CHAPTER 5 – CONCLUSIONS AND RECCOMENDATIONS

5.1. Conclusions

1. This study was conducted to monitor coolant temperature and give early warning of potential engine overheating, then automatically take the necessary countermeasures in accordance with the manufacturer's recommendations.

2. The result of experiment shows that Condition of the high temperature engine coolant, reduced amount of coolant, and reduced cooling fan rotational speed, can be immediately known by operators.

3. The result of the study shows that the engine speed can be automatically set to the medium range when abnormality in cooling system occurs, according to the manufacturer's recommendations.

4. The result of study shows that the Blynk application, can be used to send information about the condition of the engine cooling system, so that the information can also be known by other parties.

5.2. Recommendations

1. Considering that the tool made in this study is still a prototype, so it is necessary to use components that have been tested for reliability. Especially for the coolant level sensor and cooling fan speed sensor, it is better to use a sensor that has an operating ambient temperature specification that matches the ambient temperature around the engine. The placement of other components, including the installation of cable lines, further needs to be ensured that they will not damage the components or the cable itself or cause damage to the original components of the bulldozer.

2. For data transmission, it is necessary to develop other media besides the use of the internet or Wi-Fi, for example the use of radio frequencies, considering that many heavy equipment such as bulldozers are operated in areas without an internet connection.