FEDERAL AVIATION AGENCY

A-795 Revision 19 MARTIN 202 202A

February 27, 1963

AIRCRAFT SPECIFICATION NO.A-795

Manufacturer Martin-Marietta Corporation Baltimore 3, Maryland

I - Model 202, Approved September 3, 1947

Engines 2 P&W Double Wasp CA3, CA15 or CA18 (Item 101) Fuel Aviation Gasoline: Minimum grade 100/130 for all engines.

Engine limits (See Item 101)

Airspeed limits Vno (Normal Operating) Variable, see table below Vp (Maneuvering) 170 m.p.h. (148 knots) (T.I.A.S.) Vne (Never exceed) Variable, see table below Vf (Flaps down) 150 m.p.h. (130 knots) 190 m.p.h. (165 knots)

Vle (Landing Gear Extended) Vlo (Landing Gear Operation)

190 m.p.h. (165 knots) (Ext.) (Ret.) 180 m.p.h. (157 knots)

Maximum Weight						
(Zero fuel), lb.	35,000	35,500	35,700	35,900	36,000	36,200
Vne (Never exceed)						
(mph, knots)	292,254	292,254	292,254	284,247	278,242	269,234
Vno (Normal operating)						
(mph, knots)	255,222	250,218	247,215	245,213	240,209	228,198

C.G. range Takeoff and Landing (Gear Extended)

(435.0) to (460.8) Climb and Cruise

Gear Extended:

(433.0) to (460.8) Gear Retracted: (431.3) to (460.8)

Effect of Retracting Landing Gear -64,556 in.lb.

Maximum weight

(Eligible for takeoff weight in excess of 38,000 lbs. and landing weight in excess of 36,500 lb. only when landing gear equipment Items 202(a) and 206(a) or (c) are installed.)

(a) The following maximum weights are permitted when the 30° Approach and 45° Landing Flaps settings are used and the automatic propeller feathering system is operative.

Takeoff (Antidetonant Power) 39,900 lb. Takeoff (Dry Power) 39,100 lb. Landing (Antidetonant Power) 38,000 lb. Landing (Dry Power) 37,200 lb.

(b) The following maximum weights are permitted when the 18° Approach and 28° Landing Flap settings are used and the automatic propeller system is operative. See

NOTE 3 regarding required revisions for the flight manual. Takeoff (Antidetonant Power) 39,900 lb.

Takeoff (Dry Power) 39,900 lb. Landing (Antidetonant Power) 38,000 lb. Landing (Dry Power) 38,000 lb.

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I - Model 202 (cont'd)

(c) The following maximum weights are permitted when the automatic propeller feathering system is not utilized or is inoperative. See NOTE 8 regarding required

revisions for the Flight Manual.

Takeoff (Antidetonant Power)39,900 lb.Takeoff (Dry Power)36,150 lb.Landing (Antidetonant Power)38,000 lb.Landing (Dry Power)36,150 lb.

(d) The maximum zero fuel weights vary from 35,000 to 36,200 pounds. See "Airspeed Limits" for zero fuel weights and corresponding Vne and Vno speeds.

Minimum crew

2 - Pilot and Co-pilot (203)

Maximum passengers

40 (CAR 4b.432 prior to October 1, 1949)

Maximum baggage

		Maximum Capacity	
Compartment	Station	(Lb.)	Arm
Fwd. Cabin-R.H.	225-316	1150	270
Fwd. Cabin-R.H.	225-304	1000	268
Fwd. Cabin-R.H.	225-343	1500	285
Fwd. Cabin-L.H.	268-343	1000	306
Fwd. Cabin-L.H.	268-304	500	286
Aft-Cabin	676-753	800	715
Aft-Cabin	704-773	600	739
Aft-Cabin	753-832	1500	793
Fwd. Belly	325-385	300	355
Aft-Belly	580-637	400	608
Aft-Belly	580-697	950	638

Fuel Capacity 1010 gal. (458) (505 gal. in 4 interconnected wing fuel cells in right and in left wing)

(See NOTE 1(c) for "System Fuel"

Oil capacity 39.5 gal. (408) (One 19.75 gal. tank in each nacelle)

See NOTE 1(c) for "System Oil"

Serial Nos. eligible 9122 and up. For Serial No. 9123-A see NOTE 11.

Required equipment In addition to the pertinent required basic equipment specified in CAR 4b, the following

items of equipment must be installed:

Items 1, 2, 101, 102(a), 103, 104(a), 105, 106, 107, 201, 202, 205, 206. 301(a), 302, 303,

401, 403, 502.

