European Aviation Safety Agency

EASA

TYPE-CERTIFICATE DATA SHEET

HS 748

Type Certificate Holder:

BAE SYSTEMS (OPERATIONS) LTD

Prestwick International Airport
Monkton
Ayrshire
Scotland
KA9 2RW
United Kingdom

(Aircraft manufactured by British Aerospace/Hawker Siddeley Aviation/A.V. Roe and Company 1960 through 1988)

For models: HS 748 Series 1, 2, 2A and 2B

Issue 2, 15 January 2015

TABLE OF CONTENT

SECTION 1: GENERAL (ALL MODELS)

1. Data Sheet No.:	EASA.A.397
2. Airworthiness Category:	Large Aeroplane
3. Performance Category:	A
4. Certifying Authority:	EASA
5. Type Certificate Holder:	BAE SYSTEMS (Operations) Limited Prestwick International Airport Monkton Ayrshire Scotland KA9 2RW United Kingdom
6. Construction Numbers:	HS 748 Series 1: 1534 to 1547, 1549, & 1556 to 1560 HS 748 Series 2: 1550 to 1555, 1561 to 1634, 1636 to 1656, 1659, 1660, 1663, 1664, 1693, 1707 to 1711, 1715 & 1723 to 1727 HS 748 Series 2A: 1635, 1657, 1658, 1661, 1662, 1665 to 1692, 1694 to 1706, 1712 to 1714, 1716 to 1722, 1728 to 1767, 1769 to 1772, 1775 & 1777 HS 748 Series 2B: 1768, 1773, 1774, 1776 & 1778 to 1807

Notes: 1 HS 748 construction numbers are sequential and run from 1534 to 1807 but do not include 1548 and 1572 to 1575.

2 The above construction numbers listed against a particular model (Series 1, Series 2, etc.) were correct at the time each individual aircraft was initially delivered. However, some construction numbers of HS 748 may conform to a later variant than indicated above, through the retrospective embodiment of the relevant modifications.

3 This type certificate is not applicable to those HAL 748 aircraft that have serial numbers in the range 500 to 588 inclusive. These aircraft were assembled or manufactured by the Indian Air Force Manufacturing Depot or Hindustan Aeronautics Limited at Kanpur, India between 1961 and 1984.

SECTION 2: HS 748 Series 1

I. General

1. Aircraft: HS 748 Series 1

II. Certification Basis

1. Reference Date For Determining the Applicable Requirements - UK Air Registration Board (ARB) Certification Application Date: 16 March 1959

2. EASA (UK CAA/ARB) Certification Date: 9 January 1962

3. EASA Certification Basis:

British Civil Airworthiness Requirements Section D Issue 4
British Civil Airworthiness Requirements Section J Issue 2

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

Exemptions:

None.

Equivalent Safety Findings:

None.

Environmental Standards:

The original reference date for determining the applicable requirements for the HS 748 predates the introduction of these standards.

III Technical Characteristics and Operational Limitations

1. Type Design Definition: A.3244 Issue 6

2. Description:

Low wing turboprop transport with conventional tail unit configuration, powered by two turbopropeller engines mounted conventionally above the wings driving four bladed propellers.

3. Equipment:

The basic required equipment as prescribed in the applicable airworthiness regulations must be installed in the aircraft for certification. The Illustrated Parts Catalogue also contains all equipment approved for installation in the aeroplane.

4. Dimensions:

Length	20.42m	67 ft. 0 in
Wingspan	30.02m	98ft 6in
Height	7.57m	24 ft. 10 in
Wing Area	75.35m^2	810 ft^2

5. Engines:

Two:

Rolls Royce Dart 6 Mk 514 or Dart 7 Mk 533-2

Engine Limits:

	Equivalent Shaft Horse Power (ESHP)	**Propeller Shaft Speed (RPM)**	**Reduction Gearing**
Dart 6 Mk 514	1,740	14,500	0.086:1
Dart 7 Mk 533-2	2,105	15,000	0.093:1

For detailed engine limitations, see AO 1 series Aircraft Flight Manuals.

