



**Getting the job done is not enough. The job must be done safely.**



# **Driver Injury and crash Prevention Manual**

August 2008 Edition

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# What are the injury and crash trends Country-wide for the trucking industry?

## Country-wide distribution of injuries

Type	% of Incurred Costs	% of Injuries
Crash	32%	11%
Fall tractor	9%	12%
Fall trailer	8%	7%
Fall yard	8%	7%
Handling cargo	7%	14%
Load securement	8%	9%
No details	4%	3%
Trailer doors	3%	3%
Landing gears	3%	3%
Trailer work	3%	3%
<b>Totals</b>	<b>85%</b>	<b>72%</b>

## Country-wide distribution of crashes

Crash Type	% of Crashes	% of Costs
Backing	19%	7%
Falling cargo or parts	4%	2%
Fuel spill	3%	4%
Hit other in rear	18%	24%
Intersection	3%	11%
Lane change	18%	22%
Stationary object	16%	7%
Turning	13%	13%
<b>Totals</b>	<b>94%</b>	<b>91%</b>

Paying attention to details and following the procedures outlined in your training and this manual will help you avoid job related accidents.

\*Loss distribution from 2007 trucker survey data.

# Seat Belts

There are many reasons to wear seat belts. **One** is because it is company policy.



Here are a few **other** reasons you should wear them:



Your truck can be hit while parked or when someone else is driving. Seat belts protect you while in your bunk too, make sure you put them on when you sleep or rest.



Seat belts help keep you alive and let you come home to your family. Always use them while in a truck, car or other motor vehicle.



# Lane Changes

There are many reasons you may need to change lanes. The important thing is to change lanes when it is safe to do so. Make sure you know what is around your vehicle and plan ahead to avoid situations where you must change lanes quickly.

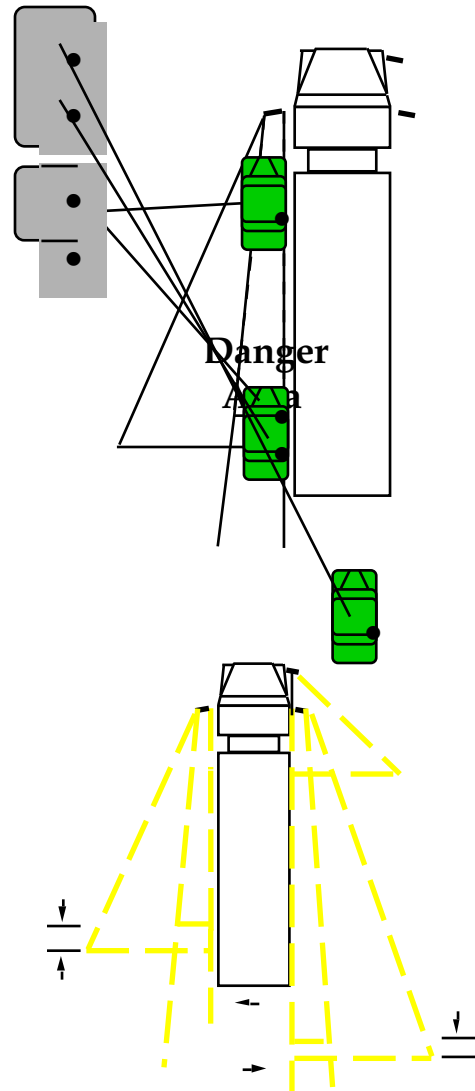


- Expand your look ahead to avoid being boxed in
- Maintain constant awareness of what is around you and changing conditions
- Adjust your mirrors so the convex and flat mirrors work together
- Signal your intentions well before you move your vehicle and let it click at least 5 times before making a lane change
- Avoid quick sudden lanes changes that can cause or contribute to rollovers
- Never pass unless you have the space and power. Only pass when there is a long term advantage
- Watch on ramps to see what is going to be coming on
- Watch for construction, vehicles on side of the road, and other hazards.
- Scan your mirrors every 5 seconds and always keep looking ahead at least 8 to 10 seconds.
- Always follow lane restrictions unless an emergency arises.
- Only make a lane change when there is a long-term gain.

