

## Installation Instructions

### Standard Compression Dead End for ACSR and ACSS Conductor

#### CAUTION: ACSR Dead Ends Cannot Be Used on ACSS HT Conductor

1. Mark the conductor a distance of  $\frac{3}{4}$  the length of the aluminum body (Figure 1).
2. Prior to making connection, the outer strands of the conductor must be cleaned with a wire brush or abrasive cloth (Figure 2).
3. Prior to any strand cutting, tape the end of the conductor to help maintain the round contour.
4. Slide the aluminum dead end body over conductor until sufficient working length protrudes from tongue end. (Figure 3).
5. Cut back aluminum strands equal to the depth of the steel forging barrel plus 1 inch (25.4 mm). Do not nick the steel strands. File burrs, if present. (Figure 4). Use of a cable trimming tool is recommended. (Figure 4a, 4b).
6. Insert steel core into steel barrel to full length of bore. (Figure 5).
7. Using the proper SH die set, compress steel barrel full length making initial compression adjacent to rib closest to barrel. Overlap each successive compression by at least  $\frac{1}{4}$  inch (6.4 mm). Complete die closure is required on all compressions. (Figure 5a, 5b).
8. Slide the aluminum body over the steel forging until the tongue end butts solidly against felt washer and shoulder of steel eye. Align eye with tongue to desired orientation for attachment to insulator string. (Figure 6).

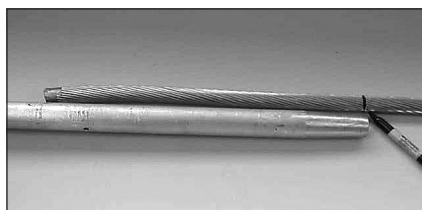


FIGURE 1: Mark the conductor and clean  $\frac{3}{4}$  the length of the aluminum body.



FIGURE 2: Clean a distance of at least  $\frac{3}{4}$  the distance of the aluminum dead end body.

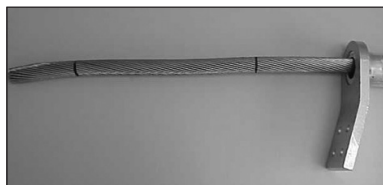


FIGURE 3: Slide aluminum dead end body over conductor.



FIGURE 4:

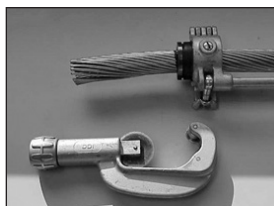


FIGURE 4a:



FIGURE 4b:



FIGURE 5:



FIGURE 5a:



FIGURE 5b:



FIGURE 6:

### Installation Instructions (cont.)

#### Standard Compression Dead End for ACSR and ACSS Conductor

9. Inject filler compound (AFC or AFCHT for HiTemp®) into filler hole until compound emerges at felt washer and tapered end of aluminum body. (*Figure 6a*).
10. Insert and drive filler plug (cavity up) into hole and peen edge of hole over top surface of plug. (*Figure 7*). Leaving the filler plug in the small plastic bag makes it easier to insert when working with gloves. (*Figure 7a*).
11. Using the proper AH die set, make the initial compression on the aluminum body beginning at the "start" mark nearest the tongue. Overlap each successive compression by at least ¼ inch (6.4 mm). Press only to the "stop" mark. Complete die closure is required for each compression. (*Figure 8*).

**Note:** A light oil coating on the die grooves and aluminum sleeve is recommended.

12. To press the dead end body over the conductor, use the same die used in step 11. Begin compressing at the "start" mark about centrally located. Overlap each successive compression by at least ¼ inch (6.4 mm). Press to the end of the body, including the tapered portion. Complete die closure is required on each compression. (*Figure 9*).

During this compression sequence, the plastic bag in which the dead end assembly was received can be used as a medium between the aluminum body and dies (instead of oil as mentioned in step 11).

13. Compressed portion of dead end body should have a smooth uniform appearance. (*Figure 10*). If die flash is present, remove with a file or emery cloth.
14. Remove any excess filler compound which may have been forced out the end of the dead end body.

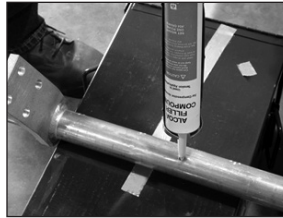


FIGURE 6a:



FIGURE 7:



FIGURE 7a:



FIGURE 8:

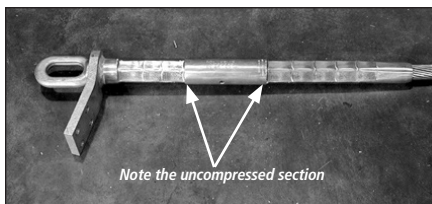


FIGURE 9:

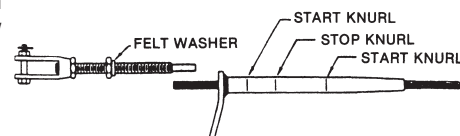


FIGURE 10:

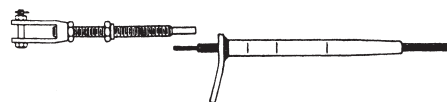
## Installation Instructions

### Adjustable Compression Dead Ends on ACSR Conductors

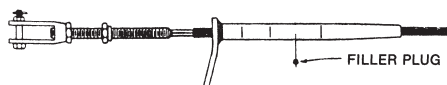
1. Prior to making connections, the outer strand on all conductors (even new conductors) must be cleaned with a wire brush or abrasive cloth. If the conductor is weathered or blackened, carefully unlay aluminum strands for a distance equal to or greater than 3/4 the length of the aluminum dead end body and clean strands thoroughly with wire brush or abrasive cloth. Check accessory bore for foreign particles, removing if present.
2. Serve the conductor, prior to cutting, with tape to help maintain the round contour making it easier to slide the end through the aluminum dead end.
3. Straighten several feet of conductor removing set caused by reel (if necessary).
4. If a comealong is being used, it should be located at least ten (10) feet from end of conductor.



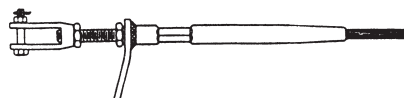
5. Slide dead end body over conductor until sufficient working length protrudes from tongue end.
6. Cut back aluminum strands a distance equal to the depth of the bore of the steel forging barrel plus 1 inch. Do not nick steel strands. File burrs as necessary for ease of insertion.



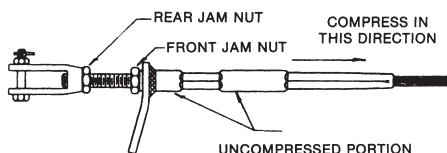
7. Insert steel core into steel barrel to full length of bore.
8. Select die size for compressing steel barrel. The die size on the die and die size marked on steel barrel must be the same.
9. Compress steel barrel full length making initial compression adjacent to corrugations. Overlap each successive compression by approximately 1/4 die bite. Complete die closure is required for each compression.



10. Remove any remaining tape from the aluminum strands and slide aluminum dead end body over steel forging until tongue end butts solidly against felt washer and shoulder of steel dead end. Align clevis or eye with tongue of dead end to ensure proper positioning when dead end is fastened to insulator hardware.
11. Inject AFL Filler Compound (AFC) into filler hole until compound emerges at the felt washer and the tapered end of the body. Insert and drive filler plug into hole and peen edge of hole over top surface of plug.
12. Select die size to compress aluminum dead end body. Die size for aluminum dead end body and die size marked on die must be the same.
13. It is recommended that die grooves be well lubricated with a light weight oil. Oil coating should be maintained during entire compression operation.
14. Make the initial compression on the dead end body over the steel shank beginning at the "start knurl" nearest the dead end tongue. Continue making compressions to the "stop knurl", overlapping the previous compression by approximately 1/4 die bite. Complete die closure is required for each compression.



15. To press the dead end body over the conductor, use the same die used in step 13. Make the initial compression at the "start knurl" and proceed with compression. Continue making compressions to the end of the dead end body, overlapping the previous compression by approximately 1/4 die bite. Complete die closure is required for each compression.
16. Note there should be an uncompressed area on the dead end body where it covers the compressed barrel of the steel forging (area of the filler plug).
17. Compressed portion of the dead end should have a smooth uniform appearance. Remove flash, if present, with file or emery cloth.



**CAUTION:** Follow installation instructions carefully. Improper installation can result in mechanical failure of the cable system and possible injury to persons handling or in the vicinity of the cable systems.

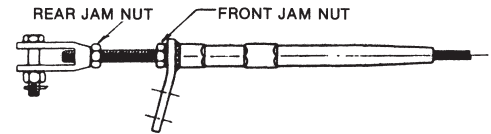
**SAFETY:** Consult your safety training department to ensure that the installation procedure adopted is in compliance with your company's standard procedure.

## Installation Instructions

### Clevis Adjustment of Adjustable Compression Dead Ends on ACSR Conductors

#### Standard Method

1. Loosen rear jam nut.
2. Rotate clevis for proper sag and tension.
3. Tighten rear jam nut.



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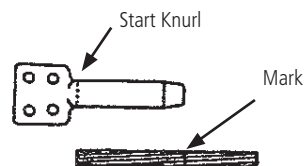
**SAFETY:** Consult your safety training department to ensure that the installation procedure adopted is in compliance with your company's standard procedure.

## Installation Instructions

### Standard and Quick Compress® Compression Terminals

#### (These instructions are not for HiTemp® Conductors)

1. Prior to making any connections, the conductor must be clean. For new conductor, the outside diameter shall be wire brushed to remove the aluminum oxidation. If the conductor is weathered or blackened, carefully unlay the aluminum strands for a distance equal to the compression length of the terminal. Clean all of the aluminum strands thoroughly with a wire brush.
2. Mark the conductor from the end, a distance equal to the compression length of the terminal.



#### Quick Compress:

- 3a. Insert the conductor into the terminal. Be sure the conductor is inserted to the mark on the conductor. The terminal comes pre-filled with compound from the factory.

#### Standard Compression:

- 3b. Inject sufficient AFL Filler Compound (AFC) in the end of the terminal bore and on the conductor to ensure that excess compound will be visible at terminal end when barrel is completely compressed. See chart below for proper amount of AFC required for each terminal size.



**AFC Filler Compound Required**

PARTIAL TERMINAL CATALOG NUMBER	LB.	GRAMS (G)
5172., 5672., 5872.	0.01	5
5173., 5673., 5873.	0.01	5
5174., 5674., 5874.	0.02	9
5175., 5675., 5875.	0.02	9
5176., 5676., 5876.	0.02	9
5106., 5606., 5806.	0.02	9
5109., 5609., 5809.	0.02	9
5110., 5610., 5810.	0.03	14
5111., 5611., 5811.	0.03	14
5112., 5612., 5812.	0.03	14
5113., 5613., 5813.	0.03	14
5120., 5620., 5820.	0.04	18
5124., 5624., 5824.	0.05	23
5127., 5627., 5827.	0.06	27
5130., 5630., 5830.	0.09	41
5134., 5634., 5834.	0.12	54
5136., 5636., 5836.	0.15	68
5138., 5638., 5838.	0.17	77
5140., 5640., 5840.	0.2	91
5142., 5642., 5842.	0.24	109
5144., 5644., 5844.	0.28	127
5148., 5648., 5848.	0.32	145

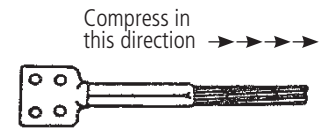
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**Continued**

**CAUTION:** Follow installation instructions carefully. Improper installation can result in mechanical failure of the cable system and possible injury to persons handling or in the vicinity of the cable systems.

