



## *European Aviation Safety Agency*

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**EASA**

**TYPE-CERTIFICATE  
DATA SHEET**

No. 10038822

**for**

**ST Aerospace Boeing 757-200  
Passenger to Combi Conversion  
(EASA STC: 10038822)**

**Aircraft Manufacturer:  
The Boeing Company**

P.O. Box 3707  
Seattle, WA 98124-2207  
United States of America

**STC Holder:  
ST Aerospace Mobile, Inc.**

2100 9<sup>th</sup> Street Brookley Complex  
Mobile, Alabama 36615  
United States of America

For Models: 757-200

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**NOTE**

**This Type Certificate Data Sheet is supplemental to the TCDS for the basic aircraft (TCDS IM.A.205). Paragraph numbering is consistent with the TCDS of the basic aircraft. Any paragraph not included in this TCDS is therefore unchanged from the basic aircraft TCDS.**

**SECTION 1: 757-200**

**I. General**

1.	Type/ Model/ Variant	757-200 converted by EASA STC 1003822 referenced as 757-200CF.
2.	Performance Class	A
3.	Certifying Authority	Federal Aviation Administration (USA) Seattle Aircraft Certification Office, 1601 Lind Avenue S.W. Seattle, Washington 98055-4056 United States of America
3.1.	Certifying Authority, STC	Federal Aviation Administration (USA) Atlanta Aircraft Certification Office, 1701 Columbia Ave, College Park, Georgia 30337 United States of America
4.	Manufacturer	The Boeing Company P.O. Box 3707 Seattle, Washington 98124-2207 United States of America
4.1.	STC Holder	ST Aerospace Mobile, Inc. 2100 9 <sup>th</sup> Street Brookley Complex Mobile, Alabama 36615 United States of America
5.	FAA Certification Application Date	15 October 2010
6.	EASA Validation Application Date	In accordance with Regulation (EC) 1702/2003
7.	FAA STC Date	8 February 2012 <u>19 February 2014 Amended</u>
8.	EASA STC Date	22 March 2012 <u>7 March 2014 Amended</u>

SECTION 1: 757-200 – continued

**II. Certification Basis**

1. Reference Date for determining the applicable requirements

In accordance with Regulation (EC) 1702/2003

2. FAA STC No.

ST03952AT

3. FAA Certification Basis

Refer to FAA STC ST03952AT

4. EASA Airworthiness Requirements

For Significant areas of change and/or affected features/functions: CS25 Amendment 9 and CS-AWO, Initial Issue

Section	Title	Nature of Change
25.29	Empty Weight and Corresponding Center of Gravity	Secondary
25.603	Materials	Secondary
25.605(a)	Fabrication Methods	Secondary
25.613(a)(b)	Material Strength Properties and Design Values	Secondary
25.625	Fitting Factors	Secondary
25.783(a)(b)(c)(d)(e)(f)	Doors (Main Deck Cargo Door, Crew Entry Door)	Significant
25.785 (a)(b)(c)(d)(2)(h)(i)(j)(k)	Seats, berths, safety belts, and harnesses	Secondary
25.787(a)(b)(c)	Stowage compartments	Secondary
25.789(a)	Retention of items of mass	Secondary
25.791	Passenger information signs	Secondary
25.793	Floor surfaces	Secondary
25.795(b)	Security Considerations	Secondary
25.801(a)(b)(c)(d)(e)	Ditching	Secondary
25.803(a)	Emergency evacuation	Secondary
25.807(a)(1)	Emergency exits	Significant
25.811(a)(b)(c)(d)(g)	Emergency Exit Markings	Secondary
25.812(a)(b)(1)(c)(d)(e)	Emergency Lighting	Secondary
25.813(a)(2)(b)(1)(4)(6)(c)(d)(e)	Emergency exit access	Secondary
25.851(a)(1)(2)(4)(5)(6)(7)(8)(b)	Fire extinguishers	Secondary
25.853(a)(d)(e)(f)(g)	Compartment Interiors	Secondary
25.855(a)(b)(c)(d)(e)(f)(h)(2)(3)(i)	Cargo or baggage compartments	Significant
25.856(a)(b)	Thermal/Acoustic Insulation materials	Secondary
25.857(c)	Cargo compartment classification	Significant
25.858	Cargo compartment fire detection systems	Significant
25.869(a)(1)	Fire Protection: Systems	Secondary
25.981(a)(d)	Fuel tank ignition prevention	Secondary
25.1301(a)	Function and Installation	Secondary
25.1309	Equipment, Systems and Installations	Secondary

