UNITED KINGDOM
CIVIL AVIATION AUTHORITY

SPECIFIC AIRWORTHINESS

SPECIFICATION (SAS)

NO. UK.SAS.R.0004

For

Brantly B-2

For Models: B-2, B-2A, B-2B

This Specific Airworthiness Specification (SAS) is issued in accordance with Regulation (EC) 216/2008 Article 20(1)(b) and Regulation (EU) 748/2021 Part 21, paragraph 21.A.173(b)(2) as retained (and amended in UK domestic law) under the European (Withdrawal) Act 2018 and amended by the Aviation Safety (Amendment etc.) (EU Exit) Regulations 2019. This SAS is issued to allow for the issue of a Restricted Certificate of Airworthiness.

This Specific Airworthiness Specification cancels and replaces EASA.SAS.IM.R.119 in the UK. The former Type Certificate Holder was:

Brantly International, Inc.
Wilbarger County Airport
12399 Airport Drive
Vernon, Texas 76384

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SECTION 1: Aircraft Design Definition (FAA TCDS H2H)

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

2H2
Revision 23
BRANTLY
(YHO 3BR) B-2
B-2A
B-2B

August 14, 2002

TYPE CERTIFICATE DATA SHEET NO. 2H2

This data sheet which is part of type certificate No. 2H2 prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder — Brantly International, Inc.
Wilbarger County Airport
12399 Airport Drive
Vernon, Texas 76384

I - Model B-2 (Military YHO 3BR), 2 PCLH (Normal Category), Approved April 27, 1959

Engine	Lycoming VO-360-A1A, VO-360-A1B or VO-360-B1A	
Fuel	91/96 minimum grade aviation gasoline	
Engine limits	For all operations, 2900 r.p.m. (180 h.p.) sea level	
Carburetor and carburetor setting	Marvel Schebler MA4-5 (Setting No. 10-3634 or 10-4329) or Marvel Schebler MA4-5AA (Setting No. 10-4495)	
Rotor limits and operational engine speeds	Power Off (Rotor Tach) Maximum 500 r.p.m. Minimum 400 r.p.m. (Applicable to helicopters with B2-248-40, B2-248-46 and B2-248-53 main rotor blades installed)	Power On (Engine Tach) Maximum 2900 r.p.m. Minimum 2700 r.p.m.
	Maximum 472 r.p.m. Minimum 400 r.p.m. (Applicable to helicopters with B2-248-100, B2-248-101, B2-248-202, and B2-248-404 main rotor blades installed)	Maximum 2900 r.p.m. Minimum 2700 r.p.m.
Airspeed limits	Never exceed speed 100 m.p.h. (87 knots) CAS from S.L. to 2,000 ft. Above 2,000 ft. decrease V_{ne} 3 m.p.h. per 1,000 ft.	

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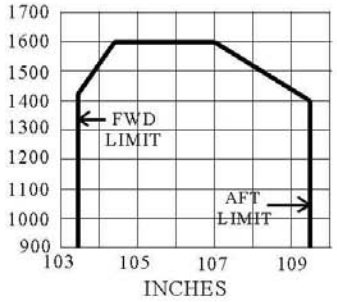
C.G. range	(+104.4) to (+107.0) at 1600 lb. (+103.4) at 1445 lb. (+109.5) at 1415 lb.



Empty wt. C.G. range	None
Maximum weight	1600 lb.
No. of seats	2 (+85)
Maximum baggage	50 lb. (+140)
Fuel capacity	31 gal. (+114) (includes 0.5 gal. unusable fuel)
Oil capacity	7.3 qt. (+108) (includes 2.6 qt. unusable oil) See NOTE 1 for undrainable oil.
Rotor blades and control movements	For rigging information refer to Maintenance Manual.
Serial Nos. eligible	4 thru 300. (S/N 33 and up manufactured under Production Certificate No. 204).

