Western Australian Travel-Safe Interagency Group

Risk Assessment Checklist for Wheelchair Transportation in Vehicles

Person's Name: _____ Date of Birth: _____

Address: _____ Sex: M/F/O

Diagnosis: _____

Australian Standards that apply to transportation of people with disabilities as detailed below, are not legislated (i.e.not a legal requirement), however are best practice recommendations which should be followed wherever practicable and reasonable to do so.

It is recommended this be read in conjunction with and in reference to the following documents:

- Australian/New Zealand Standard, Wheelchairs Part 19: Wheeled mobility devices for use as seats in motor vehicles (AS/NZS 3696.19:2009)
- Australian/New Zealand Standard, Technical systems and aids for disabled or handicapped persons - Wheelchair tiedown and occupant-restraint systems, Part 1: Requirements and test methods for all systems (AS/NZS 10542.1:2015)
- International Best Practice Guidelines, 4th International Interdisciplinary Conference on Posture and Wheeled Mobility, 2013
- Decision Making Tree, Western Australian Travel-Safe Interagency Group, 2016.
- ISO 16840-4:2009 Wheelchair seating -- Part 4: Seating systems for use in motor vehicles

"Transportation is only one of many daily activities that introduce unique circumstances and requirements that wheelchairs and wheelchair occupants may experience. Wheelchair products that comply with this part of ISO 7176 will have additional features that provide increased levels of occupant security and safety whilst their occupants are riding in motor vehicles. ***However, a wheelchair's failure to comply with this part of ISO 7176 cannot be used to limit access to, and availability of, motor vehicle transportation of wheelchair users***."
(ISO 7176-19:2008/ANZS 3696.19:2009)

In the first instance when travelling in a motor vehicle, it is considered safest for wheelchair occupants to transfer out of their wheelchair to a vehicle seat and to use the vehicle seatbelt system or child safety seat that complies with local legislation.

Is this a suitable option? Yes No
(If no continue to complete form)

Wheelchair Suitability

To be considered when transfer to a seat in a motor vehicle is not possible.

Please circle and indicate appropriate response below:

Wheelchair: Model/Type: _____ PWC / MWC / MWC with power assist

What is the weight of the occupied wheelchair?

_____kg +_____kg **=_____ kg**

(weight of wheelchair, plus components essential for life and any body support system*) (weight of person) **(total occupied weight)**

* If unsure of weight of body support system, add 15kg for standard or 20kg for complex.

Please circle and indicate appropriate response below. ***All "No" responses below indicate a transport risk. Person/NOK need to be advised. Risks need to be addressed where practicable and documented in notes.***

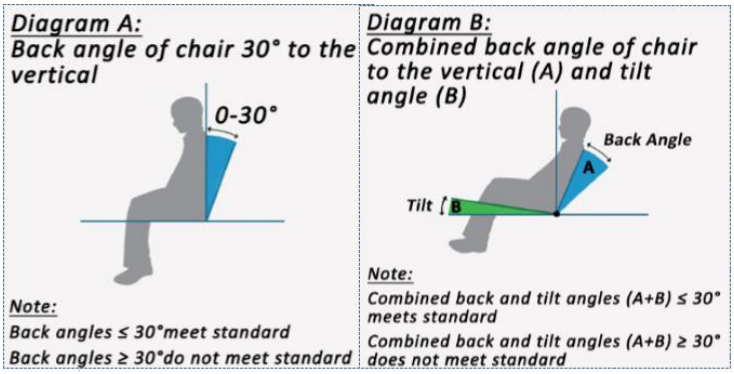
Does the person's body weight fall with the SWL of wheelchair?			Refer to manufacturer's manual/website for specifications.
Has the wheelchair passed crash testing to AS/NZ 3696.19?	YES	NO	
Does the wheelchair have transport lugs? OR			If No refer to manufacturer's manual/ website for recommended tiedown points.
Are there designated points on the frame for tie downs?			

