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T. O. No. 01-50DB-5

**HANDBOOK
BASIC WEIGHT CHECK LIST
AND LOADING DATA**

USAF SERIES

NAVY MODELS

L-5, L-5B

OY-1 AND

L-5E, AND

OY-2

L-5G

AIRCRAFT

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**16 JUNE 1949
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SECTION I

INTRODUCTION

1. This Technical Order contains Charts A, Basic Weight Check Lists and a Chart E, Loading Data, for use in the Handbook of Weight and Balance Data, AN-01-1B-40, which are representative of L-5(OY-1), L-5B, L-5E, and L-5G(OY-2) airplanes. These data are being published in Technical Order form to increase the efficiency of weight and balance control of these airplanes.

2. The Charts A contained herein are to be used as a guide in revising all existing check lists for L-5 series airplanes. However, if there is no completed Chart A in the airplane, the applicable check list contained herein may be inserted in the Handbook of Weight and Balance Data. In either case a complete inventory of all equipment in the airplane must be made and a check mark placed in the proper column on Chart A. If necessary, additional items may be entered to make the check lists suitable for individual airplanes.

3. The Chart E, Loading Data, contained herein, replaces every Chart E for L-5 series airplanes which is dated 30 days previous to the date of this publication, UNLESS SPECIFIC MODIFICATIONS NOT PROVIDED FOR IN THIS CHART E, LOADING DATA, HAVE BEEN MADE TO ANY AIRPLANES OF THIS SERIES.

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BASIC WEIGHT

**CHART
A
SHEET**

AIRPLANE MODEL L-5B SERIAL NO. _____ ENTER DATE

ENTER DATE 

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BASIC WEIGHT

CHART
A
SHEET

AIRPLANE MODEL L-5E SERIAL NO. _____

15-58

SERIAL NO.

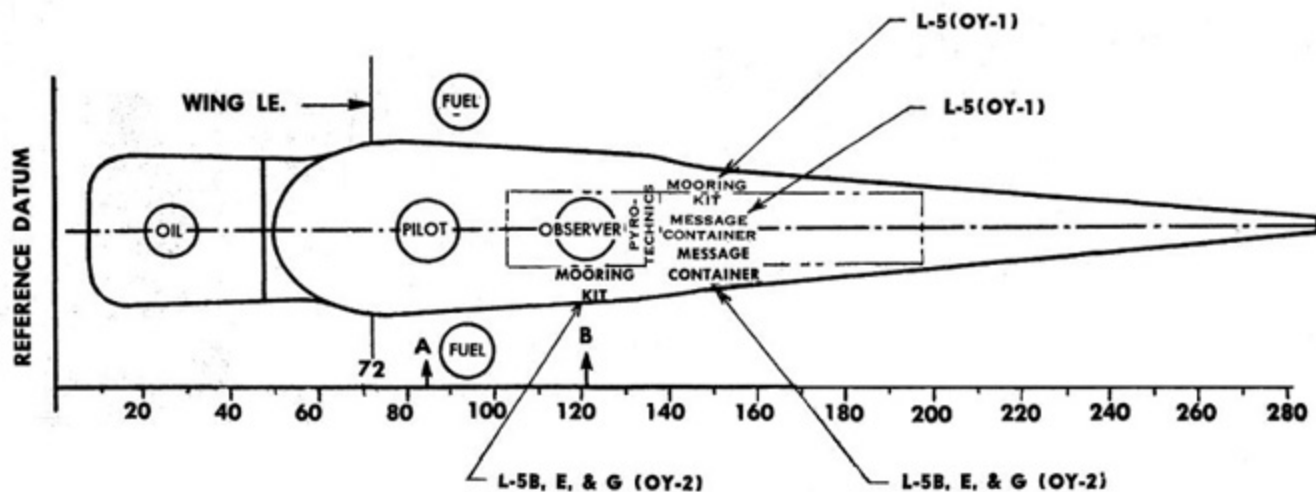
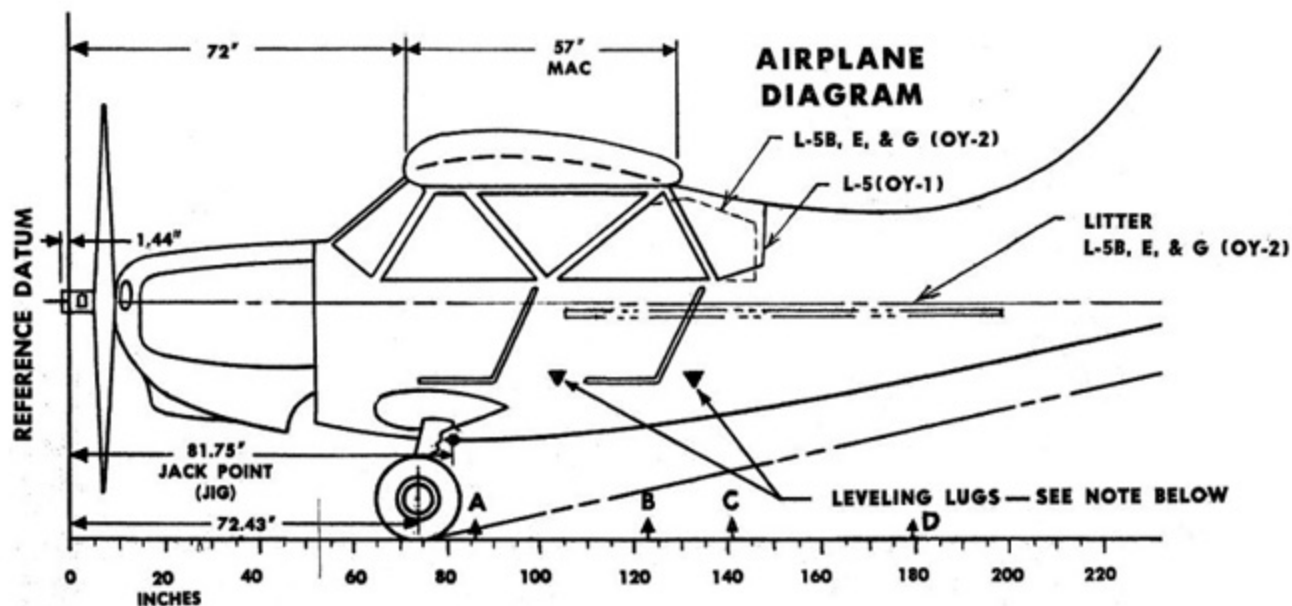
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NOTE — LEVELING LUGS
 L-5(OY-1)RIGHT SIDE FRAME
 L-5B, E, & G (OY-2).....LEFT SIDE FRAME

