SAFETY TALKS

Working Under Vehicles

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Conducting work under a vehicle is commonly done when a vehicle requires servicing, repairs, inspections, etc. Working under vehicles is typically done in a workshop but can also be completed at a private residence or on the side of a road. Working under vehicles presents many hazards and risks of injury increase when hazards are not controlled.

What's the Danger?

Working under vehicles can put workers at risk of near misses, crush injuries, fatalities, exposure to combustibles and flammables, musculoskeletal injury, exposure to hazardous vapours and substances, etc. Improper training, maintenance, inspections, safe systems of work, procedures, and equipment all contribute to potentially fatal consequences when working under vehicles.

The most common hazards when working under vehicles that leads to workplace injuries or fatalities are:

- Incorrect equipment was chosen to conduct the task.
- Improper use of equipment, (i.e., lift at the incorrect height - MSI).
- Improper training on the safe work procedures.
- Failure to conduct pre-use inspections on lifts or other tools and equipment used for repair.
- Failure to maintain equipment (i.e., preventative maintenance or annual inspections on lifts).
- Working alone in pits and away from the workshop without a work alone plan.
- Working underneath a vehicle with air suspension without properly propping the vehicle.
- Carbon monoxide (CO) or Nitrogen Dioxide (NO2) poisoning when air monitoring equipment is not annually inspected).
- Improper ventilation, failure to turn off vehicles indoors or use exhaust extractions systems creating cancer-causing substances, such as benzene, arsenic, and formaldehyde and other pollutants such as nitrogen oxides
- Presence of flammables/combustibles improperly grounded or stored in flammable containers or cabinets,
- Failure to prop cabs and tipping trailers.
- Failure to use correct lifting attachments properly to secure automotive parts such as engines.

Recent Incidents

1. **Improper Equipment Inspections:** One worker was operating a two-post lift, while another working was working beneath the lift. A drive nut failed causing the vehicle to fall on the worker working below, killing him. It was determined the safety backup drive nut had already previously been detached a long time earlier. This was a result of the lift not being examined or inspected prior to usage.

2. **Failure to Develop Safe Work Procedures:** A supervisor was working with a trainee on a vehicle that required the engine to be running. The trainee was assigned to inspect the underneath of the vehicle, while doing so the supervisor moved the van while the trainee was still inspecting, and it crushed the trainee to death.

3. **Working in Pits:** A self-employed worker working in a garage was found deceased while working in a vehicle pit. A car was found over the pit and the engine was running. It was believed that the worker was fixing an exhaust pipe when carbon monoxide fumes were emitted.

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Safety Tips

- ✔ Train all applicable personnel; only competent trained persons, who have received certification are authorized to conduct work and install lifts.
- ✔ Use the right equipment for the job and use all necessary equipment; do not take shortcuts.
- ✔ Never work beneath a vehicle that is only supported by jacks; use inspected axle stands for support.
- ✔ Inspect axle stands and lifts before use, and ensure they are inspected annually by a third party.
- ✔ Secure each axle stand (no more than a single pair) and ensure the stand is on a hard-level surface.
- ✔ Securely chock wheels remaining on the ground before conducting work where stops are not installed on lifts or scissor hoists.
- ✔ Do not exceed the rate capacities of the stands or lifts.
- ✔ Follow all manufacturer requirements, including maintenance instructions and fix lift floor as required
- ✔ Conduct pre-use inspections and ensure regular manufacturer inspections are completed by a competent person.
- ✔ Follow lockout procedures and ensure all equipment is locked out when any deficiencies are found including when machine is serviced, repaired, tested, cleaned, maintained, or adjusted.
- ✔ Never work beneath a cab or tipping trailer unless it is propped; lock in position and blocked before gaining access to prevent accidental failure or release of energy.
- ✔ Never crawl beneath a vehicle fitted with air or hydraulic suspension unless it is supported by an appropriately rated safety stand.
- ✔ Ensure all authorized workers are trained on the safe work procedures.
- ✔ Ensure only authorized personnel has access to the pit areas; cover or barricade openings when not in use, provide safe access routes, use barriers to identify open pits, and do not leave engines running unless there is effective extraction.
- ✔ Do not conduct pit work on non-diesel tanks, associated fuel tanks, or fuel lines where there is a risk of release.

Demonstrate

Demonstrate emergency procedures when working under vehicles.

Demonstrate how to barricade a pit area when work is being conducted.

Show workers what to look for when conducting inspections on axles, lifts, and additional applicable equipment.

DID YOU KNOW?

When performing a shake test– if it moves – you need to mount the stands somewhere else.

Discussion

Review procedures for reporting defective equipment with workers. If unable to do so, create procedures with your safety and health committee or worker representative.

Discuss where you have seen lifts being improperly used. What corrective actions can be taken to ensure lifts are safely used here at this organization.

Review safe work procedures for using both two-point, four-point lifts and scissor hoists.

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Manitoba Workplace Safety and Health Act and Regulation

Part 23 – Cranes and Hoists

ANSI/ALI ALCTV-2011, Automotive Lifts — Safety Requirements for Construction, Testing and Validation

ANSI/ALI ALOIM-2008 (R2013), Automotive Lifts — Safety Requirements for Operation, Inspection and Maintenance

ANSI/ALI ALIS:2009 (R2015), Standard for Automotive Lifts — Safety Requirements for Installation and Service

Workers Involved in this Safety Talk

Date:_____

Name	Signature

Name	Signature

Notes

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Please contact S2SA with any questions or concerns!
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