

**Pengaruh Penggunaan *Flyback Converter* Sebagai Alternatif Koil Terhadap Prestasi Mesin Pada Motor Bensin Konvensional** (*Effect of Used of Flyback Converter as Alternative Coil Against Engine Performance in Conventional Gasoline Motors*). Pembimbing (Ahmad Robiul Awal Udin, ST, MT)

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***ABSTRACT***

*The use of a motorcycle as an efficient and effective vehicle does not mean that is free from problems. One of them were the coil component which has a weakness that is triggered by the service life of the used of material which can caused a decrease in the voltage and affect the ignition process that results in reduced fuel engine performance and impact on fuel consumption. Technological developments' have an impact from the waste of tube television. In tube television it consists of components that can be recycled as an alternative coil, namely the flyback converter. The purpose of this research was to analyze the effect of using a flyback converter as an alternative coil on fuel consumption in conventional gasoline motors. This type of research used experimental research. The object of this study is machine performance using the flyback converter. The results of the study obtained by the researcher was producing a modified flyback converter which could be applied on a motorcycle by making a resin and activator holder. The torque produced by the flyback converter has a higher value than the standard coil, and the highest value generated is contained at RPM 6000 which is equal to 20.68 Nm. As well as the power, the highest value at RPM 7000 which is 18.13 Hp. The specific fuel consumption produced by the flyback converter has a lower value than the standard coil, and the lowest value is at RPM 6000 which is equal to 0.050931 kg / HP.h. The high torque, power values and low fuel consumption values using the flyback converter show that is more effective to use.*

**Keyword:** *coil, flyback converter, engine performance*