

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

2-558  
Revision 5  
INTERSTATE  
S-1

October 31, 2007

GROUP 2 AIRCRAFT SPECIFICATION NO. 2-558

An aircraft identified as Interstate Airplane Model S-1 and conforming to CAA approved Interstate Aircraft and Engineering Corporation Model S-1 Numerical Drawing List as revised to September 18, 1940, or later CAA or FAA approved revision, will be eligible for an airworthiness certificate upon showing compliance with this specification if the Administrator determines such aircraft is in condition for safe operation. Such certificate shall incorporate the operating limitations listed herein.

Aircraft Approval Holder	STOL Aviation LLC c/o Downs Rachlin Martin P.O. Box 191 Lebanon, NH 03766
Aircraft Approval Ownership Record	Interstate Aircraft and Engineering Corporation transferred ownership of Group 2 Aircraft Approval No. 2-558 to Harlow Aircraft Company on July 23, 1945.  Harlow Aircraft Company transferred ownership of Group 2 Aircraft Approval No. 2-558 to Call Aircraft Company on July 15, 1950.  Call Aircraft Company transferred ownership of Group 2 Aircraft Approval No. 2-558 to Nikiski Marine Corporation on May 14, 1969.  Nikiski Marine Corporation transferred ownership of Group 2 Aircraft Approval No. 2-558 to Arctic Aircraft Company, Inc., on May 15, 1970.  Arctic Aircraft Company, Inc., transferred ownership of Group 2 Aircraft Approval No. 2-558 to Interstate Engineering & Type Design Company, Inc., on June 23, 1999.  Interstate Engineering & Type Design Company, Inc., transferred ownership of Group 2 Aircraft Approval No. 2-558 to STOL Aviation LLC on October 31, 2007.

I - Model S-1, 2 PCLM (Normal Category), Approved October 31, 1940

Engine	Continental A-50-8, Engine Type Certificate No. 190
Fuel	73 min. octane aviation gasoline
Engine limits	For all operations, 1900 rpm (50 hp)
Airspeed limits	Level flight or climb      100 mph (87 knots)      TIAS Glide or dive      135 mph (117 knots)      TIAS
Propeller limits	Static rpm at maximum permissible throttle setting: Not over 1800, not under 1700. No additional tolerance permitted. Diameter: Not over 84 in., not under 74 in. No further reduction permitted.
C.G. range	(+14.2) (22.3 percent MAC) to (+16.5) (26.1 percent MAC). Leading edge of MAC is located at longitudinal station (+0.66). MAC is 60.8 in.
Maximum weight	1150 lb.
No. of seats	2 (one at +7.7 and one at +38)

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Maximum baggage	None				
Fuel capacity	12 gal. (one tank in fuselage) (-19)				
Oil capacity	4 qt. (-44)				
Control surface movements	Elevator	33.5°	Up	33°	Down
	Elevator tab	9°	Up	17°	Down
	Ailerons	20°	Up	20°	Down
	Rudder	30° right and left from centerline			
Serial Nos. (S/N) eligible	1 only				
Required equipment	In addition to the pertinent basic required equipment as prescribed in the applicable airworthiness regulations (see Approval basis), the following items of equipment must be installed in the aircraft for certification: Items 1(a) or (b), 101, 201, and 202.				
Datum	Wing leading edge at side of fuselage				
Leveling means	Fuselage tube at door sill				
Approval basis	Group 2 Aircraft Approval No. 2-558 issued in accordance with the provisions of §§ 04.031, 04.04, and 04.040 through 04.042 of the Civil Air Regulations effective November 1, 1937, as amended to March 20, 1940. Date of application for approval March 20, 1940.				
Equipment:	<p>A plus (+) or minus (-) sign preceding the weight of an optional item indicates the net weight change when that item is installed.</p> <p>Approval for the installation of all items of equipment listed herein has been obtained by the aircraft manufacturer except those items preceded by an asterisk (*). This symbol denotes that approval has been obtained by someone other than the aircraft manufacturer. An item so marked may not have been manufactured under a CAA or FAA monitored or approved quality control system and, therefore, its conformity with CAA or FAA approved technical data must be determined if the item is not identified by a CAA Form ACA-186, FAA Form 186, FAA Form 8130-3, FAA PMA, or other evidence of CAA or FAA conformity inspection or production approval.</p>				
<u>Propellers and Propeller Accessories</u>					
1.	Propeller				
	(a) U.S. Propellers, Inc., Model 5726A fixed pitch wood, Propeller Type Certificate No. 748, and Continental A3746 hub assembly				16.4 lb. (-63)
	(b) Wood (fixed or adjustable pitch, maximum weight 12.6 lb.) and Continental A3746 hub assembly				17 lb. (-63)
<u>Engines and Engine Accessories - Fuel and Oil System</u>					
101.	Carburetor air heater in accordance with Interstate Aircraft and Engineering Corporation Drawing No. D-6010				1 lb. (-44)
102.	Cabin heater in accordance with Interstate Aircraft and Engineering Corporation Drawings No. A-6009 and No. D-6010				1 lb. (-42)
<u>Landing Gear and Floats</u>					
201.	Two main wheel/brake assemblies and tires - Firestone (Shinn) 6C5WFB 6.00 - 6 wheels with brakes and Firestone 6.00 - 6, 2-ply tires				29 lb. (-1.6)
202.	Steerable tail wheel and tire - Firestone 6 x 2.00 solid tail wheel/tire assembly in accordance with Interstate Aircraft and Engineering Corporation Drawing No. D-5002				3 lb. (+174.4)

Miscellaneous (not listed above)

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| 601. Miscellaneous items of optional equipment which may be installed or removed subject to inspection and a check of the aircraft C.G. limits, originally listed under Class II, Item No. 200, on the approved equipment list in the Aircraft Operation Record | Use actual weight change |
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NOTE 1. A current weight and balance report including a list of the equipment included in the certificated empty weight, and loading instructions when necessary must be provided for the aircraft at the time of original certification.

NOTE 2. The following placards must be displayed in plain view and installed in the appropriate locations.

- (a) On the instrument panel or in another appropriate location in the front of the cockpit:  
"SOLO FLYING FROM REAR SEAT ONLY"
- (b) On the fuel tank filler opening and in an appropriate location in the rear of the cockpit:  
"MAXIMUM FUEL 7½ GALLONS WHEN FLOWN DUAL"

...END...