DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION

A-808
Revision 12
CURTISS-WRIGHT
C-46F

April 10, 1959

AIRCRAFT SPECIFICATION NO. A-808

Holder of Type Certificate: Skyways International Trading and Transport Co.
Miami, Florida

I - Model C-46F, Approved September 23, 1948

Engine

2 P&W Military R-2800-75, -51 or -43

Fuel

100/130 Min. grade aviation gasoline

Engine limits

Maximum continuous, low blower:
(Sea level) 43.2 in.Hg., 2400 rpm (1600 hp)
(Straight line manifold pressure variation with altitude to 5300 ft.)
41.5 in.Hg., 2400 rpm (1600 hp)
or (See NOTE 3 for requirements)
(Sea level) 44.0 in.Hg., 2550 rpm (1700 hp)
(Straight line manifold pressure variation with altitude to 5500 ft.)
43.0 in.Hg., 2550 rpm (1700 hp)
Maximum continuous, high blower:
(9000 ft.) 43.5 in.Hg., 2400 rpm (1450 hp)
(13000 ft.) 43.0 in.Hg., 2400 rpm (1450 hp)
Take-off (two minutes), 52 in.Hg., 2700 rpm (2000 hp)

Propellers

2 Ham. Std., hubs 23E50, blades 6491-0 or 6801-0
(Blades 6491 and 6801 may be installed in same hub.)
Diameter: Max. 15' 3/8", min. allowable for repairs 14' 8-1/2".
Min. low pitch setting, 10° at 72" sta.
or
2 Curtiss hubs C543S with Curtiss blades 814-3C3-18
or American blades C3821306
Max. diameter 13'6".
Min. low pitch setting 17° at sta. 54.

Airspeed limits

Maneuvering	163 mph (142 knots) True Ind.
Cruising	240 mph (209 knots) True Ind.
Never exceed	270 mph (235 knots) True Ind.
Flaps extended	135 mph (118 Knots) True Ind.
Landing gear extended	150 mph (130 knots) True Ind.

C.G. range
(Gear extended)

(+308.0) to (+324.4)
Effect of retracting landing gear is +21,029 in.lbs.

Maximum weight
(See NOTE 8 for passenger operation)

45,000 lbs. only when cowling louvers on each engine are closed off; otherwise eligible for 44,000 lbs. and the following placard required: "Use of high blower, except for periodic exercise, unauthorized."

No. seats	Variable - See approved loading schedule. Maximum passengers 62. Three emergency openings in addition to the main door must be provided. Crew: 2 pilots (+80) and engineer (+114)

Baggage — (Maximum floor loading is 185 lbs. per sq. ft.)

Comp. B, Sta. 128 to 194	1900 lbs.
Comp. C, Sta. 194 to 276	4100 lbs.
Comp. D, Sta. 128 to 276	3450 lbs.
Comp. E, Sta. 276 to 358	4500 lbs.
Comp. F, Sta. 358 to 440	4500 lbs.
Comp. G, Sta. 399 to 542.5	1750 lbs.
Comp. H, Sta. 440 to 542.5	5200 lbs.
Comp. I, Sta. 542.5 to 615	3100 lbs.
Comp. J, Sta. 615 to 704	2800 lbs.

Fuel capacity	1406 gals. (Six tanks - 3 in each outer wing: two front, 236 gals. each (+304); two center, 292 gals. each (+340); two rear, 175 gals. each (+374).) Fuselage fuel and oil tanks must be removed or placarded against use.
Oil capacity	79.6 gals.-- two 39.8 gal. tanks (+253)

Control surface movements

Aileron	12.5°	up	11.5°	down
Aileron tab	12.5°	up	13.5°	down
Elevator	34°	up	16°	down
Elevator trim tab	10°	up	42°	down
Elevator spring tab	15°	up	30°	down
Elevator "Vee" tab	31°	up	20°	down
Rudder	20°	right	20°	left
Rudder trim tab	30°	right	30°	left
Rudder spring tab	20°	right	20°	left
Wing flaps			35°	down

Serial Nos. eligible	All Army C-46F aircraft. Use manufacturer's serial number when available.
Equipment	See NOTES 1 and 2 and CAA Approved Airplane Flight Manual.

