



**Roll-up of Articles  
September 2020**

# General and Special Topics





## Leader Interview: CW4 Thompson, CSMS Foreman, MING

/ Published Sept. 28, 2020



CW4 Jeffrey S. Thompson, CSMS Foreman, Michigan Army National Guard

Photo by [Staff Sgt. Jacob Cessna](#)

After a bit of R&R following his last interview in Hawaii, MSG Half-Mast made his way to Michigan to sit down with CW4 Jeffrey S. Thompson of the Michigan Army National Guard. Wearing his PS-logoed face mask and sitting six feet away, he asked Chief Thompson about his maintenance operation and took a tour of the facility.

CW4 Thompson has served in uniform for 32 years, both as an enlisted Soldier and commissioned officer and on active duty and in the Army National Guard. He entered active duty in 1988 and made the transition to the National Guard in 1997. While on active duty, he was an automated logistics NCO and served in Southwest Asia, Somalia and Bosnia. He became a warrant officer in 2004.

**Among his various duties, he served as the State MAIT Chief and senior maintenance technician/senior warrant advisor for a military police brigade. Currently, he's the Combined Support Maintenance Shop (CSMS) Foreman, Joint Force HQ, Michigan Army National Guard.**

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**MSG Half-Mast: Based on your experience, how challenging is it for National Guard units to stay combat ready? How do you accurately measure readiness in your unit or the units you support?**

**CW4 Thompson:** I can definitely say that it is extremely challenging for National Guard units to stay combat ready for multiple reasons. There are many reasons;; the primary one is time. Over the past two decades, I've seen a continuous increase in mission requirements placed on National Guard units, which provides a significant challenge for leaders to fulfill without having the ability to increase the amount of time required to complete all tasks within a maintenance program.

Accurately measuring readiness for my unit or a unit I support, specifically for equipment, can be challenging, as well. We've come far in being able to track and monitor readiness, to the point where it is near "real time" and visibility and access to this information is more readily accessible than I ever imagined it would be. AESIP has great tools that measure readiness, identifies trends and even provides predictive readiness forecasts. However, it's still dependent on the information manually input into a logistics information system (LIS), such as GCSS-Army. This is the reason why it's highly important to ensure M1 notifications are created, and with the correct technical status that identifies whether or not a piece of equipment is FMC versus NMC. Even when done correctly, accurately and in a timely manner, it can still be misleading because readiness ratings are only based on the status of reportable items. In order to capture and measure a better sense of readiness within a unit, a holist approach must be taken, and that can be accomplished through the Command Maintenance Discipline Program and regular unit evaluations. For example, a unit could be reporting a 100% FMC rating for all vehicles. This can be definitively measured, tracked and monitored. However, I pose the question that if the same unit only has enough trained, qualified and licensed operators for half of their assigned vehicles, missing BII and COEI, or are have communication systems that are not installed, is the unit truly ready? The above aspects are not measured, tracked and monitored in the same manner, but are equally as important overall.

**MSG Half-Mast: How often do you get out into the motor pool and work bays and what impact does this visibility have?**

**CW4 Thompson:** Not nearly enough as I should or want to! I believe that having a presence in the motor pool and work bays, both as a technical expert and a leader, is an essential part of any maintenance program. It shows that leaders care and are being observant of Soldiers' efforts in the maintenance of their equipment.

**MSG Half-Mast: For seventy years, PS Magazine has provided preventive maintenance tips to mechanics stationed all over the world, in all climates. What are some best practices maintenance techs need to be aware of, especially in states that have the full range of seasons and temperatures?**

**CW4 Thompson:** First, ensure they have all of the proper diagnostic tools and testing devices required to check the state of various equipment components, such as batteries, cooling systems and air conditioning systems. Second is to ensure commands allow time in training schedules to perform seasonal checks on equipment beyond/outside the scheduled maintenance plan. Third, techs need to have input into the Maintenance SOP that includes provisions for climate-related tasks, such as a winterization program. For example, here in Michigan, it is essential for units to check coolant in the early fall season to identify any systems that have ratings below a level that would prevent freezing and cracking blocks. Fourth, techs need to ensure they have appropriate levels of supplies on hand to remedy deficiencies before they develop into problems that could lead to components being damaged or made inoperable. Lastly, beyond maintenance technicians specifically, equipment operators need to exercise their assigned equipment throughout the year. Nothing is worse for equipment than to let it sit idle for months at a time.

**MSG Half-Mast: How often does your shop have group meetings to discuss maintenance, supply, personnel and safety issues? Is there a common theme that emerges from these meetings?**

**CW4 Thompson:** Our shop has group meetings on a regular basis. During normal operations, we have maintenance manager meetings on a weekly basis. This normally encompasses maintenance, supply and personnel issues. We also have a monthly safety council—with a chair and co-chair—comprised of supervisors and one technician from each section. The common theme that emerges from every meeting is that everyone understands the current mission, identifies shortfalls and what needs to be done to overcome those shortfalls, and focuses on the tasks that need to be accomplished and their priority.

**MSG Half-Mast: Everyone knows—or should know—it's important to keep tools**

**organized and accounted for in the tool room. What other good habits need reinforcing?**

**CW4 Thompson:** One good habit is that tools need to be inspected for serviceability upon issue and return, *every time*, not just during the normal inventory schedule! The other habit that goes along with this is that tools found to be unserviceable need to be identified, tagged and separated from the serviceable tools to prevent them from being issued. When I was working on the floor as a mechanic, there was nothing much more disheartening than to go to the tool room and sign something out, only to find out it was broken, then find out it had been that way for quite some time. As a supervisor at an FMS, it was extremely frustrating to discover at the end of an inventory a “pile” of tools that were deemed unserviceable, but were not identified and tagged during the point of return. This is something that time does not make any better, and degrades the capability of making repairs.

**MSG Half-Mast: What percentage of your operators would you say know the first PMCS check on their vehicle system without having to look it up? What are the best ways for leaders to improve on this metric?**

**CW4 Thompson:** I’d estimate that less than 10% of operators know the first PMCS check on their vehicle without looking at the technical manual. One of the best ways, I believe, , leaders can improve on this is to emphasize the importance of PMCS and provide training in order for Soldiers to conduct this critical task proficiently. Currently, the requirement to conduct annual and biennial checks but, at best, it’s only implied that PMCS sustainability training is encompassed with these checks. One of the areas evaluated under CMDP [command maintenance discipline program] addresses PMCS training being conducted by units. In my review of the many assessments conducted in the Michigan Army National Guard, this is a neglected area for most units. Not sure why this is the case, but perhaps there may be a presumption that only vehicle operators require PMCS training. All equipment has some sort of PMCS table in the related technical manual: weapons, NVGs, communication devices, NBC masks, mess equipment, etc. I can’t image any Soldier would be exempt from being issued and operating/employing a single piece of equipment that doesn’t have PMCS requirements. If I had to provide a “best” way to improve this, it would be to issue equipment to Soldiers as much as possible in order for them to have opportunities to become highly proficient at taking care of it.

**MSG-Half: Are hard copy and IETMs readily available for every vehicle and**

## piece of equipment in your unit? If not, what's the impact and remedy?

**CW4 Thompson:** Hard copy TMs are not always readily available for every vehicle and piece of equipment, not only in my unit, but for most units I've interacted with. And the manuals they do have are often outdated or do not have changes posted. I do have to say, most units make every attempt to print the PMCS tables and place them in a binder for operators to utilize. However, although having the PMCS tables is a great start, it's still providing Soldiers an incomplete resource. Another challenge with hard-copy TMs is that they are prone to damage rather easily. Units are required to establish and maintain a publications account. For the most part, I see this being done; most units are doing well utilizing a Unit Tailored Publications listing to identify all of the required publications needed to support their equipment. However, hard copy manuals are not always available, or the publications are not listed as available through the Army Publishing Directorate or APD. AESIP does have the ETM/IETM application and it's a great resource, with thousands of manuals, but the challenge is downloading and printing the manuals.

ETMs and IETMs are a wonderful resource and a force multiplier when it comes to maintenance. Most units I have interacted with have an adequate number of CDs to support their equipment. However, this poses a challenge for units that do not have the resources or capabilities required to utilize this media type. Units authorized maintenance support devices—also known as MSDs—have the ability to utilize electronic media well, but not every unit carries the authorization for MSDs. Most units rely on “stand alone” or “off network” laptops, which is great until they run into software or hardware issues that require repairs that aren't easily supported.

Beyond having a publications account, keeping the subscriptions updated and having enough hard-copy manuals and ETMs/IETMs on hand, I see where most units struggle with organizing and maintaining an actual library. Far too many times I've gone to units and found stacks of TMs and CDs on shelves in no order and in an uncontrolled area for all to access. There have been many instances where TMs are left in vehicles, making them prone to damage and loss. For a reference library to have benefit and worth, it needs to be organized, safeguarded and publications accounted for by personnel appointed by the unit commander. Not having current and serviceable publications on hand for every piece of equipment can be detrimental to not only unit readiness, but also to the safety of Soldiers who operate that equipment.

