

**Four Point Wheelchair Restraint  
For the Radcliffe Shadow  
WWR/SW/ATF/R**

**USER OPERATING INSTRUCTIONS**



**Read instructions fully before use.**

**It is recommended that training be given on the proper use of this product.**

**Retain this manual for future reference.**

**Include it with the product in the event of transfer to new users.**

**Additional copies are available upon request.**

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## A. LIMITATIONS OF USE

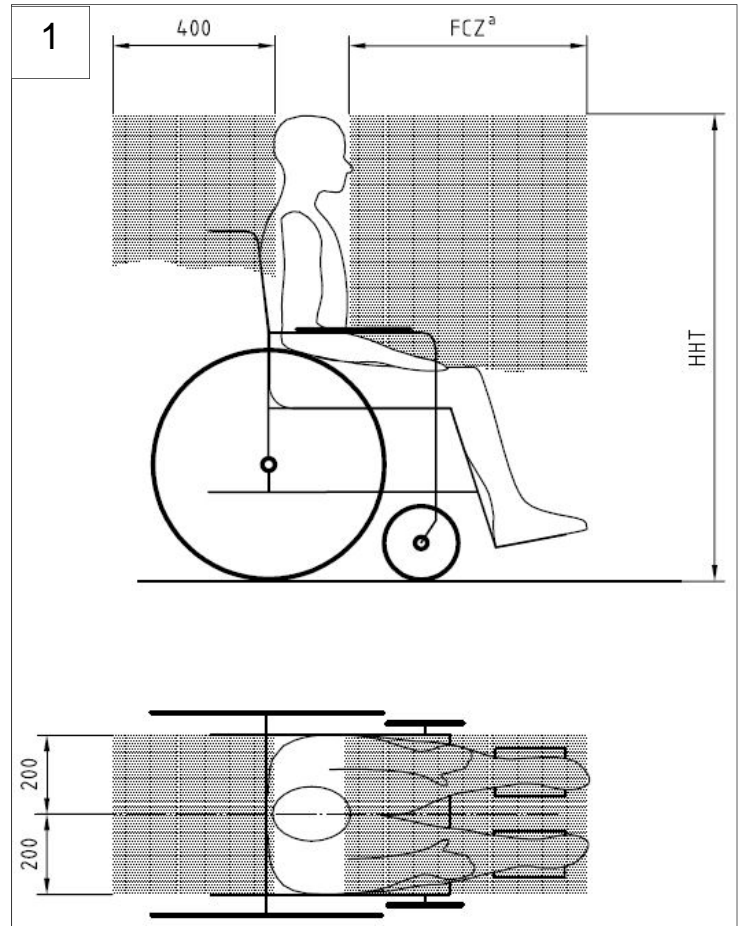
1. The Radcliffe Shadow four point restraint has been tested to ISO 10542 standard requirements and can sustain a wheelchair weight of up to 85kg. The rear straps are fitted with Tongue and Buckle.
2. **This product has been designed as a four point tiedown system, therefore the front or rear straps must not be used on their own.**
3. **An independent occupant restraint must always be used for the seat occupant.**
4. Some wheelchairs need specific restraints, i.e. Buggy type wheelchairs. If in doubt please contact Unwin or the wheelchair manufacturer.
5. Some wheelchair frames are too large for the karabiner to close around them. In these situations our D-ring straps (DR120) or an alternative restraint system should be used.
6. Unwin products are extensively tested using Unwin Rail and our full warranty applies to Unwin equipment fitted and used in accordance with our instructions. Unwins have also participated in test programs with other manufacturers 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 where Unwin has not participated in joint test programs, a limited Unwin warranty will apply.

## B. GENERAL GUIDANCE

1. Please read this manual before using the equipment.
2. Regular inspection of all parts is recommended and the equipment should be used only if all components are in good condition.
3. Replace equipment when the webbing becomes cut, contaminated or frayed.
4. Any restraints which have been subjected to a crash situation should, in the interest of safety, be replaced immediately.
5. Do not attempt to modify the equipment. If there is a problem please contact Unwin Safety Systems.
6. Avoid contact with corrosive liquids and keep the webbing away from sharp edges. Care should be taken to prevent contamination of the webbing with polishes, oils and chemicals.
7. If the proposed installation cannot be made to comply with the following requirements, please contact Unwin Safety Systems.

