CABLE AND HARNESS SPLICES

SPLICES
A splice is the joining of two or more conductors together in a manner that results in a permanent electrical termination and mechanical bond, and may be completed by either crimp or solder process.

See Section 4.01 “Cable and Harness, General Requirements”, and Section 6.01 “Through-Hole Soldering, General Requirements”, for common accept / reject criteria.

CABLE AND HARNESS SPLICES (cont.)

ACCEPTABLE LASH SPLICE SHIELD TERMINATION (TRADITIONAL)
The termination is fully wetted, smooth, and shiny. Conductor contours are discernable. Tubing is tightly shrunk, with proper strain relief.

Best Workmanship Practice

ACCEPTABLE SOLDER SLEEVE SPLICE INLINE
The termination is fully wetted, smooth, and shiny. Conductor contours are discernable. Tubing is tightly shrunk, with proper strain relief, overlap, and no exposed conductive surfaces.

Best Workmanship Practice

PREFERRED GENERAL REQUIREMENTS
The splice exhibits a smooth profile, proper strain relief, and is located in an area of the harness not subjected to flexure.

Best Workmanship Practice

PREFERRED SPLICE ASSEMBLY PROFILE
The location of splices shall be staggered to minimize the increase in profile to the harness. Final assembly profile shall not impact form, fit, or function.

Best Workmanship Practice

PREFERRED SPLICE RESTRAINT
Cable ties / lacing shall be installed at both ends of a splice or solder sleeve, but placement shall not violate stress relief requirements.

Best Workmanship Practice

ACCEPTABLE CRIMP SPLICE – BUTT / INLINE
The contact has been deformed only by tool indenters. Indents are symmetrical and centered on the crimp barrel. No exposed base metal or other damage. Wire strand ends are visible. Proper insulation spacing (C).

NASA-STD-8739.4 [19.6.1.c]

ACCEPTABLE SOLDER SLEEVE SPLICE INLINE BRANCH
The termination is fully wetted, smooth, and shiny. Conductor contours are discernable. Tubing is tightly shrunk, with proper strain relief, overlap, and no exposed conductive surfaces.

Best Workmanship Practice

ACCEPTABLE SOLDER SLEEVE SPLICE SHIELD TERMINATION (INLINE)
The termination is fully wetted, smooth, and shiny. Conductor contours are discernable. Tubing is tightly shrunk, with proper strain relief, overlap, and no exposed conductive surfaces.

NASA-STD-8739.4 [11.4], [19.6.1]

ACCEPTABLE SOLDER SLEEVE SPLICE SHIELD TERMINATION (TRADITIONAL)
The termination is fully wetted, smooth, and shiny. Conductor contours are discernable. Tubing is tightly shrunk, with proper strain relief, overlap, and no exposed conductive surfaces.

Best Workmanship Practice

ACCEPTABLE WESTERN UNION / LINEMAN SPLICE
The termination is fully wetted, smooth, and shiny. Tubing is tightly shrunk, with proper strain relief, overlap, and no exposed conductive surfaces. Western Union splices are used for solid conductors.

NASA-STD-8739.3 [13.6]

NASA WORKMANSHIP STANDARDS

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
JOHNSON SPACE CENTER HOUSTON, TEXAS USA 77058

Released: 04.05.2002
Revision: 1
Revision Date: 04.05.2002
Book: 4
Section: 4.07
Page: 1

NASA WORKMANSHIP STANDARDS

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
JOHNSON SPACE CENTER HOUSTON, TEXAS USA 77058

Released: 04.05.2002
Revision: 1
Revision Date: 04.05.2002
Book: 4
Section: 4.07
Page: 3
The location of splices shall be staggered to minimize the increase in profile to the harness. Final assembly profile shall not impact form, fit, or function.

Best Workmanship Practice

Cable ties / lacing shall not be installed across the splice / solder sleeve body, unless sufficient protection is provided to prevent compression damage to the termination and/or to the insulation of adjacent conductors.

Best Workmanship Practice

Replacement conductors shall be of the same voltage and current rating as the original conductor.

Best Workmanship Practice

The termination is fully wetted, smooth, and shiny. Conductor contours are discernable. Tubing is tightly shrunk, with proper strain relief, overlap, and no exposed conductive surfaces.

Best Workmanship Practice

The termination is fully wetted, smooth, and shiny. Conductor contours are discernable. Tubing is tightly shrunk, with proper strain relief, overlap, and no exposed conductive surfaces.

Best Workmanship Practice

The termination is fully wetted, smooth, and shiny. Conductor contours are discernable. Tubing is tightly shrunk, with proper strain relief, overlap, and no exposed conductive surfaces.

Best Workmanship Practice

The termination is fully wetted, smooth, and shiny. Conductor contours are discernable. Tubing is tightly shrunk, with proper strain relief, overlap, and no exposed conductive surfaces.

Best Workmanship Practice

The termination is fully wetted, smooth, and shiny. Conductor contours are discernable. Tubing is tightly shrunk, with proper strain relief, overlap, and no exposed conductive surfaces.

Best Workmanship Practice