IDAPA 24 – DIVISION OF OCCUPATIONAL AND PROFESSIONAL LICENSES

DIVISION OF BUILDING SAFETY – LOGGING SAFETY PROGRAM

24.39-80 – Idaho Minimum Safety Standards and Practices for Logging

Who does this rule apply to?
This rule applies to those who perform logging operations and their employees.

What is the purpose of this rule?
The rule prescribes the minimum safety standards and practices by which all logging operations in Idaho must be performed. This includes various aspects and stages of all logging operations, safe practices, and proper logging methods and safety equipment.

What is the legal authority for the agency to promulgate this rule?
This rule implements the following statute passed by the Idaho Legislature:

State Government and State Affairs -
- 67-2601A(3), Idaho Code – Department of Self Governing Agencies: Division of Building Safety

Who do I contact for more information on this rule?

Idaho Division of Building Safety
1090 E. Watertower Street, Suite 150
Meridian, ID 83642
Phone: (208) 334-3950
Fax: (877) 810-2840
Email: customer.service@dbs.idaho.gov
Website: https://dbs.idaho.gov/

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SUBCHAPTER A – GENERAL PROVISIONS
(Rules 000 - 050)

000. LEGAL AUTHORITY.
Pursuant to the provisions of Section 67-2601A, Idaho Code, the Division of Building Safety has the authority to promulgate and adopt rules for affecting the purposes therein. (3-20-20)

001. TITLE AND SCOPE.
These rules are titled IDAPA 24.39.80, "Idaho Minimum Safety Standards and Practices for Logging," and are applicable to the logging industry in the state of Idaho. (3-20-20)

002. -- 006. (RESERVED)

007. DEFINITIONS A THROUGH C.
Terms used in these standards shall be interpreted in the most commonly accepted sense, excepting only those specifically defined. (3-20-20)

01. **Administrator**. The Administrator of the Division of Building Safety. (3-20-20)

02. **A-Frame**. A structure made of the independent columns (of wood or steel) fastened together at the top and separated a reasonable width at the bottom to stabilize the unit from tipping sideways. (3-20-20)

03. **Approved**. The term approved means approved by the Division of Building Safety. (3-20-20)

04. **Arch**. A piece of equipment attached to the rear of a vehicle, used for raising one end of logs to facilitate skidding. (3-20-20)

05. **Division**. The Division of Building Safety. (3-20-20)

06. **Back Cut**. The final falling cut. (3-20-20)

07. **Barber Chair**. Slab portion of tree remaining on the stump above the back cut due to improper falling. (3-20-20)

08. **Bell or Cup Hook with Spike**. A hook consisting of a cylindrical cup from whose center there projects a spike. (3-20-20)

09. **Bight**. The loop of a line, the ends being "gast" elsewhere, or the angle formed by a line running through a block. (3-20-20)

10. **Binder**. Chain, cable, or steel strap used for binding loads of logs. (3-20-20)

11. **Blasting Cap**. A metal shell containing a detonating compound. (3-20-20)

12. **Brailling**. One (1) section of flat log raft enclosed by boom sticks. To place logs end to end in a long flat raft or boom. (3-20-20)

13. **Brow Log**. A log placed parallel to any roadway at a landing or dump to protect vehicles while loading or unloading. (3-20-20)

14. **Bullbuck**. The supervisor over cutting crew. (3-20-20)

15. **Buckle Guy Line**. Line used to stiffen or support a tree, pole, or structure between the top guys and the base. (3-20-20)

16. **Bunk**. The cross support for logs on a logging car or truck. (3-20-20)

17. **Butt Hook**. Hook at the end of a haul-in line for attaching chokers to line. (3-20-20)

18. **Butt Rigging**. Arrangement at the end of main line for attaching chokers. (3-20-20)

19. **Cable-Assisted Logging Systems**. Logging systems, including, but not limited to, winch-assisted, cable-assisted, tethered, and traction-assisted systems that enable ground-based timber harvesting machines, including, but not limited to, feller bunchers, harvesters, loaders and shovels, to be operated on slopes. (3-20-20)

20. **Capped Fuse**. A piece of fuse to which a blasting cap has been crimped. (3-20-20)

21. **Carriage Logging**. A type of high lead logging using gravity, haul back, or remote control carriages to yard logs. (Bullet carriage is one type). (3-20-20)

22. **Cat Road**. A tractor road. (3-20-20)

23. **Chaser**. The member of the yarding crew who unhooks the logs at the landing or fights hang-ups on skid road. (3-20-20)

24. **Chipper**. A machine that cuts materials into chips. (3-20-20)

25. **Chock (Bunk Block-Cheese Block)**. A wedge that prevents logs from rolling off the bunks. (3-20-20)

26. **Cheater**. An extension to bunk stakes. (3-20-20)

27. **Choker**. A wire rope with special attachments put around the log near the end for hauling or lifting. (3-20-20)

28. **Cold Deck**. Any pile of logs that is yarded and left for future removal. (3-20-20)

29. **Cold Shut**. A link for joining two (2) chains, the link being closed cold with a hammer, not a weld. (3-20-20)

30. **Competent Person**. An individual who is capable of identifying existing and predictable hazards in the work site surroundings or working conditions that are unsanitary, hazardous or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate such. (3-20-20)

31. **Connecting Wires**. Those wires that connect the leg wire of one (1) electric blasting cap or with the leading wires, when blasting in series. (3-20-20)

32. **Crotch Line**. Two (2) short lines attached to a hoisting line by means of a ring or shackle, the lower ends being attached to loading hooks and used for loading or unloading. (3-20-20)

33. **Cutter**. A term used to designate faller or bucker. (3-20-20)

008. DEFINITIONS D THROUGH I.

Terms used in these standards shall be interpreted in the most commonly accepted sense, excepting only those specifically defined. (3-20-20)

01. **D or Strap Socket**. A socket with a closed loop and arranged to be attached to the end of a line. It is used in place of a spliced eye. (3-20-20)

02. **Dead Man**. A buried log or other object used as an anchor. (3-20-20)

03. **Detonator**. A blasting cap, electric blasting cap, or delay electric blasting cap. (3-20-20)

04. **Dog Line**. Any line used to tie logs together. (3-20-20)

05. **Donkey (Short for "Donkey Engine")**. Power equipment equipped with drum and cable for moving or transporting logs as in loading or yarding. (3-20-20)

06. **Drag-Turn**. Any log or group of logs attached by some means of power and moved from a point of rest. (3-20-20)

07. **Equipment**. The term, as used, means and include all machines, machinery, tools, devices, safeguard, and protective facilities used in connection with logging operations, regardless of ownership. (3-20-20)

08. **Explosive**. Any chemical compound or mechanical mixture commonly used that contains any oxidizing and combustible units, or other ingredients, in such proportions, quantities or packing that an ignition by fire, friction concussion, percussion, or detonator of any part of the compound or mixture may cause such a sudden generation of highly heated gases that the resultant gaseous pressures are capable of producing destructive effects on contiguous objects or destroying life or limb. . (3-20-20)

09. **Exposed to Contact**. Means the location of a hazardous object is so accessible that a workman may, in the course of his employment, come into contact with the object. (3-20-20)

10. **Fair Lead**. A combination of a pair of sheaves or roller set transversely or vertically in a unit in front of another pair of sheaves to guide a line coming from any direction and leading it properly to a drum. (3-20-20)

11. **Gin Pole**. A raised pole properly guyed and used to support lines and blocks. (3-20-20)

12. **Grapple**. A device attached to a hoisting line for mechanically handling logs. (3-20-20)

13. **Guarded**. Guarded means covered, shielded, or railed so as to remove the possibility of dangerous contact or approach by employees or objects. It further means construction of guards to ensure protection from flying objects where applicable. (3-20-20)

14. **Gut Wrapper**. An intermediate binder for an individual tier of logs. (3-20-20)

15. **Guy Lines**. The lines used to stay or support spar trees, booms, etc. (3-20-20)

16. **Haul Back**. A small wire line traveling between the power skidder and a pulley set near the logs. Used to return the main cable with tongs, chokers, or hooks to the next log. (3-20-20)

17. **Hazard**. Hazard, as used in these standards, means any condition or circumstance that may cause accident or injury to an employee. (3-20-20)

18. **Heel Block**. The block heel of boom. (3-20-20)

19. **Heel Boom**. A type of loading boom where one end of the log is pulled up against the boom. (3-20-20)

20. **Hook Tender, Hooker**. The worker who supervises the method of moving the logs from the woods to the place of loading. (3-20-20)

21. **It is Recommended, or Should**. When these terms are used they indicate provisions that are not mandatory. (3-20-20)

009. DEFINITIONS J THROUGH R.

Terms used in these standards shall be interpreted in the most commonly accepted sense, excepting only those specifically defined. (3-20-20)

01. **Jaggers**. Any projecting broken strand of cable. (3-20-20)

02. **Jammer**. A machine used for handling logs. (3-20-20)

03. **Jill Poke**. A projecting object out of its normal position. (3-20-20)

04. **Knob**. A metal ferrule arranged to be attached to the end of a line, used in place of a spliced eye. (3-20-20)

05. **Landing, Rollway**. Any place where logs are placed, after being yarded, awaiting loading or unloading. (3-20-20)

06. **Lang Lay Rope**. A wire rope, in which the wires in the strands of the rope are laid in the same direction. (3-20-20)

07. **Leading Wires**. Those wires between the "connecting wires" or "leg wires" and a portable generating devise or an approved type blasting battery in series blasting. (3-20-20)

08. **Leaners**. A live or dead leaning tree. (3-20-20)

09. **Loading Boom**. Any structure projecting from a pivot point to guide a log when lifted. (3-20-20)

10. **Log or Logs**. When the word log or logs is used, it includes poles, piling, pulpwood, skids, etc. (3-20-20)

11. **Log Stacker**. A machine with lift forks used to handle logs. (3-20-20)

12. **Magazine**. Any building or other structure used exclusively for the storage of explosives. (3-20-20)

13. **Operation (Show Woods Layout)**. Any place where logging is being done. (3-20-20)

14. **Mainline**. A cable which pulls logs or trees to loading. (3-20-20)

15. **Pan (Skidding Pan)**. A solid piece of metal placed behind a tractor on which one end of logs rest. (3-20-20)

16. **Peeling Bar or Spud**. A tool for removing bark from trees or logs. (3-20-20)

17. **Pike, Pole**. A long pole whose end is shod with a sharp pointed steel spike, point, or hook. (3-20-20)

18. **Portable Spar or Tower**. An engineered structure designed to be used in a manner similar to which a wooden spar tree would be used. (3-20-20)

19. **Powder**. Any explosive other than the detonating agent. (3-20-20)

20. **Primer**. A cartridge of explosive with a detonator inserted there in. (3-20-20)

21. **Qualified Person**. An individual who, by possession of a recognized degree, certificate or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the project. (3-20-20)

22. **Reach**. An adjustable beam between a trailer and a motorized logging vehicle. (3-20-20)

23. **Receding Line**. The line on a skidder or slack-line comparable to the haul back line on a yarder. (3-20-20)

24. **Reload**. Any area where logs are dumped and reloaded. (3-20-20)

25. **Running Line**. Any line that moves. (3-20-20)

010. DEFINITIONS S THROUGH Z.
Terms used in these standards shall be interpreted in the most commonly accepted sense, excepting only those specifically defined. (3-20-20)

01. Safety Factor or Factor of Safety. This term as used is the ratio of the ultimate breaking strength of a member or piece of material to the actual working stress or to the maximum permissible (safe load) stress. For example: When a safety factor of six (6) is required, the structure, lines, hoists, or other equipment referred to shall be such as to provide a strength sufficient to support a load equal to six (6) times the total weight or stress to be imposed on it. (3-20-20)

02. Sail Guy. A guy which holds the outer end of a boom. (3-20-20)

03. Sail Block. A block hung inverted on the sail guy to hold the tong block in proper position. (3-20-20)

04. Schoolmarm. A crotched tree consisting chiefly of two (2) trunks. (3-20-20)

05. Shall, Will. Is compulsory or mandatory. (3-20-20)

06. Skids. Any group of timbers spaced a short distance apart on which the logs are placed. (3-20-20)

07. Side, Show, Chance. That unit of a logging operation, including men and equipment that is sufficient to fall, buck, and load a given area ready for transportation of the logs to the mill. (3-20-20)

08. Side Winders. A piece of log, brush, or limb thrown up or sideways during skidding operation, or a tree knocked down by another tree in falling. (3-20-20)

09. Signalman, Whistle Punk. The authorized worker who transfers signals from a given location to the operator. (3-20-20)

10. Skidding. Movement of logs on the ground. (3-20-20)

11. Skyline. The supporting line on various types of logging systems on which carriage, block, or bullet travels. (3-20-20)

12. Slack Line. A form of skyline where skyline is spooled on drum and can be raised or lowered. (3-20-20)

13. Slack Puller. Any device used to increase the movement of a line when its own weight is inadequate. (3-20-20)

14. Snags. Any dead standing trees. (3-20-20)

15. Snubbing. A method of retarding or controlling the movement of logs or machine by means of looping the line around a stationary object. (3-20-20)

16. Spring Board. A board with an iron tip used by fallers to stand on when they must stand above the ground level. (3-20-20)

17. Standard Safeguard. Means a device designed and constructed with the object of removing the hazard of an accident incidental to the machine, appliance, tool, building or equipment to which it is attached. (3-20-20)

18. Strap. Any short piece of line with an eye or “D” in each end. (3-20-20)

19. Strawline. A small line used for miscellaneous purposes. (3-20-20)

20. **Strip**. A definite location of timber allocated to a cutting crew. (3-20-20)

21. **Substantial**. Means constructed of such strength, of such material, and of such workmanship, that the object referred to will withstand normal wear, shock and usage. (3-20-20)

22. **Sweeper**. Unexpected and controlled lateral movement of a log, tree, etc., during skidding operations. (3-20-20)

23. **Swamp**. The falling or clearing of limbs and brush around or along a specific place. (3-20-20)

24. **Tag Line**. A line used to control movement during loading, unloading, or skidding operations. (3-20-20)

25. **Tail Hold**. Any anchor used for making fast any line. (3-20-20)

26. **Tell Tale**. A devise used to serve as a warning for overhead hazards. (3-20-20)

27. **Tight Line**. When power is exerted on both mainline and haul back at the same time. (3-20-20)

28. **Tongs**. A hooking device used to lift or skid logs. (3-20-20)

29. **Transfer**. Changing of a load of logs in a unit from one means of transportation to another. (3-20-20)

30. **Tree Plates**. Steel protectors spiked around a tree to prevent the lines from cutting into the trees. (3-20-20)

31. **Undercut**. A notch cut in the tree to guide and control the tree in falling. (3-20-20)

32. **Windfall**. A tree felled by the wind or other natural causes. (3-20-20)

33. **Widow Maker**. A loose limb, top, or piece of bark which may fall on a logger working beneath it. (3-20-20)

34. **Yarding**. Movement of logs or trees from the place they are felled (bucked) to a central loading or shipping point. (3-20-20)

011. INTERPRETATION AND APPLICATION OF THESE RULES.

01. **Scope**. These rules are part of the state of Idaho industrial accident prevention program and have the full force and effect of law. (3-20-20)

02. **Jurisdiction**. In accordance with the laws of the state of Idaho, every employer and every employee working in the state of Idaho shall comply with the rules contained herein. (3-20-20)

03. **Enforcement**. The enforcement of all rules of this chapter and the right of inspection and examination, at any time, shall rest with the Division. (3-20-20)

04. **Issues Not Covered**. Where specific standards in these rules fail to provide a rule or standard applicable to the operation in question, and other state of Idaho codes or standards are applicable, those codes or standards shall apply. (3-20-20)

05. **Interpretations**. Should any controversy develop as to the intent or application of any standard or rule as set forth in these rules, or the interpretation of any standard or rule set forth in these rules, such controversy shall be called to the direct attention of the Division, which shall render a decision as the applicability of such rule or standard. Any appeal from this decision shall be directed to the Administrator. (3-20-20)

06. Additional Standards. It is recognized that a definite, positive safety standard cannot anticipate all contingencies. The Division, after due notice and opportunity to be heard, may require additional standards and practices to insure adequate safety at any place of any employment, and, on its own motion or upon application of any employer, employee, group, or organization, may modify any provision of this rule. (3-20-20)

07. Exceptions. In exceptional cases where the rigid application or compliance with a requirement can only be accomplished to the detriment and serious disadvantage of an operation, method, or process, exception to the requirement will be considered upon written application to the Division. After thorough investigation, the Division may grant an exception if human life and physical well being will not be endangered by such exception. (3-20-20)

08. Existing Buildings, Structures, and Equipment. Nothing contained in this rule for logging safety shall prevent the use of existing buildings, structures, and equipment during their lifetime when maintained in good safe condition, and properly safeguarded, or require conformance with the applicable safety standards required by Idaho Safety Codes effective prior to the effective date of this rule, provided that replacements and alterations shall conform with all provisions of these rules. (3-20-20)

012. EMPLOYER'S RESPONSIBILITY.

01. General Requirements. (3-20-20)

a. Every employer subject to these rules shall furnish employment and maintain places of employment that are safe according to the standards as set forth herein. (3-20-20)

b. Every employer shall adopt and use practices, means, methods, operations and processes that are adequate to render such employment and place of employment safe. (3-20-20)

i. Employers shall place highly visible “LOGGING AHEAD” or similar-type warning signs at the entrances of active logging jobs. Employers shall also place “TRUCKS AHEAD,” “TRUCKS ENTERING,” “TREE FALLING,” and “CABLES OVERHEAD,” whenever applicable (3-20-20)

ii. Every employer shall furnish to its crew a Company Emergency Rescue Plan. (3-20-20)

c. Every employer should insure that Safety Data Sheets (SDS) are reasonably accessible for every hazardous material. (3-20-20)

d. Every employer shall post and maintain in a conspicuous place or places in and about his place or places of business a written notice stating the fact that he has complied with the worker’s compensation law as to securing the payment of compensation to his employees and their dependents in accordance with the provisions of Idaho law. Such notice shall contain the name and address of the surety, as applicable, with which the employer has secured payment of compensation. Such notice shall also be readily available on the site where logging operations are occurring, and available for inspection by Division officials upon request. (3-20-20)

e. Every employer shall do all other things as required by these rules to protect the life and safety of employees. (3-20-20)

f. No employer shall require any employee to go or be in any place of employment that does not meet the minimum safety requirement of these rules, except for the purpose of meeting such requirements. (3-20-20)

g. No employer shall fail or neglect: (3-20-20)

i. To make available and use safety devices and safeguards as are indicated. (3-20-20)

ii. To adopt and use methods and processes adequate to render the employment and place of employment safe. (3-20-20)

iii. To do all other things as required by these rules to protect the life and safety of employees.

(3-20-20)

h. No employer, owner or lessee of any real property shall construct or cause to be constructed any place of employment that does not meet the minimum safety requirements of these rules. (3-20-20)

i. No person, employer, employee, other than an authorized person, shall do any of the following: (3-20-20)

i. Remove, displace, damage, destroy or carry off any safeguard, first aid material, notice or warning, furnished for use in any employment or place of employment, or interfere in any way with the use thereof by any other person. (3-20-20)

ii. Interfere with the use of any method or process adopted for the protection of any employee, including himself, in such employment or place of employment. (3-20-20)

iii. No person shall fail or neglect to do all other things as required by these rules to protect the life and safety of employees. (3-20-20)

iv. The use of intoxicants or drugs while on duty is prohibited. Persons reporting for duty while under the influence of or impaired by liquor or other legal or illegal drugs or substances shall not work until completely recovered. (3-20-20)

j. A procedure for checking the welfare of all workers during working hours shall be instituted and all workmen so advised. The employer shall assume responsibility of work assignments so that no worker shall be required to work in a position or location so isolated or hazardous that he is not within visual or audible signal contact with another person who can render assistance in case of emergency. In any operation where cutting, yarding, loading, or a combination of these activities are carried on there shall be a minimum crew of two (2) persons who shall work as a team, and shall be in visual or audible signal contact with one another. This does not apply to operators of motorized equipment, watchmen, or certain other jobs which, by their nature are singular workmen assignments. There shall be some method of checking-in crew members at the end of the shift. Each immediate supervisor shall be responsible for his crew being accounted for. This standard also includes operators of movable equipment. (3-20-20)

k. Every employer shall keep a record of all cases of injuries his employees receive at their work. This record shall be kept in such manner as to enable representatives of the Division to determine by examining the record, the injury rate of the employee force for the period covered by the report. (3-20-20)

l. Every employer shall investigate every accident resulting in a disabling injury that his employees suffer in connection with their employment. Employers shall promptly take any required action to correct the situation. Employees shall assist in the investigation by giving any information and facts they have concerning the accident. (3-20-20)

02. Management Responsibility. (3-20-20)

a. Management shall take an active and interested part in the development and guidance of the operation's safety program, including fire safety. (3-20-20)

b. Management shall apply a basic workable safety plan on the same priority as it does to any other work facet of the operation where elimination of all injuries is to be achieved in all phases of the operation. It is the duty of management to assume full and definite responsibility. To attain these safety objectives, management shall have the full cooperation of employers and the Division. (3-20-20)

c. Every employer shall furnish employment which shall be safe for the employees therein and shall furnish such devices and safeguards and shall adopt and use such practices, means, methods, operation and processes as are adequate to render such employment and places of employment safe to protect the life and safety of employees. The employer shall make available necessary personal protective safety equipment. (3-20-20)

d. Regular safety inspection of all rigging, logging, machinery, rolling stock, bridges, and other equipment shall be made as often as the character of the equipment requires. Defective equipment or unsafe conditions found shall be replaced, repaired or remedied. (3-20-20)

e. All places of employment shall be inspected by a qualified person or persons as often as the type of operation or the character of the equipment requires. Defective equipment or unsafe conditions found by these inspections shall be replaced or repaired or remedied promptly. (3-20-20)

013. EMPLOYEE'S RESPONSIBILITY.

01. General Requirements. (3-20-20)

a. Employees shall not indulge in horseplay, scuffling, practical jokes or any activity that creates or constitutes a hazard while on the employer's property or at any time when being transported from or to work in facilities furnished by the employer. (3-20-20)

b. Employees who are assigned to, or engaged in the operation of any machinery or equipment, shall ensure that all guards, hoods, safety devices, etc., that are provided by the employer are in proper place and properly adjusted. (3-20-20)

02. Employee Accidents. Each employee shall make it his individual responsibility to keep himself, his coworkers, and his machine or equipment free from accidents to the best of his ability. (3-20-20)

03. Study Requirements. So that each worker may be better qualified to cooperate with his fellow workmen in preventing accidents, he shall study and observe these and any other safety standards governing his work. (3-20-20)

04. Employee Responsibilities. Additional responsibilities of an employee insofar as industrial safety is concerned shall be as follows: (3-20-20)

a. The employee shall report immediately, preferably in writing, to his foreman or safety coordinator for the logging operation, all known unsafe conditions and practices. (3-20-20)

b. The employee shall ascertain from the foreman where medical help may be obtained if it is needed. (3-20-20)

c. The employee shall not participate in practical jokes or horseplay. (3-20-20)

d. The employee shall make a prompt report of every accident regardless of severity to the foreman, first aid attendant, or person in charge. Such reports are required and are necessary in order that there may be a record of his injuries. (3-20-20)

e. The employee shall at all times apply the principles of accident prevention in his daily work and shall use proper safety devices and protective equipment. No employee shall remove, displace, damage, destroy, or carry off any safety device or safeguard furnished and provided for use in any employment, or interfere in any way with the use thereof by any other person, or interfere with the use of any method or process adopted for the protection of any employee in such employment, or fail or neglect to do every other thing reasonably necessary to protect the life and safety of himself and fellow employees, and by observing safe practice rules shall set a good example for his fellow workmen. (3-20-20)

f. The employee shall not report to the job impaired by intoxicants or legal or illegal drugs and shall not use intoxicants or such drugs while on the job. The employer shall prohibit any employee from working on or being in the vicinity of any job while under the influence of or impaired by intoxicants or drugs. Employers shall be responsible for the actions of any employee known to be in an intoxicated or impaired condition while on the job. (3-20-20)

g. The employee shall wear, use and properly care for personal protective safety equipment issued to

him. These items shall be returned to the employer upon termination of employment. (3-20-20)

h. Workers exposed to head hazards shall wear approved head protection. (3-20-20)

i. Proper eye protection shall be worn while performing work where a known eye hazard exists. (3-20-20)

j. The employee should consider the benefits of accident prevention to himself and to his job. (3-20-20)

k. The employee should make an effort to understand his job. (3-20-20)

l. The employee should anticipate every way in which a person might be injured on the job, and conduct the work to avoid accidents. (3-20-20)

m. The employee should be on the alert constantly for any unsafe condition or practice. (3-20-20)

n. The employee shall learn first aid. (3-20-20)

o. The employee should keep physically fit, and obtain sufficient rest. (3-20-20)

p. The employee should be certain that all instructions received are understood completely before starting the work. (3-20-20)

q. The employee should actively participate in safety programs. (3-20-20)

r. The employee should study the safety educational material posted on the bulletin boards and distributed by the employer or safety committee. (3-20-20)

s. The employee should advise inexperienced fellow-employees of safe ways to perform their work and warn them of dangers to be guarded against. (3-20-20)

t. It is the employer's responsibility to ensure compliance with the foregoing provisions. (3-20-20)

014. -- 050. (RESERVED)

SUBCHAPTER B – HEALTH, SAFETY, AND SANITATION
(Rules 051 through 100)

