

PS**THE
PREVENTIVE
MAINTENANCE
MONTHLY****ISSUE 722 JANUARY 2013**

TB 43-PS-722, **The Preventive Maintenance Monthly**, is an official publication of the Department of the Army, providing information for all Soldiers assigned to combat and combat support units and all Soldiers with unit maintenance and supply duties. All information published has been reviewed and approved by the agency responsible for the equipment, publication or policy discussed. Application of the information is optional with the user. Masculine pronouns may refer to both genders. The use of product or company names does not constitute endorsement of those products, services or companies by the U.S. Army. The use of non-DoD hyperlinks, along with their content, does not constitute endorsement by DoD or DA. Neither DoD nor DA exercises any editorial control over, and cannot vouch for, content on non-DoD websites.

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M1-Series Tank Oil Filter Recall
M1-Series Tank FRH Checks
M2/M3-Series Bradley Dipstick Gaskets
M119A2 Towed Howitzer Safety Steps
Towed Howitzer, Paladin Cannon Bore Cleaning

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FMTV Spare Tire Carrier Chain Studs
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Or email to:

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<https://www.logsa.army.mil/psmag/pshome.cfm>

By order of the Secretary of the Army:

RAYMOND T. ODIERNO
General, United States Army Chief of Staff

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Administrative Assistant to the Secretary of the Army

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MAINTENANCE
MONTHLY**

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Unlimited



***"Who knows
what evil lurks
in the hearts
of men..."***

**SEE 'Soar High
with Shadow PM'
on page 22!**



Preventive Maintenance: What Do *You* Think Of?

When you hear the words—preventive maintenance—what do you think of? If you're like most Soldiers, in your mind's eye you probably see:

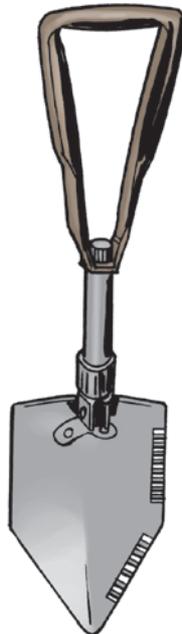
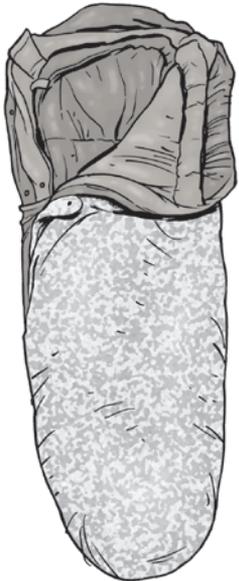
- Trucks and tanks in motor pools
- Helicopters on the flight line
- Rifles and pistols in the arms room
- Radios in the commo shop

You also probably picture Soldiers taking care of this equipment by inspecting, cleaning, lubing or replacing parts.

But when you hear the words—preventive maintenance—do you ever think of clothing, body armor, hydration systems, tents, space heaters, kitchens or scores of other troop support items? This gear deserves PM, as well. Here are some examples of what troop support gear PM can do for you:

- **Keep your Army combat uniform clean and lasting longer.** Launder it by the book. Use a mild detergent and the correct water temperature.
- **Prevent a sleepless night in a leaky tent.** Patch small holes and tears with the tentage repair kit, NSN 8340-00-262-5767.
- **Ensure your hydration system stays fresh.** Disinfect the bladder with household bleach to curb the growth of mold and bacteria.
- **Sleep safely.** Inspect the exhaust stack pipes on your space heater before firing it up. Look inside for clogs or soot build-up that might prevent deadly fumes from venting. Clean the insides with a rag.

The PMCS tables in your TMs describe a lot more checks and services you can perform on troop support items. All of them support you and your mission. Some of them may even keep you alive. Now that's something to really think about.



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Stryker...

PUTTING YOUR FOOT DOWN



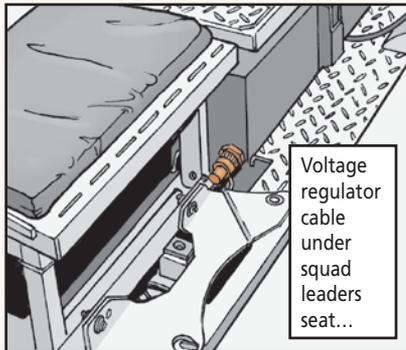
HAVE YOU FIGURED OUT THAT CHARGING PROBLEM IN MY STRYKER YET?

NOT--YAWN--YET. I JUST CAN'T--YAWN--FIGURE IT OUT!

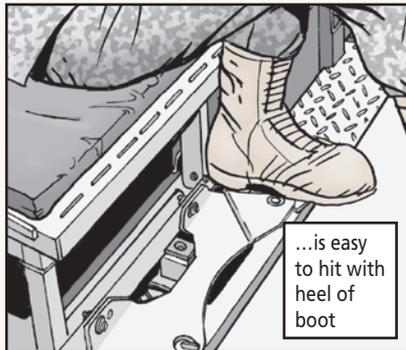


Mechanics, seems like just about any place a Soldier puts his big feet can cause you problems. The latest spot is inside the troop compartment of the Stryker.

The W4 cable that screws into the side of the battery box sits right under the squad leader's seat. It would be really easy for a Soldier's heel to hit the W4 cable and either damage it or slowly unscrew it.



Voltage regulator cable under squad leaders seat...



...is easy to hit with heel of boot

A damaged or loosened cable won't allow the vehicle's batteries to charge. You can spend a lot of time and lose a lot of sleep trying to troubleshoot this problem. So make it one of your first checks.

M1-Series Tanks...

SHOOT-OUT AT THE OIL FILTER CORRAL

THIS TOWN AIN'T BIG ENUFF FER THE TWO OF US!

SAVE PART A' YER BREATHIN', PARDNER

THIS TOWN AIN'T BIG ENOUGH FOR A DEFECTIVE FILTER!



Crewmen, there's a bad engine oil filter out there. And it's up to you to run him out of town before he guns down your M1-series tank!

The bad filter was manufactured by Fleetguard and testing has shown that the epoxy compounds used in the filter may break down. That can lead to catastrophic engine failure!

Right now, take a look at the engine oil filter on your tank. If it's clearly labeled Fleetguard with black letters and includes the part number HF28202 in red letters, get it replaced as soon as you can. If you don't have a replacement filter on hand, order a new engine oil filter parts kit, NSN 4330-01-118-2868.

Replace defective oil filter



You should get one of five different filters with the kit:	Manufacturer	CAGE	P/N
	Pall Aeropower Corp	18350	AC-9540F-74
	Purolator Products	90005	1763950
	PTI Technologies Inc	05228	7590568-101
	Separation Technologies	9Y277	ST66414896C
	Honeywell International	99193	3-300-474-05

If the kit or your tank has any filter other than what's on this list, replace it.

If you have to change the filter, changing the engine oil isn't necessary. You also won't need to submit a special AOAP sample.

However, you should hang on to the bad filter as an exhibit and submit a PQDR. You'll receive instructions on where to send the filter.

The complete scoop is in TACOM maintenance action message 12-007:

https://tulsa.tacom.army.mil/safety/mam/tacom_wn/MA12-007.html

KEEP YOUR REPLENISHER ON THE LEVEL

TIME TO HEAD OUT TO THE FIRING RANGE!

HANG ON, GUYS!

YOU HAVEN'T CHECKED MY REPLENISHER LEVEL YET...

...AND I'M FEELIN' A LITTLE GASSY!



When was the last time you checked and bled the FRH in your tank's replenisher, crewmen? If it has been a while, you could be putting yourself and others in danger!

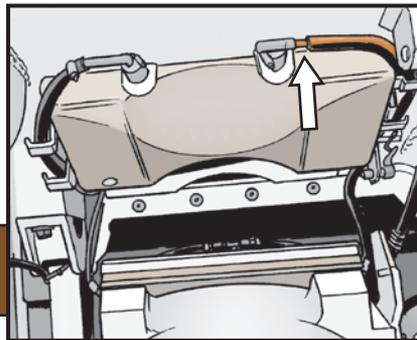
They are easy tasks to complete and can prevent some serious problems. If the recoil system is low on fluid, or there's air in the system, the main gun could recoil uncontrollably the next time it's fired. When that happens, the cannon shears its retaining bolts and slams into the ammo compartment. You don't want to be in the way if that happens!

Replenisher Level

Check the replenisher level by raising the gun tube to maximum elevation. The replenisher's reservoir should be at or above the MIN LEVEL mark.

If the replenisher oil level is low, add some FRH now. Here's how:

1. Park the tank on level ground and raise the gun tube to max elevation.
2. Make sure you're wearing long sleeves (rolled down), rubber gloves, goggles and a faceshield. FRH contains a chemical that can cause paralysis if it's taken orally. FRH can also be absorbed through the skin, so wash thoroughly with soap and water if you get any on you.
3. Disconnect the hose from the plug on the top right side of the replenisher reservoir.
4. Uncoil the hose by sliding it out of the six retaining clips around the outside of the replenisher.
5. Extend the hose through the loader's hatch.
6. Put the small BII funnel, NSN 7240-00-404-9793, in the hose and slowly add FRH, NSN 9150-00-111-6256, until the fluid level reaches the MIN LEVEL mark on the replenisher.
7. Remove the funnel, slide the hose back through the retaining clips and reattach it to the plug on top of the replenisher.



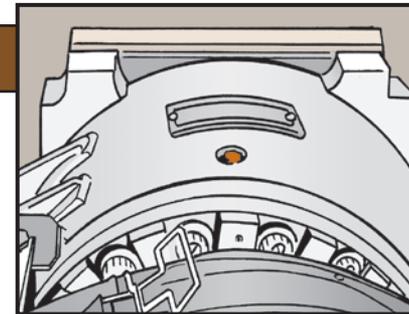
If the fluid level in the replenisher keeps moving down over time, report it. You could have a Class III leak.

Bleed Recoil System

Checking the FRH level in the replenisher isn't all you need to do, though. If there's air in the system, the replenisher could give you a false reading. The level may look good when it's actually low.

So when do you need to bleed the system? Unless you like living dangerously, you'd better do it prior to firing exercises and every time the recoil system is drained and refilled. Here's how:

1. Make sure you're wearing long sleeves, gloves, goggles and a face shield for protection.
2. Elevate the main gun to maximum elevation with the hydraulic pump handle and check the replenisher to make sure it's full.
3. With turret power off and the system hydraulic pressure reduced to zero, manually depress the gun tube just below level.
4. Loosen, but don't remove, the bleed plug below the gun mount ID plate.
5. Allow all the air to escape until you see FRH starting to ooze from around the bleed plug.
6. Retighten the bleed plug. Wipe off any FRH with a rag and dispose of it properly.
7. Recheck the replenisher reservoir. Add FRH if needed.



A STICKY SITUATION FOR DIPSTICK

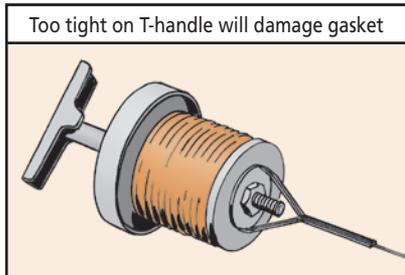


The gasket under the top of your Bradley's transmission oil dipstick is there for a good reason, crewmen.

After checking the oil level, you have to turn the T-handle on the dipstick to lock it in place. Turning the T-handle squeezes the gasket under the top of the dipstick to completely seal the opening.

But if that gasket is damaged or missing, you won't get a good seal. Water, dirt and sand can get past the seal and into the transmission. Not good!

Take a close look at the dipstick seal after checking the oil level. If it's cut, torn or missing, replace the dipstick with NSN 6680-01-180-5640.

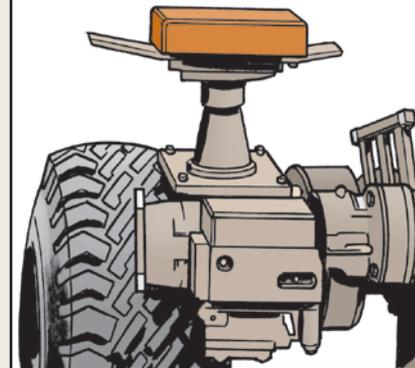


What to Know Before You Tow

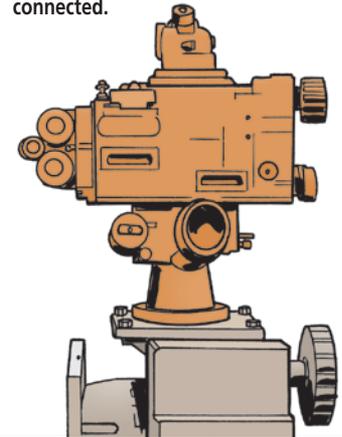
When towing the M119A2 howitzer, you need to take special care of the M137A2 panoramic telescope and M187A1 telescope mount. If you don't, damage is sure to follow.

Keep these tips in mind:

- Whenever the M137A2 isn't installed, make sure the plastic quick-release protective cover, NSN 5340-01-042-1330, is installed on the M187A1 telescope mount. Without the cover, the quick-release handles could loosen and fall off.

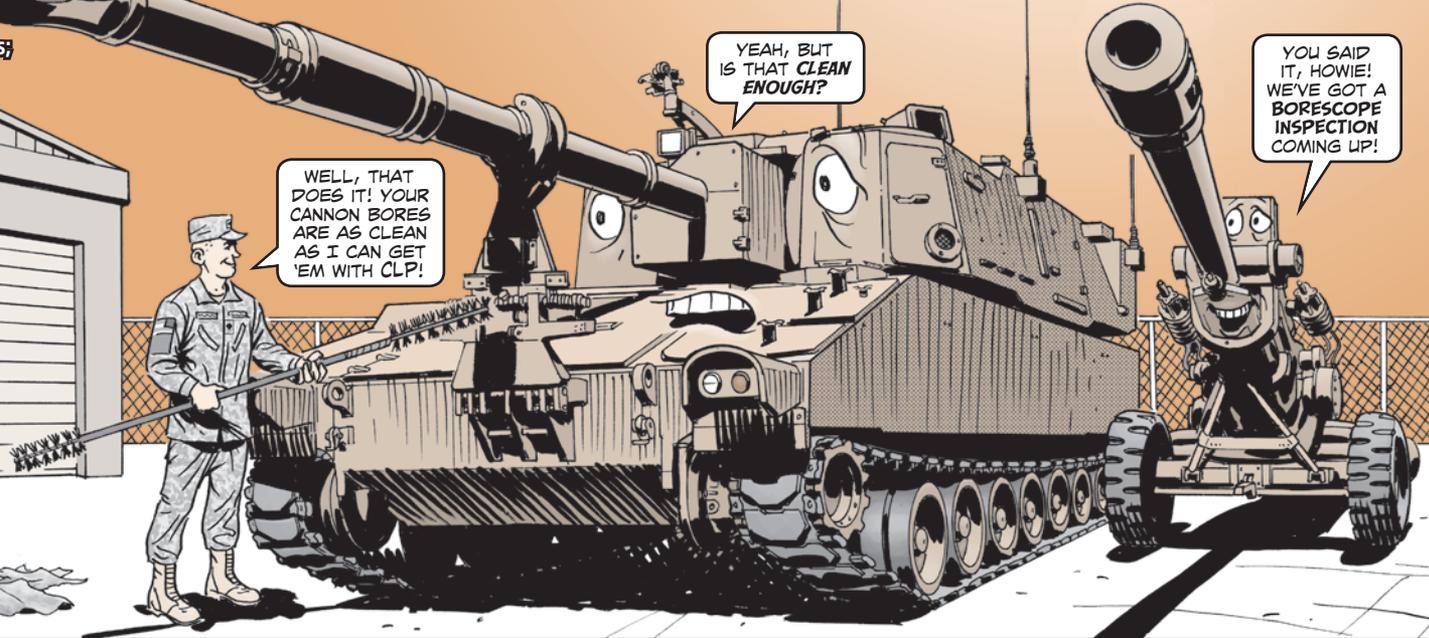


- Never tow your howitzer with the M137A2 installed. Vibration could damage both the telescope and the M187A1 mount where the two are connected.



- Make sure the canvas fire control telescope mount cover, NSN 1240-00-819-4524, is installed prior to towing. Without the cover, flying debris can damage the M187A1 mount.

WHEN 'CLEAN' ISN'T CLEAN ENOUGH!



WELL, THAT DOES IT! YOUR CANNON BORES ARE AS CLEAN AS I CAN GET 'EM WITH CLP!

YEAH, BUT IS THAT CLEAN ENOUGH?

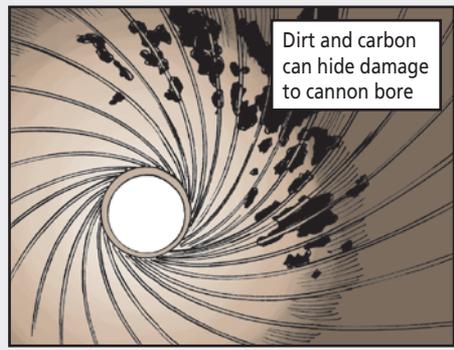
YOU SAID IT, HOWIE! WE'VE GOT A BORESCOPE INSPECTION COMING UP!

CREWMEN, THE -10 TMS FOR YOUR TOWED HOWITZERS AND M109A6 PALADIN GIVE PRETTY SPECIFIC INSTRUCTIONS ON HOW TO PROPERLY CLEAN THE CANNON BORE ON THE DAY OF AND THE DAY AFTER FIRING.



Generally, that means using that particular vehicle's bore brush, cleaning sleeves, and CLP. Add in a whole lot of elbow grease and you'll get a pretty clean bore.

But when it's time to do a borescope inspection, those cleaning procedures just aren't enough. They can leave behind small amounts of carbon and dirt that can hide erosion or pitting inside the bore.



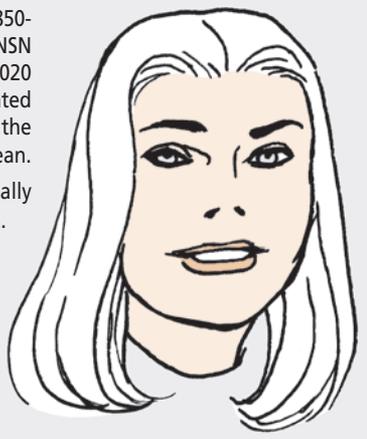
Dirt and carbon can hide damage to cannon bore

So, immediately before the inspection, follow the cleaning procedures outlined on Pages 2-1 through 2-2 of TM 9-1000-202-14, *Evaluation of Cannon Tubes* (Feb 99, w/Ch 5, Jan 11).

