

# STOP!

## Don't Connect Unless You Inspect!

**Verify that Instruction Sheet (408-Series)  
Pertains to Connector Kit Being Terminated**

To Verify, Refer to Product Drawing for  
Applicable Instruction Sheet at:

[www.tycoelectronics.com](http://www.tycoelectronics.com)

(Search by Connector Kit Part Number,  
Click on the Part Number. Click on Product Drawing)

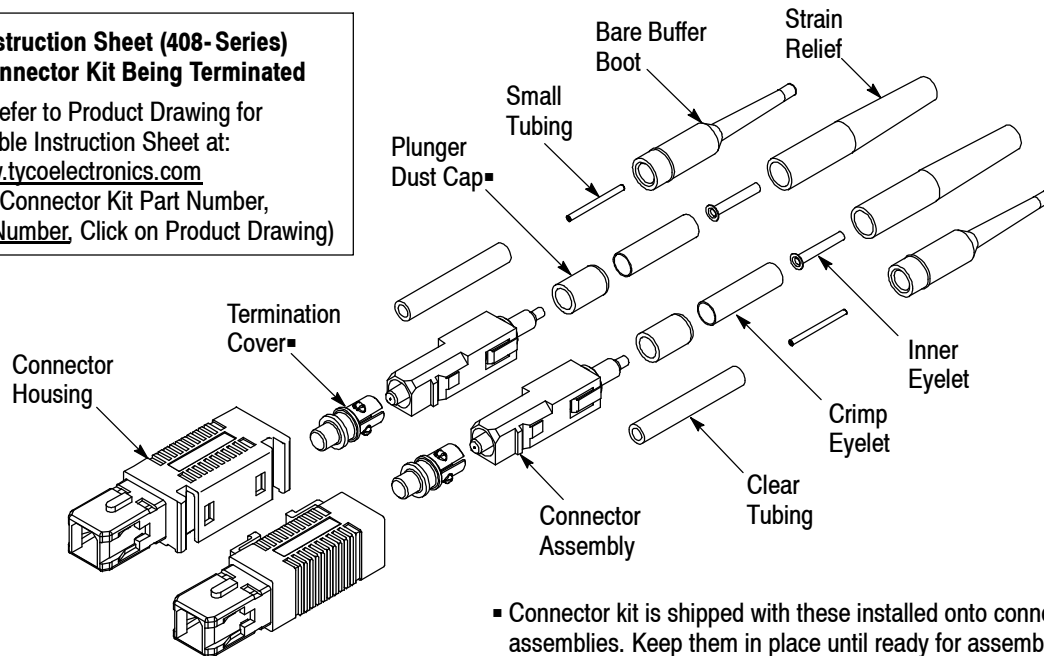


Figure 1

### 1. INTRODUCTION

LightCrimp Plus SC duplex fiber optic connector kits are designed for use with 125- $\mu$ m singlemode or multimode glass fiber cable. These kits can be used with any of the following media (paragraph of assembly procedure is indicated next to media).

#### 5.1. 900- $\mu$ m Bare Buffered Fiber

#### 5.2. 250- $\mu$ m Coated Fiber

#### 5.3. 2.5- to 3.0- mm Loose Jacketed Cable

**NOTE:** Any jacketed cable used with SC connectors must allow for the axial movement of the buffered fiber in the jacket which occurs when the connector is mated to another connector or device. Certain cable constructions do not allow axial movement and are not suitable for use with SC connectors. Refer to Inspection Specification 129-1496 for a method of determining whether a given cable construction allows axial movement (result of the buffer pull test).

#### 5.4. 900- $\mu$ m Easy Strip or Semi-Tight Buffered Fiber

Read these instructions thoroughly before assembling the connector kits.

**NOTE**



*All numerical values in this instruction sheet are in metric units. Dimensions are in millimeters. Figures are not drawn to scale.*


Reasons for reissue of this instruction sheet are provided in Section 6, REVISION SUMMARY.

### 2. DESCRIPTION (See Figure 1)


Each connector kit consists of two each of the following components: connector housing, connector assembly, strain relief, inner eyelet, crimp eyelet, and clear tubing. Each kit is also supplied with two bare buffer boots and two small tubings to compensate for small diameter cable. Also included, assembled onto the connectors, are termination covers for the ferrules (front of connectors) and plunger dust caps (rear of connectors).

### 3. SAFETY PRECAUTIONS


**DANGER** To avoid personal injury, ALWAYS wear eye protection when working with optical fibers.




**DANGER** NEVER look into the end of terminated or unterminated fibers. Laser radiation is invisible but can damage eye tissue. Never eat, drink, or smoke when working with fibers. This could lead to ingestion of glass particles.



**DANGER** Be very careful to dispose of fiber ends properly. The fibers create slivers that can easily puncture the skin and cause irritation.



**CAUTION** DO NOT use defective or damaged components. Replace them with new components.



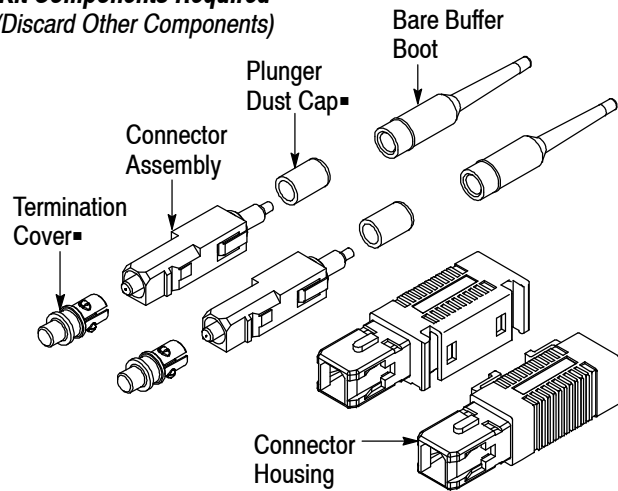
### 4. REQUIRED TOOLS AND MATERIALS

- Cable Holder Assembly 1278023-1 or 2064540-1
- Miller Strip Tool 1754708-1
- Alcohol Fiber Wipe Packet 501857-2
- isopropyl alcohol
- Fiber Optic Cleaver 1871696-1 (408-10086)
- LightCrimp Plus SC Die Set with Crimping Tool 492782-1 (consists of Die Set 492783-1 and PRO-CRIMPER\* III Hand Tool 2064431-1)  
*Can be used for terminating all cable.*
- LightCrimp\* Inline Splice Die Set with Crimping Tool 2064603-1 (consists of Die Set 1985766-1 and PRO-CRIMPER III Hand Tool 2064431-1)  
*Can only be used for terminating bare buffered fiber or coated fiber.*

### 5. ASSEMBLY PROCEDURE

#### 5.1. 900- $\mu$ m Bare Buffered Fiber

**Kit Components Required**  
(Discard Other Components)



- Connector kit is shipped with these installed onto connector assemblies. Keep them in place until ready for assembly.

#### NOTE

Assemble each set of components according to the following procedure.



#### A. Preparing 900- $\mu$ m Bare Buffered Fiber (Figure 2)

1. Slide the bare buffer boot (small diameter end first) over the buffer. See Figure 2, Detail A.
2. Remove the plunger dust cap from the connector assembly, and discard.
3. Push the connector assembly into the holder of the cable holder assembly with the termination cover facing outward. See Figure 2, Detail B. Make sure that the connector butts against the lip of the arm of the cable holder assembly. Slide the fiber into the channel marked "BUFFER". Make sure that the tip of the buffer butts against the end of the channel.
4. Mark the buffer at each cross-slot of the channel. See Figure 2, Detail B. Remove the buffer from the cable holder assembly.
5. Using the strip tool, strip the fiber to the first mark. It is recommended holding the strip tool at an angle to the fiber and stripping the fiber in three sections. See Figure 2, Detail C. Clean the fiber with an alcohol fiber wipe to remove the fiber coating residue.

#### CAUTION

Before using the strip tool, make sure that the "V" opening is clean; otherwise the fiber could break. Only use isopropyl alcohol on the tool.



**B. Cleaving** (Figure 3)

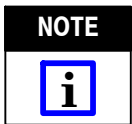
1. Open the fiber clamp of the fiber optic cleaver. Press the button, and slide the carriage back (toward the fiber clamp). Then move the fiber slide back until it stops.
2. Place the stripped fiber into the slot so that the end of the buffer is at the 8-mm marking. See Figure 3, Detail A.
3. While applying pressure on the buffer, carefully slide the fiber slide forward (toward the carriage) until it stops. See Figure 3, Detail B.
4. Gently close the fiber clamp, and slide the carriage forward. **DO NOT** touch the button while sliding the carriage. See Figure 3, Detail C.
5. Open the fiber clamp, and move the fiber slide back until it stops. Remove the cleaved fiber, and properly dispose of the scrap fiber.



**DO NOT** attempt to clean the fiber after it has been cleaved.

**C. Crimping** (Figures 4 and 5)

1. Open the cable clamp of the cable holder assembly, and position the buffer (with the cleaved end facing the connector) inside the clamp. Move the buffer so that the end of the fiber is even with the front of the arm of the cable holder assembly, and holding the buffer in place, close the clamp. See Figure 4, Detail A.
2. Carefully insert the fiber into the plunger of the connector assembly until the fiber bottoms against the internal fiber. Make sure that the remaining mark on the buffer enters the plunger. The resultant bend in the buffer should hold the fiber against the internal fiber. See Figure 4, Detail B.



*It is important that the fiber bottoms against, and remains against, the internal fiber. If the mark does not enter the plunger or if the fiber does not seem to bottom against the internal fiber, the fiber may be caught on internal guides. Rotating the connector and backing the fiber out a small amount and re-entering may help. However, if the mark will not enter the plunger, the fiber must be re-stripped.*

*Make sure that the fiber does not pull rearward from the contact (with the internal fiber) during the crimping operation.*

3. If using Die Set 492783-1, remove (and retain) the termination cover.  
If using Die Set 1985766-1, do not remove the termination cover.

