

ERGONOMICS: GROUNDS & MAINTENANCE

Preventive Measures and Controls

Extreme Weather Conditions

- Dress in layers, preferably fabrics made of wool, cold weather synthetics or blends. Avoid cotton which does not wick perspiration readily.
- Stay dry as water and perspiration decrease thermal retention of most fabrics.
- Keep your extremities covered, especially your head and hands, since those are the areas where you lose most of your body heat.
- Avoid caffeine and tobacco products as they are well recognized as vasoconstrictors.
- Take periodic breaks in warm, dry areas to warm up.
- Beware of ice, snow and other hazards when walking and maneuvering.
- Wear loose, comfortable clothing, preferably made of natural fabrics.
- Beware of the progressive signs of heat exhaustion and heat stroke.
- Take periodic breaks and drink plenty of fluids, avoiding caffeinated beverages.
- If you are working outdoors, pay attention to sun exposure by wearing a wide brim hat and using high SPF-rated sunscreen.
- Be aware that perspiration can make your grip slippery.

Loading and Unloading Equipment

- Be sure that motorized equipment is unable to be started and that the fuel has been drained or sufficiently contained prior to use.
- Only move equipment that you can safely handle.
- Tie off or remove any loose parts or components that may become loose.
- Large equipment should be rolled off trucks using ramps or trailer gates.
- Small equipment should be moved in crates, boxes or strong bags such as canvas.
- Be careful of sharp or rough working parts of all equipment.
- Lift and place equipment off of platforms or trucks above the height of your knee and below your chest.

Materials Handling

- Minimize repetitive actions by rotating tasks as much as possible.
- Reduce the size and weight of the load to make handling easier.
- Be mindful and protect against sharp edges. Use gloves, coveralls and safety shoes.
- Lighting, temperature and humidity can all contribute to the likelihood of an accident occurring. Evaluate the environmental conditions and postpone the work until conditions improve.

Handling Bagged Materials

- Straddle the end of the bag.
- Bend your hips and knees and keep your back straight.
- Grasp the bag with both hands under the end closest to you.
- Thrust the bag up with your knee while straightening your body.
- Put the bag on your shoulder.
- Avoid unloading a bag from your shoulder directly to floor level. Use an intermediate platform.
- Avoid twisting and side bending while lifting.

Vehicles

- Inspect the vehicle from the exterior for any obvious defects or dangerous conditions prior to use.
- Position seat, mirrors, radio and working papers at the start of shift to your size and configuration.
- Avoid keeping bulky or sharp objects in your pockets or utility belts when seated for long periods of time.
- Take periodic breaks while driving for an extended period of time.
- Minimize twisting while using in-vehicle communications or other tools.
- Assess the weight and position of heavy or awkward objects prior to moving them from the trunk, vehicle cargo area or bed. Beware of any load-shifting and respect the force of gravity on tilting objects or stacked materials.
- Pay particular attention to road and walking surfaces.
- Maintain high visibility of other motorists and use caution when stopping for loading or unloading.

Lifting

- Identify and assess the weight of the load.
- Be sure your path and planned end location is free of obstacles and debris.
- Stretch your muscles prior to lifting to warm up.
- Stand close to the load and face the way you intend to move.
- Use a wide stance to gain balance.
- Keep your arms straight.
- Lift the load as close to your body as possible.
- Lift smoothly without jerking.
- Avoid twisting and side bending while lifting.

Handling Drums and Barrels

- Use mechanical aids whenever possible and never attempt to raise a full drum without assistance.
- Make sure the drum is empty.
- Stand at the end of the drum.
- Place one foot forward of the drum.
- Bend your knees and hips and keep your back straight.
- Set the drum on its base by moving your back leg forward, using your body to counter the weight of the load.

Moving Drums and Barrels

- Stand close to the drum with your feet apart with one foot at the front and the other behind.
- Keep your knees slightly flexed.
- Put your hands firmly against the upper rim of the drum.
- Keep your arms straight with elbows locked.
- Rock the drum gently to get the feel of the contents before moving it.
- Push the top of the drum away by extending your back leg and shifting your body weight to your front leg.
- Stop tilting the drum at the balance point. Use your back leg as a counter balance.

Handling Bulky Sacks

- Move the sack to the edge of the platform.
- Put your back against the sack.
- Grasp it with both hands on the upper corners.
- Ease the sack onto your back, bending your hips and knees before taking the weight.
- Keep your back straight
- Stand up and straighten your hips and knees.

Powered Equipment

- Proper maintenance and adjustments are important to safely work with powered equipment and reduce the strain and load on your body. Before starting the equipment, verify that all wheels, levels and controls move freely and solidly. Adjust the handles, seats and controls for your comfort.
- Whole-body vibration typically occurs when machinery vibration passes through the buttocks of the seated individual or the feet of a standing individual. The most widely reported injury is back pain, Good preventive strategies include:
 - Proper seat adjustment.
 - Proper speed of operation.
 - Avoiding irregular ground as much as possible.
 - Having equipment properly and regularly maintained.
 - Participating in job rotation.
- Hand-arm vibration typically occurs when using powered tools such as:
 - Chainsaws
 - Trimmer,
 - Brush cutters
 - Mowers

Chainsaw Work

- The weight of a chainsaw places a strain on your back. Try to get the work at a weight where you can more easily support the chainsaw on the tree without stooping.
- When making the felling cut on a tree, support the weight of the saw by bracing your forearms on your thighs or knees.
- Rest the saw on your thigh when you are cross-cutting or cutting branches to take the weight off of your lower back.
- Keep close to the saw to reduce strain and avoid kickback.