051. FIRST AID.

01. Transportation. (3-20-20)

a. Suitable means of transportation shall be established and maintained at the site of all operations to be used in the event any employee is seriously injured. (3-20-20)

b. Transportation shall be of a nature to render reasonable comfort to an injured employee. (3-20-20)

c. Each crew bus, or similar vehicle, shall be equipped with at least one (1) first aid kit with the required contents as indicated in Subsection 051.06 of this rule. (3-20-20)

02. Communication. (3-20-20)

a. Every employer shall arrange suitable telephone or radio communication at the nearest reasonable point, and shall establish an emergency action plan to be taken in the event of serious injury to any employee. (3-20-20)

b. Instructions covering the emergency action plan shall be made available to all work crews. (3-20-20)

c. When practicable, a poster shall be displayed on, or near the cover of each first aid cabinet or phone. The poster shall display the phone numbers of applicable emergency services. The use of the Idaho State EMS Communication Center is recommended. The number is 1-800-632-8000 or 208-846-7610. (3-20-20)

d. Every employer shall obtain their specific job location (longitude and latitude preferred) and furnish such to crew for emergency evacuation. (3-20-20)

03. Attendance for Seriously Injured. (3-20-20)

a. Seriously injured employees shall, at all times, be attended by the most qualified available person to care for the injured employees. (3-20-20)

b. Seriously injured employees shall be carefully handled and removed to a hospital, or given medical attention as soon as possible. (3-20-20)

c. Caution shall be used in removing a helpless or unconscious person from the scene of an accident to prevent further injury. (3-20-20)

04. First Aid Training. Any person performing work associated with a logging operation shall be required to complete an approved course in first-aid and have a current card. (3-20-20)

05. Stretcher or Spine Board. A spine board (designed for or adaptable to the work location and terrain) and two blankets maintained in sanitary and serviceable condition shall be available where such conditions require the use of such to provide for the proper transportation and first aid to an injured workman. (3-20-20)

06. First Aid Kits. (3-20-20)

a. The employer shall provide first aid kits at each work site where trees are being felled, at each active landing, and in each employee transport vehicle. (3-20-20)

b. The following list sets forth the minimally acceptable number and type of first-aid supplies for required first-aid kits. The contents of the first-aid kits shall be adequate for small work sites, consisting of approximately two (2) to three (3) employees. When larger operations or multiple operations are being conducted at the same location, additional first-aid kits shall be provided at the work site or additional quantities of supplies shall be included in the first-aid kits:

TABLE 051.06 – REQUIRED FIRST-AID KIT CONTENTS	
1.	Gauze pads (at least 4 x 4 inches)
2.	Two (2) large gauze pads (at least 8 x 10 inches)
3.	Box adhesive bandages (band-aids)
4.	One (1) package gauze roller bandage (at least two (2) inches wide)
5.	Two (2) triangular bandages
6.	Wound cleaning agent such as sealed moistened towelettes
7.	Scissors
8.	At least one (1) blanket
9.	Tweezers
10.	Adhesive tape

TABLE 051.06 – REQUIRED FIRST-AID KIT CONTENTS	
11.	Latex gloves
12.	Resuscitation equipment such as resuscitation bag, airway, or pocket mask
13.	Two (2) elastic wraps
14.	Splint
15.	Directions for requesting emergency assistance

(3-20-20)

c. Special kits, or the equivalent, shall be provided and approved for special hazards peculiar to any given work location. (3-20-20)

d. All kits, as applicable, shall be readily available and kept supplied. (3-20-20)

e. First aid kits shall be in metal, or other sanitary containers. Such containers shall be designed and constructed so as to be impervious to conditions of weather, dust, dirt, or other foreign matter. (3-20-20)

052. SAFETY EQUIPMENT AND PERSONAL PROTECTIVE EQUIPMENT.

01. General Requirements. (3-20-20)

a. Special protective equipment or apparel required for safe employment, other than clothing or equipment customarily supplied by employees, shall be furnished by the employer where necessary for the safety of employees. (3-20-20)

b. Employees are required to utilize all prescribed safety equipment and special protective equipment or apparel, and they shall exercise due care in maintaining it in safe, efficient and sanitary conditions. (3-20-20)

c. Employers are required to provide, at no cost to employees, appropriate eye, face, head, hand, and leg protection. (3-20-20)

d. Defective safety equipment shall not be used. Where the need for their use is indicated, protective covering, ointments, gloves or other effective protection shall be provided for and used by persons exposed to materials that are irritating to the skin. (3-20-20)

02. Inspection, Maintenance and Sanitizing. (3-20-20)

a. Each employer shall maintain a regular system of inspection and maintenance of personal protective equipment furnished to workers. (3-20-20)

b. Air line equipment shall have a necessary regulator and shall be inspected before each use. (3-20-20)

c. Workers shall check their equipment at the beginning of each shift. (3-20-20)

03. Eye Protection. (3-20-20)

a. Where workers are subject to eye hazards (flying particles, dusts, hazardous liquids, gases, mists or vapors, or injurious light rays) they shall be furnished with and shall wear eye protection suitable for the hazards involved. Such eye protection shall conform to the American National Standard Institute standards for Head, Eyes and Respiratory protection. (3-20-20)

b. Face shields may be used in lieu of other forms of eye protection where the nature of the operation

is such that they will furnish equivalent protection. (3-20-20)

c. Clean water in ample quantities shall be immediately available where materials are handled that are caustic or corrosive to the eyes. (3-20-20)

04. Foot and Leg Protection. (3-20-20)

a. Employees shall wear footwear suitable for the work conditions. (3-20-20)

b. Employees shall wear sharp caulk-soled boots or other footwear which will afford maximum protection from slipping. (3-20-20)

c. Special types or designs of shoes, or foot guards, shall be required to be worn where conditions exist that make their use necessary for the safety of the workers. (3-20-20)

d. Leggings or high boots of leather, rubber or other suitable material shall be worn by climbers, persons exposed to hot substances, or caustic solutions, etc., or where poisonous snakes may be encountered. (3-20-20)

e. Each employee who operates a chain saw shall wear leg protection, which meets the requirements of ASTM F 1897 and covers the full length of the thigh to the top of the boot on each leg, except when working as a climber. (3-20-20)

05. Hand Protection. (3-20-20)

a. Hand protection suitable for the required usage shall be worn wherever the nature of the work requires extra protection for the hands. (3-20-20)

b. Gloves shall not be worn where their use would create a hazard. (3-20-20)

06. Head Protection. (3-20-20)

a. Persons required to work where falling or flying objects, overhead structures, exposed electrical conductors, equipment or material create a hazard shall wear approved safety hard hats or caps at all times while exposed to such hazards. (3-20-20)

b. Employees working in locations which present a catching or fire hazard to hair shall wear caps or other head protection that completely covers the hair. (3-20-20)

07. Life Jackets, Vests and Life Rings.
Where personal buoyancy equipment is provided, it shall be of a design and shall be worn in a manner that will maintain the wearer's face above water. It shall be capable of floating a sixteen (16) pound weight for three (3) hours in fresh water. Such equipment shall not be dependent upon manual or mechanical manipulation or chemical action to secure the buoyant effect. (3-20-20)

a. Employees shall be provided with, and shall wear, approved buoyant protective equipment at all times while working on or over water, as follows: (3-20-20)

i. On floating pontoons, rafts and floating stages. (3-20-20)

ii. On open decks of floating plants (such as dredges, pile-drivers, cranes, pond saws, and similar types of equipment) which are not equipped with bulwarks, guardrails or life lines. (3-20-20)

iii. During the construction, alteration or repair of structures extending over or adjacent to water, except when guardrails, safety nets, or safety belts and life lines are provided and used. (3-20-20)

iv. Working alone at night where there are potential drowning hazards regardless of other safeguards

provided. (3-20-20)

v. On floating logs, boom sticks or unguarded walkways. (3-20-20)

b. Life rings with sufficient line attached to meet conditions shall be located at convenient points along exposed sides of work areas adjacent to water. Such rings, if used at night where a person might be beyond illuminated areas, shall be provided with a means of rendering them visible.
NOTE: Consult U.S. Coast Guard requirements for operations in navigable waters. (3-20-20)

08. Life Lines -- Safety Belts. (3-20-20)

a. Each life line and safety belt shall be of sufficient strength to support, without breaking, a weight of two thousand five hundred (2,500) pounds. (3-20-20)

b. All life lines and safety belts shall be periodically inspected by the supervisor in charge. Employees shall inspect their belts and lines daily. Any defective belts or life lines shall be discarded or repaired before use. (3-20-20)

c. Life lines shall be safely secured to strong stable supports and maintained with minimum slack. (3-20-20)

09. Work Clothing. (3-20-20)

a. Clothing shall be worn which is appropriate to work performed and conditions encountered. (3-20-20)

b. Loose sleeves, cuffs or other loose or ragged clothing shall not be worn near moving machinery. (3-20-20)

c. Clothing saturated or impregnated with flammable liquids, corrosive substances, irritants or oxidizing agents shall be removed immediately and not worn again until properly cleaned. (3-20-20)

d. When it is necessary for workers to wear aprons or similar clothing near moving machines or hazardous materials, such clothing shall be so arranged that it can be instantly removed. (3-20-20)

e. Clothing with exposed metal buttons, metal visors or other conductive materials shall not be worn around exposed electrical conductors. (3-20-20)

10. Respiratory Equipment. (3-20-20)

a. When filter or cartridge-type respirators are required to be used regularly, each employee shall have one such respirator for his own exclusive use. (3-20-20)

b. Employers and employees shall familiarize themselves with the use, sanitary care and limitations of such respiratory equipment as they may have occasion to use. (3-20-20)

c. Whenever practical, harmful dusts, fumes, mists, vapors and gases shall be suppressed by water, oil or other means which will minimize harmful exposure and permit employees to work without the use of respiratory equipment. (3-20-20)

d. Whenever compressed air from an oil-lubricated compressor is used to supply respiratory equipment, a filter shall be inserted in the supply line to remove any oil, sediment or condensation that it may contain. Such filter shall be maintained in efficient working condition. (3-20-20)

e. When self-contained respiratory equipment is used in hazardous locations, a standby unit shall be maintained for rescue purposes. (3-20-20)

11. Hearing Protection. Where workers are subject to hazardous noise levels, they shall be furnished with and shall wear hearing protection suitable for the level of hazard involved. (3-20-20)

12. Additional Information and Requirements. Additional information and requirements for the use of safety equipment and personal protective equipment may be found in the Safety and Health Standards established in IDAPA 07.09.01, "Safety and Health Rules for Places of Public Employment." (3-20-20)

053. FIRE PREVENTION, PROTECTION AND SUPPRESSION.

01. General Requirements. (3-20-20)

a. Additional Standards pertinent to the storage, distribution, and use of liquefied petroleum gases and other flammables or combustibles may be obtained by reference to regulations of the Idaho State Fire Marshal and the National Fire Protective Association pamphlets. (3-20-20)

b. Fire fighting equipment, suitable for the hazards involved, shall be provided for the protection of workmen. Such equipment shall be readily accessible, and shall be plainly labeled as to its character and method of operation. Locations of such equipment shall be conspicuously posted. (3-20-20)

c. All equipment and apparatus for fire protection and fire fighting shall be regularly inspected and be maintained in good and serviceable condition at all times. A record of the date of the latest inspection shall be kept with each portable fire extinguisher. This includes all automatic sprinkler systems and hose lines. (3-20-20)

d. Fire extinguishers, whether portable or automatic, shall comply with appropriate current standards as published by the National Fire Protection Association. Portable fire extinguishers shall also be subject to an annual maintenance inspection by the Division. They must also be visually inspected by the employer each month, and such inspections documented. (3-20-20)

e. Electrical lights, apparatus, and wiring used in locations where flammable or explosive gases, vapors, mists, or dusts are present shall be of the type accepted by the adopted Electrical Code for the State of Idaho. (3-20-20)

f. Smoking while refueling equipment is prohibited. (3-20-20)

g. All fuel storage tanks, service tanks, etc., shall be bonded for ground for fueling purposes. (3-20-20)

h. When lights are used in enclosed rooms, vaults, manholes, tanks or other containers which may contain flammable or explosive vapors, mists, gases, or dusts, such lights shall be of the approved vapor proof types. (3-20-20)

i. No torch, flame, arc, spark, or other source of ignition shall be applied to any tank or container that has contained or does contain flammable or explosive vapors or materials until such container has been made to be inert or otherwise purged of flammable or explosive vapors or materials, except that "hot tapping" on tanks may be done provided that: (3-20-20)

i. There shall be at least four (4) feet of liquid above the point of the "hot tap"; and (3-20-20)

ii. The work shall be carried out under the direction of a supervisor experienced in this type of work.

NOTE: A test for flammability or explosiveness of the interior of such vessels shall be made using a device which will determine the concentration of flammable vapors for this purpose. Unless the percentage of flammable vapors is found to be less than twenty percent (20%) of its lower explosive limit, no source of ignition shall be permitted. (3-20-20)

j. Frequent testing for determining the concentration of flammable and explosive vapors shall be made, and if the concentration is found to exceed twenty percent (20%) of its lower explosive limit, sources of ignition shall be extinguished or removed immediately. Fire extinguishing equipment adequate to cope with possible

hazards shall be maintained close at hand. (3-20-20)

k. Smoking, the use of open flames, tools which are not approved for such areas, and other sources of ignition are prohibited in locations where flammable or explosive gases, vapors, mists, or dusts are present. Warning signs shall be conspicuously posted in such areas. (3-20-20)

l. Where salamanders and other fuel-burning heating devices are used, they shall be provided with adequate means for preventing the emission of sparks or other sources of ignition. Such devices shall be insulated or placed a sufficient distance from combustible structures and materials to prevent causing fires. Adequate ventilation shall be provided. (3-20-20)

m. When welding or cutting is done special precautionary measures shall be exercised before, during and after the job is finished to eliminate any possibility of immediate or delayed fires. (3-20-20)

02. Flammable Liquids. (3-20-20)

a. For the purpose of this section, "Flammable Liquids" shall mean any liquid having a flash point below one hundred forty (140) degrees Fahrenheit and having a vapor pressure not exceeding forty (40) pounds per square inch (absolute) at one hundred (100) degrees Fahrenheit. (3-20-20)

b. All flammable liquids shall be stored in approved containers suitable for their particular contents, and such approved containers shall be stored in areas removed from any direct source of ignition. (3-20-20)

c. Flammable liquids shall be kept in approved covered containers when not in actual use. (3-20-20)

d. The name of the flammable liquid contained therein shall be placed on all stock containers, and whenever such liquids are taken from the stock containers and put into other approved containers for use, it shall be the responsibility of the employer to ensure that these containers (except small containers of flammable liquids which are scheduled for immediate use and disposal) also bear the name of the flammable liquid contained therein. (3-20-20)

e. Flammable liquids shall not be used indoors to clean or wash floors, walls, any part of a building structure, furniture, equipment, machines or machine parts, unless sufficient ventilation is provided to bring and maintain the concentration of explosive vapors in the atmosphere below twenty percent (20%) of its lower explosive limit.

NOTE: The use of flammable liquids may create toxic contaminants in the atmosphere above permissible threshold limit values. (3-20-20)

03. Transferring Flammable Liquids and Powdered Materials. In transferring flammable liquids or finely divided flammable or explosive materials from one metal container to another, the containers shall be in firm contact with each other or be continuously bonded throughout the transfer so as to prevent the accumulation of static charges. Where portable tanks, mixers, or processing vessels are used for flammable liquids or flammable or explosive compounds, they shall be bonded and grounded while being filled or emptied. (3-20-20)

04. Transportation of Flammable Liquids. (3-20-20)

a. When transporting gasoline or other flammable liquids, approved containers shall be used. (3-20-20)

b. If tank truck service is not available or used, gasoline and other flammable liquids shall be transported in approved containers. Bungs shall be tight and containers shall be secured to prevent movement. (3-20-20)

c. It may be permissible to transport gasoline or other flammable liquids on passenger vehicles if in approved, closed safety containers of not more than six and one-half (6 1/2) gallon capacity, provided such containers are carried in a suitable and safe location outside the passenger compartment. (3-20-20)

054. DESIGNATED LOGGING CAMPS.
A camp used in a logging operation shall comply with the following requirements: (3-20-20)

01. Trees and Snags. Trees and snags that may constitute a hazard to persons in the camp area shall be felled. (3-20-20)

02. Sanitation. The Idaho Department of Environmental Quality rules for sanitation must be observed as to water, toilets, washrooms, refuse, etc. (3-20-20)

055. -- 100. (RESERVED)

SUBCHAPTER C – GARAGES, MACHINE SHOPS, AND RELATED WORK AREAS
(Rules 101 - 150)

101. GARAGES AND MACHINE SHOPS AND RELATED AREAS.

01. General Requirements. (3-20-20)

a. Machine shops and other structures where workers are employed shall be constructed, ventilated, lighted and maintained in a safe working condition. (3-20-20)

b. Engines, pulleys, belts, gears, sprockets, collars and other moving parts of machinery shall be properly guarded. (3-20-20)

c. Grinding wheels shall have proper and adequate eye guards or hoods. Face shields shall be worn by employees while grinding. (3-20-20)

d. Machines shall be in good repair and good housekeeping shall be maintained. (3-20-20)

e. Proper goggles or hoods shall be made available and used in grinding and cutting, acetylene welding, electric arc and other types of welding. (3-20-20)

f. Tools shall be kept in good condition and care shall be taken in the handling and storing of all tools and materials so as to minimize chances for injury. (3-20-20)

g. An approved screen shall be provided, and used, to protect other workers from welding flashes. (3-20-20)

102. -- 150. (RESERVED)

SUBCHAPTER D – SIGNALS AND SIGNAL SYSTEMS
(Rules 151 - 200)

151. GENERAL REQUIREMENTS.

01. Rigging.

a. Rigging shall be moved by established signals and procedures only. (3-20-20)

b. Signals shall be thoroughly understood by the crew. (3-20-20)

02. Daily Test Required. Each electric or radio signal system shall be tested daily before operations begin. (3-20-20)

03. Personnel in Clear Before Moving Logs or Turns. (3-20-20)

a. Operators of yarding equipment shall not move logs or turns until all personnel are in the clear and a signal has been given. (3-20-20)

b. Operators of yarding equipment shall be alert to signals at all times. (3-20-20)

152. SIGNALING.

01. One Worker to Give Signals. (3-20-20)

a. The Worker sending drag shall be the only one to give signals. (3-20-20)

b. Any person is authorized to give a stop signal when a worker is in danger or other emergency conditions are apparent. (3-20-20)

02. Signal Must Be Clear and Distinct. (3-20-20)

a. Machine operators shall not move any line unless the signal received is clear and distinct. (3-20-20)

b. If in doubt the operator shall repeat the signal as understood and wait for confirmation. (3-20-20)

03. Hand Signal Use Restricted. (3-20-20)

a. Hand signals are permitted only when in plain sight of the operator. (3-20-20)

b. Hand signals may be used at any time as an emergency stop signal. (3-20-20)

04. Persons in Clear Before Signal Given. All persons shall be in the clear before a signal is given to move logs or turns. (3-20-20)

05. Throwing Material Prohibited. Throwing of any type of material as a signal is prohibited. (3-20-20)

06. Audible Signaling to Be Installed and Used. A whistle, horn or other audible signaling device, clearly audible to all persons in the affected area, shall be installed and used on all machines operating as yarders. (3-20-20)

07. Audible Signaling Device at the Machine to Be Activated. When radio or other means of signal transmission is used, an audible signal must be activated at the machine. (3-20-20)

153. ELECTRIC SIGNAL SYSTEMS.

01. Weatherproof Wire and Attachments to Be Used. Where an electrical signal system is used, all wire and attachments shall be of the weather proof type. (3-20-20)

02. Electric Signal Systems to Be Properly Installed and Adjusted. Electric signal systems shall be properly installed and adjusted as necessary. They shall be protected against accidental signaling, and shall be maintained in good operating condition at all times. (3-20-20)

03. All Connections to Be Weatherproof. All connections in insulated signal wire shall be weatherproof. (3-20-20)

154. RADIO SIGNALING SYSTEMS.

01. Use of Conventional Space Transmission of Radio Signals. When conventional space transmission of radio signals is used under and in accordance with an authorization granted by the Federal Communications Commissions to initiate any whistle, horn, bell or other audible signaling device, or such

transmission of radio signals is used to activate or control any equipment, the following specific rules contained in this section will apply.

NOTE: This rule shall apply only to devices operating on radio frequencies authorized pursuant to the rules and regulations of the Federal Communications Commission. (3-20-20)

02. Description on Outside of Case. (3-20-20)

a. Each radio transmitter and receiver shall have its tone frequency(s) in hertz (CPS), the manufacturer's serial number, and the assigned radio frequency clearly and permanently indicated on the outside of the case. (3-20-20)

b. When the duration of a tone frequency performs a function, the pulse-tone duration shall also be permanently indicated on the outside of the case. (3-20-20)

c. On the FCC restricted frequencies one hundred fifty-four point fifty-seven (154.57) MHZ and one hundred fifty-four point sixty (154.60) MHZ, a maximum of two (2) watts of power will be allowed. (3-20-20)

03. Activating Pulse-Tone Limitations. The activating pulse-tone of any multi-tone transmitter shall be of not more than forty (40) milliseconds duration. (3-20-20)

04. Adjustment, Repair or Alteration. All adjustments, repairs or alterations of radio-signaling devices shall be done only by or under the immediate supervision and responsibility of a person holding a first or second class commercial radio operator's license, either radio-telephone or radio-telegraph, issued by the Federal Communications Commission. (3-20-20)

05. Testing of Tone-Signal Controlled Devices. (3-20-20)

a. Tone-signal controlled devices shall be tested each day before work begins. If any part of the equipment fails to function properly, the system shall not be used until the source of trouble is detected and corrected. (3-20-20)

b. Audible signals used for test purposes shall not include signals used for movement of lines or material.

NOTE: Equipment or machines controlled by radio-signaling devices shall be designed and built to "fail safe" or stop, in case of failure of the radio-signaling device. (3-20-20)

06. Interference, Overlap, Fade-Out or Blackout. When interference, overlap, fade-out or blackout of radio signals is encountered, the use of the tone-signal controlled device shall be immediately discontinued. The use of such tone-signal controlled device shall not be resumed until the source of trouble has been detected and corrected. (3-20-20)

07. Number of Transmitters Required. (3-20-20)

a. Two (2) radio transmitters shall be in the vicinity of the rigging crew at all times when transmitters are being used by persons who are around the live rigging. (3-20-20)

b. Only one (1) radio transmitter shall be required, if in possession of a signalman who has no other duties and remains in an area where he is not subjected to hazards created by moving logs or rigging. (3-20-20)

08. Voice Communication. (3-20-20)

a. Voice Communication shall be used for explanation purposes only. (3-20-20)

b. Actual activation of equipment shall be done by audible horn, bell or whistle and not by voice. (3-20-20)

c. The signal must be audible throughout the entire yarding and machine area. (3-20-20)

155. -- 200. (RESERVED)

SUBCHAPTER E – TRUCK ROAD STANDARDS
(Rules 201 - 250)

201. TRUCK ROAD STANDARDS.

01. Building Roads. (3-20-20)

a. When building roads, all construction shall be carried on in accordance with good logging engineering practices and shall be constructed and maintained in a manner to insure reasonably safe operation. (3-20-20)

b. The due consideration shall be given to the following factors: (3-20-20)

i. The type of material used for roadbed and surfacing. (3-20-20)

ii. The type of hauling equipment which will travel road. (3-20-20)

iii. The size of loads to be hauled. (3-20-20)

iv. The pitch and length of grades. (3-20-20)

v. The degree of curvature and visibility on turns. (3-20-20)

vi. The volume of traffic. (3-20-20)

c. Truck roads shall not be too steep for safe operation of logging, or work trucks which operate over them, and should not exceed twenty percent (20%) grade unless an auxiliary means of truck lowering is provided. (3-20-20)

d. Sufficient turnouts shall be provided and a safe side clearance maintained along all truck roads. (3-20-20)

e. Brush and other materials that obstruct the view at intersections or on sharp curves shall be eliminated and all possible precautions taken. (3-20-20)

f. Culverts and bridge structures shall be adequate to support the maximum imposed loads without exceeding the maximum safe working unit stresses. Such structures shall be maintained in good condition and shall be inspected annually by a qualified individual. (3-20-20)

g. Dangerous trees, snags and brush, which may create a hazard shall be cleared a safe distance on both sides of the right-of-way. (3-20-20)

02. Main Truck Roads. (3-20-20)

a. Main truck roads shall be of sufficient width and evenness to insure the safe operation of equipment. (3-20-20)

b. Truck roads with blind curves where visibility is less than three hundred (300) feet shall be of sufficient width for two (2) trucks to pass, controlled by some type of signal system, or speed shall be limited to fifteen (15) miles per hour. (3-20-20)

c. Conditions such as broken planking, deep holes, large rocks, logs, etc., which prevent the safe operation of equipment shall be immediately corrected. (3-20-20)

d. Wheel guard rails on bridges shall be not less than eight (8) inches above deck and shall be substantially fastened to withstand impact of shearing wheels. Such guard rails shall extend the full length of the bridge. (3-20-20)

03. Operation of Equipment. Excavators, tractors, bulldozers, and other equipment shall be operated in a safe and careful manner. All precautions shall be taken to insure the safety of all employees. (3-20-20)

202. -- 250. (RESERVED)

SUBCHAPTER F – TRANSPORTATION OF EMPLOYEES
(Rules 251 - 300)

251. TRANSPORTATION OF EMPLOYEES.

01. General Requirements. (3-20-20)

a. Anchored seats and seat belts shall be provided for each person riding in any vehicle. (3-20-20)

b. Vehicles used for the transportation of employees shall be constructed or accommodated for that purpose, and shall be equipped with adequate seats with back rests properly secured in place. Vehicles shall be protected on their sides and ends to prevent falling from the vehicle. (3-20-20)

c. Vehicles, as described above, shall be equipped with adequate steps, stirrups, or other similar devices, so placed and arranged that the employees can safely mount or dismount the vehicle. (3-20-20)

d. Vehicles designed to transport nine (9) or more passengers, shall be equipped with an emergency exit not less than six and one-half (6 1/2) feet in area, with the smaller dimension being not less than eighteen (18) inches. Such exit shall be placed at or near the back of the vehicle on the side opposite the regular entrance. The route to and egress from the exit must be unobstructed. (3-20-20)

e. Every emergency exit shall be conspicuously marked “Emergency Exit,” and be so fastened that it can be readily opened by a passenger in the case of emergency. (3-20-20)

f. Emergency doors shall be not less than twenty-four (24) inches in width. (3-20-20)

g. Every vehicle used for the transportation of employees shall be equipped with an Underwriters Laboratories, Inc. approved fire extinguisher, or its equivalent, with at least a four (4) BC rating. (3-20-20)

h. All drivers of vehicles used for the transportation of employees shall have an appropriate operator’s license for the state of Idaho. (3-20-20)

i. Drivers shall inspect vehicles before operating them. If a vehicle is found to be unsafe, it shall be reported to a proper authority and shall not be operated until it has been made safe. (3-20-20)

j. Brakes, steering mechanism and lights shall be tested immediately before starting any trip. (3-20-20)

k. No flammable materials, or toxic substances shall be transported in passenger compartments of vehicles while carrying personnel. (3-20-20)

l. Transporting more individuals than the seating capacity of the vehicle is permitted only under emergency conditions. Should it become necessary in an emergency, all employees not having seats must ride within the vehicle. (3-20-20)

m. Under no circumstances shall employees ride on fenders or running boards. (3-20-20)

n. An employee must never ride in, or on, any vehicle with his legs hanging over the end or sides.

