

▪ Connectors are shipped with dust caps installed onto connector. Keep dust caps in place until ready for assembly.

Figure 1

1. INTRODUCTION

AMP LightCrimp Plus SC Simplex Connector Kits 492643-[] (62.5/125 μm), 1278079-[] (50/125 μm), and 1588291-[] (50/125 μm) are designed for use with 125- μm multimode glass fiber optic cable only and are installed onto the following:

- 5.1. 900- μm Bare Buffered Fiber
- 5.2. 250- μm Coated Fiber
- 5.3. 2.5- to 3.0-mm Jacketed Cable
- 5.4. 900- μm Buffered Break-Out Kit
- 5.5. 900- μm Easy Strip or Semi-Tight Buffered Fiber

Refer to the referenced paragraphs for specific termination procedures.

Read these instructions thoroughly before assembling the connector kits.

NOTE

Dimensions on this document are in metric units.

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

2. DESCRIPTION

Each connector kit consists of a connector housing, connector assembly, strain relief, inner eyelet, crimp eyelet, and clear tubing. Each kit is also supplied with a bare buffer boot and small tubing to compensate for

small diameter cable. Also included, assembled onto the connector, are dust caps for the ferrule (front of connector) and plunger (rear of connector). See Figure 1.

3. SAFETY PRECAUTIONS

DANGER

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

Damaged components must not be used. They must be replaced with new components.

4. REQUIRED TOOLS AND MATERIALS FOR ASSEMBLY PROCEDURE

- Combination Fiber Stripper 1278947-1
- Scissors 501014-1
- Cable Holder Assembly 1278023-1
- Cleave Tool 492674-1
- PRO-CRIMPER* Hand Tool Assembly 492782-1
- Alcohol Fiber Wipe Packet 501857-2

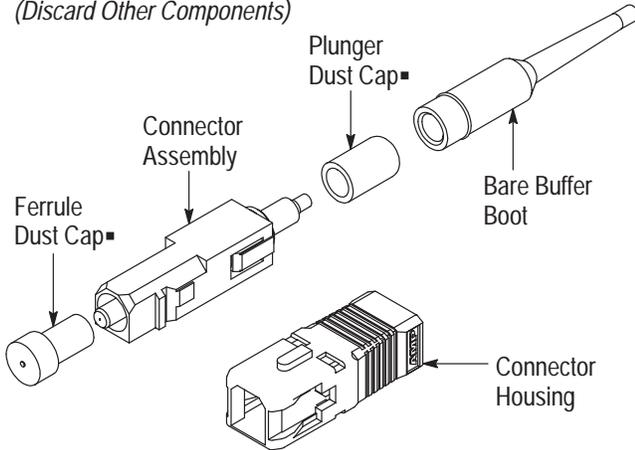
NOTE

The above items are included in LightCrimp Plus Termination Kit 1278022-1 or LightCrimp Plus Termination Kit 1278118-1.

5. TERMINATION PROCEDURES

5.1. 900- μ m Bare Buffered Fiber

*Kit Components Required
(Discard Other Components)*



- Connectors are shipped with dust caps installed onto connector. Keep dust caps in place until ready for assembly.

A. Preparing 900- μ m Bare Buffered Fiber (Figure 2)

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

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

B. Cleaving (Figure 3)

NOTE *To avoid damage to the fiber, make sure that the cleave tool blade, and the area around the blade, are clean; only use alcohol on the tool.*

Be sure that the cleave blade floats up and down in its housing with very light force. Lubricate with alcohol as required.

1. Push the lever on the cleave tool to open the clamp, and lay the fiber in the groove on the tongue with the buffer started at the 8-mm scale marking (± 0.5 mm). See Figure 3, Detail A.
2. Holding the fiber in place, release the lever so that the fiber is secure. Make sure that the tool tongue stays flat, and *gently* depress the tool arm to scribe the fiber. Release the arm. See Figure 3, Detail B.

CAUTION *To avoid damage to the fiber, do not use excessive pressure when depressing the arm. The edge of the blade should only touch the fiber.*

3. Keeping the fiber in position, slowly bend, but do not twist, the tongue to cleave the fiber. See Figure 3, Detail C. Do not touch, or otherwise contaminate, the cleaved fiber end. Do not clean the cleaved fiber end.

CAUTION *To avoid damage to the tool tongue, do not bend the tongue beyond a 45° angle.*

NOTE *Cleave blade life is 1000 cleaves. Replacement blade part number is 1278219-1.*

C. Crimping (Figures 4 and 5)

1. Open the cable clamp on the cable holder, and hold the buffer (cleaved end of fiber facing connector) inside the clamp. Pull the end of the fiber even with the front of the arm on the cable holder, and holding the buffer in place, close the clamp. See Figure 4, Detail A.
2. Carefully insert fiber into the connector plunger until the fiber bottoms against the internal fiber. Make sure that the remaining mark on the buffer enters the plunger (if mark does not enter plunger, fiber must be re-stripped). The resultant bend in the buffer should hold the fiber against the internal fiber. See Figure 4, Detail B.

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 connector and backing out fiber a small amount and re-entering may help.*

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

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

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

CAUTION

The arrows marked on the front die indicate the direction that the ferrule 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, Detail C and Figure 5, Detail A.

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

6. Position the connector plunger in the first (smallest) cavity in the front die with the shoulder of the plunger against the edge of the groove in the die and the ferrule pointed in the direction of the arrow. See Figure 5, Detail A.

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

8. Install dust cap onto ferrule, and slide bare buffer boot over the plunger until the boot butts against the connector. See Figure 5, Detail B.

9. Remove connector assembly from cable holder.

10. Align the key on the connector housing with the chamfered edges on the connector assembly. Slide the housing over the assembly until it snaps in place. See Figure 5, Detail C.

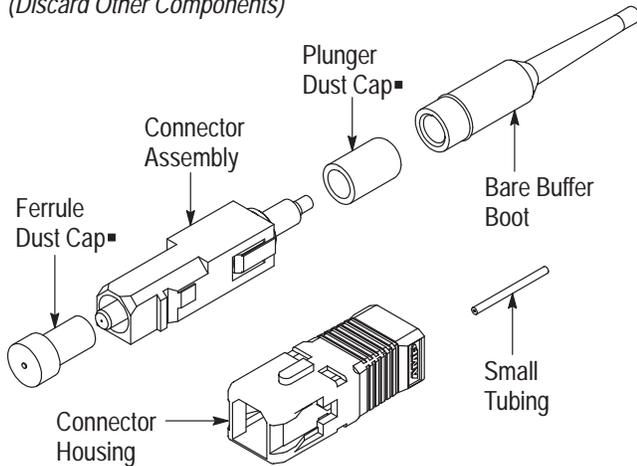
NOTE

Do not force the components together. They are designed to fit only one way.

The assembly procedure for 900- μ m bare buffered fiber is now complete.

5.2. **250- μ m Coated Fiber**

*Kit Components Required
(Discard Other Components)*



- Connectors are shipped with dust caps installed onto connector. Keep dust caps in place until ready for assembly.

A. Preparing 250- μ m Coated Fiber (Figure 2)

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

CAUTION

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

B. Cleaving (Figure 3)

NOTE

To avoid damage to the fiber, make sure that the cleave tool blade, and the area around the blade, are clean; only use alcohol on the tool.

Be sure that the cleave blade floats up and down in its housing with very light force. Lubricate with alcohol as required.

1. Push the lever on the cleave tool to open the clamp, and lay the fiber in the groove on the tongue with the coating started at the 8-mm scale marking (± 0.5 mm). See Figure 3, Detail A.
2. Holding the fiber in place, release the lever so that the fiber is secure. Make sure that the tool tongue stays flat, and *gently* depress the tool arm to scribe the fiber. Release the arm. See Figure 3, Detail B.

CAUTION

To avoid damage to the fiber, do not use excessive pressure when depressing the arm. The edge of the blade should only touch the fiber.

3. Keeping the fiber in position, slowly bend, but do not twist, the tongue to cleave the fiber. See Figure 3, Detail C. Do not touch, or otherwise contaminate, the cleaved fiber end. Do not clean the cleaved fiber end.

CAUTION

To avoid damage to the tool tongue, do not bend the tongue beyond a 45° angle.

NOTE

Cleave blade life is 1000 cleaves. Replacement blade part number is 1278219-1.

C. Crimping (Figures 4 and 5)

1. Open the cable clamp on the cable holder, and hold the fiber (cleaved end facing connector) inside the clamp. Pull the end of the fiber even with the front of the arm on the cable holder, and holding the fiber in place, close the clamp. See Figure 4, Detail A.
2. Carefully insert fiber into the connector plunger until the fiber bottoms against the internal fiber. Make sure that the remaining mark on the fiber enters the plunger (if the mark does not enter the plunger, the fiber must be re-stripped). The resultant bend in the fiber should hold the fiber against the internal fiber. See Figure 4, Detail B.

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 connector and backing out fiber a small amount and re-entering may help. Also, the 250- μ m coating must enter the small tube installed in the back of the connector in Paragraph 5.2.A; Step 3. Be sure that the start of the 250- μ m coating is not caught on the entry to the white tube.

