TYPE-CERTIFICATE DATA SHEET

No. EASA.IM.A.673

for
CL-600 Regional Jet Series

Type Certificate Holder
MHI RJ AVIATION ULC.

12655 Boul. Henri-Fabre O
Mirabel, QC, Canada
J7N 1E1

For aircraft models: CL-600-2B19 (Regional Jet Series 100)
CL-600-2C10 (Regional Jet Series 700, 701 & 702)
CL-600-2D15 (Regional Jet Series 705)
CL-600-2D24 (Regional Jet Series 900)
CL-600-2E25 (Regional Jet Series 1000)

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SECTION 1: GENERAL (ALL MODELS)

1.	Data Sheet No:	IM.A.673
2.	Airworthiness Category:	Large Aeroplanes
3.	Performance Category:	A
4.	Certifying Authority:	Transport Canada Civil Aviation Aircraft Certification Branch (AARD) 159 Cleopatra Drive Nepean, Ontario K2G 5X4 Canada
5.	Type Certificate Holder: (Since 01st June 2020)	MHI RJ Aviation ULC 12655 Boul. Henri-Fabre O Mirabel, QC, Canada J7N 1E1
	(Until 31st May 2020)	Bombardier Inc. 800 Boul. René-Lévesque Ouest Montréal, QC, Canada H3B 1Y8

6. Aircraft Manufacturer

Bombardier Inc. will continue to manufacture the CL-600 Regional Jet Series (CRJ) aircraft under license from MHI RJ Aviation ULC until the end of production of the aircraft order backlog, which is anticipated at the end of 2020.

7. Aircraft designations

The following provides a matrix with all CL-600 models and their corresponding marketing / common designations. For reasons of keeping a historical background record check, the table below contains references to both the regional and business jets.

Note following administrative transfer of regional jets from EASA.IM.A.023 to EASA.IM.A.673 that was made effective on 06th March 2020:

Existing EASA certificated or validated Supplemental Type Certificates (STCs), or EASA approvals for Alternative Method of Compliance (AMOC) to an AD issued or adopted by the Agency, that refer to EASA Type Certificate IM.A.023 and list any of the approved Regional Jet Series aircraft models listed above, remain valid and are not required to be revised following this administrative change. When revising an EASA STC for any other reason in the future, the STC may directly refer to both EASA Type Certificates.

Existing manufactured Regional Jet Series aircraft may have identification data plates which still refer to EASA Type Certificate IM.A.023 since the EASA approved type design was still recorded on EASA Type Certificate IM.A.023 at the time of individual aircraft manufacture. Since both EASA Type Certificates IM.A.023 and IM.A.673 cross-reference each other via a Note on both EASA Type Certificate Data Sheets, and Regulation (EU) No 748/2012 part 21.A.801(a) does not require the EASA Type Certificate number to be included on the aircraft identification plate, these individual aircraft will not require installation of a new or Supplemental aircraft identification data plates to comply with Regulation (EU) No 748/2012 part 21.A.801(a).

New production Regional Jet Series aircraft identification data plates will refer to the new Transport Canada Type Certificate A-276 and if necessary may include reference to this EASA Type Certificate IM.A.673.

Model	Series or Variant	Marketing / Common Designation	Applicable Type Certificate Historical background record
CL-600-1A11	600	Challenger 600	Business Jet (Challenger) aircraft models, all covered by TCCA Type Certificate (TC) A-131 and EASA TC EASA.IM.A.023.
CL-600-2A12	601 Variant	Challenger 601	
CL-600-2B16	601-3A Variant	Challenger 601-3A	
CL-600-2B16	601-3R Variant	Challenger 601-3R	
CL-600-2B16	604 Variant	Challenger 604, 605, 650	
CL-600-2B19	Regional Jet 100	Regional Jet 200 / Challenger 850 / CRJ SE	Regional Jet aircraft models, all covered by TCCA TC A-276 and EASA TC EASA.IM.A.673. All these Regional Jet aircraft models were previously recorded as follows: **A)** Under TCCA TC and TC Data Sheets (TCDSs) A-131 Issue 59 until 22nd Nov 2019, when pursuant to CAR 521.357 they were administratively transferred to the new TC/TCDS A-276 Issue 1, and **B)** Under EASA TC/TCDSs EASA.IM.A.023 Issue 16 until 05th Mar 2020, when pursuant to Part 21.A.47 they were administratively transferred to this new EASA.IM.A.673
CL-600-2B19	Regional Jet 440	-	
CL-600-2C10	Regional Jet 700	-	
CL-600-2C10	Regional Jet 701	-	
CL-600-2C10	Regional Jet 702	-	
CL-600-2D24	Regional Jet 900	-	
CL-600-2D15	Regional Jet 705	-	
CL-600-2E25	Regional Jet 1000	-	

SECTION 2: CL-600-2B19 (Regional Jet Series 100) See note 5

I. General

1. Aeroplane: Regional Jet Series 100

II. Certification Basis

1. Reference Application Date for TCCA Certification: 28 March 1988
2. TCCA Certification Date: 31 July 1992
3. EASA (JAA) Validation Application Date: 27 June 1989
4. EASA Certification Date: 15 January 1993
   (Date of first TC issuance within EU MS by LBA Germany)
5. TCCA Certification Basis:

   Refer to TCCA Type Certificate Data Sheet No: A-276 – See Section 1 Note 1
6. EASA Certification Basis:

   JAA Airworthiness Requirements:

   JAR 25 Large Aeroplanes, Change 13, 05 October 1989

   Compliance with the following optional requirements has been established:

   Ditching provisions of JAR 25.801 when the safety equipment requirements of JAR 25.1411 and the ditching equipment requirements of JAR 25.1415 are satisfied.

   Ice Protection of JAR 25.1419

   JAA Special Conditions:

SC C-10	Discrete Gust (ref. CRI C-10 and NPA 25C-205, issue Feb 1990)
SC D-2	Landing Gear Warning (ref. CRI D-2 and NPA 25D-162, Rev. 1)
SC D-3	Terminology “Resistant to Fire” (ref. CRI D-3 and NPA 25D-181, Rev. 3)
SC D-8	Cargo and Service Doors (ref. CRI D-8)
SC F-3	Effect of External Radiation upon Aircraft System (ref. CRI F-3)
SC F-4	Lightning Protection Indirect Effects (ref. CRI F-4)
SC F-8	Miscellaneous Electrical Requirements CRI F-9 and NPA 25D, F-191, Rev. 2)
SC F-9	Electrical Standby Power (ref. CRI F-9 and NPA 25F-179, Rev. 4)
SC H-1	Enhanced Airworthiness Programme for Aeroplane System – ICA on EWIS (ref. CRI H-1000-01) – see note 8

   JAA Exemptions:

JAR 25.785(h)	Location of Flight Attendant’s Seat (ref. CRI D-15)
JAR 25.562 (c)(5)	Head Injury Criterion (ref. CRI C-19)

JAR 25.1441(a)	Oxygen Requirements Cross-reference to National
JAR 25.1447(b)	Operational Regulations (ref. CRI F-14)
JAR 25.1447(c)	

JAA Equivalent Safety Findings:

JAR 25.783(f)	Doors (ref. CRI D-12)
JAR 25.813(c)(1)	Emergency Exit Access (ref. CRI D-13)
JAR 25.811(d)(2)	Emergency Exit (ref. CRI D-14)
JAR 25.677(b)	Trim Indication (ref. CRI D-7)
JAR 25.621	Critical Casting Factors (ref. CRI Post D-01)

JAA Elect to Comply Standards:

SC B-3	Accelerate Stop and Related Performance Matters (ref CRI B-3 and NPA 25B, D, G-244, March 1992)
SC B-4	Braking Performance (ref CRI B-4)
SC C-11	Discrete Source Damage (ref CRI C-11 & NPA 25C-213)
SC D-10	Flap Gates (ref. CRI D-10 and NPA 25B-238)
SC K-1	All Weather Operations (ref. CRI K-1)

JAA Environmental Standards:

Noise: Refer to Canadair Report RAU-601R-133, -ICAO Annex 16, Noise Certificate and Airplane Flight Manual CSP A-012

Additional National Design Requirements (ANDR):

Refer to CRI A-2 in Conjunction with CRI's A-2.1 through A-2.12

7. Operational Suitability Data (OSD)

The EASA Type Certification with respect to Operational Suitability Data (OSD) is defined as follows:

MMEL: JAR-MMEL/MEL Amendment 1, Section 1

FCD: Certification Specifications for Operational Suitability Data (OSD) Flight Crew Data CS-FCD Initial Issue dated 31 January 2014

III. Technical Characteristics and Operational Limitations

The CL-600-2B19 Regional Jet, manufactured by Bombardier Aerospace, is a nominal 50 passenger, five crew member, twin turbofan passenger aircraft, developed from the CL-600-2B16 Challenger Aircraft.

The aircraft is certified for a maximum altitude of 41,000 feet and a maximum design airspeed of March 0.85. The maximum operating altitude for take-off and landing is 10,000 feet. Refer to the approved AFM for operating altitudes above 10,000 feet. The airframe is

of a same monocoque design, using lightweight aluminum alloys, alloy steels, stainless steels, titanium and composite materials. It has a low, high swept airfoil, and tricycle landing gear.

1. EASA/JAA Type Design Definition:

   Report RAZ-601R-109, JAA Build Standard Definition.

2. Engines

   Two General Electric CF34-3A1 Turbofan Engines or two General Electric CF34-3B1.

   Appropriate National Authority Type Certificate or FAA Type Certificate E15NE and associated Type Certificate Data Sheet.

   Engine may be intermixed in accordance with AFM (CSP A-012).

   Engine Limits:

   Refer to the Airplane Flight Manual (CSP A-012)

3. Fuel

Type	SPECIFICATION		
	Canada	USA	UK
Kerosene JET A, A-1 JP8	 CAN 2 – 3.23 3-GP-23	 ASTM D1655 MIL-DTL-83133	 Def Stan 91-91 Def Stan 91-87
High Flash JP5	 3-GP-24	 MIL-DTL-5624	 Def Stan 91-86

Note: Fuel additives - See AFM as listed in Approved Publications
For additional approved fuel grades see AFM
Use of wide-cut fuels is prohibited except for non-revenue ferry flights.
For fuel temperature limitations see applicable AFM.