(3-20-20)

o. If tools are transported at the same time that employees are being transported, the tools shall be enclosed in boxes or racks and properly secured to the vehicle. (3-20-20)

p. No one shall board, or leave, moving equipment except in the case of an emergency (except trainmen or others whose duties require such). (3-20-20)

q. Equipment shall be operated in a safe manner and in compliance with traffic regulations. Safe speeds shall be maintained at all times. (3-20-20)

r. No explosives shall be transported on, or in, vehicles used primarily for carrying personnel while such vehicles are being used for carrying personnel. (3-20-20)

s. The driver shall do everything reasonably possible to keep vehicles under control at all times, and shall not operate vehicles at excessive speeds. The driver shall take into consideration the condition of the roadway, weather factors, curves, grades and grade crossings, the mechanical condition of the vehicle and equipment and other pertinent items. The driver shall clear rocks from between dual tires before driving on multi-lane roads. A daily inspection shall be made of trucks and trailers with particular attention to steering apparatus, brakes, boosters, brake hoses and connections, reaches and couplings. Any defects found shall be corrected before the equipment is used. (3-20-20)

252. -- 300. (RESERVED)

SUBCHAPTER G – FALLING AND BUCKING
(Rules 301 - 350)

301. FALLING AND BUCKING.

01. General Requirements. (3-20-20)

a. There shall be an established method of checking-in workers from the woods. Each supervisor shall be responsible for their crew being accounted for at the end of each shift. (3-20-20)

b. Cutters not in sight of another employee shall have radio communications with crew members on that job site. (3-20-20)

c. Common sense and good judgment must govern the safety of cutters as effected by weather conditions. At no time shall they work if wind is strong enough to prevent the falling of trees in the desired direction, or when vision is impaired by weather conditions or darkness. (3-20-20)

d. All cutters shall have a current first aid certification. Employers shall provide an opportunity for cutters to take a standard first aid course. (3-20-20)

e. Tools of cutters such as axes, sledges, wedges, saws, etc., must be maintained in safe condition. Battered sledges, and wedges shall not be used. When power saws are used, wedges shall be made of soft material, such as wood or plastic. (3-20-20)

f. Cutters shall not be placed on hillsides immediately below each other or below other operations where there is possible danger. (3-20-20)

g. Trees shall not be felled if a falling tree endangers any worker, line, or any unit in operation. (3-20-20)

h. Before starting to fall or buck any tree or snag, the cutter must survey the area for possible hazards and proceed according to safe practices. Snags, which are unsafe to cut, shall be blown down with explosives, or felled by other methods. (3-20-20)

i. Dangerous or hazardous snags shall be felled prior to or in the course of cutting a strip. No danger tree shall be felled by one (1) cutter where and when the assistance of a fellow employee is necessary to minimize the danger or hazards involved. In the case that any danger tree or snag cannot be safely felled and must remain standing or unattended, such tree or snag shall be clearly identified and suitably marked, including all surrounding impact area, and the employee's supervisor shall be notified as soon as possible. (3-20-20)

j. In falling timber, adjacent brush and snow shall be cleared away from and around the tree to be felled to provide sufficient room to use saws and axes and provide an adequate escape path. (3-20-20)

k. Cutters shall not fall into another strip; leaners on the line shall be traded. Trees shall be felled into the open whenever conditions permit. (3-20-20)

l. Undercuts and side cuts shall be large enough to safely guide the trees and eliminate the possibility of splitting and barber chairing. Particular care shall be taken to hold enough wood to prevent the tree from prematurely slipping or twisting from the stump. Undercuts shall be cleaned out to the full depth of the saw cut. Especially large undercuts are necessary in heavy leaners. When required to safely fell a tree, mechanical or other means shall be employed to accomplish this objective. Pre-cutting of trees for the purpose of production logging is prohibited.

NOTE: Trees with no perceptible lean having an undercut to a depth of one quarter (1/4) of the diameter of the tree with an undercut height equal to one fifth (1/5) of the diameter of the tree will be assumed to be in reasonable compliance with this rule. (3-20-20)

m. Back-cuts shall be above the level of the upper horizontal cut of the undercut. (3-20-20)

n. While wedging, fallers shall watch for limbs or other material which might be jarred loose. Cutting of holding wood in lieu of using wedges is prohibited. (3-20-20)

o. When falling or bucking a tree is completed the power saw motor should be stopped. The power saw motor shall be stopped while the operator is traveling to the next tree. (3-20-20)

p. Cutters shall not work on the downhill side of the log being bucked unless absolutely unavoidable and only when the log is blocked or otherwise secured to prevent rolling when cut is completed. (3-20-20)

q. Cutters must give timely warning to all persons within range of any log which may have a tendency to roll or slide after being cut off. (3-20-20)

r. Logs shall be completely bucked-through whenever possible. If it becomes hazardous to complete a cut, then the log shall be marked and identified by a predetermined method. Rigging crews shall be instructed to recognize such marks and when possible cutters shall warn rigging crew of locations where such unfinished cuts remain. (3-20-20)

s. A competent person properly experienced in this type of work shall be placed in charge of falling and bucking operations. Inexperienced workers shall not be allowed to fall timber or buck logs unless under the direction of experienced workers. (3-20-20)

t. Power saws shall be kept in good repair at all times. All exhaust parts on power chain saws shall be constructed and maintained so the operator is exposed to a minimum amount of fumes and noise. (3-20-20)

u. Combustion engine driven power saws shall be equipped with an automatic throttle which will return the motor to idling speed upon release of the throttle. (3-20-20)

v. Power saw motors shall be stopped while being fueled. (3-20-20)

w. All personnel shall wear approved head protection, proper clothing and footwear. (3-20-20)

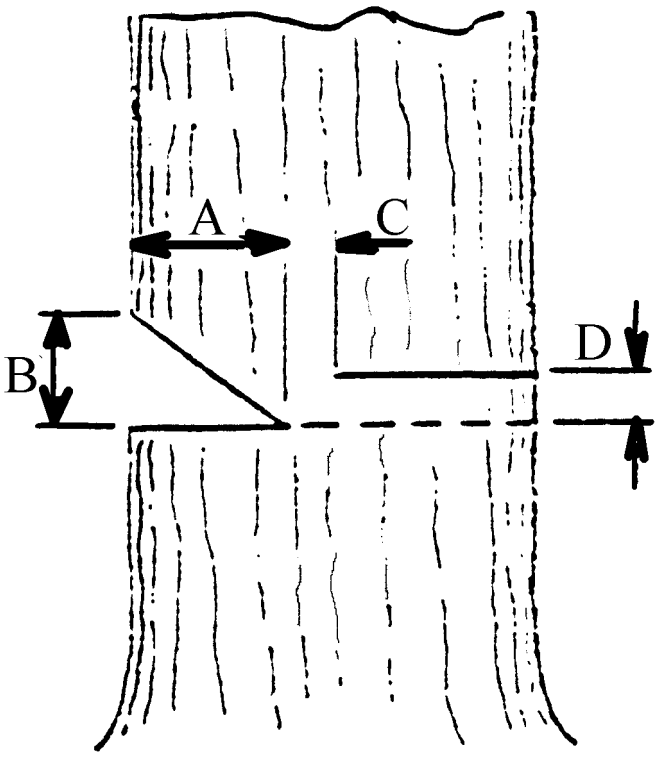
x. Each employee who operates a chain saw shall wear leg protection, which meets the requirements

of ASTM F 1897 and covers the full length of the thigh to the top of the boot on each leg, except when working as a climber. (3-20-20)

302. ILLUSTRATION OF UNDERCUTS.

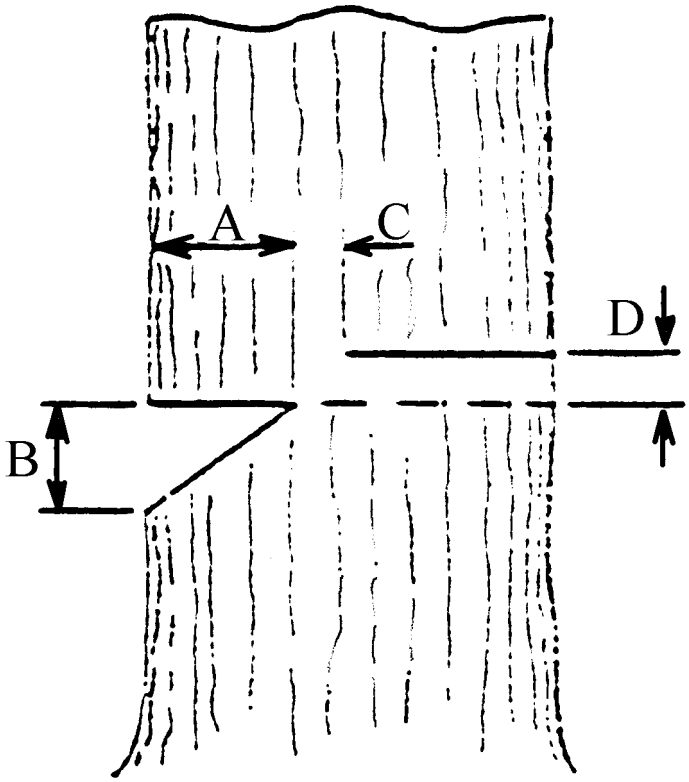
01. Illustration of Undercuts. (3-20-20)

FIGURE 302.01.a. – CONVENTIONAL UNDERCUT



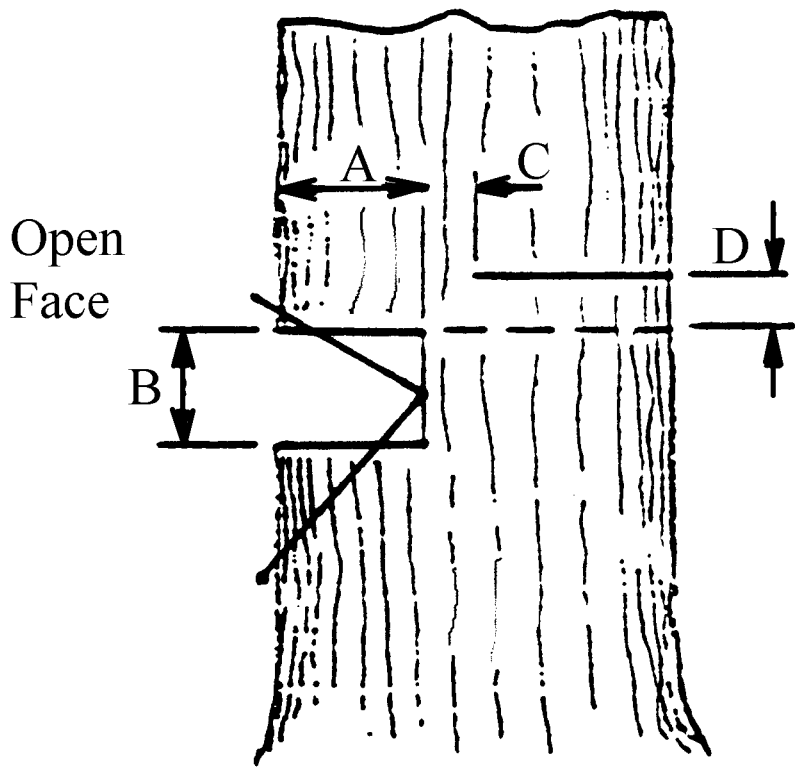
a. Conventional Undercut. May be made with parallel saw cut and a diagonal cut. Backcut (D) shall be above undercut. (3-20-20)

FIGURE 302.01.b. – HUMBOLT UNDERCUT



b. Humbolt Undercut. A cut in which both cuts made with the saw leaves a square end log (See Figure 302.01.b.). The cut is the same as a conventional cut (See Figure 302.01.a.) except that waste is on the stump. Backcut (D) shall be above undercut. (3-20-20)

FIGURE 302.01.c. – OPEN FACE UNDERCUT



c. Open Face Undercut. A cut in which two (2) angle cuts are made with the saw (See Figure 302.01.c.) -- It is used when it is necessary that the face does not close until the tree is near the ground. (3-20-20)

303. MECHANICAL DELIMBERS AND FELLER BUNCHERS.

01. General Requirements. (3-20-20)

a. Before start-up or moving equipment, check the surrounding area for fellow employees or equipment. (3-20-20)

b. If any protective device is missing, it is to be replaced as soon as possible. If it affects a safe operation, the machine is to be shut down. (3-20-20)

c. When a machine is working, extreme caution shall be used when approaching. The operator shall be notified by radio or visual contact. (3-20-20)

d. All raised equipment shall be lowered to the ground or to a safe position and the park brake set before leaving the machine. (3-20-20)

304. -- 350. (RESERVED)

SUBCHAPTER H – RIGGING, LINES, BLOCKS, AND SHACKLES
(Rules 351 - 400)

351. RIGGING.

01. General. The determining factor in rigging-up shall be the amount of rated stump pull which a machine can deliver on each line. (3-20-20)

02. Equipment Classification. (3-20-20)

a. Equipment shall be classed according to the manufacturer's rating. (3-20-20)

b. Where lower gear ratios or other devices are installed to increase the power of equipment, the size of the rigging shall be increased proportionately so that it will safely withstand the increased strains to conform to Subsection 010.04 of these rules. (3-20-20)

03. Safe Loading. Rigging, and all parts thereof, shall be of a design and application to safely withstand all expected or potential loading to which it will be subjected. (3-20-20)

04. Allowable Loading or Stress. (3-20-20)

a. In no case shall the allowable loading or stress be imposed on one half (1/2) of the rated breaking strength of any parts of the rigging. (3-20-20)

b. This shall not be construed as applying to chokers. (3-20-20)

05. Chokers. Chokers shall be at least one eighth (1/8) inch smaller than the mainline. (3-20-20)

06. Placing, Condition, and Operation of Rigging. The placing, condition and operation of rigging shall be such as to ensure safety to those who will be working in the vicinity. (3-20-20)

07. Arrangement and Operation. Rigging shall be arranged and operated so that rigging or loads will not pound, rub, or saw against lines, straps, blocks, or other equipment. (3-20-20)

08. Line Hazards. (3-20-20)

a. Running lines and changed settings shall be made in a way to avoid bight of line hazards. (3-20-20)

b. Signals to operator shall be made before moving lines. (3-20-20)

09. Reefing. Reefing or similar practices to increase line pull shall be prohibited. (3-20-20)

10. Inspection of Rigging. (3-20-20)

a. A thorough inspection, by the operator or qualified person, of all blocks, straps, guylines, and other rigging shall be made before the rigging is placed in position for use and subsequently repeated every thirty (30) days for as long as the rigging is in position for use. Each rigging inspection shall be documented and kept onsite for review. (3-20-20)

b. This inspection shall include an examination for damaged, cracked or worn parts, loose nuts and bolts, lubrication, condition of straps and guylines. (3-20-20)

c. The repairs or replacements necessary for safe operation shall be made before rigging is used. (3-20-20)

352. GUYLINES.

01. General Requirements. (3-20-20)

a. Guylines shall be of plow steel or equivalent, and in good condition. (3-20-20)

b. Guylines shall be provided in sufficient number, condition and location to develop stability and strength equivalent to the breaking strength of any component part of the rigging or equipment. (3-20-20)

c. Guylines shall be fastened by means of shackles or hooks and slides. The use of loops or molles for attaching guylines is prohibited. The use of wedge buttons on guylines is prohibited. (3-20-20)

d. The "U" part of a shackle shall be around the guyline and the pin passed through the eye of the guyline. Pins shall be secured with molles, cotter-keys, or the equivalent. (3-20-20)

e. Guylines shall be kept tightened while equipment or rigging they support is in use. (3-20-20)

02. Anchoring Guylines. (3-20-20)

a. Stumps used for fastening guylines and skylines shall be carefully chosen as to position, height and strength. They shall be tied back if necessary. See Figures 352.02.a. and 352.02.b.

FIGURE 352.02.a.

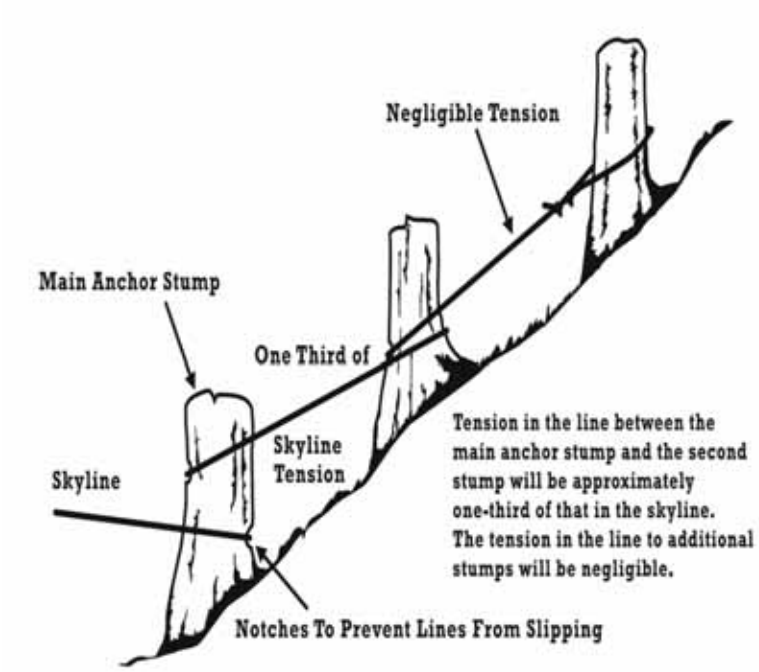
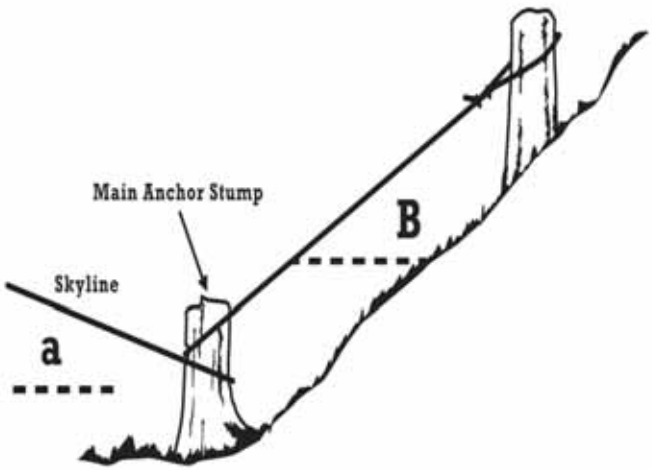


FIGURE 352.02.b.



Profile of a common two-stump anchor.

(3-20-20)

b. Properly installed deadman anchors are permitted. Guylines shall not be directly attached to deadman anchors. Suitable straps or equally effective means shall be used. (3-20-20)

c. Stumps, trees and guyline anchors shall be inspected from time to time while an operation is in progress and hazardous conditions immediately corrected. (3-20-20)

d. Standing trees which will reach landing or work areas shall not be used for guyline anchors. (3-20-20)

e. Any guyline anchor tree that can reach the landing or work area shall be felled before using as an anchor. (3-20-20)

03. Effectiveness of Guys. (3-20-20)

a. Guys making an angle with the horizontal greater than sixty (60) degrees will be considered less than fifty percent (50%) effective. For the effectiveness of other angles see Table 352.03.a.

TABLE 352.03.a.

Degree	Effectiveness
60 to 45	50% to 75%
45 to 30	75% to 85%
30 to 10	85% to 95%

(3-20-20)

b. For the effectiveness of guys according to the number of guys and their spacing, see Table 352.03.b.

TABLE 352.03.b.		
No. of Guys Equally	**Guys Most Effective When Pull Is:**	**Guys Will Support Strain Equal To The Following:**
3	Opposite 1 guy	100% of strength of 1 guy
4	Halfway between 2 guys	140% of strength of 1 guy
5	Opposite 1 guy or halfway between 2 guys	160% of strength of 1 guy
6	Opposite 1 guy or halfway between 2 guys	200% of strength of 1 guy
7	Opposite 1 guy or halfway between 2 guys	225% of strength of 1 guy
8	Halfway between 2 guys	260% of strength of 1 guy
9	Opposite 1 guy or halfway between 2 guys	290% of strength of 1 guy
10	Opposite 1 guy or halfway between 2 guys	325% of strength of 1 guy

(3-20-20)

04. Minimum Guyline Requirements. A minimum of four (4) top guys are required on any portable spar tree used for yarding, swinging, loading or cold-decking. (3-20-20)

353. LINES, SHACKLES AND BLOCKS.

01. General Requirements. (3-20-20)

a. All lines, shackles, blocks, etc., should be maintained in good condition and shall be of sufficient size, diameter and material to withstand one and one half (1 1/2) times the maximum stress imposed. (3-20-20)

b. Wire rope or other rigging equipment which shows a fifteen percent (15%) reduction in strength shall be replaced. (3-20-20)

02. Splices. (3-20-20)

a. Two (2) lines may be connected by a long splice, or by shackles of patent links of the next size larger than the line where practical. (3-20-20)

b. A safe margin of line must be used for making long splices. See Table 353.02.b.

TABLE 353.02.b.		
Rope Diameter	**Unraveled**	**Total Length**
3/8"	**8'**	**16'**
5/8"	**13'**	**20'**

TABLE 353.02.b.		
Rope Diameter	**Unraveled**	**Total Length**
3/4"	**15'**	**30'**
7/8"	**18'**	**36'**
1"	**20'**	**40'**

(3-20-20)

03. Wire Rope Clips or Clamps. (3-20-20)

a. Clips should be spaced at least six (6) rope diameters apart to achieve maximum holding power. See Table 353.03.a.

TABLE 353.03.a.		
Diameter of Rope	**Number of Clips**	**Required Space Between Clips**
1-1/2-inch	8	10 inches
1-3/8-inch	7	9 inches
1-1/4-inch	6	8 inches
1-1/8-inch	5	7 inches
1- inch	5	6 inches
7/8-inch	5	5-1/4 inches
3/4-inch	5	5-1/2 inches
3/8 to 5/8-inch	4	3 inches

(3-20-20)

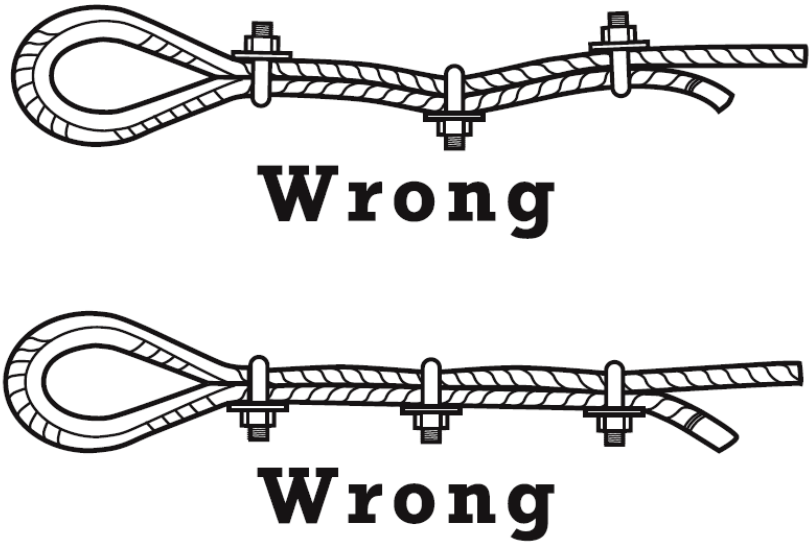
b. Clips should always be attached with the base or saddle of the clip against the longer or "live" end of the rope. See Figure 353.03.b. This is the only approved method.

FIGURE 353.03.b.

(3-20-20)

c. Do not reverse the clips or stager them. See Figure 353.03.c. Otherwise the "U" bolt will cut into the live rope when the load is applied.

FIGURE 353.03.c.