1. Clean the cannon bore using your howitzer's bore brush and a cleaning sleeve saturated with RBC (rifle bore cleaner), NSN 6850-00-224-6658 (1-qt), NSN 6850-00-224-6663 (1-gal), or NSN 6850-00-249-8029 (5-gal).
2. Swab out the bore with a wash of solvent, NSN 6850-01-472-2721 (1-qt), NSN 6850-01-474-2319 (1-gal), NSN 6850-01-472-2717 (5-gal), or NSN 6810-01-097-2020 (5-gal). Pass the bore brush and cleaning sleeve saturated with the solvent through the bore, changing out the cleaning sleeve as necessary until it comes out clean.
3. Dry the bore using clean, dry, lint-free cloth or specially prepared paper wiping towels, NSN 7920-01-368-1622.

Eyeball the interior of the bore, looking for any damage or erosion to rifled and smooth areas. Appendix A-S in TM 9-1000-202-14 will tell you exactly what to look for.

WHEN YOU'RE FINISHED, APPLY A LIGHT COAT OF CLP TO PREVENT CORROSION BETWEEN FIRINGS.



A/C V-Belt Pulley Interference

I THINK I HAVE A PROBLEM WITH MY FAN CLUTCH.

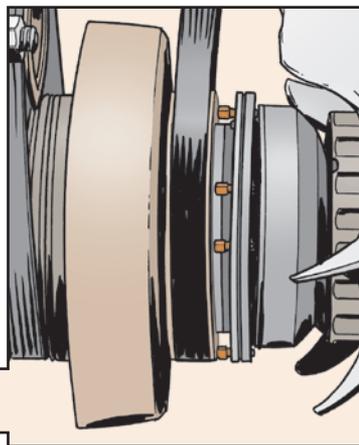
CAN YOU HELP ME?



If your unit has FMTVP1, FMTVA1P1, FMTVA1P2, LVAD and HIMARS trucks with air conditioning, you may have a problem. There could be contact between the engine fan clutch bolts and the A/C V-belt pulley. The contact itself **doesn't** make your truck non-mission capable, though.

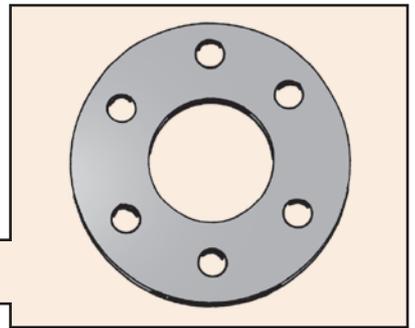
But the bad news is, depending on how much contact there is between the pulley and fan clutch, the fan clutch could fail or the fan clutch assembly could be damaged. And that **does** make your truck NMC.

Fan clutch retaining bolts with small clearance to A/C pulley can cause damage



The good news is a spacer plate is available through BAE Systems to fix this issue. The spacer plate provides more clearance between the fan clutch and A/C V-belt pulley. Use it if the fan clutch retaining ring bolts are worn and need to be replaced or if the fan clutch itself is damaged.

Fan clutch spacer plate, P/N GTS006001, provides extra clearance



Get Well Plan

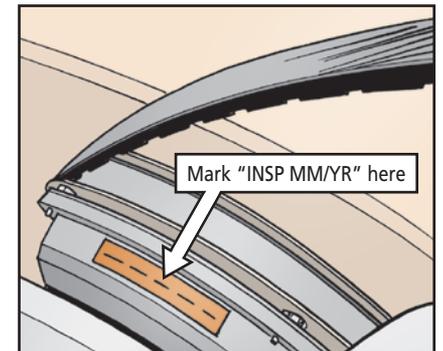
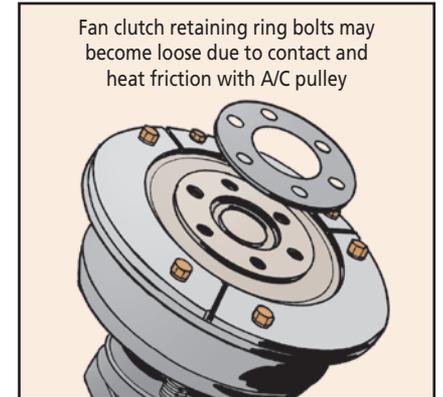
See TACOM MAM 12-025 for complete fan clutch inspection and replacement instructions. It's available online:

<https://tulsa.tacom.army.mil/SAFETY/message.cfm?id=MA12-025.html>

Here's a summary of what you should do:

1. Look for metal-to-metal contact from the fan clutch bolt heads to the face of the A/C pulley.
2. If you see any damage to the fan clutch, replace it and install the new spacer, PN GTS006001, on the new fan clutch. Refer to the TACOM MAM for details on how to get the spacer.
3. If the fan clutch retaining ring bolts are excessively worn and can't be tightened, replace the fan clutch and install the new spacer plate.
4. Undamaged or slightly worn retaining ring bolts with no other signs of damage to the fan clutch or A/C pulley can be tightened. Torque loose retaining ring bolts to 30 lb-in.
5. If you can't use this torque wrench method, use this alternate tightening method: Once the bolt is seated and the lock washer is compressed with no gap between the retaining plate and clutch, tighten the bolt with an additional $\frac{1}{4}$ to $\frac{3}{8}$ turn.
6. After inspecting and following these steps, use a paint pen to mark serviceable fan clutches: "Insp. Month/Year", for example, Insp. 12/12.

Fan clutch retaining ring bolts may become loose due to contact and heat friction with A/C pulley



REPLACE SPARE TIRE CARRIER CHAIN STUDS!



If your unit has FMTV A1P2 trucks with serial numbers below 737,560, or LVAD model M1081A1 and M1093 trucks within serial number range L-T120386EHFV to M-T120972EHBW, **your truck's spare tire lifting eye studs could fail.** And that can lead to the entire 363-lb wheel and tire assembly falling, injuring personnel and damaging equipment.

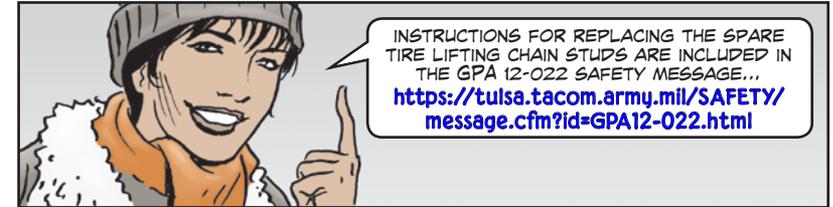
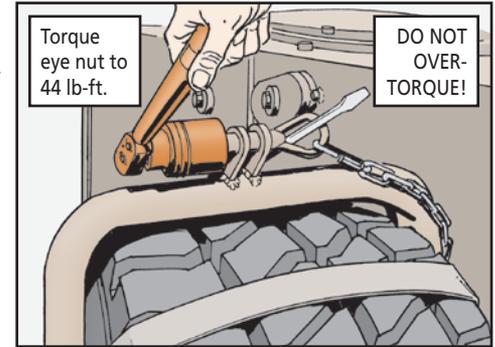
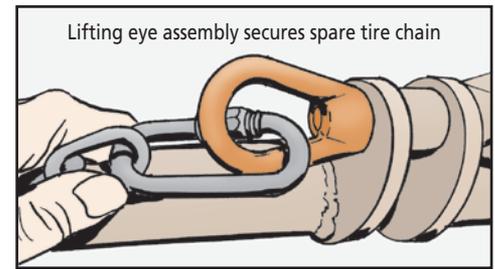
Thankfully, this preventable problem doesn't make your truck NMC. The trouble was created during vehicle production when the spare tire lifting eye nuts on these trucks were over-tightened. The resulting slightly stretched studs in turn weakened the stud threads.

The lifting eye assembly secures the chain used to lift the spare tire. Both eye nuts are screwed onto a common stud. When the spare wheel and tire assembly is lifted from the truck, the lifting eye assembly supports the full weight of the spare tire while aloft.

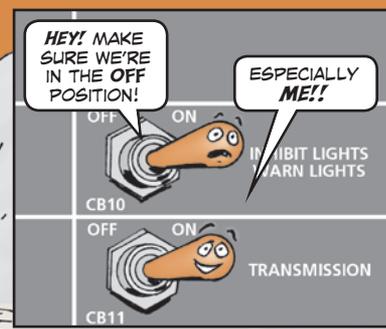
Prevent a possible failure by replacing the eye nut studs, NSN 5307-01-416-9968. Install them with the proper torque value of 44 ft-lbs.

Until stock runs out, replacement studs will be issued at no cost to units. For ordering instructions, contact TACOM's Crystal Simmons at DSN 786-6642, (586) 282-6642, or email:

crystal.j.simmons4.civ@mail.mil

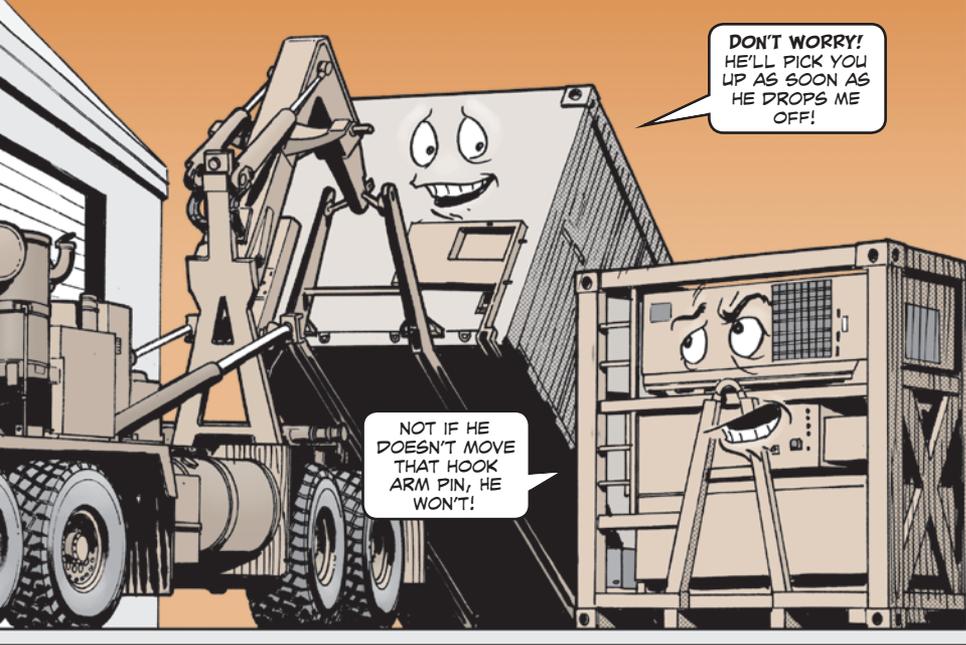


CIRCUIT BREAKER REMINDER



Crewmen, make sure the circuit breakers in your M1117 armored security vehicle (ASV) are switched OFF after the day's run. If the breakers are left ON—especially the one for the transmission—the vehicle batteries will drain in no time. So, switch off the breakers right before you turn off the engine. That way you're not stuck with dead batteries the next morning when it's time to start up the vehicle!

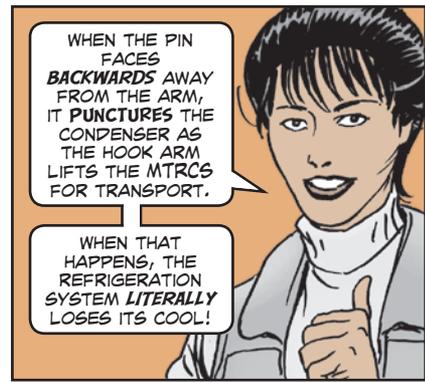
TURN HOOK ARM PIN AROUND



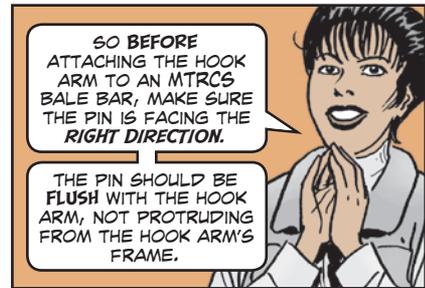
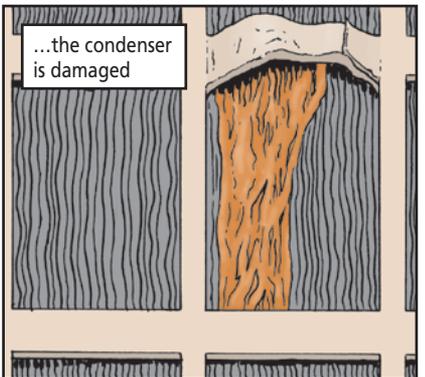
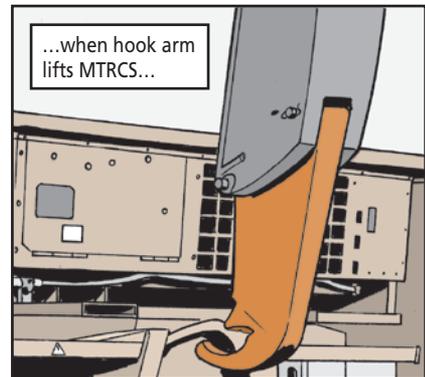
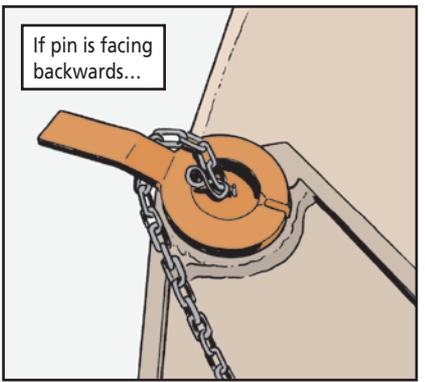
NOT IF HE DOESN'T MOVE THAT HOOK ARM PIN, HE WON'T!

OPERATORS, THE REFRIGERATION CONDENSER UNITS IN THE MULTI-TEMPERATURE REFRIGERATED CONTAINER SYSTEM (MTRCS) ARE SUFFERING A LOT OF DAMAGE.

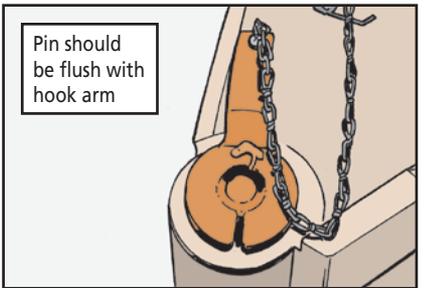
THAT'S BECAUSE THE HOOK ARM PIN ON THE M1074/A1 PLS AND M1120/AZ/A4 HEMTT LHS CAN MOVE FREELY IN THE ARM.



WHEN THAT HAPPENS, THE REFRIGERATION SYSTEM LITERALLY LOSES ITS COOL!



THE PIN SHOULD BE FLUSH WITH THE HOOK ARM, NOT PROTRUDING FROM THE HOOK ARM'S FRAME.

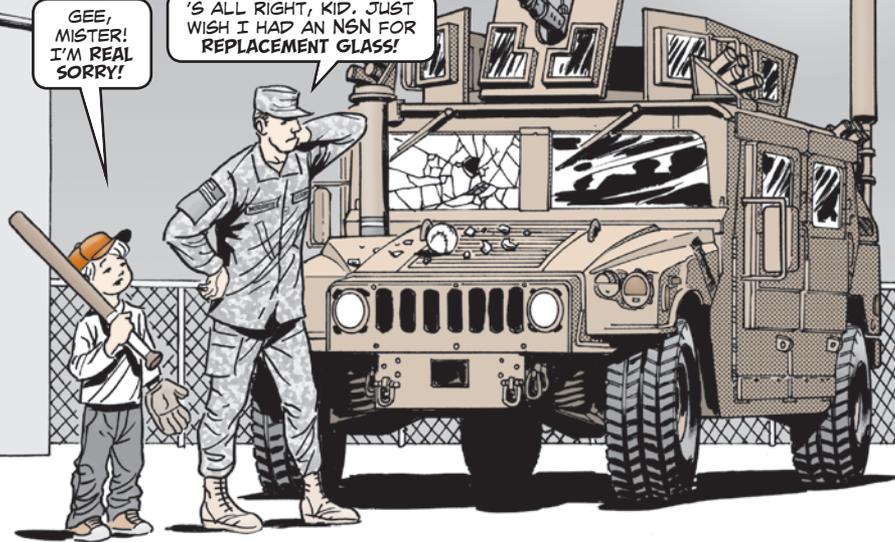


PLS Trailer Wheel Rims Have 12 or 14 Bolts

By now, your unit's M1076 PLS trailers should no longer have 10-bolt wheel rims. That's true if MWO 9-2330-385-20-1, *Installation Instructions for Bolt Together Wheels*, has been applied. The MWO describes a 12-bolt rim (Titan wheel), but a 14-bolt rim (Accuride wheel) will work fine, too. Either wheel rim comes with NSN 2530-01-500-4991 and can be mixed on the same trailer and axle.

Up-armored HMMWVs...

B-KIT AND FRAG 5 KIT GLASS



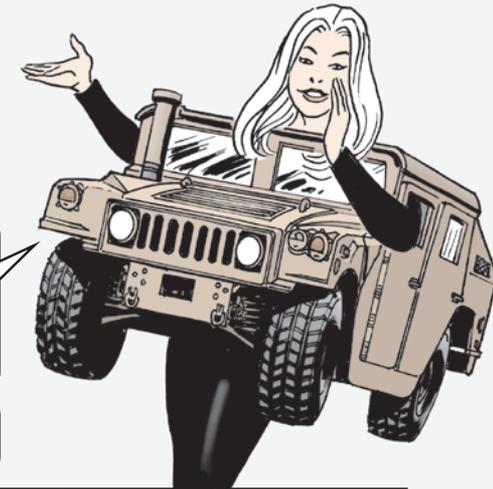
Dear Half-Mast,
 My unit has some up-armored HMMWVs with the B-kit and others with the Frag 5 kit. Which NSNs should we use to replace the glass in the doors and window assemblies?
 SFC I.C.

Dear Sergeant I.C.,
 We have a clear answer for you. For M1151A1, M1152A1, M1165A1, and M1167 up-armored HMMWVs with the B-kit, the front and rear door glass comes with NSN 2510-01-581-2107; the left-door window assembly comes with NSN 2510-01-581-4181; and the right-door window assembly comes with NSN 2510-01-581-4183.
 For M1151A1, M1152A1, M1165A1, and M1167 up-armored HMMWVs with the Frag 5 kit, the door glass comes with NSN 2510-01-563-8322; the left-door window assembly comes with NSN 2510-01-545-5898; and the right-door window assembly comes with NSN 2510-01-545-5899.
 Finally, for M1114s with the Frag 5 kit, the door window assembly comes with NSN 2510-01-545-5856.
 Half-Mast

[Click here for a copy of this article to save or email.](#)

Up-armored HMMWVs...

