

**ANALYSIS OF THE INFLUENCE OF USING STANDARD, STAINLESS  
STEEL, AND SUGARCANE BAG AIR FILTER ON ENGINE  
PERFORMANCE ON 110CC MATIC MOTOR**

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**ABSTRACT**

*This research was conducted to find out that air filters also play an important role in the combustion process, besides that the increase in vehicle performance can also be influenced by the air filter. The method used in this research is experimental method, by using a 110cc 4 stroke combustion engine with standard air filter variations, stainless steel, bagasse A and bagasse B. The test results show that the highest torque and power values are obtained by a stainless steel air filter with a torque of 9.11 Nm at 6000 rpm and a power value of 8.5 Hp at 8000 rpm. Whereas the lowest fuel consumption value was obtained by bagasse B air filter of 0.153 kg/hour at 6000 rpm. The larger the mesh size in the air filter, the higher the torque and power values. This can happen because the greater the mesh value in the air filter the more air will enter the combustion chamber which makes combustion more efficient and can increase torque and power values but fuel consumption will also increase.*

**Keywords:** *Air Filter, Bagasse, Mesh*