

Tested Maintenance Principles from National Training Center Rotation 22-07

by MAJ Patrick K. Kuiper and LTC Russell B. Thomas

Many authors write articles to address practical advice for Army leaders about maintenance. Two articles our unit found most beneficial in setting the groundwork for a solid maintenance program were “Winning the Maintenance Fight at Pace” by COL Michael Simmering¹ and “P4T3 Supporting ‘Ready Now’ Maintenance” by Chuck Brown.² Both articles provide specific technical advice to improve the maintenance program and posture sustainment for high-intensity operations.

After completing National Training Center (NTC) Rotation 22-07, where 3rd Cavalry Regiment trained in large-scale combat operations (LSCO) with greatly extended lines of communication compared to other rotations, we discuss in this article three general principles to consider when leading a maintenance program. NTC Rotation 22-07 validated that a maintenance program grounded in the principles of accountability, support and stability can thrive in LSCO over extended lines of communication.

Accountability

Several critical systems exist to enforce accountability for maintenance. One of the most important of these is the equipment-status report (ESR). The ESR is the Army’s system of record for vehicle issues and parts ordering, and is the one true method for tracking maintenance. Often a new leader will feel pulled to develop or use non-standard accountability mechanisms (Microsoft Excel or PowerPoint trackers, for example) to understand and visualize the performance of their maintenance enterprise; however, the ESR must remain the exclusive document to visualize performance.

The ESR’s prominence as a tool is critical. The ESR lets anyone in the maintenance enterprise understand current faults on a piece of equipment, the required corrective action status

of parts required to fix it, in addition to a myriad of other data. When a maintenance fault occurs and is accurately annotated on the ESR, a demand signal to the Army that the item is broken is generated. These events occur nearly automatically to rectify the fault.

However, just as critical as an accurate and active ESR is the general concept of accountability. Leaders at every echelon must be held accountable for what is printed on the ESR. This print, and thus the faults and equipment status of the organization, must be weighed against practical,

event-oriented operational performance. Operational performance at an event could be gunnery training, an impromptu deployment readiness “roll-out” drill or a company combined-arms live-fire. The ESR must be validated with equipment performance at these events and leaders must be held accountable via formal counseling and performance evaluations for the status of their equipment.

Leaders must ensure accountability for both the maintainer professionals and combat-arms organizations alike. We recommend a completely even divide



Figure 1. A pack change is made in the field during Operation Rifles Forge, a troop situational-training exercise/combined-arms live-fire exercise, at Fort Hood, TX. In February 2022. (U.S. Army photo by MAJ Patrick Kuiper)

when balancing time and effort toward assessing accountability between these organizations. For example, a unit with poor maintenance could be the result of an ineffective maintenance organization or a collection of infantry companies who do not execute proper preventive-maintenance checks and services (PMCS) with faults accurately annotated on the Department of the Army (DA) Form 5988E (Equipment Maintenance and Inspection Worksheet). Most often the fault lies near the middle between maintainers and the combat-arms organizations. Holding the appropriate organization to account for its shortfalls and encouraging all members of the organization to be great teammates is critical for overall success.

A culture of accountability within the organization need not be toxic or draconian. Rather, as on any good sports team, this accountability stems from mutual respect for one another and the requirements to ensure the overall success of the unit to fight and win in LSCO. During NTC Rotation 22-07, we found that once accountability, coupled with authority to act, were applied each member of the maintenance team strove to do their part and facilitate the success of the squadron.

Support

The maintenance specialists who have the primary responsibility to repair Army equipment require the support of end-users. These end-users are often combat-arms personnel such as vehicle drivers, gunners and commanders. If left to their own devices, many of these end-users would prefer to annotate a fault, bring the vehicle to a mechanic and ask for a message when the vehicle or equipment is ready for pick-up. In the Army, and especially a Stryker brigade, the number of mechanics is not nearly enough to allow for this type of support. When conducting LSCO, the number of repairs required due to the pace of operations simply requires all end-users to take an active role in supporting maintenance operations.

For successful maintenance operations in LSCO, both end-users and maintenance specialists must support one another as teammates to ensure

equipment is sustained properly. Therefore, leaders at all levels must adjudicate this symbiotic support relationship to ensure all parties uphold the standards of their profession and occupational specialties. A maintenance program will only be successful when the support relationship is reciprocated by all.

