

Table of Contents

07.08.09 – Idaho Minimum Safety Standards and Practices for Logging – Rigging, Lines, Blocks, and Shackles

000. Legal Authority.	2
001. Title And Scope.	2
002. Written Interpretations.	2
003. Administrative Appeals.	2
004. Incorporation By Reference.	2
005. Office – Office Hours – Mailing Address And Street Address.	2
006. Public Records Act Compliance.	2
007. -- 008. (Reserved)	2
009. Definitions.	2
010. Rigging.	2
011. Guylines.	3
012. Lines, Shackles And Blocks.	6
013. -- 999. (Reserved)	8

**IDAPA 07
TITLE 08
CHAPTER 09**

**07.08.09 – IDAHO MINIMUM SAFETY STANDARDS AND PRACTICES FOR LOGGING –
RIGGING, LINES, BLOCKS, AND SHACKLES**

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. (3-29-17)

001. TITLE AND SCOPE.

These rules shall be cited as IDAPA 07.08.09, "Idaho Minimum Safety Standards and Practices for Logging – Rigging, Lines, Blocks, and Shackles," and shall be applicable to the logging industry in the state of Idaho. (7-1-97)

002. WRITTEN INTERPRETATIONS.

There are no written statements which pertain to the interpretation of these rules. (7-1-97)

003. ADMINISTRATIVE APPEALS.

The procedure for appeals in logging safety matters is prescribed by IDAPA 07.08.16, "Idaho Minimum Safety Standards and Practices for Logging – Recommended Safety Program," and Title 67, Chapter 52, Idaho Code. (3-29-17)

004. INCORPORATION BY REFERENCE.

There are no documents that have been incorporated by reference into these rules. (3-29-17)

005. OFFICE – OFFICE HOURS – MAILING ADDRESS AND STREET ADDRESS.

The principal place of business of the Division of Building Safety, Logging Safety Program, is at the Division office located at 1090 E. Watertower Street, Suite 150, Meridian, Idaho 83642. The Logging Safety Program may also be contacted at 1250 Ironwood Drive, Suite 220, Coeur d'Alene, Idaho 83814, and at 2055 Garrett Way, Suite 4, Pocatello, Idaho 83201. All locations are open from 8:00 a.m. to 5:00 p.m., except Saturday, Sunday and legal holidays. The telephone number of the office is (208) 334-3950. The facsimile number of the office is 1-877-810-2840. The Department website is <http://dbs.idaho.gov>. (3-29-17)

006. PUBLIC RECORDS ACT COMPLIANCE.

The rules contained herein have been promulgated according to the provisions of Title 67, Chapter 52, Idaho Code, and are public records. (3-29-17)

007. -- 008. (RESERVED)

009. DEFINITIONS.

For definitions refer to IDAPA 07.08.01, "Idaho Minimum Safety Standards and Practices for Logging -- General Provisions," Section 007, and IDAPA 07.08.15, "Idaho Minimum Safety Standards and Practices for Logging – Commonly Used Logging Terms." (3-29-17)

010. 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. (7-1-97)

02. Equipment Classification. (7-1-97)

a. Equipment shall be classed according to the manufacturer's rating. (3-29-17)

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. (3-29-17)

