

European Aviation Safety Agency

European Technical Standard Order

Subject: PERSONNEL PARACHUTE ASSEMBLIES AND COMPONENTS

1 - Applicability

This ETSO provides the requirements which emergency parachutes that are designed and manufactured on or after the date of this ETSO must meet in order to be identified with the applicable ETSO marking.

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

Standards set forth for emergency parachutes in Parachute Industry Association (PIA) Technical Standard 135 (TS-135) Revision 1.4, issued April 22, 2010, 'Performance Standards for Personnel Parachute Assemblies and Components', as modified by Appendix 1 of this ETSO.

3.1.2 - Environmental Standard

As set forth in Parachute Industry Association (PIA) Technical Standard 135 (TS-135) Revision 1.4, issued April 22, 2010, 'Performance Standards for Personnel Parachute Assemblies and Components'.

3.1.3 - Software

See CS-ETSO, Subpart A, paragraph 2.2.

3.1.4 - Airborne Electronic Hardware

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

Equipment suitability for supporting the function defined in paragraph 3.1.1 of this ETSO is established by performing

the tests as prescribed in Parachute Industry Association (PIA) Technical Standard 135 (TS-135) Revision 1.4, issued April 22, 2010, 'Performance Standards for Personnel Parachute Assemblies and Components', as modified by Appendix 1 of this ETSO, with no further analysis required.

4 - Marking**4.1 - General**

Marking as detailed in CS-ETSO, Subpart A, paragraph 1.2.

4.2 - Specific

Also, mark the following permanently and legibly, with at least the manufacturer's name, subassembly part number, and the ETSO number:

- (1) Each component that is easily removable (without hand tools), and
- (2) Each subassembly of the article that you determined may be interchangeable.

5 - Availability of Referenced Document

You can download a free copy of PIA TS-135 Revision 1.4 issued April 22, 2010, Performance Standards for Personnel Parachute Assemblies and Components, at:

<http://www.pia.com/piapubs/TSDocuments/TS-135v1.4.pdf>

APPENDIX 1. MINIMUM PERFORMANCE STANDARD FOR PERSONNEL PARACHUTE ASSEMBLIES AND COMPONENTS

This Appendix prescribes the MPS for a personnel parachute assembly and its components. The applicable standard is PIA TS-135 Revision 1.4, issued April 22, 2010, Performance Standards for Personnel Parachute Assemblies and Components, as modified for this ETSO:

1. Page 2, replace paragraph 2.1.i. to read as follows:
'Cognisant Agency' — The European Aviation Safety Agency (EASA).
2. Page 2, replace paragraph 2.1.a. to read as follows:
'Administrator' — EASA.
3. Page 5, paragraph 4.1.2. delete: 'generally'.
Stitching should not ravel when it is broken. 'Generally' reduces the requirement for stitch choice, and adversely impacts the current standard.
4. Page 5, paragraph 4.1.3. delete: 'Ref: Table 2'.
Table 2 is not relevant to this requirement. Testing of a packed assembly will show if the main parachute will interfere with the proper function of the reserve parachute.
5. Page 8, paragraph 4.3.5.3 replace 'a 200 lbf (889.6 N)' with 'the greater of (200 lbf (889.6 N)) and the (maximum operating weight times 0.84)'.
To ensure that the compression load is at least the compression load of the body without legs and feet.
6. Page 9, paragraph 4.3.7. in first sentence delete: 'a weight not more than'.
The worst case is the maximum operating weight.
7. Page 11, paragraph 4.3.11. in the first sentence delete 'not more than'.
The worst case is the maximum operating weight.
8. Page 11, disregard paragraph 4.3.9.1., Rate of Descent Tests (Method 2).
9. Page 14, Table 1, under Marking Data Requirements, replace:
Statement of Authorisation under TSO-C-23e and/or (J) TSO-C-23e if applicable.
with:
Statement of Authorisation under ETSO-C23f.