

**PENGUJIAN VARIASI JUMLAH LUBANG *INJEKTOR* DIBANDINGKAN
DENGAN JUMLAH LUBANG *INJECTOR* STANDAR TERHADAP DAYA,
TORSI, DAN KONSUMSI BAHAN BAKAR SEPEDA MOTOR NMAX 155
CC**

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ABSTRAK

Penelitian ini bertujuan untuk menganalisis pengaruh variasi jumlah lubang *injector* terhadap daya, torsi, dan konsumsi bahan bakar pada sepeda motor Yamaha NMAX 155 CC dengan bahan bakar Pertamina RON 92. Penelitian menggunakan metode eksperimen kuantitatif dengan variasi *injector* 4 hole, 6 hole (standar), 8 hole, dan 10 hole. Pengujian dilakukan menggunakan dynotest untuk memperoleh data performa mesin serta pengukuran konsumsi bahan bakar pada berbagai putaran mesin. Hasil penelitian menunjukkan bahwa variasi jumlah lubang *injector* memengaruhi daya, torsi, dan konsumsi bahan bakar mesin. Peningkatan jumlah lubang *injector* cenderung meningkatkan daya dan torsi mesin, namun di sisi lain konsumsi bahan bakar juga cenderung meningkat. Dengan demikian, variasi jumlah lubang *injector* terbukti memengaruhi karakteristik performa mesin dan konsumsi bahan bakar, sehingga pemilihannya perlu disesuaikan dengan kebutuhan pengguna, apakah lebih mengutamakan peningkatan performa atau efisiensi bahan bakar.

Kata Kunci: *injector* hole, daya, torsi, konsumsi bahan bakar, Yamaha NMAX 155 CC.

*TESTING THE VARIATION IN THE NUMBER OF INJECTOR HOLES
COMPARED TO THE NUMBER OF STANDARD INJECTOR HOLES AGAINST
THE POWER, TORQUE AND FUEL CONSUMPTION OF THE NMAX 155 CC
MOTORCYCLE*

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ABSTRACT

This study aims to analyze the effect of variations in the number of injector holes on power, torque, and fuel consumption on Yamaha NMAX 155 CC motorcycles with Pertamina RON 92 fuel. The study used a quantitative experimental method with a variety of injector s of 4 holes, 6 holes (standard), 8 holes, and 10 holes. The test was carried out using dynotest to obtain engine performance data as well as fuel consumption measurements at various engine revolutions. The results showed that variations in the number of injector holes affected engine power, torque, and fuel consumption. An increase in the number of injector holes tends to increase engine power and torque, but on the other hand fuel consumption also tends to increase. These conditions have an impact on increasing engine power and torque, but on the other hand cause fuel consumption to tend to increase. Thus, variations in the number of injector holes have been proven to affect engine performance characteristics and fuel consumption, so the selection needs to be adjusted to the needs of the user, whether it prioritizes improving performance or fuel efficiency.

Keywords: injector hole, power, torque, fuel consumption, Yamaha NMAX 155 CC.