

Issue 804

# PS



November  
2019

## THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-804

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# THE PREVENTIVE MAINTENANCE MONTHLY

ISSUE 804 NOVEMBER 2019



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MSG Half-Mast

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JAMES C. MCCONVILLE  
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Official:

KATHLEEN S. MILLER  
Administrative Assistant  
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# PS MAGAZINE— THE EVOLUTION CONTINUES, PART 2

IT'S BEEN A  
GOOD—MAKE THAT  
**GREAT**—RUN FOR  
OUR MONTHLY  
PUBLICATION.

EIGHT  
HUNDRED AND  
FOUR ISSUES  
OVER A SPAN  
OF OVER 68  
YEARS.

WE'RE **PROUD** OF OUR  
HERITAGE AS THE ARMY'S  
LEADING SOURCE FOR  
PREVENTIVE MAINTENANCE  
AND SUPPLY  
ACCOUNTABILITY...

...A HERITAGE  
THAT WILL REMAIN  
UNCHANGED AS  
WE **EVOLVE** INTO  
A FULLY-ONLINE,  
MOBILE-FRIENDLY  
INFORMATION  
PORTAL.



WHAT **WILL**  
CHANGE,  
STARTING  
IMMEDIATELY,  
ARE THE  
FOLLOWING...



- **No more traditional magazine.** Rather than a 64-page, cartoon-illustrated periodical, we'll publish our articles directly to our mobile-friendly website:  
<https://www.psmagazine.army.mil>



- **No more hand-drawn cartoon illustrations or technical art.** The era of being essentially a comic book will come to an end. Instead, we'll rely much more heavily on photographs and computer-generated graphics, along with occasional videos. However, our current iconic characters—MSG Half-Mast, Connie, Bonnie, SFC Blade, and Cloe—will selectively appear on the website to sustain the PS brand.
- **No more mobile application.** Because we're adopting a mobile-friendly web platform, our articles will be readily accessible and readable using your mobile device's internet browser.
- **Rapid dissemination of information.** Because we won't be illustrating every article with hand-drawn art, which takes time to produce, we'll be able to post articles much faster.
- **More emphasis on trends.** The evolution of PS Magazine goes hand-in-hand with an evolution in the way the Army's logistics assistance programs and representatives go about their daily business. Moving forward, they'll be much more focused on identifying systemic trends that demand rapid information-sharing across the enterprise. PS will be integral to this information-sharing.

#### WHAT DOESN'T CHANGE IS:

- **Our Reader Service.** The ability to ask PS Magazine questions, request information or clarification, or recommend best practices remains intact. Every query will continue to receive a fully-researched and vetted reply.
- **Our commitment to the warfighter.** Our focus has always been on the Soldier/maintainer. The changes we're making are aimed at enhancing this commitment by getting critical information to those who need it faster and more efficiently.

SAYING GOODBYE TO OUR ICONIC COMIC BOOK-STYLE MAGAZINE IS **HARD** BUT ALSO **NECESSARY**.

EVEN THOUGH THE PLATFORM IS CHANGING, THE MISSION **ISN'T**. WE'RE COMMITTED TO BEING THE ARMY'S—EVEN THE DOD'S—GO-TO RESOURCE FOR INFORMATION THAT ENHANCES UNIT AND FLEET READINESS.

WITH YOUR CONTINUED SUPPORT AND FEEDBACK, WE'LL ENSURE YOU'RE **READY TO FIGHT AND WIN!**



OUR RECURRING QUESTION IS, "WOULD YOU STAKE YOUR LIFE RIGHT NOW ON THE CONDITION OF YOUR EQUIPMENT?"

THE STORIES WE PROVIDE HELP YOU ANSWER, **"YES!"**

**PS END**



Stryker...

# HATCH SAFETY HEADS OFF HEADACHES!



YOU MUST  
LIKE LIVING  
DANGEROUSLY,  
PAL!

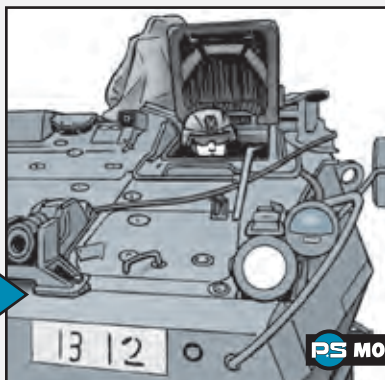
YOU'RE TAKING  
A REAL **GAMBLE**  
NOT ENGAGING  
MY HATCH STAY  
DEVICE!



**C**rewmen, a big headache could be in your future if you drive your Stryker without securing the driver's hatch.

Your vehicle has two safety devices to keep the hatch in place. But you've got to actually use them if you don't want that 250-pound hatch crashing down on your head!

Operating Stryker without engaging driver's safety hatch is **dangerous!**



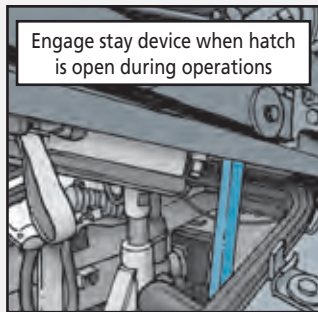
**PS MORE**

## Stay Device

The stay device is a spring-loaded pivot support with a sliding latch. It's located on the interior left-hand side of the driver's compartment.

When used properly, the stay device holds the latch open at the 10-degree and 25-degree positions. Those are the only two positions allowed for driving the vehicle. If the hatch springs or the detent assembly should fail, the stay device can save you from a world of serious hurt!

Engage stay device when hatch is open during operations

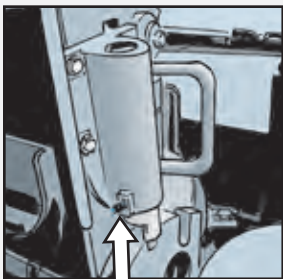


## Detent Assembly

As the hatch is raised to each position, the spring-loaded pin on the detent assembly engages the teeth on the interlock plate to keep it in place.

The detent assembly needs lube so the pin doesn't stick. If the pin sticks, it might not fully engage the interlock plate and could slip loose during operation.

Lube the pin anytime it shows signs of sticking. Just pump in GAA until you see grease coming out around the locking pin. Then wipe off the excess grease so it doesn't attract dirt and sand.



Add GAA to detent assembly when pin begins to stick

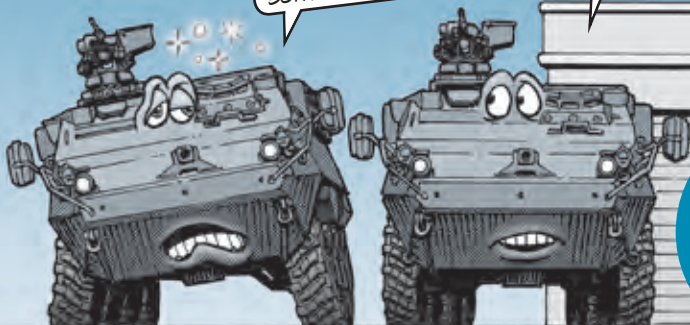
PS END

# STRYKER OUT OF KILTER?

# LEVEL IT!

EH, I FEEL A LITTLE OUT OF SORTS TODAY!

LOOKS LIKE YOU COULD USE A GOOD LEVELING!



Crewmen, when your Stryker's height management system (HMS) gets out of kilter, it's time to *level* your vehicle.

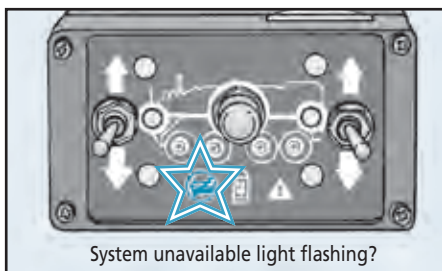
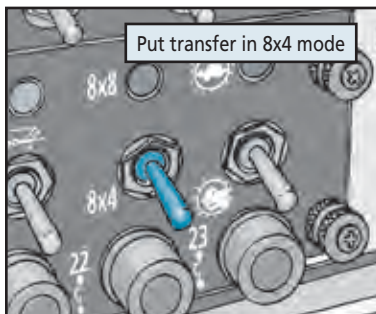
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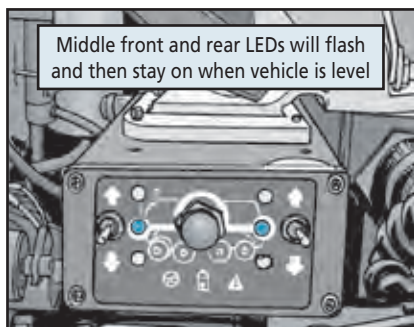
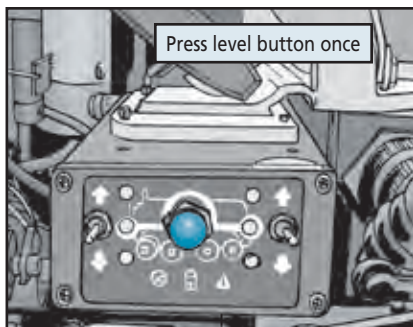
- When it starts sagging at one or more of its corners
- After it's unloaded from a ship, aircraft or any other form of transportation
- If the temperature swings from really hot to really cold or vice versa while operating the vehicle
- After it's been operated in mine ride high mode

### Here's how to level your Stryker just like it says in the TM:

1. Start the vehicle.
2. Make sure the transfer is in 8x4 mode.



4. While driving, press the center level button on the HMS panel one time. The middle front and rear LEDs will start flashing. The flashing will continue during the leveling process, which could take up to four minutes. Once the vehicle is level, the flashing will stop and the two LEDs will stay on.



If your Stryker doesn't level the first time, try it again.

If it fails on the second try, or if the system fault or low nitrogen light comes on, tell your mechanic.

# AFES PM Keeps Fires at Bay



YOUR M88A2 RECOVERY VEHICLE'S AUTOMATIC FIRE EXTINGUISHING SYSTEM-AFES- CAN SAVE YOUR VEHICLE FROM **SERIOUS DAMAGE...**

...AS WELL AS SAVE THE LIVES OF YOU AND YOUR FELLOW CREWMEN.

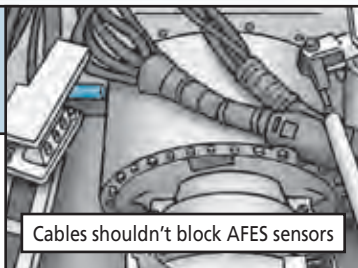






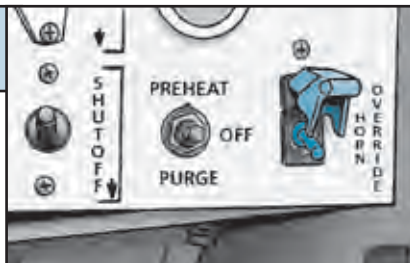
BUT THE AFES NEEDS **REGULAR** PREVENTIVE MAINTENANCE TO ENSURE IT CAN DO ITS JOB. THE FOLLOWING SHOULD **ALWAYS** BE A PART OF BEFORE OPERATIONS CHECKS...

- The AFES sensors should be free of dirt or debris and the cables properly connected. Make sure the sensors and nozzles aren't blocked by improperly routed electrical cables, hydraulic hoses or fuel lines.
- The AFES interior and exterior handles should be properly laced with safety wire. The wire keeps the bottles from accidentally discharging. There should be two strands for a proper lace. The wire comes as part of a kit, NSN 4210-01-542-3071.

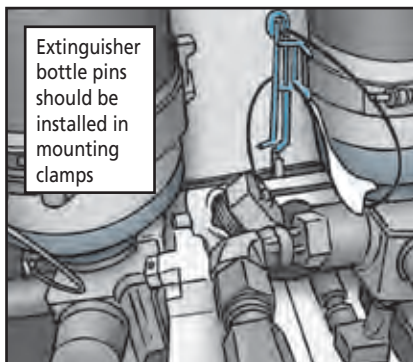


Cables shouldn't block AFES sensors

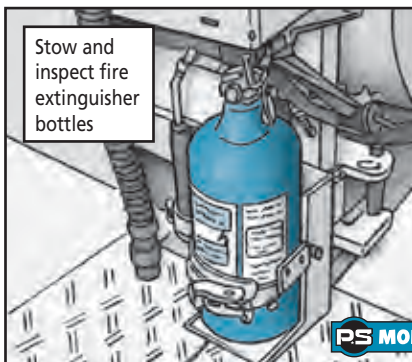
- The warning horn override should be off and the portable fire extinguishers stowed properly and inspected.
- Make it a habit when you turn on the master power switch to keep an eye on the Built-In Test (BIT) on the AFES control electronics panel (CEP). If a fault with any of the sensors occurs, a light will go on. Clean the sensors and check the electrical connection. If the fault isn't corrected, tell a mechanic.



- Make sure the extinguisher bottles don't have pins installed in the fire extinguisher operating levers. Ensure the pins are stowed properly in the fire extinguisher bottle mounting clamps. The anti-recoil plugs should be stowed out of the way of the bottle and vehicle linkages. Drape the anti-recoil plug lanyard over and through the stowed pins. The pins and anti-recoil plugs are only used when the fire extinguisher bottles are being replaced. Don't operate the AFES with empty bottles. Always check the pressure gauges like it says in the -10 TM.

