DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A1SO
Revision 17
LOCKHEED

382
382B
382E
382F
382G
382J

November 15, 2019

TYPE CERTIFICATE DATA SHEET NO. A1SO

This data sheet, which is a part of Type Certificate No. A1SO, prescribes conditions and limitations under which the product, for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Lockheed Martin Corporation
Lockheed Martin Aeronautis Company
86 South Cobb Drive
Marietta, Georgia 30063-0655

I. - Model 382 (Hercules) Transport Category Aircraft), Approved 16 February 1965 (See NOTE 5.)

Engines
`
4 Allison Turbo-prop 501-D22A
Engine Type Certificate No. E-282

Fuel
Commercial aviation turbine fuels conforming to ASTM Specification No. D1655-59T, types Jet B, Jet A-1, or Jet A, or commercial equivalents of MIL-J-5624, grade JP-4 or JP-5.

Lubricating Oil
Synthetic oil conforming to Allison Commercial Service Letter CSL-1002

Engine Limits
Static, standard day, sea level:

	Turbine Inlet Temp.	Torque	Oil Temp
Take-off (5 minutes)	1077°C	19,600 in. lb.	40°C - 100°C
Maximum continuous	1010°C	19,600 in.lb.	60°C - 85°C

Rated Speed: 100% - 13,820 erpm

Propeller and Propeller Limits
4 Hamilton Standard hydromatic propellers
Hub 54H60-91/54H60-117 Blade A7111D-2
Propeller Type Certificate No. P-906
Diameter:13 ft. 6 in.
2% reduction allowable for repair

Single rotation, four blade assembly with governing speed setting 1020 prpm (13,820 erpm). Propeller assembly is complete with spinner, feathering and reversing provision, constant speed control, negative torque control, synchrophaser, and electrical ice control.

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Blade angles		See NOTE 3
Feather	92.5° ± 0.20°	(a) (b)
Low pitch stop (min. flt. Idle)	23.25° ± 0.50°	(a)
Ground start	4.75° ± 0.75°	(b)
Ground idle	1.0° ±	(c)
Reverse	-7.0 ± 1.0°	(b)

Propeller Oil

MIL-H-5606B

Airspeed Limits

V_{MO}	Maximum operating)	See Fig. 1-2
V_A	(Maneuvering)	of approved
V_B	(Turbulent air penetration)	Airplane Flight Manual
V_{FE}	(Take-off & approach, 50%)	183K
V_{FE}	(Landing, 100%)	145K
V_{LO}	(Landing gear operation)	168K
V_{LE}	(Landing gear extended)	168K
V_{LL}	(Landing light extended)	168K

Heated Windshield Limitations

If electric windshield heat is operative, it must be used for all flight operations. Operation without electric windshield heat, on any or all portions of the windshield, is permissible provided (1) the airplane is not flown in known icing conditions, and (2) the maximum speed limit below 10,000 ft. is 187 KCAS.

Weight & C.G. Limits (gear up or down)

		Most Fwd. C.G.		Most Aft C.G.	
Condition	Wt./lbs.	%MAC	F.S.	%MAC	F.S.
Ramp	155,800	23.3	525.7	30	536.8
Take-off	155,000	23.2	525.5	30	536.8
Landing	130,000	20.2	520.6	30	536.8
Zero fuel	120,000	18.8	518.3	30	536.8

Datum

Trim Station -493.0 (F.S. 94.0), W.L. 142.98, B. L. O.O. (NAS 221 screw head on bottom of forward fuselage, 71.0" forward of center of line of nose gear strut.)

M.A.C.

164.5"; leading edge M.A.C. Trim Station -39.6 (F.S. 487.4)

Leveling Means

Provisions for leveling by plumb line are installed in the cargo compartment on the left side at approximately Trim Station +110 (F.S. 637). A plumb line support bracket is located on the fuselage side panel at approximately W.L. 252, B.L. 64L, and a leveling plate is located on top of the cargo floor curb at approximately W.L. 150 B.L. 64L.

Minimum Crew

Three (3) - Pilot, Co-pilot, and Flight Engineer

Passengers

None. Approved for cargo only.

Cargo Compartment

Length	48.3
Width	9 ft/. 11½ in.
Height	9 ft.
Usable volume	4,536 cu. ft.
Maximum cargo	See SMP 521-2.

Loading data for approved loading schedule are contained in Lockheed Report ER-9511. Individual aircraft weight and balance data are contained in Lockheed Report SMP 521-2.
Class E cargo compartment. Cargo must be loaded in compliance with loading placard, Lockheed Drawing 398251-1. When cargo restraining (barrier) net is installed, the 393487-15 placard is a required part of the installation.

Maximum Fuel Quantity	Tank	Usable Fuel	Total Fuel	F.S. Arm (full)	(T.S.)
1	(outboard)	9,238 lbs.	9,331 lbs.	545.2	+18.2
2	(inboard)	8,437 lbs.	8,578 lbs.	555.0	+28.0
3	(inboard)	8,437 lbs.	8,578 lbs.	555.0	+28.0
4	(outboard)	9,238 lbs.	9,331 lbs.	545.2	+18.2
**	Left Aux.	6,269 lbs.	6,329 lbs.	556.7	+29.7
**	Right Aux.	6,269 lbs.	6,329 lbs.	556.7	+29.7
***	Left External	9,355 lbs.	9,465 lbs.	551.2	+24.2
***	Right External	9,355 lbs.	9,465 lbs.	551.2	+24.2
***		66,598 lbs.	*67,406 lbs.	(549.9)	
****	Left External	9,355 lbs.	9,499 lbs.	551.2	+24.2
****	Right External	9,355 lbs.	9,499 lbs.	551.2	+24.2
****		66,598 lbs.	*67,474 lbs.	(549.9)	

* Does not include line fuel. (See NOTE 1(c)).
** Optional tank installations.
*** Optional external tank installation (Lockheed P/N 388236)
**** Optional external tank installation (Lear Siegler P/N 305J001)

Maximum fuel quantity — These fuel weights are not to be exceeded.
(Tank volume may be calculated using fuel density of 6.9 lbs./gal.)

Arm varies with fuel loading. Reference loading data, Lockheed Report SMP 521-2, for approved fuel loading information. See NOTE 1 for unusable fuel.

Oil Capacity — Four (4) independent tanks, one in each nacelle above the engine (Arm 442.0, Trim Station -85.0). Capacity for each, 8 gallons usable, total 12 gallons. Capacity for all, 32 gallons usable, total 48 gallons. See NOTE 1 for system oil.

Maximum operating altitude — 32,600 feet

Other operating limitations — Aircraft shall be operated in compliance with the operating limitations specified in the FAA approved Airplane Flight Manual.

Manufacturer's Serial — 3946 is a Model 382 and is only aircraft numbers eligible by incorporation of STC ST396SO. (See NOTE 5).

II. Model 382B (Hercules) (transport aircraft), approved 5 October 1965 (See NOTE 5)

Engines — 4 Allison turbo-prop 501-D22
Engine Type Certificate No. E-282

Fuel — Commercial aviation turbine fuels conforming to ASTM Specification No. D1655-59T, types Jet B, Jet A-1, or Jet A, or commercial equivalents of MIL-J-5624, grade JP-4, or JP-5.

