

**Haynes**
*shows you how***BMW 3-Series (92-98) & Z3 (96-98) Haynes Online Manual**

2 Ignition systems - testing

1 If a fault appears in the engine management (fuel/injection) system, first ensure that the fault is not due to a poor electrical connection, or to poor maintenance, i.e. check that the air filter element is clean, that the spark plugs are in good condition and correctly gapped, and that the engine breather hoses are clear and undamaged.

2 Check the condition of the spark plug wires (if equipped) as follows:

- A. Make sure that the leads are numbered to ensure correct installation, then pull the end of one of the leads from the spark plug.
- B. Check inside the end fitting for signs of corrosion, which will look like a white crusty powder.
- C. Push the end fitting back onto the spark plug, ensuring that it is a tight fit on the plug. If not, remove the lead again and use pliers to carefully crimp the metal connector inside the end fitting until it fits securely on the end of the spark plug.
- D. Using a clean rag, wipe the entire length of the lead to remove any built up dirt and grease. Once the lead is clean, check for burns, cracks and other damage. Do not bend the lead excessively or pull the lead lengthwise - the conductor inside might break.
- E. Disconnect the other end of the lead from the distributor cap (release the clips and pull off the cover for access to the leads), or coil, as applicable, and check the end fitting in the same manner as the spark plug end. Again ensure that the lead is identified to ensure correct installation.
- F. Install the lead securely on completion.
- G. Check the remaining leads one at a time in the same manner.

3 Check that the throttle cable is correctly adjusted (see [Chapter 4](#)).

4 If the engine is running very roughly, check the compression pressures (see [Chapter 2](#)).

5 If these checks fail to reveal the cause of the problem, then the vehicle should be taken to a BMW dealer or other qualified repair shop for testing using the appropriate specialist diagnostic equipment. The ECM incorporates a self-diagnostic function which stores fault codes in the system memory (note that stored fault codes are erased if the battery is disconnected). These fault codes can be read using the appropriate BMW diagnosis equipment. Improvised testing techniques are time-consuming and run the risk of damaging the engine management ECM.