## Installation Instructions (cont.)

### Standard and Quick Compress® Compression Terminals (These instructions are not for HiTemp® Conductors)

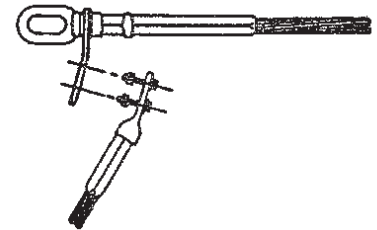
4. To compress, select the proper die size as stamped on the jumper connector.
5. Compress the terminal, beginning at the "start knurl." Continue compressing toward the end of the terminal. Complete die closure is required for each compression. Overlap the previous compression by approximately 1/4 die bite. It is recommended that die grooves be well lubricated with a lightweight oil. Oil coating should be maintained during entire compression operation. (Other acceptable mediums that can be used instead of oil are wax, soap or plastic bag the terminal was shipped in.)
6. Remove flash, if any, with a file or an abrasive cloth.



### To Attach Terminal Connector to Dead End or Tee Tap

7. Clean contact surface of pads to be connected by wire brushing thoroughly and immediately coating with a thin film of No. 2 Electrical Joint Compound (EJC). Do not use AFC.
8. Bolt terminal to dead end pad. Partially tighten all bolts and then re-tighten each bolt to the recommended torque:

Aluminum 1/2" bolts - 25 lb-ft (34 N.m)  
Stainless Steel 1/2" bolts - 40 lb-ft (54 N.m)

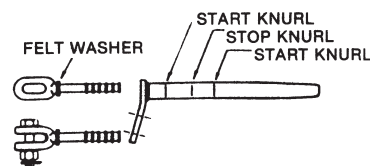


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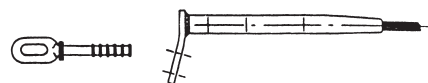
## Installation Instructions

### Adjustable and Non-Adjustable Compression Dead Ends on AAC, AAAC, ACAR and AWAC Conductors

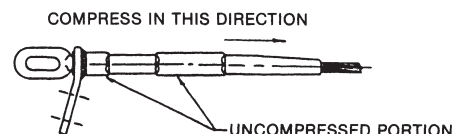
1. Prior to making connections, the conductor must be wire brushed and accessory bore must be clean. If the conductor is weathered or blackened, carefully unlay aluminum strands for a distance equal to or greater than 1/4 the length of the aluminum dead end body and clean strands thoroughly with wire brush or abrasive cloth. Check accessory bore for foreign particles and remove if present.
2. Straighten several feet of conductor removing set caused by reel.



3. Coat the steel dead end shank with a liberal quantity of AFL Filler Compound (AFC).
4. Insert steel dead end shank into tongue end of aluminum body until the felt washer butts solidly against the front jam nut on the clevis rod of the adjustable clevis or shoulder of non-adjustable steel dead end.
5. For non-adjustable steel dead ends, align the steel eye or clevis with the tongue of the aluminum dead end body to ensure that the tongue will be in proper position when the dead end is fastened to insulator hardware.
6. Select die size to compress aluminum dead end body. Die size for aluminum dead end and die size marked on die must be the same.



7. It is recommended that die grooves be well lubricated with a light weight oil. Oil coating should be maintained during entire compression operation.
8. Make the initial compression on the dead end body over the steel shank beginning at the "start knurl" nearest the dead end tongue. Continue making compressions to the "stop knurl", overlapping the previous compression by approximately 1/4 die bite. Complete die closure is required for each compression.
9. Insert conductor full depth into dead end body and mark conductor at end of barrel. Remove conductor after marking.
10. Inject sufficient AFL Filler Compound (AFC) In the end of the dead end bore and on the conductor to ensure that excess compound will be visible at the end of the dead end body when the barrel, is completely compressed.
11. Insert clean end of the conductor into the dead end body to the mark on the conductor.
12. The dead end will bow during compression unless reasonable care is taken to have about 15 ft. (4.5 m) of the conductor supported straight out from the end of the dead end such that the weight of the conductor does not hang unsupported from the end of the dead end when compressing.
13. To press the dead end body over the conductor, use the same die used in step 8. Make the initial compression at the "start knurl" nearest the end of the dead end body. Continue making compressions to the end of the dead end body, overlapping the previous compression by approximately 1/4 die bite. Complete die closure is required for each compression.
14. Compressed portion of the dead end should have a smooth uniform appearance. Remove flash, if present, with file or emery cloth.



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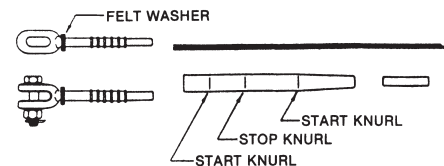
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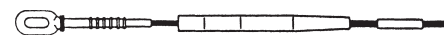
## Installation Instructions

### Compression Dead Ends on EHS ACSR, Alumoweld® and Steel Ground Wire

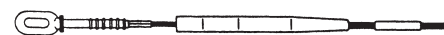
1. Serve the conductor, prior to cutting, to help maintain the round contour. File burrs or shape edges off the conductor as necessary for ease of insertion.
2. Straighten several feet of conductor removing set caused by reel.



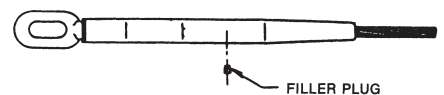
3. Slide the aluminum filler sleeve over conductor.
4. Slide the aluminum dead end body over conductor; tapered end first.
5. Select the die size for compressing the steel barrel. The die size marked on the die and the die size marked on the steel dead end must be the same.
6. Insert the conductor into the bore of the steel dead end.



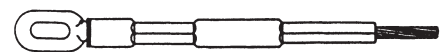
7. Compress the steel barrel full length making initial compression adjacent to the corrugations. Overlap each successive compression by approximately 1/4 die bite. Complete die closure is required for proper compression.



8. Slide the aluminum dead end body over steel forging until the end butts solidly against the felt washer.
9. Slide the aluminum filler sleeve into the aluminum dead end body until the ends of the filler sleeve and the aluminum dead end body are flush.
10. Inject AFL Filler Compound (AFC) into filler hole until compound emerges at the felt washer. Insert and drive filler plug into hole and peen edge of hole over top surface of plug.
11. Select the die size to compress the aluminum dead end body. The die size for the aluminum dead end body and the size marked on the die must be the same.



12. It is recommended that die grooves be well lubricated with a light weight oil. Oil coating should be maintained during entire compression operation.
13. Make the initial compression on the dead end body over the steel shank beginning at the "start knurl" nearest the eye or clevis. Continue making compressions to the "stop knurl" overlapping the previous compression by 1/4 die bite. Complete die closure is required for each compression.
13. To press the dead end body and filler sleeve over the conductor, use the same die used in step 13. Make the initial compression at the "start knurl" nearest the end of the dead end body. Complete die closure is required for each compression.
14. The compressed portion of the dead end should have a smooth uniform appearance. Remove flash, if present, with file or emery cloth.



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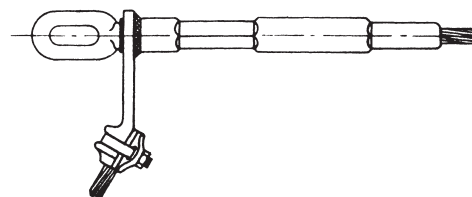


## Installation Instructions

### Bolted Jumper Connectors on Alumoweld® and Steel Ground Wire

#### Standard Method

1. Clean conductor and grooves of the bolted jumper. If installation is to be made on old cable, clean strands with a wire brush or emery cloth.
2. Coat the clamp groove and conductor liberally with No. 2 Electrical Joint Compound (EJC). DO NOT USE AFL FILLER COMPOUND (AFC).
3. Bolt conductor in groove, partially tighten nuts, then re-tighten each nut to recommended torque. (3/8" bolt-15 lbf-ft (20 N.m); 1/2" bolt-25 lbf-ft (34 N.m))
4. DO NOT remove the EJC that squeezes out when clamp is tightened.



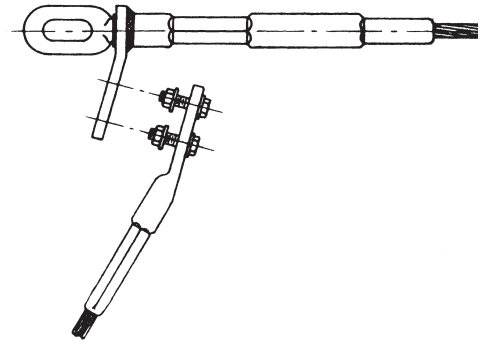
**CAUTION:** Follow installation instructions carefully. Improper installation can result in mechanical failure of the cable system and possible injury to persons handling or in the vicinity of the cable systems.

## Installation Instructions

### Terminal Connectors on Alumoweld® and Steel Ground Wire

#### Standard Method

1. Insert conductor full depth into terminal bore and mark conductor at end of barrel. Remove conductor after marking.
2. Inject sufficient AFL Filler Compound (AFC) in the end of the terminal bore and on the conductor to ensure that excess compound will be visible at terminal and when barrel is completely compressed.
3. Insert clean end of the conductor into the terminal barrel to the mark on the conductor.
4. Select die size for compressing aluminum terminal. The die size on die and die size marked on the terminal must be the same.
5. Make initial compression starting at "start knurl". Continue making compressions to the mouth of the terminal overlapping the previous compression by approximately 1/4 die bite. Complete die closure is required for each compression. Compressed portion of the terminal should have a smooth uniform appearance. Remove flash, if present, with file or emery cloth.
6. Clean contact surface of terminal and of dead end pad by wire brushing through No. 2 Electrical Joint Compound (EJC). DO NOT USE AFL FILLER COMPOUND (AFC).
7. Bolt terminal to dead end pad. Partially tighten all bolts and then re-tighten each bolt to recommended torque. 1/2" bolt-25 lbf-ft (34 N.m); 5/8" bolt-40 lbf-ft (54 N.m)

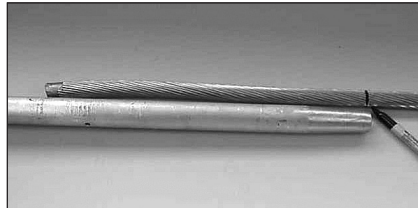


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## Installation Instructions

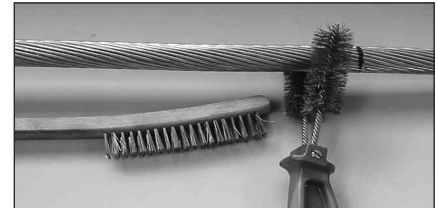
### Standard Compression Splice for ACSR

1. Mark the conductor a distance of  $\frac{1}{2}$  the length of the aluminum sleeve (**Figure 1**).



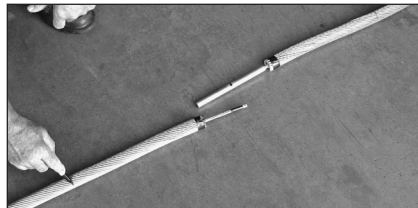
**FIGURE 1:** Mark the conductor and clean  $\frac{1}{2}$  the length of the sleeve.

