



November 8, 2012

National Transportation Safety Board
Attn: Brian Rayner
[REDACTED]
Ashburn, VA 20147

Subject: ERA12FA196 – Melbourne, FL Weight & Balance Computations

Dear Mr. Rayner:

I have attached the weight and balance computations you requested.

The computations used the occupant weights you provided.

The aircraft empty weight was taken from the Delivered Weight Data and Equipment list on file here at the factory and could vary somewhat if any modifications had been made to the airplane after its original delivery.

I rounded the front seat passenger up two pounds and I arbitrarily assigned 10 pounds of baggage compartment weight to account for the miscellaneous items you stated may have been present.

Using the inputs above, the is airplane under gross maximum takeoff weight and within the moment limits given in the Pilot Operating Handbook (POH). See attached Weight & Balance Loading Form.

If you have any questions feel free to call or email me.

Sincerely,


[REDACTED]

Bradley T. Miller
Manager
Air Safety

Weight & Balance Loading Form

Serial Num: SR22-2559 Date: _____

Reg. Num: N544SR Initials: _____

Item	Description	Weight LB	Moment/ 1000
1.	Basic Empty Weight <i>Includes unusable fuel & full oil</i>	2364	326.958
2.	Front Seat Occupants <i>Pilot & Passenger (total)</i>	380	54.53
3.	Rear Seat Occupants	160	28.80
4.	Baggage Area <i>130 lb maximum</i>	10	2.08
5.	Zero Fuel Condition Weight <i>Sub total item 1 thru 4</i>	2914	412.368
6.	Fuel Loading <i>81 Gallon @ 6.0 lb/gal. Maximum</i>	486	75.28
7.	Ramp Condition Weight <i>Sub total item 5 and 6</i>	3400	487.648
8.	Fuel for start, taxi, and runup <i>Normally 9 lb at average moment of 1394.</i>	- 9	- 1.394
9.	Takeoff Condition Weight <i>Subtract item 8 from item 7</i>	3391	486.254

• Note •

The Takeoff Condition Weight must not exceed 3400 lb.

The Takeoff Condition Moment must be within the Minimum Moment to Maximum Moment range at the Takeoff Condition Weight. (Refer to Figure 6-8, Moment Limits).

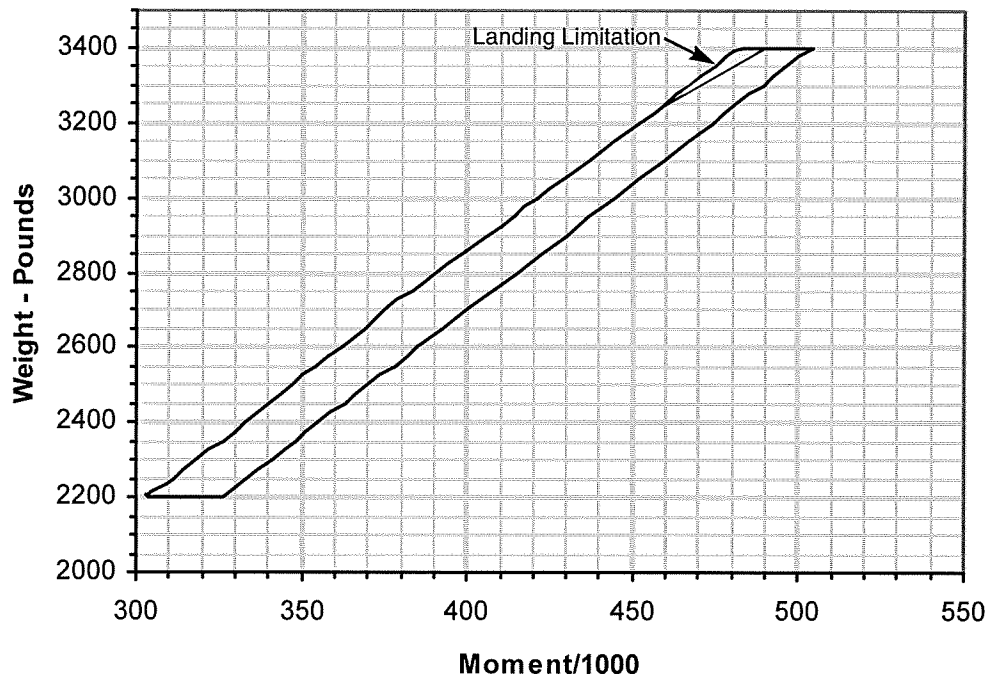
Figure 6-6
Weight and Balance Loading Form

Moment Limits

Use the following chart or table to determine if the weight and moment from the completed Weight and Balance Loading Form are within limits.

