Abstract: Although fuel economy of engines is greatly improved from the past and will probably continue to be improved, increase in number of automobiles alone dictates that there will be great demand for fuel in the near future. Gasoline and Diesel will become scarce and most costly. Alternate fuel technology, availability and use must and will become more common in the coming decades. If a 35% improvement made over a period of years, it is to be noted that during the same time the number of automobiles in the world increases but 40%, thereby nullifying the improvement. Lot of efforts gone into for achieving the net improvement in cleaning up automobile exhaust. Cost saving, longer life of the engine and less emission will attract the public for making use of LPG run vehicles. Only when extensive research and development is done over a period of years will maximum performance and efficiency be realized from these engines.

Key words: LPG • Regulator • Vaporizer

INTRODUCTION

Use of LPG as an alternative fuel dates back to 50 years ago. Today, it is known to be used in about 9 million vehicles in many countries. Its lower retail price than those of gasoline and diesel in all countries it is used [1-2], as well as its synchronous usage with other type of fuels make it more attractive to consumers than that of other fuels. In addition LPG powered vehicles produce less pollutants by their exhausts in comparison with gasoline and diesel – fuelled vehicles, which encourages some countries to use it (60% less CO, 30% less HC and 20% less NOx in comparison with gasoline) [3-5].

Converter-mixer System Components: Air from air-filter

- LPG tank
- LPG solenoid
- Vapourizer / regulator
- Mixer
- Carburetor
- Petrol solenoid
- Petrol tank
- LPG / Gasoline switch

Performance: In some cases, LPG engines can actually have more power and torque and similar economy when compared with an equivalent petrol engine. LPG flow is regulated to ensure smooth operation and will typically only deliver LPG under power. Some companies claim a 10% to 20% increase in power and torque and a reduction in overall fuel costs [2-4]. Any actual savings are dependent on the relative cost of petrol versus LPG. In India, where petrol costs substantially more than LPG, savings of 10 to 20% are claimed. A recent report by WLPGA member, Propane Education & Research Council, (PERC) confirms the fact that the use of LP Gas reduces greenhouse gas emissions when compared to other fuels across a wide range of applications. Various tests where
conducted on vehicles running on LPG, with A/C functioning all the time and with A/C being shut off. Therefore it was found that running an engine on LPG gives a cost saving from 54.43% to 57.62% [6].

REFERENCES


