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Maintenance Plan for Heavy Equipment

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1.0 PURPOSE

Successful maintenance planning of Heavy Equipment relies on conducting maintenance at the right time to the right level such that the performance may be optimized, and equipment life may be maximized.

The purpose of this document is to provide guidance to the Entity in developing and improving maintenance plan for Heavy Equipment within the facilities. These are minimum requirements for maintenance, inspection, and repair applicable to common and typical Heavy Equipment; which the Entity shall modify specific to its needs. Furthermore, this document seeks to improve and enhance the Entity's overall understanding of Heavy Equipment maintenance procedures and convey best practice.

The maintenance, inspection, repair, and rehabilitation shall conform to requirements detailed in **Section 4.0** and any specific maintenance requirements required by the Entities based on their specific operational needs.

2.0 SCOPE

The scope of this document is to guide those responsible for ensuring that maintenance is carried out in a consistent and reliable manner, focusing on planned activities and the reduction of costly and disruptive reactive maintenance. The Entity, FMC, and/or their specialist service providers shall take steps to enhance the current practice of developing a maintenance plan for efficient building operations. A Planned Maintenance (PM) strategy is an ultimate goal to improve and optimize an engineering system and further reduce the risk of component failures.

A well written maintenance plan shall provide the Entity with a high level of confidence to safely and effectively execute maintenance and repairs in the applicable environments. The objective of this document is to direct maintenance from a standard minimum acceptable quality to a required consistent improved high level quality, through professional technical advice and instruction.

This document is mainly applicable for the service and maintenance activities of Heavy Equipment owned or leased by the Entity. Having an asset register, maintenance procedures, maintenance schedules, disposal information, updating the assets history; are some of the important requirements for maintaining the service life of these expensive assets.

3.0 DEFINITIONS

Term	Definition
Asset Register	A group of information sources, which in combination, permit a maintaining supplier to identify its engineering asset base and the associated legal, safety and commercial risks over the whole life of the assets
Emergency Maintenance	Maintenance activity on a Heavy Equipment to rectify the danger to the public
Inspection	The evaluation of the condition of an asset(s) through a formally defined and controlled process. The process shall include all relevant information, site inspection surveys, and analytical assessments where required by this document or any other standard
Heavy Equipment	Heavy Equipment refers to heavy-duty vehicles, specially designed for executing construction tasks, the majority ones involve earthwork operations or other large construction tasks. The term "heavy" is not made in reference with weight or size of the machine, rather the heavy-duty nature of the tasks, the equipment performs Heavy Equipment can be self-powered, self-propelled, or towed mechanical devices, equipment, and vehicles of a nature customarily used for commercial purposes, including tandem axle trucks, graders, backhoes, tractor trailers, cranes, and lifts but excluding automobiles, recreational vehicles, and boats with their trailers Motorized Heavy Equipment are divided itself into two classes: • Heavy Machinery

Term	Definition
	• Heavy Vehicle
Heavy Machinery	Heavy Machinery has restricted mobility and provides functions related to one or several specific working areas. Such as bobcats, excavators, front end loaders, roadway scrapers, cranes, folk lifts, generators, bulldozer, backhoe loader, cranes, forklift, woodchipper, and elevated work platforms
Heavy Vehicles	Heavy Vehicles are used to carry Heavy Machinery to the respective construction sites. Heavy Vehicles are more mobile and can reach longer distances
Maintenance	The undertaking of preventative or corrective action, or both, including repairs, to ensure that the condition of the asset continues to meet the required duty over the service life of the asset
Planned Maintenance	A planned strategy of cost effective treatments to an existing asset
Rehabilitation	Rehabilitation restores Heavy Equipment to its usable condition, ceases the deterioration and ensures the safety of the public. Rehabilitation includes addressing the cause of the problem itself and it lasts significantly longer
Repair	Repair techniques are used to restore the damaged component of a heavy machinery or heavy vehicle
Service Life	The service life of an asset, element, or component is the total period during which the asset remains in use. Maintenance can extend service life of the asset
Temporary Works	Site installations, not forming part of the permanent works that are necessary for the progress of work in safety
Visual Inspection	Closed inspection of all components of the Heavy Equipment carried out within touching distance
Acronyms	
ACR	Asset Condition Reporting
CAPEX	Capital Expenditure
CMMS	Computerized Maintenance Management System
EV	Electric Vehicle
H&S	Health and Safety
HSE	Health and Safety Executive (UK Establishment)
HSQE	Health, Safety, Quality, and Environment
KSA	Kingdom of Saudi Arabia
MOF	Ministry of Finance
MOT	Ministry of Transportation
NMA&FM	National Manual of Assets and Facilities Management
OEM	Original Equipment Manufacturer
O&M	Operation and Maintenance
PM	Planned Maintenance
PPE	Personal Protective Equipment
SOP	Standard Operating Procedure
UK	United Kingdom
US	United States
UM	Unplanned Maintenance
VMS	Variable Message Signs

