

# BUMPER 2 BUMPER

## STEPS, HANDLES & DECK PLATES

A guide created by:  
**TBS Factoring Service**

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## STEPS, HANDLES & DECK PLATES

### ...CREATED BY TBS FACTORING SERVICE

[TBS Factoring Service LLC](#) is a leading company in providing factoring to growth-oriented companies in the transportation industry. Founded in 2004, the Oklahoma City-based company serves thousands of clients nationwide with simple and flexible cash flow solutions.

TBS Factoring is a key part of a family owned one-stop shop for independent trucking services that also includes [Truckers Bookkeeping Service](#), formed in 1968 to provide independent trucking companies with permitting, DOT compliance and fuel tax reporting services. In 1998, the company began offering truck insurance through a network of Preferred Agencies. In 2013, [TBS Capital Funding](#) joined the TBS Family, expanding our service offering to include accounts receivable funding and payment acceleration for businesses outside of transportation. And in 2017, TBS began offering logistics and disaster recovery services through Foxhole Logistics, the newest addition to the TBS family.

The TBS family-ownership group has over 50 years experience serving independent truckers. Our clients receive outstanding service from a seasoned and dependable staff. TBS Factoring Service is among the most highly regarded freight factoring companies in the USA.



LET'S BE FRIENDS





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# BUMPER 2 BUMPER

## STEPS, HANDLES & DECK PLATES

Collisions with another vehicle or single-vehicle accidents can lead to very serious injuries to truck drivers. However, most of the injuries in the trucking industry do not involve collisions. They are the result of slip-and-fall accidents.

Truck drivers work in all weather conditions and at all hours of the day and night. The footing can be icy or wet. The lighting is frequently poor. Rushing to complete a task, poor procedures and/or loss of situational awareness can lead to slips and falls that can cause severe injury.

This guide is intended to help truckers reduce – and hopefully avoid – slip-and-fall accidents.

## DON'T LET SAFETY TAKE A BACK SEAT

Falls and slips can cause injuries such as sprains or strains, bruises, broken bones, back injuries, strained muscles and joints, contusions, abrasions and lacerations. Often, the consequence is a disabling injury that impacts a trucker's ability to do his/her job, resulting in lost workdays.

For the employer, fall and slip accidents mean a loss of productivity and business, medical indemnity payments and increased insurance premiums. What's more, slips and falls are the leading cause of workers' compensation claims.

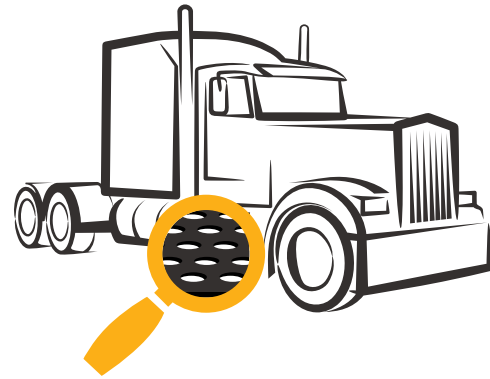
While slips and falls are common incidents, they are also among the most avoidable. In many cases, truckers can prevent a fall and/or slip by, among other measures:

- Ensuring that vehicle steps, deck plates, grab handles and bars, ladders, catwalks, etc., are in good condition.
- Carefully getting on and off vehicles.
- Remaining alert and conscious of slip and fall hazards.

Rushing or not paying attention while entering and exiting a vehicle is dangerous. Staying focused and taking safety precautions every time a driver enters/exits can prevent unnecessary pain and injury.



# CHAPTER #1



## TAKE A WALK AROUND

Pre- and post-trip vehicle walkaround safety inspections should begin with a “look and see” approach. In other words, as you approach the vehicle, look for anything that doesn’t look right. Also, look for hidden slip and trip hazards around the vehicle.

When doing the inspection, check the condition of the vehicle’s steps, deck plates, grab handles and rails, etc. A best practice is to physically check for soundness by applying moderate force to these items to see if they are secure. Do this by grabbing a handle and stepping up onto a step or plate/surface.