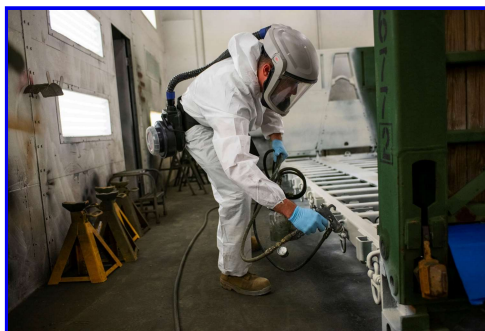
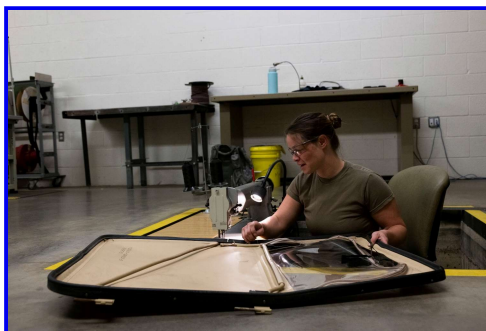
There are possible several remedies to overcome shortages of TMs or providing Soldiers the resources they need to conduct a proper PMCS; however they can be difficult to sustain. One remedy was developed by a warrant officer stationed at Ft.

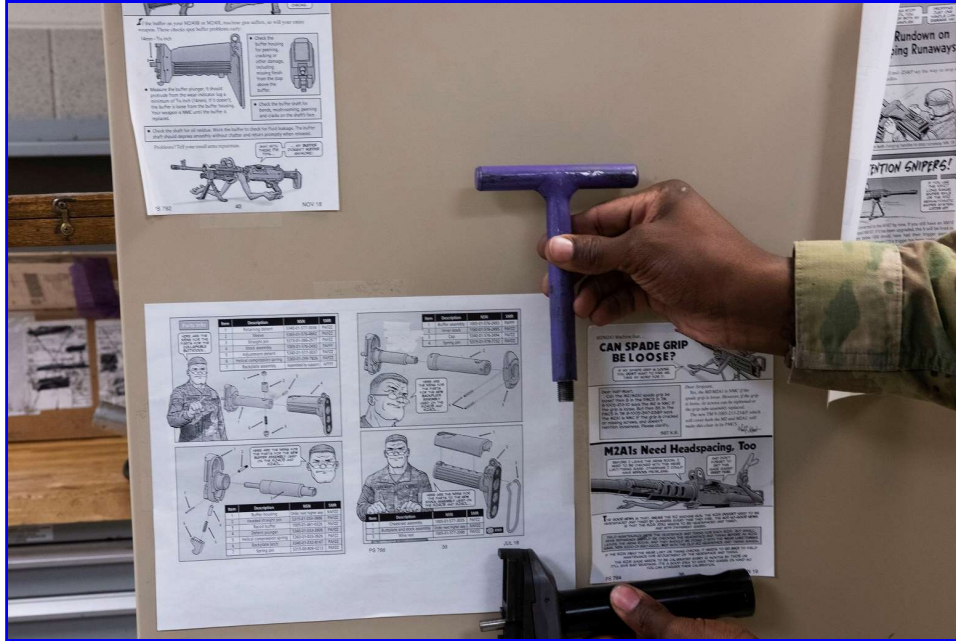
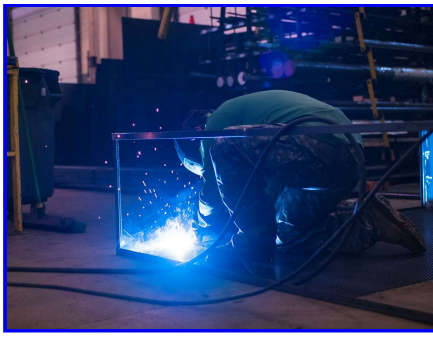
Campbell. Leveraging technology, he uploaded PMCS tables as Google documents, then assigned each a QR scan code. Then he affixed the scan codes to the vehicles to which the PMCS tables are associated. Soldiers can then use their smart phones to scan the code, and it takes them directly to the PMCS chart they need. This is a great tool and resource; I have even used it myself. However, therein lies its shortfall: it needs to be continually sustained and updated. Necessity is the mother of invention but units need to be careful that their solutions have command approval, don't violate Army policy and can be sustained. It would be a useful and highly beneficial resource if the Army would develop a PMCS application that could be accessed with a personal data device, but is also maintained and updated as changes occur.

**MSG-Half: What advice would you give junior Soldiers regarding their role in optimizing personal, unit and fleet readiness?**

**CW4 Thompson:** Junior Soldiers are the frontline of defense when it comes to unit readiness. The advice I would give them is to take ownership and have a high level of responsibility when it comes to their assigned equipment. Maintaining a high level of readiness needs everyone's involvement, not just those with an MOS that qualifies them to repair equipment. Taking responsibility for a piece of equipment, especially a vehicle, can offer junior Soldiers opportunities to broaden and excel. For example, Soldiers can achieve awards and recognition such as a Driver's Badge, which can set them apart from their peers when it comes to promotions. This being said, Soldiers shouldn't look at this as a burden, but rather a duty that will instill pride in themselves, their unit and the Army as a whole.

I also have some "upward" advice for commanders and leaders: give your maintenance chiefs maximum latitude to execute the unit's maintenance mission. By and large, they know what needs to be done and how. Establish your intent, then let them use disciplined initiative and know-how to get things done.





Various shop operations at the Combined Support Maintenance Shop (CSMS),  
Joint Force HQ, Michigan Army National Guard  
Photos by [Staff Sgt. Jacob Cessna](#)

# I Own This

A campaign to recognize Soldiers/Marines who take... **PS** ...exemplary pride in their vehicle(s) and equipment

Recognize deserving Soldiers by nominating them for *PS Magazine's* "I Own This" campaign. If you nominate them, we'll put them on our website. The nomination cycle is each calendar month.

To learn more, click on this graphic.



# I Own This: September 2020 Nominees

/ Published Oct. 13, 2020

PS Magazine's *I Own This* campaign is designed to recognize Warfighters of all services who exemplify the highest standards of care for their assigned vehicles and equipment and contribute in meaningful ways to their unit's overall maintenance and supply posture. In short, they live and breathe readiness.

For the month of September 2020, we had one Warfighter nominated for this program. That Soldier is PFC Dawson J. Ayers.

## Spotlight Profile



**PFC Dawson J. Ayers**  
**Army/Active**

FSC, 84th Engineer BN, Schofield Barracks, HI

**Nominated by:** 2LT Patrick Kovacs

**How did you come to know/observe the nominee's actions?** PFC Ayers arrived in my platoon shortly before the COVID-19 pandemic. Almost immediately, he demonstrated tremendous diligence and the ability to succeed as the only member in his shop. He is very serious about his work and always completes what needs to be done in a timely manner.

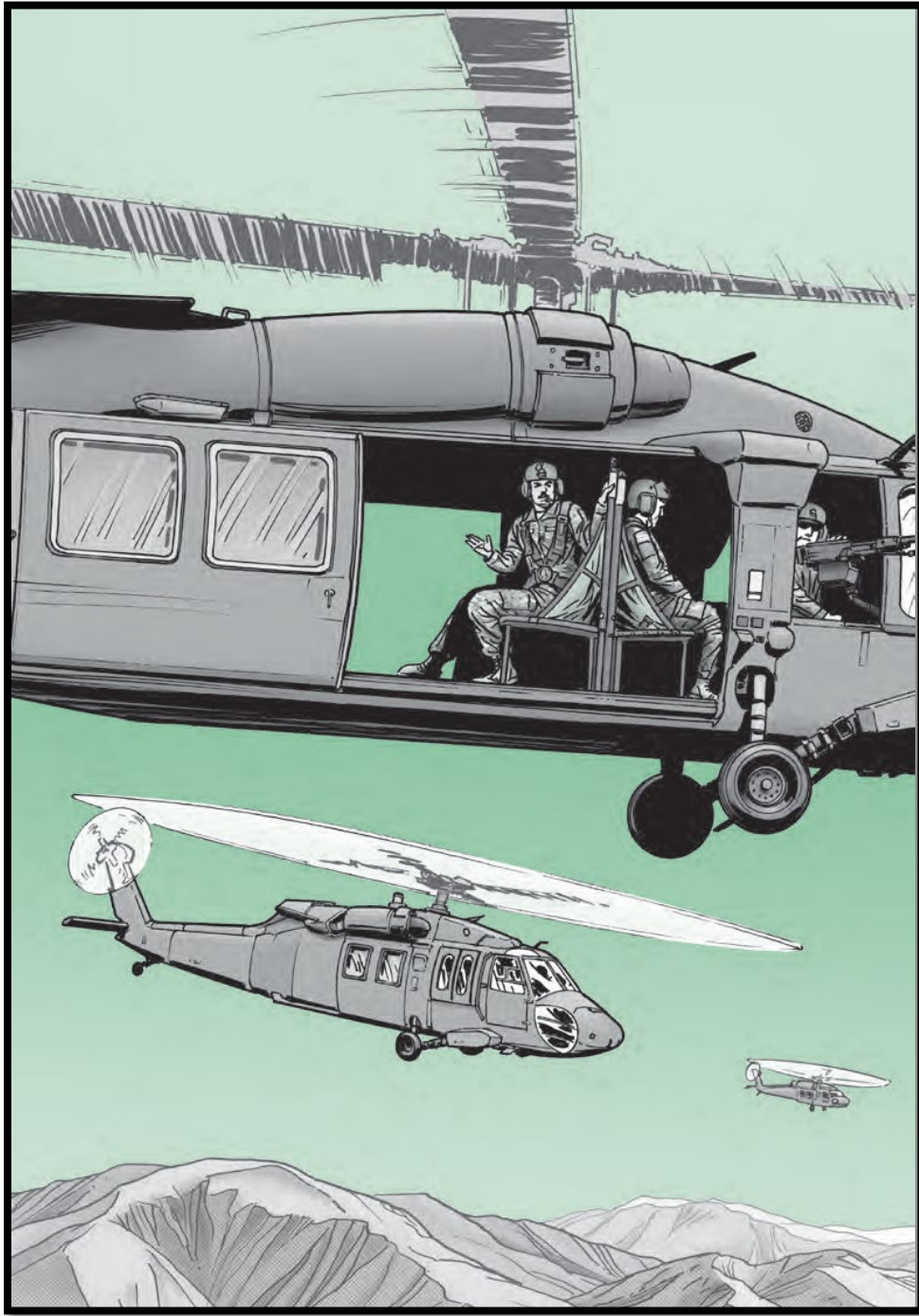
**Why does this individual deserve recognition?** PFC Ayres has been the only small arms repairer for the 84th Engineer Battalion for over six months. In that time he has completed over 1,000 services, repairs and unscheduled maintenance across six companies during two consecutive "Stay at Home" COVID-19 orders. As a subject-matter expert in multiple battalion live-fire exercises, PFC Ayres repaired seven weapons to allow adjacent companies to train without any delay. PFC Ayres keeps his armament shop clean and comes to work with a smile on his face every day.

