NOTICE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

N 8900.342

National Policy

Effective Date:
1/21/16

Cancellation Date:
1/21/17

SUBJ: Exemption 12555 Notification and Implementation Process

1. Purpose of This Notice. This notice explains the Exemption No. 12555 process and informs certificate-holding district offices (CHDO), principal inspectors (PI), and aviation safety inspectors (ASI) of the procedures for processing an operator's notification of compliance with Exemption 12555.

2. Audience. The primary audience for this notice is the ASIs within Flight Standards (AFS) service regions, Flight Standards District Offices (FSDO), headquarters (HQ), certificate management offices (CMO), and CHDOs. The secondary audience includes AFS branches and divisions in the regions and in HQ.

3. Where You Can Find This Notice. You can find this notice on the MyFAA employee Web site at https://employees.faa.gov/tools_resources/orders_notices. Inspectors can access this notice through the Flight Standards Information Management System (FSIMS) at http://fsims.avs.faa.gov. Operators can find this notice on the Federal Aviation Administration's (FAA) Web site at http://fsims.faa.gov. This notice is available to the public at http://www.faa.gov/regulations_policies/orders_notices.

4. Background. In 2010, the FAA published the Automatic Dependent Surveillance-Broadcast (ADS-B) Out rule, which mandates aircraft equipment performance in applicable airspace after January 1, 2020, under Title 14 of the Code of Federal Regulations (14 CFR) part 91, §§ 91.225 and 91.227. In April 2015, Airlines for America (A4A) petitioned the FAA, on behalf of A4A member airlines, for an exemption from the Navigation Accuracy Category for Position (NACp) and Navigation Integrity Category (NIC) requirements of the rule. In August 2015, the Administrator issued a time-limited grant of exemption from § 91.227(c)(1)(i) and (iii) for the period from January 1, 2020, through December 31, 2024. Exemption 12555 permits operations during periods when the Global Positioning System (GPS) position provided to the installed ADS-B Out equipment does not achieve the required accuracy or integrity performance, provided certain conditions and limitations are met. Although A4A was the petitioner, the exemption is for any qualifying aircraft operator. This notice includes directions for processing operators' notification of intent to adopt the conditions and limitations of the exemption. It also provides inspectors with awareness of the process that participating operators will be required to follow.

5. Discussion. The ADS-B Out rule specifies the aircraft's ADS-B equipment performance requirements for each flight in airspace designated by the rule. For each aircraft, the achieved performance depends on the type of GPS receiver that is used as the ADS-B position source. The ADS-B Out rule does not dictate any particular type of GPS receiver. Operators currently use different variants of GPS receivers that satisfy the ADS-B Out performance requirements, to varying degrees, when adequate numbers of GPS satellites can be detected by the aircraft. GPS receivers that comply with FAA Technical Standard Order (TSO)-C129, Airborne Supplemental Navigation Equipment Using the Global Positioning System (GPS), can meet the equipment performance requirements over 95 percent of the time, but can experience brief outages of performance. GPS receivers that comply with the performance requirements in TSO-C196, Airborne Supplemental Navigation Sensors for Global Positioning System Equipment Using Aircraft-Based Augmentation, can meet the ADS-B Out performance requirements over 99.9 percent of the time with the current constellation of GPS satellites, but can also experience brief outages when sufficient satellites are out of service (OTS).

a. GPS Performance Impact. Currently, air traffic control (ATC) uses a combination of surveillance systems (including Secondary Surveillance Radars (SSR), primary radar, and ADS-B) to safely support air traffic operations. As a result, during the exemption compliance period, occasional drops in NACp and NIC will have minimal operational impact and no safety impact. However, the FAA is changing the National Airspace System (NAS) to take advantage of the improved performance of ADS-B Out. ADS-B provides surveillance coverage at lower altitudes than SSRs, and the FAA plans to decommission many of the existing terminal SSRs, which will expand the volume of airspace where ADS-B is the only means of surveillance. At higher altitudes, current separation standards are limited by radar performance, and the FAA is considering plans to reduce separation standards using ADS-B surveillance information. For these reasons, in the future the FAA cannot accept this level of reduced ADS-B performance.

