

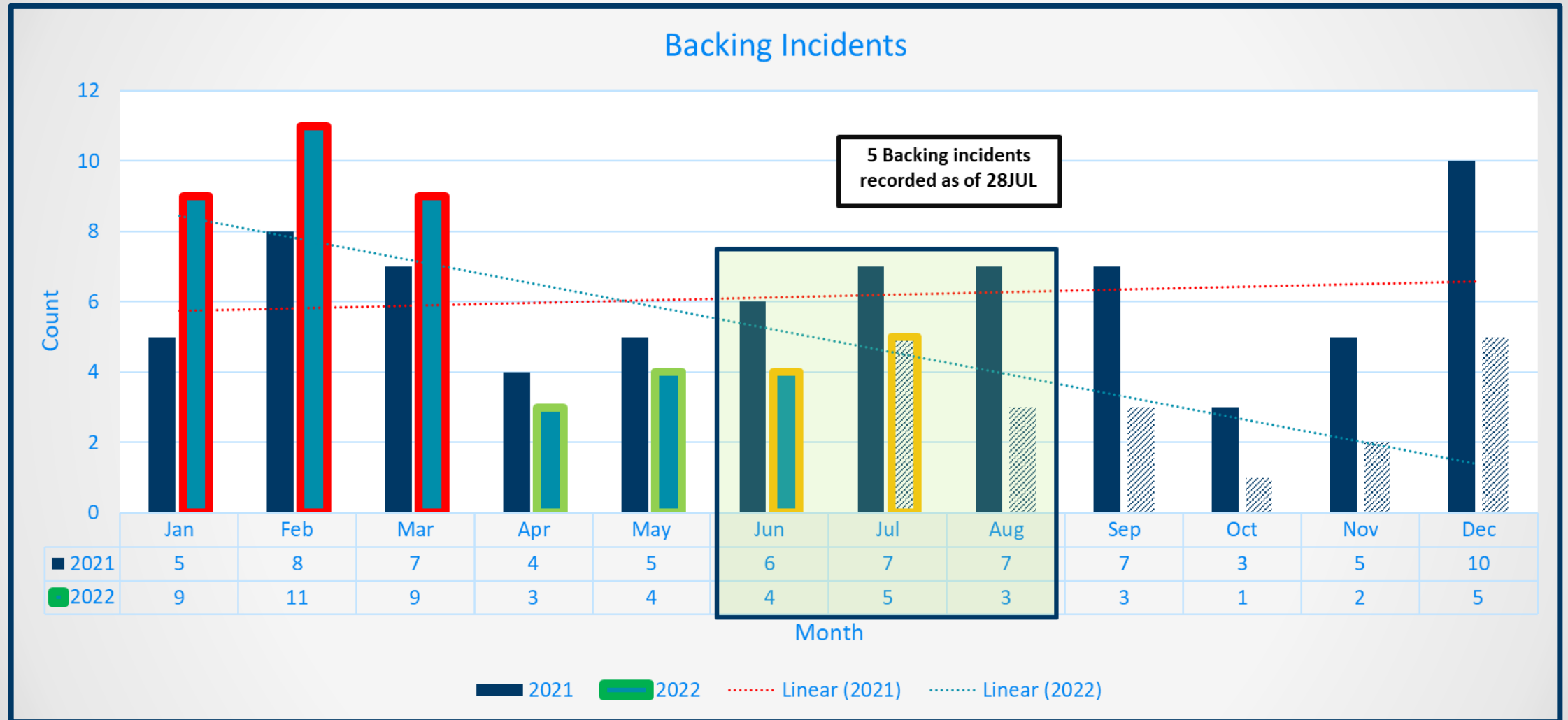


## Backing Incidents – Incident Review

The purpose of this incident review packet is to learn from recent past incidents and review MnDOT policies and best practices to prevent future occurrences.

Please review these incidents with your teams and discuss ways they can ensure this doesn't happen to them or another member of their team.

# Reminder



Summer Safety Campaign: Reduce backing incidents by 50% over the prior year.

