Combined Retractable Tie-downs with 2 & 3 Point Occupant Restraints

Unwin | User Manual

EN Instructions for fitting and use

Thank you for choosing

Combined Retractable Tie-downs with 2 & 3 Point Occupant Restraints!

The following manual is an important part of the product, providing you with information on how to achieve maximum performance and safe operation. Keep the manual in a safe place so that you can refer to it when necessary.

If you have any questions about your equipment, please contact Unwin.

Once again, thank you for placing your confidence in our products!

Unwin

SAFE VEHICLE ADAPTATION

Safe vehicle adaptation solutions

For your safety Unwin products are designed and tested according to current directives and standards.

Safety information

4 Limitations of use
6 General guidance
8 Before installing and using the combined retractable tie-downs with 2 & 3 point occupant restraints

Fit and use

10-25 **Fitting & using the combined retractable tie-downs with 2 & 3 point occupant restraints**
10 Combined retractable tie-downs with 2 & 3 point double inertia - rail floor
16 Combined self-retracting tie-downs with 2 & 3 point double inertia - rail floor
18 Combined retractable tie-downs with 2 & 3 point double inertia - floor anchor
20 Combined self-retracting tie-downs with 2 & 3 point double inertia - floor anchor
22 Combined retractable & sef-retracting tie-downs with 3 point static occupant restraint - floor anchor
24 Combined retractable & self-retracting tie-downs & 3 point WAV retractable occupant restraint - floor anchor

After care

26 Equipment storage and maintenance
26 Warranty

"Declaration of conformity" at the end of the manual.

Safety information

Limitation of use

The development of Unwin wheelchair combined wheelchair & occupant restraints is a continuous process. Applications are added on a regular basis. For more detail contact Unwin or look on the Unwin website.

Unwin combined wheelchair & occupant restraints are designed to secure the rear of a wheelchair when facing forward in a vehicle and must be used as instructed for forward-facing seating. The combined wheelchair & occupant restraints are designed to secure wheelchair weights up to 100kg.

In addition to the details given in these instructions, users of Unwin combined wheelchair & occupant restraints must refer to the wheelchair manufacturer's 'Instructions for Use in Transport' for full details of tie-down attachment points on the wheelchair, plus any other specific instructions relating to use in transport.

Wheelchair users and their carers must make sure that their wheelchair is recommended for use in transport, including any 'add-on' components such as power tilt or recline options.

Combined webbing tie-down with 2 & 3 point occupant restraint

DI-RQMK

DK-SQEPH

DI-RQEPT

STK-SQMH

WK-SQEPH

General guidance

- Wheelchair Accessories that have not been approved by the Wheelchair Manufacturer must be removed from the wheelchair and secured in the vehicle during transport to reduce the potential for injury. Refer to 'Instructions For Use in Transport' provided with the wheelchair or contact wheelchair manufacturer for further guidance.

- These combined wheelchair & occupant restraints comply with all applicable requirements of ISO 10542, including a 48km/h, 20g frontal impact test using a forward facing 85kg surrogate wheelchair and an ATD (test dummy) with a mass of 76.3kg. The test dummy was restrained by both a pelvic and upper-torso restraint. Use of a pelvic only belt may compromise the performance of the WTORS system and should be avoided.

- If the installation is to be used with an occupant head rest anchored to the vehicle, then a vehicle-anchored back rest must be provided to minimise rearward deflection of the wheelchair seatback, preventing neck injury.

- Regular inspection of all parts is recommended and the equipment should be used only if all components are in good condition.

- **Warning:** protect webbing from contacting sharp edges and corners. Replace equipment if the webbing does becomes cut, contaminated or frayed.

- Any wheelchair & occupant restraints which have been subjected to a crash situation from which the vehicle must be towed should, in the interest of safety, be replaced.
- Do not attempt to modify the equipment. For further advice on the installation and use of this wheelchair & occupant restraint, please contact Unwin. Please read this manual fully before use.
- Avoid contact with corrosive liquids. Care should be taken to prevent contamination of the webbing with polishes, oils and chemicals.
- The wheelchair & occupant restraint anchorages should be installed by an experienced technician/vehicle converter. Anchorages should not be installed into unsound materials such as corroded metal, wood, plastic and fibre glass panels, without additional and suitable reinforcement.
- The equipment has been tested in a configuration similar to that recommended by Unwin, and any deviation from the recommendations here is the responsibility of the installer/user. These instructions refer use with both Unwin rails and Solo anchors, however the equipment may be used with any Unwin proprietary rail product.