II - Model 202A, Approved July 10, 1950

(Same as Model 202 except for reinforced fuselage and wing, increased fuel capacity, power plant and miscellaneous system changes)

Engines 2 P&W Double Wasp CB16 (Item 109)

Fuel Aviation Gasoline: Minimum grade 100/130

Engine limits (See Item 109)

Airspeed limits Vno (Normal Operating) Variable, see table below (T.I.A.S.) Vp (Maneuvering) 176 m.p.h. (153 knots) Vne (Never exceed) Variable, see table below

Vf (Flaps down) (12 1/2° Takeoff) 190 m.p.h. (165 knots)

(Landing) 150 m.p.h. (130 knots)

Vle (Landing Gear Extended) 190 m.p.h. (165 knots)

Vlo (Landing Gear Operation)

(Ext.) 190 m.p.h. (165 knots) (Ret.) 180 m.p.h. (157 knots)

II - Model 202A (cont'd)

Maximum Weight						
(Zero fuel), lb.	35,300	35,800	36,000	36,200	36,300	36,500
Vne (Never exceed)						
(mph, knots)	292,254	292,254	292,254	284,247	278,242	269,234
Vno (Normal operating)						
(mph, knots)	255,222	250,218	247,215	245,213	240,209	228,198

C.G. Range		Gear Position	Max Weight	C.G. Range
	Takeoff	Extended	43,000 lb.	(442.8) to (460.8

 Takeoff
 Extended
 43,000 lb.
 (442.8) to (460.8)

 Takeoff and Landing
 Extended
 41,000 lb.
 (438.6) to (460.8)

 Takeoff and Landing
 Extended
 34,500 lb.
 (435.0) to (460.8)

 Climb and Cruise
 Retracted
 43,000 lb.
 (431.3) to (460.8)

(Straight line C.G. variation with weights shown.)

Effect of retracting landing gear -72,700 in. lb.

Maximum weight Takeoff (Antidetonant Power) 43,000 lb.

Takeoff (Dry Power) 40,000 lb. Landing (Antidetonant Power) 41,000 lb. Landing (Dry Power) 40,000 lb.

Zero-Fuel Variable between 35,300 and 36,500 pounds.

See "Airspeed Limits" for zero fuel weights and corresponding Vne and Vno speeds.

Minimum crew 2 - Pilot and Co-pilot (203)

Maximum passengers 40 (CAR 4b.432 prior to October 1, 1949)

Maximum baggage Maximum
Capacity

		Capacity	
Compartment	Station	(Lb.)	Arm
Fwd. Cabin-R.H.	225-304	1000	268
Fwd. Cabin-L.H.	269-304	500	286
Aft Cabin 704-773	600	739	
Fwd. Belly	325-385	300	355
Aft. Belly580-697	950	638	

Fuel Capacity 1350 gal. (458) (675 gal. in 6 interconnected wing fuel cells in right and in left wing)

(See NOTE 1(c) for "System Fuel")

Oil capacity 49 gal. (408) (One 24.5 gal. tank in each nacelle.)

(See NOTE 1(c) for "System Oil".)

Serial Nos. eligible 14071 and up

Required equipment In addition to the pertinent required basic equipment specified in CAR 4b, the following

items of equipment must be installed:

Items 1, 2, 102(c), 103, 104(c), 105, 106, 107, 109, 201(b), 202, 205, 206, 301(c), 302,

303, 401(e), 403, 502.

Specifications Pertinent to All Models

Datum 100 inches forward nose of fuselage

Leveling means Longitudinal: Left side, fuselage stations 459 and 485, 3 inches below windows.

Lateral: Lower surface of wing rear spar

Control surface movements	Elevator trim tab	10°	Up	20°	Down
	Elevator (Flaps 0°)	30°	Up	16°	Down
	Aileron trim tab	12°	Up	12°	Down
	Aileron	30°	Up	15°	Down
	Rudder	25°	Left	25°	Right
	Rudder trim tab	17 1/2°	Left	17 1/2°	Right
	Flaps	45°	Down		

Certification basis Type Certificate No. 795 (CAR 4b)

Production basis Production Certificate No. 106.

High +95°, Feathered +93°,

revision required).

Equipment: A plus (+) or minus (-) sign preceding the weight of an item indicates net weight change

when that item is installed.

