

BOMBARDIER

BACKGROUND

BOMBARDIER AMPHIBIOUS AIRCRAFT: A LONG TRADITION

Bombardier 415⁺ amphibians demonstrate firefighting productivity

The Bombardier 415 aircraft, currently in firefighting service, is the latest in a long line of amphibious aircraft to be designed, manufactured and supported by Bombardier Aerospace, continuing a tradition which dates back more than 50 years.

The first production Bombardier 415 aircraft, which conducted its inaugural flight Dec. 6, 1993, received Transport Canada type approval on June 24, 1994. This was followed by U.S. Federal Aviation Administration (FAA) certification on Oct. 14, 1994, and Italian Registro Aeronautico Italiano (RAI) type certification on Oct. 27, 1994. Customer deliveries began in November 1994.

To date, a total of 71 aircraft have been ordered by the governments of France (15), Ontario (9), Québec (8), Italy (22), Croatia (6), Greece (8) and Spain (3). Also the Los Angeles County Fire Department is in its 13th year lease agreement with Québec to supply SuperScooper aircraft during its critical fire period.

The Bombardier 415 aircraft incorporates several features making them the most advanced firefighting aircraft available. These features include an electronic flight instrument system (EFIS), fully powered flight controls and a computer-controlled, four-compartment drop system.

Powered by two Pratt & Whitney Canada PW123AF turboprop engines, each generating 2,380 shp (shaft horsepower) at takeoff, the Bombardier 415, in its primary role as an aerial firefighter, requires only 12 seconds to scoop its 6,137-litre load (1,621-U.S. gal.) while skimming at high speed over any suitable body of water. This technique enables it to make repeated heavy attacks, with foam suppressant added to its load, directly on a fire without returning to an airfield.

Once airborne, it can reach speeds of 359 kilometres per hour (224 mph) and in an average mission of 11 kilometres (six nautical miles) distance from water to fire, a Bombardier 415 can complete nine drops within an hour, delivering 55,233 litres (14,589 U.S. gal.) of fire suppressant.

Bombardier 415MP

The Bombardier 415MP* amphibious aircraft offers unique multi-mission capabilities for a wide range of missions. It combines the capabilities of a traditional surveillance aircraft with the additional benefit of direct intervention on water. It can be configured for other utility roles including maritime surveillance, search and rescue, and personnel transport.

To date, 4 Bombardier 415MP have been ordered. The first two were delivered in 2004 to Greece. In June 2008, the Malaysian Maritime Enforcement Agency ordered two Bombardier 415MP aircraft.

CL-215T* excels

The CL-215T is another turboprop amphibian featuring enhanced aerial firefighting capabilities. It shares many of the same systems featured in production Bombardier 415 aircraft including twin PW123AF turboprop engines, powered flight controls and a new electrical system.

A total of 17 CL-215T firefighters are currently in service including 14 with the Spanish Air Force which operates the fleet on behalf of the Ministry of Agriculture, 2 with Québec's Fonds du service aérien gouvernemental and 1 with the Government of Alberta. New conversion kits are being offered since the Fall 2004. In February 2006, nine orders for conversion kits were placed by the provinces of Alberta and Saskatchewan, Aeroflite – a private U.S. operator, and Buffalo Airways Ltd., of the Northwest Territories of Canada.

As of January 2009, the CL-215T fleet had flown over 85,000 hours.

CL-215* fleet still productive

Both the Bombardier 415 and the CL-215T continue Bombardier's tradition of excellence in designing and manufacturing amphibious aircraft. Bombardier delivered a total of 125 piston-powered CL-215 amphibians to 15 operators on four continents between June 1969 and May 1990.

Bombardier began designing the CL-215 after a National Research Council committee established criteria for the ideal forest firefighting aircraft in December 1963. Incorporating criteria and advice submitted by forest protection experts, Bombardier designed the CL-215 to be the world's first aircraft specifically developed to fight forest fires.

It received Transport Canada certification in March 1969 and the first customer delivery, to France, occurred three months later. Bombardier began delivering CL-215 aircraft to Québec in June 1970.

More CL-215s entered service with five other Canadian provinces and the Federal Government, and also with France, Greece, Italy, Spain, Thailand, Venezuela and Yugoslavia. Bombardier delivered its last CL-215 to Greece in May 1990.

Most of the fleet is still in service in firefighting operations. As of January 2009, the CL-215 fleet had flown over 532,000 hours.

With the introduction of the Bombardier 415, a number of CL-215 aircraft were taken in as trade-ins and are available for resale. The introduction of the CL-215T conversion kits and recent changes in the industry have stimulated the demand for CL-215s. Private operators have shown increased interest in the CL-215. Aero Flite, a private airtanker operator located in Kingman, Arizona has purchased two used CL-215 since January 2003, followed by two CL-215 to Buffalo Airways in Yellowknife, NWT and SOREM s.r.l. operator of the Bombardier 415 for the Italian Civil Protection Agency acquired two CL-215 in August 2003.

Powered by two rugged Pratt & Whitney R-2800 piston engines producing 2,100 brake horsepower each at takeoff, the CL-215 features a 5,346-litre (six-ton) fire-extinguishing payload.

Bombardier Aerospace's excellence in designing, manufacturing and supporting amphibious aircraft can be traced to the mid-1940s, when it delivered, along with its forerunner Canadian Vickers, a total of 369 Canso PBY-5A amphibians to the Royal Canadian Air Force and the United States Army Air Force.

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