

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

<p>A-698 Revision 13 PIPER</p> <p>J3L J3L-S J3L-65 (ARMY L-4C) J3L-65S</p> <p>July 31, 1995</p>

AIRCRAFT SPECIFICATION A-698

Type Certificate Holder The New Piper Aircraft, Inc.
2926 Piper Drive
Vero Beach, Florida 32960

I - Model J3L, 2 PCLM, Approved September 17, 1938 and Model J3L-S, 2 PCSM, Approved May 2, 1939

Engine Lycoming O-145-A1 (See Item 309A for optional engines)

Fuel 65 minimum octane aviation gasoline

Engine Limits For all operations, 2300 r.p.m. (50 hp.)

Airspeed Limits Level flight or climb 90 mph (78 Knots) True Ind.
Glide or dive 122 mph (106 Knots) True Ind.

Propeller Limits Static r.p.m. at maximum permissible throttle setting:
Seaplane Not over 2335, not under 2125. No additional tolerance permitted.
Landplane Not available
Diameter: Landplane Not over 80 in.
 Seaplane Not over 75 in., not under 68 in.

C. G. Range Landplane (+10.6) to (+22.7)
Seaplane (+10.6) to (+19.8)
See NOTE 3 for restricted range for certain Serial Nos. between 4373 and 4502.

Empty Weight C. G. Range If placard "Solo flying in rear seat only." is installed (See NOTE 2):
Landplane (+8.1) to (+20.7)
Seaplane (+8.5) to (+17.8)
When empty weight C. G. falls within the pertinent range, computation of critical fore and aft C. G. positions is unnecessary. Ranges are not valid for non-standard arrangements.

Maximum Weight Landplane: 1100 lbs.
Seaplane: 1160 lbs.

Number of Seats 2 (one at +9 and one at +36)

Maximum Baggage Landplane: 20 lbs. (+49)
Seaplane: 4 lbs. (+49)

Fuel Capacity 12 gallons (-18)

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I - Model J3L and Model J3L-S

(cont'd)

<u>Oil Capacity</u>	5 quarts	(-39)		
<u>Control Surface Movements</u>	Elevator	34°	Up	29° Down
	Aileron	18°	Up	18° Down
	Rudder	30°	Left	30° Right
	Stabilizer	2.5°	Up	4° Down
<u>Serial Numbers Eligible</u>	2325, 2327, 2339, 2340, 2342, 2344, 2345, 2347, 2349, 2351, 2355 and up, 2356-A, 2357-A and up, and 8277-1 through 8277-40.			
<u>Required Equipment</u>	In addition to the pertinent required basic equipment specified in CAR 4a, the following items of equipment must be installed: Landplane: Items 101, 102, 103, and 104. Seaplane: Items 103, 104 and 151.			

II - Models J3L-65 (ARMY L-4C) and J3L-65S, 2 PCL-SM, Approved May 27, 1940

Same as Model J3L and J3L-S except engine installation.

<u>Engine</u>	Lycoming O-145-B1 (See Item 309B for optional engines)			
<u>Fuel</u>	73 min. octane aviation gasoline			
<u>Engine Limits</u>	Takeoff and climb, 2550 r.p.m. (65 hp.) All other operations, 2412 r.p.m. (55 hp.)			
<u>Airspeed Limits</u>	Level flight or climb	90 mph (78 Knots)	True Ind.	
	Glide or dive	122 mph (106 Knots)	True Ind.	
<u>Propeller Limits</u>	Static r.p.m. at maximum permissible throttle setting: Landplane and Seaplane: Not over 2525, not under 2225. No additional tolerance permitted.			
	Diameter:	Landplane	Not over 80 in., not under 64 in.	
		Seaplane	Not over 75 in., not under 68 in.	
<u>C. G. Range</u>	Landplane	(+10.6) to (+22.7)		
	Seaplane	(+10.6) to (+19.8) with Edo or Wollam floats		
		(+10.2) to (+17.1) with Heath floats		
	See NOTE 3 for restricted range for certain Serial Nos. between 4373 and 4502.			
<u>Empty Weight C. G. Range</u>	If placard "Solo flying in rear seat only" is installed (See NOTE 2): Landplane (+8.1) to (+20.7) Seaplane (+8.4) to (+17.4) with Edo or Wollam floats (+7.8) to (+14.0) with Heath floats When empty weight C. G. falls within the pertinent range, computation of critical fore and aft C. G. positions is unnecessary. Ranges are not valid for non-standard arrangements.			
<u>Maximum Weight</u>	Landplane:	1100 lbs. (See NOTE 4 regarding eligibility for 1170 lbs.)		
	Seaplane:	1200 lbs.		
<u>Number of Seats</u>	2 (one at +9 and one at +36)			
<u>Maximum Baggage</u>	Landplane:	20 lbs. (+49)		
	Seaplane:	4 lbs. (+49)		

