

[illegible]

I - Model DC3-G102 (cont'd)

Usable ceilings

May be realized under conditions shown. See Item 503(b) and NOTE 5 for reductions necessitated by de-icing equipment:

Ceiling (ft.)	Weight (lbs.)	Manifold Pressure	True Ind. Airspeed mph - knots	Propellers Installed (Items)	Inoperative Propeller Condition
8,500	24,400	Full throttle	-----	1(f)	idling
0	24,400	36.7	-----	1(f)	braked
10,000	24,400	Full throttle	-----	1(a) and 2(b)	feathered
7,100	24,400	Full throttle	100 - 87	1(b), 2(c) & 2(i) or 1(c), 2(d) & 2(e)	feathered
6,000	25,200	Full throttle	-----	1(a) and 2(b)	feathered
6,200	25,200	Full throttle	100 - 87	1(b), 2(c) & 2(i) or 1(c), 2(d) & 2(e)	feathered
8,400	24,400	Full throttle	102 - 89	1(d), 2(c) & 2(i) or 1(d), 2(d) & 2(e)	feathered
7,500	25,200	Full throttle	102 - 89	1(d), 2(c) & 2(i) or 1(d), 2(d) & 2(e)	feathered
8,000	24,400	Full throttle	105 - 91	1(e), 2(c) & 2(i)	feathered
7,100	25,200	Full throttle	105 - 91	1(e), 2(c) & 2(i)	feathered

Additional conditions (1) Standard air;
 (2) Either engine inoperative;
 (3) Carburetor air intake on "cold air";
 (4) Operative engine at 2200 rpm.

C.G. range

(+47.1) to (+70.6)

Maximum weights
(See NOTE 12 for certification under SR-407)

- (a) For Air Carrier operation under the non-transport category performance operation limitations of FAR 121 with Item 1(d) or 1(e) installed:
 Landing 25,200 lbs.
 Take-off 25,200 lbs.
- (b) For Air Carrier operation under the non-transport category performance operation limitations of FAR 121 with 1(a), 1(b), 1(c) or 1(f) installed:
 Landing 24,400 lbs.
 Take-off 25,200 lbs. (dump valves required - see NOTE 4.)
- (c) For passenger operation other than Air Carrier:
 Landing 25,200 lbs.
 Take-off 25,200 lbs.
- (d) For cargo operation only:
 Landing 25,200 lbs.
 Take-off 25,200 lbs.
- See NOTE 3 for increased weights when de-icers are installed.*

Maximum occupants

See FAR 91.47.

Baggage

Maximum capacity of compartments:
 (See NOTE 1 for additional restrictions and placards)
 2 adjacent compts. fwd. of cabin right 1250 lbs. (-63)
 2 adjacent compts. fwd. of cabin left 700 lbs. (-45)
 1 compt. aft of cabin 1500 lbs. (+354)

Fuel capacity

822 gals. (4 tanks in center section wing: 2 main including fuel system 210 gals. each (+48) and 2 aux. 201 gals. each (+83.5))
See NOTE 2 for fuel loading procedures.

Oil capacity
 Serial Nos. eligible
 Required equipment

66-1/2 gals. (1 tank in each nacelle at 33-1/4 gals. each (-8) including capacity of oil system)
 1545 and up *(See NOTE 13)*
 Items 1(f), 2(a), 103(a), 104(a), 108, 201(d), 202(e), 203(a), 204(a), 205(a), 206(c), 207(a), 208(a), 301(a), 302(b), and 502.

II - Model DC3-G102A, (Army C-49E, C-50, C-50A, C-50B, C-50C, C-50D and C-51), approved March 1, 1939

See NOTE 7 regarding modifications required for conversion of military models.

Engines 2 Wright Cyclones GR1820G-102A

Fuel 90 min. grade aviation gasoline

Engine limits Maximum continuous
(Sea level) 37.5 in. Hg, 2300 rpm (900 hp)
(Straight line manifold press. variation with altitude to 6700 ft.)
35.4 in. Hg., 2300 rpm (900 hp)
Take-off (one minute),
43.5 in. Hg, 2350 rpm (1100 hp),

Airspeed limits (a) For weights up to and including 24,800 lbs.:
Level flight or climb 216 mph (188 knots) True Ind.
Glide or dive 262 mph (228 knots) True Ind.
Flaps extended 112 mph (97 knots) True Ind.
(See NOTE 10 for partial flap speeds)
(b) For weights between 24,800 lbs. and 25,200 lbs.:
Level flight or climb 211 mph (184 knots) True Ind.
Glide or dive 257 mph (224 knots) True Ind.
Flaps extended 112 mph (97 knots) True Ind.
(See NOTE 10 for partial flap speeds)

Usable ceilings May be realized under conditions shown. See Item 503(b) and NOTE 5 for reductions necessitated by de-icing equipment:

Ceiling (ft.)	Weight (lbs.)	RPM	Manifold Pressure	T.I.A.S. mph, knots	Propeller installed
8200	24,400	2300	Full throttle	99, 86	1(c)
7300	25,200	2300	Full throttle	100, 87	1(c)
7700	24,400	2300	Full throttle	102, 89	1(d)
6800	25,200	2300	Full throttle	103, 90	1(d)

Additional conditions (1) Standard air:
(2) Either engine inoperative:
(3) Inoperative propeller fully feathered;
(4) Carburetor air intake on "cold air";

C.G. range (+47.1) to (+70.6)

Maximum weights (See NOTE 12 for certification under SR-407)
(a) For Air Carrier operation under the non-transport category performance operation limitations of FAR 121 with Item 1(c) or 1(d) installed:
Landing 25,200 lbs.
Take-off 25,200 lbs.
(b) For passenger operation other than Air Carrier:
Landing 25,200 lbs.
Take-off 25,200 lbs.
(c) For cargo operation only:
Landing 25,200 lbs.
Take-off 25,200 lbs.

See NOTE 3 for increased weights when de-icers are installed.

Maximum occupants See FAR 91.47.

