

C.G. range	<u>See NOTE 1(b) for required loading and gear retraction moment.</u>					
	Condition	Weight lbs.	Landing gear	Fwd. sta.	Limit %MAC	Aft. sta.
Take-off	120,000*	Down	665.8*	21.0	685.2	32.0
	98,500*	Down	660.5*	18.0	685.2	32.0
Landing	98,500	Down	660.5	18.0	685.2	32.0
	98,500	Down	660.5	18.0	685.2	32.0
Cruising	120,000*	Up	661.5*	18.6	688.7	34.0
Flight	98,500*	Up	655.2*	15.0	688.7	34.0

* Straight line variation between these values.

Weight limits
(See NOTE 15 for limits when using low grade fuel)

Landing 98,500 lbs. See NOTE 8 for higher weight
Take-off 120,000 lbs. (Dump valves are required)
Maximum zero fuel weight 93,500 lbs. See NOTES 1(e) for fuel loading and 8 for higher weight.
3-engine ferrying 100,000 lbs. See FAA Approved Airplane Flight Manual for applicable restrictions.

Minimum crew
Passengers

3. Pilot and Copilot at +190 and Flight Engineer at +226.
Maximum 88 (CAR 4b.433). See Approved Weight and Balance Report for actual number and location.

Baggage

Maximum capacity of internal baggage and storage compartments:

	Vol. (cu. ft.)	Max. Floor loading psf	Cap. (lbs.)	Compt. C.G.
Fwd. cargo compartment, fwd. portion F.S. 333.6 to 482	72	70	1440	(+407.8)
Fwd. cargo compartment, aft portion F.S. 482 to 638	194	70	3880	(+560)
Aft cargo compartment, fwd. portion F.S. 750 to 932	230	70	4600	(+841)
Aft cargo compartment, aft portion F.S. 932 to 1139.8	160	70	3200	(+1036)
-67 interior				
Left hand fwd.			450	(+ 497)
Right hand fwd.			700	(+ 497)
Left hand aft			600	(+1150)
Wash water, -67 interiors			209	(+1075)
Galley water, -67 interiors			125	(+ 380)
<u>Galley installation and supplies, 67 interiors</u>		<u>45 (a)</u>		

(a) Galley areas between Stations 260 and 343.5 are structurally satisfactory for a uniformly distributed load over the entire area of 45 psf or a uniformly distributed load of 55 psf on each side of the 20 inch aisle. Galley installations and their contents shall not exceed these loadings. Fixed equipment such as galleys shall be listed on the Approved Equipment List together with pertinent weights and arms.

Fuel capacity

See NOTE 1(c) regarding "Usable fuel and System Oil."
Tanks 2 and 3 (inboard) (790 gal. ea.) 9,480 lbs. (+692)
Tanks 1 and 4 (middle) (1555 gal. ea.) 18,660 lbs. (+689)
Tanks 2a and 3a (outboard) (565 gal. ea.) 6,780 lbs. (+687)
Tank 5 (center section (730 gallons) 4,380 lbs. (+694) when installed)

Oil capacity

See NOTE 1(c) regarding "Unusable Fuel and System Oil."
(a) (2 inboard tanks (with aux. tank) and (58 gal. ea.) 870 lbs. (+584)
(2 outboard tanks (with aux. tank); or (58 gal. ea.) 870 lbs. (+603).
(b) (2 inboard tanks (without aux. tank) and (55 gal. ea.) 825 lbs. (+584)
(2 outboard tanks (without aux. tank) (55 gal. ea.) 825 lbs. (+603).

Serial Nos. eligible	1049/4001 through 1049/4024 (See Equipment Item 400)
Required equipment	In addition to the pertinent required basic equipment specified in CAR 4b, the following items of equipment must be installed: Items 1(a) or (c); 101(a) or (b); 103(a); 104(a); 105(a); 107(a) or (b); 200(a) or (b); 201(a); 202(a)(1), (2) or (3); 203(a) or (b); 204(a)(1), (a)(2) or (b)(1); 205(a) or (b); 206(a) or (b); 300(a); 301(a); 303(a) or (b); 400; 440; 441(a) or (b); 508(a).

III - Model 1049B-55 (Navy R7V-1), Approved October 28, 1953. (Same as Model 1049-54 except engines, design weights, and certain structural changes. This airplane is basically a cargo rather than passenger carrier) (See NOTE 5 for modifications necessary for civil conversion of R7V-1).

Engines	4 Wright Cyclones 972TC18DA1 with 16:7 reduction gear ratio and 6.52:1 Turbo drive ratio.	
Fuel	AN grade 115/145 (See NOTE 16 for engine limits when using low grade fuel)	
Engine limits	Low impeller ratio 6.46:1 Maximum continuous: (Sea level) 47.5 in.hg., 2600 rpm (2600 hp) (Straight line manifold pressure variation with altitude to 6500 ft.) 45.0 in. hg., 2600 rpm (2650 hp) Takeoff (2 minutes): (Sea level) 56.5 in.hg., 2900 rpm (3250 hp) (Straight line manifold pressure variation with altitude to 5000 ft.) 53.0 in.hg., 2900 rpm (3250 hp).	
	High impeller ratio 8.67:1 Maximum continuous: (9,550 ft.) 48.5 in.hg., 2600 rpm (2400 hp) (Straight line manifold pressure variation with altitude to 16,400 ft.) 47.0 in.hg., 2600 rpm (2450 hp).	
Airspeed limits	Vno (Normal Operation) (Above 12,500' reduce speed	300 mph (260 knots) True Ind. 11 mph (10 knots) for ea. additional 2000')
	Vne (Never Exceed) (Above 12,500' reduce speed	338 mph (293 knots) True Ind. 13 mph (11 knots) for ea. additional 2000')
	Va (Maneuvering)	218 mph (189 knots) True Ind.
	Vf (Takeoff position-60%)	220 mph (191 knots) True Ind.
	Vf (Approach position-66%)	200 mph (174 knots) True Ind.
	Vf (80%)	200 mph (174 knots) True Ind.
	Vf (Landing position-100%)	180 mph (156 knots) True Ind.
	Vlo (Landing Gear Operation)	190 mph (165 knots) True Ind.
	Vle (Landing Gear Extension)	190 mph (165 knots) True Ind.
	Mach No. - Never Exceed .56	

C.G. range

See NOTE 1(b) for required loading and gear retraction moment.

Condition	Weight lbs.	Landing gear	Fwd. sta.	Limit %MAC	Aft. sta.	Limit %Mac
Take-off	135,000*	Down	667.2*	21.0	685.2	32.0
	105,000*	Down	660.5*	18.0	685.2	32.0
	or less					
Landing	110,000*	Down	661.6	18.0	685.2	32.0
	105,000*	Down	660.5*	18.0	685.2	32.0
	or less					
Cruising	133,000*	Up	665.8*	21.0	688.7	34.0
Flight	90,000*	Up	655.2*	15.0	688.7	34.0
	or less					

* Straight line variation between these values.

Weight limits
(See NOTE 16 for limits when using low grade fuel)

Landing 110,000 lbs.
 Takeoff 133,000 lbs. # with auto-feathering (Dump valves are required.) See Equipment Item 1 (b), or (c) or (d) for takeoff weight with auto feathering inoperative.
 #130,000 lbs. for serial Nos. 4101 through 4139 unless modified in accordance with NOTE 6.
 Maximum zero fuel weight 105,000 lbs. See NOTE 1(e) for fuel loading.
 3-engine ferrying 100,000 lbs. See FAA Approved Airplane Flight Manual for applicable restrictions.

Minimum crew 3. Pilot and Co-pilot at +190 and Flight Engineer at +226.

Passengers All Serial Numbers originally certificated as cargo carriers. See NOTE 9 for conversion to passenger configuration.

Maximum cargo

<u>Compartment</u>	<u>Station</u>	<u>Maximum Cap. (lbs.)</u>	<u>Maximum Floor loading psf</u>	<u>Arm</u>
C (Main Cabin)	260-287	1000**	300	274
D (Main Cabin)	287-370	3900	300	329
E (Main Cabin)	370-444	6100	300	408
F (Main Cabin)	444-509	5400	300	477
G (Main Cabin)	509-583	6100	300	546
H (Main Cabin)	583-656	6100	300	620
I (Main Cabin)	656-732	6300	300	694
J (Main Cabin)	732-806	6100	300	769
K (Main Cabin)	806-879	6100	300	842
L (Main Cabin)	879-953	6100	300	916
M (Main Cabin)	953-1026	6100	300	989
N (Main Cabin)	1026-1158	7200	300	1089
O (Main Cabin)	1158-1258	2900	300	1198
Q (Lower Cargo Compt)	334-482	2800	70	402
R (Lower Cargo Compt)	482-638	5040	70	558
S (Lower Cargo Compt)	750-932	5950	70	821
T (Lower Cargo Compt)	932-1140	6370	70	1004

Maximum combined accumulated load of both cabin and lower cargo compartments from extremities of cabin toward main frames:

<u>Forebody</u>		<u>Afterbody</u>	
From Sta. 260 to		From Sta. 1258 forward to:	
Sta. 287	300 lbs.	Sta. 1158	2,900 lbs.
Sta. 370	3,900 lbs.	Sta. 1026	7,200 lbs.
Sta. 444	6,900 lbs.	Sta. 953	9,800 lbs.
Sta. 509	9,700 lbs.	Sta. 879	14,100 lbs.
Sta. 583	14,700 lbs.	Sta. 806	18,300 lbs.
Sta. 656	20,800 lbs.	Sta. 732	23,500 lbs.

** Including radio and galley equipment (700#) in compartment C.

All cargo loading must be secured with the tie-downs provided since there are no restraining or crash bulkhead provisions.

Fuel capacity

See NOTE 1(c) regarding "Unusable Fuel & System Oil."
 Tanks 2 and 3 (inboard) (790 gal. ea.) 9,480 lbs. (+692).
 Tanks 1 and 4 (middle) (1555 gal. ea.) 18,660 lbs. (+689)
 Tanks 2a and 3a (outboard) (565 gal. ea.) 6,780 lbs. (+687).
 Tank 5 (center section) (730 gallons) 4,380 lbs. (+694)

Oil capacity	See NOTE 1(c) regarding "Unusable Fuel & System Oil." 2 inboard tanks (40 gal. ea.) 600 lbs. (+634) 2 outboard tanks (40 gal. ea.) 600 lbs. (+636) 1 auxiliary cell (center section) (67 gallons) 502 lbs. (+674)
Serial Nos. eligible	1049B/4101 through 1049B/4111; 1049B/4122 through 1049B/4130; 1049B/4133 through 1049B/4150; 1049B/4152 through 1049B/4160; and 1049B/4167 through 1049B/4169.
Required equipment	In addition to the pertinent required basic equipment specified in CAR 4b, the following items of equipment must be installed: Items 1(b), (c) or (d); 101(c), (d), (e), (f), (g) or (h); 103(b) or (c); 104(b) or (c); 105(a); 107(b); 200(b); 201(a); 202(a)(2) or (3); 203(b); 204(a)(1), (a)(2) or (b)(1); 205(a) or (b); 206(a) or (b); 300(b); 301(a); 303(c) or (e); 400; 440; 441(e); 508(a).

IV - Model 1049C-55, Approved June 9, 1953, and Model 1049E-55, Approved May 26, 1954.

(Same as Model 1049-54 except engines, design weights, structural changes of wings, fuselage, nacelles and landing gear, and installation of sealed "Class D" lower cargo compartments. The Model 1049E-55 is the same as the Model 1049C-55 with miscellaneous structural revisions.)

