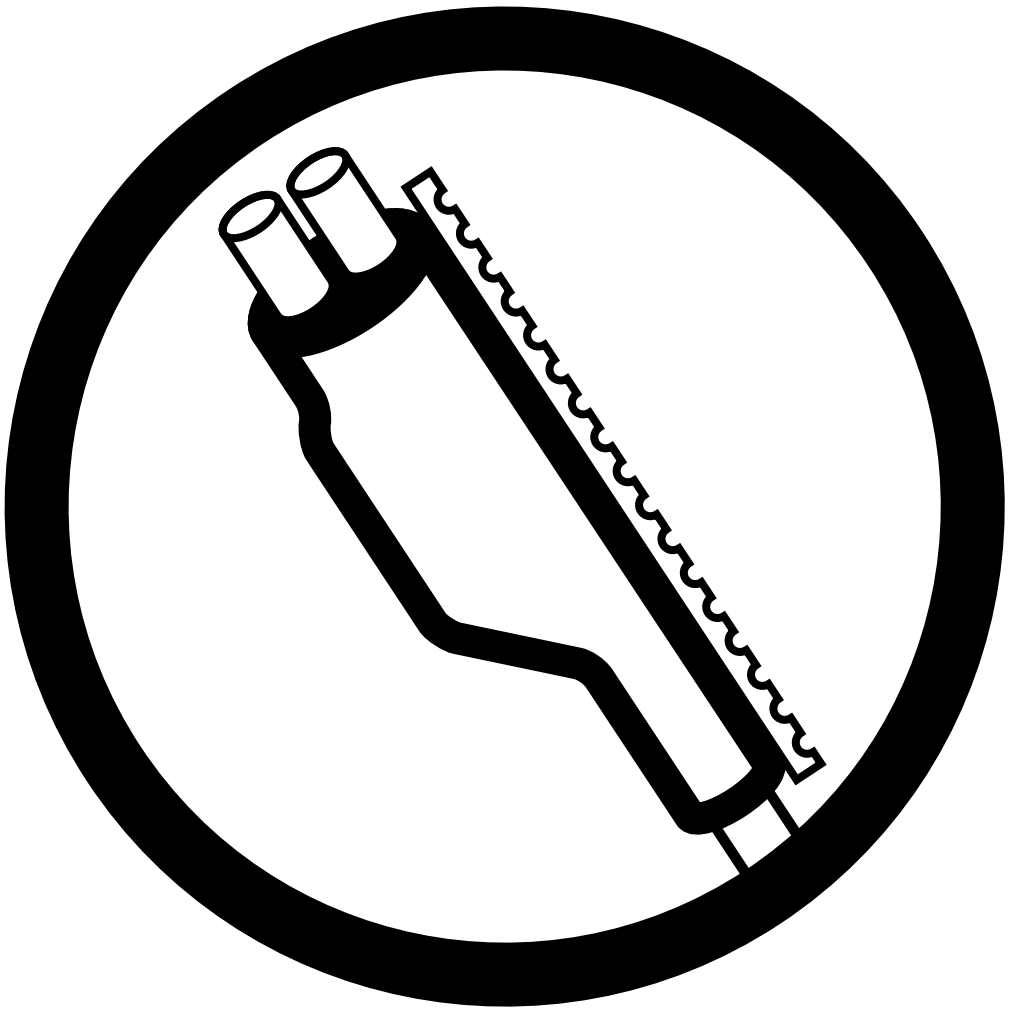
CRSM-CT

Insulation Repair and Cable Tap Encapsulation for Solid Dielectric Cables up to 1000V or Outer Jacket Sheath Repair on all Cables



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Electrical Products Division
300 Constitution Drive
Menlo Park, CA 94025-1164

PII-51069, Rev AC
DCR C25320
PCN 391941-000
Effective Date: November 1992

Suggested Installation Equipment (not supplied with kit)

- Cable preparation tools
- Raychem P42 cable preparation kit or cable manufacturer approved solvent
- Clean, lint-free cloths
- Raychem recommended torch
- Electrician's tape
- Raychem PowerSleeve™ or connector(s) or lug(s) and installation tools

Recommended Raychem Torches

Warning: Torches and accessory equipment should be checked for leaks before using.

Install heat-shrinkable cable accessories with a "clean burning" torch-- a propane fuel torch that does not deposit soot or contaminants on the product.

