



**THE UNITED REPUBLIC OF TANZANIA
NATIONAL AUDIT OFFICE**



**PERFORMANCE AUDIT REPORT ON THE PROVISION OF MAINTENANCE
SERVICES TO GOVERNMENT VEHICLES**

**AS PERFORMED BY THE TANZANIA ELECTRICAL, MECHANICAL AND
ELECTRONICS SERVICES AGENCY (TEMESA) UNDER THE MINISTRY OF
WORKS AND TRANSPORT**



**REPORT OF THE CONTROLLER AND
AUDITOR GENERAL OF
THE UNITED REPUBLIC OF TANZANIA**

MARCH 2021



**THE UNITED REPUBLIC OF TANZANIA
NATIONAL AUDIT OFFICE**



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PREFACE



Section 28 of the Public Audit Act No. 11 of 2008, mandates the Controller and Auditor General to carry-out Performance Audit (Value for-Money Audit) for the purposes of establishing the economy, efficiency and effectiveness of any expenditure or use of resources in the Ministries, Departments and Agencies (MDA), Local Government Authorities (LGAs), Public Authorities and other Bodies. The Performance Audit involves enquiring, examining, investigating and reporting, as deemed necessary under the circumstances.

I have the honour to submit to Her Excellency, the President of the United Republic of Tanzania, Hon. Samia Suluhu Hassan and through her to the Parliament of the United Republic of Tanzania, the Performance Audit Report on the Provision of Maintenance Services to Government Vehicles in Tanzania. The main audited entities are the Tanzania Electrical, Mechanical and Electronics Services Agency (TEMESA) and the Ministry of Works and Transport.

The report contains findings of the Audit, conclusions and recommendations that focus mainly on improving the provision of maintenance services for the government vehicles in the country.

The Ministry of Works and Transport and Tanzania Electrical, Mechanical and Electronics Services Agency were given the opportunity to scrutinize the factual contents and comment on the report. I wish to acknowledge that the discussions with the Ministry of Works and Transport and Tanzania Electrical, Mechanical and Electronics Services Agency were very useful and constructive.

My Office intends to carry-out a follow-up audit at an appropriate time regarding actions taken by the audited entities in relation to the recommendations of this report.

After completion of the assignment, the Office subjected the report to the critical reviews of Eng. Hans T. Mwaipopo - Automobile Engineer and Road Safety Specialist, and Eng. Michael J. Kyando - Assistant Lecturer at National

Institute of Transport who came up with useful inputs on improving the output of this report.

This report has been prepared by Mr. Frank Nyoni - Team Leader, Eng. Joseph Nkengele Team Member under the supervision and guidance of Ms. Esnath Henry - Chief External Auditor, Mr. George C. Haule - Assistant Auditor General and Mr. Jasper Mero - Deputy Auditor General.

I would like to thank my staff for their assistance in the preparation of this report. My thanks should also be extended to the audited entities for cooperation extended to the Audit Team which facilitated timely completion of this Audit.



Charles E. Kichere
Controller and Auditor General
Dodoma, United Republic of Tanzania
March, 2021

TABLE OF CONTENTS

PREFACE.....	II
LIST OF TABLES AND FIGURES.....	
LIST OF ABBREVIATIONS AND ACRONYMS.....	II
EXECUTIVE SUMMARY	IV
CHAPTER ONE.....	1
INTRODUCTION	1
1.1 BACKGROUND.....	1
1.2 MOTIVATION FOR THE AUDIT	2
1.3 AUDIT DESIGN	8
1.4 SAMPLING, METHODS FOR DATA COLLECTION AND ANALYSIS	10
1.5 ASSESSMENT CRITERIA	16
1.6 DATA VALIDATION PROCESS DURING THE AUDIT.....	20
1.7 STANDARDS USED FOR THE AUDIT.....	20
1.8 STRUCTURE OF THE AUDIT REPORT.....	21
CHAPTER TWO.....	22
SYSTEM FOR PROVISION OF MAINTENANCE SERVICES TO THE GOVERNMENT VEHICLES	22
2.1 INTRODUCTION	22
2.2 POLICIES AND LEGISLATIONS.....	22
2.3 ROLES AND RESPONSIBILITIES OF KEY STAKEHOLDERS.....	23
2.4 STAKEHOLDERS OF TEMESA.....	27
2.5 OVERVIEW OF MAINTENANCE SERVICES.....	30
2.6 RESOURCES FOR PROVISION OF MAINTENANCE WORKS BY TEMESA	33
CHAPTER THREE.....	37
AUDIT FINDINGS.....	37
3.1 INTRODUCTION	37
3.2 MAINTENANCE MANAGEMENT INFORMATION SYSTEM.....	37
3.3 PLANS FOR PROVISION OF MAINTENANCE SERVICES	42
3.4 EXECUTION OF MAINTENANCE WORKS	57
3.5 PROVISION OF COST-EFFECTIVE MAINTENANCE SERVICES	83
3.6 CAPACITY TO CONDUCT MAINTENANCE.....	92
3.7 OVERSIGHT OF MAINTENANCE SERVICES	104
CHAPTER FOUR.....	114
CONCLUSION	114
4.1 INTRODUCTION	114
4.2 GENERAL CONCLUSION.....	114
4.3 SPECIFIC AUDIT CONCLUSIONS	114
CHAPTER FIVE.....	119

RECOMMENDATIONS.....	119
5.1 INTRODUCTION	119
5.2 SPECIFIC RECOMMENDATIONS.....	119
REFERENCES.....	122
APPENDICES	124

LIST OF TABLES AND FIGURES

LIST OF TABLES	
<i>Table 1.1</i>	Variation of Quoted Costs between TEMESA and Approved Private Garages
<i>Table 1.2</i>	Selection of TEMESA Regional Offices Visited during the Audit
<i>Table 1.3</i>	Selection of Types of Motor Vehicles Assessed during Audit
<i>Table 2.1</i>	Legislations Governing Maintenance Works of Vehicles
<i>Table 2.2</i>	Organization Roles of TEMESA with regards to Maintenance Services
<i>Table 2.3</i>	Roles and Responsibilities of TEMESA's Stakeholders
<i>Table 2.4</i>	Documents used for Quality Control by TEMESA
<i>Table 2.5</i>	Distribution of Staffs by Professions at TEMESA
<i>Table 2.6</i>	Funding for TEMESA Activities
<i>Table 2.7</i>	Planned and Actual Annual Expenditure of Reviewed Funds
<i>Table 3.1</i>	Functionality of the current Information Management System at TEMESA
<i>Table 3.2</i>	Assessment of the Level of Information Available from Customers and Missing Information
<i>Table 3.3</i>	Status of Correspondence in Strategic Plan Interventions
<i>Table 3.4</i>	The Status of Implementation of Strategic Interventions
<i>Table 3.5</i>	The Extent of Availability and Use of Standards and Repair Manual by TEMESA
<i>Table 3.6</i>	Progress towards achieving ISO 9000 Certificate of Compliance
<i>Table 3.7</i>	Weaknesses of the Current Guideline on Maintenance Services
<i>Table 3.8</i>	The Degree of Compliance with the Current Maintenance Guideline
<i>Table 3.9</i>	Status of Availability of Vehicle Diagnosis Machine
<i>Table 3.10</i>	Percentage of Maintenance Works passing through the necessary approvals out of 144 Maintenance Jobs Assessed
<i>Table 3.11</i>	Extent of Supervision in the Implementation of Maintenance Works
<i>Table 3.12</i>	Extent of Approvals for Maintenance Works from different Supervisory levels in the Sample of 144 jobs in 6 Regions Visited
<i>Table 3.13</i>	Timelines for Execution of Maintenance Works based on the Analysis of Maintenance Jobs
<i>Table 3.14</i>	Identified Weaknesses in Post-Inspection Activities at TEMESA
<i>Table 3.15</i>	Assessment of Time Taken to Collect Maintenance Bills at TEMESA
<i>Table 3.16</i>	The Extent of Time Taken before an Invoice is issued by TEMESA
<i>Table 3.17</i>	TEMESA's Customer Satisfaction Surveys
<i>Table 3.18</i>	Status of Development and Implementation of Customer Visit Plans
<i>Table 3.19</i>	Comparison of Prices of the Same Spare Parts

<i>Table 3.20</i>	Comparison of Invoice Prices and Market Prices for Same Spare Parts
<i>Table 3.21</i>	Comparison of Maintenance Service Costs (Prices) between TEMESA and Market Prices of similar Maintenance Services
<i>Table 3.22</i>	Proportion of Specific Costs from Total Maintenance Costs by TEMESA
<i>Table 3.23</i>	Assessment of the capacity of TEMESA in Tools and Workshop Facilities
<i>Table 3.24</i>	Percentage Availability of Tools and Key facilities in regards to the Visited Workshops
<i>Table 3.25</i>	Assessment of Human Resource Capacity at TEMESA
<i>Table 3.26</i>	Assessment of specialized skills in maintenance of vehicles available at TEMESA Regional Offices
<i>Table 3.27</i>	Assessment of the Performance Indicators
<i>Table 3.28</i>	Assessment of Timeliness for Submission of Performance Reports
<i>Table 3.29</i>	Extent of the Number of Monitoring Visits Conducted by Ministry
LIST OF FIGURES	
<i>Figure 1.1</i>	Status of Implementation of Recommendations on Maintenance of Government Vehicles
<i>Figure 2.1</i>	Classification of Maintenance Services
<i>Figure 2.2</i>	Relationship between Different stakeholders on Provision of Maintenance Services
<i>Figure 2.3</i>	TEMESA's Maintenance and Repair Work Flow
<i>Figure 3.1</i>	Average Performance Score of Implementation of Planned Objectives and Targets by TEMESA
<i>Figure 3.2</i>	Average Planned Number of Activities against the Achievement on Maintenance Works
<i>Figure 3.3</i>	The extent of Actual Major Repair compared to the Planned Major Works
<i>Figure 3.4</i>	Vehicle Inspection form Indicating Different Vehicle Systems to be checked during Pre-inspection
<i>Figure 3.5</i>	Execution of Maintenance Works using Pre-Qualified Garages
<i>Figure 3.6</i>	Ratio of Uncollected Cash out of Total Revenue Generated
<i>Figure 3.7</i>	Percentage of Payments to Creditors out of Total Credited Amount
<i>Figure 3.8</i>	Results of Simple Survey on the Degree of Satisfaction by TEMESA's Customers
<i>Figure 3.9</i>	Costs Effectiveness of Repair Services by TEMESA
<i>Figure 3.10</i>	Cost-Effectiveness of Genuine Spare Parts
<i>Figure 3.11</i>	Coverage of Required Contents of Annual Performance Reports by TEMESA
<i>Figure 3.12</i>	The Extent of Number of Times Regions were Covered by M&E Visits from Ministry of Works

LIST OF ABBREVIATIONS AND ACRONYMS

AQRB	-	Architect and Quantity Surveyors Registration Board
CAG	-	Controller and Auditor General
E&M	-	Electrical and Mechanical
FY	-	Financial Year
GPSA	-	Government Procurement Services Agency
ICT	-	Information and Communication Technology
INTOSAI	-	International Organization of Supreme Audit Institutions
ISO	-	International Organization for Standardization
ISSAI	-	International Standards of Supreme Audit Institutions
KPI	-	Key Performance Indicators
L/C H/Top	-	Land Cruiser Hard Top
LGA	-	Local Government Authorities
LPO	-	Local Purchase Order
MAB	-	Ministry Advisory Board
MDA	-	Ministries, Departments and Agencies
MIS	-	Management Information System
MoWT	-	Ministry of Works and Transport
MT Depot	-	Motor Transport Depot
MTEF	-	Medium Term Expenditure Framework
MVMMIS	-	Motor Vehicle Maintenance Management Information System

NAOT	-	National Audit Office of Tanzania
PMU	-	Procurement Management Unit
PPRA	-	Public Procurement Regulatory Authority
SCC	-	Special Conditions of Contract
SP	-	Strategic Plan
TBA	-	Tanzania Buildings Agency
TEMESA	-	Tanzania Electrical, Mechanical and Electronics Services Agency
TMSM	-	TEMESA Maintenance Forms
URT	-	United Republic of Tanzania
WAN	-	Wide Area Network

EXECUTIVE SUMMARY

The availability of efficient support services forms the basis of day to day government operations. Delivery of efficient public services requires among other things, the availability of proper supporting infrastructures that will enhance the quality and satisfaction to the public and citizens.

There are several support infrastructures that are essential in order to allow the government to operate and deliver efficient public services. Among the key support infrastructures include equipment such as plants, and heavy and light duty vehicles. All these require the presence of a proper and effective maintenance system.

To ensure effective maintenance system, the Government of Tanzania established the Tanzania Electrical, Mechanical and Electronics Services Agency (TEMESA) through Executive Agencies Act No. 30 of 1997 under the then Ministry of Works, Transport and Communication. TEMESA was given the main responsibility of enhancing efficiency in public service delivery through the provision of efficient and effective electrical, mechanical, and electronics maintenance services that are reliable to the government institutions and general public.

However, the current performance in provision of the maintenance services to the government vehicles has not been satisfactory. There have been a lot of complains about the quality, costs and level of maintenance services being provided by TEMESA.

These motivated the Controller and Auditor-General to undertake a performance audit on the provision of maintenance services to the government vehicles in order to determine whether the overall maintenance management system effectively functions and facilitates the provision of quality and cost-effective maintenance services.

The main objective of the Audit was to assess whether maintenance management System functions effectively and facilitates provision of qualified and cost-effective maintenance services to the government owned vehicles.

The Audit focused on seven main areas dealing with provision of maintenance services including Maintenance Management System, planning for Maintenance Services, Execution of Maintenance Services with a focus

on completion of maintenance work as per the agreed time, Costs Effectiveness and Compliance with the Specifications or Standards. The Audit also focused on assessing the Capacity to conduct maintenance services as well as Monitoring and Evaluation of the maintenance services both internally by TEMESA and externally by MoWTC.

Main Audit Findings

Inadequate Maintenance Management Information System

The Audit Team revealed ineffective system for collecting and storing information about the condition of government vehicles both at TEMESA and the Ministry of Works. It was observed that the Ministry of Works, Transport and Communication which is the Chief Registrar of all government vehicles uses a manual registration system for nearly all newly purchased government vehicles. In addition, the audit revealed that the register was not used as an input to the system for maintenance of government vehicles.

Furthermore, the Audit Team noticed that the Vehicle Register did not contain the whole stock of the newly purchased or used government motor vehicles. This was in one way a result of having different authorities for registering government vehicles as per their jurisdiction including Ministry of Finance and Planning and National Defense Forces. The vehicles register which was in spreadsheet format did not include the government motor vehicles from public authorities and those acquired through donor funded projects. Additionally, the register under the Ministry of Works, Transport and Communication was not presented to TEMESA to be used as an input in developing maintenance programs and schedules for maintenance works.

Moreover, the Audit Team noted that TEMESA did not have sufficient information about the condition of vehicles. This information is crucial for provision of guidance on needs assessment and planning for Regional Offices depending on the type and condition of vehicles available in their regions. Generally, the audit revealed that TEMESA was operating under a manual information system in managing Maintenance Services. In addition to the foregoing, the manually operated system did not produce usable information about Maintenance History, Customer Base, Alerts and Feedback Systems.

On the other hand, the Audit Team noted that there is a new Web-based Motor Vehicle Maintenance Management System which is currently being

piloted at TEMESA - Dodoma, Iringa and MT- Depot Workshops. However, our review has indicated that the system was launched recently and many features were not functional.

Inadequate Plans for Maintenance of the Government Vehicles

The Audit Team noted that the planning activities for maintenance services at both Ministry of Works and TEMESA were not effective and did not provide the intended results. The Audit Team also noted that the Ministry and TEMESA did not have communication mechanisms that would ensure common direction in achieving the planned performance targets. For instance, the Ministry established a Strategic Plan with two major indicators on the level of technical services and vehicle operating costs. However, there was no information from either performance reports or Strategic Plans of TEMESA that was expected to provide data for the two indicators established by the Ministry.

Furthermore, the implementation of key strategic interventions by the Ministry on matters that concerns maintenance of vehicles was not sufficient. For instance, out of 8 planned performance targets, only 1 of them was fully completed while the remaining 7 were partially completed or not completed at all.

The Audit Team also noted that the Ministry's Strategic Plan was formulated without clearly established baseline data and data source. For instance, the Ministry was not able to establish correctly the baseline indicator values forming the basis of evaluating its performance on customer satisfaction surveys. Additionally, the Ministry planned to collect data on customers' satisfaction from its own customers and customers serviced by TEMESA were included.

The Audit Team observed that TEMESA has not implemented effectively, its strategic goals and targets particularly on its core functions of providing mechanical engineering services. The review of the implementation of current Strategic Plan which was conducted in 2019 indicated that TEMESA scored only 15% on the implementation status of mechanical and technical services in a three years period from the financial year 2016/17 to 2018/19.

Moreover, the Audit Team noted that the Ministry and TEMESA did not effectively develop and institutionalize technical guidelines for execution

of maintenance works for different vehicles owned by the government. This condition was observed despite the fact that the government currently owns a diverse range of car models with diverse specifications and years of manufacture. By the time of this audit, the government was in possession of approximately of 47 models of different vehicles purchased at different times and used in different locations. However, there was no any Repair Manual for guiding execution of Maintenance Works.

The Audit Team also noted that maintenance services provided by TEMESA were not well guided by effective procedures. Review of the current operations has noted that there is one maintenance procedure guidelines (Mwongozo wa Matengenezo) which is used to provide a guidance on maintenance services as executed by TEMESA, however the rate of compliance to the guidelines was approximately 45% only. Additionally, the audit revealed that the guidelines were outdated, not distributed to its customers and did not provide guidance on spare parts acquisition and technical procedures of maintenance services.

The Audit Team further noted that TEMESA did not have the work programs for regular check-ups and maintenance of vehicles. The maintenance services were provided only when customers brought vehicles to TEMESA. Failure to check up and repair the vehicles regularly has resulted to the increase in number of government vehicles requiring major repairs. This was evidenced by the number of major repairs executed by TEMESA to government vehicles which increased 5 times from 789 in the financial years 2015/16 to 3631 during the financial year 2019/20.

Inadequate Execution of Maintenance Works

The Audit Team also revealed that performance of TEMESA in execution of its maintenance works has weaknesses in terms of quality of services, operational efficiency and financial performance. These weaknesses affected the level and degree of the quality of maintenance works by TEMESA.

The Audit Team noted that TEMESA did not sufficiently conduct pre and post-inspections for government vehicles as indicated in the pre and post inspection forms. Generally, the Audit Team identified various problems including lack of modern tools for vehicle inspections, lack of qualified personnel to conduct the post inspections, and lack of proper techniques

for conducting post-inspections of engine works. The vehicles diagnosis machines supplied to the Regional Offices which were important tools for inspecting modern vehicles were not properly functioning in 5 out of 6 regions which were visited.

The Audit Team also noted that TEMESA did not have effective quality assurance means in ordering and receiving of spare parts to be fixed in maintained vehicles. The Agency was relying on a committee of three personnel for verification of quality and establishing the authenticity of the supplied spare parts. This team, however, did not have any mechanism for testing or identifying the genuineness of the supplied spare parts. There was no documented means of verifying the authenticity of the spare parts ordered rather than depending on the experience of technicians and other means of verifying spare parts including bar code scanners and parts catalogue.

The Audit Team noted that maintenance works were executed without having effective means of confirming their quality during and after being conducted. Moreover, the maintenance works did not pass through the necessary approval as a confirmation of quality and as a means of quality control assurance for the executed works before they are submitted for final inspection. Review of a sample of 144 maintenance work files revealed that only 9% of them were approved by the in-charge of the maintenance section for the final check.

Furthermore, the Audit Team noted that there were weaknesses in executing quality control and assurance for the outsourced works to private garages or dealers. There were no mechanisms set by TEMESA in ensuring that the works done by private garages met standards and were of high quality. For all outsourced garages, there was no quality control means during decision to choose private garages among the pre-qualified garages, acquisition and fixing of spare parts and supervision during maintenance of works.

Moreover, the Audit Team revealed that there was no effective system for technical supervision of maintenance works at implementation levels. The maintenance works executed at lower levels were mainly based on experience of the technicians and other temporary employees who were mostly performing the works. There were no documented supervision guides or other means of managing the execution of works.

In addition, the works executed by TEMESA were not undergoing necessary approvals as per the Established Maintenance or Repair Forms. The approval is supposed to be done by Immediate Technician, Principal Technician and the Manager under the observation of the driver. Only 25% of the works were approved by the Immediate Technicians, and 69% of maintenance works was only observed by responsible drivers who are actually not technically qualified to check if the works are correctly executed. This contributes to insufficient quality of maintenance works being performed.

Furthermore, the Audit Team revealed that maintenance works done by TEMESA were not executed within the timelines stipulated by the Client's Service Charter. The collected information indicates that an average vehicle was taking approximately 11 days to complete maintenance service instead of standard number of 3 days as computed based in the Client's Service Charter.

The Audit Team also observed that there were delays in the collection of maintenance bills due to delays in settlement of such bills. On average, TEMESA took about 87 days to collect bills of maintenance works done by its workshops. Region with the most delayed collection of bills was Manyara; while the most efficient regions in collection of bills were Iringa and Dodoma which took an average of 15 and 47 days respectively to collect their bills.

As a consequence of weak settlement of bills, the Audit Team noted increased amount of uncollected cash from production and maintenance works in the past 3 years in TEMESA. TEMESA achieved the lowest rate of uncollected cash during the financial year 2017/18 when 15% only of its revenue equivalent to TZS 5.7 Billion remained uncollected. However, the trend started to increase again during the financial year 2019/20 when the uncollected revenue reached 28% equivalent to TZS 11.3 Billion. Furthermore, the increase in amount of uncollected cash has ultimately decreased the capacity of the Agency in settling its spare parts bills from the creditors. The capacity of TEMESA to pay its creditors has declined dramatically from being able to pay 60% of its credit amount in 2016/17 equivalent to TZS 6.4 Billion to being able to pay only 33% of its creditors during 2019/20 when they owed TEMESA TZS 17.5 Billion.

With regard to customer management, the Audit Team has noted that TEMESA did not do enough to implement its core value of being a customer

centered organisation. TEMESA has not sufficiently conducted customer satisfaction surveys which were expected to be a means of obtaining feedback from their customers and therefore providing inputs for annual and Strategic Plans as well as progressive improvement in the provision of its maintenance services. There was only one satisfaction survey which was conducted during the financial year 2018/19, involving only one region out of the 30. The survey was very limited in terms of its scope and was not replicated to other regions, so its findings cannot provide reliable information on customer satisfaction.

Inadequate provision of Cost-Effective Maintenance Services

The Audit Team noted that Maintenance Services provided by TEMESA to the government institutions were not cost effective as per the requirement of the Establishment Order. The Audit Team noted that TEMESA was overcharging government institutions for the prices of similar spare parts by an average of 10%. This was revealed after comparing the prices paid by TEMESA to Spare Parts Suppliers and prices quoted by TEMESA to Government Institutions.

Furthermore, analysis has indicated that prices charged by TEMESA for purchase of spare parts were higher than their corresponding market prices. On average, the prices of spare parts charged by TEMESA were higher by 30% compared to those available in the market. On the other hand, the market prices for maintenance/repair services were 2 times lower than the corresponding TEMESA's prices for the same services.

Insufficient Capacity to Conduct Maintenance of Government Vehicles

The Audit Team noted that TEMESA did not have sufficient capacity in terms of Tools and Workshop Facilities and Human Resources, to enable effective maintenance of Government vehicles. Review of the capacity level from six (6) visited TEMESA workshops indicated that all workshops did not have proper building infrastructures to operate as modern workshops. Some of the workshops had dilapidated buildings which did not provide proper working environment for modern maintenance services. In addition, the workshops in the visited regional centers did not have tools and facilities to enable fully-fledged operations as modern garages.

The Audit Team further revealed that acquisition of new workshop tools was done without sufficient needs assessment. In addition, supplies of incomplete tools set and equipment which did not have certificates of inspection issued by the nominated inspection agency and certificate of origin to confirm the originality of the supplied equipment were also found in the visited regional centers.

The Audit Team also revealed human resources capacity gap at TEMESA. Generally, we noted that TEMESA lacked a significant number of staff with specific skills important for maintenance of modern vehicles including Auto-electricians, V8 Engine Specialists, Panel-Beating and Spray Painters, AC and Refrigeration and Welders.

Inadequate Oversight of Maintenance Services

The Audit Team noted that the oversight functions for maintenance activities at the Ministry of Works and TEMESA were not sufficiently executed. It was realized that TEMESA was preparing and submitting performance reports that are financial based with most contents relying on a number of activities performed and revenue generated. The assessment of the contents of the performance reports has indicated that about 41% of the contents of the performance reports were on financial matters particularly the collection of revenues and settlement of debts. Operational efficiency was covered by 38% of the contents of the performance reports while quality of services was given only 14% coverage in the reports.

The Audit Team noted that monitoring activities on maintenance activities as performed by Ministry were not effective enough to produce the intended results. It was also noted that monitoring activities were conducted without having proper monitoring guidelines. Furthermore, the Audit Team noted that in the period of 5 financial years from 2015\16 to 2019\20, the monitoring activities covered only 14 out of 30 regions of Tanzania mainland and therefore leaving the other 16 regions, equivalent to 52% totally unmonitored.

The Audit Team has noted that there is no monitoring of the maintenance activities performed by TEMESA Regional Offices or production centre. Generally, there was inadequate communication between TEMESA Headquarters and Regional Centers. The headquarters' interaction with the Regional Offices was only found during supportive supervision by top

management team. The supervision visits however, were not documented in all visited regions and reports of what were discussed in the visits were also missing.

The Audit Team noted that the evaluation activities at TEMESA was not sufficient in determining how efficient and productive the Agency was operating.

The Audit Team expected to find two levels of evaluation; the operational level evaluation of day to day maintenance activities and strategic level evaluation of implementation of the overall Strategic Plan. At operational level, TEMESA had not conducted evaluation of its maintenance activities and other interventions on maintenance to determine whether they meet their objectives or not in relation to efficiency, effectiveness, relevancy, impact and sustainability.

At the strategic level, the Audit Team also revealed that TEMESA had not conducted any evaluation to determine the achievement of her strategic objectives and targets on maintenance activities. The Audit Team however noted that TEMESA had conducted a review of the Strategic Plan in 2019 which tried to assess the achievement of her Strategic Plan objectives until that time however, the review addressed only effectiveness aspect of the evaluation and leaving other aspects like efficiency, relevancy, impact and sustainability uncovered.

General Conclusion

The Audit Team concludes that the system for provision of maintenance services to the government vehicles in Tanzania is not effectively functioning as per its Establishment Order and there is a need to deliberately impose more initiatives to enhance performance level of TEMESA in providing its maintenance services. Generally, TEMESA has not been able to meet the customers' expectations while providing its services. Additionally, TEMESA has not been able to provide cost effective maintenance services as per the Establishment Order which is the key objective for its establishment.

Main Audit Recommendations

Recommendations to the Ministry of Works, Transport and Communication

It is strongly recommended to the Ministry of Works and Transportation to:

- a) Regularly review and update its roles and functions with regards to maintenance services, so as to provide clear accountability on the use of resources by TEMESA necessary for improvement of maintenance services;
- b) Improve monitoring and evaluation of development and maintenance projects so as to effectively address key performance indicators on quality of maintenance services to the government-owned motor vehicles;
- c) Develop and institute clear guidelines, standards, and manuals geared towards establishing effective quality control and assurance mechanisms in all stages of provision of maintenance services;
- d) Supervise quarterly reporting of the condition of all government-owned motor vehicles, to enable proper planning and execution of maintenance services by TEMESA;
- e) Develop strategic and annual action plans that will provide an assurance that performance of TEMESA in providing effective and efficient maintenance services is accurately being monitored;
- f) Develop a proper mechanism that will facilitate smooth payments of maintenance bills between TEMESA and government institutions; and
- g) Improve functionality of the currently developed vehicle maintenance management system in such a manner that will ensure there is maximum interface with users of maintenance services and will enable collection of enough information from users.

Recommendations to Tanzania Electrical, Mechanical and Electronics Services Agency (TEMESA)

I strongly recommend TEMESA to:

- a) Improve the functionality and operationalization of the maintenance information management system in order to capture detailed information critical for assessing the quality of maintenance services;
- b) Strengthen supportive supervision to Regional Offices so that Strategic and Business Plans are efficiently and effectively implemented to provide adequate maintenance services;
- c) Strengthen customer relationship management through effective customer satisfaction surveys and developing clear communication systems to enable customers' reflection of maintenance services in terms of quality, cost and time;
- d) Strengthen quality control and assurance systems for maintenance works at all operational and management levels to ensure high quality of maintenance and other services;
- e) To develop maintenance plan which will include maintenance schedules for government owned vehicles which will be used as guideline for providing maintenance services to its workshops; and
- f) Establish Key Performance Indicators (KPIs) which will be used to monitor workshop's performance of maintenance services to government vehicles.

CHAPTER ONE

INTRODUCTION

1.1 Background

The government operations in different levels require the availability of efficient support services which form the basis of support to the government on its day to day operations. Delivery of efficient public services requires among other things the availability of proper supporting infrastructures that will enhance the quality and satisfaction to the public and citizens.

There are several support infrastructures that are essential in order to allow the government to operate and deliver efficient public services. Among the key support infrastructures include the vehicles and ferries and plant and machineries. All these require the presence of high quality and efficient electrical, mechanical and electronic engineering services. These services are delivered to ensure that the government is efficiently and effectively conducting its activities to serve the public in a manner that will allow smooth operations and enhance productivity.