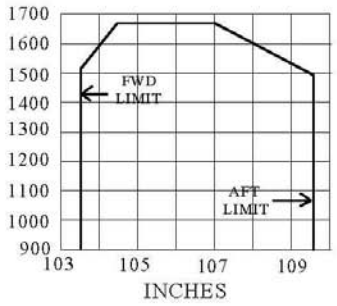
II - Model B-2A, 2 PCLM (Normal Category), Approved December 21, 1962

Engine	Lycoming VO-360-A1B or VO-360-B1A	
Fuel	91/96 minimum grade aviation gasoline	
Engine limits	For all operations, 2900 r.p.m. (180 h.p.) sea level	
Carburetor and carburetor setting	Marvel Schebler MA4-5 (Setting No. 10-3634) or Marvel Schebler MA4-5AA (Setting No. 10-4495)	
Rotor limits and operational engine speeds	Power Off (Rotor Tach) Maximum 472 r.p.m. Minimum 400 r.p.m.	Power On (Engine Tach) Maximum 2900 r.p.m. Minimum 2700 r.p.m.
Airspeed limits	Never exceed speed 100 m.p.h. (87 knots) CAS from S.L. to 2,000 ft. Above 2,000 ft. decrease V_{ne} 3 m.p.h. per 1,000 ft.	
C.G. range	(+104.4) to (+107.0) at 1600 lb. (+103.4) at 1445 lb. (+109.5) at 1415 lb. See diagram Section I	

Empty wt. C.G. range	None
Maximum weight	1600 lb.
No. of seats	2 (+85)
Maximum baggage	50 lb. (+140)
Fuel capacity	31 gal. (+114) (including 0.5 gal. unusable fuel)
Oil capacity	7.3 qt. (+108) (including 2.6 qt. unusable oil) See NOTE 1 for undrainable oil.
Rotor blade and control movements	For rigging information refer to Maintenance Manual.
Serial Nos. Eligible	301 thru 318 (Model B-2, S/N 4 thru 300 eligible when modified per Brantly Helicopter Drawing List Revision X, Supplement C). Manufactured under Production Certificate No. 204.

III - Model B-2B, 2 PCLM (Normal Category), Approved July 1, 1963

Engine	Lycoming IVO-360-A1A	
Fuel	91/96 minimum grade aviation gasoline	
Engine limits	For all operations, 2900 r.p.m. (180 h.p.) sea level	
Injector and injector setting	Bendix fuel injector RSA-5AD1 with servo regulator parts listing 2524171-1	
Rotor limits and operational engine limits	Power Off (Rotor Tach) Maximum 472 r.p.m. Minimum 400 r.p.m.	Power On (Engine Tach) Maximum 2900 r.p.m. Minimum 2700 r.p.m.
Airspeed limits	Never exceed speed 100 m.p.h. (87 knots) CAS from S.L. to 2,000 ft. Above 2,000 ft. decrease V_{ne} 3 m.p.h. per 1,000 ft.	
C.G. range	(+104.3) to (+107.0) at 1670 lb. (+103.4) at 1535 lb. (+109.5) at 1500 lb.	



Empty wt. C.G. range	None

Maximum weight	1670 lb. (See NOTE 5)
No. of seats	2 (+85)
Maximum baggage	50 lb. (+140)
Fuel capacity	31 gal. (+114) (includes 0.5 gal. unusable fuel)
Oil capacity	7.3 qt. (+108) (includes 2.6 qt. unusable oil) See NOTE 1 for undrainable oil.
Rotor blades and control movements	For rigging information refer to Maintenance Manual or Brantly flight controls rigging specification number BV-P-025.
Serial Nos. eligible	Serial numbers 319 thru 478. (Model B-2A, S/N 4 thru 318 eligible when modified per Brantly Helicopter Drawing List Revision X, Supplement C). Manufactured under Production Certificate No. 204. Serial numbers 479 thru 483 manufactured under Learjet's production certificate. Serial numbers 2001, 2004, and 2006 manufactured by Brantly Helicopter Industries U.S.A. Co., Ltd. Serial numbers 2002, 2003, 2005, 2007, and subsequent manufactured by Brantly International, Inc.

