

25 January 2022

CORRIGENDUM

Corrigendum to Decision 2020/011/R of 23 July 2020 issuing Amendment 16 to the Certification Specifications for European Technical Standard Orders (CS-ETSO) 'CS-ETSO — Amendment 16'

The consolidated version including changes related to Annex 16 is withdrawn. The updated version of CS-ETSO amendment 16 is limited to the changes pertaining to it.

The following ETSOs are withdrawn:

SUBPART B – LIST OF ETSOs

- ETSO-C1e Cargo Compartment Fire Detection Instruments
- ETSO-C2d Airspeed Instruments
- ETSO-C3e Turn and Slip Instrument
- ETSO-C4c Bank and Pitch Instruments
- ETSO-C5f Direction Instrument, Non-Magnetic (Gyroscopically Stabilized)
- ETSO-C6e Direction Instrument, Magnetic (Gyroscopically Stabilized)

Appendix 1 to ETSO-C6e – Modification to MPS for Direction Instrument, Magnetic (Gyroscopically Stabilized)

- ETSO-C7d Direction Instrument, Magnetic Non-stabilized Type (Magnetic Compass)
- ETSO-C8e Vertical Velocity Instrument (Rate-of-Climb)
- ETSO-C14b Aircraft Fabric, Intermediate Grade
- ETSO-C15d Aircraft Fabric, Grade A
- ETSO-C16b Electrically Heated Pitot and Pitot-Static Tubes

Appendix 1 to ETSO-C16b – Minimum Performance Standard for Electrically Heated Pitot and Pitot-Static Tubes

Appendix 2 to ETSO-C16b – Ice and Rain Minimum Qualification Standards for Pitot and Pitot-Static Probes

- ETSO-C21b Aircraft Turnbuckle Assemblies and/or Turnbuckle Safetying Devices
- ETSO-C22g Safety Belts
- ETSO-C23f Personnel Parachute Assemblies and Components

Appendix 1 to ETSO-C23f – Minimum Performance Standard for Personnel Parachute Assemblies and Components

- ETSO-C25a Aircraft Seats and Berths (Type I Transport 6g Forward Load)
- ETSO-C26d Aircraft Wheels and Wheel-Brake Assemblies (CS-23, -27 and -29 aircraft)

Appendix 1 to ETSO-C26d – Minimum Performance Standard for aircraft wheels, brakes and wheel/brake assemblies for small airplanes and rotorcraft

ETSO-C28 Aircraft Skis

ETSO-C30d Aircraft Position Lights

ETSO-C39c Aircraft Seats and Berths Certified by Static Testing only

Appendix 1 to ETSO-C39c – Modification to AS 8049 Rev. A

ETSO-C42 Propeller Feathering Hose Assemblies

ETSO-C44c A1 Fuel Flowmeters

Appendix 1 to ETSO-C44c A1 – Minimum Performance Standard for Fuel Flowmeters

ETSO-C45b A1 Manifold Pressure Instruments

Appendix 1 to ETSO-C45b A1 – Minimum Performance Standard for Manifold Pressure Instruments

ETSO-C46a Maximum Allowable Airspeed Indicator Systems

Appendix 1 to ETSO-C46a – Federal Aviation Administration Standard, Maximum Allowable Airspeed Indicator Systems

ETSO-C47a A1 Pressure Instruments – Fuel, Oil and Hydraulic

Appendix 1 to ETSO-C47a A1 – Minimum Performance Standards (MPSs) for Pressure Instruments - Fuel, Oil and Hydraulic

ETSO-C49b Electric Tachometer: Magnetic Drag (Indicator and Generator)

ETSO-C53a Fuel and Engine Oil System Hose Assemblies

ETSO-C54 Stall Warning Instruments

ETSO-C55a Fuel and Oil Quantity Instruments

ETSO-C56b A1 Engine-driven Direct Current Generators/Starter-generators

ETSO-C59b Airborne Selective Calling Equipment

ETSO-C62e Aircraft Tyres

Appendix 1 to ETSO-C62e – FAA Standard for Aircraft Tires

ETSO-C63e Airborne Weather Radar Equipment

ETSO-C64b Oxygen Mask Assembly, Continuous Flow, Passenger

Appendix 1 to ETSO-C64b – MPS for Passenger Oxygen Mask Assembly, Continuous Flow

ETSO-C69c Emergency Evacuation Slides, Ramps, Ramp/Slides and Slide/Rafts

Appendix 1 to ETSO-C69c – Federal Aviation Administration Minimum Performance Standard for Emergency Evacuation Slides, Ramps, Ramp/Slides, and Slide/Rafts

Appendix 2 to ETSO-C69c – Glossary of Terms

Appendix 3 to ETSO-C69c – Measurement of loads on the attachment(s) to the airplane