II - Models J3L-65 and J3L-65S

(cont'd)

<u>Fuel Capacity</u>	12 gallons	(-18)		
Oil Capacity	5 quarts	(-39)		
<u>Control Surface Movements</u>	Elevator	34°	Up	29° Down
	Aileron	18°	Up	18° Down
	Rudder	30°	Left	30° Right
	Stabilizer	2.5°	Up	4° Down
<u>Serial Numbers Eligible</u>	2325, 2327, 2339, 2340, 2342, 2344, 2345, 2347, 2349, 2351, 2355 and up, 2356-A, 2357-A and up, and 8277-1 through 8277-40, and all AAF Nos. eligible. (Use manufacturers serial numbers if available.)			
<u>Required Equipment</u>	In addition to the pertinent required basic equipment specified in CAR 4a, the following items of equipment must be installed: Landplane: Items 101, 102, 103, and 104. Seaplane: Items 103, 104 and 151.			

Data Pertinent to All Models

<u>Datum</u>	Wing leading edge
<u>Leveling Means</u>	Left upper longeron at window
<u>Certification Basis</u>	Type Certificate No. 698 (CAR 4a)
<u>Production Basis</u>	Approved for production of spare parts only under Production Certificate No. 206.
<u>Export Eligibility</u>	Deleted as of - July 31, 1995

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 manufacturer. An item marked with an asterisk may not have been manufactured under an FAA monitored or approved quality control system, and therefore attention should be paid to workmanship and conformity with pertinent data called for in this specification.

Propellers and Propeller Accessories

- Propeller - Hartzell ground adjustable, hub HA12U, blades 7414 to 6814 or 7214M to 6814M. Eligible on all models and engines at diameter and static r.p.m. limits shown for fixed pitch wood propellers. +18 lbs. (-52)
- Propeller - Sensenich M74CX-2 fixed pitch metal Static r.p.m. at maximum permissible throttle setting: Not over 2550, not under 2225. No additional tolerance permitted. Diameter: Not over 72 in., not under 68 in. +21 lbs. (-52)
- Propeller - wood (fixed or adjustable pitch) +11 lbs. (-52)

Engines and Engine Accessories - Fuel and Oil System

No aircraft of these models shall be eligible for original certification with single ignition engines after August 1, 1941. In addition, no aircraft of these models shall be eligible for recertification unless such aircraft were either previously certificated with single ignition engines or were originally certificated prior to August 1, 1941.

104.	Carburetor air heater (Dwg. D726B)	+2 lbs. (-39)
105.	Oil filter Fram PB-5, Kit No. 520, Fram installation Dwg. 61548	+4 lbs (-27)
106.	Alternate fuel gauge, Scott model A-22P, installed per Scott Bulletin I-136.	Neglect Weight
107.	Auxiliary fuel tank (6 gallon capacity) Installed in accordance with Kit and Dwg. Nos. P-18 and P-19 supplied by J. J. Villnave, 5607 Virginia, Kansas City, Missouri. (Eligible on land and seaplanes with wood spars.)	+6 lbs.(+24)
307.	Alternate fuel tank (9 gallons)	-3 lbs (-18)
309.	Engines (Lycoming -- see Engine Specification No. 199 and 210)	(-39)
	A. Models J3L and J3L-S	+13 lbs.
	(1) O-145-A2, Engine Limits for all operations, 2300 r.p.m. (55 hp.)	
	(2) O-145-A3, Engine Limits same as for O-145-A2	+15 lbs.
	B. Models J3L-65 and J3L-65S	
	(1) O-145-B2, Engine limits same as for O-145-B1	+11 lbs.
	(2) O-145-B3, Engine limits same as for O-145-B1	+14 lbs.
311.	Cabin and carburetor heater	+1 lb. (-39)
314.	Carburetor heater, cabin heater and muffler combined (Required if Item 104 is removed.)	+3 lbs. (-39)

