Testing a Knock Sensor

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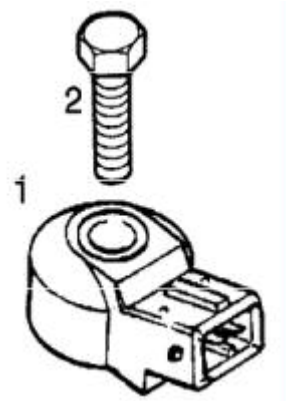

Figure 1:
Typical 2-pin KS.

Figure 4:
KS located at the back of the block under the inlet manifold.

What is a 'Knock Sensor"?

The knock sensor (KS) are commonly found on modern injection engines (carburetor engines do not have them installed), but NOT all injection engines use a KS. It is a sensor that outputs a small electrical signal on detecting 'engine knock'. Its related to ignition timing and fuel detonation within the cylinder head. On receiving a knock signal, the ECU (Engine Control Unit) will temporarily adjust (retard) the ignition timing to prevent the condition.

Some engine systems with a KS can detect engine knock in an individual cylinder. Timing for that cylinder alone will be retarded by the ECU until knock ceases.

So basically, the KS is used to stop the engine detonating (destroying) itself when the engine is running.

For more information on how the KS works and its location, see the technical guide on the KS by **clicking here**.

How do I test the KS?

For this test you need a strobe gun, so you can physically see the timing change via the cam belt or the timing mark on the crank pully wheel.

1. Inspect the KS connector and its pins for good condition and there is no damage of the cable form like cuts, splits or burns etc.
2. Check that the connecotr plug fits home on the KS and is not lose and that the pins make good contact. Spray the contacts with WD40.
3. Using the stobe gun, attache the probe of the inductive pick to the HT lead of cylinder number 1 (follow manufactues instructions if you don't know how to do this).
4. Turn on the engine and allow to idle.
5. Gently tap the engine block close to number 1 cyclinder, ie use the handle of a screw driver.
6. The timing should be seen to retard.

No other testing is possible. On most Vauxhall modesl, make sure that the connector which plugs onto the KS is red in colour.