Q'STRAINT®

Use and Care Manual

QRT-360®

4-POINT WHEELCHAIR SECUREMENT SYSTEM



THE QRT-360 4-POINT WHEELCHAIR SECUREMENT SYSTEM AND COMPONENTS COMPLIES WITH ALL APPLICABLE REQUIREMENTS OF SAFETY REGULATIONS AND STANDARDS INCLUDING:
ADA, FMVSS & CMVSS 209/210/222/302, CSA Z605 & D409, AS-2942-1994, SAE J2249 and ANSI/RESNA WC-4 SECTION 18.

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Q'STRAINT®

QRT-360®

4-POINT WHEELCHAIR SECUREMENT SYSTEM

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STOP Read All Instructions Prior to Operating

- This manual is a comprehensive step-by-step user instruction guide for the QRT-360 4-Point Wheelchair Securement System.
- Make sure to read, understand and follow all these instructions.
- To address any questions relating to ordering parts, operating this 4-Point Wheelchair Securement System, troubleshooting, maintenance, service or anything else, contact a Q'Straint® authorized dealer.
- All deviations and alterations from these instructions **MUST** be reported to a Q'Straint® authorized dealer.

IMPORTANT SAFEGUARDS AND WARNINGS

- All equipment and components **MUST** be installed and serviced by an experienced and trained technician.
- Wheelchairs are not intended to be used as seats in motor vehicles unless compliant with ANSI/RESNA WC-4, Section 19.
- This system **MUST** only be used with wheelchairs in forward facing applications and cannot be altered or modified in any way.
- The QRT-360 4-Point Wheelchair Securement System and components comply with all applicable requirements of safety regulations and standards including ADA, FMVSS & CMVSS 209/210/222/302, CSA Z605 & D409, AS-2942-1994, SAE J2249 and ANSI/RESNA WC-4 SECTION 18.
  Systems are dynamically crash tested at 30mph (48kph), 20g, using a 187 lbs. (85kg) forward facing surrogate wheelchair and a 168 lbs. (76kg) Anthropomorphic Test Device (ATD). The ATD is restrained by both shoulder and pelvic belt restraints.
- **J-Hooks** must be attached to the WC19 compliant chair securement points or a solid wheelchair frame for all other wheelchairs (no spokes or movable components) at an approximate 45 degree angle with floor.
- **DO NOT allow webbing to get twisted inside the retractors or come in contact with sharp corners and edges.**
- **Compliant Shoulder and Pelvic Belt Restraint** must go across occupant's shoulder and pelvis (lap), and not be worn twisted or held away from the occupant's body by wheelchair components. We recommend using both a pelvic and shoulder belt together and not individually since it will compromise the performance of the system.
- Make sure shoulder belt does not rub against the occupant's neck.
- This system is a complete integrated system, do not alter or modify it in any way and do not interchange or substitute any components. Any deviation from these recommendations is the responsibility of the installer.
- The QRT-360 4-Point Wheelchair Securement System and components have been tested in a configuration similar to the recommendations in this manual.
- This 4-Point Wheelchair Securement System and its components **MUST** be regularly inspected, cleaned and maintained—reference the Maintenance and Care section in this manual.
- Regulations and standards in some countries require the installation of a shoulder and pelvic belt to be considered a compliant wheelchair securement system. **The QRT-360 4-Point Wheelchair Securement System plus the shoulder and pelvic belt (occupant restraint) make a complete wheelchair securement system.**
- The QRT-360 4-Point Wheelchair Securement System should not be operated by anyone who does not have full comprehension of how the system works or if the system is not working properly.
- **The QRT-360 4-Point Wheelchair Securement System and all system components including floor and wall anchorages MUST be replaced after a vehicle collision.**
- Broken and worn components **MUST** be replaced.
- All damages and defects **MUST** be reported to Q'Straint® authorized dealer.
- **Only use Q'Straint® components** with this system, unless otherwise stated.
- Installer is responsible for making sure the installed QRT-360 4-Point Wheelchair Securement System meets all applicable regulations and standards—and that the system works according to the instructions in the section of this manual called Operating Instructions.
- Occupant restraint system (shoulder and pelvic belt) **MUST** meet applicable regulations of FMVSS/CMVSS, SAE J2249, ANSI/RESNA WC-4 SECTION 18, ISO 10542-1 and CSA Z605.
- Airbags should be used only as an added safety device in conjunction with a wheelchair securement system, a shoulder and pelvic belt restraint system that are compliant with the requirements of SAE J2249, ANSI/RESNA WC-4 SECTION 18, ISO 10542-1 and CSA Z605.
- The airbag **MUST** be disconnected if the wheelchair occupant is positioned less than 7" (177.8mm) from the airbag unit, or if an aftermarket device is installed to block the deployment of the airbag.
- **Keep loose articles of clothing away from retractors.**

SAVE THESE INSTRUCTIONS

INTRODUCTION

ENGINEERED TO PERFORM

By thinking beyond current safety standards and meeting tomorrow's industry regulations today, the QRT-360 has become the **1st Wheelchair & Occupant Restraint System** to pass the new WC18 requirements. Stronger than any previous retractors with innovative energy distribution design for maximum load capacity. Coming up with everyday solutions for transportation applications is what we do best.

BUILT TO LAST

The QRT-360 energy-absorbing steel frame retractors automatically self-tension and lock for easy one-handed hook-up of wheelchairs. While the J-Hooks reduce the twisting of belts to ensure proper securement with a quarter turn to accommodate virtually any wheelchair—the webbing strength withstands the test of time. Releasing the retractors has never been easier with the one-touch foot release lever—no more bending down.

SECURED ON THE ROAD

Because safety is our main priority, this 4-point wheelchair securement system has been independently crash tested at a world renowned test facility to meet and exceed all applicable requirements. Developing and improving wheelchair and occupant safety standards keeps us involved in all major international safety committees.