4.0 REFERENCES

Maintenance, inspection, repair, and rehabilitation of all existing Heavy Equipment assets shall be based upon the requirements of this section, industry standards, best practice, and the Original Equipment Manufacturers (OEM) guidelines for Operation & Maintenance (O&M) of Heavy Equipment.

These shall be from the Kingdom of Saudi Arabia's (KSA) Ministry of Transport (MOT) to ensure interoperability, US Department of Transportation, or as most appropriate for the individual application. Where the requirements stipulated by these standards are in conflict, the most stringent shall govern, unless otherwise noted herein, and shall require the Entity's approval. A listing of the references are as follows:

- Department for Transport, UK
- General Department of Traffic Ministry of Interior, KSA – Rules and Regulations: Traffic Safety
- Ministry of Transportation (MOT), KSA
- Ministry of Municipal and Rural Affairs (MOMRA), KSA
- Ministry of Environment Water & Agriculture (MEWA), KSA – National Environment Strategy
- National Manual of Assets and Facilities Management (NMA & FM) Volume 14 – Emergency Management
- Presidency of Meteorology and Environment (PME) – General Environmental Regulations and Rules for Implementation
- Provision and Use of Work Equipment Regulations (PUWER 1998), Health and Safety Executive (HSE), UK – https://www.hse.gov.uk/work-equipment-machinery/puwer.htm
- Safety Signs and Signals Regulations, Health and Safety Executive (HSE), UK, 1996
- US Department of Labor Occupational Safety and Health Administration

5.0 RESPONSIBILITIES

5.1 The Entity

- The Entity and/or their appointed OEM/Specialized Contractor must comply with all applicable legislation, regulations, and other policies imposed by Federal and Local Government Authorities in KSA while performing O&M works on Heavy Equipment
- All staff and suppliers carrying out O&M activities shall be qualified and competent to undertake these tasks. The staff working on equipment shall have minimum of three (3) years relevant technical training, and three (3) to five (5) years of hands-on experiences. The suppliers should have similar experiences working on Heavy Equipment and must be certified by the OEM
- The Entity and/or their appointed OEM/Specialized Contractor shall have an organizational structure with adequate staff having clear roles, responsibilities, and competencies to effectively oversee and monitor the O&M activities and works
- The Entity and the OEM/Specialized Contractors shall have a competence management system in accordance with the published guidance and standards for O&M of Heavy Equipment
- The Entity and the OEM/Specialized Contractor shall have continuous training programs on developing and maintaining staff competence
- Inspections of Heavy Equipment shall be carried out by suitably experienced, competent, and qualified staff only
- The Entity must facilitate the legislative requirements and ensure all systems and adequate funds are available to manage potential Health, Safety, Quality, and Environment (HSQE) risks arising for staff who are working on Heavy Equipment O&M
- Have annual Capital Expenditure (CAPEX) / Operating Expenditure (OPEX) budgets approved by respective Government bodies
- Ensure environmental sustainability when operating & maintaining the Heavy Equipment
- Appoint appropriate OEM/Specialized Contractor to maintain respective Heavy Equipment or have OEM Trained in-house resources equipped with workshop facility and required tools, machineries & diagnostic tools for Heavy Equipment maintenance
- Have an appropriate Computerized Maintenance Management System (CMMS) for development of asset register, maintain and update assets maintenance history records

5.2 Workshop Manager

- Responsible for implementation of approved HSQE requirements by the Entity and to manage potential HSQE risks arising for staff who are working on Heavy Equipment
- Ensure that HSQE responsibilities are appropriately defined and suitable resources (including financial and time) are provided to ensure effective hazard and risk management for Heavy Equipment O&M workers
- Ensure that timely execution of preventative/corrective maintenance works as defined by OEM to keep all Heavy Equipment in proper operational order at all times. This can be achieved by appointing appropriate OEM/Specialized Contractor or be delivered by the Entity's in-house teams trained/certified by OEM to carry out required maintenance activities
- Ensure that services are delivered in compliance with the requirements defined in this document and applicable volumes/chapters in National Manual of Assets and Facilities Management (NMA & FM)
- Adherence to environmental sustainability when operating & maintaining the Heavy Equipment
- Maintain asset register
- Record all maintenance activities and update CMMS records

