ABSTRAK

Penelitian emisi sepeda motor Yamaha Mio J 110 cc tahun 2013 penggunaan bahan bakar LPG sebagai salah satu bahan bakar alternatif yang mudah diperoleh di pasaran dan tekanan *output* yang rendah. Tujuan penelitian ini adalah untuk memperoleh data perbandingan kadar emisi gas buang sepeda motor berbahan bakar premium dan LPG, jenis penelitian ini mengunakan metode eksperimen murni. Didapatkan perbandingan antara bahan bakar premium dan LPG dapat menurunkan kadar emisi gas buang seperti CO, HC dan CO_2. kadar emisi CO LPG tertinggi sebesar 0,40 % didapatkan pada putaran mesin 7000 rpm, untuk nilai HC bahan bakar LPG 69 ppm pada putaran mesin 3000 rpm, kadar emisi CO_2 tertinggi sebesar 9,2 % pada putaran mesin 7000 rpm dengan bahan bakar LPG, Sedangkan konsentrasi O_2 mengalami peningkatan yang tidak signifikan pada penggunaan bahan bakar LPG peningkatan sebesar 5,34 % didapatkan pada putaran 7000 rpm, sedangkan bahan bakar premium nilai CO 1,20 % pada putaran 6000 rpm sudah mengalami kenaikan emisi. Nilai kadar emisi HC tertinggi sebesar 152 ppm didapatkan pada putaran mesin 3000, pada bahan bakar premium putaran 6000 rpm sudah menghasilakan CO_2 sebesar 7,9 %, untuk nilai O_2 konsentrasi bahan bakar premium pada putaran mesin 7000 sebesar 5,63 %. Pengaplikasian bahan bakar gas secara umum penggunaan bahan bakar gas LPG di nilai layak sebagai pengganti bahan bakar bensin dilihat dari aspek emisi gas buang yang dihasilkan rendah.

Kata kunci : Emisi, Motor yamaha mio j, LPG, Perbandingan kadar emisi

COMPARATION STUDY OF MOTOR VEHICLE EMISSION EMISSION LEVELS BASED ON PREMIUM AND LPG.

ABSTRACT

Research on the 2013 Yamaha Mio J 110 cc motorcycle emissions the use of LPG fuel as an alternative fuel that is easily obtained in the market and low output pressure. The purpose of this study was to obtain data on evaluation of exhaust emissions levels of motorcycle fueled by premium and LPG, this type of research uses a pure experimental method. Obtained to release between premium and LPG fuels can reduce exhaust emissions such as CO, HC and CO_2. the highest CO LPG emission level of 0.40% was obtained at 7000 rpm engine speed, for the HC value of 69 ppm LPG fuel at 3000 rpm engine speed, the highest CO_2 emission level of 9.2% at 7000 rpm engine speed with LPG fuel, Whereas O_2 concentration increases an insignificant increase in the use of LPG fuels. An increase of 5.34% is obtained at 7000 rpm, while premium fuel has a CO value of 1.20% at 6000 rpm. The highest HC emission value of 152 ppm was obtained at 3000 engine rpm, at 6000 rpm premium fuel produced CO_2 of 7.9%, for O_2 the value of premium fuel concentration at 7000 engine rpm was 5.63%. The application of natural gas fuel generally uses LPG gas as a fuel value, as seen from the aspect of exhaust emissions produced low.

***Keywords**: Emissions, Yamaha Mio, LPG, Comparison of emission levels*