This support relationship starts with an accurate and effective flow of the DA Form 5988E. During NTC Rotation 22-07, the standard flow of 5988Es was 72 hours. The troop executive officer would issue new 5988Es to the unit. All crews would conduct daily PMCS on their equipment using that same 5988E, and then on the third day the executive officer would retrieve the 5988Es from the unit (providing a new one with annotated faults from the last turn now on the print) and forward those to the unit-maintenance command post via the logistical resupply point.

With the regular push of 5988Es, faults were validated by embedded troop-level maintenance teams, updated in the Global Combat Support System-Army and placed on order. This same process was used on a staggered rotational 72-hour basis for weapons; communications equipment; nuclear, biological and chemical equipment; and vehicles. This rotation balanced generating accurate demand signals from equipment operators with the logistical overhead of the paperwork exchange, ensuring operators provided 5988Es updated on a class of equipment at every daily logistics package.

Providing support on the ground when a vehicle requires repair includes having the operator crews present for the duration of the work required to push the vehicle back in the fight. In Tiger Squadron (1st Squadron, 3rd Cavalry Regiment), we empowered crew members to conduct installation of simple parts, often “slash faults,” so that the mechanics could focus their efforts on more difficult repairs. All repairs were inspected and certified by a mechanic, but items such as periscope repair, seat installation or side-mirror repair could often be installed by the crew. Leveraging operator crews to complete this work saves valuable mechanic time.

Also, the crew should always be on hand to assist the mechanics with installation of those more difficult tasks. This teamwork reduces the overall repair time significantly.

For a successful maintenance program in the field, it is critical that support goes both ways (maintenance specialist to end-user and back). Commanders and leaders at all levels must continually enforce and demand this cooperation from each teammate so the unit is as effective as it can be.

Stability

There is no perfect maintenance program in the Army. Every program can be improved, and it is true that each must continually strive to be better so it is as effective as it can be. However, before conducting a “bold shift” in a maintenance program, a commander should check whether an established system is being leveraged appropriately before inventing new methods to bring labor, parts or any other resource to bear against an existing program. The two published articles mentioned at this article’s introduction provide excellent advice on systems to use for ensuring an effective maintenance program. Most often, consistent and simple battle-rhythm events – such as maintenance meetings, motor-pool formations, equipment-service reviews and equipment inspections – provide the stability a maintenance program requires to thrive.

Maintenance is not a “surge” event. While there may indeed be times when a unit does have to surge on maintenance – such as following a large battle/training event or after a particularly long movement over difficult terrain – the preponderance of maintenance must be steady-state. With that in mind, leaders must develop a maintenance program based on established Army systems, enforce accountability of all members of the maintenance program and facilitate mutual support by all to make the program effective. If solid systems are in place, creating a unit norm during the friction of war and/or difficulties in the LSCO environment will only require minor adjustments to allow the organization to realize continued maintenance success.

Recent conflicts across the globe have demonstrated that the ability to fight over extended lines of communication is essential to maintaining tempo in today's current operational environment. A conscious and continuous application of the three principles *accountability, support and stability* will help units maintain high operational-readiness rates to fight and win in combat.

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Notes

¹ COL Michael J. Simmering, "Winning the Maintenance Fight at Pace," *The Company Leader*, March 16, 2020, <https://companyleader.themilitaryleader.com/2020/03/16/winning-the-maintenance-fight-at-pace/>.

² Chuck Brown, "P4T3 Supporting 'Ready Now' Maintenance," *Flightfax* Edition 78, June 2019, chrome-extension://efaidn-bmnnibpcajpcgicfindmkaj/https://safety.army.mil/Portals/0/Documents/ON-DUTY/AVIATION/FLIGHTFAX/Standard/2019/Flightfax_78_June_2019.pdf.

ACRONYM QUICK-SCAN

CGSC – Command and General Staff College
DA – Department of the Army
ESR – equipment-status report
LSCO – large-scale combat operations
NTC – National Training Center
PMCS – preventive maintenance checks and services
USMA – U.S. Military Academy

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