

Supplemental Type Certificate

(Continuation Sheet)

Number SE00482SE

Soloy, LLC
 Reissued: 12/02/04
 Amended:

Limitations and Conditions: (continued)

Model:	Dual Pac 785-1000-1	
Type:	Twin Power Section Turboprop	
Propeller Drive Ratio:	.0515:1	
Ratings (See Note 1):		
Maximum Continuous:	Total Output Shaft Horsepower, SHP	1330
	Single Power Section Shaft Horsepower, SHP	660
	Output shaft Speed, RPM	1700
	Total Equivalent Shaft Horse, ESHP	1397
	Single Power Section Shaft Horsepower, ESHP	694
	Total Jet Thrust, LB	172
	Single Power Section Jet Thrust, LB	86
Takeoff:	Total Output Shaft Horsepower, SHP	1330
	Single Power Section Shaft Horsepower, SHP	660
	Output Shaft Speed, RPM	1700
	Total Equivalent Shaft Horsepower, ESHP	1397
	Single Power Section Shaft Horsepower, ESHP	694
	Total Jet Thrust, LB	172
	Single Power Section Jet Thrust, LB	86
Maximum Reverse:	Left Engine Only, Shaft Horsepower, SHP	634
	Output Shaft Speed, RPM	1632
Principal Dimensions:	Length Overall, inches	76.48
	Width, inches	49.54
	Height, inches	29.75
Center of Gravity (CG):	CG location, aft of propeller flange face, inches	35.5
	CG location, below propeller axis, inches	4.2
	CG location right of propeller axis, inches	.3
Weight:	Basic Dual Pac (dry), LB	1125.2

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

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Propeller Drive: Flanged, 5.125 inch bolt circle, twelve holes, 0.593±0.006 inch diameter

Oil:

Gearbox:

Oil Type: MIL-L-23699
 Quantity: 1.6 gallons total
 0.5 gallons usable

Auxiliary Oil System Inlet Limits:

Type: MIL-L-23699
 Temperatures: 7°C to 99°C
 Flow Rate: 2 gallons per hour minimum

Control System: Soloy Propeller Governor 785-2141-1
 Soloy Free Turbine Governor 785-2140-1

Certification Basis: FAR 21.29; FAR 21.115(a); FAR part 34 dated September 10, 1990, as amended by 34-1; FAR part 33 dated February 1, 1965, as amended by 33-1 through 33-5, plus the following sections:
 Section 33.7, Amdt 33-12
 Section 33.68, Amdt 33-10
 Section 33.75, Amdt 33-10
 and, Special Conditions 33-ANE-01, dated February 19, 1997

Note 1: The engine ratings are based on calibrated stand performance, under static sea level conditions:
 Compressor inlet air (dry) 59°F, 29.92 in Hg
 No external accessory loads and no air bleed
 Compressor screen installed

Note 2: Permissible Oil Temperatures:
 Gearbox, Takeoff and Maximum Continuous: 0°C to 99°C
 Auxiliary Oil System Inlet: 7°C to 99°C

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Note 3: The maximum output shaft overspeed limit is 108 percent at all rating and may be employed for sustained periods in emergencies. 100% output shaft speed is defined as 1700 RPM.

Note 4: Maximum Allowable Torque:
 The maximum allowable steady state and acceleration torque, as measured by torquemeter pressure, for either or both power sections are:

Continuous, PSIG	53.0
Transient Acceleration, Both Engines, PSIG	58.3

Note 5: Gearbox Oil Pressure Limits:
 70 to 105 PSIG output speeds 1500 to 1700 RPM. Pressure will vary between 0 PSIG at zero output speed and 150 PSIG at 1700 RPM.

Note 6: In addition to accessory drives available on the power sections, the following accessory drive or mounting provisions are available on the gearbox:

DRIVEN BY POWER TURBINE	ROTATION FACING DRIVE PAD	SPEED RATIO (TO PROP SPEED)	MAX TORQUE (IN-LB) CONT. STATIC	MAXIMUM OVERHUNG MOM (IN-LB)	
Propeller Governor	Clockwise	2.474	50	850	25
Propeller Overspeed Governor	Clockwise	2.474	50	850	25
Tachometer, Combining Gearbox	Clockwise	2.474	7	100	10

Note 7: This engine is certificated as a unit comprising two separate power sections with the capability of single engine operation with either power section alone in multi-engine airplanes. The unit is also approved as a single engine with either or both engines operating continuously.

Note 8: The engine meets FAA requirements for emergency oil out operation when auxiliary oil system conforms with the Soloy 785-100 Installation Manual instructions.

Note 9: This engine meets FAA requirements for operation in icing conditions and foreign object ingestion when the intake system conforms with the Pratt and Whitney Canada Installation Manual instruction for inertial separation of snow and icing particles. The engine also meets FAA requirements for adequate disk integrity and does not require external armoring.

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- Note 10: Reverse propeller operations are available using the left power section only.
- Note 11: Certain gearbox parts are life limited. These limits are listed in Soloy Service Bulletin Number 785-02 as revised. Permissible overhaul and inspection intervals are listed in Soloy Service Bulletin Number 785-03 as revised.
- Note 12: For installation on a normal, commuter, or transport category airplane, a fuel filtration system which complies with 14 CFR §§ 23.997 and 23.1305, Amendment 23-15 or later, or 14 CFR §§ 25.997 and 25.1305, Amendment 25-36 or later, is required.

*****END*****