Lubricating Oil — Synthetic oil conforming to Allison Commercial Service Letter CSL-1002

Engine limits

Static, Standard day, sea level:

Turbine Inlet Temp.		Torque	Oil Temp
Take-off (5 minutes)			
Model 382B	977°C	19,600 in. lb.	40°C - 100°C
Maximum continuous			
	932°C	18,000 in.lb.	60°C - 85°C

Rated Speed: 100% - 13,820 erpm

Propeller and Propeller Limits

4 Hamilton Standard hydromatic propellers
Hub 54H60-91/54H60-117 Blade A7111C-2/A7111D-2
Propeller Type Certificate No. P-906
Diameter:13 ft. 6 in.
2% reduction allowable for repair

Single rotation, four blade assembly with governing speed setting 1020 prpm (13,820 erpm). Propeller assembly is complete with spinner, feathering and reversing provision, constant speed control, negative torque control, synchrophaser, and electrical ice control.

Blade angles		See NOTE 3
Feather	92.5° ± 0.20°	(a) (b)
Low pitch stop (min. flt. idle)	23.25° ± 0.50°	(a)
Ground start	4.75° ± 0.75°	(b)
Ground idle	1.0°	(c)
Reverse	-7.0° ± 1.0°	(b)

Propeller Oil

MIL-H-5606B

Airspeed Limits

V_{MO}	(Maximum operating)	See Fig. 1-2
V_A	(Maneuvering)	of approved
V_B	(Turbulent air penetration)	Airplane Flight Manual
V_{FE}	(Take-off & approach, 50%)	183K
V_{FE}	(Landing, 100%)	145K
V_{LO}	(Landing gear operation)	168K
V_{LE}	(Landing gear extended)	168K
V_{LL}	(Landing light extended)	168K

Heated windshield limitations

If electric windshield heat is operative, it must be used for all flight operations. Operation without electric windshield heat, on any or all portions of the windshield, is permissible provided (1) the airplane is not flown in known icing conditions, and (2) the maximum speed limit below 10,000 ft. is 187 KCAS.

Weight & C.G. Limits (gear up or down)

Condition	Wt./lbs.	Most Fwd. C.G.		Most Aft C.G.	
		%MAC	F.S.	%MAC	F.S.
Ramp	155,800	23.3	525.7	30	536.8
Take-off	155,000	23.2	525.5	30	536.8
Landing	130,000	20.2	520.6	30	536.8
Zero fuel	117,943	18.4	517.6	30	536.8

The above weights pertain to an aircraft configuration which does not have pylon tanks installed. Consult the FAA approved Airplane Flight Manual for proper weight and center-of-gravity restrictions.

Datum — Trim Station - 493.0 (F.S. 94.0), W.L. 142.98, B.L. 0.0 (NAS 221 screw head on bottom of forward fuselage, 71.0" forward of center line of nose gear strut.)

M.A.C. — 164.5"; leading edge M.A.C. Trim Station -39.6 (F.S. 487.4)

Leveling Means — Provisions for leveling by plumb line are installed in the cargo compartment on the left side at approximately Trim Station +110 (F.S. 637). A plumb line support bracket is located on the fuselage side panel at approximately W.L. 252, B.L. 64L, and a leveling plate is located on top of the cargo floor curb at approximately W.L. 150, B.L. 64L.

Minimum Crew — Three (3) - Pilot, Co-pilot, and Flight Engineer. See AFM for fourth member of some versions.

Passengers — None. Approved for cargo only.

Cargo compartment

Length	40 ft.
Width	9 ft. 11½ in.
Height	9 ft.
Usable Volume	3,780 cu. ft.
Maximum cargo	See SMP 521.

Loading data for approved loading schedules are contained in Lockheed Report ER-8083. Individual aircraft weight and balance data are contained in Lockheed Report SMP 521.

Class E cargo compartment. Cargo must be loaded in compliance with loading placard, Lockheed Drawing 393487-11. When cargo restraining (barrier) net is installed, the 393487-11 placard is a required part of the installation.

Maximum fuel quantity — Aircraft S/N 4101 through 4581. See NOTE 9 for aircraft S/N 4582 and up.

	Tank	Usable Fuel	Total Fuel	F.S. Arm (Full)	T.S.
1	(outboard)	9,238 lbs.	9,331 lbs.	545.2	+18.2
2	(inboard)	8,437 lbs.	8,578 lbs.	555.0	+28.0
3	(inboard)	8,437 lbs.	8,578 lbs.	555.0	+28.0
4	(outboard)	9,238 lbs.	8,331 lbs.	545.2	+18.2
**	Left Aux.	6,269 lbs.	6,329 lbs.	556.7	+29.7
**	Right Aux.	6,269 lbs.	6,329 lbs.	556.7	+29.7
***	Left External	9,355 lbs.	9,465 lbs.	551.2	+24.2
***	Right External	9,355 lbs.	9,465 lbs.	551.2	+24.2
		66,598 lbs.	*67,406 lbs.	(549.9)	
****	Left External	9,355 lbs.	9,499 lbs.	551.2	+24.2
****	Right External	9,355 lbs.	9,499 lbs.	551.2	+24.2
****		66,598 lbs.	*67,474 lbs.	(549.9)	

* Does not include line fuel (See NOTE 1 (c)).
** Optional tank installations.
*** Optional external tank installation (Lockheed P/N 388236)
**** Optional external tank installation (Lear Siegler P/N 305J001)

The above fuel weights are not to be exceeded (Tank volume may be calculated using fuel density of 6.9 lbs./gal.)

Arm varies with fuel loading. Reference Weight and Balance data, Lockheed Report SMP 521, for approved fuel loading information.

See NOTE 1 for unusable fuel.

Oil Capacity	Four (4) independent tanks, one in each nacelle above the engine (Arm 442.0). Capacity for each, 8 gallons usable, total 12 gallons. Capacity for all, 32 gallons usable, total 48 gallons. See NOTE 1 for system oil.
Maximum operating altitude	32,600 feet
Other operating limitations	Aircraft shall be operated in compliance with the operating limitations specified in the FAA approved Airplane Flight Manual.
Manufacturer's Serial Number	4101 and up.

III. - Model 382E (Hercules) (transport aircraft), approved 4 October 1968 (See NOTE 5)

Engines	4 Allison turbo-prop 501-D22A Engine Type Certificate No. E-282
Fuel	Commercial aviation turbine fuels conforming to ASTM Specification No. D 1655-59T, types Jet B, Jet A-1, or Jet A, or commercial equivalents of MIL-J-5624, grade JP-4 or JP-5.
Lubricating Oil	Synthetic oil conforming to Allison Commercial Service Letter CSL-1002.

Engine Limits

Static, standard day, sea level:

Turbine inlet Temp	Torque	Oil Temp
Take-off (5 minutes)		
1077°C	19,600 in-lbs.	40°C - 100°C
Maximum continuous		
1010°	19,600 in-lbs.	60°C - 85°C

Rated Speed: 100% - 13,820 erpm

Propeller and Propeller Limits

4 Hamilton Standard hydromatic propellers
Hub 54H60-91/54H-60117 Blade A7111C-2/A7111D-2
Propeller Type Certificate No. P-906
Diameter: 13 ft. 6 in.
2% reduction allowable for repair

Single rotation, four blade assembly with governing speed setting 1020 prpm (13,820 erpm). Propeller assembly is complete with spinner, feathering and reversing provisions, constant speed control, negative torque control, synchrophaser, and electrical ice control.

Blade angles		See NOTE 3
Feather	92.5° ± 0.20°	(a) (b)
Low pitch stop (min. flt. idle)	23.25° ± 0.50°	(a)
Ground start	4.75° ± 0.75°	(b)
Ground idle	1.0°	(c)
Reverse	-7.0° ± 1.0°	(b)

Propeller Oil	MIL-H-5606B

Airspeed Limits

V_{MO}	(Maximum operating)	See Fig. 1-2
V_A	(Maneuvering)	of approved
V_B	(Turbulent air penetration)	Airplane Flight Manual
V_{FE}	(Take-off & approach, 50%)	183K
V_{FE}	(Landing, 100%)	145K
V_{LO}	(Landing gear operation)	168K
V_{LE}	(Landing gear extended)	168K
V_{LL}	(Landing light extended)	168K

Heated Windshield Limitations

If electric windshield heat is operative, it must be used for all flight operations. Operation without electric windshield heat, on any or all portions of the windshield, is permissible provided (1) the airplane is not flown in known icing conditions, and (2) the maximum speed limit below 10,000 ft. is 187 KCAS.

