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POWER EQUIPMENT SAFETY

CHIPPER OPERATION

1. Do not leave machine idling and in gear when not in use.
2. After engine has been warmed and brought to operating rpm, engage cutting wheel SLOWLY.
3. Operator shall wear safety goggles, safety glasses, or a face shield.
4. Only one person is to feed chipper at a time. Helpers should pile brush behind and to the right for a right handed operator, and opposite for a left-handed operator. Brush should be stacked so that it is convenient to operator, but will not interfere with his feet.
5. Do not wear loose clothing, wrist watches, rings, or other items that can get caught on material being fed into the chipper.
6. Do not attempt to lift exhaust chute while engine and cutting wheel are running.
7. Do not get into truck box or in front of exhaust chute while machine is running.
8. Do not leave chips in truck box over weekends. Ignition can occur due to spontaneous combustion in green chips. Wet material also decreases the life of truck flooring.
9. All employees working in the vicinity of the chipper shall wear hearing protection, either plugs or muffs, rated at an NRR of 28 or better.
10. The work area shall be adequately signed in accordance with departmental policies concerning signing and traffic control.

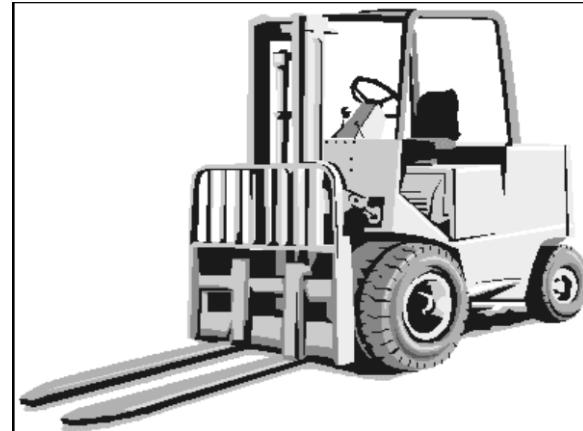
[REF: OSHA Title 8 Section 3428, 3424, 6364, 4299]

FORKLIFT OPERATION

Only operators authorized by the Department of Public Works and trained in their safe operation shall operate forklifts.. Operators must be re-certified every three years.

A list of operator rules has been prepared as a quick reference for employees. However, the department has posted Cal-OSHA's OPERATING RULES FOR INDUSTRIAL TRUCKS at DPW location where forklifts are operated pursuant to General Industry Safety Order 3664, Title 8 of the California Code of Regulations.

Forklift operators shall abide by Cal-OSHA's operating rules for industrial trucks.



Forklift Operating Rules:

1. Face the load squarely, and enter pallets with forks level and under the load as far as possible.
2. Do not attempt to exceed the capacity of the forklift by carrying loads which are too heavy or unbalanced.
3. OPERATING RULES FOR INDUSTRIAL TRUCKS at DPW locations where forklifts are operated pursuant to General Industry Safety Order 3664, Title 8 of the California Code of Regulations.
4. Forklift operators shall abide by Cal-OSHA's operating rules for industrial trucks.
5. Operators should face their destination. If unable to see over the load, the truck should be driven backwards.
6. Ascend or descend ramps or slopes with the forks facing uphill.
7. When unloaded, the truck's forks should be to the floor and all the way in. When loaded, the truck's forks should be high enough to clear the floor and not be overextended.
8. When traveling, watch for low entrances and overhead obstructions.
9. When parked, forks should be flat to the floor, shift levers in neutral, and the brake set.
10. Never allow people to ride the forks or passengers to ride on the forklift.
11. Avoid oily floors. Notify the shop of any oil spills.
12. Learn the dimension of storage racks. Place loads on racks squarely, securely, and with no overhang.
13. Do not stand or work under elevated portion of the vehicle unless it has been blocked up to prevent it from falling.
14. Do not use the forklift to elevate employees unless it is equipped with a safe work platform, 24"x24" in size, which is fastened to the forks and has standard guardrails on all sides.

OVERHEAD CRANE OPERATION

Only those employees who are properly trained and authorized to operate the overhead crane shall do so.

The following operating procedures shall be used:

1. Never hoist or move loads over other personnel or allow anyone to walk under suspended loads.
2. Do not hoist, lower, or travel when anyone is on a suspended load, sling, or hook.
3. Signals, when necessary, shall be given to the operator by a single designated person.
4. Only designated persons shall be permitted to give signals.
5. A uniform signal system shall be used on all operations and if hand signals are used, they shall be clearly understood by the operator. (SEE APPENDIX G).
6. There shall be conspicuously posted in the vicinity of the hoisting operations, a legible chart depicting and explaining the system of signals used. (Plate I)
7. When necessary, a tag line should be attached to prevent the load from swinging.
8. Loads shall not be supported on the point of the hook.

