



**THE  
PREVENTIVE  
MAINTENANCE  
MONTHLY**

**ISSUE 769 DEC 2016**



**COMBAT VEHICLES**

M1A1 SA Tank CPU Protection  
M113 FOV Driver's Hatch Lock Pin  
M88-Series Recovery Vehicle Spade Lock Cleaning  
M2/M3-Series Bradley Cdr's Hatch Latch Lubing  
M2/M3-Series Bradley Fuel Shutoff Valve  
Keep Required BII, COEI  
Stryker Engine Shutdown



**TACTICAL VEHICLES**

FMTV Faulty Voltage Regulator Disables Generator  
HMMWV Fuel Tank Drain Plug Check  
M870A1 Semitrailer Split Ring Spare Tire Placement  
M1231 MK II/III VMMD Husky Ink Tank Freezing  
MK II/III VMMD Husky Battery Drain  
M978 HEMTT Fuel Tanker, Preventing Frozen  
Emergency Fuel Shutoff Cable  
HMMWV TCM Protection from Melting Snow



**AVIATION**

Aircraft, Proper Electrical Bonding  
AEBP Parachute Disposition Instructions Vital  
Shadow PM



**MISSILES**

MLRS PM Tips



**SMALL ARMS**

M151 Spotting Scope MWO Upgrade  
M12 Rack Needs Mod to Secure M16A4/M4  
M2A1 Machine Gun Barrel Advice  
M249 Machine Gun's Short Barrel Washer NSN



**CBRN**

AN/VDR-2 Radiac Set PM Reminders



**TOOLS**

M16-Series Rifle, M4/M4A1 Carbine Special Tools  
SATS Blue Light Bulb NSN



**COMMUNICATIONS**

BB-2590/U Battery, Update Charger Software



**SOLDIER SUPPORT**

UPS Battery PM



**LOGISTICS MANAGEMENT**

2016 Logistics Excellence Awards  
Driver's Training DA Form 348 Guidance  
EMS NG Customer Support  
Gas Cylinder Safety Checks

**The Untold Tale of Teddy and  
the Rough Riders**

**27-34 Connie's Post Scripts**

**60-61**

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By order of the Secretary of the Army:

**MARK A. MILLEY**

General, United States Army Chief of Staff

Official:

**GERALD B. O'KEEFE**

Administrative Assistant to the Secretary of the Army

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Issue 769

# PS

December  
2016

## THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-769

Approved for  
Public Release;  
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Unlimited



HERE ARE THE PARTS  
WE ORDERED!

THAT'S THE  
BEST PRESENT  
WE COULD'VE  
GOTTEN!

PARTS  
DUE IN!

Tuesday  
6th  
December  
2016

PIERCE

U.S. ARMY

HARBIN

U.S. ARMY

REQs

REJ

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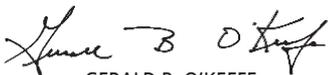
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# Do Your Best! Don't Give TMs a Rest



**M**aybe you've done PMCS so much that you think you can now do it by memory. But it's important to use TMs because, like people, TMs change. So make sure you're using the latest authenticated manuals each time you pull maintenance on your unit's equipment.

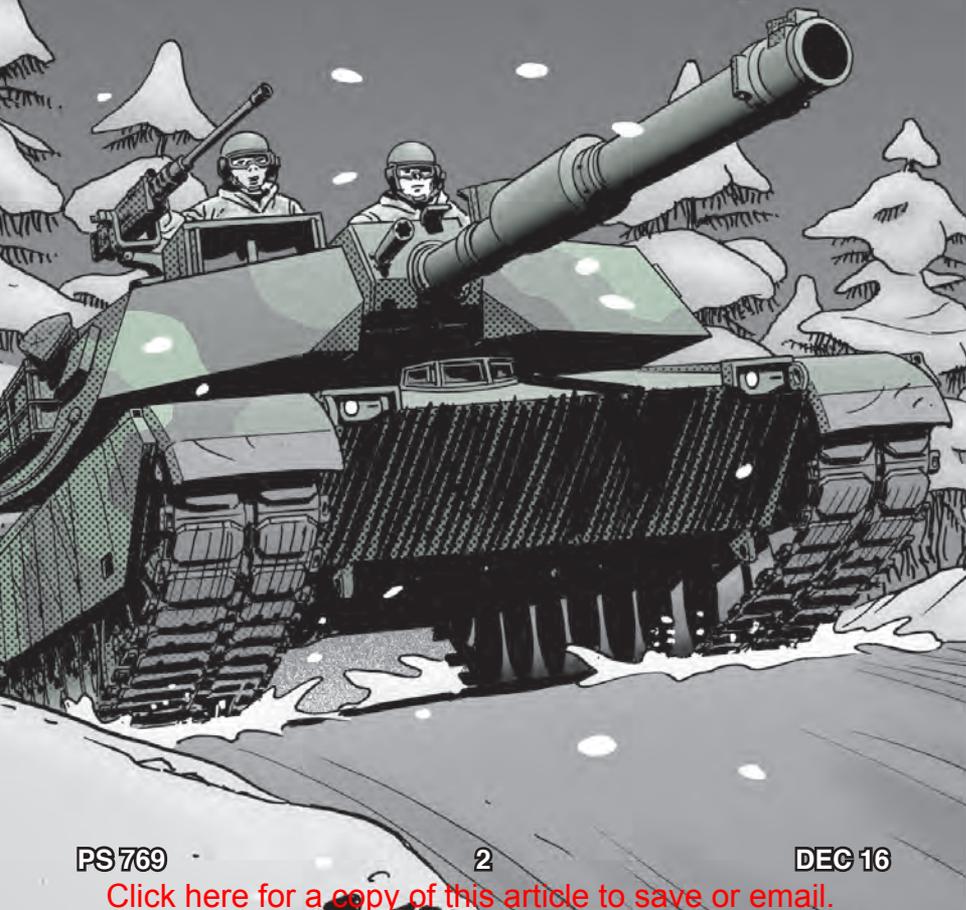
Not convinced? Then listen to this true story. You can actually tear up equipment if you use the wrong fluids in them! One unit messed up a vehicle's transmission by using the wrong fluid. It cost about \$50,000 to repair. Believe us, you don't want to be "that guy."

There's an easy fix. Just do your best and don't give TMs a rest! Pay close attention to all TM guidance, including the usable on code (UOC). It's critical to use the right parts on the right equipment.

Doing your best at PMCS prevents maintenance problems. That means not guessing about torque values because you've taken the time to find them in the TM. It means fixing anything you can during PMCS, even if it means tracking down a tool. It means lubing **all** the grease fittings, not just the ones that are easy to reach.

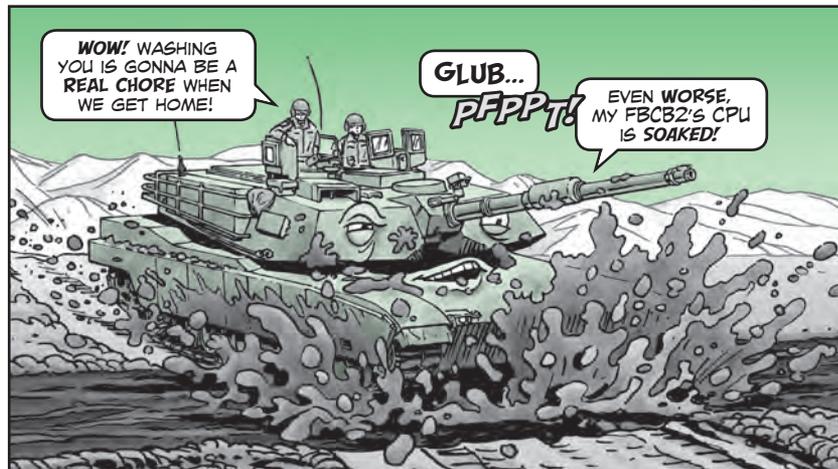
Doing your best for your equipment doesn't require you to be smart or strong or any other label. It simply means you do your best at PMCS—every time!

- Tie Down CPU Damage
- Latch Down Hatches
- Give Spade Lock a Lift With Cleaning
- Latch Down Hatch Problems
- Shut Off Fuel Problems
- Keep BII, COEI Up to Date
- Engine Shutdown Done Right!



M1A1 SA Tanks...

## Tie Down CPU Damage

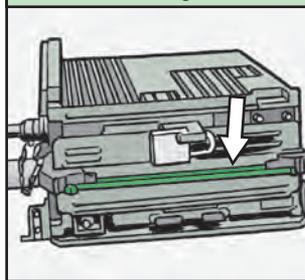


Crewmen, mud, dirt and water can make their way inside the FBCB2's CPU on your M1A1 SA tank. That's mainly because dirt and water collect on the turret floor, which is where the CPU also happens to sit.

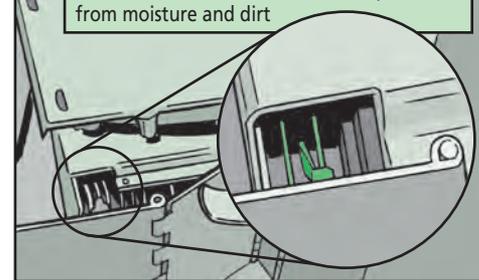
Even worse, feet and gear constantly snag the two latches on the CPU case, constantly opening them. It doesn't take long for the CPU to short out once mud and water get inside.

A wire tie running through the two latches takes care of this problem nicely. The tie keeps the latches from opening while still allowing easy access to the CPU case.

Run wire ties through CPU latches

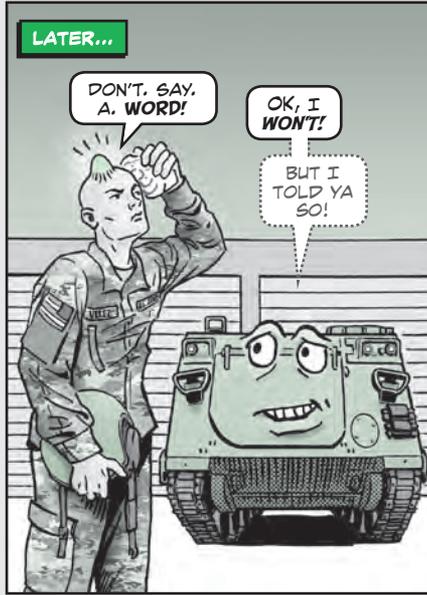
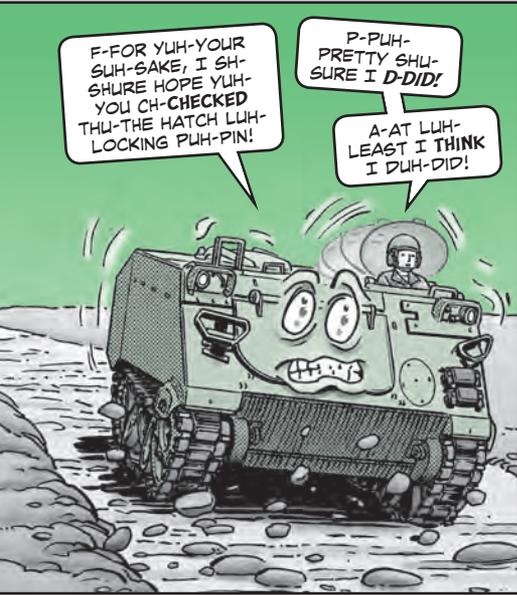


With latches secured, CPU is better protected from moisture and dirt



NSN 5975-00-133-8696 brings 100 26-inch long ties that are long enough to secure the latches.

# LATCH DOWN HATCHES



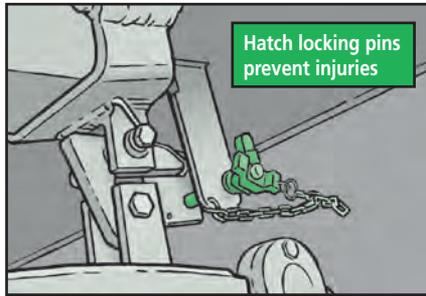
Dear Editor,

Some M113-Series FOV crewmen learn a very painful lesson the hard way: carrier hatches are just too heavy to stay open on their own.

Hit a big bump and those hatches can come flying down with a lot of Force. If you're in the way, your body'll pay the price. You could end up losing your teeth, your fingers—even your life.

Taking a few seconds to stick the safety pin through the bracket to lock that hatch in place can save you a ton of grief.

Play it safe. Lock open the hatches before moving out. Check the locking pins during weekly PMCS. If a locking pin's missing or damaged, have your mechanic install a new one.



SGT Lewis Bradley  
3rd BCT

**Editor's note:** You knocked that tip outta the park!

# Give Spade Lock a Lift With Cleaning

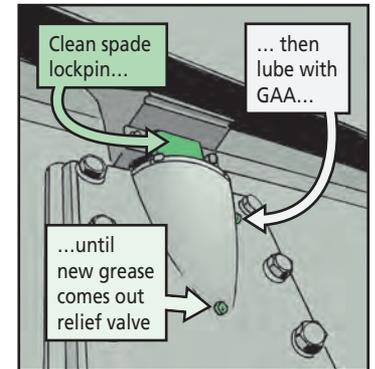


**M**echanics, lubing the spade lock on M88-series recovery vehicles is the right thing to do. But it's not the only thing the spade lock needs. A good cleaning is also needed to keep it doing its job.

The spade's lockpin gets gunked up with dirt, mud and sand. All that gunk gets inside the mechanism as the lockpin goes up and down. Next thing you know, the spade won't lock or release.

Here's how to keep that from happening:

1. Use a rag to clean off the worst of the dirt, mud, sand and old grease. Loosen any hard-to-remove gunk by scrubbing it with a nylon brush, like NSN 7920-00-061-0037.
2. Wipe the lockpin again with a clean cloth. If dirt still shows on the cloth, keep cleaning.
3. Apply GAA to the exposed part of the spade lockpin. Just a very light coat will do. Since grease attracts sand, skip this step if you're in the desert.
4. Pump GAA into the grease fitting on the right side of the pin housing quarterly. Old, dirty grease will start coming out of the relief valve. Keep pumping until you see new grease, then wipe the old stuff off the relief valve.
5. Ensure the lube is spread evenly throughout the entire mechanism by operating the spade lock a few times.



**BANG! BANG!**

HEY! THE  
COMMANDER'S  
HATCH WON'T  
OPEN!

AH, BOY!  
THAT'S WHAT  
HAPPENS WHEN  
YOU DON'T  
LUBE IT!

# LATCH DOWN HATCH PROBLEMS

Left unchecked, the elements can wreak havoc on equipment-including the commander's hatch on your Bradley.

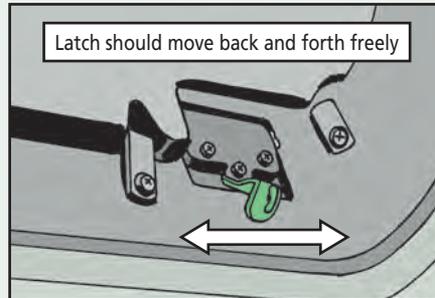
Rain and condensation pool around the hatch cover latch when the hatch is left open. The water seeps inside the latch and rusts the slide pin and spring. Then the latch won't move, so you can't move the hatch to the pop-up position. That's no good at all!

But you can keep the latch moving with a shot of aerosol dry-film lubricant, NSN 9150-01-260-2534, about every 120 days. Work in the lubricant by moving the latch back and forth a few times.

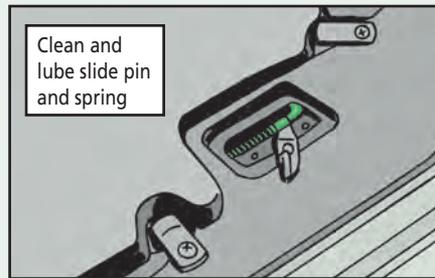
If the latch is hard to move or won't budge at all, let your mechanic know. He'll remove the latch cover and clean the area. Then he'll lube around the slide and spring with dry-film lubricant.

The hinges and hatch release pin also get exposed to the elements. Without occasional lube, the hatch will creak and groan when you try to open it—if it'll move at all.

A few drops of OE/HDO on the hinges and release pin quarterly should do the trick. Be sure to exercise the hatch a few times to work in the oil.



Latch should move back and forth freely



Clean and lube slide pin and spring

# SHUT OFF FUEL PROBLEMS



CREWMEN,  
SOMETIMES THE  
SIMPLEST THINGS  
CAN CAUSE YOU  
PROBLEMS.

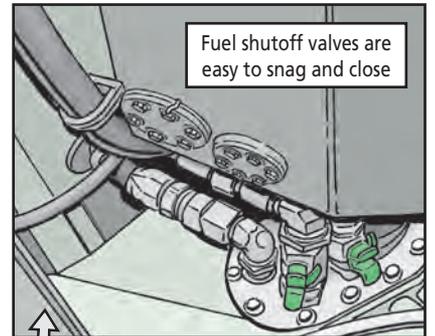
LIKE PUTTING YOUR  
FEET IN THE WRONG  
PLACE WHILE  
MOVING AROUND IN  
YOUR BRADLEY!



IF YOUR  
BRADLEY  
OR ITS  
PERSONNEL  
HEATER  
WON'T  
START,  
YOUR FIRST  
MOVE  
SHOULD BE  
TO...

...LOOK  
DOWN.

THE  
PROBLEM  
COULD BE  
A CLOSED  
FUEL  
SHUTOFF  
VALVE.

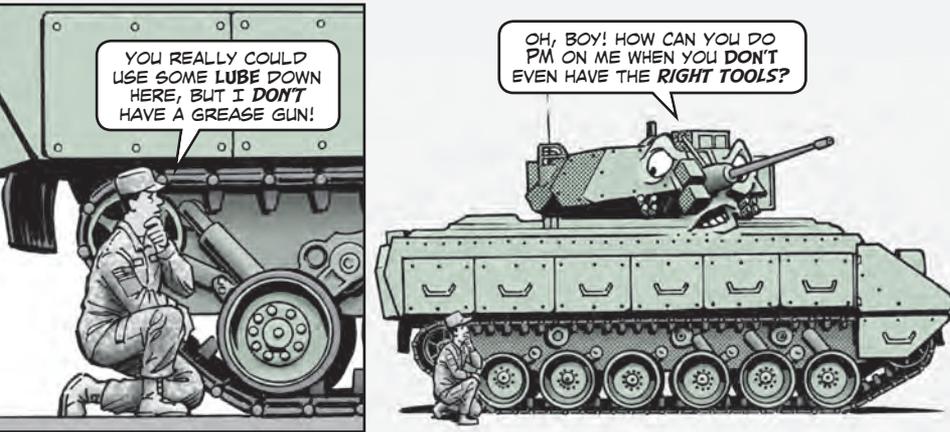


THE VALVES  
ARE LOCATED  
INSIDE THE  
BOTTOM OF  
THE TURRET  
WALL.

IN THE CLOSE CONFINES  
OF THE BRADLEY  
TURRET, IT'S EASY FOR  
A WAYWARD FOOT OR  
LOOSE GEAR TO SNAG  
ONE OF THE VALVES AND  
TURN IT OFF.

ALWAYS MAKE THE SHUTOFF VALVES YOUR FIRST CHECK  
IF YOUR BRADLEY'S ENGINE OR HEATER WON'T START.  
THAT CAN SAVE YOU AND YOUR MECHANIC SOME  
TROUBLESHOOTING.

Combat Vehicles... **KEEP BII, COEI UP TO DATE**



Dear Editor,

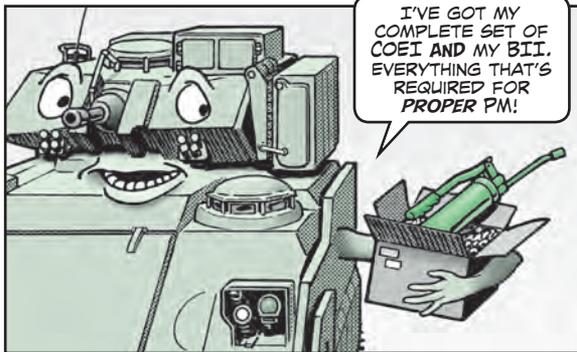
Units are showing up to the National Training Center (NTC) without the required components of end items (COEI) and basic issue items (BII) for their vehicles. That makes it impossible for crews to do preventive maintenance (PM) during their rotation.

