

Transportation Techniques



Enhancing Lives
Promoting Independence
Embracing Recovery



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Transportation Techniques

This training module is designed to train you in the proper techniques/safety measures for transporting individuals in wheelchairs, car seats, and booster seats.



Wheelchair Training Objectives

As a result of reading this material, you will be able to:

- Understand the importance of safe loading and unloading techniques.
- Understand the procedures to ensure safe loading and unloading using the lift.
- Recognize the difference in the wheelchair restraints.

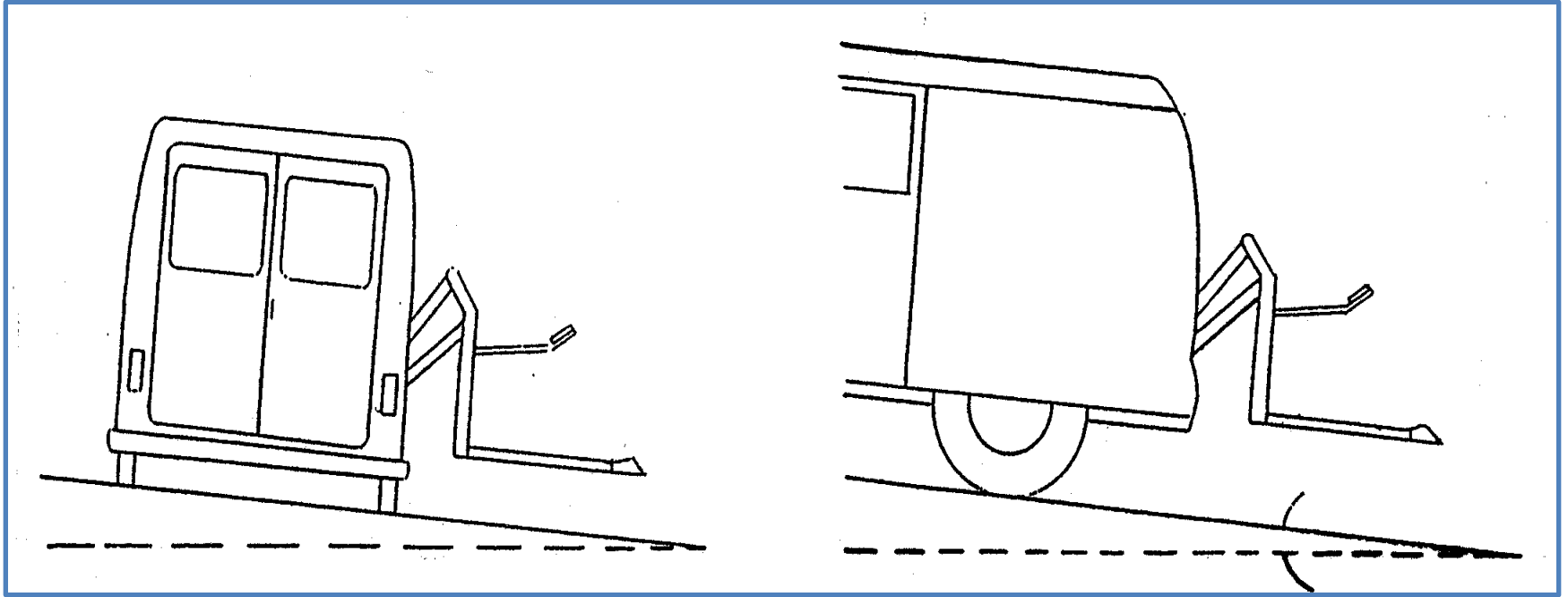
Wheelchair

Loading/Unloading Techniques

Loading and unloading passengers safely is the primary job and responsibility of each driver and driver assistant. Part of this responsibility includes knowing the differences between the vehicles you operate, the hydraulic lifts and the restraints used to secure the wheelchairs. Some vans load from the side and others from the rear. These differences are especially important when using the lift and how you place the passenger in the wheelchair on the lift.

Park the vehicle on a level area away from any traffic, allowing several feet for lift opening and passenger boarding. Ensure there are no people or obstacles in the area where the lift will rest.

