



TOKIO MARINE
AMERICA



Loss Prevention Services

Protecting Our Global Community of Customers

Equipment Maintenance Program

Introduction

A vehicle maintenance program is a vital part of an overall safety program, and highlights the importance of proper equipment maintenance.

In addition to ensuring that workers use the tools and equipment properly, it is vital that tools and equipment be properly inspected, maintained, and kept in good repair. Our maintenance program will reduce the risk of injury, damage and lost production.

Maintenance Personnel Qualifications

The qualifications of maintenance personnel are key to the success of a maintenance program. All individuals who perform maintenance work will have the appropriate skills, accreditation and/or certification. This certification applies both to company employees and to contracted maintenance services.

Operator Qualifications and Training

All individuals who operate our mobile equipment, cranes, vehicles etc. will have the appropriate skills, accreditation and/or certification. This applies to both company employees and contracted equipment services.

The approval process includes the following:

1. Possession of a valid driver's license appropriate to the type of equipment.
2. Successful completion of a practical operating exam administered by competent and authorized personnel.
3. Vision test to meet the appropriate standard. Vision tests must be conducted by competent and authorized personnel.
4. Hearing test with or without a hearing aid must be adequate for the specific operation. Hearing tests will be conducted by competent and authorized medical personnel.
5. No history of epilepsy or of a disabling heart condition or any other physical disability or impairment.
6. The operator should be trained in the following:
 - their responsibilities to operate the equipment in a safe manner;
 - familiarity and comprehension of safety requirements for the piece of mobile equipment which they intend to operate;

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- manufacturer's operating and maintenance procedures;
- how to communicate to maintenance personnel when there is a problem with a specific piece of equipment;
- Hand signals and/or other requirements set by the company, owner, or dictated by site conditions.

Records

The maintenance program must contain a recording system. Part of this system should be made up of inventories and schedules. In addition, the recording system should document what maintenance work was done, when, and by whom.

Monitoring

The monitoring functions in a maintenance program fall into two areas.

First, the people responsible for operating and/or maintaining equipment must monitor that equipment to ensure that appropriate checks and maintenance are done.

Secondly, management should monitor the entire program to ensure that it is functioning in accordance with company policy.

Scheduled Inspections and Maintenance

All mobile equipment is to be inspected and maintained according to the following Equipment Inspection Schedule as a minimum. Records of all inspections and maintenance are completed and maintained for review and approval.

Maintenance of equipment, release of lubrication fluids, etc., is performed only in approved areas. Spills and leaks from equipment are cleaned up promptly.



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Equipment Inspection Schedule

Type of Equipment	Type of Inspection	Schedule
Cranes – Crawler, Truck, Hydraulic, etc.	Complete inspection and certification	Before put to work and annually
	Critical items, controls, overall functioning	Daily
	Safety device, hooks, cables, electrical	Monthly
	Complete inspection	Every 3 months
	Repair	When failure occurs
	Preventative maintenance	Manufacturer's recommendation
Heavy Equipment	Complete inspection	Before put to work
Dozers, Backhoes	Complete inspection	Every 3 months
Compactors, Trucks	Repair	When failure occurs
	Preventative maintenance	Manufacturer's recommendation
	Operator's checklist	Daily
Miscellaneous	Complete inspection	Before put to work
Compressors, Welding Machines, Generators	Complete inspection	Every 3 months
	Repair	When failure occurs
	Preventative maintenance	Manufacturer's recommendation
	Deformation, cracks, corrosion, etc.	Daily or before each use



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Slings, Shackles, Chokers, Lifting Devices	Regular inspections of all devices	Every 3 months
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Pre-Operation Checks

Walk around checks on all pieces of mobile equipment are necessary to ensure the unit is safe to operate both from the personnel standpoint and for the equipment; that is, all fluids must be at the correct level and all components must be intact.

A. Check for personnel in the cab area and around the equipment.

Before the operator commences the pre-start checks, the operator should check the cab area for other operators and others who may be working around the equipment.

B. Visual check

The operator should walk completely around the equipment looking underneath the equipment, in the engine compartment, and in the cab.

C. Brake Lines

Visually check the brake lines for leaks. Check for moisture on the brake line. Report any leaks to maintenance for repair as soon as possible. **DO NOT** operate equipment with brake leaks.

D. Steering Assembly

- Check the tie rod ends, pins and keepers, bell cranks, drag links, ball joints, steering rams and hydraulic hoses.
- Check that all the joints are tight.
- Report any faulty conditions to your supervisor.

Note: Never operate a truck with faulty steering.



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E. Front Tires

Conduct the following checks on the front tires:

- Visually check the tires for deep cuts, separations and embedded rocks, nails, or any other foreign material.
- Check for tire bulges at the road surfaces which indicate low air pressure.
- Check the rims for cracks and breaks.
- Check the valve stems for wear and cuts.

F. Front Wheel Lugs

- Check the front wheel lugs each day.
- Report any loose or broken wheel lugs.
- If there are broken or loose, do not operate equipment.
- Report the condition to your supervisor.

G. Front Suspension

Check the front suspension for bottoming out and also check that all fastening devices are in place.

H. Fluid Levels

Check all the fluid levels at the beginning of the shift with the equipment on level ground. Refer to the manufacturer's requirements to ensure the proper procedure is followed.

If the fluid level is low, notify your supervisor. Do not operate the equipment until the appropriate fluid level is brought up to operational level.

I. Fluid Leaks

Look for fluid leaks while checking the fluid levels. There may be fluid lines or gaskets that are leaking.



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Make a visual check to see if fluid is running down the side of the engine block or any other areas while the engine is running.

J. Fan Belts, Blower Belts, Alternator Belt etc.

Check that all belts are in place, tight, and in good condition,

K. Air Tanks

Check the following air tanks:

- The Main Air Tank. The operator should drain the tank twice a shift during the winter months and at the beginning of each shift at other times. Take caution when draining air tanks because of the sludge and water that comes out. The tanks should be drained until clean air is visible.
- Front Air Application Tank. The operator should drain the tank twice a shift in the winter months and at the beginning of each shift at other times.
- Rear Air Application Tanks. The operator should drain the tank twice a shift in the winter months and at the beginning of each shift at other times.

All air lines should be checked for any damage or deterioration during the check on air tanks.

L. Hoist Rams

Visually check the hoist rams to ensure that the hoist anchor pins and keepers are in place. Check the condition of the hydraulic hose and look for leaks. Report any concerns to your supervisor.

M. Main Frame

Visually check the main frame for cracks and report any problems to the supervisor.

N. Lights



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Turn on all equipment lights to see they are working properly including; headlights, clearance lights, and back-up lights.

All faulty lights will be replaced prior to using equipment.

O. Glass

Check that the windshield, windows and mirrors are clean and free of cracks.

P. Handrails and Ladder

Check the condition of the handrails and ladder and look for loose handrails or rungs. Report any unsafe conditions.

Q. Wheel Chocks

Ensure that the truck is equipped with two wheel chocks mounted in a readily accessible place.

R. Seat Belts

Check that the truck has seat belts. It is important that the operator should use them.

S. Fire Extinguishers

Every piece of equipment must be equipped with adequate fire extinguishers in good condition. Faulty fire extinguishers must be replaced immediately.

T. Back Up Alarm

Check that the backup alarm is working correctly.



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