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TB 43-PS-579

NEED HELP? JUST ASK!

There's no excuse for guessing when you're not sure about a maintenance procedure on your equipment. Maintenance by trial and error won't cut it. It can lead to damaged equipment, injury or worse.

Your tech manuals should be your first source of information. They're a lot better at explaining WHAT and HOW to care for your equipment than they used to be.

But if your TMs don't spell it out clearly enough, check with your direct support folks or the Logistics Assistance Office. LARs don't have all the answers, but they know where to get them.

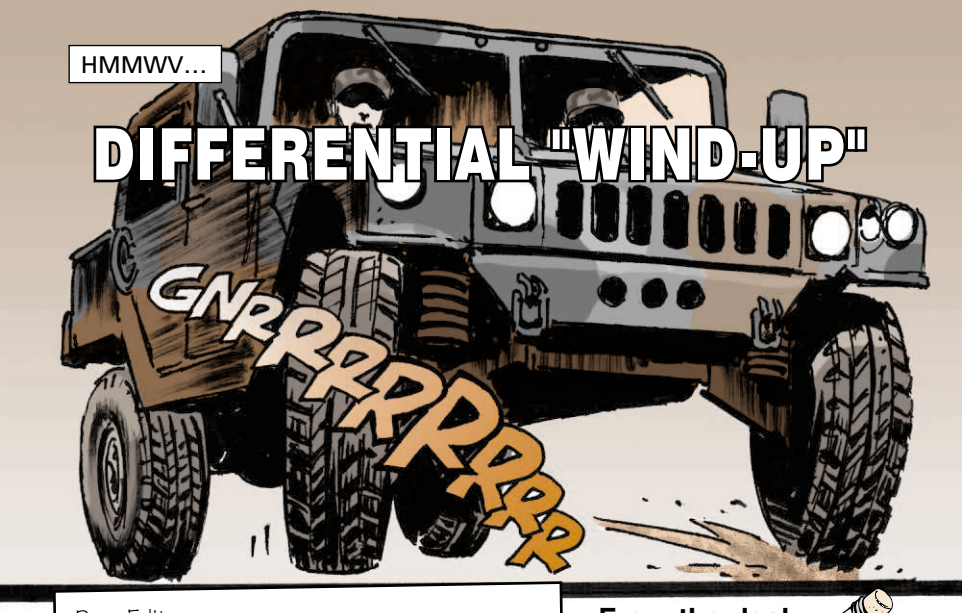
If you don't know where your nearest LAO is located, check out Appendix C of DA Pam 738-750 in the latest Maintenance Management UPDATE. It has a list of all LAOs in the Army with addresses and phone numbers. Or simply go to the Internet at **www.logsa.army.mil/directories/lse_lap**.

And don't forget PS. MSG Half-Mast, Connie and Bonnie have been helping soldiers like you with equipment maintenance and supply problems for a long time. Just send us an e-mail at **psmag@logsa.army.mil** or write to us at the address on the next page.

So don't ignore your maintenance responsibilities just because you're not sure what to do or how to do it. Help is available. But it's up to you to ask!

HMMWV...

DIFFERENTIAL "WIND-UP"



Dear Editor,

While we were servicing a HMMWV, we noticed a grinding noise from the rear end when the truck was turned.

Troubleshooting the source of the noise, we found out the last driver had operated the truck off-road with the transfer in low (L) range. He then had driven back to the unit with the transfer in high-lock (H/L) range, not high (H) range as is required.

The TM says not to operate the truck on hard surfaces with the transfer in H/L range, because the wheels can't slip as designed, so we thought the differential had been damaged.

But before we began repairs one of our mechanics mentioned that driving the HMMWV backward for a short distance would "unwind" the differential and stop the noise.

So we drove the HMMWV backward and, sure enough, the noise went away. Maybe this will help others who have this problem.

John Brown
AMSA 153
Nashville, TN

From the desk of the *Editor*

TACOM emphasizes that operating the HMMWV correctly in all conditions will prevent this differential "wind-up."

Wind-up can occur any time the truck is operated with the transfer locked. The front and rear rotate at the same speed. In off-road conditions, wheels can slip and the wind-up doesn't cause problems.

During turns on dry, hard roads, however, the locked transfer prevents the differential from letting the wheels spin at different speeds. That causes torque buildup, which you hear as grinding or popping from the rear end.

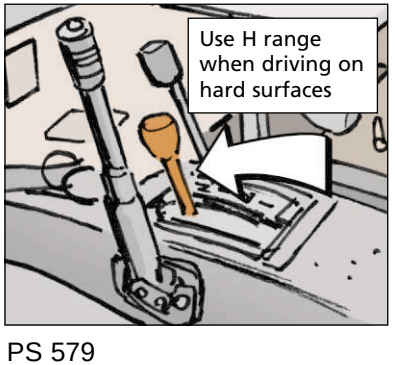
Drivers need to eyeball Tables 1-9 and 1-10 in TM 9-2320-280-10 for transmission and transfer case range selections that will prevent wind-up.

Table 1-9

CAUTION:
Damage to drivetrain will occur if transfer case ranges are not selected properly. Refer to paragraph 2-11, Placing Vehicle in Motion, and paragraph 2-29, Operating on Unusual Terrain, for specific instructions.

Transfer Case Range Selection	
Recommended Shift Lever Position	Operating Condition
"H" (high range)	This drive range shall be selected whenever possible. High range should be used when operating on all primary, secondary, and off-road surfaces, where little or no wheel slippage exists. This range is also to be used when encountering sharp, continuous turns on high traction surfaces.
"H/L" (high lock range)	This drive range shall be selected only when continuous wheel slippage is evident; i.e., when operating in mud, snow, loose sand, or on ice, and increased control or additional traction is required.
"L" (low range)	This drive range shall be selected only when high ranges do not provide sufficient power to negotiate steep hills or downgrades. This range shall also be used when the vehicle is mired and cannot be extracted using the high lock range.
"N" (neutral)	Vehicle is disabled and must be towed.

After operating on unusual terrain in H/L or L range, drivers must shift the transfer case to H range before driving on a hard surface.



Note that Para 2-29, Operating on Unusual Terrain, carries this info on Page 2-139:

"If it is difficult to shift out of a locked range, drivetrain torque buildup may have occurred. If necessary to relieve drivetrain torque buildup when leaving a low traction surface for a high traction surface, the vehicle should be backed up for a distance of approximately 5 feet before proceeding."

Five feet may not be enough, and, in some cases, backing up won't solve the problem at all. It's best to operate right the first time.

