

A-757  
Revision 30  
Textron Aviation  
C18S  
(Army C-45, -45A, -45F, UC-45B,  
-45F, AT-7, -7A, -7B, -7C,  
Navy JRB-1, -2, -3, -4, SNB-2, -2C)  
November 27, 2017

This aircraft specification which is part of Type Certificate No. A-757 prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

I. **Model C18S (Army C-45, -45A, -45F, UC-45B, -45F, AT-7, -7A, -7B, -7C; Navy JRB-1, -2, -3, -4, SNB-2, -2C), 10 PCLM, Approved September 23, 1944**  
See NOTE 3 for conversion of military models. Model C18S same as B18S, TC-710, except equipment installations, stabilizer setting and minor structural changes. Model B18S, S/N 430 through 434, 6290, 6350, 6414 and 6426 are eligible under this specification. Equipment items on S/N 430 through 434 will conform to Aircraft Specification No. A-710.

Engines	Two (2) P&W Wasp Jr. SB, with one 4-1/2N and one 9N damper each. See Item 109 for optional engines.
Fuel	80 minimum octane aviation gasoline for continuous rating and takeoff rating of 400 hp. 87 minimum octane aviation gasoline for takeoff rating of 450 hp. When 87 octane fuel is used, in order to utilize 450 hp. for takeoff, at least one fuel tank filler should be marked 87 octane minimum. Tank selector valve placard then should designate the 87 octane tank and state that 87 octane must be used for takeoff.
Engine limits	Maximum continuous (Sea level) 34.5 in. Hg, 2200 rpm. (400 hp.) (Straight line manifold pressure variation with altitude to 5000 ft. 33.5 in. Hg, 2200 rpm. (400 hp.) Takeoff (one minute) 34.5 in. Hg, 2200 rpm. (400 hp.) or 36.5 in. Hg, 2300 rpm. (450 hp.)

[illegible]

**I. Model C18S** (cont'd)

Airspeed limits (TIAS)	Level flight or climb	211 mph. (184 knots)
	Glide or dive	253 mph. (220 knots)
	Flaps extended	117 mph. (102 knots)
C.G. range	(+107.0) to (+118.9) (with landing gear extended).	
Datum	Nose of fuselage, most forward point, 102 inches forward of centerline of main wing spar.	
Leveling means	Leveling lugs on top of fuselage, forward of cabin door.	
Maximum weight	7850 lb.	
No. of seats	Maximum 10 See item 402 for optional arrangements.	
Maximum baggage	600 lb. (+28) (nose compartment: When 50 gal. auxiliary fuel tank is installed, capacity of this compartment is reduced to 300 lb. at (+17). When 38 gal. auxiliary fuel tank is installed, capacity of this compartment is reduced to 372 lb. at (+17) 300 lb. (+243) (rear compartment)	
Fuel capacity	206 gal. (four tanks in wings, two 78 gal. tanks at (+126) and two 25 gal. tanks at (+155)).	
Oil capacity	16 gal. (8 gal. tank in each nacelle at (+93)).	
Anti-icer fluid capacity	3 gal. (20 lb.) (+97)	
Control surface movements	Wing flaps	Down 44°
	Elevator trim tab	Up 18° Down 12°
	Elevator	Up 33° Down 25°
	Aileron trim tab	Up 21° Down 20°
	Aileron	Up 40° Down 23°
	Rudder trim tab	Right 30° Left 21°
	Rudder	Right 21° Left 21°
	Stabilizer	Fixed
Serial Nos. eligible	364 and On. Model B18S, S/N 430 through 434, 6290, 6350, 6414, 6424 and 6426 are eligible for certification as Model C18S at a maximum weight of 7850 lb. No conversions necessary except name plate and placards. Equipment items on S/N 430 through 434 conform to Aircraft Specification A-710 (B18S).	
Required equipment	In addition to the pertinent required basic equipment specified in CAR 4a, the following items of equipment must be installed: 1, 2, 7 or 8, 101, 102, 103, 201, 202, 203, 301, 302, 303, 304, 401 and 408.	

