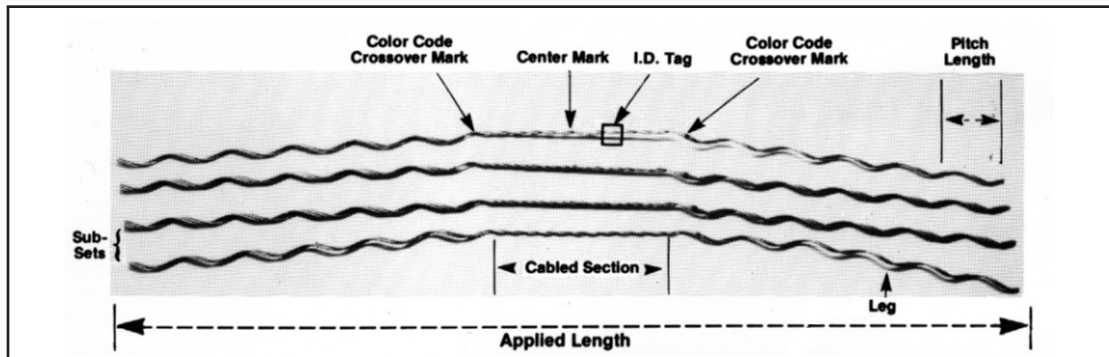




Splice/Dead-end Shunt

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



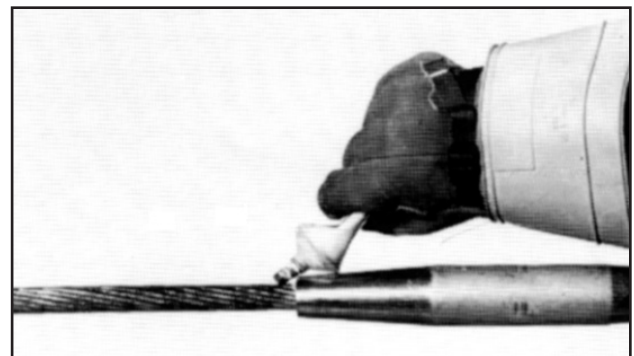
Step 1 GENERAL

The Splice/Dead-end shunt is designed to be used on existing transmission lines which are being re-rated for higher loads (electrical current), or which have experienced thermal issues with compression splices or dead-ends.

When used as a dead-end shunt, little or no mechanical (tension) reinforcement is provided by the shunt. In this application, the shunt will carry 100% of the electrical current in the conductor.

When applied over a compression splice, the shunt is designed to hold from 50% to 60% of the conductor rated breaking strength (for conventional ACSR conductors), and carry 100% of the electrical current in the conductor.

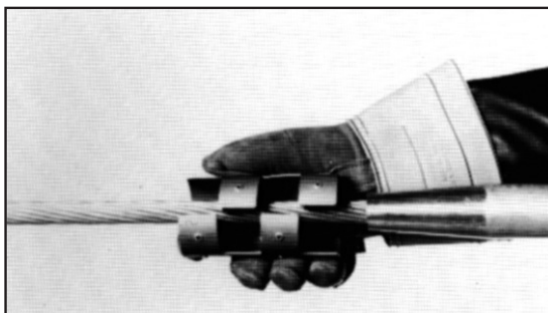
Step 3 Apply a liberal amount of conductive oxide inhibitor to the cleaned sections of conductor as shown below.



Step 2 CONDUCTOR PREPARATION

The same conductor preparations must be followed for applications over a compression dead-end or a compression splice.

Thoroughly clean the entire length of conductor on both sides of the compression dead-end or compression splice that will be covered by the leg sections of the shunt. Be sure to clean the entire circumference of the conductor with a wire brush.



WIRE BRUSH ENTIRE AREA

Step 4 APPLICATION OVER COMPRESSION SPLICE (HAND APPLICATION)

PLP Tip: Subset Application Sequence

It is important that the shunt's subsets be applied to the conductor or strand to avoid excessive gaps between each subset. Too much gap could make it difficult to completely apply all the individual rods of the last subset.

