

Issue 700

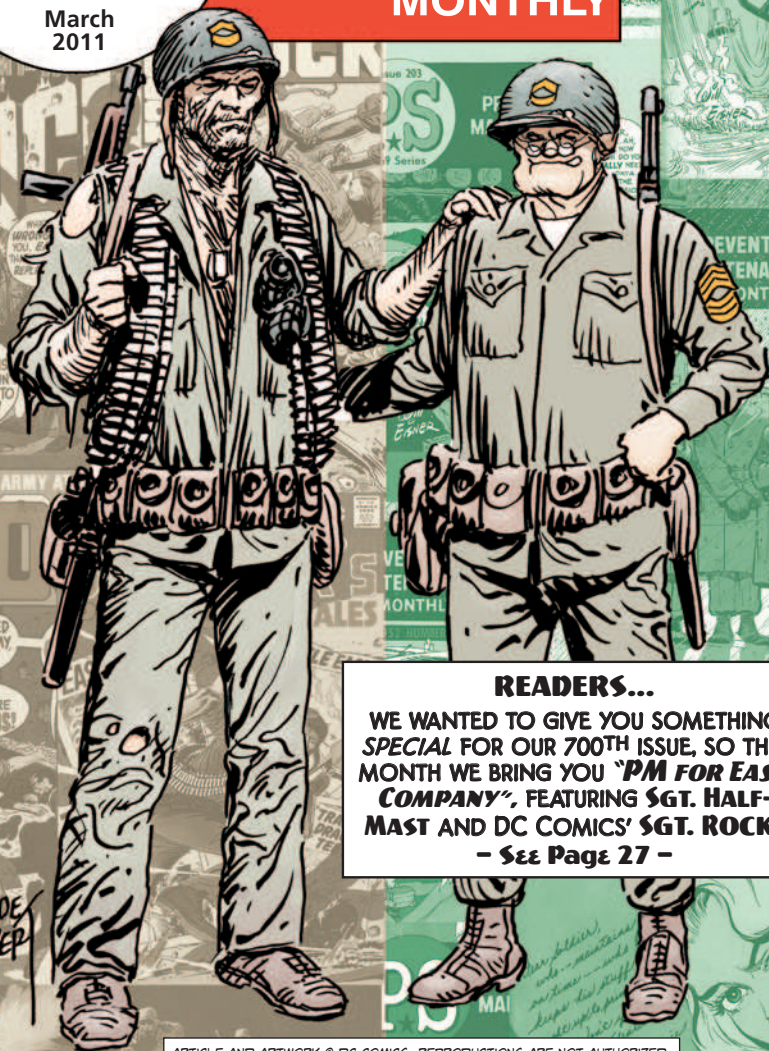
PS

March
2011

THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-700

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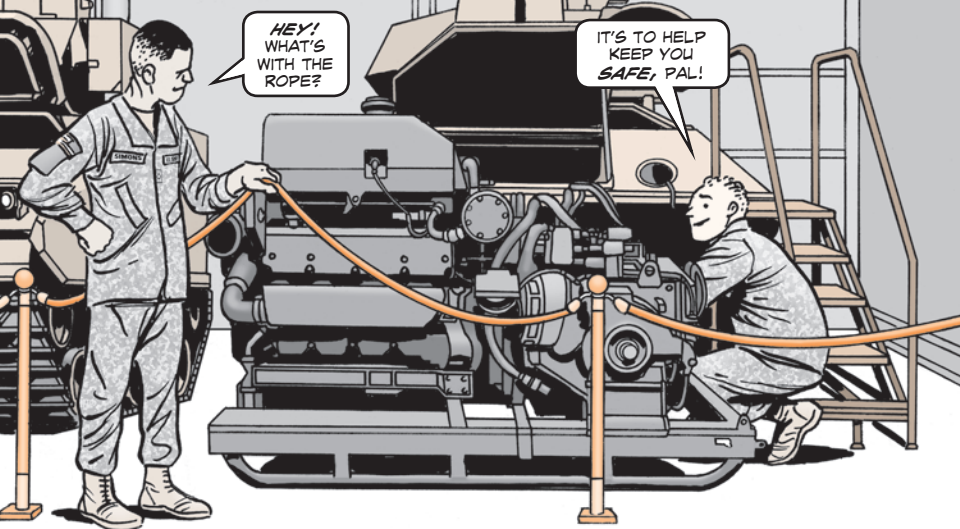


READERS...

WE WANTED TO GIVE YOU SOMETHING SPECIAL FOR OUR 700TH ISSUE, SO THIS MONTH WE BRING YOU "PM FOR EASY COMPANY", FEATURING SGT. HALF-MAST AND DC COMICS' SGT. ROCK!

- See Page 27 -

Could This Be You?



One day a Soldier walked up to a Bradley powerpack that was being prepared for ground hop. Two mechanics were kneeling down behind the powerpack to troubleshoot a wiring problem that was preventing startup. They didn't notice the visiting Soldier.

Interested in the work going on, the Soldier leaned over the powerpack to get a better look. He placed one hand on the generator near the forward mounted fan. Can you see where this is headed?

The mechanics fixed the wiring problem and the engine immediately started. Fortunately, this Soldier lost only one finger. It could have been worse—much worse.

Always remember to exercise situational awareness, especially when walking around maintenance areas. All around you are potential dangers—ground hopping, welding, grinding, and lift operations—that could catch unsuspecting Soldiers by surprise.

Maintenance NCOs, consider training opportunities such as Sergeant's Time as a chance to remind Soldiers to be aware of their surroundings. Make marking or roping off danger areas part of your unit's SOP.



PS**THE
PREVENTIVE
MAINTENANCE
MONTHLY**

TB 43-PS-700, 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.

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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.

Just write to:

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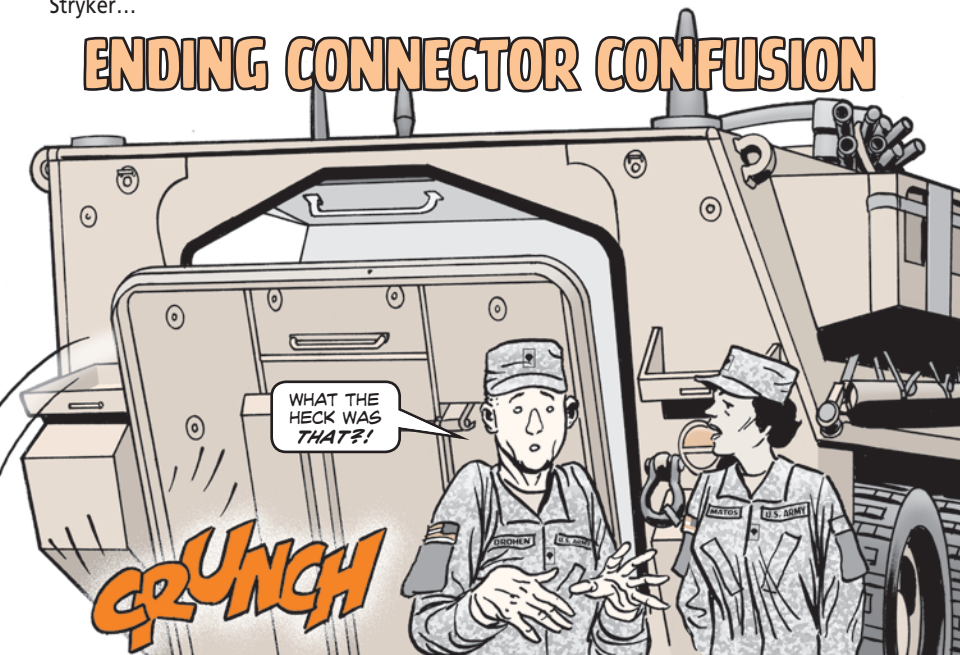
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Stryker...

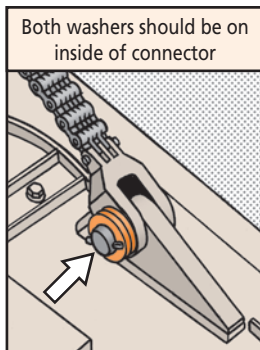
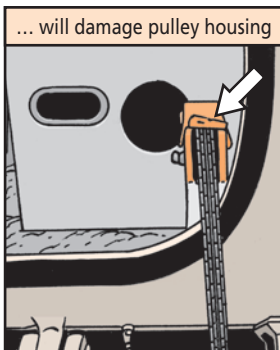
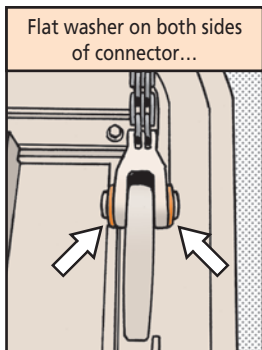
ENDING CONNECTOR CONFUSION



Mechanics, when reattaching the ramp chains after maintenance, be careful where you place the flat washers on the ramp chain connector.

Since there are two flat washers, NSN 5310-01-510-5385, you naturally assume that one goes on each side of the connector, right? Wrong!

With a washer on each side, the connector hits and damages the pulley housing as the ramp is closed. So, make sure you put both washers on the inside of the connector. Then your ramp will raise and lower smoothly.



Coasting Cures Track Tension Trouble



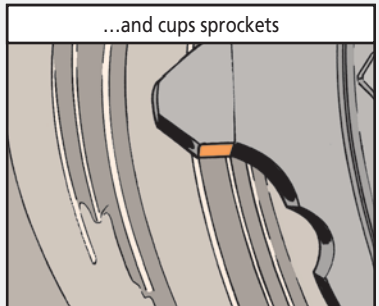
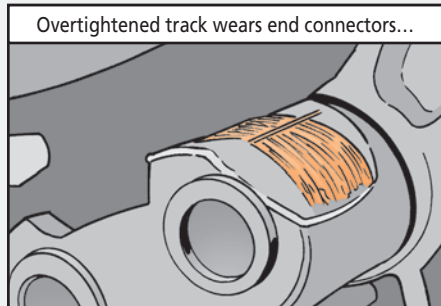
THERE YOU GO!
YOUR TRACK TENSION IS PERFECT!

IF IT'S SO PERFECT,
WHY DOES MY TRACK
HURT SO MUCH?

If your tank has constant problems with worn end connectors and cupped sprocket teeth, the problem could be that you're not coasting when it comes to adjusting track tension.

Some crewmen think adjusting the tension means whipping out the 'ole grease gun and pumping grease into the track adjusting link till it comes out of the relief valve. That's partly right, but they're forgetting a small but very important step.

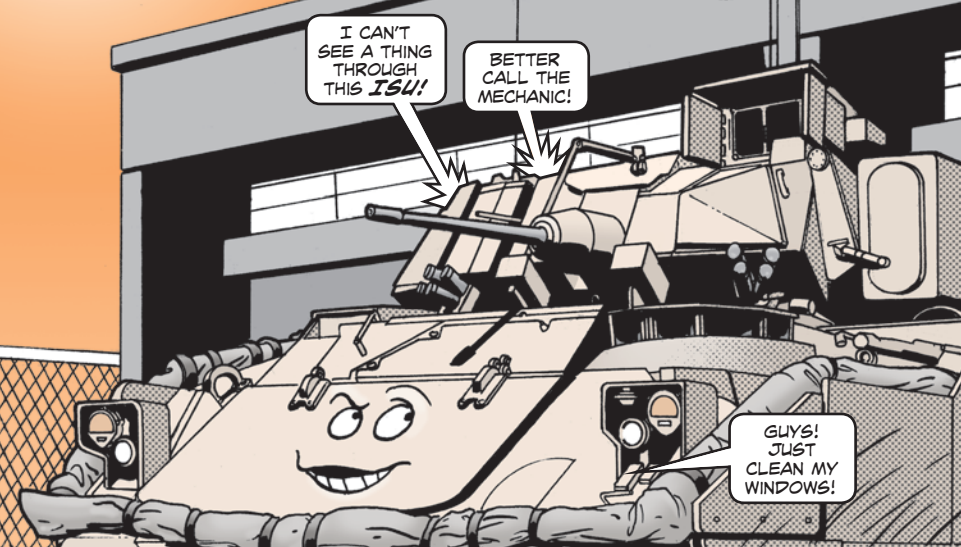
The TM says to move the tank backward 20 feet, then forward 20 feet on a level surface. But you need to **let it coast to a stop** before drawing your grease gun. That's so the track adjusting link is the only thing pressing against the track when you add grease.



If you use the brakes, the weight of the tank is thrown forward when you stop. That leaves some track tight and other track loose. Adjusting the track then usually results in overtightened track that wears out end connectors and cups sprockets.

So, don't think coasting is always a bad thing when it comes to your work. In this case, it's the only way to go.

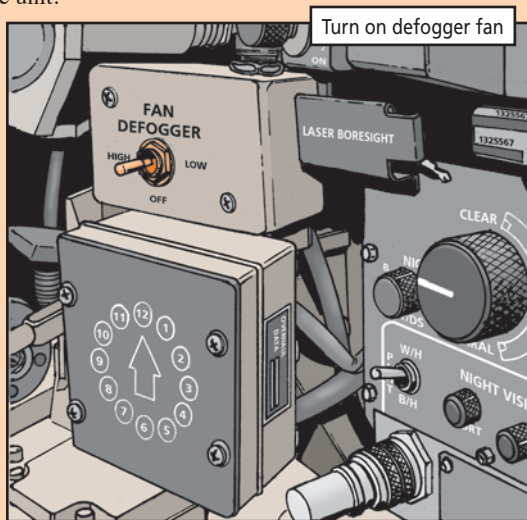
BLURRY VISION?



Is the view through your Bradley's integrated sight unit (ISU) blurry? Most operators assume that the ISU needs to be purged and charged with nitrogen to get rid of condensation inside the unit.

But the solution could be simpler. First, try turning on the ISU defogger fan. If the blurriness is caused by condensation outside the unit, that usually takes care of it.

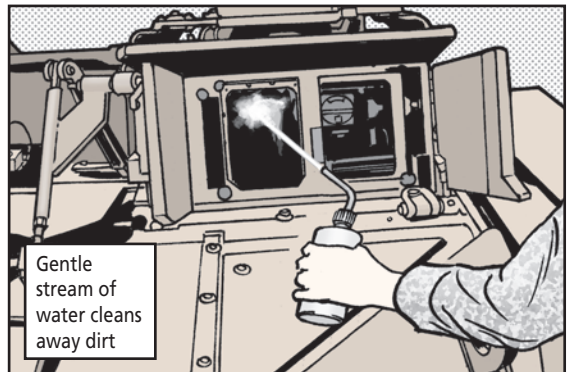
Still blurry? Could be the windows on the ISU's doghouse assembly are dirty. You can't just grab a paper towel and some glass cleaner, though. The ISU glass has a special coating on it. If you clean it wrong, the coating is damaged and your ability to see just got worse.



HERE'S THE RIGHT WAY TO CLEAN THOSE WINDOWS...




1. Rinse the window with clean water from a squirt bottle until all loose particles are gone. Warm water works best.



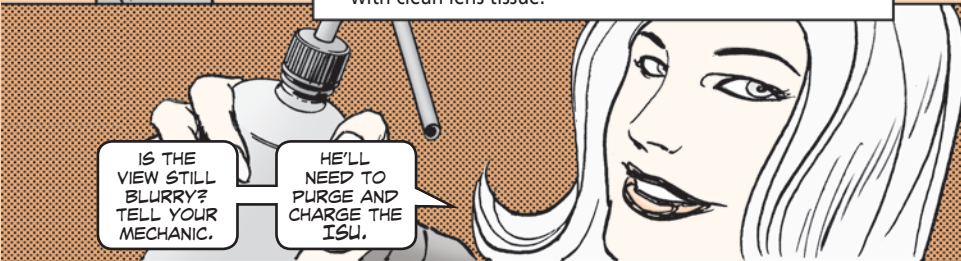
Gentle stream of water cleans away dirt

2. Soak a lens tissue, NSN 6640-00-436-5000, in lens cleaning solution, NSN 6850-00-227-1887, and clean the window with light pressure. Wipe in a single direction. Wiping in multiple directions is a good way to smear the glass and increases the chance of scratching it.



Soak lens tissue with cleaning compound to wash windows

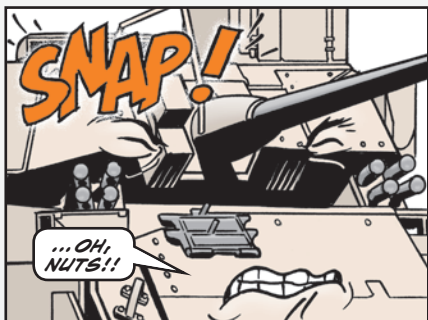
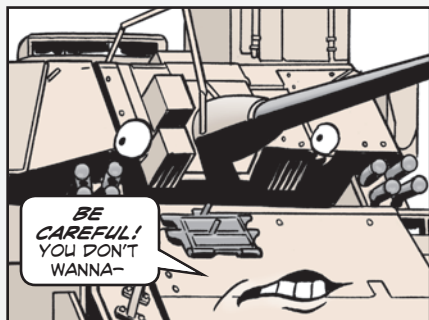
3. Flush off the cleaning solution with clean water.
4. Dry the windows by wiping lightly in a single direction with clean lens tissue.



LEMME SEE IF I CAN GET THE ISU RETICLE JUST A LITTLE BIT BRIGHTER...

UH-OH!

JUST A LI-I-I-TLE BIT MORE...

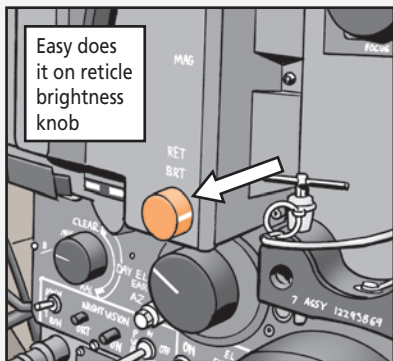


Those new flat screen HDTVs are great, aren't they? Those nice bright screens, crystal-clear pictures and easy-to-use controls for brightness and color have kinda spoiled us all.

