

401 South Grand Ave., Santa Ana, CA 92705 Tel: 714.550.6070 Fax: 714.550.9661 www.twobros.com

# V.A.L.E.

## Two Brothers Racing Juice Box<sup>TM</sup> - Fuel Controller

2009 Ducati 696 Installation & Operation Manual Part # 008-249



Qty.	Description	Part Number	
1	Juice Box™ Fuel Control Kit	008-249	(#9120220)
3	ZipTies		
1	Adhesive Velcro Square		

#### **IMPORTANT - PLEASE READ CAREFULLY**

We recommend that this performance part be installed by a qualified motorcycle technician. If you have any doubts as to your ability to install this performance part, please consult with your local motorcycle dealer. Read all instructions first before starting installation. Make sure the vehicle and exhaust system are completely cool before starting the installation. Also, make sure the vehicle is secure during installation. Be sure to save all stock components for possible use later.

The Juice  $Box^TM$  is legal ONLY for closed course race vehicles. The Juice  $Box^TM$  is not applicable, nor inteded for use on EMISSIONS CONTROLLED street, highway or off-road vehicles. The Juice  $Box^TM$  is not applicable, nor inteded for use on aircraft.

#### Warranty

Two Brothers Racing 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, Two Brothers Racing will repair or replace it with an equivalent product at no charge, except for postage, the original retail purchaser.

To obtain the benefits of this warranty, the retail purchaser must return the product and proof of purchase to the place of original purchase.

#### Installation Instructions

Thank you for purchasing a genuine Two Brothers Racing JUICE BOX™. This product represents a radical step forward in tuning fuel-injected motorcycles and ATVs for optimal performance using "load-based" technology. We at Two Brothers Racing hope that you will find this development as exciting and useful as we do. And remember: Proper Fuel = Maximum Power!

- 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 the fuel tank top cover screws. (fig.1)



4. Remove fuel tank top cover. (fig.2)



5. Remove side fuel tank covers. (fig.3)



6. Remove fuel tank by removing lower bolt that secures tank from sliding rear-ward. (fig.4)



7. Remove bottom tank bolt. (fig.5)



8. Pull the fuel tank back and prop it up. (fig.6)



 Locate left injector and unplug OEM connector and plug in the JUICE BOX™ female end into the injector and male end into the OEM harness. (fig.7)



 Locate right side injector and pass wire through engine compartment to plug into the left side injector and the male end into the OEM harness. (fig.8)



11. Run the JUICE BOX™ to rear of bike along the frame rail to secure under the seat base using the supplied velcro tab and zip ties for the wires. (fig.9)





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#### Installation Instructions continued...

12. Attach ground wire to (-) terminal of battery. (fig.10)

Fig 10



13. Make sure all wires are secured.

NOTE: Re check your wire routing and JUICE BOX™ location and make certain that in no way the wires can come into contact with any moving parts or high heat source and that the JUICE BOX™ is mounted in a way as to not cause a handling problem with the machine

- 14. Re-install fuel tank and seat assembly.
- 15. Start the bike. The green LED should now be scrolling for about 3-5 seconds and then go to 1 or more steady green LED's or a single slow flashing green LED. If the number 1 green and number 8 red LED continue flashing after startup, an injector wiring error is indicated. Re-check the wires from the JUICE BOX™ and make sure they are connected to the proper wires of your bike's stock harness. MAKE SURE you have the correct connectors selected in the stock harness. DO NOT PROCEED UNLESS ABOVE CONDITIONS ARE MET.



#### Cleaning

If the unit requires cleaning, use a cloth that is only lightly dampened with water or mild detergent.

#### **Operation Manual**

- 1. It is recommended that the pre-programmed settings of the Juice Box™ be used. However, the Juice Box™ can be adjusted to suit different engine modifications, states of tune and environmental conditions. To begin this process, press the mode button. To enter each successive mode, just press the mode button again. Note that every mode will be identifiable by the color(s) of the flashing LED(s) on the LED display. There are six modes that are distinguished by an LED color or color combination. The 6 modes are as follows, respectively: Green, Yellow, Red, Green-Blue, Yellow-Blue and Red-Blue.
- 2. You are now ready to manually program each mode. Consult the base settings supplied with the unit.