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

3. Squeeze the handles of the crimp tool until the ratchet releases. Allow handles to open fully. Slowly close the tool handles until you hear two clicks from the ratchet.
4. With the connector assembly in the cable holder, position the ferrule in the upper cavity in the front die and the plunger in the upper cavity in the rear die. See Figure 4, Detail C.

CAUTION

The arrows marked on the front die indicate the direction that the ferrule 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, Detail C and Figure 5, Detail A.

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

NOTE

Do not force the components together. They are designed to fit only one way.

The assembly procedure for 250- μ m coated fiber is now complete.

Figure 2: Preparing the Fiber

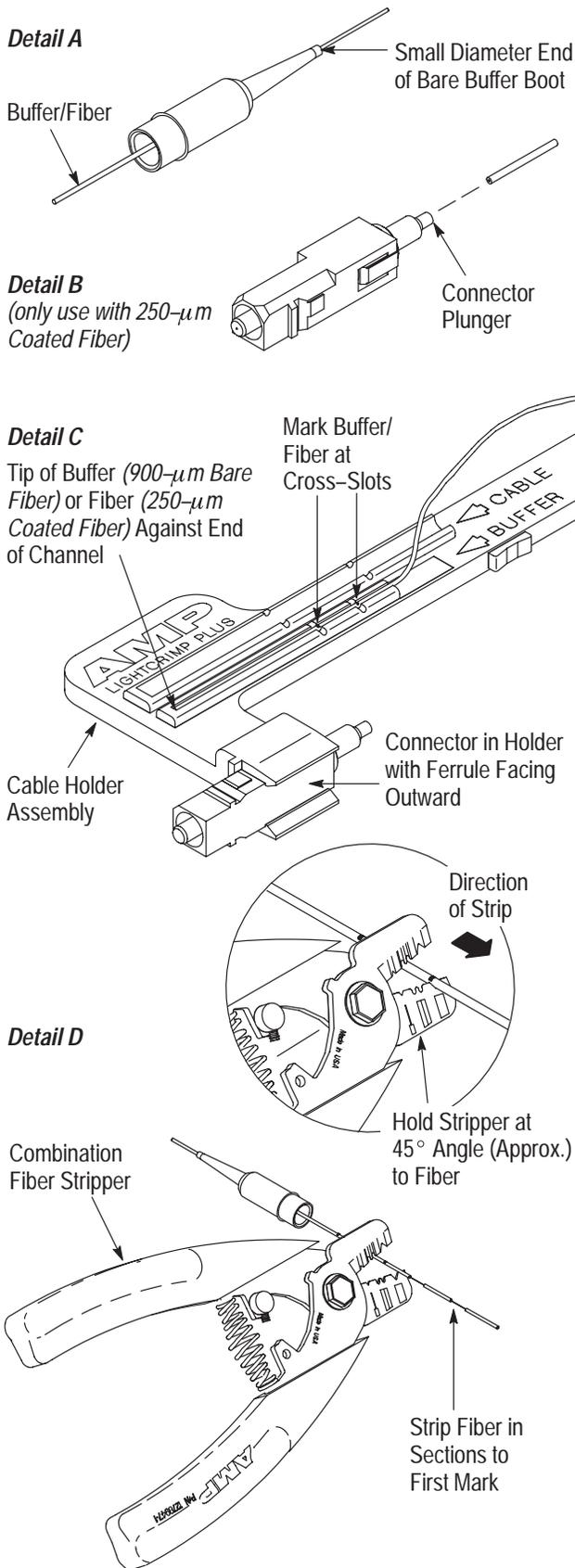


Figure 3: Cleaving

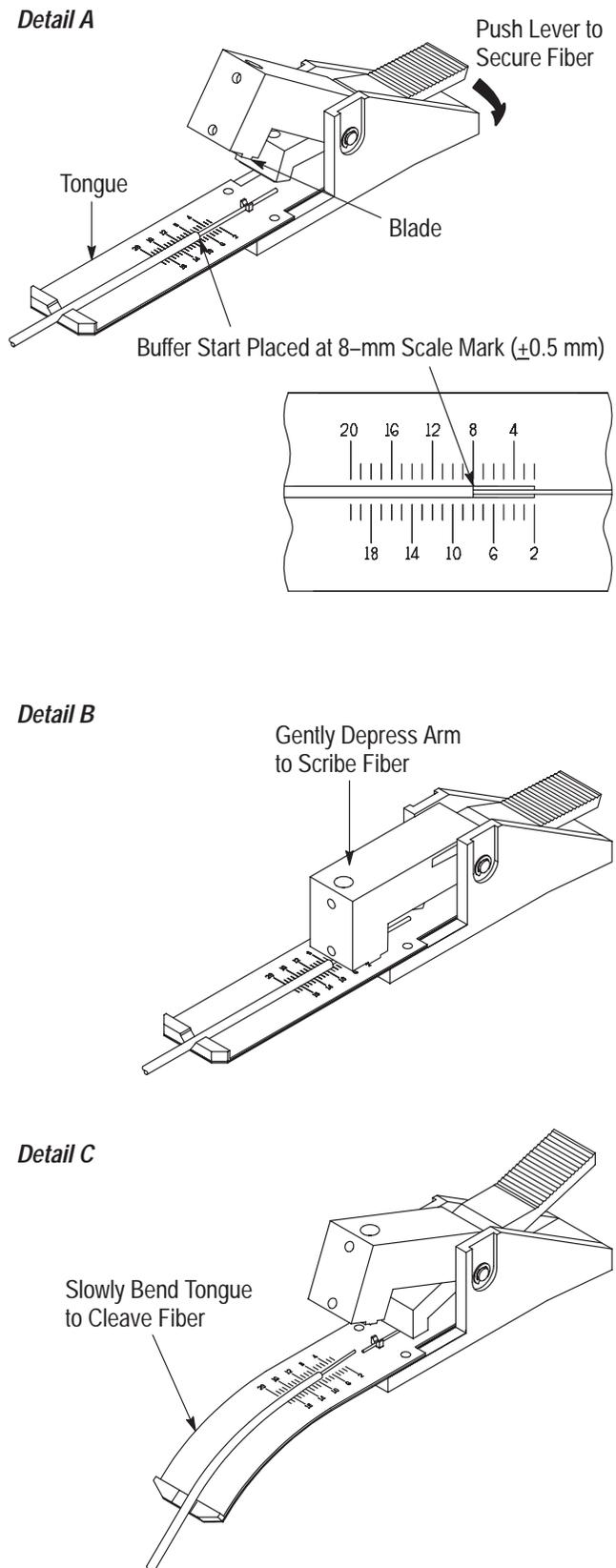


Figure 4: Crimping

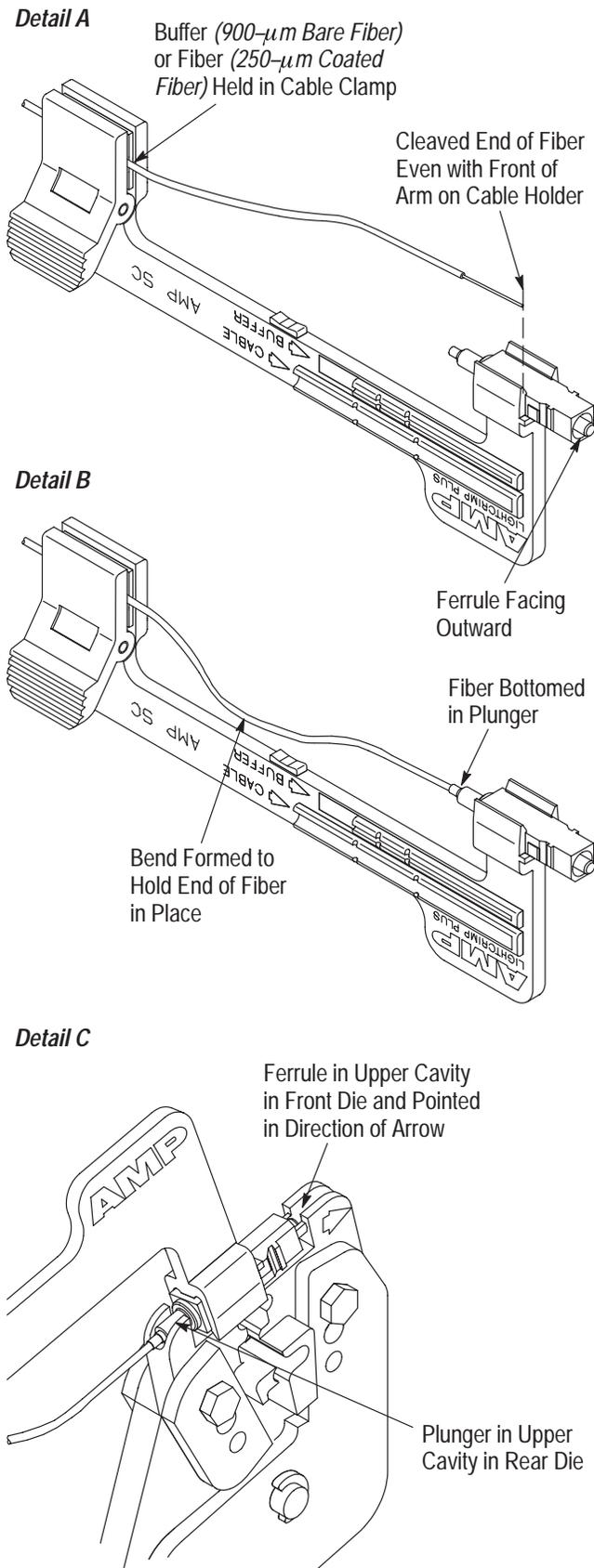
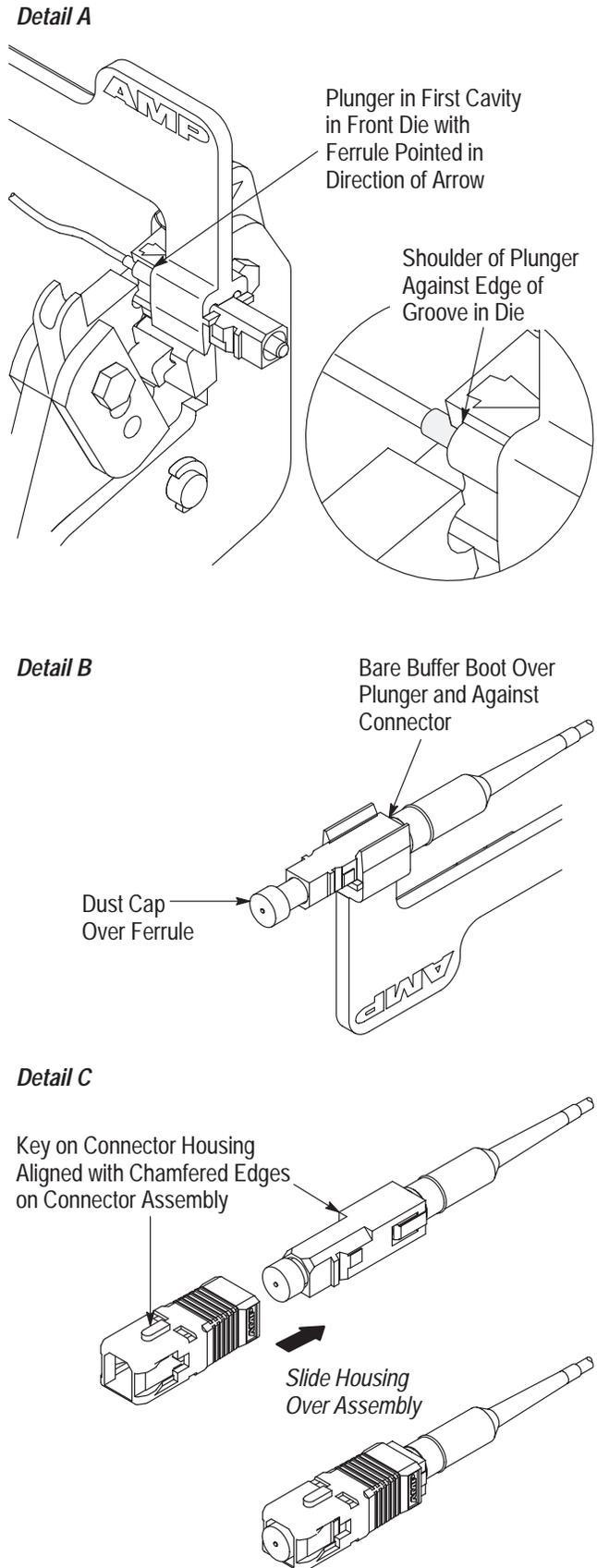
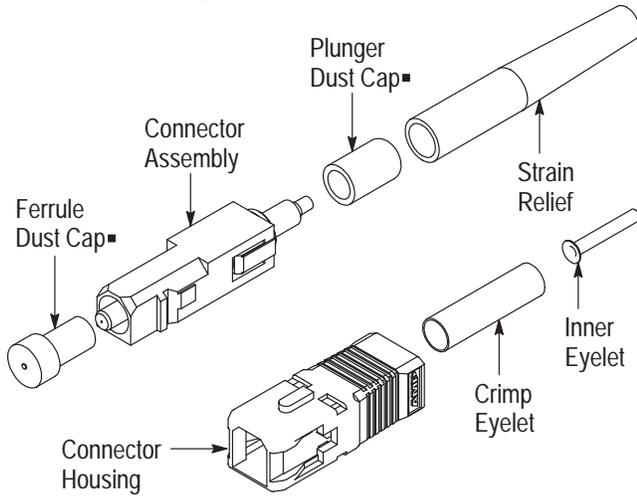


Figure 5: Crimping



5.3. 2.5- to 3.0-mm Jacketed Cable

Kit Components Required
(Discard Other Components)



- Connectors are shipped with dust caps installed onto connector. Keep dust caps in place until ready for assembly.

A. Preparing 2.5- to 3.0-mm Jacketed Cable
(Figures 6 and 7)

1. Slide strain relief (small diameter end first) over cable. See Figure 6, Detail A.
2. Remove both dust caps from the connector assembly. Keep the ferrule dust cap; discard the plunger dust cap.
3. Push the connector into the holder on the cable holder with the ferrule facing outward. Make sure that the connector is sitting flat against the arm of the cable holder. Slide the cable into the channel marked "CABLE" on the cable holder. Make sure that the tip of the jacket butts against the end of the channel. See Figure 6, Detail B.
4. Mark the cable at each cross-slot on the channel. See Figure 6, Detail B. Remove the cable from the cable holder.
5. Using the combination fiber stripper, in the slot closest to the tool tip, cut through the jacket at each mark. See Figure 6, Detail C.
6. Remove the first jacket segment, and flare the strength members away from the buffer. Using the scissors, cut the strength members even with the jacket. Then remove the remaining jacket segment. See Figure 6, Detail D.

7. Slide the crimp eyelet onto the buffer and, using the eyelet, fold the strength members back over the jacket. Continue sliding the eyelet over the jacket until the strength members appear at the front of the eyelet. See Figure 7, Detail A.

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

9. Slide the buffer into the channel marked "BUFFER" on the cable holder. Make sure that the tip of the buffer butts against the end of the channel. See Figure 7, Detail C.

10. Mark the buffer at each cross-slot on the channel. See Figure 7, Detail C. Remove the buffer from the cable holder.

11. Using the combination stripper, strip the buffer to the first mark. It is recommended holding the stripper at an angle to the buffer and stripping the fiber in three sections. See Figure 7, Detail D. Clean the fiber with an alcohol fiber wipe to remove fiber coating residue.

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

B. Cleaving (Figure 8)