**Any additional comments?** This Soldier listens to his NCOs and will do what is asked without hesitation.



To learn more about nominating a Warfighter for this recognition, read the article [HERE](#).

# Aviation





# MEDEVAC: Hoist Bumper Spring Assembly Part Number Correction

/ Published Sept. 14, 2020



Photo by [Sgt. Steven Lopez](#)

The MEDEVAC hoist bumper/spring assembly in both TM 1-1520-237-23&P (Jan 19) and TM 1-1520-280-23&P (Mar 20) has the incorrect obsolete part number, BL-12750-3.

That part number, BL-12750-3, is a shorter crushable bumper and was replaced by BL-15975-3 with the issuance of an Alert Service Bulletin (ASB) by the original equipment manufacturer (OEM).

PD MEDEVAC coordinated with DLA to ensure the correct part number, PN BL-15975-3, is associated with the existing NSN 5340-01-512-0408. Make a note that this change will be included in the next update to TM 1-1520-237-23&P and TM 1-1520-280-23&P.

Got questions? Email Lea Rivera at:

[lea.a.rivera.civ@army.mil](mailto:lea.a.rivera.civ@army.mil)



# UAS: Readiness Reporting Key to Mission Readiness

/ Published Sept. 14, 2020



Photo by [Spc. Jonathan Perdelwitz](#)

Keeping unmanned aircraft systems (UAS) in the fight requires consistent readiness reporting.

Maintaining readiness for your Shadow, Gray Eagle and all unmanned aerial vehicles (UAVs) means knowing the **who, what, when, where** and **why** of readiness reporting, so it can be done in a timely manner.

Check out Page 24 in the attached *Flightfax* (Jan 20) to get all the 5 Ws of readiness reporting to help keep your unmanned aircraft systems mission-ready and in the fight (it's attached underneath the Share/Print icons at the bottom of this article).

You can view all *Flightfax* issues at:

<https://safety.army.mil/>



# UH-60M: Replacement Searchlight Now Available!

/ Published Sept. 14, 2020



Photo by [Master Sgt. Matt Hecht](#)

*This article initially appeared in PS 802 (Sept 19), page 21.*

The searchlights on UH-60M helicopters have a problem: Their light sometimes dissipates. Good news! Those old searchlights, NSN 6230- 01-556-7911, are being replaced.

To prepare for the new searchlights, follow these steps:

1. Remove the old searchlight.
2. Take off the searchlight's lens and adapter ring.

3. Tag the lens and adapter ring as an assembly and turn it in using condition code A and ownership purpose code A (serviceable).

Send the assemblies to Red River Army Depot at:

**DLA Distribution Center (Plant: 7001RIC: BR4)  
Red River Army Depot  
Highway 82 West  
Texarkana, TX 75507-5000**



**Turn in old searchlight for new searchlight**

The new searchlight, NSN 6230-01-653-9052, doesn't have issues with dissipation. Deliveries of the replacement searchlight have already begun and can now be ordered through regular supply channels. Make a note that the A/L/V model aircraft still use the old searchlights.

Units must continue to turn in the old searchlight when you receive the new searchlight.

Questions? Direct all searchlight questions and shipping questions to Chekesha

Schenck:

[chekesha.m.schenck.civ@army.mil](mailto:chekesha.m.schenck.civ@army.mil)



# AH-64D/E: Folding Blades and Aircraft Transport

/ Published Sept. 28, 2020



Courtesy photo

Folding Apache blades and transporting aircraft isn't as simple as it seems. That's why it's important to have the right tools and support.

Aircraft transportability equipment and limited blade fold kits are managed by the Apache PM Transportability Team (APMTT) out of Ft Hood, TX.

The blade fold kit costs about \$164,000 and weighs 1,000 pounds. When using the blade fold kit, you'll need the Alion commercial off-the-shelf (COTS) manual for the red kit or the MRBFK operator's manual for the green kit and TM 1-1520-Longbow/Apache IETM as references.

The blade fold kits have limited availability, so when your Apache unit determines it needs an aircraft moved, contact APMTT and arrange for the required transportability equipment. APMTT prepares and ships the equipment to the desired location and assists units by conducting equipment training and sharing lessons learned for movement of aircraft. After a unit completes aircraft movement, it will return all equipment to APMTT. Then APMTT will inventory, clean and repair the equipment to make sure it's ready for use by the next Apache unit that requires aircraft movement.

You can access the blade fold kit documents for how to use the equipment on the JTDI website at:

<https://www.jtdi.mil/>

Sign in with your CAC. Click on **My Sites** and from the drop down menu click, **Apache**. Then select **Transportability** from the list.



Return blade equipment to APMTT when aircraft movement complete

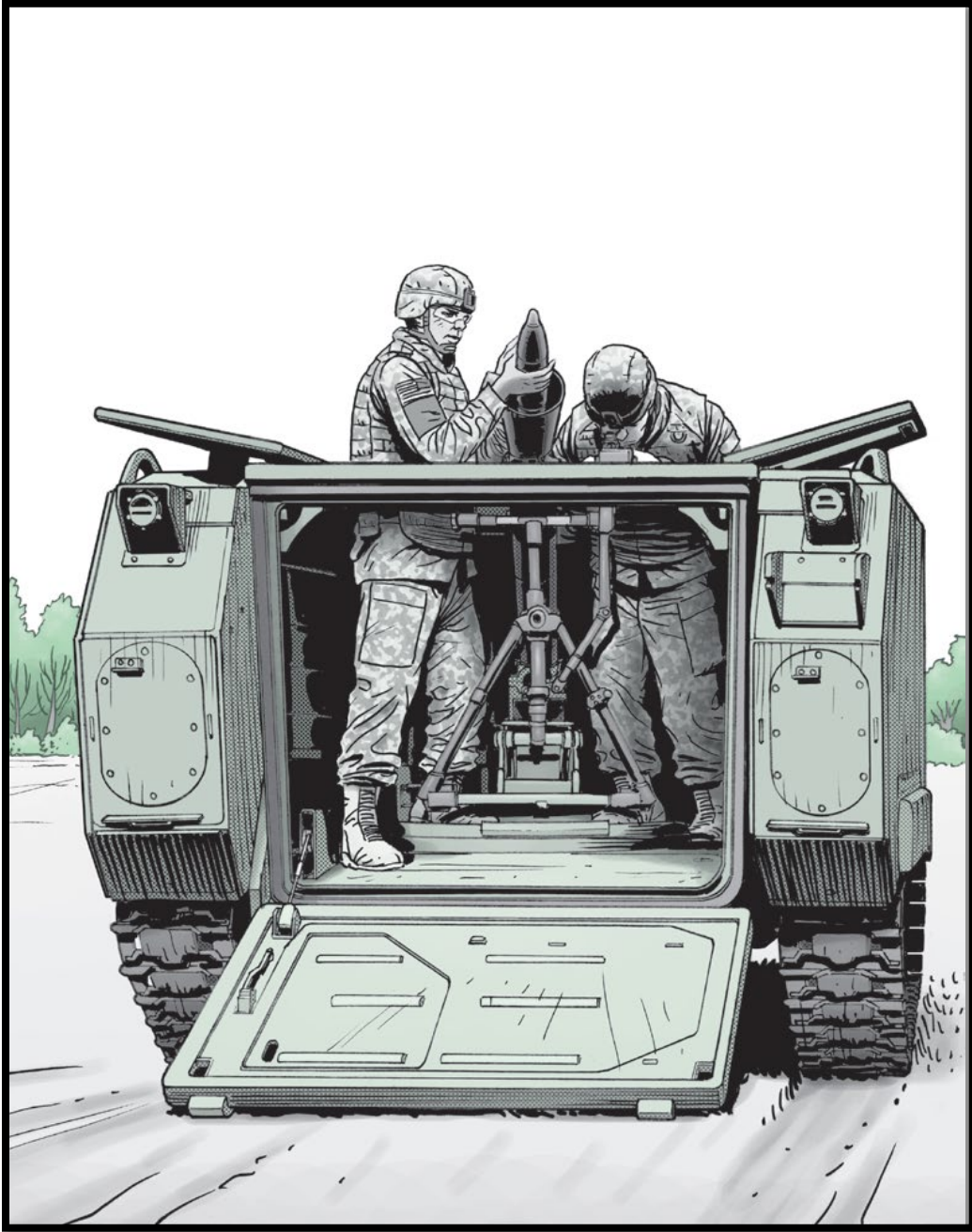
Need help? APMTT assists units with all Apache transportability needs, including movement by land, sea and air. They exist solely to assist Apache units by storing and maintaining all transportability equipment.

Want more details about training? APMTT provides transportability team training on proper use and deployment of all Apache transport equipment, which includes two versions of the Apache blade fold kits, STRAT air configuration, sealift configuration, and ground movement of an Apache helicopter by truck.