Steps, grab handles and deck plates, etc., can create safety problems if they are rusted, worn, bent, loose and have sharp edges. Bent or worn steps reduce the effectiveness of any slip-resistant features.

Clean steps, grab handles and deck plates, etc., if covered with mud, grease, oil, diesel fuel or other contaminants. These conditions can cause slips and falls, and lead to injuries.

## WATCH OUT BELOW!

Drivers should get into the habit of looking carefully for hazards before exiting. Many injuries are caused by slips due to unexpected ground surface conditions. Hazards such as a slippery surface from mud, snow or ice; loose gravel; potholes; uneven surface; waste materials and debris, etc.

Furthermore, a driver needs to be aware of the contact friction between his/her feet and the ground. If the friction is low – for example on an icy patch, a driver can slip or fall. Landing awkwardly on an uneven surface can lead to ankle and knee injuries.



## TAKE A WALK AROUND (CONTINUED...)

Environmental conditions such as snow, ice, rain, mud, high winds and even condensation on surfaces can affect the “performance” of steps, grab handles, deck plates, ladders, catwalks, etc. and increase the likelihood of slip-and-fall accidents. Keep in mind:

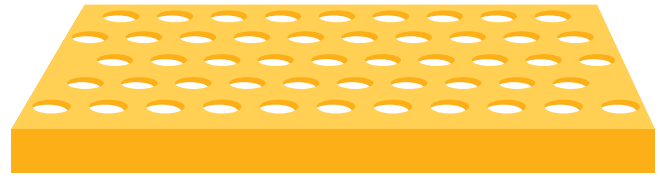
- Metal is slippery because of its lower force of friction and traction. Metal surfaces can become smooth and slippery with wear and extremely slick when wet, muddy, oily, dirty, greasy, etc.
- Carpet or brushes installed on steps to help keep the cab interior clean can freeze and become slippery in frigid temperatures.
- Inadequate back-of-cab/work lighting or poorly positioned lighting can cause glare or shadows that can also increase the risk of falls.
- If a driver uses different vehicles on different days, he/she should be sure to check the location of steps and grab handles before entering/exiting each vehicle.
- Correct any defects or problems with steps, grab handles, deck plates, etc., identified during the vehicle walkaround safety inspection.
- Establish an inspection-and-reporting system for all vehicles so any deficiencies or wear and tear can be reported and addressed promptly.
- Schedule preventive maintenance for vehicle steps, deck plates, grab handles, etc.

## DRESS THE PART

To remain safe when entering/exiting a vehicle, drivers should wear footwear with good foot and ankle support and slip-resistant soles and heels. Footwear should also be appropriate for the weather conditions, access points and other work being performed.

Loose, torn, baggy or bulky clothing should be worn with caution as it may become entangled in a vehicle and interfere with the access points for entering/exiting vehicles.

# CHAPTER #2



## ENTRY & EXIT AIDS

According to industry research, grated steps provide the highest slip resistance and are the best at shedding contaminants. A truck's steps should have non-skid surfaces. If not, retrofit for safety's sake. Using contaminant-resistant step designs and self-cleaning material will reduce the work required to maintain the steps.

Research also finds that lighting to improve a driver's visibility to the vehicle's steps when it is dark can help improve safe entry/egress. In addition to lighting the steps themselves, lighting should also illuminate the ground adjacent to the steps so drivers can inspect the area before entering/exiting the vehicle.

Spotlights and other lighting on the back of a truck tractor help improve a driver's visibility when climbing onto the deck plate and/or when connecting the air hoses and electrical lines.

Along with lighting to improve a driver's visibility to the vehicle's steps, newer trucks are also incorporating steps and ladders with non-slip surfaces that drain and do not retain mud, ice and snow. Square edges and perforated surfaces on the steps reduce the chance of slips while entering/exiting the cab, especially during poor weather.