Engines	4 Wright Compound 972TC18DA1 with 16:7 reduction gear ratio and 6.52:1 Turbo drive ratio. (Also eligible with 972TC18DA3, 988TC18EA3, and 988TC18EA6. See Item 111 for engine limits with these engines)
Fuel	AN grade 115/145 (See NOTE 16 for engine limits when using low grade fuel)
Engine limits	Low impeller ratio 6.46:1 Maximum continuous: (Sea level) 47.5 in.hg., 2600 rpm (2600 hp) (Straight line manifold pressure variation with altitude to 6500 ft.) 45.0 in. hg., 2600 rpm (2650 hp) Takeoff (2 minutes at sea level; 5 minutes at 7500 ft.; straight line variation of takeoff power time with altitude to 7500 ft.): (Sea level) 56.5 in.Hg., 2900 rpm (3250 hp) (Straight line manifold pressure variation with altitude to 5000 ft.) 53.0 in.Hg., 2900 rpm (3250 hp) High impeller ratio 8.67:1 Maximum continuous: (9550 ft.) 48.5 in.hg., 2600 rpm (2400 hp) (Straight line manifold pressure variation with altitude to 16,400 ft.) 47.0 in.hg., 2600 rpm (2450 hp).
Airspeed limits	Vno (Normal Operation) 300 mph (260 knots) True Ind. (Above 12,500' reduce speed 11 mph (10 knots) for each additional 2000') Vne (Never Exceed) 338 mph (293 knots) True Ind. (Above 12,500' reduce speed 13 mph (11 knots) for each additional 2000') Va (Maneuvering) 218 mph (189 knots) True Ind. Vf (Takeoff position-60%) 220 mph (191 knots) True Ind. Vf (Approach position-66%) 200 mph (174 knots) True Ind. Vf (80%) 200 mph (174 knots) True Ind. Vf (Landing position-100%) 180 mph (156 knots) True Ind. Vlo (Landing Gear Operation) 190 mph (165 knots) True Ind. Vle (Landing Gear Extension) 190 mph (165 knots) True Ind. Mach No. - Never Exceed .56

C.G. range

See NOTE 1(b) for required loading and gear retraction moment.

Condition	Weight lbs.	Landing gear	Fwd. Limit		Aft. Limit	
			sta.	%MAC	sta.	%Mac
Take-off	133,000*	Down	670.3*	23.5	685.2	32.0
	90,000*	Down	660.5*	18.0	685.2	32.0
Landing	110,000*	Down	664.9	20.5	685.2	32.0
	90,000*	Down	660.5*	18.0	685.2	32.0
Cruising Flight	133,000*	Up	665.8*	21.0	688.7	34.0
	90,000*	Up	655.2*	15.0	688.7	34.0

* Straight line variation between these values.

Weight limits
(See NOTE 16 for
limits when using
low grade fuel.)

Landing	110,000 lbs.	See NOTE 13 for higher landing weight.
Takeoff	133,000 lbs.	with autofeathering (Dump valves are required. See Equipment Item 1(b), (c), (d), (e) or (f) for takeoff weight with autofeathering inoperative, and NOTE 7 for takeoff weight when oil transfer system is not installed. See NOTE 12 for higher takeoff weight.
Maximum zero fuel weight 103,500 lbs. See NOTE 1(e) for fuel loading.		
3-engine ferrying 100,000 lbs. See FAA Approved Airplane Flight Manual for applicable restrictions.		

Minimum crew

3. Pilot and Co-pilot at +190 and Flight engineer at +226.

Passengers

Maximum 99 occupants (passengers plus crew) (CAR 4b.433 and SR 389 effective October 27, 1952.) See Approved Weight and Balance Report for actual number and location.

Baggage

Maximum capacity of internal baggage and storage compartments:

	Vol. (cu. ft.)	Max. Floor loading psf	Cap. (lbs.)	Compt. C.G.
(A) Fwd. cargo compartment, fwd. portion F.S. 334 to 482	77	70	1500	(+402)
(B) Fwd. cargo compartment, aft portion F.S. 482 to 638	194	70	3880	(+558)
(C) Aft cargo compartment, fwd. portion F.S. 750 to 932	230	70	4600	(+821)
(D) Aft cargo compartment, aft portion F.S. 932 to 1140	194	70	3880	(+1004)
Coat closet			200	(+1000)
Coat closets L. & R.			400	(+1165)
Wash water			500	(+ 980)

Galley areas between Stations 930 and 1014 and 10" from airplane centerline R.H. side is structurally satisfactory for a maximum total load of 2,300 pounds, with a maximum unit floor loading of 70 pounds per square foot.

Galley storage area between Stations 930 and 950 and 10" from airplane centerline L.H. side is structurally satisfactory for a maximum total load of 500 pounds with a maximum unit floor loading of 90 pounds per square foot.

Cabin Cargo Compartment A (optional) Fus. Sta. 260-339 R.H.	900 (+309)
Cabin Cargo Compartment B (optional) Fus. Sta. 339-467.5	5200* (+403)

*With lower cargo Compartment A empty. Maximum capacity must be decreased by the amount of any load carried in lower cargo Compartment A.

Fuel capacity	See NOTE 1(c) regarding "Usable fuel and System Oil." Tanks 2 and 3 (inboard) (790 gal. ea.) 9,480 lbs. (+692) Tanks 1 and 4 (middle) (1555 gal. ea.) 18,660 lbs. (+689) Tanks 2a and 3a (outboard) (565 gal. ea.) 6,780 lbs. (+687) Tank 5 (center section) (730 gal. ea.) 4,380 lbs. (+694)
Oil capacity	See NOTE 1(c) regarding "Unusable Fuel and System Oil." 2 inboard tanks (40 gal. ea.) 600 lbs. (+634) 2 outboard tanks (40 gal. ea.) 600 lbs. (+636). 1 auxiliary cell (center sect.) (67 gal. ea.) 502 lbs. (+674)
Serial Nos. eligible	1049C/4501 through 1049C/4548; 1049E/4549 through 1049E/4665, 1049E/4573, 1049E/4574; 1049E/4578 through 1049E/4581; 1049E/4606, 1049E/4607; 1049E/4613 through 1049E/4615.
Required equipment	In addition to the pertinent required basic equipment specified in CAR 4b, the following items of equipment must be installed: Items 1(b), (c), (d), (e) or (f); 101(c), (d), (e), (f), (g) or (h); 103(b) or (c); 104(b) or (c); 105(a); 107(b); 200(b); 201(a); 202(a)(2) or (3); 203(b); 204(a)(1), (a)(2) or (b)(1); 205(a) or (b); 206(a) or (b); 300(b); 301(a); 303(c) or (e); 400; 440; 441(c), (d) or (f); 508(a).

V - Model 1049D-55, Approved August 12, 1954. (Same as Model 1049B-55 except for passenger seat installation, additional emergency exits are installed, and the lower cargo compartments are Class D per CAR 4b-383(d).)

Engines	4 Wright Compound 972TC18DA1 with 16:7 reduction gear ratio and 6.52:1 Turbo drive ratio. (Also eligible with 972TC18DA3, 988TC18EA3 and 988TC18EA6. See Item 111 for engine limits with these engines)
Fuel	AN grade 115/145 (See NOTE 16 for engine limits when using low grade fuel)
Engine limits	Low impeller ratio 6.46:1 Maximum continuous: (Sea level) 47.5 in.hg., 2600 rpm (2600 hp) (Straight line manifold pressure variation with altitude to 6500 ft.) 45.0 in. hg., 2600 rpm (2650 hp) Takeoff (2 minutes at sea level; 5 minutes at 7500 ft.; straight line variation of takeoff power time with altitude to 7500 ft.): (Sea level) 56.5 in.hg., 2900 rpm (3250 hp) (Straight line manifold pressure variation with altitude to 5000 ft.) 53.0 in.hg., 2900 rpm (3250 hp). High impeller ratio 8.67:1 Maximum continuous: (9550 ft.) 48.5 in.hg., 2600 rpm (2400 hp) (Straight line manifold pressure variation with altitude to 16,400 ft.) 47.0 in.hg., 2600 rpm (2450 hp).
Airspeed limits	Vno (Normal Operation) 300 mph (260 knots) True Ind. (Above 12,500' reduce speed 11 mph (10 knots) for each additional 2000') Vne (Never Exceed) 338 mph (293 knots) True Ind. (Above 12,500' reduce speed 13 mph (11 knots) for each additional 2000') Va (Maneuvering) 218 mph (189 knots) True Ind. Vf (Takeoff position-60%) 220 mph (191 knots) True Ind. Vf (Approach position-66%) 200 mph (174 knots) True Ind. Vf (80%) 200 mph (174 knots) True Ind. Vf (Landing position-100%) 180 mph (156 knots) True Ind. Vlo (Landing Gear Operation) 190 mph (165 knots) True Ind. Vle (Landing Gear Extension) 190 mph (165 knots) True Ind. Mach No. - Never Exceed .56

C.G. range

See NOTE 1(b) for required loading and gear retraction moment.

(A) Passenger or Mixed Cargo-Passenger Loading

Condition	Weight lbs.	Landing gear	Fwd. Limit		Aft. Limit	
			sta.	%MAC	sta.	%Mac
Take-off	133,000*	Down	670.23*	23.5	685.2	32.0
	90,000* or less	Down	660.5*	18.0	685.2	32.0
Landing	110,000*	Down	661.6*	20.5	685.2	32.0
	105,000* or less	Down	660.5*	18.0	685.2	32.0
Cruising	133,000*	Up	665.8*	21.0	688.7	34.0
Flight	90,000* or less	Up	655.2*	15.0	688.7	34.0

*Straight line variation between these values.

(B) All Cargo Loading

Condition	Weight lbs.	Landing gear	Fwd. Limit		Aft. Limit	
			sta.	%MAC	sta.	%Mac
Take-off	133,000*	Down	670.23*	21.8	685.2	32.0
	105,000* or less	Down	660.5*	18.0	685.2	32.0
Landing	110,000*	Down	661.6*	18.6	685.2	32.0
	105,000* or less	Down	660.5*	18.0	685.2	32.0
Cruising	133,000*	Up	665.8*	21.0	688.7	34.0
Flight	90,000* or less	Up	655.2*	15.0	688.7	34.0

*Straight line variation between these values.

Weight limits
(See NOTE 11 for
higher weights;
NOTE 16 for weight
limits when using low
grade fuel; NOTE 19
for application of SR-411A)

Landing 110,000 lbs.
Takeoff 133,000 lbs. with autofeathering (Dump valves are required.
See Equipment Item 1(b), (c), (d), (e) or (f)
for takeoff weight with autofeathering inoperative,
and NOTE 7 for takeoff weight when oil transfer
system is not installed. Maximum zero fuel weight
105,000 lbs. See NOTE 1(e) for fuel loading.
3-engine ferrying 100,000 lbs. See FAA Approved Airplane Flight Manual for
applicable restrictions.

Minimum crew passengers

3. Pilot and Copilot at +190 and Flight Engineer at +226. Maximum 112 occupants
(passengers plus crew) (CAR 4b.433 and SR 389 effective October 27, 1952.)
See approved Weight and Balance Report for actual number and location.

Maximum cargo	<u>Compartment</u>	<u>Station</u>	Maximum	Maximum Floor	<u>Arm</u>
			<u>Cap. (lbs.)</u>	<u>loading psf</u>	
	A (Main Cabin)	260-339	2900	300	300
	B (Main Cabin)	339-444	7200	300	392
	C (Main Cabin)	444-509	5400	300	477
	D (Main Cabin)	509-583	6100	300	546
	E (Main Cabin)	583-656	6100	300	620
	F (Main Cabin)	656-732	6300	300	694
	G (Main Cabin)	732-806	6100	300	769
	H (Main Cabin)	806-879	6100	300	842
	I (Main Cabin)	879-953	6100	300	916
	J (Main Cabin)	953-1026	6100	300	989
	K (Main Cabin)	1026-1158	7700	300	1089
	L (Main Cabin)	1158-1258	3400	300	1198
	A (Lower Cargo Compt)	334-482	2800	70	402
	B (Lower Cargo Compt)	482-638	5040	70	558
	C (Lower Cargo Compt)	750-932	5950	70	821
	D (Lower Cargo Compt)	932-1140	6370	70	1004

Maximum combined accumulated load of both cabin and lower cargo compartments from extremities of cabin toward main frames:

<u>Forebody</u>		<u>Afterbody</u>	
From Sta. 260 to:		From Sta. 1258 forward to:	
Sta. 339	2,900 lbs.	Sta. 1158	3,400 lbs.
Sta. 444	7,200 lbs.	Sta. 1026	7,700 lbs.
Sta. 509	10,000 lbs.	Sta. 953	10,300 lbs.
Sta. 583	15,000 lbs.	Sta. 879	14,600 lbs.
Sta. 656	21,100 lbs.	Sta. 806	18,800 lbs.
		Sta. 732	24,000 lbs.

All cargo loading must be secured with the tie-downs provided since there are no restraining or crash bulkhead provisions.

