

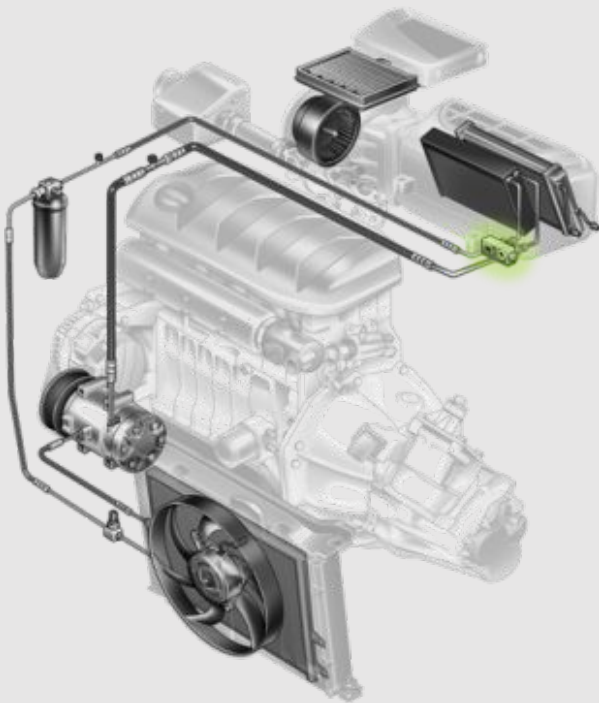
TIPS AND TRICKS

Expansion valve

Application

Vehicles equipped with A/C

Expansion valve



- **Expansion valve** controls pressure **reduction** in order to **evaporate** refrigerant and **generate cold**
- **Controls intensity** of the flow of the refrigerant in the evaporator.
- Controls **outlet temperature** of the evaporator (**Overheating**).
- Expansion valve is **located between HP and LP** after the **dryer**, and before the **evaporator** and **compressor**.
- It is always attached to the **evaporator**



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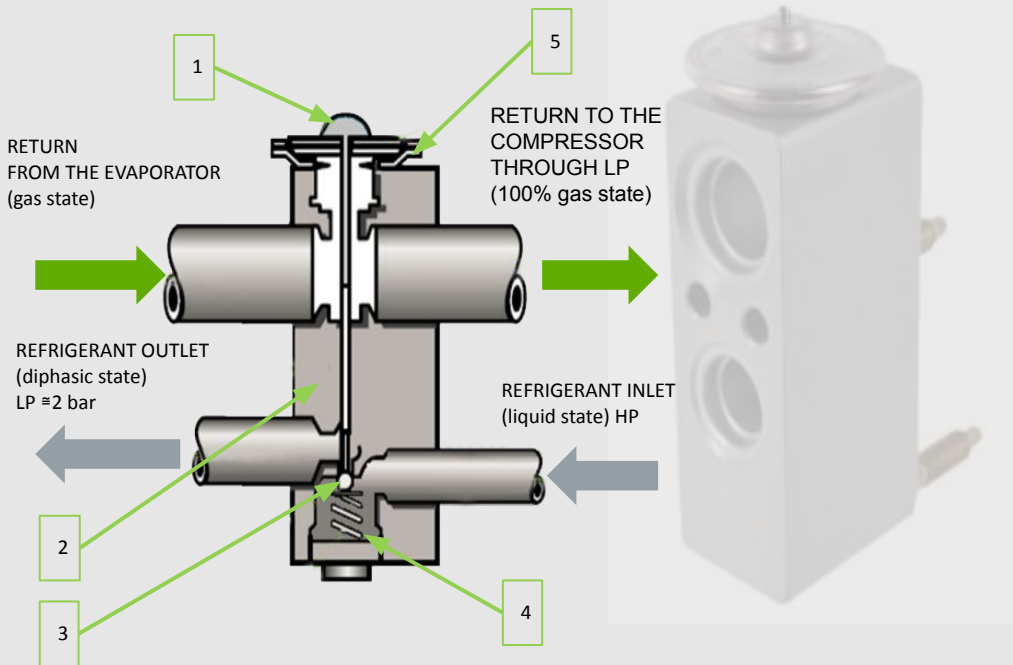


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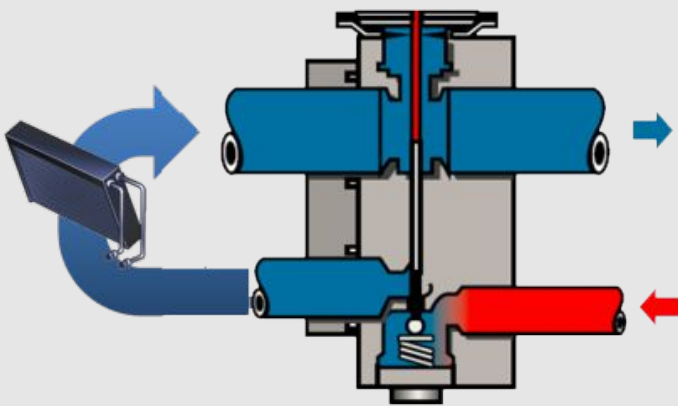


Expansion valve components



S	Item name
1	Thermostatic head
2	Body
3	Valve
4	Pre-load spring
5	Membrane

Expansion valve operation



- **Expansion valve** is a device **controlling** and **regulating** operation of the system.
- The operation of the valve **depends** and **measure** on the **temperature** of the refrigerant at the **outlet** of the evaporator.
- The temperature is determined by the **heat exchange** taking place inside the **evaporator** and varies according to the to the conditions **inside** and **outside** the cold loop.
- Based on the temperature information, the valve **adjusts** the **volume** of the fluid **injected** to the evaporator.

Expansion valve important notes

- **Regular servicing** of the system is necessary to **guarantee long-term operating** performance of the expansion valve, this is the reason to **replace** the dryer.
- Expansion valve is a **precise component** that is **sensitive** to **contaminants** and **acidic products** of the refrigerant transitions.
- Expansion valve **blocked** in the **open** position can result in a **significant drop** of the temperature in the vehicle and there is a **serious risk of damage** to the **compressor**.