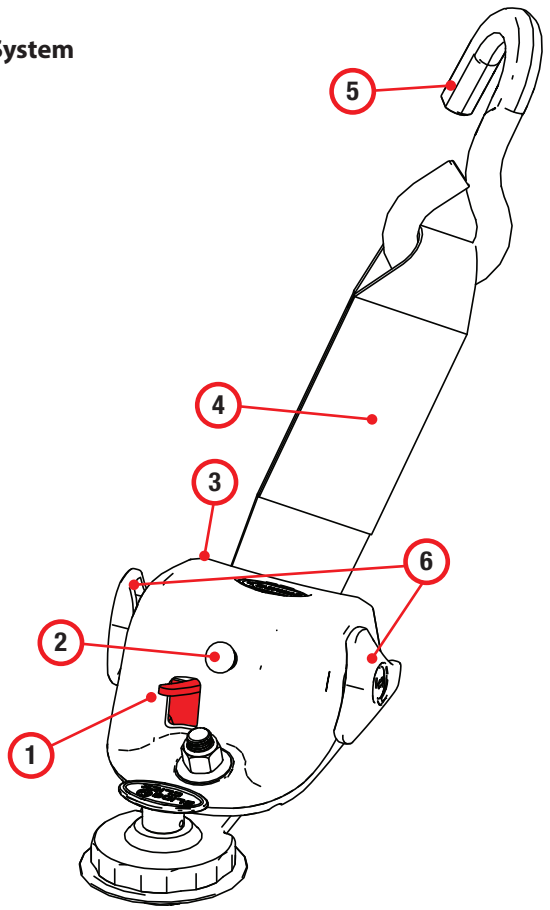
COMPLIANCE

The QRT-360 4-Point Wheelchair Securement System and components comply with all applicable requirements of safety regulations and standards including ADA, FMVSS & CMVSS 209/210/222/302, CSA Z605 & D409, AS-2942-1994, SAE J2249 and ANSI/RESNA WC-4 SECTION 18. *Systems are dynamically crash tested at 30mph (48kph), 20g, using a 187 lbs. (85kg) forward facing surrogate wheelchair and a 168 lbs. (76kg) Anthropomorphic Test Dummy (ATD). The ATD is restrained by both shoulder and pelvic belt restraints.*

EQUIPMENT

To order the QRT-360 Retractor or Occupant Restraint System call a Q'Straint® authorized dealer.

1. **Red Release Lever**
2. **Connecting Pin on Retractor** (for occupant restraint)
3. **QRT-360 Steel Frame Retractor** (energy-absorbing)
4. **Webbing** (58mm)
5. **J-Hook**
6. **Retractor Knobs** (manually tension webbing)



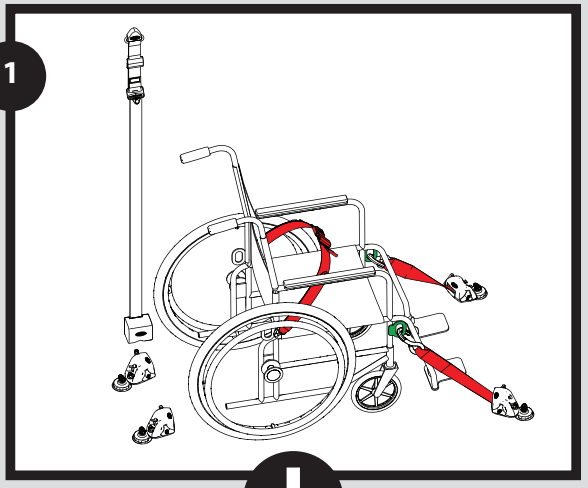
OPERATIONAL SEQUENCE

The following is a quick guide on how the QRT-360 4-Point Wheelchair Securement System works.

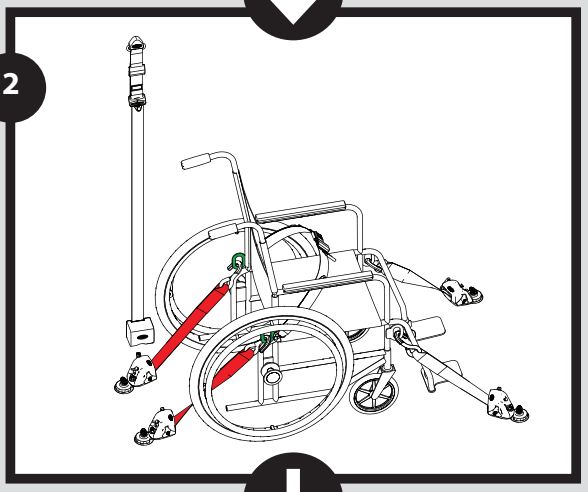
Reference the Operating Instructions Section in this manual for complete instructions.

WC19 WHEELCHAIR WITH COMPLIANT INTEGRATED PELVIC (LAP) BELT

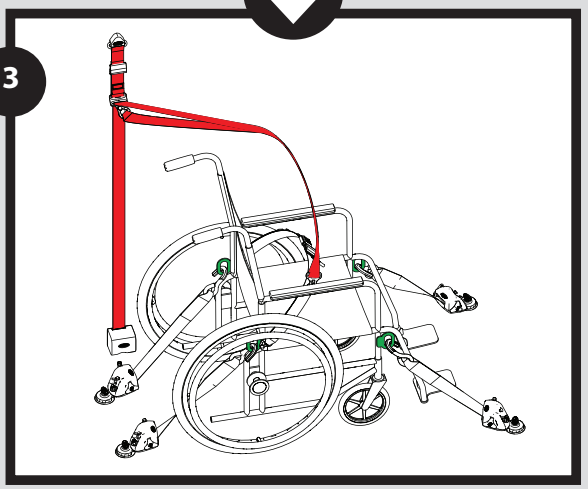
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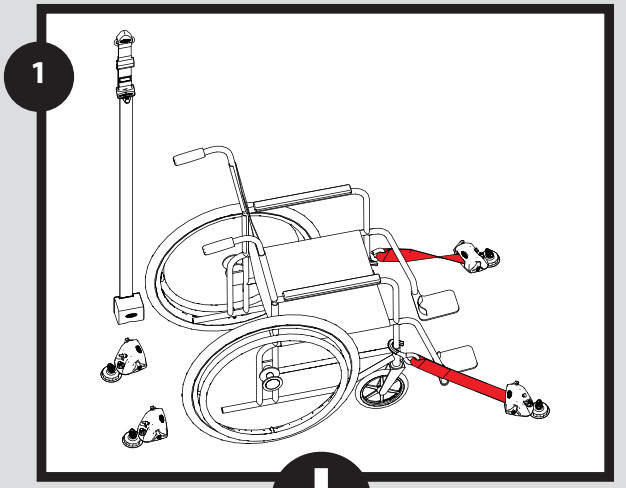


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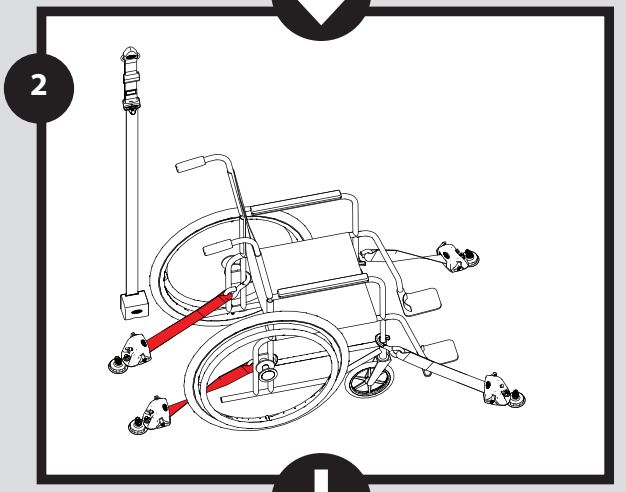