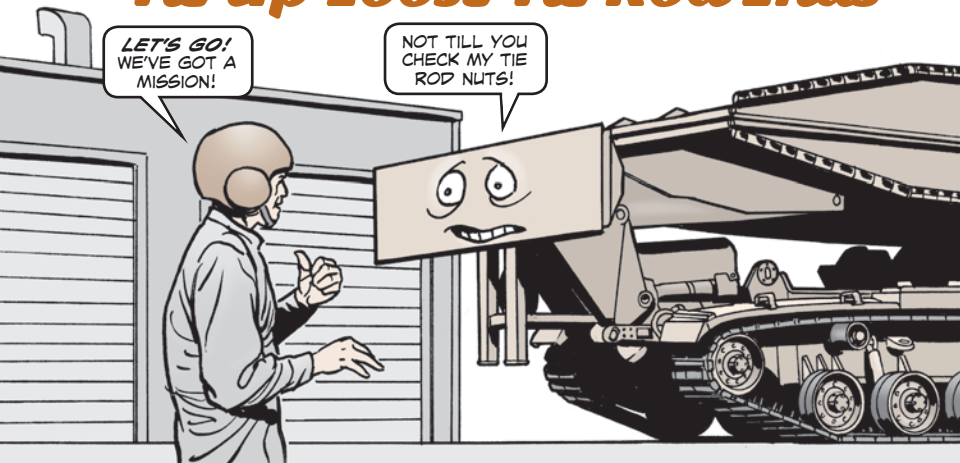
That may be why some operators run into problems with the integrated sight unit (ISU) on their Bradleys. They figure they can get an even better picture if they can just adjust the reticle brightness knob a little bit more.

Often, that "little bit more" is a little too much. The knob snaps and you won't be adjusting anything until it's replaced.

So, adjust only if you must. Just don't try to force the issue, or the picture you'll get will make standard definition TV look great by comparison.



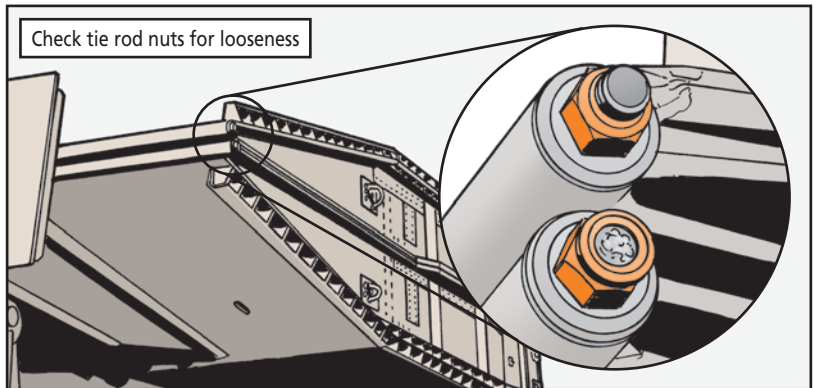
AVLB... *Tie Up Loose Tie Rod Ends*



When you're launching or retrieving your AVL B's bridge, you've got a whole lotta weight swinging through the air at one time. So it's important to make sure everything's tight and secure before you begin.

Take the bridge's end panel tie rods, for example. If the securing nut loosens, the tie rod can move. Combine that slight back and forth movement with the stress of folding or unfolding the bridge and the tie rod can bend. Even worse, if the nut comes completely off, the tie rod can slide out and the bridge starts coming apart.

So check each of the nuts before operation. TM 5-5420-203-13 is being changed to add a torque requirement of 25 lb-ft for the two tie rod nuts. If the nut shows signs of damage, replace it with NSN 5310-01-032-2318. If any other tie rod part needs replacement, check out Fig 5 of TM 5-5420-203-24P for the NSN you need.



AVLB...

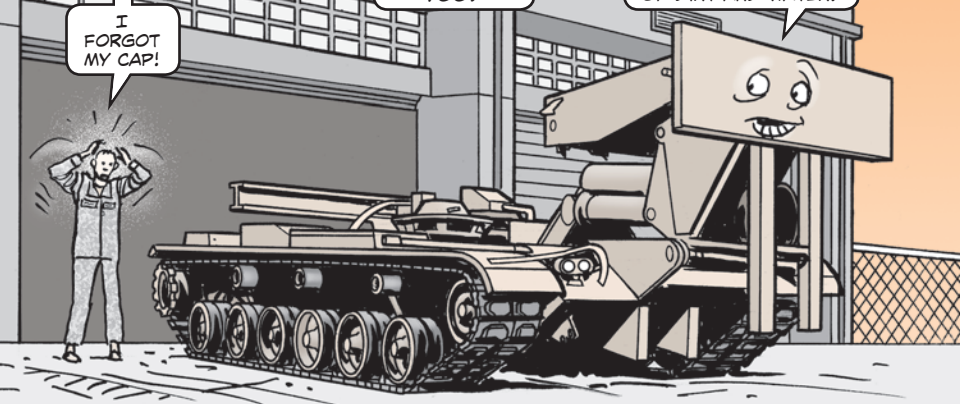
Don't Forget the Cap!

AWW,
NUTS!

I
FORGOT
MY CAP!

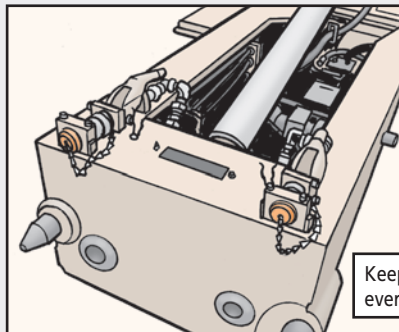
YEAH, YOU
FORGOT MINE,
TOO!

MY HYDRAULIC
COUPLINGS ARE FULL
OF DIRT AND WATER!

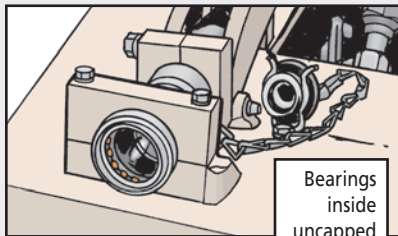


As a Soldier, you're required to put on your cover whenever you go outside. It's a good idea to follow the same guidelines for the hydraulic line quick-disconnect couplings on your AVLB.

The couplings, NSN 4730-00-257-0236, need to be capped whenever the vehicle is separated from the bridge. Without the caps, dirt and moisture get inside the couplings. That can damage or jam the retractable bearings inside.



Keep caps in place when-
ever bridge is detached



Bearings
inside
uncapped
coupling
may suffer
damage

If that happens, the couplings can pop loose when you try to launch the bridge. That bridge won't move until new couplings are installed.

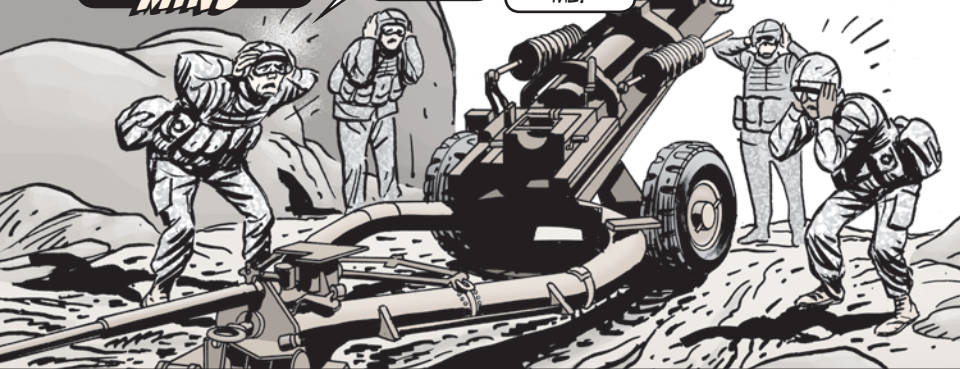
A new coupling costs about twice as much as a new cap, so replace damaged or missing caps with NSN 5420-00-816-5649. Then make sure you use 'em!

KEEP RIGHT THINGS IN MIND

SK-EE-AAAWW NUNK

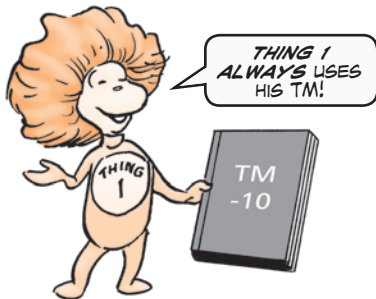
WHAT'S THAT TERRIBLE NOISE?!

YOU GUYS USED GAA TO LUBE ME!

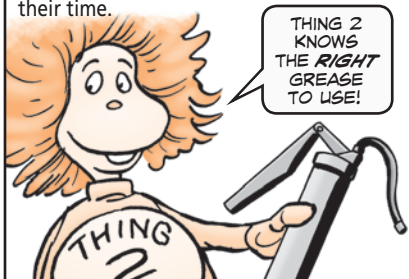


When pulling PMCS on your M119A2 howitzer, there are two very important things to keep in mind.

Thing 1: Always have your -10 manual out, open and ready to use. Specifically, turn to WP 0040 for guidance on PMCS, including lube points. You're sure to miss something if you try to rely only on memory. That leads to big trouble down the road.



Thing 2: Select the right grease for lubing. Most operators assume GAA is the right lube. While GAA might be used on most Army equipment, it is **not authorized** for use on the M119A2. GAA won't hold up to the higher temperatures generated by firing the howitzer. It breaks down faster, causing components to wear out before their time.



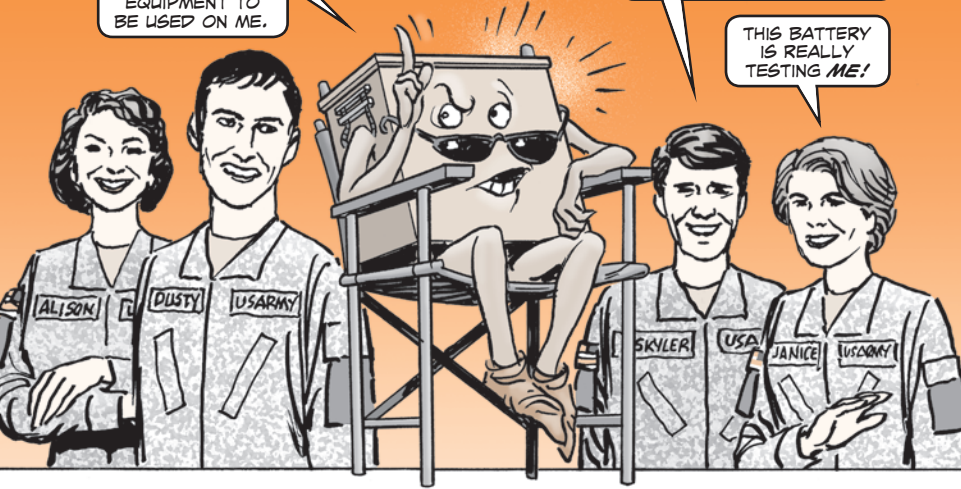
The right lube to use is WTR, NSN 9150-00-944-8953. It stands up to higher temperatures and won't break down as fast as GAA. It's also the lube specified in WP 0040 00-1 (see **Thing 1**).

VRLA Battery Testing

I NEED MY CHARGING DONE NOW AND I ONLY WANT SPECIAL EQUIPMENT TO BE USED ON ME.

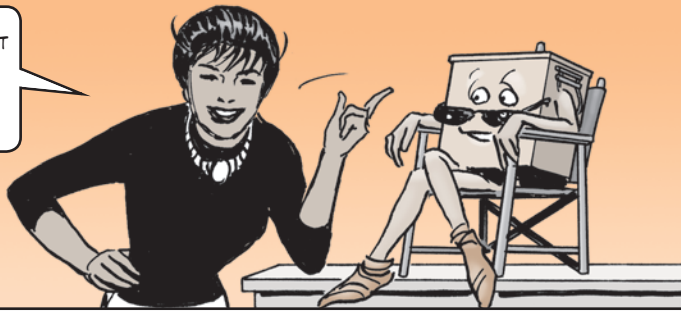
I KNOW THIS BATTERY NEEDS SPECIAL CHARGING EQUIPMENT BUT DOES HE HAVE TO BE SUCH A DIVA?

THIS BATTERY IS REALLY TESTING ME!

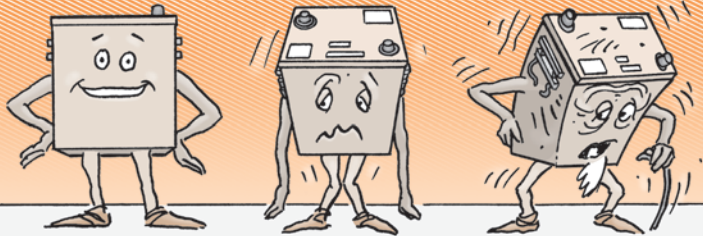


BY NOW, YOU PROBABLY KNOW THAT VALVE REGULATED LEAD-ACID (VRLA) BATTERIES REQUIRE SPECIAL CHARGING EQUIPMENT.

THESE BATTERIES CAN BE TESTED USING EQUIPMENT THAT'S ALREADY FIELDIED IN TEST SETS.



IF YOU USE THE EQUIPMENT PROPERLY, YOU CAN DETERMINE WHETHER A BATTERY IS GOOD, NEEDS CHARGING OR SHOULD BE TURNED IN.



I'M WONDERING WHICH TOOLS CHARGE AND TEST VALVE-REGULATED LEAD-ACID BATTERIES?

YOU'RE NOT THE ONLY ONE, SOLDIER!

KEEP READING FOR THE ANSWERS TO THAT AND MORE.



Charging

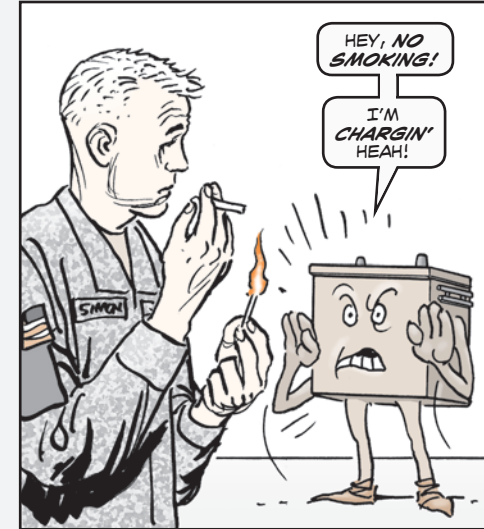
VRLA batteries have stricter recharging requirements than flooded batteries. You first have to decide if you want to recharge VRLA batteries on or off your weapon system. The preferred method is to charge the batteries on the weapon system.

Charge VRLA batteries in a well-ventilated area using a constant voltage recharging system. **Do not** smoke or have open flames in the charging area. Immediately stop charging if a battery shows signs of melting or swelling or if the surface of the battery becomes too hot to comfortably touch with a bare hand.

Battery chargers are found in the Standard Automotive Tool Set (SATS) (LIN S25885), NSN 4910-01-490-6453; the Automotive Maintenance and Repair: Field Maintenance, Basic Tool Set (LIN T24660), NSN 4910-00-754-0705; the Number 1 Common (LIN W32593), NSN 4910-00-754-0654; and the Number 2 Common (LIN W32730) tool sets, NSN 4910-00-754-0650.

The Pulse Tech Pro 4HD battery charger, NSN 6130-01-500-3401, is located in all four tool kits and automatically switches from 12 to 24 volts. It senses the battery's condition and provides only the right amount of charge for the battery.

The Pro 4HD comes with two output cable ends: one for the NATO connection and one with battery clamps. The charger will shut itself off when charging is complete.



Testing

You need to test your VRLA battery **before** installing it in a vehicle and **before** turning it in as unserviceable. To get an accurate view of the battery's health, fully charge it before testing.

There are several tools you can use to test the VRLA battery: a voltage meter, a load tester or a conductance tester (digital battery tester-analyzer).

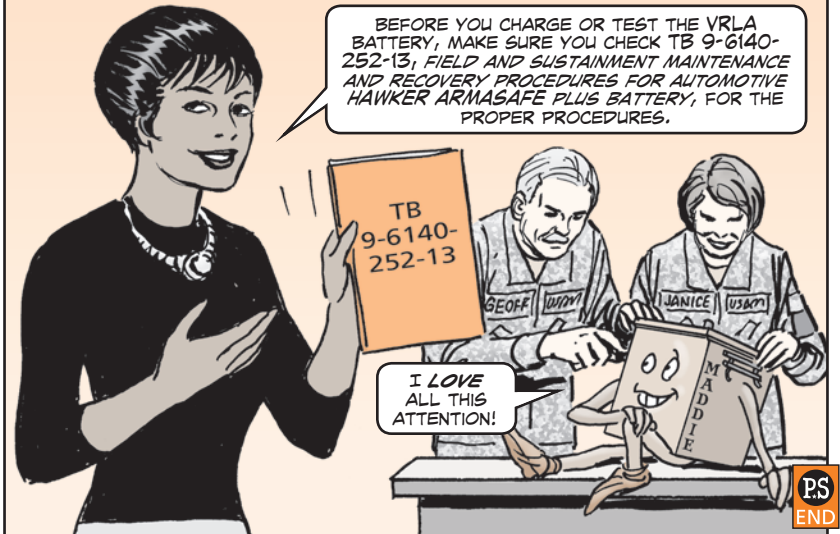
Voltage meters are found in the SATS, Shop Equipment Contact (SECM) (LIN S25681), NSN 4940-01-548-9064; Forward Repair System (FRS) (LIN F64544), NSN 4940-01-533-1621; and the Field Maintenance Module 1 (LIN T65312), NSN 4910-01-501-7342.

The multimeter will allow you to conduct an open circuit voltage (OCV) test of the battery. If the OCV is below 12.85V, you must recharge the battery and v test again.

Load testers, such as NSN 6130-01-447-7294, will give you an indication of the battery's ability to hold its voltage while under load. They are found in the FRS, Number 1 Common, and the Number 2 Common tool sets.

Make sure you read the operator's manual before using load testers. Batteries should be fully charged before using a load tester and must be recharged after using a load tester.

Conductance testers are found in the SATS and the FRS. These testers are very sensitive and can find battery defects or weaknesses long before any problem or capacity loss is noticed. This simple-to-use tester has a digital menu screen that allows the user to identify battery voltage, cold cranking amps, and battery condition.



PLS, HEMTT...

WHY, YOU YOUNG WHIPPERSNAPPER!

A FEW WRINKLES *DOESN'T* MEAN MY BUSHINGS NEED REPLACING!