If your unit needs training, contact APMTT's William Siegman at:

[william.m.siegman.civ@army.mil](mailto:william.m.siegman.civ@army.mil)

# Combat Vehicles





# Strykers: Stay on Top of Cannon Tube Record Keeping

/ Published Sept. 8, 2020

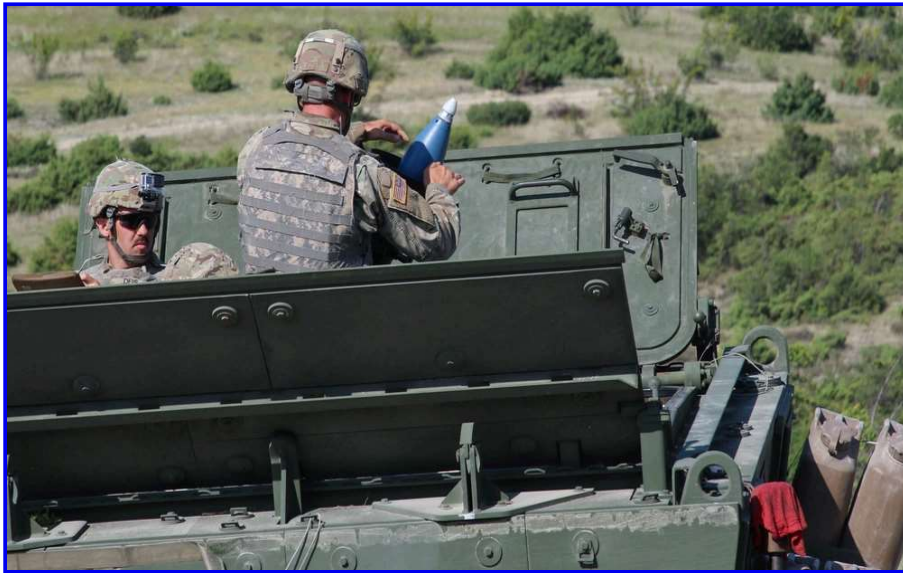


Photo by [Pvt. Ashunteia Smith](#)

Dear Editor,

Units should keep in mind that good recordkeeping is essential for making sure their M1129A1 MCV, M1251A1 MCVV and M1252 MCVV Stryker's mortar carrier RMS6-L cannon tubes are ready for training and combat duty.

A magnetic particle inspection (MPI) for the RMS6-L cannon found in M1129A1, M1251A1 and M1252 Stryker mortar carriers is required during peacetime every four (4) years or 2,000 rounds. It's a good idea for units to set up a service reminder in GCSS-Army so the inspection isn't overlooked.

Each RMS6-L cannon is stamped with its issue date and serial number before being shipped to a unit. This helps guarantee maximum training time from the cannon. It's important to record the issue date and serial number on DA Form 2408-4, *Weapon Record Data*.

RMS6-L cannons that are going to be used in combat can have no more than three (3) years of training time since the last MPI or issue date and should have fired less than 1,000 training rounds.

Check out TM 9-1000-202-14 (Feb 99, w/Ch 8, Feb 19), *Technical Manual for Evaluation of Cannon Tubes*, for more info.

James R. Garner  
AMC SBC LAR

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**Editor's note:** *Thanks, James. That's great info to know!*



# Stryker: Extended Fuel/Water Can Bracket NSNs

/ Published Sept. 24, 2020

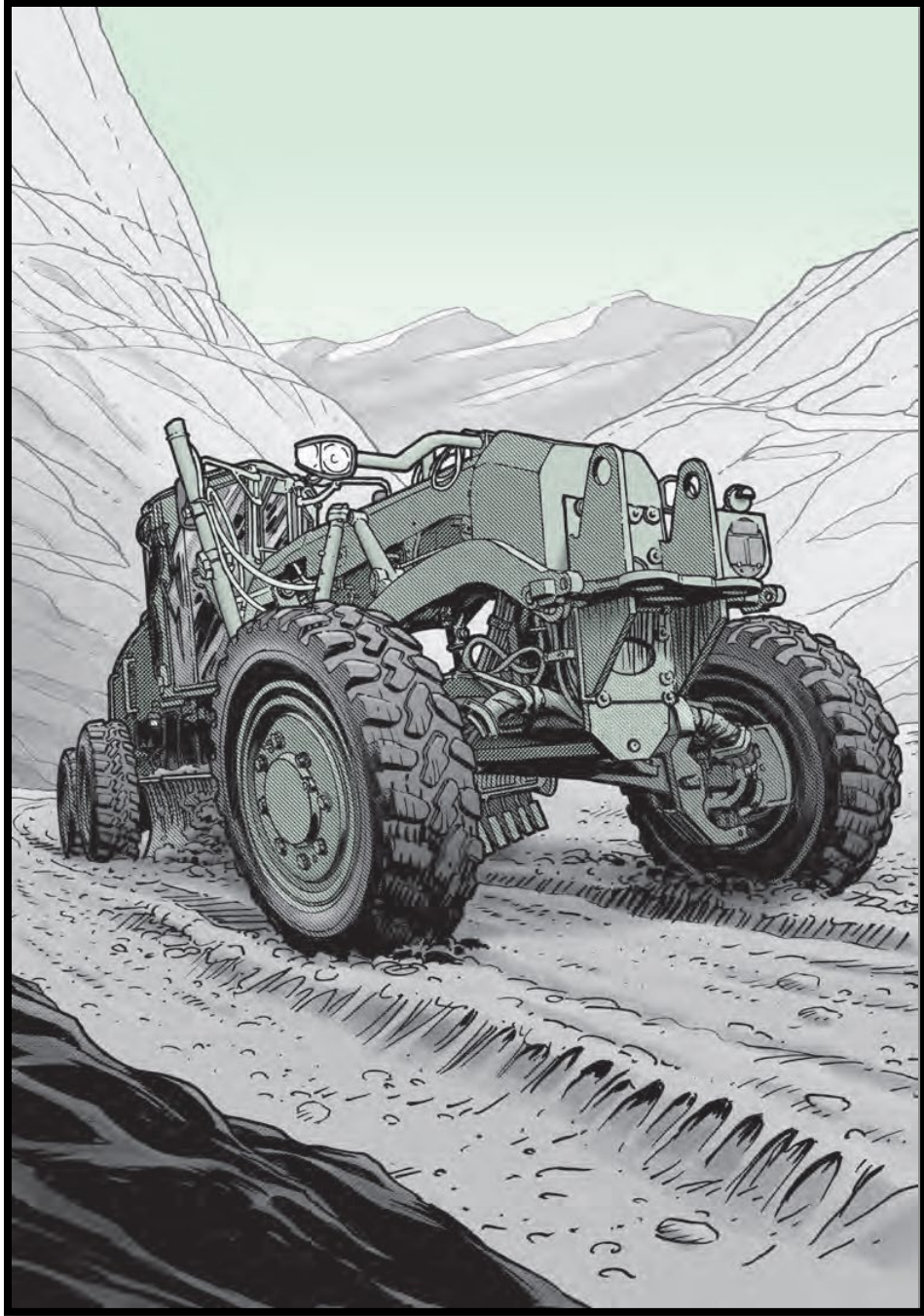


Photo by [Spc. Ethan Valetski](#)

For extended water and fuel cans on Strykers, get right-side brackets with NSN 2590-20-012-4032 and left-side brackets with NSN 2590-20-012-5574. If you didn't know, the "extended" refers to the brackets being able to hold more cans than the original brackets.

And keep in mind that you can't use the extended brackets with add-on slat armor kits. Put back on the original brackets before installing the add-on armor kit.

# Construction





## HMEE-1: Detach Head Lamps

/ Published Sept. 8, 2020



Photo by [Staff Sgt. Robert Barney](#)

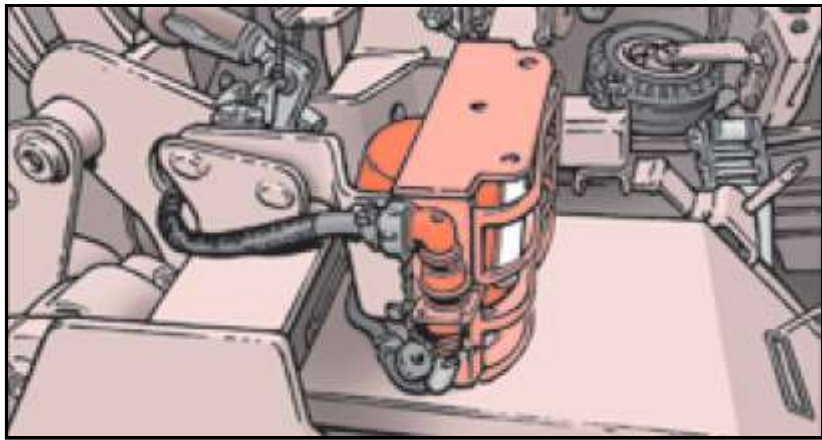
*This article initially appeared in PS 779 (Oct 17), p. 16.*

Operators, remember to detach the front bucket headlamps whenever you're unloading the HMEE-1's bucket and BII boxes.

If you don't, the headlamps, NSN 6220-01-549-6135, and their electrical cables will get ripped loose from the bucket. At \$97 bucks, those headlamps aren't cheap to replace!

And don't make the mistake of tossing the lamps in the bucket after they're detached. That's a good way to lose or damage them.

Instead, reattach the lamps to their off-road position on the cab A-posts until you're ready to reinstall them.



**Headlamp when it's attached to bucket**



# D7R II Tractor: Some Tips for the Tractor

/ Published Sept. 9, 2020



Photo by [Capt. Loyal Auterson](#)

*This article initially appeared in PS 771 (FEB 17), p. 18-19.*

Operators, here are a few reminders to keep in mind before the day's run, especially you newbies!

