

# Technical topics

## Antifreeze matters

Despite the panics from certain quarters about global warming, now might be a good time to be considering antifreeze. There are, though, many advantages in keeping a good strength of antifreeze solution in the cooling system all year round, not just for the winter months.

Air cooled Daffers can pop and have a coffee whilst the water cooled brigade read on. The following item appeared in the recent Federation of British Historic Vehicle Clubs newsletter:

Technology moves forward and new products are constantly being launched with claims to improved formulations and performance. With the recent bitterly cold weather antifreeze has been in the headlines with some alarming stories which at first seem to be about the well known tendency of antifreeze to find the tiniest hole and cause leakages - but in these cases it has led to catastrophic engine problems.

Traditional blue ethylene glycol is a toxic but highly effective antifreeze and contains silicates as an inhibitor to help prevent corrosion in an engine with mixed metals in its make up. Bluecol and Blue Star are well known brand names and both of these are declared suitable for classic cars on their company websites. Don't be misled into thinking that the Red Bluecol is OK as this is an OAT product.

And there is Bluecol U, which is not antifreeze but instead is a top up mixture and is best avoided because of its colour, even though the manufacturer says it is OK in older engines. If you add it now knowing it's a top up fluid, you can bet you'll subsequently get confused about its colour and then get things wrong. Just avoid it.

Be aware that there are also low or no silicate ethylene glycol formulations (usually red) available which may not be suitable for all engines.

Propylene glycol is another well known and less toxic antifreeze formula and usually contains silicates but Comma, the main manufacturer, have now discontinued it in favour of an ethylene glycol product containing bittering agents to make it less palatable and minimise the risk of accidental poisoning.

Both of the above products use inorganic additive technology (IAT). Recently problems have been reported concerning the use of antifreeze mixtures using organic acid technology (OAT). OAT was introduced in the mid 1990s and the products are biodegradable, recyclable and do not contain either phosphates or silicates, and are designed to be longer lasting. However these products do seem to cause problems in older engines; over and above the ability for antifreeze to find the tiniest crevice and leak, OAT antifreezes have been accused of destroying seals and gaskets and causing a great deal of damage in old engines. For this reason the manufacturers do not recommend their use in historic vehicles. These products are usually coloured red, pink or orange.

The final category is HOAT. These products use hybrid organic acid technology in an ethylene glycol base with some silicates in the formulation alongside the organic corrosion inhibitors. The product is usually coloured green and they are not recommended for use in historic vehicles.

The Federation are still researching this problem but advise owners of older cars to:

Only use blue coloured IAT antifreeze in historic vehicles;

Only use OAT products if it was used in the engine from new by the engine manufacturer;

Never mix different types of antifreeze without thoroughly flushing out the system;

Always replace the coolant within the time scale specified by the antifreeze manufacturer as the corrosion inhibitors break down over time.

So there is the advice directly from the Federation of British Historic Vehicle Clubs and even if Spring does seem just around the corner, we should not let that persuade us that antifreeze is no longer important and we should not forget the important role it has in preventing corrosion in our engines.

## Daylight Running Lights

Legislation on vehicle lighting is changing. From January 2011, EU regulations mean that all **new** cars in the UK registered after that date will require EU approved daylight running lights (DRLs).

The change in legislation was prompted by a 2006 review by the European Commission which reported a 13% reduction on fatal accidents across Europe if DRLs were to be fitted to vehicles. DRLs greatly contrast the car from its surroundings making it more visible, helping reduce accidents.

In preparation for the change, car manufacturers have started to design new

models with DRLs fitted as standard. Not only are these vehicles more visible, but the style and look created by the DRLs is now sought after by other motorists.

Ring Automotive has introduced a daytime running lamp range in anticipation of the change in the law. Its flagship product, the Aurora, is E marked to reg 87 which is specific to daytime running and uses high power LED bulbs to meet the required brightness levels. Designed for retrofitting, the lamps will give any vehicle an unmistakable modern look that is sure to be noticed.

To inform motorists of the benefits of fitting Ring Automotive's Aurora DRLs, the company has produced an innovative and distinctive point of sale unit.

The counter top stand illustrates the contrast the lamps make to a vehicle's visibility, but motorists can also see how bright the lamps are by illuminating a DRL with a "Try Me" button.

Look out for the "Try Me" DRL stand at your local car accessory retailer.

But surely you are not going to try these on your DAF? *(No! I remember in the old days, when people were encouraged to think for themselves, that operating the light switch by oneself was usually all that was necessary to help to be seen. This is a godsend for the boy racers. Ed)*

**Steve Bidwell**