2. Prior to making connection, the outer strands of the conductor should be cleaned with a wire brush or abrasive cloth (**Figure 2**).

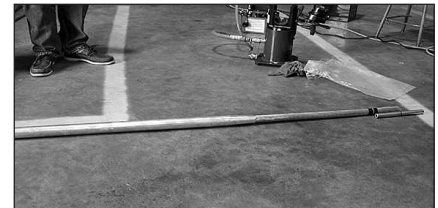


**FIGURE 2:** Clean the outer strands of the conductor with a wire brush.

3. Remark each conductor half the length of the aluminum sleeve, if the mark was removed during wire brushing. Prior to any strand cutting, tape the end of each conductor to help maintain the round contour (**Figure 3**).



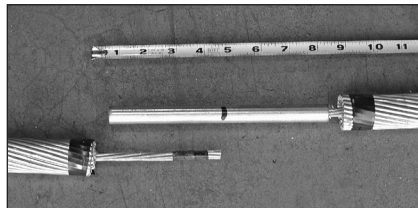
**FIGURE 3:** Re-mark the conductors after cleaning if needed.



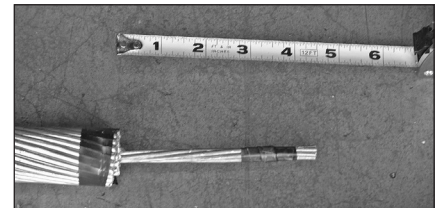
**FIGURE 4:** Slide sleeve over one conductor so it protrudes out the end.

4. Slide the aluminum sleeve over one conductor until sufficient working length protrudes from end (**Figure 4**).

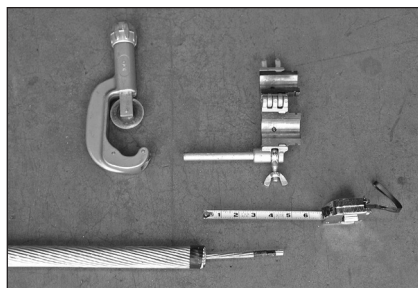
5. Cut back aluminum strands of both conductors  $\frac{1}{2}$  the length of the steel sleeve plus 1 inch (25.4 mm). Do not nick the steel strands. File any burrs, if present (**Figure 5a**). Use of a cable trimming tool is recommended (**Figure 5b**).



**FIGURE 5a:** Cut back the Aluminum strands on both conductors  $\frac{1}{2}$  the length of the Steel sleeve plus 1 inch (25.4 mm).



6. Insert ends of steel core into steel sleeve making sure the ends butt solidly against center stop (**Figure 6**).

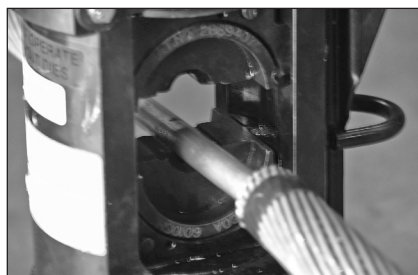


**FIGURE 5b:** Use of a cable trimming tool is recommended.



**FIGURE 6:** Slide sleeve over one conductor so it protrudes out the end.

7. Using the proper SH die set, compress steel sleeve full length making initial compression over center of sleeve (**Figure 7a**). Overlap each successive compression by at least  $\frac{1}{4}$  inch (6.4 mm) (**Figure 7b**). Complete die closure is required on all compressions.



**FIGURE 7a:** Make the initial compression on center of Steel sleeve.



**FIGURE 7b:** Overlap each compression on Steel sleeve  $\frac{1}{4}$  inch (6.4 mm).

## Installation Instructions (cont.)

### Standard Compression Splice for ACSR

8. Slide the aluminum sleeve over the installed steel sleeve, centering between the two marks that were made in **Step 3** (**Figure 8a & 8b**).
  9. Inject AFC filler compound into the filler hole until compound emerges from both ends of aluminum sleeve (**Figure 9**).
  10. Insert and drive filler plug (cavity up) into hole and peen edge of hole over top surface of plug. Leaving the filler plug in the small plastic bag makes it easier to insert when working with gloves (**Figure 10a, 10b & 10c**).
  11. Using the proper AH die set, make the initial compression at the "start" mark on one side of center (**Figure 11a**). The second compression should be made at the other "start" mark on opposite side of center. Continue making compressions to the end, overlapping each by at least 1/4 inch (6.4 mm) (**Figure 11b**). Repeat this on opposite side of joint (**Figure 11c**). Complete die closure is required for each compression.
- Note:** A light oil coating on the die grooves and aluminum sleeve is recommended.
12. Compressed portion of splice sleeve should have a smooth uniform appearance. If die flash is present, remove with a file or emery cloth (**Figure 12**). Remove any excess filler compound which may have been forced out the ends of the splice.

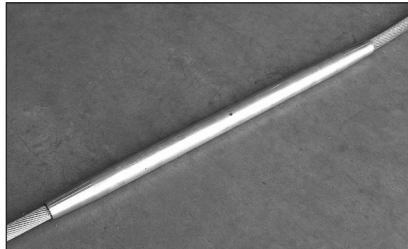


FIGURE 8a: Slide the Aluminum sleeve over the installed Steel sleeve.

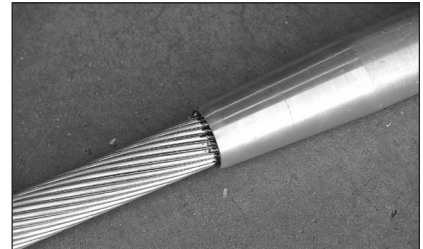


FIGURE 8b: Center the Aluminum sleeve between the marks.



FIGURE 9: Inject AFC Filler Compound into the filler hole.



FIGURE 10a: Peen edge of filler hole over top surface of plug.

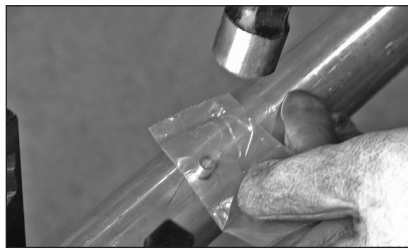


FIGURE 10b: Filler plug left in plastic bag is easier to insert with gloves.

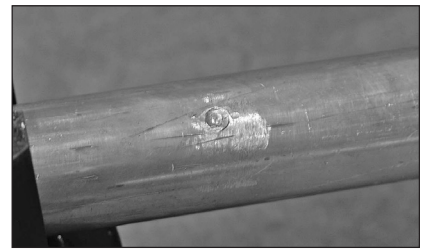


FIGURE 10c: Peen edge of filler hole over top surface of plug.



FIGURE 11a: Make the initial compression at the "start" mark.

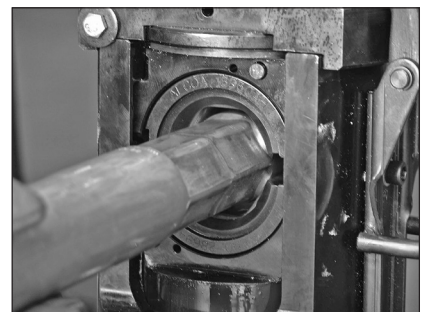


FIGURE 11b: Overlap each compression by 1/4 inch (6.4 mm).



FIGURE 11c: Completed compression splice.

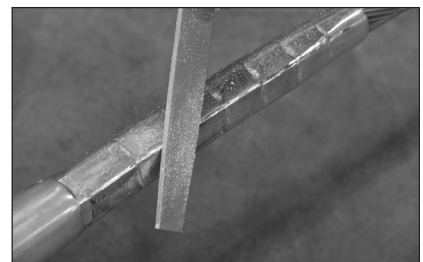
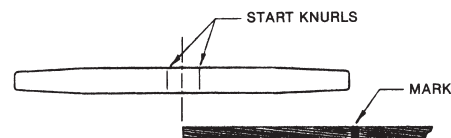


FIGURE 12: If die flash is present, remove with a file or emery cloth.

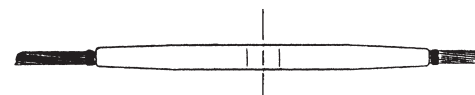
## Installation Instructions

### Compression Joints on AAC, AAAC, ACAR and AWAC Conductors

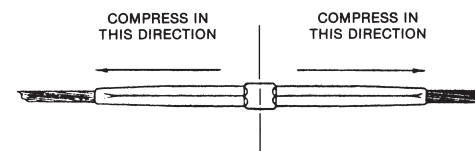
1. Measure back from each conductor end and mark at a distance equal to  $\frac{1}{2}$  the length of the aluminum joint.
2. File burrs or sharp edges off the aluminum strands as necessary for ease of insertion.
3. Prior to making connections, the conductor must be wire brushed and accessory bores must be clean. If the conductor is weathered or blackened, carefully unlay aluminum strands for a distance equal to or greater than  $\frac{1}{2}$  the length of the aluminum joint and clean strands thoroughly with wire brush or abrasive cloth. Check accessory bore for foreign particles, removing if present.
4. Straighten several feet of conductor removing Set caused by reel.



5. Inject AFL Filler Compound (AFC) into each end of joint and on the conductor to ensure that excess compound will be forced from the barrel when compressions are completed. Insert conductor ends into the joint. If the mark on the conductor is not at end of the joint, and there is resistance to further entry, twist the joint on the conductor. This will work the compound between conductor strands and bleed air from the joint.
6. Select die size for compressing joint. The die size on die and die size marked on aluminum joint must be the same.
7. The joint will bow during compression unless reasonable care is taken to have about 15 ft. (4.5 m) of the conductor supported straight out from both ends of the joint such that the weight of the conductor does not hang unsupported from the end of the joint when compressing.



8. Make initial compression on either side of joint starting at the "start knurl". Make the second compression on the opposite end of the joint at the other "start knurl". Continue making compressions to one end of joint overlapping the previous compression by approximately  $\frac{1}{4}$  die bite. Complete die closure is required for each compression. Go back and complete the compressions on the opposite end. The center portion of the joint, approximately one inch, is not compressed. It is recommended that die grooves be well lubricated with a light weight oil. Oil coating should be maintained during entire compression operation.
9. Compressed portion of the joint should have a smooth uniform appearance. Remove flash, if present, with file or emery cloth.



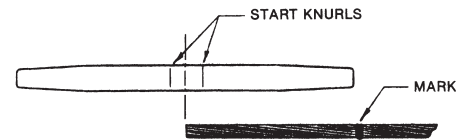
**CAUTION:** Follow installation instructions carefully. Improper installation can result in mechanical failure of the cable system and possible injury to persons handling or in the vicinity of the cable systems.



