

Deploying UH-60M Helicopters get Envelop Protective Covers

The U.S. Army's UH-60M Program Manager (PM) has selected a set of five different ENVELOP Protective Covers for 66 new UH-60M aircraft. These aircraft are stationed at Fort Riley, Kansas, and with the Wisconsin, Michigan and Hawaii Army National Guard (ARNG). All these units are scheduled for deployment in the near future.

At Fort Riley in August, Mark Bechtel (Aviation Team Leader for Shield Technologies) and Mike Dupasquier (Shield Technologies Engineer) conducted a cover demonstration for key personnel from the UH-60M PMO, and active duty and ARNG Chief Warrant Officers and NCOs. They were shown the fit and functionality of the Cockpit/Nose, Dash/Center Console, Pitot

Tube, Stabilator, and CMWS (Common Missile Warning System) Chaff/Flare Dispenser covers. *"We put almost ten months of development and testing into some of these covers and it has really paid off, the Soldiers love them,"* said Bechtel.

These covers will provide the UH-60M and its state of the art electronics and avionics the ultimate protection from moisture, corrosion, UV, heat, sand and other

debris. There are now 10 different ENVELOP Covers developed for the UH-60 Black Hawk helicopter and mission equipment that is used on the aircraft. These covers can be found on the GSA Schedule.



UH-60M Full Cockpit Nose Cover- Part Number 122037

USMC AV-8B Harrier Canopy Covers and Fuselage Plugs

The AV-8B is the Marine Corps' VTOL (Vertical Takeoff and Landing) fighter-bomber, and the Navy-Marine Corps Air-Ground Team relies heavily on this venerable aircraft to provide close air support. The Harrier has had its programmed lifespan extended after delays in its scheduled replacement, the F-35B. Based upon ENVELOP's success in the Marine Corps Rotary Wing aircraft community, the Harrier program office approached Shield Technologies and asked for help in developing products which could protect the Harrier canopy, and keep sand, dirt, and

moisture out of the inside of the aircraft. The result was the successful and rapid creation of a set of fuselage plugs and canopy covers that is being expedited and delivered to a Harrier squadron in the combat theater of operations, VMA 231.

Aircraft canopies are critical and easily damaged. Not only are the parts expensive, they take many hours to repair or replace. The ENVELOP canopy cover is designed to provide superior protection. It is both waterproof and breathable, and lined with a material that will resist picking up sand and debris, yet is soft enough that it won't scratch the glass. The cover is sealed with a gasket material around the edges to prevent sand and debris from blowing under the cover onto the glass; and it is padded to provide resistance to light impacts. This type of cover is excellent for all fixed and rotary wing aircraft, and far superior to the vinyl and Herculite covers used in the past.

Also Featured in this Issue:

- *New Paladin and ASV covers fielded by National Guard Units*
- *NAVSEA undertakes initiative to demonstrate effectiveness of Envelop covers.*
- *Special Operations Aviation Regiment (SOAR) uses innovative new design to protect delicate assets.*
- *Shield Technologies protects a large fleet of trucks in the oil and gas industry.*
- *Envelop covers provide a "green alternative."*
- *Navy Chief writes Shield Technologies a letter of praise for ENVELOP covers after two six month deployments.*



AV-8B Harrier Canopy Cover- Part Number 122200

Washington State National Guard Makes Large Purchase of ENVELOP Covers

The Washington State National Guard recently made the decision to protect all of their M109A6 Paladin Howitzers with ENVELOP Protective Covers. In addition, the Guard purchased covers for Bradley Fighting Vehicles and M1A1 Abrams Tanks. ENVELOP Covers will now protect these expensive tracked vehicles from the harsh weather encountered in Washington, which

ranges from very humid and rainy on the coast, to a dryer desert environment in the central region of the state. The “dry” desert actually gets considerable snowfall in the winter months. ENVELOP Covers are able to withstand the freeze and thaw cycle common in the colder, wetter areas of the country; they have been developed and tested in many diverse climates including Camp Ripley,

Minnesota, Ft. Sill, Oklahoma, Afghanistan, Iraq, and Korea.

The covers purchased by the Guard are integrated with the vehicle dehumidification system used at the National Guard’s Maneuver Area Training Equipment Site (MATES) in Yakima, Washington. This system blows dry air into each vehicle via an aluminum hose that resembles a dryer exhaust hose. These are effective systems, but alone they can’t overcome the sheer amount of water intrusion from rain storms or melting snow and prevent the resulting corrosion and damage. The ENVELOP Covers were modified to work in synergy with this system. The dry air hose now straps to the outside of the cover and enters through a flap. The system now also includes corrosion inhibiting ENVELOP Emitter Mats in the interior of the vehicles to ensure that maximum protection is delivered while still allowing for system use on a daily, weekly or monthly basis by the units that maintain and operate them. All future Paladin, Bradley and M1A1 ENVELOP Covers will be equipped with this feature.