5.3 Workshop Staff

- Strict compliance with HSQE requirements at all times
- Attend to duty as rostered to carry out assigned works
- Attend to allocated trainings as required
- Promote efficiency of works
- Comply with environmental sustainability requirements when operating & maintaining the Heavy Equipment
- Ensure to keep the workshop and surrounding areas clean, lit, and safe at all times
- Complete Heavy Equipment testing & calibration data accurately in appropriate formats

6.0 PROCESS

The Entity shall establish and develop the set processes and procedures for continuous maintenance and performance efficiency of Heavy Equipment assets.

The Entity shall consider the following key components in the maintenance plan for the effective maintenance of the Heavy Equipment assets:

- Development of Heavy Equipment assets maintenance planning tool in order to assist the asset managers to manage Heavy Equipment assets
- Effective planned maintenance program
- Inspection schedule (visual, detailed) and reporting
- Effective corrective maintenance
- Timely and good practices with regards to repair and rehabilitation works
- Appoint appropriate OEM/Specialized Contractor to maintain respective Heavy Equipment or have OEM trained in-house resources equipped with workshop facility and required tools, machineries & diagnostic tools for Heavy Equipment maintenance

6.1 General Requirements

- All staff and/or appointed OEM/Specialized Contractors carrying out works on Heavy Equipment shall be qualified and competent to undertake these tasks
- Health and safety aspects shall be considered throughout the maintenance, inspection, condition assessment, repairs and rehabilitation work; and due account taken of the applicable Health and Safety (H&S) regulations. The following H&S aspects shall be considered while carrying out maintenance and inspection activities:
    - Working on roads
    - Working with chemicals and paint

  - Working on electrical/electronics
  - Working near railways and motorways
  - Working at heights
  - Working at confined spaces and pits
  - Working with compressed air
  - Working with hydraulic fluids and systems
  - Working with corrosive substances
  - Working with welding and inert gases
  - Working with petroleum products
  - Working with electric vehicle charging systems
  - Lifting operations to be undertaken by trained and competent personnel
- All activities including the maintenance, inspection, repairs, and disposal of existing Heavy Equipment assets must comply with the OEM guidelines, current environmental legislation, approved codes of practice, and authoritative guidance literature issued by relevant statutory bodies and Entities
- During all activities including the maintenance, inspection, condition assessment, repairs, and disposal of existing Heavy Equipment assets; the Entity and/or Specialized Contractor shall consider others using the workshop facilities and surrounding areas during these operations such as H&S, safe access, egress, segregation, and traffic management within the premises
- Safeguard the H&S of users, employees, inspectors, and members of the general public
- The Entity and the Specialized Contractors should commit and ensure that its O&M on Heavy Equipment assets have minimal environmental impacts. The Entity and/or the Specialized Contractors shall continuously seek new ways to increase electrical energy efficiency, water efficiency, vehicle fuel efficiency, reuse, and recycle and aim to reduce fossil fuel consumption by the use of electric vehicles, alternative fuels, and reduced idling, in addition to seeking new opportunities for reducing and recycling waste while maintaining relevant records for monitoring and demonstrating compliance accordingly
- The Entity and/or the Specialized Contractors should commit and ensure that its operations of fuel dispensing units, paint booths, oil separators, disposal of batteries, coolants, and disposal of all the wastes produced during the operation, maintenance & repair of Heavy Equipment assets are fully compliant with MEWA and MOMRA legislations

6.2 Asset Register

Heavy Equipment are assets owned or leased by the Entity. The Entity shall develop a comprehensive assets registry using the CMMS application or any other means of electronic database which can store initial data and the recurring updates related to the asset until it is disposed and removed from the Entity's inventory. There shall be a separate asset register for the Heavy Equipment for any contracted assets in use. This Specialized Contractor's assets register shall be maintained in addition to the Entity's owned asset register.