It is important that these support infrastructures are properly managed so as to create a proper environment for ensuring that electrical, mechanical and electronics supporting services are properly delivered. In realization to this, the Government of Tanzania established the Tanzania Electrical, Mechanical and Electronics Services Agency (TEMESA) through Executive Agencies Act No. 30 of 1997 under the Ministry of Works, Transport and Communication. TEMESA has the responsibility of enhancing efficiency in public service delivery through the provision of efficient and effective electrical, mechanical, and electronics services.

The Ministry of Works shall ensure that necessary assistance is availed to the Agency in order to enable it deliver the required services to the public in the manner that is efficient and effective¹

¹ TEMESA Establishment Order, 2005

1.2 Motivation for the Audit

This performance audit has been motivated by the following factors;

1.2.1 Insufficient Inspection and Diagnosis of the Vehicles

In order to effectively maintain motor vehicle, plant or machinery, there is a need to conduct a thorough inspection and diagnosis before any intervention is made to maintain that vehicle, plant or machinery. These inspections and diagnosis are divided into two categories, namely, pre and post inspections and diagnosis. Through the interviews held with drivers of government vehicles, it was noted that TEMESA has not been doing a thoroughly inspection and diagnosis of vehicles and therefore embarking on fixing the “assumed” technical defects of a car/machinery without having a proper understanding of the vehicles’ problem, resulting to further damage of the vehicles. Sometimes, the recurring mechanical problems that made the vehicle to be sent to TEMESA are not addressed/solved.

A report by PPRA on the Performance Evaluation of TEMESA conducted in 2018 noted that inadequate diagnosis was compounded by a gap in terms of technological equipment that were available at TEMESA to carry out the required diagnoses. The report further noted that, most of the modern vehicles and equipment were made to use computer-based and less of manual diagnosis. However, the audit noticed that TEMESA did not have enough number of staff to handle such kinds of services. This has resulted to inadequate diagnosis of vehicles and sometimes damages to the serviced vehicles by conducting wrong engine repairs or using wrong machine parts.

1.2.2 Use of Outdated Maintenance Equipment

A review of the Performance Audit report by the Controller and Auditor General on Maintenance of Government Vehicles conducted in 2012 reported that, TEMESA was using outdated workshop equipment while carrying out maintenance services. The report noted through site visits conducted by the Audit Team at depots located in Dar es Salaam that workshops were crowded with equipment that were either outdated or not working and some of them had not been replaced since 1947. It was also reported that some of the major equipment were grounded and were not working at all. The use of outdated equipment led to inadequate delivery of services or delays in maintenance of the vehicles. In this audit, this was

the most common complaint by the interviewed Drivers and Transport Officers from different MDAs, Regions and LGAs.

1.2.3 Inadequate Post-Inspection of Vehicles

In order to guarantee that the offered repair and maintenance services were of the right quality and standard, a post services inspection should be carried out and a report issued endorsing the type and level or quality of services offered. However, a report by the Controller and Auditor General on Maintenance of Government Vehicles conducted in 2012 indicated that, TEMESA did not conduct post-service inspection to the serviced vehicles. The TEMESA's Maintenance Reports from the MT. Depots in Dar es Salaam, cited in the CAG Report of 2012, further indicated that 30% of randomly selected motor vehicles that were sent to the approved private garages were not returned back to TEMESA for post inspection. The remaining motor vehicles were serviced at TEMESA and therefore were subjected to post service inspection during the handing over. Failure to conduct the post services inspections by TEMESA, of the maintained vehicles indicates weaknesses in the provision of quality assurance on maintenance work so conducted.

1.2.4 Relatively High Costs of Maintenance

Section 3.1 of TEMESA Establishment Order states that, "the key objective of establishing TEMESA is to provide engineering services in electrical, mechanical and electronics in the most cost-effective manner towards supporting the economy of Tanzania". However, a review of correspondence letters between TEMESA and Government entities on services offered by TEMESA indicated that, the former has been providing the respective services to the government entities at a relatively high price compared to other private entities/suppliers. This was contrary to the objective of establishing TEMESA and violated the principles of its establishment. A comparison of maintenance costs charged by TEMESA and private garages was done to ascertain whether services offered by TEMESA were cost effective or not. Results of the comparison involving few types of service offered to vehicles owned by the government entities are as indicated in Table 1.1.

Table 1.1: Variation of Quoted Costs between TEMESA and Approved Private Garages

Type of Service/Part(s) of the Vehicle	Cost as Quoted by TEMESA (TZS)	Cost as Quoted by approved Private Garage (TZS)	Difference (TZS)	Percentage Difference (%)
Panel Beating and Color Spray	3,070,000	1,800,000	1,270,000	41
Wind Screen	1,200,000	578,200	621,800	52
Body Welding	800,000	530,000	330,000	41
Brake pads (1 set)	270,000	160,000	110,000	40

Source: Auditors' Analysis of the Proforma Invoices and TEMESA Costs Estimates, 2020

Table 1.1 indicates that for all four sampled invoices, costs quoted by TEMESA were higher than those of approved private garages by 44%. The higher costs quoted by TEMESA goes against the Section 3.1 of its Establishment Order; which requires TEMESA to provide the most cost-effective services to the government in a manner that supports the economy of the country.

1.2.5 Unsatisfactory Quality of Maintenance Services offered by TEMESA

The Report on the Performance Evaluation of TEMESA prepared by PPRA in 2018, indicated inadequate quality of services offered by TEMESA. According to this report, the quality of maintenance services offered by TEMESA has not been satisfactory. The assessment conducted revealed continuous complaints from the clients on the services offered.

In addition, the same report prepared by PPRA noted existence of complaints from Procuring Entities about inadequate services rendered by the pre-qualified garages. The report also pointed out that the materials used for servicing motor vehicles were of inadequate quality thus causing breakdown shortly after maintenance. The assessment noted further that there was a use of substandard oil and spare parts, which resulted in frequent breakdowns of the government vehicles.

Furthermore, the audit revealed that the vehicles or equipment which were inadequately serviced were permanently grounded or causing additional damages and therefore increasing the costs of maintenance. Similarly, the Daily News Newspaper of 3rd August, 2018 reported on a special incident with regard to a vehicle belonging to Kyerwa District Council which paid a total of about TZS 20 million as maintenance cost to TEMESA, but the maintenance services provided by TEMESA ended up damaging the vehicle permanently and the vehicle is now grounded at TEMESA's workshop.

Such incidences of inadequate quality of maintenance services offered by TEMESA escalate operational and maintenance costs to the government and affect efficiency and effectiveness of the government entities in performing their operational activities.

1.2.6 Insufficient Capacity for Handling Maintenance Activities at TEMESA

In order to effectively provide proper services to any machineries, vehicles or electronics, the capacity of service provider in terms of equipment, and sufficient skills and number of staff is of utmost importance. Review of CAG's Financial Audit report of 2016/17, indicated that TEMESA lacked sufficient capacity to provide its mandated services properly. In particular the report indicated that, TEMESA lacked sufficient number of tools that were needed to enable proper execution of their mechanical, electrical and electronics services.

In addition to that TEMESA did not have sufficient number of professionals to be able to supervise and /or undertake the required services. The interviewed Transport Officers whose motor vehicles were serviced by TEMESA noted deficiency in the number of professional Electrical and Mechanical Engineers and Technicians to enable the Agency work at full capacity in its workshops. Furthermore, CAG's Financial Audit Report of TEMESA for the financial year 2017/18 noted a deficiency of 442 professional staff who were required by this Agency. Generally, the audit noticed that inadequate staff in terms of number and quality, coupled with a shortage of equipment, hindered effective discharge of mandated tasks by TEMESA.

1.2.7 Inadequate Professional Skills

TEMESA's primary objective is to provide high-quality services through professional and skilled workmanship. However, through interviews held with operators/drivers of the government vehicles, the team noted presence of complaints about the quality of the maintenance services carried out by TEMESA. Such audit participants claimed that in most cases the motor vehicles sent to TEMESA workshops were serviced by unprofessional staff. The interviewed officials/drivers further said that in most cases TEMESA uses temporary employees who were technicians possessing low skills to service motor vehicles.

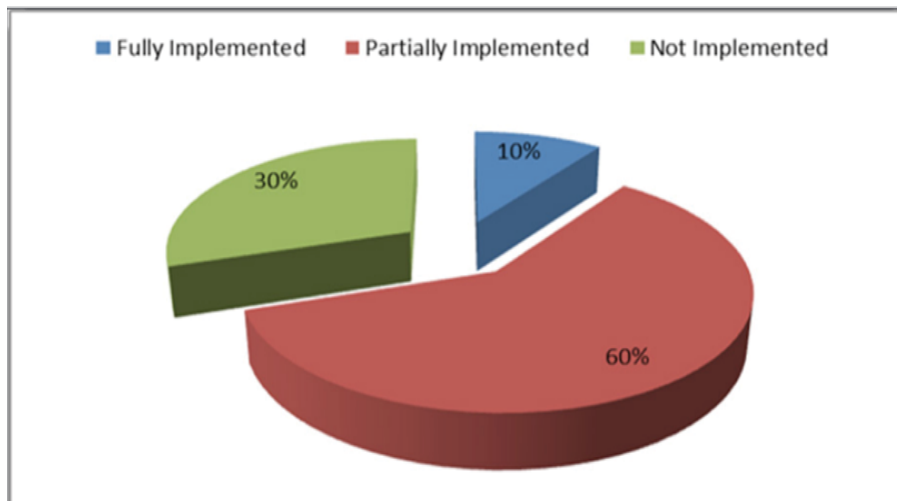
Furthermore, the interviewed staff revealed that the technicians who were working in TEMESA workshops were taken from the local street garages and were paid very low wages to do maintenance works of the government motor vehicles or equipment. These technicians were said to have insufficient professional skills to carry out the required services to most of the motor vehicles that needed specialized workmanship and use of modern equipment. Use of technicians who have no specialized skills and lack of specialized equipment sometimes resulted to permanent damages in the motor vehicles after being serviced in TEMESA workshops.

1.2.8 Inadequate Implementation of CAG Recommendations

Performance Audit conducted by CAG on the Maintenance of Government Vehicles in 2012 noted weaknesses in the maintenance of government vehicles by TEMESA. The Audit came up with recommendations that were supposed to be acted upon by TEMESA and the Ministry of Works in order to improve the provision of maintenance services to the government motor vehicles and therefore deliver quality services in line with TEMESA's Vision.

However, a Follow-up Report on the Implementation of the CAG's Performance Audit Recommendations, (2016) noted a slow progress in complying with the CAG recommendations. According to this follow-up report, only two out of 20 recommendations were fully implemented. The remaining 18 recommendations were either partially implemented or not implemented at all. Figure 1.1 shows the extent of implementation of the CAG's recommendations that were issued in the Performance Audit Report of the year 2016.

Figure 1.1: Status of Implementation of the CAG Recommendations on Maintenance of Government Vehicles



Source: CAG's Follow-up Report (2016/17)

Figure 1.1 indicates that recommendations issued by CAG through its Report on the Maintenance of Government Motor Vehicles were not sufficiently implemented. From the figure, it can be seen that only 10% of the recommendations were fully implemented, while 60% were partially implemented and 30% were not implemented at all.

Recommendations that were fully implemented related to planning and data management. On the other hand, recommendation on decision making; monitoring and evaluation and performance measurement were either partially implemented or not implemented at all. This implies that, more efforts need to be exerted by TEMESA and MoWTC in ensuring the recommendations are fully implemented in order to improve performance of TEMESA in the provision of services to the government entities.

The status of implementation of these recommendations indicates high risk that the identified problems in the provision of maintenance services to the government motor vehicles still exist, and there is a further risk for the government to continue losing money through inadequate quality of service to its vehicles. Bearing in mind that most of them were purchased at higher price, poor maintenance of government vehicles is detrimental to country's development vision.

1.3 Audit Design

1.3.1 Audit Objective

The main objective of the Audit was to assess whether Maintenance Management System for the effectively functions and facilitates the provision of qualified and cost-effective maintenance services to the government-owned Vehicles.

Specific Audit Objectives

In order to address the main audit objective, the following were the specific audit objectives:

- a) To assess the condition of Government owned vehicles;
- b) To determine if the planning for the maintenance of the government vehicles is effectively carried out;
- c) To determine if the maintenance of the government vehicles are executed and completed on time;
- d) To determine if the Maintenance services for the government vehicles are provided in a cost-effective manner;
- e) To examine the quality of maintenance services of government vehicles against the Pre-defined Specifications/Standards;
- f) To ascertain if TEMESA has sufficient capacity to conduct maintenance of the government vehicles; and
- g) To assess if the Ministry of Works, Transport and Communication and TEMESA periodically monitor and evaluate the provision of maintenance services for the government vehicles.

1.3.2 Scope of the Audit

The main audited entities were the Ministry of Works and Transportation and Communication (MoWTC) and Tanzania Electrical, Mechanical and Electronics Services Agency (TEMESA). This is because MoWTC is responsible for overseeing the performance of TEMESA regarding the maintenance services of vehicles owned or operated by the government entities. TEMESA was covered because it is responsible for undertaking maintenance services to all government vehicles.

The Audit focused on seven main areas dealing with provision of maintenance services including; the extent of existence of the government

vehicles that are in bad or inadequate condition, planning for maintenance services, execution of maintenance services focusing on completion of maintenance work as per the agreed time, costs effectiveness and compliance with specifications or standards. The Audit assessed the capacity to conduct maintenance services as well as monitoring and evaluation of the maintenance services both internally by TEMESA and externally by MoWTC.

Specifically, on the existence of government vehicles with inadequate or bad condition, the Audit Team assessed systems for collecting, storing and processing the information as well as the system for providing alerts on the condition of the existing government vehicles. With regard to the planning for the maintenance services, the Audit Team focused on assessing the extent of preparation and use of guiding instruments, performance in diagnosis and all pre-inspection activities, management of maintenance information system as well as preparation and execution of maintenance programs.

With respect to time in execution of maintenance works, the Audit Team specifically focused on assessing the timeliness in execution of maintenance works as per service agreements, preparation and dissemination of maintenance costs and bills as well as the available human-resources to enable timely execution of specific maintenance activity.

With respect to cost effectiveness, the Audit Team assessed the whole costing structure at TEMESA, focusing on preparation of the costs, communication to stakeholders, acceptability and affordability of the costs and their review. On this aspect, the Team assessed the current practices in acquisition of spare parts and allocation of maintenance services to private garages.

With regard to compliance with specifications and standards, the Team assessed the extent of execution of maintenance services as per the agreed standards and pre-defined manuals, performance of post-inspection activities and all practices in handing-over of motor vehicles after maintenance.

With regard to the capacity of executing maintenance activities, the Audit Team focused on assessing the available professionals and expertise, the available equipment for carrying out maintenance activities and strategies

for strengthening and modernizing its workshops. In the evaluation of maintenance activities, the Team focused on assessing the extent at which TEMESA monitors execution of maintenance services and the extent of TEMESA performance monitoring by the Ministry of Works, Transport and Communication.

The Audit covered two main types of maintenance services provided to the government vehicles namely; preventive, corrective and periodic maintenance.

The Audit covered a period of five financial years from 2015/16 to 2019/20. This period enabled the Audit Team to gain sufficient insights into the whole system of providing maintenance services within the government institutions as reflected in their Strategic Plans and therefore come up with workable recommendations for improvement of the services.

1.4 Sampling, Methods for Data Collection and Analysis

The Audit Team applied different sampling, data collection and analysis methods as explained below in order to come-up with sufficient evidences with regard to the provision of maintenance service to the government vehicles.

1.4.1 Sampling Methods

Non-probability sampling method was used to select the visited TEMESA Regional Offices and type or brand of vehicles that were covered during the Audit. Considering the fact that major factor for establishing the extent of maintenance is the total number of vehicles in the respective area, then TEMESA Regional Offices were ranked based on the volume of revenues accrued from maintenance work performed by or on behalf of TEMESA in that Region.

The sampling of TEMESA Regional Offices was done based on: 1) the volume of maintenance services and 2) type/brand of vehicles purchased. Details of sampling are presented below:

a) Selection of TEMESA Regional Offices

The 25 TEMESA Regions were first grouped into five groups of ordinal scales of 'Very High', High, 'Medium' 'Low' 'Very Low'. The scale was based on 20th percentile for all of the 25 TEMESA Regions. The ordinal groups were based on the volume of maintenance works reflected by revenues generated from maintenance works for vehicles as per TEMESA Annual Performance Report of 2018/19.

Then from each group of ordinal scale, the highest-ranked Region was selected for inclusion in the sample. For the purpose of having a nationwide representation, each of the selected Region was associated with one geographical zone in such a manner that each zone was represented in the sample. The selected regions were Dar es Salaam, Dodoma, Iringa, Kagera, Manyara and Lindi as indicated in Table 1.2.

In the sampling process, Kagera was chosen instead of Morogoro as the next highest-ranked Region in the medium group to avoid overlaps of the Coastal Zone which had already included Dar es Salaam. Furthermore, Dodoma Region was chosen as the highest-ranked in the Central Zone, which did not have a representative in the preceding selection.

Table 1.2: Selection of TEMESA Regional Offices Visited during the Audit

TEMESA Regional Office	Maintenance Revenue Generated (in million TZS)	Ordinal Scale Rank	Selected Region	Represented Zone
DSM (MT Depot)	4,813	Very High	Dar es Salam (MT Depot)	Coastal Zone
Dodoma	4,590	Very High	Dodoma	Central Zone
DSM Corp. Sole (EMCS)	3,769	Very High	Iringa	Southern Highlands
Arusha	2,114	Very High		
Mbeya	1,347	Very High		
Mwanza	1,313	Very High		
Iringa	1,131	High		
Kilimanjaro	1,126	High		
Pwani	1,011	High		
Tanga	936	High		

D'salaam (Vingunguti)	926	High		
Morogoro	869	Medium	Kagera	Lake Zone
Kagera	726	Medium		
Shinyanga	684	Medium		
Njombe	681	Medium		
Rukwa	590	Medium		
Manyara	566	Low	Manyara	Northern Zone
Ruvuma	564	Low		
Kigoma	436	Low		
Mtwara	432	Low		
Mara	391	Low		
Lindi	386	Very Low	Lindi	Southern Zone
Geita	364	Very Low		
Tabora	362	Very Low		
Katavi	319	Very Low		
Simiyu	305	Very Low		
Singida	272	Very Low		

Source: Analysis of TEMESA Annual Performance Report of 2018/19

Key:

Very High	Revenue generated from maintenance is above TZS Mil 1,313
High	Revenue generated from maintenance ranging between TZS Mil 926 and 1,131
Medium	Revenue generated from maintenance ranging between TZS Mil 590 and 869
Low	Revenue generated from maintenance ranging between TZS Mil 391 and 566
Very Low	Revenue generated from maintenance is below TZS Mil 386

The sampling of stakeholders and other service beneficiaries of TEMESA was done in the selected Regional Offices based on the results obtained from the reviewed maintenance files and covered all other government administrative levels from Central (MDAs), Regional Secretariats and Local Government Authorities (LGAs).

b) Selection of Types and Design of Vehicles Assessed during the Audit

In order to have a more comprehensive and accurate assessment of the maintenance services, the Audit Team selected specific types and design of vehicles to be assessed. Table 1.3 provides a selection of types and design

of motor vehicles to be assessed based on the number of vehicles purchased in the financial year 2018/19.

Table 1.3: Selection of Types of Motor Vehicles Assessed during Audit

Design of Motor Vehicle	Manufacturer	Number of Motor Vehicles	Total	Rank	Selected Vehicle Design
Station Wagon	Toyota	179	180	2	1.Hard Top 2.Station Wagon 3.Pick-Ups
	Nissan	1			
	Ford	0			
	Others	0			
Hard Top	Toyota	169	188	1	
	Nissan	0			
	Ford	0			
	Suzuki	19			
	Others	0			
Pick-ups	Toyota	103	109	3	
	Nissan	1			
	Ford	5			
	Mitsubishi	0			
	Suzuki	0			
	Others	0			
Saloon	Toyota	0	0	5	
	Nissan	0			
	Ford	0			
	Others	0			
Trucks, buses & min buses	Toyota	9	20	4	
	Tata	9			
	Suzuki	0			
	Others (Yutong, Mercedes Benz)	2			

Source: GPSA - List of Government Vehicles Purchased in Financial year 2018/19

1.4.2 Methods for Data Collection

The Audit Team gathered reliable and sufficient audit evidence to answer audit questions by using different methods namely, documents review, interviews and observation. The collected information was analysed using different methods to obtain facts and sufficient information regarding the

overall performance of MoWTC through TEMESA in ensuring that the maintenance of the government vehicles is effectively and efficiently done. The details of the data collection methods used in the audit are provided below:

a) Documents Review

Various documents from MoWTC and TEMESA were reviewed so as to obtain comprehensive, relevant and reliable information regarding the performance of TEMESA and other actors working with TEMESA in the provision of maintenance services to the government motor vehicles in the country.

The review focused mainly on the documents related to the available maintenance management system, guiding instruments and capacity in ensuring an effective, efficient and economical provision of the maintenance services to the government motor vehicles.

The documents reviewed were those containing information within the selected audit timelines; from 2017/18 to 2019/20 financial years. More details about the documents which were reviewed and the reason for reviewing them are found on **Appendix 3** of this report.

b) Interviews

To be able to respond to the audit questions and provide adequate conclusions against the audit objectives, interviews were conducted during the Audit for the purposes of obtaining more information about the plans, implementation and reporting of the maintenance services for the government vehicles. The interviews focused on gaining additional knowledge, clarifications and collaborations of information obtained from documents and field observations.

At the MoWTC, the Audit Team interviewed Staff from the Directorates of Electrical and Mechanical Services, Monitoring and Evaluation and ICT.

While at TEMESA, the Audit Team interviewed Staff from the Office of the Director of TEMESA, Manager responsible for Mechanical and Technical services, Manager for Business Support Services, Regional Office Managers, Engineers, Workshop Servicemen and Technicians.

From LGAs, the Audit Team interviewed Transport Officers, Accounting Officers and Drivers.

More details about the people who were interviewed and the reasons for interviewing them are found on **Appendix 4** of this report.

c) Field Visits

As part of data collection methods, the team conducted site visits to the TEMESA regional workshops that enabled data collection to substantiate or corroborate information obtained from interviews or document reviews. The field site visits involved visual inspection of executed maintenance works.

During the site visits, the Audit Team observed the following:

- i. The number of government vehicles and their condition;
- ii. The availability and functionality of the Management Information System soft and hard wares;
- iii. The extent to which maintenance works were conducted based on the standards, guidelines and work programs required;
- iv. The tooling capacity of TEMESA workshops; and
- v. Nature and working environment of TEMESA workshops.

1.4.3 Methods for Data Analysis

The Audit Team used different techniques to analyse qualitative and quantitative data that were collected during the execution of the Audit.

a) Analysis of Qualitative Data

- i. Content analysis techniques were used to analyse qualitative data by identifying different concepts and facts originating from interviews or document reviews and categorize them based on the emerging themes.
- ii. The extracted concepts or facts were either tabulated or presented as they are in order to explain or establish relationship between different variables originating from the audit questions;
- iii. The recurring concepts or facts were grouped depending on the nature of data they portrayed; and
- iv. Then analysed using narratives supported by evidence from the field.

b) Analysis of Quantitative Data

- i. Quantitative information with multiple occurrences were tabulated in spreadsheets to develop point data or time-series data and relevant facts extracted from the figures obtained;
- ii. The tabulated data were summed, averaged or proportionate to extract relevant information and relationships from the figures;
- iii. The sums, averages or percentages were presented using different types of graphs and charts depending on the nature of data to explain facts for point data or establish trends for time series data; and
- iv. Other quantitative information/data with a single occurrence were presented as they are in the reports by explaining their assertions.

1.5 Assessment Criteria

The criteria for the main audit questions and sub-questions based on the standards for maintenance works, manuals, laws, policies, plans, reports, guidelines and best practices acceptable in maintenance of vehicles. In general, the following criteria were used to assess the performance of TEMESA in managing the provision of maintenance services to the government-owned fleets.

1.5.1 The Extent of the availability of the Government Vehicles with bad condition

The Establishment Order (2005) requires TEMESA to establish and operationalize Management Information System (MIS) that will help to register all government vehicles countrywide.

From the Strategic Plan (2016/17-2020/21) TEMESA is required to formulate an effective Maintenance Management System, by developing Motor Vehicle Maintenance Database System. This system is supposed to be updated regularly and its status is to be reported annually.

1.5.2 Planning for Maintenance Services

According to the Establishment Order Section 4.1 (a), TEMESA is required to develop engineering standards that meet international level and ensure that they are applied. In Section 3.6 (p) of that order, TEMESA is also supposed

to develop and continuously update clear and well-defined working procedures.

From the *Mwongozo wa Matengenezo ya Magari/Pikipiki/Mitambo, Usimikaji na Matengenezo ya Umeme, Elektroniki, Viyoyozi, Majokofu na Kangavuke kwa Idara na Taasisi za Serikali*, kifungu cha 1.2.1.1 (i), TEMESA is required to develop a motor vehicle maintenance plan for all government vehicles, plant and machineries and then prepare preventive maintenance schedule for those vehicles. In section 3.1, TEMESA is supposed to conduct Special Inspection of government vehicles. This is done in order to understand the condition of vehicles, plant or machinery necessary for minimization of maintenance costs.

Section 2.2.2 of the Strategic Plan for TEMESA 2011/12-2015/16, Objective B (ix) requires TEMESA to prepare Workshop Rehabilitation Master Plan for its workshops. Also Section 2.2.2, Objective B, Way forward (iv), requires TEMESA to approve and put in use new guideline for maintenance of Government Vehicles. TEMESA is required to have and put in use Approved Plant and Equipment Guidelines, introduce and implement Replacement Policy of Equipment and Plant as indicated in the Strategic Plan for TEMESA 2016/17-2020/21 Section 2.2.2, Objective C, Way forward (iii) and (iv).

1.5.3 Time-efficiency in the Completion of Maintenance Services

TEMESA is required to deliver timely and qualified maintenance services to its customers, this is according to Section 4.2 (a) of the Establishment Order.

The *Mwongozo wa Matengenezo ya Magari/Pikipiki/Mitambo, Usimikaji na Matengenezo ya Umeme, Elektroniki, Viyoyozi, Majokofu na Kangavuke kwa Idara na Taasisi za serikali*, kifungu cha 3.1 (ii) insists that TEMESA should prepare maintenance timetable that is to be distributed to its customers.

From Section 4, Sub-section 2 (a), of the Executive Agencies Act NO. 30 of 1997, TEMESA as one of the Executive Agencies, is supposed to provide its services to its customers and the public in the most efficient and effective manner.

TEMESA is required to provide qualified maintenance services on time based on the suggestions and feedback from the customers as explained in the

Mkataba wa Huduma kwa Mteja, Kifungu cha 4 (i). TEMESA is also required to prepare maintenance costs and bills within three days after offering maintenance service as justified by the WARAKA MAALUM KUHUSU TARATIBU ZA KUZINGATIA WAKATI WA KUTEKELEZA MATENGENEZO YA MAGARI YA UMMA KWENYE KARAKANA ZA TEMESA NA ZILE TEULE AU SAIDIZI, Kifungu cha (4).

1.5.4 Costing of Maintenance Services

According to Kifungu Cha 6.2 cha Mkataba wa Huduma kwa Mteja, TEMESA is expected to provide cost effective maintenance services as stipulated by the concerned Acts.

TEMESA is obliged to promote the potential for continuous improvement of the services to the satisfaction of customers and the public as stated in the Establishment Order, Objectives of TEMESA page 2. It is also supposed to provide services that are cost effective and affordable as explained in Section 4.3 (b) of the Establishment Order.

According to Section 11.6, of the Establishment Order, The Chief Executive is responsible for obtaining value for money in the procurement of goods and delivery of services.

From Section 4 of the Mkataba wa Huduma kwa Mteja, TEMESA is supposed to consider value for money of the maintenance services it offers to its customers.

1.5.5 Quality of Maintenance Services

Based on section 3.6.4 (xxiii) of the Strategic Plan for TEMESA 2016/17-2020/21, TEMESA targets to improve efficiency of workshop operations and quality of maintenance services. TEMESA is also obliged to provide reliable and quality engineering services and its infrastructure. It is also required to ensure safety and fair treatment to all customers as explained in Section 2.3, Table 1 of its Strategic Plan. TEMESA is supposed to timely, accurately and comprehensively access information through feedback from customers/clients as stipulated in the Establishment Order Section 4.1 (e).

According to Kifungu Cha 6.2 cha Mkataba wa Huduma kwa Mteja, TEMESA is obliged to conduct maintenance and repair using qualified and genuine

spare parts. As one of the Key Performance Indicators, TEMESA is required to attain Compliance Certificate to International Standards Organization (ISO 9000). This is indicated by Strategic Plan for TEMESA 2016/17-2020/21 Section 3.6.4, KPIs (xv).

TEMESA is also supposed to conduct a performance review and an internal assessment of the existing Strategic Plan. It is also required to conduct stakeholders' analysis as shown by the Strategic Plan for TEMESA 2016/17-2020/21 Section 1.3. Section 2.5, on Critical Issues (ix), TEMESA is supposed to control and prevent purchase of sub-standard and non-genuine materials and spare parts during maintenance and repair works.

1.5.6 Capacity to Conduct Maintenance Services

The capacity to conduct maintenance services is basically by level of skills of maintenance personnel and number and technical status of maintenance tools. TEMESA targets to acquire modern tools and equipment as indicated in the Strategic Plan for TEMESA 2016/17-2020/21, Sect 3.6.4. From section 3.6 (a) of the Establishment Order, TEMESA is required to strengthen and modernise its existing mechanical workshops. It is also required to organize and supervise staff development scheme as elaborated in Section 4.2 (i) of the order.

