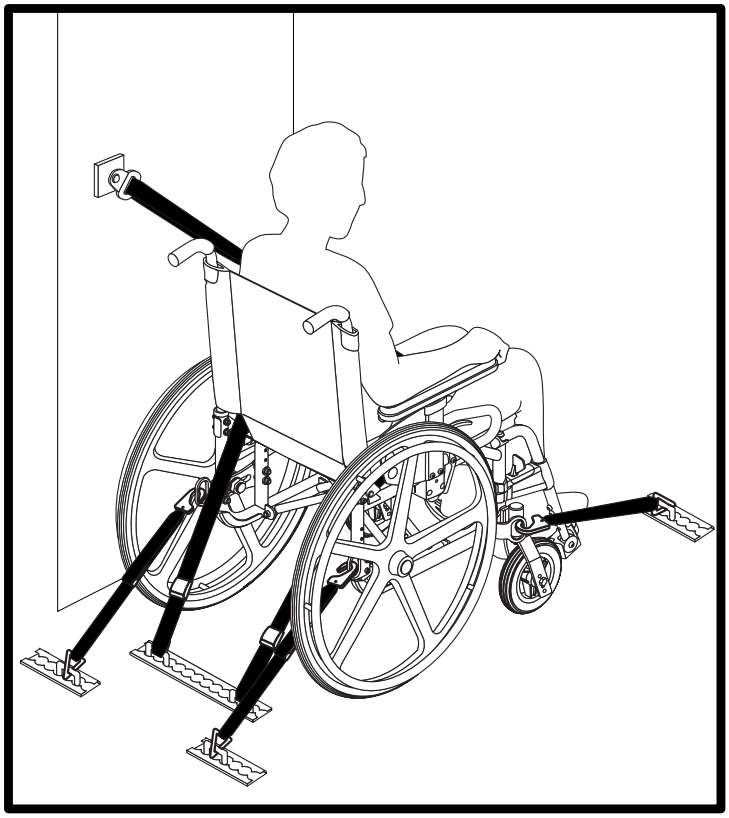
Transit Securement Package

ACN# 088 609 661



Pride Mobility Products Corp.

QUANTUM® REHAB

A Division of Pride Mobility Products® Corp.

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ACN **088 609 661**

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Introduction

MANDATORY! The following information pertains to wheelchairs equipped with a factory installed Pride Transit Securement Package. Read this information in its entirety before use in a motor vehicle. If you have any questions about this information or about using your wheelchair as a seat in a motor vehicle, contact you authorized Pride Provider/Quantum Rehab Specialist.

The Pride Transit Securement Package conforms with the standard of ANSI/RESNA WC/Vol. 4, Section 19/ISO 7176-19 for the purpose of enabling wheelchairs to be secured in certain types of motor vehicles. The Transit Securement Package, including manufacturer-installed front and rear securement brackets and pelvic belt anchoring brackets, has been crash tested in accordance with ANSI/RESNA WC/Vol. 4, Section 19, Frontal Impact Test, with a 168-lbs. (76.2 kg) surrogate occupant corresponding to a user weight range of 115–210 lbs. (52.16–95.25 kg).

Notwithstanding this standard and testing conformance, many government transportation agencies, at the time of publication, have not approved any securement system of an occupied wheelchair in a motor vehicle. Therefore, it is the position of Pride Mobility Products that the Transit Securement Package should only be utilized to secure an occupied wheelchair being transported in a motor vehicle at the user's discretion and in accordance with ANSI/RESNA WC/Vol. 4, Section 19/ISO 7176-19 standards, which are intended to increase safety, but do not suggest that compliance with the standards will necessarily prevent serious injury or death of a secured wheelchair occupant during motor vehicle transport.

In accordance with the ANSI/RESNA WC/Vol. 4, Section 19/ISO 7176-19 standard, the wheelchair user should transfer into the vehicle seat and use the vehicle-installed belt restraint system if and whenever feasible. The Transit Securement Package is only available when factory-installed on new wheelchairs, and cannot be retrofitted on existing wheelchairs or serviced in the field.

PROHIBITED! Do not modify your wheelchair in any way not authorized by Pride. Do not make alterations or substitutions to wheelchair structural parts or frame components without consulting Pride.

Labeling

Read and follow the information in the ownerís manual and all supplemental information provided with the wheelchair before initial operation.

