

ENGLISH

WC19-Compliancy Transit Policy, User's Manual, Warranty Information

Transit Guide

Cruiser Transit Chair - CX10 & CX12

EZ Rider Transit Chair - EZ12

Convertible Transit Chair - CV12



READ INSTRUCTIONS BEFORE USING YOUR NEW WHEELCHAIR

SAVE THIS BROCHURE FOR FUTURE REFERENCE

 **Convaid**

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Introduction

Congratulations on purchasing your new Convoid transit wheelchair, proven safer for use as seating aboard a motor vehicle. This guide includes important information regarding the use of your transit wheelchair. Please read it carefully and keep it for future reference.

When riding aboard a motor vehicle, it is preferred that the wheelchair user transfer from the wheelchair into the vehicle manufacturer's seat and use a federally approved, crash-tested restraint system. However, it may be undesirable for some wheelchair users to transfer to the seat provided by the motor vehicle manufacturer. In these cases, Convoid transit wheelchairs offer a safe alternative.

All Convoid transit wheelchairs comply with a transit wheelchair standard that requires wheelchairs to be dynamically crash tested. (Largest and smallest sizes of each model have been crash-tested at a leading U.S. university; intermediate sizes may be certified to standard by Convoid.) Proper use of your Convoid transit wheelchair will significantly reduce the likelihood of injury in the event of a motor-vehicle accident.

This guide provides instructions on how to correctly secure your Convoid wheelchair to the bus or van and safely restrain the wheelchair occupant. When selecting a wheelchair, choose the size in accordance with the occupant's weight as shown in the following table.

Seat Width (in. / cm)	Occupant Weight (lb. / kg)	Seat Depth (in. / cm)
10 / 25.5	35-66 / 15.9-29.9	9-11 / 22.86-27.94
12 / 30.5	35-66 / 15.9-29.9	10-13 / 25.4-33.02

Warnings & Precautions

1. **The wheelchair should be used as indicated in the User's Guide instructions accompanying the wheelchair. Failure to do so increases the likelihood of serious injury in a vehicle crash.**
2. The five-point harness and a four-point wheelchair tiedown system in compliance with SAE J2249 Wheelchair Tiedown and Occupant Restraint Systems for Use in Motor Vehicles should be used at all times during transit.
3. **Use positioning belts or postural supports in a moving vehicle only in conjunction with a crash-tested five-point harness system. NEVER USE POSITIONING BELTS OR POSTURAL SUPPORTS AS MOTOR VEHICLE RESTRAINTS, unless they have been designed, tested, and labeled for this use. (See #4 below.)**
4. **Wheelchair-anchored lap belts intended for use as an occupant restraint in a motor vehicle must comply with Section 19 ANSI/RESNA WC/Volume 1*, Wheelchairs Used as Seats in Motor Vehicles, or "WC19." Your Convaid transit wheelchair provides the option of using a crash-tested, wheelchair-anchored five point harness.**
5. **Whenever possible, auxiliary wheelchair equipment (such as an oxygen tank) should be removed from the wheelchair and secured in the vehicle during transit so that it does not break free and cause injury to vehicle occupants during a crash.**
6. **Adequate clear zones are required for occupants restrained by an upper- / lower-torso five-point harness. See Figs. 1 & 2.**
7. **Do not alter or substitute any part or component of the wheelchair, wheelchair frame or wheelchair seating system.**
8. If the wheelchair has been involved in a vehicle crash that requires the vehicle to be towed, it may have been structurally damaged, which could compromise its safety and effectiveness. Wheelchairs involved in such incidents should be returned to Convaid for inspection and evaluation.