Like other Executive Agencies, TEMESA is obliged to improve the quality of services it offers as indicated by the Executive Agencies Act No. 30 of 1997, Section 2 (c). Section 4, Subsection 2 (a)) of the act mandates TEMESA to provide its services to its customers and the public in the most efficient and effective manner.

TEMESA is required to improve performance of Engineering Maintenance and Repair Services through use of acquisition, rehabilitation and retooling maintenance works of high quality as per Strategic Plan for TEMESA 2016/17-2020/21 Section 2.2.2, Objective B.

The Strategic Plan for TEMESA 2016/17-2020/21 section 3.6.4, Targets (vii, viii & xiv), has set targets for TEMESA to maintain existing facilities and working tools yearly. It also targets at acquiring modern tools and workshop equipment. Moreover, TEMESA is required to rehabilitate the existing workshops.

TEMESA is supposed to conduct Capacity Building Training and prepare Building Requirement Reports/Training Reports as shown by the Strategic Plan for TEMESA 2016/17-2020/21 Section 4.7.1, Table 4 (S/N 65).

1.5.7 Oversight of the Maintenance Services

Section 5 of the Establishment Order gives power to the Minister of Works, Transport and Communication to ultimately determine the policy frameworks and operational limits within which TEMESA operates, and financial resources that are available to the Agency. He or she should ensure that the public derives maximum benefit from the Agency's operations.

Section 3.6.6 of the Strategic Plan for TEMESA 2016/17-2020/21 requires TEMESA to improve its monitoring and evaluation systems. Therefore, there should be key performance indicators (KPI's) which will be monitored and evaluated. The Permanent Secretary of a Ministry under which an Executive Agency is established shall be responsible for strategic management of the Agency².

1.6 Data Validation Process During the Audit

The Ministry of Works, Transport and Communication (MoWTC) and Tanzania Electrical, mechanical and Electronic Services Agency (TEMESA) were given an opportunity to go through the draft report and comment on the figures and information presented. The MoWTC and TEMESA confirmed on the accuracy of the information and figures presented in the report.

The information was also cross-checked and discussed with experts in the field of Maintenance of vehicles to obtain their opinions and confirm the validity of the information and facts presented.

1.7 Standards Used for the Audit

The Audit was done in accordance with the International Standards of Supreme Audit Institutions (ISSAIs) issued by the International Organization of Supreme Audit Institutions (INTOSAI). These standards require that the Audit is planned and performed in order to obtain sufficient and appropriate audit evidence to provide a reasonable basis for the audit findings and conclusions.

² Executive Agencies Act No. 30 of 1997, Section 5, Subsection 1

1.8 Structure of the Audit Report

The remaining parts of the audit report covers the following:

- a) Chapter two provides a detailed system in managing the provision of maintenance works to the government-owned vehicles;
- b) Chapter three presents the audit findings on the performance of MoWTC and TEMESA in managing the provision of maintenance works to the government-owned vehicles;
- c) Chapter Four provides audit conclusions; and
- d) Chapter Five outlines recommendations which should be implemented in order to improve the quality of maintenance works provided by TEMESA to the government-owned vehicles.

CHAPTER TWO

SYSTEM FOR PROVISION OF MAINTENANCE SERVICES TO THE GOVERNMENT VEHICLES

2.1 Introduction

This chapter provides the description of the system for managing provision of maintenance services to the government-owned vehicles in Tanzania. It highlights the Policies and legal framework governing the management of vehicles maintenance services as well as the organization structure of the identified audited entities. The chapter describes the key actors, their roles and responsibilities as well as their relationship in the execution of maintenance services to the government vehicles.

2.2 Policies and Legislations

In Tanzania, maintenance of government vehicles is guided by various policies and legislations as provided below.

2.2.1 Construction Industry Policy (2003)

The Construction Industry Policy provides a guide for the organization of resources in physical, economic and social infrastructure including transportation systems and infrastructure necessary for socio-economic development. The policy aims at improving the capacity and effectiveness of the construction industry to meet the national economic demand while ensuring increased value for money to industry clients.

2.2.2 Legislations on Maintenance of the Government Vehicles

There are three legislations governing the provision of Maintenance Services of the Government Vehicles in the country. These are explained in Table 2.1 below.

Table 2.1: Legislations Governing Maintenance Works of Vehicles

Legislation	Objective/Provision(s)
The Executive Agencies Act 1997	<p>TAMESA was created in the spirit of the Executive Agencies Act No 30 of 1997, which was to improve services and increase both effectiveness and efficiency of operations.</p> <p>TEMESA was established by the Government of the United Republic of Tanzania (URT) by the Government Notice Number 254 published on 26th August, 2005</p> <p>It was established to take over the functions which were previously undertaken by the then Electrical and Mechanical (E&M) Division of the Ministry of Works.</p> <p>The Act gives power to the Permanent Secretary of a Ministry under which an Executive Agency is established to be responsible for the strategic management of the Agency</p> <p>The Act also gives mandate to the Minister of Works, Transport and Communication to establish Ministerial Advisory Board whose work is to give advice to the Ministry and the Permanent Secretary on issues related to the performance of the Agency</p>
The Public Procurement Act of 2011	<p>The Public Procurement Act, No. 7 of 2011 requires TEMESA and other government entities to ensure that the procurement of services, including maintenance services, is in accordance with the procedures prescribed under this Act or Regulations.</p>
Public Procurement Regulations of 2013	<p>The Public Procurement Regulations 2013 provides mandate to TEMESA and the Regulations to all government entities which should be adhered when executing maintenance of their vehicles. The Regulations specifically outlines roles of service provider which is TEMESA and the roles of the procuring entities for maintenance services which are the government entities.</p>

Source: The Executive Agency Act, 1997, The Public Procurement Act, 2011, The Public Procurement Regulations, 2013

2.3 Roles and Responsibilities of Key Stakeholders

In order to assess the system for provision of maintenance services to the government vehicles in Tanzania, the Audit Team identified two

main actors namely the the Ministry of Works, Transport and Communication (MoWTC) and Tanzania Electrical, Mechanical and Electronics Services Agency (TEMESA).

2.3.1 The Ministry of Works, Transport and Communication

The Ministry of Works, Transport and Communication (Works) was established through the Presidential Instrument Vide Government Notice No. 144 of 22nd April 2016. As per the Instrument, the Ministry is mandated to carry out different roles under its sectors. With regard to maintenance services of the government vehicles the Ministry is mandated to:

- a) Formulate and Review Policies, Legislations, Regulations and Guidelines related to Electrical and mechanical works and monitor their implementation;
- b) Establish and Review Codes (Standards and Specifications relating to Electrical and Mechanical works);
- c) Coordinate/ cooperate with other stakeholders/research institutions to review and develop research areas related to Electrical and Mechanical works;
- d) Establish and maintain database related to electrical and mechanical works; and
- e) Coordinate the planning and implementation of disaster mitigation measures related to electrical and mechanical works (MoWTC Strategic Plan 2016/17-2020/21).

The provision of Maintenance works by TEMESA under MoWTC is operationally guided by its five years Strategic Plan 2016/17-2020/21 which is composed of eight main objectives. Based on these Objectives, the Ministry targets to;

- a) Prepare guidelines for Government real motor vehicle management;
- b) Provide Technical Support to the Ministry and Institutions under the Ministry in Preparation of Legislative Instruments;
- c) Review Guidelines for standards and specifications for Government buildings, motor vehicles, ferries, electronics and electrical equipment;
- d) Procure TEMESA Workshop tools;
- e) Facilitate rehabilitation of TEMESA Workshops and offices; and

- f) Monitor Performance of Executive Agencies/Institutions under the Ministry.

2.3.2 Tanzania Electrical, Mechanical and Electronics Services Agency (TEMESA)

The Tanzania Electrical, Mechanical and Electronics Services Agency (TEMESA) was established by the Government Notice Number 254 published on 26th August, 2005 to take over the functions which were previously undertaken by the then Electrical and Mechanical (E&M) Division of the Ministry of Works. The Agency was created in the spirit of Act of No 30 of 1997, which was to improve services and increase both the effectiveness and efficiency of operations.

The overall objective of the establishment of TEMESA is to provide efficient and effective electrical, mechanical and electronics' services as well as reliable and safe ferry services to the general public. The Agency also aims to provide quality and reliable services related to the hiring of equipment to government institutions and the general public.

In particular, the Agency was created to achieve the following objectives:

- a) To improve the delivery of public services;
- b) To create an enabling environment, conducive to efficient and effective management;
- c) To improve the quality of services which were previously provided by the Electrical and Mechanical (E&M) Division in the Ministry; and
- d) To promote the potential for the continuous improvement of the services to the satisfaction of the customers and the public.

In order to exercise its powers and perform its functions, TEMESA has put in place four main functional divisions, namely, Production and Maintenance Works Division, Technical Advice and Consultancy Services Division, Business Support Services Division, and Equipment Hire and Ferry Services Division.

i. TEMESA Strategic Plan 2016/17 - 2020/21

The implementation of this Strategic Plan is carried out under the seven (7) strategic objectives. These are reducing HIV/AIDS infection and improve supportive services, enhance effective implementation of the National Anti-Corruption strategies, enhance financial sustainability, improve engineering services and its related infrastructure, improve business processes and support services, enhancing good governance and accountability, and improve management of human resources. Each of these strategic objectives has strategies, targets and corresponding Key Performance Indicators (KPIs). These facilitate effective implementation and evaluation of the stated strategic objectives.

ii. Organization Structure of TEMESA

TEMESA is headed by the Chief Executive Officer who reports to the Permanent Secretary of MoWTC. The Organization has three Directorates reporting to the Chief Executive Officer. Those are the Directorate of Maintenance and Technical Services, Ferry Operations and Construction and Business Support Services. The details of TEMESA's Organization Structure is presented in **Appendix 6**.

The audit focused mainly on the assessment of the Directorate of Maintenance and Technical Services. This is the only directorate responsible for Provision of Maintenance Works to the Government-owned Vehicles. This Directorate is also headed by a Director and has three sections headed by different managers. The section for Maintenance Services is headed by the manager for Mechanical and Equipment Hire Services. The Organization Structure also includes the Regional Office Managers who report directly to the Chief Executive Officer³. Table 2.2, gives a detailed information of the organizational structure responsible for the provision of maintenance services to the government-owned vehicle.

³ TEMESA Establishment Order, 2005

Table 2.2: Organizational Structure and Roles of TEMESA with regards to Maintenance Services

Organ	Headed by	Roles
Ministry	Minister/Permanent secretary	<ul style="list-style-type: none"> Oversees the interest of the Ministry and the government Policy and Strategic Management of the Agency
Ministerial Advisory Board	Chairman	<ul style="list-style-type: none"> Advice the Minister on the Performance of the Agency
TEMESA	Chief Executive Secretary	<ul style="list-style-type: none"> Manages and Implement TEMESA Programs that support the objectives of Government and Public service delivery in the respective Engineering Field as required by the Government
Maintenance and Technical Services Directorate	Director	<ul style="list-style-type: none"> Formulates effective Maintenance Management Systems Draw up an effective program for strengthening and modernization of existing workshops in all Regions Formulates, establishes and supervises the implementation of quality maintenance standards
Mechanical and Equipment Hire Section	Manager	<ul style="list-style-type: none"> Undertakes all functions as directed by the Director
Regional Offices	Regional Manager	<ul style="list-style-type: none"> Manages all properties and customers in the Region Prepares and submits plans, reports and other information which may be required by the head office Provide maintenance Services in the particular Region

Source: TEMESA Establishment Order, 2005

2.4 Stakeholders of TEMESA

The provision of maintenance and repair works in Tanzania involves the roles of many stakeholders. However, the main stakeholders who are directly involved in Maintenance Services are MoWTC and TEMESA. The major role of these government institutions is to ensure effective

and efficient execution of Maintenance and Repair Works to the government owned Vehicles. The MOWTC performs the day to day oversight of the services provided by TEMESA, by formulating sound and effective Policies and Strategies for Management of the Agency.

TEMESA, operates its maintenance and repair works in collaboration with Public Procurement Regulatory Authority (PPRA), Dealers, Spare Parts Suppliers, Pre-qualified Garages and Beneficiaries/Customers.

The main beneficiaries of the Agency's Services are clients (customers) who receive the engineering services and related services. These are mainly divided into three groups. The first group include public sector entities, namely, Ministries, Departments and Agencies. These are required by the law to use the Agency services for all their mechanical, electrical and electronics works. The second group include private entities which receive the Agency's services directly or indirectly or used by the Agency to provide services to other public sector entities. The third group include general public who consume/use services such as ferry services provided by the Agency⁴.

The roles and responsibilities of TEMESA stakeholders are presented in Table 2.3. Moreover, Figure 2.3 shows the relationship among the stakeholders in the maintenance and repair services to the government vehicles.

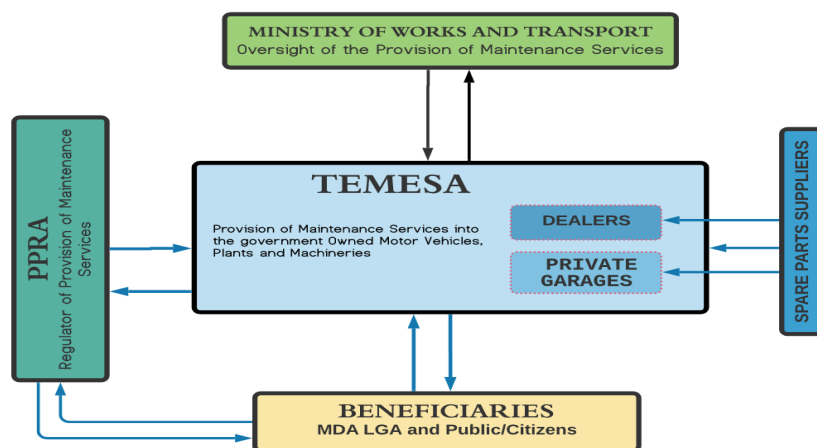
⁴ TEMESA Strategic Plan 2015/2016-2020/2021

Table 2.3: Roles and Responsibilities of TEMESA's Stakeholders

Stakeholder	Roles and Responsibilities
MOWTC	<ul style="list-style-type: none"> Oversees the interest of the Ministry and the government Policy and Strategic Management of the Agency
TEMESA	<ul style="list-style-type: none"> Provision of Maintenance Services to the Government Owned Vehicles
PPRA	<ul style="list-style-type: none"> Regulation of Provision of Maintenance services based on the Public Procurement Act of 2011
Dealers	<ul style="list-style-type: none"> Provision of Maintenance Services to the Government Owned Vehicles during Warrant Period
Spare Parts Suppliers	<ul style="list-style-type: none"> Supply spare parts to TEMESA for Maintenance Services
Pre-Qualified Garages	<ul style="list-style-type: none"> Provision of Maintenance Services to the Government Owned Vehicles when TEMESA have inadequate Capability
Beneficiaries/ Customers	<ul style="list-style-type: none"> Payment of Maintenance Services Bills Give Service Satisfaction Feedback

Source: Auditors' Analysis of Mwongozo wa Matengenezo ya Magari, 2018

Figure 2.1: Relationship between Different stakeholders on Provision of Maintenance Services



Source: Auditors' Analysis of Mwongozo wa Matengenezo ya Magari, 2018

2.5 Overview of Maintenance Services

Vehicle or Plant Maintenance service is done with the main purpose of keeping or restoring the equipment to maintain good working condition according to manufacturer's specifications. Maintenance is characterized with the following activities: cleaning, inspection and diagnosis, adjusting, serving, replacing, overhauling and modification. When maintenance is properly done, it minimizes the equipment total operating and maintenance cost, maximizes its availability, reliability and enhance its operation and safety. Moreover, a well-maintained equipment reduces unnecessary wastage of time.

2.5.1 Types of Maintenance Services for Vehicles

Maintenance services can be classified into many types depending on the context of the equipment or services being offered as classified in Figure 2.1. However, in the context of maintenance services provided by TEMESA there are mainly two types of vehicle maintenance services: planned and unplanned maintenance. These are simply known as:

- a) Preventive Maintenance; and
- b) Corrective/Breakdown Maintenance Service.

a) Preventive Maintenance

Preventive Maintenance aims at preventing an operational breakdown and it is time or distance based scheduled maintenance that involves identifying and eliminating mechanical defects before they create expensive repair or overhaul bills. It results into minimized equipment operating and maintenance cost. The Preventive Maintenance is categorized into Predictive, Conditional, Periodic and Reliability Centered Maintenance (RCM). These includes services like inspection, cleaning, servicing, checking, adjusting and measurement.

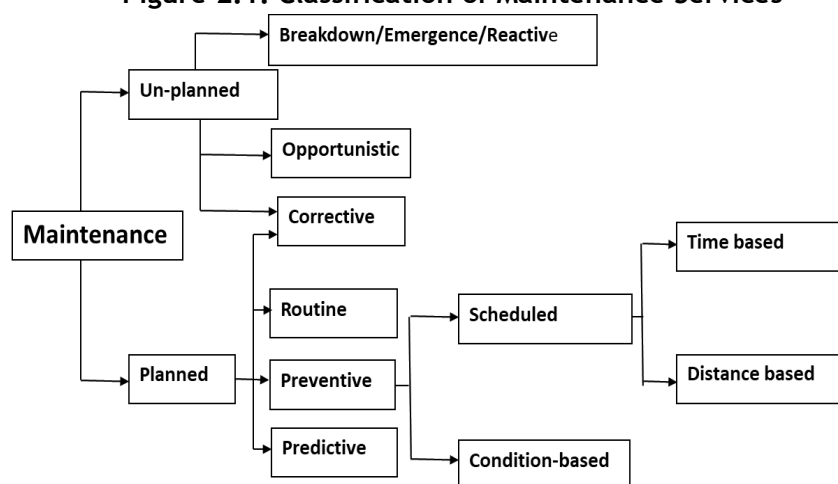
The advantages of Planned Preventive Maintenance, over Break Down Maintenance is that; increases the equipment availability for operational purposes (reduces down time), reduces repair costs through the timely repair of minor defects, ensures that the vehicle is kept road worthy and safe, extends the vehicle life and increases the

resale or residual value of the vehicle. More details on categorization of types of maintenance works is shown in Figure 2.1.

b) Corrective/Breakdown Maintenance Service

Corrective/breakdown maintenance involves carrying out maintenance measures after an operational breakdown or an accident has accrued. This type of maintenance greatly reduces operational safety and increases operational and maintenance cost, as it based on the assumption that equipment will continue to operate fully until a malfunction arises. This type of maintenance does not provide the possibility to plan or budget properly for the required maintenance measures.

Figure 2.1: Classification of Maintenance Services



Source: Auditors' Literature Review, 2020

2.5.2 Parameters for a Good Quality Maintenance Works by TEMESA

System for Quality Control and Assurance at TEMESA

As one of the Key Performance Indicators, TEMESA is required to attain Compliance Certificate to the International Standards Organization (ISO 9000)⁵. The Division of production and Maintenance Works is

⁵ Strategic Plan for TEMESA 2016/17-2020/21 Section 3.6.4, KPIs (xv)

responsible to formulate and supervise the implementation of the quality of Maintenance Works.

Quality Control involves the process of monitoring and evaluation of the quality of the maintenance works. The control of the maintenance function is achieved through appropriate documentation contained in the TEMESA Maintenance forms. The key documents, as shown in Table 2.4 below.

Table 2.4: Documents Used for Quality Control by TEMESA

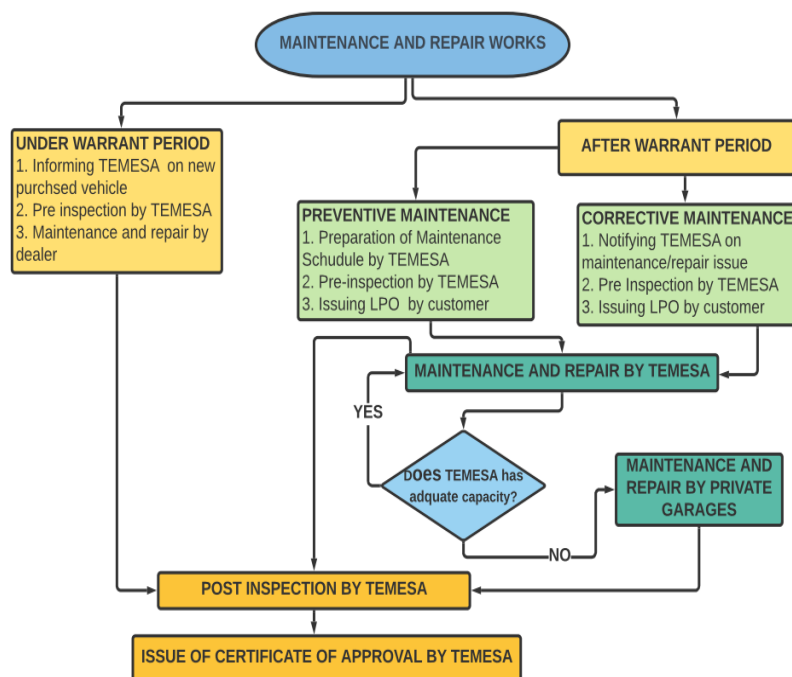
Type of Document	Implication(s)
Works Order (TMSM 1)	Provides authority to send equipment to TEMESA for inspection
Vehicle/Motorcycle/Plant Inspection Checklist (TMSM 2)	Provides guideline for inspection
Vehicle/Motorcycle/Plant Inspection Report (TMSM 3)	Provides simple report of Inspection conducted
Cost Estimates (TMSM 4)	Provides Preliminary Cost Estimates after Inspection
Customer Cost Estimates and maintenance Approval (TMSM 5)	Gives Customers an authority to accept cost estimates by preparing LPO and provides the authority to TEMESA to carry out the work
Permit to Private Garage/Dealer (TMSM 6)	Gives authority to customers to be serviced by private garages or dealers
Job Card (TMSM 7)	Acts as a record of work done and materials used during maintenance
Certificate of Approval (TMSM 8)	Provides room for approval of maintenance work
Delivery Note (TMSM 9)	Provides room to deliver the maintained equipment to the user
Gate Pass (TMSM 10)	Acts as pass from workshop

Source: *Mwongozo wa Matengenezo ya Magari/Pikipiki/Mitambo, Usimikaji na Matengenezo ya Umeme, Elektronik, Viyoyozi, Majokofu na Kangavuke kwa Idara na Taasisi za Serikali, 2016*

In order to ensure good quality of maintenance and repair works, TEMESA has Working procedures that direct all stakeholders. The

summary of working procedures is indicated in Figure 2.4, whose detailed workflow is explained in the TEMESA Maintenance Guideline⁶.

Figure 2.4: TEMESA's Maintenance and Repair Work Flow



Source: Auditors' Analysis of Mwongozo wa Matengenezo ya Magari, 2018

2.6 Resources for Provision of Maintenance Works by TEMESA

The provision of maintenance services depends upon availability of appropriate financial and human resources and maintenance facilities. These resources are mobilised by MoWTC and TEMESA, and are channeled to implement effective and efficient maintenance works to the government-owned vehicles. The resources are mobilized at different magnitudes and from various sources as detailed below;

⁶ Mwongozo wa Matengenezo ya Magari/Pikipiki/Mitambo, Usimikaji na Matengenezo ya Umeme, Elektroniki, Viyoyozi, Majokofu na Kangavuke kwa Idara na Taasisi za Serikali, 2016

2.6.1 Human Resources at TEMESA

The operations of TEMESA are undertaken mainly under two levels of operations, namely Headquarters and Regional Offices. TEMESA has established its offices and operations to some remotely located district councils such as Kahama, Masasi and Same District Councils. These operations are served by two types of staff, namely; permanent staff and temporary staff.

The Agency has a total number of 1031 staff of which 548 are permanent staff and 483 are temporary staff. The total number of permanent staff is 548 equivalent to 53% of all staff at TEMESA while that of temporary staffs is 47%⁷. This implies that the agency is served by the approximately same number of both permanent workers and temporary workers.

The permanent staffs include different professionals such as Engineers, Technicians, Procurement Officers, Accountants, Record Management Officers and ICT Officers among others. Cadres such as Accountants, Record Management Officers, Economists, ICT Officers and Administrative Officers are mostly based at the Head and Regional Offices. The distribution of permanent staffs by professions at TEMESA is shown in Table 2.4 below.

Table 2.4: Distribution of Staffs by Professions at TEMESA

Profession	Number of Staff	% out of Total
Technicians	237	43
Administrative & Other Support Staff	103	19
Accountants	58	11
Engineers	96	18
Supplies Officers	25	5
Record Management Officers	21	4
Economists	4	1
ICT Officers	4	1
TOTAL	548	100

Source: TEMESA's Staff List: August, 2020

⁷ TEMESA's Staffs List August, 2020

Table 2.4 shows the distribution of staff at TEMESA, varying with different professions responsible for road works. The most dominant profession is technicians which makes 43% of the total number of permanent staffs at TEMESA. This is followed by Administrative and other support staffs who comprise of 19% of all staffs. The Engineering staffs form 18% of all staffs at TEMESA distributed at Headquarters and Regional Offices.

2.6.2 Financial Resources for TEMESA Services

Financial resources for TEMESA Services are mainly mobilised from TEMESA Own Sources and the Government Subvention. TEMESA obtains its own source of income from; Mechanical Services, Electrical Services, Electronics Services Refrigeration and Air Conditioning Services, Technical Advices, Equipment Hire Services and Consultancy Services and Ferry Services among others. Mechanical and Ferry Services contribute more than 45% of all TEMESA own financial resources. TEMESA receives fund from the government as subvention in terms of Personal Emoluments and Development Funds⁸.

From financial year 2015/2016 to 2019/2020, TEMESA estimated to provide an average of 67% of all financial resources while 33% of all estimated revenues were obtained from the government as the subvention. The detailed distribution of estimated revenue generation between TEMESA and the Government is indicated in Table 2.5 below.

Table 2.5: Funding for TEMESA Activities

Source of Income	2015/16	2016/17	2017/18	2018/19	2019/20
TEMESA Own Funding (Bil TZS)	31.3	38.1	48.4	61.8	66.5
Government Subvention (Bil TZS)	16.3	27.6	22.7	31.3	22.6

Source: TEMESA Performance Reports 2015/2016-2019/2020

⁸ TEMESA Performance Reports, 2015/2016 - 2019/2020

Annual Expenditure of TEMESA

TEMESA spends its fund on mainly two activities, namely recurrent and development activities. The recurrent activities include day to day operating expenditures of the agency such as salaries, maintenance costs, ferry operations, construction activities and others. The development activities include all new projects under the agency such as the expansion of ferries, construction, rehabilitation and retooling of workshops, installation of management information systems, procurement of ferries and others.

From Financial Year 2015/16 to 2019/20, TEMESA expected to spend an annual average of TZS 73.3 Billion for recurrent and development activities. Out of this, TZS 52.1 Billion was for recurrent expenditure while TZS 21.2 Billion for Development Expenditure.

The actual average annual expenditures from 2015/16 to 2019/20, were TZS. 46,988,859,895 for all activities of the agency which is equivalent to 64% of the planned expenditure. The recurrent activities utilized TZS. 41,172,552,441 while only TZS. 5,816,307,454 was spent of Development Expenditure, making 12% of the total annual expenditure. Detailed information about the expected and actual annual expenditure of the agency is as indicated in Table 2.6.

Table 2.6: Planned and Actual Annual Expenditure of Reviewed Funds

Type of expenditure		2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Recurrent Activities	Planned (Bil TZS)	36.5	40.7	50.3	66.7	66.2
	Actual (Bil TZS)	30.7	36.8	42.4	43.9	52.1
Development Activities	Planned (Bil TZS)	11.1	25.1	20.8	26.4	22.9
	Actual (Bil TZS)	3.8	5.8	7.8	1.6	10.0

Source: TEMESA Performance Reports 2015/2016-2019/2020

CHAPTER THREE

AUDIT FINDINGS

3.1 Introduction

This chapter presents findings of performance audit on the provision of maintenance services to the government vehicles as performed by the Tanzania Electrical, Mechanical and Electronic Services Agency (TEMESA) under the Ministry of Works, Transport and Communication (MoWTC). In particular, the findings focused on the overall provision of maintenance services by assessing the available vehicles maintenance management system, planning for maintenance services, execution of maintenance services, cost effectiveness of the provided services, capacity of providing respective services and oversight roles by both the Ministry and TEMESA.

3.2 Maintenance Management Information System

This Section presents assessment results of the Maintenance Management Information System (MMIS) at TEMESA and other activities that supplement the system. Section 2.3.1 (b) of TEMESA Establishment Order requires it to formulate an effective Maintenance Management System. The system was expected to effectively collect, store and process information about the condition of all government vehicles. The results of the assessment are discussed below;

3.2.1 Ineffective System for Collecting and Storing Information about the Number and Condition of all Government Vehicles

In order to provide proper inputs to the available system for managing government vehicle maintenance, the system was expected to have in place a proper means of registration and storage of information about all government vehicles that will assist in generating inputs and other important data to assist in planning for maintenance services. However, the Audit Team noted that both TEMESA and the Ministry did not have effective system for collecting and storing information about the condition of government vehicles.

The Audit Team observed that the Ministry which is the chief registrar of all government vehicles had a register of all newly purchased government vehicles however, the register was not used as an input in the system for government, vehicles. In particular, the register prepared in excel format was not communicated to TEMESA in order to be used as an input to the process of maintaining the newly purchased or available vehicles.

