

OAR 437, Division 7, Forest Activities
OR-OSHA Admin. Order 3-2004, filed and effective
June 7, 2004

437-007-0220 Medical Services and First Aid.

(1) The employer must develop and implement an emergency medical plan to ensure emergency medical service to employees with major illnesses and injuries.

(2) All employees must be knowledgeable concerning the emergency care and emergency medical treatment plan.

(3) All personnel employed in forest activities must be trained in first aid and CPR as follows:

(a) In a language they understand.

(b) At least every 2 years **or as required by a nationally recognized first aid training provider.**

(c) All supervisors and all cutters must be first aid and CPR trained prior to their initial assignment.

(d) All new employees, other than supervisors and cutters, that are not first aid and CPR trained prior to their initial assignment must receive a first aid and CPR briefing.

(e) All new employees must receive first aid and CPR training within 6 months of being hired.

(f) For the initial start-up of a side or operation where new employees are assigned, at least one out of every five crew members must be first aid and CPR trained before work starts.

NOTE 1: Log truck drivers and watchers are not required to receive first aid and CPR training if they are not involved with falling, yarding or processing logs.

NOTE 2: See the Oregon OSHA Division 2, Subdivision 2/Z, Toxic and Hazardous Substances, §1910.1030, Bloodborne Pathogens, if an employee comes into contact with blood or other potentially infectious material as the result of providing first aid.

(4) Each worksite must have at least one serviceable and operable two-way radio, phone or radio/phone combination available to reach ambulance service. Citizens' band radios are permitted only as a secondary means of communication.

NOTE: This rule does not apply to road graders, log and dump trucks, crew buses and similar mobile equipment that service locations where a communication unit is already available (e.g., yarders, loaders).

- (5) Each operating site or crew in a communication “dead” area must have a mobile communication unit or advance plans to relay emergency calls through another site operating in the vicinity.
- (6) At worksites of more than one day duration, the employer must have available near the worksite communication device(s):
- (a) Written land directions to the worksite.
 - (b) The worksite location by Township, Range and Section.
- (7) When air evacuation is available to any worksite of more than one day duration, the employer must have available, near the worksite communication device(s), the:
- (a) Name and phone number of the air evacuation service.
 - (b) Worksite location by latitude and longitude or township, range and section as required by the air service.
- (8) The employer must assure that transportation is always available to:
- (a) A point where an ambulance can be met, or
 - (b) The nearest suitable medical facility.
- (9) Vehicles used for the transportation of personnel must carry a first aid kit:
- (a) Suitable for the number of passengers customarily transported.
 - (b) Suitable for the types of injuries that could occur.
 - (c) Located where they are readily available to the driver or crew.
- (10) First aid kits must be provided at each worksite.
- (11) Worksite first aid kits must contain the following minimum supplies at all times:
- (a) Eight gauze pads individually wrapped (at least 4 inches by 4 inches in size);
 - (b) Two large gauze pads that are or can be folded to an approximate size of 8 inches by 10 inches or the equivalent;
 - (c) One box adhesive bandages;
 - (d) One package gauze roller bandage at least 2 inches wide or the equivalent;
 - (e) Two triangular bandages;
 - (f) Wound-cleaning agent, such as sealed, moistened towelettes, or soap and water;

(g) Scissors;

(h) One stretcher or equivalent weatherproof litter at any three or more person worksite, and at all logging sites;

(i) Two blankets, one of which must provide the strength and insulation equivalent to a wool blanket;

(j) Latex gloves;

(k) Mouth barrier;

(l) Tweezers;

(m) Adhesive tape;

(n) Two elastic wraps; and

(o) Splint material.

NOTE: The quantities of each item are minimum amounts. Bulk pack or unit pack supplies are acceptable. First aid supplies from other states may be acceptable if such supplies are the reasonable equivalent of those required by this rule.

(12) The employer also may have the number and content of first aid kits reviewed and approved annually by a health care provider.

(13) First aid supplies must be regularly inspected and replenished as needed.

(14) First aid supplies must be stored in containers adequate to protect the contents from damage, deterioration or contamination.

(a) The containers must be clearly marked "First Aid."

(b) The container must not be locked, but may be sealed.

