Loss Prevention T.I.P.S.
Together Improving Processes & Safety

Loading and Transporting Heavy Equipment

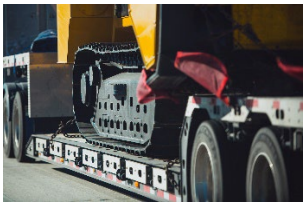
TML RISK POOL

Over the last 10 years, Risk Pool members have experienced more than 1,500 trailering-related claims, resulting in over $8 million in losses. Preventing accidents caused by improper loading or tie-down of equipment and materials is the responsibility of both operators and supervisors. Failure to adhere to standards can lead to accidents that result in equipment loss or, worse, injury to employees or the traveling public.

These points are safety reminders when loading and transporting equipment:

1. **Plan Ahead:** Before loading equipment onto trailers or trucks, carefully plan the loading process. Consider factors such as the weight and dimensions of the equipment, the capacity of the transportation vehicle, and the route to be taken.

2. **Perform Regular Inspections:** Conduct pre-trip inspections of both the equipment being transported and the transportation vehicle to ensure they are in good working condition. Check for signs of wear or damage to tires, brakes, lights, and securing devices.



3. **Selecting Proper Transport Equipment:** Select the proper truck and trailer and be mindful of weight limits and regulations. Know the trailer load limit and the total weight of the equipment, including fluids, attachments, etc. Overloading trailers or trucks compromises stability and increases the risk of accidents.

4. **Secure the Load:** Loaded equipment should be securely fastened using chains, straps, or tie-downs with a minimum Working Load Limit (WLL) of 6,600 lbs. The tie-down devices must be capable of containing a specified percent of the cargo gross weight when force is placed in the forward (80%), rearward (50%) and lateral (side) (50%) directions.

5. **Maintain Safe Speeds:** When driving loaded vehicles, adhere to safe driving speeds and maintain a safe following distance from other vehicles. Slow down when navigating corners or uneven terrain to prevent loss of control and potential accidents.

LEARN MORE WITH THESE ADDITIONAL RESOURCES:

Resources

- TMLIRP Multimedia Library Transporting Construction Equipment, Disk 157
- YouTube Video- UT Arlington TxLTAP Safety Tips when Loading Heavy Equipment
- TDI: Making roadways safer one trailer at a time
- TDI: Light-Duty Trailer Safety Fact Sheet

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Performing a Roadway Risk Assessment

TML RISK POOL

R.O.A.D. Ready is a Risk Pool program designed to save lives, prevent injuries, and protect property by raising member awareness of dangers on and near roadways. Roadway risk assessments can identify potential road safety issues and identify opportunities for improvement. As a front-line worker, you play a critical role in ensuring roadway safety. This guide helps you systematically assess risks by using the R.O.A.D Framework.

1 **Recognize the Hazards.** Monitor and document traffic volumes during different times of day. Record accidents or near misses to help identify any hazardous areas. Walk the area, and note hazards such as damaged surfaces, inadequate signage, or poor road markings.

2 **Observe People, Processes, and Equipment.** Observe any unsafe behaviors such as speeding, improper lane changes, objects/debris in the roadway, etc. Check the condition and visibility of signs, barriers, cones,etc. Ensure employees are following safety procedures and requirements.

3 **Assess the Risk Level.** Discuss the impact of the identified hazards and conditions. Evaluate high-risk hazards that may require immediate action.

4 **Determine the Safest Course of Action.** Coordinate with the necessary departments to plan significant changes such as street closures, alternative routes, temporary traffic controls, etc. Review and update implemented measures to address any new hazards.

5 **R.O.A.D. Ready Toolkit.** TMLIRP celebrates R.O.A.D Ready Month each January and encourages members to participate. The toolkit contains a train the trainer document and T.I.P.S. Sheets & posters on various topics.

LEARN MORE WITH THESE ADDITIONAL RESOURCES:

- TMLIRP R.O.A.D. Ready Program Webpage
- TMLIRP Media Library: (1) Safety First: Work Area Traffic Control – Disk #80; and (2) Roadway Worker Safety – Disk #544.
- Texas Department of Insurance: Job Safety Analysis (JSA) stpjobsafetana.pdf (texas.gov), and Job Safety Analysis Fact Sheet Job Hazard Analysis Fact Sheet (texas.gov)

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Protective Vehicles

TML RISK POOL

Protective vehicles, including barrier and shadow vehicles equipped with truck-mounted attenuators (TMAs), are essential for maintaining safety in work zones. TMAs are designed to absorb the impact of a collision. Shadow vehicles are typically large and equipped with bright, reflective markings and lights, making the work zone more visible to drivers from a distance. By providing a physical barrier and enhancing visibility, protective vehicles significantly reduce the risk of accidents and injuries in work zones or while moving equipment, making them an essential component of road safety measures. This TIPS provides guidelines on the proper placement and use of these vehicles during various types of operations.