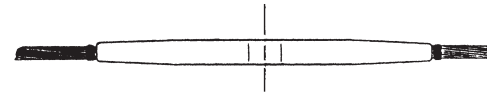
## Installation Instructions

### Compression Joints on AWAC, Alumoweld® and Steel Ground Wire

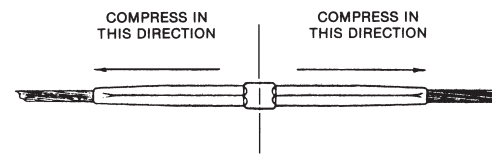
1. Measure back from each conductor end and mark at a distance equal to  $\frac{1}{2}$  the length of the aluminum joint.
2. File burrs or sharp edges off the conductor strands as necessary for ease of insertion.
3. Prior to making connections, the conductor must be clean. If the conductor is weathered or blackened, clean strands thoroughly with wire brush or abrasive cloth.
4. Straighten several feet of conductor, removing set caused by reel.



5. Insert conductor ends into the joint. If the mark on the conductor is not at the end of the joint, and there is resistance to further entry, twist the joint on the conductor. This will work the compound between conductor strands and bleed air from the joint. (Joints are prefilled so additional AFL Filler Compound (AFC) should not be required.)
6. Select die size for compressing joint. Die size on die and die size marked on aluminum joint must be the same.
7. The joint will bow during compression unless reasonable care is taken to have about 15 ft. (4.5 m) of the conductor supported straight out from both ends of the joint such that the weight of the conductor does not hang unsupported from the end of the joint when compressing.



8. Make initial compression on either side of the joint starting at the "start knurl". Make the second compression on the opposite end of the joint at the other "start knurl". Continue making compressions to one end of joint overlapping the previous compression by approximately  $\frac{1}{4}$  die bite. Complete die closure is required for each compression. Go back and complete the compressions on the opposite end. The center portion of the joint, approximately one inch, is not compressed. It is recommended that die grooves be well lubricated with a light weight oil. Oil coating should be maintained during entire compression operation.
9. Compressed portion of the joint should have a smooth appearance. Remove flash, if present, with file or emery cloth.
10. Single piece compression joints (jiffy joints) for ACSR, ACAR, AWAC and alloy conductors follow the procedure above.

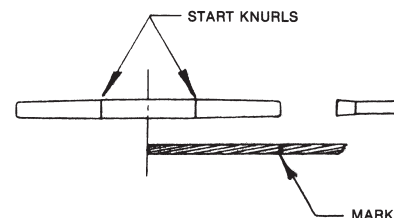


**CAUTION:** Follow installation instructions carefully. Improper installation can result in mechanical failure of the cable system and possible injury to persons handling or in the vicinity of the cable systems.

## Installation Instructions

### Compression Joints on Extra High Strength ACSR Conductors

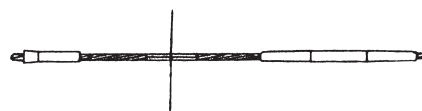
1. Measure back from each conductor end and mark at a distance equal to  $\frac{1}{2}$  the length of the aluminum joint.
2. Prior to making connections, the conductor must be wire brushed and accessory bore must be clean. If the conductor is weathered or blackened, carefully unlay aluminum strands for a distance equal to or greater than  $\frac{1}{2}$  the length of the aluminum joint and clean strands thoroughly with wire brush or abrasive cloth. Check accessory bore for foreign particles, removing if present.
3. Prior to cutting, serve the conductor with tape to help maintain the round contour making it easier to slide the end through the joint and filler sleeve.
4. Straighten several feet of conductor removing set caused by reel.



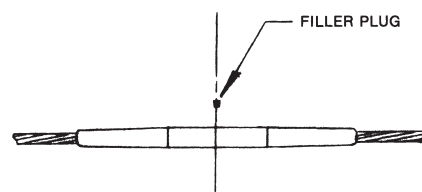
5. Slide the aluminum filler sleeve over conductor end beyond mark.
6. Slide the aluminum joint over other conductor end beyond mark. End with staked if filler sleeve first.
7. Cutback aluminum strands on each conductor end a distance equal to  $\frac{1}{2}$  the length of the steel joint plus one inch (25.4 mm). Do not nick steel strands. File burrs as necessary for ease of insertion.



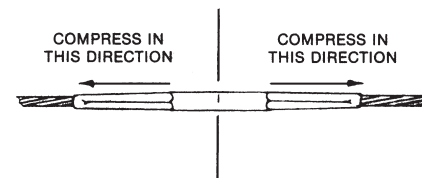
8. Insert ends of steel core into the steel joint making sure the ends butt solidly against center stop.
9. Select die size for compression steel joint. The die size on die and die size marked on steel joint must be the same.
10. Compress steel joint full length making initial compression over center stop. Overlap each successive compression by approximately  $\frac{1}{4}$  die bits. Complete die closure is required for each compression.



11. Remove tape from ends of aluminum strands. Slide the aluminum joint over the installed steel joint and center between the two marks on the cable.
12. Slide the aluminum filler sleeve into the aluminum joint until ends of the filler sleeve and aluminum joint are flush.
13. Inject AFL Filler Compound (AFC) into filler hole at end of joint until compound is visible at both ends of joint. Insert drive filler plug into hole and peen edge of hole over top surface of plug.
14. Select die size to compress aluminum joint. Die size for aluminum joint and die size marked on die must be the same.
15. The joint will bow during compression unless reasonable care is taken to have about 15 ft. (4.5 m) of the conductor supported straight out from both ends of the joint such that the eight of the conductor does not hang unsupported from the end of the joint when compressing.



16. Make initial compression on either side of joint starting at the "start knurl". Make the second compression on the opposite end of the joint at the other "start knurl". Continue making compressions to one end of the joint overlapping the previous compression by approximately  $\frac{1}{4}$  die bite. Complete die closure is required for each compression. Go back and complete the compression on the opposite end. The center portion of the joint is not compressed. It is recommended that die grooves be well lubricated with a light weight oil. Oil coating should be maintained during entire compression operation.
17. Compressed portion of the joint should have a smooth uniform appearance. Remove flash, if present, with file or emery cloth.



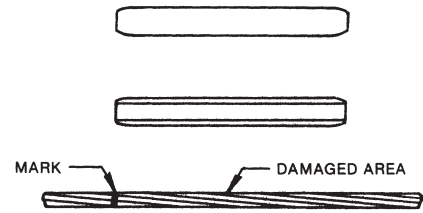
**CAUTION: Follow installation instructions carefully. Improper installation can result in mechanical failure of the cable system and possible injury to persons handling or in the vicinity of the cable systems.**



## Installation Instructions

### Standard Compression and Quick Compress® Repair Sleeves on ACSR, AAC, AAAC and ACAR Conductors

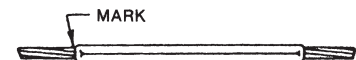
1. Compression Repair Sleeves can be used to restore the electrical and mechanical integrity of a conductor when no more than 1/3 of the aluminum strands are damaged.
2. Mark the conductor from the damaged area 1/2 the length of the repair sleeve.
3. Select die size for compressing the repair sleeve. The die size on the die and the die size marked on the repair sleeve must be the same.
4. Prior to making connections, the groove of the aluminum accessories and the conductor must be clean. If the conductor is weathered or blackened, clean strands thoroughly with wire brush. Check accessory groove for foreign particles, removing if present.
5. Coat the aluminum conductor with AFL Filler Compound (AFC) over the length to be covered by the repair sleeve.



6. Place the repair sleeve groove on the conductor adjacent to damaged area and slide other half (keeper) in place.



7. Slide repair sleeve assembly over the damaged area to the mark on the conductor.
8. Make the initial compression over the center portion of the repair sleeve. Make the second compression on one end overlapping the initial compression by 1/4 die bite. Make the third compression on the opposite end, overlapping the initial compression by 1/4 die bite. Continue making compressions to one end of the repair sleeve overlapping the previous compression by 1/4 die bite. Complete die closure is required for each compression. Go back and complete the compression on the opposite end.
9. The compressed repair sleeve should have a smooth uniform appearance. Remove flash, if present, with file or emery cloth.

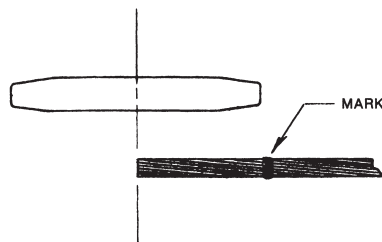


**CAUTION:** Follow installation instructions carefully. Improper installation can result in mechanical failure of the cable system and possible injury to persons handling or in the vicinity of the cable systems.

## Installation Instructions

### Standard Compression and Quick Compress® Jumper Connectors on ACSR, AAC, AAAC, ACAR, Alumoweld® and Steel Ground Wire Conductor

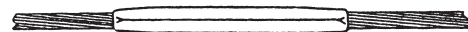
1. Measure back from each conductor end and mark at a distance equal to 1/2 the length of the aluminum jumper connector.
2. File burrs or sharp edges off the aluminum strands as necessary for ease of insertion.
3. Prior to making connections, the conductor must be wire brushed and accessory bores must be clean. If the conductor is weathered or blackened, carefully unlay aluminum strands for a distance equal to or greater than 1/2 the length of the aluminum jumper connector and clean strands thoroughly with wire brush. An alternate way to thoroughly clean the aluminum oxidation from the conductor is to use the ConductaClean® system. Check accessory bore for foreign particles, removing if present.



4. Inject AFL Filler Compound (AFC) into each end of jumper connector and on the conductor to insure that excess compound will be forced from the jumper connector when compressions are completed. Insert conductor ends into the jumper connector. If the mark on the conductor is not at the end of the jumper connector, and there is resistance to further entry, twist the jumper connector on the conductor. This will work the compound between conductor strands and bleed air from the jumper connector.
5. Select die size for compressing jumper connector. The die size on die and die size marked on aluminum jumper connector must be the same.
6. The jumper connector will bow during compression unless reasonable care is taken to have about 15 ft. (4.5 m) of the conductor supported straight out from both ends of the jumper connector such that the weight of the conductor does not hang unsupported from the end of the jumper connector when compressing.



7. Compress jumper connector full length making initial compression over center stop. Overlap each successive compression by approximately 1/4 die bite. Complete die closure is required for each compression.
8. Compressed jumper connector should have a smooth uniform appearance. Remove flash, if present, with file or emery cloth.

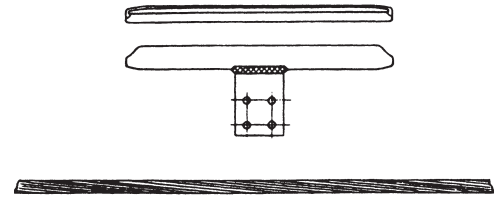


**CAUTION:** Follow installation instructions carefully. Improper installation can result in mechanical failure of the cable system and possible injury to persons handling or in the vicinity of the cable systems.

