



**U.S. Department  
of Transportation  
Federal Aviation  
Administration**

# InFO

Information for Operators

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Flight Standards Service  
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**[http://www.faa.gov/other\\_visit/aviation\\_industry/airline\\_operators/airline\\_safety/info](http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/info)**

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*An InFO contains valuable information for operators that should help them meet certain administrative, regulatory, or operational requirements with relatively low urgency or impact on safety. The contents of this document do not have the force and effect of law and are not meant to bind the public in any way. This document is intended only to provide clarity to the public regarding existing requirements under the law or agency policies.*

**Subject:** Altimetry System Error Reports (ASE-R)

**Purpose:** This InFO provides background information and notice of expected participation in the ASE-R process by operators with Reduced Vertical Separation Minimum (RVSM) authority.

**Background:** An element of the global implementation of RVSM is the establishment of a safety management system (SMS) to ensure RVSM safety objectives are being maintained. This ongoing process seeks to capture data on a continuing basis and identify risks at its earliest stages. Regional Monitoring Agencies (RMA) have been established to monitor altimetry system errors (ASE) and verify that the target level of safety for RVSM operations continues to be met. ASE is defined as the difference between the static pressure sensed and the actual altitude flown. ASE is invisible to the pilot and can lead to hazardous loss of separation.

**Discussion:** Through bilateral agreements with Canada and Mexico, the Federal Aviation Administration (FAA) has established the North American Approvals Registry and Monitoring Organization (NAARMO), staffed by the FAA Enterprise Services Test and Evaluation Division, Separation Standards Analysis Branch. This branch obtains aircraft RVSM operations data using Aircraft Geometric Height Measurement Elements (AGHME), Automatic Dependent Surveillance – Broadcast Out (ASD-B Out), or Global Positioning System (GPS) based Measurement Units (GMU) to determine ASE for aircraft operating in North American airspace and produces an ASE-R, if warranted. FAA Flight Standards Service (FS) inspectors provide notification to operators of aircraft trending toward unsatisfactory RVSM performance through the issuance of the ASE-R. The ASE-R assists the FAA and operators in addressing RVSM aircraft which exhibit unsatisfactory height keeping performance trends, preferably before the performance becomes non-compliant.

The ASE-R consists of a background statement and four sections: Section I - Subject Aircraft and ASE Measurement Overview; Section II - Data Analysis and Performance Summary; Section III - Continuing Maintenance Issues; and Section IV - Action Required. An example of a typical ASE-R may be found at the FAA, RVSM website, [https://www.faa.gov/air\\_traffic/separation\\_standards/rvsm/documentation/](https://www.faa.gov/air_traffic/separation_standards/rvsm/documentation/).

**ASE-R Process:** Altimetry System Error Reports will be processed in the following manner:

1. After an ASE-R is created by the NAARMO and reviewed by the Flight Technologies and Procedures Division's Performance-Based Flight Systems branch and the Aircraft Maintenance Division's Avionics Branch, it will be sent to a Title 14 of the Code of Federal Regulations (14 CFR) Part 121, 125, 129 and 135 operator's oversight office (FSDO/CMO/IFO). For 14 CFR Part 91 operators, an ASE-R is routed through the FSDO/IFO that issued the operator's letter of authorization. A copy for information should also be sent to either the International Program division, the Air Transportation division, or the General Aviation and Commercial division.
2. The oversight office will contact the operator and determine a plan of action that is tracked on the resolution form attached to the ASE-R. Timelines are specified on the ASE-R. Any extensions should be coordinated with the Performance-Based Flight Systems Branch and the Avionics Branch.
3. Following corrective actions, the aircraft performance may be monitored by AGHME overflights, ADS-B or through the use of a GPS Monitoring Unit (GMU). GMU results must be provided to the NAARMO.
4. Upon analysis of monitoring results, the NAARMO will release a report of either satisfactory resolution or unsatisfactory resolution.
5. In the case of an unsatisfactory resolution, the oversight office may contact the Performance-Based Flight Systems Branch and the Avionics Branch for additional assistance. This may require interaction with the relevant Aircraft Certification Office (ACO), Aircraft Evaluation Group (AEG) and aircraft/system manufacturer.
6. Operators that experience fleet wide ASE issues should include any manufacturer procedures in their maintenance programs which are found to be effective in correcting ASE. Additionally, operators with reliability programs or a Continued Analysis Surveillance System (CASS) are encouraged to use ASE-R information as a source of data collection.

**Recommended Action:** Operators with RVSM authority should familiarize themselves with the information contained in this InFO. More information on RVSM may be found at [https://www.faa.gov/air\\_traffic/separation\\_standards/rvsm/documentation/](https://www.faa.gov/air_traffic/separation_standards/rvsm/documentation/).

**Contact:** Questions or comments regarding this InFO should be directed to the Flight Technologies and Procedures Division's Performance-Based Flight Systems Branch at (202) 267-8850 or the Aircraft Maintenance Division's Avionics Branch at (202) 267-1675.