*(and proposed section 19 ANSI/RESNA WC/Volume 4)

RECOMMENDED CLEAR ZONES IN VEHICLE

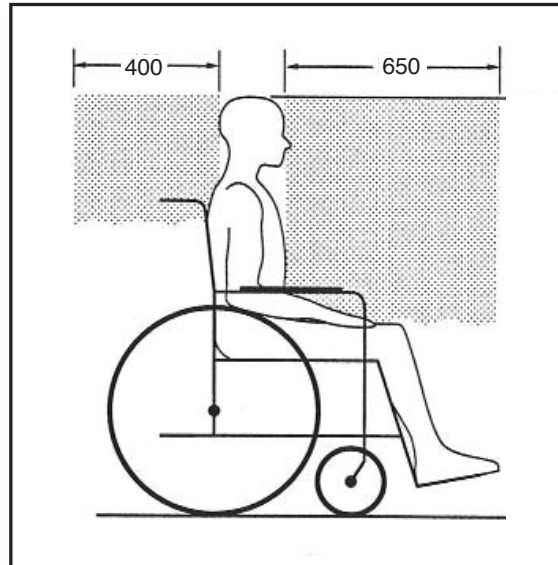


Fig. 1

SIDE VIEW

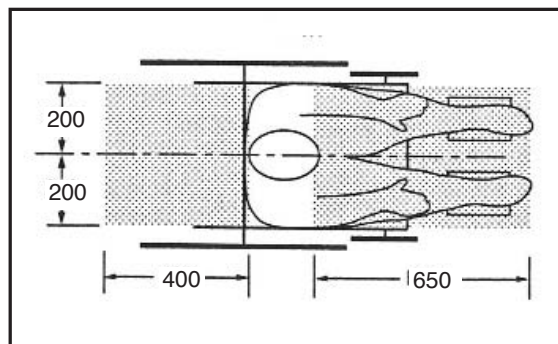


Fig. 2

Dimensions shown in millimeters.

Note -- the crash tested five-point harness must be used while traveling aboard a motor vehicle.

The rear clear zone is measured from the rearmost point on an occupant's head. The front clear zone is measured from the frontmost point on an occupant's head.

TOP VIEW

Passenger Safety

Wheelchairs Used as Seating in Motor Vehicles

Before attempting to use your Convoid transit wheelchair as a seat in a motor vehicle, please take a moment to become familiar with some fundamental principles of occupant safety:

- Most serious or fatal injuries occur during frontal-impact crashes.
- The primary cause of injury to motor-vehicle occupants in frontal crashes is a lack of effective occupant restraint, which results in contact with the vehicle's interior components or objects and structures outside the vehicle.
- Effective protection of occupants in frontal impacts requires the use of five-point harness that complies with federal safety standards and WC19. The five-point harness should be positioned snugly across the pelvis and should also be positioned snugly over the shoulder and chest. And, the crotch strap length should be adjusted for proper pelvic belt height. Harness restraints used in this manner also greatly reduce the likelihood of injury during vehicle rollovers.
- For belt restraints to be effective, the wheelchair must be effectively secured to the motor vehicle, and the harness restraint must remain in position on skeletal portions of the body and not place undue stress on the abdomen.

ANSI/RESNA WC19

For a wheelchair to provide safe seating in a motor vehicle, it is essential that it comply with the safety standard known as Section 19 ANSI/RESNA WC/Volume 1, *Wheelchairs Used as Seats in Motor Vehicles*, or "WC19." Convoid's transit wheelchairs comply with this voluntary transit wheelchair standard and have been dynamically tested according to the

procedures of Annex A of the standard, which includes the use of a wheelchair-anchored five-point harness in a 30 MPH/20 g deceleration, frontal impact.

The purpose of WC19 is to:

- reduce the risk of injury to motor-vehicle occupants who remain seated in a wheelchair during transit and
- establish an industry standard so that wheelchairs that comply with this standard will provide a reasonable measure of safe and suitable seating during normal transportation and in a frontal impact.

The standard contains a number of design and performance requirements specifically related to the use of wheelchairs as seating in motor vehicles. Among the most important of these are that:

- wheelchairs provide four easily accessible hook- or strap-type attachment points for strap-type tiedowns with hook- or strap-type end fittings to facilitate wheelchair securement in motor vehicles (see Fig. 3) and
- wheelchairs are crash tested at 30 MPH/20 g deceleration while secured by a four-point strap-type tiedown and loaded with an appropriately sized crash-test dummy. (Note that this is essentially the same level of crash testing required by federal safety standards for passenger motor vehicles.)

