Hardwire Transparent Armor Relamination

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Background

- Approximately 16K USMC Motor Transport Vehicles vulnerable to Transparent Armor delamination. Other services are experiencing similar TA delamination issues.
- Typical TA procured under the current Purchase Description Standard for Transparent Armor, ATPD 2352T, has a lamination longevity of ~6 months to 3 years.
- The current ATPD-2352T does not specify durability or longevity requirements.
- The Marine Corps contracted with “Hardwire” to procure a capability to repair delaminated Transparent Armor as a Proof of Principal (PoP).
- The PoP proved successful, demonstrating a capacity of > 1,000 repairs per year. Accelerated aging testing shows repaired TA samples lasting > 4 years with no delamination. Accelerated aging testing is on-going to determine the longevity of the repaired TA.
- 4 June – The Chief Engineer of the Marine Corps approved use of relaminated Transparent Armor in USMC equipment.
- Repair costs are primarily labor-driven (vice material driven). Significant cost savings over the cost of procuring new TA windows have been identified for larger TA windows.
- Repaired TA could potentially last much longer than currently available TA, making relamination of even smaller windows a more economically attractive option (e.g. HMMWV).

The Marine Corps is seeking a cost-effective enterprise sustainment solution for the armored vehicle fleet currently impacted by Transparent Armor delamination.

Program Overview

- Objective: Build and demonstrate a relamination capability with the ability to repair delaminated transparent armor (TA). The repair line shall be capable of relaminating TA of all sizes up to and including the Logistic Vehicle System Replacement (LVSR) windshield.

- Points of Contact:
  - USMC LOGCOM - Mr. Jim Varner, james.a.varner@usmc.mil, 229.639.7807
  - Hardwire – Mr. Tim Donoghue, tim.donoghue@hardwirellc.com, 410.957.3669

The Solution – Finished Product

Before Hardwire

After Hardwire