

BEECHCRAFT B17R (ARMY UC-43B), 5 PCLB, ATC 579

Engine Wright R-975E-3 or R-975E-2

Placard limits (See NOTE 4)

A. With fixed metal or adj. metal propeller

Maximum, except take-off 33.0 in.Hg., 1800 rpm (330 hp)
 or 31.5 in.Hg., 1900 rpm (330 hp)
 or 29.5 in.Hg., 2000 rpm (330 hp)
 or 28.5 in.Hg., 2100 rpm (330 hp)
 Take-off (one minute) — in.Hg., 1900 rpm (330 hp)
 or 35.0 in.Hg., 2200 rpm (420 hp)

B. With controllable metal propeller

Maximum, except take-off
 (Below 4000 ft.) 28.5 in.Hg., 2200 rpm (330 hp)
 (4000 ft. and up) 27.0 in.Hg., 2200 rpm (330 hp)
 Take-off (one minute) 35.0 in.Hg., 2200 rpm (420 hp)
 Propeller Maximum permissible diameter 102 in.
 Placard speeds Level flight or climb 208 mph True Ind.
 Glide or dive 225 mph True Ind.
 Flaps extended 100 mph True Ind.
 Fuel 70 gals. (Two tanks; Fuselage front 28 gals.
 (+32) and fuselage rear 42 gals. (+38))
 Oil 6 gals. (-13)
 No. passengers 4 (Max.) (Front +19, rear +80.5) (See NOTE 3)
 Baggage 125 lbs. (Max.) (+86) (See NOTE 3)
 Standard weight 3615 lbs.
 C. G. limits (+16.6) and (+29.0)
 Spec. basis Approved Type Certificate No. 579
 Serial Nos. B17R-38, B17R-50 and up mfrd. prior to 9-30-39
 and all AAF Nos. eligible. Approval expired
 as of 9-30-39.

EQUIPMENT: (Datum is lower wing leading edge) (*Means net increase)

Class I.

101. Engine ring cowl 28 lbs.
 102. Battery (Exide 6TS-13-1) (under baggage
 compt.) 36 lbs.
 103. Starter 25 lbs.
 104. Generator 15 lbs.
 105. Control column (a) Swing-over or (b) "T" type
 (Inspector should specify type installed)
 106. 24 in. streamline wheels (Hayes ATC 23) with H.D. tires.
 Wheels must be placarded for these tires.
 107. 10x3 tail wheel
 108. Fixed metal propeller (Curtiss 55503)
 109. Oil radiator (Harrison)
 110. Cabin heater

Class II.

200. Miscellaneous items as noted in approved weight and
 balance report.
 201. Miscellaneous extra instruments
 202. Adjustable metal propeller - Ham. Std. hub 5406, blades
 ASAl-21 90 lbs.
 203. Controllable metal propeller - Ham. Std. hub 2D50 and
 blades 6101A or 6095A series Use actual weight
 204. Camera installation (Dwgs. B17E015, B17E016, and
 B17E902). Camera and viewfinder 110 lbs. (+61);
 operator's stool 4 lbs. (+65); 25 gal. fuel tank in
 baggage compt. 15 lbs. (+86).
 Remove Rear seat 31 lbs. (+62); Cover plates for camera
 and viewfinder 3 lbs. (+51) and rear fuselage fuel tank
 (+55).
 205. Landing lights
 (a) (Grimes)-under lower wing 3.5 lbs. ea. (+18)
 (b) (Hall)-in wheel well 3.5 lbs. ea. (+37)
 (c) (S & M) Use actual
 206. Flares (Dwg. No. I-17004)
 207. Radio, variable (location and actual weight of installation
 including controls, etc., or name of manufacturer and model
 if already installed and included in the empty weight
 should be noted on inspection report) (Dwg. I-17002 shows
 approved locations).
 208. Shielding (a) (Breeze) 15 lbs.
 (b) (Packard) 10 lbs.
 209. Extra door on right side 6 lbs.*
 210. Extra fuel tanks in wings 23 gals. or 25 gals. each, upper
 (+45.5) and lower (+24), 20 lbs. each. Any combination of
 fuel tanks including removal of the fuselage tanks may be
 used subject to inspector's approval and provided weight and
 balance accounts for actual installation.
 211. Oil tank;
 (a) 7.5 gal. (-13)
 (b) 8.5 gal. (-13)
 (c) 10.5 gal. (-13)
 212. Generator (Helipse 25 amp.) 20 lbs.

BEECHCRAFT B17R (Continued)

213. Golf bag compartment (Dwg. I-17006). In bay aft
 of, and opens into, baggage compartment.
 Maximum capacity 70 lbs. golf bag and clubs only.
 214. Parachutes or parachute type chairs
 215. Seaplane corrosion protection 20 lbs.
 216. Pressure fire extinguisher (Dwg. I-17001)
 (Container at +14)
 217. Metal tank cover (Dwg. I-17005).
 218. Camera well (Dwg. I-17006)
 219. Ballast installation (+210) Maximum 25 lbs.
 220. Special tool compartment in tail 25 lbs. in-
 cluding tools (+218)
 Class III.
 301. 24 in. streamline wheels (Hayes ATC 23) with 6-ply
 tires 75 lbs. (Wheels must be placarded for
 6-ply tires)
 302. Puncture proof tubes (a) 7.50-10 8 lbs.*
 (b) 24 in. streamline 5 lbs.*
 303. Tail wheel steering device No change in weights
 304. Electric motor and installation for auxiliary to
 manually operated retracting gear (25 ampere
 fuse required) 8 lbs.*

NOTE 1. The following placards were required on certain
airplanes when originally certificated:

- (a) At the fuel valve: "USE MAIN FUSELAGE TANKS FOR
 TAKE-OFF AND LANDING. USE FUEL OUT OF AUXILIARY
 LOWER WING TANKS BEFORE EMPTYING MAIN TANKS."
 (b) At rear fuselage tank: "AS 4-PLACE 47 GALS., AS
 5-PLACE 22 GALS."
 (c) Baggage placarded to 75 lbs.

Similar instructions must be placed in subsequent
airplanes when the actual weight and balance report
is based on any but the most adverse (from balance
standpoint) use of the fuel. Inspector's report
and actual weight and balance report should specify
restrictions applicable.NOTE 2. Eligible for export as follows subject to inspec-
tion for equipment specified in Chapter XII of Inspec-
tion Handbook: (8-9-38)

- (a) Canada - Landplanes
 Skiplanes - not eligible
 (b) All other countries except Australia

NOTE 3. Five place type must be placarded for 75 lbs.
when 3 passengers occupy rear seat unless more is sub-
stantiated in actual weight and balance report.NOTE 4. Eligible for certification with placard limits
of 420 hp, 2200 rpm and manifold pressure of 34.5 in.Hg.,
for all operations. A weight and balance report must be
made accounting for increase in the required minimum
fuel effected by the 420 MFR0 hp rating.

BEECHCRAFT C17E, 5 FOLS, ATC 615

Engine Wright R760E-1
Placard limits Maximum, except take-off -- in. Hg.
 2100 rpm (285 hp)
 Take-off (one minute) -- in. Hg.,
 2100 rpm (285 hp)
Propeller Maximum permissible diameter 102 in.
Placard speeds Level flight or climb 206 mph Ind.
 Glide or dive 225 mph Ind.
 Flaps extended 100 mph Ind.
Fuel 98 gals. (Three tanks; Fuselage front
 28 gals. (+32), fuselage rear 47 gals.
 (+55) and lower wing 23 gals. (+24))
Oil 6 gals. (-13)
No. passengers 4 (Front +19, rear +80.5)
Baggage 125 lbs. (+86)
Standard weight \$615 lbs.
C. G. limits (+16.6) and (+29.0)
Spec. basis Approved Type Certificate No. 615
Serial Nos. C17E-73 and up mfrd. prior to 9-30-39
 eligible. Approval expired as of that
 date.

EQUIPMENT: (Datum is leading edge of lower wing)
 (See NOTE 3)

Class I.:

101. Engine ring cowl	28 lbs.
102. Starter (Eclipse E-80)	20 lbs.
103. Generator - 15 amp. (Eclipse G-1)	15 lbs.
104. 6.50-10 or 7.50-10 wheels with 7.50-10 6-ply tires (Wheels must be placarded for these tires)	
105. 10x3 tail wheel	
106. Battery (Exide 6-75-15-l)	36 lbs. (+86)
107. Landing lights - two under lower wing	7 lbs.
108. Cabin heater	3 lbs.
109. Swing-over type control column	11 lbs.
110. Electric motor and installation for aux. to manually operated retracting gear (25 amp. fuse required)	8 lbs.
111. Oil radiator (Harrison)	8 lbs.
112. Propeller - fixed metal (Curtiss 55501)	57 lbs. (-51.5)

Class II.:

200. Misc. items as noted in approved weight and balance report.	
201. Oil capacities	
(a) 5 gal. (Dwg. C17E980)	(-13)
(b) 7.5 gal. (Dwg. C17E980A)	(-13)
(c) 9 gal. (Dwg. C17E980C)	(-13)
(d) 10.5 gal. (Dwg. C17E980C)	(-13)
202. Extra 23 or 25 gal. fuel tanks in upper wings (+45.5) or lower wings (+24)	20 lbs. each
203. Extra door	6 lbs.
204. Propeller - adj. metal	(-51.5)
205. Propeller - controllable metal	(-51.5)
206. Generator - 25 amp. (Eclipse)	20 lbs.
207. Radio, variable (location and actual weight of installation incl. controls, etc. or name of manufacturer and model if already installed and included in certificated weight empty should be noted on Inspector's report.) (Dwg. I-17002 shows approved locations.)	
208. "T" type control column	11 lbs.
209. 24 in. streamline wheels	75 lbs.
210. Wobble pump	4 lbs.
211. Golf bag compt. (Dwg. I-17006). In bay of, and opens into, baggage compt. Maximum capacity 70 lbs. golf bag and clubs only.	
212. Special landing gear complying with Canadian requirements for ski installa-	

BEECHCRAFT C17E, 5 FOLS, ATC 615 (Continued)

213. Parachutes or parachute type chairs	
214. Seaplane corrosion protection	20 lbs.
215. Pressure fire ext. (Dwg. I-17001) (Container at (+14))	
216. Metal tank cover (Dwg. I-17003)	
217. Flares (Dwg. I-17004)	
218. Camera well (Dwg. I-17005)	
219. Ballast installation	Maximum 25 lbs. (+210)
220. Camera installation (Dwgs. B17E015, B17E016 and B17E902); Camera and viewfinder 110 lbs. (+51); operator's stool 4 lbs. (+85); 25 gals. fuel tank in baggage compt. 15 lbs. (+86). Remove: Rear seat 51 lbs. (+82); cover plates for camera and viewfinder 3 lbs. (+51) and rear fuselage fuel tank (+55)	

NOTE 1. The following placard must be placed at the fuel valve on serial No. C17E-78: "Use main fuselage tanks for take-off and landings. Use fuel out of auxiliary lower wing tank(s) before emptying fuselage tanks." Similar instructions must be placed at the fuel valve when weight and balance report is based on any but the most adverse (from balance standpoint) use of the fuel tanks. Inspector's report and weight and balance report should specify restrictions applicable.

NOTE 2. Eligible for export as follows, subject to inspection for equipment specified in Chapter XII of Inspection Handbook; (August 25, 1937)

(a) Canada - Landplane

Skiplane - not eligible. However, structure complies with Canadian requirements for ski installation when approved special landing gear (Item 212) is installed.

(b) All other countries except Australia.
NOTE 3. Weight and balance report including list of equipment included in certificated weight empty, and loading instructions when necessary, must be submitted for each aircraft with original inspector's report and each subsequent report covering changes in such equipment.

BEECHCRAFT C17L (Army UC-43J), SC17L, C17B (Army UC-43G),
SC17B; ATC 602

Revised November 22, 1944

I - SPECIFICATIONS PERTINENT TO ALL MODELS LISTED BELOW:

Placard speeds	Landplane			
	Level flight or climb	183 mph	True Ind.	
	Glide or dive	225 mph	True Ind.	
	Flaps extended	100 mph	True Ind.	
	Seaplane			
	Level flight or climb	150 mph	True Ind.	
	Glide or dive	223 mph	True Ind.	
	Flaps extended	100 mph	True Ind.	
	Amphibian			
	Level flight or climb	160 mph	True Ind.	
	Glide or dive	223 mph	True Ind.	
	Flaps extended	100 mph	True Ind.	
Fuel	74 gals. (Three tanks; one 23 gals. tank in each upper wing (+46.5) and one 28 gal. tank in fuselage (+31.5))			
Oil	5 gals. (-19)			
No. pass.	4 (Front +19, rear +60.5) (See NOTE 4)			
Baggage	125 lbs. maximum (+79.5) (See NOTE 4)			
Standard weight	Landplane 3165 lbs.			
	Seaplane 3525 lbs.			
	Amphibian 3525 lbs.			
C.G. limits	Landplane (+16.6) and (+29.4)			
	Seaplane (+19.4) and (+29.7)			
	Amphibian (+20.0) and (+27.0)			
Spec. basis	Approved Type Certificate No. 60z			
Serial Nos.	67 and up mfrd. prior to 9-30-39 and all AAF Nos. eligible. Approval expired as of 9-30-39.			

EQUIPMENT: (Datum is leading edge of lower wing) (* Means net increase) (See NOTE 1)

Class I:

A. Landplane

101. Engine ring cowl	30 lbs.
102. Starter (Electric)	20 lbs.
103. Generator	
(a) 10 amp. (Bosch) for Jacobs L-4	10 lbs.
(b) 15 amp. (Eclipse) for Jacobs L-5	15 lbs.
104. Battery (Exide 6TS-13-1) (Under floor in front of rear seat)	36 lbs.
105. Control column (a) Swing-over or (b) "T" type (Inspector should report type installed)	
106. Oil radiator (Harrison)	8 lbs.
107. Propeller - fixed pitch metal (Curtiss 55501)	56 lbs.
108. 6.50-10 or 7.50-10 wheels (Hayes) with 7.50-10 tires	
109. 10x3 tail wheel	

B. Seaplane; Items 101 thru 107 PLUS

160. Edo 38-3430 floats with 10 lb. water rudder installation	490 lbs.
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C. Amphibian; Items 101 thru 107 PLUS

175. Edo 49-3875 amphibian floats (ATC 73) with 7.50-10 wheels (Hayes 750A) and 7.50-10 6-ply tires	624 lbs.
176. Auxiliary fin	6 lbs.

Class II:

200. Misc. items as noted in approved weight and balance report.	
201. Propeller - wood (fixed pitch) (C17L and SC17L only)	
202. Deleted - July 1, 1944	
203. Propeller Lycoming P-220 hub and Pittsburgh B300S0 blades (Models C17L and SC17L only)	127 lbs.
204. Special landing gear complying with Canadian requirements for ski installation	
205. Landing lights	
(a) Under lower wing (Grimes)	3.5 lbs. ea. (+18)
(b) In wheel well (Hall)	3.5 lbs. ea. (+37)
(c) S & M	Use actual weight
206. Flares (Dwg. No. I-17004)	
207. Radio, variable (location and actual weight of installation including controls, etc., or name of manufacturer and model if already installed and included in certificated weight empty should be noted on inspector's report) (Dwg. I-17002 shows approved locations)	

BEECHCRAFT C17L, etc. (CONTINUED)

208. Shielding (a) (Breese)	15 lbs.
(b) (Packard)	10 lbs.
209. Extra door on right side	6 lbs.*
210. Extra fuel tanks (any combination of tanks including removal of the fuselage tanks may be used subject to inspector's approval and provided weight and balance report accounts for actual installation)	
(a) 23 or 26 gal. tanks in wings, upper (+46.5) and lower (+24)	20 lbs. ea.
(b) Fuselage, rear 42 gals.	(+57.2)
211. Oil tanks (a) 6 gal.	(-19)
(b) 7.5 gal.	(-19)
(c) 8.5 gal.	(-19)
212. Generator - 25 amp. (Eclipse)	20 lbs.
213. Golf bag compt. (Dwg. I-17006). In bay aft of, and opens into, baggage compt. Maximum capacity 70 lbs. golf bag and clubs only.	
214. Parachutes or parachute type chair.	
215. Seaplane erosion protection	20 lbs.
216. Pressure fire ext. (Dwg. I-17001) (Container at +14)	
217. Metal tank cover (Dwg. I-17003)	
218. Camera well (Dwg. I-17005)	
219. Ballast installation Maximum 25 lbs.	(+210)
220. Special tool compt. in tail, incl. tools	25 lbs. (+218)
221. Battery	
(a) Under floor in front of rear seat	25 lbs.
(b) In 1st bay aft of baggage compt.	36 lbs.
222. Engines (Use actual weight)	
(a) Jacobs L-4M, L-4MA or L-4MB (for models C17L and SC17L)	
Placard limits same as for Jacobs L-4	
(b) Jacobs L-5M or L-5MB (for models C17B and SC17B)	
Placard limits same as for Jacobs L-5	
223. Misc. instruments	
224. Starter (Heywood)	25 lbs.
225. Camera installation (Dwgs. B17E015, B17E016 and B17E902); Camera and viewfinder 110 lbs. (+51) Operator's stool 4 lbs. (+65); 25 gal. fuel tank in baggage compt. 15 lbs. (+80) Remove; Rear seat 31 lbs. (+62) and cover plates for camera and viewfinder 3 lbs. (+51)	
Class III:	
301. 24 in. streamline wheels (Hayes) with 6-ply tires	75 lbs.
(Wheels must be placarded for these tires)	
302. Puncture proof tubes	
(a) 7.50-10	8 lbs.*
(b) 24 in. streamline	5 lbs.*
303. Tail wheel steering device	No change in weight
304. Electric motor and installation for auxiliary to manually operated retracting gear (25 amp. fuse required)	8 lbs.*

NOTE 1. Weight and balance report including list of equipment included in certificated weight empty, and loading instructions when necessary, must be submitted for each aircraft with original inspector's report and each subsequent report covering changes in Class I or II equipment.

NOTE 2. Eligible for export as follows, subject to inspection for equipment specified in Chapter XIII of Inspection Handbook: (9-30-39)

- (a) Canada - Landplane
Seaplane - max. standard weight 3430 lbs.
Amphibian - not eligible.
Skiplane - not eligible. However, structure complies with Canadian requirements for ski installation when approved special landing gear (Item 204) is installed.
- (b) Australia - Landplane only.
- (c) All other countries.

BEECHCRAFT C17L, etc. (CONTINUED)

NOTE 3. On model SC17B (Amphibian type only) rudder travel must be limited to 19° right and 22° left of fin centerline.
NOTE 4. Five place type must be placarded for 60 lbs. baggage when 3 passengers occupy rear seat unless more is substantiated in weight and balance report. Baggage includes anchor and rope 25 lbs. when carried.

II - MODEL C17L (UC-45J), 5 PCLB:

Engine Jacobs L-4
 Placard limits Maximum, except take-off -- in. Hg.,
 2000 rpm (225 hp)
 Take-off (one minute) -- in. Hg.,
 2000 rpm (225 hp)

III - MODEL SC17L, 5 PCSB:

Engine Jacobs L-4
 Placard limits Maximum, except take-off -- in. Hg.,
 2000 rpm (225 hp)
 Take-off (one minute) -- in. Hg.,
 2000 rpm (225 hp)

IV - MODEL C17B (UC-45G), 5 PCLB:

Engine Jacobs L-5
 Placard limits Maximum, except take-off -- in. Hg.,
 2000 rpm (285 hp)
 Take-off (one minute) -- in. Hg.,
 2000 rpm (285 hp)

V - MODEL SC17B, 5 PCSB or 5 PGAMB (See NOTE 3):

Engine Jacobs L-5
 Placard limits Maximum, except take-off -- in. Hg.,
 2000 rpm (285 hp)
 Take-off (one minute) -- in. Hg.,
 2000 rpm (285 hp)

BEECHCRAFT C17R (Army UC-45E), SC17R, ATC 604

I - SPECIFICATIONS PERTINENT TO ALL MODELS LISTED BELOW:

Fuel 98 gals. (3 tanks: Fuselage front 28 gals. (+52), fuselage rear 47 gals. (+55) and lower wing 23 gals. (+24)
 Oil 6 gals. (-13)
 No. pass. 4 maximum (Front +19, rear +60.5) (See NOTE 3)
 Baggage 125 lbs. maximum (+86) (See NOTE 3)
 Spec. basis Approved Type Certificate No. 604
 Serial Nos. C17R-73 and up mfrd. prior to 9-30-39 and all AAF Nos. of UC-45E eligible. Approval expired as of 9-30-39.

EQUIPMENT: (Datum is lower wing leading edge) (* Means net increase)

Class I:

A. Landplane

- 101. Engine ring cowl 28 lbs.
- 102. Starter (Eclipse E-80) 20 lbs.
- 103. Generator - 15 amp. (Eclipse G-1) 15 lbs.
- 104. Battery (Exide 6TB-13-1) 36 lbs.
- 105. Control column - Swing-over or "T" type (Inspector should report type installed)
- 106. Oil radiator (Harrison) 8 lbs.
- 107. Propeller - fixed pitch metal
- 108. 6.50-10 or 7.50-10 wheels (Hayes) 75 lbs. (Wheels must be approved for at least 1950 lbs. per wheel and must be placarded for 7.50-10 6-ply tires)
- 109. 10x3 tail wheel

B. Seaplane: Items 101 thru 106, 203 and 210 PLUS

- 151. Edo 39-4000 float installation with water rudder 527 lbs.

Class II:

- 200. Miscellaneous items as noted in approved weight and balance report.
- 201. Miscellaneous extra instruments
- 202. Propeller - Ham. Std. adj. metal
- 203. Propeller - Ham. Std. hub 2D30 with: Blades 6095A-12 to 6095A-17, incl., or blades 6101A-18 to 6101A-23, incl., or blades 6167A-12 to 6167A-17, incl.
- 204. Special landing gear complying with Canadian requirements for ski installation.

BEECHCRAFT C17R, etc., (CONTINUED)

- 205. Landing lights
 - (a) Under lower wing (Grimes) 3.5 lbs. ea. (+18)
 - (b) In wheel well (Hall) 3.5 lbs. ea. (+37)
 - (c) (S & M) Use actual weight
- 206. Flares (Dwg. I-17004)
- 207. Radio, variable (Location and actual weight of installation incl. controls, etc., or name of mfr. and model if already installed and included in certificated weight empty should be noted on inspector's report.) (Dwg. I-17002 shows approved locations.)
- 208. Shielding (a) (Breeze) 15 lbs.
 (b) (Packard) 10 lbs.
- 209. Extra door on right side 6 lbs.*
- 210. Extra 25 or 25 gal. fuel tanks in wings, upper (+45.5) and lower (+24) 20 lbs. ea. (Any combination of fuel tanks incl. removal of the fuselage tanks may be used subject to inspector's approval and provided weight and balance accounts for actual installation.)
- 211. Oil tanks (a) 7 gal. (-13)
 (b) 9 gal. (-13)
 (c) 10.3 gal. (-13)
- 212. Generator - 25 amp. (Eclipse) 20 lbs.
- 213. Golf bag compt. (Dwg. I-17006). In bay aft of, and opens into, baggage compt. Maximum capacity 70 lbs. golf bag and clubs only.
- 214. Parachutes or parachute type chairs.
- 215. Seaplane corrosion protection 20 lbs.
- 216. Pressure fire ext. (Dwg. I-17001) (Container at +14)
- 217. Metal tank cover (Dwg. I-17003)
- 218. Camera well (Dwg. I-17005)
- 219. Ballast installation Maximum 25 lbs. (+210)
- 220. Special tool compt. in tail, incl. tools 25 lbs. (+218)
- 221. Camera installation (Dwgs. B17E015, B17E016 and B17E902); Camera and viewfinder 110 lbs. (+51); Operator's stool 4 lbs. (+65); 25 gal. fuel tank in baggage compt. 15 lbs. (+86) Remove; Rear seat 31 lbs. (+62); cover plates for camera and viewfinder 3 lbs. (+51) and rear fuselage fuel tank (+55)

B. Seaplane: Items 205 thru 221

Class III:

- 301. 24 in. streamline wheels (Hayes) with 6-ply tires 75 lbs. (Wheels must be placarded for 6-ply tires)
- 302. Puncture proof tubes
 - (a) 7.50-10 8 lbs.*
 - (b) 24 in. streamline 5 lbs.*
- 303. Tail wheel steering device No change in weight
- 304. Electric motor and installation for auxiliary to manually operated retracting gear (25 amp. fuse required) 8 lbs.*

NOTE 1. The following placards were required on serial No. 74 when originally certificated:

- (a) At the fuel valve: "USE MAIN FUSELAGE TANKS FOR TAKE-OFF AND LANDING. USE FUEL OUT OF AUXILIARY LOWER WING TANKS BEFORE EMPTYING MAIN TANKS."
- (b) At rear fuselage fuel tank: "AS 4-PLACE 47 GALS., AS 5-PLACE 27 GALS."
- (c) Baggage placarded to 75 lbs.

Similar instructions must be placed in subsequent airplanes when the actual weight and balance report is based on any but the most adverse (from balance standpoint) use of the fuel. Inspector's report and weight and balance report should specify restrictions applicable

BEECHCRAFT C17R, etc. (CONTINUED)

NOTE 2. Eligible for export as follows, subject to inspection for equipment specified in Chapter XII of Inspection Handbook; (9-30-39)

(a) Canada - Landplane

Seaplane - maximum standard weight 4000 lbs.
Skiplane - not eligible. However, structure complies with Canadian requirements for ski installation when approved special landing gear (item 204) is installed.

(b) All other countries except Australia.

NOTE 3. Five place type must be placarded for 75 lbs. when 3 passengers occupy rear seat unless more is substantiated in weight and balance report. Baggage includes anchor and rope 25 lbs. when carried.

II - MODEL C17R (UC-43E), 5 PCLB:

Engine Wright R-975E-3 or R-975E-2

Placard limits:

A. With fixed metal or adj. metal propeller

Maximum, except take-off 33.0 in.Hg., 1800 rpm (330 hp)
or 31.5 in.Hg., 1900 rpm (330 hp)
or 29.5 in.Hg., 2000 rpm (330 hp)
or 28.5 in.Hg., 2100 rpm (330 hp)
Take-off (one minute) -- in.Hg., 1900 rpm (365 hp)
or 35.0 in.Hg., 2200 rpm (420 hp)

B. With controllable metal propeller

Maximum, except take-off

(Below 4000 ft.) 28.5 in.Hg., 2200 rpm (330 hp)
(4000 ft. and up) 27.0 in.Hg., 2200 rpm (330 hp)

Take-off (one minute) 35.0 in.Hg., 2200 rpm (420 hp)

Placard speeds Level flight or climb 206 mph True Ind.
Glide or dive 225 mph True Ind.
Flaps extended 100 mph True Ind.

Standard weight 3915 lbs.

C.G. limits (+16.6) and (+29.0)

III - MODEL SC17R, 5 PCSB:

Engine Wright R-975E-3 or R-975E-2

Placard limits

Maximum, except take-off 34.5 in.Hg., 2200 rpm (420 hp)
Take-off (one minute) 35.0 in.Hg., 2200 rpm (420 hp)

Propeller Controllable metal only (Item 203)

Placard speeds Level flight or climb 178 mph True Ind.
Glide or dive 218 mph True Ind.
Flaps extended 100 mph True Ind.

Standard weight 4105 lbs.

C.G. limits (+17.5) and (+25.9)

BEECHCRAFT 18B, 818B, ATC 656**Y - SPECIFICATIONS PERTINENT TO ALL MODELS:**

Engines	2 Jacobs L-5, L-5M or L-5MB (See NOTE 4)
Placard limits	Maximum, except take-off -- in. Hg., 2000 rpm (285 hp) Take-off (one minute) -- in. Hg., 2000 rpm (285 hp)
Fuel capacity	180 gals. (2 tanks in wing at 80 gals. each)(+24)
Oil capacity	16 gals. (8 gal. tank in each nacelle)(-32)
No. passengers	9 (See item 210)
Baggage	Maximum capacity 900 lbs., Fwd. compt. 600 lbs. (-74) (See NOTE 3) Rear compt. 300 lbs. (+141)
Spec. basis	Approved Type Certificate No. 656
Serial Nos.	62 and up mfrd. prior to L-24-41 eligible. Approval expired as of that date.

EQUIPMENT: (Datum is center line of wing main beam at the fuselage)(* Means net increase)(See NOTE 1)

Class I:**A. Landplane (18B)**

101. Two engine ring cowls	50 lbs. (-55)
102. Goodyear 5HM wheels and 29x13-5 tires	118 lbs. (-8)
103. 1Ex5-3 tail wheel with H. D. tire (Wheel must be placarded for H.D. tire)	7 lbs. (+261)
104. Two oil radiators (Harrison 3074510)	20 lbs. (-64)
105. Two landing gear operating motors (Dumore D-5)	18 lbs. (-12)
106. Wing flap operating motor (Dumore No. 3549)	8 lbs. (-12)
107. Two generators - 15 amp. (Eclipse)	16 lbs. ea. (-42)
108. Two batteries (Exide STS-13-1)	36 lbs. ea. (-18)
109. Bonding and shielding	30 lbs.
110. Wobble pump	4 lbs. (-17)
111. Toilet equipment	7 lbs. (+106)
112. Propellers - controllable metal (Ham. Std. hubs 2B20, blades 6135A-9)	(-69)

B. Seaplane (818B): Items 101, 104, 106, 107, 108, 109, 110 and 111 PLUS

115. Edo 55-7170 floats with water rudders (Dwg. 55-S-007) and auxiliary seaplane fin (Dwg. S-186221) and cover plates	815 lbs. (+19)
116. Replacement - "V" Brace Seaplane Dwg. S-18811	

Class II:

201. Generators	
(a) 25 amp. (Eclipse)	20 lbs. (-42)
(b) 50 amp. (Eclipse)	32 lbs. (-42)
202. Flares (Type, number and location must be shown in weight and balance report)	(-52) or (-160)
203. Radio, variable. Weight and location of items should be shown in weight and balance report. The structure has been substantiated for equipment as follows:	
(a) 27 lbs. at (-44)	
(b) 176 lbs. as per Dwg. No. 118001	
204. Auxiliary 50 gal. fuel tank in fwd. baggage compt. (See NOTE 3)	32 lbs. (-64)
205. Battery - in right and/or left wing leading edge near fuselage	(-18) or (+7)
(a) (Reading 6ARL-11)	46 lbs. each
(b) (Reading 6ARL-9)	59 lbs. each
(c) (Exide 6XT-13)	64 lbs. each
(d) (Exide STS-7-1)	26 lbs. each
206. Two landing lights (Grimes ST-1000)	9 lbs. (+27)
207. Two starters (Eclipse E80)	40 lbs. (-42)
208. Two heaters	20 lbs. (-18)
209. Pressure fire extinguisher (Type, number and location must be shown on weight and balance report)	
210. Seats. (Number and location must be shown in weight and balance report.)	
(a) Standard passenger seats	17 lbs. each
(b) Couch	} Use actual wt.
(c) Auxiliary folding type passenger seats	
(d) Parachute type seats	
211. Skiplane landing gear (Dwgs. 7466 Revision B; 18800K Revision A; 18110 Revision C; A18810K Revision A)	
212. Vacuum pumps	17 lbs. each
213. Miscellaneous items as noted in approved weight and balance report.	

BEECHCRAFT 18B, 818B (Continued)

214. Oil, 10 gals. (5 gal. tank in each nacelle) (-32)

215. Dual brake installation (Dwg. 187840)
Class III; None.

NOTE 1. Weight and balance report including list of equipment included in certificated weight empty, and loading instructions when necessary, must be submitted for each aircraft with original inspector's report and each subsequent report covering changes in such equipment.

NOTE 2. Eligible for export as follows subject to inspection for equipment specified in Chapter XII of Inspection Handbook: (January 24, 1941)

(a) Canada - Landplane

Skiplane - not eligible. However, structure complies with Canadian requirements for ski installation when item 211 is installed.
Maximum standard weight 6700 lbs.

Seaplane - maximum standard weight 7170 lbs.

(b) All other countries.

NOTE 3. Forward baggage is (-85) when item 204 is installed.

NOTE 4. A generator and battery are required for each engine only when battery ignition engines, Model L-5, are installed.

II - MODEL 18B, 11 PCLM:

Propellers	Maximum permissible diameter 100 in.
Placard speeds	Level flight or climb 200 mph True Ind. Glide or dive 243 mph True Ind. Flaps extended (60°) 117 mph True Ind.
Placard ceiling	4300 ft. absolute (density altitude) either engine inoperative
Standard weight	6700 lbs.
C.G. limits	(+1.2) and (+19.9)

III - MODEL 818B, 11 PCEM:

Propellers	Maximum permissible diameter 102 in.
Placard speeds	Level flight or climb 170 mph True Ind. Glide or dive 207 mph True Ind. Flaps extended (60°) 117 mph True Ind.
Placard ceiling	Zero ft. absolute (density altitude) either engine inoperative
Standard weight	7200 lbs.
C.G. limits	(+1.2) and (+19.4)

BELLAK (FORMERLY STONE) DETROIT GULL G-1 GLIDER,

1 POLM, TC 1

Type Primary Training
Standard weight 364 lbs. (See NOTE 1)
Cert. basis Glider Type Certificate No. 1
(Aero. Bulletin 7A requirements)
Serial Nos. 101 and up eligible per NOTE A
when equipped with large rudder
(9.5 sq. ft.)

NOTE A. Prior to original certification, each glider must satisfactorily pass:

- (a) An inspection for workmanship, materials and conformity before any covering, metal priming or final finish is applied. All woodwork may be varnished.
- (b) A final inspection of the completed glider
- (c) Check of flight characteristics.

NOTE 1. Weights increased 12 lbs. when wheel type landing gear is installed.

NOTE 2. The following placard is required: "Aircraft towing not permitted."

BELLANCA CH, 6 or 8 PCL-SM, ATC 47

Engine Wright J-5 220 hp
 Fuel 86 gals.
 Oil 5 gals.
 No. pass. 5 or 7
 Baggage 292 lbs.
 Standard weight 4050 lbs.
 Spec. basis Approved Type Certificate No. 47
 Serial Nos. 1 to 129 eligible
 Class I equipment; Tail skid.