(3-20-20)

d. After the rope has been used and is under tension, the clips should again be tightened to take up any looseness caused by the tension reducing the rope diameter. Remember that even when properly applied a clip fastening has only about ninety percent (90%) of the strength of the rope and far less than that when rigged improperly. (3-20-20)

e. U-bolt wire rope clamps must not be used to form eyes on running lines, skylines, machine guylines, or straps. (3-20-20)

04. **Blocks**. All blocks must be of steel construction or of material of equal or greater strength and so hung that they will not strike or interfere with other blocks or rigging. (3-20-20)

05. **Pins**. All pins in blocks shall be properly secured by keys of the largest size the pin hole will accommodate (3-20-20)

06. **Shackles**. (3-20-20)

a. Spread in jaws of shackles shall not exceed by more than one (1) inch the size of yoke or swivel of the block to which it is connected. (3-20-20)

b. All shackles must be made of forged steel or material of equivalent strength and one (1) size larger than the line it connects. (3-20-20)

07. **Cable Cutting**. Cable cutters, soft hammers, or a cutting torch shall be available and used for cutting cables. Eye protection must be used when cutting cable. (3-20-20)

08. **Damaged or Worn Wire Rope**. Worn or damaged wire rope creating a safety hazard shall be taken out of service or properly repaired before further use. (3-20-20)

354. -- 400. **(RESERVED)**

SUBCHAPTER I – CANOPY AND CANOPY CONSTRUCTION FOR LOGGING EQUIPMENT (Rules 401 - 450)

401. GENERAL REQUIREMENTS.

01. Driver Protection Guard. (3-20-20)

a. A substantial metal guard for the protection of the driver shall be installed on every piece of equipment, where exposed to overhead hazards. (3-20-20)

b. This guard shall be strongly constructed to afford adequate protection for the driver against overhead hazards. (3-20-20)

c. This guard shall be of sufficient width and height so that it will not impair the movements of the driver or prevent his immediate escape from the equipment in emergencies. (3-20-20)

d. This guard shall be of open construction to allow the driver all the visibility possible. (3-20-20)

02. Canopy Framework. (3-20-20)

a. The canopy framework shall consist of at least two (2) arches, either transverse or longitudinal. (3-20-20)

b. If transverse, one (1) arch shall be installed at the rear of the equipment and the other at the center of the equipment. They shall be joined together by three (3) longitudinal braces, one (1) at the top and one (1) at each side of the arches. (3-20-20)

c. There shall be a shear or deflecting guard extending from the leading edge of the forward arch to the front part of the frame of the tractor or similar equipment. (3-20-20)

d. If longitudinal arches are used, they shall be extended from the rear of the tractor or equipment to the front frame of the tractor or equipment and each arch shall have an intermediate support located approximately at the dash so that ingress or egress will not be impeded. (3-20-20)

e. Regardless of the type of construction used, the fabrication and method of connecting to the tractor or equipment shall be of such design as to develop a strength equivalent to that of the upright members. (3-20-20)

03. Canopy Structure. The canopy structural framework shall be fabricated of pipe of the following size, or materials of equivalent strength, depending upon the gross weight of the tractor or similar equipment as equipped. Under twenty-eight thousand (28,000) lbs., two (2) inch double extra strong pipe (XXS); twenty-eight thousand (28,000) to fifty-eight thousand (58,000) lbs., three (3) inch double extra strong pipe (XXS); over fifty-eight thousand (58,000) lbs., four (4) inch double extra strong pipe (XXS). (3-20-20)

04. Gusset Plates or Braces. Gusset plates or braces shall be installed on the canopy framework so that the framework will withstand a horizontal pressure equal to twenty-five percent (25%) of the gross weight of the tractor or similar equipment, as equipped, when such pressure is applied to any vertical member at a point not more than six (6) inches below the roof of the canopy. (3-20-20)

05. Clearance Above the Deck. The clearance above the deck of the tractor or similar equipment at points of egress shall be not less than fifty-two (52) inches and the clearance above the driver's seat shall be of such height as will allow sufficient clearance above the driver's head. (3-20-20)

06. Overhead Covering. The overhead covering on the canopy structure shall be of not less than three-sixteenth (3/16) inch steel plate except that the forward eighteen (18) inches may be made of one quarter (1/4) inch woven wire having not more than one (1) inch mesh. (3-20-20)

07. Rear Covering. (3-20-20)

a. The opening in the rear of the structure shall be covered with one quarter (1/4) inch woven wire having not less than one and one half (1 1/2) inch or more than two (2) inch wire mesh. This covering shall be affixed to the structural members so that ample clearance will be provided between the screen and the back of the operator. (3-20-20)

b. Structural members shall present smooth, rounded edges and the covering shall be free from projections which would tend to puncture or tear flesh or clothing. (3-20-20)

08. Pin Connections. (3-20-20)

a. Pin connections are recommended for joints in the structural frame and especially at connections to the tractor frame or similar equipment frame. (3-20-20)

b. Gusset plates shall be installed at each place where individual pieces of pipe are joined. (3-20-20)

09. Sideguards. When practical, sideguards shall be installed to protect the operator from hazards. (3-20-20)

402. TRACTORS AND SIMILAR LOGGING EQUIPMENT.

01. Operating Condition. (3-20-20)

a. The general operating condition of a tractor or equipment shall be sufficient to ensure the safety of the driver and other workmen. (3-20-20)

b. An operating manual shall be readily available in either print or electronic format for each piece of machinery. (3-20-20)

02. Guards. All guards shall be kept in place and in good repair at all times when the tractor or similar equipment is used. (3-20-20)

03. Repairs or Adjustments. Repairs or adjustments to clutches, frictions, or other parts of equipment which may cause hazardous movement of equipment shall not be done while engines are running. (3-20-20)

04. Blades or Similar Equipment. (3-20-20)

a. Blades or similar equipment shall be blocked or otherwise securely supported when making repairs or performing other work around such equipment when they are elevated from the ground. (3-20-20)

b. Equipment under repair or adjustment should be tagged out. (3-20-20)

05. Brakes and Steering. (3-20-20)

a. All equipment shall be equipped with a braking system capable of stopping and holding the maximum load on all grades at all times. (3-20-20)

b. Any defect found in the braking system or steering devices of any equipment used in skidding or yarding operations shall not be used until repaired or replaced. (3-20-20)

06. Starting of Equipment. Equipment shall be started (cranked) only by the operator or other experienced persons. (3-20-20)

07. Seatbelts. (3-20-20)

a. Seatbelts shall be installed on all tractors and mobile equipment having roll-over protection or in

accordance with a design by a professional engineer which offers equivalent employee protection. (3-20-20)

b. Seatbelts shall be used when operating any machine equipped with Roll Over Protection Structure (ROPS), Falling Object Protection Structure (FOPS), or overhead guards. (3-20-20)

08. Pin Connections. (3-20-20)

a. Pin connections are recommended for joints in the structural frame and especially at connections to the tractor frame or similar equipment frame. (3-20-20)

b. Gusset plates shall be installed at each place where individual pieces of pipe are joined. (3-20-20)

09. Sideguards. When practical, sideguards shall be installed to protect the operator from hazards. (3-20-20)

403. -- 450. (RESERVED)

SUBCHAPTER J – SKIDDING AND YARDING
(Rules 451 - 500)

451. SKIDDING AND YARDING.

01. General Requirements. (3-20-20)

a. All personnel shall wear approved head protection and proper clothing at all times in skidding and yarding. (3-20-20)

b. Getting on or off moving equipment is strictly prohibited. (3-20-20)

c. Equipment operators shall move rigging only upon the signal of an authorized person. (3-20-20)

d. Workers shall at all times watch for and protect themselves and their fellow workers from side-winders, rolling logs, up ending logs, snags, and other hazards caused by the movement of equipment, logs and/or lines. (3-20-20)

e. Chokers should be placed near, but not closer than two (2) feet, from the ends of logs if possible. (3-20-20)

f. Choker holes shall be dug from the uphill side of a log if there is any danger of its rolling. (3-20-20)

g. Knots shall not be used to connect separate lengths of chain or cable. (3-20-20)

h. Chaser (hooker) shall not unhook logs (trees) until rigging has stopped and the equipment operator is aware of his location. (3-20-20)

i. Riding on drag or logs or any part of equipment used in skidding and yarding except in the area of the driver's seat is prohibited. (3-20-20)

j. A tool handle, stick, iron bar, or similar object shall be used in guiding lines onto drums. Guiding lines with hands is prohibited. (3-20-20)

k. Make sure all personnel are in the clear before skidding turn, drag, log, or tree into landing. (3-20-20)

l. All personnel shall keep out of the bight of line and clear of running lines. (3-20-20)

m. Logs shall not be swung over personnel. (3-20-20)

n. Knot bumping should be done before a log is loaded. (3-20-20)

452. CABLE YARDING.

01. Safety A. Personnel shall not ride hooks, lines, rigging, or logs suspended in the air or being moved. (3-20-20)

02. Safety B, Personnel shall not hold on to haywire, running lines, drop lines, or chokers as an assist when walking uphill. (3-20-20)

03. Safety C. Personnel shall not work in the bight of lines under tension. (3-20-20)

04. Safety D. Personnel shall be "in the clear" before any signal to move any lines is given. (3-20-20)

05. Safety E. All swing yarders shall have the outer swing radius marked with hi-vis tape or cones while skidding is in progress. No tools or supplies may be kept inside that radius outside the machine unless in a locked box. No employee may get inside that radius without first notifying the operator. (3-20-20)

453. YARDING MACHINERY.

01. Equipment Assessment. When personnel arrive at a job site with a set of machinery on hand to perform yarding operations, evaluation of the conditions at the landing shall be made, and reassessment of the capacity of the available equipment shall be performed to determine if it meets the task. The principal options and features for yarders, log loaders, and processors are described in this section. (3-20-20)

02. Manufacturer's Manual. Yarders of various types are used in logging operations, including ground-based and rigged trees to lift the lines, and mobile steel towers. The manufacturer's manual shall always be consulted for essential features and inspection points on each particular machine. (3-20-20)

03. Types of Yarding Equipment. Yarding operations may include the use of, but is not limited to the following yarding equipment: (3-20-20)

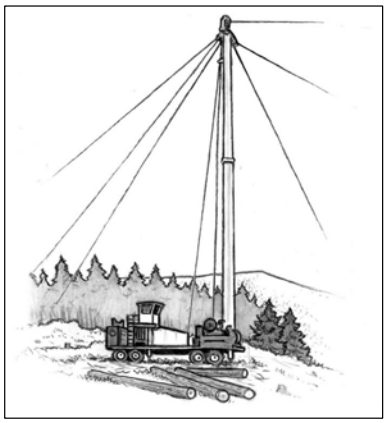
a. Straight Tube Telescoping Tower. This equipment uses a hydraulic ram or multiple-sheave cable system to raise the tower. Some telescoping towers allow use at the telescoped height. The tower may be used partially retracted if guyline anchors need to be placed closer to the landing or on steep slopes. (3-20-20)

i. This equipment may travel by self-propulsion, or be either trailer or track-mounted. It has long reach capacity with a typical height of ninety (90) to one hundred ten (110) feet. (3-20-20)

ii. The advantages of this equipment include the ability to operate heavy payloads, the tower height allows for more line deflection, and some yarders allow yarding one hundred eighty (180) degrees without moving yarder or guylines. (3-20-20)

iii. The disadvantages of this equipment are that it is heavy and difficult to move, it requires appropriate roads and it may have to be disassembled to move on public roads, it requires large landing areas, and it needs large guyline anchor capacity.

FIGURE 453.03.a.



STRAIGHT TUBE TELESCOPING TOWER

(3-20-20)

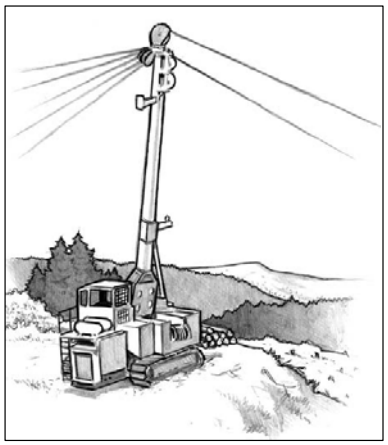
b. Fixed Leaning Tower. This equipment is a one (1)-piece tower that may be front-mounted vertical, or leaning. The height of the tower varies with make and model. (3-20-20)

i. This equipment may travel by self-propulsion, or be either trailer or track-mounted. It has medium reach capacity with a typical height of forty (40) to eighty (80) feet. (3-20-20)

ii. The advantages of this equipment include faster line setup, smaller landing area requirements, it is lighter and easier to move, and has lower guyline anchor requirements. (3-20-20)

iii. The disadvantages include a smaller yarding window which necessitates moving the tower and guylines more frequently, and smaller payloads than straight tube towers.

FIGURE 453.03.b.



FIXED LEANING TOWER

(3-20-20)

c. Swing Yarder. This equipment is similar to the fixed leaning tower in nearly all respects; however,

the swing yarder is also capable of swinging logs onto the road or landing, and capable of using a running skyline. Track mounts are more stable when moving. (3-20-20)

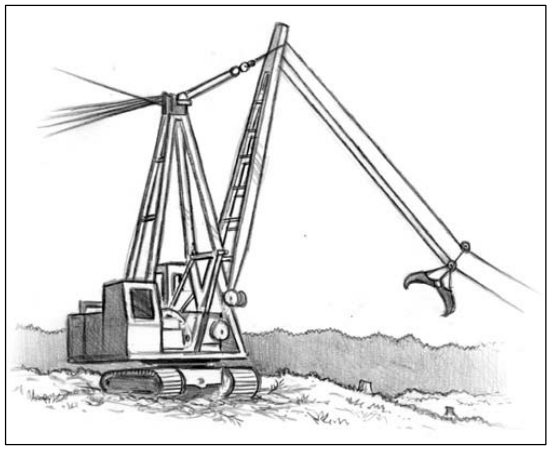
d. Grapple Yarder. This equipment uses a swing yarder or yoader system. The grapple is controlled by signals from the rigging slinger, or by the yarder engineer using a video link on the carriage. Swing capability is necessary to allow a wider logging corridor. A grapple system is typically used in conjunction with a machine anchor and elevated support on the back end of the unit, making for quick road changes. (3-20-20)

i. This equipment may travel by track-mount or rubber-tire mount. It has medium to short reach capacity. (3-20-20)

ii. The advantages of this equipment include the need for a smaller crew size, typically only a yarder engineer, landing worker, and a hooktender, and it is easier to rig up which is ideal for smaller logging areas. (3-20-20)

iii. The disadvantages of this equipment are that it requires extensive planning to achieve full production, it must have moderate to good deflection, access to the back of unit is generally necessary, and it possesses limited yarding width.

FIGURE 453.03.d.



GRAPPLE YARDER

(3-20-20)

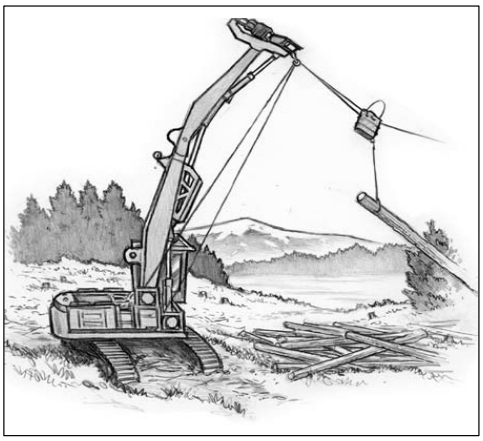
e. Yoader. This yarder is typically a log loader with two (2) drums mounted at the base of the boom. Both lines run through sheaves mounted on the boom or heel rack. The lines can be set up in a standing, live, or running skyline configuration, or a high-lead configuration. (3-20-20)

i. This equipment may travel by track-mount or rubber-tire mount. It has medium reach capacity. (3-20-20)

ii. The advantages of this equipment are that guylines are not necessary, it is easier to move, easy road changes, it is easier to rig up which is ideal for smaller logging areas, and it may be used as a loader. (3-20-20)

iii. The disadvantages of this equipment are that it requires/results in slower line speeds, it requires blocking up front of the tracks to create stability, and rigging height is limited.

FIGURE 453.03.e.



YOADER

(3-20-20)

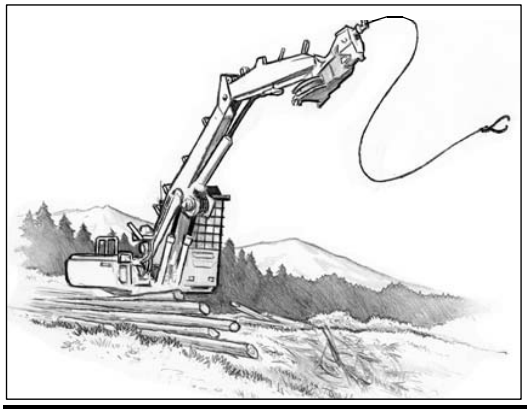
f. Tong-tosser/Jammer System. These are two (2) systems which basically use the same machine as the yoader, with either tongs or chokers on the end of the line to secure the logs. This version typically uses one (1) drum on the machine with a spitter wheel at the end of the boom to pull the line from the drum and push it out to the brush. The yarder engineer usually gets the tongs or chokers swinging and then tosses them to the waiting choker setters. (3-20-20)

i. This equipment travels by track-mount. It has short reach capacity. (3-20-20)

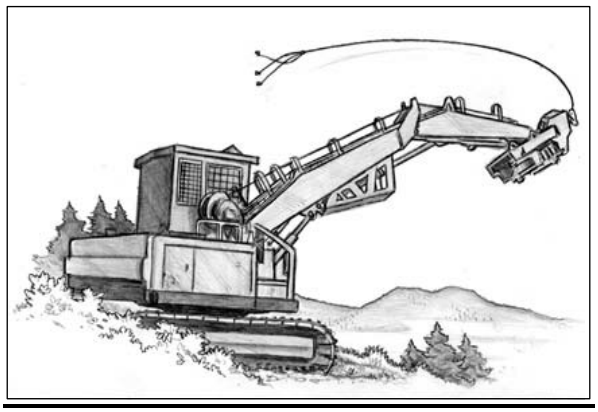
ii. The advantages of this equipment are that guylines are not necessary, it is easier to move, it is easier to rig up which is ideal for smaller logging areas, and it may be used as a loader. Additionally, it does not require line layouts or anchors. (3-20-20)

iii. The disadvantages of this equipment are that it results in slower line speeds, it requires blocking up front of the tracks to create stability, rigging height is limited, and there is a greater potential risk to the rigging crew.

FIGURE 453.03.f.



TONG-TOSSER WITH GRAPPLE



JAMMER-SYSTEM WITH CHOKERS

(3-20-20)

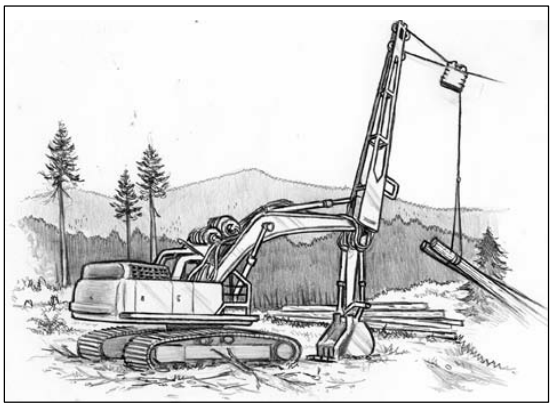
g. Stiff-leg Spar Yarder. One of various configurations for this yarder uses an excavator or log loader fitted with a third boom between the main and jib boom, which is elevated to provide lift. The elevated boom is typically rigged with two (2) or three (3) lines. Works with high lead, standing, running, or slackline configurations. (3-20-20)

i. This equipment travels by track-mount. It has medium reach capacity. (3-20-20)

ii. The advantages of this equipment are that guylines may not be necessary, it is easier to move, it is easier to rig up which is ideal for smaller logging areas, and it may be used as a loader or excavator. Additionally, it does not require line layouts or anchors. Additionally, jib boom offers greater stability, and the rigging height is greater than yoader or tong-tosser/jammer system. (3-20-20)

iii. The disadvantages of this equipment are that it results in slower line speeds, the attached tower boom may need to be removed for other operations, and it generates heavy stress on boom and components.

FIGURE 453.03.g.



STIFF-LEG SPAR YARDER

(3-20-20)

454. WIRE ROPE.

01. General Characteristics. Wire rope comes in many grades and dimensions, and every rope has its own characteristics with regard to strength and resistance to crushing and fatigue. A larger rope will outlast a smaller rope of the same materials and construction, used in the same conditions, because wear occurs over a larger surface. Similarly, a stronger rope will outlast a weaker rope, because it performs at a lower percentage of its breaking strength, with reduced stress. (3-20-20)

02. Wire Rope Terms. Common grades of wire rope include extra improved plow steel (EIPS) and swaged powerflex, among others. The following terms are commonly used for wire rope: (3-20-20)

a. Abrasion Resistance. Ability of outer wires to resist wear. Abrasion resistance is greater with larger wires. (3-20-20)

b. Core. The foundation of a wire rope which is made of materials that will provide support for the strands under normal bending and loading conditions. A fiber core (FC) can be natural or synthetic. If the core is steel, it can be a wire strand core (WSC) or an independent wire rope core (IWRC). (3-20-20)

c. Crushing Resistance. Ability of the rope to resist being deformed. A rope with an independent wire core is more resistant to crushing than one with a fiber core. (3-20-20)

d. Die-form Line. Made from strands that are first compacted by drawing them through a drawing die

to reduce their diameter. The finished rope is then swaged or further compressed. (3-20-20)

e. Fatigue Resistance. Ability of the rope to withstand repeated bending without failure (the ease of bending a rope in an arc is called its "bendability"). Fatigue resistance is greater with more wires. (3-20-20)

f. Strength. Referred to as breaking strength, usually measured as a force in pounds or tons. The breaking strength is not the same as the load limit, which is calculated as a fraction of the breaking strength to ensure safety. (3-20-20)

g. Swaged Line. Manufactured by running a nominal-sized line through a drawing die to flatten the outer crown and thus reduce the rope diameter. This compacted rope allows for increased drum capacity and increased line strength. (3-20-20)

03. Typical Wire Rope Specifications. The table below lists a few examples of wire-rope breaking strengths. (3-20-20)

TABLE 454.03 – Typical Wire Rope Specifications

6x26 Improved Plow Steel			6x26 Swaged		Swaged Compact-Strand	
Diameter (inches)	Weight (lbs/ft)	Breaking Strength (tons)	Weight (lbs/ft)	Breaking Strength (tons)	Weight (lbs/ft)	Breaking Strength (tons)
1/2	0.46	11.5	0.6	15.2	0.63	18.6
9/16	0.59	14.5	0.75	19	0.78	23.7
5/8	0.72	17.9	0.93	23.6	1.01	28.5
11/16			1.10	28.8	1.18	35.3
3/4	1.04	25.6	1.37	34.6	1.41	42.2
13/16			1.56	39.6	1.63	49.3
7/8	1.42	34.6	1.83	46.5	1.91	56.0
15/16			1.95	53.3	2.20	66.1
1	1.85	44.9	2.42	60.6	2.53	73.7
1-1/8	2.34	56.5	2.93	75.1	2.97	92.9
1-1/4	2.89	69.3	3.52	92.8	3.83	112.1
1-3/8	3.5	83.5	4.28	108.2	4.62	128.6

Source: Cable Yarding Systems Handbook. 2006. Worksafe BC. Table lists typical breaking strengths. See manufacturer's specifications for specific lines. (3-20-20)

04. Synthetic Rope. High-tensile strength synthetic lines are considerably lighter than standard wire rope; however, some lines are dimensionally as strong as standard wire rope. Accordingly, high-tensile strength synthetic lines are permitted to be used in appropriate logging applications, including as substitutes for brush straps,

tree straps, tail and intermediate support guylines, guyline extensions, skyline extensions, and haywire. Manufacturers' standards and recommendations for determining usable life or criteria for retirement of such lines shall be followed. Personnel shall examine the lines for broken or abraded strands, discoloration, inconsistent diameter, glossy or glazed areas caused by compression and heat, and other inconsistencies. Rope life is affected by load history, bending, abrasion, and chemical exposure. Most petroleum products do not affect synthetic ropes. (3-20-20)

05. Inspection and Care. (3-20-20)

a. Wire rope shall be inspected daily by a qualified individual and repaired or taken out of service when there is evidence of any of the following conditions: (3-20-20)

i. Twelve and five tenths percent (12.5%) of the wires are broken within a distance of one (1) lay. (3-20-20)

ii. Evidence of chafing, sawing, crushing, kinking, crystallization, bird-caging, corrosion, heat damage, or other damage that has weakened the rope structure. (3-20-20)

b. Qualified personnel shall closely inspect those points subject to the most wear, including the knob ends of lines, eye splices, and those sections of line that most often run through blocks or carriages. If there is doubt about the integrity of the line, it is far safer to replace a suspect line, or cut out and resplice a defective area, than risk a failure during operation. Evaluation of the load-bearing yarder lines shall be stringent. A qualified person shall also inspect all other lines used on site and remove any that are unsafe. (3-20-20)

06. Additional Precautions. The following precautions shall also be observed: (3-20-20)

a. Ensure the working load limit for any line is adequate for the intended use. (3-20-20)

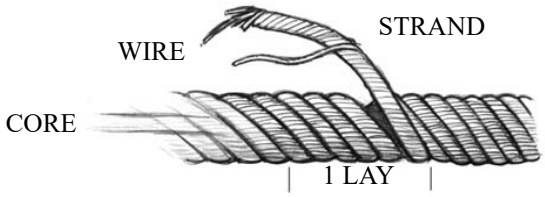
b. The manufacturer's specifications with regard to assigned breaking strength shall be followed. Such specifications as determined by engineering test results should factor the grade of the wire, number of strands, number of wires per strand, filler wire construction, lay pattern of the wires, and the diameter of the line. (3-20-20)

07. Safety Factor. Operators shall follow the manufacturer's specifications in determining load limits. The working load limit is a fraction of a line's breaking strength – a factor of three (3), or one-third (1/3) the breaking strength, is commonly used as a safety factor for running and standing lines, when workers are not exposed to breaking lines or loads passing overhead. A safety factor of three (3) is commonly used to determine the working load limit for a standing or running line. A standard six (6) x twenty-six (26) IWRC wire rope with a diameter of one (1) inch has a breaking strength of approximately forty-five (45) tons – divide by three (3) – equals fifteen (15) tons working load limit. (3-20-20)

08. Wire Labeling. (3-20-20)

a. The elements of a typical wire rope are labeled, for example, six (6) x twenty-five (25) FW PRF RL EIPS IWRC. The label indicates a six (6)-strand rope with twenty-five (25) wires per strand (six (6) x twenty-five (25)), filler-wire construction (FW), strands pre-formed in a helical pattern (PRF), laid in a right-hand lay pattern (RL), using an extra-improved plow steel (EIPS) grade of wire, and strands laid around an independent wire rope core (IWRC). See figure 013.08-A for proper labeling of wire rope. (3-20-20)

FIGURE 454.08.a.



