2.13 CENTER OF GRAVITY LIMITS

Weight Pounds	Forward Limit Inches Aft of Datum	Rearward Limit Inches Aft of Datum
4800	139.00	142.15
3200 or less	139.00	146.7

NOTES

Straight line variation between points given.

The datum line is 126.0 inches forward of the wing leading edge at the intersection of the straight and tapered section.

It is the responsibility of the airplane owner and the pilot to insure that the airplane is properly loaded. See Section 6 - Weight and Balance - for proper loading instructions.

2.15 MANEUVER LIMITS

No acrobatic maneuvers, including spins, approved.

2.17 FLIGHT MANEUVERING LOAD FACTOR LIMITS

(a) Positive Limit Maneuvering Load Factor (Maximum)	+2.83G
(b) Negative Limit Maneuvering Load Factor (Maximum) (No inverted maneuvers approved)	−1.13G

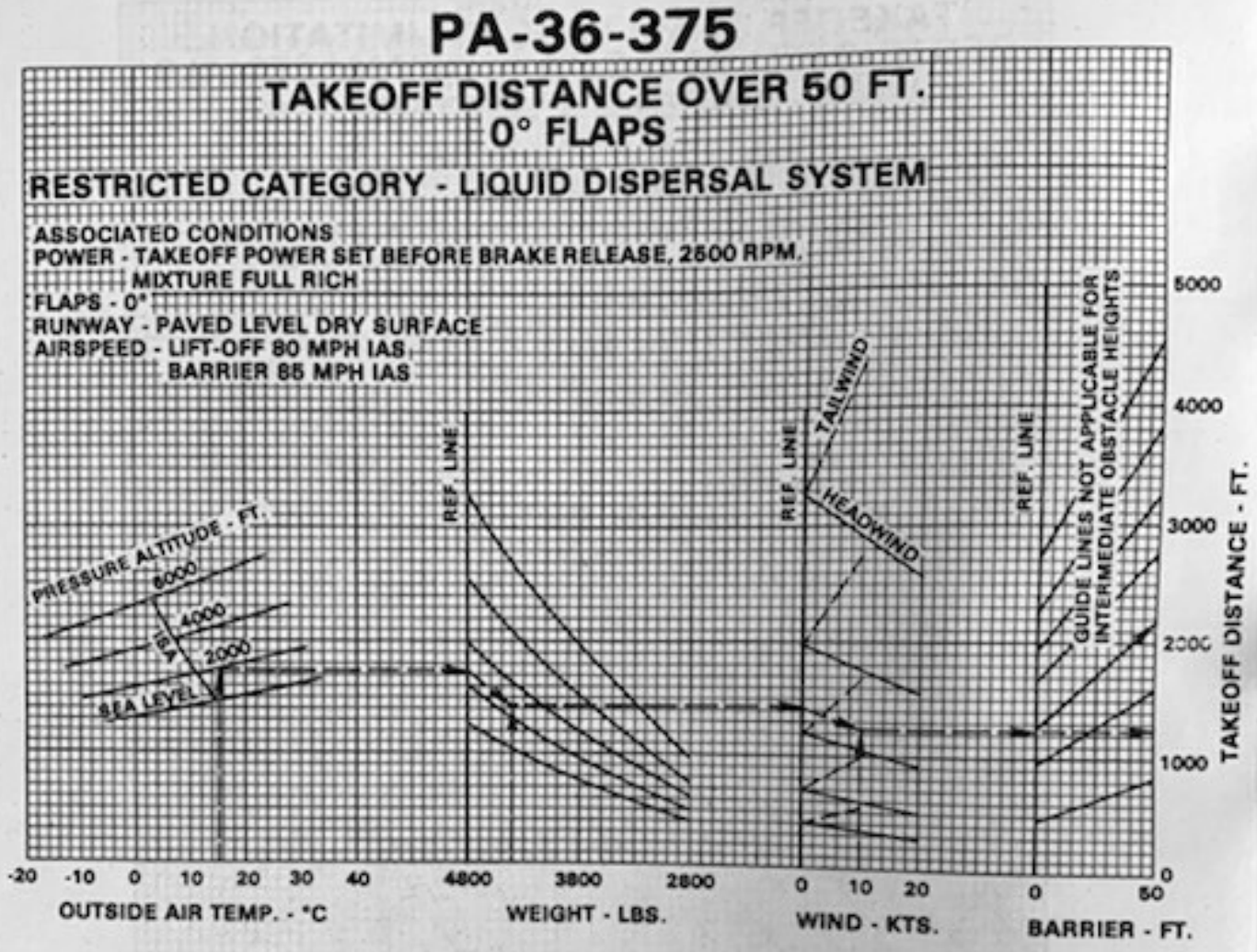
2.19 SERVICE LIFE LIMITS

The wing spar lower attachment bolts, Piper part number 77245, must be replaced upon accumulation of 2000 flight hours.

