

**THE INFLUENCE OF VARIATION IN *INTAKE MANIFOLD* ANGLE
CURVATURE WITH *PORTING* AND *POLISHING* TREATMENT ON
ENGINE PERFORMANCE IN A 110CC HONDA SCOPPY
MOTORCYCLE**

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ABSTRACT

This research was conducted with the aim of determining the influence of variations in the curvature angle of the *intake manifold* hole and *porting polish* treatment on the performance of a Honda Scoopy 110CC motorcycle engine and finding the best performance. The method used in this research was experimental, involving experiments with various angles of curvature of the *intake manifold* hole, including 30°, 35°, 40°, and 70°, along with *porting polish* treatment. Based on the research results, the performance using the standard *intake manifold* or 30° angle produced a torque of 10.18 (N.m) at 4,846 RPM and a power of 8.2 (H.p) at 10,865 RPM. The *intake manifold* with a 35° angle and *porting polish* treatment resulted in a torque of 9.79 (N.m) at 5,024 RPM and a power of 8.6 (H.p) at 6,808 RPM. The *intake manifold* with a 40° angle and *porting polish* produced a torque of 10.84 (N.m) at 4,386 RPM and a power of 9.2 (H.p) at 11,103 RPM. Lastly, using the *intake manifold* with a 70° angle yielded a torque of 11.40 (N.m) at 4,518 RPM and a power of 9.8 (H.p) at 6,936 RPM. Based on the conducted research, the maximum performance was achieved with the *intake manifold* hole curvature angle of 70°, resulting in a torque of 11.40 (N.m) at 4,518 RPM and a power of 9.8 (H.p) at 6,936 RPM.

Keywords : *Intake Manifold, Engine Performance, Porting Polish, Honda Scoopy
110CC*