

~~RESTRICTED~~ 1W-5-5

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

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

USAF SERIES

L-5, L-5B

L-5E, AND

L-5G

NAVY MODELS

OY-1 AND

OY-2

AIRCRAFT
ANOKA AVIATION
ANOKA COUNTY AIRPORT
2289 Co. Road J.
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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.

**CHART
A
SHEET**

BASIC WEIGHT CHECK LIST

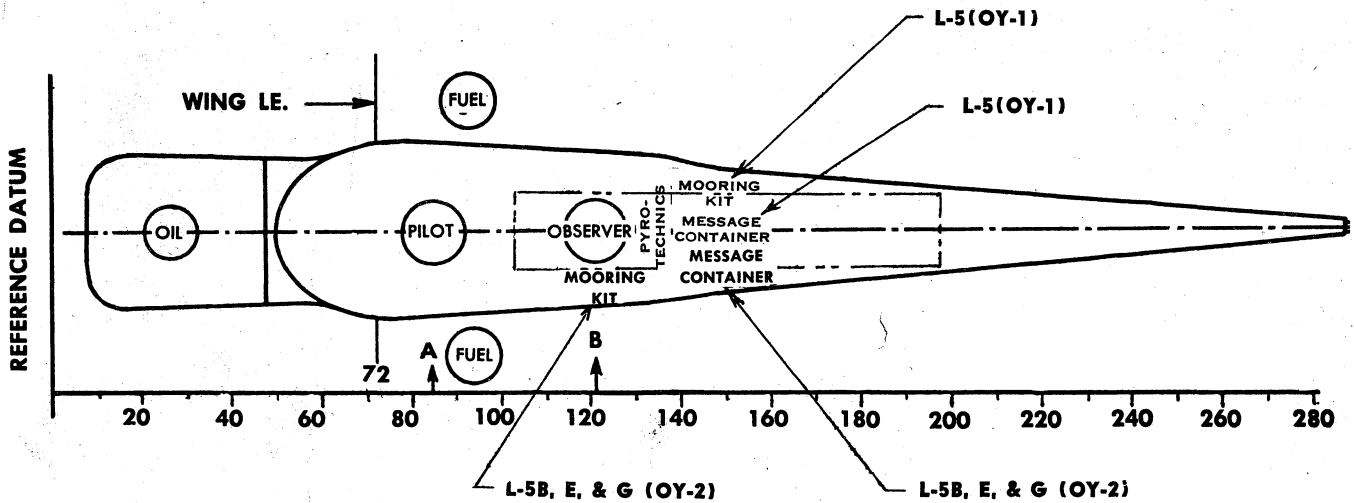
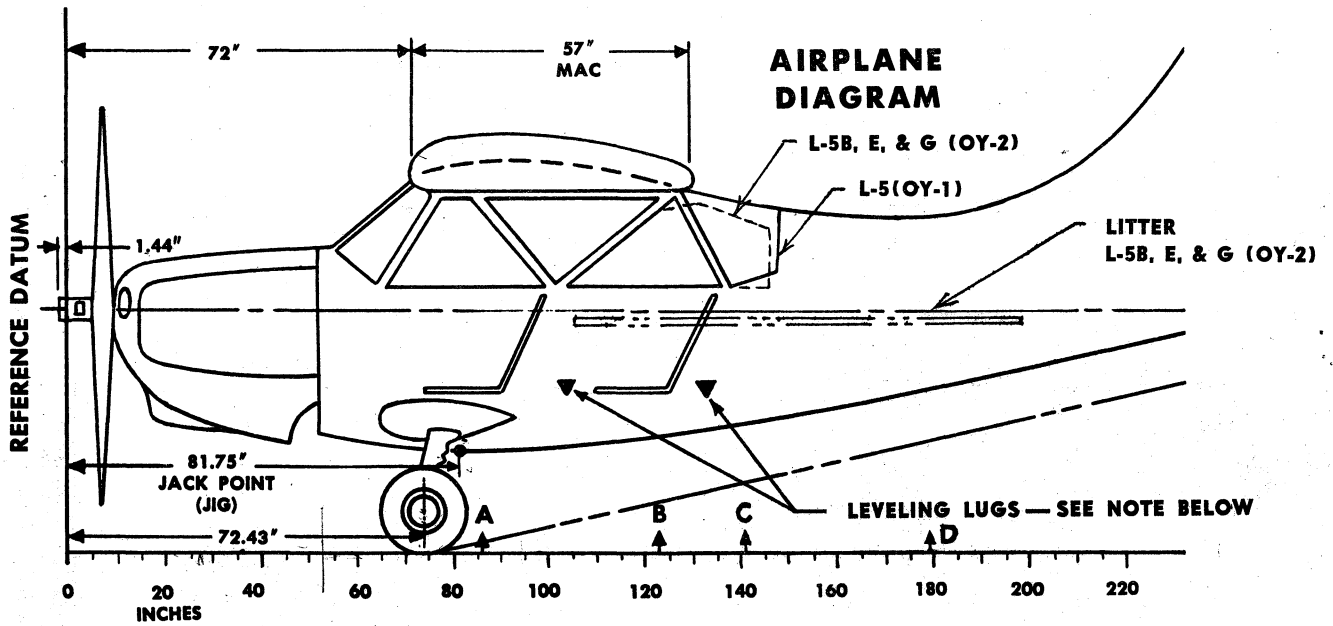
 AIRPLANE MODEL L-5B SERIAL NO. _____

