



CARE OF YOUR CLASSIC CAR INFORMATION SHEET

This information sheet offers some practical advice for classic car owners, especially those who are new to owning a classic car.

Engine oil

If your car was made before about 1980 then you should be using engine oil specifically formulated for classic cars. The viscosity of the oil is measured in the same way, but different additives are used for modern and classic formulations. Old cars need different detergents and friction reducing additives to their modern counterparts. Equally it is unwise to use classic oil in a modern vehicle. Select a quality oil from a recognised manufacturer and follow their guidance as to the age of vehicle it is suitable for.

As water, acids and detrimental products of combustion contaminate the oil, it is wise to still have regular oil changes even if the car has only done limited mileage. In fact very low mileage cars, or cars used for short distances only, may not have had the engine hot enough for long enough to boil off the accumulated water and, if the oil is not changed regularly, this can lead to emulsification and corrosion.

Battery care

For safety it is vital that the battery is securely fixed in position. Sometimes it is necessary to change the battery clamp when batteries of the original size are no longer available. If the battery can be moved with moderate hand pressure then it is not sufficiently secure.

We also recommend the fitment of a rubber insulating boot over the positive battery terminal. This is especially important where the battery has been replaced with one that is slightly taller than the original, as this can bring its terminals far closer to the metalwork than the manufacturer intended. A short circuit on the underside of the bonnet or rear seat can have dire consequences as the resulting fire, heat and dangerous fumes will quickly spread.

We also strongly recommend fitting a battery isolator to the negative terminal because:

- It helps extend the battery life by disconnecting it whilst the vehicle is not in use
- It is good for safety whilst working on the vehicle
- It provides an additional security device.

As to general care of the battery:

- Check that the terminals are secure (but not over tight)
- Check the electrolyte level (unless it is maintenance free or sealed for life)
- Use a battery maintainer not a trickle charger
- Clean the battery terminals and apply a little petroleum jelly (eg Vaseline) or terminal wax

Some classic cars have positive earth, that is to say that the positive (+) terminal of the battery is connected to the body of the vehicle. Care must be taken when fitting electrical equipment to positive earth vehicles as most equipment is designed for negative earth installation. If your vehicle has positive earth it makes sense to fit one of the pre-printed warning labels available from most classic car parts suppliers, as this will prevent confusion when work is done at a later date.

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Petrol

Your car was probably designed to run on either 4 star or 5 star leaded petrol - both contained "Tetra Ethyl Lead"; this amongst other things reduced erosion of the exhaust valve seat. The octane rating is a measurement of the resistance to detonation and is expressed as RON (Research Octane Number)

- 4 star leaded was 97 RON
- 5 star leaded was 101 RON
- Super unleaded is 97 RON
- Unleaded is 92 RON

For classic cars **super unleaded** petrol should be used as it:

- has an octane rating of 97 RON (like the old 4 star)
- Contains very little ethanol
- Absorbs less water than standard unleaded

Even using super unleaded you will need an additional octane booster if your car was originally designed to use 5 star petrol.

Unless your cylinder head has been converted for unleaded fuel (by the installation of hardened exhaust valve seats) then you will need to use a lead replacement additive. We advise you use an additive that has been tested by The Federation of British Historic Vehicle Clubs, these are:

- Castrol Valvemaster (Phosphorus)
- Castrol Valvemaster Plus (Phosphorus)
- Millers VSP-Plus (Manganese)
- Red Line Lead Substitute (Sodium)

In our workshop we use 'Castrol Valvemaster Plus' as this also contains an octane booster, and has a convenient built in measuring chamber for easy use.

In the past it was received wisdom that the ignition timing should be retarded further when converting to use unleaded petrol. This is not universally true; we advise the retardation is adjusted according to the measurements taken while tuning the vehicle, whilst using 'det cans' or a knock sensor to detect detonation.

If the vehicle is not going to be used for some time, over winter for example, then a fuel preservative/stabiliser should be added to the fuel tank. This will help prevent the loss of the lighter fractions and slow the formation of gum like varnish deposits that can clog the carburettor.

If unpreserved fuel has been left in the tank for a significant period of time then professional advice should be sought before any attempt is made to start the vehicle.

It is best not to leave the tank empty for prolonged periods as this can encourage the formation of rust within the tank.



Engine coolant (Antifreeze)

Most classic vehicles will require ethylene glycol based engine coolant – this is generally coloured blue in the UK.

Do not use modern Organic Acid Technology (OAT) based engine coolants as they may damage some of the metal and rubber components used in older engines.