GET YOUR WINDSHIELD GLASS HERE!



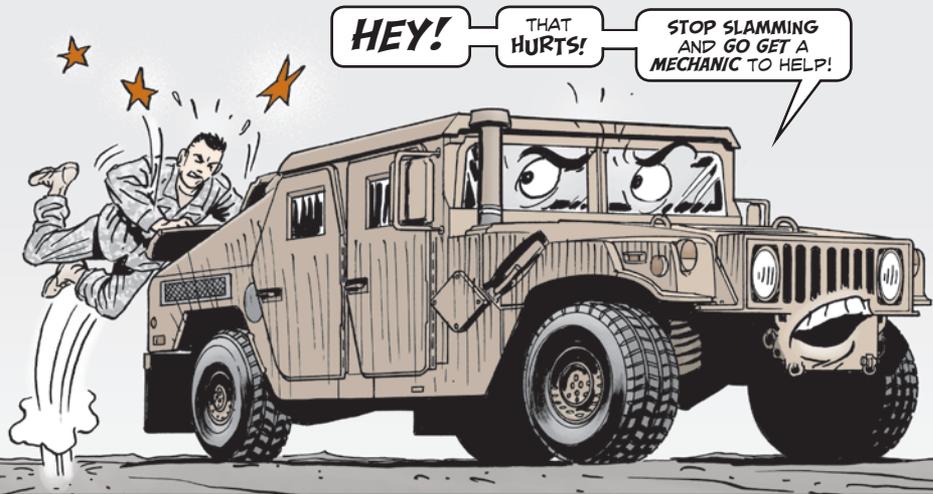
YOUR UNIT'S UP-ARMORED HMMWVs COULD HAVE ONE OF THREE WINDSHIELD CONFIGURATIONS INSTALLED...
 WINDSHIELD, HEATED WINDSHIELD, OR THE IMPROVED VEHICLE EMERGENCY EGRESS (IVEE) WINDSHIELD.

EYEBALL THIS TABLE TO SEE WHAT YOU'LL NEED TO ORDER WHEN IT'S TIME TO REPLACE THE WINDSHIELD.

HMMWV model	Type of windshield	Left hand NSN 2510-	Right hand NSN 2510-	Kit NSN
M1114	Windshield	N/A	N/A	N/A
	Heated windshield	01-435-9690	01-435-9693	N/A
	IVEE windshield	01-552-0620	01-552-0624	2510-01-552-0617
M115A1	Windshield	01-535-6001	01-535-6000	N/A
	Heated windshield	01-560-1159	01-561-2540	2540-01-558-7677
	IVEE windshield	01-560-7677	01-560-7680	2510-01-560-7672
M1152A1	Windshield	01-535-6001	01-561-6000	N/A
	Heated windshield	01-560-1159	01-560-2540	2540-01-558-7677
	IVEE windshield	01-560-7677	01-560-7680	2510-01-560-7672
M1165A1	Windshield	01-535-6001	01-535-6000	N/A
	Heated windshield	01-560-1159	01-561-2540	2540-01-558-7677
	IVEE windshield	01-560-7677	01-560-7680	2510-01-560-7672
M1167	Windshield	01-535-6001	01-535-6000	N/A
	Heated windshield	01-560-1159	01-561-2540	2540-01-558-7677
	IVEE windshield	01-560-7677	01-560-7680	2510-01-560-7672

[Click here for a copy of this article to save or email.](#)

FIX CARGO SHELL LATCH PLATE FAILURE



If your M1151, M1151A1, M1151A1WB1, and M1167 HMMWVs have failing cargo shell forward latch plate assemblies, you might be a little frustrated. Here's what you can do to prevent the failures and ease the frustration.

If your HMMWV's hatch doesn't close smoothly during PMCS, tell your mechanic. And make sure you're opening and closing it the right way.

Also, ensure the forward latches are fully engaged with the forward strikers before opening the cargo door from the rear position. That should help protect the cargo shell forward latch plate assembly.

But if you do all that and there's still a problem, your HMMWV's cargo shell forward latch plate assembly may have failed.

You can't find replacement procedures in the TM yet, but you can get them from TACOM LCMC. Just send your unit information and request to:

TACOM LCMC

Program Manager, Light Tactical Vehicles (PM-LTV)

ATTN: SFAE-CSS-TV-L

Warren, MI 48397-5000

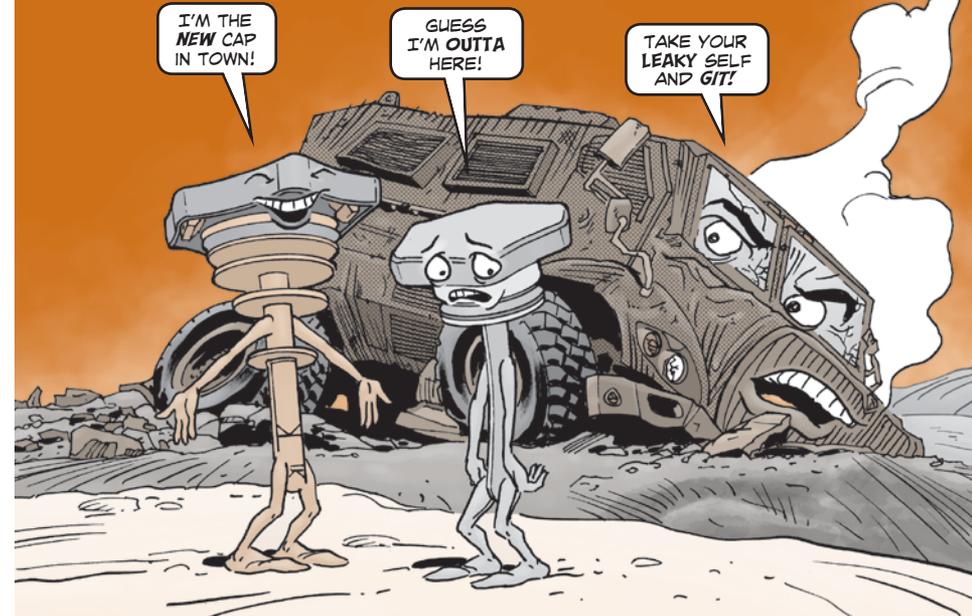
Questions? Contact Oscar Chapman at DSN 786-6510, (586)282-6510, or

oscar.b.chapman.civ@mail.mil

and Nathaniel Zachary at DSN 786-4305, (586)282-4305, or

nathaniel.j.zachary.civ@mail.mil

POWER STEERING CAP'S A REAL MISHAP!

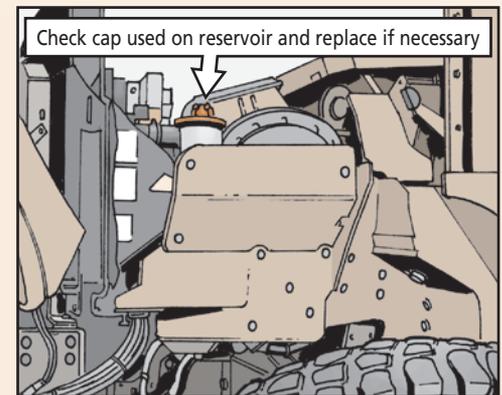


A loss of power steering fluid will cause the MaxxPro to steer hard or erratic during operation—or not at all!

The culprit is usually the vehicle's original power steering reservoir cap, NSN 2590-01-556-5316. It's a known leaker.

To stop fluid loss, replace the old cap with a new style cap. The new cap, NSN 6680-20-006-4251, has three baffles on its dipstick that keep fluid from seeping past the cap.

So eyeball the cap you have on your MaxxPro. If it's the old-style cap, replace it now.



Just What Your Javelin Needs!

IF YOU GIVE YOUR JAVELIN JUST WHAT IT NEEDS—THE ATTENTION THAT COMES FROM GOOD PMCS—IT WILL DO WONDERS FOR YOU IN THE FIELD.

HERE'S WHAT WE'RE TALKING ABOUT...

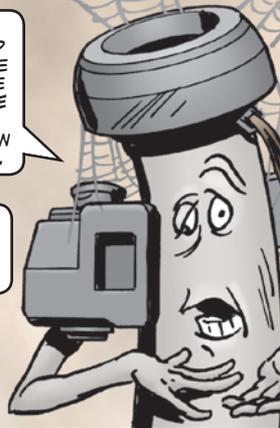


Don't let it sit. Too many Javelins are left to gather cobwebs for months at a time. Problems that would be IDed by the built-in-tests (BIT) go undetected. Then when you are finally ready to fire the Javelin, it's not fit for duty.

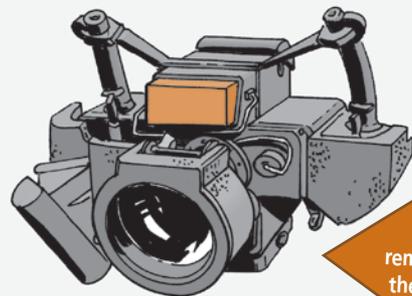
Just sticking the battery in the Javelin monthly and letting it run for 30 minutes will keep it ready for action. Do the same for the field tactical trainer, too. Sergeants' Time is a good time to power up the Javelin and refresh your knowledge of how it works. And don't forget the 180-day verifications that need to be done by support.

I WISH YOU HAD GIVEN ME A LITTLE EXERCISE THESE LAST FEW MONTHS.

NOW I DON'T FEEL SO HOT.



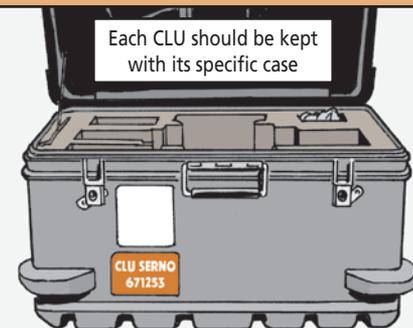
But when you're done, remember to remove the battery. If it's left in the Javelin, the battery could leak and cause corrosion.



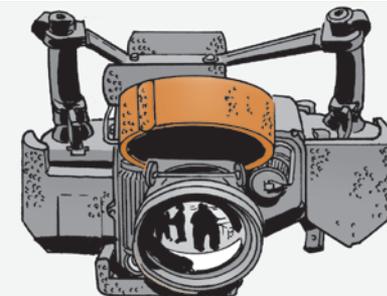
Keep CLU with its case. Each CLU is paired with a specific storage case. They both have the same ID number. By keeping the CLU in its own case, you protect the CLU and make it easier to track.

If any of your Javelin cases are ever damaged or disappear, contact the Javelin Integrated Technical Operations Center for a replacement. Call (888) 528-4862 or email: jvitoc@jvjavelin.com

Each CLU should be kept with its specific case



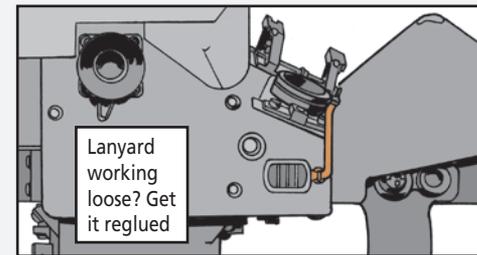
Remember that CLUs are different. The M98A1 and A2 versions have different afocal assemblies. If you don't pay attention to which afocal cover you order, you may get one that doesn't fit. Order the A1 cover with NSN 5895-01-474-6669 and A2 cover with NSN 6650-01-540-5157.



M98A1 and -A2 afocal assemblies have different covers

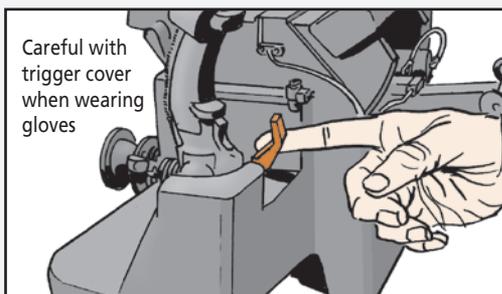
Check connector cap's lanyard during PMCS. The lanyard is just glued onto the CLU and over time it works loose. Then the cap disappears, which can be difficult to replace. Just feel during PMCS if the lanyard is working loose. If it is, tell your repairman so he can re-glue it.

Lanyard working loose? Get it reglued



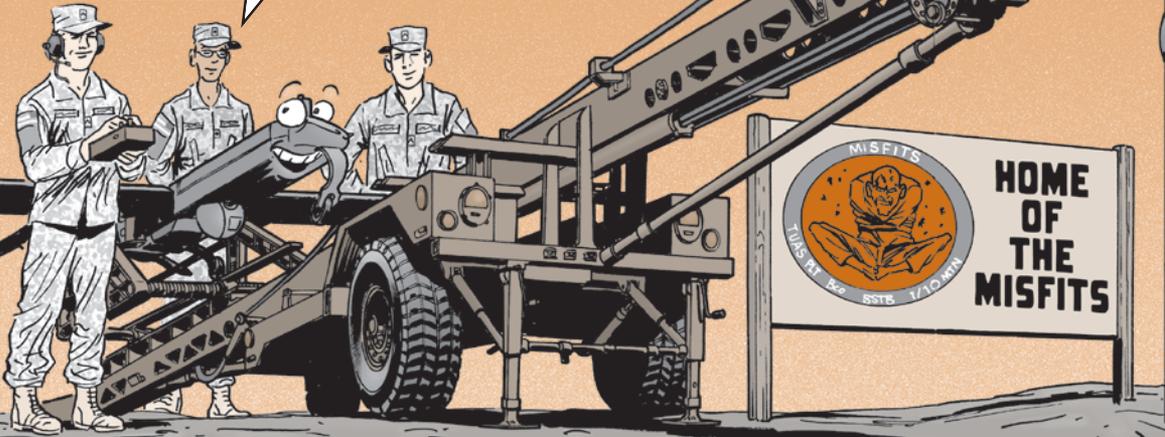
Careful with the trigger cover while wearing gloves. The bulk of your gloves makes it easier to accidentally break the trigger cover when you pull it down. Be gentle. And be careful when you're rolling the CLU off your shoulder. The guard is often broken then, too.

Careful with trigger cover when wearing gloves



Soar High with Shadow PM

HEY, THANKS FOR THE PM! NOW I'LL SOAR THROUGH THIS MISSION.



THE SHADOW TACTICAL UNMANNED AIRCRAFT SYSTEM (TUAS) CAN'T SOAR HIGH ON ITS MISSION UNLESS PM SOARS HIGH WITH IT!



Preflight Inspections

Always perform every PMCS inspection and check outlined in your TM before flight. Even when PMCS becomes old hat, never trust your memory. Always depend on the TM so you don't miss anything.

Do all of your pre-flight inspections and before engine start checks like it says in TM 1-1550-689-CL, *Operator's Manual and Crewmember's Checklist*.

Use TM for maintenance, not your memory!



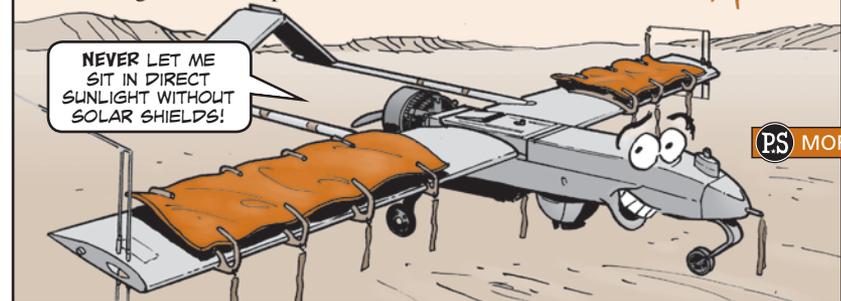
Solar Shields

In searing heat, never leave the Shadow's wings uncovered. The sun's heat can warp the carbon fiber wings. Protecting the wings with solar shields also minimizes fuel loss through the fuel tip relief valve.

Fuel loss is caused by fuel expansion as it gets hot. The lost fuel is supposed to get caught in the overflow container on the wing tip relief valve. But if the valve fails, the fuel pouches rupture inside the wings. The fuel system is dependent on ZERO air ingestion at the engine, and a vacuum leak will cause air ingestion 99.99 percent of the time.



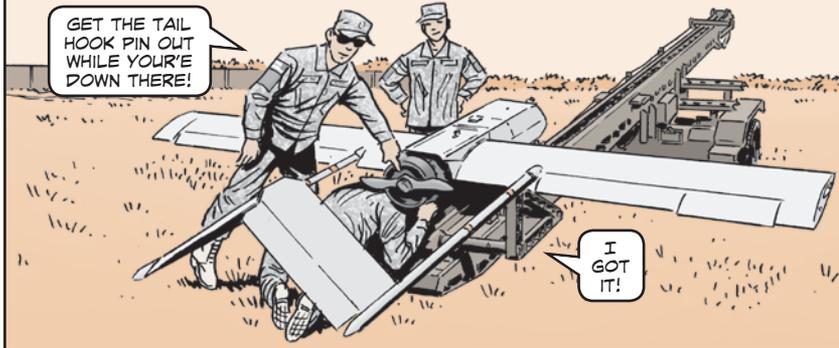
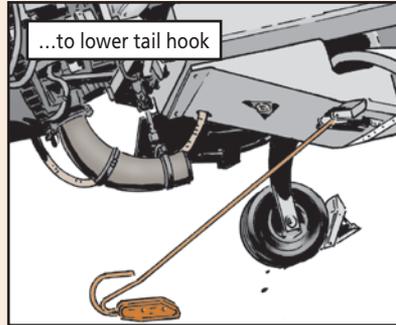
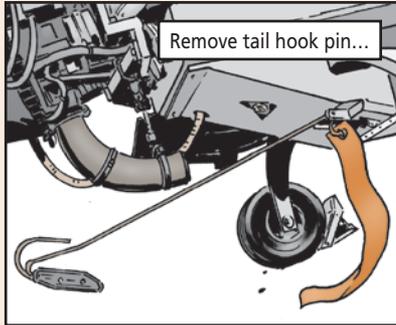
NEVER LET ME SIT IN DIRECT SUNLIGHT WITHOUT SOLAR SHIELDS!



PS MORE

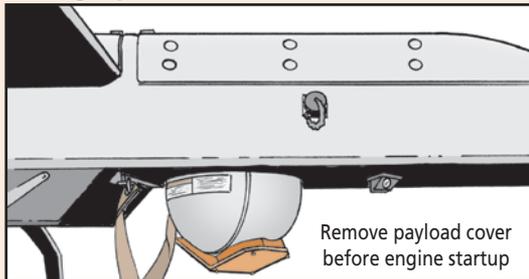
Launching the Shadow

Before launching the Shadow from the launcher, make it a habit to remove the tail hook pin before starting up the engine. Removing the pin lowers the tail hook so the Shadow can stop on the runway when landing. Forget the pin and the tail hook won't catch the primary pendant during landing. The Shadow will overrun the runway and hit the net to stop.