(c) Soap and water, stretcher, or basket and blankets may be stored separately, but must be near or with the first aid supplies.

(15) All employees must be informed of the location of first aid supplies.

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stats. Implemented: ORS 654.001 through 654.295.

Hist: OR-OSHA Admin. Order 5-2003, f. 6/02/03, ef. 12/01/03.

OR-OSHA Admin. Order 3-2004, f. 6/7/04, ef. 6/7/04.

437-007-0600 Inspection and General Requirements for Rigging.

(1) A competent person must thoroughly inspect all:

(a) Blocks, butt rigging, shackles and other rigging for damaged, cracked or worn parts, loose nuts and bolts, and the need for lubrication before they are used.

(b) Wire rope (running lines), **skylines, chokers**, straps and guylines before they are used.

(2) Repairs or replacements must be made before the blocks, butt rigging, shackles, other rigging, guylines, or straps are used.

(3) Rigging and loads must not foul or saw against lines, straps, blocks, or other equipment when in use.

Stat. Auth.: ORS 654.025(2) and 656.726(4).
Stats. Implemented: ORS 654.001 through 654.295.
Hist: OR-OSHA Admin. Order 5-2003, f. 6/02/03, ef. 12/01/03.
OR-OSHA Admin. Order 3-2004, f. 6/7/04, ef. 6/7/04.

437-007-0605 Out-of-Service Requirements for Wire Rope.

(1) Wire rope must be repaired (spliced), re-socketed, or taken out of service when there is:

(a) Evidence of chafing, sawing, crushing, kinking, crystallization, bird-caging, corrosion, heat damage, or other damage that has weakened the rope structure, or

(b) One or more broken wire(s) at the base of a poured nubbin or end fitting, or

(c) Corroded, damaged, or improperly applied end connections, or

(d) 12 1/2 percent of the wires are broken within a distance of one lay.

EXCEPTION: Out-of-service requirements do not apply to chokers, grapple opening lines, tag lines, cat and skidder winch lines, and droplines that are not used to move the carriage.
However, in accordance with 437-007-0600, a competent person must inspect these cables daily and remove from service any that are unsafe.

Figure 7-1 – Wire Rope Out-of-Service

EXAMPLE 1: A 6 x 19 Independent Wire Rope Core (IWRC) wire rope must be removed from service when 14 broken wires are found within the distance of one wire rope lay.
[6 strands with 19 wires = 114×0.125 (12 1/2%) = 14.25]

EXAMPLE 2: A 6 x 25 IWRC wire rope must be removed from service when 19 broken wires are found within the distance of one wire rope lay. [6 strands with 25 wires = 150×0.125 (12 1/2%) = 18.75]

(2) Oversized trailer lift straps must be removed from service when the strap no longer has a breaking strength equal to five times the load to be lifted.

Stat. Auth.: ORS 654.025(2) and 656.726(4).
Stats. Implemented: ORS 654.001 through 654.295.
Hist: OR-OSHA Admin. Order 5-2003, f. 6/02/03, ef. 12/01/03.
OR-OSHA Admin. Order 3-2004, f. 6/7/04, ef. 6/7/04.

437-007-0615 Pressed Eyes and End Fittings.

- (1) Pressed eyes must not be used for skyline eyes that will be crossed with loaded carriages.
- (2) Quick nubbins must not be used as guyline and skyline end fittings.
- (3) **For rigging made up after December 1, 2003**, [S]standard sized ferrules must be used when nubbins are poured on wire rope that exceeds the rated breaking strength of 1 1/8-inch diameter extra improved plow steel.
- (4) Poured nubbin ferrules must be stamped with the date they were poured.
- (5) The recommendations of the manufacturer must be followed in attaching sockets and similar end fastenings.

Stat. Auth.: ORS 654.025(2) and 656.726(4).
Stats. Implemented: ORS 654.001 through 654.295.
Hist: OR-OSHA Admin. Order 5-2003, f. 6/02/03, ef. 12/01/03.
OR-OSHA Admin. Order 3-2004, f. 6/7/04, ef. 6/7/04.

437-007-0650 Guylines – General Requirements.

