ABSTRACT

In motorcycle engine maintenance is mandatory and must be considered to reduce the occurrence of engine damage to the vehicle. One of the main maintenance is routine engine oil changes. Changing the engine oil must pay attention to the vehicle's mileage between 1500-3000 km. Generally, motorbikes are not equipped with an oil change warning feature. The system must be able to detect when the vehicle has to do an oil change after reaching a certain mileage. In this study, the sensor used in this research is a hall effect sensor which functions to convert magnetic information into an electrical signal. NodeMCU is also used as a microcontroller and connection to the internet, where the results of data processing will be displayed in the form of an oil change warning message which will turn on the indicator LED and will display notifications via the application. The purpose of this research is to help motorcycle users to perform oil change maintenance. The system in this final project is said to be successful because the system can be connected properly between the microcontroller and the hell effect sensor. The sensor can send real-time results and the software used is blynk, it also runs according to programming, then if it has traveled the maximum distance, a notification will appear on the smartphone that an oil change must be done immediately.