

PA-28R-200 (N56023) POH pp 5-8 to 5-10

Weight & Balance

Sample #1

- 1 Licensed Empty Weight
- 2 Oil quarts
- 3 Fuel (50 gal. max)
- 4 Pilot and Front Passenger
- 5 Rear Passenger
- 6 Baggage area
- 8 Total Weight and Moment
- 9 Center of Gravity

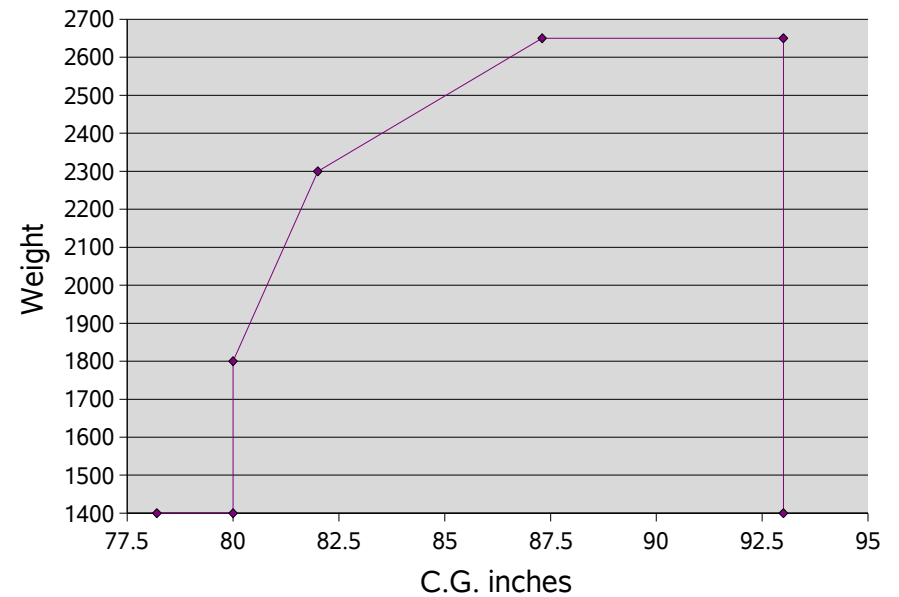
Oil/Gas Qrs/Gals	Weight lbs	Moment Arm Inches	Moment lb-ins
	1725	84.2	145206.02
8	15	24.5	367.5
50	300	95.0	28500
	340	80.5	27370
	340	118.1	40154
	61.7	142.8	8810.76
	2781.7		250408.28
			90.02

Sample #2

Oil/Gas Qrs/Gals	Weight lbs	Moment Arm Inches	Moment lb-ins
	1725	84.2	145206.02
8	15	24.5	367.5
34	204	95.0	19380
	360	80.5	28980
	160	118.1	18896
	200	142.8	28560
	2664		241389.52
			90.61

Category	C.G. inches	load	Moment K-in-lbs
Normal	78.2	1400	109
Normal	80	1400	112
Normal	80	1800	144
Normal	82	2300	189
Normal	87.3	2650	231
Normal	93	2650	246
Normal	93	1400	130

The datum used is 78.4 inches ahead of the wing leading edge at the intersection of the straight and tapered section.
It is the responsibility of the airplane owner and pilot to insure that the airplane is properly loaded.

PA-28R-200 Weight & Balance

Cherokee Arrow II - N56023

Speeds			Speeds		
	KIAS	MPH		KIAS	MPH
Vso	56	64	Vg	91	105
Vsi	62	71	Va	114	131
Vr	60	69	Vfe	109	125
Vx-dn	74	85	Vgr	109	125
Vy-dn	82	94	Vge	130	150
Vx-up	83	95	Vno	147	169
Vy-up	87	100	Vne	186	214
X-wind	17	20	Vx-cruise	93	107
Vg Best Glide	91	105	Vapproach (full flaps)	74	85