Fuel capacity	See NOTE 1(c) regarding "Unusable Fuel & System Oil."
Tanks 2 and 3 (inboard)	(790 gal. ea.) 9,480 lbs. (+692).
Tanks 1 and 4 (middle)	(1555 gal. ea.) 18,660 lbs. (+689)
Tanks 2a and 3a (outboard)	(565 gal. ea.) 6,780 lbs. (+687).
Tank 5 (center section)	(730 gallons) 4,380 lbs. (+694)

Oil capacity	See NOTE 1(c) regarding "Unusable Fuel & System Oil."
2 inboard tanks	(40 gal. ea.) 600 lbs. (+634)
2 outboard tanks	(40 gal. ea.) 600 lbs. (+636)
1 auxiliary cell (center section)	(67 gallons) 502 lbs. (+674)

Serial Nos. eligible 1049D/4163 through 1049D/4166

Required equipment In addition to the pertinent required basic equipment specified in CAR 4b, the following items of equipment must be installed:
 Items 1(b), (c), (d), (e) or (f); 101(c), (d), (e), (f), (g) or (h); 103(b) or (c); 104(b) or (c); 105(a); 107(b); 200(b); 201(a); 202(a)(2) or (3); 203(b); 204(a)(1), (a)(2) or (b)(1); 205(a) or (b); 206(b); 300(b); 301(a); 303(c) or (e); 400; 440; 441(g); 508(a).

VI - Model 1049G-82, Approved January 14, 1955.

(Same as Model 1049C except engines, propellers, brakes, provisions for tip tanks and structural reinforcements.)

Engines 4 Wright Compound 972TC18DA3 with 16:7 reduction gear ratio and 6.52:1 turbo drive ratio. (Also elig. with 988TC18EA3 & 988TC18EA6. See Item 111 for engine limits with these engines.).

Fuel AN grade 115/145. (See NOTE 17 for engine limits when using low grade fuel)

Engine limits	<p>Low impeller ratio 6.46:1 Maximum continuous: (Sea level) 49.0 in.hg., 2600 rpm (2700 hp) (Straight line manifold pressure variation with altitude to 5800 ft.) 47.0 in. hg., 2600 rpm (2750 hp) Takeoff (2 minutes at sea level; 5 minutes at 7500 ft.; straight line variation of takeoff power time with altitude to 7500 ft.): (Sea level) 56.5 in.hg., 2900 rpm (3250 hp). (Straight line manifold pressure variation with altitude to 5500 ft.) 53.5 in.Hg., 2900 rpm (3250 hp) High impeller ratio 8.67:1 Maximum continuous: (10,050 ft.) 48.5 in.hg., 2600 rpm (2400 hp) (Straight line manifold pressure variation with altitude to 16,400 ft.) 47.0 in.hg., 2600 rpm (2450 hp).</p>																																																			
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Weight limits (See NOTE 17 for weights using low grade fuel)	<p>Landing 113,000 lbs. Takeoff 137,500 lbs. with autofeathering (Dump valves are required). See Equipment Item 1(b), (e) or (f) for takeoff weight with autofeathering autofeathering inoperative. Maximum zero fuel weight 103,500 lbs. (tip tanks off) 104,200 lbs. (tip tanks on) See NOTE 1(e) for fuel loading. 3-engine ferrying 100,000 lbs. See FAA Approved Airplane Flight Manual for applicable restrictions.</p>																																																			
Minimum crew	3. Pilot and Co-pilot at +190 and Flight Engineer at +226.																																																			
Passengers	Maximum 112, 104 or 96 occupants (passengers plus crew) with 11, 10 or 9 usable passenger exits, respectively. (CAR 4b.433 and SR 389 effective October 27, 1952.) See approved Weight and Balance Report for actual number and location.																																																			

Baggage	<u>Maximum capacity of internal baggage and storage compartments:</u>			
	Vol. (cu. ft.)	Max. Floor loading psf	Cap. (lbs.)	Compt. C.G.
(A) Fwd. cargo compartment, fwd. portion F.S. 334 to 482	75	70	1500	(+402)
(B) Fwd. cargo compartment, aft portion F.S. 482 to 638	194	70	3880	(+558)
(C) Aft cargo compartment, fwd. portion F.S. 750 to 932	230	70	4600	(+821)
(D) Aft cargo compartment, aft portion F.S. 932 to 1140	194	70	3880	(+1004)
Coat closet			200	(+1000)
Coat closets L. & R.			400	(+1165)
Wash water			500	(+ 980)

Galley areas between Stations 930 and 1014 and 10" from airplane centerline R.H. side is structurally satisfactory for a maximum total load of 2,300 pounds, with a maximum unit floor loading of 70 pounds per square foot.

Galley storage area between Stations 930 and 950 and 10" from airplane centerline L.H. side is structurally satisfactory for a maximum total load of 500 pounds with a maximum unit floor loading of 90 pounds per square foot.

Fuel capacity	See NOTE 1(c) regarding "Unusable Fuel & System Oil."		
	Tanks 2 and 3 (inboard)	(790 gal. ea.)	9480 lbs. (+692).
	Tanks 1 and 4 (middle)	(1555 gal. ea.)	18660 lbs. (+689)
	Tanks 2a and 3a (outboard)	(565 gal. ea.)	6780 lbs. (+687).
	Tank 5 (center section)	(730 gallons)	4380 lbs. (+694)
	Tanks 1a and 4a (wing tips)	(609 gal. ea.)	7308 lbs. (+688)
Oil capacity	See NOTE 1(c) regarding "Unusable Fuel and Oil System Oil."		
	2 inboard tanks	(42.5 gal. ea.)	638 lbs. (+634)
	2 outboard tanks	(42.5 gal. ea.)	638 lbs. (+636)
	1 auxiliary cell (center section)	(67 gallons)	502 lbs. (+674)
Serial Nos. eligible	1049G/4572, 1049G/4575 through 1049G/4577, 1049G/4582 through 1049G/4605; 1049G/4608 through 1049G/4612, 1049G/4616 through 1049G/4699.		
Required equipment	In addition to the pertinent required basic equipment specified in CAR 4b, the following items of equipment must be installed: Items 1(b), (e) or (f); 101(i), (j), (k), or (l); 103(b) or (c); 104(b), (c), or (d); 105(a); 107(b); 200(d); 201(a); 202(a)(3) or (a)(4); 203(b); 204(a)(1), (a)(2), (a)(3) or (b)(1); 205(a) or (b); 206(c); 300(b) or (c); 301(a); 303(c), (d) or (e); 400; 440; 441(h) or (i); 508(c) or (d).		

VII - Model 1049F-55 (USAF C121C), Approved October 10, 1955. (Same as Model 1049B-55 except 34 rectangular windows replace 17 round windows, Class D lower cargo compartments replace Class C compartments, Solar APU replaces AiResearch APU, and heater is added to nose radome. This airplane is basically a cargo rather than a passenger carrier). (See NOTE 5 for modifications necessary for civil conversion of C121C).

Engines	4 Wright Compound 972TC18DA1 with 16:7 reduction gear ratio and 6.52:1 Turbo drive ratio.
Fuel	Grade 115/145 (See NOTE 16 for engine limits when using low grade fuel)

Engine limits	<p>Low impeller ratio 6.46:1 Maximum continuous: (Sea level) 47.5 in.hg., 2600 rpm (2600 hp) (Straight line manifold pressure variation with altitude to 6500 ft.) 45.0 in. hg., 2600 rpm (2650 hp) Takeoff (2 minutes at sea level; 5 minutes at 7500 ft.; straight line variation of takeoff power time to 7500 ft.): (Sea level) 56.5 in.hg., 2900 rpm (3250 hp) (Straight line manifold pressure variation with altitude to 5000 ft.) 53.0 in.hg., 2900 rpm (3250 hp).</p> <p>High impeller ratio 8.67:1 Maximum continuous: (9550 ft.) 48.5 in.hg., 2600 rpm (2400 hp) (Straight line manifold pressure variation with altitude to 16,400 ft.) 47.0 in.hg., 2600 rpm (2450 hp).</p>																																																			
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Flight	90,000* or less	Up	665.2*	15.0	688.7	34.0																																														
Weight limits (See NOTE 16 for weights when using low grade fuel)	<p>Landing 110,000 lbs. Takeoff 133,000 lbs. with autofeathering (Dump valves are required.) See Equipment Item 1(b), (e) or (f) for takeoff weight with autofeathering inoperative. Maximum zero fuel weight 105,000 lbs. See NOTE 1(e) for fuel loading. 3-engine ferrying 100,000 lbs. See FAA Approved Airplane Flight Manual for applicable restrictions.</p>																																																			
Minimum crew	3. Pilot and Co-pilot at +190 and Flight Engineer at +226.																																																			
Passengers	All serial numbers originally certificated as cargo carriers. See Note 9 for conversion to passenger configuration.																																																			

Maximum cargo

<u>Compartment</u>	<u>Station</u>	<u>Maximum Cap. (lbs.)</u>	<u>Maximum Floor loading psf</u>	<u>Arm</u>
C (Main Cabin)	260-287	1000**	300	274
D (Main Cabin)	287-420	5900	300	355
E (Main Cabin)	420-509	7400	300	465
F (Main Cabin)	509-583	6100	300	546
G (Main Cabin)	583-656	6100	300	620
H (Main Cabin)	656-732	6300	300	694
I (Main Cabin)	732-806	6100	300	769
J (Main Cabin)	806-879	6100	300	842
K (Main Cabin)	879-953	6100	300	916
L (Main Cabin)	953-1026	6100	300	989
M (Main Cabin)	1026-1158	7200	300	1089
N (Main Cabin)	1158-1258	2900	300	1198
P (Lower Cargo Compt)	334-482	2800	70	402
Q (Lower Cargo Compt)	482-638	5040	70	558
R (Lower Cargo Compt)	750-932	5950	70	821
S (Lower Cargo Compt)	932-1140	6370	70	1004

Maximum combined accumulated load of both cabin and lower cargo compartments from extremities of cabin toward main frames:

<u>Forebody</u>		<u>Afterbody</u>	
From Sta. 260 to:		From Sta. 1258 forward to:	
Sta. 287	300 lbs.	Sta. 1158	2,900 lbs.
Sta. 420	5,900 lbs.	Sta. 1026	7,200 lbs.
Sta. 509	9,700 lbs.	Sta. 953	9,800 lbs.
Sta. 583	14,700 lbs.	Sta. 879	14,100 lbs.
Sta. 656	20,800 lbs.	Sta. 806	18,300 lbs.
		Sta. 732	23,500 lbs.

**Including radio and galley equipment (700#) in compartment C.

All cargo loading must be secured with the tie-downs provided since there are no restraining or crash bulkhead provisions.

Fuel capacity

See NOTE 1(c) regarding "Unusable Fuel & System Oil."
 Tanks 2 and 3 (inboard) (790 gal. ea.) 9,480 lbs. (+692)
 Tanks 1 and 4 (middle) (1555 gal. ea.) 18,660 lbs. (+689)
 Tanks 2a and 3a (outboard) (565 gal. ea.) 6,780 lbs. (+687)
 Tank 5 (center section) (730 gallons) 4,380 lbs. (+694)

Oil capacity

See NOTE 1(c) regarding "Unusable Fuel & System Oil."
 2 inboard tanks (42.5 gal. ea.) 638 lbs. (+634)
 2 outboard tanks (42.5 gal. ea.) 638 lbs. (+636)
 1 auxiliary cell (center section) (67 gallons) 502 lbs. (+674)

Serial Nos. eligible

1049F/4170 through 1049F/4202.

Required equipment

In addition to the pertinent required basic equipment specified in CAR 4b, the following items of equipment must be installed:

1(c); 101(d); 103(b) or (c); 104(b), (c) or (d); 105(a) and (b); 107(b); 200(b), (c) or (d); 201(a); 202(a)(2), (a)(3) or (a)(4); 203(b); 204(a)(1), (a)(2) or (b)(1); 205(a) or (b); 206(b) or (d); 300(b); 301(a); 303(d) or (e); 400; 440; 441(j); 508(a) or (b).

VIII - Model 1049H-82, Approved October 9, 1956.

(Same as Model 1049D/01-55, except for engines of higher power rating, higher takeoff weight; and other minor changes.)