Before installing and using the combined wheelchair & occupant restraint

- Ensure that the wheelchair is correctly maintained and that the settings of any adjustable parts are made according to 'Instructions for Use in Transport'.

- Whenever possible remove any items of luggage etc that may be attached to the wheelchair and secure or store separately during transport in order to reduce the potential for injury to other passengers travelling in the vehicle.

- Extra care must be exercised when using vehicle boarding aids such as passenger lifts or ramps during the loading process. Refer to 'Instructions For Use' for information on safe slopes.

- Position the wheelchair facing forward - centrally in the designated region of the vehicle. **Ensure the wheelchair brakes are applied.**

- To minimise the potential for head injuries in an impact, allow a clear space of at least 400 mm behind and 650 mm, (FCZ, front clear zone), in front of the head of the wheelchair user, (Fig A). The shoulder belt anchorage must be roof or side-wall anchored at a height level such that the belt webbing passes over the midpoint of the occupant shoulder and at a height that is at or just above the level of the occupants shoulders so as not to impose downward loads on the spine.

- A height provision (HHT) ranging from 1000mm to 1550mm should be made, depending on the size of the passenger. There should also be 200 mm of clear space either side of the wheelchair centre line. If these clear space dimensions cannot be provided then any should be adequately padded and comply with impact performance requirements of ECE Regulation 21 'FMVSS 201'. All vehicle padding should comply with the flammability require ments of ECE Regulation 118 'FMVSS 302'.

Note: seated head height (HHT) ranges from as low as 1000mm for a 6-year-old child to 1550mm for a tall adult.

- Wheelchair users, their carers and family are advised to check vehicle specifications to ensure that sufficient floor space is available to accommodate the wheelchair and tie-down system. These distances are based upon the desire to maintain clear zones for potential head excursions of occupants provided with both upper and lower torso restraints.

- Users of heavy powered wheelchairs are also advised to check vehicle carrying capacity. If in doubt consult the vehicle supplier for further details.

- Any airbag, as fitted to the vehicle, shall be used only as a supplementary occupant restraint if designed to be used in combination with the Solar Quattro and an appropriate occupant restraint.

- Installers of this wheelchair & occupant restraint should take note of any vehicle airbag position when planning the installation. Airbags can cause serious injury if a wheelchair-seated occupant is seated too close to an airbag position. If in doubt contact the vehicle manufacturer or your National Automotive Regulatory Body for advice.

Figure A

Fit and use

Fitting and using the combined retractable tie-down with 2 & 3 point double inertia

Rail floor *Wheelchair Tie-down:*

1. The rail will have been installed in the vehicle in accordance with their own and the vehicle converter's instruction. Position the wheelchair within the vehicle as required.
2. Attach the front wheelchair tie-down (not supplied as part of this product) in accordance with its own instruction.
3. Place the combined rear retractable restraint into the rail behind the wheelchair. It is acceptable to use the restraint either for left hand or right hand use. The double inertia reel should be fitted to the rail adjacent to the 3rd point anchorage.
4. Moving to the wheelchair rear, select rear retractable tie-down so that the karabiner or hook gates face outboard from the wheelchair, (Fig 1). If using tongue & buckle, the buckle may be positioned facing inboard or outboard, (Fig 2).
5. Attach each tie-down into the floor rail by aligning the ATF (aluminium track fitting) feet with the cut-out sections of the rail, (Fig 3). **Note:** the yellow plungers must face toward the rear of the vehicle. Press down on the ribbed part of the ATF, (Fig 3A), and push firmly down towards the wheelchair until the yellow plunger drops and locks into the rail.
6. Press the yellow Quattro release button(s), (Fig 4A) to extend the webbing and attach the karabiner(s), hook(s) or tongue and buckle arrangement(s) around the wheelchair main frame. Some wheelchairs will indicate this rear frame tie-down position, (Fig 5).
7. Press each Quattro release button once again to take up the slack in the webbing and create an angle of around 30 to 45° and within the rear view zone, (Fig 6).
8. Final tensioning is achieved by turning each tensioning handle, (Fig 4B), until the webbing is equally taut on each side.
9. The occupant restraint must now be fitted.

