

**ENVIRONMENTAL, SAFETY, AND HEALTH  
WORK PRACTICES**

**530: MOBILE EQUIPMENT**

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## ABSTRACT

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### Overview of Practice 530

Environmental, Safety, and Health Work Practice 530: **Mobile Equipment** describes the requirements and procedures for inspecting, maintaining, and operating mobile equipment. It also describes requirements for training and testing of mobile equipment operators.

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### Contents

This Practice covers the following information:

- Definitions
  - General requirements
  - Training and testing
  - Inspection
  - Maintenance
  - Operation
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### Appendices

This Practice contains the following appendices:

- Appendix A: Mobile Equipment Certification
  - Appendix B: Pre-Operation Checklist for Forklifts
  - Appendix C: Preventive Maintenance Checklist for Mobile Equipment
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## SECTION 1 – PURPOSE

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**Purpose of Practice 530**

Environmental, Safety, and Health Work Practice 530: **Mobile Equipment** outlines the requirements for operating, inspecting, and maintaining the Terminal’s mobile equipment. It also describes requirements for training and testing of mobile equipment operators. It does not cover motor vehicles that are covered in ESH-531.

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## SECTION 2 – REFERENCES

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**References**

For more information on mobile equipment, refer to the following documents:

Document Number	Title
ESH-500	Safety, Fire, and Health Program
ESH-531	Motor Vehicle Operation
29 CFR 1910.178	Powered Industrial Trucks

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## SECTION 3 – DEFINITIONS

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**Mobile equipment**

Motorized equipment, including:

- Forklifts
  - Man Lifts
  - Tractors (including those with lawn-mowing or brush-clearing attachments)
  - Golf Carts/Scooters
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**SECTION 3 – DEFINITIONS, Continued**

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<b>Mobile equipment operator</b>	Person who has been trained and qualified to operate mobile equipment.
<b>Pre-operational checks</b>	Equipment checks that <u>must</u> be performed by the equipment operator before the equipment is operated. Performed once per shift, usually at the start of the shift.
<b>Safety pallet</b>	Platform specifically built to elevate employees when using a forklift.
<b>Unattended vehicle</b>	Applies to mobile equipment when the operator is either: <ul style="list-style-type: none"><li>• Not at the equipment controls</li><li>• More than 25 feet away from the equipment</li><li>• Out of sight of the equipment</li></ul>

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**SECTION 4 – GENERAL REQUIREMENTS**

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<b>Introduction</b>	The following requirements and responsibilities pertain to mobile equipment and those who use it.
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**4.1 – Equipment Requirements**

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<b>ANSI standards</b>	All mobile equipment used at the terminal must meet recognized national design and construction (i.e., ANSI) standards.
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## 4.1 – Equipment Requirements, Continued

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<b>Name plates, etc.</b>	Make sure all name plates and manufacturers' markings are maintained in readable condition.
<b>Load capacity</b>	All motorized lifting equipment must display its load capacity on the equipment mast, facing the operator.
<b>Overhead guard</b>	All forklifts must have an overhead guard to protect the operator from falling objects.
<b>Modifications to equipment</b>	Do not make any modifications or structural changes that affect the capacity and safe handling of mobile equipment without the manufacturer's prior written approval. If such modifications are approved and made, change capacity, operation, and maintenance instruction plates accordingly.
<b>Steering knobs</b>	Do <u>not</u> use steering knobs, unless the manufacturer supplies them and they are standard for the equipment.
<b>Load backrest</b>	A load backrest (mast guard) must be on the forklift at all times.

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## 4.2 – User Responsibilities

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<b>Authorized users</b>	Only trained personnel are permitted to operate mobile equipment. Persons subject to seizures, dizziness, or loss of physical control must <u>not</u> operate mobile equipment without a physician's written authorization.
<b>Contractors</b>	Contractor personnel may <u>not</u> operate Company mobile equipment without authorization from the Terminal Manager.

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## 4.2 – User Responsibilities, Continued

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**Overall operator responsibility**

- Mobile equipment operators have the following overall responsibilities:
- Conduct a Safe Performance Self-Assessment (SPSA) before operating any piece of mobile equipment.
  - Operate equipment properly and safely.
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**Specific operator responsibilities**

- Mobile equipment operators have the following specific responsibilities:
- Complete a pre-operational check before using equipment.
  - Report any deficiencies to the Terminal Manager.
  - Discontinue using equipment if it becomes unsafe.
  - Leave equipment in good condition for the next operator.
  - Follow operating and safe driving rules in this Practice and in the operating instructions manual.
  - Successfully complete any training needed to remain qualified to operate mobile equipment.
- 

**Terminal Manager responsibilities**

- The Terminal Manager has the following responsibilities:
- Ensure that mobile equipment is maintained in a safe and operable condition.
  - Administer a preventive maintenance program.
  - Ensure that contractor personnel meet all training and operating requirements prior to operating mobile equipment.
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## SECTION 5 – TRAINING AND TESTING

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**Introduction**

Before personnel may operate any mobile equipment, they must successfully complete the training requirements in this section.