# Mirror Adjustment

Mirrors allow you to see what is to the sides and behind your vehicle. In order for your mirrors to work they must be in good condition, clean and adjusted for maximum effectiveness. Mirror check stations allow you the opportunity to adjust your mirrors.

- Approaching traffic from the rear will first be seen in the top of the flat mirror.
- Passing vehicles will go out of view in the flat mirror.
- Passing vehicles comes into view in the convex mirror.
- Vehicles in the danger area can be seen in the convex mirror.
- The driver can see a passing vehicle as it approaches and travels through the danger area.



Check mirrors frequently to make sure your mirrors are adjusted.



# Following Distance

Hit other in rear crashes happen because drivers do not allow adequate space between their vehicle and other vehicles. Under normal driving conditions you should allow one second of following distance for every 10 feet of vehicle length (Per DOT Guidelines).

Remember you will need to double or triple your following distance in bad weather and in some weather the best thing to do is get off the road.

When stopping always allow yourself enough room to see the ground 12 inches behind the tires of the vehicle in front of you or the line that you stop at.



Count the seconds from the time a vehicle in front of you passes a fixed object, to when you pass that same object. Then adjust your following distance as needed to maintain at least 1 second of following distance per 10 feet of vehicle length. **Keep in Mind: Most tractor / trailers are 75 ft. long!**

Pole with reflector



# Intersections

You should never make a left hand turn across a lane or multiple lanes of traffic if at all possible unless there is a signal light at the intersection. It is much better to make 3 right hand turns than one left across a busy intersection. Every truck that makes that choice has the potential to cause a serious injury like one that occurred a few years ago especially on a rainy day like below.



In addition, to this rule here are some other rules to follow at intersections:

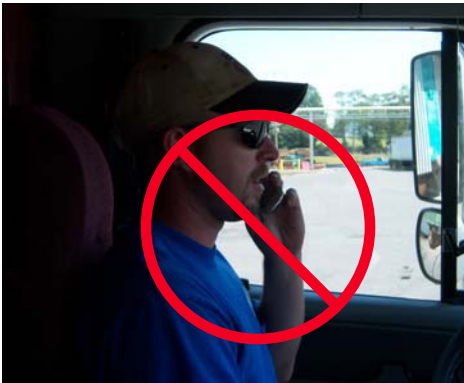
- Never pull too far up at an intersection.
- Always pay attention to the other lanes when swinging wide to avoid curbs and other traffic.
- Never make a right turn on red.
- If you don't see the light turn green then expect it to turn yellow soon and respond accordingly by letting off of the gas and covering the brake.





# Distractions

A driver's main job when behind the wheel is to drive the truck. Distractions increase the chances of a crash. Make sure you are driving the truck whenever it is in motion. Distractions occur for many reasons. Avoid them and keep focused on your job of driving



- Make your calls when you stop
- Have good directions before you start your trip
- Keep what you need in reach so you don't take your eyes off the road
- If you drop something wait until you stop to search for it
- Keep your eyes moving and stay focused on driving
- There are some things you should not do while driving
- Don't try to change clothes or take off your jacket while driving. Get comfortable before you leave.
- Take care of dispatch and paperwork while stopped.
- Don't watch cars and their passengers as they go by.



**REMEMBER:** Safe Driving is Your Main Job!



**Combinations of distractions are especially dangerous** 8

# Fatigue

Driving legal and driving tired are not always the same. You need to be rested to avoid crashes. Sleep requirements vary with age and from individual to individual. Most need 7 to 8 hours of rest. 8 one hour naps will not provide the same rest as 8 hours of sleep.

- Get proper rest before you start your trip. Please make sure your family understands the importance of getting proper rest so they can help you depart on time.
- Always leave on time (or a little early). You will be measured on On Time Departure versus On Time Arrival. If you leave on time then you will get there on time without having to run too long.
- When possible, try to stay on the same schedule or routine.
- Make sure that you actually sleep when in the bunk for at least 8 hours each day.
- Sleep aids and stimulants can not replace proper rest
- Your body builds tolerance to caffeine so you need more over time for the same effect
- Seek professional help for sleep disorders
- Take short (<45 minutes) naps when you need them
- Get regular exercise
- Maintain a healthy diet
- Nicotine is not an effective stimulant and smoke makes us tired

Fatigue impacts your judgment. Saying you know how tired you are is like saying you know how drunk you are when you have been drinking. The only way to control fatigue is to get adequate rest.