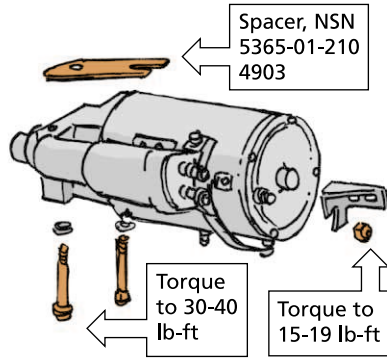
IT TAKES ONLY ONE SPACER

Once and for all, HMMWV mechanics, it takes one—and only one—0.08-in spacer plate, NSN 5365-01-210-4903, to correctly shim the starter to the flywheel.

There's no need to experiment or do clearance checks. Just follow the word in Para 4-8 of TM 9-2320-280-20-2.

The vehicle manufacturer and TACOM have tested starter installation with no spacers, one spacer and multiple spacers. What works is one—just one—spacer.

If you install a starter with one spacer and tighten the two screws into the engine block to 30-40 lb-ft and the front stud nut to 15-19 lb-ft, the starter and the flywheel will fit together within design tolerances. That means they'll work right.



'Course, installing starters right won't stop them from failing, or being bad right out of the box. But you no longer need to play games with spacers. One's just right—just one.

Use BRACKET to Hold Starter

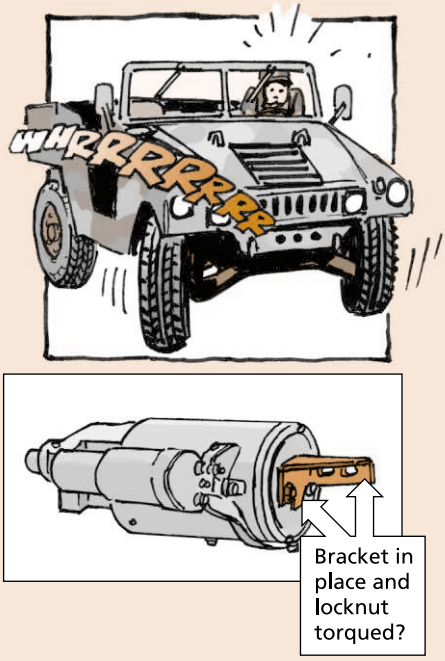
Your odds of keeping the starter stud on your HMMWV tightly secured are much better if you use the latest bracket and locknut to hold it.

A loose starter stud eventually causes the two mounting bolts to loosen, leading to broken teeth on the starter or the flywheel.

So use bracket, NSN 5342-01-413-9005, and serrated flange hex locknut, NSN 5310-00-355-5645, to secure the stud. Then torque the locknut to 15-19 lb-ft.

To keep the locknut tight, make sure you retorque it at every scheduled service.

If your HMMWV is already using the locknut and bracket shown as Items 7 and 8 of Fig 38 in TM 9-2320-280-24P-1, you've got the right hardware.



HMMWV Seat Back ROD

If what you're getting from supply for the rear seat back frame for your 4-seater HMMWV is not what you want, you're not alone. NSN 2540-01-188-3229, Item 3 in Fig 202 of TM 9-2320-280-24P-1, is supposed to bring the seat back and the hardware to secure it (Items 4, 5 and 6 in Fig 202). If that's not what you get, fill out an SF 364, Report of Discrepancy, and mail it to:

Commander,
TACOM-Rock Island
ATTN: AMSTA-AC-NCDC
Rock Island, IL 61299-7630

Or, e-mail the information asked for on the form to **rods@ria.army.mil**. Be sure to include a POC line and DSN number.

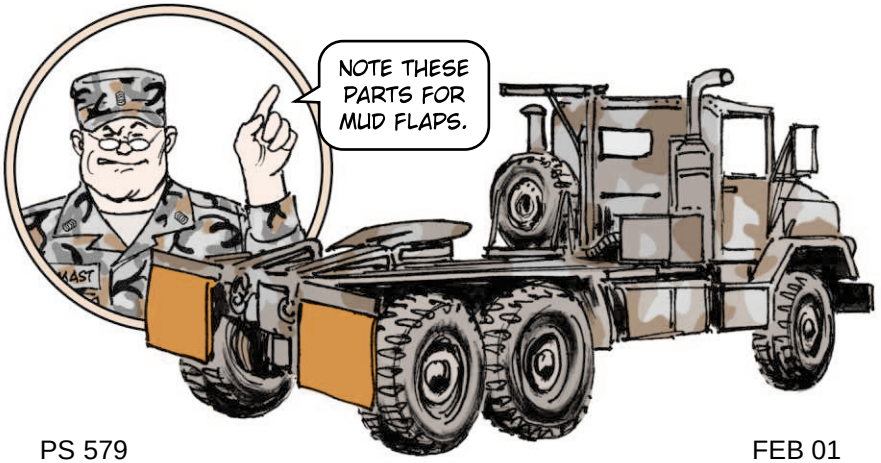
MUD FLAPS and HARDWARE

The search for mud flaps and hardware for M931 and M932 tractor trucks sends you to Fig 616A in TM 9-2320-272-24P-2. But some of the information in the figure is wrong and other information that you need is missing.

First of all, the tractor **mudflap storage kit** comes with NSN 2540-01-281-9855. The kit contains both left-side and right-side splash guards, mudflaps, hardware and accessories needed for first-time installation only.

Note these corrections to listed items in Fig 616A:

Item	Description	NSN
1	Left-side splash guard assembly only	2540-01-461-4570
1	Right-side splash guard assembly only	2540-01-461-4573
3	Arm and clip assembly	3040-01-461-4157
4	Clip only	5340-01-461-1081
12	Mud flap weight	2540-01-462-6221
13	Flat washer	5310-00-528-7638
19	Hex cap screw	5305-00-719-5239
23	Bracket	5340-01-461-6070
26	Strap	5340-01-461-1079
28	Bracket	5340-01-460-2625



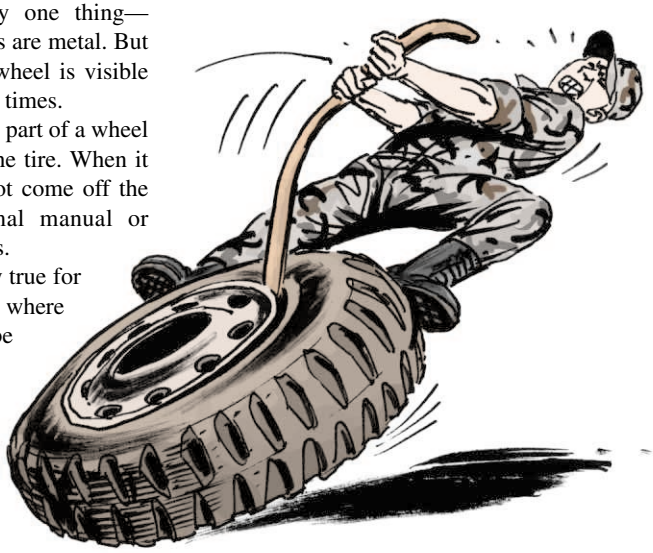
Wheel Inspection Reveals Rust

Rust eats only one thing—metal. Truck wheels are metal. But not all metal in a wheel is visible for inspection at all times.