BELLANCA CH-300 PACEMAKER, 6 PCL-SM, ATC 129

Engine Wright R-975 330 hp
 Fuel 86 gals.
 Oil 6 or 7 gals.
 No. pass. 5
 Baggage 211 lbs.
 Standard weight Landplane 4075 lbs. (See NOTE 1)
 Seaplane 4610 lbs. (See Class III equipment)
 Spec. basis Approved Type Certificate No. 129
 Serial Nos. Landplane - 119, 125, 128, 130 to 203 eligible.
 Seaplane - 125, 131, 148, to 203 eligible.
 Approval for both expired July 1, 1932.

Class I equipment; (Seaplane) Edo K floats, anchor and rope 25 lbs.
 (* Means net increase)

Class III equipment; 108 gal. fuel capacity (2 additional tanks 11 gals. each, 14 lbs.*) - maximum standard weight 4221 lbs. (land) and 4756 lbs. (sea); 112 gal. fuel capacity (2 tanks; one in each wing at 56 gals. - right wing tank has 8 gal. aux. compt. with separate filler cap) - maximum standard weight 4300 lbs. (land) and 4835 lbs. (sea); Engine ring cowl 15 lbs.; Wheel streamlines 41 lbs.; Starter; Siren; Battery; Flares; Landing lights; Shock absorbing tail wheel with necessary change in bottom of rudder for clearance (serials 147, 149, 166, 157, 159, 188 and up) 5 lbs.*; Edo Ka-5400 floats with water rudders 70 lbs.*; Skis; Kammer 4500, Star Air Service 4500, McGee Sr. S.

NOTE 1. Landplane standard weight may be increased to 4300 lbs. provided increase in empty weight is not due to concentrated loads capable of altering flight characteristics.

BELLANCA 300-W PACEMAKER, 6 PCL-SM, ATC 328

Engine P & W Wasp Jr. A 300 hp
 Propeller Adj. metal
 Fuel 112 gals.
 Oil 8 gals.
 Baggage 83 lbs.
 Standard weight Landplane 4300 lbs.
 Seaplane 4757 lbs.
 Spec. basis Approved Type Certificate No. 328
 Serial Nos. 147, 301 and up mfrd. prior to 9-30-39 eligible. Approval expired as of that date.

Class I equipment; (Landplane) Eolipse hand inertia starter; 32x6 wheels and brakes (Bendix); 4x6 tail wheel; small wet cell (3-TS-13-1); other misc. items including engine cover, tools, etc.; (Seaplane) Edo K floats; anchor, rope and Paddle 20 lbs.

Class III equipment; Shock absorbing tail wheel installation with necessary change in bottom of rudder for clearance, 5 lbs.*

BELLANCA CH-400 SKYROCKET, 6 PCL-SM, ATC 319

Engine P & W Wasp CI 420 hp or SC1 450 hp
 Propeller Adj. metal
 Fuel 120 gals. (2 tanks 60 gals. each)
 Oil 8 gals.
 No. passengers 5
 Baggage Landplane 208 lbs.
 Seaplane 188 lbs.
 Standard weight Landplane 4800 lbs.
 Seaplane 5000 lbs.
 Spec. basis Approved Type Certificate No. 319
 Serial Nos. Landplane 602 and up mfrd. prior to 9-30-39 eligible
 Seaplane 602 to 605, 607 and up mfrd. prior to 9-30-39 eligible. Serial Nos. prior to 613 must have new type stabilizer adjustment increasing stabilizer installed.

Class I equipment; (Seaplane) Edo K or Warner A-9500 floats.

Class III equipment; Starter, generator, battery, flares, landing lights, toilet equipment, upholstery, engine ring cowl, wheel streamlines, extra fuel tanks (total fuel capacity not to exceed 170 gals.); shock absorbing tail wheel installation with necessary change in bottom of rudder for clearance, net increase 5 lbs.; Skis; Pollack P-4800 or Star Air Service S-5600A.

BELLANCA CH-400 SKYROCKET, 5 PCLM, 2-205

Engine P&W Wasp CI 420 hp or SC1 450 hp
 Fuel 130 gals.
 Oil 8 gals.
 No. pass. 4
 Baggage 25 lbs.
 Standard weight 4600 lbs.
 Spec. basis Aero. Bulletin 7A, Section 3
 Serial No. 601 only eligible

Class I equipment; Electric starter; Generator; Battery; Bonding & shielding; Sound proofing; Miscellaneous instruments.

Class III equipment; Shock absorbing tail wheel installation with necessary changes in bottom of rudder for clearance, net increase 5 lbs.

BELLANCA CH-400W Pacemaker, 5 PCLM, 2-392

Engine P&W Wasp Jr. S1A 400 hp or T3A 420 hp (See NOTE 1)

Fuel 112 gals.
 Oil 8 gals.
 No. pass. 4
 Baggage 60 lbs.
 Standard weight 4277 lbs.

Spec. basis Aero. Bulletin 7A, Section 3
 Serial Nos. 305 and 307 only eligible

Class I equipment; Engine ring cowl; Landing lights; Battery; Starter; Heater; Airwheels; adj. metal propeller.

Class III equipment; Controllable metal propeller - 35 lbs. to 48 lbs. net increase

NOTE 1. When T3A engine installed, propeller must be set to limit the engine to 2150 rpm.

BELLANCA D SKYROCKET, 6 PCLM, ATC 480

Engine P&W Wasp CI 420 hp or SC1 450 hp
 Propeller Adj. metal
 Fuel 120 gals. (One each in right and left wings at 60 gals. each)

Oil 8 gals.

No. pass. 5
 Baggage 117 lbs.
 Standard weight 4900 lbs.

Spec. basis Approved Type Certificate No. 480
 205, 633 and up mfrd. prior to 4-1-34 eligible. Approval expired as of that date.

BELLANCA E PACEMAKER, 6 PCLM, ATC 476

Engine Wright R-975E-2 420 hp
 Fuel 120 gals. (One right and one left wing 60 gals. each)

Oil 8 gals.
 No. pass. 5
 Baggage 150 lbs. (Upper 30 lbs.; lower and upper not to exceed 150 lbs.)

Standard weight 4657 lbs.

Spec. basis Approved Type Certificate No. 476

Serial Nos. 202 and up mfrd. prior to 4-15-34 eligible. Approval expired as of that date. (See NOTE 1)

Class I equipment; Engine ring cowl 15 lbs.; Wheel streamlines 35 lbs.; Battery 35 lbs.; Starter 27 lbs.; Heater 18 lbs.; 5x4 tail wheel with 6-ply tire; Propeller - adj. metal.

Class III equipment; Shock absorbing tail wheel installation with necessary change in bottom of rudder for clearance, net increase 5 lbs.

NOTE 1. Serial No. 218 is eligible with the following; Baggage 100 lbs. (Compt. in rear of fuselage)

Standard weight 4843 lbs.
 Equipment; Engine ring cowl 15 lbs.; Wheel streamlines 45 lbs.; Radio (Lear) 30 lbs.; Landing lights 18 lbs.; Battery 37 lbs.; Flares 42 lbs.; Starter 36 lbs.; Generator and control box 24 lbs.; Heater; Radio bonding and shielding 20 lbs.; Couch to replace right center seat 25 lbs.; 9.50-10 wheels and tires; Propeller - adj. metal.

BELLANCA P SKYROCKET, 2-475

SPECIFICATIONS PERTINENT TO ALL SERIAL NOS.:

Engine P&W Wasp S1D1 560 hp
 Fuel 200 gals. (2 tanks - one 100 gal. tank in each wing)
 Oil 14 gals.
 Standard weight 5600 lbs.
 Spec. basis Aero. Bulletin 7A, Section 3
 Serial Nos. 804, 805 and 806 eligible

SERIAL NO. 804:

Designation 5 PCLM
 No. pass. 4
 Baggage Compt. rear of cabin - 70 lbs. with adj. metal prop., 100 lbs. with controllable metal prop.

Class I equipment: Propeller - adj. metal; Engine ring cowl 31 lbs.; Radio 56 lbs.; Landing lights 3 lbs.; Battery 76 lbs.; Flares 49 lbs.; Starter 20 lbs.; Generator 20 lbs.; Heater 18 lbs.; Toilet equipment 3 lbs.; Wheel fenders 9 lbs.; Extra instruments 9 lbs.; 31 in. streamline or 9.50-12 wheels and tires; 5.00-4 tail wheel with 6-ply tire

Class III equipment: Propeller - controllable metal (Ham. Std., hub 8460, blades 6101; low pitch setting 15°) 40 lbs. net increase

NOTE: Not equipped with wing flaps.

SERIAL NO. 806:

Designation 6 PCLM
 Placard speeds Flaps extended 100 mph Ind.
 No. pass. 5

Baggage Rear of cabin 85 lbs.
 Class I equipment: Propeller - adj. metal; Wing flaps; Engine ring cowl 31 lbs.; Wheel streamlines 30 lbs.; Radio 20 lbs.; Battery 76 lbs.; Starter 20 lbs.; Generator 20 lbs.; Heater 18 lbs.; Toilet equipment 3 lbs.; 31 in. streamline or 9.50-12 wheels; 5.00-4 tail wheel with 6-ply tire.

NOTE: Same as serial No. 804 except wing flaps, ailerons and wing fillets which were extended back and raised.

SERIAL NO. 806:

Designation 6 PCLM
 Placard speed Flaps extended 100 mph Ind.
 No. pass. 5

Baggage Rear of cabin 115 lbs.
 Class I equipment: Propeller - controllable metal (Ham. Std., hub 8460, blades 6101; low pitch setting 15°) Wing flaps; Engine ring cowl 31 lbs.; Radio 56 lbs.; Landing lights 3 lbs.; Battery 76 lbs.; Starter 20 lbs.; Generator 20 lbs.; Extra instruments 5 lbs. Heater 18 lbs.; 31 in. streamline wheels; 5.00-4 tail wheel with 6-ply tire., Flares 16 lbs.

Class III equipment: Radio equipment: Receiver (RCA), transmitter (RCA 10 watt), power unit (upper baggage compt.), aerial and controls; Net increase 19 lbs. (Maximum baggage 100 lbs.)

NOTE: Same as serial No. 806.

BELLANCA P-2 SKYROCKET, 6 PCLM, 2-462

I - SPECIFICATIONS PERTINENT TO BOTH SERIAL NOS.:

Engine P&W Wasp SCL 460 hp
 Fuel 200 gals. (Two tanks - one at 100 gals. in each wing)
 Oil 14 gals.
 No. pass. 5
 Standard weight 5600 lbs.
 Spec. basis Aero. Bulletin 7A, Section 3
 Serial Nos. 802 and 803 eligible

II - SERIAL NO. 803:

Baggage 100 lbs.
 Class I equipment: Engine ring cowl 31 lbs.; Battery (36 amp.) 35 lbs.; Generator 20 lbs.; Landing lights 12 lbs.; Electric starter 20 lbs.; 29x13-5 wheels; 5.00-4 tail wheel; Propeller - adj. metal.
 Class III equipment: Skis: Federal SA-11 or Star Air Service S-5600.

NOTE: The following placard must be installed near the oil tank: "Caution to not fill oil tank past full mark on indicator."

BELLANCA P-2 SKYROCKET (CONTINUED)

III - SERIAL NO. 802:

Baggage 202 lbs.
 Class I equipment: Engine ring cowl 31 lbs.; Radio installation incl. "B" battery) 25 lbs.; Starter 20 lbs.; Heater 18 lbs.; Wheel streamlines 30 lbs.; Landing lights 3 lbs.; Battery 35 lbs.; Generator 20 lbs.; 9.50-12 or 29x13-5 wheels and tires; 5.00-4 tail wheel; Propeller - adj. metal; Additional stabilizer brace struts 10 lbs.
 Class III equipment: Skis: Federal SA-11 or Star Air Service S-5600A; Tail ski; 36x16-6 wheels, tires and brakes; 12x6 tail wheel; Propeller - controllable metal (Ham. Std. hub 88460, blades 6101-10, low pitch setting 14°).

BELLANCA PACEMAKER 31-42, 1 or 8 PCLM, TC 578

Engine Wright R975E-2 (See also item 201)
 Placard limits Maximum, except take-off
 -- in. Hg., 2150 rpm (420 hp).
 Take-off (one minute)
 -- in. Hg., 2150 rpm (420 hp)
 Placard speeds Level flight or climb 160 mph True Ind.
 Glide or dive 198 mph True Ind.
 Fuel 200 gals. (Two tanks in wings at 100 gals. each - Right wing tank has built-in reserve tank of 12 gal. capacity)
 Oil 12-1/2 gals.
 No. pass. None or 7
 Baggage Provision in fuselage bays Nos. 1, 2 and 3 (numbered front to rear)
 (a) Passenger type 1st bay 25 lbs.
 (b) Cargo type 1st bay (1375 +25) 1400 lbs.
 2nd bay 400 lbs.
 3rd bay 200 lbs.

Standard weight 5600 lbs.
 C.G. limits (+11.8) and (+24.6)
 Spec. basis Type Certificate No. 578 (Aero. Bulletin 7A requirements)
 Serial Nos. 251 and up eligible per NOTE A. (See also NOTES 2 and 3)

EQUIPMENT: (Datum is wing leading edge) (* Means net increase)

- Class I.
- 101. Engine ring cowl 30 lbs.
 - 102. Battery (Under cabin floor) 40 lbs.
 - 103. Starter 20 lbs.
 - 104. Generator 20 lbs.
 - 105. Throw-over type control column
 - 106. 31 in. streamline wheels
 - 107. 5.00-4 tail wheel
 - 108. Propeller - controllable metal (Ham. Std. 2D50 with blades 6101A-10)

Class II.

- 200. Miscellaneous items as noted in approved weight and balance report.
- 201. Wright R975E-3 engine
 Placard limits Maximum, except take-off
 34 1/2 in. Hg., 2200 rpm (420 hp)
 Take-off (one minute)
 35 in. Hg., 2200 rpm (420 hp)

NOTE A. Each aircraft manufactured after July 18, 1941 must, prior to original certification, satisfactorily pass:

- (a) An inspection for workmanship, materials and conformity before any covering, metal priming or final finish is applied. All woodwork may be varnished.
- (b) A final inspection of the completed aircraft.
- (c) A check of flight characteristics.

BELLANCA PACEMAKER 31-42 (Continued)

NOTE 1. Eligible for export as follows subject to inspection for equipment specified in Chapter XII of Inspection Handbook: (December 12, 1941)

(a) Canada - Landplane

Skiplane - not eligible. However, structure complies with Canadian requirements for ski installation.

(b) All other countries except Great Britain, Australia and New Zealand.

NOTE 2. Serial No. 252 with Skyrocket F type ailerons, benches replaced by seats and fuselage same as Skyrocket 31-50 except engine mount is eligible as 6 PCLM with the following:

No. pass. 5
 Baggage 150 lbs. (Two compts. - 110 lbs. fwd in cabin and 40 lbs. aft of rear seats)
 Class I equipment: Items 101, 102, 104, 105, 106, 107, 108 PLUS; Radio 20 lbs.; Landing lights 8 lbs.; Flares 16 lbs.; Starter 32 lbs.; Heater 20 lbs.; Toilet equipment 7 lbs.

NOTE 3. Serial No. 253 is eligible as 6 PCLM with item 201 and the following:

No. pass. 6 (2 on rear seat in cabin; 3 on fwd. seats in cabin one of which is folding type; 1 in pilots compt.)
 Baggage 100 lbs. (Compt. in bottom in fuselage)
 Class I equipment: Items 101 thru 107 PLUS; Propeller controllable metal (Ham. Std., hub 2D80-15 and blades 6101-12); Landing lights 8 lbs.; Heater; Flares 16 lbs.; Radio bonding and shielding 20 lbs.

BELLANCA SKYROCKET 31-50 AND 31-55, TC 565
I - SPECIFICATIONS PERTINENT TO BOTH MODELS:

Placard speeds	
Landplane	Level flight or climb 173 mph True Ind. Glide or dive 198 mph True Ind. Flaps extended 100 mph True Ind.
Seaplane	Level flight or climb 160 mph True Ind. Glide or dive 198 mph True Ind. Flaps extended 100 mph True Ind.
Fuel	200 gals. (100 gal. tank in each wing) (+29)
Oil	12-1/2 gals. (-22)
No. pass.	Landplane 5 (Front +4, middle +45, rear +77) Seaplane 4 (middle +45, rear +77)
Standard weight	Landplane 5600 lbs. Seaplane 5900 lbs.
Spec. basis	Type Certificate No. 565 (Aero. Bulletin 7A requirements)

EQUIPMENT; (Datum is wing leading edge) (* Means net increase)

Class I:

(a) Landplane

101. Starter (Eclipse E-160)	20 lbs.
102. Generator (Eclipse D-1)	20 lbs.
103. 31 in. streamline wheels	
104. 5.00-4 tail wheel	
106. Radio (Westport AR62T)	37 lbs.
106. Landing lights	8 lbs.
107. Battery	40 lbs.
108. Engine ring cowl	33 lbs.
109. Flares	44 lbs. (+104)
110. Heater	20 lbs.
111. Toilet equipment	5 lbs.
112. Misc. instruments including 10 lbs. artificial horizon and directional gyro	
113. Elevator tabs	
114. Pressure fire extinguisher	11 lbs.
115. Propeller - Controllable metal (Ham. Std. 12D40 with blades 6095A-6 or 6101A-12; low pitch setting 14°) (-61)	
(b) Seaplane: Items 101, 102, 106, 107, 108, 110, 111, 112, 114 and 115 PLUS:	
151. Edo Ya-6235 floats with water rudder	770 lbs.

Class II:

200. Misc. items as noted in approved weight and balance report.

Class III:

300. Misc. cabin arrangements and items of equipment not adversely affecting C.G. limits.	
301. Y type control column	
302. 9.50-10 wheels with 8-ply tires (Wheels must be placarded for these tires)	
303. Constant speed control (Low pitch setting 12° - high pitch setting 21-1/2°)	

NOTE A. Each aircraft manufactured after July 18, 1941 must, prior to original certification, satisfactorily pass:

- (a) An inspection for workmanship, materials and conformity before any covering, metal priming or final finish is applied. All woodwork may be varnished.
- (b) A final inspection of the completed aircraft.
- (c) A check of flight characteristics.

II - MODEL 31-50, 6 PCLM or 5 PCSM:

Engine	P & W Wasp 83H1
Placard limits	Maximum, except take-off 32.5 in. Hg., 2200 rpm (550 hp) Take-off (one minute) 34.5 in. Hg., 2200 rpm (550 hp)
Baggage	150 lbs. (Two compts., one in bottom of fuselage 135 lbs. (+55), one aft of cabin 15 lbs. (+105))
C.G. limits	Landplane (+15.8) and (+25.4) Seaplane (+15.2) and (+25.8)
Serial Nos.	807 and up eligible as landplane per NOTE A 807 and others eligible as seaplane upon receipt of manufacturer's affidavit of conformity.

III - MODEL 31-55, 6 PCLM:
(Same as model 31-50 except engine, miscellaneous control system and structural changes to provide for camera installation. Note: Eligible as landplane only)

Engine	P&W Wasp S2H1
Placard limits	Maximum, except take-off 30 in. Hg., 2200 rpm (500 hp) Take-off (one minute) 36 in. Hg., 2250 rpm (500 hp)
Baggage	80 lbs. (Aft of cabin) (+105)
C.G. limits	(+15.9) and (+25.4)
Serial Nos.	806 and up eligible per NOTE A

BELLANCA 66-70, 66-75, 66-76, TC 563

I - SPECIFICATIONS PERTINENT TO ALL MODELS;

Spec. basis Type Certificate No. 563 (Aero. Bulletin 7A requirements)

NOTE A. Each aircraft manufactured after July 18, 1941 must, prior to original certification, satisfactorily pass:

(a) An inspection for workmanship, materials and conformity before any covering, metal priming or final finish is applied. All woodwork may be varnished.

(b) A final inspection of the completed aircraft.

(c) A check of flight characteristics.

II - MODEL 66-70, 2 PCLB:

Engine Wright Cyclone SGR-1820F-32 660 hp
Placard speed Glide or dive 187 mph True Ind.
Fuel 300 gals. (Two tanks at 150 gals. in wings)
Oil 19 gals.
No. pass. 1
Baggage 2903 lbs. (Fwd. bay 1380 lbs., center bay 1065 lbs., rear bay 458 lbs. (See NOTE 1))

Standard weight 11400 lbs.

Serial Nos. 719 and up eligible per NOTE A

Class I equipment: Engine ring cowl 30 lbs.; Wheel streamlines 42 lbs.; Landing lights 4 lbs.; Battery 68 lbs.; Two flares (Wiley) 47 lbs.; Starter 24 lbs.; Generator 16 lbs.; Heater 23 lbs.; 35x15-6 wheels, 16x7-3 tail wheel; Toilet equipment 23 lbs.; Water container 3 lbs.; Misc. instruments 24 lbs. (incl. artificial horizon, directional gyro, etc.); controllable propeller (Ham. Std. hub 8452, blades 6105A-6, low pitch setting 17°).

NOTE 1. It is necessary that 400 lbs. ballast be carried in space provided in lavatory compartment when passenger is carried and no cargo is carried. (As pay load is added in rear cargo bay an equivalent of ballast may be removed.)

III - MODEL 66-75, 8 PCLB:

Engine P&W Hornet S1E-G
Placard limits Maximum, except take-off
(6400 ft.) 33.0 in. Hg., 2275 rpm (750hp)
(Sea level) 34.5 in. Hg., 2275 rpm (750hp)
Take-off (one minute)
40.5 in. Hg., 2300 rpm (875 hp)

Placard speeds Level flight or climb 139 mph True Ind.
Glide or dive 168 mph True Ind.
Flaps extended 100 mph True Ind.

Fuel 300 gals. (Two tanks at 150 gals. in wing)

Oil 19 gals.

No. pass. 6

Baggage (Uniformly distributed)
(a) 2400 lbs. in fwd. bay (+32), 1800 lbs. in center bay (+84) and 0 lbs. in aft bay, OR
(b) 2400 lbs. in fwd. bay, 1300 lbs. in center bay and 470 lbs. in aft bay (+137)

Weights Empty Use actual (Serial No. 721 as originally equipped 6285 lbs.)
Standard 11400 lbs.

C.G. limits (+16.3) and (+26.4)

Serial Nos. 721 and up eligible per NOTE A

EQUIPMENT: (Datum is lower wing leading edge at fuselage) (See NOTE 2.) Engine cowl 33 lbs.; Generator (Leece-Neville 15V-15A) 22 lbs.; Landing lights (A & W type A-6); Flares (three 1-1/2 Min. electric) 15 lbs.; Pressure fire ext. 11 lbs.; Battery (Reading 6-AR-9) 44 lbs.; 6 removable chairs; 35x15-6 wheels and heavy duty tires (Wheels must be placarded for heavy duty tires); 16x7-3 tail wheel and tire; Propeller - controllable metal (Ham. Std. 3E50 with blades 6105A-12).

NOTE 1. Eligible for export as follows subject to inspection for equipment specified in Chapter XII of Inspection Handbook; (December 12, 1941)

(a) Canada - Landplane

Skiplane - not eligible. However, structure complies with Canadian requirements (per instructions in Dept. of Transport wire to Aircraft Airworthiness Section, September 28, 1938)

(b) All other countries except Australia, Great Britain and New Zealand

NOTE 2. Weight and balance report, including list of equipment included in certificated weight empty, and loading instructions when necessary, must be submitted for each aircraft with original inspector's report.

IV - MODEL 66-76, 15 PCL-SB

Engine Wright Cyclone SGR-1820F-52
Placard limits Maximum, except take-off
34.5 in. Hg., 2100 rpm (760 hp)
Take-off (one minute)
39.0 in. Hg., 2200 rpm (875 hp)

Placard speeds

Landplane Level flight or climb 150 mph True Ind.
Glide or dive 180 mph True Ind.

Seaplane Level flight or climb 139 mph True Ind.
Glide or dive 180 mph True Ind.

Fuel 300 gals. (Two tanks in wings at 150 gals.)

Oil 19 gals.

No. pass. 14 (Pass. type)

Baggage (a) Passenger type 20 lbs. (+213)
(b) Cargo type (evenly distributed)
(1) First bay 2416 lbs. (+30)
(2) Second bay 1251 lbs. (+81)
(3) Third bay 354 lbs. (+135)

Standard weight Landplane 11400 lbs.

Seaplane 11700 lbs.

C.G. limits Landplane (+16.5) and (+23.8)

Seaplane (+14.1) and (+21.6)

Serial Nos. 722 and up eligible per NOTE A

EQUIPMENT: (Datum is lower wing leading edge at fuselage) (See NOTE 2.) Engine cowl 33 lbs.; Generator (Leece-Neville 15V-15A) 22 lbs.; Landing lights (A & W type A-6); Flares (three 1-1/2 min. electric) 15 lbs.; Pressure fire ext. 11 lbs.; Battery (Reading 6-AR-9) 44 lbs.; Removable benches as follows: 5-place 23 lbs., 4-place 19 lbs.; 3-place 18 lbs., and 1-place 7 lbs.; 35x15-6 wheels and heavy duty tires (Goodyear) (wheels must be placarded for these tires); 16x7-3 tail wheel and heavy duty tire; Propeller - controllable metal, constant speed (Ham. Std. 3E50 with blades 6105A-12); Edo 42-12700 floats with water rudders, 830 lbs. net increase.

NOTE 1. Eligible for export as follows subject to inspection for equipment specified in Chapter XII of Inspection Handbook; (December 12, 1941)

(a) Canada - Landplane

Seaplane

Skiplane - not eligible. However, structure complies with Canadian requirements (per instructions in Dept. of Transport wire to Aircraft Airworthiness Section, September 28, 1938)

(b) All other countries except Australia, Great Britain and New Zealand.

NOTE 2. Weight and balance report, including list of equipment included in certificated weight empty, and loading instructions when necessary, must be submitted for each aircraft with original inspector's report.

BENNETT BTC-1, 7 PCLM, 2-562

Engines 2 Jacobs L-5
Placard limits Maximum, except take-off
 -- in. Hg., 2125 rpm (300 hp)
 Take-off (one minute) -- in. Hg.,
 2125 rpm (300 hp)
Propellers Maximum permissible diameter 126 in.
Placard speeds Level flight or climb 210 mph Ind.
 Glide or dive 254 mph Ind.
 Flaps extended 121 mph Ind.
Placard ceiling Zero with either engine inoperative with
 propeller idling
Fuel capacity 199 gals. (2 nacelle tanks at 47 gals. each
 (-10), 2 inner wing tanks at 29 gals.
 each (-15), 2 outer wing tanks at 23.5
 gals. each (+35))
Oil capacity 3 gals. (2 tanks at 6.5 gals. each (-32.6))
No. passengers 6 (One at -14, three at +15, two at +56)
Baggage 180 lbs. (Front 130 lbs. (-68), rear 50 lbs.
 (+84))
Weights Empty Use actual (Approx. 4430 lbs. (-4.1)
 as 7 PCLM with Class I items only)
 Standard 6745 lbs.
C.G. limits (-7.6) and (-1.6) (See NOTE 5)
Specification basis Aeronautics Bulletin 7A, Section 3
Serial Nos. 1 only eligible.
EQUIPMENT: (Datum is rear of spar center line on under side
 of wing) (* Means net increase)

Class I:

101. Two engine ring cowls 76 lbs. (-47)
 102. Two exhaust collector rings (Waco Aircraft
 Company No. 37482) 37 lbs. (-46)
 103. Two oil radiators (UAP 5 in.) 18 lbs. (-32)
 104. Two vacuum pumps (Pesco R-400-B) 5 lbs. (-32)
 105. Two starters (Eclipse E-80) and
 solenoids 45 lbs. (-39)
 106. (a) Two constant speed controllable metal
 propellers (Ham. Std., hubs 2B20-213,
 blades 6135-6) (Low pitch setting 11⁵)
 217 lbs. (-66.5)
 (b) Constant speed propeller con-
 trol 10 lbs. (-37)
 107. Two generators (Eclipse 5171) 39 lbs. (-39)
 108. Two batteries (Reading 6-ARL-11)
 and box 57 lbs. (-21)
 109. (a) Fire extinguisher (2 Phister
 "Ace") 15 lbs. (-35)
 (b) Fire extinguisher (Pyrene) 8 lbs. (-9)
 110. 5 in. wheels (Goodyear 5 HBA) with
 27x12-5 6 ply H.D. tires (wheels
 must be placarded for these tires) 110 lbs. (-36)
 111. Shock struts (Bendix R-107-1790D) 62 lbs. (-26)
 112. 15.25 in. streamline tail wheel
 (Goodyear 271124) and tire 10 lbs. (+248)
 113. Tail wheel shock strut (Bendix
 R-107-1779C) 6 lbs. (+240)
 114. Ventilating system 6 lbs. (-56)
 115. Instruments and panel (Refer to
 West Coast Branch, Aircraft Air-
 worthiness Section, for itemized list
 dated January 28, 1938) 26 lbs. (-39)
 116. Landing lights (Grimes ST-1000) 10 lbs. (+14)

Class II:

200. Miscellaneous items as noted in approved weight
 and balance report.
 201. Exhaust gas analyzer (Breeze) 15 lbs. (-25)
 202. Radio equipment
 (a) Receiver (RCA AVR-7) 31 lbs. (-68)
 (b) Shielding 26 lbs. (-66)
 (c) Transmitter (RCA AVT-7B) 35 lbs. (-68)
 203. Heater, cockpit and cabin 16 lbs. (-25)
 204. Outside antenna 1 lbs. (+144)

Class III:

None.

BENNETT BTC-1 (Continued)

NOTE 1. Weight and balance report including list of
 equipment included in certificated weight empty,
 and loading instructions when necessary, must
 be submitted with original inspector's report
 and each subsequent report covering changes in
 such equipment.

NOTE 2. Eligible for export as follows subject to
 inspection for required equipment: (October 31, 1937)
 (a) Canada - Landplane

Skiplane - not eligible.

(b) All other countries except Australia and Great
Britain.

NOTE 3. The following placards must be installed in
 locations noted:

(a) At fuel selector valve - "Use Rear Tanks First."

(b) At fuel tank filler caps - "Fill Front Tanks
First."

NOTE 4. Fuel dump valves must be made positively in-
 operative pending satisfactory completion of dump
 tests in accordance with KI-11c.

NOTE 5. Approved C.G. limits are based on the actual
 empty weight C.G. position with the landing gear
 extended. The airplane must be loaded so that
 its C.G. position with landing gear extended is
 always between the limits shown.

BLRDWING IMPERIAL 10, 3 POLB, 2-161

Engine Wright R-540 175 hp
 Fuel 40 gals.
 Oil 4 gals.
 No. pass. 2
 Baggage 32 lbs.
 Standard weight 2270 lbs.
 Spec. basis Aero. Bulletin 7A, Section 3
 Serial Nos. 100 only eligible

BOEING 40-B, 3 PCLB, ATC 27

Engine P & W Hornet 525 hp
 Fuel 120 gals. or 140 gals.
 Oil 9 or 12 gals.
 No. pass. 2 (See NOTE 2)
 Baggage 1045 lbs. (may be increased 22 lbs. with 9 gal. oil) (See NOTE 1)
 Standard weight 6079 lbs. (See NOTE 1)
 Spec. basis Approved Type Certificate No. 27
 Serial Nos. 1 to 1098 eligible
 NOTE 1. Serial Nos. 879 thru 885, 887, 888, 890, 892, 894, 895 thru 899, 901, 902, 903 also eligible with baggage 1333 lbs. and standard weight 6510 lbs.
 NOTE 2. Serial Nos. 880, 881, 882, 885, 888, 895, 896 and 903 also eligible as 4-place (crew 2 and 2 passengers.)
 NOTE 3. All planes eligible with approved type elevator flap provided stops are installed to limit the throw of the flap to 30° either side of neutral and that an adjustable stabilizer is in place and capable of being used. Flap installation 5 lbs.

BOEING 40-B-4, 1 or 5 PCLB, ATC 183

Engine P & W Hornet A-2 525 hp
 Propeller Ham. Std. adjustable metal
 Fuel 140 gals. (3 tanks - one in CS 60 gals. and one in each lower wing 40 gals. each)
 Oil 13 gals.
 No. pass. None or 4
 Baggage 1521 lbs. with no passengers
 741 lbs. with 4 passengers
 Standard weight 6510 lbs.
 Spec. basis Approved Type Certificate No. 183
 Serial Nos. 1042 to 1438 eligible
 Class I equipment; Radio 169 lbs.
 Class III equipment; Federal SA-11 skis.
 NOTE 1. Airplanes eligible also approved with elevator flap provided stops are installed to limit the throw of the flap to 30° either side of neutral and that an adjustable stabilizer is in place and capable of being used. Flap installation 5 lbs.

BOEING 80-A and 80-A1, 13-20 PCLB, ATC 206

Engines 3 P & W Hornets A-2 575 hr
 Fuel 388 gals. (Model 80-A)
 392 gals. (Model 80-A1)
 Oil 36 gals.
 No. pass. 11-18
 Baggage Rear mail compt. 578 lbs.; front mail compt. 1800 lbs.; front baggage compt. 400 lbs.
 Standard weight 17500 lbs.
 Spec. basis Approved Type Certificate No. 206
 Serial Nos. Model 80-A - 1081 to 1092 eligible
 Model 80-A1 - 1081, 1082, 1084 thru 1092 eligible
 Class III equipment; 500 gal. fuel capacity (Model 80-A1 limited to 17 place with this installation); Semi-servo rudder.