## DON'T JUMP!

Never jump off a vehicle because it is dangerous. Jumping down can cause a slip and fall injury after the landing. Plus, the body must absorb the impact, frequently resulting in injuries to the lower back, knees and/or ankles that can continue to cause discomfort long after they've healed.

As would be expected, the higher the jump down, the greater the impact force. Industry research has found that jumping from the bottom step of a truck results in a compression force of 1 to 1.5 times body weight; from floor level, 5 to 6 times body weight; and from seat level, 7 or more times body weight.

The impact force increases if the landing area contains a hard surface rather than a soft one which helps dissipate the impact force.

## ENTRY & EXIT AIDS (CONTINUED...)

Consider adding steps, grab handles, rails, etc., to trailers and truck bodies. Compared to vehicle cabs, bodies and trailers lack proper ingress/egress aids on bodies and trailers.



All grab handles and rails – both inside and outside the truck cab – must be in good working order as these devices provide stability when a driver gets in/out of the vehicle.

Grab handle and rail surfaces ought to have high friction that reduces the risk of a hand slip for both bare and gloved hands. High friction also maximizes the benefit of the hand grasp in the event of a foot slip. Contact the handles with both hands to reduce the consequences of a foot slip.

Consider using anti-slip coatings or finishes on critical areas or non-slip color contrast on the edges of load areas, steps, tailgates, etc.

Unlike traditional deck plate designs, low-profile deck plates sit flush with the frame rails, reducing deck plate damage and increasing durability.

## FALL FACTORS

Every year, slips and falls from vehicles account for a significant number of truck workplace incidents. Among the main contributors:

- **Human factors**, such as failure to follow safe entry/egress procedures, tiredness, lack of attention and focus, etc.
- **Ineffective instruction, information and training** on how to safely enter/exit a vehicle.
- **Environmental conditions**, such as icy or wet conditions and strong winds.
- **Poor vehicle design**, including surfaces with no or not enough slip resistance and poorly designed or lack of proper access.
- **Inadequate vehicle maintenance**, including poorly maintained steps, grab handles/rails, deck plates, ladders, surfaces, catwalks, etc.
- **Insufficient and/or poorly positioned lighting.**
- **Inappropriate footwear** for the weather and the work.



# CHAPTER #3



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## UNDERSTAND THE SYSTEM

The steps and grab handles/rails function together with the seat, cab openings and other features of the truck to form an entry/exit system. It is paramount that drivers use them.

The biggest single cause of slips and falls from trucks is drivers taking the seemingly simple maneuver of the getting in and out for granted and failing to follow what is known as the three points of contact system. With this system, a driver always faces the vehicle and keeps three of his four limbs in contact with the vehicle at all times – two hands and one foot or two feet and one hand. This way, only one limb is in motion at any one time. Maintain the three points of contact until the vehicle cab, a stable platform or the ground is reached.

Only grab handles and steps should be used. Do not use the door frame, edge or handle as a handhold as the door can swing out and cause a fall. Likewise, do not use fuel tanks, tires, fenders, wheel ends, etc. because rounded surfaces are slippery, especially when wet.

## 4 FEET AND 3,000 POUNDS

Falls from a vehicle as low as four feet can result in serious injury and possibly even death.

Consider this: The average person's reaction time is about half a second. In that length of time, a person falls 4 feet. All the while, gravity pulls the person down and their speed quickly increases. The impact force increases as well.

A trucker who weighs 250 pounds, for example, and falls 4 feet will have a downward force of up to 3,000 pounds -- way too much for anyone's grip. Once a person begins to fall, he/she will stop only after hitting a lower surface.



# UNDERSTAND THE SYSTEM (CONTINUED...)

Three points of contact – a triangle of anchor points – provide maximum stability and support, thereby reducing the likelihood of slipping and falling. Otherwise, a driver is unstable and easily imbalanced, so any misstep or faulty grip could result in a fall.

Furthermore, moving one limb at a time reduces the risk if one of the other limbs slips. This provides a better likelihood of catching a slip before a fall.