6. Auxiliary Power Unit (APU): Rover 25/150A (optional)

7. Propellers:

Dowty Rotol Type CR.201/4-30-4/20 or CR.212/4-30-4/22 or CR.251/4-30-4/49 4 bladed, constant speed propellers.

Propeller Limits:

Continuous ground operation between 8,500 and 9,500 rpm is to be avoided.

All static ground running takeoff rpm must be done with the aircraft facing into the wind ± 60 degrees, when the wind velocity exceeds 15 knots.

For detailed propeller limitations, see AO 1 series Aircraft Flight Manuals.

8. Fluids (Fuel/Oil/Additives):

For details of approved fuels, oils and additives see the AO 1 series Aircraft Flight Manuals.

9. Fluid Capacities:

9.1 Fuel Capacity:

Fuel Capacity	**UK Gal**	**US Gal**	**litres**	**kg**	**lb**
Usable	1,138	1,367	5,173	4,138	9,123
Unusable	2	3	9	7	15
Total	1,140	1,364	5,164	5,237	9,108

Capacity based on pressure refuelling.

9.2 Oil Capacity:

Each engine and oil tank combined:
15.14 litres
3.33 UK gallons
4 U.S. gallons

10. Air Speeds: Refer to AO 1 series Aircraft Flight Manuals

11. Maximum Operating Altitude: 25,000

12. All Weather Capability: Category 1

13. Maximum Weights:

	Basic Maximum Weight (kg)	Basic Maximum Weight (lb)
Take-off	16,690 kg	36,800 lb
Maximum landing	16,456 kg	36,300 lb
Maximum zero fuel	15,060 kg	33,200 lb

Variations in aircraft maximum weights are allowed through modification action. This will result in an amendment to the Aircraft Flight Manual.

14. Centre of Gravity Range: Refer to AO 1 series Aircraft Flight Manuals

15. Datum: Refer to Weight and Balance Manual

16. Standard Mean Chord (SMC): 2.509m (98.77 inches)
Note: Leading edge of SMC is 1.096m (43.15 inches) aft of the C.G. datum

17. Levelling Means: Refer to Weight and Balance Manual

18. Minimum Flight Crew: Two (Pilot and Co-pilot) for all types of flight

19. Maximum Seating Capacity (including crew): 57

20. Emergency Exits:

Location	Type	Size	
		mm	inches
One Passenger Entry Door - Left Side (Rear Cabin)	Type I	1570 x 760	62 x 30
One Service Door - Right Side (Rear Cabin)	Type I	1240 x 640	49 x 25
Two Overwing Emergency Exits - Left & Right Side	Type IV	660x483	26x19

Sliding windows on the left and right hand side provide escape routes from the flight deck

21. Baggage/Cargo Compartments:

Location	Class	Max Allowable Load	
		kg	lb
Front Right Hand Side - Small	(See Note 1)	612	1350
Front Right Hand Side - Large	(See Note 1)	835	1840
Front Left Hand Side - Small	(See Note 1)	367	810
Front Left Hand Side - Large	(See Note 1)	558	1230
Rear	(See Note 1)	771	1700

Notes 1: The certification basis of the aircraft pre-dates the introduction of cargo and baggage compartment classifications.

2: Baggage compartment load not to exceed placarded loading limitation, and baggage compartment floor loading not to exceed AFM loading limitation.

