## DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

A2GL Trans American Air Transport (Grumman) HU-16B

June 20, 1978

## TYPE CERTIFICATE DATA SHEET NO. A2GL

This data sheet which is part of type certificate No. A2GL 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 Trans American Air Transport, Inc.

P.O. Box 66155

O'Hare International Airport Chicago, Illinois 60666

## I - Grumman Model HU-16B (Restricted Category) approved June 20, 1978

Engines 2 Wright R1820-76B or R1820-76D

Fuel 100/130 minimum grade aviation gasoline

		MP		
Low Impeller Ratio	<u>HP</u>	<u>RPM</u>	in. HG	ALT. FT.
Takeoff (five min.)	1425	2700	51.5	Sea Level
Takeoff (five min.)	1425	2700	50.5	2,600
Minimum Continuous	1275	2500	46.5	Sea Level
Maximum Continuous	1275	2500	45.5	3,500
High Impeller Ratio				
Maximum Continuous	975	2500	42.0	18,300
Maximum Continuous	975	2500	43.5	12,000
	Takeoff (five min.) Takeoff (five min.) Minimum Continuous Maximum Continuous  High Impeller Ratio Maximum Continuous	Takeoff (five min.) 1425 Takeoff (five min.) 1425 Minimum Continuous 1275 Maximum Continuous 1275  High Impeller Ratio Maximum Continuous 975	Low Impeller Ratio         HP         RPM           Takeoff (five min.)         1425         2700           Takeoff (five min.)         1425         2700           Minimum Continuous         1275         2500           Maximum Continuous         1275         2500           High Impeller Ratio           Maximum Continuous         975         2500	Low Impeller Ratio         HP         RPM         in. HG           Takeoff (five min.)         1425         2700         51.5           Takeoff (five min.)         1425         2700         50.5           Minimum Continuous         1275         2500         46.5           Maximum Continuous         1275         2500         45.5           High Impeller Ratio           Maximum Continuous         975         2500         42.0

Straight line variation between points given

Propeller and propeller limits

3 blade Hamilton standard hydromatic constant speed full feathering and reversible with integral oil system.

Hub Model No. Blade No. 43D50-() 6601-()

Pitch settings at the 42 in. station:

Low 16° Feather 89° Reverse -12°

Diameter

Maximum 132.00 in. Minimum 129.36 in.

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Airspeed limits	Vne (Never exceed) In severely turbulent air Full Aileron deflection Full Rudder deflection Landing gear extending With landing gear extended With landing lights extende Flaps 15° down Flaps 30° down Flaps full down 40° design De-icer boot operation	d 120 KIAS 243 KIAS 163 KIAS	S
C.G. range	294.4" (20.5% MAC) to 30	4" (28% MAC).	
Datum	71.5" forward of nose jack	oad.	
Leveling means	Leveled laterally by leveling lugs located in the nose wheel and longitudinally by a plum bob drop from the small hole located in the shelf of either wheel well.		
Maximum weight	32,000 lbs.		
Minimum crew	1 (pilot) - See Note 5 2 (pilot & Copilot) 2 (pilot & competent observ	Day VFR IFR, Night VFR ver) All water operations	6
No. of seats	2 Pilot and Copilot 1 crew 1 crew 1 crew 1 crew 2 crew 3 crew 4 crew 2 crew	(+154.") (+187.") (+238.") (+252.") (+279.") (+306.") (+378.") (+418.") (+453.")	
Fuel capacity	Right and left main tanks Right float tank Left float tank Right and left drop tanks MK8 MOD 0 MK8 MOD 1	209 gal. 1254 212 gal. 1272 295 gal. (each) 1770	lbs. (+297.3") lbs. (+307.5") lbs. (+307.5") lbs. (+295.0") lbs. (+295.0")
Oil capacity	Right and left tanks	25.6 gal. (each)	( 262.0")
Control surface movements	Wing flaps Aileron tab Up Aileron Up Elevator tab Up Elevator Up Rudder tab Right Rudder Right	$18^{\circ} \pm 1^{\circ}$ Down $17^{\circ} \pm 1^{\circ}$ Down $5^{\circ} \pm 1^{\circ}$ Down $30^{\circ} \pm 1^{\circ}$ Down $16^{\circ} \pm 1^{\circ}$ Left	40° ± 3° 12° ± 1° 17° ± 1° 12° ± 1° 20° ± 1° 26° ± 1° 15° ± 1°
Other operating limitations	U.S.A.F. Flight Manual No	. T.O. IU-16(H)B-1 dated I	December 1, 1967
Serial Nos. eligible	Serial No. 51-5292 only.		
Certification Basis	FAR 21.25 Application for Type Certif	icate dated August 9, 1976.	Type Certificate No. A2GL

Application for Type Certificate dated August 9, 1976. Type Certificate No. A2GL issued June 20, 1978 for the special purpose of water photographic and salvage work.

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Production basis None

Equipment Basic required equipment as prescribed in the Basic Weight Check List Chart A

pages 1-9 dated December 10, 1978 and Chart E Sheets 1 & 2 dated September 30, 1978.

NOTE 1. Current weight and balance report including list of equipment in certificated empty weight and loading instructions when necessary, must be in the aircraft at the time of original airworthiness certification and at all times thereafter.

NOTE 2. The following placards must be prominently displayed in full view of the pilot:

Airspeed limits	Vne (Never exceed)	254 KIAS
	In severely turbulent air	110 - 130 KIAS
	Full Aileron deflection	208 KIAS
	Full Rudder deflection	150 KIAS
	Landing gear extending	150 KIAS
	With landing lights extended	120 KIAS
	Flaps 15° down	243 KIAS
	Flaps 30° down	163 KIAS
	Flaps full down 40° design limit	140 KIAS
	De-icer boot operation	175 KIAS

This airplane must be operated in accordance with U.S.A.F. Flight Manual TO. IU-16(H)B-1 dated December 1, 1967. NOTE 3. Prior to civil airworthiness certification, the following must be accomplished:

- (a) The provisions of U.S.A.F. T.O.'s IU-16(H)-502, -524, and -530.
- (b) An inspection of the engine support structures to verify their structural integrity.
- (c) An inspection of the engine generator cables to verify their airworthiness.
- (d) An eddy current inspection of the jack pad holes in accordance with U.S.A.F. T.O. IU- 16(H)B-513. There must be no evidence of cracks or corrosion. This inspection must be performed subsequently every 200 flight hours.
- NOTE 4. The wing lower main beam spar caps are limited to 10,000 hours total time in service.
- NOTE 5. Single pilot operation must be authorized in accordance with the provisions of FAR 91.213.

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