NON WC19 WHEELCHAIRS

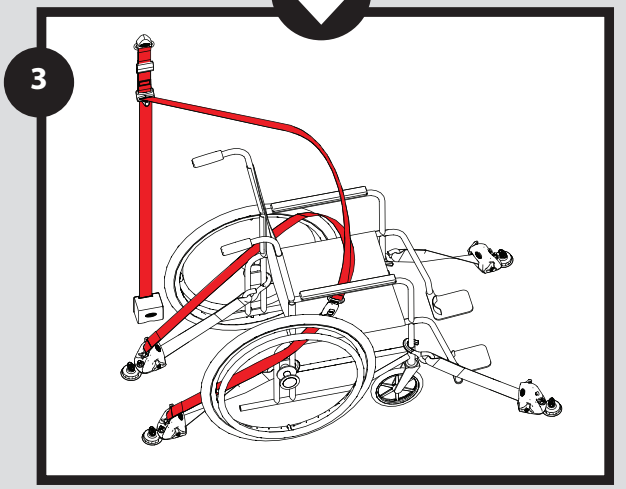
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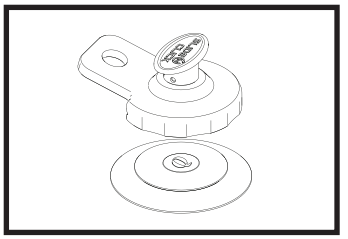


3

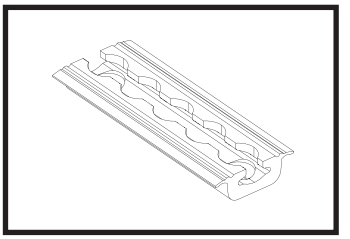


SYSTEM DEFINITIONS

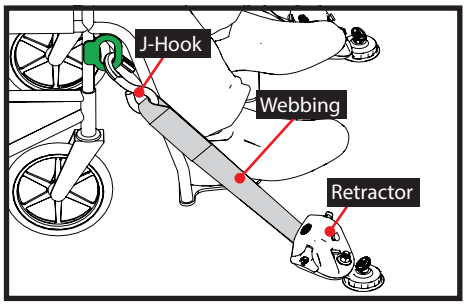
2 Different Floor Anchorages:



