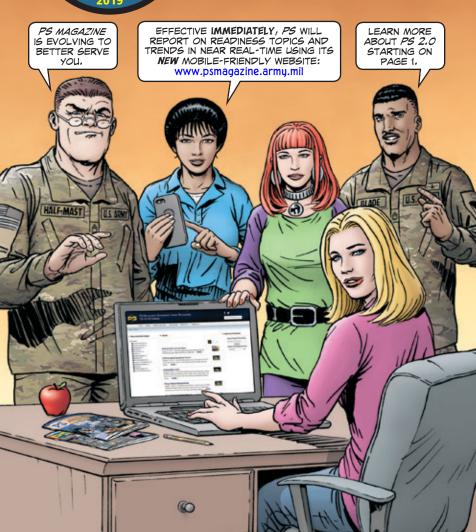


### PREVENTIVE MAINTENANCE MONTHLY

THE TB 43-PS-804

Approved for Public Release; Distribution is Unlimited

November 2019





#### ISSUE 804 NOVEMBER 2019

| COMBAT VEHICLES                       | 3   |
|---------------------------------------|-----|
| Stryker Hatch Stay Device             | 3-4 |
| Stryker Height Management System      | 4-5 |
| M88A2 Recovery Vehicle AFES PM Tips   | 6-8 |
| M2/M3-Series Bradley Oil Level Checks | 8-9 |
| TACTICAL VEHICLES                     | 10  |

| HMMWV, No GPU for Slave Starting         | 10-12 |
|--|-------|
| Diesel Engines, Preventing Slobber       | 13    |
| Cargo Net NSNs                           | 14    |
| M1101/M1102 Trailer Landing Leg Upgrade  | 15    |
| M149A2 Water Trailer Master Cylinder NSN | 15    |
|  |       |

NO

M30 BEB Adapter Pallet Cable

Flex Body Armor NSNs

D7G, D8K Dozers Gear Shifting Note M1231 Husky Maintenance Issue POCs

|            | CONSTRUCTION        | 16    |
|------------|---------------------|-------|
| 3816M BMPM | Cold Weather Starts | 16-17 |
| R816M RMPM | Conveyor Lubing     | 17    |

| AVIATION                                    | 21    |
|---|-------|
| FOD Checks                                  | 21    |
| UH-72A Lakota Rescue Hook Damper Alternates | 22-23 |
| AAFARS Collapsible Fuel Drum NSN            | 24    |

| 2019 PS Annual Index                  | 27.34 |
|---------------------------------------|-------|
|                                       |       |
| Skid Shoes Approved for Rescue Basket | s 26  |

| TOOLS                             | 35 |
|-----------------------------------|----|
| SATS Repair Parts NSN Listing     | 35 |
| TMDE Coordinators Online Training | 47 |
| MISSII FS                         | 36 |

| Patriot Maintenance Tips | 36-3 |
|--------------------------|------|
|                          |      |

| SMALL ARMS                                   | 37    |
|--|-------|
| M16-Series Rifle, M4/M4A1 Carbine Sling NSNs | 37    |
| M2/M2A1 Training, Differences                | 38-39 |
| MK 19 Machine Gun Damage Prevention          | 40    |
|  |       |

|  | SOLDIER SUPPORT | 41 |
|--|-----------------|----|
|--|-----------------|----|

| COMET Info, POC                             | 41    |
|---|-------|
| MTRCS, Keep Doors Shut & Rain Cap Installed | 42-43 |
| IHPS -10 TM Available                       | 43    |
|   |       |

| CBRN                                 | 43    |
|--------------------------------------|-------|
| M53A1 Mask NSNs and TM               | 43    |
| M1135 NBCRV Stryker Maintenance Tips | 44-46 |

| COMMUNICATIONS                        | 48    |
|---------------------------------------|-------|
| AN/TSC-154A SMART-T Ground Rod Cover  | 48-49 |
| AN/TPQ-50 Radar -10 TM Released       | 49    |
| MK-3413/U Maintenance Kit TM          | 49    |
| DAGR Return, Replacement Instructions | 50-53 |
| Radio Cautions                        | 54    |

| LOGISTICS MANAGEMENT             | 55    |
|----------------------------------|-------|
| GCSS-Army Transaction Codes      | 55    |
| Demil Codes Explained            | 56-57 |
| SAM CAGE Code Lookun/APC Website | 57    |

| Connic's Post Scripts                       | 60.61 |
|---|-------|
| GCSS-Army Serial Number Profiles            | 59    |
| Cold Weather Injury Prevention              | 58-59 |
| Army Sustainment Quarterly/PS Email Contact | 57    |
| SAM CAGE Code Lookup/APC Website            | 57    |
| Demii Codes Explained                       | 56-57 |

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PS, The Preventive Maintenance Monthly (ISSN 0475-2953)

is published monthly by the Department of the Army, Redstone Arsenal, AL 35898.

You are invited to send PS your ideas for improving maintenance procedures, questions on maintenance and supply problems and questions or comments on material published in PS.

Just write to:

MSG Half-Mast PS, the Preventive Maintenance Monthly USAMC ARMY SUSTAINMENT COMMAND BLDG 3648C-1

or email

usarmy.redstone.asc.mbx.psmag@mail.mil

Redstone Arsenal, AL 35898

Internet address:

https://www.psmagazine.army.mil

By Order of the Secretary of the Army:

JAMES C. MCCONVILLE General, United States Army Chief of Staff

Official:



to the Secretary of the Army 1923951

DISTRIBUTION: Distributed in electronic media only (EMO)



# 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 FYOLVE INTO
A FULLY-ONLINE,
MOBILE-FRIENDLY
INFORMATION
PROPERTY



WHAT WILL
CHANGE,
STARTING
IMMEPIATELY,
ARE THE
FOLLOWING...

 No more traditional magazine. Rather than a 64-page, cartoonillustrated periodical, we'll publish our articles directly to our mobilefriendly website:

https://www.psmagazine.army.mil



PS 804 1 NOV 19

- 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-STYLED 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!





### HATCH SAFETY HEADS OFF HEADACHES!





YOU MUST LIKE LIVING PANGEROUSLY PAL!

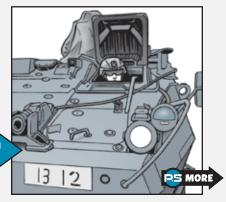
YOU'RE TAKING A REAL *GAMBLE* NOT ENGAGING MY HATCH STAY DEVICE!



Crewmen, 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!

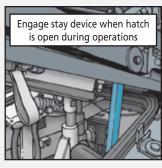
Operating Stryker without engaging driver's safety hatch is *dangerous!* 

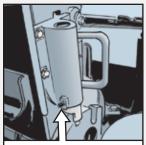


#### **Stay Device**

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!





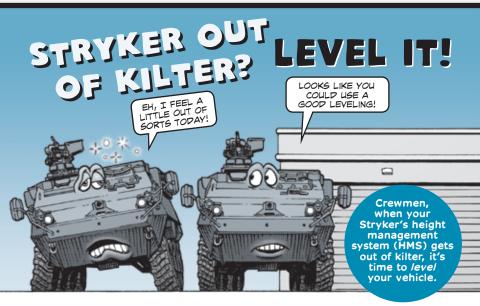
Add GAA to detent assembly when pin begins to stick

#### **Detent Assembly**

As the hatch is raised to each position, the springloaded 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.

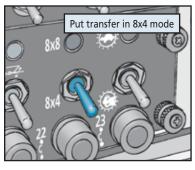




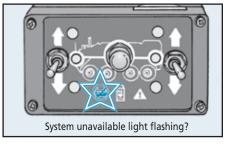
- When it starts sagging at one or more of its corners
- After it's unloaded from a ship, aircraft or any other form of transportation
- If the temperature swings from really hot to really cold or vice versa while operating the vehicle
- After it's been operated in mine ride high mode

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

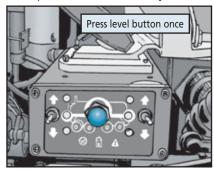
- 1. Start the vehicle.
- **2.** Make sure the transfer is in 8X4 mode.

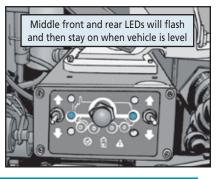


Drive the vehicle over a smooth, level stretch of road. The Stryker must be moving at a steady speed and in a straight line. If not, the SYSTEM UNAVAILABLE light will flash.



**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.



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.

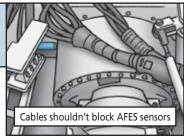
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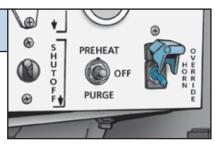


BUT THE AFES NEEDS REGULAR PREVENTIVE MAINTENANCE TO ENSURE IT CAN DO ITS JOB. THE FOLLOWING SHOULD ALWAYS BE A PART OF BEFORE OPERATIONS CHECKS...

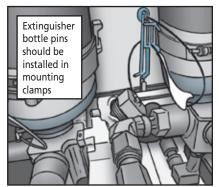
- The AFES sensors should be free of dirt or debris and the cables properly connected.
   Make sure the sensors and nozzles aren't blocked by improperly routed electrical cables, hydraulic hoses or fuel lines.
- The AFES interior and exterior handles should be properly laced with safety wire.
   The 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.

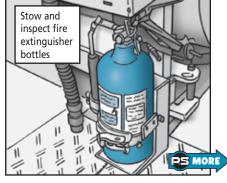


- The warning horn override should be off and the portable fire extinguishers stowed properly and inspected.
- Make it a habit when you turn on the master power switch to keep an eye on the Built-In Test (BIT) on the AFES control electronics panel (CEP). If a fault with any of the sensors occurs, a light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

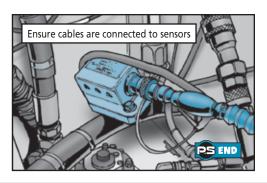


• Make sure the extinguisher bottles don't have pins installed in the fire extinguisher operating levers. Ensure the pins are stowed properly in the fire extinguisher bottle mounting clamps. The anti-recoil plugs should be stowed out of the way of the bottle and vehicle linkages. Drape the anti-recoil 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.





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?



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.

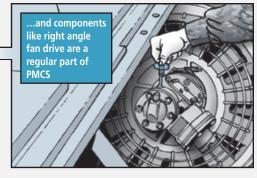
Your vehicle isn't good to go if it has a Class III oil leak or if oil levels are below the ADD mark.

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.

Checking oil level in engine...

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

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!





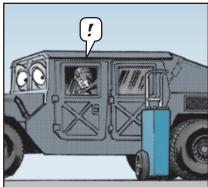
SO REMEMBER, WHETHER IT'S BEFORE, DURING OR AFTER OPERATIONS PMCS, YOU'RE NOT DONE UNTIL YOU'VE CHECKED THE OIL LEVELS!



## HMMWV:

### Slave Start = Smart Start





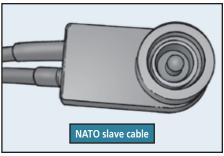




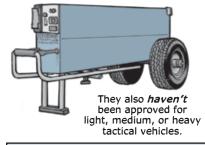
#### Dead HMMWV batteries?

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!





