

Standard Change CS-SC052d

INSTALLATION OF GNSS EQUIPMENT

1. Purpose

This SC is for the installation of GNSS equipment to enhance situational awareness. This could also include GNSS-based moving map functions.

This SC does not include the installation of external antennas (see CS-SC004(), which may be applied concurrently).

For installations that also provide voice communications functionality and/or navigation capability, CS-SC052() may be applied concurrently with CS-SC001(), and/or CS-SC006() and/or CS-SC056().

CS-SC052() may be applied concurrently with CS-SC005() and/or CS-SC057(). In such cases, the position information delivered by the GNSS equipment shall implement the respective requirements from CS-SC005() and/or CS-SC057() for the GNSS equipment.

Furthermore, this SC does not cover the connection of the GNSS equipment to any kind of AFCS or to a required system, as defined in the EASA Basic Regulation, e.g. required for the assessment of the type design, or by operating rules.

2. Applicability/Eligibility

This SC is applicable to:

- aeroplanes that are not complex motor-powered aircraft;
- rotorcraft that meet all the following conditions:
 - have a MTOM of 3 175 kg or less;
 - are certified for a maximum passenger seating configuration of 9 passengers or fewer;
 - are not approved for Category A (CAT A), or equivalent to CAT A, operations;
- ELA2 aircraft.

This SC can be used to install or exchange an electronic conspicuity (EC) function or device in the following cases:

- VFR installations, including night VFR;
- exchange of an existing electronic conspicuity (EC) function or device on an IFR aircraft.

3. Acceptable methods, techniques, and practices

The following standards contain acceptable data:

- For VFR use only: FAA Advisory Circular AC 20-138D, including Change 1 and Change 2, Appendix 6, with the exception of paragraphs A6-4.c and A6-4.f;
- FAA Advisory Circular AC 43.13-2B, Chapter 1 and 2; and
- FAA Advisory Circular AC 43.13-1B, Chapters 11 and 12 or ASTM F2639-18 or subsequent revisions.

Additionally, the following conditions apply:

- For the GNSS receiver:
 - When used as a position source for Configurations 1 and 2 of CS-SC005(), the GNSS in this SC shall be installed with an EASA Form 1. When used as a position source for Configuration 3 of CS-SC005(), the GNSS in this SC is eligible for installation without an EASA Form 1. Additionally, all the conditions for the GNSS receiver in CS-SC005() apply. Finally, the GNSS manufacturer shall indicate compatibility for concurrent installation of the GNSS receiver with CS-SC005().
 - When the GNSS in this SC is installed concurrently with CS-SC057(), all the conditions for 'aircraft position' contained in CS-SC057() apply. These conditions include provisions for the installation with or without an EASA Form 1. Additionally, the GNSS manufacturer shall indicate compatibility for concurrent installation of the GNSS receiver with CS-SC057().
 - In all other cases, the GNSS in this SC is eligible for installation without an EASA Form 1.
- The design of the equipment installation must take into account crashworthiness, the arrangement and visibility of the installation, and it should not interfere with any other equipment, the jettison of the canopy, or the emergency exit.
- Data connectivity between the GNSS installed equipment and other equipment which is:
 - required by the TCDS, AFM or POH;
 - required by other applicable requirements such as those for operations and airspace; or
 - mandated by the respective MEL, if this exists,is not allowed unless the GNSS equipment that is being installed is explicitly listed by its manufacturer as compatible equipment to which the other equipment can be connected.

Note: The GNSS equipment manufacturer declares overall compatibility and digital communication interfaces. This includes compatibility for concurrent installation with CS-SC005() and/or CS-SC057(), if applicable.
- The equipment is suitable for the environmental conditions to be expected during normal operations; refer to CS STAN.42 in Subpart A for guidance.
- The instrument does not introduce any glare or reflections that could interfere with the pilot's vision. This condition applies to the instrument for all operations for which certification is requested.
- The equipment must be installed and tested in accordance with the equipment manufacturer instructions.

4. Limitations

- When this SC is installed concurrently with CS-SC005() and/or CS-SC057(), the respective limitations from Section 4 of CS-SC005() and/or CS-SC057() apply. When this SC is installed concurrently with CS-SC001() and/or CS-SC006() and/or CS-SC056(), the respective limitations from Section 4 of CS-SC001() and/or CS-SC006() and/or CS-SC056() apply. In other cases, the following limitation applies: the system is to be used for situational awareness only.

- The installation of the equipment cannot be used to extend the operational capability of the specific aircraft (e.g. from VFR to IFR).
- All the relevant integrated databases (e.g. for charts) must be current.
- In the case of aircraft that are approved for NVISs/NVGs, the change cannot be considered a SC.
- Any limitations defined by the equipment manufacturer apply.

5. Manuals

The AFMS shall, at least, contain:

- a description of the system, its operating modes and its functionality;
- a section that states the following:
 - instructions listed in Section 5 of CS-SC001() and/or CS-SC006() and/or CS-SC056() when this SC is installed concurrently with CS-SC001() and/or CS-SC006() and/or CS-SC056(); and/or
 - instructions listed in Section 5 of CS-SC005() and/or CS-SC057() when this SC is installed concurrently with CS-SC005() and/or CS-SC057(); or
 - in other cases, a limitation like ‘This equipment is to be used for situational awareness only’; and
- the normal and emergency operating procedures.

Amend the maintenance manual with instructions for carrying out software and database updates.

Amend the ICAs to establish:

- instructions listed in Section 5 of CS-SC001() and/or CS-SC006() and/or CS-SC056() when this SC is installed concurrently with CS-SC001() and/or CS-SC006() and/or CS-SC056(); and/or
- instructions listed in Section 5 of CS-SC005() and/or CS-SC057() when this SC is installed concurrently with CS-SC005() and/or CS-SC057(); or
- in other cases, maintenance actions/inspections and intervals, as required.

6. Release to service

This SC is not suitable for the release to service of the aircraft by the pilot-owner.

[Issue: STAN/2]

[Issue: STAN/3]

[Issue: STAN/4]