II - Model DC3-G102A, (Army C-49E, C-50, C-50A, C-50B, C-50C, C-50D and C-51) (cont'd)

Baggage	Maximum capacity of compartments: (See NOTE 1 for additional restrictions and placards) 2 adjacent compts. fwd. of cabin right 1250 lbs. (-63) 2 adjacent compts. fwd. of cabin left 700 lbs. (-45) 1 compt. aft of cabin 1500 lbs. (+354)
Fuel capacity	822 gals. (4 tanks in center section wing: 2 main including fuel system 210 gals. each (+48) and 2 aux. 201 gals. each (+83.5)) <i>See NOTE 2 for fuel loading procedures.</i>
Oil capacity	66-1/2 gals. (1 tank in each nacelle at 33-1/4 gals. each (-8) including capacity of oil system)
Control surface movements	Not available
Serial Nos. eligible	1545 and up (See NOTE 13)
Required equipment	Items 1(c), 2(a), 103(a), 104(a), 108, 201(d), 202(e), 203(e), 204(a), 205(a), 206(c), 207(a), 208(a), 301(a), 302(b), and 502.

III - Model DC3-G103A, approved August 1, 1939

Engines	2 Wright Cyclones GR-1820G-103A
Fuel	90 min. grade aviation gasoline
Engine limits	Max. continuous, (Sea level) 38 in. Hg, 2300 rpm (860 hp) (Straight line manifold variation with altitude to 11,100 ft.) 34.2 in. Hg., 2300 rpm (860 hp) Take-off (one minute), 43.5 in. Hg, 2350 rpm (1000 hp),
Airspeed limits	Level flight or climb 224 mph (195 knots) True Ind. Glide or dive 268 mph (233 knots) True Ind. Flaps extended 112 mph (97 knots) True Ind. <i>(See NOTE 10 for partial flap speeds)</i>
Usable ceilings	See Item 503(a) for restrictions necessitated by de-icing equipment. (a) 10,450 ft. in standard air at an indicated airspeed of 99 mph at 24,000 lbs. with either engine inoperative and inoperative propeller idling with Item 1(f) installed. (b) 11,700 ft. in standard air at an indicated airspeed of 98.5 mph at 24,000 lbs. with C.G. at forward limit with either engine inoperative and inoperative propeller fully feathered, when items 1(c), 2(d) and 2(e) are installed.
C.G. range	(+47.1) to (+70.6)
Maximum weights	Landing 24,000 lbs. Take-off 24,000 lbs. <i>See NOTE 3 for increased weights when de-icers are installed.</i> <i>See NOTE 12 for certification under SR-407.</i>
Maximum occupants	See FAR 91.47.
Baggage	Maximum capacity of compartments: (See NOTE 1 for additional restrictions and placards) 2 adjacent compts. fwd. of cabin right 1250 lbs. (-63) 2 adjacent compts. fwd. of cabin left 700 lbs. (-45) 1 compt. aft of cabin 1500 lbs. (+354)

III - Model DC3-G103A (cont'd)

Fuel capacity	822 gals. (4 tanks in center section wing: 2 main including fuel system 210 gals. each (+48) and 2 aux. 201 gals. each (+83.5) <i>See NOTE 2 for fuel loading procedures.</i>
Oil capacity	66-1/2 gals. (1 tank in each nacelle at 33-1/4 gals. each (-8) including capacity of oil system).
Control surface movements	Not available
Serial Nos. eligible	1545 and up (See NOTE 13)
Required equipment	Items 1(f), 2(a), 103(a), 104(a), 108, 201(d), 202(e), 203(a), 204(a), 205(a), 206(c), 207(a), 208(a), 301(a), 302(b), and 502.

IV - Model DC3-G202A, (Army C-49, C-49A, C-49B, C-49C, C-49D, C-49J, C-49K; Navy R4D-2), approved May 31, 1940

See NOTE 7 regarding modifications required for conversion of military models.

Engines (<i>See also NOTE 8 for optional engines</i>)	2 Wright Cyclones 702C9GC1, 2, 3 or 4 (GR-1820G-202A) with 3:2 reduction gearing. On all Wright C9GC Series (G-200 Series) engines, remove the upper valve washers, Part Nos. 69271 and 113171. Engines equipped with the two spring combination are satisfactory without change. For engines equipped with the three spring combination, it will be satisfactory to use Part No. 118815 or No. 113171 or No. 113171J. If either of the latter two is used, it should be of the high dimension type (0.60 inch total height). (Wright Service Bulletin No. C912A covers this same subject.)	
Fuel	90 min. grade aviation gasoline	
Engine limits	Maximum continuous (Sea level) 39.5 in. Hg, 2300 rpm (1000 hp) or 43.0 in. Hg, 2400 rpm (1100 hp) (Straight line manifold pressure variation with altitude to): (6900 ft.) 37.2 in. Hg, 2300 rpm (1000 hp) (5500 ft.) 40.0 in. Hg, 2400 rpm (1100 hp) Take-off (one minute), 43.0 in. Hg, 2350 rpm (1100 hp), or 45.5 in. Hg, 2500 rpm (1200 hp)	
Airspeed limits	<u>Up to & incl. 25,200 lbs.</u> Level flight or climb 211 mph (184 knots) True Ind. Glide or dive 257 mph (224 knots) True Ind. Flaps extended 112 mph (97 knots) True Ind. (<i>See NOTE 10 for partial flap speeds</i>)	Above 25,200 lbs. & <u>incl. 26,900 lbs.</u> 200 mph (174 knots) True Ind. 241 mph (210 knots) True Ind. 112 mph (97 knots) True Ind.

IV - Model DC3-G202A, (Army C-49, C-49A, C-49B, C-49C, C-49D, C-49J, C-49K; Navy R4D-2) (cont'd)

Usable ceilings

May be realized under conditions shown. See Item 503(b) and (c) and NOTE 5 for reductions necessitated by de-icing equipment:

Ceiling (ft.)	RPM	Manifold Pressure	T.I.A.S. mph - knots	Propeller Item	Propeller De-icer Item
25,200 lbs.:					
8500	2300	Full throttle	112 - 97	1(c)	None
8300	2300	Full throttle	112 - 97	1(c)	503(b)
7500	2300	Full throttle	112 - 97	1(c)	503(c)
8100	2399	Full throttle	112 - 97	1(d)	None
7900	2300	Full throttle	112 - 97	1(d)	503(b)
9100	2300	Full throttle	112 - 97	1(e)	None
26,900 lbs.:					
6700	2300	Full throttle	112 - 97	1(c)	None
6500	2300	Full throttle	112 - 97	1(c)	503(b)
5700	2300	Full throttle	112 - 97	1(c)	503(c)
6300	2300	Full throttle	112 - 97	1(d)	None
6100	2300	Full throttle	112 - 97	1(d)	503(b)
7300	2300	Full throttle	112 - 97	1(e)	None

- Additional conditions (1) Standard air:
(2) Either engine inoperative:
(3) Inoperative propeller fully feathered;
(4) Carburetor air intake on "cold air."