b. Wide Area Augmentation System (WAAS). Based on FAA monitoring of known ADS-B aircraft installations, currently only aircraft equipped with one of the following types of GPS receivers are expected to provide the required performance, even if the number of satellites in the GPS constellation decreases to the minimum specified in the GPS Standard Positioning Service Performance Standard. They are GPS with a Satellite-based Augmentation System (SBAS) and GPS receivers tightly integrated with inertial navigation systems (INS). WAAS (receivers compliant with TSO-C145, Airborne Navigation Sensors Using the Global Positioning System Augmented by the Satellite-based Augmentation System, or TSO-C146, Standalone Airborne Navigation Equipment Using the Global Positioning System Augmented by SBAS) is the United States' implementation of SBAS. Operators with ADS-B installations that employ WAAS meet the performance requirements and do not need to obtain Exemption 12555.

c. Multifrequency/Multiconstellation Receivers. Multifrequency/multiconstellation (A European Global Satellite Navigation System (Galileo), Global Orbiting Navigation Satellite System (GLONASS), etc.) receivers are also expected to meet or exceed the rule performance requirements, but are not yet available. Standards are being developed for this next generation of navigation receivers, but may not be completed until 2021.

d. Exemption Qualification. Exemption 12555 is intended to provide relief to operators with GPS receivers (position sources) compliant with the current edition of Advisory Circular (AC) 20-165, Airworthiness Approval of Automatic Dependent Surveillance-Broadcast Out Systems, Appendix B, Identifying and Quantifying ADS-B Position Sources. Installations which qualify for this exemption are generally found in air transport aircraft. These receivers are otherwise capable of supporting ADS-B and will be certified as compliant, but do not meet the § 91.227 NACp and NIC requirements at times and in airspace when a smaller number of GPS satellites are in view.

6. Exemption Process. This exemption process will allow HQ to monitor NAS-wide progress to full ADS-B rule compliance. The recordkeeping and monitoring activities will be centralized at HQ. Field inspectors will need to issue or amend the Operations Specification/Management Specification/Letter of Authorization (OpSpec/MSpec/LOA) A005, Exemptions and Deviations, to include Exemption 12555 and, for certificated operators, monitor their compliance with preflight availability prediction procedures, as described in AC 90-114A CHG 1, Automatic Dependent Surveillance-Broadcast Operations. Noncertificated operators will submit a copy of their letter to the local FSDO, and the FSDO will amend or issue the LOA A005. Most noncertificated operators will not have installations which qualify for the exemption, and therefore we do not expect a large number to apply. The purpose of issuing the exemption in advance of its effective date is to allow the operator time to develop and implement its upgrade plan.

a. Exemption Conditions. Exemption 12555 lists the conditions and limitations with which an operator must comply to be afforded the specified relief. This includes the requirements for the operator to notify the FAA and provide an equipment upgrade plan to the Office of the Director, Flight Standards Service (AFS-1). The complete process is depicted in Appendix A, Exemption 12555 Process, and is as follows:

(1) The certificate holder/program manager/operator (hereafter known as “the operator”) notifies the FAA of the intent to comply with the limitations and conditions of Exemption 12555.

(a) The operator notifies the FAA by attaching a Letter of Intent (LOI) to the Regulatory Docket No. FAA-2015-0971. See Appendix B, Sample Letter of Notification.

(b) The operator sends a copy of the LOI to its CHDO/CMO or brings a copy to its FSDO.

(2) The inspector amends or issues the operator’s OpSpec/MSpec/LOA A005 in the Web-based Operations Safety System (WebOPSS), to include Exemption 12555.

