

# AEROSPACE STANDARD AMENDMENT

**SAE AS81714-A1**

Issued 2004-06

## Terminal Junction System (TJS), Environment Resistant General Specification For

**1. Present Requirement:** 2.1 Government documents, Page 10

MIL-STD-105 Sampling Procedures & Tables for Inspection Attributes  
MIL-STD-45662 Calibration System Requirements

**Change Requirement:** Delete MIL-STD-105 and MIL-STD-45662 references

**Rationale for Change:** Incorporate Department of the Navy Engineering Position Letter Ser: 456300C60-BS50.93 dated SEP 29 1995 and Ser: 456300C60-50.111 dated 1 October 1995.

**2. Present Requirement:** 2. REFERENCED DOCUMENTS, 2.2 Other publications, Page 11

Not required

**Change Requirement:** 2. REFERENCED DOCUMENTS, 2.2 Other publications, After the "American Society for Testing Materials", Page 11 add

AMERICAN NATIONAL STANDARDS INSTITUTE

ANSI/ISO 10012-1 Quality Assurance Requirements for Measuring Equipment

AMERICAN SOCIETY FOR QUALITY CONTROL

ASQC Z1.4, SAMPLING PROCEDURES AND TABLES FOR INSPECTION BY ATTRIBUTES

NATIONAL CONFERENCE OF STANDARDS LABORATORIES

NCSL Z540-1, -General Requirements for Calibration Laboratories and Measuring and Test Equipment

**Rationale for Change:** Incorporate Department of the Navy Engineering Position Letter Ser: 456300C60-BS50.93 dated SEP 29 1995, and Ser: 456300C60-50.111 dated 1 October 1995.

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2004 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

**TO PLACE A DOCUMENT ORDER:**  
Tel: 877-606-7323 (inside USA and Canada)  
Tel: 724-776-4970 (outside USA)  
Fax: 724-776-0790  
Email: [custsvc@sae.org](mailto:custsvc@sae.org)

**SAE WEB ADDRESS:**

<http://www.sae.org>

**SAE AS81714-A1**

**3. Present Requirement:** 2.4 Sources of documents, 2.4.2 Sources for non-government publications, Page 11

Not required

**Change Requirement:** 2.4 Sources of documents, 2.4.2 Sources for non-government publications, Page 11

- c. American National Standards Institute, 11 West 42<sup>nd</sup> Street, New York, NY 10036
- d. American Society of Quality Control, PO Box 3005, 611 East Wisconsin Ave, Milwaukee, WI 53201-46004
- e. National Conference of Standards Laboratories, 1800 30<sup>th</sup> Street, 305B, Boulder, CO 80301-1032

**Rationale for Change:** Incorporate Department of the Navy Engineering Position Letter Ser: 456300C60-BS50.93 dated SEP 29 1995, and Ser: 456300C60-50.111 dated 1 October 1995.

**4. Present Requirement:** Table II, Contact resistance limits, Page 16

TABLE II. Contact resistance limits.

Contact			Wire size	Test current (amperes)	Resistance (millivolts drop maximum)	
Part No.	Mating end size	Wire barrel size			Initial	After condition
M39029/1-507	20	22D	22	5.0	55	65
			28	1.5	40	45

**Change Requirement:** Table II, Contact resistance limits, Page 16

TABLE II. Contact resistance limits.

Contact			Wire size	Test current (amperes)	Resistance (millivolts drop maximum)	
Part No.	Mating end size	Wire barrel size			Initial	After condition
M39029/1-507	20	22D	22	5.0	55	65
			28	1.5	50	55

**Rationale for Change:** Incorporate Department of the Navy Engineering Position Letter Ser: 456300C60-MRS/M29.09 dated 27 June 1995.

**SAE AS81714-A1**

**5. Present Requirement:** Section 4. QUALITY ASSURANCE PROVISIONS, 4.1.2 Test equipment and inspection facilities, last sentence, Page 20

4.1.2 "Calibration of the standards which control the accuracy of inspection equipment shall comply with the requirements of MIL-STD-45662."

**Change Requirement:** Section 4. QUALITY ASSURANCE PROVISIONS, 4.1.2 Test equipment and inspection facilities, last sentence, Page 20

4.1.2 "Calibration of the standards which control the accuracy of inspection equipment shall comply with ANSI/NCSL Z540-1 or ISO 10012-1."

**Rationale for Change:** Incorporate Department of the Navy Engineering Position Letter Ser: 456300C60-50.111 dated 1 October 1995.

**6. Present Requirement:** Table IV, Qualification tests, Page 22

TABLE IV. Qualification tests.

Title	Requirement paragraph	Test paragraph	Test Groups			
			1	2	3	4
Vibration	3.5.8	4.6.8	X			X
Mechanical shock	3.5.9	4.6.9	X			X

**Change Requirement:** Table IV, Qualification tests, Page 22

TABLE IV. Qualification tests.

Title	Requirement paragraph	Test paragraph	Test Groups			
			1	2	3	4
Sine vibration	3.5.8	4.6.8	X			X
Random vibration	3.5.8	4.6.8		X		X
Mechanical shock	3.5.9	4.6.9	X	X		X

Note 1: For Group 4 half the sample shall be subjected to the Sine and half the Samples to the Random Vibration.

**Rationale for Change:** Incorporate Department of the Navy Engineering Position Letter Ser: 10380, 916 dated June 30, 1989

SAE AS81714-A1

**7. Present Requirement:** 4.5 Quality conformance inspection, 4.5.1.3.1 Sampling plan, Page 27

4.5.1.3.1 "Sampling plan: Statistical sampling and inspection shall be in accordance with MIL-STD-105 for general inspection Level II. The acceptable quality level (AQL) shall be 1.0 for major and 4.0 for minor defects."

**Change Requirement:** 4.5 Quality conformance inspection, 4.5.1.3.1 Sampling plan, Page 27

4.5.1.3.1 "Sampling plan: Statistical sampling and inspection shall be in accordance with ANSI/ASQC Z1.4 for general inspection Level II. The acceptable quality level (AQL) shall be 1.0 for major and 4.0 for minor defects (see 6.8)."

**Rationale for Change:** Incorporate Department of the Navy Engineering Position Letter Ser: 456300C60-BS50.93 dated SEP 29 1995

**8. Present Requirement:** 4.5 Quality conformance inspection, 4.5.1.4.1 Sampling plan, Page 28

4.5.1.4.1 "Sampling plan: The sampling plan shall be in accordance with MIL-STD-105, inspection level S-3 and the AQL shall be 4.0."

**Change Requirement:** 4.5 Quality conformance inspection, 4.5.1.4.1 Sampling plan, Page 28

4.5.1.4.1 "Sampling plan: The sampling plan shall be in accordance with ANSI/ASQC Z1.4, inspection level S-3 and the AQL shall be 4.0 (see 6.8)."

**Rationale for Change:** Incorporate Department of the Navy Engineering Position Letter Ser: 456300C60-BS50.93 dated SEP 29 1995

**9. Present Requirement:** 6.8 Definitions, Page 48

Not required

**Change Requirement:** 6.8 Definitions, Page 48

"6.8.16 Critical Defect: A critical defect is a defect that judgment and experience indicate would result in hazardous or unsafe conditions for individuals using, maintaining, or depending upon the product, or a defect that judgment and experience indicate is likely to prevent performance of the tactical function of a major end item such as a ship, aircraft, tank, missile, or space vehicle.

6.8.17 Defect: A defect is any nonconformance of the unit of product with specified requirements.