The assets register must comply with the requirements described in NMA & FM Volume 2 and will likely contain the following information:

- Description of the asset
- Make
- Model
- Serial number
- Batch number
- List of subassemblies
- Manufacturer name
- Manufacturer address & contact information
- Local agent/distributor
- Purchase order number
- Purchase date
- Warranty details
- Critical spare parts
- PM schedule

- Special tools required
- Special skills required to operate & maintain
- Provision for updating maintenance records
- Recommended disposal information
- Known hazards
- Interdependencies for operations

6.3 Maintenance Schedules and Documentation

To have an effective maintenance program, it is important to have complete, thorough, and updated documentation for each item of Heavy Equipment whether owned or leased by the Entity. Whether performing preventative, reactive, condition based monitoring or routine inspection; keeping track of equipment condition, and maintenance performed or planned is critical.

The maintenance record keeping system whether having a CMMS or other means of electronic records must be kept current so that a complete maintenance history of each piece of equipment is available at all times. Regular maintenance and emergency maintenance must be well documented, as should special work done during equipment overhauls and replacement.

This information is important for planning and conducting an ongoing maintenance program and provides documentation needed for the management decisions for scheduling, budgeting, and equipment replacement.

The maintenance schedules and documentation must comply with the requirements described in NMA & FM Volume 7 – Performing Work Procedure and Work Closeout Procedure.

6.4 Job Plan Templates

The Entity can prepare job plan templates based on available CMMS or other means of electronic assets management database for each type of Heavy Equipment considering site specific operational, environmental, and climatic conditions.

The job plan templates shall include all PM activities and may be augmented to include OEM maintenance requirements and other site specific considerations.

The job plans templates must comply with the requirements described in NMA & FM Volume 7 – Maintenance Procedures Writers Guide.

6.5 Safety

Performing maintenance on Heavy Equipment can be hazardous. Electrical and mechanical energy and rotating equipment can cause injury and death if not managed properly. The Entity must ensure availability of risk assessments and Standard Operating Procedures (SOPs) for each type of Heavy Equipment that the work is performed.

Where possible, equipment should normally be shut down and any residual/stored energy safely released (i.e. pneumatic pressure dumped, parts with gravitational/rotational energy stopped or brought to a safe position). For high risk equipment, positive means of disconnecting/isolating the equipment from the energy source may be required, along with means to prevent inadvertent reconnection. Industry best practice is to follow lock out/tag out (LOTO) procedure.

Maintenance work often involves using access equipment to reach raised sections of plant and machinery. Management of staff operating high level equipment and surrounding areas is key to preventing injury and reduction of hazards. Staff should wear safety harnesses while on access platforms and adequate safety warnings should be displayed around the area. Staff should be trained in their use and familiar with user checks to harnesses, anchorages, and attached equipment.

In some instances, it may not be possible to avoid particular hazards during the maintenance of Heavy Equipment so appropriate measures should be taken to protect people and minimize the risk. These may include physical measures or slow speed hold-to-run control devices.

Staff working on Heavy Equipment may need to undertake significant on-the-job risk assessment (essentially considering what could go wrong and how to avoid injury), as the situation may develop and change in ways that could not be foreseen at the outset.

All maintenance activities should be conducted in compliance with applicable workplace HSQE regulations.

All staff must wear be trained where hazardous activities exist and wear/use appropriate Personal Protective Equipment (PPE). An audit should be undertaken on PPE to ensure that it is still in a serviceable condition. Deficiencies should be repaired/replaced before use.

All safety warnings must be displayed in appropriate locations of the workshop and surrounding areas, and follow the guidelines stipulated in local or international regulations, particularly for dual or multiple languages.

Adequate first aid materials, eye wash stations, washing and shower facilities must be provided within the workshop complex. Mobile first aid kits must be available in all mobile workshops as well on all sites. A first aid trained person should be incorporated into the facility to deal with incidents, should they arise.

Daily Toolbox Talks shall be conducted, emphasizing the importance of safety at work.

All near missed accidents should be recorded and preventative action plan shall be developed to avoid similar situations.

UK Health and Safety Executive (HSE) – Provision and Use of Work Equipment Regulations 1998 (PUWER): https://www.hse.gov.uk/work-equipment-machinery/puwer.htm is a good source of information related to safety.

Detail information related to safety compliance requirements are described in the NMA & FM Volumes 5 and 10.

