Bombardier Challenger 605

RANGE
3,756 nm

SPEED
488 kts

PASSENGERS
10 people

Cost

ACQUISITION COST	ANNUAL COST	VARIABLE COST	FIXED COST
$15,000,000	**$2,235,337**	**$3,218/hr**	**$948,127**

MAX PAYLOAD	4,850 lb	ENGINES	2 General Electric CF34-3B
TOTAL CABIN AREA	1,146 cu ft	AVIONICS	Collins Pro-Line 21
WINGSPAN	64.3 ft	APU	Standard

Assumptions

This report uses custom assumptions that differ from Conklin & de Decker default values for Annual Utilization (Hours), Fuel Price (Jet A).

ANNUAL UTILIZATION (DISTANCE)	165,600 nm	FUEL PRICE (JET A)	$4.45/gal
ANNUAL UTILIZATION (HOURS)	400 hrs	LABOR COST	$136/hr
AVERAGE SPEED (STANDARD TRIP)	414 kts	ACQUISITION COST	$15,000,000

Bombardier Aerospace

Canadair, later acquired by Bombardier Aerospace, originated in 1911 as a subsidiary of the British shipbuilding company, Vickers, Sons and Maxim. They were initially known as Canadian Vickers and the company was established to contract with the Royal Canadian Navy to build large ships, including many that were used by the Canadian and British during World War I.

After World War I, Canadian Vickers began designing and manufacturing flying boats for the Royal Canadian Police to patrol the numerous lakes contained in Canada. The demand for these aircraft increased so rapidly, Vickers had to add an aircraft division to go with their shipbuilding division.

When the U.S. entered WWII, they contracted Canadian Vickers to design the amphibious aircraft known as the PBY-5. Because of the huge influx of contracts received to manufacture ships and the PBY-5s, Canadian Vickers informed the Canadian, British and American governments that it could not continue to manufacture ships and aircraft at the same time, and would stop manufacturing aircraft. All three governments could not lose the aircraft production, so a new company separate from Canadian Vickers was proposed. In October 1944, Canadair was formed.

In 1947, Canadair was purchased by the U.S. submarine manufacturer, Electric Boat Company. The two companies merged in 1952 and formed General Dynamics. During the 1950s, Canadair designed and manufactured the F-86 Sabre Jet, building close to 2,000 of these aircraft for the Canadian, British and American Air Forces during its 10-year production run.

In 1976, General Dynamics sold Canadair to the Canadian government following a slowdown in defense and military contracts. Canadair was eventually sold by the Canadian government to Bombardier in 1986. After acquiring Canadair, Bombardier acquired the Ireland-based Short Brothers aircraft manufacturing company in 1989. This was followed in 1990 by the acquisition of the Learjet Company and finally the de Havilland Aircraft Company in 1992.

The Challenger 600 series of aircraft originated in 1976, from a concept that the founder of Learjet, Bill Lear, presented to Canadair called the LearStar 600. Canadair was the original builder of the Challenger series of aircraft before Bombardier purchased Canadair.
The Bombardier Challenger 800 series aircraft is based on Bombardier's CRJ200LR.

Challenger 605

The Challenger 605 was introduced in 2005 at the NBAA convention in Orlando, FL. It is similar to the CL604 but features the Rockwell Collins Pro Line 21 avionics suite and a redesigned cabin.

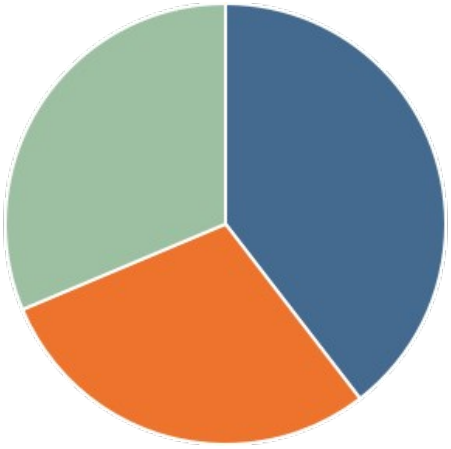
The Challenger 604 has been the fastest selling model of the Challenger series of aircraft, to date. It is powered by GE CF34-3B engines, with 3 percent lower fuel consumption, than 601-3A engines. The 604 has a maximum range of 4,000 nautical miles.

