# Please read these important instructions before opening your new Sparx Stator or Rotor

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## INSTALLING THE STATOR AND ROTOR

After removing the old stator and rotor, offer the new stator so the output wires end up on the outside and in the 2 o'clock position (on triples the wire should be on the inside in the 11 o'clock position). After cleaning the threads with alcohol, or other suitable solvent, apply a few drops of blue Loctite to the stator stud nuts (21-2177 T140 cyl. base nuts work well here) and torque to 20 foot pounds. Offer the rotor to the engine, being sure the side required for your bike is facing out. (On the twins it is the side with the Sparx logo. On triples it is the side with 6 lines with A and B markings). After cleaning the threads with alcohol, or other suitable solvent, apply a few drops of blue Loctite to the rotor nut and tighten to 30 foot pounds (triples 50 foot pounds).

### ROTOR CLEARANCE

Because the stator studs or the end of the crankshaft stub could be bent. You must check the clearance between the stator and the rotor. Because of the strength of the Sparx magnet it is machined to offer more clearance than the original Lucas. Even with the extra you MUST check for clearance!

### BE SURE TO ROTATE THE ROTOR AS YOU CHECK FOR CLEARANCE

To be sure that you have checked for all possibilities **you must rotate the rotor** during the checking process. Turn the engine through its 360° stopping every 60° to check to be sure you have .008" clearance between the 6 stator poles (single phase) or 8 stator poles (three phase) and the magnet.

### IF THE CLEARANCE IS LESS THAN .008" IT MUST BE FIXED BEFORE CONTINUING

It is possible for the stator to be mounted off center and further have the rotor mounted to a bent crankshaft (a fairly common condition). If the rotor mounted on a bent crankshaft is sitting in an offset position, which lines up with the stator's offset, you can have a false impression that the rotor has the required .008" clearance. In this condition when you rotate the motor 180° the offset rotor can run right up against the stator on the other side or have less than the required clearance.

### Other problems which will effect the performance of the stator and rotor include:

- Excessive clearance in the crankshaft bearings.
- Cracked or bent crankshaft.
- Loose or misaligned inner primary covers, as with non-unit Triumphs and Nortons.
- Rotors mounted on a worn crankshaft.
- Stators mounted on misaligned or bent studs.

The heat generated by the rotor rubbing on the stator can melt insulation off the stator, damage the rotor and cause it to loose magnetism. In the most severe cases it can lock the motor, cause damage to other parts of the motorcycle or cause serious injury, death or worse.

**IMPORTANT! If it is found that you don't have sufficient clearance the problem has to be identified and corrected by a competent mechanic before the bike is operated!**

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# Sparx 3 PHASE Alternator Kit

