

Document Title: <b>Functional description</b>	Function Group: <b>874</b>	Information Type: <b>Service Information</b>	Date: <b>6/17/2021</b>
Profile:			

## Functional description

Together with pipes and hoses, the components in the air conditioning system form a closed system filled with pressurized refrigerant R134a.

When in operation, refrigerant is pumped around the system by the compressor (1). The compressor pumps (compresses) warm gaseous refrigerant through the condenser (2), where it is cooled and condenses to a liquid. The condenser is located outside the radiator and is cooled by the cooling fan (3).

The liquid refrigerant passes through the receiver dryer (4) where any moisture is removed. The refrigerant continues to the expansion valve (5), which controls the flow of refrigerant into the evaporator (6).

The pressure in the evaporator is lower than in the rest of the system and thus the liquid refrigerant will expand. The refrigerant will change to a gaseous form when it expands, a process to which heat must be applied. This heat is taken from the air in the cab. The cab air is cooled.

The thermostat (7) controls the engagement and disengagement of the compressor via its magnetic clutch.

The pressostat (8) monitors the pressure in the system and opens if the pressure is too high or too low.

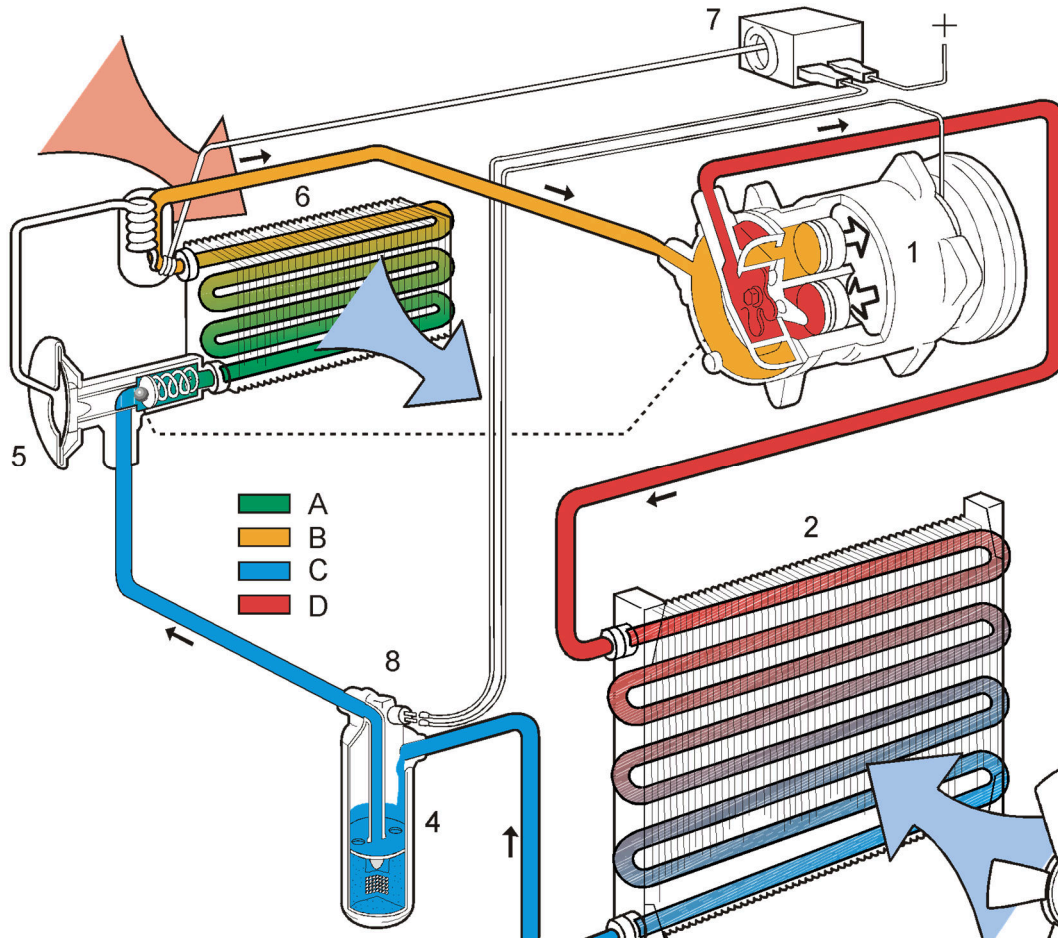


Figure 1

## Air conditioning, principle diagram

1. Compressor
2. Condenser
3. Cooling fan
4. Receiver dryer (no sight glass)
5. Expansion valve
6. Evaporator
7. Thermostat
8. Pressostat

- A. Fluid
- B. Gas
- C. Gas
- D. Fluid

### Service

- Service connections in the form of snap-on couplings are located on the receiver dryer (high pressure) and the AC compressor connecting pipe (low pressure).
- There is no sight glass, which means that the scales must be used to obtain the correct amount of R134a to be filled.

Special equipment is required to charge and drain the R134a system; Recycling station FRS-10GS.



**Equipment intended for use on R12 systems must not be used for R134a systems, except for the vacuum pump.**

**Refrigerants R12 and R134a should never be mixed.**