



## CESSNA CJ3

Typical costs of ownership between operating with or without charter

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The Citation CJ3, also known by its model number 525B, was first delivered in 2004 and was the third model in the line up of the popular CitationJet, abbreviated to CJ series. This article walks through the specifications and the various costs of ownership for the CJ3, including a scenario that includes charter revenue.

The CJ3 was relatively unchanged until 2014 when it was certified with the Garmin G3000 avionics suite, LED lighting, an upgraded interior, and renamed the CJ3+. Prior to that, the CJ3 was equipped with the Proline 21 Rockwell Collins avionics suite. For those new to aviation the avionics suite is the display and computers that interface with all of the aircraft systems. It provides the pilot with the necessary information required to pilot and navigate the aircraft.

### **Cessna CJ3+**

The CJ3 is powered by two Williams International FJ-44-3A turboprop power plants that produce 2820lbs of thrust each, and it can seat up to 9 passengers depending on how the interior is configured. The aircraft has two separate baggage compartments, easily accommodating several golf bags and plenty of baggage. This is a benefit over some of its competitors, as they would need to place the larger items, such as the golf clubs, in the cabin aisle between the seats or in the aft seats of the cabin.

### **Cessna CJ3**

The aircraft has a respectable range between 1,700nm and 1,800nm with two pilots and two passengers and their baggage, making it a great aircraft for regional travel and the occasional coast to coast trip. As depicted in the range map (below), from Dallas the aircraft can make most locations on both East and West Coasts without making a fuel stop.

### **Single Pilot Operation / Two Crew**

One great aspect of the CJ series is that they are certified for single pilot operations, which allows added flexibility for the owner operator that will pilot the aircraft themselves. Those who fly the Cessna CJ3 single pilot, say that the Proline 21 cockpit can be a handful in a busy airport environment, while others find it easily manageable. For those who will operate the aircraft with professional pilots, the three screen Proline 21 avionics make cockpit resource management highly efficient. With the CJ3+, an upgrade to the Garmin G3000 avionics makes single pilot operations more convenient for the pilot (see image below), due to the simplicity of the user interface and the touch screens.

CJ3+ panel

Ultimately your budget, on top of other factors, will determine whether or not you buy a new CJ3+ or if you will buy a pre-owned CJ3. A new CJ3+ will cost slightly over \$8 million when typically equipped, while a pre-owned CJ3 ranges from \$4 million to \$7.9 million. There are many factors to consider in the acquisition of a pre-owned CJ3, especially since some of the fleet is now reaching the 10-year-old mark. Some of these factors are:

- Engine TBO (Time Before Overhaul)
- Are the engines enrolled in the TAP (Total Assurance Program) Advantage Program?
- Damage/corrosion repairs
- Paint condition
- Interior condition
- Airworthiness Directive and Service Bulletin compliance
- Applicability of Avionics

We receive many questions regarding the ownership structure for the CJ3 and the benefits of this jet over others. This is not an easy question to answer as there are many factors to consider in the ownership of an aircraft, and that determine the proper structure for your situation. To provide some ideas on the estimated expenses, we will assume that the aircraft is owned by an individual and is managed by a professional aircraft management company.

Costs of ownership. We will review two scenarios;

- Private and/or Corporate Owned and Operated (Part 91)
- Private and/or Corporate Owned and Management Company Operated on a Charter Certificate (Part 135). Commonly used to offset some of the ownership expense or for tax advantages.

For each scenario, we've assumed the acquisition price is \$4,718,000 with a 20% down payment made at time of purchase.

200 Owner Hours		200 Owner / 200 Charter Hours	
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PAYMENT SCHEDULE			
Interest Rate	4%	Interest Rate	4%
Payment Period	Monthly	Payment Period	Monthly
Term of Loan (Months)	120	Term of Loan (Months)	120
Loan	\$3,774,400	Loan	\$3,774,400
Payment Per Period	\$38,214	Payment Per Period	\$38,214
Principal Amount	\$25,547	Principal Amount	\$25,547
Interest Amount	\$12,666	Interest Amount	\$12,666

GENERAL PARAMETERS			
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Annual Owner Hours	200	Annual Owner Hours	200
Fuel Cost Per Gallon	\$5.80	Annual Charter Hours	200
		Fuel Cost Per Gallon	\$5.80
		Charter Rate	\$2,700

ANNUAL VARIABLE COSTS			
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Fuel Cost	\$179,800	Fuel Cost	\$179,800
Airframe Maintenance	\$39,640	Airframe Maintenance	\$39,640
Engine / APU Maintenance	\$53,554	Engine / APU Maintenance	\$53,554
Crew Miscellaneous	\$30,800	Crew Miscellaneous	\$30,800
Total Variable Cost	\$303,794	Total Variable Cost	\$303,794

ANNUAL FIXED COSTS			
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Crew Expense	\$148,200	Crew Expense	\$148,200
Crew Training	\$27,690	Crew Training	\$27,690
Hangar	\$35,978	Hangar	\$35,978
Insurance	\$20,346	Insurance	\$20,346
Aircraft Misc.	\$10,000	Aircraft Misc.	\$10,000
Management / Marketing Fee	\$0	Management / Marketing Fee	\$2,000
Payment / Capital Cost	\$458,568	Payment / Capital Cost	\$458,568
Avg Market Depreciaton /Yr	\$36,997	Avg Market Depreciaton /Yr	\$36,997
Total Cost W/O Charter	\$737,778	Total Cost W/O Charter	\$739,778

CHARTER CONTRIBUTION			
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Charter Revenue	\$0	Charter Revenue	\$540,000
Variable Cost of Charter	\$0	Variable Cost of Charter	\$272,994
Net Profit Contribution	\$0	Net Profit Contribution	\$267,006
Total Fixed Cost With Charter	\$0	Total Fixed Cost With Charter	\$472,772

ANNUAL BUDGET			
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Annual Hours	200	Annual Hours	200
Annual Budget W/O Charter	\$1,041,572	Annual Budget W/O Charter	\$1,043,572
		Annual Budget With Charter	\$776,566

MONTHLY BUDGET			
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Monthly Budget W/O Charter	\$86,798	Monthly Budget W/O Charter	\$86,964
		Monthly Budget With Charter	\$64,714

HOURLY COSTS			
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Owner Hrly Rate W/O Charter	\$5,208	Owner Hrly Rate W/O Charter	\$5,218
		Owner Hrly Rate With Charter	\$3,883

The variable costs of charter are made up of an hourly maintenance cost of \$465.97 and hourly fuel cost of \$899.00 to give a total hourly cost of \$1,364.97. This is then multiplied by the 200 hours of charter to give \$272,994.

