Use of ADS-B Out to Support RVSM Operations

RVSM ADS-B Rulemaking

Presented to: ASE Workshop
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Background

- Recognizes the maturity of the RVSM aircraft fleet and operators.
- Utilizes enhancements in aircraft monitoring using ADS-B Out.
- Recognizes the burden and expense of the current RVSM application process.
- Focuses on a robust aircraft RVSM performance monitoring program.
Proposed Change

• **Revises the RVSM authorization process for U.S. registered operators:**
  – Amends 14 CFR part 91, Appendix G by adding a new section 9 (Aircraft Equipped with ADS-B Out).
  – There are no changes proposed to 14 CFR §§ 91.180 or 91.706 requiring RVSM authorization.

• **Eliminates the requirement for operators to make application to the FAA when:**
  – The aircraft is RVSM compliant.
  – Equipped with a qualified Automatic Dependent Surveillance – Broadcast (ADS-B) Out system.
  – Meets height-keeping performance requirements for operations in RVSM airspace.
  – Pilots are knowledgeable of RVSM requirements, policies and procedures, iaw Section 4 (RVSM Operations) of Appendix G
ADS-B Out

• **Aircraft must be equipped with ADS-B Out:**
  – Meeting the requirements of 14 CFR § 91.227 (ver.2).

• **Use ADS-B Out to conduct height-keeping performance monitoring:**
  – Utilize the geometric altitude and other information transmitted by ADS-B Out in Altimetry System Error (ASE) calculations.
  – Height monitor qualified aircraft on a continual basis whenever operating at RVSM altitudes.

• **RVSM performance requirement:**
  – The ASE of the aircraft does not exceed 200 feet when operating in RVSM Airspace (Appendix G, section 9b).
ADS-B Section 9 Height Monitoring

- RVSM aircraft must participate in height-keeping performance monitoring programs:
  - ADS-B Out aircraft will be monitored during normal operations whenever operating at RVSM altitudes in ADS-B airspace.
  - All aircraft in an operator’s section 9 fleet must have been monitored within the previous 24 months and found to be in compliance.
  - U.S.-registered operators may obtain monitoring performance from the FAA height-keeping performance website at https://www.faa.gov/air_traffic/separation_standards/naarmo/.
Section 3 Operator Authorization

- Specific approval may be obtained via Operation Specifications (OpSpecs), Management Specifications (Mspecs), or Letters of Authorization (LOAs) for:
  - Operators of airplanes not routinely operating in airspace where sufficient ADS-B data is available to the FAA to determine RVSM performance; or
  - When a foreign country requires a specific approval.

- The FAA will develop a plan to transition from specific approvals when it is appropriate to do so:
  - The FAA will not terminate a B046 authorization without coordinating with the operator.
Questions ?
RVSM Compliant Aircraft

• An aircraft is an “RVSM-Compliant Aircraft” when:
  – The aircraft design ensures the aircraft will meet RVSM performance requirements, and
  – The aircraft has been properly maintained on an on-going basis to conduct such operations.

• Aircraft may be:
  – Manufactured RVSM-compliant
  – Brought into compliance through the application of appropriate Service Bulletins (SB), Service Letters (SL), Engineering Change Orders (ECO), or Supplemental Type Certificates (STCs).
RVSM Authorizations

• 11,437 RVSM Authorizations Issued
  – 10,774 Part 91
  – 58 Part 121
  – 635 Part 135, 125, 125M, 91K

• 22,000+ Aircraft