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# TYPE-CERTIFICATE DATA SHEET

No. EASA.A.186

**for**

CN-235 / C-295

**Type Certificate Holder:**

Airbus Defence and Space S.A

Calle Aviocar, 2

28906 Getafe

Madrid

Spain

For Models: CN-235, CN-235-100, CN-235-200, CN-235-300, C-295



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**SECTION 1: MODEL CN-235****I. General**

## 1. Type/ Model/ Variant

CN-235

The aeroplanes covered by this section have the Serial Number format C-XXX.

## 2. Performance Class

A

## 3. Certifying Authority\*

EASA

## 4. Manufacturer (See Note 6)

Airbus Defence and Space, S.A.

Avda. de Aragón , 404, 280022

28022, Madrid

Spain

## 5. State of Design Authority Certification Application Date

DGAC-ES, 16 July 1981

## 6. EASA Type Certification Application Date

N/A

## 7. State of Design Authority Type Certificate Date

DGAC-ES, 22 August 1986

## 8. EASA Type Certification Date

N/A

EASA grandfathered the DGAC-ES TC 01/86\*.

(\*): Data Sheet from the Spanish Type Certificate Nr 01/86 remains a valid reference for design data approved before 31 May 2007. Those Data Sheets, or Hojas de Datos, as they were issued, in Spanish language, by Dirección General de Aviación Civil, DGAC-ES, can, currently, be obtained from Agencia Estatal de Seguridad Aérea, AESA. The document references appearing in those Data Sheets, as DGAC-ES approved (aprobado por DGAC) documents have been recorded, herein, as “EASA approved” documents.



**SECTION 4: MODEL CN-235-300 - continued****II. Certification Basis**

1. Reference Date for determining the applicable requirements  
16 July 1981
2. State of Design Airworthiness Authority Type Certification Data Sheet No.  
DGAC-ES, 01/86
3. State of Design Airworthiness Authority Certification Basis  
Spain
4. EASA Airworthiness Requirements  
Regulation (EC) 1702/2003, Annex Part 21.  
US Code of Federal Regulations, Title 14, Part 25 (FAR 25), effective from 1 Feb 1965,  
including all amendments from 25-1 to 25-54.  
TC-holder elected to comply with optional requirement FAR 25.1419: Ice protection.
5. Special Conditions  
SC-H-01 "Enhanced Airworthiness Programme for Aeroplane Systems – ICA on EWIS"
6. Exemptions  
Exemption to FAR 25.571(e)(2), granted by DGAC-ES on 24 July 1986.
7. Deviations  
None.
8. Equivalent Safety Findings  
ESF to FAR 25.1305(a)(2): "Fuel quantity indicator"
9. Environmental Protection  
Standards:  
ICAO Annex 16, Volume I (Noise), 3rd issue, November 1993.  
ICAO Annex 16, Volume II (Fuel system ventilation and exhaust gas), 3rd issue, November 1993.



**SECTION 4: MODEL CN-235-300 - continued****III. Technical Characteristics and Operational Limitations****1. Type Design Definition**

Defined in TC-Holder document number DT-86-3010 "List of Drawings of the Certification Configuration".

**2. Description**

A high wing, twin-engine turboprop aircraft equipped to carry up to 40 passengers and cargo in a pressurized cabin and intended for short to medium transport routes.

**3. Equipment**

The basic required equipment, as prescribed in the applicable EASA Regulation, must be installed on the aircraft.

For model CN-235, the approved equipment is related in the TC-holder document number DT-86-3309.

**4. Dimensions**

Span	25.81 m
Length	21.40 m
Height	8.18 m
Wing Area	60 m <sup>2</sup>

**5. Engines**

Two (2) Engines General Electric Company.

Model CT7-7A free turbine turboprop.

Power turbine/propeller reduction gearing 15.9:1

**5.1 Engine Limits:**

The Maximum Continuous and Take off Static Sea Level ratings at ISA:

Conditions	Rated Shaft Horse Power (SHP)	Residual Thrust (Lb.)	ITT (°C)	Maximum NG (RPM)	Maximum Torque (ft.lb.)	Fuel Specific Consumption (Lb/shp/hr)
Take off (5 min)	1 700	160	930	45 000	413	0.478
Max Cont.	1 700	160	917	44 720	413	0.487

**6. Auxiliary Power Unit**

N/A



**SECTION 4: MODEL CN-235-300 - continued****7. Propellers**

Two (2) Propellers Hamilton Standard, Model 14RF-21.

Blades: Four (4), Model RFC11L1-0C.

Diameter: 3 359 mm Maximum; 3 351 mm Minimum

Blade Angle measured at 1 067 mm radius station:

Ground Idle	$-3.7^{\circ} \pm 1.0^{\circ}$
Max. Reverse	$-12.4^{\circ} \pm 1.3^{\circ}$
Feather	$80.8^{\circ} \pm 0.5^{\circ}$
Flight Idle	$16.7^{\circ} \pm 0.8^{\circ}$

Propeller Spinner: P/N 790185-1

Propeller De-icer: Included in Blade P/N

**8. Fluids (Fuel, Oil, Additives, Hydraulics)**

Fuel:

Designation	Specification
JP-8	MIL-T-83133
Jet A	ASTM D1655
Jet A-1	ASTM D1655
Jet B	ASTM D1655
JP-4	MIL-T-5624
JP-5	MIL-T-5624

Oil:

Vol. (L)	Moment Arm (mm)
6.9 litres / engine tank	8 902
3.6 litres usable / engine tank	
4.7 litres / propeller tank	8 026
1.4 litres usable / propeller tank	

**9. Fluid Capacities**

Usable Fuel (see Note 1.1 for Unusable Fuel)

Location		Volume (L)	Weight (Kg)	Moment Arm (mm)
Right Wing	Main	1 020	816	10 400
	Aux	1 590	1 272	10 476
Left Wing	Main	1 020	816	10 400
	Aux	1 590	1 272	10 476
Total		5 220	4 176	10 446

Fuel weight is based upon fuel density 0.80 Kg/litre.

Pressure fuelling: Maximum pressure for pressure fuelling is 50 psi.



**SECTION 4: MODEL CN-235-300 - continued****10. Airspeed Limits**

Unless otherwise noted below, airspeeds are indicated airspeeds in knots:

- $V_{MO}$  (Maximum Operating):

Sea Level	240 Knots
20 000 feet	210 knots
25 000 feet	190 knots

(Straight line variation between points)

- $V_A$  (Manoeuvring):  
Sea Level to 25 000 feet: 160 Knots.

- $V_{FE}$  (Maximum Flap Extended):

Take off, 8°	160 Knots
Approach, 10°	160 Knots
Landing, 23°	150 Knots

- $V_{LE}$  (Maximum Landing Gear Extended)  
150 Knots

For other Airspeed Limits, see the appropriate “EASA approved” Aircraft Flight Manual, listed herein, for further definition.

**11. Flight Envelope**

Maximum Operating Altitude: 25 000 feet

**12. Operating Limitations****12.1 Approved Operations**

Day & night VFR and day & night IFR operations when appropriate equipment is installed and operating correctly.

**12.2 Other Limitations**

Elevator: Up  $30.0^\circ \pm 0.5^\circ$  Down  $15.0^\circ \pm 0.5^\circ$

Up to A/C Serial Number C-005; C-005 included:

Normal & Emergency Elevator Trim Tabs: Up  $0.5^\circ \pm 0.5^\circ$  Down  $8.5^\circ \pm 0.5^\circ$

From Serial Number C-006 on:

Normal Trim Tab: Up  $-0.5^\circ \pm 0.5^\circ$  Down  $9.5^\circ \pm 0.5^\circ$

Emergency Trim Tab: Up  $2.0^\circ \pm 0.5^\circ$  Down  $7.0^\circ \pm 0.5^\circ$

Elevator balance tab:

Up (for +15° elevator)  $1.75^\circ \pm 0.5^\circ$



**SECTION 4: MODEL CN-235-300 - continued**

Down (for -30° elevator)  $9.50^\circ \pm 0.5^\circ$   
 Rudder: Right  $17.0^\circ \pm 0.25^\circ$  Left  $12.0^\circ \pm 0.25^\circ$   
 Rudder trim tab: Right  $5.0^\circ \pm 0.5^\circ$  Left  $3.0^\circ \pm 0.5^\circ$   
 Rudder balance tab:  
 Right (for +12° rudder)  $2.5^\circ \pm 0.25^\circ$   
 Left (for -17° rudder)  $5.0^\circ \pm 0.25^\circ$

Ailerons: Up  $20.0^\circ \pm 0.5^\circ$  Down  $20.0^\circ \pm 0.5^\circ$   
 Aileron trim tab: Up  $8.0^\circ \pm 0.5^\circ$  Down  $8.0^\circ \pm 0.5^\circ$   
 Aileron balance tabs:  
 Trailing edge up for aileron 0°:  $5.0^\circ \pm 0.5^\circ$   
 Trailing edge down for aileron 20° up:  $8.0^\circ \pm 0.5^\circ$   
 Trailing edge up for aileron 20° down:  $18.0^\circ \pm 0.5^\circ$

Flaps (inner and outer)  
 Cruise  $0.0^\circ \pm 0.5^\circ$   
 Take off  $8.0^\circ \pm 0.5^\circ$   
 Approach  $10.0^\circ \pm 0.5^\circ$   
 Landing  $23.0^\circ \pm 0.5^\circ$

All measurements are taken at trailing edge from neutral position.

**13. Maximum Certified Masses**

Ramp	14 450 Kg
Take off	14 400 Kg
Landing	14 200 Kg
Zero Fuel	13 600 Kg

**14. Centre of Gravity Range**

See the appropriate “EASA approved” Aircraft Flight Manual, listed herein, for further definition.

**15. Datum**

The fuselage datum, Sta. 0.0, is located 2 347 mm forward to the fuselage jig point (rivet), which is located on the underside fuselage skin, immediately forward of fuselage Frame 1A.

**16. Mean Aerodynamic Chord (MAC)**

Length: 2 561 mm  
 L.E. of MAC: 9 591.29 mm aft of fuselage datum

**17. Levelling Means**

Plumb-bob suspended from aft face of aft cockpit compartment bulkhead over reticule on floor.

**18. Minimum Flight Crew**

Two (2). Pilot and Co-pilot

**19. Minimum Cabin Crew**

(in accordance with the emergency evacuation test)  
 Not Available



**SECTION 4: MODEL CN-235-300 - continued****20. Maximum Seating Capacity**

39 for aircraft with S/N up to C-005; C-005 included (See Note 1.2).

40 for aircraft with S/N from C-006 on.

**21. Baggage/ Cargo Compartment**

Refer to Aircraft Flight Manual for model CN-235: TC-holder document number DT-85-3503.  
and Weight and Balance Control and Loading Data Manual for model CN-235: TC holder  
document number DT-85-3502.

**22. Wheels and Tyres**

Refer to the approved equipment that is related in the TC-holder document number DT-86-3309.

**23. ETOPS**

N/A



**SECTION 4: MODEL CN-235-300 - continued****IV. Operating and Service Instructions****1. Airplane Flight Manual (AFM)**

Aircraft Flight Manual for model CN-235: TC-holder document number DT-85-3503.

Aircraft Weight and Balance Control and Loading Data Manual for model CN-235: TC holder document number DT-85-3502.

Aircraft operation must be in accordance with the Aircraft Flight Manual (AFM) listed above.

All placards required in either the approved AFM, the applicable operating rules, or the certification basis must be installed on the aircraft.

**2. Instructions for Continued Airworthiness and Airworthiness Limitations**

For series CN-235, required structural inspections, inspection times and retirement times for structural parts and for components are listed in Section 1.4.2 of TC-holder document number DT-86-3001. Material covered in this section must not be changed without EASA approval.

For series CN-235, system certification maintenance requirements are included in Section 1.4.1 of TC-holder document number DT-86-3001. Material covered in this section must not be changed without EASA approval.

For series CN-235, engine certification maintenance requirements are included in Appendix 1 to Maintenance Review Board Report, TC-holder document number MRB\_CN-235-PV01. Material covered in this Appendix must not be changed without EASA approval.

**3. Weight and Balance Manual (WBM)**

Refer to Aircraft Weight and Balance Control and Loading Data Manual for model CN-235: TC holder document number DT-85-3502.

**4. Service Letters and Service bulletins**

The Services Bulletins issued by the TC-holder corresponding to major modifications will be approved by EASA. The Service Bulletins corresponding to minor modifications will be approved by the TC-holder according to the privileges granted via DOA EASA.21J.032 dated July 30th, 2004. In both cases, the Service Bulletins will have the corresponding declaration of approval.





**SECTION 4: MODEL CN-235-300 - continued****V. Notes****Note 1.1**

- a) A current Weight and Balance Manual must be in each aircraft at the time of original airworthiness certification and at all times thereafter except in case an operator has an approved system for weight and balance control.
- b) The aircraft empty weight and corresponding centre of gravity location must include :

Total engine and propeller oil: 21.58 kg in the station 8 545 mm

Hydraulic fluid: 17.70 kg in the station 11 715 mm

Unusable fuel: 34.94 kg listed as follows

Unusable Fuel	Volume (L)	Weight (Kg)	Arm (mm)
Drainable			
Left Wing	16.08	12.91	10 406
Right Wing	16.08	12.91	10 406
Trapped Fuel			
Tanks & Fuel Lines	11.35	9.12	10 416
Total Unusable Fuel	43.51	34.94	10 408

- c) The aircraft must be loaded in accordance with section 2 of the approved Aircraft Flight Manual and the C.G. must be within the specified limits at all times.

**Note 1.2**

Aircrafts, model CN-235, with serial numbers from C-001 to C-005, inclusive, can be modified to transport 40 passengers according to TC-holder drawing number 35-83292-00.



**SECTION 2: MODEL CN-235-100****I. General**

## 1. Type/ Model/ Variant

CN-235-100.

The aeroplanes covered by this Section have the Serial Number format C-XXX.

## 2. Performance Class

A

## 3. Certifying Authority\*

EASA

## 4. Manufacturer (See Note 6)

Airbus Defence and Space, S.A.

Avda. de Aragón , 404, 280022

28022, Madrid

Spain

## 5. State of Design Authority Certification Application Date

DGAC-ES, 3<sup>th</sup> December 1981

## 6. EASA Type Certification Application Date

N/A

## 7. State of Design Authority Type Certificate Date

DGAC-ES , 09<sup>th</sup> December 1988

## 8. EASA Type Certification Date

N/A

EASA grandfathered the DGAC-ES TC 01/86\*

(\*): Data Sheet from the Spanish Type Certificate Nr 01/86 remains a valid reference for design data approved before 31 May 2007. Those Data Sheets, or Hojas de Datos, as they were issued, in Spanish language, by Dirección General de Aviación Civil, DGAC-ES, can, currently, be obtained from Agencia Estatal de Seguridad Aérea, AESA. The document references appearing in those Data Sheets, as DGAC-ES approved (aprobado por DGAC) documents have been recorded, herein, as "EASA approved" documents.



**SECTION 4: MODEL CN-235-300 - continued****II. Certification Basis**

1. Reference Date for determining the applicable requirements

3<sup>th</sup> December 1981

2. State of Design Airworthiness Authority Type Certification Data Sheet No.

DGAC-ES, 01/86

3. State of Design Airworthiness Authority Certification Basis

Spain

4. EASA Airworthiness Requirements

Regulation (EC) 1702/2003, Annex Part 21.

US Code of Federal Regulations, Title 14, Part 25 (FAR 25), effective from 1 Feb 1965, including all amendments from 25-1 to 25-59, 25-61 and 25-62.

TC-holder elected to comply with optional requirement FAR 25.1419: Ice protection.

5. Special Conditions

SC-S01/88 "Lightning Protection indirect effects"

SC-S02/88 "External radiation effects on the aircraft systems"

SC-H-01 "Enhanced Airworthiness Programme for Aeroplane Systems – ICA on EWIS"

6. Exemptions

Exemption to FAR 25.571(e)(2), granted by DGAC-ES on 24 March 1988.

7. Deviations

None

8. Equivalent Safety Findings

ESF to FAR 25.1305(a)(2): "Fuel quantity indicator"

9. Environmental Protection

ICAO Annex 16, Volume I (Noise), 3rd issue, November 1993.

ICAO Annex 16, Volume II (Fuel system ventilation and exhaust gas), 3rd issue, November 1993.

For more detail information refer to TCDSN A.186



**SECTION 4: MODEL CN-235-300 - continued****III. Technical Characteristics and Operational Limitations****1. Type Design Definition**

Defined in TC-holder document number DT-87-3003 "List of Drawings of the Certification Configuration".

**2. Description**

A high wing, twin-engine turboprop aircraft equipped to carry up to 44 passengers and cargo in a pressurized cabin and intended for short to medium transport routes.

**3. Equipment**

The basic required equipment as prescribed in the applicable EASA Regulation must be installed on the aircraft.

For CN-235-100 model, the approved equipment is related in the TC-holder document number DT-88-3003 (see Note 2.2 ).

**4. Dimensions**

Span	25.81 m
Length	21.40 m
Height	8.18 m
Wing Area	60 m <sup>2</sup>

**5. Engines**

Two (2) Engines General Electric Company  
Model CT7-9C free turbine turboprop.  
Power turbine/propeller reduction gearing 15.9:1.