wired NEGATIVE ground

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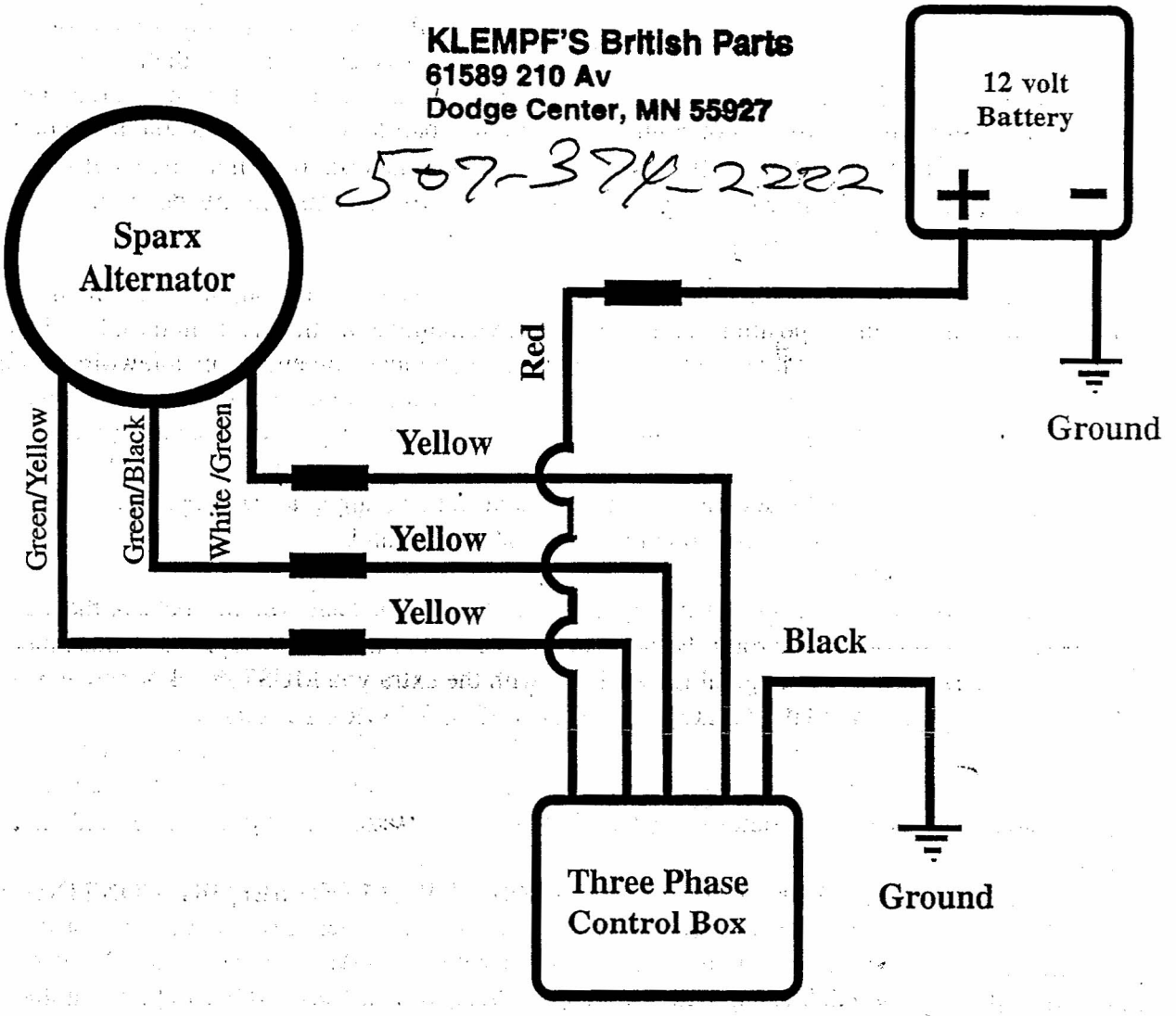
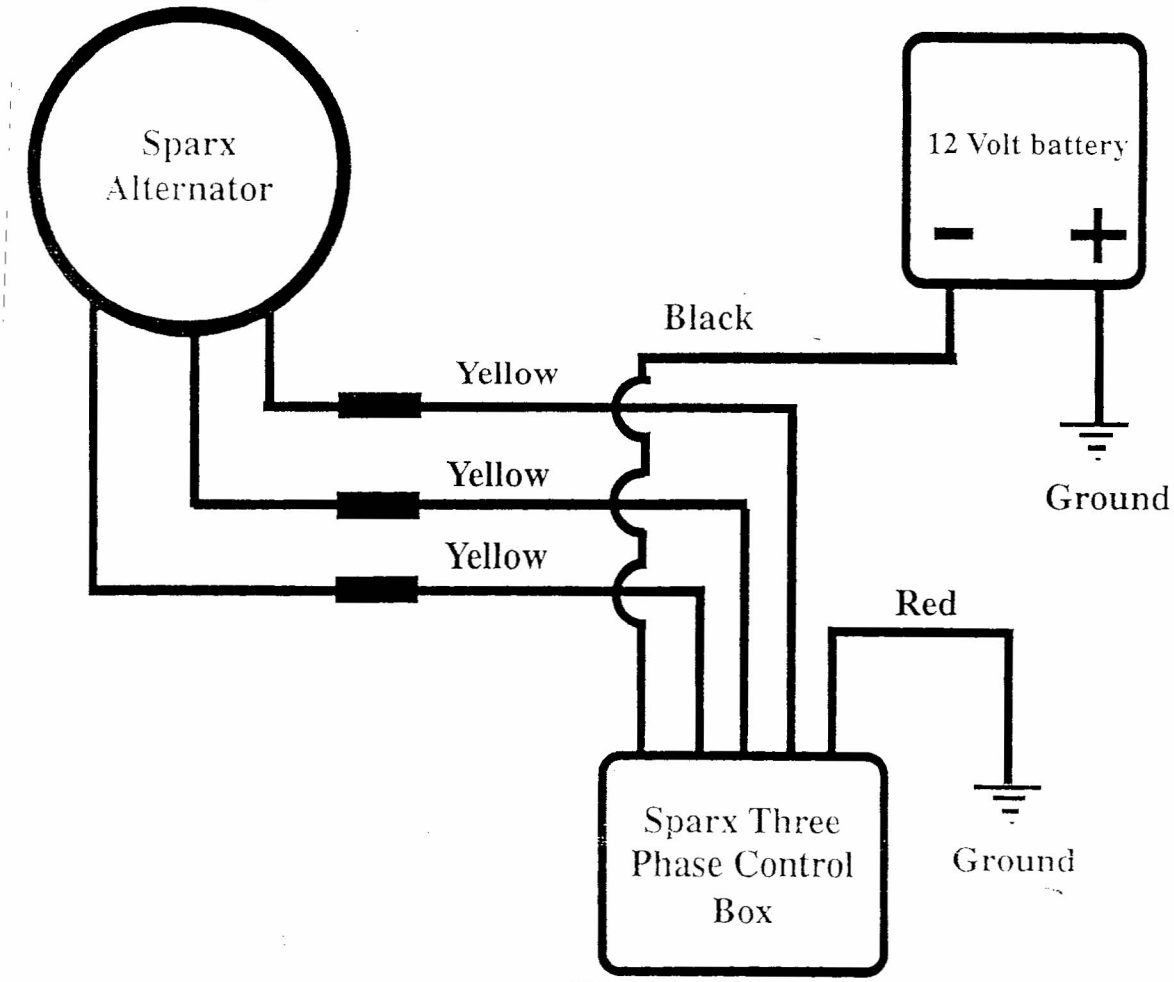


