Civil Aviation Authority
United Kingdom

TYPE-CERTIFICATE DATA SHEET

UK.TC.A.00134

for

BAe 146 / AVRO 146-RJ Series

Type Certificate Holder

BAE SYSTEMS (Operations) Limited

Trading as BAE SYSTEMS Regional Aircraft

Prestwick International Airport
Monkton
KA9 2RW
United Kingdom

UK.21J.0047

Model(s):	BAe 146 Series 100, 200 and 300 AVRO 146 Series RJ70, RJ85, RJ100 and RJ115
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Section 1 General (All Models)

I. General

This Type-Certificate Data Sheet (TCDS) is the concise definition of the type-certificated product accepted and or approved by the UK CAA in the UK for the affected types and models.

This TCDS includes:

1. Details of the type design that affect the TCDS that have been approved or accepted by the UK CAA in the UK since 01 January 2021.
2. Details of the type design that affected the TCDS and were approved or accepted by EASA before 01 January 2021 and were incorporated into **EASA TCDS EASA.A.182** at **Issue 3** dated **15 January 2015** and are therefore accepted by the UK under Article 15 of Annex 30 of the UK-EU Trade and Cooperation Agreement.

1. Airworthiness Category

Large Aeroplanes

2. Performance Category

A

3. Certificating Authority

United Kingdom Civil Aviation Authority

4. Type Certificate Holder

BAE SYSTEMS Operations Limited
Trading as BAE SYSTEMS Regional Aircraft
Prestwick International Airport
Monkton
KA9 2RW
United Kingdom

5. Manufacturer

Aircraft were manufactured by British Aerospace Hatfield and British Aerospace/BAE SYSTEMS Woodford from 1980 through 2002.

6. Construction Numbers

BAe 146 Models:	E1002 to E3220, excluding E2208, including E3222 and E2227
AVRO 146-RJ Models:	E2208**,** E3221 and subsequent, excluding E3222 and E2227

The first digit in the Model Number denotes the airframe model / series.
The last three digits in the Models Numbers are sequential build references.

1 – 100 / RJ70
2 – 200 / RJ85
3 – 300 / RJ100 / RJ115

Example: E1002 refers to the -100 series, build number 002; E3221 refers to the RJ100 series, build number 221

Section 2 BAe 146 Model

I. General

1. Type / Variant or Model

a) Type: BAe 146
b) Variant or Model: Series 100, 200 and 300

2. Reference Application Date for UK CAA Certification

Series 100 and 200: May 1979

Series 300: September 1987

3. UK CAA Certification Date

Series 100: 4 February 1983

Series 200: 3 June 1983

Series 300: 6 September 1988

II. UK CAA Certification Basis

1. BAe 146 Series 100 and 200 only

(a) JAR Part 1, Definitions and Abbreviations.

(b) JAR Part 25 at Change 5, Large Aeroplanes.

NOTE: The basis of certification of the BAe 146 type design for the Series 100 and 200, has been raised in relation to the requirements of JAR 25.307 to 351 inclusive to Change 10, associated with the increase in Maximum Zero Fuel Weight on the Series 200 (Reference BAe change HCM00021J and UK CAA letter dated 28 November 1988).

(c) UK CAA Airworthiness Notices

Compliance is required in respect of any Relevant Airworthiness Notice.

(d) UK CAA Specifications

Specification No. 10, Issue 1 (May 1974), Flight Data Recorders.

Specification No. 11, Issue 1 (May 1974), Cockpit Voice Recorders.

Specification No. 12, Issue 1 (May 1974), Underwater Sonar Location Devices.

Specification No. 14, Issue 2 (September 1976), Ground Proximity Warning Devices.

(e) Additional items not covered in JAR, taken into account during the type design:

Equipment Performance Standards.

Flight Representative of Typical Operational Use.

(Reference UK BCAR Section A5-2 Paragraph 2.3.1, one aircraft of the final build standard completed 200 flying hours, representative of typical operational use).

Systems Safety Assessments.

(UK BCAR Paper 670 provides additional interpretative material).

(f) Complementary Conditions

BAe 146 Complementary Conditions Revision 1, as notified by UK CAA letter ref. 9/30/ADH3313 dated 20 October 1979 and 19 April 1982.

Complete Sections of UK BCAR

BCAR Section A, Issue 22	Certification and Approval Procedures put in place of Chapter A3-3, the draft text in the revision of A3-3 dated 12 December 1978.
BCAR Section R, Issue 4	Radio.

