Fuel News

Petrol Life in Vehicle Tanks

Where petrol is kept for more than a week in a vehicle tank special considerations apply because that petrol will change with time. Examples are classic cars and bikes, veteran and vintage cars and bikes, racing cars and bikes, drag cars, boats, dual fuel vehicles etc.

HOW PETROL CHANGES

To understand what the potential implications are it is necessary to understand how petrol changes with time. In the fuel tank of a car exposed to the air the volatile components of the petrol will evaporate, these volatile components contain high octane compounds so the octane of the petrol will fall leading to pinging (knocking).

The volatile components have low density so as they evaporate the density of the remaining petrol increases, this will change the way the carburettor float sits so that the engine starts to run rich at all times, this will lead to over fuelling and carbon build-up. The remaining high density components have a high carbon content that promotes carbon fouling on spark plugs and they are hard to ignite so causing misfire, hesitation and stumbling. The petrol will oxidise in air forming gums that can clog jets, the sulphur compounds in the petrol will react with copper and brass components to form brown varnishes that clog the jets on the carburettors, affecting fuel air mixture and causing poor running.

The time that fuel takes to go off in a fuel tank depends upon the temperature, fuel and conditions, nominally it could take 1 week for octane loss to show, gum formation and sulphur attack is continual leading to a steady build up of gum and varnish.

HOW BP ULTIMATE HELPS

BP Ultimate has the following properties which help where vehicles are used only intermittently.

1) Low Sulphur –BP Ultimate has the lowest sulphur and this reduces attack on brass and copper components.
2) Metal Deactivator- BP Ultimate contains an additive called a metal deactivator that protects copper and brass components from corrosive attack.
3) Anti Oxidant – BP Ultimate contains an anti oxidant that protests the fuel and stops it oxidising and forming gums.
4) Corrosion Inhibitor – BP Ultimate contains a corrosion inhibitor that protects steel and iron surfaces from attack by water droplets and humidity.
5) Powerful Detergent – BP Ultimate contains a powerful detergent to keep inlet valves and fuel systems clean and remove build up of gums and varnishes.
6) High Octane – the 98 octane of BP Ultimate means that if octane is lost through evaporation of lighter components it does not reduce to the point where it can become a concern.

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MAINTAINING FUEL IN VEHICLE TANKS

It is not possible to provide a foolproof strategy for vehicles that are used only intermittently, however the following principles help.

1) Always add at least a quarter tank of fresh fuel when the equipment is to be used when it has not been used for more than a week.
2) Always keep the tank half full to stop water vapour from being sucked in and condensing.
3) Use a high octane fuel.
4) Use a fuel that contains anti oxidants, metal deactivators and corrosion inhibitors to protect metal surfaces.

For further information, please call the BP Lubricants and Fuel Technical Helpline 1300 139 700 local call
Or visit www.bp.com.au/fuelnews