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# ELE-3COP-363

## Title – Single Screen Transition Termination.

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Before starting work please read this document carefully and note the guidance given.

### 1 Purpose and Scope

This COP describes the procedure to be used when joining the overall screen of a branched harness with a single overall screen in a transition area. The instructions in this document take preference over IPC/WHMA requirements, as do the drawing and any customer documentation.

### 2 Performance Objective

This code of practice is produced to support operators already trained in the installation of heat shrinkable and harnessing products. It identifies the procedure to be used when joining the overall screens of a branched harness in a transition area. This type of installation is intended to give 360° screening at a harness branch and maintain continuity between shields on all branches.

### 3 Materials and Equipment:

Solder sleeve. (Refer to Table 1)

RayBraid™

RNF-100 tubing

22 SWG Tinned copper wire.

Kester™ Solder Flux 1544 or equivalent

Paper Adhesive Tape

Heat Gun CV1981 or equivalent. Other hot air guns may be used but these must be capable of delivering the temperatures required for installation of the solder sleeve. This also includes hot air guns with temperature displays.

Appropriate reflector. (Refer to Table 1)

### 4 Health and Safety

Adhere to local Codes and Regulations relating to Safe Working practices. For the U.K. adhere to requirements of the Health and Safety at Work Act 1974 and subsequent amendments.

When using Flux, avoid inhaling the fumes.

Do not smoke when using the Flux as it is highly inflammable.

Do not allow the Flux to come in contact with the skin. Should this happen, wash the affected area immediately with water

### 5 Procedure

Slide on and recover RNF-100 sleeves onto the breakout legs, as close into the transition area as possible. See Fig 1.

Using paper adhesive tape, attach the end of one of the branch legs to the end of the Raybraid™ former tube. Feed the Raybraid™ off of the former onto the branch leg. When all the Raybraid™ is fed on, remove the former and paper tape from the leg.

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Position and secure the Raybraid™ in the transition area over the RNF-100 sleeves using 22 SWG tinned copper wire and pull the shields tight. See Fig 2

Repeat above for the additional branches. Pull branch legs together to ensure they are parallel prior to installing Raybraid™ on the main leg.

Using paper adhesive tape, attach the end of the main leg to the end of the Raybraid™ former tube. Feed the Raybraid™ off of the former onto the main leg overlapping the Raybraid™ on the other branches by 20mm. Secure the shields using 22 SWG tinned copper wire and pull the main shields tight. See Fig 3.

Apply a small amount of flux to the area of overlapped shields. Position and heat the Solder Sleeve using the correct heat gun and reflector, slightly rotate either the heat gun or the cable until the solder ring completely disappears and wets the cable shields as per Fig 4.

The recommended recovery temperature range using a CV1981 Heat gun and PR reflector as per Table 1 is 230°C to 250°C.



Figure 1



Figure 2



Figure 3



Figure 4

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Solder Sleeve Number	Reflector Part Number
B-053-70	PR-25D
B-053-70-01	PR-25D
B-053-70-02	PR-25A
B-053-70-03	PR-25A
B-053-70-04	PR-25A
B-053-70-05	PR-25D
B-051-00-01	PR-34
B-051-01-01	PR-34
B-051-02-01	PR-35

Table 1

The termination should not be subjected to any flexing prior to the joint sufficiently cooling. Refer to ELE-3COP-361 for installation of Raybraid™.

### 6 Inspection Requirements

Ensure strands are not scraped, nicked severed or otherwise damaged.

Inspect the joint for evidence of wetting, i.e. the solder has flowed.

Ensure the weave of the shields has been maintained and there are no spikes through the solder sleeve insulation.

### 7 Visual Standards



Figure 5A  
Acceptable



Figure 5B  
Insufficient Solder Flow



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4	CR06-DM-071	25/04/06	John Cronin	Ken Wallington
5	CR09-DM-018	03/02/09	Paul Newman	Neil Dorricott
6	Visual Identity	06/06/11	Paul Newman	Neil Dorricott

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