Data Pertinent to All Models

Datum	100 inches forward of forward firewall
Leveling means	Front seat support - lateral Tail rotor drive shaft - longitudinal
Certification basis	Part 6 of the Civil Air Regulations effective December 20, 1956, as amended by 6-2. Type Certificate No. 2H2 issued April 27, 1959. Application for Type Certificate dated February 28, 1957.
Production basis	Serial numbers 2002, 2003, 2007, and subsequent, Production Certificate No. PC10SW is applicable. Serial numbers 2001, 2004, 2005, and 2006 none. Prior to the original certification of each helicopter an FAA representative performed a detailed inspection for workmanship, materials, and conformity with approved technical data, and a check of flight characteristics. Serial numbers 479 through 483 manufactured under Learjet's production certificate. Serial numbers 319 through 478 manufactured under Production Certificate No. 204.
Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification basis) must be installed in the aircraft for certification. In addition, the following items of equipment are required: B-2, FAA Approved Helicopter Flight Manual dated April 27, 1959, or February 15, 1962. B-2A, FAA Approved Helicopter Flight Manual dated December 21, 1962. B-2B, FAA Approved Helicopter Flight Manual dated June 24, 1963.

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

The certificated empty weight and corresponding center of gravity locations must include undrainable oil of 2.5 lb. at (+108) and unusable fuel at 3 lb. at (+103).

NOTE 2. The following placard must be installed in full view of the pilots:

"This helicopter must be operated in compliance with the operating limitations specified in the FAA Approved Helicopter Flight Manual."

"Heater must be turned off during hovering."

NOTE 3. Information essential to the proper maintenance of the helicopter is contained in the Maintenance Manual provided with each helicopter which specifies that service life limited parts shall be retired according to the following schedules:

MODEL B-2	PART NO.	HOURS
Main Rotor System		
Outboard main rotor blades (except spar assy. 248-45)	248-40	500
Outboard main rotor blades (except spar assy. 248-45)	248-46	500
Outboard main rotor blade	248-53	2500
Outboard main rotor blade	248-100	2500
Outboard main rotor blade	248-101, 248-202, & 248-404	2500
Lag hinge block	4-1	2500
Lag hinge block	4-12	2500
Hub and Pylon assy. (when used with outboard blades 248-40)	333	2500
Control tube assy. main rotor (when used with outboard blades P/N 248-40)	305-2	1310
Control tube assy. main rotor (when used with outboard blades P/N 248-46, 248 -53, 248-100, 248-101, 248-202 & 248-404)	305-2	2500
Inboard yoke	280-4	2500
Hub and inboard blade assy.	305-1	2500
Pylon outboard bearing shaft	280-5 & 280-6	500
Pylon outboard bearing shaft	280-7	1200
Drive System		
Transmission assy.	324	3250
Free wheeling clutch assy.	10-11	2500
Free wheeling clutch cage	10-2	300
Overrunning clutch (Formsprag)	CL-40237, -1	2500
Drive shaft extension assy.	108-33	3250
Intermediate gear box assy	278-100	3250
Tail rotor gear box assy	278-200	3250

Model B-2A and B-2B

Main Rotor System		
Outboard main rotor blades (Model B-2A & B-2B)	248-101	2500
See Note 5 for weight limitations	248-202	2500
	248-404	2500
Lag Hinge Block	4-12	2500
Main Rotor Hub	332-1	2500
Hub Straps	332-3	2500
Bolts	332-6	2500
Clevis	332-2	2500
Pylon Flanges	160-3	2500
Pylon Tubes	160-5	2500
Pylon Outboard Bearing Shaft	280-7	1200
Bearing Shaft Nut	5-5	2500
Inboard Blades	202-15	2500
Inboard Yoke	280-4	2500
Universal Joint Assembly	342-7	2500
Hub & Inboard Blade Assembly	305-1	2500
Pylon Outboard Bearing Shaft	280-6	500
Drive System		
Transmission Assembly	324	3250
Overrunning Clutch (Formsprag)	CL-40237-2, -3	2500
Drive Shaft Extension Assembly	108-33	3250
Intermediate Gear Box Assembly	278-100	3250
Tail Rotor Gear Box Assembly	278-200	3250
Morflex Coupling (Fwd.)		3250
Morflex Coupling (Aft)		3250
Free Wheeling Clutch Assembly	10-11	2500
Free Wheeling Clutch Cage	10-2	300

NOTE 4. Models B-2 and B-2A
Transmission upper cases with mount lugs 1/4 in. thick are ineligible unless reinforced by bracket P/N 151-19 installed in accordance with Brantly Service Bulletin No. 14. These cases may be identified by P/N Stamp 104-2, Revision B, and by part serial numbers 1 thru 122.