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:

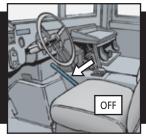
#### Step 1:

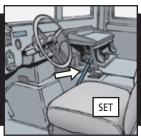
Confirm that the dead batteries can accept a charge. Use the **battery analyzer**, NSN 6130-01-510-9594, from the Standard Automotive Tool Set (SATS). The **battery analyzer**, NSN 6625-01-466-1075, in the Forward Repair System (FRS) tool kit also works.

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.

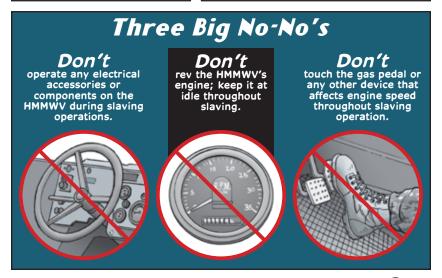


#### Step 9:

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.





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.

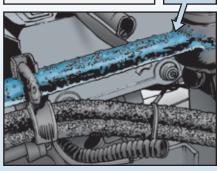
Dear Sergeant,

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.

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!

PS 804

13

NOV 19

Tactical Vehicles and Trailers...

## Your BEST Bet?

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.



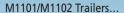
An exterior cargo net does the same thing for your bigger loads outside. Use one to keep your load from hitting the road!



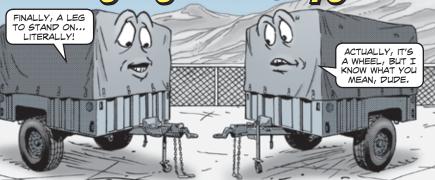
Some of the more common cargo nets may fit multiple vehicles or have additional capabilities. But it's up to each unit to determine which nets best meet their needs.

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.



## Landing Leg Wheels Upgrade





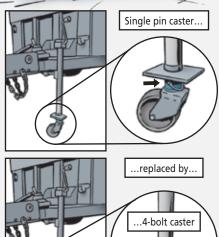
THESE NEW
4-BOLT
CASTER
WHEELS GIVE
YOUR LANDING
LEGS REAL
STABILITY.

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!

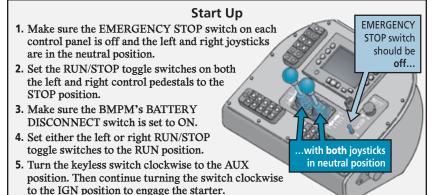


#### M149A2 Water Buffalo Master Cylinder

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.



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



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

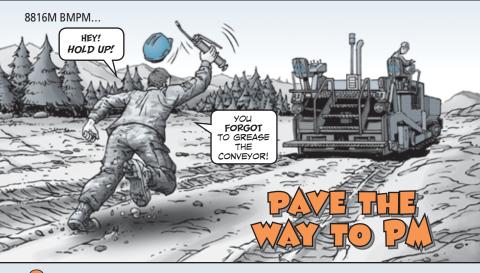
The engine needs to warm up for 10 minutes in cold weather before the BMPM is operated. Warm-up allows the vehicle's hydraulic oil to circulate for smooth operation. You'll find this info in WP 0006-3 of TM 5-3895-385-10 (Nov 11).

#### **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!

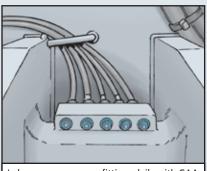
The engine has an intake air pre-heater. Using ether spray might cause a fire or explosion that could *kill* someone!





perators, 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!

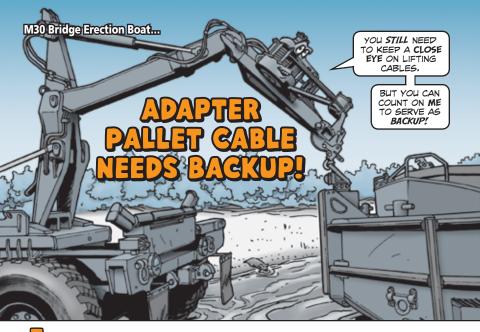
The bank of five conveyor grease fittings is located under the BMPM's hopper wing in the middle of the track on the right side. These fittings are usually coated with dirt and sand, so make sure you wipe them off before starting the lube job.



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.



The 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

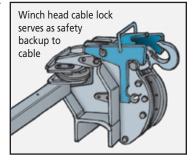






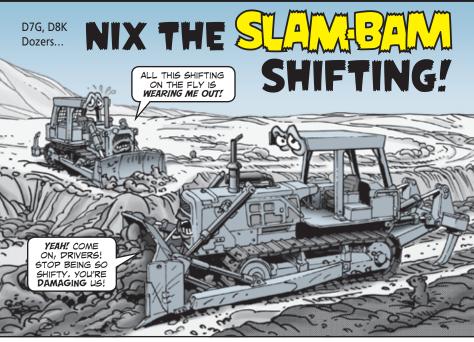
That could mean failure and an accident if the cable deteriorates enough. PMCS for the BAP's cable is covered as Item 14 in WP 0035-8 of TM 5-3990-263-13&P (Apr 12). Pay special attention to the area where the cable enters the bullet. Tell your mechanic if the cable has broken wire strands or lots of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



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).

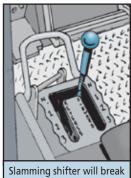
Shipments of the WHCL will begin this year with one for each previously issued M15 BAP. Units will receive them as free issue.





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



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

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.

#### 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
 Rusty Jarrett, Fielding Manager: normand.c.jarrett.civ@mail.mil

A maintenance mailbox is also available for questions: usarmy.belvoir.peo-iews.mbx.pm-ts-ceh-hmds-maint@mail.mil

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





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



## 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).



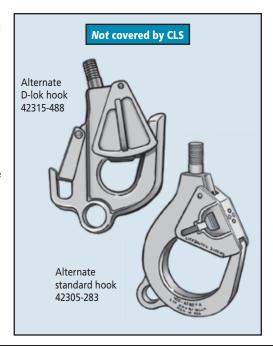
Component Maintenance Manual (CMM) 25-00-29-1 has *two more options* listed in the illustrated parts list.

**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.



IF UNITS
DECIDE TO
PURCHASE
THESE
ALTERNATE
HOOKS...

...KEEP IN
MIND THEY ARE
NOT COVERED
BY THE CLG
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.



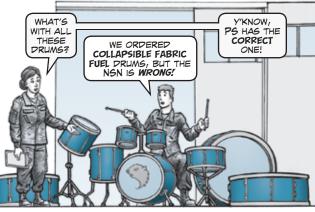
BE SURE TO FOLLOW
THE CMM EXACTLY WHEN
INSTALLING ALTERNATE
HOOKS, AND IT'S
RECOMMENDED YOU
TAG AND STORE ANY
SERVICEABLE STANDARD
HOOKS FOR FUTURE USE.





AAFARS...

Collapsible
Fuel Drum:
Which NSN
Is Right?



Mechanics, 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 NON IS 8110-O1-482-9152. 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

DOWNLOAD THE FORM FROM: 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.mli

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

https://gfis.tacom.army.mil/ hd/default.cfm?p=nt&cz=128





## Need Flex Body Armor?

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





Inits, 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.

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:

- 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 |
| М    | 01-525-8048 | 1005910-5 |
| L    | 01-525-8050 | 1005910-7 |
| XL   | 01-525-8051 | 1005910-9 |



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

#### PS Magazine Index No. 75, 2019

| Subject  | Issue      | Pg         | Subject                                       | Issue | ₽Į. |
|--|------------|------------|---|-------|-----|
| AIR CONDITIONERS   |            |            | Hoist training offered                        | 802   | 19  |
| R438A refrigerant NSNs   | 800        | 61         | Internal rescue hoist lanyard length          | 802   | 18  |
| AIRCRAFT ARMAMENT SUBSYSTE                                       | MS         |            | IVHMU battery cover screws                    | 796   | 24  |
| Aircraft Armament Repairer Tool Kit (AAR                         | TK)801     | 20         | IVHMU underwater beacon                       | 796   | 23  |
| M144Ammo can MWO problem check                                   | 794        |            | Parts list for turn-in                        | 795   | 26  |
| M230Loading procedures   | 800        | 22         | Parts list for turn-in                        | 800   | 26  |
| AIRCRAFT ENGINES   |            |            | Parts list for turn-in                        | 801   | 23  |
| T700 engine plugs  | 799        | 21         | Parts list for turn-in                        | 801   | 25  |
| T700-series cold section module check                            | 800        | 24         | Rescue basket skid shoes approved             | 804   |     |
| AIRCRAFT, GENERAL  |            |            | Rescue hoist vest approved                    | 801   |     |
| AMCOM corrosion team training offered                            | 799        | 22         | Searchlights with dissipation issues replaced |       |     |
| AN/APR-39ANew processor added                                    | 801        |            | Tail rotor retention plate bolts              | 795   | 21  |
| Aviation safety email help                                       | 802        |            | AIRCRAFT, UAV                                 |       |     |
| Corrosion treatment help   | 797        |            | RavenMWO changes NSN                          | 797   | 26  |
| CPC protects aircraft electrical connectors                      | 800        | 25         | ShadowTM, pitot tube/CRS antenna, space       | 801   | 23  |
| FOD responsibility   | 804        |            | ShadowUGCS, AVT shelter tow hitch use         | 803   | 24  |
| PEO Soldier social media contact info                            | 799        | 20         | TB 43-0002-3 covers UAV MELs                  | 794   | 26  |
| AIRCRAFT GRD SPT EQUIPMENT (A                                    |            |            | AIRCRAFT, UH-60, BLACK HAWK                   |       |     |
| AAFARSCollapsible fuel drum                                      | 804        | 24         | AN/PRC-117F SATCOM B-kit turn-in              | 803   | 27  |
| ALUMMC headlight assembly NSN                                    | 797        |            | EAWIS resistors improved                      | 803   | 21  |
| Aviation crash kit NSN and components                            | 798        |            | EAWIS software update                         | 796   | 26  |
| Composite repair kit tools                                       | 802        |            | EBAPS may need part number change             | 802   | 22  |
| Trailer repair parts   | 799        |            | Engine a no-step zone                         | 794   | 22  |
| AIRCRAFT LIFE SPT EQUIPMENT (A                                   |            |            | Engine oil level caution                      | 795   | 25  |
| ALSE shop setup help   | 799        | 25         | External rescue hoist fairing mod             | 803   | 26  |
| Acualung breathing device inspection                             | 794        |            | External rescue hoist washer change           | 802   | 17  |
| Flexible body armor NSNs   | 804        |            | Gas turbine APU turn-in                       | 796   | 25  |
| ·  | 004        | 23         | Hoist slide-loks modified                     | 801   | 24  |
| AIRCRAFT, AH-64, APACHE  | 794        | 22         | Hoist training offered                        | 802   | 19  |
| Engine a no-step zone Engine oil level caution                   | 794        |            | Internal rescue hoist lanyard length          | 802   | 18  |
| •  | 795        |            | Internal rescue hoist TM available            | 803   | 25  |
| HADS probe cover<br>MUMT support                                 | 793<br>799 |            | IVHMU battery cover screws                    | 796   |     |
| MUMT transport tracking  | 799        |            | IVHMU underwater beacon                       | 796   |     |
| NIU protection from moisture                                     | 796        |            | Parts list for turn-in                        | 795   | 26  |
| *  | 790        | 22         | Parts list for turn-in                        | 800   |     |
| AIRCRAFT, CH-47D/F, CHINOOK                                      | 706        | 26         | Parts list for turn-in                        | 801   |     |
| EAWIS software update  | 796<br>794 |            | Parts list for turn-in                        | 801   |     |
| ILCA jam test tool blueprints                                    | 794<br>798 |            | Rescue basket skid shoes approved             | 804   |     |
| Spyder crane info, TM Two-wheel tow bar info, parts              | 798<br>795 |            | Rescue hoist vest approved                    | 801   |     |
|  |            | 22         | Tail rotor retention plate bolts              | 795   |     |
| AIRCRAFT, HH-60M, BLACK HAWK                                     |            |            | Turn-in credit reversal fix                   | 798   | 35  |
| AN/PRC-117F SATCOM B-kit turn-in                                 | 803        |            | AIRCRAFT, UH-72A, LAKOTA                      |       |     |
| EBAPS may need part number change                                | 802        |            | Erosion, corrosion prevention                 | 803   |     |
| ECS system, no service w/o certification                         | 797        |            | Rescue hoist hooks                            | 804   | 22  |
| Engine a no-step zone  | 794        |            | AMMUNITION                                    |       |     |
| Engine oil level caution   | 795        |            | Brass, pick up after firing at range          | 801   | 38  |
| External rescue hoist washer change<br>Hoist slide-loks modified | 802<br>801 |            | ARMORED COMBAT EARTHMOVER,                    | M9    |     |
| rioist shae-loks modified  | 801        | <i>2</i> 4 | Apron, dozer and blade parts                  | 804   | 61  |
|  |            |            |   |       |     |