Weight & C.G. Limits (gear up or down)

Condition	Wt./lbs.	Most Fwd. C.G.		Most Aft C.G.	
		%MAC	F.S.	%MAC	F.S.
Ramp	155,800	23.3	525.7	30	536.8
Take-off	155,000	23.2	525.5	30	536.8
Landing	130,000	20.2	520.6	30	536.8
Zero fuel	120,000	18.8	518.3	30	536.8

The above weights pertain to an aircraft configuration which includes a structurally heavier wng (S/N 4299 and up) and does not have pylon tanks installed. Consult the FAA approved Airplane Flight Manual for proper weight and center gravity restrictions.

Datum

Trim Station - 493.0 (F.S. 94.0), W.L. 142.98, B.L. O.O (NAS 221 screw head on bottom of forward fuselage, 71.0" forward of center line of nose gear strut.)

M.A.C.

164.5"; leading edge M.A.C. Trim Station -39.6 (F.S. 487.4)

Leveling Means

Provisions for leveling by plumb line are installed in the cargo compartment on the left side at approximately Trim Station +110 (F.S. 637). A plumb line support bracket is located on the fuselage side panel at approximately W.L. 252, B.L. 64L, and a leveling plate is located on top of the cargo floor curb at approximately W.L. 150, B.L. 64L.

Minimum Crew

Three (3) - Pilot, Co-pilot, and Flight Engineer.

Passengers

None, approved for cargo only.

Cargo compartment

Length	48.3 ft.
Width	9 ft. 11½ in.
Height	9 ft.
Usable Volume	4,536 cu. ft.
Maximum cargo	See SMP 521-2.

Loading data for approved loading schedules are contained in Lockheed Report ER-9511. Individual aircraft weight and balance data are contained in Lockheed Report SMP 521-2.

Class E cargo compartment. Cargo must be loaded in compliance with loading placard, Lockheed Drawing 398251-1. When cargo restraining (barrier) net is installed, the 393487-15 placard is a required part of the installation.

Maximum fuel quantity — Aircraft S/N 4101 through 4581. See NOTE 9 for aircraft S/N 4582 and up.

	Tank	Usable Fuel	Total Fuel	F.S. Arm (Full)	T.S.
1	(outboard)	9239 lbs.	9331 lbs.	545.2	+18.2
2	(inboard)	8437 lbs.	8578 lbs.	555.0	+28.0
3	(inboard)	8437 lbs.	8578 lbs.	555.0	+28.0
4	(outboard)	9238 lbs.	9331 lbs.	545.2	+18.2
**	Left Aux.	6269 lbs.	6329 lbs.	556.7	+29.7
**	Right Aux.	6269 lbs.	6329	556.7	+29.7
***	Left External	9355 lbs.	9465 lbs.	551.2	+24.2
***	Right External	9355 lbs.	9465 lbs.	551.2	+24.2
		66,598 lbs.	*67,406 lbs.	(549.9)	
****	Left External	9355 lbs.	9499 lbs.	551.2	+24.2
****	Right External	9355 lbs.	9499 lbs.	551.2	+24.2
****		66,598 lbs.	*67,474 lbs.	(549.9)	

* Does not include line fuel (See NOTE 1 (c)).
** Optional tank installations.
*** Optional external tank installation (Lockheed P/N 388236)
**** Optional external tank installation (Lear Siegler P/N 305J001)

The above fuel weight are not to be exceeded. (Tank volume may be calculated using fuel density of 6.9 lbs./gal.).

Arm varies with fuel loading. Reference loading data, Lock heed Report SMP 521-2, for approved fuel loading information.
See NOTE 1 for unusable fuel.

Oil Capacity — Four (4) independent tanks, one in each nacelle above the engine (Arm 442.0, Trim Station -85.0). Capacity for each, 8 gallons usable, total 12 gallons. Capacity for all, 32 gallons usable, total 48 gallons. See NOTE 1 for system oil.

Maximum operating altitude — 32,600 feet

Other operating limitations — Aircraft shall be operated in compliance with the operating limitations specified in the FAA approved Airplane Flight Manual.

Manufacturer's Serial Numbers — 4299 and up, 4101 through 4298 by incorporation of STC STC395SO (See NOTE 5).

IV. - Model 382 F (Hercules) (transport aircraft), approved 3 December 1969 (See NOTE 5)

Engines — 4 Allison turbo-prop 501-D22
Engine Type Certificate No. E-282

Fuel — Commercial aviation turbine fuel conforming to ASTM Specification No. D 1655-59T, types Jet B, Jet A-1, or Jet A, or commercial equivalents of MIL-J-5624, grade JP-4, or JP-5.

Lubricating Oil — Synthetic oil conforming to Allison Commercial Service Letter CSL-1002

Engine Limits — Static, standard day, sea level:

	Turbine Inlet Temp.	Torque	Oil Temp.
Take-off (5 minutes)			
Model 382F	977°C	19,600 in-lb.	40°C - 100°C
Maximum continuous			
	932°C	18,000 in-lb.	60°C - 85°C

Rated Speed: 100% - 13,820 erpm

Propeller and Propeller Limits

4 Hamilton Standard hydromatic propellers
Hub 54H60-91/54H60-117 Blade A7111C-2/A7111D-2
Propeller Type Certificate No. P-906
Diameter: 13 ft. 6 in.
2% reduction allowable for repair

Single rotation four blade assembly with governing speed setting 1020 prpm (13,820 erpm). Propeller assembly is complete with spinner, feathering and reversing provisions, constant speed control, negative torque control, synchrophaser, and electrical ice control.

Blade angles		See NOTE 3
Feather	92.5° ± 0.20°	(a) (b)
Low pitch stop (min. flt. idle)	23.25° ± 0.50°	(a)
Ground start	4.75° ± 0.75°	(b)
Ground idle	1.0° ±	(c)
Reverse	-7.0 ± 1.0°	(b)

Propeller Oil

MIL-H-5606B

Airspeed Limits

V_{MO}	Maximum operating)	See Fig. 1-2
V_A	(Maneuvering)	of approved
V_B	(Turbulent air penetration)	Airplane Flight Manual
V_{FE}	(Take-off & approach, 50%)	183K
V_{FE}	(Landing, 100%)	145K
V_{LO}	(Landing gear operation)	168K
V_{LE}	(Landing gear extended)	168K
V_{LL}	(Landing light extended)	168K

Heated Windshield

If electric windshield heat is operative, it must be used for all flight operations. Operation without electric windshield heat, on any or all portions of the windshield, is permissible provided (1) the airplane is not flown in known icing conditions, and (2) the maximum speed limit below 10,000 ft. is 187 KCAS.

Weight & C.G. Limits (gear up or down)

Condition	Wt./lbs.	Most Fwd. C.G.		Most Aft C.G.	
		%MAC	F.S.	%MAC	F.S.
Ramp	155,800	23.3	525.7	30	536.8
Take-off	155,000	23.2	525.5	30	536.8
Landing	130,000	20.2	520.6	30	536.8
Zero fuel	120,000	18.8	518.3	30	536.8

The above weights pertain to an aircraft configuration which includes a structurally heavier wing (S/N 4299 and up) and does not have pylon tanks installed. Consult the FAA approved Airplane Flight Manual for proper weight and center-of-gravity restrictions.

