STANDARD OPERATING PROCEDURE

Material Handling SOP

Document no.	SOP-MFG-007
Revision	1.0
Owner	Warehouse Supervisor
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Review cycle	Every 12 months

1. Purpose

To move material safely and accurately between storage, production and shipping areas, keeping inventory records correct and material moving in the right rotation to support the production schedule.

2. Scope

Applies to internal movement of raw material, work-in-process and finished goods using forklifts, pallet jacks or hand carts. Receiving inspection at the dock is covered by a separate SOP.

Definitions

WMS	Warehouse management system, used to track material location, quantity and movement transactions.
FIFO	First in, first out. A stock rotation method that uses the oldest available material first.
Pick list	The list of materials, quantities and locations to be retrieved for a production order or shipment.
Point of use	The location on the production floor where material is staged for consumption by a process or workstation.

3. Responsibilities

Material Handler	Picks and transports material per the pick list, verifies quantities, and updates WMS transactions.
Forklift Operator	Performs pre-operation equipment inspection and transports loads safely per site traffic rules.
Warehouse Supervisor	Maintains storage locations, reviews inventory accuracy, and enforces safe handling practices.
Production Supervisor	Confirms point-of-use staging supports the production schedule and reports material shortages.

RACI matrix

Activity	Material Handler	Forklift Operator	Warehouse Supervisor	Production Supervisor
Perform forklift pre-operation inspection	I	R/A	I	-
Pick and verify material against	R/A	C	I	I

Activity	Material Handler	Forklift Operator	Warehouse Supervisor	Production Supervisor
the pick list				
Transport and stage material at point of use	R	R/A	I	C
Update WMS inventory transactions	R/A	I	A	-
Report damaged material or packaging	R	R	A	I

R = Responsible, A = Accountable, C = Consulted, I = Informed

4. Materials and PPE

Materials, tools and systems

- Warehouse management system (WMS) with pick lists
- Forklift and pallet jack pre-operation checklist
- Barcode scanner
- Site traffic route map
- Material handling instructions for hazardous or fragile items
- Damaged material report form

Personal protective equipment

- High-visibility vest
- Steel-toe boots
- Gloves appropriate to the material
- Hearing protection in high-noise areas

5. Procedure

Step	Task	Owner	Done
5.1	**Complete the forklift pre-operation inspection** Forklift operator completes the pre-operation checklist covering brakes, forks, horn, lights and fluid levels before using the equipment for the shift. **Checkpoint:** Pre-operation checklist is completed and signed before the forklift is used for any move.	Forklift Operator	☐
5.2	**Review the pick list in the WMS** Material handler reviews the pick list generated by the WMS for the production order or shipment, noting locations, quantities and any special handling instructions.	Material Handler	☐
5.3	**Retrieve material from the storage location** Handler retrieves the material from the location shown on the pick list, following FIFO or lot rotation rules for the material type.	Material Handler	☐
5.4	**Verify material against the pick list** Handler checks the part number, lot number and quantity of the retrieved material against the pick list before moving it. **Checkpoint:** Part number, lot and quantity match the pick list before the material leaves the storage location.	Material Handler	☐

Step	Task	Owner	Done
5.5	**Inspect the load for stability** Forklift operator inspects the load for stability and confirms it is within the equipment's rated weight capacity before lifting or moving it. **Warning:** Never exceed the forklift's rated load capacity or transport an unstable or improperly stacked load.	Forklift Operator	☐
5.6	**Transport material on designated routes** Operator transports the load following the site's designated traffic routes and posted speed limits, sounding the horn at blind corners and intersections.	Forklift Operator	☐
5.7	**Stage material at point of use** Handler stages the material at the correct point-of-use location for the production line, following FIFO so older lots are consumed first.	Material Handler	☐
5.8	**Scan and update the WMS transaction** Handler scans the material and location to update the WMS inventory transaction, confirming the system location matches the physical location.	Material Handler	☐
5.9	**Handle empty containers and returns** Handler returns empty pallets, containers and racks to their designated staging area for reuse or pickup, keeping them out of active traffic lanes.	Material Handler	☐
5.10	**Report damaged material or packaging** Handler reports any damaged material, packaging or containers found during handling to the warehouse supervisor and completes a damage report before the material is used or shipped.	Warehouse Supervisor	☐
5.11	**Maintain clear aisles and staging areas** Handler keeps aisles, fire lanes and staging areas clear of material and debris, following the site's floor marking standards.	Material Handler	☐
5.12	**Secure hazardous or fragile materials** Handler follows the specific handling instructions for hazardous or fragile materials, including required secondary containment or protective packaging during transport.	Material Handler	☐

6. Quality checks

- Forklift pre-operation checklists are completed for every shift the equipment is used.
- WMS system location matches the physical location during periodic spot checks.
- Material staged at point of use follows FIFO rotation with no expired or aged lots skipped.
- Damaged material is reported and documented before it reaches production or shipping.

7. Records

- Forklift pre-operation checklists
- WMS inventory transaction log
- Damaged material reports
- Pick list completion records

8. KPIs

- Inventory location accuracy
- On-time material delivery to point of use
- Material handling incidents or near-misses
- Damaged material rate

9. Common mistakes

- Skipping the forklift pre-operation checklist on a shift that's already running late.
- Moving material without scanning it, causing the WMS to show the wrong location.
- Breaking FIFO rotation by grabbing the most convenient pallet instead of the oldest lot.
- Overloading a forklift or stacking a load beyond a safe height.
- Leaving empty pallets or containers blocking an aisle or fire lane.

10. Revision history

Revision	Date	Description	Reviewed by
1.0	September 15, 2026	Initial release	Ilia Pirozhenko

Approval

Prepared by	Approved by	Date

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