Heavy Equipment (Four Other Hazards) Meeting Kit

TYPES OF HEAVY EQUIPMENT

Heavy equipment can be classified into the following categories based on the type of operation:

- excavating equipment
- lifting equipment
- loading and hauling equipment
- compaction equipment
- grading and finishing equipment
- paving and surface
- treatment equipment

HEAVY EQUIPMENT HAZARDS

Here are some key points to keep in mind when working around heavy equipment.

Poor Repair or Service: Poor repair may include repairing by an unauthorized person. Such repairs or servicing of equipment may jeopardize the safety of operators and others due to mechanical failure of heavy equipment.

Obstructed View While Backing: Due to the size of heavy equipment, equipment operators have obstructed view and blind spots while backing. Dirty or broken windows may also block an operator’s view of people or objects posing potential hazards.

Striking People and Collision with Other Equipment: Heavy equipment usually operates near other heavy equipment and on-foot workers. The interactions between the heavy equipment and on-foot workers are not always coordinated.

Caught Between Equipment and Objects: Many incidents have occurred

in work areas where on-foot workers are caught between heavy equipment and other fixed objects or crushed between the equipment.

Riders Falling Off Equipment or Buckets: Although not permitted, casual riding of the equipment by workers (other than the operators) has been the cause of many construction workplace accidents.

Overturning of Equipment: Overturning of equipment can occur when the load on the equipment is more than the capacity of the equipment. Overturning also occurs when one side of the equipment is on unstable or loose ground or on a depressed area.

Driving at Excessive Speeds: Heavy equipment is not designed for excessive speeds. However, if they are not loaded, the operators may tend to drive at higher-than-normal speeds causing hazards to on-foot workers and others on site.

Unexpected Electrical Shock: Heavy equipment can come in contact with overhead and underground power lines that cause electrical shock or electrocution.

Failure of Lifting Mechanisms/Operational Failures: Such failures can occur in lifting equipment either due to the mechanical failure or lack of proper knowledge of the lifting mechanism.

Injuries to Operators Due to Ingress/Egress Difficulties: Poor ergonomic design and improper ingress and egress practices (e.g., jumping out of the cab instead of coming down slowly) can cause injuries to equipment operators.

Runaway Machines: Runaway occurs when the wheels are not blocked upon parking or when operators are not able to control the equipment.

Overhead Obstructions: Being struck by limbs of trees or other overhead obstructions and moving equipment can occur when the operators are unaware of the limbs of trees or other fixed overhead objects.

FOUR OTHER HAZARDS RELATING TO THE USE OF HEAVY EQUIPMENT

There are also other hazards relating to heavy equipment operation that can result in frequent injury.

1. **Slips, trips, and falls** are some of most common types of incidents that result in injuries to workers. Operators of heavy equipment are not exempt from these incidents occurring to them. Climbing into the cab of equipment or walking on the slick surfaces of a machine are two common occurrences that can result in a slip, trip, or fall injury for an operator.
2. **Pinch points** are in many different places on a piece of heavy equipment. Door jams or equipment hoods are two common pinch point locations where operators injure fingers.
3. **Loose cargo** can lead to injury due to an operator losing control of their equipment. A loss in control results from an operator being distracted from their work due to objects moving around in their cab. Another way loose cargo can lead to an incident is when an object that is not secured gets stuck in a control or under a pedal of the equipment.
4. **Leaks on equipment** can lead to multiple different types of injuries or property loss. A leak in a pressurized line is especially hazardous. Hydraulic lines that are leaking can inject fluid underneath the skin of a worker. This kills tissue which often results in amputation of the affected body part if not treated quickly. Leaking equipment can also lead to a slip incident for those workers who happen to step on the fluid.

BEST PRACTICES TO MITIGATE THESE OTHER HAZARDS

- Always use three points of contact when climbing into the cab of heavy equipment.
- Clear boots and steps of any mud to avoid slick conditions.

- Watch hand placement and avoid pinch point areas. Ensure equipment guards are in place and functioning to avoid hands or body parts from being caught-in or between them.
- Maintain a clean cab. Ensure any items within the cab are tied down or secured properly.
- Always complete a pre-use inspection prior to using heavy equipment. Tag out equipment that has leaks until it is properly repaired.
- Never check for leaks on pressurized lines with your hands, even while wearing gloves.

FINAL WORD

It is important to remember that there are many hazards present while operating heavy equipment. While it is critical to eliminate the chance for struck-by incidents, caught-in or between incidents, and tip overs occurring, it is equally important to protect yourself from these other hazards mentioned in this talk.