



AEROSPACE RECOMMENDED PRACTICE

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MIL-PRF-29504/5, NSN 6060-01-6122316
Socket Terminus Alignment Sleeve Retention

RATIONALE

The MIL-PRF-29504/5, NSN 6060-01-6122316, fiber optic socket terminus is prone to intermittent optical disconnects caused by backing off of the alignment sleeve when installed in a MIL-DTL-38999 type connector.

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1. SCOPE

This recommended practice details the actions required to install a MIL-PRF-29504/5, NSN 6060-01-6122316, socket fiber optic terminus alignment sleeve during assembly, using a special torque adapter and approved torque load to prevent backing-off of the alignment sleeve.

2. APPLICABLE DOCUMENTS

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1 U.S. Government Publications

Copies of these documents are available online at <https://quicksearch.dla.mil>.

NAVAIR 01-1A-505-4 Technical Manual, Installation and Repair Practices, Aircraft Fiber Optic Cabling

3. OVERVIEW

An in-service issue has been identified where the alignment sleeve of the MIL-PRF-29504/5 fiber optic terminus can back-off during installation in a MIL-DTL-38999 type connector or when subjected to in-flight vibration. If the alignment sleeve is not fully seated, optical disconnection can occur.

The current approved process includes the addition of a low strength locking fluid to the threaded portion of the terminus using an application needle attached to the locking fluid bottle. This process can lead to locking fluid contaminating the terminus spring causing it to seize. In addition, excess locking fluid can wick from the threads and contaminate the area between the terminus ferrule and alignment sleeve effectively bonding the components together.

The section details an alternative procedure to install and properly torque load the alignment sleeve onto the end of the MIL-PRF-29504/5 Socket Terminus eliminating the need for any locking fluid.

3.1 Figures 1 and 2 detail the required tooling.



Figure 1 - Torque wrench with torque adapter bit for use on MIL-PRF-29504/5 termini