2.21 COMBINATION INSTALLATION OF DISPERSAL SYSTEMS

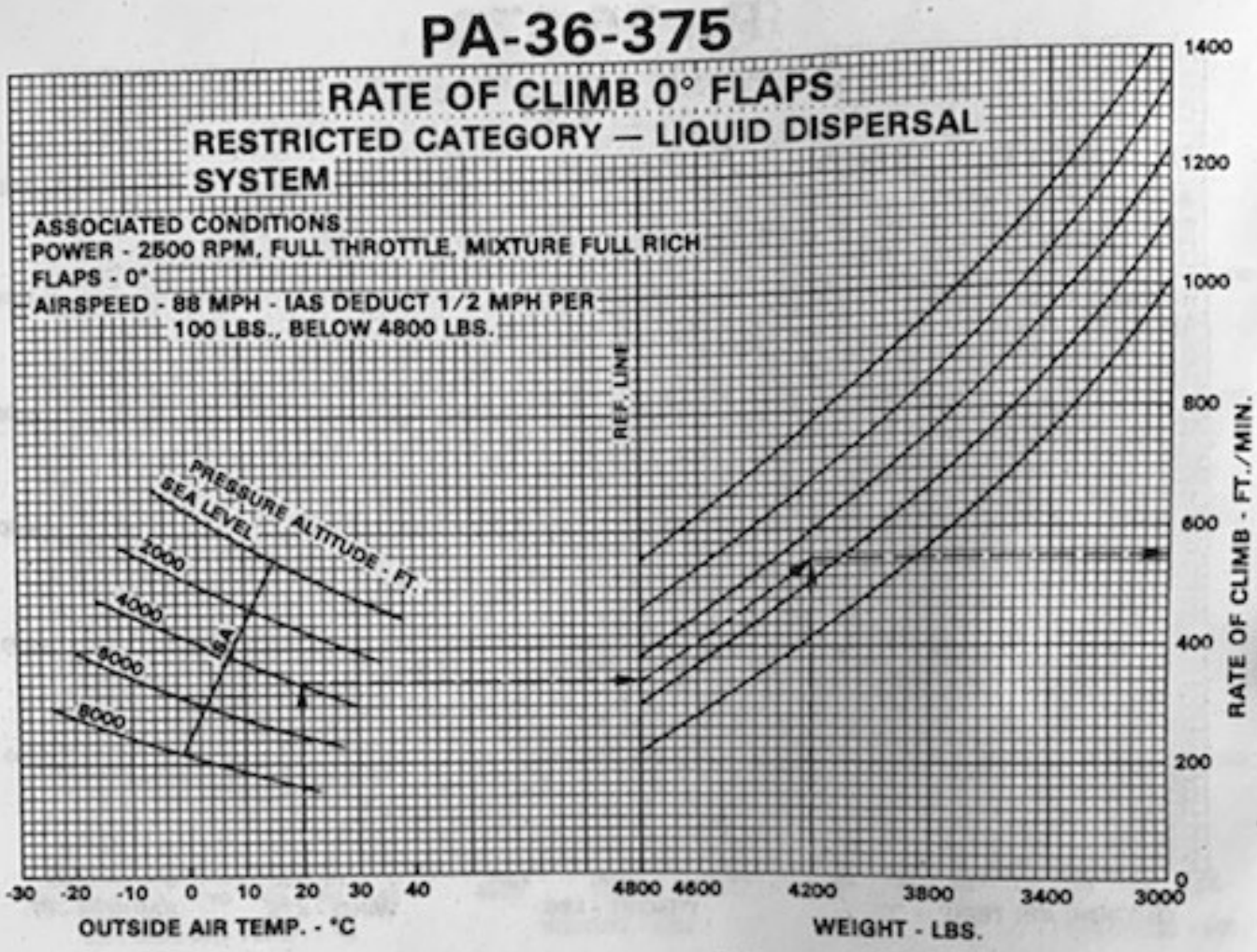
Flight with the combination or partial combination installation of the Piper approved dry and liquid dispersal systems is approved for the purpose of transporting the dispersal systems with the following limitations:

(a) VFR only
(b) Hopper load not to exceed 50 pounds.