# Falls From Tractors

Falls from tractors occur most frequently when drivers do not face the equipment and do not keep three points of contact. Make sure you face the equipment and keep your hands and feet in the proper positions.



**Keep 3 points of contact**



Never carry things when you climb  
Look down before you climb down  
Keep steps and grab bars clean  
Have footwear that is in good condition



Always face the equipment and look down before you step.

Use proper hand and foot placement



## Waiting for vendor to unload

Many accidents actually happen at the customer's job site while waiting for the customer to unload the trailer or while setting up for unloading. You should always wait in an area that keeps you out of danger (specifically site traffic including fork trucks.) You should also minimize bending and use your legs as much as possible (i.e. kicking chocks into place). Never place wheel chocks too close to the tires or you will have to strain pulling them out when the wheels roll forward while settling.



## Pulling 5<sup>th</sup> Wheels

Drivers do many things that require use of the arms, shoulders and upper body. Long term damage can occur when common tasks are performed in ways that cause unnecessary stress on the body. 5<sup>th</sup> wheel pullers are voluntary but the pressure required to release the 5<sup>th</sup> wheel should be minimal if you minimize tension on the 5<sup>th</sup> wheel during release by doing the following:

- Park your rig and set the trailer brake (red button).
- Back slowly up to “snug” the 5<sup>th</sup> wheel against the trailer king pin.
- While it is still “snug” against it, set the brake for the rig (yellow button).
- This will make it much easier to unlatch the 5<sup>th</sup> wheel



You still need to be concerned with space around you and making sure you are in a safe location away from traffic. No matter which way you pull the 5<sup>th</sup> wheel spread your legs for balance, get a firm grip, pull with firm steady pressure and never tug or jerk the release. Make sure any damage or maintenance concerns are reported. **Remember: You cannot “out-muscle” an 80,000 lb. truck!**



# Lights

Lights help you see in front of your vehicle and help others see your vehicle. Lights must be in good working order and clean. Check the lights as part of your pre trip inspection and make sure you have a way to clean the lights. Lights are much less effective when they are dirty.



Keep cleaner, rags and paper towels in your truck



Even a thin coating of dust makes your vehicle less visible. Wipe all the lights before your trip and make sure you keep them clean.



Having clean lights does make a difference

## Needed/Suggested Equipment

There are many things you should keep in your truck. Check to make sure you have essential items before you start your trip. Following is a list of examples, some of which our company provides, and some are just good to have with you.



- Reflective triangles (3)
- Cleaner for windows
- Charged fire extinguisher
- Tools
- Mallet for opening jammed doors instead of using your hand
- Flashlight with extra batteries & light bulbs
- Gloves
- Bungee cords
- Rags or paper towels
- Accident kit with camera
- Wheel chocks



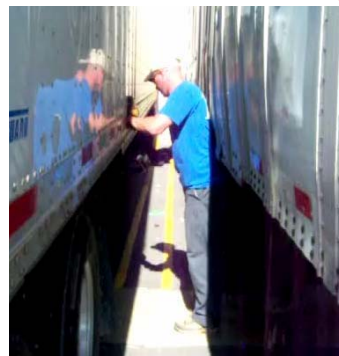
Make sure your extinguisher is charged



A good multi-tool is a good idea also. Remove loose wires from areas DOT commonly inspect.

# Landing Gear

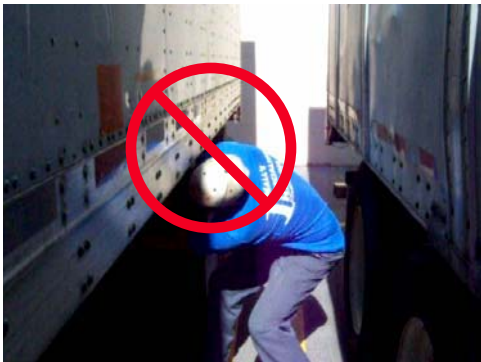
Drivers can be hurt when raising or lowering the landing gear. The injuries can be strains, falls or from walking into a handle.