4. Squeeze the handles of the hand tool until the ratchet releases. Allow the handles to open fully. Then:

If using Die Set 492783-1, slowly close the handles until you hear 2 clicks from the ratchet.

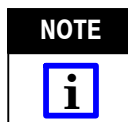
If using Die Set 1985766-1, slowly close the handles until you hear 3 clicks from the ratchet.

5. With the connector assembly in the cable holder assembly, position the ferrule or termination cover in the upper cavity of the front die and the plunger in the upper cavity of the rear die. See Figure 4, Detail C.



*The arrows marked on the front die indicate the direction that the ferrule or termination cover must be pointing when the connector is positioned in that cavity. For proper placement, and to avoid damage to the fiber, the direction of the arrows must be observed. Refer to Figure 4, Details C and D.*

6. Gently push the buffer toward the connector assembly to make sure that the fiber is still bottomed, then slowly squeeze the tool handles together until the ratchet releases. Allow the handles to open fully, and remove connector from the dies.
7. Position the plunger of the connector assembly in the first (smallest) cavity of the front die with the knurl against the edge of the groove in the die and the ferrule or termination cover pointing in the direction of the arrow. See Figure 4, Detail D.
8. Slowly squeeze the tool handles together until the ratchet releases. Allow the handles to open fully, and remove the connector assembly from the dies.
9. Slide the bare buffer boot over the plunger until the boot butts against the connector assembly. See Figure 5, Detail A.
10. Remove the connector assembly from the cable holder assembly.
11. Align the key of the connector housing with the chamfered edges of the connector assembly. Slide the housing over the assembly until it snaps in place. See Figure 5, Detail B.



**DO NOT** force the components together. They are designed to fit only one way.

**D. Joining the Connectors** (Figure 6)

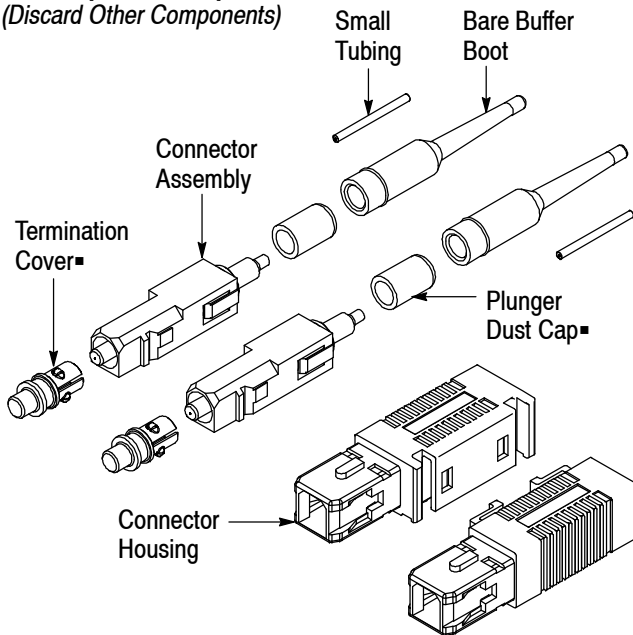
The connector housings (“plate” housing and “beam” housing) have latching features to join the two housings together. Slide the plate housing over the beam housing so that the slots engage the latches. Make sure that the housings are parallel with each other.

The assembly procedure for 900- $\mu\text{m}$  tight buffered fiber is now complete.

- If connecting connectors, refer to Paragraph 5.5.

## 5.2. 250- $\mu\text{m}$ Coated Fiber

### Kit Components Required (Discard Other Components)



- Connector kit is shipped with these installed onto connector assemblies. Keep them in place until ready for assembly.

#### NOTE



Assemble each set of components according to the following procedure.

### A. Preparing 250- $\mu\text{m}$ Coated Fiber (Figure 2)

1. Slide the bare buffer boot (small diameter end first) over the fiber. See Figure 2, Detail A.
2. Remove the plunger dust cap from the connector assembly, and discard.
3. Insert the small (white) tubing into the plunger of the connector assembly until the tubing bottoms. See Figure 2, Detail A.
4. Push the connector assembly into the holder of the cable holder assembly with the termination cover facing outward. See Figure 2, Detail B. Make sure that the connector butts against the lip of the arm of the cable holder assembly. Slide the fiber into the channel marked "BUFFER". Make sure

that the tip of the fiber butts against the end of the channel.

5. Mark the fiber at each cross-slot of the channel. See Figure 2, Detail B. Then, remove the fiber from the cable holder assembly.

6. Using the strip tool, strip the fiber to the first mark. It is recommended holding the strip tool at an angle to the fiber and stripping the fiber in three sections. See Figure 2, Detail C. Clean the fiber with an alcohol fiber wipe to remove the fiber coating residue.

#### CAUTION



Before using the strip tool, make sure that the "V" opening is clean; otherwise the fiber could break. Only use isopropyl alcohol on the tool.

### B. Cleaving (Figure 3)

1. Open the fiber clamp of the fiber optic cleaver. Press the button, and slide the carriage back (toward the fiber clamp). Then move the fiber slide back until it stops.
2. Place the stripped fiber into the slot so that the end of the buffer is at the 8-mm marking. See Figure 3, Detail A.
3. While applying pressure on the buffer, carefully slide the fiber slide forward (toward the carriage) until it stops. See Figure 3, Detail B.
4. Gently close the fiber clamp, and slide the carriage forward. DO NOT touch the button while sliding the carriage. See Figure 3, Detail C.
5. Open the fiber clamp, and move the fiber slide back until it stops.
6. Remove the cleaved fiber, and properly dispose of the scrap fiber.

#### CAUTION



DO NOT attempt to clean the fiber after it has been cleaved.

### C. Crimping (Figures 4 and 5)

1. Open the cable clamp of the cable holder assembly, and position the fiber (with the cleaved end facing the connector) inside the clamp. Move the fiber so that the end of the fiber is even with the front of the arm of the cable holder assembly, and holding the fiber in place, close the clamp. See Figure 4, Detail A.
2. Carefully insert the fiber into the plunger of the connector assembly until the fiber bottoms against the internal fiber. Make sure that the remaining mark on the fiber enters the plunger. The resultant bend in the fiber should hold the fiber against the internal fiber. See Figure 4, Detail B.

Also, the fiber coating must enter the small tubing that was installed in Step 3 of Paragraph 5.2.A. Make sure that the start of the fiber coating is not caught on the entry of the small tubing.

**NOTE**

*It is important that the fiber bottoms against, and remains against, the internal fiber. If the mark does not enter the plunger or if the fiber does not seem to bottom against the internal fiber, the fiber may be caught on internal guides. Rotating the connector and backing the fiber out a small amount and re-entering may help. However, if the mark will not enter the plunger, the fiber must be re-stripped.*

*Make sure that the fiber does not pull rearward from the contact (with the internal fiber) during the crimping operation.*

3. If using Die Set 492783-1, remove (and retain) the termination cover.

If using Die Set 1985766-1, do not remove the termination cover.

4. Squeeze the handles of the hand tool until the ratchet releases. Allow the handles to open fully. Then:

If using Die Set 492783-1, slowly close the handles until you hear 2 clicks from the ratchet.

If using Die Set 1985766-1, slowly close the handles until you hear 3 clicks from the ratchet.

5. With the connector assembly in the cable holder assembly, position the ferrule or termination cover in the upper cavity of the front die and the plunger in the upper cavity of the rear die. See Figure 4, Detail C.

**CAUTION**

*The arrows marked on the front die indicate the direction that the ferrule or termination cover must be pointing when the connector is positioned in that cavity. For proper placement and to avoid damage to the fiber, observe the direction of the arrows. Refer to Figure 4, Details C and D.*

6. Gently push the fiber toward the connector assembly to make sure that the fiber is still bottomed, then slowly squeeze the tool handles together until the ratchet releases. Allow the handles to open fully, and remove the connector from the dies.

7. Position the plunger of the connector assembly in the first (smallest) cavity of the front die with the knurl against the edge of the groove in the die and the ferrule or termination cover pointing in the direction of the arrow. See Figure 4, Detail D.

8. Slowly squeeze the tool handles together until the ratchet releases. Allow the handles to open fully, and remove the connector assembly from the die.

9. Slide the bare buffer boot over the plunger until the boot butts against the connector assembly. See Figure 5, Detail A.

10. Remove the connector assembly from the cable holder assembly.

11. Align the key of the connector housing with the chamfered edges of the connector assembly. Slide the housing over the assembly until it snaps in place. See Figure 5, Detail B.

**NOTE**

*DO NOT force the components together. They are designed to fit only one way.*

**D. Joining the Connectors** (Figure 6)

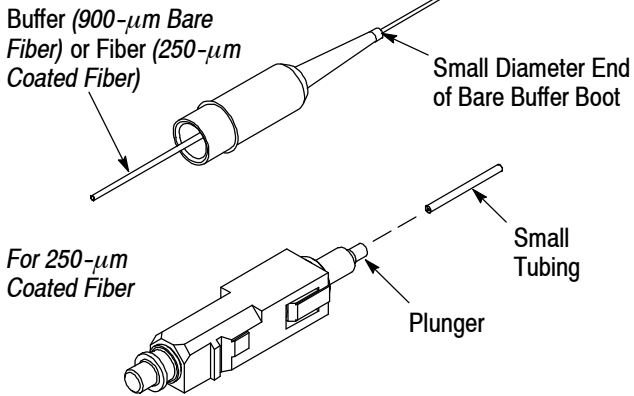
The connector housings (“plate” housing and “beam” housing) have latching features to join the two housings together. Slide the plate housing over the beam housing so that the slots engage the latches. Make sure that the housings are parallel with each other.

The assembly procedure for 250- $\mu$ m coated fiber is now complete.

