

Specialist's Report – Attachment 5
Weight and Balance Information

OPERATIONAL FACTORS

CEN21FA199

McC Campbell Porter Airport
3141 FM 3512
Aransas Pass, TX 78336

3/5/2021 4:55:45 PM

FUEL: 100 LL
PUMP: 100 LL
Units: 28.170 US Gallons
Unit Price: \$3.700
Sub Total: \$104.23

Invoice #: [REDACTED]
SALE TOTAL: \$104.23

PAYMENT AMOUNT [REDACTED]
VISA
CARD: **** * [REDACTED]
EXP: [REDACTED]
NAME: JORGENSON/CARROL V
Approval Code: 005609

Figure 1: Last known fueling slip for N587CD (Source: Gary Lee Davis, C.M., Aviation Director, The Airports of San Patricio County, email sent to the NTSB Tuesday, April 27, 2021 4:53 PM.

Young Eagle register for the Young Eagles Day on April 24th at Mustang Beach Airport starting at 9:00 am.

Registration ID: E [REDACTED]

Youth Name: [REDACTED] (First, Middle Initial and Last Name)

Gender: Male Birthday: [REDACTED] Format: MM/DD/YYYY Weight: 60 (Used for airplane loading)

of Flights: First Time Number of times that you have flown as an Young Eagle

Youth Email: [REDACTED] (Optional)

Free Memberships: - EAA Student Membership and Sportys Course - Academy of Model Aeronautics Membership

Time Slots: - Time slot #1 - 9:00 am - 10:00 am - Sorry, but this time slot is full.
 - Time slot #2 - 10:00 am - 11:00 am - Sorry, but this time slot is full.
 - Time slot #3 - 11:00 am - 12:00 pm - Sorry, but this time slot is full.
 - Time slot #4 - 12:00 pm - 2:00 pm
 - Time slot #5 - 2:00 pm - 4:00 pm

Parent Name: [REDACTED]

Email address: [REDACTED]

Mailing Address: [REDACTED]

City: Port Aransas State: Texas Zip code: 78373

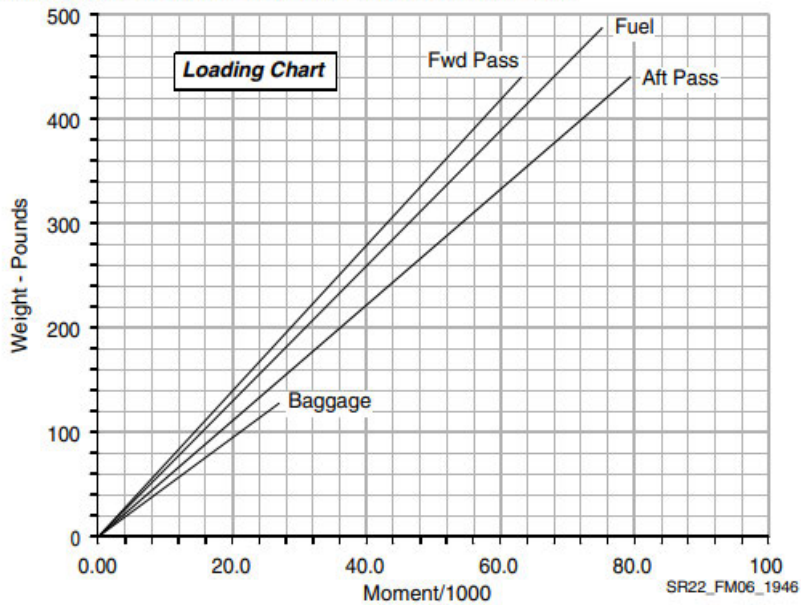
Phone Number: [REDACTED] Format: xxx-xxx-xxxx

Hear about us: Please Select

Figure 2: Young Eagles registration form indicating aft passenger weight of 60 pounds (Source: Peter Kendig, Young Eagles Chapter Coordinator in an email to the NTSB Sunday, April 25, 2021 9:25 PM).