Furthermore, the Audit Team noticed that the Vehicle Register did not contain the whole stock of the newly purchased or used government motor vehicles. This was in one way a result of having different authorities for registering government vehicles as per their jurisdiction including Ministry of Finance and Planning and National Defense Forces. The vehicles register which was in spreadsheet format did not include the government motor vehicles from public authorities and those vehicles acquired through donor funded projects. Additionally, the register under the Ministry of Works, Transport and Communication was not presented to TEMESA to be used as an input in developing maintenance programs and schedules for maintenance works.

Moreover, the Audit Team noticed that TEMESA was not sufficiently collecting and storing information about the number and condition of government vehicles in their respective areas of maintenance works. The Audit Team further noted that, TEMESA was using a manual filling system for registering vehicles which were brought at their centres for maintenance. The manual filling system was not providing comprehensive and reliable information about the number of vehicles in their respective centers at any time. The data base r of the vehicles available in the regions was not reliable as it did not contain information about the number of newly purchased vehicles or information about vehicles which were not maintained at TEMESA. Furthermore, the filling system did not generate information about the condition of the maintained vehicles for future use as an input for the planning of maintenance services.

However, in an effort to improve the current vehicle management information system, TEMESA in cooperation with the Ministry of Works, Transport and Communication have developed a Motor Vehicle

Maintenance Management Information System (MVMMS) which is at the moment under testing/piloting stage. The Audit Team also reviewed the developed system and compared it with the current manual set up to identify the expected improvements. The results of the comparison are presented in Table 3.1.

Table 3.1: Functionality of the current Maintenance Information Management System at TEMESA

Functional Requirement		Manual Maintenance Information System	Computerised Maintenance information System
Collection of vehicles information	Ownership	✓	✓
	Type/model	✓	✓
	Location	✓	✓
Storage of vehicles information	Maintenance history	x	✓
Processing of vehicles information	Customer base	x	x
	Up to date Status/ Condition of the vehicles	x	x
	Alert	x	x
	Schedule	x	x
	Feedback system	x	x
	Number of vehicles maintained	x	x

Source: TEMESA's Maintenance Information System 2015/ 16-2019/20

As indicated in Table 3.1, the Maintenance Information Management System has to a large extent not improved maintenance information management at TEMESA. Improvements have been noted in only one (maintenance history) out of ten data categories. This situation shows that the Maintenance Information Management System in this Agency still needs some improvements to enable it function effectively.

Through the review of maintenance reports, the Audit Team revealed absence of enough information about the number and condition of government vehicles was caused by the absence of reliable and comprehensive vehicles condition surveys. The condition surveys were expected to provide sufficient information about vehicles with regards to their ownership, location and conditions.

Additionally, there was no sufficient information about the condition of vehicles which was supposed to provide a guidance on planning and needs assessment for Regional Offices depending on the type and condition of the vehicles available in various regions. Neither TEMESA nor MoWTC had information about the status and condition of vehicles countrywide or regional wise.

Consequently, lack of adequate information about the condition of government vehicles has led to insufficient allocation of financial and human resources. Additionally, this has consequently led to improper conduct of monitoring and evaluation activities by the Ministry.

3.2.2 Limited involvement of Customers in Maintenance Management System

TEMESA's Establishment Order states transformational objectives of the then Electrical and Mechanical Division into TEMESA one of them being promotion of the potential for continuous improvement of the services to the satisfaction of customers and the public. Continuous improvement and satisfaction to customers is mainly achieved by having a substantial interaction with customers and collecting adequate information from the customers regarding the level and quality of services provided by TEMESA.

The Audit Team noted that the current manual system for maintenance of government vehicles has a limited amount of information from customers that would enable provision of effective maintenance services. The Audit Team assessed the information gaps existing between TEMESA and its customer in provision of maintenance services and presented the results in Table 3.2.

Table 3.2: Assessment of the Level of Available and Missing Information from the Customers

Category	Information Availed by Current System	Information Gaps
Fleet/Vehicle Information	<ul style="list-style-type: none"> •Ownership •Kilometers Run •Vehicle Plate Number •Location/Address 	<ul style="list-style-type: none"> •Vehicle Plant Type •Chassis Number •Year of Manufacture •Engine Number •Fleet condition profile
Vehicles Operating History	<ul style="list-style-type: none"> •Maintenance costs •Maintenance History 	<ul style="list-style-type: none"> •Vehicle Log sheets •Vehicle Analysis •Vehicle Movement History •Vehicle Utilization level

Source: Auditors' Documentary Review

The Table indicates that there has been a limited information from customers that will enable TEMESA to plan and execute maintenance services at the maximum possible level of quality. The audit revealed that information regarding vehicles operating history such as vehicle analysis, movement history and utilization levels were mostly not known to TEMESA prior to conducting maintenance services. This information was expected to guide TEMESA to provide not only effective inspection of government vehicles but also generate maintenance programs and schedules at the operational levels that would enable high quality pre-inspection and maintenance services.

The assessment by the audit team revealed that the limited availability of the information from customers was a result of lacking a comprehensive and generic transport management system that was expected to guide the generation and sharing of information between TEMESA and its customers. The availability of proper transport management system which would link TEMESA and its customers was expected to provide useful inputs to assist TEMESA in developing realistic annual plans, achievable schedules and implementable work programs and eventually a reliable source of revenue for TEMESA.

Through discussions with TEMESA Officials the Audit Team realized that TEMESA is currently piloting a new Computerized Motor Vehicle Maintenance Management System at Dodoma, Iringa and MT. Depot workshops. This system is expected to provide sufficient information

and enhance efficiency in the provision of maintenance services. However, the review by the Audit Team revealed that the system is still very raw and many features were not functional during the period this Audit was conducted.

The audit further revealed that the system enabled very limited interactions between TEMESA and its customers. As a result, the system cannot process the information collected from customers into useful outputs to generate usable information to assist in maintenance services. In addition, the Audit Team noticed that the current system cannot generate vehicle operating history and provide information such as vehicle utilization level, vehicle analysis, movement history, accidents history etc. that will generate useful information to TEMESA.

3.3 Plans for Provision of Maintenance Services

Section 2.2.2, Objective B, Way forward (iv) of the Strategic Plan for TEMESA 2016/17-2020/21 requires TEMESA under MoWTC to approve and put in use guidelines for maintenance of the Government Vehicles. These guidelines should be utilized for planning at the management level and execution of maintenance works. However, the Audit Team noted that the planning activities for the maintenance services at both Ministry of Works and TEMESA were not effective enough to produce the intended results. The Audit Team managed to assess both levels of planning and the results of the assessment are described below;

3.3.1 Management/Administrative Planning

Section 11.2 of the Establishment Order of TEMESA requires the Chief Executive to prepare Strategic and Business Plans. These plans are supposed to be reviewed annually and approved by the Permanent Secretary.

In this section, the Audit Team assessed how the MoWTC and TEMESA set out their organization's goals, vision and core values and link them with their plans. The review based on how MoWTC and TEMESA created a realistic and detailed plan of action for meeting organizational goals and objectives. The team managed to assess both long term and short plans as used by TEMESA to guide maintenance service for the

government owned vehicles under the supervision of the Ministry. Results from this assessment indicate a number of shortfalls as presented below;

a) Failure to Communicate the Ministry's Strategies for Maintenance of Government Vehicles

The Ministry of Works is strategically overseeing all maintenance operations for the government vehicles or those operations in connection to the maintenance of the vehicles. In that regard therefore, all Strategic Plans or other high levels plans at the level of the Ministry on the maintenance of government vehicles have to be reflected in the Strategic or Annual Plans of TEMESA.

However, the Audit Team noted that the two Strategic Plans were not sufficiently communicating to each other. The audit revealed government interventions at the level of the Ministry that had direct or indirect effects on TEMESA's Performance but they did not appear in any of its planning documents or reports.

Table 3.3 presents some of the key interventions available in the Ministry's Strategic Plan but not appearing in TEMESA Planning or Implementation documents.

Table 3.3: Correspondence between the MoWTC and TEMESA's Strategic Plans

SN	MoWTC Strategic Plan	Corresponding Intervention at TEMESA
1	Database of electrical, mechanical, ferries and Government buildings established by June 2018	WAN, Filing System, Project Management Database System, ferry information system database and Motor vehicle Maintenance database system developed and implemented by June, 2021. (TEMESA SP 2016/17-2020/21)
2	10 TEMESA Office Blocks in Regions and Districts constructed by June 2020	3 plots acquired in Katavi, Njombe and Simiyu for offices and workshops construction. (TEMESA SP 2016/17-2020/21)
3	Project management guidelines for ferries, electrical and mechanical developed June 2018	None
4	Guidelines for Government real motor vehicle management prepared by June 2021	None
5	Guidelines for standards and specifications for motor vehicles, ferries, electronics and electrical equipment reviewed by.....??	None
6	Rehabilitation of TBA & TEMESA Workshops and offices facilitated by June, 2021.	Introduce urgent program for Workshop rehabilitation according to priorities in the Master Plan, and Allocate adequate funds for improving workshops. (TEMESA SP 2016/17-2020/21)

Source: MoWTC and TEMESA Strategic Plans, 2016/17-2020/21

Table 3.3 indicates that 3 out of the 6 strategic interventions that were planned at the level of the ministry were not reflected at the level of TEMESA which is the main implementer of the government directives on the maintenance of government vehicles. These interventions included preparation of project management guidelines for ferries, electrical and mechanical, a guideline for government real motor vehicle management plan and guideline for standards and

specifications for motor vehicles, ferries, electronics and electrical equipment.

In addition to the interventions, the Audit Team also revealed that the performance indicators in the current Strategic Plan at TEMESA were not well communicating with its corresponding source of information at the Ministry. The Strategic Objective D of the current Strategic Plan of the Ministry of Works, Transport and Communication indicates that the Ministry planned to measure its performance on “Improving the Infrastructure Sector” by setting three performance indicators, two of which had data inputs from TEMESA. The indicators are “Level of Technical Services” and Vehicles Operating Costs.

The data sources for these indicators were planned to be the Ministry’s institutions as per Monitoring Plan indicated in Table 4.2. However, the review of the Performance Reports of TEMESA revealed that there were no corresponding data that was expected to provide information to measure the two indicators. Additionally, there was no other report that was processing other information to enable identification of the level of services or vehicle operating costs as a measure of the performance of the Ministry on improving infrastructure in Construction Sector.

In addition to this, the Audit Team also noted that the Ministry’s Strategic Plan indicted the intention to establish the extent of customer satisfaction on its services by establishing rate of customer satisfaction. However, this plan was difficult to achieve because the Ministry had planned to collect the data from its customers while it was basically not the service provider and did not have enough information on the services provided by its agencies. The Ministry was also not capable to establish correctly the baseline indicator values forming the basis of evaluating its performance on customer satisfaction surveys.

Generally, the audit noted that presence of disintegrated interventions and performance indicators by the Ministry and TEMESA has affected the extent to which the Ministry achieved its strategic plans. Additionally, the Ministry ability to measure the performance of TEMESA was affected by having a limited source of relevant data.

b) Ineffective Implementation of the Strategic Goals and Objectives at all levels

The Ministry of Works and Transport uses Strategic Plan as their tool for the management of its functions. Based on the scope of this work, the Audit Team managed to review the 2016/2017 to 2020/2021 Strategic Plan of the Ministry. As indicated in the Strategic Plan, the Ministry has a target to conduct monitoring and evaluation of the performance of TEMESA. It also aim to adequately supervise the retooling and rehabilitation of TEMESA workshops.

TEMESA on the other hand, is supposed to prepare both business and Strategic Plans that are to be implemented and reviewed regularly by the management. The Regional Offices of the Agency are required to submit quarterly reports based on section 4 of the Establishment Order of TEMESA. Moreover, section 4.2 of the 2016/17 to 2020/21 Strategic Plan, stipulates the general objective of ensuring improved quality of engineering and its related services or infrastructures. In particular, TEMESA is supposed to improve the quality of mechanical, electrical, electronic, ferry and equipment hire services to its customers. During the audit process the Team identified some weaknesses in implementation of the Strategic Plans as discussed below;

i. Ineffective Implementation of Strategic Goals and Objectives at the level of Ministry

The Strategic Plan indicates the Ministry's commitment to effectively monitor and evaluate the implementation of its strategic interventions in order to ensure that the services delivered to the public are improved. The Ministry's monitoring activities also aimed at ensuring that activities are timely and completely implemented to ensure achievement of the overall strategic objectives.

However, the Audit Team noted that the Ministry did not sufficiently implement its interventions aimed at improving the provision of maintenance services and therefore achieving its overall Strategic Plan. The Audit Team reviewed the implementation status of all activities aimed at improving the delivery of vehicles maintenance services to the government. The results are presented in Table 3.4.

Table 3.4: The Implementation Status of the MoWTC Strategic Plan

SN	MoWTC Strategic Plan	Implementation Status
1	Database of electrical, mechanical, ferries and Government buildings established by June 2018	Not implemented
2	10 TEMESA Office Blocks in Regions and Districts constructed by June 2020	Partially implemented
3	Project management guidelines for ferries, electrical and mechanical developed by June 2018	Not implemented
4	Guidelines for Government real motor vehicle management prepared by June, 2021	Not implemented
5	Guidelines for standards and specifications for motor vehicles, ferries, electronics and electrical equipment reviewed by.....??	Not implemented
6	Rehabilitation of TBA and TEMESA Workshops and offices facilitated by June, 2021.	Partially implemented
7	Performance of Executive Agencies/Institutions (TBA, TEMESA and AQRB) Monitored and Evaluated by June, 2021.	Partially implemented (Evaluation not Done)

Source: MoWTC Strategic Plan, 2016/17-2020/21

Table 3.4 indicates that a significant number of strategic interventions by the Ministry aimed at improving the provision of maintenance services have been partially or not been implemented at all. Out of 7 directly identifiable interventions by the Ministry, 4 were not implemented while the remaining 3 were partially implemented.

Further assessment of the implementation status has indicated that the strategic goals which were not implemented at the Ministry level were also not reflected at TEMESA for implementation. Generally, the audit noted that maintenance interventions were either partially or not completed despite heading towards the end of the implementation of the Ministry's Strategic Plan.

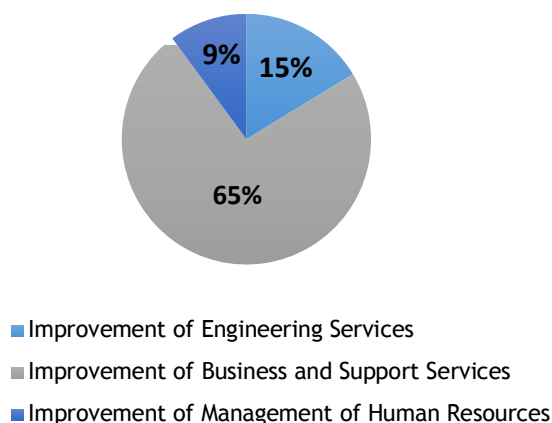
The inadequate implementation of Strategic Plan interventions has consequently undermined the achievement of the Ministry's strategic

goals and targets because such interventions are directly connected to the overall strategic goals and targets.

ii. Ineffective Implementation of the Strategic Goals and Objectives by TEMESA

TEMESA on the other hand, has in most cases failed to meet its missions, vision and core values set in the Strategic Plan. The Audit Team managed to see one of TEMESA's review on the implementation of 2016/17 to 2020/21 Strategic Plan. The summary of results from the review is presented in Figure 3.1

Figure 3.1: Average Performance Score of Implementation of Planned Objectives and Targets by TEMESA



Source: TEMESA's Strategic Plan Review Report, 2019

Figure 3.1 indicates that TEMESA has not been performing sufficiently on its core functions of providing improved engineering services. TEMESA achieved only 15% of its targets on improving engineering services despite being key to the Agency existence while achieving 65% of its objectives on business support which is a supporting machinery for providing engineering services. The agency was seen to have unsatisfactory management of human resources which has consequently resulted to inadequate improvement of engineering services.

Based on the weaknesses observed from both the Ministry and TEMESA, the main reason for poor performance was the lack of effective monitoring function at TEMESA. Absence of proper monitoring for the provision of maintenance services made it difficult to track the performance of the agency in attaining its strategic objectives and reaching its targets and performance indicators.

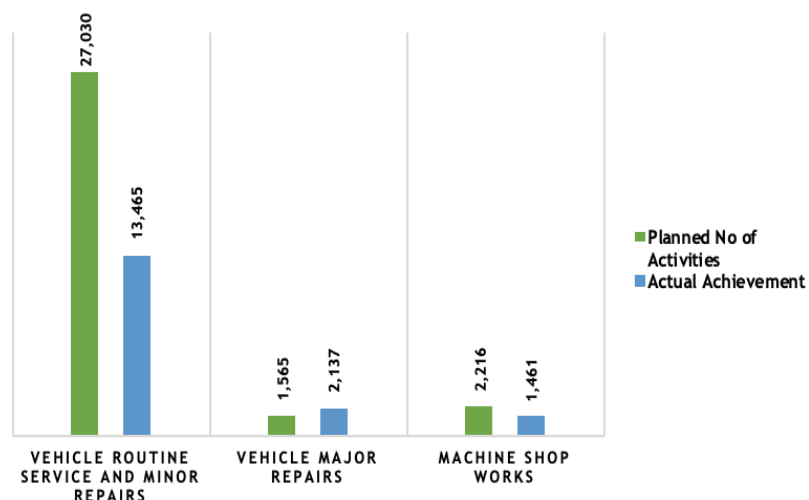
The observed shortcomings have consequently prevented achievement of high-quality services, cost-effectiveness and timely provision of maintenance services to the government-owned vehicles in TEMESA workshops.

c) Inadequate Inputs for Estimation of Expected Revenues

Section 2.1 of the Establishment Order directs TEMESA to operate in business-like manner by using modern business planning and financial management methods. TEMESA is supposed to adequately plan how to generate its income based on the services it offers to its customers. The agency is also supposed to prepare estimations of its revenues based on the assumed number of activities to be conducted and 15% budgetary increment.

From the review by the Audit Team, it was seen that TEMESA had no appropriate input data for estimation of its revenues. One of the key aspect on the preparation of revenue estimates is customer base. TEMESA had no data on the exact number of customers, neither does it have the exact number of the government-owned vehicle that are supposed to be serviced. Figure 3.2 presents a five-year estimation of number of activities against actual achievements. The average was calculated for 5 financial years from 2015 to 2020, and results are shown in Figure 3.2:

Figure 3.2: Average Planned Number of Activities against the Achievement on Maintenance Works



Source: Auditors' Analysis of TEMESA's Annual Progress Reports, 2015/16-2019/20

From Figure 3.2 it is clearly indicated that TEMESA was not accurately setting plans for its maintenance activities. This is indicated by the differences between the planned numbers of activities as compared to the actual implementation. Generally the audit revealed a big difference between planned activities on vehicle routine maintenance and machine shop works compared to actual implementation. This has direct effects on revenues generated, and can result to under budgeting or misuse of financial resources through over budgeting.

c) Insufficient Review of the Strategic Plan

Section 11.2.1 of the Establishment Order requires TEMESA through the Chief Executive to prepare a Strategic Plan that covers a period of five years. The plan should be reviewed annually and approved by the permanent secretary.

The Audit Team expected to obtain 4 required reviews of the 2016/17 to 2020/21 Strategic Plan, but only one review was conducted in October 2019. The results of the strategic plan review conducted indicated that TEMESA has not remarkably met the objectives, goals and targets set in the Strategic Plan.

The main reason for lacking proper and sufficient reviews of the Strategic Plan was absence of effective monitoring function at TEMESA. The Audit Team noted that, TEMESA did not conduct M&E of the planned goals since the launching of the current Strategic Plan. Furthermore, the expected oversight function by the Business Support Services did not have proper plans, guidelines and strategies to monitor the achievement of its Strategic Plan.

Inadequate review of the Strategic Plan as per Establishment Order resulted into inadequate implementation of goals, visions and core values of the Agency. Moreover, the lack of sufficient reviews prevented availability of sufficient information on the performance of TEMESA on maintenance and other services. The proper review was expected to provide a room for effective and efficient allocation of financial and human resources to the areas that required close attention as per review conducted.

3.3.2 Planning for Execution of Maintenance Works

With regards to the Establishment Order especially section 3.6 (p), TEMESA is required to develop and continuously update clear and well-defined working procedures. The working procedures are under the guidance of plans of maintenance services before execution. The maintenance services of TEMESA are required to be guided by accepted standards, manuals and guidelines.

The Audit Team managed to assess the extent to which both MoWTC and TEMESA developed and operationalized the planning guidance.

From the assessment the Team observed the following;

a) Inadequate Guiding Technical Instruments for Maintenance Works

The Audit Team noted that the Ministry and TEMESA did not effectively develop and institutionalize guiding technical instruments for execution of maintenance works for different vehicles owned by the government. The maintenance and repair works were executed

depending on the experience and the skills of the technicians and other personnel conducting maintenance works. This condition was observed despite the fact that the government currently owns a diverse range of car models with diverse specifications and manufacturing years. Which necessitated the presence of effective technical guidance in executing maintenance works.

The Audit Team assessed the extent of availability of repair manuals as compared to the number of government vehicles owned by the government. The results are presented in Table 3.5.

Table 3.5: The Extent of Availability and Use of Standards and Repair Manuals by TEMESA

Manufacturer	Number of Models Owned	Standards Used/Referred	Available Repair Manuals
TOYOTA	10	None	0
NISSAN	7	None	0
MITSUBISHI	8	None	0
FORD	2	None	0
MERCEDES BENZ	4	None	0
SUZUKI	5	None	0
TATA	3	None	0
LAND ROVER	3	None	0
VOLKSWAGEN	2	None	0
HYUNDAI	3	None	0
TOTAL	47	NA	0

Source: Auditors' Analysis of Interview Minutes with MoWTC and TEMESA, 2020/21

Table 3.5 indicates that Repair Manuals for all of the government vehicles are missing. The analysis done has indicated that the government owns an approximate of 47 models of different vehicles purchased at different times and being used in different locations. The maintenance works of such vehicles are done without reference to any Repair Manual.

The absence of guiding instruments has consequently caused poor quality of maintenance services and high risk of vehicle damages during maintenance. All these may lead to the high cost of maintenance services.

b) Unstandardized Maintenance Works

Section 2.3.1 of TEMESA's Establishment Order requires the Agency to formulate, establish and supervise compliance to quality maintenance standards for mechanical works. The standards are expected to be the benchmark for the level of services provide by TEMESA with respect to quality in local and international levels.

However, the Audit Team discovered that no maintenance standards are available for benchmarking during the maintenance works. Moreover, in a separate case, the Audit Team noted that TEMESA has high likelihood of failing to achieve its strategic indicator of acquiring a certificate of ISO Compliance. This is due to failure to achieve its annual targets on the same indicator as indicated in Table 3.6.

Failure of TEMESA to comply with ISO, could in turn result in failure to conduct technical assessment of maintenance services offered. Consequently, this may lead to inadequate quality assurance and quality control in such services. Generally, the audit noted that TEMESA cannot tell whether any vehicle, plant or machinery maintenance work has met the quality requirements and standards.

Table 3.6: Progress towards achieving the ISO 9000 Certificate of Compliance

Activity	Time (FY)	Status
Development of Guidelines	2016/17	Failed
Training of Engineers on Guideline	2017/18	Failed
Submission of application	2018/19	Failed
Follow up of applications	2019/20	Failed
Attaining compliance	2020/21	Likely to fail

Source: Strategic Plan Review Report, 2019

c) Ineffective Guidelines for Maintenance Works

The Audit Team observed that the maintenance services provided by TEMESA were not well guided. The review of the current operations revealed that TEMESA uses one maintenance guideline known as *Mwongozo wa Matengenezo*. However, such guidelines are not effective as they contain significant minor and major weaknesses. The

observed weaknesses of the Maintenance Guidelines have been presented in Table 3.7:

Table 3.7: Weaknesses of the Current Maintenance Services Guidelines

SN	Weaknesses	Risks Imposed
1	The Guidelines are not Technical	High risks of executing works with inadequate quality
2	The Guidelines are Out-dated	Some of the procedures/requirements may be irrelevant
3	The Guidelines do not cover Supervision of Private Garages	High risks of accepting maintenance work with inadequate quality, e.g. engine overhaul
4	The Guidelines are not knowledgeable to users	High risks of non-compliance and executing works with inadequate quality
5	The Guidelines are not knowledgeable to Relevant Customers	Not meeting customer's expectation

Source: Auditors' Analysis of Interview and Minutes, 2020

Table 3.7 indicates some of the significant shortcomings of the current guidelines on maintenance services. These weaknesses were in aggregate, making the use of the current guideline less effective. The Audit Team generally noted that the maintenance works were not sufficiently conducted to achieve the intended objectives.

In addition to the quality, the Audit Team, assessed the rate of compliance to the current guidelines on maintenance services. Sections 1.1.2 and 1.2.1 of the MWONGOZO articulate set TEMESA's responsibilities with respect to provision of maintenance service to the government-owned motor vehicles. Among these responsibilities include managing records of vehicles through maintaining and keeping all records in specific maintenance forms and files.

In order to determine the rate of compliance, the Audit Team used a sample of 144 maintenance work files to determine the particular compliance rate. The assessment of the rate of compliance was done at two levels; one was to assess the rate of compliance with regard to procedures by assessing the availability of all required maintenance forms as per the current guidelines. The second level assessed the

completeness of the available maintenance forms from the work files. The results of the assessment are indicated in Table 3.8.

Table 3.8: The Degree of Compliance with the Current Maintenance Guidelines

Region	Compliance to maintenance procedures (%)	Completeness of maintenance forms	
		Complete (%)	Incomplete (%)
Dar es Salam (MT. Depot)	43	79	21
Kagera	44	84	16
Dodoma	57	85	15
Iringa	38	90	10
Manyara	45	92	8
Lindi	41	94	6
AVERAGE	45	87	13

Source: Analysis of Maintenance forms as per Guideline on Maintenance

Table 3.8 generally indicates low level of compliance towards the maintenance procedures in the visited TEMESA workshops. When all regions are combined, the rate of compliance was revealed to be 45%. The lowest complying region was Iringa with 38% of compliance rate to the maintenance procedures. The most complying region was Dodoma with compliance rate of 57%. The Audit Team noted that compliance rate was high in procedures for the provision of invoices and estimating the bills and costs, in most cases executed electronically.

With regard to the completeness of the available forms, MT Depot Workshop was seen to have incomplete forms by 21%. Many regions had completed their forms because they were generated by systems and involved correspondences on financial matters, including receiving revenues.

The Audit Team also noted that, TEMESA was not paying much attention on fulfilling its responsibilities as per the mentioned sections of the attached maintenance forms in the manner that, some of the maintenance procedures were not completed fully. This was due to the fact that, the maintenance forms were not duly completed and some were not even included in the working procedures.

In addition, it was noted that insufficient compliance and incompleteness of the maintenance forms resulted from negligence and overlooking of the laid-out procedures among TEMESA's responsible staff. This has a significant impact on the quality of maintenance service offered as it directly affects the inspection work and consequently results in inadequate maintenance service.

d) Inadequate Preparation of Maintenance Programs and Schedules

Section 2.3.1 of the Establishment Order requires TEMESA to manage the production and maintenance works of the agency by formulating short and long terms works programmes and supervise the implementation of such programmes.

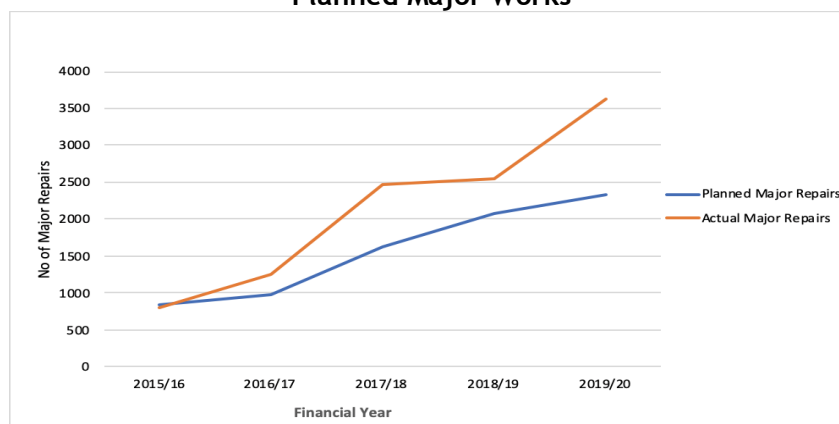
The Audit Team revealed that TEMESA do not have the work program for the maintenance of vehicles. The maintenance programs were expected to provide proactive maintenance services for all of its customers. The team has noted that the maintenance services are provided on a reactive approach where TEMESA waits for the customers to bring the vehicle to her workshops for maintenance at their own convenience and will instead of providing the proactive maintenance services.

In addition to the absence of maintenance programmes, the Audit Team also noted that the maintenance schedules at TEMESA which were also expected to provide proactive maintenance services to its customers were ineffective. The only component of service schedule was the presence of service cards which were providing due millage for the next general service. However, the operational service cards were also based on reactive approach where a customer was expected to bring vehicle at his/her convenience or choice. Generally, TEMESA has no database that would assist on providing proactive maintenance services.

Consequently, the absence of proactive maintenance programs and schedules has led to an increase in the magnitude of major repairs for the government vehicles. This is because delays in fixing minor vehicle problems for a long time consequently bring additional problems and damage to the other parts and therefore shifting the maintenance

needs from minor to major repairs. Figure 3.3 shows the increase in the magnitude of major repairs from 2015 to 2020 as compared to the planned number of major repairs.

