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How to Add Coolant to a Car

Check your car's coolant level safely, choose the correct coolant for your car, top it up yourself, and recognise when low coolant is a sign of a leak that needs a mechanic.

3-day guide · 3 chapters · Self-Directed Learning Framework

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ABOUT THIS GUIDE

Every guide on this site is produced with the Self-Directed Learning Framework: instead of an article that explains a topic at you, it turns the topic into a structure you work through — each chapter with one outcome, a starting action under twelve minutes, the minimum you actually need to know, a worked example, a checklist, and exercises using your own situation. No filler, no re-reading required.

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Finding the Tank and Reading the Level, Engine Cold

> **Outcome:** "I can find my car's coolant reservoir and read the level correctly, with the engine cold and without opening anything."

Micro-start (under 12 minutes)

With the engine cold (parked for a few hours, or first thing in the morning), open the bonnet and find a translucent plastic tank with MIN and MAX marks on the side. Don't open it yet. Just look at where the liquid sits.

The minimum you need to know

The coolant reservoir, also called the expansion tank, is a translucent plastic tank in the engine bay. You can see the liquid level through its side, between two marks: MIN and MAX, LOW and FULL, or COLD and HOT. Its cap usually carries a warning symbol or a temperature warning. If you're not sure which tank it is, the owner's manual has a picture of the engine bay. The washer-fluid tank, often blue, with a windscreen symbol on the cap, is a different tank. Always check with the engine cold. Hot coolant expands, so a reading after a drive is higher than the real level. More importantly, the system is under pressure when hot. Opening the reservoir cap or the radiator cap on a warm engine can release a spray of hot coolant and steam. Let the car cool for at least 30 minutes, and preferably a few hours. The cap should feel cool to the touch before you go near it. A level between the two marks is fine. Below MIN, it needs topping up. If you can't see any coolant at all, or the temperature warning came on while driving, don't drive further than you must, and read Chapter 3 before adding anything.

Worked example

Worked example: the tank that turned out to be washer fluid. A driver's dashboard shows a coolant warning on a cold morning. They open the bonnet and find a large blue-capped tank, nearly empty, and are about to fill it. Checking the manual's engine-bay picture first, they see that tank is the windscreen washer reservoir. The coolant tank is a smaller translucent one near the radiator, with a cap marked with a warning symbol, and its level sits just below MIN. They now know what to buy and where it goes, without having opened anything.

Checklist

- [ ] Engine cold: parked for at least 30 minutes, ideally a few hours
- [ ] Coolant reservoir identified (translucent, MIN/MAX marks, warning on the cap)
- [ ] Washer-fluid tank recognised as a different tank
- [ ] Level read through the side of the tank, not by opening it
- [ ] Level noted: above MIN, below MIN, or not visible

Exercises

1. Take a photo of the coolant tank with its MIN and MAX marks for later.
2. Find the engine-bay diagram in your owner's manual and match it to your car.
3. Check the level again on another cold morning and compare.

Choosing the Right Coolant (Not by Colour)

> **Outcome:** "I know which coolant my car needs, whether to buy ready-mixed or concentrate, and what to do if all I have is water."

Micro-start (under 12 minutes)

Look in your owner's manual for the coolant (or "antifreeze") section, and write down the exact specification it gives. It's usually a type or a manufacturer code, not a colour.

The minimum you need to know

Coolant comes in several chemical types, and car makers specify which one their engines need. The owner's manual names it, sometimes as a manufacturer code, sometimes as a technology such as OAT or HOAT. Colour is not a reliable guide. Different brands dye the same type differently, and the same colour can be a different type. Buy the coolant that matches the specification in your manual, or ask the parts counter to match it to your make, model and year. Mixing types is best avoided, because it can reduce the protection against corrosion. If you don't know what's in the car now, stick to the manual's specification for top-ups and mention it at the next service. You'll see two forms on the shelf. Pre-mixed (often labelled 50/50) is ready to pour in, which is the easiest choice for a top-up. Concentrate has to be mixed with water first, usually half and half with distilled water, following the label. If you're stuck with an empty tank and no coolant, plain water will get you to a garage or a shop. But water alone doesn't protect against freezing or corrosion, so have the mix put right soon afterwards. Coolant is poisonous and tastes sweet, which makes it dangerous to pets and children. Wipe up any spill and keep the bottle closed and out of reach.