- 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. (7-1-97)
- 04. Allowable Loading or Stress.** (7-1-97)
- 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. (3-29-17)
- b.** This shall not be construed as applying to chokers. (7-1-97)
- 05. Chokers.** Chokers shall be at least one eighth (1/8) inch smaller than the mainline. (7-1-97)
- 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. (7-1-97)
- 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. (7-1-97)
- 08. Line Hazards.** (7-1-97)
- a.** Running lines and changed settings shall be made in a way to avoid bight of line hazards. (7-1-97)
- b.** Signals to operator shall be made before moving lines. (7-1-97)
- 09. Reefing.** Reefing or similar practices to increase line pull shall be prohibited. (7-1-97)
- 10. Inspection of Rigging.** (7-1-97)
- a.** A thorough inspection, by the operator or qualified person, of all blocks, straps, guylines, and other rigging shall be made before they are placed in position for use. (7-1-97)
- b.** This inspection shall include an examination for damaged, cracked or worn parts, loose nuts and bolts, lubrication, condition of straps and guylines. (7-1-97)
- c.** The repairs or replacements necessary for safe operation shall be made before rigging is used. (7-1-97)
- 011. GUYLINES.**
- 01. General Requirements.** (7-1-97)
- a.** Guylines shall be of plow steel or equivalent, and in good condition. (3-29-17)
- 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. (7-1-97)
- 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. (3-29-17)
- 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. (7-1-97)
- e.** Guylines shall be kept tightened while equipment or rigging they support is in use. (7-1-97)
- 02. Anchoring Guylines.** (7-1-97)
- 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 011.02-A and 011.02-B.

FIGURE 011.02-A

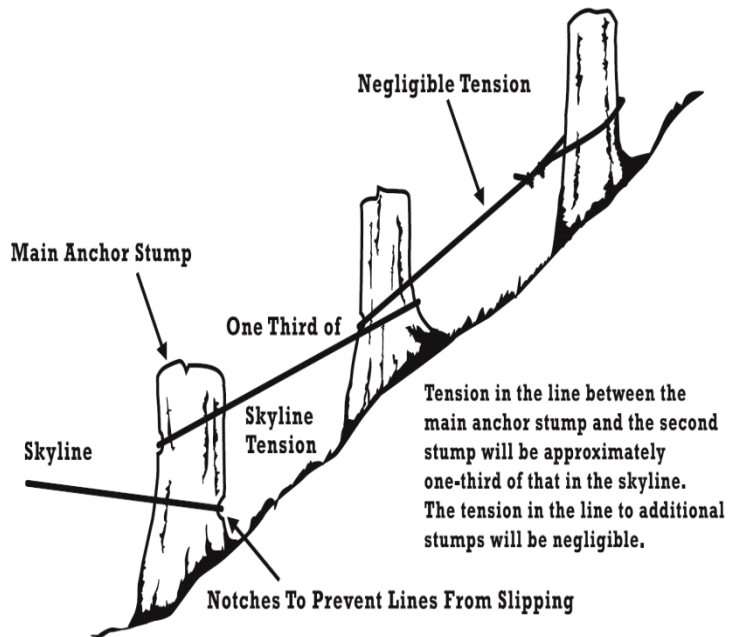
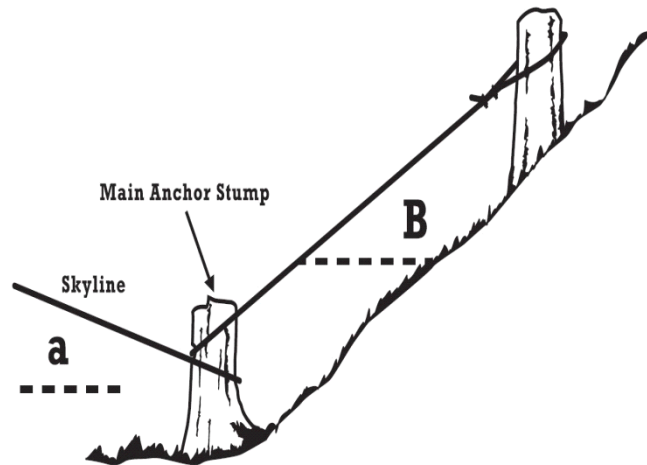


FIGURE 011.02-B



Profile of a common two-stump anchor.

(7-1-97)

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. (3-29-17)

c. Stumps, trees and guyline anchors shall be inspected from time to time while an operation is in progress and hazardous conditions immediately corrected. (3-29-17)

d. Standing trees which will reach landing or work areas shall not be used for guyline anchors. (7-1-97)

e. Any guyline anchor tree that can reach the landing or work area shall be felled before using as an anchor. (7-1-97)

03. Effectiveness of Guys. (7-1-97)

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 011.03-A.