Western Australian Travel-Safe Interagency Group

Risk Assessment Checklist for Wheelchair Transportation in Vehicles

Please circle and indicate appropriate response below. Note: Any *"No" responses indicate a transport risk and do not meet standards. Risks should be addressed where practicable prior to transportation with person/NOK advised of recommendations as documented in notes. For any not applicable responses please state with reasons why.*

Wheelchair Frame/Accessories

Is the frame free of visible damage or rust?	YES	NO	
If this wheelchair has been involved in a motor vehicle accident has it been checked by a qualified technician or engineer for frame integrity?	YES	NO	
Is the upholstery in good condition/undamaged?	YES	NO	
Are the tyres inflated correctly?	YES	NO	
Do the brakes engage and prevent the wheelchair from rolling?	YES	NO	
Is the person able to hold their head up against a flat headrest, without additional support in place? (If no, specify head support required).	YES	NO	
Is the backrest at or above person's shoulder height?	YES	NO	
Can wheelchair accessories that are non-essential for life be removed from wheelchair?	YES	NO	
Has the body support system been crash tested to ISO 16840 or been manufactured by a TGA registered agency?	YES	NO	
Is the body support system secured to the wheelchair frame as per manufacturer's instructions?	YES	NO	
In the regular position, is the backrest within 30^{o} of the vertical as per diagram A and B below?  	YES	NO	Note: If No, document reason why as it is recognised that there may be instances where this is NOT practical.
Is the wheelchair adjusted to its lowest height for transport?	YES	NO	
Do wheelchair modifications meet manufacturers' recommendations for w/c securement and occupant restraint?	YES	NO	

Western Australian Travel-Safe Interagency Group

Risk Assessment Checklist for Wheelchair Transportation in Vehicles

Please circle and indicate appropriate response below. Note: Any *"No" responses indicate a transport risk and do not meet standards. Risks should be addressed where practicable prior to transportation with person/NOK advised of recommendations as documented in notes. For any not applicable responses please state with reasons why.*

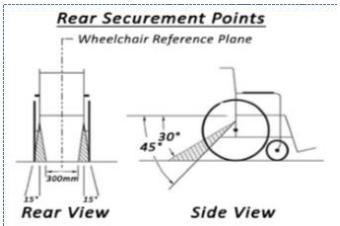
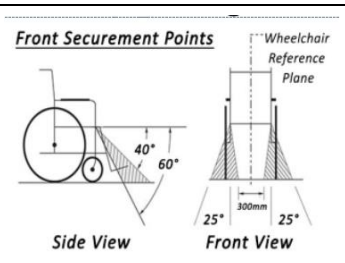
Vehicle Considerations

Is the entry and egress in and out of the vehicle manageable and safe?	YES	NO	
Will the person be in a forward-facing position in the modified motor vehicle?	YES	NO	
Vehicle Name/Type: _____			
What is the safe work load (SWL) of the existing or proposed loader (hoist/lift/ramp) on the vehicle: _____kg			
Does occupied wheelchair weight fit within this SWL?	Yes	No	Refer to manufacturer's manual/website for specifications.
Can this person be transported upright at all times with no need to change their current position in case of emergency e.g. seizure where the chair may need to be immediately reclined? If no, list condition and describe strategy.	YES	NO	
Is there sufficient space in the vehicle to allow this to happen?	YES	NO	

Wheelchair Tie down System

Is the tie down system in the vehicle clearly labelled with the manufacturer's name, month and year of manufacture and does the label state conformance to Australian Standard AS/NZS 10542.1:2009 (Specify type of system and details in notes).	YES	NO	
Is the combined weight of the wheelchair and body support system within the SWL of the wheelchair ***tiedown system***?	YES	NO	Refer to manufacturer's manual/website for SWL.
Are the wheelchair tiedown straps free from damage including nicks, tear, fraying, breaks etc.	YES	NO	

The wheelchair ***tiedown system*** should also comply with the following:
Note: If tiedown systems and tracking do not allow these angles to be achieved please indicate in notes what angles can be achieved as close as possible to the standard.

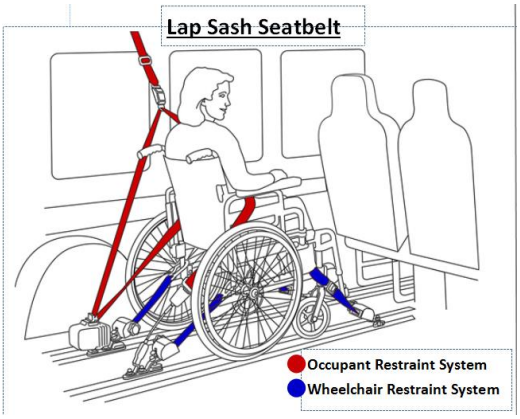
Rear tiedowns can attach to the floor at an angle of 30° to 45° (relative to horizontal)		YES	NO	
Front tiedowns can attach to the floor at an angle of 40° to 60° (relative to horizontal)		YES	NO	E.g.: if no what is the closest angle that can be achieved?