That includes the part of a wheel that's covered by the tire. When it rusts, a tire may not come off the wheel using normal manual or machine procedures.

This is especially true for multi-piece wheels, where the tire bead must be pushed off the rim.

If rust has had long enough to work on the metal, a heavy enough layer of the stuff can keep the tire from being easily removed.

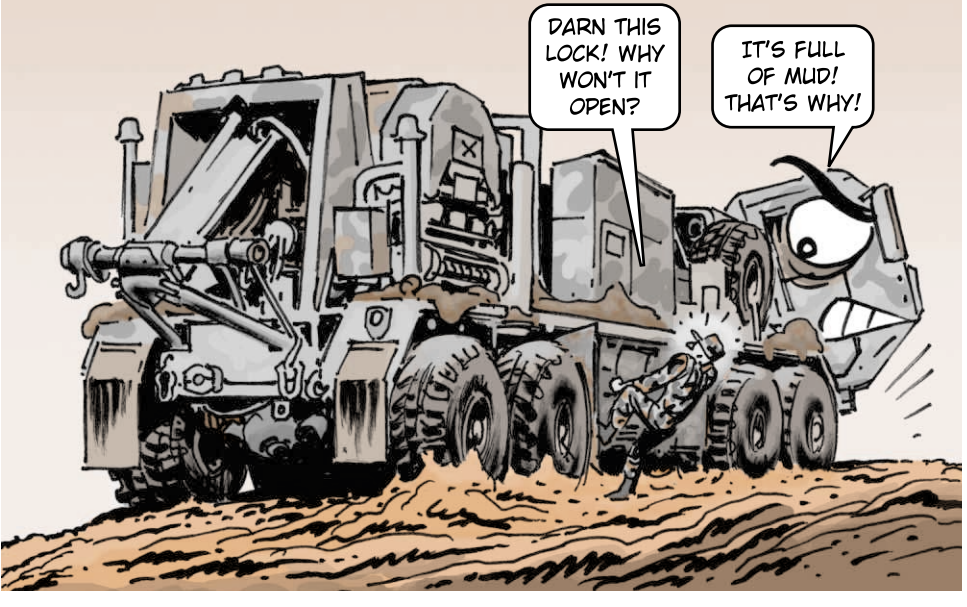


Here's one easy way to get a tire off a rusted wheel. Using the bead breaker or bead roller/combo tool on your tire machine, push the tire further onto the rim base to expose the rust around the rim.

Then use a wire brush and lots of tire mounting and demounting lubricant, NSN 2640-00-256-5527, to remove the rust and lube the rim. Once rust is removed all around the wheel, most tires slide off the rim base with little effort.

After the tire is off, inspect the wheel for other damage. If the wheel remains serviceable, paint it with CARC to prevent more rust. Use Green 383. Get a quart with NSN 8010-01-229-7546 or a gallon with NSN 8010-01-229-9561. Refer to TB 43-0242 for precautions and procedures.

Canvas Covers Keep Locks Like New



Dear Editor,

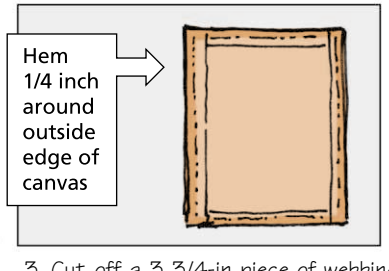
Our wrecker goes through a lot of nasty conditions to recover vehicles. That means a lot of mud and water splashes up on the sides of our truck.

Mud and water often get inside the padlocks that secure the basic issue items (BII) boxes on our vehicle. That corrodes the locking mechanisms and makes it hard to get into the boxes for much-needed equipment.

We've solved this problem by putting homemade covers on the padlocks. Here's how to make 'em:

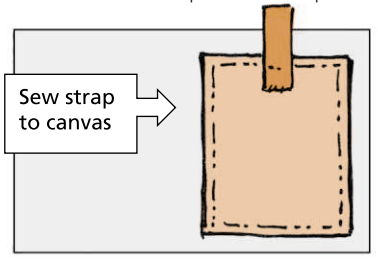
1. Cut out a 4 x 6-in piece of cotton duck canvas. NSN 8305-00-205-2491 brings a 42 x 36-in piece of canvas.

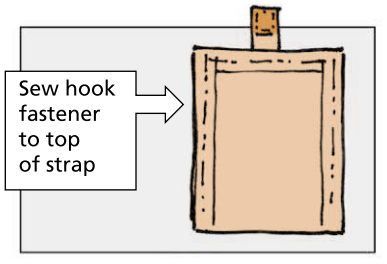
2. Fold over 1/4 inch of each edge of the canvas and stitch it in place to keep the canvas from unraveling.



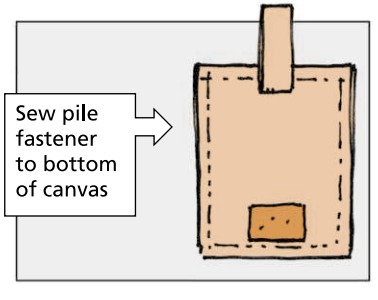
3. Cut off a 3 3/4-in piece of webbing strap, NSN 5340-00-286-6894. Fold over 1/4 inch of each end and stitch it in place to keep the ends of the strap from unraveling.

4. Flip the canvas over and sew one end of the strap to the top center of the canvas. Turn the canvas back over and sew a 1-in length of hook fastener, NSN 8315-00-106-5973, to the top of the straps.

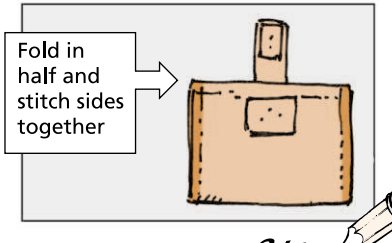




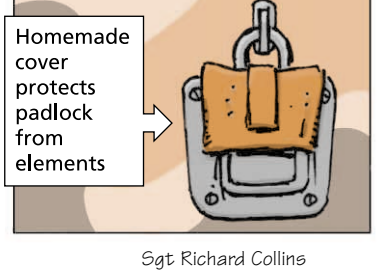
5. Flip over the canvas and sew a 1 x 3/4-in piece of pile fastener, NSN 8115-00-106-5974, to the bottom center.



