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## TRANSPORT OF CARGO IN THE AIRCRAFT PASSENGER COMPARTMENT – DURING COVID 19 CRISIS

### 1.0 PURPOSE

The purpose of this Advisory Circular is to provide guidelines to an AOC holder intending to transport cargo in the aircraft passenger compartment certified to carry only passengers, during the Corona Virus Disease (COVID-19) crisis.

Air cargo services are vital for the economy and for fighting the COVID-19. Therefore, operators should be able to continuously deliver critical products such as food, medical supplies and Personal Protective Equipment (PPE), and other products which are vital for the functioning of sensitive supply chains.

### 2.0 REFERENCES

- 2.1 Regulation 189 of the Civil Aviation (Operations of Aircraft for Commercial Air Transport) Regulations, 2018.
- 2.2 Regulation 60 & 61 of the Civil Aviation (Instruments and Equipment) regulations, 2018
- 2.3 The ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9824)
- 2.4 *Documents for further reading:*
  - (i) FAA – SAFO 20008 - Subject: Transporting Cargo on Transport-Category Airplanes Configured to Carry Passengers - DATE: 4/15/20
  - (ii) Boeing - Correspondence (MOM), SUBJECT: Information - All Model Guidelines for Passenger Airplane Carriage of Cargo - 20 March 2020
  - (iii) Embraer - ETD2020-190-012911 ERJ 190 - ATA 25-20 - Passenger Cabin - Transport of Cargo in Passenger Compartment - Technical Clarification - April 02, 2020
  - (iv) De Havilland Dash 8-400, All operator Message No. 854 – 24 March 2020
  - (v) Bombardier Regional Jet Series, Model CL-600-2B19 All Operator Message No. 1721- Date 30 March 2020

## **GUIDANCE AND PROCEDURES FOR THE CARRIAGE OF CARGO IN THE PASSENGER COMPARTMENT**

### **3.1 General Information**

3.1.1 The following guidelines are for consideration by AOC holders intending to apply to the Authority for an approval to transport cargo on the passenger seats in the passenger compartment. Operators transporting cargo with passenger seats empty and using only the designated cargo compartments, are not subject to further approvals.

3.1.2 This Circular also provides airworthiness aspects and related issues to be considered in regarding the transport of cargo on the seats in the passenger compartment, provided there is in place a No Technical Objection (NTO) or Technical Disposition Note from the specific aircraft manufacturer.

3.1.3 This Circular does not consider the transport of cargo in an aircraft passenger compartment where seats have been removed (design change). However, in the case of operators planning to conduct operations with passenger seats removed, they must contact the respective aircraft manufacturer for the configuration change, and obtain airworthiness recommendations before applying for operational approval from the Authority.

### **3.2 Restrictions**

3.2.1 Cargo shall be transported only by operators holding a valid Air Operator Certificate (AOC). Where the approval to transport cargo in the passenger compartment is issued, it shall be valid only during the COVID-19 crisis. The approval privileges cannot be used as a precedence in the future when the COVID-19 crisis are over.

3.2.2 Where cargo carried in the passenger compartment during operations in support of COVID-19, there shall be NO passengers, other than the crew and persons directly involved in the conduct of the flight.

3.2.3 This Circular applies ONLY to operators intending to transport freight/cargo in the passenger compartment, on the installed passenger seats. The process and the associated approval is valid for a limited period of no more than one month after the end of COVID-19 crisis.

### **3.3 Crew Composition**

3.3.1 Operations with cargo in the passenger compartment shall require one or more crew members to survey and access all areas in the passenger compartment during all phases of flight. Any fire that might occur must be discovered and extinguished immediately utilizing emergency equipment. These crew members are considered additional crew members with specific duties assigned during the flight and would be in addition to the required flight crew members.

3.3.2 Seats for the additional crew members shall be appropriate, and not located near the cargo (i.e. first rows), they must also be certified for use during taxi, take-off, landing, flight, and emergency landing conditions. The additional crew members seating location must be provided with a means of two-way communication with the flight crew members.

3.3.3 If there are three or more employees on board an aircraft, and at least one of them is not a flight crew member, one of them shall be a flight attendant who has received first aid training.

3.3.4 The additional crew members shall have received the following emergency procedures training:

- a) instruction in the location and operation of all emergency equipment;
- b) recognition and suppression of fire in the air and on the ground;
- c) use of hand-held fire extinguishers, including practical training;
- d) use of protective breathing equipment, including practical training;
- e) operation and use of emergency exits;
- f) emergency evacuation procedures;
- g) donning and inflation of life preservers (when equipped); and
- h) removal from stowage, deployment, inflation and boarding of life rafts/slide rafts (when equipped).

