



DEFENSE LOGISTICS AGENCY
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IN REPLY
REFER TO

13 March 2015

DLA Land and Maritime-VAC (Mr. Carpenter/DSN 850-7078/(614) 692-7078)

Memorandum for VSS (LSA)

SUBJECT: Dated Engineering Practices Study (EPS) to solicit user input to determine whether the proposed methodology for measuring the internal free cavity volume of electronic devices with designed internal cavities should be adopted by MIL-STD-750. Project Number 5961-2015-010.

Findings and recommendations on Engineering Practices Study, dated 13 March 2015, are enclosed.

/signed/
Thomas M. Hess
Chief
Active Devices Team

ENGINEERING PRACTICE STUDY

PROJECT NUMBER: 5961-2015-010

TITLE: MIL-STD-750, PROCEDURE FOR MEASURING THE INTERNAL FREE CAVITY VOLUME OF
ELECTRONIC DEVICES WITH DESIGNED INTERNAL CAVITIES

13 MARCH 2015

FINAL REPORT

Prepared by:
Kyle Carpenter
DLA-VAC

I. OBJECTIVES: The objective of this study was to solicit user input to determine whether the proposed procedure for accurately measuring the internal free cavity volume of electronic devices with designed internal cavities, should be adopted for 5961 product tested to the requirements of MIL-STD-750.

II. BACKGROUND: MIL-STD-750, Test Method 1018 (Internal Gas Analysis) and 1071 (Hermeticity), require the accurate measurement of internal free cavity volume. Inaccurate cavity volumes have been discovered and reported by multiple certified laboratories. These inaccurate values can affect subsequent hermeticity and internal gas analysis results.

III. RESULTS: The EP Study project was opened and an initial draft was posted on the DLA Land and Maritime website. Inputs were solicited from all interested parties using our entire 5961 stock class email distribution list, which included military services, manufacturers, original equipment manufacturers, and user communities. DLA received no negative feedback regarding the adoption of the proposed procedure.

IV. CONCLUSIONS: The results of this EP Study are sufficient to support the creation of a new MIL-STD-750 test method.

V. RECOMMENDATIONS: Revise MIL-STD-750, with a new test method (1082) for measuring the internal free cavity volume of electronic devices with designed internal cavities.