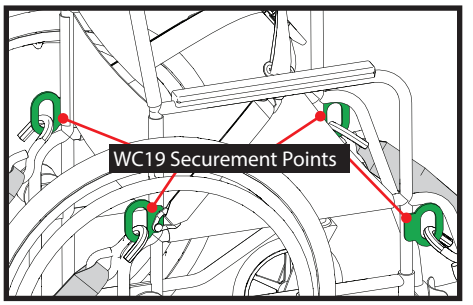
Slide 'n Click



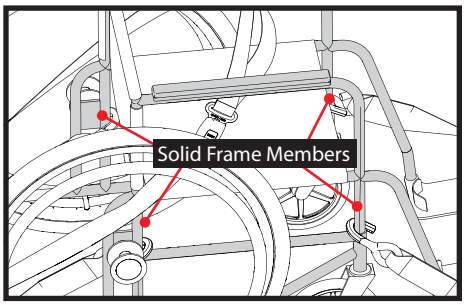
L-Track



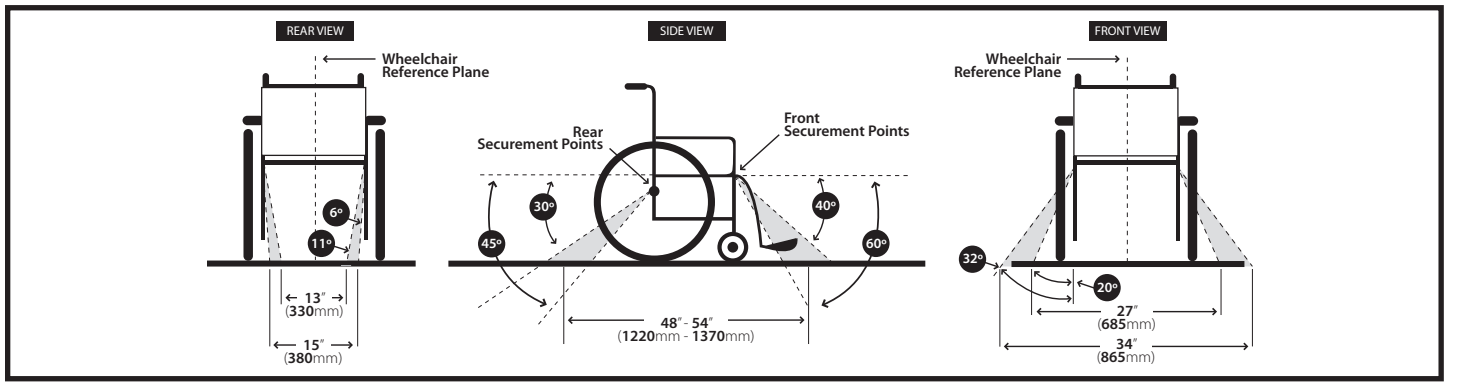
QRT-360 Retractor



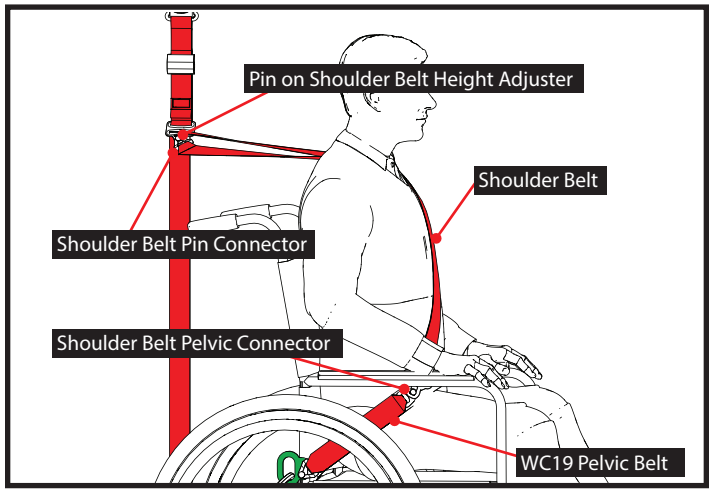
WC-19 Securement Points



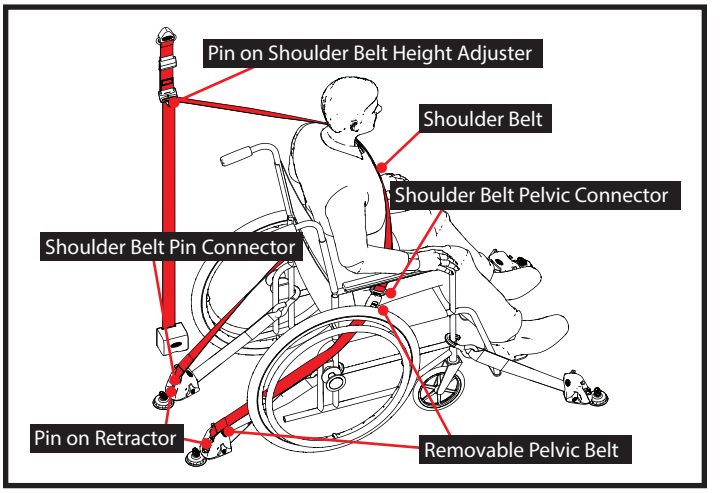
Solid Frame Members



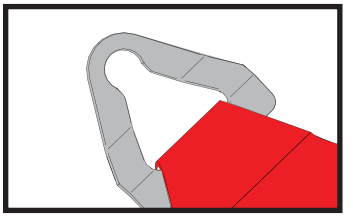
Tie-Down Angles



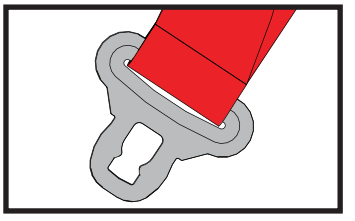
WC19 Shoulder and Pelvic Belt Restraint



Non WC19 Shoulder and Pelvic Belt Restraint



Shoulder Belt Pin Connector



Shoulder Belt Pelvic Connector

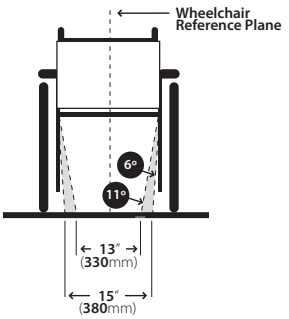
SECURING WHEELCHAIR

1. Center wheelchair facing forward in Securement Zone and lock wheelchair brakes (or power off electric chair) (**A**).

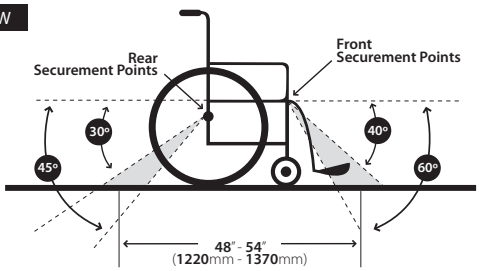
2. Attach 4 Retractors into Floor Anchorage points and lock them in place, with an approximate distance of 48″ to 54″ between the front and rear Retractors (**B**).

3. Completely pull out each Webbing and attach J-Hooks to compliant WC19 Chair Securement Points near seat level (**C**) (or solid frame members) at an approximate 45 degree side angle.

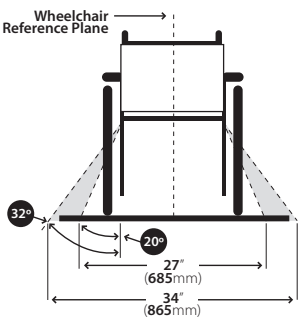
REAR VIEW



SIDE VIEW

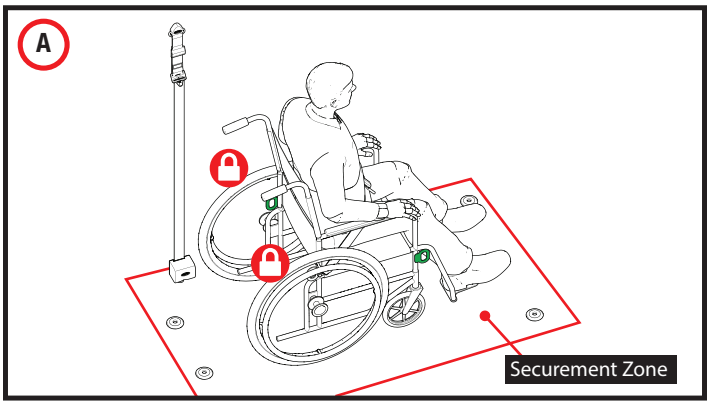


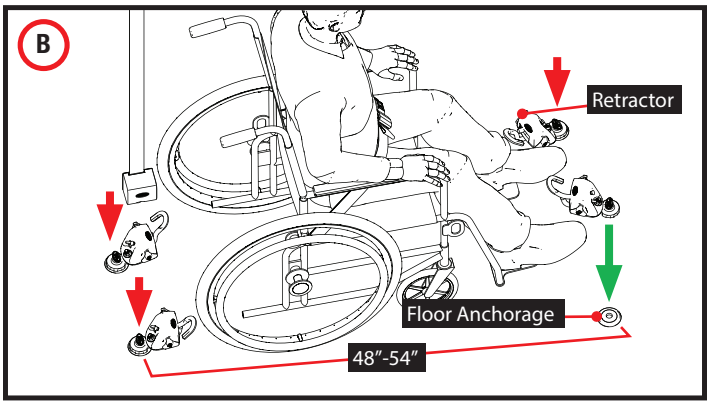
FRONT VIEW

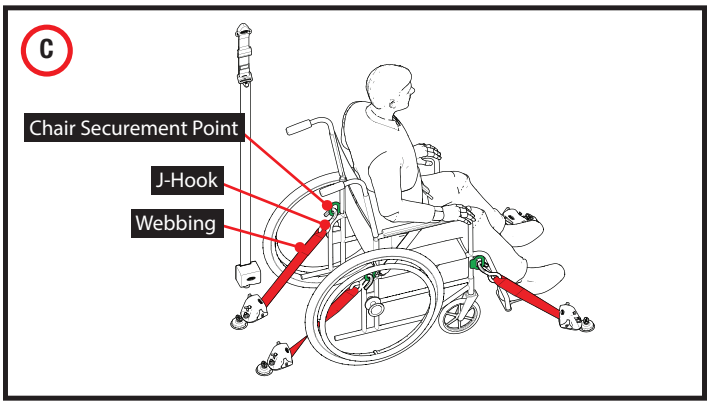


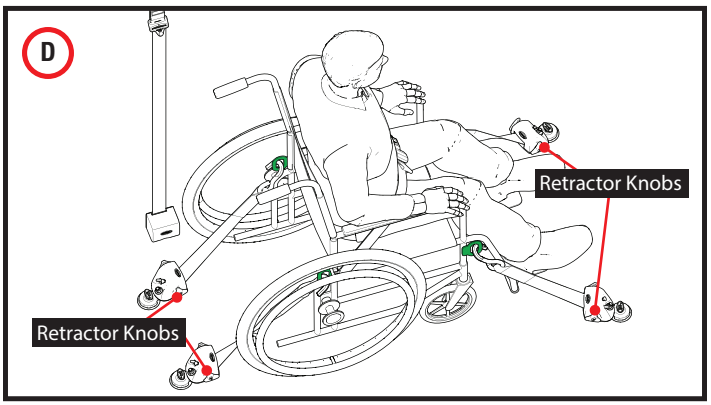
Keep loose articles of clothing away from retractors.