22. Wheels and Tyres:

Landing Gear: Hydraulically retractable tricycle
Track: 7.54m (24ft 9in)
Wheelbase: 6.30m (20ft 8in)

Nosegear: 2 wheels per unit
Tyres: Dunlop DR8628 or DR8628T
Maximum Tyre Pressure: 61psi

Main gear: 2 wheels per unit
Tyres: Dunlop DR10725T or DR10765T or DR10768T
Maximum Tyre Pressure: 98 psi

IV Operating and Service Instruction

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

1. Aircraft Flight Manual: AO 1.2
2. Manufacturers Operations Manual: HS 748 Series 1 Crew Manual
3. Maintenance Schedule HS 748 Maintenance Schedule
4. Manufacturers Maintenance Manual: HS 748 Maintenance Manual
5. Structural Repair Manual: HS 748 Structural Repair Manual
6. Wiring Diagram Manual: HS 748 Wiring Manual
7. Illustrated Parts Catalogue: HS 748 Illustrated Parts Catalogue
8. Weight and Balance Manual: HS 748 Weight and Balance Manual
9. Master Minimum Equipment List: HS 748 Master Minimum Equipment List
10. Manufacturers Service Bulletins approved under the authority of UK CAA Approval DAI/1103/38 or DAI/9386/92 or DAI/1011/55 or JAA JAR 21 Approval CAA.JA.02034 or EASA Part 21 Approval EASA.21J.047.

Note: Airworthiness Limitations and Certification Maintenance Requirements are listed in the Manufacturers Maintenance Manual, Chapter 5.

V. Notes

1. Cabin Interior and Seating Configurations must be approved.

SECTION 3: HS 748 Series 2

I. General

1. Aircraft: HS 748 Series 2

II. Certification Basis

1. Reference Date For Determining the Applicable Requirements - UK Air Registration Board (ARB) Certification Application Date: 16 March 1959

2. EASA (UK CAA/ARB) Certification Date: 29 October 1962

3. EASA Certification Basis:

British Civil Airworthiness Requirements Section D Issue 4
British Civil Airworthiness Requirements Section J Issue 2

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

Exemptions:

None.

Equivalent Safety Findings:

None.

Environmental Standards:

The original reference date for determining the applicable requirements for the HS 748 predates the introduction of these standards.

III Technical Characteristics and Operational Limitations

1. Type Design Definition: A.3237 Issue 18 and A.3257 Issue 7

2. Description:

Low wing turboprop transport with conventional tail unit configuration, powered by two turbopropeller engines mounted conventionally above the wings driving four bladed propellers.

3. Equipment:

The basic required equipment as prescribed in the applicable airworthiness regulations must be installed in the aircraft for certification. The Illustrated Parts Catalogue also contains all equipment approved for installation in the aeroplane.

4. Dimensions:

Length	20.42m	67 ft. 0 in
Wingspan	30.02m	98ft 6in
Height	7.57m	24 ft. 10 in
Wing Area	75.35m^2	810 ft^2

5. Engines:

Two:

Rolls Royce Dart 7 MK 531 or Mk 533-2 or Dart 8 Mk 550-2

Engine Limits:

	Equivalent Shaft Horse Power (ESHP)	**Propeller Shaft Speed (RPM)**	**Reduction Gearing**
Dart 7 Mk 531	1,910	15,000	0.093:1
Dart 7 Mk 533-2	2,105	15,000	0.093:1
Dart 8Mk 550-2	2,250	15,000	0.093:1

For detailed engine limitations, see AO 1 series Aircraft Flight Manuals.

6. Auxiliary Power Unit (APU): Rover 25/150A (optional)

7. Propellers:

Dowty Rotol Type CR.201/4-30-4/20 or CR.212/4-30-4/22 or CR.251/4-30-4/49 4 bladed, constant speed propellers.

Propeller Limits:

Continuous ground operation between 8,500 and 9,500 rpm is to be avoided.

All static ground running takeoff rpm must be done with the aircraft facing into the wind ± 60 degrees, when the wind velocity exceeds 15 knots.

For detailed propeller limitations, see AO 1 series Aircraft Flight Manuals.

8. Fluids (Fuel/Oil/Additives):

For details of approved fuels, oils and additives see the AO 1 series Aircraft Flight Manuals.