2. BAe 146 Series 300 only

The airworthiness requirements with which compliance has been demonstrated for the BAe 146 Series 300 type design, are the same as for the Series 100 and 200 aircraft, with the following exceptions:

JAR Part 25 at Change 5 - Large Aeroplanes, with the exception of Subpart C ‘Structure’, and the following requirements of Subpart D 'Design and Construction' which are at Change 10;

25.629	Flutter deformation and fail-safe criteria.
25.783	Doors.
25.787	Stowage compartments.
25.789	Retention of items of mass in the passenger and crew compartments, and galleys.
25.803	Emergency evacuation.
25.811	Emergency exit marking.
25.812	Emergency lighting.
25.853	Compartment interiors.
25.858	Cargo compartment fire detection system.
25.863	Flammable fluid fire protection.

The applicable requirements for the installation of the LF507-1H engine (change HCM01000E), and for the increase in operating weights (change HCM01000H / K) are defined as follows, based on JAR Part 25 at Change 12.

25.251	Vibration and buffeting
25.903(a)	Engine type certification
25.1091(e)	Air intake, foreign object ingestion
25.1093(b)(2)	Air intake, system de-icing and anti-icing provisions
25.1163(a)(3)	Powerplant accessories, oil contamination
25.1305(d)(1) and ACJ	Powerplant instruments thrust indicator

3. Special Conditions

The following Special Condition has been developed post Type Certification:

EASA CRI H-01	Enhanced Airworthiness Programme for Aeroplane Systems, ICA on EWIS

4. Equivalent Safety Findings

None

5. Exemptions

None

6. Environmental Standards

Noise: Chapter 3 of ICAO Annex 16, Volume I (see TCDSN UK.TC.A.00134 for details)

Section 2: BAe 146 Model

III. Technical Characteristics and Operating Limitations

1. Type Design Definition

Series 100 HTD.D.461.00.0004
Series 200 HTD.D.462.00.0009
Series 300 HCM00000T, Aircraft Drawing Number HC000H1016 at Issue 1 and subsequent

2. Technical Description

High wing regional jet transport, powered by four turbofan engines mounted below the wings.

Each engine supports either an electrical or hydraulic system, resulting in twin systems.

Passenger, freighter and convertible variants exist. The freighter is referred to as the Quiet Trader (QT) and the convertible the Quick Change (QC). The QC is only applicable to the Series 200 and can be configured in either a passenger or freight role.

3. Equipment

The basic required equipment as prescribed in the applicable airworthiness requirements, must be installed in the aircraft for certification. The Illustrated Parts Catalogue (IPC) references all equipment approved for installation in the aircraft.

4. Dimensions

Aircraft	Series 100	Series 200	Series 300
Length	26.19 m (85 ft 11 in)	28.55 m (93 ft 8 in)	31.00 m (101 ft 8 in)
Wingspan	26.34 m (86 ft 5 in)	26.34 m (86 ft 5 in)	26.34 m (86 ft 5 in)
Height	8.61 m (28 ft 3 in)	8.61 m (28 ft 3 in)	8.59 m (28 ft 2 in)
Wing Area	77.30 m^2 (832 ft^2)	77.30 m^2 (832 ft^2)	77.30 m^2 (832 ft^2)

5. Engines

All BAe 146 Series can be configured with four Avco Lycoming ALF502 R-3A or ALF502 R-5 engines, in any combination operating at R-5 rating.

The BAe 146 Series 100 can be configured with four Avco Lycoming ALF502 R-3 or ALF502 R-5 engines, in any combination operating at R-3 rating.

The BAe 146 Series 300 can be configured with four Textron Lycoming LF507-1H engines, no intermixing is permitted.

Engine Limits

Thrust Ratings (Sea level static thrust):

Model	ALF502 R-3	ALF503 R-3A	ALF502 R-5	LF507-1H
Maximum Continuous	6,300 lb	6,550 lb	6,550 lb	6,545 lb
Normal Take-off	6,700 lb	6,970 lb	6,970 lb	7,000 lb
Maximum Take-off	6,700 lb	6,970 lb	6,970 lb	7,000 lb

Note: The ALF502 R-5 engine may be operated at R-3 ratings. For detailed engine limitations refer to the Aircraft Flight Manual (AFM) and the relevant Engine Type Certification Data Sheet.

Section 2: BAe 146 Model

6. Auxiliary Power Unit (APU)

One AiResearch GTCP 36-100(M) auxiliary power unit by embodiment of change HCM30027A
or
One AiResearch GTCP 36-150(M) auxiliary power unit by embodiment of change HCM36019A
or
One Sundstrand T-62T-46C-3 auxiliary power unit by embodiment of change HCM30373A

7. Propellers

Not applicable

8. Fluids (Fuel / Oil / Additives) and capacities

For details of approved fuels, oils and additives refer to the AFM.

