CITATION

CJ1+

Guide to Operating Economics

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Cessna
A Textron Company

CITATION CJ1+

INTRODUCTION

This *Guide to Operating Economics* is a tool for estimating the cost of operating a new, typically-equipped, Cessna Citation CJ1+. The actual operating cost of an aircraft will vary according to mission profiles flown, types of airports used, maintenance practices, geographical location and utilization. Cost can be higher for optional items ordered with the aircraft.

OPERATING CHARACTERISTICS [1]

Stage Length (nautical miles)	Altitude (feet)	Block Speed (knots)	Block Fuel Flow [2] (US gal/hr)	Stage Length (kilometer)	Altitude (meters)	Block Speed (kilometers/hr)	Block Fuel Flow [2] (liters/hr)
200	29,000	333	167	371	8,839	617	632
300	35,000	340	142	556	10,668	630	538
500	39,000	353	123	927	11,887	654	466
700	39,000	359	119	1,297	11,887	665	450
1,000	41,000	353	107	1,853	12,497	654	405
1,200	41,000	353	105	2,224	12,497	654	397

1. Block speeds and block fuel flows are shown at high-speed cruise power for various stage lengths. Block speed includes the climb, cruise, and descent portion of the flight only. Block fuel flows include an allowance for taxi and takeoff. The cruise altitudes shown are typical flight levels for the specified stage lengths. Flight at lower altitudes will generally increase block speeds and fuel flows. Flight at higher altitudes or at reduced power settings will generally decrease block speeds and fuel flows.
2. Block fuel flow includes 80 pounds (36 kilograms) of fuel for taxi/takeoff.

LABOR [1]

	Year 1 (per hour)	Year 2 (per hour)	Year 3 (per hour)	Year 4 (per hour)	Year 5 (per hour)
Man-Hours [1]	1.2	1.4	1.5	1.6	1.8
Labor Dollars ($91.00 shop rate)	$109.20	$127.40	$136.50	$145.60	$163.80

1. Man-hours for inspections, discrepancy labor (labor to repair/replace faulty components uncovered during inspections), and unscheduled maintenance based on Cessna Service Center flat rates for inspections and the examination of historical maintenance records. These figures are averages based on a typical annual utilization of 400 flight hours and reflect the impact of warranty during the first five years. Maintenance man-hours per flight hour can vary depending on utilization, and maintenance and operating practices.

PARTS [1]

Year 1 (per hour)	Year 2 (per hour)	Year 3 (per hour)	Year 4 (per hour)	Year 5 (per hour)
$17.90	$65.10	$103.90	$103.90	$103.90

1. Parts costs are based on Cessna's ProParts, a cost control program. ProParts covers all parts requirements for the aircraft, including consumables, unscheduled repairs, and avionics, for a fixed hourly rate. There may be additional charges of $18.90 for each landing cycle in excess of one landing per flight hour. Freight charges, labor, engine parts, fluids, and in-flight consumables are not included. All cost figures are shown in current U.S. dollars and do not reflect the annual CPI adjustment calculated at the beginning of each calendar year.

ENGINE RESERVES [1]

	North America	Non-North America
0 – 1,000 Total Hours or 2 Years	$85.82	$93.67
1,001 Total Hours and Up or Over 2 Years	$100.97	$110.20

1. Engine reserves are based on Williams International's TAP-Preferred program. TAP-Preferred covers the cost of labor and parts for all major periodic inspections, cycle limited parts, unscheduled maintenance, recommended service bulletins, shipping, and rental engines. The initial rate (a 15% discount) is offered for the first 1,000 engine hours or 2 years, whichever occurs first if the aircraft is enrolled in the program prior to delivery. Rates are subject to annual escalation.

DIRECT OPERATING COST [1]

Dollars per Flight Hour for an Average 500 Nautical Mile (926 Kilometer) Stage Length and 400 Hours Annual Utilization

	Year 1	Year 2	Year 3	Year 4	Year 5
Fuel ($4.75 per US gallon) [2]	$584.25	$584.25	$584.25	$584.25	$584.25
Labor ($91.00 shop rate)	$109.20	$127.40	$136.50	$145.60	$163.80
Parts (ProParts)	$17.90	$65.10	$103.90	$103.90	$103.90
Engine Reserves (TAP-Preferred)	$171.64	$171.64	$201.94	$201.94	$201.94
Total Direct Cost per Hour	**$ 882.99**	**$ 948.39**	**$1,026.59**	**$1,035.69**	**$1,053.89**
$/nm (353 kt block speed)	**$2.50/nm**	**$2.69/nm**	**$2.91/nm**	**$2.93/nm**	**$2.99/nm**
$/km (654 km/hr block speed)	**$1.35/km**	**$1.45/km**	**$1.57/km**	**$1.58/km**	**$1.61/km**

1. All costs are shown in current dollars and do not reflect the impact of inflation. There may be other miscellaneous costs incurred on a per hour basis that are related to the general operation of any aircraft. These costs are not shown due to their variability for each operator.
2. Fuel price is based on nationwide surveys of FBO prices at the date of this publication and is subject to change without notice.

FIXED ANNUAL COST [1]

Dollars per Year

	Year 1	Year 2	Year 3	Year 4	Year 5
Personnel (1 pilot, including benefits)	$95,000	$95,000	$95,000	$95,000	$95,000
Hangar Rental ($1,500 per month)	$18,000	$18,000	$18,000	$18,000	$18,000
Hull Insurance (.45% of $4,750,000) [2]	$21,375	$21,375	$21,375	$21,375	$21,375
Liability & Medical Insurance [2]	$6,000	$6,000	$6,000	$6,000	$6,000
War Risk (hull and liability) [2]	$1,550	$1,550	$1,550	$1,550	$1,550
Initial / Recurrent Pilot Training	N/C	$11,800	$11,800	$11,800	$11,800
Total Fixed Cost per Year	**$141,925**	**$153,725**	**$153,725**	**$153,725**	**$153,725**

1. The fixed costs shown are based on recent national surveys and reflect average costs. All costs are shown in current dollars and do not reflect the impact of inflation. Other fixed costs may be incurred on a periodic basis. These costs are not shown due to their variability for each operator.
2. Insurance rates assume the aircraft is flown by a single, well-qualified, professional pilot with annual recurrency training. Liability rates are for $20 million coverage. War Risk rates are for $20 million aggregate coverage and do not include coverage under the Federal Terrorism Risk Insurance Act of 2002. Rates and terms for aircraft that are flown by the owner as a single pilot can vary significantly depending on pilot experience.

TOTAL ANNUAL BUDGET

Based on 400 Hours Annual Utilization

	Year 1	Year 2	Year 3	Year 4	Year 5
Direct Cost (400 hours)	$353,196	$379,356	$410,636	$414,276	$421,556
Fixed Cost	$141,925	$153,725	$153,725	$153,725	$153,725
Total Annual Cost	**$495,121**	**$533,081**	**$564,361**	**$568,001**	**$575,281**
$/nm (141,200 nm)	**$3.51/nm**	**$3.78/nm**	**$4.00/nm**	**$4.02/nm**	**$4.07/nm**
$/km (261,600 km)	**$1.89/km**	**$2.04/km**	**$2.16/km**	**$2.17/km**	**$2.20/km**

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