When you use your Convaid transit wheelchair as seating in a motor vehicle, it is vital that you use a wheelchair tiedown and occupant restraint system (WTORS) that complies with SAE J2249. As stated in this recommended practice, the wheelchair must be secured in a forward-facing configuration with a J2249-compliant tiedown. The wheelchair occupant should be restrained by the upper-/lower-torso five-point harness for optimal crash protection

Attach tiedown straps to securement points (red brackets) located on the wheelchair's legs in accordance with the WTORS manufacturer's instructions. Securement points are identified by the symbol in **Fig. 4**, and their location on the wheelchair illustrated in **Fig. 5**. **You must use all four tiedown straps when securing your Convaid wheelchair in a motor vehicle.**

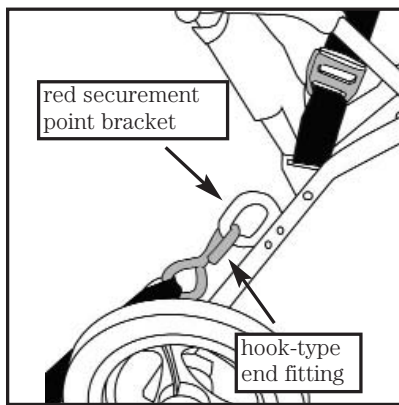


Fig. 3

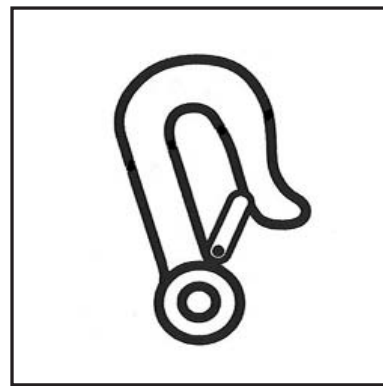


Fig. 4

ILLUSTRATION OF SECUREMENT POINT BRACKET ON WHEELCHAIR FRAME (**FIG. 3**) AND SYMBOL USED TO DESIGNATE WHEELCHAIR SECUREMENT POINTS (**FIG. 4**).