Figure 3.3: The Extent of Actual Major Repairs Compared to the Planned Major Works



Source: Annual Progress Reports 2015-2020

The Figure 3.3 indicates that there has been an increase in the number of major repairs works annually since 2016/17. The planned number of major works have been less than the actual number of major works executed. Major works were resulting to significant maintenance costs to the government and therefore undermining the TEMESA's aim of ensuring ensure low maintenance costs for the government vehicles.

3.4 Execution of Maintenance Works

The mission statement of TEMESA provides a general commitment by TEMESA to its customers by promising provision of reliable, and high-quality mechanical services using modern technologies. Furthermore, section 4 of TEMESA's Establishment Order provides critical areas to be observed by TEMESA in the provision of its maintenance services. Such areas include quality of services, operational efficiency and financial performance.

The Audit Team further assessed TEMESA's maintenance workflow from maintenance requisition to delivery of the maintained vehicle, to see if the Agency observed the identified critical areas. The findings from the assessment indicated presence of a number of weaknesses in

the above key areas as articulated by the Establishment Order. Generally the following gaps were observed in provision of the maintenance services;

3.4.1 Inadequate Pre-Inspections for Maintenance Works

Being at the heart of effective maintenance, Section 3.1 of TEMESA's Maintenance Guideline requires this organisation to conduct a special inspection of the vehicles in order to identify the underlying problems in the vehicles before embarking on maintenance works. The pre-inspections are expected to provide a way forward towards maintenance works and lay the foundation for the estimation of initial costs and type of spare to be purchased.

Despite their importance the Audit Team noted that the pre-inspections for government vehicles have not been sufficiently conducted. According to maintenance guideline issued by TEMESA, an inspection was supposed to be accompanied by duly filled inspection form which provide assurance if every vehicle or plant system has been inspected and that no other part of the vehicle or plant has been skipped or mistakenly forgotten. However, the current inspection practices at TEMESA have indicated that an inspection form which provides a comprehensive checklist of all vehicle systems is not completed and submitted.

Through interviews, the Audit Team noted that the inspections were done based on driver's explanation of the vehicle's problems and experience of the vehicle inspector before an inspection report is provided. The inspection report which was commonly available did not indicate what systems have been inspected but rather provided a general report of the vehicle problems. This practice left a substantial number of vehicles systems unchecked and therefore providing a higher risk for systemic damage of other parts as the vehicle continues to operate. Figure 3.4 shows an excerpt of an unfilled vehicle inspection form.

Figure 3.4: Vehicle Inspection checklist indicating Different Vehicle Systems to be checked before and after repair and Maintenance

TMSM 2

CLUTCH <input type="checkbox"/> Clutch Operation Condition <input type="checkbox"/> Clutch Fluid Level <input type="checkbox"/> Clutch Cable Condition TRANSMISSION / GEAR BOX <input type="checkbox"/> TM oil Grade SAE <input type="checkbox"/> TM Oil Level and Condition <input type="checkbox"/> TM oil Leakage <input type="checkbox"/> Shift Condition BRAKES <input type="checkbox"/> Brake Fluid Level <input type="checkbox"/> Service Brake Operation Condition <input type="checkbox"/> Brake Pipes Condition <input type="checkbox"/> Parking Brake Operation Condition <input type="checkbox"/> Anti-lock Braking System <input type="checkbox"/> Brake Assist <input type="checkbox"/> Electronic Brake Distribution System DRIVE SHAFT / PROPELLER SHAFTS <input type="checkbox"/> Universal joints Condition <input type="checkbox"/> Lubrication points <input type="checkbox"/> Boots condition <input type="checkbox"/> Sliding Yoke play DIFFERENTIAL SYSTEM <input type="checkbox"/> Oil level and Leakages <input type="checkbox"/> Operating condition	STEERING SYSTEM <input type="checkbox"/> Steering Wheel Play <input type="checkbox"/> Power Steering Oil Level <input type="checkbox"/> Steering Oil Leakages <input type="checkbox"/> Steering Stability condition WHEEL AND TYRES <input type="checkbox"/> Wheels and Tyre Wear Condition <input type="checkbox"/> Tyre Inflation CHASSIS <input type="checkbox"/> Front Suspension Condition <input type="checkbox"/> Rear Suspension Condition <input type="checkbox"/> Shock absorber leakages/Condition <input type="checkbox"/> Spring, Chassis and Suspension Bushes <input type="checkbox"/> Ball joints Condition <input type="checkbox"/> Drive shaft boot rubbers Condition RHS <input type="checkbox"/> Drive shaft boot rubbers Condition LHS <input type="checkbox"/> Drive shaft CV joint Condition RHS <input type="checkbox"/> Drive shaft CV joint Condition LHS
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ii

Source: Mwongozo wa Matengenezo ya Magari - TEMESA, 2012

Additionally, the Audit Team noted that the pre-inspections were not done by using the proper and modern tools particularly with respect to the modern vehicles which have very sophisticated auto-electric systems. The most common and important inspection tool was the Vehicle Diagnostic Machine which was used to initially pinpoint the vehicle systems which had problems and therefore simplify the quick and most accurate vehicle maintenance.

Table 3.9 shows visited TEMESA Regional offices, which had no computerised vehicles diagnostic machines and reasons for lacking them.

Table 3.9: Availability of Vehicle Diagnostic Machines in Selected Regions

TEMESA Regional Office	Service Availability	Reason for Absence of the Service
Dodoma	Available	NA
Manyara	Not Available	Machine Outdated
Kagera	Not Available	Malfunctioning
Dar es Salaam	Available	NA
Iringa	Not Available	Machine Outdated
Lindi	Not Available	Malfunctioning

Source: Site Observation, Diagnostic Machine Purchase Files, 2020/21

Table 3.9 indicates that some of the regions did not have the computerised vehicle diagnosing machine. The service was not available in 3 out of the six regions which were visited by the Audit Team. The main reasons for the absence of computerised vehicle diagnosing service were either the malfunctioning of the machines or newly purchased diagnostic machine with outdated software. Due to lack of computerised diagnostic machine, the maintenance of government owned vehicles has not been effective. Inadequate inspections of vehicles has increased the frequency of maintenance for vehicles and consequently the overall costs of maintenance to the government by outsourcing some of computerised diagnosis machines.

3.4.2 Inadequate Quality Control and Assurance

Section 3.6.4 of TEMESA Strategic Plan requires the Agency to improve the efficiency of workshops operation and quality of maintenance services. TEMESA is also obliged to provide reliable and quality engineering services accompanied by quality infrastructures. The Audit Team assessed the quality controls and assurance mechanisms at TEMESA and revealed different weaknesses as described below.

a) Weak Quality Assurance in Requisition and Receiving of Spare Parts

The Audit Team has noted that the Agency lacks effective quality assurance system in ordering and receiving of spare parts that are fixed in maintained vehicles. TEMESA did not have official or identifiable suppliers who supply genuinely proven spare parts for its maintenance works. The interviews conducted with the supply's personnel indicated that all of the regions had a certain number of "trusted suppliers" who were contacted when the need arises. The ordering of spare parts was done randomly to any of the trusted suppliers who are trusted to bring genuine spare parts.

Furthermore, the Audit Team noted that, TEMESA was relying on a committee of three personnel for receiving supplied goods to act as a means of quality assurance mechanism to determine the authenticity of the supplied spare parts. This team however did not have any mechanism for testing or identifying the genuineness of the supplied spare parts. Additionally, the observation by the Audit Team revealed that the team members were not jointly receiving the spare parts. Instead of joint receipt and verification of the spare parts the team members confirmed and signed the Goods Received Note separately. It was therefore difficult to have joint discussions and scrutiny on the authenticity of the supplied spare parts.

The Audit Team noted that TEMESA had no documented means of verifying the authenticity of the spare parts ordered rather than depending on the experience of technicians and use of other means of verification including bar code scanner and parts catalogue. Moreover, the spare parts were received and delivery note issued like any other goods. There was no confirmation of tests done to verify the authenticity of the spare parts received as a means of ensuring quality.

Consequently, weak controls in receiving the spare parts generated a risk of receiving non-genuine spare parts from the available suppliers. The Audit Team confirmed this through the review of frequent correspondences to TEMESA headquarters or to the Ministry with regard to the quality of spare parts or quality of works in general. The

complaints indicated the occurrence of incidences where fake spare parts are fixed during maintenance of vehicles.

b) Weak Quality Control in Execution of Maintenance Works

The Audit Team noted that the maintenance works were executed without having proper means of confirming the quality of its maintenance works. The review of maintenance/repair form as indicated in the available (Mwongozo) required any maintenance work to be approved by four personnel before it is finally sent for post-inspection.

The review of the repair forms indicated that the maintenance works were not approved by the responsible personnel who were expected to act as quality control experts. The maintenance forms were only signed by the persons who did the work but not the person who approved the works. The approval levels included the person who was to conduct the test, and then approval by the in-charge of the maintenance section and later on approval by the Head of the Section. Table 3.10 indicates the levels and extent of maintenance works approvals as per the maintenance/repair form in a sample of 144 maintenance works in the 6 visited regions.

Table 3.10: Percentage of Maintenance Works passing through the necessary approvals out of 144 Maintenance Jobs Assessed

Category of Approvals	Approved	Un-Approved	Percentage Not Approved
Initial Testing	0	144	100
Approval by In-charge of the Section	13	131	91
Approval by the Head of Maintenance Section	0	144	100
Approval by the Regional Manager	0	144	100

Source: Vehicle Maintenance Forms 2015/16-2019/20

Table 3.10 indicates that the maintenance works did not go through the necessary approval process as a way of confirming the quality and a means of quality control assurance for the executed works before

they are submitted for the final inspection. Review of the maintenance/repair forms indicates that the maintenance works were approved in a small extent only by the In-charge of Maintenance Section. All other levels of approvals did not inspect and approve the executed works. Generally, the approvals by the In-charge of maintenance section were done at 9% only with the remaining 91% of the work files unapproved.

Through discussions with the responsible personnel the Audit Team realized that instead of being documented in a special form the approvals for the maintenance works were done orally. The only document that was issued was the certificate of completion for the maintenance works as the clients need to use it as an evidence for the work that has been done by TEMESA.

The weak quality controls in execution of maintenance works brought about the risks of executing works with inadequate quality. This was noted through the correspondences of work files from TEMESA customers complaining about the quality of the works for their maintained vehicles. Furthermore, this was confirmed by the Audit Team through a simple survey which was done to TEMESA customers who were asked to provide their opinion on whether they were satisfied by the quality of maintenance works done by TEMESA. The results indicated that out of the 12 customers visited only 1 of them was somehow satisfied by the works' quality while the remaining 11 customers said that they were not satisfied with the quality of the maintenance works done by TEMESA.

c) Inadequate Quality Assurance after Completion of Maintenance Works

The Audit Team noted that the quality assurance mechanisms after the completion of maintenance works were not effective in TEMESA. The procedural maintenance guidelines at TEMESA requires any work to be post-inspected for a final check before it is delivered to the respective client. This was accompanied by the issuance of Certificate of Approval for the maintenance work, which was another means of ensuring the quality of work done.

However, the Audit Team noted that quality assurance mechanisms after completion of maintenance works were not effective in TEMESA. Post-inspection activities which were supposed to be conducted by TEMESA before delivery of vehicles were not adequately conducted. There was no documentation indicating what parts of the vehicles were inspected and whether they were maintained or /replaced.

A post-inspection is conducted together with the vehicle or plant owner/operator in order to verify whether the executed work addressed the identified problem and that a customer is satisfied with the work.

The certificate of approval was supposed to be accompanied by evidence of two levels of work supervision including name of the person who did the work and names of the people who have approved the work.

d) Lean Quality Control and Assurance for Outsourced Maintenance Works

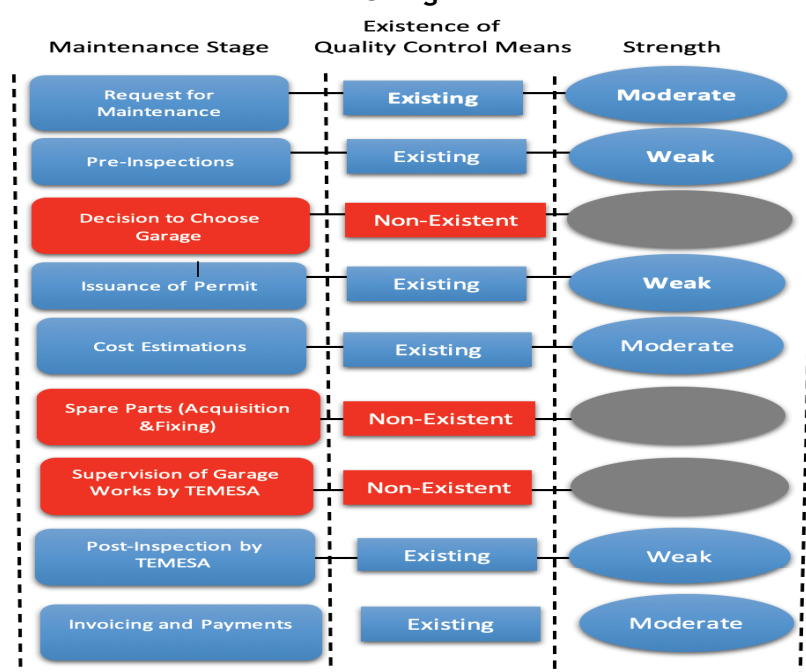
Section 2.3 of TEMESA Strategic Plan requires the Agency to ensure that private garages undertake quality and reliable maintenance services to government entities. As part of the activities in providing quality and reliable maintenance services, TEMESA is supposed to have in place a strong system for quality control and assurance of the works done by the pre-qualified private garages.

The observations made by the Audit Team identified some weaknesses in executing quality control and assurance for the outsourced works from private garages. The Audit Team noted that there was no mechanism set by TEMESA in ensuring that the works done by private garages met standards and were of high quality. Generally, there was no regular supervision for the works done by the private garages. The vehicles which were sent to private garages were left there for maintenance until the work was completed before they could be brought back to TEMESA for final inspection.

Furthermore, the Audit Team noted that the procedural Guidelines for maintenance services issued by TEMESA did not indicate how the works

done by private garages will be supervised. The guidelines indicated only when TEMESA will issue a permit for the works to be done to a pre-qualified garage but not how the maintenance works and all of its associated activities will be checked. Figure 3.5 shows key areas in execution of maintenance works using pre-qualified garages and areas of weaknesses noted out by the Audit Team.

Figure 3.5: Execution of Maintenance Works using Pre-Qualified Garages



Source: Auditors' Analysis of Motor Vehicles Maintenance files 2015/16-2019/20

Figure 3.5 indicates key stages for executing quality control by TEMESA. Critical stages in quality control, including the decision to choose garages, acquisition and fixing of spare parts and supervision of garage works by TEMESA. The Audit Team noted that all these areas had weak control in ensuring that the works executed by the private garages were of high quality, meet the required standards and were cost-effective.

In addition, the Audit Team noted that the contracts that were signed between TEMESA and the Pre-Qualified Garages were not binding to

the garages to supply and fix genuine spare parts as one of the key aspects in controlling the quality of services provided by the pre-qualified garages and also bind the private garages to use the qualified technical personnel indicated in their tender documents during the tendering phase.

The review of the contracts signed by TEMESA and the private garages particularly in section 4, where instruction is given to the supplier of services, indicated that the garages were only required to provide maintenance works as requested by the government entity through TEMESA. However, the contracts did not require or at least demand the use of genuine spare parts or use of qualified technical personnel during the maintenance works.

3.4.3 Insufficient Technical Supervision for the Maintenance Works

The Mission Statement of TEMESA demands the provision of high-quality mechanical services using modern technologies. The provision of high-quality mechanical services depends on availability of strong systems of supportive and technical supervision on service implementation levels.

However, the Audit Team noted that there was no effective system for technical supervision of maintenance works at implementation levels. The Audit Team also noted that the maintenance works executed at lower levels mainly based on the experience of the technicians and other temporary employees who were mostly performing the works.

The Audit Team assessed three supervisory aspects at implementation levels which were key in ensuring that high-quality maintenance works were done. The results are presented in Table 3.11.;

Table 3.11: Extent of Supervision in the Implementation of Maintenance Works

Supervisory Role	Identified Weaknesses	Associated Risks
Adherence to Technical Directions	<ul style="list-style-type: none"> • No Technical/Workshop/Maintenance Manuals • No Evidence of technical directions provided 	<ul style="list-style-type: none"> • New or Additional Damage to vehicle parts • Delayed maintenance works • Inadequate workmanship • Inadequate Quality
Solutions to Technical Problems	<ul style="list-style-type: none"> • No Documentation of technical problems or solutions • No Established referral system (E.g. Frequent engine problems) 	<ul style="list-style-type: none"> • New or Additional Damage to vehicle parts • Delayed maintenance works
Reviewing and Checking Works of Subordinates	<ul style="list-style-type: none"> • Inadequate Compliance to Maintenance Guide • No Comments or opinion provided 	<ul style="list-style-type: none"> • Inadequate Quality of Works

Source: Interviews Documents Review and Visual Observation on Site, 2020/21

Table 3.11 indicates the extent of supervision for the maintenance works. The audit noted different sorts of weaknesses associated with different supervisory roles and therefore posing out associated risks as identified in the third column of the Table 3.11.

The Audit Team noted weaknesses in exercising supervisory roles. Such weaknesses include the absence of technical/Workshop/Maintenance manuals, lack of proper documentation, absence of comments or opinions on performed works and inadequate compliance to maintenance guide. These weaknesses posed several risks, including risks of new or additional vehicle components damages or inadequate quality of works.

In order to assess the extent of compliance to maintenance guidelines, the Audit Team went further to assess the extent of works approvals from the three identified supervision levels during maintenance work. These included approvals by another technician through initial testing, approval from the Technician In-charge of Maintenance, the Head of the Maintenance Section in the Region and the Regional Manager's comments as the final approval.

The results of the assessment on the extent of works approved by the levels of supervisions in the regions done by determining whether the particular job was approved by the respective level of supervision or not is presented in Table 3.12. The results contain analysis from sampled 144 jobs in 6 regions that were visited by the Audit Team.

Table 3.12: Extent of Approvals for Maintenance Works from Different Supervisory Levels

Region	Total No of jobs Assessed	Approved by			
		Immediate Technician	Driver	Head of Maintenance Section	Regional Manager
Manyara	24	0	23	22	23
Dar es Salaam (MT Depot)	24	0	21	21	21
Dodoma	24	16	15	15	14
Iringa	24	0	12	11	12
Kagera	24	20	19	15	11
Lindi	24	0	9	9	9
Total	144	36(25%)	99(69%)	93(65%)	90(63%)

Source: Motor Vehicles Maintenance Works Files

Table 3.12 indicates the extent of approvals for maintenance works by different levels in the sample of 144 jobs from the six visited regions. It can be deduced from the table that most of the approvals done were for the drivers after the maintenance work. The table indicates that only 25% of the works were approved by the immediate technician. Further analysis indicates that 69% of the works were approved by the drivers during the final inspections. Out of the total maintenance

works assessed 65% were approved by head of the maintenance section, while 63% were approved by regional managers.

In the visited regions most of the works were only approved by the respective drivers who were mainly instructed to confirm the level of maintenance works conducted. The other levels did not sufficiently approve the works and therefore posing a risk of the quality of works and other mistakes that might compromise the executed works.

Insufficient supervisions created a risk of having inadequate and unsupervised maintenance works on government vehicles which may result to accidents and therefore causing deaths and other losses to properties.

3.4.4 Delays in Completion of Maintenance Works

As the Time for completion of Maintenance work is one of Key Performance Indicators of an effective Maintenance services, TEMESA's Client's Service Charter provides for the completion times for each specific maintenance work, which serves as the means of ensuring that satisfactory services are provided to the customers. The completion time was set by TEMESA after a thorough consultation with all stakeholders involved in the maintenance works. However, the review of the maintenance works done by TEMESA indicates that the maintenance works were not executed within the timelines stipulated by the client's service charter.

The Audit Team assessed time spent in the execution of the maintenance works by reviewing the 144 sampled maintenance work files and came up with the results indicated in Table 3.13. The analysis of maintenance timelines was based on the actual time spent in maintaining the vehicles while excluding the timeline preceding the maintenance works as indicated in the certificate of approval for maintenance of vehicles.

Table 3.13 provides the analysis of the timelines for the execution of maintenance works and the extent of delays for each of the specific tasks analyzed.

Table 3.13: Timelines for Execution of Maintenance Works based on the Analysis of Maintenance Tasks???

Region	Vehicle Maintenance Time in days (Days)	Required Maintenance Time (Days)	Delays (Days)
Kagera	22	3	19
Iringa	12	3	9
Dodoma	11	3	8
Dar es Salaam	9	3	6
Manyara	7	3	4
Lindi	5	3	2
AVERAGE	11	3	8

Source: Motor Vehicles Maintenance Works Files and Client's Service Charter 2015/16-2019/20.

Table 3.13 indicates the timelines for execution of the maintenance works for the government vehicles and extent to which such works were delayed. Generally, the audit noted that the maintenance of vehicles took more than the required time to accomplish the tasks. The collected information indicates that a vehicle took an average of more than 11 days to be maintained at TEMESA regardless of the type of works that were required to be done. Most of the delays were found in Kagera Region where an average of 22 days were spent to maintain the vehicles. The most time efficient region was Lindi where an average of 5 days were spent in vehicle maintenance.

The review of the maintenance work files indicates that delays in vehicle maintenance maintaining vehicles were caused by two main reasons which include delays in acquisition of spare parts and failure by the government entities to approve the maintenance works on time. With regard to acquisition of spare parts, officials from TEMESA pointed to the challenge of obtaining genuine spare parts from the suppliers who already owe it a substantial amount of money as their creditors. Failure to pay the suppliers on time contributed to delays in issuance of new requisitions. This in turn caused some delays in supply of the spare parts needed for maintenance works.

Another reason is the unavailability of some of spare parts from the current and local suppliers which necessitated TAMESA to look for

other suppliers from outside or make a special order from vehicle manufacturing countries.

3.4.5 Inadequate Post-Inspection Activities

Section 2.2 of the Procedural Maintenance Guidelines of TEMESA requires this Agency to conduct post-inspection after completion of maintenance works. The post inspections are intended to confirm the completeness of the works done and ascertain whether they have addressed the vehicle problem.

However, the Audit Team noted that the post-inspections of the maintenance works were not sufficiently executed. Based on the operations of TEMESA, Post inspections are done for vehicles maintained at TEMESA and for vehicles maintained by approved garages or dealers. The Audit Team noted several weaknesses associated with post-inspection activities in a manner that has made them ineffective. Table 3.14 illustrates the weaknesses and the associated risks in execution of the maintenance works.

Table 3.14: Identified Weaknesses in Post-Inspection Activities at TEMESA

Category of Maintenance Works	Weaknesses	Associated Risks
Maintenance Works at TEMESA Workshops	No Modern Tools for Post-inspection of the Modern Vehicles	<ul style="list-style-type: none"> • Failure to detect vehicle problems • Ineffective vehicle diagnosis • Defective/malfunction items or components parts may not be identified
	Pre and Post-inspections done by the same person	
	No check-listing for post-inspections	
	No proper methodologies for post-inspection of the engine-works	
	Post-inspections done by unqualified personnel	
Maintenance Works by Pre-Qualified Garages or Dealers	No Modern Tools for Post-inspecting Modern Vehicles	<ul style="list-style-type: none"> • Substandard spare parts may not be identified • Accepting inadequate quality works • Incomplete maintenance works may be accepted
	Vehicles from outsourced works not post-inspected	
	No proper techniques for post-inspecting engine-works	

Source: Motor Vehicles Maintenance Works Files, 2015-2020

Table 3.14 identifies weaknesses associated with the post inspection activities including unavailability of modern tools for vehicle inspections, post inspections being done by unqualified personnel, lack of proper techniques for conducting post-inspections of engine works, and in some instances the lack of separation of works whereby pre-inspections and post-inspections were done by the same person.

The associated risks with the identified weaknesses include the failure to identify the vehicle problems, substandard or non-genuine spare parts and the possibility of accepting incomplete or poor quality works.

3.4.6 Delays in the Collection of Maintenance Bills

Section 3.4.11 of TEMESA Operational Manual requires maintenance bill to be promptly settled within 30 days after completion of the works and signing of the certificate of approval for the completed maintenance works. This standard is intended to safeguard the corporate liquidity status and avoid unnecessary insolvency which could have imminent danger for TEMESA Workshops.

However, the Audit Team revealed some delays in settlement of maintenance bills from the maintenance works done in TEMESA workshops. The Audit Team noted that maintenance bills were not collected and therefore paid on time. Using a sample of 144 maintenance jobs, the Audit Team established the number of days at which maintenance bills were collected and paid and presented the results in Table 3.14.

Table 3.15: The Assessment of Time Taken to Collect Maintenance Bills at TEMESA

Region	Minimum Time required for bill Settlement (days)	Actual Time taken to Settle Bills (Average)	Delays (days)
Manyara	30	115	85
Dar es Salaam (MT Depot)	30	113	83
Kagera	30	90	60
Lindi	30	80	50
Dodoma	30	77	47
Iringa	30	45	15
AVERAGE	30	87	57

Source: TEMESA's Debtors Records, 2015-2020

Table 3.15 indicates presence of delays in collection and hence settling of bills for the maintenance works done by TEMESA. On average, TEMESA took about 87 days to collect bills from the maintenance works. Most of delays in collection of bills were found in Manyara where an average of 115 elapsed before collection of the bills (days) while the most efficient region was Iringa where collection of bills only was done within 45 days.

Through documentary reviews, the Audit Team noted that delays in the collection of maintenance bills were caused by two main reasons. The first reason was the lack of proper bill collection system within the maintenance workshops. Despite being clearly stipulated in TEMESA operational manuals, the maintenance workshops did not have a proper arrangement for bill collection. Customers who owed TEMESA were mostly left to pay for the bills at their own convenience instead of sanctioning them through well-established pro-active measures.

Lack of sanction mechanisms provided a lee way for the unfaithful customers to breach the agreement met on when the maintenance bills would be settled. Generally, the audit revealed that only few honest customers settle their bills on time within the current situation as majority take advantage of the negligence at TEMESA to pay bills at their conveniences instead of the prescribed time. Moreover, the audit revealed that the Regional Centers had no specifically identified personnel for collection of bills at the workshops. Most of the centers identified accounting units as the responsible units for collection of bills. However, such units were not effective enough to carry out the bills collection task effectively.

Secondly, the delays in settlement of bills was caused by the delays in issuing of maintenance bills soon after completing the maintenance works. In order to determine the extent of delays in issuance of payment invoice or bills, the Audit Team computed the time that TEMESA took before issuing a bill from the date when the work was completed. The results are presented in Table 3.16.

Table 3.16: Number of Days Taken Before an Invoice is Issued by TEMESA

Region	Required no of days for Issue of Invoice	Actual Days Taken to Issue an Invoice (Average)
Dar es Salaam (MT Depot)	1	25
Lindi	1	11
Dodoma	1	10
Kagera	1	5
Iringa	1	3
Manyara	1	1
AVERAGE	1	9

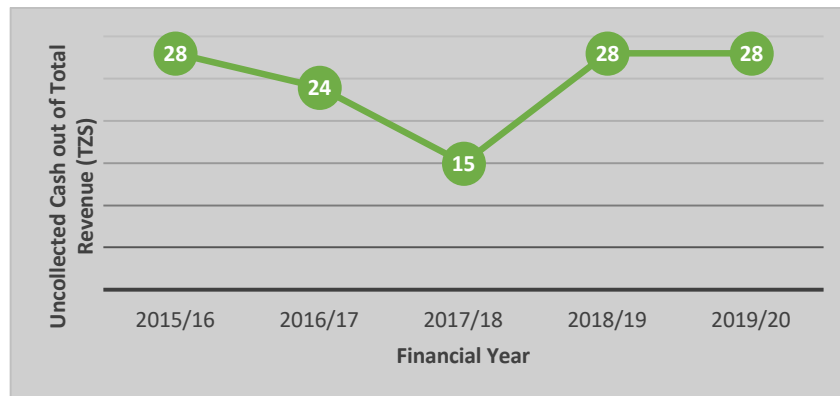
Source: Certificate of Approvals, Invoices and Payment Spreadsheets, 2015-2020

Table 3.16 indicates that there were time lags between completion of maintenance works and issuance of maintenance bills by TEMESA. The regions with the most time lag in preparation of maintenance bill was Dar es Salaam (MT. Depot) with the average of 25 days spent before issuance of maintenance bills while the most punctual region in issuance of the maintenance bill was Manyara, where issuance of payment invoice takes place within an average of one day. In general, TEMESA Workshops took an average of 9 days before issuing a bill. This compounded the delays by the customers in settlement of the bills.

The delays in collection of maintenance bills were also indicated by the extent of uncollected cash as reflected in the annual reports of TEMESA, which has shown an increasing trend in existence of uncollected funds in the past three years.

Figure 3.6 shows the trend in relation to uncollected cash from the production and maintenance works done in TEMESA workshops in the past five years.