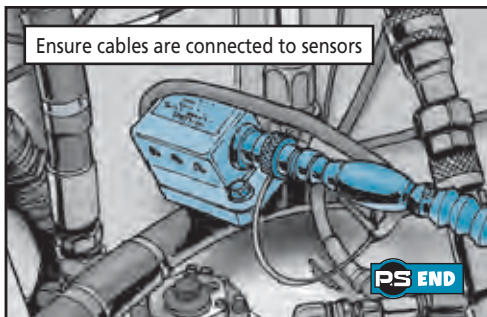


Extinguisher bottle pins should be installed in mounting clamps



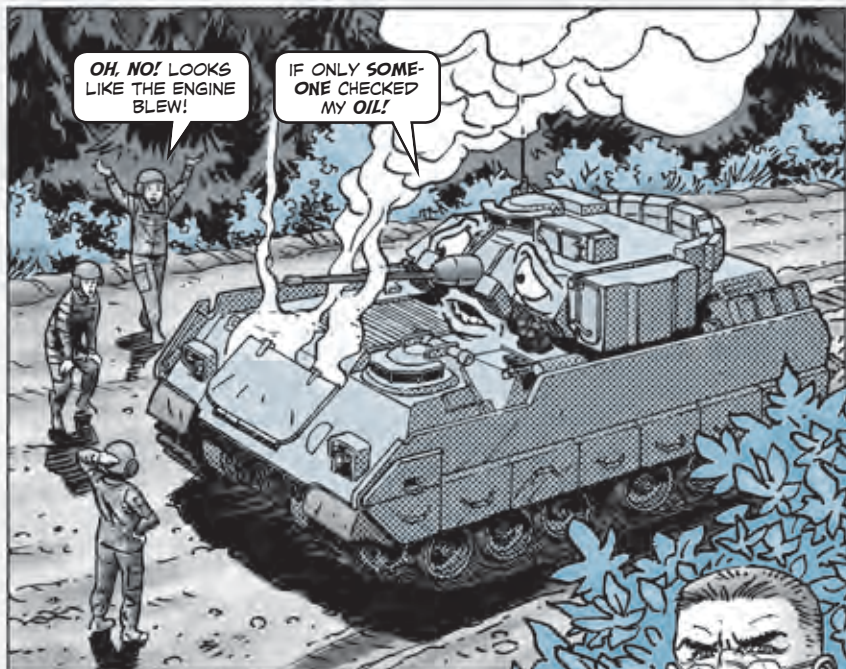
Stow and inspect fire extinguisher bottles

- Ensure the extinguisher's electrical cables are connected to the bottle. Remember, when the AFES is activated, only two bottles are deployed automatically. If the initial deployment doesn't put out the fire, you'll need to manually deploy the remaining bottles. Bottles 3 and 4 will be deployed in the engine compartment if you flip the ENG 2 switch. Bottle 5 will be deployed in the crew compartment if you flip the MECH switch.



M2/M3-Series Bradleys...

## DID YOU REMEMBER TO CHECK THE OIL?



EVERY CREWMEN KNOWS THAT CHECKING THE OIL LEVELS IN THEIR BRADLEY IS A PART OF REGULAR PMCS.

BUT BELIEVE IT OR NOT, SOME CREWS **AREN'T** DOING THAT BASIC CHECK.

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Expensive components like:

- engines
- transmissions
- final drives
- right angle fan drives

are *failing* in the field.

As a result, vehicles are NMC and combat readiness is *suffering*.



All because some crews *never bother to check oil levels!*

A low oil level reading is often the first sign that a vehicle has a **serious** oil leak. That's part of why checking oil levels is so important.

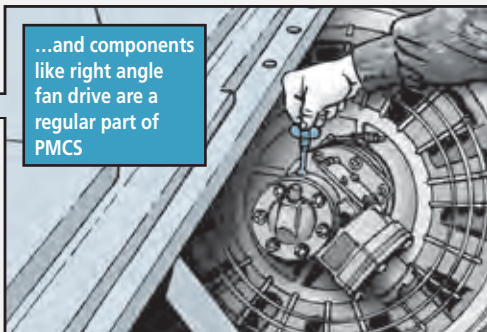
Your vehicle *isn't* good to go if it has a **Class III** oil leak or if oil levels are below the **ADD** mark.

It only takes a few minutes to check the various oil levels. Your Bradley's -10 TM spells it all out for you. All you have to do is follow the PMCS tables.



If you see the engine, transmission, final drives or right angle fan drive needs oil, add some just like the -10 TM says.

...and components like right angle fan drive are a regular part of PMCS



And if the oil level is above the **FULL** mark on the dipstick, or the oil looks milky or bubbly, tell your mechanic right away!

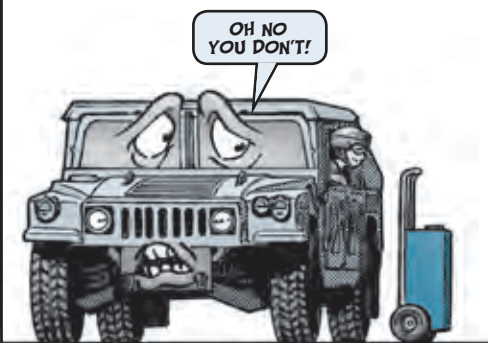
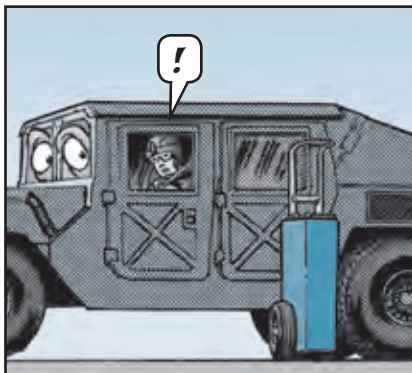
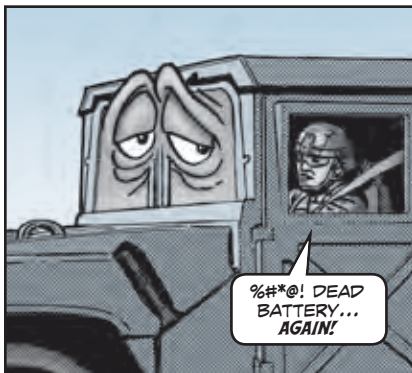


SO REMEMBER, WHETHER IT'S BEFORE, DURING OR AFTER OPERATIONS PMCS, YOU'RE **NOT** DONE UNTIL YOU'VE CHECKED THE OIL LEVELS!





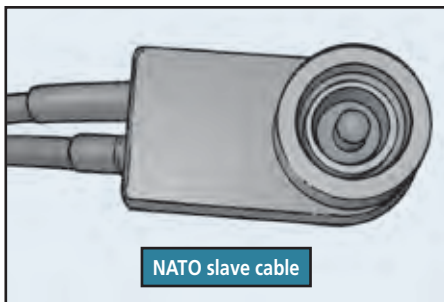
# HMMWV: Slave Start = Smart Start



## Dead HMMWV batteries?

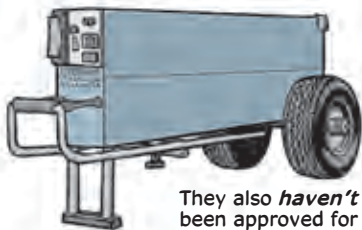
Think *twice* before you grab that handy ground power unit (GPU) for a jump start!

The **ONLY** approved method to jump start a HMMWV is with a NATO slave cable, NSN 6150-01-390-7058, attached to another HMMWV.

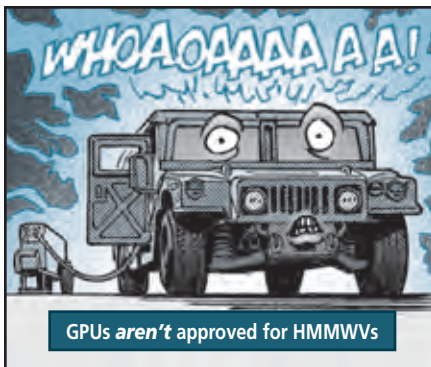




Those commercial GPUs deliver a power surge that can be **too strong** for HMMWV batteries!



They also **haven't** been approved for light, medium, or heavy tactical vehicles.



The surge blows the HMMWV's electronics and damages the batteries. The same thing can happen **even when** you jump start from another HMMWV if you don't follow proper slave starting procedures. Here's how to do it right:

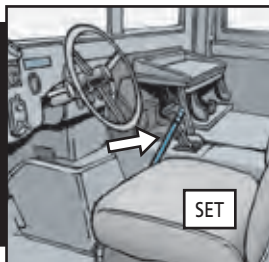
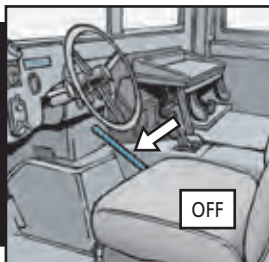
### Step 1:

Confirm that the dead batteries can accept a charge. Use the **battery analyzer**, NSN 6130-01-510-9594, from the Standard Automotive Tool Set (SATS). The **battery analyzer**, NSN 6625-01-466-1075, in the Forward Repair System (FRS) tool kit also works.

If batteries fail this test, don't attempt to slave start. Report the vehicle to field maintenance for repair.

### Step 2:

Before connecting the slave cable, set the parking brakes in **both** HMMWVs. Then turn off all the vehicles' electrical devices, accessories and switches. This prevents damage to those components if there's a power surge.



### Step 3:

Always connect a slave cable to the HMMWV being slaved first. You'll find the slave receptacle under the HMMWV's front passenger seat. Remove the cap and plug in the slave cable. Don't lose the cap because it keeps dirt and debris out of the receptacle when not in use. If the **cap** is missing, replace it with NSN 5340-01-315-7223.



Plug in slave cable under front passenger seat

### Step 4:

Connect the other end of the slave cable to the receptacle in the slaving HMMWV.



### Step 5:

Set the rotary switch of the slaving HMMWV to Run. Watch for the Wait-To-Start light to turn off, then start the vehicle. Then wait for the HMMWV's voltage gauge to stabilize in the green zone. If it **doesn't**, skip ahead to Step 10.

### Step 6:

Allow the slaving HMMWV to idle a **minimum** of five minutes with the slave cable connected before attempting to start the other HMMWV being slaved.

### Step 7:

Place the rotary switch in the slaved HMMWV to Run and watch for the Wait-To-Start light to go off. Then start the vehicle.

### Step 8:

Once the slaved HMMWV is started, monitor its voltage gauge until it stabilizes in the green zone, then let it idle for at least five minutes.



### Step 9:

Disconnect the slave cable. Always disconnect the slave cable from the slaving vehicle first; this rule applies, regardless of vehicles.

### Step 10:

Monitor the HMMWV's voltage gauge for fluctuations out of the green zone. If at any time the gauge enters the red zone, immediately shut down the HMMWV and notify maintenance personnel.

## Three Big No-No's

### Don't

operate any electrical accessories or components on the HMMWV during slaving operations.



### Don't

rev the HMMWV's engine; keep it at idle throughout slaving.



### Don't

touch the gas pedal or any other device that affects engine speed throughout slaving operation.



Diesel Engines...

# CLOBBER THE SLOBBER!



EWW! THAT SLOBBER IS NASTY!

Dear Half-Mast,

Lately, we've noticed oil leaking from the air box drain on our truck's Detroit Diesel engine. Any ideas on how to stop it?

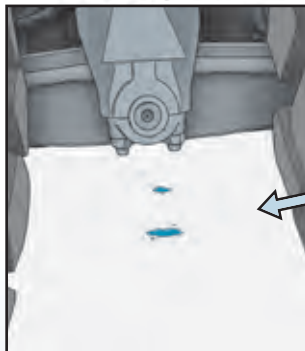
SGT M.S.F.

Dear Sergeant,

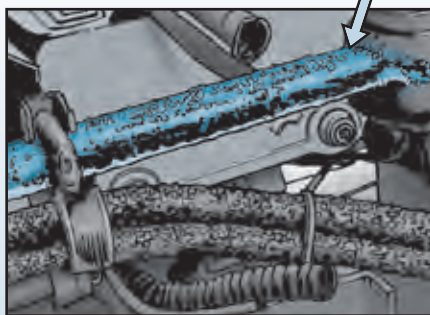
The 8V9TA Detroit Diesel engine used in some tactical vehicles is a two-stroke engine. A natural output of that type of engine is slobber, which is partially burned fuel and condensation that drains out of the hoses connected to the air box. This usually happens during long periods of low idling.

The best way to prevent this is to run the engine hard, under load, until it reaches normal operating temperatures. That'll help clobber your slobber problems.

*Half-Mast*



Finding oil drips on the floor? Low idle could be the culprit



Slobber from engine air box

NO MORE SPITTOONS FOR ME!

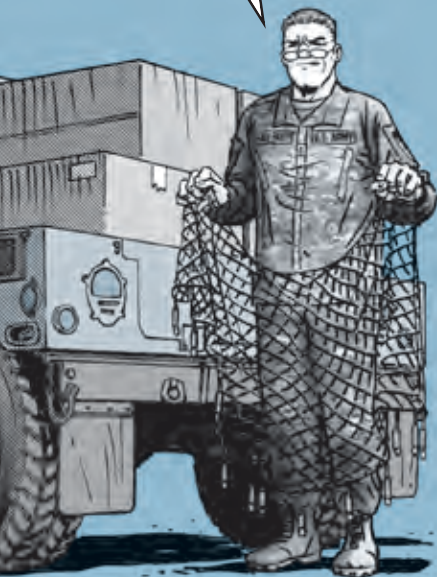


AND NOT A MOMENT TOO SOON!



# Your BEST Bet? A CARGO NET!

A CARGO NET IS YOUR  
**BEST BET FOR SAFETY AND  
SECURITY ANYTIME YOU'RE  
HAULING STUFF.**



An interior cargo net keeps gear in place and prevents stuff from hitting the driver or passengers if the vehicle swerves or rolls over.



A net **also** keeps gear from bouncing around the cargo bay where it'll likely get broken or damaged.



An exterior cargo net does the same thing for your bigger loads outside. Use one to keep your load from hitting the road!



Some of the more common cargo nets may fit multiple vehicles or have additional capabilities. But it's up to each unit to determine which nets best meet their needs.

Here are common nets referenced in the TMs:

- Interior containment net, NSN 3940-01-509-9096, for all HMMWV models except M997A3, M1113 and M1167 (may also be used as an exterior net on HMMWVs with rear open cargo beds).
- Additional cargo tie-down net, NSN 3990-01-429-9352, for HMMWV model series M1114, M1151, M1152 and M1165.
- Additional cargo tie-down net, NSN 5340-01-415-8672, for HMMWV models M1151, M1151A1, and M1167.
- Cargo net for M1101 and M1102 trailers comes in accessory kit, NSN 2540-01-483-5853.
- Exterior cargo net, NSN 3990-01-603-9090, for MaxxPro M1235A4, M1235A5, and M1266A1.

