CommScope

FOSC Preparation and Assembly

Ryan Hanes
Field Application Engineer
Agenda:

- Safety Overview
- FOSC 450 overview
- Fiber cable – entry techniques
- Cable installation, traying and closure assembly
- Grounding and sealing
- Fiber 101
Objectives:

• Identify and prepare fiber cable for restoration
• Identify the components and functionality of FOSC closures
• Assist in emergency fiber restoration
Initial emergency restoration:

• Identify, isolate and secure fiber damage
• Identify fiber type and count
• Locate nearest slack span
Safety:

- Personal protective equipment
- Work zone/security
- Underground hazards
- Electrical hazards
Utilize Personal Protective Equipment
Always Survey and Secure Work Zone Aerial/Underground

In an emergency restoration, the priority should be first security then repair

- Electrical “High Voltage” lines
- Vehicle traffic
- Inclement weather
- Fall Hazards
- Aerial equipment upset or tipping
- Objects falling onto workers or property

www.youtube.com “live line demonstration”
Always Survey the Location and Secure Work Zone

- Ensure the Aerial Bucket is parked with the appropriate precautions:
  - Vehicle and pedestrian warning signs displayed as required.
  - Lights and barricades in place as required.
  - Flashing lights on the vehicle turned on.
  - Cones placed as required
Underground Hazards - Warnings

**UNIFORM COLOR CODE**

- **WHITE** - Proposed Excavation
- **PINK** - Temporary Survey Markings
- **RED** - Electric Power Lines, Cables, Conduit and Lighting Cables
- **YELLOW** - Gas, Oil, Steam, Petroleum or Gaseous Materials
- **ORANGE** - Communication, Alarm or Signal Lines, Cables or Conduit
- **BLUE** - Potable Water
- **PURPLE** - Reclaimed Water, Irrigation and Slurry Lines
- **GREEN** - Sewers and Drain Lines

**TYPICAL MARKING**

- **LARGE PIPE OR MULTIPLE DUCTS**
  - TOLERANCE ZONE
  - * REFER TO TEXT ON FRONT OF CARD
  - Customize with your center’s phone and address information

- **SMALL PIPE OR CABLE(S)**
  - TOLERANCE ZONE
  - * REFER TO TEXT ON FRONT OF CARD
  - Customize with your center’s phone and address information
Underground Hazards - Warnings

Confirm placement of adjacent underground utilities

Heat blankets should be utilized if unsure or in joint trench situations
# Electrical Hazards - Warnings

<table>
<thead>
<tr>
<th>Voltage range (phase to phase, RMS)</th>
<th>Approach distance (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>300 V and less</td>
<td>Avoid Contact at minimum</td>
</tr>
<tr>
<td>Over 300V, not over 750V</td>
<td>12</td>
</tr>
<tr>
<td>Over 750V not over 2 kV</td>
<td>18</td>
</tr>
<tr>
<td>Over 2 kV, not over 15 kV</td>
<td>24</td>
</tr>
<tr>
<td>Over 15 kV, not over 37 kV</td>
<td>36</td>
</tr>
<tr>
<td>Over 37 kV, not over 87.5 kV</td>
<td>42</td>
</tr>
<tr>
<td>Over 87.5 kV, not over 121 kV</td>
<td>48</td>
</tr>
<tr>
<td>Over 121 kV, not over 140 kV</td>
<td>54</td>
</tr>
</tbody>
</table>
FOSC Overview

- Conforms to wide ranges of shapes and size of cable
- Gel stays flexible in wide temperature ranges
- Gel withstands harsh chemical environments
- Cold Sealed…no heat gun required

FOSC 450 D6
(432 splice capacity w/basket)

FOSC 450 C6
(144 splice capacity w/basket)

FOSC 450 B6
(144 splice capacity 6 trays w/basket)
Tools Required For Termination

- Alcohol wipes for gel filled cable
- Buffer tube cutter
- Ruler
- Fiber Scissors
- Small screwdriver
- Tie Wraps, large & small
- ¼” Nut driver
- Black marker
Identify contents of 1 FOSC 450 “B” closure

The FOSC “B” closure box will contain
✓ 1 Base, Dome, Dome clamp, O-Ring
✓ 1 Star bracket, tray tower, slack basket
✓ 1 Gel Seal end piece
✓ 2 Accessory bags
✓ 1 Installation Instructions

Large accessory bag contents
• ¼” nut driver
• Numeric labels
• Stranded fiber transport tubing (red)
• Ribbon fiber transport tubing (Green)
• Port plugs (4)
• Small tie wraps
• Felt tape

Small accessory bag contents
• Cable strain relief holders
• Hose clamps
• 6 small, and 2 large strength member attachment brackets with lugs
• Grounding straps
FOSC 450 INSTALLATION STEPS

STEP 1: Prepare Cables
STEP 2: Remove and Disassemble Closure
STEP 3: Attach Cable
STEP 4: Store Slack and Unspliced Fiber
STEP 5: Attach Splice Trays
STEP 6: Install Gel Block
STEP 7: Seal Closure
Thank You

www.commscope.com

- Ryan Hanes
- Ryan.Hanes@commscope.com