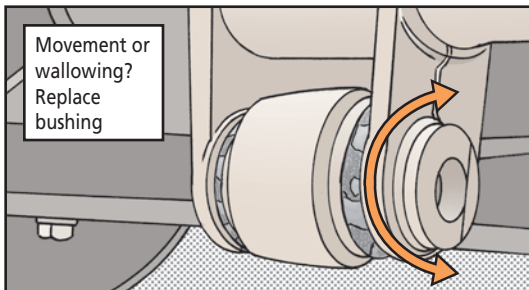
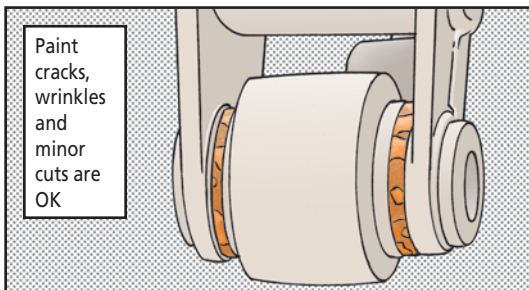
SERVICEABILITY IS MORE THAN

Mechanics, just because something looks a little worn doesn't mean it's ready for the scrap heap. The equalizer beam (walker beam) on the PLS and HEMTT is a perfect example.

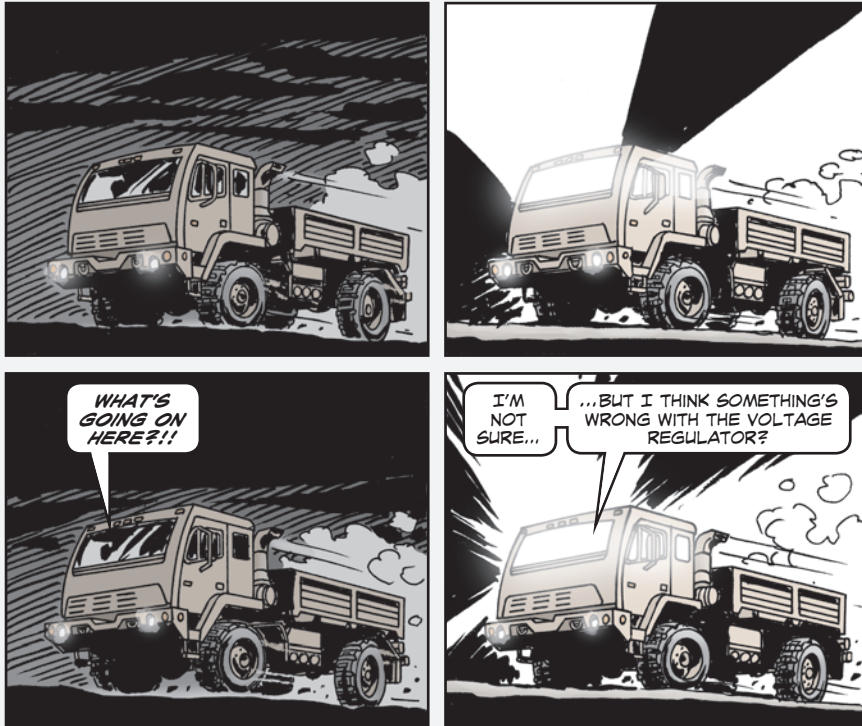
When inspecting the walker beam bushings, it's easy to be fooled. Cracked or wrinkled paint can make the bushings look like they're dry rotted. A few cuts and gouges can also make them look ready for replacement.

But before you replace the bushings, look a little closer. Movement is the key to bad bushings. If they turn (movement against the beam bore) or wallow (bushing is more narrow in some spots than others), it's time to replace 'em. Otherwise, they've still got a lot of miles left.

SKIN DEEP



Voltage Regulator Failures



Are the instrument panel lights on your FMTV flashing on and off? If so, you could have a problem with the voltage regulator found on the 260-AMP alternator.

A manufacturer's defect has led to internal failures of voltage regulators, NSN 6110-01-559-2092, PN N3221. The failure occurs during normal vehicle operations. Check the reading on the voltage gages by the flashing light. In some cases, the voltmeter gage reads in excess of 32.48 volts, or reads no voltage at all!

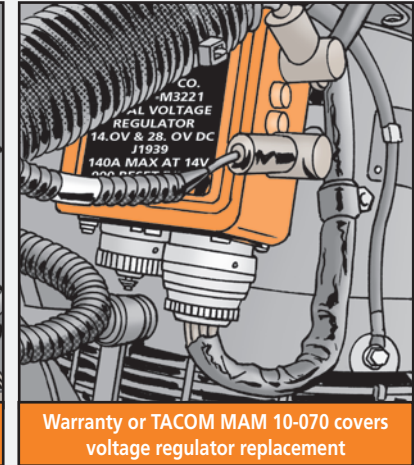
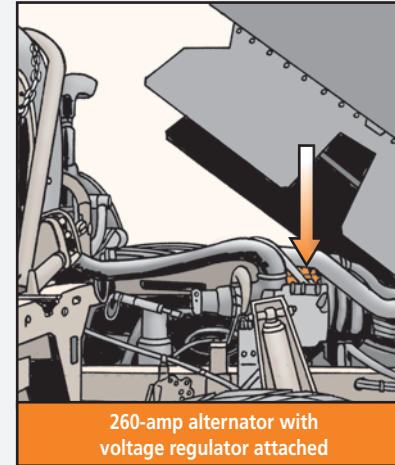
Inspect the charging system using the -10 manual for the FMTV models in your unit:

- LMTV A0: TM 9-2320-365-10 (Pg 2-46, Step #17)
- MTV A0: TM 9-2320-366-10-1 (Pg 2-66, Step #17)
- LMTV A1: TM 9-2320-391-10 (W/P 0087 00-33, Step 9)
- MTV A1: TM 9-2320-392-10-3 (W/P 0103 00-35 and -36, Step 9)

- LMTV/MTV A1R: IETM 9-2320-391-14&P (PMCS Table 2, Item 16)
- LMTV A1P2: TM 9-2320-332-10 (W/P 0081-34, Item 14)
- MTV A1P2: TM 9-2320-333-10-2 (W/P 0095-34, Item 14)
- LHS A1P2: TM 9-2320-337-10-2 (W/P 0082-36, Item 14)

You must bring the vehicle up to operating temperature to get a good voltage reading. If no defects are found, you're good to go and no action is required. But if the system is faulty, notify field-level maintenance for repairs.

Maintenance should remove and replace the voltage regulator using maintenance task 07-05, *Voltage Regulator Replacement*, in IETM 9-2320-391-14&P. Note that replacement regulators must be dated on or after 09/09/09.



Voltage regulator replacement is an extended warranty item, so all costs will be covered. If your vehicle is out of warranty, the voltage regulator replacement is still covered under TACOM LCMC's maintenance action message (MAM) 10-070. That is, if your FMTV's serial number is within the range given in the MAM. Note that the MAM calls out the M1082 trailer, but that's a mistake!

File a claim using TB 9-2300-426-15 and TB 9-2300-427-15. You must include the unit's identification and truck serial number when submitting a claim. After you submit it, a new voltage regulator will be sent to you. Return the defective regulator to the manufacturer in the original shipping box.

You can also file a claim using the BAE warranty claim website:

<https://www.tvsonlinesupport.com/OnlineSupport/public/default.aspx>

You'll have to create an account. No worries. The site is easy to use.

Need more help? Contact your TACOM logistics assistance rep or get your warranty questions answered by emailing BAE's warranty department:

warranty@baesystems.com

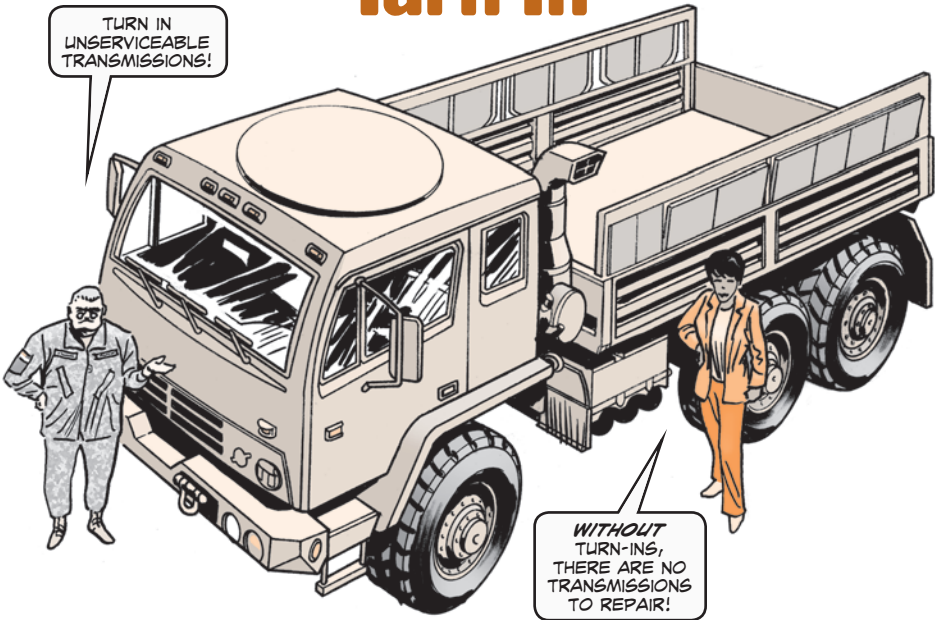
TACOM LCMC's Alan Meacham, DSN 786-4772, 586-282-4772, or John Eynon, DSN 786-4337, 586-282-4337, can also assist you. Here are their email addresses:

alan.meacham@us.army.mil

john.t.eynon@us.army.mil

Gen III Transmission "Turn In"

TURN IN UNSERVICEABLE TRANSMISSIONS!



WITHOUT TURN-INS, THERE ARE NO TRANSMISSIONS TO REPAIR!

The FMTV's hydraulic Gen III transmission, NSN 2520-01-493-6059, is no longer available in the Army's supply system. The transmission is ARIL coded "C" and needs to be turned in when it becomes an unserviceable asset.

Any of these transmissions that get cast aside in the motor pool rather than turned in puts a stress on the Army's supply system. Without turn-ins, transmissions aren't on hand for repair. That means transmissions are not ready for issue and your vehicle stays NMC!



SO, PACKAGE ANY UNSERVICEABLE TRANSMISSIONS AND RETURN THEM FOR REPAIR AT THE NATIONAL MAINTENANCE LEVEL AT FT BRAGG.

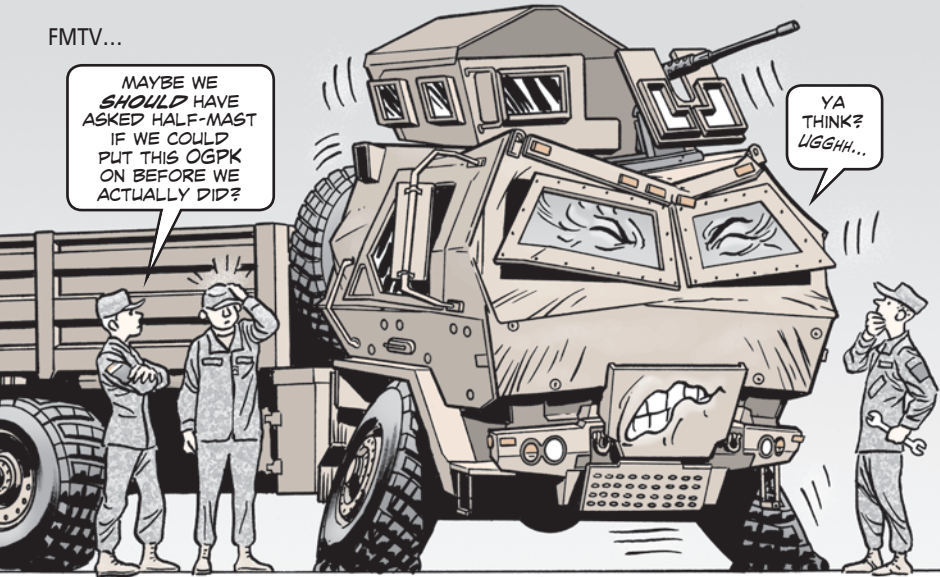
IT'S THE *BEST* WAY TO MAKE SURE THERE'S A REPLACEMENT TRANSMISSION WHEN YOU NEED ONE.

CONTACT YOUR LOCAL TACOM LAR IF YOU NEED HELP.

FMTV...

MAYBE WE
SHOULD HAVE
ASKED HALF-MAST
IF WE COULD
PUT THIS OGPK
ON BEFORE WE
ACTUALLY DID?

YA
THINK?
UGGHH...



OGPK's Not OK for LSAC

Dear Half-Mast,

Can I install an objective gunner protective kit (OGPK) on an FMTV with the low signature armored cab (LSAC)?

If so, which kit should I use?

SFC J.N.

Dear Sergeant J.N.,

The answer to your first question is no. OGPKs are approved for use only on long-term armor strategy (LTAS) FMTV models. The LTAS has dual cab lift cylinders, so there's less strain on the cab when tilting.

OGPKs haven't been tested or approved for use on LSACs. One of the biggest issues with installing the OGPK on the LSAC FMTV is the extra weight and resulting strain it puts on the cab. LSAC models have only a single cab lift.

Now for your second question. You can't use the OGPK, but you **can** use the gunner protective kit (GPK), NSN 2510-01-532-5221. Get its gun shield using NSN 2510-01-498-4996. The LSAC gunner's restraint kit comes with NSN 2540-01-569-6578.

Note that if you use the GPK on an M1088 tractor, you have to use a trailer (Bobtail) or install a weight kit. An M1078 FMTV with GPK needs the weight kit, too.

Half-Mast

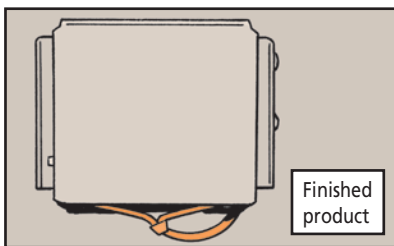
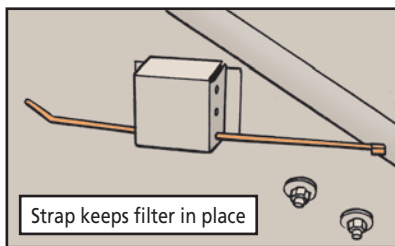
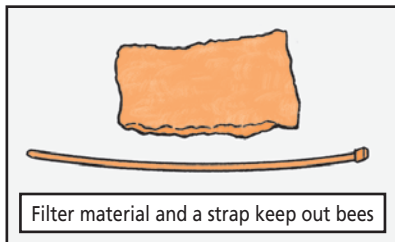
GETTING BUGS TO BUZZ OFF!

Dear Editor,

Maybe you know others who might have had problems with bees and hornets getting into the battery compartment of 5-ton trucks. In our experience, the bugs get into the truck's battery compartment through the battery breather.

Some of our technicians have been stung while performing routine maintenance! Then the unit was forced into downtime until we could get an exterminator to remove the insects. This costs us both time and money!

To solve the problem, we experimented with some A/C filter material and a strap. We simply slid the filter into the battery breather and put a strap at the bottom to keep the filter in place.



After a few months, I checked the trucks that had the filter. None of the filtered trucks had an insect problem.

We'll have our techs keep installing these filters during A-service until someone comes up with a better idea. Maybe other readers with this problem can do the same.

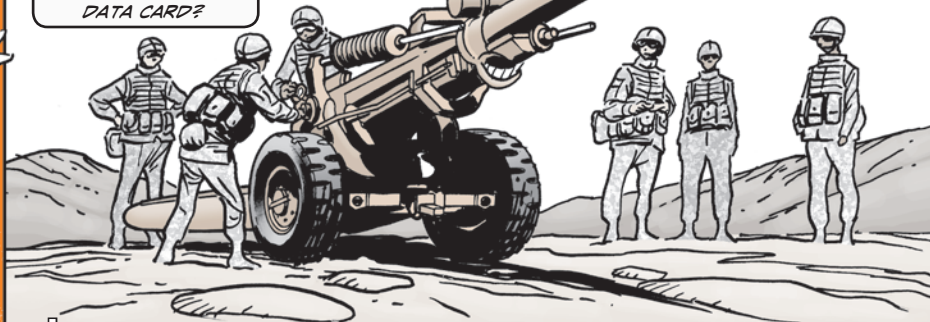
Thomas Aponte Jr.
81ST RSC
USAR

Editor's note: Great tip, Mr. Aponte. Sounds like you found an easy way to make those bugs buzz off. And readers, scouring pads, made of similar material to A/C filters, may also work. NSN 7920-00-045-2940 brings a box of 20 and NSN 5975-00-570-9598 brings 100 tiedown straps.

Change 2408-4 When You Change

BEFORE YOU FIRE ME, DID YOUR UNIT HAVE AN UP-TO-DATE DA FORM 2408-4, WEAPONS RECORD DATA CARD?

IF NOT, THERE COULD BE A FATAL MISTAKE HERE.



It's critical for units that fire mortars, artillery or armor cannon tubes to keep an accurate DA Form 2408-4, *Weapons Record Data Card*, for each weapon. Without an up-to-date card, the weapon could be fired after its cannon tube should have been replaced. That could be a fatal mistake.

But it's also important that those of you responsible for filling out the 2408-4 update your unit identification code (UIC) access list on AEPS when you change units or deploy. Otherwise, you will still be shown as responsible for 2408-4s for a unit you no longer belong to. While trying to track down bad mortar tubes, the Army has discovered that many of the POCs listed for the weapons cards are no longer with the units. That makes locating the bad tubes that much harder.

FOR ADDITIONS OR DELETIONS TO YOUR UNIT'S AEPS UIC ACCESS LIST TO 2408-4s, CONTACT THE FOLLOWING...