## Installation Instructions

### Open Run Tee Taps and Tee Connectors on ACSR, AAC, AAAC and ACAR Conductors

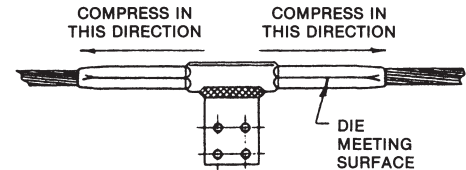
1. Remove the keeper.
2. Select die size for compressing the aluminum run. The die size on the die and die size marked on the aluminum run must be the same.
3. Prior to making connections, the groove of the aluminum accessories and the conductor must be clean. If the conductor is weathered or blackened, clean strands thoroughly with wire brush or abrasive cloth. Check the accessory groove for foreign particles, removing if present.
4. Coat the aluminum conductor with AFL Filler Compound (AFC) over the length to be covered by the tee tap.



5. Place run groove on conductor and slide the keeper in place.



6. Make initial compression on either side of run starting at the "start knurl". Make the second compression on the opposite end of the run at the "start knurl". Continue making compressions to one end of the tee overlapping the previous compression by approximately 1/4 die bite. Complete die closure is required for each compression. Go back and complete the compression on the opposite end.
7. Compressed portion of tee should have a smooth uniform appearance. Remove flash, if present, with file or emery cloth.
8. See page 131 for terminal installation instructions.



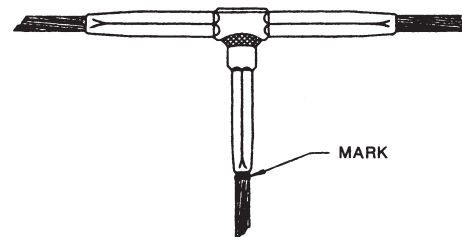
**CAUTION:** Follow installation instructions carefully. Improper installation can result in mechanical failure of the cable system and possible injury to persons handling or in the vicinity of the cable systems.

## Installation Instructions

### Open Run Tee Connectors on ACSR, AAC, AAAC and ACAR Conductors

#### Installation of Tee With Compression Branch

1. Install run tee as before per steps 1-7, page 144.
2. Select die size for compressing aluminum branch. The die size on die and the die size on the branch must be the same.
3. Insert conductor full depth into branch bore and mark conductor at end of branch. Remove conductor after marking.
4. Inject sufficient AFL Filler Compound (AFC) in the end of the branch bore and on the conductor to ensure that excess compound will be visible at the branch end when completely compressed.
5. Insert cleaned end of the conductor into the branch to the mark on the conductor.
6. Make initial compression starting at the "start knurl". Continue making compressions to mouth of the branch overlapping the previous compression by approximately 1/4 die bite. Complete die closure is required for each compression.
7. Compressed portion of the branch should have a smooth uniform appearance. Remove flash, if present, with file or emery cloth.



## INSTALLATION INSTRUCTIONS CONVENTIONAL COMPRESSION DEADENDS FOR ACSR CONDUCTORS

Deadend assemblies include aluminum body and steel deadend. Assemblies may also include jumper terminals with mounting hardware. The standard aluminum dead end terminal pad is angled at 15°, as is the pad on the jumper terminal. This allows jumper take off at either 60° or 90° from span conductor. Steel and aluminum components are stamped with die size, manufacturing date code and FARGO catalog number. Aluminum deadend body is also marked with conductor size and type. Jumper terminal is marked with conductor type and diameter range.

1. Prior to installation the conductor must be clean, straight and in lay. Any bend in conductor end section will tend to make the deadend body bow during compression.
2. Conductor tension grip must be of a size and type approved by the conductor manufacturer.
3. Remove the protective plastic and end caps. Be sure the bores of the fittings are clear of foreign matter. Do not remove any of the grit coating inside the steel barrel. Insert the conductor into the tapered end of the aluminum deadend body and slide the body over the conductor, allowing working room to install steel deadend on conductor core.
4. Cut-mark the aluminum strands at a distance, from conductor end, equal to the depth of the bore in the steel deadend barrel plus 1 inch to allow for elongation of the barrel during compression. Tape wrap the aluminum strands on the span side of the cut mark. Expose the steel core by removing the aluminum strands to the cut mark. **Do not nick the steel strands while cutting away the aluminum strands.**
5. Mount the SH die set specified on steel deadend barrel in press. Lubricate die faces and steel compression barrel with light-weight oil. Fully insert conductor core into the steel barrel, and make the first compression on the smooth portion of the steel barrel, adjacent the ribbed section. Continue compression to the end of the steel barrel. Overlap each crimp by an amount necessary to prevent the formation of ridges between adjacent crimps, and ensure complete die closure with each crimp. To minimize bowing of the steel barrel, keep barrel well lubricated and fully seated in one die half as dies close.
6. Mark the conductor at a distance from the aluminum strand cut end equal to the distance of the conductor crimp zone on the aluminum deadend body (distance from 3rd knurl mark to open end), plus 2 inches.
7. Mount the AH die set specified on the aluminum splice body in the press.
8. With a clean stainless steel wire brush (V-brush type recommended), aggressively brush the full conductor circumference from cut-end tape wrap to the mark applied in step 6. Immediately apply a generous coat of FARGO Joint Compound (UJC or HTJC) over the just-brushed conductor surface. Remove tape wrap. Brush clean and coat with joint compound this remaining conductor area.
9. Slide the aluminum deadend body over the steel deadend until snugly against the felt washer and forging eye collar. Remove and set aside the deadend body filler port plug.

CONTINUED ON REVERSE

10. With a caulking gun, inject **FARGO UJC or HTJC**, through the filler hole, until compound begins to flow out between the aluminum body and the felt washer. (See table below for approximate amount of compound required per deadend body). Hammer the aluminum plug / pin into the filler hole. Cut, or file, off any excess length of pin and peen end flush with aluminum barrel.
11. Lubricate AH die faces and deadend body between the set of knurl marks nearest the steel eye end with light-weight oil or clean plastic wrap material. (If plastic used as lubricant, ensure that it wraps completely around the splice tube, fully covering both die face during each compression).
12. Rotate the aluminum body to get the required jumper pad position with respect to the steel eye. Firmly seat deadend body in one die half and make the first compression at the knurl nearest the felt washer and continue compressions to the second knurl mark. Overlap each crimp by an amount necessary to prevent the formation of ridges between adjacent crimps.
13. Re-lubricate die faces and span-end crimp zone. Move press to the third set of knurl marks and make two overlapping crimps on the span side of third knurl mark.
14. At this point in the process (Steel deadend fully crimped on core and two overlapping crimps on span side of third knurl mark), MINIMUM tension may be applied to remove conductor slack and help keep deadend body straight during the remaining compressions.

**NOTE: DO NOT CRIMP DEADEND IN THE REVERSE DIRECTION**

15. Resume overlapping compressions to the span end of the deadend body. Keep the compression zone well lubricated and keep aluminum body seated in one die half as dies close.
16. As compressions are completed, wipe off excess joint compound as it is expelled from the deadend body. Remove any die flash and file or sand for a smooth appearance.
17. Refer to separate instruction sheet for installing the jumper loop terminal. Deadends installed at EHV will require terminal pad shielding if installed without jumpers. See separate instructions sheet supplied with jumper terminals.

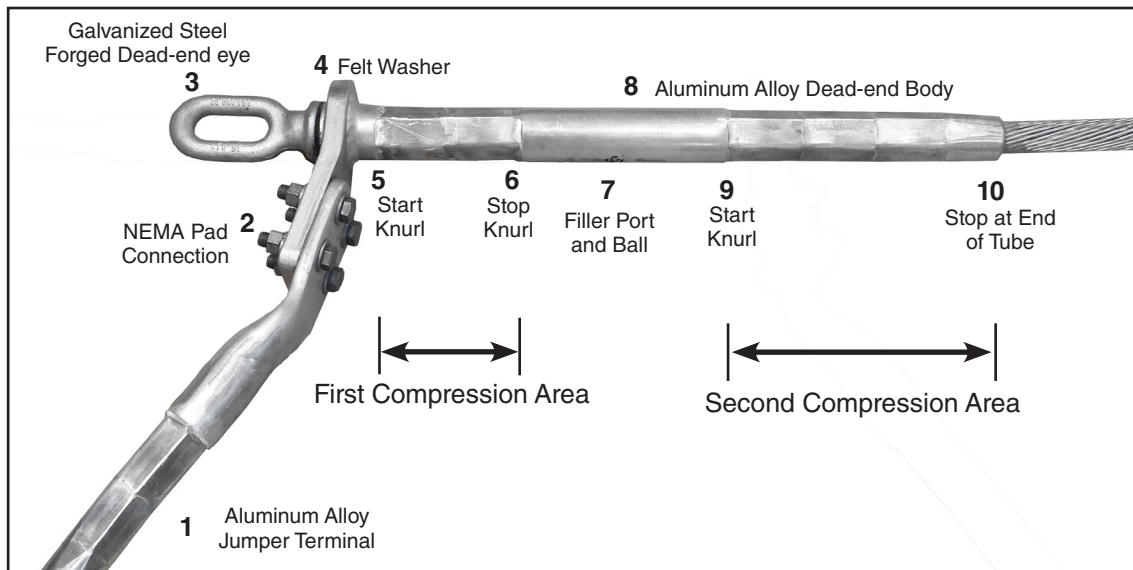
FARGO type UJC-16 Joint Compound required (cartridges per fitting)														
Fitting Type	Catalog Series	Aluminum (AH) Die Size												
		75	76	20	24	27	30	34	36	38	40	42	44	48
Deadend Body	12 / 15	0.05	0.08	0.15	0.24	0.34	0.50	0.56	0.62	0.82	0.90	1.10	1.20	1.32



## PLP Compression Dead-end & Jumper Terminal for ACSR & ACSS Conductors

Be sure to read and completely understand this procedure before applying product.  
Be sure to select the proper PREFORMED product before application.

**CAUTION: ACSR FITTINGS CANNOT BE USED ON ACSS CONDUCTORS**



### NOMENCLATURE

- |   |                                 |
|---|---------------------------------|
| 1. Aluminum Alloy Jumper Terminal       | 6. Stop Knurl                   |
| 2. NEMA Pad Connection                  | 7. Filler Port and Ball         |
| 3. Galvanized Steel Forged Dead-end Eye | 8. Aluminum Alloy Dead-end Body |
| 4. Felt Washer                          | 9. Start Knurl                  |
| 5. Start Knurl                          | 10. Stop at End of Tube         |

### TOOLS REQUIRED:

- |  |                  |
|--|------------------|
| • Compression Press with Dies          | • Pliers         |
| • Conductor Cutter/Strand Removal Tool | • File           |
| • Compression Filler Compound          | • Measuring Tape |
| • Caulking Gun                         | • Utility Knife  |
| • Hammer                               | • Ratchet Wrench |
| • Flat-head Screwdriver                | • Sockets        |

### CONSIDERATIONS:

This Application Procedure is valid for PLP Compression Dead-end Assemblies (CMPDE), Compression Jumper Terminal Assemblies (CMPTM) individually or the Full Compression Dead-end with Jumper Terminal (CMPDEJ) which contains both on ACSR Conductors. For ACSS Conductors, the high temperature version of these products is required. High temperature products are denoted by catalog numbers with an "HT" suffix (i.e., CMPDE-XXXXHT, CMPTM-XXXXHT, OR CMPDEJ-XXXXHT).



