



## THE SOLO SYSTEM

### S10 FLOOR ANCHORAGE INSTALLATION GUIDE



**Read instructions fully before use.**

**Retain this manual for future reference.  
Additional copies are available upon request.**

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### A. GENERAL GUIDANCE

1. Installation should be done by experienced personnel only.
2. Do not make any alterations to the Solo System.
3. Do not install the floor or wall anchors to unsound metal, wood, or plastic structures.
4. The installer is responsible for ensuring that the fitting meets all applicable regulations. If in doubt about the method of installation or use please contact Unwin Safety Systems.

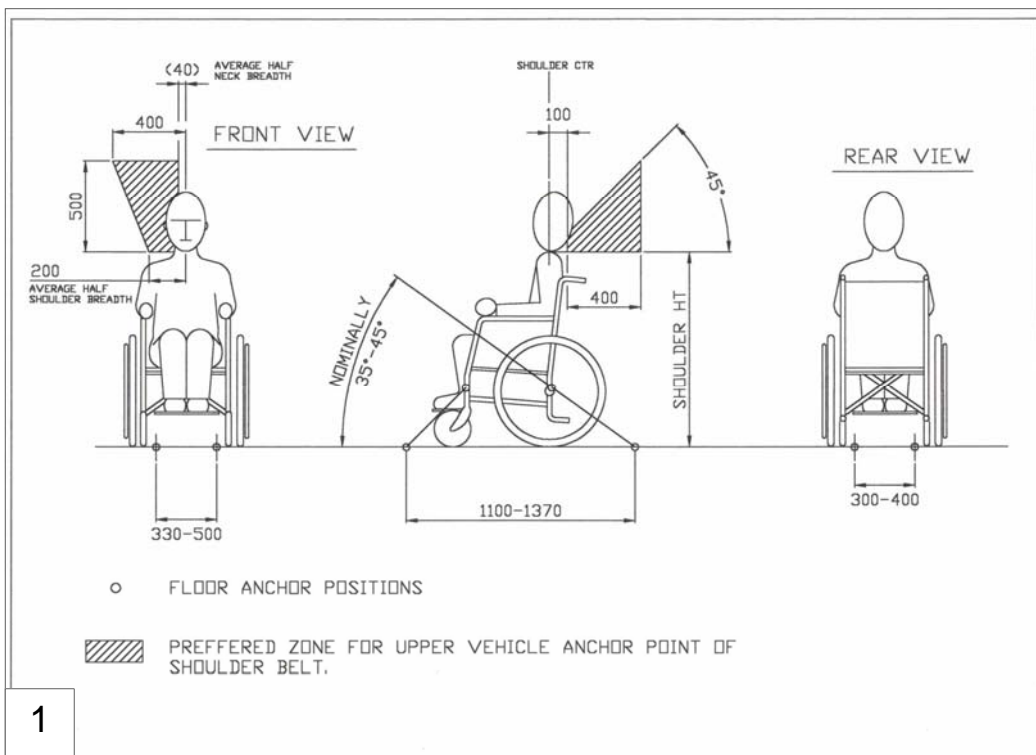
### B. BEFORE INSTALLING THE ANCHORAGES

1. Plan where the wheelchair will be located within the vehicle. The wheelchair must be positioned such that the occupant and chair face the front of the vehicle.
2. Ensure sufficient clearance is available to correctly mount and use the upper body restraint harness, (cant rail harness), if applicable.
3. Ensure that plenty of room is allowed for the driver and/or attendant to attach the restraint equipment to the wheelchair and occupant.
4. Based on the likely head excursion that could occur in an impact it is recommended that the floor anchorages are positioned such that a clear space of at least 400 mm behind and 650 mm in front of the head of the wheelchair user is provided. There should also be 200 mm clear space either side of the wheelchair centre line and if these clear space dimensions cannot be provided then any intrusion into the space should be adequately padded.
5. Once happy with the planned wheelchair position, lay the floor anchors in their desired locations and check carefully immediately below the floor, that they and/or the hole cutter will not foul brake lines, fuel tanks, chassis members etc. If in doubt modify the wheelchair or anchorage positions accordingly.
6. **Note:** The fixing screw supplied is an M10 x 60 mm long, grade 12.9, zinc plated socket head capscrew. Where a different length is required care must be taken to source a capscrew of an equal specification.

### C. INSTALLING THE FLOOR ANCHORAGES

1. Mark out the chosen floor anchor points, guidance positions are shown in Fig 1.
2. Drill an 11 mm diameter hole through the finished floor, ply and steel flooring.
3. From the top surface of the floor, counter bore the 11 mm dia. hole to a diameter of 35 mm and a depth of 13 mm.