1. **Vehicle Types and Purposes:** Barrier vehicles are used for stationary work operations to protect workers from wayward vehicles and should have a gross weight of at least 24,000 pounds. Shadow vehicles, similar to barrier vehicles, are actively adjusted during operations to maintain safety distances. Advance warning vehicles alert motorists about upcoming work zones and can be occupied or unoccupied.

2. **Proper Placement and Spacing:** Roll-ahead distance is needed to prevent the protective vehicle from being pushed into the workspace if hit. This is influenced by the vehicle's weight and traffic speed. To decrease roll-ahead distance and enhance safety, ballast such as sand or gravel to increase the vehicle's gross weight is recommended.

3. **Usage of Impact Attenuators:** Truck mounted attenuators (TMAs) are designed to absorb the impact of vehicles, protecting both work crews and work areas. Factors that determine TMA usage might include traffic volume and speed, the type and duration of work, the presence of heavy machinery for protection, and current crash history data.

4. **Operational Guidelines:** Positioning vehicles should be positioned parallel to traffic with wheels aligned with the lane striping. For mobile operations, maintain appropriate roll-ahead distances, and ensure vehicles are equipped with functional parking brakes. Stationary vehicles should be unoccupied with the parking brake set.

5. **Safety and Compliance:** All work vehicles should be equipped with approved flashing warning beacons that meet or exceed SAE Class 2 Warning Lights standards. Follow local and national guidelines, such as the AASHTO / FHWA Joint Implementation Agreement for Manual for Assessing Safety Hardware (MASH).

LEARN MORE WITH THESE ADDITIONAL RESOURCES:

- Field Guide for the Use and Placement of Shadow Vehicles in Work Zones
- Manual on Uniform Traffic Control Devices – 11th Edition - MUTCD 11th Edition - 2023 (dot.gov)
- Shadow Vehicles for Work Zones

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Safe Speed and Distance

TML RISK POOL

Job #1 when operating a vehicle, regardless of size, is to do so safely. Yet, according to the National Highway Safety Administration, US drivers are involved in 6 million auto accidents per year, with rear-end collisions account for nearly a third of these accidents, 20% of those being fatal. Collisions can range from accidents involving two vehicles to multi-vehicle collisions in heavy traffic congestion. Unsafe following distance is a key factor in these incidents. The good news is that rear-end collisions are the most avoidable type of accident. If you follow the simple rules for the road regarding safe speed and distance below, you can increase your ability to avoid being involved in a rear-end collision.

1 **Perception + Reaction Distance + Braking Distance = Total Stopping Distance**
The 1.5 seconds that pass between the driver seeing a hazard and applying the brakes does not vary with speed. Conversely, speed greatly impacts the braking distance. To better understand, the 62 feet stopping distance at 20 mph increases to 460 feet at 80 mph.

2 **3-Second Rule** As the car ahead passes a fixed object, count to three. If your vehicle passes the fixed object before you reach three, increase the distance between your vehicle and the vehicle ahead to allow for a safe following distance. Add an additional second or two for heavier vehicles and/or adverse driving conditions.

3 **Distracted Driving** Behind-the-wheel distractions such as phone calls, texts, navigation, music, eating or drinking, and passengers contributed to the loss of 3,308 lives in 2022. (NHTSA. Texas law prohibits texting and driving and requires the use of hands-free technology. Involvement in a serious accident while texting and driving can result in criminal charges and jail time.

4 **Driving in Adverse Conditions** Weather conditions such as rain, snow, sleet and fog impact visibility as well as the stopping distance of the vehicle. Reduce your speed to allow additional space between your vehicle and the lead vehicle.

5 **Drive Defensively** Scan the road ahead for indications that you may need to slow down or stop suddenly. Check your mirrors for tailgaters and slow down or change lanes to allow them to pass. Give your fellow drivers adequate time to react by avoiding sudden stops and last minute turns, and using your turn signals to alert drivers of your intentions.

LEARN MORE WITH THESE ADDITIONAL RESOURCES:

- Texas Department of Insurance: https://www.tdi.texas.gov/pubs/videoresource/fsriskstailgati.pdf (texas.gov)
- NHTSA CMV Driving Tips - Following Too Closely | FMCSA (dot.gov)

Vehicle Preparedness

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Ensuring vehicles are ready and equipped, not only for everyday use, but for various emergencies and other situations that may arise is essential to becoming R.O.A.D. Ready. Utilize this checklist to ensure your vehicle is prepared and maintained for any situation.