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# Landing Leg Wheels Upgrade

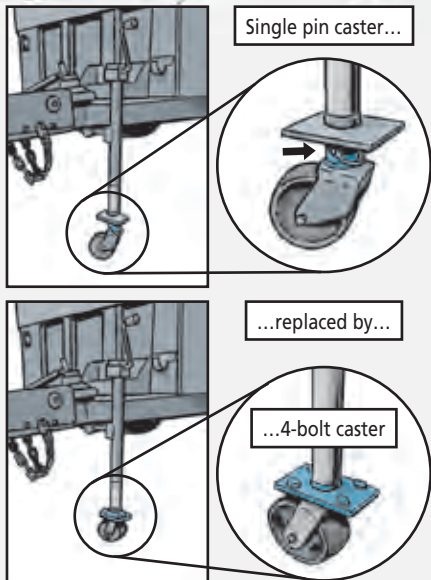


**T**he single pin caster wheels for the M1101/M1102 trailers' landing legs have been replaced by a **4-bolt caster**, with the same NSN 5340-01-611-2350.

Note, this 4-bolt caster appears as Item 7 of Group 1507 in TM 9-2330-392-13&P (Dec 12). It should also appear as Item 15, *but* the TM still shows the single pin caster as Item 15.

Until the TM is updated, make a note of this change.

Thanks to **CW3 Brandon T. Layne** of the Kentucky Army National Guard for this caster catch!



## M149A2 Water Buffalo Master Cylinder

Order a replacement master cylinder for the M149A2 water buffalo trailer with NSN 2530-01-339-8620. This replaces NSN 2530-00-204-4800, shown as Item 4 in Fig 7 of TM 9-2330-267-13&P (Dec 15), which is a terminal item.

## 8816M BMPM...

OPERATORS, KEEP THESE TIPS AND PROCEDURES IN MIND **BEFORE** CRANKING UP YOUR 8816M BITUMINOUS MATERIAL PAVING MACHINE—YOUR BMPM—AT THE WORKSITE.

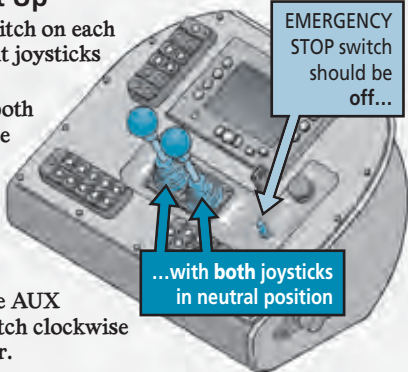


# PAVE THE WAY TO A SMOOTH START

These reminders can mean the difference between efficient paving and unnecessary down time.

## Start Up

1. Make sure the EMERGENCY STOP switch on each control panel is off and the left and right joysticks are in the neutral position.
2. Set the RUN/STOP toggle switches on both the left and right control pedestals to the STOP position.
3. Make sure the BMPM's BATTERY DISCONNECT switch is set to ON.
4. Set either the left or right RUN/STOP toggle switches to the RUN position.
5. Turn the keyless switch clockwise to the AUX position. Then continue turning the switch clockwise to the IGN position to engage the starter.
6. Release the switch back to the AUX position once the engine starts.



**Caution:** Don't operate the starter for longer than 10 to 15 seconds at a time. If the engine doesn't start, release the keyless engine switch back to the AUX position and allow the starter to cool for two to three minutes. Otherwise, you may **damage** the starter.

## 10-Minute Warm-Up

The engine needs to warm up for 10 minutes in cold weather before the BMPM is operated. Warm-up allows the vehicle's hydraulic oil to circulate for smooth operation. You'll find this info in WP 0006-3 of TM 5-3895-385-10 (Nov 11).

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

## Don't Use Spray Can Ether!

This can't be emphasized enough. **DO NOT USE SPRAY ETHER** as a starting aid for the paving machine's engine!

The engine has an intake air pre-heater. Using ether spray might cause a fire or explosion that could *kill* someone!



8816M BMPM...

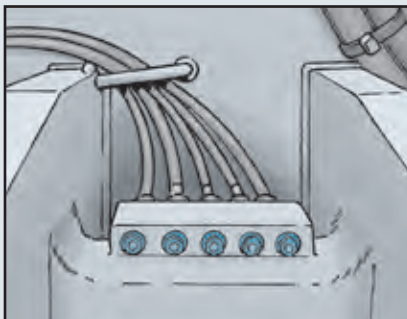
HEY!  
HOLD UP!

YOU  
FORGOT  
TO GREASE  
THE  
CONVEYOR!

# PAVE THE WAY TO PM

Operators, a little lube in the right place means smoother paving operations for your 8816M bituminous material paving machine (BMPM). And the conveyor grease fittings definitely qualify as the right place!

The bank of five conveyor grease fittings is located under the BMPM's hopper wing in the middle of the track on the right side. These fittings are usually coated with dirt and sand, so make sure you wipe them off before starting the lube job.



Lube conveyor grease fittings daily with GAA

Follow the -10 TM and make sure these fittings get greased daily. Each fitting will need four to five shots of GAA.

And if  
any of the  
fittings clog  
and won't take  
grease, report  
it **RIGHT**  
AWAY.



M30 Bridge Erection Boat...

## ADAPTER PALLET CABLE NEEDS BACKUP!

YOU *STILL* NEED  
TO KEEP A *CLOSE*  
EYE ON LIFTING  
CABLES.

BUT YOU CAN  
COUNT ON ME  
TO SERVE AS  
*BACKUP!*

**T**he M15 bridge adapter pallet (BAP) is used to launch and retrieve the new M30 bridge erection boat (BEB). A new BAP is issued with every M30.

But be aware there are reports of damage to the high stress areas near the cable's bullet on older BAPs.

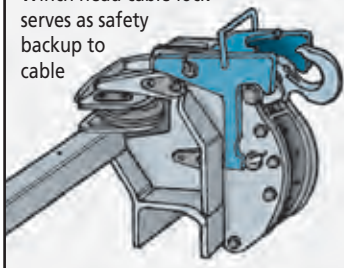
Watch high  
stress areas  
for cable  
damage



That could mean failure and an accident if the cable deteriorates enough. PMCS for the BAP's cable is covered as Item 14 in WP 0035-8 of TM 5-3990-263-13&P (Apr 12). Pay special attention to the area where the cable enters the bullet. Tell your mechanic if the cable has broken wire strands or lots of wear.

As an added safety measure, a winch head cable lock (WHCL) was designed to prevent equipment damage and personnel injury because of cable failure.

Winch head cable lock  
serves as safety  
backup to  
cable



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



Use the WHCL when you launch or retrieve the BEB to the ground without the BAP. **One WHCL**, NSN 3950-20-011-8856, is now issued with each BAP and becomes part of the M15's basic issue items (BII).

Shipments of the WHCL will begin this year with one for each previously issued M15 BAP. Units will receive them as free issue.

D7G, D8K  
Dozers...

# NIX THE **SLAM-BAM** SHIFTING!



ALL THIS SHIFTING  
ON THE FLY IS  
WEARING ME OUT!

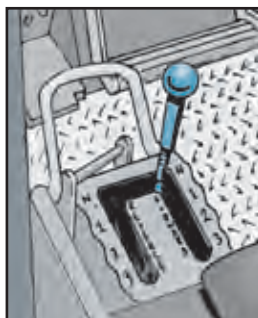


YEAH! COME  
ON, DRIVERS!  
STOP BEING SO  
SHIFTY. YOU'RE  
DAMAGING US!

OPERATORS,  
YOU NEED TO  
**COOL IT ON**  
THE **SLAM-BAM**  
GEAR SHIFTING  
AT THE WORK  
SITE.

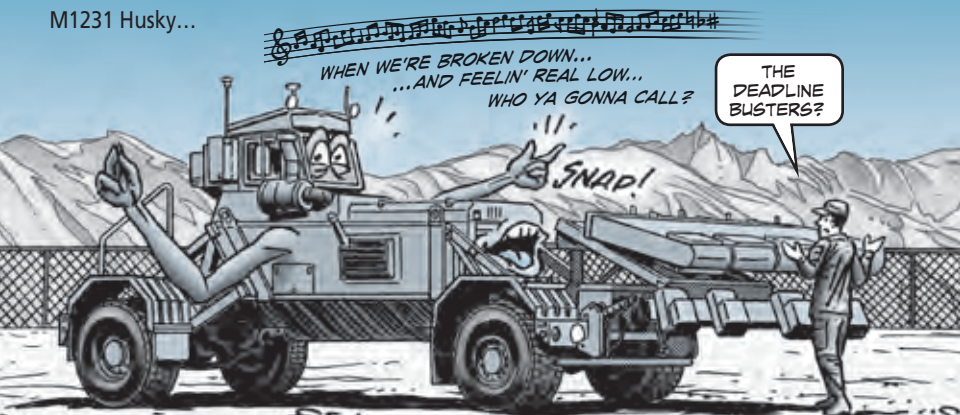
Slamming the shifter  
sideways from  
neutral, then down  
into reverse, will  
**break** the backup  
alarm's magnetic  
switch inside the  
shift console.

A busted switch  
means the backup  
alarms *won't* sound  
off in reverse. That  
makes your dozer  
**NMC!**



Slamming shifter will break  
magnetic switch

M1231 Husky...



## Got a Maintenance Issue? *We've Got the Contacts!*

**M**any components on the M1231 Husky Mounted Detection System (HMDS) need specialized attention to keep the ground penetrating radar (GPR) running smoothly and mission-ready.v

### These HMDS components include:

- System cabling
- Control and Display Unit (CDU)
- Cabin Control Unit (CCU)
- Speakerphone
- Vehicle Motion Sensor (VMS)
- Power Control Unit (PCU)
- Ethernet Control Unit (ECU)
- Marking fluid reservoir
- Mission Computer (MC)
- Position Synthesis Module (PSM)
- HMDS circuit breaker
- Hydraulic Control Unit (HCU)
- Front marking bar
- GPR panel array
- Radar Mounting and Positioning System (RMPS)
- Marking fluid pump

If you have comments or questions about the installation, removal, troubleshooting, repair and calibration of these HMDS components, contact the following Contractor Logistics Support (CLS) POCs:

- > Mark Locke, Maintenance Team Chief: [mark.c.locke.ctr@mail.mil](mailto:mark.c.locke.ctr@mail.mil)
- > Rusty Jarrett, Fielding Manager: [normand.c.jarrett.civ@mail.mil](mailto:normand.c.jarrett.civ@mail.mil)

A maintenance mailbox is also available for questions:  
[usarmy.belvoir.peo-iwms.mbx.  
pm-ts-ceh-hmms-maint@mail.mil](mailto:usarmy.belvoir.peo-iwms.mbx.pm-ts-ceh-hmms-maint@mail.mil)

You can also send an email to the HMDS maintenance mailbox by scanning this QR code with your smart phone:



All Aircraft...

# Put an End to FOD

THE **BEST**  
DEFENSE  
AGAINST  
FOD IS  
**YOU.**

MAKE  
REGULAR  
FOD  
CHECKS  
ROUTINE.

**P**utting an end to foreign object damage starts with your taking steps to check for foreign object debris (FOD) on the flight line and picking it up.

On the flight line or anyplace where aircraft land, FOD is a never-ending battle. So make FOD checks a regular part of your routine.

For more info on the FOD program, check out Para 28 of DA PAM 385-90, *Army Aviation Accident Prevention*.

## When you're on the flight line:

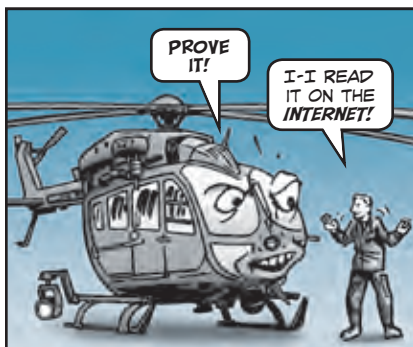
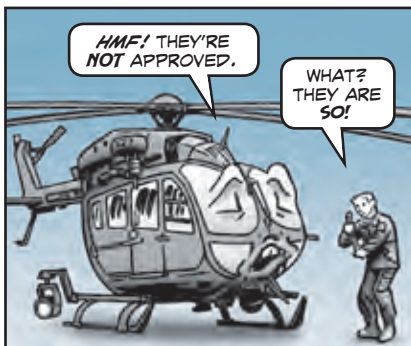
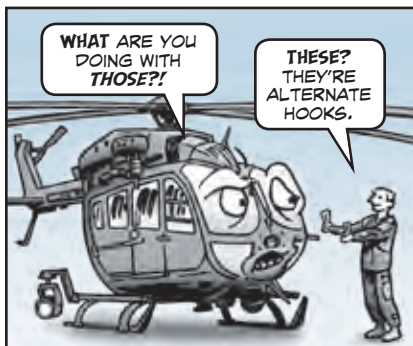
- conduct regular FOD walks.
- perform FOD sweeps with ground equipment.
- maintain clean and orderly work areas to ensure a safe and FOD-free environment.
- be aware of what's on the ground around you at all times when the aircraft rotors or propellers are turning.
- emphasize your FOD program with training, involvement and teamwork.

Get the **facts** on safety issues from the U.S. Army Combat Readiness Center website at: <https://safety.army.mil>

FOD CHECKS  
CAN SAVE YOUR  
**AIRCRAFT**  
AND  
**YOUR LIFE!**



# ALTERNATE RESCUE HOOKS **APPROVED**



THERE'S A LOT OF CHATTER ABOUT WHICH HOIST HOOKS **ARE** OR **AREN'T** APPROVED FOR THE LAKOTA. WE'VE GOT THE OFFICIAL WORD...

The Lakota's Goodrich rescue hoist comes with a **hook damper**, PN 44307-480-2, and **slide lock rescue hook**, NSN 4030-01-583-4063 (PN 42315-490), that are installed at the factory.

**Both** are covered under contractor logistics support (CLS).

## Covered by CLS

Standard side lock hook  
42315-490





Component Maintenance Manual (CMM) 25-00-29-1 has **two more options** listed in the illustrated parts list.

**OPTION 1** is hook damper, PN 44307-480-1, with **D-lok hook**, NSN 4030-01-601-4980 (PN 42315-488), installed.

**OPTION 2** is hook damper, PN 44370-480, with **standard hook**, PN 42305-283, installed.

Both combinations work with the **hook damper** (PN 44307-480-2) currently installed on the Goodrich rescue hoist.

Note, because of its auto-lock feature, using the D-lok hook **doesn't** require the steel O-ring listed in SOF H-72-17-SOF-02.