NOTE 5. Weight limitations, maximum approved gross weight for B-2B;
with 248-202 or -404 main rotor blades - 1670 lb.
with 248-101 main rotor blades - 1600 lb.

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SECTION 2: AIRWORTHINESS DIRECTIVES AND MANDATORY SERVICE BULLETINS

Number	Issued by	Issue date	Subject	Effective date
2021-26-09		15 Dec 2021	Tail Rotor Head – Tail Rotor Hub	19 Jan 2022
2014-20-16		21 Oct 2014	Main Rotor Blades - Inspection/Replacement	12 Nov 2014
2006-0170		19 Jun 2006	Tail Rotor Blades P/N B2-111-11 - Life Limit Implementation	3 Jul 2006
2006-12-07		6 Jun 2006	ECi cylinder assemblies	11 Jul 2006
2006-08-07		17 Apr 2006	Tail Rotor Drive - Upper Tail Rotor Vertical Gearbox, Shaft and Housing, and Intermediate Gearbox Bushing - Inspection / Replacement	2 May 2006
81-17-01		not recorded	Starting Vibrator Assemblies	13 Aug 1981
72-21-02		not recorded	Pylon Bearing Shaft	8 Dec 1972
71-17-05		not recorded	Main Rotor Mast	26 Nov 1971
68-04-04 R2		not recorded	Tail Rotor Blade	14 Feb 1983
68-05-02		not recorded	Tail Rotor Drive Shaft	30 Mar 1968
67-09-02		21 Mar 1967	Main Rotor Mast	20 Apr 1967
65-28-01		14 Dec 1965	Tail Rotor Blades	14 Dec 1965
62-05-02		28 Feb 1962	Fuel Pump Seals	28 Feb 1962
62-06-01		23 Mar 1962	Seat Back Adjustment	23 Mar 1962
61-04-01		10 Feb 1961	Clutch Bolts	22 Feb 1961
61-11-01		23 May 1961	Landing Gear Drag Brace	31 May 1961
61-11-02		30 May 1961	Oil System Modification	4 Aug 1961
61-16-03		4 Aug 1961	Seat Modification	4 Aug 1961
61-16-04		4 Aug 1961	Transmission Mount Lug	14 Aug 1961
61-18-02		24 Aug 1961	Tail Rotor Modification	29 Aug 1961
61-23-01		3 Nov 1961	Rotor Blade Bond Separation	4 Nov 1961
60-06-03		10 Mar 1960	Tail Rotor Guard	- - -
60-07-02		23 Mar 1960	Tail Rotor Drive Shaft (AD revised 17 Apr 1965)	- - -
60-10-02		12 May 1960	Main Rotor Blade (AD revised 10 Mar 1961)	- - -
60-26-03		20 Dec 1960	Drive Shaft Coupling	20 Dec 1960

Note:
For related documents see:
Airworthiness Directives (ADs) https://www.faa.gov/regulations_policies/airworthiness_directives/

SECTION 3: OCCURRENCE REPORTING

The Specific Airworthiness Specification may be used as a basis for the issue of a Restricted Certificate of Airworthiness in accordance with 21A.173(b)(2) under the following conditions:

a) The holder of a Restricted Certificate of Airworthiness based on this Specific Airworthiness Specification shall report to the State of Registry all information related to occurrences associated with the operation of the aircraft which affects or could affect the safety of operation1.

b) Such reports shall be despatched within 72 hours of the time when the occurrence was identified unless exceptional circumstances prevent this.

c) The State of Registry shall forward the information received under (a) to FAA when it relates to failures, malfunctions, defects or other occurrences which cause or might cause adverse effects on the continuing airworthiness of the aircraft.

d) The aircraft owner must comply with the applicable airworthiness rules (and especially Part ML if applicable).

SECTION 4: OTHER LIMITATIONS

Applicable to Serial Numbers (S/N) manufactured before 19 July 2019.

SECTION 5: Administrative

I. Change Record

Issue	Date	Changes
Issue 1	07 January 2025	Initial UK Issue. All data taken from EASA.SAS.IM.R.119 which has been superseded. Some minor changes for CAA/State of Registry responsibilities.

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