

DESIGN OF CONVERTER KIT FROM USED IRON PIPE TO CONVERT PERTALITE-FUELED WATER PUMP ENGINE TO LPG

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ABSTRACT

This research converts a Peralite-fueled water pump to LPG-fueled by replacing the carbulator using a converter kit. The purpose of this conversion is so that water pump users can save costs. To be able to find out the cost difference in the use of LPG and Peralite water pumps, fuel consumption and water discharge tests were carried out. From the fuel consumption tests that have been carried out, the data obtained on the LPG water pump reaches 0.360 kg / hour, 0.450 kg / hour, and 0.510 kg / hour, while the Peralite water pump reaches 0.600 l / hour, 0.650 l / hour, and 0.690 l / hour at each rpm variation of 2000, 2500, and 3000 rpm. Based on these data, a comparison of LPG and Peralite water pumps is carried out at 2500 engine speeds, and data has been obtained to spend 3 kg of LPG for Rp. 20,000 takes 6.66 hours, and to achieve the same time of 6.66 hours it takes 4.35 liters of Peralite for Rp. 43,500. So the use of LPG water pump machines can save costs up to Rp. 23,500. The results of water discharge testing on LPG and Peralite water pumps, obtained data on each rpm variation of 2000, 2500, and 3000, LPG water pumps can move water as much as 5.8 l / sec, 8.5 l / sec, and 10 l / sec. Meanwhile, the Peralite water pump engine can move water as much as 6 l / sec, 9.5 l / sec, and 11.5 l / sec. While the Peralite water pump engine can move water as much as 6 l / sec, 9.5 l / sec, and 11.5 l / sec. From the water discharge test data, it can be seen that the use of LPG and Peralite fuel has no effect on the water discharge produced.

Keywords : *Conversion, Converter Kit, Honda GX200, LPG Fuel, Water pump.*