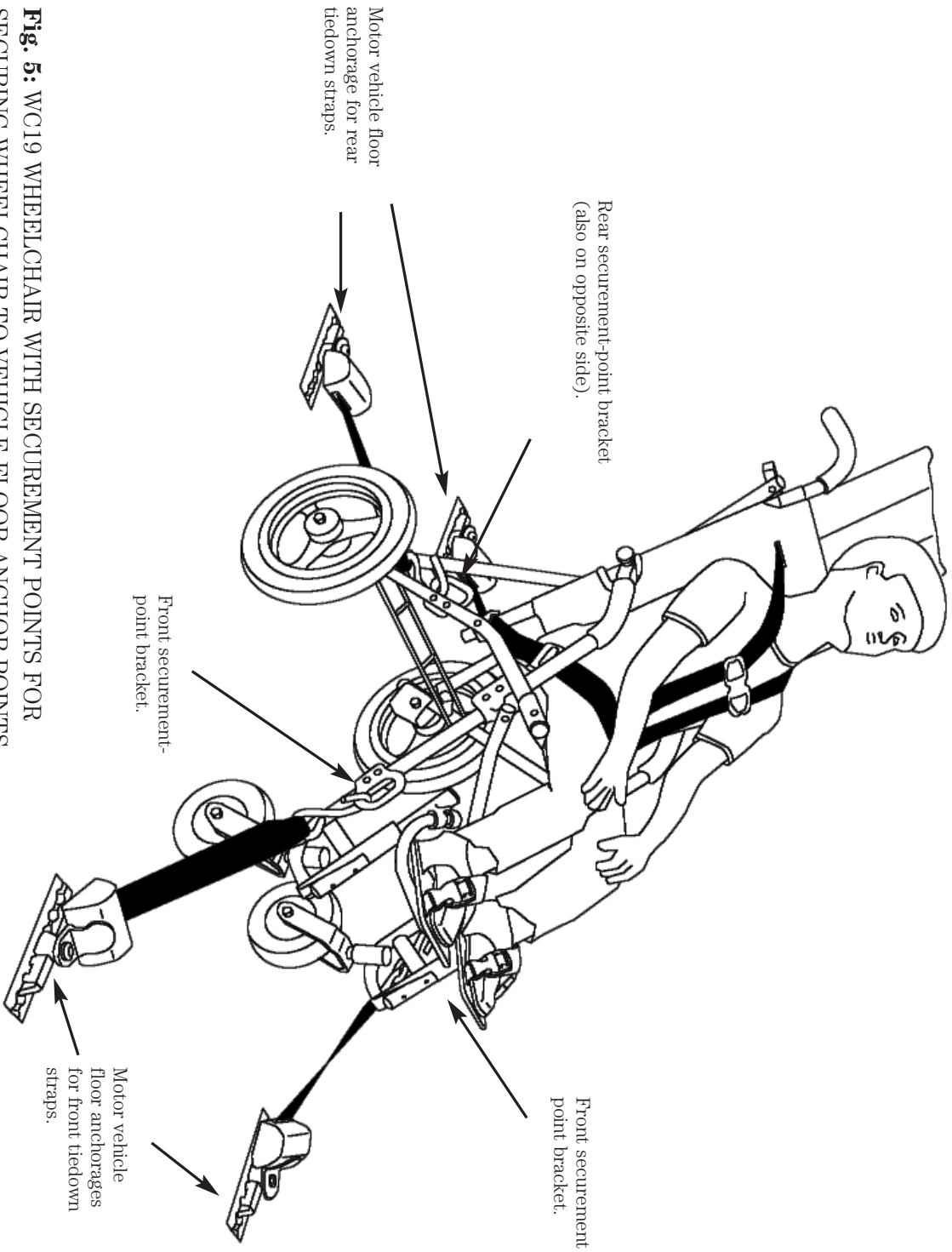


Fig. 5: WC19 WHEELCHAIR WITH SECUREMENT POINTS FOR SECURING WHEELCHAIR TO VEHICLE FLOOR ANCHOR POINTS.

Wheelchair Lateral Stability and Belt Restraint Accommodation Ratings

Wheelchair Model	Mass (Weight) of Wheelchair (lb. / kg)	Test Rating (A,B,C,D)*	Lateral Stability ** (in. / mm)
Cruiser Transit 10	19.0 / 8.6	B	0.25 / 6.4
Cruiser Transit 12	19.1 / 8.7	B	0.35 / 8.9
EZ Rider Transit 12	19.6 / 8.9	B	0.79 / 20.1
Convertible Transit 12	30.2 / 13.7	B	0.39 / 9.9

*A = Excellent; B = Good; C = Fair; D = Poor

** “Lateral stability” is the displacement of point P (the center of gravity on the loaded wheelchair) when a platform with the loaded wheelchair is tilted 45° laterally from the horizontal. Higher numbers indicate less stability.

This table refers to tests performed in accordance with WC19 to establish lateral stability during normal travel and the ease of use and proper fit of vehicle-anchored belt restraints. The letter designation reflects the overall rating of the lap and shoulder belt positioning and installation.

To obtain a copy of Section 19 ANSI/RESNA WC/Volume 1, Wheelchairs Used as Seats in Motor Vehicles, contact:

RESNA
1700 N. Moore Street, #1540
Arlington, VA 22209
(703) 524-6686, ext. 311

To obtain a copy of SAE J2249, Wheelchair Tiedown and Occupant Restraint Systems for Use in Motor Vehicles, contact:

SAE World Headquarters
400 Commonwealth Drive
Warrendale, PA 15096
(877) 606-7323 (724) 776-4970
(U.S. and Canada) (outside U.S. and Canada)

Proper Use of Equipment

The correct use of equipment that complies with SAE J2249 and ANSI/RESNA WC19 may not prevent all crash-related injuries to wheelchair-seated occupants, but it will greatly reduce the risk of serious injuries.

Securing the Wheelchair

When securing the occupied wheelchair, it is important that the WTORS anchor points on the floor and wall of the motor vehicle are positioned properly according to the WTORS manufacturer's instructions.

