DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

H3SW
Revision 10
BRANTLY
305
October 17, 1990

TYPE CERTIFICATE DATA SHEET NO. H3SW

This data sheet which is part of type certificate No. H3SW 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: Brantly Helicopters Industries U.S.A. Co., Ltd.
Wilbarger County Airport
P.O. Box 113
Vernon, Texas 76384

I - Model 305, 5 PCLH (Normal Category), Approved July 29, 1965

Engine: Lycoming IVO-540-A1A

Fuel: 100/130 min. grade aviation gasoline

Engine limits (all operations)

H.P.	R.P.M.	M.P. In. Hg	Altitude (Ft.)
305	3200	27	Sea Level
305	3200	26.3(F.T.)	2200

Fuel injector and injector setting: Bendix Type RSA-10AD/with servo regulator parts list 2524255-1.

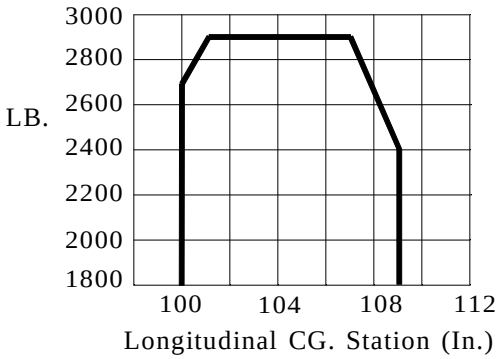
Rotor limits and operational engine speeds

Power Off (Rotor Tach)	Power On (Engine Tach)
Max. 480 r.p.m.	Max. 3200 r.p.m.
Min. 400 r.p.m. (above 2400 lb. gr. wt.)	Min. 3000 r.p.m.
380 r.p.m. (below 2400 lb. gr. wt.)	

Airspeed limits: Never exceed speed 120 m.p.h. (104 knots) CAS from sea level to 2000 ft. Above 2000 ft. decrease Vne 4.0 m.p.h. per 1000 ft.

C.G. range:

(a) Longitudinal limits
(+100.7) to (+107.2) at 2900 lb.
(+100.0) at 2700 lb.
(+109.1) at 2400 lb.
Straight line variation between points given.



	(b) Lateral C.G. limits ± 1.00 in. from centerline of fuselage at longitudinal C.G. of (+100.00) and (+109.1) ± 2.5 in. from centerline of fuselage at longitudinal C.G. of (+103.0) to (+107.1) Straight line variation between points given.
Empty wt. C.G. range	None
Datum	100 in. forward of forward firewall.
Leveling means	Cabin doors, lower sill.
Maximum weight	2900 lb.
No. of seats	2 (+56), 3 (+86).
Maximum baggage	200 lb. (+142)
Fuel capacity	43.5 gal. (+114) includes 0.5 gal. unusable fuel.
Oil capacity	9 qt. (+186) includes 4 qt unusable. (See NOTE 1 for undrainable oil).
Rotor blade and control movements	For rigging information refer to the pertinent model maintenance manual.
Serial Nos. eligible	1001 and up
Certification basis	Part 6 of the Civil Air regulations effective December 20, 1956, as amended by 6-1 thru 6-6 and .116 of 6-7. Type Certificate No. H3SW issued July 29, 1965. Application for Type Certificate dated September 11, 1963.
Production basis	None. Prior to original certification of each helicopter an FAA representative must perform a detailed inspection for workmanship, materials and conformity with approved technical data, and a check of flight characteristics.
Equipment:	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification basis) must be installed in the helicopter for certification. Brantly Report No. 528 contains a list of all required as well as optional equipment approved by the FAA. In addition, the following item of equipment is required: FAA Approved Rotorcraft Flight Manual dated July 19, 1965.

NOTE 1. Current weight and balance report together with list of required equipment, 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 3.5 lb. at (+106.5) and unusable fuel of 3.0 lb. at (+101).

NOTE 2. The following placard must be displayed in front of and in clear view of the pilot:

"This helicopter must be operated in compliance with the operating limitations specified in the FAA Approved Rotorcraft Flight Manual. Not eligible for instrument flight or acrobatic maneuvers. See Flight Manual for loading. Prior to each engine start turn rotor backward by hand through 30 degrees minimum to check clutch freedom. Do not apply rotor brake above 200 r.p.m. Avoid prolonged rearward or sideward flight."

NOTE 3. The retirement times of critical parts are listed in the following table. These values cannot be increased without FAA engineering approval.

Description	Part Number	Service Life Hours
Outboard Main Rotor Components		
Main rotor blades	J0112-1, -3	1370
Inboard Main Rotor Components		
Torque tube	J0878-1	2990
Pitch arm	C0762-1	2990
Pitch arm assembly	C0873-1	2990
Torsion strap	C0976-1	Not eligible
Pylon assembly	C0790-1	8950
Bearing	36NBC2048YZP	Not eligible
Tension clevis	C0385-1	1187
Torsion strap	D2225-3	400
Clevis bearings	ESJ74837	100
Fuselage components		
Main rotor transmission mount	D0268-1	2500
Tail cone and pylon	D0121-1	764
Tail cone and pylon	J1835	5827
Controls System		
Lateral controls	All	12,000
Collective controls	All	7,462
Drive System		
Over-running clutch	CL-41044-1	300

NOTE 4. The helicopter should be serviced and maintained in conformance with instructions given by Brantly Helicopter Corporation in the Model 305 Maintenance Manual.

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