FEBRUARY 2002

APPLICATION PROCEDURE & SAFETY CONSIDERATIONS PREFORMED LINE PRODUCTS

FIBERLIGN® Aluminum Support

For use on All Dielectric Self-Supporting (ADSS) Fiber Optic Cable
Be sure to read and completely understand this procedure before applying product. Be sure to select the proper PREFORMED™ product before application

1.00 NOMENCLATURE

1. Base (1ea)
2. Keeper (1ea)
3. Cushion Inserts (1 pair)
4. Captured Bolt,
   Lock Washer & Flat washer
   (Captured with grommet)

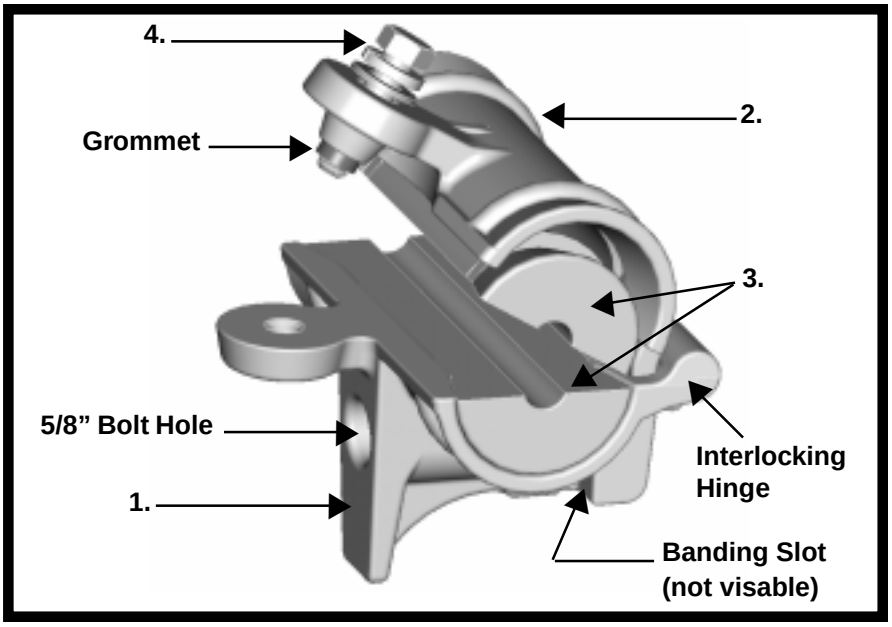

FIGURE 1 - NOMENCLATURE

2.00 DESCRIPTION

2.01 The FIBERLIGN® Aluminum Support (FAS) is tangent support hardware designed for short span, low tension ADSS fiber optic cable installations. The base and keeper are joined with an interlocking hinge that allows easy access to the cavity area. Cushion inserts made from soft polyurethane, capture and secure the cable firmly without causing excess pressure.

3.00 GENERAL NOTES

3.01 The cushion insert of a FAS is molded for a specific cable OD range and should be used only on cables within that range. A reference number is cast into the end of each insert for identification.

3.02 **Unbalanced Loading:** The FAS cushion inserts provide gentle gripping and moderate longitudinal holding strength depending upon the specific cable. CONSULT PLP FOR SPECIFICS.

3.03 **Mounting Options:** The FAS can be bolted or banded to a structure.

Through-bolt: The FAS can be mounted to a wood pole with a 5/8-11" UNC (M16) through-bolt. Drill through the pole at a right angle to the line for tangent lines, and bisect the angle on angled structures. The through bolt is fed through the FAS base (3.2" wide (81 mm)) and drilled pole.

Banding: The FAS can be mounted to a concrete or metal pole with a 1-1/4" (32 mm) wide x .040" (1 mm) thick metal band. A banding slot is cast into the base of the FAS. Position the base to secure the cable in-line for tangent lines and bisecting the angle on angled structures.

3.04 **Stringing Cable:** The large molded cavity of the FAS can be used for stringing in cable. This cavity (without the cushion inserts) provides enough clearance for a pulling-in rope and swivel assembly typically used in field applications. The smooth surfaces of the FAS cause little friction, thus allowing capable performance as a stringing device.

3.05 Maximum Line Angle: When used as a stringing device, the maximum recommended sag or line angle of the FDS is approximately 10 degrees for most ADSS cables. When used as a permanent installation, the maximum recommended sag or line angle is approximately 20 degrees for most cables. These recommended sag and angle limits can be affected by cable size, brand, stringing tension and loading conditions. CONSULT PLP FOR EXCEPTIONS WHEN GREATER ANGLES ARE REQUIRED.

3.06 Component Reuse:
Hardware - The base and keeper can be reused if in good condition.

Cushioned Inserts - If there are any signs of scratches, gouges, tears or other damage to the bore of the insert pair, replace with new inserts.

3.07 Stacking - Multi Cable Installation:
The FAS base was designed to stack two or more FAS assemblies against the structure for Multi-Cable installations (Figure 2). This saves on pole space and hardware fittings. For installations of more than two cables, a brace should be used to help support the cantilever load on the through-bolt or band.