BOEING 100, 1 POLB, ATC 133

Engine P & W Wasp C1 420 hp
 Fuel 97 gals.
 Oil 4 gals.
 No. pass. None
 Baggage 35 lbs.
 Standard weight 2699 lbs.
 Spec. basis Approved Type Certificate No. 133
 Serial Nos. 1 to 1145 eligible

BOEING 203-A, 3 POLB, ATC 211

Engine Wright R-540 175 hp
 Fuel 40 gals.
 Oil 5 gals.
 No. pass. 2
 Baggage None
 Standard weight 2577 lbs.
 Spec. basis Approved Type Certificate No. 211
 Serial Nos. 1137 thru 1141, 1940 and 1986 eligible

BOEING 203-B, 2 POLB, 2-412

(Remodeled by Boeing School of Aeronautics, Oakland, Calif.)
 Engine Lycoming R-680, R-680B-4C or R-680B-4D
 Placard limits For all operations, 2000 rpm (215 hp)
 Placard speeds Not required
 Fuel capacity 38 gals. (Two tanks in upper wing center section at 19 gals. each)(+25)
 Oil capacity 5 gals.
 No. pass. 1 (Front +37, rear +86)
 Baggage None
 Standard weight 2744 lbs.
 C.G. limits (+29.1) and (+33.7)
 Spec. basis Aero. Bulletin 7A, Section 3
 Serial Nos. 1138, 1139, 1940 and 1986 only eligible
 EQUIPMENT: (Datum is leading edge of upper wing)(See NOTE 2)

Class I:

101. 30x5 wheels with brakes
102. 10x3 tail wheel
103. Dual controls and instruments
104. Fin and rudder extension
105. Propeller - Ham. Std. adj. metal

Class II:

200. Miscellaneous items as noted in approved weight and balance report.
- | | |
|---------------------------------------|---------------|
| 201. Battery | 42 lbs. (-8) |
| 202. (a) Radio receiver | 22 lbs. (+6) |
| (b) Radio transmitter | 10 lbs. (+73) |
| (c) Dynamotor | 11 lbs. (+6) |
| (d) Radio tuning control | 11 lbs. (+62) |
| (e) Radio mast | 6 lbs. (+101) |
| 203. Hand starter | 20 lbs. |
| 204. 25x11-4 wheels, tires and brakes | |

Class III:

None.

NOTE 1. Eligible for export as follows, subject to inspection for equipment specified in Chapter XII of Inspection Handbook: (10-5-40)

- (a) Canada - Landplane
Skiplane - not eligible
- (b) All other countries except Great Britain and Australia.

NOTE 2. Weight and balance report including list of equipment included in certificated weight empty, and loading instructions when necessary, must be submitted for each aircraft with original inspector's report and each subsequent report covering changes in such equipment.

NOTE 3. Deleted February 2, 1945

BOEING 204, 6 PCFB, ATC 157

Engine P & W Wasp C1 420 hp
Fuel 80 gals.
Oil 10½ gals.
No. pass. 5
Baggage 50 lbs.
Standard weight 5000 lbs.
Spec. basis Approved Type Certificate No. 157
Serial Nos. 1076 thru 1080

BOEING 204A, 6 PCFB, 2-590

(Same as ATC 157 except fuel, passengers and equipment)

Engine P & W Wasp 420 hp
Fuel 120 gals.
Oil 10½ gals.
No. pass. 4
Baggage 33 lbs.
Standard weight 5000 lbs.
Spec. basis Aero. Bulletin 7A, Section 3
Serial Nos. 1077 only eligible
Class I equipment: Adj. metal prop. - Ham. Std. hub 5407, blades 12C1-0; Radio 170 lbs.; Battery 10 lbs.; Starter and generator 64 lbs.

BOEING 247A, 10 PCLM, ATC 524

Engines 2 P & W Twin Wasps Jr. S1A1-G at 660 hp (See NOTE 2)
Propellers (a) Ham. Std. adj. metal
(b) Ham. Std. hubs 50039 or 3D40, blades 6101A-0 to 6101A-2 incl. Dia. 10'3/4" max., 9'10-1/8" min. Low pitch setting 18° with constant speed control. Wt. 2 prop. 496 lbs.
(c) Ham. Std. hubs 23D40, blades 6183A-0 to 6183A-2. For interchangeable blade models see Prop. Spec. 719 (NOTE 6). Dia. 10'1/2" max., 9'9-7/8" min. Wt. 2 propellers 522 lbs.
Fuel 356 gals. (Two tanks - one 178 gal. tank in each wing)
Oil 26 gals.
No. pass. 8
Baggage Maximum capacity of compts.; (See NOTE 1) Fwd. compt. 1050 lbs.; Rear compt. 750 lbs.
Standard weight 13100 lbs. (See NOTE 2)
Spec. basis Approved Type Certificate No. 524
Serial Nos. 1711 and up mfd. prior to 9-30-39 elig. Approval expired as of that date.

NOTE 1. Weight specifications and list of equipment to be obtained by inspector. Certificate to be accompanied by approved loading schedule.

NOTE 2. Serial No. 1711 also eligible as model 247-A Special with the following:

Engines 2 P & W Twin Wasps Jr. SA7G
Placard limits Maximum, except take-off 29.0 in.Hg., 2300 rpm (560 hp) Take-off (one minute) 32.5 in.Hg., 2300 rpm (655 hp)
Placard speeds Level flight or climb 184 mph True Ind. Glide or dive 230 mph True Ind.
Placard ceiling 6800 ft. absolute (Density altitude) - either engine inoperative
Baggage Maximum 2290 lbs. (See loading schedule)
Standard weight 13850 lbs.
C.G. limits 38.4 in. and 47.8 in. aft of leading edge of wing at root

BOEING 247-D (Army C-73), 13 PCLM, ATC 558

Engines 2 P & W Wasps S1H1-G or S3H1 or R-1340-AN-1
Fuel 87 min. octane (CFR) aviation gasoline for S1H1-G engines
80 min. octane (CFR) aviation gasoline for S3H1 or R-1340-AN-1 engines
Placard limits For Wasp S1H1-G Maximum, except take-off, (Straight line manifold pressure variation with altitude to 8000 ft.) 33.0 in.Hg., 2200 rpm (550 hp) (Sea level) 35.0 in.Hg., 2200 rpm (550 hp) Take-off (one minute), 35.5 in.Hg., 2200 rpm (550 hp) or 34.0 in.Hg., 2100 rpm (510 hp)

BOEING 247-D (Army C-73) (Continued)

Placard Limits (Continued)
For Wasp S3H1 and R-1340-AN-1
Maximum except take-off (Straight line manifold pressure variation with altitude to 5000 ft.) 32.5 in.Hg., 2200 rpm (550 hp) (Sea level) 34.0 in.Hg., 2200 rpm (550 hp) Take-off (one minute) 34.0 in.Hg., 2200 rpm (550 hp)
Propellers See Items 113(a), (b) and 212
Placard speeds Level flight or climb 180 mph True Ind. Glide or dive 220 mph True Ind. (See NOTE 1) With S1H1-G engines and either item 112(a) or 212
(a) 4600 ft. absolute (density altitude) either engine inoperative with inoperative controllable propeller idling in high pitch
(b) 0 ft. (absolute) in standard air with either propeller braked in high pitch, blade down with the remaining engine at maximum, except take-off hp and 2250 mph with a carburetor air temperature of 100°F.
(c) 8200 ft. (usable) at an indicated airspeed of 96 mph and 14084 lbs. (with de-icers installed but not operating) in standard air, with either engine inoperative, inoperative propeller fully feathered, operative engine at maximum, except take-off, power, mixture setting for best fuel-air ratio, carburetor air intake on "Cold Air" and wings level.
With S3H1 or R-1340-AN-1 engines and Item 113(b) See Part I of Approved CAA Operating Manual
Fuel capacity 273 gals. (3 tanks: One main in left wing - 136½ gals. (+38.5), one main in right wing - 66½ gals. (+22), one auxiliary in right wing - 70 gals. (+54.5))
Oil capacity 20 gals.
No. pass. 10
Baggage 2400 lbs. (Fwd. compt. 1400 lbs.; rear compt. 1000 lbs.)
Standard weight 14000 lbs. (See NOTES 1 and 6)
C.G. limits (+11.50) (22% MAC) and (+20.86) (28.5% MAC). L.E. MAC (-20.27)
Spec. basis Approved Type Certificate No. 558
Serial Nos. 1946 and up mfd. prior to 9-30-39 and all AAF Nos. (See NOTE 8) eligible. Approval expired as of 9-30-39.
EQUIPMENT: (Datum is front spar centerline) (See NOTE 3),
Class I:
101. Two engine ring cowls 72-81 lbs.
102. Two landing lights 27 lbs.
103. Two flares 42-47 lbs.
104. Generator 44 lbs.
105. 15.00-16 wheels and tires with hydraulic brakes 282 lbs.
106. Pressure fire extinguisher 26 lbs.
107. Battery 65-76 lbs.
108. Two starters 43 lbs.
109. Starter cranks 4 lbs. each.
110. Toilet equipment 8 lbs.
111. Water container (filled) 11 lbs.
112. 16x7-3 tail wheel and tire 12 lbs.
113. Propellers
(a) For use with S1H1-G engines only. Controllable metal; Ham. Std. hubs 50039 or 3D40, blades 6101A-0 to 6101A-2, inclusive. (Dia. 10'3/4" max., 9'10-1/8" min.); low pitch setting 24° with 550 take-off hp and 20.5° with 510 take-off hp. (See Item 210 (a))
(b) For use with S3H1 or R-1340-AN-1 engines only. Constant speed; Ham. Std. 12D40 hubs and 6101A-12 to 6101A-14 blades, inclusive. (Dia. 9'1" max., 8'10-5/8" min.); low pitch setting 11.5°; high pitch setting 27°.
114. Propeller accessories (required with Item 113(b) only) 2 propeller governors; Ham. Std. model 1M12-A or 1M12-G
115. Approved Operating Manual (required to be carried in pilot's compartment only when S3H1 or R-1340-AN-1 engines and 12D40/6101A-12 to -14 propellers are installed.) See NOTE 10.

BOEING 247-D (Continued)

Class II:

201. Two engine covers	14 lbs.
202. Radio equipment:	
(a) Two-way complete	127 lbs.
(b) Stand-by receiver	18 lbs.
(c) Dynamotor	30 lbs.
203. Heating and ventilating:	
(a) Air heater	83 lbs.
(b) Liquid heater	95 lbs.
(c) Heating and ventilating system	124 lbs.
204. Vacuum pumps	10 lbs.
205. Soundproofing and carpet	87 lbs.
206. Automatic pilot installation	97 lbs.
207. Propeller accessories:	
(a) Constant speed controls with item 113(a) (Low pitch setting 17°)	10 lbs.
(b) Brakes (Air Assoc. HC-950)	
208. Stewardess equipment	122 lbs.
209. Tools and first aid kit	10 lbs.
210. De-icer installation: (See NOTE 6)	
(a) De-icer equipment - fixed	32 lbs.
(b) De-icer equipment - removable	
(1) Wing and tail	89 lbs.
(2) Two propeller spinners	20 lbs.
(3) Two propeller spinners	8 lbs.
(4) Propeller de-icer fluid (2½ gals.)	23 lbs.
211. Miscellaneous items as noted in approved weight and balance report.	
212. Propellers. For use with S1H1-G engines only. Ham. Std. hydromatic (full feathering), hubs 23D40, blades 6183A-0 to 6183A-2, inclusive. For interchangeable blade models see Prop. Spec. No. 719 (NOTE 6). (Dia. 10'1/2" max., 9'9-7/8" min.); low pitch setting 18°	64 lbs.*(-54)

Class III:

None

NOTE 1. When standard weight is reduced to 13650 lbs., the Glide or Dive speed may be increased to 230 mph True Ind.

NOTE 2. Weight of stewardess is 135 lbs.

NOTE 3. Weight and balance report including list of equipment included in certificated weight empty, and loading instructions when necessary, must be submitted with original inspector's report and each subsequent report covering changes in such equipment.

NOTE 4. Fabric covered rudder has fabric covered trim tab balancing tab. Metal covered rudder with aerodynamic balance has metal covered trim tab only. Metal covered rudder with aerodynamic balance removed has metal covered trim tab and balancing tab. Model 247-D fin, Boeing Dwg. 15-2777, must be installed or Model 247 fin, Boeing Dwg. 15-2502, must be altered in accordance with Boeing Dwg. 15-2777 except that trailing edge fairing may be extended in accordance with United Air Lines Dwg. 6U-27. Rudder must conform with Boeing Dwg. 15-2503 revision J except that deviation shown on United Air Lines Dwg. 3U-33 may be employed. Fabric or Metal covered elevator has metal covered trim tab only.

NOTE 5. Hostess jump seat in rear is not to be used by passenger.

NOTE 6. Standard weight may be increased 84 lbs. when complete de-icer is installed.

NOTE 7. Eligible for export to all countries except Canada, Great Britain, Australia and New Zealand. (6-24-41)

NOTE 8. The following serial Nos., converted from model 247 (Approved Type Certificate No. 500), also eligible: 1682, 1686 through 1691, 1693 through 1700, 1702, 1704, 1706 through 1710, 1712, 1714 through 1726, 1728 through 1737, 1740 and 1741.

NOTE 9. Aircraft equipped with S3H1 or R-1340-AN-1 engines require the following modification prior to certification:

- (1) Add a 3-inch diameter flexible blast tube running from between cylinders 3 and 4 and discharging so that cooling air is directed along the front side of the oil tank.
- (2) Add a scoop around the oil cooler inlet extending 3 inches forward from the leading edge of the wing.
- (3) Add a rearward facing scoop over the oil cooler air outlet. This scoop should cover two-thirds of the length of the air outlet opening and should be 4 inches high at its rear end.

NOTE 10. The following placard should be placed on the instrument panel in full view of the pilot when the S3H1 or R-1340-AN-1 engines and 12D40/6101A-12 to -14 propellers are installed: "This airplane shall be operated in accordance with Part I of the CAA Approved Operating Manual for the Boeing 247-D airplane."

BOEING F4B4, 1 POLB, 2-556

(Remodeled by Air Safety Board)

Engine	P & W Wasp S1D1
Placard limits (Fuel 87 min. octane)	
Maximum, except take-off	33 in. Hg., 2200 rpm (550 hp)
Take-off (one minute)	34 in. Hg., 2200 rpm (550 hp)
Placard speeds	Level flight or climb 167 mph True Ind. (145 knots)
Propeller	Glide or dive 212 mph True Ind. (185 knots)
Static rpm at maximum permissible throttle setting - not more than 1975	not less than 1650
Diameter - not more than 108 in.	not less than 104.8 in.
Fuel	110 gals. (Main 46 gals. (-7), auxiliary 65 gals. (+3.5), reserve 10 gals. (-7))
Oil	7 gals. (-21)
No. pass.	None
Baggage	151 lbs. (35 lbs. (+11), 75 lbs. (+72), 41 lbs. (+76))
Standard weight	3550 lbs.
C.G. limits	(-6.9) and (-2.2)
Spec. basis	CAR 04.031
Serial Nos.	9241 and 9251 only, eligible

EQUIPMENT: (Datum is leading edge of lower wing)

Class I:

101. Propeller - adj. metal (Ham. Std. hub 5408, blades 33C1½)
102. Engine ring cowl
103. 30x5 wheels (Bendix) with brakes and tires
104. 8 in. steerable streamline tail wheel
105. Carburetor air heater and oil temp. regulator
106. Fuel pump (a) engine driven (C-5) (b) wobble (D-1)
107. Exhaust collector ring (Solar)
108. Generator (Eclipse type GS-2)
109. Starter (Eclipse 2209B)
110. Vacuum pump (Pesco B2A)
111. Battery (Gould type A)

Class II:

200. Miscellaneous items as noted in approved weight and balance report.

Class III:

301. Shielding
302. Bonding
303. Landing light (Adams-Westlake)
304. Vertical antenna
305. Radio receiver (RCA AVR-7C) 20 lbs. (+78) (Installed in headrest baggage compt. and capacity of compt. reduced to 21 lbs.)

NOTE 1. The following placards must be displayed in full view of the pilot:

- "Intentional spins prohibited."
- "Restricted to acrobatic exhibitions and sky-writing only."
- "Auxiliary fuel tank release must be safetied when tank installed. Do not release tank in flight."

BOWLUS-DUPONT S-1000 (GLIDER), 1 PCLM, 2-1

Type Sailplane
 Standard weight 440 lbs.
 Serial Nos. S-34 to S-40 eligible

BOWLUS-DUPONT 1-S-2100 (GLIDER), 1 PCLM, ATC 4

Type Secondary Soaring
 Placard speeds Glide or dive 85 mph Ind,
 Flaps extended 60 mph Ind.

No. pass. None
 Baggage None
 Standard weight 555 lbs.
 Serial Nos. 3 and 4 eligible (See NOTE 1)

NOTE 1. Serial No. 1 is eligible without wing flaps
 and with different fin, controls and main fittings
 and the following:

Placard speed Glide or dive 85 mph Ind.
 Standard weight 540 lbs.

BRESEE R-6-C, 5 PCLM, 2-447

(Remodeled by Russel H. Lawson, Portland, Ore.)

Engine Wright R-875 330 hp
 Propeller Adj. metal
 Fuel 90 gals. (One tank in each right and
 left wing at 45 gals.)

Oil 7 gals.

No. pass. 4

Baggage 224 lbs.

Standard weight 4000 lbs.

Spec. basis Aero. Bulletin 7A, Section 3

Serial Nos. 10 only eligible

Class I equipment: Electric starter 35 lbs.; Battery
 42 lbs.; Generator 19 lbs.; Tail wheel.

BUHL, ARMY TRAINING, 2 POLB, 2-6

Engine Wright J-5 220 hp
 Fuel 50 gals.
 Oil 5 gals.
 No. passengers 1
 Baggage 78 lbs.
 Standard weight 2583 lbs.
 Spec. basis Aero. Bulletin No. 7A, Section 3
 Serial No. 1 16 only eligible.

BUHL CA-3C, 3 POLB, ATC 46

Engine Wright J-5 220 hp
 Fuel 90 gals.
 Oil 5 gals.
 No. passengers 2
 Baggage 90 gals.
 Standard weight 2938 lbs.
 Spec. basis Approved Type Certificate No. 46
 Serial Nos. 1 to 37 eligible

BUHL CA-5, 5 POLB, ATC 12

Engine Wright J-5 220 hp
 Fuel 70 gals.
 Oil 3.8 gals.
 No. passengers 4
 Baggage 330 lbs.
 Standard weight 3700 lbs.
 Spec. basis Approved Type Certificate No. 12
 Serial Nos. 1 to 23 eligible

BUHL CA-6, 6 POLB, ATC 128

Engine Wright R-975 330 hp
 Propeller Adj. metal
 Fuel 98 gals. or 124 gals.
 Oil 8 gals.
 No. passengers 5
 Baggage 54 lbs.
 Standard weight 4200 lbs. with 98 gal. fuel capacity
 4358 lbs. " 124 " " "
 Spec. basis Approved Type Certificate No. 128
 Serial Nos. 41 and up mfrd. prior to 7-1-33 eligible. Approval expired as of that date.

BUHL CA-6W, 4 POLB, 2-153

Engine Wasp CI 420 hp
 Fuel 120 gals.
 Oil 8.5 gals.
 No. passengers 3
 Baggage 78 lbs.
 Standard weight 4200 lbs.
 Spec. basis Aero. Bulletin 7A, Section 3
 Serial Nos. 48 only eligible

BUHL CA-8A, 8 POLB, ATC 98

Engine Wright Cyclone R-1750-E 525 hp
 Fuel 181 gals.
 Oil 14 gals.
 No. passengers 6
 Baggage 7 lbs.
 Standard weight 6100 lbs.
 Spec. basis Approved Type Certificate No. 98
 Serial Nos. 40, 43-A, 8-400 eligible.

BUHL FLYING BULL PUP LA-1, LA-1S, LA-1A, LA-1SA, LA-1B, LA-1SB, 1POL-SM, ATC 405

Engine Szekely SR-3-45 45 hp
 Propeller Wood
 Fuel 10 gals.
 Oil 8 qts. (LA-1, LA-1S, LA-1A, LA-1SA)
 7 qts. (LA-1B and LA-1SB)
 No. passengers None
 Baggage 30 lbs. (LA-1 and LA-1A)
 (See NOTE 1) 19 lbs. (LA-1B)
 10 lbs. (LA-1S, LA-1SA, LA-1SB)
 Standard weight 842 lbs. (LA-1 and LA-1A)
 880 lbs. (LA-1B)
 882 lbs. (LA-1S, LA-1SA, LA-1SB)
 Spec. basis Approved Type Certificate No. 405
 Serial Nos. Landplane - 101 and up mfrd. prior to 7-1-32 eligible.
 Seaplane - 113 and up mfrd. prior to 7-1-32 eligible.
 Approval expired 7-1-32.
 Class I equipment: Warner A-1680-B floats (seaplane)
 Class III equipment: Brake type wheels, net increase 12 lbs.
 NOTE 1. Baggage includes chute 20 lbs.

BUTLER BLACK HAWK, 3 POLB, ATC 135

Revised January 25, 1946

Engine Wright J-5 220 hp
 Fuel 71 gals.
 Oil 5 gals.
 No. passengers 2
 Baggage 41 lbs.
 Standard weight 2900 lbs.
 Spec. basis Approved Type Certificate No. 135
 Serial Nos. 1 to 110 eligible
 Class III equipment: Engine ring cowl 22 lbs.

BUTLER, 3 POLB, 2-49

Engine Wright J-5 220 hp
 Fuel 71 gals.
 Oil 5 gals.
 No. passengers 2
 Baggage None
 Standard weight 2859 lbs.
 Spec. basis Aero. Bulletin 7A, Section 3
 Serial Nos. 103 only eligible
 Class I equipment: Hand inertia starter.

CANADIAN VICKERS STRANRAER, 3 POLB, 2-674, APPROVED OCT. 15, 1945
(Manufacturer: Canadian Vickers Ltd. Montreal, Canada)

Engines 2 Bristol Pegasus XIII
 Fuel 91 min. octane (CPR) aviation gasoline
 Engine limits Maximum, except take-off
 (Sea level) 35 in. Hg., 2250 rpm (790 hp)
 (4000 ft.) 35 in. Hg., 2250 rpm (825 hp)
 Take-off 42 in. Hg., 2600 rpm (1010 hp)
 Airspeed limits Level flight or climb 117 knots True Ind.
 Glide or dive 141 knots True Ind.
 C.G. range (+48) to (+66)
 Datum 16 ft. 6 in. aft of hull nose
 Leveling means Leveling lugs on outside, port side of hull (0" and 79")
 Maximum weight 19,900 lbs.
 No. of seats 3 2(-75); 1(+52)
 Baggage See Note 2(h)
 Fuel capacity 590 gals. (2 tanks 295 gals. each (+50.6), left and right upper center wing)
 Oil capacity 57.6 gals. (2 tanks 28.8 gal. each (+20.2), leading edge of left and right upper center wing)
 Control surface Elevator trim tab 14° up and down
 movements Elevator Up 24° Down 20.5°
 Aileron 19° up and down
 Rudder 28° left and right
 Rudder trim tab 11° left and right
 Rudder balance tab 13.5° left and right
 Serial Nos. eligible All in accordance with the provisions of NOTE A.
 Required equipment Items 1, 101, 102, 103, 104, 105, 401
 Certification basis Canadian Certificate of Airworthiness for Export.
 Equipment: (Items included in required lists under specifications pertinent to individual models may not be removed unless replaced by approved equivalent items. The effect upon balance of all equipment changes must be computed and the aircraft operation record revised accordingly. Values in inches shown in parenthesis after each item represent horizontal arms to the C.G. of the item measured minus (-) ahead and plus (+) to the rear of the datum. A plus (+) or minus (-) sign preceding the weight of an optional item indicates the net weight change between that item and the equivalent required item.)
 Propellers and Propeller Accessories
 1. Propellers - DeHavilland 5/37A hubs, P-55255/3 blades
 Low pitch 24.5° at 42" station
 High pitch 31° at 42" station
 Engine and Engine Accessories - Fuel and Oil System
 101. Two starters (Eclipse E-160) (+2)
 102. Two fuel pumps (Bristol Dual Vane FB66233/2) (-7)
 103. Two oil coolers (U.A.P. U-3160-DS) (+41)
 104. Cylinder head temperature gauges
 105. Carburetor air heat control valve
 Landing Gear - None
 Electrical and Radio Equipment
 301. Generator (G.E. Type A)
 302. Battery (Exide, Canadian 5J/1391) 50 lbs. (+80)
 303. Radio transmitter (Northern selective AT-1) (-120)
 304. Radio receiver (Canadian Marconi AR-2) (-120)
 Interior Equipment
 401. Approved operating manual (See NOTE 1)
 402. Dual controls 14 lbs. (-94.5)
 Miscellaneous (Not listed above)
 600. Miscellaneous items as noted under this item in approved weight and balance report.

CANADIAN VICKERS STRANRAER, 3 PCFBB, 2-574 (continued)
NOTE A. The Canadian Certificate of Airworthiness for Export must be submitted for each individual aircraft for which application for certification is made and each aircraft shall be inspected by a C.A.A. inspector.

NOTE 1. The following placard must be installed on the instrument panel in full view of the pilot: "This Airplane Shall be Operated in Accordance with Part I of the C.A.A. Approved Operating Manual for Canadian Vickers Stranraer Flying Boat."

NOTE 2. Prior to certification the following must be accomplished:

- (a) The elevator trim tab control must be marked to indicate direction of rotation.
- (b) The instruments must be marked for approved limits.
- (c) Fuel and oil filler caps must be marked as to contents and capacity in U.S. gallons.
- (d) Firewalls of one of the following types must be provided:
 - (1) A single sheet of terne-plate not less than 0.028 in. thick.
 - (2) A single sheet of stainless steel not less than 0.015 in. thick.
 - (3) Two sheets of aluminum or aluminum alloy not less than 0.02 in. thick fastened together and having between them an asbestos paper or asbestos fabric sheet at least 1/8 in. thick.
- (e) A metal identification plate must be permanently affixed in a visible location in the pilot's compartment. This plate must contain the manufacturer's name, the date of manufacture, the manufacturer's serial number and the model designation.
- (f) A suitable identification plate should be permanently attached to the engine in a location which will be readily accessible when the engine is installed. This plate should contain the manufacturer's name, engine name and model, serial number, crankshaft speed (METO and take-off) and power.
- (g) Propellers should be identified with permanent data containing the following: manufacturer's name, propeller name and model, and serial number. These data may be printed or painted in a prominent location on a non-critical surface of the hub and blade.
- (h) All cargo and baggage compartments must be placarded for the maximum permissible floor loadings. Floor beams and flooring provided for such compartments should be capable of withstanding a limit load factor of 4.33 without undue permanent deformation and must have sufficient strength to withstand an ultimate load factor of 6.5. Adequate cargo tie-downs must be provided.
- (i) Fuel dump valves should be made inoperative.
- (j) Individual landing light switches must be provided if certificate for night operation.

CENTRAL AIRCRAFT CORP.

AEROMARINE KLEMM L-26-A, 2 POLM, ATC 121

Engine	Salmson AD-9 40 hp
Fuel	15 gals.
Oil	1-1/2 gals.
No. passengers	1
Baggage	69 lbs.
Standard weight	1325 lbs.
Spec. basis	Approved Type Certificate No. 121
Serial Nos.	3, 5 to 50 eligible. Approval expired 7-1-32.

NOTE 1. Also approved with optional tail bracing consisting of streamline strut attached to stabilizer and fin.

AEROMARINE KLEMM L-26, 2 POL-SM, ATC 203

Engine	Commonwealth LeBlond 60 5D 65 hp
Fuel	15 gals.
Oil	2 gals.
No. passengers	1
Baggage	55 lbs. (Includes anchor and rope when carried.)
Standard weight	Landplane 1440 lbs. Seaplane 1590 lbs.
Spec. basis	Approved Type Certificate No. 203
Serial Nos.	2-29, 2-30, 2-32 and up mfrd. prior to 7-1-32 eligible. Approval expired as of that date.

AEROMARINE KLEMM L-26, 2 POL-SM, ATC 203 (continued)

Class I equipment: (Seaplane) Edo H floats.

NOTE 1. Also approved with optional tail bracing consisting of streamline strut attached to stabilizer and fin.

AEROMARINE KLEMM L-26-A, 2 POL-SM, ATC 204

Engine	Commonwealth LeBlond 60 5D 65 hp
Fuel	2 ⁹ gals.
Oil	2 gals.
No. passengers	1
Baggage	36 lbs.
Standard weight	Landplane 1590 lbs. Seaplane 1600 lbs.
Spec. basis	Approved Type Certificate No. 204
Serial Nos.	2-16, 2-17, 2-19, 2-29 to 4-76 eligible. Approval expired 7-1-32.

Class I equipment: (Seaplane) Edo H or Aeromarine Kantner floats.

Class III equipment: (Landplane) Airwheels

NOTE 1. Also approved with optional tail bracing consisting of streamline strut attached to stabilizer and fin.

AEROMARINE KLEMM L-26-B, 2 POLM, ATC 334

Engine	Commonwealth LeBlond 85 5DF 86 hp
Fuel	29 gals.
Oil	2 gals.
No. passengers	1
Baggage	36 lbs.
Standard weight	1581 lbs.
Spec. basis	Approved Type Certificate No. 334
Serial Nos.	3-68 to 83 eligible. Approval expired 7-1-32.

NOTE 1. Also approved with optional tail bracing consisting of streamline strut attached to stabilizer and fin.

NOTE 2. Serial Nos. 3-73 and 3-82 eligible with reinforced Aeromarine Klemm L-27 center section.

CALIFORNIA CUB D-1-K, 2 POLM, 2-271
(Remodeled by Madson Flying Service, National City, Calif.)

Engine Kinmer K-5
Placard limits Maximum, except take-off
-- in. Hg., 1650 rpm (90 hp)
Take-off (one minute)
-- in. Hg., 1650 rpm (90 hp)
Propeller Wood
Placard speeds Level flight or climb 93 mph True Ind.
Glide or dive 125 mph True Ind.
Fuel 27 gals. (One tank in fuselage) (-3)
Oil 3 gals. (One tank in fuselage) (-16)
No. pass. 1 (+28) Crew at (+64)
Baggage None
Weights Empty Use actual (Approx. 1109 lbs.
(+22) with Class I items only)
Standard 1592 lbs.
(+24) and (+27)
C.G. limits Aero. Bulletin 7A, Section 3
Spec. basis
Serial Nos. 2 only eligible

EQUIPMENT:

Class I.

101. 22x10-4 wheels (Goodyear 4NBA) and tires
102. 3 in. ball bearing installed as tail wheel

Class II.

200. Misc. items as noted in approved weight and balance report.

Class III.

301. (a) Parachute (Pilot) 20 lbs. (+65)
(b) Parachute (Passenger) 20 lbs. (+29)

NOTE 1. Eligible for export as follows, subject to inspection for equipment specified in Chapter XII of Inspection Handbook; (July 27, 1938)

(a) Canada - Landplane

Skiplane - not eligible.

(b). All other countries except Great Britain and Australia.

NOTE 2. The following placard must be conspicuously posted: "Pilot must be in rear seat when airplane is flown solo."

NOTE 3. Elevator movement limited to: Up 25°, Down 36°.

CALIFORNIA CUB D-2, 2 POLM, 2-344

Engine American Cirrus Mark III 100 hp
Propeller Adj. metal
Fuel 27 gals. (10 gal. tank in CS wing,
17 gal. tank in fuselage)
Oil 2½ gals.
No. pass. 1
Baggage 2 lbs. (Tools)
Standard weight 1592 lbs.
Spec. basis Aero. Bulletin 7A, Section 3
Serial Nos. 1 only eligible

CESSNA AM, 4 PCLM, ATC 72

Engine Warner Scarab 125 hp
Propeller Fixed metal
Fuel 45 gals.
Oil 4.5 gals.
No. pass. 3
Baggage 51 lbs.
Standard weight 2260 lbs.
Spec. basis Approved Type Certificate No. 72
Serial Nos. 1 to 243 eligible
Class III equipment: Revised windshield.

CESSNA BW-5, 3 PCLM, 2-7

Engine Wright J-5 220 hp
Fuel 44 gals.
Oil 4½ gals.
No. pass. 2
Baggage None
Standard weight 2435 lbs.
Spec. basis Aero. Bulletin 7A, Section 3
Serial Nos. 113, 116, 117, 118, 120, 121, 135, 138,
138-A, 142, 143, 144, 147 eligible

CESSNA C-34 (Army UC-77B) 4 PCL-SM. ATC 576
Engine Warner Super Scarab Series 40, 50 or 50A
Placard limits Maximum, except take-off
-- in. Hg., 2050 rpm (145 hp)
Take-off (one minute)
-- in. Hg., 2050 rpm (145 hp)
Propeller Maximum permissible dia., Landplane 90 in.
Placard speeds Landplane
Level flight or climb 167 mph True Ind.
Glide or dive 215 mph True Ind.
Flaps extended 108 mph True Ind.
Seaplane
Level flight or climb 146 mph True Ind.
Glide or dive 195 mph True Ind.
Flaps extended 108 mph True Ind.
Fuel 35 gals. (2 tanks, 1 in each wing at
17½ gals.)(+35)
Oil 3.5 gals. (-18)
No. pass. 3 Front (+4), rear (+39)
Baggage 48 lbs. (+54)
Weights Empty Use actual (Seaplane approx.
256 lbs. increase over landplane incl.
different type propellers)
Standard - Landplane 2250 lbs.
Seaplane 2500 lbs.
C.G. limits Landplane (+14.3) and (+22.1)
Seaplane (+14.7) and (+23.0)
Spec. basis Approved Type Certificate No. 573
Serial Nos. 254, 255, 300 and up mfd. prior to 9-30-39 and
all AAF Nos. eligible. Approval expired as
of 9-30-39.

EQUIPMENT: (Datum is wing leading edge at fuselage)

(* Means net increase)

Class I.

A. Landplane

101. Engine ring cowl (NACA type
with baffles) 24 lbs.
102. Battery (Exide 6AC-7-1) -
aft of baggage compt. 17 lbs.) (See
103. Battery box 7 lbs.) NOTE
104. Starter (Eclipse Y-150) 23 lbs.) 1)
106. 21 in. streamline wheels 60 lbs.
106. 8 in. streamline tail wheel
107. Propeller - fixed pitch wood 27 lbs. (-53)

B. Seaplane: Items 101, 102, 103 & 104 PLUS

151. Special seaplane fin under
fuselage 6 lbs. (+213)
152. Edo 44-2425 floats with water
rudder 329 lbs. (+26)
153. Propeller - fixed pitch metal
(Qurtiss 56511) 47 lbs. (-53)

Class II.