Removing wheelchair tie-down

1. Release the tension in the rears by pressing the yellow button and extend the webbing to allow the karabiner(s) / hook(s)/tongue & buckles(s) to be removed from the wheelchair frame. If the webbing is particularly tight, it may be necessary to slightly 'tension' with the hand wheel whilst pressing the yellow button, in order to remove the webbing lock on the Quattro.
2. Lift the yellow plunger fully, slide back away from the wheelchair to align the ATF feet with the rail cut outs, lift away from the rail and store securely.

Figure 1

Figure 2

Figure 3

Figure 6

Figure 5

Figure 4

Fit and use

Fitting and using the combined retractable tie-down with 2 & 3 point double inertia

Rail Floor *3 point double inertia seatbelt*

- **Unwin recommends the use of a 3 point occupant restraint system to provide greater protection in case of an impact. However we also recognise that some vehicle layout/designs or specific postural or medical conditions do not allow that style of seatbelts to be used easily.**
- **This system is not ISO 10542 compliant if used in 2 point configuration.**
- **Before fitting the occupant restraint, ensure that the reversible or fixed stalk button is facing outside in relation to the wheelchair. With the reversible stalk, if orange button faces inside, turn the stalk 180° to sit in the right position.**
- **In accordance with International regulations, standard Unwin occupant restraints are designed to be used for passengers weighing 22kg or above. If the passenger weighs less than 22kg, Unwin recommend that a suitable, and appropriately tested child restraint seat is used. This may involve a secondary seat belt restraint as recommended by the original seat manufacturer.**

1. Position the third point fixing into the cant rail, (Fig 7), so that it is vertically above the inertia reel casing fixed onto the floor fixing. Unfasten the tongue and buckle.
2. Pull the black webbing upwards and unfasten the tongue from the grey webbing buckle.
3. Position the black webbing to form the lap belt and insert the tongue into the buckle stalk, (Fig 8).
4. Ensure that the lap belt lays low on the pelvis of the occupant, running as close as possible over the hips on both sides.
5. Remove the black plastic cover on the grey shoulder belt tongue and fit into the third point fixing.
6. Position the grey webbing to form the shoulder belt and insert the buckle into the tongue.
7. Adjust the height of the shoulder belt to clear the occupant's shoulder by approximately 25mm - 1 inch, (Fig 9).
8. The lap belt anchor points should be positioned to achieve belt angles of 30° or more to the horizontal and preferably between 45° and 75° in order to fit low across the pelvis reducing the possibility of the belt loading the abdomen, (Fig 10). The pelvic restraint is designed to bear upon the bony structure of the body and should be worn low across the front of the pelvis with any junctions between the pelvic and shoulder restraints located near the wearers hips.

Removing occupant restraint

1. Release the grey shoulder belt from the lap belt section, then from the third point fixing and carefully allow the shoulder belt to return to the retractor.
2. Disconnect the black lap belt from the buckle stalk on the aisle side and carefully allow the lap belt webbing to return onto it's retractor.
3. Connect the shoulder belt buckle to the lap belt tongue above the opening of the retractor box.
4. The wheelchair tie-down should now be removed.

Figure 8

Figure 9

Figure 7

Figure 10

Fit and use

Fitting and using the combined retractable tie-down with 2 & 3 point double inertia

Rail Floor *2 point double inertia seatbelt*

1. Ensure the Comfort Clip is released (Fig 12) and press the buckle to release the lap belt.
2. Pull the metal tongue on the black webbing upwards to release the webbing from both inertia reels. Position the webbing across the occupant with the black webbing forming the lap belt and the grey webbing forming the shoulder belt (Fig 13).
3. Insert the tongue fixed to the black webbing into the stalk buckle (11A).
4. Adjust for comfort by raising the webbing on the shoulder by two finger widths, unlock the Comfort Clip to take up the slack, then re-lock the clip so that it rests on the reel cover.
5. The lap belt anchor points should be positioned to achieve belt angles of 30° or more to the horizontal and preferably between 45° and 75° in order to fit low across the pelvis reducing the possibility of the belt loading the abdomen (Fig 10). The pelvic restraint is designed to bear upon the bony structure of the body and should be worn low across the front of the pelvis with any junctions between the pelvic and shoulder restraints located near the wearers hips.