Engines	4 Wright Compound 972TC18DA3 with 16:7 reduction gear ratio and 6.52:1 turbo drive ratio. (Also eligible with 988TC18EA3 and 988TC18EA6. See Item 111 for engine limits with these engines.)
Fuel	Grade 115/145. (See NOTE 17 for engine limits when using low grade fuel)
Engine limits	<p>Low impeller ratio 6.46:1 Maximum continuous: (Sea level) 49.0 in.hg., 2600 rpm (2700 hp) (Straight line manifold pressure variation with altitude to 5800 ft.) 47.0 in. hg., 2600 rpm (2750 hp) Take-off (2 minutes at sea level; 5 minutes at 7500 ft.; straight line variation of takeoff power time with altitude to 7500 ft.): (Sea level) 56.5 in.hg., 2900 rpm (3250 hp). (Straight line manifold pressure variation with altitude to 5500 ft.) 53.5 in.Hg., 2900 rpm (3250 hp)</p> <p>High impeller ratio 8.67:1 Maximum continuous: (10,050 ft.) 48.5 in.hg., 2600 rpm (2400 hp) (Straight line manifold pressure variation with altitude to 16,400 ft.) 47.0 in.hg., 2600 rpm (2450 hp).</p>

Airspeed limits	Vno (Normal Operation)	300 mph (261 knots) True Ind.
	(Above 12,500' reduce speed	11 mph (10 knots) for each additional 2000')
	Vne (Never Exceed)	338 mph (294 knots) True Ind.
	(Above 12,500' reduce speed	13 mph (11 knots) for each additional 2000')
	Va (Maneuvering)	222 mph (193 knots) True Ind.
	Vf (Takeoff position-60%)	224 mph (195 knots) True Ind.
	Vf (Approach position-66%)	200 mph (174 knots) True Ind.
	Vf (80%)	200 mph (174 knots) True Ind.
	Vf (Landing position-100%)	182 mph (158 knots) True Ind.
	Vlo (Landing Gear Operation)	190 mph (165 knots) True Ind.
Vle (Landing Gear Extension)	190 mph (165 knots) True Ind.	
	Mach No. - Never Exceed .56	

C.G. range

See Note 1(b) for required loading and gear retraction moment.(A) Passenger or Mixed Cargo-Passenger Loading

Condition	Weight lbs.	Landing gear	Fwd. Limit		Aft. Limit	
			sta.	%MAC	sta.	%Mac
Take-off	137,500*	Down	671.3*	24.1	685.2	32.0
	90,000* or less	Down	660.5*	18.0	685.2	32.0
Landing	113,000*	Down	665.8*	21.0	685.2	32.0
	90,000* or less	Down	660.5*	18.0	685.2	32.0
Cruising	137,500*	Up	667.0*	21.7	688.7	34.0
Flight	90,000* or less	Up	655.2*	15.0	688.7	34.0

(B) All Cargo Loading

Condition	Weight lbs.	Landing gear	Fwd. Limit		Aft.Limit	
			sta.	%MAC	sta.	%Mac
Take-off	137,500*	Down	668.4*	22.4	685.2	32.0
	105,000*	Down	660.5*	18.0	685.2	32.0
Landing	113,000*	Down	662.3*	19.0	685.2	32.0
	105,000*	Down	660.5*	18.0	685.2	32.0
Cruising Flight	137,000*	Up	667.0*	21.7	688.7	34.0
	90,000*	Up	655.2*	15.0	688.7	34.0

*Straight line variation between these values.

Weight limits
(See NOTE 17 for
limits when using
low grade fuel, and
Note 19 for
application of SR-411A)

Landing 113,000 lbs. See NOTE 14 for higher landing weight.
Takeoff 137,500 lbs. with autofeathering (Dump valves are required.
See Equipment Item 1(b), (e) or (f) for takeoff
weight with autofeathering inoperative, and
and NOTE 14 for for higher takeoff weight.
Maximum zero fuel weight 108,000 lbs. (tip tanks off)
104,200 lbs. *tip tanks on)
See NOTE 1(e) for fuel loading.
3-engine ferrying 100,000 lbs. See FAA Approved Airplane Flight Manual for
applicable restrictions.

Minimum crew passengers

3. Pilot and Copilot at +190 and Flight Engineer at +226.

Passengers

Maximum 112 occupants (passengers plus crew) (CAR 4b.433 and SR 389 effective
October 27, 1952.) See approved Weight and Balance Report for actual number and
location.

Maximum cargo

<u>Compartment</u>	<u>Station</u>	<u>Maximum Cap. (lbs.)</u>	<u>Maximum Floor loading psf</u>	<u>Arm</u>
A (Main Cabin)	260-339	2900	300	300
B (Main Cabin)	339-444	7200	300	392
C (Main Cabin)	444-509	5400	300	477
D (Main Cabin)	509-583	6100	300	546
E (Main Cabin)	583-656	6100	300	620
F (Main Cabin)	656-732	6300	300	694
G (Main Cabin)	732-806	6100	300	769
H (Main Cabin)	806-879	6100	300	842
I (Main Cabin)	879-953	6100	300	916
J (Main Cabin)	953-1026	6100	300	989
K (Main Cabin)	1026-1158	7700	300	1089
L (Main Cabin)	1158-1258	3400	300	1198
A (Lower Cargo Compt)	334-482	2800	70	402
B (Lower Cargo Compt)	482-638	5040	70	558
C (Lower Cargo Compt)	750-932	5950	70	821
D (Lower Cargo Compt)	932-1140	6370	70	1004

Maximum combined accumulated load of both cabin and lower cargo compartments
from extremities of cabin toward main frames:

<u>Forebody</u>		<u>Afterbody</u>	
From Sta. 260 to:		From Sta. 1258 forward to:	
Sta. 339	2,900 lbs.	Sta. 1158	3,400 lbs.
Sta. 444	7,200 lbs.	Sta. 1026	7,700 lbs.
Sta. 509	10,000 lbs.	Sta. 953	10,300 lbs.
Sta. 583	15,000 lbs.	Sta. 879	14,600 lbs.
Sta. 656	21,100 lbs.	Sta. 806	18,800 lbs.
		Sta. 732	24,000 lbs.

All cargo loading must be secured with the tie-downs provided since there are no
restraining or crash bulkhead provisions.

Fuel capacity	See NOTE 1(c) regarding "Unusable Fuel & System Oil." Tanks 2 and 3 (inboard) (790 gal. ea.) 9,480 lbs. (+692). Tanks 1 and 4 (middle) (1555 gal. ea.) 18,660 lbs. (+689). Tanks 2a and 3a (outboard) (565 gal. ea.) 6,780 lbs. (+687). Tank 5 (center section) (730 gallons) 4,380 lbs. (+694). Tanks 1a and 4a (wing tips) (609 gal. ea) 7,308 lbs. (+688).
Oil capacity	See NOTE 1(c) regarding "Unusable Fuel & System Oil." 2 inboard tanks (42.5 gal. ea.) 638 lbs. (+634) 2 outboard tanks (42.5 gal. ea.) 638 lbs. (+636) 1 auxiliary cell (center section) (67 gallons) 502 lbs. (+674)
Serial Nos. eligible	1049H/4801 through 1049H/4853
Required equipment	In addition to the pertinent required basic equipment specified in CAR 4b, the following items of equipment must be installed: Items 1(b), (e) or (f); 101(i), (j), (k), or (l); 103(b) or (c); 104(b), (c), or (d); 105(a); 107(b); 200(d); 201(a); 202(a)(3) or (a)(4); 203(b); 204(a)(1), (a)(2) (a)(3), or (b)(1); 205(a) or (b); 206(c); 300(b) or (c); 301(a); 303(c), (d) or (e); 400; 440; 441(g) or (k); 508(c) or (d).

SPECIFICATIONS PERTINENT TO ALL MODELS

Datum	730.2 in. forward of jig point. (Screwhead on bottom surface of wing 1.8 in. fwd. of center line of rearbeam and 3.5 in inboard of wing sta. 80).
MAC	176 inches. Leading edge of MAC Sta. 628.8.
Leveling means	Leveling plate under fuselage floor at ref. Sta. 657.
Control surface movements	Main surfaces (booster pressure on) - Elevator 40° up 20° down Aileron 25° up 10° down Rudder 30° right 30° left Tabs (main surfaces in neutral) - Elevator 22° up 22° down Aileron 12° up 12° down Rudder 25° right 25° left Flaps - 41° total angular travel.
Certification basis	Type Certificate No. 6A5 (CAR 4b - as amended to October 1, 1949.) All 1049 Series Models have been examined and found to comply with the Standards of Transport Category A of Annex 8 to the Convention on International Civil Aviation, entitled "Airworthiness of Aircraft," as amended to December 1949 with the following exception: 1. 2.4.4 Stalling, Symmetrical Power. Compliance with the ditching requirements of CAR 4b has been demonstrated. Maximum approved operational altitude 25,000 ft.
Production basis	Production Certificate No. 600.

Equipment: A plus (+) or minus (-) sign preceding the weight of an item of equipment 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 a FAA monitored or approved quality control system, and therefore conformity must be determined if the item is not identified by a Form FAA-186, PMA or other evidence of FAA production approval.

Propellers and Propeller Accessories (Except De-Icing Equipment)

- 1a. (1) 4 Propellers - Ham. Std. hubs 43E60, blades 6901-02 2281 lb. (+509)
(including slingers and shoes)
Diameter: Max. 15' 1-5/16", min. allowable for repairs 14' 9-3/16".
No further reduction permitted.
Pitch settings at 72 in. sta.: Low fwd. 12°, low reverse -21.5°, propeller
feathering setting must prevent engine windmilling (Approximately 81.5°) Propellers and

- | | | |
|--------|---|------------------|
| (2) | 4 Propeller spinners - Ham. Std. 76832 | 80 lbs. (+509) |
| (3) | 4 Feathering pumps - Pesco 1E-777-ML-1 (Mod.) | 58 lbs. (+604) |
| (4) | 4 Propeller governors Ham. Std. Type 5AA-22-8 or 5U18 (See NOTE 20) | 56 lbs. (+531) |
| (5) | 4 Master Synchronizer Generators Kollsman 1135GH-0120304 | 17 lbs. (+578) |
| (6) | 1 Propeller Synchronizing Control Box Ham. Std. Dwg. 322080 | 40 lbs. (+193) |
| b. (1) | 4 Propellers - Curtiss Electric hubs C634S-S, blades
858-5C4-0 (including slingers and shoes) with or without trailing edge extension.
(G & H Series Models equipped with this propeller must use trailing edge extension).
Diameter 15'0".
Pitch settings at 54 in. sta.: low fwd. 23.7° low reverse -11.8°,
propeller feathering pitch setting must prevent engine windmilling (approximately 91.2°).
Placard required in full view of flight engineer:
"Do not operate propellers in flight below 1500 engine rpm."
Max. takeoff wt. auto-feathering inoperative - 129,800 lbs. | 2586 lbs. (+509) |
| (2) | 4 spinners - Curtiss Type 145491 | 84 lbs. (+509) |
| (3) | 4 Alternators - Curtiss Type 124512 | 16 lbs. (+545) |
| (4) | 1 Synchronizer Master Unit - Curtiss Type 119778-20 | 40 lbs. (+195) |
| (5) | 2 Voltage boosters Curtiss Type 116285-231 | 40 lbs. (+252) |
| (6) | 1 Master Unit Filter Curtiss Type 112148-9 | 6 lbs. (+171) |
| (7) | 4 Nacelle Filters Curtiss Type 111872 | 10 lbs. (+590) |
| c. (1) | 4 Propellers - Ham. Std. hubs 43E60, blades 6903B-0
(including slingers and shoes)
Diameter: Max. 15' 1-1/16", min. allowable for repairs 14' 9-7/16".
No further reduction permitted.
Pitch settings at 72 in. sta.: Low fwd. 14°, low reverse -21.5°, propeller feathering
pitch setting must prevent engine windmilling (Approximately 80.5°).
Placard required in full view of flight engineer:
"Airplane shall be headed into the wind during static
run-up when engine speeds exceed 2600 rpm."
Max. takeoff wt. with auto-feathering inoperative - 131,500 lbs.,
or maximum weight with auto feathering operative whichever is less. | 2372 lbs. (+509) |
| (2) | 4 Propeller spinners - Ham. Std. 83772 | 84 lbs. (+509) |
| (3) | 4 Propeller Feathering Pumps
(a) Pesco 112577-021-01 | 92 lbs. (+617) |
| (4) | 4 Propeller Governors Ham. Std. Type 5AA-22-8 or 5U18 (See NOTE 20) | 56 lbs. (+532) |
| (5) | 4 Synchronizing Generators Kollsman Type 1492-0120304 | 17 lbs. (+579) |
| (6) | 1 Synchronizing Control Box Ham. Std. Dwg. 322080 | 40 lbs. (+193) |
| d. (1) | 4 Propellers - Curtiss electric hubs C634S-C500, blades
830-21C4-0 (including slingers and shoes)
Diameter 15'1".
Pitch settings at 54 in. sta.: low fwd. 22.3° low reverse
-16°, propeller feathering pitch setting must prevent engine
windmilling (approximately 90.5°).
Placard required in full view of flight engineer:
"Do not operate propellers in flight below 1500 engine rpm."
Max. takeoff wt. autofeathering inoperative - 129,800 lbs. | 2610 lbs. (+509) |
| (2) | 4 spinners - Curtiss Type 145491 | 84 lbs. (+509) |
| (3) | 4 Alternators - Curtiss Type 124512 | 16 lbs. (+545) |
| (4) | 1 Synchronizer Master Unit - Curtiss Type 119778-20 | 40 lbs. (+195) |
| (5) | 2 Voltage boosters - Curtiss Type 116285-231 | 40 lbs. (+252) |
| (6) | 1 Master Unit Filter - Curtiss Type 112148-9 | 6 lbs. (+171) |
| (7) | 4 Nacelle Filters - Curtiss Type 111872 | 10 lbs. (+590) |

