NELSON HEAT TRACING SYSTEMS

LLT-SS SPLICE KIT

INSTALLATION INSTRUCTIONS

DESCRIPTION

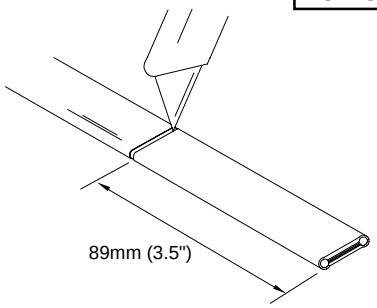
The LLT-SS Splice Kit is for use with Nelson Heat Tracing Systems' LLT heater cables with fluoropolymer overjacket.

KIT CONTENTS

15 Uninsulated Splice Connectors
5 Shrink Tubes, 19mm (0.75") diameter, 203mm (8") length
15 Silicon Tape, 25.4mm (1.0") wide, 610 mm (12") length

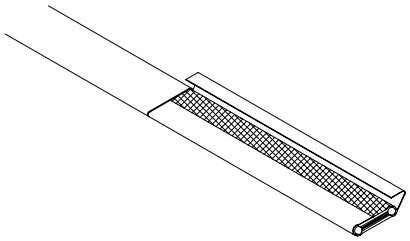
OVERJACKET STRIPPING PROCEDURES

⚠ WARNING:
DO NOT CUT BRAID

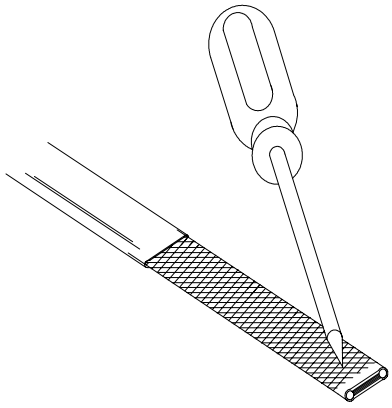


❶ Lightly cut around heater overjacket 89mm (3.5") from the end. Bend cable to break the overjacket.

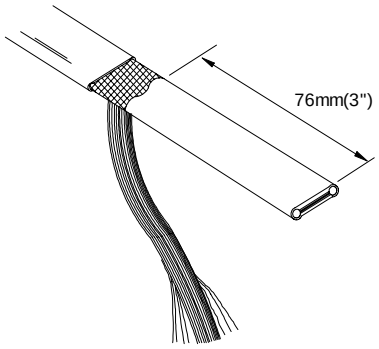
❷ Lightly cut overjacket up the center between first cut mark and the cable end. Bend cable to break



❸ Remove overjacket from heater cable.



❹ Using an awl or other sharp pointed device, unravel the braid from the cable. Even though most of the outer jacket will be removed in a subsuquent operation do not puncture it with the awl.



❺ After the braid has been unraveled so that it looks similar to the illustration above pull it tight and twist the loose wires together. A butt splice with be installed on this wire in another operation.

❻ Repeat steps 1 - 5 for the second heater cable.

❼ Proceed to *"Outer Jacket Stripping Procedures"*, sheet 2.

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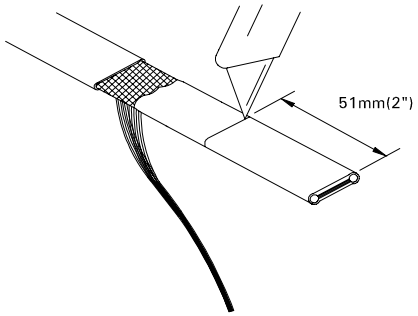
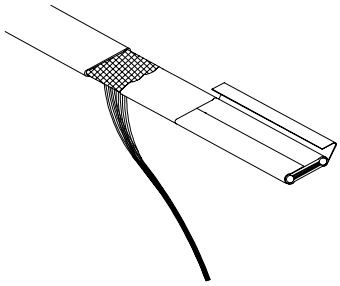
OUTER JACKET STRIPPING PROCEDURES

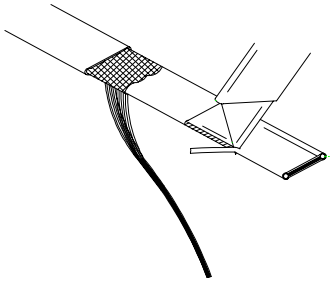
❶ Lightly cut around heater outer jacket 51mm (2") from the end. Bend cable to break outer jacket.



❷ Lightly cut the outer jacket up the center between the first cut mark & the cable end. Bend cable to break outer jacket.

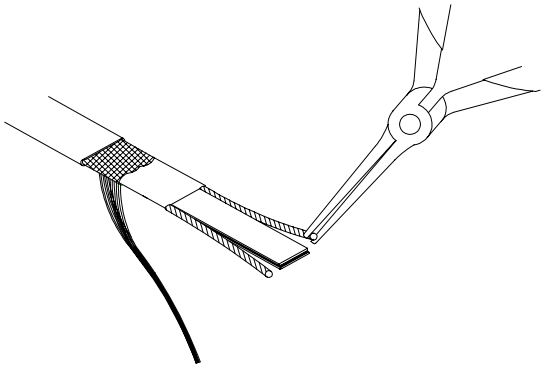


❸ Remove jacket from the heater cable.