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

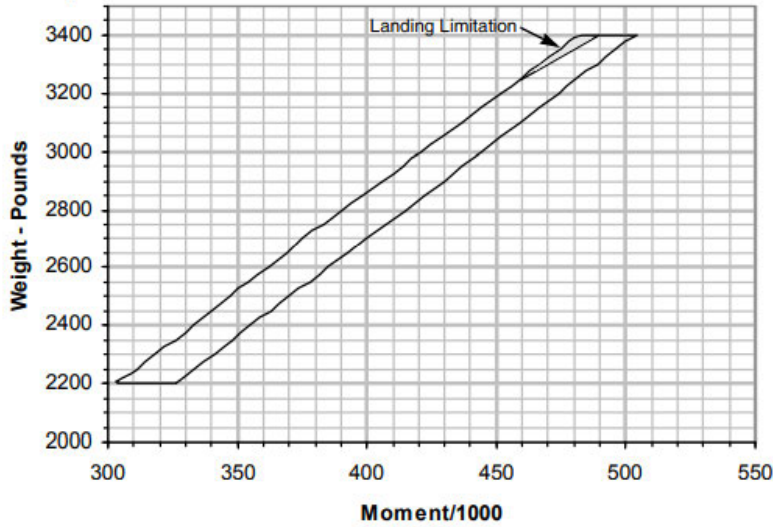
Figure 3: Cirrus SR22 Loading Data chart (Source: Cirrus SR22 Pilot Operating Handbook).

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			

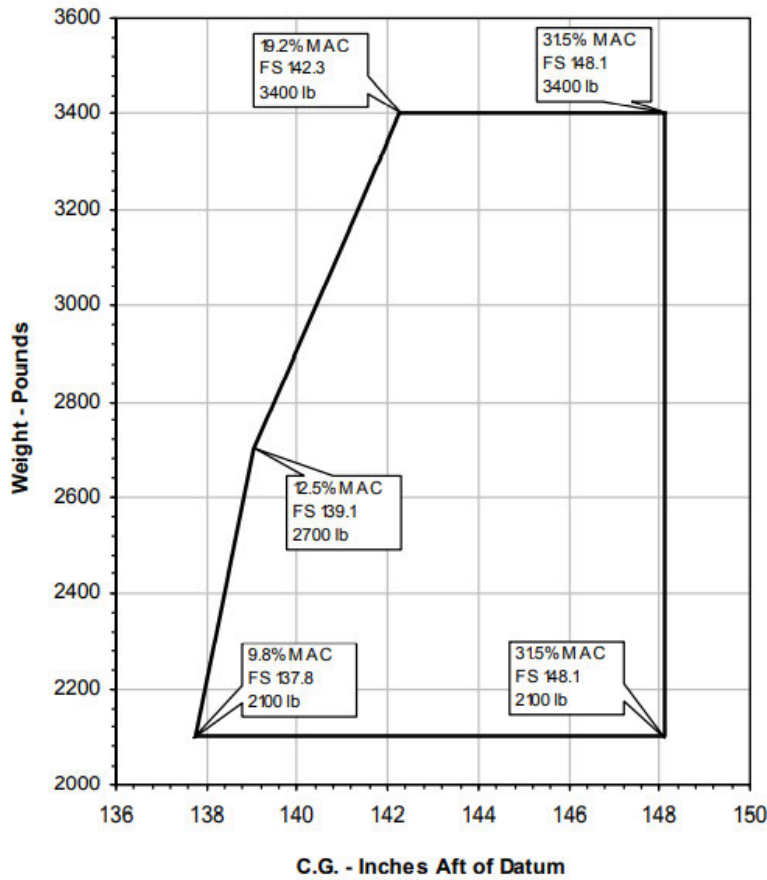
Figure 4: Cirrus SR22 Moment Limits chart (Source: Cirrus SR22 Pilot Operating Handbook).

Center of Gravity Limits

Reference Datum 100 inches forward of firewall

Forward Refer to Figure 2-1

Aft Refer to Figure 2-1



FORWARD LIMIT - The forward limit is FS 137.8 (9.8% MAC) at 2100 lb, with straight line taper to FS 139.1 (12.5% MAC) at 2700 lb, to FS 142.3 (19.2% MAC) at 3400 lb.
AFT LIMIT - The aft limit is FS 148.1 (31.5% MAC) at all weights from 2100 lb to 3400 lb.

Figure 5: Cirrus SR22 Center of Gravity Limits chart (Source: Cirrus SR22 Pilot Operating Handbook).