- (e) (1) 4 Propellers - Ham. Std. hubs 43H60, blades 6959B-0 or blades 6967-0 (nickel plated) (including slingers and shoes) 2598 lbs. (+509)
 Diameter: Max. 15' 1-5/16", min. allowable for repairs 14' 9-3/16". No further reduction permitted.
 Pitch settings at 72 in. sta.: Low fwd. 14°, reverse -21.5°
 Propeller feathering pitch setting must prevent engine windmilling (approximately 80.5°)
 Max. takeoff wt. with autofeathering inoperative - 134,600 lbs. or maximum weight with autofeathering operative whichever is less.
- (2) 4 Propeller spinners - Hamilton Standard 97197 70 lbs. (+509)
 (3) 4 Feathering pumps - Hamilton Standard 112577-041 or 112577-021 92 lbs. (+617)
 (4) 4 Propeller Governors - Hamilton Standard 5AA-22-8 56 lbs. (+532)
 (5) 4 Synchronizing Generators - Kollsman 1492-0120304 or 1492B-0120304 17 lbs. (+579)
 (6) 1 Synchronizing Control Box - Hamilton Standard 322080 40 lbs. (+193)
- (f) (1) 4 Propellers - Curtiss electric (Dural)
 (a) Hubs C634D-A2, Blades 109652-12 (including blade heaters) 2988 lbs. (+509)
 (b) Hubs C634D-A4, Blades 109652-12 (including slingers & shoes) 2934 lbs. (+509)
 Diameter: 15'0", min. allowable for repairs 14' 8-3/8". No further reduction permitted.
 Pitch settings at 54 in. sta.: low fwd. 23°, reverse -10°
 Propeller feathering pitch setting must prevent engine windmilling (approximately 88.6°).
 Placard required in full view of flight engineer:
 "Do not operate propellers in flight below 1400 engine rpm."
 Max. takeoff wt. autofeathering inoperative - 130,700 lbs.
- (2) 4 Propeller Spinners - Curtiss type 152331 or 153121 158 lbs. (+509)
 (3) 4 Alternators - Curtiss type 124512 16 lbs. (+545)
 (4) 1 Synchronizer Master Unit - Curtiss type 152923 40 lbs. (+195)
 (5) 2 Voltage boosters - Curtiss type 116285 40 lbs. (+252)
 (6) 1 Master Unit Filter - Curtiss type 112148-9 6 lbs. (+171)

Engines and Engine Accessories - Fuel and Oil System

100. Fuel dump valves (See NOTE 3 regarding use of dump valves)

- (a) Parker types 8-3046-75 (Mod. 2) and 9-946-75 (Mod. 2)
 (b) Parker types 8-3046-75 M3 and 9-946-75 M3
 (c) Parker types 9-946-75-M3 and 1.319-54637M

101. Unusable fuel and system oil (See NOTE 1 for definition).

Airplane Model	Prop. Item Installed	Center Section Fuel Cells Installed	Center Section Aux. Oil Tank Installed	
(a) 1049-54	1(a)	No	n/a	876 lbs. (+633)
(b)	1(a)	Yes	n/a	945 lbs. (+633)
(c) 1049B-55,	1(b) or (d)	Yes	Yes	940 lbs. (+642)
(d) 1049C-55,	1(c)	Yes	Yes	1073 lbs. (+631)
(e) 1049D-55,	1(b) or (d)	No	No	860 lbs. (+638)
(f) 1049E-55,	1(c)	No	No	993 lbs. (+627)
(g) or	1(b) or (d)	Yes	No	929 lbs. (+638)
(h) 1049F-55	1(c)	Yes	No	1062 lbs. (+627)
(i) 1049G-82,	1(e)	Yes	Yes	1113 lbs. (+630)
(j) or	1(e)	No	No	1033 lbs. (+626)
(k) 1049H-82	1(f)	Yes	Yes	975 lbs. (+641)
(l)	1(f)	No	No	895 lbs. (+637)

102. Starters

- (a) Jack and Heintz Type JH6 ER - Model 1049-54 installation 105 lbs. (+585)
 (b) Eclipse Type 36E00-4 - Model 1049-54 installation 113 lbs. (+585)
 (c) Jack and Heintz Type JH6 ER - Models 1049B and 1049C 105 lbs. (+596)
 (d) Eclipse Type 36E00-4 - Models 1049-B and 1049-C 113 lbs. (+596)
 (e) AN 4116R6 - Model 1049B 113 lbs. (+596)
 (f) Jack and Heintz Type JH6CE 107 lbs. (+596)
 (g) Bendix Type 36E00-4B 121 lbs. (+596)

103. 4 Oil Coolers
- (a) AiResearch Type 86909-23 - Model 1049-54 185 lbs. (+586)
 - (b) AiResearch Type 87162-24 - Models 1049B and 1049C 210 lbs. (+585)
 - (c) AiResearch Type 87242-24 - Models 1049B and 1049C 210 lbs. (+585)
104. 4 Engine-driven fuel pumps
- (a) Thompson Type TF-2100 - Model 1049-54 17 lbs. (+571)
 - (b) Pesco Type 2P-771-CE-1 - Models 1049B and 1049C 17 lbs. (+583)
 - (c) AN4102-1 - Model 1049B 17 lbs. (+583)
 - (d) Thompson Type TF2100 17 lbs. (+583)
105. Auxiliary fuel pumps
- (a) 6 for tanks 1, 2, 3, 4, 2a, 3a
 - (1) Thompson TF-52300-1 48 lbs. (+712)
 - (b) 1 for tank No. 5 (center section) (See NOTE 7)
 - (1) Thompson Type TF-42300-1 8 lbs. (+692)
106. 4 De-icer or vacuum pumps
- (a) Pesco Type 3P-485 - Model 1049-54 installation 40 lbs. (+586)
 - (b) Pesco Type 3P-485 - Models 1049B and 1049C 40 lbs. (+592)
107. 4 Hydraulic pumps
- (a) Vickers Type AA20511 - Model 1049-54 installation 102 lbs. (+583)
 - (b) Vickers Type AA20510 - Models 1049B and 1049C 112 lbs. (+595)
 - (c) Vickers Type AA20513 112 lbs. (+595)
108. Auxiliary Oil pumps (See NOTE 7)
- (a) Pesco Type 012634-010 - hydraulic 12 lbs. (+642)
 - (b) Pesco Type 112127-010 - electric 40 lbs. (+650)
109. Tip tank installation, consisting of:
Two tip tank assemblies per LAC Drawing 316076 including Undrainable Fuel (29 lbs.) and Unusable Fuel (34 lbs.) 521 lbs. (+704)
NOTE: When operating without tip tanks, it is necessary to correct for the addition of wing tips as follows:
Two wing tips - removable (including deicer boots) 57 lbs. (+711)
110. Omitted.
111. Optional Engines
- (a) 4 Wright Compound 988TC18EA3 or 988TC18EA6 with 16:7 reduction gear ratio and 6.52:1 turbo drive ratio. (When these optional engines are installed, the dash number on the airplane model designation becomes -03 or -06 respectively) EA3: 14,580 lbs. (+554)
EA6: 14,700 lbs. (+554)
Engine limits: (With fuel grade 115/145) (See NOTE 17 for engine limits when using low grade fuel)
Low impeller ratio 6.46:1
Maximum continuous:
(Sea level) 51.0 in.Hg., 2650 rpm (2860 hp)
(Straight line manifold pressure variation with altitude to 4800 ft.)
49.5 in.Hg., 2650 rpm (2920 hp)
Takeoff (2 minutes at sea level; 5 minutes at 7500 ft.; straight line variation of takeoff power time with altitude to 7500 ft.)
(Sea level) 58.5 in.Hg., 2900 rpm (3400 hp)
(Straight line manifold pressure variation with altitude to 4000 ft.)
56.0 in.Hg., 2900 rpm (3400 hp)
High impeller ratio 8.67:1
Maximum continuous:
(10,000 ft.) 48.5 in.Hg., 2600 rpm (2410 hp)
(Straight line manifold pressure variation with altitude to 16,400 ft.)
47.0 in.Hg., 2600 rpm (2450 hp)
- NOTE: Installation to be in accordance with Lockheed Service Bulletin No. 2939. When Propeller Item 1(c) is used in conjunction with the above engines, the power of ratings of the Wright 972TC18DA1 engine must be used.

- (b) 4 Wright Compound 972TC18DA3 with 16:7 reduction gear ratio and 6.52:1 turbo drive ratio 14,200 lbs. (+554)
- Engine limits:
 Low impeller ratio 6.46:1
 Maximum continuous:
 (Sea level) 49.0 in.Hg., 2600 rpm (2700 hp)
 (Straight line manifold pressure variation with altitude to 5500 ft.)
 53.5 in.Hg., 2900 rpm (3250 hp)
 High impeller ratio 8.67:1
 Maximum continuous:
 (10,050 ft.) 48.5 in.Hg., 2600 rpm (2400 hp)
 (Straight line manifold pressure variation with altitude to 16,400 ft.)
 47.0 in.Hg., 2600 rpm (2450 hp)
- NOTE: Installation to be in accordance with Lockheed Service Bulletin No. 1049/SB-2514.

Landing Gear

200. 2 main gear shock struts
- (a) Cleveland Type 9040 - Model 1049-54 986 lbs. (+713)
 - (b) Cleveland Type 9106 - Models 1049B and 1049C 1040 lbs. (+713)
 - (c) Cleveland Type 9106A 1048 lbs. (+713)
 - (d) Cleveland Type 9291B 1048 lbs. (+713)
201. Nose gear shock strut
- (a) Cleveland Type 9054 480 lbs. (+195)
202. 4 main wheel-brake assemblies
- (a) 17.00-20, Type III
 - (1) Goodyear Model LF20DHBM Wheel Assembly No. 9540552 512 lbs. (+708)
 - * or Wheel Assembly No. 9540832 546 lbs. (+708)
 - Brake Assembly No. 9540528 (inboard) 408 lbs. (+708)
 - Brake Assembly No. 9540553 (outboard) 240 lbs. (+708)
 - * or Brake Assembly No. 9540781 (outboard) 240 lbs. (+708)
 - (2) Goodrich Model 1754M Wheel Assembly No. H-3-735M 812 lbs. (+708)
 - Brake Assembly No. G-2-597 (2 per wheel) 240 lbs. (+708)
 - (3) Goodyear
 - Wheel Assembly No. 9540753 554 lbs. (+708)
 - Brake Assembly No. 9540754 (outboard) 249 lbs. (+708)
 - Brake Assembly No. 9540755 (inboard) 457 lbs. (+708)
 - (4) Goodrich
 - Wheel Assembly No. H-3-772 884 lbs. (+708)
 - Brake Assembly No. G-2-639 (2 per wheel) 264 lbs. (+708)
203. 4 main wheel tires and tubes Type III
- (a) 17.00-20, 20-ply rating nylon
 (Use actual weight) Maximum, incl. air 884 lbs. (+708)
 - (b) 17.00-20, 22-ply rating nylon
 (Use actual weight) Maximum, incl. air 884 lbs. (+708)
204. 2 Nose wheel assemblies
- (a) 4x9.9, Type VII
 - (1) Goodrich Assembly No. H-3-592M-1 (no fairing) 68 lbs. (+184)
 - (2) Goodrich Assembly No. H-3-592M (with fairing) 74 lbs. (+184)
 - (3) Goodrich Assembly No. H-3-753 (no fairing) 73 lbs. (+184)
 - (b) 33", S.C., Type I
 - (1) Bendix Assembly No. 57608M 62 lbs. (+184)
205. 2 Nose wheel 10-ply rating nylon tires
- (a) 34x9.9, Type VII B (with regular tubes) Use actual weight (+184)
 - (b) 33", S.C., Type I (with regular tubes) Use actual weight (+184)
206. 2 Main gear drag strut dampers
- (a) L.A.C. Dwg. No. 307503 176 lbs. (+701)
 - (b) L.A.C. Dwg. No. 310618 180 lbs. (+701)
 - (c) L.A.C. Dwg. No. 469080 185 lbs. (+701)