Datum

Trim Station -493.0 (F.S. 94.0), W.L. 142.98, B.L. 0.0 (NAS 221 screw head on bottom of forward fuselage, 71.0" forward of center line of nose gear strut.)

M.A.C.

164.5"; leading edge M.A.C., Trim Station -39.6 (F.S. 487.4)

Leveling Means

Provisions for leveling by plumb line are installed in the cargo compartment on the left side at approximately Trim Station +110 (F.S. 637). A plumb line support bracket is located on the fuselage side panel at approximately W.L. 252, B.L. 64L, and a leveling plate is located on top of the cargo floor curb at approximately W.L. 150, B.L. 64L.

Minimum Crew — Three (3) - Pilot, Co-Pilot, and Flight Engineer

Passengers — None. Approved for cargo only.

Cargo Compartment

Length	48.3
Width	9 ft. 11½ in.
Height	9 ft.
Unusable volume	4,536 cu. ft.
Maximum cargo	See SMP 521-2.

Loading data for approved loading schedule are contained in Lockheed Report ER-9511. Individual aircraft weight and balance data are contained in Lockheed Report SMP 521-2.

Class E cargo compartment. Cargo must be loaded in compliance with loading placard, Lockheed Drawing 398251-1. When cargo restraining (barrier) net is installed, the 393487-15 placard is a required part of the installation.

Maximum fuel quantity — Aircraft S/N 4101 through 4581. See NOTE 9 for aircraft S/N 4582 and up.

	Tank	Usable Fuel	Total Fuel	F.S. Arm (Full)	T.S.
1	(outboard)	9238 lbs.	9331 lbs.	545.2	+18.2
2	(inboard)	8437 lbs.	8578 lbs.	555.0	+28.0
3	(inboard)	8437 lbs.	8578 lbs.	555.0	+28.0
4	(outboard)	9238 lbs.	8331 lbs.	545.2	+18.2
**	Left Aux.	6269 lbs.	6329 lbs.	556.7	+29.7
**	Right Aux.	6269 lbs.	6329 lbs.	556.7	+29.7
***	Left External	9355 lbs.	9465 lbs.	551.2	+24.2
***	Right External	9355 lbs.	9465 lbs.	551.2	+24.2
		66,598 lbs.	*67,406 lbs.	(549.9)	
****	Left External	9355 lbs.	9499 lbs.	551.2	+24.2
****	Right External	9355 lbs.	9499 lbs.	551.2	+24.2
****		66,598 lbs.	*67,474 lbs.	(549.9)	

* Does not include line fuel (See NOTE 1 (c)).
** Optional tank installations.
*** Optional external tank installation (Lockheed P/N 388236)
**** Optional external tank installation (Lear Siegler P/N 305J001)

The above fuel weights are not to be exceeded. (Tank volume may be calculated using fuel density of 6.9 lbs./gal.)

Arm varies with fuel loading. Reference loading data, Lockheed Report 521-2, for approved fuel loading information.

See NOTE 1 for system oil.

Oil Capacity — Four (4) independent tanks, one in each nacelle above the engine (Arm 442.0, Trim Sta. - 85.0). Capacity for each, 8 gallons usable, total 12 gallons. Capacity for all, 32 gallons usable, total 48 gallons.

Maximum operating altitude — 32,600 feet

Other operating limitations — Aircraft shall be operated in compliance with the operating limitation specified in the FAA approved Airplane Flight Manual.

Manufacturer's Serial Numbers — 4299 and up, 4101 through 4298 by incorporation of STC serial numbers ST425SO (See NOTE 5).

V. - Model 382G (Hercules) (Transport Aircraft), approved October 7, 1970, See NOTE 5)

Engines
4 Allison turbo-prop 510-D22A
Engine Type Certificate No. E-282

Fuel
Commercial aviation turbine fuels conforming to ASTM Specification No. D 1655-59T, types Jet B, Jet A-1, or Jet A, or commercial equivalents of MIL-J-5624, grade JP-4 or JP-5.

Lubricating Oil
Synthetic oil conforming to Allison Commercial Service Letter CSL-1002.

Engine Limits
Static, standard day, sea level:

Turbine Inlet Temp.	Torque	Oil Temp.
Take-off (5 minutes)		
1077°C	19,600 in lbs.	40°C - 100°C
Maximum continuous		
1010°C	19,600 in. lbs.	60°C - 85°C

Rated Speed: 100% - 13,820 erpm

Propeller and Propeller Limits
4 Hamilton Standard hydromatic propellers
Hub 54H60-91/54H60-117 Blade A7111C-2/A7111D-2
Propeller Type Certificate No. P-906
Diameter:13 ft. 6 in.
2% reduction allowable for repair

Single rotation, four blade assembly with governing speed setting 1020 prpm (13,820 erpm). Propeller assembly is complete with spinner, feathering and reversing provisions, constant speed control, negative torque control, synchrophaser, and electrical ice control.

Blade angles		See NOTE 3
Feather	92.5° ± 0.20°	(a) (b)
Low pitch stop (min. flt. idle)	23.25° ± 0.50°	(a)
Ground start	4.75° ± 0.75°	(b)
Ground idle	1.0°	(c)
Reverse	-7.0 ± 1.0°	(b)

Propeller Oil
MIL-H-5606B

Airspeed Limits

V_{MO}	Maximum operating)	See Fig. 1-2
V_A	(Maneuvering)	of approved
V_B	(Turbulent air penetration)	Airplane Flight Manual
V_{FE}	(Take-off & approach, 50%)	183K
V_{FE}	(Landing, 100%)	150K
V_{LO}	(Landing gear operation)	171K
V_{LE}	(Landing gear extended)	171K
V_{LL}	(Landing light extended)	171K

Heated windshield limitations
If electric windshield heat is operative, it must be used for all flight operations. Operation without electric windshield heat, on any or all portions of the windshield, is permissible provided (1) the airplane is not flown in known icing conditions, and (2) the maximum speed limit below 10,000 ft. is 187 KCAS.

Weight & C.G. Limits
(gear up or down)

Condition	Wt./lbs.	Most Fwd. C.G.		Most Aft C.G.	
		%MAC	F.S.	%MAC	F.S.
Ramp	155,800	21.2	522.2	30	536.8
Take-off	155,000	21.1	522.1	30	536.8
Landing	135,000	18.6	518.0	30	536.8
Zero fuel	125,000	17.0	515.5	30	536.8

The above weights pertain to an aircraft configuration which includes a structurally heavier wing (S/N 4383 and up) and does not have pylon tanks installed. Consult the FAA approved Airplane Flight Manual for proper weight and center-of-gravity restrictions.

Datum — Trim Station -533.0 (F.S. 94.0), W.L. 142.98, B.L. 0.0 (NAS 221 screw head on bottom of forward fuselage, 71.0" forward of center line of nose gear strut).

M.A.C. — 164.5"; leading edge M.A.C. Trim Station -39.6 (F.S. 487.4)

Leveling Means — Provisions for leveling by plumb line are installed in the cargo compartment on the left side at approximately Trim Station +110 (F.S. 637). A plumb line support bracket is located on the fuselage side panel at approximately W.L. 252, B.L. 64L, and a leveling plate is located on top of the cargo floor curb at approximately W.L. 150, B.L. 64L.

Minimum Crew — Three (3) - Pilot, Co-Pilot, and Flight Engineer

Passengers — None. Approved for cargo only.

Cargo compartment

Length	54.9
Width	9 ft. 11½ in.
Height	9 ft.
Usable volume	5,140 cu. ft.
Maximum cargo	See SMP 521-4

Loading data for approved loading schedules are contained in Lockheed Report ER-10761. Individual aircraft weight and balance data are contained in Lockheed Report SMP 521-4.

