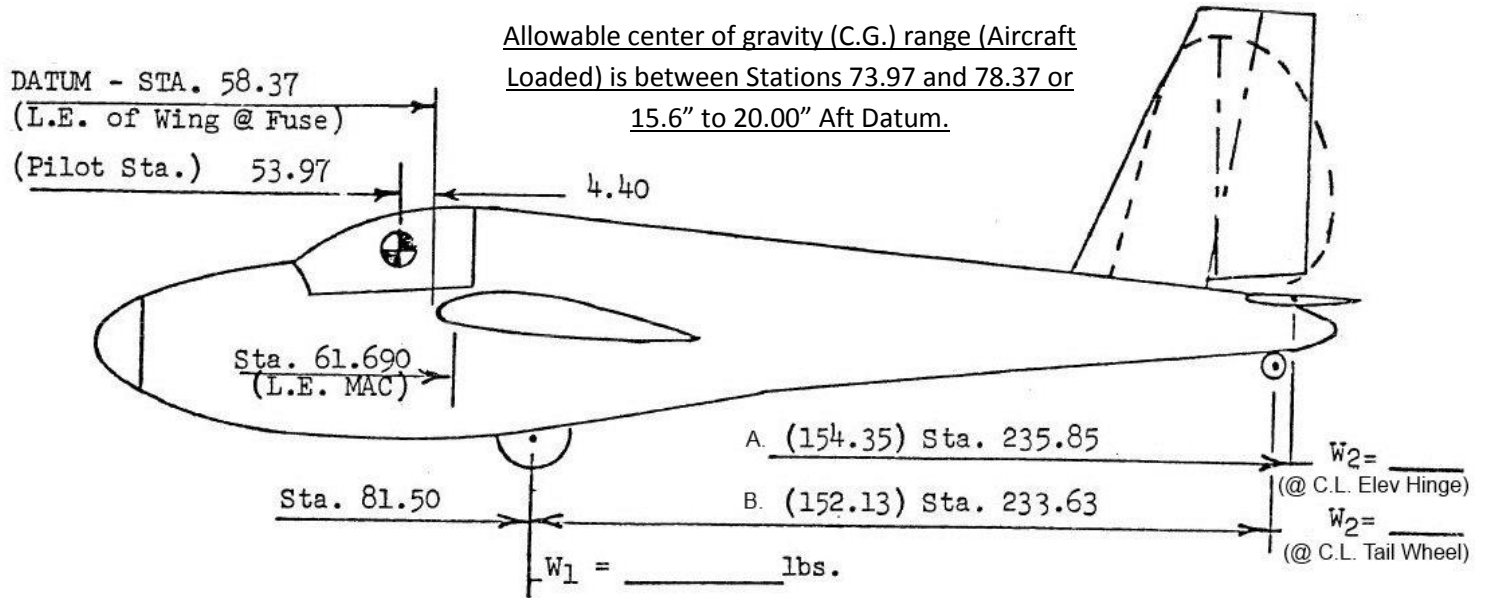




Weight & Balance

Model: 1-26 _____ Serial No.: _____ Registration No.: _____



1.) Empty Weight: $W_E = W_1 + W_2 = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$ lbs

2.) C.G. Empty: $CG_E = \frac{(W_2 \times (A \text{ or } B))}{W_E} + 81.50 = \frac{(\underline{\hspace{2cm}} \times \underline{\hspace{2cm}})}{(\underline{\hspace{2cm}})} + 81.50 = \text{Sta. } \underline{\hspace{2cm}}$

3.) Minimum Weight Pilot: $= \frac{(CG_E - 78.37) \times W_E}{78.37 - 53.97} = \frac{\underline{\hspace{2cm}} \times \underline{\hspace{2cm}}}{24.40} = \underline{\hspace{2cm}}$ lbs

