NOTE: UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS. INCHES DIMENSIONS ARE IN [.XXX] BRACKETS

1.0 Scope

This standard contains the procedures for making environment resistant 1 to 1 in-line splices in shielded and jacketed cables listed in Paragraph 5.0 using TE Connectivity D-150 Series shielded cable splice kits.

2.0 References

TE Connectivity Customer Drawing (CD) Series D-150.

See Paragraph 5.0 for applicable TE Connectivity parts.

3.0 Application Equipment

3.1 Wire Handling Tools

a) Wire stripper for primaries.

b) Wire stripper for cable jacket.

c) Small sharp scissors or diagonal cutters for braid.

d) Ruler readable to 0.50 (0.025).

e) TE Connectivity AD-1377 Crimp Tool (calibrated).

3.2 Heating Tools

Use one of the following or TE Connectivity approved alternative.

a) CV-5000 Thermogun Model 500B with TG-135 reflector, temperature setting 750°F-850°F.

b) CV-5300 Mini-gun 1 with MG-1 reflector, temperature setting 750°F-850°F

c) Steinel HL1910E or HL2010E with PR-25 reflector, temperature setting 750°F-850°F.

4.0 General Information

4.1 Splice Kit Description

The TE Connectivity D-150 Series shielded cable splice kits consists of:

a) Soldershield braid splice for splicing and encapsulating the cable shields.

b) Mini-seal crimp barrels for splicing the primary conductors.

c) Mini-seal crimp sealing sleeves for encapsulating the primary conductor splices.

5.0 Installation Procedures

Use procedure paragraph applicable to the cable configuration being spliced.

Cable Primaries			Splice Kit **Number**	Applicable Paragraph
No.	AWG Range [CMA Range]	Plating		
1	***26 to 20*** [304-1510]	Tin/Silver Nickel	D-150-0168 D-150-0228	5.1 5.1
1	20 to 16 [779-2680]	Tin/Silver Nickel	D-150-0169 D-150-0229	5.1 5.1
1	16 to 12 [1900-6755]	Tin/Silver Nickel	D-150-0170 D-150-0230	5.1 5.1
2	***26 to 20*** [304-1510]	Tin/Silver Nickel	D-150-0174 D-150-0231	5.2 5.2
2	20 to 16 [779-2680]	Tin/Silver Nickel	D-150-0175 D-150-0232	5.2 5.2
2	16 to 12 [1900-6755]	Tin/Silver Nickel	D-150-0176 D-150-0233	5.2 5.2
2	16 to 12 [1900-6755]	Tin/Silver Nickel	D-150-0177 D-150-0234	5.2 5.2
3	***26 to 20*** [304-1510]	Tin/Silver Nickel	D-150-0178 D-150-0235	5.3 5.3
3	***26 to 20*** [304-1510]	Tin/Silver Nickel	D-150-0179 D-150-0236	5.3 5.3
3	20 to 16 [779-2680]	Tin/Silver Nickel	D-150-0180 D-150-0237	5.3 5.3
3	16 to 12 [1900-6755]	Tin/Silver Nickel	D-150-0181 D-150-0238	5.3 5.3
4	***26 to 20*** [304-1510]	Tin/Silver Nickel	D-150-0178 D-150-0235	5.3 5.3
4	***26 to 20*** [304-1510]	Tin/Silver Nickel	D-150-0179 D-150-0236	5.3 5.3
4	20 to 16 [779-2680]	Tin/Silver Nickel	D-150-0180 D-150-0237	5.3 5.3
4	16 to 12 [1900-6755]	Tin/Silver Nickel	D-150-0181 D-150-0238	5.3 5.3

5.1 Single Conductor Shielded Cable

Applicable cable gauges and splice kit numbers:

26, 24, 22, 20	D-150-0168 or -0228
18, 16	D-150-0169 or -0229
14, 12	D-150-0170 or -0230

5.1.1 Cable Preparation

Tolerances: All lengths ± 0.50 (0.025)

a) Remove cable jacket and shield: 18.00 (0.700)

b) Strip primaries: 7.00 (0.275)

c) Remove cable jacket: 9.50 (0.375)

5.1.2 Assembly Procedure

a) Place the shield splice sleeve (small end first) onto one of the cables.

b) Primary Conductor Splice.

1) Place the sealing sleeve onto one of the cables.

2) Crimp primaries into opposite ends of the crimp splice using a calibrated TE Connectivity AD-1377 crimp tool. Be sure matching primaries from each cable are in same sleeve.

3) Center the sleeve over the splice.

4) Apply heat to the center of the sleeve until it recovers, and then heat ends until sealing rings melt and flow along wires.

5) Inspect per Paragraph 6.1.

c) Shield Splice

1) Center the shield splice sleeve over the splice and the exposed cable shields.