Clean burning torches include the Raychem FH-2609, FH-2629 (uses refillable propane cylinders) and FH-2616A1 (uses disposable cylinder).

Adjusting the Torch

Warning: When using gas torches, follow the safety precautions from the torch manufacturer or standard, safe work practices.

Adjust regulator and torch as required to provide an overall 12-inch bushy flame. The FH-2629 will be all blue, the other torches will have a 3- to 4-inch yellow tip. Use the yellow tip for shrinking.

Regulator Pressure

FH-2616A1	Full pressure
FH-2609	5 psig
FH-2629	15 psig

General Shrinking Instructions

- Apply outer 3- to 4-inch tip of the flame to heat-shrinkable material with a rapid brushing motion.
- Keep flame moving to avoid scorching.
- Unless otherwise instructed, start shrinking tube at center, working flame around all sides of the sleeve to apply uniform heat.

Note: Inspect installation. Reheat any flat spots or wrinkles paying particular attention to the back of the product being applied.

1. Select application.

CHOICE 1	CHOICE 2
Insulation/Jacket Repair	**Cable Tap Encapsulation**
Go to Step 2 below.	**Go to Step 8, page 4.**

CHOICE 1

Insulation/Jacket Repair

2. Product selection.

Verify kit selection using Figure 1 and the cable diameter dimensions in Table 1.

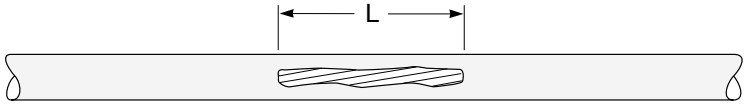

Figure 1

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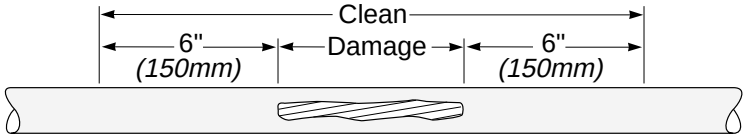
Table 1

Kit	Max Damage Length (L)	Primary Insulation on1/C Solid Dielectric Cable to 1kV: Nominal Cable Range	Primary Insulation on1/C Solid Dielectric Cable to 1kV: Cable Diameter Range	Outer Jacket (Sheath) Repair and General Use: Cable Diameter Range
CRSM-CT-34/10-150	3" *(75mm)*	#8-2/0	0.25"-0.60" *(6-15mm)*	0.25"-1.20" *(6-30mm)*
CRSM-CT-53/13-200	4" *(100mm)*	3/0-400	0.60"-0.95" *(15-24mm)*	0.60"-1.80" *(15-46mm)*
CRSM-CT-84/20-250	6" *(150mm)*	500-1000	0.95"-1.40" *(24-36mm)*	0.95"-2.70" *(24-69mm)*

3. Clean cable.

Using an approved solvent, clean and degrease the damaged area and the cable on either side of the damage as shown. Remove any sharp points from the area to be covered with CRSM.



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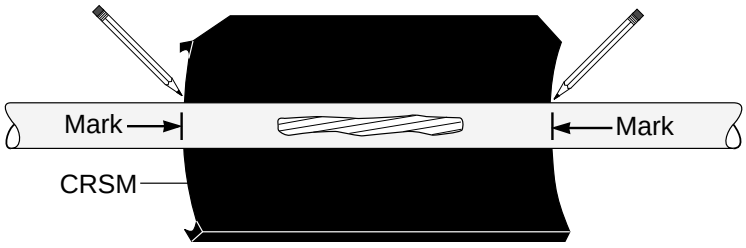
4. Center sleeve; mark cable.

Center sleeve over damaged area. Mark cable as shown.

Remove the release paper from the CRSM.



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5. Slide channel over rails.

Butt the rails together and slide the channel over the rails. Center sleeve between marks.

Note: Channel must extend beyond the sleeve edge as shown.

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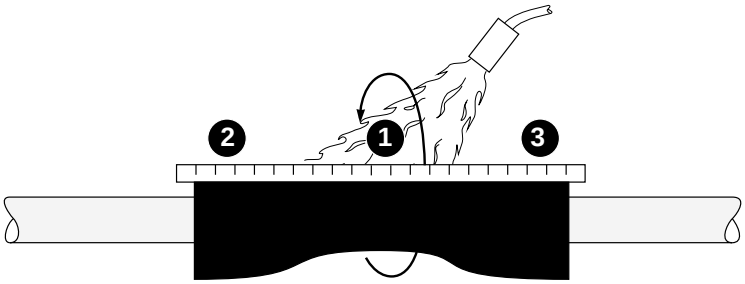
6. Shrink sleeve.

