Improving Diagnostics in the Active Component

The Master Diagnostician Program and the Unit Diagnostics Immersion Program are improving advanced diagnostic skills among Army maintainers.

■ By M.C. "Steve" Cherry

The advanced diagnostic skills of the Army's maintenance technicians and noncommissioned officers (NCOs) have atrophied. This is especially true of advanced diagnostics skills for combat vehicles, such as M1A2 Abrams system enhanced package version 2 tanks, M2A3 Bradley fighting vehicles, Stryker vehicles, and M109A6 Paladin self-propelled howitzers.

Senior leaders throughout the Army frequently remark that combat vehicle maintainers have lost the institutional knowledge and experience that used to be passed from warrant officers to NCOs to Soldiers. Arguably, a large contributing factor to this loss is the overreliance on contracted field service representatives and maintenance contractors to fill maintenance shortfalls within formations.

This reliance on outsourcing has broadened the gap in the Army's institutional knowledge and experience and created a proficiency challenge that it must now work to overcome. The inability of maintenance NCOs and warrant officers to diagnose and troubleshoot system faults results in increased equipment downtime and cost; both have significant adverse effects on readiness.

Master Diagnostician Training

Forces Command's (FORSCOM's) top priorities include maximizing readiness, mastering the fundamentals, and strengthening leader development. These three priorities have a common goal of improving the diagnostic skills of unit maintenance personnel.

To address the troubleshooting and diagnostic capabilities of maintenance organizations, the FORSCOM commander visited the National Guard Sustainment Training Center at Camp Dodge, Iowa, in February 2016. Camp Dodge is one of the premiere training locations for Army National Guard and Reserve sustainment organizations.

The FORSCOM commander was very impressed with the training he observed and directed his staff to work with the Training and Doctrine Command (TRADOC) to replicate this training for the active force. This led to the FORSCOM Master Diagnostician Training Initiative and pilot program at the Sustainment Training Center.

This pilot program jump-starts advanced diagnostics training for FORSCOM units while TRADOC works to incorporate diagnostics training in the maintenance NCO and warrant officer leader development courses at the Ordnance School.

The National Guard and FORSCOM worked together to modify the National Guard technician training contract. This collaboration resulted in eight two-week courses to develop and enhance selected FORSCOM maintainers' advanced diagnostic and troubleshooting skills. Programs of instruction were written for Bradleys, Strykers, Paladins, and Abrams.

The training concentrates on the why of diagnostics and troubleshooting and builds on the critical thinking skills required to isolate faults and repair the vehicles. Mechanical theory and technical manual information is practiced through hands-on implementation with a wide range of diagnostic tools.

The intent is to provide maintainers with the knowledge needed to rapidly diagnose problems and provide cost-effective solutions so that armored formations can reach higher levels of readiness.

The UDIP

Prior to the Master Diagnostician Training Initiative, FORSCOM collaborated with its partners at TRADOC and the Combined Arms Support Command to create the Unit Diagnostics Immersion Program (UDIP). The difference between the UDIP and the Camp Dodge program is that the UDIP instruction occurs at FORSCOM installations with armored units rather than in Iowa.

The home-station training allows for more training seats and is easily included on units' long-range training calendars. Initial UDIP training started at Fort Carson, Colorado, in February 2016.

The UDIP begins with a weeklong train-the-trainer course at Fort Lee, Virginia, for Paladins and Strykers, or at Fort Benning, Georgia, for Abrams and Bradleys. During this course, NCOs undergo detailed training to become assistant instructors within their formations.

During the week of training at the installation, a mobile training team, composed of Combined Arms Support Command instructors and augmented with the recently trained assistant instructors, provides hands-on training utilizing unit tools, test equipment, vehicles, and facilities. Upon completing the UDIP, the organization receives an exportable training package that facilitates continued training.

Initial Lessons Learned

Both NCO and warrant officer students have expressed great satisfaction with the master diagnostician and UDIP training. In fact, many students requested that the training be lengthened and expanded to include more vehicle platforms. This positive feedback helped get the program extended through fiscal year 2017.

Units can also make improvements. For instance, participating units need to ensure that they are training their best promotable sergeants, staff sergeants, warrant officers and chief warrant officers 2. The retention of these Soldiers must also be considered. Lastly, in order to maximize the return on the investment, it is imperative that units place trained master diagnosticians in positions that best use their advanced skill sets.

Since the start of the UDIP, 315 Soldiers from across six installations have attended the course. Recently trained Soldiers are making immediate improvements to the overall readiness of FORSCOM ground fleets.

The FORSCOM G-4 is working with the Sustainment Training Center to develop the schedule for another six-month Master Diagnostician Program this spring. Nearly 60 seats will be available to FORSCOM warrant officers and NCOs.

Recognizing that the Master Diagnostician Program is merely a short-term training solution, FORSCOM will continue to work with TRADOC to place critical advanced diagnostics training back into the Ordnance School maintenance curriculum for a more permanent solution in fiscal year 2019.

The increased availability of ready equipment and the cost savings from fewer misdiagnosed faults have solidified the program for the foreseeable future.

M.C. "Steve" Cherry is a branch chief in the FORSCOM G-4 at Fort Bragg, North Carolina. He is a retired colonel with more than 30 years of active duty service. He is a graduate of the Command and General Staff College, the Joint Forces Staff College, and the Marine Corps War College. He has master's degrees in public administration from John Jay College and in a strategic studies from the Marine Corps University.

Warrant officers from III Corps at Fort Hood, Texas, work on an engine while attending the Bradley M2A3 Master Diagnostician Course at Camp Dodge, Iowa, on Sept. 14, 2016.