| Subject                                     | Issue | /Pg | Subject                                     | Issue  | /Pg |
|---|-------|-----|---|--------|-----|
| Battery switch to 6TAGM Hawker              | 802   | 60  | Coolant, engine start/shutdown, air cleaner | 802    | 08  |
| Hatch hinge lubing                          | 802   | 45  | Exhaust manifold, cover rust and dry rot    | 799    | 06  |
| Hydraulic fluid check                       | 804   | 60  | Fan gearbox oil level check                 | 794    | 05  |
| Hydraulic kit NSN                           | 804   | 61  | Hatch locking pin                           | 798    | 09  |
| AVLB, M104 WOLVERINE                        |       |     | M1064Ramp pulley housing damage             | 798    | 10  |
| Bridge workout a monthly task               | 797   | 09  | Smoke grenade launcher tube covers          | 795    | 07  |
| BACK COVER                                  |       |     | CBRN EQUIPMENT                              |        |     |
| Don't Have Time to Schedule Maintenance?    | 801   | 62  | Graphic training aids for equipment help    | 794    | 43  |
| Don't Let Tools Trip You Up!                | 797   | 62  | ICBM 400, M49 gas filter expiration info    | 800    | 37  |
| Don't Ship Us Like This!                    | 802   | 62  | JACKS website for CBRN alerts, info         | 796    |     |
| Ins and Outs of Operator Maintenance        | 798   | 62  | Shelf life vs service life explained        | 798    | 47  |
| Let Tool Guide Be Your Guide                | 800   | 62  | CLOTHING                                    |        |     |
| Make PM a Monumental Priority!              | 795   | 62  | Army Certification Program                  | 801    | 52  |
| Make PMCS a Team Effort                     | 804   | 62  | CLOTHING, PROTECTIVE                        |        |     |
| Nothing's Scarier than Bad PMCS!            | 803   | 62  | JSLISTHood tightness fix                    | 795    | 44  |
| PMCS Trivia                                 | 796   | 62  | COLD WEATHER                                |        |     |
| Times Change and Your Batteries Should, To- |       |     | Cold injury prevention tips                 | 804    | 58  |
| What'chu Lookin' at, Dawg? (PS mobile app   | 794   | 62  | COMMERCIAL CONSTRUCTION EQU                 | JIP (C | CE) |
| BATTERY, HAWKER                             |       |     | CAT parts, how to find                      | 798    | 24  |
| Dead battery charging trick                 | 803   | 15  | CAT service kit NSNs                        | 797    | 17  |
| BATTERY, LEAD-ACID                          |       |     | Key and key blank NSNs                      | 800    | 16  |
| Bituminous compound for battery boxes       | 804   | 60  | MEL changes                                 | 794    | 17  |
| Terminal cover NSNs                         | 804   | 61  | Service kit NSNs                            | 798    | 12  |
| BATTLE DAMAGE AND REPAIR (BDA               | AR)   |     | Tire wear guidance                          | 801    | 19  |
| Tire repair kit                             | 799   | 08  | Turn-in instructions and key notes          | 794    | 16  |
| BODY ARMOR                                  |       |     | COMMUNICATIONS EQUIPMENT                    |        |     |
| IOTV Gen IV TM available                    | 796   | 61  | CECOM customer service contact info         | 799    | 61  |
| CAMOUFLAGE                                  |       |     | ESD causes, prevention                      | 794    | 47  |
| ULCANSOnly authorized camo netting          | 801   | 49  | TEIP name change to C5ISR CLAT              | 799    | 60  |
| CAN, FUEL                                   |       |     | COMPUTERS & SOFTWARE                        |        |     |
| Inspection, 5-year lifespan                 | 799   | 52  | Airspace work station TM available          | 796    | 53  |
| NSNs, markings                              | 802   | 52  | MSD, issues with loading ETM/IETMs          | 802    | 27  |
| CAN, WATER                                  |       |     | COMSEC EQUIPMENT                            |        |     |
| NSNs, markings                              | 802   | 52  | Crypto support portal                       | 797    | 60  |
| CARBINE, M4-SERIES                          |       |     | KG-175DClock drift, battery life            | 800    | 45  |
| Front sight post detent lube                | 800   | 42  | TSEC/KY-58 TM available                     | 796    | 53  |
| Inspection for dirty, unlubed weapons       | 800   | 40  | CONTAINERIZED KITCHEN                       |        |     |
| M12 rack fitting                            | 803   | 42  | A/C condenser guard                         | 800    | 50  |
| Ripcord barrel cleaning tool                | 801   | 42  | Condensation, carbon monoxide, wiring       | 801    | 50  |
| Sling NSNs                                  | 804   | 37  | New TMs released                            | 796    | 61  |
| CARRIER, COMMAND POST, M577-S               | ERIE  | S   | Safety and PM tips                          | 795    | 53  |
| 5-kW APU PMCS checks                        | 794   |     | CONTAINERS                                  |        |     |
| A3APU fuel line NSN                         | 800   |     | Inspection a unit responsibility            | 799    | 52  |
| CARRIER, COMMAND POST, M1068-               | SERI  | ES  | CONTINUITY                                  |        |     |
| 5-kW APU PMCS checks                        | 794   |     | Crushing the ETM/IETM MSD Conundrum         | 802    | 27  |
| A3APU fuel line NSN                         | 800   |     | Dust Driver                                 | 798    | 27  |
| AS-4701/VRC loop antenna stowage            | 797   |     | Leaders Train PMCS!                         | 800    | 27  |
| CARRIER, PERSONNEL, M113 FOV                |       |     | M240, M249: Secrets for Success             | 797    | 27  |
| 6V53 engine oil filter NSN                  | 804   | 60  | Max Torque: The Maltese Longjohns, Pt 1     | 795    | 27  |
|   |       | _ 0 |   |        |     |

