

**PS****THE  
PREVENTIVE  
MAINTENANCE  
MONTHLY****ISSUE 731 OCTOBER 2013**

TB 43-PS-731, The Preventive Maintenance Monthly, is an official publication of the Department of the Army, providing information for all Soldiers assigned to combat and combat support units and all Soldiers with unit maintenance and supply duties. All information published has been reviewed and approved by the agency responsible for the equipment, publication or policy discussed. Application of the information is optional with the user. Masculine pronouns may refer to both genders. The use of product or company names does not constitute endorsement of those products, services or companies by the U.S. Army. The use of non-DoD hyperlinks, along with their content, does not constitute endorsement by DoD or DA. Neither DoD nor DA exercises any editorial control over, and cannot vouch for, content on non-DoD websites.

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M1-Series Tank Bore Evacuator Criteria  
Stryker Cargo Strap Warning  
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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.

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**USAMC LOGSA (AMXLS-GP)**  
**Bldg. 3303**  
**Redstone Arsenal, AL 35898**

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**usarmy.redstone.logsa.mbx.psmag@mail.mil**

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MAINTENANCE  
MONTHLY

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THIS ECTOPLASM  
READING IS OFF  
THE CHARTS!

THE GHOST MUST BE  
NEARBY! WE SHOULD  
SEE HIM SOON.



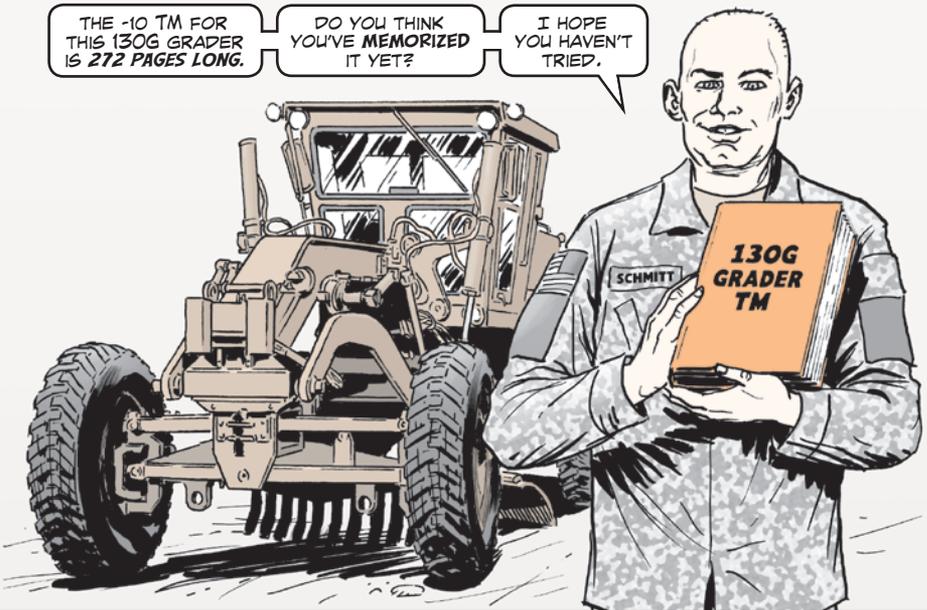
PM GHOST HUNTERS ON PAGE 27!

# RIDE THE TM WAVE!

THE -10 TM FOR THIS 130G GRADER IS 272 PAGES LONG.

DO YOU THINK YOU'VE MEMORIZED IT YET?

I HOPE YOU HAVEN'T TRIED.



CSM KARL E SCHMITT, TACOM-LCMC

Operators, if you don't have a copy of the -10 TM in your vehicle, get one **now!**

The operator's manual is more than just PMCS charts. It has instructions on lubricating, cleaning, and inspecting your vehicle. Just as important, it has the lowdown on unique characteristics specific to your vehicle's operation. In other words, it tells you how to operate the vehicle and its controls.

You may have a lot of experience operating a vehicle you've used every day for a year, but memory isn't perfect. And if you're breaking in a newer model, problems are bound to occur if you don't study the new -10.

For example, a new CAT 120M road grader looks a lot like the old, reliable CAT 130G road grader. But new technology delivers some **big operational** differences!

Having a copy of the -10 TM in your old or new vehicle and using it is critical to your safety and mission success. It's your go-to playbook for equipment operation and a must-have in every vehicle.



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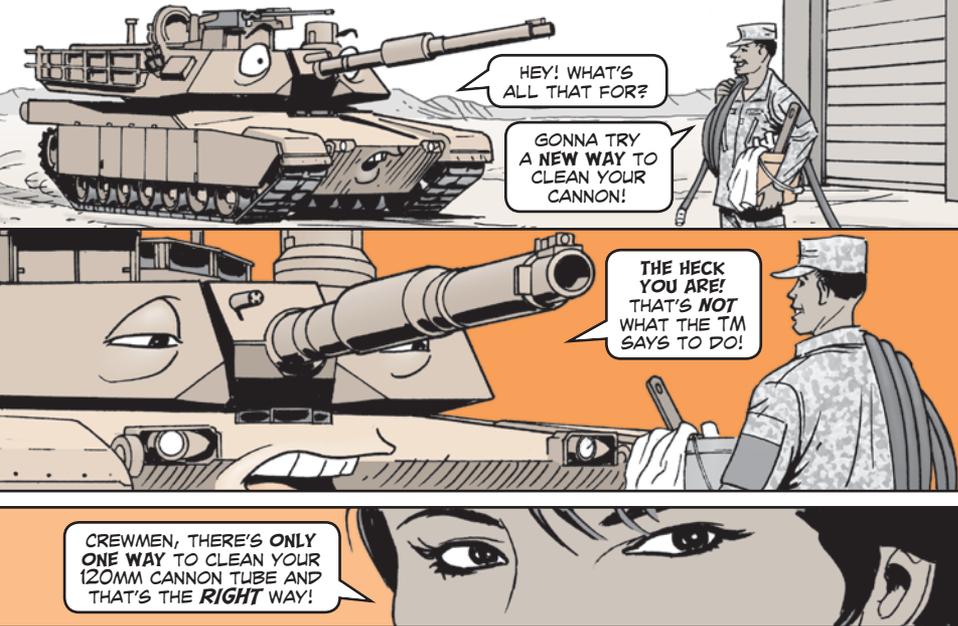
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By order of the Secretary of the Army:  
**RAYMOND T. ODIERNO**  
 General, United States Army Chief of Staff

Official:  
  
**GERALD B. O'KEEFE**  
 Administrative Assistant to the Secretary of the Army  
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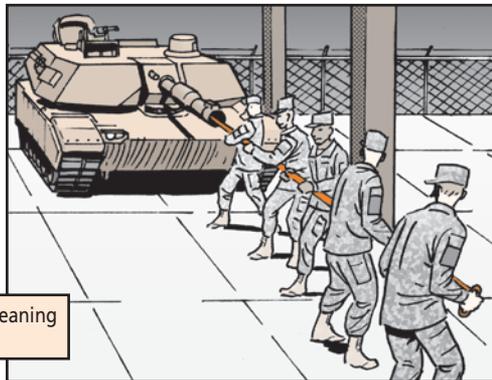
# DON'T REINVENT CLEANING TOOLS



You might think you've come up with a "homemade tool" that's a "better way" to clean your M1's cannon tube. But you better think again, unless you want to explain why your cannon tube has to be replaced before its time.

The only approved method of cleaning your tank's cannon tube is spelled out in the -10-3 TMs. To clean the cannon, you'll need CLP; a bore brush, NSN 1015-01-209-3483; a chamber brush, NSN 1015-01-511-7872; and a cleaning staff, NSN 1015-00-699-0633. The TM tells you exactly how to use 'em.

Use the right tools for cleaning your M1's cannon tube



# BORE EVACUATOR CRITERIA EXPANDED

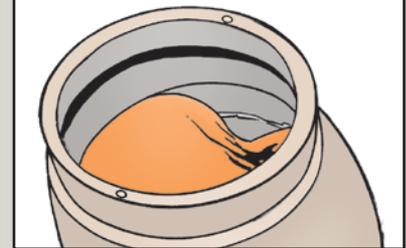
TM 9-1000-202-14 (FEB 99), EVALUATION OF CANNON TUBES, COMES UP A BIT SHORT ON CONDEMNATION CRITERIA FOR M1-SERIES TANK BORE EVACUATORS.

AS A RESULT, PARA B-6d(3) IS BEING CHANGED TO...

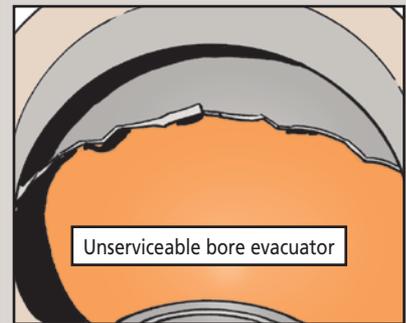


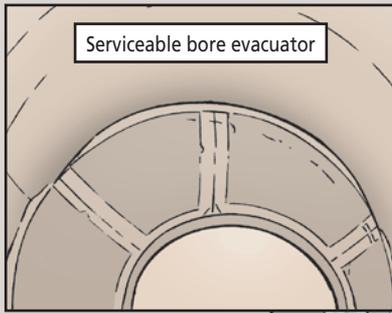
**Bore Evacuator.** Condemn the bore evacuator when visible damage to the composite material (e.g., breaks in the fiberglass) on the exterior surface (punctures, cracks, dents, severe abrasion, distortion, hammer marks) is present. Condemn the bore evacuator when visible damage to the interior surface (erosion of the resin from the fiberglass, distortion of the metal liner away from the composite [Fig B-7 and B-8]) is present. Nicks, burrs, or cracks across the sealing surface (45° chamfer on the ends) will render the bore evacuator unserviceable. Small nicks or burrs can be blended providing that no more than 20 percent of the sealing surface, resin only—no fiberglass, is removed during the blending. Irregular distance between the metal liner and the "end cap" is normal as a result of the manufacturing process (Fig B-9). A bore evacuator with that condition is serviceable.

Unserviceable bore evacuator

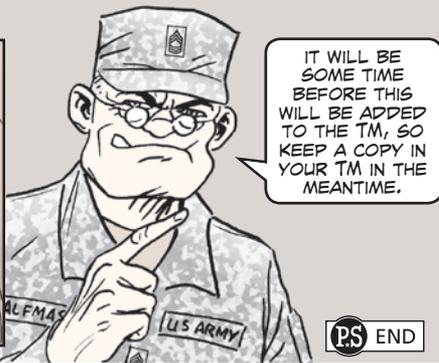


Unserviceable bore evacuator





Serviceable bore evacuator

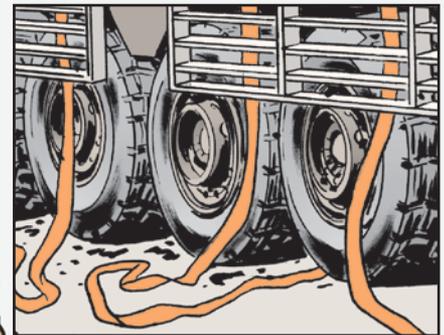


IT WILL BE SOME TIME BEFORE THIS WILL BE ADDED TO THE TM, SO KEEP A COPY IN YOUR TM IN THE MEANTIME.

PS END

DON'T JUST TOSS THE STRAPS INTO THE RACK AND GO ON YOUR WAY. THE STRAPS CAN FALL LOOSE. THEN THEY GET RUN OVER AND WRAPPED AROUND THE TIRES.

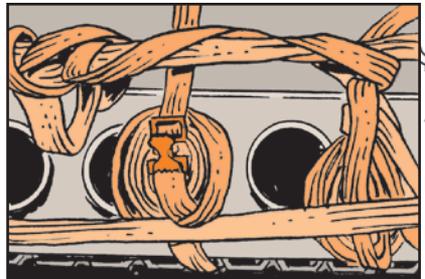
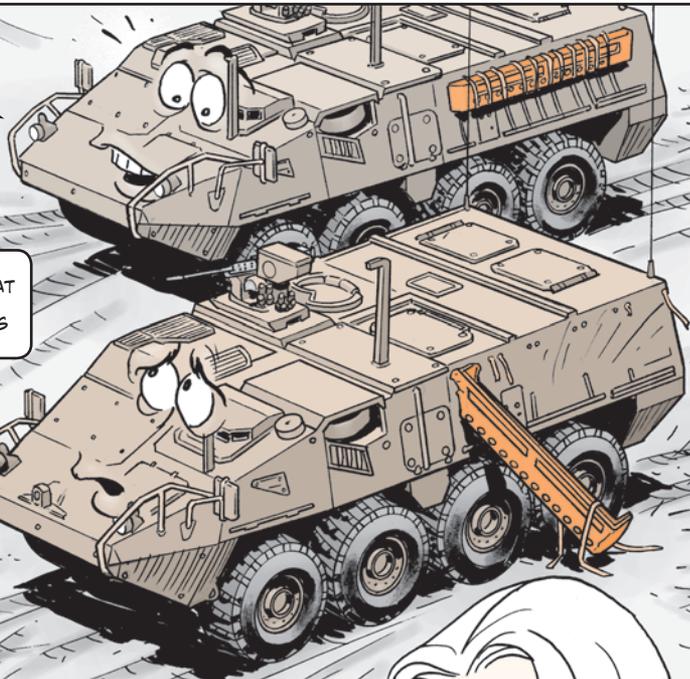
BECAUSE THE STRAPS ARE SO STRONG, THE BUSTLE RACK ENDS UP GETTING RIPPED LOOSE INSTEAD OF THE STRAP BREAKING.



Stryker...

WHOA! WHAT HAPPENED TO YOUR BUSTLE RACK, MACK?

Y'KNOW THOSE CARGO STRAPS THAT WERE DANGLING WHEN WE LEFT THIS MORNING?



BUT THAT'S EASY TO AVOID. JUST BE SURE TO ALWAYS ROLL UP THE STRAPS AND TUCK 'EM BEFORE ROLLING OUT ON A MISSION.

THE SAME GOES FOR THE CHOCK BLOCK CHAINS. IF YOU JUST THROW THE CHOCK BLOCKS BEHIND THE SLAT ARMOR ANY OL' WAY, THE CHAINS HANG DOWN AND CAN GET RUN OVER BY THE TIRES. NOT ONLY CAN THAT SNAP THE CHAINS, IT CAN DAMAGE THE SLAT ARMOR WHERE THE CHAIN CONNECTS.



DON'T LEAVE CHOCK BLOCK CHAINS DANGLING!



# DON'T Let Straps Dangle!



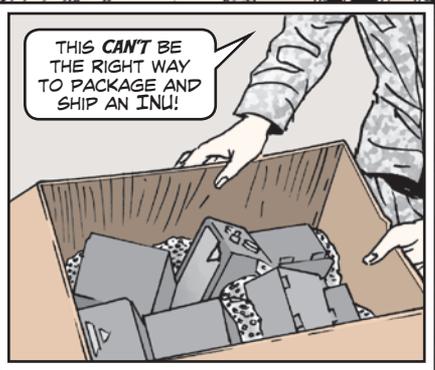
THOSE CARGO STRAPS ON YOUR STRYKER'S BUSTLE RACK SURE COME IN HANDY ON A MISSION.

BUT IF YOU GET IN A HURRY AND DON'T SECURE 'EM PROPERLY, THEY CAN CAUSE YOU HEADACHES.



SO STORE THOSE CHAINS AND CHOCK BLOCKS INSIDE MY BUSTLE RACK NEATLY AND DON'T LEAVE 'EM HANGING!

# INU Needs Proper Packaging

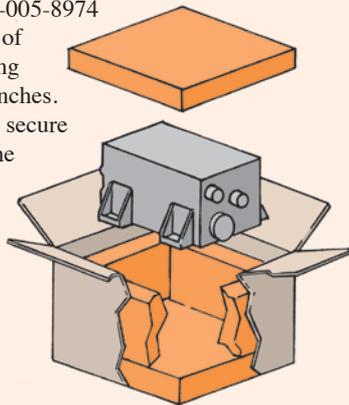


The inertial navigation unit (INU) is a reliable, ring-laser gyroscope that provides constant, upgraded grid coordinate information for your vehicle's location and targeting missions.

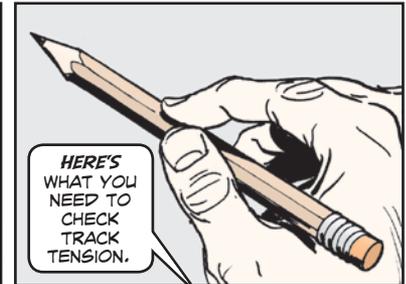
And at \$60K a pop, it's also very expensive!

So when you pack the INU for shipment, make sure you use its reusable shipping container, NSN 8145-01-502-2474. That container includes a metal shock isolation tray that protects the INU from damage.

If you have to use another container, the INU **must** be surrounded by at least 4-5 inches of high-density polyurethane foam. NSN 8135-01-005-8974 brings a sheet of foam measuring 108 x 24 x 2 inches. The foam will secure and cushion the INU so it'll arrive at its destination undamaged.



# USE A PENCIL, NOT YOUR FINGERS!



Dear Editor,

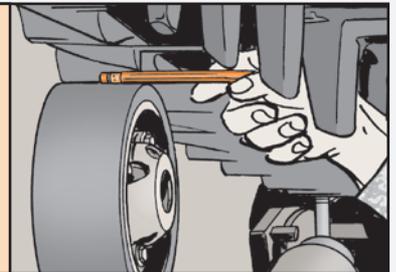
In our work supporting Ft Carson's Bradleys, we keep running into Soldiers who go by the two-finger rule for measuring track tension. That's just plain wrong. If you measure with two fingers, you'll get the wrong track tension and track that wears out too fast.

Measure with a pencil, not your fingers. After every operation, let the Bradley coast forward to a complete stop on firm, level ground. Stop the engine and try turning the rear support roller with one hand. The roller should turn freely, but with only enough room between the track and roller for a pencil to pass through.

If there's more room than that, the track is too tight. If the roller won't turn at all, the track is too loose.

