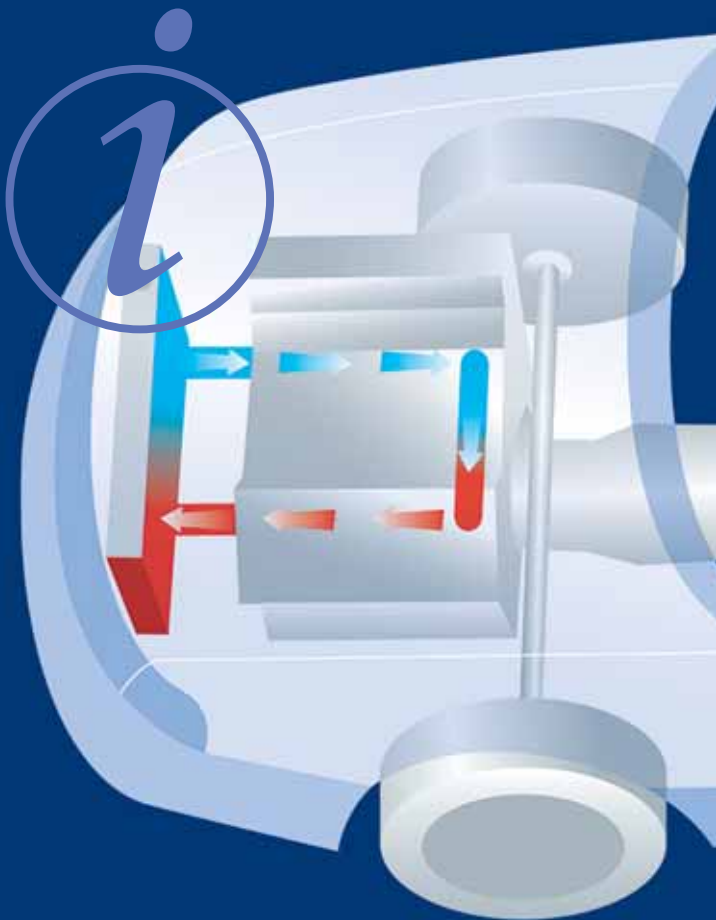


COOLING SYSTEMS



Driver Information

Getting the best from your car

COOLING things down

In the days of the early films, clouds of steam from a boiling radiator was a regular part of the action and in reality hill climbing or slow traffic were very often the cause of over-heating problems. A gallon can of water in the boot was a useful accessory!





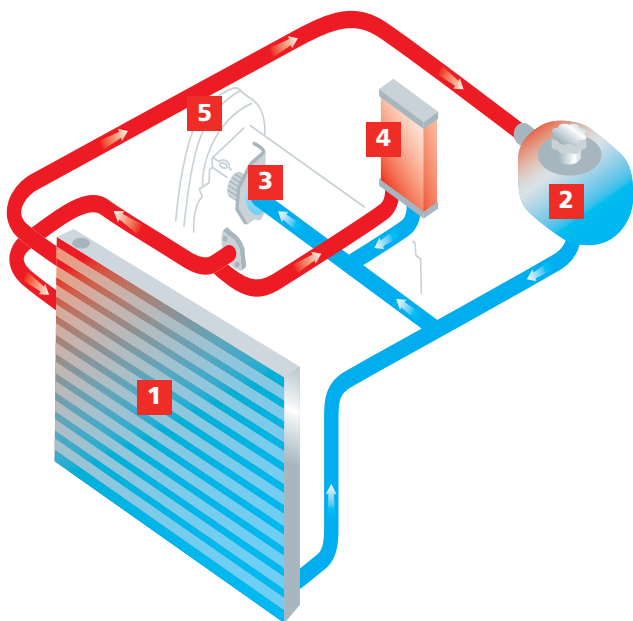
Nowadays your car's cooling system is so reliable you can virtually forget it. However it is probably working harder than ever before, to cool the engine and keep you and your passengers comfortable.

The purpose of this leaflet is to remind and help drivers to keep an eye on the simple things that avoid problems arising later.

KNOW

what's going on!

If you've ever opened your bonnet after a long motorway drive in the summer, you know just how much heat the modern engine creates. Well, that's just an extreme example of the conditions that your cooling system has to cope with, day in and day out, to prevent engine damage.



The main components of the cooling system and the part they play in efficient engine performance are as follows:

1 THE RADIATOR

Receives heated coolant liquid from the engine and passes it through a honeycomb and a series of fins, where a flow of cool air removes most of the heat, before the coolant is returned to the engine.

