Troubleshooting Guide for the Lucas 10 Amp Single Phase Stator (WW10109, RM21 Stator) with Tri-Spark MOSFET Voltage Regulator

We strongly recommend that you engage a qualified auto-electrician or technician to install your parts and perform the troubleshooting.

Review the installation instructions - make sure the installation has been done correctly.

NOTE: Undercharging issues are often caused by a weak or faulty battery. Fully charge the battery and then test it with a load tester to fully assess the condition of the battery and replace if necessary.

- **No Charging or Low Charging Output:**
    - **Check Connections:** Verify all wiring connections, including grounds, are secure and corrosion-free.
    - **Inspect Stator:** Remove and inspect the stator for signs of burning, damage, or coil resistance issues.
    - **Test Regulator:** If the stator is fine, test the regulator by measuring the voltage output.
    - **Battery Condition:** A weak or faulty battery can cause charging issues. Test the battery with a load tester.
    - **Weak Rotor Magnets:** The magnets in the rotor can weaken over time and can become too weak to effectively charge the battery, This condition often goes undetected as the rotor is difficult to access and requires removal of the stator coil.

- **Overcharging:**
    - **Voltage Check:** If the charging voltage exceeds 15V, the regulator may be faulty. Replace the regulator if necessary.

    - **Wiring Inspection:** Ensure the regulator's wiring is correctly connected. Refer the wiring diagram in the Tri-Spark Guide to Fitting the 10 amp Alternator and MOSFET Voltage Regulator and the wiring diagram for your machine.

- **Intermittent Charging:**
    - **Check for Loose Connections:** Inspect all electrical connections, especially around the alternator and regulator, for looseness or corrosion.
    - **Inspect Rotor & Stator Alignment:** Ensure the rotor and stator maintain the correct gap during engine operation.

- **Clearance between the rotor and stator**
    - **Check the clearance** between the rotor and inside of the stator with a feeler gauge all the way around. If the clearance is less on one side then the stator must be moved according to the mount.
    - Clearance should be **8-10 thou** all the way around. If the clearance is uneven, it should be fully investigated and corrected.
    - **Rotor run-out**: the rotor may exhibit run-out on the crank mounting. The rotor should be checked for run-out with a dial gauge prior to fitting the stator.

General Maintenance Tips

- **Regular Inspections:** Periodically check the alternator, regulator, and battery for signs of wear or corrosion.
- **Clean Connections:** Keep all electrical connections clean and coated with dielectric grease to prevent corrosion.
- **Monitor Battery Health:** Regularly test the battery to ensure it is holding charge properly, as a failing battery can put extra strain on the charging system.

For installation instructions and fitting guides please see our website Technical Page

https://www.trispark.com.au/technical/