Engine Limits:

The Maximum Continuous and Take off Static Sea Level ratings at ISA:

Conditions	Shaft Horse Power (SHP)	Residual Thrust (Lb.)	ITT (°C)	Maximum NG (RPM)	Maximum Torque (ft.lb.)	Fuel Specific Consumption (Lb/shp/hr)
Take off (5 min)	1 750	168	921*	45 300**	425	0.461
Take off (APR on)	1 870	179	950	45 615	454	0.455
Max Cont.	1 750	168	917	45 614	425	0.461

\*When OAT is lower than 35°C, ITT limit is 921°C. When OAT is between 35°C and 41°C the ITT limit has a lineal variation with the OAT, from 921°C to 944°C at sea level. When OAT is higher than 41°C the ITT limit is 950°C at sea level.

\*\*If OAT is higher than 41°C, the take-off limit with APR on is applied.

**6. Auxiliary Power Unit**

N/A



**SECTION 4: MODEL CN-235-300 - continued****7. Propellers**

Two (2) Propellers Hamilton Standard, Model 14RF-21.

Blades: Four (4), Model RFC11R1-0C

Diameter: 3 359 mm Maximum; 3 351 mm Minimum

Blade Angle measured at 1 067 mm radius station:

Ground Idle	-3.7° ± 1.0°
Max. Reverse	-12.4° ± 1.3°
Feather	80.8° ± 0.5°
Flight Idle	16.7° ± 0.8°

Propeller Spinner: P/N 790185-1

Propeller De-icer: Included in Blade P/N

**8. Fluids (Fuel, Oil, Additives, Hydraulics)**

Fuel:

Designation	Specification
JP-8	MIL-T-83133
Jet A	ASTM D1655
Jet A-1	ASTM D1655
Jet B	ASTM D1655
JP-4	MIL-T-5624
JP-5	MIL-T-5624

Oil:

Vol. (L)	Moment Arm (mm)
6.9 litres/ engine tank	8 902
3.6 litres usable / engine tank	
4.7 litres/ propeller tank	8 026
1.4 litres usable / propeller tank	

**9. Fluid Capacities**

Fuel:

Usable Fuel (see Note 2.1 for Unusable Fuel)

Location		Volume (L)	Weight (Kg)	Moment Arm (mm)
Right Wing	Main	1 020	816	Right Wing
	Aux	1 590	1 272	
Left Wing	Main	1 020	816	Left Wing
	Aux	1 590	1 272	
Total		5 220	4 176	10 446

Fuel weight is based upon fuel density 0.80 Kg/litre.

Pressure fuelling: Maximum pressure for pressure fuelling is 50 psi.



**SECTION 4: MODEL CN-235-300 - continued****10. Airspeed Limits**

Unless otherwise noted below, airspeeds are indicated airspeeds in knots:

- $V_{MO}$  (Maximum Operating) (See Note 2.2)

Sea Level	240 Knots
20 000 feet	210 knots
25 000 feet	190 knots

(Straight line variation between points)

- $V_A$  (Manoeuvring)  
Sea Level to 25 000 feet: 160 Knots

- $V_{FE}$  (Maximum Flap Extended)

Take off, 10°	160 Knots
Approach, 15°	160 Knots
Landing, 23°	150 Knots

- $V_{LE}$  (Maximum Landing Gear Extended)  
150 Knots

For other Speed Limits, see the appropriate "EASA approved" Aircraft Flight Manual, listed herein, for further definition.

**11. Flight Envelope**

Maximum Operating Altitude: 25 000 feet

**12. Operating Limitations****12.1 Approved Operations**

Day & night VFR and day & night IFR operations when appropriate equipment is installed and operating correctly.

**12.2 Other Limitations**

Elevator: Up  $30.0^\circ \pm 0.5^\circ$  Down  $15.0^\circ \pm 0.5^\circ$

Normal Trim Tab: Up  $-0.5^\circ \pm 0.5^\circ$  Down  $9.5^\circ \pm 0.5^\circ$

Emergency Trim Tab: Up  $2.0^\circ \pm 0.5^\circ$  Down  $7.0^\circ \pm 0.5^\circ$

Elevator balance tab:

Up (for  $+15^\circ$  elevator)  $1.75^\circ \pm 0.5^\circ$

Down (for  $-30^\circ$  elevator)  $9.50^\circ \pm 0.5^\circ$

Rudder: Right  $17.0^\circ \pm 0.25^\circ$  Left  $12.0^\circ \pm 0.25^\circ$

Rudder trim tab: Right  $5.0^\circ \pm 0.5^\circ$  Left  $3.0^\circ \pm 0.5^\circ$

Rudder balance tab:

Right (for  $+12^\circ$  rudder)  $2.5^\circ \pm 0.25^\circ$

Left (for  $-17^\circ$  rudder)  $5.0^\circ \pm 0.25^\circ$

Ailerons: Up  $20.0^\circ \pm 0.5^\circ$  Down  $20.0^\circ \pm 0.5^\circ$



**SECTION 4: MODEL CN-235-300 - continued**

Aileron trim tab: Up  $8.0^\circ \pm 0.5^\circ$  Down  $8.0^\circ \pm 0.5^\circ$

Aileron balance tabs:

Trailing edge up for aileron  $0^\circ$ :  $5.0^\circ \pm 0.5^\circ$

Trailing edge down for aileron  $20^\circ$  up:  $8.0^\circ \pm 0.5^\circ$

Trailing edge up for aileron  $20^\circ$  down:  $18.0^\circ \pm 0.5^\circ$

Flaps (inner and outer)

Cruise  $0.0^\circ \pm 0.5^\circ$

Take off  $10.0^\circ \pm 0.5^\circ$

Approach  $15.0^\circ \pm 0.5^\circ$

Landing  $23.0^\circ \pm 0.5^\circ$

All measurements are taken at trailing edge from neutral position

**13. Maximum Certified Masses**

Ramp	14 450 Kg
Take off	14 400 Kg
Landing	14 200 Kg
Zero Fuel	13 600 Kg

**14. Centre of Gravity Range**

See the appropriate "EASA approved" Aircraft Flight Manual, listed herein, for further definition.

**15. Datum**

The fuselage datum, Sta. 0.0, is located 2 347 mm. forward to the fuselage jig point (rivet), which is located on the underside fuselage skin, immediately forward of fuselage Frame 1A.

**16. Mean Aerodynamic Chord (MAC)**

Length: 2 561 mm

L.E. of MAC: 9 591.29 mm aft of fuselage datum

**17. Levelling Means**

Plumb-bob suspended from aft face of aft cockpit compartment bulkhead over reticule on floor.

**18. Minimum Flight Crew**

Two (2). Pilot and Co-pilot

**19. Minimum Cabin Crew**

(in accordance with the emergency evacuation test)

**20. Maximum Seating Capacity**

44 Passengers

**21. Baggage/ Cargo Compartment**

Refer to Aircraft Flight Manual for model CN-235-100: TC-holder document number DT-87-3501 (see Note 2.2) and to Aircraft Weight and Balance Control and Loading Data Manual for model CN-235-100: TC-holder document number DT-88-3503 (see Note 2.2).



**SECTION 4: MODEL CN-235-300 - continued****22. Wheels and Tyres**

For CN-235-100 model, the approved equipment is related in the TC-holder document number DT-88-3003 (see Note 2.2).

**23. ETOPS**

N/A





**SECTION 4: MODEL CN-235-300 - continued****IV. Operating and Service Instructions****1. Airplane Flight Manual (AFM)**

Aircraft Flight Manual for model CN-235-100: TC-holder document number DT-87-3501 (see Note 2.2).

Aircraft Weight and Balance Control and Loading Data Manual for model CN-235-100: TC-holder document number DT-88-3503 (see Note 2.2).

Aircraft operation must be in accordance with the Aircraft Flight Manual (AFM) listed above. All placards required in either the approved AFM, the application operating rules, or the certification basis must be installed on the aircraft.

**2. Instructions for Continued Airworthiness and Airworthiness Limitations**

For series CN-235, required structural inspections, inspection times and retirement times for structural parts and for components are listed in Section 1.4.2 of TC-holder document number DT-86-3001. Material covered in this section must not be changed without EASA approval.

For series CN-235, system certification maintenance requirements are included in Section 1.4.1 of TC-holder document number DT-86-3001. Material covered in this section must not be changed without EASA approval.

For series CN-235, engine certification maintenance requirements are included in Appendix 1 to Maintenance Review Board Report, TC-holder document number MRB\_CN-235-PV01. Material covered in this Appendix must not be changed without EASA approval.

**3. Weight and Balance Manual (WBM)**

Aircraft Weight and Balance Control and Loading Data Manual for model CN-235-100: TC-holder document number DT-88-3503 (see Note 2.2).



**SECTION 4: MODEL CN-235-300 - continued****V. Notes****Note 2.1**

- a) A current Weight and Balance Manual must be in each aircraft at the time of original airworthiness certification and at all times thereafter except in the case an operator having an approved system for weight and balance control.
- b) The aircraft empty weight and corresponding centre of gravity location must include:  
 Total engine and propeller oil: 21.58 kg in the station 8 545 mm Hydraulic fluid: 17.70 kg in the station 11 715 mm  
 Unusable fuel: 34.94 kg listed as follows

Unusable Fuel	Volume (L)	Weight (Kg.)	Arm (mm)
Drainable			
Left Wing	16.08	12.91	10 406
Right Wing	16.08	12.91	10 406
Trapped Fuel			
Tanks & Fuel Lines	11.35	9.12	10 416
Total Unusable Fuel	43.51	34.94	10 408

- c) The aircraft must be loaded in accordance with section 2 of the approved Aircraft Flight Manual and the C.G. must be within the specified limits at all times.

**Note 2.2**

For aircraft model CN-235-100 that have introduced the Service Bulletin with TC-holder document number SB-235-34-04 or the modification defined in the TC-holder document number CDS 3749, the above limitations established to the magnitudes mentioned below, remain changed in the following way:

Airspeeds

- $V_{MO}$  (Maximum operating)

Sea level	232 knots
20 000 ft	202 knots
25 000 ft	182 knots

Straight line variation between points

Maximum Weights

Maximum Ramp	15 150 kg
Maximum Take off	15 100 kg
Maximum Landing	14 900 kg
Maximum Zero Fuel Weight	14 100 kg

Aircraft Flight Manual is the TC-holder document number DT-90-3504, being the required equipment as per TC-holder document number DT-88-3003, and the Aircraft Weight and Balance Control and Loading Data Manual as per TC-holder document number DT-90-3505.



**SECTION 3: MODEL CN-235-200****I. General**

## 1. Type/ Model/ Variant

CN-235-200

The aeroplanes covered by this Section have the Serial Number format C-XXX

## 2. Performance Class

A

## 3. Certifying Authority\*

EASA

## 4. Manufacturer (See Note 6)

Airbus Defence and Space, S.A.

Avda. de Aragón , 404, 280022

28022, Madrid

Spain

## 5. State of Design Authority Certification Application Date

Not Available

## 6. EASA Type Certification Application Date

N/A

## 7. State of Design Authority Type Certificate Date

Spain DGAC-ES, 27 September 1991

## 8. EASA Type Certification Date

N/A

EASA grandfathered the DGAC-ES TC 01/86\*

(\*): Data Sheet from the Spanish Type Certificate Nr 01/86 remains a valid reference for design data approved before 31 May 2007. Those Data Sheets, or Hojas de Datos, as they were issued, in Spanish language, by Dirección General de Aviación Civil, DGAC-ES, can, currently, be obtained from Agencia Estatal de Seguridad Aérea, AESA. The document references appearing in those Data Sheets, as DGAC-ES approved (aprobado por DGAC) documents have been recorded, herein, as "EASA approved" documents.



## **II. Certification Basis**

1. Reference Date for determining the applicable requirements  
Not Available
2. State of Design Airworthiness Authority Type Certification Data Sheet No.  
DGAC-ES, 01/86
3. State of Design Airworthiness Authority Certification Basis  
Spain
4. EASA Airworthiness Requirements  
Regulation (EC) 1702/2003, Annex Part 21.  
US Code of Federal Regulations, Title 14, Part 25 (FAR 25), effective from 1 Feb 1965,  
including all amendments from 25-1 to 25-59, 25-61 and 25.62.  
TC-holder elected to comply with optional requirement FAR 25.1419: Ice protection.
5. Special Conditions  
SC-S01/88 "Lightning Protection indirect effects"  
SC-S02/88 "External radiation effects on the aircraft systems".  
SC-H-01 "Enhanced Airworthiness Programme for Aeroplane Systems – ICA on EWIS"
6. Exemptions  
Exemption to FAR 25.571(e)(2), granted by DGAC-ES on 26 September 1991.
7. Deviations  
N/A
8. Equivalent Safety Findings  
ESF to FAR 25.1305(a)(2): "Fuel quantity indicator"
9. Environmental Protection  
ICAO Annex 16, Volume I (Noise), 3rd issue, November 1993.  
ICAO Annex 16, Volume II (Fuel system ventilation and exhaust gas), 3rd issue,  
November 1993.  
For more detail information refer to TCDSN A.186



### **III. Technical Characteristics and Operational Limitations**

#### **1. Type Design Definition**

Defined in TC-holder document number DT-91-3215, "CN-235-200 Master Drawing List".

#### **2. Description**

A high wing, twin-engine turboprop aircraft equipped to carry up to 44 passengers and cargo in a pressurized cabin and intended for short to medium transport routes.

#### **3. Equipment**

The basic required equipment as prescribed in the applicable EASA Regulation must be installed in the aircraft.

For model CN-235-200, the approved equipment is related in the TC-holder document number DT-90-3016.

#### **4. Dimensions**

Span	25.81 m
Length	21.40 m
Height	8.18 m
Wing Area	60 m <sup>2</sup>

#### **5. Engines**

Two (2) Engines General Electric Company

Model CT7-9C free turbine turboprop.

Power turbine/propeller reduction gearing 15.9:1.

##### **5.1 Engine Limits:**

The Maximum Continuous and Take off Static Sea Level ratings at ISA:

Conditions	Shaft Horse Power (SHP)	Residual Thrust (Lb.)	ITT (°C)	Maximum NG (RPM)	Maximum Torque (ft.lb.)	Fuel Specific Consumption (Lb/shp/hr)
Take off (5 min)	1 750	168	921*	45 300**	425	0.461
Take off (APR on)	1 870	179	950	45 615	454	0.455
Max Cont.	1 750	168	917	45 614	425	0.461

\* When OAT is lower than 35°C, ITT limit is 921°C. When OAT is between 35°C and 41°C the ITT limit has a lineal variation with the OAT, from 921°C to 944°C at sea level. When OAT is higher than 41°C the ITT limit is 950°C at sea level.

\*\* If OAT is higher than 41°C, the take off limit with APR on is applied.

#### **6. Auxiliary Power Unit**

N/A



## 7. Propellers

Two (2) Propellers Hamilton Standard, Model 14RF-21

Blades: Four (4), Model RFC11R1-0C

Diameter: 3 359 mm Maximum; 3 351 mm Minimum

Blade Angle measured at 1 067 mm radius station:

Ground Idle	$-3.7^{\circ} \pm 1.0^{\circ}$
Max. Reverse	$-12.4^{\circ} \pm 1.3^{\circ}$
Feather	$80.8^{\circ} \pm 0.5^{\circ}$
Flight Idle	$16.7^{\circ} \pm 0.8^{\circ}$

Propeller Spinner: P/N 790185-1

Propeller De-icer: Included in Blade P/N

## 8. Fluids (Fuel, Oil, Additives, Hydraulics)

Fuel:

Designation	Specification
JP-8	MIL-T-83133
Jet A	ASTM D1655
Jet A-1	ASTM D1655
Jet B	ASTM D1655
JP-4	MIL-T-5624
JP-5	MIL-T-5624

Oil:

Vol. (L)	Moment Arm (mm)
6.9 litres/ engine tank	8 902
3.6 litres usable / engine tank	
4.7 litres/ propeller tank	8 026
1.4 litres usable / propeller tank	

## 9. Fluid Capacities

Usable Fuel (see Note 3.1 for Unusable Fuel)

Location		Volume (L)	Weight (Kg)	Moment Arm (mm)
Right Wing	Main	1 020	816	10 400
	Aux	1 590	1 272	10 476
Left Wing	Main	1 020	816	10 400
	Aux	1 590	1 272	10 476
Total			5 220	4 176

Fuel weight is based upon fuel density 0.80 Kg/litre.

Pressure fuelling: Maximum pressure for pressure fuelling is 50 psi.

## 10. Airspeed Limits

Unless otherwise noted below, airspeeds are indicated airspeeds in knots:

- $V_{MO}$  (Maximum Operating)

Sea Level	232 Knots
20 000 feet	202 knots
25 000 feet	182 knots



(Straight line variation between points)

- $V_A$  (Manoeuvring)  
Sea Level to 25 000 feet: 160 Knots

- $V_{FE}$  (Maximum Flap Extended)

Take off, 10°	160 Knots
Approach, 15°	160 Knots
Landing, 23°	150 Knots

- $V_{LE}$  (Maximum Landing Gear Extended)  
150 Knots

For other Speed Limits, see the appropriate "EASA approved" Aircraft Flight Manual, listed herein, for further definition.

