

AERONAUTICAL INFORMATION CIRCULAR 12/22

NOTICE OF FURTHER EXPANSION OF AUTOMATIC DEPENDENT SURVEILLANCE – BROADCAST (ADS-B) SERVICES BELOW FLIGHT LEVEL 290

(Supersedes AIC 6/22)

Introduction

NAV CANADA has commenced incremental provision of air traffic service (ATS) surveillance services using space-based automatic dependent surveillance – broadcast (ADS-B) below flight level (FL) 290 in Canadian Domestic Airspace (CDA). The first flight information region (FIR) was the Montreal FIR in December 2021.

This aeronautical information circular (AIC) provides details on the expected implementation schedule for ADS-B service provision in controlled airspace below FL 290 within the remaining Canadian FIRs:

Vancouver FIR	on or soon after 12 April 2022
Edmonton FIR	on or soon after 15 May 2022
Winnipeg FIR	on or soon after 23 May 2022
Moncton FIR	on or soon after 15 June 2022
Gander FIR	on or soon after 15 June 2022
Toronto FIR	to be determined (TBD)

Background

The provision of space-based ADS-B service below FL 290 expands ATS surveillance service into areas where it was previously not available, thereby providing greater situational awareness for air traffic controllers with safety and efficiency benefits for pilots. An incremental approach to implementation has been undertaken to allow for ongoing evaluation of overall system performance, gather air operator and air traffic controller feedback, and address potential technical issues.

Benefits are expected to include:

- Increased ATS situational awareness through improved accuracy of aircraft position and trajectory.
- Earlier warnings and alerts to ATS of unexpected aircraft deviations.
- Improved emergency response for tracking and locating aircraft in distress.
- Implementation of common surveillance technology to current and new airspace for a more seamless operating environment.
- Increased flexibility for desired operations due to availability of ATS surveillance separation.

Equipment and Operator Participation

Operators intending to receive ADS-B service in the portions of the Edmonton FIR airspace depicted below require:

- An appropriate transponder with ADS-B out capabilities and performance that meets the avionics performance standard of Radio Technical Commission for Aeronautics (RTCA) DO-260B, "Minimum Operational Performance Standards," or newer.
- An antenna emitting 1090 MHz extended squitter that is able to broadcast out toward space-based ADS-B receivers. Bottom mount transponders alone are insufficient.
- Traffic alert and collision avoidance system (TCAS) reporting that it is serviceable and enabled as a means to predict antenna diversity prior to the ADS-B mandate, commencing February 2023.

Operators are to file the following ADS-B equipment in Item 10 of the International Civil Aviation Organization (ICAO) flight plan, as appropriate:

- B1 ADS-B with dedicated 1090 MHz ADS-B "out" capability
- B2 ADS-B with dedicated 1090 MHz ADS-B "out" and "in" capability

Entry of Flight Identification (FLTID)

ADS-B avionics transmit the Flight Identification (flight number) set in the avionics or flight management system. The air traffic control (ATC) system uses that identification to correlate ADS-B position with the information contained in a filed flight plan.

When entering the Flight Identification (flight number), **pilots should ensure it exactly matches the Aircraft Identification in the ATS flight plan.** Example of Aircraft Identification/flight number: **FPL-ABC201-IS.**

Example Transponder Flight Identification



Area of Applicability

ADS-B services will be enabled below FL 290 in the areas within the Vancouver, Edmonton, Winnipeg, Montreal, Moncton and Gander FIRs depicted below.



Further Information

For further information, please contact:

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