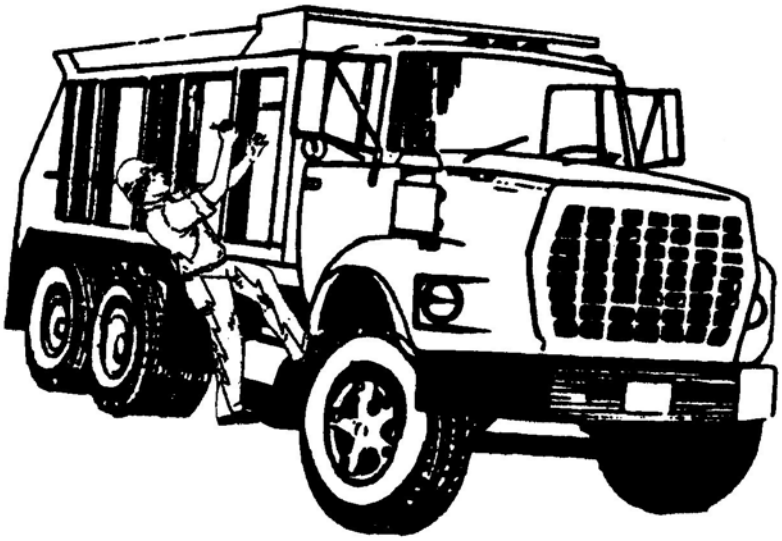
CONSTRUCTION SAFETY ASSOCIATION OF MANITOBA

CONSTRUCTION SAFETY EDUCATION PROGRAM

#18

PROPER MOUNTING / DISMOUNTINGOF CONSTRUCTION EQUIPMENT



This education program provides a guideline for creating a safe work environment. It is intended to give contractors and workers practical information relating to proper mounting and dismounting of construction equipment.

This education program contains general information. For specific regulatory requirements, please consult the appropriate regulation(s) adopted under the Workplace Safety and Health Act and the Canadian Safety Association Standards (CSA)

SAFETY PROGRAM

Each year in our construction industry, lost-time injuries occur to drivers, operators mechanics working with construction equipment. Approximately 1/4 to 1/3 of these injuries are from getting on or getting off the machine.

Bumps, cuts, sprains, fractures and fatalities occur when personnel jump down, slip, trip, or fall while attempting to climb onto or dismount from construction equipment.

As with most areas in construction, the machines and equipment you encounter are numerous and may differ greatly. The proper mounting and dismounting procedure from construction equipment will vary dependant upon what machine and specific manufacturing design you are working with. Care must be taken to ensure you are familiar with the particular machine or equipment you are mounting / dismounting.

A review of some basic common safe work procedures associated with mounting and dismounting of construction equipment can help you be aware of the hazards and reduce you risk of injury:

- Look before and where you step
- Use every available hand - hold
- Maintain 3-point contact
- Step squarely, never at an angle
- Never attempt to mount / dismount from moving equipment
- Never jump off equipment

To reduce the likelihood of workers becoming injured while attempting to mount or dismount from equipment, three main areas should be reviewed:

1. Operator Training
2. Machine Design
3. Machine Maintenance

OPERATOR TRAINING

Operators, drivers and maintenance personnel should be instructed in proper mounting and dismounting procedures for each piece of equipment they use. Procedures should be based on basic fundamental concepts such as the three-point contact.

Other points to be emphasized are:

- Maintain three point contact at all times
- Mount and dismount facing the machine
- Never jump from a machine
- Look before and where you step, taking conscious time
- Step squarely, never at an angle
- Never get on or off a moving machine
- Be conscious of the clothing you where, especially in winter

THREE POINT CONTACT

Three point contact will be the most valuable lesson to learn in safe work procedures for mounting / dismounting of construction equipment. This can be related to ALL climbing or descending actions you may take.

Three point contact is exactly that 3 POINTS OF CONTACT. To do this you must at all times have contact with one hand and two feet or two hands and one foot.

With this three point contact, a triangle is formed with the workers body being the center of mass. The closer together or smaller the triangle, the more stable you will be.

MACHINE DESIGN

Due to the wide variety or equipment and machines used in construction, operators should ensure they are familiar with particular machine they will use.

Dependant on manufacturer design, sufficient handholds and footholds should be provided to enable three point contact while getting on or off the machine. Handholds and footholds should be of a solid material in a fixed position. Chains used as footholds are not acceptable as they do not provide a stable surface.

In addition, painting of the proper access route with an obviously contrasting color to the machine should be considered. Skid resistant material on steps will aid in the prevention of slipping.

MACHINE MAINTENANCE

Prior to doing any maintenance work on the machine, the operator or maintenance personnel must ensure machine is out of gear and guard to ensure accidental movement is eliminated.

Maintenance programs should be established for all equipment and should cover at least the following provisions regarding access:

- Broken or missing handholds and footholds are repaired or replaced immediately.
- Worn of slippery surfaces of the access route should be replaced with skid-resistant surfaces

Good housekeeping is very important to machinery and equipment, especially in regard to the access route for mounting and dismounting. Housekeeping is usually the responsibility of the operator, not just maintenance personnel.

Running-boards, treads, steps, footholds and platforms must be kept clear of mud, ice, snow, grease and other hazards that can cause slips, trips or falls. To assist with maintenance it may be advisable, especially on sites with large numbers of vehicles and machines, to provide hot water, cleaning equipment, etc. However, simple cleaning of access facilities is usually adequate and can be readily done with hand tools.

Clothing has a bearing on some of the problems associated with mounting and dismounting of construction equipment. It is recommended that loose or torn clothing be avoided where possible, as it may become caught on equipment or otherwise interfere with use of the access route.

During the winter season, operators and maintenance personnel wear clothing that tends to be bulky. Heavier footwear and gloves can hamper climbing. Caution, care and extra time must be used when mounting and dismounting from construction equipment during the winter.

SELF - TEST

REVIEW QUESTIONS

1. Each year approximately _____ to _____ of lost-time injuries to drivers, operators and mechanics are from getting on or off the machine.

2. List three examples of common safe work procedures for mounting and dismounting of construction equipment. _____

   _____

   _____

3. The three main areas to be reviewed in order to reduce the likelihood of workers becoming injured while mounting or dismounting from equipment are _____training, machine _____ , and _____ maintenance.

4. The most valuable lesson to learn in safe work procedures for mounting and dismounting of equipment and all climbing is _____.

5. The _____ together or smaller the triangle the more stable you will be.

6. Operators should ensure they are _____ with their particular machine.

7. Hand-holds and foot-holds should be of a _____ material in a fixed position.

8. Good _____ is very important especially in regard to the _____ route. It is usually the responsibility of the _____.