TOOLBOX

From the Federation of British Historic Vehicle Club.

FUELS BY MATT VINCENT

We are still monitoring the situation regarding ethanol in fuel but have not received any direct evidence of bad experience from member clubs.

Bayford Thrust have just announced that they now have solved the storage problem for leaded fuel and can blend batches of 30,000 litres from 21 July.

We have recently updated the lead replacement additive list on our website (www.fbhvc.co.uk)to show which products are still available. Where a website link is shown, these products are available by mail order direct from the supplier.

As an aside: it will be interesting to learn how HRH Price Charles'Aston Martin copes with a gourmet diet of biofuel reputedly made from wine and cheese by-products.

ASPECTS OF THE USE OF PETROL CONTAINING ETHANOL— *Based on a recently published public domain document, CONCAWE Report number 3/08*

FUEL VOLATILITY.

Blending small amounts of ethanol (up to 5%) into petrol does produce a measurable increase in volatility. Oil companies must ensure that fuel volatility meets specified limits EN 228) so petrol containing ethanol will be adjusted to this specification. However, if fuel containing ethanol is mixed in the vehicle tank with purely hydrocarbon fuel an increase in the volatility of the blend in the tank can result. This may produce unwelcome symptoms of poor hot starting, erratic running including running too rich, or too lean, associated with excessive fuel volatility. The FBHVC caters for a wide range of vehicle ages, and it is highly probable that some will be less able to cope with an unintended increase in fuel volatility, and also some time-related deterioration in performance of cooling systems. Unfortunately, it seems that not all fuel containing up to 5% ethanol is labelled as such, so the scenario of mixing two types of fuel in the vehicle tank is a realistic one, with a significant probability that driving difficulties may result. Volatility related problems have been discussed before, and there are a number of often fairly simple remedies.

OCTANE QUALITY.

The addition of 5% ethanol increases petrol octane quality by about one octane number. For this reason high octane unleaded petrol (nominally 98 Research Octane Number or RON) is more likely to contain ethanol than the normal 95 RON standard or 'Premium' product. Refiners do not like giving quality away, so if ethanol is added to the standard product, the blend may be adjusted so that octane quality remains at 95 RON. Those owners of high performance cars originally requiring high octane five star petrol are more likely to buy 98 RON unleaded, so they are more likely to encounter blends containing ethanol. However, given the high octane quality of ethanol, and the EU-driven enthusiasm for bio-fuel inclusion, use of ethanol in the normal 95 RON unleaded petrol cannot be ruled out. Exposure of the majority of historic car owners to blends, containing ethanol is increasingly likely as time goes by.

EFFECTS ON FUEL SYSTEM METALS.

Briefly, the presence of ethanol in petrol increases the risk of corrosion of metallic fuel system materials. This difficulty is recognised from long experience, and effective corrosion inhibitors have been developed. Responsible fuel retailers should employ a suitable additive to protect their customers' treasured possessions, but this may not always be the case. CONCAWE Report 3/08 gives a list of metals not recommended for the use with petrol containing ethanol which reads like a metal who's who for vintage and classic cars, i.e. zinc, brass, copper, lead-coated steel. On this basis, the type of car favoured