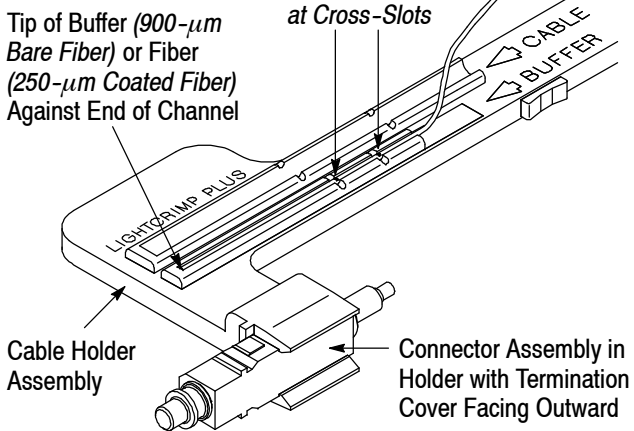
► If connecting connectors, refer to Paragraph 5.5.

**Figure 2: Preparing the Fiber**

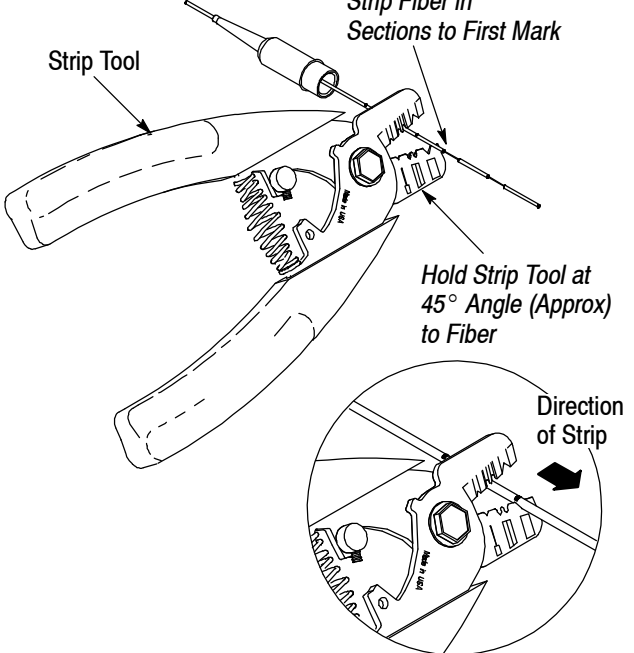
**Detail A**



**Detail B**

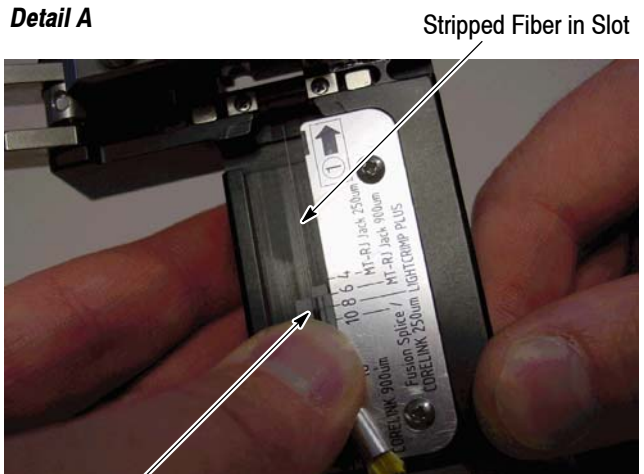


**Detail C**



**Figure 3: Cleaving**

**Detail A**

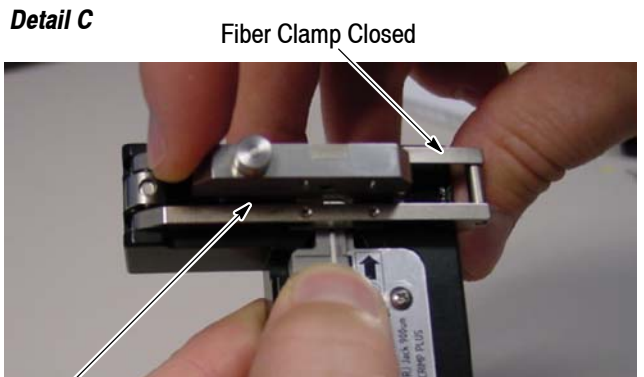


End of Buffer at 8-mm Marking

**Detail B**

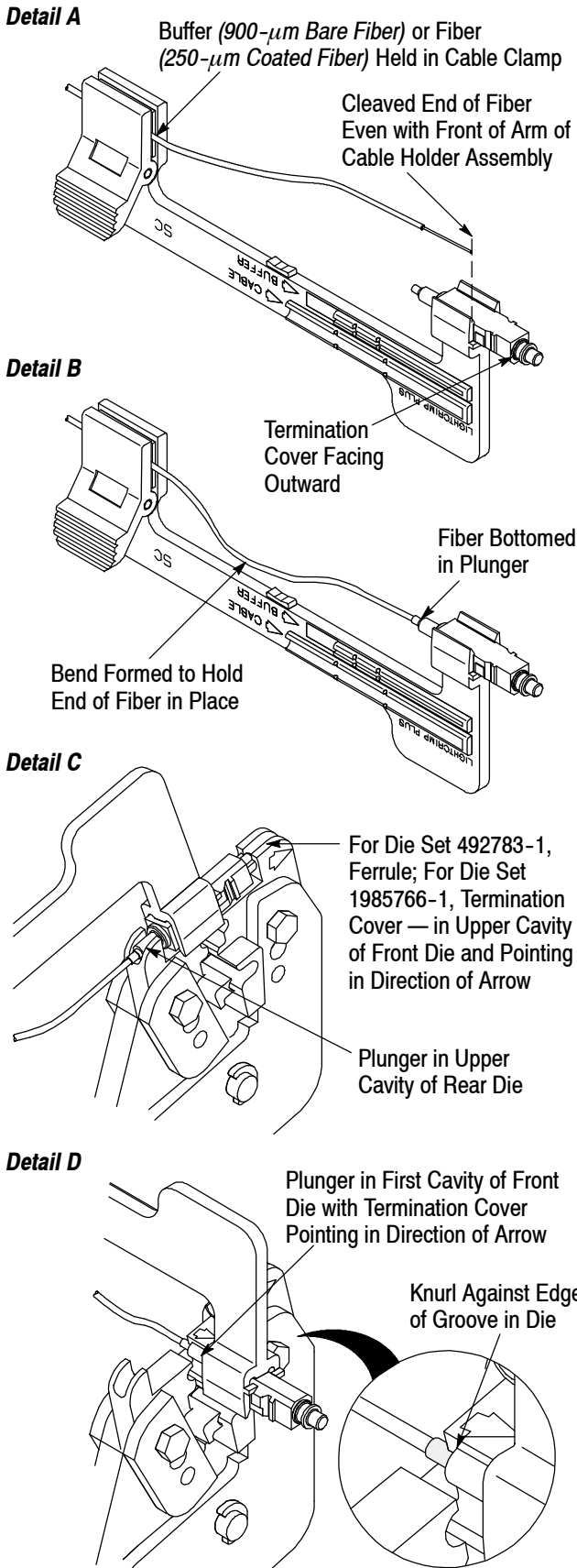


**Detail C**

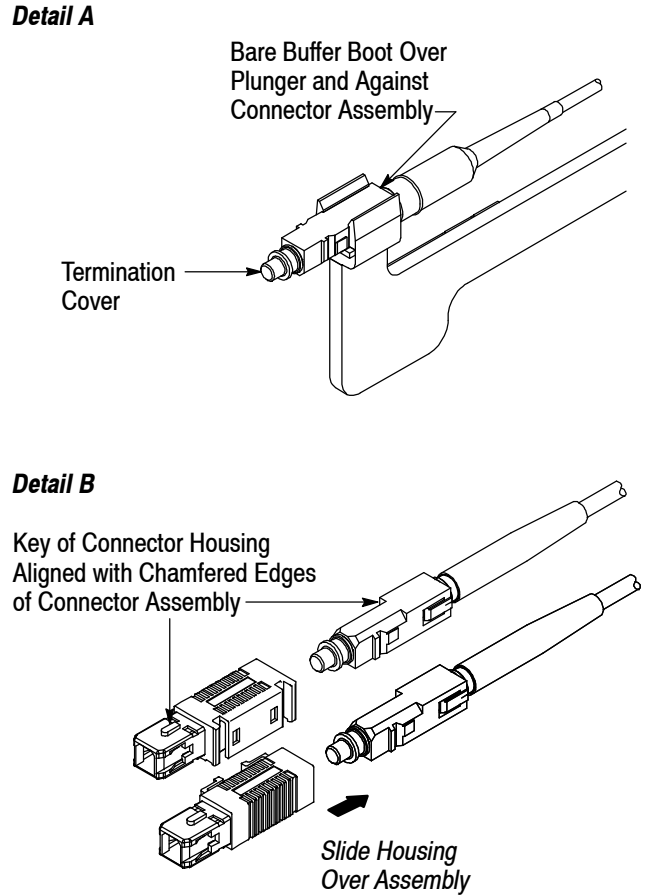


Slide Carriage Forward

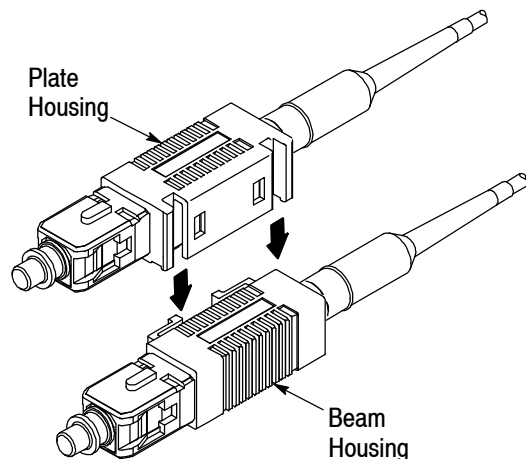
**Figure 4: Crimping**



**Figure 5: Crimping**

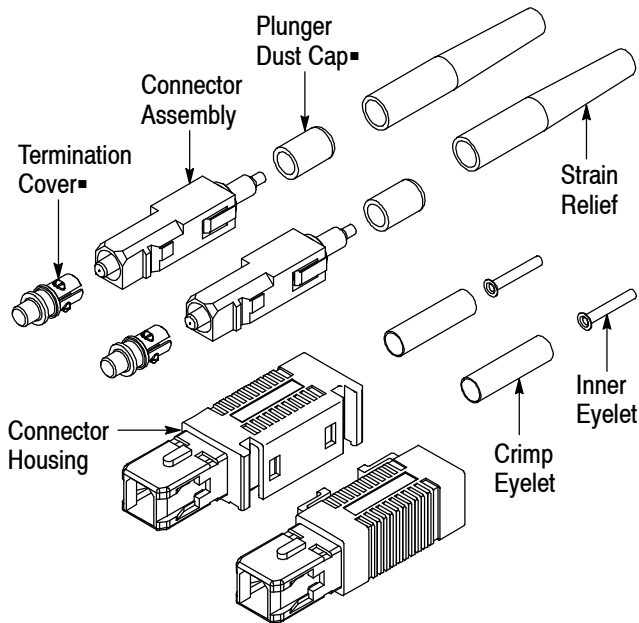


**Figure 6: Joining the Connectors**



### 5.3. 2.5- to 3.0- mm Loose Jacketed Cable

#### Kit Components Required (Discard Other Components)



- Connector kit is shipped with these installed onto connector assemblies. Keep them in place until ready for assembly.

#### NOTE



Assemble each set of components according to the following procedure.

#### A. Preparing 2.5- to 3.0- mm Loose Jacketed Cable

(Figures 7 and 8)

1. Slide the strain relief (small diameter end first) over the cable. See Figure 7, Detail A.
2. Remove the termination cover from the connector assembly, and retain. Remove the plunger dust cap from the connector assembly, and discard.
3. Push the connector assembly into the holder of the cable holder assembly with the termination cover facing outward. See Figure 7, Detail B. Make sure that the connector is sitting flat against the arm of the cable holder assembly. Slide the cable into the channel marked "CABLE". Make sure that the tip of the jacket butts against the end of the channel.
4. Mark the cable at the right-most cross-slot of the channel. See Figure 7, Detail B. Then, remove the cable from the cable holder assembly.
5. Using the strip tool, cut through the jacket at the mark. See Figure 7, Detail C.

6. Remove the jacket segment, gather the strength members in a bundle, and fold them back along the jacket. See Figure 7, Detail D.

7. Slide the crimp eyelet onto the buffer and onto the strength members to hold them in place. Slide the inner eyelet, non-flanged end first, onto the buffer. Push the inner eyelet under the strength members until the face is flush with the front of the crimp eyelet. See Figure 8, Detail B.

8. Slide the buffer into the channel marked "BUFFER" on the cable holder assembly. Make sure that the tip of the buffer butts against the end of the channel. See Figure 8, Detail C.

9. Mark the buffer at each cross-slot of the channel and at the right end of the channel (total of three marks). See Figure 8, Detail C. Then, remove the buffer from the cable holder assembly.

10. Using the strip tool, strip the buffer to the first mark. It is recommended holding the strip tool at an angle to the buffer and stripping the buffer in three sections. See Figure 8, Detail D. Clean the fiber with an alcohol fiber wipe to remove fiber coating residue.

#### CAUTION



Before using the strip tool, make sure that the "V" opening is clean; otherwise the fiber could break. Only use isopropyl alcohol on the tool.

#### B. Cleaving (Figure 9)

1. Open the fiber clamp of the fiber optic cleaver. Press the button, and slide the carriage back (toward the fiber clamp). Then move the fiber slide back until it stops.
2. Place the stripped fiber into the slot so that the end of the buffer is at the 8-mm marking. See Figure 9, Detail A.
3. While applying pressure on the buffer, carefully slide the fiber slide forward (toward the carriage) until it stops. See Figure 9, Detail B.
4. Gently close the fiber clamp, and slide the carriage forward. DO NOT touch the button while sliding the carriage. See Figure 9, Detail C.
5. Open the fiber clamp, and move the fiber slide back until it stops.
6. Remove the cleaved fiber, and properly dispose of the scrap fiber.

#### CAUTION



DO NOT attempt to clean the fiber after it has been cleaved.



**C. Crimping** (Figures 10, 11, and 12)

Only use Die Set 492783-1 to terminate loose jacketed cable.

1. Open the cable clamp of the cable holder assembly, and position the buffer (with the cleaved end facing the connector) inside the clamp. Move the buffer so that the end of the fiber is even with the front of the arm of the cable holder assembly, and holding the buffer in place, close the clamp. See Figure 10, Detail A.

