

Attachment 22

PASSENGER MOVEMENT ON AIRCRAFT TRANSPORTING HAZARDOUS MATERIALS

A22.1. Passenger Eligibility. Table A4.1., column 7 provides passenger eligibility codes that identify passenger movement restrictions with hazardous materials.

A22.1.1. Use Table A4.1. and Table A4.2. to determine passenger movement eligibility with a specific material.

A22.1.2. Do not move passengers with cargo coded as "Cargo Aircraft Only" unless exempted by this manual. Obtain a passenger deviation when required by this attachment. Passenger deviations may not be issued for contracted commercial aircraft.

A22.1.3. Aircraft transporting personnel located in the same compartment with hazardous materials, which may produce toxic, corrosive, or irritating fumes or has the capability to displace oxygen, must be equipped with serviceable supplemental oxygen equipment and oxygen supply for all personnel in addition to the aircraft's emergency oxygen system. Supplemental oxygen is not required when transporting Air, refrigerated liquid; and Engines, internal combustion. **(T-0)**.

A22.1.4. Participants in tactical, contingency, emergency, or deployment operations, including exercises transported on military organic aircraft according to DTR 4500.9-R, Part III are not considered passengers for the purposes of this manual. Also, applies to military aircraft operating a Special Assignment Airlift Mission (SAAM) providing an exclusive service for movement of unit personnel and their associated cargo.

A22.1.5. Do not transport medical evacuees or release passenger seats to non-participants if any one of the provisions of paragraph 3.6 are being used. Refer to Attachment 23 for contract airlift of personnel under DOT-SP 9232.

A22.1.6. Passenger Deviations. Move passengers with hazardous materials coded as "Cargo Aircraft Only" consistent with operational requirements. Prevent exposure of passengers to the hazardous material. A deviation authorizing the movement of passengers with cargo aircraft only material is granted only for exceptional cases.

A22.1.6.1. MAJCOM, Numbered Air Force, or Service having operational control of the aircraft establishes procedures for approving passenger deviations.

A22.1.6.2. When a deviation has been approved, type, print, or stamp on all copies of the passenger manifest the following information: "AUTHORITY TO MOVE PASSENGERS WITH CARGO AIRCRAFT ONLY CODED MATERIAL IS APPROVED. DEVIATION NUMBER: _____."

A22.1.6.3. Separate passengers from the hazardous cargo.

A22.1.6.4. An aircrew member provides surveillance to ensure passengers are safe and maintain a maximum distance from the hazardous cargo.

A22.1.6.5. Deviations are not required for:

A22.1.6.5.1. Participants (see Attachment 1)

A22.1.6.5.2. Guards.

A22.1.6.5.3. Couriers.

A22.1.6.5.4. Technical escorts responsible for cargo.

A22.1.6.5.5. Maintenance personnel assigned to support the aircraft transporting the hazardous material.

A22.1.6.5.6. DOD duty/space required passengers transported with material coded P4 in column 7 of Table A4.1.

A22.1.7. Radioactive Material Passenger Loading Restrictions.

A22.1.7.1. Packages with a radioactive Category II-Yellow or Category III-Yellow label may not be transported on aircraft carrying passengers unless:

A22.1.7.1.1. The total transport index is not over 50.

A22.1.7.1.2. The transport index is not over 3.0 for a package required to be labeled radioactive Category III-Yellow.

A22.1.7.1.3. The radioactive material is intended for use in, or incident to, research, medical diagnosis, or treatment.

A22.1.7.2. Separate radioactive material requiring a label from personnel and passengers by the greatest distance possible.

A22.1.7.3. Do not carry passengers on aircraft transporting Type B(M) packages.

A22.2. Carriage of Hazardous Materials by Passengers. Passengers may not carry hazardous materials on military aircraft. The **exceptions** listed below are not subject to any other requirements of this manual (nonregulated) when carried by a crewmember or passenger.

A22.2.1. Material in aerosol containers (non-radioactive medicinal and toilet articles or other Div. 2.2 {nonflammable gas} with no subsidiary hazard) not exceeding 500 ml (17 fluid ounces) or 0.5 kg (18 ounces) per container when carried in crewmember or passenger baggage (including carry-on baggage), unless they are classified as poisonous or irritating material. The total quantity of the excepted articles carried by any crewmember or passenger in carry-on or checked baggage may not exceed 2 kg (70 ounces) or 2 l (68 fluid ounces).

A22.2.2. Oxygen, or any hazardous material used for the generation of oxygen, carried for medical use by a passenger on a military aircraft must be an approved cylinder as listed in Attachment 6. **(T-0)**. Spare cylinders are not authorized. Portable oxygen concentrators approved by the FAA may also be used by passengers. Passengers, other than duty passenger medical patients, must have a physician's medical certificate as similarly required by FAA identifying need for supplemental oxygen. **(T-0)**. Comply with 14 CFR Sections 121.574 or 135.91 for DOD contracted civilian passenger aircraft.

