

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A550
Lockheed
282-44A-05
(C-130B)

May 15, 1967

TYPE CERTIFICATE DATA SHEET NO. A550

This data sheet which is a part of Type Certificate No. A550, 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-Georgia Company
A Division of Lockheed
Aircraft Corporation
Marietta, Georgia

**This Type Certificate was
SURRENDERED to the FAA.**

Date: December 09, 2009

I - Model 282-44A-05 (C-130B) (Restricted Category) approved April 27, 1967

Engines 4 Allison turbo-prop T56-A7 or T56-A-7A or 501-D22

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 Specification EMS-35 or MIL-L-7808

Engine limits Static, standard day, sea level;

<u>Turbine Inlet Temp.</u>	<u>Torque</u>	<u>Oil Temp.</u>
Take-off (5 Minutes): 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		

The maximum allowable power as measured by the torque meter is 19,600 in/lb for take-off on inboard engines, and the torque shown on Fig. 4-2 of AFM Supplement No. 3587-1 on outboard engines, to maintain control on take-off with the loss of an outboard engine.

Propeller and propeller limits 4 Hamilton Standard hydromatic propellers
54H60-63 Blade A-7081B-2
54H60-97 A-7081B-2
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.

<u>Blade angles:</u>		See Note 3
Feather	92.5 ± 0.20°	(a) (b)
Low pitch stop (min. ft. idle)	21.00 ± 0.50°	(a)
Ground Idle	10.0°	
Reverse	-6.0° + 1.0°	(b)

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Propeller oil MIL-H-5606B

Airspeed limits V_{mo} (Maximum operating)
 V_a (maneuvering) See Fig. 1 of AFM
 Supplement No. 3587-1

V_b (turbulent air penetration)
 V_{fe} (take-off & approach 50%) 183 K
 V_{fe} (landing, 100%) 145 K
 V_{lo} (landing gear operation) 168 K
 V_{le} (landing gear extended) 168 K
 V_{ll} (landing light extended) 168 K

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.			
			%MAC	F.S.	%MAC	F.S.
	Takeoff	135,000	20.8	521.6	30.0	536.8
	Landing	118,000	18.6	518.0	30.0	536.8
	Zero Fuel	105,000	16.1	513.9	29.2	535.4

Reference U.S.A.F. T.O. 1C-130B-1

Datum Fuselage Station 94.0, W.L. 142.98, BL 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., F.S. 487.4

Leveling means Provisions for leveling by plum line are installed in the cargo compartment on the left side of approximately 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, except for essential crew as defined in FAR 91.

Cargo compartment Length 40 ft.
 Width 9 ft., 11 1/2 in.
 Height 9 ft.
 Usable volume 3,780 cu. ft.
 Maximum cargo 35,000 lbs.

Reference Loading Data for approved loading schedule: U.S.A.F. T.O. 1C-130A-9, "Cargo loading Handbook," and Supplement No. 1, dated April 28, 1967

Tank	Usable Fuel	Total Fuel	Arm (full)
1 (outboard)	8710 lbs.	8775 lbs.	544.9
2 (inboard)	7995 lbs.	8060 lbs.	554.6
3 (inboard)	7995 lbs.	8060 lbs.	554.6
4 (outboard)	8710 lbs.	8775 lbs.	544.9
Left Aux.	5915 lbs.	5915 lbs.	556.7
Right Aux.	5915 lbs.	5915 lbs.	556.7
	45,240 lbs.	45,500 lbs.	

The above fuel weights are not to be exceeded. (Tank Volume may be calculated using fuel density of 6.5 lbs./gal.) Arm varies with fuel loading. Reference Loading Data in U.S.A.F. T.O. 1C-130B-1.
 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 alt. 32,000 feet.

Other operating limitations Aircraft shall be operated in compliance with the operating limitations specified in the following documents:

- (1) U.S.A.F. T.O. 1C-130B-1, dated 17 September 1965, changed 26 September 1966.
- (2) Flight Crew Checklist, T.O. 1C-130B-1CL-1, dated 17 September 1965.
- (3) FAA Approved AFM Supplement No. 3587-1 for Lockheed C-130B Airplane S/N 3587(AF60-5452)

Control surface movements

					Rigging Inst. <u>Drawings</u>
Rudder	35°	Right	35°	Left	371951
Elevator	40°	Up	15°	Down	374429
Ailerons	25°	Up	15°	Down	356300
Rudder Tab	25°	Right	25°	Left	371951
Elevator Tab	6°	Up	25°	Down	374429
Aileron Tab	20°	Up	20°	Down	356300
Wing Flap	36°	Down (100%)			372066

Serial Nos. eligible 3587

Certification basis FAR 21.25(a)(2) effective February 1, 1965

Type Certificate No. ASSO issued April 27, 1967 for the carriage of outsize cargo in the furtherance of the C-5 airplane program. This operation to be conducted in furtherance of operator's own business only.

