

Spark Plug Thread And Reach Gauge

Thread diameter, reach and seat type decide whether a plug is safe to fit. All three are measurable, and none of them is the heat range.

REACH IS THE ONE THAT DOES DAMAGE

A plug that is too long can be struck by the piston. A plug that is too short leaves unthreaded bore exposed to combustion, which fills with carbon and then damages the threads when the correct plug is fitted later. Both of these thread in perfectly and both feel fine until something breaks.

PRINT CALIBRATION — CHECK BEFORE MEASURING

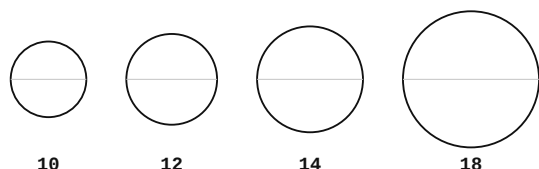


Lay a steel rule along this scale. The 150mm mark must fall at exactly 150mm. If it does not, reprint at 100% / "Actual size" with page scaling off — every measurement you take from a scaled sheet will be wrong.

THREAD DIAMETER

Stand the threaded section of the plug on the circles below and find the one it matches. Small engines use a small number of sizes and they are easy to distinguish once you have something true-size to compare against.

TRUE-SIZE THREAD DIAMETERS — MILLIMETRES



WHAT THE CIRCLES ARE AND ARE NOT

A 10mm circle is a 10mm circle — that is geometry, not a claim about your engine. What this sheet will not tell you is which of them your engine takes, because that is set by the head and the only reliable way to know is to measure the plug that came out of it.

REACH

Reach is the length of the threaded section, measured from the sealing face — the gasket or the taper — to the end of the threads. It is not the overall length of the plug and not the length including the hex. Measure the old plug and the new one the same way and compare directly.

THREAD DIAMETER

mm

REACH, OLD PLUG

mm

REACH, NEW PLUG

mm

HOW IT SEALS

The two arrangements are not interchangeable

TYPE	HOW TO RECOGNISE IT	WHAT IT NEEDS
Gasket seat	A flat shoulder with a captive metal washer on it	A flat face in the head. The washer crushes once and should be replaced with the plug
Taper seat	A cone below the hex, no washer at all	A matching cone in the head. Fitting a gasket plug here leaves it sitting too high

SEAT TYPE

HEX SIZE ACROSS FLATS

TERMINAL TYPE

 mm

Solid nut, removable nut, or stud

THE PLUG THAT IS CURRENTLY WORKING

This is the most valuable thing on the sheet. Whatever else you conclude, a plug that is in your engine and running is a known-good specification. Write it in full and you can always buy that again.

FULL PART NUMBER, EVERY CHARACTER

GAP AS FITTED

FITTED AT

 mm

 miles

DATE

HEAT RANGE IS DELIBERATELY NOT ON THIS SHEET

It is not a measurable dimension, it is specified per engine by manufacturers we often cannot identify, and the numbering runs in opposite directions between different plug makers — so a number that means one thing in one range means the opposite in another. Getting it wrong damages an engine slowly enough that nobody connects the two. Use the manufacturers' own cross-reference tables, and record the plug that is already working.

THIS SHEET RECORDS, IT DOES NOT RECOMMEND

Nothing here tells you which part to buy. It tells you what you currently have, in the units a seller works in. Machines built to the same nominal specification were fitted with different components by different suppliers, sometimes inside one model year, so the only reliable reference is the item in your hand.

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