Useable Fuel Capacity

Useable Fuel Capacity	Imp. Gal	US. Gal	Litres	kg	lb
Left Wing	1,015	1,219	4,614	3,683	8,120
Centre	550	661	2,500	1,996	4,400
Right Wing	1,015	1,219	4,614	3,683	8,120
Total	2,580	3,099	11,728	9,362	20,640

Note: An additional 129 Imperial Gallons (468 kg / 1,032 lb) can be added to each wing tank with the introduction of auxiliary tanks, often referred to as pannier tanks, through change HCM40044A.

Oil Capacity

For each engine:

Imp. Gal	US. Gal	Litres
2.5	3.0	11.4

9. Air Speeds

Refer to the Aircraft Flight Manual.

10. Maximum Operating Altitude

31,000 ft.

Pre change series HCM50043 aircraft are limited to 30,000 ft.

11. Operational Capability / Kinds of Operations

Refer to the Aircraft Flight Manual.

12. All Weather Capability

CAT I.

CAT II for aircraft modified in accordance with change HCM40350A.

Section 2: BAe 146 Model

13. Maximum Weights

Basic	Series 100	Series 200	Series 300
Maximum Total Weight Authorised	34,700 kg (76,500 lb)	40,823 kg (90,000 lb)	43,318 kg (95,500 lb)
Maximum Take-off Weight (MTOW)	34,473 kg (76,000 lb)	40,596 kg (89,500 lb)	43,091 kg (95,000 lb)
Maximum Landing Weight (MLW)	32,817 kg (72,350 lb)	35,153 kg (77,500 lb)	37,648 kg (83,000 lb)
Maximum Zero Fuel Weight (MZFW)	29,483 kg (65,000 lb)	32,204 kg (71,000 lb)	35,153 kg (77,500 lb)

Variations in aircraft maximum weights are allowed through modification action. This will result in an amendment to the Aircraft Flight Manual. The following is a list of absolute maximums which may not be allowed in combination. Reference should be made to the Aircraft Flight Manual and applicable Service Bulletins:

Absolute	Series 100	Series 200	Series 300
Maximum Total Weight Authorised	38,328 kg (84,500 lb)	42,410 kg (93,500 lb)	45,359 kg (100,000 lb)
Maximum Take-off Weight (MTOW)	38,101 kg (84, 000 lb)	42,184 kg (93,000 lb)	45,132 kg (99,500 lb)
Maximum Landing Weight (MLW)	35,153 kg (77,500 lb)	36,740 kg (81,000 lb)	39,235 kg (86,500 lb)
Maximum Zero Fuel Weight (MZFW)	31,071 kg (68,500 lb)	34,745 kg (76,600 lb)	36,514 kg (80,500 lb)

14. Centre of Gravity Range

Refer to the Aircraft Flight Manual.

15. Datum

Refer to the Weight and Balance Manual.

16. Standard Mean Chord (SMC)

2.934 m (9.625 ft)

Note: Leading edge of SMC is 1.038 m (3.405 ft) forward of the CG datum.

17. Levelling Means

Refer to the Weight and Balance Manual.

18. Minimum Flight Crew

Two (Pilot and Co-pilot) for all types of flight.

19. Maximum Seating Capacity (Including Crew)

Series 100 100 occupants

Series 200 118 occupants

Series 300 118 occupants*

*Increasing to 124 for aircraft with Type III Under Wing Exits introduced by change HCM40301A.

Section 2: BAe 146 Model

20. Emergency Exits

Location	Type	Size	
		mm	in
Two Passenger Entry Doors – Left Side (Forward and Aft Cabin)	TYPE I	1,829 x 851	72 x 33.5
Two Service Doors, Right Side (Forward and Aft Cabin)	TYPE I	1,473 x 851	58 x 33.5
Two Under Wing Emergency Exits (Left and Right Side) Optional Change HCM40301A for the Series 300 Only	TYPE III	914 x 508	32 x 20

Additionally, approved for flight crew emergency evacuation purposes, an openable escape window is installed on each side of the flight deck.

21. Baggage and Cargo Compartments

Location	Class	Maximum Allowable Load					
		Series 100		Series 200		Series 300	
		kg	lb	kg	lb	kg	lb
Forward Under Floor Baggage Compartment	**D**	1,170	2,580	1,520	3,350	1,871	4,125
Rear Under Floor Baggage Compartment	**D**	1,098	2,420	1,506	3,320	1,829	4,033

Or as otherwise placarded on the aircraft.

Note: The baggage compartment classification may be upgraded to Class C, through the introduction of a HCM30480 series change. For the QT variants, these may alternatively be upgraded to Class E, through the introduction of the HCM50309 series changes.

The QT and QC freight cargo compartments are Class E. For loading refer to the Weight and Balance Manual.

