

FEDERAL AVIATION AGENCY

A2IN
Revision 1
HANDLEY PAGE
Herald Type 300

January 28, 1963

TYPE CERTIFICATE DATA SHEET NO. A2IN

This data sheet which is a part of type certificate No. A2IN prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Civil Air Regulations.

Type Certificate Holder Handley Page (Reading) Limited
Berkshire, England

I Herald Type 300 (Transport Category), Approved May 25, 1962.

Engines 2 Rolls-Royce Dart 527 (Turboprop)
Fuel Aviation Kerosene to Spec. D.Eng.R.D.2482 (AVTUR/40) and/or D.Eng. R.D.2494 (AVTUR/50) and/or American Spec. A.S.T.M. D.1655-59T Type A or Type A-1, and/or Canadian 3-GP-23D Type 1; and/or I.A.T.A. Kerosene type fuel

Wide-cut gasoline to Spec.D.Eng.R.D.2486 and/or American Spec. MIL- J-5624E (JP4) A.S.T.M. D.1655-59T Type B and/or I.A.T.A. wide-cut fuel and/or Canadian Spec.

Engine limits

Static Sea Level Ratings

Rating	Shaft H.P.	Jet Thrust. (lb.)	Compressor Speed (rpm)	Propeller Speed (rpm)	Turbine Max. Gas Temp. (°C)
Max. takeoff (wet)	1870	495	15,000	1395	825
Max. takeoff (dry)	1835	485	15,000	1395	795
Max. continuous	1835	485	15,000	1395	835

Propeller and
propeller limits

2 Rotol R.187/4-30-4/18
Blades eligible RA.25921
Diameter: 12 ft. 6 in.
Pitch settings at 0.7 radius station:
Ground fine 0°, fine 16°30', feathered 83°45'
Restricted speed range: On the ground--continuous operation between 8500 and 9500 engine r.p.m. shall be avoided.

Airspeed limits (CAS)

Vne (never exceed) 276 m.p.h. (240 kt.) to 15,000 ft.
decreasing linearly to
243 m.p.h. (211 kt.) at 23,000 ft.

Vmo (maximum operating) 238 m.p.h. (206 kt.) to 15,000 ft.
decreasing linearly to
203 m.p.h. (174 kt.) at 23,000 ft.

Va (maneuvering) 166 m.p.h. (144 kt.)
Vfe (flaps up -5°) 175 m.p.h. (152 kt.)
Vfe (flaps 5° -30°) 143 m.p.h. (124 kt.)
Vlo (landing gear operation) 197 m.p.h. (171 kt.)
Vle (landing gear extended) 197 m.p.h. (171 kt.)
Vmc (minimum control) Sea level 96.8 m.p.h. (84.0 kt.)
8000 ft. 85.0 m.p.h. (73.9 kt.)

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C.G. range
(landing gear extended)

Landing gear retraction moment 62,580 in.-lb. (moves C.G. forward)

Weight (lb.)	Forward		Aft	
	% S.M.C.	Aft of Datum (in.)	% S.M.C.	Aft of Datum (in.)
26,000	11.13	23.64	29.11	43.80
33,500	11.13	23.64	29.11	43.80
34,800	12.48	25.20	29.11	43.80
36,100	13.83	26.64	29.11	43.80
37,400	15.18	28.20	29.11	43.80
38,700	16.53	29.64	29.11	43.80
40,000	17.88	31.20	29.11	43.80

Straight line variation between weights.

Datum

Zero moment datum is located on the center line of the aircraft at the intersection of the projected leading edge of the wing which is Station 288 inches. This datum point is located by the forward edge of the forward rigging bolt on each side of the fuselage (externally). Horizontal arms to the rear of the datum are positive (+).

Standard mean chord
(S.M.C.)

112.50 in. actual (112.11 in. projected horizontally).
The leading edge of the S.M.C. is at 11.16 in. aft of datum.

Leveling means

Fore and aft by external datum bolts at Sta. 288 and 333.
Lateral by internal datum point at Frame 114.

Maximum weight

Landing 39,500 lb.
Takeoff 40,000 lb.
Max. zero fuel weight 37,000 lb.

Minimum crew

2 pilots (-225.60).

Maximum passengers

56 (See approved weight and balance report for actual number and location.)

Maximum baggage

	Volume	Max. floor loading	Capacity	Arm
	(cu. ft.)	(p.s.f.)	(lb.)	(in.)
Forward hold	118	150	1180	(-187.32)
Aft hold	160	150	1600	(+363.00)

Fuel capacity

(See NOTE 1(b) for data on system fuel and oil.)

