

Travelling by air with a wheelchair

2. Air Travel Configuration Card

When we board a plane, we are not asked to have our legs removed and placed in the hold of the plane. However, most wheelchair users will be expected to leave their 'legs', i.e. their chair, in the hands of others while the chair is placed in the hold, and live in hope that it will be returned to them intact at their destination. Sadly, frequently the chair is not returned intact. To reduce the risk of loss or damage, a series of standards have and are being developed in the USA, the first volume of which concentrates on mobility devices (Figure 1).

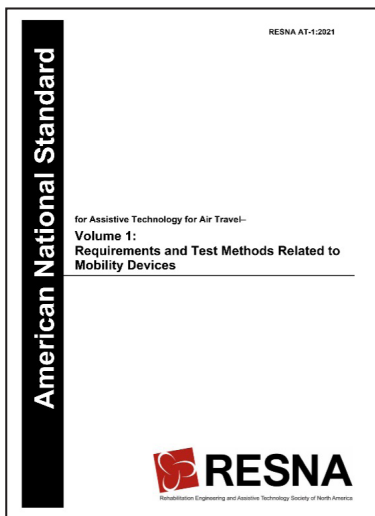


Figure 1. American National Standard for Assistive Technology for Air Travel

This Volume is divided into four sections:

1. Vocabulary and Definitions for Assistive Technology and Air Travel
2. Information and Instructions for preparing Wheelchairs to be Stored and Transported in Commercial Aircraft
3. Handling Procedures for Powered Mobility Devices (PMDs) to be Stored and Transported in Commercial Aircraft
4. Labelling and Design Requirements for Mobility Devices Designed for Stowage and Transport in Commercial Aircraft

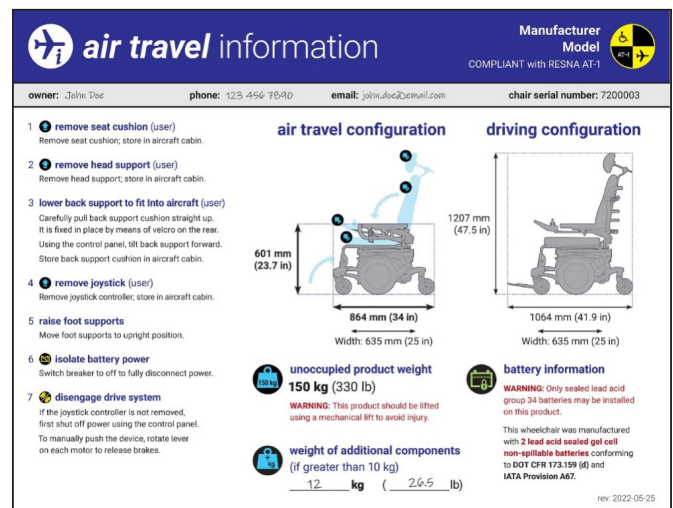
The core of Section 4 is the content of an Air Travel Configuration Card (ATCC) (Figures 3 and 5) which is designed to be with the wheelchair, but also accessible online via a QR code on the chair.



Figure 2. QR code link to ATCC

There are four key aspects to this card. The first is to provide full name and contact details of the user. The second is that the wheelchair user is expected to remove as many items as possible from the chair (such as seat cushion, head support, joystick, etc) and take those items into the cabin as 'hand baggage'. The principle is that if something is 'removable' you do not want to risk it coming away in the hands of a baggage handler and being 'misplaced'. Note that if an item like a joystick is not removable, then try fitting a hard box, or similar, to place around the joystick to protect it from being damaged.

The third aspect describes activities that the wheelchair user may be able to do when handing over the chair, but also ideally the baggage handlers will have been trained to do, which includes folding up foot supports, isolating battery power, disengaging the drive system etc. The fourth aspect is to fold the chair into its smallest footprint and configuration, so that it falls within the maximum size (e.g. under a height of 840mm) that can be loaded into an aircraft hold.



air travel information Manufacturer Model
 COMPLIANT with RESNA AT-1

owner: John Doe phone: 123 456 7890 email: john.doe@email.com chair serial number: 7200003