| PM Keeps You in the Fight! (Bradleys)  CORROSION  Desiccant bags absorb moisture UTAP corrosion resources  CRANES  LRT-110Oil sending unit NSN LRT-110Rear wheel cylinder NSN  M26Engine, water pump oil NSNs M26Starter replacement w/instructions  M26Starter replacement w/instructions  DETECTOR, CHEMICAL M4/M4A1 JCADSeal components  EDITORIAL  Ask for Help!  Back to Basics Readiness Change Is Good!  Everyone's Responsible for FOD Control Memorial Day Modern Note in an Old Song Ownership of the Vehicle PS Magazine-The Evolution Continues, Pt 1 What Do They Really Know?  MK-3413/U maintenance kit TM  POSS 56 Crane PMCS, rotation gear, exhaust cap  77 Crane PMCS, rotation gear, exhaust cap  78 Crane PMCS, rotation gear, exhaust cap  79 Crane PMCS, rotation gear, exhaust cap  70 ATP 3-34.5 released  71 Service kits, parts listing  81 Service kits, parts listing  82 Service kits, parts listing  83 Service kits, parts listing  84 Service kits, parts listing  85 Service kits, parts listing  86 Service kits, parts listing  87 Service kits, parts listing  87 Service kits, parts listing  88 Service kits, parts listing  89 Service kits, parts listing  80 Service kits, parts listing  80 Service k  | 795<br>797<br>799<br>798 |    |
|--|--------------------------|----|
| PM Keeps You in the Fight! (Bradleys)  CORROSION  Desiccant bags absorb moisture  UTAP corrosion resources  REALER-110Oil sending unit NSN  M26Engine, water pump oil NSNs  M26Engine, water pump oil NSNs  M26Starter replacement w/instructions  DETECTOR, CHEMICAL  M4/M4A1 JCADSeal components  Back to Basics Readiness  Change Is Good!  EDITORIAL  Ask for Help!  Back to Basics Readiness  Change Is Good!  Everyone's Responsible for FOD Control  Memorial Day  Modern Note in an Old Song  Ownership of the Vehicle  PS Magazine-The Evolution Continues, Pt 2  What Do They Really Know?  WELDISCH AND AND FOR MAKE 120MCab stept caution, circle drive hose  FORWARD REPAIR SYSTEM, M7  Crane PMCS, rotation gear, exhaust cap  77  Crane PMCS, rotation gear, exhaust cap  78  Crane PMCS, rotation gear, exhaust cap  79  ATP 3-34.45 released  MEL listing  MEL listing  MEL listing  Service kit NSNs  Service kits, parts listing  Servic                      | 797<br>799<br>798        |    |
| CORROSION  | 799<br>798               | 56 |
| Desiccant bags absorb moisture UTAP corrosion resources  801 13 Hydraulic hose checks 77 GENERATORS, LARGE LRT-110-Oil sending unit NSN 802 60 LRT-110-Rear wheel cylinder NSN 796 61 ATP 3-34.45 released MEL listing 88 M26-Engine, water pump oil NSNs 794 42 Power generation training pub M26-Starter replacement w/instructions 800 39 PU-822A DRASHSpeed switch faulty 57 DETECTOR, CHEMICAL M4/M4A1 JCADSeal components 800 38 GENERATORS, SMALL EDITORIAL Ask for Help! 797 01 Back to Basics Readiness 802 01 Change Is Good! 799 01 Beack to Basics Responsible for FOD Control 796 01 Memorial Day 798 01 DAGRReturn & replacement info 88 PS Magazine-The Evolution Continues, Pt 1 What Do They Really Know? 801 120MBattery drain prevention 77 Wrecked by Neglect 794 01 120MBattery drain prevention 67 ELECTRICAL, GENERAL MK-3413/U maintenance kit TM 804 49 120MCab step caution, circle drive hose 77  | 798                      |    |
| UTAP corrosion resources 801 13 Hydraulic hose checks GRANES  LRT-110-Oil sending unit NSN 802 60 150-kWService kit NSNs 77 150-kWService kit NSNs 77 150-kWService kit NSNs 78 150-kWService kit NSNs 79 150-kWService kit NSNs 80 150-kWService  | 798                      |    |
| CRANES         GENERATORS, LARGE           LRT-110Oil sending unit NSN         802         60         150-kWService kit NSNs         7           LRT-110Rear wheel cylinder NSN         796         61         ATP 3-34.45 released         7           DECON         MEL listing         8           M26Engine, water pump oil NSNs         794         42         Power generation training pub         7           M26Starter replacement w/instructions         800         39         PU-822A DRASHSpeed switch faulty         7           M26Starter replacement w/instructions         800         39         PU-822A DRASHSpeed switch faulty         7           M26Starter replacement w/instructions         800         38         GENERATORS, SMALL         5           DETCTOR, CHEMICAL         Service kits, parts listing         8         8           M4/M4A1 JCADSeal components         800         38         GENERATORS, SMALL           Service kits, parts listing         8         5-kW MEP-1030Paralleling cable NSN         8           Back to Basics Readiness         802         01         ATP 3-34.45 released         7           Change Is Good!         799         01         MEL listing         8           Everyone's Responsible for FOD Control  |                          | 46 |
| LRT-110-Oil sending unit NSN   | 798                      | 49 |
| LRT-110Rear wheel cylinder NSN   | 798                      |    |
| MECON  M26Engine, water pump oil NSNs 794 42 Power generation training pub 77  M26Starter replacement w/instructions 800 39 PU-822A DRASHSpeed switch faulty 77  DETECTOR, CHEMICAL  M4/M4A1 JCADScal components 800 38 GENERATORS, SMALL  EDITORIAL  Ask for Help! 5-kW MEP-1030Paralleling cable NSN 88  Back to Basics Readiness 802 01 S-kW TQGExhaust muffler gasket NSN 88  Back to Basics Readiness 802 01 MEL listing 88  Everyone's Responsible for FOD Control 799 01 MEP-831A, -832A 3-kWEngine NSN 88  Everyone's Responsible for FOD Control 798 01 MEP-831A, -832A 3-kWEngine NSN 89  Modern Note in an Old Song 901 GLOBAL POSITIONING SYSTEM (GPS)  Ownership of the Vehicle 795 01 DAGRReturn & replacement info 89  PS Magazine-The Evolution Continues, Pt 1 803 01  PS Magazine-The Evolution Continues, Pt 2 804 01  What Do They Really Know? 801 01 120MBattery disconnect switch 79  Wrecked by Neglect 794 01 120MBattery drain prevention 79  ELECTRICAL, GENERAL  MK-3413/U maintenance kit TM 804 49 120MCab step caution, circle drive hose 79  |                          | 12 |
| M26Engine, water pump oil NSNs M26Starter replacement w/instructions 800 39 PU-822A DRASHSpeed switch faulty 77 Service kits, parts listing 80 Servic       | 796                      | 55 |
| M26Starter replacement w/instructions  DETECTOR, CHEMICAL  M4/M4A1 JCADSeal components  EDITORIAL  Ask for Help!  Back to Basics Readiness  Change Is Good!  Everyone's Responsible for FOD Control  Memorial Day  Modern Note in an Old Song  Ownership of the Vehicle  PS Magazine-The Evolution Continues, Pt 1  What Do They Really Know?  What Do They Really Know?  West Magazine-The Evolution Continues, Pt 2  What Do They Really Know?  West Magazine-The Revelocement w/instructions and Magazine-The Evolution Continues, Pt 2  What Jo They Really Know?  MK-3413/U maintenance kit TM  800 39  PU-822A DRASHSpeed switch faulty  Service kits, parts listing  ABL DRASHSpeed switch faulty  Service kits, parts listing  Service kits, parts listing  Service kits, parts listing  Service kits, parts listing  ABL DRASHSpeed switch faulty  Service kits, parts listing  ABL DRASHSpeed switch faulty  Service kits, parts listing  Servic kits, parts listing  Severyon-Parallelion cable NSN 8  ATP 3-34.45 released  ATP 3-3             | 800                      | 46 |
| M26Starter replacement w/instructions         800         39         PU-822A DRASHSpeed switch faulty         77           DETECTOR, CHEMICAL           M4/M4A1 JCADSeal components         800         38         GENERATORS, SMALL           EDITORIAL         5-kW MEP-1030Paralleling cable NSN         8           Ask for Help!         797         01         5-kW TQGExhaust muffler gasket NSN         8           Back to Basics Readiness         802         01         ATP 3-34.45 released         7           Change Is Good!         799         01         MEL listing         8           Everyone's Responsible for FOD Control         796         01         MEP-831A, -832A 3-kWEngine NSN         8           Memorial Day         798         01         MEP-831A, -832A 3-kWEngine NSN         8           Modern Note in an Old Song         800         01         GLOBAL POSITIONING SYSTEM (GPS)           Ownership of the Vehicle         795         01         DAGRReturn & replacement info         8           PS Magazine-The Evolution Continues, Pt 1         803         01         GRADERS           PS Magazine-The Evolution Continues, Pt 2         804         01         120MBattery disconnect switch         7           What Do They Really Know?         8  | 797                      | 61 |
| M4/M4A1 JCADSeal components  Boltorial  Ask for Help!  Ask for Help!  Back to Basics Readiness  Change Is Good!  Everyone's Responsible for FOD Control  Memorial Day  Modern Note in an Old Song Ownership of the Vehicle  PS Magazine-The Evolution Continues, Pt 1  What Do They Really Know?  What Do They Really Know?  Wrecked by Neglect  M4/M4A1 JCADSeal components  800  38  GENERATORS, SMALL  5-kW MEP-1030Paralleling cable NSN  88  MEL listing  MEP-831A, -832A 3-kWEngine NSN  89  MEP-831A, -832A 3-kWEngine NSN  80  GLOBAL POSITIONING SYSTEM (GPS)  90  GRADERS  120MReturn & replacement info  80  GRADERS  120MArticulation lock pin  120MBattery disconnect switch  120MBattery drain prevention  120MBattery drain prevention  120MCab safety  120MCab step caution, circle drive hose  120MCab step caution, circle drive hose  | 796                      | 54 |
| M4/M4A1 JCADSeal components  BO 38 GENERATORS, SMALL  S-kW MEP-1030Paralleling cable NSN 88 5-kW MEP-1030Paralleling cable NSN 88 67 Help!  Ask for Help! 797 01 5-kW TQGExhaust muffler gasket NSN 88 68 67 67 61 61 61 61 61 61 61 61 61 61 61 61 61   | 800                      | 48 |
| EDITORIAL  Ask for Help! Ask for Help! Back to Basics Readiness Change Is Good! Everyone's Responsible for FOD Control Memorial Day Modern Note in an Old Song Ownership of the Vehicle PS Magazine-The Evolution Continues, Pt 1 PS Magazine-The Evolution Continues, Pt 2 What Do They Really Know? Whereked by Neglect  PMK-3413/U maintenance kit TM  804  90  10  5-kW TQG-Exhaust muffler gasket NSN RATP 3-34.45 released REL BATA - 832A 3-kW-Engine NSN REP-831A, -832A 3-kW-Engine N |                          |    |
| Ask for Help! 797 01 5-kW TQGExhaust muffler gasket NSN 88 Back to Basics Readiness 802 01 ATP 3-34.45 released 77 MEL listing 88 Everyone's Responsible for FOD Control 796 01 MEP-831A, -832A 3-kWEngine NSN 89 MEL listing 89 MEP-831A, -832A 3-kWEngine NSN 89 MEP-831A, -832A 3   | 803                      | 50 |
| Back to Basics Readiness Change Is Good!  Everyone's Responsible for FOD Control Memorial Day Modern Note in an Old Song Ownership of the Vehicle PS Magazine-The Evolution Continues, Pt 1 What Do They Really Know? What Do They Really Know? Wrecked by Neglect  ELECTRICAL, GENERAL  MEP 3-34.45 released MEL listing MEP-831A, -832A 3-kWEngine NSN RMFP-831A, -832A 3-kWEngine NSN   | 802                      | 49 |
| Change Is Good! 799 01 MEL listing 88 Everyone's Responsible for FOD Control 796 01 MEP-831A, -832A 3-kW-Engine NSN 89 Memorial Day 798 01 Power generation training pub 79 Modern Note in an Old Song 800 01 GLOBAL POSITIONING SYSTEM (GPS) Ownership of the Vehicle 795 01 DAGRReturn & replacement info 89 PS Magazine-The Evolution Continues, Pt 1 803 01 GRADERS PS Magazine-The Evolution Continues, Pt 2 804 01 120MArticulation lock pin 79 What Do They Really Know? 801 01 120MBattery disconnect switch 794 01 120MBattery drain prevention 794 01 120MBattery drain prevention 794 01 120MCab safety 88 MK-3413/U maintenance kit TM 804 49 120MCab step caution, circle drive hose 79   | 796                      | 55 |
| Everyone's Responsible for FOD Control Memorial Day 798 01 Power generation training pub 778 01 Modern Note in an Old Song 800 01 GLOBAL POSITIONING SYSTEM (GPS) Onership of the Vehicle 795 01 DAGRReturn & replacement info 8 PS Magazine-The Evolution Continues, Pt 1 803 01 GRADERS PS Magazine-The Evolution Continues, Pt 2 804 01 120MArticulation lock pin 77 What Do They Really Know? 801 01 120MBattery disconnect switch 794 01 120MBattery drain prevention 795 120MCab safety 804 01 120MCab safety 805 01 120MCab step caution, circle drive hose 795 01 120MCab step caution, circle drive hose 805 01 120M-  | 800                      | 46 |
| Memorial Day  Modern Note in an Old Song Ownership of the Vehicle PS Magazine-The Evolution Continues, Pt 1 What Do They Really Know? Wrecked by Neglect Wrecked by Neglect MK-3413/U maintenance kit TM  Power generation training pub GLOBAL POSITIONING SYSTEM (GPS) DAGRReturn & replacement info 8  GRADERS  120MArticulation lock pin 7  120MBattery disconnect switch 120MBattery drain prevention 120MCab safety 8  120MCab step caution, circle drive hose 7  120MCab step caution, circle drive hose 7  120MCab step caution, circle drive hose  | 800                      | 61 |
| Modern Note in an Old Song Ownership of the Vehicle PS Magazine-The Evolution Continues, Pt 1 What Do They Really Know? Wrecked by Neglect PELECTRICAL, GENERAL MK-3413/U maintenance kit TM  800 01 GLOBAL POSITIONING SYSTEM (GPS) DAGRReturn & replacement info RGRADERS 120MArticulation lock pin 70 120MBattery disconnect switch 120MBattery drain prevention 120MCab safety 120MCab step caution, circle drive hose 70 71 72 73 74 75 76 77 77 78 77 78 78 78 79 79 79 70 70 70 70 70 70 70 70 70 70 70 70 70   | 797                      | 61 |
| Ownership of the Vehicle 795 01 DAGRReturn & replacement info 8 PS Magazine-The Evolution Continues, Pt 1 803 01 GRADERS  PS Magazine-The Evolution Continues, Pt 2 804 01 120MArticulation lock pin 77 120MBattery disconnect switch 794 01 120MBattery drain prevention 797 120MCab safety 881 120MCab step caution, circle drive hose 798 120MCab step caution, circle drive hose 799 120MCab step caution, circle drive hose   | )                        |    |
| PS Magazine-The Evolution Continues, Pt 2 804 01 120MArticulation lock pin 7 What Do They Really Know? 801 01 120MBattery disconnect switch 7 Wrecked by Neglect 794 01 120MBattery drain prevention 7  ELECTRICAL, GENERAL 120MCab safety 8 MK-3413/U maintenance kit TM 804 49 120MCab step caution, circle drive hose 7   | 804                      | 50 |
| What Do They Really Know? 801 01 120MBattery disconnect switch 704 01 120MBattery drain prevention 704 01 120MBattery drain prevention 705 120MCab safety 805 120MCab step caution, circle drive hose 705 120MCab step caution, circle drive hos   |                          |    |
| Wrecked by Neglect         794         01         120MBattery drain prevention         7           ELECTRICAL, GENERAL         120MCab safety         8           MK-3413/U maintenance kit TM         804         49         120MCab step caution, circle drive hose         7  | 798                      | 25 |
| ELECTRICAL, GENERAL 120MCab safety 8<br>MK-3413/U maintenance kit TM 804 49 120MCab step caution, circle drive hose 7  | 799                      | 19 |
| MK-3413/U maintenance kit TM 804 49 120MCab step caution, circle drive hose 7  | 797                      | 18 |
|  | 802                      | 47 |
| 12016 G1 1 1 1 1 1   | 799                      | 17 |
| Solder, lead required 797 50 120MCab upper door stop adjustment 8  | 803                      | 18 |
| ENVIRONMENTAL CONTROL UNITS (ECU) 120MHydraulic hose leaks   | 797                      | 19 |
|  | 798                      | 26 |
|  | 801                      | 18 |
| IECUUse legacy ECUs until fielded 800 54 120MTandem drive oil check 7  | 799                      | 16 |
| R438A refrigerant NSNs 800 61 GRENADE LAUNCHER, M320   |                          |    |
| EXCAVATOR, HYEX A1Sight support cracks 8   | 803                      | 44 |
| 230LCRDEngine types 794 19 <b>GROUNDING</b>  |                          |    |
| Hydraulic hoses, walk back on reel 800 19 TC 6-02.6 grounding techniques released 7  | 794                      | 61 |
| Swing bearing ring gear cleaning, lubing 802 46 <b>GUN, MACHINE</b>  |                          |    |
| FORKLIFTS M2/M2A1Accelerator wear, coating 8   | 801                      | 40 |
| ATLASHoist boom cylinder hydraulic hose 803 61 M2/M2A1Loading instructions   | 803                      | 40 |
| • •  | 801                      | 39 |
| ·  | 798                      | 46 |
| ATLAS IIFuel pump NSN 802 61 M2/M2A1Receiver NMC checks  | 794                      | 36 |
| ATLAS IIParking brake pad NSN 803 19 M2/M2A1Spade grip NMC if loose  | 794                      | 38 |
| • •  | 804                      | 38 |
| M4KHorn NSN 801 16 M2A1Armorer checks headspace (794-38) 8   | 800                      | 43 |
| M10AWiper motor kit 800 61 M2A1Barrel cap needed with BFA  | 796                      | 36 |
| RT-022 LCRTFStarter cranking 797 21 M2A1Barrel installation check 7  | 794                      | 35 |
| RT-022 LCRTFTire air pressure 798 21 M2A1Bolt erosion criteria   | 803                      | 41 |

