European Aviation Safety Agency

EASA

TYPE CERTIFICATE DATA SHEET

EASA.A.182

BAe 146 / AVRO 146-RJ Series

Type Certificate Holder:

BAE SYSTEMS

Regional Aircraft
BAE SYSTEMS (Operations) Limited
Prestwick International Airport
Monkton
Ayrshire
Scotland
KA9 2RW
United Kingdom

(Aircraft manufactured by British Aerospace Hatfield and British Aerospace / BAE SYSTEMS Woodford, 1980 through 2002)

For Models: BAe 146 Series 100, 200 and 300
AVRO 146-RJ70, RJ85, RJ100 and RJ115

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SECTION 1: General (All Models)

1. Data Sheet No.:	EASA.A.182 (replacing UK CAA BA 16)
2. Airworthiness Category:	Large Aeroplanes
3. Performance Category:	A
4. Certifying Authority:	EASA
5. Type Certificate Holder:	BAE SYSTEMS (Operations) Ltd Prestwick International Airport Monkton Ayrshire Scotland KA9 2RW
6. Construction Numbers:	BAe 146 Models: E1002 to E3220, excluding E2208, including E3222 and E2227 AVRO 146-RJ Models: E3221 and subsequent, excluding E3222 and E2227, including E2208 Note: Last three digits are sequential build reference. First digit denotes airframe type / series: 1 – 100 / RJ70 2 – 200 / RJ85 3 – 300 / RJ100 / RJ115 Examples: E1002 – Series 100 build reference 002. E3221 – Series RJ100 build reference 221.

SECTION 2: BAe 146 Model

I. General

1. Aircraft: BAe 146 Series 100, 200 and 300

II. Certification Basis

1. Reference Date for Determining the Applicable Requirements - UK CAA Certification Application Date:
Series 100 and 200 – May 1979
Series 300 – September 1987

2. EASA (UK CAA) Certification Date:
Series 100 - 4 February 1983
Series 200 - 3 June 1983
Series 300 - 6 September 1988

3. EASA Certification Basis:

JAA Airworthiness Requirements

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

BAe 146 Series 100 and 200

(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)

System 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

BAe 146 Series 300

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

4. 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

5. Exemptions:

None

6. Equivalent Safety Findings:

None

7. Environmental Standards:

UK BCAR Section N, Issue 2 Noise

III. Technical Characteristics and Operational 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. 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 Quite 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 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	ALF502 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, and the relevant Engine Type Certificate Data Sheet.

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):

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

9. Fluid Capacities:

(a) Useable Fuel Capacity

Tank 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.

(b) Oil Capacity

Each engine:
11.4 Litres
2.5 Imperial gallons
3.0 US gallons

10. Air Speeds: Refer to the Aircraft Flight Manual.

11. Maximum Operating Altitude: 31,000 ft
Pre change series HCM50043 aircraft are limited to 30,000 ft.

12. All Weather Capability: CAT I
CAT II for aircraft modified in accordance with change HCM40350A.

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	34,473 kg (76,000 lb)	40,596 kg (89,500 lb)	43,091 kg (95,000 lb)
Maximum Landing Weight	32,817 kg (72,350 lb)	35,153 kg (77,500 lb)	37,648 kg (83,000 lb)
Maximum Zero Fuel Weight	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	38,101 kg (84, 000 lb)	42,184 kg (93,000 lb)	45,132 kg (99,500 lb)
Maximum Landing Weight	35,153 kg (77,500 lb)	36,740 kg (81,000 lb)	39,235 kg (86,500 lb)
Maximum Zero Fuel Weight	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
Series 200 - 118
Series 300 - 118 Increasing to 124 for aircraft with Type III under wing exits, introduced by change HCM40301A.

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 / 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.