The wheelchair must be positioned facing forward inside the vehicle.

Position the wheelchair between the front and rear tiedown anchor points, allowing for the correct angle of adjustment of the tiedown straps, as illustrated in **Fig. 6**.

Your Convaid transit wheelchair can be easily secured by four-point strap-type tiedowns by attaching the hook end fittings of the tiedown straps to the four red securement-point brackets located on the four tubular legs of the wheelchair or by threading tiedown straps through the openings in the securement points.

The floor anchor points and wheelchair should be located:

- so that the tiedown straps follow a straight, clear path from the wheelchair securement points to the floor anchor points and
- so that the front straps are angled outward from the sides of the wheelchair (**see Fig. 7**) and
- so that the rear straps are anchored straight back from the wheelchair securement points

Once all four tiedown straps are attached to the wheelchair:

- inspect all tiedown straps for signs of wear to the webbing and replace any straps that are worn and
- tighten the straps to remove any excess slack and provide tension between the front and rear tiedown straps

PROPER USE OF EQUIPMENT

PREFERRED ANGLES OF FRONT AND REAR TIEDOWN STRAPS (TOP) AND PREFERRED LOCATIONS OF FLOOR ANCHOR POINTS (BOTTOM).

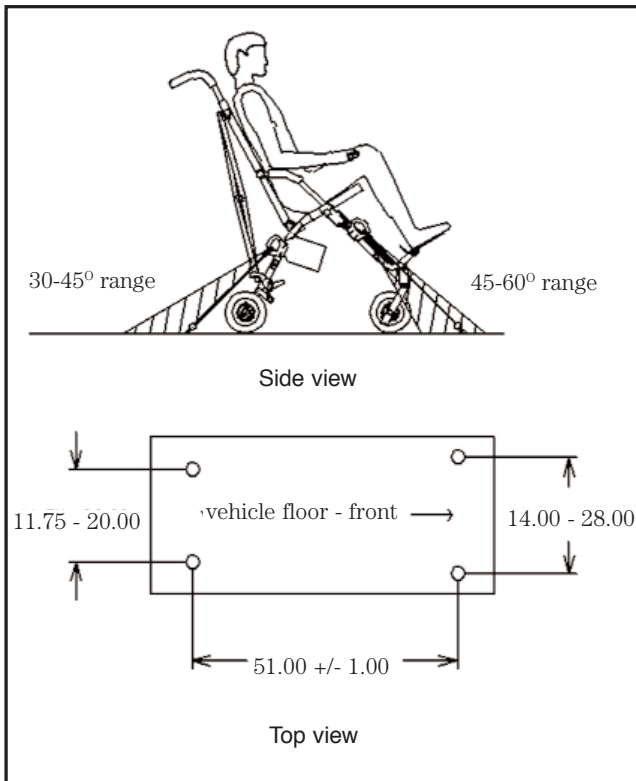


Fig. 6 Dimensions shown in inches.

FIG. 7: FRONT TIEDOWN STRAPS ANGLED AWAY FROM SIDES OF WHEELCHAIR.

FIG. 8: CORRECT POSITIONS OF FIVE-POINT HARNESS AND WHEELCHAIR TIEDOWNS.