C.G. range

(+47.1) to (+70.6)

Maximum weights
(See NOTE 12 for certification under SR-407)

- (a) For Air Carrier operation under the non-transport category performance operation limitations of FAR 121 with Item 1(c), 1(d), 1(e) or 1(g) installed:
Landing 25,200 lbs.
Take-off 25,200 lbs.
- (b) For passenger operation other than air carrier with Item 1(c), 1(d), 1(e) or 1(g) installed:
Landing 25,200 lbs.
Take-off 25,200 lbs.
- (c) For operation under the conditions set forth in NOTE 11:
Landing 26,000 lbs.
Take-off 26,200 lbs. (dump valves not required)
- (d) For cargo operation only, under the conditions set forth in NOTE 9:
Landing 26,900 lbs.
Take-off 26,900 lbs.
- (e) For cargo operation under conditions other than those set forth in NOTE 9, 11, or 12:
Landing 25,200 lbs.
Take-off 25,200 lbs.

See NOTE 3 for increased weights when de-icers are installed.

Maximum occupants

See FAR 91.47.

Baggage

Maximum capacity of compartments:
(See NOTE 1 for additional restrictions and placards)
2 adjacent compts. fwd. of cabin right 1250 lbs. (-63)
2 adjacent compts. fwd. of cabin left 700 lbs. (-45)
1 compt. aft of cabin 1500 lbs. (+354)

Fuel capacity

822 gals. (4 tanks in center section wing: 2 main including fuel system 210 gals. each (+48) and 2 aux. 201 gals. each (+83.5))
See NOTE 2 for fuel loading procedures.

IV - Model DC3-G202A, (Army C-49, C-49A, C-49B, C-49C, C-49D, C-49J, C-49K; Navy R4D-2) (cont'd)

Oil capacity	66-1/2 gals. (1 tank in each nacelle at 33-1/4 gals. each (-8) including capacity of oil system)
Control surface movements	Not available
Serial Nos. eligible	1545 and up (See NOTE 13)
Required equipment	Items 1(c), 2(a), 103(a), 104(a), 108, 201(d), 202(e), 203(a), 204(a), 205(a), 206(c), 207(a), 208(a), 301(a), 302(b), and 502.

SPECIFICATIONS PERTINENT TO ALL MODELS

Datum	Leading edge of center section of wing
Leveling means	Pins at (+198) and (+219)
Certification basis	Type Certificate No. 618 (Aero. Bulletin 7A requirements)
Production basis	Production Certificate No. 27
Export eligibility	Eligible for exports to all countries subject to the provisions of MOP 2-4 except as follows: (1) All models eligible to all countries except New Zealand with a maximum landing weight of 24,000 lbs. (2) Models DC3-G102, -G102A and -G202A eligible to all countries except Australia and New Zealand with a maximum landing weight of 24,400 lbs. (Limited to 24,000 lbs. to Australia pending receipt of a satisfactory landing roll test.)

Equipment: A plus (+) or minus (-) sign preceding the weight of an item indicates net weight change when that item is installed. Approval for the installation of all items of equipment listed herein has been obtained by the aircraft manufacturer except those items preceded by an asterisk (*). The asterisk denotes that approval has been obtained by someone other than the aircraft manufacturer. An item marked with an asterisk may not have been manufactured under an FAA monitored or approved quality control system, and therefore attention should be paid to workmanship and conformity with pertinent data called for in this specification.

Propellers and Propeller Accessories (Except Propeller De-icing Equipment)

1. Propellers
 - (a) (124 a) Curtiss propellers, hubs C532D, blades 89305 770 lbs. (-76)
(Index 20° to 40°)
 - (b) (128 a) Ham. Std., hubs 23E50, blades 6153-18 703 lbs. (-76)
(American Airlines Dwg. EDS484-A)
For model G102 only.
For interchangeable blade models see Prop. Spec. No. 603 (NOTE 6)
Dia.: Max. 11'6-3/8", min. allowable for repairs 11'3-3/8".
No further reduction permitted.
Min. low pitch setting 14° at 42 in. sta.
When oil from the airplane hydraulic system is used for operation, Items 2(c) and (i) must be installed.
Eligible with molded shank fairings per NOTE 5.
 - (c) (128 d) Ham. Std., hubs 23E50, blades 6153-18 (Douglas 784 lbs. (-70.5)
Dwgs. 5075587 or 5075582).
For Models G102, G102A, G103A and G202A.
For interchangeable blade models see Prop. Spec. No. 603 (NOTE 6)
Dia.: Max. 11'6-3/8", min. allowable for repairs 11'3-3/8".
No further reduction permitted.
Min. low pitch setting 14° at 42 in. sta.
Eligible with molded shank fairings per NOTE 5.