- (1) Splicing of guylines is prohibited except to make an eye.
- (2) Guylines used to stabilize logging machines must be **at least** of the size, strength and number recommended by the machine manufacturer.
- (3) Load-bearing guyline angles must not be greater than 50 degrees measured horizontally or that recommended by the machine manufacturer. If suitable anchors are not available or the terrain is so steep that the guyline angle exceeds 50 degrees or the machine manufacturer's recommendation, additional precautions must be taken, such as rearranging guylines to oppose the load, adding an additional guyline to oppose the load, or narrowing yarding roads.
- (4) Tail and intermediate support tree guylines must be:
 - (a) Arranged and adjusted so they share the load when lines are tensioned.
 - (b) Kept securely tightened during the yarding process.
 - (c) Made of the same strength material as the line hung in the tree or larger size guylines must be used to provide the same relative strength.

Example: In 437-007-0650(4)(c), a 1-inch swaged skyline requires guylines equivalent in strength to 5/8-inch swaged guylines.
- (5) When using tail or intermediate support trees and the line hung in the tree is:
 - (a) 5/8- inch or less, guylines must be at least 3/8-inch.
 - (b) Greater than 5/8-inch and less than 1-inch, guylines must be at least 1/2-inch.

(c) 1-inch and larger, guylines must be at least 5/8-inch.

(6) A skyline must not be considered a guyline.

(7) Machines and equipment used for yarding that are specifically designed to be self-stabilizing during operation may be used without guyline(s).

NOTE: Hydraulic excavator-based log loading machines may yard logs without using guylines.

(8) Guylines made of synthetic materials, including the end connectors, must have the equivalent strength capacities of wire rope.

(9) The manufacturer's recommendations for out-of-service requirements of synthetic materials must be followed.

(10) When guylines are required for towers they must be positioned according to Appendix 7-I, Table 7-9 or the manufacturer's specifications.

(11) Tail or intermediate support tree guylines must not be pretensioned beyond the point of tree stability before the load is applied. (See Figure 7-18.)

(12) Trees and unintentional siwashes must not interfere with the proper alignment, placement, or tightening of guylines.

(13) Guylines must be hung in a manner to prevent a bight or fouling when they are tightened.

Stat. Auth.: ORS 654.025(2) and 656.726(4).
Stats. Implemented: ORS 654.001 through 654.295.
Hist: OR-OSHA Admin. Order 5-2003, f. 6/02/03, ef. 12/01/03.
OR-OSHA Admin. Order 3-2004, f. 6/7/04, ef. 6/7/04.

437-007-0655 Guylines - Tail Tree Guying.

(1) Except as provided for in rule (2) and (5) of this section, a minimum of two guylines must be used on tail trees and located within guying zones to oppose the forces as shown in Figure 7-16 (azimuths 130-150 and 210-230 degrees).

Figure 7-16 – Guylines – Tail Trees

(2) When the angle of the lines between the tail tree and a tail hold produces an offset of more than 8 degrees between the lines as they enter and leave the tail tree, then at least three guylines are required.

(3) If a suitable anchor is not available within a specified guying zone, two guylines may be used in lieu of one guyline for that zone, provided a guyline is placed on both sides of, and as near as possible, to the affected guying zone.

(4) When additional guylines are needed in a tree, they must be placed to oppose the yarding forces.

(5) Guylines are not required when ~~[a tail tree is stable]~~ **at the point of rigging attachment the tail tree does not move more than its diameter in the direction of load as shown in** ~~[according to]~~ Figure 7-18 and the:

- (a) Tail tree is not within reach of workers.
- (b) Resulting line movement would not pose a hazard to workers if the tail tree failed.

~~[NOTE: At the point of rigging attachment, the tree must not move more than its diameter in the direction of load.]~~

Stat. Auth.: ORS 654.025(2) and 656.726(4).
Stats. Implemented: ORS 654.001 through 654.295.
Hist: OR-OSHA Admin. Order 5-2003, f. 6/02/03, ef. 12/01/03.
OR-OSHA Admin. Order 3-2004, f. 6/7/04, ef. 6/7/04.

437-007-0660 Intermediate Support Trees.