4. Move wheelchair forward and back to remove webbing slack or manually tension webbing with Retractor Knobs (**D**).

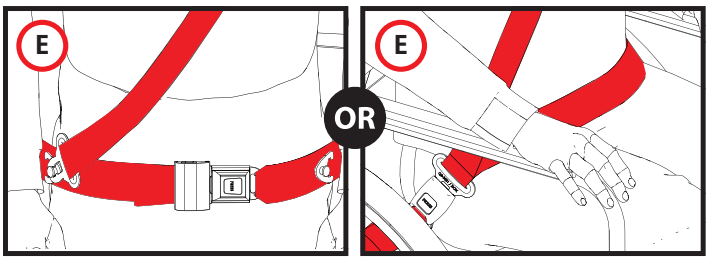




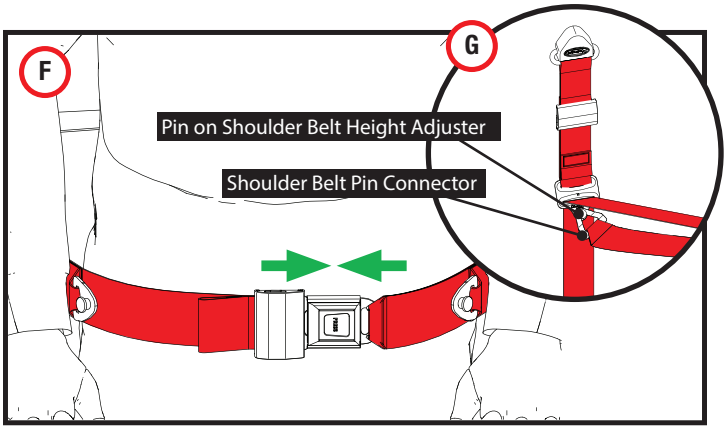






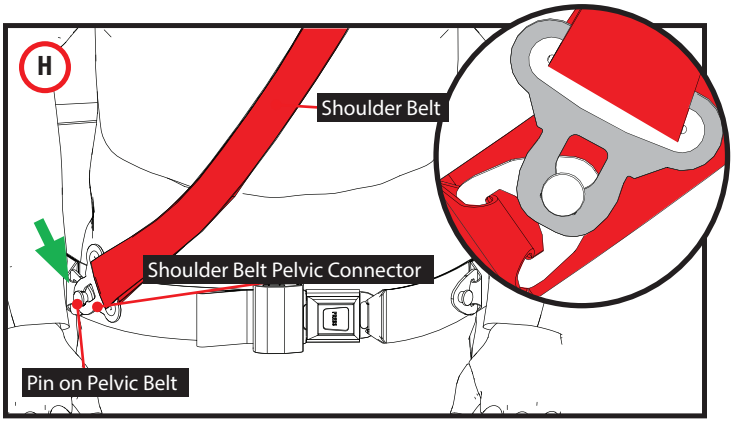


Compliant Shoulder and Pelvic (Lap) Belt Restraint (E) must go across occupant's shoulder and pelvis (hips), and not be worn twisted or held away from the occupant's body by wheelchair components. We do not recommend only using a pelvic belt restraint because it will compromise the performance of the system.



5. **WC19 Wheelchair:** (If the chair does not come with a compliant pelvic (lap) belt follow steps 9-12.) Make sure chair's Pelvic Belt is buckled over occupant's hips (**F**).

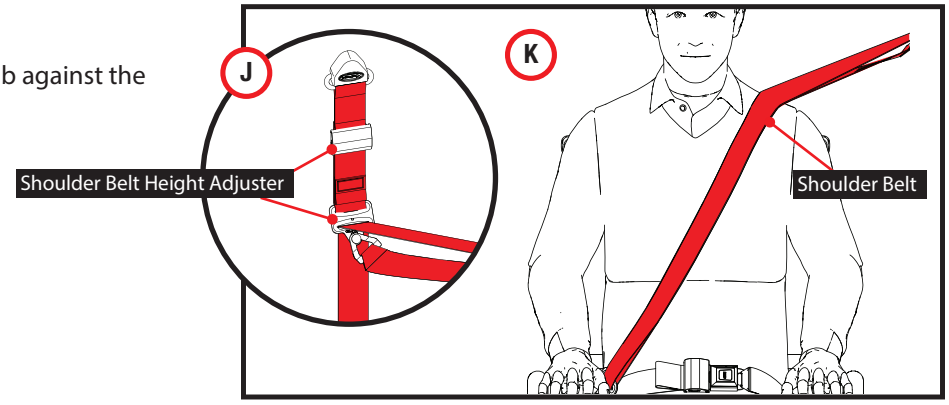
6. Attach Shoulder Belt Pin Connector to Pin located on Shoulder Belt Height Adjuster (**G**).



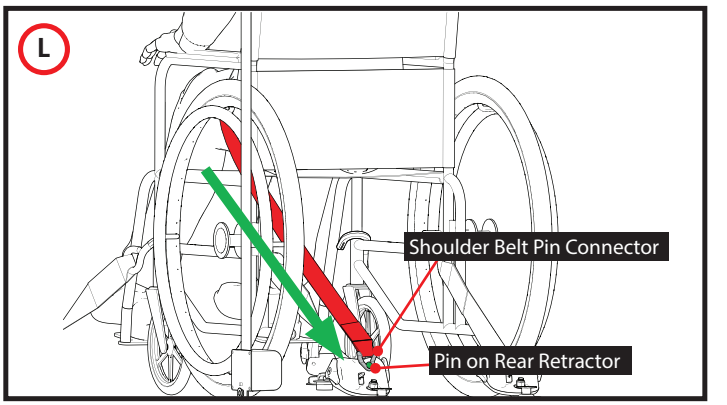
7. Pull Shoulder Belt over occupant's chest and attach Shoulder Belt Pelvic Connector to Pin on Compliant WC19 Pelvic Belt (**H**).

8. Adjust Shoulder Belt Height (**J**) so that Shoulder Belt rests on shoulder. After the occupant and vehicle are secured, the occupant is ready for transportation.

Make sure Shoulder Belt does not rub against the occupant's neck (**K**).