Removing occupant restraint

1. Release the Comfort Clip.
2. Release the grey shoulder belt from the lap belt section, and carefully allow the shoulder belt to return to the retractor. Disconnect the black lap belt from the buckle stalk on the aisle side and carefully allow the lap belt webbing to return onto it's retractor.
3. Connect the shoulder belt buckle to the lap belt tongue above the opening of the retractor box.
4. The wheelchair tie-down should now be removed.

Figure 12

Figure 3

Figure 13

Figure 10

Figure 11

Fit and use

Fitting and using the combined self-retracting tie-down with 2 & 3 point double inertia

Rail floor *Wheelchair Tie-down:*

1. The rail will have been installed in the vehicle in accordance with their own and the vehicle converter's instruction. Position wheelchair within vehicle as required.
2. Place the combined rear webbing restraint into the rail behind the wheelchair. It is acceptable to use the restraint either for left hand or right hand use. The double inertia reel should be fitted to the rail adjacent to the 3rd point anchorage.
3. Moving to the wheelchair rear, select the combined wheelchair and occupant restraint so that the karabiner or hook gates face outboard from the wheelchair, (Fig 1). If using tongue & buckle, the buckle may be positioned facing inboard or outboard, (Fig 2). Attach each restraint into the floor rail by aligning the ATF (aluminium track fitting) feet with the cut-out sections of the rail, (Fig 3). **Note:** the yellow plungers must face toward the rear of the vehicle. Press down on the ribbed part of the ATF, (Fig 3A), and push firmly down towards the wheelchair until the yellow plunger drops and locks into the rail.
4. **Note: It is not necessary to press yellow button. Webbing can be extended from the reel <u>without</u> pressing the yellow button if the lock label, (Fig 15), is <u>NOT</u> visible. The yellow button must be pressed if extending webbing with the label in view.**
5. Slack in the webbing with be taken in automatically by the reel to create an angle of around 30 to 45° and within the rear view zone, (Fig 6).
6. Final tensioning is achieved by turning each tensioning handle (Fig. 14B) until the webbing is equally taut on each side. The webbing with retract automatically into the reel. **IMPORTANT: The yellow locking label must be <u>fully</u> visible, to ensure that the reel is locked off, (Fig 15).**
7. Ensure that each <u>rear</u> Quattro Express webbing is approximately of the same length.
8. The occupant restraint must now be fitted - refer to pages 12-15.

Removing wheelchair tie-down

1. Release the tension in the rears by pressing the yellow button, (Fig 14A), and extend the webbing to allow the karabiner(s)/hook(s) or tongue & buckles to be removed from the wheelchair frame. If the webbing is particularly tight, it may be necessary to slightly 'tension' with the hand wheel, (Fig 14B), whilst pressing the yellow button, in order to remove the webbing lock on the Quattro Express.
2. Remove each Quattro Express ATF from the rail by simultaneously lifting the yellow plunger and sliding the fitting back until the ATF feet align with cut outs in the rail.
3. Lift the Quattro Express away from the rail and store securely.

Figure 1

Figure 2

Figure 3

Figure 15

Figure 6

Figure 5

Figure 14

Fit and use

Fitting and using the combined retractable tie-down with 2 & 3 point double inertia

Floor anchors *Wheelchair Tie-down:*

1. The Solo anchors will have been installed in the vehicle in accordance with our own and the vehicle converters instruction. A front wheelchair should be secured first, before any rear combined restraints are fitted.
2. Place the combined rear retractable restraint into the floor anchor behind the wheelchair. It is acceptable to use the restraint either for left hand or right hand use. The double inertia reel should be fitted to the rail adjacent to the 3rd point anchorage. Ensure that the combined wheelchair and occupant restraint is fitted with the karabiner / hook gates facing outwards, the same way as the fronts.
3. Install the restraint(s) onto the floor anchors by aligning the protrusion within each cleat to the slot on the floor anchors.
4. Slide the cleat fully home, (Fig 17), rotate the assemblies through 90°. to allow the karabiners or hooks to be attached to the wheelchair frame.
5. Press the yellow Quattro release button(s), (Fig 18A), to extend the webbing and attach the karabiner(s) or hook(s) around the wheelchair main frame. Some wheelchairs will indicate this rear frame tie-down position, (Fig 5).
6. Press each Quattro release button once again to take up the slack in the webbing and create an angle of around 30 to 45° and within the rear view zone, (Fig 6).
7. Final tensioning is achieved by turning each tensioning handle, (Fig 18B), until the webbing is equally taut on each side.
8. The occupant restraint must now be fitted - refer to pages 12-15.

