

Advisory Circular

CARRIAGE OF ELECTRIC MOBILITY AIDS BY AIR

General.....	1
Purpose.....	1
Applicability.....	1
Cancellation.....	1
Effective date.....	1
References.....	1
Background.....	1
Guidance for Air Operator in the Handling of EMAs.....	2
Communications for the Loading of EMAs.....	2
Actions to be taken for the Loading of EMAs.....	3
Source of Information on Specific Electric Mobility Aids.....	3
Contact Information.....	3
Appendix A.....	4

1. **GENERAL.** Pursuant to paragraph 88B of the Air Navigation Order, the Director General of the Civil Aviation Authority of Singapore (DGCA) may, from time to time, issue advisory circulars (ACs) on any aspect of safety in civil aviation. This AC contains information about standards, practices and procedures acceptable to CAAS. The revision number of the AC is indicated in parenthesis in the suffix of the AC number.
2. **PURPOSE.** The purpose of this AC is to provide guidance on the handling and carriage of electric mobility aids (EMA) by air.
3. **APPLICABILITY.** This AC applies to air operators and ground handling agents involved in the handling of EMA for carriage by air.
4. **CANCELLATION.** This is the first AC issued on this subject.
5. **EFFECTIVE DATE.** This AC is effective from 21 September 2012.
6. **REFERENCES.**
 - Air Navigation Order (ANO) paragraph 50E and parts II, III and IV of the 19th Schedule.
 - ICAO Technical Instructions Part 8, chapter 1 subparagraphs 1(e), (f) and (g)
7. **BACKGROUND.**
 - 7.1 There have been numerous reports worldwide concerning the carriage of EMA where the requirements of the International Civil Aviation Organization (ICAO) Technical Instructions had not been complied with.
 - 7.2 An EMA is classified as dangerous goods (DG) because it contains a spillable or non-spillable battery. Such batteries must be removed/or detached from EMAs, properly packed and protected to prevent short circuit or accidentally activated during the loading into the aircraft's cargo compartment.

7.3 Lessons from EMA related incidents indicated that:

- a) communication between passengers, travel agents, tour operators and air operators are not effective in ensuring that adequate instructions are obtained and communicated to the ground handling agents;
- b) some air operators use a notional baggage mass for an EMA. The mass of most EMA exceeds any mass used for standard checked baggage (some devices are known to weigh hundreds of kilogrammes); and
- c) some air operators are not complying with Floor Contact Load limitations when carrying EMA.

8. GUIDANCE FOR AIR OPERATOR IN THE HANDLING OF EMA.

8.1 The air operator should:

- a) provide proper information to the passenger (at the time of booking) on the applicable safety standards and any other constraints or requirements with regard to the carriage of EMA;
- b) proactively obtain from the passenger the relevant information about the EMA (including instructions for preventing accidental activation); and
- c) pass such information to the ground handling agents and other agencies, such as the airport operator, where necessary.

8.2 It is recommended that the restrictions on the carriage of EMA to be clearly explained on the operator's website or the passenger's ticket (or e-ticket). The air operators should also let the passengers know that under certain conditions, it might not be practical, to render an EMA safe for carriage. Such scenarios include:

- a) The EMA does not comply with the ICAO Technical Instructions in preventing inadvertent operation and short circuit of the mobility aid;
- b) The dimensions of the EMA are such that it is unable to go through the aircraft's cargo door during loading;
- c) The tare weight of the EMA exceeds aircraft loading limitations; or
- d) There is insufficient space on the aircraft's cargo hold to facilitate the proper loading of the EMAs at the time the booking is made.

8.3 In view of the above, it is recommended that the air operator requires passengers to pre-notify their intention to travel with an EMA so as to minimize the possibility of mishandling when loading such EMAs into the aircraft's cargo hold.

9. COMMUNICATIONS FOR THE LOADING OF EMA.

9.1 The air operator should ensure all information relating to any EMA being carried is communicated to its ground handling agent.

9.2 The ground handling agent should confirm with the air operator the information prior to loading the EMAs into the aircraft cargo hold.

9.3 If for any reason, an EMA cannot be accepted for flight, the ground handling agent must inform the air operator immediately.