Mortars: Joe Schmidt, DSN 786-8783,
(586) 282-8783, joe.schmidt@us.army.mil

Armor: Gordon Bieri, DSN 793-2189,
(309) 782-2189, gordon.bieri@us.army.mil

M109-series artillery: Frank Knight, DSN 793-3469,
(309) 782-3469, frank.knight1@us.army.mil

155mm-series artillery: Marty Nelson, DSN 793-7852,
(309) 782-7852, marty.nelson@us.army.mil

105mm-series artillery: Mario Nieto, DSN 793-8512,
(309) 782-8512, mario.nieto1@us.army.mil

AEPS Access

Unless your unit doesn't have Internet access, you're required to fill out 2408-4s through AEPS: <https://aeps.ria.army.mil/aepspublic.cfm>

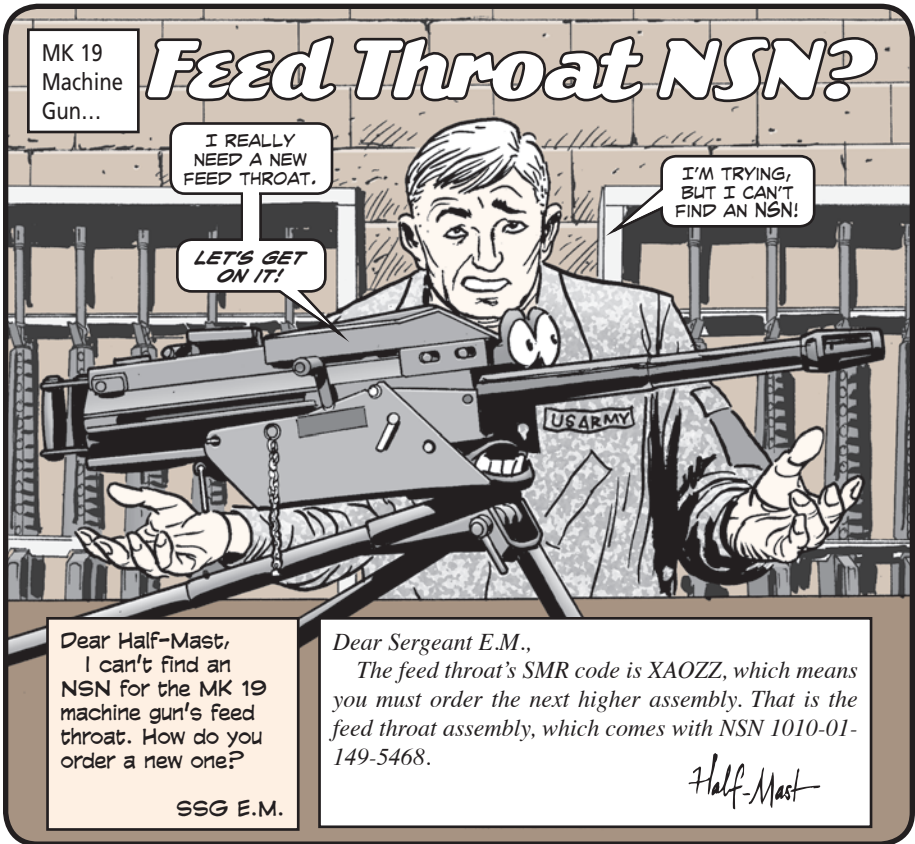
If you are a first-time AEPS user, click [Access Request Form](#) and fill out the form.

Once you have an AEPS ID and password, click [AMC Gun Card](#). You will need to fill out the User Request Form that will pop up automatically. Most of the form will already be filled out from your AEPS registration, but you will need to select the commodities and UICs you want to access. Make sure your supervisor's email is correct or the access request won't reach him.

You should receive an email approving your access within a few days. If you don't, contact the appropriate weapon system administrator listed on the previous page.

If you need more information on filling out the 2408-4, see PS 688 (Mar 10):

<https://www.logsa.army.mil/psmag/archives/PS2010/688/688-02-05.pdf>



MK 19
Machine
Gun...

Feed Throat NSN?

I REALLY
NEED A NEW
FEED THROAT.

LET'S GET
ON IT!

I'M TRYING,
BUT I CAN'T
FIND AN NSN!

Dear Half-Mast,
I can't find an
NSN for the MK 19
machine gun's feed
throat. How do you
order a new one?

SSG E.M.

Dear Sergeant E.M.,
The feed throat's SMR code is XAOZZ, which means
you must order the next higher assembly. That is the
feed throat assembly, which comes with NSN 1010-01-
149-5468.

Half-Mast

AEPS Access

Unless your unit doesn't have Internet access, you're required to fill out 2408-4s through AEPS: <https://aeps.ria.army.mil/aepspublic.cfm>

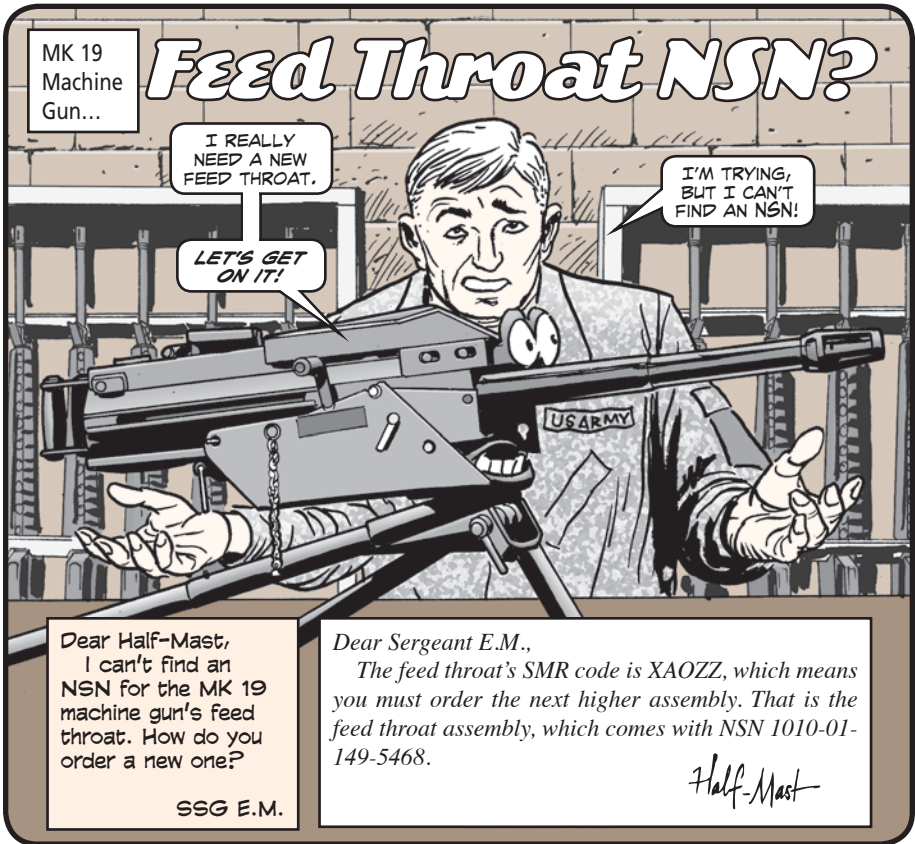
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MK 19
Machine
Gun...

Feed Throat NSN?

I REALLY
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LET'S GET
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I'M TRYING,
BUT I CAN'T
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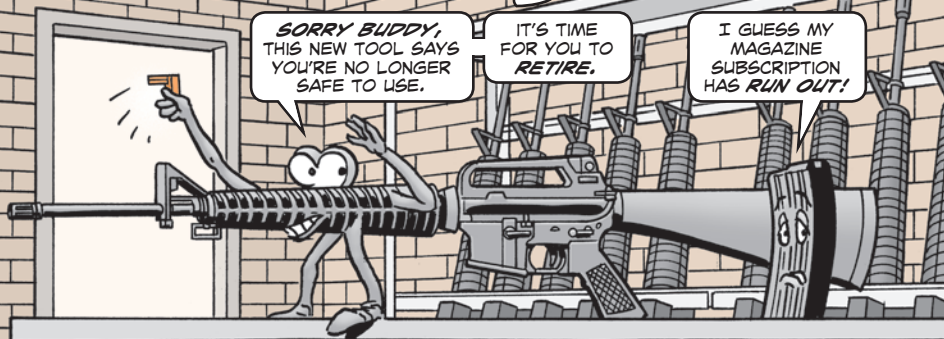
Dear Half-Mast,
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NSN for the MK 19
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throat. How do you
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SSG E.M.

Dear Sergeant E.M.,
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you must order the next higher assembly. That is the
feed throat assembly, which comes with NSN 1010-01-
149-5468.

Half-Mast

Tool IDs Bad Magazines



The last thing you need in the heat of battle is for a magazine in your M16 rifle or M4/M4A1 carbine to jam. That puts **you** in the worst possible jam.

The Army is fielding a tool that will help identify magazines that need replacing. Order the new tool with NSN 5120-01-574-0036. The tool is not a gage, so you don't need to worry about having it calibrated. But when the black oxide coating wears off the bearing surfaces of the tool, get it replaced.



- Depress the follower with your index finger.
- Grip the base of the magazine tool with your other hand.
- Slide the curved channel of the magazine tool along the bolt catch cutout area of the magazine housing.
- Apply slight pressure to slide the tool through the feed lips. If the GO portion passes through the feed lips freely and the NO GO portion does not pass through the feed lips, the magazine is good to go.

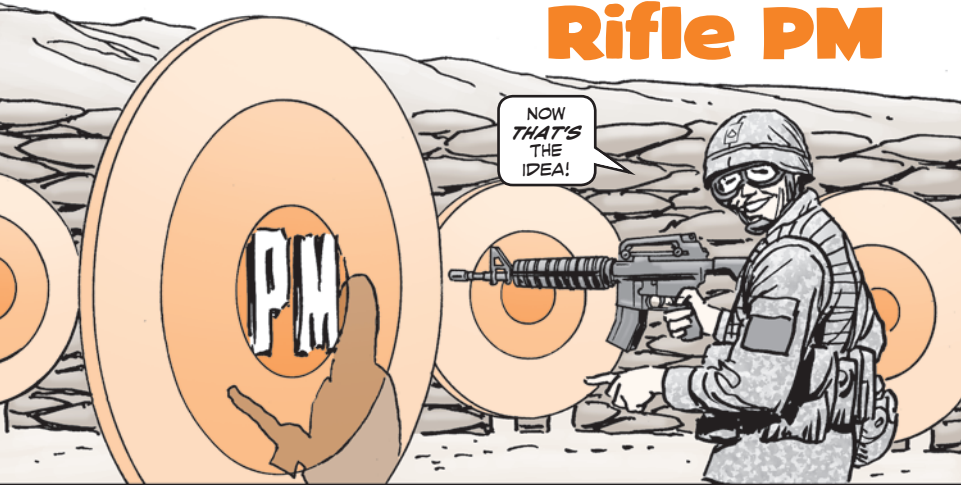
But if the GO portion won't pass through because the feed lips are crushed or bent inward or the NO GO portion does pass through because the feed lips are separated, the magazine is a no-go. **Don't** try to fix it by bending the feed lips. Get a new magazine, NSN 1005-01-561-7200, from your armorer.

Depress follower with index finger. Grip tool base with other hand



M16-Series Rifle,
M4/M4A1 Carbine...

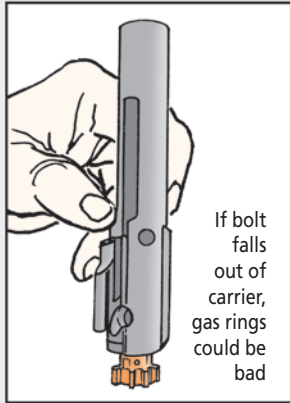
Target This Rifle PM



Your M16-series rifle or M4/M4A1 carbine will stay on target if you target this PM:

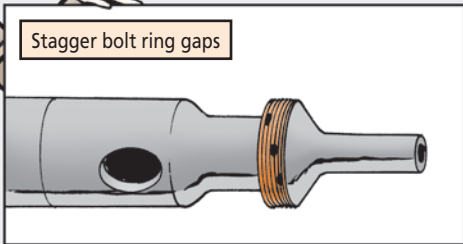
A good test of the bolt's gas rings is to turn the bolt carrier upside down. If the bolt slides out of the carrier, the gas rings may need to be replaced. If it doesn't, the gas rings are still good.

But some units are testing the gas rings by setting the bolt carrier down bolt first on a table with the bolt extended. If the carrier slides down on the bolt, they think the gas rings are bad. That may not be true. The carrier's weight can cause the carrier to slide down, even if the gas rings are good.

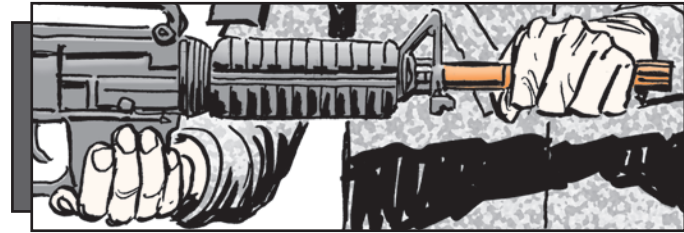


REMEMBER THAT THE GAS RING GAPS **MUST** BE STAGGERED!

IF THE GAPS LINE UP, TOO MUCH GAS ESCAPES AND YOU'LL GET POOR RECOIL.



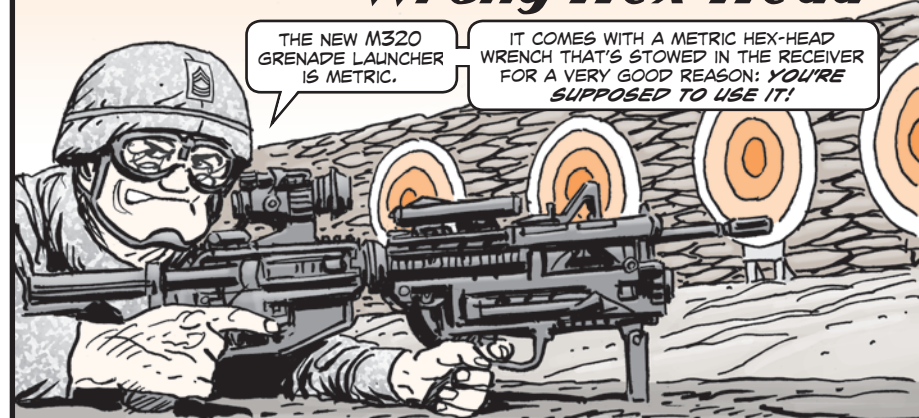
It's also a good idea to check for a loose barrel, especially with the M4/M4A1. It's easy to check to see if your barrel is loose. Hold the receiver firmly with one hand and try to twist the barrel back and forth with the other. If there's any movement, tell your maintenance personnel. Your rifle won't be accurate.



Try to turn barrel to check for looseness

M320
Grenade
Launcher...

Don't Hex M320 with Wrong Hex Head

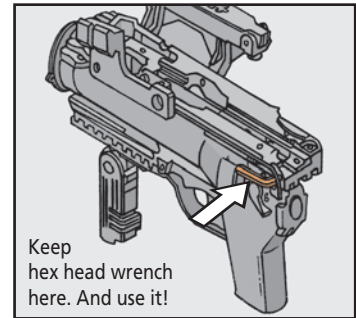


The wrench is used by the operator and maintainer to install or remove the mounting adaptors, the day/night sight mount, the forward pistol grip and the leaf sight.

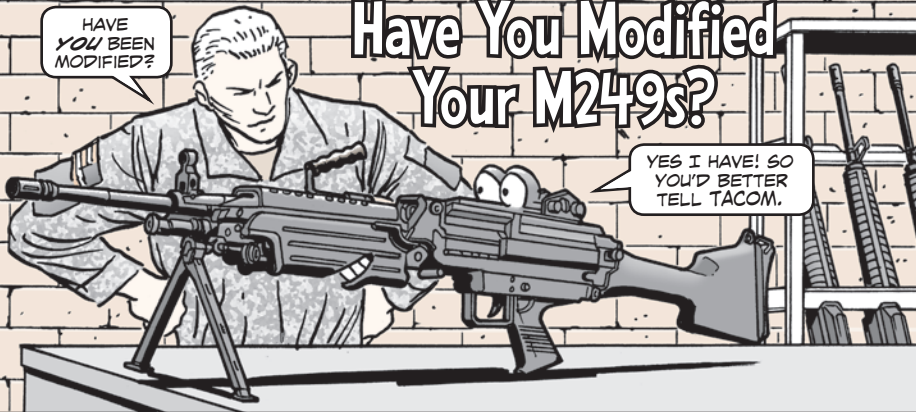
If you use a multi-purpose tool or a standard hex-head wrench, you will strip out the socket head screws for these parts. Support has to replace them.

If you lose the hex-head wrench, order a new one with NSN 5120-12-354-1599.

Learn all there is to know about the M320 and M320A1 by reading TM 9-1010-232-23&P.



Have You Modified Your M249s?

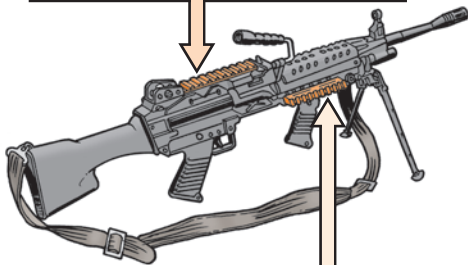


All M249 machine guns should have been modified by now with MWOs 9-1005-201-50-1 and 9-1005-201-30-6.

MWO 9-1005-201-50-1 added an accessory mounting rail to the feed tray cover. That enabled Soldiers to mount the AN/PEQ-2A and AN/PAQ-4B/C laser pointer/illuminators, AN/PAS-13 thermal weapon sight, AN/PVS-4 night vision sight, M145 machine gun optic, and combat identification system for dismounted Soldiers (CISDS).

MWO 9-1005-201-30-6 replaced the hand guard with a forward rail assembly, which provides a second rail for mounting optical and electronic devices.

Feed tray assembly MWO 9-1005-201-50-1



Forward rail assembly MWO 9-1005-201-30-6

These MWOs have passed their completion date, so there is no longer MWO funding or assets for them. If your M249s haven't been modified, you will need to order the MWO parts through normal supply channels. The top cover is NSN 1005-01-547-2614. For the forward rails, order right accessory rail, NSN 1005-01-559-1947; left accessory rail, NSN 1005-01-559-1948; and socket head cap screw, NSN 5305-01-101-9426.

Armorsers, if any of your M249s have received these modifications, TACOM wants to know about it so they can update the serial numbers in the MMIS tracking system. Call DSN 793-1348/6539/7458 or (309) 782-1348/6539/7458. Or email:

john.delmonico@us.army.mil

or

gary.p.nellis@us.army.mil

or

andre.pilgrim@us.army.mil

If your M249s have been modified, make sure their serial numbers have been reported through your local PBO/MWO coordinator, too.