#### **3.4 Operational Requirements and Procedures for Consideration**

3.4.1 Operators seeking approval for the carriage of cargo in passenger compartment during the Covid-19 crisis shall submit an application to the Authority for review and approval, detailing how they have met or addressed the requirements and recommendations contained in this Circular.

3.4.2 An Operator shall perform a risk assessment in order to identify hazards related to cargo transported in the passenger compartment, for which the design configuration is approved for transporting only passengers. The risk assessment shall be submitted to the Authority and the assessment needs to address the specific configuration of the aircraft to be utilized for the transport of cargo in the passenger compartment, whether, or not, the passenger seats remain installed.

3.4.3 The pilot-in-command of an aircraft shall ensure that, prior to each flight or series of flight segments, the crew members of the aircraft are given a pre-flight briefing to address the type of the operation being conducted and any additional information necessary for the flight, including information in respect of unserviceable equipment or abnormalities.

3.4.4 The air operator shall develop procedures to ensure cargo is properly located, stowed, and secured before each flight, during the flight, and before landing. These procedures may be performed by the Flight Crew and or the additional crew members. Once completed, there shall

be a means to record that the air operator's procedures have been complied with and that this information is shared with the pilot in command, which becomes part of the final verification procedure.

3.4.5 Operators shall establish procedures to manage emergencies in the passenger compartment; existing procedures may need to be amended to address this type of aircraft operation. The pilot in command is responsible for ensuring that all crew members are appropriately briefed before departure.

3.4.6 Operators may require temporary revisions to their applicable operating manuals to include the new type of operations and the related procedures. These revisions may include, but is not limited to, flight, ground, cargo loading, company operations and maintenance control manuals.

3.4.7 Operators shall establish procedures to address the required equipment for each flight to be operated considering the change to the aircraft configuration as well as emergency and other non-normal procedures when operated to transport cargo in the passenger compartment.

### **3.5 Loading and Mitigation for the transport of cargo in the passenger compartment, including cargo on the passenger seats**

3.5.1 Exact cargo weight and position in the cabin and the cargo hold shall be reflected in the mass and balance documentation (load sheet) and weight and balance and loading control manuals, as applicable.

3.5.2 The Pilot in Command (PIC) shall be informed of the content of all the cargo using Notice to Captain (NOTOC).

3.5.3 The operator shall load the aircraft considering the different levels of available fire protection of the loading areas.

3.5.4 For the bulkheads, or other passenger compartment monuments, such as overhead bins or galleys or stowage compartments, that have a placard indicating maximum capacity, the cargo items stowed in these areas shall not exceed the maximum capacity indicated in the placard.

3.5.5 The maximum capacity limitations in the required safety placards (on or adjacent to the cargo approved stowage locations) shall not be exceeded. All stowage instructions specified in the placards shall apply.

3.5.6 The weight of the cargo shall not exceed the structural loading limits of the floor, or seats, as published in the aircraft documentation (e.g. Limitation chapter of the Weight and Balance Manual, Seat Component Maintenance Manual Limitations, etc.).

3.5.7 The cargo placed in enclosed stowage areas shall not be of such size that they prevent latched doors from being closed securely.

3.5.8 The cargo items shall be stowed only in a location that is capable of restraining it to accommodate ground, flight, take-off, landing, and emergency condition loads.

3.5.9 The cargo stowage location shall be such that, in the event of an emergency evacuation, it will not hinder aisle access and egress.

3.5.10 The cargo shall not be placed where it can impede access to emergency equipment

3.5.11 The cargo shall be checked to ensure proper stowage in the following instances (at the minimum): The additional crew members will be required to carry out these inspections/checks

- a) Before take-off,
- b) Before landing,
- c) At frequent intervals during the flight (not exceed 30 minutes). and
- d) Under orders of the Pilot in Command (PIC)

3.5.12 The aisles shall remain free of cargo to enable access to the cargo, and seats (if still installed), in case of smoke or fire.

3.5.13 Any smoke or fire within the passenger compartment must be easily detected and extinguished using the existing provided emergency equipment. Additional emergency equipment, such as extra hand-held fire extinguishers and protective breathing equipment, may be necessary to be installed to address the increased fire load of the cargo compared to passenger carriage. Thoroughly briefed additional crew members shall be onboard to survey and access all areas of the passenger compartment during all flight phases. There must be an adequate number of trained crew members acting as fire-fighters (not part of the flight crew) with sufficient firefighting equipment. This equipment may be stowed in the passenger compartment using existing stowage provisions (overhead bins, stowage's) provided that the location is identifiable for the crew members. Specific details, including details of inflight checks, must be coordinated with the Authority.

3.5.14 Additional crew members should be placed on existing flight attendant seats unless other suitable seat locations are available and acceptable for this operation. They must not share seat rows with cargo. There must be a clear separation of areas occupied by occupants and those fitted with cargo during taxi, take-off, landing, and flight. At least one empty seat row between cargo and reserved occupant seats must be established. Any anticipated shifting of the cargo during flight must not interfere with the occupied seats.