(3-20-20)

b. Out of Service Standard Example. A six (6) x twenty-five (25) IWRC wire rope = six (6) strands in one (1) lay with twenty-five (25) wires per strand = one hundred fifty (150) wires. The rope must be taken out of service when twelve and five tenths percent (12.5%), or one-eighth (1/8), of the wires are broken within the distance of one (1) lay = one hundred fifty (150) divided by eight (8) = eighteen and seventy-five one hundredths (18.75), or nineteen (19) broken wires. (3-20-20)

09. **Wire Line Life**. Table 454.09 provides the allowable life of a line in million board feet in accordance with line size and use. Figure 454.09.a. illustrates both the correct and incorrect manner in which to measure line size (diameter). (3-20-20)

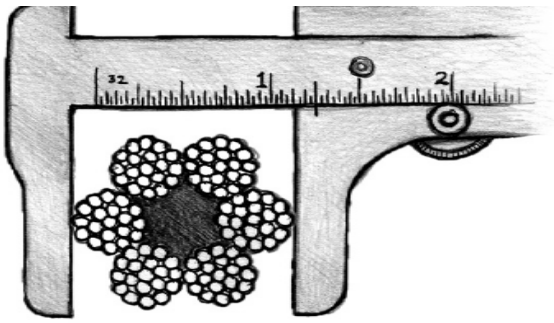
TABLE 454.09
LINE LIFE BY WOOD HAULED

System	Use	Line Size (inches)	Line Life (million board feet)
Standing Sky-line	Skyline	1-3/4	20-25
		1-1/2	15-25
		1-3/8	8-15
	Mainline	1 to 1-1/8	15-20
		1	10-15
	Haulback	3/4 to 7/8	8-12

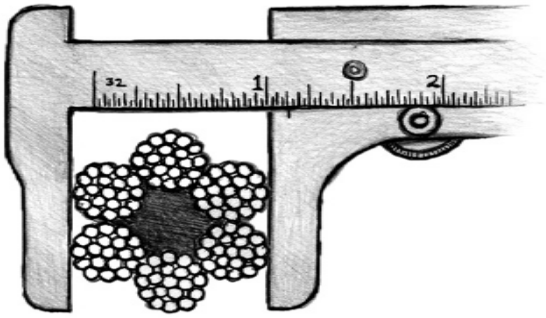
TABLE 454.09 LINE LIFE BY WOOD HAULED			
System	**Use**	**Line Size (inches)**	**Line Life (million board feet)**
Live Skyline	Skyline	1-1/2	10-20
		1-3/8	8-15
		1	6-10
	Mainline	1	10-15
		3/4	8-12
		5/8	8
	Haulback	3/4 to 7/8	8-12
		1/2	6-10
	Dropline	7/16	5-8
High Lead	Mainline	1-3/8	8-15
		1-1/8	6-12

Source: Willamette Logging Specialist's Reference by Keith L McGonagill. 1976. Portland, OR: Willamette National Forest. Calculations of line life refer to EIPS 6x21 wire rope for the skyline, and EIPS 6x26 for other lines. Figures will be different for other classes of wire rope. (3-20-20)

FIGURE 454.09.a.



Correct way to measure line diameter



Incorrect way to measure line diameter

(3-20-20)

10. Dynamic Loads. Operators shall consider high dynamic loads when calculating safe working limits of wire ropes. Wire ropes are often subjected to high dynamic loads, which greatly multiply the force on a line and may exceed the safe working limit. Even a split second of time over the limit can lead to premature failure of a line. Typical dynamic loads occur when a turn hits a stump, a turn comes down off of the back hillside to full suspension, or when excessive force is applied to pulling a turnout of its bed. A high dynamic load or a sudden shock load that exceeds the working limit may not result in immediate failure, but rope strands may stretch and weaken, and may fail at a later time. (3-20-20)

11. Other Common Wire Rope Considerations. (3-20-20)

a. Wire Rope Stretching and Line Diameter. A stretched wire rope has a reduced diameter. Operators shall check for stretched lines by measuring the diameter, particularly on older lines and any line used in stressful situations. (3-20-20)

b. Older Wire Rope. Standing lines and guylines are often kept in service for multiple years (four (4) to five (5), and as long as ten (10) years in some instances) without exhibiting any obvious signs of excessive wear other than rust. Operators shall check date stamps of wire rope and evaluate line life. Operators shall also inspect the core of older lines periodically for a fractured or dry core, which could indicate other deficiencies such as broken wires, excessive wear, or line deformation. (3-20-20)

c. Hard Use. The life of a wire rope is also affected by hard use. Line life can be measured by the volume of wood hauled (see Table 459.09). Line life is reduced when a line exceeds its elastic limits, is heavily shocked, or rubbed against rocks or other lines. As a line wears, the safe working load limit shall be lower and the payload adjusted appropriately. (3-20-20)

d. Wire Rope endurance and elastic limits. Working within the endurance and elastic limits of lines can help preserve line life. The following principles shall be observed when evaluating the integrity and safe use of wire rope: (3-20-20)

i. The "endurance limit" for all lines is fifty percent (50%) of the breaking strength. If wire rope tensioning regularly exceeds the endurance limit, the life of the line is reduced through fatigue. (3-20-20)

ii. The "elastic limit" for all lines is sixty to sixty-five percent (60-65%) of the breaking strength. When a wire rope is loaded to its normal safe working limit, the line stretches, but then returns to its original size when the load is released. If a load increases past the elastic limit through prolonged exertion or repeated stress, the line will stretch and stay stretched, resulting in a permanent reduction in the breaking strength. (3-20-20)

e. Lubrication and Abrasion. Wire rope is lubricated in the factory to reduce internal friction and corrosion, and prolong the life of the rope. Heat from friction causes the internal lubricant to deteriorate. Friction occurs when the rope stretches under load, particularly in places where it bends around sheaves or other objects. An improperly lubricated line can pick up particles of dirt and sand that will increase abrasion. Accordingly, operators

shall: (3-20-20)

i. Check for and ensure the proper lubrication of all lines and wire rope, following the manufacturer's instructions. Commercial wire rope lubricants are available. (3-20-20)

ii. Carefully inspect lines for faults in areas where dust and sand may collect. (3-20-20)

iii. Store all wire rope and lines off the ground. (3-20-20)

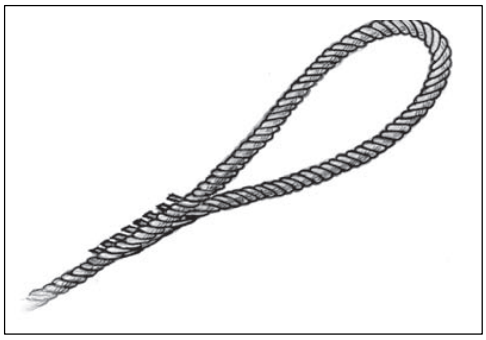
12. Line Connections. (3-20-20)

a. Inspection. Operators shall regularly inspect shackles, hooks, splices, and other connecting equipment for damage and wear, as well as ensure the connectors are the correct type and size for the line and intended use. (3-20-20)

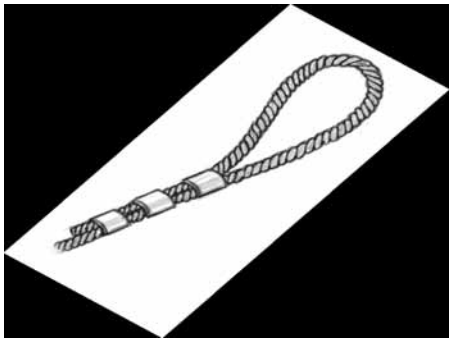
b. Wire Splicing. Splices are used to form an eye at the end of a line, extend the length of a line, or repair a broken or damaged line. The splicing of wire rope requires special skill and shall only be performed under the supervision of a competent person with using the proper tools. Reference materials are available with detailed instructions for numerous types of splices. Individuals splicing wire shall always wear appropriate eye protection while splicing or assisting with a splicing procedure. (3-20-20)

c. The logger's eye splice and three (3)-pressed eye are the most common methods to form an eye for use as a skyline terminal. See Figure 454.12.c. The spliced eye is approximately eighty percent (80%) efficient. A three (3)-pressed eye can reach ninety percent (90%) line strength. The pressed eye is typically performed at the rigging shop. Spliced eyes may be placed in the field, but may require additional time to install. (3-20-20)

FIGURE 454.12.c.



THE LOGGER'S EYE SPLICE



THREE-PRESSED EYE

(3-20-20)

d. When Flemish (Farmers, Rolled) eye splices are used on load-bearing lines, the strand ends must be secured by: (3-20-20)

i. Hand tucking each strand three (3) times; or (3-20-20)

ii. Applying a compression (pressed-eye) fitting. (3-20-20)

e. Guyline Care. Guylines are a vital link in holding up a tower. Guyline extensions shall not be excessively moved around by dragging on the ground, or left on the ground for long periods of time as they will deteriorate faster. (3-20-20)

f. Guyline extensions must be connected by: (3-20-20)

i. A bell shackle using a safety pin to connect spliced eyes or pressed eyes; or (3-20-20)

ii. Poured nubbins (buttons) and a double-ended hook. (3-20-20)

g. Line Deformity. A line may deform where it loops around a shackle or pin, producing weakness that may result in line failure. A thimble in the loop protects the line. Thimbles may be used on standing lines, but not on running lines. Examples of the appearance of deformed lines and the use of thimbles in shackles are illustrated in Figure 454.12.g. (3-20-20)

FIGURE 454.12.g.

DEFORMED EYE EYE WITH THIMBLE

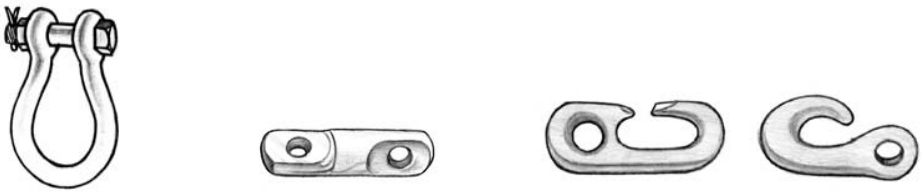
(3-20-20)

13. Shackles and Hooks. (3-20-20)

a. Hooks. Hooks shall be inspected to ensure that they have not sprung open. Ensure that shackles are positioned correctly to bear the load. Haywire swivels shall be inspected frequently, due to their susceptibility to wear rapidly. (3-20-20)

b. Shackle Safety. Proper bells or shackles shall be used to connect the guylines to the stumps, and the guyline lead blocks to the ring at the top of the tower. Connections shall have at least one and a half (1-1/2) times the strength of the guyline. The pins of the shackles must be secured to protect against dislodgement, and a nut and cotter key, or a nut and molly may be used for that purpose. The use of loops or mollies to attach guylines is prohibited. Examples of the appearance of some shackle equipment is illustrated in Figure 454.13.b.

FIGURE 454.13.b.



SHACKLE WITH SAFETY PIN HAYWIRE SWIVEL HAYWIRE HOOKS

(3-20-20)

c. The following practices shall be observed in order to ensure the safe use of shackles: (3-20-20)

i. A shackle must have a rated breaking strength greater than the rated breaking strength of the lines attached to it, and the manufacturer's rated strengths to determine oversized requirements shall be used. Accepted industry standards shall be utilized and adhered to when determining the correct shackle size based on the type and

nature of the logging operation being performed. Examples of the appearance of some shackle equipment for the purposes of proper selection is illustrated in Figure 454.13.c.i (3-20-20)

ii. Shackles with pins, and securing nuts with mollies or a cotter key shall be used on standing or overhead rigging. (3-20-20)

iii. Screw shackle pins shall not be used in any standing or overhead rigging. (3-20-20)

iv. Screw shackle pins, where allowed to be used, shall be tightened securely. (3-20-20)

v. Shackle pin mollies shall be rolled sufficiently and fit the pin hole fully. Mollies shall be tucked a minimum of three (3) times. (3-20-20)

vi. The shackle shall always be placed with the pin nearest to the yarder, so that in the event the shackle fails the least amount of hardware may be thrown at the yarder. (3-20-20)

vii. Replace shackles that are bent, broken, or show excess wear on the inner surfaces. Examples of the appearance of some damaged or non-conforming shackles are illustrated in Figure 454.13.c.vii. (3-20-20)

FIGURE 454.13.c.vii.

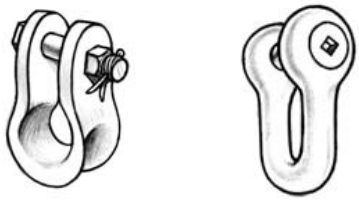
REPLACE SHACKLES THAT ARE BENT, BROKEN, OR SHOW EXCESS WEAR ON THE INNER SURFACES.

viii. Sleeve shackles or choker bells must be used when choked lines are permitted. (3-20-20)

FIGURE 454.13.c.i.

SLEEVE WITH KNOCKOUT PIN

BELL WITH KNOCKOUT PIN



SLEEVE WITH SAFETY PIN FLUSH PIN STRAIGHT SIDE

(3-20-20)

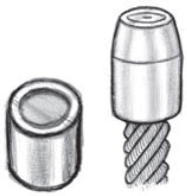
14. Knobs, Ferrules, and Eyes. (3-20-20)

a. Poured nubbins and a double-end hook are acceptable connectors in place of shackles in some instances. The use of quick nubbins (wedge buttons) as guylines and skyline end fittings is prohibited unless attaching guylines to guyline drums. Operators shall follow the manufacturer's recommendations when attaching sockets and similar end fastenings. (3-20-20)

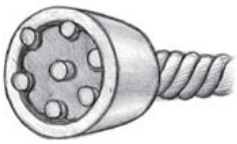
b. Poured nubbins achieve ninety-nine percent (99%) of line strength and may be used. Quick nubbins only achieve a maximum of sixty-five percent (65%) under ideal conditions, and accordingly operators shall consider whether they are appropriate for safe use in any given application. Pressed ferrule are not certifiable for strength, and shall not be used. Examples of the appearance of some knob, ferrule, and nubbin equipment are illustrated in Figure 454.14. (3-20-20)

c. Operators shall inspect knobs, ferrules, and eyes at cable ends for loose or broken wires, and corroded, damaged, or improperly applied end connections. Poured nubbins shall be date stamped.

FIGURE 454.14



BABBITED KNOB & PRESSED FERRULE

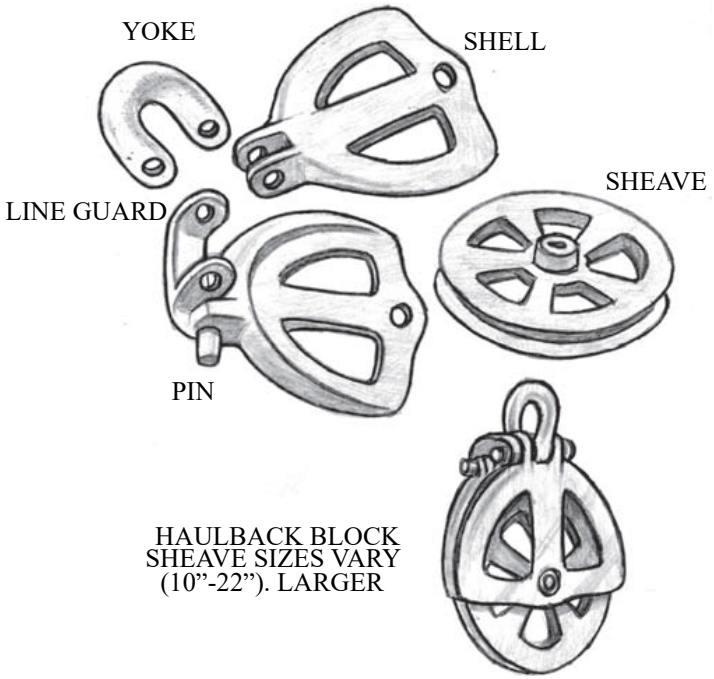


QUICK NUBBIN (WEDGE BUTTON)

(3-20-20)

15. Brush Blocks. Brush blocks shall be thoroughly inspected for cracks, wear, or deterioration. Operators shall closely examine the areas subject to the most wear, including bearings, sheave, frame, yoke, and pins. Defective parts shall be replaced immediately. Blocks shall be greased every time before each use.

FIGURE 454.15

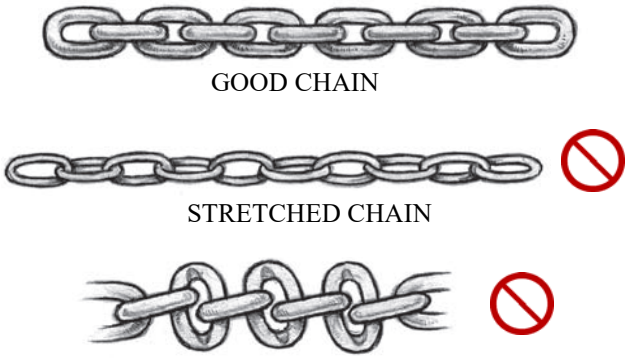


(3-20-20)

16. Chains and Straps. Chains or straps shall always be sized and used correctly for the intended purpose. Determining which size to use may depend on various factors. Oversized trailer lift straps, for example, shall have a breaking strength equal to five (5) times the load to be lifted. Towing chains shall have a tensile strength equivalent to the gross weight of the towed vehicle. The manufacturer’s specifications or other appropriate reference materials shall always be consulted to ensure the right chain or strap is used for a task. (3-20-20)

a. Operators shall periodically inspect chains for damaged, worn, or stretched links. Chains with more than ten percent (10%) wear at the bearing surface shall be replaced. Operators shall periodically inspect straps, and examine them for broken wires or wear. Examples of the appearance of damaged and safe chains are illustrated in Figure 454.16.a.

FIGURE 454.16.a.



(3-20-20)

455. TREE CLIMBING.
Loggers are often required to climb considerable heights to top trees or hang rigging on lift trees. All workers who may be exposed to fall hazards shall be specifically trained and equipped with fall protection. (3-20-20)

01. Rescue Plan. Before rigging any tree, the employer must develop rescue procedures, which includes identifying appropriate equipment, personnel, and training to perform a rescue in case a climber is injured or incapacitated in the tree. A second set of climbing gear and a person with climbing experience shall be readily available. Equipment and procedures that will support an injured climber's chest and pelvis in an upright position during a rescue shall be used. When an injured climber is wearing only a climbing belt, provisions must be made to prevent the climber from slipping through it; this may include using a rope to create an upper-body support system. Consideration should be made to replacing climbing belts with a climbing harness. (3-20-20)

02. Before Leaving the Ground. Employers shall check climbing equipment and immediately remove defective equipment from service. Personnel shall ensure that hardware and safety equipment is securely fastened before placing weight on the lanyard or life-support rope. All climbing knots shall be tied, dressed, and set prior to ascending. All personnel shall follow the recommendations of the manufacturer of the cordage with respect to the use of splices. (3-20-20)

03. Climbing Equipment. (3-20-20)

a. A climbing harness provides both pelvic and upper-body support, and may be a one (1)-piece, full-body harness, or any two (2)-piece design that meets industry standards. (3-20-20)

b. Climbing and life-support lines shall be conspicuous and easily identifiable. (3-20-20)

c. All lines and webbing used for life support shall have a minimum breaking strength of five thousand four hundred (5,400) pounds and may only be used for climbing. (3-20-20)

d. When a cutting tool is used in a tree, the climbing rope (lanyard) shall be a high-quality steel safety chain of three-sixteenths (3/16) inch size or larger, or a wire-core rope. (3-20-20)

e. A life-support rope evidencing excessive wear or damage or that has been subjected to a shock load shall be removed from climbing service. (3-20-20)

04. Climbing Operations. (3-20-20)

a. Ensure climbers are appropriately well-trained in climbing and in the use of all equipment to carry out assigned tasks. (3-20-20)

b. While climbing operations are underway, co-workers and others on the ground shall stay clear of potential falling objects. If co-workers must work directly below a climber, the climber shall stop any activity in which objects could be dropped or dislodged until the area below is cleared. Climbers shall provide warning whenever any material may be likely to fall or is dropped deliberately. Unsecured equipment, rigging, or material shall not be left in the tree. (3-20-20)

c. Yarding activity must cease within reach of a tree or guylines of a tree where a climber is working. Machinery may operate in reach of the climber to hoist rigging into the tree. In such circumstance the following shall apply: (3-20-20)

i. A spotter shall be utilized and yarding operations shall be performed with extra caution; (3-20-20)

ii. The machine operator and the spotter shall give the task their undivided attention; (3-20-20)

iii. Equipment that is nearby and which may be noisy, such as power saws, tractors, or logging machines shall be shut down if the noise interferes with signal communications with the climber; and (3-20-20)

iv. Lines attached to a tree in which a climber is working shall not be moved except on a signal from the climber. (3-20-20)

d. Tree climbers shall use a three (3)-point climbing system whereby three (3) points of contact must be firmly in place on a secure surface before moving to another point. Along with hands and feet, other points on the body, such as a hooked knee, can be considered a point of contact if it can support the full body weight. Additionally, the places of support must be secure, and climbers should use care to void unsound branches or stubs as a contact point. A lanyard around the tree secured to the safety harness or climbing belt on both ends constitute two (2) points of contact. (3-20-20)

e. Climbing without being secured to the tree is prohibited, except in conifers, when in the judgment of a qualified climber, the density of branches growing from the stem make attaching the lanyard more hazardous than simply climbing the tree. In such instances, the climber shall evaluate the tree farther up, and use attachments when it is safe to do so. (3-20-20)

05. Topping Trees. Only an experienced climber with experience felling trees shall top a tree. Cutters shall not cut when wind or other conditions make doing so hazardous. Standard safe felling procedures shall apply, with the additional following requirements: (3-20-20)

a. A chainsaw with a bar short enough to make both the face-cut and backcut easily from one side shall be used. (3-20-20)

b. Cutters shall determine the felling direction and ensure there are no obstructions. Consideration shall be given to the fact that an impact could cause violent movement in the tree being topped where the climber is perched. (3-20-20)

c. A safety chain shall be wrapped around the tree just below the cut to prevent the tree from splitting or slabbing down inside the climbing rope. (3-20-20)

d. The cutter shall ensure he is comfortable, and avoid any awkward cutting position. (3-20-20)

e. Exact cuts should be made. There is no escape route for the climber to get away from the stem to avoid kickback or a splintered hinge. When making horizontal side cuts, extra care shall be used to stay on the line of the backcut to avoid wood breaking away with the saw as the top falls. (3-20-20)