NOTE To avoid damage to the fiber, make sure that the cleave tool blade, and the area around the blade, are clean; only use alcohol on the tool.

Be sure that the cleave blade floats up and down in its housing with very light force. Lubricate with alcohol as required.

1. Push the lever on the cleave tool to open the clamp, and lay the fiber in the groove on the tongue with the buffer started at the 8-mm scale marking (± 0.5 mm). See Figure 8, Detail A.

2. Holding the fiber in place, release the lever so that the fiber is secure. Make sure that the tool tongue stays flat, and gently depress the tool arm to scribe the fiber. Release the arm. See Figure 8, Detail B.

CAUTION To avoid damage to the fiber, do not use excessive pressure when depressing the arm. The edge of the blade should only touch the fiber.

3. Keeping the fiber in position, slowly bend, but do not twist, the tongue to cleave the fiber. See Figure 8, Detail C. Do not touch, or otherwise contaminate, the cleaved fiber end. Do not clean the cleaved fiber end.

CAUTION To avoid damage to the tool tongue, do not bend the tongue beyond a 45° angle.

NOTE

Cleave blade life is 1000 cleaves. Replacement blade part number is 1278219-1.

C. Crimping (Figures 9, 10, and 11)

1. Open the cable clamp on the cable holder, and hold the buffer (cleaved end of fiber facing connector) inside the clamp. Pull the end of the fiber even with the front of the arm on the cable holder, and holding the buffer in place, close the clamp. See Figure 9, Detail A.

2. Carefully insert fiber into the connector plunger until the fiber bottoms against the internal fiber. Make sure that the remaining mark on the buffer enters the plunger (if the mark does not enter the plunger, the fiber must be re-stripped). The resultant bend in the buffer should hold the fiber against the internal fiber. See Figure 9, Detail B.

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 connector and backing out fiber a small amount and re-entering may help.

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

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

4. With the connector assembly in the cable holder, position the ferrule in the upper cavity in the front die and the plunger in the upper cavity in the rear die. See Figure 9, Detail C.

CAUTION

The arrows marked on the front die indicate the direction that the ferrule 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 9, Detail C and Figure 10, Detail A.

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

6. Position the connector plunger in the first (smallest) cavity in the front die with the shoulder of the plunger against the edge of the groove in the die and the ferrule pointed in the direction of the arrow. See Figure 10, Detail A.

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

8. Slide the crimp eyelet away from the connector 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 10, Detail B.

CAUTION

Refer to Figure 9, Detail B. Be sure that a minimum space of approximately 3.18 mm [1/8 inch] (nominal 4.76 mm [3/16 inch]) exists between the face of the inner eyelet (see Figure 7, Detail B) and the rear most tip of the connector assembly (plunger).

Failure to assure this space may result in improper connector performance when mated to another connector.