4.) Maximum Weight Pilot: = Max. Gross Weight – Empty Weight = _____ - _____ = _____ lbs

| | | |
|-------------------|----------------------------|--------------------|
| Max. Gross Weight | SGS 1-26 & 1-26A: 575 lbs | SGS 1-26D: 700 lbs |
| | SGS 1-26B & 1-26C: 600 lbs | SGS 1-26E: 700 lbs |

5.) Maximum Weight Pilot: $= \frac{(CG_E - 73.97) \times W_E}{73.97 - 53.97} = \frac{\underline{\hspace{2cm}} \times \underline{\hspace{2cm}}}{20.00} = \underline{\hspace{2cm}}$ lbs

Placard Limits: Min Weight Pilot (From Step 3) = _____ lbs

Max Weight Pilot (Use Lower Weight From Step 4 or 5) = _____ lbs

Calculated By: _____

Date: _____

Checked By: _____

Date: _____



Model: 1-26 _____ Serial No.: _____ Registration No.: _____

The Empty Weight As Listed on Page 1 Includes the Following Equipment

| Item No. | Item Description | Weight | Arm | Moment |
|----------|---|--------|-------------------------------|--------|
| 1. | Wheel, Schweizer Model 26B-201 | 7.0 | 81.50 | 570 |
| 2. | Airspeed Indicator | 1.0 | 34.00 | 34 |
| 3. | Fixed Ballast On Nose Bulkhead | | (Thru C) 6.00 (D & E) 3.00 | |
| | <u>Optional And Special Equipment (Ref: I-4032-2)</u> | | | |



Equipment List

| Item No. | Item Description | Weight | Arm | Moment |
|----------|---|---------|-------|--------|
| | <u>Required Equipment</u> | | | |
| 1. | Wheel, Schweizer Model 26B-201 | 7.0 | 81.50 | 570 |
| 2. | Airspeed Indicator | 1.0 | 34.00 | 34 |
| | <u>Optional or Special Equipment</u> | | | |
| 1. | Cosim Variometer | 1.5 | 25.00 | 37.5 |
| 2. | Sensitive Altimeter | 1.25 | 34.00 | 42.5 |
| 3. | Ball Bank Indicator | Neglect | 34.00 | — |
| 4. | Turn and Bank Indicator with 4.5 Volt Battery (Friebe 4.5 Volt Elect.) | 1.5 | 34.00 | 51 |
| 5. | Rate of Climb with Tank | 1.0 | 34.00 | 34 |
| 6. | B-21 Standby Compass | 1.0 | 34.00 | 34 |
| 7. | Cook Compass | Neglect | — | — |
| 8. | Clock | Neglect | 34.00 | — |
| 9. | Air Vent P/N 1D-304-1A | 1.25 | 22.00 | 27.5 |
| 10. | Special release Hook (CG) per drawing 26143 | 4.0 | 42.50 | 170 |
| 11. | Wheel Cover Installation | | | |
| | (a) Aluminum (Drawing 26207) | Neglect | 81.50 | — |
| | (b) Fiberglass (Drawing 26211 & 26212) | Neglect | 81.50 | — |
| 12. | Total Energy Head (Drawing 26949) | .40 | 94.00 | 37.6 |
| 13. | Safety Cushion (Drawing 26327) | 5.0 | 54.00 | 270 |
| 15. | 12 V. Bank & Turn Installation (Drawing 26938) | | | |
| | (a) Batteries (2) and Bracket | 3.5 | 12.00 | 42 |
| | (b) Indicator (Allen #12F65-A1A) | 1.5 | 34.00 | 51 |
| 16. | Wing Tip Wheels (Drawing 26215) @ 2lbs ea | 4.0 | 82.50 | 330 |
| 17. | Hydraulic Brake | | | |
| | (a) 1-26 A, B, C (Drawing 26248) | 3.0 | 80.50 | 241.5 |
| | (b) 1-26D (Drawing 26249) | 4.0 | 82.50 | 330 |
| | (c) 1-26E (Drawing 26250) | 3.0 | 82.50 | 247.5 |
| 18. | Removable Ballast Installation | | | |
| | (a) 1-26 A,B,C (Drawing 26968) | 20.0 | 23.70 | 474 |
| | (b) 1-26 D & E (Drawing 26058) | 20.0 | 23.70 | 474 |



