

***DESIGN AN OIL CHANGE REMINDER PROTOTYPE BASED ON ENGINE  
WORKING LENGTH AND MURD LEVEL USING MICROCONTROLLER  
BASED SMS***

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**ABSTRACT**

*The role of electronics is currently very important in the global era, especially in the automotive world. The importance of regular engine maintenance is very useful for healthy performance. After realizing the dangers of neglecting oil change times, an effort emerged to create a prototype of oil change times based on the length of time the engine has been running and the level of cloudiness. oil. It is hoped that the results of this research can remind drivers to change their oil regularly and reduce the risk of vehicle engine damage. The 5th oil quality level in the table is stated as 60% clean oil, which can be concluded from testing the 5th oil quality level using 200 ml of oil with a mixture of 60% clean oil and 40% dirty oil, which means 120ml clean oil and 80ml dirty oil. Research on the oil change reminder prototype research can ensure that this tool meets expectations, can detect oil quality levels accurately, and can be realized in the form of a buzzer sound and SMS notification. The time compared with this tool is in accordance with the actual time calculation and can send data information via SMS to the owner's number and it can be concluded that this tool is classified as accurate.*

*Keywords: Electronics, oil quality, automotive, oil change, prototype, oil cloud level.*