(3) The operator submits an initial upgrade plan, no later than August 1, 2018, and subsequent revisions to AFS-1, as described in the exemption. See Appendix C, Update Plan Submission Instructions.

(4) AFS-400 maintains the update plans required by the exemption and monitors the operator’s compliance with the conditions and limitations. In the event of evidence of noncompliance, AFS-400 coordinates remedial activity through the CHDO/CMO or FSDO, as appropriate.

(5) Inspectors with certificate oversight responsibility verify the operator's compliance with preflight availability prediction procedures, as described in AC 90-114A CHG 1, or later version.

(6) Upon expiration of the exemption period, AFS-1 issues a notice of cancellation of the exemption directing responsible inspectors to remove the exemption from OpSpec/MSpec/LOA A005.

b. ADS-B Out Equipment Requirements Unchanged. It is emphasized that the equipment performance requirements of §§ 91.225 and 91.227 still apply. Operators intending to use airspace covered by the rule after January 1, 2020, must still be ADS-B Out equipped. Exemption 12555 only provides an authorization to operate during the exemption period in U.S. rule airspace when NACp and NIC values drop below the required values. All other performance requirements must still be met. Operations under the provisions of Exemption 12555 have no impact on an aircraft's qualification for ADS-B Out operations outside U.S.-designated airspace.

7. Actions. Inspectors and HQ have the following responsibilities in the Exemption 12555 process:

a. Inspector Procedures. Upon receipt of an operator's LOI, inspectors will:

(1) Refer to FAA Order 8900.1, Volume 3, Chapter 2, Section 1, Exemptions, Deviations, Waivers, and Authorizations, for general guidance for issuing exemptions.

(2) Based on the LOI, issue or amend the operator's OpSpec/MSpec/LOA A005 to include Exemption 12555.

- Enter "12/31/2024" in the "Date of Expiration" column.
- Enter the following language in the "Remarks and/or References" column: "Grants qualifying aircraft operators a time-limited exemption from 14 CFR § 91.227(c)(1)(i) and (iii), from January 1, 2020, through December 31, 2024. Operator must comply with conditions and limitations specified in the Grant of Exemption, Regulatory Docket No. FAA-2015-0971. Exempt aircraft retain certification and compliance to § 91.227."
- Note that until the operator submits a plan, whether its planned installation will qualify cannot be known. HQ will review plans for qualified installation.

(3) Remind the operator of his or her responsibilities to attach the original LOI to the docket at http://www.regulations.gov/#!documentDetail;D=FAA-2015-0971-0010, and to read and comply with the conditions and limitations described in the exemption.

(4) Instruct the operator to submit the equipment upgrade plans at the intervals described in the exemption by electronic mail to 9-AWA-Equip.2020@faa.gov. Operators may download the Exemption 12555 fact sheet, sample LOI, and per-aircraft upgrade plans spreadsheet from https://www.faa.gov/nextgen/equipadsb/.

(5) For certificated operators, no later than December 31, 2019, ensure that the operator has a means to comply with the preflight availability prediction procedures described in AC 90-114A CHG 1, or later version.

b. Headquarters Procedures. AFS-400 staff will:

(1) Retain and monitor the quality and progress of the upgrade plans.

(2) Review plans for installations which qualify for the exemption.

(3) Communicate through the CMO/CHDO for certificated operators, and directly with the operator, for noncertificated operators, on any matters related to Exemption 12555.