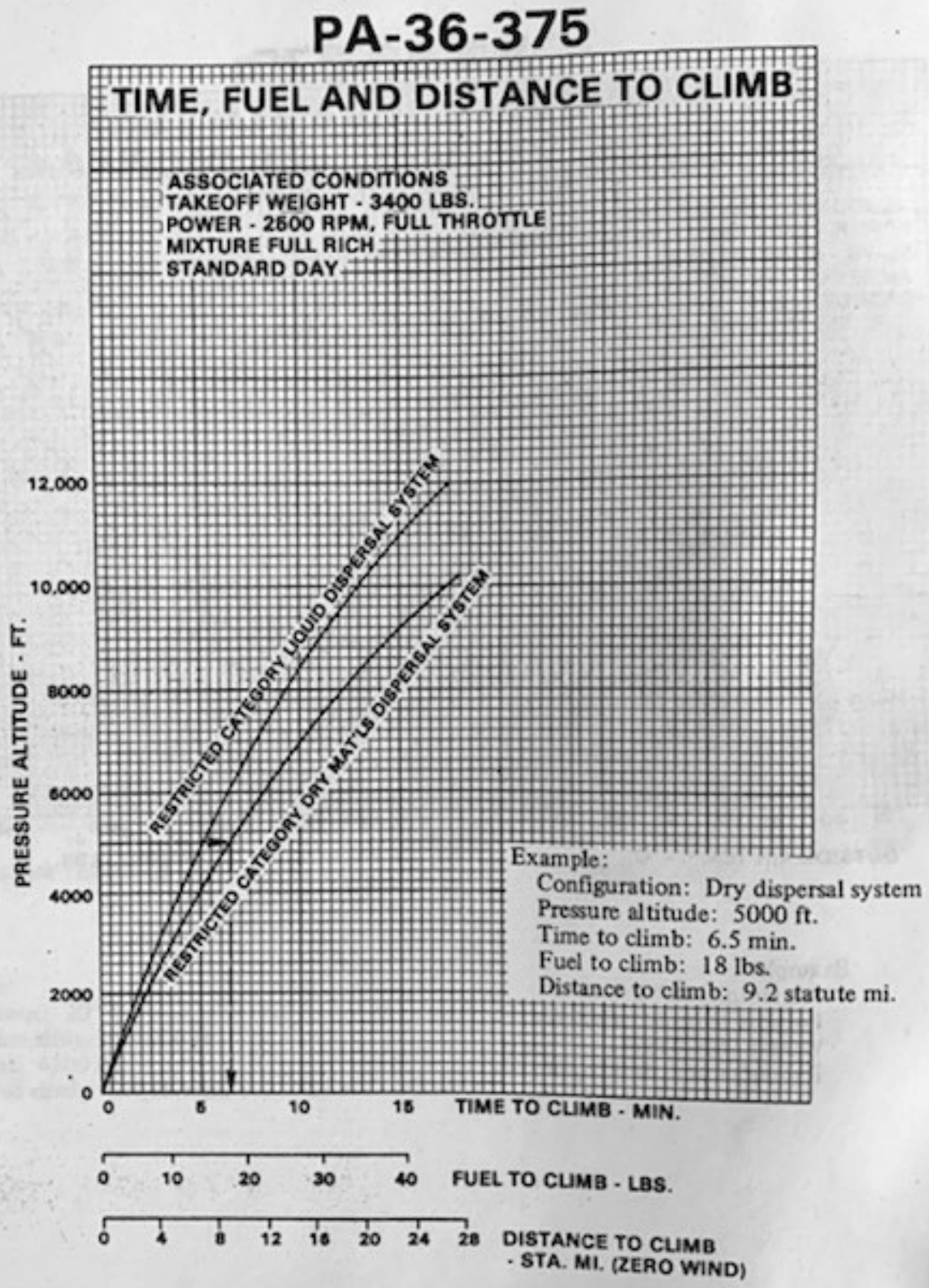
Example:
Air temp.: 15° C
Altitude: 2000 ft.
Weight: 4400 lbs.
Wind: 10 KTS
Ground roll: 1240 ft.
Distance over 50 ft.: 2180 ft.

TAKEOFF DISTANCE OVER 50 FT. 0° FLAPS (LIQUID DISPERSAL SYSTEM)
Figure 5-7



Example:
Air temp.: 20° C
Pressure altitude: 4000 ft.
Weight: 4200 lbs.
Rate of climb: 550 ft./min.