(1) Intermediate support trees must be rigged so:

- (a) Horizontal carriage clearance at the base of the intermediate support tree(s) is sufficient for the turn of logs to pass the support tree(s).
- (b) The jackline is a single piece of line that provides strength equal to a line 1/8-inch larger than the tong or skidding line. (Figures 7-17, 7-19 and 7-20.) **Extensions may be attached to the anchor end of the jack-line.**

Figure 7-17 – Intermediate Support Tree – Vertical

(2) Vertical support trees must be firmly rooted.

(3) The base of all leaning tree supports must be prevented from moving by:

- (a) Retaining 20 percent of the stump diameter in holding wood; or
- (b) Other suitable rigging arrangements.

(4) Single tree intermediate supports must be guyed as follows:

(a) For skylines 1-inch and smaller use the rigging configuration in Figure 7-17:

(A) No guylines are ~~[needed if the tree is stable according to]~~ **required when at the point of rigging attachment the tree does not move more than its diameter in the direction of load as shown in** Figure 7-18.

(B) If the tree moves more than one diameter at the point of rigging attachment, then a guyline of the size called for in 437-007-0650(4) must be rigged to oppose the yarding forces.

Figure 7-18 – Guyline – Tail Tree Stability

(b) For all skylines larger than 1-inch and for skylines rigged as in Figure 7-17.

(A) Two guylines are needed of the sizes called for in 437-007-0650(4)(c).

(B) The guylines must be rigged according to 437-007-0655(4) if the tree is not stable according to Figure 7-18.

(c) For all leaning tree intermediate supports using the rigging configuration of Figure 7-19, a minimum of three guylines must be used.

(A) Two guylines of the sizes called for in 437-007-0650(4)(c) must be rigged according to Appendix 7-I, Figure 7-42.

(B) A snap guyline of at least 3/8-inch diameter must be placed opposite the two load-bearing guylines.

Figure 7-19 – Intermediate Support Tree – Leaning

(5) Double tree supports must be rigged (see Figure 7-20) so the:

(a) Angle of the block to the center of the support line:

(A) Is 10 degrees in any direction when skylines 1 1/8-inch and smaller are used, or

(B) Has deflection in the direction of the jack which does not exceed 10 degrees when skylines larger than 1 1/8-inch are used.

(b) Loaded support trees do not displace more than 2 feet at the point of rigging attachment.

(c) Minimum and maximum heights of the jack relative to the height of the block is as shown below for double tree intermediate support systems.

Figure 7-20 – Intermediate Support – Double Tree

(6) Double tree supports must be guyed as follows:

(a) For skyline sizes equivalent to 1 1/8-inch improved plow steel (IPS) and less, no guys are required;

(b) For skyline sizes equivalent to those larger than 1 1/8-inch IPS as shown in Appendix 7-I, Figure 7-39.

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stats. Implemented: ORS 654.001 through 654.295.

Hist: OR-OSHA Admin. Order 5-2003, f. 6/02/03, ef. 12/01/03.

OR-OSHA Admin. Order 3-2004, f. 6/7/04, ef. 6/7/04.

437-007-0690 Metal Towers.

(1) A competent person must direct the raising and lowering of each metal tower.

(2) All employees not engaged in the actual raising or lowering of metal towers must stay in the clear during these operations.

- (3) Metal towers must be level to provide proper line spooling and avoid excessive stress on component parts.
- (4) Each metal tower must have an identification plate permanently attached to its base or on the yarder in a position that can be easily read by a person standing on the ground or on the base platform.
- (5) All plates must contain the following information:
- (a) Name and address of manufacturer and model number; and
 - (b) The maximum and minimum inclination at which the metal tower is designed to operate.
- (6) In addition, all identification plates on metal towers manufactured after July 1, 1980, must contain the following information:
- (a) The maximum breaking strength and size of mainline for which the metal tower is designed;
 - (b) The maximum breaking strength and size of haulback line for which the metal tower is designed;
 - (c) The number, **minimum** breaking strength and size of guylines or any other lines required; and
 - (d) If the metal tower is designed for a skyline, slackline, or modified slackline system, the maximum breaking strength and size of skyline, mainline and haulback line that can be used.
- (7) All metal towers must be operated within the manufacturer's capacity:
- (a) As specified on the identification plate; or
 - (b) As modified by the manufacturer; or
 - (c) As designed and specified by a registered professional engineer.
- (8) If wire rope dimensionally larger in size or of a greater breaking strength than that specified by the yarder manufacturer is used for skyline, mainline, skidding line and/or haulback line, one of the following methods for limiting the load on the spar must be used:
- (a) A tamper-proof tension limiting device that automatically slacks the line loads (pull) on the metal tower to below its maximum identification plate rating.
 - (b) A line fuse system installed in the skyline or mainline; or
 - (c) Established operating procedures that limit line loads (pull) on the metal tower to below the maximum identification plate rating for the metal tower.
- (9) When a line fuse system is used to limit line loads (pull) on the metal tower:

