

# FORCEWORKS

This unit is a plug and play unit made for the Yamaha BWS / Zuma (fuel injected) 125cc scooter.

## **Features:**

1. Fuel adjustment from idle to 9,000 rpm and 9,000 rpm till rev limiter.
2. All OEM connectors for a watertight seal.
3. CNC hard case is built to withstand water and the harsh elements. You can mount this unit externally and ride in the rain or go off-roading.
4. Has a built in air fuel meter.
5. Comes with a 1-year manufacturer warranty against defects.

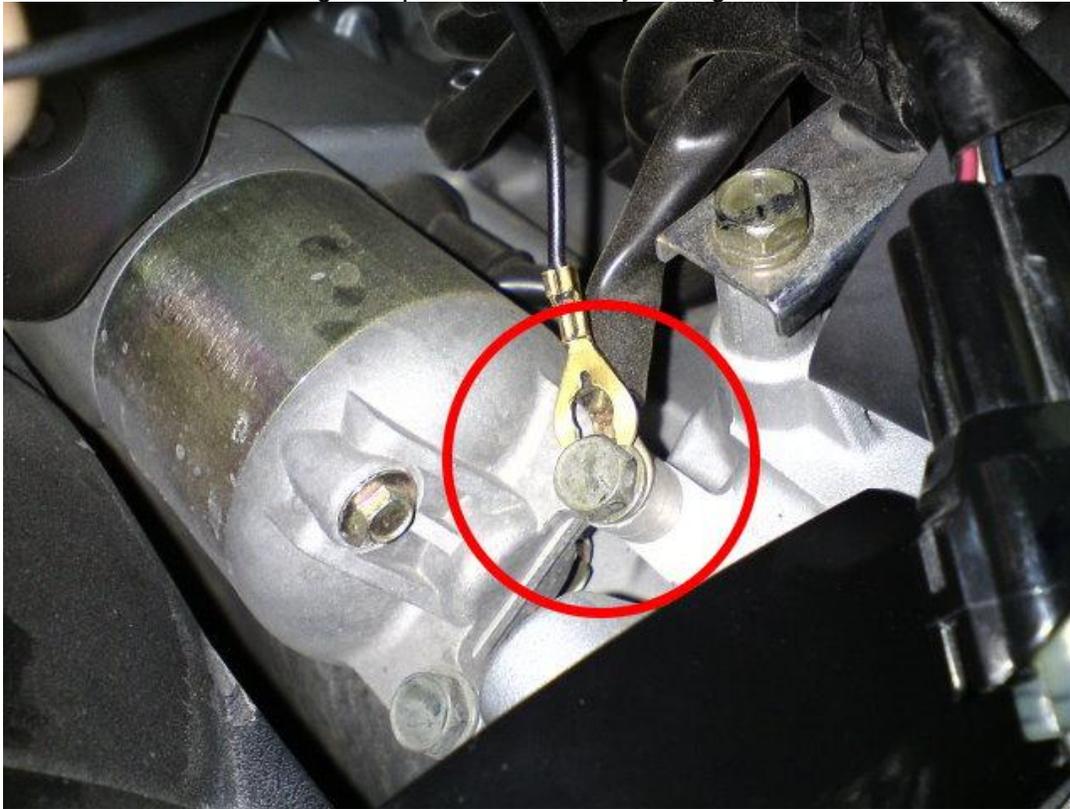
**Warning, follow owner's manual instructions and use the proper spark plug. Fail to do so will void factory warranty. Forceworks will only work with Yamaha specified fuel injectors using other types of injectors will cause a malfunction and void factory warranty (for example automotive injectors).**

## Installation

1. Forceworks plugs in between the fuel injector and O2 sensor.



2. Ground wire to the negative post of the battery or engine block.



3. Turn ignition key to on position (Force Works LED should power on, if it doesn't please check your ground, fuse, battery connections, battery condition, injector and O2 sensor connectors).

\* Extra length of wire is to give you the option of mounting the Forceworks unit externally. For example, the floor board or near the VIN number cover.

## **Interface**

**M** - is the mode button

**+** - is add fuel

**-** is subtract fuel

**Mode #1 Bright White LED** (add or subtract fuel from idle to 9,000 rpm).

a). White LED is standard and no adjustments, factory stock setting.

b). Subtract fuel a dim blue LED will light up. The more you subtract the brighter the blue LED become.

c). Add fuel and a dim red LED will light up. The more fuel you add, the brighter the red becomes.

**Mode #2). Red Led** (air fuel meter mode, led will flash white/blue/red).

a. RED is rich.

- b. BLUE is lean.
- c. White is perfect (air fuel ratio of 14).

During deceleration and idle the factory ECU will self-adjust to achieve a proper air fuel ratio. LED flashing back and forth from red and blue is normal. During throttle, the LED should flash red. Closed throttle during engine deceleration the LED should flash blue. When confirmed, then the air/fuel ratio meter is working properly.

\* For tuning purpose, the air fuel meter should only be used during mid-high speed runs. For example, maintain a cruising speed of 30mph and full throttle till reaching top speed.

Mode #3). **Dim White Led** (adjustment from 9,000 rpm and up).

- a). dim white is no adjustment
- b). dim white with blue is 5% fuel increase from 9,000 rpm and higher.
- c). dim white with red is 10% fuel increase from 9,000 rpm and higher.

Forceworks can adjust fuel at any RPM and even when the rev limiter kicks in. Adjustments are automatically saved in the unit every 3 seconds. Power failure and disconnection of the plug or ground will result a loss of memory. Forceworks will reset itself back to default fuel maps.

To lock the unit hold down the + and - down simultaneously for 5 seconds. Once the LED starts flashing this means, the unit is locked to avoid accidental adjustments. To unlock the unit just repeat the process of holding down the + and - for 5 seconds until the LED flashes again.

Any questions please e-mail me at [raceconcept.facebook@gmail.com](mailto:raceconcept.facebook@gmail.com) .

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