22. Wheels and Tyres

Landing Gear	Hydraulically retractable tricycle, with steerable nose unit.
Track	4.72 m (15.5 ft).
Wheelbase	11.20 m (36.75 ft).
Nose Gear	**2 Wheels per unit**
Standard Tyres	24 x 7.7 - 10 (14 Ply).
Maximum Tyre Pressure	136 / 130 / 128 psi for Series 100 / 200 / 300.
Low Pressure Tyres	24.5 x 8.5 - 10 (12 Ply).
Maximum Tyre Pressure	121 / 116 / 111 psi for Series 100 / 200 / 300.
Main Gear	**2 Wheels per unit**
Standard Tyres	39 x 13 - 16 (22 / 24 Ply, dependant on the aircraft weight).
Maximum Tyre Pressure	Dependant on series, weight and tyre type. Refer to the Aircraft Maintenance Manual.
Low Pressure Tyres	42 x 15 - 16 (20 / 22 Ply, dependant on the aircraft weight).
Maximum Tyre Pressure	Dependant on series, weight and tyre type. Refer to the Aircraft Maintenance Manual.

Section 2: BAe 146 Model

IV. Operating and Service Instructions

Publications

The following technical publications provide the necessary information to enable the aircraft to be operated safely and maintained satisfactorily:

Publication Type	Publication Reference
Aircraft Flight Manual (AFM)	BAE 5.1
Flight Crew Operating Manual (FCOM)	FCOM: V*
Maintenance Review Board Report (MRB)	MRB-146-01
Maintenance Planning Document (MPD)	MPD-146-01
Aircraft Maintenance Manual (AMM)	AMM-146-*
BAE Systems Component Maintenance Manual (CMM)	BAE-CMM
Structural Repair Manual (SRM)	SRM-146-01 and -03
Wiring Manual (WM)	WM-146-*
Illustrated Parts Catalogue (IPC)	IPC-146-*
Weight and Balance Manual (WBM)	WBM-146-*
Master Minimum Equipment List (MMEL)	ADE-SCG-B-460-001626
Dispatch Deviation Guide (DDG)	ADE-SCG-B-460-001627
Corrosion Protection Control Programme (CPCP)	CPCP-146-01
Supplemental Structural Inspections Document (SSID)	SSID-146-02
Non Destructive Testing Manual (NTM)	NTM-146-01
Manufacturers Service Bulletins Approved under the authority of UK CAA Approval DAI/1011/55 or JAA JAR-21 Approval CAA.JA.02034, EASA Part 21 Approval EASA.21J.047 or UK CAA Part 21 Approval UK.21J.0047.	
FAR Part 26 Compliance Source Document for BAE Systems BAe 146/AVRO 146-RJ Aircraft	MSD/002/146RJ

Notes:

1. The SSID is a post life extension document. SSID-146-01 and -03 covering the Series 100 and -300 were not approved at the time of initial publication of TCDS EASA.A.182.
2. Airworthiness Limitations and Certification Maintenance Requirements are listed in the Manufacturer's Aircraft Maintenance Manual, Chapter 05.
3. The Individual Aircraft Flight Manuals in the BAe 3. Series were developed to comply with particular regulating authority requirements.
4. * indicates documents customised for particular operators.

V. UK CAA Part-26 Compliance Information

For all models, compliance with point 26.300(a) of UK Regulation (EU) 2015/640 Annex 1 (Part-26) has been demonstrated to UK CAA by complying with points

- 26.301 Compliance Plan for (R)TC holders
- 26.302 Fatigue and damage tolerance evaluation

Section 2: BAe 146 Model

- 26.303 Limit of Validity
- 26.304 Corrosion prevention and control programme
- 26.305 Continued validity of the continuing structural integrity programme
- 26.306 Fatigue critical baseline structure
- 26.307 Damage tolerance data for existing changes to fatigue-critical structure
- 26.308 Damage tolerance data for existing repairs to fatigue-critical structure
- 26.309 Repair Evaluation Guidelines.

VI. Notes and Additional Information

1. Cabin Interior and Seating Configuration changes must be approved.

2. BAe 146 Series aeroplanes were allocated Model Numbers according to the certificating authority of the State of Registry. The following table includes all applicable models:

All Airworthiness Authorities except FAA	FAA only
BAe 146-100	BAe 146-100A
BAe 146-200	BAe 146-200A
BAe 146-300	BAe 146-300A

Note: Aeroplanes imported for registration in the UK must comply with a Model Number acceptable to the UK CAA.