6. Fold the canvas in half, leaving the pile fastener on the outside, and sew the two sides together. That gives you a pouch that measures approximately 3 1/2 x 2 1/2 inches.



Now, slip the padlock into the pouch. The strap goes through the shackle and attaches to the pile fastener on the cover.



Sgt Richard Collins
1/34th AR
Ft Riley, KS

From the desk of the *Editor*

Looks like you've got that corrosion problem covered! You might want to give the locks a shot of corrosion preventive compound, NSN 8030-01-418-9008, to provide some extra protection, too.

NOTICE YOUR JACK STANDS

You may be able to overlook a lot of things in your daily motor pool life, but one thing you better not overlook is each and every jack stand you use.

When you put a jack stand under a vehicle, you're betting that it will hold up under whatever pressure is applied to it.

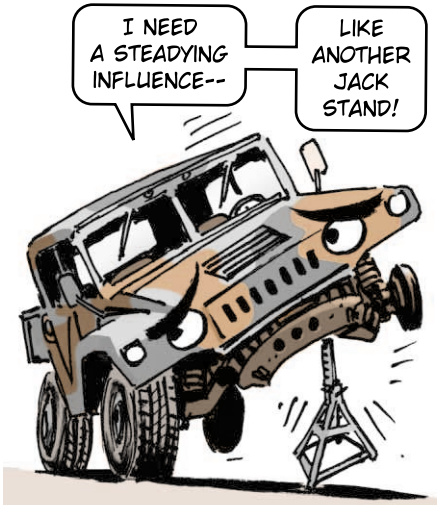
If it doesn't hold up, you can lose the stand, a vehicle (at least temporarily) or your life (or limb).

Think you should look a little closer next time you use a jack stand?

Preparation for Use

☞ Follow the instructions in your vehicle's TM for size and placement of jack stands.

☞ Park the vehicle on a level, hard surface.



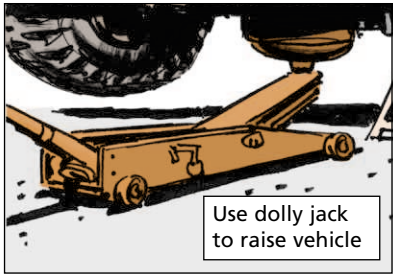
☞ Shut off the engine, set the hand brake and chock the wheels that won't be raised.

☞ Inspect the stands before use. Look for bends, separated welds, cracks and corrosion. If you have any doubt about the stability of a stand, don't use it! Have it tested by support. TB 43-0142 has the word on load testing and stenciling.

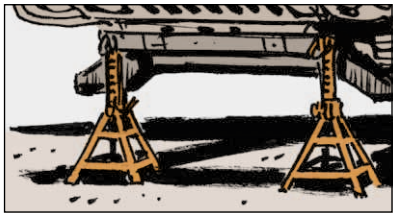
☞ Make sure the stands are standing straight and that the pawl seats fully in the column teeth.

Using

☞ Use a proper size dolly jack to raise the vehicle. If you're raising the entire axle, lift it at the middle of the axle, then place a jack stand at each end.

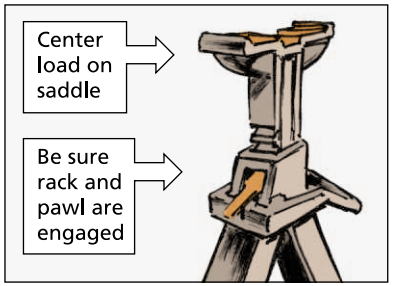


☞ Always use jack stands in pairs.



☞ Lower the jack slowly to ease the load onto the jack stands. Dropping a load onto jack stands can ruin them.

☞ Center the load on the stand's saddle. Make sure the rack and pawl are engaged before and after the load is applied.

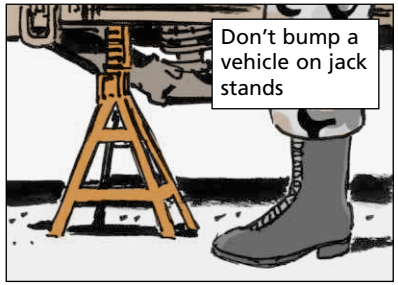


☞ Make sure all jack stand legs are firmly on the ground.

☞ Leave as many tires as possible on the vehicle and on the ground.

☞ Raise the vehicle only as high as necessary to do your work.

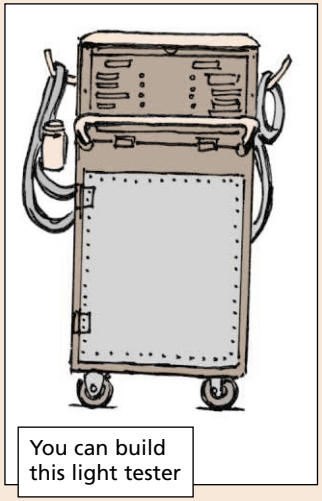
☞ Do not shake or bump the vehicle after it has been placed on jack stands. The stability of vehicles left unattended should be rechecked before resuming work.



☞ Use secondary supports—railroad ties, A-frames, floor jacks or cranes—if there's any doubt about the vehicle's stability during a maintenance procedure.

Trailers, Semitrailers...

LIGHT TESTER PLANS



Trailers here, trailers there, trailers everywhere– but no power source to test the lights?

Plans are available to build your own portable tester for trailer or semitrailer lights. It comes in real handy when there is no truck on-hand to power the lights.

To get a set of the plans and instructions for building the tester, which works both 12-volt and 24-volt light systems, let Half-Mast hear about it.

You can write to:

MSG Half-Mast
The Preventive Maintenance Monthly
LOGSA, Bldg 5307
Redstone Arsenal, AL 35898-7466

Or send e-mail to **psmag@logsa.army.mil**.

Please provide a mailing address for the plans.

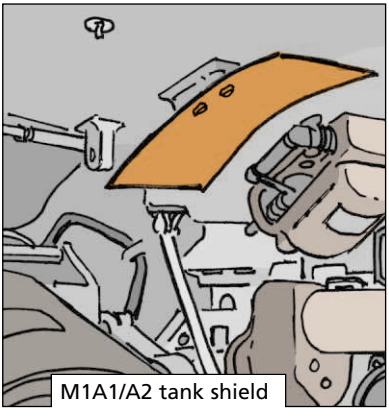
Protecting by Deflecting

A fix has been around for years to prevent the M240 machine gun's feed tray cover from being torn off when the M1's main gun is lowered. But some units haven't gotten the fix and are still replacing covers at $250 a whack.