Avoid operating the lift while vehicle is parked on a slope, since the lift platform will also slope parallel to the street causing an unsafe condition. Use extreme care in maintaining control of the wheelchair if slope causes weight to be unbalanced. The pictures on the next slide illustrate what **not to do**.



These ramps are incorrectly lowered on inclines. You can see how a wheelchair could roll off of the ramp and down the slopes.

- Never leave the platform outside of the vehicle.
- Always return the lift to the stowed position after use or when leaving the vehicle.
- Always fully open door(s).
- Always remove the keys from the ignition and engage the parking brake.
- Store door restraint cable by attaching hook to the separate eyelet in the door. This cable is used to secure the door to the vehicle so it will not crash toward the lift on a windy day.
- On some vehicles, the back door must be unlocked during transit or the buzzer sounds.

Inspect the lift prior to each use. The lift should be clean, free of debris, and well maintained.

Check the following:

- All lift functions.
- General appearance and lubrication.
- All fasteners.

Any unusual noises or movements should be inspected immediately by a reputable mechanic or authorized dealer. If any unsafe condition exists, **DO NOT** use the lift. Return the lift to an authorized dealer for repair.

The vehicle must be securely parked, with the engine turned off before using the wheelchair lift, unless operation of the lift requires the engine to be on or during **extreme temperatures**.

Safety of the passenger is the essential concern when loading and unloading the wheelchair.

- Be certain the wheelchair fits safely on the lift platform and does not extend over the inside or outside edges of the platform when loading and unloading.
- Always set the wheelchair brakes (power chair users should turn off the power and set the brake) before lift is put in motion.
- Use extreme care in wet conditions. Wheelchair brakes can be less effective when wheels are wet.
- Keep others clear while operating the lift.
- The lift is designed for one user at a time. Do not overload it.
- On some lifts the lip on the platform goes up and down automatically before and after the wheelchair is pushed on to the lift. On others, you must move the lip yourself. This is an important safety precaution. **KNOW YOUR VEHICLE.** If the platform has a belt that goes across the platform, be sure it is secured.
- The lift draws its power from the vehicle battery; therefore, children and others should not play with the lift as this may run down the battery.
- Do not place your arms or legs in or near any folding parts of the lift.
- Avoid operating the lift while vehicle is parked on a slope.

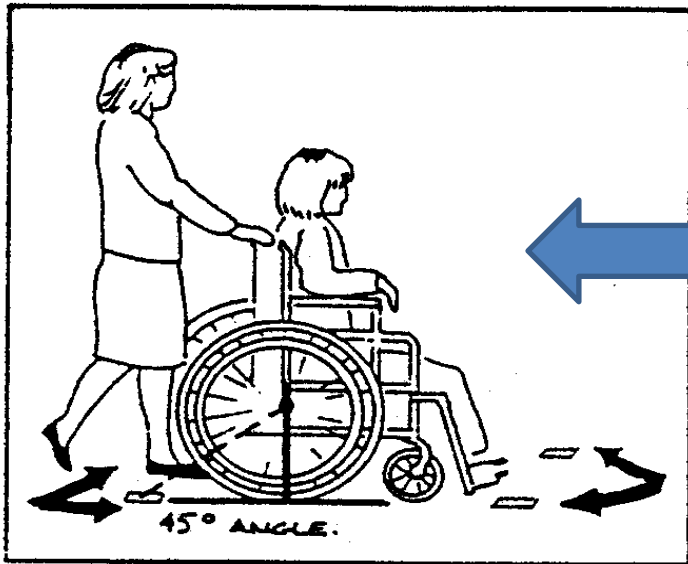
Wheelchair Restraints

There are several styles of wheelchair restraints that are designed to secure the wheelchair and its occupant in the event of an accident.

