

LOGS



WHAT DOES THIS SECTION COVER?

The standard defines a log as all natural wood that retains the original shape of the bole (trunk) of a tree whether raw, partially processed, or fully processed.

- **Raw:** All tree species that have been harvested, with bark; may have been trimmed or cut to length
- **Partially processed:** Fully or partially debarked, or further reduced in length
- **Fully processed:** Utility poles, treated poles, log cabin building components

The specific requirements for logs cover shortwood and longwood.

SHORTWOOD

- Normally up to about 2.5 m (100 in) in length.
- No longer than 4.9 m (16 ft) in length.
- Also called:
 - Cut-up logs
 - Cut-to-length logs
 - Bolts
 - Pulpwood.
 - Longwood
- Anything not considered shortwood.
- Also called:
 - Long logs
 - Treelength.

EXCEPTIONS TO THE SPECIFIC REQUIREMENTS

The following types of logs are not covered by the specific logs requirements:

- Logs unitized by banding or other comparable means. [Secure according to general cargo securement requirements.]
- Loads of no more than four processed logs. [Secure according to general cargo securement requirements.]
- Firewood, stumps, debris, other short logs, and longer logs. [Transport in a vehicle or container enclosed on both sides, the front, and the rear and strong enough to contain them.]

WHAT'S IN A STACK?

Some stacks may be made up of both shortwood and longwood.

Any stack that includes shortwood must follow the shortwood securement requirements.

Exception: If shortwood is embedded in load of longwood, it can be treated as longwood.



COMPONENTS OF THE SECUREMENT SYSTEM

SPECIALLY DESIGNED VEHICLE

Requirements

- Vehicle must be designed and built, or adapted, for transportation of logs.
- Vehicle must be fitted with a means to cradle the logs and prevent rolling, such as:
 - Bunks.
 - Bolsters.
 - Stakes. OR
 - Standards.
- All vehicle components must be designed and built to withstand all anticipated operational forces without failure, accidental release, or permanent deformation.

STAKES

Requirement

- If stakes or standards are not permanently attached to the vehicle, secure the stakes so that they do not separate from the vehicle.

TIEDOWNS

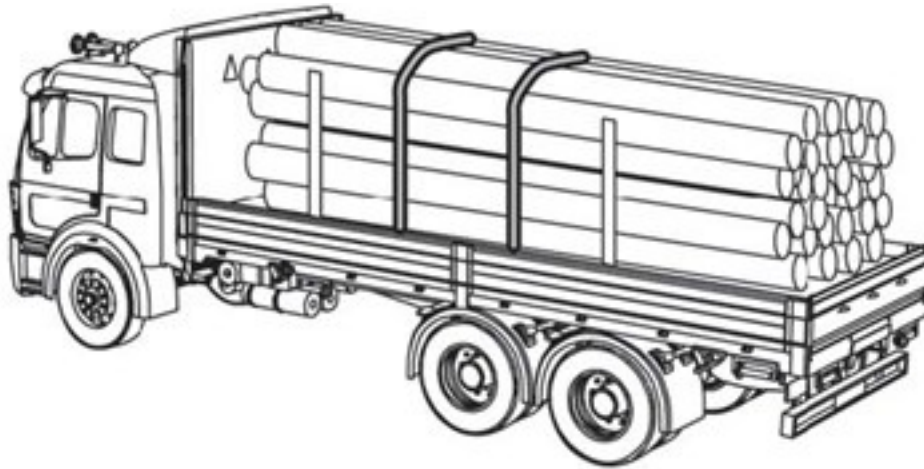
Requirements

- Use tiedowns in combination with bunks, stakes, or standards and bolsters to secure the load.
- All tiedowns must have a working load limit not less than 1,800 kg (4,000 lb.).
- Tension tiedowns as tightly as possible but not beyond their working load limit.

