

Deviation Request 2C63c#4 for an ETSO approval for CS-ETSO applicable to Airborne Weather And Ground Mapping Pulsed Radars (ETSO-2C63c)

Consultation Paper

1 Introductory Note

The hereby presented deviation requests shall be subject to public consultation, in accordance with EASA Management Board Decision No 7-2004 as amended by EASA Management Board [Decision No 12-2007](#) products certification procedure dated 11th September 2007, Article 3 (2.) of which states:

“2. Deviations from the applicable airworthiness codes, environmental protection certification specifications and/or acceptable means of compliance with Part 21, as well as important special conditions and equivalent safety findings, shall be submitted to the panel of experts and be subject to a public consultation of at least 3 weeks, except if they have been previously agreed and published in the Official Publication of the Agency. The final decision shall be published in the Official Publication of the Agency.”

2 Deviation Requests

2.1 ETSO-2C63c#4 Airborne Weather And Ground Mapping Pulsed Radars

2.1.1 Summary of Deviation

Deviates from EUROCAE ED-38, §4.2, Table 4-1 by not performing Salt Spray test for those articles which are limited to installation where they are not subject to corrosive atmospheres during normal aircraft operation.

2.1.2 Original Requirement

EUROCAE ED-38 Chapter 4

4.2 APPLICABILITY OF TESTS

The tests specified in Table 4-1 apply to Weather and Ground Mapping Radars as specified in Chapter 2 of this document, except where noted.

Table 4-1 PERFORMANCE CRITERIA TO BE MET UNDER REQUIRED TESTS FOR AIRBORNE WEATHER AND GROUND MAPPING PULSE RADARS

Required Tests from ED-14A/DO-160A	Indicator Legibility 2.1.5	Failure Indication 2.1.8	Target Alert 2.1.10	Performance Index 2.2.5	Frequency of Antenna Scan 2.2.8	Antenna Stabilization 2.2.9	Beam Tilting 2.2.11	Bearing Error 2.2.12	Range Error 2.2.13	Transmitted Band Width 2.2.16
(...)										
14 Salt Spray	x	x	x	x	x	x	x	x		

2.1.3 Industry

The components of the weather radar system are designed for installation in areas that are not susceptible to corrosive atmospheres during normal aircraft operations.

The definition of applicable categories for salt spray testing in DO-160E Section 14 specifies:

Category S

When the equipment is installed in locations where it is subjected to a corrosive atmosphere in the course of normal aircraft operations, the equipment is identified as Category S and the salt spray test is applicable.

Category T

When the equipment is installed in locations where it is subjected to a severe salt atmosphere, such as equipment exposed directly to external unfiltered air on hovering aircraft that may operate or be parked near the sea, the equipment is identified as category T and the severe salt spray test is applicable.

Since the equipment is not installed in such locations, this test is not applicable per DO-160E.

2.1.4 Equivalent Level of Safety

The equipment is to be installed in locations where it is not subjected to a corrosive atmosphere in the course of normal aircraft operations. The installation manual and the DDP clearly specify appropriate locations for installation of each LRU.

2.1.5 EASA position

Although we recognize the ED-38 requirement is not pertinent for equipment located in area where they are protected from external aggressions and concur with ED-14 statement, we have to formally log this deviation to ED-38.

We accept the deviation.