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T. O. No. 01-50DB-5**CENTER OF GRAVITY TABLE**

GROSS WEIGHT POUNDS	MOMENT/1000						
	20.5% MAC (83.7)	22% MAC (84.5)	24% MAC (85.7)	26% MAC (86.8)	28% MAC (88.0)	30% MAC (89.1)	32% MAC (90.2)
1600	133.9	135.2	137.1	138.9	140.8	142.6	144.3
20	135.6	136.9	138.8	140.6	142.6	144.3	146.1
40	137.3	138.6	140.5	142.4	144.3	146.1	147.9
60	138.9	140.3	142.3	144.1	146.1	147.9	149.7
80	140.6	142.0	144.0	145.8	147.8	149.7	151.5
1700	142.3	143.7	145.7	147.6	149.6	151.5	153.3
20	144.0	145.3	147.4	149.3	151.4	153.3	155.1
40	145.6	147.0	149.1	151.0	153.1	155.0	156.9
60	147.3	148.7	150.8	152.8	154.9	156.8	158.8
80	149.0	150.4	152.5	154.5	156.6	158.6	160.6
1800	150.7	152.1	154.3	156.2	158.4	160.4	162.4
20	152.3	153.8	156.0	158.0	160.2	162.2	164.2
40	154.0	155.5	157.7	159.7	161.9	163.9	166.0
60	155.7	157.2	159.4	161.4	163.7	165.7	167.8
80	157.4	158.9	161.1	163.2	165.4	167.5	169.6
1900	159.0	160.6	162.8	164.9	167.2	169.3	171.4
20	160.7	162.2	164.5	166.7	169.0	171.1	173.2
40	162.4	163.9	166.3	168.4	170.7	172.9	175.0
60	164.1	165.6	168.0	170.1	172.5	174.6	176.8
80	165.7	167.3	169.7	171.9	174.2	176.4	178.6
2000	167.4	169.0	171.4	173.6	176.0	178.2	180.4
20	169.1	170.7	173.1	175.3	177.8	180.0	182.2
40	170.7	172.4	174.8	177.1	179.5	181.8	184.0
60	172.4	174.1	176.5	178.8	181.3	183.5	185.8
80	174.1	175.8	178.3	180.5	183.0	185.3	187.6
2100	175.8	177.5	180.0	182.3	184.8	187.1	189.4
20	177.4	179.1	181.7	184.0	186.6	188.9	191.2
40	179.1	180.8	183.4	185.8	188.3	190.7	193.0
60	180.8	182.5	185.1	187.5	190.1	192.5	194.8
80	182.5	184.2	186.8	189.2	191.8	194.2	196.6
2200	184.1	185.9	188.5	191.0	193.6	196.0	198.4
20	185.8	187.6	190.3	192.7	195.4	197.8	200.2
40	187.5	189.3	192.0	194.4	197.1	199.6	202.0
60	189.2	191.0	193.7	196.2	198.9	201.4	203.9
80	190.8	192.7	195.4	197.9	200.6	203.1	205.7
2300	192.5	194.4	197.1	199.6	202.4	204.9	207.5
20	194.2	196.0	198.8	201.4	204.2	206.7	209.3
40	195.9	197.7	200.5	203.1	205.9	208.5	211.1
60	197.5	199.4	202.3	204.8	207.7	210.3	212.9
80	199.2	201.1	204.0	206.6	209.4	212.1	214.7
2400	200.9	202.8	205.7	208.3	211.2	213.8	216.5

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For Use As Chart E
In AN 01-18-40

FUEL TABLE
(ARM 94 IN.)