**Specifications Pertinent to All Models**

Certification Basis	Type Certificate No. 757 (CAR 4a) For items 601 and 602 only, CAR 03 (effective November 13, 1945) and paragraph 3.242 of CAR 3 (effective November 1, 1949) as amended by 3-14.
Production Basis	None. Prior to original certification of each aircraft manufactured subsequent to May 28, 1947, an FAA representative must perform a detailed inspection for workmanship, material and conformity with the approved technical data, and a check of the flight characteristics.

**Specifications Pertinent to All Models** (cont'd)

Export eligibility	Eligible for export to all countries subject to the provisions of currently effective Advisory Circular 21-2.  Canada: Landplane eligible. Skiplane not eligible. However, structure complies with Canadian requirements for ski installation when item 204 installed, with tread 155 inches and pedestal height of 13 inches.
Equipment	A plus (+) or minus (-) sign preceding the weight of an item indicates net weight change when that item is installed. 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 (*). The asterisk denotes that approval has been obtained by someone other than the aircraft manufacturer. An item so marked may not have been manufactured under an FAA monitored or approved quality control system, and therefore conformity must be determined if the item is not identified by a Form FAA-186, PMA or other evidence of FAA production approval.

**Propeller and Propeller Accessories**

1. Hamilton-Standard hubs 2D30, blades 6095A-15 or 6095A-16, 6167A-15 or 6167A-16, 6101A-21 or 6101A-22, 6101A-21S or 6101A-22S 157 lb. ea. (+ 34)  
Diameter: not over 8'3-1/2" max., 8'7/8"  
For interchangeable blade models see Propeller Spec. No. 206, (Note 6).  
Pitch settings: high 29°, low 14°
2. Two governors, Hamilton-Standard 1A2-G5 5 lb. ea. (+ 66)
3. Two spinners: (a) Air Associates HC-1026 8 lb. ea. (+ 31)  
(b) Air Associates HC-1027 5 lb. ea. (+ 31)
4. Hamilton-Standard hubs 22D30, blades 6181A-15 or 6181A-16 172 lb. ea. (+ 35)  
Diameter: not over 8'3-3/8", not under 8'1-1/8"  
For interchangeable blade models see Propeller Spec. No. 736, (Note 6).  
Pitch settings: low 13°, high 86°
5. Governors, Hamilton-Standard 4B2 5 lb. ea. (+ 66)
6. Hamilton-Standard hydromatic full-feathering installation  
(a) Hubs 22D30, blades 6381A-15 or 6381A-16 170 lb. ea. (+ 35)  
Diameter: not over 8'3-3/8", not under 8'1-1/8"  
For interchangeable blades, see Propeller Spec. No. 736, (Note 6).  
Pitch settings: low 13°, high 86°  
(b) Governor, Hamilton-Standard 4B2-G6 5 lb. ea. (+ 66)  
(c) Feathering pump, Pesco 525-13BB 14 lb. ea. (+ 77)  
(d) Controls installation 28 lb. (+ 80)
7. Two Hartzell 3-blade full-feathering instlns. per dwg. 404-001058 or 404-001068  
(a) Hub and blade assemblies  
(1) HC-B3Z30-2E hubs with 10152-5-1/2 blades and 836-16 spinner 129 lb. ea. (+ 35)  
or 10152B-5-1/2 blades and 836-17S spinner 130 lb. ea. (+ 35)  
Pitch settings at 30 in. sta.: high 87°, low 17°  
Diameter: 95-1/2 in. - no cutoff permitted  
Engine tachometer is to be marked with yellow arc between 1500 and 1700 rpm. and between 2100 and 2275 rpm. indicating restriction against continuous operation in this range.  
(2) HC-B3W30-2E hubs with W10152-5-1/2 blades and 836-16 spinner 129 lb. ea. (+ 35)  
Pitch settings at 30 in. sta.: high 87°, low 17°  
Diameter: 95-1/2 in. - no cutoff permitted  
Engine tachometer is to be marked with yellow arc between 1500 and 1700 rpm. and between 2100 and 2275 rpm. indicating restriction against continuous operation in this range.  
(b) Governor, Woodward 210402 or 210491 or Hartzell C3 6 lb. ea. (+ 66)  
(c) Controls installation (AFM Supplement P/N 130225 32 lb. ea. (+ 79)  
dated April 14, 1964, or later)