(d) (128 h)	Ham. Std. hubs 23E50, blades 6261-0, -1, -2 or -3.	Use act. wt. ch.
	For interchangeable blade models see Prop. Spec. No. 603 (<i>NOTE 6</i>) Min. low pitch setting 14° at 42 in. sta. For models G102, G102A and G202A only.	
(e) (128 j)	Ham. Std. hubs 33D50, blades 6405-18 to 6495-20, incl. Dia.: Max. 11'7", min. allowable for repairs 11'4". No additional tolerance permitted.	674 lbs. (-76)
	For interchangeable blade models see Prop. Spec. No. 749 (<i>NOTE 6</i>) Min. low pitch setting 14° at 42 in. sta. For G-102 and G-202A engines geared 3:2 with standard nose (or torque meter nose for G-102) and with at least one 4 1/2 N dynamic damper.	
(f) (Std.)	Ham. Std., hubs 3E50, blades 6105-8 For interchangeable blade models see Prop Spec. No. 246 (<i>NOTE 6</i>) Diameter: Max. 11' 6-3/8", minimum allowable for repairs 11' 3-3/8". No further reduction permitted.	710 lbs. (-76)
	Minimum low pitch setting 14° at 42 in. sta.	
(g)	Ham. Std., hubs 23E50, blades 6477-0 to 6477-2, incl. Dia.: Max. 11' 6-3/8", min. allowable for repairs 11' 3-3/8". No further reduction permitted.	Use act. wt. ch.
	Minimum low pitch setting 20° at 42 in. sta. Eligible only on R-1820 Series engines geared 16:9. See <i>NOTE 8(c)</i> .	
2. Propeller Controls		
(a) (23)	Constant speed prop. control (A-1 Hyd. Ham. Std.)	17 lbs. (-64)
(b) (124 b)	Curtiss feathering propeller controls, conduits, governors, brush assemblies and wiring.	35 lbs. (-32)
(c) (128 b)	Propeller feathering controls, tubing fittings, increased capacity for hydraulic system tank, 2-1/2 gal. additional fluid.	51 lbs. (-84)
	For model G102 only.	
(d) (128 f)	Propeller feathering controls, tubing, wiring, brackets, etc.	21 lbs. (-40.5)
	For models G102, G102A, G103A and G202A only.	
(e) (128 e)	Two feathering oil pumps for models G102, G102A and G103A only.	45 lbs. (-21.5)
(f) (72)	Propeller slinger rings (two)	12 lbs. (-76)
(g) (125)	Propeller slinger rings (two) (Curtiss)	5 lbs. (-76)
(h) (128 g)	Propeller slinger rings (two) (Ham. Std. Dwg. 52903).	4 lbs. (-69.5)
	For Models G102, G102A, and G202A only.	
(i) (128 c)	Residual hydraulic fluid. For Model G102 only.	6 lbs. (-64.5)
<u>Engines and Engine Accessories - Fuel and Oil System</u>		
101.	Reserved.	
102.	Reserved.	
103. Oil Coolers		
(a) (3)	Two oil radiators, 9" dia., and scoops, UAP U-3190-V or AiResearch 2D-481	56 lbs. (-28)
(b) (101)	Two oil radiators with scoops (U.A.P. 10")	66 lbs. (-28)
(c) (159)	Two oil coolers, scoops, etc. (UAP 11" U-2050-V or 11" AiResearch 2D-299)	102 lbs. (-27)
104. Starters		
(a) (4)	Two starters (Eclipse Type E-160)	67 lbs. (-31.5)
(b) (161)	Two combination starters and feathering pumps	80 lbs. (-40)
105. Fuel Dump System		
(a) (120)	Extendible chute installation in accordance with Douglas Dwg. 5080140 See <i>NOTE 4 for restrictions on dump valves.</i>	22 lbs. (+141.5)
*106. Outer wing Tank Installation		
(a) (188 a)	Two tanks in each wing totalling approximately 400 gals. of fuel per AiResearch Dwg. #4900-11-E. (AiResearch Aviation Service Co., 5907 W. Imperial Blvd., Los Angeles 45, Calif.)	Use act. wt. ch.
(b) (188 b)	Two tanks in each wing totalling approximately 400 gals. of fuel per Grand Central Dwg. #10878 or Dwg. #20458. (Grand Central Aircraft Company, 1314 Airways, Glendale, Calif.)	Use act. wt. ch.

	(c) (188 c) Multi-cell (34 to 400 gals.) per Executive Aircraft Service Dwg. #35267NS (Executive Aircraft Service, Inc., P.O. Box 7307, Dallas, Texas)	Use act. wt. ch.
107.	(a) (151) Dual fuel system including weight increase of pressure carburetors (Two Stromberg PD12B-7 or PD12-H3 at +15 lbs. each). (Douglas Dwgs. 5070010 and 4087774) (G100 and G200 series engines only)	+85 lbs. (+3)
	(b) (153) Dual fuel system (with Chandler-Groves 1375-F carburetors) in accordance with Douglas Dwgs. 5070010 and 4070657	+52 lbs. (+18)
108.	(22) Residual fuel and oil in drained system (Oil 34.5 lb.; fuel 21.5 lbs.)	56 lbs. (-28.5)
109.	(132) Two 29 gal. oil tanks constructed in accordance with Douglas Dwg. 507759 replacing standard 33-1/4 gal. tanks	-8 lbs. (-8)
*110.	Engine mount No. 10008 (Orlin M. Sorenson, 5101 Haskle Ave., Encino, Calif.). For R-1820 Series engine up to a maximum of 1350 hp.	

Landing Gear

201.	Main Wheels and Brake Assemblies	
	(a) (83 b) Two 17.00-16 wheels (Bendix mag.) with expander tube brakes (Goodrich G-1430 or Hayes)	243 lbs. (+28)
	(b) (67) Two 45x20-10 Goodyear wheels with L.P. disc brakes (7, 9 or 11 discs)	216 lbs. (+28)
	(c) (83 a) Two 17.00-16 Bendix wheels with cast iron drums and expander tube brakes (Goodrich H-2-445 or H-2-449)	229 lbs. (+28)
	(d) (112) Two 17.00-16 wheels (Bendix Mag., TC-34)	254 lbs. (+28)
	(e) (174) Two 45x20-10 Goodyear wheels with high pressure disc type brakes (7 or 9 discs)	230 lbs. (+28)
	(f) (146) Two 17.00-16 Bendix B-3 wheels and duo-servo brakes	263 lbs. (+28)
	* (g) (186) Two Goodyear Model CL16HBM (cross-wind wheels) Wheel Assembly No. 9560031 Brake Assembly No. 9540307 (Installation per Goodyear Dwg. No. 283AX50-500, Rev. D). (Note: When this item is installed, airplane is approved for crosswind landings in wind components up to 40 mph).	+173 lbs. (+28)
	* (h) Two 17.00-16 Goodrich wheels H-3-269M-1 and brakes H-2-415, H-2-445 or H-2-449	252 lbs. (+28)
	* (i) Two 17.00-16 Goodyear wheels 530975M and brakes 530961, 9540137, 9540356 or 9540363	216 lbs. (+28)
	* (j) Two 17.00-16 Goodyear wheels 9510517 and brakes 9540385	273 lbs. (+28)
202.	Main Wheel Tires	
	(a) (111) Two 17.00-16, 10-ply H.D. (treaded)	257 lbs. (+28)
	(b) (68 c) Two 45x20-10, 10-ply (treaded)	296 lbs. (+28)
	(c) (68 a) Two 45x20-10, 10-ply (smooth)	268 lbs. (+28)
	(d) (180) Two 17.00-16, vaned (Goodrich)	260 lbs. (+28)
	(e) (16) Two 17.00-16, 10-ply (treaded)	239 lbs. (+28)
	(f) (96) Two 17.00-16, treaded 12-ply (ribbed safety)	275 lbs. (+28)
	(g) (68 b) Two 45x20-10, 12 ply	310 lbs. (+28)
203.	Main Wheel Tubes	
	(a) (165) 17.00-16 plain	38 lbs. (+28)
	(b) (69) 45x20-10 plain	10 lbs. (+28)
	(c) (17) 17.00-16 cactus proof	56 lbs. (+28)
204.	Tail Wheel	
	(a) (19) 9.00x6	9 lbs. (+455.5)
205.	Tail Wheel Tire	
	(a) (20) 9.00-6, 8-ply	18 lbs. (+455.5)
	(b) (109 c) 9.00-6, 8-ply treaded	24 lbs. (+455.5)
	(c) (162 a) 19.00 streamline 8-ply	13 lbs. (+455.5)