Fuel Capacity (usable)

	Load		Weight	
Usable	U.S. Gal.	Litres	lb.	kg
2 main tanks (each)	700	2650	4760	2159
1 Center Tank	735.0	2782	4998	2267
Total	2135.0	8082	14518	6585

	Load		Weight	
Unusable	U.S. Gal.	Litres	lb.	kg
Residual Fuel	7.35	27.8	46.9	21.3
Trapped Fuel	7.42	28.0	50.1	22.7
Unusable Fuel	14.3	54.1	97.0	44.0

4. Oil

Engine, APU, IDG: MIL-L-7808 (Type I) or MIL-L-23699 (Type II) or Castrol 4000.

Oil Capacity:

	Load		Weight	
Usable	U.S. Quart	Litres	lb.	kg.
2 Engines (each)	5.5	5.2	11.19	5.09
Total	11.0	10.4	22.38	10.18

5. Airplane Limit Speeds

Airspeed Limits (IAS) *			Knots	Mach
	V_{MO} and M_{MO}	(Maximum Operating) Below 8000 feet *See Flight Manual for variations of V_{MO} and M_{MO} at or above 8000 ft	330*	*
	V_{FE}	(Flaps extended) 8° 20° 30° 45°	 230 230 196 191	
		Or for Airplanes 7904 and subsequent; and Airplanes incorporating Canadair Service Bulletin: SB601R-11-080, Flight Compartment, Placards and markings – Installation of the New Airspeed Limitation Placard and Removal of Flap Inspection Placard:		
	V_{FE}	(Flaps extended) 8° 20° 30° 45°	 230 230 185 170	
	V_A	(Manoeuvring) (Refer to Flight Manual for variations of V_A with altitude and aircraft weight)		
	V_{LO}	(Landing Gear Operating) Extending Retracting	 250 200	
	V_{LE}	(Landing Gear Extended)	250	

Max. tyre ground speeds:	m.p.h.	knots
Nose Gear Tyre	210	182
Main Gear Tyre	210	182

6. Centre of Gravity Range

Centre of Gravity Range: See AFM (CSP A-012)

Datum: FS 0.0 located at 100 in. Fwd of the aircraft nose

Mean Aerodynamic Cord (MAC): 2.53 m (99.43 in.)
(MAC leading edge at fuselage station 493.793.1 in.)

Leveling Means: A leveling targets are installed in the aft equipment bay, for use with a plumb bob to level the aircraft in the lateral and longitudinal planes.

7. Maximum Certified Weights kg (lbs)

Max. Taxi and ramp	23,247 kg	(51,250 lb.)
Max. Take-off	23,133 kg	(51,000 lb.)
Max. Landing	21,319 kg	(47,000 lb.)
Max. Zero fuel	19,958 kg	(44,000 lb.)

With option <0004 (JAA) > incorporated, weight limits change to:

Max. Taxi and ramp	24,154 kg	(53,250 lb.)
Max. Take-off	23,995 kg	(52,900 lb.)
Max. Landing	21,205 kg	(46,750 lb.)

NOTE: See AFM (CSP A-012) for other weight limitations and aircraft eligibility.

8. Minimum Flight Crew

Minimum Flight Crew: 2 (Pilot and co-pilot)

9. Maximum Seating Capacity:

50 pax plus 5 crew members
48 pax plus 5 crew members if Forward Wardrobe is installed (TC601R12721).
For CL-600-2B19 in the “Green Configuration”, refer to Note (6).

10. Cargo compartment loading

Aft Baggage Compartment

Class	Volume (m^3)	Max. Allowable Load (Kg)
C	6.48	1224.7
C	8.89*	1587.57*

* Note: Values marked with asterisk are obtained with the incorporation of Modification TC601R100914

11. Environmental Flight Envelope

Refer to approved Airplane Flight Manual (CSP A-012)

12. Operating Limitations

Refer to approved Airplane Flight Manual (CSP A-012).

13. Auxiliary Power Unit (APU)

Honeywell (formerly Allied Signal) GTCP-36-150 [RJ] APU P/N 3800488-2 or 3800488-3 Approved to TSO C-77A and JAR-APU.

APU Limits:

Maximum RPM	107%	
Maximum EGT for Starting *	974ºC**	1785ºF**
Maximum EGT Operating*	743°C	1369°F

* Dependent upon Altitude and Airspeed (Refer to AFM CSP A-012 for detail limitations).
** Not to be exceeded under any operating conditions.

14. Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) and defined in the Type Certificate Type Design Definition, (RAZ-601R-109) must be installed in the airplane for certification.

15. Interior Installations

Cabin interior and seating configurations must be approved.

16. All Weather Capabilities

Coupled Autopilot: CAT II

With the following Heads-Up Guidance System (HGS) Modifications installed:

TC601R60262	HGS Approach: CAT IIIA only
TC602R15068 (All phases of Flight)	HGS Approach: CAT II and CAT IIIA

17. Wheels and Tyres

Tyre	Size
Dual Nose Wheel and Tyre	H18 x 4.4-12– 12 ply
Dual Main Wheels and Tyres (L/H & R/H)	H29 x 9-15 – 16 ply

Landing Gear

Tricycle type (two main gear assemblies and one steerable nose gear assembly).
Track:
(Main gear) 10 ft 5" (3.175 m)
(Nose gear) 11.5" (29.2 cm)

18. Hydraulics

See AMM (CSP A-001) for approved fluid.

19. Operating and Service Instructions

The Approved Publications consist of the following:

Airplane Flight Manual (AFM):	CSP A-012
Maintenance Requirements Manual (MRM) Part II:	CSP A-053 – See Notes 3 & 4
Structural Repair Manual (SRM):	CSP A-008
Other Operating Instructions:	
Weight and Balance Manual (WBM):	CSP A-041

The Instructions for Continued Airworthiness consist of the following Publications:

Aircraft Maintenance Manual (AMM):	CSP A-001
Non-Destructive Testing Manual (NDT):	CSP A-010

20. OPERATIONAL SUITABILITY DATA (OSD)

The Operational Suitability Data elements listed below were originally approved by the European Union Aviation Safety Agency under the EASA Type Certificate EASA.IM.A.023 as per Commission Regulation (EU) 748/2012 as amended by Commission Regulation (EU) No 69/2014 and are now part of EASA Type Certificate EASA.IM.A.673.

1. Master Minimum Equipment List

The Master Minimum Equipment List has been approved as per the defined Operational Suitability Data Certification Basis and as documented in European Union Aviation Safety Agency Master Minimum Equipment List, Canadair Regional Jet CL 600-2B19/ CL 600-2C10/ CL 600-2D15/ CL 600-2D24/CL 600-2D25, CSP ABCD-108, Revision 20, dated Nov 18/10, or later approved revisions.

2. Flight Crew Data

The Flight Crew data has been approved as per the defined Operational Suitability Data Certification Basis and as documented in “Bombardier CRJ Series CRJ 100/200 – 700 – 705/900 - 1000 Operational Suitability Data (OSD) - Flight Crew (Ref: BAT-CRJ-OSD-FC Initial Issue dated December 15th 2015)” or later approved revisions.

21. Notes

1. JAA Approved Airplane Flight Manual: The airplane must be operated according to the appropriate JAA Approved Airplane Flight Manual (after 28th September 2003, subsequent AFM revisions are approved by EASA).

2. All placards must be installed in accordance with Drawings.

3. EASA approved Airworthiness limitations for mandatory compliance retirement life or inspection and for Certification Maintenance Requirements (CMRs) are included in CSP A-053, Maintenance Requirements Manual (MRM), Part II.

4. CRJ 200 is a marketing designation describing a CRJ Series 100 equipped with CF34-3B1 Engines:
CRJ 100 is a CL-600-2B19 with CF34-3A1 Engines
CRJ 200 is a CL-600-2B19 with CF34-3B1 Engines

   The Regional Jet Series 850 or the CRJ Special Edition “SE” are marketing designations for any CL-600-2B19 aircraft that is configured “green” and subsequently completed with an approved interior per note 6.

5. Major modifications which define the aircraft as the “Green Configuration” are recorded in document RAZ-601R-109 (Definition of type design for JAA type certification).

   The “Green Configuration” type design does not include passenger provisions. Carriage of persons in the cabin is permitted when an approved seating arrangement and related required passenger provisions are incorporated in accordance with the Basis of Certification. Aircraft delivered in the “Green configuration” and with the right service door and left overwing exit door blocked, are limited to carrying a maximum of twenty-two (22) occupants including the crew and no more than 19 passengers in accordance to FAR/JAR 25 requirements. As also referenced in Note 5, RJ aircraft of this configuration may be identified as “Series 850” for marketing purposes.

6. The CL-600-2B19 effectivity range spans from A/C SN 7001 & subsequent which includes the 100, 200, 440 and Challenger 850.

7. The Special Condition (i.e. CRI H-1000-01) that introduces requirements for EWIS-ICA’s makes CS-25 Appendix H paragraph H 25.5 and AMC Appendix H 25.5 paragraphs 1 and 6 applicable to the certification basis (note, BA demonstration of compliance against 14 CFR Part 26 requirements constitutes compliance with the EASA regulations related to EWIS).

8. OSD-compliant Cabin Crew Data is not required for the CL-600-2B19.

SECTION 3: Model CL-600-2C10 (Regional Jet Series 700/701/702)

I. General

1. Aeroplane:	Regional Jet Series 700/701/702

II. Certification Basis

1. Reference Application Date for TCCA Certification:	01 May 1996
2. TCCA Certification Date:	22 December 2000 (Series 700/701) 26 January 2005 (Series 702)
3. EASA (JAA) Validation Application Date:	01 May 1996 (Series 700/701) 12 January 2005 (Series 702)
4. EASA Certification Date: (Date of first TC issuance within EU MS by ENAC Italy & DGAC France)	29 January 2001 (Series 700/701) 28 January 2005 (Series 702)

5. TCCA Certification Basis:

   Refer to Transport Canada TCDS A-276.