Dave Whithee  
Mike Wood  
Bradley Field Support  
Ft Carson, CO

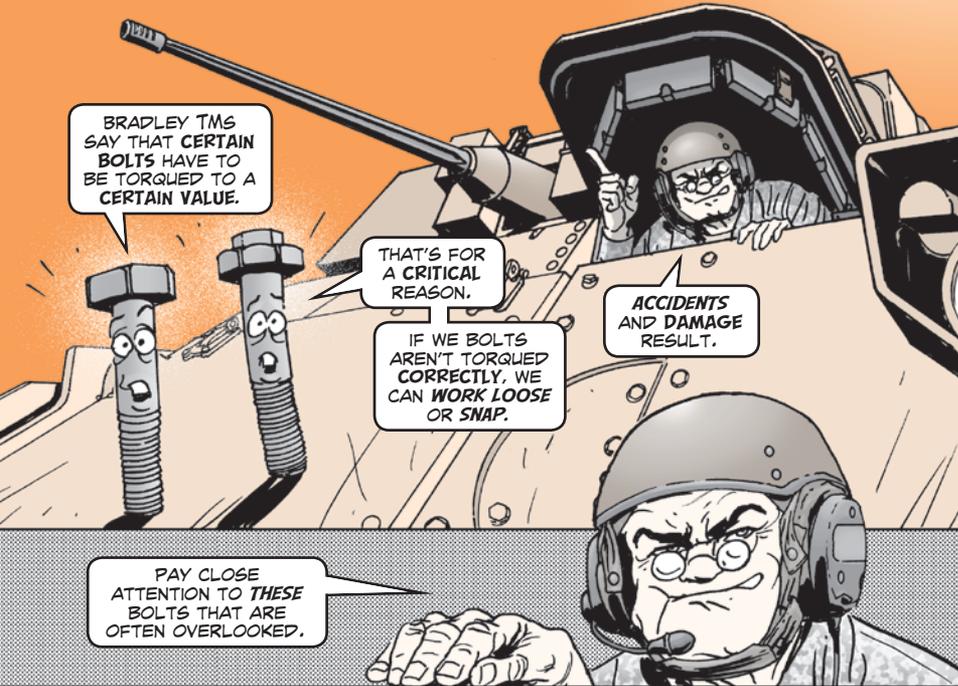
Use pencil (not your finger) to check space between rear support roller and track



**Editor's note:** If you need a refresher on how to tighten or loosen track, see Page 5 in PS 661 (Dec 07). You can find it online at:

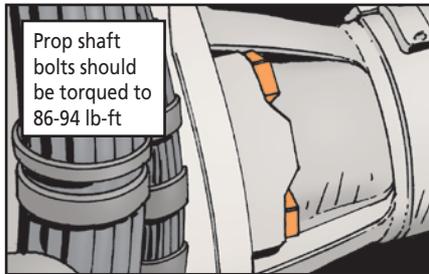
<https://www.logsa.army.mil/psmag/archives/PS2007/661/661-04-05.pdf>

# BE TRUE TO THE TORQUE



## Prop shaft bolts

These bolts are a definite BEFORE PMCS check. If they work loose, one side of the prop shaft can swing free, causing all sorts of major damage and possibly an accident. Loose bolts should be replaced with NSN 5306-01-132-3369 and torqued by your mechanic. And remember, the Bradley has to be moved forward a few feet to check all 16 prop shaft bolts.



One other tip: Don't reuse prop shaft bolts. If you remove a bolt, put a new one back in. That's a cheap way to ensure the prop shaft doesn't work loose.

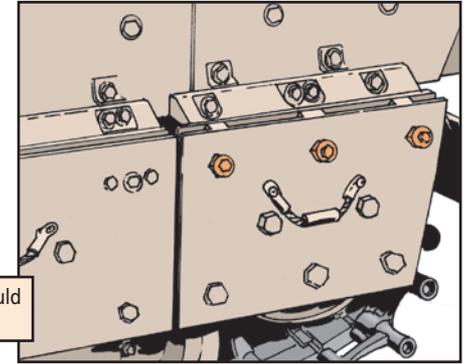
When you tow a Bradley, don't simply disconnect the prop shafts—remove them. If they are just disconnected, they can swing loose and tear up stuff like the transmission.

## Sideskirts

Crews sometimes don't realize how important the sideskirts are in a combat environment. The sideskirts deflect IED shrapnel and protect the track. So if the sideskirts aren't secure, your Bradley isn't as safe as it should be.

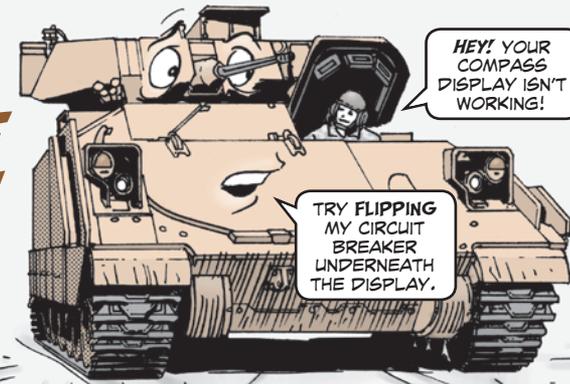
Before any mission, make sure all the sideskirt bolts are tight. If any are missing or broken, get them replaced BEFORE the mission.

When you do replace sideskirt bolts, it's a good idea to coat them with anti-seize compound, NSN 8030-00-597-5367. Otherwise, the bolts can be a bear to remove.



If sideskirt bolts are loose, you could lose a sideskirt AND increase risk

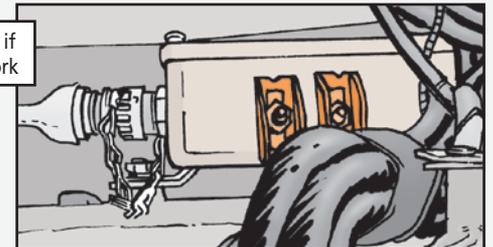
# FLIP SWITCH IF COMPASS LOSES ITS WAY



If the driver's compass display on your Bradley isn't showing up, flip the circuit breaker on the right underneath the display unit. That may bring the display back.

Try flipping circuit breaker switch if driver's compass display won't work

The circuit breaker on the left is for the MRE heater. If the heater quits working, flip that switch. If that doesn't work, call your repairman.





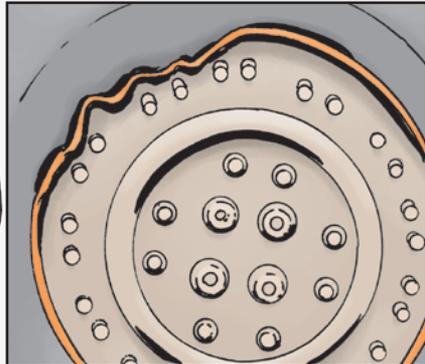
**A-B-C-D-E-F-G**∞ The alphabet is simple enough. But when it comes to condition codes for wheel assemblies, those letters can seem more like alphabet soup!

That's because not everyone knows which condition code letter to use to correctly classify unserviceable wheel assemblies used on tactical wheeled vehicles. Some have given unserviceable assemblies condition code "H - unserviceable, condemned," when the code should have been "F - unserviceable, repairable."

Here are a few tips to help you figure out which condition code to use:

### H Coding

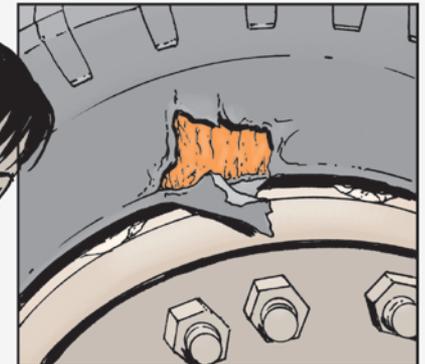
IF THERE IS SERIOUS RIM DAMAGE, SUCH AS RIM GASHES, MAJOR BENDS OR KINKS, EXCESSIVE RUST DAMAGE, CRACKS, OR LOTS OF WEAR AROUND LUG NUT HOLES, THE RIM IS UNUSABLE AND THE CONDITION CODE SHOULD BE "H."



### F Coding

FOR BASICALLY ALL OTHER ISSUES THAT WOULD MAKE THE WHEEL ASSEMBLY UNSERVICABLE, THE CONDITION CODE SHOULD BE "F."

THIS INCLUDES CONDITIONS SUCH AS A FLAT TIRE, EXPIRED SHELF LIFE, TREAD DEPTH THAT'S PAST ITS WEAR POINT, TIRE DAMAGE LIKE CRACKING OR HOLES, AND VALVE OR NUT DAMAGE.



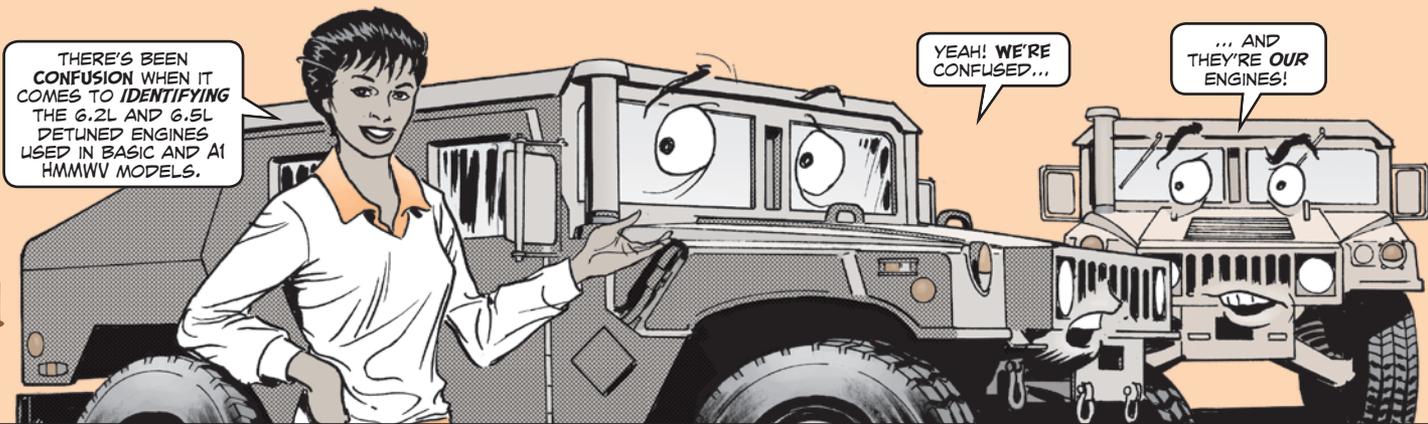
### It's More Than Just the Tire

The condition of the tire itself isn't the same as the condition of the complete assembly. So don't use just the tire to determine the condition code for the entire wheel assembly.

Need more help deciding which condition code to use for your unit's unserviceable wheel assemblies? See if Table C-38 in AR 725-50, *Requisitioning, Receipt, and Issue System*, helps you out. Or contact TACOM LCMC's tire and wheel assembly team at 586-282-8342 or email:

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

# HMMWV... Know the Difference Between the 6.2L and 6.5L Detuned Engines



TACOM LCMC says the HMMWV engine repair program is receiving unserviceable 6.2L engines mislabeled as 6.5L detuned engines. So why is that a problem?

All unserviceable 6.2L engines must be sent to DLA Disposition Services (formerly called DRMO), and replaced with the 6.5L detuned engine, NSN 2815-01-439-6664. The 6.5L detuned engine is a drop-in replacement for the 6.2L engine. And all unserviceable 6.5L detuned engines must be sent to the HMMWV engine repair program.

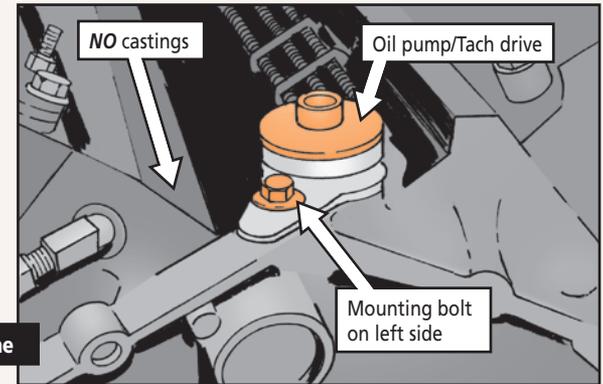


IF YOU CAN'T TELL THE DIFFERENCE BETWEEN THE ENGINES, YOU WON'T KNOW WHERE TO SEND THEM. SO HERE'S SOME HELP...

You can identify the 6.2L engine by looking at the rear of the engine block, between the cylinder heads. Locate the oil pump/tachometer drive mount bolt on the top of the engine.

## 6.2L Engine

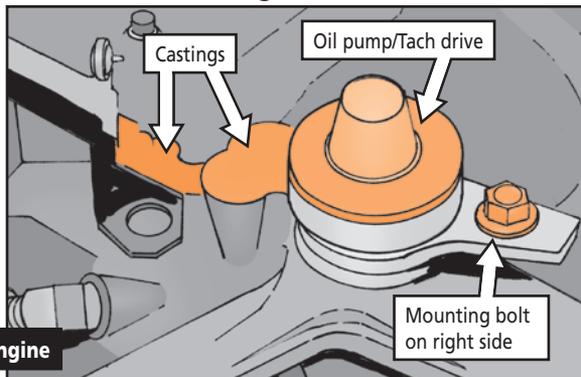
If the bolt is on the left-hand side of the oil pump/tachometer drive, and there's **no** turbocharger mount casting in front of the oil pump/tachometer drive, you've got a 6.2L engine.



Left side of engine

## 6.5L Detuned Engine

And you can identify the 6.5L detuned engine by looking for the mount bolt on the *right-hand* side of the oil pump/tachometer drive. You'll see the turbocharger mount casting in front of the oil pump/tachometer drive.



Right side of engine

If you still need help identifying your engine, TACOM's HMMWV engine maintenance manager, Buck McCuiston, can assist you. He's at DSN 786-4738, 586-282-4738, and email: [bucky.v.mccuiston.civ@mail.mil](mailto:bucky.v.mccuiston.civ@mail.mil)

REMEMBER, YOUR UNIT'S UNSERVICEABLE 6.2L ENGINES GO TO DLA DISPOSITION SERVICES AND UNSERVICEABLE 6.5L DETUNED ENGINES GO TO THE HMMWV ENGINE REPAIR PROGRAM.

TACOM's HMMWV engine item manager, Ted Robinson, can assist you with any disposition issues you may have. He's at DSN 786-4734, 586-282-4734, and email:

[ted.f.robinson.civ@mail.mil](mailto:ted.f.robinson.civ@mail.mil)



Up-armored HMMWVs...

# THE DEAL ON HOOD SEALS

IF YOU'RE TRYING TO FIND THE HOOD SEALS FOR YOUR UP-ARMORED HMMWV, YOU **WON'T** SEE THEM IN THE TM JUST YET.

SO MAKE A NOTE OF THESE HOOD SEAL NSNs...

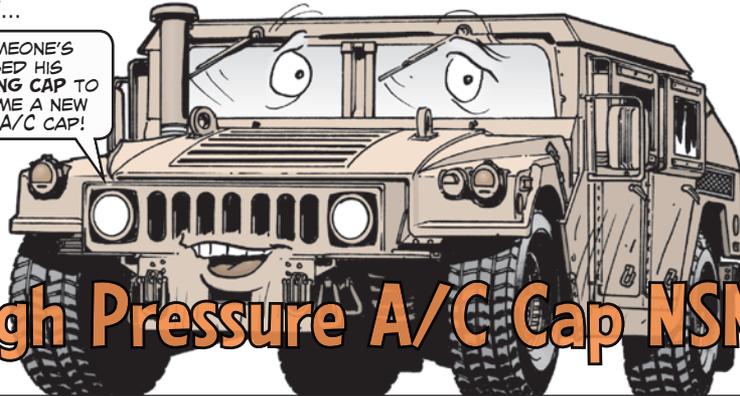


| HMMWV model   | Serial Numbers   | Side  | NSN 5330-   |
|---|------------------|-------|-------------|
| M997A3, M1151, M1151A1, M1152, M1152A1, M1165, M1165A1, and M1167 | 246890 and above | left  | 01-593-9642 |
|   |                  | right | 01-593-9643 |
| M1113, M1114, M1151, M1151A1, M1152, M1152A1, M1165, and M1165A1  | 246889 and below | left  | 01-588-4355 |
|   |                  | right | 01-588-4356 |

NSN 2510-01-432-3338 brings the hood for M1113, M1114, M1151, M1151A1, M1152, M1152A1, M1165, and M1165A1 HMMWVs with serial numbers 246889 and below. You can convert the hood on trucks with serial numbers 246890 and up by replacing the hood seals.

HMMWV...

SOMEONE'S USED HIS THINKING CAP TO GET ME A NEW RED A/C CAP!



# High Pressure A/C Cap NSN

Dear Editor,

On Page 59 of PS 722 (Jan 13), you told us that NSN 5340-01-547-6786 brings the HMMWV air conditioning high-pressure service port cap. FED LOG now shows it's a terminal item, and after checking with DLA, I found out the stock is depleted. TACOM LCMC gave me NSN 5340-01-597-2841 as a replacement for the red high-pressure cap.

Anthony Di Stefano  
Equipment Specialist  
JB MDL, NJ

**Editor's note:** Thanks, Anthony. Now other readers can order the cap.

M1117 ASV...

# GET A FREE BATTERY DISCONNECT SWITCH!

HOW DO WE PUT A STOP TO ALL THESE DEAD BATTERIES? THEY'RE EVERYWHERE!

THERE'S NO TRICK! JUST INSTALL A BATTERY DISCONNECT SWITCH!



BATTERIES ON THE ARMORED SECURITY VEHICLE HAVE BEEN MYSTERIOUSLY DRAINING AFTER SHUTDOWN.

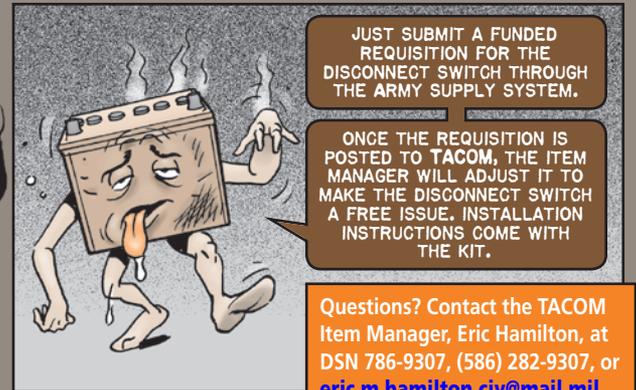
YOU MECHANICS CAN PUT A STOP TO DEAD BATTERIES BY INSTALLING A BATTERY DISCONNECT SWITCH KIT, NSN 6160-01-598-6460.

