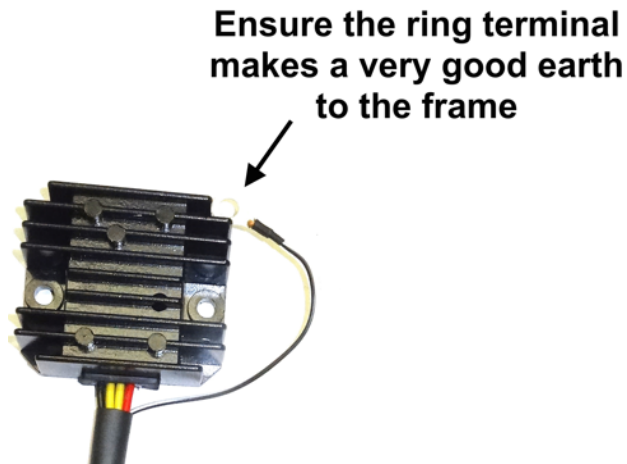
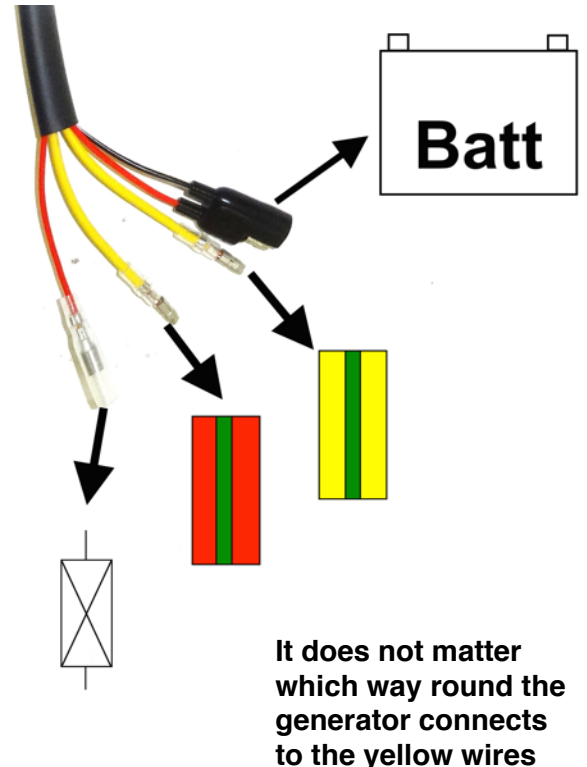


## RR12V-31 T500 Solid State Regulator Rectifier Fitting Guide



**Fuse**



Our combined regulator/rectifier RR12V-31 is intended for T500 that had a separate regulator and rectifier units. It will automatically regulate the voltage if the lights are on or off. This unit can run with a lead acid, sealed, AGM batteries or battery-less, with our eliminator (part number BE1).

1. The new unit does not bolt directly to the old mounting points so it is the responsibility of the person fitting it to make a new bracket and ensure it is securely and safely mounted to the bike.
2. Both the separate regulator and rectifier must be disconnected, removed from the bike and discarded. The orange wire that went to the regulator must be insulated as it will be live when the ignition is on (if fitted). This is not used by the new combined regulator/rectifier.
3. Plug in the new combined regulator/rectifier to the rectifier connections. Nothing goes to the regulator wires. These wires must be insulated and are now un-used.
5. The black wire with the ring terminal is the earth and must connect with the wiring loom earth (Suzuki use black with white trace to mark the earth wire). It should be placed under the bolt where the wiring loom or rectifier was earthed to the frame. It is vital this connection is good.
6. With the new regulator/rectifier connected, start the engine and check the charging rate at the battery terminals. Use a good quality digital multimeter. When the engine is revved the voltage should be between 13.8 and 14.5 volts. Check to see that it settles within this range as the lights are switched on and off. At idle the voltage may drop below this level.

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### **Trouble shooting.**

The battery must be in good condition and fully charged, if it quickly loses charge, won't accept a charge or has an open circuit terminal voltage of less than 11.7 volts after its been charged up the battery is suspect and must be replaced.

If the charging voltage is out of limits and you have a Lithium-ion battery fitted, replace it for type specified in the bike's original manual (EG a lead-acid type).

If the voltage is low or does not rise up when the engine is revved, check the earthing to the wiring loom/battery. Many charging problems are caused by powder coated frames, poor earthing, broken connections in the original loom or incorrectly connected generator wires. Remember these bikes are approaching 5 decades old and wiring problems multiply with time.

If the wiring is satisfactory and the charging voltage does not rise when the engine is started, the generator should be sent to our workshops for testing. The charging coils suffer with age and can fail, also they are easily damaged by careless use of flywheel pullers of the type where 3 bolts are screwed through the rotor to attach the puller.