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**Coordinator**

The Operations Trainer or Terminal Manager is responsible for coordinating training.

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## SECTION 5 – TRAINING AND TESTING, Continued

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**Qualified instructor** Training must be conducted by qualified instructors. Qualification is based on:

- Training, industry experience
- academic credentials (train the trainer)
- Ability to effectively instruct, communicate, describe, and demonstrate the applicable subject matter

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**Resources** Training resources are:

- Operating and equipment maintenance manuals
- Approved Training Outlines

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### 5.1 – Training Requirements

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**Initial training requirements** Initial training for all powered industrial trucks must be in compliance with

- CFR 1910.178(l)
- CSA Standard B335-94

All training outlines of any provider must be approved by the AP Safety Specialist before use, existing systems must be approved before resumption of training.

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**Refresher training requirements** Mobile equipment operators must complete refresher training every three years to be re-certified on the equipment. The training must be compliant with

- CFR 1910.178(l)
- CSA Standard B335-94

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**Certification  
Certifying  
training** The designated instructor shall certify that each operator has been trained and evaluated as required. The certification shall include:

- name of the operator
- date of the training
- date of the evaluation
- Identity of the person(s) performing the training or evaluation.

**Documenting  
training**

An employee's initial and refresher training must be submitted for input in the AP Active Learner System. Items required are:

- Approved course outline
  - AP training sheet properly completed
  - Copy of the certificate issued to the employee
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## SECTION 6 – INSPECTION AND MAINTENANCE

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**Introduction** Inspection and maintenance of mobile equipment includes general requirements, pre-operational checks, preventive maintenance, and fueling.

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### 6.1 – General Maintenance and Inspection Requirements

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**During operation** During operation, the equipment operator must be alert for any malfunction, unusual noise, smoke, or odor that indicates a possible equipment problem.

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**Out-of-service equipment** Any equipment taken out of service must not be operated until it is repaired.

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**Nonroutine maintenance** Operators must not perform any maintenance or repair on any mobile equipment other than routine maintenance. Examples of routine maintenance include adding oil, water, or brake fluid.

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### 6.2 – Pre-Operational Checks

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**Requirement** Before the first daily use of any mobile equipment, the operator must complete a pre-operational check of the equipment.

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**Checklist items** Perform the procedures in the checklist in Appendix B, or in a similar checklist that includes these same procedures. Checklists must be kept for a minimum of one month in the equipment file.

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## 6.2 – Pre-Operational Checks, Continued

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**Procedure for defective items** Follow the steps below when you encounter any items that could affect the safety of the equipment:

<b>Step</b>	<b>Action</b>
1	Immediately bring the defective item to the Terminal Manager's attention.
2	Take the defective equipment out of service.
3	Attach a "Danger. Do <u>not</u> operate." tag to the equipment.
4	Indicate on the tag why the equipment is out of service.
5	Remove ignition key from equipment.

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**Malfunctions** If a malfunction or breakdown occurs in a piece of mobile equipment, stop using the equipment and notify the Terminal Manager immediately.

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## 6.3 – Preventive Maintenance

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**Typical preventive maintenance** Follow the manufacturer's recommendations for preventive maintenance. Typical preventive maintenance includes lubrication, lift adjustments for forklifts, and a detailed check of the items listed in Appendix C.

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**Records** Maintain a permanent record of preventive maintenance inspections and services.

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## 6.4 – Fueling Mobile Equipment

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- Precautions** Take the following precautions when fueling mobile equipment:
- Fuel equipment outdoors.
  - Ensure that the engine is off.
  - Avoid spillage. If a spill occurs, clean it up thoroughly before starting the engine.
  - Replace the fuel tank cap before restarting the engine.
  - Avoid re-fueling when engine is hot.
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**Leaks** Do not operate any mobile equipment that has a leak in the fuel system.

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## SECTION 7 – OPERATION

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**Introduction** When operating mobile equipment, always observe proper operating procedures.