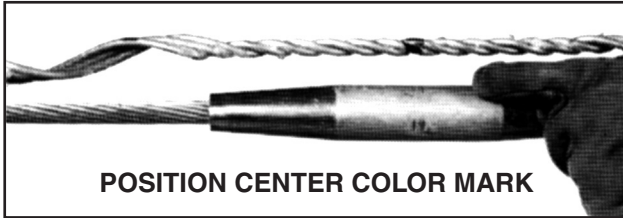
By alternately applying one subset into a previously applied subset, excessive gap is minimized. Applying away from another subset will produce excessive gaps.

Excessive gaps can also be avoided by applying all subsets on the conductor or strand at the same time in a rotating fashion. However, with large, long rods or with hot sticks, this procedure can be difficult.

Step 5 Select one of the subsets that has the most individual rods as the first subset to be installed. If they all have the same number of rods, select any subset.

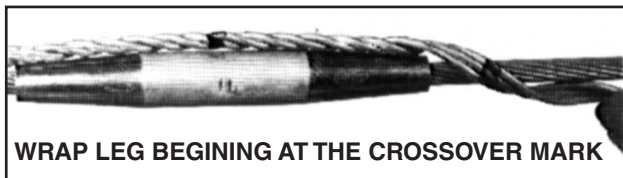
Position yourself so you face the splice and determine which are the right and left sides for identification purposes.

Position the center color mark of the cabled section over the center of the automatic (compression) splice as shown.



POSITION CENTER COLOR MARK

Step 6 While holding the center section of the subset more or less parallel to the splice, wrap the leg on the conductor or strand beginning at the crossover mark.



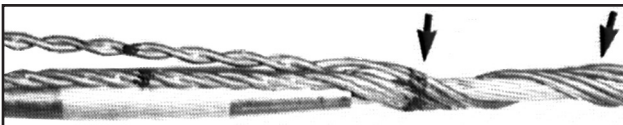
WRAP LEG BEGINING AT THE CROSSOVER MARK

Step 7 This first subset should be completely applied on both sides, making sure the leg ends are snapped into place, before proceeding with the application of remaining subsets.



SNAP LEG ENDS INTO PLACE

Step 8 Select a subset that has the **least** amount of individual rods for the next application and center it over the splice next to the subset already applied. Begin the leg application on the **right** side so it applies **into** the subset already applied as shown by the arrows. Apply this side completely.



SELECT A SUBSET, BEGIN LEG APPLICATION ON RIGHT SIDE & APPLY LEG COMPLETELY TO THIS SIDE

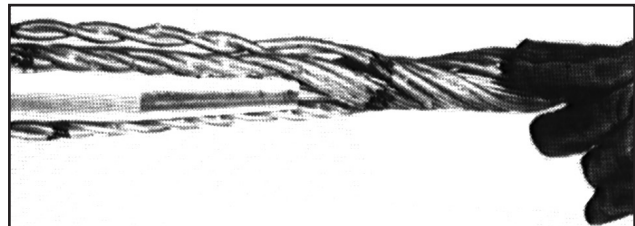
Step 9 On the other side of the splice, apply **only 1 or 2 wraps (itches)** of the second subset or only enough to secure the subset from moving excessively.

You will note that this side of the subset is applying away from the first subset already applied. This could create an excessive gap at the leg ends if it is fully applied at this time. **DO NOT** fully apply it yet.



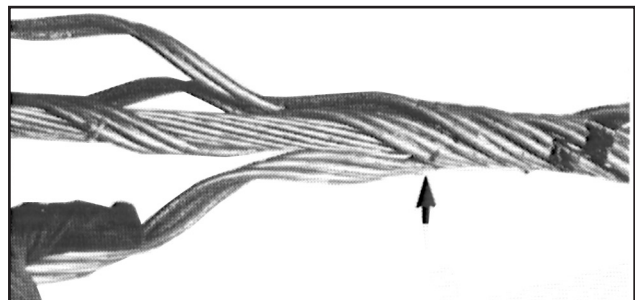
SECURE THE SUBSET SO IT DOES NOT MOVE EXCESSIVELY

Step 10 Repeat Steps 8 and 9 until you come to the last subset. Center the last subset and apply the right side leg completely as before. The entire **right** side of the shunt should be complete.