9.4 The air operator should only permit the loading of an EMA when he has received confirmation that all required actions by the passenger and ground handling agents have been taken. Such communication may be aided through the use of an EMA tag as shown in **Appendix A**.

10. ACTIONS TO BE TAKEN FOR THE LOADING OF EMA.



- 10.1 The air operator must ensure that EMAs are properly secured. Restraint methods must adhere to the handling instructions as detailed in the air operator's specific Ground Operations/Handling Manual.
- 10.2 The aircraft-specific frame spacing requirement (i.e. the minimum distance that has to be maintained between any two tie-down attachment points (fittings) bearing lashings, giving restraint in the same direction) must be adhered to.
- 10.3 The air operator must ensure that all persons responsible for positioning and securing EMAs are familiar with the handling instructions detailed in the air operator's specific Ground Operations/Handling manual.
- 10.4 The air operator should retain a written record of the confirmation provided by the passenger, tour operator, travel agent or ground handling agent and checks made by the air operator.

11. SOURCE OF INFORMATION ON SPECIFIC EMA.

- 11.1 Useful information to facilitate the safe carriage of many EMAs may be obtained from the British Healthcare Trades Association (BHTA) at the following address:
www.bhta.net/bhta-advice/air-transportation.aspx.
- 11.2 The air operator should refer to the IATA AHM (Airport Handling Manual) to identify mobility aids with spillable or non-spillable batteries and the loading of such items. In addition, the wheelchair codes should also be used in the PNR (passenger name reference) in the reservation systems.
 - WCBD (non-spillable batteries)
 - WCBW (wet cell batteries)
 - WCLB (Lithium ion batteries)

12. CONTACT INFORMATION.

- 12.1 Should you have any queries relating to this subject please e-mail to:
CAAS_Dangerousgoods@caas.gov.sg.

		<h2 style="margin: 0;">ELECTRIC MOBILITY AID</h2>
RETURN AT GATE* / BAG HALL* <small>(*delete as appropriate)</small>		
PAX Name:	Reservation no.:	
Flight no.:	Seat no.:	Travel date:
Make/Model:	Tare weight (Kg):	
Instructions for protecting from short-circuit:		
<input type="checkbox"/> The battery is fully encased with no exposed terminals		
<input type="checkbox"/> Other: _____		
Instructions for inhibiting electrical circuits:		
<input type="checkbox"/> Switch off key and give to PAX <input type="checkbox"/> Insert inhibiting plug		
<input type="checkbox"/> Separate battery cable connector by: _____		
<input type="checkbox"/> Non-spillable batteries specifically designed to be removed for ease of transport, contained in strong, rigid packagings (hold stowage only)		
<input type="checkbox"/> Lithium batteries specifically designed to be removed for ease of transport, protected from short circuit and taken by pax for cabin stowage		
<input type="checkbox"/> Other: _____		
<input type="checkbox"/> Wet acid batteries <u>only</u> that cannot be loaded and stowed in an upright position: remove, insulate terminals and arrange packing in accordance with the ICAO Technical Instructions.		
I confirm that I have protected the device from short circuit and have inhibited the electrical circuits as specified above.		
Name (print): _____		Sign: _____
PERSON RESPONSIBLE FOR MAKING SAFE FOR CARRIAGE		
I confirm that I have checked the mobility aid and it does not operate.		
Name (print): _____		Sign: _____
LOADING SUPERVISOR		

1. The specimen 'Electric Mobility Aid Tag' includes a declaration by the person responsible for making an electric mobility aid safe for carriage that should be signed to confirm the actions detailed have been completed. The air operator should check that this declaration has been signed.
2. The specimen Electric Mobility Aid Tag makes provision for the air operator to check that inadvertent operation of the device has been prevented prior to accepting an electric mobility aid for loading. This can be achieved by seeing if the mobility aid will power up, and if so whether use of the joystick results in the mobility aid moving. The air operator should also be alert to obvious visual signs that the mobility aid has not been prepared properly (e.g. battery terminals that have not been protected from short circuit).
3. The air operator should remove one of the duplicate copies of the completed tag and retain this with other flight documentation retained on the ground.