

B.D.K. RACE ENGINEERING.

Suzuki GSXR600/750 K1-3 - Alternator Fitting Info

Contents:

- 1 x Windings assembly including mounting plate
- 1 x Rotor assembly
- 3 x M6 x 10 Machined Allen screws
- 6 x M5 x 25 Allen screws
- 1 x Regulator/Rectifier unit

Fitting:

- 1) Remove the original alternator cover and flywheel assembly
- 2) Remove the original windings and bolt the mounting plate to the cover using M6 allen screws and thread locking compound and tighten securely.
- 3) Bolt stator cup to mounting plate using M5 allen screws and thread locking compound. Tighten the bolts gently and evenly in several passes until the heads of the allen screws bite into the windings and are secure.
- 4) Unbolt the original flywheel from the crank. Replace with our rotor using thread locking compound on threads and tighten to 25 ft lbs. Please check for clearance between the casing and the flywheel bolt before fitting the windings (cover should sit flush on gasket face without pressure).
- 5) Apply a smear of silicone sealant around the edge of the grommet and back of the wires and fit the cover to the casing ensuring the locating dowels are present and undamaged and that the gasket is present and undamaged.
- 6) Mount the new regulator unit in place of the old, it plugs directly into the alternator, the red and black leads direct to the battery, and the blue wire to a switched 12V supply (constantly on with ignition on, 0V with ignition off. Alternatively the blue wire can be connected to the positive battery terminal but if this is the case the regulator must be isolated when the bike is not in use to prevent power drain.

Please Note: Never run the bike with the battery or regulator/rectifier disconnected as this will cause damage to the alternator. Likewise never use the generator with the standard regulator / rectifier. Please also be aware that as the system is designed for race use it only starts charging the system at approx 5000rpm, if left running for long periods of time below this it will eventually flatten the battery.

Always start bike with a fully charged battery

The green light on the regulator / rectifier will shine brightly when all losses have been overcome and from that point on (higher revs) the battery will be topped – up.

Thread locking compound must be used on all screws on assembly – failures have occurred when this has been omitted!



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Testing your race generator if a fault is suspected:

- 1) Check that there is a 30 or 35A fuse in the reg/rec positive lead and that it is not blown.
- 2) Ensure that there is at least 12V DC at the blue wire feed with the ignition on and that the connection is secure.
- 3) Connect the reg/rec to the stator and with the battery terminals and blue wire fixed if your battery has 13+V you should see a very dim light from the reg/rec LED (you may need to shield out the light to see this).
- 4) Check that the three pins in both the stator side and reg/rec side connectors are firmly fixed by giving them a gentle tug each in turn.
- 5) Unplug the stator from the reg/rec and check continuity between the stator pins – you should have continuity between any two of them, but no continuity between any of them and earth.
- 6) With the stator unplugged from the reg/rec and whilst the engine is running at a fixed speed measure the voltage in AC across the pins out of the stator in turn (three different ways).
It is important that your meter is set to AC before doing this, and you should be getting the same voltage between any two pins. You should be getting somewhere between 3V & 4V per 1krpm, ie 9-12V for 3krpm.
- 7) Reconnect the stator to the reg/rec. Fire the bike up, set your multi-meter to DC and measure the voltage across the battery terminals. You should be seeing between 13V and 14.1V across the terminals at around 5k rpm. The generator will not fire below around 3krpm. The green LED on the reg/rec should be brightly lit – this indicates over 13.5V.
- 8) If all the above have been checked and yet the desired charging is not happening get in touch with us for further instruction and advice before sending the unit back.

Warranty and Liability Disclaimer

Due to the high stress environment of high performance riding, competition riding and especially from previous or future crash damage, in common with other racing parts no warranty, guarantee or liability is expressed or implied whatsoever in terms of but not limited to the item itself and any consequential damage. It is imperative that customers understand and recognise that they are purchasing racing equipment which has been designed with performance in mind over longevity and that they are solely responsible for their own skill and judgment when selecting and installing these products.



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