6. EASA Certification Basis:

   JAA Airworthiness Requirements:

   JAR 25 Large Aeroplanes, Change 14, 27 May 1994
   Amendment (OP) 96/1, 19 April 1996

   Note: This includes the optional requirements of JAR 25.1419, Ice Protection and JAR 25.801, Ditching Provisions.

   Reversions: None requested

   JAR AWO at change 2

   JAA Special Conditions:

INT/POL/25/2	HIRF Protection (ref. CRI D-17)
INT/POL/25/3	Lightning Strike Protection, Direct Effects (ref. CRI D-15)
INT/POL/25/4	Lightning Strike Protection, Indirect Effects (ref. CRI D-16)

INT/POL/25/6	Brake Performance (ref. CRI D-9)
INT/POL/25/8	Yawing Manoeuvring Conditions (ref. CRI C-3)
INT/POL/25/9	Fuel Tank Crashworthiness (ref. CRI C-5)
SC H-1	Enhanced Airworthiness Programme for Aeroplane System – ICA on EWIS (ref. CRI H-1000-01) – see note 5

JAA Exemptions: None

JAA Equivalent Safety Findings:

JAR 25.109	Accelerate Stop Distance (NPA 25B, D, G-244, July 1993, ref. CRI B-2)
JAR 25.677(b)	Trim Indication (ref. CRI D-5)
JAR 25.783(f)	Baggage and Avionics Compartment Door (ref. CRI D-2)
JAR 25.811(d)(2)	Main Door Exit Markings Sign (ref. CRI D-3)
JAR 25.813(c)(1)	Emergency Exit Access (ref. CRI D-4)
JAR 25.813	Passenger Seating Configuration with Additional 2 Passengers Aft of Overwing Exits (ref. CRI D-19) – see note 6
JAR 25.1435(b)(1)	Hydraulic Systems (ref. CRI-F-15)
JAR 25B.991(b)	Emergency Fuel Pumps (ref. CRI J-01)

JAA Elect to Comply Standards

NPA 25B.215	Reduced Minimum Operating Speed Factors (ref CRI-B-1) (Identical to FAR 25 NPRM 95-17)
NPA 25C-236	Vibration, Buffet and Aeroelastic Stability (ref. CRI C-6) (Identical to FAR 25 Amendment 77)
NPA 25C-282	Discrete Gust Load Design Requirements (ref CRI C-12) (Identical to FAR 25 Amendment 86)
NPA 25C-276	Braked Roll Conditions (ref. CRI C-13) (Identical to FAR 25 Amendment 97)

Additional National Design Requirements (ANDR).

Additional National Design Requirements (ANDR) as specified in JAA Administrative and Guidance Material, Section 3/Part 4 in effect at the time of Type Certification (Refer to CRI A-2).

7. Environmental Standards:

Noise: ICAO Annex 16, Volume I, Third Edition.
Fuel Venting: ICAO Annex 16, Volume II, Second Edition.

8. Operational Suitability Data (OSD)

The EASA Type Certification with respect to Operational Suitability Data (OSD) is defined as follows:

MMEL: JAR-MMEL/MEL Amendment 1, Section 1

FCD: Certification Specifications for Operational Suitability Data (OSD) Flight Crew Data CS-FCD Initial Issue dated 31 January 2014

CCD: Certification Specifications and Guidance Material for Cabin Crew Data CS-CCD Initial Issue dated 31 January 2014

III. Technical Characteristics and Operational Limitations

The CL-600-2C10 Regional Jet, manufactured by Bombardier Aerospace, is a nominal 70 passenger, five crewmember, twin turbofan passenger aircraft, developed from the CL-600-2B19 Regional Jet Aircraft. The certification of the CL-600-2C10 considers three basic aircraft variants defined as follows:

- Regional Jet Series 700: 68 passengers or less (plus 5 crewmembers)
- Regional Jet Series 701: 70 passengers configuration (plus 5 crewmembers)
- Regional Jet Series 702: 78 passengers configuration (plus 5 crewmembers) – See note 6 for aircraft fitted with an approved interior including the Equivalent Safety Finding against JAR 25.813

The aircraft is certified for a maximum altitude of 41,000 feet and a maximum design airspeed of Mach 0.85. The airframe is a monocoque design, using lightweight aluminum alloys, alloy steels, stainless steels, titanium and composite materials. It has a low, high swept wing, T-tail with trimmable horizontal stabilizer and tricycle landing gear.

1. EASA/JAA Type Design Definition

Reference CRI A-6 JAA Build Standard Definition, RAZ-BA670-120.

2. Engines

Two General Electric CF34-8C1 Turbofan Engines, or two General Electric CF34-8C5B1 Turbofan Engines, JAA Executive Board recommendation letter 04/12/46/10/00-L162 dated 31 May 2000. Appropriate National Authority Type Certificate or FAA Type Certificate No. E00063EN, and associated Type Certificate Data Sheet.

Engine may be intermixed in accordance with AFM (CSP B-012)

Engine Limits:

Refer to the Airplane Flight Manual (CSP B-012)

3. Fuel

Type	SPECIFICATION		
	Canada	USA	UK
Kerosene JET A, A-1 JP8	 CAN 2 – 3.23 3-GP-23	 ASTM D1655 MIL-DTL-83133	 Def Stan 91-91 Def Stan 91-87
High Flash JP5	 3-GP-24	 MIL-DTL-5624	 Def Stan 91-86

Note: Fuel additives - See AFM as listed in Approved Publications
For additional approved fuel grades see AFM.
For fuel temperature limitations see applicable AFM.

Fuel Capacity (usable)

	Load		Weight	
Usable	U.S. Gal.	Litres	lb.	kg
2 main tanks (each)	1110	4202	7493	3399
1 Center Tank	683	2585	4610	2091
Total	2903	10989	19596	8889

	Load		Weight	
	U.S. Gal.	Litres	lb.	kg
Unusable	23.1	87.4	155.9	70.7
Undrainable	2.0	7.6	13.5	6.1

4. Oil

Oil: Engine, APU: MIL-L-7808 (Type I) or MIL-L-23699 (Type II) or Castrol 4000

Mixing of different types of oils is prohibited

Oil Capacity:

	Load		Weight	
Usable	U.S. Quart	Litres	lb.	kg.
2 Engines (each)	10.5	9.9	21.36	9.65
Total	21	19.8	42.72	19.30

5. Airplane Limit Speeds

Airspeed Limits (IAS)			Knots	Mach
	V_{MO} and M_{MO}	(Maximum Operating)		
		Below 8000 feet	330*	*
		*See AFM (CSP B-012) for variations of V_{MO} and M_{MO} at or above 8000 ft		
	V_{FE}	(Flaps extended)		
		1°	230	
		8°	230	
		20°	230	
		30°	185	
		45°	170	
	V_A	(Manoeuvring) (Refer to Flight Manual for variations of V_A with altitude and aircraft weight)		
	V_{LO}	(Landing Gear Operating)		
		Extending	220	
		Retracting	200	
	V_{LE}	(Landing Gear Extended)	220	

Max. tyre ground speeds:	m.p.h.	knots
Nose Gear Tyre	210	182
Main Gear Tyre	210	182

6. Centre of Gravity Range

See AFM (CSP B-012)

Datum: FS 0.0 located at 365.76cm (144.00 inches) forward of the aircraft nose.

Mean Aerodynamic Cord (MAC):

3.38 m (133.18 in.) (MAC leading edge at fuselage station 18.875 m (743.1 in.)

Leveling Means:

The aircraft is leveled in the longitudinal and lateral axis by the means of a plumb bob and target plate located at fuselage station 2910.2cm (1145.75 inches).

7. Maximum Certified Weights kg (lbs)

	Type Spec		Option	
Max. Taxi and ramp	33,113 kg	(73,000 lb.)	34,133 kg	(75,250 lb.)
Max. Take-off	32,999 kg	(72,750 lb.)	34,019 kg	(75,000 lb.)
Max. Landing	30,391 kg	(67,000 lb.)	30,391 kg	(67,000 lb.)
Max. Zero fuel	28,260 kg	(62,300 lb.)	28,260 kg	(62,300 lb.)

NOTE: See AFM (CSP B-012) for other weight limitations and aircraft eligibility.

8. Minimum Flight Crew

Two: Pilot and Co-pilot

9. Maximum Seating Capacity

Maximum Passenger Seating Capacity: Series 700 – 68 or fewer passengers
Series 701 – 70 passengers
Series 702 – 78 passengers

See note 6 for aircraft fitted with an approved interior including the Equivalent Safety Finding against JAR 25.813

10. Cargo compartment loading

Class	Volume (m^3)	Max. Allowable Load (Kg)
C	10.60	1696
C	2.63	436

11. Environmental Flight Envelope

Refer to approved Airplane Flight Manual (CSP B-012).

12. Operating Limitations

Refer to approved Airplane Flight Manual (CSP B-012).

13. Auxiliary Power Unit (APU)

Honeywell (formerly Allied Signal) RE-220 RJ.
Approved to TSO C-77A and JAR-APU Change 2.

APU Limits: ***

Maximum RPM	106%	
Maximum EGT for Starting *	1038ºC**	1900ºF**
Maximum EGT Operating Ground*	789°C	1452°F
Maximum EGT Operating in Flight	806ºC	1482ºF

* Dependent upon Altitude and Temperature or Airspeed (Refer to AFM CSP B-012 for detail limitations).
** Not to be exceeded under any operating conditions.
*** Refer to AFM (CSP B-012) for detail limitations

14. Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) and defined in the Type Certificate Type Design Definition, (see RAZ-BA670-120) must be installed in the airplane for certification.

15. Interior Installations

Cabin interior and seating configurations must be approved.