**Specifications Pertinent to All Models** (cont'd)**Propeller and Propeller Accessories** (cont'd)

8. Two Hartzell 3-blade full-feathering propeller instlns. per dwg. 404-001068
- (a) Hub and blade assemblies HC-B3R30-2E hubs with 135 lb. ea. (+ 35)  
 R10152-5-1/2 blades and 836-16 spinner
- or R10152B-5-1/2 blades and 836-17S spinner 136 lb. ea. (+ 35)  
 Pitch settings at 30 in. sta.: high 87°, low 17°  
 Diameter: 95-1/2 in. No cutoff permitted.  
 Engine tachometer is to be marked with yellow arc between 1500 and 1700 rpm. and between 2100 and 2275 rpm. indicating restriction against continuous operation in this range.
- (b) Governor, Hartzell C3, Woodward 210402 or 210494 6 lb. ea. (+ 66)
- (c) Controls installation (AFM Supplement P/N 130225 dated July 11, 1967) 32 lb. ea. (+ 79)

**Engine and Engine Accessories - Fuel and Oil Systems**

101. Two oil radiators (G & O E-703-1) 12 lb. (+ 76)
102. Fuel pumps
- (a) Wobble, either
- (1) United Aircraft U-550-B0 4 lb. (+ 80)
- or (2) Romec RXD-1563 4 lb. (+ 80)
- or (3) United Aircraft U-550-BE 4 lb. (+ 80)
- or (4) Romec RXD-1563-1 4 lb. (+ 80)
- or (5) Romec RXD-1563-7 4 lb. (+ 80)
102. (b) Two engine-driven, either
- (1) Pesco 400 series 3 lb. ea. (+ 62)
- or (2) Thompson Products (Army Type G-6) 3 lb. ea. (+ 62)
- or (3) Chandler Evans (Army Type G-6) 3 lb. ea. (+ 62)
103. Two carburetor heaters (wt. and arm are for air scoop valve and one set of heater muffins) 21 lb. ea. (+ 62)
104. Two carburetor air filters and ducts for both engines 30 lb. (+ 44)
105. Starters (Eclipse E80) 20 lb. ea. (+ 70)
106. Auxiliary fuel tank in nose baggage compartment
- (a) 50 gal. (nose baggage is reduced to 300 lb.) 45 lb. (+ 38)
- (b) 38 gal. (nose baggage is reduced to 373 lb.) 32 lb. (+ 37)
- This item may be installed or retained in the military models provided satisfactory drain and fuel gauges are installed in lower tank and a finger strainer of approximately 10 mesh is installed in fuel tank outlet.
107. Oil tanks Negligible weight
- (a) 8-1/2 gal. -3 lb. ea. (+ 93)
- (b) 6-1/2 gal. 14 lb. ea. (+ 77)
108. Oil dilution valve and system 5 lb. (+ 97)
109. Engines (must have one 4-1/2N and one 9N damper) Use act. wt. change
- (a) P&W Wasps Jr. SB-2 (limits same as SB)
- (b) P&W Wasps Jr. SB-3 (limits same as SB)
- (c) P&W Wasps Jr. T1B2
- Limits
- Max. continuous
- (Sea level) 35 in. Hg 2200 rpm. (400 hp.)
- (Straight line manifold pressure variation with altitude to 3800 ft.) 34 in. Hg 2200 rpm. (400 hp.)
- Takeoff (one minute)
- 35 in. Hg 2200 rpm. (400 hp.)
- 37.5 in. Hg 2300 rpm. (450 hp.)

