

## FITTING INSTRUCTIONS **REGULATOR/RECTIFIER RR23**

HPI - Kuilenstraat 97, 3960 Bree, Belgium TEL: (0032) 089-46 74 39 | FAX: (0032) 089-47 33 28 | GSM: (0032) 0495-53 90 21 Email: hpi@hpi.be | Website: www.hpi.be

## Regulator/Rectifier for switched field alternator.

The original Honda regulator/rectifier can suffer badly over time from corrosion and overheating. Your new regulator/rectifier RR23 has cooling fins to maintain cooler operation and improved reliability.

The RR23 is supplied with a new connector pair, which requires you to cut the old connector from the bikes wire harness, and replace it with the supplied connector. The bike wire harness colours must pin by pin match the colours of the new RR23.

The RR23 is a "low side switching" alternator controller. It switches the field coil current (on and off at high frequency) from the WHITE wire to the GREEN wire (frame ground), thus controlling the alternator magnetic field strength, hence regulating the alternator output voltage,

The alternator field coil resistance is typically 5 or 6  $\Omega$ , this is just too low to measure with a handy multimeter. A more accurate indication of field coil function can be made like this: Unplug the RR23, switch on IGN, and only with engine NOT RUNNING, set meter to read AMPS and connect meter from FRAME GROUND to alternator WHITE wire. This will connect the full battery voltage across the field coil, the meter should measure about 2 amps. Any more than about 3 amps

means your field coil is probably broken – internal short circuits between turns will stop the battery charging system from operating.		
ORIGINAL BIKE WIRE	<b>RR23 WIRE</b>	FUNCTION
3x Yellow	3x Yellow	3 phases from alternator stator
Red	Red	Charging current to battery (+)
Regulator frame	Green	Charging current return from battery (–)
Black	Black	Field coil (+) brush from IGN switch, also input to the RR23 to sense battery voltage
White	White	Field coil current input from the controlled brush

