

IMPROVING MAINTENANCE STRATEGY SCANIA R580 BY USING FMEA IN  
FULL MAINTENANCE CONTRACT PT SIS ADARO

By

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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**

### **IMPROVING MAINTENANCE STRATEGY SCANIA R580 BY USING FMEA IN FULL MAINTENANCE CONTRACT PT SIS ADARO**

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Full Maintenance Contract (FMC) is one of the business lines of the service department of PT United Tractors Tbk. in performing maintenance on customers' heavy equipment. Machine availability is a high level KPI promised to customers with a minimum target written in the agreement. Downtime is the most influential thing on availability; therefore, we need the best maintenance strategy to manage downtime so that availability is achieved according to the target. Based on observation, there is a problem of availability not reaching the target in early 2022. Therefore, this study aims to develop a new maintenance strategy by using DMAIC approach. The root cause of the downtime is identified by using a combination of Pareto diagrams and why-why analysis, FMEA was used to find the Risk Priority Number, and 5W2H was used for planning improvement. The results the improvement was able to increase availability by 3.88%, from 91.90% to 95.78% (Minimum FMC Target 94.0%).

*Keywords: Downtime, Availability, DMAIC, Pareto Diagram, Why-why Analysis, FMEA, 5W2H.*

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## **DEDICATION**

This thesis is my gift to my parents who has educated me with patience, taught the sciences of life, and tirelessly loves me to this day.

This thesis is a special offering for my beloved wife. Thank you for your support, kindness, care and wisdom. Thank you for telling me how to live an honest and happy life.

I dedicate this thesis especially to my children who have given up losing their playing time with me because of work and college time.

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## TABLE OF CONTENTS

| Content                                             | Page |
|-----------------------------------------------------|------|
| STATEMENT BY THE AUTHOR.....                        | 2    |
| ABSTRACT.....                                       | 3    |
| DEDICATION.....                                     | 5    |
| ACKNOWLEDGEMENTS.....                               | 6    |
| TABLE OF CONTENTS.....                              | 7    |
| LIST OF FIGURES .....                               | 9    |
| LIST OF TABLES .....                                | 12   |
| CHAPTER 1 - INTRODUCTION.....                       | 13   |
| 1.1 Background.....                                 | 13   |
| 1.2 Research Problems .....                         | 18   |
| 1.3 Research Objectives .....                       | 19   |
| 1.4 Significance of Study .....                     | 19   |
| 1.4.1 Academic Aspect.....                          | 19   |
| 1.4.2 Company's Operational Aspect.....             | 20   |
| 1.5 Research Question .....                         | 21   |
| 1.6 Thesis Structure .....                          | 21   |
| CHAPTER 2 - LITERATURE REVIEW .....                 | 22   |
| 2.1 Theoretical Perspective.....                    | 22   |
| 2.1.1 Full Maintenance Contract (FMC) .....         | 22   |
| 2.1.2 Availability of Machine.....                  | 22   |
| 2.1.3 Downtime .....                                | 23   |
| 2.1.4 Maintenance .....                             | 23   |
| 2.1.5 Maintenance Strategy .....                    | 24   |
| 2.1.6 Failure Based Maintenance (FBM) .....         | 27   |
| 2.1.7 Preventive Maintenance (PM).....              | 27   |
| 2.1.8 Predictive Maintenance .....                  | 29   |
| 2.1.9 Condition Base Maintenance (CBM) .....        | 29   |
| 2.1.10 Reliability Centered Maintenance (RCM) ..... | 30   |
| 2.1.11 DMAIC.....                                   | 32   |
| 2.1.12 Pareto Diagram.....                          | 33   |
| 2.1.13 Why-Why Analysis .....                       | 33   |
| 2.1.14 Failure Mode & Effect Analysis (FMEA).....   | 35   |
| 2.1.15 5W2H .....                                   | 36   |
| 2.2 Previous Study.....                             | 37   |
| CHAPTER 3 – RESEARCH METHODS .....                  | 41   |