Class E cargo compartment. Cargo must be loaded in compliance with loading placard, Lockheed Drawing 398251-1. When cargo restraining (barrier) net is installed, the 393487-15 placard is a required part of the installation.

Maximum fuel quantity — Aircraft S/N 4101 through 4581. See NOTE 9 for aircraft S/N 4582 and up.

	Tank	Usable Fuel	Total Fuel	F.S. Arm (Full)	T.S.
1	(outboard)	9238 lbs.	9331 lbs.	545.2	+18.2
2	(inboard)	8437 lbs.	8578 lbs.	555.0	+28.0
3	(inboard)	8437 lbs.	8578 lbs.	555.0	+28.0
4	(outboard)	9238 lbs.	9331 lbs.	545.2	+18.2
**	Left Aux.	6269 lbs.	6329 lbs.	556.7	+29.7
**	Right Aux.	6269 lbs.	6329 lbs.	556.7	+29.7
***	Left External	9355 lbs.	9465 lbs.	551.2	+24.2
***	Right External	9355 lbs.	9465 lbs.	551.2	+24.2
		66,598 lbs.	*67,406 lbs.	(549.9)	
****	Left External	9355 lbs.	9499 lbs.	551.2	+24.2
****	Right External	9355 lbs.	9499 lbs.	551.2	+24.2
****		66,598 lbs.	*67,474 lbs.	(549.9)	

* Does not include line fuel (See NOTE 1 (c)).
** Optional tank installations.
*** Optional external tank installation (Lockheed P/N 388236)
**** Optional external tank installation (Lear Siegler P/N 305J001)

The above fuel weights are not to be exceeded. (Tank volume may be calculated using fuel density of 6.9 lbs./gal.).

Arm varies with fuel loading. Reference loading data, Lockheed Report SMP 521-4, for approved fuel loading information.

See NOTE 1 for unusable fuel.

Oil Capacity — Four (4) independent tanks, one in each nacelle above the engine (Arm 442.0, Trim Station -85.0). Capacity for each, 8 gallons usable, total 12 gallons. Capacity for all, 32 gallons usable, total 48 gallons.

See NOTE 1 for system oil.

Maximum operating altitude — 32,600 feet

Other operating limitations — Aircraft shall be operated in compliance with the operating limitations specified in the FAA approved Airplane Flight Manual.

Manufacturer's Serial Numbers — 4388 and up, 4299 through 4387 which have been modified in accordance with STC ST446SO. (See NOTE 5.)

VI. - Model 382J S/N 5408 (Hercules II) (Transport Aircraft), approved September 9, 1998, See NOTE 5)

Engines — 4 Allison turbo-prop AE2100D3
Engine Type Certificate No. TE1CH

Fuel — Commercial aviation turbine fuels conforming to ASTM Specification No. D 1655-59T, types Jet A, Jet A-1 or Jet B, or commercial equivalents of MIL-J-5624, grade JP-4, JP-5, or JP-8.

Lubricating Oil — Exxon Turbo Oil 2380 (-40 deg. C) or Mobil Jet II (-40 deg. C)

Engine Limits

Condition	MGT °C	NG %	Prop % RPM	Oil Pressure - PSIG		Oil Temp °C
				Prop Gear Box	Engine	
Start (Note 8)	< 807 (Note 1)	≥ 72	N/A	(Note 2)	(Note 3)	(Note 4) (Note 13)
Ground Operations Feathered LSGI Unfeathered LSGI Unfeathered HSGI	< 600 <600 <600 (Note 5)	≥ 72 ≥ 72 ≥ 72	20 – 30 71 – 75 (Note 6) 99	≥ 15 110 – 210 170 - 210	40 – 80	60 – 86 (Note 7)
Maximum Reverse	< 833	< 102	101	170 - 210	40 - 80	60 - 86
	≤ 852 (Note 9)	< 102	99 – 101	170 – 210	40 – 80	60 – 86 (Note 10)
Flight Max Continuous Idle	< 833 < 833	< 102	99 – 101 (Note 11)	170 - 210	40 - 80	60 – 86 (Note 12)

Note

1. Starting (start sequence, below 65% NG) MGT of 807°C for a maximum of three seconds is permitted.
2. An indication of increasing oil pressure must be noted within 15 seconds of propeller rotation.
3. An indication of increasing oil pressure must be noted within 15 seconds of gas generator rotation.

4. Engine starts are prohibited when oil temperatures are -40°C or below with MIL-L-23699 oil or its commercial equivalent (Exxon Turbo Oil 2380, Mobil Jet II)
5. Ground Operation MGT reference temperature.
6. Avoid stabilized operation between 52-68 percent and 76 to 85 percent propeller RPM (turbine shaft and propeller critical speed range).
7. During ground operation engine power is limited to idle when oil temperature is less than 0°C, and to 1,000 HP when engine oil temperature is less than 45°C.
8. Engine life cycle is counted each time the engine is started.
9. If MGT exceeds 852°C, accomplish the EMERGENCE ENGINE SHUTDOWN procedure contained in the FAA Approved Airplane Flight Manual.
10. Take-off is permitted with an oil temperature of 45°C.
11. Transient operation up to 112 percent during transition from flight idle to ground idle is acceptable.
12. If oil temperature exceeds 93°C, engine shutdown is recommended and maintenance is required.
13. Blade angle changes when the engine is not operating should not be accomplished when oil temperature is less than -40°C.

Propeller and Propeller Limits

4 Dowty Aerospace (c)R391/6-132-F/3 propellers (constant speed, hydraulic)
Propeller Type Certificate No. P15BO
Diameter:13 ft. 6 in.
Single rotation, six blade assembly with governing speed setting 1020 prpm.
Propeller assembly is complete with spinner, feathering and reversing provisions, constant speed control, synchrophaser, and electrical ice control.

Blade angles		See NOTE 3
Feather	84.5° ± 0.3°	(d)
Low pitch stop (min. flt. idle)	13.0° ± 2.0°	(d)
Ground idle	1.0° ± 0.3°	(d)
Reverse	-17.0 ± 0.3°	(d)

Airspeed Limits

V_{MO}	Maximum operating)	See Fig. 1-3
V_A	(Maneuvering)	of approved
V_B	(Turbulent air penetration)	Airplane Flight Manual
V_{FE}	(Take-off & approach, 50%)	182K
V_{FE}	(Landing, 100%)	149K
V_{LO}	(Landing gear operation)	170K
V_{LE}	(Landing gear extended)	170K
V_{LL}	(Landing light extended)	250K

Heated windshield limitations

If electric windshield heat is operative, it must be used for all flight operations. Operation without electric windshield heat, on any or all portions of the windshield, is permissible provided (1) the airplane is not flown in known icing conditions, and (2) the maximum speed limit below 10,000 ft. is 187 KCAS.

Weight & C.G. Limits (gear up or down)

Condition	Wt./lbs.	Most Fwd. C.G.		Most Aft C.G.	
		%MAC	F.S.	%MAC	F.S.
Ramp	155,800	21.2	522.3	30	536.8
Take-off	155,000	21.1	522.1	30	536.8
Landing	130,000	17.8	516.7	30	536.8
Zero fuel	124,000	16.8	515.0	30	536.8

Datum

Trim Station -533.0 (F.S. 94.0), W.L. 142.98, B.L. 0.0 (NAS 221 screw head on bottom of forward fuselage, 71.0" forward of center line of nose gear strut).

M.A.C.