For example, many M2/M3-series Bradleys and M1-series tanks don't have grease to perform required lubrication, nor the grease gun to apply it!

Too many vehicles throw track because their crews don't have the equipment for PMCS on track adjusters, end connectors, wedges and track assemblies like it says in the -10 TM.

Units should make sure their vehicles have the required COEI and BII. That goes even if they're not scheduled for an NTC rotation.

Inventory each vehicle's COEI and BII during semi-annual and annual services. Replace missing items right away. Remember, -10 TMs are part of each vehicle's BII.



CW4 William J. Baker  
Goldminer Team, NTC

**Editor's Note:** Thanks, Chief. That's good advice for all units to follow, whether they're in training or deployed.

Stryker...

SEE YA BRIGHT AND EARLY TOMORROW. WE'VE GOT ANOTHER LONG DAY AHEAD OF US!

I'LL BE READY 'CAUSE YOU TOOK THE TIME TO SHUT ME DOWN RIGHT!



## ENGINE SHUTDOWN DONE RIGHT!

Dear Editor,

After a long mission, some Stryker crews get in a hurry and don't follow all the steps for a proper vehicle shutdown. But shutting down a Stryker the wrong way can cause serious damage.

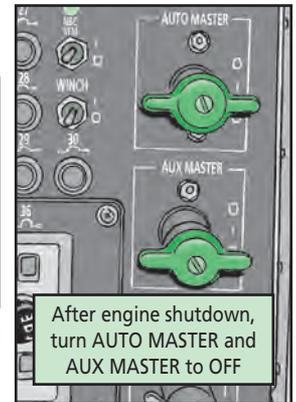
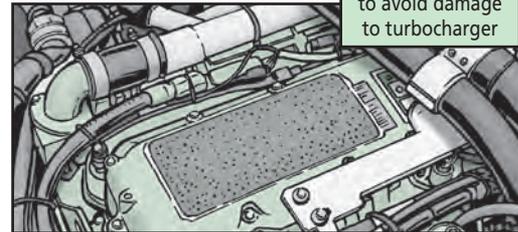
First off, use the parking brake when the vehicle is stopped. Engage the transfer gear lock if parked on a grade of 30 percent or more.

And remember, it's very important to let the engine idle for three minutes before shutting down. This lets the turbocharger slow down and prevents damage from a lack of oil.



Engage parking brake *before* shutting down engine

Let engine idle for three minutes to avoid damage to turbocharger



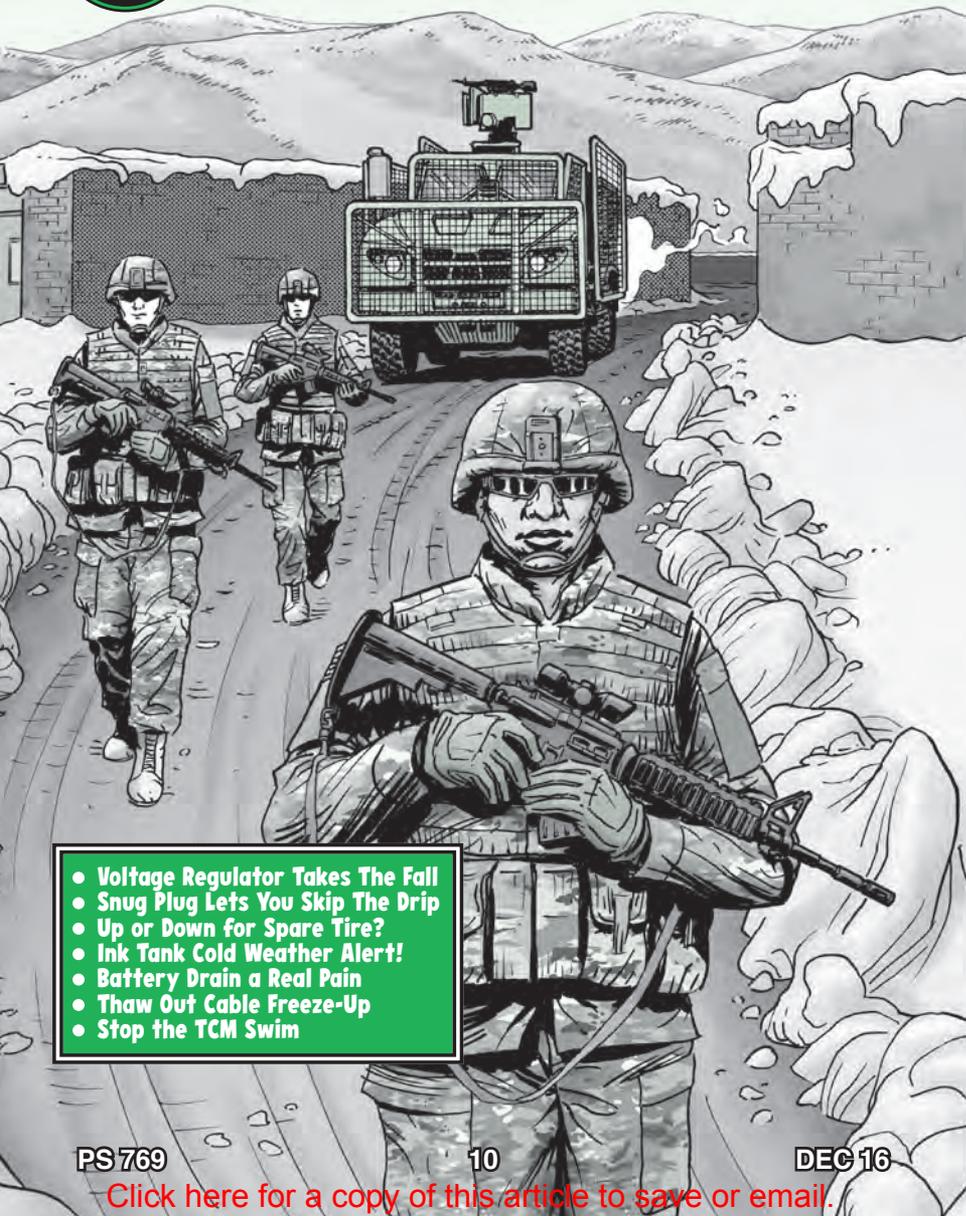
After engine shutdown, turn AUTO MASTER and AUX MASTER to OFF

Also, turn off all communication and electrical equipment. That'll protect equipment from damage by electrical surges. However, don't turn off any master switches-including AUTO MASTER and AUX MASTER-until the engine is shut down.

The complete shutdown procedures are found in the -10 TMs. You'll save yourself trouble if you shut your Stryker's engine down by the book.

CW3 Chris Parker  
3rd BCT

**Editor's note:** Thanks, Chief! That's a reminder that'll help shut down Stryker damage.



- Voltage Regulator Takes The Fall
- Snug Plug Lets You Skip The Drip
- Up or Down for Spare Tire?
- Ink Tank Cold Weather Alert!
- Battery Drain a Real Pain
- Thaw Out Cable Freeze-Up
- Stop the TCM Swim

## VOLTAGE REGULATOR ⚡ TAKES THE FALL



BEFORE YOU TROUBLESHOOT MY GENERATOR, YOU NEED TO KNOW SOMETHING.



IT'S THE VOLTAGE REGULATOR'S FAULT!

**M**echanics, the FMTV's 100-amp generator, NSN 6115-01-504-0680; 260-amp generator, NSN 2920-01-559-2715; and 300-amp generator, NSN 2920-01-515-6764, are in high demand. But the culprit behind generator failure is usually a faulty voltage regulator.

So when troubleshooting the vehicle generator system IAW TM 9-2320-391-13&P (100-, 260-amp), TM 9-2320-333-13&P (260-amp), or TM 9-2300-310-14&P (300-amp) make replacing the voltage regulator your first step rather than ordering a new generator.

Why? Replacing the voltage regulator is cheaper, reduces backorders and lessens the load on the supply system.

The rebuild lines for FMTV generators are short of unserviceable assets. So if you have any unserviceable 100-amp, 260-amp, or 300-amp generators, send them to your SSA, closest DLA depot, or let GCSS-Army route them to the closest Army National Maintenance repair site.

Have questions? Contact TACOM's FMTV equipment specialist, Tim Pflueger, at DSN 786- 9401, (586) 282-9401, or by email: [timothy.p.pflueger.civ.mail.mil](mailto:timothy.p.pflueger.civ.mail.mil)

For FMTV supply questions, check with Ted Robinson at DSN 786-8314, (586) 282-8314, or by email: [ted.f.robinson.civ@mail.mil](mailto:ted.f.robinson.civ@mail.mil)

HMMWV...

# SNUG PLUG LETS YOU SKIP THE DRIP



I KNEW I SHOULD'VE CHECKED THAT FUEL TANK DRAIN PLUG!



YOUR HMMWV GETS YOU WHERE YOU WANT TO GO, OR AT LEAST IT DOES UNTIL YOU RUN OUT OF FUEL.

UNFORTUNATELY, THAT CAN HAPPEN IF YOUR VEHICLE'S FUEL TANK HAS A LEAKY DRAIN PLUG. AND WHAT'S WORSE THAN BEING STUCK ON THE SIDE OF THE ROAD WITH NO GAS?

HOW ABOUT TRYING TO EXPLAIN THE SPILLED FUEL TO YOUR ENVIRONMENTAL FOLKS!

THE DRAIN PLUG CONSISTS OF A METAL SCREW SURROUNDED BY A RUBBER GASKET.

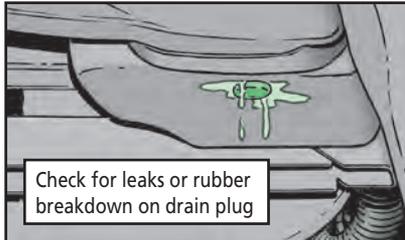
IF THE DRAIN PLUG IS OVER-TIGHTENED, THE SHARP EDGE OF THE HOLE MAY CUT INTO THE RUBBER. EVEN IF THE DRAIN PLUG IS PROPERLY SEATED, THE RUBBER DETERIORATES OVER TIME.

EITHER WAY, YOU'VE GOT A FUEL LEAK.



CHECK THE PLUG BEFORE OPERATIONS AS PART OF YOUR PMCS.

A LEAK SHOULD BE REPORTED IMMEDIATELY. BUT EVEN IF THERE'S NO LEAK, YOU SHOULD LOOK FOR SIGNS OF DETERIORATION. IF THE RUBBER HAS HARDENED OR IS OVERLY SOFT AND SMOOSHY TO THE TOUCH, REPORT IT.

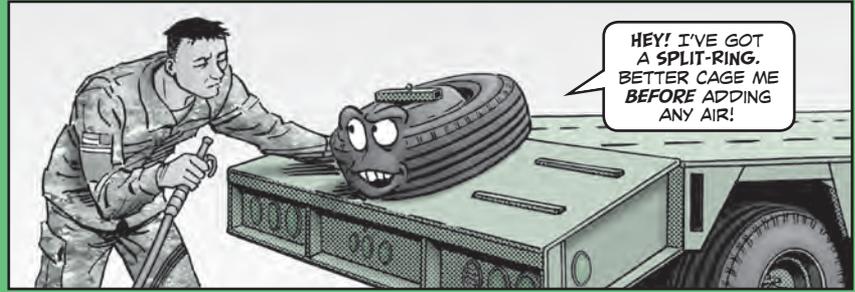


Check for leaks or rubber breakdown on drain plug

A NEW DRAIN PLUG, NSN 5340-01-244-5765, COSTS LESS THAN \$4. THAT'S A LOT CHEAPER THAN PAYING FOR A FUEL SPILL!

M870A1 Semitrailers...

# UP OR DOWN FOR SPARE TIRE?



HEY! I'VE GOT A SPLIT-RING. BETTER CAGE ME BEFORE ADDING ANY AIR!

Dear Half-Mast,  
When mounting the spare tire on an M870A1 semitrailer, should the splitting-ring side of the tire face up or down? I've heard two different opinions on this. One is that it's easier to check the tire's air pressure with the splitting ring up because that's the side the valve stem is on. The other is that the split-ring needs to face down against the trailer's rear deck. That's to keep everyone safe in case the split ring lets go. What say you?

Mr. G.J.C.

Dear Sir,  
The TM says to mount the spare with the split-ring up. While you can check the air pressure in that position, you should always cage any tire with a split-ring before adding air. Split-ring tires for this trailer are being replaced by single-piece rims. Look for an upcoming article in PS with more info.

Half-Mast

M1231 MK II/III VMMD Husky...

# INK TANK COLD WEATHER ALERT!

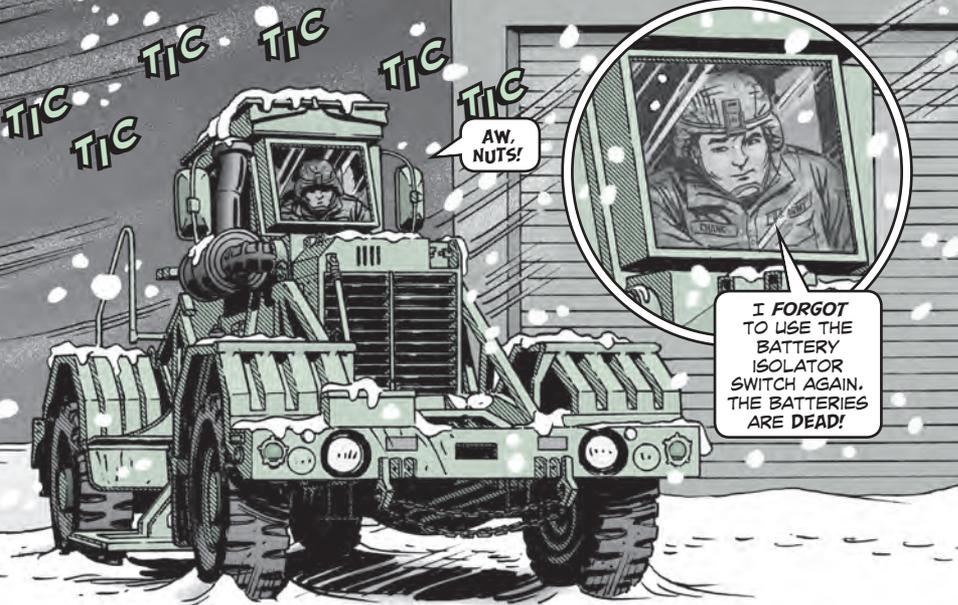
Operators, cold weather can spell D-O-O-M for the ink tank on the left side of your Husky's cab. The water/ink solution inside the tank will freeze when temperatures drop too low. The tank swells and the welds split. If you notice a tank that's bulging or with CARC paint peeling off, you've got a problem!

When cold weather's on the way, it's a good idea to drain the vehicle's marking system, especially if the vehicle is stored outside. That keeps the water/ink solution from freezing and protects the marking system's plastic hoses, fittings and spray nozzles.



PAINT OFTEN PEELS ON BULGING TANKS.

# Battery Drain a Real Pain



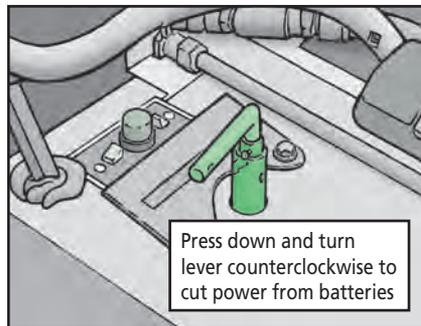
**D**ead batteries and the Husky seem to go hand-in-hand, especially when your vehicle sits for long periods in cold weather.

To keep batteries charged, it's a good idea to start and run your Husky at least once a week for 30 minutes.

Also, after shutdown, turn the vehicle's battery isolator switch to OFF. That cuts the flow of power and saves the batteries. The isolator switch is actually a small lever that's located on the floor on the right side of the driver's compartment.

To turn the switch to OFF, press down on the spring-loaded lever and turn counterclockwise. Before startup, turn the switch back to ON by pushing down and turning the lever clockwise.

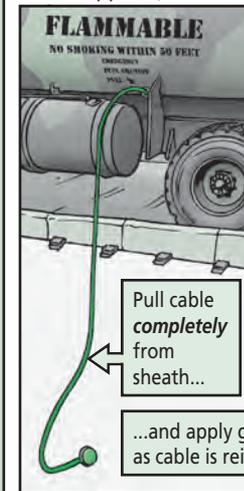
You can find more information on the switch in WP 0006-13 of TM 9-2355-316-10 (Apr 16).



# THAW OUT CABLE FREEZE-UP

Dear Editor,

In really cold weather, we've been having problems with the emergency fuel shutoff cable freezing in place on our M978-series HEMTT fuel tankers. When that happens, the tankers are NMC.



Our first solution was to store the vehicles in a POL barn overnight to keep them out of the cold. But just two hours after driving one back outside the next morning, the cable was frozen in place again!

After moving the vehicle back inside, we removed the cable from its sheath to find out the cause. Turned out the cable was wet and rusty.

After we dried and cleaned off the cable, we tried lubricating it with white molybdenum disulfide grease, NSN 6810-00-264-6715, before putting it back into its sheath.



A day later, at -20°F, the cable worked just fine. We've had no more problems with any cable that's been lubed.

Since then, we've also tested off-the-shelf WD-40® white lithium spray. It works well, too.

1SG Michael J. Witten  
E CO 1/52 AV REGT

**Editor's note:** Thanks for a great fix for a cold cable. Good job!

# Stop the TCM Swim!



HEY, THAT LOOKS LIKE FUN! MAYBE WE SHOULD GIVE IT A TRY.

ARE YOU CRAZY? OUR TCMs WOULD GET SOAKED!

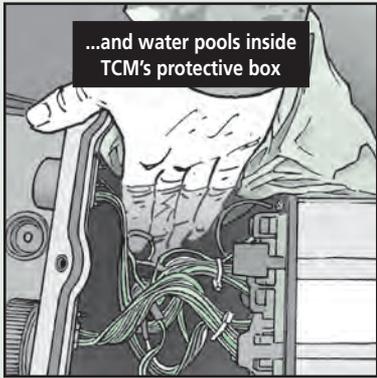
Dear Editor,

We've been finding lots of transmission control modules (TCM), NSNs 2520-01-579-1379 and 2520-01-579-2302, sitting in pools of water. This is typically found in two-door HMMWVs with the 4L80E transmission.

We finally figured out that the water comes from all the snow we have here. Operators like to remove their vehicle's troop carrier cover when it snows. That's to prevent damage to the bows from the snow's weight. The snow melts, then refreezes and melts again. When combined with the salt used for snow removal, the seal in the TCM's protective box doesn't stand a chance. The TCM ends up submerged in salty water, often for weeks at a time.



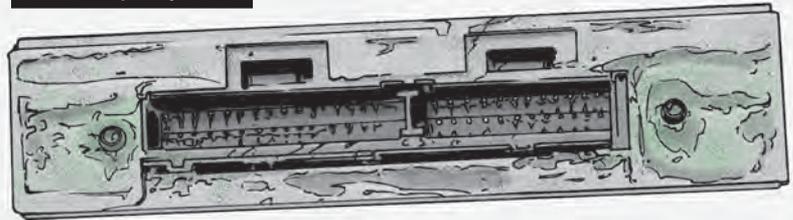
Snow melts in back of HMMWV...



...and water pools inside TCM's protective box

Not only is the TCM destroyed, but when inexperienced drivers fail to notice that the vehicle isn't shifting properly, the transmission and other components are damaged, too.

