



# Worker fatally injured when crushed by falling pipe

October 30, 2021

---

# Summary of investigation and outcomes

## Background information

### Work site parties

#### Employer

The employer, Sonic Coating Solutions Inc. (Sonic) was a medium sized employer (under 30 employees) based out of Leduc, Alberta. Sonic completed abrasive blasting and industrial coatings for a variety of industries and had been in operation since being founded in 2013.

An abrasive blaster was fatally injured in the incident.

#### The work

The abrasive blaster was assisting in movement of the loads of pipe between the buildings when they were fatally injured after being struck and pinned by the pipe. An abrasive blaster's responsibilities included preparing equipment for the industrial coatings process.

## The work site

The work site was located at 3914 77 Avenue, Leduc, Alberta (Figure 1).

The work site was a large rectangular lot filled with a variety of equipment. The incident occurred in the entrance to a bay in the main building.



*Figure 1. Post incident Google map view of the work site.*

- A. Abrasive blasting building.
- B. Paint bay entrance in main building where incident occurred.

## Industry code

The Workers' Compensation Board – Alberta (WCB) categorizes this industry as 42120 Sandblasting.

## Equipment and materials

### Abrasive blasting building

The abrasive blasting building was located on the northwest end of the yard (Figure 2) and was large enough to accommodate loads of varying sizes including the longer sections of pipe for the project. Commercially manufactured sawhorses, (also known as “bunks”) had been placed throughout the building to accommodate the pipe sections for blasting.



**Figure 2.** Post incident view of the bunks in the abrasive blasting building for pipe sections.

A. Bunks for loads.

## Paint bay 4

Paint bay 4 was the second bay from the west end of the main building (Figure 3).



**Figure 3.** Paint bay 4 entrance.

- A. Paint bay 4. This is where the incident occurred.

## Interior of paint bay 4

Bunks had been placed on either side of the paint bay to accommodate the pipe sections for painting. An unmarked walkway was situated down the middle of the paint bay to allow workers to transit from one end to the other (Figure 4).



**Figure 4.** Interior of paint bay 4 with bunks and previously moved pipe sections.

- A. Pipe sections.
- B. Bunks for loads.
- C. Unmarked area allocated as the walkway for worker access.

## **Wheeled loader**

The pipe sections were being moved, throughout the task, from the abrasive blasting building to the paint bay by a Hyundai Model: HL 955TM wheeled loader (Figure 5).



*Figure 5. Hyundai HL 955TM wheeled loader.*

## Attachments mechanical boom pole

An AMI Attachments Model: 757TM-9 Q mechanical boom pole (jib boom) (Figure 6) was affixed to the quick coupler of the wheeled loader boom. The dimensions of the jib boom were 2.7 metre (m) retracted and 4.4 m extended. The weight of the jib boom was 725 kilograms (kg). The jib boom had a rated capacity of 4535 kg retracted and 2720 kg extended. Affixed to the front of the jib boom were the attachment points for the load.

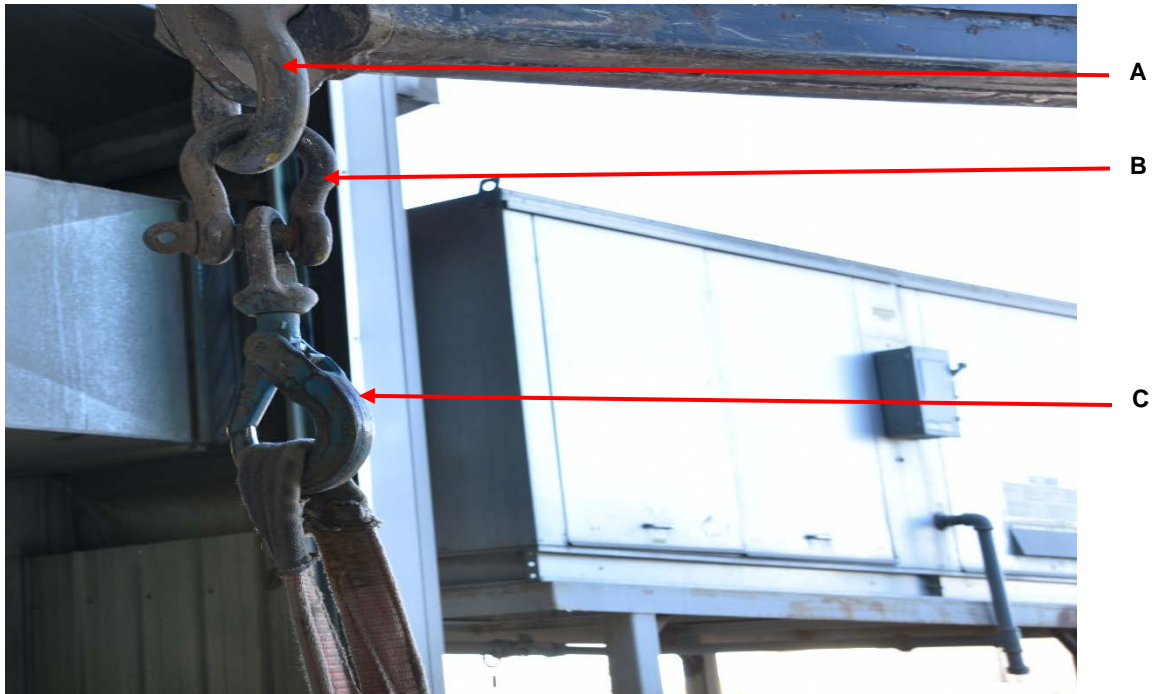


**Figure 6.** AMI Attachments jib boom.



## Load attachment points

The following components were attached to the jib boom as load attachment points and are listed from top to bottom. (Figure 7).