456. TYPICAL RIGGING SYSTEMS.

01. See Figures 456.01-A through 456.01-H.

FIGURE 456.01-A

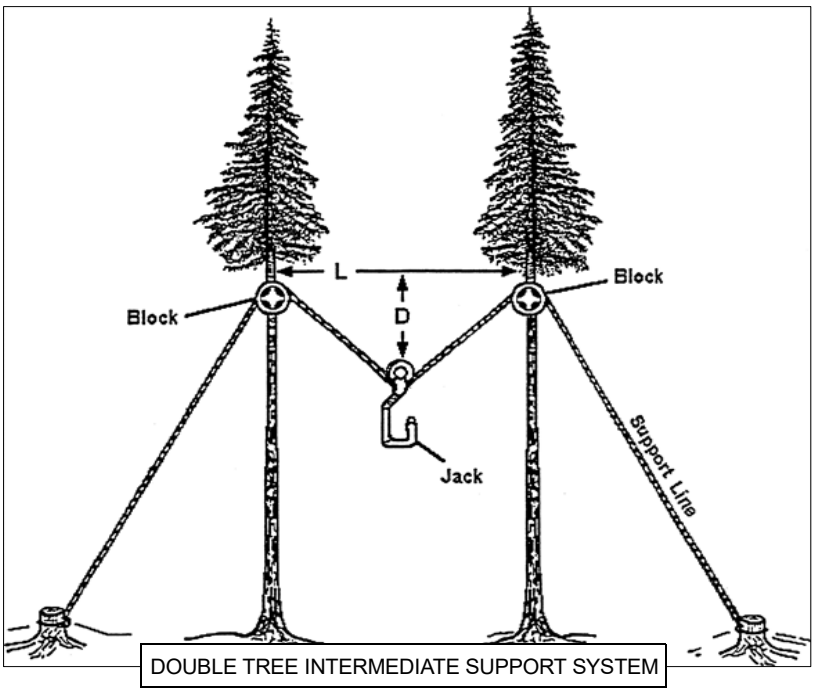


FIGURE 456.01-B

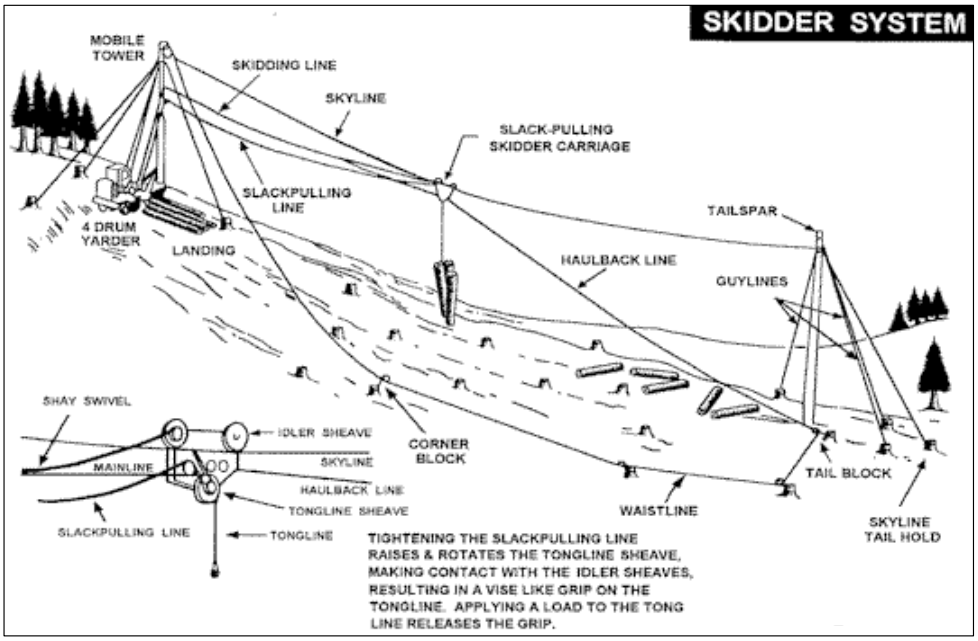


FIGURE 456.01-C

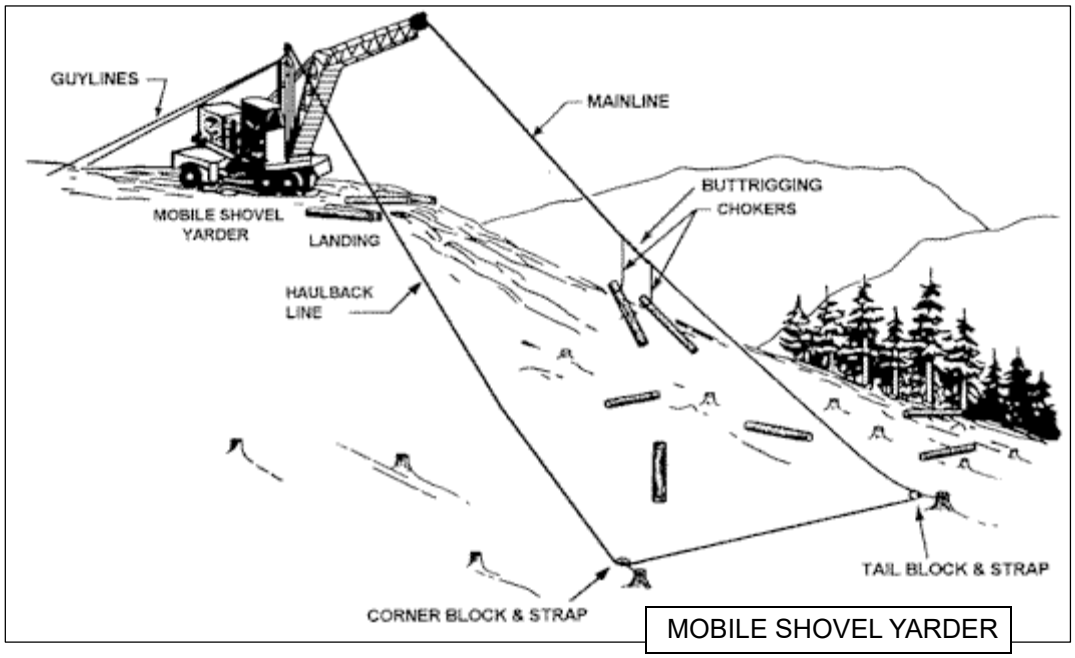


FIGURE 456.01-D

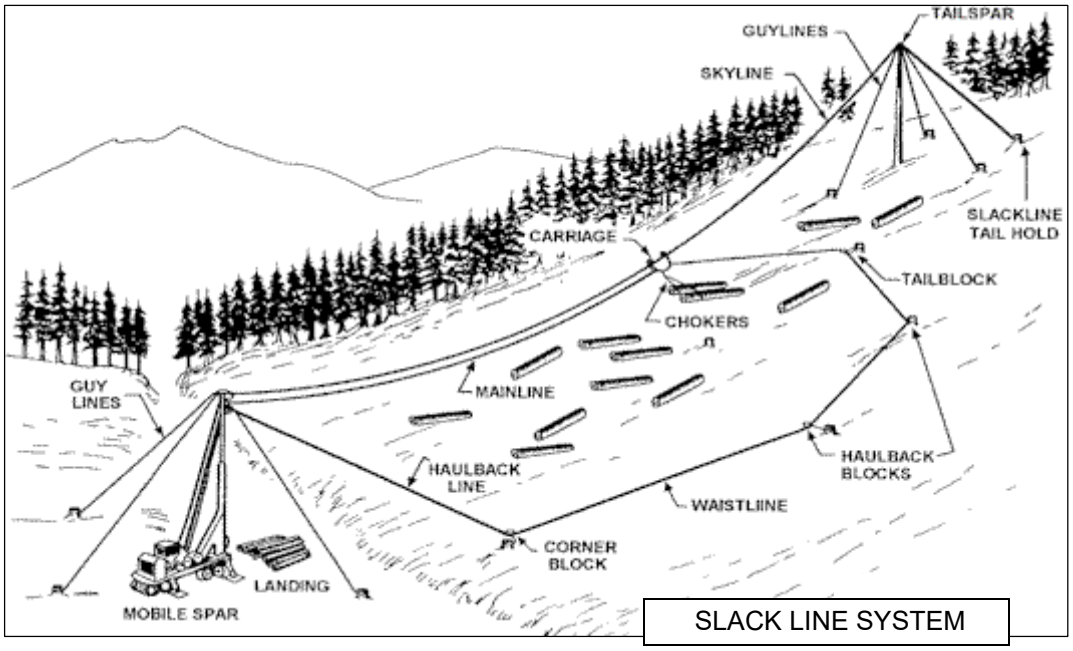


FIGURE 456.01-E

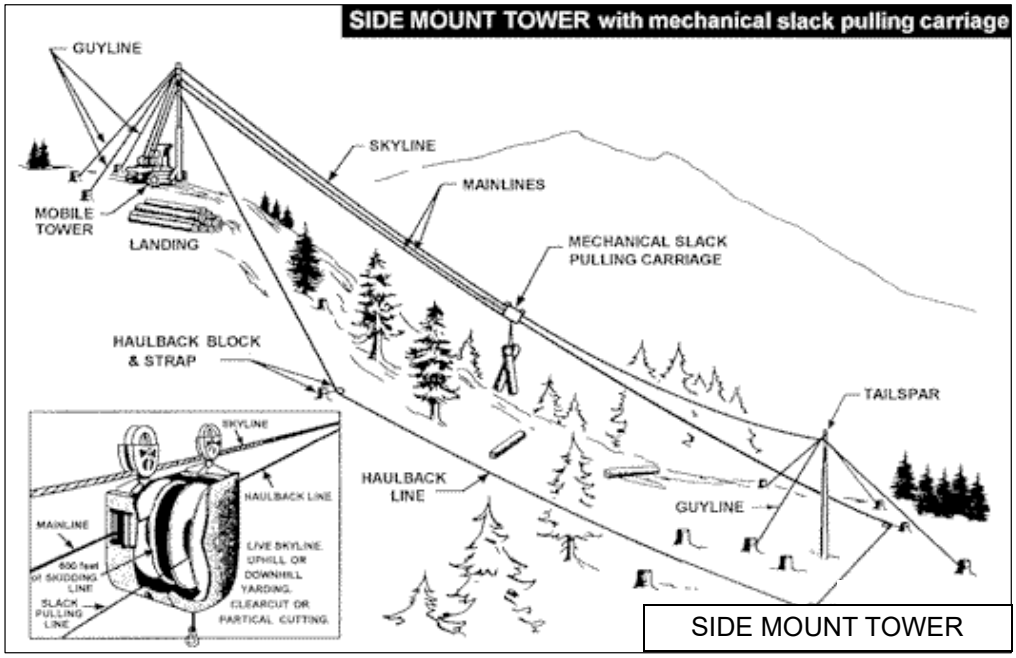


FIGURE 456.01-F

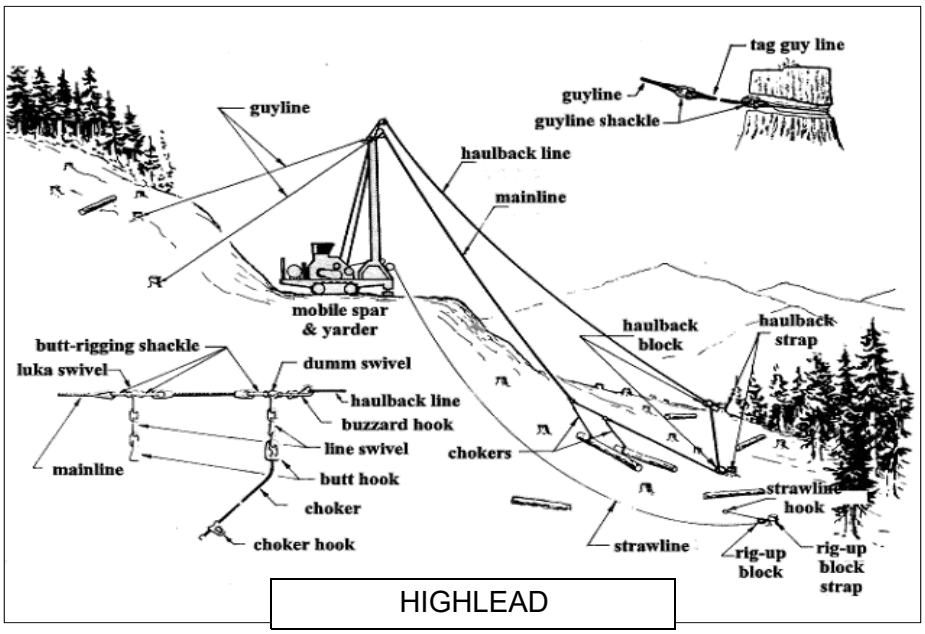


FIGURE 456.01-G

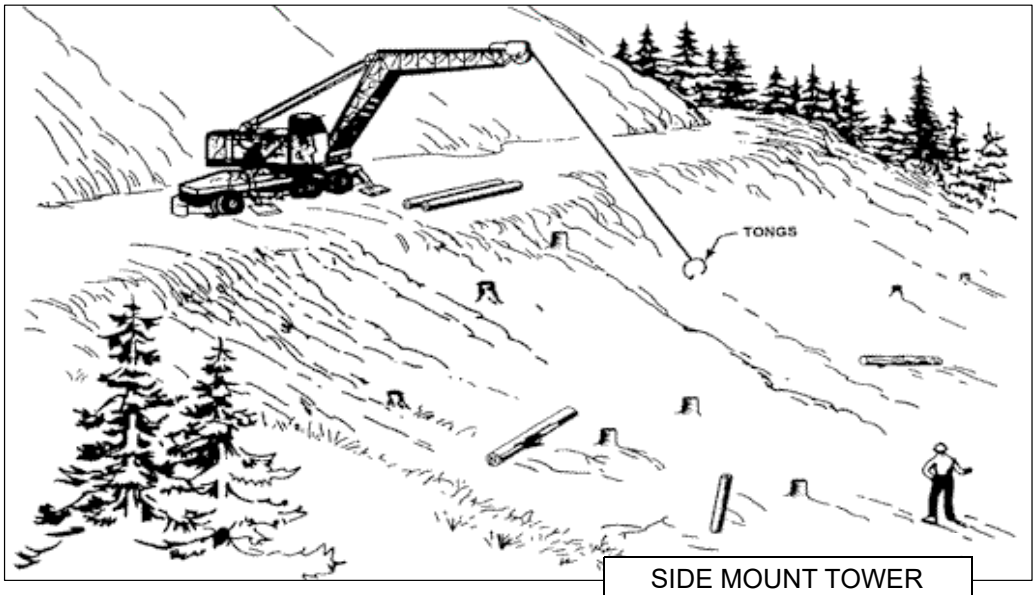
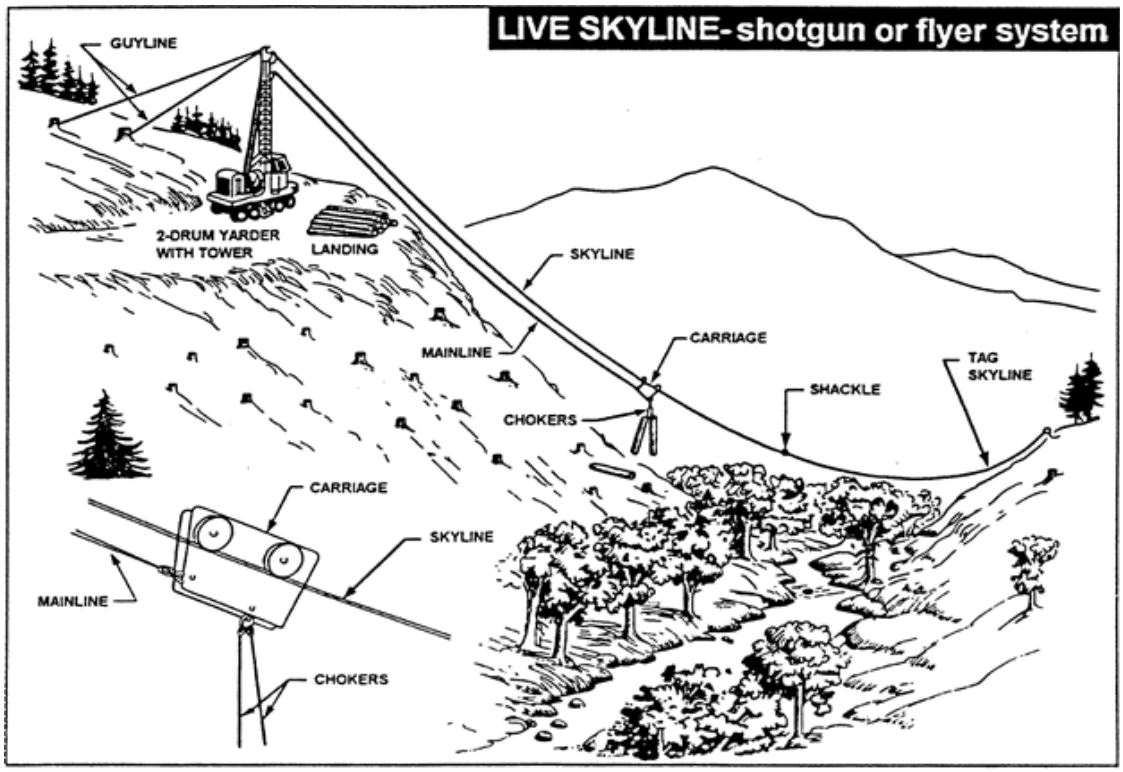


FIGURE 456.01-H



(3-20-20)

457. -- 500. (RESERVED)

SUBCHAPTER K – ROAD TRANSPORTATION
(Rules 501 - 550)

501. LOG TRUCK TRANSPORTATION.

01. General. The following requirements are supplemental to any Idaho law governing automobiles, trucks, tractors, trailers, and any combination of these units. If there are any discrepancies in the codes between this section and any federal or Idaho motor vehicle regulations pursuant to title 49, Idaho Code, applicable in the state of Idaho, such federal or other governmental regulations will govern. (3-20-20)

02. Stopping and Holding Devices for Log Trucks. (3-20-20)

a. Motor logging trucks and trailers must be equipped with brakes or other control methods which will safely stop and hold the maximum load on the maximum grade. Air or vacuum brake lines shall be of the type intended for such use and shall have fittings which will not be interchangeable with water or other lines. (3-20-20)

b. Brake Test - A brake test shall be made before and immediately after moving a vehicle. Any defects shall be eliminated before proceeding. (3-20-20)

03. Lighting Equipment Required. (3-20-20)

a. Motor vehicles used on roads not under the control of the Idaho Transportation Board, counties or cities, shall have equipment necessary for safe operation, such as head, tail, and stop lights. (3-20-20)

b. Such lights shall be used during clearance periods of reduced visibility. (3-20-20)

04. Safe Operating Requirements. (3-20-20)

a. The driver shall do everything reasonably possible to keep his truck under control at all times and shall not operate in excess of a speed at which he can stop the truck in one-half (1/2) the distance between him and the range of unobstructed vision. (3-20-20)

b. The driver shall take into consideration the condition of the roadway, weather factors, curves, grades and grade crossings, the mechanical condition of his equipment, and other relevant factors. (3-20-20)

c. The driver shall clear rocks from between dual tires before driving on multi-lane roads. (3-20-20)

d. A daily inspection shall be made of trucks and trailers with particular attention to steering apparatus, brakes, boosters, brake hoses and connections, reaches, and couplings. Any defects found shall be corrected before equipment is used. (3-20-20)

05. Stakes, Bunks, or Chock Blocks. All stakes and bunks, installed on log trucks and trailers, together with the means provided for securing and locking the stakes in a hauling position, shall be designed and constructed of materials of such size and dimensions that will withstand a pressure of fifteen thousand (15,000) pounds applied outward against the tops of the stakes, and, or extensions when used, without yield or permanent set resulting in the stakes, bunks or the means provided for securing and locking the stakes.

NOTE: Test Procedure - A test pressure of fifteen thousand (15,000) pounds is applied to the top of one (1) stake, using the top of the stake opposite as a base for applying pressure. Bunk is not to be secured to floor or other base except in a manner similar to that used to mount it to truck or trailer. Stakes must return to normal upright position at end of test and stakes and all component parts examined and checked with original specifications. If no yield results in any part, the design and construction may be considered as meeting code requirements. (3-20-20)

06. Stake Extensions. (3-20-20)

a. Stake extensions shall not be used unless all component parts of the bunking system are of sufficient size and strength to support the added stresses involved. (3-20-20)

b. Truck drivers shall report missing or broken stake extensions to the proper authority. (3-20-20)

07. Stake and Chock Tripping Mechanisms. Stakes and chocks that trip shall be constructed in such a manner that the tripping mechanism, which releases the stake or chocks, is activated at the opposite side of the load from the stake being tripped. (3-20-20)

08. Linkage for Stakes or Chocks. (3-20-20)

a. The linkage used to support the stakes or chock must be of adequate size and strength to withstand the maximum imposed impact lead. (3-20-20)

b. "Molly Hogans" or cold shuts are prohibited in chains or cable used for linkage. (3-20-20)

09. Notify Engineer When Around Truck. (3-20-20)

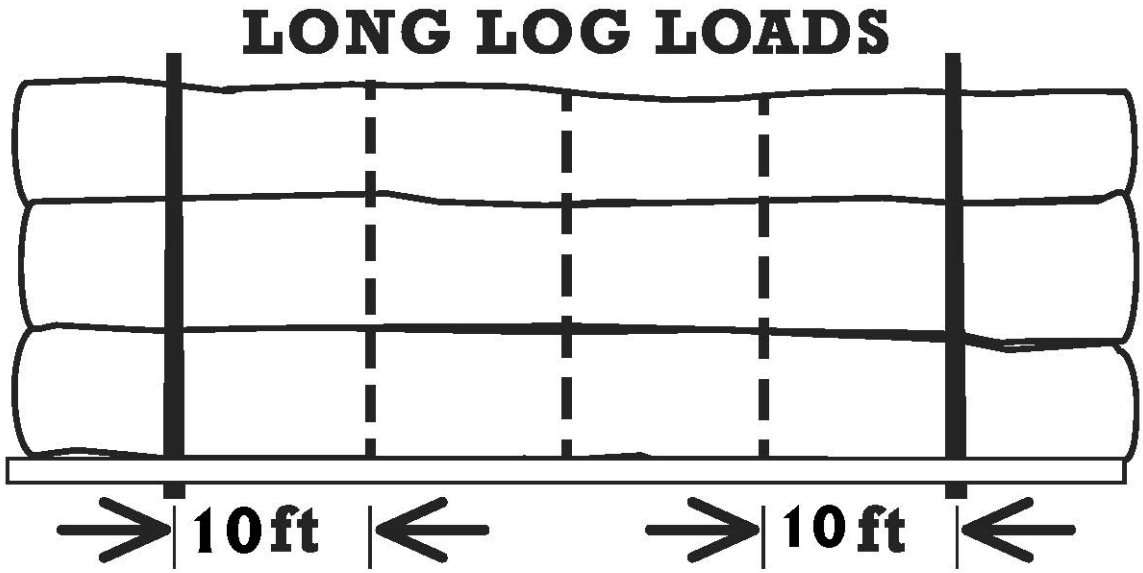
a. Persons shall not walk along side of or be underneath any truck being loaded. (3-20-20)

b. Prior to performing any duties, such as releasing bunk locks, placing or removing compensating pin, scaling logs, reading scale, chopping limbs or making connections, persons shall notify the loading engineer of their intentions and be acknowledged. (3-20-20)

10. Number of Wrappers Required. (3-20-20)

a. Each unit used for hauling logs longer than twenty six (26) feet, shall have the load secured by a minimum of three (3) wrappers. Wrappers shall be placed in positions that effectively secure the load. One (1) wrapper shall be placed within ten (10) feet of each bunk. See Figure 501.10.a.

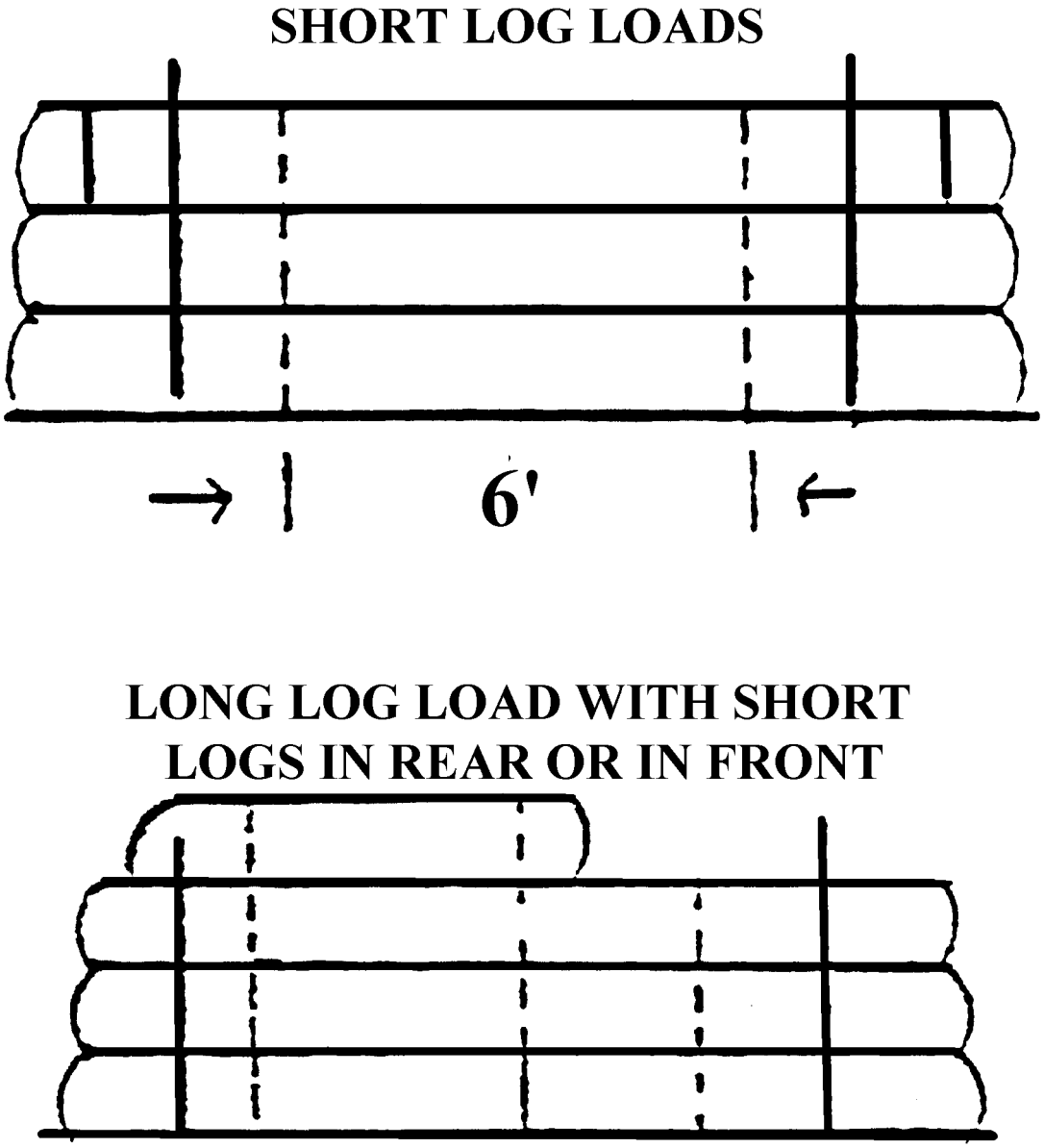
FIGURE 501.10.a.



