

THE EFFECT OF USING COCONUT FIBER IN VARIOUS EXHAUSTS ON NOISE AND TEMPERATURE

by

Firas Khalid Fakhrezi

*Study Program of Automotive Engineering, Majoring of Engineering
The State Polytechnic of Jember*

ABSTRACT

The results of the dB Max test are the lowest values obtained when the motor uses the exhaust at 1500 rpm, which is 78.1 dB, at 3000 rpm for the exhaust variation, which is 83.1 dB, and at 4500 rpm at the exhaust variation, which is 86.0 dB. That the lowest average noise level at 1,500 rpm is 77.4 dB using a variation exhaust and the highest average noise level at 1,500 rpm is 80.8 dB using a standard exhaust. Then the lowest average noise level at 3,000 rpm is 82.6 using a variation exhaust and the highest average noise level at 3,000 rpm is 84.3 using a standard exhaust. Then the lowest average noise level at 4,500 rpm is 85.8 dB using a variation exhaust and the highest average noise level at 4500 rpm is 89.2 dB with a standard exhaust. The use of coconut fiber in exhaust variations can reduce noise levels and the best dB max is obtained at 1,500 rpm rotation at the exhaust variation treatment, which is 78.1 and the best temperature (°C) max is 44.2°C at 1,500 rpm. The highest percentage reduction in exhaust noise level was achieved by the variation of exhaust treatment to standard exhaust at 1,500 rpm, which was 4.20%. The exhaust heat damper occurs in the variation exhaust treatment with the composition of coconut fiber. This shows that the modified muffler with coconut fiber can reduce the noise level and exhaust temperature.

Keywords: *Noise, Temperature, Coconut Fiber, Variation Exhaust.*