A22.2.3. For human beings or animals with an implanted medical device, such as a heart pacemaker, that contains radioactive material, lithium batteries, or with radio-pharmaceuticals, that have been injected or ingested.

A22.2.4. Small compressed gas cylinders of Division 2.2 worn by passengers for the operation of mechanical limbs. Spare cylinders of a similar size for the same purpose, in sufficient quantities to ensure an adequate supply for the duration of the journey are authorized in carry-on and checked baggage.

A22.2.5. Electronic devices acceptable for consumer use that contain lithium batteries. Includes, but not limited to laptop computers, cameras, cell phones, watches, etc.

A22.2.5.1. Ensure each installed or spare lithium battery is of a type proven to meet the requirements of each test in the UN Manual of Tests and Criteria, Part III, Sub-section 38.3 and each spare lithium battery is individually protected so as to prevent short circuits (e.g., by placement in original retail packaging, by otherwise insulating terminals by taping over exposed terminals, or placing each battery in a separate plastic bag or protective pouch).

A22.2.5.2. There is no limit on the number lithium ion (rechargeable) batteries not exceeding 100 Watt-hour (Wh) per battery or lithium metal (non-rechargeable) batteries not exceeding 2 grams of lithium per battery when installed in a device or carried as spares.

A22.2.5.3. Portable medical electronic devices (e.g., automated external defibrillators (AED), nebulizer, continuous positive airway pressure (CPAP), etc.) may contain lithium metal batteries exceeding 2 grams, but not exceeding 8 grams. No more than two lithium metal batteries each exceeding 2 grams, but not exceeding 8 grams, may be carried as spare batteries for portable medical electronic devices in carry-on baggage and must be carried with the portable medical electronic device the spare batteries are intended to operate. **(T-0)**.

A22.2.5.4. Portable electronic devices may contain lithium ion batteries exceeding 100 Wh, but not exceeding 160 Wh and no more than two individually protected lithium ion batteries each exceeding 100 Wh, but not exceeding 160 Wh, may be carried per person as spare batteries in carry-on baggage. Do not place spare lithium ion and lithium metal batteries in checked baggage. Devices with installed lithium ion and lithium metal batteries placed in carry-on or checked baggage must be packed to prevent accidentally activation during transport. **(T-0)**.

A22.2.5.5. Battery-powered portable electronic smoking devices (e.g., e-cigarettes, e-cigs, e-cigars, e-pipes, e-hookahs, personal vaporizers, electronic nicotine delivery systems) when carried by passengers for personal are allowed on one's person or in carry-on baggage only.

A22.2.5.6. Carry articles containing lithium metal or lithium ion cells or batteries the primary purpose of which is to provide power to another device as spare batteries in accordance with the provisions of this paragraph.

A22.2.6. Catalytic hair curlers (curling irons) containing hydrocarbon gas such as butane may be carried in carry-on baggage only. Securely fitt the safety cover over the heating element. Gas refills are not permitted. Not more than one curler per person is authorized.

- A22.2.7. Alcoholic beverages not exceeding 70 percent alcohol by volume, when packed in receptacles of less than 5 L may be in carry-on or checked baggage.
- A22.2.8. Dry ice, in quantities not exceeding 2.5 kg (5.5 pounds) per passenger when used to pack perishables in carry-on or checked baggage, provided the package permits the release of carbon dioxide gas.
- A22.2.9. Safety matches or a lighter carried by an individual for use by the individual. However, lighters containing unabsorbed liquid fuel (other than liquefied gas), lighter fuel and lighter refills are not permitted on one's person or in checked or carry-on baggage. For lighters powered by lithium batteries (e.g., laser plasma lighters, tesla coil lighters, flux lighters, arc lighters and double arc lighters), ensure each battery is of a type which meets the requirements of each test in the UN Manual of Tests and Criteria, Part III, Subsection 38.3. Take measures to prevent unintentional activation of the heating element while on board the aircraft. Recharging of the devices and/or the batteries on board the aircraft is not permitted. Each battery may not exceed 2 grams of lithium content for lithium metal batteries, or a Watt-hour (Wh) rating of 100 Wh for lithium ion batteries
- A22.2.10. Packaged small arms cartridges (in Class 1.4S), in quantities authorized in DTR 4500.9-R, , Part I may be in checked baggage. Do not combine allowances for more than one passenger into one or more packages.
- A22.2.11. Wheelchairs or other battery-powered mobility devices with spillable or non-spillable batteries, provided that the battery is disconnected, battery terminals are insulated to prevent accidental short circuits and the battery is securely attached to the wheelchair or mobility device may be carried in checked baggage. Load and store batteries attached to these devices with their filling holes upright. A wheelchair or other mobility aid equipped with a lithium ion battery, when carried as checked baggage, provided:
- A22.2.11.1. Ensure the lithium ion battery is of a type that successfully passed each test in the UN Manual of Tests and Criteria.
- A22.2.11.2. The aerial port inspects the wheelchair or other mobility aid to ensure no obvious defects, the battery terminals are protected from short circuits (e.g., enclosed within a battery housing), the battery is securely attached to the mobility aid, and electrical circuits are isolated.
- A22.2.11.3. The wheelchair or other mobility aid is loaded and stowed in such a manner to prevent its unintentional activation and protect its battery from short circuiting.
- A22.2.11.4. The wheelchair or other mobility aid is protected from damage by the movement of baggage, mail, service items, or other cargo.
- A22.2.11.5. Where a lithium ion battery-powered wheelchair or other mobility aid is specifically designed to allow its battery to be removed by the user (e.g., collapsible), remove the battery according to instructions provided owner or its manufacturer. Carry the battery in carry-on baggage only. Protect battery terminals from short circuits (by placement in original retail packaging or otherwise insulating the terminal e.g., by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch).