A. Landplane

200. Miscellaneous items as noted in approved
weight and balance report.
201. Stretcher installation
202. Propeller - Adj. metal, Ham. Std.
hub 7056, blades 19B½-12 or -13.
Dia. 90" max., 88" min. 63 lbs. (-53)

B. Seaplane: Items 200, 302, 303 & 305

Class III.

A. Landplane

301. Radio (under pilot's seat) 22 lbs. (+7)
302. Flares Maximum 18 lbs. (+66)
(Wheel flares installed, fire ext. 7 lbs.
must be located at firewall -
otherwise in baggage compt.)
303. Landing lights 7 lbs. (+37)
304. 22x10-4 wheels (Goodyear 4MBA) 9 lbs.* (+1)
305. Extra fuel tank in cabin attached
to rear of front spar
(a) 10 gal. capacity 7 lbs. or
(b) 17½ gal. capacity 12 lbs.
306. 6.50-10 wheels (Warner M-3270)
Net decrease 5 lbs.

307. Generator

- (a) (Eclipse) 16 lbs.
(b) (Bosch) 11 lbs.
(c) (Hodges H-12-V)
(1) Engine-driven 14 lbs. (-27)
(2) Wind-driven 10 lbs. (-3)

CESSNA C-34 (CONTINUED)

308. Engine shielding	3 lbs. (-39)
309. Cabin heater	3 lbs.
310. Miscellaneous instruments	Max. 8 lbs. (-12)
311. 6.50-10 wheels (Detro-Mich)	
	Net decrease 5 lbs.
312. Propeller - fixed pitch metal (Curtiss 55511)	47 lbs. (-53)
313. Electric flap control	10 lbs.*
314. Emergency exit	5 lbs. (+20)
315. Pilot hatch	3 lbs. (-2)
316. Camera apertures	3 lbs. (-3)
317. Skis	Use actual weight
	(a) Wien Alaska W-2500
	(b) Wien Alaska W-2500-A
	(c) Wien Alaska GS-5
	(d) Federal SC-3

B. Seaplane; Items 301, 307, 308, 309, 310, (312 is standard), 313, 314, 315 & 316.

NOTE 1. Items 102, 103 and 104 may be removed simultaneously without C.G. check.

NOTE 2. Eligible for export as follows, subject to inspection for equipment specified in Chapter XII of Inspection Handbook: (March 8, 1938)

- (a) Canada - Landplane
 Seaplane
 Skiplane - not eligible. However, structure complies with Canadian requirements for ski gear with ski height of 8.5 in. or less.
- (b) All other countries.

CESSNA C-37, (Army UC-77C, UC-77D), 4 PCL-SM, ATC 622

Engine	Warner Super Scarab Series 40, 50 or 50A
Fuel	73 min. octane (CFR) Aviation gasoline
Engine limits	For all operations, 2050 rpm (145 hp)
Propeller	Maximum permissible dia., Landplane 86 in.
Airspeed limits	Landplane
	Level flight or climb 167 mph True Ind.
	Glide or dive 215 mph True Ind.
	Flaps extended 108 mph True Ind.
	Seaplane
	Level flight or climb 146 mph True Ind.
	Glide or dive 195 mph True Ind.
	Flaps extended 108 mph True Ind.
Fuel capacity	35 gals. (2 tanks, 1 in each wing at 17½ gals.)(+35)
Oil capacity	3.5 gals. (-24)
No. pass.	3 Front (+4), rear (+39)
Baggage	48 lbs. (+54)
Weights	Empty Use actual (Seaplane approx. 256 lbs. increase over landplane incl. different type propellers)
	Standard - Landplane 2250 lbs.
	Seaplane 2500 lbs.
C.G. Range	Landplane (+14.2) and (+23.3) Seaplane (+14.7) and (+23.0)
Leveling means	Set level on a 15/16" thick block against bottom of front spar at Rib 3 from fuselage and a 2" thick block against bottom of rear spar at Rib 3 from fuselage.
Cert. basis	Approved Type Certificate No. 622
Serial Nos.	330, 342 and up mfrd. prior to 9-30-39 eligible. Approval expired as of that date.

EQUIPMENT: (Datum is wing leading edge at fuselage)

(* Means net increase)

Class I.

A. Landplane

101. Engine ring cowl (NACA type with baffles)	24 lbs.
102. Battery (Exide 6AC-7-1) - aft of baggage compt.	17 lbs.
103. Battery box	7 lbs.
104. Starter (Eclipse Y-150)	23 lbs.
105. Generator - wind-driven (Hodges H-12V)	10 lbs. (-3)
106. 6.50-10 (Detro-Mich.) wheels	55 lbs.
107. 8. in. streamline tail wheel	
108. Electric flap control	
109. Propeller - fixed pitch wood	27 lbs. (-53)

CESSNA C-37 (CONTINUED)

B. Seaplane; Items 101, 102, 103, 104, 105, 108 PLUS	
151. Special seaplane fin under fuselage	6 lbs. (+215)
152. Edo 44-2425 floats with water rudder	329 lbs. (+26)
153. Propeller - fixed pitch metal (Curtiss 55511)	47 lbs. (-53)

Class II.

A. Landplane

200. Miscellaneous items as noted in approved weight and balance report.

201. Stretcher installation

B. Seaplane; Items 200, 201, 302, 303, 310, 311, 315 & 316.

Class III.

A. Landplane

301. Radio (under pilot's seat)	22 lbs. (+7)
302. Flares	
	(a) Three 1½ minute 18 lbs. (+66)
	(b) Five 1 minute 15 lbs. (+66)
303. Landing lights	
	(a) Two (ST-250) 11 lbs. (+37)
	(b) One (Grimes ST-1000) 7 lbs. (+37)
304. 22x10-4 wheels (Goodyear 4MBA)	69 lbs. (+1)
305. 21 in. streamline wheels (Autofan CS100) with (Goodyear) 4 ply tires	60 lbs. (+1)
306. 6.50-10 wheels (Warner M-3270)	57 lbs. (+1)
307. Generators - Engine-driven	
	(a) (Eclipse G-15A-15V) 21 lbs. (-27)
	(b) (Bosch LE70-12R5) 16 lbs. (-27)
	(c) (Hodges H-12V) 14 lbs. (-27)
308. Pilot hatch	3 lbs. (-2)
309. Engine shielding	5 lbs. (-39)
310. Battery (Exide 6TS-7-1) - aft of baggage compt.	26 lbs. (+66)
311. Cabin heater	5 lbs.
312. Extra instruments	9 lbs. (-11)
313. Propeller -fixed pitch metal (Curtiss 55511)	47 lbs. (-53)
314. Manual flap control	3 lbs.
315. Extra 10 gal. fuel tank	8 lbs. (+26)
316. Extra 17½ gal. fuel tank	12 lbs. (+24.5)
317. Wheel streamlines	22 lbs. (+0)
318. Emergency exit	5 lbs. (+20)
319. Camera apertures	3 lbs. (-8)
320. Skis	Use actual weight
	(a) Wien Alaska W-2500
	(b) Wien Alaska W-2500-A
	(c) Wien Alaska GS-5
	(d) Federal SC-3
321. Propeller - Ham. Std. adj. metal, hub 7056, blades 19B½-16 or-17. Dia. 86" max., 84" min.	

B. Seaplane; Items 301, 307, 308, 309, 312, 314, 318 & 319.

NOTE 1. Eligible for export as follows, subject to inspection for equipment specified in Chapter XII of Inspection Handbook: (March 9, 1938)

- (a) Canada - Landplane
 Seaplane
 Skiplane - not eligible. However, structure complies with Canadian requirements for ski gear with maximum ski height of 9 in.
- (b) All other countries.

CESSNA C-38, 4 PCL-SM, TC 668

(May be converted to Model C-185 in accordance with NOTE 7 of Aircraft Specification for that model.)

Engine	Warner super scaroo Series 50 or 50A
Engine limits	For all operations, 2050 rpm (145 hp)
Propeller	Maximum permissible diameter Landplane 90 in., Seaplane 96 in.
Airspeed limits	Landplane Level flight or climb 104 mph True Ind. Glide or dive 115 mph True Ind. Flaps ext. (90° down) 110 mph True Ind. Seaplane Level flight or climb 146 mph True Ind. Glide or dive 195 mph True Ind. Flaps ext. (70° down) 108 mph True Ind.
Fuel	35 gals. (2 tanks, 1 in each wing at 17½ gals.)(+61)
Oil	3.5 gals. (+4)
No. pass.	3 (Front (+34), rear (+68))
Baggage	64 lbs. (+82)
Weights	Empty Use actual (Seaplane approx. 256 lbs. increase over landplane) Standard - Landplane 2350 lbs. Seaplane 2500 lbs.
C.G. limits	(+41.2) and (+49.3) (Landplane) (+41.5) and (+49.8) (Seaplane)
Spec. basis	Type Certificate No. 668 Production Certificate No. 4
Serial Nos.	401 to 449, inclusive, mfrd. prior to Aug. 27, 1942, eligible. Approval expired as of that date. Serial Nos. 401 to 405, incl., must have baggage support (Dwg. C38641)

EQUIPMENT: (Datum is centerline bulkhead No. 1 (Firewall))
(* Means net increase) (See NOTE 4)

Class I.

A. Landplane

101. Engine cowling (NACA type with baffles)	24 lbs. (-16)
102. Propeller - fixed pitch wood	27 lbs. (-27)
103. 3.50-10 wheels (Warner M-3270)	57 lbs. (+28)
104. 8 in. streamline tail wheel	4 lbs. (+243)
105. Battery (Exide STS-7-1) - aft of baggage compt.	26 lbs. (+97)
106. Battery box	7 lbs. (+97)
107. Leveling blocks	
108. Carburetor heater (Dwg. C38912)	3 lbs. (-8)
B. Seaplane: Items 101, 105, 106, 107, 108 PLUS	
151. Seaplane fin (Dwg. 37451)	6 lbs. (+240)
152. Edo 44-2425 floats with water rudder	329 lbs. (+53)
153. Propeller - fixed pitch metal - Curtiss 55511	47 lbs. (-27)

Class II.

200. Miscellaneous items as noted in approved weight and balance report.	
201. Starter (Eclipse Y-150)	23 lbs. (+0)
202. Camera apertures (Dwg. C37908-2, -4, -5)	3 lbs. (+56)
203. Navigation lights (Grimes C)	2 lbs. (+70)
204. Generators	
(a) Wind-driven (Hodges H-12V)	10 lbs. (+31.5)
(b) Engine-driven (Hodges H-12V)	14 lbs. (-4)
(c) Engine-driven (Bosch LE70-12R5)	16 lbs. (-4)
(d) Engine-driven (Eclipse G-15A-15V)	21 lbs. (-4)
206. Flares	
(a) Three 1½ minute electric	18 lbs. (+92)
(b) Five 1 minute electric	15 lbs. (+92)
206. Landing lights	
(a) (Grimes ST-250)	11 lbs. (+56)
(b) (Grimes ST-1000)(Lt. only)	7 lbs. (+56)
207. 22x10-4 wheels and tires (Goodyear 4MRA)	69 lbs. (+28)
208. 21 in. streamline wheels (Autofan CS100) with 21 in. streamline tires	60 lbs. (+28)
209. Pilot hatch (Dwg. C37512)	3 lbs. (+36)
210. Engine shielding	5 lbs. (-13)

CESSNA C-38 (Continued)

211. Cabin heater (Dwg. C37915)	5 lbs. (-9)
212. Extra instruments	20 lbs. (+16)
213. Propellers	
(a) Fixed pitch metal - Curtiss 55511 (Landplane)	47 lbs. (-27)
(b) Adj. metal - Ham. Std. hub 7056. blades 19B4-16 or 19B4-17 Dia. 7'2" max., 7'1/4" min.	63 lbs. (-27)
214. Wheel streamlines (Dwg. C37353)	27 lbs. (+28)
215. Emergency exit (Dwg. C37511)	5 lbs. (+53)
216. Radio	
(a) Superior 8B receiver (Dwg. C38901-1)	8 lbs. (+34)
(b) RAC AVD-7D, E, F, G receiver (Dwg. C38901-2)	31 lbs. (+34)
(c) RAC AVR-10 receiver	9 lbs. (+25) or (+51)
(d) Superior transmitter (Dwg. C38901-5)	11 lbs. (+34)
(e) Dynamotor (Dwg. C38901-3)	16 lbs. (+62)
(f) Antenna reel (Dwg. C38901-4)	2 lbs. (+45)
217. 10 gal. cabin fuel tank (Dwg. C38764)	8 lbs. (+49.5)
218. 17½ gal. cabin fuel tank (Dwg. C38764)	12 lbs. (+51)
219. Photographer's seat (1 person only) (Dwg. C38602)	8 lbs. (+82)
220. Camera support (Dwg. C37908-3)	2 lbs. (+55)
(Any camera up to 62 lbs. in weight may be installed according to Dwg. C37908-3. Inspector should list type, weight and make of camera; obtain a weight and balance report both with and without camera installed.)	
221. Heavy duty landing gear	
(a) Tail wheel fork (9 lbs.)	1 lb.* (+244)
(b) Main gear (100 lbs.)	10 lbs.* (+28)
222. Skis	Use actual weights
(a) Wien Alaska W-2500	
(b) Wien Alaska W-2500-A	

Class III.

None.

NOTE 1. Eligible for export as follows, subject to inspection for equipment specified in Chapter XII of Inspection Handbook: (February 16, 1939)

(a) Canada - Landplane

Seaplane - max. standard weight 2425 lbs.
Skiplane - not eligible. However, structure (Dwg. C38357, Rev. A) complies with Canadian requirements for ski gear with maximum pedestal height of 14 in. and tread of 79 in. with gear in half-deflected position. Tail skid structure satisfactory for installation of tail ski on tail wheel fork and axle assembly (Dwg. C38383).

(b) All other countries.

NOTE 2. Relief valve in hydraulic flap operating system must be set to open at 180 lbs. per sq. in.

NOTE 3. Control surface movement:

Rudder 25° from centerline airplane.

Elevator 25° Up, 23½° Down.

Aileron 25° Up, 25° Down.

Tab 6.5° Up, 22° Down.

Flap - see placard speeds.

NOTE 4. Weight and balance report including list of equipment included in certificated weight empty, and loading instructions when necessary, must be submitted with original inspection report and each subsequent report covering change in equipment.

CESSNA DC-6A (Army UC-77), 4 PCLM, ATC 243

Engine Wright R-975 330 hp
Fuel 66 gals.
Oil 9½ gals.
No. pass. 3
Baggage 271 lbs.
Standard weight 3350 lbs.
Spec. basis Approved Type Certificate No. 243
Serial Nos. 199 to 246, 291 and all AAF Nos. eligible
Class I equipment: Hand inertia starter.
Class III equipment: Oil tank installed aft of cabin.

CESSNA DC-6B (Army UC-77A), 4PCLM, ATC 244

Engine Wright R-760 250 hp
Fuel 66 gals.
Oil 7 gals.
No. pass. 3
Baggage 100 lbs. (See NOTE 1)
Standard weight 3100 lbs. (See NOTE 1)
Spec. basis Approved Type Certificate No. 244
Serial Nos. 198,200,201,202,203,205 and up mfd. prior to 9-30-39 and all AAF Nos. eligible.
Approval expired as of 9-30-39.

Class I equipment: Hand inertia starter.

Class III equipment: Tail wheel; 30x5 wheels and brakes (Bendix); elongated oleo and vee struts to accommodate installation of low pressure tires.

NOTE 1. Serial No. 246 also eligible with oil tank installed aft of cabin with the following:

Baggage 75 lbs.; Standard weight 3075 lbs. Others eligible upon submission of mfr's affidavit of conformity with approved data for the installation.

CESSNA C-3, 4 PCLM, 2-473

Engine Warner Scarab 125 hp
Propeller Adj. metal
Fuel 44 gals. (Two tanks, one 22 gal. tank in each wing)
Oil 4½ gals.
No. pass. 3
Baggage 50 lbs.
Standard weight 2260 lbs.
Spec. basis Aero. Bulletin 7A, Section 3
Serial Nos. 4 only eligible
Class I equipment: Engine ring cowl 15 lbs.; wheel streamlines; 6.50-10 wheels; 10x3 tail wheel.

CHAMBERLIN C-81, 8 PCLM, 2-355

Engine Wright R-975 330 hp
Propeller Adj. metal
Fuel 100 gals.
Oil 10 gals.
No. pass. 7
Baggage 170 lbs.
Standard weight 4950 lbs.
Spec. basis Aero. Bulletin 7A, Section 3
Serial Nos. 2 only eligible
Class I equipment: Hand inertia starter.

CHAMBERLIN C-82, 7 PCLM, 2-343

Engine Wright R-975 330 hp
Fuel 100 gals.
Oil 10 gals.
No. pass. 6
Baggage 170 lbs.
Standard weight 4590 lbs.
Spec. basis Aero. Bulletin 7A, Section 3
Serial Nos. 3 only eligible
Class I equipment: Engine ring cowl 18 lbs. and toilet equipment.

5-20700

COMMAND-AIRE 3-C-3, 3 POLB, ATC 53

Engine Curtiss OX5 90 hp or OXK 102 hp
 Propeller Wood or fixed metal
 Fuel 45 gals.
 Oil 3-1/2 gals.
 No. passengers 2
 Baggage None with 2 passengers
 30 lbs. with 1 passenger

Standard weight 2286 lbs.

Spec. basis Approved Type Certificate No. 53
 Serial Nos. 511 to 641 eligible (See NOTE 1)

NOTE 1. Serial Nos. 501 thru 510 eligible provided following reinforcement made: Reinforcement will consist of 3/4 in. spruce strips on upper center section spars covering full height of spars. Inspection reports should show that reinforcement has been satisfactorily completed.

COMMAND-AIRE 3-C-3, 3 POLB, 2-201

Engine Curtiss OX5 90 hp

Fuel 45 gals.
 Oil 3-1/2 gals.

No. passengers 2

Baggage 5 lbs.

Standard weight 2118 lbs.

Spec. basis Aero. Bulletin 7A, Section 3

Serial Nos. 640 to 666 eligible.

COMMAND-AIRE 3-C-3 TRAINER, 2 POLB, ATC 150

Engine OX5 90 hp or OXK 102 hp

Propeller Wood

Fuel 44 gals.

Oil 3-1/2 gals.

No. passengers 1

Baggage None (Pay load includes 2 parachutes
 20 lbs. each)

Standard weight 2109 lbs.

Spec. basis Approved Type Certificate No. 150

Serial Nos. 606 to 639 eligible (See NOTE 1)

NOTE 1. Serial Nos. 551 to 601 eligible after they have been reworked at factory.

COMMAND-AIRE 3-C-3A, 3 POLB, ATC 118

Engine Warner Scareab 125 hp

Propeller Wood or adj. metal

Fuel 42 gals.

Oil 5 gals.

No. passengers 2

Baggage 15 lbs.

Standard weight 2172 lbs.

Spec. basis Approved Type Certificate No. 118

Serial Nos. All mfrd. prior to 9-30-39 eligible.

Approval expired as of that date.

NOTE 1. Eligible with or without airwheel installation on rigid chassis.

COMMAND-AIRE 3-C-3A TRAINER, 2 POLB, ATC 161

Engine Warner Scareab 125 hp

Propeller Wood or adj. metal

Fuel 48 gals.

Oil 5 gals.

No. passengers 1

Baggage None (Pay load includes 2 parachutes
 20 lbs. each)

Standard weight 1990 lbs.

Spec. basis Approved Type Certificate No. 161

Serial Nos. W-60 and up mfrd. prior to 9-30-39

eligible. Approval expired as of that date.

COMMAND-AIRE 3C-3B, 3 POLB, ATC 120

Engine Siemens-Halske 14 115 hp

Propeller Wood

Fuel 44 gals.

Oil 4-1/2 gals.

No. passengers 2

Baggage None

Standard weight 2135 lbs.

Spec. basis Approved Type Certificate No. 120

Serial Nos. All mfrd. prior to 9-30-39 eligible.

Approval expired as of that date.

Class I equipment: Hand wobble pump and visual over-glow gage

Class III equipment: 22x10-4 tires.

COMMAND-AIRE 5C-3, 3 POL-3B, ATC 184

Engine Curtiss Challenger R-600 185 hp

Propeller Adj. metal

Fuel 55 gals. (One tank in fuselage)

Oil 5 gals.

No. passengers 2

Baggage 5 lbs.

Standard weight Landplane 2385 lbs.

Seaplane 2547 lbs.

Spec. basis Approved Type Certificate No. 184

Serial Nos. Landplane - W-93 and up mfrd. prior to 9-30-39 eligible.

Seaplane - W-137 and up mfrd. prior to 9-30-39 eligible.

Approval of both expired 9-30-39

Class I equipment: Hand inertia starter; Edn DeLuxe floats.

Class III equipment: Engine ring cowl 17 lbs. (Standard weight may be increased accordingly)

NOTE 1. Serial Nos. W-82 and W-86 eligible as landplane and W-93 to W-136 eligible as seaplane, provided they are changed to conform to approved data. (Manufacturer's affidavit of conformity required.)

COMMAND-AIRE 5C-3, 3 POLB, 2-251

Engine Curtiss Challenger R-600 185 hp

Fuel 47 gals.

Oil 5 gals.

No. passengers 2

Baggage 30 lbs.

Standard weight 2419 lbs.

Spec. basis Aero. Bulletin 7A, Section 3

Serial Nos. W-143 only eligible.

COMMAND-AIRE 5C-3A, 3 POLB, ATC 185

Engine Hispano A 150 hp

Propeller Wood

Fuel 60 gals. (Fuselage tank 40 gals.,
 2 wing tanks 10 gals. each)

Oil 5 gals.

No. passengers 2

Baggage 5 lbs.

Standard weight 2523 lbs.

Spec. basis Approved Type Certificate No. 185

Serial Nos. W-54 to W-81 eligible.

COMMAND-AIRE 5C-3B, 3 POLB, ATC 214

Engine Axelson 115 hp

Propeller Adj. metal

Fuel 51 gals.

Oil 5 gals.

No. passengers 2

Baggage 16 lbs.

Standard weight 2372 lbs.

Spec. basis Approved Type Certificate No. 214

Serial Nos. W-61 and up mfrd. prior to 9-30-39

eligible. Approval expired as of that date.

COMMAND-AIRE 5C-3B, 3 POLB, 2-249

Engine Axelson 115 hp

Fuel 54 gals.

Oil 5 gals.

No. passengers 2

Baggage 7 lbs.

Standard weight 2510 lbs.

Spec. basis Aero. Bulletin 7A, Section 3

Serial Nos. W-142 only eligible.

COMMAND-AIRE 5C-3C, 3 POLB, ATC 233

Engine Wright R-540 175 hp

Propeller Adj. metal

Fuel 55 gals.

Oil 5 gals.

No. passengers 2

Baggage 33 lbs. (Pay load includes parachute
 20 lbs.)

Standard weight 2490 lbs.

Spec. basis Approved Type Certificate No. 233

Serial Nos. W-110 and up mfrd. prior to 9-30-39

eligible. Approval expired as of that date.

Class I equipment: Hand inertia starter 29 lbs.

CONSOLIDATED VULTEE ARMY BT-13, BT-13A (NAVY SNV-1), BT-13B (NAVY SNV-2), BT-15; 2-571

I - MODEL ARMY BT-13, BT-13A (NAVY SNV-1), BT-13B (NAVY SNV-2), 2 PCLM, APPROVED JUNE 2, 1946

Engine P&W Wasp Jr. T1B2 or T1B3 or Military Models R-985-26, -27, -AN-1 or -AN-3

Fuel 87 min. octane (CFR) aviation gasoline

Engine limits Maximum, except take-off,
(Sea level) 37.5 in. Hg., 2300 rpm (460 hp)
(Straight line manifold pressure variation with altitude to 1500 ft.)
37.0 in. Hg., 2300 rpm (460 hp)
Take-off (one minute),
37.5 in. Hg., 2300 rpm (460 hp)

Airspeed limits Level flight or climb 177 mph True Ind.
Glide or Dive 207 mph True Ind.
Flaps extended 111 mph True Ind.

C.G. range (+31.9)(18.8% MAC) to (+41.25)(32.0% MAC)

Empty weight C.G. range (+30.65)(17.1% MAC) to (+32.12)(19.14% MAC) (See NOTE 2)

Datum Forward face of firewall

MAC 71.3 in. L.E. MAC at (+18.47)

Leveling means Leveling lugs at right of rear cockpit (sta. 113-5/32 and 132-33/64)

Standard weight 4360 lbs.

No. seats 2 (1 at +45) (1 at +105)

Baggage 175 lbs. Maximum (+132.5)

Fuel capacity 120 gal. (+56) (one 60 gallon tank in each side of center section. Right tank has reserve of 17 gal. included in the capacity of 60 gal.)

Oil capacity 10.9 gal. (-8.5)

Control surface movements

Wing flaps			
Elevator	Up 30°	Down 25°	
Elevator trim tab	Up 25°	Down 25°	
Aileron	Up 26°	Down 11.5°	
Aileron trim tab	Up 5°	Down 6°	
Rudder	Right and Left 35°		
Rudder trim tab	Right and Left 25°		

Serial Nos. eligible - All Army and Navy serial numbers

Required equipment - Items 1 or 2, 101, 103, 104, 106, 107, 201, 202

II - MODEL ARMY BT-15, 2 PCLM, APPROVED MAY 31, 1946

Engine Wright R-975E-3 or Military Model R-975-11

Fuel 80 min. octane (CFR) aviation gasoline

Engine limits Maximum except take-off,
(Sea level) 34.8 in. Hg., 2200 rpm (420 hp)
(Straight line manifold pressure variation with altitude to 1400 ft.)
34.5 in. Hg., 2200 rpm (420 hp)
Take-off (one minute),
36.5 in. Hg., 2250 rpm (450 hp)

Airspeed limits Level flight or climb 177 mph True Ind.
Glide or Dive 207 mph True Ind.
Flaps extended 111 mph True Ind.

C.G. range (+31.9)(18.8% MAC) to (+41.25)(32.0% MAC)

Empty weight C.G. range (+30.65)(17.1% MAC) to (+31.12)(19.14% MAC) (See NOTE 2)

Datum Forward face of firewall

MAC 71.3 in. L.E. MAC at (+18.47)

Leveling means Leveling lugs at right of rear cockpit (sta. 113-5/32 and 132-33/64)

Standard weight 4360 lbs.

No. seats 2 (1 at +45) (1 at +105)

Baggage 175 lbs. Maximum (+132.5)

Fuel capacity 120 gal. (+56) (one 60 gallon tank in each side of center section. Right tank has reserve of 17 gal. included in the capacity of 60 gal.)

Oil capacity 10.9 (-8.5)

Control surface movements

Wing flaps			
Elevator	Up 30°	Down 25°	
Elevator trim tab	Up 25°	Down 25°	
Aileron	Up 26°	Down 11.5°	
Aileron trim tab	Up 5°	Down 6°	
Rudder	Right and Left 35°		
Rudder trim tab	Right and Left 25°		

Serial Nos. eligible - All Army and Navy serial numbers

Required equipment - Items 1, 101, 103, 104, 106, 107, 201, 202

CONSOLIDATED VULTEE ARMY BT-13 Series, BT-15 (continued)
SPECIFICATIONS PERTINENT TO ALL MODELS

Certification basis - CAR 04.031 prior to Nov. 9, 1945

Eligible for export as follows subject to inspection for equipment specified in Chapter XII of the Inspection Handbook:

- (a) Canada - Landplane
Skiplane - not eligible
- (b) All other countries except Great Britain, Australia, and New Zealand

Equipment: (Items included in required list under specifications pertinent to individual models may not be removed unless replaced by approved equivalent items. The effect upon balance of all equipment changes must be computed and the aircraft operation record revised accordingly.)

Values in inches shown in parenthesis after each item represent horizontal arms to the C.G. of the item measured minus (-) ahead and plus (+) to the rear of the datum. A plus (+) or minus (-) sign preceding the weight of an optional item indicates the net weight change between that item and the equivalent required item.)

Propellers and Propeller Accessories

- Propeller - Ham. Std. two position controllable, hub 2D30, blades 6101A-12 to 6101A-14.
 - (a) Models BT-13, -13A, -13B, SNV-1, SNV-2 163 lbs. (-59)
 - (b) Model BT-15 163 lbs. (-62.5)
 Diameter - 9' 1/8" maximum, 8' 9-3/4" minimum.
Pitch settings at 42 inch station:
Models BT-13, -13A, -13B, SNV-1, SNV-2:
Low - 12.5°; High - 18.5°
Model BT-15:
Low - 13.5°; High - 18.5°
- Propeller - Army two position controllable, hub 2D30 Blades 42K13717 (for models BT-13, -13A, -13B, SNV-1, SNV-2 only) 177 lbs. (-59)
Diameter - 9' 1/8" maximum, 8' 9-3/4" minimum
Pitch settings at 42 inch station:
Low 13.5°; High 18.5°

- (a) Propeller - Ham. Std. constant speed, hub 2D30, blades 6101A-12 to 6101A-14. 163 lbs. (-59)
Dia. 9' 1/8" max., 8' 9-3/4" min.
Min. low pitch setting 12.5° at 42 in. sta.
(Models BT-13, -13A, -13B, SNV-1, -2 only)
- Constant speed governor - Ham. Std. 1A2 (See NOTE 4) 6 lbs. (-27.5)

Engine and Engine Accessories - Fuel and Oil System

- Carburetor air preheater and muff Model BT-13A 16 lbs. (-28)
Model BT-15 16 lbs. (-31)
- Starter Eclipse H-5 (Model BT-13A) 37 lbs. (-23)
Eclipse Type 444 (Model BT-15) 37 lbs. (-26)
- Oil cooler U.A.P. U-3170-W-D6 (Model BT-13A) 18 lbs. (-14.5)
Air Research 2D-3281 (Model BT-15) 19 lbs. (-16)
- Engine-driven fuel pump Chandler Evans, Type F (Model BT-13A) 2 lbs. (-34)
Pesco, F-4A (Model BT-15) 2 lbs. (-25.5)
- Engine-driven vacuum pump Pesco, Type B-12 (Model BT-13A) 6 lbs. (-31.5)
Pesco, Type B-12 (Model BT-15) 6 lbs. (-24.0)
- Fuel unit (strainer, hand pump and controls) 9 lbs. (+49.5)
- Engine cowl and supports Model BT-13A 39 lbs. (-28)
Model BT-15 39 lbs. (-31.5)

Landing Gear and Floats

- 27 inch smooth contour wheels and brakes (Hayes model 2750A) 6 or 8 ply tires 127 lbs. (+14)
 - 10 inch smooth contour tail wheel (Goodyear) with 4 or 6 ply tire 6 lbs. (+248)
- Electrical and Radio Equipment
- Battery-Gould D-6-A, 12 volt 71 lbs. (-4)
 - Generator - 50 Amp. Leece-Neville E-5A (Model BT-13A) 24 lbs. (-28.5)
Eclipse Type 790 (Model BT-15) 24 lbs. (-27)

Miscellaneous (not listed above)

- Miscellaneous items as noted under this number in approved weight and balance report.

CONSOLIDATED VULTEE ARMY BT-13 Series, BT-15 (continued)

NOTE 1. The following must be accomplished prior to certification of the aircraft:

- (a) Placard rear cockpit "Solo Flying From Front Seat Only."
- (b) Placard both cockpits "Intentional Spinning Prohibited."
- (c) Provide an oil measuring stick for oil tank.
- (d) Provide a first aid kit.
- (e) Modify the elevator trim tabs by adding a two-inch wide strip of .032 inch Alclad along the trailing edges so that 1.5 inches of the strips extend rearward from the present trailing edges. On the aluminum tabs, rivet the strip to the present tabs by means of 1/8 inch diameter rivets spaced two inches on centers. On wood tabs, rivet the strips to the present tabs by means of 1/8 inch diameter hollow rivets and washers spaced two inches on centers.
- (f) For day operation, only circuit protectors in the circuits to electrical equipment used in the operation need be made accessible to the pilot in flight. The airplane should be restricted to day operation.
- (g) To make the airplane eligible for night operation the following must be accomplished:
 - (1) Provide certificated position lights.
 - (2) Remove position light resistors.
 - (3) Relocate all electrical circuit protective devices so that they are accessible to the pilot in flight.
- (h) Removal of the propeller spinner is optional.
- (i) Placard the baggage compartment, "Maximum capacity 175 lbs."
- (j) BT-13. A generator field switch should be installed adjacent to the battery actuating toggle switch now installed on the front cockpit electrical panel, and the levers of the two switches should be ganged for master switch operation.

BT-13A and BT-15. A generator field switch should be installed to be controlled by the pilot in the front cockpit. In addition, the battery solenoid circuits now connected to the ignition switch should be removed and connected to a separate switch installed adjacent to the generator switch and ganged with it.

BT-13B. Either the battery or generator switch should be moved so that these switches are adjacent to each other, and the levers of the two switches should then be ganged.

NOTE 2. If the empty weight C.G. of a particular airplane falls within the range given it is not necessary to check the critical forward and aft loading conditions. If the empty weight C.G. does not fall within the empty weight C.G. limits given, those conditions should be checked to determine whether the airplane will remain within the approved C.G. limits. In cases where it is possible to load an airplane in a manner not covered herein (i.e. extra tanks, extra seats, etc.), the usual complete calculations should be made.

NOTE 3. Wood components may be interchanged with similar metal parts provided one wood wing is not used with one metal wing.

NOTE 4. When propeller item 3(b) is installed, the installation must be inspected to insure that the propeller control system from the belt crank located at the fire-wall to the governor control arm is so installed that reliable free and easy control rod action is provided.

COMMAND-AIRE BS-14, 2 POLE, 2-204

Engine	Warner Scareab	125 hp
Propeller	Adj. metal	
Fuel	45 gals.	
Oil	5 gals.	
No. pass.	1	
Baggage	None	
Standard weight	1983 lbs.	
Spec. basis	Aero. Bulletin 7A, Section 3	
Serial Nos.	W-138 only eligible.	

CONSOLIDATED 16 COMMODORE TYPES 1 & 2, 25 OR 33 PCFm, ATC 258

Engines	2 P&W Hornets B at 575 hp (See NOTE 1)
Fuel	650 gals.
Oil	50 gals.
No. pass.	Type 1, 22; Type 2, 30
Baggage	Type 1, 1612 lbs.; Type 2, 250 lbs.
Standard weight	17800 lbs. (See NOTE 1)
Spec. basis	Approved Type Certificate No. 258
Serial Nos.	1 to 14 eligible

Class I equipment: Toilet equipment (1 washroom complete); battery; anchor & cable; Mooring pendant; radio; landing lights; flares & holders; generator; starter.