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- Pedestrians** Always observe the following requirements related to pedestrians:
- Be alert for pedestrians and give them the right-of-way.
  - Do not move equipment until all pedestrians are in the clear.
  - To prevent pinning people between equipment and a fixed object, do not drive up to persons standing in front of a work bench, wall, or other fixed object.
  - When approaching pedestrians from the rear, sound the horn at least 20 feet away, slow down until recognized, and prepare to make an emergency stop, if necessary.
  - Avoid operating mowers in areas where people are present and could be injured by flying debris from mower blade.
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- Load capacity**
- Know the load capacity of a fork lift truck
  - Never load a forklift in excess of its rated capacity or carry more than two full pallets.
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**SECTION 7 – OPERATION, Continued**

**Inclines** Back down sloping ramps and other inclines when carrying a load. On all grades, tilt the load and forks back and raise only as far as necessary to clear the surface.

**Clear view** If a load obstructs the forward view, travel in reverse with the load trailing.

**Pushing loads** Do not use the forks to push a load or to butt an elevated load into position.

**Unpaved surfaces** Avoid using forklifts on unpaved surfaces.

**Parking procedure** Follow these steps when parking a forklift:

<b>Step</b>	<b>Action</b>
1	Bring the mast to the vertical position.
2	Lower the forks to the floor.
3	Shut off the power and set the brakes.

**Unattended equipment** Complete the following required steps before leaving equipment unattended:

<b>Step</b>	<b>Action</b>
1	Fully lower load-engaging means.
2	Neutralize controls.
3	Shut off power.
4	Set brakes.
5	If equipment is on an incline, block wheels.

## 7.1 – Elevating Employees

**Safety pallet** Whenever you must elevate an employee with a forklift, you must use a safety pallet. Safety pallets must meet the following requirements: a person is to be raised using a forklift truck the following requirements apply:

- The forklift truck manufacturers operating manual must specifically allow the attachment of a safety pallet
- Have handrails, mid-rails, and toe boards completely around the platform that conform to requirements of the Chevron Products Company Safety-in-Design manual.
- Have platform floor at least 30 inches by 30 inches.

Attach the safety pallet firmly to the forks or the mast.

**Mast** Before elevating personnel, make sure the mast is vertical. Do not tilt it forward or backward while persons are elevated.

**Person in control position** A person must remain in the control position on the forklift the entire time personnel are on an elevated safety pallet.

**Procedure for elevating** Follow these steps when elevating personnel on a forklift:

Step	Action
1	Ensure that lifting mechanism is operating smoothly before allowing anyone to enter safety pallet.
2	Place forklift in neutral and set parking brake.
3	Lift and lower smoothly and with caution: <ul style="list-style-type: none"> <li>• Watch for overhead obstructions.</li> <li>• Keep hands and feet clear of controls other than those in use.</li> </ul>

**Traveling with personnel prohibited** Never travel with personnel on a safety pallet other than to make minor movement for the final position of the platform.



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# **APPENDIX A – Mobile Equipment Training Certification**

## **MOBILE EQUIPMENT CERTIFICATION**

\_\_\_\_\_  
(Equipment Operator)

has successfully completed training and is qualified to operate the following equipment:

\_\_\_\_\_ Forklift

\_\_\_\_\_ Manlift

\_\_\_\_\_ Other \_\_\_\_\_  
(Specify)

\_\_\_\_\_  
Instructor

\_\_\_\_\_  
Date

Original: Employee's Training File  
Copy: Employee

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**APPENDIX B – Pre-Operation Checklist for Forklifts**

