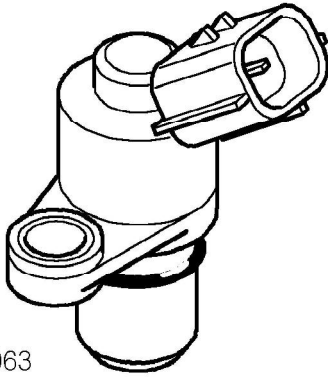




CMP Sensor - VVC Engines



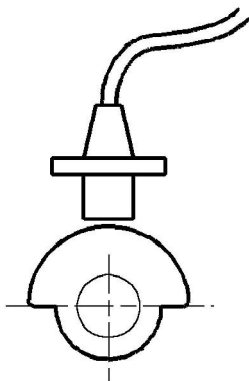
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The CMP sensor on VVC engines is located on the rear face of the cylinder head and reads off a reluctor on the inlet camshaft.

The CMP sensor is a variable reluctance sensor which does not require a power supply. The sensor consists of a permanent magnet and a sensing coil winding.

The signal is generated by changes which occur in the magnetic flux of the magnet. As the reluctor passes the sensor, an electromotive force (e.m.f.) is generated in the coil winding. The amplitude of the e.m.f. is proportional to the frequency of the change of magnetic flux which is detected by the ECM as an analogue signal.

CMP Reluctor - MPi and VVC Engines



M18 0448

The reluctor consists of a single 'tooth' design which extends over 180° of the camshaft's rotation, for this reason it is known as a half moon cam wheel.

The half moon cam wheel reluctor enables the ECM to provide sequential fuel injection at start up, but it cannot provide a back-up signal in cases of CKP sensor failure.

If the CMP sensor signal is missing, the engine will still start and run, but the fuel injection may be out of phase. This will be noticeable by a reduction in performance and driveability, together with an increase in fuel consumption and emissions.

As the camshaft rotates the signal will switch between the high and low voltages. The position of the half moon cam wheel relative to the camshaft is not adjustable. The air gap between the CMP sensor tip and the half moon cam wheel is not adjustable.