
Counterbalance Forklift Pre-Shift Daily Inspection

1.0 Objective & Intent

The objective of this SOP is to establish a mandatory daily pre-shift inspection procedure for all counterbalance forklifts used in the facility. This procedure is designed to identify and correct any mechanical, hydraulic, or safety defects before the forklift is placed into service, thereby preventing accidents, injuries, and equipment damage. Compliance with this SOP ensures adherence to WorkSafeBC regulations (OHS Regulation Part 16: Mobile Equipment) and the manufacturer's safety guidelines.

The specific risk mitigated by this SOP is the operation of a forklift with undetected faults, which can lead to loss of control, tip-overs, falling loads, collisions, and serious or fatal injuries. A thorough pre-shift inspection is the first line of defense against these hazards.

2.0 Operational Scope

This procedure applies to all counterbalance forklifts (including propane, electric, and diesel models) operated within the cabinet and millwork manufacturing facility, including the production floor, raw material storage areas, finished goods warehouse, and loading docks. It is mandatory for all forklift operators, maintenance personnel, and supervisors who may operate or authorize the use of these vehicles. This inspection must be completed at the start of every shift, before the forklift is used for any material handling task.

3.0 Hazard Identification & Mandatory PPE

- Crush/Pinch Points: Mast, carriage, chains, and steering linkage can cause severe hand and body injuries.
- Hydraulic Fluid Leaks: High-pressure fluid can inject into skin or cause slip hazards.
- Propane Leaks (if applicable): Flammable gas creates fire and explosion risk.
- Battery Acid Exposure (electric models): Corrosive electrolyte can cause chemical burns.
- Falling Objects: Unsecured loads or damaged forks can drop materials.
- Tip-Over: Uneven tire pressure, damaged mast, or faulty brakes increase rollover risk.
- CSA-Approved Steel Toed Boots with puncture-resistant sole
- High-Visibility Safety Vest (Class 2 or higher)
- Safety Glasses with side shields (or full-face shield if inspecting battery/acid)
- Cut-Resistant Gloves (ANSI A4 or higher) for handling chains and sharp components
- Hard Hat (when working under or near the mast)

4.0 Required Safety Equipment & Tools

- Forklift Pre-Shift Inspection Checklist (company-specific form or digital app)
- Pen or permanent marker for completing paper checklist
- Flashlight (for inspecting hard-to-see areas like undercarriage and mast channels)
- Tire pressure gauge (for pneumatic tires)
- Spill kit (for containing hydraulic fluid, coolant, or battery acid leaks)

- Lockout/Tagout (LOTO) kit with personal lock and hasp (for removing from service)
- Propane leak detection solution (soapy water spray bottle) for propane models
- Distilled water and funnel (for battery top-up on electric models)
- Fire extinguisher (ABC-rated, located nearby but not carried on forklift during inspection)

5.0 Step-by-Step Safety Procedure

1. Park the forklift in a designated inspection area on level ground, ensure the parking brake is engaged, the mast is fully tilted back, the forks are lowered to the floor, and the ignition key is removed. Place a 'Do Not Operate' tag on the steering wheel or control panel.
2. Perform a visual walk-around inspection. Check for any visible damage, leaks (oil, coolant, hydraulic fluid, fuel, or battery acid), loose or missing bolts, cracks in the frame or mast, and ensure all safety decals and nameplates are legible and intact. Use the flashlight to inspect under the forklift and inside the mast channels.
3. Inspect the tires and wheels. Check for proper inflation (using gauge if pneumatic), cuts, gouges, embedded debris, uneven wear, and secure wheel lug nuts. For solid tires, verify there are no chunks missing and the tread depth is adequate. Record tire condition on the checklist.
4. Inspect the forks. Check for cracks (especially at the heel where the fork meets the carriage), straightness, wear (measure fork blade thickness and hook thickness per manufacturer specs), and ensure the fork positioning locks are functional and engaged. Verify both forks are at the same height and properly aligned.
5. Check the mast and carriage assembly. Visually inspect the mast channels for cracks or distortion, check the lift chains for even tension, wear, and lubrication, and inspect all hydraulic hoses for abrasion, bulges, leaks, or loose fittings. Operate the mast tilt and lift controls (with engine off but key on for electric models) to verify smooth, full-range movement without binding or unusual noise.
6. Inspect the operator compartment and safety systems. Check the seat belt for cuts, fraying, and proper retraction and latching. Test the horn, backup alarm (if equipped), lights (headlights, taillights, strobe), and gauges (fuel level, battery charge indicator, temperature). Verify the operator presence system (seat switch or pedal) functions by attempting to start or move the forklift without being seated.
7. Check the steering, brakes, and controls. With the forklift powered on and the parking brake released, slowly drive forward and backward in a straight line, testing the steering for excessive play or stiffness. Apply the service brake firmly to ensure it stops the forklift smoothly and without pulling. Test the parking brake on a slight incline (if safe) to confirm it holds. Verify the forward/neutral/reverse control is positive and returns to neutral when released.
8. For propane models: Inspect the propane tank for dents, rust, or damage, ensure it is securely fastened in the cradle, check the hose and connections for leaks using the soapy water solution (bubbles indicate a leak), and verify the tank is within its requalification date. For electric models: Check the battery electrolyte level (add distilled water if needed, wear PPE), inspect cables and terminals for corrosion or damage, and ensure the battery restraint bar is in place and secured.
9. Complete the inspection checklist by recording all findings, including the forklift ID number, date, time, operator name, and odometer/hour meter reading. If any defects are found, tag the forklift with a 'Do Not Operate' tag, remove the key, and report the issue immediately to the supervisor or maintenance department. Do not use the forklift until repairs are completed and the inspection is re-signed off.
10. If the forklift passes inspection, sign and date the checklist, remove the 'Do Not Operate' tag, and return the key to the authorized operator. The completed checklist must be filed in the designated logbook or digital system and retained for a minimum of one year as per WorkSafeBC recordkeeping requirements.

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.