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|------|---|-----------------|
| 206. | Tail Wheel Tube | |
| | (a) (21) 9.00-6 (cactus-proof) | 5 lbs. (+455.5) |
| | (b) (162 b) 19.00 plain | 2 lbs. (+455.5) |
| | (c) (109 a) 9.00-6 (plain) | 3 lbs. (+455.5) |
| 207. | Main Gear Shock Struts | |
| | (a) (14) Four Bendix Nos. 53420 or 53585 | 223 lbs. (+28) |
| 208. | Tail Wheel Oleo Strut | |
| | (a) (18) Douglas Dwg. No. 3006620 or Cleveland No. A-6356 | 12 lbs. (+449) |
| | (b) (127) Douglas Dwg. No. 5044046 or 5115222 | 23 lbs. (+449) |

Electrical Equipment

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|------|--|-----------------|
| 301. | Generators | |
| | (a) (5) Two 50 amp. (Eclipse E-5 or E-7) (12 volt) | 62 lbs. (-31.5) |
| | (b) (62) One Eclipse E-5, M2617-a (12 volt) | 31 lbs. (-31.5) |
| | (c) (99) One 25 amp. (Eclipse Type D) (12 volt) | 28 lbs. (-31.5) |
| | (d) (160) Two Eclipse Type 311, 100 amp. (12 volt) | 81 lbs. (-31.0) |
| | * (e) (187) Two P-1 or equivalent, 200 amp., 28 volts (Reference
FAA Aeronautical Center Standardization Dwg. Wiring Diagram Page No. 34) | 88 lbs. (-38.5) |
| 302. | Batteries | |
| | (a) Two 65 amp. (6-TX-19) (12 volt) | 126 lbs. (-65) |
| | (b) (6) Two batteries 88 amp. hr. (Exide 6-FHM-13) | 155 lbs. (-65) |
| | (c) (98) One 50 amp. (Exide 6-X-9) (12 volt) | 63 lbs. (-65) |
| | (d) (63) One Preto-lite, 105 amp. (R 1213G) (12 volt) | 91 lbs. (-65) |
| | (e) (93) One 88 amp. (Exide 6-FHM-13) (12 volt) | 78 lbs. (-65) |

Interior Equipment

- | | | |
|------|--|------------------|
| 401. | Reserved | |
| 402. | Automatic Pilot (See NOTE 12(g) for Aircraft Certificated under provisions of SR-407) | |
| | (a) Hydraulic - Servo unit Model No. C8-D3-B | 65 lbs. (-140) |
| | (b) (185 a) Sperry Type A-12 | 205 lbs. (+ 93) |
| | <u>Main Servo Units:</u> | |
| | Aileron: Servo unit model NR.656542 (S-1-180-60-D) | |
| | Pulley size: 4.25" drum pitch diameter | |
| | Rudder: Servo unit model NR.656542 (S-1-148-40-D) | |
| | Pulley size: 4.25" drum pitch diameter | |
| | Elevator: Servo unit model NR.656542 (S-1-104-20-D) | |
| | Pulley size: 4.25" drum pitch diameter | |
| | <u>Elevator Trim Tab Servo Unit:</u> | |
| | Servo unit model NR.661202 (S-3-2000-3-5E) | |
| | Pulley size: 2.749" drum pitch diameter | |
| | (Sperry Dwg. Nos. 5245-90052B, -90053D and -90029B) | |
| | (1) Servo stall force installation values (+0 or -3%) at the pilot's controls: | |
| | Rudder 70 lbs., elevator 40 lbs., aileron 23 lbs. | |
| | (2) The following placard should be installed in a conspicuous place near the automatic pilot controller: | |
| | "When using auto-pilot in normal operation (except approach), minimum terrain clearance is 500 feet. When using auto-pilot during an approach, minimum altitude is 200 feet, pilot's seat belt fastened and hand on control wheel. Minimum altitude for each case does not override any higher minimum operational altitudes." | |
| | * (c) (185 b) (1) Lear Model L-5 automatic pilot, altitude controller and approach coupler installed in accordance with Lear Dwg. 82784. | 92 lbs. (+113.0) |
| | (2) Lear Model L-2C automatic pilot and altitude controller (optional equipment) installed in accordance with Lear Dwg. 91326. | 68 lbs. (+147.5) |
| | The following placard should be installed in a conspicuous place near the automatic pilot controller: "When using autopilot in normal operation (except approach) minimum terrain clearance is 500 feet. When using autopilot during an approach, minimum altitude is 200 feet, pilot's seat belt fastened and hand on control wheel. Minimum altitude for each case does not override any higher minimum operational altitude." | |

