

BLIPPER RSV4



The SGRACE_BLIPPER is our latest high performance design. We have put an enormous amount of energy in the form of time, technology and knowledge to create a reliable and innovative product. It is a "Strain Gauge" sensor style that ensures long lasting performance. To bring this product into reality we have used all the manufacturing tricks, electronic formulae and rendered a keen eye on software support to make this happen. This product is encouraged to use in a on a closed circuit only. It is not homologated for road use. The manufacturer of this product is not liable for any injury or damage to the operator, vehicle, or third parties from the use of this product.

MADE IN ITALY



DISCLAIMERS



- System setup must always be done when bike is at complete halt and is parked on stands.
- A wrong setting could affect, partially or fully, the system's effectiveness, ultimately damaging the gearbox.
- System setting is the responsibility of the user and not of the manufacturer. While fixing sensors, take extra caution to not damage while screwing and unscrewing the bike. It is a delicate product.
- The use of this product is at the total discretion of the private parties.
- Each system modification, both of hardware and software, as well as harness or single components, could affect the system functionality. It can do potential damage or cause injury to the user, vehicle, or to third parts and this will negate the product warranty.
- Installation must be done carefully It is mandatory that you follow instructions provided in the manual book. After installation it is highly recommended that you do proper test of the product before riding on.
- Installation is an extremely crucial setup for system efficiency. Be sure it is done by competent and specialized mechanic.

This manual is issued on Dec 23rd 2016 in Rev. 1.0. It is the end user's responsibility to periodically visit the website www.irccomponents.it in order to check for revised and updated manual guides.

1. DISPLAY

After switching on the system, the ECU makes a general check and, if passed, the display will show the firmware version.



WARNING: Do not start any process, setting or action on sensor until the above routine is completed.

When the pre load threshold has passed (par. 2.4 and 2.7), the display will show "--" .

In case of failure, the display will show an "E" followed by a number. Give this code to the assistant.

2. INITIAL SET UP

To set up initial program press both the buttons to enter into the system.

Push lower button to scroll the menus forward.

Push the upper one to scroll the menus backwards.

Press and maintain the lower button to enter into the various menus. However, to exit from the menu and undermenus press upper or both buttons. System will go out of programming session if no button is pushed except the "r" menu. Also during programming, the quickshifter is disabled.



WARNING: Act only on the following setup options.

2.1 Signal time programming "t"

Set at the maximum allowed value. Upshift timing will be regulated by the original APRILIA ECU and not by the SGRACE_BLIPPER.

2.2 Downshift rpm "rL"

The "Blip" will not work below 3,000rpm. Above this limit the timing of the blipper is automatically set in function of customer's choice. "rL" are the lower rpm limit level.

2.3 Downshift timing "SL"

To set the downshift timing; adjust the preferred timing of the "blip" at "rL" rpm (see par. 2.2).

2.4 Upshift Pre Load adjustment "L"

The default value is fixed at "16" however it's possible to change the load necessary to apply on the sensor for having the upshift signal. Shift lever should move through the spring load in gearbox until gear resistance can be sensed. is felt. If rpm is above the set value at par. 2.8, The panel LED should show "--" for a while. If

this happen too early or too late; then change the preload setting.

2.5 Actual Load displaying "S"

Entering in this menu it's possible to read the actual load value. Useful feature for preload adjustment and for gearbox check and maintenance.

2.5.1 Max Load displaying "--"

Pressing and holding the lower button, the display will show blinking "--" for about 10s. Afterwards it will show the max load value registered in this period.

2.6 Downshift Timing "tS"

Set the "Blip" timing within 20÷98ms at 8,000 rpm. Default timing is set at 63ms. Consider that the blip timing at 12,500rpm will be 70ms higher.

In the between the CPU will interpolate the value.

A too long timing allows gear in but then you'll feel the bike pushing a while. A too short timing doesn't allow a proper downshift. We recommend to initiate the process with high value and reduce it during the tests on the road.

2.7 Downshift Pre Load adjustment "LS"

The default value is fixed at "16" however, it's possible to change the load necessary to apply on the sensor for having the downshif signal. Try to select the lower gear by switching off the engine and keeping the ignition on. Shift lever should move through the spring load in gearbox until gear resistance can be senseed. felt. If rpm is above the set value at par. 2.8, The panel LED should show "--" for a while. If this happen too early or too late; then change the preload setting.