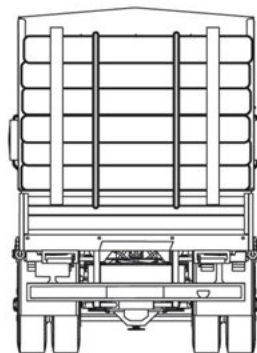
USE OF THE SECUREMENT SYSTEM

PACKING REQUIREMENTS

- **Requirement:** Logs must be solidly packed.
- **Requirement:** Outer bottom logs must be in contact with and rest solidly against bunks, bolsters, stakes, or standards.
- **Requirement:** Each outside log on the side of a stack of logs must touch at least two bunks, bolsters, stakes, or standards. If one end of the log doesn't touch a stake:
 - It must rest on other logs in a stable manner.
 - It must extend beyond the stake, bunk, bolster, or standard.
- **Requirement:** The center of the highest log on each side or end must be below the top of each stake, bunk, or standard.

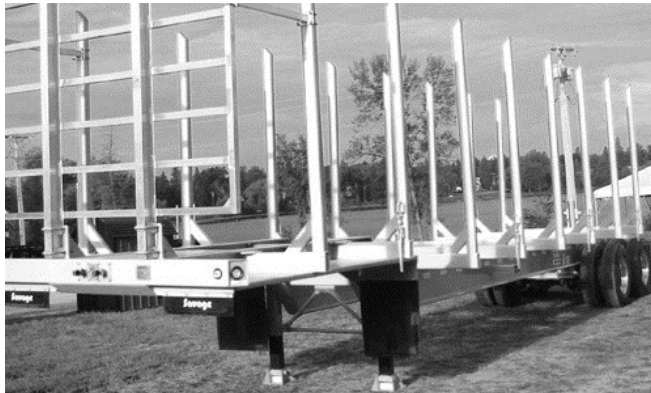


- **Requirement:** There are two options for the upper logs that form the top of the load:
 - Either they must be crowned
 - Or each log that is not held in place by contact with other logs or stakes, bunks, or standards must be held in place by a tiedown.



SECUREMENT REQUIREMENTS

- Tighten tiedowns at initial loading.
- Do not tension beyond the tiedown's working load limit.
- Check the load and tiedowns at entry onto a public road, in addition to the intervals specified on page x. Adjust load and tiedowns as needed.
- Use additional tiedowns or securing devices when there is low friction between logs and they are likely to slip on each other (for example, logs are wet or coated with sawdust).



SAFETY

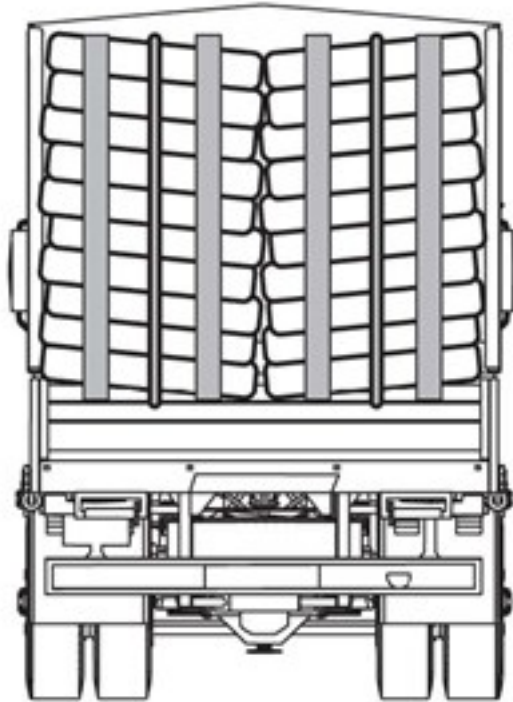
SPECIAL CIRCUMSTANCES: SECURING SHORTWOOD LOGS LOADED CROSSWISE ON FRAME, RAIL, AND FLATBED VEHICLES

LOWER TIER REQUIREMENTS

- The end of a log in the lower tier must never extend more than 1/3 of the log's total length beyond the nearest supporting structure. This prevents tipping when the vehicle turns.