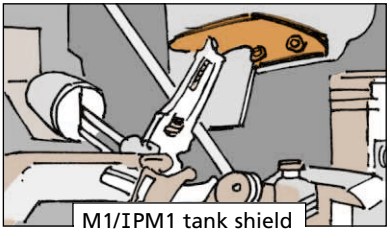
The fix is a deflector that fastens to the turret's ceiling. If the M240 cover is left up after loading, the deflector pushes down the cover when the main gun is lowered.

To make a deflector for the M1A1/A2, cut out a 5x18-in piece of thin metal—tin's good, so is aluminum. Wrap the edges of the deflector with duct tape so it won't cut your hands.

Use the two existing ceiling bolts to bolt the deflector to the turret ceiling. Bend a curve in the forward portion of the deflector so it will push the M240 cover down.


M1A1/A2 tank shield

For the M1/IPM1, cut the same size deflector, but attach and bend it like this:


M1/IPM1 tank shield

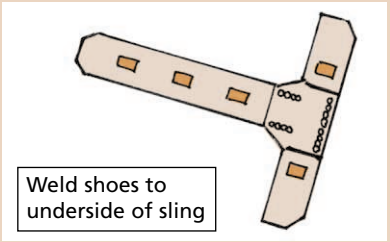
As part of before-operation PMCS, M1 crews should make sure the deflector is bolted in tight. If the deflector's missing, report it.

Aluminum Shoes Protect Sling

The M1 tank's engine and transmission sling, NSN 4910-01-086-6837, is a heavy piece of equipment. That's why it's usually dragged to where it's needed in the motor pool.

But dragging puts a lot of wear and tear on the sling's rivets. Sooner or later the rivets snap and the sling collapses in the middle of a lift. You don't want to be nearby when that happens.

Protect the sling's rivets by welding small aluminum "shoes" to the underside of the sling.



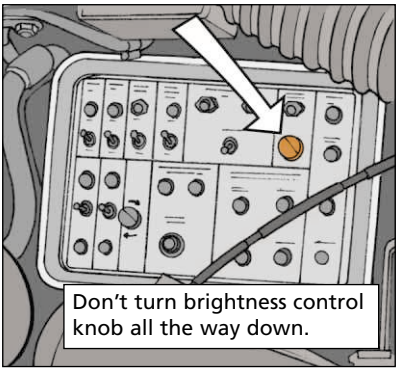
The shoes are 2 inches long by 1 inch wide by 2 inches high. Cut them from aluminum stock, NSN 9530-00-232-5584.

M1A1 Tank . . .

Lights Out?

Just because you can use the brightness control knob to completely dim the lights on the commander's panel of your M1A1 tank doesn't mean you should. In fact, you **shouldn't**.

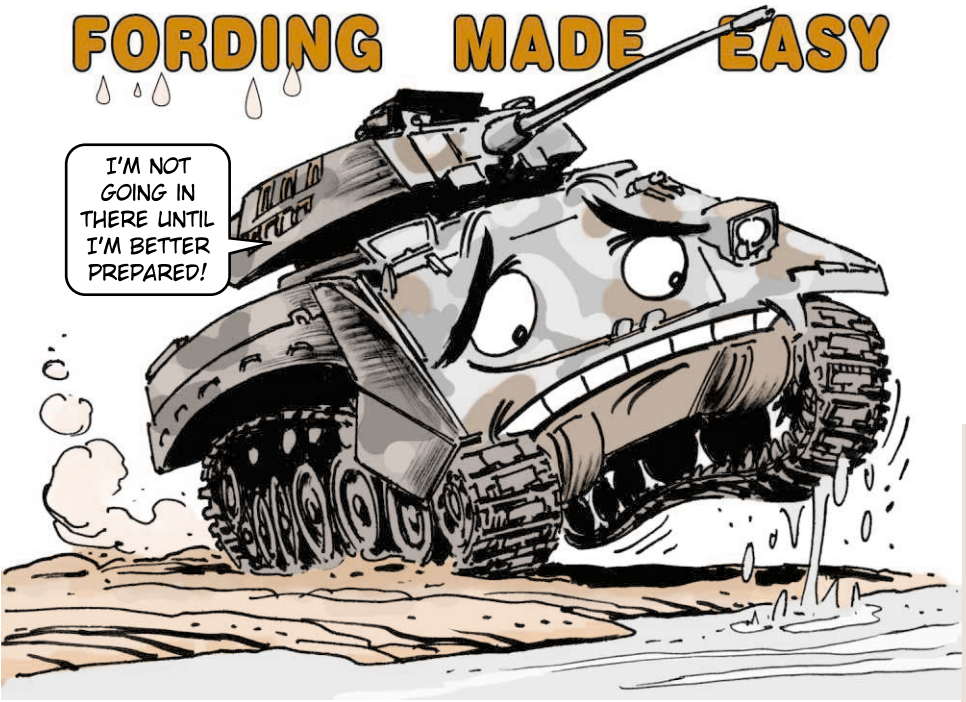
Dimming those lights completely is a real safety hazard—especially when it comes to the warning lights.



One crew learned that lesson the hard way when the NBC filter on their tank caught fire after the air cycle turbine failed. The crew reported that the NBC OVERHEAT SPONSON OUT light didn't provide any warning. It turned out that the warning light was working but had been completely dimmed.

So follow the procedure on Page 2-179 of TM 9-2350-264-10-1. It tells you how to adjust the brightness control knob so the lights are dimmed but still readable. Never dim them completely.

FORDING MADE EASY



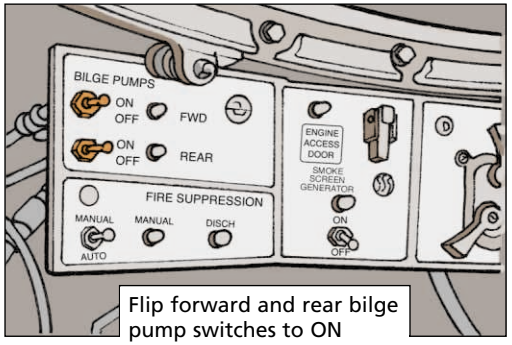
Drivers, swimming your Bradley is no longer allowed, but you can still ford water up to 31/2 feet deep.

If you don't ford properly, though, you may not make it out the other side of the creek. So, follow these steps:

1. Make sure all hull drain plugs and both final drive drain plugs are in place and secure.

2. Choose a spot to enter and exit the water. Look for firm ground without rocks, stumps or other obstacles. Try to avoid steep slopes.