- 1 **remove seat cushion (user)**
Remove seat cushion; store in aircraft cabin.
- 2 **remove head support (user)**
Remove head support; store in aircraft cabin.
- 3 **lower back support to fit into aircraft (user)**
Carefully pull back support cushion straight up. It is fixed in place by means of velcro on the rear. Using the control panel, tilt back support forward. Store back support cushion in aircraft cabin.
- 4 **remove joystick (user)**
Remove joystick controller; store in aircraft cabin.
- 5 **raise foot supports**
Move foot supports to upright position.
- 6 **isolate battery power**
Switch breaker to off to fully disconnect power.
- 7 **disengage drive system**
If the joystick controller is not removed, first shut off power using the control panel. To manually push the device, rotate lever on each motor to release brakes.

air travel configuration
 601 mm (23.7 in) height
 864 mm (34 in) width
 Width: 635 mm (25 in)

driving configuration
 1207 mm (47.5 in) height
 1064 mm (41.9 in) width
 Width: 635 mm (25 in)

unoccupied product weight
 150 kg (330 lb)

weight of additional components
 (if greater than 10 kg)
 12 kg (26.5 lb)

battery information
WARNING: Only sealed lead acid group 34 batteries may be installed on this product.
 This wheelchair was manufactured with 2 lead acid sealed gel cell non-spillable batteries conforming to DOT CFR 173.159 (6) and IATA Provision A67.

rev: 2022-05-25

Figure 3. Air Travel Configuration Card example for a powered wheelchair - Front

Weight and battery information

The front of the ATCC has weight and battery information for baggage handlers' information and protection (Figure 4). Batteries must be non-spillable, and the following information is required: Number of batteries; Battery chemistry; Access location; Nominal voltage; Watt-hour rating if Lithium.

The rear of the ATCC (Figure 5) provides information as to the situation of the battery isolation switch (and if there isn't one, where the batteries can be unplugged) (Figure 6).




 <p>unoccupied product weight 150 kg (330 lb)</p> <p>WARNING: This product should be lifted using a mechanical lift to avoid injury.</p>	 <p>battery information</p> <p>WARNING: Only sealed lead acid group 34 batteries may be installed on this product.</p> <p>This wheelchair was manufactured with 2 lead acid sealed gel cell non-spillable batteries conforming to DOT CFR 173.159 (d) and IATA Provision A67.</p>
 <p>weight of additional components (if greater than 10 kg)</p> <p>12 kg (26.5 lb)</p>	<p>rev: 2022-05-25</p>

Figure 4. Weight and battery information example

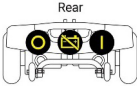

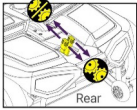
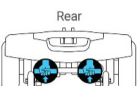
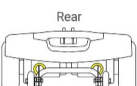
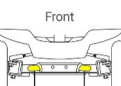





 <p>Rear</p>  <p>Front (top view, no seat)</p>  <p>Rear</p>  <p>Rear</p>  <p>Rear</p>  <p>Front</p> <p><small>The make and model of wheelchair selected to draft this prototype of an air travel configuration card was modified for illustration purposes and does not represent a specific device. Some data was obtained from a sample user operator manual and specification sheet that was available online. Other values are estimated. The manufacturer of the product illustrated has not reviewed or approved this information.</small></p>	<p> isolate battery power</p> <p>The circuit breaker is located on the top of the battery pack. It also acts as a battery isolator and is controlled via the lever located inside the hole at the top of the battery pack. Switch breaker to off to disconnect power from the battery.</p> <p> disengage drive system</p> <p>Disengage drive wheels with brake release levers to move product manually. The brake release levers are located at the rear of the scooter. Move levers forward to release the brakes.</p> <p> manual lift points</p> <p>WARNING! This product should be lifted using a mechanical lift to avoid injury. Unoccupied product weight is 52.7 kg (116 lb). Side lifting points are located at the middle edges of the foot plate. Rear lifting points are located near the motors and the anti-tip wheels. Use securement points when lifting mechanically.</p> <p> chair securement</p> <p>Re-engage the drive system to lock the device. Use cargo straps with or without the use of securement straps attached to the designated transit eye locations at the front and rear of the chair. The rear anchor points should be placed directly behind the rear securement points. The front anchor points should be placed wider than the scooter to provide increased lateral stability. Attach fastening straps to marked securement points ONLY.</p> <p>user operator manual online</p> <p>Scan the QR code to learn more about RESNA Assistive Technology for Air Travel (ATAT) Standards.</p> 
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Figure 5. Air Travel Configuration Card example for a scooter - Rear