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*Federal Motor Carrier Safety Regulations, Part 399, Subpart L – Step, handhold, and deck requirements for commercial motor vehicles, 399.207, Truck and truck-tractor access requirements, states:*

“Any person entering or exiting the cab or accessing the rear portion of a high-profile COE truck or truck-tractor shall be afforded sufficient steps and handholds, and/or deck plates, to allow the user to have at least 3 limbs in contact with the truck or truck tractor at any time. This rule applies to intermediate positions as well as transition between intermediate positions. To allow for changes in climbing sequence, the step design shall include, as a minimum, one intermediate step of sufficient size to accommodate two feet.”

The exception to this requirement, noted within the regulation reads: “If air and electrical connections necessary to couple or uncouple a truck tractor from a trailer are accessible from the ground, no step, handholds or deck plates are required to permit access to the rear of the cab.”

Safety research has found that:

- Most injuries occur due to slips, rather than trips, when a driver exits a vehicle.
- Most injury-causing events are initiated by a foot slip rather than a hand slip.

## WHOA!

Drivers who rush their entry/exit and fail to use the three points of contact system increase their risk of falling. Extra care should always be taken in wet, snowy or icy weather.

Drivers should not rush to climb out of the cab after a long run. Rather, descend slowly to avoid straining a muscle.

While entering/exiting, movement should be slow and steady to avoid injury from slips, falls and striking other objects.

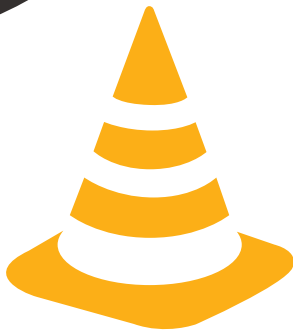
Some drivers exit going forward instead of backing out – usually having only one hand in contact with the truck. Others jump off the truck. Both methods are dangerous.

# CHAPTER #4

## HOW TO STAY SAFE

Take the following measures to stay safe when getting on/off vehicles and to prevent unnecessary pain and injury:

- Check the condition of grab handles and rails, footholds, steps, ladders, deck plates, platforms, catwalks, etc., during pre- and post-trip vehicle walkaround safety inspections. Make any necessary repairs.
- Keep such items as tools, gloves, brushes, fire extinguisher, etc., in their proper place and out of the path of entry/exit.
- Always enter/exit facing the vehicle, use the three points of contact system and take adequate time climbing in/out.
- Get a firm grip with hands, not just with fingertips.



## FUNCTION NOT FASHION

A key to preventing slip-related falls, say safety professionals, is adequate traction between the foot and the walking surface. The less friction between the shoe and the surface, the more difficult it is not to slip.

The harder a shoe's sole, the slipperier. Leather soles tend to be very slippery; soft rubber soles generally provide more traction.

Safety professionals advise using footwear with non-slip soles, fully enclosed and well "coupled" to the foot using laces. Loose and ill-fitting shoes provide little stability and support. Properly fitting footwear increases comfort and prevents fatigue, improving safety.

But even the best work shoes cannot prevent a slip or fall if not properly worn and maintained. Keep them free of excessive dirt, mud and debris.

Shoes don't last forever. Even the best footwear needs to be replaced from time to time.



## HOW TO STAY SAFE (CONTINUED...)

Other recommendations for safe vehicle entry/exit:

- To get on or off, do not use parts of the vehicle that are not designed as handholds or footholds.
- Use the ball of the foot on step surfaces, not just the tips of the shoes.
- Break the three points of contact only when the desired destination is reached: ground, vehicle cab, stable platform or body/trailer.
- While entering/exiting, movement should be slow and steady.
- Use extra caution in wet, muddy, icy, snowy or other dangerous weather conditions.
- Look for obstacles and observe ground conditions below before exiting.
- Do not carry things when entering/exiting. Place them out of the way where they can be safely retrieved after entry/exit.
- Never jump from a vehicle.

## IT'S ALL YOU

Only you can prevent a slip or fall. Don't become an injury statistic. A professional truck driver knows – and always practices – the do's and don'ts of getting in and out of a vehicle.

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