

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

A-2-582 Rev. 15 Textron Aviation Army AT-11 Navy SNB-1 November 27, 2017

AIRCRAFT SPECIFICATION NO. A-2-582

Type Certificate Holder Textron Aviation Inc.
 One Cessna Boulevard
 Wichita, KS 67215

Type Certificate Holder Record Beech Aircraft Corporation transferred to
 Raytheon Aircraft Company on April 15, 1996

 Raytheon Aircraft Company transferred to
 Hawker Beechcraft Corporation on March 26, 2007

 Hawker Beechcraft Corporation transferred to
 Beechcraft Corporation on April 12, 2013

 Beechcraft Corporation transferred to
 Textron Aviation Inc. on October 12, 2016

I. Model Army AT-11 (Navy SNB-1), 4 PCLM, Approved May 2, 1946

Engines Two (2) P&W Wasps Jr. SB, with one 4½N and one 9N damper each
 See Item 108 for optional engines

Fuel 87 min. octane aviation gasoline for takeoff at 450 hp.
 When 87 octane fuel is used in order to utilize 450 hp. for takeoff, at least one fuel tank
 must be placarded for 87 octane fuel. Tank selector valve placard must designate that
 tank and state that 87 octane fuel must be used for takeoff.
 80 min. octane aviation gasoline for max. except takeoff and takeoff at 400 hp.

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.)

Airspeed Limits Level flight or climb 203 mph. True Ind.
 Glide or dive 243 mph. True Ind.
 Flaps extended 117 mph. True Ind.

C.G. Range (+107.0) to (+116.6) landing gear extended

Leveling Means Lugs provided on outside bottom of fuselage between main wheels

Datum Forward of nose, 102 inches forward of centerline of main wing spar

Maximum Weight 7850 lb.

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I. Model Army AT-11 (Navy SNB-1) (cont'd)

No. of Seats	Variable - see Items 401 and 405 and NOTE 2(1)		
Maximum Baggage	Nose compartment: 400 lb. (+50). Airplanes modified by Texas Engineering and Manufacturing Co. with UC-45 type nose eligible for 600 lb. (+28) See NOTE 2(j) for standard military models Rear compartment: 300 lb. (+243)		
Fuel Capacity	206 gal. (four tanks in wings, two 78 gal. tanks at +126, two 25 gal. tanks at +155)		
Oil Capacity	16 gal. (8 gal. tank in each nacelle at +93)		
Control Surface Movements	Wing flaps	Down	45°
	Elevator trim tab	Up 20°	Down 14°
	Elevator	Up 35°	Down 25°
	Aileron trim tab	Up 20°	Down 20°
	Aileron	Up 45°	Down 20°
	Rudder trim tab	Right 30°	Left 30°
	Rudder	Right 25°	Left 25°
	Stabilizer		Fixed
Serial Nos. Eligible	All Army and Navy serial numbers. Use manufacturers serial number if available. Airplanes modified by Texas Engineering and Manufacturing Company in accordance with approved modification data are also eligible for certification. This modification includes a fuselage nose section similar to Army UC-45. Allowable baggage in nose baggage compartment is 600 lb. (+28).		
Required Equipment	Items 1, 2, 101, 102, 103, 201, 202, 203, 301, 302, 303, 304, 401, 402.		

Specifications Pertinent to All Models

Certification Basis	Airworthiness Certificate only (CAR 4a)
Export Eligibility	Eligible for export to all countries subject to the provisions of ASR No. 312 (MOP 2-4 contains the same information) except as follows: (Note: Export license from State Department may be necessary for these models.) Canada - Landplane eligible Skiplane - not eligible
Equipment	A plus (+) or minus (-) sign preceding the weight of an item indicates net weight change when that item is installed.

Propellers and Propeller Accessories

1.	Hamilton Standard propellers, hubs 2D30, blades 6095A-15 or 6095A-16, 6167A-15 or 6167A-16, 6101A-21 or 6101A-22, 6101A-21S or 6101A-22S Diameter: 8' 3-1/8" max., 8' 7/8" min. For interchangeable blade models see Prop. Spec. No. 206 (Note 6) Pitch settings: high 28°, low 13°	157 lb. ea. (+35)
2.	Two propeller 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)