9. Fluid Capacities:

9.1 Fuel Capacity:

Fuel Capacity	**UK Gal**	**US Gal**	**litres**	**kg**	**lb**
Usable	1,438	1,726	6,537	5,230	11530
Unusable	2	3	9	7	15
Total	1,440	1,729	6,546	5,237	11,546

Capacity based on pressure refuelling.

9.2 Oil Capacity:

Each engine and oil tank combined:
15.14 litres
3.33 UK gallons
4 U.S. gallons

10. Air Speeds: Refer to AO 1 series Aircraft Flight Manuals

11. Maximum Operating Altitude: 25,000

12. All Weather Capability: Category 1

13. Maximum Weights:

	Basic Maximum weight (kg)	Basic Maximum weight (lb)
Take-off	19,750	43,500
Maximum Landing Weight	18,824	41,500
Maximum Zero Fuel Weight	16,783	37,000

Variations in aircraft maximum weights are allowed through modification action. This will result in an amendment to the Aircraft Flight Manual.

14. Centre of Gravity Range: Refer to AO 1 series Aircraft Flight Manuals

15. Datum: Refer to Weight and Balance Manual

16. Standard Mean Chord (SMC): 2.509m (98.77 inches)
Note: Leading edge of SMC is 1.096m (43.15 inches) aft of the C.G. datum

17. Levelling Means: Refer to Weight and Balance Manual

18. Minimum Flight Crew: Two (Pilot and Co-pilot) for all types of flight

19. Maximum Seating Capacity (including crew): 57

20. Emergency Exits:

Location	Type	Size	
		mm	inches
One Passenger Entry Door - Left Side (Rear Cabin)	Type I	1570 x 760	62 x 30
One Service Door - Right Side (Rear Cabin)	Type I	1240 x 640	49 x 25
Two Overwing Emergency Exits - Left & Right Side	Type IV	660x483	26x19

Sliding windows on the left and right hand side provide escape routes from the flight deck

21. Baggage/Cargo Compartments:

Location	Class	Max Allowable Load	
		kg	lb
Front Right Hand Side - Small	(See Note 1)	612	1350
Front Right Hand Side - Large	(See Note 1)	835	1840
Front Left Hand Side - Small	(See Note 1)	367	810
Front Left Hand Side - Large	(See Note 1)	558	1230
Rear	(See Note 1)	771	1700

Note 1: The certification basis of the aircraft pre-dates the introduction of cargo and baggage compartment classifications.

Note 2: Baggage compartment load not to exceed placarded loading limitation, and baggage compartment floor loading not to exceed AFM loading limitation.

22. Wheels and Tyres:

Landing Gear: Hydraulically retractable tricycle
Track: 7.54m (24ft 9in)
Wheelbase: 6.30m (20ft 8in)

Nosegear: 2 wheels per unit
Tyres: Dunlop DR8628 or DR8628T
Maximum Tyre Pressure: 61psi

Main gear: 2 wheels per unit
Tyres: Dunlop DR10725T or DR10765T or DR10768T
Maximum Tyre Pressure: 98 psi

IV Operating and Service Instruction

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

1. Aircraft Flight Manual: AO 1.5 & AO 1.9 (CASA Australia)
2. Manufacturers Operations Manual: HS 748 Series 2 Crew Manual
3. Maintenance Schedule: HS 748 Maintenance Schedule
4. Manufacturers Maintenance Manual: HS 748 Maintenance Manual
5. Structural Repair Manual: HS 748 Structural Repair Manual
6. Wiring Diagram Manual: HS 748 Wiring Manual
7. Illustrated Parts Catalogue: HS 748 Illustrated Parts Catalogue
8. Weight and Balance Manual: HS 748 Weight and Balance Manual
9. Master Minimum Equipment List: HS 748 Master Minimum Equipment List
10. Manufacturers Service Bulletins approved under the authority of UK CAA Approval DAI/1103/38 or DAI/9386/92 or DAI/1011/55 or JAA JAR 21 Approval CAA.JA.02034 or EASA Part 21 Approval EASA.21J.047.

