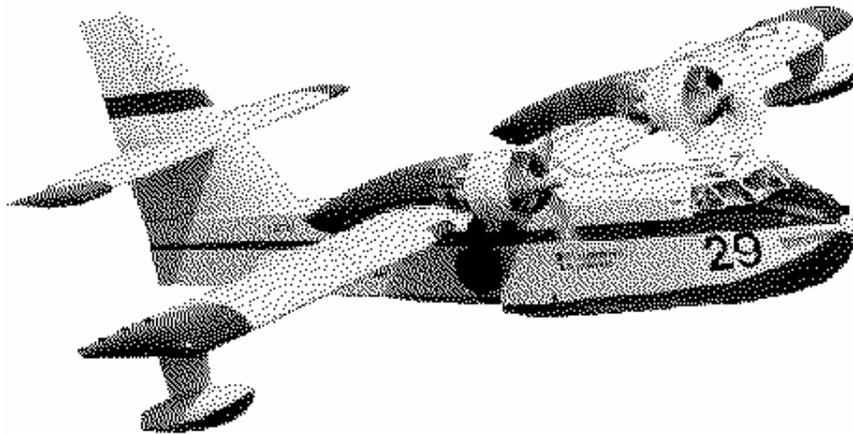


# FLIGHT STANDARDIZATION BOARD (FSB) REPORT

CANADAIR CL-215



APPROVED:        *original signed by*    DATE: 03/10/98

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### REVISION RECORD

<u>Revision No.</u>	<u>Section</u>	<u>Page #s</u>	<u>Date</u>
Original	All	All	03/10/98

## 1 PURPOSE

The primary purpose of this report is to specify FAA training, checking and currency requirements applicable to crews operating the Bombardier/Canadair CL-215-1A10, hereafter referred to as the "CL-215". FAR Parts 119, 121, and 135 do not apply to the CL-215, but it may be operated under Part 137. This report can help Part 137 Operators in the development of their training programs and FAA Principal Operations Inspectors (POIs) in the administration of the knowledge and skills tests required by Part 137.19 (e). Provisions of this report are effective until amended, superseded, or withdrawn by subsequent FSB determinations.

Relevant acronyms are defined as follows:

AC	Advisory Circular
ACO	Aircraft Certification Office
AFM	Airplane Flight Manual
AP	Autopilot
ATP	Airline Transport Pilot
CHDO	Certificate Holding District Office
FSB	Flight Standardization Board
FTD	Flight Training Device
POI	Principal Operations Inspector
PTS	Practical Test Standards

## 2 FSB COMPOSITION

Mark A. Humphreys	Chairman	LGB-AEG 3930 Paramount Blvd, Lakewood, CA 90712-4137
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## 3 BACKGROUND

The CL-215 is a high wing, twin engine amphibious airplane which was certificated under FAR 21.29(a)(1)(ii). It is listed on FAA Type Certificate Data Sheet A14EA. It's primary purpose is aerial fire fighting. It has the capability of operating on land or water. On water it can scoop 1500 gallons (12,000 pounds) of water into two internal tanks, then drop it on fires. It can also be configured to spray liquids or drop chemical foam.

In September, 1997, Canadair requested that the FAA conduct an AEG operational evaluation of the CL-215 which is required prior to operation in the U.S. In January, 1998, the CL-215 Flight Standardization Board (FSB) received a CL-215 initial pilot ground school utilizing the

classroom training facilities of Bombardier Aerospace Training Center located in Montreal, Canada. The FSB then received aircraft training in the CL-215, registration number C-GDRS, at Kinston, NC. It then conducted AC 120-53 test T5, which is essentially an evaluation of all the FAA Practical Test Standards maneuvers required for a person not previously qualified in a seaplane.

The FSB is responsible for conducting future evaluations of changes to the CL-215 (such as engines, system instrumentation, or similar new systems) and its derivatives (such as the CL-215T and CL-415). The FSB then determines those changes' impact on training, checking and currency, and amends this report accordingly.

#### **4 APPLICATION OF FSB REPORT**

The guidelines in this report apply to: Aviation Safety Inspectors, Designated Pilot Examiners, Certificated Flight Instructors, Certificated Ground Instructors, and Pilot Proficiency Examiners.

#### **5 PILOT "TYPE RATING" REQUIREMENTS**

In accordance with Parts 1 and 61, the pilot type rating for the CL-215-1A10 is designated as "CL-215". At Canadair's request, the FSB did not conduct a comparison between the CL-215 and the CL-215T or the CL-215 and the CL-415. Therefore, no credit may be given between these aircraft for training, checking, or currency.

#### **6 "MASTER COMMON REQUIREMENTS" (MCRs)**

LANDING MINIMA - In accordance with the CL-215 Airplane Flight Manual, dated January 17, 1997, the maximum landing weight for land operations is 34,400 pounds, and 37,700 pounds for water operations. 1.3 V<sub>so</sub> at a flap setting of 25 degrees is 86 knots at a gross landing weight of 34,400 pounds. In accordance with FAR Section 97.3, the CL-215 is a category "A" aircraft during straight-in instrument approaches and category "A" for circling approaches.