The Challenger 605 made its first flight on January 22, 2006.

1. Cost

ACQUISITION COST	ANNUAL COST	VARIABLE COST	FIXED COST
$15,000,000	**$2,235,337**	**$3,218/hr**	**$948,127**

Total Annual Cost With Market Depreciation



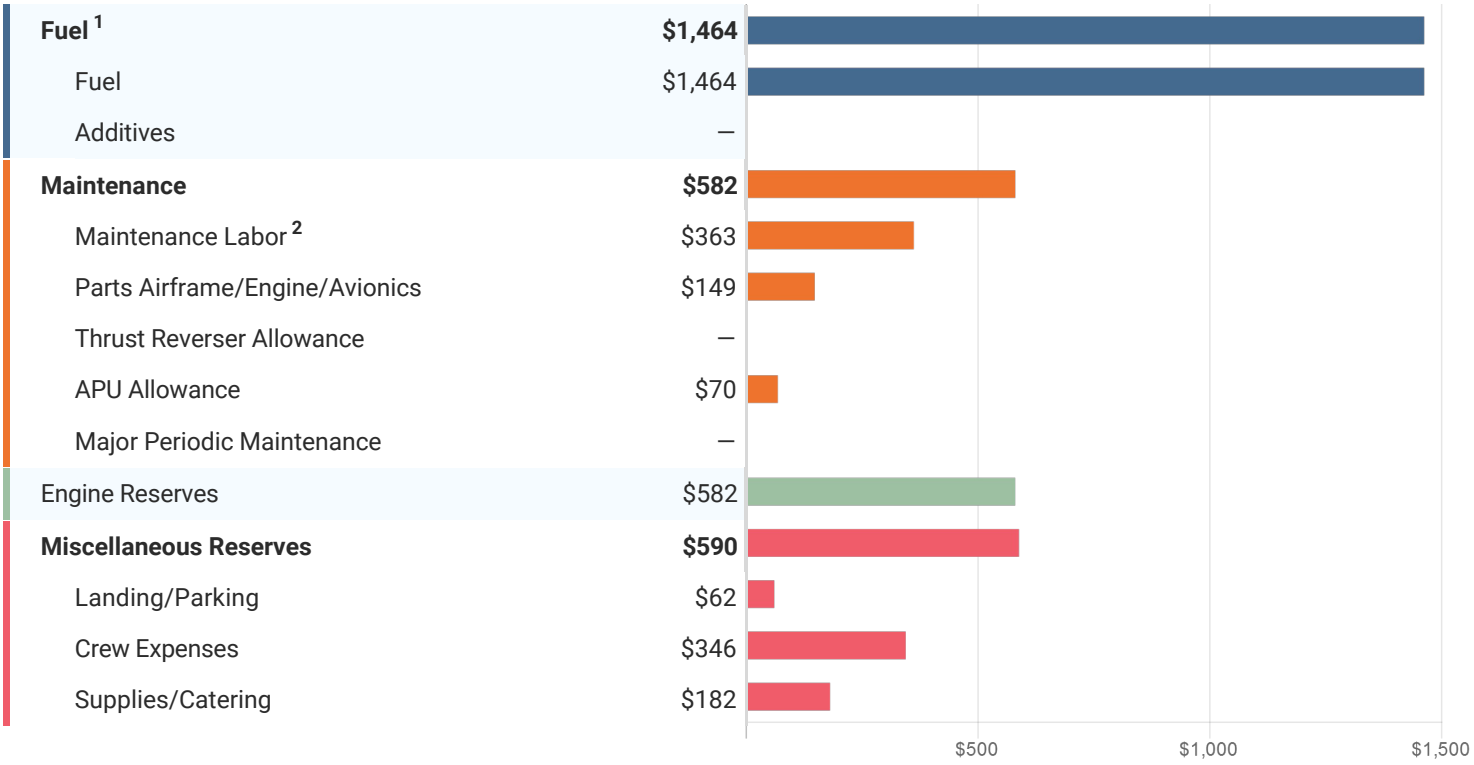
$3,255,337

- 40% - Variable Cost - $1,287,210
- 29% - Fixed Cost - $948,127
- 31% - Market Depreciation - $1,020,000

