

**MONITORING ENGINE OIL PRESSURE WITH IOT SYSTEM IN
MULTINATIONAL HEAVY EQUIPMENT COMPANY**

By

SYGIT IRAWAN

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SWISS GERMAN UNIVERSITY

The Prominence Tower

Jalan Jalur Sutera Barat No. 15, Alam Sutera

Tangerang, Banten 15143 - Indonesia

Revision after Thesis Defense on July 25, 2023

STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.



Sygit Irawan

Student

Date

Revision after Thesis Defense on July 25, 2023

Approved by:



Dens Hendriana B.Sc. S.M. Sc.D

Thesis Advisor

Date



Dr. Eng. Cuk Supriyadi Ali Nandar

Thesis Co-Advisor

Date

Dr. Maulahikmah Galinium, S.Kom., M.Sc.

Dean

Date

ABSTRACT

MONITORING ENGINE OIL PRESSURE WITH IOT SYSTEM IN MULTINATIONAL HEAVY EQUIPMENT COMPANY

By

Sygit Irawan

Dena Hendriana B.Sc. S.M. Sc. D, Advisor

Dr. Eng. Cuk Supriyadi Ali Nandar, Co-Advisor

SWISS GERMAN UNIVERSITY

Komatsu Bulldozer D85ESS-2 is the most popular Komatsu Bulldozer Small product from United Tractors. In operating, of course, Komatsu Bulldozer D85ESS-2 is inseparable from problems. One of them is the oil engine pressure drop. The following are some of the possible causes of oil engine pressure drops. Engines are usually equipped with an oil pressure sensor that turns on a warning light at low oil pressure. Low oil pressure will be the focus of this research. Knowing faster the presence of low oil pressure can prevent engine damage caused by the absence of lubrication, because low oil pressure can cause engine oil not to circulate properly in every engine component. Based on these things, this research is carried out by developing a tool that can monitor engine oil pressure. Among other things, it must also be supplemented with a warning of the occurrence of an abnormal condition or an action that needs to be taken immediately when an abnormal condition occurs. In addition, it can also be known by owners in different places with the use of IoT. ESP32 will be used with the Google Sheets application as an IoT platform, to be able to send information from sensors to google sheets then the data is sent to the looker studio for display data to prevent damage to engine components due to the absence of lubrication.

Keywords: Engine Oil Pressure, Google Sheets, Esp32, LookerStudio, OPST Sensor, Monitoring System.

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DEDICATION

This research is entirely devoted to my lovely wife and children, who have been our source of inspiration and have given me courage when I thought of giving up. In addition, I made a dedicated to PT United Tractors Tbk. and UT School.

Thank you for everyone who involve in this thesis and for your time. This thesis is dedicated to you all and my beloved country, Indonesia.

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