However, neither the **slide lock**, PN 42315-490, or the **standard hook**, PN 42305-283, has the auto-lock feature, so **all** requirements of SOF H-72-17-SOF-02 **must** be followed when using those components.

**Not covered by CLS**

Alternate  
D-lok hook  
42315-488



Alternate  
standard hook  
42305-283



IF UNITS  
DECIDE TO  
PURCHASE  
THESE  
ALTERNATE  
HOOKS...

...KEEP IN  
MIND THEY ARE  
**NOT** COVERED  
BY THE CLS  
CONTRACT FOR  
SUPPORT.

The options in the CMM help standardize platforms for rescue hoist operations. There was no need for an airworthiness release for the alternate hooks since they're covered in the CMM.

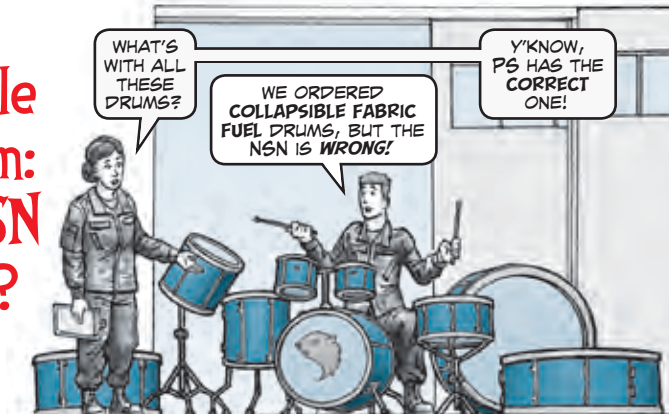
LAKOTA UNITS THAT  
DECIDE TO INSTALL AN  
ALTERNATE RESCUE HOOK  
ON THEIR HOIST ASSUME  
ALL RESPONSIBILITY FOR  
PROCUREMENT, OPERATION  
AND SUSTAINMENT.

BE SURE TO FOLLOW  
THE CMM **EXACTLY** WHEN  
INSTALLING ALTERNATE  
HOOKS. AND IT'S  
RECOMMENDED YOU  
**TAG AND STORE** ANY  
SERVICEABLE STANDARD  
HOOKS FOR FUTURE USE.



AAFARS...

# Collapsible Fuel Drum: Which NSN Is Right?



**M**echanics, Item 60 in Table 1 of the Mandatory Replacement Parts list of TM 10-4930-351-13 (Apr 11) and Item 1 in Fig 55 of TM 10 4930-351-24P (Jun 11) have the **wrong** NSN listed. NSN 8110-01-515-4727 for the Advanced Aviation Forward Area Refueling Station's (AAFARS) collapsible fabric fuel drum is an **invalid** item.



THE **CORRECT** NSN IS 8110-01-482-9152. IT'S LISTED AS **ITEM 4** IN TABLE 1 OF THE COMPONENTS OF END ITEM LIST IN TM 10-4930-351-13.

TACOM will revise the TM to fix that and other issues. If you find **other** mistakes, submit a DA Form 2028, *Recommended Changes to Publications and Blank Forms*, to TACOM using one of the following methods:

The **preferred and quickest way** is through the TULSA DA Form 2028 website:

<https://tulsa.tacom.army.mil/da2028/da2028.cfm>

You can **also** email a completed DA Form 2028 in PDF format to the EPCO at:

[usarmy.detroit.tacom.mbx.ilsc-tech-pubs@mail.mil](mailto:usarmy.detroit.tacom.mbx.ilsc-tech-pubs@mail.mil)

**DOWNLOAD THE  
FORM FROM:**

[https://armypubs.army.mil/  
ProductMaps/PubForm/DAForm.aspx](https://armypubs.army.mil/ProductMaps/PubForm/DAForm.aspx)

**Mail a completed  
DA Form 2028 to:**

**Fax a completed  
DA Form 2028 to:**  
DSN 786-1856 or  
(586) 282-1856.

U.S. Army Tank-automotive and  
Armaments Command  
ATTN: AMSTA-LCL-IMP/Tech Pubs  
MS #727; 6501 E. 11 Mile Road  
Warren, MI 48397-5000

**Questions about the  
new procedures?  
Send an email to:**  
[usarmy.detroit.tacom.  
mbx.ilsc-tech-pubs@  
mail.mil](mailto:usarmy.detroit.tacom.mbx.ilsc-tech-pubs@mail.mil)

For overall problems or concerns with TACOM equipment, let your voice be heard by submitting a Collaborative Readiness Problem Solving (CREPS) report online:

[https://gfs.tacom.army.mil/  
hd/default.cfm?p=nt&cz=128](https://gfs.tacom.army.mil/hd/default.cfm?p=nt&cz=128)

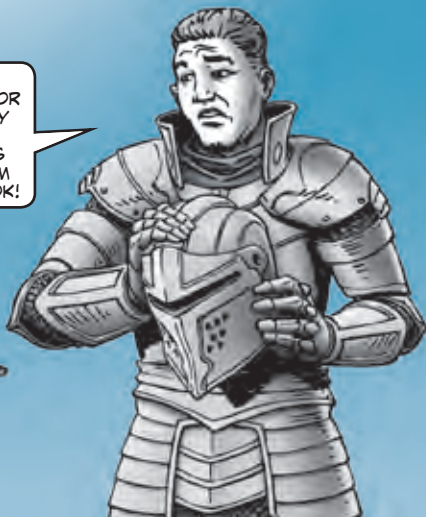


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WHY ARE YOU WEARING THAT?!

UNITS ARE RESPONSIBLE FOR ALL FLEX BODY ARMOR NOW... AND OUR GUYS ORDERED FROM THE **WRONG** BOOK!



## Need Flex Body Armor?

THE AIR WARRIOR OFFICE IS NO LONGER ISSUING BODY ARMOR. CHECK OUT THE DETAILS!



Units, PM Air Warrior has been issuing flex body armor for more than 10 years. But they are now *out* of the flex body armor business.

Order body armor from supply



All flex body armor is the unit's responsibility and should be on unit property books for issue to deploying Soldiers.

If your unit *doesn't* have inserts to install in the flex body armor covers, you've got two choices:

1. Check with other units in your state that are not deploying to get inserts from those units.
2. Order them through the supply system.

Here are the NSNs:

| Size | NSN 8470-   | PN        |
|------|-------------|-----------|
| XS   | 01-525-8046 | 1005910-1 |
| S    | 01-525-8047 | 1005910-3 |
| M    | 01-525-8048 | 1005910-5 |
| L    | 01-525-8050 | 1005910-7 |
| XL   | 01-525-8051 | 1005910-9 |



**MEDEVAC** operators are asking about the use of skid shoes on approved rescue baskets and litters. After reviewing the details and drawings of the skid shoes, the Aviation Engineering Directorate (AED) concluded that no AED approval is required for their use.



Use of skid shoes should extend the service life of the equipment while also protecting the aircraft floor from damage.

Skid shoe product information and pricing are available through Lifesaving Systems Corporation. Contact a rep at (813) 645-2748 or online:

<http://www.lifesavingsystems.com>



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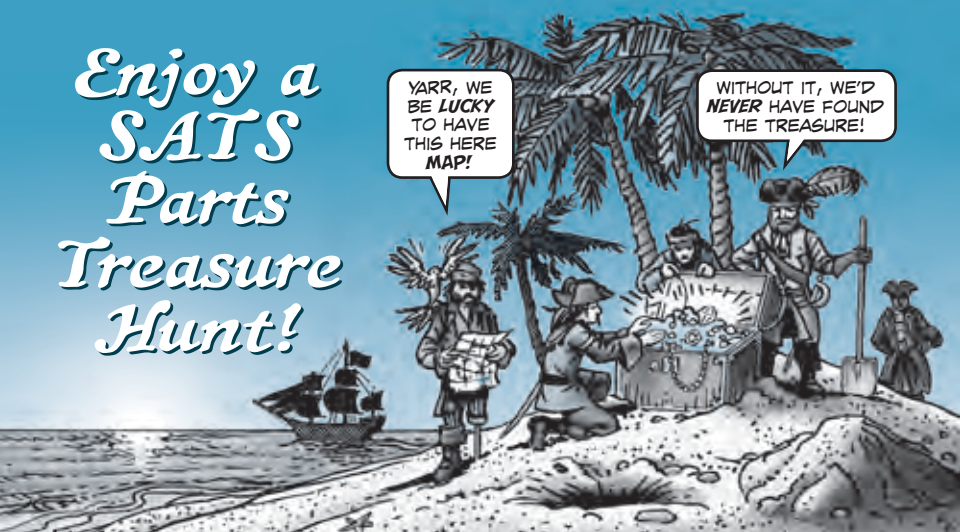
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| D7R II--Blade float indicator check               | 799 60   | Turret traversing handle replacement     | 801 12   |
| D7R II--Hydraulic filter clearance                | 797 16   | Unauthorized modifications               | 799 10   |
| D7R II--Idling after startup                      | 797 17   | Up-armored--Ball joint NSN               | 803 60   |
| D7R II--Track adjuster O-ring seal                | 794 18   | <b>TRUCK, FMTV</b>                       |          |
| <b>TRACTOR, D8K</b>                               |          | A1/A1P2--Electrical system part NSNs     | 801 10   |
| Gear shifting precaution                          | 804 19   | A1/A1P2--Tire wear indicators            | 794 13   |
| <b>TRAILERS</b>                                   |          | A1P2--Door shock absorber NSN            | 798 17   |
| Cargo net NSNs                                    | 804 14   | A1P2--EHPU cap NSN                       | 797 61   |
| M149A2--Hose assembly NSN                         | 802 61   | A1P2--Lift cylinder NSN                  | 796 61   |
| M149A2--Master cylinder NSN                       | 803 60   | A1P2--Window latch NSN                   | 795 15   |
| M149A2--Master cylinder NSN                       | 804 15   | A/C belt NSNs                            | 798 16   |
| M1076--Air chamber dust cap NSNs                  | 803 14   | A/C refrigerant pressure by temperature  | 801 14   |
| M1082, M1095--Tire & wheel assembly NSN           | 803 61   | CTIS electronic control module, A0 vs A1 | 797 14   |
| M1095--ABS light caps                             | 797 61   | Door handle parts NSNs                   | 797 60   |
| M1101--Shackle nut NSN                            | 799 61   | Gunner's platform NSN                    | 803 13   |
| M1101, M1102--Brake drum NSN                      | 798 61   | LTAS--Heater switch NSN                  | 796 13   |
| M1101, M1102--Cover kit NSN                       | 798 61   | LTAS--Tow bar decal NSNs                 | 801 11   |
|   |          | LTAS--Transmission control valve module  | 803 60   |

| Subject                                      | Issue/Pg | Subject   | Issue/Pg |
|--|----------|---|----------|
| M1078A1--Mud flap, splash guard NSNs         | 803 14   | Shock absorber PM tips                            | 795 06   |
| M1087A1P2--Side platform parts list          | 797 12   | Towing techniques explained                       | 800 08   |
| M1089A1P2--20-ton jack, amber light in BII   | 797 61   | Track tension, cdr's hatch, ramp, idler wheels... | 801 27   |
| M1157A1P2--HVAC system parts                 | 800 12   | Transmission housing cleaning                     | 798 08   |
| Packing wheel bearings                       | 802 14   | <b>VEHICLE, MRAP</b>                              |          |
| Power steering gasket NSN                    | 797 61   | Doors, hatches need glow-in-the-dark tape         | 802 16   |
| Spare wheel assy for trucks                  | 798 15   | M-ATV--Cab drain plugs                            | 796 14   |
| Towing FMTV/LTAS vehicles                    | 795 12   | <b>VEHICLE, RECOVERY, M88-SERIES</b>              |          |
| Transmission parts reversed                  | 803 10   | A1--Road wheel arm bearing lube                   | 801 04   |
| Troop seats and safety straps                | 800 10   | A2--AFES PM tips                                  | 804 06   |
| <b>TRUCK, HEMTT</b>                          |          | A2--Engine fire prevention checks                 | 802 06   |
| Battery liner prevents corrosion             | 794 12   | A2--Engine fire prevention flipbook               | 801 03   |
| Fuel containment berms                       | 797 15   | A2--Engine fires: oil levels and batteries        | 803 02   |
| Fuel tanker cleaning instructions            | 803 61   | A2--Fuel injection lines faulty                   | 800 06   |
| M978--Main pump motor NSN                    | 798 17   | A2--Tarp NSN for full vehicle                     | 794 03   |
| M978-Series--Purging info                    | 804 60   | Hatch lever check                                 | 798 11   |
| M983A4 LET--Fifth wheel mount screws         | 800 15   | Transmission oil filter mounting bolt sequence    | 795 09   |
| REBS retrieval cautions                      | 796 18   | <b>VEHICLE, STRYKER</b>                           |          |
| Towing FMTV/LTAS vehicles                    | 795 12   | Armor panel damaged by winch cable                | 800 07   |
| <b>TRUCK, M878 YARD TRACTOR</b>              |          | Brake check before shutdown                       | 797 06   |
| A2--Backup alarm NSN                         | 794 15   | Bustle rack, cargo nets for storage               | 799 04   |
| <b>TRUCK, M915-SERIES</b>                    |          | Cargo net NSNs                                    | 796 03   |
| M915A5--Front hub rubber fill plug NSN       | 796 13   | Driver's hatch stay device, detent assembly       | 804 03   |
| M915-Series--Coolant filter kit              | 800 61   | DVE cable routing                                 | 796 02   |
| M917A2--Tire & wheel assy components         | 802 60   | Fuel injector line inspection                     | 797 07   |
| <b>TRUCK, M1070 HET</b>                      |          | Fuel shutoff switch damage                        | 798 05   |
| A1--Engine fan clutch NSN                    | 794 61   | Height management system                          | 804 04   |
| <b>TRUCK, PALLETIZED LOADING (PLS)</b>       |          | Hub seal replacement                              | 803 07   |
| Cold weather pubs, no ether for starts       | 795 10   | ITH headset troubleshooting, repair parts         | 803 08   |
| M1075-Series--Transfer case training         | 802 11   | M1135 NBCRV--Detection PM tips                    | 804 44   |
| <b>TRUCKS, GENERAL</b>                       |          | Start-up and shutdown procedures                  | 797 08   |
| Brake chamber dust cap NSNs                  | 800 14   | Steering damper damage, leaks                     | 797 02   |
| Cargo net NSNs                               | 804 14   | VV-Hull--Control arm assembly adjustment          | 794 02   |
| Diesel engine slobber                        | 804 13   | <b>VEHICLES, COMBAT</b>                           |          |
| OGPK transparent armor glass installation    | 796 09   | Service kit NSNs                                  | 798 12   |
| Service kit NSNs                             | 798 12   | <b>WATERCRAFT</b>                                 |          |
| Universal high-flow ground tire inflator kit | 796 10   | DA Pam 750-8 update                               | 795 20   |
| Windshield washer fluid                      | 804 61   | Diving equipment, boats, motors POC               | 794 61   |
| <b>VEHICLE, FIGHTING, M2/M3 BRADLEY</b>      |          | M30 BEB--M15 bridge adapter pallet                | 804 18   |
| DVDB turn-in                                 | 803 07   | MKII--Artwork correction (794-19)                 | 799 60   |
| Engine access door hydraulic reservoir       | 798 06   | MKII--Bilge drain plug location                   | 794 19   |
| M242--14-pin connector damage                | 802 04   | MK-7 life raft replacements                       | 800 18   |
| M242--91F, recoil damper fluid, lockwire...  | 799 02   | <b>WELDING</b>                                    |          |
| M242--Installation tips                      | 794 07   | Gas cylinder turn-in, delivery                    | 802 50   |
| M242--Track & bolt assemblies stay together  | 794 08   | SEW--Repair parts listing                         | 800 36   |
| Oil level checks                             | 804 08   | <b>WIRE ROPE</b>                                  |          |
| Ramp and door seal check                     | 796 04   | Wire rope NSNs                                    | 794 15   |