Preheat the metal channel area for approximately 15 seconds. Continue shrinking at the center (1), working torch with a smooth brushing motion around the sleeve. After the center portion shrinks, work torch as before toward one end (2), then to the opposite end (3).



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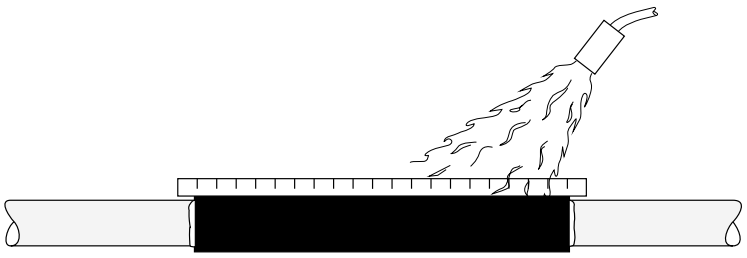
7. Post-heat sleeve.

Post-heat the entire length, concentrating on the metal channel area, until the CRSM conforms tightly to the cable, without wrinkles, and adhesive flows from each end.

This completes the installation. Discard black cloth tape and sealant.

Note: Allow to cool before moving or placing in service.



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CHOICE 2

Cable Tap Encapsulation

8. Product selection.

Verify kit selection using Figures 2-5 and the cable diameter dimensions in Table 2.

Table 2: Cable Tap Encapsulation "H" or WYE

Kit	Nominal Cable Range Main Cable	Nominal Cable Range Tap Cable	Max. Connection Length (L)
Compression Connector			
CRSM-CT-34/10-150	#8-#2	#10-#2	2" *(50mm)*
CRSM-CT-53/13-200	#2-4/0	#10-4/0	4" *(100mm)*
CRSM-CT-84/20-250	4/0-500	#2-500	6" *(150mm)*
Standard Split Bolt			
CRSM-CT-53/13-200	#8-#2	#14-#2	4" *(100mm)*

Typical Connections

Fig. 2

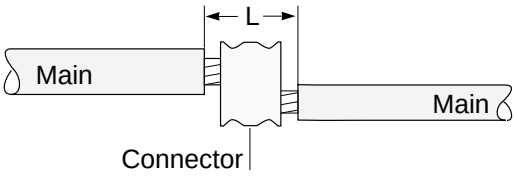

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Fig. 3

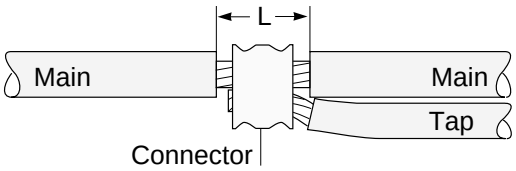

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Fig. 4

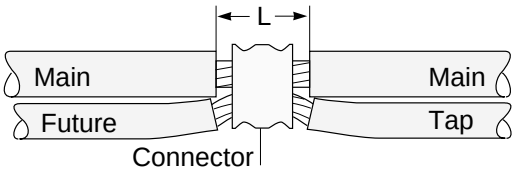

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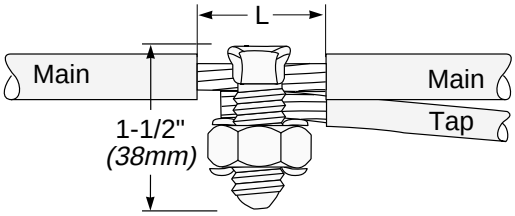
Fig. 5



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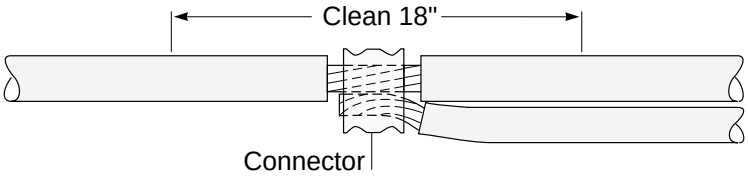
9. Install connector.

Install connector and wipe off excess contact compound.