**Specifications Pertinent to All Models** (cont'd)**Engine and Engine Accessories - Fuel and Oil Systems** (cont'd)

109. (d) P&W Wasp Jr. T1B3 (limits same as T1B2, item 109(c) above)  
 (e) Military R-985-AN-4 (limits same as SB)  
 (f) Military R-985-AN-6 or -AN-6N (limits same as SB)  
 (g) Military R-985-AN-12 or -AN-12B (limits same as SB)  
 (h) Military R-985-AN-14B (limits same as SB)  
 (i) Military R-985-25 (limits same as T1B2, item 109(c) above)  
 (j) Military R-985-AN-1 or -AN-3 (limits same as T1B2, item 109(c) above)  
 (k) Military R-985-13, -17, -19, -23, -48, -50, -AN-2, or -AN-8 (limits same as SB)  
 (l) Military R-985-27 (limits same as T1B2, item 109(c) above)
110. Jet Stack installation (E18 type per dwg. 404-001019) -45 lb. (+ 80)

**Landing Gear**

201. Wheels, brakes and tires (see item 203)  
 (a) 33 in. smooth contour wheels (Bendix B-4) with 13x2-1/2 (Bendix 59799) brakes and 8-ply tires. 104 lb. ea. (+ 91)  
 (b) Goodyear A5HBM-10 wheels with 29x13-5 brakes and 6-ply tires. 76 lb. ea. (+ 93)  
 (c) Goodyear Model L12HBM, 11.00-12, Type III, Wheel Assy. No. 530884M or 530884G, Brake Assy. No. 530886H or 530886SG, with 11.00-12, 8-ply tires and tubes. 95 lb. ea. (+ 92)  
 (d) Goodyear Model L12HBM, 11.00-12 Type III, Wheel Assy. No. 9531432, Brake Assy No. 9531637 or 530886SG, with 11.00-12 8-ply Nylon tubeless tires. 79 lb. ea. (+ 92)
202. 12 x 5-3 wheel and tire (Goodyear) 8 lb. (+364)
203. Landing gears  
 (a) Beech dwg. 804-188000 and 804-188005 (used with item 201(a); used with item 201(c) when modified per Beech dwg. 404-001113). 110 lb. ea. (+ 90)  
 (b) Beech dwg. 188004 and 188005 (used with item 201(b); used with 201(d) when modified per Beech dwg. 404-001113). 93 lb. ea. (+ 90)
204. Skiplane landing gear (dwg. 200-188500K or 18800K. 188110 revision Q, shock struts 188400K, and drag legs C18820K).
205. Landing gear oleo drag leg assembly (734-188005) replacing standard drag legs, 18820, 804-188416 or 804-188420. Use act. wt. change
- \*206. Martin landing gear oleo drag leg assy. (90-1000001) replacing standard drag legs 18820, 804-188416 or 804-188420. Use act. wg. change

**Electrical Equipment**

301. Landing gear operating motor (Electric Specialty, type HGA3, modified). 14 lb. (+ 87)  
 302. Wing flap operating motor (Dumore KBL, modified) 5 lb. (+ 94)
303. Generators  
 (a) Two 50 a. (Leece-Neville M-3) 20 lb. ea. (+ 64)  
 (b) Two 25 a. (Leece-Neville L-2 or Eclipse) 20 lb. ea. (+ 64)
304. Two batteries (type 24 v. 17 a.) Maximum weight 64 lb. ea. (+ 87)
306. Passing light 1 lb. (+112)
307. Two landing lights (Grimes ST-1220) 6 lb. ea. (+142)

**Interior Equipment**

401. Two pilot seats with safety belts  
 (a) Tubular dural frame 16 lb. ea. (+ 87)  
 (b) Plastic or tubular steel frame 18 lb. ea. (+ 97)
402. Cabin seating arrangement  
 (a) Five transport type cabin seats with safety belts as follows:  
     Front right (Number 1) 20 lb. (+128)  
     Front left (Number 2) 20 lb. (+136)  
     Middle right (Number 3) 20 lb. (+166)  
     Middle left (Number 4) 20 lb. (+181)  
     Rear right (Number 5) 20 lb. (+206)