## **Parking Brake**

You can grind the engine's starter all day long, but it won't start unless the parking brake is locked (engaged). So if the engine won't start, make this your first check!



Lock parking brake to start engine

### Winch Area Reminder

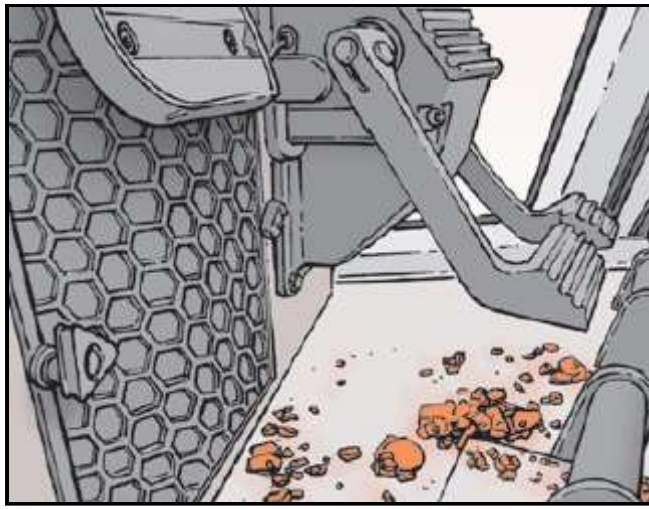
Don't use the area behind the winch handle for storage. Sure, it's an open area and your backpack fits perfectly. Problem is, anything placed there can move and activate the winch. Not good when you're not expecting it!



Don't use the area behind the winch handle for storage

### A Clean Cab

Dirt and sand on the dozer's cab floor gets kicked around and sucked into the cab's air filter. It's a good idea to take a rag or whisk broom and brush the dirt out of the cab after each day's run.



**Keep dirt cleaned up to protect cab air filter**



# Construction Equipment: Stop That Sneaky Leak

/ Published Sept. 14, 2020



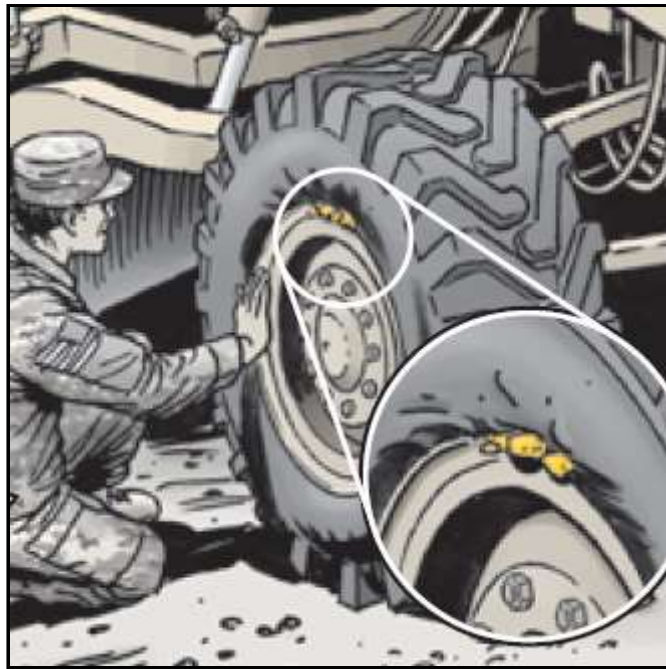
Photo by [Sgt. Brian Calhoun](#)

*This article initially appeared in PS 774 (May 17), p. 16.*

Operators,

Working in rocky soil can play havoc with the tires on your construction equipment. When small rocks get stuck between the tire and wheel rim, tire pressure goes right out the window!

So, whenever you've got a few minutes, get down on your hands and knees and eyeball the wheel assembly. If you see small rocks wedged between the tire and rim, sing out your mechanic.



**Look for rocks wedged between tire and rim**

He'll let a little air out of the tire to release some pressure. That makes it easier to pull the rocks loose with something like a pair of pliers. Just make sure he reinflates it afterwards!

You'll find the right tire pressure listed in the vehicle's -10 TM.



# M400W Skid Loader: Stop Needless Battery Replacement!

/ Published Sept. 14, 2020



Photo by [Sgt. James Kennedy Benjamin](#)

*This article initially appeared in PS 779 (Oct 17), p. 17.*

Operators, it's no secret that M400W compact-skid loaders have an ongoing problem with battery drain. Most of these vehicles use the yellow-top Optima battery.

Even though Optima batteries are high-quality, they can't stand the constant drain by the loader's electrical system. The constant discharge leads to sulfated plates.

Over time, Optima batteries can no longer be charged and have to be replaced. The end result is way too many dead batteries in these skid loaders!

And the cycle continues.

Here are four (4) ways to stop the needless battery replacement:

- Start the skid loader weekly and run it for an hour.
- Every other week, plug a charger into the vehicle's NATO receptacle and fully charge the battery set. The ProHD, NSN 6130-01-500-3401, is an approved charger that comes with the SATS.
- For long term storage, make sure you disconnect the skid loader's batteries.
- For skid loaders stored outdoors in the motorpool, use a solar charging system, like the Solar Pulse Monitor System, NSN 6130-01-558-5371. It simply plugs into the NATO receptacle and no modifications are needed.



## 5K LCRT Forklift: Tarp NSN

/ Published Sept. 24, 2020



Photo by [Capt. Daniel Boone](#)

Use tarp, NSN 9390-01-645-8905, to help reduce corrosion on the Light Capability Rough Terrain Forklift (LCRTF), NSN 3939-01-599-9978 (LIN L05010), during long-term storage.

Questions? Contact TACOM at:

[usarmy.detroit.tacom.mbx.ilsc-mhe@army.mil](mailto:usarmy.detroit.tacom.mbx.ilsc-mhe@army.mil)



# 815F Compactor: Air Filter Brush Off

/ Published Sept. 24, 2020

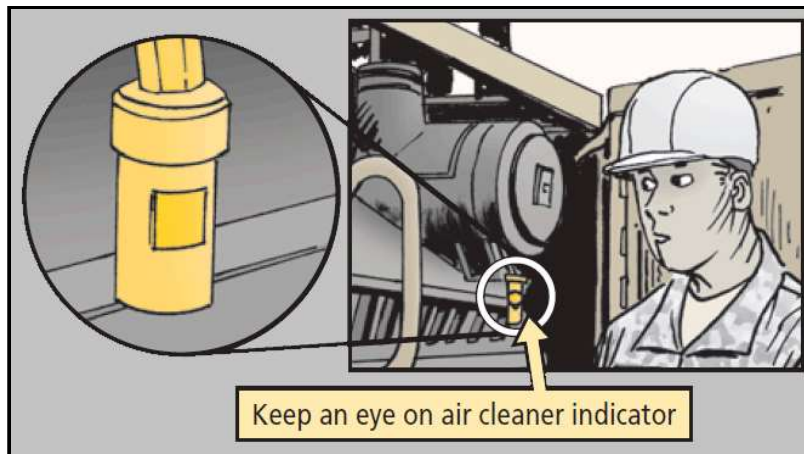


Photo by [Spc. Thea N Jorgensen](#)

*This article initially appeared in PS 774 (Jun 15), p. 58.*

Operators, a clean air filter element is crucial during construction operations, especially when there's a lot of dust in the air.

So you need to keep a close eye on the air cleaner indicator next to the filter canister. If the indicator moves from yellow to red, you've got some work to do.



**Keep an eye on air cleaner indicator**

Pop the canister's lid and pull out both air filters. You'll find the secondary filter inside the primary.

Tap each filter against the heel of your palm to loosen dirt or sand. Don't smack it against something hard or you'll damage the filter. Now, shake the filter really good and tap some more. That'll usually knock enough junk out of the filter to keep you in operation. When the workday's over, let your mechanic know so they can clean or replace the filter.



## 22-Ton Crane: Filter Facts

/ Published Sept. 29, 2020



Photo by [Sgt. 1st Class Jon Cupp](#)

*This article initially appeared in PS 579 (Feb 01), p. 25.*

Operators,

You don't have to replace the primary filter element every time the restriction indicator turns red. You can often save the cost of a new element by cleaning the old one with compressed air or warm, soapy water.

When you use air, blow out from the inside of the element, since the dirt's on the outside of the filter. Then hold the nozzle at an angle to blow loose dirt from the outside. That keeps you from damaging the paper element.



For loose dirt, use compressed air

To get rid of oily dirt, you'll need to wash the filter element with detergent, NSN 7930-00-282-9699, and warm water.



For oily dirt, use detergent and warm water

Rinse away the soap with warm water and let the element dry before you put it back in the crane.

Replace the filter element, NSN 2940-01-438-5680, after **six** cleanings or if it's ripped, torn or won't come clean. If the indicator still shows red after cleaning the filter element, tell your mechanic.



