

**ERGONOMIC ANALYSIS OF THE PROCESS GENERAL OVERHAUL,
REPAIR AND MAINTAINANCE HEAVY EQUIPMENT
AT PT UNITED TRACTORS SITE TANJUNG REDEB**

By:

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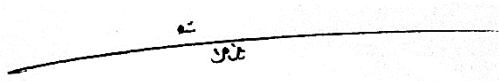


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STATEMENT BY THE AUTHOR

I here by 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.

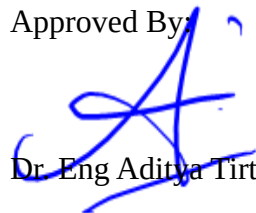


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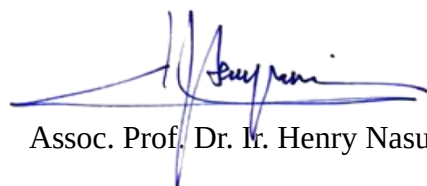
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ABSTRACT

Ergonomic Analysis of The Process General Overhaul, Repair and Maintainance Heavy Equipment at PT United Tractors Site Tanjung Redeb

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Workshop PT United Tractors Site Tanjung Redeb includes several quite diverse activities, ranging from administration, technical training to physical activities such as troubleshooting, inspection, dismantling, installation. These activities are closely related and have significant potential risks to the development of MSDs. Data from radiological examinations, 88 out of 90 service employees have the potential to suffer from paralumbarmuscle spasms. This study aims to obtain an ergonomic risk assessment in general overhaul activities, repair and maintenance of heavy equipment using the RULA, REBA and body map musculoskeletal questionnaire methods to see the profile of disease complaints. Based on the prevalence of SPM, the highest among service department respondents were the lower back (47%), neck (31%), shoulders (29%), and upper back (22%). To reduce the occurrence of musculoskeletal disorders, improvement programs such as EHS Monitor, safety campaigns and several other programs have been implemented. The results of this program show a decrease in musculoskeletal disorders from a total of 88 people in 2022 to 13 people in 2023 as well as an increase in mechanical productivity (OTIF) 97% in 2023

Keywords: *RULA, REBA, Ergonomic, Nordic Body Map, Anthropometry*

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DEDICATION

By expressing deep gratitude and having completed this master's thesis, I dedicate this thesis to the people I love, respect and am proud of:

- Allah Subhanahu wa ta'ala for every answer to my prayers, including achieving this 26th dream. Allah first, Allah again, Allah continues. Give thanks to Allah.
- My Prophet Muhammad Shalallaahu Alaihi Wassalam, one prosperous to be with your family and friends. Thank you for helping me complete my studies, especially during my difficult times during these 4 years;
- My father and mother always pray for and support every decision I make, including the decision to continue my master's education so that one day I can achieve my dream of becoming a PhD graduate. I dedicate all these achievements just to make Mom and Dad proud.
- My heavenly angel: Nahrin Syarifi, SP, a special Figure who is ready to accompany us until the end of life, we still have a long way to go. Level 2 is finally complete, let's find another way to get to level 3.
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- PT United Tractors Tbk. as a place to find good fortune currently as well as being the most important part in realizing my 26th dream of being able to pursue a master's degree level of education through the UT-SGU Bridging Program, this program has become the best way for me to achieve my dream of becoming a master's degree, dream comes true.
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While studying this bridging program, I gained useful and meaningful learning experiences through quality curriculum and programs of international standard.

Hopefully the knowledge I gain in the future can provide me with the opportunity to increase my potential to be more useful for my family, company, nation and state.

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