# Enjoy a SATS Parts Treasure Hunt!



**I**n a tool set as huge as the standard auto tool set (SATS), sometimes it's hard to find tool and part NSNs.

Here's a roundup of recent answers to PS reader questions on SATS NSNs:

- 4-ft ramp, NSN 3990-01-603-1279
- 14-ft ramp with box, NSN 3990-01-628-2644
- 14-ft ramp without box, NSN 3990-01-603-1275
- guard rails (9 each), NSN 5340-01-629-9242
- keyhole strap assembly (14 each), NSN 5340-01-629-9583
- hook strap assembly (2 each), NSN 5340-01-629-9561
- threshold plate, NSN 5340-01-603-1286
- carbon monoxide detector, NSN 6350-01-612-6014
- environmental control unit (ECU) pig tail, NSN 6150-01-658-5433
- trailer basic issue items (BII) box, NSN 2540-01-679-3053

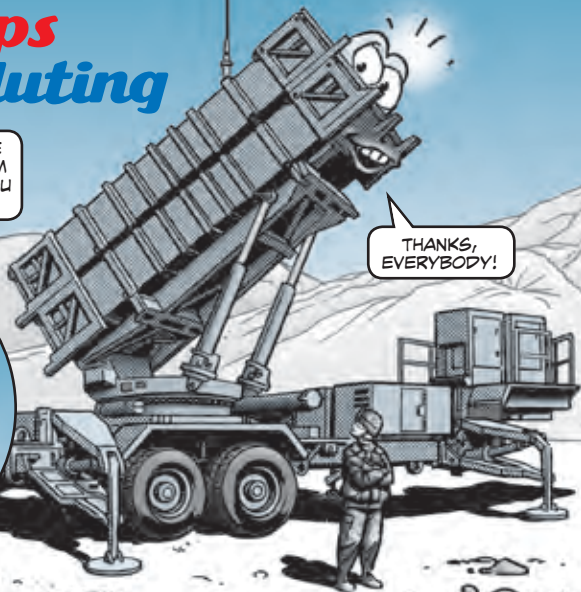
**Don't forget** there's a 91-page pictorial guide to every tool and drawer in SATS. The guide lists only part numbers, not NSNs. Those can generally be found in CL 4910-95-A81.

If you would like a copy of the guide, email PS: [usarmy.redstone.asc.mbx.psmag@mail.mil](mailto:usarmy.redstone.asc.mbx.psmag@mail.mil)

# Patriot Tips Worth Saluting

HERE ARE SOME  
GOOD TIPS FROM  
FT HOOD FOR YOU  
PATRIOTEERS!

THANKS,  
EVERYBODY!



Dear Editor,

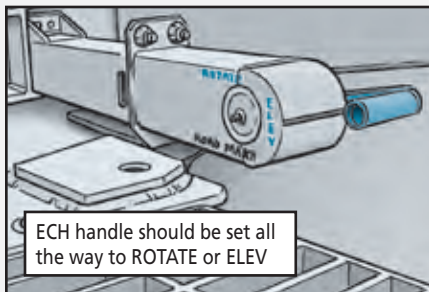
We've come up with a few tips that will save other Patriot Missile units time and trouble.

- **Remember that pulling out the embedded data recorder no longer reboots the system.** That used to be the standard check to see if the recorder was good. But the update to the Modern Man Station changed that.
- **Because of the Combined Cryptographic Modernization Phase-1 (CCMP-1) upgrade, you must follow the boot up steps in the ECS -10 TM exactly.** If you don't, you put faults in the system that lead to needless troubleshooting.

- **Put the engagement control handle (ECH) all the way to either ROTATE or ELEV when you rotate or raise the launcher.** If the handle isn't completely set to one of the two positions, it eventually gets damaged. Plus, this can cause faults in the launcher system.

If the handle becomes difficult to move, don't jerk it. That can damage it. Your unit maintenance can adjust the handle so it's easier to shift.

- **Don't forget the PAC 2 launcher's motor control unit (MCU) circuit breaker.** If it's not turned off, the launcher can unexpectedly slew during maintenance. Just remember the circuit breaker must be turned back on to move the launcher. This isn't a problem with the PAC 3.



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

- **Keep launcher cables tied back.** Always check the launcher for dangling cables before you operate. Unsecured, cables snag and get ripped out when the launcher traverses. One Patriot unit lost a launcher J box along with its cable and wiring harness because all the cables weren't tied back. That cost them almost \$500K in repairs.

WO1 Kayla Wilkes  
SGT Travis Blackburn

**Editor's note:** *Excellent tips! Follow the TM for your launcher version for where to tie back cables.*

*Use launcher cable clamp assemblies, NSN 4030-01-582-8341, to secure them.*

M16-Series Rifles, M4/M4A1 Carbines...

## WHAT SLINGS ARE AVAILABLE?

Dear Half-Mast,  
Are there any slings available for the M16 rifle and the M4 carbine other than the classic black sling and the quick-release sling?

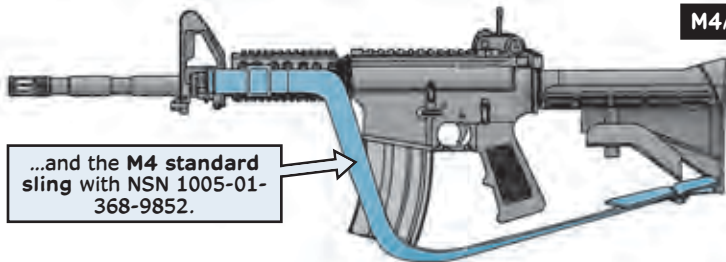
1LT L.E.

NO, SIR, THOSE ARE STILL THE **ONLY** APPROVED SLINGS FOR THE M16 AND M4.



**M16A3/M16A4**

Order the **M16 standard sling** with NSN 1005-01-216-4510 and...



**M4/M4A1**

...and the **M4 standard sling** with NSN 1005-01-368-9852.

The tactical quick-release sling for both the M16 and M4 comes with NSN 1005-01-562-9457.

# How To **STOP** M2/M2A1 Damage!



TOO MANY M2S AND M2A1S ARE BEING **DAMAGED** BECAUSE SOLDIERS **AREN'T** THOROUGHLY TRAINED ON HOW TO FIRE AND MAINTAIN THEM.

HERE'S WHAT UNITS NEED TO DO TO STOP THAT DAMAGE.

**S**ince Jan 2018, there've been 40 reported M2/M2A1 machine gun firing incidents resulting in damage to weapons. There are likely many more unreported incidents.

More than half of the incidents involved improper barrel installation. The barrels' alignment pins were sheared off and the barrels had to be replaced at a cost of more than \$1K each.

Most of this damage could've been avoided if units had required more training of gunners before certifying them to fire M2s.



## TRAINING SHOULD INCLUDE:

- emplacing the tripod.
- installing the weapon on a tripod or pedestal mount.
- properly installing the barrel.
- proper loading.
- determining distance to targets.
- engaging targets correctly.
- clearing weapon stoppages.
- diagnosing malfunctions.
- disassembly and assembly.
- required cleaning and lubing.

**Until Soldiers can demonstrate ability to do each task, they *shouldn't* be certified as an M2/M2A1 operator.**

**These checks shouldn't be considered one-and-done.**

**Soldiers, like everyone else, forget skills. Refresher training is a *must*.**



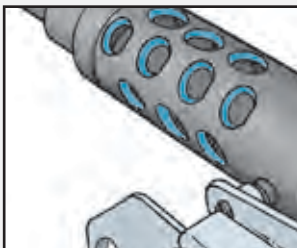
## M2 and M2A1 Differences



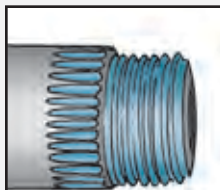
OF COURSE, SOLDIERS NEED TO BE ABLE TO TELL AT A GLANCE WHETHER THEY HAVE AN M2 OR AN M2A1.

HERE'S WHAT TO LOOK FOR...

The **M2** has round holes in the barrel support and its barrel has notches and uninterrupted threading.

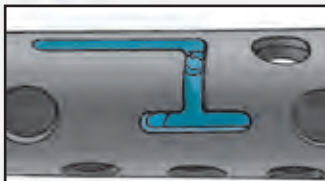


M2 has round holes in barrel support...

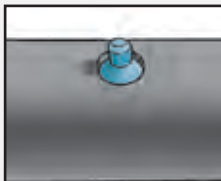


...barrel notches and uninterrupted threading

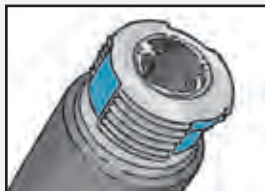
The **M2A1** has a zig-zag slot in the barrel support and its barrel has an alignment pin, an interrupted thread design and no notches.



M2A1 has zig-zag slot in barrel support...



...alignment pin...



...and interrupted thread design with no notches

It's critical to know *which* M2 you have.

**M2s** must be headspaced and timed by the operator *each time* they're fired or the barrel is changed.

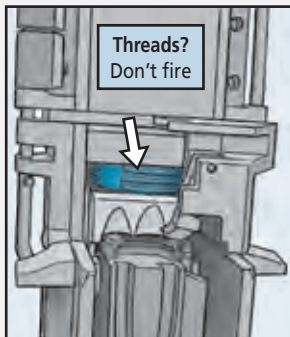
**M2A1s** don't need to be headspaced and timed by the operator, *but* headspace and timing **must** be checked by the armorer.

Many M2A1 barrels are ruined because operators don't screw them all the way into the barrel extension.

One simple check **prevents** that. Before firing, check for barrel threads in front of the barrel extension.

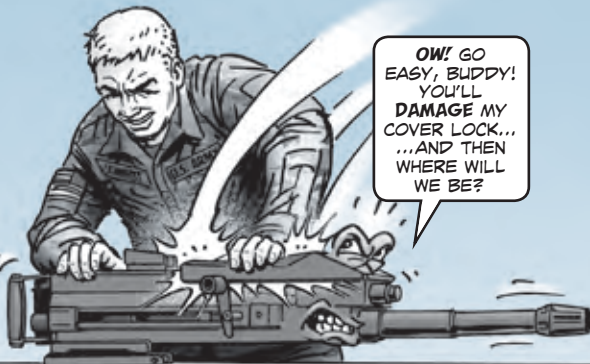
If you see threads, the barrel is not fully screwed in.

**No threads?**  
You're good to fire.



**Train, train, train to prevent more M2/M2A1 damage.**

# **STOP** **Slamming** **and** **Jamming!**

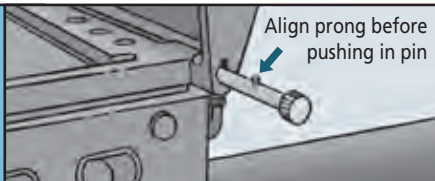


**E**ven on a heavy-duty weapon like the MK 19 machine gun, slamming and jamming can cause heavy-duty damage. Remember these rules, gunners, to keep you and your MK 19 out of jams:

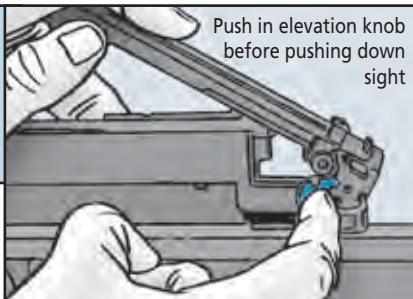
- **Guide the feed tray cover to the latched position.** Never let the cover slam down. If you slam the cover down, the cover lock is damaged. Then you can't lock the cover in place. If that's not enough, slamming also knocks the primary drive lever out of alignment with the secondary drive lever. That causes feeding problems.

Push the secondary drive lever all the way to the right and then guide the cover down, making sure the two levers mate. If they won't mate, you probably have a problem with the feed slide guide rod spring. Your small arms repairman should check it out.

- **Align the feed tray cover pin prong before pushing the pin in place.** If you jam in the pin without aligning the prong, the prong could be snapped off. Then the pin can work out during firing and the cover comes loose.



- **Put the rear sight bar down and push in the elevation screw knob before you push down the sight.** If you forget either step, you'll soon be without a sight. Protect the sight by locking it down when you're not firing.



- **Charge overhanded.** Charge with your hands on top of the charging handles and your palms down. Use a steady and smooth pull for a good charge.

# NOWHERE TO TURN? TURN TO COMET!



## COMET HAS THE ANSWERS!

**COMET stands for Command Maintenance Evaluation and Training team.**

The sole purpose of COMET is to help units solve their logistical problems through both assistance and training.