Removing wheelchair tie-down

1. Release the tension in the rears by pressing the yellow button and extend the webbing to allow the karabiner(s)/ hooks to be removed from the wheelchair frame. If the webbing is particularly tight, it may be necessary to slightly 'tension' with the hand wheel whilst pressing the yellow button, in order to remove the webbing lock on the Quattro.
2. Remove each Quattro Solo from the anchor by rotating the tie-down through 90° so that the raised protusion on the cleat is aligned with the indent on the floor anchors, (Fig 16). Slide off. ***Note: protrusion and indent are only applicable with spring loaded anchors, not with static anchors S10.***
3. Pull the tie-down away from the floor anchor and store safely.

Figure 17

Figure 6

Figure 16

Figure 5

Figure 18

Fit and use

Fitting and using the combined self-retracting tie-down with 2 & 3 point double inertia

Floor anchors *Wheelchair Tie-down:*

1. The Solo anchors will have been installed in the vehicle in accordance with our own and the vehicle converters instruction. A front wheelchair should be secured first, before any rear combined restraints are fitted.
2. Place the combined rear retractable restraint into the floor anchor behind the wheelchair. It is acceptable to use the restraint either for left hand or right hand use. The double inertia reel should be fitted to the rail adjacent to the 3rd point anchorage.
   Ensure that the combined wheelchair and occupant restraint is fitted with the karabiner /hook gates facing outwards, the same way as the fronts.
3. Install the restraint(s) onto the floor anchors by aligning the protrusion within each cleat to the slot on the floor anchors. Slide the cleat fully home, (Fig 17), rotate the assemblies through 90°. to allow the hooks or karabiners to be attached to the wheelchair frame.
4. **Note: It is not necessary to press yellow button. Webbing can be extended from the reel without pressing the yellow button if the lock label, (Fig 15), is NOT visible. The yellow button must be pressed if extending webbing with the label in view.**
5. Slack in the webbing with be taken in automatically by the reel to create an angle of around 30 to 45° and within the rear view zone, (Fig 6).
6. Final tensioning is achieved by turning each tensioning handle (Fig. 19B) until the webbing is equally taut on each side. The webbing with retract automatically into the reel.
   IMPORTANT: The yellow locking label must be fully visible, to ensure that the reel is locked off, (Fig 15).
7. Ensure that each rear Quattro Express Solo webbing is approximately of the same length.
8. The occupant restraint must now be fitted - refer to pages 12-15.

Removing wheelchair tie-down

1. Release the tension in the rears by pressing the yellow button, (Fig 14A), and extend the webbing to allow the karabiner(s)/hook(s) to be removed from the wheelchair frame. If the webbing is particularly tight, it may be necessary to slightly 'tension' with the hand wheel, (Fig 14B), whilst pressing the yellow button, in order to remove the webbing lock on the Quattro Express Solo.
2. Remove each Quattro Express Solo from the anchor by rotating the tie-down through 90° so that the raised protusion on the cleat is aligned with the indent on the floor anchors, (Fig 16). Slide off. ***Note: protrusion and indent are only applicable with spring loaded anchors, not with static anchors S10.*** Pull the tie-down away from the floor anchor and store securely.

Figure 17

Figure 16

Figure 6

Figure 15

Figure 5

Figure 19

Fit and use

Fitting and using the combined retractable and self-retracting tie-down with 3 point static occupant restraint

