

Experimental investigation on the alternator charging capacity for automotive applications

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Abstract

This research paper investigates the use of an automotive alternator on an experimental stand to evaluate the capacity to load the battery and produce electricity for car systems. The efficiency was calculated by measuring the electric power supplied to the battery for different regimes of speed. Various aspects regarding the efficiency of energy conversion by using an alternator were also discussed. The stand uses an electric motor with various transmission ratios to rotate the alternator. The speed was recorded with a digital tachometer and the energy consumption of the electric motor with a digital wattmeter. The results obtained showed that the increase in alternator speed generated more electricity and improved the load of the battery.

Keywords: automotive alternators, automotive batteries

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