Since teams are generally composed of retired warrant officers and NCOs, they **know** what they're doing.

They work on **your behalf** and report their findings directly to you.



- PMCS.
- Maintenance management.
- Shop operations.
- Food service operations.
- GCSS-Army Supply.
- GCSS-Army Maintenance.
- Property accountability.
- Supply management.
- Supply support activity operations.
- Publications.
- Unit movement.
- Command Supply Discipline Program.
- Command Maintenance Discipline Program.

**COMET teams are located at Forts:**

- Stewart
- Campbell
- Hood
- Carson
- Riley
- Polk
- Bliss
- Irwin

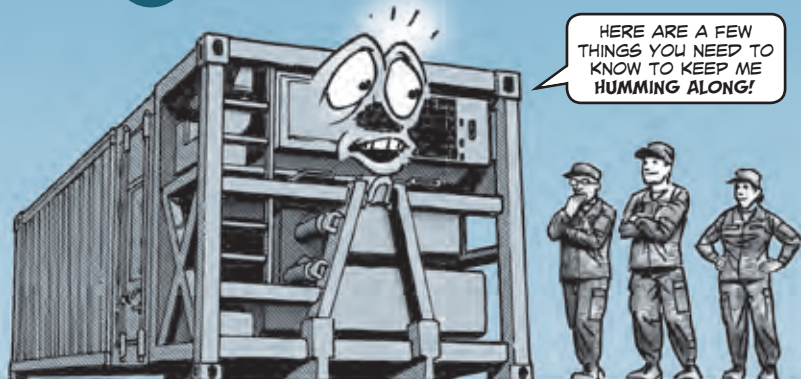
**plus** • Aberdeen Proving Ground  
**and** • Joint Base Lewis-McChord.

COMET teams will **also** come to **YOU.**

You can contact them through your division or brigade's G-4 or S-4 or through the COMET program manager listed below.

For **more information**, contact Willis Bennett at DSN 670-6428, (910) 570-6428, or email: [willis.m.bennett.ctr@mail.mil](mailto:willis.m.bennett.ctr@mail.mil)

# SHUT THOSE DOORS, and HEED RAIN CAP CAUTION!



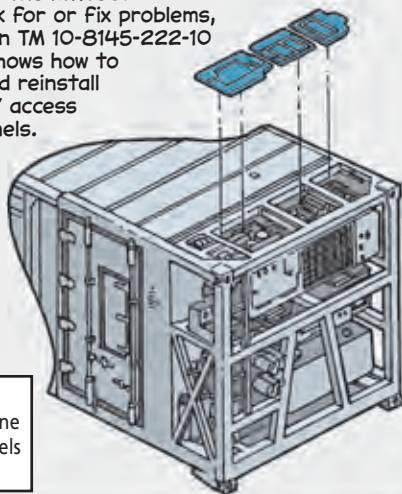
MAINTAINERS AND OPERATORS **AREN'T** FOLLOWING PROPER -10 TM PROCEDURES WITH THE MULTI-TEMPERATURE REFRIGERATED CONTAINER SYSTEM—KNOWN AS MTRCS.



First, it's important for maintainers to close the top engine access panels on the MTRCS.

Leaves, tree branches, bird nests and other debris get into the MTRCS' engine compartment through the open doors. Closing the three top door engine covers is crucial in preventing damage to the MTRCS.

To check for or fix problems, WP 0027 in TM 10-8145-222-10 (Apr 16) shows how to remove and reinstall the doors' access engine panels.



Keep top three engine access panels closed



The MTRCS PMCS instructions also note that the rain cap needs to be functional and properly installed on the end of the engine's exhaust pipe. The rain cap prevents water getting into the engine.

Rain cap must be properly installed and functioning



Gustavo "Gus" Caruso  
402d AFSB Senior Command Rep

NO MATTER THE REASON  
OR THE SEASON, IF THE  
RAIN CAP *ISN'T* WORKING  
PROPERLY...

...THE EQUIPMENT  
IS **DEADLINED**.



**Editor's Note:** *You've certainly capped these problems for us, Gus!*

## IHPS TM Available

The operator's manual for the integrated head protection system (IHPS) is out. TM 10-8470-216-10 (Dec 18) covers the following helmet sizes:

- Small, NSN 8470-01-672-2752
- Medium, NSN 8470-01-672-2727
- Large, NSN 8470-01-672-2383
- X-large, NSN 8470-01-671-9927

TM distribution is restricted, so you'll need to log in with your CAC to:

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

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

## M53A1 Mask TM Released

TM 3-4240-552-13&P (Oct 18) includes the repair parts and special tools list for the following mask sizes:

| M53A1 (Right) | NSN 4240-   | M53A1 (Left) | NSN 4240-   |
|---------------|-------------|--------------|-------------|
| Extra Small   | 01-646-2614 | Extra Small  | 01-646-2717 |
| Small         | 01-646-2709 | Small        | 01-646-2646 |
| Medium        | 01-646-2699 | Medium       | 01-646-2637 |
| Large         | 01-646-2625 | Large        | 01-646-2683 |

TM distribution is restricted, so you'll need to log in with your CAC to:

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

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

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# Help NBCRV Stryker Do Its **Detecting Duty!**



WANT TO HELP  
YOUR NBCRV  
STRYKER STAY ON  
THE DETECTING  
TRAIL? **READ ON!**



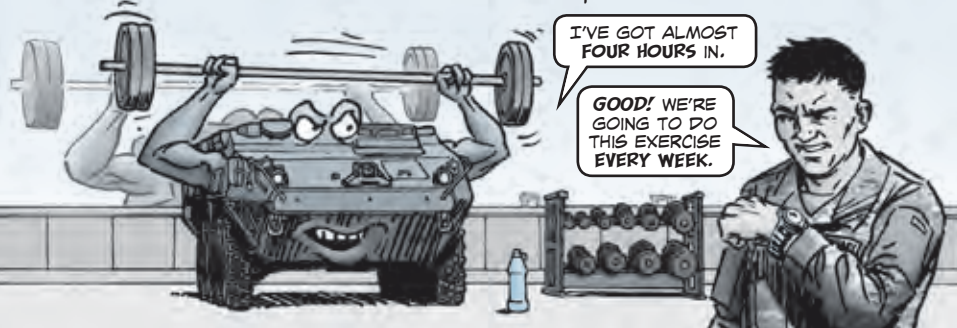
THE M1135  
NBCRV  
STRYKER IS  
CRITICAL IN AN  
ENVIRONMENT  
WITH CBRN  
THREATS.

IF IT **DOESN'T**  
DO ITS  
DETECTING  
JOB, THE  
RESULTS  
COULD BE  
**FATAL.**

HERE ARE  
SOME WAYS  
TO KEEP  
YOU AND  
YOUR NBCRV  
STRYKER  
DETECTING...

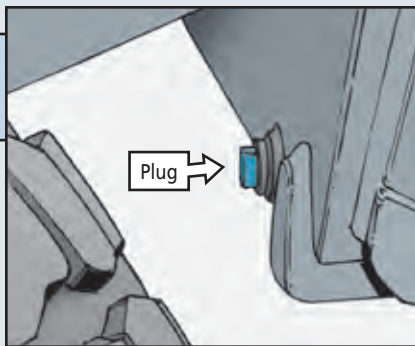
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- **Run the NBCRV Stryker at least four hours weekly while doing a complete PMCS.** If you don't, you'll have guaranteed trouble. The chemical biological mass spectrometer II (CBMS II) needs at least that long to complete its built-in-test (BIT) sequence. That's the only way to find CBMS II problems **before** you go to the field. Plus it cuts down on the time needed for start-up.



Running the NBCRV Stryker for at least four hours weekly also helps dry up moisture. The A/C sucks up moisture that builds up inside the Stryker when it's closed up. The moisture can affect the sensors while leaving the interior a mildew mess. You don't want that cleaning job!

Don't forget to pull the 15 hull drain plugs, too. Water that collects in the hull will eventually damage critical electronics if it's not drained.



Because there's so much PMCS for the NBCRV Stryker, it's a good idea to devote one day just to the sensor suite and another just to the vehicle.

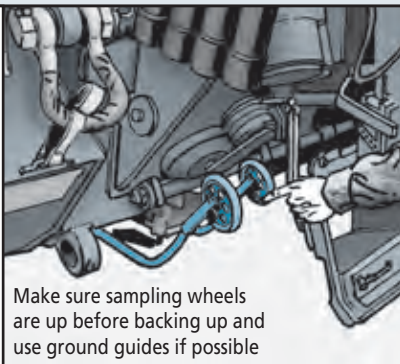


Monthly, run the Stryker CBMS II system for an 8-hour bake out. A bake out purges the system of any contaminants that can interfere with detecting.



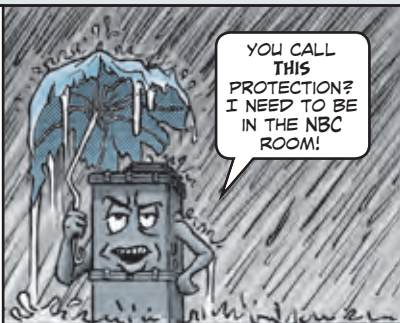
- **Careful with the sampling wheels and lower rear door while backing up.** The wheels were designed to roll forward, not backward. They should go to the standby position 22 inches off the ground when you put the vehicle in reverse. One good bump while you're in reverse can snap them off. The two arms and wheels cost a total of \$2,800 to replace. In a non-tactical situation, use ground guides when backing up.

The lower rear door should be closed before backing up or changing the vehicle's height management system. Otherwise, the door will be damaged.



- **Don't forget the ACADA's M88 detector.** When you're not in the field, the best place for the M88 is in the CBRN room or locked in a shelter. If it's left exposed to the elements, water can seep past its seals. Keep dust caps installed on both the exhaust and inlet valves to seal out dust and moisture. If you need more caps, order them with NSN 5340-01-454-6322.

But remove the caps before you turn the M88 on. Otherwise, the M88's motor will burn out or it could get stuck in BIT mode.



- **Experiment with the tong box position.** For shorter Soldiers especially, it's very difficult to gather samples from inside the Stryker using the glove port. The tong box can be adjusted up and down and left to right, which makes the job somewhat easier. Experiment with the best position for the tong box.

Remember to put the guide out before you start a mission. That makes it easier for the wheels to contact the probe. You can't put the guide out from inside the vehicle.

- **Take care climbing around on the Stryker.** When you're on top of the Stryker, you're nine feet off the ground. That's a long way to fall, especially onto concrete. And the Stryker's roof gets very slippery when it's wet. Always practice three points of contact. Some units have improved footing with non-skid strips. NSN 7220-00-823-7419 gets a 60-ft roll.

The safest place to climb up and down is at wheel #1 by the driver's hatch. After you put your right foot on the hub, you have handholds to help the rest of the way up.

Climb up and down NBCRV Stryker **only** at #1 wheel







# TMDE Coordinators Now Train Online

**TMDE** wants all of its unit support coordinators to take online training, even if they've had local TMDE training.

After coordinators have taken the course and passed the five-question test, they'll receive a training certificate by email.

Here's how to access the course:

1. Go to <https://elc.learn.army.mil/> and click CAC/PKI Login. Select the appropriate certificate and input your PIN.
2. Click on Courses.
3. Once the Courses screen has loaded, click on Browse Course Catalog.
4. Type **TMDE** in the Search Catalog and click Go. Make sure the search criteria is "Name" for the course. Set the creation date to "Before" and the day after the current date.

**Browse Course Catalog**

Search Catalog Course Name Contests  AND Creation Date Before  Go

5. From the search results, select TMDE Support Coordinator Training.

6. Hover over the course's ID. A dropdown arrow will appear. Click on the arrow and another display box will appear. Click on Enroll.

7. The Self Enrollment screen will appear. Click Submit.

8. You should receive a message confirming your enrollment. Click OK and take the course.

| Course ID                           | Course Name   |
|-------------------------------------|---|
| 991_196_94H30_C45_2015_01_N         | TMDE Maintenance Support Specialist Advanced Leaders Course (ALC) |
| <input type="text" value="Enroll"/> | TMDE Support Coordinator Training                                 |

Questions? Contact Gary Davenport at (256) 955-8082 or email: [gary.m.davenport.civ@mail.mil](mailto:gary.m.davenport.civ@mail.mil)

# OPEN DOOR A **COSTLY** MISTAKE!

AFTER YOU PUT  
AWAY MY ANTENNA,  
BE SURE MY  
GROUND ROD COVER  
DOOR IS SHUT!

YOU  
GOT IT!

I RECENTLY INVESTIGATED  
AN ISSUE WITH AN AN/TSC-  
154A SECURE MOBILE ANTI-JAM  
RELIABLE TERMINAL-TACTICAL-  
SMART-T.

IT HAD A DIGITAL DATA  
TRANSMITTER-A DDT-  
AND CABLE DAMAGED  
DURING ANTENNA  
STOWAGE.

This happened because the ground rod cover door was left open during antenna stowage, which allowed the door to catch on the RF-IN cable to the SMART-T's DDT.

The end result was a broken cable at the DDT's cannon plug connector.

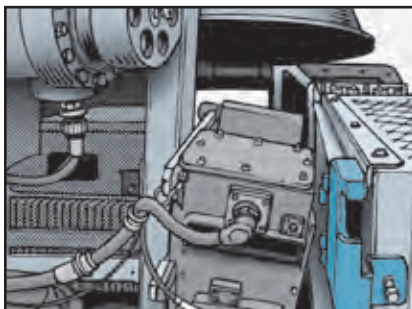
Cabling from  
digital data  
transmitter  
can get  
caught on  
open ground  
rod cover  
door, while  
deploying  
or stowing  
antenna...

...causing  
it to rip  
out from  
connector

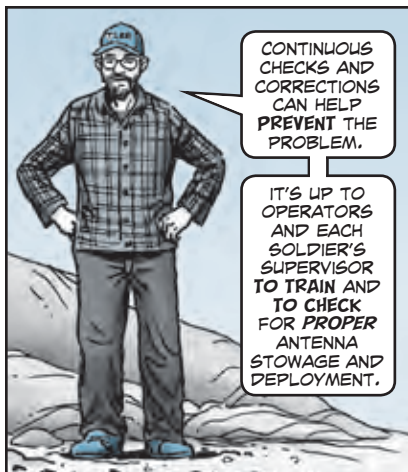
PLACE  
CANT  
RF INPUT  
J1

Unfortunately, it isn't the first time I've seen this happen. It'll be a problem until units ensure that all operators are properly trained.