|                                                   |                                                              |     |
|---------------------------------------------------|--------------------------------------------------------------|-----|
| 3.1                                               | Research Framework .....                                     | 41  |
| 3.1.1                                             | Define Phase .....                                           | 42  |
| 3.1.2                                             | Measure Phase .....                                          | 43  |
| 3.1.3                                             | Analyze Phase .....                                          | 44  |
| 3.1.4                                             | Improve Phase .....                                          | 46  |
| 3.1.5                                             | Control .....                                                | 47  |
| 3.2                                               | Time Frame .....                                             | 49  |
| CHAPTER 4 – RESULTS AND DISCUSSIONS .....         |                                                              | 50  |
| 4.1                                               | Define .....                                                 | 50  |
| 4.1.1                                             | Overview of PT United Tractors FMC Scania SIS Adaro .....    | 50  |
| 4.1.2                                             | FMC Scania SIS Adaro Machine Availability .....              | 53  |
| 4.1.3                                             | Daily Breakdown Record of FMC Machine .....                  | 54  |
| 4.2                                               | Measure .....                                                | 56  |
| 4.3                                               | Analyze .....                                                | 61  |
| 4.3.1                                             | Why-Why Analysis .....                                       | 63  |
| 4.3.2                                             | FMEA Analysis .....                                          | 65  |
| 4.3.3                                             | 5W2H Analysis .....                                          | 70  |
| 4.4                                               | Improvement .....                                            | 73  |
| 4.4.1                                             | Improve Bracket Mud Guard .....                              | 73  |
| 4.4.2                                             | Improve Bracket Rear Lamp .....                              | 79  |
| 4.4.3                                             | Schedule Replacement Bulb Head Lamp Every PS (250 Hrs) ..... | 81  |
| 4.4.4                                             | Upgrade Loading Lamp .....                                   | 84  |
| 4.4.5                                             | Listing the Critical Part .....                              | 87  |
| 4.4.6                                             | Update LIB (List Item Backup) Spare Part .....               | 90  |
| 4.4.7                                             | New Flow Process Periodic Inspection (PI) .....              | 91  |
| 4.5                                               | Control .....                                                | 94  |
| 4.5.1                                             | New Check Sheet Periodic Service .....                       | 94  |
| 4.5.2                                             | New Check Sheet Periodic Inspection .....                    | 96  |
| 4.5.3                                             | New SOP Periodic Inspection .....                            | 99  |
| 4.5.4                                             | Weekly Meeting Spare Part .....                              | 103 |
| 4.6                                               | Discussion .....                                             | 103 |
| 4.6.1                                             | Review Pareto Problem .....                                  | 104 |
| 4.6.2                                             | Review Achievement Periodic Inspection .....                 | 107 |
| 4.6.3                                             | Review Part Availability (Instant Supply Capability) .....   | 108 |
| 4.6.4                                             | Review RPN (Risk Priority Number) .....                      | 109 |
| 4.6.5                                             | Review Machine Availability .....                            | 111 |
| CHAPTER 5 – CONCLUSIONS AND RECOMMENDATIONS ..... |                                                              | 113 |
| 5.1                                               | Conclusions .....                                            | 113 |
| 5.2                                               | Recommendation .....                                         | 114 |
| 5.2.1                                             | For Company .....                                            | 114 |
| 5.2.2                                             | For Further Research .....                                   | 114 |
| REFERENCES .....                                  |                                                              | 116 |
| CURRICULUM VITAE .....                            |                                                              | 121 |

## LIST OF FIGURES

| Figures                                                                        | Page |
|--------------------------------------------------------------------------------|------|
| Figure 1. 1 Placard of United Tractors .....                                   | 13   |
| Figure 1. 2 Logo of AHEMCE.....                                                | 14   |
| Figure 1. 3 Business Structure of United Tractors .....                        | 14   |
| Figure 1. 4 Logo of Slogan Moving as one .....                                 | 15   |
| Figure 1. 5 Flow process FMC business in United Tractors.....                  | 15   |
| Figure 1. 6 Scania Operating Position in Coal Mining Business.....             | 16   |
| Figure 1. 7 Scania R580 and Scania R560.....                                   | 16   |
| Figure 1. 8 Scania R580 General Specification .....                            | 17   |
| Figure 1. 9 Machine Availability FMC Scania R580 .....                         | 17   |
| Figure 1. 10 Pareto Analysis of Scania R580 .....                              | 18   |
| Figure 1. 11 Target VS Achievement PA Scania R580 2022 .....                   | 19   |
| Figure 2. 1 Components of RCM.....                                             | 31   |
| Figure 2. 2 Pareto Diagram .....                                               | 33   |
| Figure 2. 3 Flow process of why-why analysis.....                              | 34   |
| Figure 2. 4 Cycle stage of FMEA .....                                          | 36   |
| Figure 2. 5 Mind Map Literature Review .....                                   | 37   |
| Figure 3. 1 Research Framework .....                                           | 42   |
| Figure 3. 2 Define Flow Process in DMAIC Framework .....                       | 43   |
| Figure 3. 3 Measure Flow Process in DMAIC Framework .....                      | 44   |
| Figure 3. 4 Analize Flow Process in DMAIC Framework.....                       | 46   |
| Figure 3. 5 Improvement Flow Process in DMAIC Framework .....                  | 47   |
| Figure 3. 6 Control Flow Process in DMAIC Framework.....                       | 48   |
| Figure 4. 1 Flow Process of Maintenance Strategy in FMC Scania SIS Adaro ..... | 53   |
| Figure 4. 2 Scania R580 Availability 2022 .....                                | 54   |
| Figure 4. 3 Mapping of Downtime that affected for Availability .....           | 55   |
| Figure 4. 4 Pareto Diagram by Frequency of Breakdown Week 1 – Week 5, 2022.... | 56   |
| Figure 4. 5 Pareto Diagram by Downtime Week 1 – Week 5, 2022 .....             | 57   |