Section 3 AVRO 146-RJ Model

I. General

1. Type / Variant or Model

a) Type: AVRO 146
b) Variant or Model: Series RJ70, RJ85, RJ100 and RJ115

2. Reference Application Date for UK CAA Certification

All Models: Circa 1992

3. UK CAA Certification Date

Series RJ70:	24 August 1993
Series RJ85:	23 April 1993
Series RJ100:	2 July 1993
Series RJ115:	22 July 1993

II. UK CAA Certification Basis

1. JAA Airworthiness Requirements

The airworthiness requirements with which compliance has been demonstrated for the AVRO 146 type design, using the above reference date, are:

(a) JAR Part 1, Definitions and Abbreviations.

(b) JAR Part 25 at Change 5, Large Aeroplanes with the exception of Subpart C ‘Structure’ and the following requirements of Subpart D ‘Design and Construction’ which are at Change 10.

25.629	Flutter deformation and fail-safe criteria.
25.783	Doors.
25.787	Stowage compartments.
25.789	Retention of items of mass in the passenger and crew compartments, and galleys.
25.803	Emergency evacuation.
25.811	Emergency exit marking.
25.812	Emergency lighting.
25.853	Compartment interiors.
25.858	Cargo compartment fire detection system.
25.863	Flammable fluid fire protection.

The applicable requirements for the installation of the engines and operating weights are defined as follow, based on JAR Part 25 at Change 12.

25.251	Vibration and buffeting.
25.903(a)	Engine type certification.
25.1091(e)	Air intake, foreign object ingestion.
25.1093(b)(2)	Air intake, system de-icing and anti-icing provisions.
25.1163(a)(3)	Powerplant accessories, oil contamination.
25.1305(d)(1) and ACJ	Powerplant instruments thrust indicator.

(c) UK CAA Airworthiness Notices

Compliance is required in respect of any Relevant Airworthiness Notice.

(d) UK CAA Specifications

Specification No. 10, Issue 1 (May 1974), Flight Data Recorders.

Specification No. 11, Issue 1 (May 1974), Cockpit Voice Recorders.

Specification No. 12, Issue 1 (May 1974), Underwater Sonar Location Devices.

Specification No. 14, Issue 2 (September 1976), Ground Proximity Warning Devices.

(e) Additional items not covered in JAR, taken into account during the type design

Equipment Performance Standards.

Flight Representative of Typical Operational Use.

(Reference UK BCAR Section A5-2 Paragraph 2.3.1, one aircraft of the final build standard completed 200 flying hours, representative of typical operational use).

Systems Safety Assessments.

(UK BCAR Paper 670 provides additional interpretative material).

(f) Complementary Conditions

BAe 146 Complementary Conditions Revision 1, as notified by UK CAA letter ref. 9/30/ADH3313 dated 20 October 1979 and 19 April 1982.

Complete Sections of UK BCAR

BCAR Section A, Issue 22	Certification and Approval Procedures put in place of Chapter A3-3, the draft text in the revision of A3-3 dated 12 December 1978.
BCAR Section R, Issue 4	Radio

The above basis is the same as for a BAe 146 Series 300 with LF507-1H engines. The following requirements are additional:

JAR All Weather Operations (AWO) Subparts 1, 2 and 3 at Change 1.

AMJ 20X-1 to JAR E Section E - Aircraft Propulsion Systems with Electronic Controls.

NPA-E-10 to JAR E Section E - Approval of Engines and Associated Equipment.

NPA AWO-XX dated July 1991 - Low Weather Minima: Go-around Performance (AWO 243).

2. Special Conditions

UK CAA Special Condition No. 01 - Engine FADEC Systems.

UK CAA Special Condition No. 02 - High Intensity Radiated Fields.

UK CAA Special Condition No. 03 - Lightning Protection Indirect Effects.

UK CAA Special Condition No. 04 – EGPWS.

The following Special Condition has been developed post Type Certification:

EASA CRI H-01 Enhanced Airworthiness Programme for Aeroplane Systems, ICA on EWIS

3. Equivalent Safety Findings

None

4. Exemptions

None

5. Environmental Standards

Noise: Chapter 3 of ICAO Annex 16, Volume I (see TCDSN UK.TC.A.00134 for details)

III. Technical Characteristics and Operating Limitations

1. Type Design Definition

Series RJ70	HCM60401Z	Aircraft Part Number HC000H1401-000 at Issue 3 and subsequent.
Series RJ85	HCM60402Z	Aircraft Part Number HC000H1402-000 at Issue 2 and subsequent.
Series RJ100	HCM60403Z	Aircraft Part Number HC000H1403-000 at Issue 4 and subsequent.
Series RJ115	HCM60403Z	Aircraft Part Number HC000H1403-001 at Issue 1 and subsequent.

2. Technical Description

High wing regional jet transport, powered by four turbofan engines mounted below the wings.