2. Carefully insert the fiber into the plunger of the connector assembly until the fiber bottoms against the internal fiber. See Figure 10, Detail B. Make sure that the remaining mark on the buffer enters the plunger. The resultant bend in the buffer should hold the fiber against the internal fiber. Only a slight bend is necessary.

**NOTE**

*It is important that the fiber bottoms against, and remains against, the internal fiber. If the mark does not enter the plunger or if the fiber does not seem to bottom against the internal fiber, the fiber may be caught on internal guides. Rotating the connector and backing the fiber out a small amount and re-entering may help. However, if the mark will not enter the plunger, the fiber must be re-stripped.*

*Make sure that the fiber does not pull rearward from the contact (with the internal fiber) during the crimping operation.*

3. Squeeze the handles of the hand tool until the ratchet releases. Allow the handles to open fully. Gently close the handles until you hear two clicks from the ratchet.

4. With the connector assembly in the cable holder assembly, position the termination cover in the upper cavity of the front die and the plunger in the upper cavity of the rear die. See Figure 10, Detail C.

**CAUTION**

*The arrows marked on the front die indicate the direction that the termination cover must be pointing when the connector is positioned in that cavity. For proper placement, and to avoid damage to the fiber, the direction of the arrows must be observed. Refer to Figure 10, Detail C (also shown in Figure 11, Detail B).*

5. Gently push the buffer toward the connector assembly to make sure that the fiber is still bottomed, then slowly squeeze the tool handles together until the ratchet releases. Allow the handles to open fully, and remove the connector from the dies.

6. Open the cable clamp of the cable holder, and straighten the cable. Close the cable clamp so that the cable is aligned with, and tracks straight back from, the plunger and through the cable clamp.

See Figure 11, Detail A. Make sure that the inner eyelet is still aligned with the right-most mark on the buffer. If necessary, adjust the position of the jacket.

**CAUTION**

*Make sure that a space of 3 to 5 mm exists between the face of the inner eyelet (shown in Figure 8, Detail B) and the plunger (rear of connector assembly). Refer to Figure 11, Detail A.*

*Failure to ensure that this space exists may result in improper connector performance when mated to a connector.*

7. Position the plunger of the connector assembly in the first (smallest) cavity of the front die with the knurl against the edge of the groove in the die and the termination cover pointing in the direction of the arrow. See Figure 11, Detail B.

8. Slowly squeeze the tool handles together until the ratchet releases. Allow the handles to open fully, and remove the connector assembly from the die.

9. Slide the crimp eyelet away from the connector assembly until the strength members are free, then slide the crimp eyelet toward the connector until the strength members and crimp eyelet butt against the connector. See Figure 11, Detail C.

10. Position the crimp eyelet *against* the last cavity of the front die with the termination cover pointing in the direction of the arrow. Make sure that the connector assembly is butted against the die. The crimp eyelet will move into the cavity when the dies are closed. See Figure 12, Detail A. Slowly squeeze the tool handles together until the ratchet releases. Allow the handles to open fully. Remove the connector assembly from the die.

11. Cut the strength members flush with the crimp sleeve. Slide the strain relief over the plunger until the strain relief butts against the connector assembly. See Figure 12, Detail B.

12. Remove the connector assembly from the cable holder assembly.

13. Align the key of the connector housing with the chamfered edges of the connector assembly, and slide the housing over the assembly until it snaps in place. See Figure 12, Detail C.

**NOTE**

*DO NOT force the components together. They are designed to fit only one way.*

**D. Joining the Connectors** (Figure 13)

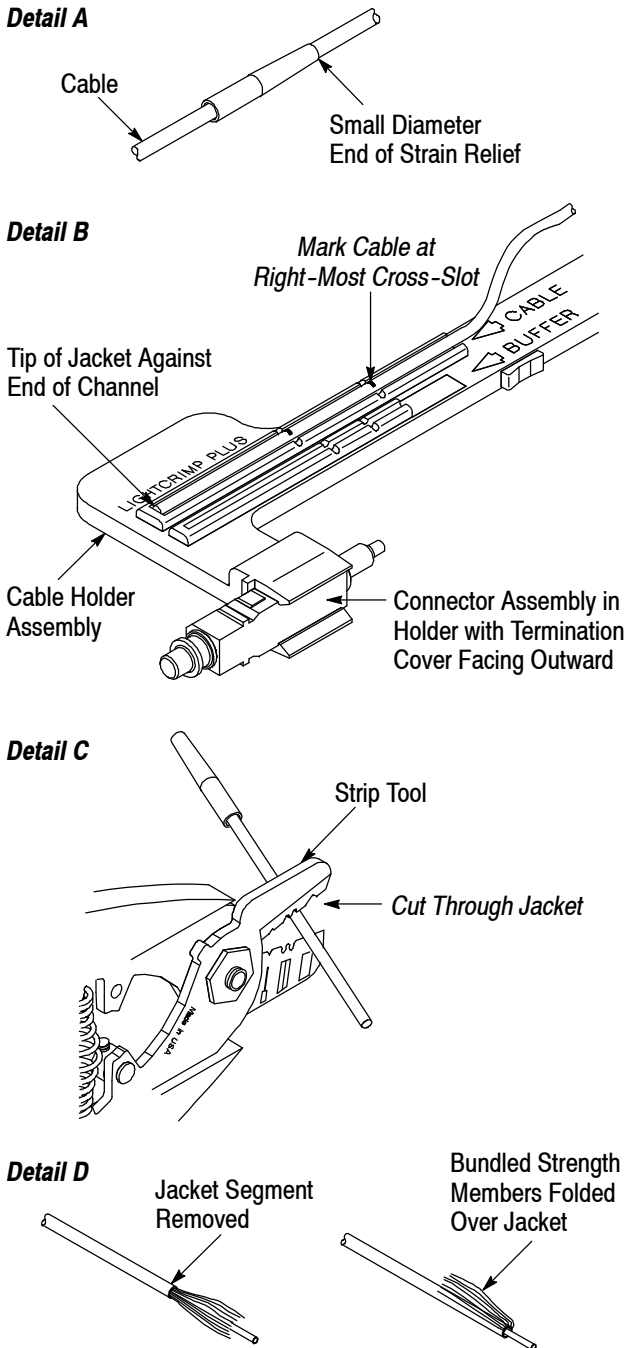
The connector housings (“plate” housing and “beam” housing) have latching features to join the two housings together. Slide the plate housing over the beam housing so that the slots engage the latches.

