

3M™ Mining Cable Jacket Repair Kit 3101

Instructions

Kit Contents:

1 Scotch® Heavy Duty Mining Tape 31, 2" x 8.5'
1 3M™ Temflex™ Vinyl Electrical Tape 1700P, 1½" x 44'
1 3M™ Cable Cleaning Preparation Kit CC-2-Dry
1 Instruction Sheet

Application Information:

For use in making Cable Jacket Repairs on Single or Multi-Conductor, Flat or Round cables.

This kit is limited to repair of the cable jacket and is not sufficient for repair if any conductor, insulation, semi-conducting material, or shielding is damaged.

Large diameter cables or long jacket repairs will require the use of additional tape.

#16 AWG to 4/0 AWG (1 - 110 mm²)

110 V - 15 kV

Mine Safety and Health Administration Acceptance:

P-07-KA08005/00-MSHA

⚠ DANGER

Before attempting any cable repairs, make sure that the proper cable is disconnected, locked out and suitably tagged.

⚠ CAUTION

Working around energized systems may cause serious injury or death. Installation should be performed by personnel familiar with good safety practice in handling electrical equipment. De-energize and ground all electrical systems before installing product.

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1.0 Repairing Damaged Cable Jacket When No Portion of Cable Jacket is Missing

Note: For use when ONLY the outer jacket is damaged, but not missing. If any conductor, (phase, ground, or ground check), is damaged, then follow splice instructions to complete repair. Splicing instructions not supplied in this kit. If insulation, semi-conducting material, or shielding is damaged, then repair damaged cable section per best practice. If damage does not extend to the conductor, (i.e. the copper), then splice is not required. Insulation, semi-conducting material, and shielding repair instructions not included in this kit.

- 1.1 Ensure outer jacket is free from dirt, debris, and chemicals. Use the 3M™ Cable Cleaning Preparation Kit CC-2-Dry as needed.
- 1.2 Abrade the cable jacket 3" (75 mm) beyond each side of the damaged cable jacket section.

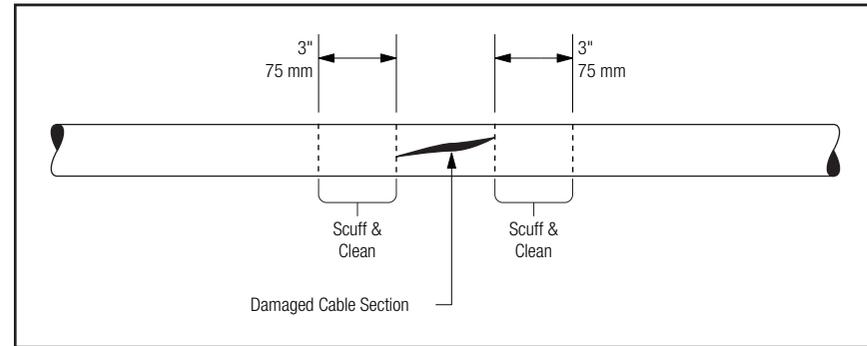


Figure 1

- 1.3 Wrap one half-lapped layer of Scotch® Mining Tape 31 extending at least 2" (50 mm) on each side beyond the damaged cable jacket.

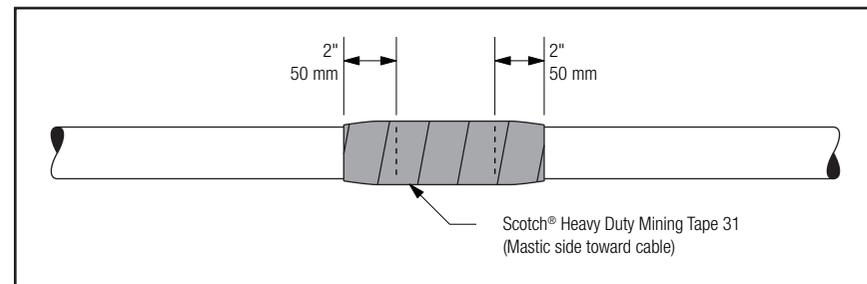


Figure 2

- 1.4 Starting 1" (25 mm) past the Scotch® Mining Tape 31, apply 3 half-lapped layers of 3M™ Temflex™ Vinyl Electrical Tape 1700P to each end to temporarily secure the ends of the Scotch® Mining Tape 31 to the cable jacket until the tape reaches full bond.

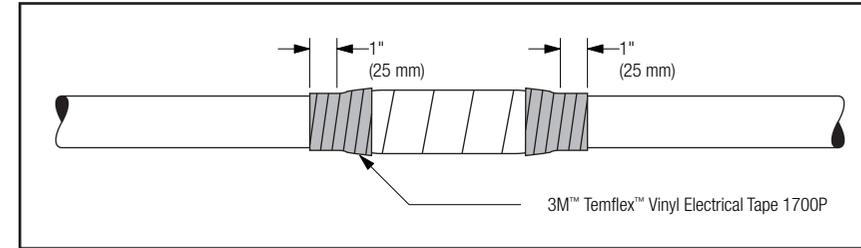


Figure 3

2.0 Repair to Replace Missing Cable Jacket

Note: If any conductor, (phase, ground, or ground check), is damaged, then follow splice instructions to complete repair. Splicing instructions not supplied in this kit. If insulation, semi-conducting material, or shielding is damaged, then repair damaged cable section per best practice. If damage does not extend to the conductor, (i.e. the copper), then splice is not required. Insulation, semi-conducting material, and shielding repair instructions not included in this kit. Additional tape may be needed for longer repairs.