9. Position the crimp eyelet *against* the lower cavity in the front die with the ferrule pointed in the direction of the arrow. Make sure that the connector is butted against the die. The crimp eyelet will move into the cavity when the dies are closed. See Figure 11, Detail A. Slowly squeeze the tool handles together until the ratchet releases. Allow handles to open fully.

10. Install dust cap onto ferrule, and slide the strain relief over the plunger until the strain relief butts against the connector. See Figure 11, Detail B.

11. Remove connector assembly from cable holder.

12. Align the key on the connector housing with the chamfered edges on the connector assembly, and slide the housing over the assembly until it snaps in place. See Figure 11, Detail C.

NOTE

Do not force the components together. They are designed to fit only one way.

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

Figure 6: Preparing the Cable

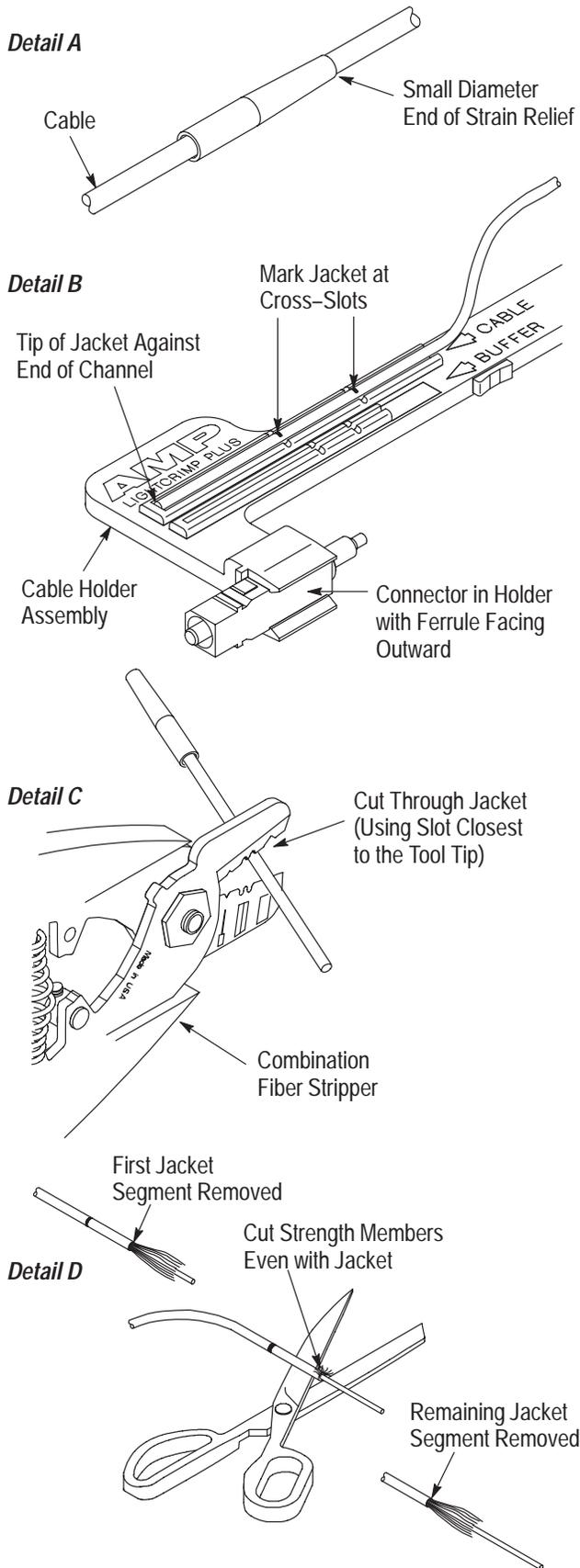


Figure 7: Preparing the Cable

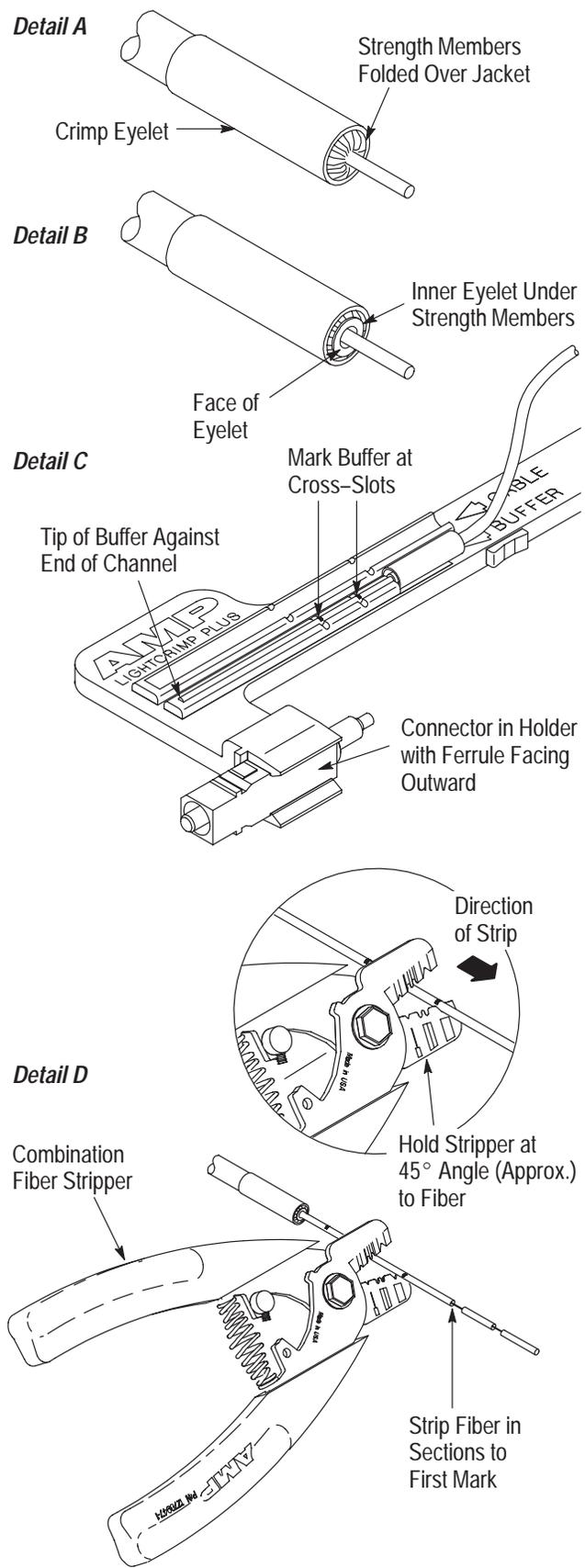


Figure 8: Cleaving

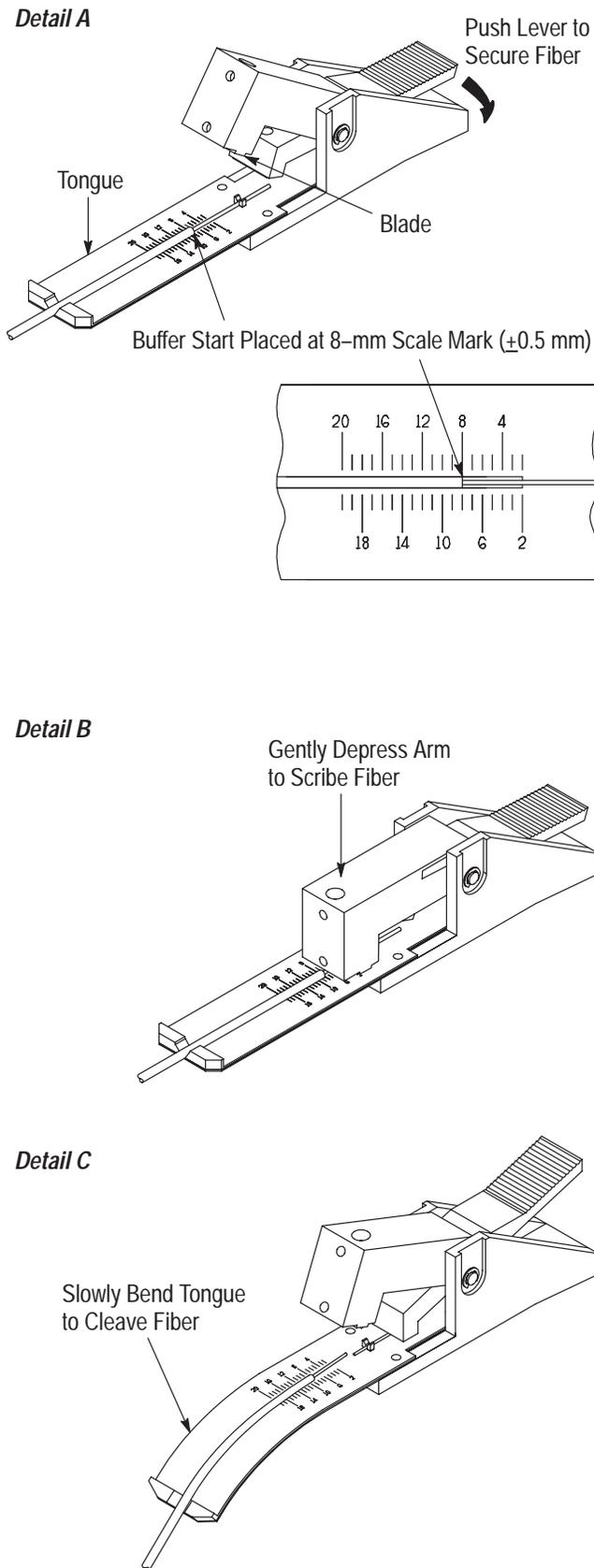


Figure 9: Crimping

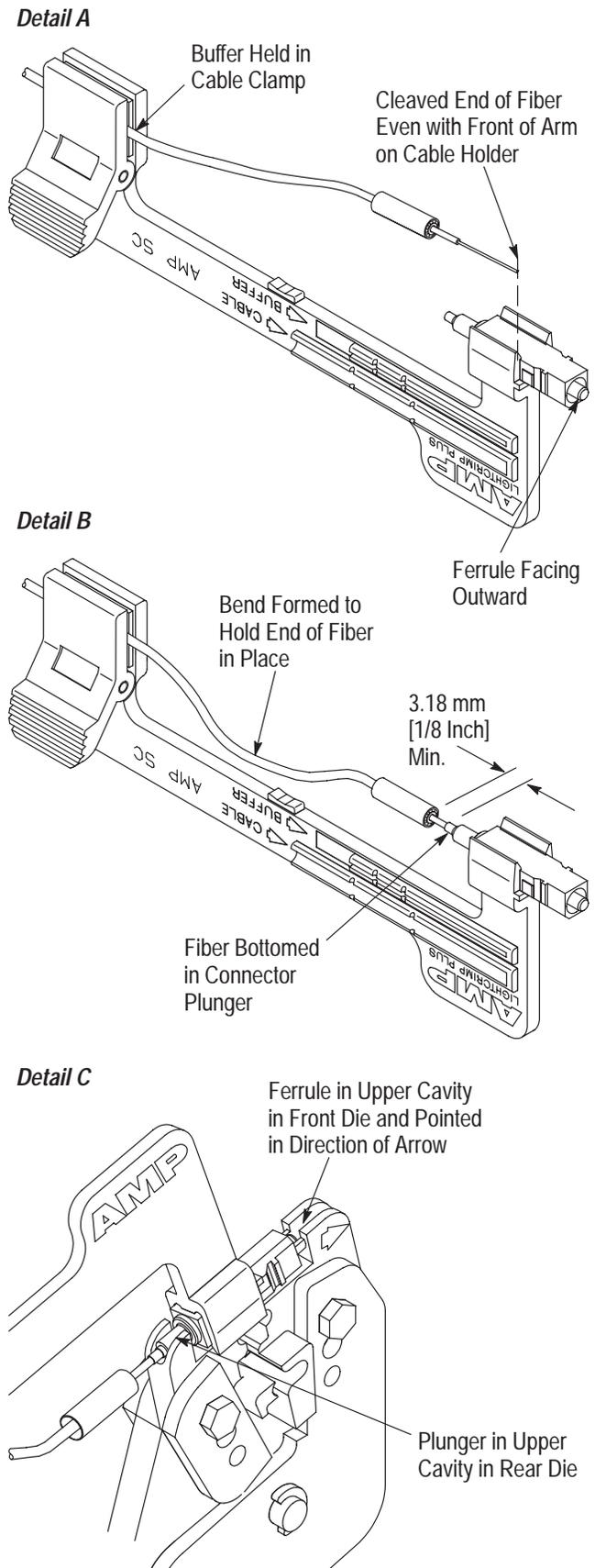


Figure 10: Crimping

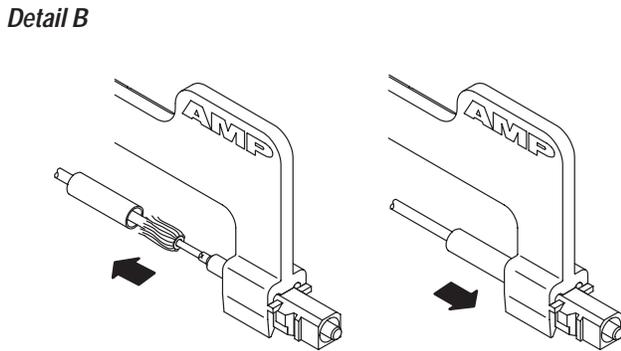
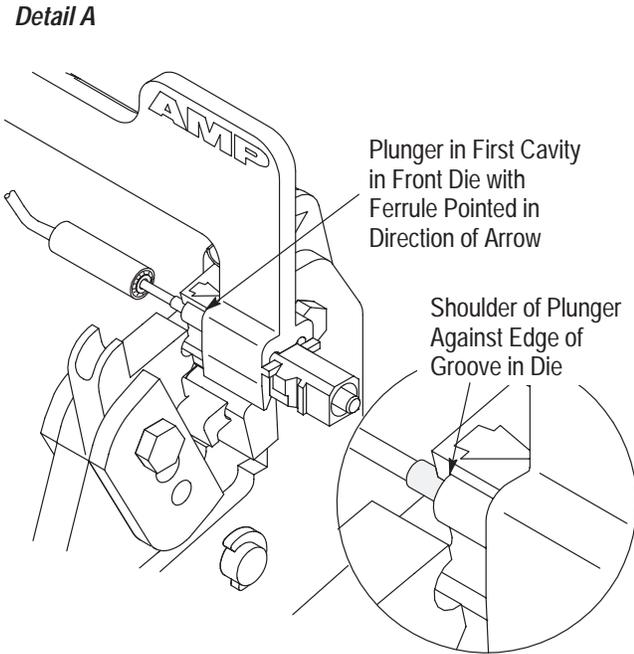
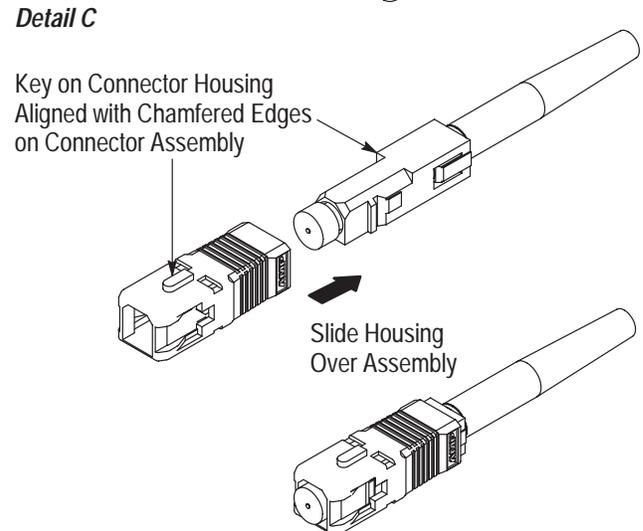
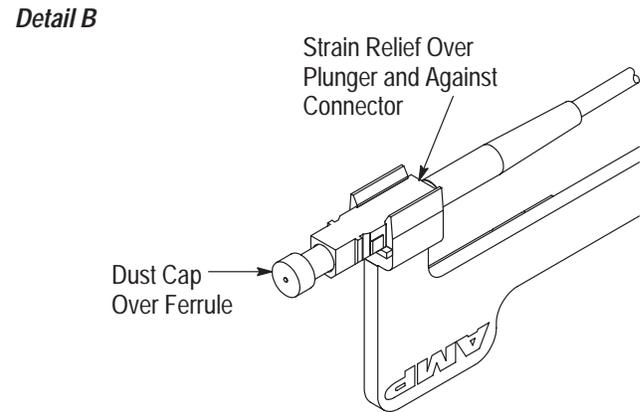
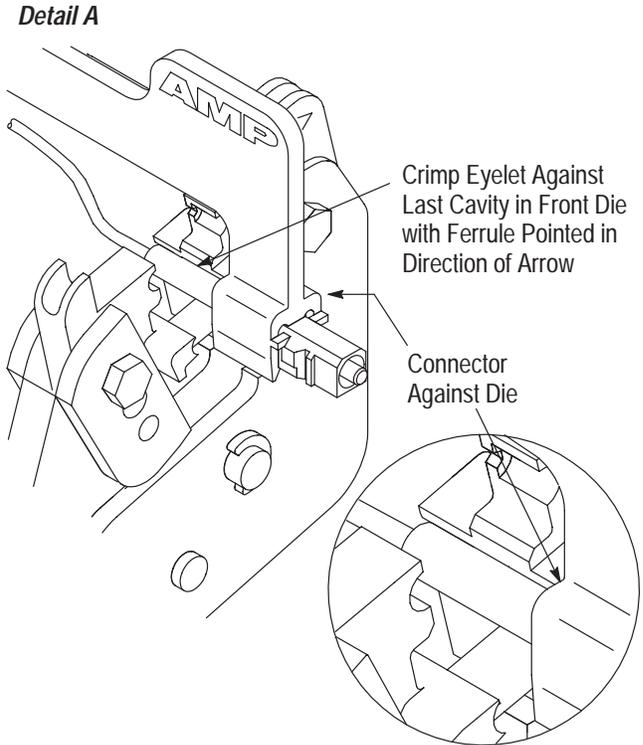
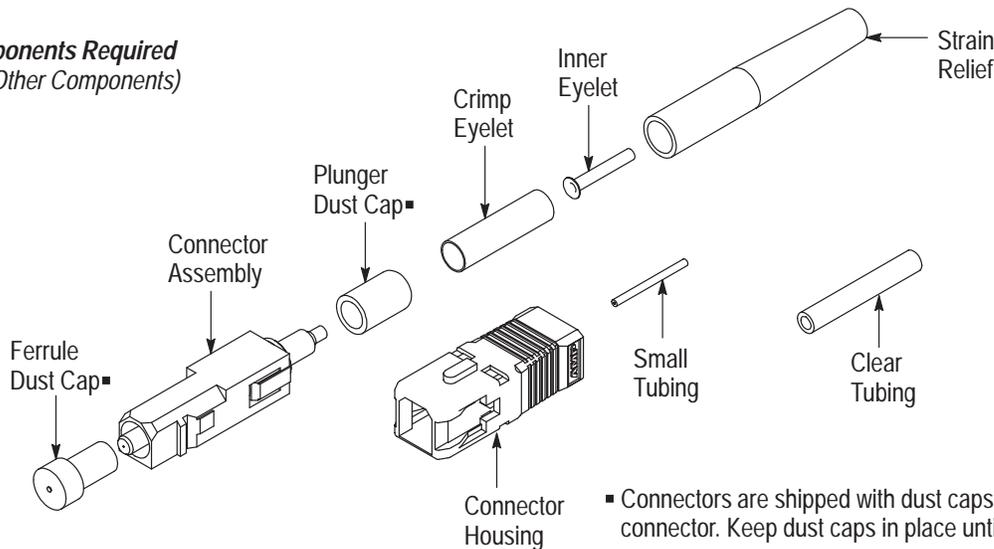