| Subject                                     | Issue | /Pg | Subject                                    | Issue | /Pg |
|---|-------|-----|--|-------|-----|
| M2A1Flash suppressor, no anti-seize         | 797   | 41  | LASER RANGEFINDER                          |       |     |
| M2A1Headspace and timing still required     | 794   | 38  | AN/PED-5Protective eyepiece filter MWO     | 799   | 39  |
| M2A1Visual user guide download              | 800   | 43  | LIGHTING SETS                              |       |     |
| M240Buffer assembly cracks                  | 801   | 39  | DISE, PDISEMEL list                        | 800   | 46  |
| M240M80A1, M62A1 ammo, no changes           | 796   | 37  | LOADER, BACKHOE (BHL)                      |       |     |
| M240, M249Finish standards changed          | 800   | 44  | Battery PM                                 | 797   | 20  |
| M240, M249Gas system, scraper, BFA          | 797   | 27  | Bucket, rest on wood board when not in use | 801   | 16  |
| M249Barrel collar movement                  | 802   | 39  | HMEE-1Bucket pivot pin lubing              | 795   |     |
| M249Extractor pin check, no kicking         | 801   | 34  | HMEE-1Bucket, lay flat to keep water out   | 795   |     |
| M249Feed box support kit update (793-19)    | 802   | 40  | HMEE-1Egress window knob corrosion         | 796   | 20  |
| M249Scraper NSN change                      | 798   |     | HMEE-1Tire and wheel assembly NSN          | 799   | 60  |
| M249Scraper NSN change                      | 804   | 60  | Repair parts, maintenance support          | 803   | 61  |
| M249Slamming feed cover causes damage       | 796   |     | Transmission oil NSNs                      | 800   | 17  |
| MK 19Feed tray cover, sight bar, charging   | 804   |     | LOADER, SCOOP-TYPE                         |       |     |
| MK 19Rear sight replaced                    | 799   |     | 966HJoystick NSN                           | 800   | 61  |
| MK 19Round removal tool required            | 799   | 39  | 966HQuick-coupler parts NSNs               | 803   | 16  |
| HARDWARE                                    |       |     | LOADER, SKID-STEER, BOBCAT                 |       |     |
| Bench stock help                            | 803   |     | M400WBattery drain prevention              | 798   | 26  |
| Lock washers, torque wrench, lockwire       | 795   | 40  | M400WCab door sensor drains batteries      | 803   |     |
| HAZARDOUS MATERIALS & WASTE (I              |       |     | M400WLocking lever, debris in latches      | 796   |     |
| Absorbent compound NSN                      | 799   |     | M400WRear cab bolt replacement             | 796   |     |
| DAU HAZMAT website                          | 797   |     | LOCKS                                      |       |     |
| Drip pan NSNs                               | 804   |     | Safe combination security                  | 803   | 51  |
| PSCC help for shipping, storage             | 803   |     | Series 200 padlock control                 | 803   | 59  |
| Spill kit NSNs, components                  | 796   |     | LOGISTICS ASSISTANCE                       |       |     |
| Warning labels, shipping placards explained | 794   | 56  | AESIP, adding UICs                         | 798   | 54  |
| HEATER, SPACE                               |       |     | COMET POC                                  | 804   |     |
| Maintenance a year-round effort             | 803   | 52  | Deployer's toolbox                         | 799   | 54  |
| HELMETS, AVIATION                           |       |     | DLA-DS locations                           | 801   |     |
| AAIH, HGU-56PZeta III liners available      | 800   | 20  | DLA handbook                               |       |     |
| AN/AVS-7 HUD TM available                   | 796   | 55  | DLA RTD program                            | 803   | 55  |
| HOWITZER, SP, M109A6/A7 PALADII             | 1     |     | ETID registration for DLA turn-in          | 801   | 55  |
| Cradle mount bearing lube points            | 803   | 04  | Property turn-in with DD Form 1348-1A      | 798   | 56  |
| Fallback prevention tips                    | 801   | 02  | Safety, maintenance message web locations  | 798   | 58  |
| HOWITZER, TOWED, M119-SERIES                |       |     | UIC transfer help                          | 802   | 57  |
| A2Equilibrator spring damage                | 795   | 08  | LOGISTICS MANAGEMENT                       |       |     |
| A3Firing pin sticking                       | 803   | 05  | AR-COP training                            | 796   | 58  |
| HOWITZER, TOWED, M777A2                     |       |     | DEMIL codes defined                        | 804   | 56  |
| Hydrostrut cylinder corrosion               | 794   | 03  | GCSS-ArmyHelp desk website                 | 797   | 59  |
| Loading tray piston swivel eye loosening    | 794   | 04  | GCSS-ArmySerial number profile             | 804   | 59  |
| INSECT REPELLENT                            |       |     | GCSS-ArmySLocs w/T-code printing           | 799   | 57  |
| Deet-free repellent available               | 799   | 49  | GCSS-ArmyStorage codes                     | 800   | 56  |
| INTERCOM SETS                               |       |     | GCSS-ArmyTransaction codes defined         | 804   | 55  |
| AN/VIC-3Power cable arcing                  | 803   | 46  | GCSS-ArmyUnit of issue changes             | 799   | 56  |
| KITCHEN EQUIPMENT                           |       |     | GCSS-ArmyWarehouse activity monitor        | 802   |     |
| Field sanitation team not required (794-53) | 797   | 60  | TMC/MCS added to MMDF                      | 794   | 60  |
| MBUDust protection tips                     | 797   | 46  | MASK, PROTECTIVE                           |       |     |
| MTRCSTop engine panel doors, rain cap       | 804   | 42  | JSGPMCarriers disappearing                 | 802   | 42  |
| MTRCSRollers, locking pins/clips missing    | 800   | 49  | JSGPMFaceform, outsert pouches             | 803   | 45  |
|   |       |     |  |       |     |