164.5"; leading edge M.A.C. Trim Station -39.6 (F.S. 487.4)

Leveling Means

Provisions for leveling by plumb line are installed in the cargo compartment on the left side at approximately Trim Station +110 (F.S. 637). A plumb line support bracket is located on the fuselage side panel at approximately W.L. 252, B.L. 64L, and a leveling plate is located on top of the cargo floor curb at approximately W.L. 150, B.L. 64L.

Minimum Crew

Two (2) - Pilot and Co-Pilot

Passengers

None. Approved for cargo only.

Cargo compartment

Length	54.9
Width	9 ft. 11½ in.
Height	9 ft.
Usable volume	5,140 cu. ft.
Maximum cargo	See SMP 521-5

Loading data for approved loading schedules are contained in Lockheed Report LG95ER0192 for aircraft S/N 5408. Individual aircraft weight and balance data are contained in Lockheed Report SMP 521-5.

Class E cargo compartment. For all models except the Model 382J, cargo must be loaded in compliance with loading placard, Lockheed Drawing 398251-1. For all models except the Model 382J, when cargo restraining (barrier) net is installed, the 393487-15 placard is a required part of the installation. For the Model 382J, cargo must be loaded in compliance with loading placard, Lockheed Drawing 3305068-5. For the Model 382J, when cargo restraining (barrier) net is installed, the 3305073-1 placard is a required part of this installation.

Maximum fuel quantity

	Tank	Usable Fuel	Total Fuel	F.S. Arm (Full)	T.S.
1	(outboard)	8,784 lbs.	8,970 lbs.	545.2	+18.2
2	(inboard)	8,183 lbs.	8,280 lbs.	555.0	+28.0
3	(inboard)	8,183 lbs.	8,280 lbs.	555.0	+28.0
4	(outboard)	8,784 lbs.	8,970 lbs.	545.2	+18.2
	Left Aux.	6,217 lbs.	6,279 lbs.	556.7	+29.7
	Right Aux.	6,217 lbs.	6,279 lbs.	556.7	+29.7
	Total	46,368 lbs.	*47,058 lbs.	(551.8)	(+24.8)

* Does not include line fuel (See NOTE 1 (c)).

The above fuel weights are not to be exceeded. (Tank volume may be calculated using fuel density of 6.9 lbs./gal.).

Arm varies with fuel loading. Reference loading data, Lockheed Report SMP 521-5, for approved fuel loading information.

See NOTE 1 for unusable fuel.

Oil Capacity

Four (4) independent tanks, one in each nacelle above the engine (Arm 442.0, Trim Station -85.0). Capacity for each, 12 gallons usable, total 12 gallons. Capacity for all, 48 gallons usable, total 48 gallons.

See NOTE 1 for system oil.

Maximum operating altitude

32,200 feet

Other operating limitations

Aircraft shall be operated in compliance with the operating limitations specified in the FAA approved Airplane Flight Manual.

Manufacturer's Serial Numbers

5408

VII. - Model 382J (LM-100J) Type Design Upgrade approved November 15, 2019 (See NOTE 5)

A 382J (LM100) is a 382J cargo airplane that has been modified with significant upgrades. These aircraft remain 382J aircraft for documentation purposes on this TCDS and with regard to the applicability of airworthiness directives. Because of the magnitude of thses changes, the certification basis for the changed aspects was required to established and documented in accordance with section 21.101 (Changed Product Rule).

Certification Basis: The certification basis is advanced for the following regulations for the areas listed below:

For new systems, and those systems which have been significantly modified to alter its basic function or capability, compliance was shown to FAR 25, dated 21 February 2014, as modified by Amendment 25-1 through 25-137, and FAR 26, dated 10 December 2007, as modified by amendments 26-1 thru 26-6 except that:

Paragraph	Amendment	Paragraph	Amendment
25.21	25-72	25.171	25-7
25.103	25-108	25.177	25-108
25.105	25-92	25.207	25-108
25.107	25-108	25.237(a)	25-108
25.111	25-115	25.253	25-84
25.119	25-108	25.305	25-0
25.121	25-108	25.333	25-0
25.123	25-0	25.335(a-d) e(1-2)	25-23
25.125	25-108	25.335(e)(3)	25-23
25.143	25-108	25.341	25-0
25.149(e)	25-137-SC	25.343	25-0
25.161(d)	CAR 4b.143	25.345	25-0
25.345	25-0	25.904	25-137-SC
25.349	25-0	25.905	25-72
25.351	25-23	25.907	25-0
25.363	25-23	25.961	25-0
25.365	25-0	25.963	25-0
25.371	25-0	25.965	25-0
25.391	25-0	25.969	25-0
25.415	25-0	25.977	25-0
25.427	25-23	25.979	25-0
25.479(a-c)(e)	25-23	25.981(a-2) (b)	25-102
25.485	25-0	25.981(a)(3)	25-102
25.491	25-91	25.981(c)	25-102
25.499	25-23	25.993	25-0
25.561(a-c)	25-23	25.1013	25-0
25.571(a-d)	25-54	25.1091	25-0/25-57
25.571(e)	25-54	25.1103	25-0
25.573	25-0	25.1121	25-0
25.629	25-72	25.1141	25-72
25.657	25-0	25.1163	25-0
25.671	25-0	25.1181	25-0/25-72
25.683	25-0	25.1183	25-57
25.685	25-0	25.1189	25-0
25.693	25-0	25.1199	25-0
25.695	25-0	25.1203	25-26
25.697	25-0	25.1205	25-0
25.701	25-0	25.1301	ARAC RECOMMENDED
25.721	25-0	25.1303	SC NO. 25-ANM-124
25.729	25-0	25.1309	ARAC RECOMMENDED
25.775	25-0	25.1317	SC NO. 25-ANM-125
25.783	25-0	25.1321	SC NO. 25-ANM-124
25.785	25-0	25.1322	25-38
25.789	25-46	25.1329	25-46
25.809	25-9	25.1335	25-41
25.801(a)(2)	25-72	25.1359	25-0
25.811(a)(e-g)	25-0	25.1411	25-0

25.811(b-d)	25-0	25.1415	25-0
25.812(a)(1)(e)(h-j)	25-15	25.1419	25-72
25.813	25-0	25.1435	25-0
25.831	25-41	25.1557	25-0
25.841	25-38	C25.1	25-0
25.851	25-0	F25.2	25-72
25.853	25-72	I25.1 thru .6	25-137-SC
25.855	25-123	I25.1	SC No. 25-AMN-125
25.863	25-0	36.1	36-30
25.901	25-0/25-46		
25.903	25-94		

Weight & C.G. Limits (gear up or down)

Condition	Wt./lbs.	Most Fwd. C.G. %MAC	Most Fwd. C.G. F.S.	Most Aft C.G. %MAC
Ramp	164,00	21.2	522.3	30
Take-off	164000	22.1	523.8	30
Landing	143,000	19.7	519.7	30
Zero fuel	129,000	17.6	516.4	30

Cargo compartment

Length	55.0 ft
Width	9 ft. 11½ in.
Height	9 ft.
Usable volume approx.	5,836 cu. ft.
Maximum cargo	See SMP 3518

Loading data for approved loading schedules are contained in Lockheed Cargo Compartment Loads Document No. LM01-800002-626A. Individual aircraft weight and balance data are contained in Lockheed Weight and Balance Manual SMP 3518.

Manufacturer's Serial Numbers 5818 and up.

DATA PERTINENT TO ALL MODELS:

Certification Basis CAR 1 dated October 1, 1955, and Amendments 1-1 through 1-9.

CAR 9a effective 10 January 1964, which references CAR 4b amended to 31 December 1953, including Amendments 4b-1 through 4b-11, together with SR-422B, SR-450A and amendment 4b-12 as related to CAR 4b.307(a).

