MODELS: Douglas UC-67 and B-23, 5 PGLM

T.C. NUMBER: 2-576 (Approved 11/28/45)

Engines	2 Wright R-2600-3, -11, or -23 (Note: These engines are equipped with two speed superchargers. The supercharger speed controls must be positively safetied for operation in lowgear ratio only.)
Fuel	100 minimum octane aviation gasoline
Engine limits	R-2600-3: Maximum, except takeoff (low blower) (Sea level) 35.8 in. Hg., 2300 rpm (1200 hp) (Straight line manifold pressure variation with altitude to 5500 ft.) 35.8 in. Hg., 2300 rpm (1350 hp) Takeoff (five minutes) 43 in. Hg., 2400 rpm (1600 hp) R-2600-11: Maximum, except takeoff (low blower) (Sea level) 34.6 in. Hg., 2300 rpm (1290 hp) (Straight line manifold pressure variation with altitude to 6500 ft.) 34.6 in. Hg., 2300 rpm (1350 hp) Takeoff (five minutes) 43 in. Hg., 2400 rpm (1600 hp) R-2600-23: Maximum, except takeoff (low blower) (Sea level) 38.5 in. Hg., 2300 rpm (1350 hp) (Straight line manifold pressure variation with altitude to 5800 ft.) 36.5 in. Hg., 2300 rpm (1350 hp) Takeoff (five minutes) 44.0 in. Hg., 2400 rpm (1600 hp)
Airspeed limits	Level flight or climb - 241 mph True Ind. Glide or dive - 289 mph True Ind. Flaps extended - 131 mph True Ind.

C.G. range	(+55.3) (18.65 percent MAC) to (+62.3) (24.0 percent MAC) (gear extended)
Datum	Leading edge of center section wing
MAC	141 in. L.E. of MAC at (+29)
Leveling means	Leveling lugs at Stations 301 and 316 in fuselage (See NOTE 5)
Maximum weights (takeoff and landing)	27,500 (cargo); 26,000 (passenger) (See NOTE 3)
Baggage	(See NOTE 2(j))
No. seats	(See NOTE 2(b))
Fuel capacity	814 gallons (four tanks in center section wing with front and rear tanks on each side connected to form one right and one left hand tank of 407 gallons each (+66))
Oil capacity	66 gallons (two 33 gallon tanks) (+2.0)
Control surface movements	Aileron (5/8" droop) 24 degrees up 11 degrees down Aileron tab 11 degrees up 14 degrees down Elevator 30 degrees up 16 degrees down Elevator tab 10 degrees up 9 degrees down Rudder 20 degrees right 20 degrees left Rudder tab 15 degrees right 15 degrees left Wing flaps 55 degrees down
Serial Nos. eligible	All AAF numbers
Certification basis	Airworthiness Certificate only (CAR 04 prior to 11/9/45)
Required equipment	Items 1, 2, 3,101, 103, 104, 105, 106, 107, 201, 202, 203, 204, 205, 206, 207, 208, 301, 302, 505
Export eligibility	Eligible for export as follows subject to inspection specified in Chapter XII of Manual of Procedure: (a) Canada - Landplane - Skiplane - not eligible (b) All other countries except Great Britain, Australia, and New Zealand

EQUIPMENT:

Propeller and Propeller Accessories (Except De-Icing Equipment):

1.	Hamilton Standard propellers, hubs 23E50, blades 6159A-6 to 6159A-9 inclusive. Diameter 13'6-3/8" maximum, 13'2-7/8" minimum. For interchangeable blade models see Propeller Spec. 603 (NOTE 6). Minimum low pitch setting 23 degrees at 42" station; feathered 93 degrees at 42" station.		(-106)
2.	Two Hamilton Standard governors (Model 4K11-B1B)		(-102)
3.	Two propeller feathering pumps (Pesco R-280-BE)		
4.	Hamilton Standard propellers, hubs 23E50, blades 6359A-12 to -14. Diameter 13'1/4" maximum, 12'9-1/8" minimum. Minimum low pitch setting 24 degrees at 42" station, feathered 93 degrees at 42" station. Note: Fairbanks Morse Co., 600 S. Michigan Ave., Chicago 5, IL, holds approved single engine performance data.		(-106)

Engine and Engine Accessories (Except De-Icing Equipment):

101.	Two vacuum pumps (Pesco 207-D)	10 lbs.	(-24)
102.	Two starters (Eclipse Model 18)		(-46)
103.	Two oil coolers (U.A.P. U-6013)	87 lbs.	(-40)
104.	Two cylinder head temperature gauges		(-44)
105.	Two fuel pumps (Thompson Prod. 4101)		(-48)
106.	Two hydraulic pumps (Pesco 214MA)	8 lbs.	(-48)
107.	Two auxiliary fuel pumps (Thompson TPD6400)	10 lbs.	