SECTION 1: 757-200 – continued

Section	Title	Nature of Change
25.1325(c)(2)(ii)	Static pressure systems	Secondary
25.1351(a)(1)	Electrical systems and equipment – General	Secondary
25.1353(a)(c)	Electrical Equipment and Installations	Secondary
25.1357(a)(b)(c)(d)(e)	Circuit protective devices	Secondary
25.1360	Precaution against injury	Secondary
25.1381(a)	Instrument lights	Secondary
25.1411(a)(b)(c)(d)(1)(2)(4)(e)(f)	Safety equipment – general	Secondary
25.1415(a)(b)(c)(d)	Ditching equipment	Secondary
25.1423(a)(1)(b)(c)(d)(g)	Public address system	Secondary
25.1431(a)(c)(d)	Electronic equipment	Secondary
25.1447(a)(c)(1)(4)	Equipment standards for oxygen dispensing units	Secondary
25.1529	Instructions for continued airworthiness	Secondary
25.1557(a)(c)(d)	Misc. Markings and Placards	Secondary
25.1561(a)(b)(c)(e)	Safety equipment	Secondary
25.1581(a)(1)(2)	AFM – general	Secondary
25.1585(a)(3)	Operating procedures	Secondary
25.1701	Definition	Secondary
25.1703	Function and Installation: EWIS	Secondary
25.1705	Systems and Functional: EWIS	Secondary
25.1707	System separation: EWIS	Secondary
25.1709	System safety: EWIS	Secondary
25.1711	Component identification: EWIS	Secondary
25.1713	Fire protection: EWIS	Secondary
25.1715	Electrical bonding and protection against static electricity	Secondary
25.1717	Circuit protective devices: EWIS	Secondary
25.1719	Accessibility provisions: EWIS	Secondary
25.1721	Protection of EWIS	Secondary
25.1723	Flammable fluid fire protection: EWIS	Secondary
25.1729	Instructions for continued Airworthiness: EWIS	Secondary
25.1733	Fire detector systems, general: EWIS	Secondary

For secondary changes (not elected to CS25 amendment 9 as above), not affected areas and unrelated changes and/ or affected features/ functions: EASA 757-200 TCDS (EASA TCDS.IM.A.205)

5. Special conditions

- CRI D-01 Courier Compartment
- CRI D-02 Halon 1301 Concentrations
- CRI F-01 Crew Member Interphone System

SECTION 1: 757-200 – continued

**III. Technical Characteristics and Operational Limitations**

1. STC Design Definition

ST Aerospace Mobile Inc., MDL 33600000 Rev G

12. Operating Limitations

12.1 Approved Operations

See the appropriate FAA Approved Airplane Flight Manual and ST Aerospace Mobile Inc. Airplane Flight Manual supplement and FAA TCDS A2NM

12.2 Other Limitations

See the appropriate FAA Approved Airplane Flight Manual and ST Aerospace Mobile Inc. Airplane Flight Manual supplement and FAA TCDS A2NM

18. Minimum Flight Crew

Two (2): Pilot and Co-pilot

19. Maximum Seating Capacity

Passenger Cabin:

Capacity 80 Persons in the passenger compartment.

Forward Courier Compartment:

2 Persons

Note: Persons authorised to occupy the courier area are as defined in the STA Mobile Combi Freighter Modification Airplane Flight Manual Supplement

Maximum total occupancy 86 persons including crew.

20. Baggage/Cargo Compartment

See Weight and Balance Control and Loading Manual Supplement

**IV. Operating and Service Instructions**

1. Airplane Flight Manual (AFM)

Airplane Flight Manual Supplement, STA Mobile Combi Freighter Modification, 757SC-AFM-01

2. Instructions for Continued Airworthiness and Airworthiness Limitations

Maintenance Planning Data (MPD) Supplement, STA Mobile Passenger-To-Combi Modification, 757SC-MPD-01

3. Weight and Balance Manual (WBM)

Weight and Balance Control and Loading Manual Supplement Chapter 1, 757SC-WBM-01

SECTION 1: 757-200 – continued

**V. Notes**

1. Additional information is provided in FAA TCDS A2NM and EASA TCDS IM.A.205
2. This modification must be installed concurrently with the 9G Rigid Cargo Barrier per FAA STC ST02115LA and EASA STC 10038866 and the Cargo Loading System per FAA STC ST02414LA and EASA STC 10038884.
3. This modification must be installed concurrently with ST Aerospace Minor Modifications EDC/EASA/DOA/023 and EDC/EASA/DOA/41.
4. This modification cannot be installed on aeroplanes with a winglet STC, nor can a winglet STC be installed on a converted a/c.
5. Incorporation of this STC affects AD compliance as an alternative means of compliance, detailed below:

**AMOCs:**

87-07-06	Pressure relief rupture disc retainer on passenger doors
90-12-11 R1	Escape slide release cables
95-25-01	Passenger door and repair
98-19-24	Escape slide shelf assemblies of passenger doors
2001-15-01	Latch assembly of the escape slides
2005-03-02	Open body station frames and lanyard hook brackets and lanyard assemblies under air conditioning overhead ducts
2006-11-11	Revisions to operator maintenance documents to incorporate new inspections for fatigue cracking of principal structural elements (PSEs)
2006-22-01	Girt bar leaf springs for escape slides
2007-16-12	Changes to existing wiring, installation of new circuit breakers, relays, relay connectors and wiring
2007-19-07	Scribe lines and cracks of fuselage skin, lap joints, circumferential butt slice strap and external and internal approved repairs
2008-06-14	Ultrasound inspection for disbanded tear straps not mechanically fastened to the skin
2008-10-11	Revisions to operator maintenance documents to incorporate new airworthiness limitations for fuel tank systems
2011-01-15	Fatigue cracking of fuselage skin
2012-12-15	Revisions to operator maintenance documents to incorporate new airworthiness limitations for fuel tank systems



SECTION 1: 757-200 – continued

**Appendix**

In order to provide a complete definition of the Certification Basis here is presented the content of each Certification Review Item raised on this project.

SECTION 1: 757-200 – continued

**CRI D-01; Special Condition; Courier Compartment**

**1. Categories of occupants accepted in the courier compartment**

The approved Airplane Flight Manual (AFM) must contain an operating limitation, restricting the total courier compartment occupancy to 2 persons who are:

- a. Briefed by a flight crew member prior to each flight
  - i. on the use of the emergency escape means (door opening, slide release)
  - ii. on the location and usage of oxygen equipment (automatic and portable) and procedures to be followed in case of depressurization
  - iii. on the use of the intercom system
  - iv. on how to open the cockpit door in case of flight crew incapacitation
- b. Physically able to accomplish the necessary emergency procedures.
- c. Included in the following categories:
  1. A crew member
  2. An employee of the operator
  3. An AA inspector or any other authorized representative of the AA
  4. Any person determined by the operator, for the particular flight on which carried, to be necessary for:
    - a. the safety of the flight
    - b. the safe handling of animals
    - c. the safe handling of radioactive materials
    - d. the security of valuable or confidential cargo
    - e. the preservation of fragile or perishable cargo
    - f. the operation of special equipment for loading or unloading cargo
    - g. the loading or unloading of outsize cargo
  5. A person travelling to or from an assignment by the operator involving a function described above.
  6. Other categories of persons authorised by the Operational Authorities of the Operator

**2. Occupation of the courier compartment**

In order to comply with CS 25.772 (c) the courier compartment must be occupied:

- a. On all flights with at least one passenger in the passenger compartment by at least one trained person or cabin crew
- b. On flights without passengers but with cabin crew by at least one cabin crew member

**3. CS 25.785 Seats, berths, safety belts and harnesses**

This paragraph is applicable with the exemption of:

- a. subparagraph (b) compliance with CS 25.562 is not required
- b. subparagraph (e) deleted
- c. subparagraph (f)(2) deleted
- d. subparagraph (g) deleted
- e. subparagraph (h) deleted
- f. subparagraph (j) replaced by: there must be means reachable for persons standing to steady themselves in light turbulences
- g. subparagraph (l) deleted

**4. CS 25.807 Emergency Exits**

For the applicable requirements for Emergency Exits (and other related requirements, e.g. aisle width, etc) the forward doors in the Courier Compartment are considered as Type III exits due to the max occupancy of the Courier Compartment and Flight Deck limited to 6 persons

SECTION 1: 757-200 – continued

**5. CS 25.812 (e) Emergency lighting**

This paragraph is applicable with the exemption of:

- a. subparagraph (e)(1) deleted

**6. Access to the class C cargo compartment:**

The sliding door must be kept close during all phases of flight, and must be appropriately placarded to restrict access at all times.