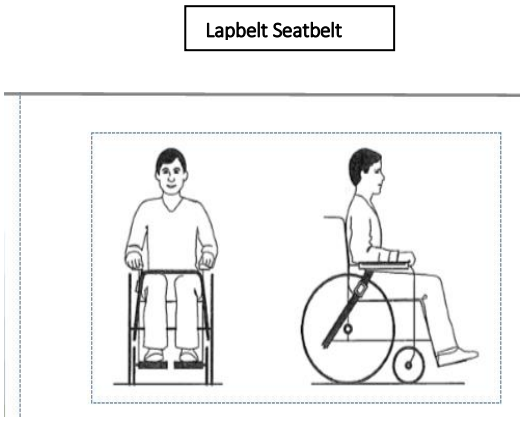
Western Australian Travel-Safe Interagency Group

Risk Assessment Checklist for Wheelchair Transportation in Vehicles

Please circle and indicate appropriate response below. Note: Any *"No" responses indicate a transport risk and do not meet standards. Risks should be addressed where practicable prior to transportation with person/NOK advised of recommendations as documented in notes. For any not applicable responses please state with reasons why.*

Please circle relevant occupant restraint option and state reasons for choice. Note lap belt is not recommended in the current standard AS-NZS 3696.19:2009 but may be the only suitable option.





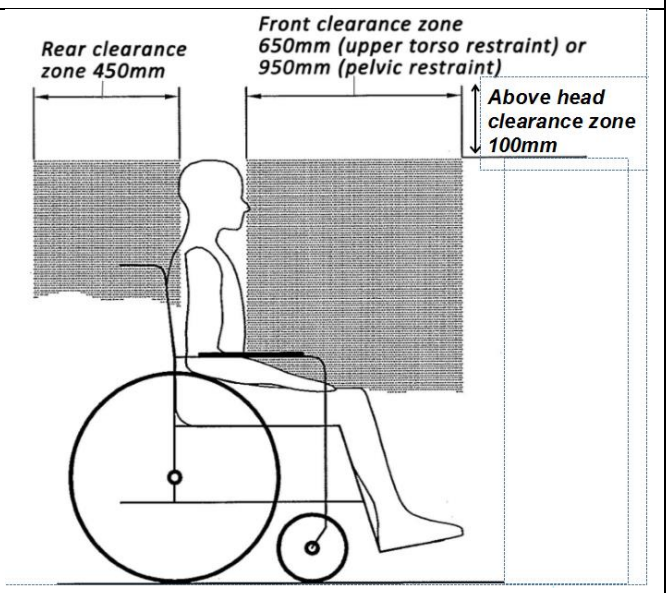
Reason/s:

The wheelchair restraints system should comply with the clear space requirements, stated in relevant section/s of AS/NZS 10542.1:2015 as per diagram:

- Rear clearance zone 450mm (or items in this zone covered with padding that conforms with the impact performance requirements).
- Minimum above head clearance zone 100mm.
- Front clear zone is 650mm with upper torso restraint and 950mm with only pelvic restraints.
- 220mm clearance zone on either side from midline of head.

Can this be achieved? YES NO N/A

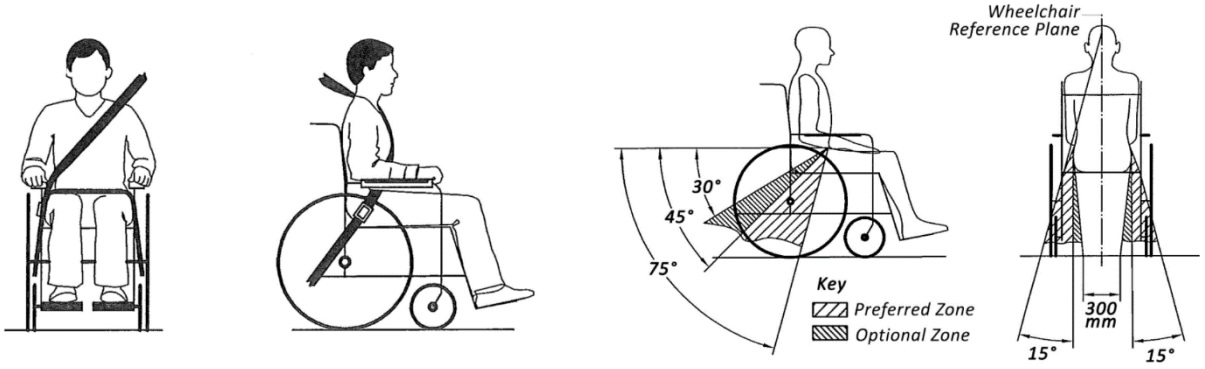
If no, please explain:



Risk Assessment Checklist for Wheelchair Transportation in Vehicles

Please circle and indicate appropriate response below. Note: Any *"No" responses indicate a transport risk and do not meet standards. Risks should be addressed where practicable prior to transportation with person/NOK advised of recommendations as documented in notes. For any not applicable responses please state with reasons why.*

As per diagrams below from standard AS/NZS 10542.1:2015, when a person is secured in the wheelchair as a seat in a vehicle the occupant restraint should:



Note: 300mm refers to min. distance between tracking for tie downs

- For lap: fit low over the hips, touch the top of the thighs and ideally be angled at 45^{o} - 75 ^{o} to the horizontal when viewed from the side. As per standards "The angle of the pelvic belt should be within the preferred zone of 45^{o} - 75^{o} to the horizontal, or the optional zone of 30^{o} - 45^{o} to the horizontal"

NB To ensure effective fit feed the lap belt between the arm support and wheelchair occupant (not over or around the armrests). Any postural supports attached to the wheelchair are not considered a vehicle restraint but can be left in place to provide postural support to the occupant.

- For sash: First cross the collarbone, the chest and then connect to the lap belt near opposite hip
- The upper anchor point should attach to a structural point on the sidewall of the vehicle and behind the occupant's shoulder

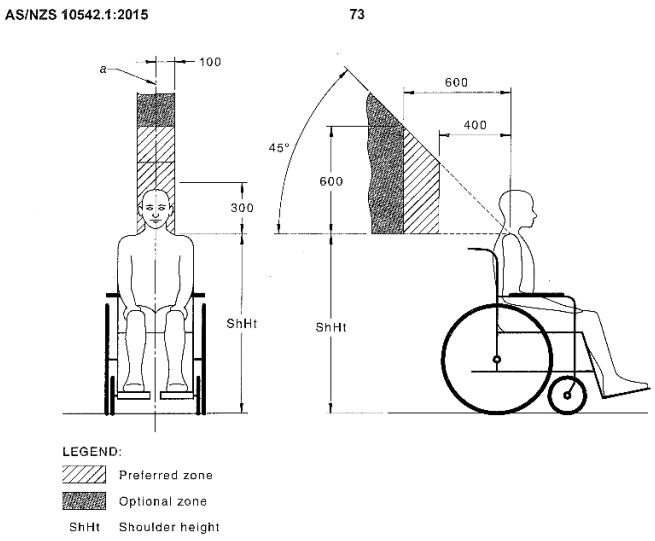


Figure H.4 — Preferred and optional zones for upper vehicle anchor point of shoulder belt

Note: If postural support/seating system is used with a wheelchair there may be componentry that interferes with this line of pull. Please remediate as practicable and document reasons below:

Risk Assessment Checklist for Wheelchair Transportation in Vehicles

Note: Any behavioural considerations in terms of transport e.g. undoes seat belt, needs to be seated at the front of
vehicle:_____

_____

Note: Any medical conditions affected by transport e.g. seizures by light, travel sickness—note strategies in transport
plan:_____

_____

Note: Consider growth and possible changes in mobility equipment i.e. from MWC to PWC likely to affect vehicle transport clear space and securement, in the future

_____

_____

Assessor Recommendations:

_____

_____

Assessor Name: _____

Profession:_____Organisation:_____

Person/NOK Declaration *(Please circle appropriate response)*

I (person / NOK) have been informed of the details contained and risks identified in this assessment.	**YES**	**NO**

Comments:

NOK Name :_____

Signature:_____ Date: _____