Each engine supports either an electrical or hydraulic system, resulting in twin systems.

3. Equipment

The basic required equipment as prescribed in the applicable airworthiness requirements, must be installed in the aircraft for certification. The Illustrated Parts Catalogue (IPC) references all equipment approved for installation in the aircraft.

4. Dimensions

Aircraft	Series RJ70	Series RJ85	Series RJ100 & RJ115
Length	26.19 m (85 ft 11 in)	28.55 m (93 ft 8 in)	31.00 m (101 ft 8 in)
Wingspan	26.34 m (86 ft 5 in)	26.34 m (86 ft 5 in)	26.34 m (86 ft 5 in)
Height	8.61 m (28 ft 3 in)	8.61 m (28 ft 3 in)	8.59 m (28 ft 2 in)
Wing Area	77.30 m^2 (832 ft^2)	77.30 m^2 (832 ft^2)	77.30 m^2 (832 ft^2)

5. Engines

Four Textron Lycoming LF507-1F engines.

Engine Limits

Thrust Ratings (Sea level static thrust):

Model	LF507-1F
Maximum Continuous	6,545 lb
Normal Take-off	7,000 lb
Maximum Take-off	7,000 lb

Note: For detailed engine limitations refer to the Aircraft Flight Manual and the relevant Engine Type Certificate Data Sheet.

6. Auxiliary Power Unit (APU)

One AiResearch GTCP 36-150(M) auxiliary power unit by embodiment of change HCM36019A
or
One Sundstrand T-62T-46C-3 auxiliary power unit by embodiment of change HCM30373A

7. Propellers

Not applicable

8. Fluids (Fuel / Oil / Additives)

For details of approved fuels, oils and additives refer to the Aircraft Flight Manual.

Useable Fuel Capacity

Useable Fuel Capacity	Imp. Gal	US. Gal	Litres	kg	lb
Left Wing	1,015	1,219	4,614	3,683	8,120
Centre	550	661	2,500	1,996	4,400
Right Wing	1,015	1,219	4,614	3,683	8,120
Total	2,580	3,099	11,728	9,362	20,640

Note: An additional 129 Imperial Gallons (468 kg / 1,032 lb) can be added to each wing tank with the introduction of auxiliary tanks, often referred to as pannier tanks, through change HCM40044A.

Oil Capacity

For each engine:

Imp. Gal	US. Gal	Litres
2.5	3.0	11.4

9. Air Speeds

Refer to the Aircraft Flight Manual.

10. Maximum Operating Altitude

35,000 ft

Pre change HCM50259A aircraft are limited to 33,000 ft.

Pre change HCM50070 aircraft are limited to 31,000 ft.

Pre change HCM50258A aircraft are limited to 31,000 ft.

11. Operational Capability / Kinds of Operations

Refer to the Aircraft Flight Manual.

12. All Weather Capability

CAT III

13. Maximum Weights

Basic	Series RJ70	Series RJ85	Series RJ100	Series RJ115
Maximum Total Weight Authorised	38,328 kg (84,500 lb)	42,410 kg (93,500 lb)	44,451 kg (98,000 lb)	46,266 kg (102,000 lb)
Maximum Take-off Weight (MTOW)	38,101 kg (84,000 lb)	42,184 kg (93,000 lb)	44,225 kg (97,500 lb)	46,039 kg (101,500 lb)
Maximum Landing Weight (MLW)	37,875 kg (83,500 lb)	38,555 kg (85,000 lb)	40,142 kg (88,500 lb)	40,142 kg (88,500 lb)
Maximum Zero Fuel Weight (MZFW)	32,432 kg (71,500 lb)	35,833 kg (79,000 lb)	37,421 kg (82,500 lb)	37,421 kg (82,500 lb)

Note: Maximum Landing Weight and Maximum Zero Fuel Weight are limited to 39,235 kg (86,500 lb) and 36,514 kg (80,500 lb) respectively, on aircraft E3221 only, by change HCM60346N.

Variations in aircraft maximum weights are allowed through modification action. This will result in an amendment to the Aircraft Flight Manual. The following is a list of absolute maximums which may not be allowed in combination. Reference should be made to the Aircraft Flight Manual and applicable Service Bulletins:

Section 3: AVRO 146-RJ Model

Absolute	Series RJ70	Series RJ85	Series RJ100	Series RJ115
Maximum Total Weight Authorised	43,318 kg (95,500 lb)	44,225 kg (97,500 lb)	46,266 kg (102,000 lb)	No increase available
Maximum Take-off Weight (MTOW)	43,091 kg (95,000 lb)	43,998 kg (97,000 lb)	46,039 kg (101,500 lb)	No increase available
Maximum Landing Weight (MLW)	No increase available	No increase available	No increase available	No increase available
Maximum Zero Fuel Weight (MZFW)	33,792 kg (74,500 lb)	No increase available	37,875 kg (83,500 lb)	No increase available

14. Centre of Gravity Range

Refer to the Aircraft Flight Manual.