Three variations are briefly explained in the following:

- Q'Straint
- Wheel Locks
- Kinedyne Wheelchair Securement System

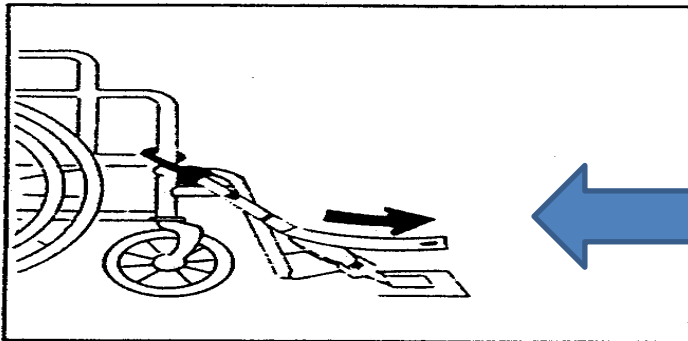
Procedures for each system are considerably different; thus, always following the instructions supplied by the manufacturer is extremely important for the safety of the individual.



Position the wheelchair

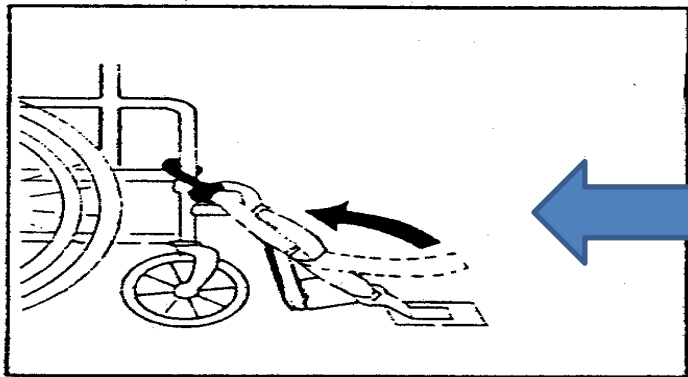
Wheel the chair into position, centering the chair evenly on all four corners with the four floor pocket inserts. Keep in mind that the rear belt, when fastened, should create approximately a 45 degree angle from the floor pocket to the chair.

Apply wheelchair brakes and turn off power on electric chairs.

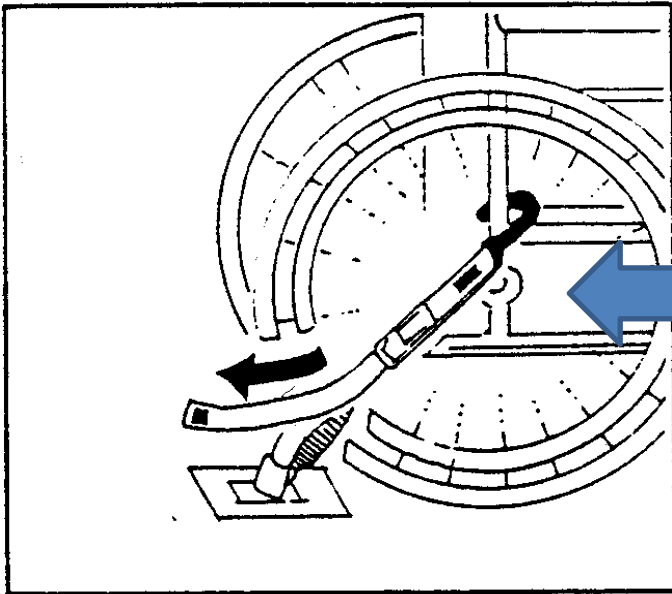


Front Belts

Attach the front belts by hooking the top black hook to a solid frame member of the chair, the opposite end of the belt, to the floor inserts. (try to maintain a 45 degree angle with the floor, but it is not critical at this point).



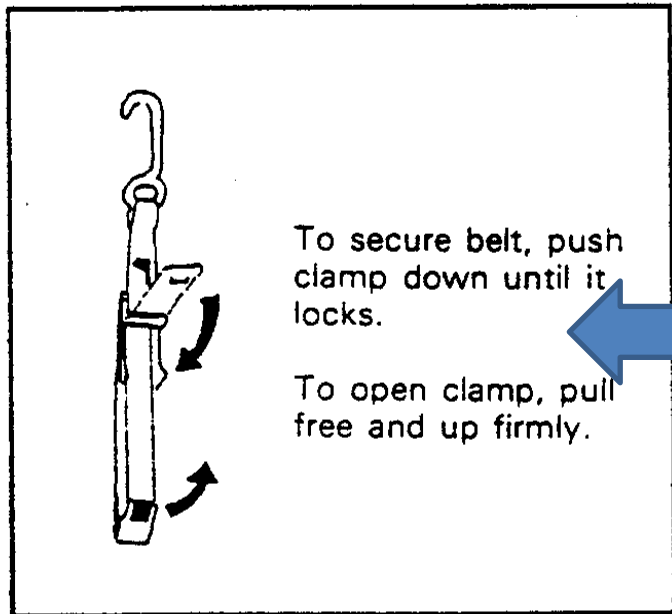
Pull the loose end of the belt until snug. Connect Velcro tabs to keep excess belting off the floor.