- A22.2.11.6. The battery may not exceed 300 Watt-hour (Wh). A maximum of one spare battery not exceeding 300 Wh or two spares not exceeding 160 Wh each may be carried.
- A22.2.11.7. The flight crew is notified as to the location of the lithium ion battery or batteries aboard the aircraft.
- A22.2.12. A mercury barometer or thermometer carried by a representative of a government weather bureau or other similar official agency may be in carry-on baggage. However, package the barometer or thermometer in a strong outer packaging, having a sealed inner liner or a bag of strong leak proof and puncture-resistant material impervious to mercury, which prevents the escape of mercury from the package irrespective of its position.
- A22.2.13. A single self-inflating personal safety device such as a life jacket or vest fitted with no more than two small gas cartridges (containing no hazardous material other than a Div. 2.2 gas) for inflation purposes plus no more than two spare cartridges. The personal safety device and spare cartridges may be carried in carry-on or checked baggage, and packed in such a manner that it cannot be accidentally activated.
- A22.2.14. Battery powered heat-producing articles (e.g., battery-operated equipment such as diving lamps and soldering equipment) as checked or carry-on baggage only. Ensure the heat-producing component, the battery, or other component (e.g., fuse) is isolated to prevent unintentional activation during transport. Protect any battery that is removed against short circuit by placement in original retail packaging or by otherwise insulating terminals (e.g., by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch). Ensure lithium batteries comply with the requirements of paragraph A22.2.5.
- A22.2.15. Scuba diving tanks containing not more than 25 pounds per square inch at 21 degrees C (70 degrees F) may be shipped as checked baggage. Affix a tag or label to the tank by a dive shop or certified individual to indicate service was performed.
- A22.2.16. Fuel cells used to power portable electronic devices (e.g., cameras, cellular phones, laptop computers and camcorders) and spare fuel cell cartridges when transported personal use. Fuel cells and fuel cell cartridges may contain only Division 2.1 liquefied flammable gas, or hydrogen in a metal hydride, Class 3 flammable liquid (including methanol), Division 4.3 water-reactive material, or Class 8 corrosive material. The quantity of fuel in any fuel cell or fuel cell cartridge may not exceed 200 mL (6.76 ounces) for liquids, 120 mL (4 fluid ounces) for liquefied gases in non-metallic fuel cell cartridges or 200 mL (6.76 ounces) for liquefied gases in metal fuel cell cartridges, 200 g (7 ounces) for solids. For hydrogen in metal hydride, the fuel cell cartridges are limited to a water capacity of 120 mL (4 fluid ounces) or less. No more than two spare fuel cell cartridges may be carried by a passenger or crew member as follows:
- A22.2.16.1. Fuel cell cartridges containing Class 3 flammable liquid (including methanol) and Class 8 corrosive material in carry-on or checked baggage.
- A22.2.16.2. Division 2.1 liquefied flammable gas or hydrogen in a metal hydride and Division 4.3 water-reactive material in carry-on baggage only.
- A22.2.16.3. Fuel cells containing fuel are permitted in carry-on baggage only.

- A22.2.16.4. Fuel cell cartridges containing hydrogen in a metal hydride must meet the requirements in 49 CFR Paragraph 173.230(d). **(T-0)**.
- A22.2.16.5. Refueling of a fuel cell aboard an aircraft is not permitted except that the installation of a spare cartridge is allowed.
- A22.2.16.6. Each fuel cell and fuel cell cartridge must conform to IEC 62282-6-100 and IEC 62282-6-100 Amend 1 and must be marked with a manufacturer's certification that it conforms to the specification. **(T-0)**. In addition, mark each fuel cell cartridge with the maximum quantity and type of fuel in the cartridge.
- A22.2.16.7. Interaction between fuel cells and integrated batteries in a device must conform to IEC 62282-6-100 and IEC 62282-6-100 Amend 1. **(T-0)**. Fuel cells whose sole function is to charge a battery in the device are not permitted.
- A22.2.16.8. Fuel cells must be of a type that do not charge batteries when the consumer electronic device is not in use and must be durably marked by the manufacturer with the wording: "APPROVED FOR CARRIAGE IN AIRCRAFT CABIN ONLY" to indicate that the fuel cell meets this requirement. **(T-0)**.