



International Civil Aviation Organization

**FIFTEENTH MEETING OF THE ADS-B STUDY AND IMPLEMENTATION
TASK FORCE (ADS-B SITF/15)**

Bangkok, Thailand, 18 - 20 April 2016

**Agenda Item 4: Review States' activities and interregional issues on implementation of
ADS-B and multilateralism.**

**U.S. FEDERAL AVIATION ADMINISTRATION EXEMPTION 12555
APPLICABILITY AND PROCESS**

(Presented by United States/Federal Aviation Administration)

SUMMARY

This paper presents information about the U.S. FAA Exemption 12555, its applicability to operators, and describes the simple process by which it may be obtained. The Exemption is time-limited, has conditions and limitations and is available to any operator with qualifying ADS-B position source.

1. INTRODUCTION

1.1 This paper presents information about the U.S. FAA Exemption 12555, its applicability to operators and describes the process by which it may be obtained.

2. DISCUSSION

What is U.S. FAA Exemption 12555?

2.1 Exemption 12555 is a time-limited grant of exemption from the Navigation Integrity Category (NIC) and Navigation Accuracy Category for Position (NACp) requirements specified in Title 14 of the U.S. Code of Federal Regulations (CFR). Exemption 12555 is valid from January 1, 2020 through December 31, 2024 and is subject to certain conditions and limitations.

2.2 The U.S. presented the differences in ADS-B requirements for ANSPs around the globe, including NIC and NACp, at ADS-B SITF/14 (see IP/11, *Differences Between ADS-B Requirements Across the Globe*). That paper noted the U.S. requirements for NIC ≥ 7 and NACp ≥ 8 and provided the rationale for these minimums, which are higher than the rest of the globe.

2.3 Experience in the U.S. has shown that with the current GPS constellation, ADS-B installations with SA-On and SA-Aware position sources may experience brief reductions in NIC and NACp to below the minimum required values of NIC=7 and NACp=8. Any reduction in the number of operational GPS satellites will worsen the problem. This poses the risk that operators of such aircraft may be denied access to U.S. ADS-B-mandated airspace. For a more detailed consideration of

this issue, refer to the IP titled *Performance of Current ADS-B Version 2 Systems* presented by the FAA at this meeting.

2.4 Airlines for America (A4A) petitioned the FAA for this exemption on behalf of their members and similarly situated operators to allow time for development and manufacture of more advanced position sources, such as multi-frequency/multi-constellation receivers. The FAA found that granting the exemption would pose no safety risk since a backup means of surveillance will be able to safely support most operations. The FAA further found that the exemption would be in the public interest since it would assure that the investment in NextGen would be useable by operators.

Who is eligible for Exemption 12555?

2.5 Exemption 12555 is intended for operators of aircraft with GPS receivers (position sources) compliant with the current edition of FAA Advisory Circular (AC) 20-165, *Airworthiness Approval of Automatic Dependent Surveillance – Broadcast Out Systems, Appendix B, Identifying and Quantifying ADS-B Position Sources*. The exemption is not limited to U.S. registered aircraft.

What are the conditions and limitations of the Exemption?

2.6 The conditions and limitations of Exemption 12555 are detailed in the Grant of Exemption (<https://www.regulations.gov/#!documentDetail;D=FAA-2015-0971-0010>) and are summarized here for the meeting:

2.6.1 The operator must notify the FAA of their intent to adopt the conditions and limitations of the exemption. Operators are encouraged to use the notification letter template found at <http://www.faa.gov/nextgen/equipadsb/media/12555ExemptionLetterofNotificationTemplate.docx>

2.6.2 As part of the exemption, the operator must create, maintain and update a GPS equipage plan for airplanes equipped for ADS-B Out and meet the performance requirements of U.S. Title 14 CFR 91.227(c). The plan must be submitted to the FAA by August 1, 2018 and updated as needed, but at least annually thereafter. The plans and updates will not be approved by the FAA but must be available for review. Prior to January 1, 2020, the operator's plan must be complete, in that it details each affected aircraft's scheduled date for compliance with 14 CFR § 91.227(c)(1)(i) and (iii). A template for this plan can be found at <http://www.faa.gov/nextgen/equipadsb/media/12555UpgradePlanTemplate.xlsx>.