15. Datum

Refer to the Weight and Balance Manual.

16. Standard Mean Chord (SMC)

2.934 m (9.625 ft).

Note: Leading edge of SMC is 1.038 m (3.405 ft) forward of the CG datum.

17. Levelling Means

Refer to the Weight and Balance Manual.

18. Minimum Flight Crew

Two (Pilot and Co-pilot) for all types of flight.

19. Maximum Seating Capacity (Including Crew)

Series RJ70	100 occupants
Series RJ85	118 occupants
Series RJ100	118 occupants
Series RJ115	124 occupants

20. Emergency Exits

Location	Type	Size	
		mm	in
Two Passenger Entry Doors – Left Side (Forward and Aft Cabin)	TYPE I	1,829 x 851	72 x 33.5
Two Service Doors, Right Side (Forward and Aft Cabin)	TYPE I	1,473 x 851	58 x 33.5
Two Under Wing Emergency Exits - Left and Right Side (Series RJ115 Only)	TYPE III	914 x 508	32 x 20

Additionally, approved for flight crew emergency evacuation purposes, an openable escape window is installed on each side of the flight deck.

21. Baggage and Cargo Compartments

Location	Class	Maximum Allowable Load					
		Series RJ70		Series RJ85		Series RJ100 and RJ115	
		kg	lb	kg	lb	kg	lb
Forward Under Floor Baggage Compartment	**D**	1,170	2,580	1,520	3,350	1,871	4,125
Rear Under Floor Baggage Compartment	**D**	1,098	2,420	1,506	3,320	1,829	4,033

Or as otherwise placarded on the aircraft.

Note: The baggage compartment classification may be upgraded to Class C, through the introduction of a HCM30480 series change.

22. Wheels and Tyres

Landing Gear	Hydraulically retractable tricycle, with steerable nose unit.
Track	4.72 m (15.5 ft)
Wheelbase	11.20 m (36.75 ft)

Nose Gear	**2 Wheels per unit.**
Standard Tyres	24 x 7.7 - 10 (14 Ply)
Maximum Tyre Pressure	136 / 130 / 128 psi for Series RJ70 / RJ85 / RJ100 and RJ115
Low Pressure Tyres	24.5 x 8.5 - 10 (12 Ply)
Maximum Tyre Pressure	121 / 116 / 111 psi for Series RJ70 / RJ85 / RJ100 and RJ115

Main Gear	**2 Wheels per unit.**
Standard Tyres	39 x 13 - 16 (22 / 24 Ply, dependant on the aircraft weight)
Maximum Tyre Pressure	Dependant on series, weight and tyre type. Refer to the Aircraft Maintenance Manual.
Low Pressure Tyres	42 x 15 - 16 (20 / 22 Ply, dependant on the aircraft weight)
Maximum Tyre Pressure	Dependant on series, weight and tyre type. Refer to the Aircraft Maintenance Manual.

IV. Operating and Service Instructions

Publications

The following technical publications provide the necessary information to enable the aircraft to be operated safely and maintained satisfactorily:

Publication Type	Publication Reference
Aircraft Flight Manual (AFM)	BAE 5.1
Flight Crew Operating Manual (FCOM)	FCOM: V*
Maintenance Review Board Report (MRB)	MRB-146-01
Maintenance Planning Document (MPD)	MPD-146-01
Aircraft Maintenance Manual (AMM)	AMM-146-*
BAE Systems Component Maintenance Manual (CMM)	BAE-CMM
Structural Repair Manual (SRM)	SRM-146-01 and -03

Section 3: AVRO 146-RJ Model

Wiring Manual (WM)	WM-146-*
Illustrated Parts Catalogue (IPC)	IPC-146-*
Weight and Balance Manual (WBM)	WBM-146-*
Master Minimum Equipment List (MMEL)	ADE-SCG-B-460-001626
Dispatch Deviation Guide (DDG)	ADE-SCG-B-460-001627
Non Destructive Testing Manual (NDTM)	NTM-146-01
Manufacturers Service Bulletins Approved under the authority of UK CAA Approval DAI/1011/55 or JAA JAR-21 Approval CAA.JA.02034, EASA Part 21 Approval EASA.21J.047 or UK CAA Approval UK.21J.0047.	
FAR Part 26 Compliance Source Document for BAE Systems BAe 146/AVRO 146-RJ Aircraft	MSD/002/146RJ

Notes:

1. Airworthiness Limitations and Certification Maintenance Requirements are listed in the Manufacturer's Aircraft Maintenance Manual, Chapter 05.
2. * indicates documents customised for particular operators.