RATE OF CLIMB 0° FLAPS (LIQUID DISPERSAL SYSTEM)
Figure 5-11



TIME, FUEL, AND DISTANCE TO CLIMB
Figure 5-15

Power Setting Table - Lycoming Model IO-720-D1CD, 375 HP Engine

Press. Alt Feet	Std Alt Temp °C	206 HP – 55% Rated RPM AND MAN. PRESS. 2000	2100	2200	2300	244 HP – 65% Rated RPM AND MAN. PRESS. 2100	2200	2300	2400	281 HP – 75% Rated RPM AND MAN. PRESS. 2100	2200	2300	2400	Press. Alt Feet
		Approx. Fuel Consumption At Best Economy Mixture 15.0 Gal/Hr.				Approx. Fuel Consumption At Max. Power Mixture 19.5 Gal/Hr.				Approx. Fuel Consumption At Max. Power Mixture 21.9 Gal/Hr.				
SL	15	23.0	22.0	21.3	20.7	24.6	23.7	23.0	22.4	27.5	26.6	25.6	24.9	SL
1,000	13	22.8	21.8	21.1	20.5	24.3	23.5	22.8	22.1	27.2	26.3	25.4	24.6	1,000
2,000	11	22.5	21.6	20.8	20.3	24.1	23.3	22.6	21.9	26.9	26.0	25.1	24.4	2,000
3,000	9	22.3	21.3	20.6	20.1	23.9	23.1	22.3	21.7	F.T.	25.8	24.8	24.1	3,000
4,000	7	22.0	21.1	20.4	19.8	23.7	22.8	22.1	21.4	–	25.5	24.6	23.8	4,000
5,000	5	21.8	20.8	20.1	19.6	23.4	22.6	21.9	21.2	–	F.T.	24.3	23.5	5,000
6,000	3	21.5	20.6	19.9	19.3	23.3	22.3	21.7	21.0	–	–	F.T.	23.2	6,000
7,000	1	21.2	20.4	19.6	19.1	F.T.	22.1	21.4	20.8	–	–	–	F.T.	7,000
8,000	-1	21.0	20.1	19.4	18.8	–	21.9	21.2	20.5					8,000
9,000	-3	20.7	19.9	19.2	18.6	–	F.T.	20.9	20.3					9,000
10,000	-5	20.4	19.6	18.9	18.3	–	–	F.T.	20.1					10,000
11,000	-7	F.T.	19.4	18.7	18.1	–	–	–	F.T.					11,000
12,000	-9	–	F.T.	18.4	17.9									12,000
13,000	-11	–	–	F.T.	17.6									13,000
14,000	-13	–	–	–	F.T.									14,000

To maintain constant power, correct manifold pressure approximately 0.18" Hg for each 6°C variation in induction air temperature from standard altitude temperature. Add manifold pressure for air temperature above standard: subtract for temperatures below standard.

POWER SETTING TABLE
Figure 5-17

Weight and Balance Revision

6-02-2008

PA36-285 ***36-7660006*** ***N57607***

Previous Aircraft Values:

Empty Weight: 2899.0 lbs
Gross Weight: 4400.0 lbs
Useful Load: 1501.0 lbs
Empty C.G.: 140.2 in.
Moment: 406430.9

Equipment Installed	Weight	Arm	Moment
Crophawk Display	1.0 lbs	179.0	179.0
Crophawk Flowmeter	4.0 lbs	182.0	728.0
	5.0 lbs		907.0

New Aircraft Values:

Empty Weight: 2904.0 lbs.
Gross Weight: 4400.0 lbs.
Useful Load: 1496.0 lbs.
Empty C.G.: 140.27 in.
Moment: 407,337.9

[redacted]
Darren Zanardi
[redacted]IA

	Weight (Lbs)	Arm Aft Datum (Inches)	Moment (In-Lbs)
Basic Empty Weight			
Pilot		+ 196.0	
Fuel (86 Gallon Maximum)		+ 138.4	
Hopper Load (2200 Pounds Maximum)		+ 134.4	
Total Loaded Airplane			

Totals must be within approved weight and C.G. limits. It is the responsibility of the airplane owner and the pilot to insure that the airplane is loaded properly. The Basic Empty Weight C.G. is noted on the Weight and Balance Data Form (Figure 6-7). If the airplane has been altered, refer to the Weight and Balance Record for this information.