## 11. Flight Envelope

Maximum Operating Altitude: 25 000 feet

## 12. Operating Limitations

### 12.1 Approved Operations

Day & Night VFR and day & Night IFR operations when appropriate equipment is installed and operating correctly

### 12.2 Other Limitations

Elevator: Up  $30.0^\circ \pm 0.5^\circ$  Down  $15.0^\circ \pm 0.5^\circ$

Normal Trim Tab: Up  $-0.5^\circ \pm 0.5^\circ$  Down  $11^\circ \pm 0.5^\circ$

Emergency Trim Tab: Up  $-2.0^\circ \pm 0.5^\circ$  Down  $+7.0^\circ \pm 0.5^\circ$

Elevator balance tab:

Up (for  $+15^\circ$  elevator)  $1.75^\circ \pm 0.5^\circ$

Down (for  $-30^\circ$  elevator)  $9.50^\circ \pm 0.5^\circ$

Rudder: Right  $-19.0^\circ \pm 0.5^\circ$  Left  $+15.0^\circ \pm 0.5^\circ$

Rudder trim tab: Right  $-5.0^\circ \pm 0.5^\circ$  Left  $+3.0^\circ \pm 0.5^\circ$

Rudder balance tab:

Right (for  $-19^\circ$  rudder)  $+5.25^\circ \pm 0.5^\circ$

Left (for  $+15^\circ$  rudder)  $-2.0^\circ \pm 0.5^\circ$

$\pm 0.5$  of Trim corresponds to  $0^\circ$  of Rudder

Ailerons: Up  $-20.0^\circ \pm 0.5^\circ$  Down  $+20.0^\circ \pm 0.5^\circ$

Aileron trim tab: Up  $-8.0^\circ \pm 0.5^\circ$  Down  $+8.0^\circ \pm 0.5^\circ$

Aileron balance tabs:

Trailing edge up for aileron  $0^\circ$ :  $5.0^\circ \pm 0.5^\circ$

Trailing edge down for aileron  $20^\circ$  up:  $8.0^\circ \pm 0.5^\circ$



Trailing edge up for aileron 20° down:  $18.0^\circ \pm 0.5^\circ$

Flaps (inner and outer)

Cruise  $0.0^\circ \pm 0.5^\circ$

Take off  $10.0^\circ \pm 0.5^\circ$

Approach  $15.0^\circ \pm 0.5^\circ$

Landing  $23.0^\circ \pm 0.5^\circ$

All measurements are taken at trailing edge from neutral position.

### 13. Maximum Certified Masses

(See Note 3.2)

Ramp	15 850 Kg
Take off	15 800 Kg
Landing	15 600 Kg
Zero Fuel	14 100 Kg

### 14. Centre of Gravity Range

See the appropriate "EASA approved" Aircraft Flight Manual, listed herein, for further definition

### 15. Datum

The fuselage datum, Sta. 0.0, is located 2 347 mm. forward to the fuselage jig point (rivet), which is located on the underside fuselage skin, immediately forward of fuselage Frame 1A.

### 16. Mean Aerodynamic Chord (MAC)

Length: 2 561 mm

L.E. of MAC: 9 591.29 mm aft of fuselage datum

### 17. Levelling Means

Plumb-bob suspended from aft face of aft cockpit compartment bulkhead over reticule on Floor.

### 18. Minimum Flight Crew

Two (2). Pilot and Co-pilot

### 19. Minimum Cabin Crew

(in accordance with the emergency evacuation test)

Not Available

### 20. Maximum Seating Capacity

44 Passengers

### 21. Baggage/ Cargo Compartment

Refer to Aircraft Flight Manual for model CN-235-200: TC-holder document number DT-91-3501.

And Refer to Aircraft Weight and Balance Control and Loading Data Manual for model CN-235-200: TC-holder document number DT-91-3502.

### 22. Wheels and Tyres

Refer to the approved equipment is related in the TC-holder document number DT-90-3016.





## 23. ETOPS

N/A

## **IV. Operating and Service Instructions**

### 1. Airplane Flight Manual (AFM)

Aircraft Flight Manual for model CN-235-200: TC-holder document number DT-91-3501.

Aircraft Weight and Balance Control and Loading Data Manual for model CN-235-200:

TC-holder document number DT-91-3502.

Aircraft operation must be in accordance with the Aircraft Flight Manual (AFM) listed above. All placards required in either the approved AFM, the application operating rules, or the certification basis must be installed on the aircraft.

Aircrafts, model CN-235-200, equipped with a Flight Management System installed according to TC-holder Service Bulletin number SB-235-34-25 must be operated in accordance with Aircraft Flight Manual, TC-holder document number DT-91-3501, and Supplement n° 17 to the referenced AFM.

Aircrafts, model CN-235-200, that have incorporated the special operation kit defined in TC-holder document number DT-96-3003 must be operated according to the specific revision n°4 to the Aircraft Flight Manual, TC-holder document number DT-91-3501. In this configuration, the aircrafts are limited to operations with NO PASSENGER AND NO LOAD, since this configuration has not been evaluated with the compliance of airworthiness requirements relative to compartments that have passengers or loads.

### 2. Instructions for Continued Airworthiness and Airworthiness Limitations

For series CN-235, required structural inspections, inspection times and retirement times for structural parts and for components are listed in Section 1.4.2 of TC-holder document number DT-86-3001. Material covered in this section must not be changed without EASA approval.

For series CN-235, system certification maintenance requirements are included in Section 1.4.1 of TC-holder document number DT-86-3001. Material covered in this section must not be changed without EASA approval.

For series CN-235, engine certification maintenance requirements are included in Appendix 1 to Maintenance Review Board Report, TC-holder document number MRB\_CN-235-PV01. Material covered in this Appendix must not be changed without EASA approval.

### 3. Weight and Balance Manual (WBM)

Refer to Aircraft Weight and Balance Control and Loading Data Manual for model CN-235-200: TC-holder document number DT-91-3502.



**V. Notes****Note 3.1**

- a) A current Weight and Balance Manual must be in each aircraft at the time of original airworthiness certification and at all times thereafter except in case an operator has an approved system for weight and balance control.
- b) The aircraft empty weight and corresponding centre of gravity location must include (applicable to CN-235 series):

Total engine and propeller oil: 21.58 kg in the station 8 545 mm

Hydraulic fluid: 17.70 kg in the station 11 715 mm

Unusable fuel: 34.94 kg listed as follows

Unusable Fuel	Volume (L)	Weight (Kg.)	Arm (mm)
Drainable			
Left Wing	16 .08	12 .91	10 406
Right Wing	16 .08	12 .91	10 406
Trapped Fuel			
Tanks & Fuel Lines	11 .35	9 .12	10 416
Total Unusable Fuel	43 .51	34 .94	10 408

- c) The aircraft must be loaded in accordance with section 2 of the approved AircraftFlight Manual and the C.G. must be within the specified limits at all times.

**Note 3.2**

Aircrafts, model CN-235-100, incorporating TC-holder Service Bulletins numbers SB-235-11-06 and SB-235-11-10, conform to the design definition of CN-235-200 model. In case the modifications of SB-235-11-10 are not introduced in the aircraft, the limitations established for the CN-235-200 with respect to the magnitudes mentioned below remain changed in the following way:

**Maximum Weights**

Maximum Ramp	15 150 kg
Maximum Take off	15 100 kg
Maximum Landing	14 900 kg
Maximum Zero Fuel Weight	14 100 kg

The applicable Aircraft Flight Manual is TC-holder document number DT-90-3506, the required equipment is as per TC-holder document number DT-91-3017, and the Aircraft Weight and Balance Control and Loading Data Manual as per TC-holder document number DT-90-3507.



## **SECTION 4: MODEL CN-235-300**

### **I. General**

1. Type/ Model/ Variant

CN-235-300

The aeroplanes covered by this Section have the Serial Number format C-XXX.

2. Performance Class

A

3. Certifying Authority\*

EASA

4. Manufacturer (See Note 6)

Airbus Defence and Space, S.A.  
Avda. de Aragón , 404, 280022  
28022, Madrid  
Spain

5. State of Design Authority Certification Application Date

Spain, DGAC-ES, 8 September 1997

6. EASA Type Certification Application Date

N/A

7. State of Design Authority Type Certificate Date

Spain, DGAC-ES, 09 December 1998

8. EASA Type Certification Date

N/A

EASA has grandfathered the original DGAC-ES TC 01/86\*

(\*): Data Sheet from the Spanish Type Certificate Nr 01/86 remains a valid reference for design data approved before 31 May 2007. Those Data Sheets, or Hojas de Datos, as they were issued, in Spanish language, by Dirección General de Aviación Civil, DGAC-ES, can, currently, be obtained from Agencia Estatal de Seguridad Aérea, AESA. The document references appearing in those Data Sheets, as DGAC-ES approved (aprobado por DGAC) documents have been recorded, herein, as “EASA approved” documents.



## **II. Certification Basis**

### 1. Reference Date for determining the applicable requirements

8 September 1997

### 2. State of Design Airworthiness Authority Type Certification Data Sheet No.

DGAC-ES, TC 01/86

### 3. State of Design Airworthiness Authority Certification Basis

Spain

### 4. EASA Airworthiness Requirements

Regulation (EC) 1702/2003, Annex Part 21.

US Code of Federal Regulations, Title 14, Part 25 (FAR 25), effective from 1 Feb 1965, including the following amendments:

25-1 to 25-59, 25-61 to 25-62,

section 25.365(e) to amendment 25-71,

sections 25.571(e)(2), 25.905(d) to amdt 25-72

and section 25.1316 (only IEDS) to amdt. 25-80

TC-holder elected to comply with FAR 25.1419, to its initial issue, and, partially, to its amdt. 25-72 (only airframe ice protection).

Additionally, versions AE01, AE02, L302, SM01 and L303 have shown compliance with the following sections of FAR:

section 25.1457, to amendment 25-65;

sections 25.307, 25.613, 25.723, 25.731, 25.733, 25.773, 25.791, 25.803, 25.809, 25.1307, 25.1351, 25.1381, 25.1557, 25.1581, 25.1583 to amendment 25-72,

section 25.851 to amendment 25-74;

section 25.729 to amendment 25-75;

sections 25.1411, 25.1423 to amendment 25-79; section 25.519 to amendment 25-81;

section 25.853 to amendment 25-83;

sections 25.783, 25.785, 25.810, 25.811, 25.812, 25.813 to amendment 25-88;

section 25.831 to amendment 25-89;

section 25.561 to amendment 25-91;

sections 25.855, 25.857, 25.858 to amendment 25-93;

section 25.807 to amendment 25-94

Additionally, for SM01 version, TC-holder elected to comply with FAR 25.856 Amdt. 111.

Additionally, for L303 version, TC-holder elected to comply with FAR 25.1316 Amdt. 80, only for equipment and systems performing critical and essential hazardous (severe major) functions and with CRI F-1, "HIRF Protection"



**5. Special Conditions**

SC-S01/88 "Lightning Protection indirect effects"

Not applicable, in this model, to the IEDS system

SC-S02/88 "External radiation effects on the aircraft systems"

SC-H-01 "Enhanced Airworthiness Programme for Aeroplane Systems – ICA on EWIS"

**6. Exemptions**

N/A

**7. Deviations**

N/A

**8. Equivalent Safety Findings**

ESF to FAR 25.1305 (a)(2): "Fuel Quantity Indicator".

For SM01 version, ESF to FAR 25.855 and 25.857: Cargo compartment in ramp area (Ref. CRI D-2).

**9. Environmental Protection**

ICAO Annex 16, Volume I (Noise), 3rd issue.

For SM01 version: 4th issue

ICAO Annex 16, Volume II (Fuel system ventilation and exhaust gas), 3rd issue.

For SM01 version: 4th issue.

For more detail information refer to TCDSN A.186

**III. Technical Characteristics and Operational Limitations****1. Type Design Definition**

Defined in TC-holder document number DT-98-3308, "Type Design Standard Model CN-235-300 Version CS05".

**2. Description**

A high wing, twin-engine turboprop aircraft equipped to carry up to 44 passengers and cargo in a pressurized cabin and intended for short to medium transport routes.

**3. Equipment**

The basic required equipment as prescribed in the applicable EASA Regulation must be installed on the aircraft.

For model CN-235-300, the approved equipment is related in the TC-holder document number DT-98-3016,

For version AE-01 of model CN-235-300, the approved equipment is related in the TC holder document number DT-02-3002.

**4. Dimensions**

Span	25.81 m
Length	21.40 m
Height	8.18 m
Wing Area	60 m <sup>2</sup>



## 5. Engines

Two (2) Engines General Electric Company  
Model CT7-9C3, free turbine turboprop.  
Power turbine /propeller gearing 15.9:1.

Engine Limits:

The Maximum Continuous and Take off Static Sea Level ratings at ISA:

Operation Conditions	Operations Limits				
	Shaft Horse Power	ITT (°C)	Engine RPM (%)	Torque Meter Reading (%)	ESHP
Take off (5 minutes)	1 750	(a)(b) 917	101.3	(c) 100	1 816
Maximum Continuous	1 750	944	102.0	100	1 816
Take off (APR on)	1 870	(b) 940	102.0	107	1 942

(a) The shown temperature value is the absolute maximum. See the appropriate "EASA Approved" Flight Manual listed below for the maintained ITT limits in relation with the environmental conditions.

(b) Up to 10°C over-temperature are permitted over the maintained ITT values, for a maximum of two minutes.

(c) The shown torque value is the absolute maximum. See the appropriate "EASA Approved" Aircraft Flight Manual listed below for the maintained ITT limits in relation with the environmental conditions.

## 6. Auxiliary Power Unit

N/A

## 7. Propellers

Two (2) Propellers Hamilton Standard,  
Model 14 RF-37

Blades: Four (4), Model RFA12A1-POC

Diameter: 3 679 mm (144.84 in.)

Prohibited % rpm interval: 47% to 71%



## 8. Fluids (Fuel, Oil, Additives, Hydraulics)

## Fuel:

Designation	Specification
JP-8	MIL-T-83133
Jet A	ASTM D1655
Jet A-1	ASTM D1655
Jet B	ASTM D1655
JP-4	MIL-T-5624
JP-5	MIL-T-5624

## Oil:

Vol. (L)	Moment Arm (mm)
6.9 litres/ engine tank	8 902
3.6 litres usable / engine tank	
4.7 litres/ propeller tank	8 026
1.4 litres usable / propeller tank	

## 9. Fluid Capacities

Usable Fuel: (see Note 4.1 for Unusable Fuel)

Location		Volume (L)	Weight (Kg)	Moment Arm (mm)
Right Wing	Main	1 020	1 040	275
	Aux	1 590	1 592	420
Left Wing	Main	1 020	1 040	275
	Aux	1 590	1 592	420
Total		5.220	5 260	1 391

Fuel weight is based upon fuel density 0.80 Kg/litre.

Pressure fuelling: maximum pressure for pressure fuelling is 50 psi.

## 10. Airspeed Limits

Unless otherwise noted below, airspeeds are indicated airspeeds in knots:

- $V_{MO}$  (Maximum Operating)

Sea Level	232 Knots
20 000 feet	202 knots
25 000 feet	182 knots

(Straight line variation between points)



- VA (Manoeuvring)  
Sea Level to 25 000 feet: 160 Knots

- VFE (Maximum Flap Extended)

Take off, 10°	160 Knots
Approach, 15°	160 Knots
Landing, 23°	150 Knots

- VLE (Maximum Landing Gear Extended)  
150 Knots

For other Speed Limits, see the appropriate "EASA approved" Aircraft Flight Manual, listed herein, for further definition.

## 11. Flight Envelope

Maximum Operating Altitude: 25 000 feet

## 12. Operating Limitations

### 12.1 Approved Operations

Day & night VFR and day & night IFR operations when appropriate equipment is installed and operating correctly.

### 12.2 Other Limitations

Elevator: Up  $30.0^\circ \pm 0.5^\circ$  Down  $15.0^\circ \pm 0.5^\circ$

Normal Trim Tab: Up  $-0.5^\circ \pm 0.5^\circ$  Down  $11^\circ \pm 0.5^\circ$

Emergency Trim Tab: Up  $-2.0^\circ \pm 0.5^\circ$  Down  $+7.0^\circ \pm 0.5^\circ$

Elevator balance tab:

Up (for  $+15^\circ$  elevator)  $1.75^\circ \pm 0.5^\circ$

Down (for  $-30^\circ$  elevator)  $9.50^\circ \pm 0.5^\circ$

Rudder: Right  $-19.0^\circ \pm 0.5^\circ$  Left  $+15.0^\circ \pm 0.5^\circ$

Rudder trim tab: Right  $-5.0^\circ \pm 0.5^\circ$  Left  $+3.0^\circ \pm 0.5^\circ$

Rudder balance tab:

Right (for  $-19^\circ$  rudder)  $+5.25^\circ \pm 0.5^\circ$

Left (for  $+15^\circ$  rudder)  $-2.0^\circ \pm 0.5^\circ$

$\pm 0.5$  of Trim corresponds to  $0^\circ$  of Rudder

Ailerons: Up  $-18.0^\circ \pm 0.5^\circ$  Down  $+18.0^\circ \pm 0.5^\circ$

Aileron trim tab: Up  $-8.0^\circ \pm 0.5^\circ$  Down  $+8.0^\circ \pm 0.5^\circ$

Aileron balance tabs:

Trailing edge up for aileron  $0^\circ$ :  $5.0^\circ \pm 0.5^\circ$





Trailing edge down for aileron 20° up:  $8.0^\circ \pm 0.5^\circ$

Trailing edge up for aileron 20° down:  $18.0^\circ \pm 0.5^\circ$

Flaps (inner and outer)

Cruise  $0.0^\circ \pm 0.5^\circ$

Take off  $10.0^\circ \pm 0.5^\circ$

Approach  $15.0^\circ \pm 0.5^\circ$

Landing  $23.0^\circ \pm 0.5^\circ$

All measurements are taken at trailing edge from neutral position.