Make sure that the housings are parallel with each other. Then, install the termination covers.

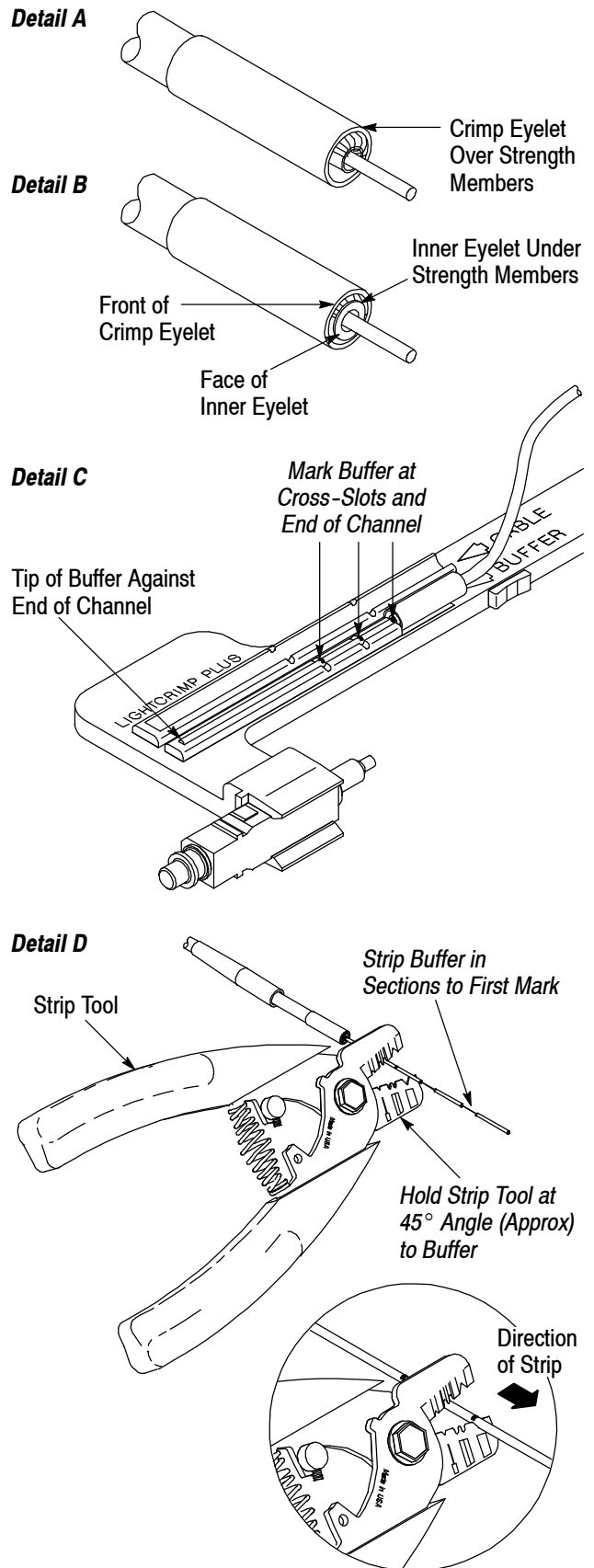
The assembly procedure for 2.5- to 3.0-mm loose jacketed cable is now complete.

► If connecting connectors, refer to Paragraph 5.5.