 ENTER DATE ∇ _____

• RECORD OF CHECKING •

| COMPARTMENT & ITEM NUMBER | ITEMS AND LOCATION GROUPED BY COMPARTMENT | WEIGHT | ARM | MOMENT 1000 | DELIVERY EQUIPMENT | CHECK 1 | | CHECK 2 | | CHECK 3 | | CHECK 4 | | CHECK 5 | | CHECK 6 | | CHECK 7 | | CHECK 8 | |
|------------------------------|--|--------|-----|----------------|-----------------------|-------------|------------------|-------------|------------------|-------------|------------------|-------------|------------------|-------------|------------------|-------------|------------------|-------------|------------------|-------------|------------------|
| | | | | | | In Airplane | CHART C ENTRY | In Airplane | CHART C ENTRY | In Airplane | CHART C ENTRY | In Airplane | CHART C ENTRY | In Airplane | CHART C ENTRY | In Airplane | CHART C ENTRY | In Airplane | CHART C ENTRY | In Airplane | CHART C ENTRY |
| ✓ 1 | Engine Filter | 3.3 | -35 | .12 | | | | | | | | | | | | | | | | | |
| ✓ 2 | Fire Extinguisher | 7.0 | +65 | .45 | | | | | | | | | | | | | | | | | |
| ✓ 3 | Power Supply | 9.2 | +65 | .60 | | | | | | | | | | | | | | | | | |
| ✓ 4 | Flight Report Holder | .9 | +74 | .07 | | | | | | | | | | | | | | | | | |
| ✓ 5 | First Aid Kit | 1.2 | 83 | .10 | | | | | | | | | | | | | | | | | |
| ✓ 6 | Transmitter RCA-AVT-112 | 5.8 | 102 | .59 | | | | | | | | | | | | | | | | | |
| ✓ 7 | Receiver RCA-AVR-20A | 5.7 | 102 | .58 | | | | | | | | | | | | | | | | | |
| ✓ 8 | Earphones (2) | 1.3 | 103 | .13 | | | | | | | | | | | | | | | | | |
| ✓ 9 | Microphones (2) | 1.7 | 103 | .18 | | | | | | | | | | | | | | | | | |
| ✓ 10 | Crash Pad | 1.5 | 103 | .15 | | | | | | | | | | | | | | | | | |
| ✓ 11 | Rear Control Stick | .9 | 110 | .10 | | | | | | | | | | | | | | | | | |
| ✓ 12 | Mooring Kit | 11.3 | 120 | 1.33 | | | | | | | | | | | | | | | | | |
| ✓ 13 | Airplane Data Case | 1.4 | 135 | .19 | | | | | | | | | | | | | | | | | |
| ✓ 14 | Engine Tool Kit | 6.3 | 135 | .85 | | | | | | | | | | | | | | | | | |
| ✓ 15 | Pyrotechnic Cartridges | 5.2 | 136 | .55 | | | | | | | | | | | | | | | | | |
| ✓ 16 | Pyrotechnic Pistol | 4.0 | 136 | .54 | | | | | | | | | | | | | | | | | |
| ✓ 17 | Engine, Propeller & Canopy Covers | 7.7 | 145 | 1.12 | | | | | | | | | | | | | | | | | |
| ✓ 18 | Message Containers | 2.0 | 145 | .29 | | | | | | | | | | | | | | | | | |
| ✓ 19 | Surface Control Locks | .3 | 145 | .04 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |

RESTRICTED



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

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 |

FUEL TABLE
(ARM 94 IN.)

| GALLONS | WEIGHT | <u>MOMENT</u> 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 | <u>MOMENT</u> 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

| <i>A</i> ARM=86 IN. | | <i>B</i> ARM=122 IN. | | <i>C</i> ARM=141 IN. | | <i>D</i> ARM=178 IN. | |
|------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|
| WEIGHT | <u>MOMENT</u> 1000 | WEIGHT | <u>MOMENT</u> 1000 | WEIGHT | <u>MOMENT</u> 1000 | WEIGHT | <u>MOMENT</u> 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 | .... | ..... |

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 | ..... | ..... | ..... | ..... |
| Patient | ..... | ..... | ..... | ..... | ..... | ..... | 180 | 25.4 | ..... | ..... |
| Stretcher | ..... | ..... | ..... | ..... | ..... | ..... | 20 | 2.9 | ..... | ..... |
| 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 |

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) ²⁵²72.43 inches

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

Pilot 86 inches

Observer 122 inches

Patient 141 inches

FUEL TANK DATA

| LOCATION | Type | Total Weight of Tanks | Arm to Tanks | Total Capacity | Total Weight of Contents | Arm to Contents |
|-----------------|-------|-----------------------|--------------|----------------|--------------------------|-----------------|
| Wing Panels (2) | Metal | 27.8 | 94 | 36 | 216 | 94 |

OIL TANK DATA

| LOCATION | Type | Weight of Tank | Arm to Tank | Total Capacity | Total Weight of Contents | Arm to Contents |
|-------------|-------|----------------|-------------|----------------|--------------------------|-----------------|
| Engine Sump | | | | 3 | 22.5 | 27 |