Landing Gear and Floats

101.	8.00-4 wheels (Hayes 840) with tires	+20 lbs. (+3)
102.	Tail skid	+4 lbs.(+190)
151.	Edo 54-1140 floats with one water rudder (147 lbs.)	+106 lbs.(+18)
204.	Heath 1460A float installation (Model J3L-65S only) (166 lbs.) Bungee must be installed in the elevator control system per Piper Dwg. No. 80352	+121 lbs.(+14)
205.	Scott Aviation Corporation Model B-711 brake pressure unit	Neglect Weight Change
206.	Scott Model 4200-B1 Hydraulic parking brake valve (See Scott Bulletin I-116, Parking Brake Installation Instruction).	Neglect Weight Change
207.	Edo 60-1320 floats with water rudders (171 lbs.)	+130 lbs.(+17)
*208.	LCN shock strut (Per LCN Corporation Dwg. 11000 and Kit Installation Instruction) (Each shock strut must either have a CAA Form ACA-186 attached, or be identified with the symbol "CAA-PMA".)	+7 lbs. (+3)
*209.	Consolidair Model 17 wheel fenders, installed per Consolidair Dwg. 0041	+9 lbs. (+3)
*210.	One nose wheel, 5.00-4, Type III, Firestone Model 5C2M-1, with 5.00-4 4-ply rating tire and tube. (Used with Testerman Tricycle-Type landing gear, Item 211.)	+8 lbs. (-31)
*211.	Tricycle landing gear - Testerman Model SPM-1 (J3L-65 only). Install in accordance with Stewart-Pearce Company, Tulsa, Oklahoma, Installation Manual (Report No. SPR-6), dated July 9, 1949. Placard all airplanes "SOLO FROM REAR SEAT" and restrict C. G. range to (+11.2) to (+18.3). Net weight change for SPM-1 installation (including Items 210 and 308(c))	+17 lbs. (-29.5)
212.	Shock strut - cord and hydraulic type Piper P/N 12843, installed per Piper Dwg. 10534.	+4 lbs. (+3)
303.	Wheel streamlines	+6 lbs. (+3)