---

|                                                                                            |     |
|--------------------------------------------------------------------------------------------|-----|
| Figure 4. 6 Measurement Result of Mechanic Quantity & Competency.....                      | 58  |
| Figure 4. 7 Measurement result of mechanic load .....                                      | 59  |
| Figure 4. 8 Measurement Result of Periodic Inspection Achievement.....                     | 59  |
| Figure 4. 9 Measurement Result of Periodic Service Performance .....                       | 60  |
| Figure 4. 10 Measurement Result of Part Availability .....                                 | 61  |
| Figure 4. 11 Scania R580 standard mudguard bracket .....                                   | 73  |
| Figure 4. 12 Repeated damage to Scania R580 standard mud guard bracket.....                | 74  |
| Figure 4. 13 Measurement and Data Collection for the New Bracket Mud Guard<br>Design ..... | 75  |
| Figure 4. 14 Desain new bracket mud guard to Scania R580 .....                             | 76  |
| Figure 4. 15 The Welding Process the New Mud Guard Scania R580.....                        | 76  |
| Figure 4. 16 Implementation Result of New Bracket Mud Guard Scania R580 .....              | 78  |
| Figure 4. 17 Rear Lamp Bracket Scania R580 Before Improvement .....                        | 79  |
| Figure 4. 18 Problem at Rear Lamp Bracket Scania R580 Before Improvement.....              | 80  |
| Figure 4. 19 New Rear Lamp Bracket Scania R580 (After Improvement) .....                   | 80  |
| Figure 4. 20 New Check Sheet Periodic Service Scania R580 .....                            | 83  |
| Figure 4. 21 Prepare Stock Bulb Head Lamp H7 for Replacement Schedule Needs ..             | 84  |
| Figure 4. 22 Trial process of changing from bulb lamp to LED lamp.....                     | 85  |
| Figure 4. 23 LED lights for Mass Implementation .....                                      | 86  |
| Figure 4. 24 Readiness of List Item Backup (LIB) Spare Part Scania R580 .....              | 91  |
| Figure 4. 25 Existing Flow Process of Periodic Inspection (PI).....                        | 92  |
| Figure 4. 26 New Flow Process of Periodic Inspection (PI).....                             | 93  |
| Figure 4. 27 New check sheet Periodic Service.....                                         | 95  |
| Figure 4. 28 New Check Sheet Periodic Inspection.....                                      | 98  |
| Figure 4. 29 SOP Periodic Inspection .....                                                 | 102 |
| Figure 4. 30 Weekly Online Meeting for Spare Part Coordination .....                       | 103 |
| Figure 4. 31 Pareto Diagram by Frequency of Breakdown Week 1 – Week 5, 2022                | 104 |
| Figure 4. 32 Pareto Diagram by Frequency of Breakdown Week 14 – Week 18 2022<br>.....      | 105 |
| Figure 4. 33 Pareto Diagram by Downtime Week 1 – Week 5, 2022 .....                        | 106 |
| Figure 4. 34 Pareto Diagram by Downtime Week 14 – Week 18, 2022 .....                      | 106 |
| Figure 4. 35 Achievement periodic inspection as of April 2022 .....                        | 108 |

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|                                                                                                |     |
|------------------------------------------------------------------------------------------------|-----|
| Figure 4. 36 Part Instant Supply Performance as of April 2022 .....                            | 109 |
| Figure 4. 37 Availability Before Improving Maintenance Strategy (Week 1 – Week 4, 2022) .....  | 111 |
| Figure 4. 38 Availability After Improving Maintenance Strategy (Week 14 – Week 18, 2022) ..... | 112 |

## LIST OF TABLES

| Table                                                                                  | Page |
|----------------------------------------------------------------------------------------|------|
| Table 2. 1 Adaptability of Journal Literature Research .....                           | 40   |
| Table 3. 1 Time Frame of Research .....                                                | 49   |
| Table 4. 1 Sample of Raw Data Daily Breakdown Record FMC Scania R580.....              | 55   |
| Table 4. 2 Why-Why Analisis.....                                                       | 64   |
| Table 4. 3 Severity Value Criteria Level to Calculate FMEA .....                       | 66   |
| Table 4. 4 Occurrence Value Criteria Level to Calculate FMEA .....                     | 67   |
| Table 4. 5 Detection Value Criteria Level to Calculate FMEA.....                       | 68   |
| Table 4. 6 Risk Priority Number (RPN) Calculation Results .....                        | 69   |
| Table 4. 7 5W2H Analysis.....                                                          | 72   |
| Table 4. 8 Summary Execution New Mud Guard Bracket Scania R580.....                    | 77   |
| Table 4. 9 Summary Execution of the Improvement Bracket Rear Lamp Scania R580<br>..... | 81   |
| Table 4. 10 Execution Summary of the LED Loading Lamp .....                            | 86   |
| Table 4. 11 List of Critical Part Scania R580 .....                                    | 87   |
| Table 4. 12 RPN May 2022 .....                                                         | 110  |