Soldiers need to know the extent of damage this door can cause if left open. When the DDT is damaged, the mission stops until the DDT is changed out. Plus, it's costly to fix, as each DDT costs nearly \$200,000.



Keep ground rod cover door closed when deploying or stowing antenna



CONTINUOUS  
CHECKS AND  
CORRECTIONS  
CAN HELP  
PREVENT THE  
PROBLEM.

IT'S UP TO  
OPERATORS  
AND EACH  
SOLDIER'S  
SUPERVISOR  
TO TRAIN AND  
TO CHECK  
FOR PROPER  
ANTENNA  
STOWAGE AND  
DEPLOYMENT.

LHT LAR Joe Sheffield  
JBLM, WA

**Editor's Note:**

*Consider the message  
transmitted, Joe.*

## Scan for New AN/TPQ-50 Radar TM



TM 11-5840-392-10  
(JUN 19) IS THE NEW  
OPERATOR'S MANUAL FOR  
THE AN/TPQ-50 RADAR SET,  
NSN 5840-01-578-4119.

TM distribution is  
restricted, so you'll need to  
log in with your CAC:  
[https://idmng.armyerp.  
army.mil/](https://idmng.armyerp.army.mil/)

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

## MK-3413/U Maintenance Kit Gets TM

TM 11-5895-2018-13&P (Apr 19) is the new operator and field maintenance manual, including RPSTL, for the MK-3413/U electronic equipment maintenance kit, NSN 5895-01-630-1886.

TM distribution is restricted, so you'll need to log in with your CAC:

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

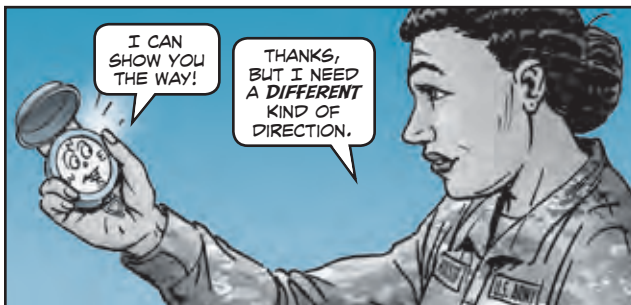
Choose the "ETM/IETM" app and search for the TM.

# DAGR

## Returns and Replacements



**D**efense Advanced GPS Receivers (DAGRs) give Soldiers an edge in directions. But another kind of direction is needed when it comes to replacing defective or older model DAGRs.



CECOM/ILSC (B16) is the source of supply for DAGRs and responsible for their sustainment

The current AN/PSN-13A's DAGR's NSN is 5825-01-526-4783, LIN N96248.

Only **unserviceable** DAGRs with serial numbers 0001 through 111,500 should be turned in for replacement.

Early DAGRs were initialized with incorrect crypto storage settings that rendered them unable to perform Over-The-Air Distribution or Over-The-Air-Rekey (OTAD/OTAR).

Since GPS satellites **weren't** beaming the OTAD/OTAR signal at that time, it **wasn't** considered an issue.

Since then, the GPS Directorate has activated the OTAD/OTAR signal, which makes unit-level action imperative to retrofit DAGRs to use the signal.

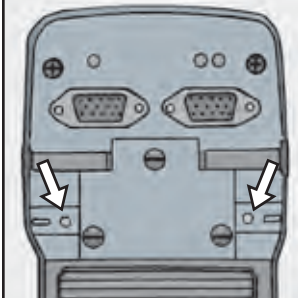
A depot-level settings change is **necessary** to correct the issue.

If you have a DAGR with SN 111,500 and below, and aren't sure if it has received the data element storage change, look at the **back** of the DAGR.

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



Check to see if the top two brass threaded inserts (screws) are painted green. If painted green, the DAGR is compliant and no further action is required.



DAGR SNs 111,500 and below whose screws **aren't** green are **non-compliant** and users should follow the turn-in instructions.

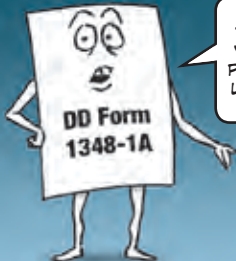
IF RETURNING EARLY DAGRS OR AFTER CONFIRMING DAGR FAILURE (IF THE DAGR WILL TURN ON) USING THE BUILT-IN TEST, THE BIT, RETURN EQUIPMENT USING THE FOLLOWING PROCEDURES...



## Instructions for DAGR Turn-In

Turn in unserviceable DAGRs through your unit's supply support activity (SSA) to the B16 account.

The unit's SSA signs the DD Form 1348-1A, *Disposal Turn-In Document*. The unit keeps a copy of the signed 1348-1A as proof of unserviceable turn-in and emails CECOM/ILSC a signed copy of the 1348-1A at: [usarmy.apg.cecom.mbx.dagr-support@mail.mil](mailto:usarmy.apg.cecom.mbx.dagr-support@mail.mil)



REMEMBER TO KEEP ME IN YOUR UNIT! I'M PROOF OF YOUR UNSERVICEABLE TURN-IN.

If an SSA *isn't* involved in the turn-in process, units may have **major problems** clearing their property books.

CECOM (B16) is **not** physically located at the depot, isn't authorized to sign 1348-1As, has **no** visibility of what is turned in, and **cannot** go back to retrieve a copy of the signed document from the depot.

Keep in mind that shipping directly to a depot could result in **lengthy delays**. Neither the depot nor the item manager is authorized to sign turn-in paperwork.

ARE YOU STILL WAITING TO CLEAR THAT TURN-IN OFF YOUR PROPERTY BOOK?



However, if the SSA turns in the DAGRs through their system, as soon as they're accepted by the depot, that closes the transaction and clears the property book.

**PS MORE**

If an SSA is not accessible to a unit, the property book officer (PBO) is responsible for the DAGRs, plus witnessing the packing and shipping, and recording the tracking number for the shipment.

The PBO can then use that tracking information as justification to drop those assets from the unit's property book.

When all steps are completed, email the integrated logistics support manager (ILSM) the DAGR replacement information sheet and a signed copy of the DD Form 1348-1A/SSA documentation to:

[usarmy.apg.cecom.mbx.dagr-support@mail.mil](mailto:usarmy.apg.cecom.mbx.dagr-support@mail.mil).

THIS STEP SERVES AS PROOF OF TURN-IN.



Once the return is verified, the ILSM will input a material release order to provide the DAGR replacement(s) to the DODAAC listed on the DAGR replacement information sheet. Keep in mind that the ILSM is only authorized to fill and ship unit shortages.

ONLY THE ILSM CAN GET YOU REPLACEMENTS.



AND I CAN **ONLY** SEND ASSETS TO THE TAC2 ADDRESS ON RECORD.



FOR OUTSTANDING DD FORM 1348-1A RECEIPTS, CONTACT THE DLA CUSTOMER INTERACTION CENTER—THE CIC.

THE CIC CAN BE REACHED AT 1-877-DLA-CALL, DSN 661-7766, OR COMMERCIAL 269-961-7766. OR EMAIL:

[DLAContactCenter@dla.mil](mailto:DLAContactCenter@dla.mil)



Give the CIC a copy of the DD Form 1348-1A and any other shipping documentation. The CIC will open a service ticket with DLA Distribution Research.

Each unit is responsible for return shipment costs, and B16 is responsible for the replacements. New DAGR replacements will have different serial numbers.

## Preparing a DAGR for Shipment

- Use the menu to “zeroize” the crypto key (if loaded). See TM 11-5820-1172-13&P (May 14, w/ Ch 1, Aug 15)



**DON'T** USE THE “EMERGENCY ZEROIZE” METHOD OR YOU’LL ERASE ALL MEMORY, INCLUDING FAULT CODES.

- Remove primary batteries.

**DON'T** SEND THE DAGR WITHOUT THE BATTERY PACK. KEEP THE BATTERIES, BUT SEND THE DAGR’S BATTERY PACK.



- Keep all accessories.

- Package the DAGR for in-transit protection.

USE REUSABLE CONTAINERS WHENEVER POSSIBLE. FOLLOW PROCEDURES IN TM 11-5820-1172-13&P (MAY 14).



- **Important:** Never send a DAGR to DLA Disposition Services for disposal.

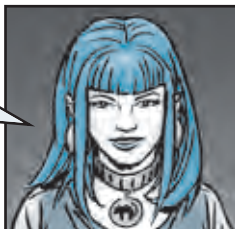
DAGR REQUIRES DEPOT-LEVEL DEMIL PRIOR TO DISPOSAL.

IF YOU HAVE EXCESS DAGRS, FOLLOW NORMAL SUPPLY SYSTEM PROCEDURES.



**Note:** The older AN/PSN-13 DAGR, NSN 5825-01-516-8038, is obsolete and *can't* be updated to the latest operating software. You'll receive a replacement AN/PSN-13A for every AN/PSN-13 turned in, but you must contact the ILSM at: [usarmy.apg.cecom.mbx.dagr-support@mail.mil](mailto:usarmy.apg.cecom.mbx.dagr-support@mail.mil)

FOR DAGR SUPPORT, QUESTIONS OR THE DAGR REPLACEMENT INFO SHEET, CONTACT THE ILSM AT THE ABOVE EMAIL.

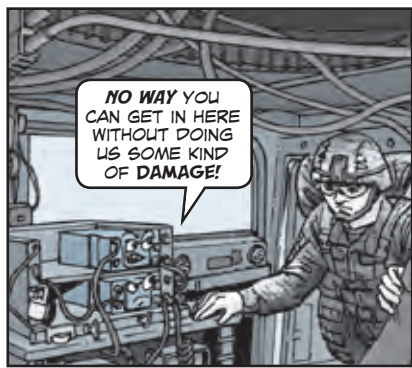
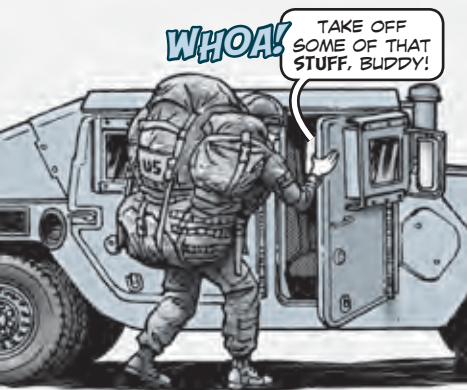


DAGR turn-ins should be sent through the unit's SSA or PBO to the following address:

7000 - Tobyhanna - BY6 - W25G1W  
W1A8 DLA DIST - TOBYHANNA  
GIBBS AND FIFTH STREETS  
WAREHOUSE 6 BAY 4  
TOBYHANNA, PA 18466-5059  
MARK FOR “B16 F STOCK”



# CARE KEEPS RADIOS COMMUNICATING!

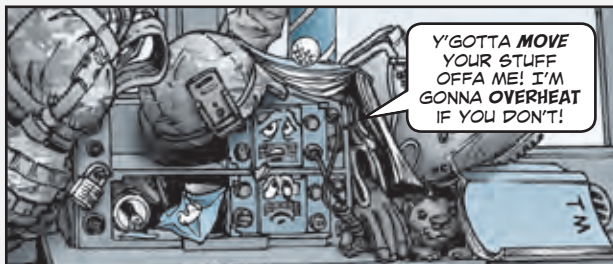


Dear Editor,

Soldiers need reminding that rough treatment can quickly silence radios.

If they jam connectors on, twist knobs hard, throw gear around, don't watch where they're stepping, and pile equipment on radios, then they'll soon have a radio that can't communicate.

Carefully mate connectors. Don't twist knobs farther than they want to go. Watch where you put your feet. Don't throw stuff around radios that can knock off knobs or connectors. Never pile equipment on top of radios. If radios can't get fresh air, they overheat.



Please use caution when climbing into vehicles with installed radios.

It's a good idea to take off as much gear as possible, depending on the tactical situation, before getting in the vehicle. Especially in HMWWVs, there's not much room inside to maneuver. The more gear you're wearing, the more likely you are to damage something on the radio.

CPL Ryan Latour  
Ft Hood, TX

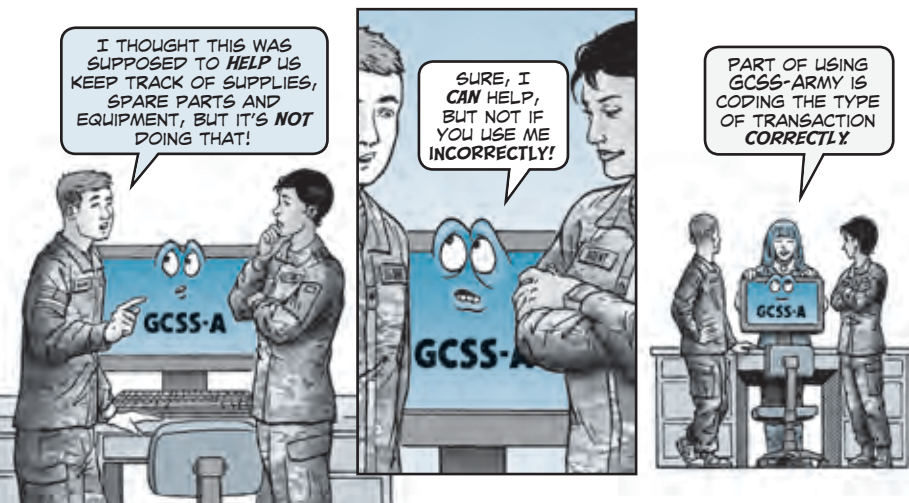
WE HEAR  
YOU LOUD  
AND CLEAR,  
CORPORAL.  
THANKS!