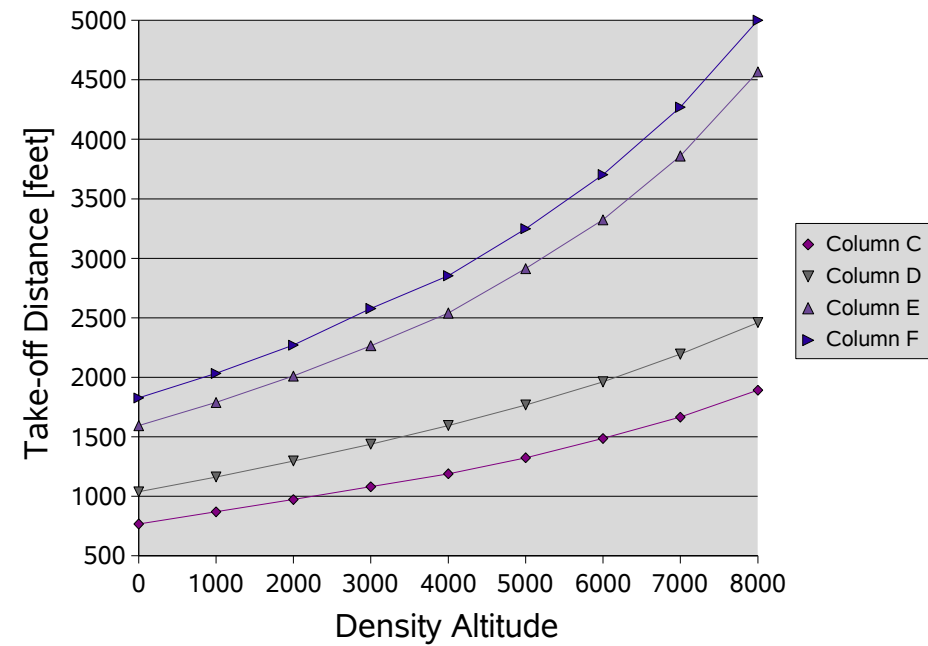
Cherokee Arrow II - N56023**Stall speeds**

Angle of bank	0	20	40	50	60
Stall Speeds (mph) flaps up	71	73	81	88	100
Stall Speeds (kias) flaps up	62	63	70	77	87
Stall Speeds (mph) flaps down	64	66	73	80	90
Stall Speeds (kias) flaps down	56	57	63	70	78

Calibrated airspeed. All performance is given for 2650 pounds.

Cherokee Arrow II - N56023**Take-off Distance vs Density Altitude**

Density Altitude	Ground 25d Flaps	RunGround 0d flaps	RunOver 25d flaps	50' Over 0d flaps	50'
0	768	1038	1595	1827	
1000	870	1162	1789	2032	
2000	973	1297	2011	2270	
3000	1081	1438	2265	2578	
4000	1189	1595	2540	2854	
5000	1324	1768	2914	3249	
6000	1487	1962	3324	3703	
7000	1665	2195	3860	4270	
8000	1892	2460	4568	5000	