TCM is completely ruined



The fix is simple. Just leave those covers in place and order new covers for vehicles that don't have them. Then make sure you clear the snow off the covers when necessary to protect the bows.

SSG Nang Lee Vue  
10th Mountain Div



EDUCATING MECHANICS AND OPERATORS ABOUT PROBLEMS LIKE THIS IS A SURE WAY TO SAVE THE ARMY MONEY. THANKS, SERGEANT!

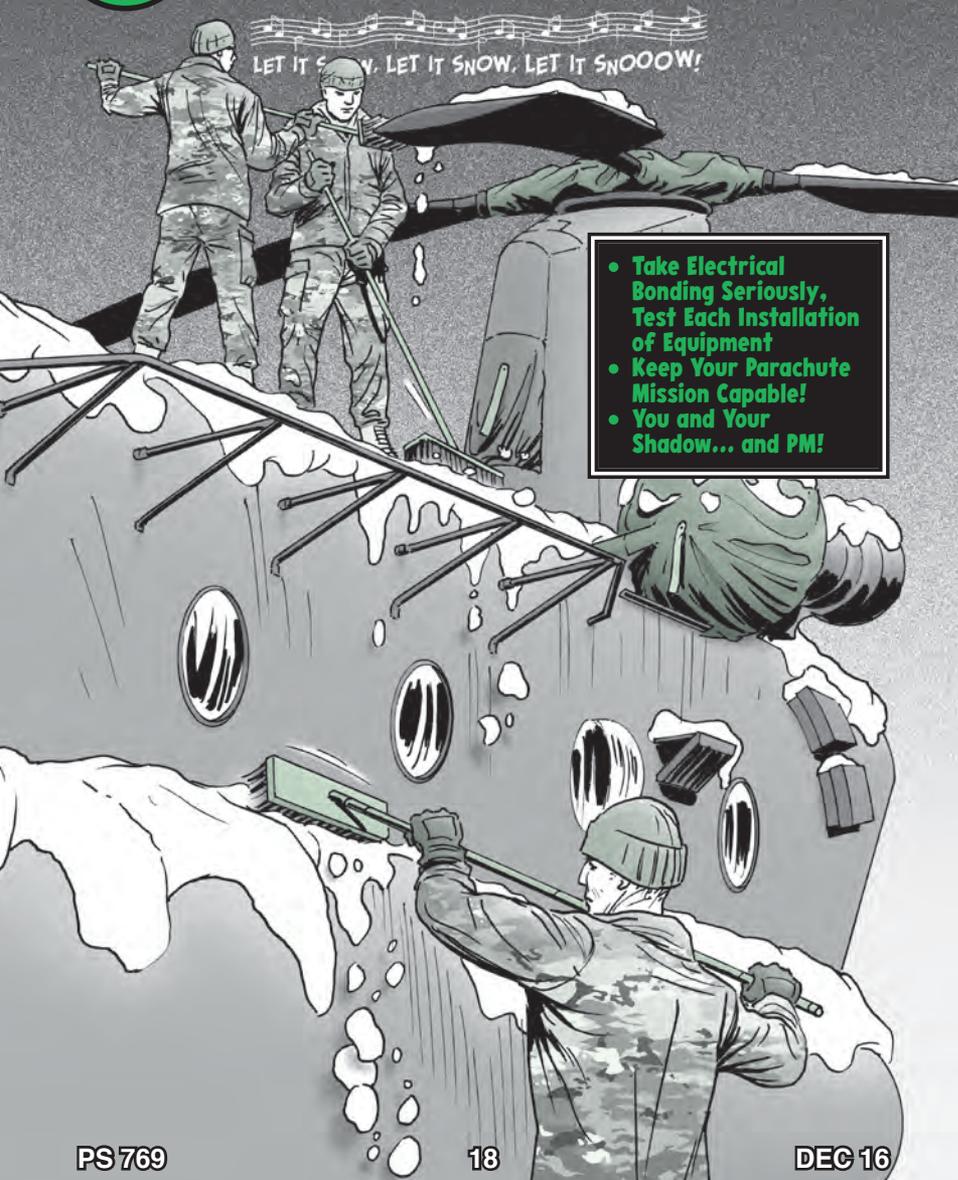
DRIVERS, YOU CAN ALSO PROTECT THE TCM BY COVERING THE VEHICLE WITH A 12X7-FT TARP, NSN 2540-00-587-2532.

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

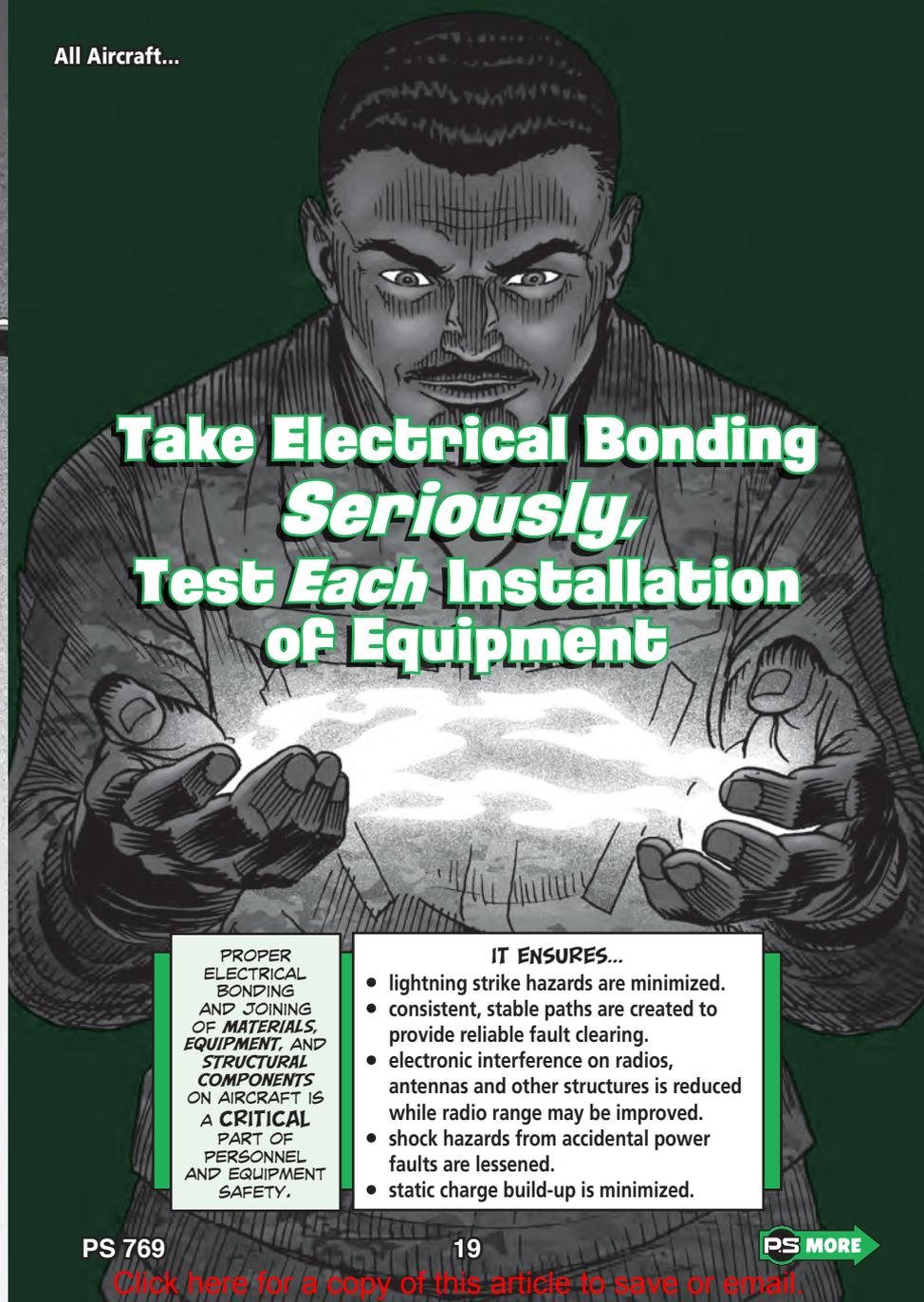


C'MON IN! THE WATER'S GREAT!

I THINK YOU'RE GONNA REGRET THAT TOMORROW!



- Take Electrical Bonding Seriously, Test Each Installation of Equipment
- Keep Your Parachute Mission Capable!
- You and Your Shadow... and PM!



## Take Electrical Bonding *Seriously,* Test Each Installation of Equipment

PROPER ELECTRICAL BONDING AND JOINING OF MATERIALS, EQUIPMENT, AND STRUCTURAL COMPONENTS ON AIRCRAFT IS A CRITICAL PART OF PERSONNEL AND EQUIPMENT SAFETY.

### IT ENSURES...

- lightning strike hazards are minimized.
- consistent, stable paths are created to provide reliable fault clearing.
- electronic interference on radios, antennas and other structures is reduced while radio range may be improved.
- shock hazards from accidental power faults are lessened.
- static charge build-up is minimized.

TODAY'S MAINTENANCE INVOLVES A **BALANCE** BETWEEN **CORROSION PREVENTION CONTROL (CPC)** AND **ELECTRONIC BONDING REQUIREMENTS** FOR AIRCRAFT.

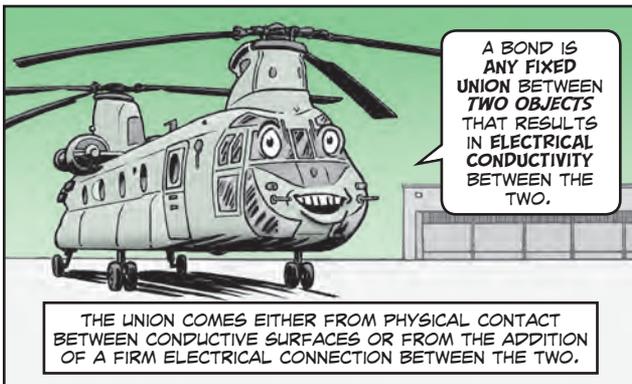


TO DO THE JOB RIGHT, YOU NEED A SOLID UNDERSTANDING OF BOTH. TOO MUCH CPC CAN HAVE A **NEGATIVE** IMPACT ON ELECTRICAL BONDING AND VICE-VERSA.

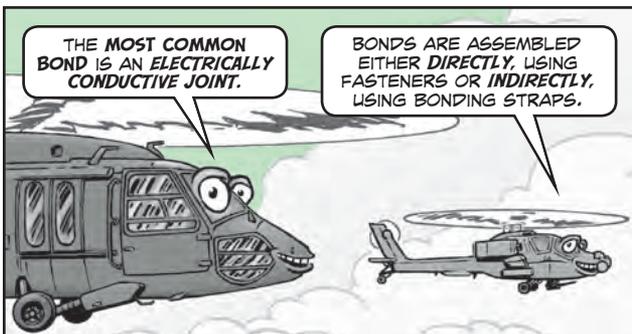
BEFORE YOU CAN START LEARNING ABOUT ELECTRICAL BONDING, YOU HAVE TO KNOW WHAT IT IS.



## What is Bonding?



## Bonding Facts!



## Definitions

### BONDING STRAP:

A BONDING STRAP IS MADE OF **BRAIDED WIRE** THAT PROVIDES ELECTRICAL CONDUCTIVITY BETWEEN TWO ITEMS THAT WOULD OTHERWISE NOT BE IN ELECTRICAL CONTACT. A BONDING STRAP SHOULD BE USED **ONLY** FOR STATIC BLEED OFF OR A FAULT CURRENT TO MINIMIZE ELECTROMAGNETIC INTERFERENCE.

**AVOID BONDING STRAPS WHENEVER POSSIBLE.**

THEY SHOULD **ONLY** BE USED ACROSS MOVABLE VIBRATION OR THERMAL ISOLATION JOINTS WHERE A DIRECT METAL-TO-METAL BOND CAN'T BE CREATED.

BONDING STRAPS SHOULD BE KEPT SHORT WITH A LENGTH-TO-WIDTH RATIO THAT DOES NOT EXCEED 5 TO 1. **A RATIO OF 3 TO 1 IS PREFERRED.**

**NEVER** CREATE A BONDING STRAP THAT REQUIRES MORE THAN ONE STRAP IN SERIES TO PROVIDE THE REQUIRED LENGTH.

WHEN MEASURING THE RESISTANCE FROM EQUIPMENT TO THE **CONDUCTIVE STRUCTURE** USING YOUR 4-WIRE ELECTRICAL BONDING METER, THE STRAP IS **NOT** PART OF THE MEASUREMENT. ONLY MEASURE THE ENDS OF THE STRAP TO THE CONDUCTIVE STRUCTURE. THE IMPEDANCE OF A BONDING STRAP WITH A LENGTH TO WIDTH RATIO NO GREATER THAN 5 TO 1 **ISNT** INCLUDED IN THIS MEASUREMENT.

### CONDUCTIVE STRUCTURE:

A **STRUCTURAL ELEMENT** WITH A RESISTANCE LESS THAN 100 MICROHM/CM GROUNDED TO A SINGLE POINT GROUND.

### CONDUCTIVE SURFACES/OBJECTS:

ALL **SURFACES OR OBJECTS** THAT HAVE A RESISTANCE OF LESS THAN 100 MICROHM/CM.

### EQUIPMENT:

ANY ELECTRICAL, ELECTRONIC, OR ELECTROMECHANICAL DEVICE OR COLLECTION OF DEVICES INTENDED TO OPERATE AS A **SINGLE UNIT** AND PERFORM A **SINGLE FUNCTION**.

**SUCH EQUIPMENT INCLUDES:**

RECEIVERS, TRANSMITTERS, ANTENNAS, CABLE CONNECTORS, TRANSPONDERS, POWER SUPPLIES, HAND TOOLS, PROCESSORS, TEST DEVICES AND INSTRUMENTS.

### RESISTANCE:

THE OPPOSITION PRESENTED BY AN ELECTRONIC DEVICE OR MATERIAL TO THE FLOW OF DIRECT CURRENT.

THERE SHOULD BE A DIRECT CURRENT RESISTANCE OF LESS THAN 2.5 MILLIOHMS (TYPICALLY 0.5 MILLIOHMS AT INITIAL INSTALLATION) ACROSS EACH FAYING SURFACE.

### GROUNDING:

THE CONSTRUCTION OF A LOW RESISTANCE DIRECT CONNECTION TO A GROUND PLANE.

### BOND SURFACES:

AREAS ON AIRCRAFT STRUCTURES OR ELECTRICAL BONDING HARDWARE THAT PROVIDE A PATH FOR THE DISSIPATION OF ELECTRICAL ENERGY.

### IMPEDANCE:

THE TOTAL OPPOSITION PRESENTED BY AN ELECTRICAL CIRCUIT AT FREQUENCIES (TYPICALLY HZ TO GHZ).

ALL ELECTRICAL AND ELECTRONIC COMPONENTS THAT USE OR PRODUCE ELECTROMAGNETIC ENERGY SHOULD BE INSTALLED TO PROVIDE A CONTINUOUS LOW IMPEDANCE PATH FROM THE EQUIPMENT ENCLOSURE TO THE CONDUCTIVE STRUCTURE.

THE **KEY FEATURES** OF LOW BOND IMPEDANCE ARE THE CONTACT AREA (.5 SQUARE INCHES OR LARGER) OF THE BOND, MATERIALS USED AND THE AMOUNT OF PRESSURE ON THE FAYING SURFACE (ONE OF THE SURFACES IN CONTACT AT A JOINT).

**NOTE: SCREWS DO NOT PROVIDE ENOUGH PRESSURE FOR ELECTRICAL BONDING!**



WHAT ARE YOU GONNA USE INSTEAD A' ME?

**ALL ELECTRICAL BONDS MUST USE BOLTS OR THREE OR MORE RIVETS.**



RAZZIN' FRAZZIN' BOLTS... RAZZIN' FRAZZIN' RIVETS.

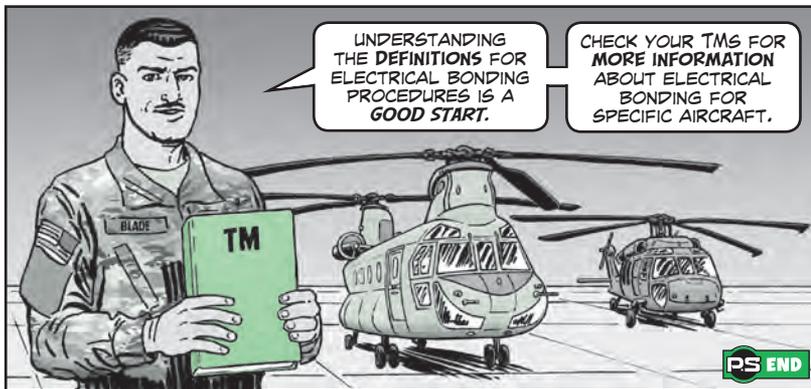


THE BOND BETWEEN THE EQUIPMENT ENCLOSURE AND MOUNTING PLATE SHOULD ALSO MEET THESE REQUIREMENTS.

HOWEVER, A SUITABLE GROUND STRAP MAY BE USED ACROSS ANY NECESSARY VIBRATION ISOLATORS OR OTHER ENVIRONMENT ISOLATORS.

#### ACCEPTABLE ELECTRICAL BONDING SHOULD ADDRESS:

- Materials control, including types of acceptable materials for cleaning, surface prep, sealing, etc.
- Cleaning methods, including methods for cleaning faying surfaces prior to bonding, coating, etc.
- Surface preparation, including removal of paints and other nonconductive coatings, machining of surfaces to meet smoothness specifications, etc.
- Coatings and corrosion control, including acceptable corrosion control coatings, methods for controlling corrosion and galvanic corrosion, etc.
- Quality assurance. Test every bond!
- Process control to include supporting test data to verify repeatability.

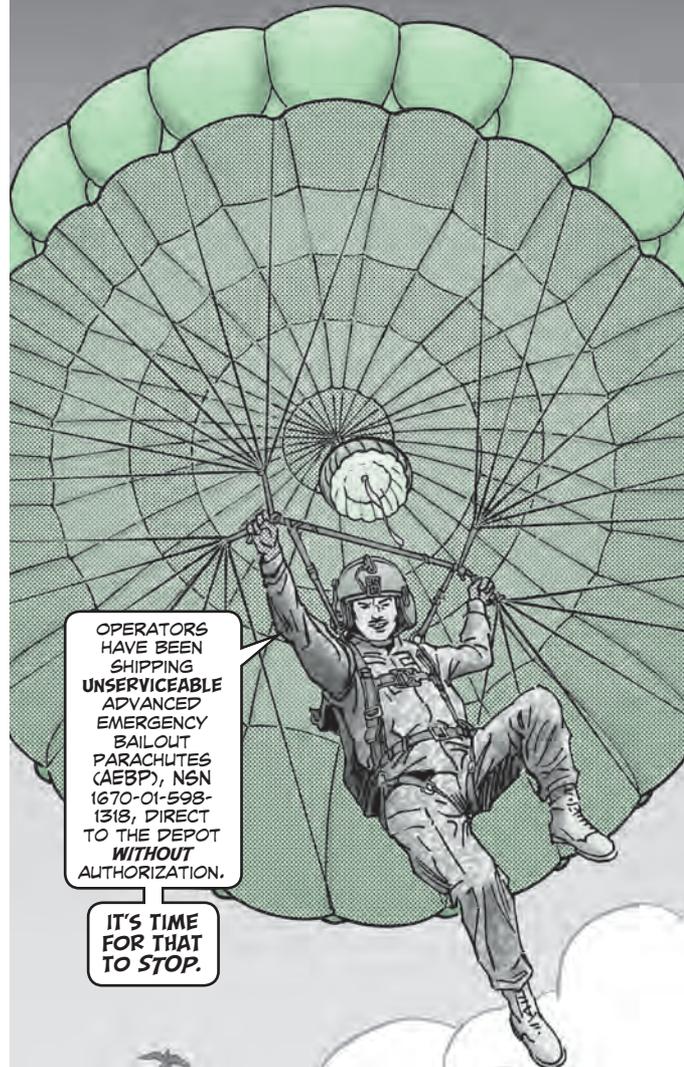


UNDERSTANDING THE DEFINITIONS FOR ELECTRICAL BONDING PROCEDURES IS A **GOOD START.**

CHECK YOUR TMS FOR **MORE INFORMATION** ABOUT ELECTRICAL BONDING FOR SPECIFIC AIRCRAFT.