NOTE 1. Also eligible with 2 P&W Hornets T2D1 at 660 hp. Net increase 50 lbs. (20 lbs. for each engine and 5 lbs. for each fuel pump change). Maximum standard weight 17650 lbs. Approved propeller installations as follows:

- (a) Ham. Std., 5977H hubs, D7C1 $\frac{1}{2}$ -19 or 7C1 $\frac{1}{2}$ -18 blades. Continuous operation between 1600 rpm and 1750 rpm should be avoided with this installation.
- (b) Ham. Std., two-position, 3D40 hubs, 6101A-6 blades; low pitch setting 13-3/4°.

NOTE 2. Fuel dump valves must be made positively inoperative pending satisfactory completion of dump tests.

CONSOLIDATED FLEETSTER 17 and 17 SPECIAL, ATC 291I - SPECIFICATIONS PERTINENT TO ALL MODELS:

Fuel capacity	144 gals.
Oil capacity	12 gals.
No. pass.	Landplane 7 Seaplane 5
Baggage	(Canvas bag compartment may be installed in back of rear seat) 30 lbs.
Weights	Empty Use actual (Seaplane 498 lbs. increase over landplane) Standard Landplane 5600 lbs. Seaplane 5570 lbs.
Spec. basis	Approved Type Certificate No. 291
Serial Nos.	1 thru 4 eligible.

EQUIPMENT: (* Means net increase)

Class I:

A. Landplane

101. NACA engine ring cowl
102. Electric inertia starter
103. 32x6 wheels and tires
104. Wheel streamlines
105. Generator
106. Battery

B. Seaplane: Items 101, 102, 105 and 106 P/N

151. Edo model J floats

Class II: None

Class III:

301. Landing lights and flares 77 lbs.*
302. 35x15-6 wheels and tires 30 lbs. decrease from standard wheels with streamlines
303. Radio equipment - RCA Model AVT-7A transmitter and Model AVR-7F receiver (replacing right hand seat and occupant in cockpit) 60 lbs.
304. Special leather upholstery 88 lbs.
305. Exhaust tail pipes 8 lbs.

CONSOLIDATED FLEETSTER 17 (Continued)II - Model Fleetster 17 Designation 8 PCLM or 6 PCSM

Engine	P&W Hornet B1
Placard limits	Maximum, except take-off -- in.Hg., 1950 rpm (575 hp) Take-off (one minute) -- in.Hg., 1950 rpm (575 hp)
Propeller	Adjustable metal

III - Model Fleetster 17 Special Designation 8 PCLM or 6 PCSM

Engine	P&W Hornet C
Placard limits	Maximum, except take-off -- in.Hg., 1950 rpm (575 hp) Take-off (one minute) -- in.Hg., 1950 rpm (575 hp)
Propeller	Hamilton Standard, Hub 2038, Blades 17A2-16A

(Same as Fleetster 17 except for engine and propeller change resulting in 11 lbs. additional weight.)

CONSOLIDATED FLEETSTER 17AF, 9 PCLM, ATC 486

Engine	Wright Cyclone R-1820F-21M 575 hp
Propeller	Adjustable metal
Fuel	200 gals. (3 tanks - 2 in wings at 82 $\frac{1}{2}$ gals. and one in center section 35 gals.)
Oil	14 gals.
No. pass.	8
Baggage	279 lbs. (Fwd. compt.)
Standard weight	6500 lbs.
Spec. basis	Approved Type Certificate No. 486
Serial Nos.	1, 2 and 3 eligible

Class I equipment: Engine ring cowl 52 lbs.; Battery (installed in rear) 62 lbs.; Starter 34 lbs.; 30x13-6 wheels and tires with hyd. brakes; Tail wheel; Landing lights 27 lbs.; Flare brackets 4 lbs.; Generator 19 lbs.; Fire extinguisher 12 lbs.; Special equipment in rear compartment (rations, snowshoes, covers, etc.) 74 lbs.

CONSOLIDATED FLEETSTER SPECIAL 17 TYPE 2H, 6 PCLM, 2-331

Engine	P&W Hornet B1 575 hp
Propeller	Adjustable metal
Fuel	Serial No. 7 - 144 gals. Serial No. 8 - 179 gals. *
Oil	12 gals. (See NOTE 1)
No. pass.	4
Baggage	90 lbs.
Standard weight	5600 lbs.
Spec. basis	Aero. Bulletin 7A, Section 3
Serial Nos.	7 and 8 only eligible

NOTE 1. Serial No. 8 also eligible with standard 12 gal. oil tank replaced by 20 gal. tank mfrd. by Pacific Airmotive Corp.

CONSOLIDATED FLEETSTER 20-A, 8 PCLM, ATC 494

Engine	P&W Hornet B or B1 575 hp
Propeller	Adj. metal
Fuel	193 $\frac{1}{2}$ gals. (One tank in each wing at 80 gals. and one in CS at 33 $\frac{1}{2}$ gals.)
Oil	15 gals.
No. pass.	7
Baggage	300 lbs.
Standard weight	6800 lbs.
Spec. basis	Approved Type Certificate No. 494
Serial Nos.	1 to 7 eligible

Class I equipment: Engine ring cowl 50 lbs.; Two-way radio 158 lbs.; Landing lights 23 $\frac{1}{2}$ lbs.; Battery 70 lbs.; Flares 36 lbs.; Starter and crank 39 lbs.; Generator 35 lbs.; Cabin and cockpit heater 10 lbs.; Warning light 2 lbs.; 30x13-6 wheels; 16x7-4 tail wheel.

CONSOLIDATED 21-C, 2 FOLB, 2-405

Engine P & W Wasp Jr. A 300 hp
 Propeller Adj. metal
 Fuel 75 gals. (Center section tank 43 gals.)
 and fuselage tank 30 gals.)
 Oil 7 gals.
 No. pass. None
 Baggage 61 lbs. (Pay load includes 2 chutes 20 lbs. ea.)
 Standard weight 3100 lbs.
 Spec. basis Aero. Bulletin 7A, Section 3
 Serial Nos. 1 eligible (See NOTE 1)
 Class I equipment; Engine ring cowl 18½ lbs.; Two landing
 lights 9 lbs.; Starter 36½ lbs.; Flare brackets; Generator
 15½ lbs.; Tail wheel; 9.50-12 tires.
 Class III equipment; Battery 38 lbs.
 NOTE 1. Serial No. 12 also eligible with the following:
 Fuel 68 gals. (CS tank 25 gals., fuselage tank 43 gals.)
 Baggage 55 lbs. (Front compt. 40 lbs., rear compt. 15 lbs.)
 Class I equipment; Engine ring cowl 8 lbs.; Radio 28 lbs.;
 Landing lights 11 lbs.; Starter 30 lbs.; Generator 11 lbs.
 Special instruments 16 lbs.; Tail wheel; 9.50-12 wheels.
 Class III equipment; Battery 28 lbs.
 NOTE 2. (Deleted - January 18, 1946)

CONSOLIDATED 28-4, PBY-5, PBY-5A (continued)

(1) With authorized weight in excess of standard -
 "Landing shall not be made at a weight in excess of standard
 except in accordance with CAR 61.7811. Fuel shall not be dumped
 except in accordance with CAR 61.7811 and then only if the pilot
 deems it safer than landing at a weight in excess of standard."
 (2) With authorized weight not in excess of standard -
 "Fuel shall not be dumped except in accordance with CAR 61.7811."
 III - Models PBY-5 (Army OA-10) 4 PCFBM and PBY-5A (Army OA-10A)
 4 PCAMM
 Engines 2 P&W Twin Wasps 81C5-G or R-1830-92; with
 spline coupled type 18:9 reduction gear and
 one 3½ dynamic damper.
 Fuel (See NOTE 9) 91 or 100 octane (CFR) aviation gasoline
 Engine limits Maximum, except take-off
 (Sea level) 41.5 in. Hg., 2550 rpm (1050 hp)
 (7500 ft.) 39.5 in. Hg., 2550 rpm (1050 hp)
 (See NOTES 3,9) Take-off (one minute)
 48.0 in. Hg., 2700 rpm (1200 hp) or
 47.0 in. Hg., 2750 rpm (1200 hp)
 Propellers Ham. Std. hubs 2SE50. blades 6153A-12 to
 6153A-14.
 Diameter: 12'-3/8" max. 11' 9-1/4" min.
 For interchangeable blade models see Prop.
 Spec. No. 603 (NOTE 6).
 Low pitch setting: 17° at 42" Sta.
 Level flight or climb 170 mph (148 knots)
 True Ind.
 Glide or dive 199 mph (173 knots) True Ind.
 See Approved Operating Manual
 C.G. range 242.2 in. (22.9% MAC) to 251.5 in. (28.5% MAC)
 Datum 3" aft of bow
 MAC 185.3"
 L.E. of MAC Sta. 199.5
 Leveling means Longitudinal inclinometer at Flight Engineer's
 station (right side) and deck line.
 Max. weight 27,000 lbs. (take-off and landing) (See NOTE 4)
 No. pass. None
 Baggage Maximum capacity of compartments - Sta. 2-4,
 3740 lbs.; Sta. 4-5, 2810 lbs. (PBY-5), 936 lbs.
 (PBY-5A); Sta. 5-6, 4100 lbs.; Sta. 6-7, 3240
 lbs.
 Fuel capacity 1750 gals. (2 tanks in CS at 875 gals.)
 Oil capacity 110 gals. (2 tanks, one in each nacelle at
 55 gals.)
 Control surface Rudder + or - 22°; elevator up 50° down 20°;
 movements aileron up 21° down 20°; rudder trim tab right
 15° left 20°; elevator trim tab 5° down 10°;
 aileron trim tab + or - 15°
 Serial Nos. PBY-5; 91, 92, 93, 94, 163 and all Army and
 eligible Navy serial numbers.
 PBY-5A; 87, 110, 111 and all Army and Navy
 serial numbers.

CONSOLIDATED 28-4, PBY-5 (Army OA-10) AND PBY-5A (Army OA-10A); 2-548

I - SPECIFICATIONS PERTINENT TO ALL MODELS:

Cert. basis Airworthiness Certificate only (CAR 04 prior to
 November 9, 1945).
 II - MODEL 28-4, 9 PCFBM;
 Engines 2 P & W Twin Wasps SC35 or 81C5-G
 Engine limits SC35-G (87 min. octane (CFR) fuel)
 Maximum, except take-off
 (Sea level) 38 in. Hg., 2550 rpm (900 hp)
 (12000 ft.) 34 in. Hg., 2550 rpm (900 hp)
 Take-off (one minute)
 42 in. Hg., 2700 rpm (1050 hp)
 81C5-G (91 min. octane (CFR) fuel)
 Maximum, except take-off
 (Sea level) 41.5 in. Hg., 2550 rpm (1050 hp)
 (7500 ft.) 39.5 in. Hg., 2550 rpm (1050 hp)
 Take-off (one minute)
 42 in. Hg., 2700 rpm (1050 hp)
 Propellers Ham. Std. controllable metal, constant speed,
 hubs 2SE50, blades 6153A-12 or equivalent -
 see NOTE 6 of Prop. Spec. No. 603; low pitch
 setting 17°. Max. permissible dia. 182 in.
 Airspeed limits Level flight or climb 170 mph (148 knots)
 True Ind.
 Usable ceiling Glide or dive 199 mph (173 knots) True Ind.
 (May be realized under conditions noted)

Ceiling (ft.)	Weight (lbs.)	Manifold RPM Pressure	Airspeed MPH	Fuel Knots	De-Icers	
					Instal- led	Yes
(a) 4500	27000	2550 H.E.T.O.	100	87	87	No
(b) 6900	27000	2550 Full throttle	100	87	91	Yes

Additional conditions: (1) Standard air
 (2) Either engine inoperative
 (3) Carburetor air temp. control on
 "cold air"
 (4) Inoperative prop. fully feathered
 (5) De-Icers not operating.

Fuel capacity 1750 gals. (2 tanks in CS at 875 gals.)
 Oil capacity 110 gals. (2 tanks. 1 in each nacelle at 55 gals.)
 No. pass. 4
 Baggage Maximum capacity of compartments; Cargo Station
 No. 1, 6470 lbs.; Cargo Station No. 2 1000 lbs.
 Weights Landing 27000 lbs.) (See NOTES 2 and 3)
 Take-off 30500 lbs.)
 C.G. range 242.2 in. (22.9% MAC) to 251.5 in. (28.5% MAC,
 aft of Hor..Ref. (3 in. aft of bow)
 Serial Nos. C-4 only eligible

EQUIPMENT: Equipment and weight thereof as noted in approved
 copy of pertinent report and loading schedule which must
 accompany certificate and form part thereof.

NOTE 1. Eligible for export to all countries except Great
 Britain, Canada, Australia and New Zealand.

NOTE 2. The following must be installed in full view
 of the pilot; "Take-off limited to 27000 lbs., or less, in
 waves higher than 2 ft."

NOTE 3. A. If provisions other than as specified in approved
 equipment list, report ZW-28-018 or subsequent revisions
 hereto, are made for dumping, the fuel dump valves shall
 be made positively inoperative.
 B. If provisions as specified in said report are
 installed and aircraft is operated as an air carrier, the
 aircraft operation record shall incorporate one of the
 following as the case may be:

EQUIPMENT: Equipment and weight thereof as noted in approved copy
 of pertinent report and loading schedule which must accompany
 certificate and form part thereof.

NOTE 1. Eligible for export to all countries except Great Britain,
 Canada, Australia, and New Zealand.

NOTE 2. The following placard shall be placed on the instrument
 panel in full view of the pilot; "This airplane shall be
 operated in accordance with the C.A.A. Approved Operating Manual
 for Consolidated 28-4 (PBY-5, PB5-5A) which shall be carried in
 the pilot's compartment at all times."

NOTE 3. A take-off period of two minutes is permissible for long
 range flying boat operation.

NOTE 4. Maximum weight may be increased 162 lbs. when complete
 de-icer is installed.

NOTE 5. The airspeed indicator installation error must not exceed
 + 4.5 knots at a true indicated airspeed of 148 knots.

NOTE 6. A weight and balance report including list of equipment
 included in the certificated weight empty, and loading instruc-
 tions when necessary, must be submitted for each aircraft with
 original inspector's report and each subsequent report covering
 change of equipment.

Prior to original certification, each airplane must be weighed
 to determine its weight and balance, unless a satisfactory Army
 or Navy weight and balance report is available.

NOTE 7. Prior to certification as a civil aircraft the following
 must be accomplished:

- (a) Each airplane must satisfactorily pass an inspection for
 conformity, possible hidden damage, and for workmanship and
 materials used in making any repairs and/or alterations.
 Each aircraft must incorporate those changes required by all
 applicable Airworthiness Directive mandatory notes.
- (b) Install also outside air temperature indicator, covers for
 cables and conduits in forward cargo compartment, stowage
 for bulkhead No. 6 water-tight door, 2 sea anchors with
 stowage provisions, and life raft with stowage provisions.
- (c) The firewall either must be completely replaced by, or
 covered or backed up by, one of the following materials:

CONSOLIDATED PB-4, PB-5, PB-5A, 2-548 (continued)

- (1) Stainless steel -.015 in. thick.
 - (2) Nickel-Chromium-iron-alloy -.015 in. thick.
 - (3) Low carbon steel -.018 in. thick. (aluminum coated or otherwise protected against corrosion.)
 - (4) Monel metal -.018 in. thick.
 - (5) Ferrelplate -.018 in. thick.
- (d) Hems must be installed to provide, without continuous manual operation, vision through the windshield adequate for executing take-offs and landings on water with spray striking the windshield.
- (e) Guards must be installed to prevent the inadvertent operation of switches on control column and on forward side of bulkhead aft of pilot's compartment.
- (f) The supports for the servo control fluid lines forward of the servo must be replaced with supports having adequate strength and rigidity.
- (g) Positive means of communication between the pilot, co-pilot and flying engineer must be installed.
- (h) Fuel dump valves must be removed or made positively inoperative.
- (i) Instruments must be marked for approved operation limits.
- (j) The airplane must be modified in accordance with either (1) or (2).
- (1) Install a carburetor alcohol de-icing system with a capacity of not less than 5 gal. per engine. The capacity of the alcohol pumps should be sufficient to provide a flow of 10 gal. per hour to both engines simultaneously.
 - (2) Modify the carburetor air preheat system to provide a heat rise of 100° F when operating at 75% power at an outside air temperature of 30° F.
- (k) Auxiliary powerplant and cabin heater must be placarded for ground or water operation only if passengers are carried.
- (l) All cargo compartments must be placarded for permissible loads specified in C.A.A. Approved Operating Manual.
- (m) Identification plate must be marked to indicate date of conversion to certificated status.
- (n) All fuel tank filler caps or adjacent surfaces must be marked to indicate the minimum octane fuel and the tank capacity.
- (o) The oil tank filler caps must be marked "Oil" and indicate the tank capacity.
- (p) Approval number "5E-4" should be added to R-1830-82 engine identification plates in lieu of the Type Certificate number.
- (q) If an exhaust heat type wing and tail de-icer system is installed, this system must be inspected giving special attention to its engine section and to the combustion heater in the tail of the airplane.
- (r) The airplane heating system must be inspected.
- (s) The carbon monoxide concentration in the pilot and crew compartments must be checked to ascertain that it does not exceed one part in 20,000 (or 0.005%).
- (t) All circuit protectors must be made accessible in flight.
- (u) The A.K.L. fuel unit drain outlets must be moved to a position remote from the auxiliary power plant exhaust outlet.
- (v) Any G-9 or equivalent 400 gallon per hour engine-driven fuel pumps must be installed.

NOTE 8. If conversion to cargo carrier is desired, the following alterations are satisfactory and should be handled in the usual manner on Alteration and Repair Forms:

- (1) Install cargo platforms and tie-down rings. See Consolidated dwgs. Nos. 28FF100 (1 and 2), 28FF200 (1 and 2), 28FF300 (1 and 2), 28FF400, and 28FF501.
- (2) Install large water-tight door for, and enlarge out-out in, bulkhead No. 6. See Consolidated dwgs. Nos. 28FF502 and 28B5360 (1 and 2).
- (3) Install hull cargo door. See Consolidated dwg. No. 28B5223-A.

NOTE 9. 100 min. octane fuel must be used unless the carburetors have been suitably modified for operation with 91 min. octane fuel.

CONSOLIDATED PB-2, 14 PCFbM, 2-545

Engines	2 RW Twin Wasps SB-G
Placard limits	Maximum, except take-off 34.5 in. Hg., 2450 rpm (900 hp) Take-off (one minute) 41.3 in. Hg., 2650 rpm (1000 hp)
Propellers	Ham. Std. controllable, constant speed, hubs 3B50, blades 6105A-18 or equivalent - see NOTE 6 of Prop. Spec. No. 246. Maximum permissible diameter 164 in.
Placard speeds	Level flight or climb 170 mph (148 knots) True Ind. Glide or dive 204 mph (177 knots) True Ind.
Placard ceiling	6500 ft. absolute (density alt.) either engine inoperative.
Fuel capacity	1750 gals. (2 tanks in CS at 875 gals.)
Oil capacity	130 gals. (2 tanks, 1 in each nacelle at 65 gals.)
No. pass.	10
Baggage	Maximum capacity of compartments; Bow compt. 300 lbs.; Navigator's compt. 860 lbs.; Cargo compt. No. 1 6400 lbs.; No. 2 3000 lbs.
Standard weight	27000 lbs.
C.G. limits	239.2 in. (21.1% MAC) and 251.5 in. (28.5% MAC) aft of Hor. Ref. (3 in. aft of bow)

CONSOLIDATED PB-2, 14 PCFbM, 2-545 (continued)

Serial Nos. C-3 only eligible

EQUIPMENT: Equipment and weight thereof as noted in approved copy of pertinent report and loading instructions which must accompany certificate and form part thereof.

NOTE 1. Eligible for export to all countries except Great Britain, Canada and Australia. (4-4-38)

NOTE 2. Fuel dump valves must be made positively inoperative pending satisfactory completion of dump tests.

CROWN B-3, 2 POLB, ATC 199

Engine	Kinner K-4 100 hp
Fuel	26 gals.
Oil	3 gals.
No. pass.	1
Baggage	None
Standard weight	1756 lbs.
Spec. basis	Approved Type Certificate No. 199
Serial Nos.	37 and up mfrd. prior to 7-1-35 eligible. Approval expired as of that date. (See NOTE 1)
Class I equipment:	Wood propeller
Class III equipment:	Adj. metal propeller 18 lbs.*
NOTE 1.	Serial No. 36 eligible when changed to conform.

CROWN B-3, 2 POLB, 2-61

Engine	Kinner K-5 100 hp
Fuel	28 gals.
Oil	3 gals.
No. pass.	1
Baggage	30 lbs. (2 compt. 15 lbs. each)
Standard weight	1707 lbs.
Spec. basis	Aero. Bulletin 7A, Section 3
Serial Nos.	36 only eligible

CULVER LCA AND LFA, TC 730

I - SPECIFICATIONS PERTINENT TO ALL MODELS:

Airspeed limits	Level flight or climb 145 mph True Ind.	
	Glide or dive 175 mph True Ind.	
Fuel capacity	20 gals. (-3)	
No. pass.	1 (+26)	
Baggage	50 lbs. (+42)	
Standard weight	1305 lbs.	
C.G. limits	(+14.86)(22.06% MAC) and (+19.5)(30.3% MAC)	
MAC	57.4 in. LE. MAC (+2.2)	
Leveling means	(See NOTE 2)	
Spec. basis	Type Certificate No. 730	
	Production Certificate No. 20	
Serial Nos.	100 and up mfrd. prior to 10-17-42	
	eligible. Approval expired as of that date.	

EQUIPMENT: (Datum is leading edge of wing at fuselage which is 18 in. fwd. of wing attachment fitting centerline)(*Means net increase)(see NOTE 3)

Class I:	LCA	LFA
101. Propeller - wood (fixed or adjustable pitch)	13 lbs. (-42)	15 lbs. (-41)
102. Carburetor air heater	1 lb. (-27)	4 lbs. (-24)
103. Oil radiator (Continental)	5 lbs. (-34)	—
104. 5.00-4 wheels (Hayes 451M with E.T. brakes)	10 lbs. (+9)	10 lbs. (+9)
105. 6-ply tires and tubes	13 lbs. (+9)	13 lbs. (+9)
106. Tail wheel assembly (Heath) with 6x2.00 cushion tire	5 lbs. (+160)	5 lbs. (+160)
Class II:		
200. Miscellaneous items as listed under this number on approved weight and balance report.		
201. Battery and box (a) Exide 6-AC-7-1	16 lbs. (-17)	—
(b) Reading R24L	—	24 lbs. (+40)
202. Landing lights (a) One Grimes ST-250	4 lbs. (+29)	4 lbs. (+29)
(Item 210(a) or (b) required for LCA)		
(b) Two Grimes ST-250	—	8 lbs. (+29)
203. Generator - engine driven (Auto-lite GDY-4106)	—	12 lbs. (-16)
204. Starter (Auto-lite MBG-4009)	—	15 lbs. (-16)
205. Radio equipment (a) In instrument panel	12 lbs. (+5)	12 lbs. (+5)
(b) In baggage compartment	9 lbs. (+42)	18 lbs. (+42)
(c) Reel type trailing antenna	1 lb. (+65)	1 lb. (+65)
(d) Loop antenna	2 lbs. (+28)	2 lbs. (+28)
206. Fuel tank - 15 gal. (aft of seat)(Item 207 or 208 required)	8 lbs. (+50)	8 lbs. (+50)
207. Oil tank - 8 qt. (Dwg. No. 551)	2 lbs.*(-23)	—
208. Oil pan - 8 qt. (Franklin)	—	2 lbs.*(-26)
209. Engines (a) Continental A-75-9	3 lbs.*	—
(b) Franklin 4AC-176-F2	—	Neglect wt. change
(c) Franklin 4AC-176DE or 4AC-176DS	—	No weight change
Fuel 80 min. oct. (CFR) aviation gasoline		
Engine limits - For all operations, 2650 rpm (80 hp)		
Propeller limits - Static rpm at maximum permissible throttle setting - not more than 2240 not less than 2240		
Diameter - not more than 70 in. not less than 68 in.		
210. Generators - wind-driven (a) Air Assoc. GE-20	7 lbs. (+18)	—
(b) Lear 1030A	8 lbs. (+18)	—
211. Oil radiator (Harrison)	—	4 lbs. (-52)

CULVER LCA AND LFA (Continued)

Class III:	LCA	LFA
301. Engine primer	Neglect weight change	
302. Misc. instruments	30 lbs. (+6)	30 lbs. (+6)
303. Tail wheel assembly (Universal tail wheel fork and Firestone-Shim wheel) with 6x2.00 cushion tire	No weight change	
304. 5.00-4 wheels (Culver 304 with Hayes E.T. brakes)	4 lbs.* (+9)	4 lbs.* (+9)
305. Cabin heater	2 lbs. (-16)	2 lbs. (-16)
306. Cabin ventilator	Neglect weight change	
307. Parking brake	1 lb. (-3)	1 lb. (-3)
308. Dome light	1 lb. (+30)	1 lb. (+30)
NOTE 1. Eligible for export as follows, subject to inspection for equipment specified in Chapter XII of Inspection Handbook: (10-17-42)		
(a) Canada - Landplane	Skiplane - not eligible	
(b) All other countries except Great Britain, Australia and New Zealand.		
NOTE 2. Plumb line from upper rear engine mount attaching bolt to reference mark on bottom longeron may be used for leveling purposes.		
NOTE 3. Weight and balance report including list of equipment included in certificated weight empty must be submitted with original inspector's report and each subsequent report covering changes in Class I and Class II equipment.		
NOTE 4. The following placard shall be installed on the instrument panel in full view of the pilot and included on the aircraft operation record: "Intentional aerobatics and instrument flight prohibited."		
II - MODEL LCA DESIGNATION 2 PCLM:		
Engine	Continental A-75-8 (See also Item 209(a))	
Fuel	73 min. Oct. (CFR) aviation gasoline	
Engine limits	For all operations, 2600 rpm (75 hp)	
Propeller limits	Static rpm at maximum permissible throttle setting - not more than 2320 not less than 2120	
	Diameter - not more than 70 in. not less than 64 in.	
Oil capacity	1 gal. (-23)(See also Item 207)	
III - MODEL LFA DESIGNATION 2 PCLM:		
Engine	Franklin 4AC-176-F3 (See also Items 209(b) and (c))	
Fuel	80 min. oct. (CFR) aviation gasoline	
Engine limits	For all operations, 2600 rpm (80 hp)	
Propeller limits (See item 209(c))	Static rpm at maximum permissible throttle setting - not more than 2200 not less than 2080	
	Diameter - not more than 70 in. not less than 68 in.	
Oil capacity	5 qts. (-26) (See also Item 208)	

CULVER LAR, 1 PCLM, 2-559

Engine Franklin 4AC-176-F5
 Placard limits Maximum, except take-off
 -- in. Hg., 2500 rpm (80 hp)
 Take-off (one minute)
 -- in. Hg., 2500 rpm (80 hp)
 Propeller Static rpm at maximum permissible
 throttle setting -
 not more than 2140
 not less than 2140
 Diameter - not more than 70-7/8 in.
 not less than 68 in.
 Placard speeds Level flight or climb 145 mph True Ind.
 Glide or dive 175 mph True Ind.
 Fuel capacity 12 gals. (-3)
 Oil capacity 5 qts. (-24)
 No. pass. None (Pilot at (+25))
 Baggage None
 Standard weight 1305 lbs.
 C.G. limits (+15.4)(23% MAC) and (+16.0)(24% MAC)
 MAC is 57.4 in. long. L.E. MAC
 (+2.2). To level - use plumb line
 from upper rear engine mount attach-
 ing bolt to reference mark on bottom
 longeron.
 Spec. basis CAR 04.051
 Serial Nos. L101AR only eligible

EQUIPMENT: (Datum is leading edge of wing at fuselage
 which is 18 in. fwd. of wing attachment
 fitting centerline)(+ Means net increase)

Class I:

- 101. Propeller - wood (fixed or
 adj. pitch) with hub 15 lbs. (-48)
- 102. Carburetor air heater 1 lb. (-28)
- 103. 8.00-4 main wheels (Hayes 451-M
 with H.T. brakes) 10 lbs. (+28)
- 104. 8.00-4 nose wheel (Hayes 450-M) 3 lbs. (-28)
- 105. 6 ply tires and tubes (main
 wheels) 15 lbs. (+28)
- 106. 6 ply tire and tube (nose wheel) 7 lbs. (-28)

Class II:

- 200. Miscellaneous items as noted in approved
 weight and balance report. The structure
 has been substantiated (except attachment)
 for the following equipment:

 - (a) 20 lbs. (+6)
 - (b) 20 lbs. (+27)
 - (c) 20 lbs. (+37)
 - (d) 20 lbs. (+30)

- 201. Starter (Auto-Lite) 15 lbs. (-18)
- 202. Generators (2) (Auto-Lite) 24 lbs. (-17)
- 203. Battery 51 lbs. (+42)
- 204. Vacuum pump 4 lbs. (-19)
- 205. Hydraulic pump 3 lbs. (-19)

Class III:

None.

NOTE 1. Eligible for export as follows, subject to
 inspection for equipment specified in Chapter XII of
 Inspection Handbook: (March 3, 1941)

- (a) Canada - Landplane
 Skiplane - not eligible
- (b) All other countries except Australia, Great
 Britain and New Zealand.

5-27444

CUMMINGHAM-HALL PT-6 AND PT-6F, 6 PCLB, ATC 177

I - SPECIFICATIONS PERTINENT TO ALL MODELS:
 Fuel 90 gals.
 Oil 6 1/2 gals.
 No. pass. 5.
 Baggage 60 lbs.
 Spec. basis Approved Type Certificate No. 177
II - MODEL PT-6:
 Engine Wright R-975 330 hp
 Standard weight 4550 lbs.
 Serial Nos. 2961 and 2962 eligible
 Class I equipment: Fixed metal propeller and tail
 skid.
 Class III equipment: Tail wheel 6 lbs.*
III - MODEL PT-6F:
 Engine Wright R-975B-1
 Placard limits Maximum, except take-off
 (2000 ft.) 28 1/2 in. Hg., 2060 rpm
 (330 hp)
 (Sea level) 29 1/2 in. Hg., 2060 rpm
 (330 hp)
 Take-off (one minute)
 -- in. Hg., 2100 rpm (365 hp)
 Propeller Maximum permissible diameter 108 in.
 Placard speeds Level flight or climb 134 mph True Ind.
 Glide or dive 161 mph True Ind.
 Standard weight 4550 lbs.
 Serial Nos. 381 only eligible
 Class I equipment: Propeller - controllable metal
 (Ham. Std. hub 2D50-207, blades 6C95A-6); Engine
 cowl; 8.50-12 wheels (Warner 2020) with 6 ply tires;
 8.00-4 tail wheel (Warner 1222) with tire; redesigned
 cabin (for use as freighter).

CURTISS-WRIGHT CONDOR AT-32, 14 or 19 PCLB, TC 534

Engines 2 Wright Cyclones SGR-1820F-2 at 720 hp
 or SGR-1820F-3 at 710 hp
 Fuel 300 gals. (4 tanks in center section
 75 gals. each) or 374 gals. (with
 2 additional 37 gal. tanks in center
 section)
 Oil 59 gals. (One 15 gal. in each nacelle)
 No. pass. 12 (Night type) (See NOTE 2a)
 16 (Day type) (See NOTE 2b)
 Baggage Maximum capacity of compts.:
 Night type - 200 lbs. front, 271 lbs.
 rear

Day type - 200 lbs. front, 450 lbs. rear
 Standard weight 17500 lbs.

Spec. basis Type Certificate No. 534 (Aero. Bulletin
 7A requirements)

Serial Nos. 42 and up eligible per NOTE A

Class I equipment: Propellers - controllable metal
 (For SGR-1820F-2 or SGR-1820F-3 engines with crankshaft
 gearing of 16:11 and No. 50 spline shaft - Ham. Std. hubs
 50001, blades 6105A-18, low pitch setting 22.5°.
 For SGR-1820F-2 or SGR-1820F-3 engines with crankshaft
 gearing of 8:5 and No. 40 spline shaft - Ham. Std. hubs
 50001, blades 6105A-1E, low pitch setting 25°); Two
 starters (Hand electric) 75 lbs.; Flares; Two generators
 50 lbs.; Two heaters 40 lbs.; Two batteries 128 lbs.;
 Toilet equipment 35 lbs.; Radio equipment (varies from
 85 lbs. to 200 lbs.); Water container (filled) 29 lbs.;
 Landing lights 9 lbs.; 15.00-16 wheels with special
 8-ply tires (wheels must be placarded for these tires);
 7.00-5 tail wheel; Two engine ring cowls 65 lbs.

NOTE A. Each aircraft manufactured after Dec. 20, 1940
 must, prior to original certification, satisfactorily
 pass:

- (a) An inspection for workmanship, materials, and con-
 formity before any covering, metal priming or final
 finish is applied. All woodwork may be varnished.
- (b) A final inspection of the completed aircraft.
- (c) A check of the flight characteristics.

NOTE 1. Serial Nos. 59, 60, 61 and 62 originally con-
 structed for military purposes and have certain oversize
 members in the nacelle and fuselage and lower longerons
 braced in the center.

NOTE 2. (a) Night type also approved when equipped with
 hostess seat installed in accordance with American
 Airlines approved data. Weight of seat installation
 5 lbs. No. pass. 12 and crew 3. Weight of hostess and
 handbag 150 lbs.

(b) Day type also approved with extra passenger
 seat installed opposite present rear-most passenger seat
 and with hostess seat (attached to bulkhead) removed.
 Net increase 9 lbs. No. of pass. 17 and crew 2.

