
Cargo Securement and Load Binding Inspection for Flatbed Trailers

1.0 Objective & Scope

The objective of this procedure is to ensure that all cargo loaded onto flatbed trailers is secured in compliance with Transport Canada's National Safety Code (NSC) Standard 10, and that all load binding equipment is inspected for serviceability before departure. This SOP applies to all fleet drivers, loaders, and field operations personnel responsible for loading, securing, and inspecting flatbed trailer loads.

The scope includes pre-trip inspection of binding equipment, proper application of tie-downs, edge protection, and final verification of load security. The Lead Driver or Loader is responsible for executing this procedure and obtaining sign-off before the vehicle leaves the yard or customer site.

2.0 Required Equipment & Tools

- Mobile tablet with SiteQueue application installed for digital inspection and sign-off
- Minimum 2-inch ratchet straps with working load limit (WLL) of 3,333 lbs each (or as required by load weight)
- Chain binders and Grade 70 transport chains (if required for heavy or specialized loads)
- Edge protectors (corner guards, rubber mats, or wood blocks) to prevent strap damage
- Load securement bars or dunnage (as needed for specific cargo types)
- Inspection checklist (digital or laminated paper copy) for load binding components
- Personal protective equipment (PPE): high-visibility vest, steel-toed boots, gloves, hard hat
- Flashlight for inspecting tie-downs and trailer components in low-light conditions

3.0 Site Safety & Hazard Assessment

- High-visibility vest and steel-toed boots are mandatory when working near loading docks, yard areas, or active traffic zones.
- Conduct a 360-degree walk-around of the trailer before and after loading to identify any obstructions, debris, or damage.
- Ensure the loading area is level, well-lit, and free of standing water or ice to prevent slips and falls.
- Use gloves when handling chains, straps, and binders to avoid pinch points and cuts.
- Never stand under a suspended load or between the trailer and a loading dock during securement.
- Inspect all tie-down equipment for wear, cuts, corrosion, or deformation before use. Do not use damaged equipment.

4.0 Step-by-Step Execution Procedure

1. Perform a pre-trip inspection of the flatbed trailer, including the deck condition, stake pockets, rub rails, and tie-down anchor points. Document any damage in SiteQueue.
2. Verify the cargo weight and dimensions against the load securement plan. Ensure the total WLL of all tie-downs meets or exceeds the requirements of NSC Standard 10 (typically 50% of the cargo weight for tiedowns, or 100% for loads over 5,000 kg).

3. Position the cargo on the trailer deck, ensuring it is centered and stable. Use dunnage or blocking to prevent shifting if the cargo has a curved or irregular base.
4. Select the appropriate tie-down equipment based on load type and weight. For general freight, use ratchet straps with a minimum WLL of 3,333 lbs. For heavy or specialized loads, use Grade 70 chains and binders.
5. Install edge protectors at all points where straps or chains contact sharp edges of the cargo. This prevents cutting or abrasion of the securement device.
6. Apply the first tie-down over the center of the cargo, attaching to anchor points on both sides of the trailer. Tighten the strap or binder until the cargo is firmly held, but avoid over-tightening that could damage the cargo or equipment.
7. Apply additional tie-downs as required by the load securement plan. For loads over 10 feet in length, use at least two tie-downs. For loads over 20 feet, use three or more, spaced evenly along the length.
8. For loads that may shift forward during braking, install a front stop or header board if available, or use additional forward-facing tie-downs to prevent forward movement.
9. Inspect each tie-down for proper tension, routing, and security. Ensure no straps or chains are twisted, and that all ratchets are fully engaged and locked. Check that binder handles are secured in the closed position.
10. Perform a final walk-around of the trailer, checking for any loose ends of straps or chains that could flap or come undone during transit. Secure any excess strap webbing with a strap keeper or tape.
11. Document the load securement inspection in SiteQueue, including photos of the cargo from all four sides and close-ups of tie-down points. Note any defects found and corrective actions taken.
12. Obtain a digital signature from the loader or supervisor confirming the load is secure and ready for transport. If loading at a customer site, also obtain the customer's representative signature.

5.0 Verification, Sign-off & Reporting

1. After completing the load securement, perform a second verification walk-around with a second person (if available) to confirm all tie-downs are properly tensioned and no equipment is damaged.
2. Log the inspection results in SiteQueue, including the number of tie-downs used, their WLL, and any edge protection applied. Attach all required photos (front, rear, left, right, and close-ups of tie-downs).
3. Obtain a digital signature from the responsible supervisor or customer representative in SiteQueue to confirm acceptance of the load securement. This serves as the official sign-off for the task.
4. If any defects or non-compliances were identified during the inspection, create a non-conformance report in SiteQueue and notify the fleet manager immediately. Do not dispatch the vehicle until the issue is resolved.
5. File the completed inspection record in the SiteQueue system for audit and compliance purposes. Retain records for a minimum of 6 months as per Transport Canada requirements.

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