1-26 Calculated Weight and Balance

| | | | | | |
|-----------|--|------------|--|------------------|--|
| Model No. | | Serial No. | | Registration No. | |
|-----------|--|------------|--|------------------|--|

| | | | | Previous Weight & Balance Data | | |
|--|--|--|--|--------------------------------|---------------------|----------------|
| | | | | Weight [lb.] | Station [in.] | Moment [in·lb] |
| From Weight & Balance Dated () | | | | | | |
| Optional Equipment | | | | | | |
| Added/Removed Equipment Description | | | | Weight [lb.] | Station [in.] | Moment [in·lb] |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Total Weight | | | | | Total Moment | |

Note: Weight × Station = Moment

| Empty C.G. | |
|---|---|
| Empty C. G. = $\frac{\text{Total Moment}}{\text{Total Weight}}$ | $\left(\frac{\quad}{\quad} \right) = \quad \text{in.}$ |

| Maximum Pilot Weight | | |
|--|---|--|
| A.) Max. Pilot Wt. = Max. Gross Wt. – Empty Wt. | () – () = | lbs. |
| B.) Max. Pilot Wt. = $\frac{(\text{Empty C.G.} - 73.97) \times (\text{Empty Wt.})}{19.97}$ | (- 73.97) × () = | lbs |
| Max. Gross Weight | SGS 1-26 & 1-26A: 575 lbs SGS 1-26B & 1-26C: 600 lbs | SGS 1-26D: 700 lbs SGS 1-26E: 700 lbs |
| Maximum Pilot Weight (Use Lower of Step A or Step B) | | lbs |

| Minimum Pilot Weight | | |
|--|---|------------|
| Min. Pilot Wt. = $\frac{(\text{Empty C.G.} - 78.37) \times (\text{Empty Wt.})}{24.37}$ | (- 78.37) × () = | lbs |
| Minimum Pilot Weight | | lbs |