CURTISS-WRIGHT TRAVEL AIR A-14-D, 3 PCLB, ATC 442

Engine Wright R-760 250 hp
 Propeller Adj. metal
 Fuel 68 gals.
 Oil 4-3/4 gals.
 No. pass. 2
 Baggage 91 lbs. (See NOTE 1)
 Standard weight 2750 lbs. (See NOTE 1)
 Spec. basis Approved Type Certificate No. 442
 Serial Nos. 2001, 2002, 2004 and up mfrd. prior to
 9-30-39 eligible. Approval expired as
 of that date.

Class I equipment: Engine ring cowl 15 lbs.; Battery
 33 lbs.; Starter 35 lbs.; Airwheels 70 lbs.

NOTE 1. Serial Nos. 2007 and up, mfrd. prior to 9-30-39,
 also eligible with the following:

Baggage Maximum capacity of compts.:
 Front 84 lbs. incl. 14 lbs. tools
 Rear 80 lbs. with flares and
 120 lbs. without flares

Standard weight 2870 lbs.

Class I equipment: Engine ring cowl 40 lbs.; Battery
 and box 30 lbs.; Flare brakes 4 lbs.; Starter and
 wiring 25 lbs.; Semi-airwheels 71 lbs.; Rate of climb
 indicator 2 lbs.; Additional flooring 6 lbs.;
 Special upholstery 8 lbs.

Class III equipment: Flares (See baggage restriction).

CURTISS-WRIGHT TRAVEL AIR B-14-B, 3 PCLB, ATC 485

Engine Wright R-975 330 hp
 Propeller Adj. metal
 Fuel 68 gals. (One center section 23 gals.
 and one fuselage 45 gals.)
 Oil 6 gals.
 No. pass. 2
 Baggage 148 lbs. (Lower compt. 100 lbs.;
 upper compt. 48 lbs. - must be
 reduced to 8 lbs. when radio is
 installed)

Standard weight 3087 lbs.

Spec. basis Approved Type Certificate No. 485

Serial Nos. 2010 and up mfrd. prior to 9-30-39 eli-
 gible. Approval expired as of that
 date.

Class I equipment: Engine ring cowl 40 lbs.; Battery
 30 lbs.; Electric starter 35 lbs.; 8.50-10 wheels and
 brakes 89 lbs.; Special windshield 14 lbs.; Heater
 4 lbs.

Class III equipment: Radio 40 lbs. (See baggage
 restriction).

CURTISS-WRIGHT TRAVEL AIR 16E; 2-3 PO-CLB, 3 POSB; ATC 463

Engine Wright R-540 175 hp
 Propeller Adj. metal
 Fuel 33 gals. (One wing 88 tank)
 Oil 4 gals.
 No. pass. 2
 Baggage Landplane - 55 lbs. as 3-place;
 60 lbs. as 2-place.
 Seaplane - 42 lbs.

Standard weight Landplane - 2150 lbs.
 Seaplane - 2380 lbs.

Spec. basis Approved Type Certificate No. 463

Serial Nos. 3501 and up mfrd. prior to 9-30-39 eli-
 gible. Approval expired as of that
 date. (See NOTE 1)

Class I equipment: Battery 30 lbs.; Starter 32 lbs.;
 6.50-10 wheels and brakes 68 lbs. or Edo L-2260
 floats.

Class III equipment: (Landplane only) Coupe top 47 lbs.,
 10x3 tail wheel; (Landplane and seaplane) Extra 20 gal.
 fuel tank installed in front cockpit replacing two
 passengers, net increase 9 lbs. (Tank installation
 17 lbs., seat cushions and safety belt removed 8 lbs.)

NOTE 1. Seaplanes eligible provided:

- (a) The diagonal fuselage member from forward landing
 gear strut attachment point to upper engine mount
 attachment point is 1"x0.049 4130 steel tubing
 (was 3/4"x0.049).
- (b) The lower longeron from forward landing gear strut
 attachment fitting must be reinforced on serials
 3501 to 3507, incl., with a stiffener composed of a
 1"x0.049 4130 steel tube 22-1/2 in. long split
 along center line and held in place over the longer-
 on with 4 clamps. Serials 3508 and up must have
 7/8"x0.049 steel tube (was 7/8"x0.035).
- (c) The auxiliary fin on lower side of fuselage must be
 installed.
- (d) All must include fuselage side truss and longeron
 reinforcement at front wing fitting made in accord-
 ance with mfrs. Dwg. 16E401, dated 12-30-36. Mfr.
 has agreed to furnish all owners with this drawing.

NOTE 2. Eligible for use in acrobatic stages of Civilian
 Pilot Training secondary course when operated in ac-
 cordance with "Instructions for the operation of Curtiss-
 Wright Travel Air 16E in the acrobatic stages of the
 Civilian Pilot Training Program Secondary Course" issued
 by Civilian Pilot Training.

CURTISS-WRIGHT TRAVEL AIR 16W, 3 POLB, TC 429

Engine Warner Scarab 125 hp
 Fuel 33 gals.
 Oil 4 gals.
 No. pass. 2
 Baggage 35 lbs.
 Standard weight 1950 lbs.
 Spec. basis Type Certificate No. 429
 (Aero. Bulletin 7A requirements)
 Serial Nos. 16W-2002 and up eligible per NOTE A
 Class I equipment: Engine ring cowl 5 lbs.; Air-
 wheels 50 lbs.; Propeller - wood.
 Class III equipment: Starter 24 lbs.; Battery
 26 lbs.; Propeller - adj. metal 13 lbs. net in-
 crease; Extra 20 gal. fuel tank in front cockpit
 replacing 2 passengers, net increase 9 lbs. (Tank
 installation 17 lbs. and seat cushions and safety
 belt removed 8 lbs.)

NOTE A. Each aircraft manufactured after Dec. 20, 1940
 must, prior to original certification, satisfactorily
 pass:

- (a) An inspection for workmanship, materials, and con-
 formity before any covering, metal priming or final
 finish is applied. All woodwork may be varnished.
 (b) A final inspection of the completed aircraft.
 (c) A check of the flight characteristics.

CURTISS-WRIGHT A-19-R, 2 PCLM, TC 629

Engine Wright R975E-3
 Placard limits Maximum, except take-off
 34.5 in. Hg., 2200 rpm (420 hp)
 Take-off (one minute)
 36.5 in. Hg., 2250 rpm (450 hp)
 Propeller Maximum permissible diameter 99 in.
 Placard speeds Level flight or climb 189 mph True Ind.
 Glide or dive 250 mph True Ind.
 Flaps extended 100 mph True Ind.
 Fuel 70 gals. (Two tanks in wing at 35 gals.
 each)(-47)

Oil 6.5 gals.
 No. pass. 1 (+15)
 Baggage 50 lbs. (+48)(See NOTE 1)
 Standard weight 3200 lbs.
 C.G. limits (-54.4) and (-44.8)
 Spec. basis Type Certificate No. 629
 (Aero. Bulletin 7A requirements)

Serial Nos. 19R-2 and up eligible per NOTE A
 EQUIPMENT: (Datum is wing trailing edge)(* Means net
 increase)

Class I:

101. Integral engine cowl
 102. Starter (Eclipse F-141) 25 lbs.
 103. Generator 20 lbs.
 104. Battery and box (Exide 6TS-7-1)
 (Aft of fuselage) 28 lbs.
 105. Oil cooler (U.A.P. U-3150) 12 lbs.
 106. 7.50-10 wheels (Goodyear 10HBM)
 with 6.50-10 6-ply tires
 107. 8 in. streamline steerable tail wheel
 108. Propeller - adj. metal (Ham. Std.
 hub 5406, blades A3A1-21) (-121)

Class III:

301. Engine shielding 8 lbs.*(-104)
 302. Extra instruments
 (a) Front cockpit 3 lbs.*(-61)
 (b) Rear cockpit 6 lbs.*(-8)
 303. Propeller - controllable metal
 (Ham. Std. hub 2D, blades 6095)
 (See NOTE 1) 67 lbs.*(-121)
 304. Parachutes - one or two 20 lbs. each

NOTE A. Each aircraft manufactured after Dec. 20, 1940
 must, prior to original certification, satisfactorily
 pass:

- (a) An inspection for workmanship, materials, and con-
 formity before any covering, metal priming or final
 finish is applied. All woodwork may be varnished.
 (b) A final inspection of the completed aircraft.
 (c) A check of the flight characteristics.

NOTE 1. Baggage compartment is removable canvas type.
 Must be installed when item 303 is installed (for
 balance considerations).

NOTE 2. Eligible for export to all countries except
 Great Britain, Canada and Australia. (Feb. 19, 1937)

CURTISS-WRIGHT A22 AND 22B, 2-549

I - SPECIFICATIONS PERTINENT TO ALL MODELS:

Engine Wright R975E-3
 Placard limits Maximum, except take-off
 34.5 in. Hg., 2200 rpm (420 hp)
 Take-off (one minute)
 36.5 in. Hg., 2250 rpm (450 hp)
 Propeller Maximum permissible diameter 99 in.
 Placard speeds Level flight or climb 170 mph True Ind.
 Glide or dive 250 mph True Ind.
 Flaps extended 100 mph True Ind.
 No. pass. 1 (+16) or (-31)
 Baggage 40 lbs. (+40)
 Standard weight 3455 lbs.
 C.G. limits (-51.4)(19.7% MAC) and (-46.8)(26.9% MAC)
 Levelling means (Model A22) Spirit level installed in
 front cockpit
 (Model 22B) Levelling lugs installed on
 top longeron in front cockpit
 Specification basis CAR 04.031
 EQUIPMENT: (Datum is trailing edge of wing at root)
 (* Means net increase)

Class I.	A22	22B
101. Propeller - metal		
(a) Controllable (Ham. Std. hub 2D30, blades 6095A-15)(Low pitch setting 15°)	155 lbs.	(-121)
(b) Constant speed (Ham. Std. hub 2D30, blades 6167A-15) (Low pitch setting 13°)	157 lbs.	(-121)
102. Exhaust collector ring		
(a) WAC	25 lbs.	(-111)
(b) WAC SU472	27 lbs.	(-111)
103. Oil cooler		
(a) U.A.P.-3150	12 lbs.	(-91)
(b) U.A.P.-3150	14 lbs.	(-88)
104. Fuel pumps		
(a) Wobble (Type D-2)	3 lbs.	(-77)
(b) Wobble (U.A.P. AEL-1 fuel unit, incl. wobble pump)	7 lbs.	(-52)
(c) Engine driven (Pesco R-400-BLE)	3 lbs.	(-87)
(d) Engine driven (Pesco R-400BE)	3 lbs.	(-85)
105. (a) 7.50-10 wheels (Goodyear 10HBM)	33 lbs.	(-67) (-67)
(b) 6.50-10 6 ply H.D. tires 22 lbs.		(-67) (-67)
106. (a) 8 in. streamline tail wheel with 6 ply tire (wheel must be placarded for Goodyear H.D. tire at 45 lbs. air press. 2 lbs.)		(+160)
(b) 10 in. smooth contour tail wheel with 6 ply H.D. tire (wheel must be placarded for this tire)	7 lbs.	(+165)
107. Tell-tale signal system	2 lbs.	(-40)
108. Battery		
(a) Exide 6-TS-7-1	28 lbs.	(+38)
(b) Exide 6-TS-7B	25 lbs.	(+56)
109. Generator:		
(a) Eclipse type G-2	22 lbs.	(-85)
(b) Eclipse 703-3	23 lbs.	(-85)
110. Generator control box		
(a) Eclipse CB-666	5 lbs.	(-77)
(b) Eclipse G-24A	6 lbs.	(-10)
111. Hydraulic pump		
(a) Northill 7-181-L	8 lbs.	(-59)
(b) Engine driven (Pesco 204-DA)	4 lbs.	(-93)
(c) Hand operated (Adel D-8109)	5 lbs.	(-39)
112. Instruments		
(a)	8 lbs.	(-40)
(b) Front cockpit	17 lbs.	(-60)
Rear cockpit	11 lbs.	(-6)
113. Starter - hand inertia (Eclipse series XI)	34 lbs.	(-83)
114. Vacuum pump (Pesco B-2A)	4 lbs.	(-84)
115. Pressure fire extinguisher (5 lbs. CO ₂ type)	20 lbs.	(-69)
116. Landing lights - two (Grimes ST-1220)	10 lbs.	(-38)

CURTISS-WRIGHT A22 AND 22B (Continued)

Class II.	A22	22B
200. Miscellaneous items as listed under this number in approved weight and balance report.		
201. Starter (Eclipse F-141)	26 lbs. (-85)	
202. Cabin heater	6 lbs. (-98)	
203. Pressure fire extinguisher	18 lbs. (-72)	
204. Radio		
(a) Variable (location and actual weight of installation incl. controls, etc. should be noted on inspector's report)		
(b)	71 lbs.	(-20)
205. Vacuum pump (Eclipse AP-8)	7 lbs. (-90)	
206. Extra instruments	20 lbs. (-40)	
207. Propeller - adjustable metal (Ham. Std. hub 5406, blades ASAl-21)	88 lbs. (-121)	
208. Flares (Two - Wiley Type A-8)	34 lbs.	(+67)

Class III.

None

NOTE 1. Eligible for export to all countries except Great Britain, Canada, Australia and New Zealand. (February 27, 1942)

NOTE 2. For the model 22B, serial No. 3604, the following placards are to be posted in full view of the pilot:
"WITH PASSENGER - MAXIMUM FUEL 63 GALS.; NO BAGGAGE, FLARES, RADIO TRANSMITTER OR POWER UNIT SHALL BE CARRIED. WITHOUT PASSENGER - FULL FUEL, ALL EQUIPMENT AND 40 LBS. MAXIMUM BAGGAGE MAY BE CARRIED."
"SOLO FROM FRONT SEAT ONLY."

II - MODEL A22, DESIGNATION 2 PCLM:

Fuel capacity 94 gals. (Two tanks in wing, 33 gals. ea. (-48) and two outboard wing tanks, 14 gals. ea. (-40))
Oil capacity 6½ gals. (-81)
Serial Nos. A22-1 only eligible

III - MODEL 22B, DESIGNATION 1-2 PCLM (SEE NOTE 2):

Fuel capacity 66 gals. (Two tanks in wing center section 33 gals. ea. (-48))
Oil capacity 6 gals. (-80)
Serial Nos. 3604 only eligible

5-21314

CURTISS CONDOR CO. 21-27 POLB, ATC 193

Engines 2 Curtiss Conquerors GV-1570 at 600 hp
 Propellers Adj. metal
 Fuel 444 gals.
 Oil 38 gals.
 No. pass. 18 (Crew 3) (See NOTE 2)
 Baggage Serial Nos. 1, 2 and 3;
 Engine nacelles 270 lbs. (135 lbs. ea.)
 Fuselage 350 lbs. (Mail only)
 Serial Nos. 4 and up;
 Engine nacelles 440 lbs. (220 lbs. ea.)
 Under seats in center fwd. passenger
 compts. 200 lbs. (100 lbs. ea.)

Standard weight 18660 lbs.
 Spec. basis Approved Type Certificate No. 193
 Serial Nos. 1 and up mfrd. prior to 7-15-33 eligible.
 Approval expired as of that date.

NOTE 1. The following loading instructions must be observed: The three rearmost seats are not to be made available until all other seats are occupied. The center and fwd. seats should be loaded before the 5th and 6th rows are occupied, or better still in the following order: Rows 3, 4, 2, 5, 1 and 6.

NOTE 2. (a) Serials 4, 5 and 6 also eligible with berths accommodating two persons installed in center compt.
 (b) Serials G-4 and G-5 also eligible with 25 passengers and 2 crew.
 (c) Serial 6 also eligible with 22 passengers and 2 crew.

CURTISS FLEDGLING, 2 POLB, ATC 191

Engine Curtiss Challenger R600 185 hp
 Fuel 40 gals.
 Oil 5½ gals.
 No. pass. 1
 Baggage 50 lbs. (Pay load includes 2 parachutes 20 lbs. each)

Standard weight 2686 lbs.
 Spec. basis Approved Type Certificate No. 191
 Serial Nos. 1 and up and B-1 and up mfrd. prior to 7-15-33 eligible. Approval expired as of that date.

NOTE 1. Eligible also with modifications necessary for conversion for military use.

CURTISS FLEDGLING JR., 2 POLB, ATC 182

Engine Curtiss Challenger R600 185 hp
 Propeller Wood, fixed or adj. metal
 Fuel 40 gals.
 Oil 5½ gals.
 No. pass. 1
 Baggage 25 lbs. (Pay load includes 2 parachutes 20 lbs. each)

Standard weight 2592 lbs.
 Spec. basis Approved Type Certificate No. 182
 Serial Nos. B-102 and up mfrd. prior to 4-26-37 eligible. Approval expired as of that date.

NOTE 1. Same as Fledgling, ATC 191, except for single bay wings in place of two bay. All aircraft having original wings replaced by new wings of this design are also eligible.

CURTISS FLEDGLING J-1 SPECIAL, 2 POLB, 2-472

SPECIFICATIONS PERTINENT TO BOTH SERIAL NOS.:

Engine Wright J-5 220 hp
 Fuel 40 gals. (One in fuselage)
 Oil 3½ gals.
 Spec. basis Aero. Bulletin 7A, Section 3
 Serial Nos. B-22 and B-69 only eligible

SERIAL NO. B-22;
 Propeller Fixed metal
 No. pass. 1
 Baggage 25 lbs. (over engine mount)(Pay load includes 2 parachutes 20 lbs. each and 20 lbs. tools)

Standard weight 2700 lbs.

CURTISS FLEDGLING J-1 SPECIAL (Continued)

SERIAL NO. B-69;
 Propeller Adj. metal
 No. pass. None (Crew +40 and +78)
 Baggage None
 Standard weight 2962 lbs.
 C.G. limits (+14) and (+18.4)
 EQUIPMENT: (Datum is wheel centerline)

Class I.
 101. Generator 8 lbs. (+2)
 102. Battery 35 lbs. (+14)
 103. Landing lights 4 lbs.
 104. Radio 19 lbs. (+8)
 105. Extra instruments 10 lbs. (+18)
 106. Instrument flying hood 8 lbs. (+78)
 107. 29x13-5 wheels
 108. Tail skid

Class III.
 301. Parachutes - one or two 20 lbs. each

CURTISS-WRIGHT JR. CW-1, 2 POLM, ATC 397

Y - SPECIFICATIONS PERTINENT TO ALL SERIAL NOS.:

Engine Szekely SR-3-45 45 hp
 Propeller Wood
 No. pass. 1
 Fuel 8½ gals.
 Spec. basis Approved Type Certificate No. 397
 Serial Nos. 1012 and up mfrd. prior to 4-26-37 eligible. Approval expired as of that date due to sale to Curtiss-Wright Corp., St. Louis Airplane Division.

Class I equipment; Tail skid or wheel.
 NOTE 1. All airplanes must have "drift struts" installed instead of "drift wires" in cabane structure.

NOTE 2. Aircraft operation record must include the following unless it has been satisfactorily demonstrated to an inspector of Civil Aeronautics that such notation is unnecessary: "INTENTIONAL ACROBATICS PROHIBITED." (See current Certificate and Inspection Division instruction.)

II - FOR SERIAL NOS. 1012 TO 1022, INCL.:

Oil 2 gals.
 Baggage 14 lbs.
 Standard weight 975 lbs.

III - FOR SERIAL NOS. 1025 TO 1101, INCL.:

Oil 1½ gals.
 Baggage 14 lbs.
 Standard weight 971 lbs.

IV - FOR SERIAL NOS. 1102 AND UP:

Oil 1½ gals.
 Baggage 3 lbs.
 Standard weight 975 lbs.

CURTISS-WRIGHT JR. CW-18, 2 POLM, 2-525

(Remodeler Franklin R. Hyde, Pierre, South Dakota)

Engine Salmson AD-9 40 hp
 Placard limits Maximum, except take-off
 -- in. Hg., 2000 rpm (40 hp)
 Take-off (one minute)
 -- in. Hg., 2000 rpm (40 hp)

Fuel 6 gals. (Center section)
 Oil 1 gal.
 No. pass. 1
 Baggage None
 Standard weight 988 lbs.
 C.G. limits (+21.4) and (+22.6)
 Spec. basis Aero. Bulletin 7A, Section 3
 Serial Nos. 1164 and 1224 only eligible

Class I equipment: (Datum is wing leading edge)
 101. Propeller - wood (fixed or adj. pitch)
 102. 16x7-5 wheels
 103. Tail skid

NOTE 1. Aircraft must be placarded, "PILOT MUST OCCUPY FRONT SEAT WHEN AIRPLANE IS FLOWN SOLO."

NOTE 2. Aircraft operation record must include the following unless it has been satisfactorily demonstrated to an inspector of Civil Aeronautics that such notation is unnecessary: "INTENTIONAL ACROBATICS PROHIBITED." (See current Certificate and Inspection Division instruction.)

CURTISS KINGBIRD D-2, ATC 348I - SPECIFICATIONS PERTINENT TO ALL TYPES

Engines 2 Wrights R975 330 hp
 Fuel 120 gals.
 Oil 14 gals.
 Spec. basis Approved Type Certificate No. 348
 NOTE 1. Manufacturer's affidavit of conformity required for change from one type to another.

II - PASSENGER TYPE - DESIGNATION 8 PCLM:

No. pass. 7
 Baggage 210 lbs.
 Standard weight 6115 lbs.
 Serial Nos. 2002, 2003, 2004, 2006 and up mfrd. prior to July 15, 1933, eligible. Approval expired as of that date.

III - CARGO TYPE - DESIGNATION 4 PCLM:

No. pass. 2
 Baggage 794 lbs.
 Standard weight 6055 lbs.
 Serial Nos. 2004 and up mfrd. prior to July 15, 1933 eligible. Approval expired as of that date.

IV - MAIL-PASSENGER TYPE - DESIGNATION 7 PCLM:

No. pass. 6
 Baggage 155 lbs. (Baggage compt.)
 200 lbs. (Mail compt.)
 Standard weight 6360 lbs.
 Serial Nos. 2001 and up mfrd. prior to July 15, 1933, eligible. Approval expired as of that date.
 Class I equipment: Flares, hand brakes, generator, heater installation, small baggage compt., metal lined mail compt., radio installation, shielding and magneto, landing lights, engine ring cowls 18 lbs. each.

CURTISS-WRIGHT KINGBIRD D-3, 6 PCLM, ATC 440

Engines 2 Wrights R975 330 hp
 Fuel 166 gals.
 Oil 14 gals.
 No. pass. 5
 Baggage 259 lbs.
 Standard weight 6600 lbs.
 Spec. basis Approved Type Certificate No. 440
 Serial Nos. 2016 and up mfrd. prior to April 26, 1937, eligible. Approval expired that date due to sale to Curtiss-Wright Corp., St. Louis Airplane Division.

Class I equipment: Two engine ring cowls 34 lbs.; Landing lights 8½ lbs.; Battery 38 lbs.; Flare holders 5½ lbs.; Two starters 49 lbs.; Generator 15 lbs.; Heater 15 lbs.; Toilet equipment 32 lbs.; Airwheels 99 lbs.; Propellers - adj. metal.

CURTISS ROBIN C-1, 3 PCL-SM, ATC 143

Engine Curtiss Challenger R600 185 hp
 Propeller Wood, fixed metal or adj. metal
 Fuel 50 gals.
 Oil 5 gals.
 No. pass. 2
 Baggage Landplane 50 lbs.
 Seaplane (Edo DeLuxe floats) 50 lbs.
 Seaplane (Edo P floats) 45 lbs.

Standard weight Landplane 2536 lbs.
 Seaplane (Edo DeLuxe floats) 2660 lbs.
 Seaplane (Edo P floats) 2910 lbs.

Spec. basis Approved Type Certificate No. 143
 Serial Nos. Landplane - 182, 185, 188, 234, 249
 and up mfrd. prior to July 1, 1933
 eligible.
 Seaplane - 182, 185, 188, 234, 336
 and up mfrd. prior to July 1, 1933
 eligible.
 Approval for both expired as of that
 date.

Class III equipment: Skis: Federal SA-6, Richards 2,
 Star Air Service 2900.

NOTE 1. Landplanes eligible with either high pressure
 tires and oleo gear, airwheels and oleo gear or
 airwheels and rigid gear.

NOTE 2. Eligible with camera installation provided
 changes in rudder cable installation are made in
 accordance with approved data.

NOTE 3. Aircraft eligible as model C-2 under ATC 144
 also eligible under this approval provided manufactur-
 er's affidavit of conformity submitted.

CURTISS ROBIN, 3 PCLM, ATC 40 or 68

Engine Curtiss OX5 90 hp or
 OXX6 102 hp
 Propeller Wood or adj. metal
 Fuel 30 gals. or 50 gals.
 Oil 3-1/2 gals.
 No. pass. 2
 Baggage 50 lbs.
 Standard weight 2217 lbs. (with 30 gals. fuel)
 2270 lbs. (with 50 gals. fuel)
 Spec. basis Approved Type Certificate No. 40 or 68
 Serial Nos. 1 to 569 eligible.

CURTISS ROBIN, 3 PCLM, ATC 63 or 69

Engine Curtiss Challenger R600 185 hp
 Fuel 50 gals.
 Oil 5 gals.
 No. pass. 2
 Baggage 16 lbs.
 Standard weight 2440 lbs.
 Spec. basis Approved Type Certificate No. 63 or 69
 Serial Nos. 1 to 483 eligible.
 Class III equipment: Curtiss-Wright Robin Skis

CURTISS ROBIN C-2, 3 PCLM, ATC 144

Engine Curtiss Challenger R600 185 hp
 Fuel 80 gals.
 Oil 5 gals.
 No. pass. 2
 Baggage 114 lbs.
 Standard weight 2600 lbs.
 Spec. basis Approved Type Certificate No. 144
 Serial Nos. 249 and up mfrd. prior to July 1, 1933
 eligible. Approval expired as of
 that date.

NOTE 1. Eligible with camera installation provided
 changes in rudder cable installation are made in
 accordance with approved data.

NOTE 2. Aircraft eligible as model C-1 under ATC 143,
 serial Nos. 249 and up, also eligible under this
 approval provided manufacturer's affidavit of con-
 formity submitted.

CURTISS ROBIN, 3 PCLM, 2-345

(Remodeler) Milwaukee Parts Corporation
 Milwaukee, Wisconsin
 Engine Tank V-470 115 hp or Tank V-502 115 hp
 Propeller Adj. metal or original OX5 wood
 Fuel 30 gals. or 50 gals.
 Oil 3-1/2 gals.
 No. passengers 2
 Baggage 50 lbs.
 Standard weight 2255 lbs. (with 30 gals. fuel)
 2270 lbs. (with 50 gals. fuel)
 Spec. basis Aero. Bulletin 7A, Section 7
 Serial Nos. All aircraft eligible under Approved
 Type Certificates Nos. 40 and 68
 eligible when changed in accordance
 with approved data submitted by
 Milwaukee Parts Corporation.

CURTISS ROBIN 4-C, 4 PCLM, ATC 270

Engine Curtiss Challenger R600 185 hp
 Fuel 50 gals.
 Oil 5 gals.
 No. pass. 3
 Baggage 102 lbs.
 Standard weight 2600 lbs.
 Spec. basis Approved Type Certificate No. 270
 Serial Nos. 208 and up mfrd. prior to July 15, 1933
 eligible. Approval expired as of that
 date.

Class III equipment: Engine ring cowl 15 lbs.

CURTISS ROBIN, 3 PCLM, 2-132

Engine Hispano A 150 hp
 Fuel 50 gals.
 Oil 3-1/2 gals.
 No. pass. 2
 Baggage 25 lbs.
 Standard weight 2560 lbs.
 Spec. basis Aero. Bulletin No. 7A, Section 3
 Serial Nos. 112 only eligible (See NOTE 1)
 NOTE 1. Serial No. 107 eligible with above specs.
 except as follows:
 Oil 7 gals.
 Equipment: Adj. metal propeller, hot shot battery
 and 22x10-4 low pressure tires.

CURTISS ROBIN 4-C-1, 3 PCLM, 2-198

Engine Curtiss Challenger R600 185 hp
 Fuel 50 gals.
 Oil 5 gals.
 No. pass. 2
 Baggage 92 lbs.
 Standard weight 2600 lbs.
 Spec. basis Aeronautics Bulletin 7A, Section 3
 Serial Nos. 700, 767 and 769 eligible.

NOTE 1. These aircraft differ from the Curtiss Robin
 C-1 in that the fuselage is 4 inches wider.

CURTISS ROBIN 4C-1A, 4 PCLM, ATC 309

Engine Curtiss Challenger R600 185 hp
 Fuel 50 gals.
 Oil 5 gals.
 No. pass. 3
 Baggage 21 lbs.
 Standard weight 2850 lbs.
 Spec. basis Approved Type Certificate No. 309
 Serial Nos. 702, 704 and up mfrd. prior to July 15, 1933, eligible. Approval expired as of that date.

Class I equipment: Hand inertia starter
 Class III equipment: Engine ring cowl 15 lbs.

CURTISS ROBIN J-1 and J-1 DeLuxe, 3 PCL-SM, ATC 220

Engine Wright R-540 165 hp
 Fuel 50 gals.
 Oil 5 gals.
 No. pass. 2
 Baggage 50 lbs.
 Standard weight Landplane 2523 lbs.
 Landplane DeLuxe 2581 lbs.
 Seaplane 2660 lbs.
 Spec. basis Approved Type Certificate No. 220
 Serial Nos. 382 and up mfrd. prior to July 15, 1933, eligible. Approval expired as of that date.

Class I equipment:
 (Landplane DeLuxe): Adj. metal propeller; Eclipse hand starter; Booster magneto; Heater; Battery 15 lbs.
 (Seaplane): Edo DeLuxe floats.

Class III equipment:
 (Landplane): Skis - McGee Jr. S, Federal SA-6, Star Air Service 2900.

NOTE 1. Serial Nos. 39 and up, eligible as Robins under ATC 68, also eligible under this approval provided manufacturer's affidavit of conformity submitted.

CURTISS ROBIN J-2, 3 PCLM, ATC 221

Engine Wright R-540 175 hp
 Fuel 78 gals.
 Oil 5 gals.
 No. pass. 2
 Baggage 50 lbs.
 Standard weight 2600 lbs.
 Spec. basis Approved Type Certificate No. 221
 Serial Nos. 382 and up mfrd. prior to July 15, 1933 eligible. Approval expired as of that date.

CURTISS ROBIN W, 3 PCLM, ATC 268

Engine Warner Scorpion 125 hp
 Fuel 50 gals.
 Oil 5 gals.
 No. pass. 2
 Baggage 102 lbs.
 Standard weight 2300 lbs.
 Spec. basis Approved Type Certificate No. 268
 Serial Nos. 252 eligible.

CURTISS-WRIGHT SEDAN 15-C, 4 PCLM, ATC 426

Engine Curtiss Challenger R-600 185 hp
 Fuel 60 gals.
 Oil 5 gals.
 No. pass. 3
 Baggage 120 lbs.
 Standard weight 3281 lbs.
 Spec. basis Approved Type Certificate No. 426
 Serial Nos. 15C-2001 and up mfrd. prior to April 26, 1937 eligible. Approval expired as of that date due to sale to Curtiss-Wright Corp., St. Louis Airplane Division.

Class I equipment: Adj. metal propeller; Battery 38 lbs.; Electric Starter 25 lbs.; 25x11-4 wheels; Brakes, Duals (wheels); Position lights; Engine ring cowl.

Class III equipment: Detachable right hand control wheel 5 lbs. (Standard weight may be increased accordingly); New airwheel installation and/or new oil tank; Tail wheel. No change in weight

CURTISS-WRIGHT SEDAN 15-D, 4 PCLM, ATC 444

Engine Wright R-760 250 hp
 Fuel 60 gals.
 Oil 5 gals.
 No. pass. 3
 Baggage 121 lbs.
 Standard weight 3360 lbs.
 Spec. basis Approved Type Certificate No. 444
 Serial Nos. 15C-2203, 15D-2206, 15D-2207, 15D-2213 and up mfrd. prior to April 26, 1937 eligible. Approval expired as of that date due to sale to Curtiss-Wright Corp., St. Louis Airplane Division. (See NOTE 1)

Class I equipment: Adj. metal propeller.

Class III equipment: Pyle National landing lights 15 lbs.; Oil radiator 10 lbs.; New airwheel installation or new oil tank, no change in weight; Skis - Washington Aircraft 3600.

NOTE 1. Serial No. 15D-2209 also eligible with the following:

Class I equipment: Adj. metal propeller; Engine ring cowl 18 lbs.; Radio 38 lbs.; Battery 39 lbs.; Starter 27 lbs.; Generator 21 lbs.; Heater 5 lbs.; Airwheels 70 lbs.; Tail wheel.

Class III equipment: 80 gal. fuel capacity (two 30 gal. tanks replaced by two 40 gal. tanks), net increase 17 lbs.

CURTISS-WRIGHT SEDAN 15-N, 4 PCLM, ATC 425

Engine Kinner C-5 210 hp
 Fuel 60 gals.
 Oil 5 gals.
 No. pass. 3
 Baggage 120 lbs.
 Standard weight 3279 lbs.
 Spec. basis Approved Type Certificate No. 425
 Serial Nos. 2002 and up mfrd. prior to April 26, 1937 eligible. Approval expired as of that date due to sale to Curtiss-Wright Corp., St. Louis Airplane Division.

Class I equipment: Battery 38 lbs.; Starter 26 lbs.

Class III equipment: Tail wheel, Wing lift struts; New oil tank and new airwheel installation, no change in weight.

CURTISS THRUSH J, 6 PCLM, ATC 236

Engine Wright R-760 250 hp
Fuel 110 gals.
Oil 9 gals.
No. pass. 5
Baggage ---
Standard weight 3800 lbs.
Spec. basis Approved Type Certificate No. 236
Serial Nos. G-1 and G-2 eligible
Class III equipment: Tail wheel.

CURTISS THRUSH J, 6 PCLM, ATC 261

Engine Wright R-760 250 hp (See NOTE 1)
Fuel 110 gals.
Oil 9 gals.
No. pass. 5
Baggage 67 lbs.
Standard weight 3800 lbs.
Spec. basis Approved Type Certificate No. 236
Serial Nos. 1 to 1010 eligible
Class III equipment: Tail wheel; Skis - Bowman 4300, Star Air Service 3800.

NOTE 1. Serial No. 1010 is also eligible as model Thrush J Special with Wright J-5 engine replacing R-760 engine.