**Specifications Pertinent to All Models** (cont'd)**Interior Equipment** (cont'd)

402. (b) Cabin seats with safety belts (these seats mount to the side of the airplane with two legs on the floor. Arrangements are as shown on Beech dwg. 18051-1 to -7).
- |  |            |
|--|------------|
| (1) 4 seats (+136, +181, +147, +192)   | 17 lb. ea. |
| (2) 6 seats (+124, +156, +188)   | 17 lb. ea. |
| (3) 7 seats (+124, +156, +188 and one at +217)   | 17 lb. ea. |
| (4) 6 seats (+124, +127, +156, +161, +188, +194)   | 17 lb. ea. |
| (5) 6 seats (+124, +156, +188)<br>2 folding chairs (+220)  | 17 lb. ea. |
| (6) 3 place couch (39 lb. with safety belts at +143)<br>(left side, +117, +143, +169; with from 1 to 5 seats at any of the<br>following locations: +124, +127, +156, +161, +188, +194, +217, +220).                                  |            |
| (7) 2, 3 or 4 place couch (40 lb. with safety belts as required)<br>(left side, +114, +134, +154, +174; with from 1 to 5 seats at any<br>of the following locations; +124, +127, +147, +156, +161, +188,<br>+194, +215, +217, +220). |            |
- (c) Five bucket-type seats with safety belts:
- |                         |               |
|-------------------------|---------------|
| Front right (Number 1)  | 22 lb. (+128) |
| Front left (Number 2)   | 22 lb. (+136) |
| Middle right (Number 3) | 22 lb. (+166) |
| Middle left (Number 4)  | 22 lb. (+181) |
| Rear right (Number 5)   | 22 lb. (+206) |
403. Pressure fire extinguisher
- |                                     |               |
|-------------------------------------|---------------|
| (a) Fixed portion (less bottle)     | 12 lb. (+ 50) |
| (b) 7-1/4 lb. bottle (Walter Kidde) | 22 lb. (+ 50) |
| (c) 5 lb. bottle (Lux)              | 20 lb. (+ 71) |
404. Toilet equipment. Placard lavatory door: "This room not to be occupied during takeoff and landing." Adequate rear baggage tie-down straps or other means should be provided to prevent baggage shifting into lavatory space.
405. Vacuum pumps
- |                                    |                  |
|------------------------------------|------------------|
| (a) Two Pesco Model 3P-207JA       | 5 lb. ea. (+ 64) |
| (b) Eclipse - AP-8 and accessories | 8 lb. (+ 64)     |
| (c) Romec                          | 5 lb. (+ 64)     |
406. Flares
- |  |                            |
|--|----------------------------|
| (a) Wiley type A-8, TC 46 (2 required) | 18 lb. (+ 50)<br>or (+262) |
| (b) International - 3 minute           | 23 lb. (+ 50)<br>or (+262) |
407. Extra instruments (dwg. 900-183800) (max.) 60 lb. (+ 60)
408. Approved Airplane Flight Manual (current issue) (Airplane Operating Manual is the equivalent)
409. Sperry type A-3 automatic pilot installation  
(Autopilots for new installations made after April 1, 1947 must conform to TSO C9a)
- |   |               |
|---|---------------|
| (a) Control gyros with mount                  | 35 lb. (+ 54) |
| (b) Servo unit, model C6-D3-B, and bellcranks | 18 lb. (+ 80) |
| (c) Sump, pump and valves                     | 9 lb. (+ 64)  |
| (d) Filter and pressure regulator             | 3 lb. (+112)  |
| (e) Pulleys, cables and guards                | 5 lb. (+ 41)  |
| (f) Tubing and fittings                       | 24 lb. (+ 70) |
| (g) Fluid (2 gal.)                            | 14 lb. (+ 73) |
410. Jack and Heintz type A-3A automatic pilot installation  
(Autopilots for new installations made after April 1, 1949, must conform to TSO C9a)
- |   |               |
|---|---------------|
| (a) Control gyros and mount                       | 26 lb. (+ 57) |
| (b) Servo unit, Model M6-D3-A, pulleys and cables | 15 lb. (+ 51) |
| (c) Sump, pump, lines, etc.                       | 25 lb. (+ 74) |
| (d) Fluid   | 14 lb. (+ 74) |