Indicator  
still RED  
after  
cleaning  
the filter  
element?  
Tell your  
mechanic

**Tell your mechanic if the indicator is RED after cleaning**



# 621G Scraper: Wet Filter Turns Moldy

/ Published Sept. 29, 2020



Photo by [Spc. Pernell Ports](#)

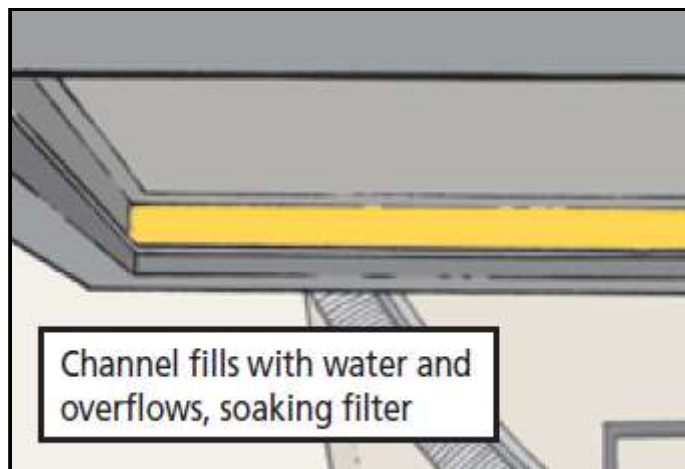
*This article initially appeared in PS 774 (May 17), p. 20.*

Operators,

Make sure you keep a close eye on the 621G scraper's cab air filter, especially after a heavy rain.

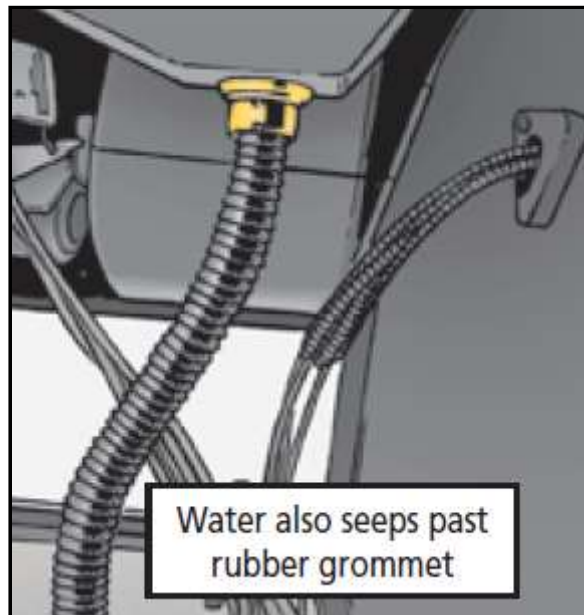
The filter's access door has a series of louvers that allows open air flow. Problem is, the louvers also allow water from rain and cab run-off inside the door. That water fills the channel along the inside bottom of the door.

If there's too much water, it overflows the channel and the air filter soaks it up like a sponge. A soaked filter element gets moldy real quick!



**Channel fills with water and overflows, soaking filter**

You may also see buildup from water that seeps past the drain hoses attached to the A/C drip pan. The hoses are installed with a grommet that fits into a hole in the plastic drip pan. But the grommet doesn't fit tight and leaks.



**Water also seeps past rubber grommet**

Replace a wet or moldy filter element with NSN 4310-02-602-0614. Then follow the instructions in TACOM GPA 17-008. It tells how to drill two drain holes in the door channel and add two O-rings, NSN 5331-01-333-6444, to the A/C drip pan grommet. See message at:

<https://tulsa.tacom.army.mil/Safety/message.cfm?id=GPA17-008.html>



# Backhoe Loader: New Tires Need a Little Work

/ Published Sept. 29, 2020



Photo by [Cpl. Rubin Tan](#)

*This article initially appeared in PS 746 (Jan 15), p. 21.*

When it's time to replace tires on your backhoe loader (BHL), you've got a little work to do!

Unlike most equipment, the BHL does **not** have a tire and wheel assembly. Instead, you'll need to order the tire and wheel separately and put them together yourself.

Get the front tire with NSN 2610-01-627-2155. Note--that's a replacement for NSN 2610-01-533-0485, which is currently shown as Item 2 in Fig 60 of TM 5-2420-231-24P (Jun 13).

The front wheel, shown as Item 5 in Fig 60, comes with NSN 2530-01-623-3528. Instructions for installing the front tire and wheel assembly are in WP 0203 of TM 5-2420-231-23-2 (Jul 13).

The BHL's rear tire is shown as Item 4 in Fig 72 of the -24P and comes with NSN 2610-01-533-0486. The rear wheel is NSN 2530-01-623-3437 and is shown as Item 1 in Fig 72.

Installation procedures for the rear tire assembly are in WP 0217 of the 23-2 TM.



# CAT Construction Equipment: 500-hr Service Kit

/ Published Sept. 30, 2020



Photo by [Maj. Marvin Baker](#)

*This article initially appeared in PS 781 (Dec 17), p. 16.*

Mechanics, service kits which are now available for your CAT construction equipment.

Here's the list of kits to use for 500-hr services:

Vehicle	NSN
D6R Dozer	2540-01-659-6411
D7II Dozer	4910-01-659-7085
120M Grader	2540-01-660-6080
621G Scraper	2540-01-660-6081
966H Loader	4910-01-660-8146

924H Loader	4910-01-660-8161
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# Commo/Electronics





# DCGS-A: New TGS TM Makes Tactical Touchdown

/ Published Sept. 14, 2020

TM 11-5865-1098-10 (Jul 20) is the new operator's manual for the Tactical Intelligence Ground Station (TGS) AN/TSQ-179E (V) 2, NSN 5865-01-673-1760. The HMMWV-mounted system is part of the Distributed Common Ground System-Army (DCGS-A).

To get the TM, log in with your CAC at this link:

<https://idmng.armyerp.army.mil/>

Choose the ETM/IETM app and search for the TM.



TGS mounted on HMMWV (Courtesy photo)

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# Joint Battle Command Platform (JBC-P): Equipment Transfer Guidance

/ Published Sept. 24, 2020

When changing from the M997A2 to the new M997A3 armored HMMWV ambulance, unit maintainers need to take specific steps to maintain a fully-functional Joint Battle Command Platform (JBC-P) digital computer set.

Instructions are found in the attached PDF.



M997A3 Vehicle (Courtesy photo)



**Joint Battle Command Platform  
(JBC-P): Equipment Transfer Guidance**



**M997A3 Vehicle (Courtesy photo)**



**JBC-P MFoCS mounted in an M997A2 vehicle (Courtesy photo)**



**Using JBC-P to monitor troops  
Photo by Sgt. Robert Golden**

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## OVERVIEW

When changing from the M997A2 to the new M997A3 armored HMMVV ambulance, unit maintainers need to take specific steps to maintain a fully-functional Joint Battle Command Platform (JBC-P) digital computer set.

Several versions of the JBC-P were fielded and the equipment transfer process is different for each. In the information that follows, these versions are differentiated by LIN and type designator. The following tables tell you which parts and equipment need to be purchased, and which need to be retained from the M997A2 when transferring a JBC-P digital computer set into the M997A3.

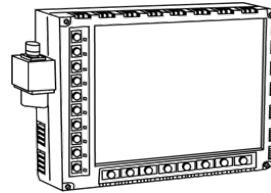
## CHAPTER 1

LIN: C05036

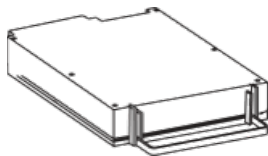
Type designator: AN/UYK-128A(V)3 or AN/UYK-128B(V)3 (JV5 system)



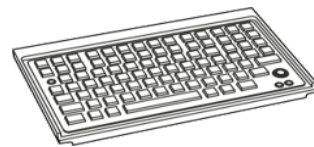
**Processor unit (PU)**  
NSN 7021-01-598-1551  
(JV5 BLK2)  
PN 9800-07080-0000  
**--Or--**  
NSN 7021-01-554-2707  
(JV5)  
PN 9800-07060-9030



**Display unit (DU)**  
NSN 7025-01-526-5612  
PN 9800-07090-9007  
**--Or--**  
NSN 7025-01-598-1454  
PN 9800-07090-9027



**Removable hard disk drive**  
NSN 7025-01-554-4055 DB 20 (JV5  
only)  
PN 9800-13900-0000



**Keyboard unit (KU)**  
NSN 7025-01-496-9879  
PN 9800-07010-9005



**Blue Force Tracking 2 (BFT2)  
Receiver-transmitter (RT)-1981AV**  
NSN 7035-01-654-4139  
PN: 1239327  
**--Or--**  
**Blue Force Tracking 2 (BFT2)  
RT-1981/V**  
NSN 7035-01-591-0115  
PN: 1096450



**KGV 72 Encryption-decryption  
equipment**  
NSN 5810-01-564-3364,  
Class 2



**Order:**

Nomenclature	NSN 7010-	PN
Installation & equipment kit	01-488-7482	889506-1
Installation & equipment kit	01-678-1730	A3347919
Installation & equipment kit	01-591-7660	170440-4*

**\*Alternative (if 170440-4 is not available):**

Nomenclature	NSN 7010-	PN
Installation & equipment kit	01-591-8755	170437-4

**Note:** When removing JBC-P equipment and mounting provisions, make sure you keep all lock washers and locking nuts for reuse when installing the equipment onto the M997A3 HMMWV. This maintains locking capabilities and prevents any loss or damage due to vibration. Installation instructions are on the Mission Command Support Center (MCSC) website:

**<https://mcsc.army.mil/fsc/references/jbcp/drawings/>**

Keep the following items from your M997A2 HMMWV:

<b>Nomenclature</b>	<b>NSN</b>	<b>PN</b>
Computer, digital	7021-01-598-1551 <b>--or--</b> 7021-01-554-2707	9800-07060-9030 <b>--or--</b> 9800-07080-0000
Display unit (DU)	7025-01-526-5612 <b>--or--</b> 7025-01-598-1454	9800-07090-9007 <b>--or--</b> 9800-07090-9027
Disk drive unit	7025-01-554-4055	9800-13900-0320
Keyboard, data entry	7025-01-496-9879	9800-07010-9005
Receiver-transmitter (RT) RT-1981A/V	7035-01-654-4139 <b>--or--</b> 7035-01-591-0115	1239327 <b>--or--</b> 1096450
KGV-72 encryption- decryption device	5810-01-564-3364	KGV-72
Defense Advanced GPS Receiver (DAGR), navigation set, satellite	5825-01-526-4783	AN/PSN-13A
Cable assembly, radio	5995-01-504-1762	987-4640-001
Magnetic mount, remote antenna	5985-01-502-6692	013-1981-010