(This propeller not reversible). (See NOTE 9 regarding airplane flight manual

_	es and Propeller Accessories Cept Deicing Equipment)		Elio	ible on Moo	del
<u>,</u>			202 Basic <u>Nacelle</u>	202 Uptilted Nacelle	202A
1.	2 Propellers, controllable-Hamilton Standard hu (See NOTE 6 of Prop. No. P-853 for interchang (a) Deleted December 19, 1958 (b) Deleted April 17, 1950				
	(c) 2H17K3-48R; Diameter 157 in. (13'1")	Use act. wt. change	(304)	(301)	(301)
	(d) 2H17K3-50R; Diameter 155 in. (12'11")	Use act. wt. change	(304)	(301)	(301)
	(e) 2H17U3-48R or 2H17AA3-48R; Diameter 157 in. (13'1")	Use act. wt. change	(304)	(301)	(301)
	(f) 2H17U3-50R or 2H17AA3-50R; Diameter 155 in. (12'11")	Use act. wt. change	(304)	(301)	(301)
	(g) 2H17AC3-48R, Diameter 157 in. (13'1") Pitch settings at 72 in. Sta.: Low +13°, High +80°, Feathered +80°, Reverse -27°. (See NOTE 4 regarding airplane flight manual r	Use act. wt. change	(304)	(301)	(301)
2.	2 Propeller governors Hamilton Standard 4U18	18 lb.	(325)	(322)	(322)
3.	2 Propellers, controllable-Hamilton Standard hu	ibs 43E60 with 3 blades.	(===)	(===)	(==)
	(a) 6895A-12 1106 l Diameter: Max. 13' 1-5/16", min. allowabl Pitch settings at 42 in. Sta.: Low +30.5°, High +95°, Feathered +95°, Reverse -13°. (See NOTES 4 and 9 regarding airplane fli	b. e for repairs 12'9-5/8"	(304)	(301)	(301)
4.	2 Propellers, controllable-Hamilton Standard hu	•			
7.	(a) 6899A-12 1040 1 Diameter 158 in. (13'2") Pitch settings at 42 in. Sta.: Low +30.5°		(304)	(301)	

Engines and Engine Accessories - Fuel and Oil Systems

(Model 202 is eligible with 1 1/2 uptilted nacelle and engine installation. See NOTE 6 for details. Model 202A incorporates uptilted nacelle)

Eligible on Model
202 202 202A
Basic Uptilted
Nacelle Nacelle
(342) (339) --(342) (339) ---

101. (a) 2 P&W Double Wasp CA3 Engines with G.E. Ignition

Engine Limits	Alt.	H.P.	R.P.M.	Mp. In.Hg.
Low impeller gear ratio 7.29:1				_
Takeoff (dry) to (5 minutes)	S.L. to 3000	2100	2800	53.5
Takeoff (Antidetonant Injection)				
(5 minutes)	S.L.	2400	2800	56.5
Maximum continuous	S.L.	1800	2600	45.0
Maximum continuous	6500	1800	2600	44.0
(Straight line manifold pressure variation w	rith altitudes shown))		

When this item is installed, the flight manual Item 401 must be revised to reflect the installation and the applicable performance. This revision material must be supplied by the applicant.

(b) Two P&W Double Wasp CA15 Engines

+ 66 lb.

4654 lb.

+23.5 lb.

(342) (339)

Engine Limits	Alt.	H.P.	R.P.M.	Mp. In.Hg.
Low impeller gear ratio 7.29:1				
Takeoff (dry) to (5 minutes)	S.L. to 3000	2100	2800	53.5
Talracff (Antidatament Injection)				
Takeoff (Antidetonant Injection)				
(5 minutes)	S.L.	2400	2800	56.5
Maximum continuous	S.L.	1800	2600	45.0
Maximum continuous	6500	1800	2600	44.0
High impeller gear ratio 9.45:1				
Maximum continuous	10000	1600	2600	46.5
Maximum continuous	16200	1600	2600	45.0

(Straight line manifold pressure variation with altitudes shown)

When this item is installed, the flight manual Item 401(c) only is applicable.

			Eligib	le on Mod	ei	
			202	202	202A	
			Basic	Uptilted		
			Nacelle	Nacelle		
(c)	Two P&W Double Wasp CA18 Engines	No weight change	(342)	(339)		
	with G.E. Ignition	-10 lb.	(342)	(339)		

Engine Limits	Alt.	H.P.	R.P.M.	Mp. In.Hg.
Low impeller gear ratio 7.29:1				
Takeoff (dry) to (5 minutes)	S.L. to 3000	2100	2800	53.5
Takeoff (Antidetonant Injection)				
(5 minutes)	S.L.	2400	2800	56.5
Maximum continuous	S.L.	1800	2600	45.0
Maximum continuous	6500	1800	2600	44.0
High impeller gear ratio 9.1:1				
Maximum continuous	8000	1675	2600	49.0
Maximum continuous	13500	1675	2600	47.0

When this item is installed, the flight manual Item 401(b) and (d) only are applicable.