Hourly Variable Cost

PER FLIGHT HOUR

$3,218/hr



1. Fuel is calculated using Fuel Cost x Fuel Burn + 15% - 329 gal/hr

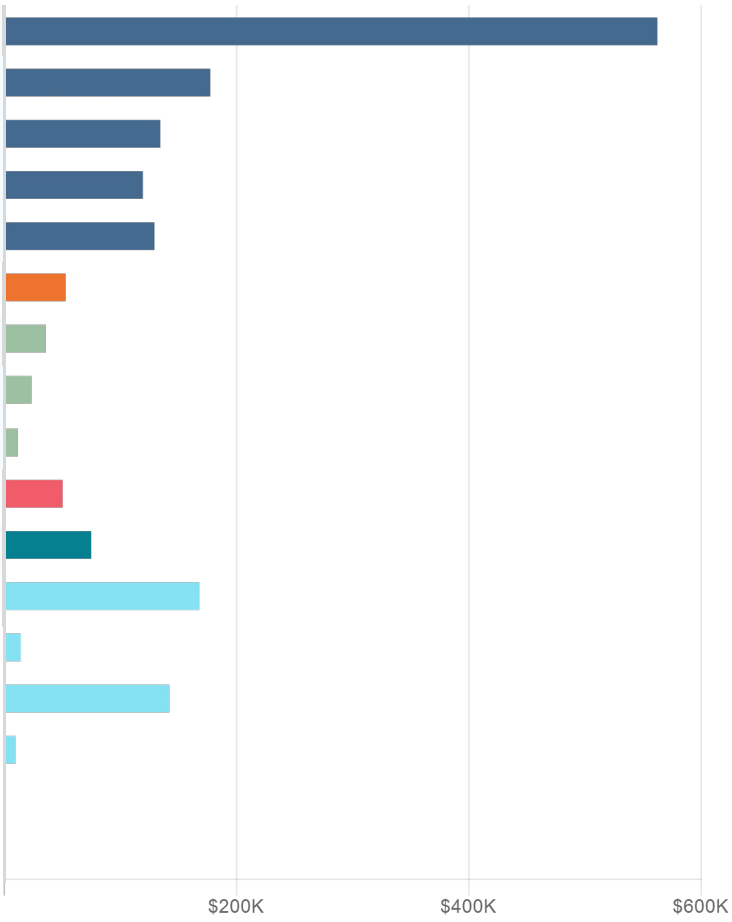
2. Maintenance Labor Cost is calculated using the ratio of Maintenance Labor Hours per Flight Hour and the Labor Rate: 2.67 labor-hr/Fhr @ $136/hr

Annual Fixed Cost

ANNUAL COST

$948,127

Crew	**$562,900**
Captain	$178,000
Copilot	$135,000
Flight Attendant	$120,000
Benefits	$129,900
Hangar	$53,400
Insurance	**$36,500**
Hull	$24,000
Single Limit Liability	$12,500
Aircraft Modernization	$51,000
Training	$75,480
Miscellaneous	**$168,847**
Navigation Chart Service	$14,847
Refurbish	$142,800
Computer Maintenance Program	$10,500
Weather Service	$700
Other	–



Costs are forward looking estimates based on Conklin & de Decker Research. For comparison purposes only.

