Falcon 10/100

Additional Information

economics

(1987 Falcon 100)

HOURLY DIRECT OPERATING COSTS

– Fuel ($6.86 per gal): $1,625.82
– Maintenance labor (at $93 per hour): $416.64
– Parts, airframe, engine, avionics: $275.15
– Inspections, component overhauls, life limited parts: $201.63
– Engine restoration: $450.90
– Misc. expenses
  Landing and parking fees: $20.00
  Crew expenses: $67.54
  Supplies & catering: $32.16

TOTAL VARIABLE FLIGHT COSTS PER HOUR: $3,089.84

Average speed: 428 knots
– Cost per nautical mile: $7.22

ANNUAL FIXED OPERATING COSTS

– Crew salaries (estimates)
  Captain: $95,000
  Copilot: $60,000
  Benefits: $46,500
– Hangar rental (typical): $25,700
– Insurance (insured hull value = $800,000)
  Hull (1.19% of value): $9,520
  Single limit liability: $10,500
– Recurrent crew training: $27,200
– Aircraft modernization (avg per year): $45,000
– Navigational chart service: $4,730
– Refurbishing: $16,740
– Computer maintenance program: $9,750
– Aviation weather service (typical): $700

TOTAL FIXED COST PER YEAR: $351,340

ANNUAL BUDGET–BASED ON 175,000 NM

(Utilization: 409 hours)
– Variable cost: $1,263,745
– Fixed cost: $351,340

TOTAL FIXED COST (WITHOUT DEPRECIATION): $1,615,085

– Per hour: $3,949
– Per nautical mile: $9.23
– Per seat nautical mile: $1.32

Total cost (without depreciation): $1,615,085
– Book depreciation (10% per year): $80,000

TOTAL COST (WITH BOOK DEPRECIATION): $1,695,085

– Per hour: $4,144
– Per nautical mile: $9.69
– Per seat nautical mile: $1.38

Total cost (without depreciation): $1,615,085
– Market depreciation: $32,000

TOTAL COST (WITH MARKET DEPRECIATION): $1,647,085

– Per hour: $4,027
– Per nautical mile: $9.41
– Per nautical seat mile: $1.34

Source: Conklin & de Decker, Orleans, Mass.

specifications

(1987 Falcon 100)

CABIN DIMENSIONS

– Height: 4.9 ft
– Width: 4.8 ft
– Length: 12.7 ft
– Volume: 251 cu ft
– Door height: 4.8 ft
– Door width: 2.6 ft

BAGGAGE:

– Internal: 12 cu ft
– External: 28 cu ft

TYPICAL SEATS CREW/PASSENGERS: 2/6

MAXIMUM WEIGHTS

– Takeoff: 18,740 lb
– Basic operating: 11,585 lb
– Usable fuel: 5,912 lb
– Maximum payload: 1,975 lb

performance

(1987 Falcon 100)

RANGE (IFR NBAA 200 nm reserve)

– Seats full: 1,520 nm
– Ferry range: 1,620 nm

RATE OF CLIMB

– 4,600 fpm
– One engine not operating: 1,535 fpm

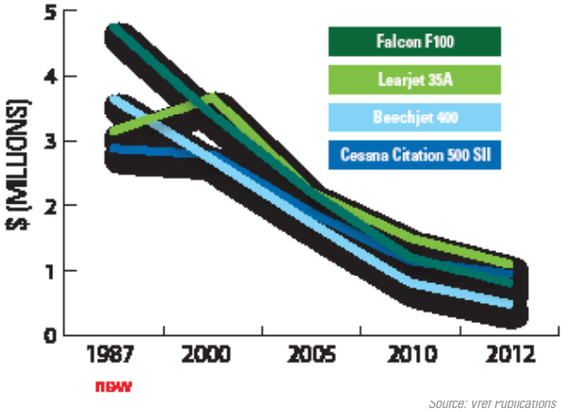
CRUISE SPEED

– Max: 490 kt
– Long range: 433 kt

SERVICE CEILING

– Both engines at MTOW: 39,000 ft
– One engine: 17,000 ft

FAIR MARKET VALUE



Source: Vref Publications

FALCON 100 COMPARED WITH OTHER AIRCRAFT

Model	First year produced	Variable cost/hour	Seats exec/max	Range (nm)	Normal cruise (kt)	Max takeoff weight (lb)
Falcon 100	1983	$3,090	6/9	1,560	452	18,740
Learjet 35A	1976	$2,806	6/10	1,995	441	18,300
Beechjet 400	1986	$2,766	7/9	1,409	446	15,780
Citation SII 550	1984	$2,543	7/10	1,700	386	15,100

Assumptions: Aircraft are 1987 models. Jet fuel $6.86/gal; variable cost: fuel plus maintenance reserves; four passengers; NBAA IFR 200 nm reserve fuel; passenger weight 200 lb includes baggage; two pilots, one cabin attendant.

Cost source: Conklin & de Decker Life Cycle Cost

Performance source: Conklin & de Decker Aircraft Performance Comparator, Orleans, Mass.