16. All Weather Capabilities

Coupled Autopilot: CAT II

17. Wheels and Tyres

Tyre	Size
Dual Nose Wheel and Tyre	20.5 x 6.75 – 10, 12 ply
Dual Main Wheels and Tyres (L/H & R/H)	H36 x 12 – 18, 18 ply

Landing Gear

Tricycle Type (Two main gear assemblies and one steerable nose gear assembly)

18. Hydraulics

See AMM (CSP B-001) for approved fluids

19. Operating and Service Instructions

The Approved Publications consist of the following:

Airplane Flight Manual (AFM):	CSP B-012
Maintenance Requirement Manual (MRM) Part II:	CSP B-053 – See Note 3
Structural Repair Manual (SRM):	CSP B-008

Other Operating Instructions:
Weight and Balance Manual (WBM); CSP B-041

The Instructions for Continued Airworthiness consist of the following Publications:

Aircraft Maintenance Manual (AMM):	CSP B-001
Non-Destructive Testing Manual (NDT)	CSP B-010

20. OPERATIONAL SUITABILITY DATA (OSD)

The Operational Suitability Data elements listed below were originally approved by the European Union Aviation Safety Agency under the EASA Type Certificate EASA.IM.A.023 as per Commission Regulation (EU) 748/2012 as amended by Commission Regulation (EU) No 69/2014 and are now part of EASA Type Certificate EASA.IM.A.S.673.

1. Master Minimum Equipment List

   The Master Minimum Equipment List has been approved as per the defined Operational Suitability Data Certification Basis and as documented in European Union Aviation Safety Agency Master Minimum Equipment List, Canadair Regional Jet CL 600-2B19/ CL 600-2C10/ CL 600-2D15/ CL 600-2D24/CL 600-2D25, CSP ABCD-108, Revision 20, dated Nov 18/10, or later approved revisions.

2. Flight Crew Data

   The Flight Crew data has been approved as per the defined Operational Suitability Data Certification Basis and as documented in “Bombardier CRJ Series CRJ 100/200 – 700 – 705/900 - 1000 Operational Suitability Data (OSD) - Flight Crew (Ref: BAT-CRJ-OSD-FC Initial Issue dated December 15th 2015)” or later approved revisions.

3. Cabin Crew Data

   The Cabin Crew data has been approved as per the defined Operational Suitability Data Certification Basis recorded in CRI A-CCD, and as demonstrated by the “Bombardier EASA Cabin Crew Operational Suitability Data (OSD) for CRJ 900 Family of Aircraft (Ref: CC-E-BD500-900 Initial Issue dated December 1st 2015)”, or later approved revisions.

   The CL-600-2D15, CL-600-2D24 and CL-600-2E25 are considered to be one type, and the CL-600-2C10 is considered to be a variant of the CL-600-2D24.

21. Notes

1. JAA Approved Airplane Flight Manual: The airplane must be operated according to the appropriate JAA Approved Airplane Flight Manual (after 28th September 2003, subsequent AFM revisions are approved by EASA).

2. All placards must be installed in accordance with Drawings BA670-47501, BA670-47506 and BA670-47800 or BA670-47537, BA670-47510 and BA670-47801. Self illuminated and electrical signs must be installed in accordance with BA670-47802 and BA670-47803 or BA670-47805.

   Drawings noted above are for basic type certification only. For as-delivered aircraft configurations, refer to customer options listed in RAL-670-300.

3. EASA approved Airworthiness limitations for mandatory compliance retirement life or inspection and Certification Maintenance Requirements (CMRs) are found in the Maintenance Requirements Manual (MRM), CSP B-053 - Part II.

4. The effectivity range for the CL-600-2C10 is 10002 & subsequent which includes the 700/ 701 and 702.

5. The Special Condition (i.e. CRI H-1000-01) that introduces requirements for EWIS-ICA's makes CS-25 Appendix H paragraph H 25.5 and AMC Appendix H 25.5 paragraphs 1 and 6 applicable to the certification basis (note, BA demonstration of compliance against 14 CFR Part 26 requirements constitutes compliance with the EASA regulations related to EWIS).

6. For CL-600-2C10 - Series 702 aircraft fitted with an approved interior including the Equivalent Safety Finding against JAR 25.813, the maximum passenger capacity is limited to 71 passengers with a maximum of 28 passenger seats installed aft of the Type III overwing exit.

   For CL-600-2C10 - Series 700 and Series 701 aircraft fitted with an approved interior including the Equivalent Safety Finding against JAR 25.813, the maximum passenger capacity remains the same (68 and 70 passengers respectively) with a maximum of 28 passenger seats installed aft of the Type III overwing exit.

SECTION 4: CL-600-2D15 (Regional Jet Series 705)

I. General

1. Aeroplane: Regional Jet Series 705

II. Certification Basis

1. Reference Application Date for TCCA Certification: 03 Dec 2004
2. TCCA Certification Date: 03 May 2005
3. EASA (JAA) Validation Application Date: 11 February 2005
4. EASA Certification Date 03 November 2005
5. TCCA Certification Basis:

   Refer to TCCA Type Certificate Data Sheet No: A-276

6. EASA Certification Basis:

   JAA Airworthiness Requirements:

   JAR 25 Large Aeroplanes, Change 14, 27 May 1994
   Amendment (OP) 96/1, 19 April 1996

   Note: This includes the optional requirements of JAR 25.1419, Ice Protection and JAR 25.801, Ditching Provisions.

   Reversions: None requested

   JAR AWO at Change 2

   JAA Special Conditions:

   Novel Design Features: None.
   Unconventional Use: None.

   The following CL600-2C10 Special Conditions are also applicable to the CL600-2D15:-

INT/POL/25/2	HIRF Protection (CRI D-17)
INT/POL/25/3	Lightning Strike Protection, Direct Effects (CRI D-15)
INT/POL/25/4	Lightning Strike Protection, Indirect Effects (CRI D-16)
INT/POL/25/8	Yawing Manoeuvring Conditions (CRI C-3)
INT/POL/25/9	Fuel Tank Crashworthiness (CRI C-5)
SC H-1	Enhanced Airworthiness Programme for Aeroplane System – ICA on EWIS (ref. CRI H-1000-01) – see note 6

The following Special Conditions are specific to the CL600-2D15 & CL-600-2D24:

INT/POL/25/5	Accelerate-Stop Distances and Related Performances (CRI B-900-03)
INT/POL/25/6	Worn Brakes (CRI D-900-01)
INT/POL/25/12	Fuel Tank Safety-Ignition Prevention (CRI E-900-04)
INT/POL/25/13	Towbarless Towing (CRI C-900-06)

JAA Exemptions:

The following Temporary Exemption has been accepted for the CL-600-2D15 as it was for the CL-600-2C10 (CRI F-01).

JAR 25.1441 and 25.1447 Oxygen System Requirements (CRI F-900-01)

JAA Equivalent Safety Findings:

The following Equivalent Safety Findings (ESF) were agreed for the CL-600-2C10 and are applicable to the CL-600-2D15:

JAR 25.677(b)	Trim Indication (CRI D-5)
JAR 25.783(f)	Baggage and Avionics Compartment Door (CRI D-2)
JAR 25.811(d)(2)	Main Door Exit Markings Sign (CRI D-3)
JAR 25.813(c)(1)	Emergency Exit Access (CRI D-4)
JAR 25B.991(b)	Emergency Fuel Pumps (CRI J-1)
JAR 25.1435(b)(1)	Hydraulic Systems (CRI F-15)
NPA 25C-236	Vibration, Buffet and Aeroelastic Stability (CRI C-6) (Identical to FAR 25 Amendment 77)

The following ESF have been agreed for the CL-600-2D15:

JAR 25.341	Continuous Turbulence (CRI C-900-07)
JAR 25.361(b)	Engine and APU Load Conditions (CRI C-900-09)
JAR 25.307	Proof of Structure (CRI C-900-11)
JAR 25.1181(a)(b)	Designated Fire Zones (CRI E-900-02)

JAA Elect to Comply Standards

The following CL-600-2C10 Elect to Comply standards are applicable to the CL-600-2D15:

NPA 25B-215	Stall, Stall Warning Speeds and Manoeuvre Capability (CRI B-1) (Identical to FAR 25 NPRM 95-17)
NPA 25C-282	Discrete Gust Load Design Requirements (CRI C-12) (Identical to FAR 25 Amendment 86)
NPA 25C-276	Braked Roll Conditions (CRI C-13) (Identical to FAR 25 Amendment 97)

Bombardier have elected to comply with the following standards specifically for the CL-600-2D15 & CL-600-2D24:

NPA 25D-285 Allowable Carbon Dioxide Concentration in Aeroplane Cabins and Cabin Ozone Concentration. (CRI D-900-02)

Note: CRI B-900-03 includes NPA 25B, D, G-244 as an “Elect to Comply”.

Additional National Design Requirements (ANDR).

Additional National Design Requirements (ANDR) as specified in JAA Administrative and Guidance Material, Section 3/Part 4 in effect at the time of Type Certification. Refer to CRI A-900-02

7. Environmental Standards:

Noise: ICAO Annex 16, Volume I, Third Edition. (CRI-A-900-03 refers).

8. Operational Suitability Data (OSD)

The EASA Type Certification with respect to Operational Suitability Data (OSD) is defined as follows:

MMEL: JAR-MMEL/MEL Amendment 1, Section 1

FCD: Certification Specifications for Operational Suitability Data (OSD) Flight Crew Data CS-FCD Initial Issue dated 31 January 2014

CCD: Certification Specifications and Guidance Material for Cabin Crew Data CS-CCD Initial Issue dated 31 January 2014

III. Technical Characteristics and Operational Limitations

The CL-600-2D15 Regional Jet, manufactured by Bombardier Aerospace, is a nominal 75 passenger, five crewmember, twin turbofan passenger aircraft, developed from the CL-600-2C10 Regional Jet Aircraft. The certification of the CL-600-2D15 considers one basic aircraft model defined as follows:

- CL-600-2D15 (Regional Jet Series 705): 75 passengers configuration (plus 5 crewmembers).