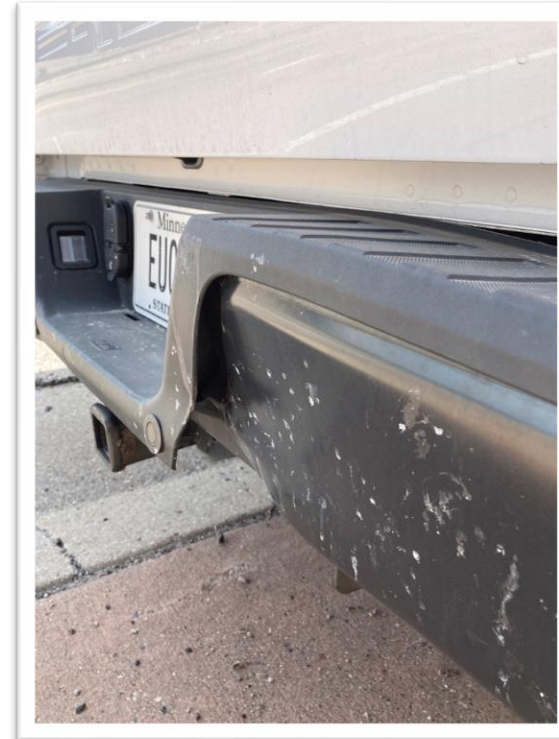
# June Incidents (1 of 4)

## Narrative:

*“Backing up on shoulder to get to a hand hole.  
Didn’t check to see if path was clear.”*

## Root Cause:

Did not follow Safety Policy. Failed to use backup camera and alarm and did not take the time to check if the area behind the vehicle was clear.



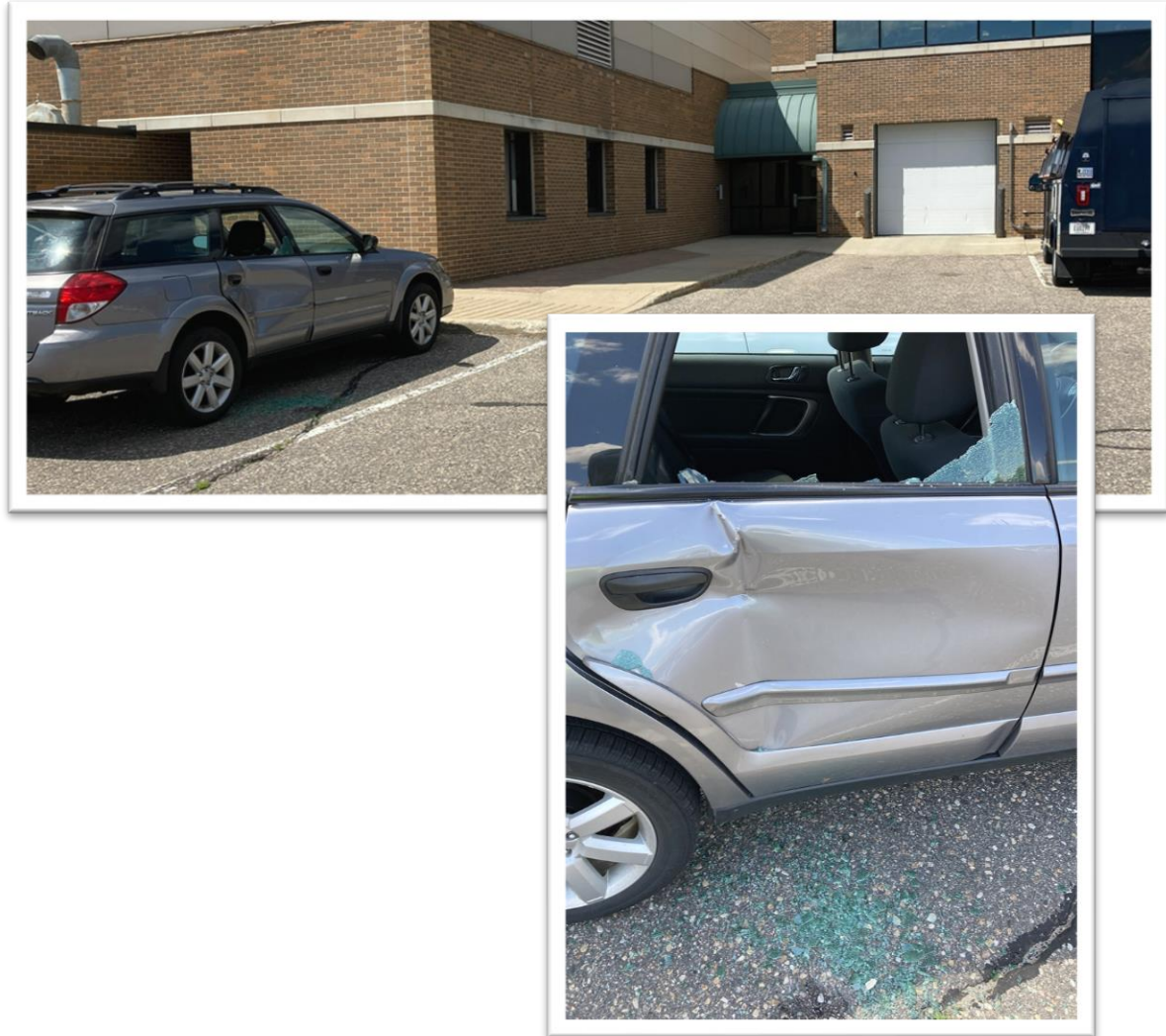
# June Incidents (2 of 4)