**Specifications Pertinent to All Models** (cont'd)Interior Equipment (cont'd)

411. Eclipse-Pioneer Type A-10 automatic pilot installation  
(Autopilots for new installations made after April 1, 1949, must conform to TSO C9a)
- |  |        |          |
|--|--------|----------|
| (a) Controls and instrument units  | 19 lb. | (+ 57)   |
| (b) Three servo units (Model EP-2-15-1A), disconnects, pulley brackets, cables | 88 lb. | (+ 53)   |
| (c) Fluxgate transmitter, amplifier and brackets                               | 19 lb. | (+148)   |
| (d) Servo amplifier  | 15 lb. | (+ 19)   |
| (e) Inverter, relay and circuit breaker  | 29 lb. | (+114)   |
| (f) Rudder pulley brackets and plates  | 3 lb.  | (+ 44.5) |
| (g) Manual disconnect handle and pulley  | 2 lb.  | (+ 58)   |
412. U. S. Army type safety belts B-11 or B-14
- \*413. Lear automatic pilot installation
- |  |        |        |
|--|--------|--------|
| (a) Model 1101A installed per Lear Dwg. 78749<br>The Airplane Flight Manual should be supplemented to include the following:<br>Before takeoff - check that the automatic pilot is "OFF". During flight - to engage pilot, (1) Center "Turn" manual control, (2) Turn automatic pilot switch to "Ready", (3) Turn automatic pilot switch to "ON". (It will not be possible to turn switch to "ON" until automatic pilot switch is ready for operation).<br>To <u>disengage</u> automatic pilot, turn switch to "OFF". <u>Before landing</u> - check that automatic pilot is "OFF". | 76 lb. | (+247) |
|--|--------|--------|
- (b) Model L-2C and optional equipment installed per Lear dwgs. as follows:
- |  |              |        |
|--|--------------|--------|
| (1) 91250C<br>Servo stall torque measured at the servo on the ground:<br>Aileron 75 ±5 in.-lb.<br>Rudder 75 ±5 in.-lb.<br>Elevator 75 ±5 in.-lb.<br>Servo drum pitch diameters for all three axes are 1.375 in.<br>Item 412(b)(6) required.  |              |        |
| (2) 95658 and 95658G<br>Servo stall torque measured at the servo on the ground:<br>Aileron 150 ±5 in.-lb.<br>Rudder 150 ±5 in.-lb.<br>Elevator 150 ±5 in.-lb.<br>Servo drum pitch diameters for all three axes are 2.67 in.<br>Item 413(b)(6) required.  | 58 lb.       | (+209) |
| (3) Model 1404B altitude controller installed per Lear dwg. 95658 (optional)   | 2 lb.        | (+283) |
| (4) Model 2203 altitude controller installed per Lear dwg. 95658G (optional)   | 2 lb.        | (+283) |
| (5) Model 1350B approach coupler installed per Lear dwg.<br>95658G (optional equipment) item 143(b)(7) required  | Use act. wt. | change |
| (6) Lear FAA Approved Airplane Flight Manual Supplement dated April 5, 1951, or Revisions dated September 2, 1952 or November 29, 1954.  |              |        |
| (7) Lear FAA Approved Airplane Flight Manual Supplement dated November 29, 1954 (with approach coupler).   |              |        |
| (8) The following placards should be installed on airplanes with Flight Manual Supplements dated April 5, 1951 or Revision dated September 2, 1952: "DO NOT USE AUTOPILOT BELOW 300 FEET ABOVE TERRAIN IN CRUISE CONFIGURATION."<br>"DO NOT USE AUTOPILOT BELOW 100 FEET ABOVE TERRAIN IN APPROACH CONFIGURATION." |              |        |
- \*414. Retractable entry step per installation procedure and  
Dwg. 62149 and 62150 for kit installation by the Reed  
Company, Municipal Airport, Santa Monica, Calif.
- |            |       |        |
|------------|-------|--------|
| Flite Step | 9 lb. | (+208) |
| Power Unit | 5 lb. | (+221) |
- \*415. Shoulder harness, Air Associates HI-G Model M-4450-F18  
and M-4450M1-F18 for pilot and copilot respectively,  
installed per Air Associates, Teterboro, N.J., Dwg. SK-933
- Use act. wt. change