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

101.	Two oil radiators (G & O E-703-1)	12 lb. ea. (+76)
102.	Fuel pumps	
	(a) Wobble	
	either (1) United Aircraft U-550B0	4 lb. (+80)
	or (2) Romec R-XD1563	4 lb. (+80)
	(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 (weight and arm are for the air scoop valve and one set of heater muffers)	21 lb. ea. (+62)
104.	Two carburetor air filters and ducts for both engines	30 lb. (+44)
105.	Short cold air ducts (used instead of Item 104)	11 lb. (+48)
106.	Starters - Eclipse E80	20 lb. ea. (+70)
107.	Oil dilution valve and system	5 lb. (+97)
108.	Engines (must have one 4½N and one 9N damper)	Use actual wt. increase
	(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	
	Maximum continuous	
	Sea level, 35 in. Hg., 2200 rpm. (400hp.)	
	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. (400hp.)	
	37.5 in. Hg., 2300 rpm. (450 hp.)	
	(d) P&W Wasps Jr. T1B3 (Limits same as T1B2, Item 108 (c) above)	
	(e) Military R-985-AN-4 (Limits same as SB)	
	(f) Military R-985-AN-6 or -AN-6B (Limits same as SB)	
	(g) Military R-985-AN-12 or -AN-12-B (Limits same as SB)	
	(h) Military R-985-AN-14B (Limits same as SB)	
	(i) Military R-985-25 (Limits same as T1B2, Item 108 (c) above)	
	(j) Military R-985-AN-1 or -AN-3 (Limits same as T1B2, Item 108 (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)	
109.	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)

Landing Gear

201.	Wheels, brakes and tires (See Item 203)	
	(a) 33 in. smooth contour wheels (Bendix B-4) with 13 x 2½ (Bendix 59799) brakes and 8-ply tires	104 lb. ea. (+91)
	or (b) Goodyear A5HBM-10 wheels and brakes with 29 x 13-5 6 ply tires	76 lb. ea. (+93)
202.	12 x 5-3 tail wheel and tire (Goodyear)	8 lb. (+364)
203.	Landing gears	
	(a) Beech Dwgs. 804-188000 and 804-188005 (used with Item 201 (a))	110 lb. ea. (+90)
	(b) Beech Dwgs. 188004 and 188005 (used with Item 201 (b))	93 lb. ea. (+90)
204.	Landing gear oleo drag leg assembly (734-188005) replacing the standard drag legs (804-188416 or 804-188420)	+29 lb. (+100)

Specifications Pertinent to All Models (cont'd)Electrical and Radio Equipment

301.	Landing gear operating motor - Electric specialty, type HCA3, modified	14 lb.	(+87)	
302.	Wing flap operating motor - Dumore KBL, modified			5 lb. (+94)
303.	Generators			
	(a) Two 50 amp. - Leece-Neville M-3			20 lb. ea. (+64)
	or (b) Two 25 amp. - Leece-Neville L-2 or Eclipse			20 lb. ea. (+64)
304.	Two batteries (Type 24 volt-17 amp. Hr. Min.) Max. wt.			64 lb. ea. (+87)
306.	Passing light			1 lb. (+112)
307.	Two landing lights - Grimes ST-1220			6 lb. ea. (+142)

Interior Equipment

401.	Pilot's seat with Army Type B-11 or B-14 safety belts			16 lb. ea. (+87)
402.	Approved Operating Manual (same as Approved flight manual) (May be obtained from Beech Aircraft Corp.)			
403.	Pressure fire extinguisher			
	(a) Fixed portion (less bottle)			12 lb. (+50)
	(b) 7¼ lb. bottle (Walter Kidde)			12 lb. (+50)
404.	Two flares - International - 3 min.			48 lb. (+259)
405.	Two cabin seats (folding) with Army Type B-11 or B-14 safety belts			10 lb. ea. (+220)
406.	Heating and ventilating system (complete)			49 lb. (+227)
407.	Portable fire extinguisher			7 lb. (+227)
408.	Automatic pilot			
	(a) Lear Model L-2C installation in accordance with Lear Dwg. 91250. The following placards should appear near the automatic pilot controller: "DO NOT USE AUTOPILOT BELOW 300 FEET ABOVE THE TERRAIN IN THE CRUISE CONFIGURATION." "DO NOT USE AUTOPILOT BELOW 100 FEET ABOVE TERRAIN IN THE APPROACH CONFIGURATION." Servo stall torque measured at the servo on the ground: Aileron 75 in.-lbs., elevator 75 in.-lbs., rudder 75 in.-lbs. Servo drum pitch diameters for all three axes are 1.375 in. The Pilot's Operations Instructions dated February 14, 1952, are required.			55 lb. (+200)

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 be loaded so that its C.G. position with the landing gear extended is always between the limits shown.

Each airplane must be weighed to determine its weight and balance prior to original certification.

