

Rule-of-nine method

An alternative sequence often recommended by car manufacturers for in-line four-cylinder engines, is to follow the 'rule of nine'.

There are some engines – including the Fiesta 1.1 – on which this method is not recommended: consult your car handbook or service manual if in doubt.

The feeler gauge must be a close sliding fit – with the engine hot or cold, according to the manufacturer's instructions. With many different sorts of engine layouts, No. 1 cylinder is usually at the crankshaft-pulley end, irrespective of which way the engine is mounted in the car.

Turn the engine by means of a socket spanner on the crankshaft-pulley wheel, or by jacking up one of the driven wheels, engaging a high gear, and turning the wheel by hand to turn the engine.

Removal of the sparkplugs (See [Cleaning and fitting spark plugs](#)) will make turning the engine easier.

Count the valves of No. 1 cylinder as 1 and 2, the next pair as 3 and 4 up to the furthest pair, 7 and 8.

Turn the engine until one rocker arm is fully down, the valve being fully open.

Follow this order:

- Check No. 1 valve clearance with No. 8 8 fully down.
- Check No. 3 valve with No. 6 fully down.
- Check No. 5 valve with No. 4 fully down.
- Check No. 2 valve with No. 7 fully down.
- Check No. 8 valve with No. 1 fully down.
- Check No. 6 valve with No. 3 fully down.
- Check No. 4 valve with No. 5 fully down.
- Check No. 7 valve with No. 2 fully down.

Note that whichever valve is fully down, adjust the valve which makes up to 9 when the two numbers are added.