PS END

# AEBP... **KEEP YOUR PARACHUTE MISSION CAPABLE!**



OPERATORS HAVE BEEN SHIPPING **UNSERVICEABLE** ADVANCED EMERGENCY BAILOUT PARACHUTES (AEBP), NSN 1670-01-598-1318, DIRECT TO THE DEPOT **WITHOUT** AUTHORIZATION.

**IT'S TIME FOR THAT TO STOP.**

YOU SHOULD **NEVER** SHIP OR DISPOSE OF AN UNSERVICEABLE AEBP WITHOUT FIRST RECEIVING DISPOSITION INSTRUCTIONS FROM THE ITEM MANAGER, THAT'S PART OF THE AEBP'S **BEYOND ECONOMICAL REPAIR (BER)** PROCESS.

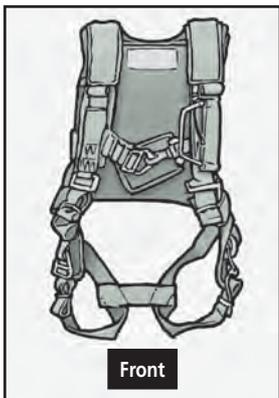
THAT PROCESS BEGINS WITH THE **PARACHUTE REPAIR DEPOT** AT CHINA LAKE, CA.

WHEN A PARACHUTE ARRIVES AT THE DEPOT, HOW IT'S TREATED **DEPENDS** ON THOSE DISPOSITION INSTRUCTIONS.

SOME PARACHUTES MERELY NEED TO BE REPACKED AFTER THEY'VE BEEN USED OR ACCIDENTALLY DEPLOYED. OTHERS REQUIRE REPAIR BECAUSE OF DAMAGE SUFFERED DURING DEPLOYMENT.

REPAIR IS **MORE EXPENSIVE** DUE TO THE COST OF REPLACEMENT PARTS AND CLEANING, SO PUTTING A PARACHUTE THROUGH REPAIR THAT ONLY NEEDS REPACKING IS A **WASTE OF FUNDS.**

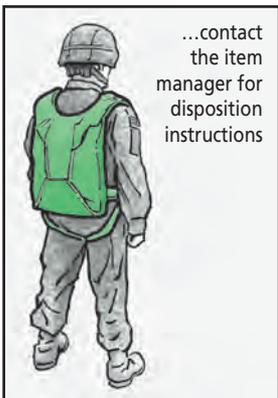
PS MORE



Front



Back



...contact the item manager for disposition instructions

SO WHEN YOU HAVE DEPLOYED OR DAMAGED AEBPS, FOLLOW THIS PROCESS TO GET THEM REPAIRED OR REPACKED...



1. Contact the TACOM-Natick item manager (SOS A12) at (508) 233-6080.
2. The item manager will ask for the technical rigger inspection (TRI) documentation and DA Form 2404, *Equipment Inspection and Maintenance Worksheet*. This provides the paperwork to determine if the AEBP is non-mission capable.
3. The item manager will review the documentation to determine if the AEBP needs repair and then provide disposition instructions.
4. The item manager coordinates with the unit and depot for turn-in. Once the AEBP is accepted at the depot, the item manager advises the unit on requisitioning a new AEBP.
5. The depot inspects the AEBP for serviceability and repairs or repacks it as necessary.
6. Fully mission capable AEBPs are then shipped to the Defense Distribution Susquehanna Pennsylvania (DDSP) at New Cumberland Army Depot to support future mission requirements.

**GOT QUESTIONS? CONTACT TACOM-NATICK'S DANIEL GAILOR AT DSN 256-6217, (508) 233-6217 OR BY EMAIL: [daniel.f.gailor.civ@mail.mil](mailto:daniel.f.gailor.civ@mail.mil) OR AIRDROP SYSTEM'S SFC MARK BRUMBAUGH AT (508) 233-6080 OR BY EMAIL AT [mark.a.brumbaugh.mil@mail.mil](mailto:mark.a.brumbaugh.mil@mail.mil)**

YOU CAN ALSO CONTACT ANDREW GOSSELIN AT DSN 256-5646, (508) 233-5646 OR BY EMAIL: [andrew.f.gosselin.civ@mail.mil](mailto:andrew.f.gosselin.civ@mail.mil)

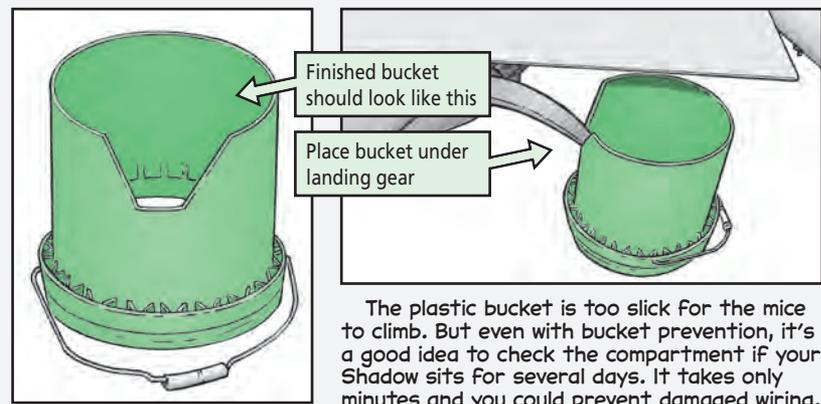


Dear Editor,

Here are a few ways to help units keep their Shadows flying high rather than sitting in the shadows:

**Make your Shadow mouseproof.** We have trouble with mice nesting in the rear aft compartment. They climb up the wheels and make themselves at home, chewing up wiring. We stopped the mice in their tracks with 5-gal plastic buckets.

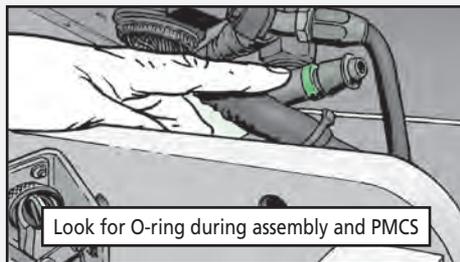
We cut off the bottom of the bucket and then cut a notch in the bottom of one side so it just fits under where the main landing gear bends into the frame. You'll need a bucket for each wheel. It should look like this:



The plastic bucket is too slick for the mice to climb. But even with bucket prevention, it's a good idea to check the compartment if your Shadow sits for several days. It takes only minutes and you could prevent damaged wiring.



Don't forget the O-ring when you assemble the bottom of the center wing. If the O-ring is missing, oil and air go straight into the fuselage. We had an oil flood in one of our Shadows because of this. The O-ring should be replaced during the 250-hr AV inspection. It should be checked during AV assembly and center wing installation, too.



Look for O-ring during assembly and PMCS

Continue to do the 12-hr propeller retorque inspection. The latest version of TM 1-1550-689-10 drops the inspection, but we've discovered it's the best way to catch a bad rear engine seal. It takes just a minute and it could save your Shadow.

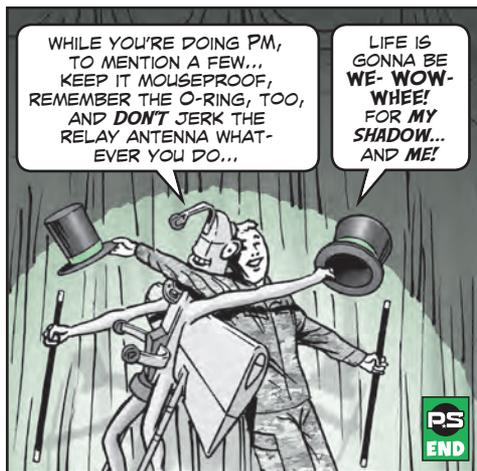


Don't be a jerk with relay antenna!

Easy does it checking the relay antennas during PMCS. Just gently tug the antennas to see if they're secure. If you jerk them, they can come out completely.

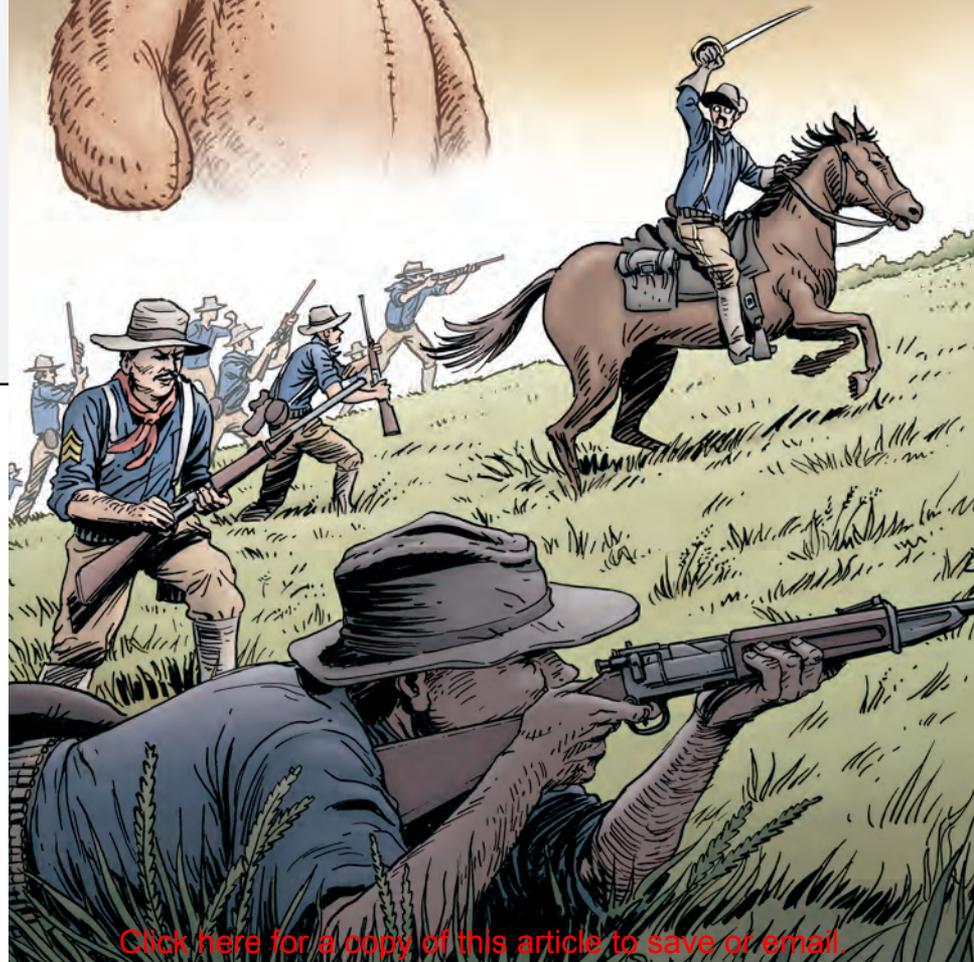
SFC Todd Sherman  
SGT Jeffrey Daniels  
16th Eng Bn

*Editor's note: Beyond a shadow of a doubt, these are excellent Shadow suggestions.*

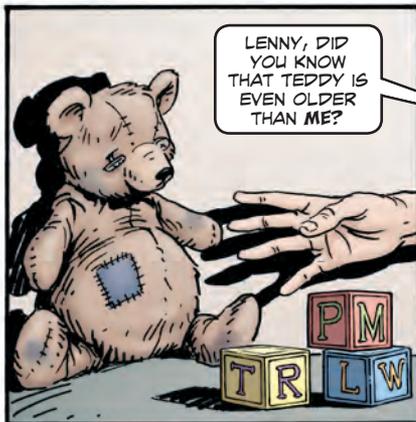


# The Untold Tale of TEDDY and the ROUGH RIDERS

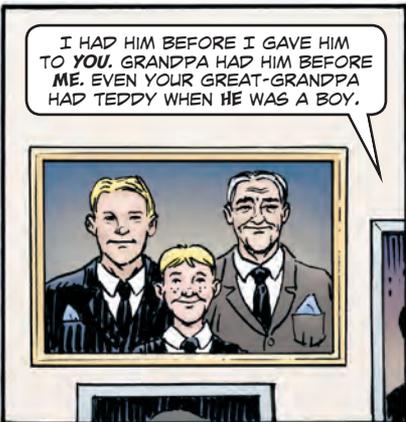
featuring THEODORE ROOSEVELT in his breakthrough performance!



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



LENNY, DID YOU KNOW THAT TEDDY IS EVEN OLDER THAN ME?



I HAD HIM BEFORE I GAVE HIM TO YOU. GRANDPA HAD HIM BEFORE ME. EVEN YOUR GREAT-GRANDPA HAD TEDDY WHEN HE WAS A BOY.



WOW, TEDDY'S ANCIENT-OLD! IS THAT WHY HIS EYES DON'T MATCH?

HA! PROLLY.



I 'SPECT OL' TEDDY'S LOST MORE'N A FEW BUTTONS OVER THE YEARS. HE'S BEEN ON LOTS OF ADVENTURES, AFTER ALL.

LIKE WHAT?



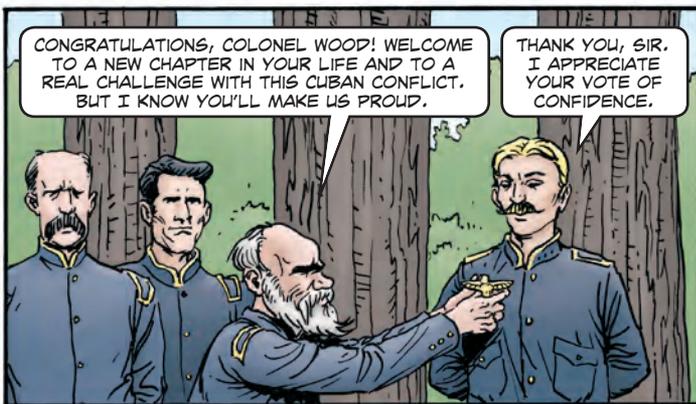
WELL, THERE'S ONE TALE THAT THIS SCRUFFY OL' FELLA LIKES ME TO TELL, IF YOU'D LIKE TO HEAR IT.

SURE!



WELL, SNUGGLE DOWN AND LISTEN. JUST LIKE YOUR NAME'S BEEN HANDED DOWN FOR GENERATIONS, LENNY, SO TOO HAS THIS FAMILY MASCOT. TEDDY'S FIRST ADVENTURE HAPPENED WAY BACK IN 1898...

...AFTER YOUR GREAT-GREAT-GRANDPA LEONARD WOOD WAS PROMOTED TO COLONEL FOR THE SPANISH AMERICAN WAR...

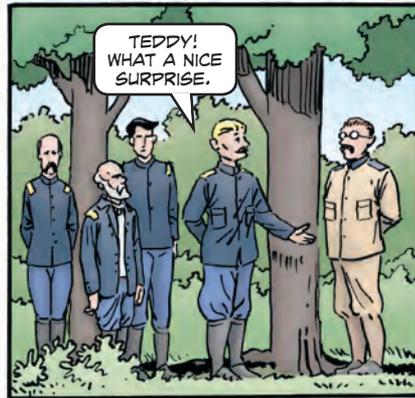


CONGRATULATIONS, COLONEL WOOD! WELCOME TO A NEW CHAPTER IN YOUR LIFE AND TO A REAL CHALLENGE WITH THIS CUBAN CONFLICT. BUT I KNOW YOU'LL MAKE US PROUD.

THANK YOU, SIR. I APPRECIATE YOUR VOTE OF CONFIDENCE.



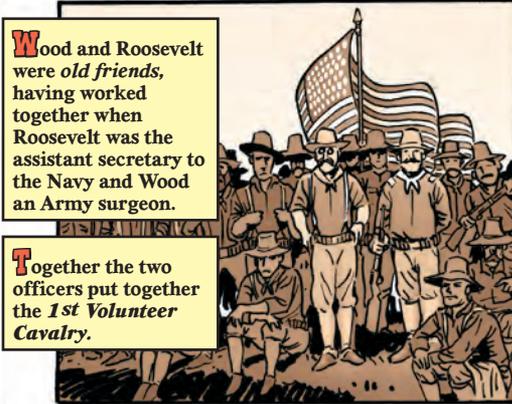
NOT JUST MINE. AN OLD FRIEND OF YOURS HAD A SAY IN THIS, TOO.



TEDDY! WHAT A NICE SURPRISE.



COULDN'T MISS THIS CEREMONY, LEO. I'M JOINING UP, TOO. YOU'LL NEED A DEPENDABLE LIEUTENANT COLONEL.

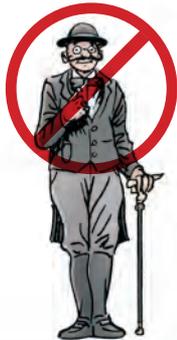


Wood and Roosevelt were old friends, having worked together when Roosevelt was the assistant secretary to the Navy and Wood an Army surgeon.

Together the two officers put together the 1st Volunteer Cavalry.

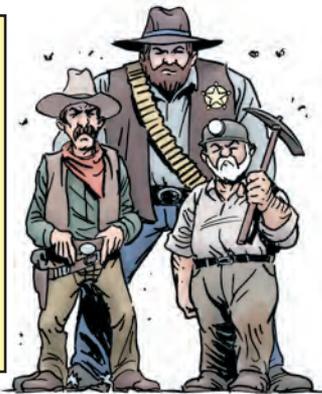
More than 23,000 men wanted to join the volunteers, but Wood and Roosevelt had to winnow it down to 1,250.

Ordinary fellows need *not* apply—a man had to shoot and ride with the *best* of 'em to make the cut.



Many of those chosen were *rough-hewn fellas*, like cowboys, ranchers and miners. Some were policemen or former veterans who wanted to see action again.

Even a gambler or two tossed his hat in the ring.



To set them apart from the *regular* Army troops, they wore slouch hats, blue flannel shirts, brown trousers, neckerchiefs, leggings and boots. This look led to their nickname, the

## ROUGH RIDERS!



Experienced Army men who had fought in the Civil and Indian Wars were hired on as the Rough Rider officers.



WE ONLY GOT A SHORT TIME TO POLISH THE *ROUGH EDGES* OFF THESE RECRUITS.

But more importantly, they taught their men how to take care of their mounts and equipment.



LISSEN UP, YUH GREENHORNS! IT'S TIME FER SOME EDIFYIN'! WARS ARE *WON* OR *LOST* BY THE *SLIMMEST* OF MARGINS!

YOUR LIVES NOW DEPEND ON *PREVENTIVE MAINTENANCE*—WHAT I LIKES T'CALL PM!



Even with all their prep, it *wasn't* smooth sailing for the Rough Riders when they deployed.

Logistical problems meant most of the horses and mules they needed didn't make it to Cuba. so...

UHH... AIN'T WE S'POSED TO BE ON THET SHIP?

They made sure the Rough Riders got all the *training* they needed, plus the *best* weapons and gear available, like...

• BOWIE KNIVES



• SHELTER-TENTS



• SPRINGFIELD (Krag) BOLT-ACTION RIFLES WITH .30-40 CALIBER CARTRIDGES



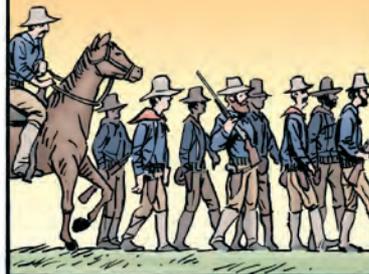
• RIDING TACK



• COLT .45 REVOLVERS



...many of the men were forced to march and fight as infantry instead of cavalry.