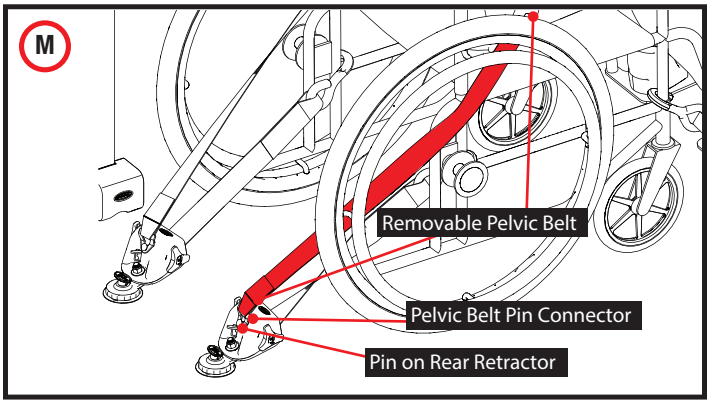


9. **Non WC19 Wheelchairs:** Attach Shoulder Belt Pin Connector to Pin on Rear Retractor closest to wall (**L**).



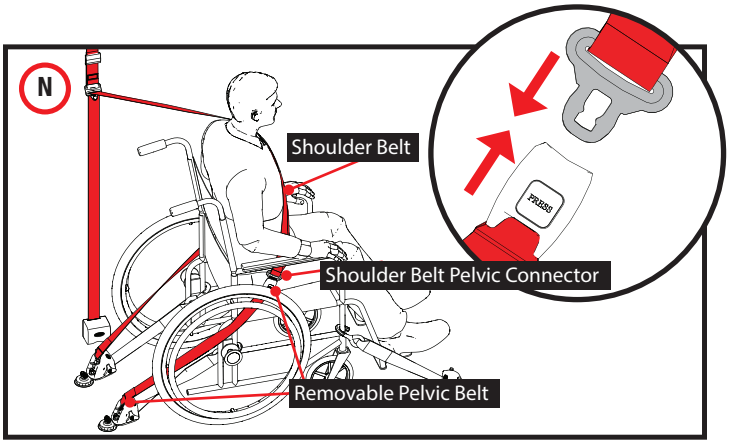
Occupant Restraint (Shoulder and Pelvic Belt) **MUST** not be held away from the occupant's body by wheelchair components.

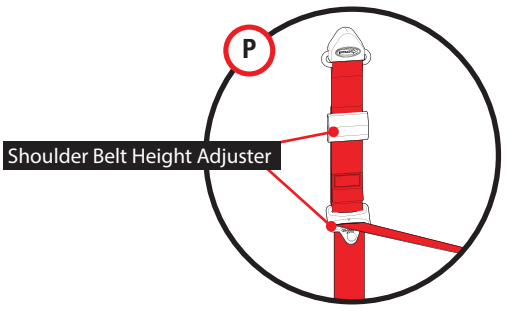
10. Attach the Pelvic Belt Pin Connector to Pin on Rear Retractor closest to the aisle (**M**).



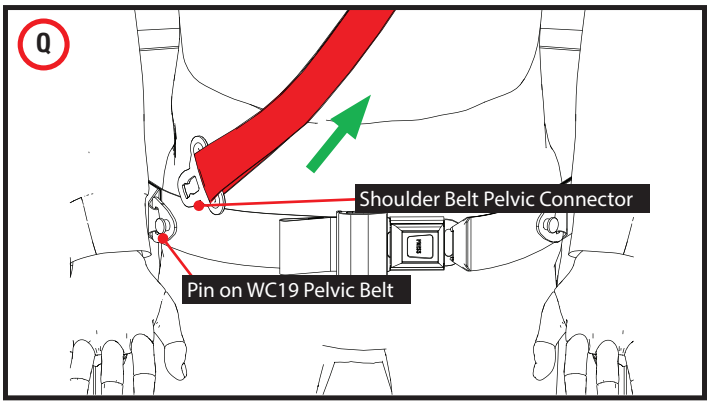
11. Pull the Shoulder Belt over occupant's chest and buckle Shoulder Belt Pelvic Connector to Removable Pelvic Belt (**N**).

12. Adjust Shoulder Belt Height (**P**) so that Shoulder Belt rests on shoulder. After the occupant and vehicle are secured, the occupant is ready for transportation.

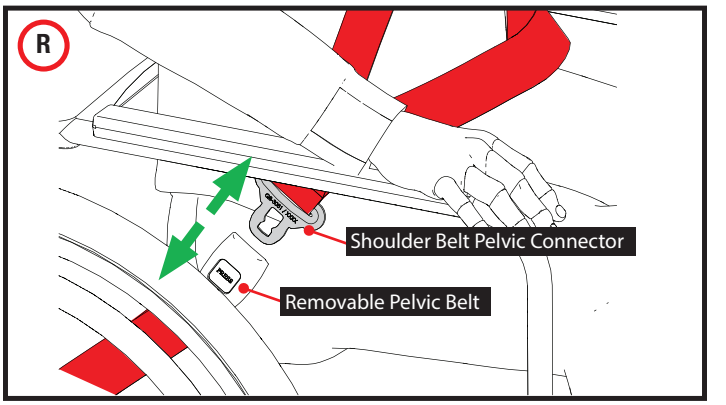




13. **WC19 Wheelchair:** (If chair does not come with a pelvic belt follow steps 14-17.) Detach Shoulder Belt Pelvic Connector from Pin on WC19 Pelvic Belt (**Q**) and return Shoulder Belt to storage position.



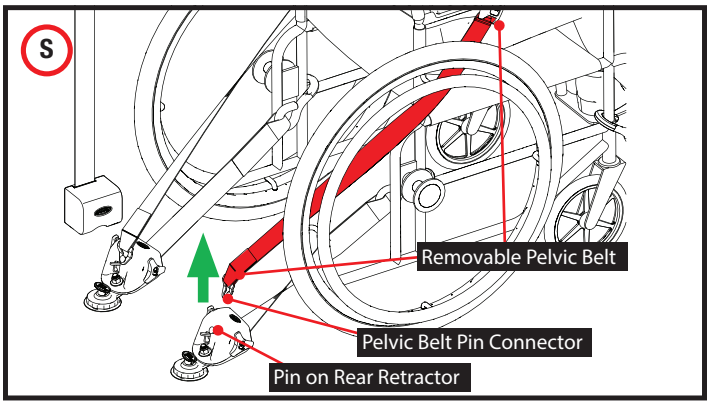
14. **Non WC19 Wheelchairs:** Unbuckle Shoulder Belt Pelvic Connector from Removable Pelvic Belt (**R**).

