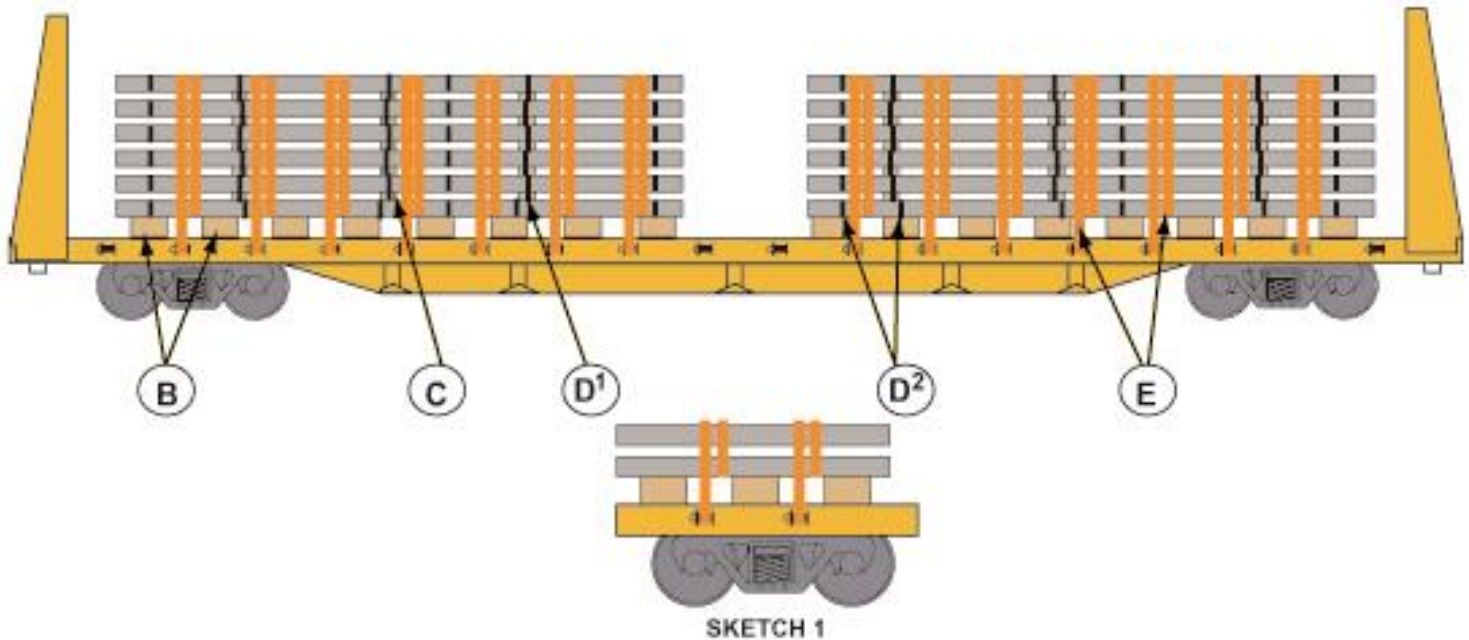


**ALUMINUM EXTRUSION LOGS 3 IN. TO 20 IN. OD, 8 FEET LONG AND OVER  
FLAT CARS EQUIPPED WITH PERMANENT END BULKHEADS AND PVC  
TREATED POLYESTER WEBBING TIE-DOWN SYSTEM.**

RAC 12043S

Revised 01-2024 Ref: AAR Fig.43s



Item	No. of Pcs.	Description
A		Vacant
B	As required	Bearing pieces: hardwood, 8 in. x 8 in. length equal to width of the car. Space every 3 or 4 feet, stagger location with winches. Each bearing pieces must be bolted or otherwise permanently secured to the car deck to prevent displacement.
C	2 per packages 12ft. long or less, add 1 for each additional 8 feet or less	Attached separators: hardwood, 3in.x 3in. length sufficient to support all logs in a package but no wider than the package. Each separator must be attached with item D1
D1	1 per each item C	Attached separator package bands: ¾ in. x .029 in. high tension steel band. One band to encircle each item C and all logs in package. May be substituted with an AAR approved Type 1A Grade 4 polyester strapping.



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RAC 12043S (Concluded)

Revised 01-2024 Ref: AAR Fig.43s

Item	No. of Pcs.	Description
D2	2 per each package 12 ft or less add 1 for each additional 8 feet or less	Package bands: ¾ in. x .029 in. high tension steel band to encircle all logs in a package. Locate one band near each end the other(s) to be placed intermediately between attached separators. May be substituted with an AAR approved Type 1A Grade 4 polyester strapping.
E	As required per note 4	We tie-down straps: polyester weebing, 4 in. wide with a working load limit (WLL) of 6,666 lbs. or a minimum breaking strength (MBS) of 20,000 lbs. Pass strapping over all logs in a pile, pass under load and back across the top of the load and secure to the winch on each side of car. Tension straps from both sides of car using a 30 to 40 in. winch bar or equivalent.

**Notes and additional requirements:**

1. At origin load must be equally distributed on car.
2. Load can consist of 2 or more piles.
3. Pile height may not exceed 125% of its width.
4. The weight of a pile must not exceed 75 % of the combined rated MBS of all the item E straps restraining that pile. (Example Five item E straps each with a 20,000 lbs. MBS, have a combined restraint rated at 100,000 lbs. The total weight of all ingots in that pile must not exceed 75% of the combined rated restraint of the five straps which is 75,000 lbs in this case).
5. All packages must be comprised of a single layer of logs. Nesting is not permitted. All logs in a layer must be of equal diameter and length.
6. All layers in the pile must be of equal width; except for the top layer in each pile which can be narrower by no more than one log.
7. To avoid contact between items C attached separators and items B bearing pieces in the event of longitudinal shift, item C may be omitted in the bottom layers. When item C is not applied to the bottom layer packages each item C omitted must be replaced by an item D2 package band.
8. To the extent possible item B should be located between ratchets on each side of car to prevent premature web wear. (See **SKETCH 1**)

For further details see General Rules.