Calculated by: _____ Date: _____

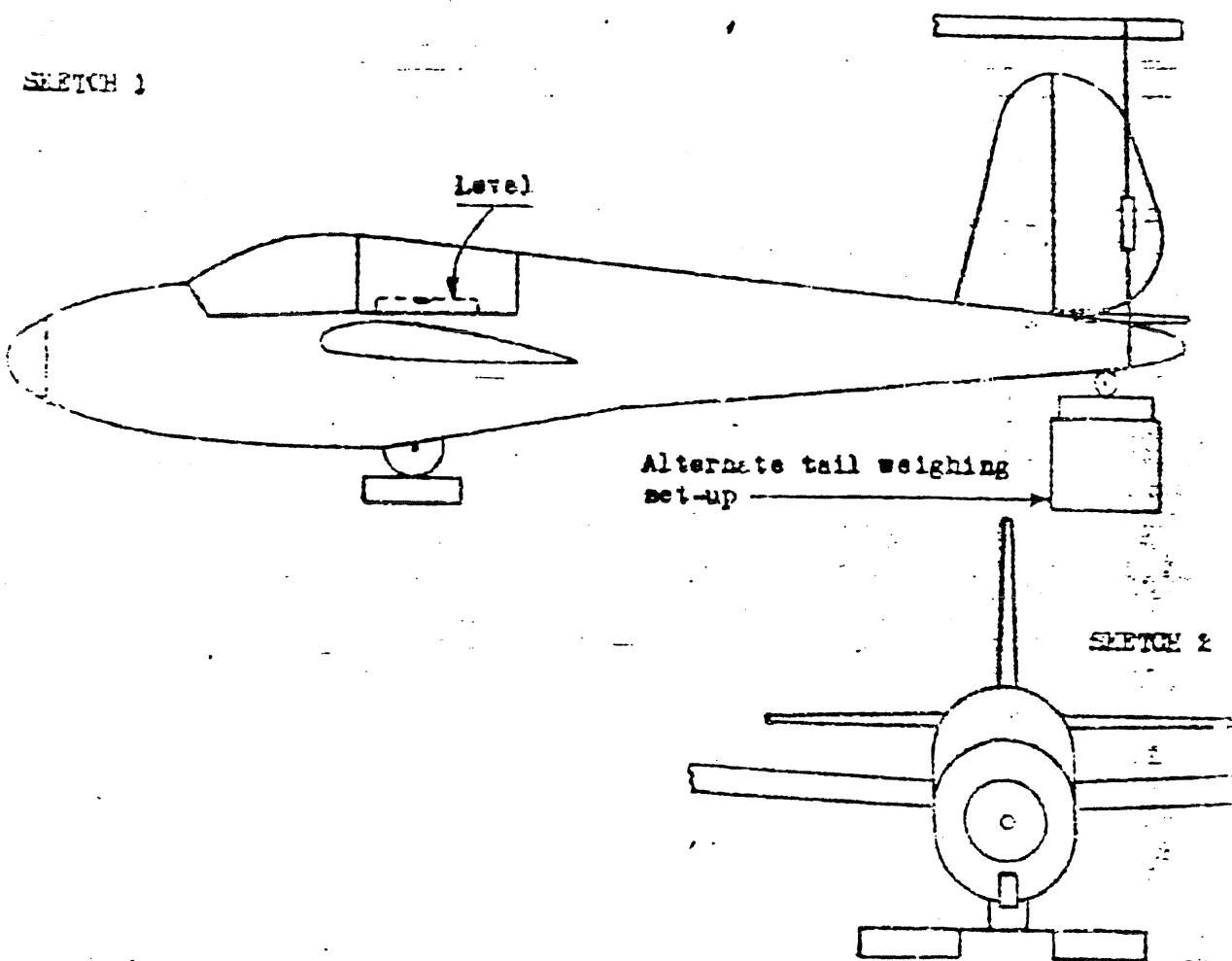
Checked by: _____ Date: _____

SGS 1-25 WEIGHT AND BALANCE PROCEDURE

Upon completion and final assembly of the 1-25, the ship must be weighed to determine the weight and the center of gravity location. Normal variations in material and finishing noticeably affect the component weights, thereby, changing the C.G. and making necessary a check on each ship, however, similar to another.

The following procedure may be followed to weigh the ship, the results being used with SAC Form I-4032.

The ship is set up in a level position with a scale (preferably a good platform scale) under the main wheel and a wire or cable wrapped around the center elevator hinge and hooked to another scale slung from an overhead support. The main top longerons aft of the main carry-thru are to be level with the ship's center line, and a level placed on one of these will indicate the level of the ship.



If a good platform scale is not available two accurate bath-room type scales may be used under the main wheel by placing a strong board over the two scales and placing the ship on the board (See Sketch 2). Care should be taken to check the wheel to prevent the ship from rolling off and damaging the structure. Any good tension-type spring scales may be used at the tail. Be sure this scale lines vertical from the hinge center line to prevent an inaccurate reading.

Prior to weighing the ship, check the scales with known weights to determine their accuracy and usability.

Any additional weight placed on the scales such as boards or chocks must be weighed separately, and this weight (tare) subtracted from the original weight. Be sure to subtract tare weight before weight and balance calculations.

When the weights have been determined, the C.G. location may be calculated (Ref. Form I-4032). See Sample V-7.3.

After the weight and balance has been calculated and the minimum and maximum pilot weights determined, the operations placard should be stamped and affixed to the instrument panel with #4 x 1/4 Round Head P.K. Screws.