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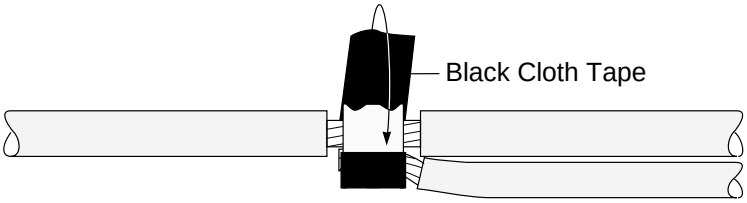
10. Apply black cloth tape to connector.

Choose the connector type and follow the directions given.

10a. Compression connector.

Remove all sharp points from connector. Wrap black cloth tape around the connector, overlapping the edges as shown.

Go to Step 11, page 5.



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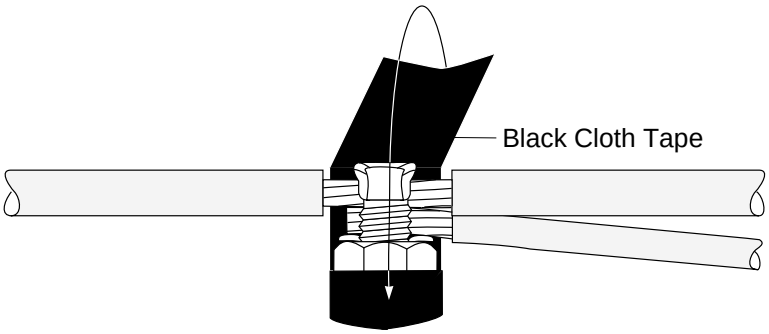
10b. Split bolt connector.

Wrap one layer of black cloth tape around the split bolt, overlapping the edges as shown.



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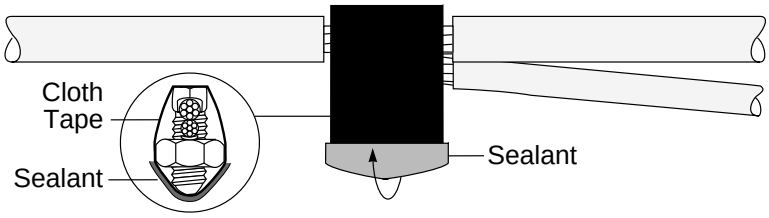
Tear off a 1" *(25mm)* piece of sealant from the long strip and apply to the split bolt as shown.



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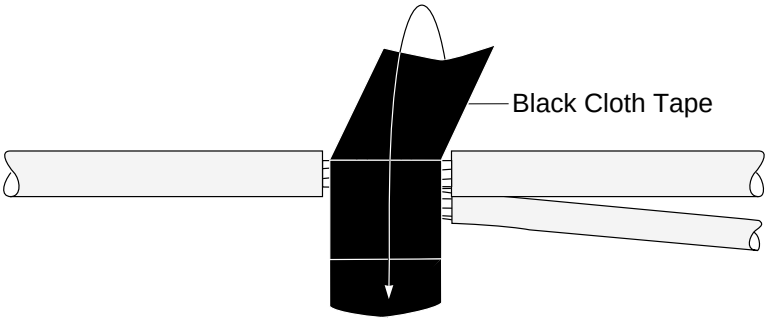
Wrap another layer of black cloth tape over the sealant and around the split bolt as shown.

Go to Step 11 below.



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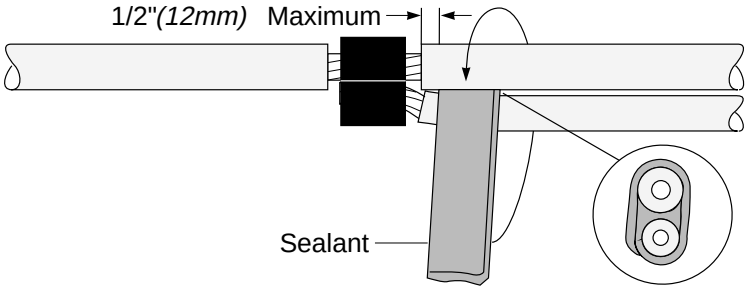
11. Apply sealant around tap and main cable

Remove the release paper from the strip of sealant. Insert one end between the main and tap cables as shown. Using light tension, wrap one layer of sealant around the tap cable and then around both cables.