CURTISS THRUSH J SPECIAL, 6 PCLM, 2-210

Engine Wright R-760 250 hp
Fuel 110 gals.
Oil 9 gals.
No. pass. 4
Baggage ---
Standard weight 3800 lbs.
Spec. basis Aero. Bulletin 7A, Section 3
Serial No. 1006 only eligible.

CURTISS-WRIGHT TRAVEL AIR 4-D, 3 POL-SE, ATC 254

Engine Wright R-760 250 hp (See NOTE 1)
Fuel 67 gals.
Oil 6 gals.
No. pass. 2
Baggage ---
Std. weight
Landplane 2880 lbs.
Seaplane 3000 lbs.
Spec. basis Approved Type Certificate No. 254
Serial Nos. 898 to 1366 eligible (See NOTE 1)

Class I equipment: Seaplane - Edo P floats
Class III equipment: Engine ring cowl 19 lbs.

NOTE 1. Serial No. 1362 eligible with Wright R760E-1 engine installation. The following propeller limits apply:

Propeller - fixed or adjustable metal.
Static rpm at maximum permissible throttle setting - not more than 1800 rpm
not less than 1800 rpm
Diameter - not more than 102 inches
not less than 99 inches

CURTISS-WRIGHT TRAVEL AIR 4-D, 3 POLB, 2-300

Engine Wright R-760 250 hp
Fuel 67 gals.
Oil 6 gals.
No. pass. 2
Baggage 50 lbs.
Std. weight 2880 lbs.
Spec. basis Aero. Bulletin 7A, Section 3
Serial Nos. 1367 only eligible.

CURTISS-WRIGHT TRAVEL AIR D-4D, 3POLB, 2-178

Engine Wright R-760 250 hp
Fuel 65 gals.
Oil 6 gals.
No. pass. 2
Baggage 50 lbs.
Std. weight 2650 lbs.
Spec. basis Aero. Bulletin 7A, Section 3
Serial Nos. 515, 1340, 1372, 1374, 1376 and 1391 eligible.

CURTISS-WRIGHT TRAVEL AIR 4-P, 3 POLB, ATC 280

Engine Ace LA-1 170 hp
Fuel 42 gals.
Oil 6 gals.
No. pass. 2
Baggage 50 lbs.
Std. weight 2388 lbs.
Spec. basis Approved Type Certificate No. 280
Serial Nos. 1332 eligible
Class I equipment: Brakes. Tail skid

CURTISS-WRIGHT TRAVEL AIR 4-U, 3 POLB, 2-432

(Remodeler Timm Aircraft Corp., Burbank, Calif.)

Engine Comet 130 hp or Comet 7M 165 hp
Propeller Adj. metal
No. pass. 2
Spec. basis Aero. Bulletin 7A, Section 7
Serial Nos. 242, 268, 322, 418, 423, 551, 611, 735, 763, 788, 767, 818, 871, 1004, 1016, 1162 eligible.

NOTE 1. Other specifications dependent upon model from which converted. Use those shown on airworthiness certificate previously issued.

CURTISS-WRIGHT TRAVEL AIR 6A, 6 PCLM, ATC 436

Engine P & W Wasp C1 420 hp
Propeller Adj. metal
Fuel 150 gals.
Oil 8 gals.
No. pass. 6
Baggage 68 lbs.
Standard weight 5600 lbs.
Spec. basis Approved Type Certificate No. 436
Serial Nos. AGA-2009 and up mfrd. prior to July 1, 1932 eligible. Approval expired as of that date.

CURTISS-WRIGHT TRAVEL AIR 6-B, 6 PCLM, ATC 352

Engine Wright R-975 330 hp
Fuel 90 gals.
Oil 7 gals.
No. pass. 4 (See NOTE 1)
Baggage 100 lbs. (Tool kit beneath co-pilot's seat 25 lbs.; baggage compt. 75 lbs.) (See equipment)
Standard weight 4420 lbs. (See equipment)
Spec. basis Approved Type Certificate No. 352
Serial Nos. 6B-2037 and up mfrd. prior to July 1, 1932 eligible. Approval expired as of that date. (See NOTE 2)

Class III equipment: Toilet equipment 35 lbs., reduce baggage accordingly; Night flying equipment (incl. flares), baggage reduced to 40 lbs., standard weight increased 32 lbs.; Engine ring cowl and wheels streamlines 32 lbs., standard weight increased accordingly; Federal SA-9 skis.

NOTE 1. Also eligible with lounge in place of two rear seats with baggage 56 lbs., standard weight 4500 lbs. and the following equipment; Engine ring cowl 26 lbs.; Battery 35 lbs.; Flare holders 5 lbs.; Generator 15 lbs.; Heater 12 lbs. (Note: Dual controls not removable.)

NOTE 2. The chassis for serial Nos. 6B-2041, 2042, 2043 and 2044 were built according to factory drawings and the aircraft assembled by Airtech Flying Service, Ltd., San Diego, California. They are eligible with the following:

Propeller Adj. metal
Baggage 86 lbs. (Rear of cabin)
Standard weight 4500 lbs.
C.G. limits (+16.4) and (+28.1)
Class I equipment: (Datum is wing leading edge)
Engine ring cowl 26 lbs.; Starter 16 lbs.; Generator 15 lbs.; Battery 59 lbs.; Heater; 27 in. streamline wheels with brakes (Bendix)
Class III equipment: Federal SA-9 skis.
Note: Serial No. 2044 also eligible with extra passenger seat installation, 12 lbs. increase.
No. pass. 5, crew 2

CURTISS-WRIGHT TRAVEL AIR 10-D, 4 PCLM, ATC 278

Engine Wright R-760 250 hp
Fuel 70 gals.
Oil 6 gals.
No. pass. 2
Baggage 125 lbs.
Standard weight 3400 lbs.
Spec. basis Approved Type Certificate No. 278
Serial Nos. 10-2001 to 10-2011 eligible
Class I equipment: Hand inertia starter; Heater; 14x3 tail wheel.

CURTISS-WRIGHT TRAVEL AIR B-11-D, 1 POLB, 2-399

Engine Wright R-760 250 hp
 Propeller Adj. metal
 Fuel 34 gals.
 Oil 7 gals.
 No. pass. None
 Baggage None
 Standard weight 2083 lbs.
 Spec. basis Aero. Bulletin 7A, Section 3
 Serial No. 1267 only eligible
 Class I equipment; New type landing gear; Engine ring cowl; Wheel streamlines.

CURTISS-WRIGHT TRAVEL AIR 12-K, 2 POLB, ATC 406

Engine Kinner B-6 125 hp
 Fuel 33 gals.
 Oil 4 gals.
 No. pass. 1
 Baggage 98 lbs.
 Standard weight 1800 lbs.
 Spec. basis Approved Type Certificate No. 406
 Serial Nos. 12K-2001 and up mfrd. prior to 4/26/37 eligible. Approval expired as of that date due to sale to Curtiss-Wright Corp., St. Louis Airplane Division.
 Class I equipment; Battery; Electric starter; Wood propeller.

CURTISS-WRIGHT TRAVEL AIR 12-Q, 2 POLB, ATC 401

Engine Wright Gipsy L-320 90 hp
 Fuel 33 gals.
 Oil 2-3/8 gals.
 No. pass. 1
 Baggage 98 lbs.
 Standard weight 1725 lbs.
 Spec. basis Approved Type Certificate No. 401
 Serial Nos. 12Q-2001 and up mfrd. prior to 4/26/37 eligible. Approval expired as of that date.
 Class I equipment; Wood propeller; Tail skid.
 Class III equipment; Tail wheel 4 lbs. net increase.

CURTISS-WRIGHT TRAVEL AIR 12-W, 2 POLB, ATC 407

Engine Warner Scarab 125 hp
 Fuel 35 gals.
 Oil 4 gals.
 No. pass. 1
 Baggage 46 lbs.
 Standard weight 1800 lbs.
 Spec. basis Approved Type Certificate No. 407
 Serial Nos. 12W-2001 and up mfrd. prior to 4/26/37 eligible. Approval expired as of that date.
 Class I equipment; Engine ring cowl; Electric starter; Battery; Wheels with brakes and 6.50-10 tires.
 NOTE 1. Eligible for use in acrobatic stages of Civilian Pilot Training Secondary course when operated in accordance with "Instructions for the Operation of Travel Air 12-W in the Acrobatic Stages of the Civilian Pilot Training Program Secondary Course" issued by Civilian Pilot Training.

CURTISS-WRIGHT TRAVEL AIR B-14-R, 1 or 2 POLB, 2-403

Engine Wright R-975E-2 420 hp
 Fuel 76 gals. (as 2-place)
 104 gals. (as 1-place)
 Oil 6 gals. (as 2-place)
 8 gals. (as 1-place)
 No. pass. 0 or 1
 Baggage 120 lbs.
 Standard weight 2966 lbs. (as 2-place)
 2966 lbs. (as 1-place)
 Spec. basis Aero. Bulletin 7-A, Section 3
 Serial Nos. 2003 only eligible
 Class I equipment; Engine ring cowl 40 lbs.; Battery 30 lbs.; Starter 30 lbs.; Generator 25 lbs.; Heater 5 lbs.; Airwheels 87 lbs.; Special equipment (drift indicator, fuel gauge and wobble pump) 13 lbs.; Adj. metal propeller.

CURTISS-WRIGHT TRAVEL AIR 16-K, 3 POLB, ATC 411

Engine Kinner B-5 125 hp
 Fuel 33 gals.
 Oil 4 gals.
 No. pass. 2
 Baggage 35 lbs.
 Standard weight 1950 lbs.
 Spec. basis Approved Type Certificate No. 411
 Serial Nos. 16K-2001 and up mfrd. prior to 4-26-37 eligible. Approval expired as of that date due to sale to Curtiss-Wright Corp., St. Louis Airplane Division.

Class I equipment; Battery box switch and wires 9 lbs.; Airwheels 59 lbs.; Wood propeller.
 Class III equipment; Starter 20 lbs.; Battery 26 lbs.; Exhaust collector ring 25 lbs.; Adj. metal propeller, net increase 16 lbs.; Extra 20 gal. fuel tank installed in front cockpit replacing two passengers (weight of tank installation 17 lbs.--seat cushions and safety belt removed 8 lbs.), net increase 9 lbs.
 NOTE 1. Eligible for use in acrobatic stages of Civilian Pilot Training secondary course when operated in accordance with "Instructions for the Operation of Travel Air 16-K in the Acrobatic Stages of the Civilian Pilot Training Program Secondary Course" issued by Civilian Pilot Training.

CURTISS-WRIGHT TRAVEL AIR 2000, 3 POLB, ATC 30

Engine Curtiss OX5 90 hp or OXX6 102 hp
 Propeller Wood, fixed metal or adj. metal
 Fuel 42 gals. (See NOTE 1)
 Oil 3-1/2 gals.
 No. pass. 2
 Baggage 39 lbs.
 Standard weight 2180 lbs.
 Spec. basis Approved Type Certificate No. 30
 Serial Nos. 1 to 1429 eligible
 Class I equipment; Tail skid.
 Class III equipment; Tail wheel manufactured and installed by Air Transport Equipment, Inc., Roosevelt Field, N. Y.
 NOTE 1. A number of these aircraft have an 18 gal. center section fuel tank installed. The outlet of this tank must be plugged.

CURTISS-WRIGHT TRAVEL AIR 2000, 3 POLB, 2-4?

Engine Curtiss OX5 90 hp
 Fuel 42 gals.
 Oil 5 gals.
 No. pass. 2
 Baggage --
 Standard weight 2351 lbs.
 Spec. basis Aero. Bulletin No. 7A, Section 3
 Serial No. 280 only eligible.

CURTISS-WRIGHT TRAVEL AIR 2000-T, 3 POLB, 2-368

(Remodeler Milwaukee Parts Corporation, Milwaukee, Wis.)
 Engine Tank V-470 115 hp or V-502 115 hp
 Propeller Adj. metal or wood
 Fuel 43 gals.
 Oil 3-1/2 gals.
 No. pass. 2
 Baggage None
 Standard weight 2180 lbs.
 Spec. basis Aero. Bulletin 7A, Section 7
 Serial Nos. All aircraft eligible as model 2000 under ATC 30 eligible under this specification when changed in accordance with approved data submitted by Milwaukee Parts Corp.

CURTISS-WRIGHT TRAVEL AIR SC-2000, 3 POLB, ATC 111

Engine Curtiss C-6 160 hp
 Fuel 60 gals.
 Oil 5 gals.
 No. pass. 2
 Baggage --
 Standard weight 2600 lbs.
 Spec. basis Approved Type Certificate No. 111
 Serial Nos. 1 to 882, 1387 eligible.

CURTISS-WRIGHT TRAVEL AIR 3000, 3 POLB, ATC 31

Engine Hispano A 150 hp or E 180 hp
 Fuel 30 gals.
 Oil 5 gals.
 No. pass. 2
 Baggage 18 lbs.
 Standard weight 2590 lbs.
 Spec. basis Approved Type Certificate No. 31
 Serial Nos. 1 to 1393 eligible
 Class I equipment: Wood propeller
 Class III equipment: Adj. metal propeller, approx.
 25 lbs. net increase; Wheels and brakes - 30x5
 (Bendix) or 8.50-10.

CURTISS-WRIGHT TRAVEL AIR 4000, 3 POLB, ATC 32

Engine Wright J-5 220 hp
 Fuel 60 gals.
 Oil 6 gals.
 No. pass. 2
 Baggage None
 Standard weight 2450 lbs.
 Spec. basis Approved Type Certificate No. 32
 Serial Nos. 1 to 1261, 1383, 1409, 1416, 1418 and
 1418 eligible.

Class I equipment: Starter (Hand inertia) 20 lbs.,
 Propeller - adj. metal.

NOTE 1. Eligible for use in acrobatic stages of Civilian
 Pilot Training secondary course when operated in accor-
 dance with "Instructions for the Operation of Travel Air
 4000 in the Acrobatic Stages of the Civilian Pilot Train-
 ing Program Secondary Course" issued by Civilian Pilot
 Training.

CURTISS-WRIGHT TRAVEL AIR A-4000, 3 POLB, ATC 148

Engine Axelson 115 hp
 Fuel 67 gals.
 Oil 6 gals.
 No. pass. 2
 Baggage 38 lbs.
 Standard weight 2650 lbs.
 Spec. basis Approved Type Certificate No. 148
 Serial Nos. 818 thru 1370 eligible.

CURTISS-WRIGHT TRAVEL AIR E-4000, 3 POLB, ATC 146

Engine Wright J-5 220 hp
 Fuel 67 gals.
 Oil 6 gals.
 No. pass. 2
 Baggage 50 lbs.
 Standard weight 2900 lbs.
 Spec. basis Approved Type Certificate No. 146
 Serial Nos. 1000, 1011, 1014 thru 1365, and 1398 eligible.
 Class I equipment: Tail skid
 Class III equipment: 6x2-3/8 solid rubber tired tail
 wheel manufactured and installed by Air Transport Equipment,
 Inc., Roosevelt Field, N. Y.

CURTISS-WRIGHT TRAVEL AIR B9-4000, 3 POLB, 2-381

Engine Wright R-975 330 hp
 Fuel 65 gals.
 Oil 6 gals.
 No. pass. 2
 Baggage 15 lbs.
 Standard weight 2800 lbs.
 Spec. basis Aero. Bulletin 7A, Section 3
 Serial Nos. 1001, 1010, 1103, 1398 and 1397 eligible
 Class I equipment: Hand inertia starter; Adj. metal prop.

CURTISS-WRIGHT TRAVEL AIR C-4000, 3 POLB, ATC 149

Engine Curtiss Challenger R-800 185 hp
 Fuel 67 gals.
 Oil 6 gals.
 No. pass. 2
 Baggage 50 lbs.
 Standard weight 2597 lbs. (with old wings)
 2637 lbs. (with new wings)
 Spec. basis Approved Type Certificate No. 149
 Serial Nos. 754 eligible with either old or new wings.
 781, 798, 869, 871 thru 1350 eligible
 with old wings.
 1300 thru 1350 eligible with new wings.
 Class III equipment: Brakes, net increase 28 lbs.
 (Standard weight may be increased accordingly.)
 5-2/405

CURTISS-WRIGHT TRAVEL AIR D-4000, 3 POLB, 2-84

Engine Wright J-5 220 hp
 Fuel 67 gals.
 Oil 6 gals.
 No. pass. 2
 Baggage 156 lbs.
 Standard weight 2350 lbs.
 Spec. basis Aero. Bulletin 7A, Section 3
 Serial Nos. 379, 515, 626, 690 and up mfrd. prior
 to 4/26/37 eligible. (See NOTE 1)
 NOTE 1. Serial Nos. 379, 626, 729, 751, 754, 807, eligi-
 ble provided wing fittings have been changed according
 to Travel Air instructions sheet and Dwg. D-2410A,
 D-2415A and D-2435A.

CURTISS-WRIGHT TRAVEL AIR E-4000, 3 POL-SE, ATC 188

Engine Wright R-540 175 hp
 Propeller Wood or adj. metal
 Fuel 67 gals.
 Oil 6 gals.
 No. pass. 2
 Baggage 50 lbs.
 Standard weight Landplane 2702 lbs.
 Seaplane 2720 lbs.
 Spec. basis Approved Type Certificate No. 188
 Serial Nos. Landplane - 799, 861, 925, 1060, 1104 to
 1381 eligible.
 Seaplane - 861, 1060, 1104, to 1381
 eligible.
 Class I equipment: (Seaplane) Edo M floats.
 Class III equipment: Engine ring cowling 15 lbs.

CURTISS-WRIGHT TRAVEL AIR K-4000, 3 POLB, ATC 206

Engine Kinner K-5 100 hp
 Fuel 42 gals.
 Oil 5 gals.
 No. pass. 2
 Baggage 20 lbs.
 Standard weight 2160 lbs.
 Spec. basis Approved Type Certificate No. 206
 Serial Nos. 1005 to 1373 eligible.

CURTISS-WRIGHT TRAVEL AIR W-4000, 3 POLB, ATC 112

Engine Warner Scarab 125 hp
 Fuel 30 gals. (1 tank in fuselage)
 42 gals. (1 tank in fuselage)
 57 gals. (30 gal. fuselage tank, 27 gal.
 CS tank)
 Oil 5 gals.
 No. pass. 2
 Baggage 50 lbs.
 Standard weight 2115 lbs. (with 30 gal. fuel capacity)
 2187 lbs. (with 42 gal. fuel capacity)
 2277 lbs. (with 57 gal. fuel capacity)
 Spec. basis Approved Type Certificate No. 112
 Serial Nos. 1 to 1366 eligible.

CURTISS-WRIGHT TRAVEL AIR W-4000, 3 POLB, 2-35

Engine Warner Scarab 125 hp
 Fuel 60 gals.
 Oil 5 gals.
 No. pass. 2
 Baggage --
 Standard weight 2276 lbs.
 Spec. basis Aero. Bulletin 7A, Section 3
 Serial Nos. All mfrd. prior to 4/26/37 eligible.

CURTISS-WRIGHT TRAVEL AIR L-4000, 2 POLB, 2-560
(Remodeled by Parks Air College, East St. Louis, Ill.)

Engine	Lycoming R-680-B4
Placard limits	For all operations, 2100 rpm (225 hp)
Propeller	Static rpm at maximum permissible throttle setting - not more than 1875 not less than 1875
	Diameter - not more than 96 in. not less than 93 in.
Placard speeds	Level flight or climb 115 mph True Ind. Glide or dive 138 mph True Ind.
Fuel capacity	42 gals. (-11)
Oil capacity	6 gals. (-22)
No. passengers	1 (+18 or +55) (See NOTE 1)
Baggage	None
Standard weight	2450 lbs.
C.G. limits	(26.92%MAC) and (31.67% MAC)(See NOTE 5)
MAC	63.25 in.
Leveling means	Level upper longerons or leveling lugs at Station 3 when provided
Spec. basis	CAR 04.031
Serial Nos.	1122 and 1180 only eligible(See NOTE A)

EQUIPMENT: (Datum is lower wing leading edge)(*Denotes net increase).

Class I.

101. Propeller - adjustable metal - Ham.Std. hub
H5131, blades 5B1-9 70 lbs. (-64)
102. Carburetor air heater 7 lbs. (-38)
103. 27 in. Streamline wheels (Hayes
2700A with mechanical brakes)
and 4-ply tires and tubes 104 lbs. (-15)
104. 6.00x2.5 tail wheel (Parks)
and tire 5 lbs. (+162)

Class II.

200. Miscellaneous items as noted in
approved weight and balance report.
201. Starter 25 lbs. (-29)
202. Battery 36 lbs. (-32)

Class III.

None

NOTE A. Additional airplanes of the Travel Air 4000 may be remodeled in accordance with the Parks Air College approved drawing file and certificated under the terms of this specification, but each aircraft certificated must satisfactorily pass:

- (a) An inspection of the revised structure for workmanship, materials, and conformity before any covering, metal priming, or finish is applied. All woodwork may be varnished.
- (b) A final inspection of the completed aircraft.
- (c) Check of flight characteristics.

The serial number(s) of all aircraft certificated under this note must be forwarded to the Mid-West Engineering Branch at the time of original certification in order that this specification may be revised to include the additional airplane(s) under "Serial numbers."

NOTE 1. The following placard must be installed in full view of pilot in front cockpit:
"Solo - Use Rear Seat only."

NOTE 2. Converted from Travel Air 4000 in accordance with Parks Air College approved drawing file.

NOTE 3. Weight and balance report including list of equipment included in certificated weight empty must be submitted with original inspector's report and each subsequent report covering changes in Class I or Class II equipment.

NOTE 4. Eligible for export to all countries except Canada, Australia, Great Britain and New Zealand.

NOTE 5. MAC to be determined in accordance with the procedure set forth in Appendix II of the Civil Aeronautics Manual 18.

NOTE 6. Serial Nos. 1122 and 1180 eligible for use in acrobatic stages of War Training Service secondary course when operated in accordance with "Instructions for the operation of Travel Air L-4000 in the acrobatic stages of the Civilian Pilot Training Program Secondary Course" issued by War Training Service.

S-21462

CURTISS-WRIGHT TRAVEL AIR 6000, 5 or 6 PCLM, ATC 100

Engine	Wright J-6 220 hp
Fuel	82 gals.
Oil	7 gals.
No. pass.	4 or 5
Baggage	105 lbs. (See NOTE 1)
Standard weight	4100 lbs.
Spec. basis	Approved Type Certificate No. 100
Serial Nos.	732, 733, 779, 780, 790, 791, 814, 815, 838, 839 to 1036 eligible.

NOTE 1. Approximately 170 lbs. additional baggage may be carried in compartment which may replace right pilot's seat. Inspector should specify capacity. Serial Nos. 779, 815, 864, 892, 964, 966, 967, 968, 981, 986, 993, 994, 995, 1029, 1034, 1036, 1070, 1071, 1084 have the baggage compartment in place of the right pilot's seat.

CURTISS-WRIGHT TRAVEL AIR A-6000-A, 6 PCLM, ATC 116

Engine	P & W Wasp C1 420 hp or SC-1 450 hp
Fuel	130 gals.
Oil	9 gals.
No. pass.	5
Baggage	157 lbs.
Standard weight	5250 lbs.
Spec. basis	Approved Type Certificate No. 116
Serial Nos.	All Serial Nos. up to and including No. A6A-2008, except 816 and 840, eligible. Serials 816 and 840 will be eligible when larger tail surfaces are installed according to approved data.

Class I equipment: Heywood starter; Toilet equipment; Heater

Class III equipment: Engine ring cowl 30 lbs.; Skis: Washington Aircraft 5600

CURTISS-WRIGHT TRAVEL AIR A-6000-A, 7 PCLM, 2-76

Engine	P & W Wasp C1 420 hp
Fuel	130 gals.
Oil	10 gals.
No. pass.	6
Baggage	222 lbs.
Standard weight	5500 lbs.
Spec. basis	Aero. Bulletin 7A, Section 3
Serial Nos.	840, 892, 963, 981, 1078, 1084, 1097, 1098, 2002, 2003, A6A-2006 eligible.

Class I equipment: Night flying equipment 140 lbs.; Heater; Toilet equipment.

Class III equipment: Skis: Washington Aircraft 5600.

CURTISS-WRIGHT TRAVEL AIR A-6000-A SPECIAL, 7 PCLM, 2-308

Engine	P & W Wasp C1 420 hp
Fuel	130 gals.
Oil	8 gals.
No. pass.	5
Baggage	87 lbs. (25 lbs. tools under co-pilots' seat and 62 lbs. baggage in toilet compartment. Baggage in toilet may be increased to 110 lbs. when one pass- enger is omitted.)
Standard weight	5250 lbs.
Spec. basis	Aero. Bulletin 7A, Section 3
Serial Nos.	1095 only eligible.

CURTISS-WRIGHT TRAVEL AIR S-6000-B, 6 PCL-SM, ATC 130

Engine	Wright R-975 330 hp
Fuel	80 gals.
Oil	7 gals.
No. pass.	4 (See NOTE 1)
Baggage	69 lbs. (Rear compt.) (See NOTE 1)
Standard weight	Landplane - 4230 lbs. Seaplane - 4620 lbs.
Spec. basis	Approved Type Certificate No. 130
Serial Nos.	Landplane - all mfrd. prior to April 26, 1937, eligible. Seaplane - 99C and up mfrd. prior to April 26, 1937 eligible. Serial 998 eligible upon receipt of mfr.'s affidavit of con- formity.

No. 177

and tail

, 2080 rpm

., 2080 rpm

348 hp)
motor 108 in.
4 mph True Ind
11 mph True Indlable metal
-6); Engine
th 6 ply tires
tire; redesign

CURTISS-WRIGHT TRAVEL AIR S-6000-B (CONTINUED)

Approval expired April 26, 1937, due to sale to Curtiss-Wright Corp., St. Louis Airplane Division.

Class I equipment: Battery 75 lbs.; Flares 43 lbs.; Landing lights 24 lbs.; Inertia starter; Misc. instruments 39 lbs.; Edo K floats (seaplane)

Class III equipment: Engine ring cowl 15 lbs.; Tail wheel; Skis; Bacon 4400, Washington Aircraft 4600, Grab and Smith GS-2, Federal SA-9; Edo WA 4665 floats 47 lbs. less than Edo K floats.

NOTE 1. Eligible with baggage compt. (capacity 170 lbs.) replacing co-pilot's seat with or without a seat installed in rear of cabin. When the seat is installed in rear of cabin, baggage may not be carried in rear baggage compt.

CURTISS-WRIGHT TRAVEL AIR S-6000-B, 7 PCLM, 2-138

(Same as ATC 130 landplane except extra passenger seat)

Engine Wright R-975 330 hp
Fuel 32 gals.
Oil 7 gals.
No. pass. 5
Baggage 50 lbs.
Standard weight 4230 lbs.
Spec. basis Aero. Bulletin 7A, Section 3
Serial Nos. All mfrd. prior April 26, 1937 eligible. Approval expired as of that date due to sale to Curtiss-Wright Corp., St. Louis Airplane Division.

Class I equipment: Battery; Landing lights; Flares; Inertia starter.

Class III equipment: Skis; Bacon 4400, Washington Aircraft 4600, Grab and Smith GS-2, Federal SA-9.

CURTISS-WRIGHT TRAVEL AIR S-6000-B SPECIAL, 4 PCLM, 2-302

Engine Wright R-975 330 hp
Fuel 80 gals.
Oil 7 gals.
No. pass. 3
Baggage 400 lbs. with 2 passengers
298 lbs. with 3 passengers
Standard weight 4230 lbs.
Spec. basis Aero. Bulletin 7A, Section 3
Serial Nos. 779, 966, 1029 eligible.
Class I equipment: Landing lights; Battery; Flares.

CURTISS-WRIGHT TRAVEL AIR SA-6000-A, 6 PCLM, ATC 175

Engine P & W Wasp C1 420 hp
Fuel 132 gals.
Oil 9 gals.
No. pass. 4
Baggage --
Standard weight 5500 lbs.
Spec. basis Approved Type Certificate No. 175
Serial Nos. 1075 and up mfrd. prior to April 26, 1937 eligible. Approval expired as of that date due to sale to Curtiss-Wright Corp., St. Louis Airplane Division.

Class I equipment: Anchor and 75 ft. 3/4 in. line 43 lbs.; Tools 15 lbs.; Life preservers (6 at 2-1/2 lbs. each) 15 lbs.; 2 gals. water in tank in toilet compt.; Edo J floats.

CURTISS-WRIGHT TRAVEL AIR 9000, 3 POLB, ATC 38

Engine Ryan Siemens 125 hp
Fuel 60 gals.
Oil 4 gals.
No. pass. 2
Baggage 20 lbs.
Standard weight 2300 lbs.
Serial Nos. 1 to 651 and 1189 eligible.

CYCLOPLANE C-1, 1 POLM, ATC 445

Engine Cyclomotor A2-25 22 hp
Propeller Wood
Fuel 7 gals.
Oil 1 gal.
No. passengers None
Baggage None (See NOTE 1)
Standard weight 67C lbs.
Spec. basis Approved Type Certificate No. 445
Serial Nos. 4 and up mfrd. prior to 9-30-39 eligible. Approval expired as of that date.

Class I equipment: One-way radio 20 lbs.; Tail wheel or skid.

NOTE 1. When radio is not installed there is an allowance of 20 lbs. for parachute.

CYCLOPLANE C-1, 1 POLM, 2-352

Engine Cyclomotor A2-25 22 hp
Fuel 7 gals.
Oil 1 gal.
No. pass. None
Baggage None
Standard weight 660 lbs.
Spec. basis Aero. Bulletin 7A, Section 3
Serial Nos. 1,2,3 eligible

Class I equipment: Tail wheel or skid.

DAVIS D-1, 2 POLM, ATC 256

Engine Rearwin Le Blond 60 5D 65 hp, 70 5DE 70 hp
or 70 DE 70 hp
Fuel 20 gals.
Oil 2 gals.
No. pass. 1
Baggage 20 lbs.
Standard weight 1334 lbs.
Spec. basis Approved Type Certificate No. 256
Serial Nos. 126 and up mfrd. prior to 7-15-33
eligible. Approval expired as of
that date.

DAVIS D-1-K, 2 POLM, 2-148

Engine Kinner K-6 100 hp
Fuel 30 gals.
Oil 2-1/2 gals.
No. pass. 1
Baggage None
Standard weight 1476 lbs.
Spec. basis Aero. Bulletin 7A, Section 3
Serial Nos. 501 and 701 eligible

DAVIS D-1-K, 2 POLM, ATC 272

Engine Kinner K-5 100 hp
Fuel 26 gals.
Oil 2-1/2 gals.
No. pass. 1
Baggage 27 lbs.
Standard weight 1461 lbs.
Spec. basis Approved Type Certificate No. 272
Serial Nos. 502 and up mfrd. prior to 7-15-33
eligible. Approval expired as of
that date.
Class III equipment: Wheel streamlines 14 lbs.

DAVIS D-1-W, 2 POLM, 2-394

Engine Warner Scarab 125 hp
Fuel 30 gals.
Oil 5 gals.
No. pass. 1
Baggage None (Pay load includes tools 14 lbs.)
Standard weight 1461 lbs. (See equipment)
Spec. basis Aero. Bulletin 7A, Section 3
Serial Nos. 504, 701 to 706, and 801 eligible.
Class I equipment: Engine ring cowl 7 lbs.; Propeller -
wood.
Class III equipment: Wheel streamlines 14 lbs.; adj. metal
propeller, net increase 10 lbs. (Standard weight may be
increased to 1471 lbs. for this installation.)

DAVIS D-1-66, 2 POLM, ATC 317

Engine Rearwin Le Blond 85 5DF or 5F 85 hp
Fuel 20 gals.
Oil 2-1/2 gals.
No. pass. 1
Baggage 47 lbs.
Standard weight 1380 lbs.
Spec. basis Approved Type Certificate No. 317
Serial Nos. 128, 301 and up mfrd. prior to 7-15-33
eligible. Approval expired as of that
date.
Class III equipment: Wheel streamlines 14 lbs.; 6.50-10
wheels (Warner 3001), net increase 8 lbs.

DAVIS V-3, 2 POLM, 2-119

Engine Rearwin Le Blond 60 5D 65 hp
Fuel 25 gals.
Oil 2 gals.
No. pass. 1
Baggage None
Standard weight 1528 lbs.
Spec. basis Aero. Bulletin 7A, Section 3
Serial Nos. 101 to 123 eligible provided they
are equipped with large tail sur-
faces.

DAVIS V-3 SPECIAL, 2 POLM, 2-532

(Remodeler H.E. Stone, Mt. Rainier, Maryland)

Engine Rearwin Le Blond 90 7D
Placard limits Maximum, except take-off -- in. Hg.,
1975 rpm (90 hp)
Take-off (one minute) -- in. Hg.,
1975 rpm (90 hp)
Placard speeds Not required
Fuel 25 gals. (One tank in center section)
Oil 2 gals.
No. pass. 1
Baggage None
Standard weight 1373 lbs.
Spec. basis Aero. Bulletin 7A, Section 7
Serial Nos. 101 only eligible.
Class I equipment: 26x6 wheels; Tail skid; wood propel-
ler.

De HAVILLAND MOTH, 2 POLB, 2-41

Engine DH Gipsy 85 hp
No. pass. 1
Standard weight 1650 lbs. (See NOTE 1)
Spec. basis Certificate of Airworthiness of Great
Britain
Serial Nos. 2A, 3A, 4A, 5A, 6A, 341, 814, 885, 886,
910, 911, 912, 913, 924, 925, 926,
978, 979, 980, 1044, 1063, 1064,
1084 eligible.
NOTE 1. Fuel, oil and baggage to be furnished by in-
structor. Standard weight is based on British allow-
able gross weight 1650 lbs. for non-acrobatic operations.

De HAVILLAND MOTH 60-X, 2 POLB, 2-150

Engine Cirrus Mark II 76 hp
Fuel Serial No. 547 - 25 gals.
Serial No. 616 - 23 gals.
Serial No. 626 - 55 gals.
Oil Serial Nos. 547 & 626 - 1-1/2 gals.
Serial No. 616 - 2-1/2 gals.
No. pass. 1
Baggage Serial Nos. 547 & 626 - None
Serial No. 616 - 17 lbs.
Standard weight Serial Nos. 547 & 626 - 1402 lbs.
Serial No. 616 - 1400 lbs.
Spec. basis Certificate of Airworthiness of Great
Britain
Serial Nos. 547, 616 and 626 eligible.