Indicates that tested and approved wheelchair, with similarly labeled tested and approved seating system, conforms to ANSI/RESNA WC/Vol. 4, Section 19/ISO 7176-19 for transport of an occupied wheelchair in a motor vehicle.

Indicates wheelchair securement points which conform to ANSI/RESNA WC/Vol. 4, Section 19/ISO 7176-19.

WARNING! Indicates a potentially hazardous condition/situation. Failure to follow designated procedures can cause either personal injury, component damage, or malfunction. On the product, this icon is represented as a black symbol on a yellow triangle with a black border.

MANDATORY! These actions should be performed as specified. Failure to perform mandatory actions can cause personal injury and/or equipment damage. On the product, this icon is represented as a white symbol on a blue dot with a white border.

PROHIBITED! These actions are prohibited. These actions should not be performed at any time or in any circumstances. Performing a prohibited action can cause personal injury and/or equipment damage. On the product, this icon is represented as a black symbol with a red circle and red slash.

IMPORTANT! Indicates important information to remember when using this product.

Definitions

- **ANSI/RESNA:** American National Standards Institute/Rehabilitation Engineering and Assistive Technology Society of North America
- **ISO:** International Standards Organization
- **Transit Securement Package:** Equipment installed on the wheelchair which allows the wheelchair to be anchored in a motor vehicle. The equipment consists of tie-down anchor points and may include a pelvic belt.
- **Wheelchair Tie-down and Occupant Restraint System (WTORS):** Equipment installed in a motor vehicle which allows a wheelchair and/or a wheelchair-seated occupant to be anchored in the motor vehicle for limiting occupant movement in a motor vehicle crash. The equipment consists of a system or device for securing the wheelchair and a belt-type restraint system.
- **Securement Points:** Specific structural points on the wheelchair base or seat frame that are designed for attachment of a WTORS. These securement points are indicated by anchor symbols.

User Safety Information

MANDATORY! Always secure the wheelchair and occupant in a forward-facing position in the vehicle.

MANDATORY! The wheelchair should be used as indicated in the manufacturerís instructions. If you have any questions about the proper use of your wheelchair, contact your authorized Pride Provider/ Quantum Rehab Specialist.

MANDATORY! Only belt restraints that comply with the provisions of ANSI/RESNA WC/Vol. 4, Section 19/ISO 7176-19 and that have been dynamically tested in accordance with this standard should be installed on the wheelchair for use as a restraint in a motor vehicle.

Protocols and Procedures

The wheelchair user should transfer into the vehicle seat and use the vehicle-installed restraint system if and whenever feasible. The wheelchair should then be stored and secured in the vehicle.

If it is found necessary at the user's discretion to secure a wheelchair to a vehicle, the vehicle must be equipped with a Wheelchair Tie-down and Occupant Restraint System (WTORS) that has been installed in accordance with the tie-down manufacturer's instructions, and is compliant with ANSI/RESNA WC/Vol. 4, Section 19/ISO 7176-19 standards, and the wheelchair must have a transit securement package conforming to the ANSI/RESNA WC/Vol. 4, Section 19/ISO 7176-19 standards. It is essential to use a complete WTORS to secure the wheelchair to the vehicle and to provide the wheelchair occupant with a properly designed and tested safety restraint system. A restraint system with both pelvic and upper torso belts must be used to protect the wheelchair occupant and minimize the likelihood of injury caused by contact with the vehicle during a crash or sudden braking.

Securing the Wheelchair

NOTE: In addition to following the general guidelines below, be sure to follow all recommendations and instructions provided by the WTORS manufacturer.

- Always secure the wheelchair and occupant in a forward-facing position in the vehicle.
- Attach the four tie-down straps only to designated, labeled transit securement points indicated by anchor symbols on the wheelchair. See figure 4. Tighten the straps to sufficiently remove all slack.
- Never attach tie-downs to adjustable, moving, or removable parts of the wheelchair such as armrests, front riggings, and wheels.
- Position the anchor points for the rear tie-down straps directly behind the rear securement points on the wheelchair. The front tie-down straps should anchor to floor points that are spaced wider than the wheelchair to provide increased lateral stability. See figure 1.

WARNING! Always allow for proper clear zones when securing an occupied wheelchair in a motor vehicle.