Powering Up the Shadow

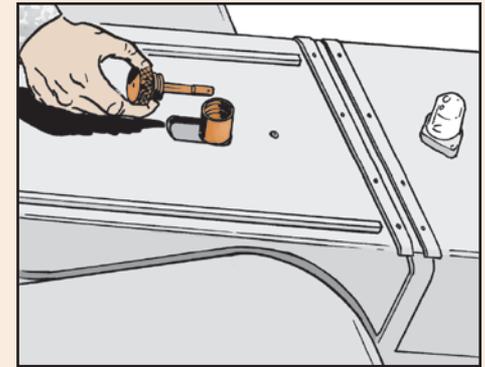
Before starting up the Shadow, remember to remove the payload cover. When power is turned on, the infrared/optical sensor payload moves and rotates. If the cover is still attached, it will hit and damage the underside of the fuselage.



Check the Oil

The Shadow uses a lot of oil during flight. You must add oil before it flies again. Without enough oil, the Shadow may not make it back.

CHECK THE OIL BEFORE EVERY FLIGHT!



Maintenance Upkeep

No matter what you do to the Shadow, **all** maintenance must be recorded in the logbook so other maintenance personnel will know what has been done in the past. For example, you must record what components were replaced and what failures occurred during flight. Also, if inaccurate flight hours are recorded, scheduled maintenance won't take place on time.



TO KEEP YOUR SHADOW IN THE AIR AND NOT GROUNDED, CHECK OUT THE GOOD WORD IN TM 1-1550-689-10-1 AND 10-2, OPERATOR'S MANUAL FOR SHADOW 200 TACTICAL UNMANNED AIRCRAFT SYSTEM (TUAS) (NSN 1550-01-534-3238).



KEEP PARTS TOGETHER



Almost every day, parts and supplies come into the unit tech supply office or the supply support activity (SSA).

Sometimes, parts come in separate packages or boxes as a set. That's when you should pay close attention to the shipping labels so you don't separate parts that belong together.

If you don't really eyeball matched sets or two-part components, the end result is a mismatch of parts and components. Then, when a unit puts in a request for a part, you could end up giving them the wrong parts because the set was separated or stored in different parts drawers.

The next time you think you have an extra component or part, think twice. It could be a part of a matched set.



Subject	Issue/Pg	Subject	Issue/Pg
AIR CONDITIONERS		AIRCRAFT, OH-58D, KIOWA	
FDECU--Refrigerant contamination	721 22	Blades, keep them stored inside	717 22
AIRCRAFT ARMAMENT SUBSYSTEMS		IFF antenna, avoid hitting	717 23
M230--Firing pin limit changed	710 60	M3P machine gun can damage chin bubble	719 25
M230--Recoil, keep water out	712 15	Tail rotor gearbox lubing	720 35
AIRCRAFT, GENERAL		AIRCRAFT, UAV	
Airfield marking, Compass Rose	716 26	Shadow--External power, test gage...	716 43
AMCOM Corrosion Control Program Office	712 16	Shadow--Oil use, preflight, weather, launcher	721 42
AN/APR-39--Torque wrench for tightening	721 35	AIRCRAFT, UH-60, BLACK HAWK	
Blade tie-down, mooring info	711 22	Blade pin removal cautions	720 36
Cleaning, what not to use	712 12	Blade pin removal, installation	711 24
Condition code tags, all info needed	718 24	Center console, watch your feet	716 24
Condition code tags, use correctly	718 25	Cover, beware of pitot tubes	710 21
Corrosion preventive compound for plugs	712 12	Drive shaft shimming check	710 24
Corrosion treatment change	711 21	Helmet hanging location	713 25
Doors, always secure before flight	716 23	HH-60--Light bulb, dome light NSNs	719 26
Hardware, keep it tight and secure	713 24	Rotor blade pin removal tool	713 23
Maintenance forms, records	716 25	Seat tracks, clean out sand & dust	717 25
Packing and shipping components	712 06	Tail rotor gearbox hardware	721 39
Painting and marking TM revision	712 19	Tire cage use, safety	715 24
Parts turn-in, prevent damage	715 26	ALARM, CHEMICAL	
PWC paint not authorized	718 26	M4 JCAD--Intro, batteries, sieve pack...	714 46
Step, walkway, handhold safety	710 26	AMMUNITION	
Tie-down chain corrosion	712 14	Munitions affected by RF radiation	714 39
Towing how-to	714 22	UTM ammo OK for training	718 37
AIRCRAFT GROUND SUPPORT EQUIPMENT		ARMORED COMBAT EARTHMOVER, M9	
AGPU can activate aircraft components	718 22	Fuel shutoff valve harness, bracket	718 20
FARP helmets, parts	721 37	ARMORED SECURITY VEHICLE, M1117	
Fuel tank kit NSNs	718 23	Cold weather PM	719 10
PSGC holster kit components	710 23	Entering vehicle, don't jump on seat	714 15
SATS tug full-length crew protection system	719 23	Service kit NSN, annual	718 61
AIRCRAFT LIFE SUPPORT EQUIPMENT		AVLB, M60/M48	
Food saver sealing iron and bags	714 26	Exhaust pipe rust	712 27
FREE--Only for deploying Soldiers	715 23	MLC reclassified to 85	719 08
AIRCRAFT, AH-64 APACHE		AWARDS	
EFAB not a good place for helmet	716 22	2011 Sec Def Maintenance Award winner	710 60
Pushing aircraft, positioning critical	719 24	2012 Sec Def Maintenance Award winner	720 60
Rocket launcher installation	721 36	2012 AAME nomination packets due soon	716 60
T355 panel, careful on removal	717 26	2012 CLEA "Best of the Best"	718 61
Tail rotor gear box, check for nests	711 25	2012 CLEA winners	718 57
Tire cage use, safety	715 24	BACK COVER	
Towing preparation	711 26	Dirty fuel causes...	715 62
AIRCRAFT, CH-47, CHINOOK		Don't Chill When You Drill (COLD)	720 62
Aircraft cover protection kit NSNs	712 18	Filter PM Keeps Equipment in the Battle	719 62
Analyzer card kit protection	720 38	Good PM Needs Your Best Efforts!	721 62
Fire sensing line chafing	713 22	MRAP driving mistakes	718 62
Tire cage use, safety	715 24	One-Stop Driver's Training	711 62
AIRCRAFT, CH-47D/F, CHINOOK		PS Live (Facebook, Twitter, blog)	710 62
B-1 maintenance stand cautions	720 37	Save Your Track...Avoid Sharp Turns	713 62
Drive shaft covers, tie down in high winds	711 23	See It Our Way (eye safety)	716 62
Engine stand, secure with both struts	717 24	Share Your Maintenance Knowledge	714 62
No. 1 sync shaft homemade tool	714 24	When Questions Come, Call Your LAR	717 62

Subject	Issue/Pg	Subject	Issue/Pg
BATTERY, HAWKER		M9 Paper--Safe to use?	720 48
Customer support phone number, website	711 15	M41 PATS--Calibrate every 18 months	716 41
BATTERY, LEAD-ACID		M41 PATS--Reagent grade alcohol only	710 40
Battery pubs updated	713 60	CHEMICAL AGENT MONITOR, IMPROVED (ICAM)	
Cold weather PM	720 52	BA-5800 battery terminal, replacement	713 43
BATTERY, LITHIUM		CLOTHING	
Cold weather PM	720 52	Boots POC	711 61
BATTERY, NICKEL-CADMIUM		Mechanic's coveralls, universal camoflage	721 21
Cold weather PM	720 52	COMMERCIAL CONSTRUCTION EQUIPMENT	
BATTERY, NON-RECHARGEABLE		Caterpillar diagnostic website	715 61
Hoarding, POWER app, heat, packaging...	716 52	Exhaust pipe direction affects turbocharger	710 20
BATTERY, RECHARGEABLE		COMMUNICATIONS EQUIPMENT	
Hoarding, POWER app, heat, packaging...	716 52	AN/TPX-57--Battery for use	711 52
BATTLE DAMAGE AND REPAIR (BDAR)		Common item NSN list	712 58
New kit replaces crew & maintainer kits	714 06	COMPUTERS & SOFTWARE	
BINOCULARS		Cleaning, 10 tips	711 48
M25--Depot turn-in, not DLA disp. svcs.	716 61	Cleaning kit	715 49
CABLES, COMMUNICATION		Heat protection	714 52
Corrosion prevention, cleaning	712 60	Keyboard cleaning tips	717 46
CX-13303--NSNs for different lengths	718 49	Laser printer cleaning	718 46
CAMOUFLAGE		Vacuum cleaner	714 60
LCSS--Replacement parts, repair kits	716 51	CONTAINER HANDLER, RT (RTCH)	
ULCANS--Accountability, NSNs	711 53	Crane, don't use as one	715 22
ULCANS--Keeps equipment cooler	713 45	CONTAINERS	
CARBINE, M4-SERIES		Corrosion prevention	712 02
ACOG repair parts	711 36	LLRC--Preservation, desiccant, inspect	712 03
Bolt carrier checkup	716 36	CONTINUITY	
M4/M5 adapter rails not reportable	718 39	2012: A Logistics Odyssey (Cloe, Part 2)	719 27
M12 rack modification	719 35	AMC: Strength Behind the Might	717 27
M203 must be attached at turn-in	713 39	Cutting Corrosion	712 28
Magazine improved, anti-tilt follower	716 35	Error of Eros	711 27
Magazine improved, new NSN	713 41	Like It's 1999 (Cloe, Part 1)	718 27
Storage with CCO/ACOG attached	716 39	Out-Classed Again?	713 27
Unauthorized mods not allowed	716 38	PM Chuckie Brown Special	721 27
Zero target NSN	716 40	P.M. Stein Monster	716 27
CARRIER, AMMO, M992A2		Proper Sight-Weapon Mix	715 27
APU door hinge lube	711 09	River of Doubt	714 27
Driver's bulkhead to slave receptacle harness	711 60	Stranded in the Frozen Tundra	720 27
Exhaust pipe packing	715 08	COOLING SYSTEM	
Personnel ventilator grille cleaning	720 06	Antifreeze test kit	712 26
Towing, remove rear door locking latches	718 06	Testing, antifreeze mix, radiator cap...	716 10
CARRIER, COMMAND POST, M1068-SERIES		CORROSION	
SICPS--RF cable for LAN ground box	714 61	AMCOM Corrosion Control Program Office	712 16
CARRIER, PERSONNEL, M113 FOV		Cadmium dust hazard	712 37
Compartment cover gasket NSN	710 03	Corrosion letter from Wimpy Pybus	712 01
Driver's/radio operator's seat spring pin	711 60	Cutting Corrosion (types, inhibitor...)	712 28
M113A2--Pivot steer brake assy, no lube	711 03	Rebar protection in concrete	712 52
M113A3--Two types of engine assemblies	721 58	Repair parts, keep packaged for protection	712 10
M113A3, M58--Ramp hydraulic hose NSN	713 60	Steel structure overcoating	712 53
Ramp rope cleaning, lubing	718 08	Utility pipe corrosion	712 54
CBRN EQUIPMENT		CRANES	
BIDS--Wire/cable check, cleaning	711 43	22-ton--Air filter cleaning	711 17
CBPS Shelter--Overpack box needed	720 60	22-ton--Filter element for fuel/water separator	720 18
CBRN-IRC hotline	714 47		

Subject	Issue/Pg	Subject	Issue/Pg
LR1-110--Wire rope replacement NSN	716 61	Door seal NSN	721 60
DECON		FOX CBRN VEHICLE	
M12A1--Fuel additive properties, use	710 43	Rear door opening/closing tips	715 44
M26--Start button, pipe tape, hand crank	713 44	GENERATOR, SMOKE, M157	
DEUCE		Turn in and replace with M56/M58	720 60
Roadwheel rubber criteria	716 20	GENERATORS, GENERAL	
Swing shaft arm lubing	716 19	TQG--Fuel drain bung installation	713 50
EDITORIAL		GENERATORS, LARGE	
Act on Those Bright Ideas	721 01	60-kW--Turn in for credit	713 49
Back to Normal	717 01	100-kW--Hydraulic pump under warranty	715 46
Comprehensive Soldier Fitness	710 01	GENERATORS, SMALL	
Confident Corrosion Control	712 01	5-, 10-, 15-kW TQG--K1 contactor faulty	720 60
Getting the Magazine Out	718 01	GRADERS	
If In Doubt, Give PS a Shout	719 01	130G--Air brake tank draining	718 19
Joe Kubert: In Memorium	720 01	130G--Centershift pin rust	712 43
Maintenance Training Matters	714 01	130G--Transmission O-ring NSN	714 61
Making of Maintenance Experts	716 01	GRENADE LAUNCHER, M203	
Master Key to Proper PMCS	715 01	Breech insert loctite NSN	720 42
Operator TMs...Keep a Hard Copy	713 01	GUN, MACHINE	
PS Education Required	711 01	Barrel ID with dog tags, stamping set	712 47
ELECTRICAL, GENERAL		CROWS--Elevation locks, SSA secure...	714 35
Electronics equipment ruined by water	712 57	M2--BFA parts manual	713 39
Vacuum cleaner for electronics	714 60	M2--Gages turned in with weapon	717 40
ELECTROSTATIC DISCHARGE (ESD)		M2--Headspace/timing cards, barrel threads...	711 38
Causes, workstations, pouches, grounding...	719 48	M2--M3 recoil amplifier instructions	721 49
EXCAVATOR, HYEX		M2, M2A1--Barrel switching	715 35
Boom & arm hydraulic hose kit	717 60	M2, M2A1--Bolt latch differences	720 41
EXPLOSIVE ORDNANCE DISPOSAL (EOD)		M2A1--Ammo loading procedures	715 36
ATTP 4-32 available online	717 51	M2A1--Barrel installation	720 43
FIRE CONTROL INSTRUMENTS		M2A1--Breech lock NSN	720 42
Tritium devices should be turned in	721 55	M2A1--Gage rust cleaning, replacement	717 42
FIRE EXTINGUISHERS		M48--Barrel extension burrs	720 41
AFES video available	715 61	M240B--MK93 mounting	710 36
Anti-recoil plug and lock pin	713 05	M240B/L--Buffer defects	715 38
FIRE SUPPORT VEHICLES		M240-Series--Adjustable bipod parts	721 50
M1200, M707--Software updates on AKO	719 07	M240-Series--M21 & M24 BFA	714 40
FLAGS		M249--ACOG repair parts	711 36
Flag, guidon, streamer ordering	715 51	M249--Bipod part NSNs & PNs	714 42
FORKLIFTS		M249--Firing pins may be bad	719 40
6K VRRT--Alternator NSN	717 61	M249--Gage NSN change	721 54
6K VRRT--Fuel shutoff solenoid NSN	713 60	M249--Lightweight collapsible buttstock	721 54
6K VRRT--Service kit	721 60	M249--Lower takedown pin NSN	711 35
ATLAS, II--Service kits	721 60	M249--MK93 mounting	710 36
ATLAS II--Rear seal installation tool	715 61	M249--Short barrel not for gunner's shield	717 40
MHE 237--Fuel gauge NSN	714 61	MK 19--MWO changes NSN	713 38
FORMS, GENERAL		Mounts, don't make your own	717 39
Aircraft maintenance forms, records	716 25	HARDWARE	
DA Form 2028--Status check	715 60	Benchstock, DLA website for fasteners	716 50
DA Form 2404--Handwritten or typed?	713 57	Cadmium dust hazard	712 37
DA Form 2408-4--Electronic form required	716 08	Deicing fluid NSN	711 61
DA Form 2408-4--Hard copies needed	710 38	HAZARDOUS MATERIALS & WASTE (HAZMAT)	
SF 368 PQDR, how and why to use	715 54	Drip pans, interlocking	714 14
FORWARD REPAIR SYSTEM, M7		HEADSETS, COMMO	
Compressor control box terminal board	717 61	Peltor headsets no longer restricted	715 50

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HEATER, PERSONNEL		IMPROVED TOW VEHICLE, M901	
FDECU--Refrigerant contamination	721 22	Driver's hatch yoke support assembly	713 61
HEATER, SPACE		INTERNET	
LCFH, Type II--Fault code H562	721 20	Acronym websites	714 60
Tent heater list	721 59	CALL website makeover, URL	713 56
HELMETS, AVIATION		CECOM LRC PIE equipment search	715 60
FARP--Parts	721 37	PM J-AIT website change	715 61
HGU-56/P--AIHS chin strap assembly	711 60	JSLIST	
HGU-56/P--Decals, no unauthorized ones	713 26	Free issue for training	720 48
HGU-56/P--Earcup can't be changed	719 22	KITCHEN EQUIPMENT	
IHADSS--CEP kit NSN	716 26	Containerized Kitchen--Shrouds for A/C fins	711 46
IHADSS--Communications earplug kit	713 61	FSC--Grease separator, hoses	714 48
IHADSS--NVG smoke and clear visors	719 61	FSC--Heat shields, sink temperature	714 50
IHADSS--Visor info	713 61	MIRCS--Exercise to prevent damage	716 48
Zeta II liner NSNs	710 22	MTRCS--Exercise to prevent damage	716 48
HELMETS, GROUND		LAUNDRY ADVANCED SYSTEM (LADS)	
ACH--Chin strap parts listing	711 45	Exercise to prevent damage	716 48
ACH--Pads better than liners	721 18	LIGHTING	
ACH--TM number correction (713-58)	715 60	Chemlight disposal	716 26
MICH--Four-point headstrap parts	713 58	LOADER, SCOOP-TYPE	
HIGH MOBILITY ENGINEER EXCAVATOR (HMEE)		966H--Cold weather PM	720 16
HMEE III--POC for parts	721 61	MW24C--Air compressor NSN	718 61
HOWITZER, SP, M109A6 PALADIN		MW24C--Engine panels, door latch...	711 18
Bore evacuator cleaning	711 06	MW24C--Hydraulic hose rub fix	711 20
Breech cam screws, stake 'em	710 07	MW24C--Windshield NSN	721 61
Breech spindle/obturator, remove to clean	711 07	LOGISTICS MANAGEMENT	
Traverse and elevation selector valves	713 60	ARSNT to track items by serial number	721 44
HOWITZER, SP, M109-SERIES		Equipment usage reporting	717 58
Air cleaner locking handle settings	710 06	GCSS-Army--Data conversion process	718 52
Exhaust pipe packing	715 08	GCSS-Army--New forum on SustainNet	721 45
HOWITZER, TOWED, M119A2		GCSS-Army--PBUSE catalog fix	717 56
Brake hose rust inspection, replacement	712 40	LRC Policy & Information Encyclopedia	710 59
Breech block serial number location	715 42	Nonreportable equipment in SAMS-E	713 52
COEI stays with howitzer	720 46	OPLOG Planner on AKO	717 57
Jack stand placement	715 09	PBUSE AIT course	710 54
M140A1 alignment device serial number	720 44	PBUSE Eagle Gazette newsletter	710 59
Overrun brake lubing	718 05	PBUSE improvements and training	710 52
Saddle bearing surface cleaning, lubing	712 41	PD TIS customer service	720 55
HOWITZER, TOWED, M198		PM DCGS-A, new names for systems	719 57
Breech spindle/obturator, remove to clean	711 07	SAMS-E upgrade info	713 54
HOWITZER, TOWED, M777A2		MAINTENANCE MANAGEMENT	
Breech spindle/obturator, remove to clean	711 07	Enhanced EPIC policy search tool	719 58
Breech, swab before loading next round	719 08	Left-behind equip converting to UME	718 54
Elevation gear box lead screw lube	713 08	Low-usage vehicles service intervals	714 13
Equilibrator pressure temperature changes	721 07	Maintenance meeting how-to	711 56
Gun tube finish	720 07	PDREP for CECOM PQDRs	721 48
Hydraulic fluid, OHT or OHA?	716 05	MASK, PROTECTIVE	
Muzzle brake looseness	721 04	Canteens only for water hydration	710 41
Service kit NSN, quarterly	718 61	M40A1--Drink adapter for hydration system	721 59
Stabilizer arms, prevent flapping	713 06	M40-, M42-Series--Canisters authorized	714 45
Towing bracket gets twisted	721 06	M40-, M42-Series--Facepiece MWO	713 42
Traverse bearing collar setscrews	717 05	M40-, M42-Series--Nosecup clarification	711 44
W16/W3 cable cap fix	710 08	M40-, M42-Series--Nosecup parts reversed	719 43
		M45--Lateral movement test failure	720 47