De HAVILLAND FUSS MOTH 80A, 3 POLM, 2-395

Engine DH Gipsy III 105 hp
Placard speed Never exceed 120 mph Indicated (per Air
Ministry Notice to Aircraft Owners and
Ground Engineers No. 23 of the Year
1936)
Propeller The Airscrew Co., Ltd., DH5212DS
Fuel 35 gals.
Oil 1-3/4 gals.
No. pass. 2
Baggage 28 lbs.
Standard weight 1986 lbs.
Spec. basis Certificate of Airworthiness of Great
Britain
Serial Nos. 2140 only eligible.

DETROIT SEA ROVER E-2, 4 POFBE, ATC 288

Engine Curtiss Challenger R-600 185 hp
 Fuel 48 gals.
 Oil 5 gals.
 No. pass. 5
 Baggage 15 lbs.
 Standard weight 2725 lbs.
 Spec. basis Approved Type Certificate No. 288
 Serial Nos. 3,4 to 18 eligible.

DETROIT E-2-A, 3 POAMB, ATC 338

Engine Curtiss Challenger R-600 185 hp
 Fuel 48 gals.
 Oil 5 gals.
 No. passengers 2
 Baggage 20 lbs.
 Standard weight 2725 lbs.
 Serial Nos. 11, 15 to 20 eligible (See NOTE 1)
 NOTE 1. Serials 4 and up, previously constructed as flying boats under ATC 288, also eligible when changed to conform to ATC 338.

DETROIT PARKS P-2, 3 POIB, ATC 200

Engine Axelson 115 hp
 Fuel 52 gals.
 Oil 6 gals.
 No. pass. 2
 Baggage 53 lbs.
 Standard weight 2440 lbs.
 Spec. basis Approved Type Certificate No. 200
 Serial Nos. 2951 to 2972 of old series and 103 and up of the new series mfrd. prior to June 1, 1932 eligible. Approval expired as of that date due to sale to Dean B. Hammond.

DETROIT PARKS P-2A, 3 POIB, ATC 276

Engine Wright R-540 175 hp
 Propeller Adj. metal
 Fuel 52 gals.
 Oil 6 gals.
 No. passengers 2
 Baggage 30 lbs.
 Standard weight 2580 lbs.
 Spec. basis Approved Type Certificate No. 276
 Serial Nos. 101, 102, 103, 106, 107, 108, 2981, 2983, 2984, 2991 and up mfrd. prior to June 1, 1932, eligible. Approval expired as of that date due to sale to Dean B. Hammond.

DETROIT VEGA DL-1 & DL-1B, 7 PCLM, ATC 308

Engine P&W Wasp C-1 420 hp or SC-1 450 hp
 Fuel 94 gals. (See item 302)
 Oil 12 gals. (See item 303)
 No. passengers 6
 Baggage 100 lbs. (See item 310)
 Standard weight 4539 lbs. (See NOTE 1)
 Spec. basis Approved Type Certificate No. 308
 Serial Nos. 135 and up mfrd. prior to 9-30-39 eligible. Approval expired as of that date

Class I equipment:

101. Engine ring cowl
102. Battery
103. Starter
104. Propeller - adj. metal
105. Wire braced landing gear (Model DL-1B only)

Class III equipment:

301. Wheel streamlines (Model DL-1 only) 50 lbs.
302. Extra fuel tanks (Total capacity not to exceed 180 gals.)
 - (a) 49 gal. tank in center section (See item 310) 27 lbs.
 - (b) Two 43 gal. outboard wing tanks 27½ lbs. ea.
303. 15 gal. oil tank replacing 12 gal. tank No change in weight
304. Landing lights 30 lbs.
305. Flares 45 lbs.
306. Oil radiator 15 lbs.
307. Airwheels (Goodyear) (Model DL-1 only) 60 lbs.
308. 9.50-12 wheels and tires
309. 32x6 wheels (Model DL-1B only)
310. Center section baggage compt. (capacity 300 lbs.) 25 lbs.
 (Note this compt. and center section fuel tank have same location)

NOTE 1. Standard weight may be increased to 4750 lbs. for approved equipment provided;

- (1) All plywood covering is removed from the top surface of the wings between spars.
- (2) Additional stringers of same size as old stringers are installed midway between the present stringers extending between the ribs and parallel to the present stringers. The total number between each rib will be seven when complete.
- (3) The top surface is recovered using 1/8 inch plywood between the spars and between the No. 10 ribs at each wing tip. The plywood elsewhere should be the same thickness as the present installation.

DETROIT VEGA DL-1 SPECIAL, 7 PCLM, 2-448

(Remodeler Richard A. Von Hake, Burbank, California)

Engine P&W Wasp SC-1 450 hp
 Fuel 144 gals.
 Oil 14 gals.
 No. pass. 6
 Baggage 100 lbs.
 Standard weight 4750 lbs.
 Spec. basis Aero. Bulletin 7A, Section 3
 Serial Nos. 161 only eligible

Class I equipment: Engine ring cowl 50 lbs.; Landing lights 15 lbs.; Battery 40 lbs.; Generator 19 lbs.; Radio 15 lbs.; Oil radiator 15 lbs.; 9.50-12 wheels and tires; Propeller - adj. metal.

DOUGLAS DC-2, 16-17-18 PCLM, ATC 540

Engines 2 Wright Cyclones (a) SGR-1820F-3
 or (b) GR-1820F-3A
 or (c) SGR-1820F-2 (below serial No. 22747)
 or (d) SGR-1820F-2 (serial No. 22747 and up)
 or (e) SGR-1820F-53
 or (f) SGR-1820F-52 (except serial Nos. 25319 thru 25322) or SGR-1820F-2B
 or (g) SGR-1820F-3B
 or (h) GR-1820F-2A or GR-1820F-52 (serial Nos. 25319 thru 25322 and 29103)

Placard limits Using 87 minimum octane aviation fuel (See NOTE 6)
 (See NOTES 9 and 10)

Engine	Maximum, except take-off	Take-off (one minute)
(a) F-3	34-1/2 in. Hg., 1950 rpm (700 hp)	37-1/2 in. Hg., 1950 rpm (710 hp)
(b) F-3A	33-1/2 in. Hg., 1950 rpm (700 hp)	36 in. Hg., 1950 rpm (700 hp)
(c) F-2	34-1/2 in. Hg., 1950 rpm (720 hp)	37-1/2 in. Hg., 1950 rpm (750 hp)
(d) F-2	36-1/2 in. Hg., 1950 rpm (750 hp)	37-1/2 in. Hg., 1950 rpm (750 hp)
(e) F-53	34 in. Hg., 2100 rpm (730 hp)	37-1/2 in. Hg., 2200 rpm (770 hp)
(f) F-52 or F-2B	34-1/2 in. Hg., 2100 rpm (760 hp)	39 in. Hg., 2200 rpm (875 hp)
(g) F-3B	34 in. Hg., 2100 rpm (730 hp)	37-1/2 in. Hg., 2200 rpm (770 hp)
(h) F-2A or F-52	36 in. Hg., 1950 rpm (750 hp)	36-1/2 in. Hg., 1950 rpm (750 hp)

Propellers Controllable metal (Standard installation for engine geared 16:11, Ham. Std., hubs 3E50 or 8452, blades 6111A-6. For old type engine geared 8:5, Ham. Std., hubs 3E40 or 50001, blades 6111A-6) (See also items 85, 127, 133, and 134, NOTES 9 and 10.)

Placard speeds

(a) For weights up to and including 18,560 lbs.
 Level flight or climb 190 mph True Ind.
 Glide or dive 234 mph True Ind.
 Flaps extended 100 mph True Ind.

(b) For weights between 18,560 lbs. and 19,000 lbs.
 Level flight or climb 184 mph True Ind.
 Glide or dive 219 mph True Ind.
 Flaps extended 100 mph True Ind.

Ceiling May be realized under conditions shown:

- A. Constant speed propeller - Hamilton Standard
 For engines geared 16:11 - Hubs 3E50 or 8452, Blades 6111A-6, 6105A-18 or 6105A-24
 For engines geared 8:5 - Hubs 3E40 or 50001, Blades 6111A-6, 6105A-18 or 6105A-24

Engine (Item)	Weight (lbs.)	Ceiling Ft. (absolute)
(a), (b)	18,200	8500
(a), (b)	18,560	7600
(c), (d), (h)	18,200	6000
(c), (d), (h)	18,560	5100
(g), (e)	18,200	9500
(g), (e)	18,560	8600
(f)	18,200	8000
(f)	18,560	7100

- Additional Conditions:
1. Standard air
 2. 87 octane fuel
 3. Either engine inoperative
 4. Inoperative propeller idling at 750 rpm

B. Full feathering propeller:

Engine (Item)	Propeller (Item No.)	Ceiling (ft.)	Weight (lbs.)	RPM	True Ind. Airspeed (MPH)	Surface De-icers Installed	Propeller De-icers (Item No.)	NOTES
(b)	127 (a)	10,000 (abs.)	18,200	-	-	-	None	
(b)	127 (a)	9,100 (abs.)	18,560	-	-	-	None	
(b)	127 (a)	9,000 (usable)	18,200	1950	100	Yes	135	
(b)	127 (a)	8,400 (usable)	18,560	1950	100	Yes	135	
(b)	127 (b)	9,250 (abs.)	18,200	-	-	-	None	
(b)	127 (b)	8,350 (abs.)	18,560	-	-	-	None	
(c, f, g)	127 (c)	9,500 (usable)	19,000	2100	110	-	None	
(f)	134 (a)	8,700 (usable)	19,000	2100	110	-	None	9,10
(f)	134 (b)	9,100 (usable)	18,200	2100	102	No	None	9,10
(f)	134 (b)	8,600 (usable)	18,560	2100	102	No	None	9,10
(f)	134 (b)	8,000 (usable)	19,000	2100	102	No	None	9,10
(g)	134 (b)	9,500 (usable)	19,000	2100	110	No	None	9,10
(g)	134 (c)	9,900 (usable)	19,000	2100	102	No	None	9,10

- Additional conditions:
1. Standard air
 2. 87 octane fuel
 3. Either engine inoperative
 4. Inoperative propeller fully feathered
 5. Carburetor air intake on "Cold Air"
 6. Manifold pressure - full throttle

DOUGLAS DC-2, (continued)

Fuel capacity	510 gals. (4 tanks in center section wing; 2 main right and left 180 gals. each(+48) and 2 aux. right and left 76 gals. each(+84))
Oil capacity	38 gals. (2 tanks; one in each nacelle 19 gals. each) (-25)
No. pass.	14
Baggage	2000 lbs. (Compt. forward of cabin 1000 lbs. (-76) and compt. aft of cabin 1000 lbs. (+327))
Weights	Empty Use actual (Approx. 12080 lbs.(+55.9) as 16 PCLM with Class I items only) Standard 18,000 lbs. or 18,200 lbs. (See NOTE 2) or 18,560 lbs. (See NOTES 2,3 and 8) Provisional 19,000 lbs. (See NOTES 2,3,8,&11)
C.G. limits	(+53) and (+69). Leveling pins for weighing at (+199) and (+219)
Spec. basis	Approved Type Certificate No. 540
Serial Nos.	1237 and up manufactured prior to September 30, 1939 eligible. Approval expired as of that date.

Equipment: (Datum is center section wing)(Means net increase)

Class I.

1. Two engine collector rings	110 lbs. (-44)
2. Two engine ring cowls	86 lbs. (-49)
3. Two landing and one warning light (in nose)	9 lbs. (-178)
4. Flares (two 3 minute)	36 lbs. (+307)
5. Flare brackets (two)	12 lbs. (+368)
6. Oil radiators & scoops (two)	56 lbs. (-26)
7. Two starters (electric)	63 lbs. (-17)
8. Battery 12V	63 lbs. (-59.5)
9. Generator	38 lbs. (-31.5)
10. Robot pilot lines and brackets	13 lbs. (0)
11. Robot mechanism (mag. cast)	71 lbs. (-124)
12. Fourteen serving trays	19 lbs.
13. 15.00-16 wheels (Bendix mag. dual brakes)	180 lbs. (+28)
14. 15.00-16 treaded tires 10-ply or 8-ply H.D. (Wheels must be placarded for these special tires)	182 lbs. (+28)
15. Two cactus-proof 15.00-16 tubes	40 lbs. (+28)
16. Two vacuum pumps	12 lbs. (-30)
17. Two spark retard solenoids	10 lbs. (-30)
18. Wing fairing fillets	60 lbs. (+84.5)
19. Wing connection fairings	7 lbs. (+84.5)
20. Radio (TWA) transmitter and receiver	124 lbs. (+307)
21. Radio (TWA) dyn. and h'd sets	50 lbs. (-70)
22. Pressure fire extinguisher system	30 lbs. (-24)
23. Steam heater system and 5 qts. water	101 lbs. (-88)
24. Ventilating system	77 lbs. (+100)
25. Cabin rug 17 lbs. and lavatory mat 3 lbs.	20 lbs. (+120)
26. Toilet equipment	32 lbs. (+290)
27. Container and 4 gals. water	38 lbs. (+298)
28. Hold-down straps, etc.	12 lbs.
29. Tail wheel plain tube	2 lbs. (+419)
30. Tail wheel 8.00-5, 6-ply tire	22 lbs. (+419)
31. Tail wheel oleo strut (Bendix 53103)	10 lbs. (+405)
32. Oildraulic manually operated retracting landing gear system (including 2 Bendix type FF-1 or FF-1A oildraulic shock struts)	124 lbs. (+1)
33. Equipped with wing split flaps (T.E.) oildraulic manually operated system	127 lbs.
34. Elevators, rudder, and right aileron equipped with adjustable tabs, manually operated	(+476)
35. Instruments	81 lbs. (-98)
36. Residual fuel and oil system, exclusive of 38 gal. capacity	45 lbs. (-26)
Class II.	
41. Steward's folding chair (adjacent to cabin entrance door)	16 lbs. (+267.5)
42. Radio operator's chair (in fwd. companionway; folds under floor)	16 lbs. (-110)
43. Radio operator's chair (in baggage compt.)	16 lbs. (+327)
44. Radio complete (W.E.)	188 lbs.
45. Radio added accessories	5 lbs.
46. Radio complete (P.A.A.)	79 lbs. (-85)

DOUGLAS DC-2, (continued)

47. Radio added accessories	8 lbs.
48. Radio complete (GP-1)	150 lbs. (+328)
49. Navigator's chair (in fwd. companion way; folds against bulkhead)	5 lbs.
50. Extra battery (installed in fwd. baggage compt.)	63 lbs. (-75)
51. Extra battery box (installed in fwd. baggage compt.)	7 lbs. (-75.5)
52. Extra wiring and conduit	10 lbs.
53. Heavy duty battery (under fwd. baggage compt. -- standard location)	78 lbs. (-60)
54. Electric hydraulic pump installation	37 lbs.
55. Wing landing light installation and reinforcements	63 lbs. (+16)
56. Wing landing light installation one side	26 lbs. (+16)
57. Oxygen installation (less tanks)	10 lbs.
58. Cabin DeLuxe accessories	38 lbs. (+106)
59. Cabin accessories (Navy)	14 lbs. (+106)
60. Heavier type cabin paneling	39 lbs. (+100)
61. Added cabin paneling	12 lbs. (+100)
62. Cabin light weight sound-proofing	10 lbs. (+100)
	Net decrease
63. Rations and buffet	51 lbs. (+300)
64. 15.00-16 wheels (Bendix dural, dual brake)	206 lbs. (+28)
65. (a) 15.00-16 non-treaded 10-ply	203 lbs. (+28)
(b) 15.00-16 tire liners	24 lbs. (+28)
66. 16.00-16 treaded tires 10-ply	215 lbs. (+28)
67. 16.00-16 cactus-proof tubes	47 lbs. (+28)
68. 15.00-16 plain tire tubes	29 lbs. (+28)
69. Auxiliary brakes on tires	6 lbs.
70. 8.00-5 cactus-proof tail wheel tube	4 lbs. (+419)
71. Tail wheel self-centering device	12 lbs. (+403)
72. Tail wheel frame reinforcement	2 lbs. (+408)
73. Robot mechanism (dural castings)	18 lbs. (+88)
74. Deicer installation (fixed portion 61 lbs., removable 60 lbs.)(See NOTE 7)	121 lbs.
75. Mechanical safety latch for landing gear	10 lbs. (+29)
76. Two extra engine vacuum drive units	24 lbs. (-30)
77. One vacuum pump	6 lbs. (-30)
78. Heavier type carburetor air scoop	7 lbs. (-29)
79. Fuel system cross feed	12 lbs. (+23)
80. Heavier type ice buffer	9 lbs. (-75)
81. Baggage compt. screen	6 lbs. (+327)
82. Additional cockpit heater control	5 lbs. (-106)
83. Steam heater system with 11 qts. water	121 lbs. (-88)
84. Additions to ventilating system	2 lbs. (+100)
85. Propeller blades Ham. Std.6105A-18 (replacing Ham. Std.6111A-6) (See NOTE 10)	36 lbs. (-70)
86. (a) Heavier type propeller control	5 lbs. (-70)
(b) Individual propeller controls (in cockpit)	2 lbs. (-86)
87. Special factory installed reinforcement to fuselage and center section wing (See NOTE 3)	25 lbs. (+87)
88. Auxiliary radio equipment (W.E.)	17 lbs.
89. Outer wing factory built with beaded type ribs (replacing factory wing with riveted type ribs)	30 lbs. (+84.5)
	Net decrease
90. (a) Small size strong box (installed in forward baggage compt.)	5 lbs. (-68)
(b) Large size strong box (installed in forward baggage compt.)	23 lbs. (-68)
91. Small type generator	28 lbs. (-28)
92. Oil radiator 9 in. type (replacing std. type)	8 lbs. (-26)
93. Heavier gage fuel tanks (replacing std. tanks)	29 lbs. (+72)
94. Additional gyro and horizon instrument installation	10 lbs. (-157)
95. Revised vertical control surfaces in accordance with Douglas Dwg. 5000642D and 5004183A (replacing std. vertical control surfaces) (When this installation is made, the std. rudder tab control unit must be replaced by revised rudder tab control unit in accordance with Douglas Dwg.5006079(-141)) (See Item 99)	31 lbs. (+436)

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DOUGLAS DC-2, (continued)

96. Wing reinforcements(outer and center section)
 (See NOTE 3) 18 lbs. (+86)
97. Factory installed alternate electric
 installation Net decrease 20 lbs.
98. External paint (trimming) 78 lbs.
99. Aileron hinge fittings, Douglas Dwg.
 125387, revision G, may be replaced
 with aileron hinge fittings, Douglas
 Dwg. 125387, revision F. No change in weight.
 (This replacement is recommended whenever
 installation of Item 95 is made.)
100. Reworked thicker type rudder(Douglas
 Dwg.570728) No change in weight.
101. Floating rib reinforcement 5 lbs.* (+73)
102. (a) Fuel dump valves and controls
 (Douglas Dwg.No.432077)(See NOTE 8) 9 lbs. (+49)
 (b) Fuel dump valve chute(Douglas
 Dwg.No.5046038)(See NOTE 8) 12 lbs. (+115)
 (c) Extendable type fuel dump chute
 installation in accordance with
 Douglas Dwg.No.5080140(See NOTE 8) 22 lbs. (+165.5)
103. Estimated addition (Service pickup) 55 lbs.*
104. Synchroscope (Magneto) 2 lbs.* (-98)
105. Estimated weight of wing repair 8 lbs.* (+85)
106. Valve lubricating harness 18 lbs.* (-52)
107. Baggage compt. and floor reinforcement 14 lbs.* (-74)
108. Extra leather trim (doors) 5 lbs.*
109. Additional carburetor air intake
 heaters 10 lbs.* (-32)
110. Miscellaneous item(minor alterations,
 distributed throughout airplane) 30 lbs.*
111. Heavier type collector ring 3 in.
 intensifier 18 lbs.* (-40)
112. Floor reinforcement 3 lbs.* (+84)
113. (a) Ham. Std. constant speed propeller
 governor on engine 8 lbs. (-60)
 (b) Heavier engine nose case with
 governor pad 44 lbs.* (-60)
 (c) Ham. Std. 20° propeller brackets
 replacing 10° brackets 27 lbs.* (-74)
114. Addition to heating system 3 lbs.* (-83)
115. Wright air scoops 30 lbs. (-39)
116. 15.00-16 smooth tread tires, extra
 duty, 10-ply 184 lbs.
117. Oleo (landing gear) heavier type 10 lbs.* (+29)
118. (a) Two F-53 engines (replacing two
 F-3 engines) 70 lbs.* (-52)
 (b) Two F-3B engines (replacing two
 F-3 engines) 70 lbs.* (-52)
 (c) Two F-3B engines (replacing two
 F-3A engines) 17 lbs.* (-52)
119. Two F-52 engines (replacing F-3
 engines) 70 lbs.* (-52)
120. Collector ring with 2 in. double
 intensifier tubes 10 lbs.*
121. Flap reinforcement 5 lbs.* (-149)
122. Miscellaneous items as noted in
 approved weight and balance report.
123. Propeller de-icer(includes 2 slinger
 rings and tank with 3 gals. fluid in
 fwd. baggage compartment). Total
 (fwd. baggage may be reduced 43 lbs.
 in lieu of C.G. check for this
 installation) 43 lbs.
124. Two 45 in. streamline wheels and tires 136 lbs.* (+11)
125. Anilol supply tank with 10 gals.
 anilol installed under roof of front
 baggage compt. per Pan American and
 Fuel Development Corp.Dwg.DA3
 Complete installation 100 lbs.
 (fwd. Baggage may be reduced 90 lbs.
 in lieu of C.G. check for this
 installation)
126. Aileron slot fairings installed in
 accordance with Douglas Dwg.No.5015631 21 lbs. (+150)
127. (a) Two Curtiss full feathering electric
 props., hubs C532D, blades 89303-18
 or 89306-18, including slinger rings,
 wiring, controls, governors, relays,
 brackets, etc., for F3A engines
 only. (See Item 135) 807 lbs.
 (b) Two Curtiss full-feathering
 electric props., hubs C531B5,
 blades 614Col.5-12A or 614-1C1.
 5-12 or 614-1 C1.5-12 Change A
 (or later) (11 ft. diameter), in-
 cluding slinger rings, wiring, con-
 trols, governors, relays, brackets,
 etc., for F3A engines only 706 lbs.

DOUGLAS DC-2, (continued)

- (c) Two Curtiss full-feathering electric
 props., hubs C531B5, blades 614Col.
 5-6 or 614-1C1.5-6 Change A (or later)
 (11 ft. 6 in. diameter), including
 wiring, controls, governors, brackets,
 etc. for F-2B, F-3B, F-52, and F-53
 engines only.(Low pitch setting 19½°)
 Net Decrease 106 lbs.
128. Conversion of two Wright SGR-1820F-3
 engines to SGR-1820F-3A engines 53 lbs.*(-52)
129. .018 stainless steel inner ring cowl,
 Douglas Dwg.No.5076264(replacing .040
 aluminum alloy cowl) 11 lbs.*(-36.5)
130. Engine driven hydraulic system installed
 in accordance with Douglas Dwg.No.5039858
 dated 1-9-39, or later 27 lbs.*(-35)
131. Aileron hinge arm and trim tab cut-out
 cover plates installed in accordance
 with Douglas Dwg. No. 5080775 2 lbs.*(+145)
132. Intake de-icing system using anilol in
 accordance with Braniff Dwg.428H. Complete
 installation (fwd. baggage may be re-
 duced 25 lbs. in lieu of C.G. check for
 this installation) 25 lbs.
133. Propeller blades Ham. Std.6105A-24
 (See NOTES 9 and 10)
134. (a) Two Ham.Std. Hydromatic full feather-
 ing props., hubs 23E50, blades
 6153A-18 (11 ft. 6 in. diameter) or
 6261A-2 (11 ft.4 in. diameter) includ-
 ing controls. (See NOTES 9 and 10) 91 lbs.*
 (b) Two Ham.Std. Hydromatic Full feather-
 ing props.,hubs 33D50,blades 6249A-0
 including controls(See NOTES 9,10) 308 lbs.
 (c) Two Ham.Std. Hydromatic full feath-
 ering props.,hubs 33D50,blades
 6495A-18 or equivalent,(See NOTE 6,
 Propeller Specification No.749) in-
 cluding controls.(See NOTES 9,10) 338 lbs.
135. Goodrich propeller de-icing shoes for
 use with propeller item 127(a) only.
 Must not extend beyond propeller 60
 inch station.
- NOTE 1. Weight and balance report including list of equipment
 included in certificated weight empty, and loading instruc-
 tions when necessary, must be submitted for each aircraft
 with original inspector's report and each subsequent report
 covering change in equipment.
- NOTE 2. All airplanes eligible must be equipped with the re-
 worked stronger type landing gear upper structure in accord-
 ance with Douglas Dwg. No.530553. The reworked structure
 may be identified by the No. "18200" stamped on the lower
 inboard forging. Until this change is made the airplane
 standard weight shall be limited to 18,000 lbs. Airplanes
 bearing serial numbers 1290 to 1300, inclusive, 1307 to 1316,
 inclusive, 1319, 1322 and up have been or will be equipped
 at the factory with the reinforced structure.
- NOTE 3. The standard weight may be increased to 18,560 lbs.
 provided Items 96, 87, and 72 are installed. Item 96 (wing
 and fuselage reinforcement) and Item 87 must be installed
 in accordance with Douglas Dwg. Nos. 50000717, 530536
 revision Y, and 531027 revision M.
- NOTE 4. Deleted - May 12, 1943
- NOTE 5. Eligible for export as follows subject to inspection
 for required equipment: (9-30-39)
 (a) Canada - Landplane
 Skiplane - not eligible.
 (b) All other countries except New Zealand.
- NOTE 6. 80 minimum octane aviation fuel may be used provided
 no engine is operated at more than 550 hp (operating instruc-
 tions should be prepared accordingly). This applies to F-2,
 F-2A, F-3, and F-3A engines only.
- NOTE 7. Standard (and provisional) weight may be increased
 by an amount equal to .006 x standard weight when complete
 de-icer is installed.
- NOTE 8. The following operational limitations shall be ob-
 served:
 A. If provisions other than items 102 (a) and (c) are
 made for dumping, the fuel dump valves shall be made
 positively inoperative.
 B. If items 102 (a) and (c) (which comply with E1-11c)
 are installed, the aircraft operation record shall in-
 corporate one of the following statements, as the case
 may be:
 (1) Non-Air Carrier. "Fuel shall not be dumped except in
 accordance with the provisions of CAR 60.900."

DOUGLAS DC-2, (continued)

(2) Air Carrier.

- (a) With authorized weight in excess of standard - "Landing shall not be made at a weight in excess of standard except in accordance with CAR 61.7811. Fuel shall not be dumped except in accordance with CAR 61.7811 and then only if the pilot deems it safer that landing at a weight in excess of standard."
- (b) With authorized weight not in excess of standard - "Fuel shall not be dumped except in accordance with CAR 61.7811."

NOTE 9. Continuous operation is to be avoided in accordance with the following table:

Propeller Model	Engine		One Rear Damper Pin Dia.	Avoid Continuous Operation Between the Following Engine RPM
	Model	Geared		
All propellers Ham.Std. blades	All		None	1300 and 1600
6105A				See NOTE 10
6111A-6	all	16:11		1750 and 1850
6153A-18	F2B, F52	16:11	1.023"	1600 and 1600
6261A-2	F2B, F52	16:11	1.023"	1500 and 1600
6259A-0	F2B, F52, F3B	16:11	1.023"	No restrictions.
6495A-18	F3B	16:11	1.000"	1750 and 2150 (Take-off should be made only at 2200 RPM)
6495A-18	F3B	16:11	1.023"	No restrictions.

NOTE 10. (a) Item 85 eligible on F-3, F-3A, F-2 and F-2A engines only.

- (b) Items 85 and 133 eligible on F-52 or F-2B engines with the following take-off limit: 38 $\frac{1}{2}$ in.Hg., 2100 rpm (835 hp)
- (c) Items 85 and 133 eligible on F-53 or F-3B engines with the following take-off limit: 36 $\frac{1}{2}$ in.Hg., 2100 rpm (735 hp)
- (d) Item 134(a) eligible on F-2B or F-52 engines only.
- (e) Item 134(b) eligible on F-2B, F-3B or F-52 engines only.
- (f) Item 134(c) eligible on F-3B engine only.

NOTE 11. Aircraft may be operated at a provisional weight of 19,000 lbs. provided Notes 2, 3 and 8 are complied with. F-2B, F-3E, F-52, or F-53 engines geared 16:11 must be installed and operated with 87 minimum octane fuel; and Item 127(c), 134(a), 134(b) or 134(c) must be installed. Items 102(a) and (c), or equivalent, must also be installed.

DOUGLAS DOLPHIN 1 SPECIAL, 10 PCAMM, 2-366

Engines	2 Wrights R975E
Placard limits	For all operations, 2000 rpm (330 hp)
Placard speeds	Glide or dive 170 mph Ind. Flaps extended 100 mph Ind.
Placard ceiling	2000 ft. (density altitude) either engine inoperative
Fuel	180 gals. (Two tanks in CS wing 90 gals. each)
Oil	18 gals.
No. pass.	9
Baggage	150 lbs. (Front compt. 100 lbs.; aft of cabin compt. 50 lbs.)
Standard weight	8350 lbs.
C.G. limits	(+30.0) and (+41.3)
Spec. basis	Aero Bulletin 7A, Section 3
Serial Nos.	999 only eligible
Equipment:	(Datum is leading edge of center section wing at side of hull)

Class I.

101. Two engine ring cowls 60 lbs.
102. Battery - 12V 45 lbs.
103. Two starters (electric) 50 lbs.
104. Generator 21 lbs.
105. 36x8 wheels and brakes (Bendix) with 8-ply tires (Wheels must be placarded for these tires)
106. Two wing floats and struts 86 lbs.
107. Pressure fire extinguisher 26 lbs.
108. Extra one-quart fire extinguisher 7 lbs.
109. Sea-gear (anchor, boat hook, rope and towing gear) (Must be carried in bow at all times) 32 lbs.
110. 8 $\frac{1}{2}$ x4 retractable tail wheel with solid rubber tire.
111. Electric siren
112. Propellers - Ham. Std. adj. metal, hub 5406, blades 1A1-12, 3A1-12 or 1027X

NOTE 1. The following special placard must be prominently displayed in the pilot's compartment:

"THIS AIRPLANE IS ELIGIBLE FOR OPERATION WITH MINIMUM FUEL OF 60 GALS. AND MINIMUM OIL OF 10 GALS. ONLY ON THE WILMINGTON-CATALINA AIRLINE BETWEEN WILMINGTON, CALIFORNIA, AND CATALINA ISLAND. THE OIL CARRIED AT ANY TIME SHALL NOT BE LESS THAN 1 GAL. OIL FOR EACH 13 GALS. OF FUEL."

J-21411

DOUGLAS DOLPHIN 3, 8 PCAMM, ATC 432

Engines	2 Wasps Jr. A 300 hp
Fuel	180 gals.
Oil	16 gals.
No. pass.	7
Baggage	150 lbs.
Standard weight	8200 lbs.
Spec. basis	Approved Type Certificate No. 432
Serial Nos.	1001 and up mfrd. prior to 9-30-39 eligible. Approval expired as of that date.

Class I equipment: Two engine ring cowls 60 lbs.; Battery 70 lbs.; two starters 50 lbs.; Generator 20 lbs.; exhaust collector rings 90 lbs.; Toilet equipment 50 lbs.; adjustable metal propeller.

DOUGLAS DOLPHIN 8, 7 PCAMM, 2-482

Engines	2 P&W Wasps S3D1
Placard limits	Maximum, except take-off 28.5 in.Hg., 2100 rpm (450 hp) Take-off (one minute) 30.0 in.Hg., 2100 rpm (450 hp)
Placard speeds	Glide or dive 170 mph Ind. Flaps extended 100 mph Ind.
Placard ceiling	2000 ft. (density altitude) either engine inoperative
Fuel	302 gals. (6 tanks in CS wing; 2 main 96 gals. each; 2 aux. outboard 30 gals. each; 2 aux. inboard 25 gals. each.)
Oil	20 gals.
No. pass.	6
Baggage	132 lbs. (Single compt. aft of cabin)
Standard weight	9500 lbs.
C.G. limits	(+30.0) and (+40.2)
Spec. basis	Aero. Bulletin 7A, Section 3
Serial Nos.	1280 and up mfrd. prior to July 1, 1940 eligible. Approval expired as of that date.

EQUIPMENT: (Datum is leading edge of center section wing at side of fuselage)

- Class I.
101. Two engine ring cowls 36 lbs.
102. Battery - 12V 65 lbs.
103. Starters (electric) 64 lbs.
104. Generator -50 amp. 34 lbs.
105. 36x8 wheels and brakes (Bendix) with 40x10 8-ply tires 213 lbs.
(Wheels must be placarded for these tires)
106. Two wing floats and struts 89 lbs.
107. Pressure fire extinguisher system 27 lbs.
108. Landing lights 2 lbs.
109. Sea anchor and 150 ft. rope 20 lbs.
110. Boat hook 2 lbs.
111. 8 $\frac{1}{2}$ x4 retractable tail wheel with solid rubber tire
112. Wings equipped with T.E. full flaps manually oilhydraulic operated and drooping type ailerons
113. Elevator control surface equipped with manually operated T.E. tabs
114. Tool kit 16 lbs.
115. Hoist sling 7 lbs.
116. Eilge pump 7 lbs.
117. Toilet equipment 18 lbs.
118. Water container and 1 $\frac{1}{2}$ gals. water 14 lbs.
119. Radio complete with 2 receivers 135 lbs.
120. Propellers - controllable metal (Ham.Std., hubs 8460, blades 6101-10; low pitch setting 16 $^{\circ}$)

NOTE 1. Eligible for export to all countries except Great Britain, Canada, and Australia. (2-28-37)

NOTE 3. Same as model 8-114 (2-483), model 11 (2-479), model 12 (2-486) and model 129 (2-487) except for changes in engines, propellers, cabin interior arrangements and items of equipment.