### 13. Maximum Certified Masses

Ramp	15 850 Kg
Take off	15 800 Kg
Landing	15 600 Kg
Zero Fuel	14 100 Kg

### 14. Centre of Gravity Range

See the appropriate “EASA approved” Aircraft Flight Manual, listed herein, for further definition.

### 15. Datum

The fuselage datum, Sta. 0.0, is located 2 347 mm. forward to the fuselage jig point (rivet), which is located on the underside fuselage skin, immediately forward of fuselage Frame 1A.

### 16. Mean Aerodynamic Chord (MAC)

Length: 2 561 mm

L.E. of MAC: 9 591.29 mm aft of fuselage datum

### 17. Levelling Means

Plumb-bob suspended from aft face of aft cockpit compartment bulkhead over reticule on floor.

### 18. Minimum Flight Crew

Two (2). Pilot and Co-pilot (see Note 4.4)

### 19. Minimum Cabin Crew

(in accordance with the emergency evacuation test)

Not Available

### 20. Maximum Seating Capacity

Maximum Passengers: 44

Additionally see Note 4.2 and Note 4.3

### 21. Baggage/ Cargo Compartment

Refer to Aircraft Flight Manual for model CN-235-300: TC-holder document number DT-98-3002.

Also Refer to Aircraft Weight and Balance Control and Loading Data Manual for model CN-235-300: TC-holder document number DT-98-3003



## 22. Wheels and Tyres

Refer to:

For model CN-235-300, the approved equipment is related in the TC-holder document number DT-98-3016,

For version AE-01 of model CN-235-300, the approved equipment is related in the TC holder document number DT-02-3002.

## 23. ETOPS

N/A



#### **IV. Operating and Service Instructions**

##### **1. Airplane Flight Manual (AFM)**

Aircraft Flight Manual for model CN-235-300: TC-holder document number DT-98-3002.

Aircraft Weight and Balance Control and Loading Data Manual for model CN-235-300:

TC-holder document number DT-98-3003.

Aircraft operation must be in accordance with the Aircraft Flight Manual (AFM) listed above.

All placards required in either the approved AFM, the application operating rules, or the certification basis must be installed in the aircraft.

##### **2. Instructions for Continued Airworthiness and Airworthiness Limitations**

For series CN-235, required structural inspections, inspection times and retirement times for structural parts and for components are listed in Section 1.4.2 of TC-holder document number DT-86-3001. Material covered in this section must not be changed without EASA approval.

For series CN-235, system certification maintenance requirements are included in Section 1.4.1 of TC-holder document number DT-86-3001. Material covered in this section must not be changed without EASA approval.

For series CN-235, engine certification maintenance requirements are included in Appendix 1 to Maintenance Review Board Report, TC-holder document number MRB\_CN-235-PV01. Material covered in this Appendix must not be changed without EASA approval.

##### **3. Weight and Balance Manual (WBM)**

Aircraft Weight and Balance Control and Loading Data Manual for model CN-235-300:

TC-holder document number DT-98-3003.



**V. Notes****Note 4.1**

a) A current Weight and Balance Manual must be in each aircraft at the time of original airworthiness certification and at all times thereafter except in case an operator has an approved system for weight and balance control.

b) The aircraft empty weight and corresponding centre of gravity location must include (applicable to CN-235 series):

Total engine and propeller oil of 21.58 kg in the station 8 545 mm

Hydraulic fluid of 17.70 kg in the station 11 715 mm

Unusable fuel: 34.94 kg listed as follows:

Unusable Fuel	Volume (L)	Weight (Kg.)	Arm (mm)
Drainable			
Left Wing	16.08	12.91	10 406
Right Wing	16.08	12.91	10 406
Trapped Fuel			
Tanks & Fuel Lines	11.35	9.12	10 416
Total Unusable Fuel	43.51	34 .94	10 408

The aircraft must be loaded in accordance with section 2 of the approved Aircraft Flight Manual and the C.G. must be within the specified limits at all times.

**Note 4.2**

The version AE-01 of model CN-235-300 remains defined with the incorporation of the design modifications (CDS's) TC-holder document numbers 31383, 31384, 31385, 31386, 31387, 31388, 31389, 31390, 31391, 31409, and 31413.

The TC-holder Service Bulletin number SB-235-25-56, for the AE-01 version of CN-235- 300, allows the conversion of personnel transport configuration to load configuration and vice versa. In the configuration of personnel transport, the maximum number of passengers is 19.

**Note 4.3**

The version L3-02 of model CN-235-300 is defined with the introduction of TC-holder Service Bulletin number SB-235-11-27 The TC-holder Service Bulletin number SB-235-25-56 for version L3-02 of model CN- 235-300 allows the conversion of configuration from personnel transport to cargo transport and vice versa. In the configuration of personnel transport, the maximum number of passenger is 19.

**Note 4.4**

The Version SM01 of model CN-235-300 has a Minimum Crew of Three (3). Pilot, Copilot and Dropmaster / Cargo Observer.



**Note 4.5**

For the Version SM01 of model CN-235-300, the TC-holder Service Bulletin number SB- 235-25-62 allows the conversion from Maritime patrol configuration to Cargo transport configuration and the TC-holder Service Bulletin number SB-235-25-63 for conversion from Cargo transport configuration to Maritime patrol configuration.

Additionally, the TC-holder Service Bulletin number SB-235-25-64 allows the conversion from Maritime patrol configuration to Maritime patrol configuration with Cargo Handling System in ramp area, and the TC-holder Service Bulletin number SB-235-25-65 allows the conversion from Maritime patrol configuration with Cargo Handling System in ramp area to Maritime patrol configuration.



## **SECTION 5: MODEL C-295**

### **I. General**

#### **1. Type/ Model/ Variant**

C-295

Significant Product Level Changes i.a.w. 21.A.101

Major significant Modifications:

Winglets modification

- DC10718A

TS03.01 Avionic and Autopilot Upgrade modifications

- DC10278, DC10280, DC10281, DC10282, DC10283, DC10284, DC10285, DC10286 DC10288, DC10289, DC10290, DC10291, DC10310, DC10415, DC10416, DC10417, DC10418, DC10419, DC10420, DC10421, DC10422, DC10423, DC10424, DC10426, DC10428, DC10429, DC10450, DC10451, DC10293.

Significant Major Modifications listed above are defined in TEA-5-DT-200100 "TYPE DESIGN STANDARD C-295FW".

Hereinafter the Airplanes as defined in document TEA-5-DT-200100 "TYPE DESIGN STANDARD C-295FW" will be designate with the new commercial designation C-295FW (see Note 5.2)

The aeroplanes covered by this Section have the Serial Number format S-XXX or MSN/SN-XXXX as appropriated.

#### **2. Performance Class**

A

#### **3. Certifying Authority\***

EASA

#### **4. Manufacturer (See Note 6)**

Airbus Defence and Space, S.A.  
Avda. de Aragón , 404, 280022  
28022, Madrid  
Spain

#### **5. State of Design Authority Certification Application Date**

DGAC-ES, 21 December 1994

#### **6. EASA Type Certification Application Date**

C- 295

N/A

Major Significant Modifications:

- |                                  |                                |
|----------------------------------|--------------------------------|
| ○ Winglets modifications         | 10 <sup>th</sup> April 2015    |
| DC10718A Winglets                |                                |
| ○ TS03.01/avionics modifications | 20 <sup>th</sup> December 2014 |
| DC10278, DC10280, DC10281        |                                |
| DC10282, DC10283, DC10284        |                                |



DC10285, DC10286, DC10288  
 DC10289, DC10290, DC10291  
 DC10310, DC10415, DC10416  
 DC10417, DC10418, DC10419  
 DC10420, DC10421, DC10422  
 DC10423, DC10424, DC10426  
 DC10428, DC10429, DC10450  
 DC10451, DC10293.

#### 7. State of Design Authority Type Certificate Date

DGAC-ES, 2 December 1999

#### 8. EASA Type Certification Date

C-295

EASA has grandfathered the original  
 DGAC-ES TC 01/86\*

#### Major Significant Modifications:

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>○ Winglets modifications<br/>DC10718A</li> <li>○ TS03.01/avionics modifications<br/>DC10278, DC10280, DC10281<br/>DC10282, DC10283, DC10284<br/>DC10285, DC10286, DC10288<br/>DC10289, DC10290, DC10291<br/>DC10310, DC10415, DC10416<br/>DC10417, DC10418, DC10419<br/>DC10420, DC10421, DC10422<br/>DC10423, DC10424, DC10426<br/>DC10428, DC10429, DC10450<br/>DC10451, DC10293</li> </ul> | <p>10<sup>th</sup> April 2015</p> <p>20<sup>th</sup> December 2014</p> |
|--|--|

(\*): Data Sheet from the Spanish Type Certificate Nr 01/86 remains a valid reference for design data approved before 31 May 2007. Those Data Sheets, or Hojas de Datos, as they were issued, in Spanish language, by Dirección General de Aviación Civil, DGAC-ES, can, currently, be obtained from Agencia Estatal de Seguridad Aérea, AESA. The document references appearing in those Data Sheets, as DGAC-ES approved (aprobado por DGAC) documents have been recorded, herein, as “EASA approved” documents.



## **II. Certification Basis**

### **1. Reference Date for determining the applicable requirements**

C-295

21 December 1994

Major Significant Modifications:

- Winglets modifications  
DC10718A  
10<sup>th</sup> April 2015
- TS03.01/avionics modifications  
DC10278, DC10280, DC10281  
DC10282, DC10283, DC10284  
DC10285, DC10286, DC10288  
DC10289, DC10290, DC10291  
DC10310, DC10415, DC10416  
DC10417, DC10418, DC10419  
DC10420, DC10421, DC10422  
DC10423, DC10424, DC10426  
DC10428, DC10429, DC10450  
DC10451, DC10293  
20<sup>th</sup> December 2014

### **2. State of Design Airworthiness Authority Type Certification Data Sheet No.**

DGAC-ES, TC 01/86 was replaced by EASA-TCDS-A.186

### **3. State of Design Airworthiness Authority Certification Basis**

C- 295

Spain

Major Significant Modifications

EASA

- Winglets modifications  
DC10718A
- TS03.01/avionics modifications  
DC10278, DC10280, DC10281  
DC10282, DC10283, DC10284  
DC10285, DC10286, DC10288  
DC10289, DC10290, DC10291  
DC10310, DC10415, DC10416  
DC10417, DC10418, DC10419  
DC10420, DC10421, DC10422  
DC10423, DC10424, DC10426  
DC10428, DC10429, DC10450  
DC10451, DC10293





#### 4. EASA Airworthiness Requirements

Hereafter are listed the original certification basis for C-295 and the additional airworthiness requirements amended for the corresponding major significant modifications.

##### 4.1 Original Airworthiness Requirements

Regulation (EC) 1702/2003, Annex Part 21.

US Code of Federal Regulations, Title 14, Part 25 (FAR 25), effective from 1 Feb 1965, including the all amendments from 25-1 to 25-89, additionally section 25.351 to amendment 25-91. The amendment 25-64 has not shown compliance with the section 25.562 (c)(5).

TC-holder elected to comply with FAR 25.1419 Ice protection and 14 CFR Part 25, amendment 25-92 "Improved standards for go around performances".

##### 4.2 Certification basis revised for major significant modification DC10718A

- The certification basis is that of the C-295 amended by the following:
  - CS25 Amendment 16, dated 12 March 2015:
    - For Dynamic Loads & Aeroelasticity:
      - 25.305 (c) Strength and deformation
      - 25.341 (All) Gust and turbulence loads
      - 25.349 (b) Rolling conditions
      - 25.473 (All) Landing load conditions and assumptions
      - 25.479 (All) Level landing conditions
      - 25.481 (All) Tail-down landing conditions
      - 25.629 (All) Aeroelastic stability requirement
      - 25.905 (d) Propellers
    - Plus for Static Loads:
      - 25.301 (All) Loads
      - 25.321 (All) General
      - 25.331 (All) Symmetric manoeuvring conditions
      - 25.333 (All) Flight manoeuvring envelope
      - 25.335 (All) Design airspeeds
      - 25.337 (All) Limit manoeuvring load factors
      - 25.343 (All) Design fuel and oil loads
      - 25.345 (All) High lift devices
      - 25.349 (All) Rolling conditions
      - 25.351 (All) Yaw manoeuvre conditions
      - 25.367 (All) Unsymmetrical loads due to engine failure
      - 25.391 (All) Control surface loads: general
      - 25.427 (All) Unsymmetrical loads
      - 25.445 (All) Outboard fins
    - Plus for Navigation Lights Installation:
      - 25.1301 (a), (b) Function and installation
      - 25.1385 (All) Position light system installation
      - 25.1387 (All) Position light system dihedral angles
      - 25.1389 (All) Position light distribution and intensities



- 25.1391(All) Minimum intensities in the horizontal plane of forward and rear position lights
- 25.1393 (All) Minimum intensities in any vertical plane of forward and rear position lights
- 25.1395 (All) Maximum intensities in over-lapping beams of forward and rear position lights
- 25.1397 (All) Colour specifications
- Plus for Lightning Direct Effects (LDE):
  - 25.581 (All) Lightning protection
- Plus for Landing Gear:
  - 25.735 (f) Brakes and braking systems
- Plus for Stress:
  - 25.303 (All) Factor of safety
  - 25.305 (All) Strength and deformation
  - 25.307 (All) Proof of structure
  - 25.561 (All) General
  - 25.625 (All) Fitting factors
  - 25.631 (All) Bird strike damage
- Plus for Fatigue:
  - 25.571 (All) Damage-tolerance and fatigue evaluation of structure
- Plus for Airplane Flight Manual:
  - 25.1581 (a), (a1), (a2), (b), (d) General
  - 25.1583 (a) Operating limitations
  - 25.1585 (a) Operating procedures
  - 25.1587 (All) Performance information
- Plus for Safety:
  - 25.631 (All) Bird strike damage
  - 25.903 (d1) Engines
  - 25.905 (d) Propellers
  - 25.1309 (b), (d) Equipment, systems and installations
  - 25.1709 (All) System Safety; EWIS
- Plus for EWIS:
  - 25.1703 (a), (b), (d), (e) Function and Installation ; EWIS
  - 25.1705 (a) Systems and Functions; EWIS
  - 25.1707 (b), (l) System Separation; EWIS
  - 25.1711 (a), (c), (d), (e)Component identification; EWIS
  - 25.1713 (a), (c) Fire Protection; EWIS
  - 25.1715 (b) Electrical bonding and protection against static
  - 25.1717 (All) Circuit protective devices; EWIS
  - 25.1719 (All) Accessibility Provisions; EWIS
  - 25.1729 (-) Instructions for Continued Airworthiness; EWIS
- Plus for ICA:
  - 25.1529 (-)Instructions for Continued Airworthiness
- 
- CS25 Amendment 07, dated 21 21 October 2009:
  - Static Loads
    - 25.361 (All) Engine and auxiliary power unit torque



- Reversions:

The following reversions defined by the respective CRI F-01 “Flight in Icing Conditions” (Acceptable Means of Compliance) have been identified and accepted as part of the EASA certification.