Dear Editor,

Here at the small arms support shop at Ft Hood, we continually run into armorers who don't have the two required standard barrels for their M249 machine guns.

When their M249s go through SARET repair, the standard long barrel is sometimes replaced with a short barrel. Or armorers order a short barrel and turn in a long barrel.

As you pointed out in PS 689 (Apr 10), the two standard barrels are B11 (basic issue items), which means they must be kept at all times. The short barrel, on the other hand, is AAL (additional authorization list), which means it's authorized but optional. You don't have to have it.

But what PS 689 didn't point out is that the standard barrels have a controlled inventory item code of 4, so the barrels do have security requirements. If a standard barrel is missing, AR 190-11, *Physical Security of Arms, Ammunition, and Explosives*, states the commander can initiate an investigation.

No armorer needs that grief. So never ever be without both M249 standard barrels, regardless of how many short barrels you have. Order a new long barrel through your support, if necessary.

CW4 Jeffrey Fullam
602nd Maintenance Co
Ft Hood, TX

Editor's note: You've done an excellent job giving armorers the long and short of it, Chief. Thanks.

Single or Double Strands OK

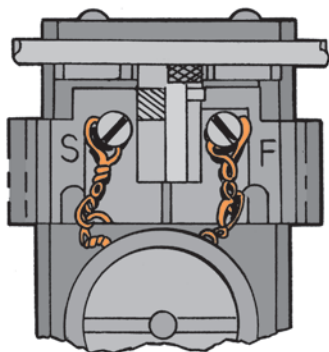
Dear Half-Mast,

We have seen new M2 machine guns, and ones that have had MWO 9-1005-213-30-1 applied, that have back plate shoulder screws safety-wired two different ways. In some cases, the screws that secure the trigger block and flat spring to the receiver are safety-wired with a single strand of wire, and in other cases with a double twist of wire. Are both methods OK? WP 0020 00-4 in TM 9-1005-213-23&P shows only the double-twist method.

SSG M.S.

Dear Staff Sergeant M.S.,

Both methods of safety-wiring the shoulder screws are fine. But it's important the screws are safety-wired. Otherwise, vibration during firing works them loose.



Single strand or double-twist safety wire OK

Half-Mast

A GOOD ANNUAL PHYSICAL

Dear Editor,

TM 9-1005-317-23&P doesn't really have an annual support-level inspection for the M9 pistol similar to that required for machine guns and the M16 rifle/M4 carbine.

Here at the Ft Carson DOL, we've created our own inspection that we do for any pistol that is being prepared for deployment or is going through Reset.

First we do the PMCS in WP 0006, then the function safety check in WP 0011, and finally the inspection spelled out in WP 0017. The last inspection is especially critical because it includes the trigger pull test.

I think it would benefit all armorers to have their support do at least these checks on their M9s annually.

Albert Sweet
DOL
Ft Carson, CO

Editor's note: An excellent annual physical for M9s! Thanks for the prescription, Albert.


PM FOR EASY COMPANY



THE TIME IS 1944. THE PLACE IS THE ARDENNES FOREST. THE MEN OF *EASY COMPANY* FIND THEMSELVES SOME QUIET... MAYBE A TIME TO REST.



LISTEN UP, EASY. SOME OF YOU AREN'T PAYIN' ATTENTION TO PREVENTIVE MAINTENANCE ON YOUR GEAR.



NEGLECTING *LITTLE* THINGS HAVE A WAY OF BITIN' YOU *BIG* TIME... WHEN YOU LEAST EXPECT IT!

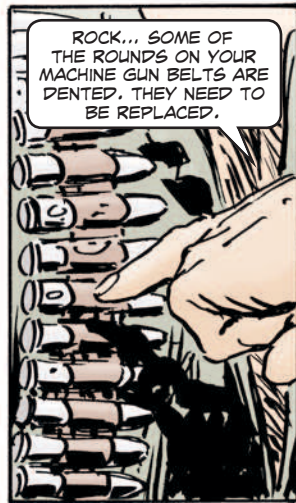




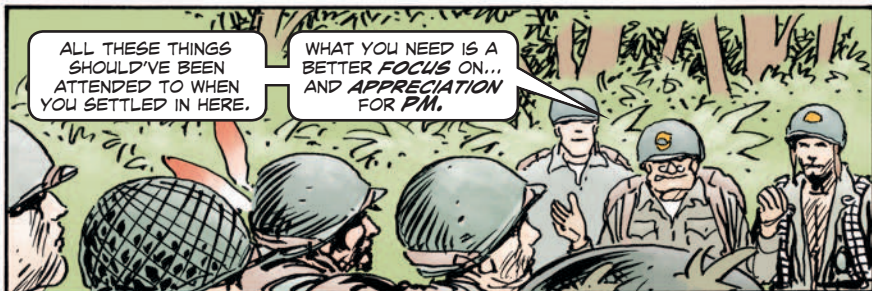
A BENT RADIO ANTENNA CAN INTERRUPT SENDING OR RECEIVING IMPORTANT INFO.



YOUR BAR HASN'T BEEN CLEANED OR LUBED IN A WHILE. AND YOU THINK IT'LL FIRE?



ROCK... SOME OF THE ROUNDS ON YOUR MACHINE GUN BELTS ARE DENTED. THEY NEED TO BE REPLACED.



ALL THESE THINGS SHOULD'VE BEEN ATTENDED TO WHEN YOU SETTLED IN HERE.

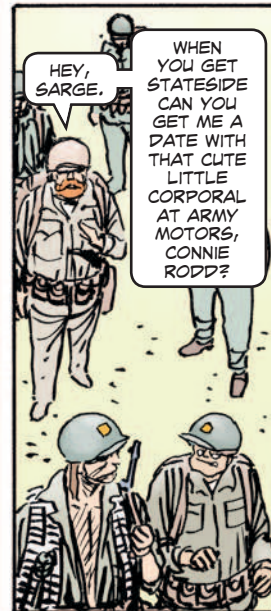
WHAT YOU NEED IS A BETTER FOCUS ON... AND APPRECIATION FOR PM.



ASK YOURSELF THIS QUESTION: WOULD YOU STAKE YOUR LIFE... RIGHT NOW... ON THE CONDITION OF YOUR EQUIPMENT?



THANKS, HALF-MAST... FOR TALKIN' TO MY GUYS... AN' SAVIN' THEM FROM THE POSSIBILITY OF A LOT OF PAIN!



HEY, SARGE.

WHEN YOU GET STATESIDE CAN YOU GET ME A DATE WITH THAT CUTE LITTLE CORPORAL AT ARMY MOTORS, CONNIE RODD?



IN YOUR DREAMS, SOLDIER.

CONNIE'S GOT A MIND OF HER OWN!



PM'S NEVER AN EASY SELL, ROCK, BUT THAT'S MY MISSION!

YOU KNOW WHAT I ALWAYS SAY, HALF-MAST... NOTHING'S EVER EASY IN EASY.



WHERE ARE YOU HEADIN' FOR NOW?

PLENTY OF OTHER G.I.'S I GOTTA TALK TO...AND MAKE SURE THEY'RE DOING GOOD MAINTENANCE.



A LOT DEPENDS ON THEM GETTING THE WORD...SO THEY CAN MAKE IT HOME.



EDITOR'S NOTE:

SERGEANT HALF-MAST MCCANICK AND CORPORAL CONNIE RODD FIRST APPEARED IN THE PAGES OF ARMY MOTORS IN 1942. HALF-MAST WAS LATER PROMOTED TO THE RANK OF MASTER SERGEANT, AND CONNIE RODD LEFT ACTIVE DUTY TO BECOME A CIVILIAN INSTRUCTOR FOR PS MAGAZINE.



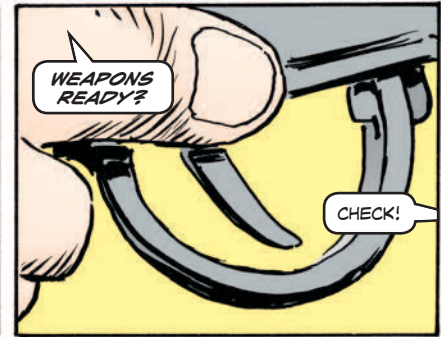
THE NEXT DAY WAS LIKE EVERY OTHER DAY FOR SGT. ROCK AND EASY COMPANY...

LOCK AND LOAD, EASY.



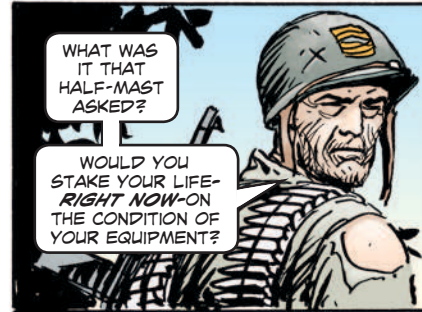
MAGAZINES LOCKED?

CHECK!



WEAPONS READY?

CHECK!

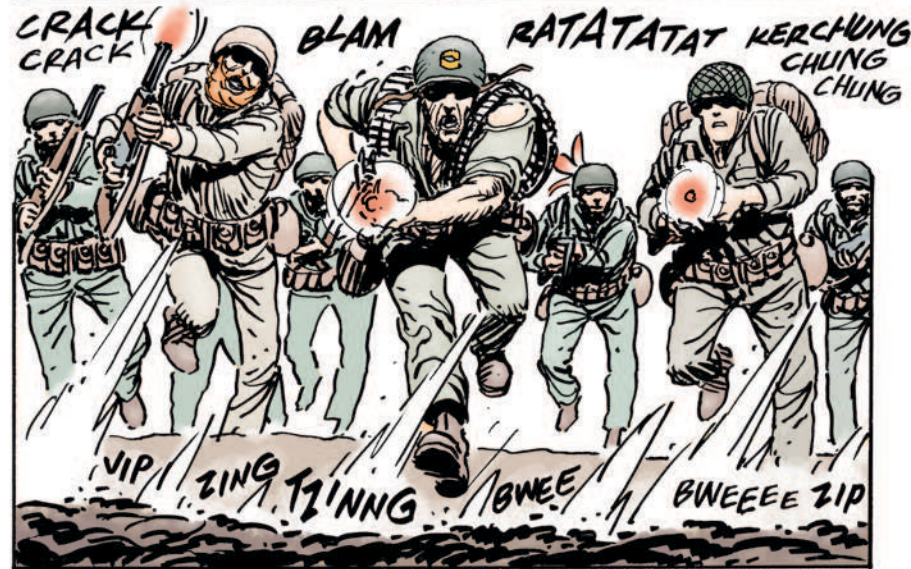


WHAT WAS IT THAT HALF-MAST ASKED?

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



HERE'S WHERE WE FIND OUT!



CRACK CRACK

BLAM

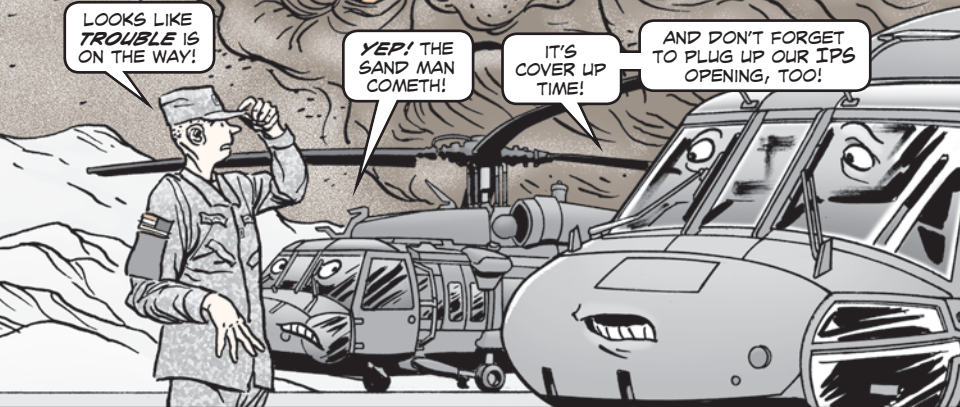
RATATATAT KERCHUNG CHUNG CHUNG

VIP ZING ZING BWE BWE BWE ZIP



SGT. ROCK AND EASY COMPANY CHARACTERS AND RELATED ELEMENTS ARE ™ AND © DC COMICS. USED WITH PERMISSION.

KEEP THE SAND OUT



Mechanics, stopping sand from blowing into your Black Hawk's No. 1 inlet particle separator (IPS) prevents extra maintenance.

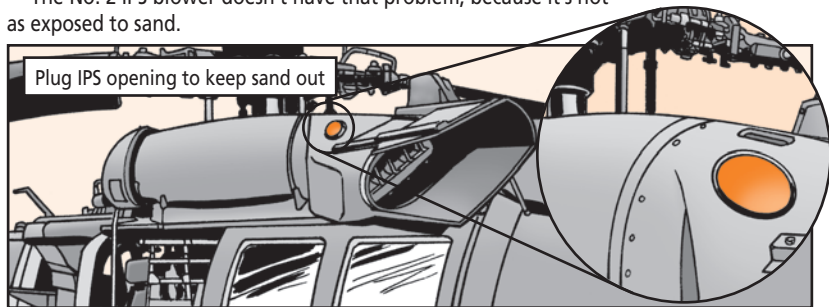
The problem with the No.1 IPS blower is that it sits in a place on the Black Hawk that allows sand to get in easily.

Fine sand getting into the No. 1 IPS blower can wear out the Axis-G seal on the accessory gearbox of the engine. If that happens and the seal goes bad, oil will blow out through the IPS duct blower.

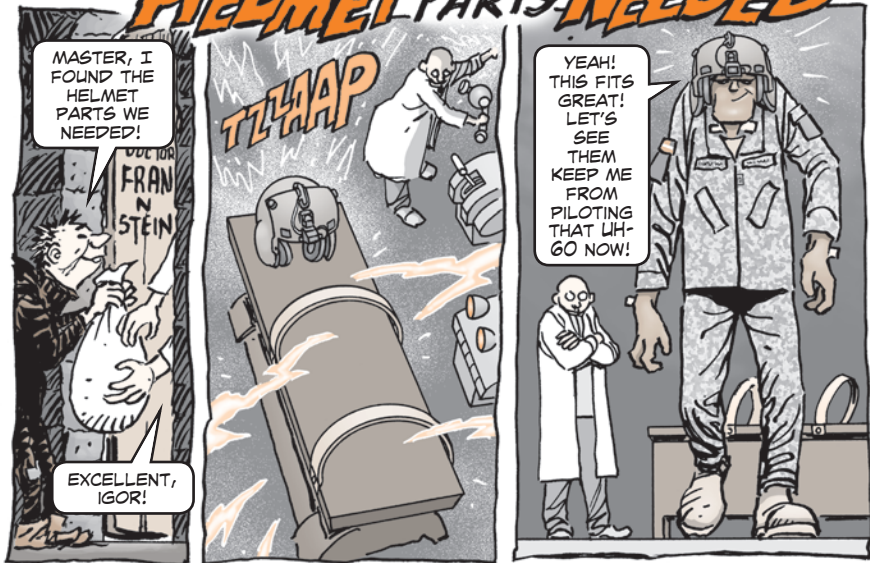
Keeping the No. 1 IPS blower covered in a sandy environment protects the seal from sand and prevents oil gear box leakage.

To keep sand out of the IPS duct, cut a piece of unserviceable inlet plug the size of the hole and place it into the duct with a REMOVE BEFORE FLIGHT streamer attached.

The No. 2 IPS blower doesn't have that problem, because it's not as exposed to sand.



HELMET PARTS NEEDED



Dear Sergeant Blade,

In the sand box, we are short on parts to fix our aircrew integrated helmet system (AIHS). Is there anything official that says we cannot take parts off one helmet and put them on another helmet to make it serviceable?

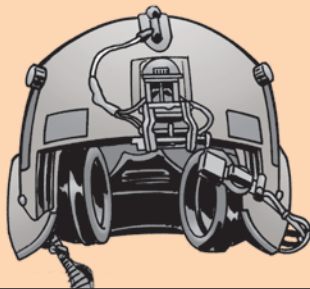
SSG W.M.

Dear Sergeant W. M.,

The short answer to your question is no. You can take parts off one helmet to fix another when operational readiness is affected and parts are not immediately available through the supply system. Follow the guidelines in Section X, paragraph 10-2, of TM 1-1500-328-23, Aeronautical Equipment Maintenance Management Policies and Procedures.

Just make sure the proper paperwork and tags are in place on older helmets and all parts are on order for any cannibalized helmet.

"Rotor" Blade



You can take parts off one helmet to fix another for readiness



Dear Sergeant Blade,

For some time now the communication earplug (CEP), NSN 5965-01-504-0077, on our HGU-56/P, aircrew integrated helmet system (AIHS) keeps cutting in and out. After trying a number of CEPs, we still have the same problem. Do you know what's going on?

CW3 J.L.

Dear Chief J.L.,

As a matter of fact, I do. In an effort to reduce ALSE workload and eliminate some difficult solder joints, PM Air Warrior requested the manufacturer integrate the CEP helmet wiring harness into the HGU-56/P. However, the initial design had a flaw which resulted in helmet wiring harness failures.

The problem has been identified and a fix is in the works. That's the good news. The bad news is that there are still a lot of bad integrated communication cords in the supply system. The NSN for a new harness is NSN 5995-01-519-9234.

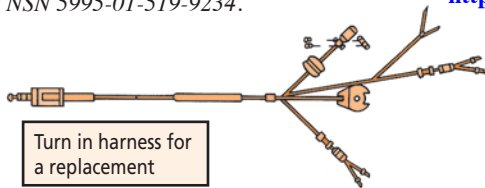
If you have a helmet that has a bad factory-installed harness, the manufacturers will honor their warranty and replace one bad harness with a new updated harness. Send to:

Gentex Corporation
 Attn: Carlo Pisa
 324 Main Street
 Carbondale, PA 18407

Make sure you mark the package with "customer return number 18407." Delivery time of the harness is based on availability.

For additional information, go to their website:

<http://www.gentexcorp.com>



Turn in harness for a replacement

"Rotor" Blade



...PROTECT THE OIL NOZZLE!

Mechanics, the Axis A oil nozzle on the UH-60 and the AH-64 engines requires special attention.

