



Required equipment In addition to the pertinent required basic equipment specified in CAR 3, the following items of equipment must be installed: 1, 101, 102, 200, 201, 202, 403 and also 300, 301 and 303 when 103 is installed.

SPECIFICATIONS PERTINENT TO ALL MODELS

Certification basis CAR 03 effective November 13, 1945  
Type Certificate No. 769 issued October 15, 1947  
Application for Type Certificate dated August 21, 1945

Production basis None. Prior to original certification of each aircraft, an FAA representative must perform a detailed inspection for workmanship, materials, and conformity with approved technical data, and a check of the flight characteristics.

Datum Hull Sta. 0, located 97.5 in. forward of wing leading edge.

Leveling means Lugs on front and rear left and right-hand door frames.

Equipment: A plus (+) or minus (-) sign preceding the weight of an item of equipment indicates the 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 (\*). 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 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. Controllable and reversible (see NOTE 2 for applicable placards)
  - (a) Hartzell hub HC12x20-2 with blades L8427 or L8433 64 lb. (+178)  
Diameter: L8427 blades - not over 84 in.  
not under 82 in.  
L8433 blades - 84 in. - no cutoff permitted  
Pitch settings at 30 in. sta.:  
Blades 8427 - Normal operation +17° to +18°  
Reverse thrust operation -15° to -14°  
Note: total angular travel not to exceed 32°  
Blades 8433 - Low 13-1/2°, high 19-1/2°  
Reverse -14°
  - (b) Hartzell hub HC-12x20-3, -3A, -3C or -3E with L8427 or +3 lb. (+178)  
L8433 blades (Similar to 1(a) except for larger operating cylinder and piston)  
Diameter and pitch limits same as 1(a).  
Franklin 6A8-215-B8F engines, S/N 23281 and up, and all -B9F engines are equipped with floating or ball thrust bearings for reverse thrust propeller operation. -B8F engines with S/N below 23281 not eligible with HC-12x20-3 propeller unless modified by incorporation of floating or ball thrust bearings as indicated by "F" or "B" affixed to the serial number.  
See NOTE 4 of Engine Specification E-242 for additional information.

Engine and Engine Accessories - Fuel and Oil System

101. Fuel pump AC Spark Plug Model B-F(2) 4 lb. (+148)
102. Oil cooler - Heat Exchange, Inc. model 100 13 lb. (+140)
103. Engine - Franklin 6A8-215-B9F  
(same as -B8F except S/N 23501 and up equipped with magneto and battery ignition)
104. Oil cooler - United Air Products model U-3170-D-5 22 lb. (+137)  
Eligible only when installed per Installation Instructions  
No. 1 dated January 11, 1951, furnished by Kenmore Air Harbor, Inc., Box 64, Kenmore, Washington

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Landing Gear

200. Two main wheel-brake assemblies, 7.00-8, Type III
- (a) Goodrich 6056A, with 4-ply rating 7.00-8 Type III tires & tubes 55 lb. (+93)  
Wheel assy. G-3-410-A  
Brake assy. D-2-540
  - (b) Goodrich 6056AD, with 4-ply rating 7.00-8 Type III tires & tubes 52 lb. (+93)  
Wheel assy. G-3-410-AD  
Brake assy. D-2-540
201. Tail wheel assy. 10.00, Type I, with 4-ply rating tire
- (a) Goodyear PD-173
  - (b) Bendix 146413
  - (c) Bendix 146414
  - (d) Firestone BO-200-F
202. Tail wheel gear with wheel and tire
- (a) Free swivel lock, S/N 6 thru 875 39 lb. (+225)
  - (b) Steerable, S/N 876 and up, Republic dwg. 17F42001B and 17F30000G. If this item installed on S/N 6 thru 875, an additional 7 lb. nose ballast must be added. 42 lb. (+236)
203. Skis Use actual weight change
- (a) Federal A3500
  - (b) Federal AT3500 tail ski
- Optional when Federal A3500 main skis installed.  
Remove 30 lb. ballast when skis are installed. Floats may be removed with skis installed.