That also meant they had a *brand new* category of equipment to care for.

There was a *reason* why the Rough Riders were also known as **"WOOD'S WEARY WALKERS!"**





HEARD YOU'VE GOT SOME MIGHTY BAD BLISTERS, COLLINS.

I'LL BE FINE, SIR.



**NONSENSE.** PROPER FOOT CARE IS **JUST** AS CRITICAL AS MAINTAINING OUR GEAR AND WEAPONS. NOW LET ME TAKE A LOOK.

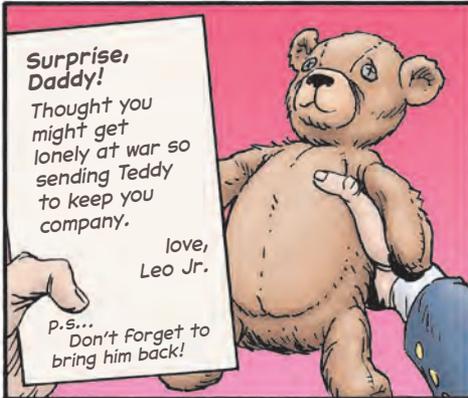


HMMM, WE'D BETTER TAKE CARE OF THIS.

I'VE GOT SOME SALVE AND BANDAGES IN MY TENT. BE RIGHT BACK



WHAT'S THIS?!



Surprise, Daddy!

Thought you might get lonely at war so sending Teddy to keep you company.

love,  
Leo Jr.

p.s... Don't forget to bring him back!



WELL, I'LL BE! GUESS THE ROUGH RIDERS HAVE AN OFFICIAL MASCOT NOW.

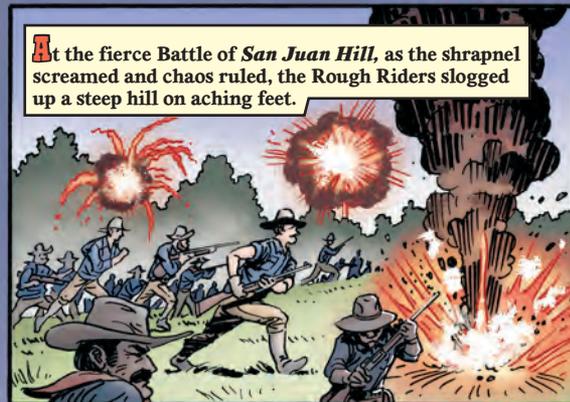
**I**n rain and shine and jungle swamps, Colonel Wood carried the stuffed bear his 7 year-old son had sent.

Whether perched on his saddle horn or dangling from a pack, the reminder of home and hearth lifted his and the men's spirits when the grind got hard and the slog long.



**SNIFFE**  
I SURELY DO LOVE THAT LI'L FELLA!

HIM AND ALL HE SYMBOLIZES, CLEM!



**A**t the fierce Battle of *San Juan Hill*, as the shrapnel screamed and chaos ruled, the Rough Riders slogged up a steep hill on aching feet.



**T**wo teddies now urged the men on in this final push—the **TOY**...

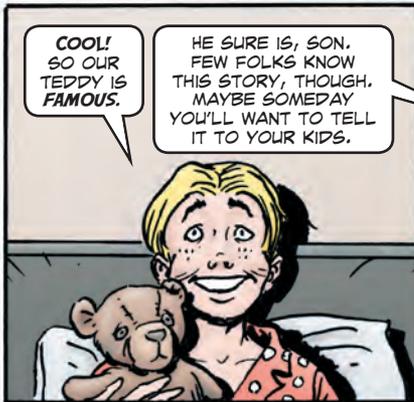
...and the **REAL TEDDY**—Teddy Roosevelt, who became Colonel of the Rough Riders after Wood was promoted to Brigadier General of the 2nd Cavalry.

Roosevelt led the charge on his horse, Texas, so all the men on foot could see him and be *encouraged*.



After the blazing Gatling guns cleared the last stretch for the Americans, *Victory* was not far behind.

At long last, the Rough Riders could go home, and so could both Teddies!



COOL!  
SO OUR  
TEDDY IS  
FAMOUS.

HE SURE IS, SON.  
FEW FOLKS KNOW  
THIS STORY, THOUGH.  
MAYBE SOMEDAY  
YOU'LL WANT TO TELL  
IT TO YOUR KIDS.



I WILL,  
DADDY.

LOOKS LIKE TEDDY CAN  
USE A LITTLE PM HIMSELF.  
I'LL ASK MOMMY TO FIX  
THIS LOOSE BUTTON.  
SWEET DREAMS!



# PS MISSILES

- MLRS PMCS Multiplies Performance

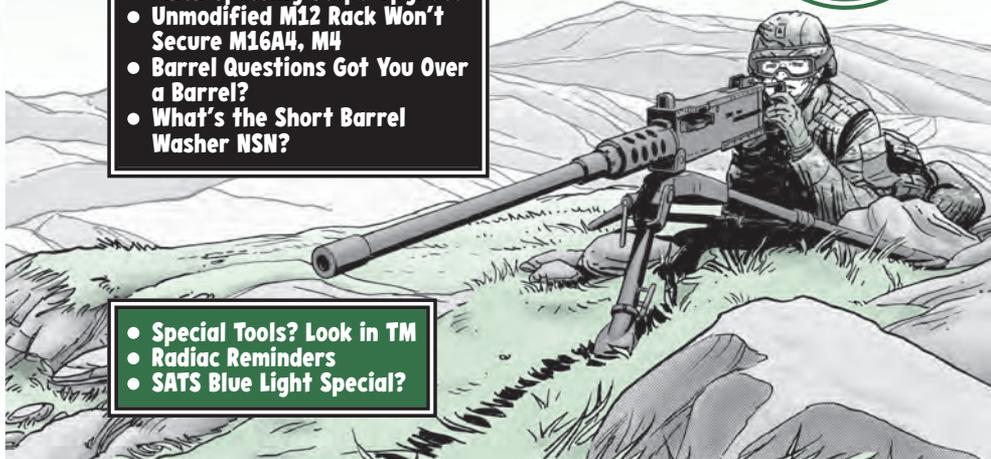


# PS SMALL ARMS

ALSO  
FEATURING  
CBRN  
AND  
TOOLS

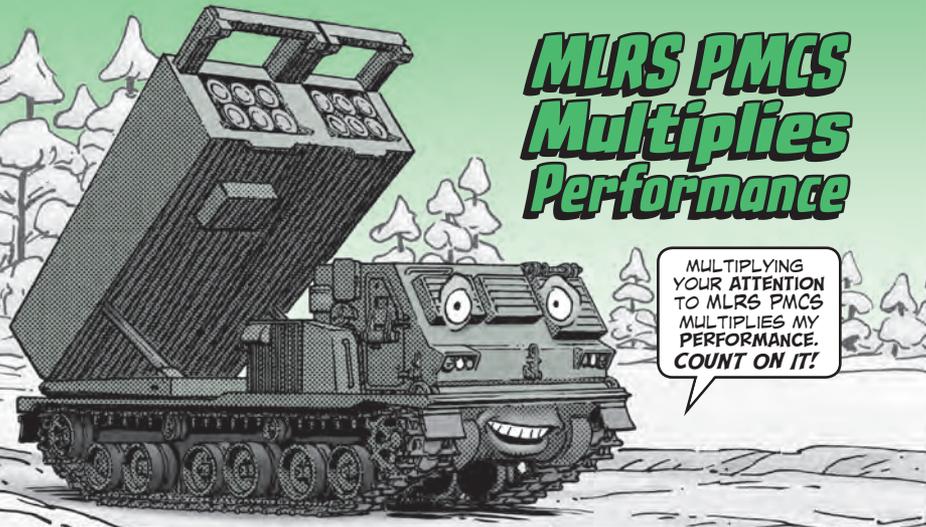
- M151 Spotting Scope Upgrade
- Unmodified M12 Rack Won't Secure M16A4, M4
- Barrel Questions Got You Over a Barrel?
- What's the Short Barrel Washer NSN?

- Special Tools? Look in TM
- Radiac Reminders
- SATS Blue Light Special?

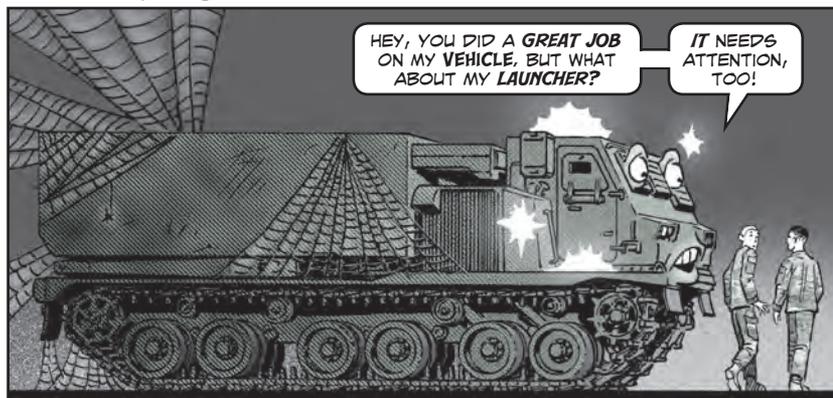


[Click here for a copy of this article to save or email.](#)

# MLRS PMCS Multiplies Performance



**Give the launcher the same attention you give the carrier.** Some units spend most of their time doing carrier PMCS and leave the launcher alone. Bad move! If the launcher sits without exercise, the launcher batteries go dead, the rollers on the booms freeze and the hydraulic fluid turns to gunk. Just operating the booms and hoists weekly will prevent that.



**Make sure prop shaft bolts are safety-wired.** The tremendous vibration of the MLRS will soon loosen bolts missing safety wire.

**Keep connectors as clean as possible.** Even a little bit of dirt in connectors causes system faults. Before disconnecting connectors, blow away any dirt. While they're disconnected, clean them with technical isopropyl alcohol, NSN 6810-00-286-5435. If the connector is supposed to be safety-wired, do it.

**Grease well, but first get rid of the old grease.** When the MLRS is roaring down those dirt trails, it kicks up a huge amount of dust. The dirt mixes with the grease and soon the grease stops greasing. That wears out boom parts fast, especially gears and the boom motor.

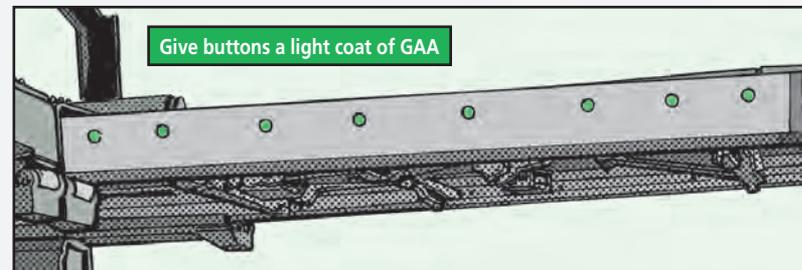
So before putting in new grease, you must get rid of the old grease. Use lubricant cleaner and MEK to do that. The procedure is in the operator maintenance instructions for boom forward rollers in IETM 9-1425-648-13&P.



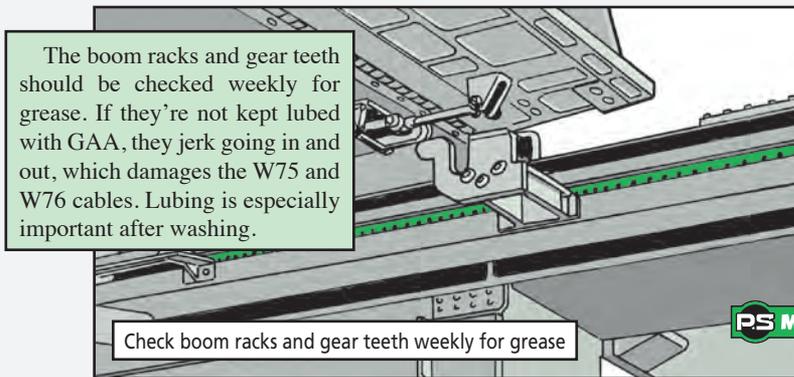
**Get rid of old grease before pumping in new grease**



Remember when you grease the boom rails to put a thin coat of GAA on each of the nylon buttons on the rails. That cuts down on friction when the boom moves in and out.



**Give buttons a light coat of GAA**

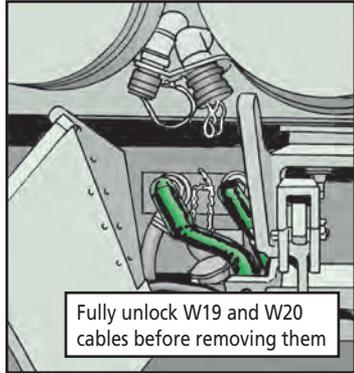


The boom racks and gear teeth should be checked weekly for grease. If they're not kept lubed with GAA, they jerk going in and out, which damages the W75 and W76 cables. Lubing is especially important after washing.

**Check boom racks and gear teeth weekly for grease**

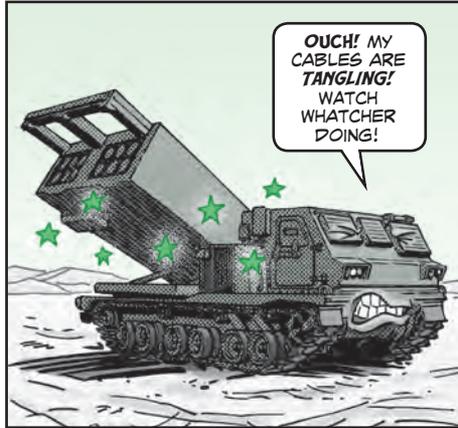
**PS MORE**

**Careful with the W19 and W20 cables.** If you get in a hurry during reloads and yank on the cables, they break. To disconnect the cables, completely unlock the cable connectors and then pull straight back on the connectors. Do not pull on the cables! That breaks wiring.



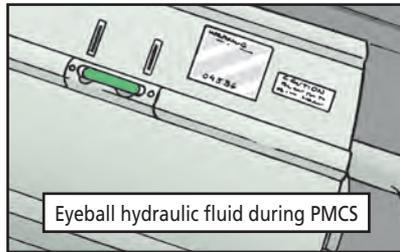
Fully unlock W19 and W20 cables before removing them

**Careful with cables while traversing.** If the cables aren't following the grooves in the cable wrap, they birdnest and then you've got a real mess. Have someone eyeball the cables as you traverse. And never ignore the panel lights and warning alarms that signal something is wrong.



OUCH! MY CABLES ARE TANGLING! WATCH WHATCHER DOING!

**Don't forget hydraulic fluid.** Units often forget to check the level. If the fluid gets too low, the launcher will move erratically or not at all. To check the fluid, all you have to do is glance at the sight glass. If it doesn't read GOOD, tell your repairman. Any time the launcher moves strangely, check the hydraulic fluid.



Eyeball hydraulic fluid during PMCS

**Cooking spray anyone?** Every MLRS unit knows what a chore it is to clean off carbon after firing. Cooking spray can actually make the job easier. Before firing, spray non-stick cooking spray on trouble spots. The spray keeps the carbon from sticking.

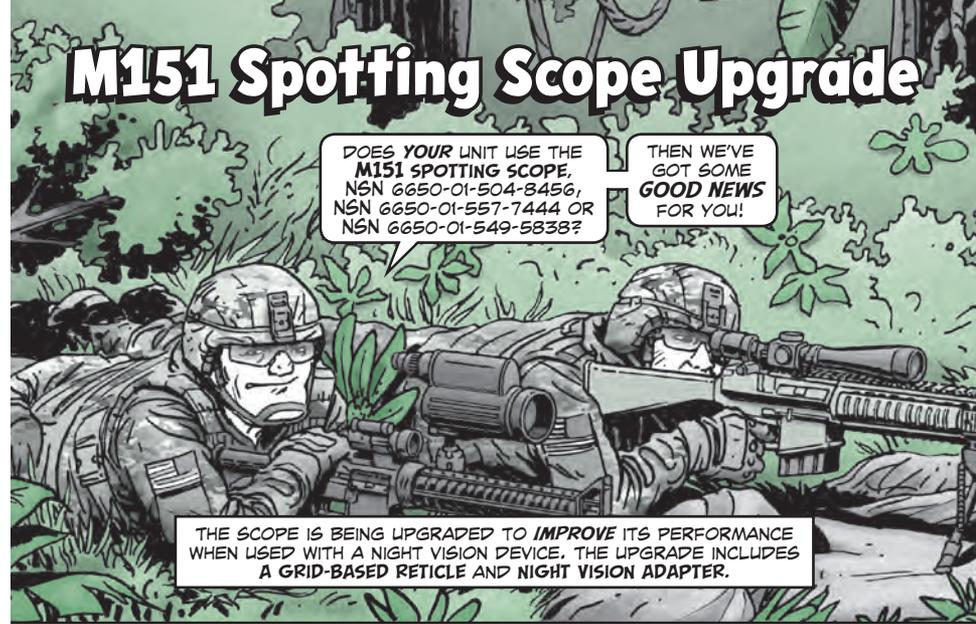


I SEE YOU REMEMBERED THE COOKING SPRAY THIS TIME!

I'LL BE ABLE TO HELP YOU CLEAN UP BETTER!

Cooking Spray

# M151 Spotting Scope Upgrade



DOES YOUR UNIT USE THE M151 SPOTTING SCOPE, NSN 6650-01-504-8456, NSN 6650-01-557-7444 OR NSN 6650-01-549-5838?

THEN WE'VE GOT SOME GOOD NEWS FOR YOU!

THE SCOPE IS BEING UPGRADED TO **IMPROVE** ITS PERFORMANCE WHEN USED WITH A NIGHT VISION DEVICE. THE UPGRADE INCLUDES A GRID-BASED RETICLE AND NIGHT VISION ADAPTER.

AUTHORIZED SCOPES ARE BEING UPGRADED TO **IMPROVE** THEIR PERFORMANCE WHEN USED WITH A NIGHT VISION DEVICE. THE UPGRADE INCLUDES A GRID-BASED RETICLE AND NIGHT VISION ADAPTER.

THE UPGRADE WILL BE DONE BY MWO 9-6650-238-50-1.

THE OLD SPOTTING SCOPES WILL BE SWAPPED OUT AT:

- CAMP ROBINSON
- EGLIN AIR FORCE BASE
- FT BENNING
- FT BLISS

- FT BRAGG
- FT CAMPBELL
- FT CARSON
- FT DRUM

- FT HOOD
- FT LEWIS
- FT POLK
- FT STEWART

THE SWAPS WILL BE SCHEDULED THROUGH FORSCOM IN ACCORDANCE WITH AR 750-10. TACOM IS MANAGING THE MWO.

IF YOUR UNIT ISN'T LOCATED AT ONE OF THESE POSTS, THE SWAP WILL BE HANDLED BY MAIL.

CONTACT YOUR LOCAL MWO COORDINATOR FOR INSTRUCTIONS. IT WILL TAKE ROUGHLY A MONTH FOR THE MAIL-IN SWAP.



WHETHER YOUR M151 IS BEING SWAPPED OUT LOCALLY OR MAILED IN, IT SHOULD BE STRIPPED DOWN AND CONTAIN **NO DOWN PARTS**.

ANY PARTS TURNED IN OTHER THAN THE SCOPE **WON'T** BE RETURNED AND IT WILL BE THE UNIT'S RESPONSIBILITY TO REPLACE THEM.

