

Deviation Request ETSO-C99#1 for an ETSO approval for CS-ETSO applicable to Protective Breathing Equipment (ETSO-C99) 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 ETSO-C99#1 Protective Breathing Equipment

2.1 Summary of Deviation

Deviates from AS8031 paragraph 8.1(k) Optical Quality, as is impossible for the Applicant to meet because of the nature of the product design: i.e., a flexible hood rather than a rigid face piece or goggles.

2.2 Original Requirement

AS8031 paragraph 8.1(k) *Optical Quality: clear vs. yellow tint and vision distortion testing for thermal protection.*

2.3 Industry

The Protective Breathing Equipment (PBE) has not been tested according to the procedures shown in FAA-AM-78-41, a reference for testing optical quality, because these tests were designed for goggles, face masks, or other nonflexible types of devices. Many of the tests specified in FAA-AM-78-41 cannot be run on flexible hoods such as this PBE. As an alternative, the PBE has been tested against the vision requirements of ETSO C116, and found to be satisfactory.

2.4 Equivalent Level of Safety

The PBE is certified to TSO C116, “Crewmember Protective Breathing Equipment”. Devices certified to TSO C99, “Protective Breathing Equipment”, and devices certified to TSO C116 perform the same function, i.e., allow aircraft crewmembers to safely enter areas of the aircraft that may contain smoke or toxic fumes, in order to determine the severity of the emergency and take appropriate action. Whereas devices defined by TSO C99 may be either self-contained or be connected to other aircraft sources of air or oxygen, devices that fall under TSO C116 must be self-contained. Also, the workload requirements for users of devices defined by TSO C116 are slightly more demanding than workloads under TSO C99. Because the units defined by these two TSO’s are intended to be used by the same people in the same emergency situation, and because devices defined by TSO C116 must meet equal or more demanding requirements for all other aspects of product design, and because the PBE meets all of the requirements, including vision requirements, of TSO C116, the Applicant contends that the design of the PBE is adequate to meet the vision requirements of users of units certified by TSO C99.

2.5 EASA position

We accept the deviation.