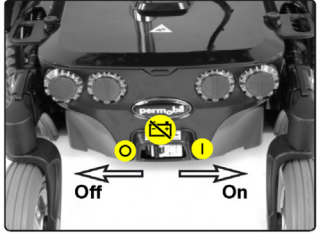
 <p>isolate battery power SWITCH</p> <p>The circuit breaker is located in the rear beneath the tail lights. It also acts as a battery isolator and is controlled using the lever located inside the hole at the bottom of the rear battery cover. Switch breaker to off to disconnect power from the battery.</p>	 <p>Off On</p>
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Figure 6. Battery isolation switch information example

Disengaging the drive system

This information is provided on the rear of the ATCC (Figure 7):



 <p>disengage drive system</p> <p>Disengage drive wheels with brake release levers to move product manually. the brake release levers are located at the rear of the mobility device. Move levers outwards to release the brakes.</p>	
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Figure 7. Drive disengagement information example

Where to lift the chair

The chair should have manual lift point labels placed where it is safe and appropriate for the handlers to lift the chair (Figure 8):

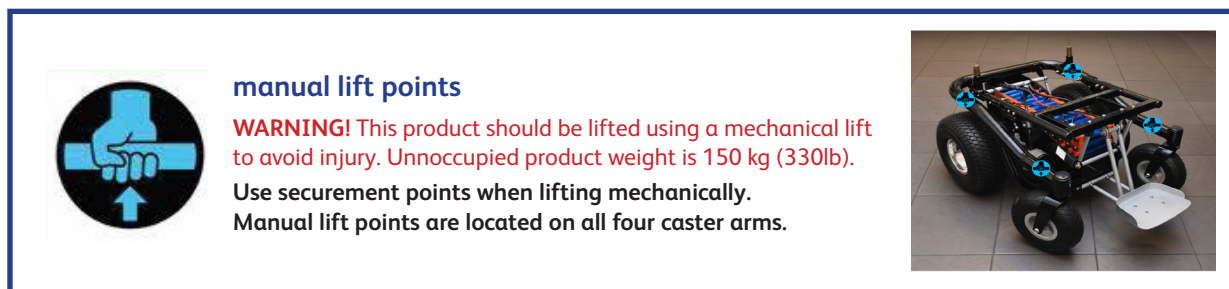


Figure 8. Manual lifting points information example

Chair securement

The chair should have yellow labels depicting where tie-down strapping can be attached (Figure 9). After attachment, the drive system should be re-engaged.

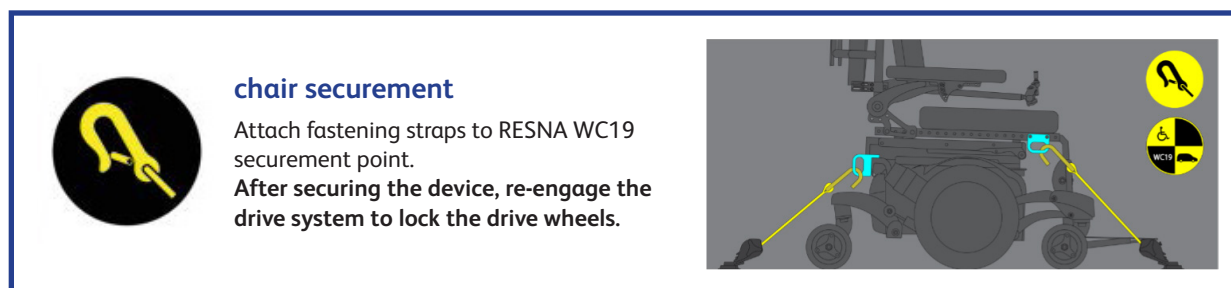


Figure 9. Securement information example

Conclusion

When travelling by air no-one can be certain that their baggage will arrive with them and undamaged. Given the significant disruption and inconvenience that lost or damaged luggage can cause, and how catastrophic this can be for the user if related to their wheelchair, it is vital that actions are taken to reduce this risk. Hopefully, now, wheelchair users can improve the odds by the following the guidance in the US standard and by making use of the ATCC. The downside is that this is a US standard and being taken up by US airlines in the US. However, other airports and other airlines are slowly coming aboard as well.

Now that the US standard volume 1 has been published, various wheelchair and scooter manufacturers have been working on creating ATCCs for their chairs, and adding appropriate labelling to the items. If you are a purchaser or supplier of a chair that is to be used during air travel, then seek out a mobility device that meets the requirements.



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