Whilst the antifreeze component of engine coolant lasts a long time, the corrosion prevention additives get depleted and thus limit the life of the coolant. We recommend being environmentally friendly and extending the life of your engine coolant by using a proprietary engine cooling system anti-corrosion additive i.e. Silverhook Anti Rust.

Tyre care

Rubber tyres perish and go hard as they get older, and this can lead to cracks forming and loss of pressure, detachment of tread or sudden failure of the tyre with little warning. Even if your tyres still have plenty of tread, they should be replaced if they have signs of cracking to the side walls or are over ten years old. Ensure your tyres are maintained at the correct pressure, especially when the vehicle is in storage over winter.

Carpets & floor mats

Even when new, classic cars were never as watertight as their modern counterparts; it was common practice to secure the floor carpets with metal press stud style clips. This meant the carpets could be removed to allow them to dry out properly, if they became damp. We recommend that periodically you check under the carpet for dampness or corrosion on the floor pan. The cause of any musty aromas should be investigated, as frequently this is caused by water ingress. Any corrosion should be treated before it has a chance to spread. If you are fitting new replacement carpets make sure they are secured with clips and not glued down. Carpet glue should only be used sparingly on vertical surfaces.

Security

It's a sad fact that some people show an interest in our cars for all the wrong reasons, so we must think about security. Classic cars do not lend themselves to the fitment of electronic immobilisers as the vehicles' wiring is generally so simple that these measures are quickly bypassed by a prospective thief. Measures such as using a switch to short out the ignition coil to ground are also largely ineffective for the same reason.

Some security measures you might like to consider are:

- Fitting an electric fuel cut off valve with secure key switch
- Fitting a fuel tap with padlock to the fuel line
- Using a steering wheel lock, or steering wheel to brake pedal lock
- Parking in a secure garage with additional locks on the up and over door.
- Applying a microdot style security marking system to various components. i.e. Alpha•Dot
- Taking some good clear photographs of your car including the engine and body numbers



Car covers

Keeping your car under a cover is a good idea, but not all covers are suitable. Many car covers are intended for cars with modern paintwork that is hard and has a clear lacquer over it. Make sure that your choice of car cover has a soft inner lining that is suitable for the softer paints used on classic cars. The car cover must be breathable and only applied to a clean dry car. A 'waxed mop', or 'paraffin mop' type car duster are perfect for safely removing grit and abrasive dirt that might otherwise mark the paintwork.

When using an outdoor cover make sure the securing straps or bungees do not bite into or rub the paintwork as the cover moves in the wind. Straps should go under the car only, not right around it.

Cars being stored over the winter

However much you are tempted, do NOT keep starting the engine every so often unless you intend to take the vehicle out for a lengthy run to ensure that the oil circulates properly and that any moisture in the engine case has sufficient time to fully boil off.

It is best to park the vehicle on a flat level surface and make sure tyres are fully inflated and insulated from the cold hard garage floor with proprietary rubber blocks that are shaped to prevent flat spots forming or use wooden blocks. Chock both sides of at least one wheel to prevent the car moving and fully release the hand brake as this will prevent the brakes sticking on.

Unless you use a dehumidified plastic bubble style cocoon, it is best to store the vehicle in a dry well ventilated area.

Wheel spinners

If your classic car has wire spoked wheels and wheel spinners then the appropriate action is required to prevent them seizing up:

- Thoroughly clean the threads on the hub and the spinner with a suitable solvent, using a stiff brush if necessary
- Coat the threads with copper grease; make sure the threads are fully coated all the way around to prevent water ingress.
- Spinners are self-tightening so, once tightened by hand, a smart tap with a copper headed hammer is all that is needed.

Rust -Under body and engine bay inspection

Whilst we can all inspect the bodywork of our vehicles for obvious signs of rust or corrosion, only the most dedicated owners inspect under the bonnet or venture underneath their car. This means that corrosion can be quite advanced in these areas before anyone notices. We recommend an annual corrosion inspection so that these areas can be thoroughly inspected and any corrosion or damage to the protective coatings can be corrected before it has a chance to spread. The under body protective coatings are not a fit and forget thing - stone chips and debris on the road can perforate them rendering them ineffective. The only way to be sure is to properly inspect the vehicle. For more information on rust treatment and prevention please see our [Rust & corrosion information sheet](#)

Note:

Whilst this information is offered in good faith, no liability can be accepted by its authors for any loss, damage or injury caused by errors in or omissions from the information given.

This document contains general information only and some aspects will not be applicable in all cases. We recommend that your vehicle is serviced and maintained by a suitably qualified professional.

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