(a) The line fuse must have a designed breaking strength equal to or less than the maximum line rating of the metal tower as listed on its identification plate.

(b) The line fuse must be certified and stamped as to the breaking strength.

(c) The skyline or mainline must be hung in a single eye of the fuse link.

(d) Notice must be given to crew personnel that line fuses are in use.

(10) When operating procedures are used to limit line loads (pull) on the metal tower:

(a) They must be observable or verifiable.

(b) Any locking or dogging device on the brake or elsewhere must be removed or deactivated.

(c) Personnel must be knowledgeable about the operating procedures that are in use to limit line loads.

(11) Metal towers and their appurtenances must be inspected by a competent person each time the tower is lowered and at any time its safe condition is in doubt.

(12) When damage from overstress or any other source is noted or suspected, the part in question must be inspected by a suitable method and found to be safe or the part repaired by a qualified person or replaced before the tower is again used.

(13) Structural modifications or additions which affect the capacity or safe operation of metal towers must be made only under the direction of the manufacturer or a registered professional engineer. If such modifications or additions are made, the identification plate required in OAR 437-007-0690(4), (5) and (6) must reflect such changes.

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stats. Implemented: ORS 654.001 through 654.295.

Hist: OR-OSHA Admin. Order 5-2003, f. 6/02/03, ef. 12/01/03.

OR-OSHA Admin. Order 3-2004, f. 6/7/04, ef. 6/7/04.

437-007-0725 Securing Machines.

(1) Before the operator leaves the operator's work station, procedures must be implemented to prevent the release of stored energy, accidental start up, or movement of the machine.

(2) The employer must instruct all authorized employees how to use shut down procedures.

(3) Authorized employees must demonstrate a working knowledge of the specific shut down procedures they are required to use.

(4) Locks, tags and other devices used to control hazardous energy must be durable.

(5) The words "DO NOT START," "DO NOT OPERATE," or other appropriate warning must be displayed on tags used to control energy.

(6) Tags used to control hazardous energy must be placed so they are obvious to anyone attempting to operate the machinery.

(7) Blades must be lowered to the ground or other stable surfaces to secure the blade and machine from movement while maintenance or repair activities are performed.

(8) Grapples, delimeter masts, feller buncher attachments, forks and other similar devices must be stable and not pose a hazard to personnel while maintenance or repair activities are performed.

(9) If a hydraulic or pneumatic storage device can move machine elements, such as blades, buckets, saws, shears, etc., after the machine is shut down for maintenance or repair, the pressure or stored energy that can activate the movable elements must be discharged.

(10) Before locks, tags and other devices that are used to control hazardous energy are removed and machinery or equipment is started, the work area must be inspected to ensure that:

(a) All tools have been removed.

(b) Personnel are in the clear.

(11) Guards must be replaced after necessary adjustments are made.

(12) ~~Machines or equipment that are not mounted on sleds, wheels, or tracks must comply with the requirements of Division 2/J, §1910.147, for controlling hazardous energy.~~ **Follow the requirements of Division 2/J, 1910.147 when it is necessary to control hazardous energy for servicing and maintenance of machines.**

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stats. Implemented: ORS 654.001 through 654.295.

Hist: OR-OSHA Admin. Order 5-2003, f. 6/02/03, ef. 12/01/03.

OR-OSHA Admin. Order 3-2004, f. 6/7/04, ef. 6/7/04.