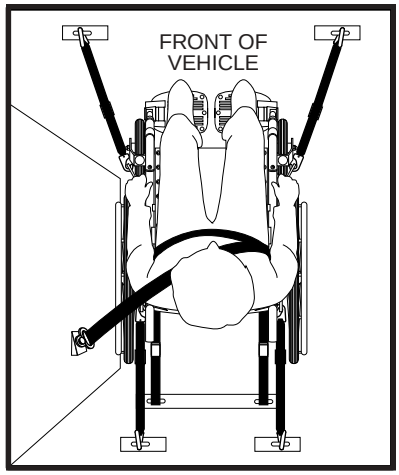


Figure 1. Securing the Wheelchair

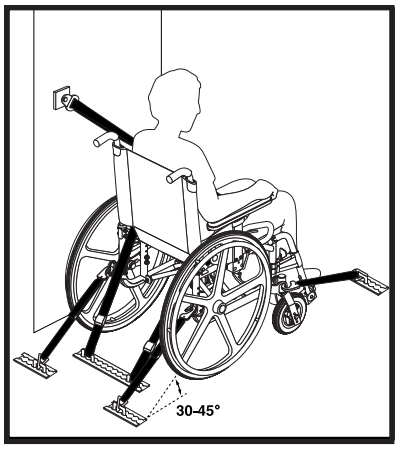


Figure 2. Tie-down System

- The frontal clear zone (FCZ) is measured from the forwardmost point on the occupant's head and should measure at least 26 in. (66 cm) if both a pelvic and upper-torso belt are used. See figure 3.

NOTE: The recommended frontal clear zone may not be achievable for wheelchair-seated vehicle operators.

- The rear clear zone (RCZ) is measured from the rearmost point on the occupant's head and should measure at least 16 in. (40.64 cm). See figure 3.
- The seated head height (HHT) ranges from about 47 in. (120 cm) for a small adult female to about 61 in. (155 cm) for a tall adult male. See figure 3.

WARNING! Allow as much clearance as possible around the wheelchair occupant to reduce the possibility of contact with vehicle components and other passengers in the event of a crash.

WARNING! Ensure all vehicle components that are in close proximity to the wheelchair occupant are removed or covered with dense padding.

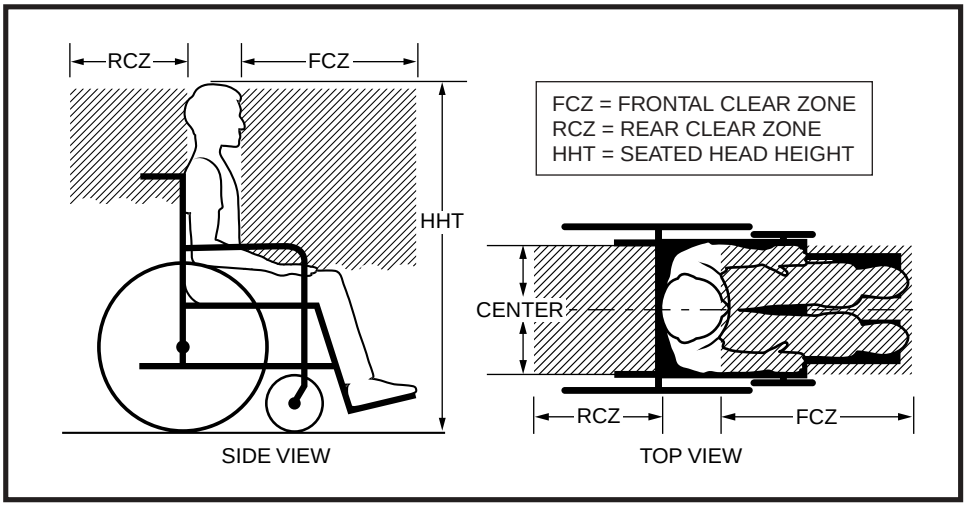


Figure 3. Recommended Clear Zones for Wheelchair-seated Occupants

- The Pride Transit Securement Package includes belt restraint anchor points in conformance with ANSI/RESNA WC/Vol. 4, Section 19/ISO 7176-19. See figure 4.