102. (a) 2 Starters (Jack and Heintz JH-6ER12)		53 lb. 55 lb. 55 lb. 27 lb. 68 lb. 64 lb. 69 lb.		Eligib 202 Basic Nacelle (383) (383) (397) (373) (373)	ole on Mode 202 Uptilted Nacelle (380) (380) (397) (370) (370)	202A
105. 2 Fuel Pumps, Engine Driven (Pesco 2P-771-A or -106. 2 Fuel Booster Pumps, Electrically Driven (Thompson TFD-27900-10 Type B5C) (Submerged in fuel tanks)	C)	9 lb. 14 lb.		(379) (478)	(376) (478)	(379) (478)
107. System fuel and oil (See NOTE 1(c) for definition)(a) System fuel(b) System oil		37 lb. 196 lb.		(450) (393)	(450) (393)	(450) (393)
108. Antidetonant system installation, including 15 gal. of fluid at 8 lb. per gallon (G.L.M. Dwg. No. 2021C12679) (See NOTE 2(d)(I) and 2(d)(II) for required placard (See NOTE 2(d)(III) for required placard - Model 2 (See NOTE 5 for required changes in Flight Manual	02A only)	-		(404)	(404)	(404)
(See NOTE 3 for required changes in Fight Manua.	- Wiodel 202	omy)				
	i - Wiodel 202	• ,				(340)
109. 2 P&W Double Wasp CB16 Engines		4704 lb.	R P M	 Mp. In	 Ha	(340)
109. 2 P&W Double Wasp CB16 Engines Engine Limits	Alt.	• ,	R.P.M.	Mp. In	 .Hg.	(340)
109. 2 P&W Double Wasp CB16 Engines Engine Limits Low impeller gear ratio 7.29:1	Alt.	4704 lb. H.P.				(340)
109. 2 P&W Double Wasp CB16 Engines Engine Limits Low impeller gear ratio 7.29:1 Takeoff (dry) (2 minutes)	Alt.	4704 lb. H.P. 2050	2700	55.	0	(340)
109. 2 P&W Double Wasp CB16 Engines Engine Limits Low impeller gear ratio 7.29:1 Takeoff (dry) (2 minutes) Critical Altitude	Alt.	4704 lb. H.P.			0	(340)
109. 2 P&W Double Wasp CB16 Engines Engine Limits Low impeller gear ratio 7.29:1 Takeoff (dry) (2 minutes) Critical Altitude Takeoff (Antidetonant Injection)	Alt. S.L. 6900	4704 lb. H.P. 2050 2050	2700 2700	55. 53.	0	(340)
109. 2 P&W Double Wasp CB16 Engines Engine Limits Low impeller gear ratio 7.29:1 Takeoff (dry) (2 minutes) Critical Altitude Takeoff (Antidetonant Injection) (2 minutes)	Alt. S.L. 6900 S.L.	4704 lb. H.P. 2050 2050 2400	2700 2700 2800	55. 53.	0 0 5	(340)
109. 2 P&W Double Wasp CB16 Engines Engine Limits Low impeller gear ratio 7.29:1 Takeoff (dry) (2 minutes) Critical Altitude Takeoff (Antidetonant Injection) (2 minutes) Critical Altitude	Alt. S.L. 6900 S.L. 5000	4704 lb. H.P. 2050 2050 2400 2400	2700 2700 2800 2800	55. 53. 59. 58.	0 0 5 5	(340)
109. 2 P&W Double Wasp CB16 Engines Engine Limits Low impeller gear ratio 7.29:1 Takeoff (dry) (2 minutes) Critical Altitude Takeoff (Antidetonant Injection) (2 minutes)	Alt. S.L. 6900 S.L.	4704 lb. H.P. 2050 2050 2400	2700 2700 2800	55. 53.	0 0 5 5 5	(340)
109. 2 P&W Double Wasp CB16 Engines Engine Limits Low impeller gear ratio 7.29:1 Takeoff (dry) (2 minutes) Critical Altitude Takeoff (Antidetonant Injection) (2 minutes) Critical Altitude Maximum continuous Maximum continuous	Alt. S.L. 6900 S.L. 5000 S.L.	4704 lb. H.P. 2050 2050 2400 2400 1800	2700 2700 2800 2800 2600	55. 53. 59. 58. 48.	0 0 5 5 5	(340)
109. 2 P&W Double Wasp CB16 Engines Engine Limits Low impeller gear ratio 7.29:1 Takeoff (dry) (2 minutes) Critical Altitude Takeoff (Antidetonant Injection) (2 minutes) Critical Altitude Maximum continuous	Alt. S.L. 6900 S.L. 5000 S.L.	4704 lb. H.P. 2050 2050 2400 2400 1800	2700 2700 2800 2800 2600	55. 53. 59. 58. 48.	0 0 5 5 5 5	(340)
109. 2 P&W Double Wasp CB16 Engines Engine Limits Low impeller gear ratio 7.29:1 Takeoff (dry) (2 minutes) Critical Altitude Takeoff (Antidetonant Injection) (2 minutes) Critical Altitude Maximum continuous Maximum continuous High impeller gear ratio 8.58:1	Alt. S.L. 6900 S.L. 5000 S.L. 9200	4704 lb. H.P. 2050 2050 2400 2400 1800 1800	2700 2700 2800 2800 2600 2600 2600	55. 53. 59. 58. 48. 46.	0 0 5 5 5 5 5	(340)
