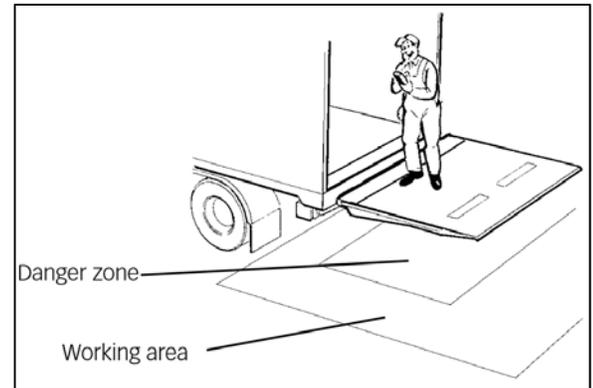


Lift-gate injuries are an unfortunate risk present in today's transportation industry. However as with many of the hazards of driving and fleet management, utilizing the proper training and equipment maintenance can make a huge difference in safety. Below, are some tips to help prevent lift-gate incidents.

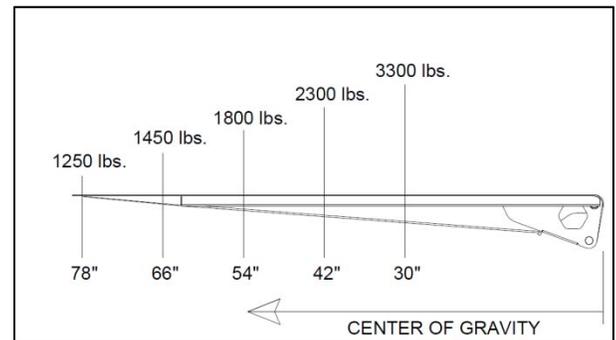
Lift-gate Injury Prevention Tips:

- Drivers and lift-gate operators should not perform any maintenance on lift-gates. Take them to the Garage for any service.
- Never enter the area beneath a raised lift-gate.
- Lower the lift-gate to the ground and inspect the rear of the trailer to ensure the lift-gate has proper clearance for its full cycle.
- Check the condition of the equipment and any accompanying tools; simple checks can make a big difference in the long term operational quality of lift-gates.



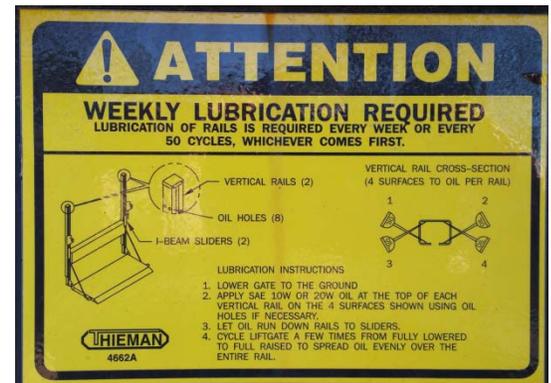
Equipment Safety Considerations

- Use the remote control if the lift-gate has one. Operate while standing on the gate or on the ground, whichever is better in the current circumstances. Do not try to stand on the gate and use the controls mounted to the truck.
- Know the lift-gate's capacity and do not overload. F&S has lift-gates with capacities of 1,200 to 3,000 pounds.



Pre-Operations

- Maintain the lift-gate according to manufacturer's instructions.
- Read the lift-gate operator's manual and follow the directions. Pay special attention to the safety warning decals. Make sure the decals are in place and legible.
- Visually inspect the lift-gate daily as part of the vehicle's trip inspection and report any deficiencies. Do not use the lift-gate if there are signs of abuse, or it fails to operate properly.
- Before running the lift-gate loaded, run it empty through its full range as a "pre-trip" to verify that it will provide a good landing area for the freight that will be rolled off it.



Operations

- Secure top-heavy loads with strapping to prevent the item from tipping or rolling off.
- Use chocks to prevent loads from rolling off the gate.
- Personnel should not ever attempt to put a piece of freight in motion that is beyond their ability to control once it starts moving. Get assistance if you need it.
- Keep an escape plan in mind. Be prepared to move out of the way to keep from getting hurt. Never sacrifice yourself for the freight.