Equipment: \_\_\_\_\_ Date: \_\_\_\_\_

Pass	Fail	Before starting the forklift
		<b>CONDITION</b> - Visually inspect unit. Look for puddles or fluid on the floor, wet hoses, bent metal, etc. Do not operate equipment if it is leaking.
		<b>MANUFACTURER'S DATA PLATE</b> - Check that the Data Plate is clean and legible.
		<b>TIRES</b> - Check tires for chunks of rubber missing, or if pneumatic tires are low on air (fill tires as necessary).
		<b>LIFT CHAINS</b> - Check lift chains for equal tension, broken pins, and extra wear.
		<b>LIFT</b> - Check forks for signs of damage. Check for loose bolts and cracks on the overhead guard, back rest masts and tilt cylinders.
		<b>FLUIDS</b> - Check the fluid levels for the brake fluid, engine oil, radiator water level (check cold), hydraulic fluid, and coolant.
		<b>BRAKES</b> - Push brake pedal down. It should stop at least half way from the floor. It should stop stiffly and firmly, not “spongy” or “mushy.” Remove foot. Pedal should bounce back.
		<b>CLUTCH</b> - Push the clutch pedal down, remove foot. Pedal should spring back up.
		<b>FAN BELT</b> - Belt should have some “give” but not be loose enough to slip on the pulley.
		<b>Start the forklift</b>
		<b>WARNING LIGHTS</b> - Check warning lights as you start engine. Check dashboard gauges for proper readings.
		<b>LIGHTS</b> - Turn on the light switch and check to make sure the lights work.
		<b>PARKING BRAKE</b> - Fully apply the parking brake. Put transmission in forward then reverse. Brake should hold unit in place with no pressure on the accelerator.
		<b>HORN</b> - Test that the horn works.
		<b>STEERING</b> - Drive forward slowly. Turn the steering wheel to be sure the forklift goes in the indicated direction. Check to make sure the steering is not too loose (i.e., steering wheel turns 1/4 turn before the lift truck begins to turn in the direction indicated).
		<b>BRAKES</b> - Drive forward slowly. Press brake pedal. Vehicle should stop surely and quickly.
		<b>SEAT BRAKE</b> - While seated, move the forklift forward and raise up in the seat just enough to apply the brake. Listen for the drive to cut off.
		<b>CLUTCH</b> - Push the pedal down and see if the gears can be shifted without grinding. Put truck in gear slowly. If jerky or lots of vibration, the clutch may be bad.
		<b>LIFT CONTROLS</b> - Raise forks all the way up. Check to make sure they remain in position once the lever is released. Check that they lower and tilt smoothly
		<b>BATTERY POWERED UNITS</b> - Check that battery discharge indicator needle is in the green area.
		<b>GASOLINE UNITS</b> - Check fuel gauge on dashboard. If low, refill tank.
		<b>LPG UNITS</b> - LP tank gauge should register more than 30 pounds. If low, replace tank.

NOTE: Use this pre-operation checklist or a similar checklist if the equipment manufacturer’s per-operation checklist is not available.

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## **APPENDIX C – Preventive Maintenance Checklist for Mobile Equipment**

NOTE: Use this Preventive Maintenance Checklist or a similar checklist if the equipment manufacturer’s Preventive Maintenance Checklist is not available.

EQUIPMENT: \_\_\_\_\_ DATE: \_\_\_\_\_

- \_\_\_\_\_ 1. Check battery charging rate.
- \_\_\_\_\_ 2. Add water to battery and check connections.
- \_\_\_\_\_ 3. Check sound of the unit (listen for unusual engine noises or rough idle).
- \_\_\_\_\_ 4. Check brakes.
- \_\_\_\_\_ 5. Check tires, remove foreign objects.
  
- \_\_\_\_\_ 6. Check hydraulic oil level.
- \_\_\_\_\_ 7. Operate hydraulic Equipment
- \_\_\_\_\_ 8. Clean hydraulic breather cap.
- \_\_\_\_\_ 9. Check mast, chains, carriage.
- \_\_\_\_\_ 10. Lubricate machine thoroughly.
  
- \_\_\_\_\_ 11. Check oil pressure.
- \_\_\_\_\_ 12. Change oil and filter (use manufacturer’s guide for frequency).
- \_\_\_\_\_ 13. Check condition of fuel and oil lines.
- \_\_\_\_\_ 14. Clean fuel bowl and strainer.
- \_\_\_\_\_ 15. Inspect fan and accessory belts.
  
- \_\_\_\_\_ 16. Check steering for wear, alignment, turning.
- \_\_\_\_\_ 17. Visually check engine wiring.
- \_\_\_\_\_ 18. Check universal joints for wear.
- \_\_\_\_\_ 19. Inspect springs, U-bolts, clips, shackle bolts.
- \_\_\_\_\_ 20. Clean or replace crankcase breather and outlet pipe.
  
- \_\_\_\_\_ 21. Inspect gear shifting mechanism.
- \_\_\_\_\_ 22. Check clutch adjustment.
- \_\_\_\_\_ 23. Check engine and transmission for looseness.
- \_\_\_\_\_ 24. Tighten cylinder head bolts if loose.
- \_\_\_\_\_ 25. Check compression of each cylinder.
  
- \_\_\_\_\_ 26. Clean carburetor air cleaner.
- \_\_\_\_\_ 27. Check and adjust carburetor, idle speed, governor.
- \_\_\_\_\_ 28. Clean radiator cooling coils.
- \_\_\_\_\_ 29. Fill radiator and inspect cooling system for leaks.

Signature \_\_\_\_\_