- Make sure you use the right gear (high or low)
- Try to start with the handle at the top and use your weight, as well as arm strength to push it, rather than pull it up from the bottom.
- Get a firm grasp on the handle
- Use steady pressure
- Keep your face away from the handle
- Brace yourself for balance
- Secure the handle when you have finished
- Report any damage or landing gears needing maintenance
- Never try to lift the trailer. Lower it only to the ground or slightly above.

# Tandems

There are two main ways drivers are hurt while sliding the tandems. These are strains from lifting the lever to retract the pins, or by being struck by any other vehicles that might be driving alongside your trailer.



- Slide the tandems in an area away from traffic & pedestrians.
- Try to slide the tandems on a level surface.
- Try to slide the tandems with an empty or near empty trailer, if possible.
- Stand parallel to the trailer
- Use slow steady pressure to lift or pull the release lever.
- If you feel too much resistance, stop, and reposition, or “jiggle” the trailer to get the pins to release.
- Keep your feet away from the wheels
- Be clear on signals if you use another driver to help
- Use “pullers” when available.





# Trailers and Trailer Doors

Many drivers have been hurt opening trailer doors. The doors can suddenly move because cargo has shifted during transport or when wind catches the door.



- Check the door before you open it to see if cargo has shifted
- Stand to the side of the door as you open it
- Stay to the side of the door as you walk
- Watch where you step as you walk around the trailer
- Keep a firm grip on the door until it is secured
- Don't hammer on the door handle with your hand. Use a mallet.
- Always ensure that your load is secured.
- Watch your hands.
- Use the three point system when entering exiting trailers also.
- Make sure your trailers are clean and free of loose freight. The job isn't done until the trailer is clean.
- Ensure that all hinges and moving parts are properly lubricated.



# Backing

The most effective way to avoid backing accidents is to avoid backing. When you can't avoid backing, plan it out to avoid hazards



- Park where you will not need to back when possible
- Use sight side backing when you have a choice
- Avoid blind side backing
- Make sure your mirrors are clean and adjusted for the best view
- Maintain constant awareness of what is around you and changes taking place
- Only use reliable guides and make sure you understand the signals
- If there is any doubt about what is behind you stop the truck, and **Get Out And Look**.
- Look for damage that other drivers might have caused while backing so you know what to avoid.

## Route Planning

Planning routes allows you to avoid high hazard areas and be more rested. You should plan your route before you leave and follow your plan as you go.

- Obtain directions from a reliable source. Remember: Directions are only as good as the last person to give them or run them. Always pay attention & use common sense. PC Miler and the “trucker’s atlas” are trusted sources.
- Internet resources are not reliable (e.g. mapquest).
- Know where construction will be occurring
- Pay attention to weather forecasts to avoid storms
- Have a backup plan when you encounter storms
- Plan fuel and rest stops in safe areas
- Be aware of local hazards and take precautions (keep windows up, lock doors, park in safe, well lit locations etc.)
- Avoid high crash areas
- Plan your route based on what is best overall and not what is the shortest distance
- Always cross reference your route with the “trucker’s atlas”.
- Never enter under areas with low clearance (Under 13’ 6”).



# Bad Weather Driving

Bad weather makes safe driving even more challenging. Monitor weather conditions and communicate with dispatch when you may encounter bad weather. Plan ahead for fuel and keep emergency supplies in your vehicle.



- Stay off the roads when conditions make driving too hazardous (icy roads, blinding snow etc.)
- Keep windows and lights clear and visible
- Slow down
- Double or triple your following distance
- Plan extra time for travel
- Watch for pedestrians in unexpected places



# Rest Stop Safety

Safety when you stop is just as important as safety when you are driving or working. Rest and fuel stops have unique hazards you should be aware of.



- Park in well lit areas
- Watch for vehicle traffic especially when moving between trucks
- Plan stops to avoid high risk areas especially at night
- Lock your truck
- Check the vehicle before you re-enter it
- Don't wear expensive jewelry or show cash when you are in sight of others
- Be protective of PIN numbers when using ATMs
- Be aware of what and who is around you
- Avoid talking about your cargo and / or destination while others are around you and / or over the CB radio.
- Carry a flashlight at night



# Healthy Eating

Healthy eating is just a matter of eating the right amounts of the right foods. When you eat too much of some foods or too little of other foods you are not able to maintain your health as you should.