Created on Aug 21, 2019, by Doug Strangfeld
Data Version: V 19.1

2. Performance

NORMAL CRUISE
459 kts

LONG-RANGE CRUISE
425 kts

MAXIMUM CRUISE
488 kts

RATE OF CLIMB
4,345 ft/min

MAX CERT. ALTITUDE
41,000 ft

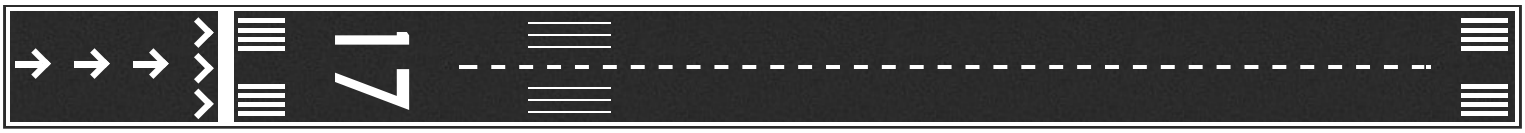
INITIAL CRUISE ALTITUDE
37,000 ft

TIME TO CRUISE ALTITUDE
21 min

ENGINE OUT RATE OF CLIMB
581 ft/min

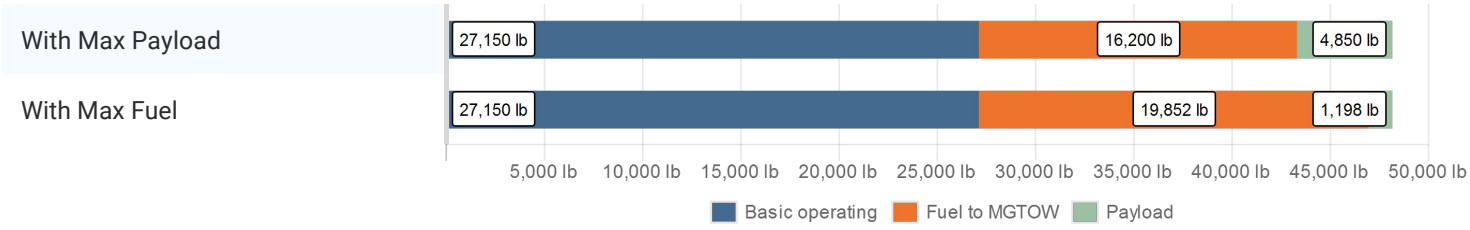
ENGINE OUT CEILING
20,000 ft

Field Length



3. Weight/Payload

Weight Breakdown



With Max Payload

MAXIMUM PAYLOAD
4,850 lb

RANGE AT MAX PAYLOAD
3,315 nm

With Max Fuel

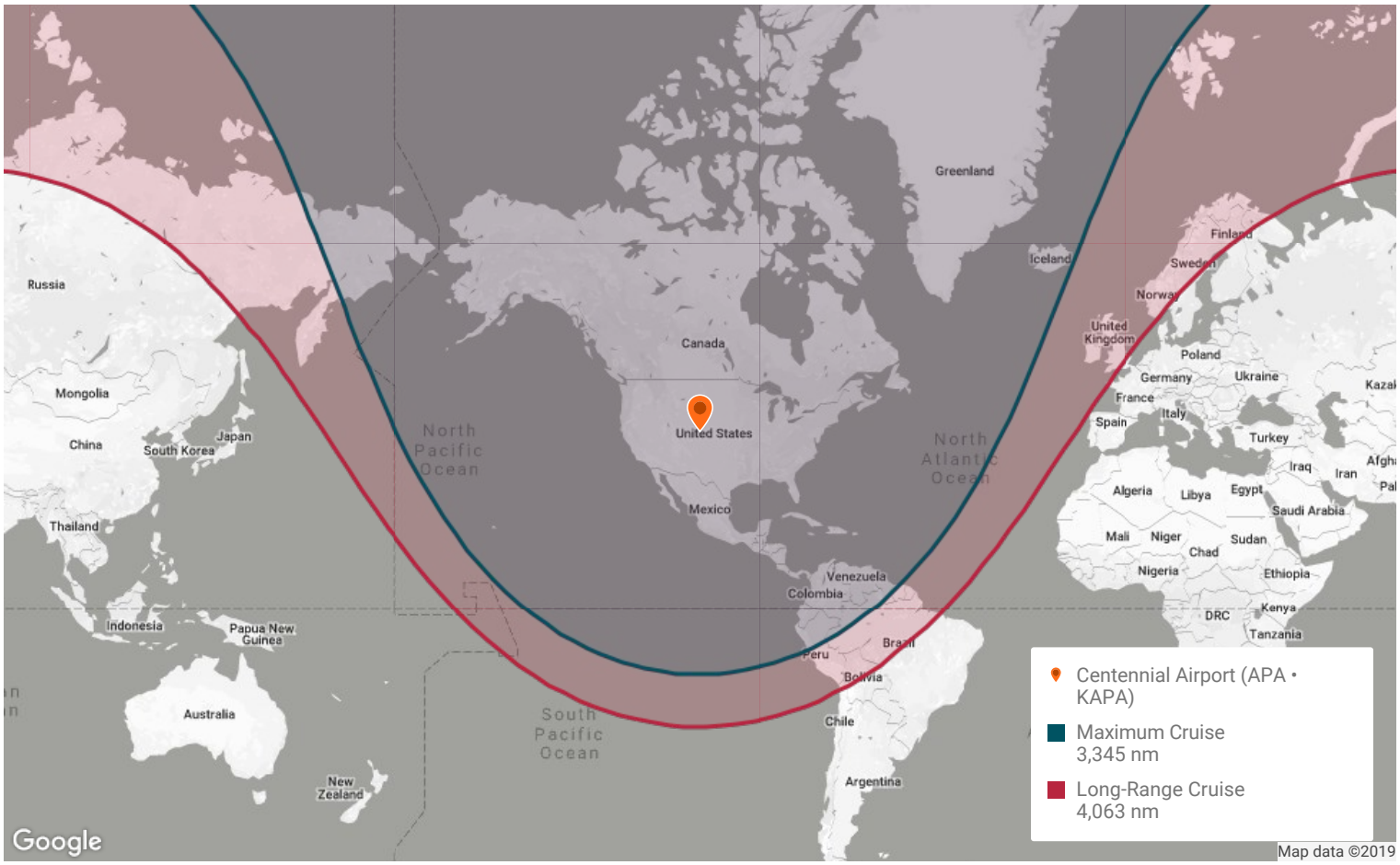
AVAILABLE PAYLOAD
1,298 lb

PASSENGER CAPACITY
6.5 people

RAMP	48,300 lb
MAX LANDING	38,000 lb
BASIC OPERATING	27,150 lb
USEFUL LOAD	21,150 lb

MAX TAKEOFF	48,200 lb