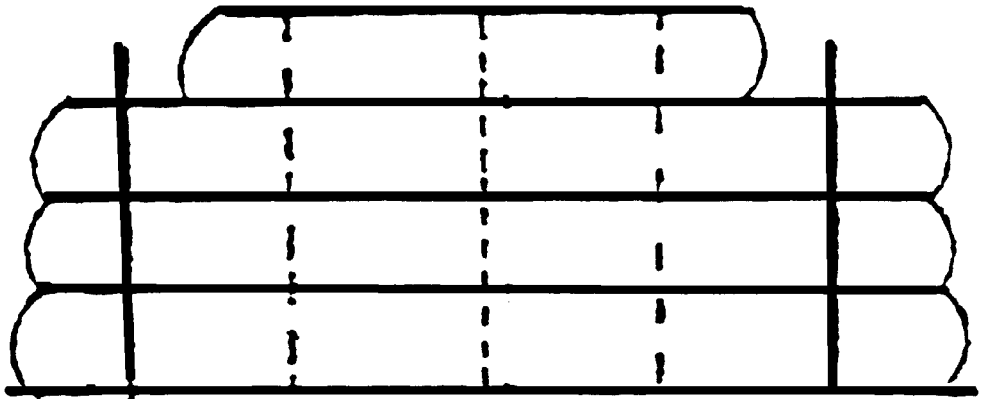
(3-20-20)

b. All exposed outside logs shall be secured by one (1) wrapper passing near each end of the log. See Figure 501.10.b.

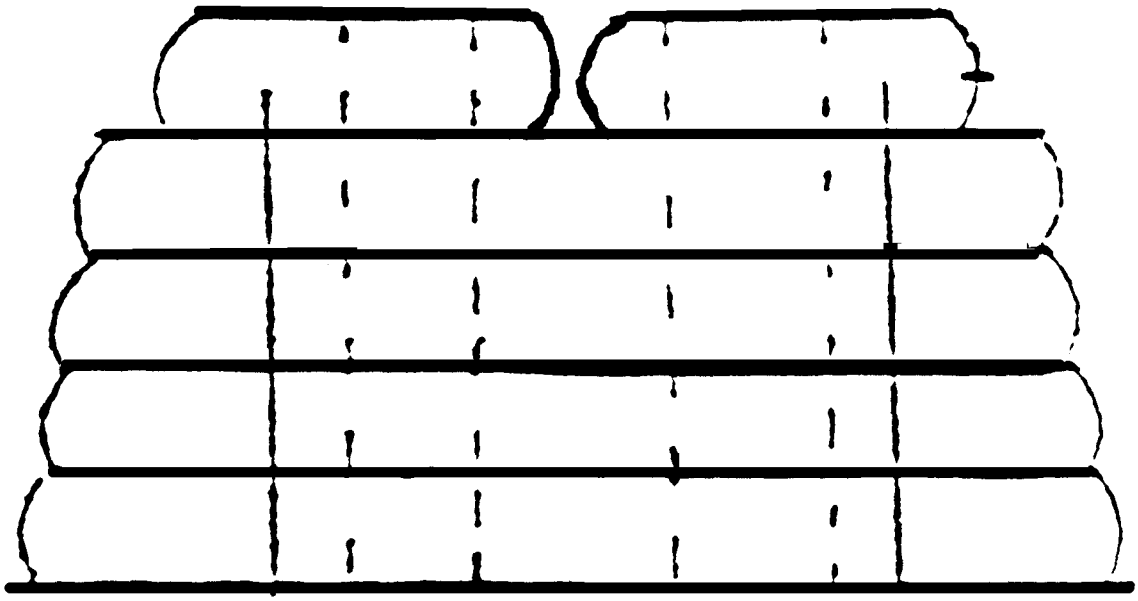
FIGURE 501.10.b.



LONG LOG LOAD WITH SHORT LOGS IN CENTER



LONG LOG LOAD WITH SHORT LOGS BUTTED

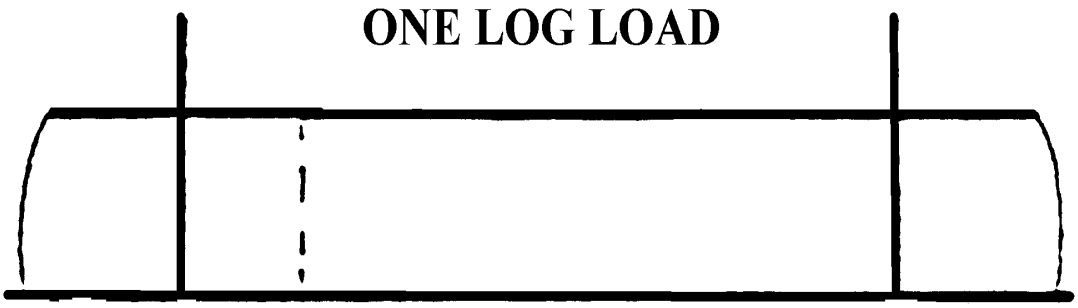


(3-20-20)

c. On one (1) log load where trailer bunk is equipped with cheese blocks, one (1) wrapper securing log to the trailer bunk will be sufficient. Outside wrappers on short logs shall have a minimum of six (6) feet spread. (See Figure 501.10.c.)

NOTE: High loads are defined as logs loaded above bunk stakes.

FIGURE 501.10.c.

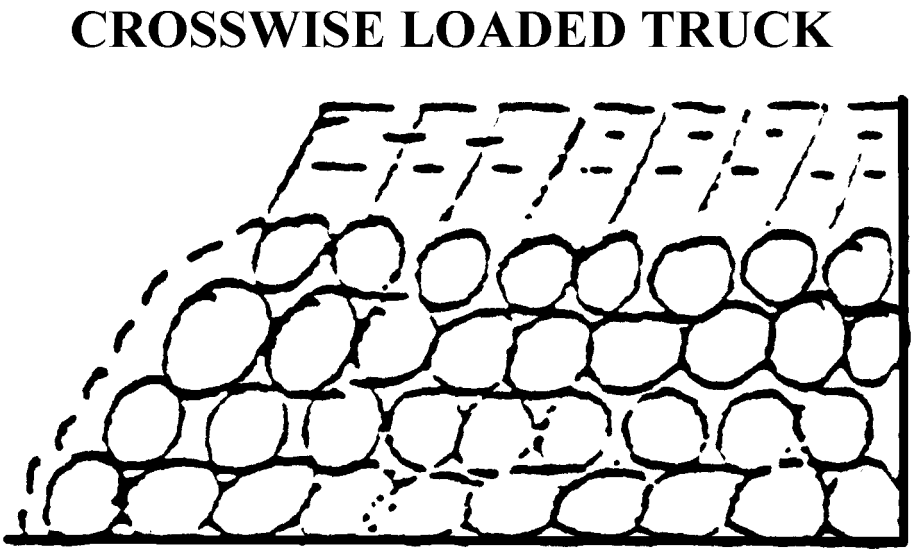


(3-20-20)

11. Requirements for Crosswise Loaded Trucks. (3-20-20)

a. When loads of short logs are loaded crosswise, the logs shall be properly contained by use of stake or chock blocks and shall be secured by a minimum of two (2) wrappers. (See Figure 501.11.a.)

FIGURE 501.11.a.



(3-20-20)

b. Binders shall be securely fastened to the vehicle. (3-20-20)

12. Construction of Wrappers and Binders. (3-20-20)

a. Cables shall have a spliced eye or swaged fittings. (3-20-20)

b. "Molly Hogans" or cold shuts are prohibited to make splices or connections. (3-20-20)

c. Each wrapper shall have a minimum breaking strength of not less than fifteen thousand (15,000) pounds. (3-20-20)

d. Binders must be stamped with a working load limit of four thousand (4,000) pounds or greater. (3-20-20)

13. Binder Placement Requirements. (3-20-20)

a. Binders shall be placed in a manner whereby they will be released on the side opposite the brow log, or on the side where the unloading equipment operator can see the binders. (3-20-20)

b. Truck drivers shall be required to stop vehicles, dismount, check and tighten loose load binders, either just before or immediately after leaving a private road to enter the first public road they encounter. (3-20-20)

14. Precautions When Placing or Removing Binders and Wrappers. (3-20-20)

a. Binders and wrappers shall remain on the load until an approved safeguard has been provided to prevent logs from rolling off the side of truck where binders are being released. (3-20-20)

b. At least one (1) wrapper shall remain secured while relocating or tightening other binders. (3-20-20)

15. Binders and Wrappers to Be Placed Before Leaving Landing Area. Binders and wrappers shall be placed and tightened around the completed load before shifting the load for proper balance. Each load must have all required wrappers placed and secured at the loader before the truck is moved. If it is unsafe to do so, the truck may be moved to the nearest safe place in sight of the loader. (3-20-20)

16. Adequate Reaches Required. (3-20-20)

a. Log trailers must be connected to tractors by reaches of a size and strength to withstand all imposed stresses. (3-20-20)

b. Spliced reaches shall not be used. (3-20-20)

c. Documented reach inspections shall be performed annually. (3-20-20)

17. Proper Lay of Logs in Stakes or Bunks. (3-20-20)

a. The method of loading shall be such that the logs in any tier or layer unsecured by stakes or cheese blocks shall have their centers inside of the centers of the outer logs of the next lower tier or layer so that the load is stable without the aid of binders. (3-20-20)

b. Logs shall be well saddled without crowding so that there will be no excessive strain on the wrappers or stakes. (3-20-20)

c. No more than one half (1/2) of any log shall extend above the stakes unless properly and securely saddled. (3-20-20)

d. Bunk logs shall extend not less than twelve (12) inches beyond the bunk, with the exception of non-oscillating bunks. (3-20-20)

18. Traffic Travel on Right Side of Road Except Where Posted. All trucks shall keep to the right side of the road, except where road is plainly and adequately posted for left side traveling. (3-20-20)

19. Towing of Trucks. When trucks must be towed on any road, the person guiding the vehicle being

towed shall, by prearranged signals, govern the speed of travel. (3-20-20)

20. Scaling and Branding. When at the dump or reload and where logs are scaled or branded on the truck, the logs shall be scaled or branded before the wrappers are released. (3-20-20)

21. Metal Parts Between Bunk and Cab to Be **Covered**. Suitable material shall be used on treading surfaces between the bunk and cab to prevent persons from slipping on the metal parts. (3-20-20)

22. Bunks to Be Kept in Good Condition and Repair. (3-20-20)

a. Log bunks or any part of bunk assembly bent enough to cause bunks to bind shall be straightened. (3-20-20)

b. Bunks shall be sufficiently sharp to prevent logs from slipping. (3-20-20)

23. Following Other Vehicles. (3-20-20)

a. A vehicle not intending to pass shall not follow another vehicle closer than one hundred fifty (150) feet. (3-20-20)

b. Passing shall be done only when it can be done safely. The passing vehicle shall consider all factors which may be essential, such as condition of the roadway, width of the road, and distance of clear visibility ahead. (3-20-20)

24. Reaches to Be Clamped When Towing Unloaded Trailer. A positive means, in addition to the clamp, shall be installed on the reach of log truck trailers when the trailers are being towed without a load. (3-20-20)

25. Inserting of Compensating Pin. (3-20-20)

a. Persons shall never enter the area below suspended logs or trailers. (3-20-20)

b. At dumps where the load must remain suspended above the bunks until the truck is moved away and when the trailer is the type with a compensating pin in the reach, a device shall be installed that will allow the trailer to be towed away from the danger area. (3-20-20)

26. Safety Chains. (3-20-20)

a. All trailers shall be secured with a safety chain, or chains, which connect the frame of the truck assembly to the trailer unit. (3-20-20)

b. The chains shall be capable of holding the trailer in line in case of failure of the hitch assembly. (3-20-20)

502. STEERED TRAILERS.

01. Steered Trailers. Steered trailers not controlled from the truck cab shall be designed, constructed, and operated in accordance with this section. (3-20-20)

a. Secure seat. A secure seat with substantial foot rests shall be provided for the steerer at the rear of the bunk. Any arrangement that permits the steerer to ride in front of the bunk is prohibited. (3-20-20)

b. Unobstructed exit. The seat for the steerer shall be so arranged that the steerer has an unobstructed exit from both sides and the rear. (3-20-20)

c. Bunk support. The bunk support shall be so constructed that the steerer has a clear view ahead at all times. (3-20-20)

d. Adequate means of communication. Adequate means of communication shall be provided between the steerer and the truck driver. (3-20-20)

e. Eye protection and respirator. Eye protection and respirator shall be provided for the steerer. (3-20-20)

f. Fenders and splash plates. The trailer shall be equipped with fenders or splash plates to protect the steerer from mud and dust so far as possible. (3-20-20)

g. Lights. If used during a period of reduced visibility on roads not under the control of the Idaho Transportation Board, counties or cities, the trailer shall be equipped with head, tail and stop lights. (3-20-20)

503. COMMON CARRIERS.

01. Responsibility. It shall be the responsibility of the common carrier, and particularly the operator of the common carrier, upon entering the premises of any sawmill, woodworking or allied industry, to exercise all possible caution and to use all necessary safety devices and precautions to their fullest extent. (3-20-20)

02. Audible and Visual Warning Devices. (3-20-20)

a. All common carriers equipped with audible and visual warning devices shall activate such warning devices before entering a danger zone, and they shall remain activated as long as the carrier is moving in that zone. (3-20-20)

b. A danger zone shall be defined as an area where men or vehicles are working or normally work. (3-20-20)

03. Train Operations. When a train is operating on a plant railway system, the safety rules shall apply as outlined by the Association of American Railroads governing train, engine and transportation of employees. (3-20-20)

504. SELF-LOADING LOG TRUCKS.

01. Self-Loading Log Trucks. Self-loading log trucks manufactured after January 1, 1981, shall be equipped with: (3-20-20)

a. A load check valve (velocity fuse) or similar device installed on the main boom. (3-20-20)

b. A seat that is offset from the point of attachment of the boom. The seat and boom structure shall rotate concurrently. (3-20-20)

02. Operator. The operator of a self-loading log truck shall not: (3-20-20)

a. Heel the log over his head; or (3-20-20)

b. Heel the log on the operator side of the boom of the seat if offset from the point of attachment of the boom. (3-20-20)

03. Safe and Adequate Access. A safe and adequate means of access to and from the loading work station on self-loading log trucks shall be provided. (3-20-20)

04. Overhead Hazards. A self-loading log truck shall not load itself or another truck when the loading process is under or within a guyline circle or similar overhead hazard. (3-20-20)

05. Trailers Secured. Self-loading truck trailers shall be secured to the truck when the trailer is being hauled on the truck. (3-20-20)

505. -- 550. (RESERVED)

SUBCHAPTER L – LOG DUMPS, LANDING, LOG HANDLING EQUIPMENT, LOADING AND UNLOADING BOOMS, AND TRAILER LOADING HOISTS (Rules 551 - 600)

551. SPECIFIC REQUIREMENTS.

01. Log Dumps, Landings, Log Handling Equipment, Loading, and Unloading. (3-20-20)

a. Only authorized persons shall operate log handling equipment. Machine operators shall be capable and experienced personnel. No persons other than the operator may be in the operator's compartment while machinery is operating, except for purposes of operating instructions. Unnecessary talking to the operator of log handling equipment while the machine is in operation is prohibited. (3-20-20)

b. Machine operators shall make necessary inspection of machines each day before starting work. All repairs or adjustments shall be made before any strain or load is placed upon the equipment. (3-20-20)

c. Substantial barriers or bulkheads protecting the operator shall be provided for all log handling machines where the design, location, or use of such machines exposes the operator to material or loads being handled. Such barriers or bulkheads shall be of adequate area and capable of withstanding impact of materials handled. (3-20-20)

d. A safe and adequate means of access to, and egress from, the operator's station shall be provided. Necessary ladders, steps, step plates, foot plates, running boards, walkways, grab irons, handrails, etc., shall be provided and maintained. (3-20-20)

e. All moving parts shall be guarded in an approved manner to afford complete protection to the operator and other workers. (3-20-20)

f. Throttles and all power controls shall be maintained in good operating condition. (3-20-20)

g. Landings shall be prepared and arranged to provide maximum safety for all employees and shall provide ample space for the safe movement of equipment and storage and handling of logs. (3-20-20)

h. Adequate means shall be used to prevent logs from rolling into the road or against trucks. Workers shall be sure that logs are securely landed before approaching them. While unhooking chokers, workers shall choose the safest approach. This is usually from the upper side of the log. (3-20-20)

i. Logs shall not be landed at loading areas until all workers, tractors, trucks, or equipment are in the clear. All persons shall stay in the clear of running lines, moving rigging, and loads until rigging or loads have stopped. (3-20-20)

j. The loading machine shall be set so that the operator shall have an unobstructed view of the loading area, or a signalman shall be properly placed and his signal shall be followed. Signaling the operator shall be done by standard hand signals, whistles, or other positive means of communication. (3-20-20)

k. Machines, sleds, or bases shall be of sufficient strength to safely withstand moving, and machines shall be securely anchored to their bases. (3-20-20)

l. Mufflers shall be installed on all internal combustion engines of log handling equipment and located or guarded in such a manner as to prevent accidental contact with the muffler or exhaust pipes and afford protection from fumes. (3-20-20)

m. Brakes shall be installed on all machine drums and maintained in effective working condition. (3-20-20)

n. Brake levers shall be provided with a ratchet or other equally effective means for securely holding the drum. (3-20-20)

o. Brake bands shall have a safety factor of five (5) times the stress to be imposed and they shall be of a design which will render them impervious to exposure. Operators shall test brakes before lifting any load at the start of each shift. (3-20-20)

p. In no case shall stresses in excess of the manufacturer's recommendation be permitted. Equipment not carrying a manufacturer's recommendation shall not exceed stresses of more than one half of the yield strength of the material used. Conversion of cranes, shovels, etc., into yarders shall be in conformity with these rules. Necessary guylines or outriggers shall be provided and used to effectively prevent mast, A-frames, etc., from tipping or overturning. (3-20-20)

q. The manufacturer's recommendations for line sizes, if in compliance with these rules, shall be followed and such line sizes shall not exceed the rated capacity of the machine using it. (3-20-20)

r. Fork lifts or arms, tongs, clams or grapples shall be lowered to their lowest position and all equipment brakes set before the operator leaves the machine. (3-20-20)

s. Log unloaders shall not be moved about the premises for distances greater than absolutely necessary with the lift extended or with the loads higher than necessary for clear vision. (3-20-20)

t. All log handling machines which have lift arms that create a shear point with the driver's cab or position shall be provided sheer guards that will eliminate the operator's exposure to such hazard. Grapple arms or other positive means of keeping logs on the forks shall be required on fork lift-type loading machines. (3-20-20)

u. All workers shall be in the clear and in view of the machine operator before a lift is made. (3-20-20)

v. All mobile log handling machines shall be equipped with rearview mirrors, a horn or other audible warning device, and lights front and rear so as to illuminate the entire length of the load being lifted or carried. An automatic warning device that will activate when the vehicle is moved is preferable in areas where other workers are employed. (3-20-20)

w. Logs or loads shall not be swung over occupied equipment or workers and no person shall ride the load or rigging. (3-20-20)

x. While logs are being loaded, no person shall remain on the chain deck or behind the truck cab protector where they could be pinned between the end of a log and cab, tank, or cab protector. Cab protectors shall be cleaned of all loose gear before trucks are moved from the landing. (3-20-20)

y. An unimpaired clearance of not less than three (3) feet shall be maintained from swinging or moving parts of machines, where such swinging or moving parts create a hazard to personnel. If this clearance cannot be maintained, suitable barricades or safeguards shall be installed to isolate the hazardous area. (3-20-20)

z. A-frames, towers, masts, etc., shall be designed and constructed to provide adequate structural strength and height for positive control of materials or loads lifted. When in use, they shall be guyed or braced to provide stability and prevent tipping. Their bases shall be secured against possible displacement. (3-20-20)

aa. All log handling equipment shall be equipped with brakes capable of holding and controlling the vehicle with capacity load. (3-20-20)

bb. A limit stop which will prevent the lift arms from over-traveling shall be installed on all electric powered log unloaders. (3-20-20)

cc. Gas powered vehicles shall not be refueled while motor is running nor in the vicinity of smoking or open flames. (3-20-20)

dd. All log handling equipment shall be equipped with approved fire extinguisher of at least five (5) B.C. rating easily accessible to operator. (3-20-20)

ee. Methods of unloading logs shall be properly arranged and used in a manner to provide protection to all employees. (3-20-20)

ff. After cars or trucks are spotted at such dump or landing, no person will be permitted to pass between a brow log and a truck or rail car. (3-20-20)

gg. Where there is danger of tongs or hooks pulling out of the logs, straps shall be used. (3-20-20)

hh. All equipment should be so positioned, equipped, or protected so that no part shall be capable of coming within ten (10) feet of any power line. (3-20-20)

ii. Bunk logs shall extend not less than twelve (12) inches beyond the bunks, with the exception of non-oscillating bunks. (3-20-20)

jj. The method of loading shall be such that the logs in any tier or layer unsecured by stakes or cheese blocks shall have their centers inside of the centers of the outer logs of the next lower tier or layer so that the load is stable without the aid of binders. Logs shall be well saddled without crowding so that there will be no excessive strain on the binders, bunk chains, or stakes. No more than one half (1/2) of any log shall extend above the stakes unless properly and securely saddled. (3-20-20)

kk. Binders shall be so placed that they will not be fouled by the unloading machine and that they may be released from the side on which the unloader operates. Proper protection shall be provided for workers while removing wrappers. (3-20-20)

ll. Truck drivers shall be in the clear and in view of the log unloader operator before forks are moved into the load or against it, before a lift is made. All persons are prohibited from standing under, or near, the ends of logs being lifted or moved. (3-20-20)

mm. Loads or logs shall not be moved or shifted while binders are being applied or adjusted.
NOTE: For logs in transit see Section 501 of these rules "Log Truck Transportation." (3-20-20)

nn. All log dumps, trailer loading areas, and landings shall be kept reasonably free from bark and other debris. (3-20-20)

oo. Logs in storage decks shall be so arranged as to prevent logs from rolling off the face of the deck. (3-20-20)

pp. All log load wrappers shall be arranged so that they must be released in view of the unloader operator or signal person. When binders are released by remote control devices and when the person releasing the binders is in a safe location, and when in view of the unloading operators, or signal person, the binders may be released from either side. After the unloading machine is in position to hold the load, the binders shall be removed and the person removing them shall be in a safe location in view of the operator. The operator will be given a signal by the person releasing the binders before the machine or load is moved. (3-20-20)

02. Trailer Loading Hoist/Sawmill Log Dump. (3-20-20)

a. The hoist shall be designed and constructed in accordance with the National Electrical Code, so as to provide safe loading or unloading of the trailer. (3-20-20)

b. The hoist shall be equipped with a limiting device to maintain safe take-up limits of line on the hoisting drum. (3-20-20)

c. Regular service and inspection of the hoist and hoisting equipment shall be made to assure reliable

serviceability of the facility. (3-20-20)

552. -- 600. (RESERVED)

SUBCHAPTER M – HELICOPTER LOGGING
(Rules 601 -- 650)

601. GENERAL REQUIREMENTS.
Safety requirements are as follows: (3-20-20)

01. Briefings. Prior to each day's operation, a briefing shall be conducted. This briefing shall set forth the daily plan of operation for the pilot and ground personnel. (3-20-20)

02. Personal Protective Equipment. Personal protective equipment for employees receiving the load shall, as a minimum, consist of complete eye protection and hard hats secured by chinstraps. (3-20-20)

03. Loose-Fitting Clothing. Loose-fitting clothing likely to flap in the downwash, and perhaps be snagged on the hoist line, shall not be worn. (3-20-20)

04. Reduced Visibility. When visibility is reduced by dust or other conditions, ground personnel shall keep clear of main and stabilizing rotors. (3-20-20)

05. Unauthorized Personnel. No unauthorized person shall be allowed to approach within fifty (50) feet of the helicopter when the rotor blades are turning. (3-20-20)

06. Approaching or Leaving Helicopter. All employees approaching or leaving a helicopter with blades rotating shall remain in full view of the pilot and remain in a crouched position. (3-20-20)

07 Areas to Avoid in Helicopter. Employees shall avoid the area from the cockpit or cabin rearward unless authorized to be there by the helicopter operator. (3-20-20)

08. Approach and Departure Zones. Helicopter approach and departure zones shall be designated and no equipment or personnel will occupy these areas during helicopter arrival or departure. (3-20-20)

09. External Loads. Helicopters with an external load shall not pass over areas where fallers are working. (3-20-20)

10. Open Fires. Open fires shall not be permitted in an area that could result in such fires being spread by rotor downwash. (3-20-20)

11. Compliance with FAA Regulations. Helicopter operations shall comply with any applicable regulation of the Federal Aviation Administration. (3-20-20)

12. Protective Precautions. Every practical precaution shall be taken to provide for the protection of employees from flying objects in the rotor downwash. (3-20-20)

602. SPECIFIC REQUIREMENTS.

01. Signal Systems. (3-20-20)

a. Signal systems between air crew and ground personnel shall be understood and checked before hoisting the load. This applies to either radio or hand signal systems. (3-20-20)

b. There shall be constant reliable communication between the pilot and a designated signalman during the period of loading and unloading. (3-20-20)

c. The helicopter shall be equipped with a siren to warn workers of hazardous situations. (3-20-20)