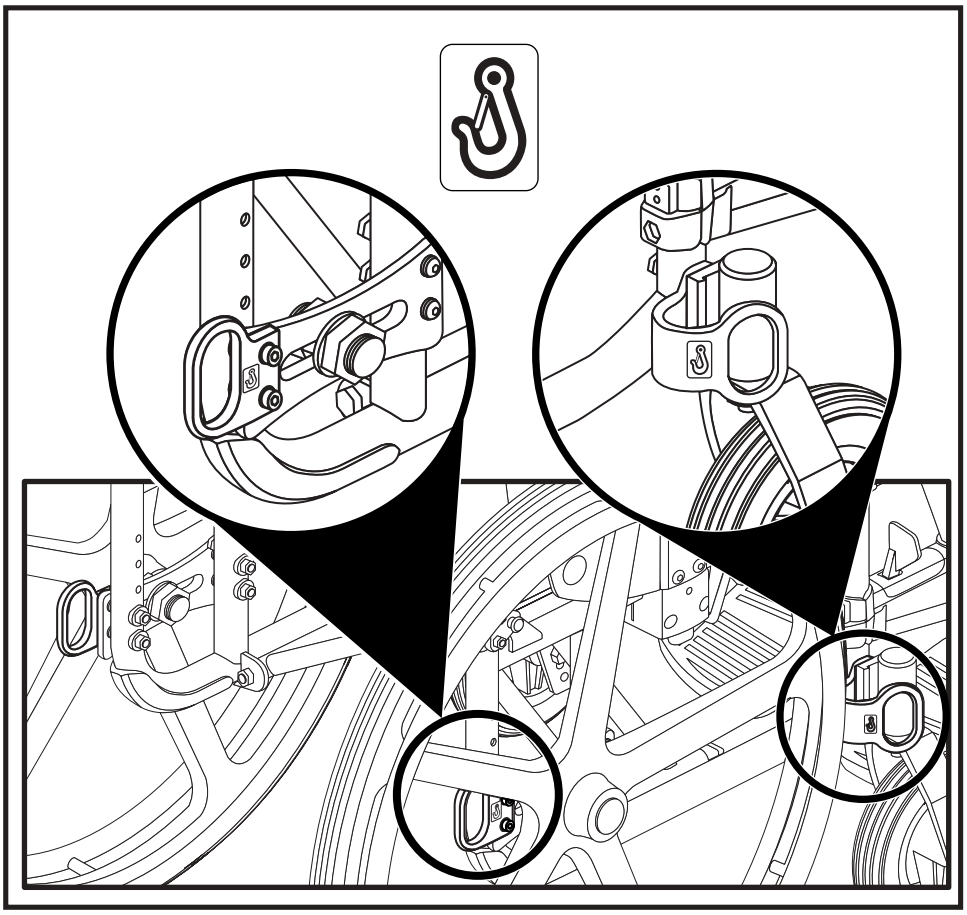


Figure 4. Securement Points on a LiteStream XF

Securing the Wheelchair Occupant

Once the wheelchair has been properly secured, it is essential that the wheelchair occupant be protected for transport.

WARNING! The wheelchair occupant must be secured with dynamically crash-tested and approved pelvic and upper-torso belts or with a five-point child restraint harness as part of WTORS.

- Place the pelvic belt across the front of the pelvis near the upper thighs, not high over the abdomen.

WARNING! The pelvic belt should be angled between 45 and 75 degrees to the horizontal when viewed from the side. However, if the user cannot achieve this standard, an optional zone of 30 to 45 degrees can be utilized safely.

