



JSWAG Conferences/ Announcements

The next JSWAG/JFOWG Meeting is scheduled for March 26-29, 2012 in Virginia Beach, VA. Please visit <https://jswag.navair.navy.mil/> for more information.

Voting for the 2011 Lu Roberts award recipient has begun. Please visit <https://jswag.navair.navy.mil/> to place your vote. Voting will end March 15 so the winner can be announced at the 2012 Spring JSWAG/JFOWG meeting.

Other Conferences

- EA-6B MAG -- St. Augustine, FL
February 7-8, 2012
- Dixie Crow -- Warner Robins, GA
March 18-22, 2012
- Quad-A -- Nashville, TN
April 1-4, 2012
- AA&S -- Baltimore, MD
April 2-5, 2012
- AEA -- Washington, DC
April 3-6, 2012
- AIMS Conference --
Panama City Beach, FL
April 30-May 3, 2012
- AUVSI Unmanned Systems 2012 -- Las Vegas, NV
August 6-9, 2012
- DoD Maintenance Symposium & Exhibition -- Grand Rapids, MI
November 13-16, 2012

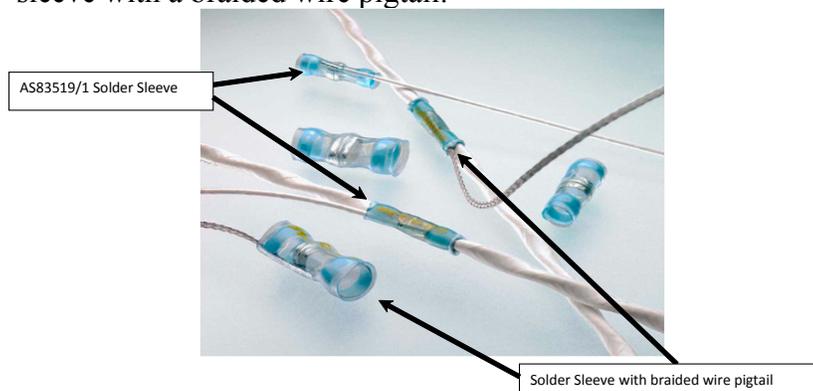
Newsletter Contacts

JSWAG Coordinator
jswag@navy.mil

Solder Sleeve Update

The NAVAIR Wiring Systems Team (AIR-4.4.5.3 and 6.7.1.3) in cooperation with TE Connectivity and SAE (Society of Automotive Engineers) have been working to resolve issues with the AS83519 Solder Sleeve.

JSWAG Action Chit# 607 - This action chit was submitted to report a problem with inadequate sealing of AS83519/1 solder sleeve around the shield termination. This issue was originally discovered by the ATSRAC (Aging Transport Systems Rulemaking Advisory Committee). Three actions are being pursued by NAVAIR to improve the AS83519 solder sleeve: (1) development of a new AS83519 slash sheet for a multi-wire solder sleeve; (2) development of a new AS83519 slash sheet for a lead free variant of the AS83519 solder sleeve; and (3) development of a new AS83519 slash sheet for a solder sleeve with a braided wire pigtail.

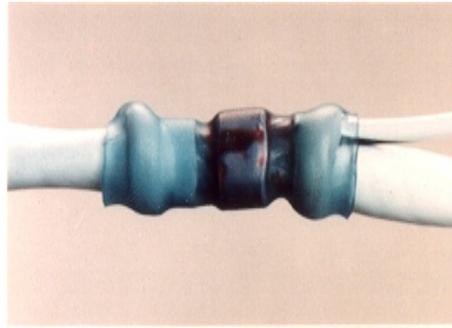


Multi-Wire Solder Sleeve - Current solder sleeves are designed to seal around one or two conductors. As a result, NAVAIR has been working cooperatively with TE Connectivity to develop a new standard for a multi-wire AS83519 solder sleeve. A new AS83519/6 slash sheet is currently being drafted to capture these performance improvements. This standard will detail the requirements for an environmental resistant, heat-shrinkable solder type shield termination. This will include up to six conductors, with a thermo chromic indicator. The solder sleeve may be used on data-bus, RF, and shielded cables. The temperature rating of the solder sleeve will be 200°C. A draft of the new standard is anticipated by the May 2012 SAE AE-8C2 committee meeting.