Note: Airworthiness Limitations and Certification Maintenance Requirements are listed in the Manufacturers Maintenance Manual, Chapter 5.

V. Notes

1. Cabin Interior and Seating Configurations must be approved.

SECTION 4: HS 748 Series 2A

I. General

1. Aircraft: HS 748 Series 2A

II. Certification Basis

1. Reference Date For Determining the Applicable Requirements - UK Air Registration Board (ARB) Certification Application Date: 16 March 1959

2. EASA (UK CAA/ARB) Certification Date: 13 August 1968

3. EASA Certification Basis:

British Civil Airworthiness Requirements Section D Issue 4
British Civil Airworthiness Requirements Section J Issue 2

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

Exemptions:

None.

Equivalent Safety Findings:

None.

Environmental Standards:

The original reference date for determining the applicable requirements for the HS 748 predates the introduction of these standards.

III Technical Characteristics and Operational Limitations

1. Type Design Definition: A.3237 Issue 18 and A.3257 Issue 7 with the addition of modifications 2644, 2392, 2390, 2881 or 2882, and 2863

2. Description:

Low wing turboprop transport with conventional tail unit configuration, powered by two turbopropeller engines mounted conventionally above the wings driving four bladed propellers.

3. Equipment:

The basic required equipment as prescribed in the applicable airworthiness regulations must be installed in the aircraft for certification. The Illustrated Parts Catalogue also contains all equipment approved for installation in the aeroplane.

4. Dimensions:

Length	20.42m	67 ft. 0 in
Wingspan	30.02m	98ft 6in
Height	7.57m	24 ft. 10 in
Wing Area	75.35m^2	810 ft^2

5. Engines:

Two:

Rolls Royce Dart 7 Mk (534-2 or Mk 532-2L)

Engine Limits:

	Equivalent Shaft Horse Power (ESHP)	**Propeller Shaft Speed (RPM)**	**Reduction Gearing**
Dart 7 Mk 532-2L (see Note)	2,280	15,000	0.093:1
Dart 7 Mk 534-2 (see Note)	2,280	15,000	0.093:1

For detailed engine limitations, see AO 1 series Aircraft Flight Manuals.

Note: Rolls Royce Dart Mk 534-2 was formerly known as Rolls Royce Dart Mk 532-2L

6. Auxiliary Power Unit (APU): Rover 25/150A (optional)

7. Propellers:

Dowty Rotol Type CR.201/4-30-4/20 or CR.212/4-30-4/22 or CR.251/4-30-4/49 4 bladed, constant speed propellers.

Propeller Limits:

Continuous ground operation between 8,500 and 9,500 rpm is to be avoided.

All static ground running takeoff rpm must be done with the aircraft facing into the wind ± 60 degrees, when the wind velocity exceeds 15 knots.

For detailed propeller limitations, see AO 1 series Aircraft Flight Manuals.

8. Fluids (Fuel/Oil/Additives):

For details of approved fuels, oils and additives see the AO 1 series Aircraft Flight Manuals.

9. Fluid Capacities:

9.1 Fuel Capacity:

Fuel Capacity	UK Gal	US Gal	litres	kg	lb
Usable	1,438	1,726	6,537	5,230	11530
Unusable	2	3	9	7	15
Total	1,440	1,729	6,546	5,237	11,546

Note: Conversion of 0.8 kg/litre. Capacity based on pressure refuelling.

9.2 Oil Capacity:

Each engine and oil tank combined:
15.14 litres
3.33 UK gallons
4 U.S. gallons

10. Air Speeds: Refer to AO 1 series Aircraft Flight Manuals

11. Maximum Operating Altitude: 25,000

12. All Weather Capability: Category 1

13. Maximum Weights:

	Basic Maximum weight (kg)	Basic Maximum weight (lb)
Take-off	21,092	46,500
Maximum Landing Weight	19,504	43,000
Maximum Zero Fuel Weight	17,463	38,500

Variations in aircraft maximum weights are allowed through modification action. This will result in an amendment to the Aircraft Flight Manual.