CENTER THE LAST SUBSET AND APPLY THE RIGHT LEG COMPLETING THE RIGHT SHUNT

Step 11 Completely apply this subset on the **left** side. Note this subset now applies **into** the first subset originally applied, as shown by the arrow.

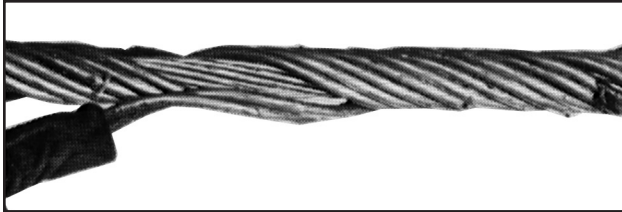


APPLY SUBSET ON THE LEFT SIDE

Step 12 Determine which of the remaining unapplied subsets will apply **into** the last one applied. Wrap this subset completely.

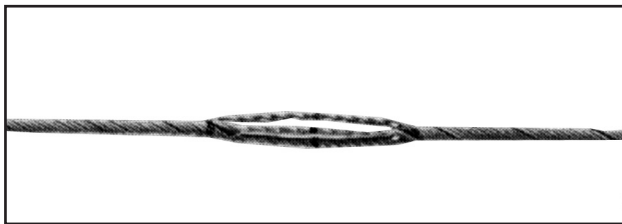
Use this procedure to wrap all the remaining subsets one by one. Note you are applying the subsets on the left side in the reverse order from the right side.

Make sure all leg ends are snapped into place.



WRAP REMAINING SUBSETS ONE BY ONE MAKING SURE LEG ENDS ARE SNAPPED INTO PLACE

Step 13 Completed application of splice shunt.



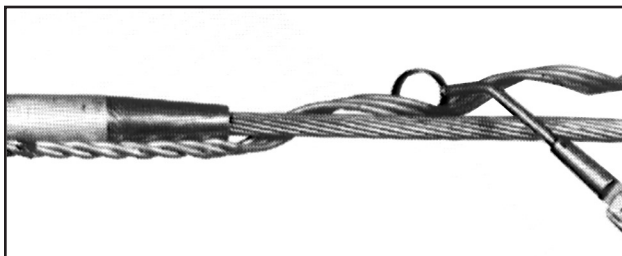
COMPLETED APPLICATION

Step 14 APPLICATION OVER COMPRESSION SPLICE (HOT STICK APPLICATION)

Read the Hand Application Steps 4 – 13 for guidance before attempting hot stick application.

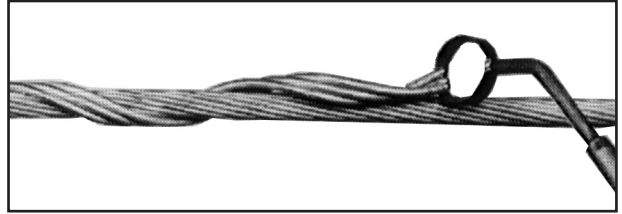
After proper conductor or strand preparation (Step 4), select the first subset which has the most individual rods. Position yourself so you're facing the splice and use a holding tool to secure the subset and center it over the splice.

Use an Applicator Ring to wrap on the legs of **both** sides of the subset.



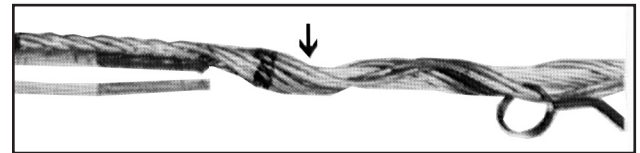
USE APPLICATOR RING TO WRAP THE LEGS OF THE SUBSET ON BOTH SIDES

Step 15 Use the beveled edges of the Applicator Ring to snap the leg ends into place.



USE APPLICATOR RING TO SNAP LEG ENDS INTO PLACE

Step 16 Select the second subset (least number of individual rods), secure it with the holding tool and center it over the splice behind the previously applied subset. Use the Applicator Ring to completely apply the leg on the right side so it applies into the subset already applied.