**Figure 7.** Load attachment points.

- A. Crosby shackle.
- B. Gunnebo shackle.
- C. Gunnebo safety swivel.

## Synthetic fibre sling

A Tufflift, Model EE4-904 10-foot, type 4 synthetic fibre sling (sling) secured to the pipe choker style, was the final attachment point for the load (Figure 8). The rated capacity of the sling in this configuration was 7983 kg.



**Figure 8.** Synthetic fibre sling secured to pipe.

A. Synthetic sling.

## Pipe section

The load being moved was a section of steel pipe (pipe) to be painted (Figure 9). The pipe dimensions were 18 m length and 28 cm outside diameter. The pipe weight was 1494 kg.



**Figure 9.** Section of pipe involved in incident.

- A. The area where the worker was when they were struck.
- B. Section of pipe that struck worker.

## Wheeled loader joystick control

The movement of the load was controlled by the joystick located in the operator's compartment (Figure 10). The joystick was powered on when the wheeled loader was started and remained live as it was not equipped with a "deadman" switch, which would have prevented accidental activation.



**Figure 10:** Operator's compartment of Wheeled Loader.

- A. Wheeled loader steering wheel.
- B. Joystick.

## The incident

### What happened

On Saturday, October 30, 2021, four workers were transferring pipe with the assistance of a wheeled loader, from the abrasive blasting building to the paint shop for painting. One of the workers sustained fatal injuries when a section of pipe being moved by the wheeled loader dropped suddenly and struck the worker.

### Facts and findings

- Sonic workers were scheduled for a Saturday day shift on October 30, 2021, in order to meet a deadline of the following Monday.
- Work for the day included moving pipe sections from the abrasive blasting building to paint bay 4. The pipe sections were long and heavy, at approximately 18 m and 1494 kg.
- The loader operator prepared the wheeled loader to move the pipe sections. This was done by attaching a mechanical boom pole (or jib boom) and AMI Attachments to the quick coupler of the wheeled loader boom. Further attachment points were used, including shackles and a swivel safety hook (Figure 7).
- The abrasive blaster secured the pipe to the wheeled loader using a synthetic fibre sling, choker style (Figure 8). No tag lines were used.
- The loader operator reached out of the right window to prevent the swinging load (pipe) from striking the side of the machine.

- The abrasive blaster was positioned in an area of significant restricted visibility on the right side of the loader when struck by the pipe.
- The jib boom control joystick was not equipped with a 'deadman' switch, which would have prevented accidental activation.
- The movement of the loader operator caused them to strike the jib boom control joystick, which caused the load to drop.

## Mechanism of injury

Mechanism of injury: struck by falling object.

## Likely cause

The loader operator inadvertently contacted the jib boom controls. This caused the pipe to drop and strike the worker.

## Outcomes

### Work site parties

#### Employer

Sonic implemented the following corrective actions to prevent recurrence:

- System for identifying new workers on shift.
- Competency program for each position (labourer, coater, abrasive blaster, operator, rigging and spotting).
- A supervisor training handbook was created for supervisors as well as an associated competency form.
- An annual review of managers and supervisors was to be implemented along with a yearly safety meeting.
- Sonic stopped accepting work involving pipe sections that were considered too long to safely move from the abrasive blasting building to a paint bay.
- Sonic ceased business operations shortly after the incident and filed for bankruptcy.

#### OHS

On May 26, 2023, Alberta Occupational Health and Safety (OHS) laid 14 charges against Sonic Coating Solutions Inc.

On May 22, 2024, Sonic Coating Solutions Inc. pleaded guilty to a contravention of section 3(1)(a) of the *Occupational Health and Safety Act* (failure to ensure, as far as it is reasonably practicable to do so by preventing a worker from standing in proximity to or under a suspended load, the safety of workers engaged in the work of that employer).

At sentencing, Sonic Coating Solutions Inc. was fined a total of \$350 000. The fine amount included a 20 per cent victim fine surcharge, which is a mandatory fine surcharge imposed on a convicted party of an offence under provincial laws. The surcharge is directed to the Victims of Crime Fund.

## Related information

### Key prevention messages

- Before work begins, employers must assess the work site to identify existing or potential hazards. If hazards cannot be eliminated, they must be controlled.
- An employer must ensure that work is arranged, if reasonably practicable, so that a load does not pass over workers.
- A worker must not stand or pass under a suspended load unless the worker has been effectively warned of the danger and the operator of the lifting device knows the worker is under the suspended load.

## Additional resources

For annual workplace injury, illness and fatality statistic reports and infographics, go to [alberta.ca/ohs-statistics.aspx](https://alberta.ca/ohs-statistics.aspx).

## Statement of completion

This summary was completed by the Government of Alberta.

June 19, 2024

© 2024 Government of Alberta

The information provided in this material is a summary only, is solely for the user's information and, while thought to be accurate, is provided without warranty of any kind. For confirmation of legal requirements, please refer to the current edition of the *Occupational Health and Safety Act*, Regulation and Code, or other applicable legislation. Further, if there is any inconsistency or conflict between any of the information contained in this material and the applicable legislative requirement, the legislative requirement shall prevail.