3. Flip the forward and rear bilge pump switches to ON.

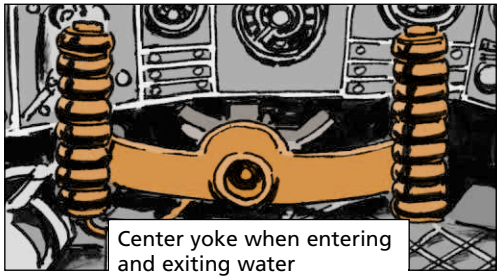


Flip forward and rear bilge pump switches to ON

4. Enter the water at no more than a fast walking pace (about 2 mph or less). If you try to go faster, water will splash up into the air intake system and damage the engine.

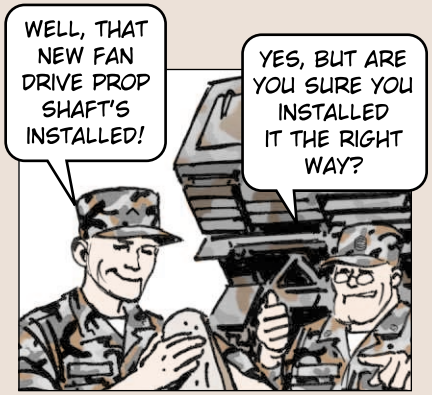
5. Once into the water, center the steering yoke and try to keep the tracks on solid ground. Feel your way across, trying to avoid underwater obstacles. Be prepared for sudden stops.

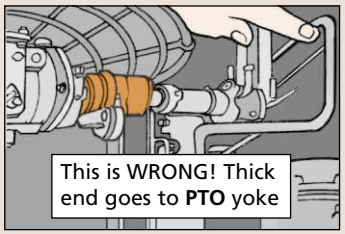
6. Exit the water with the steering yoke centered. Don't leave the water at an angle to the bank.


Center yoke when entering and exiting water

7. After the bilges are empty, flip the bilge pump switches to OFF.

Don't Shaft the Prop Shaft



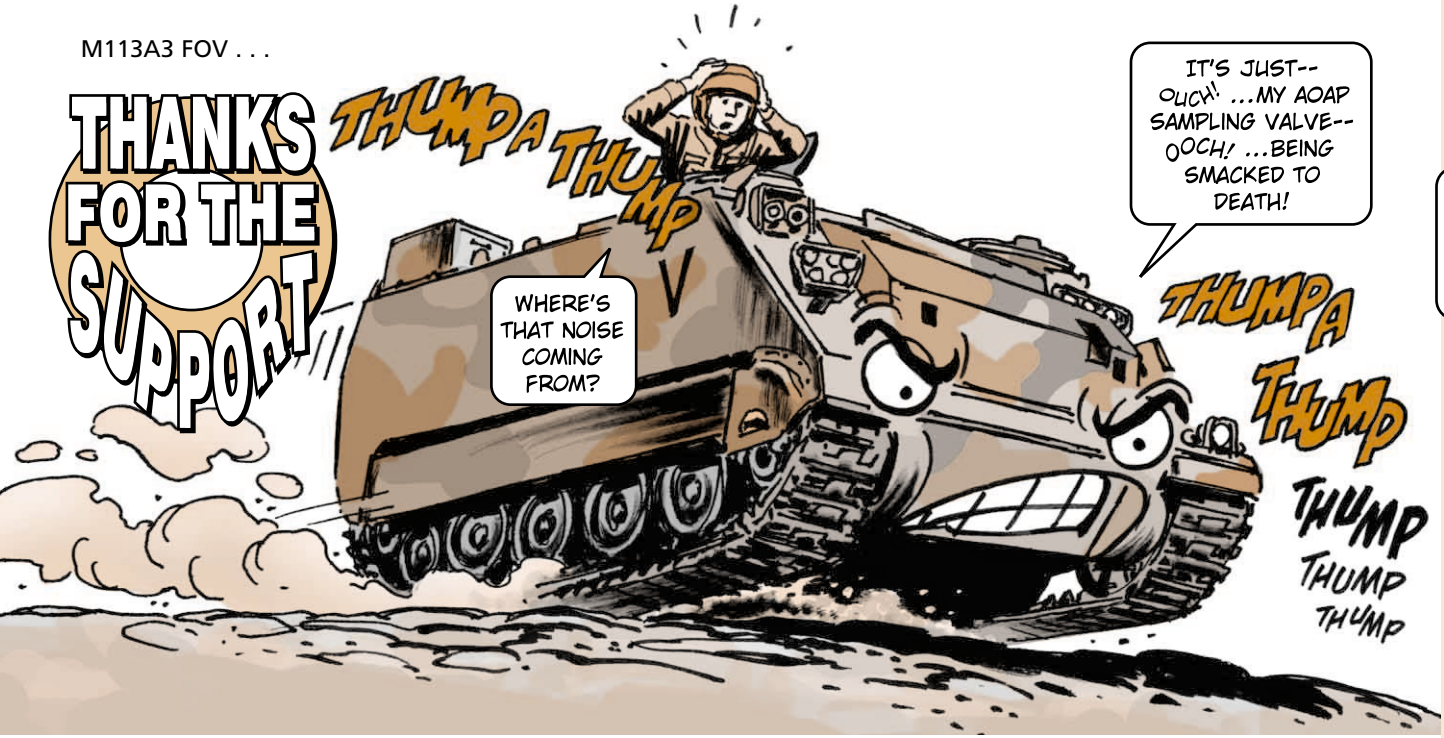

This is WRONG! Thick end goes to **PTO** yoke

Mechanics, there's a right way and a wrong way to install the MLRS' fan drive propeller shaft, NSN 2520-01-108-9273. The choice you make will determine how well the prop shaft does its job—and for how long.

The prop shaft connects the final drive to the right angle drive. If it's put in backward, water works its way into the yoke assembly. That causes slack in the prop shaft, dried-out bearings and eventually a broken prop shaft.

You can prevent damage by installing the prop shaft the right way. The thicker portion of the shaft goes down and attaches to the PTO yoke on the final drive. Then water cannot get into the yoke assembly

THANKS FOR THE SUPPORT



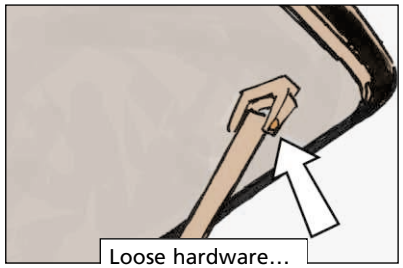
Drivers, the mounting hardware for the M113A3 FOV's engine compartment door support arm needs to be kept nice and tight.

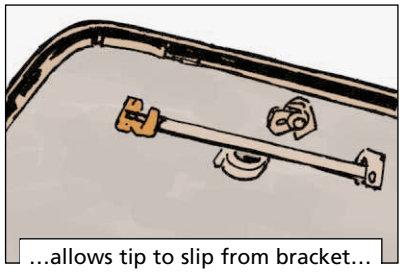
If the hardware loosens, the arm rattles around from vibration. It doesn't take much movement to free the arm's tip from its storage bracket.