Electrical Equipment

300. Generators		
(a) 4 D.C. Eclipse Type 30E02 - Model 1049-54 installation		254 lbs. (+584)
(b) 4 D.C. Eclipse Type 30E02 - Model 1049B and 1049C		254 lbs. (+597)
(c) 6 D.C. Eclipse Type 30E02-(9)		381 lbs. (+594)
301. Batteries		
(a) 2 24 Volt, 36 A.H.		152 lbs. (+283)
303. Alternators		
(a) 2 Pioneer Type 1631-7		19 lbs. (+588)
(b) 2 Pioneer Type 1632-1		12 lbs. (+588)
(c) 2 Eclipse Type 28E04		21 lbs. (+601)
(d) 2 Eclipse Type 28E04		21 lbs. (+582)
(e) Inverter (Bendix Model K-2496)		13 lbs. (+130)

Interior Equipment

400. FAA Approved Airplane Flight Manual. (A manual containing information required for the Airplane Flight Manual may be carried in lieu thereof in aircraft operated under the provisions of Parts 40, 41 and 42 of the Civil Air Regulations.) The following table identifies the airplane flight manuals and revisions thereto currently approved for each airplane:

Model	Serial Number	Lockheed Report Number	Date of Latest Revision	For Aircraft with Item:
1049-54	4001 thru 4024	7787	4-14-58	
1049B-55	4101 thru 4111 4122 thru 4130 4133 thru 4150 4152 thru 4160 4167 thru 4169	(All of these serial numbered aircraft delivered as Model R7V-1 or C121C. Approved Manuals must be provided at time of conversion to Model 1049B-55 or 1049F-55 per NOTE 5(d).)		
1049F-55	4170 thru 4202			
1049C-55	4503, 4504, 4506	9153	6-27-58	1(b) or 1(d)
1049E-55	4507, 4509 thru	9154	5-29-58	1(c)
1049E/01-55	4552, 4554 thru			
1049E/02-55	4557, 4561 thru 4565, 4573, 4574 4578 thru 4581, 4606, 4607, 4613 thru 4615			
1049G-82	4572, 4575 thru 4577	10051 (with Log of Pages i)	10-1-58	1(f)
	4553, 4558, 4559, 4560, 4629, 4630, 4631, 4635	10051 (with Log of Pages Ai)		
	4641, 4643	10051 (with Log of Pages Bi)		
	4682, 4683	10051 (with Log of Pages Ci)		
	4679, 4680	10051 (with Log of Pages Di)		
1049C-55 Modified to	4501, 4502, 4505, 4508	10051 (with Log of Pages Ei)		
1049G/02-82				
1049G-82	4582 thru 4601, 4648 thru 4652, 4654, 4656, 4658	10052 (with Log of Pages i)	10-1-58	1(e)
	4602 thru 4605, 4637, 4640, 4642, 4647	10052 (with Log of Pages Ai)		
	4610 thru 4612	10052 (with Log of Pages Bi)		
	4620 thru 4627, 4668 thru 4671, 4634, 4639	10052 (with Log of Pages Ci)		

Model	Serial Number	Lockheed Report Number	Date of Latest Revision	For Aircraft with Item:
	4616 thru 4618	10052 (with <u>Log of Page Di</u>)		
	4628, 4646, 4666, 4667, 4686, 4687	10052 (with <u>Log of Pages Ei</u>)		
	4619	10052 (with <u>Log of Pages Fi</u>)		
	4636, 4674	10052 (with <u>Log of Pages Gi</u>)		
	4644, 4645	10052 (with <u>Log of Pages Hi</u>)		
	4653, 4655, 4657, 4659 thru 4665	10052 (with <u>Log of Pages Ji</u>)		
	4673, 4676	10052 (with <u>Log of Pages Ki</u>)		
	4672, 4677, 4678	10052 (with <u>Log of Pages Li</u>)		
	4681, 4684, 4685	10052 (with <u>Log of Pages Mi</u>)		
	4632, 4633, 4675	10052 (with <u>Log of Pages Ni</u>)		
1049D/01-82	4165, 4166	11020 (with <u>Log of Page i</u>)	1-12-59	1(b)
1049H	4801, 4803	11020 (with <u>Log of Pages Ai</u>)	10-1-58	1(f)
	4802, 4805 thru 4808	11020 (with <u>Log of Pages Bi</u>)	1-12-59	1(b)
	4828, 4829, 4831, 4832	11020 (with <u>Log of Pages Fi</u>)	10-1-58	1(c) or 1(e)
1049H/01-03 or 1049H/01-03 Modified to 1049H/02-03 1049H/05-03 1049H/06-03	4839, 4842, 4844, 4845	11020 (with <u>Log of Pages Ci</u>)	10-23-58	
	4804, 4809 thru 4812, 4814, 4815, 4816,	11020 (with <u>Log of Pages Di</u>)		
	4819, 4822, 4827, 4852, 4853			
	4813, 4817, 4818, 4820, 4821, 4823 thru 4826	11020 (with <u>Log of Pages Ei</u>)		
	4830	11020 (with <u>Log of Pages Gi</u>)		
	4833, 4834, 4837, 4838	11020 (with <u>Log of Pages Hi</u>)		
	4835, 4836	11020 (with <u>Log of Pages Ji</u>)		1(f)
	4840, 4841, 4843	11020 (with <u>Log of Pages Li</u>)		1(c) or 1(e)
	4846, 4847	11020 (with <u>Log of Pages Mi</u>)		
1049D/01-82 Modified to 1049H/03-82	4163, 4164	11020 (with <u>Log of Pages Ki</u>)	1-12-59	1(b)
1049H/02-03 Modified to 1049H/07-03	4850, 4851	11020 (with <u>Log of Pages Ni</u>)	1-12-59	

401. Surface Control Equipment

(a) Automatic pilot

(1) Pioneer PB-10 (3 servos 15601-1A, 1 servo 15620-2A) 141 lbs. (+700)

NOTE: The following information may be used with Model 1049 only.

When using automatic pilot in cruise configurations, minimum terrain clearance is 500 ft. When using automatic pilot during approach, minimum altitude is 200 ft., pilot's seat belt fastened and hand on control wheel. (Minimum altitude for each case does not overrule any higher minimum operational altitude.) (Maximum speed for autopilot is 338 MPH)

Servo stall forces measured at the pilot's controls:

Elevator	30 lbs.	+0 lbs.	-10 lbs.
Aileron	30 lbs.	+0 lbs.	-10 lbs.
Rudder	95 lbs.	+0 lbs.	-30 lbs.

(These forces have not been demonstrated for Flight Path Control)

(2) Pioneer PB-10 (3 servos 15601-1A or 15613-1, 1 servo 15620-2A.) 141 lbs. (+700)

Maximum speed for operation with autopilot is 338 MPH (294 knots.)

(See FAA Approved Airplane Flight Manual for altitude loss during autopilot malfunction.)

Component	Servo Stall Forces Measured at Pilot's Controls	Torques Measured at Servos with Control Cable Disconnected
Elevator	40 lbs. +0 lbs., -14 lbs.	310 in. lbs. \pm 10%
Aileron	19 lbs. +0 lbs., - 6 lbs.	225 in. lbs. \pm 10%
Rudder	80 lbs. +0 lbs., -30 lbs.	400 in. lbs. + 10%

(These forces are satisfactory for Flight Path Control)

*(3) Lear L-5 in accordance with Lear Dwg. 700062 (3 main servos 118AP, elevator and rudder trim service 2216A). 183 lbs. (+687)

Maximum speed for operation with autopilot is 325 mph.

(See FAA approved Lear Airplane Flight Manual Supplement for altitude loss during autopilot malfunction).

Servo torques measured in in. lbs. at the servos:

Rudder	280 max.	225 min.
Aileron	175 max.	140 min.
Elevator	182 max.	154 min.

(These torques are satisfactory for automatic approach)

(b) Elevator boost unit - P/N 308575 or 322645 108 lbs. (+1420)

(c) Rudder boost unit - P/N 308576 or 322646 105 lbs. (+1417)

(d) 2 Aileron boost units P/N 289283-602 71 lbs. (+734)

420. 2 cabin superchargers

(a) AiResearch Type 56930 (with snood) 187 lbs. (+634)

(b) Airesearch Type 57910193 lbs. (+634)

(c) AiResearch Type 57910B 202 lbs. (+642)

(d) Airesearch Type 57970

421. 2 Supercharger drive shaft and disconnect assemblies

(a) LAC 31145 shaft assembly and guard installation per LAC Dwg. No. 308479 109 lbs. (+613)

(b) LAC 311442 shaft assembly and guard installation per LAC Dwg. No. 311441 100 lbs. (+617)

(c) LAC 315908 shaft assembly and guard installation per LAC Dwg. No. 315904 82 lbs. (+620)

(d) LAC 329552 shaft assembly and guard installation per LAC Dwg. No. 315904 82 lbs. (+620)

(e) L.A.C. 469864 shaft assembly and guard installation per LAC Dwg. No. 470286. 82 lbs. (+620)

(f) L.A.C. 470093 shaft assembly and guard installation per LAC Dwg. No. 470286. 82 lbs. (+620)

	(g) AiResearch 205400 shaft and guard installation per LAC Dwg. No. RR1393	80 lbs. (+620)
422.	2 Cabin heaters	
	(a) Surface combustion Type A77A63	42 lbs. (+800)
423.	2 Recirculating fans	
	(a) Dynamic Air Type 8862B-8B	74 lbs. (+800)
	(b) Joy Type X702-164	70 lbs. (+800)
424.	Cabin refrigeration installation	
	(a) 2 Cooling units, AiResearch Type 56910-1 and 2	47 lbs. (+744)
	(b) 2 Heat exchange cooling blowers, AiResearch Type 30980	45 lbs. (+759)
	(c) 2 Primary heat exchangers, AiResearch Type 19658	70 lbs. (+740)
	(d) 2 Secondary heat exchangers, AiResearch Type 81118	82 lbs. (+747)
	(e) 2 Water separators, AiResearch Type 81148-3 and -4	39 lbs. (+730)
440.	Emergency ladder or emergency chute See Approved Master Equipment List for approved locations, types, weights and arms for various configurations.	
441.	Fixed Oxygen system	
	(a) Model 1049-54 installed in accordance with LAC Dwg. No. 309287, including:	
	(1) One Kidde Type 870324 cylinder	27 lbs. (+26)
	(2) 3 Masks (full face or oval-nasal with goggles)	Negligible
	(b) Model 1049-54 installed in accordance with LAC Dwg. No. 311142, including:	
	(1) 3 Kidde Type 870326 cylinders LAC Dwg. No. 654112	177 lbs. (+254)
	(2) 3 Masks, TWA 1-45981-1	Negligible
	(c) Model 1049C-55-81 installed in accordance with LAC Dwg. No. 313262, including:	
	(1) 2 Kidde Type 870275 cylinders LAC Dwg. No. 654092	68 lbs. (+218)
	(d) Model 1049C-55-81 installed in accordance with LAC Dwg. No. 318611, including:	
	(1) One Kidde Type 870326 cylinder LAC Dwg. No. 654112	63 lbs. (+218)
	(e) Model 1049B-55-75 installed in accordance with LAC Dwg. No. 311168, including:	
	(1) 3 Kidde Type 870557 cylinders LAC Dwg. No. 654114	69 lbs. (+224)
	(f) Model 1049C-55-94 installed in accordance with LAC Dwg. No. 321501, including:	
	(1) One Kidde Type 870 cylinder (LAC Dwg. NO. 654092)	34 lbs. (+231)
	(g) Model 1049D-55-85 installed in accordance with LAC Dwg. No. 322662, including:	
	(1) 1 Kidde Type 870275	
	(h) Model 1049G-82-101 installed in accordance with LAC Dwg. No. 465081 including:	
	(1) 2 Kidde Type 870326 cylinders LAC Dwg. No. 654112	125 lbs. (+215)
	(i) Model 1049G-82-102 installed in accordance with LAC Dwg. No. 328201 including:	
	(1) 2 Kidde Type 870275 cylinders LAC Dwg. No. 654092	68 lbs. (+218)
	(j) Model 1049F-55-96 installed in accordance with LAC Dwg. No. 315939, including:	
	(1) Three Kidde Type 870275 cylinders (LAC Dwg. No. 654114)	69 lbs. (+224)
	(k) Model 1049H-82-133 installed in accordance with LAC Dwg. No. 496938, including:	
	(1) Two Kidde Type 870275 cylinders LAC Dwg. No. 654092	64 lbs. (+219)