| Subject   | Issue | /Pg | Subject I                                  | ssue       | P/P |
|---|-------|-----|--|------------|-----|
| JSGPMJSLIST hood too tight                          | 795   | 44  | MOUNT, WEAPONS                             |            |     |
| M53A1TM with parts list                             | 804   | 43  | FMTV LTAS ring mount components            | 799        | 4   |
| Night vision device use and training                | 798   | 48  | M153 CROWS II-Clearance issues             | 803        | 38  |
| MATERIAL HANDLING EQUIPMENT                         |       |     | M153 CROWS IICover NSN changed             | 799        | 6   |
| MEL updates   | 798   | 22  | M153 CROWS IICover NSN changed             | 801        | 4   |
| POC emails  | 797   | 60  | NIGHT VISION EQUIPMENT                     |            |     |
| MEDICAL EQUIPMENT                                   |       |     | AN/PSQ-40TM available                      | 803        | 49  |
| Repair parts in GCSS-Army                           | 802   | 53  | AN/PVS-14Eyeguard vs eyeshield (788-59)    | 794        | 6   |
| MINE CLEARING EQUIPMENT                             |       |     | Protective mask use and training           | 798        | 48  |
| BuffaloEmergency door, keep closed                  | 797   | 19  | PACKAGING                                  |            |     |
| BuffaloGenerator NSN                                | 794   |     | COSIS instructional videos                 | 803        | 59  |
| BuffaloWater draining tips                          | 796   |     | LLRC inspection tips                       | 802        |     |
| M7 SpiderBattery tips                               | 803   |     | Packaged items, keep sealed until needed   | 797        | 55  |
| M1231 HuskyAir dryer filter change interv           |       |     | Strapping and sealing kit NSNs             | 797        | 44  |
| M1231 HuskyComponent maintenance help               |       |     | PARACHUTES                                 |            |     |
| M1231 HuskyFuel system contamination                | 796   |     | T-11Slider mesh panel criteria increased   | 800        | 52  |
| M1231 HuskySteering wheel clip                      | 798   |     | PAVING MACHINE                             |            |     |
| M1270 MMPVTalon robot parking                       | 795   | 18  | 8816M BMPMAir filter cleaning              | 801        | 1'  |
| MINE DETECTOR                                       |       |     | 8816M BMPMCold weather starts              | 804        |     |
| AN/PSS-14Turn-in request                            | 794   | 43  | 8816M BMPMConveyor grease fittings         | 804        |     |
| MISSILE, AVENGER                                    | ,,,   |     | PISTOLS                                    | 004        | 1   |
| Caps/covers, tarp, NATO cable, CDT                  | 797   | 36  | M9Ammo, holstering, safety                 | 797        | 40  |
| ECU/PPU, use as primary power source                | 795   |     | M9Recoil spring flat spot criteria         | 801        |     |
| MISSILE, HELLFIRE                                   | 175   | 72  | M17/M18 MHSIntroduction                    | 801        |     |
| -   | 802   | 25  | POL  | 801        | 51  |
| Launcher, loading and missile tips  MISSILE, HIMARS | 802   | 33  |  | 804        |     |
| •   | 707   | 25  | Drip pan NSNs<br>Petroleum ops smart book  | 803        |     |
| AS-4701/VRC loop antenna stowage                    | 797   |     | USAPC website                              | 804        |     |
| Hoist cable positioning                             | 803   | 34  | POWER SUPPLY                               | 004        | )   |
| MISSILE, JAVELIN                                    | 706   | 20  |  | 001        | 44  |
| CLU protection in the field                         | 796   | 38  | X60M 60-KWTM with enhanced videos          | 801        | 48  |
| MISSILE, PATRIOT                                    |       |     | PS MAGAZINE                                |            | _   |
| 15-kW generator oil drain fitting                   | 794   |     | milSuite group added                       | 800        |     |
| Air filters, keep extra sets on hand                | 799   |     | POC for article suggestions                | 804        |     |
| AN/MPQ-65/ACLET filter cracks                       | 794   |     | PS Mag Live                                | 801        |     |
| Connector caps, keep in place                       | 797   |     | Search engine instructions                 | 796        |     |
| Data recorder, ECH handle, PAC 2 MCU                | 804   |     | What'chu Lookin' at, Dawg? (PS mobile app) | /94        | 6.  |
| Moisture, fiber optic cables, J4/J10/J11 cable      | s803  | 35  | PUBLICATIONS                               |            |     |
| MISSILE, THAAD                                      |       |     | AN/GYK-78B(V)3 TM released                 | 803        |     |
| PMCS, coolant leaks, antenna unit grounding         | ;799  | 35  | AN/TPX-57(V)1 & 2 interrogator set TM      | 802        |     |
| MLRS  |       |     | AN/TSQ-232 TM correction                   | 794        |     |
| AS-4701/VRC loop antenna stowage                    | 797   | 35  | AN/TSX-4 TM revised                        | 798        |     |
| Cab lift, hoist pulley, hoist markings              | 796   |     | AN/TYS-94H(V)2 TM                          | 803        |     |
| Hoist cable positioning                             | 803   |     | Army Sustainment goes quarterly            | 804        |     |
| Shock absorber PM tips                              | 795   |     | ATP 4-25.12 provides sanitation guidance   | 794        |     |
| Transmission housing cleaning                       | 798   | 08  | ATP 6-02.54 released                       | 794        |     |
| MORTARS   |       |     | EIR digest                                 | 795        |     |
| M120/A1Firing pin alignment explanation             | 795   | 35  | ICIDS-V TM available                       | 802        |     |
| M120/A1Gun card updated for tracking                | 796   | 37  | IHPS TM available KiT! Magazine            | 804<br>795 |     |
|   |       |     | 1111. Magazine                             | 173        | 0.  |

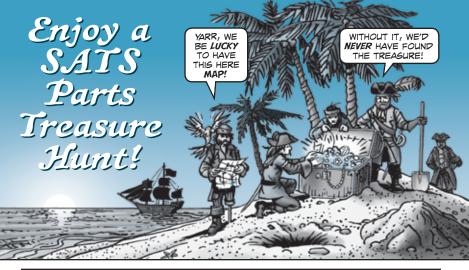
PS 804 31 NOV 19

| Subject  | Issue | /Pg | Subject                                     | Issue | /Pg |
|--|-------|-----|---|-------|-----|
| PM Bridging Newsletter download                                    | 802   | 61  | SIGHTS & SCOPES                             |       |     |
| TB 43-0002-3 covers UAV MELs                                       | 794   | 26  | Lithium batteries, use only if TM allows    | 797   | 53  |
| TB 43-0134 updated   | 795   | 61  | M68NMC if ARD is missing                    | 797   |     |
| TB 43-180 revised  | 795   | 61  | M68Windage/elevation caps, cleaning         | 802   |     |
| TB 55-46-1 updated   | 797   | 55  | M150Lens cover NSNs                         | 794   | 39  |
| TC 3-04.71 released  | 796   | 61  | M150Tritium leak check                      | 799   | 41  |
| TC 6-02.6 grounding techniques released                            | 794   | 61  | Sight/weapon mix explained                  | 803   |     |
| TM 10-6130-523-10 released   | 795   | 61  | SMALL ARMS                                  |       |     |
| RADARS   |       |     | Acetylene torch not allowed for stuck parts | 802   | 42  |
| AN/TPO-50TM available  | 804   | 49  | CCMCK cleaning reminder                     | 802   |     |
| SentinelVoltage, cybersecurity, cleaning                           | 798   | 42  | CCMCK dangers explained                     | 795   |     |
| RADIAC EQUIPMENT   |       |     | Controlled parts, statement needed for dama |       |     |
| AN/PDR-77Pancake probes defective                                  | 799   | 48  | Gaging not required for new weapons         | 797   |     |
| RADIO SET, GENERAL   |       |     | Gaging requirement back to 2 years          | 796   | 36  |
| AN/TRC-238 radio terminal set TMs release.                         | d 796 | 61  | Lube not allowed for chamber, bore, ammo    | 801   | 35  |
| Connector mating, knob jamming                                     | 804   |     | Shipping Do's and Dont's                    | 799   | 42  |
| Turn-in procedures explained                                       | 800   |     | SMALL EMPLACEMENT EXCAVATO                  | R (SE | E)  |
| Vehicle power surge damages radios                                 | 795   |     | Ball joint lubing                           | 800   | ,   |
| RADIO SET, SINCGARS  | ,,,,  |     | SUPPLY, GENERAL                             |       |     |
| Installation kits stay with vehicle                                | 796   | 52  | CAGE code POC identification                | 800   | 57  |
| RF and synthesizer CCA turn-in                                     | 794   |     | CAGE codes, identify through SAM            | 804   |     |
| RIFLE, M16-SERIES  | //-   | 77  | DD Form 1348-6 for parts without NSNs       | 797   |     |
| ,  | 800   | 42  | DLA handbook                                | 798   |     |
| Front sight post detent lube Inspection for dirty, unlubed weapons | 800   |     | GCSS-Army stock control functions           | 796   |     |
| * **   | 803   |     | Property, equipment turn-in to DLA-DS       | 799   |     |
| M12 rack fitting Ripcord barrel cleaning tool                      | 801   |     | Usable On Code (UOC) explained              | 796   |     |
| Sling NSNs   | 804   |     | TANK, M1-SERIES                             |       |     |
|  | 804   | 31  | Air precleaner PM                           | 796   | 06  |
| ROBOTS, GROUND   | 705   | 10  | Ammo compartment lubing                     | 798   |     |
| TalonProper parking on M1270 MMPV                                  | 795   | 18  | Ammo tube round stopper damage              | 800   |     |
| ROLLER, VIBRATORY  | 700   | 10  | Cleaning tips for inside and out            | 801   |     |
| CS-433CSeat belt replacement criteria                              | 799   | 18  | Crosswind sensor fault caused by insects    | 800   | 02  |
| SAFETY   |       |     | EMFS water damage                           | 800   | 03  |
| Cold weather injuries  | 795   |     | Engine exhaust deflector for towing         | 803   |     |
| Eyewear protection NSNs  | 794   |     | Fire prevention: belly plate, grill doors   | 801   | 06  |
| Laser myths and facts  | 795   | 57  | Gun mount travel lock pin                   | 797   | 04  |
| SATELLITE COMMUNICATION  |       |     | Hydraulic reservoir level check             | 801   | 05  |
| AN/FYQ-110C DSCS TM released                                       | 797   |     | M1A2 SEPCROWS WSCP switch guards            | 797   | 03  |
| AN/TSC-154A SMART-TGround rod door                                 | 804   |     | M1A2 SEPWTR only lube authorized            | 801   | 05  |
| AN/TSC-185(V)1, (V)2HPA cables                                     | 801   |     | Mine BladeHydraulic jack replaced           | 799   | 60  |
| AN/TSC-185A(V)2 fire extinguisher bracket                          |       |     | Oil types for engines                       | 798   | 02  |
| ATP 6-02.54 released   | 794   | 61  | Parking brake check                         | 802   | 03  |
| SCRAPER, EARTHMOVER, 621G  |       |     | Pintle lubing                               | 796   | 08  |
| Battery disconnect switch  | 803   |     | Replenisher level, recoil bleeding          | 795   | 02  |
| Push loading allowed   | 797   | 60  | Shock absorber sight glass cleaning         | 794   | 09  |
| SHELTERS   |       |     | Skirt hinge points                          | 797   | 05  |
| CommoExterior PM tips  | 795   | 50  | Transmission turn-in                        | 798   | 61  |
| CommoInterior PM tips  | 795   | 46  | Transmission turn-in                        | 800   | 05  |
| TASNSNs  | 797   | 52  | V-pack cleaning, maintenance                | 795   | 04  |

