

Two-Stroke Or Four-Stroke?

The question everything else depends on, settled from six things you can see without tools. Plus air-cooled or liquid-cooled while you are there.

Six things you can see, no tools. Any three pointing the same way settles it.

THE SIX OBSERVATIONS

Work down these. The oil arrangement is the strongest single indicator.

WHAT TO LOOK AT	TWO-STROKE	FOUR-STROKE
Oil	A separate oil tank you top up, or fuel you mix oil into yourself	Oil inside the engine, with a filler cap and usually a dipstick on it
Draining	No engine oil drain plug in the crankcase	A drain plug in the bottom of the crankcase
Exhaust on start-up	Visible blue-ish smoke, which is normal and clears little	Little or no smoke once running, and any smoke is a fault
Exhaust shape	Often a fat, bulged expansion chamber	Usually a plain pipe into a silencer
Sound	Higher, sharper, more of a buzz	Deeper, with a distinct beat
Engine code on the case	Often begins 1E, e.g. 1E40QMB	Often reads like 139QMB, 152QMI, 157QMJ

THE ONE THAT DECIDES IT

A separate oil tank, or an instruction to mix oil into the fuel, means two-stroke. An oil filler cap on the engine with a level to check and a drain plug underneath means four-stroke. If the exhaust shape suggests one and the oil arrangement suggests the other, believe the oil.

WHILE YOU ARE LOOKING — HOW IS IT COOLED?

This decides whether the coolant and overheating sheets apply to you

WHAT TO LOOK FOR	AIR-COOLED	LIQUID-COOLED
A radiator	None	A small radiator, usually behind the front panel or beside the engine
Hoses at the cylinder	None	Two rubber hoses running to the cylinder head
Cooling fins	Prominent fins on the barrel and head	Fewer or no fins; the barrel looks smooth
Plastic shrouding	Shrouds ducting air from a flywheel fan	Usually none of that ducting
A coolant reservoir	None	A small translucent bottle with level marks

WHAT THE ANSWER CHANGES

Why this is the first sheet and not an afterthought

	IF TWO-STROKE	IF FOUR-STROKE
Oil	Two-stroke oil, in the tank or premixed. Running it dry seizes the engine	Four-stroke engine oil, changed at intervals, level checked
Smoke	Some is normal. What matters is a change	Any persistent smoke is a fault — see the smoking sheet
Spark plug	Reads sootier by nature	Plug colour is a more sensitive mixture indicator
Running lean	Can seize the engine in seconds at full throttle	Runs hot and damages over time
Rebuild	Rings, bore and seals	Rings, bore, and valves and their seats
Valve clearance	Does not apply — there are no valves	Checked cold, and the first thing to check when it runs badly

YOUR MACHINE

TWO-STROKE OR FOUR-STROKE	AIR-COOLED OR LIQUID-COOLED	HOW MANY OBSERVATIONS AGREED
ENGINE CODE ON THE CASE	SEPARATE OIL TANK?	OIL DRAIN PLUG PRESENT?
OIL TYPE IT TAKES	OIL QUANTITY	DATE ESTABLISHED
	ml	

WRITE IT ON THE MACHINE'S PAPERWORK

Whatever you conclude, put it somewhere that stays with the machine. The next owner will otherwise be doing this exercise from scratch, and the commonest way these engines get damaged is somebody putting the wrong oil in — or no oil at all — because nobody told them which kind it was.

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