2 THE EXPANSION TANK

Most cars have a 'no-loss' cooling system to reduce the need for topping up the liquid level. As the system heats up, expansion causes unwanted liquid to flow under pressure into this reservoir. As the system cools down, the coolant flows back into the radiator so the cycle can begin all over again. **This expansion tank is fitted with a pressure cap that is set to suit the needs of the particular engine/vehicle combination. Your XPart AutoService centre can check that it is operating properly for you.** Never remove this cap when the system is hot because of the danger of scalding, and never substitute a different cap.

3 THE THERMOSTAT

This valve controls the amount of liquid flowing from radiator to the engine – it opens fully when the system is hot and stays nearly closed in cold weather. **A well-maintained thermostat ensures that the system is always working efficiently. Your XPart AutoService centre can check that it is operating properly when your car is serviced.**

4 HEATING/AIR CONDITIONING SYSTEMS

The engine's coolant liquid is routed through these components to provide a comfortable passenger cabin. In cold weather some engine heat is used to warm the passenger compartment – in hotter weather this heat is dissipated through the normal cooling system.

Air conditioning systems may need specialised checking if they emit a smell or appear to be working incorrectly. Your XPart AutoService centre can advise you.

5 COOLANT LIQUID

This is just as much a vital part of the system as the mechanical components. While it is generally called "anti-freeze", it does much more than prevent the modern engine from freezing. All kinds of materials are used in the cooling system – metals, ceramics and plastics – and as things get older, rust and other corrosion inevitably takes place. The coolant liquid contains a sophisticated set of inhibitors to reduce the effects of this corrosive attack, and these are carefully matched to suit your particular engine. That's why it is essential that you only use the recommended OAT (Organic Acid Technology) anti-freeze specified for your car, and your vehicle manual has full details.

The coolant liquid is important throughout the year, not just when the weather is freezing and it shouldn't be forgotten at any time. **It's been estimated that around one third of all year-old cars have inadequate or worn-out coolant liquid. Your XPart AutoService centre will be able to test for this and advise you.**

Keeping your COOL

Get into the habit of making a regular check of coolant level, just as you check your tyre pressures or oil level.

1. Check the coolant level regularly when the cooling system is cold and with the car resting on level ground. The level should be between the Max and Min markings.

DO NOT remove the reservoir cap when the cooling system is hot – escaping steam or water could cause serious injury.

2. Remove the filler cap carefully when necessary and top-up to the Max level with coolant to the correct specification. (See your vehicle handbook.) **DO NOT** mix different types of coolant liquid.

3. Do not allow the level to fall below the Min level – if you do, air can be drawn into the system that might result in air locks and faulty liquid circulation.

4. If the coolant level falls appreciably during a short period there may be leakage or overheating.

ARRANGE FOR YOUR XPART AUTOSERVICE CENTRE DEALER TO CARRY OUT A SPECIALIST COOLING SYSTEM PRESSURE TEST.

In an emergency – and only if the correct specification anti-freeze is not available – you can top up the cooling system with plain water. Note that there will however be a resulting reduction in frost protection.

DO NOT top-up with anti-freeze of a different specification to that recommended in the vehicle handbook. Your XPart AutoService centre dealer can test your car's coolant and supply the correct OAT specification.



Keep your eyes Open!



Notice anything different about the way your car is behaving? These telltale indicators could be the first sign that something is going wrong with your car's cooling system.



TEMPERATURE GAUGE

If your car's cooling system is operating properly, the temperature gauge will quickly indicate the usual operating temperature after starting – and the needle will stay round about the same position. If the gauge goes up a lot when hill climbing or in traffic conditions, or if it falls completely, consult your XPart AutoService centre.



HEATER PERFORMANCE

If your heater performance varies from what you're accustomed to, then it can be an indicator of a malfunctioning cooling system. Again consult your XPart AutoService centre dealer if in doubt.



CAUTION

Anti-freeze/coolant is poisonous and can be fatal if swallowed – keep containers sealed and out of the reach of children. If accidental consumption is suspected, seek medical attention immediately.

Prevent anti-freeze/coolant coming into contact with the skin or eyes. If this occurs, rinse immediately with plenty of water.

NOTE – when topping up, avoid spillage on body panels as it will damage painted surfaces.



Delivering your kind of service...

WORK YOU CAN RELY ON

- Fully qualified technicians
- Latest workshop technology and equipment
- Quality parts used

HERE WHEN YOU NEED US

- Immediate diagnostic checks available
- Fast appointments convenient to you
- Open to suit our customers

TOP VALUE

- Very competitive prices
- Tyres Exhausts Batteries Brakes
- All-Makes and models
- While-you-wait service
- Scheduled and tailored servicing and repair