Keep an eye on the Axis A oil nozzle when hand cranking the engine to identify symptoms and corrective actions during troubleshooting or when replacing the engine starter.

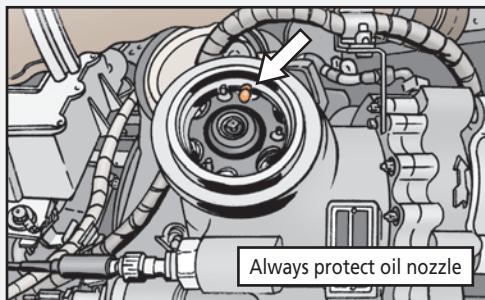
Use extreme caution when removing and installing the Axis A cover assembly to avoid contact and damage to the Axis A oil nozzle. Remove the engine coupling retaining bolt and hold the radial drive shaft assembly using a ratchet with a $\frac{1}{4}$ -in drive adapter and a $\frac{5}{16}$ -in socket to prevent turning when removing the bolt.

As you place the $\frac{1}{4}$ -in drive adapter on the radial drive shaft to keep it from turning, make sure that it does not hit the oil nozzle or rest against it. The removal, replacement and installation instructions are in WP 0695 of TM 1-1520-237-23.

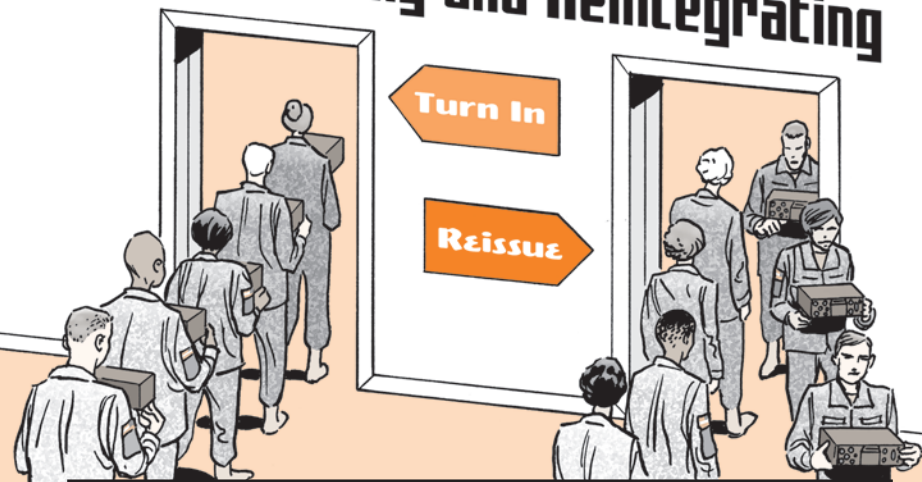
The nozzle has a very tiny hole to spray oil through. The slightest damage to the oil nozzle means it won't be able to provide oil to the radial drive shaft and the Axis A bearing in the gearbox.

Then the engine oil pressure drops, starving the radial drive shaft and the bearing assembly of oil. You could end up replacing a burned-out gearbox caused by a lack of oil.

Steer clear of the Axis A oil nozzle when replacing the engine starter and you'll avoid major engine repair. Also, to prevent oil loss and possible in-flight shutdown, make sure the Axis A cover assembly is reinstalled correctly. Check out the instructions in WP 0398 of TM 1-2840-248-23&P.



Keeping Records Right While Resetting and Reintegrating



Dear Editor,

I take in SINGGARS systems for theater-provided equipment (TPE) Reset and reintegration. Commanders need to know that when they turn in SINGGARS TPE, that equipment is no longer theirs. It will be reissued to other units. PBOs must drop that equipment off their unit's property books.

Make sure the correct serial numbers are used.

Commanders also need to understand that their unit's organic equipment—not theater provided—should not be turned in to TPE RESET.

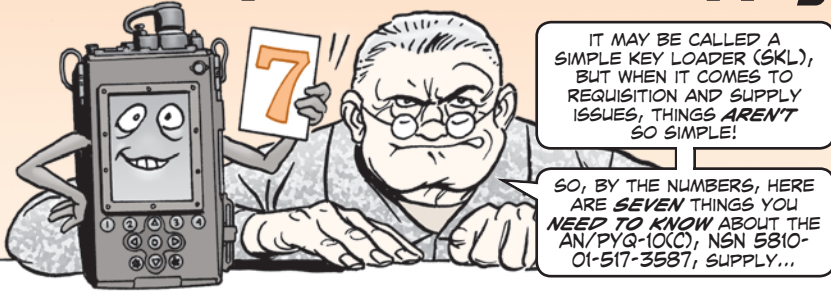
Finally, we are finding SINGGARS equipment with the wrong data plates. We have found wrong data plates on all models, but it is especially a problem with the older, wide-body models.

If you think you have a SINGGARS piece of equipment with the wrong serial number or labeled incorrectly, contact your CECOM IT Radio LAR. The LAR will help you identify your system and make sure you're following the correct Reset procedures.

Randy L. Cline
CEER-T-TPE
Ft Hood, TX

Editor's note: Equipment from overseas is streaming back. All of it will need to be Reset and much of it will be reissued or stored. Keeping good accountability will be hard, but it's a must. It is also everyone's responsibility. We cannot afford a "pass it off and forget about it" mentality. Don't make it the next Soldier's problem. Commanders and top NCOs, make sure all your property is accounted for and that it is listed under the right serial numbers.

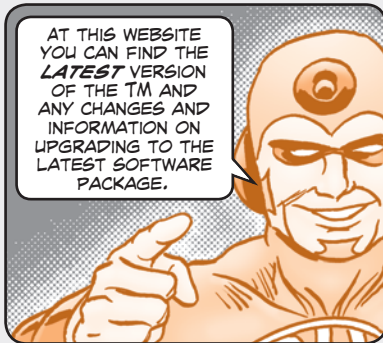
SKL Requisition and Supply



1. You need to know that the TM for the SKL is TM 11-5810-410-13&P. You can find it on EM 0164 and at the LOGSA ETM website: <https://www.logsa.army.mil/etms/online.cfm>



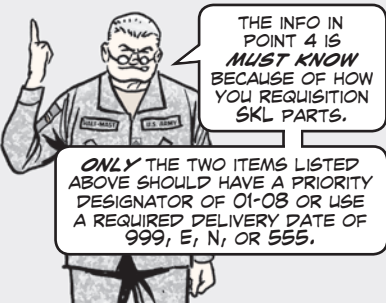
2. You need to know that the SKL has its own website: https://rdit.apg.army.mil/akms_gsc/menu.cfm



3. You need to know that there is a toll-free number, 1-866-651-1199, to an SKL help desk and also an email address: acescst3helpdesk@css-inc.biz

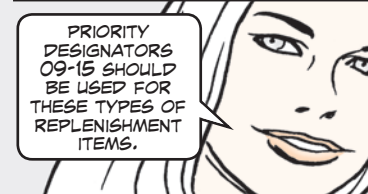


4. You need to know that only these two items can cause the SKL to be considered not-fully mission capable: the battery charger kit, NSN 6130-01-548-1505, which is composed of the charger, NSN 6130-01-525-1640; the AC power cord, NSN 6150-01-551-3064; and the AC/DC adapter, NSN 6130-01-551-3902; and the USB female to male adapter, NSN 5995-01-545-0167.



5. You need to know that the absence of the following items **does not** make your SKL non-mission capable...

Item	NSN
Battery power source	6130-01-525-2788
Battery power source	6130-01-525-1635
Battery power supply	6130-01-525-1617
Power supply adapter	6130-01-525-2021
Computer case	7045-01-525-2029
Gasket	5330-01-525-2011
O-ring	5331-01-525-2035
O-ring	5331-01-525-2064
O-ring	5331-01-545-0210
Retaining ring	5325-01-524-9457
Retaining ring instrument	5365-01-524-9820
Security module	5810-01-529-8767
Dust cap	5340-01-524-9816
Dust cap	5340-01-524-9480
Hardware kit	5340-01-539-3970
Inductive stylus	7520-01-524-9762
Stylus holder	5895-01-525-0352



6. You need to know that regular automated supply channels won't do the job with a controlled asset like the COMSEC SKL. You must submit a requisition through the Information Systems Security Program (ISSP): <https://issp.army.mil>

To help you through the submission process, you can call or email the ISSP help desk at DSN 879-1829, (520)538-1829, or: csia.issp@us.army.mil

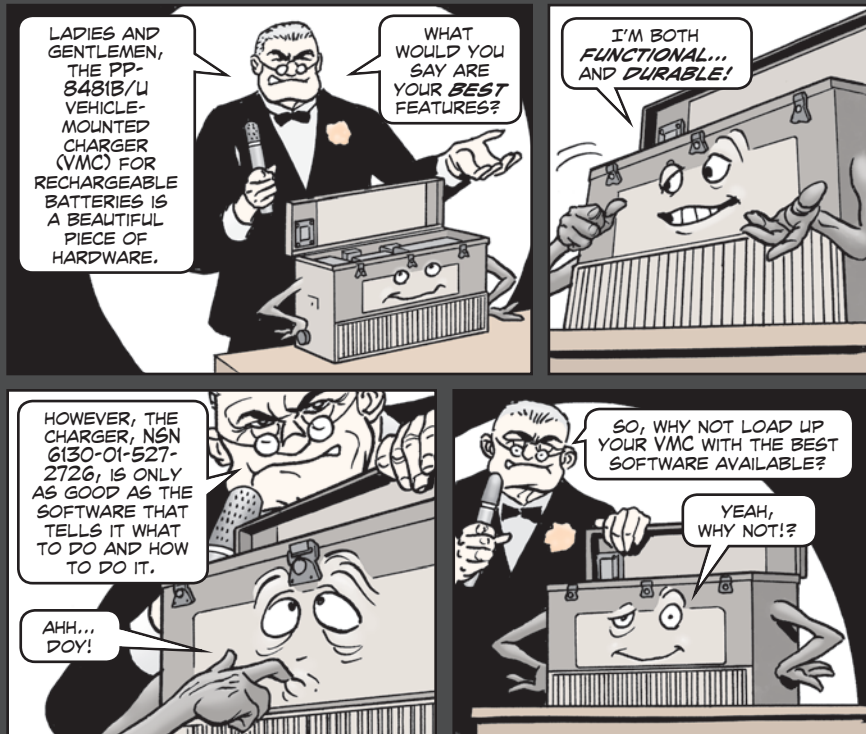


7. You need to know these three important POCs: For parts requisitions, contact Roland Barnes or Natasha Henderson, DSN 458-4473/4471, (410) 306-4473/4471, email: roland.barnes@us.army.mil natasha.henderson1@us.army.mil

For the SKL end item, AN/PYQ-10(c) contact John Bath, DSN 458-4580, (410) 306-4580, email: john.bath@us.army.mil



IT DON'T WORK WITHOUT THE SOFTWARE!



The latest and greatest software is Program C. Program C has all the enhancements of the previous programs, plus an enhanced capability to charge the AN/PRC-153 and Li-ion batteries.

To download the new software, you'll need USB-to-serial cable, NSN 6150-01-558-7214. Then go to the website:

<https://lrc3.monmouth.army.mil/cecomlrc/index.cfm?page=training>

Under Customer Services, click on Battery Support.

Once at the website, go to the Charger Software upgrades page and follow the instructions.

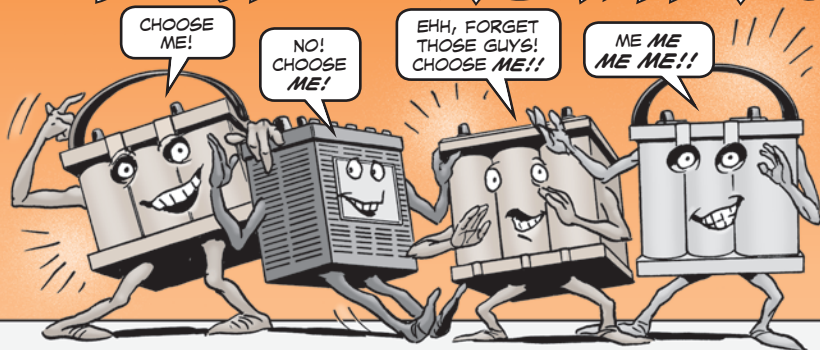
It might serve you well to stop by the charger tutorial page and go through the training if it has been awhile since you've used it. You'll also find a list of the batteries that can be recharged by this charger and the adapters you need for each type of battery.

If you have any hardware or software questions about battery chargers or rechargeable batteries, the expert in the field is Don Brockel at DSN 992-4948, (732) 532-4948, or email:

donald.brockel@us.army.mil

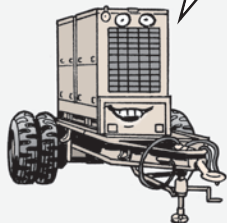
5-, 10-, 15-, 30-, 60-kW TQG...

CHOOSE YOUR BATTERY!



GENERATOR TECHNICIANS AND MAINTAINERS, THERE ARE SOME BATTERY CHOICES FOR THE 5-, 10-, 15-, 30-, AND 60-KW TACTICAL QUIET GENERATORS (TQG).

HERE ARE THE BATTERIES YOU CAN CHOOSE FROM...



Model Number	Set Size	Battery Type	NSN 6140-
MEP 802; MEP-812	5-kW	2HN wet 2HN dry D51R	01-390-1969 00-057-2553 01-529-7226
MEP-803; MEP-813	10-kW	800/U (Optima)	01-374-2243
MEP-804; MEP-814	15-kW	6TFM wet 6TFM dry w/electrolyte 6TFM dry w/o electrolyte 800/U (Optima)	01-446-9506 01-446-9498 01-469-9184 01-374-2243
MEP-805A; MEP-815A MEP-805B; MEP-815B	30-kW	6TFM wet 6TFM dry w/electrolyte 6TFM dry w/o electrolyte 800/U (Optima)	01-446-9506 01-446-9498 01-469-9184 01-374-2243
MEP-806A; MEP-816A MEP-806B; MEP-816B	60-kW	6TFM wet 6TFM dry w/electrolyte 6TFM dry w/o electrolyte 800/U (Optima)	01-446-9506 01-446-9498 01-469-9184 01-374-2243

If you choose to use the Optima 800/U battery, NSN 6140-01-374-2243, with the 15-, 30- and 60-KW TQGs, you'll need adapter plate, NSN 6160-01-453-0858.

Now that you know the batteries that can be used, know what is recommended and what is ahead. Wet cell batteries for generators are on the way out. The liquid acid in the batteries can make them dangerous to transport and they frequently need water. So, C-E LCMC recommends that whenever possible, use the Optima batteries. If not possible, then use the 2HN or 6TFM batteries. One more note: the AGM battery known as the Hawker, NSN 6140-01-485-1472, is not approved for these generators. The size of the battery makes it difficult to secure in the generator. So, the bottom line—use the Optima!



HERE
ARE SOME
IMPORTANT
COMMO
BRIEFS!

Extension Lights

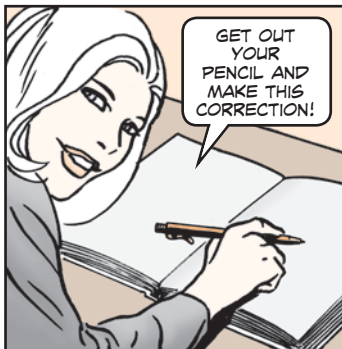
The engine compartment of a combat or tactical vehicle can be dark, making it hard to see what you're doing.

Shed some light on your work with an extension light. Each light uses 18 AWG wiring and comes with a hanging hook and metal guard reflector.

NSN 6230-00-	Length
140-1165	25-ft
146-8898	50-ft
146-8899	100-ft



HERE... LET
ME SHED
SOME LIGHT
ON THAT!



GET OUT
YOUR
PENCIL AND
MAKE THIS
CORRECTION!

Important FDECU TM Correction

TM 9-4120-411-24P, *Field Deployable Environmental Control Unit Models FDECU-2, FDECU-3, and FDECU-4*, NSN 4120-01-449-0459, has an error you need to correct. Item 32 in Fig 1, proximity switch, has the wrong part number. Change part number 59135-010 to part number 57135-000. The right part number leads to an NSN for the proximity switch of NSN 5999-01-052-3527.

Order Battery Charger Offline

Battery charger, NSN 6130-01-252-9724, part of the tactical high speed data network, has the wrong acquisition advice code (AAC) on FED LOG. The code listed is "N", which means your request for the charger will be rejected. So, in order to get the battery charger, call CECOM LCMC Customer Service at DSN 992-9361 or (732) 532-9361. Order it through SOS B16 that way.

THE *ONLY* WAY
TO GET THIS
CHARGER IS WITH
A *PHONE CALL!*



CBRN...

I KNOW I SHOULD HAVE MORE CBRN EQUIPMENT THAN THIS, BUT I'M JUST NOT SURE WHAT I SHOULD HAVE.

NO PROBLEM. I HAVE A LIST FOR YOU!

CBRN

What Every CBRN Room Needs

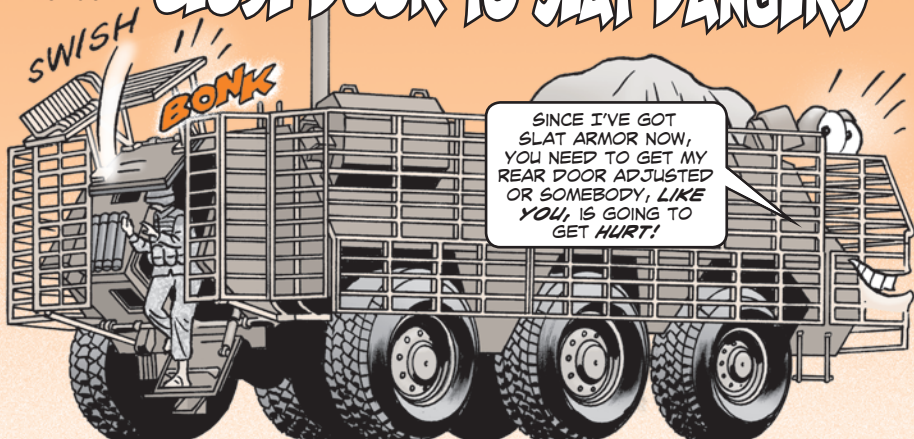
CBRN SPECIALISTS, HERE ARE SOME OF THE CBRN ITEMS THAT ARE OFTEN OVERLOOKED...