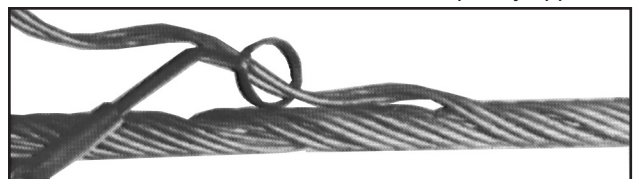
SNAP LEG ENDS INTO PLACE

Step 17 Apply only 1 or 2 pitches on left side of splice to secure this subset. A holding tool could also be used to temporarily secure this subset. **DO NOT** apply the rest of the left side at this time.



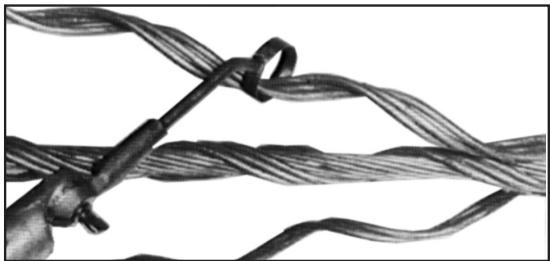
APPLY 1 OR 2 PITCHES TO LEFT SIDE OF SPLICE SECURING THIS SUBSET

Step 18 Repeat steps 16 & 17 with the remaining subsets until you are left with the last subset. Center, secure and apply the **right** side as before and then completely apply the **left** side of the legs at this time. You will now have all subsets on the **right** side completely applied and the first and last subsets on the **left** side completely applied.



CENTER, SECURE & APPLY LAST SUBSET THEN COMPLETELY APPLY LEFT SIDE LEGS

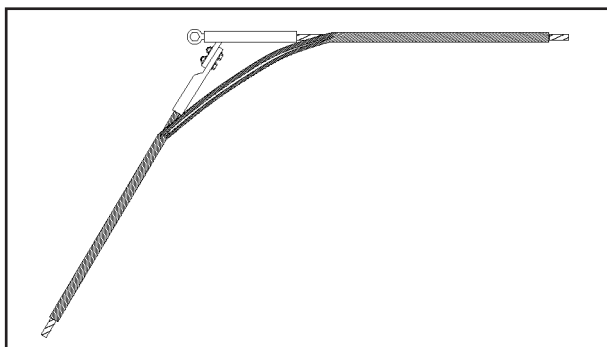
Step 19 To complete the application, wrap the remaining subsets onto the conductor or strand in a sequence that allows them to apply into the subsets already applied. Once all leg ends have been snapped into place, the application is complete.



WRAP REMAINING SUBSETS ONTO CONDUCTOR OR STRAND

Step 20 APPLICATION OVER COMPRESSION DEAD-END

Position the cabled section of the shunt so that it transitions smoothly from the conductor in the span to the conductor in the jumper loop.

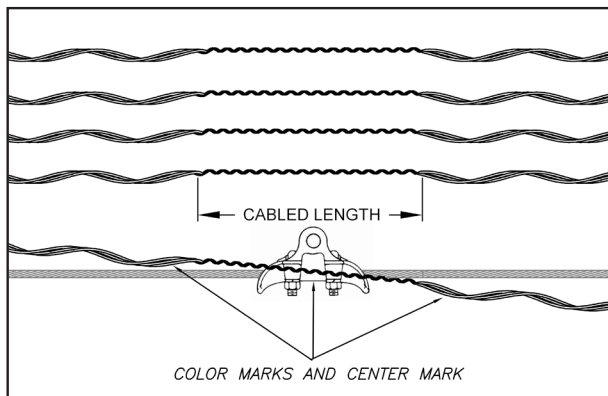


SHUNT TRANSITIONS SMOOTHLY FROM BOTH THE SPAN TO JUMPER LOOP CONDUCTORS

Step 21 Apply the legs of the shunt in subsets to the conductor in the span and the conductor in the jumper loop following Steps 4-13 for hand application or Steps 14-19 for hot stick application.

Step 22 APPLICATION OVER SUSPENSION CLAMP

Position the cabled sections of the shunt so that they are evenly spaced around the outside of the suspension clamp.



APPLICATION OF SHUNT OVER SUSPENSION CLAMP

Step 23 Apply the legs of the shunt in subsets to the conductor following Steps 4-13 for hand application or Steps 14-19 for hot stick application.

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.



PREFORMED LINE PRODUCTS

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