## QUESTIONS?

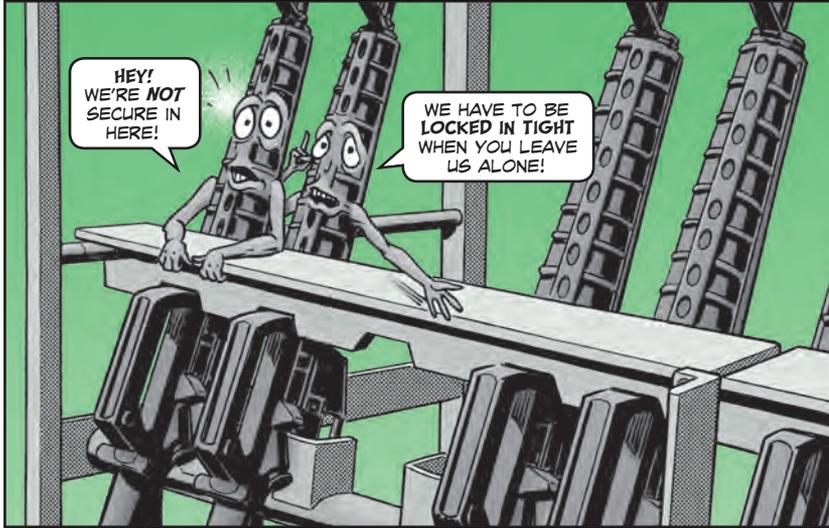
CONTACT BUCK SEWELL AT (586) 282-1333 OR EMAIL:

[ernest.g.sewell.civ@mail.mil](mailto:ernest.g.sewell.civ@mail.mil)

OR CHRISTOPHER KLINE AT (586) 282-1357 OR EMAIL:

[christopher.m.kline4.civ@mail.mil](mailto:christopher.m.kline4.civ@mail.mil)

# Unmodified M12 Rack Won't Secure M16A4, M4



Dear Editor,

As a TACOM armament LAR, I visit many arms rooms where I see M4/M4A1 carbines stored in unmodified M12 racks. Without the addition of an adapter bar, the M4s can easily be removed from the rack. That's a violation of AR 190-11, *Physical Security of Arms, Ammunition and Explosives*. Can you spread the word that units need to make sure they add the adapter bar?

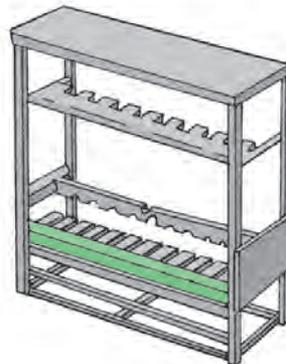
James Wood



**WITHOUT** THE ADAPTER BAR, YOU **CAN'T** SECURELY LOCK IN THE M4/M4A1S OR THE M16A4 WITH A CARRYING HANDLE.

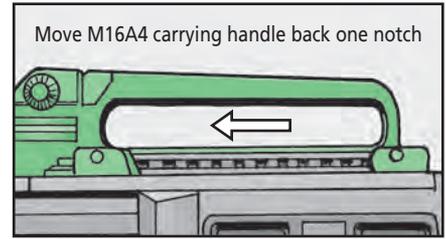
YOUR FIELD SUPPORT SHOULD MAKE THE ADAPTER BAR FOLLOWING THE INSTRUCTIONS IN WP 0036-1 IN TM 9-1005-319-23&P (NOV 08).

Adapter bar needed to secure M16A4 and M4/M4A1



TO LOCK AN M16A4 WITH A CARRYING HANDLE IN THE M12 RACK WITH THE ADAPTER BAR, YOU MAY NEED TO **MOVE THE CARRYING HANDLE BACK ONE NOTCH** TO THE REAR.

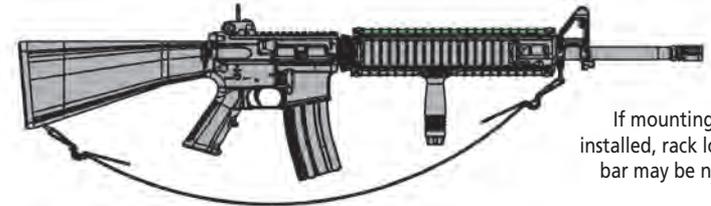
BUT THEN THE CARRYING HANDLE MUST BE RETURNED TO THE ORIGINAL POSITION FOR FIRING TO MAINTAIN THE ZERO. MAKE SURE THE SOLDIER THE RIFLE BELONGS TO KNOWS THAT.



THE STANDARD ADAPTER RAIL SYSTEM INSTALLED ON THE M16A4 OR M4/M4A1 WILL PREVENT THE M12 FROM CLOSING.

IN THAT CASE, A SINGLE LOCKING BAR IS NEEDED. TO GET INSTRUCTIONS FOR FABRICATING A SINGLE LOCKING BAR, CONTACT TACOM'S ARTHUR JANKOWSKI AT (586) 282-0927, D5N 786-0927, OR EMAIL:

[arthur.m.jankowski.civ@mail.mil](mailto:arthur.m.jankowski.civ@mail.mil)

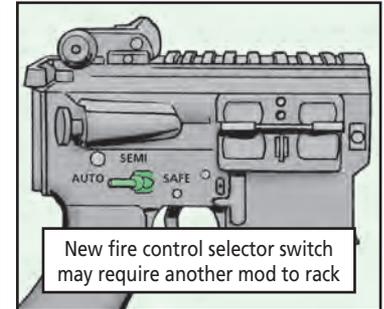


If mounting rail is installed, rack locking bar may be needed

## THAT'S NOT ALL!

WHEN YOU INSTALL THE NEW FIRE CONTROL SELECTOR SWITCH, NSN 1005-01-585-6042, ON THE M16 OR THE M4/M4A1 CARBINE YOU MAY NEED TO MODIFY THE M12 RACK ONCE AGAIN. THAT'S BECAUSE THE NEW FIRE CONTROL SELECTOR **ADDS 1/4 INCH** TO THE LEFT SIDE OF THE WEAPON.

TACOM HAS PUBLISHED MAINTENANCE INFORMATION MESSAGE (MIM) 16-002 THAT TELLS YOU HOW TO INSTALL THE NEW SWITCH, PLUS HOW TO MODIFY THE OLDER M12 RACKS SO THAT M4S AND M16S WITH THE NEW SWITCH WILL FIT SECURELY.

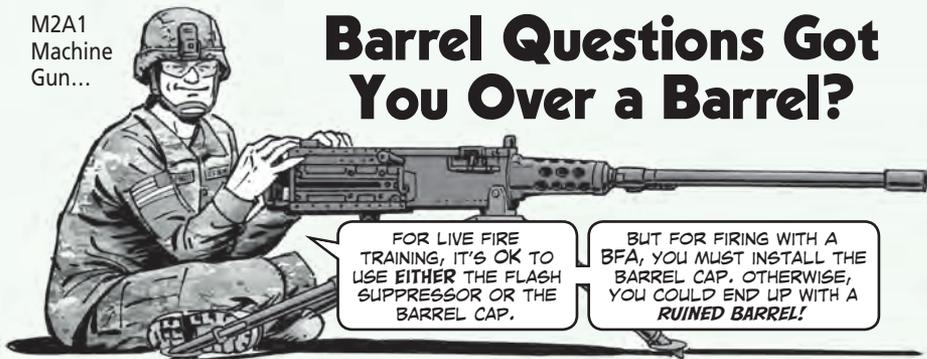


TO FIND MIM 16-002, GO TO:

<https://tulsa.tacom.army.mil/Maintenance/message.cfm?id=M16-002.html>



# Barrel Questions Got You Over a Barrel?



FOR LIVE FIRE TRAINING, IT'S OK TO USE EITHER THE FLASH SUPPRESSOR OR THE BARREL CAP.

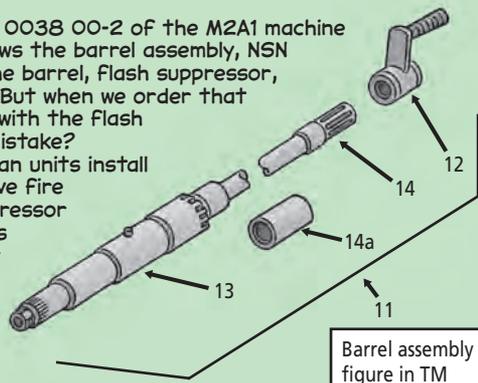
BUT FOR FIRING WITH A BFA, YOU MUST INSTALL THE BARREL CAP. OTHERWISE, YOU COULD END UP WITH A RUINED BARREL!

Dear Half-Mast,

The bracket for Item 11 in WP 0038 00-2 of the M2A1 machine gun's TM 9-1005-347-23&P shows the barrel assembly, NSN 1005-01-541-2478, to include the barrel, flash suppressor, barrel cap and carrying handle. But when we order that NSN, we receive only the barrel with the flash suppressor installed. Is this a mistake?

One other barrel question: Can units install the thread protector cap for live fire training or must the flash suppressor be installed? I'm concerned units won't use the thread protector cap with the blank firing attachment (BFA), which could lead to a ruined \$1,300 barrel.

SFC J.D.



Barrel assembly figure in TM

Dear Sergeant,

The bracket for Item 11 in WP 0038 00-2 does confuse things and will be removed in the next revision to the TM.

When you order NSN 1005-01-541-2478, you'll receive only the barrel and the installed flash suppressor.

The barrel carrying handle (Item 12), NSN 1005-01-539-3410, is BII and should not be turned in with a damaged barrel.

The barrel cap (Item 14A), NSN 5340-01-545-2949, is BII for the BFA, which is covered by TM 9-1005-314-13&P. It also should be kept and not turned in with a damaged barrel.

Now for your second question. Yes, the barrel cap can be used in place of the flash suppressor during live fire training. When the BFA is going to be used, the barrel cap should be installed like it says in the BFA TM. Remember there is also a barrel protective cap, NSN 5340-01-552-0082, which protects the barrel breech threads. Don't mix up the caps.

*Half-Mast*

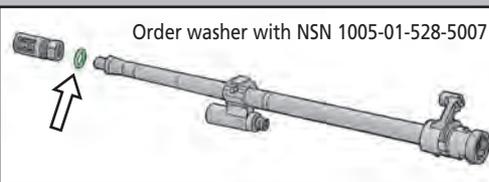
# What's the Short Barrel Washer NSN?

Dear Half-Mast,

The M249 machine gun's TM 9-1005-201-23&P shows washers for both long barrel and short barrel compensators in WP 0017-13. Unfortunately, there's no NSN listed for the short barrel washer. Can you help?

Mr. D.L.

YOU BET WE CAN, SIR! THE SHORT BARREL WASHER COMES WITH NSN 1005-01-528-5007. YOU'LL FIND IT LISTED AS ITEM 14 IN WP 0042-2 OF TM 9-1005-201-23&P (OCT 14).



Order washer with NSN 1005-01-528-5007



# Special Tools? Look in TM

Dear Editor,

Through my work as a civilian small arms repairman at Ft Benning, I run into 91F small arms repairmen who aren't aware of the special tools that should be fabricated for the M16 rifle and M4/M4A1 carbine.

They need to be aware because these tools make their job easier. And the plans for the tools are all in the M16/M4's TM 9-1005-319-23&P, beginning in WP 0030-2.

The tools are:

- Front sight detent depressor
- Front sight post removal and installation tool
- Pivot pin removal tool
- Pivot pin installation tool
- Slave pin
- Adapter bar for M12 arms rack
- Modified needle-nose pliers

Scott Taylor

GREAT POINT, SCOTT! EVERY SMALL ARMS REPAIRMAN SHOULD HAVE THESE TOOLS IN HIS KIT. YOUR SUPPORT CAN MAKE THE TOOLS FOR YOU.



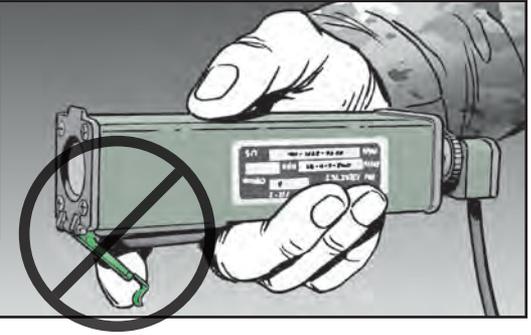
# RADIAC REMINDERS



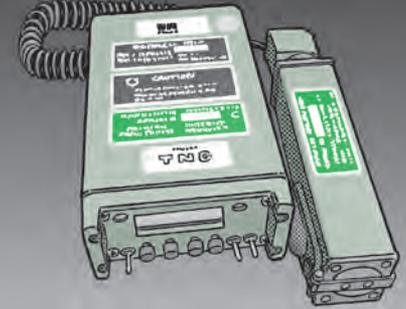
THE AN/VDR-2 RADIAC SET DOESN'T GET MUCH ATTENTION AT MOST UNITS... UNTIL IT ACTUALLY NEEDS TO BE USED.

HERE ARE A FEW RADIAC REMINDERS TO MAKE SURE THE AN/VDR-2 IS READY FOR DUTY...

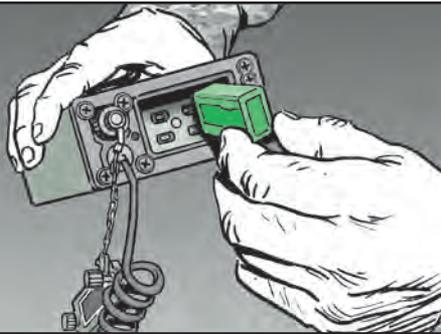
Don't squeeze the beta shield while detecting. Operators unconsciously do that, which breaks off the shield. It can take weeks to replace the shield.



When your AN/VDR-2 comes back from calibration or repair, make sure the probe and meter have the same serial numbers. Sometimes the wrong probe gets attached to the meter and then you've got accountability problems.



Don't leave batteries in AN/VDR-2s for storage. If you forget, the batteries leak and the AN/VDR-2 is damaged or even ruined. Before you lock up the AN/VDR-2 in the cabinet, check that the batteries are removed. It takes only seconds, but saves big bucks.



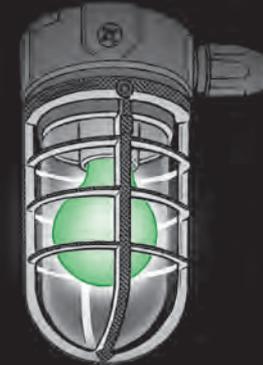
When storing the AN/VDR-2 in its case, put the probe in first and then the meter with the cable in the other compartment. If the meter goes in first, the cable ends up partly in the probe section of the case. When you pull out the meter, the cable hangs up and is damaged.



## SATS Blue Light Special?

Dear Half-Mast,  
Is there an NSN for the blue light bulb used in the standard automotive tool set (SATS)? The part number listed in the TM doesn't cross-reference to an NSN.

Mr. T.M.

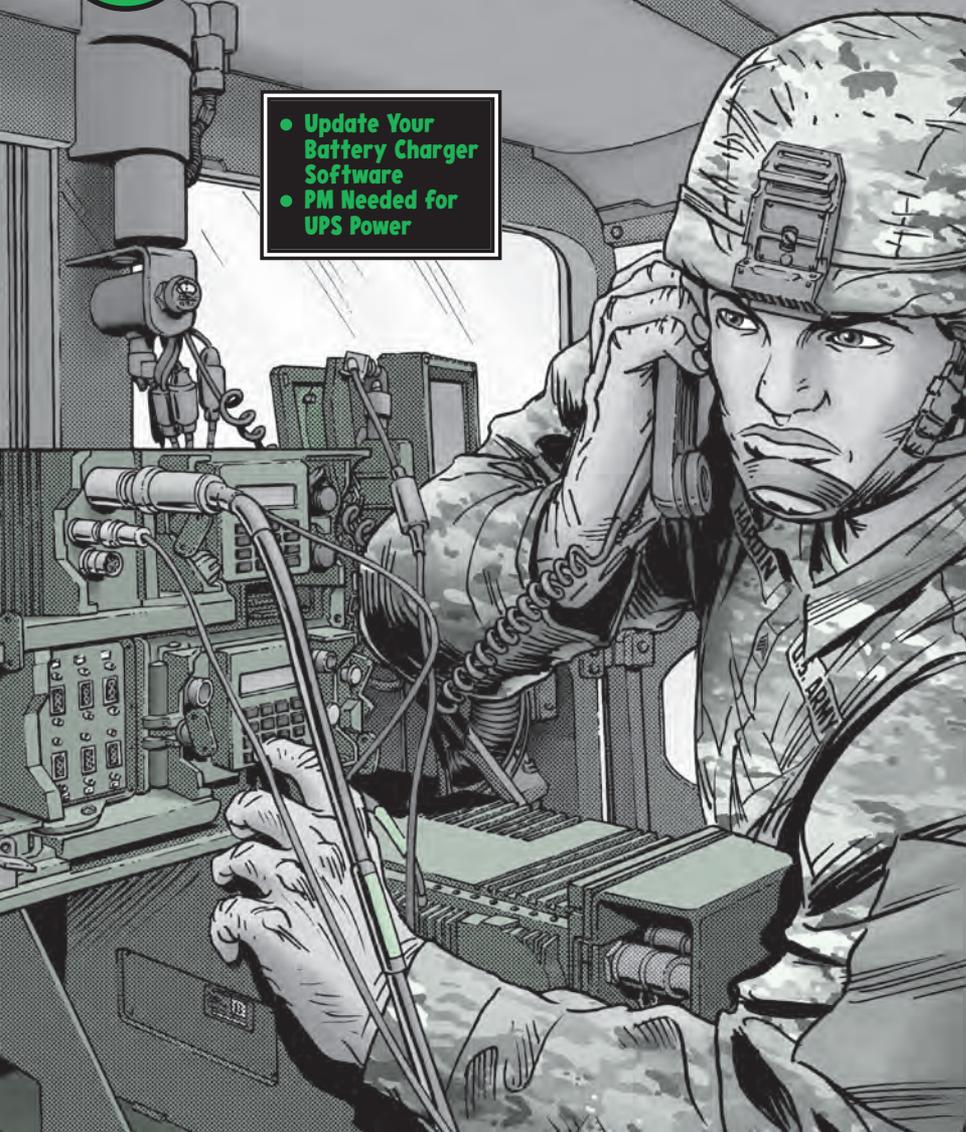


GOOD NEWS, SIR! YOU CAN GET A NEW BLUE BULB WITH NSN 6240-00-944-1293.



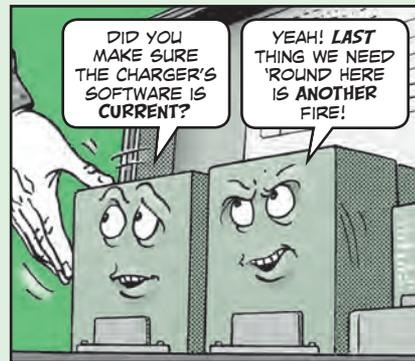
IT REPLACES PN KTC-50107, WHICH IS LISTED AS ITEM 5 IN FIG 5-13 OF TM 9-4910-783-13&P (SEP 05).

- Update Your Battery Charger Software
- PM Needed for UPS Power



BB-2590/U Rechargeable Battery...

## UPDATE YOUR BATTERY CHARGER SOFTWARE



THE BB-2590/U RECHARGEABLE LITHIUM-ION BATTERY IS GREAT BECAUSE IT'S LIGHTWEIGHT AND ITS CHARGE LASTS A LONG TIME.

BUT IF YOU DON'T CHARGE IT THE *RIGHT* WAY, YOU COULD BE IN FOR TROUBLE.



USING CHARGERS WITH OUT-OF-DATE SOFTWARE CAN CAUSE A FIRE.