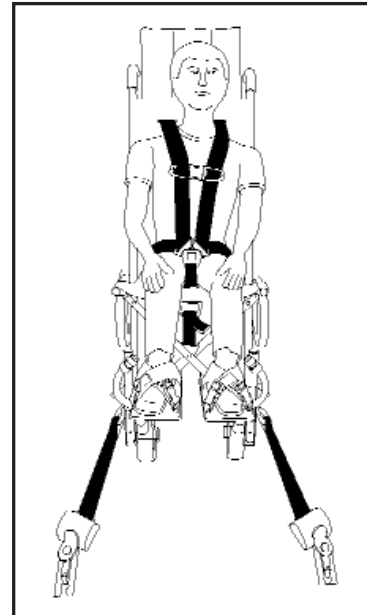


Fig. 7

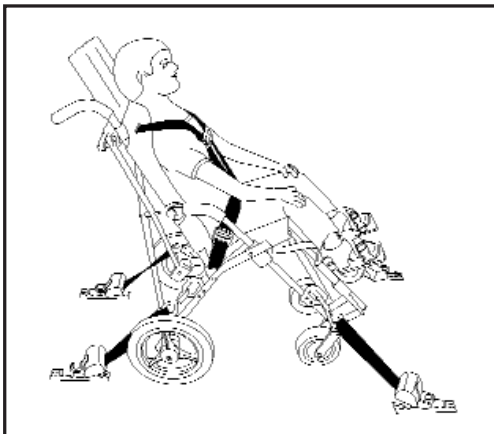


Fig. 8

Providing Clear Space & Padding

Position the wheelchair aboard the motor vehicle to ensure sufficient clear space in front of, and behind, the occupant. **(See Figs. 1 & 2)** If there are any hard or sharp objects or components near the wheelchair, such as components of lifts or fold-up seats, they must be covered with heavy-duty energy-absorbing padding to ensure the safety of the wheelchair occupant and other passengers.

Restraining the Wheelchair Occupant

Your Convaid transit wheelchair was dynamically crash tested in a forward-facing configuration using an appropriately sized crash-test dummy restrained by an upper-/lower-torso five-point harness. To reduce the possibility of head and chest injuries resulting from contact with vehicle components, you must use the five-point harness. (See Figs. 5, 7 & 8)

Your Convaid transit wheelchair provides for the use of a five-point harness, which replaces the vehicle-mounted lap/shoulder belt. The five-point harness, which has been dynamically tested in accordance with Annex A of WC19*, comes standard on the chair. This harness is for children weighing less than 65 lbs, and increases safety because it is attached to the wheelchair rather than the vehicle, providing a closer fit.

Before loading the wheelchair onto the vehicle lift, adjust and fasten the five-point harness over the wheelchair user's upper / lower torso. The five-point harness should be adjusted so the upper torso (shoulder) straps fit/attach to chair just above the shoulders, the lower torso (pelvic) straps fit low over the pelvis, and the crotch strap should be adjusted for proper pelvic belt height. The straps should be adjusted as snugly as possible without compromising comfort.

*(and proposed section 19 ANSI/RESNA WC/Volume 4)

Adjusting the height of the Shoulder Harness

- 1) Release the Upper and Lower Rear Lock Braces by lifting up on the center of each individual brace.
- 2) Press in the silver snap button on the upper rear lock brace and lift the lock brace out of the housing.
- 3) Slip the shoulder harness loop off of the brace and pull the shoulder harness out through the seat upholstery.
- 4) Reposition the shoulder harness to the desired height, and reinsert it through the seat upholstery.
- 5) Slide the shoulder harness loop on to the upper rear lock brace and reinsert the lock brace into the housing. Repeat steps 1-5 for the opposite side.
- 7) Lock the both the upper and lower rear lock braces by pressing down on each individual brace.

Adjusting the Pelvic Straps

- 1) Adjust the crotch strap by pressing down on the gray push button, and pulling on the end of the strap
- 2) Adjust the pelvic belt straps by either pulling on the loop located at the end of the strap (tighten), or pulling on the end of the strap closest to the buckle (loosening).

If the wheelchair user elects not to use the five-point harness, a vehicle-anchored lap and shoulder belt must be used. As with the wheelchair-anchored lap belt, it is very important to position the vehicle-anchored lap belt low over the pelvis so that the angle of the lap belt is within the preferred zone of 45° to 75° to the horizontal or the optional zone of 30° to 45° to the horizontal, as shown in **Fig. 11**. Be sure that the shoulder belt crosses the chest and the middle of one shoulder and that belt restraints are not held away from the body by wheelchair components or parts, such as armrests or wheelchair legs. **(See Fig. 12)** Thread the lap belt under the frame tubes located directly under the user's elbows and pull the belt snug against the pelvis. Ensure that belt webbing is not twisted as this may compromise safety.

