

AmberStrand® Composite EMI/RFI Shielding Termination Instructions

For Series 79 “Micro-Crimp” and Series 80 “Mighty Mouse”



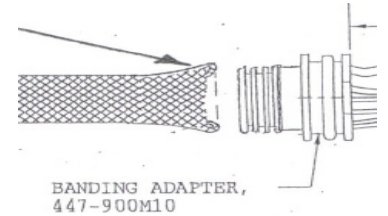
1. Terminate the first side connector end of assembly under production. Install proper Glenair strain relief adaptor in correct orientation. Slide AmberStrand® braid sleeve and other applicable components onto harness prior to terminating the opposite connector in proper orientation. Cut length according to assembly drawing using Glenair Large Broad Blade Utility Sheers (PN 600-164) or equivalent. Be sure to take into account length change due to pulling the braiding material tight over conductors (*milking*)—this will vary by application and may require some adjustments.



**Recommended AmberStrand®
Cutting Procedure**

Note: When cutting braid, both metal and especially composite, open cutter blades to allow the full 2" cut. Place braid all the way back onto blades as shown.

2. Fold or invert braids inward on both ends (*fish-mouth*) in order to provide for correct length, finished look and additional mass for banding (in most cases this process can be used to eliminate trimming. (Not all cable builds are the same and some braid trimming may be required after banding process). If additional non-conductive braid sleeve, shrink sleeve or jacketing material is to be used over the AmberStrand® Composite Braid, special care needs to be taken to ensure that both material layers are captured properly between Glenair standard or micro band (PNs 600-087, 600-057, 600-052, or 600-090). Using Glenair Hand Micro Banding tool (PN 600-058, 600-061), apply band over braid layers to



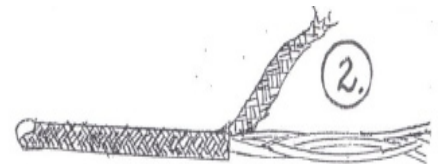
affix to adaptor. Glenair Series 79 “Micro-Crimp” and Series 80 “Mighty Mouse” connectors are recommended with Micro Band P/Ns 600-087 and 600-057.

Note: Always be sure to use properly calibrated hand tools. Improper calibration may damage connector hardware. Hot blade cutting devices, which can be used for non-conductive braids, are NOT recommended for use with Amberstrand Composite braids. For further instruction on the use of Glenair Banding tools and materials please reference the Glenair *Interconnect Cable Assembly Tools* catalog, page 5-6, 43-51.