Appendix 4 to ETSO-C69c – Calorimeter Specification and Calibration Procedure

ETSO-C70b Life Rafts

Appendix 1 to ETSO-C70b MPS for Life Rafts

ETSO-C71 Airborne Static ('DC to DC') Electrical Power Converter (for Air Carrier Aircraft)

FAA Standard associated with ETSO-C71 for Airborne Static („DC to DC“) Electrical Power Converter

FAA Standard associated with ETSO-C71 – Appendix A - Test Procedures Airborne Static („DC to DC “) Electrical Power Converter

ETSO-72c Individual Flotation Devices

Federal Aviation Administration Standard - Individual Flotation Devices

ETSO-C73 Static Electrical Power Inverter

FAA Standard associated with ETSO-C73

ETSO-C76b Fuel Drain Valves

Appendix 1 to ETSO-C76b Minimum Performance Standard (MPS) for Fuel Drain Valves

ETSO-C78a Crewmember Demand Oxygen Mask

Appendix 1 to ETSO-C78a – MPS for Crewmember Demand Oxygen Mask

ETSO-C79 Fire Detectors (Radiation Sensing Type)

Federal Aviation Administration Standard associated with ETSO-C79 – Fire Detectors-Radiation Sensing Type

ETSO-C80 Flexible Fuel and Oil Cell Material

Appendix 1 to ETSO-C80 – Federal Aviation Administration Standard for Flexible Fuel and Oil Cell Material

ETSO-C85b Survivor Locator Lights

Appendix 1 to ETSO-C85b – MPS for Survivor Locator Lights

ETSO-C87a Airborne Low-Range Radio Altimeter

Appendix 1 to ETSO-C87a – Modifications and Additions to EUROCAE ED-30 for Minimum Performance Standards for Low-Range Radio Altimeters

ETSO-C88b Automatic Pressure Altitude Reporting Code Generating Equipment

ETSO-C89a Crew Member Oxygen Regulator, Demand

Appendix 1 to ETSO-C89a – MPS for Crew Member Oxygen Generators, Demand

ETSO-C90d A1 Cargo Pallets, Nets and Containers (Unit Load Devices)

ETSO-C92c Ground Proximity Warning-Glide Slope Deviation Alerting Equipment

- ETSO-C95a Mach Meters
- ETSO-C96b Anticollision Light Systems
- ETSO-C99a Flight Deck (Sedentary) Crew Member Protective Breathing Equipment
- Appendix 1 TO ETSO-C99a – MPS for Flight Deck (Sedentary) Crew Member Protective Breathing Equipment
- ETSO-C100c Aviation Child Safety Device (ACSD)
- APPENDIX 1 TO ETSO-C100c – MPS FOR AVIATION CHILD SAFETY DEVICE
- ETSO-C101 Overspeed Warning Instruments
- ETSO-C102 Airborne Radar Approach and Beacon Systems for Helicopters
- ETSO-C103 Continuous Flow Oxygen Mask Assembly (for Non-transport Category Aircraft)
- ETSO-C105 Optional Display Equipment for Weather and Ground Mapping Radar Indicators
- ETSO-C106 A1 Air Data Computer
- ETSO-C109 Airborne Navigation Data Storage System
- ETSO-C110a Airborne Passive Thunderstorm Detection Systems
- ETSO-C112e Secondary Surveillance Radar Mode S Transponder
- Appendix 1 to ETSO-C112e – Secondary Surveillance Radar Mode S Transponder Amendment to EUROCAE ED-73E requirements
- ETSO-C114 A1 Torso Restraint Systems
- ETSO-C115d Required Navigation Performance (RNP) Equipment using Multi-Sensor Inputs
- Appendix 1 to ETSO-C115d – Modifications to RTCA DO-283B Requirements
- ETSO-C116a Crew member Portable Protective Breathing Equipment
- Appendix 1 to ETSO-C116a – MPS for Crewmember Portable PBE
- ETSO-C118a Traffic Alert and Collision Avoidance System (TCAS) Airborne Equipment, TCAS I
- ETSO-C119d Airborne Collision Avoidance System II (ACAS II) Version 7.1 with Hybrid Surveillance
- Appendix 1 to ETSO-C119d – Traffic Alert and Collision Avoidance System II (TCAS II) Version 7.1 Amendment to EUROCAE ED-143 Change 2 Requirements
- Appendix 2 to ETSO-C119d – Traffic Alert and Collision Avoidance System II (TCAS II) Version 7.1 Hybrid Surveillance Amendment to EUROCAE ED-221 Requirements
- ETSO-C121b Underwater Locating Devices (Acoustic) (Self-powered)
- ETSO-C127b Rotorcraft, Transport Aeroplane, and Small Aeroplane Seating Systems
- Appendix 1 to ETSO-C127b – MPS For Rotorcraft, Transport Aeroplane, and Small Aeroplane Seating Systems