NO FLAP APPROACHES - Checking in no flap approaches and landings is required per the Airline Transport Pilot and/or Type Rating Practical Test Standards (FAA-S-8081 Area of Operation VI, Task F).

#### **7 "MASTER DIFFERENCE REQUIREMENTS" (MDRs)**

This section is reserved for variants of the Canadair CL-215.

## **8 ACCEPTABLE "OPERATOR DIFFERENCE REQUIREMENTS" (ODRs) TABLES**

This section is reserved for variants of the Canadair CL-215.

## **9 FSB SPECIFICATIONS FOR TRAINING**

The applicant must meet the requirements of Part 61.157 (a)(1)(ii), (v), (b), or (d) for the addition of a CL-215 type rating to an ATP certificate. Part 61.63(d)(e) applies for the addition of a CL-215 type rating to any other grade of certificate. See Appendix 1 for a list of Training Program Special Emphasis Items.

## **10 FSB SPECIFICATIONS FOR CHECKING**

Testing, Checking and Evaluations specified by Part 61.58, Part 61.155 Part 61.157, and FAA Practical Test Standards (including seaplane) apply.

The following Specific Flight Characteristics (ATP/PTS section IV, Task E) must be demonstrated by all crewmembers at each proficiency/competency check:

- 1) Proficiency in water scooping and aerial dropping.
- 2) Maneuvering in medium bank turns (with water tanks full).

## **11 FSB SPECIFICATIONS FOR CURRENCY**

Currency will be maintained, or re-established, in accordance with Parts 61.57 and 61.58.

## **12 AIRCRAFT REGULATORY COMPLIANCE CHECKLIST**

Canadair did not provide the FSB with an Operating Rules Compliance Checklist to evaluate, therefore it is the responsibility of the CHDO to review operator's compliance with pertinent rules or policies.

## **13 FSB SPECIFICATIONS FOR DEVICES AND SIMULATORS**

Device and simulator characteristics are designated in AC 120-40 and 120-45 (as amended). The acceptability of differences between devices, simulators, and aircraft must be addressed by the POI. Requests for device approval should be made to the POI. The POI may approve those devices for that operator if their characteristics clearly meet the established FAA criteria and have been approved by the National Simulator Program (NSP). There are currently no simulators

or training devices available for the CL-215.

## **14 ALTERNATE MEANS OF COMPLIANCE TO THIS REPORT**

The FSB chairman should be consulted by the POI when alternate means of compliance, other than those specified in this report, are proposed. Alternate means of compliance must be approved by the FAA General Aviation and Commercial Division, AFS-800, Washington Headquarters. If an alternate means of compliance is sought, operators will be required to submit a proposed alternate means for approval that provides an equivalent level of safety to the provisions of AC 120-53 and this FSB report. Analysis, demonstrations, proof of concept testing, differences documentation, and/or other evidence may be required.

In the event that alternate compliance is sought, training program hour reductions, simulator approvals, and device approvals may be significantly limited and reporting requirements may be increased to ensure an equivalent level of training, checking, and currency. FAA will generally not consider relief through alternate compliance means unless sufficient lead time has been planned by an operator to allow for any necessary testing and evaluation.

## **15 SUPPLEMENTAL BOARD REPORT - PART II**

Part II of the FSB report contains historical development information used to develop Part I. This information is kept on file at the Long Beach Aircraft Evaluation Group, (LGB AEG), 3960 Paramount Boulevard, Lakewood, CA 90712-4137.

Documents kept on file are as follows:

- CL-215 Operational Manuals
- CL-215 Training syllabus of FSB members
- CL-215 Original Aircraft Flight Manual
- CL-215 FAA FSB Order (FSB member list)

## **Appendix 1 - TRAINING PROGRAM SPECIAL EMPHASIS ITEMS**

The FSB has identified several aircraft systems and/or procedures that should receive special emphasis in a CL-215 Training Program:

### Ground Training:

- 1) Radial engine powerplant management.
- 2) Aerial firefighting water system.

### Flight Training:

- 1) Crosswind takeoffs and landings on both land and sea.
- 2) Maneuvering in medium bank turns with full water load.
- 3) Recovery from hull porpoising during water operations.
- 4) Water probe operation - When water probes are extended for scooping, the aircraft experiences deceleration and a bow low trim angle change, requiring the pilot to increase elevator back pressure. When water probes are retracted at the completion of scooping the aircraft trim angle is restored and may be accentuated by the pilot induced back pressure.
- 5) Water dropping - When water is dropped from the aircraft at normal water dropping speeds, the aircraft experienced an increased positive G factor and pitches up significantly. At speeds close to the critical angle of attack this tendency is minimized.
- 6) Simulating Engine Failures - Pilot examiners should be cognizant of, and have a complete understanding of, the auto-feather arming system prior to simulating engine failures/malfunctions during takeoffs and landings.