Figure 11: Crimping



5.4. Termination to 900- μ m Buffered Break-Out Kit

Kit Components Required
(Discard Other Components)



A. Preparing Fiber and Buffer Tube (Figure 12)

1. The break-out kit is assumed to be installed with one fiber per buffer tube, and fiber and buffer tubes cut to the same length.
2. With a marking pen, place a circumferential line (approximately 90° around) at 4 mm [5/32 inch] from one end of the clear tubing. See Figure 12, Detail A.
3. Place inner eyelet, small end first, inside clear tubing with flange of inner eyelet against end of tube. See Figure 12, Detail A.
4. Slide strain relief, clear tube with inner eyelet inside, and crimp eyelet onto the cable. See Figure 12, Detail B.
5. Remove both dust caps from the connector assembly. Keep the ferrule dust cap. Discard the plunger dust cap.
6. Insert the small (white) tubing into the connector plunger until the tubing bottoms. See Figure 12, Detail C.
7. Push the connector into the holder on the cable holder with the ferrule facing outward. Make sure that the connector butts against the lip on the arm of the cable holder as shown in Figure 12, Detail D.
8. Slide the buffer tube into the channel marked "BUFFER" on the cable holder. Make sure that the tip of the buffer tube butts against the end of the channel. See Figure 12, Detail D.
9. Mark the buffer tube at the end of the channel (approximately 43 mm from fiber tip). Cut the buffer tube at the mark and remove.

NOTE *The buffer tube is now approximately 43 mm shorter than the 250- μ m coated fiber.*

10. Slide the 250- μ m coated fiber into the channel marked "BUFFER" on the cable holder. Make sure that the tip of the fiber butts against the end of the channel. Mark the fiber at each cross-slot on the channel. See Figure 12, Detail D. Remove the fiber from the channel.

11. Using the combination fiber stripper, strip the 250- μ m coating back to the first mark. It is recommended holding the stripper at an angle to the fiber and stripping the coating in three sections. See Figure 12, Detail E. Clean the fiber with an alcohol fiber wipe to remove the fiber coating residue.

CAUTION *Before using the fiber stripper, make sure that the "V" opening is clean. If it is not clean, the fiber could break. Only use alcohol to clean the tool.*

B. Cleaving (Figure 13)

NOTE *To avoid damage to the fiber, make sure that the cleave tool blade, and the area around the blade, are clean; only use alcohol on the tool.*

Be sure that the cleave blade floats up and down in its housing with very light force. Lubricate with alcohol as required.

1. Push the lever on the cleave tool to open the clamp, and lay the fiber in the groove on the tongue with the started of the 250- μ m coating lined up with the 8-mm scale marking (± 0.5 mm). See Figure 13, Detail A.

2. Holding the fiber in place, release the lever so that the fiber is secure. Make sure that the tool tongue stays flat, and *gently* depress the tool arm to scribe the fiber. Release the arm. See Figure 13, Detail B.

CAUTION

To avoid damage to the fiber, do not use excessive pressure when depressing the arm. The edge of the blade should only touch the fiber.

3. Keeping the fiber in position, slowly bend, but do not twist, the tongue to cleave the fiber. See Figure 13, Detail C. Do not touch, or otherwise contaminate, the cleaved fiber end. Do not clean the cleaved fiber end.

CAUTION

To avoid damage to the tool tongue, do not bend the tongue beyond a 45° angle.

NOTE

Cleave blade life is 1000 cleaves. Replacement blade part number is 1278219-1.

C. Crimping (Figures 14 and 15)

1. Open the cable clamp on the cable holder, and hold the fiber (cleaved end facing connector) inside the clamp. Pull the end of the fiber even with the front of the arm on the cable holder, and holding the fiber in place, close the clamp. See Figure 14, Detail A.
2. Holding the fiber on the 250- μ m coating, carefully insert fiber into the connector plunger until the fiber bottoms against the internal fiber. Make sure that the second mark placed on the 250- μ m coating enters the plunger. A bend results in the fiber which helps to hold the fiber against the internal fiber. See Figure 14, Detail B.

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 connector and backing out fiber a small amount and re-entering may help. Also, the 250- μ m coating must enter the small tube installed in the back of the connector in Paragraph 5.4.A; Step 6. Be sure that the start of the 250- μ m coating is not caught on the entry to the white tube.

CAUTION

*When feeding the fiber into the connector, hold the fiber on the 250- μ m coating to ensure fiber feeds into the connector. If the fiber is gripped by the break-out kit buffer tube, the fiber will slide rearwards into the buffer tube and will **NOT** contact the internal fiber.*

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

3. Squeeze the handles of the crimp tool until the ratchet releases. Allow handles to open fully. Slowly close the tool handles until you hear two clicks from the ratchet.
4. With the connector assembly in the cable holder, position the ferrule in the upper cavity in the

front die and the plunger in the upper cavity in the rear die. See Figure 14, Detail C.

CAUTION

The arrows marked on the front die indicate the direction that the ferrule 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 14, Details C and D.

5. Gently push the fiber toward the connector to make sure that the fiber is still bottomed, then slowly squeeze the tool handles together until the ratchet releases. Allow handles to open fully, and remove connector assembly from dies.
6. Position the connector plunger in the first (smallest) cavity in the front die with the shoulder of the plunger against the edge of the groove in the die and the ferrule pointed in the direction of the arrow. See Figure 14, Detail D.
7. Slowly squeeze the tool handles together until the ratchet releases. Allow handles to open fully, and remove connector assembly from die.
8. Slide the crimp eyelet up behind, and butt against, the rear of the connector.
9. Slide the clear tubing with inner eyelet into the crimp eyelet until the circumferential line is lined up with the end of the crimp eyelet. See Figure 15, Detail A.
10. While maintaining the positioning of the clear tubing relative to the crimp eyelet, position the crimp eyelet against the lower cavity in the front die with the ferrule pointed in the direction of the arrowhead. Make sure the connector is butted against the die and the line on the clear tube 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 15, Detail B.
11. Slowly squeeze the tool handles together until the ratchet releases. Allow handles to open fully.
12. Install dust cap onto ferrule. Open the cable clamp on the cable holder, and remove the buffer from the clamp. Slide the strain relief over the crimp eyelet until it butts against the connector. See Figure 15, Detail C.
13. Align the key on the connector housing with the chamfered edges on the connector assembly, and slide the housing over the assembly until it snaps in place. See Figure 15, Detail D.

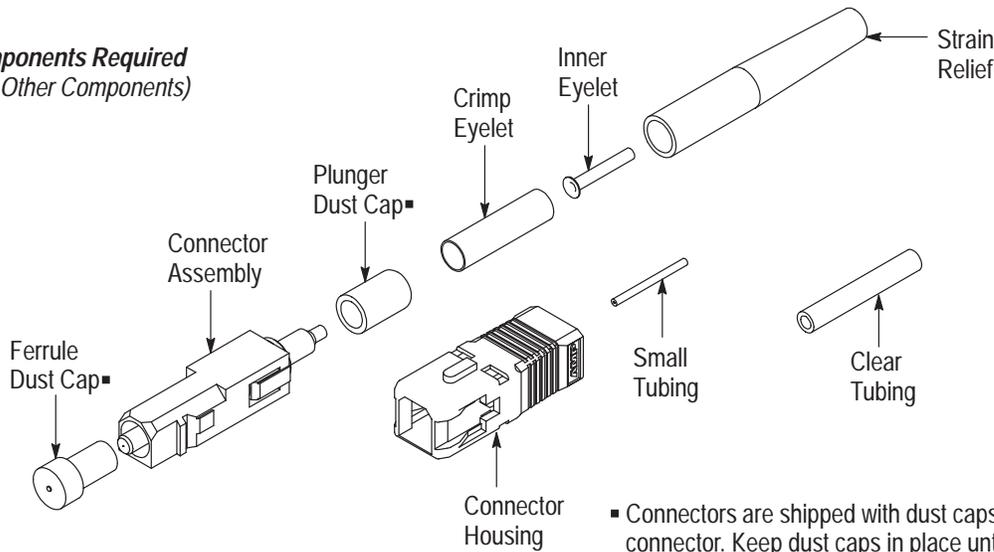
NOTE

Do not force the components together. They are designed to fit only one way.