## The Food Guide Pyramid

A Guide to Daily Food Choices

Fats, Oils, & Sweets  
USE SPARINGLY

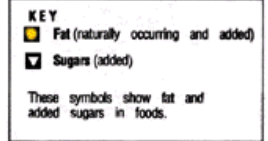
Milk, Yogurt,  
& Cheese  
Group  
2-3 SERVINGS

Vegetable  
Group  
3-5 SERVINGS

Meat, Poultry, Fish,  
Dry Beans, Eggs,  
& Nuts Group  
2-3 SERVINGS

Fruit  
Group  
2-4 SERVINGS

Bread, Cereal,  
Rice, & Pasta  
Group  
6-11  
SERVINGS



- **Aim for a healthy weight. If you are at a healthy weight aim to avoid weight gain. If overweight first aim should be to avoid gaining more, then lose weight to improve your health.**

- **Build a healthy base by eating vegetables, fruits, and grains especially whole grains with little added fat or sugar.**

- **Select sensible portion sizes.**

- **Get moving. Get regular physical activity to burn the calories from the foods you eat.**

- **Set a good example for children by practicing healthy eating habits and enjoying regular physical activities together.**

- **Keep in mind that even though heredity and the environment are important influences, your behaviors help determine your body weight.**



# Healthy Snacks for the Road

Taking food on the road with you allows you to eat better And save money. Packing a cooler before you go and eating right while on the road will keep you healthier.

## Healthy Cooler Snacks for the Road:

- Bottled Water
- String Cheese
- Low-fat Yogurt or Pudding
- Bagels & Lite Cream Cheese
- 100% Fruit Juice
- Fruit Cups
- Fresh Fruit



## Healthy Snacks for the Road:

- Granola Bars or Nutri-Grain Bars
- Pretzels
- Flavored Rice Cakes with Peanut Butter
- Baked Chips
- Unsalted Mixed Nuts
- Dried Fruit
- Rice Crispy Treats
- Dry Cereal
- Fruit Snacks



**If you take a cooler make sure it is kept in a secure location where it can not move around during a crash or sudden maneuver. Get what you need when stopped. 23**

# Getting Exercise

Most people do not get regular exercise. Regular exercise helps you feel better and enjoy better overall health.

- Physical activity need not be strenuous to achieve health benefits.
- Men and women of all ages benefit from a moderate amount of daily physical activity.
- Additional health benefits can be gained through greater amounts of daily physical activity.
- Previously sedentary people who begin physical activity programs should start with short sessions (5-10 minutes).
- Adults with chronic health problems such as heart disease, diabetes or obesity or have high risk for these should consult a physician before beginning an exercise program.
- Men over 40 and women over age 50 who plan to begin a new program of vigorous activity should consult a physician to be sure they do not have heart disease or other health problems.



The driver shown here uses the truck steps as an improvised stair climbing machine. Make sure you get some form of regular exercise



# Stretching

Stretching has been recommended by physical therapists and others to reduce the potential for injuries. The type of stretching, how frequent stretching should occur and the duration of each stretch is still being studied. Basic stretching helps relieve stiffness that can occur after driving or sitting and may help prevent injuries when jobs are performed along the guidelines outlined in this manual.



*These stretches should be done slowly to avoid bouncing motions. It is best if stretches are done on a regular basis, not just prior to working or exercise. Hold each stretch for a short time and repeat. There is a wide variety of stretches that are beneficial. Ask your doctor or physical therapist what is best for you. A gym is available when you visit the Beloit facility.*

# Seat Adjustment

The adjustment of your seat can play a big role in driver fatigue and also injuries after long drives or while performing other tasks. Proper seat adjustment is very simple. Follow these basic guidelines for proper seat adjustment.

## Horizontal Adjustment



Adjusting the seat on the horizontal plane should minimize over reach or under reach and also leg cramping.

- Adjust seat to allow for neutral posture
- Adjust lumbar support to provide back support
- Pay attention to any soreness and adjust seat accordingly if any soreness or stiffness is noted.*
- Avoid hunching at the wheel

## Vertical Adjustment



Adjusting the seat on the vertical plane should minimize over reach or under reach of legs leading to decreased circulation.