Based on 14 CFR § 21.17(a) for new type certificates (TCs), (or 14 CFR § 21.101(g) for changes to TCs), applicable provisions of 14 CFR part 26 are included in the certifaication basis. For any future 14 CFR part 26 amendments, the holder of this TC must demonstrate compliance with the applicable sections.

The Lockheed Model 382J (S/N 5408) was certified as a derivative aircraft and its certification basis was established in accordance with FAA Order 8110.23. For unmodified systems and airframe components, which do not alter the basic system function or capability, the certification basis is FAR Part 25, dated February 1, 1965. For new systems, and those systems which have been significantly modified to alter its basic function or capability, compliance was shown to FAR 25, dated 1 February 1965, as modified by Amendment 25-1 through 25-76, except that:

Compliance with the amendment levels of the following paragraphs was shown:

Paragraph	Amendment
25.143	25-0
25.147	25-0
25.149	25-0
25.361	25-46

25.629	25-72
25.1001	25-18
25.1316	25-81
25.1505	25-22

Compliance was shown to the equivalent CAR 4b requirement for the following FAR 25 requirements:

FAR 25	CAR 4b
25.161	4b.143
25.365	4b.216
25.457	4b.221

Special conditions applicable to the Model 382J (S/N 5408) are shown in the attachments to the following FAA letters to Lockheed Martin: April 16, 1997, May 19, 1997, and February 6, 1998.

FAR 91 effective September 30, 1963.

Application for Type Certificate dated April 23, 1964.

Type Certificate A1SO issued February 16, 1965.

Compliance with CAR 4b.361, Ditching Provisions, has been established.

Compliance with CAR 4b.640, Ice Protection, has been established. Compliance with FAR 25.1419 has been established for the Model 382J S/N 5408.

Compliance with Amendments 4b-11 (CAR 4b.334), Wing Flap Aural Warning, has been established.

Compliance with FAR 25.1001 as amended by 25-18 effective September 28, 1968, has been established.

For the Model 382G, compliance has been shown with FAR 21.93(b), effective December 1, 1969, in that noise levels have not been increased.

For Models 382E, 382G, and 382J compliance with FAR 36.1(d)(1), noise standards, has been established. The Models 382E, 382G, and 382J (S/N 5408)also meet FAR 36, Stage 3 noise requirements. The Model 382J (LM-100J) meets 14 CFR Part 36, Stage 5 noise requirements.

Compliance has been found for the following regulations: 14 CFR § 26.11, 26.43 and 26.45, (Amdt. No. 26-0 through 26-3).

Production Basis — Production Certificate No. 205

Equipment — The basic required equipment, as prescribed in the applicable airworthiness regulations (see certification basis), must be installed in the aircraft for certification. Approved Equipment for Model 382 is shown on Master Equipment List ER-9798. Approved equipment for the Models 382B, 382E, and 382F, S/N 4101 through 4933 is shown in the Master Equipment List, Lockheed Report ER-9710, revised October 4, 1968, or later FAA approved revision. Approved equipment for Lockheed Models 382B, 382E, and 382F, S/N 4350 and up is shown on Lockheed Drawing 3303609, Type Design Equipment List, latest FAA approved revision. Approved equipment for the Lockheed Model 382G is shown on Lockheed Drawings 3331262-1 and 393201-3. Approved equipment for the Model 382J (S/N 5408) is shown on Lockheed Drawings 3331262-1and 3350139-1/3/7.

Control Surface Movements

Rudder	35°	right	35°	left
Elevator	40°	up	15°	down

Ailerons	25°	up	15°	down
Rudder Tab	25°	right	25°	left
Elevator Tab	6°	up	25°	down
Aileron Tab	20°	up	20°	down
Wing flap	36°	down	(100%)	

Service information — Lockheed operations and maintenance instructions, service bulletins and other service information, when FAA approved, will carry a statement to that effect.

NOTE 1.

a. Current weight and balance report, including a list of equipment in certificated empty weight, and loading instructions when necessary, must be in each airplane at the time of original certification and at all times thereafter except in the case of operators having an approved weight control system. Approved weight and balance data for the Model 382 is contained in Lockheed Report ER-9511. Approved weight and balance data for the Model 382B is contained in Lockheed Report ER-8083. Approved weight and balance data for Model 382E airplanes, ship serials 4222 and 4225, is contained in ER-10285. Approved weight and balance data for the remaining Model 382E airplanes and all Model 382F airplanes is contained in Lockheed Report ER-9511.

Approved weight and balance data for the Model 382G is contained in Lockheed Report ER-10761. Individual aircraft weight and balance data are contained in Lockheed Report SMP 521 (Model 382B), SMP 521-2 (382, 382E and 382F), SMP 521-3 (ship serials 4222 and 4225), and SMP 521-4 (Model 382G).

Approved weight and balance data for the Model 382J (S/N 5408) is contained in Lockheed report LG95ER0192. Individual aircraft weight and balance data are contained in Lockheed Report SMP 521-5. Approved weight and balance data for Model 382J (LM-100J), are contained in Lockheed report LM01-800002-626A. Individual aircraft weight and balance data are contained in Lockheed Report SMP 3518.

b. The airplane must be loaded so that the C.G. is within the specified limits at all times. Moment change due to gear retraction is negligible.

c. The weight of the system fuel and oil as defined below, and hydraulic fluid, must be included in the airplane empty weight.

System fuel: The weight of all fuel required to fill all lines and tanks up to the zero point on the fuel gauges in the level flight attitude. Unusable (includes drainable and trapped fuel):

Unusable fuel aircraft serial 4101 through 4581.

Tank	Wt./lbs.	Arm (F.S.)	Arm (T.S.)
1 (outboard)	93	555.3	+28.3
2 (inboard)	141	565.4	+38.4
3 (inboard)	141	565.4	+38.4
4 (outboard)	93	555.3	+28.3
Left Aux.	*60	564.0	+37.0
Right Aux.	*60	564.0	+37.0
Left Ext. (Lockheed P/N 388236)	**110	552.0	25.0
Right Ext. (Lockheed P/N 388236)	**110	552.0	+25.0
Lines	44		
	852		
Left Ex. (Lear Siegler P/N 305J001)	**144	552.0	+25.0
Right Ext. (Lear Siegler P/N 305J001)	**144	552.0	+25.0
	920		

Unusable fuel aircraft serial 4582 and up (except Model 382J).

Tank	Wt./lbs.	Arm (F.S.)	Arm (T.S.)
1 (outboard)	84	555.3	+28.3
2 (inboard)	97	565.4	+38.4
3 (inboard)	97	565.4	+38.4
4 (outboard)	84	555.3	+28.3
Left Aux.	*60	564.0	+37.0
Right Aux.	*60	564.0	+37.0
Left Ext. (Lockheed P/N 388236) Lines	**110	552.0	25.0
Right Ext. (Lockheed P/N 388236)	**110	552.0	+25.0
Lines	44		
	746		
Left Ex. (Lear Siegler P/N 305J001)	**144	552.0	+25.0
Right Ext. (Lear Siegler P/N 305J001)	**144	552.0	+25.0
	814		

* See NOTE 4
** See NOTE 8

Unusable fuel aircraft Model 382J, serial 5408.

Tank	Wt./lbs.	Arm (F.S.)	Arm (T.S.)
1 (outboard)	186	552.2	+25.2
2 (inboard)	97	565.1	+38.1
3 (inboard)	97	565.1	+38.1
4 (outboard)	186	552.2	+25.2
Left Aux.	*62	565.9	+38.9
Right Aux.	*62	565.9	+38.9
Lines	44		
	690		

* See NOTE 4

A density of 6.9 lbs./gal. was used in calculating unusable fuel weights.