2) Heat sleeve.

a) Heat center of sleeve until the solder melts and the shield and tube recover.

b) Move the heat toward one end of the shield slowly enough to keep the sleeve recovering as you move along.

c) Apply heat for an additional 5 to 10 seconds to the final 12.5 mm (half-inch) of the sleeve shield to ensure sufficient heat transfer to the cable shield to make a good joint.

d) Apply heat to end of sleeve until rings melt and flow along cable jacket.

e) Repeat for other end of sleeve.

3) Inspect per Paragraph 6.2.

5.2 Two Conductor Shielded Cable

Applicable cable gauges and splice kit numbers:

26, 24, 22, 20	D-150-0174 or –0231
18, 16	D-150-0175 or –0232
14	D-150-0176 or –0233
12	D-150-0177 or –0234

5.2.1 Cable Preparation

Tolerances: All lengths ± 0.50 (0.025)

a) Remove cable jacket and shield: 46.50 (1.825)

b) Cut 1 primary on each cable: 17.00 (0.675) from cable jacket. **Note**: Short primaries on cable A must be left uncut on cable B.

c) Strip primaries: 7.00 (0.275)

d) Remove cable jacket: 9.50 (0.375)

5.2.2 Assembly Procedure

a) Place the shield splice sleeve (small end first) onto one of the cables.

b) Primary Conductor Splices.

1) Place the sealing sleeve onto the longer lead of each cable.

2) Crimp primaries into opposite ends of the crimp splice using a calibrated TE Connectivity AD-1377 crimp tool.

3) Center the sleeves over the splices.

4) Apply heat to the center of the sleeve until it recovers, and then heat ends until sealing rings melt and flow along wires.

5) Inspect per Paragraph 6.1.

c) Shield Splice

1) Center the shield splice sleeve over the splice and the exposed cable shields.

2) Heat sleeve.

a) Heat center of sleeve until the solder melts and the shield and tube recover.

b) Move the heat toward one end of the shield slowly enough to keep the sleeve recovering as you move along.

c) Apply heat for an additional 5 to 10 seconds to the final 12.5 mm (half-inch) of the sleeve shield to ensure sufficient heat transfer to the cable shield to make a good joint.

d) Apply heat to end of sleeve until rings melt and flow along cable jacket.

e) Repeat for other end of sleeve.

3) Inspect per Paragraph 6.2.

5.3 Three and Four Conductor Shielded Cable

Applicable cable gauges and splice kit numbers:

26, 24,	D-150-0178 or -0235
22, 20	D-150-0179 or -0236
16, 18	D-150-0180 or -0237
14, 12	D-150-0181 or -0238

5.3.1 Cable Preparation

Tolerances: All lengths ± 0.50 (0.025)

a) Remove cable jacket and shield: 46.50 (1.825)

b) Cut primaries: 3-conductor: 2 on cable A and 1 on cable B; 4-conductor: 2 on both cables A and B: 17.00 (0.675) from cable jacket.

Note: Short primaries on cable A must be left uncut on cable B.

c) Strip primaries: 7.00 (0.275)

d) Remove cable jacket: 9.50 (0.375)

5.3.2 Assembly Procedure

a) Place the shield splice sleeve (small end first) onto one of the cables.

b) Primary Conductor Splices.

1) Place the sealing sleeve onto the longer lead of each cable.

2) Crimp primaries into opposite ends of the crimp splices using a calibrated TE Connectivity AD-1377 crimp tool.

3) Center the sleeves over the splices.

4) Apply heat to the center of the sleeve until it recovers, and then heat ends until sealing rings melt and flow along wires.

5) Inspect per Paragraph 6.1.

c) Shield Splice

1) Center the shield splice sleeve over the splice and the exposed cable shields.

2) Heat sleeve.

a) Heat center of sleeve until the solder melts and the shield and tube recover.

b) Move the heat toward one end of the shield slowly enough to keep the sleeve recovering as you move along.

c) Apply heat for an additional 5 to 10 seconds to the final 12.5 mm (half-inch) of the sleeve shield to ensure sufficient heat transfer to the cable shield to make a good joint.

d) Apply heat to end of sleeve until rings melt and flow along cable jacket.

e) Repeat for other end of sleeve.

3) Inspect per Paragraph 6.2.

6.0 Inspection

6.1 Mini-seal Splices

a) Conductors must be visible at point where they enter the crimp barrel.

b) Both indentations of a crimp must be on the crimp barrel.

c) Sealing sleeve inserts must have flowed along wire insulation.

d) Sleeve must not have discolored to the degree that the crimp barrel cannot be inspected.

e) Sleeve must not be cut or split.

6.2 Shield Splice

a) Sleeve/shield must be recovered along its entire length.

b) Sleeve must be recovered tightly around cable jacket.

c) Sealing rings must have flowed along cable jacket.

d) Sleeve must not have discolored to the degree that joint can not be inspected.

e) Sleeve must not cut or split.

f) Strands must not be poking through the sleeve.

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