8. References. Refer to the following for more information:

a. Point of Contact. Contact the ADS-B Lead, Paul Von Hoene, at (202) 267-8916, or paul.vonhoene@faa.gov for assistance or questions related to Exemption 12555 and this notice.

b. References (current editions):

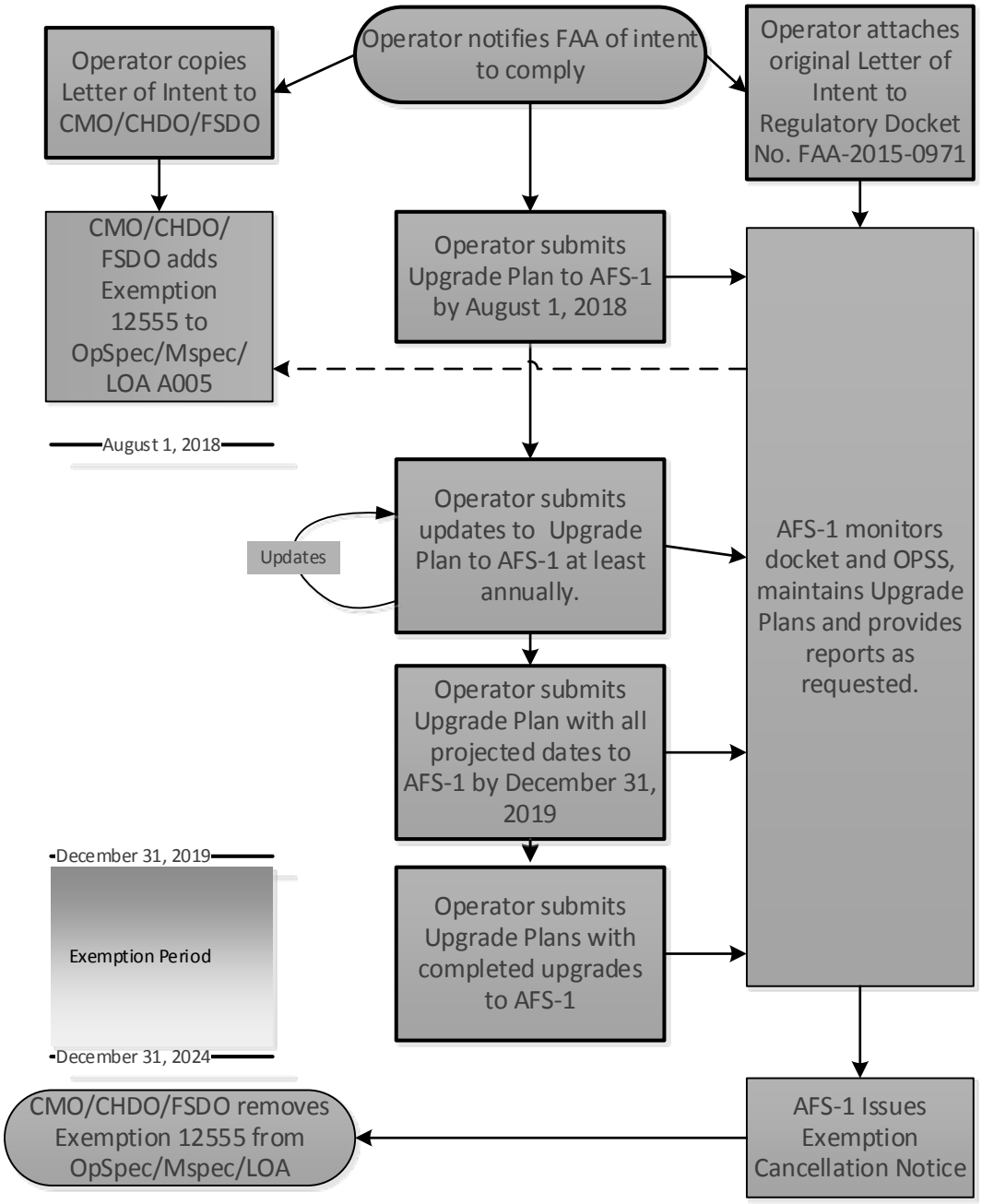
- Exemption 12555 in Regulatory Docket No. FAA-2015-0971 at http://www.regulations.gov/#!docketDetail;D=FAA-2015-0971.
- AC 20-165, Airworthiness Approval of Automatic Dependent Surveillance-Broadcast Out Systems.
- AC 90-114A CHG 1, Automatic Dependent Surveillance-Broadcast Operations.
- Order 8900.1, Volume 3, Chapter 2, Section 1, Exemptions, Deviations, Waivers, and Authorizations.