2.8 Minimum rpm limit "Sr"

Set rpm value below which the system is not cutting. Visualization: /1000.

2.9 Pushing/Pulling"CE"

Referring to the upshift, "C" to set pushing, "E" to set pulling.

3. CONNECTIONS

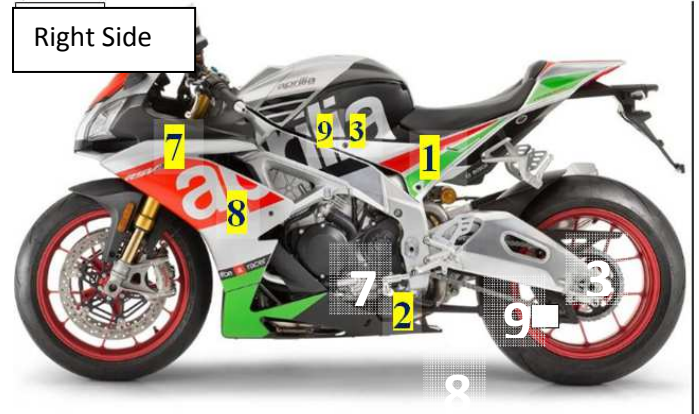
Please following the following steps to install Blipper in your RSV4:

- 3.1) Fix Main Board on the frame (left side)
- 3.2) Load Cell Installation (left side)
- 3.3) Gearshift Connector (left side)
- 3.4) Coils connector installation (right side)
- 3.5) Dashboard connectors (left side)
- 3.6) Fix Blipper Main Board: Blue Box. (right side)

3.7) Fix Blipper Main Board: White Box. (left side)

3.8) APS Connector

3.9) Up Shifter Connection



3.1 Fix Main Board on the frame (left side)





Sensor has "magic threads" i.e. both right and left. Connect the sensor to the shiftrod (This has to be bought separately it is not included in the kit). Once you have connected it, measure the shift-rod and cut it to customize it. After connecting, tighten the nuts and ensure the grub screws to avoid disconnections due to vibrations.

However, Install sensors and rod with uniball links on both the ends. Most bikes have stock uniballs. Check that the shiftrod does not rub or touch anything, as this could impair sensing. Try to fix sensors that does not get in connection with heated parts while riding. Make sure wire has a slight bend/loop so that it does not tighten up and pull the sensors up or down while shifting.

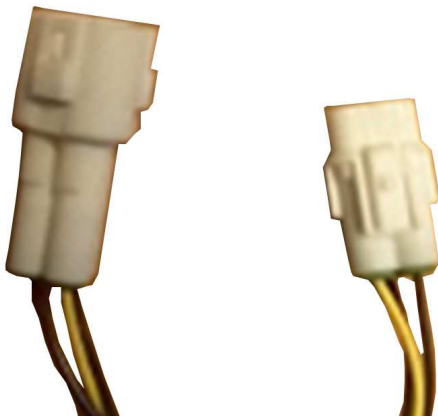
Warranty does not cover ripped out wires.



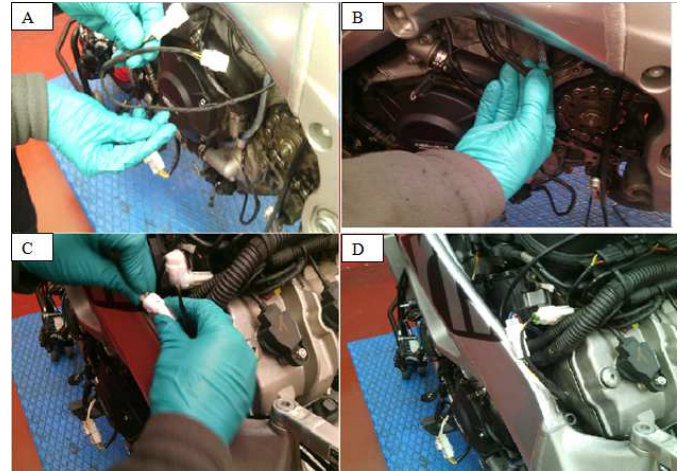
WARNING: To adjust sensor positioning, act on the proper planes. Sensor failure could occur of acting on the cover.

3.3 Gearshift Connector

Take the gearshift harness:



Locate the gearshift connector following A-B-C-D path. It is on the left side between engine and frame.