Rear Belts

Attach rear belts by connecting the black hook to a solid frame member close to the point where the chair back and cushion meet.

Attach the metal hook at the opposite end to the floor insert. Keep in mind that the rear belt when fastened should create approximately a 45 degree angle from the floor pocket to the chair.



To secure belt, push clamp down until it locks.

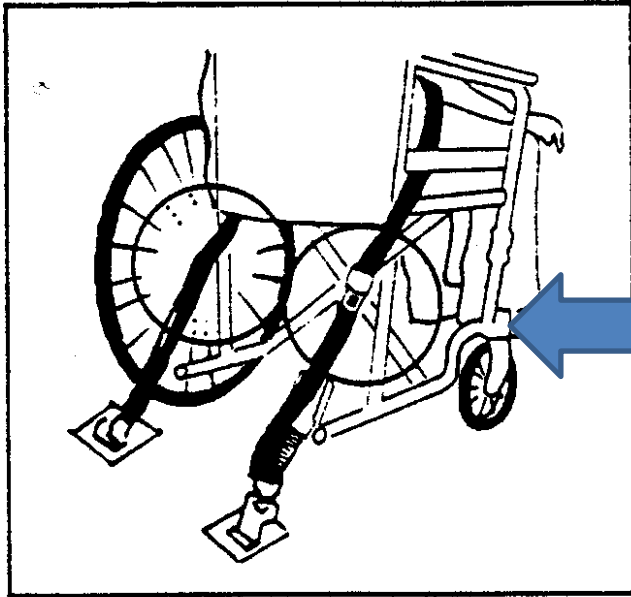
To open clamp, pull free and up firmly.

Rear Belts

With the bear clamp open, pull the loose end of the belt until snug. While holding the loose end with one hand, pull the lever end of the clamp down until it locks.

Connect the Velcro tabs to keep the excess belting off the floor.

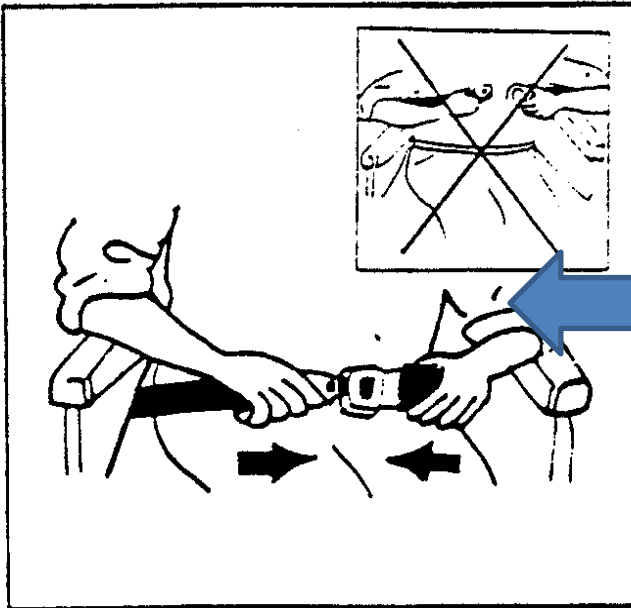
Check that the belts are tight and the chair is secure and does not have any movement back and forth.