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M50/M51--Training information/video	710 42	Hydration system parts	717 44
MINE CLEARING EQUIPMENT		PISTOLS	
AN/PLQ-9 THOR III--Antenna cable jam	719 55	M9--Hammer release levers defective	720 40
Buffalo--Differential breather valves	715 20	POL	
Buffalo--Drain plugs, open to drain water	715 18	TM 4-43.3 supersedes FM 10-67-2	717 60
Buffalo--Fuel tank, battery drain, ladder...	717 16	POSITION AZIMUTH DETERMINING SYSTEM (PADS)	
Husky--Module bolt, air dryer, access cover	718 16	M67 GLPS--Battery charging	713 40
Husky--Transmission filter access door	717 19	POWER PLANTS	
SPARK II--Debris shield NSN	721 60	PP-2953, PP-6224--Same but different	711 50
MINE EQUIPMENT		POWER UNITS	
XM7 Spider--Batteries for components	714 41	Central power solution equipment NSNs	716 56
XM7 Spider--Resetting MCU	721 56	PS MAGAZINE	
MISSILE, AVENGER		2000-2011 consolidated, linked index	713 61
M3P, turret safety, W103 cable	718 44	Article submission info	715 56
MISSILE, HELLFIRE		Army Publishing Directorate website	721 43
Connectors, no-step zone, covers, latches	713 35	Full issues online, where to find	717 61
MISSILE, HIMARS		Getting the Magazine Out	718 01
Batteries, jury strut release, ICP, GDU...	717 34	If In Doubt, Give PS a Shout	719 01
Hydraulic fluid reservoir, drain daily	718 40	Joe Kubert: In Memorium	720 01
Hydraulic relief valve drain cock fix	718 40	Logistic newsletters, bulletin, sign up PS	719 56
W529 cable connector cover	715 41	PS Education Required	711 01
MISSILE, PATRIOT		PS Live (Facebook, Twitter, blog)	710 62
AN/MPQ-53 Radar--Buckle up for travel	710 35	PS Live (Facebook, Twitter, blog, email)	717 43
ECS air conditioning PM	719 41	Soldier service program how-to	716 55
M860A1 Trailer--Torque rod checks	721 40	Subscription rebuilding info	717 59
Tire pressure	717 36	PUBLICATIONS	
MLRS		AR 385-10 revision available	710 61
Fire suppression system sensor check	715 06	ATTP 4-32 available online	717 51
Tarp protects LRUs from rain	716 09	Authorized sources only for pubs	721 46
MORTARS		Battery pubs updated	713 60
M95/M96--Turn in excess LRUs	711 41	Cold weather pubs	720 51
M121--Remove before washing vehicle	711 42	DA Pam 220-1 released	713 56
M224A1--Bipod slippage check	719 38	DLA handbook	714 60
M224A1--M225A1 cannon round limit	711 40	EOPDB, tailored pub index listing	711 54
M224A1--MWO upgrades M224	721 56	ETMs & IETMs, how to find online	717 52
MOUNT, WEAPONS		FM 7-0 divided into 2 publications	713 56
CROWS--Elevation locks, SSA secure...	714 35	MEL TB for wheeled vehicles updated	710 61
Homemade mounts not allowed	717 39	Operator TMs...Keep a Hard Copy	713 01
M66--Vehicles mount can be used on	718 38	PBO operations handbook	718 56
NIGHT VISION EQUIPMENT		Sustainment Force Structure book updated	717 60
AN/PVS-14--COTS goggles not allowed	710 44	TM 43-0209 now obsolete	711 15
AN/PVS-14--Single battery compartment	719 61	TM 4-43.3 supersedes FM 10-67-2	717 60
Batteries, lens caps, lens interference filter	721 26	TM 55-1500-345-23 under revision	712 19
PACKAGING		PUMPS	
ASSIST website for packaging help	714 57	350 GPM--Starter NSN	721 60
Packaging courses available	713 59	RADARS	
Packaging requirements, where to find	720 56	Firefinder--AN/TPQ-36(V10) & -37(V9) tips	718 42
Pinewood nematode protection	710 46	Firefinder, Sentinel--Voltage switch, resistor	717 37
PSCC packaging guide	714 60	Sentinel--Grounding instructions	720 39
PAINTING		Sentinel--Rubbing alcohol not for cleaning	719 42
TB 43-0209 now obsolete	711 15	RADIO FREQUENCY ID	
TM 55-1500-345-23 under revision	712 19	PM J-AIT website change	715 61
PERSONAL EQUIPMENT		RF-ITV global help desk	717 51
Combat eyewear replacement parts	715 53		

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RADIO SET, GENERAL		M500--Extractor reversal correction (711-37)	716 40
Power surge, switch off after shutdown	710 45	SIGHTS & SCOPES	
RADIO SET, SINCGRS		ACOG--Flip cover NSNs	710 35
AN/GRM-122--ESD kills circuit cards	718 50	AN/PAS-13--Replaces PVS-4 & TVS-5	716 42
CX-13303--NSNs for different lengths	718 49	AN/PSQ-23 STORM--Turn-in info	714 44
RIFLE, M16-SERIES		Proper Sight-Weapon Mix	715 27
ACOG repair parts	711 36	SMALL ARMS	
Bolt carrier checkup	716 36	Cleaning tanks, how to use	712 48
M4/M5 adapter rails not reportable	718 39	Digital tracking for small arms	714 43
M12 rack modification	719 35	Gage PM	715 40
M16A2/A4--Barrel, sight, bolt differences	720 41	Humidity, how to prevent corrosion	712 50
M203 must be attached at turn-in	713 39	Mannequin target quantity changed	710 61
Magazine improved, anti-tilt follower	716 35	Mannequin target quantity changed	719 38
Magazine improved, new NSN	713 41	Proper Sight-Weapon Mix	715 27
Storage with CCO/ACOG attached	716 39	Racks from Secureit and Marvel	719 36
Unauthorized mods not allowed	716 38	Shipping how-to	712 46
Zero target NSN	716 40	Small Arms Integration Book download	710 37
ROBOTS, GROUND		SMALL EMPLACEMENT EXCAVATOR (SEE)	
Irobot 510--Track, battery tray, controller	713 19	Ball joint lubing	718 19
M160--Bulkhead coupler, air filter...	714 18	Electrical system chart	714 61
M160--Operating distance, obstacles...	716 16	SMALL UNIT SUPPORT VEHICLE (SUSV)	
M160--Track adjustment	716 18	Battery NSN	717 61
M160--Warm-up and cool-down	717 20	Coolant bleeding procedure	720 23
SUGV--Micro-display lens care	715 21	Fuel line leaks	720 26
Talon IV--Track, sprocket, arm chain...	710 16	Fuel, oil check, cleaning, arctic cover...	720 20
ROCKET LAUNCHER		Side slope driving caution	720 19
M202--Turn in as is	720 60	Water drain, starter, idle speed	720 24
SAFETY		Wipers, sprocket wear, track, fluid leaks...	720 27
AR 385-10 safety revision available	710 61	SMART SUGGESTION PROGRAM	
Cadmium dust hazard	712 37	Act on Those Bright Ideas	721 01
Driver safety tips	716 14	New website URL	713 56
Fuel can storage hazard	713 13	Submissions, winners, tips & guidelines	719 18
GRAT safety tool updated	716 61	STEAM CLEANER	
Range & Weapons Safety Toolbox	716 61	GFCI protection required	718 36
ReportIt accident reporting tool	714 58	SUPPLY, GENERAL	
Safety Center DL classes	714 61	Automatic disposal list (ADL)	711 59
Safety Center lite website	719 56	CECOM website for supply cancellations	710 61
Safety glasses, Class IX	714 14	CECOM website for supply cancellations	715 60
See It Our Way (eye safety)	716 62	Chaplain supplies ordering info	715 52
SCRAPER, EARTHMOVER, 621B		DoD EMALL information	710 56
Guide roller lubing	714 16	SF 368 PQDR, how and why to use	715 54
Hydraulic reservoir oil level check	711 16	Shelf life and service life of products	710 50
SENTINEL RADAR SYSTEM		Shelf life extension for Type II items	714 54
Isopropyl alcohol for cleaning	712 59	SURVEILLANCE SYSTEMS	
SHELTERS		AN/TAS-8 LRAS3--Laser rangefinder	717 45
CBPS--Overpack box needed for reshipment	720 60	TANK, M1-SERIES	
MILVAN--Container system, tie-down kit...	720 49	Air intake cleaner, don't block	718 03
S842, S842A--ECU cover PM	717 50	Ammo compartment desiccant	712 20
SHOP EQUIPMENT		Anti-recoil plug and lock pin	713 05
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M1022A1 Dolly Set--Hydraulic cylinders	712 44	Engine exhaust duct lifting eye	716 02
SHOTGUN		Engine memory unit circuit breaker	710 04
M500--Extractor TM picture reversed	711 37	Fuel nozzle studs correction (703-02-03)	719 61
M500--Extractor reversal correction (711-37)	715 61	Fuel pump sealing compound NSN	716 61

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Ice cleats for track	711 04	M871A3--Electrical converter box	719 61
M1A1--Panel light knob, don't dim	711 04	M900-Series--APU engine replacement	711 61
M1A2 SEP--BFT connector, move it	713 03	M1000--Brake/air pressure relay valves	710 14
M1A2 SEP--FBCB2 CPU mount	720 05	TRAINING	
M48A1 filter container safety	717 09	COMET provides training	710 54
M240--Feed tray cover stop doesn't work	713 04	Commercial driver's license training	718 14
Race ring lubrication	720 02	Driver's training toolbox	711 10
Recoil fluid residue collector sponge	718 02	Maintenance Training Matters	714 01
Shock absorber sight glass cleaning	719 06	One-Stop Driver's Training	711 62
Transmission filler neck needs funnel	710 05	Packaging courses available	713 59
TENTS		Safety Center DL classes	714 61
DRASH--ECU baffle, startup, POCs	716 45	UTAP email address change	710 60
DRASH--UST trailer PM tips	713 46	UTAP email address correction (710-60)	720 61
TEST EQUIPMENT		UTAP website, instructions	716 58
MSD replaces STE-ICE/R	717 60	WTSP training material	719 20
STE-M1/FVS a repairable item	717 61	TRUCK, 1 1/4-TON, HMMWV	
TIRES		Auxiliary fuel tank identification	715 13
BF Goodrich/Uniroyal tire recall	721 12	ECV--Wrench NSN correction	715 15
Shiny tires a problem	713 12	Electrical switches, turn off at shutdown	716 13
TOOLS		Electric power manager NSN	713 60
Jack stand capacity, stencil limits	717 13	Fitted cover update (707-10)	721 09
MCAT mobile tool cart	719 45	Geared hub fill plug washer	721 58
SATS video available	719 46	Legacy group email change	719 61
SECM drawer inserts	719 47	LRAS3 mounting	721 47
TRACTOR, D5B		M998--Oil pan hardware torque	721 17
Winch case cover O-ring NSN	714 61	M1114, M1151A1--OGPK glass NSNs	715 60
TRACTOR, D7E/F/G		M1165A1--Windshield options (707-61)	721 61
Governor control lever linkage lubing	712 42	M1151, M1152, M1165, M1167--Alternator	720 60
Hose assembly NSN	718 15	S3 control box replaces EESS	710 12
Sprocket bearing lubing	712 55	Seatbelt assembly, improved	718 11
Sprocket bearing lubing	718 15	Service kit NSN, annual	718 61
Track shoe nut installation	714 16	Tire pressure correction (698-10-11)	713 14
TRACTOR, D8K		Transmission, replace by attrition	710 10
Track shoe nut installation	714 16	Up-armored--AFES safety wire	718 10
TRAILERS		Up-armored--Brake caliper adapters	713 61
Lunette-style--Cable connector corrosion	712 56	Up-armored--VEE/IVEE washer nozzle	714 14
Lunette-style--Safety chain hooks	721 10	Up-armored--Windshield washer nozzle/bracket	721 61
M101A1/A2/A3-Series--Brake line NSN	715 45	TRUCK, 5-TON, M939-SERIES	
M103-, M116-Series--Tire NSN	715 43	M939/A1/A2-Series--Pre-heater kit	711 60
M105A3--Landing leg replacement	715 45	TRUCK, FMTV	
M149A2--Manhole, faucet, drain plug	717 10	Air tanks, drain after operation	710 13
M149-Series, M1112--Cold weather PM	719 16	Battery caps, tighten regularly	711 13
M989 HEMAT--Swap out for M989A1	710 60	Bungee cord for covers	720 61
M1112--Axle spindle nut NSN	715 61	Cab support mounts	714 12
M1112--Axle spindle nut NSN	718 61	Door seal NSN	721 13
M1112--Brake line NSN	721 61	Engine overheating prevention	714 10
TRAILERS, SEMI		Gladhand, don't plug	719 14
Decking preservative, linseed oil	715 43	LMTV--Transmission oil dipstick tube	721 59
M870A1--Wood decking kit	711 61	LSAC cab windows	711 60
M870A3--Hydraulic hose correction (691-16)	710 60	Safety chain hooks for lunette-style trailers	721 10
M870A3--Hydraulic hose kit	711 60	Troop limit decal NSN	715 60
M870A3--Pneumatic wheel assembly	711 60	Vehicle data computer (VDC) NSN	710 60
M870A3--Retrofit for M983A2/A4 HEMTT	720 61	TRUCK, HEMTT	
M871R/A1R--MEL lowered to 10%	717 60	A2/A4 Models--Tire and wheel assy	714 60
M871A3--Clearance light NSN	721 60	A4 Models--Coolant sight glass NSN	711 61

Subject	Issue/Pg	Subject	Issue/Pg
A4 Models--MAC updated	713 10	VEHICLE, MRAP	
A4 Models--Service kit NSNs	711 61	After-startup checks	714 02
A4 Models--Spare tire strap	721 14	Driving mistakes	718 62
HEWATT--Hydraulic drive pump plug	720 22	Fording checklist	713 16
M978A4--Clamp, new and improved	713 11	Glow-in-the-dark tape	715 17
M1142 TFFT, M1158 HEWATT--Pipe purging	719 14	M-ATV--Backup alarm shutoff	715 15
REBS under-ride bar kit	716 21	M-ATV--Floor mat NSNs, safety	713 18
TRUCK, M1070 HET		M-ATV--Steering wheel shaft corrosion	715 16
Battery disconnect switch	718 10	MaxxPro--Hull ribs, keep feet off	711 14
TRUCK, M915-SERIES		MaxxPro--Radiator surge tank cap	713 60
Battery box liner for leaks	712 23	MaxxPro--Severe weather operation	720 14
M915A2, M916A1--Tachometer sensors	714 61	MaxxPro Dash--Tire chain NSN	720 22
M915A3--HEMTT shocks for armor	718 12	MEL guidance	721 13
M915A4--Fuse identification & placement	715 14	Model numbers, NSNs	721 14
M915A4--Max rpm correction	713 61	Power line danger	710 15
M917A1/A2--Tailgate/MCS air tank draining	718 13	Training at Wheeled Vehicle Mechanic Crs	718 61
TRUCK, PALLETIZED LOADING (PLS)		Training at RRAD	710 61
Hot weather PM tips	717 14	Universal combat lock tool	721 16
REBS under-ride bar kit	716 21	VEHICLE, RECOVERY, M88-SERIES	
Service kit NSN	721 13	A1--Ground hop components	716 06
TRUCKS, GENERAL		A1--Steering linkage bell crank assembly	712 21
Antifreeze test kit	712 26	Roadwheel (spare) corrosion prevention	712 22
Chock block NSNs	717 12	Synthetic gear oil NSN	714 60
Cold weather PMCS	720 08	Winch, don't bypass during recovery	714 05
Coolant system testing, antifreeze mix...	716 10	VEHICLE, STRYKER	
Doors, don't hang on them	716 14	Air intake, keep water away	716 04
Drip pans, interlocking	714 14	Brake drum jack bolt stripping problem	710 03
Driver safety tips	716 14	Exhaust blanket fires	721 02
Driver's training toolbox	711 10	Hub oil level, color	715 02
Elastic cord for cover tie-downs	711 15	M1129A1 MCV--Mortar firing pin bad	720 45
Fuel can storage hazard	713 13	M1129A1 MCV--Mortar replenisher check	713 02
JCIMS update (CIP, TIP, Phoenix)	714 07	M1131--Software updates on AKO	719 07
Low-usage vehicles service intervals	714 13	M1135 NBCRV--BAWS, opening manually	719 43
MEL TB for wheeled vehicles updated	710 61	M1135 NBCRV--Climbing, chock blocks	718 35
Operate stored vehicles every 2 weeks	710 13	Ramp air pressure, pintle plug, chain...	719 02
Passenger limits in TB 9-639	721 08	Ramp door tension	718 04
Service kit NSNs	719 12	Tire and wheel assembly NSN	711 61
Shiny tires a problem	713 12	Transfer gear lock exercise, how to	711 02
Slave starting basics	720 11	VEHICLES, COMBAT	
Vehicle tie-down precautions	715 10	Air filter PM	717 06
VEHICLE, FIGHTING, M2/M3 BRADLEY		Bridges made from plastic lumber	712 24
Battery box shorting	721 03	Chock block NSNs	717 12
Cdr's hatch latch lubing	712 35	Dirty fuel causes...	715 62
Cdr's RBD hit by M242's feeder handle	711 08	JCIMS update (CIP, TIP, Phoenix)	714 07
Driver's hatch latch lever damage	718 07	Low-usage vehicles service intervals	714 13
Driver's hatch periscope thumbscrew rust	712 36	Save Your Track...Avoid Sharp Turns	713 62
Hand brake release instructions	710 02	Smoke grenade launcher turn-in	715 39
Hydraulic reservoir fluid checks	715 04	Track tips for the desert	717 02
ISU azimuth knob, push to turn	716 07	VEHICLES, GENERAL	
M7 BFIST--Software updates on AKO	719 07	Service kit creation at DLA	715 58
M242--Etching barrel not allowed	718 39	WATER PURIFICATION	
M242--Stand, how to make	715 37	LWP--RO simulators installed wrong	715 48
Niehoff 400-amp generator replacement	714 04	WATERCRAFT	
STE-M1/FVS not needed w/A3 or ODS-SA	717 61	MCS--Transfer case flange PN	717 60

MAINTENANCE ADVICE FROM COMET!

