
Forklift Overhead Guard Integrity Inspection

1.0 Objective & Intent

This SOP defines the safety protocols for performing a structural integrity inspection of forklift overhead guards. The primary objective is to prevent crush injuries and fatalities resulting from falling objects or overhead guard failure during material handling operations. This procedure ensures compliance with WorkSafeBC OHS Regulation Part 16: Mobile Equipment and the CSA B335-15 standard for industrial lift trucks.

Overhead guards are critical safety devices designed to protect the operator from falling debris, loads, or structural components. A compromised guard can collapse under impact, leading to catastrophic injury. Regular inspection identifies cracks, deformation, corrosion, or loose fasteners before they result in failure.

2.0 Operational Scope

This procedure applies to all counterbalanced forklifts, reach trucks, order pickers, and other powered industrial trucks equipped with overhead guards operating within the cabinet and millwork manufacturing facility. It applies to all maintenance personnel, operators, and safety inspectors responsible for daily, weekly, and monthly equipment inspections.

The inspection must be performed on every forklift in the fleet at the start of each shift, after any impact event, and as part of the scheduled preventive maintenance program. This SOP covers visual and tactile inspection of the overhead guard structure, mounting points, and load-rated components.

3.0 Hazard Identification & Mandatory PPE

- Crush Hazard: Overhead guard collapse or falling objects can cause severe injury or death.
- Pinch Points: Hands and fingers can be caught between guard components and the forklift frame during inspection.
- Sharp Edges: Cracked or deformed metal may have sharp edges that can cause lacerations.
- Falling from Height: Reaching or climbing to inspect the top of the guard may cause a fall.
- CSA-Approved Steel Toed Boots with puncture-resistant soles.
- ANSI Z87.1-Approved Safety Glasses with side shields.
- Cut-Resistant Gloves (ANSI A4 level or higher).
- High-Visibility Safety Vest (Class 2 or 3).
- Hard Hat (CSA Z94.1-15 Type 1 or 2) when working under overhead hazards.

4.0 Required Safety Equipment & Tools

- Lockout/Tagout (LOTO) Kit with personal lock and hasp.
- Inspection flashlight (high-lumen, rechargeable).
- Inspection mirror with telescoping handle.
- Wire brush for cleaning debris from weld joints.
- Feeler gauge set for measuring crack widths.
- Torque wrench calibrated to manufacturer specifications.
- Digital camera or smartphone for documenting defects.

- Forklift manufacturer's service manual or guard inspection checklist.

5.0 Step-by-Step Safety Procedure

1. Park the forklift on a level, dry surface away from traffic. Lower the forks fully to the ground, set the parking brake, and turn off the engine or disconnect the battery. Remove the key and place it in your pocket or a designated lockbox.
2. Apply Lockout/Tagout (LOTO) to the forklift's primary energy source (battery disconnect or ignition system) using your personal lock and hasp. Verify zero energy state by attempting to start the engine or activate the hydraulic controls.
3. Perform a visual inspection of the entire overhead guard structure from ground level. Look for any signs of deformation, bending, cracking, or corrosion on the roof panel, side rails, and support posts. Pay special attention to weld joints and areas where the guard attaches to the forklift frame.
4. Using the inspection flashlight and mirror, examine all mounting brackets, bolts, and fasteners for signs of loosening, wear, or damage. Check that all bolts are present and torqued to manufacturer specifications. Use the torque wrench to verify tightness if accessible.
5. Inspect the guard's load rating label or plate. Ensure it is legible and matches the forklift's capacity. If the label is missing or illegible, tag the forklift out of service and notify the maintenance supervisor.
6. Check for any modifications, repairs, or aftermarket additions to the guard. Unauthorized welding, drilling, or bending voids the manufacturer's certification and requires immediate removal from service. Document any non-original components with photographs.
7. Using the wire brush, clean any dirt, grease, or debris from weld joints and bolt holes. Re-inspect these areas for hairline cracks or corrosion pitting. Use the feeler gauge to measure any visible cracks; if the crack width exceeds 0.5 mm or extends more than 25 mm, the guard must be replaced.
8. If the guard passes all visual and tactile inspections, remove the LOTO device, reinstall the key, and start the forklift. Perform a functional test by raising and lowering the forks while observing the guard for any unusual movement or noise. Document the inspection results on the daily checklist.
9. If any defect is found, immediately tag the forklift out of service with a 'Do Not Operate' tag. Report the issue to the maintenance supervisor and safety manager. Do not return the forklift to service until the guard has been repaired or replaced by a qualified technician and re-inspected.
10. Complete the digital inspection record in SafeDesk, including photographs of any defects, the inspector's name, date, time, and forklift unit number. Submit the report for review and retain a copy in the equipment maintenance file.

Regulatory Disclaimer: This document is a generic safety template provided for educational and informational purposes only. It does not constitute professional engineering, legal, or regulatory compliance advice. The end-user assumes all liability for validating all safety protocols against specific machinery manufacturer manuals and local occupational health and safety regulations (e.g., WorkSafeBC, CSA standards) before deployment.