Floor anchors *3 Point Static Occupant Restraint :*

1. The retractable wheelchair tie-down should first be fitted as indicated on page 18-19
1. The self-retracting wheelchair tie-down should first be fitted as indicated on page 20-21
2. The occupant restraint should be installed in accordance with section B and C notes using the supplied hardware.(Fig 20). **Note:** if fitting hardware, other than that provided in this kit, is to be used then the fixing bolts should be of an equivalent cross section and an equivalent grade namely B.S. Grade 'S' (ISO 8.8).
3. The componentry is assembed (Fig 20), with the upper 3rd point bolted to an approved anchorage position on the vehicle body. Bolts should be tightened to a torque of 40Nm. If installing the ATF of the removable 3rd point, then a suitable rail section, known as a cant rail, should be installed in the vehicle. **Note:** all vehicle anchorage points may require reinforcement as necessary to meet any required minimum strength recommendations for the vehicle.
4. Install the static lap belt section - tongue side into the stalk opposite the 3rd point anchorage, (Fig 21B) and the buckle side into the stalk nearest to the 3rd point anchorage, (Fig 21A).
5. Draw the two sections around the occupant's waist and clip the lap belt adjuster into the lap belt buckle, adjusting as firmly as possible, consistent with user comfort, so that the lap belt sits low over the front of the pelvis and bears over the bony part of the body.
6. Disconnect the shoulder belt snap clip from its storage position, (Fig 22), and draw across the upper body connecting it into the static lap belt section - tongue side snap button, (Fig 23). Adjust the shoulder belt tension to comfortably suit the user, (Fig 24).
7. The lap belt anchor points should be positioned to achieve belt angles of 30° or more to the horizontal and preferably between 45° and 75° in order to fit low across the pelvis, reducing the possibility of the belt loading the abdomen, (Fig 10). The pelvic restraint is designed to bear upon the bony structure of the body and should be worn low across the front of the pelvis with any junctions between the pelvic and shoulder restraints located near the wearer's hips.

Removing occupant restraint

1. Disconnect the shoulder belt snap clip from the lap belt snap button and the lap belt tongue section from the lap belt buckle section.
2. Remove each ATF fitting from the rail by raising the yellow plunger and sliding the fitting backward until the ATF feet align with the cut outs in the rail, lift the fitting out of the rail.
3. To remove the wheelchair tie-down, see page 18 or 20.

Occupant restraints should not be held away from the body by wheelchair parts or components, such as wheels or armrests, and should not be worn twisted in any way.

Occupant restraints should be adjusted as firmly as possible and consistent with user comfort. Upper torso restraints should fit over the shoulder or shoulders.

Figure 20

Figure 10

Figure 21

Figure 22

Figure 23

Figure 24

Fit and use

Fitting and using the combined retracting and self-retracting tie-down with 3 point WAV retractable occupant restraint

Floor anchors *3 Point Retractable Occupant Restraint:*

1. The retractable wheelchair tie-down should first be fitted as indicated on page 18-19
1. The self-retracting wheelchair tie-down should first be fitted as indicated on page 20-21
2. The occupant restraint should be installed in accordance with section B and C notes using the supplied hardware (Fig 25). **Note:** if fitting hardware, other than that provided in this kit, is to be used then the fixing bolts should be of an equivalent cross section and an equivalent grade namely B.S. Grade 'S' (ISO 8.8).
3. The componentry is assembed (Fig 25), with the upper 3rd point and lower reel anchorage points bolted to an approved anchorage position on the vehicle body. **Note:** the upper 3rd point may be reversed as required, by unclipping the buckle from the drop link tongue, reversing, and clipping back together. The inertia reel should be mounted at an angle of 90°/90° as viewed in 2 planes to the road level (see inset photo opposite). The reel and its bracketry is bolted through the vehicle and reinforced on the underside, if required, with the 100mm diameter load spreader plate and nyloc nut. All bolts should be tightened to a torque of 40Nm. **Note:** all vehicle anchorage points may require reinforcement as necessary to meet any required minimum strength recommendations for the vehicle.
4. Once installed, check the free running of webbing into and out of the inertia reel and check the 'lock up' facility of the reel by engaging a short tug at various intervals along the extension and retraction of the webbing in and out of the reel.
5. Adjust the drop link position at or above the shoulder height to comfortably suit the user, and draw the running tongue across the occupant, through the furthest arm of the wheelchair and connect into the far side Quattro stalk to form a diagonal belt, (Fig 26). Disconnect the fixed tongue from its buckle attached to the inertia reel, (Fig 27), pass it through the near arm of the wheelchair and connect back into the rearside Quattro stalk forming the complete lap and diagonal, (see Figs 26 & 27).
6. The lap belt anchor points should be positioned to achieve belt angles of 30° or more to the horizontal and preferably between 45° and 75° in order to fit low across the pelvis, reducing the possibility of the belt loading the abdomen, (Fig 10). The pelvic restraint is designed to bear upon the bony structure of the body and should be worn low across the front of the pelvis with any junctions between the pelvic and shoulder restraints located near the wearer's hips.
7. Place the wrap around the drop link and secure the Velcro to tidy the loose webbing end, (Fig 28).

