

Model: DA 40



Aircraft Specific Weighting Report

Aircraft Serial Number	40.1059
Registration	N349AF
Issue Date	May 12.2009

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

Reference Plane: Vertical plane 2194mm (86.38 in) in front of wing leading edge at root rib
 Horizontal reference plane Wedge 600:31 (2.96%), 2910mm (114.57 in) aft of step in the cockpit rim.

Equipment list dated May 12.2009

Cause for weighing INSTALLATION OF NEW LH WING ASSEMBLY

Weight and Balance Calculations

Weight Condition:

Include brake fluid, engine oil and unusable fuel (2 liters/0.5 US gallons on each side).

Empty Weight

Support	Gross		Tare		Net Weight	
	kg	lbs.	kg	lbs	kg	lbs
Front, G ₂	119.70	264.00	0.00	0.00	119.70	264.00
Main, G _{1LH}	346.50	764.00	0.00	0.00	346.50	764.00
Main, G _{1RH}	342.90	756.00	0.00	0.00	342.90	756.00
EMPTY WEIGHT, G					809.10	1784.00

	Lever Arm	
	mm	in.
X ₂	973.00	38.31
X _{1LH}	2742.00	107.95
X _{1RH}	2739.00	107.83

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

Empty Weight CG Formula

$$X_{CG} = \frac{((G_{1LH} + G_{1RH}) * X_1) + (G_2 * X_2)}{G_2 + G_{1LH} + G_{1RH}} = \frac{2.46 \text{ m}}{97.60 \text{ in.}}$$

Empty Weight Moment, (M):

Empty Weight Moment Formula

$$M = G * X_{CG} = \frac{2006.57 \text{ kg-m}}{174118.40 \text{ in-lbs}}$$

Maximum Permitted Useful Load:

Maximum Take-off Weight	1200.00 kg	2646.00 lbs
Empty Weight	809.10 kg	1784.00 lbs
Maximum Useful Load	390.90 kg	862.00 lbs

Data to be entered into the Flight Manual:

Empty Weight, G:	809.10 kg 1784.00 lbs	Empty Weight Moment, M:	2006.57 kg-m 174118.40 in-lbs
------------------	--------------------------	-------------------------	----------------------------------

Place: Date:	D.A.I.C - CYRU May 12.2009	Authorizing Stamp		Authorizing Signature	
-----------------	-------------------------------	-------------------	--	-----------------------	--