		Servo stall torques measured at rudder, aileron and elevator servos: 150 in. lbs. minimum, 200 in. lbs. maximum.	
		Servo drum pitch diameters for all three axes are 2.67 inches.	
* (d) (185 c)		Pioneer PB-10 (Three main servo units 15601, one elevator tab servo unit 15602 and two throttle servo units 15602) (Reference Pioneer Pub. No. 95-14, 511-18, 05-8G, 88-31 and FAA Aeronautical Standardization Drawings)	Use act. wt. ch.
	(1)	Servo stall forces measured in pounds at the pilot's controls: Rudder 75 Elevator 39 Aileron 23 These forces are satisfactory for automatic approach.	
	(2)	When using autopilot in cruise configuration the minimum terrain clearance is 500 feet. When using autopilot in approach configuration the minimum terrain clearance is 200 feet, pilot's seat belt fastened and hand on control wheel. The minimum altitude in each case does not override any higher minimum operating altitude.	
* (e) (185 d)		Minneapolis-Honeywell Model MH-6 (3 servos MG7001A1: 1 servo MG700A3) installed in accordance with Minneapolis-Honeywell Dwg. ET-1924.	189 lbs. (+31.5)
	(1)	Servo Stall forces at pilot's controls: Rudder 120 ± 5 lbs. Aileron 50 ± 5 lbs. Elevator 30 ± 5 lbs. (These forces are satisfactory for automatic approach.)	
	(2)	The following should be included on a placard installed near the automatic pilot controller: "Pilot's Operating Manual dated April 21, 1953, for the MH-6 Automatic Pilot is required. Maximum speed demonstrated for use of the Automatic Pilot is 165 mph. Do not use Automatic Pilot below 300 feet above the terrain for cruise configuration or 200 feet for approach."	
403.	(9)	Two flares (3 min.) Wiley Type A-8 (including brackets, etc., 15 lbs.)	52 lbs. (+389)
404.	(118) T.W.A.	buffet installation (349 lbs. capacity at +331.5) (includes Thermos rack) Rear baggage capacity must be reduced to 1070 lbs. at +368. Load in buffet should be so distributed that a major portion will be carried on the floor of the buffet compartment.	51 lbs. (+332)
<u>De-Icer Equipment (Propeller, Wing and Windshield)</u>			
501.	(61)	De-icer installation complete consisting of	165 lbs. (+67)
	(a) (a)	Boots and attachments	92 lbs.
	(b) (b)	Wing and fuselage lines	13 lbs.
	(c) (c)	Pump, controls, valves, clips and brackets and lines forward of firewall	30 lbs.
502.	(33)	Carburetor and windshield system	32 lbs. (+72)
	(a) (a)	Tank	
	(b) (b)	Lines	
	(c) (c)	2 gal. alcohol	
503.	Propeller De-Icing Provisions		
	(a) (173 a)	Goodrich No. 37572 propeller de-icer fluid feed strips Goodrich No. 36889 feed rings may be used on round shank blades With G103A engines the strips shall not extend beyond the outside diameter of the engine cowl on the propeller blades and the usable ceiling must be reduced by 1,000 feet when installed. Strips and rings should be installed on the blades in accord with Goodrich Installation Manual furnished with the strips.	

- (b) (173 b) Goodrich No. 37572 propeller de-icer fluid feed strips.
Goodrich No. 36889 feed rings may be used on round shank blades.
With G102, G102A, and G202A engines the strips shall not extend beyond the 45 in. station on the propeller blades, and the usable ceiling must be reduced by 200 feet when installed. Strips and rings should be installed on the blades in accord with Goodrich Installation Manual furnished with the strips.
- (c) (173 c) Goodrich No. 37572 propeller de-icer fluid feed strips max. extension to 60 inch station on 6153 (or equivalent) propeller blades eligible with G202A engines only. Reduce usable ceilings 1,000 feet when strips are installed. Goodrich No. 36889 de-icer fluid feed rings eligible. Strips and rings should be installed on the blades in accordance with Goodrich Installation Manual furnished with the strips.
- (d) (173 d) Goodrich No. 37572 propeller de-icer fluid feed strips max. extension to 59 inch station on 6153 or (equivalent) and 6261 (or equivalent) propeller blades eligible with G102A engines only. Reduce usable ceiling 1200 feet when strips are installed. Goodrich No. 36889 de-icer fluid feed rings eligible. Strips and rings should be installed on the blades in accordance with Goodrich Installation Manual furnished with the strips.
- (e) (173 e) Firestone No. YRE-75J99 propeller de-icer fluid feed strips, with G103A engines the strips shall not extend beyond the outside diameter of the engine cowl on the propeller blades and the usable ceiling must be reduced by 1,000 feet when installed. Strips should be installed in accord with Firestone instructions furnished with the strips.
- (f) (173 f) Firestone No. YRE-75J99 propeller de-icer fluid feed strips. With G102, G102A and G202A the strips shall not extend beyond the 45 inch station on the propeller blades and the usable ceiling must be reduced by 200 feet when installed. Strips should be installed in accord with Firestone instructions furnished with the strips.
- (g) (173 g) Firestone No. YRE-75J99 propeller de-icer fluid feed strips extending to 60 inch station on 6153 (or equivalent) propeller blades eligible with G202A engines only. Reduce usable ceiling 1,000 feet when strips are installed. Strips should be installed in accordance with Firestone instructions furnished with the strips.
- (h) (173 h) Firestone No. YRE-75J99 propeller de-icer fluid feed strips extending to 59 inch station on 6153 18 (or equivalent) and 6261 (or equivalent) propeller blades eligible with G102A engines only. Reduce usable ceiling 1,000 feet when strips are installed. Strips should be installed in accordance with Firestone instructions furnished with the strips.

Miscellaneous (Not Listed Above)

- 601. Heating System
 - (a) (13) Steam heater system and 2 gal. water 109 lbs. (+29.5)
 - (b) (113 a) Heating system boiler, Project Sketch Change 0038B (replacing standard No. 6020541) No. wt. change
 - (c) (113 b) Heating system boiler A.A. No. EDS 271 (replacing standard No. 6020541) No. wt. change
 - (d) (176) Stewart Warner heater (Douglas Dwg. No. 5144982) 51 lbs. (30)
(replaces 601(a) when installed)
- *602. Geared Rudder Tab
 - (a) (189 a) AiResearch Dwg. No. C-7100-19 Instal. Geared Rudder Tab." (AiResearch Aviation Service Co., 5907 W. Imperial Blvd., Los Angeles 45, Calif.) Use act. wt. ch.
 - (b) (189 b) Executive Aircraft Service Dwg. #35283. (Executive Aircraft Service, Inc., P.O. Box 7307, Dallas, Texas) Use act. wt. ch.
- *603. (190) Windshield Installation, Dwg. #352544GDA, Executive Aircraft Service, Inc. Use act. wt. ch.

- NOTE 1.
- (a) Weight and balance report including list of equipment included in certificated weight empty, and loading instructions when necessary, must be in each aircraft at the time of original certification and at all times thereafter (except in the case of air carrier operators having an approved weight control system).
 - (b) An optional forward baggage compartment (-95.5) may be utilized when noted on approved loading schedule. It is formed by swinging the standard left-hand forward baggage door to the inside snap lock. The optional compartment must be placarded for a maximum capacity of 200 lbs.

