

# RV-7 WEIGHT AND BALANCE DATA QUICK REFERENCE

NOTE: this quick reference chart is NOT a substitute for the complete Weight and Balance information contained in Section 14 of the Builder's Manual.

CAUTION: the Gross Weight is established by the builder, who is considered the manufacturer.

CAUTION: The Aerobatic Gross Weight is set by structural limits. AEROBATIC FLIGHT SHOULD NOT BE CONDUCTED AT WEIGHTS GREATER THAN 1600 LBS nor AT CGS OUTSIDE THE AEROBATIC CG LIMIT

**DATUM**.....70 inches forward of the wing leading edge

### LIMITS

Design C.G. Range..... 15%-29% of wing chord OR 78.7- 86.82 inches aft of Datum.

Recommended Gross Weight ..... 1800 lbs

Aerobatic Gross Weight..... 1600 lbs

Aerobatic Aft CG Limit.....25% of chord OR 84.5" aft of Datum

### ARMS

Fuel 80.0" aft of datum

Pilot & Passenger 97.48" aft of datum

Baggage 126.78" aft of datum

### DETERMINING EMPTY CG

Level the aircraft longitudinally and laterally using the longerons in the cabin area as the level reference. Weigh the airplane with the canopy closed, full oil and the fuel tanks empty. Enter the weights and distances from the datum (arm) in the chart below. Multiply weight by arm to obtain moment. Divide the total moment by the weight to determine the empty CG.

|                               | Weight | Arm | Moment |
|-------------------------------|--------|-----|--------|
| Right Wheel                   |        |     |        |
| Left Wheel                    |        |     |        |
| Nose/Tail Wheel               |        |     |        |
| Total                         |        |     |        |
| CG (moment divided by weight) |        |     |        |