- For Performance:

- FAR 25.21 (a), (b), (c), (d), (e), (f) Proof of compliance at Amdt 25-72
- FAR 25.101 (All) General at Amdt 25-92
- FAR 25.103 (All) Stalling speed at Amdt 25-0 (requirement modified with ESF IP F-2)
- FAR 25.105 (All) Takeoff at Amdt 25-92
- FAR 25.107 (All) Takeoff speeds at Amdt 25-92 (requirement modified with ESF IP F-2)
- FAR 25.109 (All) Accelerate-stop distance at Amdt 25-92
- FAR 25.111 (All) Takeoff path at Amdt 25-72 (requirement modified with ESF IP F-2)
- FAR 25.113 (All) Takeoff distance and takeoff run at Amdt 25-92
- FAR 25.115 (All) Takeoff flight path at Amdt 25-92
- FAR 25.117 (All) Climb: general at Amdt 25-0
- FAR 25.119 (All) Landing climb: All-engine-operating at Amdt 25-84 (requirement modified with ESF IP F-2)
- FAR 25.121 (All) Climb: One-engine-inoperative at Amdt 25-0 (requirement modified with ESF IP F-2)
- FAR 25.123 (All) En route flight paths at Amdt 25-0
- FAR 25.125 (All) Landing at Amdt 25-84 (requirement modified with ESF IP F-2)

- Plus for Handling Qualities:

- FAR 25.21 (a), (b), (c), (d), (e), (f) Proof of compliance at Amdt 25-72
- FAR 25.143 (All) General at Amdt 25-84 (requirement modified with ESF IP F-2)
- FAR 25.145 (All) Longitudinal control at Amdt 25-84 (requirement modified with ESF IP F-2)
- FAR 25.147 (All) Directional and lateral control at Amdt 25-72 (requirement modified with ESF IP F-2)
- FAR 25.149 (All) Minimum control speed at Amdt 25-84 (requirement modified with ESF IP F-2)
- FAR 25.161 (All) Trim. at Amdt 25-38 (requirement modified with ESF IP F-2)
- FAR 25.171 General. (All) at Amdt 25-7
- FAR 25.173 Static longitudinal stability (All) at Amdt 25-7
- FAR 25.175 Demonstration of static longitudinal stability (All) at Amdt 25-7 (requirement modified with ESF IP F-2)
- FAR 25.177 Static directional and lateral stability (All) at Amdt 25-72 (requirement modified with ESF IP F-2)
- FAR 25.181 (All) Dynamic stability at Amdt 25-72 (requirement modified with ESF IP F-2)
- FAR 25.201 (All) Stall demonstration at Amdt 25-84 (requirement modified with ESF IP F-2)
- FAR 25.203 (All) Stall characteristics at Amdt 25-84



- FAR 25.207 (All) Stall warning at Amdt 25-42 (requirement modified with ESF IP F-2).
- FAR 25.231 (All) Longitudinal stability and control at Amdt 25-0
- FAR 25.233 (All) Directional stability and control. at Amdt 25-42 (requirement modified with ESF IP F-2)
- FAR 25.235 (All) Taxiing condition at Amdt 25-0
- FAR 25.237 (All) Wind velocities at Amdt 25-42 (requirement modified with ESF IP F-2)
- FAR 25.251 (All) Vibration and buffeting at Amdt 25-77
- FAR 25.253 (All) High-speed characteristics at Amdt 25-84
- FAR 25.255 (All) Out-of-trim characteristics at Amdt 25-42
- Plus for Icing:
  - FAR 25.1419 (a) Ice protection at Amdt 25-72
- Plus for Flight Controls:
  - FAR 25.1301 (d) Function and installation at Amdt 25-0

The validity of this justification must be reassessed in case of any subsequent type design change, modification, or repair to ensure the level of safety of the C-295FW is maintained.

4.3 Certification basis revised for major significant modifications DC10278, DC10280, DC10281, DC10282, DC10283, DC10284, DC10285, DC10286, DC10288, DC10289, DC10290, DC10291, DC10310, DC10415, DC10416, DC10417, DC10418, DC10419, DC10420, DC10421, DC10422, DC10423, DC10424, DC10426, DC10428, DC10429, DC10450, DC10451 and DC10293.

- The certification basis is that of the C-295 amended by the following:
  - CS 25, Amendment 15, dated 23 July 2014
    - For Cockpit system (cockpit arrangement and human factors):
      - 25.207 (a), (b) Stall warning
      - 25.677 (b) Trim Systems
      - 25.699 (a), (b) Lift and drag device indicator
      - 25.703 (a), (b4) Take-off warning system
      - 25.729 (e2), (e4), (e7) Retracting mechanism
      - 25.735 (h) Brakes and braking systems
      - 25.771 (a), (c), (e) Pilot compartment
      - 25.773 (a2) Pilot compartment view
      - 25.777 (a), (b), (c) Cockpit controls
      - 25.841 (b5), (b6) Pressurized cabins
      - 25.843 (b3) Tests for pressurized cabins
      - 25.854 (a) Lavatory fire protection
      - 25.858 (a), (c) Cargo compartment fire detection systems
      - 25.1141 (f2i) Powerplant controls: general
      - 25.1155 (d) Reverse thrust and propeller pitch settings below the flight regime
      - 25.1203 (b2), (b3), (d) Fire-detector system
      - 25.1301 (a1), (a2), (a3) Function and installations
      - 25.1302 (All) Installed systems and equipment for use by the flight crew
      - 25.1303 (a), (b), (c1) Flight and navigation instruments
      - 25.1305 all except (a3), (a8), (c8), (d1), (d2), (d3), (f) Powerplant instruments
      - 25.1307 (d), (e) Miscellaneous equipment
      - 25.1321 (All) Arrangement and visibility



- 25.1322 (a2), (b1), (b2), (b3),(d2), (f) Flight Crew Alerting
- 25.1323 (f) Airspeed indicating system
- 25.1309 (a), (a1), (c) Equipment, system and installations
- 25.1325 (f) Static pressure systems
- 25.1326 (All) Pitot heat indication
- 25.1327 (a), (b) Direction Indicator
- 25.1329 (f), (i), (j) Flight Guidance System
- 25.1331 (a3) Instruments using a power supply
- 25.1333 (b) Instrument systems
- 25.1337 (b1, (e) Powerplant instruments
- 25.1351 (b5), (b6) General
- 25.1381 (All) Instrument lights
- 25.1419 (c) Ice protection
- 25.1435 (b1) Hydraulic System
- 25.1457 (d3) Cockpit voice recorders
- 25.1459 (a4) Flight recorders
- 25.1523 (All) Minimum flight crew
- 25.1543 (b) Instrument Markings
- 25.1545 (-) Airspeed limitation information
- 25.1549 (All) Powerplant instruments
- 25.1555 (All) Control markings
- Plus for Hardware:
  - 25.1309 (a), (a1), (a2), (b1), (b2), (b3), (c) Equipment, system and installations
- Plus for Structural Dynamics:
  - 25.1329 (g) Flight Guidance System
- Plus for Stress:
  - 25.303 (All) Factor of safety
  - 25.305 (All) Strength and deformation
  - 25.307 (All) Proof of structure
  - 25.365 (All) Pressurised compartment loads
  - 25.561 (All) General
  - 25.625 (All) Fitting factors
  - 25.631 (All) Bird strike damage
- Plus for Fatigue:
  - 25.571 (All) Damage-tolerance and fatigue evaluation of structure
- Plus for EMI & EMC, Lightning and HIRF:
  - 25.581 (All) Lightning protection
  - 25.899 (All) Electrical bonding and protection against static electricity
  - 25.1316 (All) System lightning protection
  - 25.1353 (a) Electrical equipment and installations
  - 25.1431 (c) Electronic equipment
- Plus for Airplane Flight Manual:
  - 25.1309 (c) Equipment, system and installations
  - 25.1501 (b) General
  - 25.1581 (All) General
  - 25.1583 (All) Operating limitations
  - 25.1585 (All) Operating procedures



- 25.1587 (All) Performance information
- Plus for Safety:
  - 25.671 (c) General (Control Systems)
  - 25.672 (c) Stability augmentation and automatic and power-operated systems
  - 25.734 (All) Protection against wheel and tyre failures
  - 25.903 (d1) Engines
  - 25.905 (d) Propellers
  - 25.1329 (b) Flight Guidance System
  - 25.1333 (b) Instrument systems
  - 25.1709 (a1), (a2),(b) System Safety; EWIS
  - 25.1725 (b) Powerplants; EWIS
  - 25.1309 (b1), (b2), (b3), (c) Equipment, system and installations
- Plus for Software:
  - 25.1309 (b1), (b2), (b3), (c) Equipment, system and installations
- Plus for Flight Controls System and Autopilot:
  - 25.671 (c) General (Control Systems)
  - 25.672 (All) Stability augmentation and automatic and power-operated systems
  - 25.677 (b) Trim Systems
  - 25.685 (a) Control System details
  - 25.699 (a) (b) Lift and drag device indicator
  - 25.703 (a), (b1), (b2), (b3), (b4) Take-off warning system
  - 25.1301 (a1), (a2), (a3) Function and installations
  - 25.1309 (a1), (c) Equipment, system and installations
  - 25.1329 (All) except (k), (b) and (m) Flight Guidance System
  - 25.1431 (a) Electronic equipment
- Plus for Avionics:
  - Displays and controls:
    - 25.207 (b) Stall warning
    - 25.677 (b) Trim Systems
    - 25.699 (a), (b) Lift and drag device indicator
    - 25.703 (a), (b4) Take-off warning system
    - 25.729 (e2), (e7) Retracting mechanism
    - 25.735 (h) Brakes and braking systems
    - 25.841 (b6), (b8) Pressurized cabins
    - 25.843 (b3) Tests for pressurized cabins
    - 25.854 (a) Lavatory fire protection
    - 25.858 (a), (c) Cargo compartment fire detection systems
    - 25.1141 (f2i) Powerplant controls: general
    - 25.1155 (d) Reverse thrust and propeller pitch settings below the flight regime
    - 25.1203 (b2), (b3) Fire-detector system
    - 25.1301 (a1), (a2), (a3) Function and installations
    - 25.1303 (b5), (c1) Flight and navigation instruments
    - 25.1305 (All) except (a3), (a8), (c8), (d1), (d2), (d3), (f) Powerplant instruments
    - 25.1307 (c) Miscellaneous equipment



- 25.1322 (a1), (a3), (b1), (b2), (b3), (c1), (c2), (c3), (d1), (d2),(e1) Flight Crew Alerting
- 25.1325 (f) Static pressure systems
- 25.1326 (All) Pitot heat indication
- 25.1331 (a1), (a2), (b) Instruments using a power supply
- 25.1337 (b1) Powerplant instruments
- 25.1419 (c) Ice protection
- 25.1435 (b1) Hydraulic System
- 25.1459 (All) Flight recorders
- 25.1549 (a), (c),(d) Powerplant instruments
- 25.1431 (a), (d) Electronic equipment
- 25.1309 (a1), (a2), (c) Equipment, system and installations
- Communication:
  - 25.1301 (a1), (a2), (a3) Function and installations
  - 25.1307 (c), (d) Miscellaneous equipment
  - 25.1322 (c1), (d2) Flight Crew Alerting
  - 25.1457 (All) Cockpit voice recorders
  - 25.1431 (a), (d) Electronic equipment
  - 25.1309 (a1), (a2), (c) Equipment, system and installations
- Navigation:
  - 25.1301 (a1), (a2), (a3) Function and installations
  - 25.1303 (a1), (b1-b6) (c1) Flight and navigation instruments
  - 25.1307 (c), (e) Miscellaneous equipment
  - 25.1309 (a1), (a2), (c) Equipment, system and installations
  - 25.1323 (a), (c), (f), (g), (h) Airspeed indicating system
  - 25.1325 (a), (c1), (c2), (d), (e), (f) Static pressure systems
  - 25.1327 (a), (c) Direction Indicator
  - 25.1331 (a3), (b) Instruments using a power supply
  - 25.1333 (All) Instrument systems
  - 25.1431 (a), (d) Electronic equipment
- Surveillance:
  - 25.1301 (a1), (a2), (a3) Function and installations
  - 25.1303 (b5) Flight and navigation instruments
  - 25.1307 (c) Miscellaneous equipment
  - 25.1309 (a1), (a2), (c) Equipment, system and installations
  - 25.1331 (a3), (b) Instruments using a power supply
  - 25.1333 (a) Instrument systems
  - 25.1431 (a), (d) Electronic equipment
- Plus for Flight Management System:
  - 25.1301 (a1) Function and installations
  - 25.1309 (a1), (c) Equipment, system and installations
- Plus for Antennas:
  - 25.1309 (a1),(a2) Equipment, system and installations
  - 25.1431 (a) Electronic equipment
- Plus for Power Plant:
  - 25.1155 (d) Reverse thrust and propeller pitch settings below the flight regime
  - 25.1301 (a1) Function and installations
  - 25.1305 (a3), (a4), (a5), (a6), (c1-c3), (c6), (c7),(e1), (e2) Powerplant instruments



- 25.1337 (d), (e) Powerplant instruments
- 25.1549 (All) Powerplant instruments
- 25.1309 (c) Equipment, system and installations
- Plus for Doors:
  - 25.1301 (a1) Function and installations
  - 25.1309 (c) Equipment, system and installations
- Plus for Hydraulics:
  - 25.1301 (a1) Function and installations
  - 25.1435 (b1) Hydraulic System
  - 25.1309 (c) Equipment, system and installations
- Plus for Landing Gear:
  - 25.729 (e2-e7) Retracting mechanism
  - 25.735 (h) Brakes and braking systems
  - 25.1301 (a1),(a2),(a3) Function and installations
  - 25.1309 (a1),(a2), (c) Equipment, system and installations
- Plus for Fire Protection:
  - 25.854 (a) Lavatory fire protection
  - 25.858 (a) (c) Cargo compartment fire detection systems
  - 25.1203 (b2), (b3), (d) Fire-detector system
  - 25.1301 (a1) Function and installations
  - 25.1305 (a7), Powerplant instruments
  - 25.1309 (c) Equipment, system and installations
- Plus for IMA:
  - 25.1301 (a1), (a3) Function and installations
- Plus for Electrics:
  - 25.1301 (a1) Function and installations
  - 25.1303 (b4) Flight and navigation instruments
  - 25.1351 (b6) General
  - 25.1457 (d1) Cockpit voice recorders
  - 25.1459 (a3) Flight recorders
  - 25.1309 (c) Equipment, system and installations
- Plus for OMS:
  - 25.1301 (a1), (a2), (a3) Function and installations
- Plus for Environmental Control System:
  - 25.841 (b5), (b6), (b8) Pressurized cabins
  - 25.843 (b3) Tests for pressurized cabins
  - 25.1301 (a1), (a2), (a3) Function and installations
  - 25.1326 (All) Pitot heat indication
  - 25.1419 (c) Ice protection
  - 25.1309 (a1), (a2), (c) Equipment, system and installations
- Plus for EWIS:
  - 25.1701 (All) Definition
  - 25.1703 (a),(b),(d),(e) Function and installation EWIS
  - 25.1705 (a), (b) System and Functions EWIS
  - 25.1707 (All) System Separation EWIS
  - 25.1711 (All) Component identification; EWIS
  - 25.1713 (a), (c) Fire protection; EWIS





- 25.1715 (All) Electrical bonding and protection against static electricity; EWIS
- 25.1717 (All) Circuit protection devices; EWIS
- 25.1719 (All) Accessibility Provisions; EWIS
- 25.1721(All) Protection of EWIS
- Plus for FUEL:
  - 25.961 (a) Fuel system hot weather operation
  - 25.1141 (f2i), (f2ii) Powerplant controls: general
  - 25.1301 (a1) Function and installations
  - 25.1305 (a1), (a2i), (a2ii), (a2iii), (a2iv) Powerplant instruments
  - 25.1337 (b1), (b2), (b3) Powerplant instruments
  - 25.1527 (All) Ambient air temperature and operating altitude
  - 25.1309 (c) Equipment, system and installations
- Plus for ICA:
  - 25.1529 (-) Instructions for Continued Airworthiness
  - 25.1729 (-) Instructions for Continued Airworthiness; EWIS
- CS 25, Amendment 17, dated 15 July 2015
  - HIRF elect to comply:
    - 25.1317 (All) High-intensity Radiated Fields (HIRF) Protection
- Reversion:
 

The following reversion from the defined certification basis has been accepted:

  - Certification Specification 25, Amendment 3, dated 19 September 2007:
    - Doors:
      - CS 25.783 (e) Doors
- Plus Airworthiness Requirements CS-ACNS, Certification Specification ACNS Initial Issue, dated 17 December 2013
  - CS-ACNS Book 1 Subpart B Section 1 - Voice Channel Spacing (VCS) (8.33 KHZ).
  - CS-ACNS Book 1 Subpart B Section 2 - Data Link Services.
  - CS-ACNS Book 1 Subpart D Section 2 - Mode S Elementary Surveillance.
  - CS-ACNS Book 1 Subpart D Section 3 - Mode S Enhanced Surveillance.
  - CS-ACNS Book 1 Subpart D Section 4 - 1090 MHz Extended Squitter ADS-B Out.
  - CS-ACNS Book 1 Subpart E Section 1 - Terrain Awareness And Warning System (TAWS).
  - For Safety :
    - CS ACNS.B.VCS.025
    - CS ACNS.B.VCS.030
    - CS ACNS.B.DLS.B1.030
    - CS ACNS.B.DLS.B1.035
    - CS ACNS.D.EHS.020
    - CS ACNS.D.EHS.025
    - CS ACNS.D.ADSB.100 (a1-a18), (b)
    - CS ACNS.D.ADSB.105 (a)
    - CS ACNS.E.TAWS.040 (a), (b), (c)
    - CS ACNS.E.TAWS.045
  - Plus for Cockpit system (cockpit arrangement and human factors):
    - CS ACNS.B.VCS.040 (a), (b), (c)
    - CS ACNS.B.DLS.B1.005