• **Caution** •

Before landing, verify aircraft weight and moment do not fall in the Landing Limitation Zone.

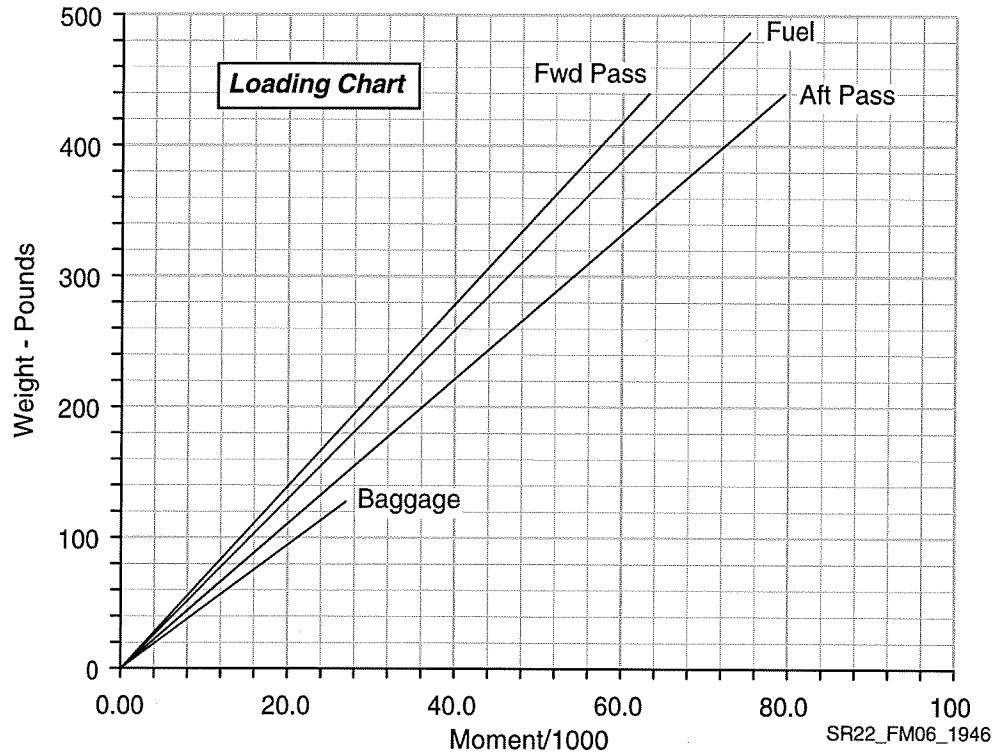


Weight LB	Moment/1000		Weight LB	Moment/1000	
	Minimum	Maximum		Minimum	Maximum
2200	304	326	2850	398	422
2250	311	333	2900	406	430
2300	318	341	2950	414	437
2350	326	348	3000	421	444
2400	333	355	3050	429	452
2450	340	363	3100	437	459
2500	347	370	3150	444	467
2550	354	378	3200	452	474
2600	362	385	3250	460	481
2650	369	392	3300	467	489
2700	375	400	3350	475	496
2750	383	407	3400	483	504
2800	390	415			

Figure 6-8
Moment Limits

Loading Data

Use the following chart or table to determine the moment/1000 for fuel and payload items to complete the Loading Form.



Weight LB	Fwd Pass FS 143.5	Aft Pass FS 180.0	Baggage FS 208.0	Fuel FS 154.9	Weight LB	Fwd Pass FS 143.5	Aft Pass FS 180.0	Fuel FS 154.9
20	2.87	3.60	4.16	3.10	260	37.31	46.80	40.27
40	5.74	7.20	8.32	6.20	280	40.18	50.40	43.37
60	8.61	10.80	12.48	9.29	300	43.05	54.00	46.47
80	11.48	14.40	16.64	12.39	320	45.92	57.60	49.57
100	14.35	18.00	20.80	15.49	340	48.79	61.20	52.67
120	17.22	21.60	24.96	18.59	360	51.66	64.80	55.76
140	20.09	25.20	(27.04)*	21.69	380	54.53	68.40	58.86
160	22.96	28.80		24.78	400	57.40	72.00	61.96
180	25.83	32.40		27.88	420	60.27	75.60	65.06
200	28.70	36.00		30.98	440	63.14	79.20	68.16
220	31.57	39.60		34.08	460			71.25
240	34.44	43.20		37.18	486**			75.28

*130 lb Maximum

**81 U.S. Gallons Usable

Figure 6-7
Loading Data