To program the Juice  $\mathsf{Box}^\mathsf{TM}$ , the bike must be running in order to supply power to the Juice  $\mathsf{Box}^\mathsf{TM}$ .

Simply press the mode button to activate the first mode. If at anytime you stay in an adjustment mode for longer **than 5 seconds** without pressing any buttons, the Juice Box<sup>TM</sup> will exit the adjustment mode and will return to the operational mode.

To save settings in a particular mode press the MODE button which goes to the next adjustable mode or wait for the Juice Box™ to exit back to the operational mode.

The settings in each mode are adjusted by pressing the (+) and (-) buttons located on the right and left side of the mode button, respectively. For easy reference, the LEDs are numbered 1 through 8. However, the LEDs can be adjusted to the following positions: 0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8. For example, in a particular mode, if LED 4 is flashing then the LED display is set to 4 in that mode. If the (+) button is pressed once then LEDs 4 and 5 will flash simultaneously and the LED display is set to 4.5. If the (+) button is pressed once again, only LED 5 will flash and the LED display is set to 5. The LED display can also be set to 0.5 by pressing the (-) button and scrolling the colored LED to position 1 and then pressing the (-) button once more until the LED in position 1 is flashing twice as fast as normal.

- The first mode (Green Mode) is not used in this application. Adjusting the Green LED in this mode has no result.
- II. *The second mode* (Yellow Mode) represents an additional amount of fuel added during acceleration. A flashing yellow LED should appear on the LED display. To add more fuel, scroll the flashing yellow LED to the right using the (+) button. To add less fuel, scroll the flashing yellow LED to the left using the (-) button. If you set the flashing yellow LED to the 0.5 position on the LED display, no fuel will be added to the stock fuel curve.

III. *The third mode* (Red Mode) represents an additional amount of fuel added during full throttle conditions. A flashing red LED should appear on the LED display. To add more fuel, scroll the flashing red LED to the right using the (+) button. To add less fuel, scroll the flashing red LED to the left using the (-) button. If you set the flashing red LED to the 0.5 position on the LED display, **no fuel will be added to the stock fuel curve**.

Note: If the flashing green, yellow and red LEDs in modes 1 through 3 (Green, Yellow and Red) are set to the 0.5 position on the LED display then the Juice Box™ will not add any fuel to the bike's stock fuel curve. This setting will essentially turn off the Juice Box™ even though it is still attached to the bike's fuel injection system. The bike will run as though the Juice Box™ is not installed. The Juice Box™ LEDs will still operate normally even though no fuel is being added.

- IV. **The fourth mode** (Green-Blue Mode) is not applicable for this particular model.
- V. *The fifth mode* (Yellow-Blue Mode) is an adjustment to determine the time when the acceleration/Yellow Mode fuel amount turns on. A flashing yellow LED appears on the LED display while at the same time a flashing blue LED appears on the 8th LED. To increase the sensitivity and therefore cause the Yellow Mode fuel to turn on sooner, scroll the flashing yellow LED to the left using the (-) button. To decrease the sensitivity and therefore cause the Yellow Mode fuel to turn on later, scroll the flashing yellow LED to the right using the (+) button.
- VI. *The sixth mode* (Red-Blue Mode) is an adjustment to determine the time when the full throttle/Red Mode fuel amount turns on. A flashing red LED appears on the LED display while at the same time a flashing blue LED appears on the 8th LED. To increase the sensitivity and therefore cause the Red Mode fuel to turn on sooner, scroll the flashing red LED to the left using the (-) button. To decrease the sensitivity and therefore cause the Red Mode fuel to turn on later, scroll the flashing red LED to the right using the (+) button.



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#### Operation Manual - JUICE BOX™ Settings

(2009) Ducati 696 Pre-set Settings: 696 baseline settings with stock air filter and TBR DUAL slip-on exhaust system. (G=0.5, Y=4, R=4, GB=N/A, YB=4, RB=4)

Mode 1 - Green







Mode 4 - Green/Blue





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For additional settings please visit our website at www.twobros.com.