PA28R Take-off distance vs Density Altitude

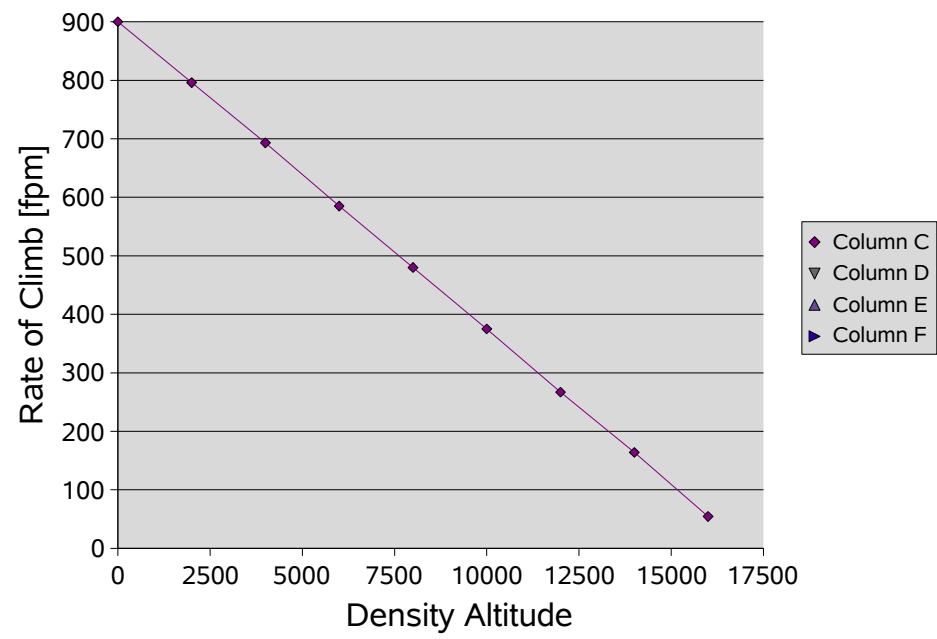
PAVED LEVEL DRY RUNWAY GROSS WT. 2650 LBS

Cherokee Arrow II - N56023

Rate of Climb vs Density Altitude

Density Altitude	Rate of Climb
0	900
2000	796
4000	693
6000	585
8000	480
10000	375
12000	267
14000	164
16000	55

PA28R Rate of Climb vs Density Altitude



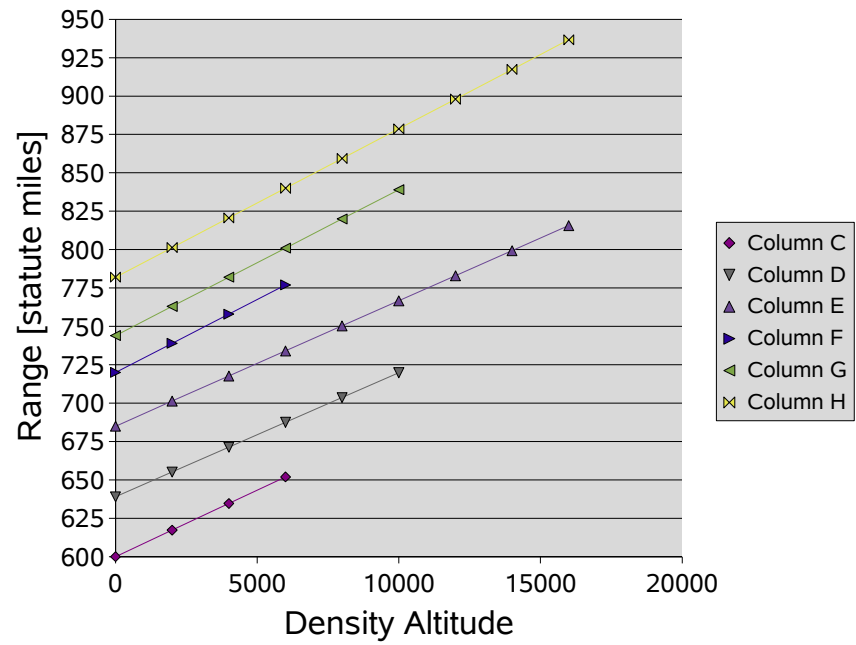
GEAR AND FLAPS RETRACTED GROSS WT 2650 LBS - LEAN MIXTURE > 5000'

Cherokee Arrow II - N56023

Range vs Density Altitude

Density Altitude	75% Power 10.15 GPH	65% Power 9.16 GPH	55% Power 8.0 GPH	75% Power 10.15 GPH	65% Power 9.16 GPH	55% Power 8.0 GPH	Power 45 GPH
	RESERVE	NO	NO	RESERVE	MIN	MIN	MIN
0	600	639	685	720	744	782	
2000	617	655	701	739	763	801	
4000	635	671	718	758	782	821	
6000	652	688	734	777	801	840	
8000		704	750		820	859	
10000		720	767		839	879	
12000			783			898	
14000			799			917	
16000			816			937	