2.6.3 Operators having aircraft equipped with GPS receivers meeting the performance requirements of TSO-C196 (SA-Aware) and subject to the exemption may operate in airspace specified in 14 CFR § 91.225 when their ADS-B Out equipment is otherwise functional but temporarily does not meet the NIC and NACp requirements.

2.6.4 Operators having aircraft equipped with TSO-C129-approved GPS receivers (SA-On) that do not meet the performance requirements of TSO-C196 or TSO-C145/-146 and subject to the exemption may operate in U.S. ADS-B-mandated airspace when their ADS-B Out equipment does not meet the NIC and NACp requirements and the FAA determines there is a backup means of surveillance. The FAA will provide operators with a preflight availability verification tool and information about backup means of surveillance for use in flight planning; and the operator must perform GPS preflight availability verification.

2.6.5 Exemption 12555 expires on December 31, 2024.

What is the process for obtaining the Exemption?

2.7 The process for obtaining Exemption 12555 is detailed in FAA Information for Operators (InFO) 16003, *Exemption 12555 Process*. For detailed instructions refer to <http://www.faa.gov/nextgen/equipadsb/media/UpdatePlanSubmissionInstructions.pdf> and to http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/info/all_infos/media/2016/InFO16003.pdf. The process is summarized here for the meeting:

2.7.1 The operator notifies the FAA of their intent to adopt the conditions and limitations of the Exemption by submission of a letter to the regulatory docket which contains the exemption.

2.7.2 The operator is issued Exemption 12555.

2.7.3 The operator submits an initial GPS upgrade plan at any time, but no later than August 1, 2018 with subsequent revisions to the FAA as described in the exemption.

3. ACTION REQUIRED BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this papers; and
- b) discuss any relevant matters as appropriate.

4. REFERENCES

U.S. ADS-B Final Rule

<http://www.regulations.gov/#!documentDetail;D=FAA-2007-29305-0289>

FAA Grant of Exemption 12555

<https://www.regulations.gov/#!documentDetail;D=FAA-2015-0971-0010>

FAA AC 20-165B (ADS-B-Out Installation Guidance)

http://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_20-165B.pdf

Notification of Intent Template

<http://www.faa.gov/nextgen/equipadsb/media/12555ExemptionLetterofNotificationTemplate.docx>

Equipment Upgrade Plans Template

<http://www.faa.gov/nextgen/equipadsb/media/12555UpgradePlanTemplate.xlsx>.

FAA TSO-C196 (Airborne Supplemental Navigation Sensors for Global Positioning System Equipment using Aircraft-Based Augmentation)

http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/0/43DD92D6F1B61F4686257C4D006B94B8?OpenDocument

FAA TSO-C129 – CANCELLED (Airborne Supplemental Navigation Equipment using the Global Positioning System)

http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/0/99152036DC7D8A5D86256E930055EEC0?OpenDocument

FAA TSO-C145 (Airborne Navigation Sensors Using The Global Positioning System Augmented By The Satellite Based Augmentation System (SBAS))

http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/0/785A4017CA63206986257C4D006B94A4?OpenDocument

FAA TSO-C146 (Stand-Alone Airborne Navigation Equipment Using The Global Positioning System Augmented By The Satellite Based Augmentation System (SBAS))

http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/0/7A49AE550D23A48F86257C4D006B94AE?OpenDocument

Update Plan Submission Instructions

<http://www.faa.gov/nextgen/equipadsb/media/UpdatePlanSubmissionInstructions.pdf>

FAA NextGen Equip ADS-B Website

<https://www.faa.gov/nextgen/equipadsb/>