EVEN BETTER NEWS IS THAT THE KIT IS FREE.

JUST SUBMIT A FUNDED REQUISITION FOR THE DISCONNECT SWITCH THROUGH THE ARMY SUPPLY SYSTEM.

ONCE THE REQUISITION IS POSTED TO TACOM, THE ITEM MANAGER WILL ADJUST IT TO MAKE THE DISCONNECT SWITCH A FREE ISSUE. INSTALLATION INSTRUCTIONS COME WITH THE KIT.

Questions? Contact the TACOM Item Manager, Eric Hamilton, at DSN 786-9307, (586) 282-9307, or [eric.m.hamilton.civ@mail.mil](mailto:eric.m.hamilton.civ@mail.mil)



# PIN GIVES BEFORE LOCKS

NEED TO REPLACE THE SHEAR PIN ON YOUR PLS OR HEMTT LHS TRUCK?

I'VE GOT YOUR NSNG RIGHT HERE!



PLS AND HEMTT TRUCKS THAT HAVE ENHANCED CONTAINER HANDLING UNITS (E-CHU) WITH SERIAL NUMBERS 1422 AND ABOVE HAVE REDESIGNED LOWER STORAGE LOCKS.

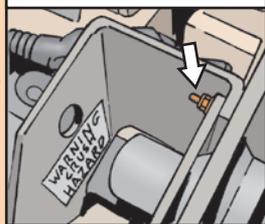
IF THOSE LOCKS AREN'T DISENGAGED BEFORE RAISING THE E-CHU FROM ITS STOWED POSITION, A SHEAR PIN INSIDE EACH LOCK IS DESIGNED TO SNAP.

THAT PREVENTS ANY DAMAGE TO THE E-CHU.



IT'S UP TO YOU TO REPLACE THOSE BROKEN SHEAR PINS WHEN THAT HAPPENS.

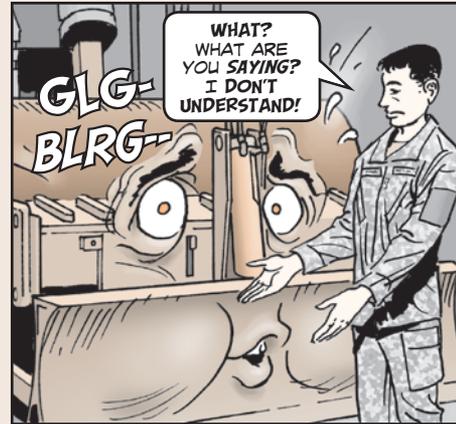
SO CHECK FOR SNAPPED OR MISSING SHEAR PINS BEFORE EACH DAY'S RUN.



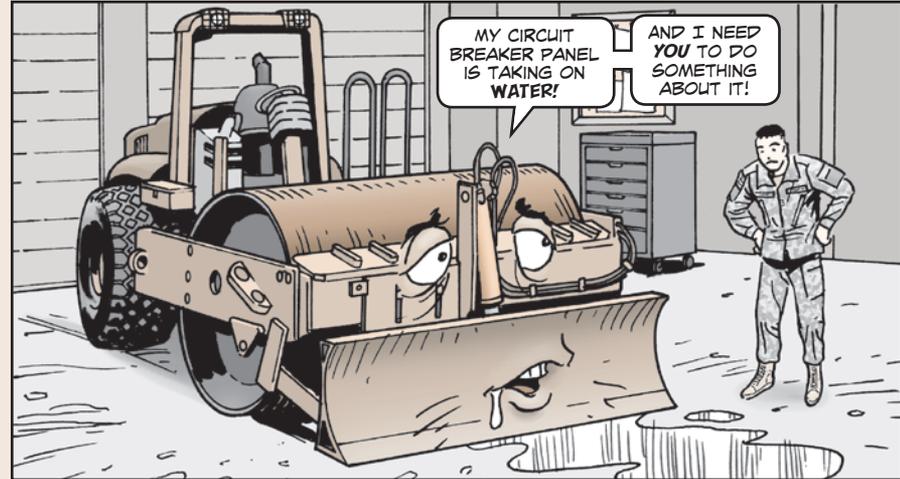
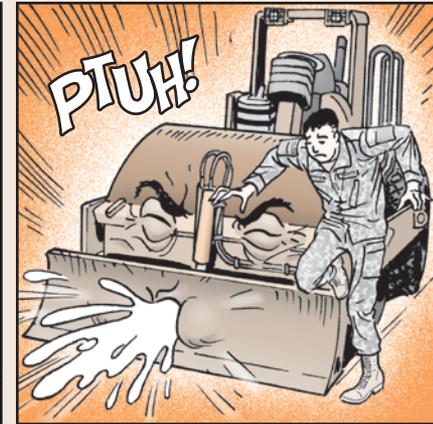
REPLACE A MISSING OR DAMAGED PIN WITH THESE NSNGs:

| Item        | NSN              |
|-------------|------------------|
| Shear screw | 5305-01-440-3666 |
| Locknut     | 5310-01-457-3244 |
| Washer      | 5310-01-506-0517 |

# KEEP ROLLER ROLLING With PM



WHAT? WHAT ARE YOU SAYING? I DON'T UNDERSTAND!



MY CIRCUIT BREAKER PANEL IS TAKING ON WATER!

AND I NEED YOU TO DO SOMETHING ABOUT IT!

Operators, keep these PM pointers in mind so your vibratory roller keeps on rolling during paving operations.

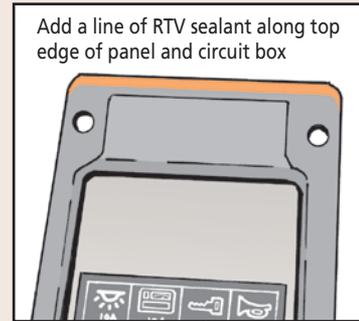
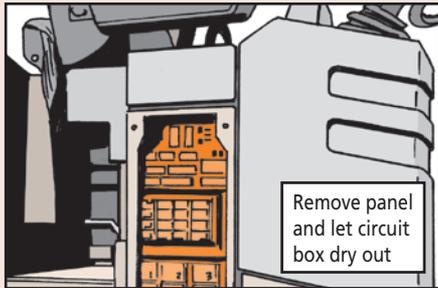
## Circuit Breaker Panel

Water plays havoc with the vehicle's circuit breakers. Over time, any moisture that leaks or builds up inside the circuit breaker housing corrodes the breakers and shorts them out. That means the vibratory roller will run erratically or not at all!





So, if you detect water seepage around the access panel, open the panel and let it dry out. Have your mechanic dab some RTV sealant around the top edge of the panel next to the housing. That will help keep moisture out. It's also a good idea to make sure the panel's turn knobs are tight so moisture can't seep in.

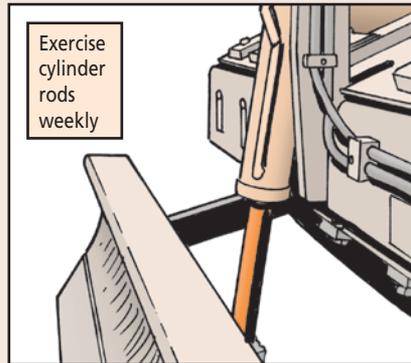


### Cylinder Rod Protection

It's not uncommon for rollers to sit in the motor pool for long periods between operations. So the roller's hydraulic lift-cylinder rod is constantly exposed to all kinds of weather.

That means the rod can become corroded and pitted. In fact, the pitting can become bad enough that the rod's seal can't prevent fluid leaks. Once the leak gets to Class III, your roller becomes NMC.

Stop corrosion in its tracks by exercising the cylinder once a week. That keeps a thin coat of hydraulic oil on the cylinder rod. If you can't exercise the roller, protect the cylinder rod with a thin coat of GAA.



### Battery Disconnect Switch

The batteries on your self-propelled vibratory rollers can run down if you don't put a stop to it.

So after the day's run, make sure you turn off the battery disconnect switch. It's located behind the passenger side engine access door. If you leave it on, the batteries will lose their charge within three to five days! No juice means your roller needs a slave start or it won't be going anywhere!

**PS** END

# What Should Tow SATS?



Dear Half-Mast,

The article on the standard automotive tool set (SATS) on Pages 40-42 in PS 722 (Jan 13) implied that under normal conditions it would be OK to tow SATS with an LMTV.

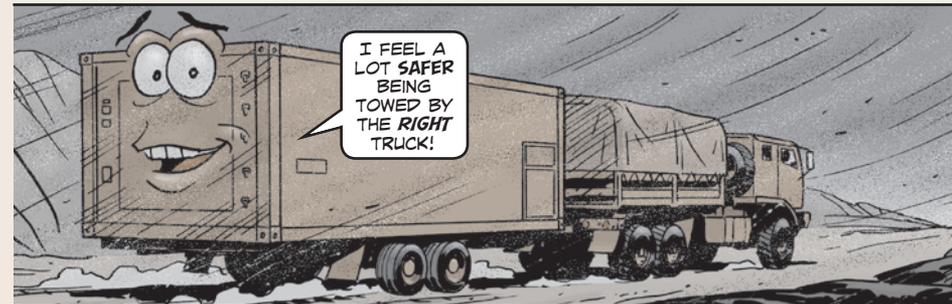
But the LMTV towing capacity is rated at 12,000 pounds. The SATS combined with its trailer is close to 16,000 pounds, which to us means the SATS should never be towed with an LMTV. Is this correct?

CW2 M.L.

Dear Chief M.L.,

Yes. TACOM recommends you tow SATS with the M1083A1 5-ton truck. It has a towing capacity of 21,000 pounds, plus an extra axle, which gives more braking power than the LMTV, and a larger engine than the LMTV. That makes for a safer trip. If an M1083A1 isn't available, use a truck that can safely tow at least 20,000 pounds and has a pintle capacity of 2,100 pounds.

*Half-Mast*





# SKOT Has Tool for Ordering Tools!

Dear Half-Mast,  
 In my battalion, we have several major tool sets, including the SATS and GMTK. When I try to order replacement tools for these sets, I can't find NSNs or part numbers for them listed on the AMDF. What can I do?

SFC B.H.

Dear Sergeant B.H.,

The SKOT (Sets, Kits, Outfits and Tools) warranty/replacement website is the one-stop-shop for all SKOT Group and PM SKOT tool sets. The website allows you to purchase missing tools and replace broken tools under warranty all on the same order. Follow these steps:

1. Using your CAC card, go to: <https://tools.army.mil>
2. There will be a one-time login that will require you to provide basic information.
3. After logging onto the site, go to the Help tab on the main page, which will walk you through submitting a warranty and purchase claim.
4. Search by SKO, part number, or tool description.
5. Order as many items as you need. There is no limitation on the number of items you can order. The items can be from multiple SKOs. Warranty and purchase claims can also be placed within the same order.
6. Click on **My Cart** and then start the checkout process by clicking **Proceed to Checkout**.
7. Enter shipping information. The order can be sent to other units if necessary. The "Share Order with User" page lets the order be shared with your unit's financial POC when using a MIPR/GFEBS order or an Impact card. It's available during checkout.
8. Click **Finish** to complete checkout. Reports can be generated by clicking on **My Orders** and then selecting from the reporting options on the right side of the page. The order can be updated there as well.
9. When the MIPR form has been completed, scan and email it to:

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

A MIPR example is located under the MIPR/GFEBS tab.

Questions? Contact the SKOT group at (586) 282-3403, DSN 786-3403, or email:

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

Half-Mast

M1135 NBCRV Stryker...

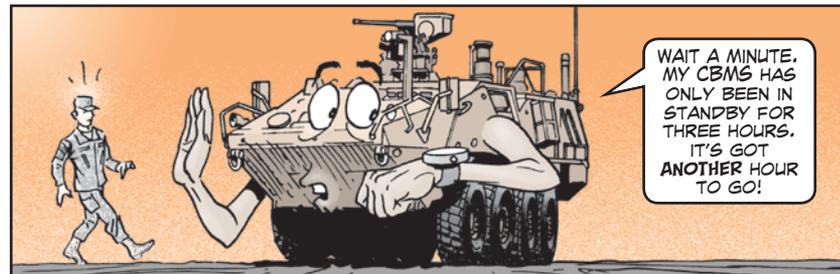
# CBMS PMCS Makes Things A-OK



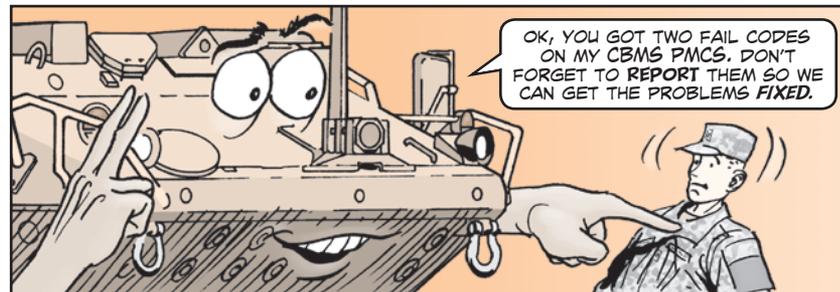
SOME CREWS OPERATING THE M1135 NUCLEAR BIOLOGICAL CHEMICAL RECON VEHICLE (NBCRV) STRYKER ARE RUNNING INTO PROBLEMS WITH ITS CHEMICAL BIOLOGICAL MASS SPECTROMETER II (CBMS II).

BUT A LITTLE **WEEKLY PMCS** CAN MAKE THINGS **A-OK**.

- Completely do the PMCS in WP 0035 of TM 3-6665-392-13&P, including the weekly PMCS in WP 35-6. Make sure to put the system in STANDBY and run it for 4 hours to ensure it's fully mission capable.

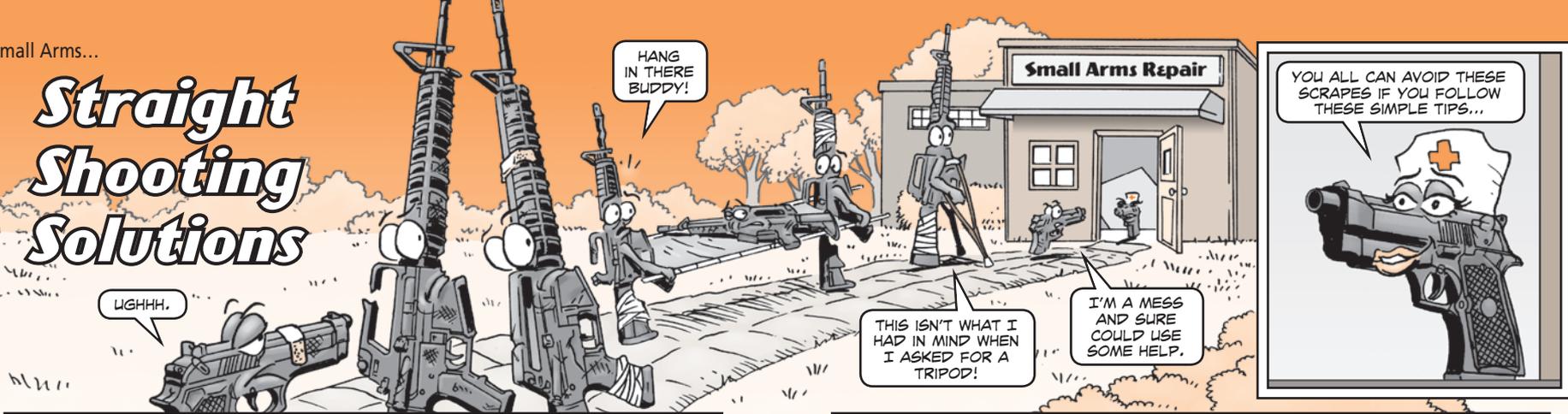


- Give the CBMS II as much time as it needs to complete its built-in-test (BIT) sequence. If you shut down the CBMS too soon, it eventually can lead to BIT failures with corresponding FAIL codes on Page 6 of the status tab. If you do the weekly PMCS on time, it cuts down the time needed to complete the start up procedure and reduces the number of failures.
- Do the confidence checks both before and after you go into STANDBY for PMCS.
- Document any FAIL codes from Page 6 on either a DA Form 5988-E or 2404. That way the field level maintainer can do a better job troubleshooting what's wrong.



- Shut down the CBMS like it says in WP 0012. Make sure the soldier display unit (SDU) says it's safe to turn off the power before you do.

# Straight Shooting Solutions

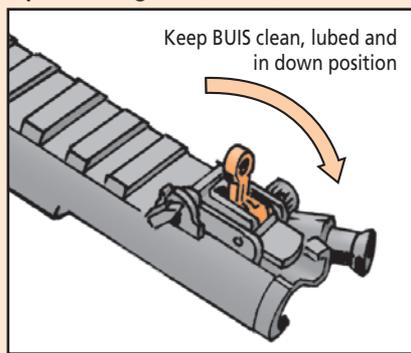


Dear Editor,

We do much of the small arms repair work at Ft Leonard Wood and we've noticed a few problems that are easily preventable:

### **Broken M16/M4 back up iron sights (BUIS).**

Sometimes we replace as many as 40 of these a week! The best way to protect the BUIS is to keep it in the down position when you're not using it. If it sticks up, it catches and bends on stuff like your pack's straps. Keeping the BUIS in the down position also helps to keep it clean and lubed. If it becomes gunked up with dirt or rust, it's hard to position and you end up bending it. Don't play with the BUIS either. If you idly flip it back and forth, the nub catches the side's blade and gets worn off.

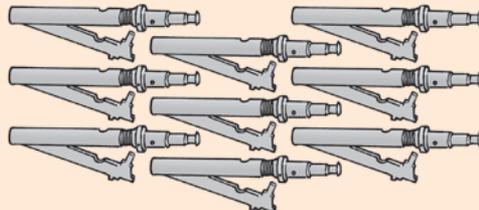


### **No scrapers.**

We see too many units that don't have enough gas system scrapers for their M240 and M249 machine guns. Without the scrapers, it's impossible to totally clean the gas system and soon it plugs up.

