

Stator And Regulator Test Record

Open, shorted, or plausible. Three states that need no reference figure and catch most real failures.

BEFORE YOU START

Petrol vapour ignites, batteries produce hydrogen, ignition and charging circuits carry enough energy to hurt, and a machine on a stand can fall. Work outdoors or with the door open, disconnect the battery before probing anything you are not deliberately measuring live, and never run an engine in a closed space. This sheet helps you observe and record.

DO THESE TWO THINGS FIRST OR EVERY READING BELOW IS WORTHLESS

Check the earths, especially the engine-to-frame strap, and make sure the battery is charged enough to crank properly. A corroded earth produces exactly the symptoms of a failed charging system, and a flat battery makes every voltage reading meaningless. Both are free and both have their own sheets in this library.

TESTING A STATOR WITHOUT A SPECIFICATION

Unplug the stator connector first, so you are testing the component and not the whole circuit. Then look for absolutes rather than for a number.

TEST	WHAT YOU ARE LOOKING FOR	WHAT IT MEANS
Each winding to each other winding	Continuity, low resistance	Open circuit means a broken winding. That is a definite failure
Each winding to the engine case	No continuity at all	Any continuity to earth means the insulation has failed. That is a definite failure
Output with the engine running	AC volts that rise with engine speed	No rise means it is not generating, whatever the resistance says

WHAT THIS METHOD CATCHES, AND WHAT IT DOES NOT

Open circuit and short to earth are absolutes — no reference figure needed, and between them they account for most stator failures. What it will not catch is a winding that has partly failed and still reads plausible. That exists, and this method will miss it. We would rather tell you that than print a resistance figure that condemns good parts, which is what the numbers circulating for these machines do.

TESTING A REGULATOR BY BEHAVIOUR

Measure DC volts at the battery terminals. The direction of change is the diagnosis.

WHAT THE METER DOES	WHAT THAT TELLS YOU
No rise at all when revved	Nothing is reaching the battery. Stator, regulator, or the wiring between them
Rises clearly and then levels off	Charging and regulating. This part is doing its job
Climbs and keeps climbing past 15 V	Not regulating. Stop — this destroys batteries and blows bulbs

- ☐ Battery getting hot, venting, or smelling of sulphur
Corroborates overcharging
- ☐ Bulbs blowing repeatedly
- ☐ Regulator body extremely hot after a short run

- ☐ Regulator's own earth clean and tight
- These fail from poor earthing more often than internally

THE THING THAT FAILS MORE OFTEN THAN EITHER COMPONENT

The wiring where the loom leaves the engine case. It moves with the engine every time the suspension works, it is close to heat, and it passes an edge. A chafed wire there gives exactly the symptoms of a failed stator and costs nothing to repair. Check it before condemning anything, and check it along its whole length rather than at the ends.

- ☐ Loom intact where it exits the engine case
- ☐ No rubbing where it passes the frame or the swingarm
- ☐ Connector clean and dry inside, not green with corrosion
- ☐ No melted insulation anywhere near the exhaust
- ☐ Connector pins tight in their housings, not pushed back

READINGS

WHAT WAS TESTED	BETWEEN WHICH POINTS	READING	OPEN / SHORT / PLAUSIBLE

BATTERY, ENGINE OFF

RUNNING, REVVED

DID IT RISE?

V

V

WRITE DOWN WHAT YOU SAW, NOT WHAT YOU CONCLUDED

The observation is recoverable later and the conclusion is not. "Wheel would not spin more than half a turn" is still useful in a month. "Brake problem" is not, because you will not remember what made you think so.

Need to work out what you actually own?

The Scooter Parts Registry is a free public record of the Chinese factories behind US-market scooters, ATVs and go-karts — brand, engine family, VIN prefix, factory and related machines. No account, no email.

thescooterparts.com/identify