02. Loading Logs. (3-20-20)

a. It shall be the responsibility of the firm, supervisor, or person who is in charge of the actual loading operation to comply with the provisions of these rules applicable to log loading. (3-20-20)

b. The helicopter operator shall be responsible for the size, weight and manner in which loads are attached to the helicopter. If, for any reason, the helicopter operator believes the lift cannot be made safely, the lift shall not be made. (3-20-20)

c. When employees are required to perform work under hovering aircraft, a safe means of access shall be provided for employees to reach the hoist line hook and engage or disengage cargo slings. (3-20-20)

d. Employees shall not work under hovering aircraft except while hooking or unhooking loads. (3-20-20)

e. The weight of an external load shall not exceed the manufacturer's rating. (3-20-20)

f. The hook-up crew shall not work on slopes below felled and bucked timber when an unsafe situation exists. Culls left, which have a potential of rolling, should be moved to a safe position. (3-20-20)

03. Loading and Landing Areas. (3-20-20)

a. The minimum dimensions of a drop zone shall be determined by the length of the logs being hauled. All zones shall be at least one and one-half (1 1/2) times as long, and as wide as the length of the average log being harvested. (3-20-20)

b. Landing or loading machinery shall be a reasonable distance away from where logs are to be landed. (3-20-20)

c. Landing crew shall be in the clear before logs are landed. (3-20-20)

d. The approach to the landing shall be clear and long enough to prevent tree tops from being pulled onto the landing. (3-20-20)

e. Separate areas shall be designated for landing logs and fueling helicopters. (3-20-20)

f. Sufficient ground personnel shall be provided for safe helicopter loading and unloading operations. (3-20-20)

g. A clear area shall be maintained in all helicopter loading and unloading areas. (3-20-20)

h. Emergency landing areas for injured workers shall be located within a reasonable distance from all working areas. (3-20-20)

04. Hooks and Chokers. (3-20-20)

a. The electrical activating device of all electrically operated cargo hooks shall be designed and installed to prevent inadvertent operation. In addition, these cargo hooks shall be equipped with an emergency mechanical control for releasing the load. (3-20-20)

b. Logs will be laid on the ground and the helicopter completely free of the chokers before workers approach the logs. (3-20-20)

c. One (1) end of all the logs in the turn shall be touching the ground and at an angle no greater than forty-five degrees (45°) before the chokers are released. (3-20-20)

d. If the load must be lightened, the hook shall be placed on the ground on the uphill side of the turn before the hooker approaches to release the excess logs. (3-20-20)

603. -- 650. (RESERVED)

SUBCHAPTER N – RECOMMENDED SAFETY PROGRAM
(Rules 651 - 700)

651. INTRODUCTION.

01. Scope. (3-20-20)

a. These rules are part of the accident prevention program of the state of Idaho. This program is dedicated to the safety and well-being of all workers in Idaho's logging industry. It has been established according to the processes prescribed by law. (3-20-20)

b. These rules contain the primary safety rules for the logging industry. However, other Idaho Safety Standards promulgated and adopted by the Industrial Commission shall be applicable to this industry where not inconsistent with the provisions herein, or where any particular activity which is being carried on is not specifically covered or regulated herein. (3-20-20)

02. Enforcement. The enforcement of these rules is the responsibility of the Division of Building Safety. These rules will not serve their purpose if their requirements are considered anything but a minimum for safe operation. So much variation exists in the logging industry that each operation should be judged, not by its compliance to the letter of this Standard, but according to a higher standard -- that of absolute safety under all conditions. (3-20-20)

03. Accident Prevention. Accident prevention is often a problem of organization and education. It does not succeed solely on detailed safety codes but consists largely of the desire to institute a common sense safety program and determination to carry out the program effectively. Effective accident prevention embodies the following five (5) principles: management leadership; employee cooperation; effective organization; thorough training; and good supervision. (3-20-20)

652. FIRE AND SAFETY POLICY.

01. Elements. The basic elements or management responsibility for fire and safety policy are enumerated in this section. (3-20-20)

02. Management Leadership. The establishment of the safety policy should be made clear to all levels of supervision, purchasing, engineering, industrial and construction; and communicated to all employees that top management has approved the operation's safety program. (3-20-20)

03. Planning. The program should be based on the following: accounting record of safety cost, accident recording system, accident investigation recommendations, operation inspection recommended corrections, employee suggestions, and job analysis to determine the work hazards. The hazard appraisal can be summarized as follows: mechanical and physical hazards; environmental hazards; and work procedure and practices. (3-20-20)

04. Management Discharge of Duty. (3-20-20)

a. If management is to discharge its duty in proper directing of the fire and safety program, it must organized a definite planned program of continuous supervision and leadership by all facets of the management organization. The very fact that safety must be woven into all operations and activities should not require extra managerial time beyond the ordinary to operate a business successfully, i.e., if the entire management team will assume their safety responsibility. (3-20-20)

b. The first task of management is to determine the operational hazards. Once these are ascertained and appraised, suitable corrective action can be initiated. If the working unit is operating, the following specific activities should be carried out to find the hazards. These are: job inspection; job analysis; accident investigation

(near accident, non-disabling injuries) to determine necessary remedial action to prevent reoccurrence of the accident. (3-20-20)

05. Hazard Appraisal. The partial list of terms covered by appraisals are summarized briefly as follows: mechanical and physical hazards; adequacy of mechanical guarding of machines and equipment; preventing the use of inferior manufactured and unsafe supplies, equipment, chain, cables, sheaves, tires, power saws, tractor canopy guards, approved head protection, fire extinguishers, solvents, mill saws, etc.; and physical exhaustion such as may be caused by excessive work hours by truck drivers and mill maintenance employees. (3-20-20)

06. Environmental Hazards Inherent to the Operation. (3-20-20)

a. Personal protection devices (approved head protection, ear plugs, knee pads, proper eye protection, respirators, etc.) (3-20-20)

b. Storage and use of flammable liquids and gases (gasoline, diesel, acetone, acetylene, acids, etc.) (3-20-20)

c. All employees should be familiar with proper work signals (falling, blasting, high lead signals, loading, mill signals, operation fire signal, etc.) (3-20-20)

d. Noise and fatigue hazards that are inherent to the industry (planers, cutoff saws, jack hammers, etc.). (3-20-20)

07. Work Procedures and Practices. (3-20-20)

a. Hazards directly related to work practices should be carefully observed and evaluated. (3-20-20)

b. Work practices that should be investigated include, but are not necessarily limited to: use, care and maintenance of hand and portable power tools; degree of supervision given the worker; the extent of job training provided; the safety indoctrination and training of new or transferred employees; the proper use of fire extinguishers; the use of personal protective devices (approved head protection, shoes, etc.); and the repair and maintenance of equipment with respect to machines, mechanical handling equipment, log loaders, yarding equipment, tractors, fork lifts, overhead cranes, headrigs, etc.; (3-20-20)

08. Reporting of Injuries. (3-20-20)

a. The employer shall instruct all employees to report all job injuries to the supervisor at the time injuries occur. The employer shall check specifications for new machines, processes and equipment for compliance with existing safety standards, laws and safety requirements, and shall have such equipment fully inspected before it is placed in use. (3-20-20)

b. The employer is responsible for reporting all industrial lost time injuries to the Industrial Commission within forty-eight (48) hours. (3-20-20)

c. The employer is responsible for reporting all in-patient hospitalization, amputation, or the loss of an eye for any employee to the Occupational Safety and Health Administration (OSHA) and the Division of Building Safety Logging Safety Program within twenty-four (24) hours. (3-20-20)

09. Fatalities. All work fatalities should be immediately reported to the County Sheriff or Coroner, the Division of Building Safety Logging Safety Program, and OSHA in accordance with the Code of Federal Regulations, 29 CFR 1904.39. (3-20-20)

10. Management of Personnel. (3-20-20)

a. The recruiting and placing of a new worker on the job is a major responsibility of the management organization. Every effort should be made to match the qualifications of the worker with the demands of the job. (3-20-20)

b. The furnishing of first aid services, treatment of injuries, and inspection of working conditions is the employer's responsibility. (3-20-20)

11. Assignment of Responsibilities. (3-20-20)

a. Supervisors, purchasing agents, engineering personnel, safety directors, personnel directors, and employees have responsibilities to ensure conformance with the organization's fire and safety objectives in every operation. (3-20-20)

b. Management must accept the normal obligation for preventing accidents. In many operations it is a practice to delegate the actual administration of the safety program to a person who can devote full-time to it. In smaller operations, safety administration may be a collateral duty carried on in conjunction with some other duties. The safety director should function in a staff capacity. Because the safety director operates in a consultant capacity, ultimate responsibility for accident prevention rests with the workers' supervisor, the foreman and line production organization. There is no doubt that the foreman is the key person in every safety program. Safety is not something separate and apart from production. If the job is done right, it is done safely. (3-20-20)

c. Safety is an integral and important part of production, just as is quality and quantity, or meeting production schedules. (3-20-20)

d. All these duties are foreman or project superintendent duties, and the most important part of the line production organization. This obligation cannot be delegated. As the person in charge of production, the foreman is responsible for the safety of his people. This fact must be made clear and should be included in the statement of policy. (3-20-20)

12. Safety Director (Part-Time or Full-Time): (3-20-20)

a. Makes periodic inspections of the operations and suggests corrective measures to eliminate hazards. (3-20-20)

b. Should assist in investigation of all types of accidents to determine the cause, so as to prevent like accidents in the future. (3-20-20)

c. Aids foremen in developing safe work procedures and practices and assists foremen in training their workers. (3-20-20)

d. Keeps accident records and makes periodic reports to the proper official on the progress being made. Reports and records; report of accidents; accident investigation report; performance report (injury frequency and severity); accident cost report; safety committee reports; report on degree of corrective action taken on different recommendations. (3-20-20)

e. Conducts or initiates safety training courses including first aid and fire fighting, where appropriate, and any other course inherent to the job (truck driver courses, power saw courses, welding, grinder usage, fork lift truck operator, etc.). (3-20-20)

f. Establishes safety committee. (3-20-20)

g. Ensures that recommendations are promptly and properly implemented. (3-20-20)

h. Checks specifications for new machines, processes and equipment for compliance with existing safety standards, laws and safety requirements, and shall have such equipment fully inspected before it is placed in use. (3-20-20)

i. He shall assist the safety committee in developing agendas for their meetings. (3-20-20)

13. Foreman Responsibilities. It is widely accepted that the foreman is the key man in attaining

proper work habits in any operation. It is the obligation of management to give the most careful attention to the selection, education, and training of foremen and train them in the proper way to train employees in correct and safe work methods to attain the best production in the safest way. (3-20-20)

14. **First Aid Training**. It shall be the responsibility of management to arrange to have all employees take a full course in first aid training. It is required that supervisory personnel shall take an approved first aid course, and have a current first aid card. (3-20-20)

15. **Injury Record and Reporting System**. (3-20-20)

a. If an employer had ten (10) or fewer employees at all times during the last calendar year, it does not need to keep OSHA injury and illness records unless OSHA or the Bureau of Labor Statistics (BLS) informs the employer in writing that it must keep records under OSHA regulations. However, as required by such regulations, all employers covered by the OSH Act must report to OSHA and the Division of Building Safety Logging Safety Program any workplace incident that results in a fatality or the hospitalization, the amputation of a limb, or the loss of an eye for any employee. (3-20-20)

b. For those employers subject to the injury and illness recording requirements under OSHA, the employer shall establish in its main Idaho office an injury record and reporting system which is consistent with reporting, record, and statistical requirements of the Occupational Safety and Health Administration (OSHA). (3-20-20)

c. Injury frequency rates shall be calculated annually commencing the first of January each year. These rates shall be kept on file in the office of the employer for at least four (4) years after the date of entry thereof, and shall be made available to the Division of Building Safety, upon request. (3-20-20)

d. The injury frequency rate shall be the number of lost time injuries to all employees per one million (1,000,000) man hours of exposure. The frequency rate is computed by multiplying the number of lost time injuries by one million (1,000,000) (the standard of measurement) and dividing the product by the total number of man hours worked during the period. The formula is expressed as follows: Frequency equals the number of lost time injuries times one million (1,000,000) total man hours of exposure. (3-20-20)

e. A lost time injury shall be the term applied to any injury, arising out of, and in the course of employment which makes it impossible for the injured person to return to an established regular job at the beginning of the next regular shift following the shift during which the injury occurred, or some future shift. (3-20-20)

f. Man hours of exposure shall be the total number of man hours actually worked by all personnel in the industrial unit during the period for which the rate is being computed. (3-20-20)

16. **Training and Education**. (3-20-20)

a. Training and education includes: (3-20-20)

i. Establishment of effective job training methods and safety education. (3-20-20)

ii. First aid courses, proper work signals and job hazard warnings. (3-20-20)

iii. Pamphlets, bulletin boards, safety meetings, posters, etc. (3-20-20)

b. The employer shall establish an adequate job training and safety education program. The relationship of safety to job quality and modern quantity production methods should be clearly understood. Good work production is governed by careful planning and accurate control of all phases of the operation. Accidents are the result of inadequate planning of faulty operation. (3-20-20)

c. Safety must be made an essential and integral part of every operation and integrated into the activity if the most successful quantity production is to be attained. The soundness of this statement has been proven many times by comparing the accident cost with the day by day curve of production. (3-20-20)

d. It is the responsibility of management to train employees in all phases of the work they are assigned. The worker training should begin at the time of employment with a careful presentation of the general safety information the employee must have to work on and in logging and lumbering or wood working operations. When the worker is placed on the job, the worker must be given detailed training on proper work methods for accomplishment of the job. The correct way is the safe way. Telling is not training. (3-20-20)

e. People learn to do things primarily through action. The employee's job training should be given using the five (5) step job training method: (3-20-20)

i. Tell the employee; (3-20-20)

ii. Show the employee; (3-20-20)

iii. Have the employee do it; (3-20-20)

iv. Correct until the employee does it right; and (3-20-20)

v. Supervise to see that the employee keeps doing it right. (3-20-20)

f. Education and promotion are a supplemental means of reducing injuries. This device employs any number of methods to accomplish results. A good program may use but will not overemphasize emotional appeal to the workers using such devices as scholarships, stamps, posters, safety meetings, contests, and awards. It is management's responsibility to integrate education and training program and balance its effectiveness to employee training. Unsafe acts or unsafe work practices are the result of failure to train workers in safe work procedures. In establishing or operating a safe and quality work program, an appraisal of unsafe work procedures and poor quality of work is called for, and job training methods initiated to correct these practices. (3-20-20)

17. Employer, Employee, and Labor Representative Cooperation. (3-20-20)

a. The workers have a responsibility to obey the units safety rules, smoking rules, report unsafe conditions, to serve on the different safety committees, perform their work in a safe way, and to help fellow workers by showing them how to do their job safely. (3-20-20)

b. Many safety programs fail because the worker has not been made to feel that it is their program; or that they can contribute as well as benefit from the program. It often fails because it lacks employee participation and interest. The fact that employees are given the opportunity to participate and to contribute to the program not only opens a reservoir of valuable information on practical experience in accident prevention, it also gives the employee a feeling of being a part of the organization. (3-20-20)

c. The committee on safety should be made up of personnel selected from management and workers. Management members are supervisors and worker members may be selected by the union or by the employees. (3-20-20)

d. The labor unions should help develop a safe behavior among the workers. (3-20-20)

18. Maintenance of Safe Working Conditions. (3-20-20)

a. The employer shall provide a safe and healthy work area in which to work, including purchasing of safe equipment and tools and provide proper maintenance of such equipment. (3-20-20)

b. Since a safe and healthy place to work is the very foundation of the safety program, the mechanical, physical, and environmental conditions should be given first consideration. (3-20-20)

c. For almost every accident there are typically two (2) contributing causes - an unsafe condition and an unsafe act. A safe and healthy place to work will diminish or eliminate the first cause, the unsafe condition; but unless the unsafe act is corrected, accidents will continue to occur. Unsafe acts may stem from a number of factors,

such as improper selection of the worker for the job, lack of job training, physical or mental limitations or inadequate supervision. When a safety program is first established or a new project with a new crew is started, this may necessitate a thorough periodic survey of the entire operation to determine hazards. (3-20-20)

19. Remedial Measures of Corrective Action. (3-20-20)

a. The employees shall support and correct the findings of job analysis, inspections, accident investigations, employee suggestions, etc. (3-20-20)

b. The assumption of responsibility for fire and accident prevention by management carries with it the continuing responsibility to assess the progress being made on the program, and where progress is unsatisfactory to take necessary steps to bring about improvement. Inspection alone is primarily a means of finding and eliminating fire and physical hazards, particularly in connection with enforcement. All educational and promotional activities should be integrated with inspection activities, and should be based on the specific needs of the establishment or operation. Inspection and educational and promotional programs are sometimes looked upon as entirely unrelated activities rather than a single integrated program. (3-20-20)

c. None of the foregoing activities are of value unless followed by effective corrective action. The responsible executive within top management must establish specific procedures to effect proper and complete corrective action in each area for problems that occur. In well-managed organizations the areas of responsibility are clearly defined. The activities are well coordinated, supervision is adequate and proactive, employees' safety behavior is excellent, and policies are well-defined to permit smooth organization. This is not difficult; the corrective measures are applied as part of the day to day operating procedure. (3-20-20)

20. Safety Order By the Administrator. In accordance with the provisions of section 67-2601A (3), Idaho Code, the administrator may issue a safety order requiring an owner, operator or other party responsible for ensuring safe logging operations to immediately stop work or close any work site, or portion thereof where an inspection has revealed evidence of a condition that poses an immediate threat of bodily harm or loss of life to any person. The process governing the issuance of a safety order is contained herein this section. (3-20-20)

a. Upon receiving information evidencing an unsafe condition or unsafe practices at any logging workplace or place of employment, the administrator shall inspect or cause to be inspected such place of employment unless such information was obtained by previous inspection of the Division. If upon such inspection the administrator determines that an unsafe condition or unsafe practice exists which may pose an immediate threat of bodily harm or loss of life, the administrator may issue a safety order requiring the employer to immediately stop work or close any work site, or portion thereof. Any safety order issued by the administrator shall specifically identify the unsafe condition or practice, as well as the safety risks associated therewith. Written notice of such order shall immediately be provided by the administrator to the owner or operator of the business, or any other appropriate party responsible for abating the unsafe condition or practice. (3-20-20)

b. Upon receiving such notice from the administrator, such owner, operator or responsible party shall immediately comply with such, and may notify the administrator in writing of their objection to the notice and request to contest such at a hearing. The owner, operator or responsible party shall provide the administrator with information, documentation, or other evidence supporting their objection. (3-20-20)

c. Upon receipt and review of such information from the owner, operator, or responsible party, the administrator may reconsider the matter and issue appropriate findings to the owner, operator, or party responsible for abating the unsafe condition or practice, including rescission of the order. (3-20-20)

d. If after review it is the determination of the administrator to keep the safety order in place, he shall so notify the owner, operator or responsible party and designate a time and place for hearing, and may assign the matter for hearing by a hearing officer. The hearing shall be afforded at such time not to exceed five (5) business days from the date the administrator received the notice of objection unless additional time is requested by the owner, operator, or responsible party. The hearing proceedings shall be governed by the provisions of Title 67, Chapter 52, Idaho Code. The hearing officer shall issue an order in accordance with Section 67-5243, Idaho Code. The hearing may be held at such location or by such means as the administrator determines most convenient for the parties. (3-20-20)

e. The safety order shall remain in effect, and shall not be rescinded until the administrator has determined that the safety threat has been corrected or removed from the workplace. Upon verification by the administrator that the safety threat has been corrected or otherwise removed from the worksite, the administrator shall immediately notify the owner, operator or responsible party of the rescission of the safety order. Any party aggrieved by the final order of the administrator shall be entitled to judicial review thereof in accordance with the provisions of Title 67, Chapter 52, Idaho Code. (3-20-20)

f. Any person who knowingly fails or refuses to comply with the provisions of a safety order issued by the administrator shall be guilty of a misdemeanor, and the administrator may seek criminal prosecution of any such violations. (3-20-20)

653. -- 700. (RESERVED)

SUBCHAPTER O – CABLE-ASSISTED LOGGING SYSTEMS (Rules 701 - 999)

701. MACHINE SAFETY REQUIREMENTS.

01. Harvesting Machines. Harvesting machines for cable-assisted logging operations shall comply with each of the following: (3-20-20)

a. Meet the protective structure requirements set forth in IDAPA 07.08.10.010; (3-20-20)

b. Be equipped with a certified roll-over protective structure (ROPS); and (3-20-20)

c. Be equipped with at least a four (4)-point restraint system approved by the machine's manufacturer or a qualified person. (3-20-20)

02. System Approval. The cable-assisted logging system shall be designed and constructed for cable-assisted logging applications by the original equipment manufacturer, or approved for cable-assisted logging applications in writing by the original equipment manufacturer or a registered professional engineer. (3-20-20)

03. Operation of System. The cable-assisted logging system shall be operated, inspected and maintained in accordance with the manufacturer's recommendations, specifications and limitations, or if no manufacturer's recommendations exist, then by the recommendations of a registered professional engineer. Cable-assisted logging systems not in safe operating condition shall be removed from service until repaired by a qualified person. (3-20-20)

702. TETHERED LINE SAFETY REQUIREMENTS.

01. Inspection of Tethered Lines. Tether lines shall be new wire rope and have a rated breaking load according to the cable-assisted logging system manufacturer's recommendations and specifications. At a minimum, a competent person shall inspect the entire length of each tether line and drum connection prior to the startup of each cable-assisted logging operation, and thereafter on a monthly basis. A competent person shall also inspect the first fifty (50) feet of each tether line daily prior to use. These inspections shall be documented in writing. Tether lines must not be spliced and shall be replaced if there is evidence of chafing, sawing, crushing, kinking, crystallization, bird-caging, significant corrosion, heat damage, other damage that has weakened the tether line, or if the tether line reaches two thousand (2,000) hours of use. (3-20-20)

02. Line Tension. The tether line tension and machine travel shall be synchronized to ensure tether line tension is continuously provided and does not exceed thirty-three percent (33%) of the rope's rated breaking load. The operator shall have an immediate and self-reliant or automated method to identify tether line tension, winch rotation and speed, amount of line on and off the drum, and anchor movement. (3-20-20)

03. Tether Line Components. All tether line assembly components shall be rated with a greater safe working load than the wire rope. Tether line attachment points and hitches shall be engineered and certified to

maintain a safety factor equal to or greater than the recommendations and specifications of the cable-assisted logging system manufacturer. Inspections of tether line assembly components (except drum connection as specified in Subsection 011.01 of these rules), hitches, winches, machines, and anchors shall be performed daily by a competent person prior to use. (3-20-20)

703. OPERATION AND SAFETY REQUIREMENTS.

01. General. Cable-assisted logging systems shall be operated, inspected and maintained in accordance with the manufacturer's recommendations and specifications. Inspections shall be documented in writing. (3-20-20)

02. Planning. All cable-assisted logging operations shall be planned by the operator and a competent person who has the knowledge, training or experience to identify existing and predictable hazards in the work site surroundings or working conditions, which could be hazardous to employees, and has been authorized by the employer or employer representative to eliminate the hazard or take corrective action therefrom. Items to consider during site-specific planning must include, but are not limited to, the following: (3-20-20)

a. Experience of the operator; (3-20-20)

b. Limitations of the equipment; (3-20-20)

c. Soil and terrain conditions; (3-20-20)

d. Environmental conditions; (3-20-20)

e. Poor visibility and lighting conditions; (3-20-20)

f. Weather conditions; (3-20-20)

g. Direction of travel; (3-20-20)

h. Requirements for turning the machine on slopes; (3-20-20)

i. Load sizes; (3-20-20)

j. Method and adequacy of anchorage; and (3-20-20)

k. Any other condition that may adversely affect operations. (3-20-20)

03. Operator Qualifications. Cable-assisted logging operators shall have documented training or adequate experience to safely operate the equipment on slopes. (3-20-20)

04. Operating Plans. A cable-assisted logging system operator shall have a written operating plan on site detailing the following: (3-20-20)

a. Tether line replacement criteria; (3-20-20)

b. Cable size, type and breaking strength, and method of assurance that tensions do not exceed one-third (1/3) of breaking strength to maintain a 3:1 safety factor or greater; (3-20-20)

c. Inspection and maintenance to be performed on tether lines, end connectors, machines and winches; (3-20-20)

d. How the operator will use tension limiting controls to maintain desired tension; (3-20-20)

e. How the winch cable tension and machine travel are synchronized; (3-20-20)

f. How the operator will monitor machine slope, anchor movement, winch tension, amount of line on and off drum, and winch function; (3-20-20)

g. How the tether line attachment points to the harvesting machine are engineered to withstand potential loads; (3-20-20)

h. All harvesting machine modifications that allow it to operate on steep slopes, including operator harness or restraint system; (3-20-20)

i. How pre-operations planning and daily assessments will identify hazards for soil and terrain conditions; (3-20-20)

j. How the operator will determine if soil and terrain conditions are unsafe during operations; (3-20-20)

k. How operators will report new hazards identified during operations; (3-20-20)

l. Operating guidance given to the operator; and (3-20-20)

m. How emergencies are handled by the system, including line failure, machine failure, winch failure, anchor failure, winch machine movement or anchor movement, and whether there is an emergency stop for the operator or at the anchor. (3-20-20)

05. Unsafe Conditions. The employer shall establish and use procedures for operators to report unsafe conditions to a supervisor or qualified person. Such conditions must be corrected prior to resuming cable-assisted logging operations. Procedures shall also include steps to take in the event of equipment breakdown and for upset conditions. (3-20-20)

06. Warning Signs. Effective signage shall be affixed to all remotely operated equipment warning employees and others that lines and machines may start, stop, or move without warning. All employees working in close proximity of cable-assisted logging operations must receive training that enables them to recognize the potential hazards involved and to maintain safe distances. (3-20-20)

704. -- 999. (RESERVED)

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