**Figure 7: Preparing the Cable**

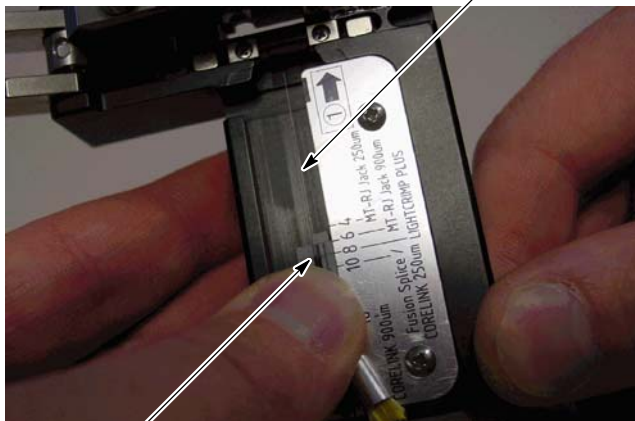


**Figure 8: Preparing the Cable**



**Figure 9: Crimping**

**Detail A**



Stripped Fiber in Slot

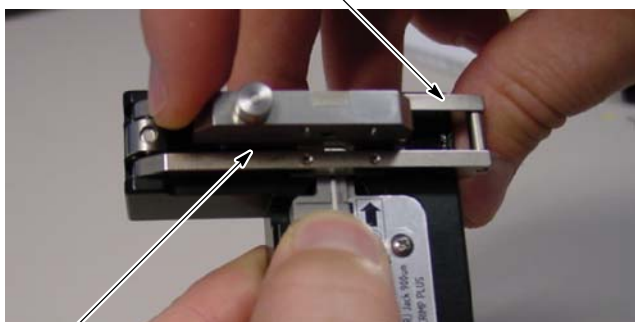
End of Buffer at 8-mm Marking

**Detail B**



Slide Fiber Slide Forward

**Detail C**

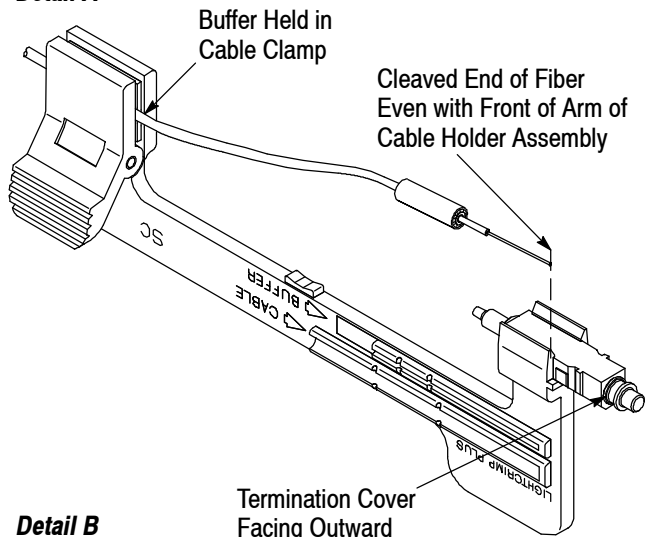


Fiber Clamp Closed

Slide Carriage Forward

**Figure 10: Crimping**

**Detail A**

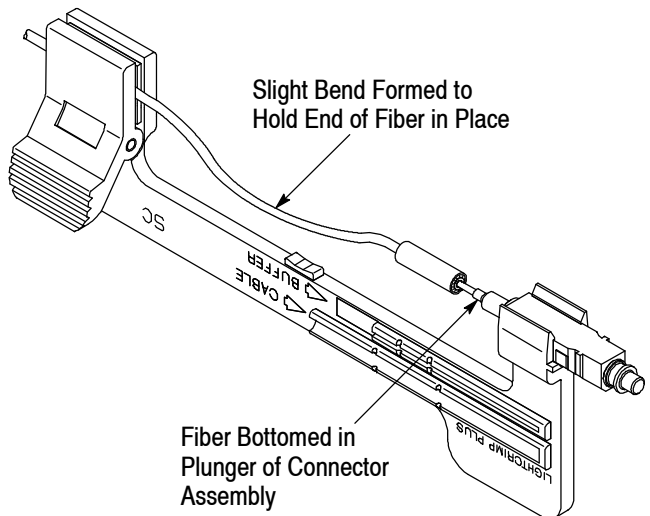


Buffer Held in Cable Clamp

Cleaved End of Fiber Even with Front of Arm of Cable Holder Assembly

Termination Cover Facing Outward

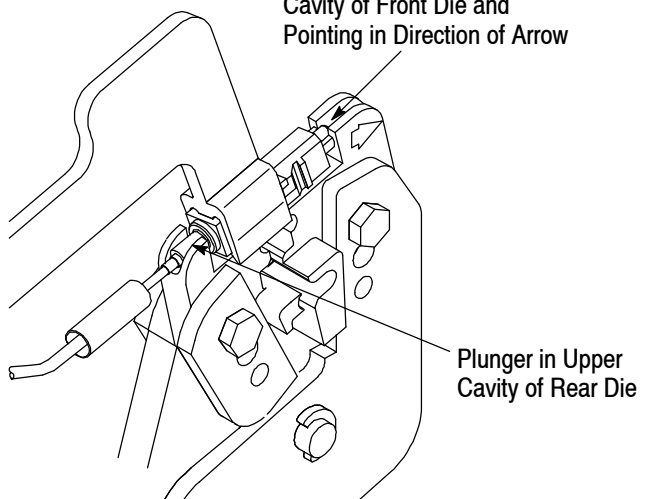
**Detail B**



Slight Bend Formed to Hold End of Fiber in Place

Fiber Bottomed in Plunger of Connector Assembly

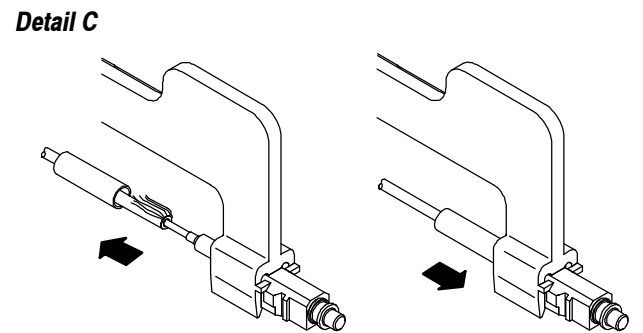
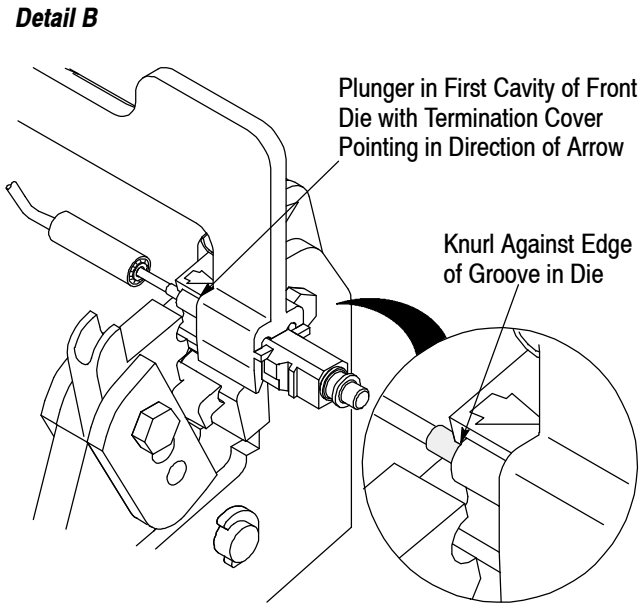
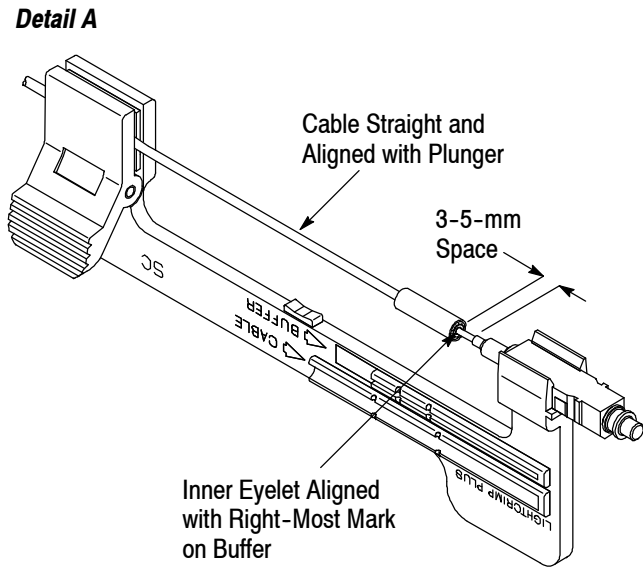
**Detail C**



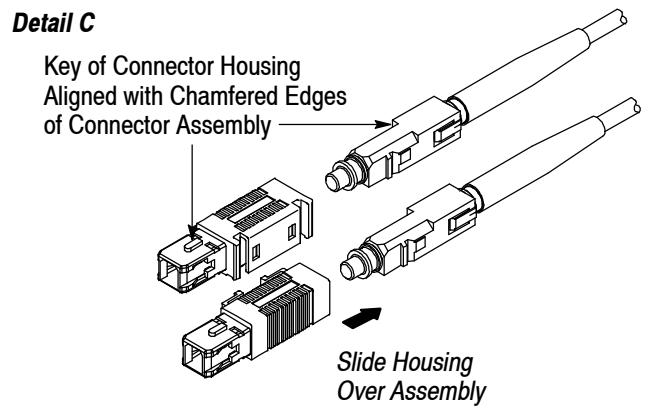
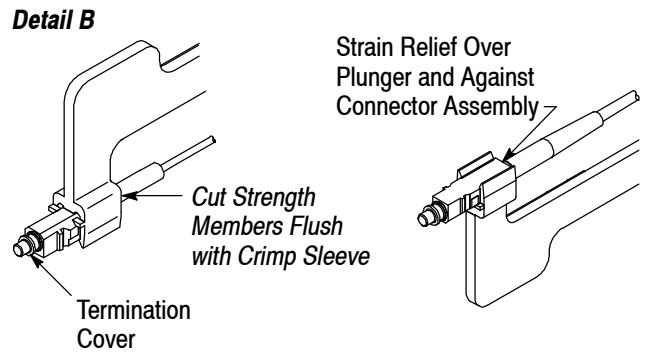
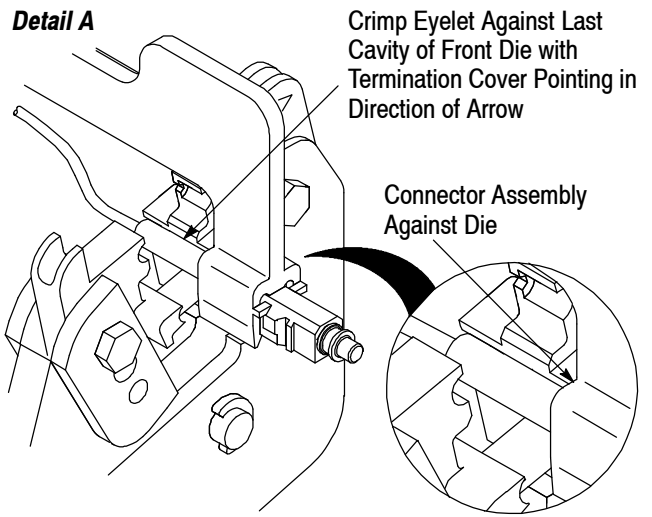
Termination Cover in Upper Cavity of Front Die and Pointing in Direction of Arrow

Plunger in Upper Cavity of Rear Die

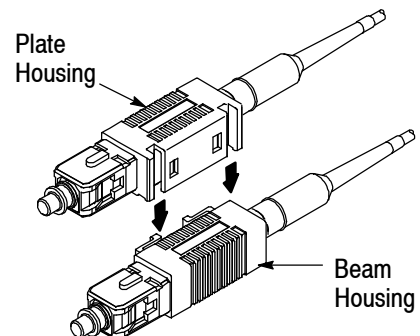
**Figure 11: Crimping**



**Figure 12: Crimping**

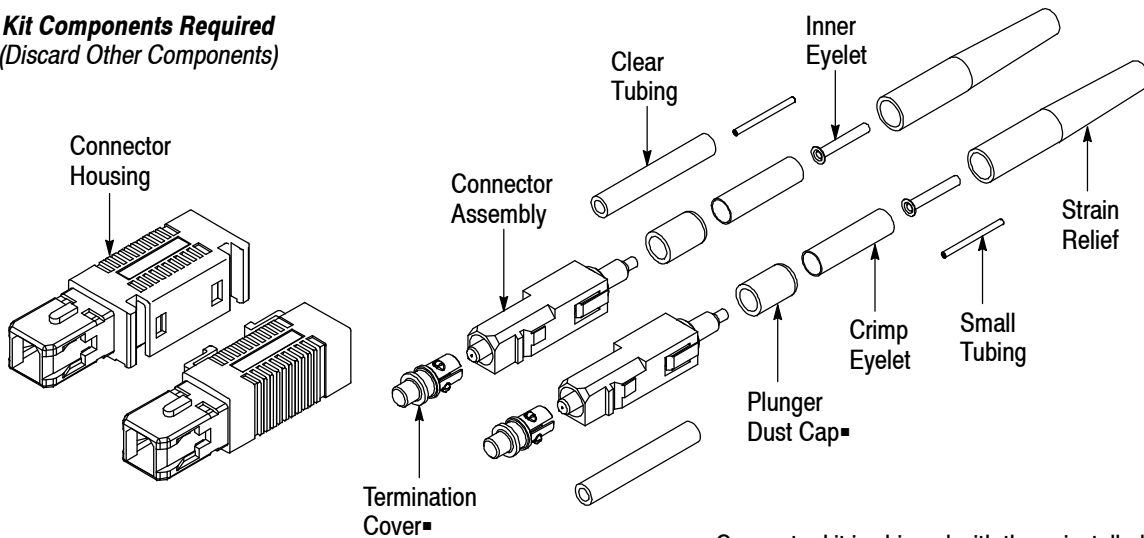


**Figure 13: Joining the Connectors**



## 5.4. 900- $\mu$ m Easy Strip or Semi-Tight Buffered Fiber

### Kit Components Required (Discard Other Components)



▪ Connector kit is shipped with these installed onto connector assemblies. Keep them in place until ready for assembly.

#### NOTE



Assemble each set of components according to the following procedure.

### A. Preparing 900- $\mu$ m Easy Strip or Semi-Tight Buffered Fiber (Figure 14)

1. Mark a circumferential line (approximately 90° around) 4 mm from one end of the clear tubing. See Figure 14, Detail A.
2. Place the inner eyelet, small diameter end first, inside the clear tubing with the flange of the inner eyelet against the end of the clear tubing. See Figure 14, Detail A.
3. Slide the strain relief (small diameter end first), clear tubing (with the inner eyelet inside), and crimp eyelet onto the fiber. See Figure 14, Detail B.
4. Remove the termination cover from the connector assembly, and retain. Remove the plunger dust cap from the connector assembly, and discard.
5. Insert the small (white) tubing into the plunger of the connector assembly until the tubing bottoms. See Figure 14, Detail C.
6. Push the connector assembly into the holder of the cable holder assembly with the termination cover facing outward. See Figure 14, Detail D. Make sure that the connector butts against the lip of the arm of the cable holder. Slide the fiber into the channel marked "BUFFER. Make sure that the tip of the fiber butts against the end of the channel.