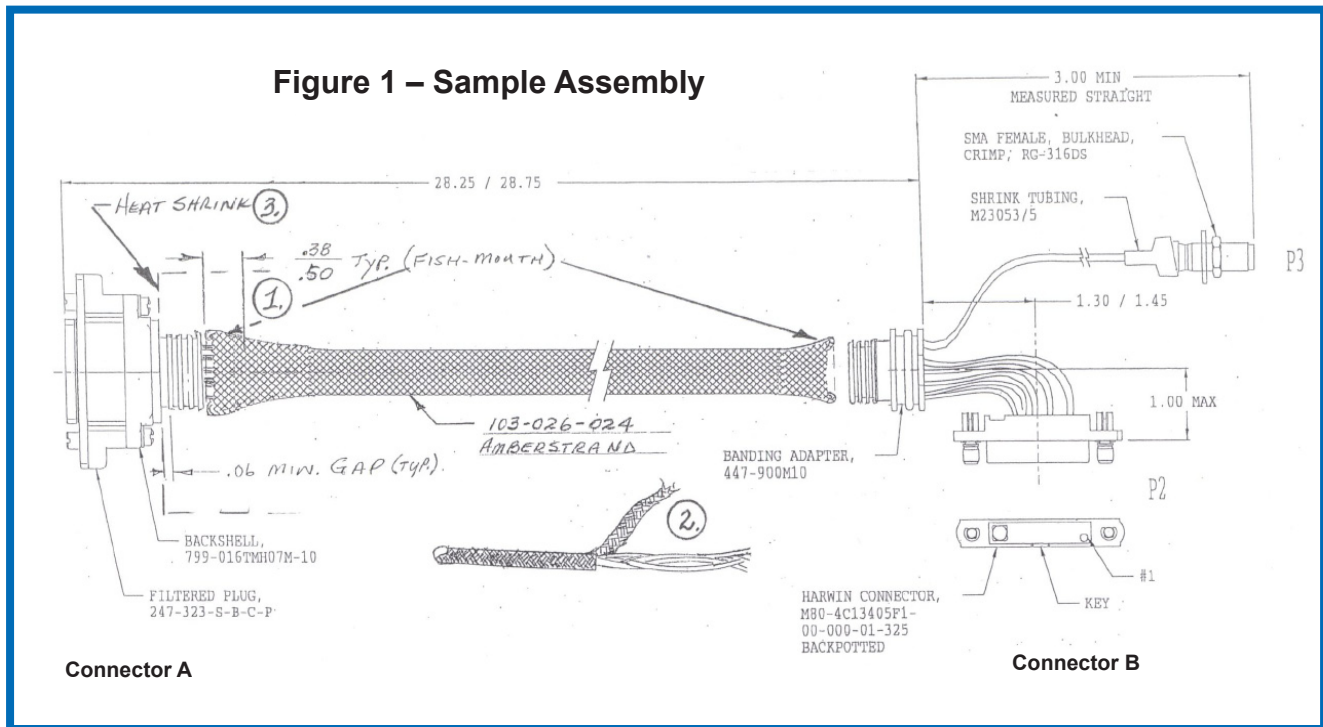


3. **If you are required to pull out internal conductors or pigtails, terminate shield braid to shell or floating banding platform, please review this note:**

APPLICATION OF PULLING OUT SHIELDED TWISTED PAIRS, ETC. (as shown in sample assembly Note 2). After determining the approximate area to extract conductors or pigtails, carefully extract the conductors from within the AmberStrand® braid. Allow pigtail to be at least 1.00 inch long over banding platform. Flatten both pigtails and organize around elliptical or round banding platforms. Combine applicable drain wires, also 1 inch long, lay all grounding members first on the backshell (no overlapping), and allow excess pigtails and wires to lay forward on the banding platform. Bring forward the overall AmberStrand® braid. The fish-mouthed end can then be pre-formed to the elliptical or round shape. Push braid onto platform over pigtails and drain wires, band in place with appropriate Band and Banding Tool. Allow a gap between the start of banding platform and the fish-mouthed braid to facilitate shrink sleeving or shrink boot. Repeat these steps on the other end insuring the required cable length and tolerance is met. Pigtail and drain wire excess may either be trimmed off or folded back on the band (in case of rework).



4. Terminate connector side B according to assembly drawing, as required to finish additional connectors. Be sure to jewel on all required hardware prior to any potting or connector termination that does not allow for de-pinning.



5. After completing banding of connector side A, and after preparing grounding conductors/internal shields (if required) draw down (milk) braid tightly over conductors to insure that all excess slack is removed. Mark appropriate location in order to meet assembly length and tolerance and tie off to hold in place. Install final heat shrink layer, cut to correct length. Band side B using previous applicable instructions.

Note: Whenever possible you want EMI braids and non-conductive outer layers, to be as tight as possible over internal cable or conductors to minimize cable or harness OD. Trim ends of braid using Glenair Large Broad Blade Utility Shear (PN 600-164) or equivalent as required. You may be required to adjust your braid length, and re-fish-mouth, after you perform this draw down procedure. If using multiple layers of AmberStrand® Composite Braid at the same time, a dry spacing layer, i.e. aluminum Mylar, can be used to isolate braid layers and protect from possible friction wear. If working with odd shaped or uneven conductor combinations, or if your assembly requires that you go from a large OD band platform to a smaller OD band platform, the use of lacing cord can be utilized to create a tight, snug braid layer.

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6. Use heat shrink sleeving to achieve jacket coverage and abrasion resistance of AmberStrand® layer. The following sleeving is suggested for use in weight sensitive, high abrasion environments: PN M23053/5-XXX (with 2:1 shrink ratio). Sleeving type and shrink ratios can be adjusted according to specific requirements; however, always default to assembly drawing requirements. These general procedures are not intended to replace applicable Mil specifications or drawing requirements.

Note: Glenair recommends the use of a solid material outer layer (i.e. heat shrink sleeving or flexible convoluted tubing) if using AmberStrand® Composite Braid in an environment where there is potential for excessive abrasion or FOD during cable installation (i.e. around carbon fiber housings) in your system.

7. Finish cable with shrink boots or heat shrink sleeve over adaptors and band. Be sure to install boots (or cut lengths of applicable heat shrink) prior to terminating or banding of the B side. Any element that may have an outer diameter greater than the un-recovered OD of the boot or heat shrink may require you to redo steps.



When using sleeving to finish, be sure that it is flush with backshell shoulder. Hold sleeving in place, apply heat to elliptical or round area only until it conforms to backshell shape. Continue to shrink over bundle diameter to within 3” of final length. Measure for final length, complete shrinking process and trim excess sleeving.

It is recommended that you utilize a Glenair Series 77 Environmental Shrink Boots to cover metal band, EMI termination to connector, as well as to seal back of connector to outer cable or sleeving layer. However, in applications that are weight or size sensitive, segments of thin walled heat shrink sleeving can be utilized, or left off all together. Each assembly and application will have slight requirement variations.

8. Measure for final length, complete shrinking process, trim excess sleeving if necessary.

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