



DEPARTMENT OF THE NAVY

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DAHLGREN, VIRGINIA 22448-5100

IN REPLY REFER TO

3910  
Ser B35/003  
10 Mar 06

From: Commander, Dahlgren Division, Naval Surface Warfare Center  
To: Commander, Naval Sea Systems Command

Subj: CLARIFICATION ON CABLE SADDLE REQUIREMENT

1. This letter clarifies the cable saddle requirement of MIL-STD-2042B, Part 4, Paragraph 4.1.5.2.4.

2. BACKGROUND: Blown Optical Fiber (BOF) cables are particularly susceptible to damage due to compression on the cable. One instance in which BOF cables are routinely subjected to compressive forces is during cable banding operations intended to retain cables in the cableways. Such banding operations have been shown to damage BOF cables during prior shipboard installations. A cable saddle provides mechanical protection to the fiber optic cable during initial cable banding operations as well as throughout the service life of the cable plant by moving the compressive forces occurring during cable banding operations to the saddle, thereby preventing damage to the cable. To accomplish its intended purpose, the cable saddle must retain its shape and structural integrity during banding and throughout the cable's service life to keep the banding forces from damaging the cable.

3. CLARIFICATION OF MIL-STD-2042B, Part 4, paragraph 4.1.5.2.4: Cable saddles shall be used to protect the fiber optic cable from being crushed or deformed during and following cable banding. All saddles shall be made of a sufficiently rigid and dimensionally stable material (e.g., metal or fiber glass) such that the saddle shall retain its shape and structural integrity and keep damaging forces off the fiber optic cable when a cable band is strapped down around the saddle. In addition, the material used for the cable saddles shall meet all other applicable Navy requirements (i.e., toxic material requirements, flammability, etc). See the following figures for examples of acceptable saddle implementation.

CLARIFICATION ON CABLE SADDLE REQUIREMENTS

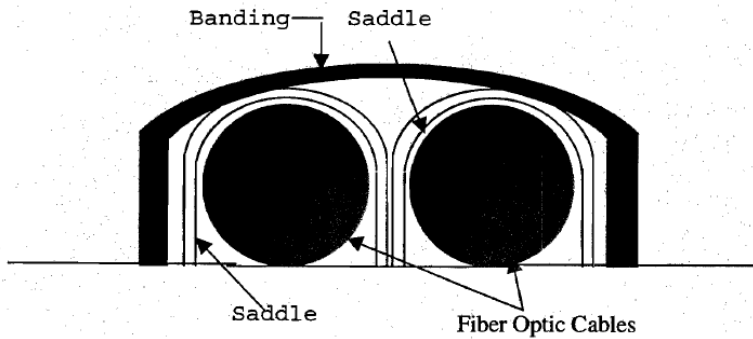


Figure 1. Installation Using Single Cable, Cable Saddles.

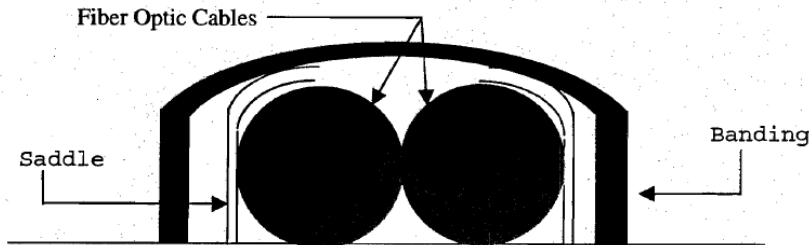


Figure 2. Installation Using Multi-Cable, Cable Saddles.

*Note: A single saddle may go across one cable or multiple cables. Saddles shall be properly sized to fit over the protected cable(s). Saddles shall only allow minimum movement of cables while protecting the fiber optic cables from being compressed.*

4. The clarification addressed in this letter will be incorporated into the next formal revision to MIL-STD-2042.
5. If you have any questions, please contact Mr. Robert Throm at (540) 653-4203 [robert.throm@navy.mil](mailto:robert.throm@navy.mil).

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By direction