ABSTRACT

Along with the times, transportation is growing rapidly in terms of models and functions. Of the many forms of transportation available today, one of them is a motorcycle. Motorcycles with injection technology are equipped with indicator lights on the motorbike dashboard panel. This light is called MIL (Malfunction Indicator Light) function is to notify the condition of the engine on the motorcycle.

The design is to make it easier for vehicle owners to know the condition of the engine, namely with a monitoring system on the Arduino-based Engine Control Unit. This system works by using a microcontroller after the Engine Control Unit detects input on the received sensor and is bridged with an OBD-II (On Board Diagnostics) socket.

This research produces an ECU monitoring system for two-wheeled vehicles, namely an ECU monitoring system via an Arduino-based OBD II socket, parameter data is displayed on the I2C LCD with four ECU parameters to be monitored, namely KPH (Vehicle Speed), RPM (Revolutions Per Minute), TPS (Throttle Position Sensor), and Coolant Temperature (Coolant Temperature) with an accuracy level of 90% which makes it easier for users to diagnose engines in vehicles, especially two-wheeled vehicles.

Keywords: Engine Control Unit, OBD II, Arduino, OBD II Connector Cable