

AGENCY ACTION NOTICE

1. TITLE

Preliminary results of tests conducted on Amphenol Aerospace Connectors by the DLA Land and Maritime Product Test Center

2. DOCUMENT NUMBER

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DISCUSSION

DLA Land and Maritime has been performing product testing on several types of milspec connectors produced by Amphenol Aerospace. This testing was undertaken after several QPL programmatic non-conformances were identified since the beginning of 2016. All testing has been carried out by DLA Land and Maritime's testing facility. To date, parts tested include connectors from MIL-DTL-26482, MIL-DTL-26500 and MIL-DTL-27599. All connector types were tested to the Group A&B lot acceptance test plans as detailed in the individual milspecs. Several failures have been observed across these specifications as detailed below:

MIL-DTL-26482

MS3124E16-14P: 144 connectors were tested with 2 connectors exhibiting failures. 2 connectors failed DWV and IR when tested IAW the requirements in the subject specification (EIA-364-20E and EIA-364-21E). Both failures were observed between an exterior pin (size 12 contact) and the shell of the connector. Test results were verified using alternate equipment.

MIL-DTL-26500

MS24264G18B8PN: 13 connectors were tested with 13 connectors exhibiting failures. The backshell accessory thread was noted to be undersized in both overall dimension and thread pitch for all 13 connectors. The distance from the bayonet pin to the center of the connector was also noted to be undersized.

MS24266G18B8SN: 13 connectors were tested with 13 connectors exhibiting failures. The backshell accessory thread was noted to be undersized in both overall dimension and thread pitch for all 13 connectors. Finally, three connectors failed visual inspection of the plating (bubbles, cracks and blisters of the plating were observed).

MS24266G14B7PN: 13 connectors were tested with 13 connectors exhibiting failures. The backshell accessory thread was noted to be undersized in both overall dimension and thread pitch for all 13 connectors. Eight connectors also failed the coupling torque test. The connectors failed to meet the minimum uncoupling torque of 3.5 in-lbs (without contacts).

MS24264G14B4PN: 13 connectors were tested with 13 connectors exhibiting failures. The backshell accessory thread was noted to be undersized in both overall dimension and thread pitch for all 13 connectors.

MIL-DTL-27599

MS20028T15B97S: 39 Connectors were tested with zero connectors exhibiting failures.

All connector testing was performed IAW the test methods outlined in the relevant military specifications. All equipment used in this effort was properly calibrated and employed by trained personnel. This testing represents a first round of work with further evaluations being carried out. Additional testing work will be performed on the subject milspecs and on several additional milspecs (MIL-DTL-38999, MIL-DTL-22992, MIL-DTL-83723). Failure/Root Cause analysis is underway, and this AAN will be updated as more details become available.

Any questions on the subject of this AAN should be directed to Alex Baillieul at vqp.ab@dla.mil or 614-692-2867.