109. 2 P&W Double Wasp CB16 Engines Engine Limits Low impeller gear ratio 7.29:1 Takeoff (dry) (2 minutes) Critical Altitude Takeoff (Antidetonant Injection) (2 minutes) Critical Altitude Maximum continuous Maximum continuous High impeller gear ratio 8.58:1 Maximum continuous Maximum continuous Maximum continuous	Alt. S.L. 6900 S.L. 5000 S.L. 9200 10000 16800	4704 lb. H.P. 2050 2050 2400 2400 1800 1800 1700 1700	2700 2700 2800 2800 2600 2600	55. 53. 59. 58. 48. 46.	0 0 5 5 5 5 5	(340)
109. 2 P&W Double Wasp CB16 Engines Engine Limits Low impeller gear ratio 7.29:1 Takeoff (dry) (2 minutes) Critical Altitude Takeoff (Antidetonant Injection) (2 minutes) Critical Altitude Maximum continuous Maximum continuous High impeller gear ratio 8.58:1 Maximum continuous Maximum continuous (Straight line manifold pressure variation with	Alt. S.L. 6900 S.L. 5000 S.L. 9200 10000 16800 altitudes show	4704 lb. H.P. 2050 2050 2400 2400 1800 1800 1700 1700 vn)	2700 2700 2800 2800 2600 2600 2600	55. 53. 59. 58. 48. 46.	0 0 5 5 5 5 5	(340)
109. 2 P&W Double Wasp CB16 Engines Engine Limits Low impeller gear ratio 7.29:1 Takeoff (dry) (2 minutes) Critical Altitude Takeoff (Antidetonant Injection) (2 minutes) Critical Altitude Maximum continuous Maximum continuous High impeller gear ratio 8.58:1 Maximum continuous Maximum continuous (Straight line manifold pressure variation with When this item is installed, Flight Manual Item Landing Gear 201. 4 Main wheel-brake assemblies, 12.50-16, Type III,	Alt. S.L. 6900 S.L. 5000 S.L. 9200 10000 16800 altitudes show	4704 lb. H.P. 2050 2050 2400 2400 1800 1700 1700 vn) s applicable.	2700 2700 2800 2800 2600 2600 2600	55. 53. 59. 58. 48. 46. 48.	0 0 5 5 5 5 5 5 5	(340)
109. 2 P&W Double Wasp CB16 Engines Engine Limits Low impeller gear ratio 7.29:1 Takeoff (dry) (2 minutes) Critical Altitude Takeoff (Antidetonant Injection) (2 minutes) Critical Altitude Maximum continuous Maximum continuous High impeller gear ratio 8.58:1 Maximum continuous Maximum continuous (Straight line manifold pressure variation with When this item is installed, Flight Manual Item Landing Gear 201. 4 Main wheel-brake assemblies, 12.50-16, Type III, (a) Goodyear Model L12.50-16HBM, Wheel Asse	Alt. S.L. 6900 S.L. 5000 S.L. 9200 10000 16800 altitudes show	4704 lb. H.P. 2050 2050 2400 2400 1800 1800 1700 1700 vn)	2700 2700 2800 2800 2600 2600 2600	55. 53. 59. 58. 48. 46.	0 0 5 5 5 5 5	(340)
109. 2 P&W Double Wasp CB16 Engines Engine Limits Low impeller gear ratio 7.29:1 Takeoff (dry) (2 minutes) Critical Altitude Takeoff (Antidetonant Injection) (2 minutes) Critical Altitude Maximum continuous Maximum continuous High impeller gear ratio 8.58:1 Maximum continuous Maximum continuous (Straight line manifold pressure variation with When this item is installed, Flight Manual Item Landing Gear 201. 4 Main wheel-brake assemblies, 12.50-16, Type III, (a) Goodyear Model L12.50-16HBM, Wheel Asse No. 9530250, Brake Assembly No. 9540036 (b) Goodyear Model L12.50-16 HBMG, Wheel Asse No. 9540381, Brake Assembly No. 9540466	Alt. S.L. 6900 S.L. 5000 S.L. 9200 10000 16800 altitudes shown 401(e) only i	4704 lb. H.P. 2050 2050 2400 2400 1800 1700 1700 vn) s applicable.	2700 2700 2800 2800 2600 2600 2600	55. 53. 59. 58. 48. 46. 48.	0 0 5 5 5 5 5 5 5	(340)
109. 2 P&W Double Wasp CB16 Engines Engine Limits Low impeller gear ratio 7.29:1 Takeoff (dry) (2 minutes) Critical Altitude Takeoff (Antidetonant Injection) (2 minutes) Critical Altitude Maximum continuous Maximum continuous High impeller gear ratio 8.58:1 Maximum continuous Maximum continuous (Straight line manifold pressure variation with When this item is installed, Flight Manual Item Landing Gear 201. 4 Main wheel-brake assemblies, 12.50-16, Type III, (a) Goodyear Model L12.50-16HBM, Wheel Asse No. 9530250, Brake Assembly No. 9540036 (b) Goodyear Model L12.50-16 HBMG, Wheel Asse	Alt. S.L. 6900 S.L. 5000 S.L. 9200 10000 16800 altitudes shown 401(e) only i	4704 lb. H.P. 2050 2050 2400 2400 1800 1700 1700 vn) s applicable.	2700 2700 2800 2800 2600 2600 2600	55. 53. 59. 58. 48. 46. 48. 47.	0 0 5 5 5 5 5 5 5 5 5 5 7 7	