**Specifications Pertinent to All Models** (cont'd)**Interior Equipment** (cont'd)

416. Sperry automatic pilot installations
- (a) Model SP-3 per Beech Dwg. 414-001035-15. AFM Supplement P/N 130017 dated November 3, 1961 required. 33 lb. (+202)
  - (b) Model SP-3 with altitude hold per Beech Dwg. 414-001035-15, AFM Supplement P/N 130017 dated November 3, 1961 required. 38 lb. (+213)
417. Cargo door installation per Beech Dwg. 414-001051, approved for flight for flight with or without cargo door panel and cabin entrance door installed. Beech placards 414-001054, 414-001074 and 414-001075 required. Use act. wt. change
418. Cabin floor provisions, high density seating (nine chairs) Use act. wt. change
- (a) Install per Beech Dwg. 404-001128.
419. Electrically heated stall warning indicator installation
- (a) Safe-Flight No. 180F 2 lb. (+ 75)
  - or (b) Safe-Flight No. 180A per Beech Dwg. 414-180611 or 404-001046 2 lb. (+ 75)

**Deicing Equipment (Propeller, Wing and Windshield)**

501. Surface deicers - Goodrich Type 2 Model C-270
- (a) Two wing boots (removable) 14 lb. ea. (+108)
  - (b) Two stabilizer boots (removable) 4 lb. ea. (+349)
  - (c) Deicer installation (fixed portion) 47 lb. (+117)
502. Propeller anti-icer
- (a) 3 gal. fluid tank, pump and lines 11 lb. (+ 92)
  - (b) Two slinger rings (Air Associates HC-469) 1 lb. (+ 40)

**Miscellaneous (not listed above)**

601. 8750 lb. gross wt. basic modernization kit per Beech Dwg. 404-000023 Use act.wt.change
- Limitations as follows:
- |                                    |   |
|------------------------------------|---|
| Fuel                               | 80/87 min. grade aviation gasoline  |
| Engine limits                      | Maximum continuous  |
|                                    | Sea level, 34.5 in. Hg, 2200 rpm. (400 hp.)   |
|                                    | Straight line manifold pressure variation with altitude to 5000 ft., 33.5 in.Hg, 2200 rpm. (400 hp.)  |
|                                    | Takeoff (one min.), 36.5 in. Hg., 2300 rpm. (450 hp.)   |
| C.G. range (landing gear extended) | (+109.8) to (+120.5) (Moment due to retraction of landing gear +12000 in.-lb.)  |
| Maximum weight                     | Takeoff 8750 lb., landing 8550 lb.  |
| Required equipment                 | 4 and 5 or 6, 101, 102, 103, 201, 202, 203 (modified as noted on Dwg. 404-000023), 301, 302, 303, 304, 401 and AFM P/N 404-001151 dated October 11, 1963. |
602. 9000 lb. gross wt. basic modernization kit per Beech Dwg. 404-000025.
- Limitations as follows:
- |                                    |  |
|------------------------------------|--|
| Fuel                               | 80/87 min. grade aviation gasoline   |
| Engine limits                      | For all operations   |
|                                    | Sea level, 36.5 in. Hg, 2300 rpm. (450 hp.)  |
|                                    | Straight line manifold pressure variation with altitude 3500 ft., 35.5 in. Hg, 2300 rpm. (450 hp.)   |
| C.G. range (landing gear extended) | (+108.6) to (+120.5) at 9000 lb.<br>(+107.0) to (+120.5) at 8600 lb. or less   |
|                                    | Straight line variation between points given. Moment due to retraction of landing gear is +12000 in.-lb.   |
| Maximum weight                     | Takeoff 9000 lb., landing 8550 lb.   |
| Required equipment                 | 4 and 5 or 6, 101, 102, 103, 110, 201, 202, 203, (modified as noted on Dwg. 404-000023), 301, 302, 303, 304, 401 and AFM 130394 dated November 15, 1963, 418, 601 and 603. |
603. Stall strip installation per Beech Dwg. 404-001048-3 Negligible weight
604. E18S type removable nose installation per Beech Dwg. 404-001080 25 lb. (+ 22)



**Specifications Pertinent to All Models** (cont'd)

NOTE 1. Current weight and balance report including list of equipment included in certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at the time of original certification.

The C.G. limits were determined with the landing gear extended. The airplane must always be so loaded that its C.G. position with the landing gear extended is between the limits shown.