Removing occupant restraint

1. Unfasten the buckle from the stalks, remove the occupant restraint and let the webbing retract back into the housing.

2. The wheelchair tie-down should now be removed as indicated on page 18 or 20.

Figure 25

Figure 26

Figure 27

Occupant restraints should not be held away from the body by wheelchair components or parts, such as wheelchair armrests or wheels, and should not be worn twisted in any way.

Occupant restraints should be adjusted as firmly as possible and consistent with user comfort. Upper torso restraints should fit over the shoulder or shoulders.

Figure 28

Figure 10

After care

Equipment storage and maintenance

- Store the restraint safely off the floor to avoid damage and ensure that it cannot become a projectile in an accident. This can be achieved by using wall mounted storage bag such as SLR111.
- Regularly inspect the wheelchair and occupant restraint systems for damage, wear or malfunction. If any problems are identified replace it immediately.
- When not in use, keep loose occupant webbing ends connected to their corresponding buckle sleeves, etc, to prevent them from becoming tripping hazards and from flailing around when the vehicle is in motion.
- All webbing and components can be cleaned as necessary, but care should be taken to prevent contamination of the webbings with polishes, oils and chemicals, particularly battery acide.
- To clean the straps use warm soapy water and a clean soft cloth. Rinse with clear water and allow to air dry. To disinfect, use a mild spray disinfectant and do not use products containing bleach. **Important: when cleaning or disinfecting, do not immerse or flood buckles, karabiners or Solo fittings in the disinfectant or water.**
- If the vehicle is involved in an accident when any restraints are deployed, remove them from service and replace immediately. If in doubt please contact Unwin.

Warranty

Unwin products are extensively tested using Unwin anchorage systems, and our full warranty normally only applies to Unwin equipment when used with Unwin branded anchorages or as instructed. Unwin have also participated in test programs with other manufacturers anchorage products and will support warranty on the Unwin products when used in conjunction with such jointly tested systems. For further details on specific applications please contact the Sales Office. In other situations, using Unwin products, for which Unwin has not participated in a joint test program, a limited Unwin warranty will apply.

Declaration of conformity

Manufacturer /

Unwin
Unwin House
The Horseshoe Coat Road
Martock, Somerset, UK

Phone: +44 1935 827 740
E-mail: sales@unwinsafety.com
www.unwinsafety.com

Declares that the product /

DI-RQPK, DI-RQPT, DI-RQPH, DI-RQMT, DI-RQMH, DI-RQMK, DI-RQEPH, DI-RQEMH, DI-RQEMK, DI-SQPH, DI-SQPK, DI-SQMH, DI-SQMK, DI-SQEPH, DI-SQEPK, DI-SQEMH, DI-SQEMK, DK-RQPH, DK-RQMH, DK-RQEPH, DK-RQEMH, DK-SQPH, DK-SQMH, DK-SQEPH, DK-SQEMH, STK-SQPH, STK-SQMH, STK-SQEPH, STK-SQEMH, WK-SQPH, WK-SQMH, WK-SQEPH, WK-SQEMH

Conforms to following directives standards and regulations /

214/2014/EU Paragraphs 2.3.1 and 2.3.2
ISO 10542:2012
RESNA WC-4 2012 Section 18
R.107.06
2007/46/EC

Unwin, Martock, 17 October 2017

Chris Hellier
MD

URS is a member of Registrar of Standards (Holdings) Ltd.

Accredited by URS as testing laboratory in accordance with ISO/IEC 17025:2005
Quality system certified in accordance with ISO 9001:2008

Illustrations, descriptions and specifications in the user manual are based on current product information.
Unwin reserves the right to make alterations without previous notice.
© 2017 Unwin

UJ2300A

www.unwinsafety.com

facebook.com/UnwinSafety
twitter.com/UnwinSafety
linkedin.com/company/unwin

UNWIN

Unwin House
The Horseshoe Coat Road
Martock, Somerset, UK
Phone: +44 1935 827740
E-mail: sales@unwinsafety.com

Worldwide Safe Mobility Solutions

Included in our corporate group are Autoadapt, BraunAbility, Bruno, Unwin and Foca-Braun.