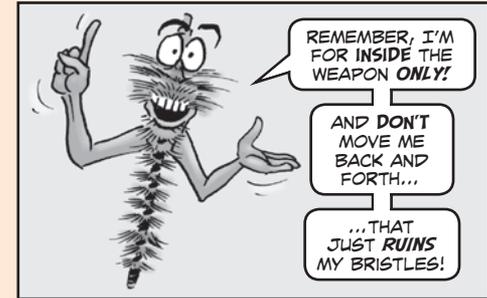
Armorers should order extra M249 scrapers, NSN 5120-01-598-4301, and the three M240 scrapers, NSN 4933-01-047-3394, NSN 4933-01-033-1504, and NSN 4933-01-033-1503. The scrapers get lost in the field, so it's a good idea to keep replacements on-hand.

You'll need extra scrapers, so order them!



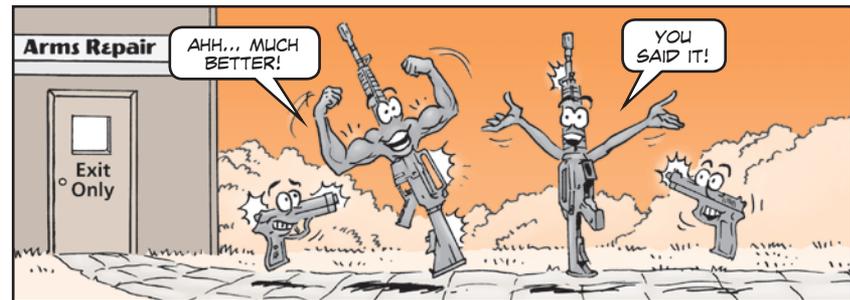
### **Wrong use of bore and chamber brushes.**

The brushes are intended for use only *inside* weapons. If you use them to clean the outside of weapons, they take off the weapon's finish that protects against corrosion. And don't reverse the direction of the brush when you run it through the weapon either. That ruins the brush eventually. Run the brush straight through, then remove it before pulling out the rod.



Charles Dutton  
Christopher Wilson  
DOL  
Ft Leonard Wood, MO

**Editor's note:** This is good advice for Soldiers to target. Thanks for sharing.



# Carson COMET Offers Help

THROUGH ITS YEARS OF HELPING UNITS WITH THEIR MAINTENANCE AND SUPPLY PROBLEMS, THE FT CARSON COMMAND MAINTENANCE TRAINING TEAM (COMET) OFFERS THESE SUGGESTIONS...



## Do not put more than one weapon on a job order when you enter it in SAMS-E.

Armorer can list up to 10 weapons on a single job order. But that's a problem. When the job order is put in SAMS-E, only the serial number of the first weapon is updated. The other serial numbers have to be entered manually or their information is lost. In the long run, it's simpler just to limit each job order to one weapon.



## Each unit should develop and follow their own SOP for their arms rooms and CBRN rooms.

Some units are just transferring SOPs from other installations and not even bothering to change the names. Proper inventory of items like the small arms tool kit is not being done. M40 masks aren't being tracked for expired canisters and PATS testing.

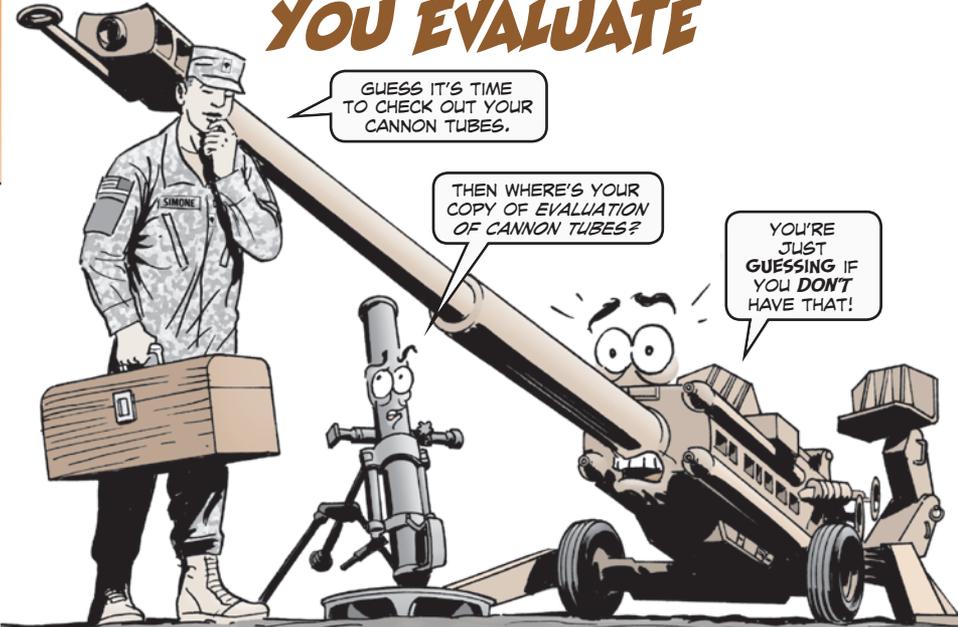


If your unit needs help with SOPs and you have a local COMET team, you're in luck. Every COMET team has a CD with SOPs for arms rooms, CBRN rooms, commo, supply and maintenance, plus regulations and checklists. They'll be glad to provide you a copy. Just don't forget to modify the SOP to make it specific to your unit. There are COMET teams at Forts Bragg, Stewart, Drum, Campbell, Hood, Carson, Riley, Polk, Bliss and JBLM.

If you have received JCAD, turn in ACADA. ACADAs are being replaced by the joint chemical agent detector (JCAD). The ACADA should be gone by FY 17. Once you receive the JCAD, you don't need the ACADA.

# GET THE BOOK BEFORE YOU EVALUATE

GUESS IT'S TIME TO CHECK OUT YOUR CANNON TUBES.



Dear Editor,

Every repairman who works with howitzers and mortars should have a personal copy of TM 9-1000-202-14, *Evaluation of Cannon Tubes*.

The TM gives very clear criteria on whether a cannon tube is still usable or should be condemned. Without the TM, good tubes end up junked and bad tubes keep being used.

EM 0065, which covers most small arms, has the TM, as does LOGSA's ETM website:

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

You can also access it at

<https://tulsa.tacom.army.mil/guncard/index.cfm>

I suggest repairmen download it to their laptop or tablet so the TM is always readily available.

**Editor's note:** No use guessing on something as critical as cannon tubes, repairmen. Listen to Terry's suggestion.

Terry Blount  
TACOM LAR  
Ft Carson, CO

Mortars...

# REMEMBER ACCESSORY RULES

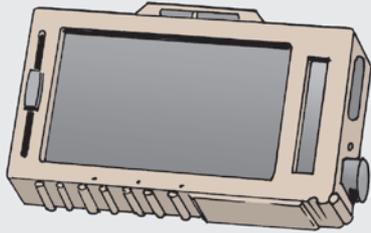
REMEMBERING THESE TWO RULES FOR YOUR MORTAR SYSTEM'S ACCESSORY EQUIPMENT WILL MAKE YOUR LIFE EASIER!



## M150/M151 Mortar Fire Control Systems-dismounted

If you're turning in or transferring the HMMVV and trailer the M150/M151 is mounted on, first remove the fire control system's components. That includes the fire control computer mount, 9W8/9W6 cables, flop cover and associated hardware. If you don't, you probably won't get them back. And they're expensive to replace.

Remove M150/M151 equipment before turning in HMMVV



## M32 Lightweight Handheld Mortar Ballistic Computer (LHMBC)

If your M32 won't be used for a while, place it in SHELF mode. That helps conserve the M32's internal battery. And don't forget to fully charge the battery every 90 days. If the internal battery fails, the entire M32 computer must be replaced. For info on M32 storage and charging, see TM 9-1220-252-13&P, TM 9-1220-254-13&P, and TM 9-1220-255-13&P.

If you have any mortar fire control questions, contact TACOM's Kevin Horn at DSN 786-1219, (586) 282-1219, or email:

[kevin.m.horn2.civ@mail.mil](mailto:kevin.m.horn2.civ@mail.mil)

### Shutdown

#### Shelf Mode

- Suspend
- Self Reset
- Hard Reset
- Soft Pattern

OK

Cancel

If M32 isn't going to be used, put it in SHELF mode and remember to charge battery every 90 days

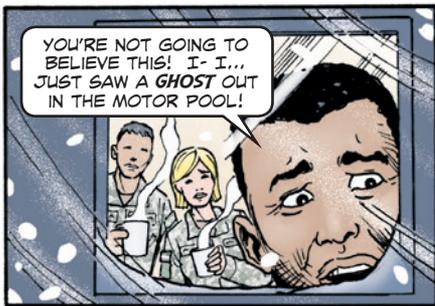


# PM GHOST HUNTERS MEET FUEL LINE FRED





YAAAAAAAHH!





GULP!



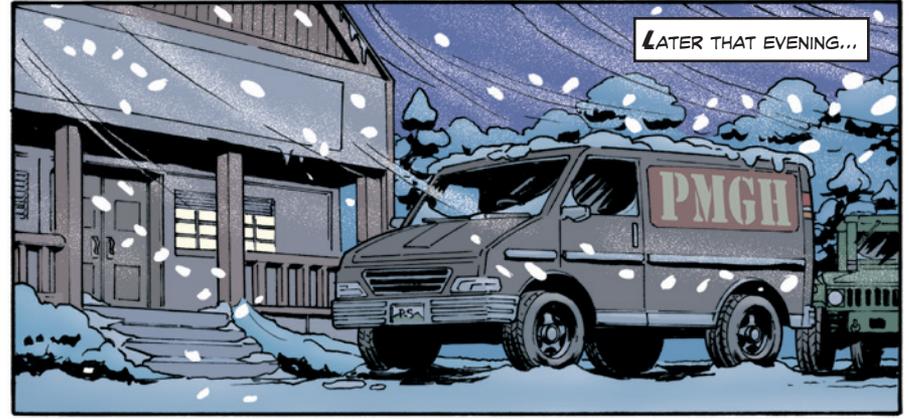
THERE'S ONLY ONE THING TO DO.

LET'S CALL IN THE PM GHOST HUNTERS.

MAYBE THEY CAN FIGURE OUT WHY FRED KEEPS HAUNTING US.



LATER STILL...



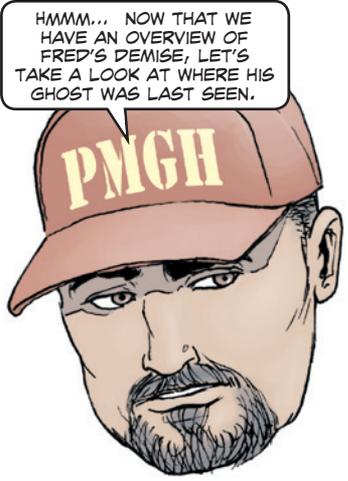
LATER THAT EVENING...



THE LAST THING I REMEMBER IS THE GHOST POINTING TO THE ENGINE COMPARTMENT.



...AND HE WAS NEVER SEEN ALIVE AGAIN!



HMMM... NOW THAT WE HAVE AN OVERVIEW OF FRED'S DEMISE, LET'S TAKE A LOOK AT WHERE HIS GHOST WAS LAST SEEN.



HMMM... COULD BE THIS GHOST IS TRYING TO HELP YOU OUT.

WE'LL TAKE IT FROM HERE AND SEE YOU ALL IN THE MORNING.

THE NEXT MORNING...

# MOTOR POOL INVESTIGATION: THE REVEAL

WE CAN CERTAINLY SEE WHY YOU CALL HIM FUEL LINE FRED.



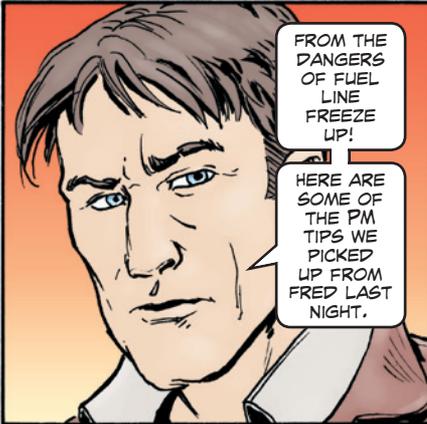
OUR INSTRUMENTS INDICATE FRED IS A RESIDUAL GHOST THAT IS TRYING TO **WARN AND PROTECT** YOUR OPERATORS.

HUH? PROTECT US FROM WHAT?



FROM THE DANGERS OF FUEL LINE FREEZE UP!

HERE ARE SOME OF THE PM TIPS WE PICKED UP FROM FRED LAST NIGHT.



FILL FUEL TANKS TO WITHIN 2 INCHES OF THE BOTTOM OF THE FILLER NECK. STENCIL A MARK THERE TO USE AS A GUIDE. MAKE SURE YOU KEEP ICE AND SNOW AWAY FROM THE TANK OPENING WHEN FUELING.



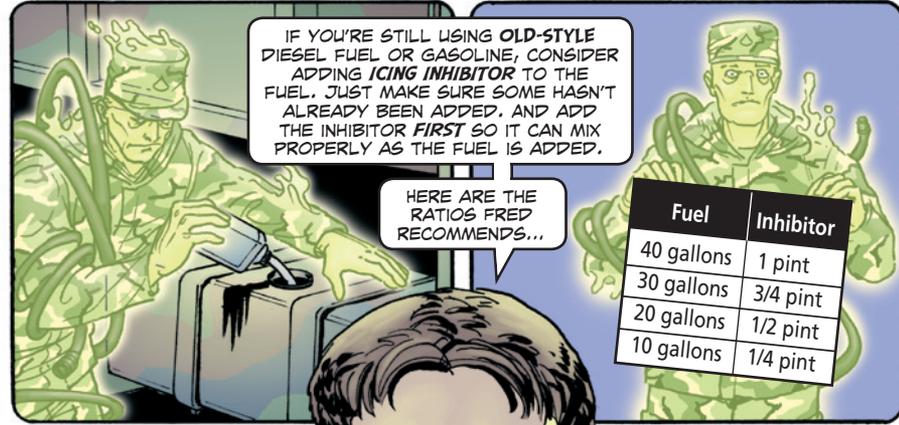
DRAIN FUEL FILTERS EVERY DAY YOU OPERATE. IF YOU GET MORE WATER THAN USUAL, REPORT IT.



IF YOU'RE STILL USING OLD-STYLE DIESEL FUEL OR GASOLINE, CONSIDER ADDING **ICING INHIBITOR** TO THE FUEL. JUST MAKE SURE SOME HASN'T ALREADY BEEN ADDED, AND ADD THE INHIBITOR **FIRST** SO IT CAN MIX PROPERLY AS THE FUEL IS ADDED.

HERE ARE THE RATIOS FRED RECOMMENDS...

| Fuel       | Inhibitor |
|------------|-----------|
| 40 gallons | 1 pint    |
| 30 gallons | 3/4 pint  |
| 20 gallons | 1/2 pint  |
| 10 gallons | 1/4 pint  |



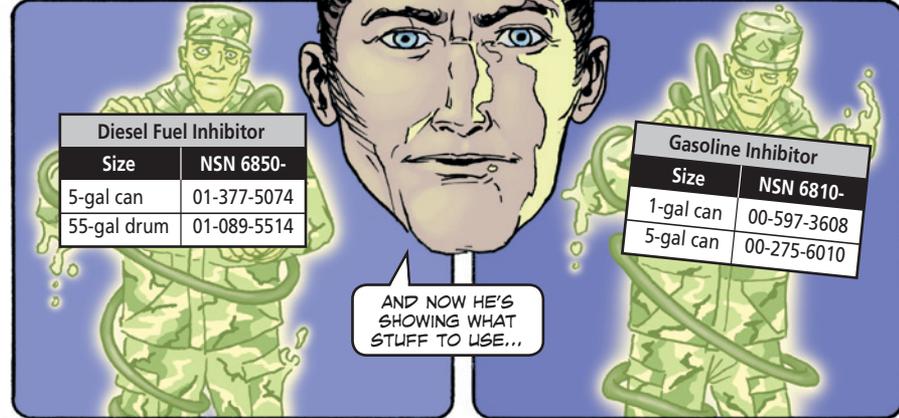
### Diesel Fuel Inhibitor

| Size        | NSN 6850-   |
|-------------|-------------|
| 5-gal can   | 01-377-5074 |
| 55-gal drum | 01-089-5514 |

### Gasoline Inhibitor

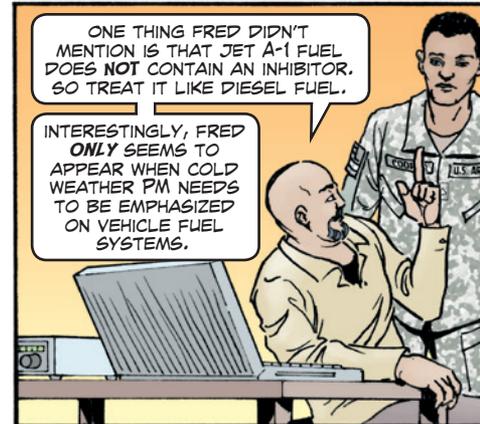
| Size      | NSN 6810-   |
|-----------|-------------|
| 1-gal can | 00-597-3608 |
| 5-gal can | 00-275-6010 |

AND NOW HE'S SHOWING WHAT STUFF TO USE...



ONE THING FRED DIDN'T MENTION IS THAT JET A-1 FUEL DOES NOT CONTAIN AN INHIBITOR, SO TREAT IT LIKE DIESEL FUEL.

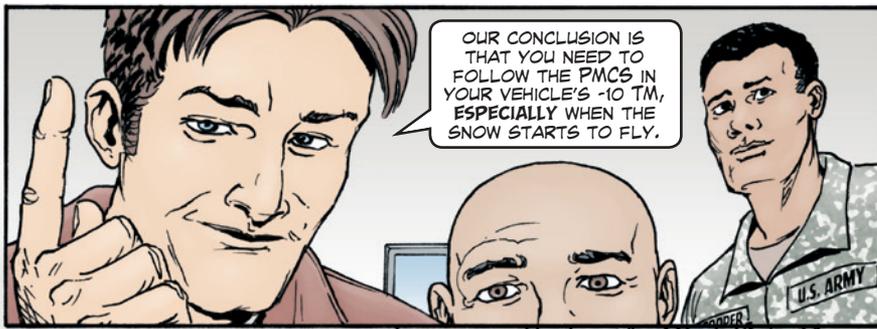
INTERESTINGLY, FRED **ONLY** SEEMS TO APPEAR WHEN COLD WEATHER PM NEEDS TO BE EMPHASIZED ON VEHICLE FUEL SYSTEMS.



WILL HE EVER GO AWAY?