System oil: The weight of oil remaining in the engine lines and tanks after subtracting the usable oil from the total capacity.

Total: 221 lbs., Arm 442.0 (Model 382 and 382B),
Trim Station - 85.0 (Model 382E and 382G).

Total: 108 lbs. (Model 382J)
Trim Station: -77.0

Fuel loading and usage:

1. Fuel must be loaded and used to provide compliance with the "Fuel Unbalance" limitations contained in the approved Airplane Flight Manual.

2. Refer to the approved Airplane Flight Manual for normal fuel management procedures.

3. Phillips fuel additive PFA-55MB may be used in concentrations not to exceed 0.15% by volume. No fuel system anti-icing credit is allowed.

NOTE 2. The following Airplane Flight Manuals are required: For the Model 382B, AFM Lockheed Publication SMP 514, dated October 5, 1965 (with appropriate revisions), for the Model 382F, AFM Lockheed Publication SMP 760, dated December 3, 1969 (with appropriate revisions), and for the Models 382, 382E, and 382G, AFM 382/E/G, dated August 30, 1978 (with appropriate revisions). For the Model 382J (S/N 5408), Lockheed publication AFM 382J, dated September 9, 1998 is required. For Model 382J (LM-100J)), Lockheed publication AFM 382J (SMP 3510), dated November 15, 2019 is required.

NOTE 3.

a. Propeller blade angles are measured at the blade 42 inch stations with the propeller on a test post under conditions established by the applicable Hamilton Standard Maintenance Manual.

b. Propeller blade angles are indicated on the back-up valve housing under conditions established in the applicable Lockheed Model 382 Maintenance Manual.

c. 1° blade angle is a running blade angle and corresponds to a static coordinator pointer position of 10° ± 1°. This position is obtained with the throttle lever in the ground idle aft detent.

d. For the Model 382J, propeller blade angles are measured at seventy percent of blade radius.

NOTE 4. Auxiliary fuel tanks are eligible for installation in the Model 382B and 382E and 382F when installed according to Lockheed Drawing 393830 and PS 101 for 382B up to S/N 4299, and Drawing 399301 for aircraft with S/n 4299 and up.

NOTE 5. The basic model numbers of the aircraft are 382, 382B, 382E, 382F, 382G, and 382J. The nameplate contains two sets of additional numbers; the first set represents the engine and the second set represents the type of fuselage on initial issue of the standard airworthiness certificate.

<u>EXAMPLES</u>:

1. 382B-44B-17 contains 501-D22 engines and short fuselage.

2. 382E-44K-20 contains 501-D22A engines and has the 100 inch fuselage stretch.

3. 382F-44B-20 contains 501-D22 engines and has the 100 inch fuselage stretch.

4. 382G-44K-30 contains 501-D22A engines and has the 180 inch fuselage stretch

The Model numbers are specified in ER-206M, Addendum A. Incorporation of Supplemental Type Certificate ST395SO modifies a 382B to 382E configuration and is noted with the installation of a modification data plate. The basic model remains 382B on the registration and airworthiness certificates. The modified airplane is operated in accordance with the Model 382E data contained in the data sheet and in the Airplane Flight Manual, Lockheed Publication AFM 382/E/G dated

August 30, 1978. Incorporation of Supplemental Type Certificate ST425SO modifies a 382B to a 382F configuration and is noted with the installation of a modification data plate. The basic model remains 382B on the registration and airworthiness certificates. The modified airplane is operated in accordance with the Model 382F data contained in the data sheet and in the Airplane Flight Manual, Lockheed Publication SMP 760, dated 3 December 1969. Incorporation of Supplemental Type Certificate ST446SO modifies a Model 382B to a 382G configuration and is noted with the installation of a modification data plate. The basic model remains 382B on the registration and airworthiness certificates. The modified airplane is operated in accordance with the Model 382G data contained in the data sheet and in the Airplane Flight Manual, AFM 382/E/G, dated August 30, 1978.

The suffix -1C, -2C, etc., appearing on the aircraft data plate designates a customer peculiar configuration, which includes variations in equipment installations from the basic model airplane.

NOTE 6. FAA Exemption No. 319 is pertinent to the civil certification of this model aircraft and will be noted on all Certificates of Airworthiness.

NOTE 7. For all Model 382 aircraft, except the Model 382J: The 373118 beam at W.L. 195, F.S. 93 to 172, must be replaced after every 40,000 flight hours. For the Model 382J (S/N 5408), mandatory inspections and life limited components are listed in Lockheed Report J61C05A626, "Maintenance Program for Lockheed Model382J (S/N 5408)," dated 26 August 1998, or later FAA approved revision. For Model 382J (LM-100J), mandatory inspections and life limited components are listed in Lockheed Report PMC-L382-98897-MI000-00, "Aircraft Scheduled Inspections and Maintenance Requirements Manual Work Cards".

NOTE 8. External fuel tanks are eligible for removal in accordance with the maintenance manuals for the Models 382, 382B, 382E, 382F, and 382G airplanes. For Model 382J series External tanks are not part of the certification basis.

NOTE 9. Maximum Fuel Quantity for aircraft S/N 4582 and up (except the Model 382J).

Maximum fuel quantity Aircraft S/N 4101 through 4581. See NOTE 9 for aircraft S/N 4582 and up.

	Tank	Usable Fuel	Total Fuel	F.S. Arm (Full)	T.S.
1	(outboard)	9247 lbs.	9331 lbs.	545.2	+18.2
2	(inboard)	8481 lbs.	8578 lbs.	555.0	+28.0
3	(inboard)	8481 lbs.	8578 lbs.	555.0	+28.0
4	(outboard)	9247 lbs.	9331 lbs.	545.2	+18.2
**	Left Aux.	6269 lbs.	6329 lbs.	556.7	+29.7
**	Right Aux.	6269 lbs.	6329 lbs.	556.7	+29.7
***	Left External	9355 lbs.	9465 lbs.	551.2	+24.2
***	Right External	9355 lbs.	9465 lbs.	551.2	+24.2
		66,704 lbs.	*67,406 lbs.	(549.9)	
****	Left External	9355 lbs.	9499 lbs.	551.2	+24.2
****	Right External	9355 lbs.	9499 lbs.	551.2	+24.2
****		66,704 lbs.	*67,474 lbs.	(549.9)	

* Does not include line fuel (See NOTE 1 (c)).
** Optional tank installations.
*** Optional external tank installation (Lockheed P/N 388263)
**** Optional external tank installation (Lear Siegler P/N 305J001)

See NOTE 1 for unusable fuel.

NOTE 10. For the Model 382J (S/N 5408), no issuance of a standard certificate of airworthiness is permissable without FAA approval of a maintenance review board (MRB) report and a maintenance program per the requirements of Advisory Circular 121.22A.

Note 11. For Model 382J (LM-100J), the following Exemptions, Equivalent Levels of Safety (ELOSs), Special Conditions apply:

Exemptions:
Exemption No. 17185 for 25.335(e)(3) and 25.473(a)(2)
Exemption No. 17702 for 25.981(a)(3)

Equivalent Level of Safety (ELOS) for 25.1301 and 25.1309 ARAC Recommend

Special Conditions for; 25.1317, SC NO. 25-ANM-125
25.1321 and 25.1303, SC NO. 25-ANM-124
Appendices I25.1 thru .6, 25-137-SC
Appendices L25.1, SC No. 25-AMN-125

Note 12. For Model 382J (LM-100J) Fire Containment Covers (FCCs) must be used in accordance with SMP 3520 (382J Cargo Loading Manual) and must meet the qualification test requirements on Lockheed Martin Source Control Drawing (SCD) 698490.

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