- CS ACNS.B.DLS.B1.010 (a1-a7)
- CS ACNS.D.ELS.030 (a1-a8)
- CS ACNS.D.ADSB.090 (a), (b)
- CS ACNS.E.TAWS.025 (a), (b)
- CS ACNS.E.TAWS.030 (a), (b1-b6), (c), (d), (e)
- CS ACNS.E.TAWS.035 (a), (b), (c), (d), (e), (f)
- CS ACNS.E.TAWS.075
- CS ACNS.E.TAWS.080 (a1-a5)
- Plus for Antenna:
  - CS ACNS.D.ELS.060 (a), (b)
  - CS ACNS.D. ADSB.045
- Plus for Flight Management System:
  - CS ACNS.E.TAWS.010
- Plus for Avionics:
  - For Communications:
    - CS ACNS.B.VCS.010 (a), (b)
    - CS ACNS.B.VCS.020 (a), (b), (c), (d)
    - CS ACNS.B.VCS.040 (a), (b), (c)
    - CS ACNS.B.DLS.B1.005
    - CS ACNS.B.DLS.B1.010 (a1-a7), (b)
    - CS ACNS.B.DLS.B1.020 (a), (b), (c), (d)
    - CS ACNS.B.DLS.B1.025
    - CS ACNS.B.DLS.B1.040
    - CS ACNS.B.DLS.B1.050
    - CS ACNS.B.DLS.B1.055
    - CS ACNS.B.DLS.B1.060
    - CS ACNS.B.DLS.B1.070
    - CS ACNS.B.DLS.B1.075
    - CS ACNS.B.DLS.B1.080
    - CS ACNS.B.DLS.B1.085
    - CS ACNS.B.DLS.B1.090
    - CS ACNS.B.DLS.B1.095
    - CS ACNS.B.DLS.B1.100
    - CS ACNS.B.DLS.B1.105
    - CS ACNS.B.DLS.B1.110
    - CS ACNS.B.DLS.B1.115
    - CS ACNS.B.DLS.B1.120
    - CS ACNS.B.DLS.B1.125
    - CS ACNS.E.TAWS.075
  - Plus for Display and Controls:
    - CS ACNS.B.VCS.040 (c)
    - CS ACNS.B.DLS.B1.005
    - CS ACNS.B.DLS.B1.010 (a1)
    - CS ACNS.D.ELS.030 (a4), (a6)
    - CS ACNS.D.ADSB.090 (b)
    - CS ACNS.E.TAWS.035 (a), (b), (c), (f)
    - CS ACNS.E.TAWS.025 (a), (b)
    - CS ACNS.E.TAWS.030 (b4), (c)



- CS ACNS.E.TAWS.060 (c), (d), (f)
- CS ACNS.E.TAWS.070 (a), (b), (c)
- Plus for Navigation:
  - CS ACNS.D.ELS.025 (a), (b), (c)
  - CS ACNS.D. ADSB.025 (a), (c)
  - CS ACNS.D.ADSB.070 (a), (b), (c)
  - CS ACNS.D.ADSB.085 (a), (b)
  - CS ACNS.D.ADSB.110
  - CS ACNS.E.TAWS.010
  - CS ACNS.E.TAWS.060 (a), (e)
- Plus for Surveillance:
  - CS ACNS.D.ELS.010 (a), (b), (c)
  - CS ACNS.D.ELS.015 (a1-a10)
  - CS ACNS.D.ELS.020 (a), (b)
  - CS ACNS.D.ELS.025 (c)
  - CS ACNS.D.ELS.030 (a1-a8), (b)
  - CS ACNS.D.ELS.040
  - CS ACNS.D.ELS.045
  - CS ACNS.D.ELS.055
  - CS ACNS.D.ELS.060 (a), (b)
  - CS ACNS.D.ELS.065
  - CS ACNS.D.EHS.010
  - CS ACNS.D.EHS.015 (a1-a9), (b), (c)
  - CS ACNS.D.ADSB.020 (a), (b)
  - CS ACNS.D. ADSB.025 (b)
  - CS ACNS.D.ADSB.030
  - CS ACNS.D. ADSB.035
  - CS ACNS.D. ADSB.040
  - CS ACNS.D. ADSB.045
  - CS ACNS.D.ADSB.050
  - CS ACNS.D.ADSB.060 (a), (b)
  - CS ACNS.D.ADSB.070 (a), (b), (c)
  - CS ACNS.D.ADSB.080
  - CS ACNS.D.ADSB.085 (a), (b)
  - CS ACNS.D.ADSB.090 (a), (b)
  - CS ACNS.D.ADSB.110
  - CS ACNS.D.ADSB.115
  - CS ACNS.D.ADSB.120
  - CS ACNS.E.TAWS.005
  - CS ACNS.E.TAWS.010
  - CS ACNS.E.TAWS.015 (a), (b), (c), (d)
  - CS ACNS.E.TAWS.020 (a), (b)
  - CS ACNS.E.TAWS.025 (a), (b)
  - CS ACNS.E.TAWS.030 (b1-b6), (c), (e)
  - CS ACNS.E.TAWS.035 (a), (b), (c), (d), (e), (f)
  - CS ACNS.E.TAWS.050
  - CS ACNS.E.TAWS.055 (a), (b)
  - CS ACNS.E.TAWS.060 (a), (c), (d), (f)



- CS ACNS.E.TAWS.070 (a), (b), (c)
- CS ACNS.E.TAWS.075
- CS ACNS.E.TAWS.080 (a1-a5)

## 5. Special Conditions

### 5.1 Original Special Conditions part of Certification Basis

SC-F-1 “Effect of external radiation over aircraft systems”

SC-E-2 “Power Control Automatic System”

SC-H-01 “Enhanced Airworthiness Programme for Aeroplane Systems – ICA on EWIS”

### 5.2 Additional Special Conditions for C-295FW (Commercial designation only)

CRI F-05 “Security Protection of Aircraft Systems and Networks”

CRI F-06 “Flight Recorders and Data Link Recording”

CRI F-25 “Non-rechargeable Lithium Battery Installations”

## 6. Exemptions

Exemption to FAR 25.571(e)(1), granted by DGAC-ES on 29 October 1998.

## 7. Deviations

### 7.1 Deviations for C-295FW (Commercial designation only):

CRI F-26 “Mode-S and ADSB-out Extended Squitter Installation”

CRI F-27 “Compliance with CS25.1322, Amendment 15”

## 8. Equivalent Safety Findings

### 8.1 Original Equivalent Safety Findings part of Certification Basis:

In relation with the regulation 14 CFR Section 25.1149: Propeller speed and pitch controls.

Use the stall speed to 1-g to show compliance with the corresponding paragraphs of 14 CFR Part 25 instead of “Minimum Speed” in stall.

### 8.2 Additional Equivalent Safety Findings for C-295FW (Commercial designation only):

IP F-2 “Use of 1-g Stall Speeds Instead of Minimum Speed in the Stall as a Basis for Determining Compliance”

CRI E-01 “Green Arc for Powerplant Instrument”

CRI F-19 “FOB Miscompare”

## 9. Elect to comply

Hereafter are listed regulations that TC Holder elects to comply for the major not significant modifications (See Note 5.2).

### 9.1 For modification DC10736A elect to comply:

- CS 25 Amendment 16, dated 12 March 2015:
  - For Airplane Flight Manual:
    - 25.1581 (a), (a1), (a2), (b), (d) General
    - 25.1583 (a) (c) Operating limitations

### 9.2 For modifications DC10738A, DC10740A, DC10741A, DC10735A elect to comply:

- CS 25 Amendment 16, dated 12 March 2015:
  - For ICA:
    - 25.1529 (-) Instructions for Continued Airworthiness

### 9.3 For modifications DC10287, DC10550, DC10967 elect to comply:

- CS 25 Amendment 15, dated 23 July 2014:
  - For Stress:
    - 25.303 (All) Factor of safety
    - 25.305 (All) Strength and deformation
    - 25.307 (All) Proof of structure



- 25.365 (All) Pressurized compartment loads
- 25.561 (All) General
- 25.625 (All) Fitting factors
- 25.631 (All) Bird strike damage
- Plus for Fatigue:
  - 25.571 (All) Damage-tolerance and fatigue evaluation of structure
- Plus for Electric Analysis:
  - 25.869 (a1) (a2) (a3) Fire protection: systems
  - 25.1163 (a), (b), (c) Powerplant accessories
  - 25.1301 (a1) (a2) (a3) Function and installations
  - 25.1307 (c) Miscellaneous equipment
  - 25.1309 (a1), (a2), (c) Equipment, system and installations
  - 25.1310 (All) Power source capacity and distribution
  - 25.1315 (All) Negative acceleration
  - 25.1351 (All) except (c) General
  - 25.1353 (b), (c1), (c2), (c3), (c4), Electrical equipment and installations
  - 25.1355 (c) Distribution system
  - 25.1357 (All) except (f) Circuit protective devices
  - 25.1360 (All) Precautions against injury
  - 25.1362 (-) Electrical supplies for emergency conditions
  - 25.1363 (All) Electrical system tests
  - 25.1431 (a) Electronic equipment
  - 25.1461 (b), (c) Equipment containing high-energy rotor
- Plus for Power Plant:
  - 25.901 (b1) Engines
  - 25.1041 General
  - 25.1163 (a), (b) Powerplant accessories
- Plus for EMI & EMC, Lightning and HIRF:
  - 25.1316 (All) System lightning protection
  - 25.1353 (a) Electrical equipment and installations
  - 25.1431 (c) Electronic equipment
- Plus for Safety:
  - 25.734 Protection against wheel and tyre failures
  - 25.903 (d1) Engines
  - 25.905 (d) Propellers
  - 25.1309 (b1), (b2), (b3) Equipment, system and installations
- Plus for Airplane Flight Manual:
  - 25.1581 (All) General
  - 25.1585 (All) Operating procedures
- CS 25, Amendment 17, dated 15 July 2015:
  - HIRF:
    - 25.1317 (All) High-intensity Radiated Fields (HIRF) Protection

#### 9.4 For modification DC10402 elect to comply:

- CS 25 Amendment 15, dated 23 July 2014:
  - For Safety:
    - 25.734 Protection against wheel and tyre failures
    - 25.903 (d1) Engines
    - 25.905 (d) Propellers



- 25.1309 (b1), (b2), (b3) Equipment, system and installations
- Plus for Cockpit system (cockpit arrangement and human factors):
  - 25.1309 (c) Equipment, system and installations
- Plus for ECS:
  - 25.831 (d) Ventilation
  - 25.1301 (a1) (a2) (a3) Function and installations
  - 25.1309 (a1), (a2), (c) Equipment, system and installations
  - 25.1461 (All) Equipment containing high-energy rotors
- Plus for EMI & EMC, Lightning and HIRF:
  - 25.1316 (All) System lightning protection
  - 25.1353 (a) Electrical equipment and installations
  - 25.1431 (c) Electronic equipment
- Plus for Airplane Flight Manual:
  - 25.1501 (b) General Operating Limitations And Information
  - 25.1581 (All) General
  - 25.1583 (All) Operating limitations
  - 25.1585 (All) Operating procedures
- Plus for ICA:
  - 25.1529 (-) Instructions for Continued Airworthiness
  - 25.1729 (-) Instructions for Continued Airworthiness; EWIS
- CS 25, Amendment 17, dated 15 July 2015
  - For HIRF:
    - 25.1317 (All) High-intensity Radiated Fields (HIRF) Protection

#### 9.5 For modification DC10656 elect to comply:

- CS 25 Amendment 15, dated 23 July 2014:
  - For Fire Protection:
    - 25.854 (All) Lavatory fire protection
    - 25.855 (h2), (i), Cargo or baggage compartments
    - 25.858 (a), (b), (d) Cargo or baggage compartment smoke or fire detection systems
    - 25.863 (All) Flammable fluid fire protection
    - 25.1301 (a1), (a2), (a3) Function and Installation
    - 25.1309 (a1) Equipment, systems and installations
  - Plus for Safety:
    - 25.734 Protection against wheel and tyre failures
    - 25.903 (d1) Engines
    - 25.905 (d) Propellers
    - 25.1309 (b1), (b2), (b3), (c), Equipment, systems and installations
  - Plus for EMI & EMC, Lightning and HIRF:
    - 25.1353 (a) Electrical equipment and installations
    - 25.1316 (All) System lightning protection
    - 25.1431 (c) Electronic equipment
- CS 25, Amendment 17, dated 15 July 2015
  - For HIRF:
    - 25.1317 (All) High-intensity Radiated Fields (HIRF) Protection

#### 9.6 For modification DC10998-E elect to comply:



- CS 25 Amendment 15, dated 23 July 2014:
  - For Flight Control System:
    - 25.1329 (a), (i) Flight Guidance System
    - 25.1705 (a) System and Functions EWIS
  - Plus for Avionics (Displays and Controls):
    - 25.1301 (a1) Function and installations
    - 25.1459 (e) Flight recorders
    - 25.1705 (a) System and Functions EWIS
  - Plus for EWIS:
    - 25.1701 (All) Definition
    - 25.1703 (a), (b), (d), (e) Function and installation EWIS
    - 25.1705 (All) System and Functions EWIS
    - 25.1707 (All) System Separation EWIS
    - 25.1711 (All) Component identification; EWIS
    - 25.1713 (a), (c) Fire protection; EWIS
    - 25.1715 (All) Electrical bonding and protection against static electricity; EWIS
    - 25.1717 (All) Circuit protection devices; EWIS
    - 25.1719 (All) Accessibility Provisions; EWIS
    - 25.1721 (All) Protection of EWIS
  - Plus for Cockpit system (cockpit arrangement and human factors):
    - 25.771 (a), (c) Pilot compartment
    - 25.777 (a), (b), (c) Cockpit controls
    - 25.1301 (a1), (a2) Function and installations
    - 25.1302 (a), (b), (c), (d) Installed systems and equipment for use by the flight crew
    - 25.1321 (a) Arrangement and visibility
    - 25.1381 (a), (b) Instrument lights
    - 25.1523 (a), (b), (c) Minimum flight crew
    - 25.1555 (a) Control markings
  - Plus for EMC:
    - 25.1707 (b) System Separation EWIS
    - 25.1715 (a) Electrical bonding and protection against static

#### 9.7 For modification DC10943-E elect to comply:

- CS 25 Amendment 15, dated 23 July 2014:
  - For Fire protection:
    - 25.561 (c1)(i) General
    - 25.851 (a1), (a2), (a3), (a5), (a6), (a7), (a8), (c) Fire extinguishers
    - 25.1301 (a1),(a2), (a3) Function and installations Function and installation
    - 25.1309 (a1) Equipment, system and installations

#### 9.8 For modification DC11090-E elect to comply:

- CS 25 Amendment 15, dated 23 July 2014:
  - For Flight Control System:
    - 25.699 (a) Lift and drag device indicator
    - 25.703 (a1) Take-off warning system
- CS 25, Amendment 17, dated 15 July 2015
  - For HIRF:
    - 25.1317 (All) High-intensity Radiated Fields (HIRF) Protection



9.9 For modification DC11174-E, DC10890-E, DC11301-E elect to comply:

- CS 25, Amendment 17, dated 15 July 2015
  - For HIRF:
    - 25.1317 (All) High-intensity Radiated Fields (HIRF) Protection

9.10 For modification DC10907-E elect to comply:

- CS 25 Amendment 15, dated 23 July 2014:
  - For Lightning Direct Effects (LDE):
    - 25.899 (All) Electrical bonding and protection against static electricity
- CS 25, Amendment 17, dated 15 July 2015
  - For HIRF:
    - 25.1317 (All) High-intensity Radiated Fields (HIRF) Protection
- For Powerplant
  - FAR 25.901 (b1), (b4) Installation amdt 126

9.11 For modification DC10973-E and DC10974-E, DC11678-E, DC11680A-E elect to comply:

- CS 25 Amendment 15, dated 23 July 2014:
  - For Flight Control System:
    - 25.1301 (a1) Function and installations
    - 25.1329 (c), (d), (e), (g) Flight Guidance System
  - Plus for Cockpit system (cockpit arrangement and human factors):
    - 25.771 (a) Pilot compartment
    - 25.773 (a2) Pilot compartment view
    - 25.777 (a),(b),(c) Cockpit controls
    - 25.1301 (a1) Function and installations
    - 25.1302 (a),(b),(c),(d) Installed systems and equipment for use by the flight crew
    - 25.1309 (c) Equipment, system and installations
    - 25.1322 (b),(e1),(f) Flight Crew Alerting
    - 25.1381 (a),(b) Instrument lights
    - 25.1523 (a),(b),(c) Minimum flight crew
    - 25.1555 (a) Control markings
  - Plus for Flight Management System:
    - 25.1301 (a1) Function and installations
  - Plus for IMA:
    - 25.1301 (a1), (a3) Function and installations
  - Plus for EWIS:
    - 25.1701 (All) Definition
    - 25.1703 (a), (b), (d), (e) Function and installation EWIS
    - 25.1705 (All) System and Functions EWIS
    - 25.1707 (All) System Separation EWIS
    - 25.1711 (All) Component identification; EWIS
    - 25.1713 (a), (c) Fire protection; EWIS
    - 25.1715 (All) Electrical bonding and protection against static electricity; EWIS
    - 25.1717 - Circuit protection devices; EWIS
    - 25.1719 - Accessibility Provisions; EWIS
    - 25.1721 (All) Protection of EWIS
  - Plus for HW Assurance:
    - 25.1309 (All) Equipment, system and installations





