Technical Tips, Modifications & Questions

ETHANOL AND FUEL HOSES

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September 07 was a disastrous month for Don Anderson and his XJS – it caught fire!

Luckily for Don, he was just pulling into his driveway, so was able to put the fire out without major damage, but it did take quite a bit of effort and late nights to rectify the problem, and make sure it couldn't happen again.

On discussing Don's fire situation, it came to light that this under bonnet fire problem has affected a number of people here in Newcastle and Sydney from the car club movement.

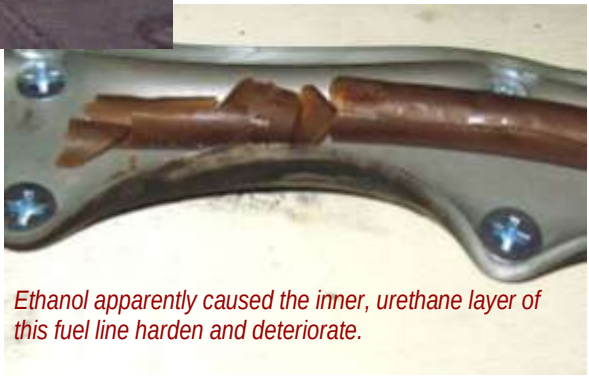
What happened in Don's case (and to others) was one of his fuel line hoses went soft and mushy and split from the fuel pressure. Don had replaced all his lines as a mater of course with new lines except one where he used some new/old stock. This was the line that failed.

It is our opinion from experience, and talking to fuel hose suppliers such as Earl's, that any fuel hose fitted to cars or sold before 2000 (or later in some cases) is not acceptable for ethanol fuel.

If you are using stainless braid hose, use Teflon/SS rather than Rubber/SS but be aware that the end fittings are different in style.

If fitting push on hose to HE engines use only good quality imperial hose ie Gates, Using a lesser quality may cause leaking due to bore size & tolerance as the sealing of the hose relies on the reinforcement weave and bore.

This is only our opinion, but we would strongly recommend that any cars you have from before this period, check the fuel hoses, and replace any with new fuel hose that is rated to take ethanol fuel.



Ethanol apparently caused the inner, urethane layer of this fuel line harden and deteriorate.

Following is an abridged article from a few years ago ...

Ethanol fuel mix to be flagged as rotting is confirmed
By Mike Seccombe (SMH)
February 20 2003

Petrol stations will be forced to show the ethanol content of their fuel as the first official test results reveal the damage caused by high concentrations of the additive.

At 20 per cent - a blend widely available in NSW - ethanol was found to cause a variety of "performance and durability concerns" in trials by the Orbital engine company for the federal Environment Department.

The trials showed, however, that 10 per cent blends had no substantial impact on engine performance or operability apart from slight carburettor damage.

The Environment Minister, David Kemp, said he would move within months to force stations to reveal their ethanol levels, but he continued to resist demands for a set limit.

The study's findings reinforce the argument of engine makers, the car and boat industries, and motoring and consumer groups that ethanol should be capped at 10 per cent.
The study turned up problems including stalling, a rise in exhaust gas temperature, increased carbon deposits on pistons, corrosion of metallic engine components and damage to plastic and rubber hoses.

A year ago, car makers told the Government that unless it limited ethanol content they would refuse to honour warranties on vehicles run on blends above 10per cent.

Dr Kemp argued that labelling should be a state job, although other fuel quality regulations are a federal responsibility.

He also refused to accept the evidence by engine makers or a study of scientific literature done for his department which detailed the damage done by high-ethanol blends, insisting that he would not act until the results of fresh government studies were available.

Negative publicity about the issue was cited by BP this week as the reason it was abandoning its marketing trial of blended fuel - labelled and capped at 10 per cent ethanol.

The company said it would not re-enter the market until regulations were introduced to protect consumers and restore their "confidence in the product".

One major supplier, the Manildra group, has continued to sell blends of up to 20 per cent through a network of about 200 independent service stations in NSW.

The full article can be viewed at www.smh.com.au/articles/2003/02/19/1045638361888.html