AERONAUTICAL INFORMATION CIRCULAR 29/17

AIRCRAFT IDENTIFICATION AND AUTOMATIC DEPENDENT SURVEILLANCE – BROADCAST FLIGHT IDENTIFICATION

Purpose of Circular

This aeronautical information circular highlights the requirement for Aircraft Identification (ACID) and Automatic Dependent Surveillance-Broadcast (ADS-B) Flight Identification (Flight ID) to match.

Background

ADS-B is a surveillance system that uses an aircraft's Mode S transponder to relay a range of aircraft parameters such as identification, position, and altitude to air traffic services. ADS-B uses two means of identifying transmitting aircraft. The first is the aircraft's Mode S address, also known as the International Civil Aviation Organization (ICAO) 24-bit aircraft address. The second is the Flight ID which is the aircraft's call sign.

Every aircraft has a unique 24-bit aircraft address assigned by the State of aircraft registry. In Canada, the aircraft address is printed at the bottom of the aircraft's certificate of registration in three formats: binary (24 ones and zeros), octal (eight numerical digits), and hexadecimal (six alpha-numeric digits). The aircraft address is entered into the transponder during installation, and it remains associated with that specific aircraft registration.

Flight ID is the ACID entered on the ICAO flight plan in item 7. The Flight ID enables the air traffic service's surveillance displays to correctly correlate with the flight plan information. To ensure uninterrupted surveillance separation services, the Flight ID must **exactly** match the ACID entered in item 7 of the ICAO flight plan.

Use of Flight ID without an Assigned Radiotelephony Designator or Flight Number

For general aviation transponder installations, Flight ID will be equal to the aircraft registration. In these cases, ADS-B installers should program Flight ID during the initial configuration. After this, the Flight ID will not be an editable field during normal operation. Aircraft operators should obtain confirmation from installers that the Flight ID entered into the transponder matches the aircraft registration, without any leading zeros, hyphens, dashes or added spaces. Aircraft operators are also reminded that trading transponders between aircraft or using a loaner transponder will necessitate reprogramming the correct aircraft address and flight ID into the configuration settings.

Use of Flight ID with an Assigned Radiotelephony Designator followed by a Flight Number

Air operators that use assigned three-letter radiotelephony designators followed by a flight number may require a different Flight ID for each flight segment. In these operations, prior to taxi for each departure, the flight crew enters the Flight ID through either a transponder control panel or through the flight management system (FMS). Pilots must always ensure that the Flight ID entered is **exactly** the same as the ACID that was filed in item 7 of the ICAO flight plan. Flight ID should never contain hyphens, dashes, or added spaces, and zeros should only appear if they form part of the ACID.

Example

Generic Airlines Flight 045, using ICAO assigned airline code GEN. If entered in item 7 on the ICAO Flight Plan as GEN045, then the Flight ID input by pilot in the FMS must be entered as GEN045 (and not GEN45, GEN_045, or as the aircraft registration CFABC).

Air operators are strongly encouraged to include proper Flight ID entering procedures on checklists for FMS initialization, particularly for departures where the avionics have not been reset through a power-down cycle.

Further Information

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