Figure 3.6: Ratio of Uncollected Cash out of the Total Revenue Generated

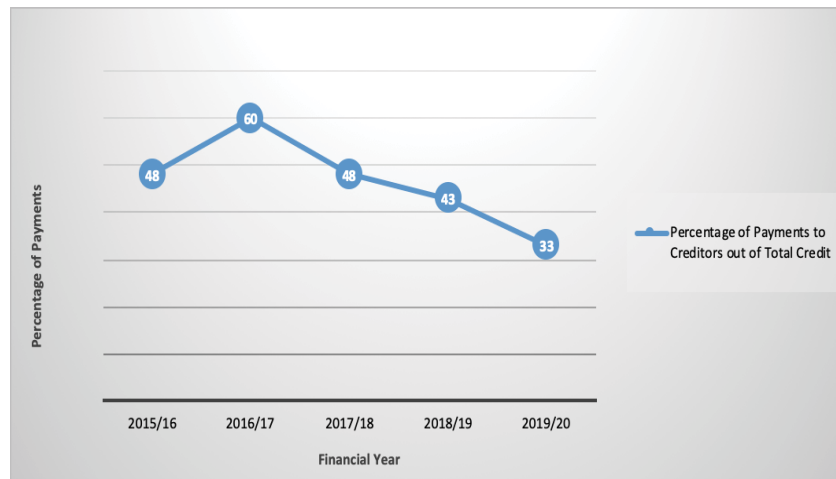


Source: TEMESA's Performance Reports, 2015/16-2019/20

Figure 3.6 indicates an increasing trend in the amount of uncollected cash from production and maintenance works in the past 3 years. TEMESA recorded the lowest rate of uncollected cash during the financial year 2017/18 however the trend started to increase afterwards to the highest rate of 28% in a period of five years.

Consequently, the delays in collection of maintenance bills and prompt payment and the resulting magnitude of uncollected cash from customers resulted into liquidity problems at TEMESA workshops which in turn affected their capacity in clearing of their creditors' debts and purchasing spare parts needed for servicing customers in need of maintenance services. Figure 3-7 indicates the capacity of TEMESA in settling creditors arising from their maintenance services for the period between 2015/16 to 2019/20.

Figure 3.7: Percentage of Payments to Creditors out of the Total Credited Amount



Source: TEMESA Annual Performance Reports, 2015/ 16-2019/20

Figure 3.7 indicates that the capacity of TEMESA to pay its creditors has declined dramatically and continued to decline in the period of five years from 2015/16 to 2019/20. TEMESA had the highest capacity in settling creditors during the financial year 2016/17 where they paid about 60% of their total credit amount. However, the ratio and therefore capacity has declined since then until financial year 2020 when they were able to 33% of their total credit amount to pay the debts.

Through discussions with the officials from TEMESA, it was indicated that, one of the factors contributing to the decline in capacity to pay the creditors was the lack of seed capital at TEMESA during the establishment of the agency. The establishment of TEMESA was not accompanied by a capacitation on financial resource through a seed financial resources as initial capital to assists in running its operations in a business-like manner as per the Establishment Order.

3.4.7 Insufficient Management of Customer Satisfaction

Section 3.2 of TEMESA Establishment Order stipulates the Agency's vision of being the most reputable and progressive institution in the country and Sub-Saharan countries by providing high-quality engineering services focused on customer satisfaction. Additionally,

Section 4.2 of the Establishment Order sets the performance criteria of the Agency by requiring the provision of timely and quality service delivery to customers. In addition, the Strategic Plan of TEMESA identifies one of its core values as “customer centricity” which translates as providing services that are centered on its customers.

The achievement of the above-stated criterion depends on the availability of effective customer satisfaction systems. However, the audit noted that there was weak customer satisfaction management system at both levels of operation within TEMESA, i.e. Headquarters and Regional Offices. The noted weaknesses included: the *absence of customer satisfaction surveys, absence of customers’ feedback system, absence of communication policy and guidelines and inadequate customers visits as per Strategic Plan*. The identified weaknesses are elaborated below:

a) Inadequate Customer Satisfaction Surveys

The Strategic Plan of TEMESA requires customer satisfaction surveys to be conducted annually as a means of obtaining feedback from its customers and therefore providing inputs for annual and Strategic Planning as well as progressive improvements in the provision of its maintenance services. The Audit Team noted that TEMESA did not conduct regularly conduct the customers satisfaction surveys as per the requirements of the Strategic Plan. Table 3.17 indicates the extent to which TEMESA conducted Customer Satisfaction surveys between 2015/16 and 2019/20.

Table 3.17: TEMESA’s Customer Satisfaction Surveys

Financial Year	Status	Scope/Coverage	Reports	Major Corrective Actions
2015/16	Not Conducted	NA	NA	NA
2016/17	Not Conducted	NA	NA	NA
2017/18	Not Conducted	NA	NA	NA
2018/19	Conducted	Kilimanjaro	Availed	None
2019/20	Not Conducted	NA	NA	NA

Source: Annual Performance Reports, Strategic Plan, 2015/ 16-2019/20

Table 3.17 indicates that customers' satisfaction surveys have not been sufficiently conducted by TEMESA throughout the financial year 2015/16 to 2019/20. There was only one customer satisfaction survey which was conducted during the financial year 2018/19 involving only one region without being replicated in other regions. The survey was very limited in terms of its scope by involving only one region out of the 30 regions of Mainland Tanzania. The survey however was not accompanied by the corresponding report and any corrective actions against the findings identified during the survey.

The Audit Team also noted that there was lack of internal drive for conducting the customers' satisfaction surveys. The customers' surveys were planned annually and were available in TEMESA's Strategic Plan 2016/17-2020/21. The Audit Team further noted that the specific activity had its own budget as per TEMESA MTEF, however there was no release of funds to cater for this activity in the last four out of five years of implementation of the current Strategic Plan.

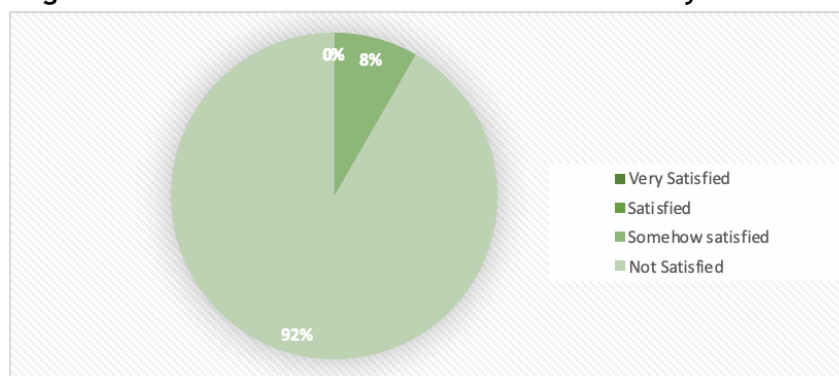
Consequently, the absence of customers' satisfaction surveys deprived the Agency of key information on the degree of satisfaction of its customers and the challenges they need to overcome in order to improve services and therefore meet the vision of the Agency as stated in Section 3.2 of the Establishment Order. Generally, the audit revealed presence of a limited room for TEMESA's customers to officially provide constructive feedback about the quality of the maintenance works. Such feedback is crucial for improving the quality of services in TEMESA by focusing on its customer satisfaction.

Furthermore, the absence of customer surveys and therefore a room to clear customer dissatisfactions, has indirectly developed an adverse perception towards the services provided by TEMESA. This has resulted to reduction of TEMESA's customer base. This was confirmed when the Audit Team conducted a simple survey of TEMESA's customers⁹ and assessed the extent to which they were satisfied by TEMESA's services. The survey was conducted to 12 government Institutions using the maintenance services from TEMESA. A simple structured questionnaire was administered between October 2020 and January 2021 with the objective of obtaining opinions of TEMESA customers on Maintenance

⁹ Government Institutions such as MDAs, LGAs etc.

Services provided. The results of the survey conducted are provided in Figure 3.8;

Figure 3.8: Results of Customer Satisfaction Survey in TEMESA



Source: Auditors' Survey, 2020/21

Figure 3.8 indicates that majority of the customers (9 percent) were not satisfied by the quality of services provided by TEMESA. None of the customers contacted were either satisfied or very satisfied by the services provided. The customers pointed out that they were not satisfied by TEMESA services for several reasons the main ones being high prices of spare parts, the time taken to maintain vehicles, quality of the maintenance services and quality of spare parts installed in their vehicles.

b) Inadequate Customer Communication Guidelines

Section 4.2 of the Establishment Order of TEMESA requires provision of timely and quality services to its customers. It requires, among other things, the presence of proper internal communication guidelines and policy. This is necessitated by the operating environment of TEMESA which frequently require communication with its clients to ensure that maintenance services are provided in a timely and quality manner.

Despite their importance, the Audit Team revealed that the clear communication guidelines and policy with the customers are missing at TEMESA. Generally, no well-defined channel for communicating with clients was available at TEMESA, apart from the maintenance

forms submitted through working files. Additionally, the customers did not have a mechanism for channeling their individual pinions with regards to the services provided to them, particularly by the Regional Offices, being the units where most of the maintenance works are performed. The Audit Team did not find the most commonly “*Sanduku la Maoni*” or any other alternative means for the independent casting of customers’ opinions. This tool was expected to help in identification of areas for further improvements and therefore offering an opportunity for TEMESA to strengthen its relationship with its clients.

Consequently, the absence of proper communication guidelines has resulted to fragmented communications between TEMESA and its customers who have been channeling their complaints in a manner which was considered proper for them. For example, the Audit Team noted the presence of several dissatisfaction opinions over the maintenance services from Regional Offices being channeled to Headquarters which were later communicated back to Regional Offices to be resolved. The Audit Team further noted several other opinions communicating dissatisfaction over the maintenance services due to delays in maintenance of vehicles and payment of suppliers, being channeled to the Ministry of Works, Transport and Communication for resolution instead of being channeled to TEMESA.

c) Inadequate Customer Visits

Section 3.6.5 of the Strategic Plan of TEMESA requires the development and implementation of customer visitation plans to be done throughout the implementation of the current Strategic Plan. The Annual Business Plans for the period of five years (between 2015/16 and 2019/20) indicated that, the customer visitation plans were to be replicated in the Regional Offices to achieve the same purpose as per its overall Strategic Plan. Customer visitation plans is among the means of implementing TEMESA’s strategy on strengthening awareness, publicity and marketing of its maintenance services and products.

The Audit Team noted that, the customer visits were not sufficient in TEMESA and therefore the Agency failed to meet its strategic targets and objectives in this aspect. Table 3.18 indicates the extent to which

the customer visitation plans were developed and implemented between 2015/16 and 2019/20 in the course of implementing the current Strategic Plan.

Table 3.18: Development and Implementation of Customer Visit Plans at TEMESA

Customer Visit Plans	2015/16	2016/17	2017/18	2018/19	2019/20
Required Number of Customer visit Plans	4	4	4	4	4
Number of Customer Visits Plans developed	1	3	10	1	2
Number of Customer Visits Plans Implemented	1	2	10	0	1
Percentage Implementation	25	50	250	0	25

Source: Strategic Plan of TEMESA, 2016/17-2020/21

Table 3.18 indicates inadequate implementation of customer visitation plans in the past four years. TEMESA has managed to implement 14 out of the 20 customer visit plans which were expected to be implemented between the financial years 2016/17 and 2019/20. During the financial year 2017/18, TEMESA managed to implement 10 out of 4 customer visit plans which was more than 2.5 times of the required number of customer visit planned as per the Strategic Plan.

Based on the discussions with the officials from TEMESA, the achievements in implementation of the customer visitation plans in the financial year 2017/18 was caused by the introduction of new staff in the Marketing and Public Relations Unit which increased the possibility of conducting the respective customer visit plans. However, the customer visit plans implemented were not sufficient in terms of coverage. In the last five financial years of implementation, only 10 out of 30 regions were covered with some of them having repeated customer visits.

Based on the same Strategic Plan, TEMESA identified customer visit plans as a means of improving the relationship with its customers. As a measure of this target, the Strategic Plan put forth the number of customer visits as an indicator and a measure of the extent to which the customer relationship has improved. On the other hand, this situation of insufficient customer visits was also confirmed by the Audit Team through a simple survey conducted to its customers who expressed negative opinion towards the services provided by TEMESA as indicated in Figure 3.8 in section 3.4.7 (a) above.

3.5 Provision of Cost-effective Maintenance Services

According to the Establishment Order of TEMESA, the key aim of establishing the Agency is for it to provide mechanical engineering services in the most cost-effective manner to support the economy of Tanzania. In addition to that, Section 4.3 of the Establishment Order provides financial performance criteria one of which demands operations that would result to cost-effectiveness.

However, the Audit Team noted that the maintenance services provided at TEMESA were not cost-effective. In order to determine cost effectiveness in TEMESA, the Audit Team conducted price analysis by assessing prices charged for spare parts and services rendered in three different perspectives elaborated below.

First, the Audit Team assessed whether TEMESA was overcharging government institutions for spare parts prices and the reasons for doing so in case it was found out. This assessment was done by comparing prices of spare parts indicated in the invoices issued to the government against prices indicated by suppliers of spare parts to TEMESA.

Second, the Audit Team assessed whether prices of spare parts charged by TEMESA were above the prevailing market prices for the same spare parts.

Third, the Audit Team assessed whether costs of maintenance services by TEMESA were above the prevailing market prices for similar

maintenance services. The detailed explanations of these analyses are given below.

3.5.1 Prices of Spare Parts Quoted in LPOs and Prices Quoted in Invoices to Government Institutions

The Audit Team assessed the prices of spare parts between those paid by TEMESA in acquisition of the spare parts as indicated in their LPOs and those quoted by TEMESA to government institutions. The objective of this comparison was to determine whether TEMESA was overcharging government institutions for prices of spare parts. In order to determine the authenticity of the spare parts prices, the Audit Team made a sample of 30 invoices to government institutions in order to compare the prices.

Table 3.19: Comparison of Prices of the Same Spare Parts

Region	Average Price by Supplier to TEMESA (TZS)	Average Price by TEMESA to Government Entity (TZS)	Percentage Difference
Kagera	83,307	135,923	34.10
Iringa	243,143	297,209	22.20
Dodoma	545,000	510,767	6.70
Dar es Salaam (MT-Depot)	452,972	429,167	6.50
Lindi	186,200	183,430	1.30
Manyara	171,650	172,420	0.45
TOTAL	1,682,272	1,728,916	AVERAGE=11.9

Source: Auditors' Analysis TEMESA and Supplier Spare Parts Prices, 2020/21

Table 3.19 indicates that there was some difference of prices between those quoted by suppliers to TEMESA and those quoted by TEMESA to government entities. The general analysis has indicated that TEMESA was overcharging government institutions for spare parts prices by an average of 11%. The most overcharging region was Kagera Region with an average of 34% difference between the prices of same spare parts

from the supplier against the prices of same spare parts to the government.

Through discussions with the officials from the visited Regional Offices, it was pointed out that the differences in prices were caused by the nature of purchase done by TEMESA which was based on credit purchases and therefore provided a room for suppliers to overcharge TEMESA as a compensation of credit period offered. Based on discussions with the suppliers, the purchases on credit were quoted at higher prices than prices quoted when cash sales were made.

However, further analysis of the purchase procedures by TEMESA indicates that the higher prices was caused by the faulty purchase procedures by the Procurement Management Unit (PMU) at TEMESA Regional Offices. Based on the current processes, the Procurement Management Units (PMU) were providing price estimates before conducting a mini competition to obtain the price quotations and eventually, the correct prices for spare parts. The current practice of developing estimates before receiving quotation was causing additional costs on top or below the previously estimated costs. This difference in costs was not reflected back to the LPOs of government entities which by the time of purchase were supposed to have accepted the provided costs estimates.

Consequently, the overcharged prices were inflating the total costs of maintenance services by TEMESA to the government entities. This situation was also confirmed by the simple survey done by the Audit Team to the officials from the government entities who were asked to provide opinion on whether prices charged by TEMESA were reasonable or not. The results indicated that officials in all 12 government entities visited claimed that the prices were not reasonable.

3.5.2 Spare Parts Prices Quoted by TEMESA to Government Institutions and Market Prices of Similar Spare Parts

The Audit Team assessed the prices of spare parts quoted by TEMESA against the market prices of similar spare parts. The aim of this assessment was to determine whether the spare parts used by TEMESA were purchased at a market price and therefore contributing to cost-

effective services. In order to determine the authenticity of the prices quoted in the sample of 144 invoices issued to government entities such prices were compared with the market prices of similar spare parts. Within a sample, a total of 18 most common spare parts were considered while making the comparison as indicated in Table 3.20.

Table 3.20: Comparison of Invoice Prices and Market Prices for Similar Spare Parts

SN	Name of Spare Part(s)	TEMESA Price	Average Market Price	Variation (%)
1	Knuckle Bearing L/C H/Top Toyota L/C H/Top	330,400	146,400	126
2	Timing Belt L/C Prado (1KD)	306,800	177,080	73
3	Stabilizer Link Assembly Front - Nissan Patrol	212,400	129,250	64
4	Clutch Plate - Nissan Patrol	660,800	428,200	54
5	Pressure Plate - Nissan Patrol	696,200	475,800	46
6	Coil Spring Front - Nissan Patrol	578,200	401,070	44
7	C.V Joint LHS Toyota L/C H/Top	802,400	604,500	33
8	Tie Rod Ends - Nissan Patrol	448,400	336,500	33
9	Hand Brake Shoe L/C V8 GX	330,400	264,570	25
10	Brake Pads Rear L/C Prado 1KD	318,600	263,660	21
11	Brake Shoe Toyota L/C H/Top	318,600	264,860	20
12	Brake Pads Front L/C V8 GX	413,000	361,900	14
13	Rotor Head Toyota L/C H/Top	885,000	790,660	12
14	Brake Pads Toyota L/C H/Top	330,400	311,200	6
15	Radiator Assembly - Nissan Patrol	1,840,800	1,760,000	5
16	Tensioner Bearing L/C Prado (1KD)	448,400	435,230	3
17	Brake Hydro-booster Assembly L/C Prado (1KD)	6,254,000	6,212,000	1

18	Brake Pads Front L/C Prado 1KD	330,400	346,160	(5)
19	Front Shock Absorber Assembly L/C Prado (1KD)	566,400	658800	(14)

Source: Price Quotations and TEMESA's Invoices, 2015/16-2019/20

Table 3.20 indicates a variation in prices between those indicated in the invoices issued to government institutions against market prices of similar spare parts. On average prices were higher by 30%. From the selected spare parts, the most common inflated part/product was the Knuckle Bearing which was fixed on Toyota Landcruiser Hard Top which was inflated by 126%.

Further discussion with the officials from TEMESA pointed out that the difference in prices was caused by the nature of purchase by TEMESA which is normally purchasing spare parts on credit basis. According to the suppliers, the credit purchases were quoted at higher prices than the prevailing market prices while the cash purchases were quoted at prices corresponding to the prevailing market prices. This made the prices to be higher than the prevailing market prices.

3.5.3 Costs of Maintenance Services by TEMESA against Market Prices of Similar Maintenance Services

The Audit Team assessed the prices of maintenance services offered by TEMESA against those quoted by other maintenance service providers including private garages and dealers. The aim of this comparison as has been summarised in Table 3.21 was to assess if there was a difference in prices and determining whether TEMESA was overcharging or undercharging the government institutions for similar maintenance services.

**Table 3.21: Comparison of Maintenance Service Costs (Prices)
between TEMESA and Market Prices of similar
Maintenance Services**

	Type of Service	TEMESA Prices ¹⁰	Average Market Price	Deviation (%)
Land Cruiser (VDJ 200)	General Service	64,125	235,000	266
	Engine Dismantling and Assembly Overhaul (Land Cruiser VDJ 200)	1,411,000	4,160,000	195
	Steering Gear Box Overhaul	103,750	300,000	189
	Oil Pump (R&R)	249,000	508,333	104
	Brake Pads (R&R)	41,500	76,667	85
	Vehicle Chassis (R&R)	2,324,000	3,950,000	70
	Fly Wheel (R&R)	197,125	283,333	44
Toyota Pick Up	Water Jacket Core Plug (R&R) Pick-Up	41,500	211,667	410
	Gearbox Overhaul Manual (R&R)	166,000	670,000	304
	Oil Pump (R&R) (Toyota Pick Up)	99,600	383,333	285
	Vehicle Chassis (R&R)	1,328,000	3,200,000	141
	Brake Pedal (R&R)	83,000	85,833	3

Source: Auditors Analysis of TEMESA's Invoices and LPO's and Supplier's Quotations, 2015/16-2019/20

Table 3.21 indicates that prices of maintenance services as quoted by TEMESA were lower as compared to the market prices of similar maintenance services by private garages dealers. The computations have indicated that the costs of maintenance services by private garages were higher than those by TEMESA by 175 percent. On the other hand, market prices of similar maintenance costs by private garages including approved dealers were approximately 2 times higher than costs of similar services by TEMESA.

Through interviews with the officials from TEMESA in the visited regions, it was pointed out that main reason for having lower costs of maintenance/repair services than corresponding market prices was the man-hour charging rate based on the man-hour charging manual recently issued by TEMESA. It was pointed out that the current man-

¹⁰ The prices indicated in this category are based on TEMESA's Man-Hour Charging Manual of 2018

hour charging rate of TZS 41,500 was relatively low and did not match with the actual workload when the services are executed.

On the other hand, the review of the operating practices by the Audit Team noted that the big workload as pointed out by TEMESA technicians was caused by nature of tools and equipment currently used by TEMESA in execution of its works. The observations have indicated that the execution of maintenance works by TEMESA is still largely mechanical and manual and therefore consumes substantial amount of labor hours/power.

Consequently, the lower costs of maintenance services provided by TEMESA has resulted to a lower percentage of revenue generated in the region or production centers. This in turn has affected regional initiatives in improving the working environment of their staff. This is because the amount of funds generated from labor charges is the one allowed to be spent on other requirements including improvement of working environment.

3.5.4 Cost-Effectiveness Analysis for Maintenance Services Provided by TEMESA

In addition to the assessment of prices in the previous section the Audit Team finally assessed whether the services provided by TEMESA were cost effective. The aim of this assessment was to check whether TEMESA was meeting the fundamental objective of its establishment as provided in Section 3.1 of TEMESA Establishment Order. The Establishment Order required TEMESA to provide among other services, mechanical engineering services in the most cost-effective manner to support the economy of Tanzania. The following section presents the results of the assessment.

The Cost Effectiveness Analysis (CEA) was anchored in two major costs components as per services provided by TEMESA. The two costs components are the costs of spare parts and the cost for maintenance services as a labour. The two components constitute the total costs for maintenance services by TEMESA.

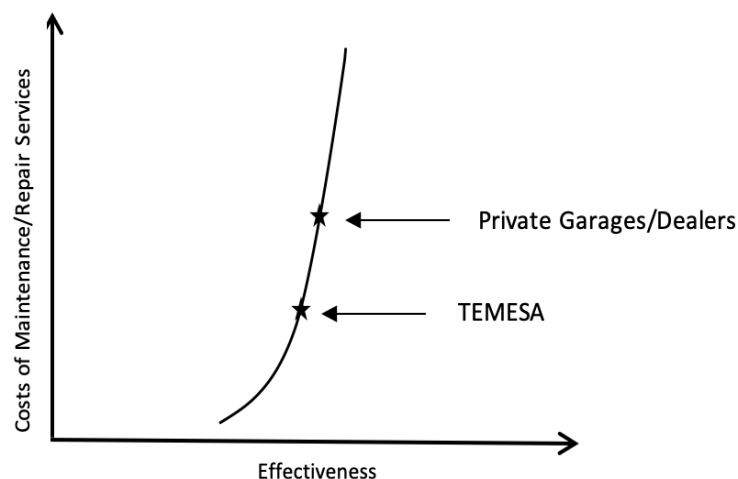
Additionally, the analysis was based on two assumptions. First, the analysis has assumed that all spare parts acquired by TEMESA are

genuine spare parts and therefore are bound to be effective in delivering the intended objective when fixed in the respective vehicles. Secondly, the analysis has assumed that all personnel working to maintain vehicles brought at TEMESA have satisfactory skills and experience to deliver the required maintenance services.

a) Cost-Effectiveness of Maintenance/Repair Services Excluding Costs of Spare Parts

The results from the analysis by the Audit Team indicated that the costs of maintenance services provided by TEMESA were lower compared to the costs charged at the market. This is indicated by Table 3.21 above which compared the average market price of services against the prices offered by TEMESA, based on its Man-hour charging manual. The audit revealed that TEMESA offers cost effective services due to the fact that the personnel working to maintain vehicles have sufficient skills and experiences to deliver the services. The Audit Team concludes that the provided maintenance services excluding spare parts component are cost-effective as presented in Figure 3.8 below.

Figure 3.8: Costs Effectiveness of Repair Services by TEMESA



Source: Auditors' Analysis of Costs of Maintenance and Repair Services, 2015/16-2019/20

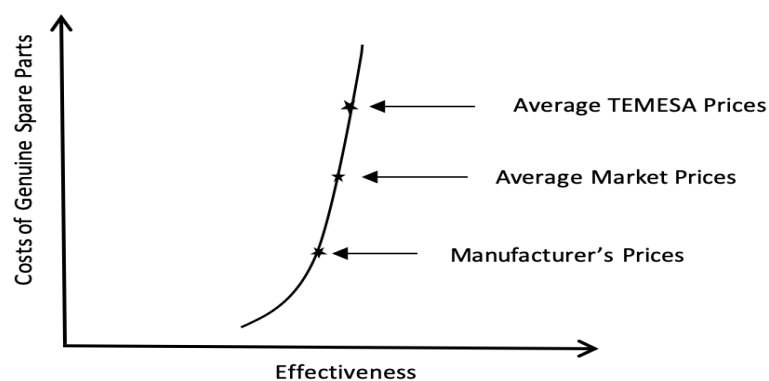
Figure 3.8 indicates the relationship between the costs of maintenance services provided by TEMESA, Dealers and Private Garages in the market. The relationship indicates that average prices of repair or maintenance services by TEMESA were lower and cheaper as compared to all other possible sources of the same maintenance services in the market. The audit revealed that TEMESA had lower maintenance cost due to availability of personnel with sufficient skills and experiences working to maintain or repair the vehicles compared to those working in Private Garages.

Based on the above conditions, the relationship indicates that the maintenance/repair services supplied by TEMESA were **cost-effective**.

b) Cost-Effectiveness of Supplied Spare Parts

The analysis of the Audit Team revealed that the costs of genuine spare parts supplied by TEMESA were expensive as compared to the same genuine spare parts available in the market. This is indicated by the analysis on Table 3.20 above which compared the average market price of genuine spare parts against the prices of similar spare parts by TEMESA. The comparison was done with the consideration that all genuine spare parts are equally effective by serving the intended function in the vehicle/plant at the standard time before it is changed. The relationship between the costs of spare parts and effectiveness of spare parts is presented in Figure 3.9 below.

Figure 3.9: Cost-Effectiveness of Genuine Spare Parts



Source: Auditors' Analysis of Costs of Maintenance and Repair Services, 2015/16-2019/20

Figure 3.9 indicates the relationship between the costs and the effectiveness of genuine spare parts. The relationship indicates that Average prices of spare parts by TEMESA were higher as compared to all other possible sources of spare parts.

In addition to the above analysis, the Audit Team assessed the level of costs for the spare parts and the costs of maintenance services in invoices issued to customers by TEMESA to determine the level of costs between costs of spare parts and costs of labour as a service (Labour charges). The analysis was based on the sample of 144 invoices from the six TEMESA Regional Offices that were visited by the Audit Team.

The results are presented in Table 3.22 below.

Table 3.22: Proportion of Specific Costs from Total Maintenance Costs by TEMESA

Cost Component	Percentage
Material Costs	82
Labour Charges	18
Handling Charges	-
TOTAL	100

Source: Auditors' Analysis of 144 Invoices Issued by TEMESA, 2015/16-2019/20

Table 3.22 indicates that more than 82% of the total costs of maintenance services by TEMESA are originating from the costs of spare parts. This being the case, the relationship of the cost-effectiveness of the maintenance services by TEMESA by referring to the total costs depends on the degree of cost-effectiveness of spare parts supplied.

Based on the assessment of the relationship of costs and effectiveness of spare parts provided above, the total maintenance costs by TEMESA were seen not to be cost-effective.

3.6 Capacity to Conduct Maintenance

This section presents the assessment of the capacity of TEMESA to conduct maintenance activities for the government vehicles. The section 3.6.4 of TEMESA Strategic Plan sets a target for the Agency to acquire modern tools and workshop equipment. In addition to this,

TEMESA had a target to rehabilitate its workshops so as to capacitate and enable them to deliver high quality and efficient services. TEMESA was also supposed to ensure that they maintain a sufficient level of qualified human resources to enable execution of maintenance services effectively.

The Audit Team in this section assessed the capacity levels in terms of availability and reliability of both tools and building facilities as well as human resources to conduct maintenance services. With respect to availability, the audit team checked the physical availability of the tools, buildings and human resources. With respect to reliability the Audit Team assessed the functionality of the buildings and tools/facilities as well as the skills levels of the available human resources at TEMESA.

The assessment relied on analyzing both the current capacity levels and the initiatives taken to address the capacity gap observed. The detailed discussion is presented below.

3.6.1 Capacity Level in terms of Tools and Workshop Facilities

The Audit Team assessed the capacity of the workshops in the visited regions by establishing the general capacity of the building infrastructure (Based on the opinion of the Auditors) and the tools/workshop facilities. Summary of the results from the assessment are presented in Table 3.23:

Table 3.23: Assessment of the Capacity of TEMESA in Relation to Working Tools and Workshop Facilities

Item	Category	Manyara	Kagera	Dodoma	Dar es Salam	Iringa	Lindi
Workshop Building Infrastructure	Area Capacity	C	C	N	C	N	C
	Building Condition	N	N	C	C	N	N
Tools and Workshop Facilities	Computerised Diagnosis	N	N	C	D	D	D
	Tire Changer	N	N	N	C	C	N
	Wheel Balancer	D	D	C	C	D	D
	Complete Tool Box	C	C	C	C	C	C
	Car Jack (50 tons)	N	C	D	C	C	C
	Welder Machine	C	C	C	C	C	D
	Press Machine	N	C	C	C	C	C

Source: Interview and Auditors' Observations during the visit to TEMESA Workshops, 2020/21

***Key**

C= Capable

N= Not Capable

D= Available with Limited Functionality

Table 3.23 indicates that the regional centers had some tools and facilities but not the required capability. With regard to workshop infrastructure, the regions had enough capacity in terms of space or area capacity except for Dodoma and Iringa, which seemed to be overwhelmed by the number of vehicles in demand of service. With regard to building condition, Manyara, Kagera and Lindi regions did not have proper building condition to support a modern working environment for garage workshop. Photo 3.1 shows an inspection pit in one of the visited workshops.