14. Centre of Gravity Range: Refer to AO 1 series Aircraft Flight Manuals

15. Datum: Refer to Weight and Balance Manual

16. Standard Mean Chord (SMC): 2.509m (98.77 inches)
Note: Leading edge of SMC is
1.096m (43.15 inches) aft of the C.G. datum

17. Levelling Means: Refer to Weight and Balance Manual

18. Minimum Flight Crew: Two (Pilot and Co-pilot) for all types of flight

19. Maximum Seating Capacity (including crew): 57

20. Emergency Exits:

Location	Type	Size	
		mm	inches
One Passenger Entry Door - Left Side (Rear Cabin)	Type I	1570 x 760	62 x 30
One Service Door - Right Side (Rear Cabin)	Type I	1240 x 640	49 x 25
Two Overwing Emergency Exits - Left & Right Side	Type IV	660x483	26x19

Sliding windows on the left and right hand side provide escape routes from the flight deck

21. Baggage/Cargo Compartments:

Location	Class	Max Allowable Load	
		kg	lb
Front Right Hand Side - Small	(See Note 1)	612	1350
Front Right Hand Side - Large	(See Note 1)	835	1840
Front Left Hand Side - Small	(See Note 1)	367	810
Front Left Hand Side - Large	(See Note 1)	558	1230
Rear	(See Note 1)	771	1700

Note 1: The certification basis of the aircraft pre-dates the introduction of cargo and baggage compartment classifications.

Note 2: Baggage compartment load not to exceed placarded loading limitation, and baggage compartment floor loading not to exceed AFM loading limitation.

22. Wheels and Tyres:

Landing Gear: Hydraulically retractable tricycle
Track: 7.54m (24ft 9in)
Wheelbase: 6.30m (20ft 8in)

Nosegear: 2 wheels per unit
Tyres: Dunlop DR8628 or DR8628T
Maximum Tyre Pressure: 61psi

Main gear: 2 wheels per unit
Tyres: Dunlop DR10725T or DR10765T or DR10768T
Maximum Tyre Pressure: 98 psi

IV Operating and Service Instruction

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

1.	Aircraft Flight Manual:	AO 1.8 & AO 1.10 (FAA)
2.	Manufacturers Operations Manual:	HS 748 Series 2A Crew Manual
3.	Maintenance Schedule:	HS 748 Maintenance Schedule
4.	Manufacturers Maintenance Manual:	HS 748 Maintenance Manual
5.	Structural Repair Manual:	HS 748 Structural Repair Manual
6.	Wiring Diagram Manual:	HS 748 Wiring Manual
7.	Illustrated Parts Catalogue:	HS 748 Illustrated Parts Catalogue
8.	Weight and Balance Manual:	HS 748 Weight and Balance Manual
9.	Master Minimum Equipment List:	HS 748 Master Minimum Equipment List

10. Manufacturers Service Bulletins approved under the authority of UK CAA Approval DAI/1103/38 or DAI/9386/92 or DAI/1011/55 or JAA JAR 21 Approval CAA.JA.02034 or EASA Part 21 Approval EASA.21J.047.

Note: Airworthiness Limitations and Certification Maintenance Requirements are listed in the Manufacturers Maintenance Manual, Chapter 5.

V. Notes

1. Cabin Interior and Seating Configurations must be approved.

SECTION 5: HS 748 Series 2B

I. General

1. Aircraft: HS 748 Series 2B

II. Certification Basis

1. Reference Date For Determining the Applicable Requirements - UK Air Registration Board (ARB) Certification Application Date: 16 March 1959

2. EASA (UK CAA) Certification Date: 2 July 1981

3. EASA Certification Basis:

British Civil Airworthiness Requirements Section D Issue 4
British Civil Airworthiness Requirements Section J Issue 2

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

Exemptions:

None.