- Plus for SW Assurance:
  - 25.1309 (b) Equipment, system and installations
- Plus for Safety:
  - 25.1309 (b), (c) Equipment, system and installations
  - 25.1333 (b) Instrument systems
- Plus for Airplane Flight Manual:
  - 25.1501 (b) General
  - 25.1581 (a1), (a2), (b), (d)
  - 25.1583 (a) Operating limitations
  - 25.1585 (a) Operating procedures
- Plus for EMC:
  - 25.1707 (b) System Separation EWIS
  - 25.1715 (a) Electrical bonding and protection against static
- Plus for Avionics
  - Navigation:
    - 25.1301 (a1), (a2), (a3) Function and installations
    - 25.1303 (b4), (b5), (b6) Flight and navigation instruments
    - 25.1307 (c) Miscellaneous equipment
    - 25.1309 (a1), (c) Equipment, system and installations
    - 25.1327 (a), (c) Direction Indicator
    - 25.1331 (a3), (b) Instruments using a power supply
    - 25.1333 (a), (c) Instrument systems
    - 25.1431 (a), (d) Electronic equipment
    - 25.1705 (a),(b)(7), (b)(16) System and Functions EWIS
  - Display and Control:
    - 25.1301 (a1) Function and installations
    - 25.1303 (b5) Flight and navigation instruments
    - 25.1309 (c) Equipment, system and installations
    - 25.1322 (a1), (a3), (b), (c), (d1), (e1) Flight Crew Alerting
    - 25.1459 (a1), (e) Flight recorders
  - Surveillance:
    - 25.1301 (a1), (a2), (a3) Function and installations
    - 25.1307 (c) Miscellaneous equipment
    - 25.1309 (a1), (c) Equipment, system and installations
    - 25.1431 (a), (d) Electronic equipment
    - 25.1705 (a),(b)(16) System and Functions EWIS
- CS 25, Amendment 17, dated 15 July 2015:
  - For HIRF:
    - 25.1317 (All) High-intensity Radiated Fields (HIRF) Protection
- Plus Airworthiness Requirements CS-ACNS, Certification Specification ACNS Initial Issue, dated 17 December 2013:
  - CS-ACNS Book 1 Subpart D Section 2 - Mode S Elementary Surveillance.
  - CS-ACNS Book 1 Subpart D Section 3 - Mode S Enhanced Surveillance.
  - CS-ACNS Book 1 Subpart D Section 4 - 1090 MHz Extended Squitter ADS-B Out.
  - CS-ACNS Book 1 Subpart E Section 1 - Terrain Awareness And Warning System (TAWS).
    - Surveillance:
      - ACNS.D. EHS.015 (a),(b),(c)



- ACNS.E. TAWS.010 (-)
- ACNS.D. ADSB.020 (a), (b)
- ACNS.D. ADSB.025 (b)
- ACNS.D. ADSB.035 (All)
- ACNS.D.ADSB.055 (All)
- ACNS.D.ADSB.060 (a), (b)
- ACNS.D.ADSB.070 (a), (b), (c)
- ACNS.D.ADSB.080 (All)
- ACNS.D.ADSB.085 (a), (b)
- ACNS.D.ADSB.090 (a), (b)
- ACNS.D.ADSB.110 (All)
- ACNS.D.ELS.015 (a)
- ACNS.D.ELS.020 (a), (b)
- ACNS.D.ELS.025 (c)
- ACNS.D.ELS.030 (a1), (a2), (a3), (a4), (a5), (a6), (a7), (a8), (b)
- ACNS.D.ELS.050 (All)
- ACNS.D.ELS.055 (All)
- Display and Control:
  - ACNS.D.ELS.030 (a4), (a6)
  - ACNS.D.ADSB.090 (b)
- Navigation:
  - ACNS.D. ADSB.025 (a)

9.12 For modification DC10915-E, DC11448S-E and DC11571A-E elect to comply:

- CS 25 Amendment 15, dated 23 July 2014:
  - For Flight Control System:
    - 25.1301 (a1) Function and installations
  - Plus for Cockpit system (cockpit arrangement and human factors):
    - 25.771 (a) Pilot compartment
    - 25.773 (a2) Pilot compartment view
    - 25.777 (a), (b), (c) Cockpit controls
    - 25.1301 (a1), (a2) Function and installations
    - 25.1302 (a), (b), (c), (d) Installed systems and equipment for use by the flight crew
    - 25.1309 (b), (c) Equipment, system and installations
    - 25.1322 (b), (e1), (f) Flight Crew Alerting
    - 25.1381 (a), (b) Instrument lights
    - 25.1523 (a), (b), (c) Minimum flight crew
    - 25.1555 (a) Control markings
  - Plus for IMA:
    - 25.1301 (a1), (a3) Function and installations
  - Plus for Electrical Analysis:
    - 25.1423 (a1), (a2) Public address system
    - 25.1431 (b) Electronic equipment
  - Plus for EWIS:
    - 25.1701 all Definition
    - 25.1703 (a), (b), (d), (e) Function and installation EWIS
    - 25.1705 (a) System and Functions EWIS
    - 25.1707 (All) System Separation EWIS



- 25.1711 (All) Component identification; EWIS
- 25.1713 (a), (c) Fire protection; EWIS
- 25.1715 (All) Electrical bonding and protection against static electricity; EWIS
- 25.1717 (-) Circuit protection devices; EWIS
- 25.1719 (-) Accessibility Provisions; EWIS
- 25.1721 (All) Protection of EWIS
- Plus for OMS:
  - 25.1301 (a1), (a2), (a3) Function and installations
- Plus for Safety:
  - 25.671 (c) General (Control Systems)
  - 25.672 (c) Stability augmentation and automatic and power-operated systems
  - 25.1309 (b),(c) Equipment, system and installations
  - 25.1329 (b) Flight Guidance System
  - SC F-25 (5), (6)
- Plus for Software Assurance:
  - 25.1309 (b) Equipment, system and installations
  - 25.1301 (a1) Function and installations
- Plus for Airplane Flight Manual:
  - 25.1501 (b) General
  - 25.1581 (All) General
  - 25.1583 (All) Operating limitations
  - 25.1585 (a), (a2) Operating procedures
- Plus for Cyber Security:
  - SC F-05 (a), (b),(c)
- Plus for Flight Management System:
  - 25.1301 (a1) Function and installations
  - 25.1309 (a1) Equipment, system and installations
- Plus for EMC:
  - 25.1707 (b) System Separation EWIS
  - 25.1715 (a) Electrical bonding and protection against static electricity; EWIS
- Plus for Avionics
  - Navigation:
    - 25.1301 (a1) Function and installations
    - 25.1309 (c) Equipment, system and installations
    - 25.1323 (a), (c), (h) Airspeed indicating system
    - 25.1325 (a), (c1),(c2), (d), (e) Static pressure systems
    - 25.1705 (a) System and Functions EWIS
  - Display and Controls:
    - CS 25.1301 (a1), (a2) Function and installations
    - CS 25.1309 (a1), (b), (c) Equipment, system and installations
    - CS 25.1322 (a1), (a3), (b), (c), (d1), (e1) Flight Crew Alerting
    - 25.1705 (a) System and Functions EWIS
    - SC F-25 (1), (2), (3), (4), (5), (6)
  - Surveillance:
    - CS 25.1301 (a1) Function and installations



- CS 25.1459(e) Flight recorders
- 25.1705 (a) System and Functions EWIS
- SC F-25 (1), (2), (3), (4), (5), (6)
- Communication:
  - 25.1301 (a1), (a2), (a3), Function and installations
  - 25.1307 (c) Miscellaneous equipment
  - 25.1309 (a1) Equipment, system and installations
  - 25.1423 (c), (d), (e), (f) Public address system
  - 25.1431 (a), (d) Electronic equipment
  - SC F-25 (1), (2), (3), (4), (5), (6)
- CS 25, Amendment 17, dated 15 July 2015
  - For HIRF:
    - 25.1317 (All) High-intensity Radiated Fields (HIRF) Protection
- Plus Airworthiness Requirements CS-ACNS, Certification Specification ACNS Initial Issue, dated 17 December 2013:
  - CS-ACNS Book 1 Subpart E Section 1 - Terrain Awareness And Warning System (TAWS).
    - Surveillance:
      - ACNS.E.TAWS.010 -

9.13 For modification DC11416S-E, elect to comply:

- CS 25 Amendment 15, dated 23 July 2014:
  - For Stress:
    - 25.303 (All) Factor of safety
    - 25.305 (All) Strength and deformation
    - 25.307 (All) Proof of structure
    - 25.365 (All) Pressurised compartment loads
    - 25.561 (All) General
    - 25.619 (All) Special factors
    - 25.625 (All) Fitting factors
  - Plus for Fatigue:
    - 25.571 (a), (b) Damage-tolerance and fatigue evaluation of structure
  - For Cockpit system (cockpit arrangement and human factors):
    - 25.777 (a), (b), (c) Cockpit controls
    - 25.1301 (a1) Function and installations
    - 25.1302 (a), (b), (c), (d) Installed systems and equipment for use by the
    - 25.1381 (a), (b), Instrument lights
    - 25.1555 (a) Control markings
  - Plus for Antennas:
    - 25.1301 (a3) Function and installations
    - 25.1309 (a1) Equipment, system and installations
    - 25.1431 (a) Electronic equipment
  - Plus for EWIS:
    - 25.1701 (All) Definition
    - 25.1703 (a) (b), (d), (e) Function and installation EWIS
    - 25.1705 (a), (b16) System and Functions EWIS
    - 25.1707 (a), (b), (i), (j), (l) System Separation EWIS
    - 25.1711 (a), (c), (d), (e) Component identification; EWIS
    - 25.1713 (a), (c) Fire protection; EWIS



- 25.1719 (-) Accessibility Provisions; EWIS
- 25.1721 (All) Protection of EWIS
- Plus EMI & EMC and HIRF
  - 25.1353 (a) Electrical equipment and installations
  - 25.1431 (c) Electronic equipment
  - 25.1707 (b) System Separation EWIS
- Plus Lightning(LDE)
  - 25.581 (All) Lightning protection
  - 25.899 (All) Electrical bonding and protection against static electricity
- Plus for Airplane Flight Manual
  - 25.1581 (a), (a1), (a2), (b), (d) General
  - 25.1585 (a1), (a2) Operating procedures
- Plus for Safety:
  - SC F-25 (5), (6)
- Plus for Avionics:
  - Display and controls:
    - 25.1301 (a1) Function and installations
    - 25.1309 (c) Equipment, system and installations
    - 25.1322 (a1), (a3), (b), (c), (d1), (e1) Flight Crew Alerting
    - SC F-25 (3), (4), (5), (6)
  - Surveillance
    - 25.1301 (a1), (a2), (a3) Function and installations
    - 25.1309 (a1), (c) Equipment, system and installations
    - 25.1431 (a) Electronic equipment
    - 25.1705 (a), (b16) System and Functions EWIS
    - SC F-25 (1), (2), (3), (4), (5), (6)
  - Communications
    - SC F-25 (3), (4), (5), (6)

9.14 For modification DC10702-E, elect to comply:

- CS 25 Amendment 15, dated 23 July 2014:
  - For Airplane Flight Manual:
    - 25.1501 (b) General
    - 25.1581 (a1), (a2); (b), (d) General
    - 25.1583 (c) Operating limitations

9.15 For modification DC10877A elect to comply:

- CS 25 Amendment 16, dated 12 March 2015:
  - For Airplane Flight Manual:
    - 25.1581 (All) General
    - 25.1583 (All) Operating limitations
    - 25.1585 (All) Operating procedures
    - 25.1587 (All) Performance information
  - Plus for ICA:
    - 25.1529 (-) Instructions for Continued Airworthiness

9.16 For modification DC11714S-E elect to comply:

- CS 25 Amendment 15, dated 23 July 2014:
  - For Flight Management System:
    - 25.1301 (a2) Function and installations
  - Plus for IMA:
    - 25.1301 (a2) Function and installations



## 9.17 For modification DC11609S-E elect to comply:

- CS 25 Amendment 15, dated 23 July 2014:
  - For Cockpit system (cockpit arrangement and human factors):
    - 25.1322 (e) Flight Crew Alerting
  - Plus for Electric Analysis:
    - 25.1310 (a), (b) Power source capacity and distribution
    - 25.1351 (a), (d1), (d2) General
  - Plus for IMA:
    - 25.1301 (a2) Function and installations
  - Plus for OMS:
    - 25.1309 (a1) Equipment, systems and installations
  - Development Assurance
    - 25.1309 (b) Equipment, systems and installations
- For Power Plant
  - FAR 25.901 (a2), (a3) Installation amdt 126

## 10. Environmental Protection

ICAO Annex 16, Volume I (Noise), 3rd issue, November 1993.

ICAO Annex 16, Volume II (Fuel system ventilation and exhaust gas), 3rd issue, November 1993.

For more detail information refer to TCDSN A.186



### **III. Technical Characteristics and Operational Limitations**

#### **1. Type Design Definition**

C-295: Defined in TC-holder technical document number DT-5-ADG-99001 "Type Design Standard Model C-295"

C-295FW Variant (commercial designation): Defined in TC-holder technical document number TEA-5-DT-200100 "TYPE DESIGN STANDARD C-295FW", on the production assembly line starting with SN 188 and subsequent.

#### **2. Description**

A high wing, twin-engine turboprop aircraft equipped to carry cargo in a pressurized cabin and intended for short to medium transport routes.

#### **3. Equipment**

The basic required equipment as prescribed in the applicable EASA Regulation must be installed on the aircraft.

For model C-295, the approved equipment is related in the TC-holder document number DT-5-C-99-5005.

For C-295FW variant, the approved equipment is related in the TC-holder document number: TEA-5-DT-200289 "C-295FW Equipment List."

#### **4. Dimensions**

	C-295	C-295FW
Span	25. 81 m	27. 59 m
Length	24. 50 m	
Height	8. 66 m	
Wing Area	60 m <sup>2</sup>	

#### **5. Engines**

Two (2) Engines Pratt & Whitney of Canada

Model P&WC 127G, free turbine turboprop.

Power turbine / propeller gearing 16.6:1.

Engine Limits:

The Maximum Continuous and Take off Static Sea Level ratings at ISA:

Operation Condition	Max. Torque %	Max. ITT °C	Max. % NH	Max. % NP
Normal Take off NTO (Two engines operative) (5 minutes)	101	765 (3)	102.3	101
Take off (One engine inoperative) (5 minutes)	112	800	103.7	101
Transient (20 seconds)	125	840	104.3	120 (2)
Maximum continuous (1)	112	800	103.7	101



(1) Maximum continuous power; although authorized for non-limited periods, is for use in abnormal conditions (for instance Operations with one engine inoperative, important ice, accumulation over the structure, compliance with CTA requirements, or when the obstacles require a descent angle according to pilot decision).

(2) The corresponding transient limit is further restricted to five seconds.

(3) The value shown is an absolute maximum. The steady-state ITT limit for the existing ambient conditions to be observed in a normal take-off (two engine operation), must be obtained from the corresponding AFM.

#### 6. Auxiliary Power Unit

N/A

#### 7. Propellers

Two (2) Propellers Hamilton Standard, Model HSD 568F-5

Blades: Six (6)

Diameter: 3 932 mm (12.9 ft.)

#### 8. Fluids (Fuel, Oil, Additives, Hydraulics)

##### Fuel:

Designation	Specification
JP-8	MIL-T-83133
Jet A	ASTM D1655
Jet A-1	ASTM D1655
Jet B	ASTM D6615
JP-4	MIL-T-5624
JP-5	MIL-T-5624

##### Oil:

	C-295	C-295FW
Vol. (L)	Moment Arm (mm)	Moment Arm (mm)
23.02 litres/ engine tank	8 931	10 445
7.27 litres usable / engine tank	8 835	10 361

##### Hydraulic:

The approved Hydraulic fluids are MIL-H-5606 8(red) and MIL-H83282 (red).however, when the latter is used the lowest permissible ambient temperature is restricted to - 40°C.





## 9. Fluid Capacities

### - C-295 Usable Fuel:

Location		Volume (L)	Weight (Kg)	Moment (mm)	Arm
Right Wing	Main Tank	1 605	1 284	10 419	
	Aux Tank	2 161	2 029	10 487	
Left Wing	Main Tank	1 605	1 284	10 419	
	Aux Tank	2 161	2 029	10 487	
Total		8 532	7 626		

Fuel weight is based upon fuel density 0.80 Kg/litre

Pressure fuelling: maximum pressure for pressure fuelling is 50 psi.

### - C-295FW Variant Usable Fuel:

Location		Volume (L)	Weight (Kg)	Moment (mm)	Arm
Right Wing	Main Tank	1 695	1 440.5	11 943	
	Aux Tank	2 055	1 747	12 058	
Left Wing	Main Tank	1 695	1 440.5	11 943	
	Aux Tank	2 055	1747	12 058	
Total		7 500	6 375		

Fuel weights are based on a fuel density of 0.85 kg/litre

## 10. Airspeed Limits

### - C-295

Unless otherwise noted below, airspeeds are indicated airspeeds in knots:

- $V_{MO}$  (Maximum Operating)

Sea Level	245 Knots
7 000 feet	254 Knots
14 000 feet	245 knots
25 000 feet	200 knots

(Straight line variation between points)

- $V_A$  (Manoeuvring)

Sea Level to 25 000 feet: 190 Knots

- $V_{FE}$  (Maximum Flap Extended)

Take off, 10°	185 Knots
Approach, 15°	180 Knots
Landing, 23°	175 Knots

- $V_{LO} V_{LE}$  (Operations speeds of landing gear): 175 Knots

- $V_{LO} = V_{LE}$



## - C-295FW

Unless otherwise noted below, airspeeds are indicated airspeeds in KIAS:

- $V_{MO}$  (Maximum Operating)

Sea Level	246.4 KIAS
15300 feet	246.4 KIAS
25 000 feet	203.4 KIAS

(Straight line variation between points)

- $V_A$  (Manoeuvring)

Sea Level to 25 000 feet: 185 KIAS

- $V_{FE}$  (Maximum Flap Extended)

Take off, 10°	190 KIAS
Approach, 15°	185 KIAS
Landing, 23°	180 KIAS

- $V_{LO}, V_{LE}$  (Operations speeds of landing gear): 180 KIAS
- $V_{LO} = V_{LE}$

For other Speed Limits, see Section 2 of the appropriate “EASA approved” Aircraft Flight Manual, listed herein, for further definition.