Specifications Pertinent to All Models

Datum	Nose of fuselage - Station 0
Leveling means	Lugs on right cabin floor at Stations 276 and 378.
Certification basis	Type Certificate No. 808 (CAR 3, Normal Category) (Airplanes which have been modified in accordance with Supplemental Type Certificate No. SA4-33 owned by Aircraft Engineering Foundation, Inc., Meacham Field, Fort Worth, Texas, are eligible for transport category certification under the terms of Special Regulation 406A.)
Export eligibility	Eligible for export to all countries subject to the provisions of MOP 2-4 except as follows: (a) Canada: Landplane - eligible Skiplane - not eligible

NOTE 1. At the time of original airworthiness certification and at all times thereafter, the following must be provided in each aircraft:

(a) A CAA Approved Airplane Flight Manual for Skyways International, Curtiss-Wright C-46F airplane dated September 23, 1948 and including revisions thru June 29, 1949 (revision #2), issued in conjunction with the pertinent airworthiness certificate. (Exception: May be incorporated as a part of Air Carrier Operators Manual and must be readily available to flight crew during operation of the aircraft.) The performance and limitations sections of the Curtiss-Wright C-46E CAA Approved Airplane Flight Manual (issued by Skyways International, Inc.) are directly applicable to the C-46F without change. An Airplane Flight Manual based on those sections of the C-46E manual, therefore, will be acceptable for use in C-46F aircraft.

(b) A current weight and balance report including list of equipment included in the certificated empty weight, and loading instructions when necessary. (Exception: Air Carrier operators having an approved weight control system).

(c) The following placard must be placed in the locations noted:

(1) On the instrument panel in full view of the pilot:
"This airplane shall be operated in accordance with the limitations in Part A of the CAA Approved Airplane Flight Manual."

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

(a) The manufacturer's nameplate should be altered to include the date of conversion. In case the original nameplate is not sufficiently large to include this additional information, a similar plate should be installed near the original plate. Under no circumstances should the original or any succeeding nameplate be removed from the aircraft.

(b) The instruments should be marked for the approved limitations.

(c) Cargo compartments should be placarded for the correct maximum capacity and for a maximum floor loading of 185 lbs. per sq. ft.

(d) The following should be added to the engine nameplates:
"FAA Specification No. 5E-8."

(e) A fire resistant enclosure or an adequate fire warning and fire extinguishing system must be provided for the fuel burning heater compartment and adequate drainage must also be provided.

(f) A single master switch or a "gang" control on the present battery and generator switches must be provided to cut off all electrical power in one operation, including the auxiliary power unit.

(g) An emergency shut-off valve must be provided in each engine oil system. This valve should be located just aft of the firewall in each engine nacelle and should cut off all flow of oil to the engine accessory compartment except that the shut-off should not prevent feathering the propeller.

(h) An emergency shut-off valve must be provided in each engine nacelle to shut off the flow of hydraulic fluid forward of the firewall.

(i) A fire resistant enclosure or an adequate fire warning and fire extinguishing system must be provided for the auxiliary power plant.

(j) (Deleted October 12, 1949)

(k) The alternate filtered air ducts of the induction system running through firewalls should be removed and the valve of this system should be secured in the closed position. Also the openings then existing in the firewalls must be sealed with .015" stainless steel.

(l) The auxiliary power plant circuit breaker must be made accessible.

(m) The glider release mechanism must be removed or placarded against use.

(n) Fuselage fuel and oil tanks must be removed or placarded against use.

(o) The oil cooler control rod opening in the firewall must be sealed.

(p) If No. 3 (rear) fuel tanks are removed, it is necessary also to remove the position designation placard for these tanks on the fuel selector valves.

(q) The left hand elevator trim tab control should be in accordance with Drawing 20- 530-5763, change A.

(r) The following USAF Technical Orders must be complied with (modifications which accomplish the same purpose will be considered satisfactory substitutes for the Technical Orders).