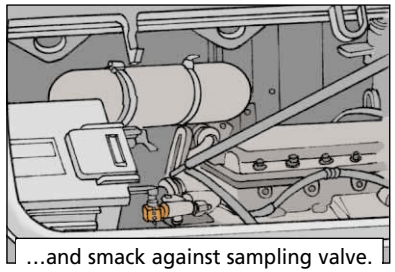
When that happens—WHAM!—right into the AOAP sampling valve. The valve is damaged as the tip of the support arm bounces against it over and over. You won't even realize the damage is done until the next time you open the engine access cover.

During your before-operation PMCS, take a close look at the support arm hardware. If it's loose, take a few seconds to tighten it up.

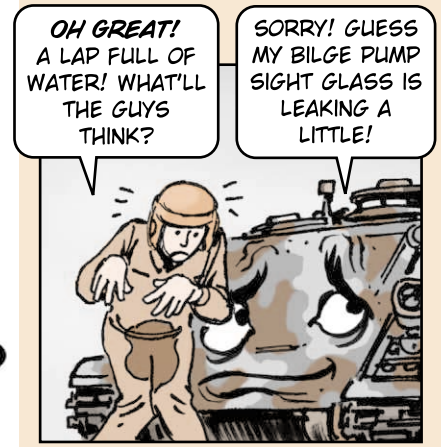
If the support arm comes loose a lot, try a few drops of sealing compound, NSN 8030-00-081-2339, on the hardware threads. That should keep the support arm in place.


Loose hardware...


...allows tip to slip from bracket...


...and smack against sampling valve.

Don't Be a Glass Cracker

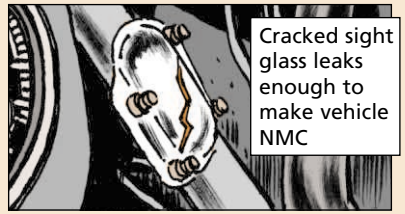


Mechanics, easy does it on the M113A3's bilge pump sight glass.

It's made of plastic so it cracks easily as you tighten down the clamp nuts.

A cracked sight glass delivers a lap full of water to the driver the next time the bilge pump is turned on. That's sure to get you scratched off next year's Christmas card list!

A big leak from the sight glass is considered a Class III leak, too. That means the carrier is NMC until the sight glass, NSN 9330-00-782-1832, is replaced.


Cracked sight glass leaks enough to make vehicle NMC

MIXING WON'T MATCH

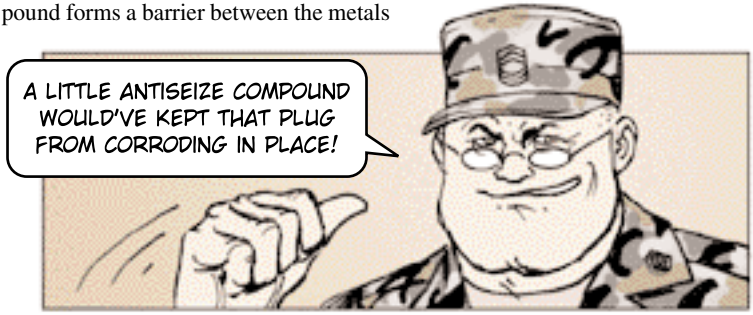
Mechanics, just like oil won't mix with water, different metals don't mix, either.

If, for example, you put a steel bolt or screw into a hole with aluminum threads, the two metals react to each other to form corrosion. When it's time to remove the bolt, it either won't budge or the bolt snaps.

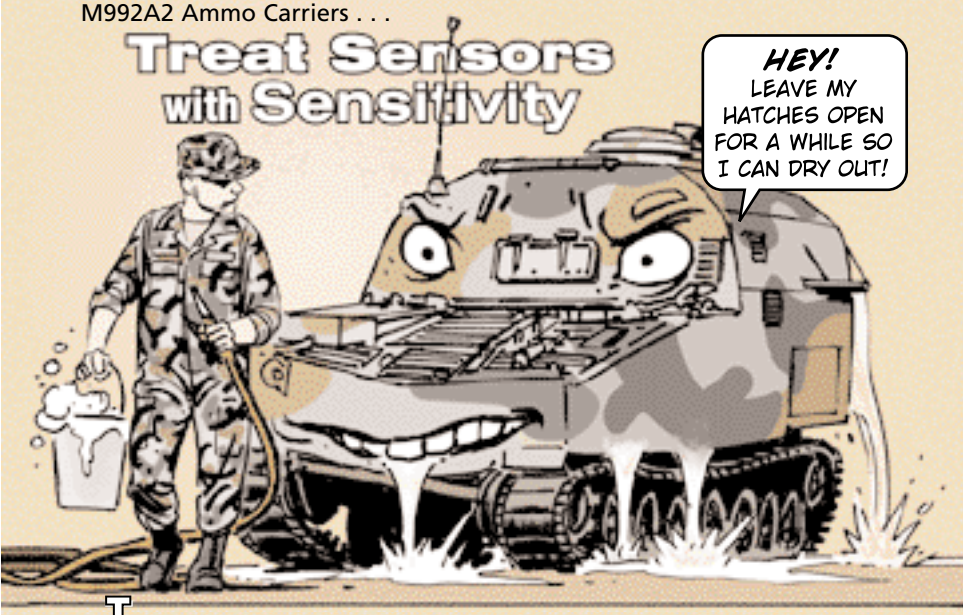
Since you have to use the parts called for in the TMs, try coating the threads of bolts and screws with antiseize compound before using them. The compound forms a barrier between the metals that prevents corrosion and makes the hardware easier to remove later.

It's a good idea to use antiseize compound even when the bolt and threaded hole are made of the same metal. Same metals don't react to each other, but rust can still form if the fasteners get wet.

Always use the antiseize compound called for in your -20 TMs. You'll find it in the expendable/durable supplies and materials list appendix. If there's none listed, order a 1-lb can with NSN 8030-00-251-3980.



Treat Sensors with Sensitivity



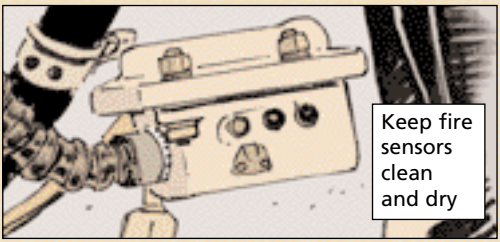
The fire sensors in your M992A2 ammo carrier are very sensitive instruments, crewmen. How you care for them directly affects how well they care for you.