304.	Tail Wheel Installations:	
	(a) 6x2.00 steerable tail wheel - Aircraft Associates	+3 lbs. (+197)
	(b) 6x2.00 steerable tail wheel - Scott Aviation Corp. Model CST-12	+3 lbs. (+197)
	(c) 6x2.00 steerable tail wheel - Scott Aviation Corp. Model 3-21	+5 lbs. (+197)
	*(d) Steerable tail wheel - Lang (formerly Decker) Model D-501A	+2 lbs. (+197)
308.	Wheels	
	(a) 18x8-3 (Goodyear 3LNBM) with tires	-2 lbs. (+3)
	(b) 7.00-4 (Shinn 2A or 2AV) with tires	-1 lbs. (+3)
	(c) 8.00-4, Type III, wheel brake assemblies Goodrich Model 841; Wheel assembly No. D-3-13, Brake assembly No. D-2-113, with 4-ply rating tires and tubes. When used with Item 211	+12 lbs. (+3) +12 lbs. (+24)
	(d) Goodyear Model CL6HBM, (7.00-6) (cross-wind wheel) Wheel Assembly No. 266AX36 Brake Assembly No. 266AX55 Wheel Installation No. 266AX54	+29 lbs. (+3)
310.	Skis (Eligible on any airplane of these models provided the propeller installation meets the minimum ground clearance. The maximum weight of the skiplane will be the same as for the corresponding landplane or that shown in parenthesis after ski model, whichever is less).	Use Actual Weight Change
	* (a) Piper S-1000 (maximum 1200 lbs.).	
	* (b) Fairbanks MF-5 (maximum 1310 lbs.).	
	* (c) Federal SA-1 (maximum 1200 lbs.).	
	* (d) Federal SC-1 (maximum 1400 lbs.).	
	* (e) Aviation Service B (maximum 1100 lbs.).	
	* (f) Air Transport 1220-480 (maximum 1220 lbs.).	
	* (g) Air Transport 1460-580 (maximum 1460 lbs.).	
	* (h) Marston MFS-1600 (maximum 1600 lbs.).	
	* (i) Heath 655 (maximum 1310 lbs.).	
	* (j) Heath 725 (maximum 1450 lbs.).	
	* (k) Air Transport 1224-580-1 (maximum 1220 lbs.).	
	* (l) Marston MFS-1200 (maximum 1200 lbs.).	
	* (m) Wollam W-1650 (maximum 1650 lbs.).	
	* (n) Heath 725A (maximum 1450 lbs.).	
	* (o) Federal SKT-1 (maximum 1400 lbs.).	
	* (p) Federal SA-2 (maximum 1400 lbs.).	
	* (q) Federal SC-2 (maximum 1650 lbs.).	
	* (r) Washington Aircraft 1200 (maximum 1200 lbs.).	
	* (s) Troyer W-54 (maximum 1200 lbs.).	
	* (t) Call Model S-1 (with 8.00-4 tires only) per Call Dwg. 1002 (maximum 1800 lbs.).	
	* (u) Federal A-1500 or A-1500A (maximum 1500 lbs.) per Federal Dwg. 11R262	
	* (v) Federal A-1850 (maximum 1850 lbs.) per Federal Dwg. 11R262	
	* (w) Federal A-2000 or A-2000A (maximum 2000 lbs.) per Federal Dwg. 11R262	

*(x) Federal AWB-2100 wheel-ski installed in accordance with Federal Aircraft Works, Minneapolis, Minnesota, Dwg. 11R1101.

The following placards are required:

- (a) "Do not extend or retract skis while in motion on the ground."
- (b) On the ski position selector box
"Ski control" "Up-Neutral-Down"

*(y) Wesco per Western Aircraft Equipment Company Dwg. Nos. 12 and 148.

- (1) A-15 maximum 1500 lbs.)
- (2) A-20 or AS-2 (maximum 2000 lbs.)
- (3) A-25, AS-2A or AS-2B (maximum 2500 lbs.)

- 313. Dual brake installation (Dwg. D4101-C)
- 316. Wollam 1200 plywood float installation +137 lbs.(+16)
(Model J3L-65S only) (182 lbs.)
Bungee must be installed in the elevator control system per Piper Dwg. C-85.

Electrical Equipment

- 202. Battery (Reading 3-BRL-6) +8 lbs. (+41)
- 302. Battery (Exide 3AC-7 or Willard SYR-7-3) +10 lbs. (-19)
- 315. Generator installations (wind-driven). +11 lbs. (+3)
(a) General Armature AG-40
- 317. Landing lights in wing leading edge per Piper Dwg. 12534 +4 lbs. (+5)

Interior Equipment

- 401. Windshield defroster +1 lb. (-17)
- 402. Slip-not stabilizer control Model 10-C +2 lbs.(+72)
(Installed per Westfield Industries, Salem, Illinois,
Dwg. 1 and Kit Installation Instructions)

Miscellaneous (Not Listed Above)