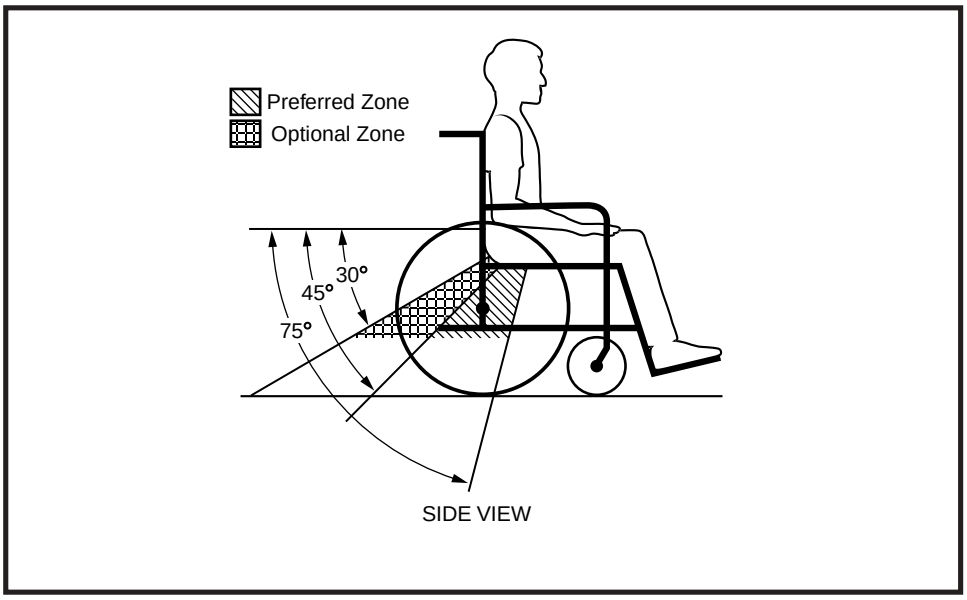


Figure 5. Recommended Pelvic Belt Placement Angles

- Some wheelchair components, like armrests and wheels, can interfere with proper belt fit. It may be necessary to insert the belt between the armrest and the seatback or through openings between the backrest and seat in order to avoid placing the pelvic belt over the armrest. See figure 6.

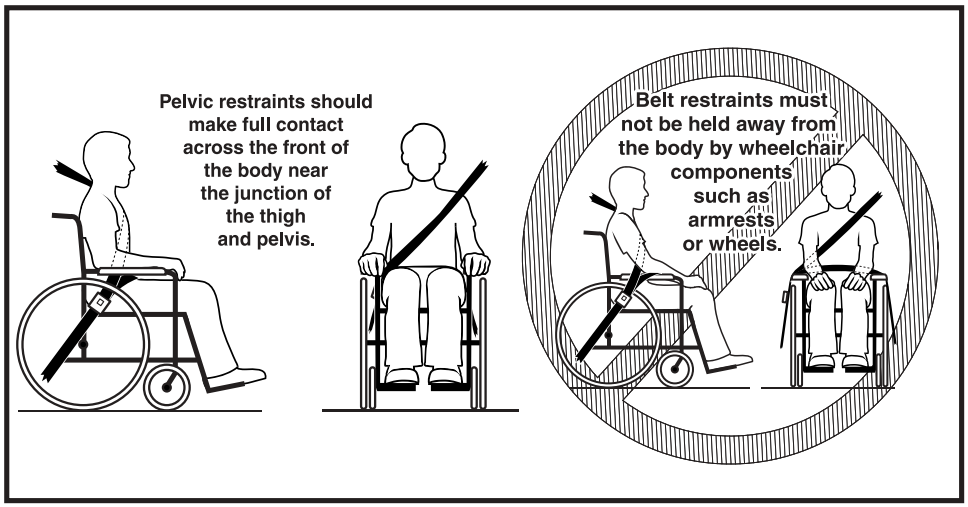


Figure 6. Proper Pelvic Belt Placement

- Place the upper-torso belt across the middle of the shoulder and the center of the chest, and connect to the pelvic belt near the hip of the wheelchair occupant. See figure 7.

WARNING! The upper-torso belt webbing should not be worn twisted in a manner that reduces the area of contact of the belt with the occupant.

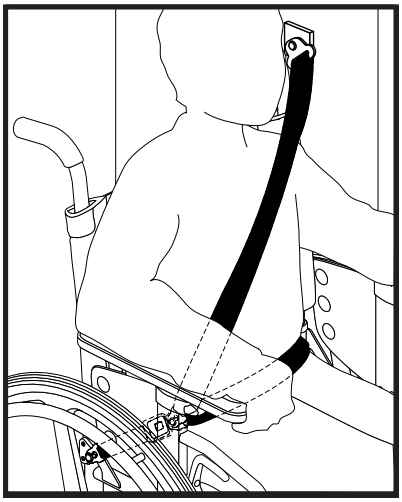


Figure 7. Upper-torso Belt Placement

- The upper-torso belt anchor point should be anchored above and behind the top of the wheelchair occupant's shoulder to ensure that the occupant is properly restrained during transport. Both the pelvic and upper-torso belt restraints should be adjusted as snugly as possible consistent with user comfort.

