

Bombardier (Canadair) CL-415 "Super scooper"

An FS2004 and FSX port over aircraft model by Massimo Taccoli and Dennis Seeley.



The Bombardier CL-415 "Super scooper"

The AIRCRAFT

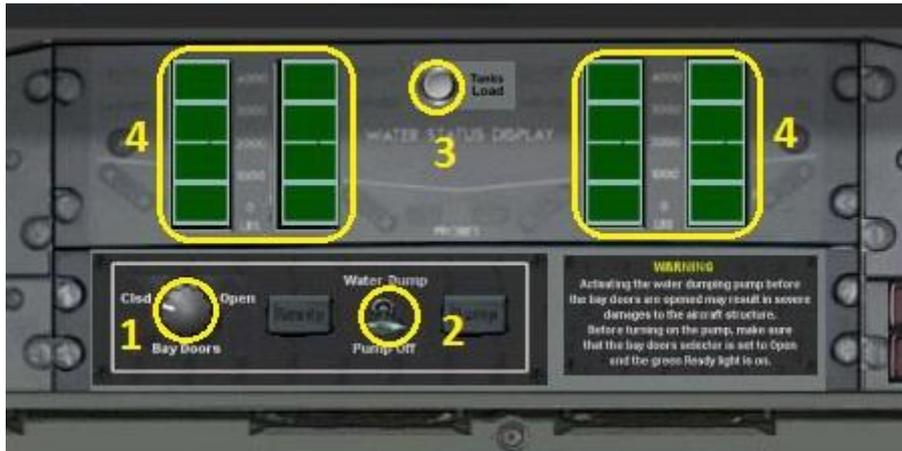
Canadair CL-215, forerunner of the CL-415, had been in production for more than 20 years when plans began on a development of a turboprop version of the aircraft. The CL-215T version used the proven airframe of the piston engine CL-215, but replaced the Pratt&Whitney R-2800 radial engines with more efficient and lighter Pratt&Whitney Canada PW123 turboprops. The new aircraft was fitted with wingtip endplates and auxiliary finlets to increase lateral stability. The Spanish air force has so far been the only customer of the variant, receiving a total of 15 conversion kits to use on its existing airframes. Following the receipt in 1991 of an order from French government for 12 new-production aircraft, the CL-415 was officially launched. This designation was chosen to distinguish new aircraft from the retrofitted CL-215Ts. The first deliveries took place in 1994 and there have been a follow on of customers such as Italy and the government of Quebec, who use the aircraft mainly for the fire-fighting duties.

In Italy, carrying the insignia of the Fire Fighting Brigade, operates the most conspicuous civilian fleet in the world, 19 aircraft (in January 2010) operated by INAER Aviation Italy.

According to data provided by the manufacturer, until the end of January 2009, in the world would be delivered 69 example of CL-415, including the MP version, with 49 aircraft operating only in the Mediterranean area.

On April 23, 2013, fire air fleet operated by Italian Civil protection, consisting of 19 CL-415, is delivered and entrusted to Italian Fire Fighting Brigade.

WATER DUMP PANEL OPERATION.



A water dump special effect is provided with this aircraft. A water dumping panel is provided both in 2d and 3d Virtual Cockpit panels.

With this panel it is possible to dump the water or retardant payload and then refill the tanks. The Bay Doors knob (1) on the left opens/closes the water tank doors situated under the belly of the aircraft. The Water Dump switch (2) on the right activates the water dump effects. The Tanks Load button (3) on the top center refills the tanks.

Fuel drop tanks simulate the water load. The max weight they hold corresponds to the max weight of water and/or retardant fluid carried by the real aircraft.

NOTE: Fuel and water in drop tanks loads should be adjusted before takeoff to avoid exceeding the aircraft's MTOW.