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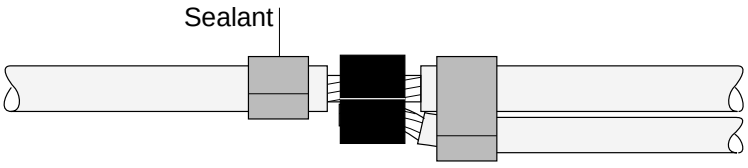
12. Apply sealant to main cable.

Using light tension, wrap one layer of sealant around the main cable as shown. (For H-configuration, apply sealant as described in Step 11.)



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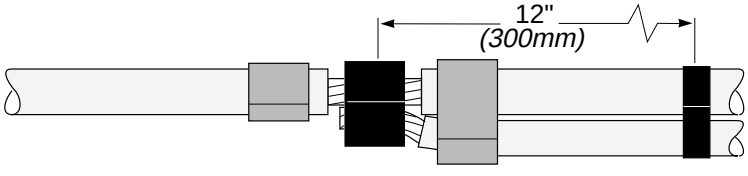
13. Secure tap to main cable.

Using tape or tie-wrap, secure tap(s) to main cable, 12" *(300mm)* from the center of the connection.



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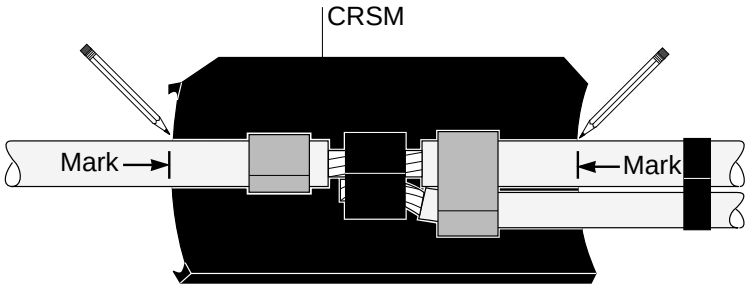
14. Mark cable; center sleeve.

Center sleeve over connection area. Mark cable as shown.

Remove the release paper from the CRSM.



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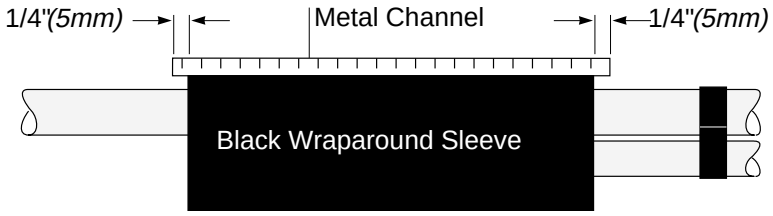
15. Slide channel over rails.

Butt the rails together and slide the channel over the rails. Position sleeve between marks to center over damage.

Note: Channel must overlap sleeve edge by 1/4" *(5mm)* minimum.



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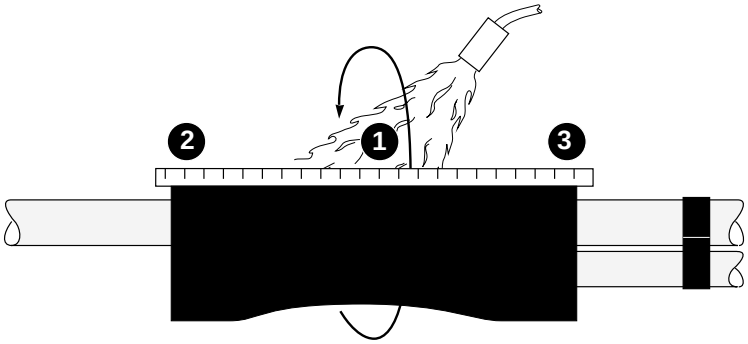
16. Shrink wraparound sleeve.

Preheat the metal channel area for approximately 15 seconds.

Continue shrinking at the center (1), working torch with a smooth brushing motion around the sleeve. After the center portion shrinks, work torch as before toward one end (2), then to the opposite end (3).



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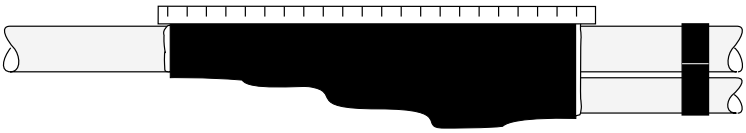
17. Post-heat sleeve.

Post-heat the entire sleeve, concentrating on the channel area, until the CRSM conforms tightly to the sealant, without wrinkles, and adhesive appears at both ends.

This completes the installation.

Note: Allow to cool before moving or placing in service.



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