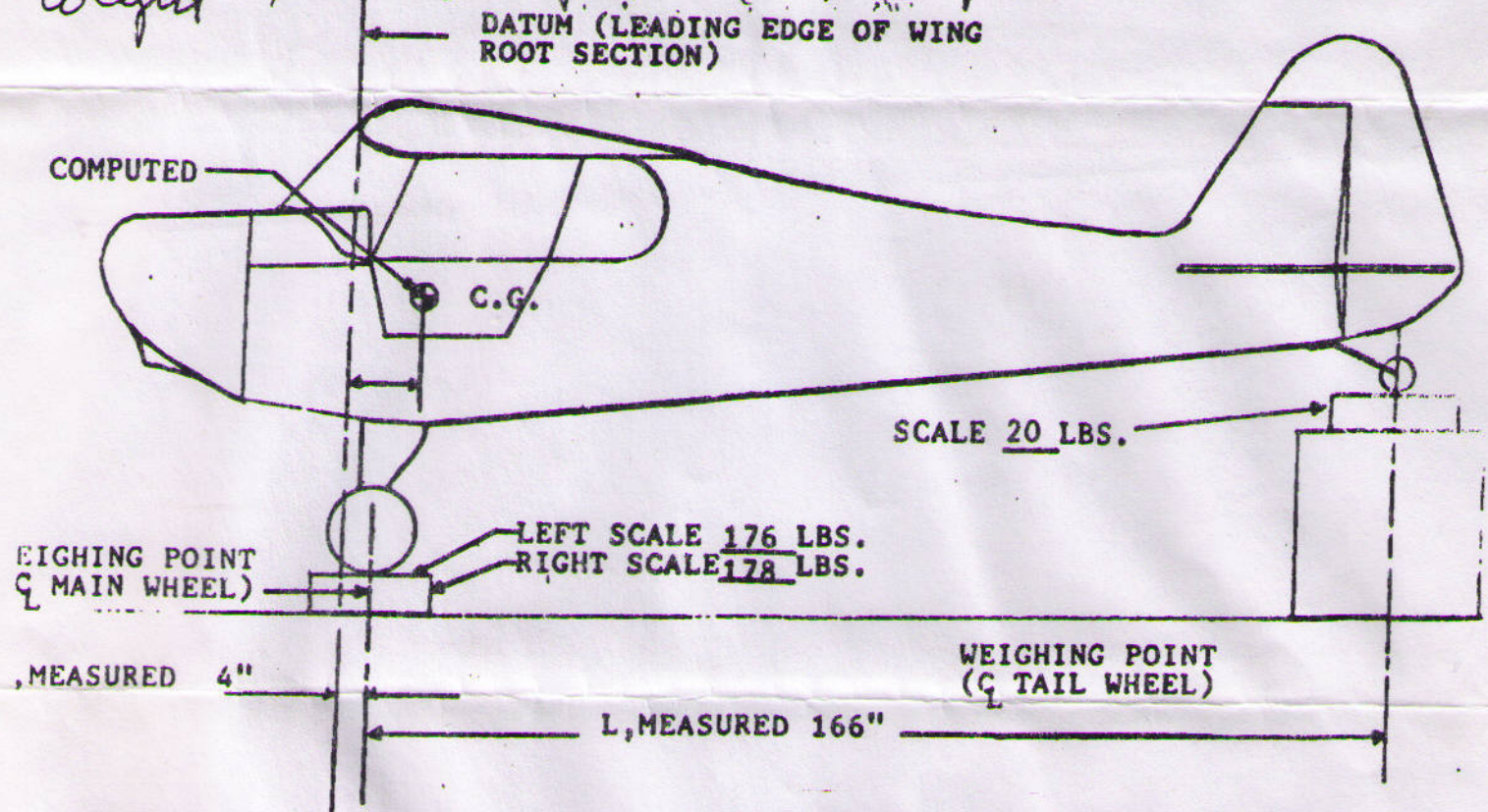


July 1, 1948 - W/B done @ 0-200 engine
 MC 67/2 Prop, Starter, alternator & 14 lb
 weight in Battery Box - plus pilot



TO FIND: EMPTY WEIGHT AND EMPTY WEIGHT CENTER OF GRAVITY

- Datum is the leading edge of the wing (from aircraft specification)
- (D) Actual measured horizontal distance from the main wheel weighing point (Q main wheel) to the Datum----- 7 "
- (L) Actual measured horizontal distance from the rear wheel weighing point (Q rear wheel) to the main wheel weighing point----- 149 "

FORMULA FOR C.G. = $D + \frac{R \times L}{W}$ $7 + \frac{0.75 + 149}{755} = 18.4" \approx 30\% \text{ of wing cord}$

USE ABOVE FORMULA TO OBTAIN C.G. LOCATION WITH PILOT IN PLACE

NB W - empty wt + pilot

- C.G. = Distance from datum to center of gravity of the aircraft.
- W = The weight of the aircraft at the time of weighing.
- D = The horizontal distance measured from the datum to the main wheel weighing point.
- R = The weight at the tail weighing point.

EXAMPLE: Empty C.G.

C.G. = $D = 4" + \frac{20 \times 166}{374} = \frac{3320}{374} + 4" = 8.87" + 4" = 12.87" \text{ from Datum}$

To convert inches to percent of wing cord use answer to equation divided by wing cord length (inches), or 12.87" divided by 54" = 23.8% (round off to 24%).