Photo 3.1: A Photo from TEMESA-Lindi Workshop showing Dilapidated Inspection Pit



Source: Photo captured at TEMESA Workshop in Lindi Region by the Audit Team on 23rd January, 2021

On the other hand, tools and workshop facilities were also lacking in some regions while available in other regions. The Audit Team outlined seven most important tools facilities to be available to support efficient maintenance services as indicated in Table 3.23. The assessment indicates that most of the regions were lacking computerised diagnostic machine which was important for servicing modern vehicles with complicated auto-electric systems. Four out of six centers/regions visited did not have a tire changer equipment which is very important for wheel works. All of the regions were having complete sets of toolboxes to assists proper working.

3.6.2 General Availability of Tools

The Audit Team assessed the general availability of the needed tools by determining their percentage of availability. This was done by assessing the available against the required number of tools as indicated in **Appendix 7** of this report. The type and minimum number of the equipment were established in order to determine the availability of important tools for workshops operations.

The minimum requirements were based on the criteria used by TEMESA to qualify private garages to provide maintenance services on behalf of the government. The summarized results of the availability of tools are indicated in Table 3.24.

Table 3.24: Percentage of the Availability of Tools and Key facilities in regards to the Visited Workshops

Regional Office	Percentage Availability
Dodoma	88
Dar es Salaam (MT Depot)	83
Iringa	80
Manyara	66
Kagera	62
Lindi	57

Source: Auditor's Observations and Analysis (2020)

Table 3.24 indicates that there was a varying levels of tools availability in the visited regions. Three of the six regions; Dodoma, Dar es Salaam and Iringa had sufficient tools with the percentage of availability of more than 80%. While Manyara, Kagera and Lindi had a moderate level of tools availability ranging between 57% and 66%.

The commonly available tools in all of the regions included arc welding machines, light duty tool boxes, battery chargers, hand drills, press machines, air compressors and chain blocks. The mostly unavailable tools included tool boxes for heavy duty, panel beating, spray and painting, tire service machines and modern functional diagnostic machines and functional wheel balancers.

Generally, the assessment indicated that regions did not have full capacity to operate as full-fledged workshops without encountering challenges due to lack of some tools. For instance, regions without tire changer were not able to properly execute all wheel works.

a) Assessment of TEMESA Initiatives to Maintain or Improve Capacity Level in Tools and Workshop Facilities

In order to address challenges encountered with regard to tools and facilities capacity, TEMESA adopted deliberate measures. The

initiatives included purchasing of the new set of tools and conducting major rehabilitation of their existing workshops. The purchase of new equipment and tools was done through procurement with the contract number AE/006/2019-20/HQ/G/CN-22 of the financial year 2019/20 with a total sum of TZS 4,430,823,810.32 and another procurement with different subcontracts with a total sum of TZS 342,096,872 of the financial year 2012/13.

The measures aimed at strengthening the capacity of TEMESA in order to enable it deliver efficient and high-quality maintenance services as per its Mission statement. However, the Audit Team noted that these initiatives encountered some challenges in procurement or distribution processes which undermined the efforts taken to promote performance in maintenance of the government vehicles. These challenges are discussed below

i. Supply of Incomplete Set of Tools

The Audit Team noted that some of the supplied sets of tools were incomplete and therefore could not operate without having an additional set of equipment. This affected the objective of supplying particular tools to the respective regions. For instance, TEMESA has recently distributed Wheel Balancing equipment. However, the equipment was not purchased together with the corresponding tire changer and wheel balancing weights which work together to complete the wheel works. Photo 3.2 shows a set of a single wheel balancing machine without a corresponding tire changer machine.

Photo 3.2: A Non-operating Newly Purchased Wheel Balancer Equipment



Source: Photo captured at TEMESA Workshop in Kagera Region by the Audit Team on 8th December, 2020

ii. Purchase of Malfunctioning Tools

The Audit Team noted that some of the tools which were purchased were malfunctioning right from the start because of either being defective or having outdated software. As an initiative to improve its working capacity TEMESA procured Computerised Diagnostic Machines to assist in conducting pre and post inspection activities whenever vehicles are brought for maintenance. However, the Audit Team noted that some of the diagnostic tools were not functioning and therefore could not completely serve the intended objectives. Some of the machines were installed with outdated software capable of diagnosing vehicle models which were manufactured up to year 2014. Any vehicle manufactured beyond that year could not be diagnosed.

Moreover, the Audit Team noted that some of the machines were defective right from the start and could not work completely. The initial analysis indicated that the equipment were was either defective or broken right from their purchase. Photo 3.3 shows one of the non-operating computerised diagnostic machines.

Photo 3.3: Non-functional Computerised Diagnostic Machine



Source: Photos captured at TEMESA Workshop in Manyara Region by the Audit Team on 8th December, 2020

iii. Purchase of out of Specifications Equipment

The Audit Team noted that some of the equipment purchased were not compatible with the available local conditions in the areas where they were to be installed. For instance, the newly purchased welding machines and wheel balancer were to be operating in areas where there is a single-phase electric circuit. However, the newly purchased and supplied equipment were supplied in areas with three phase electric supply. This made the equipment non-operative until a new electric supply system is installed to fit the single-phase requirements of the supplied equipment.

Photo 3.4: A Single-phase Wheel Balancer supplied to 3-phase workshop



Source: Photos captured at TEMESA Workshop in Kagera Region by the Audit Team on 8th December 2020

iv. Goods Supplied Without Inspection and Country of Origin Certificates

Section 11 of the Special Conditions of the Contract (SCC) between TEMESA and the selected supplier, requires the supplier to present one week before the arrival of the goods at the port or place of arrival the inspection certificates issued by the nominated inspection agency and the certificate of country of origin issued by the chamber of commerce and industry in that country. These certificates were supposed to be the initial guarantee of the genuineness of the supplied commodities and an assurance of the functionality and value for money for the purchased equipment.

However, the Audit Team noted that the supplied equipment did not have some of the key certificates to confirm the authenticity of the equipment and therefore guarantee that it will properly function. Absence of the required certificates increased the risk of procuring tools out of standards and specification.

3.6.3 Capacity Level in terms of Human Resources

The Audit Team assessed the human resource capacity of the workshops in the visited regions (Based on the opinion of the auditors) and presented the results in Table 3.25:

Table 3.25: Assessment of Human Resource Capacity at TEMESA

Category	Profession	Manyara	Kagera	Dodoma	Dar es Salaam	Iringa	Lindi
Capacity in terms of number of staff	Engineers	S	NS	S	S	NS	NS
	Technicians	NS	NS	S	S	NS	NS
	Artisans	NS	NS	S	S	S	S
Capacity in terms of Skills	Professional Registrations	S	S	S	S	S	S
	Key Training	NS	NS	NS	NS	NS	NS
	Workshops Attendance	NS	NS	NS	NS	NS	NS
	Attachments	NS	NS	NS	NS	NS	NS

Source: TEMESA's Staff List, August 2020

***Key**

S= Sufficient

NS= Not Sufficient

Table 3.25 indicates the human resource capacity of TEMESA in the visited regions with varying capacity levels in numbers and skills. With regard to the number of staff, most of the regions were having insufficient level of capacity in terms of human resource with the exception of Dodoma Region with a sufficient number of staffs to undertake maintenance activities.

With regard to skills levels, all of the regions did not have sufficient skills capacity levels. This was caused by the lack of sufficient training programs and other capacity building programs including workshops and attachments. Interviews with the responsible staff in the visited

regions indicated that they have not attended any key training in their areas of specialization for a long time.

Furthermore, the Audit Team assessed the capacity of Regional Offices in conducting maintenance works by using specialized skills through specialized technicians. Based on the discussions with officials from the Regional Offices, a complete set of maintenance team needed in addition to the available technicians a set of 5 other key specialized technicians who are experienced and capable of troubleshooting any problem associated with a particular vehicle. The specialized skills are indicated in Table 3.26 together with the assessment of the capacity level in the respective regional office.

Table 3.26: Assessment of Specialized Skills in the Maintenance of Vehicles Available at TEMESA Regional Offices

Specialized Skill(s)	Manyara	Kagera	Dodoma	Dar es Salaam	Iringa	Lindi
Auto-Electricians	AN	N	AS	AN	N	N
Engine Specialists	AN	AN	AS	AN	AN	AN
Panel Beating & Spray Painters	N	N	NT	AN	NT	N
AC & Refrigeration	N	AN	AS	AS	NT	NT
Welders	AN	AN	AS	AS	AN	N

Source: TEMESA's Staff List: August, 2020

***Key**

AS= Available & Sufficient

AN= Available but Not Sufficient

N= Not Available

NT= Not Available but Outsourced

Table 3.26 generally indicates that there is insufficient capacity for specialized skills in conducting maintenance services for the government vehicles. Most of the skills were either not available or available but not sufficient. Panel Beating and Spray Painting were the most insufficient skills where 5 of the regions did not have them with some of them deciding to outsource the skills particularly in Dodoma and Iringa regions. Only Dar es Salaam MT Depot production center had its own Panel Beating and Spray-Painting Unit.

Generally, the audit revealed that Four out of Six regions visited did not have sufficient skills to conduct maintenance services. These included Manyara, Kagera, Iringa and Lindi. These regions were either having skills not available or available but not sufficient and therefore decided to outsource. Dodoma region and Dar es Salaam MT Depot were sufficient in 3 of the 5 skills with a deficiency in Panel Beating only which was outsourced.

Consequently, the deficiency in specialized skills in Regional Offices affected quality level of the maintenance activities. The Regional Offices were involuntarily forced to complete the maintenance services for vehicles brought to their workshops sometimes by using the unskilled staff available at the moment.

a) TEMESA's Initiatives to Improve Human Resource Capacity

In order to address challenges encountered with regard to human resources availability and skills capacity TEMESA designed a set of measures. The most notable initiatives included the planning for capacity building programs as reflected in their Strategic Plan. This aimed at strengthening their capacity in order to deliver high-quality maintenance services as per TEMESA's Mission statement.

However, the Audit Team has noted that these initiatives were not sufficiently executed. As a result, the capacity gap has continued to exist and generate more challenges as the number of vehicles has continued to grow each year. The weaknesses encountered are discussed below

i. Insufficient Training Programs

The Audit Team noted that, TEMESA has not conducted sufficient training to equip its human resource with proper skills in order to undertake maintenance services in the most modern and efficient way. The Audit noted that the last time training programs with an identified number of training planned was in the financial year 2017/18. Nevertheless, the training program was not sufficiently executed, as there was only one training conducted.

Apart from being inadequate, the training program was implemented without a thorough needs assessment to establish the existing gap in skills and outline the proper interventions.

ii. Recruitment of Temporary Staff

The Audit Team noted that TEMESA has been recruiting temporary staff at the headquarters and in some of the Regional Offices as a means of bridging the human resource capacity gap. Most of the recruited staff were technicians and other artisans to assist in undertaking maintenance works in their workshops.

The Audit Team has noted that the recruited temporary staff have been able to assist in bridging the gap not only in maintenance works but also in other cadres connected with provision of maintenance activities including procurement, records and accounting cadres. However, the number and ratio of temporary staff have been growing gradually with a current proportion standing at 44% of the total workforce of TEMESA. As the ratio increases, a risk is imposed on the accountability of works and stability of the workforce. Temporary staff can shift easily outside TEMESA to seek for more suitable job opportunities and therefore temporarily affecting the operational capacity of the respective centers and the capacity of the agency to meet its strategic objectives.

3.7 Oversight of Maintenance Services

This section presents the implementation of oversight functions on the maintenance activities at both Ministry's and TEMESA level. The oversight functions were assessed at three main roles, including performance agreement and its reporting, Monitoring roles of the Ministry over the operations of TEMESA and the Monitoring roles of TEMESA over its activities. Further details on the assessment are provided below.

3.7.1 Performance Monitoring by the Ministry of Works, Transport and Communication to TEMESA

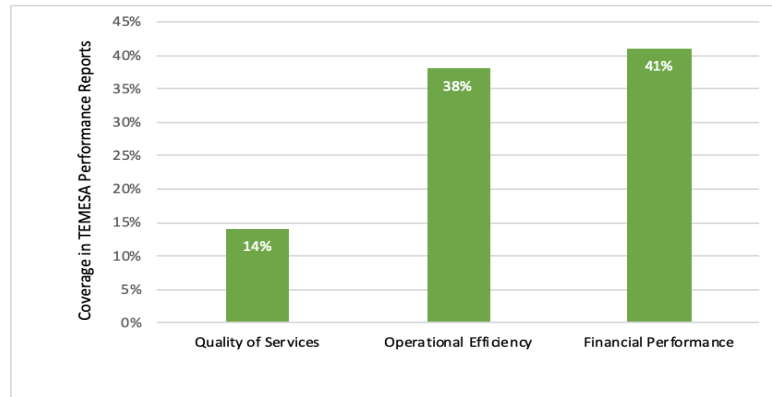
Among the approved functions of the Ministry of Works, Transport and Communication is to monitor the performance of TEMESA on annual basis through performance agreements signed between them and TEMESA. The performance agreements are intended to act as an oversight tool by the Ministry to TEMESA by providing both Ministry's expectation on the Agency's activities and other directives. On the other hand, its corresponding progress reports are expected to provide the operational information on the implementation of the agreed and other activities. The Audit Team assessed the execution of oversight roles of the Ministry through Performance Agreement and noted the following weaknesses.

a) Overreliance of Performance Reports and Business Plans on Financial Performance

Section 4 of the Establishment Order directs TEMESA to prepare Strategic Plans and Business Plan. The implementation of these plans was to be measured by quarterly performance reports. The section further explains the important aspects that are supposed to be included during preparation of the performance report. Based on the Establishment Order, the report should not only include financial performance but also Quality of Services and Operational Efficiency.

The Audit Team observed that TEMESA prepares performance reports that are financial based. In most cases, the reports mostly rely on number of activities performed and revenues generated. The team was able to conduct an evaluation of the reports as per the Establishment Order and presented the results in Figure 3.11.

Figure 3.11: Coverage of Required Contents of Annual Performance Reports by TEMESA



Source: TEMESA Performance Reports, 2015/16-2019/20

Figure 3.11 indicates generally that the performance reports of TEMESA were mainly reporting on the financial performance of the agency. About 41% of the contents of the performance reports were on financial matters particularly the collection of revenues and settlement of debts. Operational efficiency was covered by 38 percent of the contents of the performance reports while quality of services was given only 14% coverage in the report. TEMESA Establishment Order required all categories of performance to receive significant attention in the reports as they were crucial for organizational performance as well. This was caused by irregular reviews of the Establishment Order by the management in order to prepare technically and economically feasible performance reports.

Consequently, the overreliance of a performance report on a number of activities and revenue generation has a great impact on technical evaluation of maintenance services by TEMESA. TEMESA as an agency, did not have sufficient information about their technical performance, particularly on maintenance services rather than reporting about the number or volume of vehicles maintained.

c) Non-SMART Performance Indicators on Maintenance Services

In order to effectively measure the performance of the agency on particular activity, the Audit Team expected to see performance agreements accompanied by the performance indicators which are

specific and measurable. The Audit Team however noted that the performance indicators were not meeting the qualities of SMART indicators. The performance indicators between TEMESA and the Ministry are indicated in schedule IX of the performance agreement between the two. The Audit Team assessed the extent to which the indicators are SMART and whether they can measure the agreed performance on maintenance of government vehicles. Table 3.27 indicates the results.

Table 3.27: Assessment of the Performance Indicators

Activities	Performance Indicator(s)	Specific	Measurable	Attainable	Relevant	Time Bound
Maintenance of Vehicles, plants, plant equipment, electrical and electronics installation, rehabilitation and repair	Adherence to Executive Agencies Act No.30 of the year 1997 and its amendment of 2009	x	x	✓	✓	x
	Adherence to Public Finance Act 2001	x	x	✓	✓	x
	Works completed with quality material or spare parts and within time agreed with clients	x	x	✓	✓	x

Source: Performance Agreement & Auditors Analysis, 2020/21

Table 3.27 indicates that the three KPI which were expected to measure the performance of TEMESA did not meet all qualities of SMART indicators and therefore were likely not sufficient to correctly indicate the performance of TEMESA. Out of the five qualities of SMART indicators the identified indicators were only able to meet attainability and relevance aspect of SMART indicator. All of the three identifiable indicators were not specific, measurable and not time-bound. This made them to have a limited capacity to measure the performance of TEMESA with regard to the maintenance of services.

Generally, the indicators did not meet the qualities of a SMART indicator enough to make them measure the performance of the

agency and provide proper indication of the direction towards achievement of the respective strategic targets.

d) Delayed Performance Reports

The performance agreements, beside the commitment reached between the Chief Executive Officer of TEMESA and the Permanent Secretary outline the key dates for submission of the progress reports. The ability to deliver the reports on time was the key factor in providing effective feedback on the ongoing activities and address any challenge facing the implementation of the agency's activities.

However, the Audit Team noted that the submission of the progress reports on the implementation of the performance agreements was not made on time. Based on Section 2.3 of the Performance Agreement, TEMESA was supposed to submit quarterly and annual reports within the indicated dates. However, the Audit Team noted that both quarterly and annual reports were not submitted on time to the Ministry. The Audit Team established the extent to which the annual reports were delayed and presented the results in Table 3.28.

Table 3.28: Assessment of Timeliness for Submission of Performance Reports

Financial Year	Date Required	Date Submitted	Delays(days)
2015/16	31 st August, 2016	-	-
2016/17	31 st August, 2017	8 th September, 2017	6
2017/18	31 st August, 2018	16 th November, 2018	49
2018/19	31 st August, 2019	18 th November, 2019	79
2019/20	31 st August, 2020	-	-

Source: Annual Performance Reports, 2015/16-2019/20

Table 3.28 indicates that there were delays in submission of TEMESA's performance reports to the Ministry. Such reports contained information about the status and extent of implementation of its performance agreement. Generally, there has been an average of 45 days delays in submission of the reports. Most of the delays in submission of the reports happened during the financial years 2018/19 when the report was submitted 79 days from the required date.

Delays in submission of reports was caused by delays in the preparation of reports from Regional Offices and consolidated report by TEMESA. The consolidated report of TEMESA was a collection of all reports by Regional Offices.

Consequently, the delays in submission of the consolidated reports resulted into delayed feedback on the implementation of Strategic Plans and Business Plans. This is not a healthy situation as it bring some difficulties in assessment of ongoing activities and addressing any challenge faced.

3.7.2 Monitoring of Maintenance Activities by the Ministry

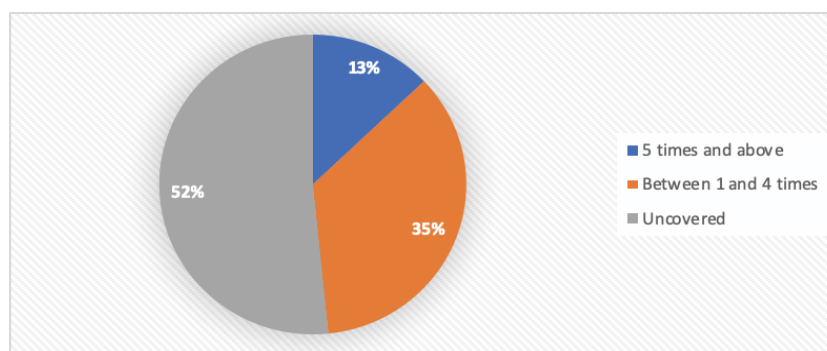
Among the approved functions of the Ministry of Works, Transport and Communication is to monitor the activities of TEMESA including the maintenance activities. The monitoring activities are expected to provide directions for the maintenance activities at TEMESA and provide solutions to challenges encountered during the provision of its activities. The monitoring activities are also expected to act as supportive supervisory functions at the level of the Ministry.

The Audit Team noted that the Ministry of Works, Transport and communication monitored various maintenance activities performed by TEMESA in order to identify performance short falls and establish corrective measures. However, the monitoring functions were not adequately performed on four aspects as described below.

Firstly, the Ministry did not have guidelines for conducting the monitoring activities for maintenance of government vehicles performed by TEMESA. The Audit Team noted that maintenance activities were done and reported based on the experience of the officials who were involved in the monitoring. There were no tools to guide the data collection and what was being monitored in relation to the implementation of annual action plan and Ministry's Strategic Plan. Moreover, there was only one checklist which provided areas to be monitored during the visits in the regions but such checklist did not describe what contents should be checked by the responsible staff.

Secondly, the monitoring activities were not comprehensive in terms of regions covered and contents described in the report. The monitoring activities covered only a few regions out of the total number of regions in Tanzania Mainland, and some of the regions were repeatedly covered leaving other regions uncovered. The Audit Team established the extent to which regions were covered during the monitoring activities in the period of five years since 2015/16 - 2019/20. The details from the assessment are summarised in Figure 3.12.

Figure 3.12: The Extent of Number of Times Regions were Covered by M&E Visits from Ministry of Works



Source: Monitoring Report by MoWTC, 2015/16-2019/20

Figure 3.12 indicates that monitoring activities were not comprehensive in terms of areas to be covered. Such activities left out a significant number of regions. The audit revealed that about 52% of all regions were not covered by the M&E visits by the Ministry. This left challenges and other technical deficiencies in those regions remaining unsolved. This left a loophole for existing challenges in those areas to persist and create more challenges in relation to provision of maintenance activities for government vehicles.

Lastly, the monitoring activities were also not sufficient in terms of number of visits which were conducted in relation to the planned number of visits to be conducted. According to the Strategic Plan, the Ministry is supposed to conduct at least 4 visits annually one in each quarter to be able to address the challenge encountered in the regions and TEMESA maintenance centers. However, the Audit Team noted that the number of visits conducted by the Ministry were not sufficient

as per the plans. The Audit Team established the extent to which monitoring visits were conducted by the Ministry and compared them with the required number of visits and presented the details in Table 3.29:

Table 3.29: Extent of the Number of Monitoring Visits Conducted by the Ministry

Financial Years	Required No of visits	Actual No of Visits	Discrepancy (%)
2015/16	4	NA	-
2016/17	4	NA	-
2017/18	4	2	50
2018/19	4	3	25
2019/20	4	2	50

Source: Ministry's Monitoring Reports, 2015/16-2019/20

Table 3.29 indicates generally that there has been insufficient number of monitoring visits conducted to TEMESA by the Ministry. In a period of 5 years, Ministry has managed to conduct only 7 out of the 20 required visits. This represented less than a half of the required visits on maintenance services.

Through the review of the performance reports at the Ministry, the Audit Team noted that there is a lack of sufficient monitoring activities at the Ministry. The absence of the Ministry's guidelines and technical support on monitoring and evaluation from the Directorate of Policy and Planning has contributed to the insufficient monitoring activities both in numbers and details coverage and contents of the reports.

Consequently, weak monitoring functions at the ministry has contributed to under-implementation of the ministerial plans on the provision of maintenance services. For instance, in the current strategic plan, the Ministry had planned to implement a total of 7 major strategies aimed at enhancing provision of maintenance services, however all of 7 interventions are either not implemented or partially implemented as indicated in Table 3.3 in Section 3.3 above.

3.7.3 Monitoring of the Maintenance Activities by TEMESA

The Audit Team noted that there is no monitoring of the maintenance activities at TEMESA. Maintenance activities were conducted without being sufficiently monitored by TEMESA itself. The headquarters' interaction with Regional Offices was only found on supportive supervision by the top management team. These visits however were not documented and no report of what was discussed in the visits was provided to the Auditors.

Through the review of Annual Performance Reports, the Audit Team noted that TEMESA was monitoring the implementation of strategic targets at a higher level by reporting how each of the indicators has been achieved. There were no discussions of other technical matters on maintenance activities and how they have been addressed.

Through interviews with the TEMESA officials, the Audit Team was informed that the monitoring activities were not conducted because of lacking proper monitoring tools at TEMESA. Throughout the period of implementation of current Strategic Plan, TEMESA has been operating without having a well identified monitoring function at the headquarters. The implementation of Strategic Plan was tracked through annual performance reports which provided only a general achievement of what has been performed without providing more details of how and why other targets were not achieved.

Furthermore, Audit Team noted that there was no monitoring guideline to provide details of what, how and when to monitor vehicle maintenance activities. The officials noted further that the monitoring guideline is in progress and it was to be finalized soon so as to guide the implementation of monitoring activities at TEMESA.

3.7.4 Evaluation of Maintenance Activities

Section 3.3 of TEMESA's Establishment Order provides an overall mission of TEMESA which demands the provision of mechanical engineering services to government institutions through efficient and increased productivity. This can be achieved through continuous evaluative activities aimed at determining how efficient and

productive the agency is operating as it strive to address its strategic objectives.

However, the Audit Team noted that the evaluation activities at TEMESA did not sufficiently determine how efficient and productive the agency was operating. The Audit Team expected to find two levels of evaluation; the operational level evaluation of day to day maintenance activities and the strategic level evaluation of the implementation of the overall Strategic Plan.

At operational level, TEMESA has not been conducting the evaluation of her maintenance activities and other interventions on maintenance to determine whether they are meeting their objectives with respect to efficiency, effectiveness, relevancy, impact and sustainability. The operational level evaluation was also expected to be a prompt indicator of Strategic Plan achievement in the Agency and an input to the overall evaluation of the implementation of Strategic Plan, which is done periodically. The evaluation function at institutional level was expected to go hand in hand with the monitoring function which was not present at the time of this audit.

At a strategic level, the Audit Team noted that the evaluation of the strategic objectives was also note done. The Audit Team however noted that TEMESA conducted a review of the Strategic Plan in 2019 which tried to assess the achievement of the Strategic Plan objectives until that time. However, the review of the Strategic Plan pointed out only one area of evaluation principles which was effectiveness. The report did not provide information on efficiency towards the achievement of the objectives, relevancy, impact and sustainability of different intervention by TEMESA on maintenance activities.

Consequently, lack of evaluation function at TEMESA deprived the Agency of reliable information on whether it efficiently addressed her strategic objectives, executed the adopted interventions, realized the intended impacts whether the interventions were sustainable in the long run.

CHAPTER FOUR

CONCLUSION

4.1 Introduction

This chapter provides a conclusion of the Audit. The basis for drawing the conclusions are the overall and specific audit objectives as presented in chapter one of this report. The general and specific conclusions are given below.

4.2 General Conclusion

The Audit Team concludes that the system for provision of maintenance services to the government vehicles in Tanzania is not effectively functioning as per TEMESA Establishment Order. Due to this situation there is a need to deliberately impose more initiatives to enhance performance level of TEMESA in providing maintenance services to the government vehicles. TEMESA has not been able to meet the customers' expectations while providing her services and therefore the core requirements for its establishment. Additionally, TEMESA has not been able to provide cost effective maintenance services as per the Establishment Order which is the key objective for its establishment.

4.3 Specific Audit Conclusions

The following are specific audit conclusions

4.3.1 Ineffective Vehicle Maintenance Management System

The Audit Team concludes that the vehicle maintenance system currently available is not effective and does not provide the proper environment for conducting maintenance services in a modern way and therefore providing high quality maintenance services. Both at strategic level and implementation level, the vehicle maintenance management systems is not providing useful inputs and outputs to enable proper functioning of vehicle maintenance.

The maintenance system is still manual with an operating environment that collects a lot of manual information and data and continue to store them unprocessed. The data inputs for the vehicles systems is not functioning to provide proper data feed to enable effective plans for maintenance services. The vehicles maintenance management system does not have proper information about the number and condition of government vehicles currently under the possession of the government which is the key information on developing a proper interventions to improve the provision of maintenance services for government vehicles. Additionally, the system is fragmented with a substantial deviations from a number of data collection points including form filling and other procedures.

4.3.2 Inadequate Planning for Maintenance Services

The Audit Team concludes that, the currently strategic and annual plans on maintenance are not effectively prepared and do not provide enabling environment for delivering high quality maintenance services. The lack of strong commitment in implementing interventions on the provision of maintenance services risks the achievement of the overall objectives and targets.

The high-level plans at both Ministry and TEMESA were not sufficiently coordinated to enable adequate implementation of activities at the operational level in TEMESA. The Ministry of Works also did not sufficiently implement her Strategic Plans on provision of maintenance services. There had been a number of activities which were not completed aimed at improving the provision of maintenance services. This has a direct effect on preparation and allocation of both financial and human resources on implementing these activities. Moreover, these plans mainly based on financial performance rather than the technical performance.

On the other hand, TEMESA did not effectively implement its strategic activities. The extent of implementation of engineering services is low and they address the technical performance at minimum rate. This existed regardless of the fact that the technical plans, were core to TEMESA functionality. Additionally, the plans were also not periodically reviewed in order to comply with technological advancement in the maintenance services.

Additionally, TEMESA under the Ministry of Works, Transport and Communication did not have any technical guidance at the execution level of maintenance services. The provision of maintenance service relied mostly on experience of technicians. This made it difficult to technically assess the performance of maintenance services of motor vehicles. The availed procedural guidance on maintenance services were accompanied by weaknesses which rendered it ineffective.

4.3.3 Inadequate Execution of Maintenance Services

The execution of maintenance services at TEMESA do not provide an assurance of high-quality maintenance services and cost-effective maintenance services. The maintenance services provided at TEMESA workshops are accompanied by weaknesses that have affected the level of quality and efficiency at which the services are being provided.