NOTE 2. The following placards must be displayed as indicated:

- (a) Lavatory door: "This room not to be occupied during takeoff and landing."
- (b) Instrument panel in full view of the pilot:
  - (1) "This airplane shall be operated in accordance with Part I of the FAA Approved Operating Manual for the Beech C18S airplane. This manual shall be carried in the pilot's compartment at all times." (Used with standard aircraft).
  - (2) "Acrobatics and intentional spinning prohibited."
  - (3) "This airplane must be operated as a normal category airplane in compliance with the Airplane Flight Manual. No acrobatic maneuvers including spins approved." (Used when aircraft is modernized per item 601 and 602).
- (c) On airplanes with nose baggage provisions on inner side of nose door: "Load in accordance with Airplane Flight Manual. Max. structural capacity of nose 600 lb."

NOTE 3. Prior to certification as a civil aircraft, the following must be accomplished:

- (a) Each airplane must be weighed to determine its weight and balance unless a satisfactory Army or Navy weight and balance report is available. An approved loading chart or device must be installed.
- (b) The fuel cross-feed system must either be removed or disconnected from the fuel system, or the pressure cross-feed valve enclosed in a fuel and fume-tight box which is ventilated and drained to the outside. (Beech Service Bulletin C18-3 outlines a satisfactory method of accomplishing this modification).
- (c) Each fuel and oil tank and/or the structure adjacent to the filler opening must be placarded for the contents and capacity.
- (d) A satisfactory means of measuring the oil must be provided.
- (e) Instruments must be marked for approved operation limitations as outlined in CAM 04.4632.
- (f) A master switch arrangement (accessible to the pilot or copilot) must be installed in order that all electrical power, including batteries and generators, can be disconnected within approximately two feet of the power source with one operation.
- (g) All fuses and circuit breakers for required equipment, including radio fuse, must be accessible to the crew for replacement or resetting in flight.
- (h) All airplanes except C-45 and C-45A (JRB-2) must have control system lock removed.
- (i) The navigator's turret must be removed and a suitable enclosure installed.
- (j) When engines as described by item 109(e) through (j) are installed, the engine nameplate must have the following information added: "FAA Specification No. 5E1".
- (k) If the landing lights are retained, the circuit must be revised to provide adequate circuit protection in the motor circuit. The installation of an additional fuse (15 a.) in the motor circuit is satisfactory.
- (l) Circuit breakers or fuses must be installed in the generator main line circuits (applies only to C-45B, C-45F, AT-7C, SNB-2C, JRB-3 and JRB-4 aircraft).
- (m) The 38 gal. nose fuel tank may be installed or retained in the military models provided a satisfactory drain and fuel gauge is installed in the lower tank and a finger strainer of approximately 10 mesh is installed in the fuel tank outlet.
- (n) For certification for "Night Flying", the following must be complied with:
  - (1) Remove the resistors installed in the position light circuits and replace the single pole double throw position light switch with a single pole single throw switch.
  - (2) Replace the wing position lights with certificated units, or satisfactorily modify the lights, if pertinent. Nose: Type A-9 wing position lights (AN-3033-5 through -8) may be satisfactorily modified by painting the inside of the frosted glass cover black. Type A-9 (AN-3033-1 through -4) are satisfactory without modification.
  - (3) The tail light must be replaced with a certificated unit.
  - (4) The amber glass of the tail warning light must be replaced with a clear cover glass; otherwise, this light must be made inoperative.

**Specifications Pertinent to All Models** (cont'd)

## NOTE 3 (cont'd)

- (o) If the engines do not incorporate an .010 in. radius at the root of the crankshaft thrust bearing nut threads as outlined in P&W Service Bulletin No. 1488, the dye penetrant inspection of the subject area described under "Note" in AD 57-5-4 must be accomplished even though no oil leakage of the front section is noted.
- (p) Install wing spar strap which reinforces the lower spar cap from LWS 181 to RWS 181. Consult STC Summary or applicable AD's for eligible installation.

Upon completion of the conversion to certificated status, the manufacturer's nameplate containing the commercial model designation, serial number and the date of manufacture shall be installed below the original nameplate. The original or any succeeding nameplate should not be removed from the aircraft.

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