Using Postural Belts & Supports

Positioning accessories such as pelvic positioning belts, anterior trunk supports, and lateral trunk supports may be used while in transit, but are not designed to provide restraint during a crash. **Postural supports and belts should therefore not be relied on for restraint in a vehicle crash and should be used only in conjunction with five-point harness that have been designed for restraint in a motor vehicle and crash tested in accordance with SAE J2249 and/or ANSI/RESNA WC/19.**

Trays & Other Wheelchair Components

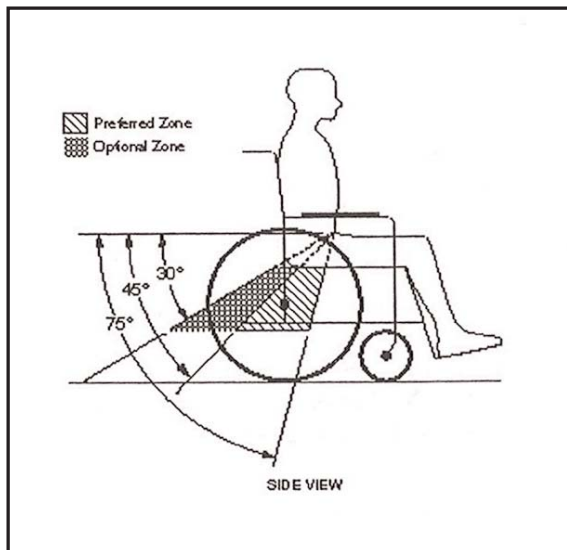
To reduce the risk of potential injury to the wheelchair user or other occupants in a motor-vehicle crash, wheelchair-mounted accessories, such as trays and respiratory equipment, must be removed and secured separately during transit. Use tether straps or other strong attachment hardware to prevent items from breaking loose and causing injury during a crash. If it is absolutely necessary to keep a tray on the wheelchair during transit, use either a crash-tested foam tray, or an energy-absorbing padding must be placed between the edge of the tray and the wheelchair user to prevent serious injury during a crash.

WTORS Manufacturers

Convaid is a wheelchair manufacturer and does not offer wheelchair tiedown systems. However, products that comply with current Wheelchair Tiedown and Occupant Restraint Systems (WTORS) standards can be obtained from the following companies that specialize in crash-tested WTORS:

Ortho Safe Systems	Q Straint	Sure-Lok	Unwin Safety Systems
P.O. Box 9435	5553 Ravenswood Rd.	151 Industrial Pkwy.	Willow House
Trenton, NJ 08650	Ft. Lauderdale, FL 33312	Branchburg, NJ 08876	Artillery Road
U.S.A	U.S.A.	U.S.A	Yeovil, Somerset
(609) 587-3859	(954) 986-6665	(866) 787-3565	U.K.
			(44) (01935) 410920

PREFERRED AND OPTIONAL ANGLES OF PELVIC (LAP) BELT RESTRAINTS.



Note: Steeper side-view pelvic-belt angles are especially important if the pelvic belt is intended to be used for postural support in addition to occupant restraint in a frontal crash. Steeper angles will reduce the tendency for a vertical gap to develop between the user and the belt due to compliance of seat cushions and belt movement, thereby reducing the tendency for the user to slip under the belt or the belt to ride up on the soft abdomen during normal use.

Note: Steeper belt angles also reduce the tendency for upper-torso belts to pull the pelvic belt onto the abdomen during frontal impact loading.