Application for Type Certificate dated April 21, 1967.

Production basis None - Prior to original certification of each aircraft, an FAA representative must perform a detailed inspection for workmanship, materials, and conformity with the approved technical data, and a check of the flight characteristics.

Equipment The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.

Service information Maintenance of the aircraft will be in accordance with the approved procedures of the company. A Progressive Inspection System will be established per FAR 91.171.

- NOTE 1. (a) Current weight and balance report including list of equipment included in certificated weight empty, and loading instructions when necessary must be in each aircraft at the time of original certification and at all times thereafter except in the case of operators having an approved weight control system.
- (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 fuel point on the fuel gages in the level flight attitude.

Unusable (includes drainable and trapped fuel):

Tank	<u>Lbs.</u>	<u>Arm</u>
1	65	555.3
2	65	565.4
3	65	565.4
4	65	555.3
Left Aux.	0	
Right Aux.	0	
TOTAL	260	
Trapped or line fuel	149	563.5

*This column includes 41 lbs. of fuel (trapped in lines) distributed to each tank at 5 lbs. per tank.

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

- (d) Fuel Loading and Usage.

- (1) Fuel must be loaded and used to provide compliance with the "Fuel Unbalance" limitation contained in U.S.A.F. T.O. 1C-130B-1. Refer to U.S.A.F. T.O. 1C-130B-1 for normal fuel management procedures.
- (2) 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 documents are required for the Model C-130B:

- (a) U.S.A.F. T.O. 1C-130B-1, dated 17 September 1965, changed 26 September 1966, "Flight Manual."
- (b) U.S.A.F. T.O. 1C-130B-1CL-1, dated 17 September 1965, "Pilots' and Flight Mechanic's abbreviated Flight Crew Checklist."
- (c) FAA Approved AFM Supplement No. 3587-1 for Lockheed C-130B Airplane S/N 3587(AF60-5452)
- (d) U.S.A.F. T.O. 1C-130A-9, "Cargo Loading Handbook," and Supplement No. 1, dated April 28, 1967.
- (e) U.S.A.F. T.O. 1-1B-40, "Handbook of Weight and Balance Data for AF60-5452."

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 C-130B Maintenance Manual.

NOTE 4. Prior to civil airworthiness certification, Lockheed-Georgia Company must show that the following has been accomplished:

- (a) Modifications in accordance with Lockheed-Georgia Company Drawing No. 397582.
- (b) Compliance with Lockheed-Georgia Service Bulletin 82-153, dated December 1, 1966.
- (c) Compliance with all U.S.A.F. Technical Orders which affect airworthiness.
- (d) Inspect all fuel tanks for sealant deterioration and repair as necessary.

.....END.....

Federal Aviation Agency

RESTRICTED

Type Certificate

Number A550

Added Notes at Surrender:

1. Future unsafe conditions existing in the product can result in an airworthiness directive requiring correction of the unsafe condition before further flight. If there is no entity to comply with 14 CFR 21.99(a), Required design changes, the existence of an unsafe condition might result in permanently grounding of the aircraft.
2. Replacement parts might not be available in the future.

This certificate, issued to Lockheed-Georgia Company, Marietta, Georgia certifies that the type design for the following product with the operating limitations and conditions therefor as specified in the Civil Air Regulations and the Type Certificate Data Sheet, meets the airworthiness requirements of Part 21.25 of the Civil Air Regulations.

Lockheed Model 282-44A-05 (C-130B)

This certificate and the Type Certificate Data Sheet which is a part hereof, shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Agency.

Date of application: April 21, 1967

Date of issuance: April 27, 1967

STC Surrender processed:

Approval by:

Melvin Taylor
Melvin Taylor, ATL ACO Manager

Date: 01 DEC 2009

By direction of the Administrator:

(Signature) John F. Vogel
John F. Vogel
Chief, Engineering and Manufacturing Branch
Flight Standards Division

This certificate may be transferred if endorsed as provided on the reverse hereof.

Any alteration of this certificate and/or the Type Certificate Data Sheet is ~~prohibited~~ if not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.