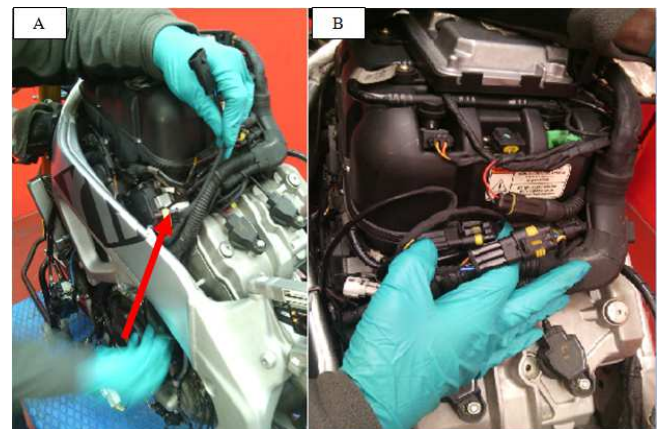


3.4 Coils connector installation.

Take the coils harness:

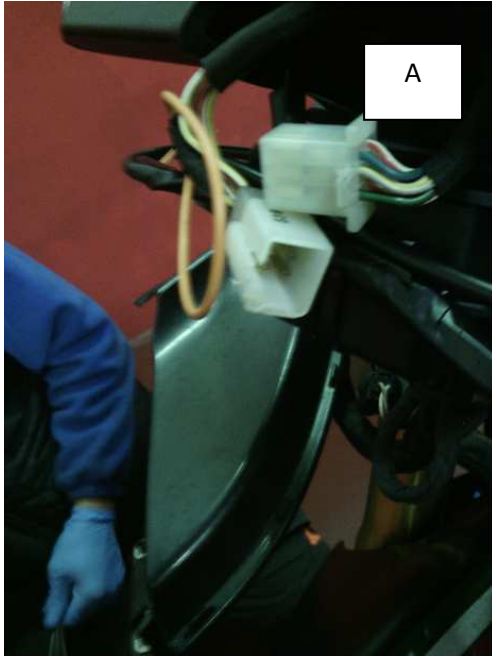


Pass the wire inside the frame following the arrow (A) and connect the harness to one of the rear coils (B). No matter which one.



3.5 Dashboard connectors

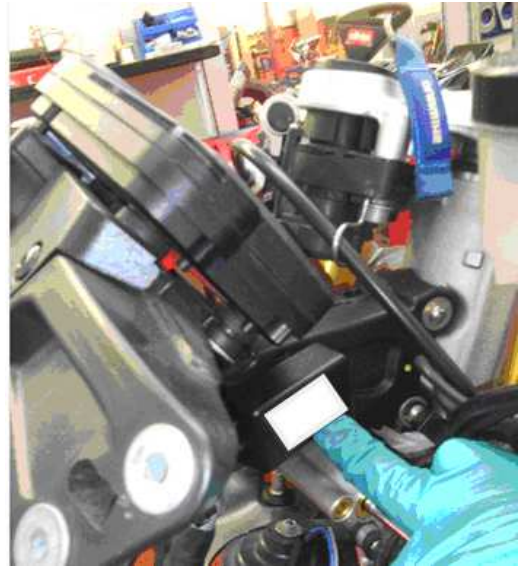
Disconnect the white 6 way connector behind the dashboard and insert both male and female of blipper harness.



3.6 Fix the Blipper BLUE Main Board on the right side below the dashboard.



3.7 Fix the Blipper WHITE Main Board on the left side below the dashboard



3.8 APS CONNECTORS

Locate the APS connectors (from white and blue boxes) behind the cooler on the lower left side. Disconnect them (one per time) and connect in the between the IRC's ones. Blue wire is connect in the inside connection, white one is in the outside location.





WARNING: Properly fix the wires using hose clamps avoiding contacts with the exhaust pipes.

3.9 UpShift Connection

The upshift connector is plug&play with the OEM harness.



Pass the wire inside the frame following A-B-C path.
Wire must be maintained closed to the frame. Use hose clamp to assure this. See picture (B).
Connect the it as per picture (C).



4. WORKING CONDITIONS

8÷17.5V; -20°C÷+95°C

We value your business with us.

For any questions or troubleshooting queries, please contact us at:

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