

LOCKHEED AIRCRAFT CORPORATION

MODELS: Lockheed (Army) P-38E, P-38J (F-5E), P-38L (F-5F, F-5G), P-38M

SPEC. NUMBER: L-10-3 (Approved 4/7/47)

(Eligible for Certification in Limited Category only.)

(Holder of Limited Type Certificate: Lockheed Aircraft Corp., Burbank, CA)

Engine	2 Allison V-1710-27, -29, -89, -91, -111 or -113								
Fuel	Grade 100/130								
Engine limits	V-1710-27 and -29: Maximum, except takeoff 36.5 in. Hg., 2600 rpm (1000 hp) (Sea level to 25,000 ft. with turbo-supercharger) Takeoff (five minutes) 39.5 in. Hg., 3000 rpm (1,150 hp) V-1710-89, -91, -111 and -113: Maximum, except takeoff 44 in. Hg., 2600 rpm (1,100 hp) (Sea level to 27,000 ft. with turbo-supercharger) Takeoff (five minutes) 54 in. Hg., 3,000 rpm (1,1425 hp)								
Propellers	Curtiss: C532D-F61 hub, 88966-18 blades. C532D-F62 hub, 89303-18 blades. Pitch stops (ref. 42 in. sta.) 22.7 degrees low, 57.7 degrees high, 87.5 degrees feather. C532D-F40 or F56 hub, 89303-18 blades. C532D-39 or -55 hub, 88996-18 blades. Pitch stops (ref. 42 in. sta.) 22.7 degrees low, 57.7 degrees high, 87.5 degrees feather. C532D-F40 or -F56 hub, 89303-18 blades. C532D-39 or -55 hub, 88996-18 blades. Pitch stops (ref. 42 in. sta.) 20.3 degrees low, 55.3 degrees high, 87.5 degrees feather. Diameter 11'6". (See NOTE 2)								
Airspeed limits	<table><thead><tr><th><u>Altitude</u></th><th><u>Maximum glide or dive speed</u></th></tr></thead><tbody><tr><td>0 to 10,000 ft.</td><td>420 mph</td></tr><tr><td>10,000 to 20,000 ft.</td><td>360 mph</td></tr><tr><td>20,000 to 30,000 ft.</td><td>290 mph</td></tr></tbody></table>	<u>Altitude</u>	<u>Maximum glide or dive speed</u>	0 to 10,000 ft.	420 mph	10,000 to 20,000 ft.	360 mph	20,000 to 30,000 ft.	290 mph
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Maximum weight	Level flight or climb speed	290 mph
C.G. range	18,500 lbs.	
	20 percent to 28.5 percent MAC gear down (landing gear retraction has negligible effect on C.G. movement)	
Datum	L.E. wing at root chord (119.5" from nose)	
MAC	84.25 inches L.E. MAC +11.46 in.	
Other operating limitations	Army Technical Order AN-01-75-1	
Certification basis	Limited Type Certificate No. 10 (CAR 9)	
Production basis	None may be produced under this approval	
Export eligibility	Not eligible for a certificate of airworthiness for export	

EQUIPMENT:

No equipment other than engines and propellers are specified. However, such equipment as required by CAR Part 43.30 for the particular operation authorized for NC aircraft must be installed. Also, any additional equipment necessary for the proper operation of the aircraft must be installed. The aircraft may incorporate such military equipment (except armament) as was originally incorporated in the type for military or naval service. Additional equipment may be installed as can be substantiated on the basis that it presents no obvious hazard to safety.

NOTE 1. Weight and Balance Report including list of equipment included in the certificated empty weight must be submitted for each aircraft. Army or Navy weight records in current condition may be submitted in lieu of an actual weight. The equipment list need include no more than the following:

- (a) Required equipment as defined under "EQUIPMENT" above.
- (b) Additional items as may be reasonably considered removable and are so located or of such weight that their removal or addition could noticeably affect the weight and balance of the aircraft. Items built into the aircraft structure need not be listed. The equipment list must be prepared by the applicant for the approval of the certificating FAA representative, and in such form that it can be attached to the FAA Operating Limitations.

NOTE 2. The following placards must be prominently displayed in the positions indicated:

- (a) In full view of all passengers: "This is a military type aircraft and under the Civil Air Regulations shall not be used for the carriage of passengers or cargo for compensation or hire."
- (b) In the cockpit in full view of the pilot:
 - "Do not extend landing gear above 175 mph."
 - "Do not extend landing light above 140 mph."
 - "Do not operate extended flaps above 150 mph."
 - "Do not operate maneuvering flaps above 250 mph."
 A dive limits placard in accordance with Figure 25a T.O. AN-01-75-1.

The airspeed indicator shall be marked as follows:

- (1) A red radial line at 420 mph.
- (2) A green radial line at 290 mph.
- (3) A yellow arc (precautionary range) shall extend from the green line to the red radial line.

NOTE 3. The following statement must appear on the Operating Limitations: "This airplane must be operated at all times within the limitations set forth in Army Technical Order AN-01-75 except for limitations specifically called out in Aircraft Specification AL-10 in which case the values given in the specification must be observed. A copy of the pertinent Army Technical Order and Aircraft Specification AL-10 must be carried during flight." In all cases it will be the responsibility of the applicant to secure a copy of the correct Technical Orders. The FAA does not have these documents available for distribution.

NOTE 4. All structural repairs should be made in accordance with Army Technical Order AN-01-75FF-3. If any repairs or modifications (other than those covered in the pertinent Army repair manual) are made prior to and/or subsequent to NL certification, it is the responsibility of the owner to furnish sufficient evidence to a FAA representative to show that the modified airplane maintains the same degree of airworthiness as the original. The FAA can give no technical assistance on such matters since complete structural data for NL aircraft are not required by Part 9 and therefore are not available in the FAA.

NOTE 5. Prior to obtaining certification for night operation, the following modifications to the exterior lighting must be made in order to comply with the general requirements of the Civil Air Regulations:

- (1) Position lights
 - (a) Wing Tip - If type A-7 or A-8 light assemblies are installed,

they must be replaced with type certificated light assemblies. If type A-9 (AN-3033-10 or AN-3033-5 through -8) light assemblies are installed, they may be satisfactorily modified by painting the sand blasted portion of the inner surface of the AN-1042-3 and -4 covers black. The AN-3033-1 through -4 light assemblies are satisfactory without modification.

- (b) Tail - The present lights on the vertical stabilizers are not satisfactory and must be replaced with type certificated units.
- (2) Position light installation
The position lights shall be installed to comply with the requirement of the CAR, Parts 15.2 and 3.538.
- (3) Position light circuit and control
The position lights (wing tips and tail) shall be controlled by one SPST switch. The circuit should be protected by its own fuse or circuit breaker. The individual wing tip and tail light switches with dim and bright positions shall be removed and the dimming resistors presently installed shall be disconnected.
- (4) Other exterior lights
With the exception of the landing lights, any other exterior lights are not required and may be removed if so desired.

NOTE 6. The F-5C is the same as the P-38J and F-5F and F-50 are the same as the F-38L except for photographic equipment. The P-38M is the night fighter version of the P-38L with the following major changes: Revised fuel system, standard canopy replaced with larger canopy, and installation of observer's seat.

The list of mandatory changes required prior to original certification may be obtained from Federal Aviation Agency, Washington 25, D.C.