6.6 Maintenance Work

- Maintenance work shall be scheduled, preventative or predictive, and remedial action including repairs to damage and defects
- Maintenance work shall be justified on the principles of whole lifecycle asset management
- The frequency and nature of maintenance should be determined through risk assessment, taking full account of:
    - Manufacturer's recommendations
    - Intensity & the frequency/duration of use
    - Operating environment (e.g., effect of temperature, saline environment, corrosion, inclement weather)
    - Operator experience and feedback
    - Risk to H&S from any foreseeable failure or malfunction

6.7 Planned Maintenance Preventative

Preventative Maintenance covers regular examination, inspection, lubrication, testing, and adjustments of equipment without prior knowledge of equipment failure. Preventative Maintenance also provides the framework for all planned maintenance activity, including the generation of planned work orders to correct potential problems identified by inspection. The result is a proactive (rather than a reactive) environment, optimizing equipment performance and life.

Concentrating maintenance efforts on unscheduled breakdowns or emergency repairs are responsible for maintaining equipment efficiency and reduction of cost. In particular maintenance team’s overtime,

increased costs of parts for emergency repairs, unsafe operation of the equipment, and unbudgeted temporary hiring costs for replacement equipment.

An Entity's major cost are derived from the major assets owned, of which Heavy Equipment is a major contributory. By utilizing a properly developed Preventative Maintenance regime, the Entity can prevent unplanned events and protect its' Heavy Equipment assets from production downtime. Assisting to predict when failure is likely to occur and find a solution to problems before they happen, or become unscheduled loss causing additional unbudgeted expense.

The Entity/Specialized Contractor shall conduct PM activities at a set schedule and/or through metered time based, as required by the OEM in order to prevent operational deficiencies and breakdowns. This will ensure safe operation and all components of the Heavy Equipment maintaining to a fully operational order.

PM activities of Heavy Equipment can be performed based on the usage meter or scheduled intervals.

- **Scheduled** – The Entity/Contractor can conduct activities on a scheduled calendar basis
- **Meter Based** – The Entity/Contractor can conduct activities based on number of hours the equipment operated or the distance the equipment has traveled

These activities are considered necessary and the Entity shall consider PM activities to gain long term service life from these expensive Heavy Equipment assets.

Preventative maintenance activities should maintain the usability of the Heavy Equipment assets, improve the equipment and system reliability, reduce unexpected breakdown, enhance parts inventory management, reduce expensive parts replacement, extend equipment life, and improve the resale value of the equipment.

6.8 Planned Maintenance Predictive

Predictive maintenance techniques are designed to help determine the condition of in-service equipment in order to estimate when maintenance should be performed. Predictive maintenance relies on knowing the condition of individual pieces of equipment.

The aim of Expro Maintenance strategy is to achieve Intelligent Maintenance using the maintenance history data through monitoring and analysis of the asset's conditions and behavior in order to select the most appropriate maintenance type based on evidence towards optimizing cost against performance.

Monitoring equipment parameters such as temperatures, pressures, vibrations, carbon monoxide levels, operating noise levels, oil analysis, infrared testing, and analyzing operator-gathered data.

This process would help the Entity to take knowledgeable maintenance decisions focusing only on equipment that really needs attention.

This requires expertise knowledge and consistent analysis to be effective, and the condition monitoring of equipment & systems requires periodic calibration and maintenance of testing equipment which may add additional costs.

Monitoring, testing, analyzing historical data, and PM schedules may provide the best information on when equipment should be maintained.

Replacement of tires, brake pads, catalytic convertor, machining brake discs and de-carbonization are good examples of predictive maintenance.

Refer to NMA & FM Vol 6, Chapter 20 – System Assessment and Monitoring, for example techniques.

6.9 Unplanned (Reactive/Emergency) Maintenance (UM)

- The Entity/Specialized Contractor shall develop an UM plan to cater for the unscheduled and unplanned maintenance such as caused by malfunctions, continues usage of equipment, accidents, misuse, vandalism, external factors, sandstorms, rains, hail damage, and fire.
- This is usually reported through a service call and recorded in CMMS when a component or the whole equipment has been perceived to be non-functioning appropriately or is not fit for the purpose
- This should be recorded against the asset number of the equipment to allow historical data to be collated, that is essential for demonstrating where CAPEX funds may need to be assigned for overhauling or replacement of Heavy Equipment
- The consequent inspection after the service call can result in two actions:
    - If the problem is affecting the usability of the Heavy Equipment or posing threat to the H&S of the operator, environment or the public, then emergency response and corrective action is required immediately
    - If the problem is not critical, then a routine PM response may be adequate
    - Undertake a review of the current maintenance regime in place and, if necessary, adjust to meet the present conditions
- The response can include repair of the Heavy Equipment or component to protect the equipment and to moderate/major repair requiring expertise of OEM

The Entity should also refer to the requirements detailed in the NMA & FM Volume 14 – Emergency Management, for further details regarding emergency response procedures during hazardous events.