Fig. 11

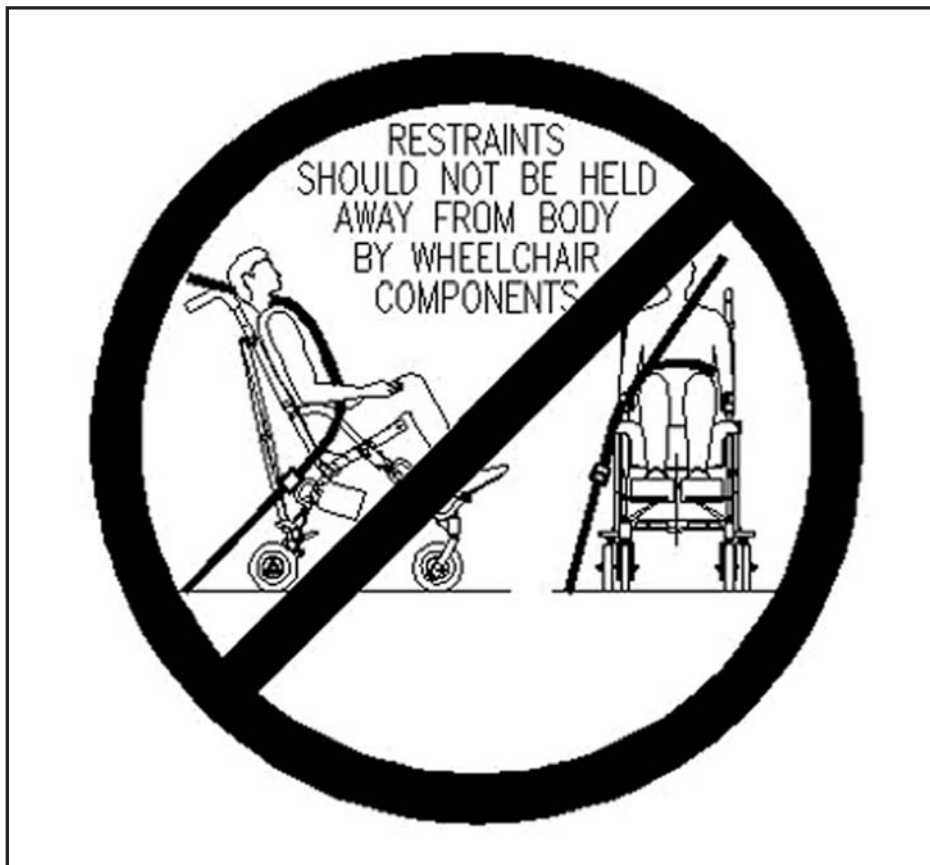


Fig. 12

Convoid Limited Transit Warranty

FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY CAUSE DAMAGE TO YOUR WHEELCHAIR AND WILL INCREASE THE LIKELIHOOD OF INJURY TO THE WHEELCHAIR OCCUPANT OR OTHERS IN THE EVENT OF A VEHICLE CRASH OR EMERGENCY MANEUVER.

The Convoid warranty listed in your wheelchair's User's Guide applies to your transit wheelchair, with the addition of the following modifications:

This warranty is rendered null and void in the event that the wheelchair frame, parts, or accessories are modified in any way (except by Convoid), or if other than Convoid or Convoid-approved accessories are used, or if the wheelchair is used in a manner other than that for which it was intended.

If the wheelchair is damaged in a motor vehicle accident, the warranty will apply if the wheelchair is shipped by the original user to Convoid accompanied by a copy of an official police accident report documenting that the wheelchair was involved in a motor vehicle accident.

Due to normal wear and tear or after an extended period of use, your Convoid transit wheelchair may no longer meet the original crash-test standards. To ensure the safety of the wheelchair user, it is strongly urged that the wheelchair be returned to Convoid or its authorized dealer every three years for inspection, service, and/or repair. Damage caused by misuse of the wheelchair is not covered by the warranty and must be evaluated and repaired by Convoid.

Contact Us

Thank you for choosing Convaid transit wheelchairs. We welcome your comments. **For questions regarding using your wheelchair as seating in a motor vehicle, please contact us at:**

Convaid, Inc.
P.O. Box 4209
Palos Verdes, CA 90274
(888) 266-8243 (310) 618-0111
(U.S. and Canada) (outside U.S. and Canada)

For Answers to Your Questions

Contact your authorized dealer for questions pertaining to safety, use, and maintenance of your wheelchair. For future reference, complete the dealer information section below.

Dealer: _____

Address: _____

Telephone: _____

Serial #: _____

Date Purchased: _____

NOTE -- This supplement contains information pertaining to usage, precautions and options available for Convaid transit wheelchairs. Please refer to the User's Guide that accompanied your wheelchair for detailed information regarding the set-up, adjustment, operation, maintenance, and warranty of your new wheelchair.

09/08