

**DEVELOPING MAINTENANCE PROGRAM FOR SCANIA P360CB-6X4
CASE STUDY AT PT XYZ**

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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.

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ABSTRACTDEVELOPING MAINTENANCE PROGRAM FOR SCANIA P360CB-6x4
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The Scania Truck P360CB-6x4 is used by PT XYZ as a means of transporting coal from the Pit to ROM at the East Kalimantan Coal Mine. As an indicator of Scania's Performance, PT XYZ uses MA (Mechanical Availability). The MA Unit Scania P360CB-6x4 for the period June – December 2021 averaged 82%, still below the 90% target. This study aims to find the cause of the low MA and provide recommendations for Scania program maintenance to PT XYZ. This study uses an Overall Equipment Effectiveness (OEE) approach to calculate the effectiveness of using Scania units and an assessment maintenance program to determine the maturity of the maintenance process at PT XYZ. The results of Scania's OEE calculation for the period June – December 2021 are 15.79%, Availability rate is 55.33%, Performance rate is 27.81% and Quality rate is 100%. By implementing the recommended maintenance program, it is expected to increase the effectiveness of using the unit. The results of OEE monitoring for the period January – May 2022 showed an increase in OEE by 37.67%, Availability rate by 68.80%, Performance rate by 54.76% and Quality rate by 100%.

Keywords : Availability Rate, Performance Rate, Quality Rate, Overall Equipment Effectiveness, OEE, DMAIC, Maintenance, Scania Truck

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Scania Truck P360CB-6x4 digunakan oleh PT XYZ sebagai alat angkut batubara dari *Pit* ke ROM di Tambang Batubara Kalimantan Timur. Sebagai indikator *Performance* Scania, PT XYZ menggunakan MA (*Mechanical Availability*). MA Unit Scania P360CB-6x4 periode Juni – Desember 2021 rata-rata sebesar 82%, masih di bawah target 90%. Penelitian ini bertujuan untuk mencari penyebab rendahnya MA tersebut dan memberikan rekomendasi *maintenance program* Scania kepada PT XYZ. Penelitian ini menggunakan pendekatan *Overall Equipment Effectiveness* (OEE) untuk menghitung efektifitas penggunaan unit Scania dan *assessment maintenance program* untuk mengetahui kematangan proses *maintenance* di PT XYZ. Hasil perhitungan OEE Scania periode Juni – Desember 2021 adalah sebesar 15,79%, *Availability rate* sebesar 55,33%, *Performance rate* 27,81% dan *Quality rate* sebesar 100%. Dengan menerapkan *maintenance program* yang direkomendasikan diharapkan akan meningkatkan efektifitas penggunaan unit. Hasil monitoring OEE periode bulan Januari – Mei 2022 menunjukkan adanya peningkatan OEE sebesar 37,67%, *Availability rate* sebesar 68,80%, *Performance rate* sebesar 54,76% dan *Quality rate* sebesar 100%.

Kata Kunci : *Availability Rate, Performance Rate, Quality rate, Overall Equipment Effectiveness, OEE, DMAIC, Maintenance, Scania Truck*

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LEMBAR PERSEMBAHAN

Karya ini Saya Persembahkan Spesial untuk Keluarga Tercinta, khususnya untuk Istri Saya Durotun Nafisah, Putri Saya Wahdah Fatikhatuz Zahra dan Putra Saya Muhammad Zhafran Khairy.

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