Worked example

Worked example: two green bottles that weren't the same. At the parts shop, someone reaches for a green bottle because the coolant in their tank looks green. The manual, though, specifies a particular long-life type by its code. The green bottle on the shelf is a different, older type. The counter staff look up the car's make, model and year and hand over a pre-mixed bottle that matches the manual's code, in a different colour. The driver buys that one, and keeps the receipt in the glovebox with the specification written on it.

Checklist

- [ ] Coolant specification found in the owner's manual
- [ ] Colour not used to choose the coolant
- [ ] Pre-mixed chosen for a simple top-up, or concentrate mixed as the label says
- [ ] Water used only as an emergency stopgap, with the mix corrected afterwards
- [ ] Bottle stored closed, away from children and pets

Exercises

1. Write your car's coolant specification inside the glovebox lid or on your phone.
2. Look up a pre-mixed coolant that matches it at a shop or parts website.
3. Check whether the label of your chosen coolant says pre-mixed or concentrate.

Topping Up and Knowing When It's a Leak

> **Outcome:** "I can top up the coolant to the right level, close the system properly, and tell whether a dropping level needs a mechanic."

Micro-start (under 12 minutes)

With the engine cold, put a rag over the reservoir cap and turn it a quarter turn, slowly, then stop for a few seconds before taking it off. That pause is the habit that keeps you safe every time.

The minimum you need to know

With the engine cold, cover the reservoir cap with a rag and open it slowly, pausing after the first turn so any remaining pressure can escape. On most modern cars, the reservoir is where you add coolant. Older cars may have a radiator cap as well, but follow your manual and don't open the radiator unless it says to. Pour the coolant in slowly until the level reaches the MAX (or FULL, or COLD) mark, never above it. The coolant needs room to expand when it gets hot. Close the cap firmly until it clicks or stops, wipe any spills, and close the bonnet. Check the level again over the next few days, always cold. A small top-up that stays put is normal over time. A level that keeps dropping is a different matter: the coolant is going somewhere. Look under the car for drips or a coloured puddle where you park, and watch for a sweet smell, steam, or the temperature gauge rising. Any of those means a leak or another fault, and it needs a mechanic, not more top-ups. If the temperature warning comes on while you're driving, pull over when it's safe, switch the engine off and let it cool. Don't open the cap while it's hot. Refilling a system that has been fully drained also needs the air bled out of it, which is a job for the manual or a garage.

Worked example

Worked example: a top-up that kept disappearing. A driver tops up their coolant to MAX on Saturday morning. By Wednesday, checked cold, it's back below MIN, and there's a small orange spot on the driveway under the front of the car. Instead of buying another bottle, they book the car in and mention the puddle and the dates. The garage finds a split hose and replaces it. The driver checks the level twice more over the next week, cold, and it stays at MAX.

Checklist

- ☐ Cap opened only with the engine cold, slowly, with a rag over it
- ☐ Coolant added to the reservoir (or where the manual says), not the washer tank
- ☐ Level brought to MAX, not above it
- ☐ Cap closed firmly and spills wiped up
- ☐ Level re-checked cold over the next few days
- ☐ A level that keeps dropping, a puddle or a high temperature gauge taken to a mechanic

Exercises

1. Top up your coolant to MAX using the slow, rag-over-the-cap method.
2. Mark the date and level in a note, then check again three days later.
3. Look at the ground where you usually park for any coloured drips.

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