

Model: DA 42



Aircraft Serial No.: 42.AC127

Registration: N127US

Issue Date: 25/02/2008

Aircraft Specific Weighting Report

Data with reference to the Type Certificate Data Sheet and the Flight Manual

Reference Plane: 2196mm fwd of the leading edge at wing root rib
Horizontal reference line: Nose Baggage Floor Level
Equipment List dated: 25/02/2008
Cause for Weighing: Original

ORIGINAL

Weight and Balance CalculationsWeight Condition:

Include brake fluid, engine oil, cooling water, hydraulic oil and unusable fuel (1 gallon/wing)
unusable in aux. tanks (.5gallon/tank) if installed, TKS with 1 litre if installed

Empty Weight:Finding Arm: (Measured)

Support	Gross		Tare		Net Weight	
	kg	lbs	kg	lbs	kg	lbs
Front, G ₂	264.0	582.0	0	0	264.0	582.0
Main, G _{1LH}	544.0	1199.3	0	0	544.0	1199.3
Main, G _{1RH}	534.0	1177.3	0	0	534.0	1177.3
EMPTY WEIGHT, G					1342.0	2958.6

	Lever Arm	
	mm	in.
X ₂	874	34.41
X _{1LH}	2783	109.57
X _{1RH}	2783	109.57

Empty Weight Centre of Gravity, X_{CG}:Empty Weight CG Formula

$$X_{CG} = \frac{(G_{1LH} * X_{1LH} + G_{1RH} * X_{1RH}) + (G_2 * X_2)}{G_2 + G_{1LH} + G_{1RH}} = \begin{matrix} 2.407 \text{ m} \\ 94.78 \text{ in.} \end{matrix}$$

Empty Weight Moment, M:Empty Weight Moment Formula

$$M = G \times X_{CG} = \begin{matrix} 3230.8 \text{ kg}\cdot\text{m} \\ 280422.0 \text{ in}\cdot\text{lbs} \end{matrix}$$

Maximum Permitted Useful Load:

Maximum Ramp Weight	1785.0 kg	3935.3 lbs
Empty Weight	1342.0 kg	2958.6 lbs
Maximum Useful Load	443.0 kg	976.7 lbs

Data to be entered into the Flight Manual:

Empty Weight, G: <div>1342.0 kg</div> <div>2958.6 lbs</div>		Empty Weight Moment, M: <div>3230.8 kg·m</div> <div>280422.0 in·lbs</div>	
Place: D.A.I.C. - CYXU Date: 25/02/2008		Authorizing Stamp DA Q 20	Authorizing Signature