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Media Advisory

TARDEC

June 20, 2008

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Release # 0810

Two TARDEC Projects Honored With 2007 Army Greatest Inventions Award

WARREN, MI ─ Two U.S. Army Tank Automotive Research, Development and Engineering Center (TARDEC)-led projects ─ the High Mobility Multipurpose Wheeled Vehicle (HMMMV) Egress Assistance Trainer (HEAT) and the Improvised Explosive Device Mine Roller Self Protective Adaptive Roller Kit (SPARK) ─ were honored as two of the top ten 2007 Army Greatest Inventions (AGIs) for their life-saving features and Soldier survivability enhancements.

U.S. Army Materiel Command (AMC) Commanding General GEN Benjamin S. Griffin hosted the awards ceremony, which was held June 12, 2008, in Arlington, VA. Also in attendance and presenting the AGI awards to the laboratory directors and their teams was Secretary of the Army Pete Geren.

"It's very important to recognize these achievements because they make an impact every day on the lives of the men and women serving around the world," Griffin stated. "If you go around to the field, whether it's Iraq, Afghanistan, CONUS [Continental United States], Europe, Korea or the Pacific, and you talk to Soldiers about these different systems, they know about them and are using them."

Griffin lauded the Army's research, development and engineering centers for their engagement in and cultivation of "world-class engineering" and what Army technological breakthroughs mean to Soldiers waging the global war on terrorism. He urged the leaders gathered at the ceremony to congratulate their employees "on the tremendous work that they've produced, and continue to produce, for our Soldiers worldwide."

"I am proud of both TARDEC teams for their innovation and their collaborative efforts with other Army organizations on the HEAT and SPARK," remarked TARDEC Director Dr. Grace M. Bochenek. "These two inventions bring real protection and capability to our Soldiers and are indicative of the systems engineering integration our associates have developed for all the DOD ground combat weapons and vehicle systems we support."

"When these systems go into theater, our engineers are right there with the equipment as part of the project management team to train the Soldiers how to use it and ensure that the equipment is fulfilling the commander's operational requirements or product

specifications," Bochenek continued. "We understand the sacrifices our Soldiers make every day, and our entire workforce is dedicated to giving them the best equipment and vehicle systems we can deliver so they can return home safely."

In response to an Operational Needs Statement (ONS) from the U.S. Army Forces Command and Program Executive Office for Simulation, Training and Implementation (PEO STRI), and follow-on manufacturing assistance from Red River Army Depot, TARDEC rapidly prototyped, designed, fabricated and integrated the HMMWV HEAT. HEAT trains Soldiers how to react in vehicle rollover situations so they can overcome the natural fear and disorientation associated with this type of incident. Likewise, the trainer helps Soldiers deal with cluttered crew cabs (payload challenges), how to unlock their seat belts and how to unlock heavy up-armored doors from a variety of positions. This training is helping Soldiers become more adept at vehicle egress in emergency situations and, ultimately, helping save Soldiers' lives Army wide.

Prior to the HEAT's invention, Soldiers were not trained how to properly exit a vehicle that had rolled on its side or top because of an incident. Soldiers, including the gunner, can now be appropriately trained on how to open their safety restraints and exit the vehicle through either the doors or the gunner's hatch in a variety of rotated positions.

The TARDEC-developed HEAT has become the U.S. Army standard for egress training and has been made part of required training for all Soldiers. In addition, it is required training for all Department of Defense civilian employees and contractors who go on certain missions outside the CONUS. HEAT is the only Army device that can rotate and stop in various positions, allowing Soldiers to experience and react to a variety of operational scenarios. Since HEAT's rollout in January 2007 to its actual deployment and fielding Army wide, HEAT has been credited with savings hundreds of warfighters' lives.

SPARK, TARDEC's second award winner, provides additional protection to vehicles and crews against pressure-activated improvised explosive devices and mines. The rollers, which are installed on the front and rear of vehicles, provide additional stand-off protection to the vehicle and crew by applying variable amounts of downward pressure. The rollers can be calibrated to adapt to emerging threats. By rolling over and activating an improvised explosive device's/mine's pressure switch while it is still in front of a vehicle, the device is designed to detonate in front of the vehicle instead of underneath it, greatly reducing the risk of injury or trauma to the crew and battle damage to the vehicle.

TARDEC teamed with Product Manager (PM) Improvised Explosive Device Defeat/Protect Force, part of PM Close Combat Systems, to present a commercial-off-the-shelf solution to the Joint Improvised Explosive Device Defeat Office in response to a Joint Urgent ONS for the SPARK mine rollers.

The AGI awards recognize innovative new products emerging from the Army's research and development community that enhance warfighter performance capabilities and, ultimately, safety. Soldiers decide which inventions are the best, measuring nomination importance and product impact based on their field experiences. This year's evaluation pool included members from all 10 active Army divisions.

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Note: There are photos that can be used with this release. Caption information follows. To download the photos, go to http://www.tardec.info/pressreleases/.

Photo Captions:

TARDEC-PR-0810_1_AGI.jpg
TARDEC's IED Mine Roller SPARK is shown here on the front of a Mine Resistant Ambush Protected (MRAP) vehicle. The SPARK won a 2007 AGI Award. (U.S. Army photo.)

TARDEC-PR-0810_2_AGI.jpg
TARDEC's HEAT (see inset photo) trains Soldiers how to react in vehicle rollover situations. The HEAT is pictured at bottom right in the inset of this up-armored HMMWV. The HEAT won a 2007 AGI Award. (U.S. Army TARDEC photo. HMMWV photo courtesy of BAE Systems.)

TARDEC-PR-0810_3_AGI.jpg
(From left) AMC Commanding General GEN Benjamin S. Griffin and Secretary of the Army Pete Geren congratulate TARDEC Director Dr. Grace M. Bochenek and MAJ John Niemeyer for TARDEC's 2007 AGI Award for the IED Mine Roller SPARK. (U.S. Army TARDEC photo by Paul Tremblay.)

TARDEC-PR-0810_4_AGI.jpg
Representing the TARDEC team that developed the award winning HEAT are (from left) Pete Pfister, Ken Essig, LTC Scott Pulford, TARDEC Director Dr. Grace M. Bochenek, Jim Revello and Gerard Szczerbinski. Pulford represents Product Manager Ground Combat Tactical Trainers of Program Executive Office Simulation, Training and Instrumentation. (U.S. Army TARDEC photo by Paul Tremblay.)

TARDEC is the Nation's laboratory for advanced military ground systems and automotive technology. A leading technology integrator for the U.S. Army Materiel Command's

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Research Development and Engineering Command (RDECOM), TARDEC is headquartered at the Detroit Arsenal in Warren, MI, located in the heart of the world's automotive capitol. TARDEC is a major element of RDECOM and partner in the TACOM Life Cycle Management Command. As a full life-cycle engineering support provider-of-first-choice for all DOD ground combat and combat support weapons and vehicle systems, TARDEC develops and integrates the right technology solutions to improve Current Force effectiveness and provide superior capabilities for the Future Force. TARDEC's technical staff leads research in ground vehicle survivability; mobility/power and energy; robotics and intelligent systems; maneuver support and sustainment; and condition based maintenance. TARDEC develops and maintains ground vehicles for all U.S. Armed Forces and numerous federal agencies.

For additional information about TARDEC's forthcoming developments and other technologies, please contact Mike Roddin at (586) 574-6534 or mike.roddin@us.army.mil.