7. Mark the fiber at each cross-slot of the channel. See Figure 14, Detail D. Also, mark the buffer at the end of the channel. Then, remove the fiber from the channel.

8. Using the strip tool, strip the 250- $\mu$ m fiber coating and buffer to the first mark. It is recommended holding the strip tool at an angle to the fiber and stripping the fiber coating in three sections. Refer to Figure 14, Detail E. Clean the fiber with an alcohol fiber wipe to remove the coating residue.

9. Using the strip tool, apply slightly less pressure than when stripping 125- $\mu$ m fiber, and strip the buffer only (leave the 250- $\mu$ m fiber coating in place) to the second mark. Practice this first.

10. Mark the 250- $\mu$ m fiber coating at the shoulder of the 900- $\mu$ m buffer. Strip the buffer to the third mark.

#### CAUTION



Before using the strip tool, make sure that the "V" opening is clean; otherwise the fiber could break. Only use isopropyl alcohol on the tool.

### B. Cleaving (Figure 15)

1. Open the fiber clamp of the fiber optic cleaver. Press the button, and slide the carriage back (toward the fiber clamp). Then move the fiber slide back until it stops.
2. Place the stripped fiber into the slot so that the end of the buffer is at the 8-mm marking. See Figure 15, Detail A.

3. While applying pressure on the buffer, carefully slide the fiber slide forward (toward the carriage) until it stops. See Figure 15, Detail B.

4. Gently close the fiber clamp, and slide the carriage forward. DO NOT touch the button while sliding the carriage. See Figure 15, Detail C.

5. Open the fiber clamp, and move the fiber slide back until it stops.

6. Remove the cleaved fiber, and properly dispose of the scrap fiber.



**CAUTION** *DO NOT attempt to clean the fiber after it has been cleaved.*

### C. Crimping (Figures 16 and 17)

Only use Die Set 492783-1 to terminate easy strip or semi-tight buffered fiber.

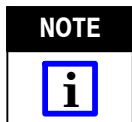
1. Open the cable clamp of the cable holder assembly, and position the fiber (with the cleaved end facing the connector) inside the clamp. Move the fiber so that the end is even with the front of the arm of the cable holder assembly, and holding the fiber in place, close the clamp. See Figure 16, Detail A.

2. Holding the 250- $\mu$ m fiber coating, carefully insert the fiber into the plunger of the connector assembly until the fiber bottoms against the internal fiber. Make sure that the second mark placed on the coating enters the plunger. The resultant bend in the fiber should hold the fiber against the internal fiber. See Figure 16, Detail B.

Also, the fiber coating must enter the small tubing installed in Step 5 of Paragraph 5.5.A. Make sure that the start of the fiber coating is not caught on the entry of the small tubing.



**CAUTION** *When inserting the fiber into the connector, make sure to hold the coating of the fiber so that the fiber feeds into the connector. If the fiber is gripped by the buffer tube, the fiber will slide rearwards into the buffer tube and will **NOT** contact the internal fiber.*



**NOTE** *It is important that the fiber bottoms against, and remains against, the internal fiber. If the mark does not enter the plunger or if the fiber does not seem to bottom against the internal fiber, the fiber may be caught on internal guides. Rotating the connector and backing the fiber out a small amount and re-entering may help. However, if the mark will not enter the plunger, the fiber must be re-stripped.*

#### NOTE



*Make sure that the fiber does not pull rearward from the contact with the internal fiber during the crimping operation.*

3. Squeeze the handles of the hand tool until the ratchet releases. Allow the handles to open fully. Slowly close the handles until you hear two clicks from the ratchet.

4. With the connector assembly in the cable holder assembly, position the termination cover in the upper cavity of the front die and the plunger in the upper cavity of the rear die. See Figure 16, Detail C.



**CAUTION** *The arrows marked on the front die indicate the direction that the termination cover must be pointing when the connector is positioned in that cavity. For proper placement, and to avoid damage to the fiber, the direction of the arrows must be observed. Refer to Figure 16, Details C and D.*

5. Gently push the fiber toward the connector assembly to make sure that the fiber is still bottomed, then slowly squeeze the tool handles together until the ratchet releases. Allow the handles to open fully, and remove the connector from the dies.

6. Position the plunger of the connector assembly in the first (smallest) cavity of the front die with the knurl against the edge of the groove in the die and the termination cover pointing in the direction of the arrow. See Figure 16, Detail D.

7. Slowly squeeze the tool handles together until the ratchet releases. Allow the handles to open fully, and remove the connector assembly from the die.

8. Slide the crimp eyelet up to, and until it butts against, the rear of the connector assembly.

9. Slide the clear tubing with inner eyelet into the crimp eyelet until the circumferential line is aligned with the end of the crimp eyelet. See Figure 17, Detail A.

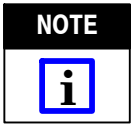
10. While maintaining the position of the clear tubing relative to the crimp eyelet, position the crimp eyelet against the last cavity of the front die with the termination cover pointing in the direction of the arrow. Make sure the connector assembly is against the die and the circumferential line on the clear tubing is aligned with the opposite end of the crimp eyelet. The crimp eyelet will move into the cavity when the dies are closed. See Figure 17, Detail B.

11. Slowly squeeze the tool handles together until the ratchet releases. Allow the handles to open fully.

12. Open the cable clamp of the cable holder assembly, and remove the buffer from the clamp. Slide the strain relief over the crimp eyelet until it butts against the connector assembly. See Figure 17, Detail C.

13. Remove the connector assembly from the cable holder assembly.

14. Align the key of the connector housing with the chamfered edges of the connector assembly, and slide the housing over the assembly until it snaps in place. See Figure 17, Detail D.



**NOTE** DO NOT force the components together. They are designed to fit only one way.

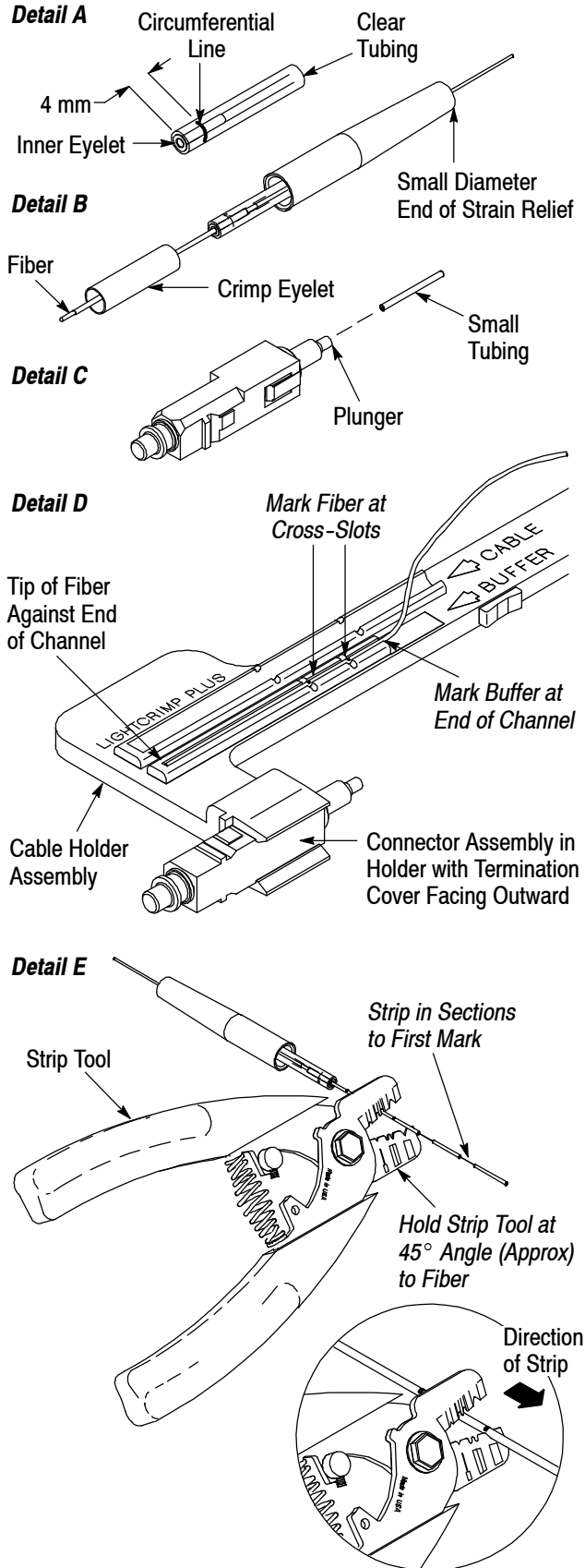
**D. Joining the Connectors** (Figure 18)

The connector housings (“plate” housing and “beam” housing) have latching features to join the two housings together. Slide the plate housing over the beam housing so that the slots engage the latches. Make sure that the housings are parallel with each other. Then, install the termination covers.

The assembly procedure for 900- $\mu$ m easy strip or semi-tight buffered fiber is now complete.

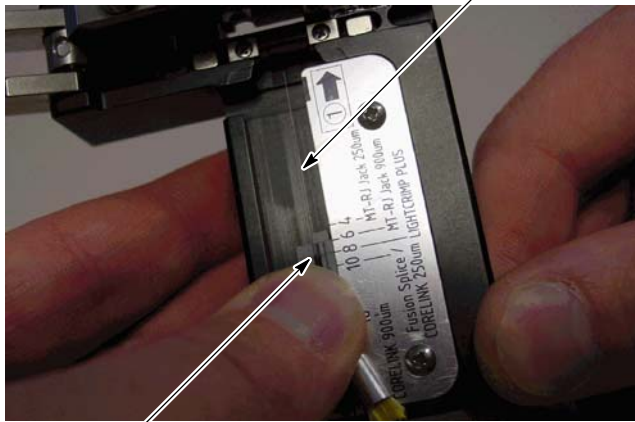
►If connecting connectors, refer to Paragraph 5.5.