Lap Belts

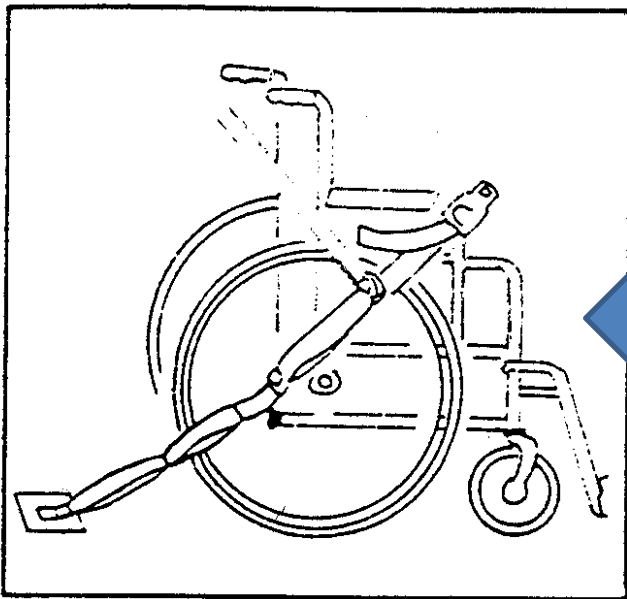
The ends of the belt should be passed around the occupant and down either between the side panels and the seat of the chair or through the gap between the chair and the seat behind the occupant.

Connect the loose ends of the belt to the pins attached to the rear tie down belts.



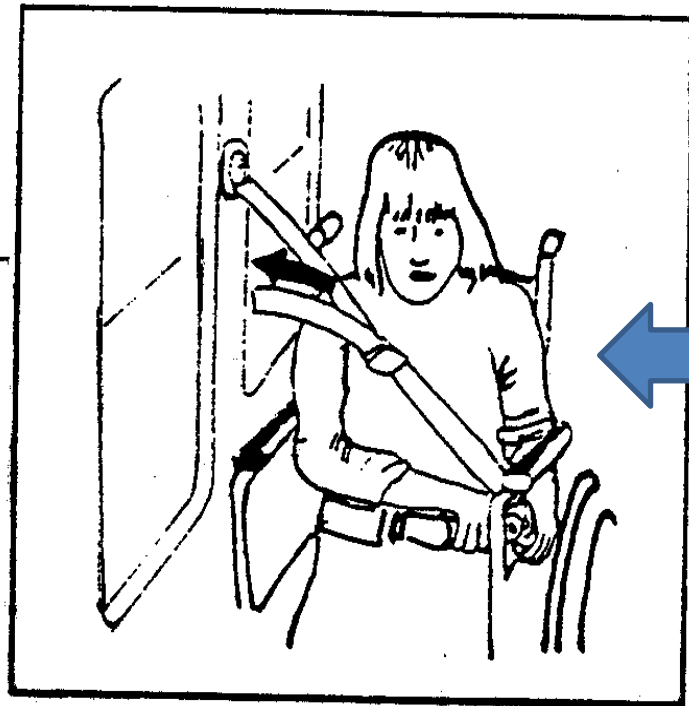
Lap Belts

Never put the belt over the arm rests or the side panels. When the belt is adjusted snugly, it should cross the pelvic zone of the occupant.



Shoulder Belt

Connect the shoulder belt to either the left or right pin attached to the lap belt.



Shoulder Belt

The belt will be attached to the pin depending on which side of the vehicle the chair is located. Right hand pin if the chair is on the driver's side and left hand pin if the chair is located on the passenger's side of the vehicle.

Maintenance of Wheelchair locks and belts

The wheel locks are located on a bar near the floor of the vehicle and are adjustable to the width of the chair. The wheelchair with occupant is pushed backwards into the lock. One lock on the chair is latched into place, then the other lock is latched. Lastly the wheelchair brakes are applied.

To remove the chair from the locks, the wheelchair brakes are released, each wheel lock is unlatched, and the chair and occupant wheeled to the lift.

1. When not in use, store belts on rack provided in the vehicle.
2. To clean the belts, use mild soap and water.

Car Seats & Child Restraint Systems

Training Objectives

As a result of reading this material, you will be able to:

- Know how to use car seats and child restraint systems
- Know when to use and change between them

Car Seats

Birth to at least age 1 and 20lbs

Use a rear-facing car seat to at least age 1 and 20 lbs. Use it longer if the seat has higher weight and height limits.

