

Model: DA 40 NG

Diamond
Aircraft Specific Weighting Report

Aircraft Serial Number	40 NC242
Registration	N124SA
Issue Date	May 18, 2023

Data with reference to the Type Certificate Data Sheet and the Flight Manual
 Reference Plane: Vertical plane 2194mm (86.38 in) in front of the leading edge of wing at the root rib.
 Horizontal reference plane Wedge 600:31 (2.96°), 2910mm (114.57 in) aft of the step in the cockpit trim.
 Equipment list dated May 18, 2023

ORIGINAL

Cause for weighing

Weight and Balance Calculations

Weight Condition:
 Include brake fluid, lubricant (1.0 liter / 1.06 qts), coolant, gearbox oil, engine oil (7.0 liter / 7.4 qts)
 plus unusable fuel (2.0 US gal / approx. 7.6 liter).

Empty Weight

Support	Gross		Tare		Net Weight	
	kg	lbs	kg	lbs	kg	lbs
Front, G ₂	142.00	313.00	0.00	0.00	142.00	313.00
Main, G _{1LH}	413.70	912.00	0.00	0.00	413.70	912.00
Main, G _{1RH}	408.90	901.50	0.00	0.00	408.90	901.50
EMPTY WEIGHT, G					964.60	2126.50

	Lever Arm	
	mm	in.
X ₂	891.00	35.08
X _{1LH}	2742.00	107.95
X _{1RH}	2737.00	107.76

Empty Weight Centre of Gravity, (X_{CG}):

Empty Weight CG Formula

$$X_{CG} = \frac{((G_{1LH} + G_{1RH}) * X_1) + (G_2 * X_2)}{G_2 + G_{1LH} + G_{1RH}} = \frac{2.467 \text{ m}}{97.14 \text{ in.}}$$

Empty Weight Moment, (M):

Empty Weight Moment Formula

$$M = G \times X_{CG} = \frac{2379.67 \text{ kg-m}}{206568.21 \text{ in-lbs}}$$

Maximum Permitted Useful Load:

Maximum Take-off Weight	1310.00 kg	2888.00 lbs
Empty Weight	964.60 kg	2126.50 lbs
Maximum Useful Load	345.40 kg	761.50 lbs

Data to be entered into the Flight Manual:

Empty Weight, G:	964.60 kg 2126.50 lbs	Empty Weight Moment, M:	2379.67 kg-m 206568.21 in-lbs
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Place: D.A.I.C - CYXU	Authorizing Stamp: DA Q 81	Authorizing Signature: <i>O. Tremblay</i>
Date: May 18, 2023		