TABLE 011.03-A	
Degree	Effectiveness
60 to 45	50% to 75%
45 to 30	75% to 85%
30 to 10	85% to 95%

(7-1-97)

- b. For the effectiveness of guys according to the number of guys and their spacing, see Table 011.03-B.

TABLE 011.03-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

(3-29-17)

- 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. (3-29-17)

012. LINES, SHACKLES AND BLOCKS.

- 01. General Requirements.** (7-1-97)

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. (7-1-97)

b. Wire rope or other rigging equipment which shows a fifteen percent (15%) reduction in strength shall be replaced. (3-29-17)

- 02. Splices.** (7-1-97)

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. (7-1-97)

- b. A safe margin of line must be used for making long splices. See Table 012.02-A.

TABLE 012.02-A		
Rope Diameter	Unraveled	Total Length
3/8"	8'	16'
5/8"	13'	20'
3/4"	15'	30'

TABLE 012.02-A		
Rope Diameter	Unraveled	Total Length
7/8"	18'	36'
1"	20'	40'

(3-29-17)

03. Clips.

(7-1-97)

a. Clips should be spaced at least six (6) rope diameters apart to achieve maximum holding power. See Table 012.03-A

TABLE 012.03-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

(3-29-17)

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 012.03-A. This is the only approved method.

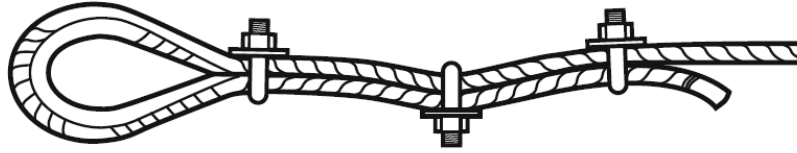
FIGURE 012.03-A



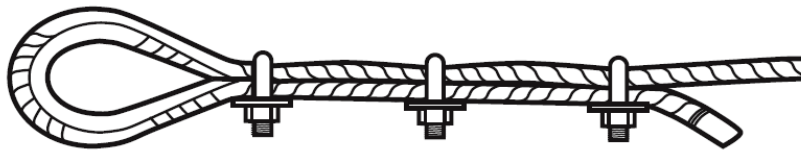
(3-29-17)

c. Do not reverse the clips or stagger them. See Figure 012.03-B. Otherwise the “U” bolt will cut into the live rope when the load is applied.

FIGURE 012.03-B



Wrong



Wrong

(7-1-97)

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. (3-29-10)

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. (7-1-97)

05. Pins. All pins in blocks shall be properly secured by keys of the largest size the pin hole will accommodate (7-1-97)

06. Shackles. (7-1-97)

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. (7-1-97)

b. All shackles must be made of forged steel or material of equivalent strength and one (1) size larger than the line it connects. (7-1-97)

07. Cable Cutting. Cable cutters, soft hammers, or a cutting torch shall be available and shall be used for cutting cables. (3-29-17)

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. (3-29-17)

013. -- 999. (RESERVED)

Subject Index

D

Definitions, IDAPA 07.08.09, Idaho
Minimum Safety Standards &
Practices For Logging -- Rigging,
Lines, Blocks, & Shackles 2

G

Guylines 3
Anchoring Guylines 3
Effectiveness of Guys 5
General Requirements 3
Minimum Guyline
Requirements 6

L

Lines, Shackles & Blocks 6
Blocks 8
Cable Cutting 8
Clips 7
Damaged or Worn Wire Rope 8
General Requirements 6
Pins 8
Shackles 8
Splices 6

R

Rigging 2
Allowable Loading or Stress 3
Arrangement & Operation 3
Equipment Classification 2
General 2
Inspection of Rigging 3
Line Hazards 3
Placing, Condition, & Operation of
Rigging 3
Reefing 3
Safe Loading 3