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Checking the A/C compressor's rotational speed sensor

Some air conditioning compressors, such as the ACP 1712 000S, have a built-in rotational speed sensor. You can check whether the sensor is working correctly by simply measuring its resistance.

Efficiency and safety

If the air conditioning fails, operates at reduced power, the A/C light flashes, or the compressor constantly switches on and off, a defective rotational speed sensor may be the root cause.

In air conditioning compressors such as the ACP 1712 000S, a sensor measures the rotational speed of the compressor shaft. As a result, the air conditioning control system can control and optimize the operation of the compressor so that the entire system operates safely and efficiently. The shaft rotational speed determined by the rotational speed sensor is used to control the compressor, to prevent damage, and to synchronize the compressor with other components in the air conditioning system.

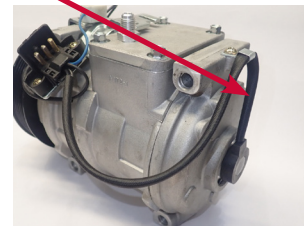
Simple testing

To measure the resistance value of the shaft rotational speed sensor, connect an ohmmeter or multimeter to pins 1 and 2 (Figure 4). If the sensor is functioning properly, the measurement should be 847 ohms.

Important

If the air conditioning compressor's rotational speed sensor (often located on the magnetic clutch) is defective, the climate control unit will usually switch the compressor off to prevent damage. If the A/C system is defective or operating at reduced power, it is therefore essential to check that the rotational speed sensor is functioning properly.

Shaft rotational speed sensor



Figures 1–2: A/C compressor ACP 1712 000S with rotational speed sensor

Shaft rotational speed sensor



Figure 3: A/C compressor ACP 1712 000S with rotational speed sensor



Figure 4: Rotational speed sensor pins



Figure 5: Measuring the rotational speed sensor's resistance