

**Haynes**
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11 Air conditioning system - general information and precautions

General information

1 The air conditioning system enables the temperature of incoming air to be lowered, and dehumidifies the air, which makes for rapid demisting and increased comfort.

2 The cooling side of the system works in the same way as a domestic refrigerator. Refrigerant gas is drawn into a belt-driven compressor and passes into a condenser mounted in front of the radiator, where it loses heat and becomes liquid. The liquid passes through an expansion valve to an evaporator, where it changes from liquid under high pressure to gas under low pressure. This change is accompanied by a drop in temperature, which cools the evaporator. The refrigerant returns to the compressor and the cycle begins again.

3 Air blown through the evaporator passes to the air distribution unit, where it is mixed with hot air blown through the heater core to achieve the desired temperature in the passenger compartment.

4 The heating side of the system works in the same way as on models without air conditioning (see [Section 8](#)).

5 The operation of the system is controlled electronically by the coolant temperature switch (see [Section 6](#)), and pressure switches which are screwed into the compressor high-pressure line. Any problems with the system should be referred to a BMW dealer or other qualified repair shop.

Precautions

Warning:

The refrigerant is potentially dangerous and should only be handled by qualified persons. If it is splashed onto the skin it can cause frostbite. It is not itself poisonous, but in the presence of an open flame (including a cigarette) it forms a poisonous gas. Uncontrolled discharging of the refrigerant is dangerous and potentially damaging to the environment.

Caution:

Do not operate the air conditioning system if it is known to be short of refrigerant, as this may damage the compressor.

6 When an air conditioning system is fitted, it is necessary to observe special precautions whenever dealing with any part of the system, its associated components and any items which require disconnection of the system. If for any reason the system must be disconnected, entrust this task to your BMW dealer or an automotive air conditioning specialist.