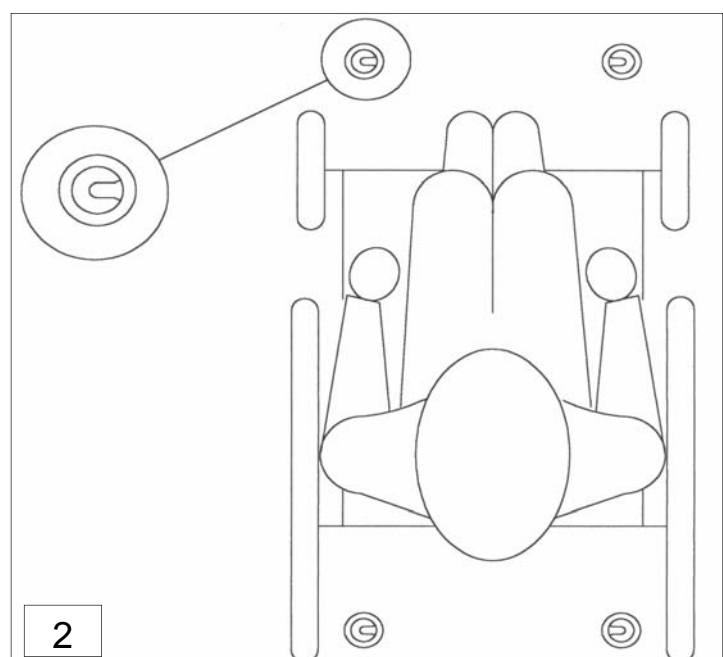
4. Clear debris and install the floor anchors, orientated as shown in Fig 2. Tighten to 25-30 Nm from underneath (a special wrench is available to prevent the floor anchor from turning), using the nut, washer and under floor spreader plate.
5. If you need to modify the spreader plate to clear an obstruction, always leave as much material as possible around the bolt hole. Any modification must be made such that the original load spreading properties are retained.
6. **Note:** It may be necessary to provide fillers between the vehicle floor convolutions to prevent these from being crushed when tightening up on the nuts.
7. It is recommended that some type of body sealant or foam fill is used between the
8. under floor spreader plate and the vehicle under side to prevent ingress of water and subsequent saturation of the ply.



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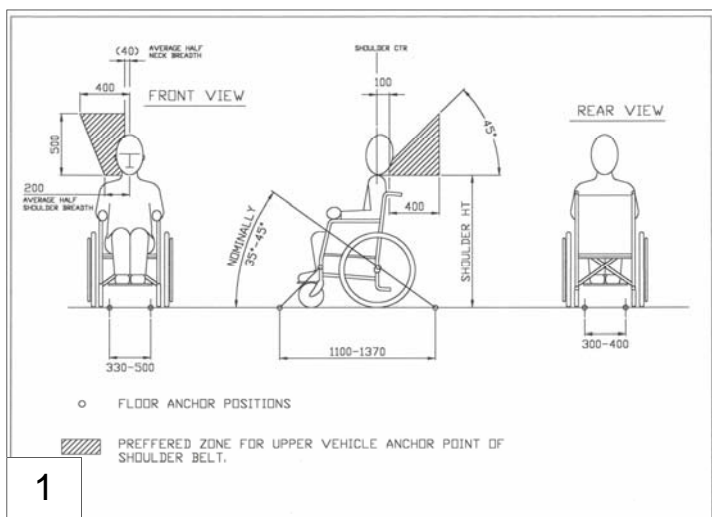
**NOTE**

It is essential that the slot in each floor anchor is orientated as shown.



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## D. INSTALLING THE WALL ANCHORAGE



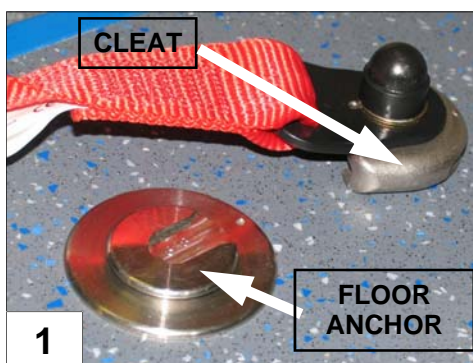
If using a 3 point inertia passenger restraint it will be necessary to install a wall anchorage to the vehicle.

This will consist of either a section of surface rail, to allow for adjustment and removal of the 3rd point strap, or, a fixed position anchor plate and strap, secured to the vehicle.

### Installing wall rail/fixed position anchor plate.

This should be located and secured to a solid body frame member, in a suitable location in the vehicle, to ensure that the occupant restraint falls within the preferred zone indicated in figure A. **It is the responsibility of the installer to ensure that the fittings meets all applicable wall strength regulations and requirements.**

## E. AFTER INSTALLING THE FLOOR ANCHORAGES



Attach the front straps onto the front anchor points by aligning the button within the cleat, to the slot on the floor anchors (Fig 1).

Slide the cleat fully home (this has the effect of raising the floor anchor from its housing). (Fig 2),



Rotate the assembly through 90° to allow the tongue and buckle fixing to be attached to the wheelchair

If you have any queries on the installation of this product please contact Unwin Safety Systems.

## F. WARRANTY

Unwin products are extensively tested using Unwin rail, and our full warranty normally only applies to Unwin equipment when used in Unwin branded rail. Unwins have also participated in test programs with manufacturers of structural rail 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 rail products for which Unwin has not participated in joint test programs, a limited Unwin warranty will apply.