

BDK RACE ENGINEERING

Suzuki GSXR600/750 K6+ Alternator Fitting Info

Contents:

1 x Alternator assembly mounted in modified casing
1 x Rotor assembly
6 x M6 x 16 Countersunk hex head screws
1 x Regulator/Rectifier unit

Fitting:

- 1) Remove the original alternator cover and remove the stator assembly from it.
- 2) Unbolt the original flywheel from the starter clutch and replace with our flywheel using the countersunk screws supplied to 9.5 ft lbs (thread-lock on clean and dry threads is a **must** when bolting back together).
- 3) Refit the new flywheel assembly & tighten the centre bolt to 25ftlbs using thread-lock. Please check for clearance between the casing and the flywheel bolt before fitting the windings (the cover should go fully home without pressure).
- 4) Ensure locating dowels are fitted either to casing or cover and undamaged prior to installation.
- 5) Take the new cover and stator assembly and fit to the engine taking care to line up the casing when fitting so as not to damage the alternator coils through misalignment. Always use a gasket. Ensure the cover is fully home and flat before tightening the cover bolts and check the crank rotates freely once tight.
- 6) Mount the new regulator unit in place of the old, it plugs directly into the alternator and then the red lead needs to go to the positive terminal of the battery and the black lead to the negative. The blue lead connects ideally to a switched positive (which must be off after EVERY race. The blue wire can be connected to the battery positive terminal, but in this instance we recommend fitting a fuse/switch to the blue wire and pulling the fuse out/switching off when the bike is not running to prevent drain on the battery. Never run the bike without 12V supply to the reg/rec!

Please Note: Never run the bike with the battery or regulator/rectifier disconnected as this will cause damage to the alternator. 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. The LED light will come on when the generator overcomes drain.

Always start bike with a fully charged battery & Remove fuse from regulator after each use

Also note that the regulator body must be earthed at all times

Important : All bolts must be fitted with thread locking compound

Do not use standard regulator



BDK RACE ENGINEERING ASHWELLTHORPE IND EST, NORWICH, NR16 1ER, UK
+44 (0)1508 481713 James@bdkraceeng.co.uk Web Site: www.bdkraceeng.co.uk
Webshop: www.bdkraceeng.co.uk/tc

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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.