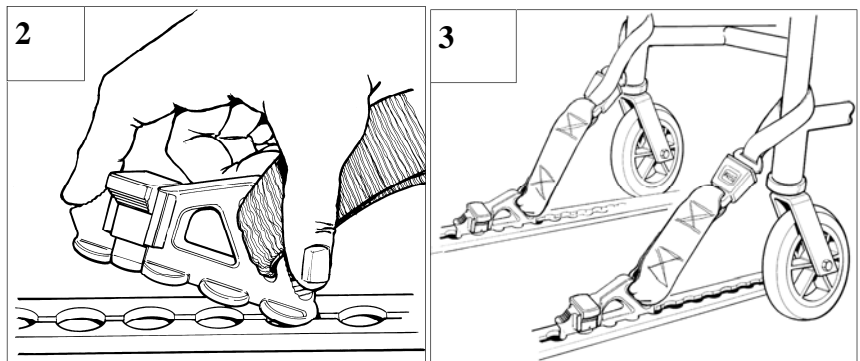
## C. BEFORE USING THE RESTRAINT

1. Ensure that the wheelchair is appropriate for the tiedown being used.
2. Position the wheelchair, facing forward, centrally over the Unwin rail. Ensure the wheelchair brakes are applied and the wheelchair cannot roll.
3. To minimise the potential for head injuries in an impact, it is recommended to allow a clear space of at least 400 mm behind and 650 mm for 3 point systems or 950mm for 2 point systems in front of the head of the wheelchair user when positioning the chair for transit. A height provision ranging from 1200mm 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. (See Figure 1) If these clear space dimensions cannot be provided then any structure protruding into this space should be adequately padded.
4. Electric wheelchairs may require an additional strap to secure the batteries.

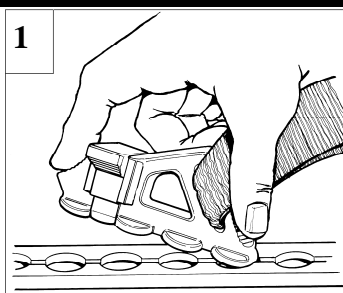


## D. FITTING THE FRONT STRAPS

1. Position the wheelchair over the rail and apply the brakes.
2. To attach the front straps into rail, match the feet on the clip with the cut-out sections of the rail and insert into the rail (Fig 2).
3. Move the clip slightly backwards or forwards until the yellow plunger drops and locks into the rail.
4. Install the second clip. The position of this must be in line with the first.  
**IMPORTANT: Check the plungers are fully engaged on both sides.**
5. With buckles facing outwards, connect the front straps to the front vertical framework of the wheelchair above the front castoring wheels (Fig 3).  
**IMPORTANT: Check both sets of buckle and tongue are fully clipped together.**
6. Pull the wheelchair back to tension front tiedown straps and apply the wheelchair brakes if fitted.



## E. FITTING THE REAR STRAPS



1. Attach rear straps into rail (Fig 1) approximately 300 mm behind the wheelchair backrest. **IMPORTANT: The yellow plungers must face the rear of the vehicle.**
2. Release over-centre buckles.
3. Attach the Tongue and Buckle to the rear main frame of the wheelchair to create an angle of approximately 45 degrees.
4. Pull the webbing through the over-centre buckle, removing the slack.
5. With free hand begin to close the buckle (Fig 2) and once the webbing is retained fully close the buckle using both hands.
6. Finally re-secure free webbing end onto the Velcro stowage point.

## F. REMOVING AND STORING

1. Detach the Velcro, undo the over-centre buckle and release the webbing.
2. Unfasten the Tongue and Buckle and remove restraint from the wheelchair main frame.
3. Lifting the yellow plunger on the clip and remove the rear straps from the rail.
4. Release the brakes and push the wheelchair forward to loosen the front straps.
5. Press the buckle to release the front straps and remove from the rail.
6. Store the restraint safely off the floor to avoid damage and ensure that it would not become a projectile in an accident. This can be achieved by using wall mounted storage rails or a stowage box.

## G. MAINTENANCE

1. Regularly inspect the restraint for damage, wear or malfunction. If any problems are identified replace it immediately.
2. All webbing and components can be cleaned as necessary, but care should be taken to prevent contamination of the webbing with polish, oils and chemicals.
3. 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 buckles or rail fittings in the disinfectant or water.**
4. 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 Safety Systems.