Specifications Pertinent to All Models (cont'd)

NOTE 2. Prior to certification as a civil aircraft, the following must be accomplished:

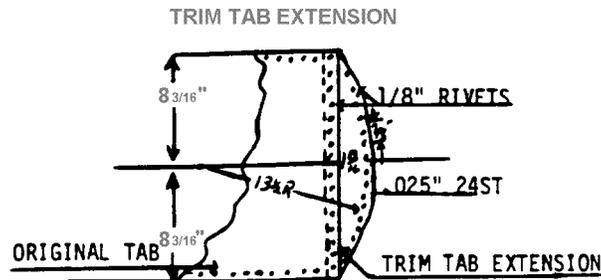
- (a) **Fuel System**. The fuel cross-feed system must be either removed or disconnected from the fuel system or the pressure cross-feed valve enclosed in a fuel and fume-tight box which is ventilated and drained to the outside.
- (b) **Engine Nameplate**. When either of Items 108(e) to (f), inclusive, is installed, the engine nameplate must have the following information added: "CAA Spec. No. 5E-1."
- (c) **Fuel and Oil Tanks**.
 - (1) Each fuel and oil tank and/or the structure adjacent to the filler opening must be placarded for the contents and capacity.
 - (2) When 87 octane fuel is used in order to utilize 450 hp. for takeoff, at least one fuel tank must be placarded for 87 octane minimum. Tank selector valve placard then must designate the 87 octane fuel tank and state that 87 octane must be used for takeoff.
 - (3) A satisfactory means of measuring the oil must be provided.
- (d) **Bombardier's Seat**. If this seat is retained an approved safety belt must be satisfactorily installed or the seat placarded "not to be occupied during takeoff and landing."
- (e) **Instruments**. Instruments must be marked for approved operation limitations
- (f) **Control System Lock**. The control system lock must be removed from the airplane.
- (g) **Automatic pilots**. If Sperry A-5 or Minneapolis-Honeywell C-1 automatic pilot is installed, it must be disconnected from the airplane flight control system.
- (h) **Gun Turret**. A satisfactory enclosure must be provided to replace the gun turret if installed.
- (i) The following placards must be displayed on the instrument panel in full view of the pilot:
 - (1) "This airplane shall be operated in accordance with Part I of the CAA approved Operating Manual for the Model AT-11 airplanes. This manual shall be carried in the pilot's compartment at all times."
 - (2) "Intentional spinning prohibited."
- (j) **Cargo and Baggage Compartments**. Both cargo and baggage compartments must be placarded for the maximum permissible load and suitable tie-down provisions shall be installed in each compartment when used as such. The forward compartment shall be confined to the pilot's floor boards between the bombardier's seat and the instrument panel. Suitable provision must be made to isolate the contents from possible jamming of the pilot's controls.
- (k) **Emergency Exit**. (See CAR 4a.462 for Requirements) - Present Army AT-11 (Navy SNB-1) airplanes can be certificated for carrying a maximum of five persons. For more than five persons, an emergency exit complying with CAR 4a.462 must be installed on the right side of the passenger compartment. If fuselage structural members are altered to provide for the required exits, details of the alteration and substantiating structural data should be forwarded to the Federal Aviation Administration, 601 East 12th Street, Kansas City, Missouri 64106, for examination and approval.
- (l) **Passenger Seats**. Passenger seats, flooring, and safety belt installations other than originally provided by the manufacturer must be shown to meet the strength requirements of CAR 4a.
- (m) **Bomb Bay Doors**. The bomb bay doors must be made inoperative.
- (n) **Master Switch**. 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.
- (o) **Fuses**. All fuses or circuit breakers for required equipment must be accessible to the pilot(s) for replacement or resetting in flight, including radio fuse.
- (p) **Landing Light Circuit**. 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 ampere cap.) in the motor circuit is satisfactory.

Specifications Pertinent to All Models (cont'd)

NOTE 2. (cont'd)

(q) **Rudder Trim Tab.**

(1) The rudder trim tab area must be increased by modification in accordance with the Figure 1 below:



REAR TAB TRAILING EDGE RIVETS DRILLED OUT
AND TRIM TAB EXTENSION INSERTED ON INSIDE
AND RIVETED IN PLACE WITH 1/8" AD RIVETS

- (2) Dual rudder tabs per Beech Dwg. 404-000010 sheet six may be installed in lieu of the tab extension - required in (q) (1) above.
- (r) The following additional items must be complied with for night operation:
- (1) Remove the resistors installed in the position light circuits and replace single pole double throw position light switch with a single pole throw switch.
 - (2) Replace the wing position lights with certificated units or satisfactorily modify the lights, if pertinent.
Note: 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.
 - (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.
- (s) If the engines do not incorporate an .010 inch radius at the root of the crankshaft thrust bearing nut threads as outlined in P&WA 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.
- (t) 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.

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