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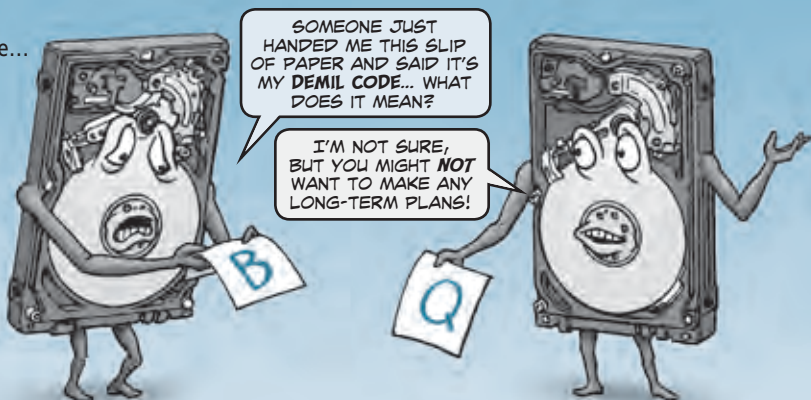


# Deciphering Document Numbers



GCSS-A documents numbers have 10 digits, but it's the **first two digits** that indicate the type of transaction taking place:

| First two digits          | Description  |
|---------------------------|--|
| 00                        | Transfer Order (TO) – Internal SSA movement that transfers an item from bin to bin within the warehouse. |
| 10                        | Purchase Requirements (PR) – Request for a material pending release.                                     |
| 18                        | Inbound Delivery (IBD) - Created against a document when an item is shipped.                             |
| 22                        | Property Book Purchase Order (PO) Property Book Dedicated Order  |
| 71                        | Unit Request or Turn in (STO) – Customer Order requesting supplies or turning in supplies.               |
| 45                        | Standard Purchase Order (PO) – SSA or dedicated customer order.  |
| 80                        | Outbound Delivery (OBD) – Created against a document when you have a due out at SSA or customer turn-in. |
| 60                        | Purchase Requisition (PR) - for Property Book Asset Adjustments and "WANTS"                              |
| <b>Material documents</b> |  |
| 49                        | Inventory loss   |
| 50                        | Inventory gain   |



## DECODING DEMILITARIZATION

**D**emilitarization (DEMIL) codes are assigned to all DoD personal property for control and disposal. They indicate the required level of physical destruction or provide special handling instructions for United States Munitions List (USML) and Commerce Control List (CCL) items being turned in to Defense Logistics Agency (DLA) Disposition Services.

The codes also identify additional guidelines for some property and cover items that *don't* require DEMIL.

Here  
are the  
codes and  
what they  
mean:

| Code | DEMIL Requirements  |
|------|---|
| G    | <b>USML or CCL military ammunitions and explosives (AE).</b> DEMIL is required for classified and unclassified items.   |
| P    | <b>USML classified items.</b> DEMIL is required.  |
| F    | <b>USML or CCL military items.</b> DEMIL is required, but item managers, equipment specialists or product specialists must provide special DEMIL instructions.  |
| D    | <b>USML or CCL military items.</b> DEMIL is required. Destroy the item and its components to prevent the item from being restored to a usable condition.  |
| C    | <b>USML or CCL military items.</b> Remove or demilitarize installed key point items as DEMIL code D.  |
| E    | The DoD DEMIL Program Office reserves exclusive rights to this code and issues the DEMIL instructions for items using it.   |
| B    | <b>USML Items.</b> Mutilation (MUT) to the point of scrap is required worldwide.  |
| Q    | <b>CCL items (CCLI).</b> MUT to the point of scrap required outside the US. Inside the US, MUT is required if the DEMIL integrity code (IC) is 3. MUT isn't required when the DEMIL IC is 6.                                |
| A    | Items subject to the Export Administration Regulations (EAR) in parts 730-774 of Title 15 Code of Federal Regulations (CFR) (CCLI or EAR99) and determined by the DoD to present a low risk when released from DoD control. |

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DLA Disposition Services *doesn't* accept items with DEMIL codes G or P in their original configuration.

Turn in **DEMIL G** coded items with a *material documented as safe* (MDAS) certificate.

Turn in **DEMIL P** coded items with a declassification certification.

You can find more tips on disposal turn-in by downloading DLA Disposition Service's *Turn-in Smartbook*:

<https://www.dla.mil/Portals/104/Documents/DispositionServices/Library/CAH/Smartbook.pdf>

## SAM Finds CAGE Codes

NEED TO LOOK UP THE POC FOR A CAGE CODE QUICKLY WITHOUT THE HASSLE OF REGISTERING FOR AN ACCOUNT?

TRY THE SYSTEM FOR AWARD MANAGEMENT (SAM). YOU CAN USE IT TO LOOK UP A CAGE CODE OR POC:

<https://www.sam.gov/SAM/>



## All About USAPC

THE US ARMY PETROLEUM CENTER (USAPC) HAS A WEBSITE FULL OF INFO AT: <https://usapc.army.mil>

YOU'LL ALSO FIND THEM ON FACEBOOK: <https://facebook.com/usarmypetroleumcenter/>



## Army Sustainment Goes Quarterly

ARMY SUSTAINMENT PROFESSIONAL BULLETIN CHANGED ITS PUBLICATION FREQUENCY FROM BIMONTHLY TO QUARTERLY. EARLIER THIS YEAR.

THE MAGAZINE CONTINUES TO BE A VALUABLE SOURCE OF PROFESSIONAL DEVELOPMENT INFORMATION FOR THE ARMY SUSTAINMENT COMMUNITY. FIND THE MAGAZINE ONLINE AT:

<https://www.alu.army.mil/alog>



## Help PS Help Your Fellow Soldiers

IF YOU'VE FOUND A MISTAKE IN YOUR TM OR FIGURED OUT A BETTER WAY TO DO MAINTENANCE OR SAVE THE ARMY MONEY, SHARE YOUR KNOWLEDGE WITH PS MAGAZINE. CONTACT US HERE: [usarmy.redstone.asc.mbx.psmag@mail.mil](mailto:usarmy.redstone.asc.mbx.psmag@mail.mil)



# GOT ANY GOOD COLD WEATHER ADVICE?



Dear Half-Mast,

A few issues ago, you offered some really helpful advice on how to avoid heat injuries. Now that the season has changed, do you have any wisdom to share on how to avoid cold weather injuries?

SGT K.B.



HERE ARE A FEW TIPS TO HELP KEEP YOU SAFE FROM OLD MAN WINTER.

When it comes to cold weather clothing, remember the acronym:

**C**lean: Always keep clothing clean

**O**verheating: Avoid getting too hot

**L**oose: Wear clothing loose and in layers

**D**ry: Keep clothing as dry as possible

## OTHER TIPS INCLUDE:

- Change into dry clothing every day or if your clothing becomes wet.
- Wash and dry your feet and change into dry socks as often as necessary.

- Wear gloves to handle equipment and fuel products.

- Use sunglasses with UV protection to protect your eyes from the sun's glare reflecting off of snow.

YEAH, YOU **DO** LOOK GOOD, BUT THAT TIP WAS FOR ME, **NOT** YOU!

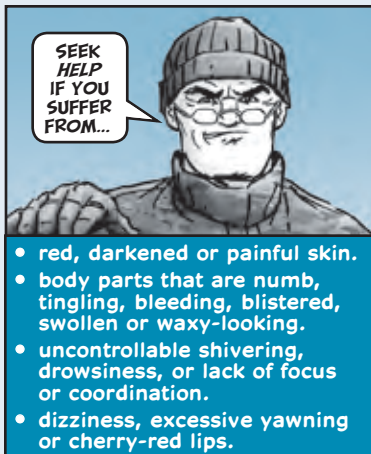


- Once the temperature falls below 32°F (0°C), don't use skin camouflage. Instead of helping you hide, it might be hiding a cold weather injury.

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- Use Army-approved heaters in sleeping areas and post a fire guard to keep an eye on things.



Get more information about **cold weather injury prevention** from the Army Public Health Center:

<https://phc.amedd.army.mil/topics/discond/cip/Pages/Cold-Weather-Casualties-and-Injuries.aspx>

GCSS-Army...



Dear Half-Mast,  
We have a pallet of new computer monitors sitting in the warehouse. Since they are going to be on our property book, is it OK to assign them serial numbers?

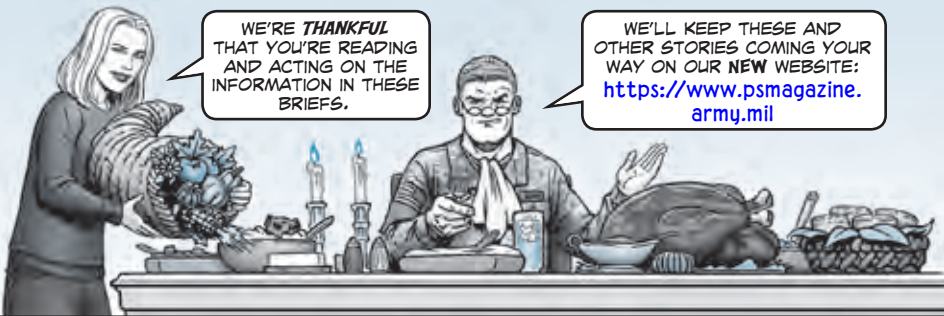
SSG D.K.

Dear Sergeant,

You can't add serial numbers to those monitors without a Serial Number Profile (SNP). We went over how to get a SNP on pages 55-57 of PS 782 (Jan 18). Here's a link to the article:

<https://www.logsa.army.mil/web2/archive/PS2018/782/782-55-57.pdf>

Half-Mast



## M249 Scraper NSN Changes

When your M249 machine gun's scraper tool wears out, don't use NSN 1005-01-131-1914 to order a new one. That NSN is obsolete. Instead, order a new scraper with NSN 5120-01-598-4301. It costs about \$25.

## The Solution For HEMTT Purging

Get a 5-gal container of cleaning compound (purging solution) for the M978-series HEMTT fuel tanker with NSN 7930-01-350-7034. For a 55-gal container, use NSN 7930-01-350-7035. You'll find it listed in ATP 4-43, *Petroleum Supply Operations*. Make sure all purging solution is removed from the tanker before deploying, shipping overseas or sending to RESET. Follow the procedure for gravity bulk unloading of fuel from the tanker. You'll find it in the operating instructions of TM 9-2320-279-14&P (IETM EM 0290, Jun 09) for the M978, TM 9-2320-325-14&P (IETM EM 0289, May 09) for the M978A2, and TM 9-2320-326-14&P (IETM EM 0288, Dec 15) for the M978A4.

## M113 FOV Oil Filter NSN

Order a new oil filter for the M113 FOV's 6V53 engine with NSN 2940-01-633-3432 (PN PH3612). It replaces NSN 2940-01-197-7106 (PN FL804FP), which is shown as Item 9 in Fig 22 of TM 9-2815-205-24P (Feb 13). The old oil filter has a high rate of failure. Make a note until the TM is updated.

## BITUMINOUS COATING COMPOUND

Get a gallon of bituminous coating compound for your battery box with NSN 8030-00-290-5141. First use a wire brush to scrape off rust and old paint. Then protect the bare metal inside the box with a coat of the compound.

## M1151A1 HMMWV Gunner's Sling NSN

Get the M1151A1 HMMWV gunner's sling with NSN 5340-01-530-1744. It's Item 11 in Fig 298 of TM 9-2320-387-13&P (IETM EM 0323, Mar 14).

## M9 ACE HYDRAULIC FLUID CHECK

Operators, when checking the M9 ACE's hydraulic oil level, make sure the vehicle is level and all the oil is in the hydraulic tank. To do that, put the vehicle in SPRUNG mode with the engine off, ejector retracted (back), apron down and hydraulic pressure relieved.

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## Tire Lube NSNs

**Never** use oil or grease to mount a tire. Petroleum-based products will deteriorate rubber. Instead, use a premixed tire lube with a vegetable oil base. Get one gallon of the lube with NSN 2640-00-256-5527. Five gallons come with NSN 2640-00-256-5529.

## M9 ACE Parts Missing

TM 5-2350-262-24P (Jun 12) comes up short on some needed parts for the M9 armored combat earthmover (ACE). Fig 50 covers the apron, dozer and blade assembly. It shows the blade's sleeve bushings as Item 26, but not the lock pins that fit through the bushings. Also missing are the retaining clips holding the lock pins in place. Get a new lock pin with NSN 5315-01-184-4868 and a retaining clip with NSN 2590-01-239-1664.

## M9 ACE Hydraulic Kit NSN

Get a hydraulic parts kit for your M9 armored combat earthmover (ACE) with NSN 2590-01-216-8646. Need replacement parts? Check out Figure 228 of TM 5-2350-262-24P (Jun 12) for a complete list.

## BATTERY TERMINAL COVERS

Protect your vehicle's batteries from accidental shorts by adding rubber terminal covers. Single terminal covers come with NSN 2530-01-089-4992. NSN 5940-00-738-6272 brings a double terminal cover.

## LINSEED OIL PRESERVES DECKS

Constant exposure to the elements leads to dry, cracked and splintered wood decking on semitrailers. Prevent that damage by applying a light coat of linseed oil to the decking as needed. NSN 8010-00-152-3245 brings a gallon of linseed oil and NSN 8010-00-684-8789 gets five gallons. A 55-gal drum comes with NSN 8010-00-242-6114.

## Windshield Washer Fluid NSN

To get windshield washer fluid for your vehicle, order NSN 6850-00-926-2275. That brings a case of twelve 16-oz bottles of **concentrated** windshield cleaning compound. You'll need to mix it with water depending on the temperature:

| Temperature (Fahrenheit) | Cleaning Compound | Water     |
|--------------------------|-------------------|-----------|
| +40° to -10°             | 1 bottle          | 2 bottles |
| 0° to -40°               | 1 bottle          | 1 bottle  |
| -30° to -65°             | 2 bottles         | 1 bottle  |

Use the empty cleaning compound bottles to measure the water.

## Crushproof Drip Pan NSNs

Crushproof drip pans are really handy for preventing spills around the motor pool. Order them with these NSNs:

| NSN 4940-   | Size      |
|-------------|-----------|
| 01-490-2455 | 3-gal     |
| 01-490-2463 | 6 1/2-gal |
| 01-490-2470 | 15-gal    |

Each NSN brings a package of 10 drip pans.

**Would You Stake Your Life <sup>right now</sup> on the Condition of Your Equipment?**

# Make **PMCS**...

WOULD YOU STAKE  
YOUR LIFE, *RIGHT NOW*,  
ON THE CONDITION OF  
YOUR EQUIPMENT?



## ...a **Team Effort** in your **Motor Pool!**

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