a big advantage over carbureted bikes. Fuel injected bikes all have the same exact fuel curve and is corrected everyday by the on board weather station. Nothing is leaner than a stock fuel injection map. So with our box on and the bike fully warmed up, if you slowly turn on the green pot and the engine does not accept any more fuel (RPM drops when adding fuel) then you “may” have one or more of these problems.

1. Engine not fully warmed up.
2. A vacuum leak on the intake.
3. High lift cams affecting map at light loads and low RPM.
4. The loss of TPS and ECU sync.
5. Cylinder head temp sensor malfunction.

(Order from most common to least common)

POOR MILEAGE

Solution:

1. Check your green pot setting. This setting is generally responsible for 90% of your mileage. In the hundreds of installs performed, we have never gone beyond the 4:00 setting. Try backing down the green setting slightly. You can slightly lower the yellow and red settings also.
2. RPM pot adjusted too low. Make sure the red LED is turning on no lower than 70-75% of the maximum rpm**.
3. Make sure your engine passes the 2000 RPM test at the beginning of the troubleshooting chapter. If you still have mileage issues call tech support at 877-764-3337

** : Some engine setups can dictate a higher or lower setting on the RPM pot.

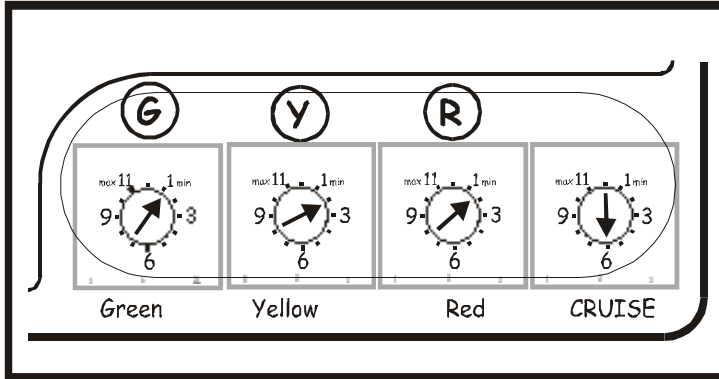
FULL THROTTLE

Simply add or subtract fuel with the red light pot to determine if the problem is better or worse. This lets the engine dictate additional adjustments or call tech support at 877-764-3337.

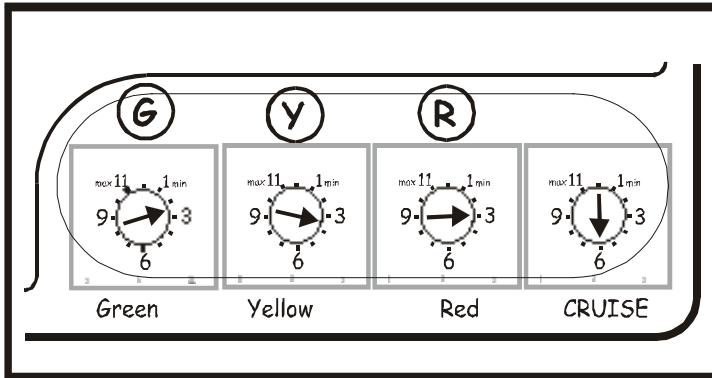
Some vehicles modifications with Techclusion Inc. products must not be used on public roads and in some cases may be restricted to close course competition. Those products not identified as US EPA legal are intended for off-road or marine applications only. Not intended for use ON emission controlled vehicles.

Reccomend Setting

Street & Speed Triple



Rocket 05-10





2-year Unlimited Mileage Warranty

Techlusion warrants that this product carries a warranty for 2-years from date of purchase against original defects in materials and workmanship. Should this product fail to perform for either of the above reasons, Techlusion will repair or replace it with an equivalent product at no charge, except for postage, to the original retail purchaser.

*****IMPORTANT*****

To obtain the benefits of this warranty, the retail purchaser must first call 1-877-764-3337 to obtain a Return Authorization Number, then send the product with proof of purchase and postage prepaid to:

**Dobeck Performance
157 Progressive Dr.
Belgrade, MT 59714**