WARNING! The buckle of belt restraint systems should not be located near wheelchair components that may come in contact with the buckle release button in the event of a vehicle accident or collision.

- If your wheelchair is equipped with a crash-tested pelvic belt that is anchored to the wheelchair frame, complete the restraint system by attaching the lower end of the WTORS upper-torso belt to the pelvic belt by referring to the WTORS manufacturer's instruction. Crash-tested wheelchair-anchored pelvic belts will be labeled to indicate compliance to the ANSI/RESNA WC/Vol 4, Section 19/ISO 7176-19 standards. See figure 8.

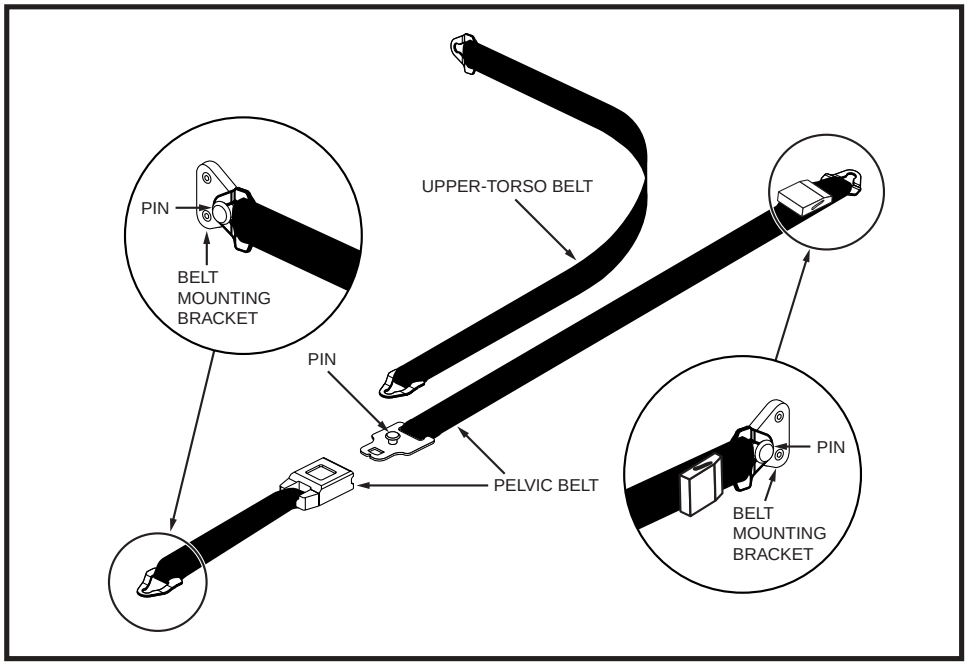


Figure 8. Wheelchair-anchored Belt Restraint

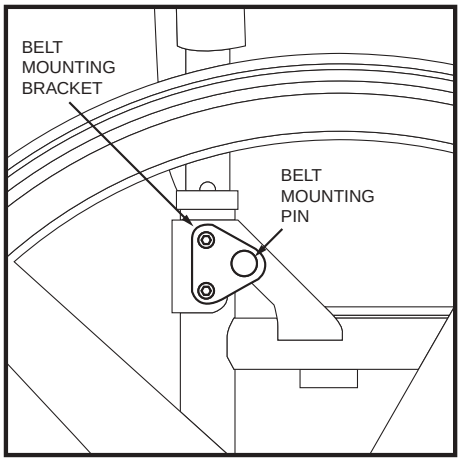


Figure 9. Wheelchair Belt Restraint Anchor

MANDATORY! A vehicle-anchored belt restraint system conforming to ANSI/RESNA WC/Vol 4, Section 19/ISO 7176-19 must be used if the wheelchair occupant chooses not to utilize a manufacturer-installed wheelchair-anchored belt restraint system.

WARNING! Although postural supports and belts may be used in a moving vehicle in addition to the occupant belt restraint system, they should not be relied upon to replace occupant restraints that have been designed and tested for this purpose and should not interfere with proper belt restraint placement.

Transit Securement Package

The following components of the transit securement package must be compliant to ANSI/RESNA WC/Vol. 1, Section 18 (formerly SAE J2249) and must be installed according to the manufacturer's instructions.