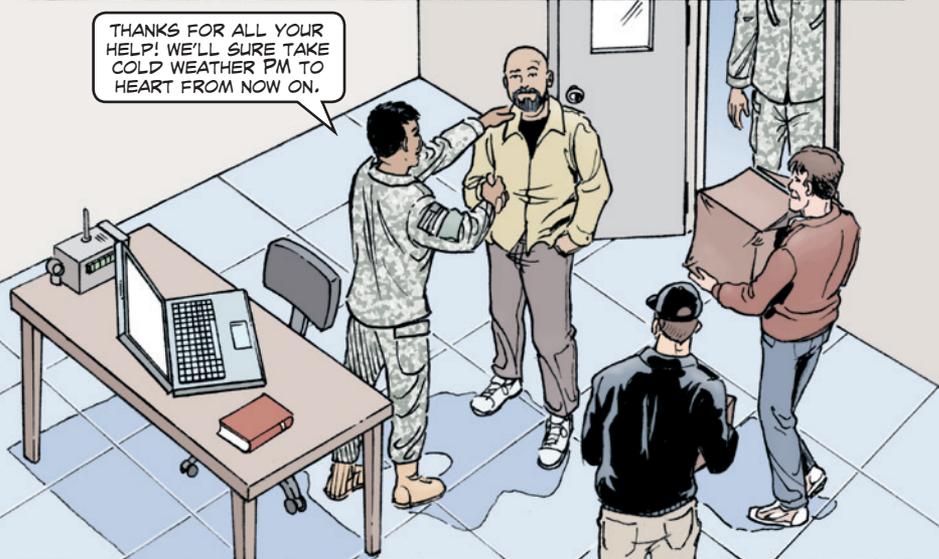
NOT AS LONG AS PM IS NEGLECTED!





OUR CONCLUSION IS THAT YOU NEED TO FOLLOW THE PMCS IN YOUR VEHICLE'S -10 TM, ESPECIALLY WHEN THE SNOW STARTS TO FLY.

THANKS FOR ALL YOUR HELP! WE'LL SURE TAKE COLD WEATHER PM TO HEART FROM NOW ON.



ONCE THE ROOM HAS EMPTIED OUT...

ping!

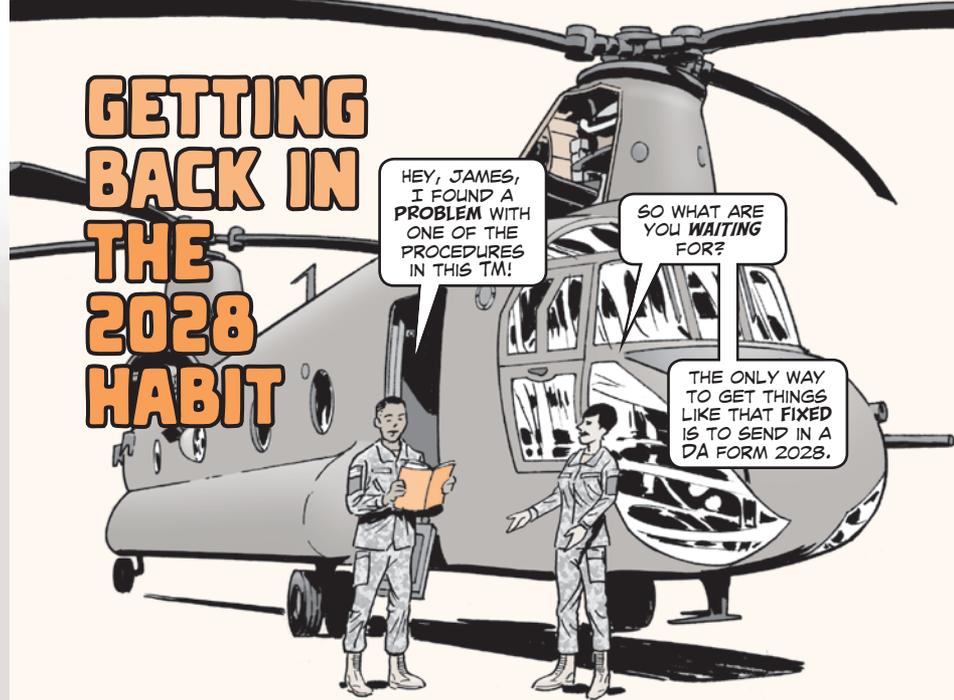


FINALLY, I GOT SOMEONE'S ATTENTION ABOUT THE IMPORTANCE OF COLD WEATHER PM!



AT LONG LAST, I CAN REST IN PEACE!

# GETTING BACK IN THE 2028 HABIT



HEY, JAMES, I FOUND A PROBLEM WITH ONE OF THE PROCEDURES IN THIS TM!

SO WHAT ARE YOU WAITING FOR?

THE ONLY WAY TO GET THINGS LIKE THAT FIXED IS TO SEND IN A DA FORM 2028.

Filling out DA Form 2028s, *Recommended Changes to Publications and Blank Forms*, sat on the back burner because of more than a decade of war.

Now that Army drawdowns are likely and high op tempos are slowing down, it's time to get back into the good habit of having your say on DA Form 2028s when you see problems with TMs.

Every TM, whether paper or electronic (ETM/IETM), comes with a DA Form 2028 and instructions on how to fill it out. In the paper manuals, the 2028 is located in the back of the TM with an address for where to send it.

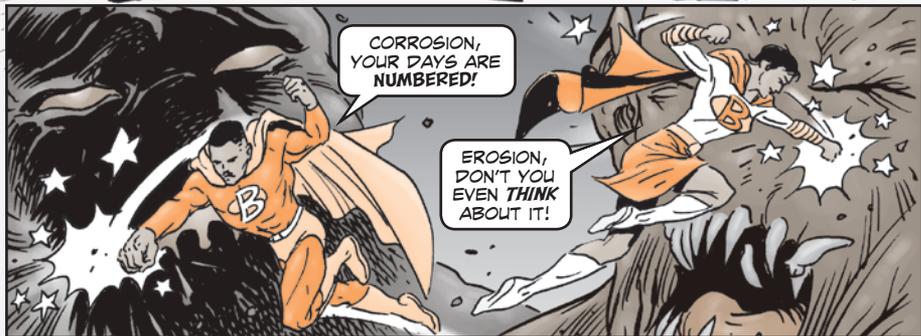
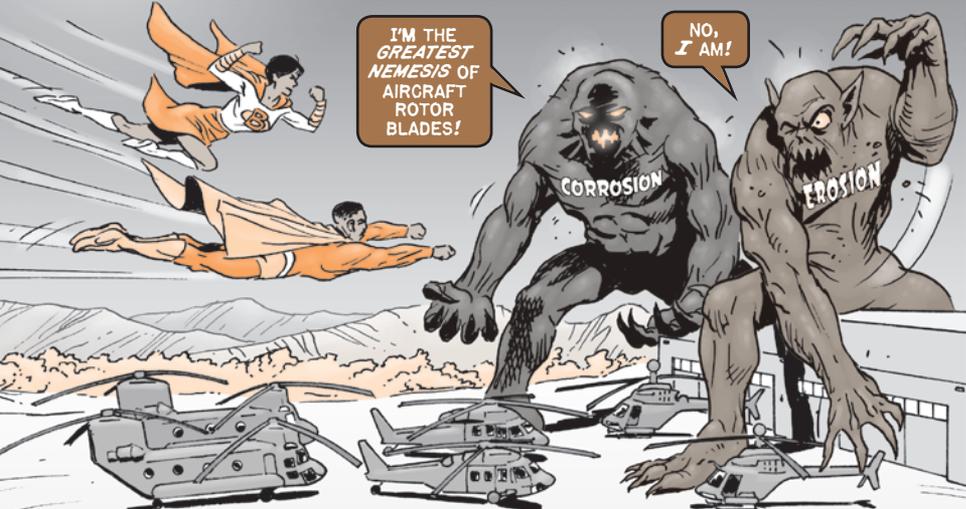
Keep in mind that the life cycle management commands (LCMC) want you to tell them about TM problems, errors and mistakes. And the only way that happens is if you completely and correctly write up the problem and use the most up-to-date manual. If you don't, the system will automatically reject your 2028.

When you've got everything together, send it in to the respective LCMC for action. Include a phone number so you can be called if there's any trouble understanding your 2028. Supporting photos can also be helpful.

Changes don't happen unless you act. So turn in those 2028s and get the TM change ball rolling.

You can find more information on where to send electronic 2028s on Pages 54-55 of this issue.

# Protect and Preserve Rotor Blades



**M**echanics, erosion is the mortal enemy of aircraft rotor blades. And corrosion is erosion's first cousin. These two forces are always at work, so prevent erosion's attack on blades, and keep a watchful eye on corrosion's attack everywhere else.

If your blades need a little touch-up paint, spray on a light coat of black paint to help slow blade erosion. Don't use too much, though, because you can throw off the track and balance of your aircraft. And do not paint over blade serial numbers, because they are used to track blade hours.

Cleaning, painting and preserving rotor blades is slightly different for Black Hawks, Kiowa Warriors and Chinooks, so follow these tips:

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

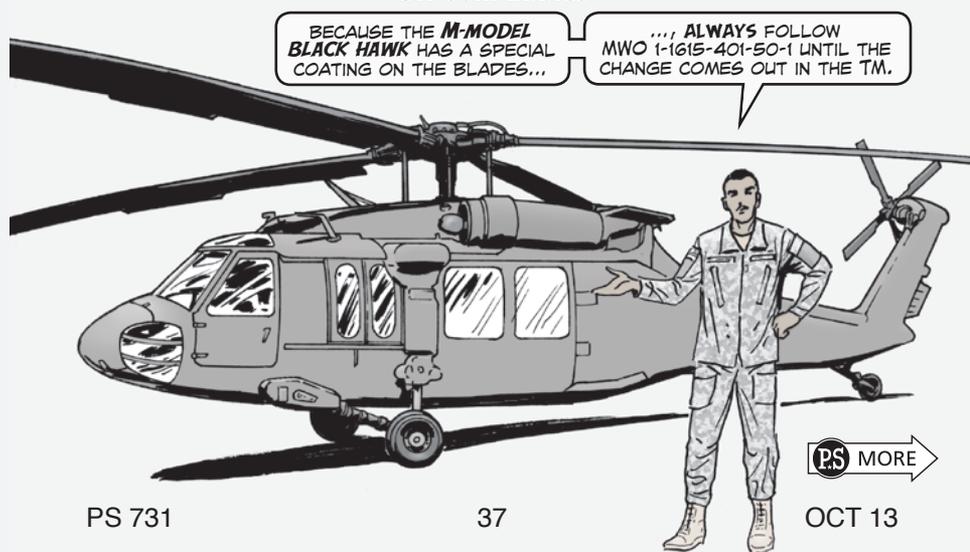
## UH-60A/L Blades



Clean the blades with water and cleaning compound, NSN 6850-01-429-2368. Follow the instructions in WP 1686 of the IETM TM 1-1520-Blackhawk.

Paint the blades with a coat of polyurethane, NSN 8010-01-576-2880, like it says in WP 0585 of IETM TM 1-1520-Blackhawk.

## UH-60M Blades



## CH-47 Blades

CLEAN **CHINOOK BLADES** WITH A **CLEANING CLOTH**, NSN 8305-00-753-2967, SOAKED WITH **SOAP**, NSN 8520-00-228-0598, AND WATER.

THEN WIPE OFF THE SOLUTION WITH A **CLEAN CLOTH**, NSN 8305-00-656-1259, SOAKED IN CLEAN WATER, DRY THE BLADES WITH ANOTHER CLOTH.



During the cleaning process, if you notice stubborn deposits, remove them with a cloth dampened with dry cleaning solvent, NSN 6850-01-474-2320, like it says in WP 00934 of TM 1-1520-240-23&P or TM 1-1520-271-23&P.

When you are refinishing or repairing a complete blade, use a spray gun. Follow the steps in TM 1-1520-240-23&P and TM 1-1520-271-23&P. Use black lusterless paint, NSN 8010-00-527-2884. Thin the paint with thinner, NSN 8010-00-160-5789, and spray it over a coat of anti-static coating, NSN 8010-01-408-9236.

The Chinook TMs do not have NSNs for black lusterless paint in spray cans. But it is OK to use black lusterless paint in spray cans as long as it's for minor touch ups only.

## OH-58 Blades

CLEAN **KIOWA WARRIOR BLADES** WITH **DISHWASHING COMPOUND**, NSN 7930-00-880-4454, MIXED WITH WATER.

RINSE THE BLADES WITH CLEAN WATER AND DRY WITH A **SOFT CLOTH**, NSN 7920-00-044-9281.



Clean the Kiowa blade grip, bolt, and expandable bolt with dry cleaning solvent, NSN 6850-01-474-2302. Wipe the parts dry with a clean rag, NSN 7920-00-044-9281.

To protect the blade bolts, the faying surfaces of the blade and the grip, apply some corrosion preventive compound (CPC), NSN 8030-00-244-1297, like it says in WP 5-1-5 of TM 1-1520-248-23.

WHEN USING CPCs FOR CLEANING, CHECK YOUR TMS AND IETMS FOR APPROVED CLEANERS AND FOLLOW THE INFO IN TM 1-1500-344-23, **CLEANING AND CORROSION CONTROL**.

MAKE SURE THAT **EVERY** CLEANING PRODUCT USED ON YOUR AIRCRAFT IS APPROVED BY THE ARMY AND IS LISTED IN YOUR TMS.



CPCs HAVE A SHORT SHELF-LIFE, SO THEY MUST BE REPLACED REGULARLY.

CHECK OUT TM 1-1500-344-23-2, TABLE 8-1, FOR CPC LIMITATIONS.

IF YOU HAVE QUESTIONS CONCERNING CPCs, CONTACT THE AMCOM CORROSION PROGRAM OFFICE HOTLINE AT DSN 897-0209 OR (256) 313-0209.



EROSION AND CORROSION ARE NO MATCH FOR GOOD MAINTENANCE.

KEEP ROTOR BLADES IN TIP-TOP SHAPE TO KEEP YOUR BIRD MISSION-READY!



PS  
END

# DOING SLING LOADING OPERATIONS RIGHT

WHEN IT'S TIME FOR SLING LOADING OPERATIONS, KNOWING WHERE TO GO FOR INFORMATION IS KEY.



THE FIRST PLACE TO START IS YOUR AIRCRAFT-SPECIFIC TMS AND IETMS.

ALL SLING LOADING OPERATIONS SHOULD BE DONE **BY THE BOOK** AND **NOT** BY THE SEAT OF YOUR PANTS. OTHERWISE, ACCIDENTS **WILL** HAPPEN.

FOR YOUR INFORMATION, MAKE A NOTE THAT FM 4-20.197, MULTI-SERVICE HELICOPTER SLING LOAD: BASIC OPERATIONS AND EQUIPMENT, HAS CHANGED TO TM 4-48.09.

THE OTHER SLING LOADING FMS ON APD **DID NOT** CHANGE TO TMS. THEY ARE FM 4-20.198, MULTISERVICE HELICOPTER SLING LOAD: SINGLE-POINT LOAD RIGGING PROCEDURES, AND FM 4-20.199, MULTISERVICE HELICOPTER SLING LOAD: DUAL-POINT LOAD RIGGING PROCEDURES. YOU CAN FIND THEM ON THE APD WEBSITE: [http://armypubs.army.mil/doctrine/Active\\_FM.html](http://armypubs.army.mil/doctrine/Active_FM.html)

YOU CAN FIND THE TM ON THE ARMY PUBLISHING DIRECTORATE (APD) WEBSITE: [http://armypubs.army.mil/doctrine/Active\\_TM.html](http://armypubs.army.mil/doctrine/Active_TM.html)

**ALL LOADS MUST** BE RIGGED BY AN AIR ASSAULT-QUALIFIED PERSON.



## AH-64D/E... **Turn In NIU to DLA Depot**

THAT NIU I SENT TO THE CONTRACTOR FOR REPAIR HAS BEEN GONE A LONG TIME.

I'D BETTER CHECK ON IT.

HAVEN'T YOU HEARD? WE'RE SUPPOSED TO SEND THOSE NIUS TO A DLA DEPOT, NOT A CONTRACTOR!



**T**urning in unserviceable or defective nitrogen inerting units (NIUs), NSN 1560-01-165-9449 or NSN 1560-01-587-1028, to a contractor is not the correct procedure to follow, mechanics.

If you have broken NIUs, you must return them to a DLA depot to receive turn-in credit. Defective assets should be returned to DLA using the Quality Deficiency Report (QDR) process.

Submitting defective NIUs on a QDR allows them to be tracked so a service-able NIU can be returned to your unit more efficiently.

Make a note that the new configuration NIU, NSN 1560-01-587-1028, is now available. So if you are ordering an NIU, use the new NSN.

Turn in unserviceable NIUs to DLA depot



# TURN IN ALL UNSERVICEABLE EQUIPMENT



**M**echanics, the US Army Aviation and Missile Command's repair programs need your help. They depend on the timely return of unserviceable components.

If nothing's turned in, depots won't be able to repair enough items to meet your needs. That reduces on-hand inventory of items needing depot overhaul.

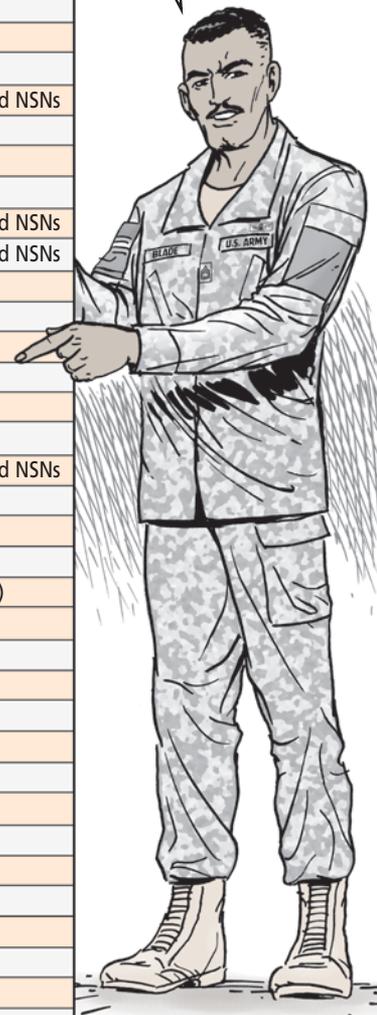
So locate unserviceable components and turn them in ASAP.



