
Forklift Seatbelt and Interlock Check

1.0 Objective & Intent

This SOP defines the mandatory safety protocol for inspecting and verifying the functionality of the forklift seatbelt and operator presence interlock system. The primary objective is to prevent serious injury or fatality resulting from operator ejection during a tip-over or runaway incident. This procedure ensures compliance with WorkSafeBC OHS Regulation Part 16 (Mobile Equipment) and CSA B335-15 (Safety Standard for Lift Trucks).

A properly functioning seatbelt and interlock system is a critical engineering control that automatically stops the forklift if the operator leaves the seat without setting the parking brake. Failure to perform this check daily can lead to catastrophic accidents, including crush injuries, rollover fatalities, and uncontrolled vehicle movement.

2.0 Operational Scope

This procedure applies to all counterbalanced sit-down rider forklifts, stand-up rider forklifts, and order pickers equipped with an operator presence interlock system operating within the cabinet and millwork manufacturing facility. It covers all shifts, including day, afternoon, and night operations.

All forklift operators, maintenance personnel, and supervisors are required to perform this check at the start of every shift, after any reported incident or near-miss, and following any maintenance or repair work on the forklift's electrical or safety systems. This SOP does not apply to pallet jacks or walk-behind equipment.

3.0 Hazard Identification & Mandatory PPE

- Crush/Pinch Points: Seatbelt retractor mechanism, seat adjustment rails, and interlock switch actuator arm.
- Electrical Shock: Exposed wiring or terminals near the interlock switch under the seat.
- Stored Energy: Hydraulic system pressure and battery electrical potential.
- Tip-Over / Rollover: Unrestrained operator during dynamic testing or if interlock fails to engage.
- CSA-Approved Steel Toed Boots with oil-resistant soles.
- High-Visibility Safety Vest (Class 2 or 3).
- Safety Glasses with side shields.
- Cut-Resistant Gloves (ANSI A4 or higher) when handling seatbelt webbing or metal components.

4.0 Required Safety Equipment & Tools

- Forklift Daily Inspection Checklist (paper or digital via SafeDesk).
- Lockout/Tagout (LOTO) Kit with personal lock and hasp (for electrical interlock testing).
- Non-contact voltage tester (for verifying power is off before touching interlock wiring).
- Flashlight (for inspecting under-seat area and wiring).
- Small flathead screwdriver (for accessing interlock switch cover if needed).
- Seatbelt cutter (safety knife with retractable blade) for emergency release testing.

5.0 Step-by-Step Safety Procedure

1. Park the forklift on a level, dry surface in a designated inspection area. Ensure the forks are fully lowered to the floor, the mast is tilted forward slightly, and the parking brake is engaged. Turn the key to the OFF position and remove the key from the ignition.
2. Perform a visual inspection of the seatbelt webbing. Pull the webbing fully out of the retractor and inspect both sides for fraying, cuts, chemical burns, or signs of wear. Check the buckle and latch plate for cracks, deformation, or debris. Verify the retractor locks automatically when pulled sharply.
3. Inspect the seatbelt mounting points. Check the anchor bolts at the floor, seat base, and retractor housing. Ensure all bolts are tight and free of corrosion. Verify the retractor is securely fastened and the webbing routes freely without binding on the seat frame.
4. Locate the operator presence interlock switch. This is typically a mechanical plunger or reed switch mounted under the seat, activated by the operator's weight. Use the flashlight to inspect the switch housing for cracks, loose wires, or signs of tampering. Ensure the wiring harness is securely connected and free of abrasion.
5. Perform a functional test of the interlock system with the forklift key in the ON position but the engine off. Sit in the operator seat, fasten the seatbelt, and start the engine. While keeping the engine running, slowly lift your body off the seat. The engine should immediately shut off or the travel/hydraulic functions should disengage within 2 seconds. If the engine continues to run, tag the forklift as defective and report it immediately.
6. Test the interlock with the seatbelt unfastened. With the engine running and the seatbelt unbuckled, attempt to move the directional control lever (forward/reverse). The forklift must not move. If the forklift moves with the seatbelt unfastened, the interlock system has failed. Tag the forklift OUT OF SERVICE and initiate a LOTO procedure.
7. Verify the parking brake interlock function. With the engine running and seatbelt fastened, engage the parking brake. Attempt to move the forklift by pressing the accelerator. The forklift must not move. If movement occurs, the parking brake interlock is faulty. Tag the forklift and report it to the supervisor.
8. Document all inspection results on the Daily Forklift Inspection Checklist. Record the forklift ID number, date, time, operator name, and any defects found. If any component fails inspection, attach a red DO NOT OPERATE tag to the steering wheel and submit a maintenance work order through SafeDesk immediately.
9. If the forklift passes all checks, sign off the inspection checklist and proceed with normal operations. If the forklift fails any check, ensure it is not operated until repairs are completed and re-inspected by a qualified technician. Notify the shift supervisor of the status.

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.