**Figure 14: Preparing the Fiber**



**Figure 15: Cleaving**

**Detail A**



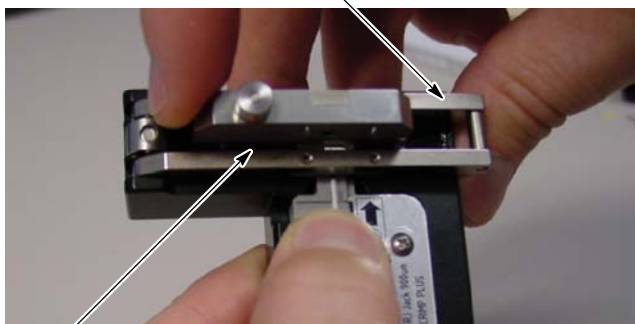
End of Buffer at 8-mm Marking

**Detail B**



Slide Fiber Slide Forward

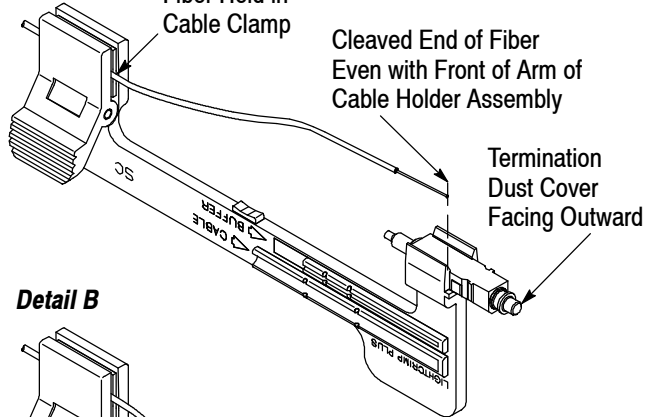
**Detail C**



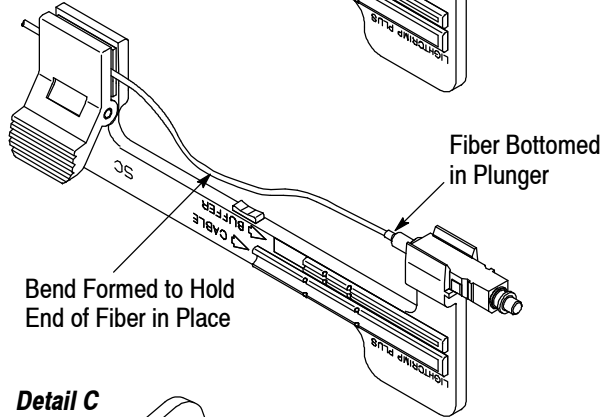
Slide Carriage Forward

**Figure 16: Crimping**

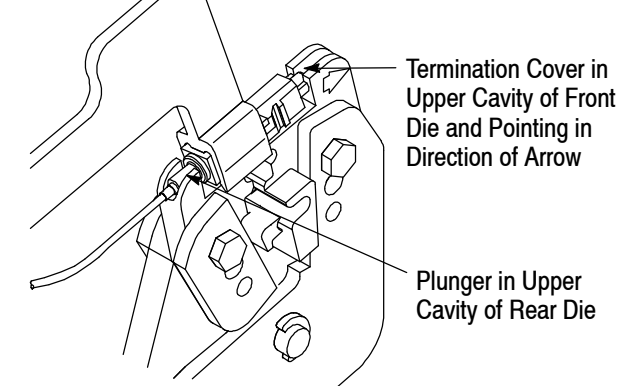
**Detail A**



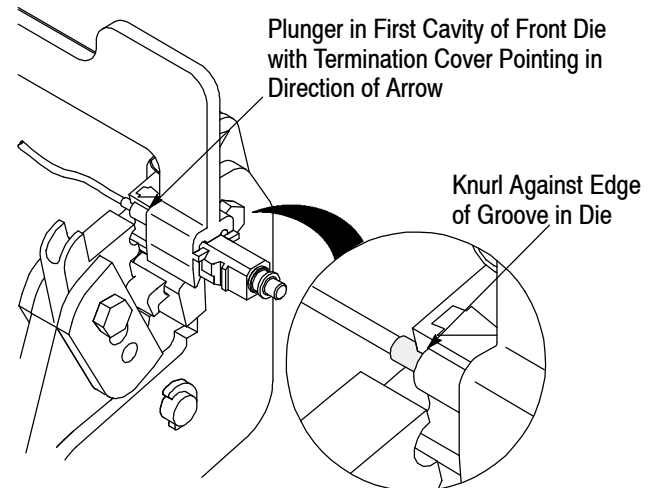
**Detail B**



**Detail C**



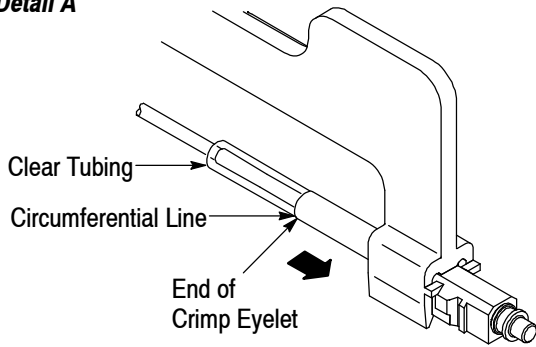
**Detail D**



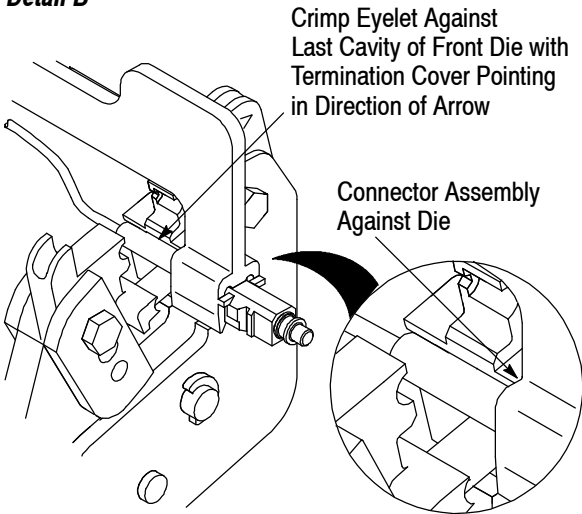


**Figure 17: Crimping**

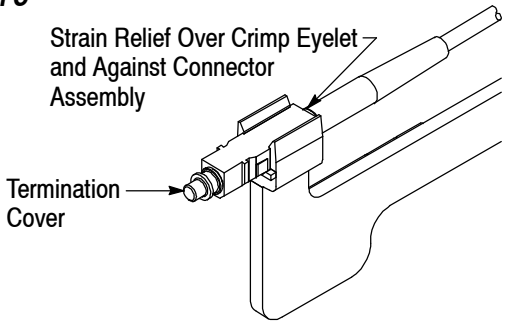
**Detail A**



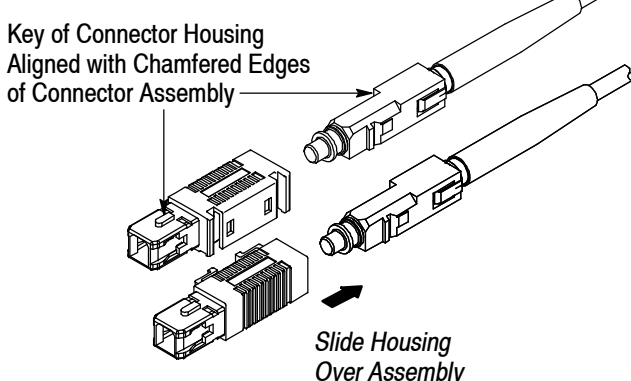
**Detail B**



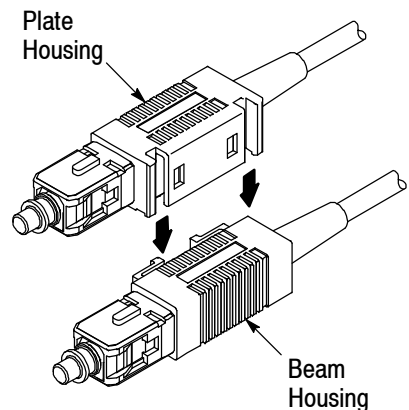
**Detail C**



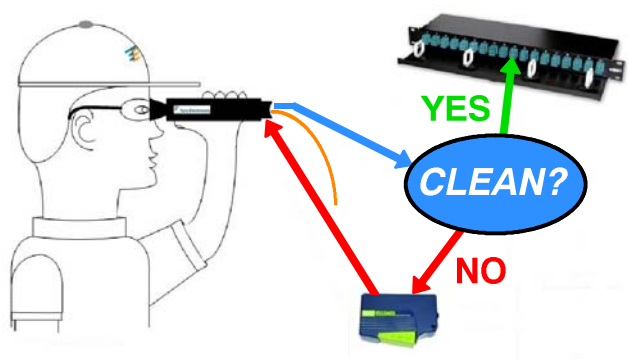
**Detail D**



**Figure 18: Joining the Connectors**



**STOP!**  
Don't Connect Unless You Inspect!



**DANGER: Never View Active Fiber Signals**

**5.5. Inspection**

Remove the termination cover (if installed), and inspect the ferrule end face for cleanliness using 200x Microscope Kit 1754767-1 (includes 2.5-mm adapter cap).

**6. REVISION SUMMARY**

- Revisions to this instruction sheet include:
- Added box-note to Figure 1