Applicable technical manuals (TMs) and technical bulletins (TBs):

- TM 11-7010-498-10 (Apr 15)
- TM 11-7010-498-23&P (Apr 15)
- TM 11-7010-554-10 (Jun 15)
- TM 11-7010-554-23&P (Jun 15)
- TB 11-7010-415-23 (Aug 14)
- TB 11-7010-555-23 (Aug 14)
- TB 11-7010-438-23 (Aug 14)
- TB 11-7010-508-23 (May 14)
- TB 11-7010-435-23 (Aug 14)

## CHAPTER 2

LIN: C05036

**Type Designator:** AN/UYK-128D(V)3 (Mounted Family of Computer Systems [MFoCS])

**Note:** Check the part number on the mounting rack for the system. If it's 630201, no items need to be ordered. Just transfer all cables and brackets, unbolt the softskin HMMWV crow's feet from the bottom of the rack, and follow installation instructions for the A3339388 kit for an up-armored HMMWV (UAH) and M997A3 variant to reinstall this kit, as seen on the MCSC website:

<https://mcsc.army.mil/fsc/references/jbcp/drawings/>

Otherwise, proceed with one of the following ordering options:

### Preferred Option

Order:

Nomenclature	NSN 7010-	PN
Installation & equipment kit	01-678-2478	A3339388
Installation & equipment kit	01-678-1730	A3347919

### Alternate Options

Order:






Nomenclature	NSN 7010-	PN
Installation & equipment kit	01-488-7482	889506-1
Installation & equipment kit	01-678-1730	A3347919
Installation & equipment kit	01-591-7660	170440-4*


**\*Alternative (if 170440-4 is unavailable)**

Order:

Nomenclature	NSN	PN
Installation & equipment kit	7010-01-591-8755	170437-4

With any of these options, keep the following from your M997A2 HMMVV:

Nomenclature	NSN	PN
<p><b>Computer, digital</b></p> 	7021-01-622-8908	9800-96000-5001
<p><b>Display unit 12.1</b></p> 	7025-01-622-8848	9800-96100-0000
<p><b>Disk drive unit (removable hard disk)</b></p> 	7025-01-624-3792	9800-96612-0512
<p><b>Keyboard, data entry</b></p> 	7025-01-623-5349	9800-96810-0000
<p><b>RT</b></p>  <p><b>Blue Force Tracking 2 (BFT2)</b> RT-1981A/V <b>--or--</b> <b>Blue Force Tracking 2 (BFT2)</b></p>	7035-01-654-4139 <b>--or--</b> 7035-01-591-0115	1239327 <b>--or--</b> 1096450

RT-1981/V		
<b>KGV-72 encryption-decryption device</b> 	5810-01-564-3364	KGV-72

Additional items to retain if alternate option is used:

Nomenclature	NSN	PN
Cable assembly, radio	5995-01-504-1762	987-4640-001
Magnetic mount, remote antenna	5985-01-502-6692	013-1981-010
Hardware kit, electronic equipment	5340-01-642-2889	9850-96000-0002
Cable assembly, special	5995-01-626-9575	8900-96704-0000

Applicable TMs and TBs:

- TM 11-7010-498-10 (Apr 15)
- TM 11-7010-498-23&P (Apr 15)
- TM 11-7010-554-10 (Jun 15)
- TM 11-7010-554-23&P (Jun 15)
- TB 11-7010-415-23 (Aug 14)
- TB 11-7010-555-23 (Aug 14)
- TB 11-7010-438-23 (Aug 14)
- TB 11-7010-508-23 (May 14)
- TB 11-7010-435-23 (Aug 14)

### CHAPTER 3

LIN: C05055

Type Designator: AN/UYQ-90B(V)6 (MFoCS System)

**Note:** Check the PN on the mounting rack for the system. If it's 630201, no items need to be ordered. Just transfer all cables and brackets, unbolt the softskin HMMVV crow's feet from the bottom of the rack, and follow installation instructions for the A3339388 kit as found on the MCSC website for a UAH and M997A3 variant:

<https://mcsc.army.mil/fsc/references/jbcp/drawings/>

Otherwise, use one of the following ordering options:

Order:

#### Preferred Option

Nomenclature	NSN 7010-	PN
Installation & equipment kit	01-678-2478	A3339388
Installation & equipment kit	01-678-1730	A3347919

#### Alternate Option

Order:


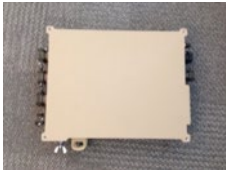



Nomenclature	NSN 7010-	PN
Installation & equipment kit	01-488-7482	889506-1
Installation & equipment kit	01-678-1730	A3347919
Installation & equipment kit	01-681-0870	A3339392-001
Installation & equipment kit	01-591-7660	170440-4*


\*Alternative (if 170440-4 is unavailable)

Order:

Nomenclature	NSN	PN
Installation & equipment kit	7010-01-591-8755	170437-4

With any of these options, retain the following from your M997A2 vehicle:

Nomenclature	NSN	PN
<b>Computer, digital</b> 	7021-01-622-9813	9800-96600-5000
<b>Docking station</b> 	7035-01-622-9809	9800-96300-5000
<b>Disk drive unit</b> 	7025-01-624-3792	9800-96612-0512
<b>Keyboard, data entry</b> 	7025-01-623-5349	9800-96810-0000
<b>RT</b>  <b>Blue Force Tracking 2 (BFT2)</b> RT-1981A/V	7035-01-654-4139 <b>--or--</b> 7035-01-591-0115	1239327 <b>--or--</b> 1096450

<b>--Or--</b> <b>Blue Force Tracking 2 (BFT2)</b> RT-1981/V		
<b>Antenna</b> 	5985-01-631- 5552	MD11-19
<b>Hardware kit, electronic</b>	5340-01-642- 2890	9850-96300- 0002
<b>Cable assembly, special</b>	5995-01-674- 1576	A3354745- 001
<b>Cable assembly, special</b>	5995-01-681- 0074	620800
<b>Cable assembly, radio</b>	5995-01-678- 2617	8900-52087- 0003

Applicable TMs and TBs:

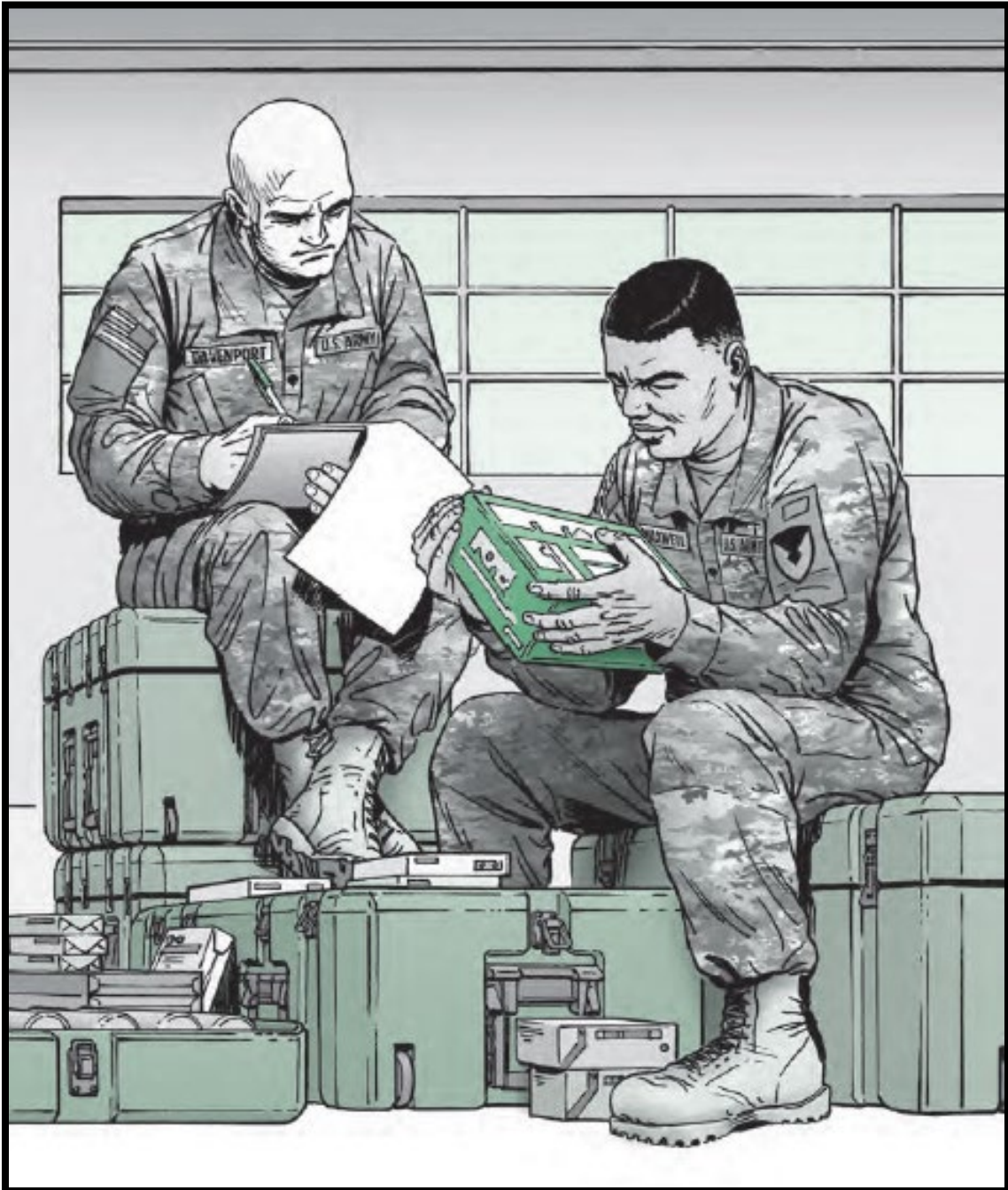
- TM 11-7010-498-10 (Apr 15)
- TM 11-7010-498-23&P (Apr 15)
- TM 11-7010-554-10 (Jun 15)
- TM 11-7010-554-23&P (Jun 15)
- TB 11-7010-415-23 (Aug 14)
- TB 11-7010-555-23 (Aug 14)
- TB 11-7010-438-23 (Aug 14)
- TB 11-7010-508-23 (May 14)
- TB 11-7010-435-23 (Aug 14)