- Set the vehicle brakes and wherever possible, operate the lift-gate on a level surface.
- Work out communication and routines between co-workers, including a “ready” signal without which the gate is not started.
- If you have by-standers, insist that they keep their distance.

Special Safety Considerations

- Never use the lift-gate for any purpose other than to lift or lower cargo from the truck. Never use lift-gates as a personnel lift.
- Keep hands and feet clear of all pinch points. There is a shear or pinch point exposure during lift-gate operations. Take note of where the lift-gate and the truck bed meet. Feet and hands are particularly vulnerable, during raising and lowering of the lift-gate.
- If you are unloading curbside on a street, wear high-vis vests, available at the tool room.
- Make sure the platform is not slippery (e.g., oil, rain, ice or snow).
- Do not drive with the lift-gate down. It must be folded up and secured before the truck moves.



Lifting Strong



Ratio
of
1:1

Ratio
of
6:1



Work/Play in the
Green/Yellow
Zones

High Risk!



- Up to a 150:1 ratio
- Risk of Back Injury
- Fatigue



Reminder:
Stay in your
GREEN
ZONE!



I will demonstrate how much more work your muscles have to do to lift in the Red Zone compared to lifting in the **Green Zone**.

Set up the demo correctly and safely!

- Pick an employee to be the participant in this demonstration.
- Do a brief **Safety Check**.
- Find out if they are right or left handed.
- Participant puts same-side hand and foot forward; hand is thumb up, wrist straight.
- You put your Best Foot Forward and stay in your **Green** zone throughout the demo.

Please keep your elbow by your side and put your hand out in your **Green Zone** with your thumb up and wrist straight.



L = Leader

P = Participant

Position your hands so one provides moderate resistance to lifting and the other serves as a lifting target.

- Now, lift my hand up slow and steady and notice how much effort it takes.
- Where did you feel the pressure?

Have the participant measure and move their elbow out to the **Yellow Zone**.

NOTE: You (leader) move to stay in your green zone.

Lift my hand again and notice where the effort is this time.

Have the participant move their elbow out to the Near Red Zone with their elbow slightly flexed.

Move to stay in your **Green Zone**.



Now, lift my hand one more time and notice how much effort it takes.

Don't keep them trying to lift in the Red Zone for very long!

Did you notice a difference? Where did you feel the pressure?

Thank You.

Note: If you have only one participant then skip the instructions below and go on to the next page.



Thank you.

I would like **EVERYONE** who can safely participate to experience how much more effort it takes to lift your hand in the **Yellow and Red Zones**.

- Safety Check
- Give brief instructions so the participants understand how to do the demonstration correctly.
- Remind them about judgment and No pain, No strain.
- Ask them to pair up and try the demonstration.
- Remind them to be slow and steady.
- Supervise for safety and time.



Ask: Why is it easier to lift your hand in the **Green Zone** compared to the **Red Zone**?



Answer: In the **Green Zone** the weight is closer to your body so you have better leverage and less force is required to lift your hand.

Also, the hinge (*the technical term is fulcrum of motion*) is the elbow and the muscles around the elbow are very efficient for lifting. The force is 1:1.

Use posters and movement to demonstrate.

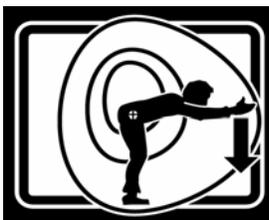


In the **Yellow Zone** the elbow is farther away from the body and the hinge has moved to the shoulder.

The force on the shoulder can be up to 6:1.

So holding a 10 pound object can exert 60 lbs of force on your shoulder muscles and tendons.

Use good judgment and do not strain yourself to show this position. You may want to show the icon.



In the **Red Zone** the hinge has moved to the low back.

The force on the low back can be up to 50:1.

So that same 10 pounds in the **Red Zone** can exert up to 500 pounds of force on your low back.



UNIVERSITY OF ILLINOIS
EMPLOYEE PROTECTION PROCESS/SAFETY



Reminder:
Engage your
CORE
MUSCLES!

It is healthy to work in all **three (3) Zones**. But, there are also risks. The key to boosting your strength and balance is finding ways to reach, lift and carry with your elbows closer to your side. Every little bit helps. Here are some techniques for reducing the stress on your body.