

ARCHIVED REPORT

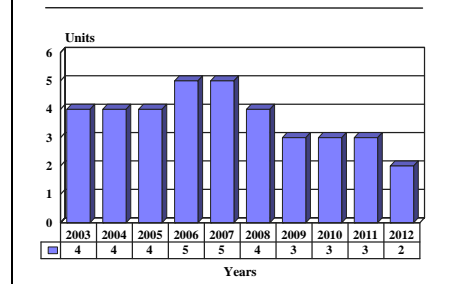
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Reims F406 Caravan II - Archived 8/2003

Outlook

- Reims has been split into two parts and sold to different buyers
- The new owners of the F406 business have revived the F406 Mark II

10 Year Unit Production Forecast
2003 - 2012



Orientation

Description. Eight- to 14-passenger, unpressurized, twin-turboprop-powered commuter, business, and utility transport aircraft.

Sponsor. F406 development was sponsored by Reims Aviation in cooperation with Cessna Aircraft Company. Additional financial support was provided by the French government.

Contractors. Reims Aviation Industries; Aerodrome de Reims-Prunay, Reims Cedex, France.

Status. The F406 is currently in production. Certification was achieved in France in December 1984; the initial production aircraft first flew in April 1985.

Total Produced. Approximately 96 F406s had been produced through 2002.

Application. Business/corporate passenger transportation, air charter, small package/freight carriage, and various military missions, including target towing and maritime patrol.

Price Range. Estimated at \$2.5 million (equipped) in 2002 US dollars.

Technical Data

(F406)

Design Features. Cantilever low-wing monoplane with retractable tricycle-type landing gear and cruciform tail section. The aircraft uses the fuselage of the Cessna 404 Titan and the wings and engines of the Cessna Conquest I.

	<u>Metric</u>	<u>US</u>
Dimensions		
Length overall	11.89 m	39.02 ft
Height overall	4.01 m	13.15 ft
Wingspan	15.09 m	49.50 ft
Wing area, gross	23.48 sq m	252.74 sq ft

	<u>Metric</u>	<u>US</u>
Weight		
Standard empty weight	2,283 kg	5,033 lb
Maximum weight	4,502 kg	9,925 lb
Maximum T-O weight	4,468 kg	9,850 lb
Maximum landing weight	4,246 kg	9,361 lb
Maximum zero-fuel weight	3,856 kg	8,500 lb
Maximum useful load	2,219 kg	4,892 lb
Capacities		
Maximum fuel	1,823 liters	481 US gal
Usable fuel	1,798 liters	475 US gal
Performance		
Maximum cruise speed	455 kmph	246 kt
Rate of climb	564 m/min	1,850 ft/min
Service ceiling	9,144 km	30,000 ft
Range with full fuel ^(a)	2,135 km	1,153 nm

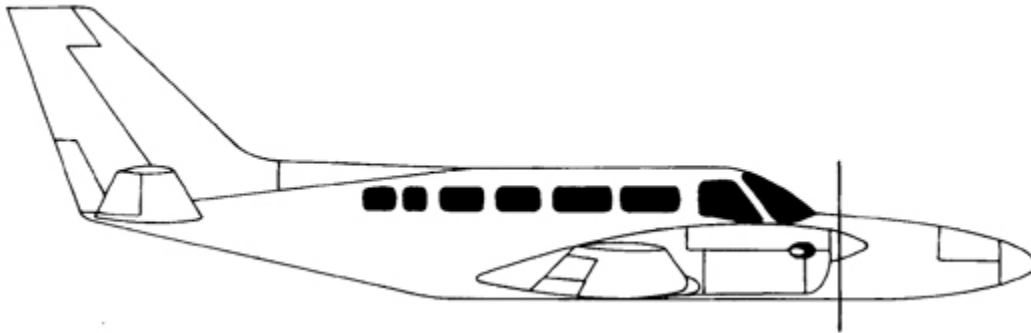
Propulsion

F406 (2) UTC Pratt & Whitney Canada PT6A-112 reverse-flow axial-centrifugal turboprop engines flat-rated to 372 kW (500 shp); each driving a McCauley three-bladed, reversible pitch, fully feathering, all-metal propeller.

Seating

Maximum of 14 passengers. Crew of two. Alternative six-seat configuration for VIP/executive use.

^(a)At maximum cruise speed; 45-minute reserves.



REIMS F406 CARAVAN II

Source: Forecast International



F406

Source: Hellenic Coast Guard

Variants/Upgrades

F406. The original F406 is marketed in two basic models that can be adapted to 12 specific versions. The two basic models are the Caravan II passenger and freight transport and the Vigilant surveillance version.

Program Review

Background. In mid-1982, Reims Aviation SA of France announced that it was collaborating with Cessna Aircraft on the development of an unpressurized light twin-turboprop-powered aircraft for transport/utility roles. The aircraft development was also supported by the French government, with funding shared equally by the three partners. The aircraft was given the designation F406 and was derived from the Cessna 404 Titan.