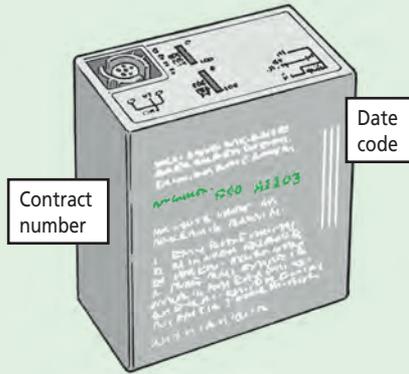
ONE RECENT FIRE CAUSED **\$5.5 MILLION** IN DAMAGE!



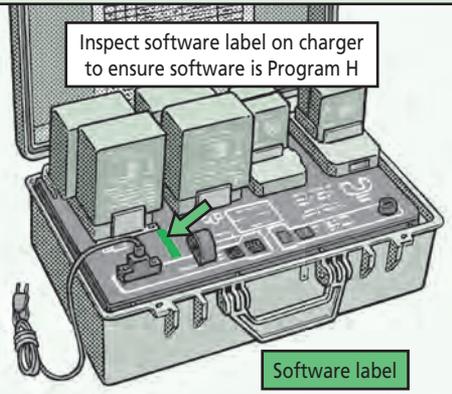
**FOLLOW THESE TIPS TO AVOID EXPENSIVE DAMAGE TO EQUIPMENT AND PERSONNEL INJURIES...**

- **Battery maintenance.** First, fully charge lithium-ion rechargeable batteries before using them the first time and at least once a year afterwards. *Don't* use commercial versions of Army-issued batteries or chargers. They aren't approved for military use.

Batteries approved for military use will have a contract number above the date code. Military-approved chargers have the contract number listed on the charger faceplate.



- **Inspection.** Check the program label on your charger to find if its software needs to be updated. The correct software version is Program H for PP-8498/U soldier portable chargers (SPC), NSN 6130-01-495-2839, and Program C for PP-8481B/U vehicle mounted chargers (VMC), NSN 6130-01-527-2726. Note that the PP-8481A/U charger on the move (COTM), NSN 6130-01-494-9164, cannot be updated.



- **Software update.** If you need updated software, go to this website to download and install the correct version: <http://go.usa.gov/3v8KP>

You'll need a USB-to-serial cable such as NSN 6150-01-558-7214, or a DB9 male to DB9 female serial cable with straight through connections. Do not use a null cable.

- **Monitored charging.** If you have to charge batteries before you can update your charger's software, *don't* leave the charger unattended. That's a fire hazard. Signs of trouble include batteries that are hot to the touch or have smoke coming from them. It's a good idea to always keep a fire extinguisher on hand while the charger is in use.

ALSO, **DON'T** CHARGE MORE THAN TWO BATTERIES AT THE SAME TIME IF THE SOFTWARE IS **OUT OF DATE!**

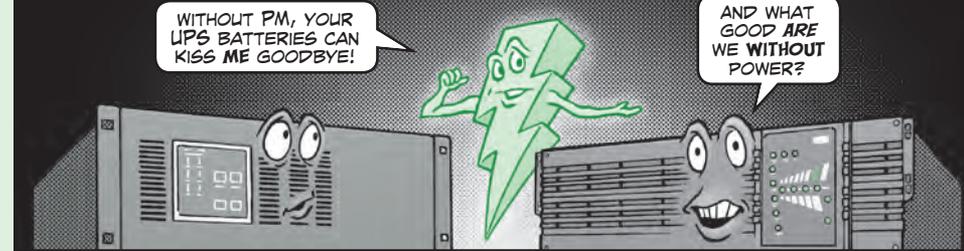
CHECK OUT THE USER MANUAL OR THE MATRIX PRINTED INSIDE THE CHARGER LID. BOTH'LL TELL YOU HOW TO PROPERLY INTERPRET THE CHARGER LIGHTS SO YOU CAN AVOID OVERCHARGING THE BATTERIES.



# PM Needed for UPS Power

WITHOUT PM, YOUR UPS BATTERIES CAN KISS ME GOODBYE!

AND WHAT GOOD ARE WE WITHOUT POWER?



ALMOST EVERY TACTICAL ARMY SYSTEM USES AN UNINTERRUPTIBLE POWER SUPPLY (UPS) FOR EMERGENCY BACK-UP POWER. THAT ALLOWS OPERATIONS TO CONTINUE, EVEN WITH PRIMARY POWER FAILURE, LIKE A GENERATOR OR VEHICLE.



THE INTERNAL BATTERIES ON A UPS HAVE TO BE MAINTAINED.

**THAT MEANS:**

- PROTECTING THE UPS FROM RAIN AND OTHER BAD WEATHER CONDITIONS
- KEEPING THE FILTERS CLEAN
- FOLLOWING THE MANUFACTURER'S GUIDELINES AND OPERATING INSTRUCTIONS.

IF YOU *DON'T*, THERE WILL BE NO BACK-UP POWER WHEN YOU *NEED* IT MOST.

TOO OFTEN, A UPS IS TURNED IN FOR REPAIR AND FOUND TO HAVE DEPLETED BATTERIES FROM A LACK OF PROPER MAINTENANCE!

HERE'S SOME NEED-TO-KNOW BATTERY MAINTENANCE INFO FOR TWO UPSs COMMONLY USED BY THE ARMY:

INTELLIPOWER 1-KW UPS AND TRIPP LITE UPS

## Intellipower 1-kw UPS, NSN 6120-01-538-5514

DO NOT ATTEMPT TO REMOVE OR REPLACE THE INTERNAL BATTERIES FOR THE INTELLIPOWER 1-KW UPS.

THERE IS THE POTENTIAL FOR SEVERE SHOCK THAT COULD RESULT IN SERIOUS INJURY OR DEATH.

INSTEAD, RETURN THE PRODUCT TO THE MANUFACTURER FOR BATTERY REPLACEMENT OR PRODUCT SERVICE. FOR HELP, CALL THE COMMON HARDWARE SYSTEMS HOTLINE TOLL-FREE AT (877) 247-7711.



WHEN PLACED IN STORAGE, THE BATTERIES IN THIS UPS UNDERGO AN INTERNAL CHEMICAL REACTION THAT **REDUCES** THEIR STORED CHARGE. THIS SELF-DISCHARGE DECREASES THE BATTERIES' SHELF LIFE.

THE PROCESS HAPPENS EVEN FASTER IF THE BATTERIES ARE STORED AT **HIGH TEMPERATURES**.

HELLO!?

HELLO!?

STORAGE

DUDE, I THINK THEY **FORGOT** ABOUT US!

IF THE TRIPP LITE UPS IS STORED FOR AN EXTENDED PERIOD OF TIME, THE BATTERIES WILL SELF-DISCHARGE, THE VOLTAGE WILL DROP AND THE UPS WILL NO LONGER POWER ON.

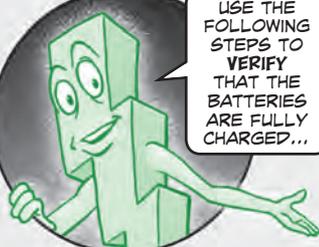
IF THE BATTERY STAYS FULLY DISCHARGED FOR TOO LONG, THE BATTERIES ARE **PERMANENTLY DEGRADED** AND HAVE TO BE **REPLACED**.



**DO NOT ATTEMPT TO REMOVE OR REPLACE THE INTERNAL BATTERIES FOR THE TRIPP LITE UPS.**

**DOING SO MAY RESULT IN SEVERE SHOCK LEADING TO SERIOUS INJURY OR DEATH.**

IT'S RECOMMENDED THAT YOU RECHARGE THE UPS' INTERNAL BATTERIES EVERY THREE MONTHS. RECHARGING IS PERFORMED BY POWERING ON THE UPS AND ALLOWING IT TO RUN FOR FOUR TO SIX HOURS WHILE PLUGGED INTO AN AC POWER SOURCE.



USE THE FOLLOWING STEPS TO **VERIFY** THAT THE BATTERIES ARE FULLY CHARGED...

1. Press and hold the **ON** button until you hear a beep and the **ON LINE** LED illuminates.
2. Unplug the UPS from its AC power source.
3. Verify that the battery's **100%** LED is illuminated.
4. Plug the UPS back into its AC power source.
5. Press and hold the **OFF** button until you hear a beep. The **ON LINE** LED will turn off.
6. Unplug the UPS from its AC power source.

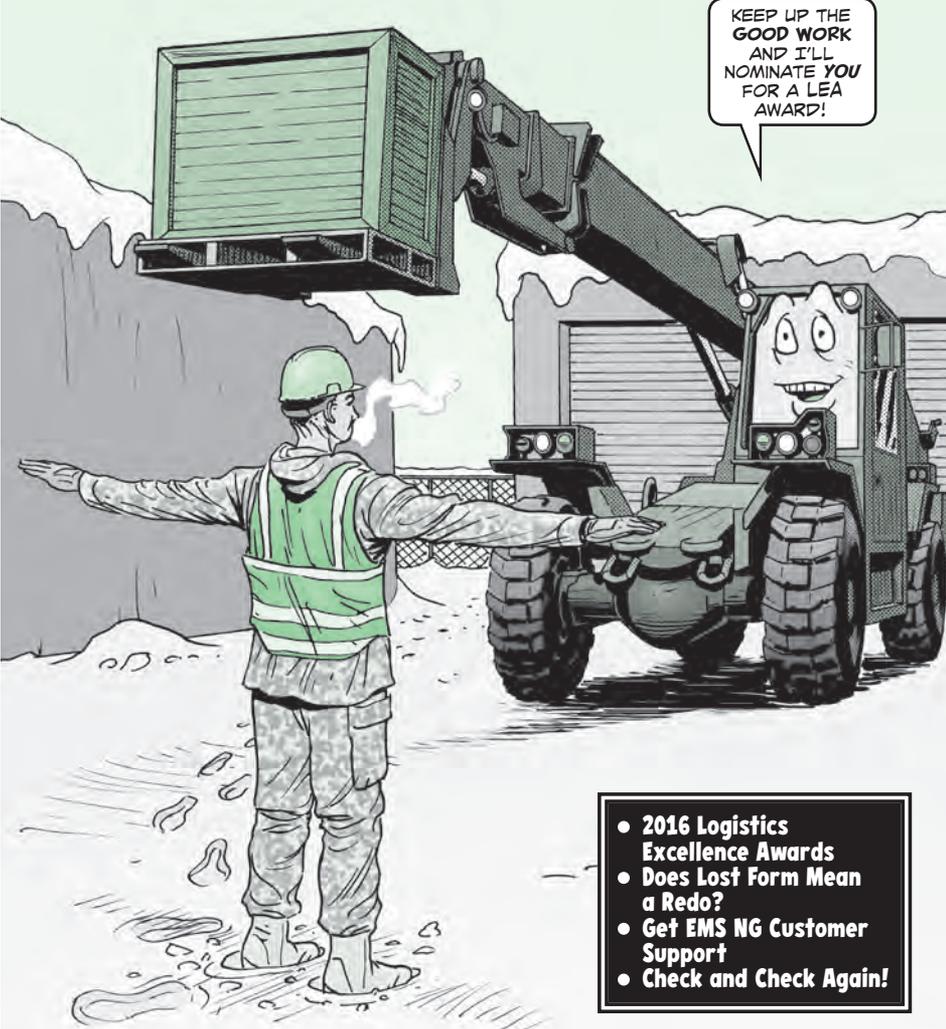
NOTE THAT A UPS STORED AT **ELEVATED TEMPERATURES** WILL REQUIRE **MORE FREQUENT** RECHARGING.

IT'S RECOMMENDED THAT BATTERY RECHARGING TAKE PLACE EVERY 30 TO 45 DAYS FOR A UPS STORED AT TEMPERATURES EXCEEDING 78°F.



**REMEMBER THESE WARNINGS:**

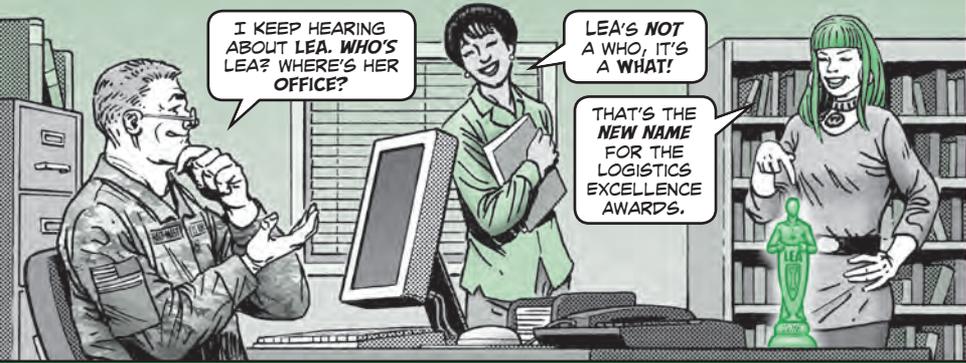
- Voltage for the Tripp Lite UPS batteries is 48VDC. **Do not** attempt to replace them while in a field environment.
- **Do not** open the UPS covers or directly or indirectly contact the UPS battery or power terminals.
- **Not following these instructions could result in electrical shock and serious personal injury or death.**

KEEP UP THE **GOOD WORK** AND I'LL NOMINATE YOU FOR A LEA AWARD!

- **2016 Logistics Excellence Awards**
- **Does Lost Form Mean a Redo?**
- **Get EMS NG Customer Support**
- **Check and Check Again!**

# 2016 Logistics Excellence Awards



I KEEP HEARING ABOUT LEA. WHO'S LEA? WHERE'S HER OFFICE?

LEA'S NOT A WHO, IT'S A WHAT!

THAT'S THE NEW NAME FOR THE LOGISTICS EXCELLENCE AWARDS.



WE OLD-TIMERS GOTTA CATCH UP, HALF-MAST! CLEA IS NOW LEA.

THE NAME MAY BE DIFFERENT, BUT THE AWARDS ARE EVERY BIT AS AWESOME!

*Congratulations*  
TO THE WINNERS AND RUNNERS-UP OF THE 2016 CHIEF OF STAFF, ARMY LOGISTICS EXCELLENCE AWARDS.

**YOUR SELECTION PUTS YOU AMONG THE BEST IN THE ARMY.**

## "Best of the Best" Crowned!



THIS YEAR'S TOP THREE WINNERS IN THE MAINTENANCE, DEPLOYMENT AND SUPPLY CATEGORIES ARE...

- MAINTENANCE:**  
7th Korean Svc Corps CO, Camp Casey, Korea (USARPAC)
- DEPLOYMENT:**  
Logs Readiness Ctr, Ft Riley, KS (AMC)
- SUPPLY:**  
5th BN, 7th ADA Regt,  
10th Army Air and Missile Defense Cmd, Baumholder, Germany (USAREUR)

## ARMY AWARDS FOR MAINTENANCE EXCELLENCE

### ACTIVE ARMY DEPOT LEVEL

Winner: Anniston Army Depot, Anniston, AL

### ACTIVE ARMY MTOE

#### Small Category

Winner: E CO FSC, 3d SF BN, 7th SFG (Abn), Eglin AFB, FL

Runner-up: HHD, 759th MP BN, Ft Carson, CO

#### Medium Category

Winner: 58th MP CO, 728th MP BN, Schofield Barracks, HI

Runner-up: 1st Inland Cargo Transfer CO, 18th CSSB, Grafenwoehr, Germany

#### Large Category

Winner: 532d MI BN, Camp Humphreys, Korea

Runner-up: 864th Eng BN, 555th Eng BDE, JBLM, WA

### ACTIVE ARMY TDA

Winner: Materiel Spt Cmd—Korea, Camp Carroll, Korea

Runner-up: AFSB—NE Asia, Camp Carroll, Korea

### ARMY RESERVE MTOE

#### Small Category

Winner: 467th Trans Floating Craft CO, 385th Terminal BN, Tacoma, WA

#### Medium Category

Winner: 851st Trans CO, 319th CSSB, Sinton, TX

Runner-up: E CO, 8-229th Attack Reconnaissance BN, Ft Knox, KY

### ARMY RESERVE TDA

Winner: Area Maint Spt Acty #147 (G), 81st Reg Spt Cmd, Grey, TN

### AVIATION

Winner: 3d MI BN (Aerial Exploitation), Camp Humphreys, Korea

### NATIONAL GUARD MTOE

#### Small Category

Winner: A BTRY, 1-118th FAR, Springfield, GA

#### Medium Category

Winner: 1128th FSC, 1st BN, 129th FA, Marshall, MO

Runner-up: 1167th BDE Spt CO, 67th Battlefield Surveillance BDE, Lincoln, NE

### NATIONAL GUARD TDA

Winner: Maneuver Area Trng Equip Site, Ft Pickett, VA

Runner-up: Field Maint Shop—Winder, Winder, GA

### ALL OTHERS

Winner: 7th Korean Svc Corps CO, Camp Casey, Korea

Runner-up: Busan Storage Ctr, Busan, Korea

## DEPLOYMENT EXCELLENCE AWARDS

### ACTIVE ARMY

#### Small Deploying Unit Category

Winner: A CO, 307th Expeditionary Sig BN, Wahiawa, HI

Runner-up: 902d Eng Construction CO, Grafenwoehr, Germany

#### Large Deploying Unit Category

Winner: 4th BN, 5th ADA, Ft Hood, TX

Runner-up: 173d Inf BCT, Vicenza, Italy

#### Supporting Unit Category

Winner: 386th Trans Det, Vicenza, Italy

Runner-up: Deployment Processing Ctr—Rhine Ord Barracks, Kaiserslautern, Germany

### ARMY RESERVE

#### Small Deploying Unit Category

Winner: 874th Trans Det, Staten Island, NY

#### Supporting Unit Category

Winner: USA Pacific Spt Unit, Honolulu, HI

### ARMY NATIONAL GUARD

#### Large Deploying Unit Category

Winner: 116th Cav BCT—Idaho, Boise, ID

Runner-up: 194th Eng BDE, Jackson, TN

### ALL ARMY INSTALLATION CONUS

Winner: Ft Riley, KS

### OCONUS

Winner: USAG-Italy, Vicenza, Italy

Runner-up: USAG—Bavaria, Grafenwoehr, Germany

### Operational Deployment Category

Winner: 1st Stryker BCT, 4th ID, Ft Carson, CO





## SUPPLY EXCELLENCE AWARDS

### ACTIVE ARMY

#### Level I (A) Company Supply MTOE

Winner: 575th Area Spt Med CO, JBLM, WA  
 Runner-up: B CO, 1st BN, 4th Inf Reg, Hohenfels, Germany

#### Level I (B) Company Supply TDA

Winner: B CO, 2d BN, 13th Inf Reg, Ft Jackson, SC

#### Level II (A) Property Book MTOE

Winner: 709th MP BN, 18th Military BDE, Grafenwoehr, Germany  
 Runner-up: 11th Trans BN, 7th Sus BDE, Ft Story, VA

#### Level II (B) Property Book TDA

Winner: USA Logs Readiness Ctr, Ft Rucker, AL

#### Level III (A) Brigade/Battalion MTOE

Winner: HHD, 509th Sig BN, Vicenza, Italy  
 Runner-up: 56th Med Multifunctional BN, JBLM, WA

#### Level III (B) Brigade/Battalion TDA

Winner: 1st BN, 40th FA, Ft Sill, OK

#### Level IV (A) SSA MTOE

Winner: 5th BN, 7th ADA BN, 10th Army Air and Missile Defense Cmd, Baumholder, Germany  
 Runner-up: Sus and Distribution CO, Grp Spt BN, 5th SF Spec Grp (Abn), Ft Campbell, KY

#### Level IV (B) SSA TDA

Winner: 5th Sig Cmd, Wackernheim, Germany

### ARMY NATIONAL GUARD

#### Level I (A) Company Supply MTOE

Winner: 147th Army Band, Mitchell, SD  
 Runner-up: 623d Eng CO, Wahoo, NE

#### Level II (A) Property Book MTOE

Winner: HQ, 347th Reg Spt Grp, Roseville, MN

#### Level III (A) Battalion MTOE

Winner: 402d MP BN, 67th Battlefield Surveillance BDE, Omaha, NE

#### Level IV (B) SSA TDA

Winner: JFHQ—Hawaii, Kapolei, HI

### ARMY RESERVE

#### Level I (A) Company Supply MTOE

Winner: 310th Trans CO, Quincy, IL

#### Level I (B) Company Supply TDA

Winner: Area Maint Spt Acty #56, Whitehall, OH

#### Level II (A) Property Book MTOE

Winner: HQ, 311th Sig Cmd (Theater), Ft Shafter, HI  
 Runner-up: 448th Eng BN, Ft Buchanan, Puerto Rico

WANT TO SEE  
 YOUR UNIT LISTED  
 HERE NEXT YEAR?