3.5.15 'Under-seat stowage' is allowed only if the seat is equipped with a restraint bar system, and the cargo items can be placed fully underneath the seat. The loading of the cargo under each seat should not exceed 9 kg (20 lbs.). This is allowed only if stowage of cargo in these areas will not impede visual inspection during flight.

3.5.16 The cargo packaging shall be able to equalize the pressure so that it can handle the Delta Pressure (DP) during the flight, as applicable.

3.5.17 All smoke and fire detectors shall be maintained as per the applicable Instructions contained in the Component Maintenance Manual (CMM). Any areas where existing smoke detectors are installed such as in lavatories must not be used for cargo stowage if the smoke detection system is not operational.

3.5.18 The Air Conditioning system shall be set taking into account the nature of the cargo being transported in the passenger compartment, and any emergency procedures requiring their functionality

3.5.19 When cargo is carried on the seats, the load should be evenly distributed across the seat row, and the loading on each seat should not exceed the manufacturer Seat TSO limit, 77kg (170 lbs.).

3.5.20 When cargo is carried on the seats, the vertical Centre of Gravity (CG) of the cargo must be equal to or lower than the passenger CG of the seat provided by the seat supplier.

3.5.21 When cargo is carried on the seats, the cargo on the seats shall be adequately restrained and the restraint means must be attached to the existing seat or to the seat primary structure itself, in accordance with structural load limitations. The restraint means shall address in particular upward, forward and sideward load cases. Seat backrest are typically not designed to hold emergency landing forward loads induced by cargo and are not to be used to restrain those loads.

3.5.22 The standard portable safety and emergency equipment from the passenger configuration, such as portable breathing equipment (PBE), fire extinguishers, etc., shall be retained in the aircraft and is expected to be available to the additional crew members. The need for additional emergency equipment must be evaluated by considering the cargo to be transported (e.g. expected class of fire), the existing equipment installed, and type of operation, e.g. EDTO may require additional fire extinguishers.

3.5.23 To prevent passenger compartment floor collapse into belly during depressurization, the passenger compartment, cargo loading procedures shall be as per aircraft manufacturer instructions, to ensure depressurization panels remain unobstructed.

3.5.24 To prevent overheating of passenger compartment systems adjacent to cargo, entertainment systems, seat power systems, unused galley systems and any other heat generating systems that are not required for the operation of the aircraft are to be turned off.

3.5.25 When cargo is loaded into the passenger compartment, the cargo shall not include any live animals.

### 3.6 Transport of Dangerous Goods

3.6.1 Dangerous goods shall only be transported by Operators already holding an approval from the Authority. New applications for the transport of dangerous goods shall not be processed during the COVID-19 outbreak.

3.6.2 In the absence of passengers in the cabin, the limits for the dangerous goods can be those for Cargo Aircraft instead of Passenger Aircraft, as established in the ICAO Technical Instructions for the Safe Transport of Dangerous goods by Air (Doc 9284). The operator shall nevertheless conduct a risk assessment for this kind of aircraft operation.

3.6.3 Additional training/briefing shall be given to the crew members, particularly letting them know whether the limits have been increased from those applicable to passenger aircraft to those applicable to cargo aircraft. This should, at least, include the following:

- i. the risks and consequences of increasing the amount of dangerous goods in the hold;
- ii. any changes in the emergency procedures and the emergency equipment that may be on board.

3.6.4 Relevant information on dangerous goods (e.g. affecting emergency procedures) shall be included in the briefing given to other people occupying the aircraft.

3.6.5 Dangerous goods shall not be carried in the passenger compartment and must always be carried in the hold and shall be transported under the conditions established by the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284).

3.6.6 No person, other than a crew member, an operator's employee in an official capacity, an Authority Inspector or an authorized person accompanying a consignment or cargo, may be present on board the flight being conducted. Any other person on board will be considered a passenger and, therefore, the aircraft will no longer be able to use the provisions applicable to cargo aircraft in regards to the transport of dangerous goods.

### 3.7 Approval

3.7.1 The application for the carriage of cargo in the passenger compartment during COVID – 19 crisis should be submitted to the Authority for approval.

3.7.2 If discrepancies are found during the review of the application, the Authority will notify the operator or applicant in writing.

3.7.3 When the Authority is satisfied that the minimum requirements for the intended operations have been met, an approval letter on the carriage of cargo in passenger compartment during COVID -19 crisis shall also be issued.

3.7.4 The list of effective pages of all applicable procedures shall be stamped and signed approved and returned to the operator. These documents and the approval letter shall be carried on board the aircraft during operations.



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**Kenya Civil Aviation Authority**