THE FT CARSON COMMAND MAINTENANCE EVALUATION TRAINING TEAM (COMET) HELPS UNITS TRAIN AND MAINTAIN TO GET THE BEST PERFORMANCE OUT OF BOTH SOLDIERS AND EQUIPMENT.

THROUGH THEIR EXPERIENCE, THEY OFFER THESE SUGGESTIONS FOR YOUR OWN UNIT...



Needs calibration? Enroll it at your local TMDE shop. Any time your unit receives an item that will require regular TMDE calibration or gaging, immediately take it to your local TMDE shop to be entered into its data base. These would include small arms gages, multimeters, torque wrenches, and radiac equipment. TMDE will keep track of when these items are to be checked and let you know when the deadline nears. That's one less thing to worry about. See TB 43-180 for what requires calibration. TMDE data is available at LOGSA's LIW site:

<https://liw.logsa.army.mil>

Just select the TMDE icon.



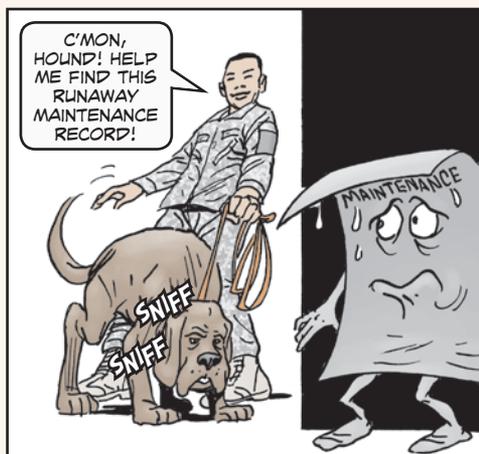
For the **M2 machine gun gages**, remember that when they come back from TMDE they will have new serial numbers. Armorers need to write down the new serial number on a tag and attach it to the gage. That avoids confusion during inspections.

Order -10 TMs and order more than you need. Units are supposed to have an operator's TM for each piece of equipment. The -10 is needed to do a thorough PMCS. And if you don't have enough TMs you will be giggered during inspections. But after every trip to the field, some -10s won't make it back. That's why it's a good idea to order extras. Your pubs clerk can do this for you.



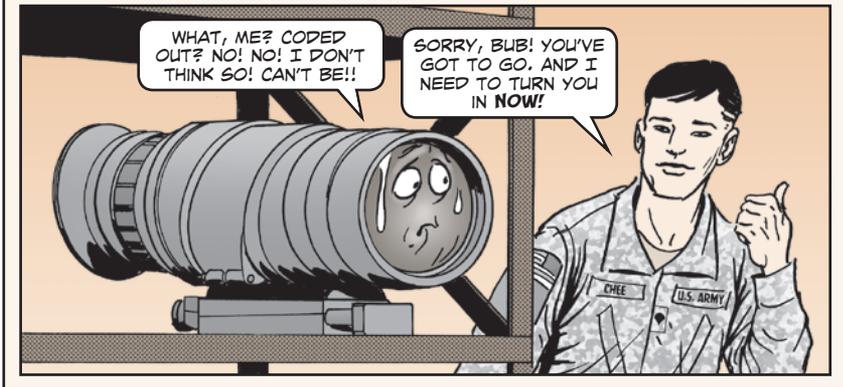
Make sure your unit knows how to fill out the PMCS forms, DA Forms 5988E and 2404. The forms ensure that faults found during PMCS get fixed. Sergeants' Time is a good time for a refresher course on the forms.

Keep track of maintenance records during rotations. If the records disappear when your unit rotates overseas and back, you have to start again from scratch. That's a huge amount of work you want to avoid at all costs. This has been a particular problem for records on small arms gaging. And if your equipment goes through any of the rebuild programs like SARET, make sure to get the paperwork showing that. You may need to prove that later to avoid unnecessary gaging.



Hand-carry the high security arms room locks when you do a rotation. If you pack the locks in a CONEX, you'll probably never see them again. At \$600 a pop, they're not cheap to replace.

When weapons and sights have been coded out, turn them in. You have 90 days to turn the items in, but once that has passed you must go through the whole code out procedure again.



If an item is reportable, get it entered in SAMS-E. This includes all weapons and CBRN items like the ICAM and JCAD. Having the items in SAMS-E makes it easier to track maintenance, repairs and gaging. If any of the PMCS forms are done manually, make sure that information gets to the SAMS-E clerk so that it can be entered in the system. Otherwise, it will be lost. Check the Maintenance Master Data File (MMDF) for what's reportable. It can be found on LIW by selecting the LIW Rsres icon.

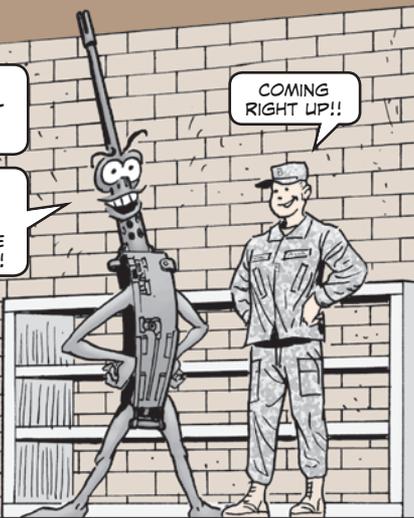
Don't make a Soldier an armorer without proper training. Sometimes when much of a unit is deployed, an inexperienced Soldier is left in charge of the arms room. If the Soldier doesn't know how to inventory weapons or sign them out properly, it can cause major accountability problems for the commander. If your post has a COMET team, see them for armorer training. If your post doesn't have COMET, contact your logistics assistance office for training information.



SRTA Requires M3 Recoil Amplifier

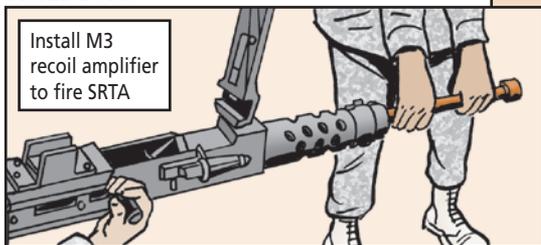
“AHHH! WHAT A WONDERFUL DAY FOR TRAINING!”

“INSTALL MY M3 RECOIL AMPLIFIER AND WE’LL BE READY TO GO!”

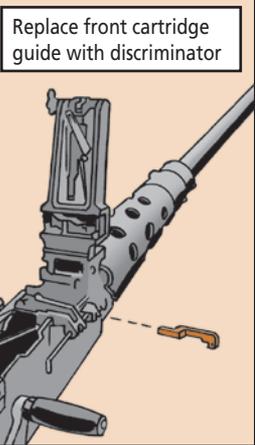


“COMING RIGHT UP!!”

If you’re going to be firing short range training ammunition (SRTA) with either your M2 or M2A1 machine gun, you must use the M3 recoil amplifier, NSN 1005-01-323-5406.



Install M3 recoil amplifier to fire SRTA



Replace front cartridge guide with discriminator

Without the M3 installed, there’s not enough back pressure to fire SRTA continually. The M3 screws into the M2 or M2A1 receiver the same way the barrel does. When you install the M3, make sure the discriminator is properly installed in place of the front cartridge guide. That ensures normal live ammo can’t be fired.

Don’t look for info on the M3 in the M2’s TM 9-1005-347-10. The M3 has its own TM, TM 9-1005-203-13&P. Check it out at:

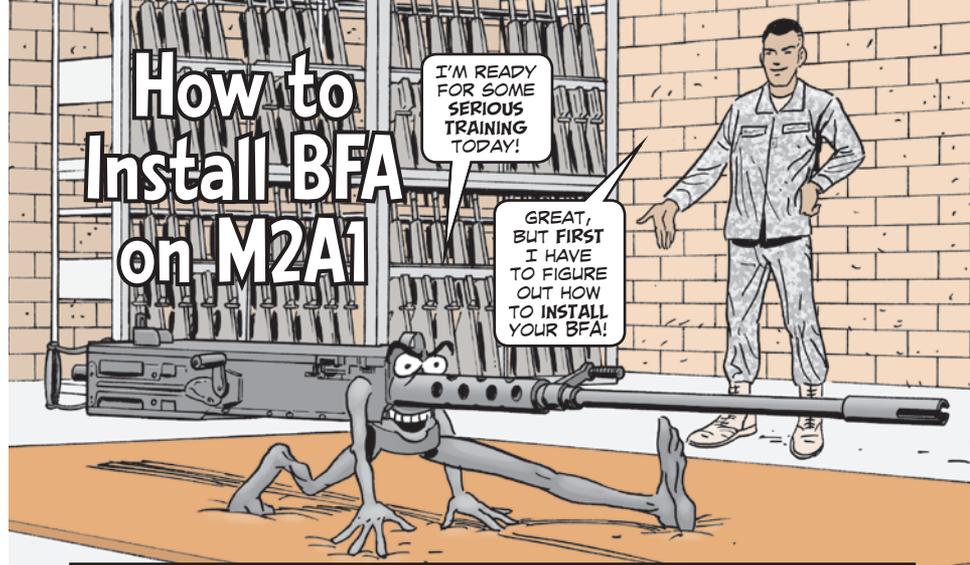
<https://www.logsa.army.mil/etms/online.cfm>

SRTA is intended for target practice at up to 700 meters. But just because it’s for training doesn’t mean it’s not lethal. SRTA should never be used for force-on-force training. Wear eye and hearing protection and practice normal safety rules when firing SRTA.

How to Install BFA on M2A1

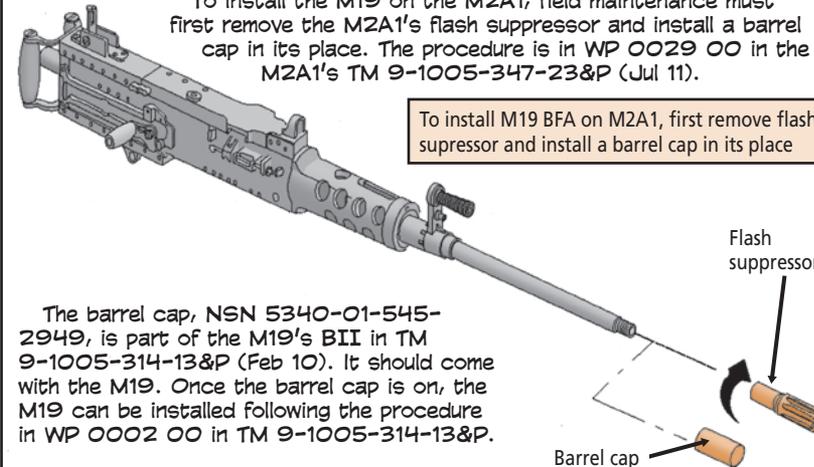
“I’M READY FOR SOME SERIOUS TRAINING TODAY!”

“GREAT, BUT FIRST I HAVE TO FIGURE OUT HOW TO INSTALL YOUR BFA!”



Dear Editor,
As a TACOM logistics assistance representative at Ft Riley, I have been asked several times how to install the M19 blank firing attachment (BFA) on the new M2A1 machine gun.

To install the M19 on the M2A1, field maintenance must first remove the M2A1’s flash suppressor and install a barrel cap in its place. The procedure is in WP 0029 00 in the M2A1’s TM 9-1005-347-23&P (Jul 11).



To install M19 BFA on M2A1, first remove flash suppressor and install a barrel cap in its place

The barrel cap, NSN 5340-01-545-2949, is part of the M19’s BII in TM 9-1005-314-13&P (Feb 10). It should come with the M19. Once the barrel cap is on, the M19 can be installed following the procedure in WP 0002 00 in TM 9-1005-314-13&P.

Gerald Kripe
TACOM LAR
Ft Riley, KS

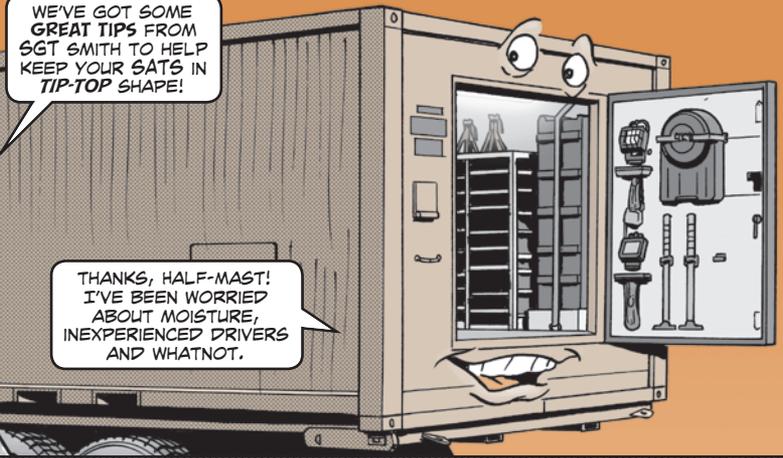
Editor’s note: This will greatly help units that are learning how to fire their new M2A1s. Thanks for the advice, Gerald.

Hats Off to SATS Tips!



WE'VE GOT SOME GREAT TIPS FROM SGT SMITH TO HELP KEEP YOUR SATS IN TIP-TOP SHAPE!

THANKS, HALF-MAST! I'VE BEEN WORRIED ABOUT MOISTURE, INEXPERIENCED DRIVERS AND WHATNOT.



Dear Editor,

Through my work with the standard automotive tool set (SATS), I've come up with a few suggestions that will help other units keep SATS at it:

Moisture Defense

Where moisture is left standing, corrosion will soon follow. Corrosion can eventually ruin tools, so you want to fight moisture buildup. The vapor capsules that hang in the van help absorb moisture, but they need to be changed at least yearly—more often in humid areas. If you're operating in humid areas, it's a good idea to add extra vapor capsules, too. NSN 6850-01-590-1676 gets four capsules.

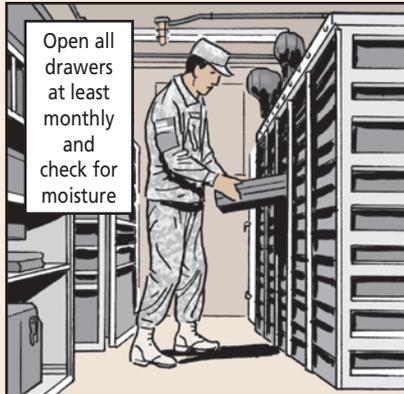
At least monthly (weekly if it's humid), open all the tool drawers and check for moisture. If you find any, wipe everything dry.

Change vapor capsules at least yearly—more often in humid areas



If moisture is a big problem, add more capsules

Open all drawers at least monthly and check for moisture



Hidden A/C Circuit Breaker

Power surges can trip the circuit breakers for the SATS air conditioner and then you have no A/C. But many repairmen don't realize that often the first circuit breaker that trips is behind the A/C inlet panel. Remove the panel's four screws and check the circuit breaker before you call in the A/C repairman.

The TM for the A/C is TM 5-4120-386-14 and it's on the ETM site:

<https://www.logsa.army.mil/etms/online.cfm>

Experienced Drivers Only

Because SATS is top-heavy, it can be more difficult to handle than many other Army trailers. You don't want rookie drivers driving SATS. SATS requires the skill of an experienced driver.

When dealing with high winds, units might want to consider using a heavier truck, like the HEMTT, for towing SATS. The LMTV is light enough that it can have trouble dealing with strong gusts of wind knocking SATS around.



Don't Trust Step

If the step at the rear of SATS isn't securely latched, it can swing in when you step on it, sending you tumbling. Even if the step is latched, it sometimes has enough give to cause a tumble if you're not careful. It's safer to use the step bracket as a step. It won't move.

Now I have three questions about SATS that Soldiers could really use help with:

1. Is there an NSN for the lightbulb for the SATS worklights?
2. Is there an updated drawer layout? What we have doesn't reflect the tools that have been added.
3. Are there any other tires that can be used on the trailer? The current tire sinks in the sand too much.



SGT Daniel Smith
F Co, 2-43 ADA
Ft Bliss, TX

Local TMDE Sends PATS for Calibration

LOOKS LIKE YOU DON'T SEND ME FOR CALIBRATION, BUT YOUR LOCAL TMDE DOES.

GOOD! THAT'LL BE EASIER FOR ME.



Dear Editor,

On Pages 41-42 of PS 716 (July 12), you told CBRN specialists to send their M41 PATS (protection assessment test system) to the TMDE activities at either Pirmasens Army Depot or Redstone Arsenal for calibration.

Actually, the local TMDE support centers should be doing that, not the individual CBRN specialists. The CBRN specialists should turn in their PATS for calibration every 12 or 18 months to the local TMDE facility, which will then ship PATS to the Pirmasens or Redstone addresses you listed. Determine your calibration interval by checking TMDE's TB 43-180, *Calibration and Repair Requirements for the Maintenance of Army Materiel*. Direct questions to the local TMDE labs.

