FEDERAL AVIATION ADMINISTRATION

A1SW Revision 3 HOWARD 500

July 17, 1967

TYPE CERTIFICATE DATA SHEET NO. A1SW

This data sheet which is a part of type certificate No. A1SW prescribes conditions and limitations under which the product for which the certificate was issued meets the airworthiness requirements of the Civil Air Regulations.

Type Certificate Holder The Dee Howard Company

International Airport San Antonio, Texas

I - Model 500 (Transport Category), Approved February 20, 1963

Engine 2 Pratt and Whitney Double Wasp CB17 or

R-2800-52WD or R-2800-83AM7D or

R-2800-103WD Engines

Carburetor Setting No. 391433-17

Fuel 115/145 minimum grade aviation gasoline

Water/Methanol Mixture Ratio 50/50

Engine limits				M.P.		
		<u>HP.</u>	<u>R.P.M.</u>	in Hg.	<u>Alt. (Ft.)</u>	
	Takeoff Wet (2 min.)	2500	2800	62.0	S.L.	
		2500	2800	61.5	3700	
	Maximum Continuous Power					
	Low Blower (7.29 to 1)	1900	2600	51.5	S.L.	
		1900	2600	50.0	7200	
	High Blower (8.58 to 1)	1750	2600	51.5	10,000	
		1750	2600	49.5	15,000	

Propeller and 2 Hamilton Standard 24E60-41 hubs with four 7037A-50S blades each.

propeller limits Diameter: Maximum 10' 11-7/8", Minimum 10' 9-1/4".

No further reduction permitted. Settings at 42 inch station: Low Pitch 33° Feathered 88°

Avoid Ground Operation 1950-2250 r.p.m. Avoid In-flight Operation 1900-2175 r.p.m.

Airspeed limits (CAS) Vne (Never exceed) 11,000 ft. and below 350 m.p.h. (304 K)

Vc (Max. structural cruising)310 m.p.h. (269 K)Mne (Never exceed mach)0.56Mmo (Normal operating)0.50

 Va (Maneuvering)
 199 m.p.h. (173 K)

 Vfe (Flaps down 14°)
 232 m.p.h. (202 K)

 Vfe (Flaps down 35°)
 169 m.p.h. (147 K)

 Vlo (Landing gear operation)
 220 m.p.h. (191 K)

 Vle (Landing gear extended)
 220 m.p.h. (191 K)

VII (Landing light extension and operation) 220 m.p.h. (191 K)

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C.G. range (gear down)	Weight	F	orward		Aft		
2 (0 /	lb.	Sta. (in.)		STA. (i	n.) %]	MAC	
	Up to	1000	25.04	101.0	20	5 0	
	32,000 34,000	186.6 188.2	25.84 27.19	191.0 191.0	29. 29.		
	34,000	100.2	27.19	191.0	29.	.36	
	Straight line variation between points given. Retraction moment +44,123 inlb. (Moves C.G. aft)						
M.A.C.	117.19 inche Leading edg		. Sta. +156.3	33 in.			
Datum	Fuselage Station 0 (188.12 in. fwd. of Lower Main Wing Beam Centerline at jack points)						
Leveling means	Longitudinal: Lugs on right side of fuselage aft wing trailing edge.						
Maximum weight	Takeoff Landing Max. Zero F	34,0	000 lb. 000 lb. 000 lb.				
Minimum crew	2 (Pilot and	copilot)					
Maximum passengers	19						
Maximum baggage	<u>Station</u> 142.5 to 268	.75	Capacity 1500	Floo Loading 59	(lb./ft. ²)	<u>C.G.(in.)</u> 197.5	
Fuel capacity	1546 gal. tot	al usable					
	Tank Location Right and Location Right and Location Right and Location See Note 1 for	eft Front eft Rear eft Outer W	19	ty (gal.) 91 17 55	Arm (in.) 171.5 212.0 182.0		
ADI Fluid]	17			
Oil capacity			ving tanks of Arm 212. S			ndes 2.25 gal. per tank nusable oil.	
Maximum operating altitude	25,000 ft.						
Other operating limitations	Aircraft shall be operated in compliance with the operating limitations specified in the FAA approved Airplane Flight Manual.						
Control surface movements	Elevator Elevator Tri Elevator Spr Rudder Rudder Trin Aileron Aileron Trin Flaps	ing Tab 1 Tab	Up Up Up Left Left Up Up	20° 20° 20° 30° 25° 25° 25°	Down Down Right Right Down Down Down	15° 30° 30° 30° 25° 8° 25° 35°	
Serial Nos. eligible	500-101 and	up.					

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Certification basis CAR 4b dated 12/31/53 through Amendments 4b-1, 4b-2, 4b-3 for gust and landing

loads, 4b-7 and exemption 347.

Production basis None. Prior to original certification of each aircraft, an FAA representative must

perform a detailed inspection for workmanship, materials, and conformity with the

approved technical data, and a check of the flight characteristics.

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, Howard Report No. 356, "Howard 500 Equipment List," contains a list of all required

equipment plus optional equipment installations approved by FAA.

NOTE 1. Current weight and balance report, including list of equipment included in certificated empty weight and loading instructions when necessary, must be in each aircraft at the time of original certification and at all times thereafter (except in the case of operators having an approved weight control system).

The certificated empty weight and corresponding center of gravity locations must include system oil of 74.5 lb. at +212.0 and unusable fuel of 16 lb. at +171.5, 36 lb. at +212.0, and 60 lb. at +182.0.

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