Equivalent Safety Findings:

None.

Environmental Standards:

The original reference date for determining the applicable requirements for the HS 748 predates the introduction of these standards.

III Technical Characteristics and Operational Limitations

1. Type Design Definition: A.3237 Issue 18 and A.3257 Issue 7 with the addition of modifications 2644, 2392, 2390, 2881 or 2882, 2863, 6426, 6756, 5993, 6246, 6179, 6182, 6570, 6597, 6640, 6700, 6180, 6181, 6178, 6255, 6223, 6224, and 6225.

2. Description:

Low wing turboprop transport with conventional tail unit configuration, powered by two turbopropeller engines mounted conventionally above the wings driving four bladed propellers.

3. Equipment:

The basic required equipment as prescribed in the applicable airworthiness regulations must be installed in the aircraft for certification. The Illustrated Parts Catalogue also contains all equipment approved for installation in the aeroplane.

4. Dimensions:

Length	20.42m	67 ft. 0 in
Wingspan	31.24m	102 ft. 6 in
Height	7.57m	24 ft. 10 in
Wing Area	77.01m^2	829 ft^2

5. Engines:

Two:

Rolls Royce Dart 7 Mk 532-2S, Mk 535-2, Mk 536-2, or Mk 552-2

Engine Limits:

	Equivalent Shaft Horse Power (ESHP)	**Propeller Shaft Speed (RPM)**	**Reduction Gearing**
Dart 7 Mk 532-2S (see Note)	2,280	15,000	0.093:1
Dart 7 Mk 535-2	2,280	15,000	0.093:1
Dart 7 Mk 536-2 (see Note)	2,280	15,000	0.093:1
Dart 7 Mk 552-2	2,280	15,000	0.093:1

For detailed engine limitations, see AO 1 series Aircraft Flight Manuals.

Note: Rolls Royce Dart Mk 536-2 was formerly known as Rolls Royce Dart Mk 532-2S

6. Auxiliary Power Unit (APU): Rover 25/150A (optional)

7. Propellers:

Dowty Rotol Type CR.201/4-30-4/20 or CR.212/4-30-4/22 or CR.251/4-30-4/49 4 bladed, constant speed propellers.

Propeller Limits:

Continuous ground operation between 8,500 and 9,500 rpm is to be avoided.

All static ground running takeoff rpm must be done with the aircraft facing into the wind ± 60 degrees, when the wind velocity exceeds 15 knots.

For detailed propeller limitations, see AO 1 series Aircraft Flight Manuals.

8. Fluids (Fuel/Oil/Additives):

For details of approved fuels, oils and additives see the AO 1 series Aircraft Flight Manuals.

9. Fluid Capacities:

9.1 Fuel Capacity:

Fuel Capacity	UK Gal	US Gal	litres	kg	lb
Usable	1,438	1,726	6,537	5,230	11530
Unusable	2	3	9	7	15
Total	1,440	1,729	6,546	5,237	11,546

Note: Conversion of 0.8 kg/litre. Capacity based on pressure refuelling.

9.2 Oil Capacity:

Each engine and oil tank combined:
15.14 litres
3.33 UK gallons
4 U.S. gallons

10. Air Speeds: Refer to AO 1 series Aircraft Flight Manuals

11. Maximum Operating Altitude: 25,000

12. All Weather Capability: Category 1

13. Maximum Weights:

	Basic Maximum weight (kg)	Basic Maximum weight (lb)
Take-off	21,092	46,500
Maximum Landing Weight	19,504	43,000
Maximum Zero Fuel Weight	17,463	38,500

Variations in aircraft maximum weights are allowed through modification action. This will result in an amendment to the Aircraft Flight Manual.