TIEDOWNS REQUIREMENTS

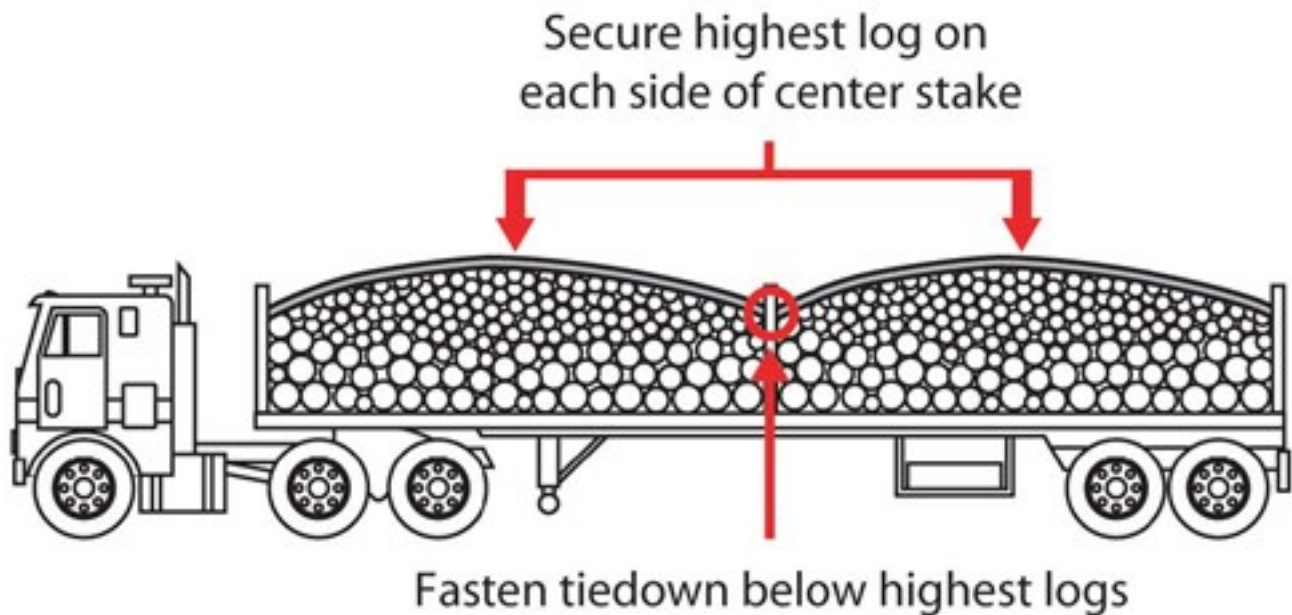
- Use two tiedowns to secure one stack of shortwood loaded crosswise.
- Attach the tiedowns to the vehicle frame at the front and rear of the load.
- Position tiedowns approximately 1/3 and 2/3 of the length of the logs.



SAFETY

REQUIREMENTS FOR DIVIDING VEHICLES OVER 10 M (33 FT)

- Vehicles over 10 m (33 ft) must be equipped with center stakes, or comparable devices, to divide it into sections of equal length.
- Each tiedown must:
 - Secure the highest log on each side of the center stake.
 - Be fastened below these logs.
- Three securement options:
 - Option #1: Tiedowns may be fixed at each end and tensioned from the middle.
 - Option #2: Tiedowns may be fixed in the middle and tensioned from each end.
 - Option #3: Tiedowns may pass through a pulley or equivalent device in the middle and tensioned from one end.