		_	Eligible on Model 202 202 202A		
		Basic	202 Uptilted	202A	
 205. 1 Nose wheel, 32 x 8.8, Type VIIB, Goodrich Model 6103M. Wheel assembly No. H-3-575-M 206. 1 Nose wheel tire with 32 x 8.8, Type VIIB regular tube: (either (a) or (c) below is required for take-off weights 	37 lb.	<u>Nacelle</u> (218)	Nacelle (218)	(218)	
over 38,000 lb. and landing weights over 36,500 lb.) (a) 32 x 8.8, Type VIIB, 10-ply rating (b) 32 x 8.8, Type VIIB, 8-ply rating (c) 9.50-16, Type III, 8-ply rating	43 lb. 40 lb. 47 lb.	(218) (218) (218)	(218) (218) (218)	(218) (218)	
	47 10.	(210)	(210)	(210)	
Electrical Equipment 301. (a) 2 Generators (Westinghouse TY-D30 or TY-DA30)	118 lb. 128 lb. 123 lb. 83 lb. 12 lb.	(383) (383) (413) (438)	(380) (380) (413) (438)	(377) (413) (438)	
Interior Equipment 401. One of the following FAA Approved Airplane Flight Manual 8. (The Manual may be carried as part of, or bound wi remain in the airplane and must retain its identity as an indibut only reflect the latest revision to the current manuals. (a) Basic Model 202 - Discontinued, not eligible (b) NW Model 202 - Rev. 20 dated 6/3/52 (c) LAN Model 202 - Rev. 10 dated 10/6/51 (d) LAV Model 202 - Rev. 9 dated 12/11/51 (e) Model 202A- Rev. 9 dated 5/15/54	th, the operator's "Approved	Operator's Man	ual", but <u>n</u>	<u>nust</u>	
 402. Automatic Pilot, Sperry A-12 (Servo Unit Model 656542-161(3)) (a) Servo stall forces measured at pilot's control: Elevator: Maximum 45 lb., Minimum 21 lb. Aileron: Maximum 38 lb., Minimum 20 lb. Rudder: Maximum 115 lb., Minimum 65 lb. (Approach Coupler not investigated therefore not eligible for installation.) (b) When using autopilot, minimum terrain clearance is 450 feet. (Minimum terrain clearance does not override any higher minimum operational altitudes.) (See NOTE 10 regarding Airplane Flight Manual revision in 	110 lb. required.)	(414)	(414)		
403. Windshield Wiper installation (Kearfott 2068-5, 2069-2, 2331-2)	5 lb.	(170)	(170)	(170)	
404. (a) Cabin Combustion Heater (Stewart Warner 921-B)	30 lb.	(256)	(256)		
(b) Cabin Combustion Heater (Surface Combustion S-200)	34 lb.			(257)	