	<u>Total</u>	<u>Usable</u>
Two forward center plane tanks	223 U.S. gal.	223 U.S. gal.
Two aft center plane tanks	199 U.S. gal.	199 U.S. gal.
Two outer plane tanks	226 U.S. gal.	226 U.S. gal.

Oil capacity

See NOTE 1(b) for data on system fuel and oil.
1.65 U.S. gal. per engine. Total oil 3.3 U.S. gal.

Max. operating altitude

23,000 ft.

Other operating
limitations

Aircraft shall be operated in compliance with the operating limitations specified in the A.R.B. approved Airplane Flight Manual.

Control surface movements	Elevator	Up 25°	Down 15°
	Servo tab	Up 24°	Down 10°
	Spring tab	Up 20°	Down 20°
	Rudder	*Right 14-11/32"	*Left 17-13/16"
	Servo tab	*Right 4-5/8"	*Left 4-5/8"
	Trim tab	*Right 4-5/8"	*Left 4-5/8"
	Aileron	Up 25°	Down 15°
	Servo tab	Up 15°	Down 15°
	Trim tab	Up 18 1/2°	Down 11 1/2°
	Flaps	30°	Total angle of travel

**Rudder and rudder tab movements are inches measured at bottom of root rib.*

Serial Nos. eligible The United Kingdom Certificate of Airworthiness for export endorsed as noted under "Certification basis" must be submitted for each individual aircraft for which application for certification is made.

Certification basis CAR 10. Type Certificate No. A21N issued May 25, 1962
Date of Application for Type Certificate June 17, 1957.

Each aircraft and any replacement parts manufactured in the U.K. must be designated as "import" and clearly labeled as such in accordance with CAR 10.30. A U.S. Airworthiness Certificate may be issued on basis of a United Kingdom Certificate of Airworthiness for Export signed by a representative of the Ministry of Aviation containing the following notation: "The aeroplane covered by this certificate has been examined and found to comply with the British Civil Airworthiness Requirements (1959) and the Special Requirements for Herald Aircraft notified by the U.S.A. Government to the Government of the United Kingdom and conforms to T.C. A21N." (This certification equivalent to CAR 4b effective December 31, 1953, plus Amendments 4b-1 thru 4b-11 and SR-422B dated July 9, 1959.)

Compliance with the ditching requirements has been demonstrated.

Equipment The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. The following additional equipment is required:

- (a) Stall Warning Indicator, Kelvin & Hughes Type No. KSB.0213.
- (b) Stick Shaker, Western Manufacturing Type No. CCV.161.

- NOTE 1.
- (a) Current weight and balance report, including list of equipment included in certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at the time of original certification.
 - (b) "Unusable Fuel and System Oil" and all hydraulic fluid must be included in the certificated empty weight. Unusable fuel is that quantity of fuel in the system and in the tanks which is unavailable to the engine under critical flight conditions as defined in CAR 4b.416. This unusable fuel includes "system fuel" which is defined as the quantity required to fill the system and tanks to the tank outlet level when the airplane is in the ground level attitude. The fuel gauges are calibrated with the unusable fuel level as the zero datum. The total amount of fuel is as follows:

<u>Usable fuel</u>	<u>Unusable fuel</u> (that is downstream of booster pumps)	<u>Undrainable fuel</u> Using pressure de-fueling unit
1312 U.S. gal.	24 lb. total	96 lb. total

System Oil is that amount of oil required to fill the oil systems and tanks to the tank outlets to the engines. The propeller feathering oil is not considered usable oil and is included in "System Oil". System oil weight is 86 lb. The oil tank capacities shown in this data sheet include only the usable oil for which the tanks are placarded. Dipstick readings indicate the amount of usable oil.

NOTE 2. The following is a list of aircraft parts which are critical from the fatigue standpoint at less than 15,000 flights and must be replaced at the times specified.

- (a) Flap Cables
 - Cable Part No. P.04884 B.1 750 flights
 - All other flap cables 3,500 flights
- (b) Flap Chains
 - Parts P.04877 B.1 and P.04878 1,000 flights
 - All other flap chains 10,000 flights

Other aircraft parts that are critical from a fatigue standpoint at 15,000 or more flights will be included herein as further testing and operational experience is evaluated.

NOTE 3. All aircraft must be maintained and repaired in accordance with the Air Registration Board approved Maintenance and Structural Repair Manuals.

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