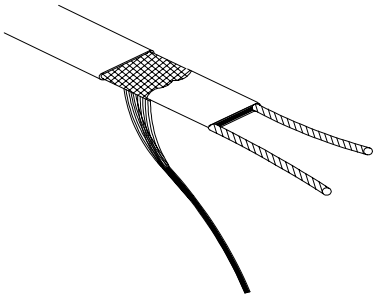
⚠ WARNING:
DO NOT CUT BUS WIRES

❹ Shave core material from the outside of each bus wire.



❺ Starting at the end, pull each bus wire away from the core material.

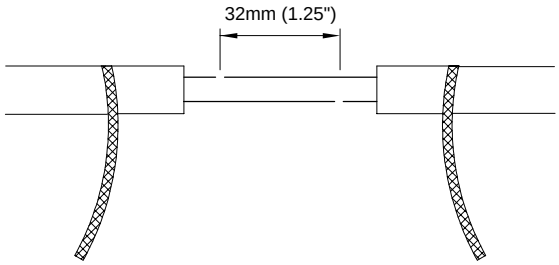
❻ Remove exposed core material.



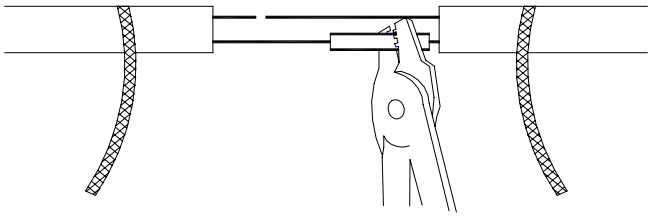
❼ Repeat steps 1 - 6 for the second heater cable.

❽ Proceed to *"Shrink Tube Procedures"*, sheet 3

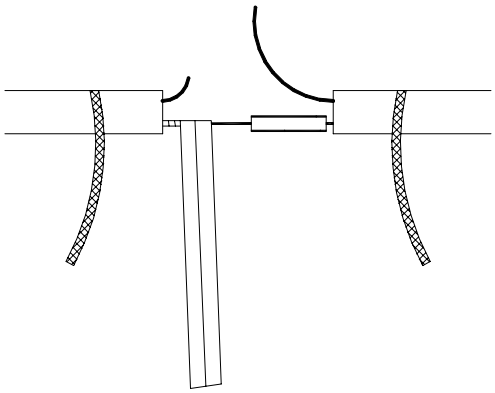
SHRINK TUBE PROCEDURES



❶ Position both heater cables with the ground braid on the same side. Remove 32mm (1.25”) of bus wire from each heater cable to offset for uninsulated splice connectors.



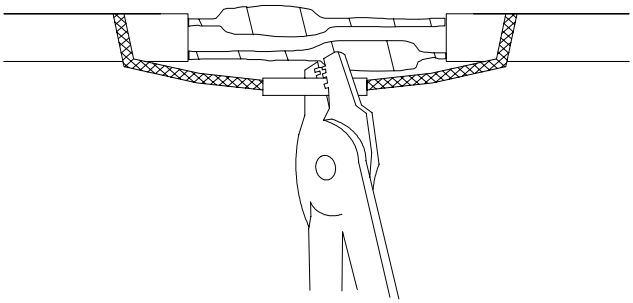
❷ Slide one 19mm (0.75”) diameter, 203mm (8”) length shrink tube over one of the heater cables. Crimp an uninsulated splice connector to one pair of bus wires. Do not install a splice on the other pair at this time.



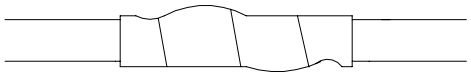
❸ Using one piece of silicon tape, 24.5mm (1.0”) wide by 610mm (12”) long wrap the butt splice connection just made. Follow the instructions which follow:

a. Make sure the area of the cable to be wrapped is clean and free from dirt. If not, clean thoroughly using a cable cleaner. Silicon tape should be clean as well. Wash hands before handling either.
b. The release liner (clear plastic backing) should be removed as the tape is installed. This will keep the tape from sticking to itself.
c. To begin the taping process, wrap one overlap of tape onto itself with minimal stretch. Remember the tape will only stick to itself.
d. After beginning the wrap, stretch the fusion tape to approximately ¾ its normal width. Overlap each layer of tape by matching the edge of the tape with the center guideline of the previous layer.
e. Continue this half-lap process until you reach the end of the insulated area. At this point wrap one full turn of tape onto intself to seal the end of the insulation, stretching the tape to approximately 2/3 its normal width. Make sure all bare wire is covered as best as possible.

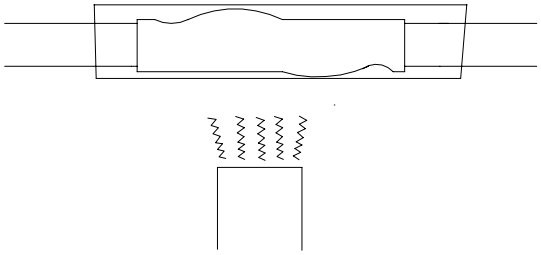
❹ Connect the second pair of wires using a second butt splice. Wrape this connection with silicon tape using the instructions given in step 3.



❺ If necessary, cut excess length from braid straps. Crimp the braid straps together into an uninsulated splice connector. Secure the connector at the indented area with one and a half wraps of fiberglass tape (not included in kit).



❻ Wrap the entire splice including the joined together braid with silicon tape following the instructions outlined in step 3.



❼ Center the 19mm (0.75”) diameter, 203mm (8”) length shrink tube over the splice. Shrink with heat gun until completely shrunk.