| Subject   | Issue | /Pg | Subject   | Issue      | /Pg |
|---|-------|-----|---|------------|-----|
| TENTS   |       |     | M1101, M1102Landing leg wheels  | 804        | 15  |
| Bed net protects against insects                | 798   | 53  | M1102Breakaway cable carabiner NSN  | 798        | 61  |
| TEST EQUIPMENT                                  |       |     | M1112Walking beam arm clearance   | 797        | 10  |
| AN/GRM-122Component TMs                         | 797   | 48  | Service kit NSNs  | 798        | 12  |
| AN/PRM-36Lithium batteries not allowed          | 799   | 51  | XCK2000E1Tire and wheel assembly NSN  | 798        | 61  |
| Fluke multimeters recalled                      | 801   | 44  | TRAILERS, SEMI  |            |     |
| UIC change for TMDE                             | 803   | 38  | Brake chamber dust cap NSNs   | 800        | 14  |
| TIRES   |       |     | Linseed oil for deck preservation   | 804        | 61  |
| FedMall tire catalog                            | 794   | 14  | M3/M3A1 CROPData plate NSNs   | 794        | 11  |
| Tire lube NSNs                                  | 804   | 61  | M3/M3A1 CROPStrap assembly NSN  | 803        | 61  |
| Universal high-flow ground tire inflator kit    | 796   | 10  | M3/M3A1 CROPWeb tie-down straps   | 794        | 10  |
| Universal high-flow tire inflator kit accessori | es799 | 60  | M3A1 CROPWear plates not needed   | 800        | 13  |
| TOOLS   |       |     | M172A1Hub bearing NSN fix   | 799        | 61  |
| Biometric automated toolset TM revised          | 798   | 61  | M172A1Hub bearing NSN fix   | 800        | 11  |
| Calibration, keep current                       | 802   | 43  | M870A1Hub & drum kit missing parts  | 802        | 60  |
| Component lists, how to find                    | 795   | 38  | M871-SeriesGlad hand cover seals  | 799        | 12  |
| Don't Let Tools Trip You Up!                    | 797   | 62  | M969-SeriesVapor integrity test   | 802        |     |
| JGMTK replaces GMTK                             | 802   | 60  | M1000APU battery solar panel  | 799        |     |
| Pallet jack NSN                                 | 803   | 61  | M1000APU hydraulic reservoir valve  | 799        |     |
| SATSA/C door panel thumbscrew                   | 801   | 45  | Service kit NSNs  | 798        | 12  |
| SATSComponent list available                    | 795   | 41  | TRAINING  |            |     |
| SATSParts list                                  | 804   | 35  | UTAP training materials website   | 798        | 20  |
| SECMRain tube and gutter NSN                    | 803   | 37  | TRUCK, 1 1/4-TON, HMMWV   |            |     |
| SEWRepair parts listing                         | 800   | 36  | A/C refrigerant charge weight   | 801        | 14  |
| SKOT help desk email                            | 799   | 61  | High seat kit NSNs  | 797        | 60  |
| TMDE coordinator online training                | 804   | 47  | Incandescent vs LED bulbs, mix or match?  | 795        | 14  |
| Tool set component lists                        | 800   | 35  | Installation kit for AN/VRC-104(V)5   | 802        | 48  |
| TRACTOR, D6K                                    |       |     | M1097R1Special purpose kits   | 799        | 61  |
| Platform wiring harness NSN                     | 802   | 61  | M1151A1Gunner's sling NSN   | 802        |     |
| TRACTOR, D7E/F/G/R                              |       |     | M1151A1Gunner's sling NSN   | 804        |     |
| D7GGear shifting precaution                     | 804   | 19  | Slave starting steps  | 804        |     |
| D7R IIBattery drain prevention                  | 799   | 19  | Tow bar bracket mod   | 798        |     |
| D7R IIBlade float indicator check               | 799   | 60  | Turret traversing handle replacement  | 801        |     |
| D7R IIHydraulic filter clearance                | 797   | 16  | Unauthorized modifications  | 799        |     |
| D7R IIIdling after startup                      | 797   | 17  | Up-armoredBall joint NSN  | 803        | 60  |
| D7R IITrack adjuster O-ring seal                | 794   | 18  | TRUCK, FMTV   |            |     |
| TRACTOR, D8K                                    |       |     | A1/A1P2Electrical system part NSNs  |            | 10  |
| Gear shifting precaution                        | 804   | 19  | A1/A1P2Tire wear indicators   | 794        |     |
| TRAILERS  |       |     | A1P2Door shock absorber NSN   | 798        |     |
| Cargo net NSNs                                  | 804   | 14  | A1P2EHPU cap NSN  | 797        |     |
| M149A2Hose assembly NSN                         | 802   | 61  | A1P2Lift cylinder NSN   | 796        |     |
| M149A2Master cylinder NSN                       | 803   | 60  | A1P2Window latch NSN<br>A/C belt NSNs   | 795<br>798 |     |
| M149A2Master cylinder NSN                       | 804   | 15  |   | 798<br>801 |     |
| M1076Air chamber dust cap NSNs                  | 803   | 14  | A/C refrigerant pressure by temperature<br>CTIS electronic control module, A0 vs A1 | 797        |     |
| M1082, M1095Tire & wheel assembly NSI           | N 803 | 61  | *   | 797        |     |
| M1095ABS light caps                             | 797   | 61  | Door handle parts NSNs<br>Gunner's platform NSN                                     | 803        |     |
| M1101Shackle nut NSN                            | 799   |     | LTASHeater switch NSN   | 796        |     |
| M1101, M1102Brake drum NSN                      | 798   | 61  | LTASHeater switch NSN  LTASTow bar decal NSNs                                       | 801        | 11  |
| M1101, M1102Cover kit NSN                       | 798   | 61  | LTASTow bar decar NSNs  LTASTransmission control valve module                       | 803        |     |
|   |       |     | 21.13 Transmission control varve module   | 005        | 00  |

PS 804 33 NOV 19

| Subject                                      | Issue | /Pg | Subject  | Issue  | /Pg |
|--|-------|-----|--|--------|-----|
| M1078A1Mud flap, splash guard NSNs           | 803   | 14  | Shock absorber PM tips                         | 795    | 06  |
| M1087A1P2Side platform parts list            | 797   | 12  | Towing techniques explained                    | 800    | 08  |
| M1089A1P220-ton jack, amber light in BI      | 797   | 61  | Track tension, cdr's hatch, ramp, idler wheel  | s801   | 27  |
| M1157A1P2HVAC system parts                   | 800   | 12  | Transmission housing cleaning                  | 798    | 08  |
| Packing wheel bearings                       | 802   | 14  | VEHICLE, MRAP                                  |        |     |
| Power steering gasket NSN                    | 797   | 61  | Doors, hatches need glow-in-the-dark tape      | 802    | 16  |
| Spare wheel assy for trucks                  | 798   | 15  | M-ATVCab drain plugs                           | 796    | 14  |
| Towing FMTV/LTAS vehicles                    | 795   | 12  | VEHICLE, RECOVERY, M88-SERIES                  |        |     |
| Transmission parts reversed                  | 803   | 10  | A1Road wheel arm bearing lube                  | 801    | 04  |
| Troop seats and safety straps                | 800   | 10  | A2-AFES PM tips                                | 804    | 06  |
| TRUCK, HEMTT                                 |       |     | A2Engine fire prevention checks                | 802    | 06  |
| Battery liner prevents corrosion             | 794   | 12  | A2Engine fire prevention flipbook              | 801    | 03  |
| Fuel containment berms                       | 797   | 15  | A2Engine fires: oil levels and batteries       | 803    | 02  |
| Fuel tanker cleaning instructions            | 803   | 61  | A2Fuel injection lines faulty                  | 800    | 06  |
| M978Main pump motor NSN                      | 798   | 17  | A2Tarp NSN for full vehicle                    | 794    | 03  |
| M978-SeriesPurging info                      | 804   | 60  | Hatch lever check                              | 798    | 11  |
| M983A4 LETFifth wheel mount screws           | 800   | 15  | Transmission oil filter mounting bolt sequence | ce 795 | 09  |
| REBS retrieval cautions                      | 796   | 18  | VEHICLE, STRYKER                               |        |     |
| Towing FMTV/LTAS vehicles                    | 795   | 12  | Armor panel damaged by winch cable             | 800    | 07  |
| TRUCK, M878 YARD TRACTOR                     |       |     | Brake check before shutdown                    | 797    | 06  |
| A2Backup alarm NSN                           | 794   | 15  | Bustle rack, cargo nets for storage            | 799    | 04  |
| TRUCK, M915-SERIES                           |       |     | Cargo net NSNs                                 | 796    | 03  |
| M915A5Front hub rubber fill plug NSN         | 796   | 13  | Driver's hatch stay device, detent assembly    | 804    | 03  |
| M915-SeriesCoolant filter kit                | 800   | 61  | DVE cable routing                              | 796    | 02  |
| M917A2Tire & wheel assy components           | 802   | 60  | Fuel injector line inspection                  | 797    | 07  |
| TRUCK, M1070 HET                             |       |     | Fuel shutoff switch damage                     | 798    | 05  |
| A1Engine fan clutch NSN                      | 794   | 61  | Height management system                       | 804    | 04  |
| TRUCK, PALLETIZED LOADING (PLS               | 3)    |     | Hub seal replacement                           | 803    | 07  |
| Cold weather pubs, no ether for starts       | 795   | 10  | ITH headset troubleshooting, repair parts      | 803    | 08  |
| M1075-SeriesTransfer case training           | 802   | 11  | M1135 NBCRVDetection PM tips                   | 804    | 44  |
| TRUCKS, GENERAL                              |       |     | Start-up and shutdown procedures               | 797    | 08  |
| Brake chamber dust cap NSNs                  | 800   | 14  | Steering damper damage, leaks                  | 797    | 02  |
| Cargo net NSNs                               | 804   |     | VV-HullControl arm assembly adjustment         | 794    | 02  |
| Diesel engine slobber                        | 804   |     | VEHICLES, COMBAT                               |        |     |
| OGPK transparent armor glass installation    | 796   | 09  | Service kit NSNs                               | 798    | 12  |
| Service kit NSNs                             | 798   | 12  | WATERCRAFT                                     |        |     |
| 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  |
| VEHICLE, FIGHTING, M2/M3 BRADL               | FY    |     | M30 BEBM15 bridge adapter pallet               | 804    | 18  |
| DVDB turn-in                                 | 803   | 07  | MKIIArtwork correction (794-19)                | 799    | 60  |
| Engine access door hydraulic reservoir       | 798   |     | MKIIBilge drain plug location                  | 794    | 19  |
| M24214-pin connector damage                  | 802   |     | MK-7 life raft replacements                    | 800    | 18  |
| M24291F, recoil damper fluid, lockwire       | 799   |     | WELDING  |        |     |
| M242Installation tips                        | 794   |     | Gas cylinder turn-in, delivery                 | 802    | 50  |
| M242Track & bolt assemblies stay togethe     |       |     | SEWRepair parts listing                        | 800    | 36  |
| Oil level checks                             | 804   |     | WIRE ROPE                                      |        |     |
| Ramp and door seal check                     | 796   | 04  | Wire rope NSNs                                 | 794    | 15  |
|  |       |     |  |        |     |





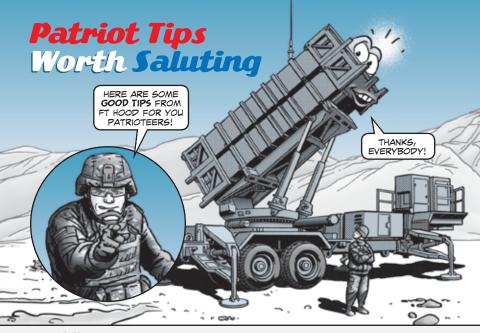
In a tool set as huge as the standard auto tool set (SATS), sometimes it's hard to find tool and part NSNs.

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

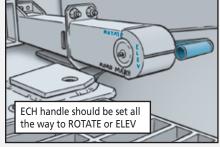


Dear Editor,

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.

 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.

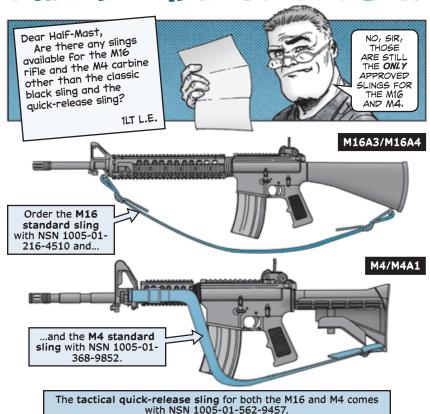
> WO1 Kayla Wilkes SGT Travis Blackburn

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?





Since 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*.

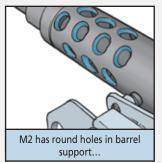
#### M2 and M2A1 Differences

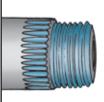
OF COURSE,

SOLDIERS NEED TO BE ABLE TO TELL AT A GLANCE WHETHER THEY HAVE AN M2 OR AN MZAI.