YOU CAN  
 MAKE IT  
 HAPPEN!



PS  
 END

Driver's Training...

## Does Lost Form Mean a Redo?

SO, MASTER  
 SERGEANT HALF-  
 MAST, I WAS  
 WONDERING...



... TOO MANY SOLDIERS  
 TRANSFER TO OUR UNIT  
 WITHOUT THEIR MANUAL  
 DA FORM 348,  
 EQUIPMENT OPERATOR'S  
 QUALIFICATION RECORD.

IF A SOLDIER  
 COMES TO YOUR  
 UNIT WITHOUT  
 A MANUAL  
 DA FORM 348,  
 THEY STILL  
 MIGHT HAVE  
 SOME TYPE OF  
 DOCUMENTATION  
 PROVING THAT  
 THEY TOOK  
 DRIVER'S  
 TRAINING.

DO THEY  
 HAVE TO  
 TAKE  
 DRIVER'S  
 TRAINING ALL  
 OVER AGAIN?

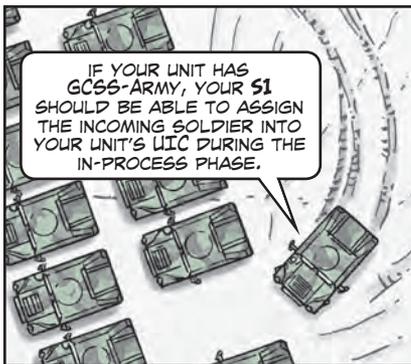
FOR EXAMPLE, A DRIVER'S TRAINING CERTIFICATE; DA FORM 5984-E (OPERATOR'S PERMIT); OF 346/5984 (US GOVERNMENT MOTOR VEHICLE OPERATOR'S IDENTIFICATION CARD); A DA FORM 348-E COMPUTER-GENERATED FORM FROM THE 5AMS-1E BOX; OR EVEN A MEMORANDUM FOR RECORD.

WHAT IF THE SOLDIER DOESN'T  
 HAVE DOCUMENTATION?

TRY CONTACTING THE  
 SOLDIER'S LOSING UNIT  
 MASTER DRIVER AND ASK  
 THEM TO SEND YOU A  
 COPY OF THE SOLDIER'S  
 DA FORM 348-E.

IF A SOLDIER OUTPROCESSES PROPERLY, THEY MUST CLEAR ALL OF THEIR UNIT'S STATIONS (LIKE THE MOTOR POOL). WHEN THEIR NAME IS DELETED FROM THE UNIT'S 5AMS-1E BOX, THE SYSTEM AUTOMATICALLY PRINTS OUT THEIR DA FORM 348-E FOR THEM TO TAKE TO THEIR NEXT ASSIGNMENT. IF THE SOLDIER DIDN'T DO THAT, THEN THEIR NAME SHOULD STILL BE IN THE LOSING UNIT'S 5AMS-1E BOX.

HAVE THE LOSING UNIT'S MASTER DRIVER PRINT OUT AND SEND YOU A COPY OF THE SOLDIER'S DA FORM 348-E. THIS PROOF SHOULD REMOVE THE NEED FOR THE SOLDIER TO RETAKE THE ENTIRE DRIVER'S TRAINING COURSE.



IF YOUR UNIT HAS GCSS-ARMY, YOUR S1 SHOULD BE ABLE TO ASSIGN THE INCOMING SOLDIER INTO YOUR UNIT'S UIC DURING THE IN-PROCESS PHASE.

ONCE THE SOLDIER'S INFO IS INPUT INTO GCSS-ARMY, YOU SHOULD BE ABLE TO SEE ALL OF THEIR DRIVER'S RECORDS IN THE SYSTEM, ASSUMING THEY WERE UPLOADED INTO GCSS-ARMY BY THEIR PRIOR MASTER DRIVER.

HOWEVER, THE SOLDIER STILL NEEDS TO BRING IN THEIR MANUAL DA FORM 348. THIS DOCUMENT **MUST** FOLLOW EVERY SOLDIER THROUGH THEIR ARMY CAREER.



WHEN A NEW SOLDIER COMES TO YOUR UNIT, WITH OR WITHOUT DA FORM 348, THEY STILL NEED TO ATTEND THE LOCAL PORTION OF YOUR DRIVER'S TRAINING PROGRAM BEFORE THEY START DRIVING ANY UNIT VEHICLE.

WHY IS THAT?



THAT'S BECAUSE DRIVING LAWS AND POLICIES VARY BY COUNTRY AND STATE.

ALSO VERIFY THAT ANY DA FORM 348-E IS SIGNED BY THEIR FORMER UNIT COMMANDER. ONE WAY TO ASSESS THE VALIDITY OF A DA FORM 348-E IS TO CHECK THE EQUIPMENT QUALIFICATION PORTION. ALL CODE, DATE, DESCRIPTION, AND VERIFIER COLUMNS SHOULD MATCH THE EQUIPMENT QUALIFICATION SECTION.



IF THE DA FORM 348-E QUALIFICATION IS NOT PROPERLY DOCUMENTED, THEN IT'S VOID.

THAT MEANS THE SOLDIER MUST RETAKE DRIVER'S TRAINING.

FOR MORE INFO ABOUT DRIVER'S TRAINING, CHECK OUT THE ARMY DRIVER STANDARDIZATION OFFICE (ADSO) WEBSITE AT: [http://www.transchool.lee.army.mil/adso/adso\\_index.htm](http://www.transchool.lee.army.mil/adso/adso_index.htm)

QUESTIONS? CONTACT ADSO AT DSN 539-1955/1859, (804) 765-1955/1859, OR EMAIL: [usarmy.lee.tradoc.list.lee-adso@mail.mil](mailto:usarmy.lee.tradoc.list.lee-adso@mail.mil)



Publications...

# Get EMS NG Customer Support



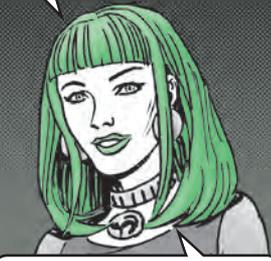
HEY BUDDY, YOU SEEM A LITTLE SLUGGISH TODAY. GOT SOME KIND OF BUG?

YEP, I SURPE THINK MY EMS NG SOFTWARE NEEDS A LIL' SGRPE TECH SUPPORT. AND I COULD USE A SGRPE COUPLE A' ANTACIDS TO BOOT.

DID YOU KNOW THAT TACOM PROVIDES TECHNICAL SUPPORT FOR YOUR ELECTRONIC MAINTENANCE SYSTEM-NEXT GENERATION (EMS NG) VIEWER AND AUTONOMOUS DIAGNOSTICS MANAGER SOFTWARE?

NO, I DIDN'T.

THE EMS NG POWERS YOUR HEMTT, HET, PLS, M915, HMMWV AND OTHER INTERACTIVE ELECTRONIC TECHNICAL MANUALS (IETMS)...



...SO IF IT'S NOT WORKING RIGHT, YOU'LL NOTICE.



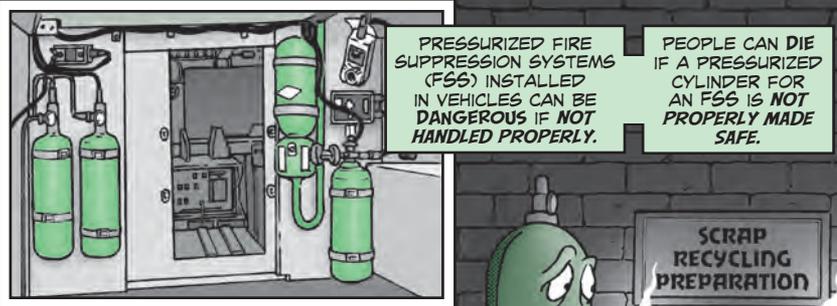
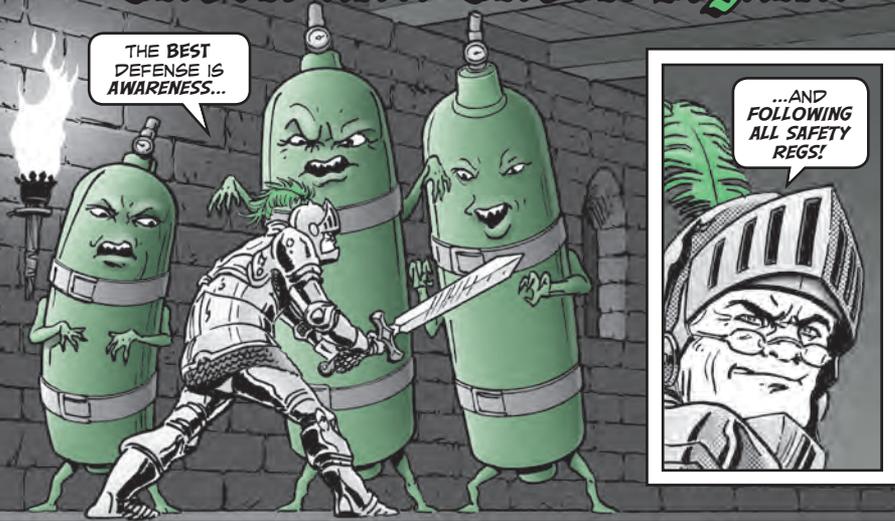
IF YOU NEED ASSISTANCE WITH THE EMS NG SOFTWARE, SUBMIT A HELP TICKET ON THE EMS SUPPORT SITE AT: <http://www.ems-helpdesk.com>

AFTER YOU REGISTER FOR AN ACCOUNT, YOU CAN OPEN, VIEW, AND TRACK INCIDENTS FROM START TO FINISH. LOG IN WITH YOUR EMS WEB PORTAL CREDENTIALS. IF YOU DO NOT HAVE CREDENTIALS, SIMPLY REGISTER TO RECEIVE A USERNAME AND PASSWORD.

YOU CAN ALSO CALL THE HELP DESK AT 1-877-445-1780, MONDAY-FRIDAY, 7:30 A.M. TO 4:30 P.M. EST, OR EMAIL: [support@ems-helpdesk.com](mailto:support@ems-helpdesk.com)

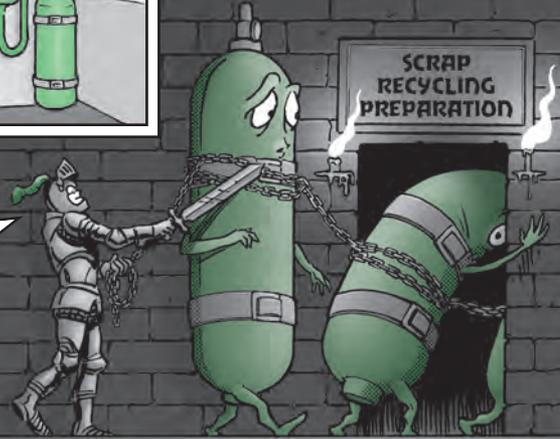
Click here for a copy of this article to save or email.

# Safety... Check and Check Again!



THAT POTENTIAL FOR DEADLY INJURY IS WHY THE DEFENSE LOGISTICS AGENCY (DLA) **CANNOT** ACCEPT PHYSICAL CUSTODY OF CYLINDERS...

...EXCEPT THOSE THAT HAVE BEEN **EVACUATED AND RENDERED INERT** FOR SCRAP RECYCLING, AS MANDATED BY PARA 41, VOLUME 4 IN DOD 4160.21-M (OCT 15).



ANYONE PLANNING TO WORK ON ANY PRESSURIZED CYLINDERS MUST ALSO **ENSURE** THAT THEIR WORK IS DONE IN ACCORDANCE WITH THE APPLICABLE JOINT SERVICES AND DLA REGULATIONS, PLUS ANY CONTROLS THAT THEIR UNIT OR INSTALLATION MAY HAVE.

High-pressure cylinders (600-1000 psi) in FSS should only be handled by trained technicians

DLA DISPOSITION SERVICES IS ONLY AUTHORIZED TO PHYSICALLY RECEIVE CYLINDERS THAT ARE DETERMINED TO BE AND RENDERED AS SCRAP.

FOR THE FSS, THE CYLINDER NEEDS TO BE REMOVED WITH ITS VARIOUS SAFETY AND CONTROL DEVICES IN PLACE.

THE JOINT SERVICES REGULATION INSTRUCTS THE OWNING ORGANIZATION TO REMOVE THE VALVE, DRILL A HOLE IN THE CYLINDER AND STENCIL IT AS **CONDEMNED.**

THE CYLINDER CONTAINS GASEOUS SUPPRESSION AGENTS AND NITROGEN AND SHOULD BE RECEIVED IN PLACE.

IT MAY BE PROCESSED THROUGH A DLA DISPOSITION SERVICES ENVIRONMENTAL CONTRACT.

### Important Safety Reminder

DLA WORKERS HAVE ALSO FOUND AMMUNITION AND EXPLOSIVE (AE) ITEMS WHILE PREPPING VEHICLES FOR DEMIL. **MORE SERIOUS RED FLAGS!**

PRIOR TO TURNING IN ANY VEHICLES TO DLA DISPOSITION SERVICES, MAKE SURE THAT THE FOLLOWING ARE REMOVED FROM THE VEHICLES OR RENDERED INERT:

- All pressurized systems and cylinders, including FSS
- Any AE items

ANY VEHICLE PREVIOUSLY USED IN COMBAT OR LIVE-FIRE EXERCISES IS CONSIDERED A MATERIAL POTENTIALLY PRESENTING AN EXPLOSIVE HAZARD (MPPEH) AND REQUIRES A MATERIAL DOCUMENTED AS SAFE (MDAS) STATEMENT AND AN INERT CERTIFICATE.

REMEMBER TO **DOUBLE-CHECK** ANY VEHICLES YOU'RE TURNING IN, EVEN **BEFORE** THEY GO TO MDAS INSPECTION.

EXTRA EYES SCRUBBING TURN-INS REDUCES THE RISK OF DANGEROUS ITEMS ENTERING FACILITIES AND THE SUPPLY CHAIN.

FOR SPECIFIC GUIDANCE, SEE "PROPERTY REQUIRING SPECIAL PROCESSING" AT: <http://www.dla.mil/DispositionServices/Offers/Disposal/turnin/special.aspx>

**QUESTIONS? CALL YOUR LOCAL DLA DISPOSITION SERVICES OFFICE OR EMAIL: DRMSRTD@dlm.mil**

**REMEMBER, SAFETY COMES FIRST WHEN DEALING WITH VEHICLE FSS OR HANDLING CYLINDERS.**

### CS563D Vibratory Roller Hydraulic System Hose Assembly

Get the hydraulic oil cooler hose assembly for your CS563D vibratory roller with PN 179-9342, PN 152-0254, which is shown as Item 5 on Page 44 of TM 5-3895-383-24P (Sep 99, w/Ch 1, Sep 03), brings a hose that is too short. Until an NSN is assigned, order the assembly on a DD Form 1348-6 using the PN and CAGE 11083. You can also get the part through local purchase from a CAT dealer.

### Turn In Unserviceable Black Hawk ESIS Displays

The supply system is in critical need of Black Hawk electronic standby instrument system displays, NSN 6610-01-545-0766 (PN 501-1851-2402). Fully support the maintenance and repair program by turning in this critically needed asset **now**. If a replacement ESIS display for the UH-60M isn't available, order the Chinook display, NSN 6610-01-598-6052, instead. That ESIS display is compatible with the UH-60M based on air worthiness release (AWR) 1726 and is not in short supply.

### Turn in Unserviceable Black Hawk ESIS Computers

The supply system is in critical need of unserviceable Black Hawk electronic standby instrument system (ESIS) computers, NSN 6610-01-614-3703 (PNs 9200-30000-058 and 70600-01822-106). Fully support the maintenance and repair program by turning in this critically needed asset **now**. If you don't, you might not get that repair part when it's needed for your helicopter.

### MEP-804A/B, MEP-814A/B 15-kW Generator Voltage Regulator

Two of the voltage regulator NSNs listed as Item 55 in Fig 7 of TM 9-6115-643-24P (Jul 10) were swapped. NSNs 6110-01-379-7187 and 6110-01-368-7123 should be transposed. Until the TM is corrected, here's how Item 55 should read:

Item	Army	Air Force	NSN	CAGE	PN	Description and UOC	Qty
55	PAFZZ	PAOZZ	6110-01-363-0493	30554	01-21501-1	Regulator, voltage UOC: EMK, 86Q	1
55	PAFZZ	PAOZZ	6110-01-368-7123	30554	01-21501-2	Regulator, voltage UOC: EMK, 86Q	1
55	PAFZZ	PAOZZ	6110-01-379-7187	30554	01-21507-1	Regulator, voltage UOC: YNN, 86R	1

### ATLAS II Level Controller NSN

Get the auto-level controller for your ATLAS II forklift with NSN 5998-01-571-8808 (PN 1600446). It's shown as Item 28 in Fig 56 of TM 10-3930-677-13&P in IETM EM 0296 (Jan 10). When TM 10-3930-677-23&P is released, the controller will be shown as Item 25 in Figure 56 and listed as a "circuit card assembly."

### ATLAS II Forklift TMs

A revised operator's manual, lube order and IETM are in the works for the ATLAS II forklift. To get the manuals to you faster, TACOM needs a rough estimate of how many will be needed to support the forklift. Contact TACOM's Marcus Clemons at DSN 330-6113, (586) 467-6113 or by email:

[marcus.a.clemons.civ@mail.mil](mailto:marcus.a.clemons.civ@mail.mil)

You'll need to provide the unit's UIC, DODAAC, POC info, mailing address and quantity of each manual required.

### How to Check Army Forms, Pubs

Need to know if an Army publication or form is still active or valid? Check out DA Pam 25-30, *Consolidated Index of Army Publications and Blank Forms*. The Army Publishing Directorate (APD) has it. Go to: <http://www.apd.army.mil/>

In the dropdown box at the top of APD's main page, choose "Publications," then click Administrative and PAM-DA Pamphlets. Scroll down to find DA Pam 25-30.

### M1117 ASV Windshield Washer Pump

The wrong NSN and PN are listed for the M1117 armored security vehicle's (ASV) windshield washer pump, which is listed as Item 10 in Fig 194 of TM 9-2320-307-24P (Sep 10). The SMR code should be XAFZZ, which means order the next higher assembly. That's Item 9, the windshield washer reservoir with pump assembly, NSN 2540-01-178-7218. That NSN brings both the reservoir and the pump.

### FMTVs with C7 Engine Fuel/Water Separator Bracket

Get a replacement fuel/water separator bracket for your FMTV with C7 engine by ordering NSN 5340-01-626-1762. NSN 5340-01-524-8206, which is shown as Item 11 in Fig 1031 of TM 9-2320-391-13&P in IETM EM 0195 (Aug 15), is a terminal item.

### M240L Flash Hider NSN

Page 43 of PS 755 (Oct 15) gave the wrong NSN for the M240L machine gun short barrel flash hider. The correct NSN is 1005-01-561-3292.

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

**Would You Stake Your Life *right now* on the Condition of Your Equipment?**



WHEN IT'S  
*TIME TO DO*  
PM...

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this article to  
save or email.

...DON'T STOP  
TILL YOU REACH THE  
BOTTOM FLOOR!