



# Material Handling

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This is an awareness class only.  
This will not make you a licensed  
operator.

# Material handling

- \$156 Billion dollar industry
- Employing over 700,000 in the United States
- Can make or break a business
- ?
  - IT
  - Lifting, moving equipment
  - Sustainability
  - Makes supply chain work
  - Automation
  - Lean Manufacturing



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- Manual Material Handling:
    - Carrying
    - Lifting
    - Lowering
  - Machine Material Handling:
    - Forklift

# Possible Injuries

- Lifting, Carrying and Lowering of Material can cause lower back injuries along with neck and shoulder strain
- Material Handling with Forklifts can cause struck-by and caught between injuries.
- Forklifts can roll-over

# Hazards



- Improper lifting, carrying or handling loads that are awkward or heavy
- Struck by materials that are stored improperly or by forklifts that are carrying loads
- Struck by products that are not properly loaded on the pallet or the load has shifted in transit to the store.
- Trying to exit machine while rolling over
- Improperly cutting shrink wrap from pallet

# Never exit forklift if it starts to rollover

Forklifts can weigh anywhere from 3000lbs-15000lbs. If you attempt to get off when the machine starts to flip, you might get crushed

# Safe Lifting



- Break load into parts
- Get help with heavy or bulky items
- Lift with legs, keep back straight, do not twist
- Use handling aids - such as steps, trestles, shoulder pads, handles, and wheels
- Avoid lifting above shoulder level





# Safe Lifting Training

- What should be taught:
  - How to lift safely
  - How to avoid unnecessary physical stress and strain
  - What you can comfortably handle without undue strain
  - Proper use of equipment
  - Recognizing potential hazards and how to prevent / correct them

# Personal Protective Equipment

- For loads with sharp or rough edges, wear gloves or other hand and forearm protection
- When loads are heavy or bulky, wear steel-toed safety shoes to prevent foot injuries if the load is dropped



# Material Handling Equipment



# Equipment Training



- All employees must be trained before using Material Handling Equipment and they must demonstrate how to use the equipment

# The risk of ignoring forklift safety

Forklifts are extremely useful in a variety of workplaces, but there is great risk of property damage, injury or death if you:

- are not trained on forklift safety
- are not familiar with the specific forklift vehicle
- operate the forklift in an unsafe manner
- operate a forklift with a defect or missing parts



Source: New Zealand Dept. of Labor



Source: RiteHite Doors



Source: WorksafeBC

<b>Fatal Accident Type</b>	<b>Per Cent</b>
Crushed by vehicle tipping over	42%
Crushed between vehicle and a surface	25%
Crushed between two vehicles	11%
Struck or run over by a forklift	10%
Struck by falling material	8%
Fall from platform on the forks	4%



# Forklifts and Material Handling

## Accident Prevention

To prevent these type accidents, always be on a constant watch for your surroundings such as pedestrians, blind spots, and ramp/dock edges.

During forklift operation, always wear your seatbelt and do not ever extend your hands, arms or head outside of the safe zone.





# Forklifts and Material Handling

## Accident Prevention

If you end up in an unbalanced situation due to loads shifting or wheels leaving floor edges, do not remove your seatbelt and do call out for help. In most cases, the safest place to be is to be belted in your seat.

Always do your best to designate forklift work zones and pedestrian areas. Use your horn when needed as you approach blind spots and intersections.





# Forklifts and Material Handling

## Material Handling

Do not ever stack materials above a safe stacking height. Consider the use of warehouse rack storage when needed.

Follow standard practices when stacking materials to ensure optimal stability. In addition, consider the use of shrink wrap to enhance the stability of a stack.

Make sure that warehouse racks are not loaded above their rated capacity and store the heaviest materials on the floor or on the lowest rack locations.



# Forklifts and Material Handling

## Trailer Loading

Prior to trailer entry from a dock, inspect the trailer floor to ensure good condition. Do not drive forklifts into trailers that have damaged or weak floors.

Make sure that trailers are secured from movement and tipping prior to forklift entry.





# Forklift Safety Checklist


- Make sure the operator's manual is on the lift and the load capacity is posted
- Check that steps are free from mud, oil, and grease and that the windows are clean
- Make sure overhead protection is in place (All forklifts must have a cage that the operator sits in)




- Check all hydraulic cylinders, hoses, and connectors for leaks
- Inspect the tires
- Make sure the forklift has a fire extinguisher on board, that it's fully charged, and that it has an up to date inspection tag

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- Verify that the seatbelt works
  - Be sure the seat bottom and back are secure
  - Adjust the mirrors to the correct positions

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- Test the horn lights and back up alarm
  - After starting the forklift, make sure that all gauges are in normal range
  - Test the brakes and parking brake to ensure there is no movement when they are applied

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- Move the lift forward and backward, and left and right to make sure it maneuvers properly. Listen for loud or unusual noises
  - After you've moved the lift, check the ground underneath for signs of fluid leaks



A FORKLIFT IS NOT AN AERIAL  
LIFT. NO ONE IS EVER  
ALLOWED TO USE THE  
FORKS OR A PALLET AS AN  
ELEVATED WORK PLATFORM.