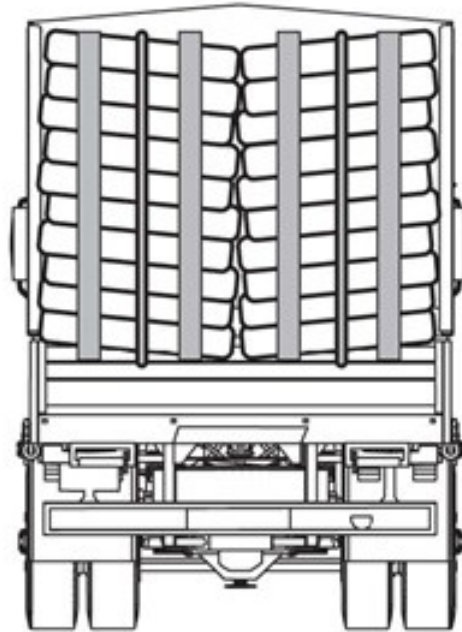
STAKES/STRUCTURE AND TIEDOWNS REQUIREMENTS

Anchor any structure or stake that is being forced upward when the tiedowns are being tensioned.

SAFETY

ADDITIONAL REQUIREMENTS SECUREMENT FOR TWO STACKS SIDE-BY-SIDE

- In addition to the requirements for shortwood loaded crosswise, load two stacks side-by-side so that:
 - There is no space between the stacks of logs.
 - The outside of each stack is raised at least 2.5 cm (1 in) within 10 cm (4 in) of the end of the logs or from the side of the vehicle.
 - The highest log is no more than 2.44 m (8 ft) above the deck.
 - At least one tiedown is used lengthwise across each stack.



SPECIAL CIRCUMSTANCES: SECURING LOGS LOADED LENGTHWISE ON FLATBED AND FRAME VEHICLES (SECTION 3.1.5)

Logs loaded lengthwise on these vehicles must meet these requirements.

REQUIREMENTS FOR SHORTWOOD LOADED LENGTHWISE

- Shortwood must be cradled in a bunk or contained by stakes.
- Logs should be centered in the bunk.
- Each outside log bearing against stakes should extend at least 0.15 m (6 in) beyond the stakes at each end.

SHORTWOOD AND TIEDOWNS REQUIREMENTS

TWO TIEDOWNS

Secure each stack of shortwood with at least two tiedowns.

ONE TIEDOWN

- **A stack can be secured with one tiedown if all logs in the stack less than 3.04 m (10 ft) are:**
- **Blocked in the front by a headboard strong enough to restrain the load or by another stack of logs.**
- **Blocked in the rear by the vehicle's end structure or another stack of logs.**
- **Position the one tiedown about midway between bunks, stakes, or standards.**

REQUIREMENTS FOR SECURING LONGWOOD LOADED LENGTHWISE

- **Longwood must be cradled in two or more bunks or contained by stakes.**
- **Each outside log should bear against at least two stakes, one near each end of the log.**
- **Each end of the log should extend at least 0.15 m (6 in) beyond the stakes.**
- **If shorter logs are carried on top of the stack, secure each log with at least two tiedowns.**

LONGWOOD AND TIEDOWN REQUIREMENTS

- **Secure each stack of longwood with at least two tiedowns at positions along the load that provide effective securement.**
- **Secure each outside log of a stack with at least two tiedowns.**

WORKING LOAD LIMIT FOR LONGWOOD AND SHORTWOOD LOADED LENGTHWISE

The aggregate working load limit for all tiedowns must be no less than 1/6 the weight of the stack of logs.

Note: This requirement is much less than the general requirement of an aggregate working load limit equal to 1/2 the weight of the load. This lowered requirement recognizes that the bunks/stakes help to prevent slippage.

SPECIAL CIRCUMSTANCES: SECURING LOGS TRANSPORTED ON POLE TRAILERS

Requirements for logs on pole trailers

- **Secure the load in one of these ways:**
 - **Either at least one tiedown at each bunk.**
 - **Or at least two tiedowns used as wrappers that encircle the entire load.**

WRAPPER REQUIREMENTS

- **Position front and rear wrappers at least 3.04 m (10 ft) apart.**

LARGE LOGS - SHIFT PREVENTION REQUIREMENT

- **Use chock blocks to prevent the shifting of large diameter single and double log loads.**

LARGE LOGS - ADDITIONAL TIEDOWNS REQUIREMENT

- **Secure large diameter logs that are above the bunks to the underlying load with at least two additional wrappers.**