The ENVELOP Paladin, Bradley and M1A1 Covers are available on GSA (Contract Number GS07F9386S).



Installed Paladin M109A2 Cover Set.

New Hampshire National Guard Selects ENVELOP to Protect Their ASV’s

Finding the best protection for new assets and reducing the amount of time that Soldiers have to spend on low-value repetitive tasks, such as draining water and busting rust, are high on the list of any leader in today’s high tempo operational environment. This fact is especially true in the National Guard where assets may sit for weeks between drills

with little or no hands-on attention. The M117 Armored Security Vehicle (ASV) is a turreted, armored, all-wheel drive vehicle that supports military police (MP) missions throughout the National Guard’s MP Community.

While extremely effective against the enemy, the new ASVs are, like any large

combat vehicle, maintenance intensive and prone to large amounts of water intrusion. At almost \$1 million per vehicle, units are doing whatever it takes to protect these high value assets. This fact is no different in New Hampshire where summers are hot and humid and winters are wet and cold. This is exactly why the Soldiers of the 237th MP Company of the New Hampshire National Guard (NHNG) have chosen ENVELOP Protective Covers

In the short amount of time every month that National Guard Commanders have with their Soldiers, training time and value must be maximized. The ENVELOP Cover will not only protect the ASV from the harsh environments found in places like Iraq and Afghanistan, it will also provide unique protection in the more humid climates found within the United States by creating a moisture-reducing micro-environment around the system. The ENVELOP Protective Cover allows units to focus on the mission at hand knowing that their equipment is protected in such a manner that will assure its effectiveness when the need arises.

The ASV ENVELOP Protective Cover (PN 123166) may be procured through GSA, or by contacting Shield directly.



Installed ASV M1117 Gunship Cover. Part Number 123166

Shield Provides Integrated, Long Term Storage Protection

Shield Technologies was recently chosen to provide numerous corrosion protective products to sustain up to 500 oil and gas industry heavy equipment vehicles in Texas and Oklahoma. The customer required two to five years of protection for various external and internal components of their industrial infrastructure. The resulting design was an integrated solution using ENVELOP Protective Covers and corrosion inhibiting chemicals that work in conjunction to protect critical electronic control boxes and other valuable external machinery components, including: hydraulic systems and lubrication points, oil/fuel/coolant systems, void space tubing, electrical boxes and connections, and exterior surface wash down and inhibitor coating.

The integrated physical and chemical solution is customized for each type of equipment and their unique physical storage and longevity demands. As a result, the equipment will be ready for use after prolonged storage with a limited amount of preparation. The preservation solution can have a duration that lasts as long as 5 years with minimal intermittent maintenance required.

The ENVELOP Cover design will also protect the customer's equipment from damage commonly caused by the "greenhouse effect," a difficult problem that exists with traditional covers. The interior spaces are treated with a long term mold and fungus inhibiting product, which works in conjunction with the protective cover for maximum effect. All of the chemicals and products designed into this high technology solution are environmentally safe and user friendly.



Cast iron after 2 months of testing with an oil company near the Gulf of Mexico. Proving a 90% reduction in corrosion when using ENVELOP covers.



Envelop Covers Receive Unsolicited Letter of Praise

After serving on two 6-month deployments aboard a U.S. Navy destroyer a Chief had the following comments regarding Envelop covers: "I replaced four Envelop covers for my single .50 cal machine guns, the original covers finally took all that they could. But this is not a bad thing, those original covers lasted approximately two years and took a great amount of damage from wave impacts and sea water intrusion and direct UV/UB exposure. I wanted to say that when used, the covers have aided in the prevention of rust formation on my machine guns. Its only when they must be uncovered that they take the worst amount of exposure damage. So thanks to you and your company for helping my gunners maintain functional weapons."

The "Green" Benefits of Envelop Covers

Today's increased awareness for environmental protection has led to green solutions; but often, acting responsibly on that awareness has led to higher costs for business. That is why it is especially gratifying when new technology provides not only solutions that are beneficial to the environment, but also provide higher sustainability for the equipment we use – and therefore cost savings. Shield Technologies' products are a leading example of technology that excels in both areas.

ENVELOP Protective Covers achieve this positive outcome in several ways. Cleaning old lubricants and corrosion off a piece of equipment creates hazardous and environmentally unfriendly wastes. Disposing of oil and grease soaked rags, used desiccants, and used plastic wraps all contribute to the hazardous materials that a command or a company must dispose of. By using ENVELOP Protective Covers you can reduce the amount of hazardous waste generated from these items. It will also reduce the amount of materials that are sent to landfills.

