

Parachute Industry Association Publications

PIA Technical Standard 120 2.01

AAD Design and Testing Report Format

September 20, 1995

TS-120 2.01

Table of Contents

1.	Objective.....	4
2.	Reference documents	4
3.	Design description	5
3.1.	Specific usage modes of the device	5
3.2.	Principle of operation	5
3.3.	Technical data.....	5
3.4.	Limitations.....	6
3.5.	Preventive means of the device to minimize the affection of system or sub system failures	6
4.	Testing	6
4.1.	General overview of the testing program.....	6
4.2.	Altitude measurement subsystem.....	7
4.3.	Release subsystem.....	7
4.4.	Complete system test	7
4.4.1.	Installation and function	7
4.4.2.	Drop tests	8
4.4.3.	Live jumps	8
4.5.	Environmental testing	8
4.5.1.	Shock.....	8
4.5.2.	Vibration.....	9
4.5.3.	Humidity	9
4.5.4.	Salt	9
4.5.5.	Temperature	10
4.5.6.	Software	10
4.5.7.	EMI / EMS / ESD	11
4.5.8.	Aging test	11
4.5.9.	Other	11

5.	Human Interface	11
5.1.	Arm / Disarm	11
5.2.	User calibration	11
5.3.	Parameter changes.....	12
6.	Marking / Labeling.....	12
7.	Documentation.....	12
8.	Maintenance	12
8.1.	Field maintenance.....	12
8.2.	Manufacturer maintenance.....	12
8.3.	Service stations	13
9.	Quality Control Procedures/Systems and Methodology	13
9.1.	Purchased parts / components.....	13
9.2.	Production.....	13
9.3.	Final testing	13
9.4.	In the field	13
10.	Additional remarks	13

1. Objective

The PIA AAD Design & Testing Report Format is regarded as fulfilled when the manufacturer releases the following test report about his product.

The test report will be published by the PIA in the "Para NewsBrief", and on the PIA Internet Web Site so that the public has access to it.

With the following report procedure, every manufacturer has their own choice to define the extent and kind of requirements concerning their particular unit. The requirement regarding quality of each product results from the self-defined test requirements. Each manufacturer is free to decide which of the actual tests and quality control parameters they want to use in the published test report.

The self-chosen quality requirements should be documented.

The form of the description should follow a general format. In each section, the manufacturer should describe:

- the goal of the test, e.g. recognizing of the correct activation altitude, checking of correct function under elevated temperatures, etc.
- how many units have been utilized to perform the test in question
- the test arrangement
 - what has been measured/tested?
 - how has it been measured/tested?
 - what test equipment has been utilized?

Each test report shall contain references to all sections, even if they are "not recommended". All sections should be listed even when no data is presented. In this case a statement such as "not applicable", "not recommended", "not appropriate", "not valid", or "no statement on this point" should be included. In the event there is no reference to any particular section, the Para NewsBrief Editor will include the missing section with the notation "no statement supplied by the manufacturer" prior to publishing the report.

2. Reference documents

MIL-STD-810E	Environmental Test Methods
MIL-STD-45662A	Calibration System Requirements
RTCA/DO-160C	Environmental Conditions and Test Procedures
MIL-STD-331B	Procedure C1 for Temp. & Humidity Test
RTCA/DO-178B	Software considerations in Airborne Systems and Equipment Certifications
MIL-STD-461D	Requirements of the Control of Electromagnetic Interference, Emissions and Susceptibility