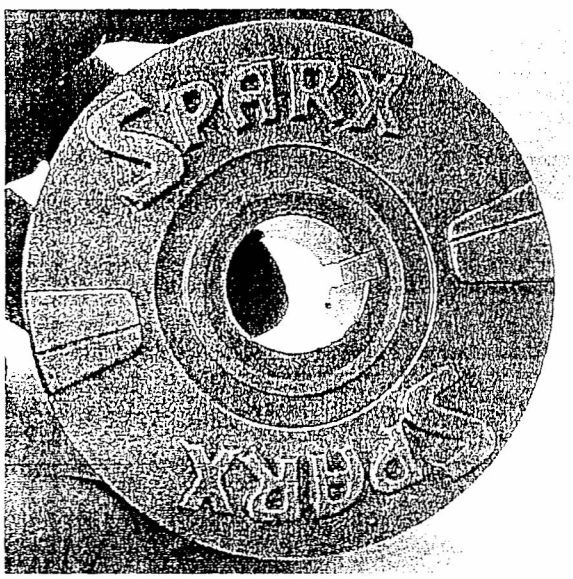

**There will be no voltage output from the regulator until it is connected to a "known good" 12 volt battery. To test the output from the regulator you must have it connected to a known good battery.**

**With 3 Phase kits you must use 5000-ohm resistor spark plug caps or overcharging of the battery may occur!**

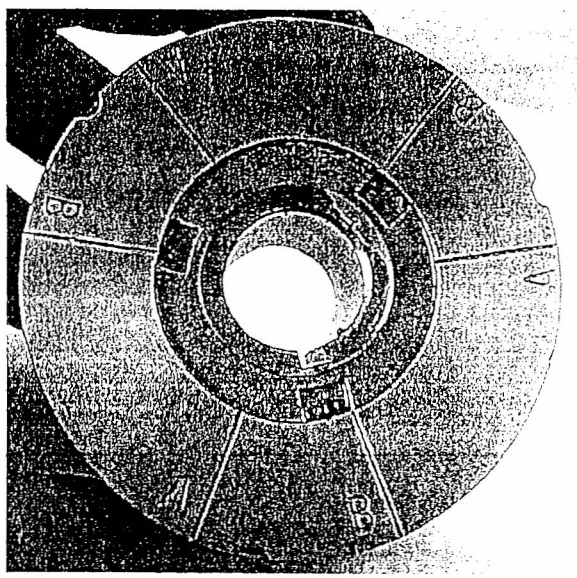
# Sparx Three PHASE Alternator Kit

wired POSITIVE ground

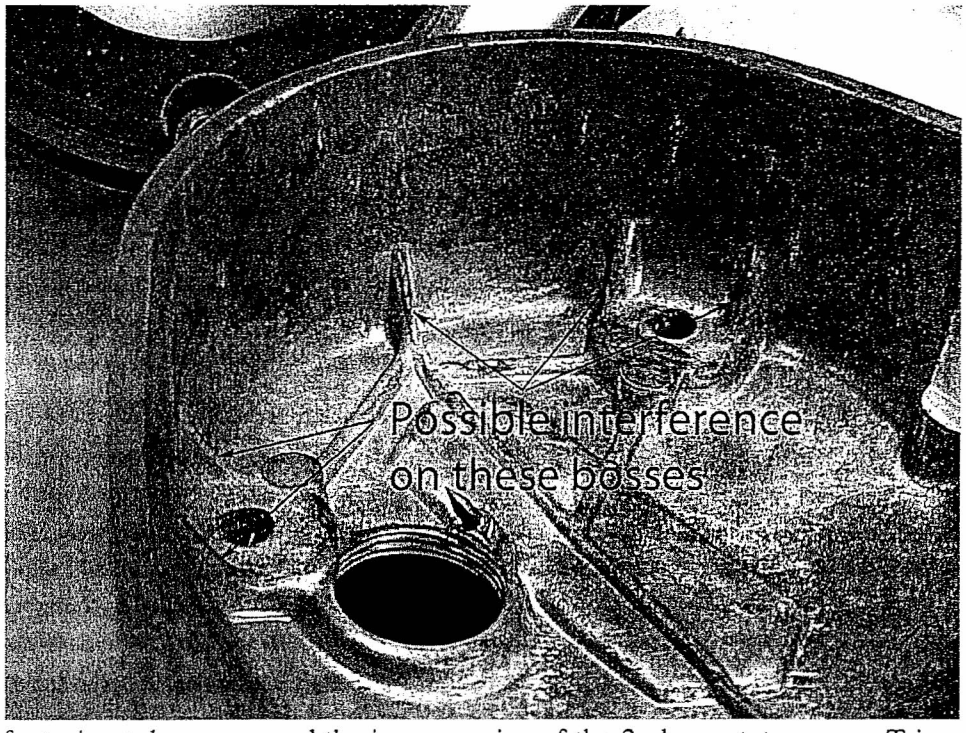



For Triumph, BSA , and Triumph twins and Singles mount the rotor with Sparx logo facing you. Timing mark is Full Advance or 38 degrees BTDC.



For Triumph, BSA three cylinder models mount the rotor with "A" - "B" timing lines facing you. Up to engine # PG01602 use "A" to time ignition. After PG01603 use "B." Mark is Full Advance.




Due to manufacturing tolerances, and the increase size of the 3 phase stator, some Triumph T140s can have some interference between the Sparx stator and the primary cover. If present, the primary cover is held away from the engine cases by the thickness of a primary gasket. Careful removal of a little material on the primary cover's inner bosses (shown in photo) will cure the problem.