IV. Operating and Service Instructions

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

1.	Aircraft Flight Manual (AFM):	BAE 5.1
2.	Flight Crew Operating Manual (FCOM):	FCOM: V*
3.	Maintenance Review Board Report (MRB):	MRB-146-01
4.	Maintenance Planning Document (MPD):	MPD-146-01
5.	Aircraft Maintenance Manual (AMM):	AMM-146-*
6.	BAE Systems Component Maintenance Manual (CMM):	BAE-CMM
7.	Structural Repair Manual (SRM):	SRM-146-01 and 03
8.	Wiring Manual (WM):	WM-146-*
9.	Illustrated Parts Catalogue (IPC):	IPC-146-*
10.	Weight and Balance Manual (WBM);	WBM-146-*
11.	Master Minimum Equipment List (MMEL):	ADE-SCG-B-460-001626
12.	Dispatch Deviation Guide (DDG):	ADE-SCG-B-460-001627
13.	Corrosion Protection Control Programme (CPCP):	CPCP-146-01
14.	Supplemental Structural Inspections Document (SSID):	SSID-146-02
15.	Non Destructive Testing Manual (NTM):	NTM-146-01
16.	Manufacturer's Service Bulletins approved under the authority of UK CAA Approval DAI/1011/55 or JAA JAR-21 Approval CAA.JA.02034 or EASA Part 21 Approval EASA.21J.047.	
17.	FAR Part 26 Compliance Source Document for BAE Systems BAe 146/Avro 146-RJ Aircraft:	MSD/002/146RJ

Notes: 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 this TCDS.

Airworthiness Limitations and Certification Maintenance Requirements are listed in the Manufacturer's Aircraft Maintenance Manual, Chapter 5.

The individual Aircraft Flight Manuals in the BAe 3. Series were developed to comply with particular regulating authority requirements.

* indicates documents customised for particular operators.

V. Notes

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 the models:

Model Number	Airworthiness Authority
BAe 146-100	All except FAA (USA)
BAe 146-100A	FAA (USA)
BAe 146-200	All except FAA (USA)
BAe 146-200A	FAA (USA)
BAe 146-300	All except FAA (USA)
BAe 146-300A	FAA (USA)

Aeroplanes imported for registration in an EASA Member State must comply with a Model Number acceptable to EASA.

SECTION 3: AVRO 146-RJ Model

I. General

1. Aircraft: AVRO 146 Series RJ70, RJ85, RJ100 and RJ115

II. Certification Basis

1. Reference Date for Determining the Applicable Requirements - UK CAA Certification Application Date: Circa 1992

2. EASA (UK CAA) Certification Date:
Series RJ70 - 24 August 1993
Series RJ85 - 23 April 1993
Series RJ100 - 2 July 1993
Series RJ115 - 22 July 1993

3. EASA Certification Basis:

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 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

(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)

System 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)

4. 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

5. Exemptions:

None

6. Equivalent Safety Findings:

None

7. Environmental Standards:

UK BCAR Section N, Issue 2 Noise

III. Technical Characteristics and Operational 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. 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 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 (101ft 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)

Maximum Continuous	6,545 lb
Normal Take-off	7,000 lb
Maximum Take-off	7,000 lb

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.

9. Fluid Capacities:

(a) Useable Fuel Capacity

Tank 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.

(b) Oil Capacity

Each engine:
11.4 Litres
2.5 Imperial gallons
3.0 US gallons

10. Air Speeds: Refer to the Aircraft Flight Manual.

11. Maximum Operating Altitude: 35,000 ft
Pre change HCM50259A aircraft are limited to 33,000 ft. Pre change HCM50070 and HCM50258A aircraft are limited to 31,000 ft.

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	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	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	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:

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	43,091 kg (95,000 lb)	43,998 kg (97,000 lb)	46,039 kg (101,500 lb)	No increase available
Maximum Landing Weight	No increase available	No increase available	No increase available	No increase available
Maximum Zero Fuel Weight	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
Series RJ85 - 118
Series RJ100 - 118
Series RJ115 - 124

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 available on each side of the flight deck.