ENVELOP Covers will also help with reducing the periodicity of equipment maintenance cycles, and the various lubricants and preservatives applied over time. The reduced use of pressurized spray cans and various paint solvents is another positive way to protect the atmosphere. Lower maintenance and HAZMAT disposal fees will also result for an organization that reduces its use of hazardous maintenance materials.

ENVELOP Covers Repair Kit Now Available

ENVELOP Protective Covers are designed to survive the most unforgiving environments and harshest treatment. However, sometimes even rugged ENVELOP covers can succumb to the most severe conditions, or be inadvertently damaged. Over the past several months Shield Technologies has worked to develop a repair kit that can remedy many of these rare problems and extend the lifespan of an ENVELOP Cover.

The repair kit includes all of the necessary materials to patch cuts and holes of a wide variety of sizes. The patches are bonded with a waterproof adhesive that can easily be applied with a common iron. The adhesive forms a rigid bond between the patch and cover that can overcome the kinds of environmental degradation infrequently found on ENVELOP Covers after extended periods of use.

The new repair kit also addresses other parts of an ENVELOP Protective Cover that might require mending. Upon request Shield Technologies can provide the following items as integral components to the kit: 1" webbing, 5/8" webbing, grommets, 1" buckles, 5/8" buckles, slide locks, barrel locks, D-rings, gutter hooks, and "Remove Before Flight" flags.

The repair kit is designed to maximize the lifespan of ENVELOP Covers so that they can continue to protect sensitive equipment, decrease maintenance man-hours, and increase mission readiness. The kits can be procured by contacting a Shield Technologies sales team representative.

NAVSEA Outfits Four Surface Combatants as Pilot Project

Shield Technologies Corporation has been awarded a contract from the U.S. Navy to outfit four combatant ships with complete sets of Envelop Protective Covers. USS NICHOLAS (FFG-47), USS RAMAGE (DDG-61), USS JAMES E. WILLIAMS (DDG-95) and USS LEYTE GULF (CG-55) are all being outfitted with Envelop Protective Covers as the key piece of a topside corrosion prevention initiative. SEA-21 is the sponsoring activity for the initiative.

The goal of the project is to demonstrate to the INSURV board a cost effective solution as part of the broader corrosion prevention program administered by the U.S. Navy's surface fleet. Each of the ships being outfitted will undergo INSURV inspections within the next 12 months. As always, Shield Technologies representatives will be present for all deliveries to provide training and information on care and use of these technologically advanced corrosion preventive covers. They will also work in close coordination with SEA-21, the ship class squadrons, and the ships' companies themselves throughout the initiative to ensure that the proposed solution can achieve maximum results for combat readiness.

ENVELOP Protective Covers Reach a Fixed-Wing Aircraft Milestone

During the month of September 2009, the U.S. Navy procured 11 complete sets of E/A-18 Growler aircraft covers for the Naval Air Station (NAS) Whidbey Island-based electronic attack squadron VAQ-129. The Boeing Integrated Defense Systems Corporation's E/A-18 Growler is the nation's newest and most technologically advanced electronic warfare aircraft in the world. ENVELOP Protective Covers were chosen by VAQ-129 due to the diverse environmental degradation protection that the covers provide, as well as the end-user custom design choices offered by Shield Technologies.

The U.S. Navy recently introduced the Growler aircraft to NAS Whidbey Island and began a phased transition from the aging EA-6B Prowler aircraft to the Growler. The Navy's decision to put ENVELOP protective covers on the initial set guarantees VAQ-129 a significant reduction in overall maintenance hours expended, as well as corrosion related maintenance costs. A complete set of F/A-18 protective covers includes customized color and lettering for the left and right engine intake and exhaust covers, and a unique aircraft canopy protective cover which provides aircraft internal thermal protection from extreme temperature spikes.

The E/A-18 contract represents another significant milestone for Shield Technologies, which is increasingly recognized by the naval aviation community as the leading choice for superior protective covers.



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ENVELOP Protects Stabilators for Special Operations Aviation Regiment (SOAR)

The 160th SOAR (Special Operation Aviation Regiment) at Fort Campbell, KY recently purchased 26 UH-60M Stabilator covers for their MH-60 aircraft.

The covers were displayed for the unit in September and were a big hit with the hard working Night Stalker NCOs that maintain the aircraft. These padded covers provide impact protection from accidentally dropped tools or equipment that is used to perform maintenance on the tail rotor assembly or service the gearbox. Through extensive testing Envelop has designed a cover that provides 100% impact protection to the area of the Stabilator below the gearbox



UH-60L Padded Stabilator Cover.

from a tool weighing up to 6 pounds that is dropped from a height of 8 feet. This type of guaranteed protection is important because the composite Stabilator on the UH-60M does not have an authorized repair for damage. Envelop has Stabilator covers designed for the UH-60A/L, UH-60M and the AH-64A/D aircraft.