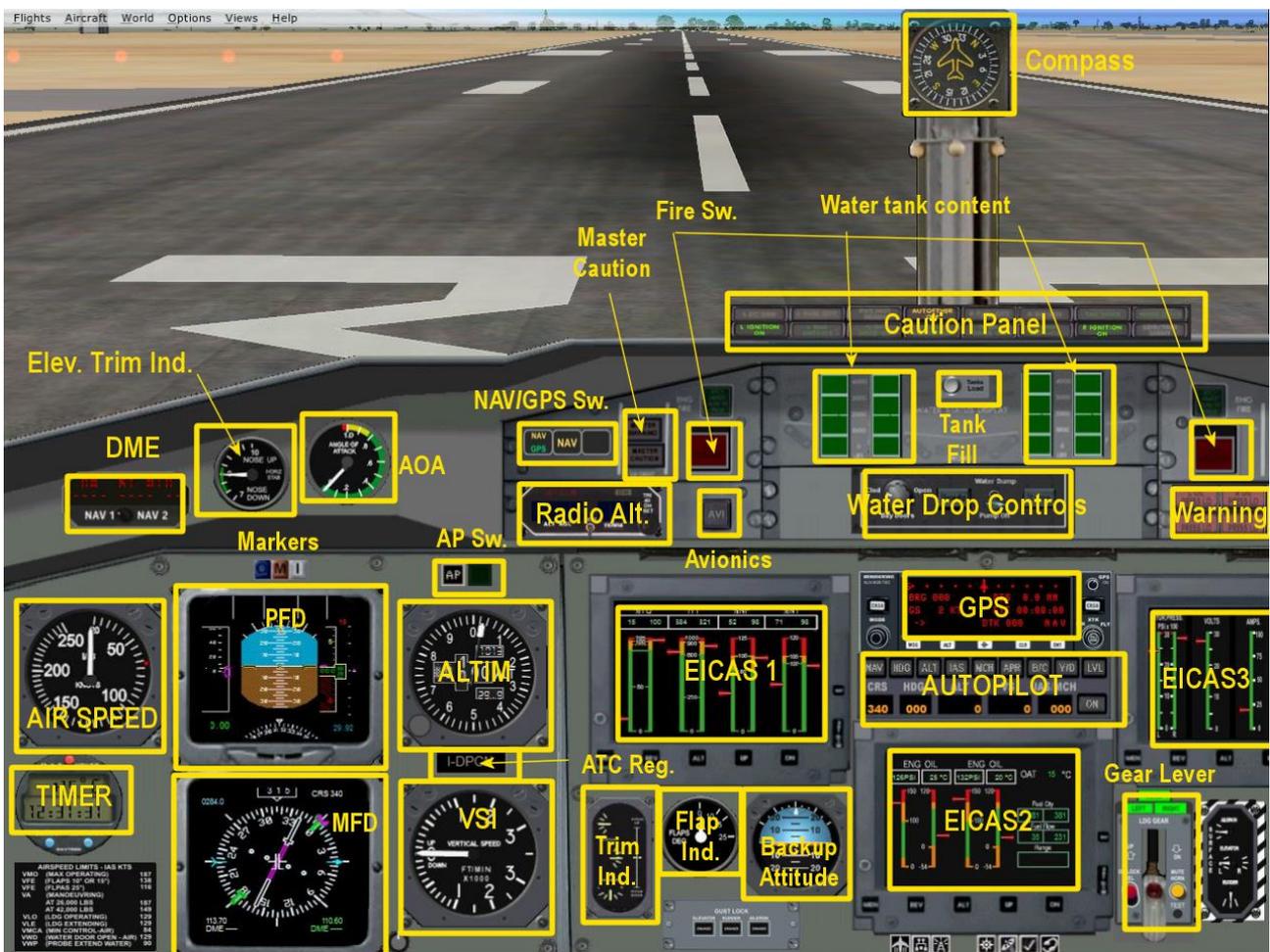
The aircraft loads in FS9/FSX with full water tanks (the drop tanks) and the green bar indicators (4) show full tanks. When you open the doors and dump the water, the aircraft weight decreases and the green indicators decrease to zero. You can then turn the Dump Switch (2) to off, close the doors (1) and press the Tanks Load button (3). The green bars indicators will increase to "full" but the aircraft weight will not increase because Microsoft Flight Simulator did not provide a way to restore the drop tanks used to simulate the fire retardant. The only way to restore the weight for max drop realism is to select another aircraft and then select the CL-415 again. It is possible to repeat water drops without re-selecting the aircraft but, after the first drop, but you will not "feel" the trim effect of dumping the tanks. To avoid reloading the model for the full effect of water tank weight decrease you can create and save a start situation with already corrected weight of fuel in the drop tanks.

Below a picture showing the Water Dump panel location in the top center of the 3d Virtual Cockpit panel.

Water dump panel



2D Panel



Aircraft data

Data for CL-215-6B11 (CL-415 Variant)

Two Pratt & Whitney Canada PW123AF (Turboprop) with P&WC SB 21211 incorporated.
Propeller. Two 14SF-19 four blade Hamilton Standard
Diameter. 13 feet 1/4 inch.

Maximum weight.

Land operation 43,850 lb

Water operation 37,850 lb

Maximum operating altitude (Pressure altitude)

Take-off and landing 10,000 feet

Enroute 20,000 feet

Water pick-up 8,000 feet

Maximum Water tanks capacity: (Water Bomber Configuration).

Inboard tanks (2) 838 gallons 6,980 lb. weight

Outboard tanks (2) 783 gallons 6,520 lb. weight

All tanks (4) 1,621 gallons 13,500 lb. weight

Vmo (SL to 20,000 ft)

215 mph IAS (186.8 Kn)

VA - Manouvering Speed

145 mph IAS (VA varies with aircraft weight) (126 Kn)

VFE - Maximum Flaps Extended Speed

10° 159 mph IAS (138.1KN)

15° 159 mph IAS (138.1KN)

25° land & Water operation 131 mph IAS (113.8 Kn)

VLE (Maximum Speed-Landing Gear Extended)

148 mph IAS (128.6 Kn)

VNO - Maximum Structural Cruising Speed

233 mph IAS (202.4Kn)

VLE - Maximum speed Landing gear extended

148 mph IAS (128.6 Kn)

VS - Stalling Speed Flaps Up

86 mph IAS (74.7Kn)

VSO - Stalling Speed Flaps Landing

75 mph IAS (65.1 Kn)

VWD (Maximum Speed at which water doors may be opened or operated in flight)

148 mph IAS (128.6 Kn)

All reference comes from TYPE CERTIFICATE DATA SHEET NO. A14EA, Department of transportation F.A.A. JAN2008.

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