

Performance	<u>Gross</u> <u>Weight (lbs)</u>	<u>Empty</u> <u>Weight (lbs)</u>	<u>Useful</u> <u>Load (lbs)</u>	<u>Total</u> <u>Horsepower</u>	<u>Total</u> <u>Fuel (Gal)</u>	<u>Total</u> <u>Range (nm)</u>
Twin Comanche C/R	3,600	2,270	1,330	320	90	785
Bonanza V35B (IO520)	3,400	2,125	1,275	285	74	717
Bonanza F33A (IO520)	3,400	2,125	1,275	285	74	717
Beech Travel Air	4,100	2,635	1,465	360	80	661
Bonanza A36 (IO550)	3,650	2,517	1,133	300	74	760
Difference	200	145	55	35	16	68
Percentage	6%	7%	4%	12%	22%	9%

Performance	<u>Top</u> <u>Speed (kts)</u>	<u>Cruise</u> <u>Speed (kts)</u>	<u>Stall</u> <u>Speed (kts)</u>	<u>Rate Of</u> <u>Climb (fpm)</u>	<u>Rate Of</u> <u>limb SE (fpm)</u>	<u>Service</u> <u>Ceiling (ft)</u>	<u>Service</u> <u>Ceiling SE (ft)</u>
Twin Comanche C/R	178	172	61	1,460	260	18,600	5,800
Bonanza V35B (IO520)	182	172	51	1,167	N/A	17,858	N/A
Bonanza F33A (IO520)	182	172	51	1,167	N/A	17,858	N/A
Beech Travel Air	170	161	61	1,250	205	18,100	4,400
Bonanza A36 (IO550)	184	167	59	1,219	N/A	16,600	N/A
Difference	-4	0	10	293	N/A	742	N/A
Percentage	-2%	0%	20%	25%	N/A	4%	N/A

Performance	<u>Takeoff</u> <u>Roll (ft)</u>	<u>Over 50ft</u> <u>Obstacle (ft)</u>	<u>Landing</u> <u>Roll (ft)</u>	<u>Over 50ft</u> <u>Obstacle (ft)</u>
Twin Comanche C/R	940	1,530	700	1,870
Bonanza V35B (IO520)	1,002	1,769	763	1,324
Bonanza F33A (IO520)	1,002	1,769	763	1,324
Beech Travel Air	1,740	2,100	1,015	1,850
Bonanza A36 (IO550)	1,140	2,040	840	1,450
Difference	62	239	63	-546
Percentage	6%	14%	8%	-41%

Engines	<u>Engine</u> <u>Manufacturer</u>	<u>Engine</u> <u>Model</u>	<u>Engine</u> <u>TBO</u>	<u>Total</u> <u>Horsepower</u>	<u>Total</u> <u>Overhaul Cost</u>	<u>Engine</u> <u>Reserve/Hr</u>	<u>Total</u> <u>Cylinders</u>	<u>Cost Per</u> <u>Cylinder</u>	<u>Top Overhaul</u> <u>Parts Cost</u>	<u>Top Overhaul</u> <u>Cost</u>
Twin Comanche C/R	Lycoming	IO-320B1A	2,000	320	\$47,300	\$23.65	8	\$1,202	\$9,616	\$13,616
Bonanza V35B (IO520)	Continental	IO-520B	1,700	285	\$36,850	\$21.68	6	\$1,783	\$10,698	\$13,698
Bonanza F33A (IO520)	Continental	IO-520B	1,700	285	\$36,850	\$21.68	6	\$1,783	\$10,698	\$13,698
Bonanza A36 (IO550)	Continental	IO-550B	1,700	300	\$39,050	\$22.97	6	\$1,831	\$10,986	\$13,986
Difference			300	35	10,450	\$1.97	2	-\$581	-\$1,082	-\$82
Percentage			18%	12%	28%	9%	33%	10%	10%	1%

