

WEIGHING REPORT

Model: DA 40 Serial Number: 40518 Registration: N139PS

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

Reference Plane: Vertical plane 2194 mm (86.38 in) in front of the leading edge of wing at the root rib.

Horizontal reference line: Wedge 600:31 (2.96°), 2910 mm (114.57 in) aft of the step in the cockpit rim.

Equipment Inventory - dated: _____ Cause for Weighing: verify previous wt & balance sheets

Weight and Balance Calculations (Weighing at the wheels)

Weight Condition: Including brake fluid, engine oil (MAX level), coolant (TAE version only), and unusable fuel (Lycoming: 2 x 0.5 US gal / 2 x 1.9 liters; TAE: 2 x 1 US gal / 2 x 3.8 liters). with wheel fairings removed

Support	Gross	Tare	Net
MAIN G _{1LH}			762.00
MAIN G _{1RH}			763.66
NOSE G ₂			230.33
Empty Weight			1756.0

Lever Arm
X _{1LH} = 107.72
X _{1RH} = 107.72
X ₂ = 37.99

Calculate the Empty Weight, $G = \text{MAIN } G_{1LH} + \text{MAIN } G_{1RH} + \text{NOSE } G_2$.	G = 1756.0
Calculate the Empty Weight Moment, $M = (G_{1LH} * X_{1LH}) + (G_{1RH} * X_{1RH}) + (G_2 * X_2)$.	M = 173095.1767
Calculate the Empty Weight Center-of-Gravity position, $X_{CG} = M/G$.	X _{CG} = 98.57
Maximum permitted all-up-weight: Max AUW (see AFM). <u>Max gross</u>	2646
Maximum useful load = Max AUW - G.	890.0

Record the Empty Weight (G) and the Empty-Weight Moment (M) in the Airplane Flight Manual.

Place/Date <u>AdvAvid 15 June 2021</u>	Authorizing Stamp <u>A+ p3517275</u>	Authorizing Signature <u>Chuck Harvie</u>
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Figure 6: Weighing Report for Mechanical Scales Under the Wheels

	Detail Steps/Work Items	Key Items/Reference
(32)	Calculate the Empty Weight, G, from the Net values.	$G = 1756.0$ $\text{Net } G_{1LH} + \text{Net } G_{1RH} + \text{Net } G_2$
(33)	Calculate the Empty Weight Moment, M.	$M = 173095.1767$ $(G_{1LH} * X_{1LH}) + (G_{1RH} * X_{1RH}) + (G_2 * X_2)$
(34)	Calculate the position of the Empty Weight Center-of-Gravity, X_{CG} .	$X_{CG} = M/G$ 98.57
(35)	Record the Empty Weight (G) and the Empty Weight Moment (M) in the Airplane Flight Manual.	890.0

Max Gross = 2646

*15 June 2021
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