SECTION 1: 757-200 – continued

**CRI D-02; Special Condition/ Means of Compliance; Halon Concentration**

**Special Conditions**

1. Any Seal that is regularly disturbed due to normal operations (e.g access doors) that is required to maintain the Halon 1301 concentrations within the Class C cargo compartment (CS 25.857(c)(2)) and exclude hazardous quantities of Halon from the occupied compartments (CS 25.857(c)(3)) must be subjected to a regular inspection or Pre-flight Check. Damaged or missing seals to an extent leading to excessive leakage rate shall be not be permitted under MMEL conditions.
2. Access to the class C cargo compartment in flight:
  - a. Access from the passenger compartment into the class C cargo compartment is not allowed during all phases of flight.
  - b. Access from the courier compartment into the class C cargo compartment is not allowed during all phases of flight.
3. Aural and /or visual warning  
There must be provisions or procedures for a warning to the cabin crew and to the occupants in the courier compartment when the fire extinguishers for the Main Deck Class C Cargo Compartment have been advertently or inadvertently actuated.

**Means of Compliance**

1. Hazardous quantities of smoke and toxic gases
  - a. It must be demonstrated by test that no hazardous quantity of smoke and toxic gases is entering the passenger compartment from the time fire has started until evacuation of the passengers is terminated.
  - b. It must be demonstrated by test that no hazardous quantity of smoke and toxic gases is entering the courier compartment from the time fire has started until evacuation of the occupants is terminated.
2. Halon concentration in passenger and / or courier compartment
  - a. It must be demonstrated by ground and by flight test that:
    1. The Halon 1301 concentration does not exceed 5% in volume for a duration of 5 minutes from the time the system is activated, and a concentration not exceeding 0,4% over the next 175 minutes and not more than 0.2 % for the remaining duration of the flight until the aircraft is completely evacuated, in the passenger compartment taking into account temperatures, cabin (passenger cabin, cargo compartment) pressures, and cabin ventilation which can occur during ground operation and in flight into account.
    2. The Halon 1301 concentration do not exceed 5% in volume for a duration of 5 minutes from the time the system is activated, and a concentration not exceeding 0,4% over the next 175 minutes and not more than 0.2 % for the remaining duration of the flight until the part of aircraft is completely evacuated, in the courier compartment taking into account temperatures, cabin (courier compartment, cargo compartment) pressures, and cabin ventilation which can occur during ground operation and in flight into account.
    3. The concentration must be measured and analysed at different heights and locations in the passenger cabin and the courier compartment
3. Continued airworthiness  
There must be a maintenance program in place for all components which are subject to wear and tear leading to an increased leak-rate and by thus a higher Halon 1301 concentration in the occupied compartments.
4. Precautions
  - (1) Dry chemical extinguishing agents when discharged in crew compartments or confined areas may cause serious impairment to visibility. In addition, they may cause temporary breathing difficulty during and immediately after discharge.