## Narrative:

*"I was backing up the Kubota and wasn't looking behind me and I backed into a vehicle next to the sidewalk outside our office."*

## Root Cause:

Did not follow Safety Policy. Failed to use a spotter. In absence of a spotter, failed to back slowly and cautiously.



# June Incidents (3 of 4)

## Narrative:

*“Backed up the light tower in yard to park. Turned a bit sharp while backing. the back of the one-ton metal latch made contact with the light tower panel, shattering the corner panel.”*

## Root Cause:

Did not follow Safety Policy. Failed to use a spotter. In absence of a spotter, failed to stop and re-check the path of travel and visually re-checking the area to the rear of the equipment.



# June Incidents (4 of 4)

## Narrative:

*"I was inspecting XXX construction, and I needed to backup my truck to give space to a mixer truck. And I started backing up without inspecting behind my truck, and I run into a metal piece of a machine. So I broke the back right side light.."*

## Root Cause:

Did not follow Safety Policy. Failed to walk to the rear of the vehicle and visually check for personnel or obstruction in the planned area of backward travel.



# July Incidents (1 of 5)

## Narrative:

*“When traveling south on hwy XX with class 33 and foam trailer, drove thru work zone to turn around to face north to perform work . Proceeded to next intersection, turned left on XXX Ave facing east uphill; then while performing a blind side back up with no relief on either side, the back up was shallow however with the hitch being too short, the trailer obtained impact damage as the box came in contact with the trailer.”*

## Root Cause:

Did not follow Safety Policy. Failed to use a spotter.

Separately, we are also reviewing hitch options and possibly adding hitch extension and adjustable hitch receiver options.





# July Incidents (2 of 5)

## Narrative:

*“We were working on a vertical pipe in the median. After repairing the culvert employee was going to drive the small Cat 908 loader back. As they were about to leave, instead of steering to the left and heading east, they backed up and without looking behind, they backed into the Cat Excavator. XX was spotting employee so they could turn around safely, and employee had no reason to back up to turn the loader around. XX yelled and pointed for employee to stop. They slowed a little, then hit the throttle and then contacted the Cat Excavator. The Excavator was not running and was unoccupied at the time of the incident. The excavator was parked on the shoulder waiting to be loaded back onto the trailer. The damage is to the paint only and there was no damage to the lights.”*

## Root Cause:

Did not follow Safety Policy. Failed to look before backing. Failed to follow spotter’s instructions.



# July Incidents (3 of 5)

## Narrative:

*“Was talking to paving foreman. Got back into truck to move out of tractor’s way that was cleaning up. Check my mirrors. Thought roller was backing up so I looked out my passenger side mirror to start backing up to get out of tractor’s way and backed into roller.”*

## Root Cause:

Did not follow Safety Policy. Failed to walk to the rear of the vehicle and visually check for personnel or obstruction in the planned area of backward travel.