Appendix 2 to ETSO-C127b – Elective MPS For Rotorcraft, Transport Aeroplane, and Small Aeroplane Seating Systems

ETSO-C132a Geosynchronous Orbit Aeronautical Mobile Satellite Services Aircraft Earth Station Equipment

ETSO-C135a Large Aeroplane Wheels and Wheel and Brake Assemblies

Appendix 1 to ETSO-C135a – Minimum Performance Specification for Large Aeroplane Wheels, Brakes, and Wheel and Brake Assemblies

Appendix 2 to ETSO-C135a – MPS for Large Wheel and Brake Assemblies for Electrically Actuated Brakes

ETSO-C139a Audio Systems and Equipment

ETSO-C141 Aircraft Fluorescent Lighting Ballast/Fixture Equipment

ETSO-C144a Passive Airborne Global Navigation Satellite System (GNSS) Antenna

ETSO-C147a Traffic Advisory System (TAS) Airborne Equipment

Appendix 1 to ETSO-C147a – Changes to RTCA/DO-197A, “Minimum Operational Performance Standards for an Active Traffic Alert and Collision Avoidance System I (Active TCAS I)” applicable to Traffic Advisory System (TAS) airborne equipment

ETSO-C154c Universal Access Transceiver (UAT) Automatic Dependent Surveillance - Broadcast (ADS-B) Equipment Operating on the Frequency of 978 MHz

ETSO-C155b Recorder Independent Power Supply

Appendix 1 to ETSO-C155b – Minimum Performance Standard (MPS) for Recorder Independent Power Supply (RIPS)

Appendix 2 to ETSO-C155b – Environmental Qualification Equipment Category/Class

ETSO-C157b Flight Information Services-Broadcast (FIS-B) Equipment

ETSO-C158 Aeronautical Mobile High Frequency Data Link (HF DL) Equipment

ETSO-C161a Ground Based Augmentation System Positioning and Navigation Equipment

Appendix 1 to ETSO-C161a – Minimum Performance Specification for Ground Based Augmentation System Positioning and Navigation Equipment

Appendix 2 to ETSO-C161a – Minimum Performance Specification for GNSS-Based Precision Approach Local Area Augmentation System (LAAS) Signal-in-Space Interface Control Document (ICD)

ETSO-C162a Ground Based Augmentation System Very High Frequency Data Broadcast Equipment

ETSO-C164 Night Vision Goggles (NVG)

ETSO-C166b A3 Extended Squitter Automatic Dependent Surveillance-Broadcast (ADS-B) and Traffic Information Services-Broadcast (TIS-B) Equipment Operating on the Radio Frequency of 1090 Megahertz (MHz)

ETSO-C170 High Frequency (HF) Radio Communications Transceiver Equipment Operating Within the Radio Frequency 1.5 to 30 Megahertz

ETSO-C172a Cargo Restraint Strap Assemblies

Appendix 1 to ETSO-C172a – Minimum Performance Standard for Cargo Restraint Strap Assemblies

ETSO-C173a Nickel-Cadmium, Nickel Metal-Hydride, and Lead-Acid Batteries

Appendix 1 to ETSO-C173a – Minimum Performance Standard for Nickel-Cadmium, Nickel Metal-Hydride, and Lead-Acid Batteries Amendment to RTCA DO-293A Requirements

ETSO-C174 A1 Battery-based Emergency Power Unit (BEPU)

Appendix 1 to ETSO-C174 A1 – Minimum Performance Standard for Battery-based Emergency Power Unit (BEPU)

ETSO-C175 Galley Cart, Containers and Associated Components

Appendix 1 to ETSO-C175 – MPS for Galley Cart, Containers and Associated Components

ETSO-C178 Single Phase 115 VAC, 400 Hz Arc Fault Circuit Breakers

ETSO-C184 Airplane Galley Insert Equipment, Electrical/Pressurised

Appendix 1 to ETSO-C184 – Minimum Performance Standard for Airplane Galley Insert Equipment, Electrical/Pressurized

ETSO-C190 Active Airborne Global Navigation Satellite System (GNSS)

ETSO-C194 Helicopter Terrain Awareness and Warning System (HTAWS)

ETSO-C195b Avionics Supporting Automatic Dependent Surveillance - Broadcast (ADS-B) Aircraft Surveillance Applications (ASA)

Appendix 1 to ETSO-C195b – Amendment to ED-194A/DO-371B

ETSO-C198 Automatic Flight Guidance and Control System (AFGCS) Equipment

ETSO-C200a Low-Frequency Underwater Locating Devices (Acoustic) (Self-Powered)