## PRECAUTIONARY MEASURES:

CAUTION: BEFORE INSTALLING ANY PRODUCTS, THE FOLLOWING PRECAUTIONS MUST BE TAKEN:

1. Ensure that the correct compression product has been selected for the conductor. Compare catalog numbers of the product with associated conductor size/range published in PLP literature.

2. Be certain that dies being used to compress the fittings match the engraved sizes marked on the product surfaces. **NOTE:** Dies will have markings on the surface of the die face or the edges of the die.

3. The compression press and dies **MUST** be inspected before use. Ensure that they are well lubricated, there are no hydraulic oil leaks, the press is of the correct size (60 or 100 Ton) to adequately compress the fittings, die surfaces mate completely when the press is fully extended, and that the dies are in good condition without significant damage or wear.

4. Before installation, the mating surfaces of the products to be installed, such as the inner bore of the aluminum tube, inner bore and outer surfaces of steel hardware, and NEMA Pad connections, must be inspected for surface defects, etc. If any significant irregularities exist, the products **MUST** be discarded or returned to PLP. **DO NOT INSTALL DEFECTIVE OR DAMAGED COMPRESSION HARDWARE!**

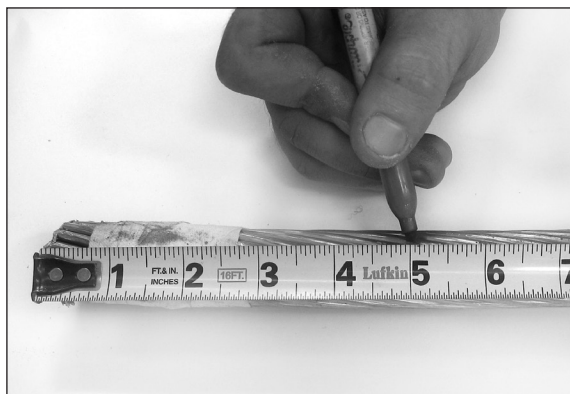
**NOTE:** FAILURE TO FOLLOW THE PRECAUTIONS, NOTES AND STEPS CONTAINED WITHIN THIS APPLICATION PROCEDURE REPRESENTS A MISAPPLICATION OF THE PRODUCT! THIS PRODUCT AND APPLICATION PROCEDURE ARE FOR ACSR & ACSS CONDUCTORS ONLY.

**Step #2** Remove the plastic plug from the aluminum body. Inspect the inside bores of the hardware to ensure that there are no sharp points or other defects.

**NOTE:** As the compound filler hole on the bottom of the aluminum body is drilled, there may be some flash or small aluminum bits on the inside of the tube which may make it difficult to insert the conductor. If this is present, please clear with a spare conductor piece.

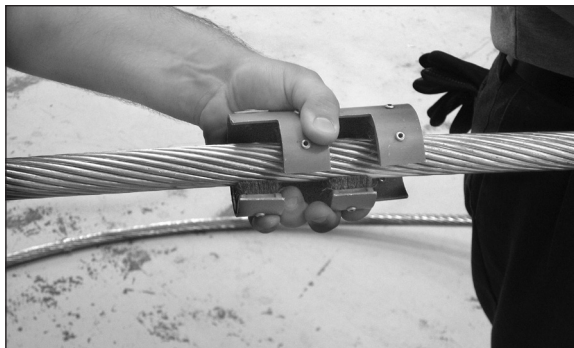


**Step #3** Measure from the first knurl on the steel eye to the end of the tube. Add 1" to this length to allow for aluminum strand expansion when the dead-end body is applied and mark this length to cut back the aluminum strands of the conductor.

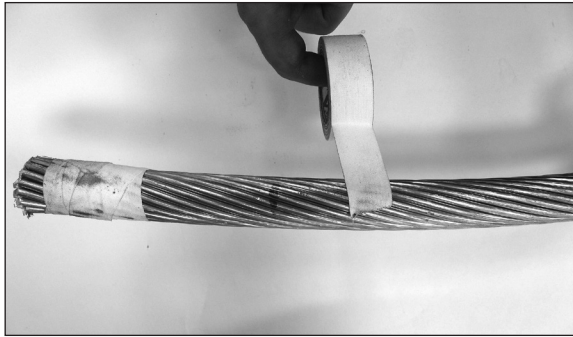


## DEAD-END ASSEMBLY APPLICATION

**Step #1** Begin by cleaning/wire-brushing the entire area to be covered by the compression hardware per your standard company practices. Check that no residue or surface particles remain.

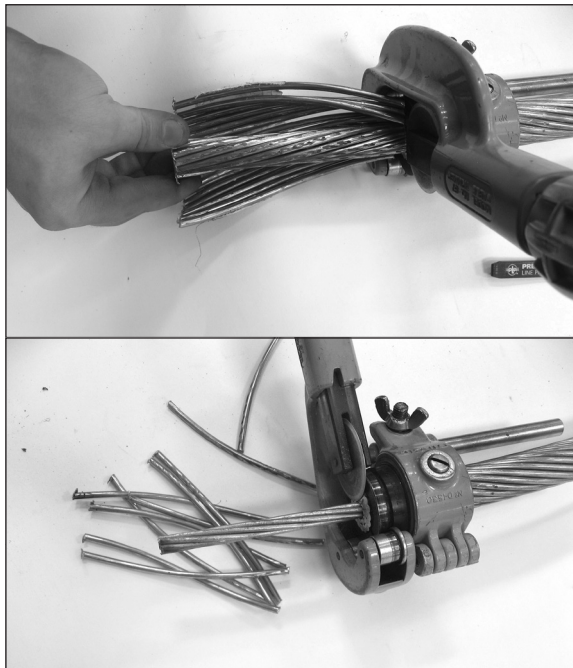


**Step #4** Apply tape approximately 1" back from the cutting mark to secure the aluminum strands and maintain the conductor diameter after the cut is made.



**Step #5** Cut the outer aluminum strands at the mark to expose the steel core.

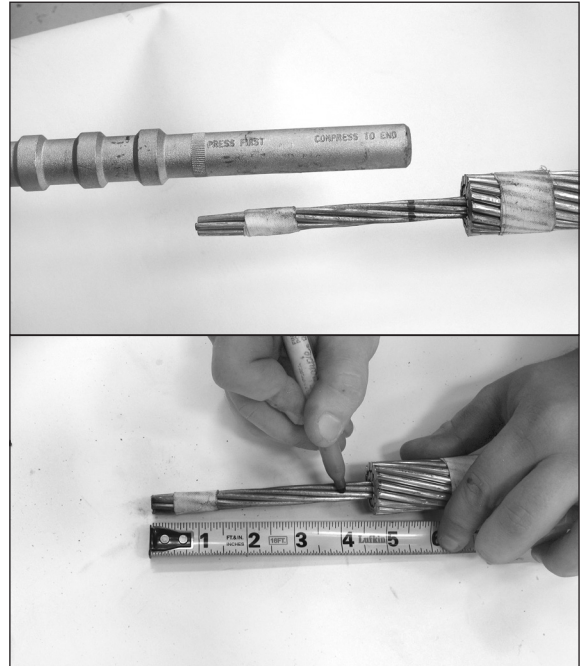
**NOTE:** Take care not to damage the steel core strands during this process.



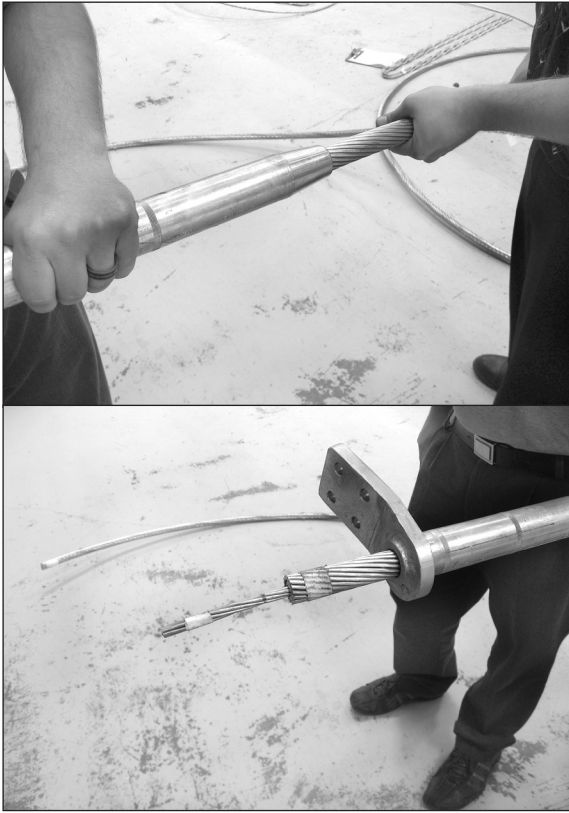
**PLP TIP:** To ensure no damage to the steel core and rapid installation, PLP recommends the use of a Utility Approved Trimming Tool. After strands are removed, any flash or burrs on the outside can be removed with a file.

**Step #6** Secure the conductor core strands with tape. Mark the depth of steel eye to the knurl on the steel core strands.

**NOTE:** Any deformation of the O.D. or outer strands caused during cutting may make it difficult to assemble the fittings.

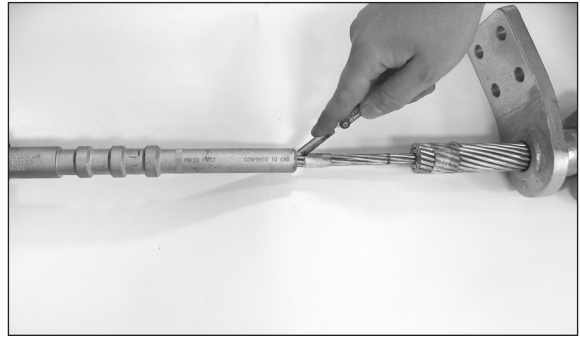


**Step #7** Apply the aluminum dead-end body to the conductor starting with the tapered end and pushing the tube over the conductor slightly past the terminal tab.

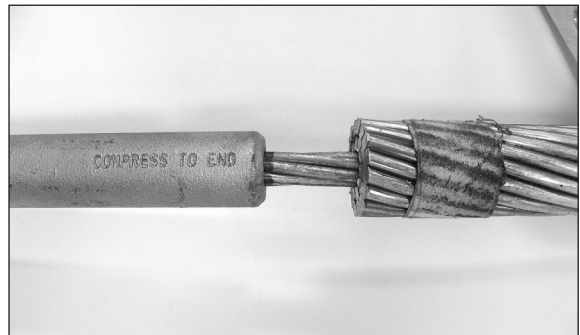


**PLP TIP:** Occasionally there will be curvature in the conductor from the reel. To assist in the application of the dead-end body, the aluminum tube can be leveraged to help straighten the conductor. To straighten, apply one quarter of the fitting length to the conductor and bend in the opposite direction of the curvature. Next, slide the fitting onto one half of its length and repeat the opposite bending process every one quarter of the length until the conductor is straightened and fully inserted through the tube. To assist installation, the tip of the conductor should be inserted slightly into the aluminum tube to secure the strands. The tape should then be removed as the strands are now captured by the dead-end body. To better slide the tube over the conductor, turn the tube with the lay of the conductor strands which helps keep them tight. Once the conductor is through, apply a new piece of tape to the end to keep the strands in place.