# July Incidents (4 of 5)

## Narrative:

*“While backing to park a trailer near the cold storage building, I lost my perception between sunlight and the shadow of the building and hit the corner of the trailer and signs into the building panels..”*

## Root Cause:

Did not follow Safety Policy. Failed to use a spotter. In absence of a spotter, failed to park elsewhere until someone could be a spotter.



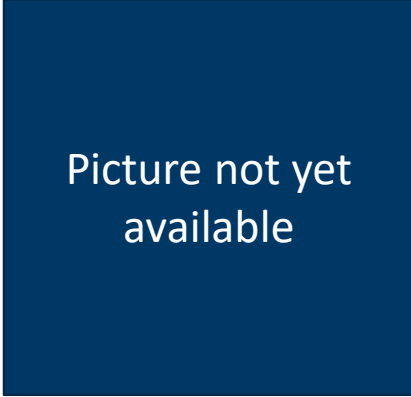
# July Incidents (5 of 5)

## Narrative:

*"I was backing into the asphalt loading tunnel and was focusing on the rear strobes because of minimal clearance and didn't realize the upper strobes were too high to clear the roof of the tunnel. The upper strobes hit the tunnel and were bent forward."*

## Root Cause:

Did not follow Safety Policy. Failed to assure adequate overhead clearance is available when backing in areas with potential overhead obstructions.



Picture not yet available

# Safety Directive – Motor Vehicle and Equipment Backing

- When feasible, park or plan the flow of operations so that backing is minimized or not required.
- One of the following must be provided:
  1. A reverse alarm, audible above surrounding noise level.
  2. An observer to signal it is safe to back the equipment.
- No backing will be made until the area to the rear of the equipment has been checked to make sure the area is free of personnel or obstructions. Also, side clearance for vehicle swing should be checked.
- Anytime another employee is available in the immediate area, they shall act as a spotter.
- If backing without a guide, prior to entering the equipment, walk to the rear and visually check for personnel or obstruction in the planned area of backward travel.
- Assure adequate overhead clearance is available when backing in areas with potential overhead obstructions.

MINNESOTA DEPARTMENT OF TRANSPORTATION  
SAFETY DIRECTIVE: Motor Vehicle and Equipment Backing  
Review Date: October 19, 2021  
Date Created: April 1, 2004  
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## MINNESOTA DEPARTMENT OF TRANSPORTATION SAFETY DIRECTIVE: Motor Vehicle and Equipment Backing

### Subject:

Motor Vehicle and Equipment Backing

### Objective:

Ensure that safe operating procedures are followed when backing a motor vehicle or motorized self-propelled equipment.

### Directive:

- A. When feasible, park or plan the flow of operations so that backing of a motor vehicle or motorized self-propelled equipment is minimized or not required to continue operation.
- B. All requirements of this directive apply regardless of whether a vehicle is equipped with a backup camera or other backing assist technology. These technologies are aids in backing safely, but are not a substitute for the requirements of this directive.
- C. For backing equipment with a restricted view to the rear, one of the following must be provided:
  1. A reverse signal alarm, audible above surrounding noise level.
  2. An observer to signal it is safe to back the equipment.
- D. No backing movement of a motor vehicle or motorized self-propelled equipment will be made until the area to the rear of the equipment has been checked to make sure the area is free of personnel or obstructions. Also, side clearance for vehicle swing when backing shall be checked. Anytime another employee is available in the immediate area, they shall act as a spotter to assist in safely backing the equipment.
  1. Guide assisted backing of equipment.
    - a. Position the guide at the left rear corner of the equipment to give the equipment operator the best line of sight.
    - b. Never permit the guide to get directly behind the equipment or in the path of intended travel.
    - c. Establish eye contact with the guide prior to backing and maintain eye contact while backing. If you lose sight of the guide, immediately **STOP** until eye contact

# Other Best Practices

- G.O.A.L. – Get Out And Look!
- 2 Beeps for a Buddy – to alert those in the vicinity that you are backing.
- Practice! Conduct vehicle backing exercises at Getting Ready for Winter Meetings.
- Hold each other accountable.