Solder from page 1

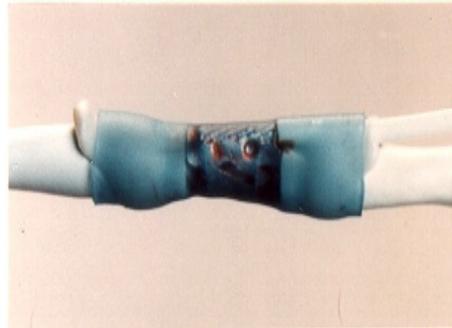
Lead Free AS83519 solder sleeve – The new environmental requirements are forcing the elimination of lead. In the not too distant future, leaded solder and components may no longer be available. Lead free solder sleeves are currently commercially available. NAVAIR forwarded a letter to the SAE AE-8C2 committee requesting that a new task group be established to develop an AS83519 slash sheet for a lead free solder sleeve. The task group was established and TE Connectivity will be drafting a new slash sheet for the lead free solder sleeve.

Solder sleeve with braided wire pigtail – The current AS83519/1 solder sleeves, having an insulated wire pigtail, do not provide adequate shielding especially at higher frequencies. The insulated wire pigtail in certain applications may act as an antenna for surrounding EMI (Electromagnetic Interference). Solder sleeves with braided wire pigtails rectify the issue and are commercially available. NAVAIR forwarded a letter requesting SAE to establish a Task Group to develop a new AS83519 slash sheet for solder sleeves with wire pigtails. TE Connectivity has been tasked to develop the new slash sheet. We are currently considering a 150°C and 200°C variants. The 200°C variant would be ROHS compliant. The NA 01-1A-505-1 will be updated with this information once the products are qualified and logistically available. 



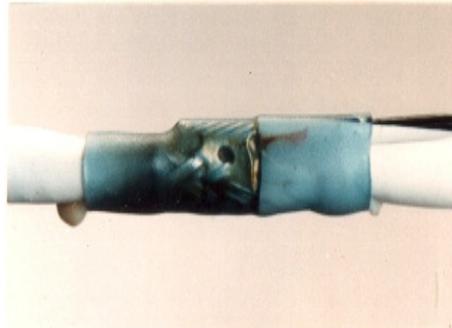
Insufficient Heat Unacceptable

Thermal Indicator readily visible.
Contour of solder preform is visible.
Melttable inserts have not flowed.
Contour of braid and/or lead is obscured by solder.



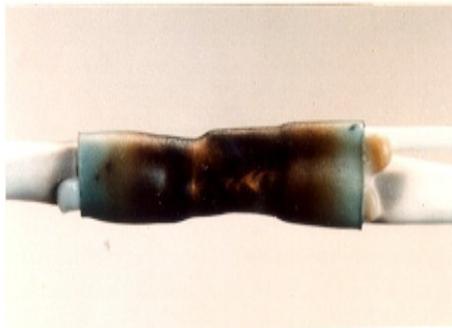
Minimum Solder Flow Acceptable

Slight traces of Thermal Indicator may be present*
Solder has lost all appearance of ring shape.
Inserts have melted and flowed along wires.
Shield and lead contours are visible.
There is a definite fillet visible along the lead and shield interface.



Maximum Solder Flow Acceptable

Thermal Indicator has disappeared.
There shall be no traces of Thermal Indicator in the soldered area. However, slight traces of the Thermal Indicator in the insert area are acceptable.
Fillet is clearly visible between lead and shield.
Joint area is visible despite browning of sleeve.



Overheated Unacceptable

Joint area is not visible because of severe darkening of the outer sleeve.
Solder fillet is not visible along lead and shield interface.
Wire insulation damaged outside of sleeve.

*Note: Thermal Indicator is the red color around the solder band, and is to be used as an inspection aid. The final inspection criteria for a proper termination is as called out in MIL-STD-454, Requirement 5. The optimum termination may have traces of the Thermal Indicator in the insert area only