- Read the car seat instructions.
- Use the correct car seat for the baby's weight and height.
- Use the car's safety belt or LATCH (Lower Anchors and Tethers for Children) system to lock the car seat into the car. The car seat should not move more than one inch side to side or front to back. Grab the car seat at the safety belt path or LATCH path to test it.
- Put harnesses through the slots so they are even with or below the infant's shoulders. Be sure the harness is tight, so you can't pinch extra webbing at the shoulder.
- Adjust the chest clip to armpit level.
- Recline no more than 45 degrees, so the baby's head stays in contact with the seat and the baby's airway stays open.

- If the child is wearing a winter coat that has a hood, if possible remove the hood and have the child wear a hat. If it is not possible to remove the hood, remove the coat, secure the child in the car seat and place the child's coat on backwards (with the zipper in back). This will prevent the hood from bunching behind the child's neck. If the coat is too bulky, remove it altogether before placing the child in the car seat.
- Find where the frontal airbags are in the vehicle by checking the owner's manual. Never put a rear-facing car seat in front of an active airbag.

Older Than Age 1 and Over 20 lbs.

- Use a forward-facing car seat correctly in a back seat.
- Use the right car seat with a harness for the toddler's weight and height.
- Use the car's safety belt or **LATCH** system to lock the car seat into the car. The car seat should not move more than one inch side to side or front to back. Grab the car seat at the safety belt path or **LATCH** path to test it.

- Put harnesses through the slots so they are even with or above the child's shoulders. Some seats require use of the top slots when the seat is forward-facing, so check the instructions.
- Be sure the harness is tight, so you can't pinch extra webbing at the shoulder.
- Use a top tether if the vehicle and car seat are both so equipped. Tethers limit the forward motion of the child's head in a crash. If you don't have them, contact the car dealer and car seat manufacturer.
- Adjust the chest clip to armpit level.
- If the child is wearing a winter coat that has a hood, if possible remove the hood and have the child wear a hat. If it is not possible to remove the hood, remove the coat, secure the child in the car seat and place the child's coat on backwards (with the zipper in back). This will prevent the hood from bunching behind the child's neck. If the coat is too bulky, remove it altogether before placing the child in the car seat.
- A child is too big for the seat when the shoulders are above the top slots, the tops of the ears are above the back of the seat or the weight limit is exceeded. Move to a taller car seat or a booster seat. Many children will outgrow the harness of a forward-facing car seat at age 4 or once a child reaches 40 pounds, remove the harness straps and use a high-back booster with the lap and shoulder seat belts.

Booster Seat

As of July 1, 2008, Michigan law requires children to be properly secured in a child restraint system who are: between the ages of 4 and 8 years old **AND** are less than 4 feet, 9 inches tall. The child restraint system may be either a child seat with harness straps or a booster seat (no-back or high-back), depending on the child's weight. It must be used in accordance with the child restraint manufacturer's and vehicle manufacturer's instructions and applicable federal standards.

1. Have the child sit all the way back on the vehicle seat. Do his or her knees bend at the front edge of the seat? If they bend naturally, go to step #2. If they don't, return to the booster seat.
2. Buckle the lap and shoulder belt. Be sure the lap belt rests on the upper legs or hips. If it does, go to step #3. If it rests on the stomach, return to the booster seat.
3. Be sure the shoulder belt rests on the shoulder or collarbone. If it does, go to step #4. If it's on the face or neck, return to the booster seat. Never put the shoulder belt under the child's arm or behind the child's back.
4. Check whether the child maintains the correct seating position for as long as you are in the car. If the child slouches or shifts positions so the safety belt touches the face, neck or stomach, return the child to the booster seat.

- Booster seats are not installed tightly. They sit on the vehicle seat; the child buckles the lap and shoulder belt and wears the safety belt like you do. Never use only the lap belt.
- Use the vehicle's lap and shoulder belts on every booster seat. Never place the shoulder belt under the child's arm or behind the child's back.
- In Michigan, an operator of a motor vehicle transporting a child who is found responsible for not placing the child in a child restraint can be fined \$25 for a civil infraction.
- Use a booster seat with the vehicle lap and shoulder safety belts until the child passes the Safety Belt Fit Test.