

REAL Torque

October 2022

Air Conditioning

With summer fast approaching, we wanted to touch on a topic often forgotten about over winter: air conditioning.

Air conditioning, often abbreviated as AC, is the process of removing heat from the cab to keep it cool when it's hot outside.

How does it work?

In the simplest sense, the AC system changes refrigerant from a liquid to a gas. As the refrigerant changes state, it absorbs heat and humidity from the cab and allows the system to give off cool, dry air.

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PARTS OF AN AC SYSTEM

AC Compressor

This is mounted to the front of the engine and driven by a drive belt. The compressor takes in low-pressure gas and compresses it into high-temperature, high-pressure gas.

Condenser

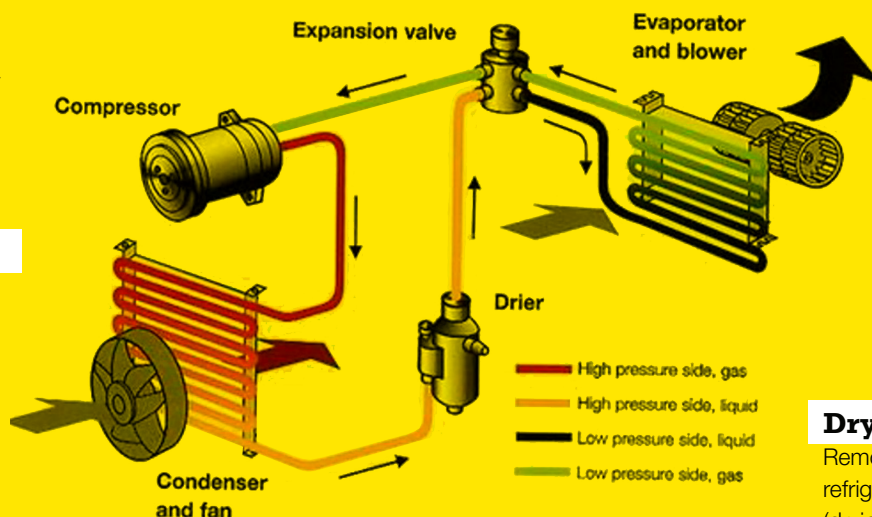
Usually mounted to the front of the truck behind the grill, acts like a radiator and uses air to transfer heat. In the condenser, the refrigerant changes from a gas to a liquid as it cools.

Metering Device

Sometimes called an expansion valve. This is used to quickly lower the pressure of the refrigerant, which also drops the temperature of the refrigerant.

Evaporator

Mounted inside the cab of the truck behind the dashboard. Inside the evaporator, the refrigerant changes from a liquid to a gas, creating a cooling effect. The fan's blower blows air across the evaporator, which is cooled and blows into the cab.



Dryer

Removes water from the refrigerant using desiccant (drying agent), has some filtering properties.

Have you ever noticed what you thought was a leak under a truck when the AC has been running?

This is caused by a build-up of condensation on the evaporator during normal use. All AC systems have a drain hose that runs off the evaporator, which carries this water away and drips onto the ground. This is normal, especially on hot, humid days.

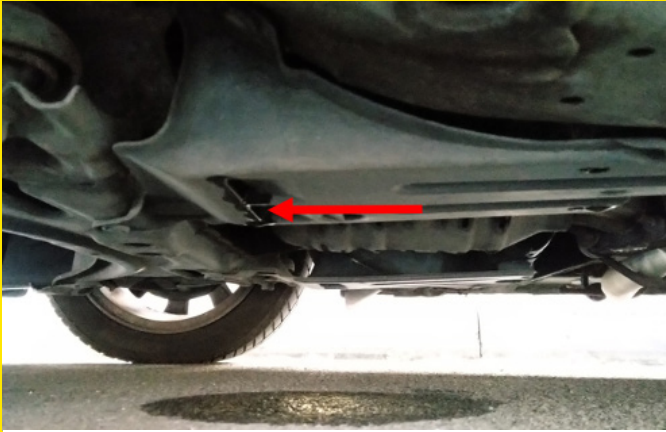


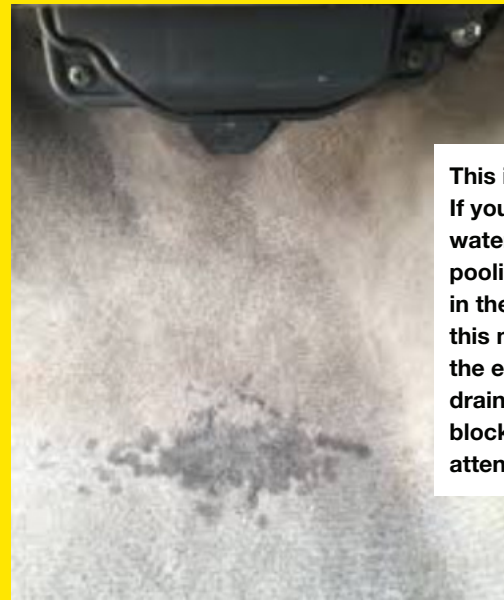
Image above shows the evaporator drain hose with a visible puddle of condensation on the ground.

Why does my AC smell funny sometimes?

Unpleasant odours or funny smells can result from bacteria or fungi build-up on the evaporator inside the cabin. This can be caused by a build-up of moisture commonly caused by a blocked evaporator drain tube. If you do have an unpleasant smell from your AC system best to get it checked out to make sure all is OK.



This image shows the difference between a clean and dirty evaporator.



This is not normal. If you notice water dripping or pooling on the floor in the cab then this may indicate the evaporator drain hose is blocked and needs attention.

Tips and Tricks



TR Tips

- ▶ Keep the air vents in the cab free of blockages. For example, don't place items on the dashboard as these can easily block the flow of air from the windscreen vents.
- ▶ If your AC doesn't work, get it checked out to catch early issues before they become worse and result in more downtime.
- ▶ To keep the supply of fresh cool air, avoid using the recirculation feature
- ▶ Even in winter, switch the AC on regularly. Do this when the outside temp is above 5°C. Regular operation ensures its functions well when needed in those hot summer months
- ▶ The ideal temperature range for efficient cooling is 22°C
- ▶ On a really hot day, open the windows before setting off so accumulated heat can escape first to help cool the cabin down even quicker.

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