De-icing Equipment

500.	Wing de-icer boots	
	(a) Goodrich Type 21 Pneumatic	150 lbs. (+642)
	(b) Goodrich Type 22 Pneumatic	165 lbs. (+640)
501.	Stabilizer de-icer boots	
	(a) Goodrich Type 21 Pneumatic	68 lbs. (+1345)
	(b) Goodrich Type 22 Pneumatic	76 lbs. (+1345)
502.	Fin de-icer boots	
	(a) Goodrich Type 21 Pneumatic	39 lbs. (+1365)

508. Windshield wipers

- | | |
|--|----------------|
| (a) 1 Dual Marquette (electric) installed in accordance with LAC Dwg. No. 309368 | 17 lbs. (+189) |
| (b) 1 Dual Marquette installed in accordance with LAC Drawing No. 325296 | 18 lbs. (+189) |
| (c) 1 Dual Alco installed in accordance with LAC Dwg. No. 326072 | 13 lbs. (+183) |
| (d) 2 wipers Alco installed in accordance with LAC Dwg. No. 327329 | 11 lbs. (+163) |

- NOTE 1. (a) Current weight and balance report including list of equipment included in certificated weight empty, and loading instructions, 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). See approved Master Equipment List (LAC Report 8097) for list of approved items of equipment in addition to those items listed in this specification.
- (b) The airplane must be loaded so that the C.G. is within the specified limits at all times, with the effects of fuel use, gear retraction, and movement of crew and passengers from their assigned positions being considered (retraction of the main and nose gears causes the C.G. to move forward, a value of 186,000 in. lbs. is a satisfactory approximation of the change in moment for all approved wheel items). At takeoff, the airplane shall be loaded so that, due to fuel use, the C.G. cannot move forward of 18% MAC. A 34% aft C.G. limit (gear retracted) for cruising flight may be used when the effect of passenger and crew movements from their assigned positions has been taken into account.
- (c) "Unusable Fuel and System Oil" and all hydraulic fluid must be included in the certificated weight empty. (See Item 101)
- Unusable fuel is that quantity of fuel in the system and in the tanks which is unavailable to the engines under critical flight conditions as defined in CAR 4b.494. Thus unusable fuel, includes "system fuel" which is defined as the quantity required to fill the system and tanks to the tank outlet level when the airplane is in the ground level attitude. The fuel gages are calibrated with the unusable fuel level as the zero datum. The total amount of fuel (Unusable included in Item 101) is as follows:

Model	Center Section Fuel Cells Installed	Usable Fuel (lbs.)	Unusable Fuel (lbs.)			
1049-54	Yes	39,300	491			
	No	34,920	422			
1049B-55**	Yes	39,300*	457			
or 1049C-55**						
or 1049D-55**				No	34,920*	388
or 1049E-55**						
or 1049F-55**						
or 1049G-82**						
or 1049H-82**	Yes	46,608	520			
1049G-82, 1049H-82 with tip tanks						

*The total usable fuel must be limited to 28,800 lbs. when the oil transfer system is not installed (See NOTE 7).

** No tip tanks (See ITEM 109).

System oil is that amount of oil required to fill the oil systems and tanks to the tank outlets to the engines. The propeller feathering oil is not considered usable oil, and, when applicable, is included in "System oil." The oil tank capacities shown in this specification include only the usable oil for which the tanks are placarded. Dipstick readings indicate the amount of usable oil.

Model	With Aux. Oil Tanks	With Oil Transfer System	Prop. Item Installed	Usable Oil (lbs.)	System Oil (lbs.)
or 1049-54	Yes	---	1(a)	1740	454
	No	---	1(a)	1650	454
1049B-55	---	Yes	1(b) or (d)	1702	483
or 1049C-55	---	Yes	1(c)	1702	616
or 1049D-55	---	No	1(b) or (d)	1200	472
or 1049E-55	---	No	1(c)	1200	605
or 1049F-55	---	---	---	---	---
1049G-82	---	Yes	1(e)	1702	656
or 1049H-82	---	Yes	1(f)	1702	518
	---	No	1(e)	1200	645
	---	No	1(f)	1200	507

- (d) Fuel dumping. When fuel dump valves (Item 100) are installed per NOTE 3, the amount of usable fuel, over and above the unusable fuel listed in Item 101, remaining after dumping is as follows:

Gallons Remaining in Tanks						
(A) Model	Tank 5	Tanks 2 & 3	Tanks 1 & 4	Tanks 2a & 3a	Tanks 1a & 4a	Remarks
1049-54	-	45 ea.	139 ea.	152 ea.	-	
1049B-55	<i>See Foot-note Below</i>	45 ea.	145 ea.	149 ea.	-	No standpipes in Tanks 2 & 3 - 4" connector
1049C-55		145 ea.	145 ea.	149 ea.	-	(D) Standpipes installed in Tanks 2 & 3 - 4" connector
1049D-55		174 ea.	145 ea.	149 ea.	-	(D) Standpipes installed in Tanks 2 & 3 - 2-1/2" connector
1049E-55 or 1049F-55		71 ea.	145 ea.	149 ea.	-	No standpipes in Tanks 2 & 3 - 2-1/2" connector
1049G-82		45 ea.	(C) 175 ea.	(C) 175 ea.	-	No Standpipes in Tanks 2 & 3 - 4" connector
1049H-82		145 ea.	(C) 175 ea.	(C) 175 ea.	-	(D) Standpipes installed in Tanks 2 & 3 - 4" connector
1049G-03 or 1049H-03						
1049G-82		45 ea.	(C) 175 ea.	(C) 175 ea.	15 ea.	No Standpipes in Tanks 2 & 3 - 4" connector
1049H-82		145 ea.	(C) 175 ea.	(C) 175 ea.	15 ea.	(D) Standpipes installed in Tanks 2 & 3 - 4" connector
1049G-03 or 1049H-03						

The indicated combinations of undumpable fuel and the corresponding standpipe arrangement apply to any model within a given block.

(Same as amount prior to dumping (no dump valves in this tank).

Standpipe height increased to accommodate EA-3 engines.

Operational zero fuel weight must not exceed the design landing weight minus the total undumpable fuel weight (including fuel in tank No. 5 at take-off), but in any case must not exceed design zero fuel weight. (The above undumpable fuel quantities at 6 lbs. per gallon should be used in this determination).

- (e) Fuel loading and usage.

- (1) Fuel must be distributed and used in a manner that will permit compliance with the lateral balance limitations in the FAA Approved Airplane Flight Manual.
- (2) For minimum fuel at any takeoff weight, refer to fuel loading and usage chart in the pertinent Approved Operating Manual.
- (3) Fuel loaded in Tank No. 5 will affect the maximum zero fuel gross weight as follows:

Model	Maximum Zero Fuel Weight
1049-54	93,500 lbs. less weight of fuel in Tank 5 or 95,500 lbs. less weight of fuel in Tank 5 (see Note 6)
1049B-55 or 1049F-55	105,000 lbs. less weight of fuel in Tank 5
1049C-55 or 1049E-55 or 1049G-82	103,500 lbs. less weight of fuel in Tank 5 in excess of 1500 lbs.
1049D-55 or 1049D/01-55 or 1049H-82	105,000 lbs. less weight of fuel in Tank 5 108,000 lbs. less weight of fuel in Tank 5 (See Note 11)
1049G-82 with tip tanks	104,200 lbs. less weight of fuel in Tank 5

- (4) By reason of structural limitations, the following fuel quantities shall not be exceeded during landing operations:

Model	Tank 5	Tanks 2 & 3	Tanks 1 & 4	Tanks 2a & 3a	Tanks 1a & 4a
1049-54	730 gal.	790 gal. ea.	1200 gal. ea.	515 gal. ea	----
1049-55					
or 1049C-55		No limitations.			----
or 1049D-55		(Tanks 2a and 4a not installed)			----
or 1049E-55					----
or 1049F-55					----
or 1049G-82					----
or 1049H-82					----
1049G-82	730 gal.	790 gal. ea.	1555 gal. ea	565 gal. ea.	200 gal. ea.

NOTE 2. The following placards must be installed:

- (a) In full view of the pilots and flight engineer:
 - (1) "This airplane must be fueled and the fuel used in accordance with instructions contained in the FAA approved Airplane Flight Manual."
 - (2) "This airplane shall be operated in accordance with the Operating Limitations specified in the FAA Approved Airplane Flight Manual."
- (b) On the forward side of door at Station 303.5 for the -67 interior, or door at Station 339 for -81 interior: "This door must be locked open during all take-offs and landings."

NOTE 3. Fuel dump valves (Item 100) must be installed for operation of the airplane at weights in excess of maximum landing weight. Refer to CAA Approved Airplane Flight Manual for limitations and cautionary procedures to be observed during the dumping of fuel.

NOTE 4. The electric drive on the elevator trim tab mechanism on the control pedestal, formerly considered as an integral part of the airplane, may be retained or removed at the option of the operator.

NOTE 5. Prior to civil certification of each military R7V-1 or C121-C aircraft of the Model 1049B-55 or 1049F-55 series, the following modifications will be required:

- (a) The position and fuselage lights installation must be modified to conform to FAA requirements.
- (b) On R7V-1 aircraft, fire detecting and extinguishing equipment must be installed in the lower baggage compartments in accordance with CAR 4b.383(c).
- (c) All military special equipment must be removed.
- (d) FAA approved operating manual (Airplane Flight Manual) (Item 400) must be provided.
- (e) Airplanes bearing manufacturer's numbers 4102, 4103, 4104 and 4106 must be inspected for corrosion of the integrally stiffened machined plates of the inner wing lower surface. In order to accomplish this, the sealing of integral fuel tanks in this area must be removed. If detrimental corrosion is found, contact Lockheed Aircraft Corporation for corrective measures.
- (f) Parachute flares must be installed.
- (g) Airspeed placards limiting Vno and Vne in accordance with airspeed limits of Part III of this specification must be installed in full view of the pilots.
- (h) Placards must be installed in the cabin which will insure that an aisle way will be maintained throughout the entire length of the cabin to:
 - (1) Provide access to an emergency exit over the wing for smoke evacuation purposes.
 - (2) Provide access to all cargo in the cabin area to facilitate fire fighting with a hand extinguisher.
- (i) Placards must be installed to warn ground and flight personnel that the airplane must not be flown with the cargo doors removed or unlatched.
- (j) Revise the engine nameplate to include the corresponding civil model designation (972TC18DA1) and Type Certificate No. (272).
- (k) Compliance with Airworthiness Directive Note No. 55-23-2 or Lockheed Service Bulletin No. 1049/SB-2753 must be accomplished for Serial Nos. 4144 and up.

NOTE 6. Lockheed Serial Nos. 4101 through 4139 of Model 1049B (Navy R7V-1) are eligible for certification at 130,000 pounds takeoff weight only. To be eligible for certification at 133,000 pounds takeoff weight, the following items must be accomplished:

- (1) Fuel loading and usage procedure must be in accordance with that described in Lockheed Report No. 9154.
- (2) Reinforce fuselage main frame and fuselage skin in accordance with Lockheed Rapid Revision Dwg. No. 173.