**Step #8** Once the outer dead-end body is on the conductor, remove the tape from the steel core to apply the steel dead-end eye. At this point, ensure that the felt washer is installed at the base of the steel dead-end eye.



**Step #9** Insert the steel core of the conductor into the bore of the steel dead-end eye. Make sure that the steel core goes to at least the mark or just past. Also ensure that roughly a 1" gap remains between the aluminum strands of the conductor and the edge of the steel dead-end eye as this allows room for material expansion underneath the press.



**Step #10** Prepare the compression press and install the die sizes marked on the steel dead-end eye.

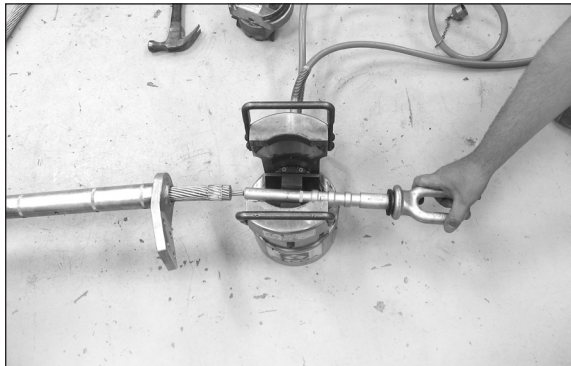


**Step #11** Ensure that the compression die surfaces are clean and have no burrs: this is the most critical factor in applying proper compressions. If it assists the application, lubricate the compression dies with desired lubricant and then wipe the dies clean with a cloth to ensure that the dies slide easily together and that the fitting hardware material slides underneath the dies. Excessive lubricant that is left on the bottom die only can cause curvature of the steel eye during compression.

**NOTE:** These steps are taken to prevent curvature.



**Step #12** Insert the assembly into the compression press. Ensure the proper alignment of the steel eye with the compression dead-end body.



### Step #13

Starting at the "Press First" knurl, compress the steel eye onto the steel conductor core, applying compressions first at the knurl and working out towards the conductor.

**NOTE: FULL COMPRESSIONS (WITH THE DIES PUSHED TO THEIR MAXIMUM EXTENT IN THE PRESS) MUST BE APPLIED TO THE ENTIRE PORTION OF THE STEEL EYE FROM THE KNURL ALL THE WAY TO THE END. FAILURE TO APPLY FULL COMPRESSIONS TO THE ENTIRE PORTION OF THE STEEL EYE FROM KNURL TO END REPRESENTS A MISAPPLICATION OF THE PRODUCT!**



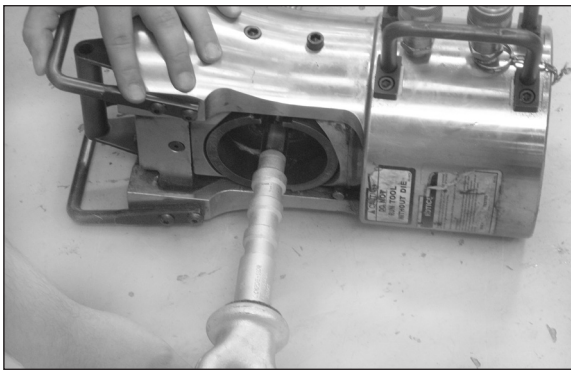
**PRECAUTION: TO BE A CORRECT APPLICATION, COMPRESSION CURVATURE MUST BE KEPT TO A MINIMUM, PREFERABLY LESS THAN 1/2 THE ALUMINUM TUBE DIAMETER FROM THE CENTERLINE. FOR THE STEEL, CURVATURE SHOULD NOT BE VISIBLE. EXCESSIVE COMPRESSION HARDWARE CURVATURE IS A MISAPPLICATION OF THE PRODUCT.**

**PLP TIP:** To prevent curvature, the following steps can be taken:

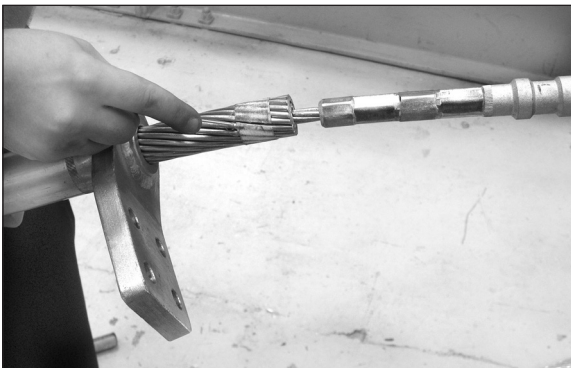
1. Evenly lubricate the compression dies and then wipe the dies clean with a cloth. **PLP Tip: Excessive lubricant that is left on the bottom die only can cause curvature of the steel eye during compression.** Curvature occurs due to an unequal friction and material expansion between the top and bottom dies of the press.
2. As an ALTERNATIVE to traditional lubricants, the PLASTIC BAG originally containing the compression hardware may be reapplied over the fittings and then compressed. The Bag in this instance serves the same purpose as a lubricant and it allows equal expansion of the material underneath the compression press.
3. Steady the material when applying compressions. Apply compressions slowly and ensure that the hardware runs through the centerline of the press.
4. Rotate the hardware or press by 90° between compressions. This step reduces curvature, but **NOTE:** This also increases the "flash" and sharp surfaces left on the compressed tube. Please check with your local utility practices when taking this step as some suggest this step and others will not approve it.
5. Overlap succeeding compressions by approximately one quarter of their lengths to ensure they are evenly applied and compressed to the fullest extent.
6. Slight curvature of steel hardware may be straightened using the press; this procedure is NOT acceptable for the aluminum tube.

**Step #14** Per the practice of certain utilities, the compression press **may** be rotated 90 degrees for each succeeding compression to help prevent curvature. This is not a necessary step as there are other options to mitigate this curvature such as ensuring adequate press lubrication and maintenance, using adequate press force by slightly overlapping compressions, or by compressing over the plastic bag that the hardware came in instead of applying additional lubrication.

**NOTE: Curvature should be avoided on both the steel core as well as the aluminum dead-end body where it is much more problematic.**



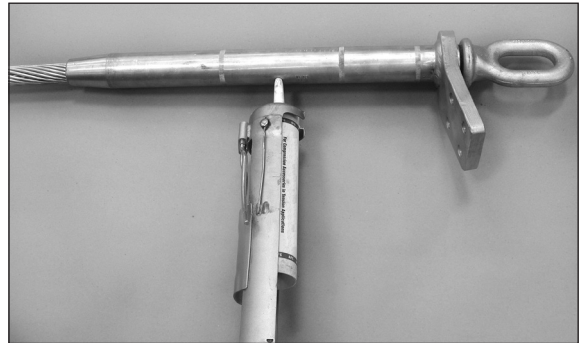
**Step #15** Remove the tape from the aluminum strands. Check that a gap remains between the aluminum strands and the eye.



**Step #16** Slide the aluminum body back against the felt washer and steel eye making sure to align the hardware properly.

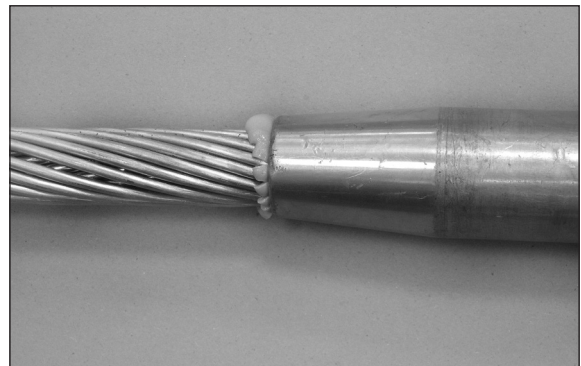


**Step #17** Apply appropriate inhibitor (filler) compound through the filler hole in the aluminum body. **For ACSS Conductors, the inhibitor must be rated for temperatures up to 250°C.**

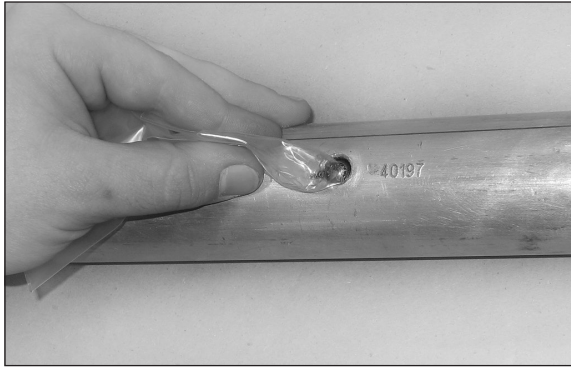


**Step #18** Cease application when the filler compound seeps out the tapered “conductor facing” end of the hardware.

**NOTE: When installing compression hardware correctly, the inhibitor compound will continue to ooze out the end as the compressions are applied from the “Press First” knurl outward toward the tapered end and conductor.**

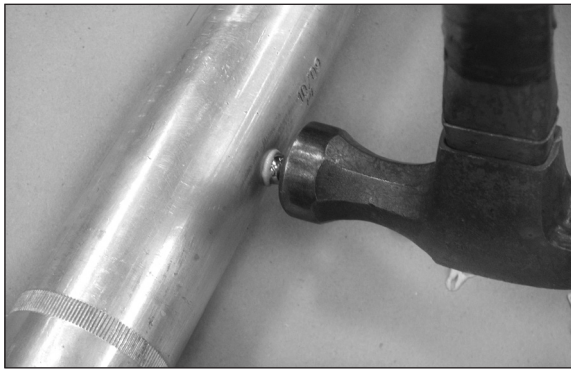


**Step #19** Seal the filler hole by inserting the stainless steel ball.

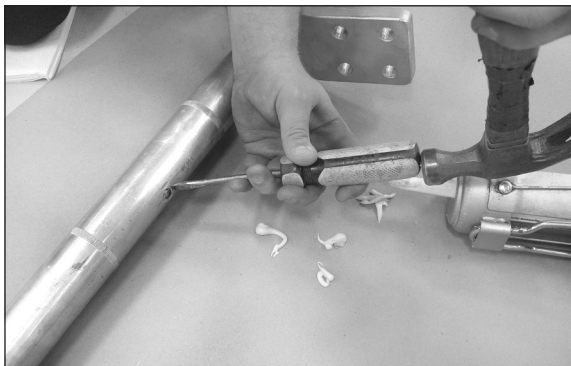


**PLP TIP:** The plastic bag containing the ball should be used to more easily position the ball into place than by hand and to avoid dropping.

**Step #20** Tap the ball into the filler hole using a hammer until the ball is flush with the OD of the aluminum tube. Remove the plastic bag if used.