9. Ensure that the load is removed and the switch turned off prior to leaving the crane unattended.
10. The rated capacity of the crane shall be clearly marked and should never be exceeded.
11. Only CAL/OSHA-approved and marked lifting chains and devices shall be used.
12. Watch for all overhead electric and utility lines.

[REF: Fed Code 1926.550, 1910.180 & OSHA Article 99 Testing.]

PORTABLE CHAIN SAW OPERATIONS:

1. Employees, such as fallers, buckers, limbers, choppers, landing chasers, and others performing similar operations, who operate chain saws, shall use leg protection (chaps, pads, or inserts).

EXCEPTIONS:

- a. High climbers described in Section 6287.
- b. Employees, with employer's concurrence, who use a chain saw incidental to their normal assigned tasks.

2. Each chain saw placed in service on or after May 5, 1995 shall be equipped with a chain brake and shall otherwise be provided with a label or plate stating that it meets the requirements of the ANSI B175.1-1991 "Safety Requirements for Gasoline-Powered Chain Saws". Chain saws placed in service before May 5, 1995 shall be equipped with a protective device that minimizes chain-saw kickback. No chain-saw kickback device shall be removed or otherwise disabled.

3. Chain saws shall be stopped and employees shall use the escape path when the tree starts to fall.

4. All chain saws shall be equipped with a control that when released returns the saw to idling speed.

5. Power saw motors shall be stopped when carried for a distance greater than from tree to tree, not to exceed 100 feet, or in hazardous conditions such as slippery surfaces or heavy underbrush. The saw shall be at idle speed when carried short distances.

6. Exhaust manifolds on gasoline motors shall be constructed and maintained so that exhaust fumes are directed away from the operator.

7. Power saws shall be equipped with a clutch so adjusted that at idling speed it will not engage the chain drive.

8. Loose material that may catch the saw shall be removed.

9. All power saws shall be equipped with a positive off-and on switch

10. Power cables on electric units shall be properly insulated. Care shall be taken to see that cables are in the clear at all times.

11. Electric saw and generator units shall be bonded together and grounded.

12. The cable on electric units shall be disconnected while moving the saw through brush and thickets, or where the character of the ground obstructs the free movement of the fallers.

13. Every employer shall instruct and enforce a safe practice procedure including the rules listed below:

- a. Inspect the saw daily to assure that all handles and guards are in place and tight, all controls function properly, and the muffler is operative.
- b. Properly instruct operators on safe operation and adjustment.
- c. Always keep a firm grip on the saw.
- d. Fuel the saw only in conditions not conducive to fire hazards.
- e. Start the saw at least 10 feet away from fueling area.
- f. Start the saw only when firmly supported.
- g. Do not use engine fuel for starting fires or as a cleaning solvent.
- h. Use proper methods to avoid kickbacks.

[REF: CCR Title 8 Section 6283]

PORTABLE CHANGEABLE MESSAGE SIGNS

Portable Changeable Message Signs shall be Temporary Traffic Control devices with the flexibility to display a variety of messages.

Typical applications include the following:

- a. Where the speed of vehicular traffic is expected to drop substantially;
- b. Where significant queuing and delays are expected;
- c. Where adverse environmental conditions are present;
- d. Where there are changes in alignment or surface conditions;
- e. Where advance notice of ramp, lane or roadway closures is needed;
- f. Where crash or incident management is needed; and/ or
- g. Where changes in the road user pattern occur.

[Ref: MUTCD Section 6F.55]

PORTABLE ARROW PANELS

An arrow panel shall be a sign with a matrix of elements capable of either flashing or sequential displays. This sign shall provide additional warning and directional information to assist in merging and controlling road users through or around a Temporary Traffic Control zone.

If used, an arrow panel should be used in combination with appropriate signs, canalizing devices, or other Temporary Traffic Control devices.

An arrow pane should be placed on the shoulder of the roadway or, if practical, further from the traveled lane. It should be delineated with retro-reflective Temporary Traffic Control devices. When an arrow panel is not being used, it should be removed.

If not removed, it should be shielded.

Or if the previous tow options are not feasible, it should be delineated with retroreflective Temporary Control devices.

[Ref: MUTCD Section 6F.56]

POR TABLE FLOODLIGHTS

When nighttime work is being performed, floodlights should be used to illuminate the work area, equipment crossings, and other areas.

Except in emergency situations, flagged stations shall be illuminated at night. Floodlighting shall not produce a disabling glare condition for approaching users, flaggers or workers.

The adequacy of the floodlight placement and elimination of potential glare should be determined by driving through and observing the floodlighted area from each direction on all approaching roadways after the initial floodlight setup, at night, and periodically.

[Ref: MUTCD Section 6F.76]