PA28R Range vs Density Altitude



48 GAL FUEL ECONOMY CRUISE WT 2650 MIXTURE-LEAN PEAK EGT

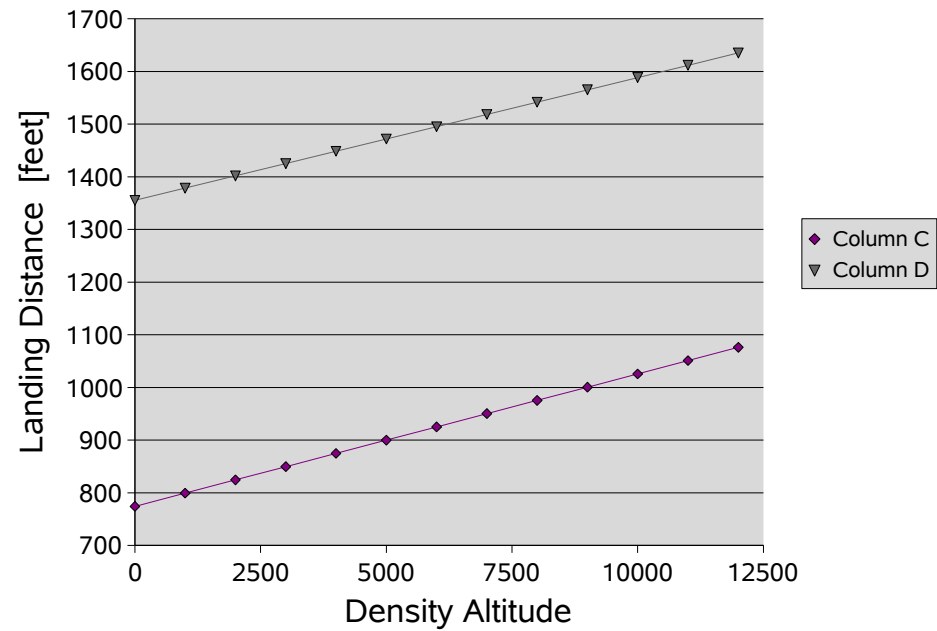
From graph						
0	600	639	685	720	744	782
6000	652	688	734	777	801	840
	0.0087	0.0081	0.0082	0.0095	0.0095	0.0097
600	600	639	685	720	744	782

Cherokee Arrow II - N56023

Landing Distance vs Density Altitude

Density Altitude	Ground Roll	Over 50'
0	774	1355
1000	799	1378
2000	824	1402
3000	850	1425
4000	875	1448
5000	900	1472
6000	925	1495
7000	950	1518
8000	975	1542
9000	1001	1565
10000	1026	1588
11000	1051	1612
12000	1076	1635

PA28R Landing Distance vs Density Altitude



FLAPS 40D POWER OFF PAVED LEVEL DRY RUNWAY
 NO WIND MAXIMUM BRAKING SHORT FIELD EFFORT
 GROSS WEIGHT 2650

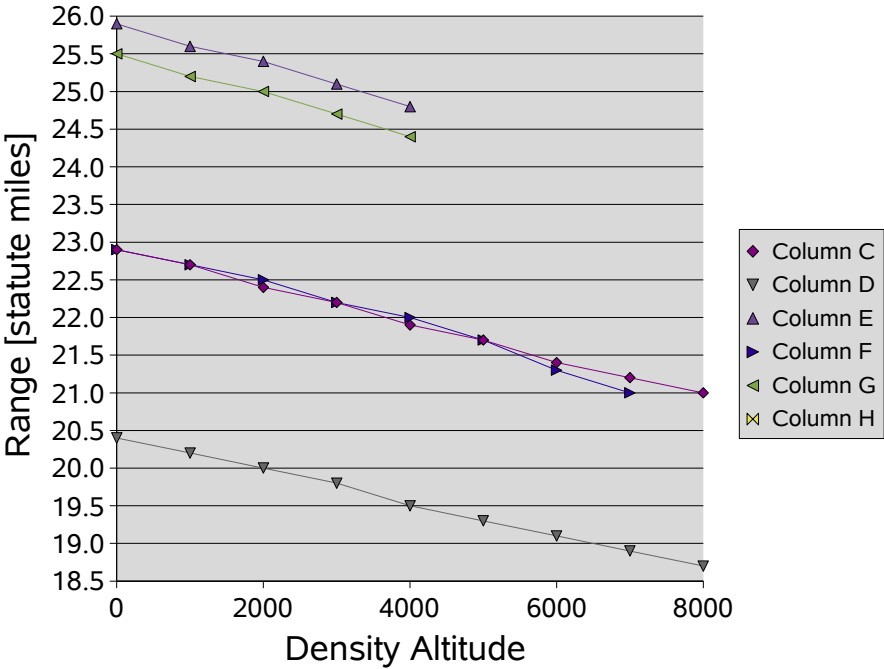
From graph		
0	774	1355
6000	925	1495
	0.0252	0.0233
	774	1355