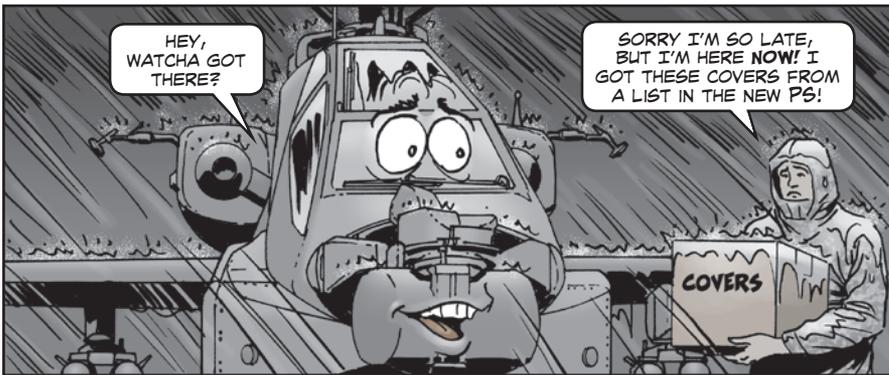
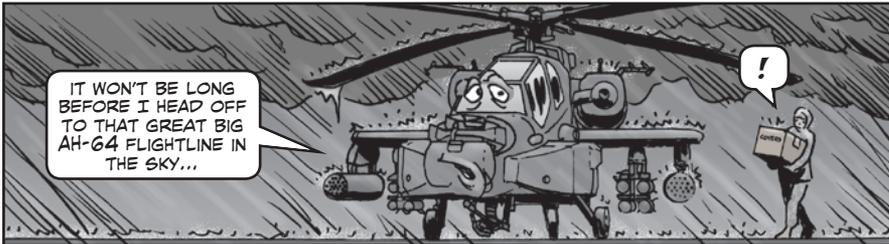
| Nomenclature                               | NSN   |
|--|---|
| Electric actuator                          | 1680-01-269-7284  |
| Axial pump                                 | 4230-01-158-0893  |
| Engine coupling                            | 1615-01-155-0634  |
| Aft hangar bearing                         | 3130-01-333-8490  |
| Forward hangar bearing                     | 3130-01-333-8491  |
| Intermediate gearbox                       | 1680-01-530-1625 & related NSNs                         |
| Link assembly                              | 3040-01-352-1531  |
| Main rotor blades                          | All NSNs  |
| Main rotor swashplate                      | 1615-01-325-7002  |
| Main transmission                          | 1615-01-532-9390 & related NSNs                         |
| Main rotor head                            | 1615-01-512-0889  |
| Hydraulic manifold                         | 4730-01-326-4375  |
| Hydraulic manifold                         | 4730-01-326-1804  |
| Left-hand nose gearbox                     | 3010-01-519-7677 & related NSNs                         |
| Right-hand nose gearbox                    | 3010-01-536-3481 & related NSNs                         |
| Hydraulic pump                             | 4320-01-305-6955  |
| Searchlight                                | 6220-01-160-3527  |
| Servocylinder                              | All NSNs  |
| Shock strut                                | 1620-01-147-4775  |
| Shock strut                                | 1620-01-465-9232  |
| Tail rotor coupling                        | 1615-01-154-7077  |
| Tail rotor gearbox                         | 1615-01-507-5294 & related NSNs                         |
| Tail rotor swashplate                      | 1615-01-508-4118  |
| Trailing arm assembly                      | 1620-01-147-4776  |
| Connecting link                            | 3040-01-154-7056  |
| Captive boresight harmonization kit (CBHK) | 4920-01-412-4978 (Analog)<br>4920-01-535-3520 (Digital) |
| Infrared collimator                        | 4920-01-202-4135  |
| Collimator                                 | 4920-01-206-5818  |
| Bell crank                                 | 1680-01-244-2262  |
| Bell crank                                 | 1680-01-225-2538  |
| Bell crank                                 | 1560-01-242-1495  |
| Bell crank                                 | 1680-01-224-2263  |
| Bell crank                                 | 1560-01-263-9849  |
| Fuel transfer valve                        | 1680-01-159-7988  |
| Submerge pump                              | 2915-01-159-8522  |
| Servocylinder                              | 1650-01-494-0084  |
| Servocylinder                              | 1650-01-494-0083  |
| Leading tip assembly                       | 1560-01-170-5256  |
| Trailing arm assembly                      | 1620-01-147-4777  |

TAKE ACTION **NOW** TO STOP THE SHORTAGE OF COMPONENTS FOR OVERHAUL.

THAT WAY, WHENEVER YOU NEED A REPAIRED PART OR COMPONENT, YOU CAN GET IT.



# PROTECT AIRCRAFT WITH COVERS



**M**echanics, using your AH-64 aircraft covers keeps maintenance costs low, not to mention protecting your aircraft from nasty weather.

If your covers have disappeared or worn out over time, all is not lost.

Order the covers from the approved TM 1-1520-Longbow/Apache, IETM. Look under Peculiar Ground Support Equipment (PGSE), Flyaway Equipment Kit, and the Flyaway Equipment Kit RPSTL.

A second location to look is in Aircraft General Maintenance, Protective Cover Installation Section. Here is a short list of basic covers you'll need. The list also includes alternative NSNs, other flyaway equipment and peculiar ground support equipment (PSGC).

| Item  | Primary NSN      | Alternative NSN                      | Qty |
|---|------------------|--------------------------------------|-----|
| Blade handling pole   | 1730-01-183-6672 | NA                                   | 1   |
| M/R blade tie-down assy                                       | 1730-01-614-3978 | 1730-01-614-4590                     | 4   |
| Flyaway kit stowage safety pouch pins                         | 1560-01-187-8510 | NA                                   | 1   |
| Environmental cover   | 1680-01-247-2431 | NA                                   | 1   |
| Pitot head protective cover                                   | 6610-01-189-3001 | NA                                   | 2   |
| Engine exhaust duct cover                                     | 1730-01-183-4501 | NA                                   | 6   |
| Noise G/B inlet cover   | 1730-01-183-4502 | NA                                   | 2   |
| ENCU inlet protective cover                                   | 1560-01-211-6930 | NA                                   | 1   |
| Engine nacelle upper protective cover                         | 1730-01-183-4508 | NA                                   | 2   |
| APU exhaust cover   | 1560-01-211-6941 | NA                                   | 1   |
| Engine inlet cover  | 1730-01-193-4761 | NA                                   | 2   |
| IFF antenna PGSE AVUM cover                                   | 1730-01-396-7780 | NA                                   | 1   |
| ECS inlet cover assy  | 1730-01-465-7807 | NA                                   | 2   |
| ECS exhaust cover assy  | 1730-01-465-7808 | NA                                   | 2   |
| Area weapon turret protective cover (environmental gun cover) | 5340-01-464-4491 | 5340-01-289-4695                     | 1   |
| Ground HADS aircraft cover                                    | 1730-01-066-9634 | NA                                   | 2   |
| Fire control radar cover (MMA cover)                          | 1270-01-529-8399 | 1730-01-508-3684<br>1730-01-508-3690 | 1   |
| TAD/PNVS turret cover   | 1730-01-508-3686 | 1730-01-508-3685<br>1730-01-508-3691 | 1   |
| Canopy cover  | 1730-01-508-3695 | 1730-01-508-3692<br>1730-01-508-3697 | 1   |
| Main rotor head cover   | 1730-01-508-3688 | 1730-01-508-3693<br>1730-01-508-3698 | 1   |
| FAB windbreaker (right)                                       | 1730-01-508-3687 | 1730-01-508-3699<br>1730-01-508-3689 | 1   |
| FAB windbreaker (left)  | 1730-01-544-3510 | 1730-01-508-3696<br>1730-01-508-3694 | 1   |
| Canopy cover replacement container                            | 1730-01-613-9946 | 1730-01-544-3937<br>1730-01-545-1486 | 1   |
| Ice sensor assembly cover                                     | 1730-01-337-7580 | NA                                   | 1   |
| Extended MTADS cover  | 5340-01-572-8637 | NA                                   | 1   |
| Protective NGB cooling inlet shield                           | 3640-01-604-1630 | NA                                   | 1   |



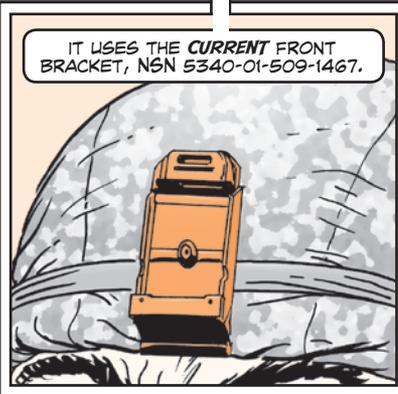
Night Vision...

# Introducing a New Helmet Mount

A NEW HELMET MOUNT, NSN 5855-01-610-8704, IS AVAILABLE FOR MOUNTING THE AN/PVS-7 NIGHT VISION GOGGLES AND THE AN/PVS-14 MONOCULAR NIGHT VISION DEVICE.

THE NEW MOUNT FITS ON THE ADVANCED COMBAT HELMET (ACH) AND THE COMBAT VEHICLE CREWMAN'S (CVC) HELMET.

IT USES THE CURRENT FRONT BRACKET, NSN 5340-01-509-1467.



The new mount allows you to vertically adjust your night vision and lock it in place. The old helmet mount, NSN 5855-01-551-4525, will be issued until stocks run out.



THESE NSNs BELONG TO HELMET MOUNTS THAT ARE TERMINAL ITEMS. DON'T USE THEM WITH THE ACH OR CVC HELMET...

5855-01-457-2953  
5855-01-441-0401  
5855-01-421-7691  
5855-01-381-6033

Dispose of unserviceable helmet mounts at your local Defense Logistics Agency (DLA) Disposition Services (formerly DRMO). Do not send unserviceable mounts to Tobyhanna Army Depot. Units will not receive credit for turning in serviceable or unserviceable mounts. Need more information? Contact these folks at the CECOM Logistics and Readiness Center: Regan Bennett, inventory manager, DSN 648-1374, (443) 395-1374, or email:

[regan.e.bennett.civ@mail.mil](mailto:regan.e.bennett.civ@mail.mil)

Jenny Irizarry, ILS manager, DSN 648-1406, (443) 395-1406, or email:

[jenny.a.irizarry.civ@mail.mil](mailto:jenny.a.irizarry.civ@mail.mil)

Angel Acevedo, engineer, DSN 648-1407, (443) 395-1407, or email:

[angel.l.acevedo30.civ@mail.mil](mailto:angel.l.acevedo30.civ@mail.mil)

Timothy L. Langan, engineer, DSN 648-1429, (443) 395-1429, or email:

[timothy.l.langan.civ@mail.mil](mailto:timothy.l.langan.civ@mail.mil)

Automated Integrated Surveying Instrument...

# Longer Time Between Services



DO YOU HAVE AN AUTOMATED INTEGRATED SURVEY INSTRUMENT (AISI), NSN 6675-01-503-3579, MANAGED BY CECOM?

YOU DO? THEN LISTEN UP!

Until recently, your AISI required contractor service once every 3 years. Now the manufacturer of the AISI, Trimble Navigation, Ltd., has extended the service interval to once every 5 years. The extension covers all AISIs managed by CECOM.

AISIs under this contract have a sticker that shows the month and year when the next service is due. Because the service date is set for every 3 years, the sticker needs to be updated. Add two years to the date shown on the sticker and write the new service due date on the sticker.

## When To Get Service

So, how do you know when your AISI needs contractor service? Look at the month and year on the sticker. The sticker always reflects a 3-year interval service due date. To get the new 5-year interval service due date, simply add 2 years to the date shown. For example, if the sticker reads April 2014, then the new service due date is April 2016.

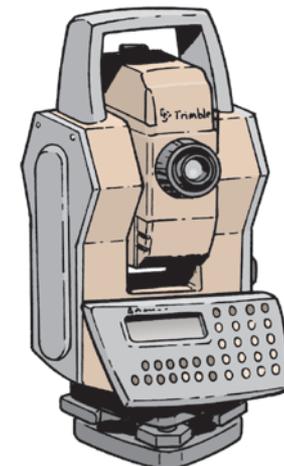
## Why Extend the Service Interval?

The AISI has an internal battery that supplies power to store data and firmware/software. The manufacturer of this battery has increased its operating life. That in turn has increased the AISI's time between services to 5 years.

As long as you inspect and maintain the AISI like it says in TM 5-6675-371-12&P (Jan 09), a 5-year interval service is all you need.

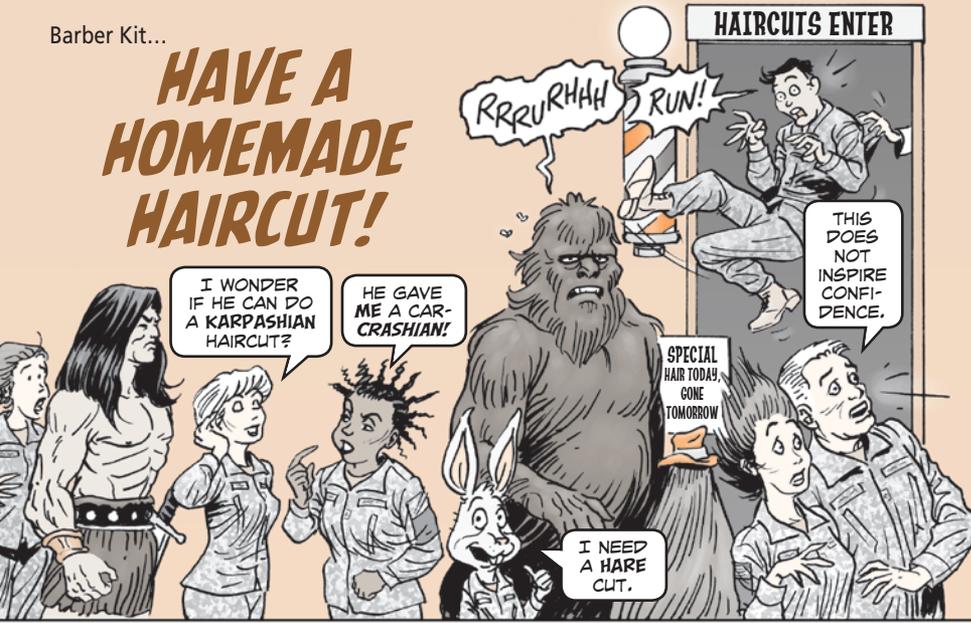
When it's time for contractor service, get instructions from CECOM's Denice Ellis at DSN 848-2916, (443) 861-2916, or email:

[denice.d.ellis.civ@mail.mil](mailto:denice.d.ellis.civ@mail.mil)



Now AISI needs contractor service once every 5 years

# HAVE A HOMEMADE HAIRCUT!



RRRURHAAH RUN!

HAIRCUTS ENTER

THIS DOES NOT INSPIRE CONFIDENCE.

SPECIAL HAIR TODAY, GONE TOMORROW

I NEED A HARE CUT.

I WONDER IF HE CAN DO A KARPASHIAN HAIRCUT?

HE GAVE ME A CAR-CRASHIAN!

HAIRCUTS EXIT

ALL I NEED NOW IS MOE AND CURLY.

YOU BUTCHER!

I ASKED FOR A MOHAWK. DOES THIS LOOK RIGHT TO YOU?

I COULDN'T AFFORD A WHOLE HAIRCUT.

HE SAID I DIDN'T NEED A HAIRCUT, JUST A BUFF!

HOW DO I HAVE MORE HAIR NOW THAN WHEN I WENT IN?

GOOD GRIEF!

LUCKY!



IT'S HARD TO FIND A DECENT BARBER SHOP WHEN YOU'RE MANNING A REMOTE OUTPOST IN A MOUNTAIN PASS.



THERE JUST AREN'T ANY IN THE NEIGHBORHOOD. YOU AND YOUR BUDDIES HAVE TO DO YOUR OWN BARBERING.

YEAH, BUT ALL WE HAVE ARE THESE PRUNING SHEARS I GOT FROM THE SHED.

GYAH! YOU'RE NOT COMING ANYWHERE NEAR ME WITH THOSE!



YOU NEED A BARBER KIT, NSN 3590-00-058-1837.

YOU WON'T FIND THE KIT'S COMPONENTS LISTED IN ANY PUBLICATION, THOUGH...

...SO, IN THE INTEREST OF KEEPING YOU TRIMMED AND WELL-GROOMED, KEEP THE KIT STOCKED WITH THESE COMPONENTS...

