

Aircraft Weight and Balance Revision

Tail Number: N21767				Date: 5/3/10	
Prepared by: STEPHEN D. ZIMMER TRANS AM AVIATION SERVICES, INC				Work Order No:	
				Type Certificate 3A12 Data No:	
Aircraft Make: CESSNA	Model: 1722	Serial No: 172S9635		Time: 3820.0	
Registered Owner: COMPANION AIRE LLC		Address: ORANGE PARK, FL 32003-8224			
Maximum Weight 2558.0		CG Range FWD 52.0 AFT 71.0			
As Received; Date of Previous Weight and Balance: 3/9/2008		Useful Load: 683.67	EW: 1874.33	EWCG: 44.64	Moment: 83677.51
Notes: REMOVED PICTOMETRY UPGRADE. RECONFIGURED TO NORMAL OPERATION SETUP.					
		Weight	Arm	Moment	
EXHAUST PIPE EXTENSION		-22	36	-792.00	
REAR SEAT		44.7	73	3263.10	
HAT RACK EQUIPMENT		-24.8	108	-2678.40	
LUGGAGE AREA EQUIPMENT		-48	99	-4752.00	
PASSENGER AREA EQUIPMENT		-98.98	77.67	-7687.78	
PILOT AREA EQUIPMENT		-9.65	65.33	-630.43	
REAR PANELS		2.6	65	169.00	
		0.00	0.00	0.00	
		0.00	0.00	0.00	
		0.00	0.00	0.00	
☒ As Calculated ☐ As Weighed	Moment 70569.00 Weight 1718.20	New Empty Weight CG 41.07		New Useful Load 839.80	
		Signature STEPHEN D. ZIMMER 			
		Repair Agency A&P IA or License No:			

Aircraft Weight and Balance Revision

Tail Number: N21767			Date: 9/21/10		
Prepared by: STEPHEN D. ZIMMER TRANS AM AVIATION SERVICES, INC			Work Order No:		
			Type Certificate Data No: 3A12		
Aircraft Make: CESSNA	Model: 172S	Serial No: 172S9635		Time:	
Registered Owner: COMPANION AIRE LLC		Address: ORANGE PARK, FL 32003-8224			
Maximum Weight 2558.0		CG Range FWD 52.0 AFT 71.0			
As Received; Date of Previous Weight and Balance: 5/3/10		Useful Load: 839.80	EW: 1718.2	EWCG: 41.07	Moment: 70569.00
Notes: CONVERTED AIRCRAFT BACK TO CAMERA OPERATIONS CONFIGURATION.					
		Weight	Arm	Moment	
EXHAUST PIPE EXTENSION		22	36	792.00	
REAR SEAT		-44.7	73	-3263.10	
HAT RACK EQUIPMENT		24.8	108	2678.40	
LUGGAGE AREA EQUIPMENT		48	99	4752.00	
PASSENGER AREA EQUIPMENT		98.98	77.67	7687.78	
PILOT AREA EQUIPMENT		9.65	65.33	630.43	
REAR PANELS		-2.6	65	-169.00	
WHEEL PANTS		-11	61.10	-672.10	
		0.00	0.00	0.00	
		0.00	0.00	0.00	
☒ As Calculated ☐ As Weighed		Moment 83005.41 Weight 1863.33		New Empty Weight CG 44.55	
				New Useful Load 694.67	
Signature DANNY H.A. DÖEBAR 					
Repair Agency or License No: A&P XXXXXX A					

Fox Todd

From: Fox Todd
Sent: Wednesday, August 17, 2016 1:52 PM
To: william.landerson@nasa.gov
Cc: PJBasile@nasa.gov; Platt, Mark; Fox Todd
Subject: FW: CEN16LA228 -- Weight and Balance Questions
Attachments: Aircraft Weight and Balance -- without photography equipment.pdf; Aircraft Weight and Balance -- with photography equipment.pdf

Importance: High

Argh...

Well, apparently I am still referencing the incorrect empty weight (thanks to Mr. Basile who is keeping me honest)... In my defense, the W&B records are unnecessarily convoluted!

5/3/2010, without photography equipment, airplane empty weight was 1,718.2 lbs (839.8 useful load)
9/21/2010, with photography equipment, airplane empty weight was 1,863.3 lbs (694.7 lbs useful load)

At the time of the accident, the airplane was configured with the photography equipment, and thus had an empty weight of 1,863.3 lbs and a useful load of 694.7 lbs.

Empty Weight: 1,863.3 lbs
Pilot A: 280 lbs
Pilot B: 180 lbs
Fuel: 318 lbs (53 gallons useable)
Bags: 40 lbs (estimated)
Calculated Ramp Weight: 2,681.3 lbs (123.3 lbs over maximum ramp weight)

Max Ramp Weight: 2,558 lbs
Max Takeoff Weight: 2,550 lbs

If we use the higher occupant weights, as listed on their medical certificates (180 lbs for Donahue and 180 lbs for D'Errico) the calculated ramp weight increases to 2,716.3 lbs, or 158.3 lbs over maximum ramp weight.

Sincerely,
Andrew Todd Fox
NTSB, Air Safety Investigator

From: Fox Todd
Sent: Wednesday, August 17, 2016 1:33 PM
To: william.landerson@nasa.gov
Cc: Fox Todd; Platt, Mark; PJBasile@nasa.gov
Subject: FW: CEN16LA228 -- Weight and Balance Questions
Importance: High

Inspector Landers,