1 Vehicle Inspections & Maintenance

- Check *tires* for proper inflation, adequate tread depth, and signs of wear
- Ensure *brake* systems are responsive and fully functional; listen for unusual noises. Test all *lights* to ensure proper function and visibility
- Inspect the *battery* and cables for corrosion and charge; replace every three years or when signs of weak charge exist
- Ensure the *windshield* is clean and free of cracks, *wipers* are functioning properly, and that *washer fluid* levels are adequate
- Regularly check all *fluid levels*, including oil, coolant, brake, and transmission, and refill/change as needed

2 Emergency Essentials

- Confirm first aid kits are adequately stocked and ready for use
- Assess tools and equipment, such as jumper cables, basic tools, spare tires, tire gauge, jacks, etc. are in proper working condition and accessible
- Keep other emergency equipment onboard, such as flashlights, reflective vests, and fire extinguishers

3 Seasonal and Specific Needs

- *Winter Gear* – Consider items for use in ice/snow removal, tire chains, coats, gloves, and boots
- *Summer Gear* – Stock extra water, sun protection – long sleeves, sunscreen, hats, and portable shade shelters
- *Flood/Rain Events* – Include rain gear, such as boots/waders, and lifejackets and sandbags, especially when working in flood-prone areas

4 Routine Checks

- Ensure items such as the vehicle's registration, insurance card, and emergency contact numbers are in place and maintained in the vehicle
- Conduct regular, documented inspections of vehicles and equipment and ensure any necessary corrective actions are addressed
- Keep vehicles clean and well-fueled, especially in inclement weather situations

5 Other Considerations

- Maintain and test communication devices, such as radios and cell phones; keep chargers in the vehicle
- Establish communication standards, especially when working alone or on call-outs for service; regularly check-in with supervisors, coworkers, or dispatchers to assure safety

LEARN MORE WITH THESE ADDITIONAL RESOURCES

- TMLIRP Media Library: (1) Implementing a Comprehensive Safe Driving Program – Disk #271, Safe Driving: Take Control – Disk #716, and Transit Authorities: Pre-Trip Inspections #263
- TMLIRP YouTube Channel, Safer in Seconds: Mobile Equipment Pre-Trip Inspection, Fleet Vehicle and Driver Safety, and Vehicle and Equipment Dangers
- Texas Department of Insurance: Safety at Work Free Online Safety Videos and Occupational Driving Safety Resources

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Debris Removal Safety

TML RISK POOL

Timely debris removal from the roadway is crucial for public safety and efficient traffic flow. Accumulated debris can pose hazards to both vehicles and pedestrians, potentially causing accidents or injuries. Debris removal on or near roadways is a frequent and important local government process, but it should never be treated as routine. When conducting roadway debris removal, it is crucial to ensure the safety of both workers and the public. This involves specific measures to protect workers, ensure public safety, and manage traffic effectively. R.O.A.D. Ready (Recognize, Observe, Assess, & Determine) can be used to help improve awareness of hazards and increase safety when it's your job to keep roadways clear of debris.

1. **Traffic Control & Scene Safety:** Always wear high-visibility clothing. Set up cones, signs, or arrow boards per MUTCD standards before starting work. Position work vehicles as barriers with hazard lights on. Stay alert, face traffic when possible, and maintain an escape route. Never become complacent working on or near roadways.

2. **Safe Handling Practices:** Use tools to move debris when possilble. Exercise back injury prevention, lift with your legs. Use help or equipment for heavy or awkward items. Avoid overexertion, especially in hot or cold or inclimate weather.

3. **Required PPE:** Wear ANSI Class 2 or 3 high-visibility gear. Use safety boots, gloves, and, when needed, hard hats and safety glasses. Ensure PPE is worn properly and maintained. Make sure you are highly visible to motorist.

4. **Environmental & Health Hazards**: Avoid contact with unknown or hazardous materials. Do not move leaking or toxic items, report and isolate them. Handle biological waste (e.g., syringes, dead animals) with proper protection and dispose of it according to regulations.

5. **Communication & Teamwork:** When removing debris in disaster areas, everyone should remain vigilant. Maintain contact via radio or phone. Use a lookout to watch for traffic and hazards. Effective coordination improves safety and efficiency in operations.

LEARN MORE WITH THESE ADDITIONAL RESOURCES:

- TMLIRP Training Video Now Work Zone Safety TrainingVideoNow
- National Work Zone Safety: Project Coordination in Work Zones — Workzone Safety Information Clearinghouse
- Texas Department of Insurance: Cleaning Up After A Disaster Safety at Work Free Online Safety Videos.
- TMLIRP "High Visibility Apparel" T.I.P.S. Sheet