The aircraft is certified for a maximum altitude of 41,000 feet and a maximum design airspeed of Mach 0.85. The Mach number must be decreased to Mach 0.84 above 34,000 feet. The airframe is a monocoque design, using lightweight aluminum alloys, alloy steels, stainless steels, titanium and composite materials. It has a low, high swept wing, T-tail with trimmable horizontal stabilizer and tricycle landing gear.

1. EASA/JAA Type Design Definition

   Reference CRI A-900-06 JAA/EASA Build Standard Definition, RAZ-BA690-120.

2. Engines

   Two General Electric CF34-8C5 or optional CF34-8C5A1 Turbofan Engines, with reverse thrust capability, are rear fuselage mounted on pylons; JAA Executive Board recommendation letter 04/12/91/10/02-L237 dated 20 September 2002. Appropriate National Authority Type Certificate or FAA Engine Type Certificate No. E00063EN Revision 2 or later, and associated Type Certificate Data Sheet.

   Engine Limits:

   Refer to the Airplane Flight Manual (CSP C-012).

3. Fuel

Type	SPECIFICATION		
	Canada	USA	UK
Kerosene JET A, A-1 JP8	CAN 2 – 3.23 3-GP-23	ASTM D1655 MIL-DTL-83133	Def Stan 91-91 Def Stan 91-87
High Flash JP5	3-GP-24	MIL-DTL-5624	Def Stan 91-86

   Note: Fuel additives - See AFM as listed in Approved Publications
   For additional approved fuel grades see AFM (CSP C-012).
   For fuel temperature limitations see applicable AFM (CSP C-012).

   Fuel Capacity:

	Load		Weight	
Usable	U.S. Gal.	Litres	lb.	kg
2 main tanks (each)	1,110	4,202	7,492	3,398
1 Center Tank	683	2,585	4,610	2,091
Total	2,903	10,989	19,595	8,888

	Load		Weight	
	U.S. Gal.	Litres	lb.	kg
Unusable	23.1	87.4	155.9	70.7
Undrainable	2.0	7.6	13.5	6.1

4. Oil

   Oil: Engine, APU: MIL-L-7808 (Type I) or MIL-L-23699 (Type II) or Castrol 4000

   Mixing of different types of oils is prohibited

Oil Capacity:

	Load		Weight	
Usable	U.S. Quart	Litres	lb.	kg.
2 Engines (each)	10.5	9.9	21.36	9.65
Total	21	19.8	42.72	19.30

5. Air Speeds:

Airspeed Limits (IAS)			Knots	Mach
	V_{MO} and M_{MO}	(Maximum Operating)		
		Below 8000 feet	330*	*
		*See AFM (CSP B-012) for variations of V_{MO} and M_{MO} at or above 8000 ft		
	V_{FE}	(Flaps extended)		
		1°	230	
		8°	230	
		20°	220	
		30°	185	
		45°	170	
	V_A	(Manoeuvring) (Refer to Flight Manual for variations of V_A with altitude and aircraft weight)		
	V_{LO}	(Landing Gear Operating)		
		Extending	220	
		Retracting	200	
	V_{LE}	(Landing Gear Extended)	220	

Max. tyre ground speeds:	m.p.h.	knots
Nose Gear Tyre	225	195
Main Gear Tyre	225	195

6. Centre of Gravity Range

See AFM (CSP C-012).

Datum: FS 0.0 located at 365.76cm (144.00 inches) forward of the aircraft nose

Mean Aerodynamic Cord (MAC):
3.38 m (133.18 in.) (MAC leading edge at fuselage station 21.161 m (833.1 in.)

Leveling Means:
The aircraft is leveled in the longitudinal and lateral axis by the means of a plumb bob and target plate located at fuselage station 2910.2cm (1146.75 inches).

7. Maximum Certified Weights kg (lbs)

	Type Spec	Option <2005>
Max. Taxi and ramp	36,628 kg (80,750 lb.)	38,555 kg (85,000 lb.)
Max. Take-off	36,514 kg (80,500 lb.)	38,329 kg (84,500 lb.)
Max. Landing	33,339 kg (73,500 lb.)	34,065 kg (75,100 lb.)
Max. Zero fuel	31,751 kg (70,000 lb.)	32,092 kg (70,750 lb.)

NOTE: See AFM (CSP C-012) for other weight limitations and aircraft eligibility.

8. Minimum Flight Crew

Two: Pilot and Co-pilot

9. Maximum Seating Capacity

Maximum Passenger Seating Capacity: Series 705 – 75 or fewer passengers

10. Cargo compartment loading

Class	Volume (m3)	Max. Allowable Load (Kg)
C	12.39	1985
C	4.42	772

11. Environmental Flight Envelope

Refer to approved Airplane Flight Manual (CSP C-012).

12. Operating Limitations

Refer to approved Airplane Flight Manual (CSP C-012).

13. Auxiliary Power Unit (APU)

Allied Signal RE-220 RJ.
Approved to TSO C-77A and JAR-APU Change 2
Appropriate National Authority Type Certificate and TCDS.

APU Limits: ***

Maximum RPM:	106%	
Maximum EGT:	°C	°F
Starting*	692-1038	1274-1900
Running–Ground **	789	1452
Running-Flight**	806	1482

* Dependant upon altitude and temperature (refer to AFM CSP C-012)
** Not to be exceeded under any operating conditions
*** Refer to AFM (CSP C-012) for detail limitations

14. Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) and defined in the Type Certificate Type Design Definition, (see RAZ-BA690-120) must be installed in the airplane for certification.

15. Interior Installations

Cabin interior and seating configurations must be approved.

16. All Weather Capabilities

Coupled Autopilot: CAT II

17. Wheels and Tyres

Tyre	Size
Dual Nose Wheel and Tyre	20.5 x 6.75 – 10, 12 ply
Dual Main Wheels and Tyres (L/H & R/H)	H36 x 12 – 18, 18 ply

Landing Gear:

Tricycle Type (Two main gear assemblies and one steerable nose gear assembly)

18. Hydraulics

See AMM (CSP B-001) for approved Fluids.

19. Operating and Service Instructions

The Approved Publications consist of the following:

Airplane Flight Manual (AFM):	CSP C-012
Maintenance Requirement Manual (MRM) Part II:	CSP B-053 – See Note 4
Structural Repair Manual (SRM):	CSP B-008

Other Operating Instructions:

Weight and Balance Manual (WBM):	CSP C-041

The Instructions for Continued Airworthiness consist of the following Publications:

Aircraft Maintenance Manual (AMM):	CSP B-001
Non-Destructive Testing Manual (NDT)	CSP B-010

20. OPERATIONAL SUITABILITY DATA (OSD)

The Operational Suitability Data elements listed below were originally approved by the European Union Aviation Safety Agency under the EASA Type Certificate EASA.IM.A.023 as per Commission Regulation (EU) 748/2012 as amended by

Commission Regulation (EU) No 69/2014 and are now part of EASA Type Certificate EASA.IM.A.673.

1. Master Minimum Equipment List

   The Master Minimum Equipment List has been approved as per the defined Operational Suitability Data Certification Basis and as documented in European Union Aviation Safety Agency Master Minimum Equipment List, Canadair Regional Jet CL 600-2B19/ CL 600-2C10/ CL 600-2D15/ CL 600-2D24/CL 600-2D25, CSP ABCD-108, Revision 20, dated Nov 18/10, or later approved revisions.

2. Flight Crew Data

   The Flight Crew data has been approved as per the defined Operational Suitability Data Certification Basis and as documented in “Bombardier CRJ Series CRJ 100/200 – 700 – 705/900 - 1000 Operational Suitability Data (OSD) - Flight Crew (Ref: BAT-CRJ-OSD-FC Initial Issue dated December 15th 2015)” or later approved revisions.

3. Cabin Crew Data

   The Cabin Crew data has been approved as per the defined Operational Suitability Data Certification Basis recorded in CRI A-CCD, and as demonstrated by the “Bombardier EASA Cabin Crew Operational Suitability Data (OSD) for CRJ 900 Family of Aircraft (Ref: CC-E-BD500-900 Initial Issue dated December 1st 2015)”, or later approved revisions.

   The CL-600-2D15, CL-600-2D24 and CL-600-2E25 are considered to be one type, and the CL-600-2C10 is considered to be a variant of the CL-600-2D24.

21. Notes

1. Current weight and balance report, loading instructions (when necessary), and the list of equipment included in the certificated empty weight must be provided for each aircraft at the time of original certification.

2. JAA Approved Airplane Flight Manual: The airplane must be operated according to the appropriate JAA Approved Airplane Flight Manual (after 28th September 2003, subsequent AFM revisions are approved by EASA).

3. All placards must be installed in accordance with Drawings:
   a) Basic markings and placards: BA690-47500, BA690-47506 and BA690-47804.
   b) Self illuminated and electrical signs: BA690-47805 and BA690-47806.

   Note: Drawings noted above are for basic type certification only. For as delivered aircraft configuration, refer to CL-690-XXXXX or RAL-BA690-XXXXX. (XXXXX denotes aircraft serial number).

4. JAA approved Airworthiness limitations for mandatory compliance retirement life or inspection and Certification Maintenance Requirements (CMRs) are found in the Maintenance Requirements Manual (MRM), CSP B-053 - Part II

5. 15001 and subsequent serial number aircraft can be either CL-600-2D15 or CL-600-2D24 depending on the interior configuration

6. The Special Condition (i.e. CRI H-1000-01) that introduces requirements for EWIS-ICA's makes CS-25 Appendix H paragraph H 25.5 and AMC Appendix H 25.5 paragraphs 1 and 6 applicable to the certification basis (note, BA demonstration of compliance against 14 CFR Part 26 requirements constitutes compliance with the EASA regulations related to EWIS).