- (c) Stewardess or stewards seat not to be occupied by passengers. Placard accordingly.
- (d) Placard lavatory door as follows: "These rooms not to be occupied during take-off or landing."
- NOTE 2. (a) Fuel must be loaded in front tanks and then in rear tanks and used in the reverse order except for take-off and landing, unless the carburetor overflow return line is routed to the rear tanks, in which case the fuel loading and usage procedure must be reversed.
- (b) Models DC3-G102, DC3-G102A, DC3-G202A and DC3-G103A only:
The following placard must be conspicuously posted at each fuel tank filler cap:
"Fill with 91 Octane Fuel Only."
- (c) Model DC3-G202A:
With Wright Cyclone R-1820-66 engines, the following placard must be conspicuously posted at each fuel tank filler cap:
"Fill with 100 Octane Fuel Only."
- NOTE 3. Maximum landing (and take-off) weight may be increased by an amount equal to .006 x maximum landing weight when complete de-icer is installed, except that no allowance may be made for de-icers that will result in take-off or landing weights higher than 25,346 pounds.
- NOTE 4. Fuel Dumping - Fuel dump valves (Item 105(a)) must be installed for operation of the airplane at weights in excess of the maximum landing weight, unless otherwise noted in this specification.
- NOTE 5. Hamilton Standard propeller 6153 Series and 6495 Series blades are eligible with molded shank fairings. Blades with fairings will be indicated with a letter and a dash preceding the model designation. On G102, G102A, and G202A engines only, fairings may incorporate de-icing fluid grooves and a grooved extension strip. (The complete assembly shall not extend beyond 45 inch station on the blade.) Reduce usable ceiling by 200 ft. when fairings are grooved.
- NOTE 6. Deleted - May 22, 1957
- NOTE 7. The various military models listed were originally built as commercial aircraft but were converted for military use prior to delivery from the factory. 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. All Airworthiness Directive Notes must be complied with.
- (b) Instrument markings and placards must be installed as required by this specification and commercial DC-3 practice. Attention should be given to the windshield equipment and it should be determined that a satisfactory windshield wiper is installed.
- (c) Each airplane must be weighed to determine its weight and balance and an approved loading chart or device installed. If any changes have been made which would adversely affect the flight characteristics, the particular airplane must be flight tested. Upon completion of the conversion to certificated status, the manufacturer's nameplate on the aircraft should be altered to include the date of conversion and the new commercial model designation. 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.
- NOTE 8. Model DC3-G202A also eligible with the following engines:
- | | | | | |
|---|-----------|------------|---------------|-------------|
| (a) Wright Cyclone 730C9GD series engine limits | | | MP | |
| | <u>HP</u> | <u>RPM</u> | <u>IN.HG.</u> | <u>ALT.</u> |
| Maximum continuous | 1000 | 2300 | 39.0 | S.L.* |
| or | 1100 | 2400 | 42.5 | S.L.* |
| Maximum continuous | 1000 | 2300 | 36.7 | 6900* |
| or | 1100 | 2400 | 39.8 | 5500* |
| Take-off (one minute) | 1200 | 2500 | 45.0 | S.L. |
- *Straight line variation in manifold pressure with altitude.*

- (b) Wright Cyclone #R-1820-56 or -66

Engine limits

	HP	RPM	MP IN.HG.	ALT.
Maximum continuous	1100	2400	41.5	S.L. **
Maximum continuous	1100	2400	40.0	4200 **
Take-off (one minute)	1200	2500	44.0	S.L.

**When these engines are installed, the engine supercharger speed control must be safetied in the low blower position.*

***Straight line variation in manifold pressure with altitude.*

- (c) Wright Cyclone *R-1820-56AM2, -71M1, -72AM1, -70 or -70M1 geared 16:9

Propeller: Item 1(g) only eligible.

Engine Limits

	HP	RPM	MP IN.HG.	ALT.
Maximum continuous	1100	2500	40.5	S.L. ***
Maximum continuous	1100	2500	40.0	5100 ***
Take-off (one minute)	1350 **	2700	48.0	S.L.

**When engines incorporating 2-speed superchargers are installed, the engine supercharger speed control must be safetied in the low blower position.*

***Only if NOTE 12 is complied with; otherwise, take-off must be limited to 1200 hp.*

****Straight line variation in manifold pressure with altitude.*

NOTE 9.

- (a) All DC3 aircraft are eligible for cargo operation at a maximum weight of 26,900 lbs. when engines having at least 1050 hp Maximum Continuous and 1200 hp for Take-off are installed, provided the cabin floor is structurally adequate and when the landing weight exceeds 25,200 and/or the take-off weight exceeds 26,200 lbs., the following structural reinforcements are accomplished:

- (1) Install C-47 type upper main landing gear truss in accordance with Douglas Dwg. 5110569 or 5141775.
- (2) Install C-47 type landing gear retracting strut and mechanical lock in accordance with Douglas Dwg. 5110586, 5114203, 2114381, 5140045, and 5341742.
- (3) Add an .040 doubler plate to each front spar upper landing gear attach point as shown in Douglas Dwg. No. 5116763-18.
- (4) It must be determined that the main landing gear wheels and tires have static ratings of at least 13,450 lbs. Wheels listed under Items 201(e), (f), (h), (i), and (j) are satisfactory at the 26,900 lbs. cargo weight.

Similarly, the tires listed under the following items are satisfactory for 26,900 lbs. gross weight:

Item No.	Inflation Pressure
202(a)	48 p.s.i.
202(b)	38 p.s.i.
202(c)	38 p.s.i.
202(g)	38 p.s.i.

In case other wheels and tires have been approved for particular installations, the approved static ratings for the wheels (refer to wheel specifications), and tires (refer to Tire and Rim Association Airplane Handbook) should be determined to be at least 13,450 lbs. before authorizing operation at a weight of 26,900 lbs.

- (5) The following Douglas DC-3 axles are satisfactory for maximum weights as indicated:

<u>Axle Assembly</u>	<u>Weight</u>
5007396	25,200 lbs.
5007162 with 5007390 torque collar	25,200 lbs.
5007162 with 5007390RW torque collar	26,900 lbs.
5007162 with changes per Douglas S.B. #242 including 5203324 or 5111575 collar and C-47 type keys and lower oleo caps.	26,900 lbs.
5116596 with 5203324 or 5111575 collar	26,900 lbs.
5367124	26,900 lbs.

Douglas Service Bulletin DC 3 No. 261 contains information relative to identifying characteristics of the above listed axle assemblies.

- (b) A flap setting of 15 degrees is required to meet the take-off and climb requirements at weights in excess of 25,200 lbs. at sea level except for those aircraft operated in accordance with an FAA Approved Airplane Flight Manual or those aircraft eligible for operation in accordance with the take-off limitations of FAR 121, in which case a retracted flap position may be used for take-off.
- (c) The drawings referenced under (a) are not available to FAA representatives and, in each case, it will be necessary for the applicant to supply the necessary proof of compliance to satisfy the FAA representative that the changes have been incorporated in the individual airplane. Douglas Service Bulletin No. 242 describes in detail how to complete the rework covered by the drawings listed in parts (1), (2) and (3) above.

