

**IMPLEMENTING PERIODIC REVIEW – VARIABLE ORDER QUANTITY
SYSTEM IN INVENTORY MANAGEMENT: A CASE STUDY HEAVY
EQUIPMENT COMPANIES, KUTAI BARAT**

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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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ABSTRACT

INCREASE PARTS AVAILABILITY SCANIA PRODUCT THROUGH PREVENTIVE MAINTENANCE IN LEADING INDONESIAN HEAVY EQUIPMENT COMPANIES CASE SITE SUPPORT KUTAI BARAT

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One of the processes to minimize down time unit is the availability of good spare parts. In this study, we will discuss how the process of developing inventory management procedures in order to get the availability of spare parts is quite good. In this study, the desired goal is the result of the researcher at 90%. The DMAIC method is used in this study to improve the existing processes in the reordering point. Periodic review with demand fluctuations, vendors holding stock, and inspection programs is an implementation carried out in the inventory process in order to get the availability of slow-moving spare parts, fast-moving spare parts and spare parts that are monitored for damage. The results obtained are reorder quantity using Inspection which contributes 13% and for casting using holding stock vendors based on customer brainstorming contributed 38% while the forgetfulness made by distributor with the periodic review modeling system contributed 43% the prediction accuracy in January was 94% this support is greater than 2021, which is 88%, so there is an increase of 6% and a reduction in the delay time for repairs from 2021, the average order delay is 5.5 days to an order delay of 3.9 days.

Keywords: Availability spare parts, Inventory Management, Preventive Maintenance, Scania Product, DMAIC, Lean six sigma, Periodic Review Inventory.

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DEDICATION

I dedicate this work to my parents, my wife, and my children.

Also to management PT United Tractors Tbk

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CHAPTER 1 - INTRODUCTION

1.1 Background

In supporting national development, the industrial sector is one sector that plays a significant role. One of the most superior industrial sectors today is the coal mining industry. Coal mining is able to create jobs and build the economy and is able to increase state revenues such as foreign exchange earnings through exports and support electrification and national energy security. However, the coal industry is very vulnerable to volatility in commodity prices and global economic developments, so the mining industry is highly dependent on the global trade situation.

Many coal mining companies in Indonesia support the increase in the coal trade. Every company must have good performance to achieve production. To achieve production, every company wants equipment that works optimally to the capabilities of the equipment. However, the performance of the equipment will decrease with increasing age of use. To restore the performance of the equipment in optimal conditions, maintenance activities need to be carried out. Maintenance activities need to be managed to get good maintenance results. However, there are several obstacles in managing maintenance activities, one of which is the limited availability of spare parts by dealers.

Availability parts especially Scania parts are more important for the support availability unit. It makes all customers focus on available parts. As in Figure 2, the achievement of Scania product spare parts availability in 2021 with an average of only 88%, indicates that the available spare parts are not sufficient to back up customers in the West Kutai area.