SECTION 5: CL-600-2D24 (Regional Jet Series 900)

I. General

1. Aeroplane: Regional Jet Series 900

II. Certification Basis

1. Reference Application Date for TCCA Certification: 01 November 1999
2. TCCA Certification Date: 09 September 2002
3. EASA (JAA) Validation Application Date: 01 November 1999
4. EASA Certification Date 18 December 2002
   (Date of first TC issuance within EU MS by ENAC Italy)
5. TCCA Certification Basis:

   Refer to TCCA Type Certificate Data Sheet No: A-276
6. EASA Certification Basis:

   JAA Airworthiness Requirements:

   JAR 25 Large Aeroplanes, Change 14, 27 May 1994
   Amendment (OP) 96/1, 19 April 1996

   Note: This includes the optional requirements of JAR 25.1419, Ice Protection and JAR 25.801, Ditching Provisions.

   Reversions : None requested

   JAR AWO at Change 2

   JAA Special Conditions:

   Novel Design Features: None.
   Unconventional Use: None.

   The following CL600-2C10 Special Conditions are also applicable to the CL600-2D24:

INT/POL/25/2	HIRF Protection (CRI D-17)
INT/POL/25/3	Lightning Strike Protection, Direct Effects (CRI D-15)
INT/POL/25/4	Lightning Strike Protection, Indirect Effects (CRI D-16)
INT/POL/25/8	Yawing Manoeuvring Conditions (CRI C-3)
INT/POL/25/9	Fuel Tank Crashworthiness (CRI C-5)
SC H-1	Enhanced Airworthiness Programme for Aeroplane System – ICA on EWIS (ref. CRI H-1000-01) – see note 6

The following Special Conditions are specific to the CL600-2D24:

INT/POL/25/5	Accelerate-Stop Distances and Related Performances (CRI B-900-03)
INT/POL/25/6	Worn Brakes (CRI D-900-01)
INT/POL/25/12	Fuel Tank Safety-Ignition Prevention (CRI E-900-04)
INT/POL/25/13	Towbarless Towing (CRI C-900-06)

JAA Exemptions:

The following Temporary Exemption has been accepted for the CL-600-2D24 as it was for the CL-600-2C10 (CRI F-01).

JAR 25.1441 and 25.1447 Oxygen System Requirements (CRI F-900-01)

JAA Equivalent Safety Findings:

The following Equivalent Safety Findings (ESF) were agreed for the CL600-2C10 and are applicable to the CL600-2D24:

JAR 25.677(b)	Trim Indication (CRI D-5)
JAR 25.783(f)	Baggage and Avionics Compartment Door (CRI D-2)
JAR 25.811(d)(2)	Main Door Exit Markings Sign (CRI D-3)
JAR 25.813(c)(1)	Emergency Exit Access (CRI D-4)
JAR 25B.991(b)	Emergency Fuel Pumps (CRI J-1)
JAR 25.1435(b)(1)	Hydraulic Systems (CRI F-15)
NPA 25C-236	Vibration, Buffet and Aeroelastic Stability (CRI C-6) (Identical to FAR 25 Amendment 77)

The following ESF have been agreed for the CL600-2D24:-

JAR 25.341	Continuous Turbulence (CRI C-900-07)
JAR 25.361(b)	Engine and APU Load Conditions (CRI C-900-09)
JAR 25.307	Proof of Structure (CRI C-900-11)
JAR 25.1181(a)(b)	Designated Fire Zones (CRI E-900-02)

JAA Elect to Comply Standards:

The following CL600-2C10 Elect to Comply standards are applicable to the CL600-2D24:

NPA 25B-215	Stall, Stall Warning Speeds and Manoeuvre Capability (CRI B-1) (Identical to FAR 25 NPRM 95-17)
NPA 25C-282	Discrete Gust Load Design Requirements (CRI C-12) (Identical to FAR 25 Amendment 86)
NPA 25C-276	Braked Roll Conditions (CRI C-13) (Identical to FAR 25 Amendment 97)

Bombardier have elected to comply with the following standards specifically for the CL600-2D24:

NPA 25D-285	Allowable Carbon Dioxide Concentration in Aeroplane Cabins and Cabin Ozone Concentration (CRI D-900-02)
CS 25.811	Emergency exit marking, Amendment 3
CS 25.812	Emergency lighting, Amendment 3

Note: CRI B-900-03 includes NPA 25B, D, G-244 as an “Elect to Comply”.

Additional National Design Requirements (ANDR).

Additional National Design Requirements (ANDR) as specified in JAA Administrative and Guidance Material, Section 3/Part 4 in effect at the time of Type Certification. Refer to CRI A-900-02.

7. Environmental Standards:

Noise: ICAO Annex 16, Volume I, Third Edition. (CRI-A-900-03 refers).

8. Operational Suitability Data (OSD)

The EASA Type Certification with respect to Operational Suitability Data (OSD) is defined as follows:

MMEL: JAR-MMEL/MEL Amendment 1, Section 1

FCD: Certification Specifications for Operational Suitability Data (OSD) Flight Crew Data CS-FCD Initial Issue dated 31 January 2014

CCD: Certification Specifications and Guidance Material for Cabin Crew Data CS-CCD Initial Issue dated 31 January 2014

III. Technical Characteristics and Operational Limitations

The CL-600-2D24 Regional Jet, manufactured by Bombardier Aerospace, is a nominal 86 passenger, five crewmember, twin turbofan passenger aircraft, developed from the CL-600-2C10 Regional Jet Aircraft. The certification of the CL-600-2D24 considers one basic aircraft model defined as follows:

- CL-600-2D24 (Regional Jet Series 900): 86 passengers configuration (plus 5 crewmembers)

The aircraft is certified for a maximum altitude of 41,000 feet and a maximum design airspeed of Mach 0.85. With the incorporation of M/S 690T002727 – Introduction of new winglet, the Mach number must be decreased to Mach 0.84 above 34,000 feet. The airframe is a monocoque design, using lightweight aluminum alloys, alloy steels, stainless steels,

titanium and composite materials. It has a low, high swept wing, T-tail with trimmable horizontal stabilizer and tricycle landing gear.

1. EASA/JAA Type Design Definition

   Reference CRI A-900-06 JAA/EASA Build Standard Definition, RAZ-BA690-120.

2. Engines

   Two General Electric CF34-8C5 or optional CF34-8C5A1 Turbofan Engines, with reverse thrust capability, are rear fuselage mounted on pylons; JAA Executive Board recommendation letter 04/12/91/10/02-L237 dated 20 September 2002. Appropriate National Authority Type Certificate or FAA Engine Type Certificate No. E00063EN Revision 2 or later, and associated Type Certificate Data Sheet.

   Engine Limits:

   Refer to the Airplane Flight Manual (CSP C-012).

3. Fuel

Type	SPECIFICATION		
	Canada	USA	UK
Kerosene JET A, A-1 JP8	 CAN 2 – 3.23 3-GP-23	 ASTM D1655 MIL-DTL-83133	 Def Stan 91-91 Def Stan 91-87
High Flash JP5	 3-GP-24	 MIL-DTL-5624	 Def Stan 91-86

Note: Fuel additives - See AFM as listed in Approved Publications.
For additional approved fuel grades see AFM.
For fuel temperature limitations see applicable AFM.

Fuel Capacity:

	Load		Weight	
Usable	U.S. Gal.	Litres	lb.	kg
2 main tanks (each)	1,110	4,202	7,492	3,398
1 Center Tank	683	2,585	4,610	2,091
Total	2,903	10,989	19,595	8,888

	Load		Weight	
	U.S. Gal.	Litres	lb.	kg
Unusable	23.1	87.4	155.9	70.7
Undrainable	2.0	7.6	13.5	6.1

4. Oil

   Oil: Engine, APU: MIL-L-7808 (Type I) or MIL-L-23699 (Type II) or Castrol 4000

   Mixing of different types of oils is prohibited.

Oil Capacity:

	Load		Weight	
Usable	U.S. Quart	Litres	lb.	kg.
2 Engines (each)	10.4é	9.9	21.36	9.65
Total	20.8	19.8	42.72	19.30

5. Air Speeds:

Airspeed Limits (IAS)			Knots	Mach
	V_{MO} and M_{MO}	(Maximum Operating)		
		Below 8000 feet	330*	*
		*See AFM (CSP B-012) for variations of V_{MO} and M_{MO} at or above 8000 ft		
	V_{FE}	(Flaps extended)		
		1°	230	
		8°	230	
		20°	220	
		30°	185	
		45°	170	
	V_A	(Manoeuvring) (Refer to Flight Manual for variations of V_A with altitude and aircraft weight)		
	V_{LO}	(Landing Gear Operating)		
		Extending	220	
		Retracting	200	
	V_{LE}	(Landing Gear Extended)	220	

Max. tyre ground speeds:	m.p.h.	knots
Nose Gear Tyre	225	195
Main Gear Tyre	225	195

6. Centre of Gravity Range

See AFM, CSP C-012.

Datum: FS 0.0 located at 365.76cm (144.00 inches) forward of the aircraft nose

Mean Aerodynamic Cord (MAC):
3.38 m (133.18 in.) (MAC leading edge at fuselage station 21.161 m (833.1 in.)

Leveling Means:
The aircraft is leveled in the longitudinal and lateral axis by the means of a plumb bob and target plate located at fuselage station 2910.2cm (1146.75 inches).

7. Maximum Certified Weights kg (lbs)

	Type Spec	Option <2004>	Option <2005>	Option <2006>
Max. Taxi and ramp	36,628 kg (80,750 lb.)	37,535 kg (82,750 lb.)	38,555 kg (85,000 lb.)	38,222 kg (84,265 lb.)
Max. Take-off	36,514 kg (80,500 lb.)	37,421 kg (82,500 lb.)	38,329 kg (84,500 lb.)	37,995 kg (83,765 lb.)
Max. Landing	33,339 kg (73,500 lb.)	33,339 kg (73,500 lb.)	34,065 kg (75,100 lb.)	34,065 kg (75,100 lb.)
Max. Zero fuel	31,751 kg (70,000 lb.)	31,751 kg (70,000 lb.)	32,092 kg (70,750 lb.)	32,092 kg (70,750 lb.)

NOTE: See AFM (CSP C-012) for other weight limitations and aircraft eligibility.