		Eligible on Model		
		202 Basic	202 Uptilted	202A
		<u>Nacelle</u>	-	
405. Oxygen System Variable				
406. Auxiliary Vacuum System (GLM Dwg. No. 2021C23909)	21 lb.	(462)	(462)	
407. Name Plates - Flap Lever - Pilots Pedestal (GLM				
Dwgs. No. 2021C33729 and 2021C33699)	No wt. change			
Anti-Icing and Deicing Equipment				
501. 4 Wing Combustion Heaters (a) Stewart Warner 921-B	118 lb.	(462)	(462)	
(b) Surface Combustion S-200	135 lb.		(402)	(461)
				,
502. Carburetor Anti-icing system				
(GLM Dwg. No. 2021C11040)				
503. Propeller Electric Anti-Icing System	31 lb.	(380)	(377)	
504 G	2.11	(200)	(277)	
504. Generator Air Scoop Anti-Icing System (GLM Dwg. No. 2021C24106)	3 lb.	(380)	(377)	
(GEM D "g. 110. 2021-02-100)				
505. Alcohol Deicing System (15 gal. at 7 lb. per gallon				(434)
(GLM Dwg. No. 202A5051030)				

- (a) Propeller deicing equipment: Hamilton Standard boots Model 74467, length 52 in.
- (b) Carburetor
- (c) Windshield
- NOTE 1. (a) Current 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) Refer to Martin Engineering Reports "Actual Weight and Balance Model 202(A) (Airline)" and "Weight and Balance Loading Schedule Model 202(A) (Airline)" for interior arrangement, equipment list, weight and balance and loading schedule for any particular airplane.
 - (c) "System Fuel and Oil" is that amount required to fill both systems and the tanks up to the tank outlets to the engines, when the airplane is in the level attitude. "System Fuel and Oil" and all hydraulic fluid must be included in the certificated weight empty. (See Item 107 for fuel and oil quantities.)
 - (d) Fuel and Oil Tank capacities do not include any "System Fuel and Oil". Oil tank does include propeller feathering oil (2 gal.).
- NOTE 2. The following placards must be displayed on the instrument panel in full view of the pilot (except as noted in (c) below):
 - (a) "This airplane must be operated in compliance with operating limitations specified in F.A.A. approved airplane operating manual."
 - (b) Automatic Propeller Feathering:
 - I. "Lights ON for all take-off operation" (Model 202) or
 - II. "Lights ON for all take-off operations. When lights are off see Appendix A in flight manual" (Model 202)
 - III. "Switch and lights ON for all take-off conditions" (Model 202A)
 - (c) "Do not lower landing gear by emergency release above 130 m.p.h.". (Located inside emergency gear control access door)
 - (d) When Item 108 is installed the following placards must be included:
 - I. Two minute wet take-off power limit (Model 202 only)
 - "1. Water tank must be full before each take-off
 - 2. Do not exceed 53.5 inches M.P. unless flow lights are ON
 - Do not use water injection longer than 2 minutes on take-off, except for single engine emergency operation when 5 minutes may be used."

- NOTE 2. (d) II. One-minute wet take-off power limit (Model 202 only)
 - "1. Minimum water for take-off 8.5 gallons
 - 2. Maximum manifold pressure without flow lights on 53.5 inches.
 - 3. Time limit for wet take-off (except in emergency) 1 min."
 - III. Two-minute wet take-off power limit (Model 202A only):
 - "1. Minimum water for take-off 11.2 gallons.
 - 2. If flow lights do not come on discontinue WET take-off."

or

- "1. Minimum water for take-off 11.2 gallons.
- 2. If A.D.I. pressure falls below 20 psi discontinue WET take-off."
- (e) "Do not exceed 200 m.p.h. TIAS with either propeller feathered." (This placard not required if Martin Service Bulletin 55 has been complied with) (Model 202 only)
- (f) "Do not use nose wheel steering for take-off or landing." (This placard not required if Martin Service Bulletin 46 has been complied with) (Model 202 only)
- (g) Cabin Heater Fire: "Cabin heater switch must be OFF before firing Co₂ to heater compartment. Do not fire second shot until a minimum of 2 minutes have elapsed."
- (h) When reverse thrust propeller operation is provided the following placard must be installed: "Exercise caution in using reverse thrust on runways covered with dust, snow, or other matter which may reduce visibility".
- NOTE 3. When wing flap setting of 18° Approach and 28° Landing are used, Item 407 must be installed and the Airplane Flight Manual (Item 401) must contain revisions as follows:

