



WHAT IS AUTOGAS?

Autogas is a mixture of butanes and propanes which is kept under pressure to keep it liquid at normal temperature. This means it can be moved around and into the vehicle as a liquid. In the vehicle the fuel flows from the fuel tank to a converter where it is converted to gas and mixed with air before going to the engine in the correct proportions. The quality of autogas is controlled by the National Fuels Quality Standards of 2000 autogas determination of 2004, it is also controlled by the ALPGA specification for autogas. This fuels news covers specific maintenance issues that may arise from its use.

SERVICE and MAINTENANCE

Cleaning the Converter

Both the specifications quoted for autogas allow for an amount of non volatile material. This material is expected in all types of autogas and the amount present is limited by National Standards. The non volatile material normally collects in the converter where the liquid gas turns to vapour.

The converter is a round box which is heated to 100 deg C by engine cooling water where the liquid is turned into vapour. The converter acts like a carburettor in petrol cars and is susceptible to similar problems that can occur with carburettors and injectors in cars. In the converter anything that evaporates above 100 deg C will stay in the converter and will accumulate.

This includes the following materials:

Metal scale and dust – any iron rust, copper sulphides and dust that get past the filters in the fuel line.

Hydrocarbon Oil – any hydrocarbon lubricating oil from compressors and pumps that is dissolved in the LPG

Silicon Oil – any surface protection oils or silicon oils that have been absorbed by the liquid gas

Hose Materials- LPG is a very effective solvent for some materials that are used as components in rubber and plastic hose materials and diaphragms to give them elasticity, these will be absorbed from rubber hoses and deposited in the converter when the gas evaporates

These compounds can accumulate and in time will interfere with the operation of the converter. To prevent this, the gas converters should be serviced at regulator intervals to remove accumulated deposits. Normal service intervals would be 25,000km to 45,000km.

At this time rubber diaphragms in the converter should be checked because these will harden with age and lose elasticity.

Cleaning solenoid valves

The flow of gas in the converter is controlled by solenoid valves which can also be affected by residue in the gas. These should also be serviced by regularly removing and cleaning with carburettor solvent to remove accumulated residue.

Dual Fuel Vehicles – Petrol tank

With dual fuel vehicles there will be one tank for petrol and one for LPG. The petrol in the petrol tank will deteriorate if it is not used. It can oxidise and become corrosive, damaging fuel pumps and rails, the gums produced as a result of the oxidation process can block injectors. To avoid this any petrol in the fuel tank of a dual fuel vehicle should be used within 3 to 4 weeks and the tank should be kept at least one third full at all times.

Following the simple steps outlined above will ensure years of trouble free motoring on gas.

The following web site lists vehicles for which conversion kits are available.

www.lpgautogas.com.au/images/LPG%20Kit%20Listing%2015Aug06.pdf

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