8. Minimum Flight Crew

Two: Pilot and Co-pilot

9. Maximum Seating Capacity

Maximum Passenger Seating Capacity: Series 900 – 90 or less passengers

10. Cargo compartment loading

Class	Volume (m3)	Max. Allowable Load (Kg)
C	12.39	1985
C	4.42	772

11. Environmental Flight Envelope

Refer to approved Airplane Flight Manual (CSP C-012).

12. Operating Limitations

Refer to approved Airplane Flight Manual (CSP C-012).

13. Auxiliary Power Unit (APU)

Allied Signal RE-220 RJ.
Approved to TSO C-77A and JAR-APU Change 2
Appropriate National Authority Type Certificate and TCDS.

APU Limits: ***

Maximum RPM:	106%	
Maximum EGT:	°C	°F
Starting*	692-1038	1274-1900
Running–Ground **	789	1452
Running-Flight**	806	1482

* Dependant upon altitude and temperature (refer to AFM CSP C-012)
** Not to be exceeded under any operating conditions
*** Refer to AFM (CSP C-012) for detail limitations

14. Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) and defined in the Type Certificate Type Design Definition, (see RAZ-BA690-120) must be installed in the airplane for certification.

15. 15. Interior Installations

Cabin interior and seating configurations must be approved.

16. All Weather Capabilities

Coupled Autopilot: CAT II

17. Wheels and Tyres

Tyre	Size
Dual Nose Wheel and Tyre	20.5 x 6.75 – 10, 12 ply
Dual Main Wheels and Tyres (L/H & R/H)	H36 x 12 – 18, 18 ply

Landing Gear

Tricycle Type (Two main gear assemblies and one steerable nose gear assembly)

18. Hydraulics

See AMM (CSP B-001) for approved fluids.

19. Operating and Service Instructions

The Approved Publications consist of the following:

Airplane Flight Manual (AFM): CSP C-012
Maintenance Requirement Manual (MRM) Part II: CSP B-053 – See Note 4
Structural Repair Manual (SRM): CSP B-008

Other Operating Instructions:
Weight and Balance Manual: CSP C-041

The Instructions for Continued Airworthiness consist of the following Publications:

Aircraft Maintenance Manual (AMM):	CSP B-001
Non-Destructive Testing Manual (NDT)	CSP B-010

20. OPERATIONAL SUITABILITY DATA (OSD)

The Operational Suitability Data elements listed below were originally approved by the European Union Aviation Safety Agency under the EASA Type Certificate EASA.IM.A.023 as per Commission Regulation (EU) 748/2012 as amended by Commission Regulation (EU) No 69/2014 and are now part of EASA Type Certificate EASA.IM.A.673.

1. Master Minimum Equipment List

   The Master Minimum Equipment List has been approved as per the defined Operational Suitability Data Certification Basis and as documented in European Union Aviation Safety Agency Master Minimum Equipment List, Canadair Regional Jet CL 600-2B19/ CL 600-2C10/ CL 600-2D15/ CL 600-2D24/CL 600-2D25, CSP ABCD-108, Revision 20, dated Nov 18/10, or later approved revisions.

2. Flight Crew Data

   The Flight Crew data has been approved as per the defined Operational Suitability Data Certification Basis and as documented in “Bombardier CRJ Series CRJ 100/200 – 700 – 705/900 - 1000 Operational Suitability Data (OSD) - Flight Crew (Ref: BAT-CRJ-OSD-FC Initial Issue dated December 15th 2015)” or later approved revisions.

3. Cabin Crew Data

   The Cabin Crew data has been approved as per the defined Operational Suitability Data Certification Basis recorded in CRI A-CCD, and as demonstrated by the “Bombardier EASA Cabin Crew Operational Suitability Data (OSD) for CRJ 900 Family of Aircraft (Ref: CC-E-BD500-900 Initial Issue dated December 1st 2015)”, or later approved revisions.

   The CL-600-2D15, CL-600-2D24 and CL-600-2E25 are considered to be one type, and the CL-600-2C10 is considered to be a variant of the CL-600-2D24.

21. Notes

1. Current weight and balance report, loading instructions (when necessary), and the list of equipment included in the certificated empty weight must be provided for each aircraft at time of original certification.

2. JAA Approved Airplane Flight Manual: The airplane must be operated according to the appropriate JAA Approved Airplane Flight Manual (after 28th September 2003, subsequent AFM revisions are approved by EASA).

3. All placards must be installed in accordance with Drawings:
   a) Basic markings and placards: BA690-47500, BA690-47506 and BA690-47804.
   b) Self illuminated and electrical signs: BA690-47805 and BA690-47806.

   Note: Drawings noted above are for basic type certification only. For as delivered aircraft configuration, refer to CL-690-XXXXX or RAL-BA690-XXXXX. (XXXXX denotes aircraft serial number).

4. EASA approved Airworthiness limitations for mandatory compliance retirement life or inspection and Certification Maintenance Requirements (CMRs) are found in the Maintenance Requirements Manual (MRM), CSP B-053 - Part II.

5. 15001 and subsequent serial number aircraft can be either CL-600-2D15 or CL-600-2D24 depending on the interior configuration.

6. The Special Condition (i.e. CRI H-1000-01) that introduces requirements for EWIS-ICA's makes CS-25 Appendix H paragraph H 25.5 and AMC Appendix H 25.5 paragraphs 1 and 6 applicable to the certification basis (note, BA demonstration of compliance against 14 CFR Part 26 requirements constitutes compliance with the EASA regulations related to EWIS).

SECTION 6: CL-600-2E25 (Regional Jet Series 1000)

I. General

1. Aeroplane: Regional Jet Series 1000

II. Certification Basis

1. Reference Application Date for TCCA Certification: 23 February 2007
2. TCCA Certification Date: 02 November 2010
3. EASA Validation Application Date: 28 February 2007
4. EASA Certification Date 09 November 2010
5. TCCA Certification Basis:

   Refer to TCCA Type Certificate Data Sheet No: A-276

6. EASA Certification Basis:

   EASA Airworthiness Requirements:

   CS-25 Large Aeroplanes, Amendment 2, dated 02 October 2006
   Note: This includes the optional requirements of CS 25.1419, Ice Protection and CS 25.801, Ditching Provisions.

   CS-AWO at Initial Issue

   Reversions:

   CS 25.772(c) reversion to JAR 25, Change 14
   CS 25.415(c) reversion to JAR 25, Change 14 (for Rudder Control System only)
   CS 25.981(c) is not applicable.

   EASA Special Conditions:

   Novel Design Features:

   D-1000-01 Command-by-Wire Control Systems Failure Criteria

   General Experience:

C-1000-01	Engine Imbalance
C-1000-02	Engine loads
C-1000-03	Emergency landings
C-1000-11	Design Stall Speed
D-1000-04	Application of heat release and smoke density requirements to seat materials
H-1000-01	EWIS/EAPAS – see note 5

The following CL-600-2C10/CL-600-2D24 Special Conditions are also applicable to the CL-600-2E25:

D-15	Lightning strike protection, direct effects
D-16	Lightning strike protection, indirect effects
D-17	HIRF protection
E-900-04	Fuel tank safety – Ignition prevention

Equivalent Safety Findings

D-1000-03	Seat Cushion protrusion

The following Equivalent Safety Findings were agreed for the CL-600-2C10/2D24 and are equally applicable to the CL-600-2E25:

D-5	Trim Indication
D-2	Baggage and Avionics Compartment Door
D-3	Main Entry Door Markings Sign
J-1	Emergency Fuel Pumps
E-900-02	Designated Fire Zones

Elect to Comply Requirements

The following sub-paragraphs of CS-25 at amendment 3 issued September 19th, 2007 are elected to be complied with by Bombardier Aerospace per their submission of the Changed Product Rule Analysis RAZ-BA698-004 at latest revision:

CS-25.811 (g)
CS-25.812 (b)
CS-25.812 (e)

7. Environmental Standards:

Fuel Venting and Emissions: ICAO Annex 16, 2nd edition, Volume 2, Part II and Part III, Chapter 2, Amendment 4.
Noise: ICAO Annex 16, Volume I, Part II, Chapter 4, Amendment 8.

8. Operational Suitability Data (OSD)

The EASA Type Certification with respect to Operational Suitability Data (OSD) is defined as follows:

MMEL: JAR-MMEL/MEL Amendment 1, Section 1

FCD: Certification Specifications for Operational Suitability Data (OSD) Flight Crew Data CS-FCD Initial Issue dated 31 January 2014

CCD: Certification Specifications and Guidance Material for Cabin Crew Data CS-CCD Initial Issue dated 31 January 2014

III. Technical Characteristics and Operational Limitations

The CL-600-2E25 (Regional Jet Series 1000), manufactured by Bombardier Aerospace, is a nominal 104 passenger, six crewmember, twin turbofan passenger aircraft, developed from the CL-600-2D24/2D15 Regional Jet Aircraft.

The aircraft is certified for maximum altitude of 41,000 feet and maximum design airspeed of Mach 0.84. The airframe is a monocoque design, using lightweight aluminum alloys, alloy steels, stainless steels, titanium and composite materials. It has a low, high swept wing, T-tail with trimmable horizontal stabilizer and tricycle landing gear.

1. EASA Type Design Definition

   EASA Definition of Type design contained in document, RAZ-BA698-018.

2. Engines

   Two General Electric CF34-8C5 or optionals CF34-8C5A1 and CF34-8C5A2 Turbofan Engines, with reverse thrust capability, are rear fuselage mounted on pylons. Appropriate National Authority Type Certificate or FAA Engine Type Certificate No. E00063EN Revision 2 or later, and associated Type Certificate Data Sheet.

   Engine Limits:

   Refer to the Airplane Flight Manual (CSP D-012).

3. Fuel

SPECIFICATION					
Canada	USA	UK	China	CIS	NATO
CGSB-3.23	ASTM D1655 JET A				
	ASTM D1655 JET A-1	Def Stan 91-91	GB6537-94 No. 3 Jet	RT	F-35
CGSB-3.24	MIL-DTL-83133 JP-8	Def Stan 91-87			F-34
	MIL-DTL-5624 JP-5	Def Stan 91-86			F-44

Note: Fuel additives - See AFM as listed in Approved Publications.
For additional approved fuel grades see AFM.
For fuel temperature limitations see applicable AFM.