- Adjust seat to allow for neutral posture
- Adjust lumbar support to provide back support
- Pay attention to any soreness and adjust seat accordingly*

## “Bounce” and “Slide” adjustment

Maintain a minimum level of “bounce” and “slide” which results in the seat moving excessively. The intent is simply to absorb the impact of road defects normally absorbed by the body while driving. There should be no more than 6 inches of play on the vertical and horizontal when the seat “bounces” or “slides”.





# Yard Hazards

- **Always be aware of hazards in yards. Watch where you walk.**
- **Hazards in yards can include: standing water, ice, snow, other vehicles, potholes, etc.**
- **Chose the shortest walking distance to avoid hazards.**
- **Avoid high traffic areas.**
- **Ask for a “yard dog” to move a trailer to a safer position if necessary.**
- **Always notify the yard personnel of hazards noted and document to protect others and yourself.**
- **Move the trailer to a better position if/when necessary.**
- **Don’t back up to far as it can cause damage to property and make opening doors more difficult.**



## Deer / Truck Collisions

- Deer Collisions Continue to Rise
- 100 Fatalities / 10,000 Injuries



## What to Do?

- **Don't Panic!**
- **Never Leave your Lane!**
- **Slow Down & Blow Horn, if possible.**
- **Leave the deer alone. If it is still alive, it could hurt you**

## Why Be Safe?

There are many reasons you should work safe, drive safe and take care of yourself. One reason is because working and driving safe is what we expect of you. But the best reason is so you can enjoy your life when you leave work and retire.

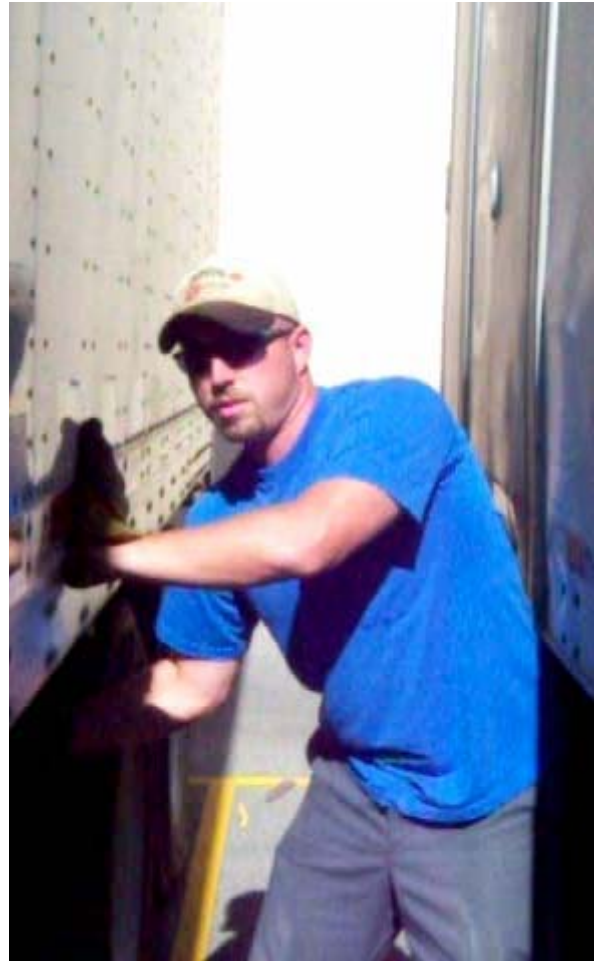


Do your job safely and take care of your health so you can enjoy your hobbies, traveling, recreation or just spending time with your family when you leave work. Your family expects you to come home the same way you left them and<sup>29</sup> be around for a long time.



# Summary

- Be aware of what is going on around you.
- Know and use the safety precautions for each job.
- Inspect your equipment before you use it.
- Report defective equipment.
- Work like your family depends on you to come home the same way you left, because they do.



*Our loss prevention service is advisory only. We assume no responsibility for management or control of customer safety activities nor for implementation of recommended corrective measures. This report is based on information supplied by the customer and observations of conditions and practices at the time of the visit. We have not tried to identify all hazards. We do not warrant that requirements of any federal, state, or local law, regulation or ordinance have or have not been met.*