> HERE'S WHAT TO LOOK FOR...

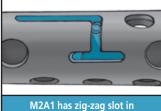
The M2 has round holes in the barrel support and its barrel has notches and uninterrupted threading.



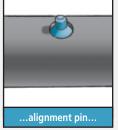


...barrel notches and uninterrupted threading

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.



barrel support...





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.

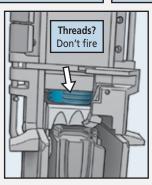
M2A1s don't need to be headspaced and timed by the operator, but headspace and timing must be checked by the armorer.

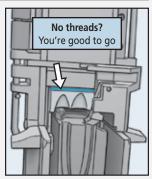
Many M2A1 barrels are ruined because operators don't screw them all the way into the barrel extension.

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.

MK 19 Machine Gun...



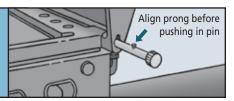


Even on a heavy-duty weapon like the MK 19 machine gun, slamming and jamming can cause heavy-duty damage. Remember these rules, gunners, to keep you and your MK 19 out of jams:

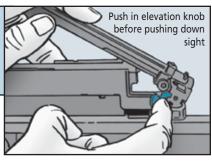
Guide the feed tray cover to the latched position. Never let the cover slam down. If you
slam the cover down, the cover lock is damaged. Then you can't lock the cover in place.
If that's not enough, slamming also knocks the primary drive lever out of alignment with
the secondary drive lever. That causes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





THEY MAY NEED COMET.. MIGHT, TOO!

#### **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

Carson

Hood

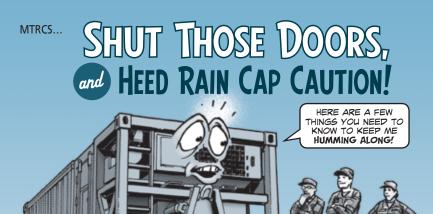
- Riley Polk Bliss
- olus Aberdeen Provina Ground
  - Joint Base Lewis-McChord.

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



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

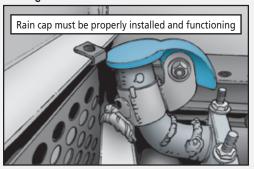
First, it's important for maintainers to close the top engine access panels on the MTRCS.

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.



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-   |
|---------------|-------------|
| Extra Small   | 01-646-2614 |
| Small         | 01-646-2709 |
| Medium        | 01-646-2699 |
| Large         | 01-646-2625 |

| M53A1 (Left) | NSN 4240-   |
|--------------|-------------|
| Extra Small  | 01-646-2717 |
| Small        | 01-646-2646 |
| Medium       | 01-646-2637 |
| Large        | 01-646-2683 |

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

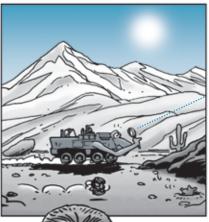
https://idmng.armyerp.army.mil

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

# Help NBCRV Stryker Do Its Detecting Duty!









THE M1135 NBCRV STRYKER IS CRITICAL IN AN ENVIRONMENT WITH CBRN THREATS. IF IT DOESN'T
PO ITS
PETECTING
JOB, THE
RESULTS
COULD BE
FATAL.

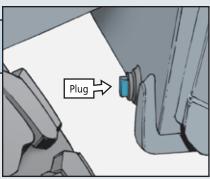
HERE ARE SOME WAYS TO KEEP YOU AND YOUR NBCRV STRYKER DETECTING...  Run the NBCRV Stryker at least four hours weekly while doing a complete PMCS. If you don't, you'll have guaranteed trouble. The chemical biological mass spectrometer II (CBMS II) needs at least that long to complete its built-in-test (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.



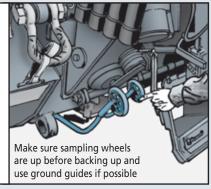


Monthly, run the Stryker CBMS II system for an 8-hour bake out. A bake out purges the system of any contaminants that can interfere with detecting.



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 yehicle.

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.





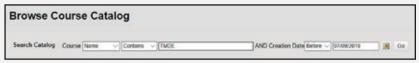
# TMDE Coordinators Now Train Online

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

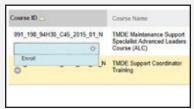
After coordinators have taken the course and passed the five-question test, they'll receive a training certificate by email.

Here's how to access the course:

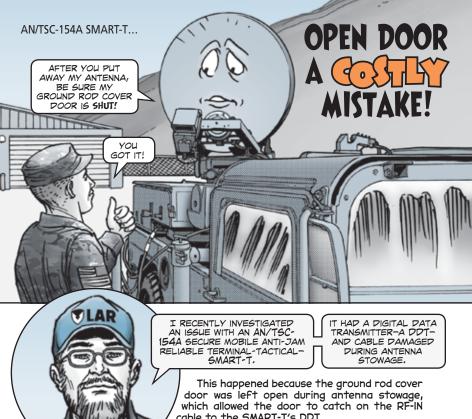
- Go to https://ellc.learn.army.mil/ and click <u>CAC/PKI Login</u>. Select the appropriate certificate and input your PIN.
- 2. Click on Courses.
- 3. Once the Courses screen has loaded, click on Browse Course Catalog.
- 4. Type **TMDE** in the Search Catalog and click <u>Go</u>. Make sure the search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



- **5.** From the search results, select TMDE Support Coordinator Training.
- Hover over the course's ID. A dropdown arrow will appear. Click on the arrow and another display box will appear. Click on <u>Enroll</u>.
- 7. The Self Enrollment screen will appear. Click Submit.
- **8.** You should receive a message confirming your enrollment. Click <u>OK</u> and take the course.

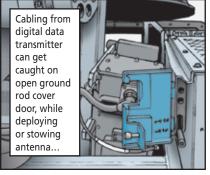


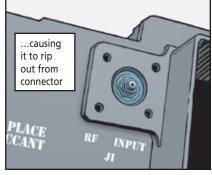
Questions? Contact Gary Davenport at (256) 955-8082 or email: gary.m.davenport.civ@mail.mil



cable to the SMART-T's DDT. The end result was a broken cable at the DDT's

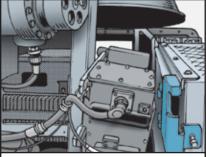
cannon plug connector.



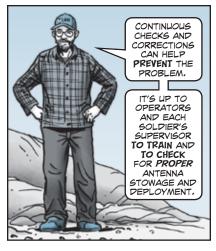


Unfortunately, it isn't the first time I've seen this happen. It'll be a problem until units ensure that all operators are properly trained.

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.



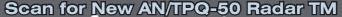
Keep ground rod cover door closed when deploying or stowing antenna



LHT LAR Joe Sheffield JBLM, WA

Editor's Note:

Consider the message transmitted, Joe.





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.

#### 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





Defense 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).

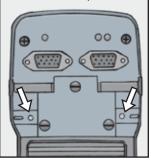
Since GPS satellites weren't beaming the OTAD/OTAR signal at that time, it wasn't considered an issue.

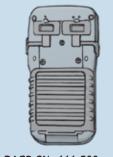
Since then, the GPS Directorate has activated the OTAD/OTAR signal, which makes unit-level action imperative to retrofit DAGRs to use the signal.

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.

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.





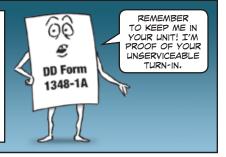
DAGR SNs 111,500 and below whose screws aren't green are noncompliant and users should follow the turn-in instructions. IF RETURNING EARLY
DAGRS OR AFTER
CONFIRMING PAGR
FAILURE (IF THE DAGR
WILL TURN ON) USING
THE BUILT-IN TEST,
THE BIT, RETURN
EQUIPMENT USING
THE FOLLOWING
PROCEPURES...



#### 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



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.



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.



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.

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.







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, DON 661-7766, OR COMMERCIAL 269-961-7766. OR EMAIL: 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





• Keep all accessories.





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

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

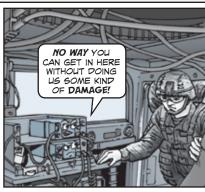


DAGR turn-ins should be sent through the unit's SSA or PBO to the following address:

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.



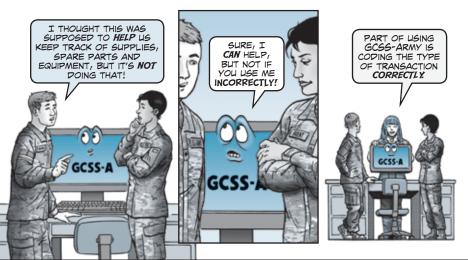
Please use caution when climbing into vehicles with installed radios.

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

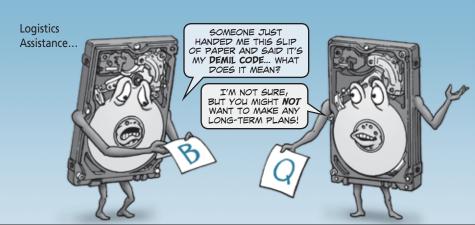


## Deciphering Document Numbers



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

| First two<br>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"                              |
| Material documents  |  |
| 49                  | Inventory loss   |
| 50                  | Inventory gain   |



### DECODING DEMILITARIZATION

Demilitarization (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.

are the

codes and

what they

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

mean: Code **DEMIL Requirementst** USML or CCL military ammunitions and explosives (AE). DEMIL is required for G classified and unclassified items. P **USML classified items.** DEMIL is required. USML or CCL military items. DEMIL is required, but item managers, equipment F specialists or product specialists must provide special DEMIL instructions. USML or CCL military items. DEMIL is required. Destroy the item and its D components to prevent the item from being restored to a usable condition. **USML or CCL military items.** Remove or demilitarize installed key point items C as DEMIL code D. The DoD DEMIL Program Office reserves exclusive rights to this code and issues F the DEMIL instructions for items using it. В **USML Items.** Mutilation (MUT) to the point of scrap is required worldwide. CCL items (CCLI). 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 Q when the DEMIL IC is 6. 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 Α by the DoD to present a low risk when released from DoD control.

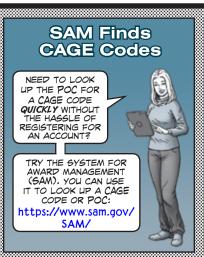
DLA Disposition Services doesn't accept items with DEMIL codes G or P in their original configuration.

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











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.



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

lean: Always keep clothing clean

verheating: Avoid getting too hot

oose: Wear clothing loose and in layers

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

YEAH, YOU DO LOOK FOR ME, NOT YOU!



Wear gloves to handle equipment and fuel products.



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.

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







- red, darkened or painful skin.
- body parts that are numb, tingling, bleeding, blistered, swollen or waxy-looking.
- uncontrollable shivering, drowsiness, or lack of focus or coordination.
- dizziness, excessive yawning or cherry-red lips.

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



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.

#### 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<br>(Fahrenheit) | Cleaning<br>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 <sup>1</sup> / <sub>2</sub> -gal |
| 01-490-2470 | 15-gal                             |

Each NSN brings a package of 10 drip pans.

# Would You Stake Your Life on the Condition of Your Equipment?

# Make PMCS...



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