FIGURE 2 - MULTI-CABLE INSTALLATION

3.08 For safety considerations refer to the end of this application procedure.

4.00 APPLICATION: BOLTED

4.01 Determine the location for proper attachment and drill through the structure for a 5/8"-11 (M16) through-bolt.

4.02 Feed a 5/8"-11 (M16) through-bolt through the FAS base and through the structure. (Figure 3)

FIGURE 3 - FEED BOLT THROUGH BASE AND POLE

4.03 Join the keeper and base at the interlocking hinge if the components are not already coupled (Figure 4). Then install conventional washers and nuts on the 5/8"-11(M16) through bolt and tighten to secure assembly against the structure.

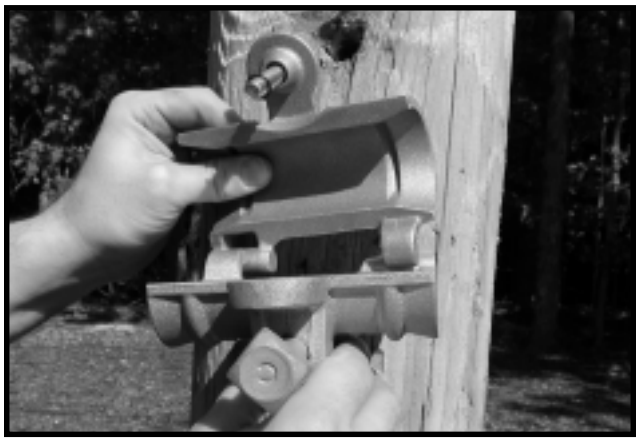

FIGURE 4 - INSTALL KEEPER

4.04 For permanent installations, lay one insert half into the base of the FAS and place the cable into the groove of the insert. (Figure 5)

FIGURE 5 - PLACE INSERT IN BASE AND CABLE IN GROOVE OF INSERT

4.05 Rest the groove of the second insert onto the cable and close the keeper.

4.06 Carefully begin screwing the captured bolt into the threaded FAS base until hand tight. (Figure 6)

FIGURE 6 - HAND TIGHTEN BOLT

4.07 Complete the installation by tightening the captured bolt until the lock washer is flat or torque reaches about 10 ft-lbs (13.5 NM). (Figure 7)

FIGURE 7 - WRENCH TIGHTEN - FLATTEN LOCK WASHER

5.00 APPLICATION: BANDED

5.01 Feed the band through the slots of the FAS base. For full strength capability, the band should be 1-1/4" (32 mm) wide x .040" (1mm) thick with a 45,000 psi yield strength and 95,000 psi ultimate strength. (Figure 8)

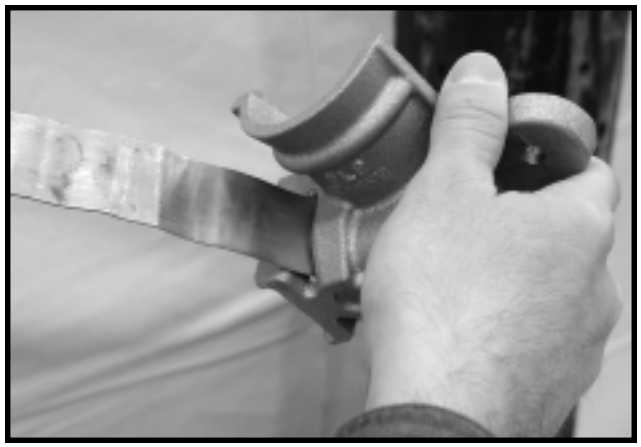

FIGURE 8 - BASE BANDING SLOT

5.02 Join the keeper and base at the interlocking hinge if the components are not already coupled.

5.03 Wrap the band around the structure and position the FAS as required. Tighten the band in accordance with the band manufacturer's recommendation. (Figure 9)

5.04 Follow steps 4.04 through 4.07 to complete permanent installation of the cable.

FIGURE 9 - COMPLETED ASSEMBLY - BANDED

6.00 STRINGING WITH THE FAS

NOTE: The maximum line or sag angle for stringing with the FAS is approximately 10 degrees for most ADSS cables (20 degrees in certain cases, consult PLP).

6.01 After mounting the base and keeper components against the structure, leave the FAS cavity empty (without inserts) and tighten the capture bolt to secure the keeper to the base.

6.02 The stringing rope and cable may be pulled through the empty cavity. The largest cable, rope or pulling-in grip that will move freely throughout the cavity is approximiatley 1-5/8" (41 mm) diameter. (Figure 10)

6.03 Once the cable stringing operation is completed, open the keeper and reinstall the inserts and the keeper as previously described for permanent installation.

FIGURE 10 - STRINGING ADSS CABLE

SAFETY CONSIDERATIONS

1. This application procedure is not intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual. CAUTION: FAILURE TO FOLLOW THESE PROCEDURES AND RESTRICTIONS MAY RESULT IN PERSONAL INJURY OR DEATH.
2. This product is intended for the specified application. CAUTION: DO NOT MODIFY THIS PRODUCT UNDER ANY CIRCUMSTANCES.
3. This product is intended for use by trained craftspeople only. This product SHOULD NOT BE USED by anyone who is not familiar with and trained in the use of it.
4. When working in the area of energized lines with this product, EXTRA CARE should be taken to prevent accidental electrical contact.
5. For PROPER PERFORMANCE AND PERSONAL SAFETY be sure to select the proper size PREFORMED™ products before application.
6. PREFORMED products are precision devices. To insure proper performance, they should be stored in cartons under cover and handled carefully.