Fuel Capacity:

	Load		Weight	
Usable	U.S. Gal.	Litres	lb.	kg
2 main tanks (each)	1,114	4,217	7,517	3,410
1 Center Tank	710	2,688	4,795	2,175
Total	2,937	11,117	19,828	8,994

	Load		Weight	
	U.S. Gal.	Litres	lb.	kg
Unusable	37.5	141.9	252.8	114.6
Undrainable	13.1	49.6	88.3	40.1

4. Oil

Oil: Engine, APU: MIL-L-7808 (Type I) or MIL-L-23699 (Type II) or Castrol 4000

Mixing of different types of oils is prohibited.

Oil Capacity:

	Load		Weight	
Usable	U.S. Quart	Litres	lb.	kg.
2 Engines (each)	11	10.4	22.5	10.2
Total	22	20.8	44.8	20.3

5. Air Speeds

Airspeed Limits (IAS)			Knots	Mach
	V_{MO} and M_{MO}	(Maximum Operating)		
		Below 8000 feet	330*	*
		*See AFM (CSP D-012) for variations of V_{MO} and M_{MO} at or above 8000 ft		
	V_{FE}	(Flaps extended)		
		1°	230	
		8°	230	
		20°	220	
		30°	185	
		45°	170	
	V_A	(Manoeuvring) (Refer to Flight Manual for variations of V_A with altitude and aircraft weight)		
	V_{LO}	(Landing Gear Operating)		
		Extending	220	
		Retracting	200	
	V_{LE}	(Landing Gear Extended)	220	

Max. tyre ground speeds:	m.p.h.	knots
Nose Gear Tyre	225	195
Main Gear Tyre	225	195

6. Centre of Gravity Range

   See AFM, CSP D-012.

   Datum: FS 0.0 located at 365.76cm (144.00 inches) forward of the aircraft nose

   Mean Aerodynamic Cord (MAC):
   3.48 m (137.02 in.) (MAC leading edge at Xarm 22.866 m (900.257 in.)

   Leveling Means:
   The aircraft is leveled in the longitudinal and lateral axis by the means of a plumb bob and target plate located at fuselage station 2910.2cm (1146.75 inches).

7. Maximum Certified Weights kg (lbs)

	Type Spec	Option <3002>	Option <3003>	Option <3004>	Option <3005>
Max. Taxi and ramp	41,050 kg (90,500 lb.)	41,868 kg (92,300 lb.)	40,221 kg (88,673 lb.)	41,222 kg (90,878 lb.)	39,222 kg (86,469 lb.)
Max. Take-off	40,823 kg (90,000 lb.)	41,640 kg (91,800 lb.)	39,995 kg (88,173 lb.)	40,995 kg (90,378 lb.)	38,995 kg (85,969 lb.)
Max. Landing	36,968 kg (81,500 lb.)	36,968 kg (81,500 lb.)	36,968 kg (81,500 lb.)	36,968 kg (81,500 lb.)	36,968 kg (81,500 lb.)
Max. Zero fuel	35,153 kg (77,500 lb.)	35,153 kg (77,500 lb.)	35,153 kg (77,500 lb.)	35,153 kg (77,500 lb.)	35,153 kg (77,500 lb.)

   NOTE: See AFM (CSP D-012) for other weight limitations and aircraft eligibility.

8. Minimum Flight Crew

   Two: Pilot and Co-pilot

9. Maximum Seating Capacity

   Maximum Passenger Seating Capacity: 104 passengers

10. Cargo compartment loading

    See Weight & Balance Manual for cargo compartment loads for each configuration.

11. Environmental Flight Envelope

    Refer to approved Airplane Flight Manual.

12. Operating Limitations

Refer to approved Airplane Flight Manual.

13. Auxiliary Power Unit (APU)

Allied Signal RE-220 RJ.
Approved to TSO C-77A and JAR-APU Change 2
Appropriate National Authority Type Certificate and TCDS.

APU Limits: ***

Maximum RPM:	106%	
Maximum EGT:	°C	°F
Starting*	692-1038	1274-1900
Running–Ground **	789	1452
Running-Flight**	806	1482

* Dependant upon altitude and temperature (refer to AFM)
** Not to be exceeded under any operating conditions
*** Refer to AFM (CSP D-012) for detail limitations

14. Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) are defined in the Type Certificate Type Design Definition, (see RAZ-BA698-018) must be installed in the airplane for certification.

15. Interior Installations

Cabin interior and seating configurations must be approved.

16. All Weather Capabilities

Reserved

17. Wheels and Tyres

Tyre	Size
Dual Nose Wheel and Tyre	20.5 x 6.75 – 10, 12 ply
Dual Main Wheels and Tyres (L/H & R/H)	H36 x 11.5 – 19, 20 ply

Landing Gear

Tricycle Type (Two main gear assemblies and one steerable nose gear assembly)

18. Hydraulics

See AMM (CSP B-001) for approved fluids

19. Operating and Service Instructions

The Approved Publications consist of the following:

Airplane Flight Manual (AFM):	CSP D-012
Maintenance Requirement Manual (MRM) Part II:	CSP B-053
Structural Repair Manual (SRM):	CSP D-008
Weight and Balance Manual:	CSP D-041
Minimum Master Equipment List (MMEL):	CSP ABCD-108

Other Operating Instructions:

Weight and Balance Manual (WBM):	CSP D-041

The Instructions for Continued Airworthiness consist of the following Publications:

Aircraft Maintenance Manual (AMM):	CSP B-001
Non-Destructive Testing Manual (NDT)	CSP B-010

20. OPERATIONAL SUITABILITY DATA (OSD)

The Operational Suitability Data elements listed below were originally approved by the European Union Aviation Safety Agency under the EASA Type Certificate EASA.IM.A.023 as per Commission Regulation (EU) 748/2012 as amended by Commission Regulation (EU) No 69/2014 and are now part of EASA Type Certificate EASA.IM.A.673.

1. Master Minimum Equipment List

The Master Minimum Equipment List has been approved as per the defined Operational Suitability Data Certification Basis and as documented in European Union Aviation Safety Agency Master Minimum Equipment List, Canadair Regional Jet CL 600-2B19/ CL 600-2C10/ CL 600-2D15/ CL 600-2D24/CL 600-2D25, CSP ABCD-108, Revision 20, dated Nov 18/10, or later approved revisions.

2. Flight Crew Data

The Flight Crew data has been approved as per the defined Operational Suitability Data Certification Basis and as documented in “Bombardier CRJ Series CRJ 100/200 – 700 – 705/900 - 1000 Operational Suitability Data (OSD) - Flight Crew (Ref: BAT-CRJ-OSD-FC Initial Issue dated December 15th 2015)” or later approved revisions.

3. Cabin Crew Data

The Cabin Crew data has been approved as per the defined Operational Suitability Data Certification Basis recorded in CRI A-CCD, and as demonstrated by the “Bombardier EASA Cabin Crew Operational Suitability Data (OSD) for CRJ 900

Family of Aircraft (Ref: CC-E-BD500-900 Initial Issue dated December 1st 2015)", or later approved revisions.

The CL-600-2D15, CL-600-2D24 and CL-600-2E25 are considered to be one type, and the CL-600-2C10 is considered to be a variant of the CL-600-2D24.

21. Notes

1. Current weight and balance report, loading instructions (when necessary), and the list of equipment included in the certificated empty weight must be provided for each aircraft at the time of original certification.

2. EASA Approved Airplane Flight Manual: The airplane must be operated according to the appropriate EASA Approved Airplane Flight Manual.

3. All placards must be installed in accordance with Drawings:
   a) Basic markings and placards: BA670-47850, BA670-47869, BA690-47504, BA690-47518, BA690-47525, BA690-47526, BA690-47528, BA690-47529, BA690-47530, BA698-47203, BA698-47502, BA698-47519, BA698-47800, BA698-47805 and CC698-47251.
   b) Self-illuminated and electrical signs: BA690-47805 and BA698-47801.

   Note: Drawings noted above are for basic type certification only. For as delivered aircraft configuration, refer to RAL-BA698-19XXX. (19XXX denotes aircraft serial number).

4. EASA approved Airworthiness limitations for mandatory compliance retirement life or inspection and Certification Maintenance Requirements (CMRs) are found in the Maintenance Requirements Manual (MRM), CSP B-053 - Part II.

5. The effectivity range for the CL-600-2E25 is 19991 & subsequent.

6. The Special Condition (i.e. CRI H-1000-01) that introduces requirements for EWIS-ICA's makes CS-25 Appendix H paragraph H 25.5 and AMC Appendix H 25.5 paragraphs 1 and 6 applicable to the certification basis (note, BA demonstration of compliance against 14 CFR Part 26 requirements constitutes compliance with the EASA regulations related to EWIS).

SECTION 7: CHANGE RECORD

Starting with Issue1.0

TCDS Issue No	TCDS Date	TCDS Changes	TC Date
1.0	06/03/2020	Initial issue. Included Text in SECTION 1 to explain that the following Regional Jet models were previously recorded on Issue EASA TC/TCDS IM.A.023 Issue 16.0 and have been administratively moved to this TCDS at Issue 1.0 pursuant to Regulation (EU) No 69/2014 part 21.A.47: • CL-600-2B19 (Regional Jet Series 100) • CL-600-2B19 (Regional Jet Series 440) • CL-600-2C10 (Regional Jet Series 700 and 701) • CL-600-2C10 (Regional Jet Series 702) • CL-600-2D15 (Regional Jet Series 705) • CL-600-2D24 (Regional Jet Series 900) • CL-600-2E25 (Regional Jet Series 1000	06/03/2020
2.0	01/06/2020	Issue 2.0 EASA.IM.A.673 Type Certificate transferred from Bombardier Inc to new TC Holder MHI RJ Aviation ULC, following Transport Canada TC A-276 transfer of title.	06/03/2020