## **CONCLUSION**

If you have questions or need further assistance, submit a help ticket on the CAC-enabled MSSC website:

**<https://mcsc.army.mil>**

# Logistics Management





# Army Equipment: Need to Look Up An Item Manager?

/ Published Sept. 14, 2020



Photo courtesy [U.S. Army Aviation and Missile Command](#)

Getting in touch with an item manager about a piece of equipment is pretty simple. Just go to:

<https://i2log.apg.army.mil/>

From there, click on Analyst Codes, then type in the item manager/analyst code number in the Search block and click Go. Next, hover over the analyst code. The item manager's email address or phone number or both will pop up. Now you have the info you need.

You can also look up NIINs, LINs and weapon system codes on the site.

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# Small Arms





## M16-Series Rifle & M4 Carbine: Carrier Key Screw Ordering Advice

/ Published Sept. 14, 2020



Photo by [Staff Sgt. Shawn Morris](#)

If you're trying to order the carrier key screw, NSN 5305-00-992-7284, and it's being cancelled, here's why. There's an error in the DLA system, and they're working to fix it. Until then, order the next higher assembly. That's the key and bolt carrier assembly, NSN 1005-01-441-1619.

Until this issue is resolved, you will be spending an additional \$80 but in the end, you save an undetermined amount of NMC time.



# M287/AT4 Tracer Trainer: Need Help Getting Parts?

/ Published Sept. 18, 2020



Photo by [Staff Sgt. Christopherer Jelle](#)

Soldiers, if your unit has the M287/AT4 tracer trainer and is having trouble getting repair parts, here's the why and the how to get what you need.

Defense Logistics Agency (DLA) doesn't have the demand to stock some of the parts for this equipment, so you'll have to order them directly from Saab, the original equipment manufacturer (OEM).

In order to get some of the repair parts, you'll need to order the next higher assembly.

For example, if you have a bad firing rod assembly, NSN 1055-01-326-5405, you'll need to order the firing mechanism tube assembly, NSN 4210-01-274-6382, which is the next higher assembly. DLA is working with the OEM to order stock for this part.

So, the long and short of getting repair parts for your M287 trainer is that if the Army supply chain doesn't have a repair part for it, your unit may order the repair part directly from the OEM.

Just email the Close Combat Support Team mailbox with any questions you have about ordering parts:

[usarmy.detroit.tacom.mbx.ilsc-close-combat-systems@army.mil](mailto:usarmy.detroit.tacom.mbx.ilsc-close-combat-systems@army.mil)

They'll help you get your M287 trainer back up and running.



# M777A2 Howitzer: Solar Charger NSNs

/ Published Sept. 24, 2020



Photo by [Spc. Rolyn Kropf](#)

Keep the two (2) 12-volt batteries in the M777A2 howitzer's 24-volt system fully charged with the solar charger. It's listed as Item 83 in WP 0098-38 of TM 9-1025-215-10 (Sep 19). Get the charger, case and solar panel with NSN 6130-01-540-3380. Get the charger and solar panel, but no case, with NSN 6130-01-521-1387. The charger with no case or solar panel comes with NSN 6130-01-521-1329.

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# Small Arms: Quarterly Inspection Exception to Policy

/ Published Sept. 24, 2020



Photo by [Spc. Marcus Floyd](#)

Commanders and unit armorers,

Have you heard about the new exception to policy for quarterly services on small arms weapons?

The Deputy Chief of Staff G4 has granted unit-level armorers who aren't MOS 91F permission to conduct quarterly services on M9, M16 and M4 families of weapons, **but only after** commanders ensure the following two conditions are met:

1. Requirements from AR 750-1 (Oct 19) and DA PAM 750-1 (Dec 13) are being followed and adhered to.

2. Unit armorers are trained by the Program of Instruction (POI) approved by the Combined Arms Support Command (CASCOM).

This exception doesn't apply in brigade combat teams where the MOS 91F is authorized and assigned.

**Note:** this exception to policy is good through 18 August 2022.

You can get a copy of the full memo at:

<https://www.milsuite.mil/book/docs/DOC-874578>

For more information, contact CW5 Robert C. Pitts III at:

[robert.c.pitts3.mil@army.mil](mailto:robert.c.pitts3.mil@army.mil)



# M4 Carbine: Enhanced Function Check Reminder

/ Published Sept. 30, 2020



Photo by [Spc. Sean Harding](#)

Dear Half-Mast,

After receiving 30 M4A1 carbines from a lateral transfer, the gaining unit requested a service-upon-receipt inspection. This service, which should be conducted when receiving equipment from a transfer, identifies any faults with the equipment.

One of my repairers found that 12 out of 30 M4A1s failed the enhanced function check.

Commanders, unit armorers, small arms repairers and LARs all need to realize that they must remain vigilant and check all weapons that they receive through transfer.

TACOM LCMC GPA 19-001 includes the steps for the enhanced function check. Soldiers can use the following link to download it:

<https://tulsa.tacom.army.mil/Safety/message.cfm?id=GPA19-001.html>

Terry Nichols  
19 ESC Armament Branch Chief  
Korea

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Dear Terry,

Thanks for the advice. Soldiers, make sure your weapon passes the function check.

*Half-Mast*

# Soldier Support





## Safety: Think Before You Climb

/ Published Sept. 14, 2020

**BLUF:** Keep safety tips in mind when mounting or dismounting from Army equipment.



Photo by [Sgt. Leon Cook](#)

*This article originally appeared in PS 760 (Mar 16), pp. 60-61.*

Too many Soldiers are hurt when mounting or dismounting from Army equipment. Often these injuries are caused by failure to follow basic safety guidelines. How can you avoid getting hurt? Be aware and think it through before you even make a move. Here are some tips:

- Before climbing on equipment, remove all jewelry and put on protective gloves.



Remove risk of injury by removing jewelry

- Make sure your boot soles have good traction to reduce chances of slipping.
- When climbing, keep both hands free for grasping handholds. Don't try to hold supplies, lunch buckets, tools or other items. If you need something, hoist it up after mounting the equipment or have a buddy hand it up to you. Do the same in reverse before climbing down.
- Never dismount from a vehicle by jumping.



Easy does it when dismounting

- Make sure you understand and use the three points of contact method when mounting, dismounting or moving around on the vehicle. This means having two hands and one foot or two feet and one hand on the equipment at all times.



**Use three points of contact**

- Break three points of contact only when you reach the ground, cab, turret or a stable platform.
- Use the parts designed by the manufacturer for mounting and dismounting, such as steps, running boards, traction strips, footholds and handgrips. Keep these parts free of mud, snow, grease and other hazards.



**Use proper parts when dismounting**

- Avoid using wheel hubs, machine tracks or door handles for mounting and dismounting.
- Be sure the driver and gunner are aware whenever people mount or dismount from the vehicle.
- Never mount or dismount from a moving vehicle. Drivers must bring the vehicle to a **complete** stop before allowing anyone to mount or dismount.
- Never climb in front of a weapon when mounting or dismounting from a vehicle.

For more safety pointers, check out the US Army Combat Readiness/Safety Center at:

<https://safety.army.mil/>

# Tactical Vehicles





## M-ATV/MRAP: Better Check Your Optima® Batteries

/ Published Sept. 30, 2020

**BLUF:** MIM 20-040 advises that the REDTOP battery has been replaced with the YELLOWTOP battery.



Photo by [Sgt. Branden Bourque](#)

Does your unit's MRAPs include M-ATVs? Heads up! You're no longer able to order the Optima® REDTOP® battery, NSN 6140-01-534-6466, according to TACOM LCMC Maintenance Information Message (MIM) 20-040.

The good news is, they've been replaced with the Optima® YELLOWTOP® battery, NSN-6140-01-441-4272.

Check out the table below for a list of M-ATVs this applies to:

Model	NSN 2355-	LIN
M1240A1	01-596-1330	M05030
M1277	01-623-0967	M05029

M1274	01-621-5506	M05027
M1276	01-620-7041	M05028
M1245A1	01-641-2096	M05051

Be careful because the REDTOP® and YELLOWTOP® batteries have different power ratings and **cannot** be intermixed in the same battery box. Intermixing in same battery box may cause battery failure. But it's okay to have two REDTOP® batteries in one box and two YELLOWTOP® batteries in the other.

This info isn't in TM 9-2355-335-10 (Apr 20) and IETM 9-2355-335-13&P (Apr 20) yet, so make a note until they're updated.

View the complete MIM 20-040 at:

<https://tulsa.tacom.army.mil/Maintenance/message.cfm?id=MI20-040.html>

