

Case 357. 24-year-old ramp agent died when he was pinned by a 2001 Tug 660 Belt Loader Wide Body conveyor against a plane.

A 24-year-old ramp agent died when he was pinned by a 2001 Tug 660 Belt Loader Wide Body conveyor against a plane. The decedent was a member of a three-person crew who were preparing to load a plane parked at an airport gate. The decedent was to open the plane's right side back cargo door. Coworker 1 walked to an office to get a scanner. Coworker 2 was driving a 2001 Tug 660 Belt Loader Wide Body that was owned by another company and leased to the decedent's employer. The belt loader was used to load luggage/cargo onto the plane. The decedent's employer was required to maintain the equipment and train their employees on its use. While the decedent was attempting to open the cargo door, Coworker 2 drove the belt loader and positioned it approximately six feet away and directly behind the decedent. The decedent was having trouble opening the cargo door. Coworker 1 was walking back to the plane and witnessed the incident. Coworker 2 saw the decedent having trouble with the latch and wanted to help/show him how to open the cargo door. Coworker 2 pushed the belt loader's shift lever forward thinking the loader was in neutral (it was still in gear), took his foot off the brake, and quickly jumped off the loader. Because the loader was in gear and the emergency brake was not set, the loader lunged forward, crushing the decedent between the end of the conveyor on the belt loader and the side of the plane. Coworker 2 got back on the loader, placed it in reverse, and backed up. While awaiting emergency response, the airplane's fueler performed CPR. The decedent was transported by emergency personnel to a local hospital where he was declared dead.

The MIOSHA compliance officer found:

- The shifting mechanism moved freely from neutral to drive and back to neutral. The detents were adequate to hold the shifter in place when in neutral or drive.
- The emergency brake, when engaged, held the vehicle in place when the shift was in neutral. When the vehicle was shifted into drive with the emergency brake set the vehicle moved approximately 12 inches before stopping.
- The brakes were adequate to stop the moving vehicle immediately and completely when compressed.
- The idle was set to a point that with the vehicle in gear and idling when the brake was released the vehicle rapidly moved forward.

The MIOSHA compliance officer, a ground safety mechanic and a representative of the company leasing the belt loader conducted several belt loader operational tests. The ground safety equipment mechanic was asked to perform specific tests on the emergency brake and the motor idle. The loader's idle was found to be set at 700 rpm with a battery voltage output at 14.8 volts and the distributor set at approximately 2:30-3:00 o'clock. These settings were the routine operational settings for the belt loader. The ground safety equipment mechanic stated these were all normal settings when performing a preventative maintenance on this piece of equipment. The

MIOSHA compliance officer asked the ground safety mechanic he was familiar with the Owner Operator manual and he replied yes, he has one in the maintenance shop. The MIOSHA compliance officer referenced the specification section and found that the recommended idle setting for this belt loader was 500-550 rpm. The representative of the belt loader leasing company indicated that if the idle was set at 500-550 rpm the battery output will be too low to operate the equipment properly. The MIOSHA compliance officer asked the mechanic to lower the idle and do the same check as before. With the idle at 550 rpm, the battery output was 14.5. The mechanic said this was a very good setting to have. At 550 rpm the mechanic placed the belt loader in forward gear, released the emergency brake, and then took his foot off the brake. The belt loader traveled slowly forward. When the vehicle was shifted into drive, with the emergency brake set, the vehicle did not move.

The MIOSHA General Industry Safety and Health Division issued the following Serious citations to the firm at the conclusion of its investigation:

Serious: POWERED INDUSTRIAL TRUCKS-Part 21

- 408.12154(1): An employer shall provide the employee with a permit to operate a powered industrial truck only after meeting the requirements prescribed in R 408.12151, and R 408.12153.

The employee was not provided with an operator permit while operating a belt loader.

- 408.12152(3)(b): Refresher training in relevant topics shall be provided to an operator under any of the following conditions: (b) an operator has been involved in an accident or a near-miss incident.

The employee did not receive refresher training after being involved in an accident while operating a 2001 Tug Belt Loader Wide Body.

- 408.12171(1): At the start of each shift, the operator of a powered industrial truck or a qualified employee shall perform daily checks of the equipment as required by the employer.

The employee was not required to perform daily checks on the 2001 Tug Belt Loader Wide Body with the parking brake set and the belt loader at an idle. The belt loader moved forward approximately 12-inches before stopping.

- 408.12172(1): An operator shall safeguard other employees at all times.

The employee was not required to safeguard other employees while operating a 2001 Tug Belt Loader Wide Body. After the accident, the parking brake was tested. With the parking brake set and the belt loader at an idle, the belt loader moved forward

approximately 12-inches before stopping. The Operation, Maintenance, and Parts manual states when the parking brake is engaged, the belt loader will not move even if shifted into gear.

- 408.12172(2): An operator shall not drive a truck up to anyone who is standing in front of a fixed object.

The employee was not restricted from driving the belt loader up to an employee standing in front of an airplane.

- 408.12171(2): An employer shall ensure that any defects that would affect the safe operation of the equipment shall be repaired before use.

The employee was not restricted from using the 2001 Tug Belt Loader Wide Body with defects that affected the safe operation. The engine idle was set at approximately 700 RPMs. The Operation, Maintenance, and Parts manual recommends the idle to be set approximately 500-550 RPMs. After the accident, the parking brake was tested. With the parking brake set and the belt loader at an idle, the belt loader moved forward approximately 12-inches before stopping.

- 408.12161(1)(a): An employer shall not permit a powered industrial truck to be used if:
(a) The service and parking brakes do not perform their intended function.

The employee was permitted to use the 2001 Tug Belt Loader Wide Body with an inadequate parking brake. After the accident, the parking brake was tested. With the parking brake set and the belt loader at an idle, the belt loader moved forward approximately 12-inches before stopping.