AA Public Affairs
The Voice of UK Motorists

January 2008

MISFUELLING - DON'T GET CAUGHT OUT

Every year something like 150 000 motorists in the UK fill their car's tank with the wrong fuel. It can cost from £80 up to thousands of pounds - and take days to put right. The risk of filling with the wrong fuel increases if you often drive hire or pool cars of different types.

Even a small amount of the wrong fuel can seriously damage the car's fuel system or reduce the efficiency of the catalyst.

Most pumps use a colour coding –
Green for unleaded petrol
Black for diesel

Make sure you use the right fuel

DIESEL VEHICLES

Modern diesel engines are much quieter than their predecessors and performance has improved dramatically, so it is not always immediately obvious you are driving a diesel-engined car.

At the filling station:

Make sure it is a diesel engine: if you're not sure check the marking around the filler cap. Never assume.

Always double check that you pick up a diesel pump nozzle – not a petrol one. Read the label on the pump.

You can easily get a petrol nozzle into a diesel filler neck by mistake. Beware: petrol will damage a diesel car.

If you do misfuel don't start the engine – get advice.

PETROL VEHICLES

At the filling station:

Make sure it is a petrol engine – if you're not sure check the fuel filler neck marking. Never assume.
Double check that you pick up a petrol pump nozzle – not a diesel one. Read the label on the pump
Never force a larger nozzle into a smaller filler neck. It will be the wrong fuel.
If you do misfuel don't start the engine - get advice.

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THINK BEFORE YOU FILL

If you use both petrol and diesel cars, or occasionally hire or borrow another car or van, it's very easy to make a mistake. So – double check the fuel every time.

Before putting any fuel in the vehicle take a few seconds to look at the nozzle and consciously check that the car and the fuel match. Even if you're often busy and thinking of other things, watch what you're doing when filling up.

If you get it wrong, the consequences will be very expensive and take a long time to sort out.

Background Information

Why Now?

Misfuelling was never a great problem going back say 20 years. When there were comparatively few diesel cars, the DERV pump was very often around the back of the forecourt, outside the canopy, as it was mainly used by trucks. Then gradually the number of diesel engines used in private cars started to grow, and the two fuels were put on the same pump islands.

Another factor was the move towards unleaded petrol. This started in the late 1980s, because exhaust catalysts are damaged by lead additives used to improve octane rating. To cut the chances of putting the old leaded petrol into a car with a petrol engine and a catalyst system, the filler neck of catalyst-equipped petrol cars was made smaller, as was the filler nozzle for unleaded petrol, ULP. Remember, this started in the US, and diesel cars were not considered at the time.

The result is that diesel cars (and older, pre-catalyst petrol cars) have the larger filler neck that will easily accept either the larger diesel nozzle or the smaller ULP nozzle. So, the possibility of getting the wrong fuel has risen pretty much in line with the increase in the number of diesel cars – and these now make up about 40 per cent of the UK car population.

What is the damage?

The factors above on their own would have been a real problem. What now makes the situation very much worse is that with the increasingly stringent exhaust emission regulations, the fuels and catalyst systems on cars, both petrol and diesel, are damaged by only small amounts of the incorrect fuel. It used to be common enough to put a little petrol into diesel to help the engine start in cold weather – but with modern diesels that use extremely high injection pressures the viscosity of the fuel is critical. Any petrol present can cause scarring of the pump elements, and the seals can be damaged by compounds found in petrol. The combustion efficiency of an engine designed for petrol will be very poor if it's fed diesel fuel, and the resulting unburned fuel passing through to the exhaust can cause the catalyst to overheat.

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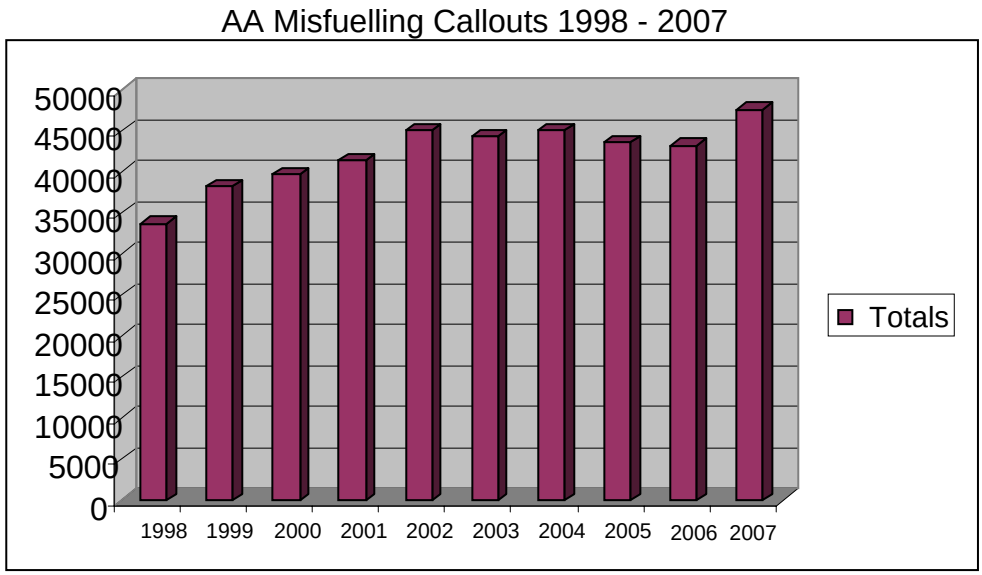
What should I do with a misfuelled car?

If you find that you have put the wrong fuel into a car, don't start the engine. If it has been run, stop as soon as reasonably possible. The contaminated fuel will have to be drained with the correct equipment, and the fuel properly disposed of. If the car is still under warranty, check with a franchised dealer for the correct remedial procedure: some cars must have seals and filters renewed even if the engine has not been run.

How widespread is the problem?

So, misfuelling is now both easier to do and much more damaging. It can mean repairs costing over £3,000 on a modern diesel car, if it has been started and run. This chart shows how the number of cases to which the AA is called has changed:



The effect is that each year more than 40,000 AA members are experiencing the inconvenience and the expense of having the vehicle's fuel removed. The AA has become so concerned about the problem that it has set up its own 'Fuel Assist' service which operates a small fleet of vehicles capable of draining contaminated fuel at the roadside. Bookings and enquiries number for AA Fuel Assist is **0870 240 3985** (opening hours 7.30am till 7pm).

What can be done about it?

For the longer term it may be necessary to develop positive means of preventing misfuelling. There's also the point that to keep emissions within the vehicle's allowed limits, contamination of the fuel and hence poor operation of the catalyst system must be avoided. The major oil companies have agreed to standardise the colour of nozzles and hoses for unleaded and diesel, which is very

welcome, as is their decision to review nozzle adverts to reduce potential customer confusion at the point of delivery. Some car manufacturers have introduced devices to make misfuelling more difficult

and some filler caps designed to prevent errors are now available on the aftermarket. Misfuelling is much too easy. It's expensive, inconvenient, wasteful, environmentally damaging and potentially dangerous.