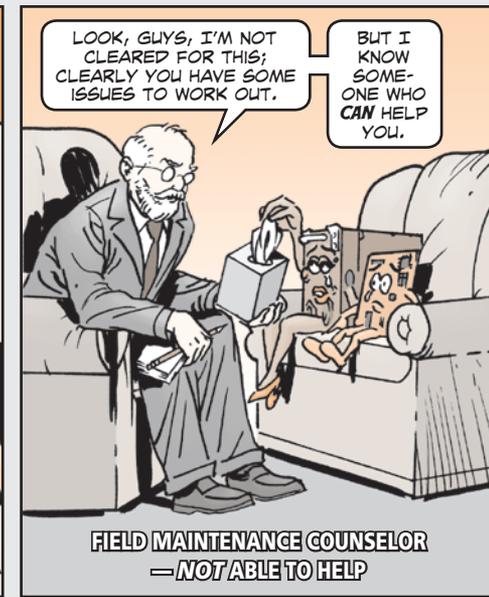
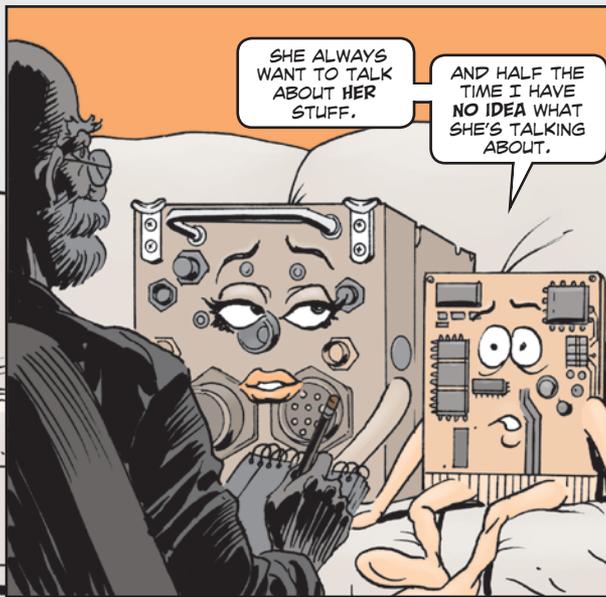
| Item   | Qty per kit | NSN  |
|--|-------------|--|
| Barber shears  | 2 ea        | 3590-00-161-6913   |
| Barber cloth   | 2 ea        | 3590-00-162-5630   |
| Manual hair clipper, size 0, with blade set                                    | 1 ea        | 3590-00-170-8462   |
| Case   | 1 ea        | 3590-00-240-2926   |
| Electric hair clipper with detachable blades (blades not available separately) | 1 ea        | 3590-00-892-4525   |
| Disinfecting tray  | 1 ea        | 3590-00-926-3838   |
| Disinfectant   | 2 ea        | 6840-00-753-4797   |
| Toilet soap  | 2 ea        | 8520-00-129-0803   |
| Shaving cream  | 1 ea        | 8520-01-303-4039   |
| Soap box   | 1 ea        | 8530-01-371-0055   |
| Comb   | 2 ea        | 8530-01-293-1384   |
| Disposable safety razor  | 80 ea       | 8530-01-347-9577* (This NSN brings a box of 720 razors.) |



# DEPOT REMOVES AND REPLACES



**AN/APX-118(C) AND CIRCUIT CARD — INCOMPATIBLE?**



**FIELD MAINTENANCE COUNSELOR — NOT ABLE TO HELP**

THE ARMY HAS MADE A CHANGE TO THE SOURCE, MAINTENANCE AND RECOVERABILITY (SMR) CODES OF THE FOLLOWING PARTS USED IN THE AN/APX-118(C) TRANSPONDER SET, NSN 5895-01-504-0407...



| Item                     | NSN              |
|--------------------------|------------------|
| Circuit card             | 5998-01-510-5853 |
| Circuit card             | 5998-01-510-5897 |
| Crypto module            | 5998-01-526-2159 |
| Chassis                  | 5975-01-512-7961 |
| Power supply             | 5895-01-560-2880 |
| Circuit card (RF module) | 5998-01-503-7423 |

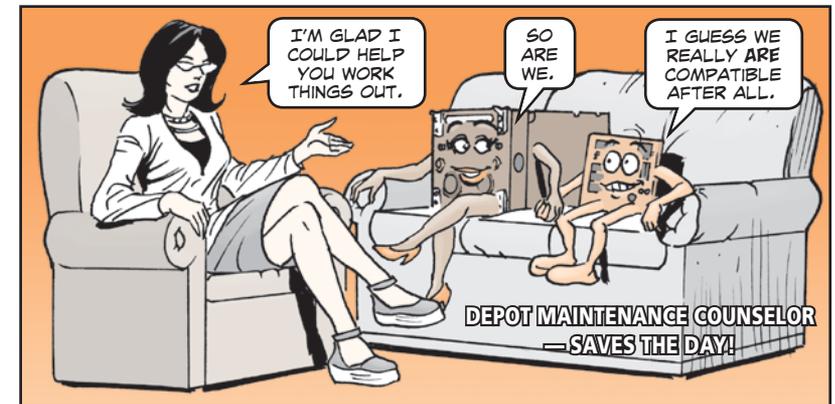
The specific change is to the maintenance code, 3rd position. Field maintenance is no longer allowed to remove and replace the parts. From now on, only depot maintenance is allowed to remove and replace them. So, make a note in the RPSTL of TM 11-5895-1733-13&P (Jun 04) until the TM is updated to show the maintenance code has changed to D for these items.

| (1) ITEM NO. | (2) SMR CODE | (2) NSN          | (4) CAGI COD | (1) ITEM NO. | (2) SMR CODE | (2) NSN          | (4) CAGI COD |
|--------------|--------------|------------------|--------------|--------------|--------------|------------------|--------------|
| 1            | PAFD         | 5975-01-512-7961 | 8024         | 1            | PAFD         | 5975-01-512-7961 | 8024         |
| 2            | PAFDD        | 5998-01-510-5897 | 8024         | 2            | PAFDD        | 5998-01-510-5897 | 8024         |
| 3            | PAFDA        | N/A              | 8024         | 3            | PAFDA        | N/A              | 8024         |
| 4            | PAFDD        | 5998-01-510-5853 | 8024         | 4            | PAFDD        | 5998-01-510-5853 | 8024         |

Change maintenance code, 3rd position, to D

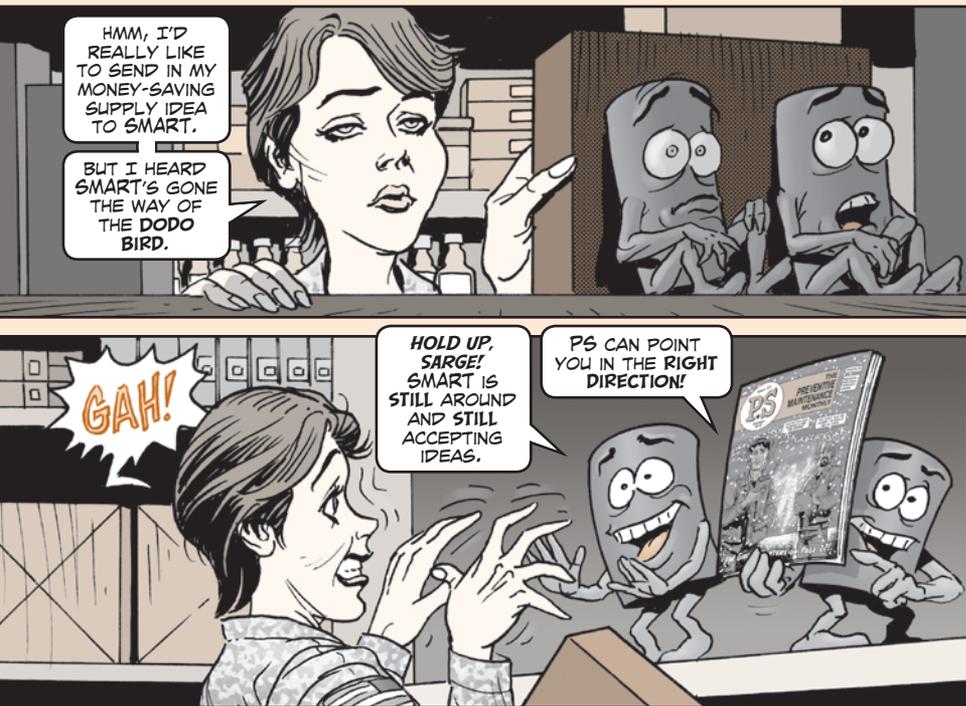
If your unit has placed an order for any of these parts, it will be cancelled. If you have an unserviceable transponder that needs any of the parts, turn it in and order a replacement. Delete the parts from your authorized stockage list (ASL) as soon as possible.

The Army made the SMR code changes to ensure that all subassemblies within the higher assembly are fully compatible. Only depot level maintenance can perform the compatibility tests.



**DEPOT MAINTENANCE COUNSELOR — SAVES THE DAY!**

# SMART Still Going Strong



**W**ith budget cutbacks around every corner, it's easy for rumors to get started. Here's one that needs to be nipped in the bud! The Army's Supply and Maintenance Assessment Review Team (SMART) and Tools Improvement Program Suggestions (TIPS) are **still here** and **still accepting** suggestions.

Another rumor is that the Army Suggestion Program (ASP) is gone. That one's true. It's easy to confuse the programs because of their similar missions, but the best SMART suggestions often solve everyday problems. Your ideas on supply, maintenance, transportation, food service or any other aspect of Army logistics are encouraged. Approved SMART ideas can earn cash awards.

Also, if you submitted a logistics idea to ASP but never heard back, and you believe your suggestion is still valid, you can resubmit it to SMART.

Visit the SMART milBook page at:

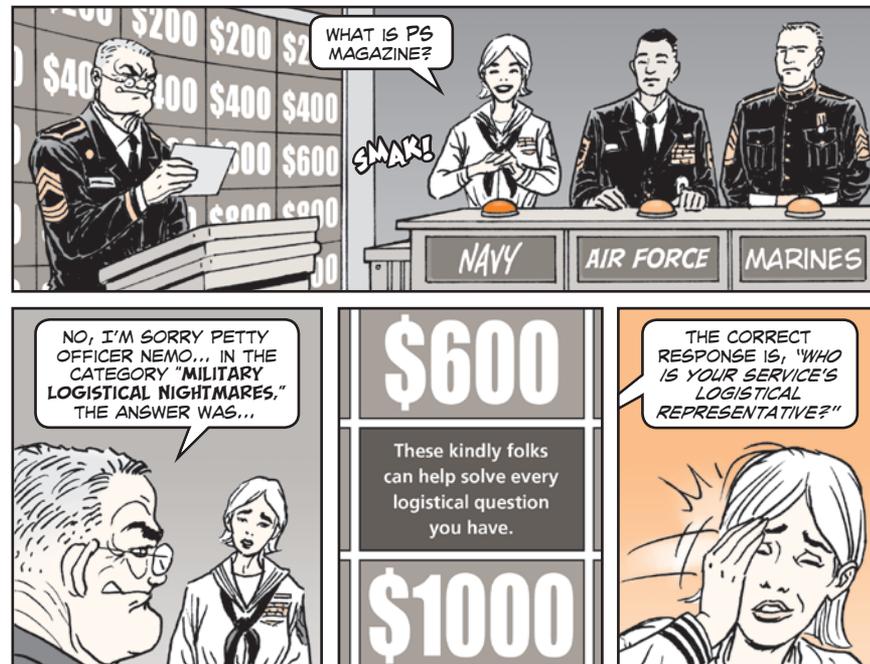
<https://www.milsuite.mil/book/docs/DOC-101393>

or email:

[usarmy.lee.tradoc.mbx.smart@mail.mil](mailto:usarmy.lee.tradoc.mbx.smart@mail.mil)

Logistics Management...

## HERE'S A TOAST TO THE HOST OF THE HALLS OF MONTEZUMA: ANCHORS AWEIGH!

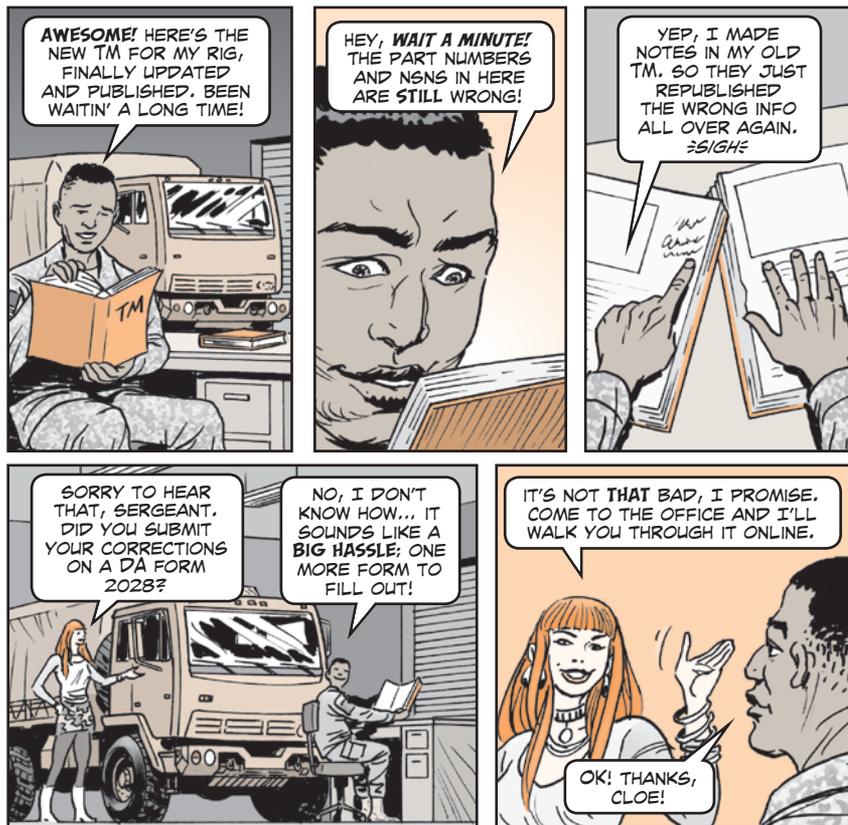


**N**ope, no mistake—we've mixed up some military song lyrics in a title that's a nod to our sister services. We thought it common knowledge that *PS Magazine* is an Army pub, but judging by the number of questions we're getting from other services, it's time to stress that fact.

Hey, we love helping military folks; it's what we do. But our resources do have limits. Lately we've been asked by readers to do things like track Air Force deliveries and find a source of supply for Navy armaments. Of course we're flattered that you think we can do that, but like someone who's found out their name and number is scrawled on a bathroom wall, we wonder how the rumors got started that "*PS Does Destroyers.*" Yep, here's our SOS, but this time it doesn't stand for "source of supply." It's "*Serve our Soldiers.*"

We salute everyone in uniform. And we're touched that our sister services put such faith in us to end their logistical nightmares. But our mission is Army-managed equipment. Thanks for your understanding.

# How to Fix TM Mistakes



Expecting others to find or fix mistakes isn't a smart move, whether it comes to actual repairs or TMs.

You can help out other Soldiers, civilians and contractors worldwide by alerting Army life cycle management commands (LCMCs) about errors you find in their TMs.

The form used to report mistakes is DA Form 2028, *Recommended Changes to Publications and Blank Forms*. You can download it here:

<https://armypubs.army.mil/eforms/pdf/A2028.pdf>

But 2028s don't have to be just about mistakes. You can use them to suggest improvements, too. For example, if a TM left out important details, if steps aren't clear or if you know how a procedure can be done better, easier or faster, you can submit your ideas.

## Make a Difference

It's simple. Fill out and submit a DA Form 2028 to the LCMC that manages the equipment.

You'll find paper 2028s in the back of many TMs. But you can also submit unclassified 2028s electronically online or by email, fax or letter. Here's how to get them to the right place:

### AMCOM LCMC (aviation and missiles)

Online: <https://amcom2028.redstone.army.mil>

Email: [2028@redstone.army.mil](mailto:2028@redstone.army.mil)

Fax: DSN 788-6546 or (256) 842-6546

Letter: Commander

US Army Aviation and Missile Command

ATTN: AMSAM-MSS-LP

Redstone Arsenal, AL 35898-5000

**Note:** When you submit an AMCOM 2028 online, you'll get a control number so you can check the status of your submission.

### CECOM LCMC (electronics and communications)

Online: <https://edm.apg.army.mil/pubs/2028.html>

Email: [usarmy.apg.cecom.mbx.amsel-lc-leo-pubs-chg@mail.mil](mailto:usarmy.apg.cecom.mbx.amsel-lc-leo-pubs-chg@mail.mil)

Fax: DSN 848-5521 or (443) 861-5521

Letter: CDR, USA CECOM and APG

ATTN: AMSEL-LCL-ECM (Pubs)

6001 Combat Drive

APG, MD 21005-1846

### TACOM LCMC

#### (wheeled and tracked vehicles, small arms, many others)

Submit 2028s at the TACOM-Unique Logistics Support Applications (TULSA) website. You'll need your CAC. First-time users must request access. Go to:

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

If you need assistance getting into the website, email TULSA's helpdesk at:

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

Enter 2028s here: <https://tulsa.tacom.army.mil/da2028/da2028.cfm>

Email: [tacomlcmc.daform2028@us.army.mil](mailto:tacomlcmc.daform2028@us.army.mil)

Fax: DSN 786-1856 or (586) 282-1856

Letter: TACOM LCMC

Attn: AMSTA-LCL-MPP/TECH PUBS

MS 727

6501 E. 11 Mile Road

Warren, MI 48397-5000

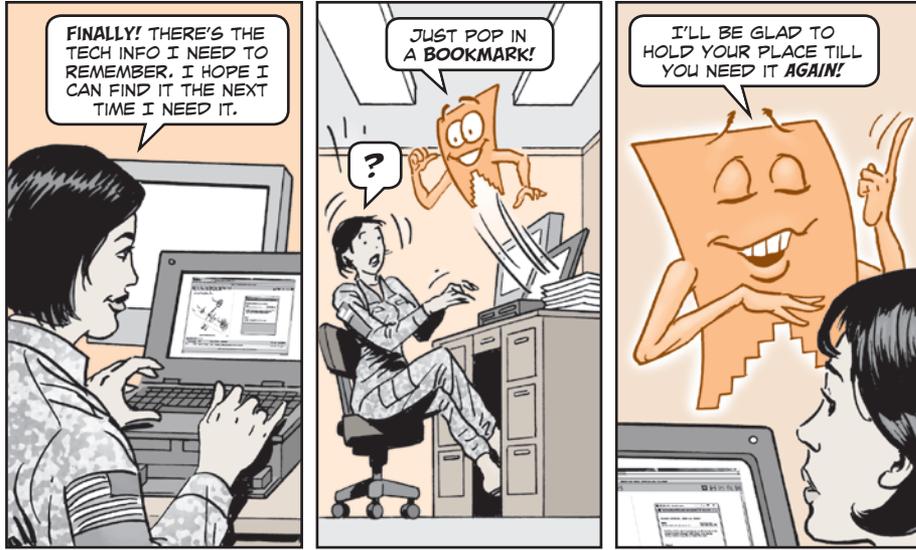
**Note:** The TACOM info is good for all TACOM-supported vehicles, armament, CBRN and Soldier support systems.

You can also use 2028s to submit corrections on FM, ARs and other Army pubs. Send the 2028 to the proponent listed in the front of the specific pub. You will usually find the address under "Suggested Improvements."

You'll see lots of TMs during your career. Take time to jot down mistakes and send them in. Send us the info here at *PS*, too, because we can usually alert the field before TMs can be updated. Email:

[half.mast@us.army.mil](mailto:half.mast@us.army.mil) or [usarmy.redstone.logsa.mbx.psmag@mail.mil](mailto:usarmy.redstone.logsa.mbx.psmag@mail.mil)

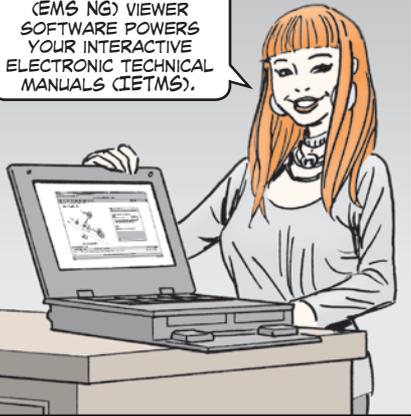
# Get the **MOST** from IETMs with EMS NextGen Viewer



THE ELECTRONIC MAINTENANCE SYSTEM-NEXT GENERATION (EMS NG) VIEWER SOFTWARE POWERS YOUR INTERACTIVE ELECTRONIC TECHNICAL MANUALS (IETMS).