Appendix 1 to ETSO-C200a Lithium Battery Containment Requirements

ETSO-C201 Attitude and Heading Reference Systems (AHRS)

ETSO-C202 Cargo Stopper Devices

Appendix 1 to ETSO-C202

ETSO-C203 A1 Fire Containment Cover (FCC)

Appendix 1 to ETSO-C203 A1 – Minimum Performance Standard (MPS) for Fire Containment Covers

ETSO-C209 Electronic Flight Instrument System (EFIS) Display

ETSO-C210 Airborne Head-Up Display

ETSO-2C11e Powerplant Fire Detection Instruments (Thermal and Flame Contact Types)

ETSO-2C34f ILS Glide Slope Receiving Equipment Operating within the Radio Frequency Range of 328.6-335.4 Megahertz (MHz)

ETSO-2C35d Radar Marker Receiving Equipment

ETSO-2C36f Airborne ILS Localizer Receiving Equipment Operating within the Radio Frequency Range 108-112 Megahertz

ETSO-2C40c VOR Receiving Equipment Operating Within the Radio Frequency Range 108-117.95 Megahertz

ETSO-2C41d Airborne Automatic Direction Finding (ADF) Equipment

ETSO-2C48a Carbon Monoxide Detector Instruments

Appendix 1 to ETSO-2C48a – Minimum Performance Standard

Appendix 2 to ETSO-2C48a – Additional Tests

ETSO-2C66b Distance Measuring Equipment (DME) Operating Within the Radio Frequency Range of 960-1215 Megahertz

ETSO-2C75 Hydraulic Hoses Assembly

Appendix 1 to ETSO-2C75 – Federal Aviation Administration Standard for Hydraulic Hose Assemblies

ETSO-2C93b Airborne Interim Standard Microwave Landing System Converter Equipment

ETSO-2C104a Microwave Landing System (MLS) Airborne Receiving Equipment

ETSO-2C122 Devices That Prevent Blocked Channels Used in Two-Way Radio Communications Due to Simultaneous Transmissions

ETSO-2C128 Devices That Prevent Blocked Channels used in Two-Way Radio Communications Due to Unintentional Transmissions

ETSO-2C169a VHF Radio Communications Transceiver Equipment Operating within the Radio Frequency Range 117.975 to 137.000 Megahertz

ETSO-2C177a Data Link Recorder Equipment

Appendix 1 to ETSO-2C177a – MPS for Crash-Protected Airborne Recorder Systems

ETSO-2C500a Multi-mode Receiver (ILS/MLS/GPS)

ETSO-2C501 Mode S Aircraft Data Link Processor

ETSO-2C502 Helicopter Crew and Passenger Integrated Immersion Suits

Appendix 1 to ETSO-2C502 – EASA Standard for Helicopter Crew and Passenger Integrated Immersion Suits

Appendix 2 to ETSO-2C502 – Integrated Immersion Suit System Performance Testing

ETSO-2C503 Helicopter Crew and Passenger Integrated Immersion Suits for Operations to or from Helidecks Located in a Hostile Sea Area

Appendix 1 to ETSO-2C503 – EASA Standard for Helicopter Crew and Passenger Integrated Immersion Suits for Operations to or from Helidecks Located in a Hostile Sea Area

Appendix 2 to ETSO-2C503 – Immersion Suit / Lifejacket System Performance Testing

ETSO-2C504 Helicopter Constant-Wear Lifejackets for Operations to or from Helidecks Located in a Hostile Sea Area

Appendix 1 to ETSO-2C504 – EASA Standard for Helicopter Constant-Wear Lifejackets for Operations to or from Helidecks Located in a Hostile Sea Area

Appendix 2 to ETSO-2C504 – Immersion Suit / Lifejacket System Performance Testing

ETSO-2C505 Helicopter Liferafts for Operations to or from Helidecks Located in a Hostile Sea

Appendix 1 to ETSO-2C505 – EASA Standard for Helicopter Liferafts for Operations to or from Helidecks Located in a Hostile Sea Area

ETSO-2C509 Light Aviation Secondary Surveillance Transponder (LAST)

ETSO-C2C512 Portable Gaseous Oxygen Supply (PGOS)

ETSO-2C513 Tow Release

Appendix 1 to ETSO-2C513 – Tow Release

ETSO-2C514a Airborne Systems for Non Required Telecommunication Services (in Non Aeronautical Frequency Bands) (ASNRT)

Appendix 1 to ETSO-2C514a – Airborne Systems for Non Required Telecommunication Services (in Non Aeronautical Frequency Bands) (ASNRT)