GALLONS	WEIGHT	$\frac{MOMENT}{1000}$
2	12	1.1
4	24	2.3
6	36	3.4
8	48	4.5
10	60	5.6
12	72	6.8
14	84	7.9
16	96	9.0
18	108	10.2
20	120	11.3
22	132	12.4
24	144	13.5
26	156	14.7
28	168	15.8
30	180	16.9
32	192	18.0
34	204	19.2
36	216	20.3

OIL TABLE
(ARM 27 IN.)

QUARTS	WEIGHT	$\frac{MOMENT}{1000}$
1	1.9	.05
2	3.8	.10
3	5.6	.15
4	7.5	.20
5	9.4	.25
6	11.3	.31
7	13.1	.35
8	15.0	.41
9	16.9	.46
10	18.8	.51
11	20.6	.56
12	22.5	.61

COMPARTMENT TABLE

A ARM=86 IN.		B ARM=122 IN.		C ARM=141 IN.		D ARM=178 IN.	
WEIGHT	$\frac{MOMENT}{1000}$	WEIGHT	$\frac{MOMENT}{1000}$	WEIGHT	$\frac{MOMENT}{1000}$	WEIGHT	$\frac{MOMENT}{1000}$
20	1.7	20	2.4	20	2.8	10	1.8
40	3.4	40	4.9	40	5.6	20	3.6
60	5.2	60	7.3	60	8.5	30	5.3
80	6.9	80	9.8	80	11.3	40	7.1
100	8.6	100	12.2	100	14.1	50	8.9
120	10.3	120	14.6	120	16.9	----	-----
140	12.0	140	17.1	140	19.7	----	-----
160	13.8	160	19.5	160	22.6	----	-----
180	15.5	180	22.0	180	25.4	----	-----
200	17.2	200	24.4	200	28.2	----	-----

For Use As Chart E
IN AN 01-18-40**RESTRICTED**
T. O. No. 01-50DB-5**TYPICAL SERVICE LOAD CONDITIONS**

ITEM	OBSERVATION		Observation—Alternate L-5(OY-1) Only		Observation—Alternate L-5B, E & G (OY-2)		AMBULANCE L-5B, E & G (OY-2)		CARGO	
	WEIGHT	MOMENT 1000	WEIGHT	MOMENT 1000	WEIGHT	MOMENT 1000	WEIGHT	MOMENT 1000	WEIGHT	MOMENT 1000
Pilot	200	17.2	200	17.2	200	17.2	200	17.2	200	17.2
Observer	200	24.4	200	24.4	200	24.4	180	25.4	200	24.4
Patient	.....	.....	.....	.....	.....	.....	20	2.9	.....	.....
Stretcher	.....	.....	.....	.....	.....	.....	150	14.1	.....	.....
Fuel	150	14.1	216	20.3	216	20.3	150	14.1	150	14.1
Oil	23	.6	23	.6	23	.6	23	.6	23	.6
Pyrotechnics	.....	.....	9.2	1.2	9.2	1.2	.....	.....	.....	.....
Message Containers	.....	.....	2.0	.3	2.0	.3	.....	.....	.....	.....
Mooring Kit			11.3	1.7	11.3	1.4				
Cargo									200	24.4
TOTALS	573	56.3	661.5	65.7	661.5	65.4	573	60.2	573	56.3

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For Use As Chart E
 In AN 01-1B-40

MISCELLANEOUS DATA

Jig Point Front fuselage jack points, 81.75 inches
 aft of reference datum.

C. G. Range Forward Limit 83.7 inches (20.5% MAC)
 Aft Limit 90.2 inches (32% MAC)

Gross Weight Limit — Take-Off *
 Gross Weight Limit — Landing *

*Service activities shall insert, or substitute current figures from latest applicable Technical Order covering operating restrictions.

Wheelbase—3 point (Approx) 186.75 inches

Tread (Approx) 86.43 inches (87.43 inches with 8.50 x 6 wheels)

Basic Weight (Approx) L-5(OY-1) 1480 lb.
 L-5B 1520 lb.
 L-5E 1600 lb.
 L-5G(OY-2) 1600 lb.

Distance from Reference Datum to:

C. L. Main Wheels (Approx) 72.43 inches

C. L. Tail Wheel (Approx) 252 to 255 inches

Pilot 86 inches

Observer 122 inches

Patient 141 inches

FUEL TANK DATA

<i>LOCATION</i>	<i>Type</i>	<i>Total Weight of Tanks</i>	<i>Arm to Tanks</i>	<i>Total Capacity</i>	<i>Total Weight of Contents</i>	<i>Arm to Contents</i>
Wing Panels (2)	Metal	27.8	94	36	216	94

OIL TANK DATA

<i>LOCATION</i>	<i>Type</i>	<i>Weight of Tank</i>	<i>Arm to Tank</i>	<i>Total Capacity</i>	<i>Total Weight of Contents</i>	<i>Arm to Contents</i>
Engine Sump				3	22.5	27