The F406 uses essentially the same fuselage as the Cessna 404. The wings are from the Cessna Conquest I, although with redesigned nacelles to accommodate the Pratt & Whitney Canada engines. The empennage

(except for a cruciform tail) is from the Conquest II, while the nose is from the Conquest I. The landing gear is designed for use on unimproved airports, and features the trailing-link concept used on the Conquest I and II and the Citation III.

The F406's standard avionics system is the Honeywell Silver Crown package, which includes two communication and navigation systems, glideslope, and ADF. Gold Crown avionics are optional, as are a Honeywell autopilot and the Honeywell RDR 2000 weather radar.

The F406 is marketed with a variety of optional interiors, including commuter, executive, cargo, and

combi configurations. The cargo and combi configurations have a large cargo door that measures 1.24 meters x 1.27 meters (4.08 feet x 4.17 feet).

Initially, Cessna supplied wings and fuselages for the F406. However, Reims later took over production of the entire structure of the aircraft.

One option on the F406 is a 1.3-cubic-meter belly-mounted cargo pod. The pod is constructed of glass fabric, epoxy resin, and Nomex honeycomb. It weighs only 60 kilograms (132 lb) but can carry up to 320 kilograms (705 lb) of general freight or passenger bags in three compartments.

Seating options range from six- to eight-seat VIP arrangements to 12- to 14-passenger configurations.

The F406 prototype was first displayed at the June 1983 Paris Air Show. It was granted basic certification in France in December 1984, by which time the aircraft had accumulated 410 flight hours and 339 flights. After its appearance at the 1985 NBAA show in New Orleans, the aircraft underwent final US FAA certification proceedings.

F406 Production. Through 2002, approximately 96 F406s had been produced. Customers have included Aviation Lease Holland (38), the French Customs Service (13), the French Army (two), and the South Korean Navy (five).

Funding

Not available.

Recent Contracts

In September 1999, a contract from the Greek government for two F406s for the Greek Coast Guard was finalized. The contract included an option for an additional F406, which was later exercised.

Timetable

<u>Month</u>	<u>Year</u>	<u>Major Development</u>
	1982	F406 development announced
Jun	1983	Prototype displayed at Paris Air Show
Sep	1983	Prototype first flight
Dec	1984	French certification granted
Apr	1985	Initial flight of first production model
Jun	1986	Certificated by FAA to SFAR 41
Jul	2001	F406 Mark II launched

Worldwide Distribution

Military/Government

Australian Customs Service	3
French Army	2
French Customs Service	12
Greek Coast Guard	3
Namibian Fisheries	1
Scottish Fisheries	4
South Korean Navy	5

Civil

Not available

Forecast Rationale

In January 2003, a French commercial court lifted a bankruptcy protection order on Reims Aviation SA under which the company had been operating since October 2002. However, the court also decided that Reims was to be divided into two parts, with each part sold to a separate buyer. The Austrian investment firm Ventana Group bought Reims' aerostructures manufacturing arm, which has been re-named Reims Aerospace SAS. Meanwhile, the French financial group Green Recovery and a number of private investors purchased Reims' F406 marketing and production business, which is now operated under the name Reims Aviation Industries. Reims Aviation SA had entered bankruptcy protection following cash-flow difficulties.

The new Reims Aviation Industries is continuing production of the F406, and has revived development plans for the F406 Mark II, a new F406 version. Reims had launched the Mark II in July 2001. The new model will have two 635-shp Pratt & Whitney Canada PT6A-135A engines, four-bladed propellers, a new cabin interior, a maximum take-off weight of 4,700 kilograms (10,350 lb), a useful load of 2,450 kilograms (5,401 lb), and new avionics. The Mark II will also provide improved take-off performance in hot weather conditions and increased endurance, two improvements that have been requested by F406 operators. Operators have also asked for more avionics choices and increased cabin comfort.

The Mark II will have Honeywell avionics, with several options available. Included will be standard Silver Crown avionics with Silver Crown Plus comms, new avionics definition with two EFIS displays, and optional special missions avionics with two or five EFIS displays and one flight management system with a built-in GPS and GLONASS receiver.

The new cabin interior has been designed by Reims and Air Esthetic. The Mark II is being marketed with three interior options: a standard commuter configuration, a special mission version, and a VIP version.

Reims expects certification of the Mark II to occur in the summer of 2003.

The South Korean Navy took delivery in 1998/99 of five F406s equipped with target towing systems. The service has a requirement for approximately six additional F406s.

In mid-2001, the French Customs Service ordered an F406 Polmar III pollution surveillance version. This aircraft is currently scheduled to be delivered in the first quarter of 2004.

The air freight and small package markets have generated significant sales for the F406, and continued sales activity in these areas can be expected.

Ten-Year Outlook

ESTIMATED CALENDAR YEAR PRODUCTION

Aircraft	(Engine)	High Confidence Level				Good Confidence Level				Speculative				Total 03-12
		thru 02	03	04	05	06	07	08	09	10	11	12		
REIMS														
F406	PT6A-112	96	2	2	2	2	1	0	0	0	0	0	0	9
F406 MARK II	PT6A-135A	0	2	2	2	3	4	4	3	3	3	2	2	28
Total Production		96	4	4	4	5	5	4	3	3	3	2	2	37