European Aviation Safety Agency

European Technical Standard Order

Subject: Airborne Supplemental Navigation Sensors for Global Positioning System Equipment Using Aircraft-Based Augmentation

1 - Applicability
This ETSO gives the requirements which Airborne Supplemental Navigation Sensors for Global Positioning System Equipment Using Aircraft-Based Augmentation that are manufactured on or after the date of this ETSO must meet in order to be identified with the applicable ETSO marking.

This ETSO cancels ETSO-C129a Airborne Supplemental Navigation Equipment Using Global Positioning System (GPS)

2 - Procedures
2.1 - General
Applicable procedures are detailed in CS-ETSO Subpart A.

2.2 - Specific
None.

3 - Technical Conditions
3.1 - Basic
3.1.1 - Minimum Performance Standard

3.1.2 - Environmental Standard
See CS-ETSO Subpart A paragraph 2.1.
Test to EUROCAE ED-14( ) section 9 and 26 are considered optional. Test to section 10, 11, 12, 13, and 14 are required only, when the component is installed on the outside of the aircraft, like the antenna.

3.1.3 - Computer Software
3.1.4 - Electronic Hardware Qualification
See CS-ETSO Subpart A paragraph 2.3.

3.2 - Specific
3.2.1 - Failure Condition Classification
See CS-ETSO Subpart A paragraph 2.4.

Failure of the function defined in paragraph 3.1.1 of this ETSO has been determined to be a major failure condition for malfunction of oceanic/remote, en route and terminal navigation and lateral navigation (LNAV) approaches.

Failure of the function defined in paragraph 3.1.1 of this ETSO has been determined to be a minor failure condition for loss of navigation of oceanic/remote, en route and terminal navigation and lateral navigation (LNAV) approaches.

3.2.2
**Barometric-aided Fault Detection and Exclusion (FDE).** If the equipment uses barometric-aiding to enhance FDE availability, then the equipment must meet the requirements in RTCA/DO-316, Appendix G.

4 - Marking
4.1 - General
Marking as detailed in CS-ETSO Subpart A paragraph 1.2.

4.2 - Specific
None.

5 - Availability of Referenced Document
See CS-ETSO Subpart A paragraph 3.