## 11. Flight Envelope

Maximum Operating Altitude: 25 000 feet

## 12. Operating Limitations

## 12.1 Approved Operations

## - C-295

Day & night VFR and day & night IFR operations when appropriate equipment is installed and operating correctly.

## - C-295FW

This commercial variant is certified in the Transport Category and is eligible for the following kinds of operation when the appropriate instruments and equipment required by the airworthiness and/or operating regulations are installed and approved, and are in operable condition:

- Instrument (IFR).
- Night Flying.
- Carriage of cargo.
- Icing.



## 12.2 Other Limitations

### - C-295

Elevator: Up  $-25.0^{\circ}$  Down  $+12.5^{\circ}$   
 Normal Trim Tab: Up  $+0^{\circ}$  Down  $+12^{\circ}$   
 Emergency Trim Tab: Up  $0^{\circ}$  Down  $+12^{\circ}$   
 Elevator Balance Tab:  
 Up (for  $+12.5^{\circ}$  elevator)  $-2.2^{\circ}$   
 Down (for  $-25^{\circ}$  elevator)  $+7.7^{\circ}$

Rudder (See Note 5.1):  
 Right  $-19.0^{\circ}$  ( $-22^{\circ}$  in Expander Mode)  
 Left  $+12.0^{\circ}$  ( $+16.5^{\circ}$  in Expander Mode)  
 Rudder trim tab:  
 Right  $-5.0^{\circ}$  ( $-7^{\circ}$  in Standby trim)  
 Left  $+5^{\circ}$  ( $+7^{\circ}$  in Standby trim)  
 Rudder Balance Tab  
 (For nominal maximum deflection)  
 Right (for  $-19^{\circ}$  rudder)  $-7.7^{\circ}$   
 Left (for  $+12^{\circ}$  rudder)  $+2.4^{\circ}$

Ailerons (See Note 5.1)  
 Up  $-18^{\circ}$  Down  $+18^{\circ}$   
 Ailerons Trim Tabs Up  $-8.0^{\circ}$  Down  $+8.0^{\circ}$

Ailerons balance tabs  
 (for maximum deflection)  
 Trailing edge up for aileron  $0^{\circ}$ :  $+5^{\circ}$   
 Trailing edge down for aileron  $+18^{\circ}$ : up:  $-6.7^{\circ}$   
 Trailing edge up for aileron  $-18^{\circ}$  down:  $+16.7^{\circ}$

Flaps (inner and outer)  
 Cruise  $0.0^{\circ}$   
 Take off  $10.0^{\circ}$   
 Approach  $15.0^{\circ}$   
 Landing  $23.0^{\circ}$

### - C-295FW

Flaps (inner and outer)  
 Cruise  $0.0^{\circ}$   
 Take off  $10.0^{\circ}$   
 Approach  $15.0^{\circ}$   
 Landing  $23.0^{\circ}$

All measurements are taken at trailing edge from neutral position.

All measurements have a tolerance of  $\pm 0.5^{\circ}$



## 13. Maximum Certified Masses

	C-295
Ramp:	21 050 Kg
Take off:	21 000 Kg
Landing:	20 700 Kg
Zero Fuel :	18 500 Kg

## 14. Centre of Gravity Range

See the appropriate "EASA approved" Aircraft Flight Manual, listed herein, for further definition.

## 15. Datum

The reference datum is located 2 367 mm (93.19 in.) forward of jig point.

The jig point is defined by a rivet located on the underside skin fuselage nose.

## 16. Mean Aerodynamic Chord (MAC)

Length: 2 561 mm

L.E. of MAC: 11,115 mm (437.61 in.) aft from reference datum.

## 17. Levelling Means

Plumb-bob suspended from aft face of aft cockpit compartment bulkhead over reticule on floor.

## 18. Minimum Flight Crew

Two (2). Pilot and Co-pilot

## 19. Minimum Cabin Crew

(in accordance with the emergency evacuation test)

- C-295

Not Available

- C-295FW

The total number of persons carried, including the minimum flight crew, shall not exceed three

## 20. Maximum Seating Capacity

Not Applicable for Cargo Configuration

## 21. Baggage/ Cargo Compartment

- C-295

Refer to Aircraft Weight and Balance Control and Loading Data Manual for model C-295: TC holder document number DT-5-C-97-5007.

- C-295FW

Refer to Aircraft Weight and Balance Control and Loading Data Manual:

- TAE-5-DT-160181 "C-295FW EASA-Approved Airplane Weight and Balance Control and Loading Data"
- TAE-5-DT-160181 Basic revision nº 1 C-295FW EASA-Approved Airplane Weight and Balance Control and Loading Data



## 22. Wheels and Tyres

- For C-295

Refer to the approved equipment that is related in the TC-holder document number DT-5-C-99-5005.

- For C-295FW:

Each main Landing gear leg has two main wheels in tandem configuration designed to fit the following:

Total wheels number: 4

Tyre characteristics: DUNLOP DR 30420T 34 X 14.0 – 14 14PR

Nose Landing gear leg has wheel twin arrangement configuration designed to fit

Total wheels number: 2

Tyre characteristics: DUNLOP DR 15854T 24 X 7.7 8PR

## 23. ETOPS

N/A



#### **IV. Operating and Service Instructions**

##### **1. Airplane Flight Manual (AFM)**

Aircraft Flight Manual for C-295:

Aircraft Flight Manual for model C-295: TC holder document number DT-5-C-97-5006.

Aircraft Flight Manual for C-295FW (new commercial designation):

- TAE-5-DT-160180 FLEET REV02 "C-295FW EASA Approved AFM TAE-5-DT-160180 FLEET REV02"

Or later EASA AFM approved Revision

Aircraft operation must be in accordance with the Aircraft Flight Manual (AFM) listed above. All placards required in either the approved AFM, the application operating rules, or the certification basis must be installed on the aircraft.

##### **2. Instructions for Continued Airworthiness and Airworthiness Limitations**

###### **- C-295:**

For model C-295, required structural inspections, inspection times and retirement times for structural parts and for components are listed in Section 1.4.2 of TC-holder document number DT-5-C-99-5008. Material covered in this section must not be changed without EASA approval.

For model C-295, system certification maintenance requirements are included in Section 1.4.1 of TC-holder document number DT-5-C-99-5008. Material covered in this section must not be changed without EASA approval.

For model C-295, engine certification maintenance requirements are included in Appendix 1 to Maintenance Review Board Report, TC-holder document number MRBR\_C-295\_PV01. Material covered in this Appendix must not be changed without EASA approval.

###### **- C-295FW**

For C-295FW variant Airworthiness Limitations are provided in the:

Safe Life Airworthiness Limitation Items are provided in the C-295FW Airworthiness Limitations Section (ALS) Part 1, Revision G TAE-5-DT-170120 "C-295FW Airworthiness Limitations.

Damage-Tolerant Airworthiness Limitation Items are provided in the C-295FW Airworthiness Limitations Section (ALS) Part 2, Revision G TAE-5-DT-170120 "C-295FW Airworthiness Limitations.

Certification Maintenance Requirements are provided in the C-295FW Airworthiness Limitations Section (ALS) Part 3, Revision G TAE-5-DT-170120 "C-295FW Airworthiness

C-295FW System Equipment Maintenance Requirements are provided in the C-295FW Airworthiness Limitations Section (ALS) Part 4, Revision G TAE-5-DT-170120 "C-295FW Airworthiness

C-295FW Fuel System Airworthiness Limitations are provided in in the C-295FW Airworthiness Limitations Section (ALS) Part 5, Revision G TAE-5-DT-170120 "C-295FW Airworthiness

or any further revision or variation approved by EASA.



Maintenance Review Board Report (MRBR), TC holder document number MRBR C-295-PV01.

### 3. Weight and Balance Manual (WBM)

For C-295 Refer to: Aircraft Weight and Balance Control and Loading Data Manual for model C-295: TC holder document number DT-5-C-97-5007.

For C-295FW Refer to Aircraft Weight and Balance Control and Loading Data Manual for C-295FW:

- TAE-5-DT-160181 "C-295FW EASA-Approved Airplane Weight and Balance Control and Loading Data"
- TAE-5-DT-160181 "Basic revision nº 1 C-295FW EASA-Approved Airplane Weight and Balance Control and Loading Data"



## **V. Notes**

### **Note 5.1**

A modification has been approved relative to the design of Flight Controls of model C-295, referenced in the modification sheets (CDS), TC-holder document numbers S30301, S30333, S30307, S30338, S30305, S30306, S30331 and S30337. This modification is effective for all serial numbers from 0001 upward and established the new movements as follows:

Aileron

Nominal movement  $\pm 21^\circ \pm 0,5^\circ$

Rudder Variables End System Movements

Nominal movement  $-21^\circ \pm 0,5^\circ$ ;  $+12,5^\circ \pm 0,5^\circ$

Flight movement  $-23^\circ \pm 0,5^\circ$ ;  $+16,5^\circ \pm 0,5^\circ$

Ground movement  $-25^\circ \pm 0,5^\circ$ ;  $+18,8^\circ \pm 0,5^\circ$

Aircrafts, model C-295, with this modification introduced must be operated according to the Specific Revision Nº 2 to the Aircraft Flight Manual, TC-holder document number DT- 5-97-5006, "C-295 DGAC approved Aircraft Flight Manual".

For aircrafts, model C-295, with this modification introduced the following revisions of TC-holder documents apply:

- Revision "C" of DT-5-C-99-5005, "C-295 Equipment List", and
- the Revision "C" of DT-5-ADG-99001, "Type Design Standard model C-295".

### **Note 5.2**

The C-295 Airplanes on these modifications have been applied will be designate with the **new commercial designation** C-295FW:

DC10718A, DC10735A, DC10736A, DC10737A, DC10738A, DC10739A, DC10740A, DC10741A, DC10877A, DC10892, DC10278, DC10280, DC10281, DC10282, DC10283, DC10284, DC10285, DC10286, DC10288, DC10289, DC10290, DC10291, DC10310, DC10415, DC10416, DC10417, DC10418, DC10419, DC10420, DC10421, DC10422, DC10423, DC10424, DC10426, DC10428, DC10429, DC10450, DC10451, DC10293, DC10402, DC10287, DC10550, DC10656, DC10657, DC10967, DC10965A, DC10684-E, DC10702-E, DC10914-E, DC10998-E, DC10943-E, DC11090-E, DC11174-E, DC11000-E, DC11002-E, DC10890-E, DC10907-E, DC10910-E, DC10936-E, DC10955-E, DC10956-E, DC10993-E, DC11004-E, DC11030-E, DC11301-E, DC10915-E, DC11448S-E, DC11571A-E, DC10973-E, DC10974-E, DC11416S-E, DC11678-E, DC11680A-E, DC11609S-E, DC11615S-E, DC11714S-E.

For the following Major Not Significant modifications, Certification Basis (CB) for the original product remains applicable:

DC10737A, DC10892, DC10739A, DC10657, DC10965A, DC10684-E, DC10914-E, DC11000-E, DC11002-E, DC10910-E, DC10936-E, DC10955-E, DC10956-E, DC10993-E, DC11004-E, DC11030-E.





**SECTION 6: ADMINISTRATIVE****I. Acronyms and Abbreviations**

A/C	Aircraft
ACNS	Airborne communications, Navigation and Surveillance
AESA	Agencia Estatal de Seguridad Aérea (State Agency for Aviation Safety)
AFM	Airplane Flight Manual
ALS	Airworthiness Limitation
Amdt	Amendment
APR	Automatic Power Reserve
Aux	Auxiliar
°C	Degrees-Celsius
C.G.	Centre of Gravity
CASA	Construcciones Aeronáuticas S.A. (Aeronautical Constructions Company)
CB	Certification Basis
CDS	Change data sheet
CFR	Code of Federal Regulations
DGAC	Dirección General de Aviación Civil (General Directorate for Civil Aviation)
DOA	Design Organisation Approval
DT	Documento técnico (technical document)
EADS	European Aeronautic Defence and Space Company
EASA	European Aviation Safety Agency
EC	European Commission
ECS	Environmental Control System
EMC	Electromagnetic compatibility
EMI	Electromagnetic interference
ES	España (Spain)
ESF	Equivalent Safety Finding
ESHP	Equivalent shaft horse power
ETOPS	Extended range operation; Extended twin-engine operation; Extended range operation by twin-engined aeroplane
EWIS	Electrical wiring interconnect system
FAR	Federal aviation regulation
FMS	Flight Management System
ft	Feet
HIRF	High-intensity radiated field
hr	Hour
HW	Hardware
IAS	Indicated airspeed
ICA	Instructions for continued airworthiness
ICAO	International Civil Aviation Organisation



A/C	Aircraft
IFR	Instrumental Flight Rules
IMA	Integrated Modular Avionics
ISA	International Standard Atmosphere
ITT	Inter-turbine temperature
Kg	Kilogram
KIAS	Knots indicated airspeed
L	Litre
L.E.	Leading edge
lb	Pound
LDE	Lightning direct effects
LIE	Lightning indirect effects
m	Metre
m <sup>2</sup>	Square Metre
MAC	Mean Aerodynamic Chord
Max Cont.	Maximum Continuous
Max.	Maximum
min	Minute
mm	Millimetre
MRB	Maintenance Review Board
MRBR	Maintenance Review Board Report
N/A	Not Applicable
NG	Revolutions per minute of the gas generator
NH	High Pressure Shaft Speed
NP	Propeller Speed
OAT	Outside Ambient Temperature
OMS	On-board Maintenance System
P/N	Part number
psi	Pounds per square inch
Ref	Reference
RPM	Revolutions per minute
S/N	Serial Number
SB	Service Bulletin
SC	Special Condition
SHP	Shaft Horse Power
Sta.	Station
SW	Software
TC	Type Certificate
TCDS	Type Certificate Data Sheet
US	United States
VFR	Visual Flight Rules
WBM	Weight and Balance Manual



**II. Type Certificate Holder Record**

Airbus Defence and Space S.A  
 Avda. de Aragón 404  
 28022, Madrid  
 Spain

**Note 6.**

The company corporate name was changed to “AIRBUS DEFENCE AND SPACE, S.A.U.” (Airbus DS S.A.U.)” in September 2014, and it is reflected in the EASA DOA Approval Certificate EASA.21J.032 issued on 30<sup>th</sup> September 2014.

The former corporate name of “EADS CONSTRUCCIONES AERONÁUTICAS, S.A.U.” (EADS CASA) has been used to identify the TC Holder in the Data Sheet TCDS EASA.A.186 issue 1 , dated 31th May 2007 and Issue 2, dated 10th January 2011.

The former corporate name, “Construcciones Aeronáuticas S.A” (CASA) was used to identify the TC Holder in all versions of the Data Sheet previous to TCDS EASA.A.186 issue 1, dated 31 May 2007.

**III. Change Record**

Issue	Date	Changes	TC issue
Issue 1.0	31/05/2007	Initial Issue	Initial Issue, 31/05/2007
Issue 2.0	10/01/2011	- All pages: transfer to EASA Form NR 90C. - Front cover: rewriting of TC-holder and models names, following the publication by EASA of the lists of EU products. - Section 1: addition of explanations about the TC-holder and the certifying authority history. - Sections 2 thru 5, paragraph II.3: addition of reference to SC-H-01, following completion of EU EWIS-ICAs program. - Section 4, paragraph II.2: addition of references to elected-to-comply requirements, following EASA certification of version L303. - All pages: stylistic changes, following EASA document WI-CAP-00002-001 guidelines.	31/05/2007
Issue 3.0	10/12/2020	-All pages: transfer to new EASA Format -Front cover: rewriting of TC-holder's name -Removed section 1: GENERAL (ALL MODELS) and harmonization of the new formatting document. -In New section 5: Addition of information relative to new modifications that define C-295FW (new commercial designation). Typo errata corrections in Engines Section. Updated Datum reference (Section 5-15) Updated L.E. of MAC from (Section 5-16)	
Issue 4.0	28/01/2022	-Section 5: Deviation F-28 “User Defined Approaches Deviation” Removed from Paragraph II.7. Added new elect to comply modifications in Paragraph II.9.	



Issue	Date	Changes	TC issue
		C-295FW AFM reference Updated in Paragraph IV.1.	
Issue 5.0	28/01/2022	Typo corrected §4.3, §9.11, §9.12 for CS-ACNS	
Issue 6.0	14/03/2023	Changed “Airbus Defence and Space S.A” DOA business registration address, page 1	

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