



PRESS RELEASE

September 26, 2008

For Immediate Release

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Alion-McNally Center for Production Technologies Announces Release of the Flex Circuit Harness

Grantsburg, WI, Sept. 26, 2008 – The Alion-McNally Center for Production Technologies (A-M CPT) announces the release of the new Flex Circuit Harness for the TOW-2 Weapon System onboard the Army's armored Bradley Fighting Vehicle (BFV).

The new wire harness was developed at A-M CPT at the request of the Army. A-M CPT engineers worked closely with Army personnel to understand the shortcomings and failures of harnesses currently in use and to design an innovative harness with new features and many improvements.

The new wire harness supercedes a more rigid and bulky legacy design of molded wire and a second generation woven wire design. The new design now incorporates electronic circuitry within a flat hybrid material that offers greater flexibility for a precise custom fit to the TOW-2 optics chassis.

The bulk of the legacy designs made them prone to abrasion and damage during maintenance, a risk that is now minimized with the new flat flexible wire design. Reduced maintenance and replacement of this part translates into significant cost savings to the Army. A-M CPT provided the design and a complete technical data package to the Army so that the new generation of the flex circuit harness can be more competitively priced for procurement.

Doug Johnston of the Army's Close Combat Weapons System TOW Division of Engineering commented, "This harness will lessen or remove one commonly damaged part. Damaged BSAs (Basic Sight Assemblies) have to be returned to the U.S. maintenance depots for repair. Less maintenance-induced damage will allow these harnesses to remain in the fielded units longer."

One of the most troubling maintenance issues with the previous designs was that individual components of the harness were not serviceable, requiring the entire harness to be replaced if one segment or connector malfunctioned. Alion Project Engineer Melissa Anderson explained that one of the engineers' chief tasks was to integrate two replaceable sections in the new harness, allowing easier and less expensive repair. The new harness integrates three slots to accommodate replacement resistors in the case of failure, which can be accomplished without removal of the harness from the chassis. In the new design, circuitry performance is enhanced with optimal protection from radio frequency and electromagnetic interference, affording greater signal performance and minimal cross-talk.

Alion Program Manager Eric Peterson noted, "We are pleased with the result of our engineering effort on this project. Our design offers superior performance as well as operational and maintenance savings for the Army. The new generation of this part resulted in a large step forward in form, function and technology." Johnston further commented, "Design of this harness was no easy task ... the A-M CPT folks have done a great job. One of the toughest challenges was passing the scrutinizing eye of our maintenance team, especially with regard to 'glove tight' fit of the harness to the BSA (Basic Sight Assembly). That has been achieved."

The bottom line to the Soldier, Johnston acknowledged, is less down time, which is a significant accomplishment. "The Soldier will have the battle weapon at a higher readiness level for offensive and defensive situations, and this alternate design will provide for competitive pricing."



A-M CPT's new flexible circuit harness, shown wrapped around a TOW-2 optics chassis, precisely fits its host and provides many benefits to the Army over legacy models.

About A-M CPT

The Alion-McNally Center for Production Technologies (A-M CPT) is an alliance between Alion Science and Technology (www.alionscience.com) and McNally Industries, providing a full range of advanced engineering solutions and precision manufacturing services to support the United States Armed Forces. The Center specializes in expedited development, prototyping and manufacturing to meet the rigorous scheduling requirements of the military.

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A-M CPT is headquartered in Grantsburg, Wisconsin. For more information, go to www.a-mcpt.com.

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