WEIGHT AND BALANCE LOADING FORM

Figure 6-13

PILOT

Weight	Moment/100
100	196
110	216
120	235
130	255
140	274
150	294
160	314
170	333
180	353
190	372
200	392
210	412
220	431
230	451
240	470
250	490

LOADING CHART

Figure 6-15

FUEL

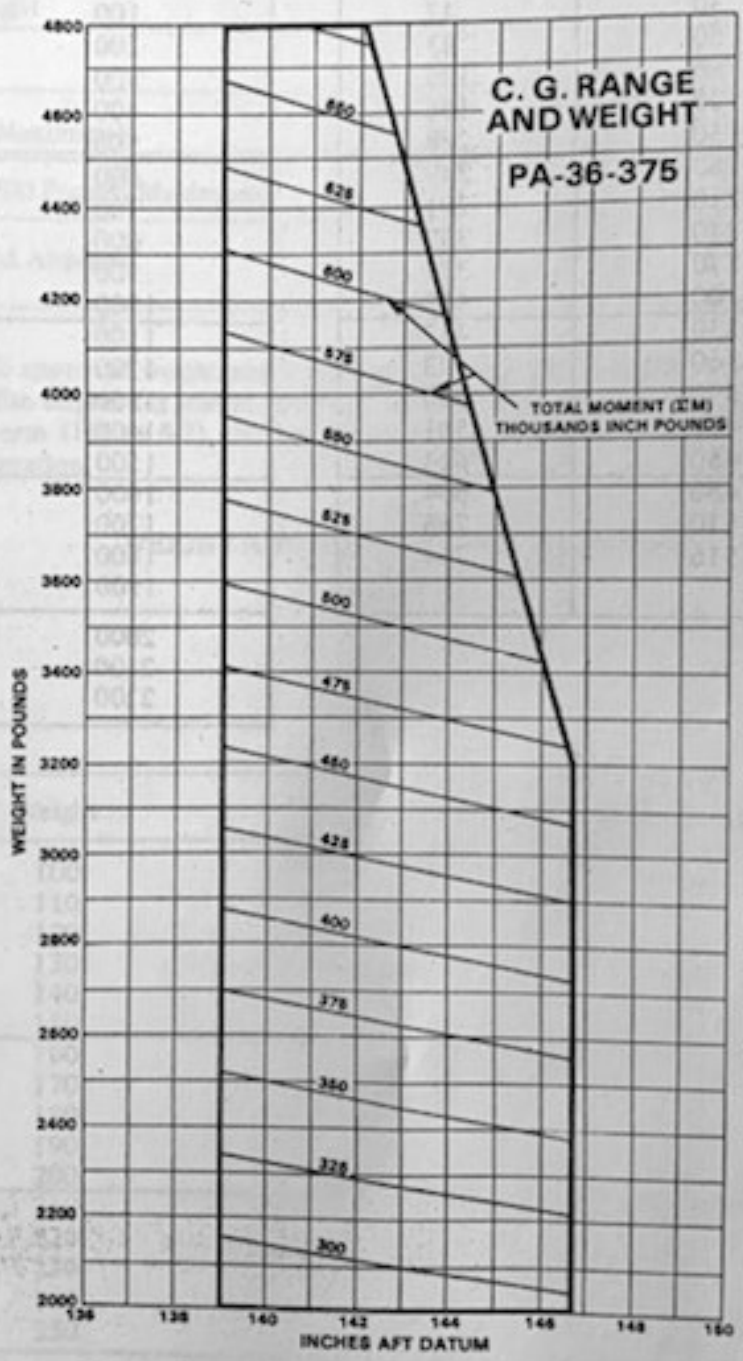
Gallons	Weight - Lbs.	Moment/100
5	30	42
10	60	83
15	90	125
20	120	166
25	150	208
30	180	249
35	210	291
40	240	332
45	270	374
50	300	415
55	330	457
60	360	498
65	390	540
70	420	581
75	450	623
80	480	664
85	510	706
86	516	714

HOPPER LOAD
(Based on water or material of similar density)

Weight-Lbs.	Moment/100
100	134
200	269
300	403
400	538
500	672
600	806
700	941
800	1075
900	1210
1000	1344
1100	1478
1200	1613
1300	1747
1400	1882
1500	2016
1600	2150
1700	2285
1800	2419
1900	2554
2000	2688
2100	2822
2200	2957

LOADING CHART (cont)
Figure 6-15 (cont)

IT IS THE RESPONSIBILITY OF THE OWNER AND PILOT TO ASCERTAIN THAT THE AIRPLANE ALWAYS REMAINS WITHIN THE ALLOWABLE WEIGHT VS. CENTER OF GRAVITY ENVELOPE WHILE IN FLIGHT.



C.G. RANGE AND WEIGHT

Figure 6-17