ZERO FUEL	32,000 lb
USABLE FUEL	19,852 lb

4. Range



Long-Range Cruise

RANGE
4,063 nm

AVERAGE SPEED
425 kts

ENDURANCE
9.56 hrs

PASSENGERS
4 people

Maximum Cruise

RANGE
3,345 nm

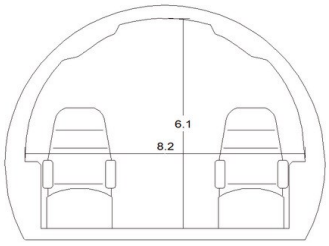
AVERAGE SPEED
470 kts

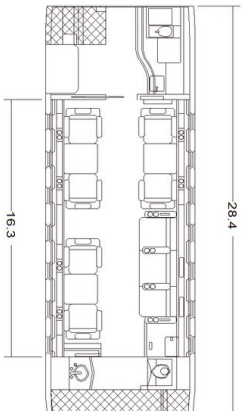
ENDURANCE
7.12 hrs

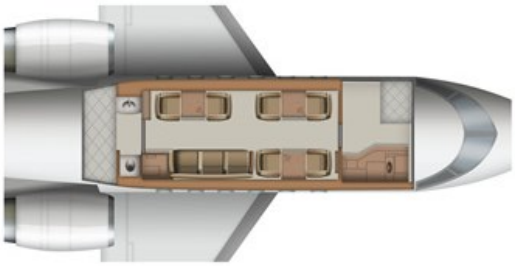
PASSENGERS
4 people

SEATS FULL RANGE	3,756 nm
FERRY RANGE	4,123 nm

5. Interior





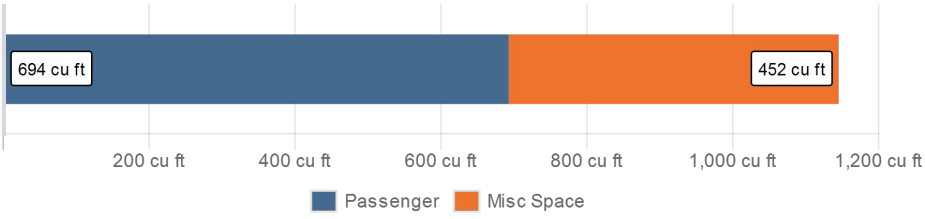


PASSENGERS
10 people

CREW
2 people

AREA PER PASSENGER
69.4 cu ft/person

CABIN VOLUME BREAKDOWN
1,146 cu ft



TOTAL CABIN AREA
1,146 cu ft

PASSENGER AREA
694 cu ft

MISC SPACE (GALLEY, LAV, ETC.)
452 cu ft

CABIN WIDTH
8.17 ft

CABIN LENGTH
28.4 ft

CABIN HEIGHT
6.08 ft

TOTAL BAGGAGE AREA
115 cu ft