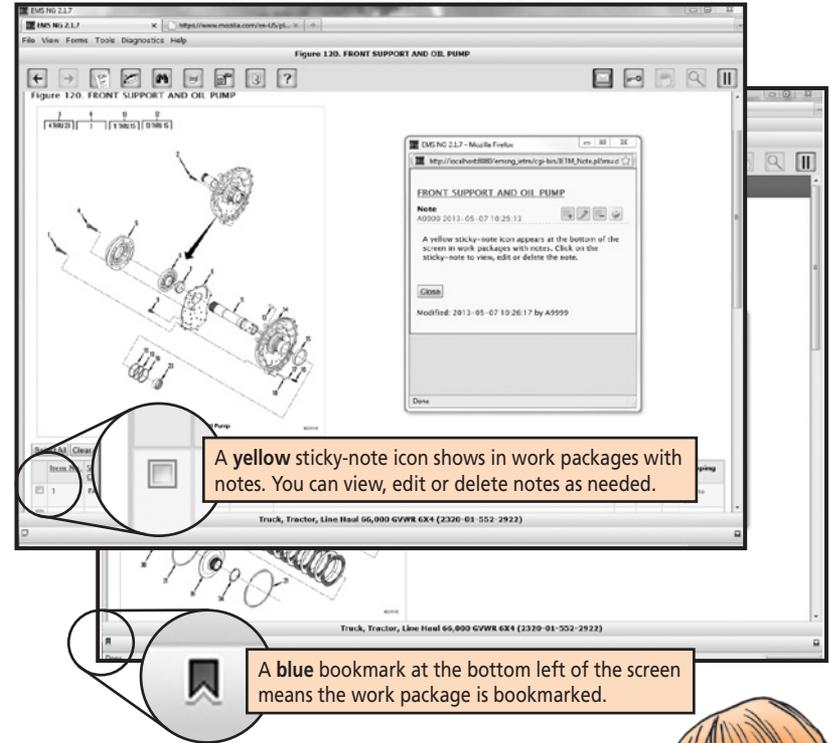
AND IT HAS SOME **NIFTY** BUILT-IN FEATURES YOU MAY NOT KNOW ABOUT.

HERE ARE SOME EXAMPLES...



- The notes and bookmarks functions of the EMS NextGen Viewer lets you mark up your IETMs just like paper TMs. You can jot down part numbers or NSN corrections, flag tips from PS articles or copy info from Safety of Use Messages (SOUMs), Maintenance Advisory Messages (MAMs) and Ground Precautionary Messages (GPMs).
- To view all your notes and bookmarks or add a note or bookmark, visit the viewer's "Tools" menu.
- Each note in the master notes lists links to the work package where it was made (if it's a work package-specific note).

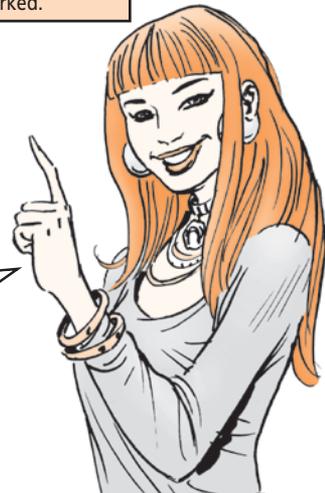
- You can choose from global or personal notes. Global notes can be seen by all users. Personal notes are displayed only in the account that created the note.
- A yellow sticky-note icon appears at the bottom of the screen in work packages with notes. A blue bookmark at the bottom of the screen means that the work package is bookmarked.



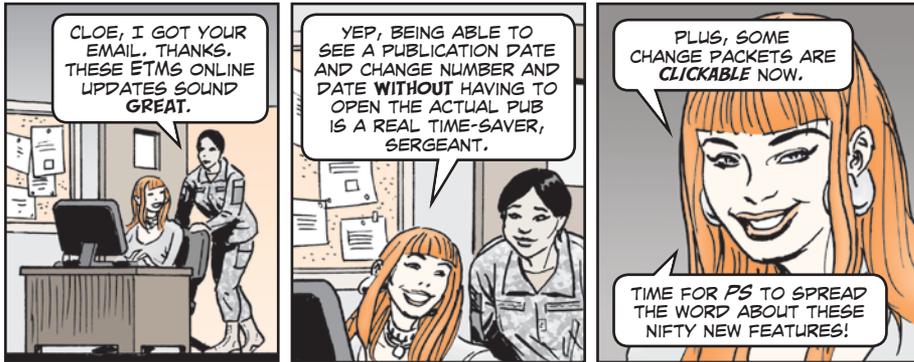
THE VIEWER GUIDE VERSION 2.1.7 HAS MORE INFO ON THESE AND OTHER FEATURES. YOU CAN FIND THEM ALL IN THE EMS NG VIEWER'S HELP SECTION OR VISIT: <https://www.EMS-Helpdesk.com> SEE PAGES 17-18 IN THE GUIDE FOR HOW TO BOOKMARK PAGES OR ADD NOTES. PAGE 38 EXPLAINS HOW TO EDIT AND DELETE NOTES.

**NOTE:** THE IETM HAS TO BE RUNNING FROM YOUR COMPUTER'S HARD DRIVE, NOT FROM THE DISK, IF YOU WANT TO SAVE YOUR NOTES AND BOOKMARKS.

IF YOU RUN INTO HURDLES, CALL THE EMS NG HELP DESK AT 1-877-445-1780 OR EMAIL: [Support@EMS-HelpDesk.com](mailto:Support@EMS-HelpDesk.com) THE HELP DESK IS STAFFED MONDAY THROUGH FRIDAY FROM 7:30 A.M. TO 4 P.M. EST.



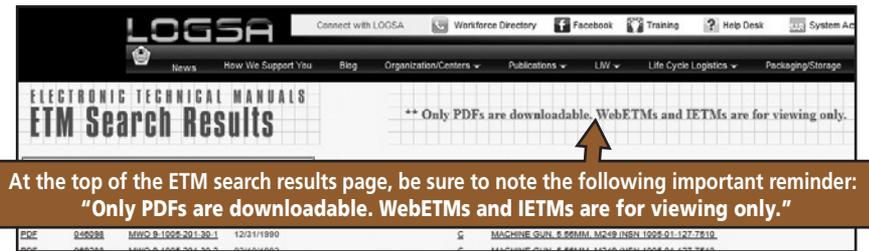
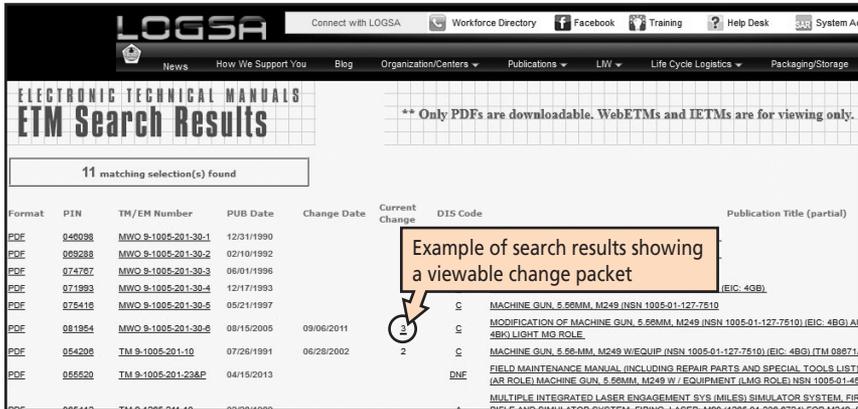
# ETMs Online Adds Helpful Details



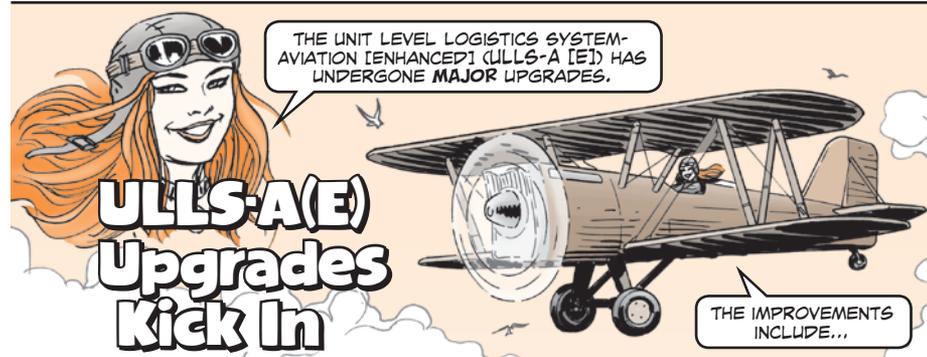
The Logistics Support Activity (LOGSA) ETMs Online website has added a couple of great new features to the search results page. Now when you do a search for electronic technical manuals (ETMs), the results page shows the publication date and date and number of the most recent change.

This lets you see how current the pub is and view the last change date without opening the full publication. That makes checking for updates faster and easier, especially if you have a slow Internet connection.

Wait! There's more! If a change number has a line under it (see figure below), you can click on the underlined number and open and view that change. When just the number is shown without any underline, it means the individual change packet is unavailable. You'll have to open the full publication to see the change.



To access ETMs Online, visit: <https://www.logsa.army.mil/etms/>  
 For detailed instructions on how to search the ETMs Online website, check out Pages 52-55 in PS 717 (Aug 12):  
<https://www.logsa.army.mil/psmag/archives/PS2012/717/717-52-55.pdf>  
 If you have questions or need help finding a specific pub, contact LOGSA's tech pubs ETM Customer Service at 1-800-270-1409, or email:  
[usarmy.redstone.logsa.mbx.logetm@mail.mil](mailto:usarmy.redstone.logsa.mbx.logetm@mail.mil)



## ULLS-A(E) Upgrades Kick In

- a built-in training support package
- a commander's dashboard
- a streamlined graphic interface
- improved supply, production and quality control functions.

SUPPLY AND MAINTENANCE ARE COMBINED, SO IF YOU SELECT AN AIRCRAFT IN THE SYSTEM, ALL ASSOCIATED FAULTS, PARTS REQUESTS AND WORK ORDERS ARE VIEWABLE AT ONCE. READ ABOUT ALL THE IMPROVEMENTS IN THE SPRING 2013 EDITION OF *THE CUBE*. DOWNLOAD AT:  
<https://www.milsuite.mil/book/thread/101753>

### M1074A1/M1075A1 PLS Steering Gear

Get the rear steering gear for your M1074A1/M1075A1 PLS tractor truck with NSN 3010-01-581-5058. It replaces NSN 2530-01-569-9930, which is shown as Item 1 in Fig 505 of TM 9-2320-319-13&P (EM 0298).

### CONTAINERIZED KITCHEN WINCH

Need a good NSN for the winch that lowers and raises the side panels on your containerized kitchen? Item 1 in Fig 2 of TM 10-7360-226-13&P (Aug 01, w/Ch 4, Mar 07) lists the *wrong* NSN: 3950-01-515-2999. The correct NSN is 3950-01-511-1191. This NSN brings a winch repair kit that contains two winches. Make a note in the repair parts list until the TM is updated.

### M1073 Trailer Wheel Assembly

Get a new wheel assembly for your M1073 7 1/2-ton flatbed trailer with NSN 2530-01-618-7916. Just the wheel comes with NSN 2530-01-305-9979. To get just the 11R x 17.5 tubeless radial "G" load range tire, order NSN 2610-01-603-8017. It's an approved substitute for the old "H" load range tire, NSN 2610-01-256-0080, which is no longer available.

### Beware of Counterfeit CR123A Batteries

Counterfeit CR123A batteries are being sold to the public from a variety of sources. They look similar in size, shape and color to name-brand batteries such as Duracell, Energizer, Rayovac and others. These knock-offs may even have labels and logos similar to those on name-brand batteries. But make no mistake. The counterfeit CR123As are substandard. They can overheat and catch fire or explode when used, transported or stored. So, steer clear of counterfeit CR123As. Order authentic CR123As, NSN 6135-01-351-1131, only through the Army supply system. That way you can be sure you're getting good batteries.

### CK Chassis Crank Handle

Currently, there's no NSN for the crank handle on the containerized kitchen's (CK) chassis, XCK2000. But you can order the crank handle on a DD Form 1348-6 using PN 1103-1945-01 and CAGE 2W888.

### M26 Shotgun Buttstock NSN

Need a buttstock for the Army's new M26 shotgun? You won't find it listed in WP 0017-23 in TM 9-1005-341-23&P. Order the buttstock with NSN 1005-01-617-9519. The NSN will be added in the next revision to the TM.

### The Solution for HEMTT Purging

Get a 5-gal container of cleaning compound (purging solution) for the M978 HEMTT fuel tanker with NSN 7930-01-350-7034. For a 55-gal container, use NSN 7930-01-350-7035. Make sure all purging solution is removed from the tanker before deploying, shipping overseas or sending to RESET. Follow the instructions in TACOM's ground precautionary message #94-02. You can view it at: [https://tulsa.tacom.army.mil/safety/gpm/tacom\\_wn/gpm94-02.html](https://tulsa.tacom.army.mil/safety/gpm/tacom_wn/gpm94-02.html)

### M777A2 Fire Control Telescope Mount

Page 7 of PS 722 (Jan 13) told you to prevent damage when towing the M119A2 howitzer by removing the M137A2 panoramic telescope from the M187A1 mount, as well as installing a plastic cover when the telescope isn't mounted. That info also applies to the M777A2 towed howitzer and its M171A1 mount. The original article can be viewed at:

<https://www.logsa.army.mil/psmag/archives/PS2013/722/722-07.pdf>

### M149-SERIES TRAILER WHEEL BEARING ASSEMBLY NSN

Get a complete wheel bearing assembly for your M149-series water trailer with NSN 3110-00-100-5951. It replaces NSN 3110-00-100-3095, which is shown as Item 16 in Fig 17 of TM 9-2330-267-14&P (Jul 91). That NSN brings only the tapered roller section of the bearing.

SPECIALIST... GOT ANYTHING MORE TO SAY TO OUR READERS BEFORE LEAVING THIS EARTHLY REALM?

SURE DO, CONNIE. TELL THEM TO TAKE ADVANTAGE OF ALL THE SAFETY AND MAINTENANCE INFO THEY'LL FIND IN PS SO THEY CAN AVOID MY FATE.



### XM1216 SUGV Battery

The BB-2590/U, NSN 6140-01-490-4316, is the **only** approved battery for the XM1216 small unmanned ground vehicle (SUGV) system. Using any other battery in the chassis or operator control unit (OCU) could cause damage or failure of the robot and OCU.

### STE-M1/FVS Continuity Test Probe

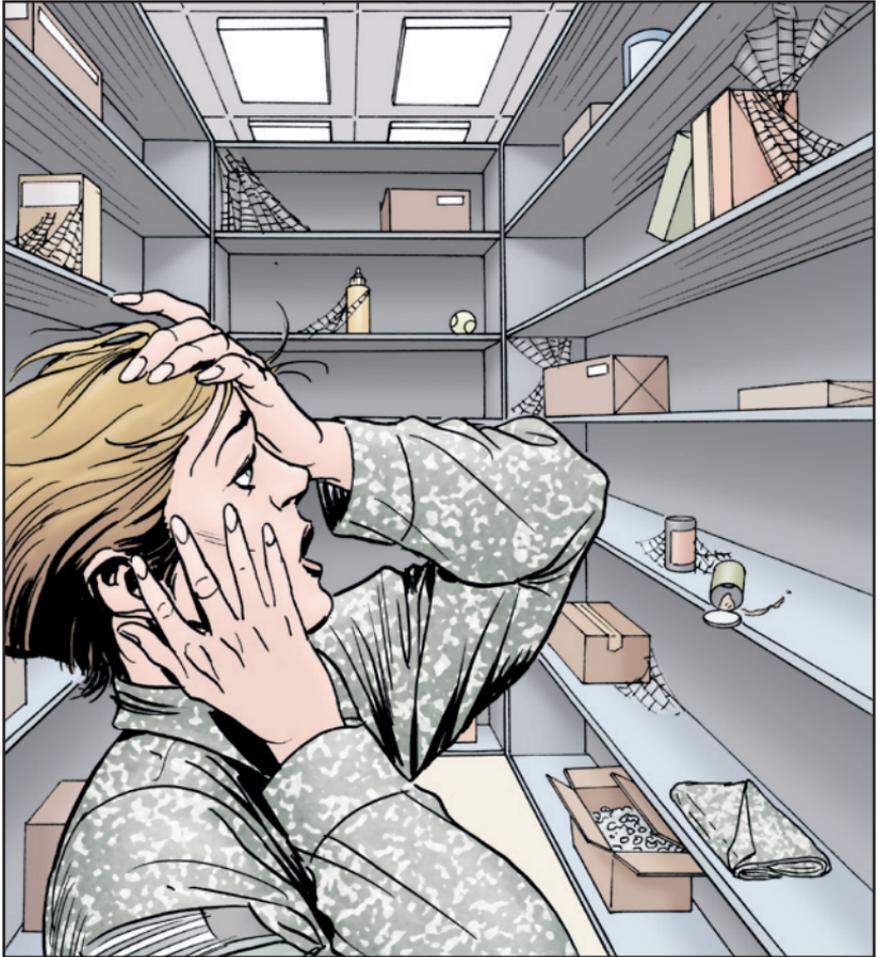
The STE-M1/FVS test set's continuity test probe assembly, NSN 6525-01-102-6878, shown as Fig F6 in TM 9-4910-751-14&P (May 91 w/Ch 2, Mar 97), is no longer available. But you can still put the probe assembly together by ordering its down parts from the same Fig. Note that Items 4 and 11 have been replaced by NSNs 5999-01-098-8726 and 6625-00-975-3998 respectively.

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

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

Click here for a copy of this article to save or email.

# REMEMBER THIS OLD ARMY SUPPLY MOTTO:



**IF IT'S AUTHORIZED...**  
**IT SHOULD BE IN STOCK**  
**OR ON ORDER!**