- NOTE 7. When auxiliary oil tank and oil transfer systems are not used on Model 1049B-55 and 1049C-55, total usable fuel must be limited to 4800 gallons (28,800 lbs.).
- NOTE 8. Model 1049-54 aircraft are eligible for certification at a landing weight of 101,500 lbs. and a maximum zero fuel weight of 95,500 lbs. when modified in accordance with Lockheed Service Bulletins No. 1049/SB2202, 1049/SB2223 and 1049/SB2224. These modifications include reinforcements of the fuselage and wings, revised orifice plates in the main landing gear oleos, and revised piston assemblies in the main landing gear drag link shock struts.
- NOTE 9. If cargo aircraft (Model 1049B-55 or 1049F-55) are converted for passenger operation or combination passenger-cargo operation, approved modifications must be incorporated to show compliance with CAR 4b.433, 4b.434 and SR389 effective October 27, 1952, or Amendment 4b-4, effective December 20, 1951.
- NOTE 10. In accordance with the agreement between the Department of Defense and the Civil Aeronautics Board, all air carrier operators utilizing aircraft which have been modified under the Civil Reserve Air Fleet Program, Part I, Phase II, may deduct the added weight of the military modification up to a maximum of 50 pounds for each aircraft so modified.
- NOTE 11. Model 1049D-55 is eligible for landing weight of 113,000 lbs., takeoff weight of 135,400 lbs., and maximum zero fuel weight of 108,000 lbs., when larger brakes are installed, stronger main landing gear side struts and drag strut dampers are installed and other minor modifications accomplished. These changes are described in Lockheed Service Bulletin 2373, 2504, 2508, 2509, 2529 and 2599. Upon completion of all of these items, the airplane is re-designated as Model 1049D/01-55.
- NOTE 12. Models 1049C-55 and 1049E-55 are eligible for a takeoff weight of 135,400 lbs. when stronger main landing gear side struts and drag strut dampers, speed recovery modifications, propeller spinner afterbodies, fuselage and wing reinforcements and propeller blade trailing edge fairings (on those airplanes having Curtiss 858 propellers) are installed. Lockheed Service Bulletin 2300, 2301, 2302, 2303, 2329, 2330, 2500, 2508, 2509 and 2599 describe those modifications required for Model 1049C. Service Bulletins 2500, 2508, 2509 and 2599 describe those required for Model 1049E. Upon completion of all of these items, the airplane is re-designated as Model 1049E/01-55.
- NOTE 13. Model 1049E/01-55 (See NOTE 12) is eligible for a landing weight of 113,000 lbs. when the landing gear incorporates wheel and brake assemblies as described under equipment items 202(a)(3), or (a)(4). The airplane is then designated as Model 1049E/02-055.
- NOTE 14. Model 1049H-82 is eligible for increased takeoff, landing and zero fuel weights when certain specific modifications are incorporated. Upon completion of the required items the aircraft model is redesignated. The redesignated aircraft with the required modifications and weight limitations are listed below.

A. Model 1049H/01-03 or 1049H/01-06

This model is basically a 1049H with the wing structure reinforced according to Lockheed Drawing No. 329998-505 "Wing Group Installation" and Item 111 (a) optional engines and propeller Item 1(e) are installed.

	<u>Tip Tanks Off</u>	<u>Tip Tanks On</u>
Gross Weight	140,000	140,000
Landing Weight	113,000	113,000
Zero Fuel Weight	109,500	106,700

B. Model 1049H/02-03 or 1049H/02-06

This model is a 1049H/01 modified in accordance with Lockheed Service Bulletin No. 3041. This results in a change in landing weight to 114,500 lbs. for both tip tanks on or off configurations.

C. Model 1049H/03. See NOTE 18.

D. Model 1049H/04-82

This model is basically a 1049H modified in accordance with Lockheed Service Bulletin No. 3041 making this model eligible for the following landing and zero fuel weights:

	<u>Tip Tanks Off</u>	<u>Tip Tanks On</u>
Landing Weight	114,500	114,500
Zero Fuel Weight	109,500	104,200

E. Model 1049H/05-03 or 1049H/05-06

This model is basically a 1049H/01 modified in accordance with Lockheed Service Bulletin No. 3060 rendering this model eligible for the following weights:

	<u>Tip Tanks Off</u>	<u>Tip Tanks On</u>
Takeoff Weight	142,100	142,100
Landing Weight	113,000	113,000
Zero Fuel Weight	108,000	108,000

F. Model 1049H/06-03 or 1049H/06-06

This model is basically a 1049H/06 modified in accordance with Lockheed Service Bulletin No. 3060 rendering this model eligible for the following weights:

	<u>Tip Tanks Off</u>	<u>Tip Tanks On</u>
Takeoff Weight	142,100	142,100
Landing Weight	114,500	114,500
Zero Fuel Weight	109,500	109,500

G. Model 1049H/07-03 or 1049H/07-06

This model is basically a 1049H/06 with the takeoff weight limited because of the substitution of propeller Item 1(b) for Item 1(e). The operational weights are as follows:

	<u>Tip Tanks Off</u>	<u>Tip Tanks On</u>
Takeoff Weight	141,700	141,700
Landing Weight	114,500	114,500
Zero Fuel Weight	109,500	109,500

NOTE 15. The 975C18CB1 engine is eligible for use with grade 100/130 or 108/135 fuel at the following ratings:

Lower impeller ratio 6.46:1

Maximum continuous:

(Sea level) 43.5 in.Hg., 2600 rpm (2150 hp)

(Straight line manifold pressure variation with altitude to 8700 ft.)

40.5 in.Hg., 2600 rpm (2150 hp)

Takeoff (2 minutes):

(Sea level) 47.0 in.Hg., 2600 rpm (2350 hp)

(Straight line manifold pressure variation with altitude to 5900 ft.)

45.0 in.Hg., 2600 rpm (2350 hp)

High impeller ratio 8.67:1

Maximum continuous:

(14,000 ft.) 42.0 in.Hg., 2600 rpm (1800 hp)

(Straight line manifold pressure variation with altitude to 18,800 ft.)

41.0 in.Hg., 2600 rpm (1800 hp)

When using the above grade fuel and power ratings, the airplane weight limitations are as follows:

Landing: 91,000 lbs.

Takeoff 100,000 lbs. (Dump valves are required)

Maximum zero fuel weight: 87,332 lbs.

NOTE 16. The 972TC18CDA1 engine is eligible for use with grade 100/130 or 108/135 fuel at the following ratings with automatic rich mixture settings only for all operations including cruise::

Lower impeller ratio 6.46:1

Maximum continuous:

(Sea level) 43.5 in.Hg., 2600 rpm (2380 hp)

(Straight line manifold pressure variation with altitude to 9100 ft.)

41.0 in.Hg., 2600 rpm (2450 hp)

Takeoff (2 minutes at sea level; 5 minutes at 7500 ft.)

(Straight line variation of takeoff power time with altitude to 7500 ft.)

(Sea level) 51.0 in.Hg., 2900 rpm (2880 hp)

(Straight line manifold pressure variation with altitude to 8100 ft.)

47.5 in.Hg., 2900 rpm (2950 hp)

High impeller ratio 8.67:1

Operation with grade 100/130 fuel not permitted.

When using the above grade fuel and power ratings, the airplane weight limitations are as follows:

Landing:	101,500 lbs.
Takeoff	120,000 lbs. (Dump valves are required)
Maximum zero fuel weight:	95,884 lbs. (with 2-1/2 inch connector tubes)
	95,560 lbs. (with 4 inch connector tubes)

NOTE 17. The 972TC18DA3, 988TC18EA3 and 988TC18EA6 engines are eligible for use with grade 100/130 or 108/135 fuel at the following ratings with automatic rich mixture settings only for all operations including cruise::

Lower impeller ratio 6.46:1

Maximum continuous:

(Sea level) 44.0 in.Hg., 2600 rpm (2380 hp)

(Straight line manifold pressure variation with altitude to 9400 ft.)

41.5 in.Hg., 2600 rpm (2450 hp)

Takeoff (2 minutes at sea level; 5 minutes at 7500 ft.;

straight line variation of takeoff power time with altitude to 7500 ft.):

(Sea level) 51.0 in.Hg., 2900 rpm (2880 hp)

(Straight line manifold pressure variation with altitude to 8500 ft.)

48.0 in.Hg., 2900 rpm (2950 hp)

High impeller ratio 8.67:1

Operation with grade 100/130 fuel not permitted.

When using the above grade fuel and power ratings, the airplane weight limitations are as follows:

Landing:	101,500 lbs.
Takeoff	120,000 lbs. (Dump valves are required)
Maximum zero fuel weight:	96,750 lbs. (Tip tanks off) Standard configuration)
	96,580 lbs. (Tip tanks on)
	95,560 lbs. (Tip tanks off and stand pipe in tanks 2 and 3)
	95,380 lbs. (Tip tanks on and stand pipe in tanks 2 and 3)

NOTE 18. Model 1049D/01 may be modified to Model 1049H when modified in accordance with Lockheed Service Bulletin No. 2505. Upon completion of this item, the airplane is redesignated as 1049H/03-82.

NOTE 19. In accordance with Civil Aeronautics Board Special Regulation 411A, aircraft operated by "Air Carriers" for cargo operation only, are permitted to increase the zero fuel weight and landing weight by 5 per cent of the zero fuel weight. For aircraft covered by this specification, the landing and maximum zero fuel weights may be increased as follows for airplanes equipped with Hamilton Standard and Dural propellers and with 858 trailing edge propellers, respectively:

Tip Tanks	<u>Landing Weight</u>		<u>Zero Fuel Weight</u>	
	<u>ON</u>	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
<u>Hamilton Standard Propellers</u>	(Equipment Items 1(c) and 1(e))			
Model 1049C &) (1)	115,210	115,175	109,410	108,675
1049E & 1049E/01) (2)	115,210	115,175	109,090	108,675
1049E/02 (1)	117,200	117,200	109,410	108,675
(2)	117,200	117,200	109,410	108,675
1049G (equip. item 1(e) only)	118,210	118,175	109,410	108,675
1049H	118,210	118,400	109,410	113,400
1049H/01	118,335	118,400	112,035	113,400
1049H/02	119,835	119,975	112,035	114,975
1049H/05	118,400	118,400	113,400	113,400
1049H/06	119,975	119,975	114,975	114,975

Tip Tanks (cont'd)	<u>Landing Weight</u>		<u>Zero Fuel Weight</u>		
	<u>ON</u>	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
<u>Dural Propellers</u>	(Equipment Item 1(f))				
Model 1049C &)	(1)	115,210	115,175	109,410	108,675
1049E & 1049E/01	(2)	115,210	115,175	109,090	108,675
1049E/02	(1)	116,600	116,600	109,410	108,675
	(2)	116,600	116,600	109,410	108,675
1049G		117,600	117,600	109,410	108,675
1049H		117,600	117,600	109,410	112,860
1049H/01		118,335	118,400	112,035	113,400
1049H/02		119,835	119,975	112,035	114,975
1049H/05		118,400	118,400	113,400	113,400
1049H/06		119,975	114,975	114,975	114,975
<u>858 T.E. Propellers</u>	(Equipment Item 1(b))				
Model 1049C &	(1)	115,210	115,175	109,410	108,675
1049E & 1049E/01	(2)	115,210	115,175	109,090	108,675
1049E/02	(1)	115,600	115,600	109,410	108,675
	(2)	115,600	115,600	109,410	108,675
1049D/01		115,600	115,600	109,410	111,220
1049H		116,850	116,850	109,410	112,110
1049H/03		116,850	116,850	109,410	112,110
1049H/07		118,800	118,800	113,880	114,060

- (1) Standpipes in tanks 2 and 3 with 2-1/2" connecting tube.
(2) Standpipes in tanks 2 and 3 with 4" connecting tube.

In addition to the operator's normal inspection program, aircraft operated in accordance with SR-411A must be inspected with the "Inspection Procedures for Cargo Aircraft Operated at Gross Weights Above Certificated Gross Weights" (Lockheed Report No. 11414, Pages 27 and 28) as revised and approved by the FAA. Requests for changes in the inspection procedure must be forwarded to the manufacturer for his recommendations and submittal to the FAA for approval.

The increased weights authorized in accordance with SR-411A do not apply to foreign operators when the aircraft is operated in the United States.

FAA Approved Airplane Flight Manual revision, including performance information for operation at the increased weights, should be obtained from the manufacturer or from the organization performing the modifications for cargo operation and submitting the corresponding Manual Supplement for FAA approval.

NOTE 20. Propeller governor Type 5U18 is eligible for use only on aircraft equipped with Wright 975C18CB-1 engines.

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