**Step #21** Peen over the aluminum edges of the filler hole with a hammer and flat head screwdriver to secure the ball into place.

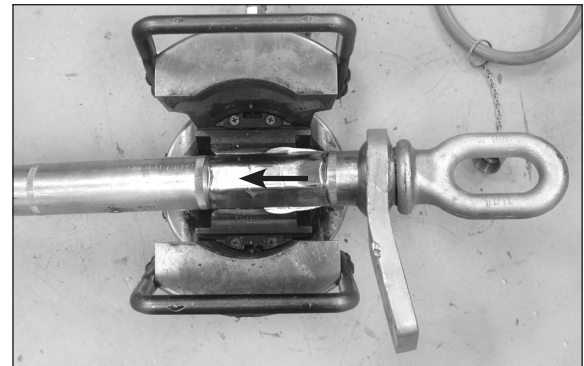


**Step #22** While ensuring alignment of all hardware, insert the dead-end body into the compression press at the "Press First" knurl directly over the forged steel eye at the END of the aluminum body.



**Step #23** Compress the aluminum body over the steel eye from the "Press First" knurl to the "Stop" knurl.

**NOTE:** The section of the tube marked "DO NOT PRESS" should not be compressed.



**Step #24** After the first section of aluminum body over the steel eye portion is fully compressed, move towards the tapered end/conductor to the second "Press First" knurl.





**Step #25** Compress the conductor from the “Press First” knurl out towards the conductor, applying compressions all the way to the tapered end.

**NOTE:** The special Dual “Graduated Taper” of the aluminum tube end is designed to be compressed over. Doing so gradually reduces the strain on both the conductor and hardware and makes the connection more resistant to vibration and future strand damage. PLEASE DO NOT SKIP THIS STEP!



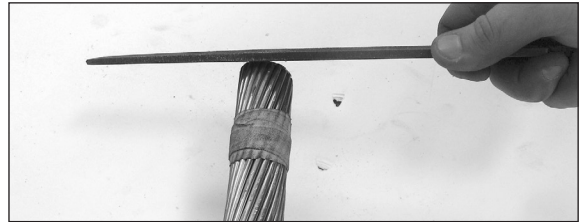
## JUMPER TERMINAL APPLICATION

**Step #26** Begin by cleaning/wire-brushing the entire area to be covered by the compression per your standard company practices. Take caution that no residue or surface particles remain. Conductor strands may be taped to help hold in place.



**Step #27** If necessary, file down the conductor to ease insertion into the jumper terminal.

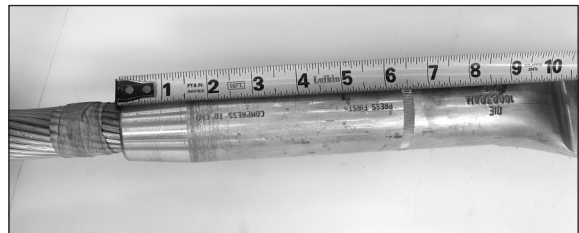
**PLP TIP:** In order to maintain the O.D. of the conductor and ease installation, PLP suggests that the outer aluminum strands should be first trimmed back using a Utility Approved Trimming Tool. After, the steel core should then be trimmed back even with the aluminum strands per your standard company practices.



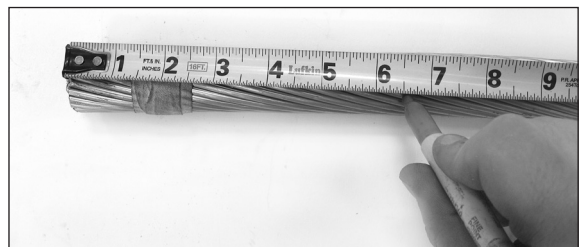
**Step #28** Remove the plastic plug from the aluminum body. Inspect the inside bores of the hardware to ensure that there are no sharp points or other defects.



**Step #29** Measure the terminal from the taper to the knurl to check depth.

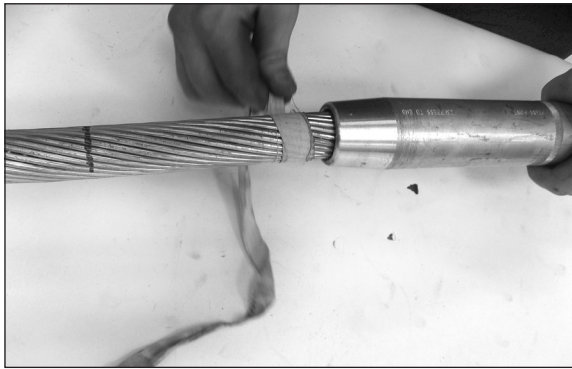


**Step #30** Mark the conductor with the measurement to ensure that the jumper is inserted to the adequate depth.

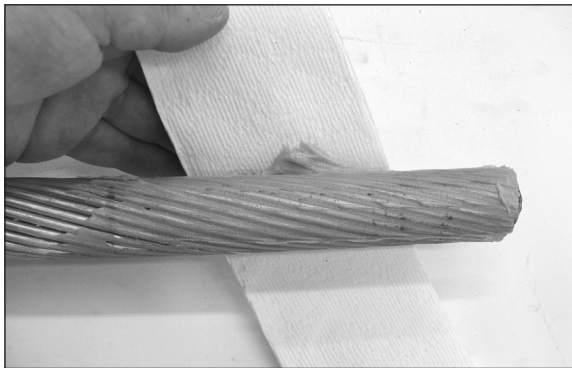




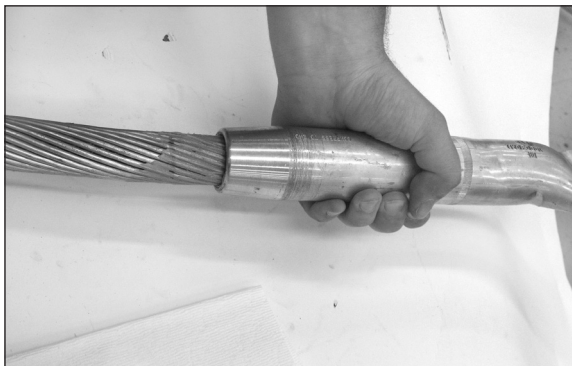
**Step #31** Remove the conductor tape.



**Step #32** Apply inhibitor (filler) compound to the aluminum conductor strands back to the mark. **For ACSS Conductors, the inhibitor must be rated for temperatures up to 250°C.**

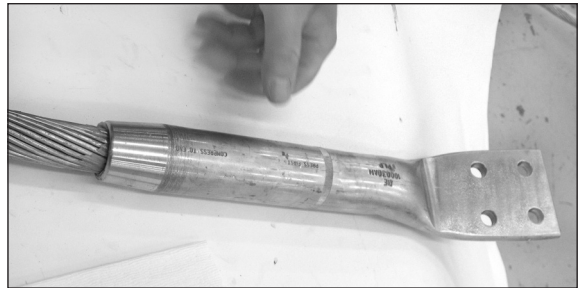


**Step #33** Insert the conductor fully into the jumper terminal.



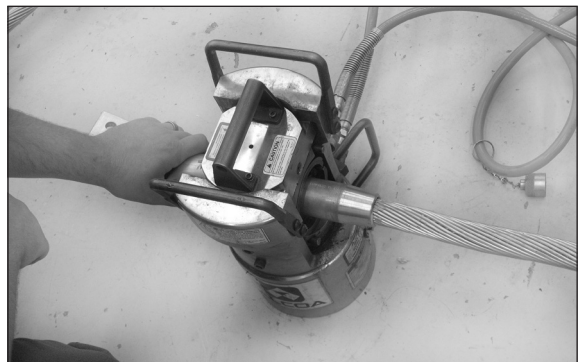
**Step #34** Ensure that the conductor is aligned and seated properly, and that the tab is facing the correct direction for your application.

**NOTE:** To assist installation and better slide the tube over the conductor, turn the tube with the lay of the conductor strands which helps keep them tight.

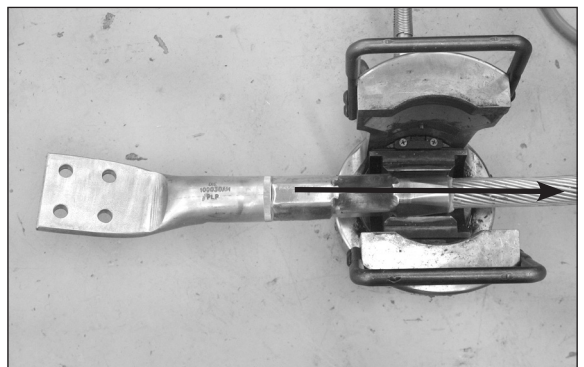


**Step #35** Insert the jumper terminal into the press, and compress the conductor starting from the "Press First" knurl moving out to the edge of the tapered end of the tube.

**NOTE: FOR MORE DETAIL ON COMPRESSING PROPERLY, REFER TO THE INSTRUCTIONS FOR THE DEAD-END.**



**Step #36** If desired by the utility, the jumper terminal may be rotated 90° for each succeeding compression until the end of the tube is reached.



## FULL DEAD-END ASSEMBLY APPLICATION

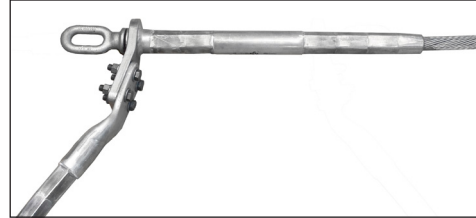
**Step #37** Check once again to ensure that the pad connections are free from damage and any residue has been removed. Thoroughly wire brush the pads of both the dead-end and the jumper to ensure that oxidation build up is removed.

**Step #38** Coat the dead-end terminal pad with conductive electrical joint compound. Spread the compound evenly over the pad to ensure total coverage.

**Do not use the inhibitor (filler) compound that is used to fill the compression dead-end before compressions.**

**Step #39** To install the jumper terminal pad to the compression dead-end pad and complete the full dead-end assembly, insert a flat washer onto each bolt and thread through the pad. On the opposite end, apply the other flat washer, then lockwasher, then nut, and hand tighten. Once tight, torque bolts to at least 40 ft-lbs, revisiting each bolt several times to ensure that the pad is fully compressed and that all bolts are tightened to the proper specification.

**Step #40** Once the tabs are properly installed and the dead-end and jumper terminals are properly compressed onto the conductor, the full assembly application is complete.





## SAFETY CONSIDERATIONS

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. **FAILURE TO FOLLOW THESE PROCEDURES MAY RESULT IN PERSONAL INJURY OR DEATH.**

This product is intended for a single (one time) use and for the specified application.  
**Do not reuse or modify this product under any circumstances.**

This product is intended for use by trained technicians only. **This product should not be used by anyone who is not familiar with, and not trained to use it.**

When working in the area of energized lines, extra care should be taken to prevent accidental electrical contact.

For proper performance and personal safety, be sure to select the proper size PREFORMED™ product before application.

PREFORMED products are precision devices. To insure proper performance, they should be stored in cartons under cover and handled carefully.



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