Bob Herndon
US Army TMDE Activity
Regions West

Editor's note: Got it! Thanks for straightening us out.

Editor's note: Great SATS advice and that's a fact!

Here are the answers to your questions:

1. No, You must purchase the 500-watt or smaller halogen bulb locally. You can find the instruction book for the light at http://www.cooperindustries.com/content/dam/public/lighting/products/documents/consumer_products/instruction_sheets/sqs505qd_825_0532_is.pdf
2. Yes. You can access the most current SATS TMs, tool locator guides and 2062 hand receipts at PM SKOT: <https://www.us.army.mil/suite/page/601934>
3. Per TM 9-2330-328-14&P, you should use only the LT 235/85/R16 on/off road pneumatic radial. But for driving on sand, the tires need to be inflated to 75 psi.



PS END

M26 Decon...

HOW DO YOU GET HOSE FILTERS?



Dear Half-Mast,

TM 3-4230-238-10 says we can clean the filter for the M26 decon's metering valve suction hose. But eventually you need to replace the filter and I can't find any mention in the TM of a filter NSN. Does it have one?

W.O.

Dear Mr. W.O.,

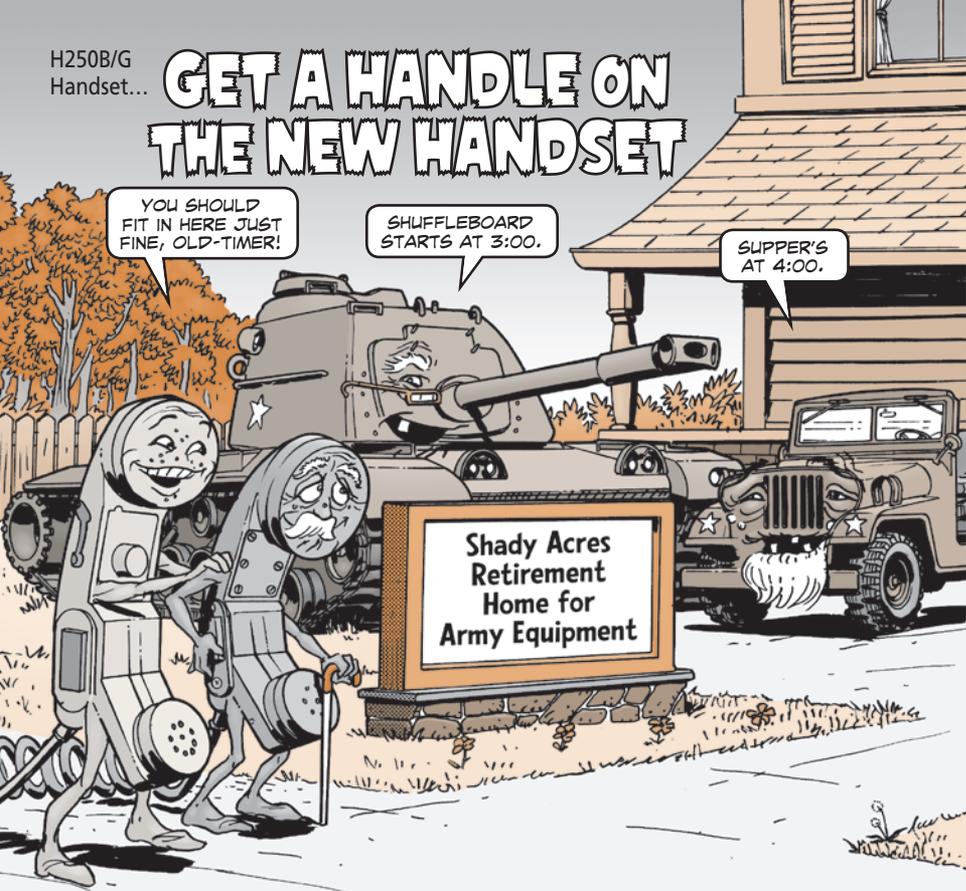
We're in harmony on this one. Order the filter with NSN 4730-12-324-0555.



Filter

Half-Mast

GET A HANDLE ON THE NEW HANDSET



YOU SHOULD FIT IN HERE JUST FINE, OLD-TIMER!

SHUFFLEBOARD STARTS AT 3:00.

SUPPER'S AT 4:00.

Shady Acres
Retirement
Home for
Army Equipment

The old, reliable H250/U handset, NSN 5965-00-043-3463, has been used on a lot of radios over the years, including the SINCGARS. But that old handset has headed for retirement.

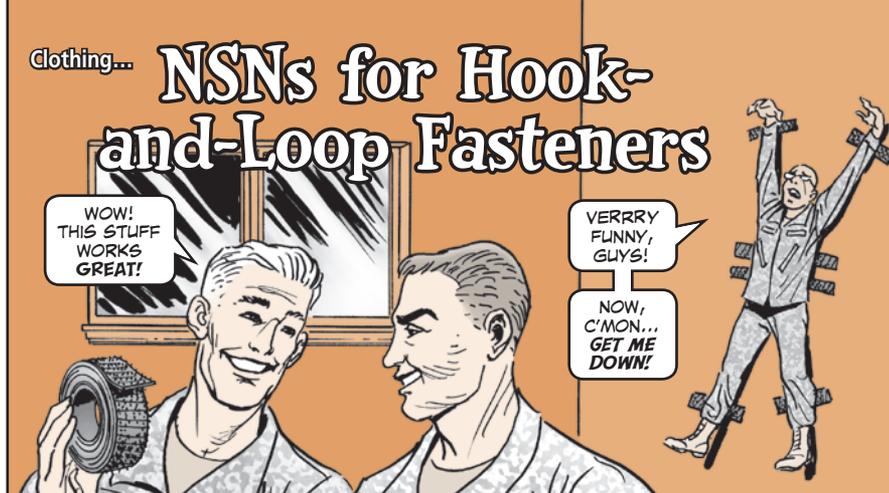
It's been replaced by the new and improved H-250B/G handset, NSN 5965-01-549-6390. The H-250B/G comes with a built-in volume control and earphone jack with detachable earphone.

There are a few of the old handsets in the supply system and returns will still be accepted and reissued to fill any requirements. But as soon as they're gone, all requisitions will be filled using the H-250B/G. Even if you prefer the old handset, it won't be an option once stock is exhausted.

Questions? Contact Miguel Salles, DSN 648-6239, 443-395-6239, or by email:

miguel.a.salles.civ@mail.mil

NSNs for Hook-and-Loop Fasteners

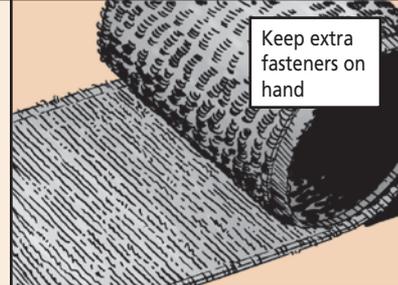


WOW! THIS STUFF WORKS GREAT!

VERRRY FUNNY, GUYS!

NOW, C'MON... GET ME DOWN!

Hook-and-loop fasteners are commonplace these days. You'll find them on ACUs, body armor, MOLLE, ECWCS and more. Problem is, the fasteners take a beating and wear out over time. If you're running a clothing repair site in the field, you need an ample supply of fasteners. The following NSNs bring you hook tape and loop (pile) tape.



Keep extra fasteners on hand

Hook Tape

Width in inches	Color	NSN 8315-
1	olive green	00-106-5973
1 1/2	olive green	00-151-6481
2	olive green	00-450-9837
2	black	00-926-4931
4	sage green	01-187-7773*

Loop Tape

Width in inches	Color	NSN 8315-
1	olive green	00-106-5974
1 1/2	olive green	00-151-6483
2	olive green	00-498-6631
2	black	00-926-4930
4	sage green	01-187-7774*

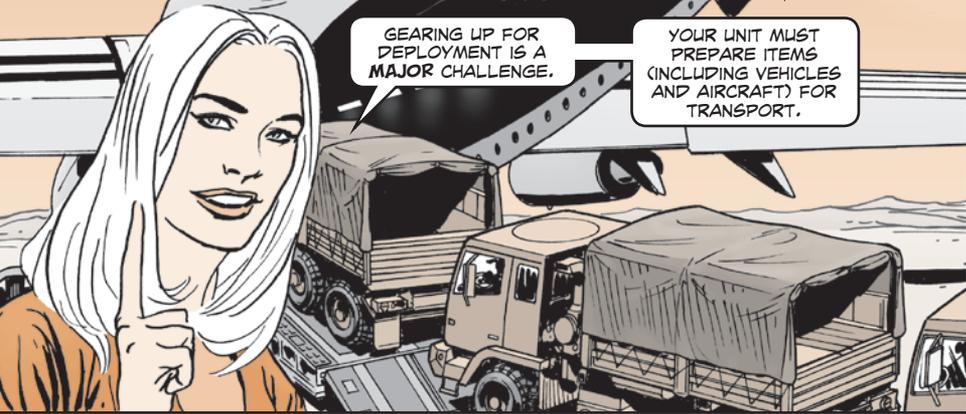
* These NSNs are not on the AMDF. Order them on DD Form 1348-6 and put "NSN not on AMDF" in the REMARKS block.

A note about length when ordering hook-and-loop (pile) fasteners:

Generally, these fasteners are ordered by the yard. Some fastener NSNs require you to order minimum lengths. Go online to DoD Email for length requirements:

<https://dod-email.dla.mil/acct/>

PREPARING TO SHIP EQUIPMENT



GEARING UP FOR DEPLOYMENT IS A MAJOR CHALLENGE.

YOUR UNIT MUST PREPARE ITEMS (INCLUDING VEHICLES AND AIRCRAFT) FOR TRANSPORT.

HERE ARE SOME SIMPLE GUIDELINES FOR DEPLOYING WITH HAZMAT-AND SOME PEOPLE WHO CAN GIVE YOU HANDS-ON HELP...



Training

Make sure your unit has plenty of Soldiers with HAZMAT certification. These are the people who classify, inspect, document and certify HAZMAT shipments. Have them get the training early, well before deployment. The training is not easy. It's two weeks of college-level classes.

Initial and refresher HAZMAT training is available through the Defense Ammunition Center. Here's their website:

<http://ammo.okstate.edu>

Find out who is already HAZMAT certified in your unit. Go online to the Army Training Requirements and Resources System (ATRRS):

<https://www.atrrs.army.mil>

From the home page, click on the ARMY heading. Then click on ATRRS Training Tracker. The Training Tracker allows a command sergeant major or a first sergeant to view the training records of Soldiers assigned to his unit identification code (UIC). (The UIC is a six-character code that identifies each Army unit.)

Budget

Set aside funds to buy regulations, labels, placards and containers. You'll need them to help make sure your HAZMAT is legal to ship. Don't scrimp on preparing HAZMAT. That can delay shipments. It's also dangerous. You'll need the most current regs to keep up with all the changes in the HAZMAT world. And there are lots of changes.

Put placards on HAZMAT



PS MORE

THE WORK INCLUDES...

- load planning
- filling out transportation documents
- ID marking on crates and equipment
- blocking and bracing containers
- ISO container packing



YOUR GOAL IS TO HAVE YOUR EQUIPMENT ARRIVE IN THEATER INTACT AND FULLY MISSION CAPABLE.

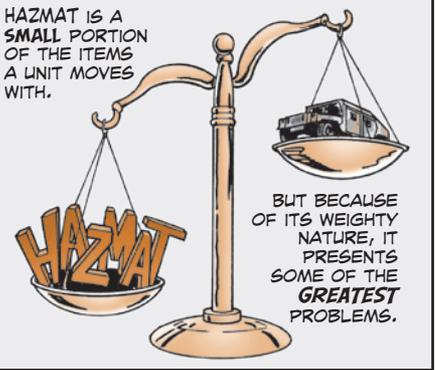
WE'RE READY AND RARIN' TO GO!!



IF YOU HAVE TO DEPLOY WITH HAZARDOUS MATERIALS, YOU'RE FACED WITH ANOTHER CHALLENGE.

HAZMAT IS A SMALL PORTION OF THE ITEMS A UNIT MOVES WITH.

BUT BECAUSE OF ITS WEIGHTY NATURE, IT PRESENTS SOME OF THE GREATEST PROBLEMS.



Equipment Can Be HAZMAT Too

Your unit's HAZMAT certifier is picky about what goes on military shipments. So, you must prepare your equipment before it's shipped. For more on preparing equipment, see Chap 204 of Defense Transportation Regulation (DTR) 4500.9-R, *Part II-Cargo Movement* (Jun 08). You'll find it on the United States Transportation Command website: <http://www.transcom.mil/dtr/part-ii/chapters.cfm>



Shipping Commercial Products

Consider the commercial products you plan to ship. Some units have bought insecticides, compressed gas and cleaning supplies that are not HAZMAT in the US. But overseas they might be regulated as HAZMAT. If so, you'll have to buy suitable labels and packaging. Read material safety data sheets (MSDS) to find out if the items you bought downtown are HAZMAT for shipment.

MSDS are available online at the Hazardous Materials Information Resource System (HMIRS):

<http://www.dlis.dla.vmil/hmirs/>

Who Do You Turn To for Help?

USAMC LOGSA Packaging, Storage and Containerization Center (PSCC) offers packaging and shipping help for your equipment and HAZMAT. PSCC:

- helps you determine what packaging, handling and transportation training you need
- recommends regulations, documents, labels, placards and shipping containers
- advises you on prepping equipment and HAZMAT for shipment
- helps you prepare transportation and certification documents

For more information, contact the LOGSA PSCC: toby.pt@us.army.mil
Or phone DSN 795-7070/7105, (570) 615-7070/7105.



Hazardous Materials...

HAZMAT Questions Answered ONLINE!

IT'S A COMPLICATED BUSINESS, WORKING WITH HAZARDOUS MATERIALS (HAZMAT).



HANDLING, PACKAGING, STORING AND TRANSPORTING HAZMAT RAISE ALL KINDS OF THORNY QUESTIONS.

FOR EXAMPLE...



DO YOU KNOW WHICH DOCUMENTS TO USE WHEN SHIPPING?

DO YOU UNDERSTAND PACKAGING REQUIREMENTS?

HOW DO NATIONAL AND INTERNATIONAL LAWS RELATE TO DOD REGULATIONS?

DO YOU KNOW HOW TO GET A COPY OF A DEPARTMENT OF TRANSPORTATION (DOT) SPECIAL PERMIT, A COMPETENT AUTHORITY APPROVAL (CAA), OR A CERTIFICATE OF EQUIVALENCY (COE)?



AND HOW ABOUT HAZMAT TRAINING? WHAT TRAINING AND CERTIFICATION DO YOU NEED AND WHERE DO YOU GET IT?

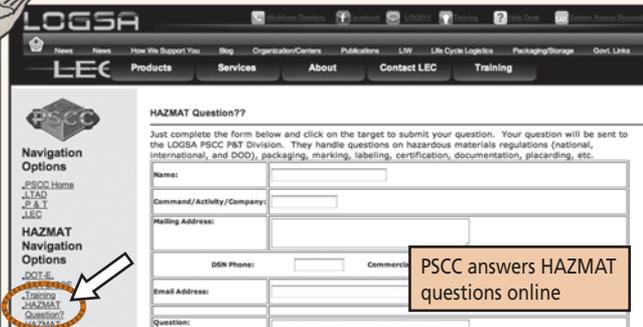




HERE'S HOW TO GET ANSWERS...

- Go to the PSCC home page: https://www.logsa.army.mil/pssc/PSCC_WebDev/PSCC/psscindex.htm
- Click on **HAZMAT**.
- On the next web page, in the left-hand banner, click on **HAZMAT Question?**

It'll take you to an online form that lets you submit questions. Fill out the form, including name, command/activity, mailing address, DSN and commercial phone numbers, email address and your question. Then click the target icon to submit it.



The PSCC Packaging & Transportation (P&T) Division team will research your question and answer it by email. You can also go directly to the HAZMAT Question form with this url:

https://www.logsa.army.mil/pssc/PSCC_WebDev/P&T/HAZMAT/hazmatquestions.htm

Or you can phone DSN 795-7070/7144/ 7685, (570) 615-7070/7144/7685.

As Long As You're Online

And while you're on the PSCC website, you'll benefit by looking at a few other web pages:

From the home page, click on **HAZMAT**. The next web page discusses PSCC's role in HAZMAT:

- packaging and policy
- transport and storage
- marking, labeling and placarding
- certification
- training
- on-site guidance and more



In the left-hand banner of the page, you'll find links to:

- **DoT-E, CAA & COE**
- **Training**
- **HAZMAT Regulations**
- **FAQs**

Explore these pages and expand your HAZMAT education.

Material Safety Data Sheets

Need material safety data sheets (MSDS)? From the PSCC home page, click on **HMIRS**. The link takes you to a page that discusses the DoD Hazardous Materials Information Resource System (HMIRS). In the fourth paragraph, click on **this web site**. You'll go to the Defense Logistics Agency (DLA) HMIRS website, where you'll find MSDS. Of course, you can go directly to DLA HMIRS with this url:

<http://www.dlis.dla.mil/hmirs/>



Packaging... CLEARING THE METHODS OF PRESERVATION MAZE

PATTERSON, I DON'T LIKE THE LOOK OF THIS PACKAGING METHODS MAZE!

METHODS MAZE

This Way

METHODS

10

20

30

40

50

YEAH, FROM HERE IT DOESN'T SEEM TO HAVE ANY RHYME, REASON OR EVEN AN EXIT!

THERE MUST BE A **SHORTCUT** WE CAN TAKE...



CLOE! ðWHEW!ð IF ANYONE CAN HELP US, IT'S YOU!



Does it seem like you're wandering through a maze when trying to figure out how to protect your unit's items for shipment or storage? A good map is what you need. Once you learn about military packaging preservation methods, you can navigate around any obstacles that pop up.

An excellent map is MIL-STD-2073-1, *Standard Practice for Military Packaging*. This pub tells you about the available methods to protect materiel against corrosion and deterioration, physical and mechanical damage, and other harm. Any of these can happen during storage, handling, or shipment of materiel.

Deciding which protection method to use on a particular item is based on that item's characteristics. It's common sense that you wouldn't package delicate electronics equipment the same way you would an M1 Abrams tank!

In military packaging, there are five basic preservation methods. They are:

- Method 10-Physical protection
- Method 20-Physical protection with preservative (with greaseproof wrap, as required)
- Method 30-Waterproof or waterproof-greaseproof protection (with preservative, as required)
- Method 40-Water-vaporproof protection (with preservative, as required)
- Method 50-Water-vaporproof protection with desiccant.

