

No Spark — Diagnostic Chart

Working back along the ignition circuit from the plug, one component at a time, without replacing anything on spec.

IGNITION SYSTEMS BITE

An ignition coil produces many thousands of volts. Hold a plug lead with insulated pliers, never with bare hands, and keep clear of the plug body while cranking. Disconnect the battery before unplugging or probing connectors. If you are not comfortable doing this, this is the right point to hand it to somebody who is.

The chain runs: plug, plug cap, high tension lead, ignition coil, CDI, pickup, stator charge coil, and the kill and stand switches that can interrupt the whole thing. Check it in the order below — cheapest and most likely first.

1 Have you tried a different, known-good spark plug?

YES The plug is eliminated. Go on.

NO Do this first. A plug that is oil-fouled or cracked internally will show no spark and costs a fraction of anything else in the circuit.

↓ still not solved — go on

2 With the plug cap removed and the bare lead held about 5mm from the engine, is there a spark?

YES The cap is suspect — many unscrew from the lead and can be replaced on their own.

NO The fault is upstream of the cap. Go on.

↓ still not solved — go on

3 Are the earth connections clean, tight and actually earthing?

YES Go on.

NO A corroded earth or an engine-to-frame strap that has rusted through produces exactly the same symptom as a dead CDI, for nothing. Clean every earth back to bright metal before buying a single part.

↓ still not solved — go on

4 Have you eliminated the kill switch, the ignition switch and the side stand switch?

YES Go on.

NO All three interrupt the ignition circuit by design. A wet or corroded switch will kill the spark permanently. Unplug or bypass each in turn to test, then reconnect it.

↓ still not solved — go on

5 Are the connectors into the CDI and the coil clean, dry and fully seated?

YES Go on.

NO Push every connector apart and back together. Green corrosion inside a multi-pin block is common on a machine that has been outdoors, and it is invisible while the block is together.

↓ still not solved — go on

6

Does the ignition coil measure within a sensible range on a meter, primary and secondary?

YES

Coil is probably fine. Go on.

NO

An open circuit on either winding is a failed coil. Note that the correct resistance values vary between coils, so what you are looking for here is an open or a dead short rather than a specific number.

↓ still not solved — go on

7

Does the pickup and the stator charge coil show continuity rather than an open circuit?

YES

The generating side is intact, and the CDI is now genuinely a candidate. Record your readings before you buy one.

NO

An open winding under the flywheel cover is the fault. Check the wiring back from the connector first, because a chafed wire where the loom leaves the engine is far more common than a failed winding.

METER READINGS

WHAT YOU MEASURED	BETWEEN WHICH POINTS	READING	OPEN / SHORT / PLAUSIBLE

WHY NO RESISTANCE VALUES ARE PRINTED HERE

Published figures for these components differ between sources and between suppliers of nominally identical parts, and a wrong number leads people to condemn a good component. What a meter reliably tells you without any reference figure is whether a winding is open circuit, shorted, or somewhere plausible in between — and that distinguishes most failures on its own.

WHAT YOU FOUND, AND WHAT YOU CHANGED

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