Dimensions	<u>Exterior</u> <u>Height</u>	<u>Exterior</u> <u>Wingspan</u>	<u>Exterior</u> <u>Length</u>	<u>Cabin</u> <u>Height</u>	<u>Cabin</u> <u>Width</u>	<u>Cabin</u> <u>Length</u>	<u>Door</u> <u>Height</u>	<u>Door</u> <u>Width</u>	<u>Maximum</u> <u>Baggage (lbs)</u>	<u>Wing</u> <u>Area (sq)</u>	<u>Wing</u> <u>Loading (lbs/sq)</u>	<u>Power</u> <u>Loading (lbs/HP)</u>
Twin Comanche C/R	8 ft 2 in	36 ft 0 in	25 ft 2 in	3 ft 10 in	3 ft 8 in				250	178	20.2	11.3
Bonanza V35B (IO520)	7 ft 1 in	32 ft 1 in	25 ft 1 in	4 ft 2 in	3 ft 6 in	12 ft 7 in	3 ft 0 in	3 ft 1 in	270	178	19.1	11.9
Bonanza F33A (IO520)	8 ft 3 in	33 ft 6 in	26 ft 7 in	4 ft 2 in	3 ft 6 in	12 ft 7 in	3 ft 0 in	3 ft 1 in	270	178	19.1	11.9
Beech Travel Air									199	199	21.1	11.7
Bonanza A36 (IO550)	8 ft 7 in	33 ft 6 in	27 ft 6 in	4 ft 2 in	3 ft 6 in	12 ft 7 in	3 ft 0 in	3 ft 1 in	600			

Values By Year	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Twin Comanche C/R	\$60,000	\$62,000	\$64,000	\$66,000	\$70,000	\$75,000	\$80,000	\$85,000	\$88,000	\$90,000
Bonanza V35B (IO520)	\$49,000	\$55,000	\$57,000	\$60,000	\$62,000	\$63,000	\$67,000	\$70,000	\$73,000	\$76,000
Bonanza F33A (IO520)	\$51,000	\$53,000	\$56,000	\$67,000	\$72,000	\$55,000	\$58,000	\$65,000	\$70,000	\$75,000
Bonanza A36 (IO550)	N/A	N/A	N/A	N/A	N/A	N/A				
Average Difference	\$10,000	\$8,000	\$7,500	\$2,500	\$3,000	\$16,000	\$17,500	\$17,500	\$16,500	\$14,500
Percentage	20%	15%	13%	4%	4%	27%	28%	26%	23%	19%

1972 PA-39 PIPER TWIN COMANCHE C/R

Engines	Propellers
Models	Lyc. IO-320-Blades 2
	Lyc. LIO-32(Make Hartzell
No. Cylinder	4 Model E2YL-27663-4
Oil Capacity	8 Diameter 72 in
Displacement	319.8 cu. in. Type Constant Speed
HP	160

Fuel:	
TBO	2,000 Hours
Carbureted/Fuel Injected	Standard Fuel (Gal) 90/540
	Long Range Fuel (120/720)
	Min. Octane Fuel 100

Weights and	
Takeoff/Land	3,600 lbs. Fuel Burn 75% Po 17.2 Gal
Standard Emj	2,270 lbs. Fuel Burn 65% Po 14.9 Gal
Useful Load	1,330 lbs.

Dimensions	
Height	8 ft 2 in
Maximum Cg	250 lbs Wing Span 36 ft
Volume (cu f	20 cu ft Length 25 ft 2 in
Baggage Doc	19x21 in

Cabin Dimensions.	
Cabin Width (in)	44 in
Best Rate of Climb	1,460 FPM Cabin Height (in) 46 in
Rate of Climb	260 FPM
Wing Loading	0.2 lbs./sq. ft.
Wing Area	178 sq. ft. Never Exceed Speed 230/200
Power Loading	11.3 lbs./hp Top Speed 205/178
Absolute Ceiling	20,000 ft. Max. Structural Cr 194/168
Service Ceiling	18,600 ft. Design Maneuvering 162/141
Absolute Ceiling	7,100 ft. Design Maneuvering 145/126
Service Ceiling	5,800 ft. Stall - Clean 76/66
Takeoff Ground	940 ft. Stall - Landing Config 70/61
Takeoff 50 Feet	1,530 ft. Maximum Gear Extension 150/130
Landing Ground	700 ft. Maximum Flap Extension 150/130

Landing 50 F	1,870 ft	Minimum Control	80/69
Range	785 NM	Best Rate of Climb	112/97
		Best Rate of Climb	91/79

Landing Gear

Wheel base	7 ft. 3 in
Wheel track	9 ft. 10 in
Tire size	6.00 x 6

Other Information

Seating Capacity	4-6
Aspect Ratio	7.28:1