Electrical Equipment

300. Battery
- (a) Auto Lite CF129 Form 221 52 lb. (+14)
  - (b) Mitchell Type 2SM-9, 12 v. 60 a. hr. 45 lb. (+14)
  - (c) Exide Type 2SM, 12 v. 53 a. hr. at 20 hr. rate 39 lb. (+14)
301. Generator 23 lb. (+126.5)
302. Starter 22 lb. (+128)
303. Voltage regulator (airplane S/N's 6 thru 520) 1 lb. (+110)  
(airplane S/N's 521 and up) 2 lb. (+22.5)
304. Cross-country instrument panel (optional) +2 lb. (+40)
306. Landing light - Grimes D3150 (optional) 2 lb. (+35)
307. Landing light - Grimes G2900-12 (Land Aviation Corp. Kit RC-3L) 5 lb. (+10)

Interior Equipment

400. Anchor equipment (when anchor or line is removed, add equal weight of ballast to anchor compartment cover).
- (a) Anchor and hemp line 16 lb. (+40)
  - (b) Anchor and cotton braided line 11 lb. (+40)
  - (c) Anchor and nylon line 8 lb. (+40)
401. Life Preservers, front seats 4 lb. (+67)  
Life Preservers, rear seats 4 lb. (+101.5)  
(Cushions on backs of front and rear seats are approved life preservers, Republic No. SK17-15944).
402. Fire extinguisher 7 lb. (+65)
403. FAA Approved Airplane Flight Manual (current issue)
404. Stewart-Warner 977-B-1 cabin heater installation (when this heater installed and connected for operation, a hand fire-extinguisher accessible to pilot during flight must be installed. Also, when this heater is installed 20 lb. ballast must be removed). 23 lb. (+21.5)

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NOTE 1. Current weight and balance report together with 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. Approximately 53 lb. of ballast required at (+4.5). Actual ballast required should be determined from weight and balance data.

NOTE 2. The following placards shall be placed on the instrument panel in full view of pilot:  
 “This airplane must be operated as a Normal or Utility Category airplane in compliance with the FAA Approved Flight Manual applicable in each case.”

“All markings and placards on this airplane apply to Normal Category. For Utility Category, refer to the FAA Approved Airplane Flight Manual for airspeed, weight and maneuver limits.”

For airplanes with Franklin 6A8-215-B8F engines, S/N's 23001 thru 23280 (only item 1(a) propeller eligible on these engines): “Warning - reversing propeller in flight prohibited. Operate reverse lever in low pitch only. Maximum 1750 r.p.m. in reverse pitch.”

For airplanes with Franklin 6A8-215-B8F engines, S/N's 23001F thru 23280F and 23281 and up and all B9F engines

(see NOTE 4, Spec. E-242) and

- (a) HC-12x20-3 or -3A propellers: “Warning - reversing propeller in flight prohibited. Operate reverse lever in low pitch only. Maximum 2300 r.p.m. in reverse pitch,”  
 or (b) HC-12x20-2, -3C or -3E propellers: “Warning - reversing propeller in flight prohibited. Operate reverse lever in low pitch only. Maximum 2500 r.p.m. in reverse pitch.”

NOTE 3. Alternate pitot tube installation above pilot's compartment per dwg. 17F81030 is also acceptable.

NOTE 4. Amphibian may be converted to flying boat by removing complete main gear and tail wheel assemblies, including actuating mechanism (approximate decrease in empty weight 196 lb. at +119) provided following is accomplished:

- (a) Plug unused hydraulic lines and provide watertight seal at hull openings resulting from removal of main landing gear.  
 (b) Check weight and balance, and adjust weight of nose ballast to maintain most forward and aft C.G. locations within the specified limits. (Loading schedule in flight manual is not applicable to flying boat).  
 (c) Replace present takeoff and landing procedure placard with the following:

<u>Takeoff</u>	<u>Landing</u>
Flaps down	Mixture - full rich
Propeller - low pitch	Flaps down
Mixture - full rich	Propeller - low pitch
Carburetor Heat - off	

NOTE 5. Eligible as 5-place flying boat when converted per “Flyers Service Seabee Five-Place Conversion Kit No. 1” and R. G. Hunt, Middlebury Airport, Middlebury, Vermont Kit Instructions dated April 10, 1950.

NOTE 6. Amphibian may be converted to flying boat by unbolting the main landing gear only (approximate decrease in empty weight 115 lb. at +93) provided the following is accomplished:  
 (a) A self-sealing hydraulic coupling is used for each brake line at the hull surface.  
 (b) An adequate seal or seaplane corrosion proofing is used for main landing gear supporting tube.  
 (c) Check weight and balance and adjust weight of nose ballast to maintain most forward and aft C.G. locations within the specified limits. (Loading schedule in flight manual is not applicable to flying boat).

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