Cherokee Arrow II - N56023
Power Setting Table - Lycoming IO-360-C, 200 hp

Std Temp	Pressure Altitude	110	hp 110	hp 130	hp 130	hp 150	hp
		55% 2100 rpm	55% 2400 rpm	65% 2100 rpm	65% 2400 rpm	75% 2400 rpm	
59	0	22.9	20.4	25.9	22.9	25.5	
55	1000	22.7	20.2	25.6	22.7	25.2	
52	2000	22.4	20.0	25.4	22.5	25.0	
48	3000	22.2	19.8	25.1	22.2	24.7	
45	4000	21.9	19.5	24.8	22.0	24.4	
41	5000	21.7	19.3		21.7		
38	6000	21.4	19.1		21.3		
34	7000	21.2	18.9		21.0		
30	8000	21.0	18.7				
27	9000		18.5				
23	10000		18.3				
20	11000		18.1				
16	12000		17.8				
13	13000		17.6				
9	14000						

From graph
59 0
9 14000
-0.0036
59

PA28R Engine settings



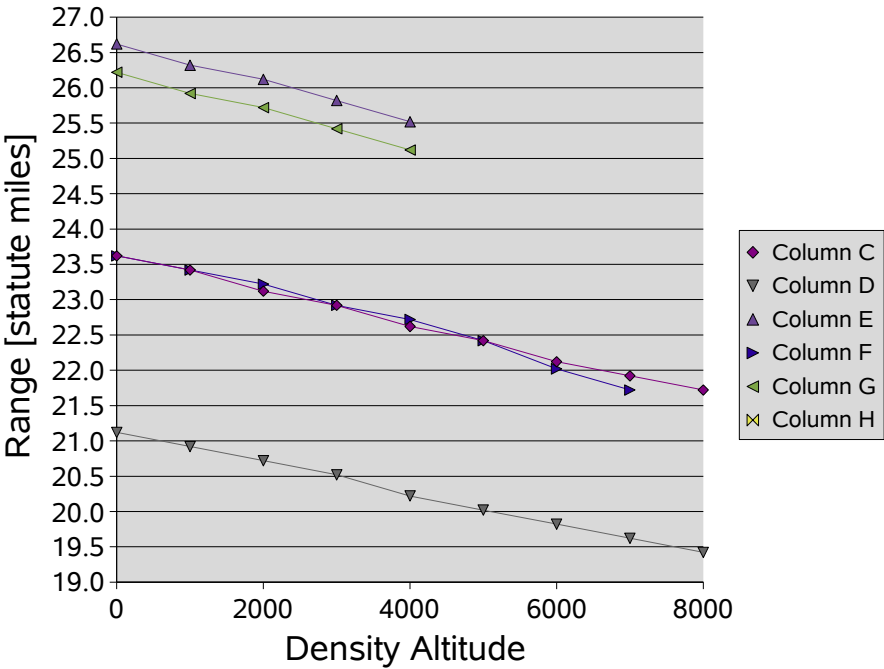
To maintain constant power, correct manifold pressure approximately 0.16" for each 10F variation in inlet air for standard altitude temperature. Add manifold pressure for air temperatures above standard; subtract for temperatures below standard.

Cherokee Arrow II - N56023
Power Setting Table - Lycoming IO-360-C, 200 hp

Perhaps a typical summer day in Arizona.

Non Temp	StdPressure Altitude	110	hp 110	hp 130	hp 130	hp 150	hp
		55% 2100 rpm	55% 2400 rpm	65% 2100 rpm	65% 2400 rpm	75% 2400 rpm	
104	0	23.6	21.1	26.6	23.6	26.2	
100	1000	23.4	20.9	26.3	23.4	25.9	
97	2000	23.1	20.7	26.1	23.2	25.7	
93	3000	22.9	20.5	25.8	22.9	25.4	
90	4000	22.6	20.2	25.5	22.7	25.1	
86	5000	22.4	20.0		22.4		
83	6000	22.1	19.8		22.0		
79	7000	21.9	19.6		21.7		
75	8000	21.7	19.4				
72	9000		19.2				
68	10000		19.0				
65	11000		18.8				
61	12000		18.5				
58	13000		18.3				
54	14000						

PA28R Engine settings



To maintain constant power, correct manifold pressure approximately 0.16" for each 10F variation in inlet air for standard altitude temperature. Add manifold pressure for air temperatures above standard; subtract for temperatures below standard.

45 0.72

From graph

104 0

54 14000

-0.0036

104