The maintenance services are being done without having complete pre and post inspections something which has generated risks of maintaining vehicles with incomplete diagnosis and therefore affecting the quality of works at large. The maintenance services lack critical quality control measures and therefore provide a number of loopholes for inadequate services for both services provided at TEMESA workshops and those provided by outsourced garages. In addition to weak quality control and assurance measures, the maintenance works are not supervised by the different levels of supervision in the workshops. These weaknesses in supervision of maintenance works have amplifying the major challenges on spare parts acquisition and quality of works done. On the other hand, there is no timely execution of maintenance services as most of the maintenance works are delayed for a substantial number of days.

The audit also concludes that management of revenues matters at TEMESA operations is not adequately done. The maintenance bills are not being issued on time and the revenues resulting from the issued bills are not collected on time. This has affected the capacity of TEMESA to settle debts with her creditors which again complicates its relationship with suppliers of genuine spare parts.

4.3.4 Inadequate Provision of Cost-effective Maintenance Services

The current operating environment for maintenance services for government vehicles do not guarantee the provision of costs effective maintenance services which is the requirement of TEMESA Establishment Order. The government vehicles have been maintained at costs which are slightly higher than the prevailing costs in the market due to higher spare parts prices.

The procedures in procurement of the spare parts at TEMESA has resulted to overcharging of the government institutions for spare parts purchased and fixed into their vehicles. The spare parts purchase terms have caused the prices of spare parts at TEMESA to be higher than prices of similar spare parts in the markets. Despite having repair services charged below the market prices, the total costs for maintenance services are not cost-effective due to higher spare parts charges.

4.3.5 Insufficient Capacity of TEMESA to Conduct Maintenance Services

The available capacity at TEMESA s is not sufficient enough to guarantee the provision of adequate maintenance services for all government institutions in demand of such services. TEMESA is operating with insufficient capacity in terms of tools and workshop facilities while the same is observed on human resource. The workshop facilities are operating with a dilapidated building structures and old machine tools.

The available human resource capacity at TEMESA does not guarantee the sufficient provision of maintenance services while facing a declining number every year without a corresponding replacement. The recent initiatives to employ temporary staff to minimize the gap is not a long-term solution to the existing gap.

On the other hand, the recent initiatives to capacitate the agency have been associated with procurement and distribution of malfunction tools. This has undermined the efforts to capacitate the agency. The supply of Non-functional tools to TEMESA workshops has affected the Agency's initiatives to achieve the intended objectives. Additionally, the human resource is not well capacitated at TEMESA, through continuous training programs and other interventions aimed at decreasing their skills gaps.

4.3.6 Inadequate Oversight of Maintenance Services

The current oversight activities for maintenance services do not provide an assurance of provision of maintenance services in a most effective manner. The maintenance activities are not well overseen at both levels of ministry and TEMESA itself. The performance monitoring is regularly through request of quarterly and annual reports however, the results and objectives of performance monitoring are undermined by the delays in submission of the reports and lack of proper actions taken following matters observed in the performance reports.

The monitoring activities by the Ministry of Works and Transport were not effective enough to provide a required level of oversight function for maintenance services. The M&E visits have not been guided by proper tools and checklists. On the other hand, the M&E functions by TEMESA on its activities are not being done. The maintenance activities are being executed without a properly guided supervision or monitoring process from the headquarters.

CHAPTER FIVE

RECOMMENDATIONS

5.1 Introduction

The audit findings and conclusion pointed-out weaknesses in the provision of maintenance service to the government-owned motor vehicles by TEMESA. Areas for further improvements have been identified in the management of information system, planning, execution and oversight of maintenance services.

In order to improve the weaknesses in provision of maintenance services by TEMESA, the Audit Team generally recommend improvement of how the maintenance activities are carried by the responsible stakeholders. The recommendations are specifically addressed to the Ministry of Works, Transport and Communication (MoWTC) and Tanzania Electrical, Mechanical and Electronics Services Agency (TEMESA) in order to improve the quality, cost and time of provision of maintenance services to the government-owned motor vehicles.

5.2 Specific Recommendations

5.2.1 Recommendations to the Ministry of Works, Transport and Communication

It is strongly recommended to the Ministry of Works and Transportation to:

- a) Regularly review and update its roles and functions with regards to maintenance services, so as to provide clear accountability on the use of resources by TEMESA necessary for improvement of maintenance services;
- b) Improve monitoring and evaluation of development and maintenance projects so as to effectively address key performance indicators on quality of maintenance services to the government-owned motor vehicles;

- c) Develop and institute clear guidelines, standards, and manuals geared towards establishing effective quality control and assurance mechanisms in all stages of provision of maintenance services;
- d) Supervise quarterly reporting of the condition of all government-owned motor vehicles, to enable proper planning and execution of maintenance services by TEMESA;
- e) Develop strategic and annual action plans that will provide an assurance that performance of TEMESA in providing effective and efficient maintenance services is accurately being monitored;
- f) Develop a proper mechanism that will facilitate smooth payments of maintenance bills between TEMESA and government institutions; and
- g) Improve functionality of the currently developed vehicle maintenance management system in such a manner that will ensure there is maximum interface with users of maintenance services and will enable collection of enough information from users.

5.2.2 Recommendations to TEMESA

I strong recommend to TEMESA to:

- a) Improve the functionality and operationalization of the maintenance information management system in order to capture detailed information critical for assessing the quality of maintenance services;
- b) Strengthen supportive supervision to Regional Offices so that Strategic and Business Plans are efficiently and effectively implemented to provide adequate maintenance services;
- c) Strengthen customer relationship management through effective customer satisfaction surveys and developing clear communication systems to enable customers' reflection of maintenance services in terms of quality, cost and time;

- d) Strengthen quality control and assurance systems for maintenance works at all operational and management levels to ensure high quality of maintenance and other services;
- e) To develop maintenance plan which will include maintenance schedules for government owned vehicles which will be used as guideline for providing maintenance services to her workshops; and
- f) Establish Key Performance Indicators (KPIs) which will be used to monitor workshop's performance of maintenance services to government vehicles.

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APPENDICES

Appendix 1: Responses from the audited entities

This part provides details on the overall comments from the two audited entities and their responses for comments, action to be taken and implementation timeline for each of the issued recommendation.

Appendix 1a: Responses from Ministry of Works and Transport

A: Overall Comments (s)

<p>The Ministry of Works and Transport adheres to the recommendations given and will improve supervision to TEMESA so as to meet customers' expectations. To improve TEMESA Workshops, the Ministry (Works) has taken some steps to modernize TEMESA workshops such as to:</p> <ul style="list-style-type: none">i) Set aside funds to TEMESA for construction and rehabilitation of all workshops;ii) Establish TEMESA workshops in some districts that are far from Regional Headquarter;iii) Facilitate TEMESA to procure modern mobile workshops to save some districts that are in remote areas;iv) Facilitate TEMESA to establish motor vehicle maintenance and information system, which links all workshops.			
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B: Specific Responses on the issued audit recommendations

SN	RECOMMENDATIONS	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
1.	Regularly review and update its roles and functions with regards to maintenance services, so as to provide clear accountability on the use of resources by TEMESA	Recommendation is taken	Roles and functions with regards to maintenance services will be reviewed and updated regularly.	FY 2021/2022

SN	RECOMMENDATIONS	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
	necessary for the improvement of maintenance services			
2.	Improve monitoring and evaluation of the development and maintenance projects so as to effectively address key performance indicators on quality of maintenance services to the government-owned motor vehicles	Recommendation is taken	To improve monitoring and evaluation of the development and maintenance project.	Two years 2021/2022 & 2022/2023
3.	Develop and institute clear guidelines, standards, and manuals geared to establish effective quality control and assurance mechanisms in all stages of maintenance services provision.	Recommendation is taken. However, the Ministry of Works in collaboration with Prime Minister's office, President's Office, Public Service Management and Good Governance and Ministry of Finance and Planning are in the process of formulating Guidelines of how to manage Government motor vehicles, plants and motor cycles.	To develop and institute clear guidelines, standards and manuals in maintenance services provision. To review and update roles and functions with regards to maintenance services regularly.	Two years 2021/2022- 2022/2023

SN	RECOMMENDATIONS	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
4.	Supervise quarterly reporting of the condition of all government-owned motor vehicles to enable proper planning and execution of maintenance services by TEMESA	Recommendation is taken	To supervise quarterly report of the condition of all government owned motor vehicles.	One year 2021/2022
5.	Develop strategic and annual action plans that will provide an assurance that the performance of TEMESA in providing effective and efficient maintenance services is accurately monitored	Recommendation is taken	To develop strategic and annual action plans to enhance efficient maintenance.	Two years 2021/2022 2022/2023
6.	Develop a proper mechanism that will facilitate smooth payments of maintenance bills between TEMESA and government institutions	Recommendation is taken	The Ministry has prepared the proposal to be tabled to IMTC to establish Plant and Transport Maintenance Fund (PTMF), which will be under the Ministry of Finance and Planning where all Government Vehicles will be maintained through that fund.	Two years 2021/2022 2022/2023
7.	Improve the functionality of the currently developed vehicle maintenance management system in such a manner that it will promote interactions between	Recommendation is taken. Meanwhile, TEMESA has already established the motor vehicle maintenance and information system which shows all	To improve vehicle maintenance management system.	Two years 2020/2021 - 2021/2022

SN	RECOMMENDATIONS	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
	TEMESA and users of maintenance services and collects enough information from them	information, maintenance and bill. The system is accessible to all TEMESA managers in all workshops.		

Appendix 1b: Responses from Tanzania Electrical, Mechanical and Electronics Services Agency (TEMESA)

A: Specific Responses on the issued audit recommendations

SN	RECOMMENDATIONS	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
a.	Improve the functionality and operationalization of the maintenance information management system in order to capture detailed information critical for assessing the quality of maintenance services	Recommendations noted, and will be accommodated in the new Maintenance Information Management System for Motor Vehicles Maintenance.	The new established Maintenance Information Management System for Motor Vehicles Maintenance is designed to accommodate all challenges revealed in current manual system which is used currently.	By the end of financial year 2020/21.
b.	Strengthen supportive supervision to its Regional Offices so that Strategic and Business Plans are efficiently and effectively implemented to provide adequate maintenance services	TEMESA has a Motor Vehicle Maintenance Guideline (Mwongozo wa Matengenezo ya Magari) which is used in all regions. The guidelines indicate each process of maintenance handling procedures (Pre-inspection, maintenance process up to Post inspection)	The audit recommendations noted the procedures indicated in the Motor Vehicle Maintenance Guideline has not adequately adhered. TEMESA will strengthen Monitoring and Evaluation from HQ to Regions in order to make sure all production Centers are complying with the Motor Vehicle Maintenance Guidelines.	To be done immediately.

SN	RECOMMENDATIONS	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
			Supervisors will be equipped with supervisory skills in order to perform their roles effectively and efficiently.	
C.	Strengthen customer relationship management through effective customer satisfaction surveys and develop clear communication systems to enable customers' feedback on maintenance services in terms of quality, cost and time	Recommendation noted	<p>TEMESA has its Customer Visit Plan which is prepared each financial year. For the first and second quarter of this financial year, Customer Satisfaction Survey has been done in six regions (Iringa, Mwanza, Mtwara, Lindi, Njombe and Geita).</p> <p>Also, the Management of TEMESA HQ conducted customer satisfaction Survey in four ministries (Waziri Mkuu, TAMISEMI, UTUMISHI and Fedha),</p> <p>To improve service through implementation of Annual marketing communication</p>	<p>It is a Continuous process/activity done within this Financial Year (2020/21)</p>

SN	RECOMMENDATIONS	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
			Plan in order to increase clear Communication between Agency and Customers.	
d.	Strengthen quality control and assurance systems for maintenance works at all operational and management levels to ensure high quality of maintenance and other services	Recommendation noted	Quality of parts are checked by a receiving and inspection committee as well as trained vehicle inspectors. Currently, TEMESA and TOYOTA are having a discussion of signing an MOU on procurement of spare parts on Bulk where by all spare parts will be bought from TOYOTA. The agreement is expected to reduce challenges of non - genuine spare parts. TEMESA is using signography for marking spare parts fixed at each Workshop in order to avoid	Strengthening will be done time to time (Continuous process/activity)

SN	RECOMMENDATIONS	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
			<p>cannibalisation of our spare parts.</p> <p>Use of barcode scanner and parts catalogue in order to specify required specification</p> <p>Use of CCTV camera installed in all workshops</p>	
e.	To develop the maintenance plan which will include maintenance schedules for government owned vehicles which will be used as guideline for providing maintenance services to its workshops	Recommendation noted	<p>The new Maintenance Information Management System for Motor Vehicles Maintenance will be proactive by designing a maintenance plan which will ensure government vehicles are maintained on schedule basis.</p> <p>Vehicle maintenance survey will be done on annual basis in order to establish maintenance need.</p>	Will be done Immediately

SN	RECOMMENDATIONS	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
f.	Establish Key Performance Indicators (KPIs) which will be used to monitor the workshop's performance of maintenance services to government vehicles	Recommendation noted	Management concurred with auditor's recommendations. However, KPIs for Workshop's Performance Services are clearly indicated in the Strategic Plan of the Agency. The KPI's indicators are number of jobs attended and revenue generated which should not be less than 75%. Also, a smaller number of complains attended	Review is done on each Financial year within a quarter base

Appendix 2: Audit Questions and Sub-Questions

Audit Question 1	To what extent the government vehicles have been in bad condition as a result of inadequate maintenance services?
<i>Sub-Audit Question 1.1</i>	<i>Is the system for collecting, storing and processing information about the condition of all government vehicles functioning properly?</i>
<i>Sub-Audit Question 1.2</i>	<i>Is the information system for providing alerts on the existence of vehicles which are in bad or inadequate condition effective?</i>
<i>Sub-Audit Question 1.3</i>	<i>How many government vehicles are in bad condition country wide as a result of inadequate -quality maintenance services?</i>
Audit Question 2	Is planning for maintenance of government vehicles effectively done?
<i>Sub-Audit Question 2.1</i>	<i>Are there guiding instruments for conducting maintenance of government vehicles available and functioning properly?</i>
<i>Sub-Audit Question 2.2</i>	<i>Is there a proper diagnosis of government vehicles before embarking on maintenance services by TEMESA?</i>
<i>Sub-Audit Question 2.3</i>	<i>Does TEMESA have proper maintenance information system?</i>
<i>Sub-Audit Question 2.4</i>	<i>Is the information system that facilitates proper management of records and status of the government motor vehicles available and working well?</i>
<i>Sub-Audit Question 2.5</i>	<i>Does TEMESA have an up-to-date information/database on the status of the government motor vehicles?</i>
<i>Sub-Audit Question 2.6</i>	<i>Are work programs for maintenance of the government motor vehicles prepared and updated periodically?</i>
<i>Sub-Audit Question 2.7</i>	<i>Are schedules for maintenance of the government motor vehicles prepared appropriately?</i>
<i>Sub-Audit Question 2.8</i>	<i>Are pre-inspections of the government motor vehicles conducted before carrying out maintenance effectively?</i>
<i>Sub-Audit Question 2.9</i>	<i>Is guidance for deciding the type of maintenance to be done to vehicles spelt-out by TEMESA?</i>
<i>Sub-Audit Question 2.10</i>	<i>Are procedures for allocating responsible staff or garages to undertake appropriate type of maintenance in place and functioning properly?</i>
Audit Question 3	Are maintenance services of government vehicles done and completed on time?

<i>Sub-Audit Question 3.1</i>	<i>Does maintenance time of the government motor vehicles follow the pre-defined manuals that are specific for each type of service?</i>
<i>Sub-Audit Question 3.2</i>	<i>Are the maintenance costs and maintenance bills prepared by TEMESA and well communicated to stakeholders on time?</i>
<i>Sub-Audit Question 3.3</i>	<i>Does TEMESA provide maintenance services within the timelines indicated in their service agreements?</i>
<i>Sub-Audit Question 3.4</i>	<i>Is the manpower available at TEMESA sufficient to allow timely provision of maintenance services?</i>
Audit Question 4	Are maintenance services to the government vehicles provided in a cost-effective manner?
<i>Sub-Audit Question 4.1</i>	<i>Does TEMESA have proper costing structure for generating costs of its maintenance services based on the prevailing market prices?</i>
<i>Sub-Audit Question 4.2</i>	<i>Are the costing structure for maintenance services properly communicated to the responsible stakeholders prior to provision of maintenance services?</i>
<i>Sub-Audit Question 4.3</i>	<i>Are the maintenance costs set by TEMESA acceptable and affordable?</i>
<i>Sub-Audit Question 4.4</i>	<i>Does TEMESA have a proper means of acquiring spare parts and other equipment used in the provision of maintenance services at the best prices?</i>
<i>Sub-Audit Question 4.5</i>	<i>Does TEMESA have a proper plan to periodically review the costing structure it has set for the customers?</i>
<i>Sub-Audit Question 4.6</i>	<i>Does TEMESA has a proper means of allocating government vehicles to private garages in a manner that ensures cost effective services are provided?</i>
Audit Question 5	Does the quality of maintenance services provided to the government vehicles meet the Pre-defined Specifications/Standards?
<i>Sub-Audit Question 5.1</i>	<i>Does TEMESA undertake maintenance of government motor vehicles in accordance with the set standards and manuals?</i>
<i>Sub-Audit Question 5.2</i>	<i>Does TEMESA supervise maintenance works in order to ensure they are carried out in accordance with the agreed standards and quality?</i>
<i>Sub-Audit Question 5.3</i>	<i>Are the maintenance services offered by TEMESA trustworthy based on the quality of spare parts used?</i>
<i>Sub-Audit Question 5.4</i>	<i>Does TEMESA effectively conduct post-inspection of the government vehicles after carrying out maintenance?</i>

<i>Sub-Audit Question 5.5</i>	<i>Does TEMESA properly hand over the maintained vehicles to the responsible government entities after maintenance?</i>
<i>Sub-Audit Question 5.6</i>	<i>Does TEMESA collect and analyse customer's feedback as a means of ensuring there is continuous improvement on the quality of its maintenance services?</i>
Audit Question 6	Does TEMESA have sufficient capacity to carry out maintenance of the government motor vehicles?
<i>Sub-Audit Question 6.1</i>	<i>Does TEMESA have enough professionals and expertise to properly carry-out maintenance of government vehicles?</i>
<i>Sub-Audit Question 6.2</i>	<i>Does TEMESA have proper capacity building programmes for its staff?</i>
<i>Sub-Audit Question 6.3</i>	<i>Does TEMESA have enough equipment for conducting diagnosis, maintenance services and post-inspection of the government vehicles?</i>
<i>Sub-Audit Question 6.4</i>	<i>Does TEMESA have sound strategies for strengthening and modernizing its existing workshops?</i>
Audit Question 7	Does the monitoring and evaluation on the provision of maintenance services to the government vehicles periodically conducted by the Ministry of Works and TEMESA?
<i>Sub-Audit Question 7.1</i>	<i>Does TEMESA closely monitor the provision of its maintenance services?</i>
<i>Sub-Audit Question 7.2</i>	<i>Does TEMESA evaluate the provision of maintenance services to check if they conform to the agreed performance criteria and operational objectives?</i>
<i>Sub-Audit Question 7.3</i>	<i>Does the Ministry of Works have plans for monitoring and evaluation of activities performed by TEMESA on maintenance of the government motor vehicles?</i>
<i>Sub-Audit Question 7.4</i>	<i>Are the conducted monitoring and evaluation activities address the existing challenges on maintenance of the government motor vehicles?</i>
<i>Sub-Audit Question 7.5</i>	<i>Are the results of monitoring and evaluation effectively communicated or reported to TEMESA and responsible stakeholders for further action?</i>
<i>Sub-Audit Question 7.6</i>	<i>Does the Ministry of Works conduct follow-ups on the implementation of recommendations issued to TEMESA and other responsible stakeholders?</i>

Appendix 3: Documents to be Reviewed and Reasons thereof

Documents	Reasons for the Review
Extent of the Government Vehicles, plants and machineries in Inadequate /Bad Condition <ul style="list-style-type: none"> • Report on the Performance of the MIS • Report on the Condition of Government Vehicle, Plants and Machineries • General Performance Reports 	<p>To assess the:</p> <ul style="list-style-type: none"> • availability and functionality of the system for collecting, storing and processing information about the condition of all government vehicles. • number of government vehicles which are in bad condition as a result of inadequate -quality maintenance services • extent of information system in facilitating proper management of records and status of the government vehicles • availability and functionality of system that provide alerts on the existence of vehicles which are in bad or inadequate condition. • extent of maintenance database on MIS in recognizing status of the government motor vehicles
Planning for Maintenance <ul style="list-style-type: none"> • Customized guidelines, standards and manuals for maintenance • Pre-Inspection Schedule/Manuals • Work Procedures for Maintenance Works • Rehabilitation Master Plan • Maintenance Manuals for Government Vehicles, Plants and Machineries • Maintenance Timetable/Schedule for the Customers • Performance Report of MIS • Work Programs on Maintenance 	<p>To assess the extent:</p> <ul style="list-style-type: none"> • of availability and functionality of the guiding instruments in conducting maintenance on government vehicles. • to which diagnosis of the government motor vehicles is conducted before embarking on maintenance services. • to which guidelines and manuals are used to conduct maintenance of the government motor vehicles. • to which the customised engineering standards and best practises are used in conducting maintenance of government vehicles. • to which information system is used in facilitating proper management of records and status of the government motor vehicles. • to which work programs for maintenance of the government motor vehicles is prepared and updated periodically. • to which TEMESA prepares and applies schedules for maintenance of government vehicles.

Appendix 4: Persons to be Interviewed from Government Entities, and Reasons for Interview

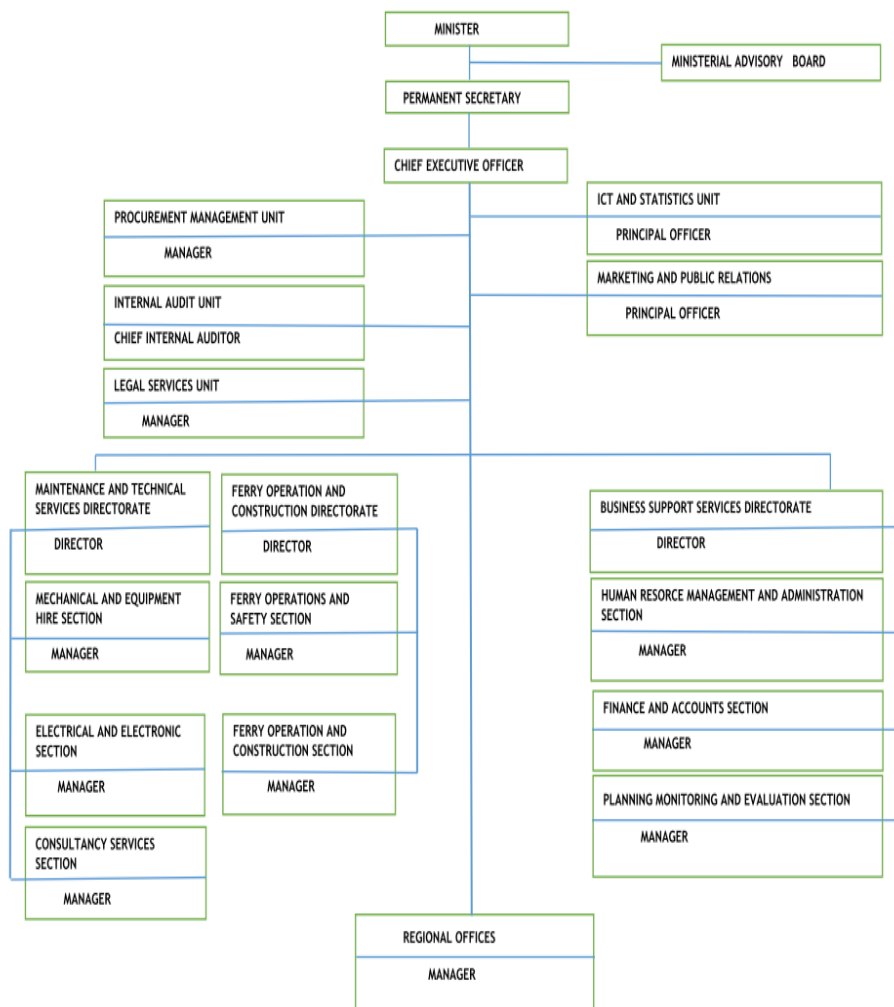
Entity	Person to be Interviewed	Reason for being Interviewed
MoWTC	<ul style="list-style-type: none"> • Permanent Secretary • One member of MAB 	<p>Obtain information on:</p> <ul style="list-style-type: none"> • how the Ministry of Works monitors performance of TEMESA • plans for monitoring and evaluating activities performed by TEMESA on maintenance of the government motor vehicles by the Ministry. • whether the existing challenges as they relate to the provision of maintenance of government vehicles by TEMESA have been addressed by the Ministry. • about the functionality of the Ministry and MAB with regards to maintenance services rendered by TEMESA • frequency of follow-ups conducted by the Ministry on work performed by TEMESA and level of implementation of recommendations issued to TEMESA.
TEMESA HQ	<ul style="list-style-type: none"> • Director of Maintenance and Technical Services • Assistant Director, Maintenance and Technical Services • Head of Section-Maintenance Services • Managers - Maintenance and Technical Services • Planning, Monitoring and Evaluation Manager • ICT Officers 	<p>Obtain information on:</p> <ul style="list-style-type: none"> • how TEMESA develops, updates and use Maintenance Management System to ensure that government vehicles are adequately maintained • the guiding instruments for provision of maintenance services at TEMESA. • execution of maintenance works by TEMESA

	<ul style="list-style-type: none"> • Other Relevant Engineers • Technicians 	<ul style="list-style-type: none"> • the capacity of TEMESA to execute maintenance services to the government institutions.
TEMESA Regional Offices	<ul style="list-style-type: none"> • Regional Managers • Head of Mechanical Services (Regional Engineer) • Other Responsible Engineers • Technicians • Workshop Servicemen 	<p>Obtain information on the:</p> <ul style="list-style-type: none"> • guiding instruments for provision of maintenance services at TEMESA • Execution of maintenance works by TEMESA. • capacity of TEMESA to execute maintenance services to the government institutions
MDAs, LGAs and Other Stakeholders	<ul style="list-style-type: none"> • Transport Officer • Accounting Officer • Drivers 	<p>Obtain information on the:</p> <ul style="list-style-type: none"> • maintenance services offered by TEMESA • extent at which TEMESA functionalities are communicated to stakeholders (Customers) • condition of government vehicles used by stakeholders

Appendix 5: The Vehicle Models owned by the Government and the Extent of Availability of its Repair Manual

Most Common Government Vehicles	Standards Used/Referred	Available Repair Manuals	Source	
			TEMESA	Manufacturer
TOYOTA	None	Available (mostly not referred)	x	✓
NISSAN	None	None	x	x
MITSUBISHI	None	None	x	x
TATA	None	None	x	x
FORD	None	None	x	x
MERCEDES BENZ	None	None	x	x
LAND ROVER	None	None	x	x
TATA	None	None	x	x
VOLKSWAGEN	None	None	x	x
HYUNDAI	None	None	x	x

Appendix 6: TEMESA Organization Structure



Sources: <https://www.temesa.go.tz/pages/organization-structure>

Appendix 7: Availability of Maintenance Tools at TEMESA

ITEM DESCRIPTION	MINIMUM REQUIREMENT	ACTUAL QTY					
		Dodoma	Manayara	Kagera	Iringa	Lindi	DSM
Complete Tools Box for H/Duty Motor Vehicle Repair	1	1	-	-	1	-	-
Complete Tools Box for L/Duty Motor Vehicle Repair	1	1	-	1	1	1	1
Complete Tool Box for Auto Electric Repair	1	1	-	1	-	1	1
Complete Tool Box for Panel Beating, praying and Painting	1 Set	1 Set	-	-	-	-	-
Arc Welding Machine-welding and cutting	1	1	1	1	1	1	1
Oxy-Acetylene gas welding/cutting tool sets	1 Set	1 Set	1	-	1	-	1
Maintenance Safety Gears (Gloves, Goggles, Aprons, Shields, etc.)	Various	Aprons	Aprons	Aprons	Aprons	Aprons	Aprons
12/24 Battery Charger	1	1	1	1	1	12 v only	1
Hand Drill	1	1	1	1	1	1	1
Battery Charger	1	1	1	-	1	1	1
Lubricant Set (Oil Pump, Grease Pump and Oil Bucket)	1 Set	1 Set	1	1	1	Only oil pump	1
Tyre service Machine	Set	Set	-	1 incomplete	1	-	1

ITEM DESCRIPTION	MINIMUM REQUIREMENT	ACTUAL QTY					
		Dodoma	Manayara	Kagera	Iringa	Lindi	DSM
Pressing machine Minimum 50/ 300 tons	1	1	50 ton	40 ton + 60	40 ton	30/50 old	25 ton
Working Benches with Vices	2	2	1	1	1	2	4
Air compressor, Minimum pressure 7kg/cm ²	1	1	1	1	1	-	2
Jacks, minimum 3/30 Ton	2	2	2	1	1	5, 10 tons	15 ton
Jacks, minimum 5/50 Ton	2	2	-	1	1	-	-
Jacks, minimum 20/100 Ton	1	-	-	1	1	-	-
Crane/ Chain Block, 5/10 Ton	1	1	1	1	1	5 ton	1
Firefighting equipment	4	4	4	-	1	4	
Mechanical (internal and external pullers	2/4	1	1	1	1	1	1
Piston ring squeezer, minimum range 50 -125 mm	1/3	1	1	1	1	1	2