KAJIAN EKSPRIMENTAL TENTANG KINERJA MESIN TEKNOLOGI i-VTEC 1500 CC DENGAN BAHAN BAKAR PREMIUM

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ABSTRAK

Transport company launched a four-wheeled vehicle with an engine that is capable of workingat low speed and high speed. VTEC enhance enterprise by combining VTC (variable timing control) of the merger of these two technologies to create i-VTEC (intelligent variable-valve timing and lift electronic control). I-VTEC technology is used to increase the power at low, medium and high speeds at the same time improve fuel efficiency and reduce exhaust emissions, i-VTEC only work on the intake valve. Basic overview i-VTEC is optimizing the engine torque at any speed and condition of the driver can produce an efficient fuel consumption and emission levels are very low.

I-VTEC engine of 1500 CC four-wheeled vehicle in 2013 as a test engine in this study. Tests performed a total of seven (7) times by using a dynamometer and test equipment AFR. The results of the testing in the form of a graphic image is then performed calculations to determine the power, torque, and AFR by using statistical plot digitizer software. Part of the process of fuel consumption on the research done by direct testing on theRing Road Yogyakarta.

The results of the research power and torque produced by using premium fuel is lower than the manufacturer's specifications withpertamax fuel. Maximum power for premium fuels 81.86 (hp) at engine speed 4694 (rpm) and maximum torque of 93.7 (Nm) at engine speed 3546 (rpm), while data from the manufacturer's specifications with fuel pertamax ie maximum power of 120 (hp) at engine speed 6600 (rpm) and maximum torque of 145 (Nm) at engine speed 4800 (rpm). The results for fuel consumption by using premium fuel that is 15.46 (Km / liter) and a maximum AFR is 14.7 kg of air per 1 kg of fuel.

Keywords: i-VTEC engine technology, power, torque, fuel consumption, AFR (Air Fuel Ratio).