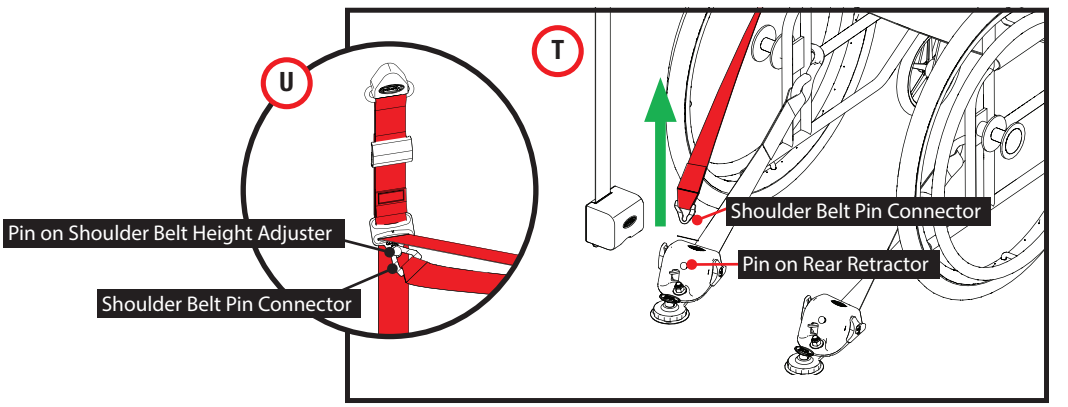


15. Detach Pelvic Belt Pin Connector from Pin on Rear Retractor closest to aisle (**S**). Place Removable Pelvic Belt in storage.

16. Detach Shoulder Belt Pin Connector from Pin on Rear Retractor closest to wall (**T**).

17. Attach Shoulder Belt Pin Connector to Pin on Shoulder Belt Height Adjuster (**U**) and return Shoulder Belt to storage position.





18. Press Red Release Levers on Retractors, detach J-Hooks from wheelchair frame and slowly return them to retractors (**V**).

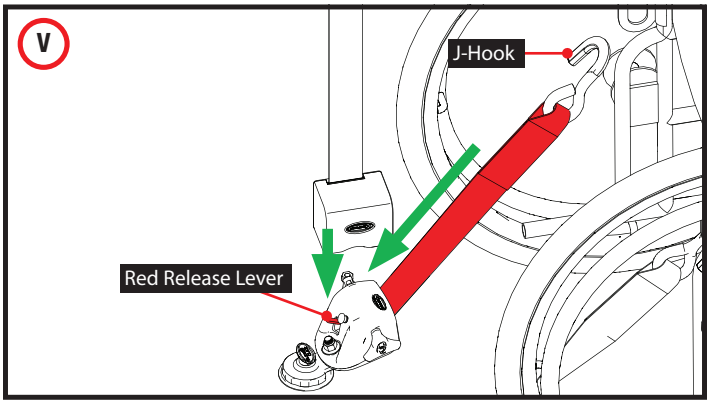
Keep loose articles of clothing away from retractors.

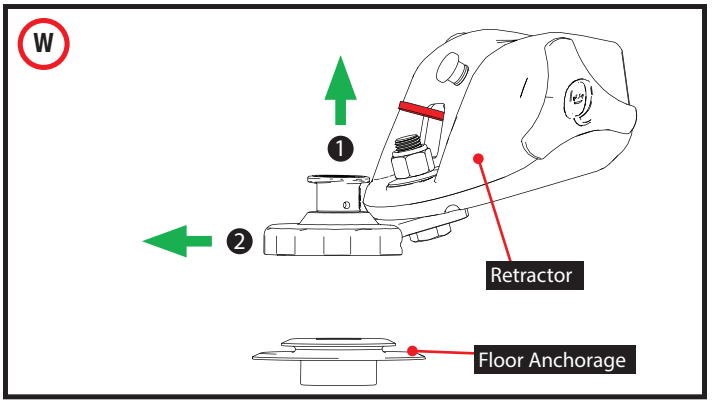
19. Remove Retractors from Floor Anchorage points (**W**) and place in storage.

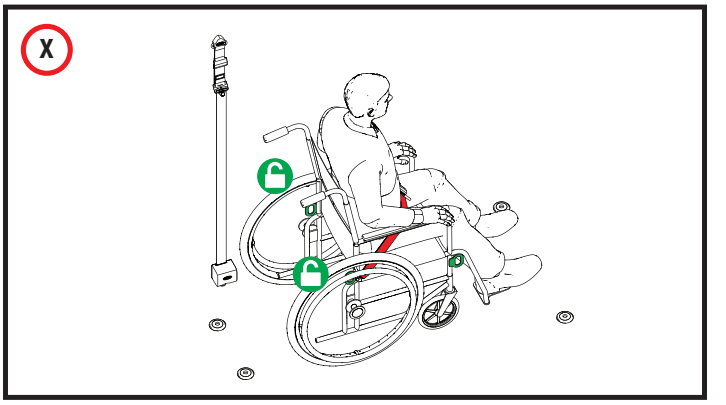
Shown is the Slide 'n Click anchorage system. Pull the lever (1) and slide (2) to remove (**W**).

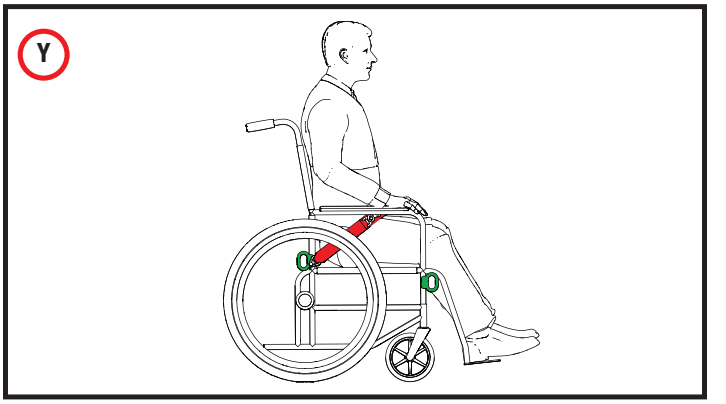
20. Unlock wheelchair brakes (or power on electric chair) (**X**).