INTERNAL
115 cu ft

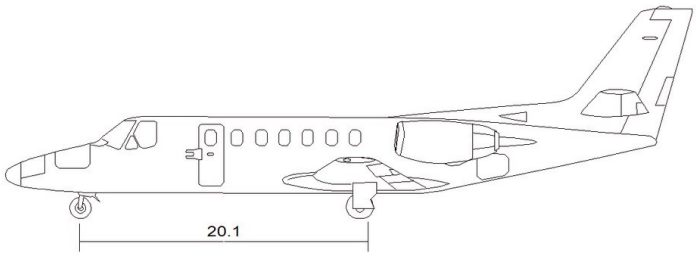
EXTERNAL
—

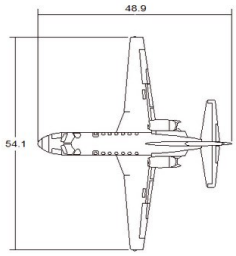
DOOR
17.96 sq ft

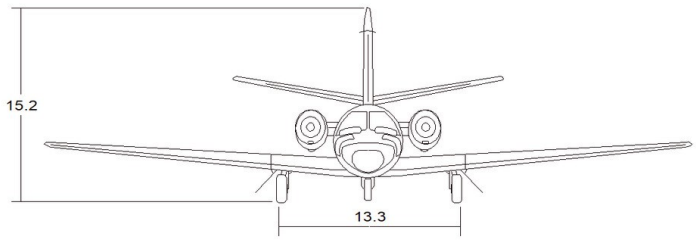
WIDTH (DOOR)
3.08 ft

LENGTH (DOOR)
5.83 ft

6. Exterior







WINGSPAN

64.3 ft

FUSELAGE

68.4 ft

POWERPLANT

2 General Electric CF34-3B

THRUST

8,729 lb

THRUST REVERSER

Standard

7. Equipment

AVIONICS

Collins Pro-Line 21

COCKPIT VOICE RECORDER	Standard
FLIGHT DATA RECORDER	Standard
EICAS	Standard
GROUND WARNING SYSTEM	EGPWS
TRAFFIC WARNING SYSTEM	TCAS II
MAINT DIAG SYS	Standard
VHF 8KHZ SPACING	Standard

AUXILIARY POWER UNIT

Standard

MEETS STAGE 3 NOISE LEVELS	Yes
REGULATORY CERTIFICATION	2006
IFR CERTIFIED	Yes
PRODUCTION	2007 - 2015
SINGLE POINT REFUEL	Standard
EXTERNAL LAV. SERVICE	Standard