Many military items, like engines, avionics, gyroscopes, and electrostatic-sensitive devices, need a high level of protection. That's usually because they are high dollar value items, can deteriorate rapidly, or are sensitive to physical damage.

FAQs

Q: How do I return unserviceable repairable items?

A: Return them in the package the new replacement part came in, if the packaging is still in good condition. If it was damaged, then duplicate the package as best you can.

Q: We can't find packaging instructions for an item. Can we just make up our own?

A: Before you reinvent the wheel, be sure to check for packaging instructions in LIW, FED LOG, and WebFLIS. If none of these places have information on your item, then contact the item manager's packaging specialists.

You can also examine the item's characteristics and look up requirements for a similar item. MIL-STD-2073-1 lists all methods and sub-methods for military packaging.

However, the best choice if you don't understand something in MIL-STD-2073-1 or you have questions is to call the Logistics Support Activity's Packaging, Storage and Containerization Center at DSN 795-7105, (570) 615-7105, or email: toby.pt@us.army.mil



How to Use PS Magazine's Online Search Tool!

PS MAGAZINE IS CHOCK FULL OF INFO. SPANNING MORE THAN 60 YEARS! THAT HAS ALWAYS BEEN OUR STRENGTH.

A FEW YEARS AGO WE CREATED A TOOL THAT HELPS READERS SEARCH THROUGH OUR BACK ISSUES.

WE CAN HELP YOU FIND WHAT YOU NEED FROM OUR ARCHIVES.

OUR ONLINE SEARCH TOOL IS EASY TO USE!

HERE'S HOW IT WORKS. FIRST, GO TO OUR SEARCH ENGINE: <https://www.logsa.army.mil/psmag/searchForm.cfm>

THE PREVENTIVE MAINTENANCE MONTHLY

Enter a word or phrase below and click on the Search button Helpful Hints

Options:
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Options:
From: All To: All
Include: Articles Issues Indexes

HMMWV

Search

OUR SEARCH TOOL LETS YOU SEARCH FOR WORDS, NOMENCLATURES, NSNS, TMS OR MODEL NUMBERS—VIRTUALLY ANY TERM USED IN THE MAGAZINE.

ALL THE PS PDF FILES FROM 2000 FORWARD ARE SEARCHABLE.

SEARCH AS FEW ITEMS AS POSSIBLE. HERE, TRY "HMMWV."

Search and Surf

THE RESULTS PAGE RESTATES YOUR SEARCH CRITERIA AND TELLS YOU HOW MANY RESULTS WERE FOUND. RESULTS ARE DISPLAYED IN GROUPS OF TEN.

CLICK ON ALL TO SCROLL THROUGH ALL THE RESULTS.

THE MOST CURRENT ARTICLES ARE LISTED FIRST, AND TITLE LINES ARE LINKED TO THEIR ARTICLES. THE SUMMARY IS TEXT LIFTED FROM THE ARTICLE.

IF THE SEARCH TERM IS FOUND IN THE SUMMARY, IT WILL BE HIGHLIGHTED.

THE PREVENTIVE MAINTENANCE MONTHLY

Search Criteria: "HMMWV"
Options Selected: Search All Years Display Articles
Items Found: 421

Search Again

1. Title: [HMMWV... Smart Start System Control Box Buzz](#)
Year: 2012 Issue: 710 Pages: 12
Summary:
We're talking about your HMMWV's smart start system (S3) control box. Some people didn't get the word that the S3 control box, NSN 6110-01-542-7901, is replacing the engine electrical start system (EESS) control box, NSN 6110-01-491-2158. The biggest difference between the EESS and the S3 is that the S3 control box has three connector receptacles, while the EESS control box has only two.

2. Title: [HMMWV... Replace Old Transmissions by Attrition](#)
Year: 2012 Issue: 710 Pages: 10-11
Summary:
11PS 710JAN 12 The truck headshed tells us that there have been a lot of questions from the field about the 4L80E HMMWV transmission and transmission control module (TCM) E-FROM (or erasable programmable read-only memory). So when the time for a replacement comes, you'll get a transmission NSN 2520-01-480-0942, not

IF YOU WANT TO CONDUCT A NEW SEARCH, THE SEARCH AGAIN BUTTON IS AVAILABLE AT THE TOP AND BOTTOM OF THE RESULTS LIST.

THE PREVENTIVE MAINTENANCE MONTHLY

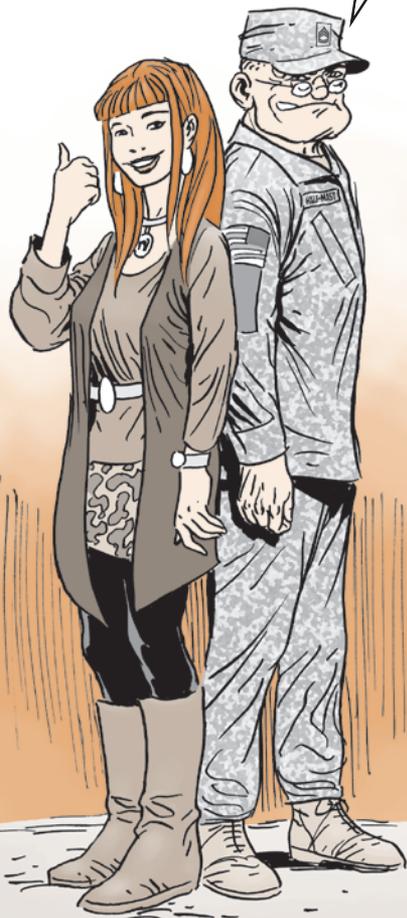
Search Criteria: "HMMWV"
Options Selected: Search All Years Display Articles
Items Found: 421

Search Again



THESE HELPFUL HINTS SHOULD IMPROVE YOUR SEARCHES.

BUT, THERE ARE ALWAYS TIMES WHEN YOU CAN'T RECALL THE WHOLE NSN OR TM NUMBER. IN THAT CASE, OUR WILD CARDS MAY COME IN HANDY.



Helpful Hints

- Search using as few terms as possible to get broad results. For example, "HMMWV" is better than "high mobility multi-purpose wheeled vehicle"
- Using more search terms will produce fewer but more specific results. A search for HMMWV alternator will find articles about alternators on HMMWVs.
- Quotes are your friend. Place multiple search terms in quotes to find only those articles that contain all of the search terms in the specified order. This can help you whittle down the results. For instance:
"combat vehicles" = 66 items
vs combat vehicles = 201 items
- If you can't find the desired info, try using fewer or related search terms
- For model numbers, searching for the basic model may give you better results. For example, if you're looking for the thermal sight AN/PAS-13(V)3, enter AN/PAS-13 or AN/PAS-13*. Or, instead of M40 mask, try M40.
- The search tool looks for terms at the beginning of a word. So drive returns drive, drives, driver, driven, and driveshaft.
- Searches are not case sensitive.

Wild Cards

- The asterisk (*) replaces any character(s) before or after the search term
- If you know the first part of a search term, use a trailing asterisk. For example, 5940-01-517* will return pages with NSN 5940-01-517-7731.
- If you know only the last four numbers in an NSN, use the (*) before it. So *7731 will find pages with NSN 5940-01-517-7731.
- If you know only the middle part of a search term, use an (*) before and after: *517* will return NSN 5940-01-517-7731.
- The question mark (?) matches any character in a specific position.
- The asterisk (*) and question mark (?) wild cards can be used together. TM 9223207387* will find articles with TM 9-2320-387-10.

One for the Road

WE DIDN'T LOAD ISSUES PRIOR TO 2000 ON OUR SEARCH TOOL BECAUSE THAT INFO ISN'T UP-TO-DATE.

BUT YOU CAN VIEW ISSUES BACK TO 1990 ON OUR WEBSITE BY CHECKING OUR ARCHIVES AND INDEXES.

AND IF YOU EVER NEED ONE OF OUR OLDER ARTICLES, DROP US AN EMAIL:
half.mast@us.army.mil



Army Forums Moving to milSuite

All Army Professional Forums will migrate to milSuite, beginning in December 2012 and completing migration by March 2013. Current forum memberships will not transfer. To stay in the know, register with milSuite at:

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

Learn Seasonal Hazards

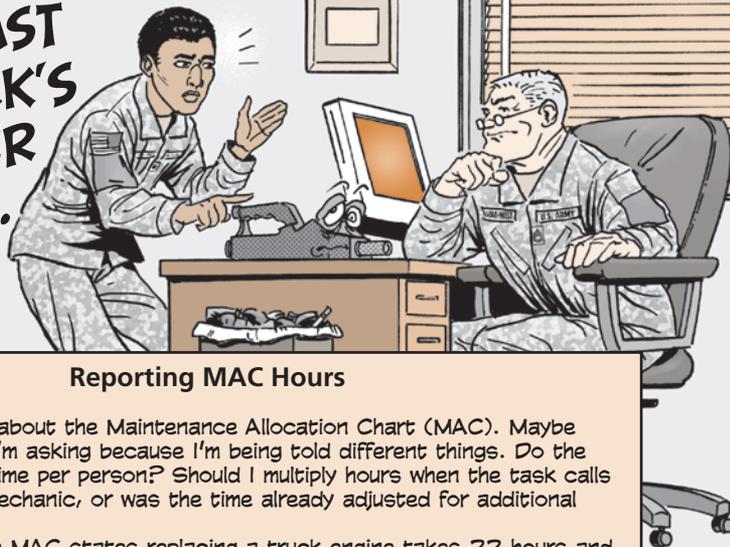
The USACRC/Safety Center launched a new year-round Army safety awareness campaign called Know the Signs. It focuses on the unique hazards each season brings. Info changes every three to four months. Articles, posters, videos and other materials are free and can be downloaded at:

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

Check Out AKO My Library

Want to immerse yourself in a good e-book? Or maybe you prefer audio books? In AKO My Library, you can find these, plus use the Army's subscription to databases ranging from automotive to small engine repair, dictionaries to digital collections, even current popular magazines and daily newspapers. The portal packs a ton into one tidy space. You'll find My Library under the "Self Service" tab in your AKO account.

MSG HALF-MAST MCCANICK'S ANSWER DEPT.



Reporting MAC Hours

Dear Half-Mast,

I have a question about the Maintenance Allocation Chart (MAC). Maybe it's a silly one, but I'm asking because I'm being told different things. Do the MAC hours reflect time per person? Should I multiply hours when the task calls for more than one mechanic, or was the time already adjusted for additional personnel?

For example, if the MAC states replacing a truck engine takes 22 hours and requires two mechanics, does that mean the total hours I report is 44?

SGT W.G.

Dear Sergeant W.G.,

Thanks for asking. Hey, the only silly question is the one someone's afraid to ask! The 50/50 chances of getting this one wrong are too high.

Yep, times on the MAC already include the total time it should take the specified number of personnel to complete the job. So if the MAC calls for 22 hours and it takes two mechanics to complete the task from start to finish, each mechanic should receive 11 man-hours credit.

Does it really matter if man-hour reports are right? You betcha. If maintenance managers can't quantify each shop's workload by man-hours, then they can't schedule work efficiently.

When inaccurate data is sent to DA, it paints a false picture of the man-hours needed to repair equipment. This can lead to maintenance managers at any level making decisions based on the wrong info.

Bottom-line, the man-hours you report affect your unit's budget. **Underreporting** may cause your unit to lose mechanic slots. **Overreporting** is wasting money, and can likewise lead to personnel cuts or reassignments if DA determines unit maintenance funds were mismanaged.

Kudos to you, Sergeant, for not guessing but requesting official guidance.

Half-Mast

Use UOCs for HMMWV Thread Protectors

Dear Half-Mast,

Item 4 in Fig 217B of TM 9-2320-387-24P shows a thread protector used on the seat mounting studs of the battery box cover. Is that thread protector used on all HMMWV commander's seats or just on the M1113 and above?

G.C.

Dear Mr. G.C.

The headshed says that for the commander's seat referenced in the TM, use the tapered spacer (thread protector), NSN 5365-01-380-7340, for all models except the M1114.

References to front seat configurations are different than the commander's seat, however. So use the following information to clarify the commander's seat and front seat info for HMMWVs.

- Item 4 in Fig 217B of TM 9-2320-387-24P: Use the tapered spacer, NSN 5365-01-380-7340, on the commander's seat for up-armored HMMWVs with usable on codes (UOCs) TTA, TTT, TT1, UUA, UUU, UU1 and UU2.
- Item 4 in Fig 216 of TM 9-2320-387-24P: Use the tapered spacer, NSN 5365-01-380-7340, on the M1113 commander's seat (UOC XAA).
- Item 23 in Fig 231 of TM 9-2320-280-24P: Use the tapered spacer, NSN 5365-01-380-7340, on the commander's seat for legacy HMMWVs with UOCs AVY, A11, A13, A14, A15, A20, A24, A25, A26, A27, BVY, B15, B16, B17, B18, B20, B24, B25, C17 and NNN.
- Fig 230 in TM 9-2320-280-24P: A different configuration is used for the front seats in legacy HMMWVs with UOCs HVY, H11, H13, H14, H15, H16, H17, H18, H20, H21, H24, H25, H26, H27, H28 and MMM. They do not use the tapered spacer.

This information is also referenced in an upcoming Interactive Electronic Technical Manual (IETM). The up-armor HMMWV IETMs are scheduled for release in early 2013. The legacy HMMWV ETMS have an estimated release of late 2013 to early 2014.

Half-Mast

Get Replacement HMMWV A/C Caps

Dear Half-Mast,

I am writing in regards to the HMMWV with the A/C installed. My primary focus is the M1151A1 high pressure and low pressure service port caps.

I have been unsuccessful at finding replacement caps. I do not see an illustration for them in any of the TM's. There wasn't an NSN provided in the Maintenance Action Message MA11-004 either. They can be locally purchased but our contract requires as much as possible to be ordered through the supply system with an NSN.

I.C.

Dear I.C.,

The TACOM headshed says that you need NSN 5340-01-548-4825 for the blue low pressure cap and NSN 5340-01-547-6786 for the red high pressure cap. They also said these items will be included in the next revision to the technical manual.

Half-Mast

Connie's POST SCRIPTS

M1112 Trailer Brake Line

The front hydraulic brake line for the M1112 water trailer comes with NSN 4710-01-436-4034. It replaces PN 12472170, which is shown as Item 3 in Fig 9 of TM 9-2320-397-14&P (Apr 00).

WIRE ROPE GREASE

The wire rope used on cranes and dozer winches is constantly exposed to the elements. Give it extra protection with wire rope grease. NSN 9150-00-530-6814 brings a 35-lb can.

M870A1 SEMI-TRAILER SEAL PRESERVES BRAKE SHOES

Are the mechanics in your unit changing a lot of brake shoes on M870A1 semi-trailers because oil is oozing past the wheel seal? The seal that comes with NSN 5330-01-047-9367 solves that problem. It replaces NSN 5330-01-063-3674, which is shown as Item 6 in Fig 10 of TM 5-2330-378-14&P (Jun 99). Make a note until the TM is updated.

FMTV Front Grille

To get the front grille for the FMTVs use NSN 2510-01-524-9257. This NSN replaces the one shown as Item 11 in Fig 249 of TM 9-2320-366-24P-1.

M1022 Wheel Seal

Use NSN 5330-01-082-7965 to get a metal-ring wheel seal for the M1022 dolly set. This NSN replaces the parts info shown as Item 18 in Fig 12 of TM 9-2330-379-14&P.

GROUNDING AND BONDING PAMPHLET

Proper grounding and bonding of generators and commo equipment isn't merely a safety protocol. It's a matter of life and death. For your own protection—and that of your fellow Soldiers—use CECOM Pamphlet TR 98-6, *Earth Grounding and Bonding*. Get it from the CECOM Directorate for Safety at DSN 648-3812, (443) 395-3812, fax (443) 395-3836 or email: usarmy.apg.cecom.mbx.amsel-sf@mail.mil

You can also mail your request to:

CECOM Directorate for Safety

ATTN: AMSEL-SF

3200 Raritan Avenue

Aberdeen Proving Ground, MD 21005-1850

BACKHOE LOADER (BHL) SUPPORT

When you need repair parts, commercial technical manuals or maintenance services for the Case Backhoe Loader, NSN 2420-01-532-3399, email:

dpg@cnh.com

A company field support representative will assist your unit in getting the support you need to keep your backhoe loader mission-ready. You can also call (800) 388-6103, CONUS, or (954) 968-0372, OCONUS, for assistance.

HEMTT Headlight Help

Need new headlights for your unit's HEMTTs? For now, you'll need to order NSN 6220-01-547-9043 because the headlight that comes with NSN 6220-01-586-4949 isn't in stock. But it'll probably be available again in the early part of calendar year 2013.

SHELF LIFE FOR SURVIVAL FOOD AND WATER

Questions keep coming up concerning how long survival food and water is good for. Let's put the issue to rest. For food, shelf life is 5 years and service life is 3 years. Water is good until the expiration date. Check out WP 0642 00-4 and 00-6 of TM 1-1680-377-13&P-7 for the good word on this.

BOBCAT SKID-STEER LOADER TIRE

To get a 10-ply tire for the compact skid-steer loader (Models 763 and 5150) use NSN 2610-01-582-6399. Make a note until this NSN is added to TM 5-3805-285-14&P and TM 5-3805-288-14P.

LRT-110 Crane Belt Tensioner NSN

Get a new belt tensioner for the engine on your 7 1/2-ton rough terrain crane with NSN 2920-01-291-6477. It replaces PN 3908163, which is shown as Item 3 in Fig 5-6 of TM 5-3810-305-24P (Jul 91). That PN does not cross to an NSN.

Annual Service Kit NSN for M978A2 HEMTT

On Pages 12-13 of PS 719 (Oct 2012), we gave you NSNs for the annual service kits for tactical vehicles. But some of you brought an error to our attention and we thank you. The correct NSN for the M978A2 HEMTT's annual service kit is 4910-01-591-4509, **not** 4910-01-591-5409.

COME BACK NEXT MONTH FOR MORE BRIEFS!



621B SCRAPER CAB LINERS

Use these NSNs if the cab liner in your scraper is falling apart.

Liner	NSN
Front of the cab floor	2510-01-178-8863
Rear of the cab floor	2510-01-187-2235
Floor mat	2540-01-184-4688
Side panel	2510-01-182-9272
Insulator panel	5970-01-176-0128

Adhesive primer, NSN 8040-00-826-3535, keeps the liner in place.

DISTRIBUTION: To be distributed in accordance with the initial distribution number (IDN) 340312, requirements for TB 43-PS-Series.

Would You Stake Your Life ^{right now} on the Condition of Your Equipment?

[Click here for a copy of this article to save or email.](#)



THE MESSAGE IS CLEAR ON WHAT **NOT**
TO WEAR DURING MAINTENANCE!