Coolants

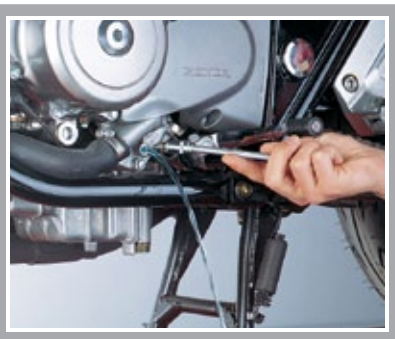
Adding antifreeze to wine is definitely not a good idea, but for protecting a motorcycle engine it certainly is ... There's no denying that an air-cooled engine with its cooling fins looks pretty stylish! But as far as noise reduction, uniform engine temperature and cooling are concerned, liquid cooling is simply better.

Maintenance

To check how safe your coolant is from Jack Frost, you can use an antifreeze tester (Order no. 10003443), which gives a reading in °C. Always bear in mind that an unheated garage may protect your bike from snow, but not against frost. Without adequate antifreeze, your coolant will freeze and build up so much pressure that the cooling hoses and radiator may burst, and – worst case scenario – the engine may be damaged.

An engine's cooling system is divided into a small and a large circuit. The small cooling circuit is thermostat-controlled and bypasses the radiator (large circuit) so that the engine reaches operating temperature more quickly. Once the coolant temperature reaches approx. 85°C, the thermostat opens and the coolant flows through the radiator, which is positioned in the airstream. If the coolant is so hot that the radiator is unable to cool it down sufficiently on its own, a temperature-controlled electric fan is activated. An engine-driven coolant pump (water pump) pumps the coolant through the system. An external container with a water level indicator serves as an expansion tank and reservoir. The coolant comprises a prescribed mixture of water and antifreeze. It is preferable to use deionised, distilled water, as this prevents scale build-up in the engine. The antifreeze added to the water contains alcohol and glycol, and also anti-corrosive additives. You should replace the coolant every two years. If you're draining the coolant for any other reason, like carrying out a general engine overhaul, it should not be re-used.

1



Drain coolant

2

Tighten drain plug with torque wrench

3

Top up with coolant

We recommend:

Procycle radiator antifreeze concentrate
Top-quality antifreeze and anti-corrosion agent containing state-of-the-art corrosion inhibitors for car, motorcycle and scooter engines made of aluminium/light alloy or grey cast iron ▪ Suitable for year-round use and satisfies today's requirements of vehicle manufacturers ▪ Completely non-foaming, prevents deposits in the cooling system and behaves neutrally towards metals, rubber components and seals ▪ Nitrite-free ▪ Contains: 1 litre
Order no. 10004869

Please note: Harmful if swallowed

Demineralised water
Contains: 1 litre
Order no. 10038020

Procycle coolant
For all water-cooled motorcycle and scooter engines ▪ This ready-to-use mixture offers antifreeze protection at temperatures down to at least -37°C and is therefore suitable for year-round use ▪ It is specially formulated to keep the entire cooling system clean and provide lasting, effective protection against corrosion and deposits ▪ Does not foam and offers outstanding protection against overheating (even in high-performance engines) ▪ Completely neutral in aluminium engines ▪ Free of nitrites, amines and phosphates. Contains silicate. Colour: blue ▪ Contains: 1 litre
Order no. 10004894

Please note: Harmful if swallowed

1 The engine must be cold when you change the antifreeze (max. 35°C), because otherwise, the system is under pressure and there is a risk you will scald yourself. Depending on your motorcycle model, you will first need to remove the fairing, the tank, the seat and the side cover. The majority of engines have a drain plug near the coolant pump (check the owner's manual, if you can't locate it). Before removing the drain plug, make sure you place a container underneath (such as a multipurpose bowl). Once you have removed the drain plug, slowly open the filler cap – this gives you a degree of control over the draining. In the case of engines without a drain plug, simply remove the bottom hose from the radiator – do not re-use any clamps. Depending on your radiator system, you may also need to remove and empty the expansion reservoir. When working with coolants, always ensure you follow the proper disposal procedure. If you splash coolant onto paintwork wash it off with plenty of water.

2 Once you've drained the entire system, fit the drain plug with a new seal and screw it back in. Always use a torque wrench (check your bike manual for the correct torque), as it's very easy to strip the the aluminium thread in the engine block.

3–4 There are different types of antifreeze: Pre-diluted antifreeze is read to use, and provides protection down to approx. -37°C. Concentrated antifreeze, on the other hand, needs to be diluted with deionised water before use. If you are using concentrated antifreeze, you will need to check the bottle for the right amount of water to add. It is also essential to check that it is suitable for aluminium engines. Only mix and top up with distilled water. And remember, antifreeze is also a must in summer because it contains special additives to protect your engine from corrosion and oxidation. Slowly pour the coolant into the filler until the level no longer sinks. Now start up the engine. If your bike is fitted with a bleed screw, leave this open and run the engine until all the air has escaped and you only see coolant flowing out. The level may drop sharply when you open the thermostat. This is completely normal because the water is now flowing through the radiator (large circuit). You simply need to add more coolant and close the filler cap. Depending on the cooling system, you may also need to top up the expansion reservoir until it is between the "Min.-Max." marking. Leave the engine running until the electric fan starts up, all the while keeping an eye on the coolant level and the engine temperature. Because the heat causes the water to expand, you will need to check the level of the coolant once again after the engine has cooled down (make sure the bike is upright). If the coolant level is now too high when cold, you will need to suction off the excess.

5 Finally, give your radiator a thorough clean on the outside. Insects and other deposits are pretty easy to shift using an insect remover and spraying gently with water. Do not use a steam cleaner or a strong water jet. Use a small screwdriver to carefully straighten any bent fins.


4 Also fill the expansion reservoir


5 Straighten cooling fins

Please note!

These tips for DIY mechanics contain general recommendations that may not apply to all vehicles or all individual components. As local conditions may vary considerably, we are unable to guarantee the correctness of information in these tips for DIY mechanics. Thank you for your understanding.