NOTE 10. The following partial flap settings and corresponding airspeeds may be used during approach procedures:

<u>Flap Setting</u>	<u>Maximum Speed</u>
1/4	155 mph (135 knots) True Ind.
1/2	114 mph (99 knots) True Ind.
3/4	112 mph (97 knots) True Ind.
Full (45°)	112 mph (97 knots) True Ind.

NOTE 11. Model DC3 aircraft with engines installed that are rated at 1000 hp Maximum Continuous and 1200 hp for Take-off and authorized to be operated in accordance with the performance operation requirements of FAR 121, are eligible for maximum landing and take-off weights of 26,000 and 26,200 lbs. respectively, when the conditions as set forth in Items (a) and (c) of NOTE 9 are complied with. For airplanes of United States registry, this applies only to airplanes operated by certificated air carriers. The following airspeed limits are applicable for weights between 25,200 and 26,200 lbs.:

Level flight or climb	205 mph (178 knots) True Ind.
Glide or dive	251 mph (218 knots) True Ind.
Flaps extended	112 mph (97 knots) True Ind.

See NOTE 10 for partial flap speeds.

An FAA Approved Flight Manual will be required for airplanes of United States registry operating at these weights.

NOTE 12. The following is applicable to airplanes certificated under the provisions of CAB Special Regulation SR-407:

Model DC3 aircraft have been determined to meet the structural requirements of CAR 1a as amended April 7, 1950, for a maximum landing and take-off weight of 26,900 lbs. and may be certificated for passenger carrying at weights up to and including 26,900 lbs., when Wright R 1820 series or P&W R 1830 series engines are installed whose Maximum Continuous hp does not exceed 1100 and whose Take off hp does not exceed 1350, provided that the total weight of the engine-propeller installation forward of the firewall does not exceed 2500 lbs. and the following are accomplished:

- (a) The structural modifications and installation of tires and wheels in accordance with NOTE 9 are required if the landing weight exceeds 25,200 lbs. or the take-off weight exceeds 26,200 lbs.

- (b) If not already accomplished, the center wing spars, the tank covers on the bottom of the center wing and the nacelle to wing attach angles must be reworked in accordance with Douglas Project Sketches 10826, 10827, 10828 and 10829 and Douglas Dwg. #5162328 on the following aircraft: All serial numbers up to and including 1976, 1979 through 2003, 2009, 2011 through 2016, and 2019 through 2028.
- (c) Wright R-1820 series engines having a Maximum Continuous hp not to exceed 1100 and a Take-off hp not to exceed 1350 are installed. Engines incorporating two speed super chargers must be locked in low blower unless satisfactory cooling tests are conducted and any modifications found necessary to permit high blower operation are incorporated.
- (d) Any increase in power above .200 hp must not adversely affect the flight characteristics of the airplane. It has been determined that the directional controllability and stability of the DC-3 series aircraft is inadequate in the one- engine out condition if engines having more than 1200 hp for take-off are installed. Therefore, suitable modifications must be made to the airplane in a manner acceptable to the Administrator, which will maintain flight characteristics equivalent to those previously approved. One such modification which has been approved for a maximum of 1350 hp for take-off is a geared rudder tab installation which is described on Item 602.
- (e) An FAA Approved Airplane Flight Manual is required and must be carried in the airplane at all times. For airplanes using a maximum of 1200 hp for take-off a maximum weight of 26,200 lbs. has been established and may be approved without further tests. For airplanes using over 1200 hp up to 1350 hp for takeoff, if it is desired to increase the maximum weight above 26,200 lbs. to a maximum of 26,900 lbs., performance substantiation is required.
- (f) The following airspeed (TIAS) limits are applicable:

	Up to and including 24,800 lbs.	Between 24,800 lbs. and 25,200 lbs.	Between 25,200 lbs. and 26,900 lbs.
Vl (level flight or climb)	201 mph (175 knots)	195 mph (170 knots)	183 mph (159 knots)
Vne (never exceed)	241 mph (210 knots)	233 mph (202 knots)	219 mph (190 knots)
Vf (Flaps 1/4)	155 mph (135 knots)	155 mph (135 knots)	155 mph (135 knots)
(Flaps 1/2)	114 mph (99 knots)	114 mph (99 knots)	114 mph (99 knots)
(Flaps 3/4)	112 mph (97 knots)	112 mph (97 knots)	112 mph (97 knots)
(Flaps full) (45°)	112 mph (97 knots)	112 mph (97 knots)	112 mph (97 knots)

- (g) The DC-3 series aircraft is not structurally satisfactory for take-off weight in excess of 26,900 lbs. Therefore, if the takeoff weight, up to a maximum of 26,900 lbs., does not exceed the landing weight by more than 105%, dump valves are not required. No allowance for de-icer installation will be permitted at any weight. If an automatic pilot is installed in the airplane, satisfactory flight tests must be completed to determine the effects upon the automatic pilot servo forces of any modification made to the airplane to maintain its flight characteristics. The forces shown in items 402(b) and (d) of this specification for the Sperry A-12 and Pioneer PB-10 automatic pilots have been demonstrated to be satisfactory when the "Geared Rudder Tab" (Item 602) is installed provided the maximum speed for operation of the automatic pilot is limited to 180 mph.
- (h) In lieu of installing the Wright R-1820 series engines, the P&W R-1830 series engines may be installed in accordance with Aircraft Specification A-669 including NOTE 13 of that specification. Since the Wright engine powered DC-3 aircraft covered by this specification incorporated engine mounts supported at five points on the firewall, while the P&W engine powered DC-3A as covered by Specification A-669 incorporated engine mounts supported at four points on the firewall, the following must be accomplished when installing the P&W R-1830 series engines on aircraft originally incorporating the Wright R-1820 series engines:
 - (1) If it is desired to retain or install the forged mount per Douglas Dwg. No. 5110599, suitable modifications must be made to the nacelle and firewall to withstand the loads imposed by the four-point suspension, or
 - (2) Install a new engine mount, supported at five points on the firewall, which is structurally adequate to withstand the loads resulting from the increased hp and weight of the power plant installation.

P&W R-2000-7M2 or -D5 engines may be installed in lieu of the R-1820 Series engines provided the above items are complied with and the installation is made in accordance with Item 101(d) of Aircraft Specification A-669.

- NOTE 13. The following aircraft models are also eligible for an airworthiness certificate under this specification.
- (a) DST-G102, DST G102A and DTS-G202A, serial numbers 1494 and up.
 - (b) DC3B-G102 and DC3B-G202A, serial nubmers 1922 and up.

.....END.....