14. Centre of Gravity Range: Refer to AO 1 series Aircraft Flight Manuals

15. Datum: Refer to Weight and Balance Manual

16. Standard Mean Chord (SMC): 2.509m (98.77 inches)
Note: Leading edge of SMC is
1.096m (43.15 inches) aft of the C.G. datum

17. Levelling Means: Refer to Weight and Balance Manual

18. Minimum Flight Crew: Two (Pilot and Co-pilot) for all types of flight

19. Maximum Seating Capacity (including crew): 57

20. Emergency Exits:

Location	Type	Size	
		mm	inches
One Passenger Entry Door - Left Side (Rear Cabin)	Type I	1570 x 760	62 x 30
One Service Door - Right Side (Rear Cabin)	Type I	1240 x 640	49 x 25
Two Overwing Emergency Exits - Left & Right Side	Type IV	660x483	26x19

Sliding windows on the left and right hand side provide escape routes from the flight deck

21. Baggage/Cargo Compartments:

Location	Class	Max Allowable Load	
		kg	lb
Front Right Hand Side - Small	(See Note 1)	612	1350
Front Right Hand Side - Large	(See Note 1)	835	1840
Front Left Hand Side - Small	(See Note 1)	367	810
Front Left Hand Side - Large	(See Note 1)	558	1230
Rear	(See Note 1)	771	1700

Note 1: The certification basis of the aircraft pre-dates the introduction of cargo and baggage compartment classifications.

Note 2: Baggage compartment load not to exceed placarded loading limitation, and baggage compartment floor loading not to exceed AFM loading limitation.

22. Wheels and Tyres:

Landing Gear: Hydraulically retractable tricycle
Track: 7.54m (24ft 9in)
Wheelbase: 6.30m (20ft 8in)

Nosegear: 2 wheels per unit
Tyres: Dunlop DR8628 or DR8628T
Maximum Tyre Pressure: 61psi

Main gear: 2 wheels per unit
Tyres: Dunlop DR10725T or DR10765T or DR10768T
Maximum Tyre Pressure: 98 psi

IV Operating and Service Instruction

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

1.	Aircraft Flight Manual:	AO 1.10 (FAA) & AO 1.11
2.	Manufacturers Operations Manual:	HS 748 Series 2B Crew Manual
3.	Maintenance Schedule:	HS 748 Maintenance Schedule
4.	Manufacturers Maintenance Manual:	HS 748 Maintenance Manual
5.	Structural Repair Manual:	HS 748 Structural Repair Manual
6.	Wiring Diagram Manual:	HS 748 Wiring Manual
7.	Illustrated Parts Catalogue:	HS 748 Illustrated Parts Catalogue
8.	Weight and Balance Manual:	HS 748 Weight and Balance Manual
9.	Master Minimum Equipment List:	HS 748 Master Minimum Equipment List

10. Manufacturers Service Bulletins approved under the authority of UK CAA Approval DAI/1103/38 or DAI/9386/92 or DAI/1011/55 or JAA JAR 21 Approval CAA.JA.02034 or EASA Part 21 Approval EASA.21J.047.

Note: Airworthiness Limitations and Certification Maintenance Requirements are listed in the Manufacturers Maintenance Manual, Chapter 5.

V. Notes

1. Cabin Interior and Seating Configurations must be approved.

SECTION 6: Change Record

Issue	Date	Changes	TC issue
Issue 1.0	30/09/09	First Issue of EASA TCDS	Initial Issue, 30/09/09
Issue 2.0	15/01/15	Front Page, List of Effective Pages deleted Section 2, sub section II, item 3, EASA Certification Basis, Special Condition H-01 added Section 3, sub section II, item 3, EASA Certification Basis, Special Condition H-01 added Section 4, sub section II, item 3, EASA Certification Basis, Special Condition H-01 added Section 5, sub section II, item 3, EASA Certification Basis, Special Condition H-01 added Section 6, Change Record added	30/09/09