The assembly procedure for 900- μ m buffered break-out kit is now complete.

5.5. Termination to 900- μ m Easy Strip or Semi-Tight Buffered Fiber

Kit Components Required
(Discard Other Components)



A. Preparing 900- μ m Bare Buffered Fiber (Figure 12)

1. With a marking pen, place a circumferential line (approximately 90° around) at 4 mm [5/32 inch] from one end of the clear tubing. See Figure 12, Detail A.
2. Place inner eyelet, small end first, inside clear tubing with flange of inner eyelet against end of tube. See Figure 12, Detail A.
3. Slide strain relief, clear tube with inner eyelet inside, and crimp eyelet onto the cable. See Figure 12, Detail B.
4. Remove both dust caps from the connector assembly. Keep the ferrule dust cap. Discard the plunger dust cap.
5. Insert the small (white) tubing into the connector plunger until the tubing bottoms. See Figure 12, Detail C.
6. Push the connector into the holder on the cable holder with the ferrule facing outward. Make sure that the connector butts against the lip on the arm of the cable holder as shown in Figure 12, Detail D.
7. Slide the fiber into the channel marked "BUFFER" on the cable holder. Make sure that the tip of the fiber butts against the end of the channel. See Figure 12, Detail D.
8. Mark the fiber at each cross-slot on the channel. See Figure 12, Detail D. Also, place a mark on the buffer at the very end of the channel. Remove the fiber from the channel.
9. Using the combination fiber stripper, strip the 250- μ m coating and buffer back to the first mark. It

is recommended holding the stripper at an angle to the fiber and stripping the coating in three sections. See Figure 12, Detail E. Clean the fiber with an alcohol fiber wipe to remove the fiber coating residue.

10. Strip the buffer only (leave 250- μ m coating in place) back to the second mark. Use the combination stripper and apply slightly less pressure than stripping to the 125- μ m fiber. Practice first.

11. Mark the 250- μ m coating at the shoulder of the 900- μ m buffer. Strip the buffer only back to the third mark.

CAUTION Before using the fiber stripper, make sure that the "V" opening is clean. If it is not clean, the fiber could break. Only use alcohol to clean the tool.

B. Cleaving (Figure 13)

NOTE To avoid damage to the fiber, make sure that the cleave tool blade, and the area around the blade, are clean; only use alcohol on the tool.

Be sure that the cleave blade floats up and down in its housing with very light force. Lubricate with alcohol as required.

1. Push the lever on the cleave tool to open the clamp, and lay the fiber in the groove on the tongue with the started of the 250- μ m coating lined up with the 8-mm scale marking (± 0.5 mm). See Figure 13, Detail A.
2. Holding the fiber in place, release the lever so that the fiber is secure. Make sure that the tool tongue stays flat, and gently depress the tool arm to scribe the fiber. Release the arm. See Figure 13, Detail B.

CAUTION

To avoid damage to the fiber, do not use excessive pressure when depressing the arm. The edge of the blade should only touch the fiber.

3. Keeping the fiber in position, slowly bend, but do not twist, the tongue to cleave the fiber. See Figure 13, Detail C. Do not touch, or otherwise contaminate, the cleaved fiber end. Do not clean the cleaved fiber end.

CAUTION

To avoid damage to the tool tongue, do not bend the tongue beyond a 45° angle.

NOTE

Cleave blade life is 1000 cleaves. Replacement blade part number is 1278219-1.

C. Crimping (Figures 14 and 15)

1. Open the cable clamp on the cable holder, and hold the fiber (cleaved end facing connector) inside the clamp. Pull the end of the fiber even with the front of the arm on the cable holder, and holding the fiber in place, close the clamp. See Figure 14, Detail A.

2. Holding the fiber on the 250-μm coating, carefully insert fiber into the connector plunger until the fiber bottoms against the internal fiber. Make sure that the second mark placed on the 250-μm coating enters the plunger. A bend results in the fiber which helps to hold the fiber against the internal fiber. See Figure 14, Detail B.

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 connector and backing out fiber a small amount and re-entering may help. Also, the 250-μm coating must enter the small tube installed in the back of the connector in Paragraph 5.5.A; Step 5. Be sure that the start of the 250-μm coating is not caught on the entry to the white tube.

CAUTION

*When feeding the fiber into the connector, hold the fiber on the 250-μm coating to ensure 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.*

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

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

4. With the connector assembly in the cable holder, position the ferrule in the upper cavity in the

front die and the plunger in the upper cavity in the rear die. See Figure 14, Detail C.

CAUTION

The arrows marked on the front die indicate the direction that the ferrule 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 14, Details C and D.

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

6. Position the connector plunger in the first (smallest) cavity in the front die with the shoulder of the plunger against the edge of the groove in the die and the ferrule pointed in the direction of the arrow. See Figure 14, Detail D.

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

8. Slide the crimp eyelet up behind, and butt against, the rear of the connector.

9. Slide the clear tubing with inner eyelet into the crimp eyelet until the circumferential line is lined up with the end of the crimp eyelet. See Figure 15, Detail A.

10. While maintaining the positioning of the clear tubing relative to the crimp eyelet, position the crimp eyelet against the lower cavity in the front die with the ferrule pointed in the direction of the arrowhead. Make sure the connector is butted against the die and the line on the clear tube 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 15, Detail B.

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

12. Install dust cap onto ferrule. Open the cable clamp on the cable holder, and remove the buffer (cable) from the clamp. Slide the strain relief over the crimp eyelet until it butts against the connector. See Figure 15, Detail C.

13. Align the key on the connector housing with the chamfered edges on the connector assembly, and slide the housing over the assembly until it snaps in place. See Figure 15, Detail D.

NOTE

Do not force the components together. They are designed to fit only one way.

The assembly procedure for 900-μm easy strip or semi-tight buffered fiber is now complete.