- **M295 decon kit**, NSN 8850-01-357-8456, one kit per Soldier. This NSN brings a box with 20 kits.
- **M256A2 detector kit**, NSN 6665-01-563-7473, one kit per squad
- **M8 detector paper**, NSN 6665-00-050-8529, one book per Soldier
- **M9 detector paper**, NSN 6665-01-226-5589, one roll per five Soldiers and one roll per each major piece of equipment
- **C2A1 filters**, NSN 4240-01-361-1319, two per M40/M42/M45 mask and four per M43/M48 mask

- **Chemical protective (CP) helmet covers**, NSN 8415-01-111-9028, two per Soldier
- **CP overshoes**, three pairs per Soldier
- **CP gloves**, three sets per Soldier
- **JSLIST overgarments**, two per Soldier
- **Quick-doff hood**, two per Soldier
- **Mask second skin**, one per Soldier
- **CP undergarments**, five per Soldier

YOUR -10 TMS WILL GIVE YOU A COMPLETE LIST OF WHAT YOU NEED TO KEEP ON-HAND!

CLOSE DOOR TO SLAT DANGERS



When slat armor is installed on the Fox NBCRS vehicle, it makes the rear door a lot heavier. As a result, the upper rear door operates smoothly as it begins to close downward, but then suddenly drops with great force. That can put a serious hurt on someone's head.

The fix is to have your Fox field service rep adjust the gas cylinder that controls the upper rear door to handle the additional weight of the slat armor.

But until that can be done, Fox crew members need to use this procedure to close the upper rear door:

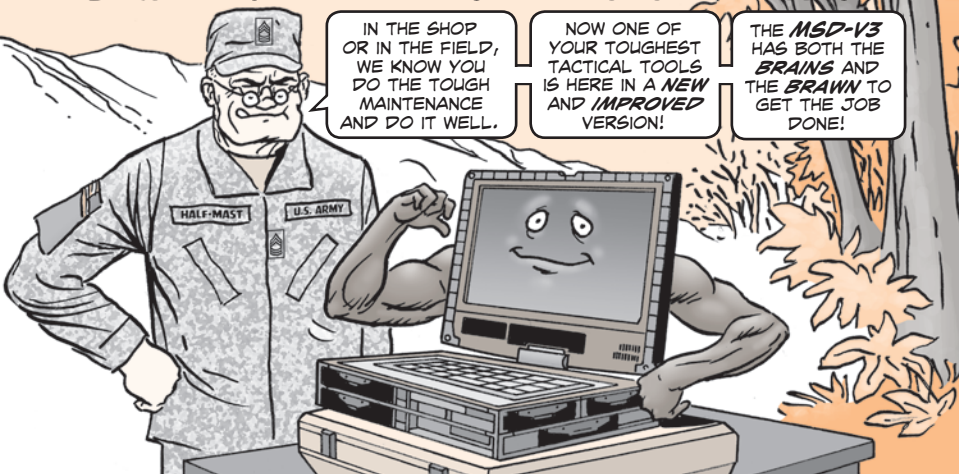
- Use two crew members to close the door. Both should maintain two points of contact and keep upward pressure on the door as they guide it shut. That ensures the door doesn't swing down suddenly. The base of the slat armor grill makes a good hand grip, but remember it might have sharp edges. So be careful and wear gloves.



- The upper door has a hand grip on its interior bottom center that the surveyor inside the NBC suite can use to help close the door.
- Once the door is closed, one crew member should move out of the way so the other can lock the door shut.

If slat armor is removed from the vehicle, the gas cylinder must be readjusted.

MSD-V3 Heads Out to Units

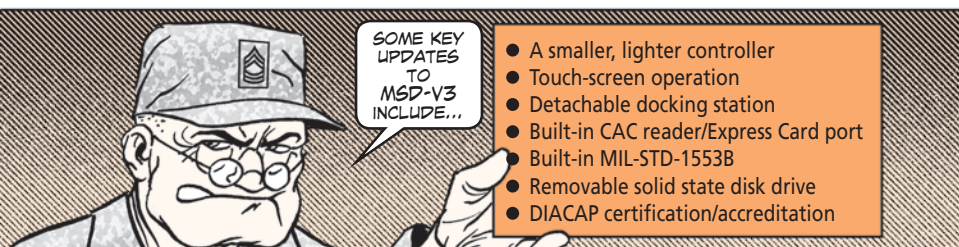


Which test set can support maintenance on more than 50 weapons systems? If you guessed the Maintenance Support Device-Version 3 (MSD-V3), you're right.

Even if you said, "I don't know, but I'll take one anyway!"—well, we've got good news. Fielding of the MSD-V3 will start soon.

MSD-V3 (LIN T92889) is a follow-on to the MSD-V2 as the newest weapon systems tester of choice. It checks the operational status of aviation, automotive, electronic and missile systems, and flags faulty components so they can be repaired or replaced.

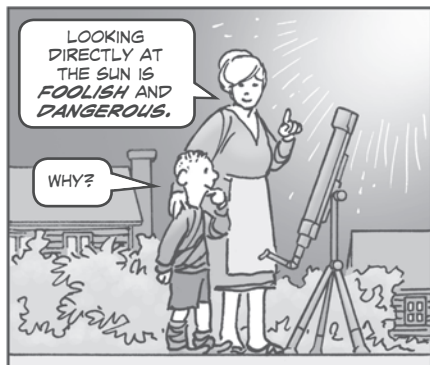
MSD-V3 also hosts interactive electronic technical manuals (IETMs) and Digital Logbook, enables and restores mission software, and supports condition-based maintenance and data collection.



For more information, visit: <http://pmtmde.redstone.army.mil>

Questions or technical issues? Contact the MSD Help Desk at DSN 746-2200, (877) 564-1137, or email: APATS2@conus.army.mil

Safety... Stick with NVGs for Boresighting

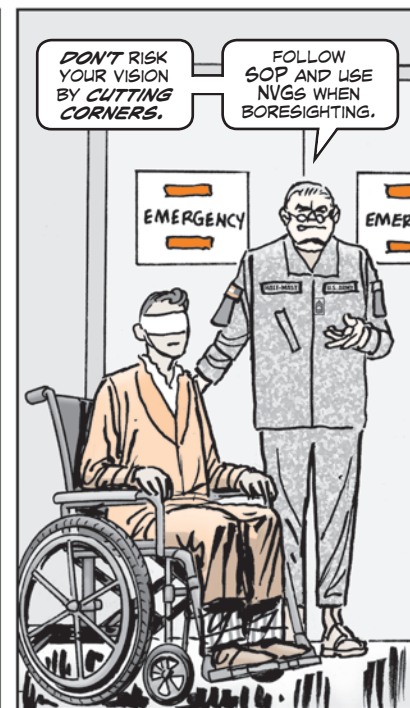


Some Soldiers are using digital cameras or cell phone cameras instead of night vision goggles (NVGs) to boresight their infrared (IR) laser weapon systems. That's **dangerous!**



First, not all digital cameras are sensitive to IR wavelengths, and Army lasers emit a wide range of IR wavelengths. But most Army lasers fall into the highest hazard classifications, Class 3B or Class 4.

Immediate and permanent eye injury can result from direct exposure to a laser beam this strong, or even from a reflection. Low camera sensitivity could prompt a photographer to move closer to a laser beam's POI on the target board, increasing the risk of exposure to the main laser beam or reflections.



Tools...




I'M THE
GRANDDADDY
OF ALL POCKET
TOOLS!

JUST WAIT
'TILL YOU SEE
WHAT I CAN
DO!

Handy-Dandy Pocket Tool

Keeping a multipurpose tool around when doing maintenance really helps.

If you need a stainless steel pocket tool with just a knife and pliers, order one with NSN 5110-01-346-5339, or order the flat black version with NSN 5110-01-346-5341.



IF YOU WANT MORE CHOICES, YOU CAN ORDER THE GRANDDADDY OF ALL-IN-ONE POCKET MULTIPURPOSE TOOLS, NSN 5110-01-451-4945, WHICH INCLUDES THE FOLLOWING...

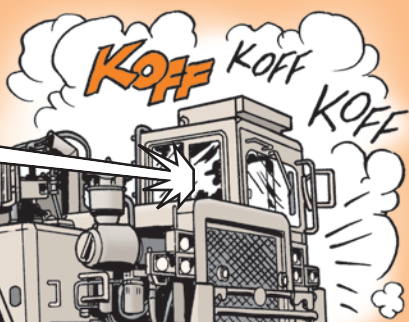
- Scissors
- Large, flat-tip screwdriver
- Medium, flat-tip screwdriver
- Cross-tip screwdriver
- Needlenose pliers
- Serrated-blade knife
- Bottle opener
- Can opener
- Carbide file/sharpener
- Lanyard ring
- Awl

Carry the multipurpose tool in a pocket or, if authorized, wear it on your belt using the black sheath that comes with it. Appendix A of CTA 50-970 is your authority for ordering.

Remember, though, while it may be OK to use a multipurpose tool during maintenance, don't use it for critical repairs. Always use the correct tool to complete a maintenance task like your IETM/manual says.

☹KOFF!☹
AHHHEE-UH... I
NEED... SOME...
ONE... TO...
☹KOFF!☹

...CLEAN...
THE... AIR...
FILTER...
ELEMENT...
☹KOFF!☹



Cab Air Flow

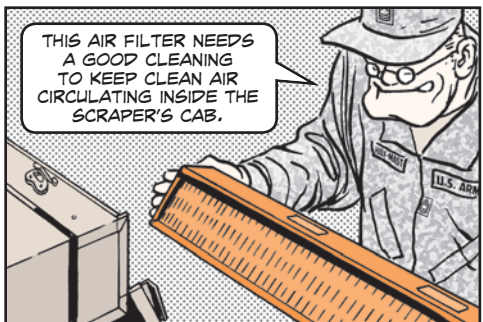
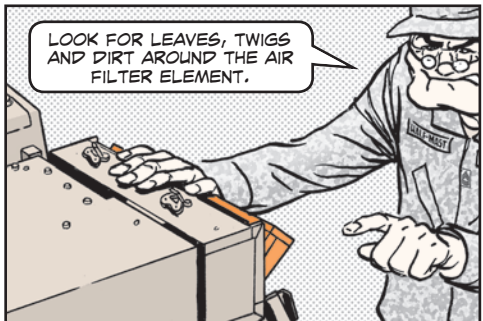
Because filter elements for the Scrapper cab's air system are located on the roof they sometimes don't get regular cleaning.

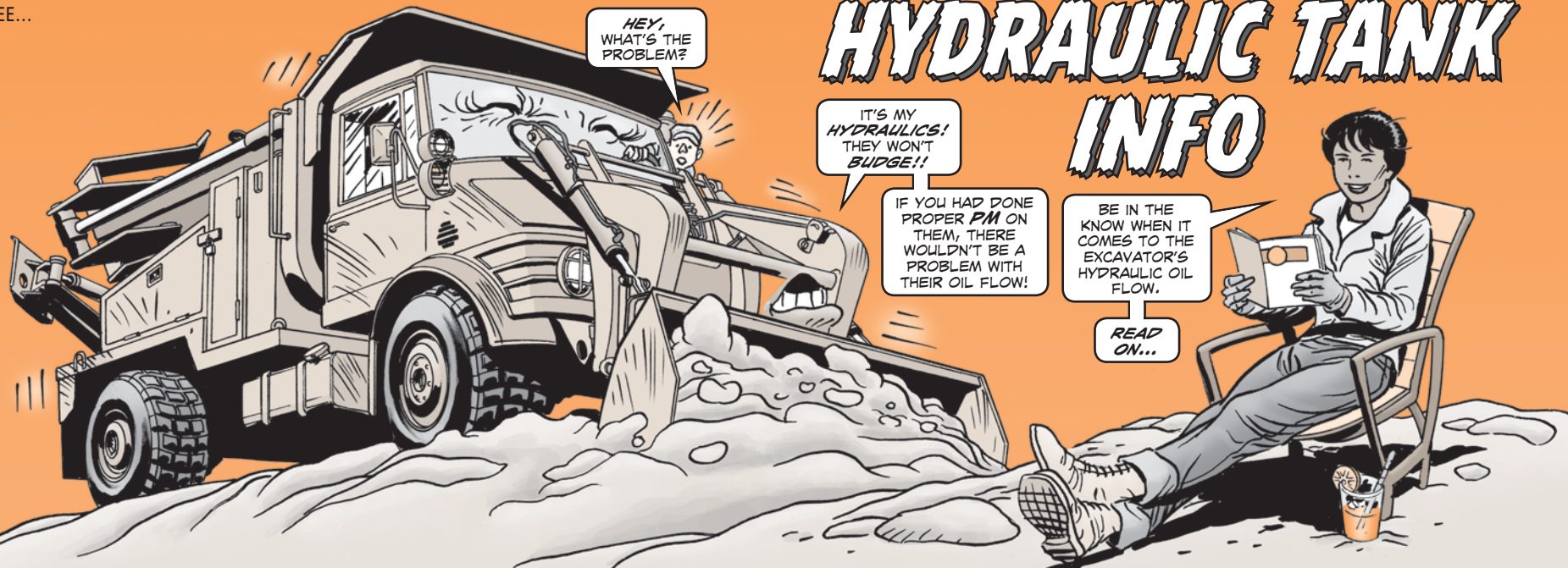
The filtering elements can keep you supplied with clean air, regardless of how dusty work sites can be. But, if you want clean air circulating in your cab, you've got to keep the filter elements clean.

Before you start using low-pressure air (30 psi or less) to clean the elements, make sure that leaves, dirt, ice or snow aren't blocking the air inlets.

To help keep elements clean, start your day's run by removing the elements and tapping them with your hand to loosen and dislodge trapped dirt.

Don't bang elements against the cab or other hard surfaces! That would bend sealing edges or crush its filtering material. Then you'd really be hitting the dusty trail.





HYDRAULIC TANK

INFO

Does It Read Low?

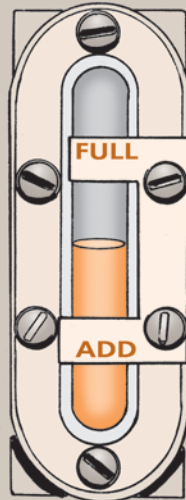
The operator's manual tells you to eyeball the hydraulic oil level before startup. Do that and the oil level can read too low. It'll also read low if the cylinders are extended.

Oil expands as it warms. That means the oil in cylinders won't register on the hydraulic tank's sight indicator gauge. Overfilling the oil tank just builds pressure that blows seals.

Play it safe. Make sure the excavator is in the parked position, with all cylinders retracted. Then, let it warm up a few minutes. The oil level should then be between the ADD and FULL marks.

Shut down the excavator before adding any hydraulic oil.

Fluid level between ADD and FULL?



Sneaky Oil Leak

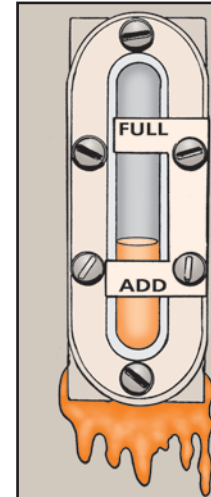
An oil leak from the sight indicator gauge usually means one thing—the gauge's mounting screws were overtightened.

Too much muscle on those screws will crush the rubber gasket behind the sight indicator. Then oil seeps past the gasket and runs down the side of the tank.

Suspect an oil leak? Touch the tank near the bottom of the gauge. If you feel oil it means the gasket is shot.

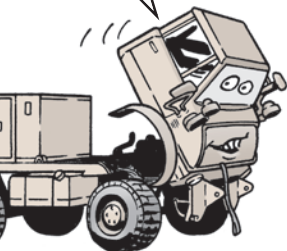
So easy does it. Tighten the screws so they're **only** snug. Replace just the gasket with NSN 5330-01-520-7325, or the complete sight indicator assembly with NSN 6680-01-144-8984. The gasket is part of the sight indicator assemblies shown as Item 22 in Figure 317 and Item 25 in Figure 318 of TM 5-2420-224-24P.

Oil seeping past gasket?



SEE... CAB AND HOOD REMINDERS

HERE'S SOMETHING TO KEEP IN MIND BEFORE YOU TILT MY CAB!

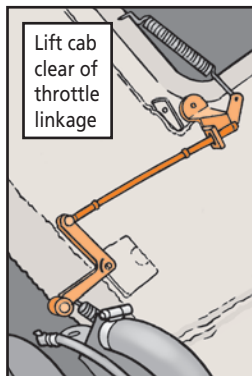


It's real easy to damage the engine's throttle linkage and mounting bracket when you tilt or lower the small emplacement excavator's cab.

Both the linkage and bracket are connected to the driver's side of the cab's engine wall. There's not much room between them and the engine. A damaged throttle linkage means you're stuck with an engine that won't accelerate or decelerate smoothly, if at all.

To protect the linkage and bracket, have a buddy hold the other side of the cab when it's tilted forward or back. That extra help keeps the cab clear of the linkage.

Pages 4-418 through 4-432 of TM 5-2420-224-20 have the complete lowdown on how to raise and lower the cab.

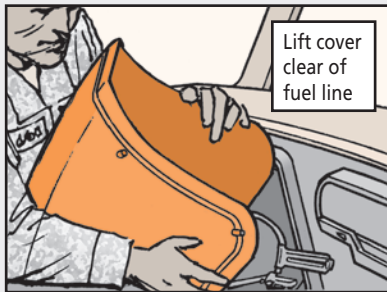


Watch the Fuel Line

The excavator's fuel return line is an open target for bumps and rubs when you remove and replace the engine cover (doghouse) during checks and services.

Over time, enough bumps and rubs wear a hole in the line. You'll know something's up when the engine runs rough, won't run at all, or you smell fuel inside the cab.

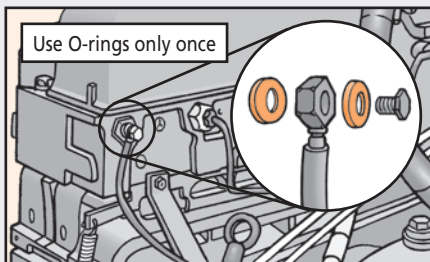
You can head off those problems by lifting the cover clear of the fuel return line when you need to get at the engine.