21. Wheelchair occupant is ready to exit vehicle (**Y**).









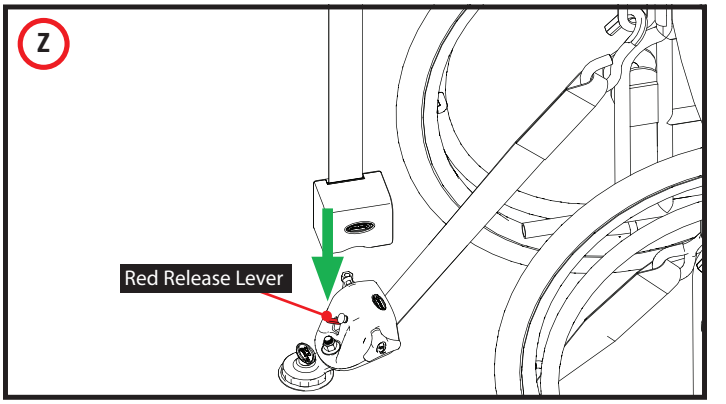
EMERGENCY RELEASE

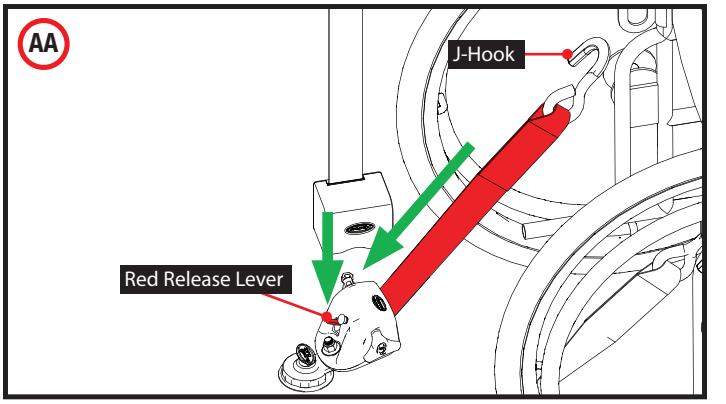
First, release Occupant Restraint (Shoulder and Pelvic Belt). If Occupant Restraint System does not release occupant, in an emergency cut webbings at an angle.

1. Press and hold the Red Release Lever on each retractor to release the webbing (**Z**).

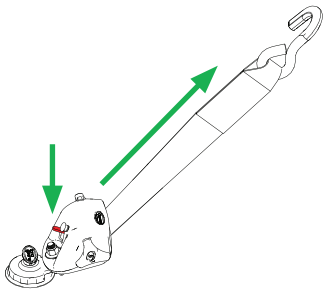
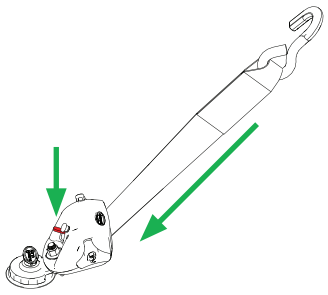
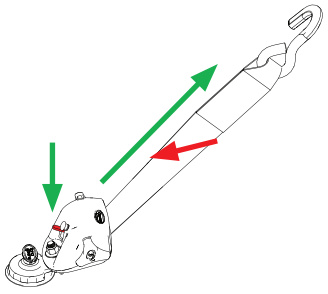
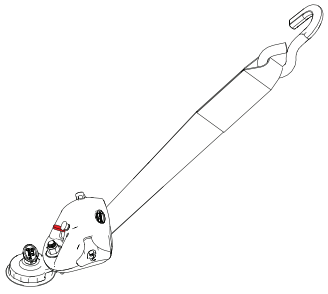
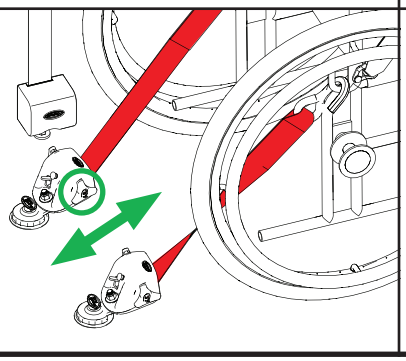
2. Detach J-Hooks from wheelchair and slowly return webbing to retractors (**AA**).

If retractors do not release the webbing, in an emergency cut the front and rear webbings at an angle.





TROUBLESHOOTING

PROBLEM	IMAGE	ANSWER
The webbing is twisted inside the retractor.		Press and hold Red Release Lever then pull J-Hook until webbing is straight.
The retractor(s) is (are) not releasing the webbing.		Press and hold Red Release Lever to release webbing from retractor.
It's an Emergency and the retractor(s) is (are) not releasing the webbing.		Press and hold Red Release Lever then pull J-Hook—if retractor does not release webbing, cut the Front and Rear webbings at an angle.
The retractor(s) is (are) not working.		Call a Q'Straint® authorized dealer.
The webbing is slacking.		Move wheelchair forward and back to remove slack from webbing and self-tension the retractors, or manually tension webbing with retractor knobs.

MAINTENANCE AND CARE

The following items should be inspected and serviced by an experienced and trained technician during the scheduled maintenance of the QRT-360 4-Point Wheelchair Securement System.

- **Always keep belts clean and off the floor** by using a storage device such as a Q'Straint® wall pouch. We recommend one storage device per wheelchair location.
- **All systems and components MUST be regularly inspected, tightened, cleaned, and maintained.**
- Clean webbing periodically with mild soap and water. After cleaning, fully extend belts and position them to prevent water from entering retractors until completely dry.
- **Make sure to prevent contamination of the webbing** by keeping it away from polishes, oils or other chemicals (particularly battery acid).
- Occasionally lubricate buckles and fittings, without contaminating the webbing.
- Clean bolt threads and reapply permanent thread locker if bolts are adjusted.
- **Frayed, contaminated or damaged webbing MUST be replaced immediately.**
- **Systems or components exposed to a vehicle accident, showing signs of missing parts, excessive damage or wear MUST be replaced.**

5 YEAR WARRANTY - ALL SYSTEMS, PRODUCTS & ACCESSORIES

WARRANTY REGISTRATION

In order to take full advantage of Q'Straint's warranty, register your product online at: **www.qstraint.com/registration**
PLEASE DO NOT MAIL IN THIS REGISTRATION. Before going online, have your vehicle's registration handy as well as the equipment's:

Serial # _____ Part # _____

Q'STRAINT'S LIMITED WARRANTY: Q'Straint® warrants this product conformance to our manufacturing specifications and to be free from defects in materials and workmanship. Q'Straint® or its authorized dealer will (at its sole discretion), repair or replace the defective component(s) free of charge. This warranty does not cover the cost of assembly or disassembly, transportation, labor, or any other incidental costs involved in the removal of a defective part or the installation of the replacement part.

Q'Straint® or its authorized dealers reserves the right to inspect the product to verify the claimed defect has not been caused by non-Q'Straint® approved maintenance or by foreign particles or substances. This Warranty does not apply to defects that result from accident, misuse or abuse, intentional damage, fire, flood, alteration or modification of the product, negligence, exposure, or use of the product in a manner inconsistent with its intended use.

Q'STRAINT®

THINKING **BEYOND** SAFETY

www.qstraint.com

This manual contains current information at the time of printing. Q'Straint® reserves the right to modify systems, components and content without notice.

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