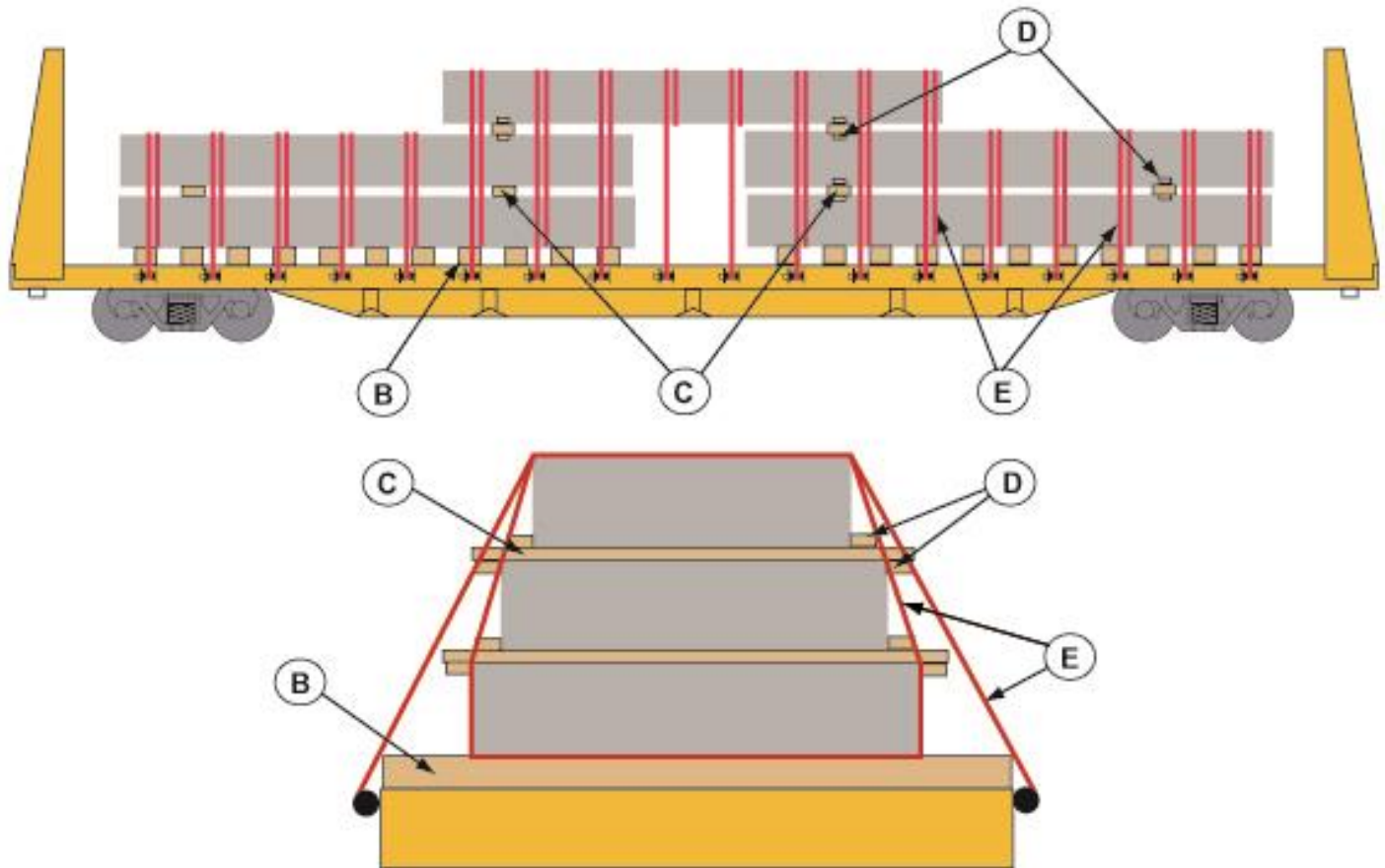


INGOTS ALUMINUM, 12 FT LONG OR OVER - FLAT CARS EQUIPPED WITH
PERMANENT END BULKHEADS AND PVC TREATED POLYESTER WEBBING
TIE-DOWN SYSTEM.

RAC 12043T

Revised 09-2011



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	Minimum 2 per layer	Separators: hardwood, 3in.x 5in. length sufficient for the application of item D side blocks. Locate each approximately 45 in. from ends of pile.



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RAC 12043T (Concluded)

New 05-2009

Item	No. of Pcs.	Description
D	4 per item C	Side blocks: lumber, 2 in. x 6 in. x 6 in. Locate against ingots on the top and bottom of each Item C separator, and secure each with four (4) I6-D nails. Side blocks to be used only when top layer is narrower than bottom layer.
E	As required	Web tie-down straps: polyester webbing, 4 in. wide with 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. Web tie down can be substitute one to one with Type 1A grade 8 polyester straps.

Notes and additional requirements:

1. Load must be centrally and evenly located on car at origin.
2. Maximum void between bottom ingots must not exceed 50% of the length of the top ingot. Top ingot must be centrally located over void.
3. Height of load above Item B bearing pieces may not exceed 170% of base width, including Item C separators.
4. All web tie-down components, including winches and webbing, must be inspected and applied in accordance with General Rule 20.
5. The weight of a pile must not exceed 60 percent of the combined MBS rated restraint of all the Item E straps restraining that pile. (Example: Five Item E straps, each with a 20,000 lb MBS, have a combined MBS restraint rating of 100,000. The total weight of all ingots in the pile may not exceed sixty percent of the combined restraint rating of the five straps, or 60,000 lb in this case.) If necessary, additional strap assemblies may be added with the car owner's permission.

See General Rules for further details.