

Material Handlers

Definition: A material handler consists of an upper carriage with hydraulically operated attachment revolving 360° and is mounted to either a wheeled or crawler undercarriage. Material handlers may also be mounted on a truck, a rail car, or on a fixed pedestal. The front end of the attachment consists either of a multi-tine grapple, a clamshell attachment, or a magnet.

Material handlers pose a wide range of risks during normal operation, not only to the operators but also to maintenance personnel and others nearby.

Primary Hazards

Falling and projected objects

Slipping and falling

Cutting

Pinching and crushing

Burning and explosions

Safety Solutions

Wearing personal protective equipment

Pre-startup inspections

Scheduled inspections and maintenance

Safe operating and working procedures

Employee safety training

Operator and maintenance training

Pre-Start-Up Procedure and Inspection

Ensure that the operator is properly trained and certified to operate the machine

Identify clear and safe approaches to the machine such as pedestals, catwalks, platforms, ladders and steps

Perform a detailed walk-around inspection of the machine and jobsite surroundings

Check for the presence of all safety devices, loose pin and bolt connections, wear and tear items, hydraulic and fuel leaks, and structural damage of any kind

Pay attention to obvious maintenance deficiencies including, but not limited to, clogged radiator and cooler cores, combustion air intake system, frayed or otherwise damaged hoses, hose assemblies, or leaking hydraulic lines

Never attempt to operate a defective or damaged material handler

Climb up, facing the machine using a three-point stance

Perform the daily maintenance as outlined in the manufacturer's manual

Verify that all maintenance has been completed and documented

Ensure that all doors are unlocked but closed and secured

Ensure that all windows and mirrors are clean and not obstructed. Mirrors must be properly positioned for best possible visibility

Adjust the seat and armrests to the most comfortable position

Ensure the area of operation is clear of personnel and obstructions

Sound the horn to alert anyone in the vicinity of the machine

Ensure that other personnel are aware that the machine has started and the operation commences

Operate the machine only outdoors or in a well ventilated interior space

Starting and Operating the Material Handler

Maintain good communication and visibility at all times

Use one of the signals to alert all personnel in the area of the impending machine operation

Sound the horn twice

Energize the beacon or flasher light (if applicable)

Start engine as specified by the manufacturer and allow systems such as coolant and hydraulic fluid to warm up to operating temperatures

Test all machine and attachment functions and brake systems

Bring the machine into proper working position and begin operation

During operation, make sure that attachments sufficiently clear buildings, power lines and other obstructions

Be sure to operate within the machine attachment's lifting capabilities at all times

Use slow, progressive movement when operating attachment functions such as boom, stick, and grapple or magnet

Shut-Down Procedure

Park the machine on level and firm ground

Align the upper deck with the undercarriage, install house lock pin if applicable

Lower the attachment completely to the ground

Engage the parking and swing brake functions

In case of an emergency, if the machine stops on an incline, lower the attachment completely to the ground and use the appropriate blocks/chucks to keep the machine from rolling downhill

Disengage the safety lever and shut down the engine

Gradually reduce the engine speed and idle it for five minutes prior to shut-off

Work joysticks in a circular motion to relieve pressure

Shut and secure windows and covers and lock doors

Climb down facing the machine using a three-point stance

Remove the battery disconnect switch (if applicable)

Maintenance Procedure

Always follow the manufacturer's scheduled and preventive maintenance and inspection procedures and instructions

Prior to any maintenance and/or repair service follow the proper lock-out/tag-out procedure

Visitors / Vendor / Supplier Alert

Post safety signs that inform of all jobsite hazards

Inform visitors, vendors and suppliers to maintain the proper and safe distance from operational equipment, especially in the loading and unloading area

General Safety Instructions

Make the operator aware of the dangers and risks involved with the operation of this machine

Train every employee what each warning signal or audible alarm represents

Identify potential areas where flying debris may occur

Frequently check the placement of safety signs and make certain they are legible and complete. Replace missing or illegible safety signs at once

Adhere fully to the instructions on the safety signs

Identify and cordon off or mark specific areas that are prohibited to enter during operation

Ensure that trip and falls hazards are kept out of drive and walk ways

Always follow good housekeeping procedures