6.10 Routine Inspection

The Entity shall develop a comprehensive Heavy Equipment daily routine check lists for each type of equipment according to the needs of its operations and usage. Competent personnel should be engaged in making the assessments and reporting to the management and CMMS system.

Inspections of Heavy Equipment assets shall be carried out for the following purposes:

- To confirm equipment is safe for desired operations
- To confirm information necessary for the compliance requirements
- To assess the condition of the equipment in a consistent and accurate manner
- To provide information enabling the asset register to be maintained as an accurate record of the physical features of the assets
- To provide all the necessary physical information on the Heavy Equipment assets to meet the requirements for the Asset Condition Reporting (ACR) process
- To identify defects, the causes and effects of damage and deterioration of Heavy Equipment assets
- Inspection reports and forms shall be retained in an electronic format for the life of the asset
- No inspection shall commence unless the Inspector has reviewed previous inspection reports, asset register, and asset files to establish, as far as possible, information about the Heavy Equipment asset, its previous condition, and likely hazards

A sample routing inspection checklist is given in **Attachment 1**.

6.11 Disposal of Heavy Equipment

On a yearly basis the Entity shall evaluate the service life and economical serviceability of each of the Heavy Equipment owned or leased by the Entity.

Based on the evaluation, the Entity shall propose for disposal of Heavy Equipment in advance facilitating reservation of budgets for replacement equipment. The Entity shall consider the time required for budget approvals, tendering & procurement process, and the lead-time not to interrupt the business requirements of the Entity, ideally allowing some overlap of existing and replacement equipment.

7.0 ATTACHMENTS

Attachment 1 – EOM-ZM0-TP-000196 – Heavy Equipment Daily Routine Checklist

Heavy Equipment Daily Routine Checklist				
Inspector Name:			**Date:**	
Equipment Make / Model:			**Hour Meter:**	
Item Description	**Status**			**Notes**
Visual check for accidents / damages / leaks / wear	OK	NO	N/A	
Check Engine coolant level	OK	NO	N/A	
Check Hydraulic fluid levels	OK	NO	N/A	
Check Engine oil level	OK	NO	N/A	
Check fuel level	OK	NO	N/A	
Check air filters for clogging	OK	NO	N/A	
Check drive function forward/reverse for smooth operations	OK	NO	N/A	
Check Steer function left/right for smooth operations	OK	NO	N/A	
Check Front bucket controls	OK	NO	N/A	
Check Bucket | Boom | Dipper | Attachment | Pins | Pivots | Rams | Lift arms | Bucket teeth for proper operations	OK	NO	N/A	
Check transmission for smooth operation	OK	NO	N/A	
Check driving brakes and parking brakes	OK	NO	N/A	
Inspect hoses, lines, fittings	OK	NO	N/A	
Check that all safety devices and guards in place and functional	OK	NO	N/A	
Inspect bolts, welds and safety pins for proper function	OK	NO	N/A	
Inspect rollover protective structure	OK	NO	N/A	
Inspect seat belt	OK	NO	N/A	
Check tires for condition, inflation and missing valve caps	OK	NO	N/A	
Check all lights, gauges, horn, alarms, control lamps, indicators, tachometer, hour meter for proper operations	OK	NO	N/A	
Check cleanliness of Interior & glasses of the Operator's cabin, mirrors	OK	NO	N/A	
Strobe lights working and Safety stickers and warning labels are in place	OK	NO	N/A	
Does the machine needs greasing	YES	NO	N/A	
Inspect fire extinguisher	OK	NO	N/A	
Spill kit is present and stocked	OK	NO	N/A	
Operations manual is present	OK	NO	N/A	
Logbook available	OK	NO	N/A	
Data plate is present and legible	OK	NO	N/A	
First Aid kit is present and stocked	OK	NO	N/A	
NOTES:				
Note: Report any defect or malfunction to the Supervisor / Manager				
Inspector's Signature:				