V. UK CAA Part-26 Compliance Information

For all models, compliance with point 26.300(a) of UK Regulation (EU) 2015/640 Annex 1 (Part-26) has been demonstrated to UK CAA by complying with points

- 26.301 Compliance Plan for (R)TC holders
- 26.302 Fatigue and damage tolerance evaluation
- 26.303 Limit of Validity
- 26.304 Corrosion prevention and control programme
- 26.305 Continued validity of the continuing structural integrity programme
- 26.306 Fatigue critical baseline structure
- 26.307 Damage tolerance data for existing changes to fatigue-critical structure
- 26.308 Damage tolerance data for existing repairs to fatigue-critical structure
- 26.309 Repair Evaluation Guidelines.

VI. Notes and Additional Information

1. Cabin Interior and Seating Configuration changes must be approved.

2. AVRO 146-RJ Series aeroplanes were allocated Model Numbers according to the certifying authority of the State of Registry. The following table includes all applicable models:

All Airworthiness Authorities except FAA	FAA only
AVRO 146-RJ70	AVRO 146-RJ70A
AVRO 146-RJ85	AVRO 146-RJ85A
AVRO 146-RJ100	AVRO 146-RJ100A
AVRO 146-RJ115	

Note: Aeroplanes imported for registration in the UK must comply with a Model Number acceptable to the UK CAA.

Section 4 Administration

I. Acronyms and Abbreviations

Acronym / Abbreviation	Definition
AFM	Aircraft Flight Manual
AMM	Aircraft Maintenance Manual
APU	Auxiliary Power Unit
BCAR	British Civil Airworthiness Requirements
CPCP	Corrosion Protection Control Programme
CRI	Certification Review Item
DDG	Dispatch Deviation Guide
EASA	European Union Aviation Safety Agency
EGPWS	Enhanced Ground Proximity Warning System
EWIS	Electrical Wiring Interconnecting Systems
FAA	Federal Aviation Administration
FADEC	Full Authority Digital Engine Control
FCOM	Flight Crew Operating Manual
ICA	Instructions for Continued Airworthiness
IPC	Illustrated Parts Catalogue
JAR	Joint Aviation Regulations
MMEL	Master Minimum Equipment List
MPD	Master Planning Document
MRB	Maintenance Review Board
NDTM	Non-Destructive Testing Manual
PSI	Pounds per Square Inch
QC	Quick Change
QT	Quiet Trader
SRM	Structural Repair Manual
SSID	Supplemental Structural Inspection Document
TC	Type Certificate
TCDS	Type Certificate Data Sheet
TCH	Type Certificate Holder
UK CAA	United Kingdom Civil Aviation Authority
WBM	Weight and Balance Manual
WM	Wiring Manual

Section 4: Administration

II. Type Certificate Holder Record

TCH Record Details	Period
BAE SYSTEMS (Operations) Limited Trading as BAE SYSTEMS Regional Aircraft Prestwick International Airport Monkton KA9 2RW United Kingdom	Present. No Changes

III. Amendment Record

Issue	Date	Changes	TC Issue and Date
1	26 September 2025	Initial Issue of UK.TC.A.00134 The content of the initial issue of this UK CAA TCDS was taken from EASA TCDS No. EASA.A.182 Issue 3 dated 15 January 2015 which was the current EASA version at 31 December 2020 and therefore the version of the TCDS for the BAe 146/AVRO 146-RJ accepted by the UK under Article 15 of Annex 30 of the UK-EU Trade and Cooperation Agreement, except as listed below: • General formatting changes associated with use of CAA TCDS template • Page 1, TC holder name amended to 'BAE SYSTEMS (Operations) Limited Trading as BAE SYSTEMS Regional Aircraft' • Page 1, formatting changes to TCH address • Section 1, subsection I, introduction of new subsection to reflect UK CAA TCDS issue • Section 1, subsection I, item 3 certificating authority changed to 'United Kingdom Civil Aviation Authority' • Section 1, subsection I, item 4, formatting changes to TCH address • Section 2, subsection II, item 6, reference to BCAR Section N replaced with 'Chapter 3 of ICAO Annex 16 , Volume I (see TCDSN UK.TC.A.00134 for details)' • Section 2, subsection V, addition of UK CAA Part-26 compliance information • Section 3, subsection II, item 5, reference to BCAR Section N replaced with 'Chapter 3 of ICAO Annex 16 , Volume I (see TCDSN UK.TC.A.00134 for details)' • Section 3, subsection V, addition of UK CAA Part-26 compliance information	Issue 1 26 September 2025