Item 401(a) - Discontinued, not eligible

Item 401(b) - Revision No. 8 and/or 9

Item 401(c) - Revision No. 6

Item 401(d) - Revision No. 4

Item 401(e) - Not eligible

NOTE 4. When reversible thrust propeller operation is provided (see NOTE 2(h) for required placard) according to G.L.M. Service Bulletin 62, the Airplane Flight Manual must contain revisions as follows:

Item 401(a) - Discontinued, not eligible

Item 401(b) - Revision No. 12

Item 401(c) - Revision No. 6

Item 401(d) - Revision No. 6

Item 401(e) - (No revision required)

- NOTE 5. When Item 108 is installed in the Airplane Flight Manual (Item 401) must contain revisions as follows: (See NOTE 2(d) for required placard)
 - (a) Two-minute wet take-off power limit

Item 401(a) - Discontinued, not eligible

Item 401(b) - Revision Nos. 6A and 7

Item 401(c) - Revision No. 1

Item 401(d) - Not revised, therefore not eligible

Item 401(e) - Revision No. 6

- (b) One-minute wet take-off power limit
 - Item 401(a) Discontinued, not eligible
 - Item 401(b) Revision Nos. 6A, 7 and 11
 - Item 401(c) Not revised, therefore not eligible
 - Item 401(d) Not revised, therefore not eligible
 - Item 401(e) Not eligible, deleted by revision 6
- NOTE 6. Model 202 eligible for 1 1/2° uptilted nacelle and engine installation, in accordance with Martin Dwg. No. 2021C05036. With this installation, elevator tab compression spring, Martin Dwg. No. 2021C33678, must also be installed. All airplanes incorporating this installation must be identified by adding the letter "A" to the serial number (e.g. Serial Number 0000-A). (Model 202A incorporates uptilted nacelle and engine installation).

NOTE 7. Outer wing installations and outer wing flap assemblies eligible in any combination, including unsymmetrical combinations, in accordance with the following Martin drawings:

(Model 202 only)

Outer Wing Installation

2021C01201 Supplement No. 1 2021C01201 Supplement No. 2

Outer Flap Assembly

2021C13395 Supplement No. 1

2021C13395 Sheet 2

NOTE 8. Operation with the automatic propeller feathering system off or inoperative is permitted provided the Airplane Flight Manual (Item 401) contains the pertinent certification data identified as Appendix A incorporated by one of the following revisions (See NOTE 2(b) II for required placard):

Item 401(a) - Discontinued, not eligible

Item 401(b) - Revision No. 16

Item 401(c) - Not revised, therefore not eligible

Item 401(d) - Not revised, therefore not eligible

Item 401(e) - Not eligible

Model 202 aircraft certificated only with the automatic propeller feathering system operative (see Items 401(c) or 401(d), may be operated with the automatic propeller feathering system inoperative by Ferry Permit only. Item 401(a), (c) and (d) revisions dated 6/22/49 contain pertinent ferry permit limitations.

NOTE 9. When Item 3 or 4 is installed on the Model 202, the Airplane Flight Manual, Item 401, must be revised as follows:

Item 401(a) - Discontinued, not eligible

Item 401(b) - Not revised, therefore not eligible

Item 401(c) - Revision 9; Item 3 only eligible

Item 401(d) - Revision 9; Item 3 only eligible

Item 401(e) - No revision required for Item 3; Item 4 not eligible.

NOTE 10. When Item 402 is installed on the Model 202, the Airplane Flight Manual, Item 401, must be revised as follows:

Item 401(a) - Discontinued, not eligible

Item 401(b) - Revision 18

Item 401(c) - Revision 10

Item 401(d) - Revision 8

Item 401(e) - Not eligible

NOTE 11. For configuration, performance and FAA Approved Airplane Flight Manual for modified Serial No. 9123-A see Martin Report "Substantiation of Model 202 (9123-A)." This airplane is the same as the basic Model 202 except for CB-16 engines, fuselage length, flight control configuration, aileron boost, oleo drag strut landing gear and miscellaneous system and equipment changes.

.....END.....