- 201. Anchor and rope +12 lbs.(+49)
- 301. Friese type ailerons replacing unbalanced type No Weight Change
- 305. Emergency exit No Weight Change
- 312. Two hinge tail surfaces (D-4152-C and D-4157-C) No Weight Change
- *601. Wing tip spill plate (J3L-65 only) installed in
accordance with Flo-Trol Splate Co., Wahpeton,
North Dakota, Kit No. 100, dated September 1, 1949,
for wings with wood spars and Kit No. 200, dated
October 1, 1949, on wings with metal spars.
Lower static propeller limit shall not be under 2440 r.p.m.
- *602. Brodie Suspending Gear
(Aircraft of 1220 lbs. maximum weight, and 65 hp. min.)
installed in accordance with Brodie Engineering Corp.
2107 Maryland Avenue, Baltimore, Maryland
Dwg. No. X46R6187.
- (a) Complete installation including fixed mount, hook,
arm and cables. The following placards are required: +37 lbs. (-2)
 - (1) "Intentional spins prohibited with Brodie Hook installed;
(Spins permitted with fixed mount only installed)".
 - (2) At the release handle: "Warning - Suspending gear hook release."

- (b) Installation of fixed mount only, +15 lbs. (-3)
 in accordance with Dwgs. X45D17370,
 X45G17375, X45G17393 and X45B17394.

Aircraft incorporating Item (a) may be operated, in accordance with required operating instructions, on the Brodie Aerial Track Airport erected at Diffendall (Eastern) Airport, Baltimore, Maryland. These operating instructions are contained in the CAA approved Brodie pilot operating Manual entitled "Pilot Operating Instructions for Piper J3 and PA-11 Airplanes for Landing and Takeoff on Aerial Track Airports," which must remain in the airplane during such operation, and must retain its identity as an individual manual.

- NOTE 1 Current weight and balance report including list of equipment included in certificated empty weight, and loading instructions when necessary, must be in each aircraft at the time of original certification and at all times thereafter (except in the case of air carrier operators having an approved weight control system).
- NOTE 2 Placard front cockpit, "Solo flying from rear seat only." Placard may be removed if individual aircraft actual weight and balance show that the approved C. G. limits will not be exceeded under any loading condition. Manufacturer recommends that all J-3 airplanes be flown solo from the rear seat.
- NOTE 3 Serial Nos. 4373, 4419, 4435, 4438, 4445, 4446, 4447, 4449, 4450, 4451, 4452, 4457, 4458, 4459, 4460, 4464, 4466, 4467, 4469, 4471, 4473, 4474, 4475, 4477, 4478, 4495, and 4502 eligible with the following C. G. Range:

Landplane	(+10.6)	to	(+21.5)
Seaplane	(+10.7)	to	(+18.6) with Edo and Wollam floats

Empty weight C. G. ranges:

Landplane	(+8.1)	to	(+19.1)
Seaplane	(+8.5)	to	(+16.4) with Edo and Wollam floats

- NOTE 4 Serial Nos. 7842, 7845 to 7883, inclusive, 7912 and up of Model J3L-65 are eligible for 1170 lbs. maximum weight with minimum propeller diameter of 68 inch. All other serial numbers of this model also eligible for 1170 lbs. maximum weight with minimum propeller diameter of 68 inches provided lift strut end fittings and fuselage lift strut attachment fittings are revised in accordance with Piper Dwgs. C-16 and C-22, respectively.
- NOTE 5 Army TG-8 gliders having Serial Nos. G-1 and up are eligible for certification as J3L Series airplanes under the provisions of this aircraft specification, provided that they have been converted to J3L Series airplanes and are in conformity with the approved Piper data. Conversion procedure is given in Safety Regulation Release No. 188.
- NOTE 6 The following parts from TG-8 gliders can be used directly in Piper J3 Series airplanes. The replacement of such complete component parts is considered a minor repair in accordance with Advisory Circular 43.13-1:

Tail surfaces; Landing gear tires and wheels; Tail wheel; Wings, provided the spoiler and spoiler controls are removed; The control system from (and including) the middle occupant aft; Wing struts; Instruments, same as or equivalent to those used on powered aircraft.

The fuselage primary structure of the TG-8 glider aft of the main landing gear fittings can be used on Piper J-3 Series airplanes; however, the use of such parts entails a major repair and must be handled as such in accordance with current Advisory Circulars.

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