21. Baggage / Cargo Compartments:

Location	Class	Maximum Allowable Load					
		Series RJ70		Series RJ85		Series RJ100 & 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 & RJ115
Low Pressure Tyres	24.5 x 8.5 - 10 (12 Ply)
Maximum Tyre Pressure:	121 / 116 / 111 psi for Series RJ70 / RJ85 / RJ100 & 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

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

1.	Aircraft Flight Manual (AFM):	BAE 5.1
2.	Flight Crew Operating Manual (FCOM):	FCOM: V*
3.	Maintenance Review Board Report (MRB):	MRB-146-01
4.	Maintenance Planning Document (MPD):	MPD-146-01
5.	Aircraft Maintenance Manual (AMM):	AMM-146-*
6.	BAE Systems Component Maintenance Manual (CMM):	BAE-CMM
7.	Structural Repair Manual (SRM):	SRM-146-01 & 03
8.	Wiring Manual (WM):	WM-146-*
9.	Illustrated Parts Catalogue (IPC):	IPC-146-*
10.	Weight and Balance Manual (WBM):	WBM-146-*
11.	Master Minimum Equipment List (MMEL):	ADE-SCG-B-460-001626
12.	Dispatch Deviation Guide (DDG):	ADE-SCG-B-460-001627
13.	Non Destructive Test Manual (NTM):	NTM-146-01
14.	Manufacturer's Service Bulletins approved under the authority of UK CAA Approval DAI/1011/55 or JAA JAR-21 Approval CAA.JA.02034 or EASA Part 21 Approval EASA.21J.047.	
15.	FAR Part 26 Compliance Source Document for BAE Systems BAe 146/Avro 146-RJ Aircraft:	MSD/002/146RJ

Note: Airworthiness Limitations and Certification Maintenance Requirements are listed in the Manufacturer's Aircraft Maintenance Manual, Chapter 5.

* indicates documents customised for particular operators.

V. Notes

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

2. Avro 146-RJ series aeroplanes were allocated Model Numbers according to the certificating authority of the State of Registry. The following table includes all the models:

Model Number	Airworthiness Authority
Avro 146-RJ70	All except FAA (USA)
Avro 146-RJ70A	FAA (USA)
Avro 146-RJ85	All except FAA (USA)
Avro 146-RJ85A	FAA (USA)
Avro 146-RJ100	All except FAA (USA)
Avro 146-RJ100A	FAA (USA)
Avro 146-RJ115	All except FAA (USA)

Aeroplanes imported for registration in an EASA Member State must comply with a Model Number acceptable to EASA.

SECTION 4: Change Record

Issue	Date	Changes	TC issue
Issue 1.0	11/06/08	First Issue of EASA TCDS	Initial Issue, 11/06/08
Issue 2.0	20/10/10	Section 2, sub section V, Note 2 added Section 3, sub-section III, para. 13, table corrected	11/06/08
Issue 3.0	15/01/15	Section 1, item 1, Data Sheet No., "(replacing UK CAA BA 16)" added Section 2, sub section II, item 1, Reference Dates detailed Section 2, sub section II, item 4, EASA Certification Basis, Special Condition H-01 added Section 2, sub section III, item 1, Type Design Definition amended for Series 300 Section 2, sub section IV, item 1, obsolete AFM reference deleted Section 2, sub section IV, item 2, obsolete Manufacturers Operating Manual and reference deleted Section 2, sub section IV, item 17, EWIS Source Document added Section 3, sub section II. item 4, EASA Certification Basis, Special Condition H-01 added Section 3, sub section IV, item 1, obsolete AFM reference deleted Section 3, sub section IV, item 2, obsolete Manufacturers Operating Manual and reference deleted Section 3, sub section IV, item 15, EWIS Source Document added Section 3, sub section V, Note 2 added	11/06/08