Landing Gear and Floats:

201.	Two 45x20:00-18 Bendix wheels with duo servo brakes (Bendix 56478)	(+28)
202.	Two 45x20:00-18 tires (Goodrich 12 ply)	(+28)
203.	Two 45x20:00-18 (Goodrich tubes)	(+28)
204.	22x9 tail wheel (Bendix B-1)	(+443)
205.	22x9:00x6 tail wheel tire (Goodyear 8 ply)	(+443)
206.	22x9:00x6 tail wheel tire tube	(+443)
207.	Four shockstruts (Douglas Drawing	

	5077049)		(+28)
208.	Tail wheel shockstrut (Douglas Drawing 5077046)		(+426)
209.	Two 17.00-16 Bendix wheels (Bendix B-3)		
210.	Two 17.00-16 tires (Bendix 10-ply rayon)		
Electrical Equipment:			
301.	Two batteries (Exide D-6)	142 lbs.	(+46)
302.	Two generators (Eclipse E-7)	46 lbs.	(-47)
303.	Two landing lights (AC-36D-3467 Type A-9)	7 lbs.	(+30)
Interior Equipment:			
402.	Seats		
	(a) Pilot (Douglas Drawing 5083281)		(-18)
	(b) Co-pilot (Douglas Drawing 5082337)		(-18)
	(c) Navigator (Douglas Drawing 5082338)		(+36)
	(d) Radio Operator (Douglas Drawing 5082339)		(+36)
De-Icer Equipment (Propeller, Wing and Windshield):			
501.	Propeller de-icer equipment including lines, tanks, etc.		
502.	Windshield de-icer system		
	(a) Pump		(-36)
	(b) Anti-icer tank		(-32)
503.	Windshield wipers (Acrotorque 17)		(-42)
504.	Windshield wipers (Kearfoot 5A-4)		
505.	Type II Model 539 wing and tail surface de-icers.		

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 inspection report and each subsequent report covering change in equipment. Each airplane must be weighted to determine its weight and balance prior to original certification.

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

(a) Carbon Monoxide Elimitation in cabin. Charges must be made to reduce the carbin monoxide concentration in the pilot and passenger cabin to at least one part in 20,000 (or .005 percent).

(b) Emergency Exits (See CAR 04.462 for requirements). Present UC-67 (B-23) airplanes can be certificated for carrying a maximum of five persons. For more than five persons, changes must be made to comply with the exit requirements of CAR 04.462. If fuselage structural members are altered to provide for the required exits, details of the alteration and substantiating structural data should be forwarded to FAA, P.O. Box 45007, Airport Station, Los Angeles, CA.

(c) Accessibility of Switches and Circuit Protectors. Fuel booster pump switches, landing light and battery switch fuses must be relocated so as to be accessible to a crew member in flight. All circuit protectors must be accessible in flight.

(d) Master Switch. A master switch arrangement accessible to a crew member in flight must be installed to provide disconnection of all electrical power at a point near the power source (batteries and generators). The ignition switch and system must be made independent of the master switch and battery switch.

(e) Fuel Tank Sump Drains. Sump drains must be modified so as to drain clear of the nacelle structure.

(f) Landing Flares. All airplanes certificated for night operation must be provided with approved flares in accordance with CAR 04.512(c).

(g) Passenger Seats. Passenger seats and safety belt installations other than originally provided by the manufacturer must be shown to meet the strength requirements of CAR 04.

(h) Fuel System. In the event any tanks are removed or not intended to be used, the fuel gauges should be checked for proper graduation and the fuel valves of the poppet type removed or blocked open in order to preclude setting the valve in the "unused" position. All fuel tank filler caps or adjacent surfaces must be marked to indicate the minimum octane fuel and the tank capacity, and in the case of the front tanks, the additional note "Fill rear fuel tanks first." Fuel tank capacitites also must be properly indicated at the fuel valve controls.

(i) Lubricating System. An oil level indicating device must be provided in accordance with CAR 04.633.

(j) Cargo and Baggage Compartments. 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 3.82 without undue permanent

deformation and must have sufficient strength to withstand an ultimate load factor of 5.73. Adequate cargo tie-downs must be provided. Some UC-67 airplanes have a bomb bay floor installation of 3/4 inch plywood supported by four pine 2x4 inch transverse beams. This floor is capable of supporting a uniformly distributed load of 1600 lbs.

(k) Instruments. Instruments must be marked for approved operation limitations.

(l) A cylinder head temperature gauge must be installed and marked to indicate a limiting temperature of 450 degrees F.

(m) Each aircraft must satisfactorily pass an inspection for conformity, possible hidden damage, and for workmanship and materials used in making any repairs and/or alterations. In making the inspection for hidden damage, the outer wing panels must be removed to permit the inspection of the doublers and attaching angles for defects and replacement thereof as needed in accordance with the Airworthiness Directives for Douglas DC-3 series aircraft as are pertinent to this aircraft. If any changes have been made which would adversely affect its flight characteristics, the particular airplane must be flight tested.

(n) Any interior or exterior changes made to the primary structure or equipment be either according to approved Douglas drawings or satisfactorily substantiated.

(o) Upon completion of the conversion to certificated status, the manufacturer's nameplate on the aircraft should be altered to include the date of conversion. In some cases 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.

(p) Fuel booster pump and propeller feathering pump circuits must incorporate circuit breakers.

(q) Approved position lights must be installed.

NOTE 3. Eligible for certification at a takeoff weight of 27,500 lbs. with passengers, provided a satisfactory fuel dumping installation is made. Requests regarding approval of such an installation should be addressed to the FAA, P.O. Box 45007, Airport Station, Los Angeles, CA.

NOTE 4. The following placards shall be placed on the instrument panel in full view of the pilot. The operating manual referred to in part (b) shall be in the pilot's compartment at all times.

(a) Use booster pumps for takeoff and for all operations above 10,000 ft.

(b) This airplane shall be operated in accordance with Part I of the CAA approved operating manual for Douglas UC-67 airplanes.

(c) Use fuel tanks 3 and 4 when using booster pumps (for aircraft having 4 tank fuel system).

NOTE 5. For airplanes in which the leveling lugs have been removed during conversion to a civil status, the use of a plumb bob dropped from the top to the bottom door sill at fuselage station 270.5 (+102) is considered satisfactory.