



DEFENSE LOGISTICS AGENCY
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DLA LAND AND MARITIME-VAI

November 4, 2022

MEMORANDUM FOR MILITARY/INDUSTRY DISTRIBUTION

SUBJECT: Initial Draft of EP Study on Cavity to Cavity Leakage Test (Cavity Leakage)
(see table below for details).

The initial draft for the subject document is now available for viewing and downloading from the DLA Land and Maritime-VA Web site:

<https://landandmaritimeapps.dla.mil/Programs/MilSpec/DocSearch.aspx>

Initial Draft	Title	Project Number
EPS	EP Study on Cavity to Cavity Leakage Test (Cavity Leakage)	5935-2023-005

Concurrence or comments are required at this Center within 21 days. Late comments will be held for the next coordination of the document. Comments from military departments must be identified as either "Essential" or "Suggested". Essential comments must be justified with supporting data. Military review activities should forward comments to their custodians of this office, as applicable, in sufficient time to allow for consolidating the department reply. Lack of response to this draft will be construed as concurrence.

If this document is of interest to you, please provide your comments or suggested changes. The point of contact for this document is Mr. Bender, phone number 614-692-9185, facsimile transmission, 614-692-6939, e-mail Jacob.Bender@dla.mil or may be mailed via the US Postal Service to DLA LAND AND MARITIME, ATTN: VAI (Attention: Jacob Bender), P.O. Box 3990, Columbus, OH 43218-3990.

Sincerely,

/ SIGNED /

ABDONASSER M. ABDOUNI
Chief,
Interconnection Branch

CC: David Devine, Robert Schoening, Alan Drais, Eddie Shen, Kyle Hochevar

ENGINEERING PRACTICE STUDY (EPS)

FSC 5935

Cavity-to-Cavity (C2C) Leakage Requirements

PROJECT NUMBER: 5935-2020-011

4 November 2022

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ENGINEERING PRACTICE STUDY

FSC 5935

Objective: Solicit input from manufacturers on the cavity-to-cavity leakage test. Questions have arisen about the value of the test due to allegations of unreliability, inconsistencies, and ability to circumvent the test due to requirements being too loose allowing for tricks to be used to pass the test even with the presence of a defect. This EP study will collect information from the manufacturers as they are the primary entity performing the test.

Background: For several years, manufacturers of the subject circular electrical connectors have proposed removing cavity-to-cavity leakage as a test method in the relevant specifications. Several manufacturing companies have performed engineering studies over the years to support their contention that these this test should be removed from the two specifications.

Proposal: Request input from manufacturers through a series of question and inviting any additional feedback they may have.

Q: Do you perform the cavity to cavity (C2C) leakage test or do you outsource this test?

A:

Q: If you outsource the test, is it difficult or easy to find a lab to perform the test?

A:

Q: How difficult is the test to perform?

A:

Q: Does the test require custom equipment?

A:

Q: Does the test result in damage to the insert grommet due to testing?

A:

Q: If it causes damage, can this lead to a test failure due to the damage?

A:

Q: Can the test be circumvented (i.e. pressing probe against the grommet causing the grommet and plastic to seal weather or not adhesive is present)?

A:

Q: Has the test been successful in uncovering manufacturing defects? Does it have value as a test?

A:

Q: Do you have any alternative methods for testing and/or determining incomplete adhesive coverage?

A:

Q: Do you use CT Scanning or other imaging modality to inspect for incomplete adhesive coverage?

A:

Q: After insert stack assembly is complete, do you pull a sample and grind off the rubber or section the part to visually inspect for incomplete adhesive coverage?

A:

Q: Have you preformed any studies which have suggested removal or retention of the C2C test in the specification?

A:

Q: What is overall opinion of the test? Do you have any other comments, thoughts, assertions, ponderies?

A:

Results:

If there are any questions, please contact Mr. Jacob Bender, phone DSN 850-9185/commercial 614-692-9185, E-mail Jacob.Bender@dla.mil, DLA Land and Maritime-VAI, P.O. Box 3990, Columbus, OH 43218-3990.