Figure 12: Preparing the Fiber and Buffer Tube

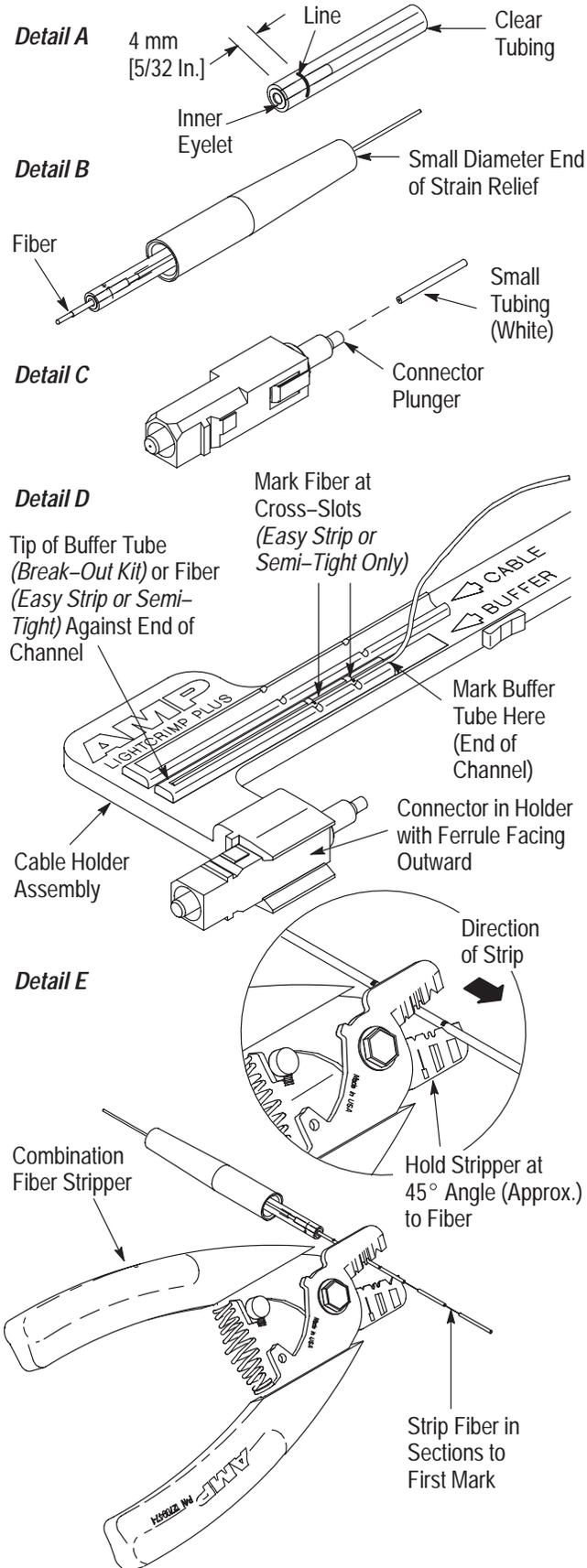


Figure 13: Cleaving

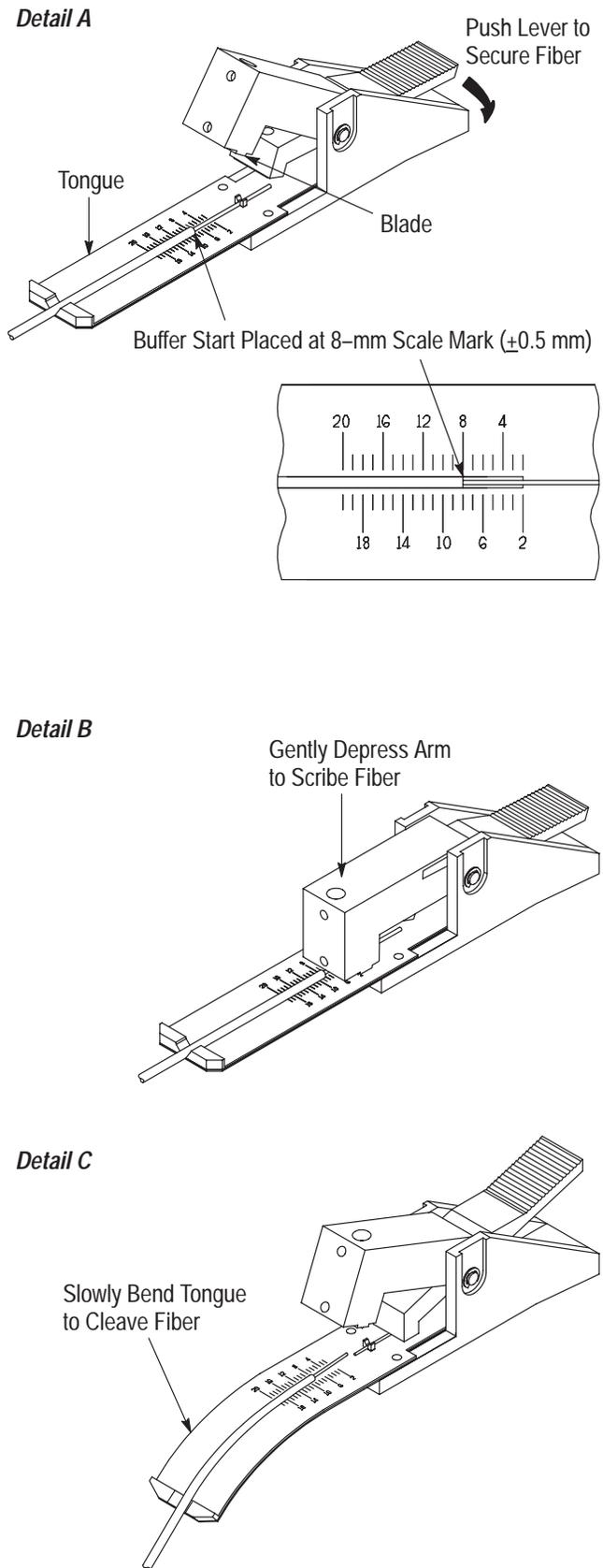


Figure 14: Crimping

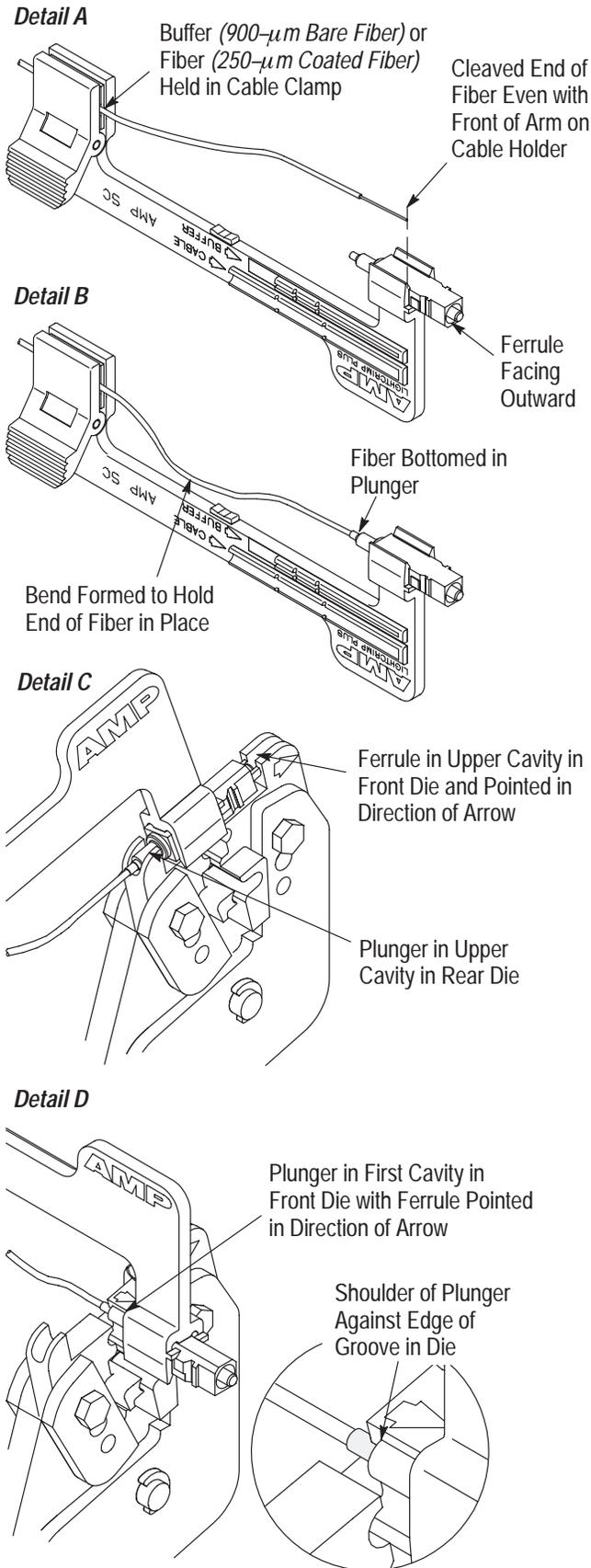
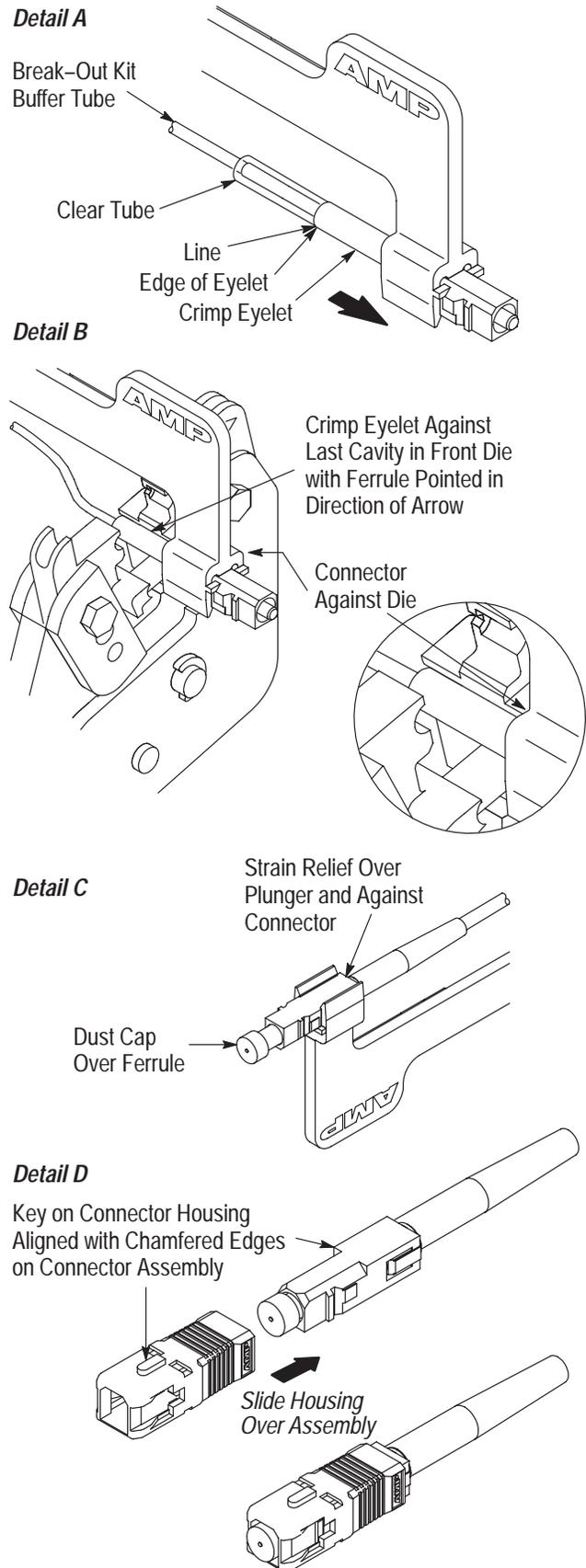


Figure 15: Crimping



6. REVISION SUMMARY

Per EC 0990-1048-02

- Added LightCrimp Plus SC Simplex Connector Kit 1588291-[]
- Updated document to corporate requirements