9. Disposition. We will incorporate this notice into Order 8900.1 before this notice expires. Direct questions or comments to the Flight Technologies and Procedures Division (AFS-400) at (202) 267-8790.



John Barbagallo
Deputy Director, Flight Standards Service

Appendix A. Exemption 12555 Process



Appendix B. Sample Letter of Notification

Date:

Federal Aviation Administration
Orville Wright Building (FOB-10A)
800 Independence Ave. SW
Washington, DC 20591

Subject: Time-limited Exemption from Title 14 of the Code of Federal Regulations (14 CFR) part 91, § 91.227(c)(1)(i) and (iii)–Automatic Dependent Surveillance-Broadcast (ADS-B) Out Equipment Performance Requirements.

Reference: Grant of Exemption No. 12555, Regulatory Docket No. FAA-2015-0971.

Grant of Exemption 12555 provides for a time-limited grant of exemption from the ADS-B Navigation Accuracy Category for Position (NACp) and Navigation Integrity Category (NIC) requirements of § 91.227(c)(1)(i) and (iii) from January 1, 2020, through December 31, 2024.

(NAME/ADDRESS_____)[1] herby notifies the FAA that we/I[2] intend to comply with the conditions and limitations expressed in the exemption cited above.

Signature:[3]

Copies:

AFS-1 (mailto: 9-AWA-Equip.2020@faa.gov)
CMO/CHDO/FS

[1] FAA certificate holders should provide the name and address as it appears on your certificate. Noncertificate holders should use their name and mailing address.
[2] Use appropriate term, depending on a corporate or individual owner.
[3] For certificate holders, the signature should consist of the name and title of the appropriate person appearing on the certificate. For individuals, use the aircraft owner's signature.

Appendix C. Update Plan Submission Instructions

Operators who intend to comply with the conditions and limitations of Exemption 12555 should refer to: http://www.regulations.gov/#!documentDetail;D=FAA-2015-0971-0010. The following instructions only summarize the plan requirements and deadlines:

1. Each operator must create, maintain, and update a Global Positioning System (GPS) equipage plan for airplanes equipped for ADS-B Out and meet the requirements of § 91.227(c) within the timeframe of relief under this exemption.

a. The plan must be submitted to the Office of the Director, Flight Standards Service (AFS-1), by August 1, 2018, and updated as needed, but at least annually thereafter. Submit plans electronically to 9-AWA-Equip.2020@faa.gov.

b. Each update must reflect increased technical and schedule confidence and details regarding each aircraft's scheduled equipage; more frequent updates may be appropriate as schedule installations proceed.

c. The operator's plan and subsequent updates will not be approved by the FAA, but must be available for review.

2. 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 § 91.227(c)(1)(i) and (iii).

3. The operator's plan must include the following elements:

a. Registration numbers of the affected aircraft and indication of whether the GPS is selective availability (SA)-Aware or SA-On.

b. For aircraft which will be upgraded, the manufacturer, model, and part number; applicable Service Bulletin (SB); or Supplemental Type Certificate (STC) of the new or upgraded GPS/Global Navigation Satellite System (GNSS) receiver that will replace the existing certified GPS position source.

c. For aircraft which will not be upgraded, the operator's plan for operations beyond the expiration of this exemption (e.g., date of planned aircraft retirement).

4. Operators are encouraged to use the template at the end of this appendix for submission of per-aircraft upgrade plans (for submission of multiple aircraft, a spreadsheet in this format is preferred.). Operators may download the Exemption 12555 fact sheet, sample LOI, and per-aircraft upgrade plans spreadsheet from https://www.faa.gov/nextgen/equipadsb/.

Template for Submission of Per-Aircraft Upgrade Plans