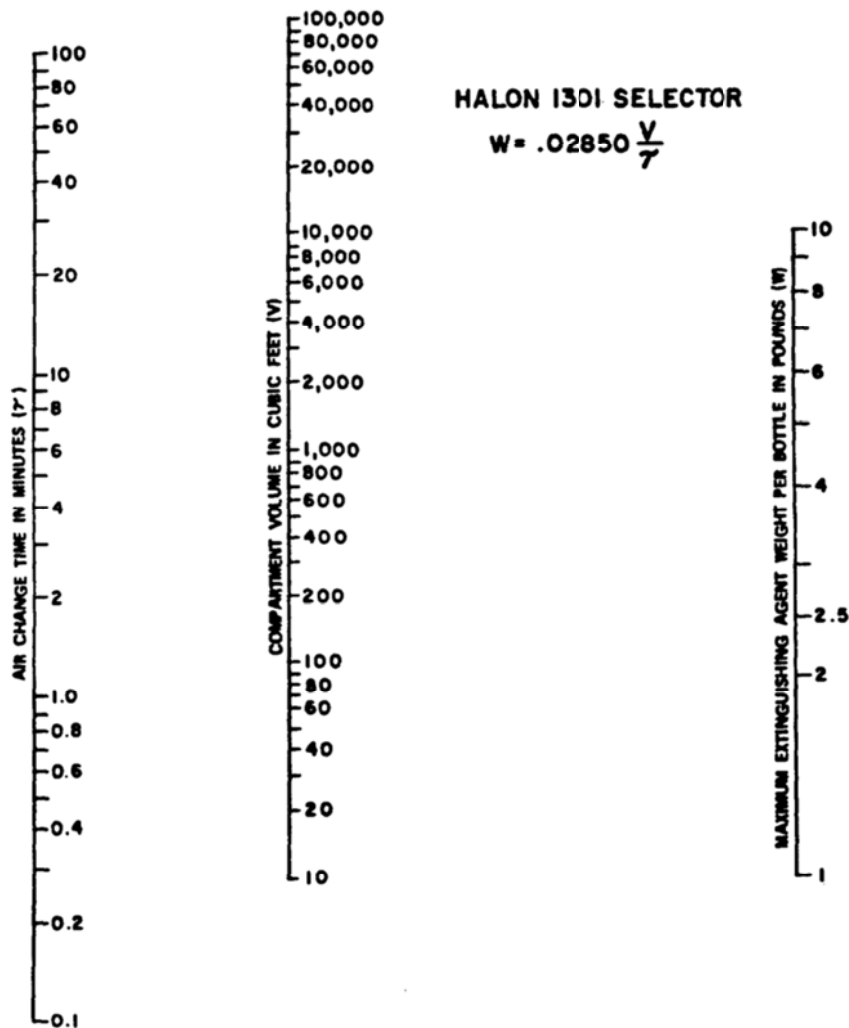
SECTION 1: 757-200 – continued

- (2) Tests indicate that human exposure to high levels of Halon vapours may result in dizziness, impaired coordination, and reduced mental sharpness. Exposure to natural agents is generally of less concern than is exposure to the decomposition products. Exposure to un-decomposed halogenated agents may produce varied central nervous system effects depending upon exposure concentration and time. Halogenated agents will also decompose into more toxic products when subjected to flame or hot surfaces at approximately 900°F(482°C). However, unnecessary exposure of personnel to either the natural agent or to the decomposition products should be avoided. The decomposition products of the Halon have a characteristic sharp, acrid odour, and an eye irritating effect, even in concentrations of only a few parts per million. Generally, decomposition products from the fire itself, especially carbon monoxide, smoke, heat, and oxygen depletion, create a greater hazard than the thermal decomposition products of Halon. See NFPA Standard 12A, Halon 1301 Fire Extinguishing Systems, and NFPA Standard 12R, Halon 1211 Fire Extinguishing System, for more detailed information.

3/7/84

AC 20-42C  
Appendix 1

FIGURE 3. NOMOGRAPH



SECTION 1: 757-200 – continued

**CRI F-01; Special Condition; Crew Member Interphone System**

The location of the class C cargo compartment between the cockpit and the passenger compartment is an unusual design which eliminates the provisions for direct access and communication between flight and cabin crew.

A crew member interphone system for two-way communication is not required by CS 25. The interphone system is an acceptable provision for communication between crew members while at their designated crew stations. A requirement for a crew member interphone system is included in the operational requirements EU OPS 1.690.

In order to compensate for the lack of direct access of cockpit and passenger cabin and communication between crew member and the absence of alternative provisions; EASA is issuing the Special Conditions as listed.

The crew member interphone system required by this special condition must:

1. Operate independently of the public address system except for handsets, headsets, microphones, selector switches and signalling devices;
2. Provide a means of two-way communication between the flight crew compartment and:
  - a. The remote passenger compartment;
  - b. The courier compartment located in front of the cargo compartment
3. Be readily accessible for use from each of the required flight crew station in the flight crew compartment;
4. Be readily accessible for use at required cabin crew member stations at the smoke barrier and close to each separate or pair of floor level emergency exits;
5. Be readily available for occupants in the courier area;
6. Have an alerting system incorporating aural or visual signals for use by flight crew members to alert the cabin crew and couriers and for use by cabin crew members and couriers to alert the flight crew;
7. Have a means for the recipient of a call to determine whether it is a normal call or an emergency call.
8. The cable routing between the cockpit and the remote passenger compartment must be such that a single failure or adverse effects resulting from a class C cargo compartment fire scenario and engine uncontained rotor failure will not terminate the communication.
9. Instructions how to use the crew member interphone must be included in the pre-flight courier briefing.
10. Mishandling at either station must not prohibit the use from other stations.
11. The Cabin Crew must be able to establish communication to the Flight Deck for emergency landing and evacuation reasons in load shedding or total loss of power generation during cash landing scenarios.

**SECTION: ADMINISTRATIVE**

**I. Change Record**

<b>Issue</b>	<b>Date</b>	<b>Changes</b>	<b>STC issue</b>
Issue 01	22/03/2012	Initial Issue	22/03/2012
Issue 2	16/04/2012	Correction on Page 14, second to last bullet point	
Issue 3	07/03/2014	Amendment due to re-issue of STC: Removal of temporary Deviation D-03	07/03/2014

-END-