Scotch® Linerless Rubber Splicing Tape 130C, not supplied in the kit, will be needed to replace the missing portion of cable jacket.

Note: Scotch® Linerless Rubber Splicing Tape 130C is applied highly stretched with the tacky side DOWN.

- 2.1 Remove damaged cable jacket and taper jacket approximately 1" (25 mm).
- 2.2 Scuff and clean 4" (100 mm) of cable jacket beyond the top of the taper.
- 2.3 Bundle cable assembly and bind with one half-lapped layer of 3M™ Temflex™ Vinyl Electrical Tape 1700P from taper to taper.

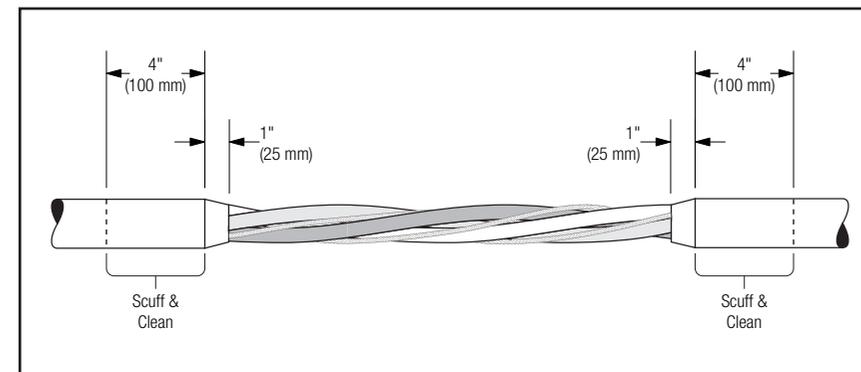


Figure 4

- 2.4 Starting half way up the tapers, wrap half-lapped layers of Scotch® Linerless Rubber Splicing Tape 130C (**tacky side DOWN**), building up and across the splice until 130C tape is equal to or greater than original jacket thickness and extends 1" (25 mm) past the top of jacket tapers.

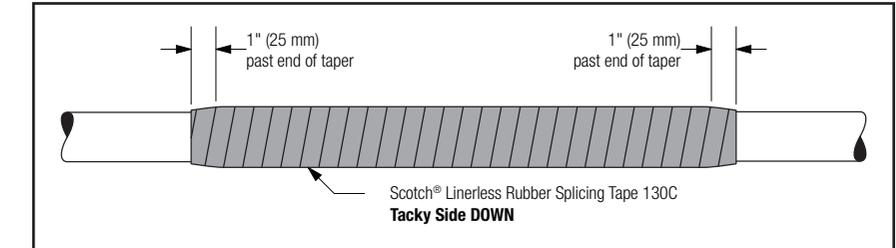


Figure 5

- 2.5 Start 2" (50 mm) beyond Scotch® Linerless Rubber Splicing Tape 130C, wrap one half-lapped layer of Scotch® Heavy Duty Mining Tape 31 with mastic side toward the cable extending 2" (50 mm) beyond the 130C tape on the opposite end. Always wrap the 31 tape toward the machine end of the cable.

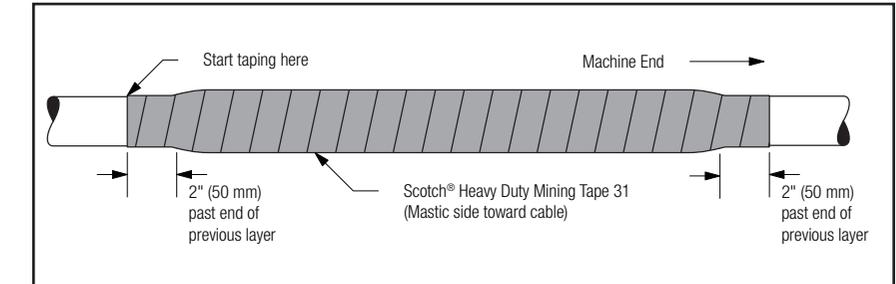


Figure 6

- 2.6 Starting 1" (25 mm) past the 31 tape, apply 3 half-lapped layers of 3M™ Temflex™ Vinyl Electrical Tape 1700P to each end to temporarily secure the ends of the 31 tape until the tape reaches full bond.

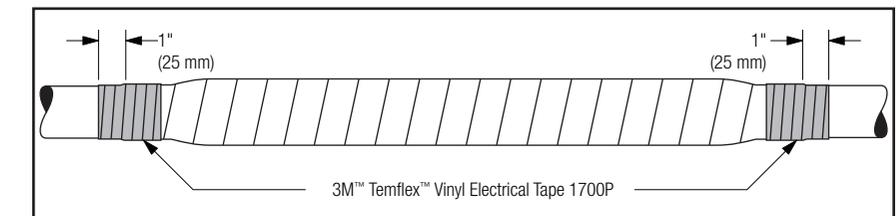


Figure 7