- Wheelchair Tie-down and Occupant Restraint System (WTORS)
- 4-point power chair tie-down system with an integrated 3-point occupant restraint
- Tie-down end fittings
- WTORS securement points
- Occupant restraint securement points

NOTE: To obtain a copy of ANSI/RESNA WC/Vol. 1, Sections 18 and/or 19 visit http://www.ansi.org.

NOTE: To obtain a copy of ISO 7176-19 visit http://www.iso.org.

Important Points to Remember

MANDATORY! Read and follow all manufacturerís instructions, including the product ownerís manual.

MANDATORY! Any WTORS or wheelchair involved in a vehicle crash should be replaced.

WARNING! The wheelchair seatback should be positioned at an angle of no more than 30 degrees to the vertical. If a greater recline angle is required, the upper-torso belt anchor point should be moved rearward along the vehicleís sidewall to ensure that the belt maintains contact with the wheelchair occupantís shoulder and chest.

WARNING! Visually inspect all WTORS equipment according to WTORS manufacturerís instructions on a regular basis, and have worn or broken components replaced immediately. Ensure anchorage track is free of dirt and debris.

WARNING! Remove hard trays and stow or secure them elsewhere in the vehicle to reduce the chance of wheelchair occupant injury from contact with the tray.

WARNING! Consider using foam trays in place of rigid trays during vehicle transport. If that is not possible, place dense foam padding between the wheelchair occupant and the tray, and make sure that the tray is securely attached to the wheelchair so that it will not break loose and cause injury to other occupants in a crash.

WARNING! Ensure the wheelchair occupant is properly positioned to protect the neck during rear impact.

WARNING! Secure all removable accessories, including clothing guards, medical, and other equipment to the wheelchair or vehicle to prevent injury during a crash.

WARNING! If head and neck support is required during travel, use a soft, light neck collar as they are less likely to cause neck injury in a crash. Do not attach the soft collar to the wheelchair or seating system.

APPENDIX: DECLARATIONS

Pride Transit Securement Package Declarations

MANDATORY! A belt restraint system with both pelvic and upper-torso belts must be used to protect the wheelchair occupant and minimize the likelihood of injury caused by contact with the vehicle during a crash or sudden braking.

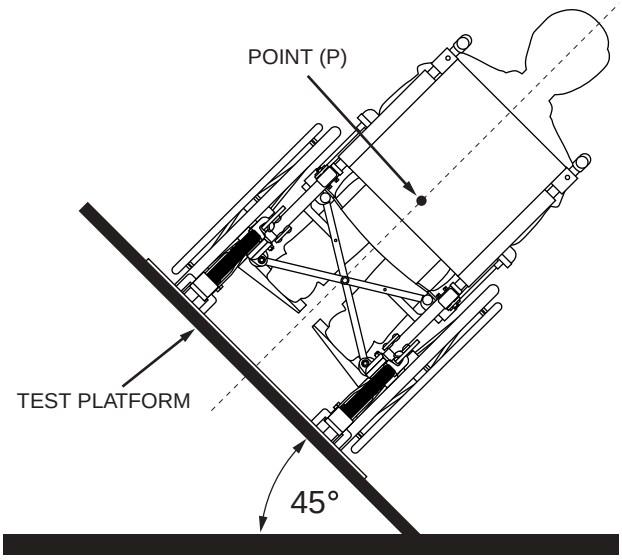
The LiteStream XF was dynamically tested in a forward-facing position with the surrogate occupant restrained by both pelvic and upper-torso belts and conforms with ANSI/RESNA WC/Vol. 4, Section 19/ ISO 7176-19.

- The mass of the wheelchair tested was 36 lbs. (16.3 kg).
- The turning radius of the wheelchair tested was 20 in. (50.8 cm).
- The seat size of the wheelchair tested was 16 in. x 16 in. This is the standard factory-installed seat.
- The overall rating of the wheelchair accommodating fit and use of a vehicle-anchored belt restraint is "A." This rating is ranked as follows:

RATING	DESCRIPTION
A	Excellent
B	Good
C	Fair
D	Poor

APPENDIX: DECLARATIONS

- The test for Lateral Stability Displacement for Point (P) is shown in figure 10. The average test result for Point (P) is: 13.9 mm.



NOTE: Rear view of the wheelchair and human surrogate secured on test platform and tilted to 45°.

Figure 10. Lateral Stability Displacement Illustration

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