01-25L-74	Hot Air Duct Cover Replace
01-25L-76	Exhaust Collector Ring - Deletion of Drain Holes
01-25L-78	Carb Heater Shroud Mod
01-25L-79	Carb to Carb Air Duct Adapter Mod
01-25L-83	Heater Drip Shield Mod
01-25L-102	Aileron Horn Replac
01-25L-103	Horizontal Stabilizer Mod of Rib Assy
01-25L-104	Wing Fuel Tank Inspection
01-25L-105	Anti-Heat Shield, Instal Over Flexible Hose - Hamilton Standard Feathering System
01-25LA-66	Exhaust Manifold - Instal of Mod Heat Shields
01-25LA-66A	Supplement - Exhaust Manifold - Installation of Modified Heat Shield
01-25LA-161	Prop Governor Conduit - Insp of Relay to Connector plug Sockets
01-25LA-202	Fire Seal Installation Between Center Wing Panel and outerpanel
01-25LA-204	Nacelle Pressurization
01-25LA-206	Carburetor Heater Shroud Installation (may be accomplished in lieu of T.O. 01-25L-78)

(s) All existing C-46 Series Airworthiness Directives which may be applicable to this model must be complied with.

If the airplane is to be operated at night, the following must also be accomplished:

(t) Landing light fuses must be relocated so as to be accessible to the crew in flight.

(u) The tail position light must be replaced with one of an approved type.

(v) The resistance units in the position light circuits must be removed and the switch replaced with a single throw type or proper jumpers must be incorporated in the present switches.

(w) The separate switches for the wing and tail position lights must be replaced with a single switch or the present switches must be "ganged" for single operation.

NOTE 3. Use of the alternate engine rating under requires the following:

(a) Remarking of powerplant instruments in accordance with CAR 3.759.

(b) Addition of alternate engine rating to limitations section of Airplane Flight Manual.

(c) No increase in the performance values contained in the Airplane Flight Manual authorized unless officially substantiated by the applicant.

NOTE 4. The following brake blocks are satisfactory replacements for the original blocks in Hayes brakes No. H-2-257-1 on C-46 aircraft:

(a) M.E. Williams Enterprises No. MEW-1000

(b) Slick Airways No. 00340

(c) Flying Tiger Line, Inc. PS 265

NOTE 5. Seat installations meeting the requirements of CAR 4a are eligible for certification in C-46 aircraft.

NOTE 6. Slick Airways exhaust manifold, P/N 00237, is an acceptable replacement for the original manifold assembly.

NOTE 7. B.F. Goodrich Part No. 37572 propeller deicer fluid feed strips eligible for Hamilton Standard propellers, length 52 in. from discharge tube. Installation should be in accordance with Hamilton Standard Service Bulletin No. 201. Usable ceiling reduction of 250 ft. required when deicing boots are installed.

NOTE 8. In accordance with this Aircraft Specification, SR-391 and SR-406, the maximum allowable weight for the carriage of passengers for remuneration or hire is 44,000 lbs. unless the following are accomplished:

(a) If the cowling louvres are closed off then the maximum allowable weight for the carriage of passengers for remuneration or hire is 44,300 lbs.

(b) If (a) above is accomplished and Hamilton Standard propeller blades 6491-6 to 6491-9 (modified in accordance with Pan American World Airways Report No. LA424 or with Propeller Service of Miami, Inc. Report No. C-3614) are installed, the maximum weight permitted for the carriage of passengers for remuneration or hire is 45,000 lbs.

NOTE 9. The following control surface travel tolerances are applicable.

	Unbalance Permitted	Spanwise C.G. of Surface Airplane Sta.
Aileron	+ 5 ± 20 in. lb.	285.5 ± 2.5
Aileron trim tab	+12.2 ± 2 in. lb.	200 ± 2
Elevator (each)	+410 ± 70 in. lb.	109 ± 2
Elevator vee tab	- 12.2 ± 1.0 in. lb.	109 ± 2
Elevator spring tab	+ 1.0 ± 1.0 in. lb.	37 ± 2
Elevator trim tab	+12.0 + 1 in. lb. - 5	106 ± 2
Rudder	+170 ± 70 in. lb.	108 ± 2
Rudder spring tab	+ 35.8 + 0 in. lb. - 5	84 ± 2
Rudder trim tab	+17.5 + 1.5 in. lb. - 5	151 ± 2

Notes: (1) The surface tabs should be balanced prior to balancing the control surface to which they are attached. All control rods, etc., should be in their normal position when balancing surface, but disconnected at the control surface horn.

(2) (+) Plus unbalance indicates that the center of gravity of the control surface is aft of the hinge line, i.e., T.E. heavy.

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