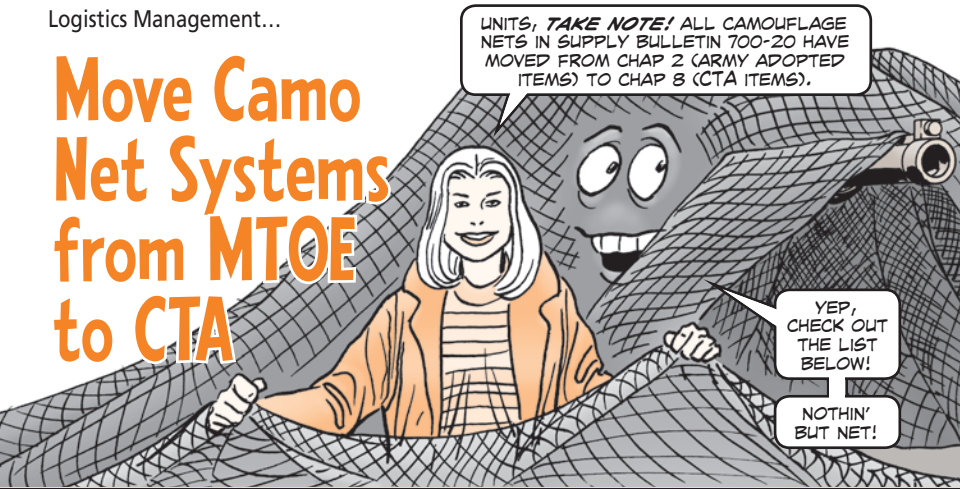
Looking for Leaks

And while you're looking for leaks during PMCS, touch the return line where its multiple-connector mounts into the engine block. If it feels wet, the metal O-rings on each side of the connector are probably shot.

Replace them with NSN 5330-00-140-7701. They're shown as Item 2 in Fig 40 of TM 5-2420-224-24P. For a tight seal, use the O-rings only once.



Move Camo Net Systems from MTOE to CTA



Units, you need to move the camouflage net systems listed in the table below from your Modified Table of Organization and Equipment (MTOE) to the Common Table of Allowances (CTA) 50-909.

Note that this is only a transfer of material from the MTOE to the CTA. When some of you saw these camo nets come off your unit's MTOE, you tried to turn them in! Not so fast. Keep any on-hand net systems unless otherwise instructed by higher HQ.

Note: Only the first two LINs listed are still active. The other LINs are terminal items that are still good, but are no longer stocked or procured. The old nets will keep their LINs/NSNs for property book purposes.

LIN	Nomenclature
C89361	Camouflage net system radar transparent: AN/USQ-160
C89480	Camouflage net system radar scattering: AN/USQ-159
C89145	Camouflage screen system: Woodland lt wt radar scat w/o spt sys
C89179	Camouflage screen system: Woodland lt wt radar tran w/o spt sys
C89070	Camouflage screen support system: Woodland/desert
C89213	Camouflage screen support system: Woodland/desert plastic poles
C89085	Camouflage screen system: Desert lt wt radar scat w/o spt sys
C89115	Camouflage screen system: Desert lt wt radar trans w/o spt sys
C89128	Camouflage screen system: Snow lt wt radar scat w/o spt sys
C89130	Camouflage screen system: Snow lt wt radar trans w/o spt sys
C89064	Camouflage screen support system: Snow

For questions or further assistance, contact HQDA G-4's Tony Rozga at DSN 224-3870, (703) 614-3870, or email: tony.rozga@us.army.mil

PROPERTY BOOK POINTERS FOR IMPROVING UNIT EOH READINESS

PART III

IF YOUR UNIT'S EQUIPMENT READINESS REPORTING RATING IS A LITTLE **LOWER** THAN IT SHOULD BE, YOU MAY BE ABLE TO RESOLVE IT BY TRYING SOME OF THE TIPS IN THIS ARTICLE!

Recent Army studies found that certain line item numbers (LINs) can cause problems on property books and lower unit readiness ratings. In this third *PS* article in a mini-series about problem LINs, we alert property book officers (PBOs) and supply sergeants about vehicle LINs that can potentially drag down equipment-on-hand (EOH) readiness ratings.

In the following chart, these problem LINs are listed along with their nomenclatures and suggested solutions.

Note: Most of the equipment in this series of articles is common to more than one type of Army unit.

LIN	Nomenclature	Issue	Solution
A93374	M1117 armored security vehicle (ASV)	The M1117 ASV (LIN A93374) is being fielded against an MTOE requirement in military police units as a replacement for certain M1114 up-armored HMMWVs (UAHs) (LIN T92446). Many units do not report the ASVs as valid in-lieu-of (ILO) substitutions for the UAHs they replace.	Commander directs PBO to generate a lateral transfer (DA Form 3161) in PBUSE, to sub-LIN A93374 under LIN T92446, and then this item will count as an ILO piece of EOH.
M31793	M2A2 ODS-E: Engineer-Bradley fighting vehicle	The M2A2 ODS-E vehicle is documented as an infantry fighting vehicle on MTOEs.	Commander directs PBO to generate a lateral transfer (DA Form 3161) in PBUSE, to sub-LIN the engineer variant LIN (M31793) under the M2A2 infantry (LIN F40375) variant, if the infantry variant is documented on the unit MTOE.

LIN	Nomenclature	Issue	Solution
T07543	M1037 Shelter carrier	Current MTOEs document the M1037 (LIN T07543) as the required S250 shelter carrier. All M1037s are being recapped to M1097R2s (LIN T07679). Many units fail to account for these shelter carriers as EOH. They are associated support items of equipment and systems/shelters on-hand under a different LIN.	Commander directs PBO to generate a lateral transfer (DA Form 3161) in PBUSE, to sub-LIN T07679, T11588, T37588 and T61630 under LIN T07543.
T61562	M1038 troop cargo carrier	Current MTOEs document the M1038 (LIN T61562) as the required troop/cargo vehicle. All M1038s are being recapped to M1097R2s (LIN T07679). Many units do not account for these vehicles as being on-hand under a different LIN.	Commander directs PBO to generate a lateral transfer (DA Form 3161) in PBUSE, to sub-LIN T07679, T11588, T37588, T56383, T61494 and T61630 under LIN T61562.

If you have questions, contact: Mark Moore, DSN 225-4513, (703) 695-4513, or email: mark.moore@us.army.mil

Computer Screen Wipes

Clean that dirty, fingerprint-smearred computer screen with cleaning wipes, NSN 7045-01-454-1138. That NSN brings a box of 12 pop-up dispensers that hold 50 wipes each.

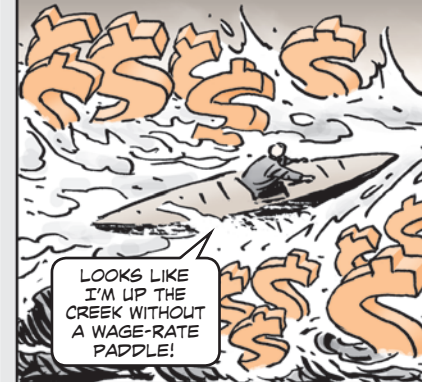
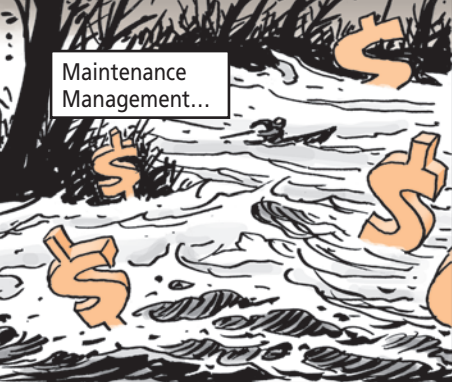
Computer Monitor Anti-Glare Filters

Right around 1400 hrs, the sun peeks in through your office window and makes it impossible to read your computer screen. What you need is an anti-glare filter. Order the size you need:

NSN 7045-01-	Monitor Size (measured diagonally)
450-4407	10- to 13-inch
419-3740	14- to 15-inch
434-0356	16- to 19-inch
491-7229	19- to 21-inch
570-8895	22-inch
570-8897	24-inch



Maintenance Management...



Are You Boxed-in by SAMS-E Wage Blanks?

Dear Half-Mast,
I'm trying to find the financial man-hour wage rates to load into the SAMS-E boxes for our units. Nobody has any idea where to find this information. Can you help?

Mr. J.M.

Dear Mr. J.M.,

As you've discovered, SAMS-E doesn't control or dictate any labor rates you input. SAMS-E isn't supposed to be a financial accounting system, but it does have built-in personnel cost functions for funds management.

Any labor-associated costs in the Army are based on personnel categories—military, civilian, contractor or local national rates.

But these rates can vary widely by location, and even within identical job descriptions when you add in factors like grades/ranks, time in service, or contract costs. This means there are no set rules, and no single source for getting wage-rate data that applies Army-wide.

So, does this mean you're up a creek without a wage-rate paddle? Not at all!

First, talk to your unit's financial division to get some local guidance.

Remember, while military and civilian labor rates are set at a national level, contractor and local national labor rates vary. Your unit's official contracting representative can give you contract-specific labor rates.

There's also an official website to help solve wage-rate puzzles. The Army Military-Civilian Cost System (AMCOS) has average salaries, overhead costs and related data by career fields for military, government, contractor and private sector jobs.

You'll need to register for an AMCOS account the first time, but once it's synched up with your AKO, you're golden. Check it out:

<https://www.osmisweb.army.mil/amcos/app/home.aspx>

AMCOS also covers life cycle cost estimates for weapon systems and other personnel and economic data. The information on this helpful website can help fill the wage-rate gap that exists in today's maintenance systems. AMCOS gives SAMS-E users a baseline, so they can more accurately project labor costs.

Half-Mast

Training...

BREAKING DOWN LANGUAGE BARRIERS



IN SOME SITUATIONS, THERE ISN'T TIME TO CALL IN A TRANSLATOR.

BRUSHING UP ON LANGUAGE SKILLS BEFORE YOU DEPLOY WILL HELP YOU CONFIDENTLY NAVIGATE UNFAMILIAR WATERS.

YOU CAN ALSO MAKE A POSITIVE IMPRESSION IN YOUR HOST COUNTRY.



To help you meet new pre-deployment language training requirements, the Army's Rosetta Stone® program has added six more languages to its offerings. The latest additions are Dari, Pashto, Iraqi Arabic, Urdu, Swahili and Indonesian.

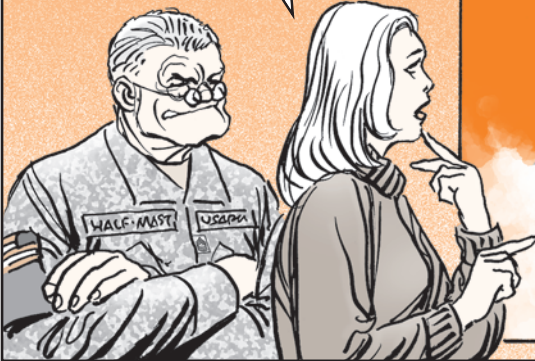
These courses are the military editions, so they include an additional unit of instruction that teaches military-specific terms and commands. The language exercises also include military scenarios.

All Active Duty, National Guard, Army Reserve Soldiers and Department of the Army civilians can access free training for 31 languages through the Army e-Learning website:

<http://usarmy.skillport.com>

GOOD HEAVENS, HALF-MAST!
HAVE I REALLY BEEN SHARING
PREVENTIVE MAINTENANCE INFO WITH
THE TROOPS FOR THAT LONG?!

CORPORAL *Connie Rodd's*
BULLETIN BOARD



M872/A1/A2 Brake Chamber Dust Cap

Use NSN 2530-01-367-6668 to get a dust cap for the air brake chamber on your M872/A1/A2 34-ton flatbed semitrailer. It replaces NSN 3040-01-065-2021, which we listed on Page 16 of PS 695 (Oct 10):

<https://www.logsa.army.mil/psmag/archives/PS2010/695/695-16.pdf>

M24 BINOCULARS NSNs

If you use the L3 version of the M24 binoculars, NSN 1240-01-499-3547, there are now three replacement items that can be ordered:

- objective lens cap, NSN 6650-01-589-0552
- eye lens cap, NSN 6650-01-589-0551
- webbing strap, NSN 5340-01-589-3985

M1079 FMTV CARGO NET

Get an interior cargo restraint net for the shelf or floor area of the M1079 FMTV's shop van by using NSN 3940-01-477-7081. This net helps secure cargo from bouncing around inside the vehicle. A three-position molded nylon clamp locks a clinching line around the entire net. Each net comes with a storage bag and attachment instructions.

MRAP M-ATV CV Joint Kits

When the CV joint boot gets ripped or torn on the M-ATV's front half-shaft, use NSN 2520-01-474-5708 to get a replacement kit that includes the boot and clamps. For the entire half-shaft assembly, which includes the outer CV half-shaft, deflector, shaft yoke, boot, clamps and tube shaft, use NSN 2520-01-474-5707. Both of these NSNs are missing from TM 9-2355-335-24P.

M978A4 HEMTT TANKER PUMP

To get the HEMTT tanker's primary pump, use NSN 4320-01-579-1044. This NSN includes the pump assembly w/motor and replaces the parts info shown as Item 1 in Fig 433 of TM 9-2320-326-14&P (EM 0288).

M777A2 Parts Update

Operators and mechanics, make note of the following NSN updates to TM 9-1025-215-24&P (EM 0274) for the M777A2 towed howitzer: The 300-320mm spanner wrench in Fig 20 now has an NSN. Order it with NSN 5120-12-381-2036 (PN 54841). The accumulator seal kit, NSN 1090-99-730-6603, in Fig 91 has changed to NSN 1680-99-226-6690 (PN AMP 09 00 40000). The NSN for buffer seal kit was incorrectly listed in Fig 9589. The correct NSN is 1090-99-169-4703, not 4730. These changes will be added during the next update to the TM.



MRAP Arm Lift Kit

The MaxxPro Plus ambulance arm lift kit comes with NSN 2590-01-583-1145. This kit prevents the patient's head (and/or spine) from bumping into the vehicle's upper litter support arm. Go to the Army Electronic Product Support (AEPS) website for the kit's parts and installation instructions. You'll need your AKO login and password to access it:

https://aeps2.ria.army.mil/commodity/gpm/tacom_wn/CASEVAC-Kit-ArmInstall.pdf

AR 700-16 Revised

A major revision to AR 700-16, *U.S. Army Ammunition Management in the Pacific Theater*, went into effect in Nov 2010. The revision covers materiel management and explosive ordnance disposal. It's available on the Army Publishing Directorate's website:

http://www.apd.army.mil/pdf/files/r700_116.pdf

PUB UPDATES ARMY SUSTAINMENT

TRADOC Pam 525-4-1, *The United States Army Functional Concept for Sustainment 2016-2028*, was revised in Oct 2010. The revision covers topics such as homeland defense and civil support. Check out the full deal:

<http://www.tradoc.army.mil/tpubs/pams/tp525-4-1.pdf>

Turn In M578 Recovery Vehicles

M578 recovery vehicles are no longer supported by the Army. Units need to take them off their property books and turn them over to their nearest DRMO/DRMS. Also, this vehicle system has no secondary items in the supply chain. For more information call TACOM's major item manager, Ms. Cynda Peter, at DSN 786-5687 or (586) 282-5687, or contact her by email: cynda.peter@us.army.mil

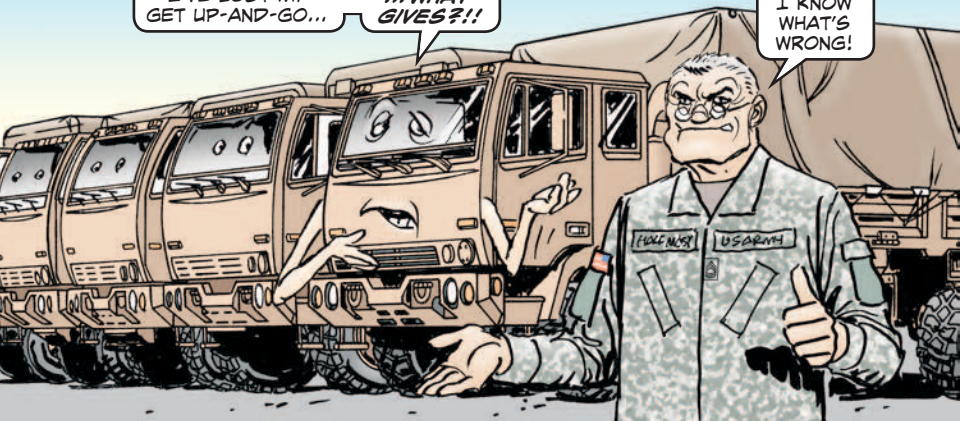
DISTRIBUTION: To be distributed in accordance with the initial distribution number (IDN) 340312, requirements for TB 43-PS-Series.

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

I'VE LOST MY
GET UP-AND-GO...

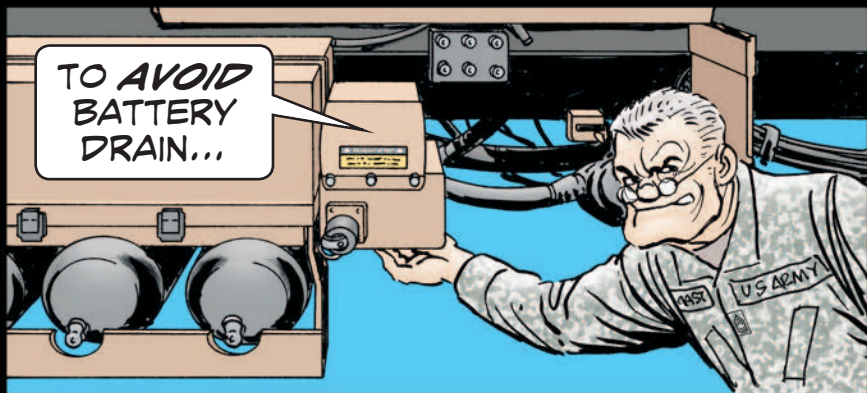
... WHAT
GIVES?!!

I KNOW
WHAT'S
WRONG!



BATTERY DRAIN!

TO AVOID
BATTERY
DRAIN...



...USE THE
VEHICLE'S
BATTERY
MASTER
DISCONNECT
SWITCH!