Never use a rag—even a clean one—to wipe the sensor glass. It scratches the glass and can cause a false alarm. Worse yet, the sensors may not function during a fire when they're really needed.

The sensors should be cleaned only with isopropyl alcohol, NSN 6810-00-753-4993, and lint-free foam wipes, NSN 7920-00-184-9014 gets a package of 25 wipes.

The next time you wash out your carrier, don't close up the vehicle while it's still wet. If you do, the water will evaporate and then condense on the fire sensors.

The sensors are sensitive to direct and reflected sunlight even when they're dry. When a sensor is wet, the beads of water act like tiny magnifying glasses that intensify any light that hits them.



So, if light hits a sensor from an open hatch the next time you start your vehicle, it could trigger the fire suppression system. Prevent that by letting the vehicle's interior dry out by leaving the hatches open after washing.

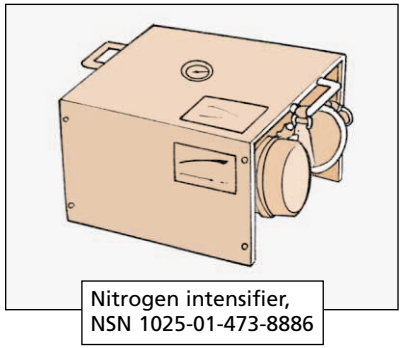
Two new special tools that are now available make servicing your M198 howitzer a whole lot easier. One is a nitrogen intensifier and the other is an oil transfer system.

Nitrogen Intensifier

The operating pressure for the M198's equilibrators is 1,750-1,800 psi. Elevating the tube with pressure less than 1,750 psi is difficult, but it's next to impossible with pressure under 1,500 psi.

That means when it's time to charge the equilibrators, you have to use a nitrogen cylinder with at least 1,500 psi. When the cylinder pressure drops below that reading, your unit must pay to have it recharged.

You can save time and money by using a nitrogen intensifier, NSN 1025-01-473-8886. When it's hooked up to a partially-used cylinder, the intensifier draws out most of the remaining gas and increases it to the proper psi.



Nitrogen intensifier, NSN 1025-01-473-8886

Once the pressure reaches 150 psi or less, the cylinder has to be recharged.

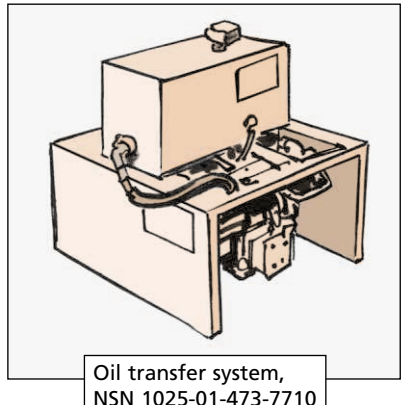
Oil Transfer System

The M3 oil pump is currently used for filling and purging air from the M45 recoil mechanism. The M3 holds about 1 quart of hydraulic fluid. The M45 recoil mechanism holds about 6 gallons.

It takes around 70+ pumps of the M3's handle to move the oil reserve indicator from one number to the next. So completely filling and purging the recoil takes a lot of time and wears out quite a few arms.

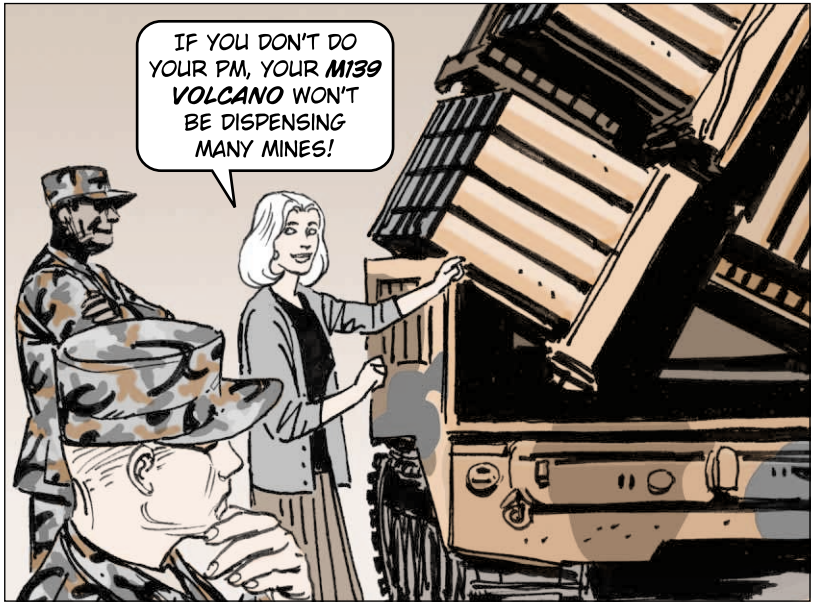
The new oil transfer system, NSN 1025-01-473-7710, puts a stop to that. It has a 5-gal reservoir and an electric pump that makes filling and purging the recoil a snap.

The system self-purges all air from its lines before pumping oil and includes a special filter that screens out all contamination. Make a note until both new tools can be added to Fig C-75 of TM 9-1025-211-20&P.



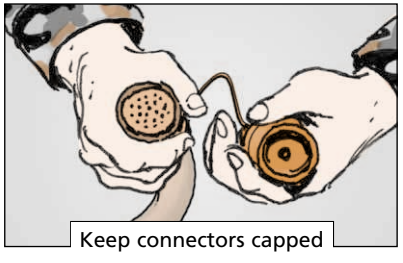
Oil transfer system, NSN 1025-01-473-7710

PM TO STOKE YOUR VOLCANO



Cables and Connectors

Keep the rack cables' connector caps screwed on when the cables aren't connected to the racks. Uncapped cables don't sound like a big deal, but they can

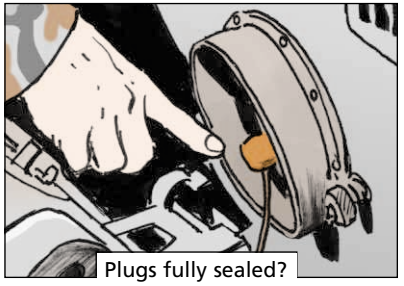

Keep connectors capped

be. If the cable connectors are left exposed to wind, rain and sand, they corrode and become plugged. Then you either get a poor connection when you connect the cable to the rack or you bend connector pins. Bent pins make the rack NMC.

If caps are missing, your repairman can replace them. The caps are listed in the repair parts list in TM 9-1095-208-23-1&P.

Make sure all the cable connectors are not only pushed in completely, but also tightened down. One loose connector can cause a rack to flunk the self-test.

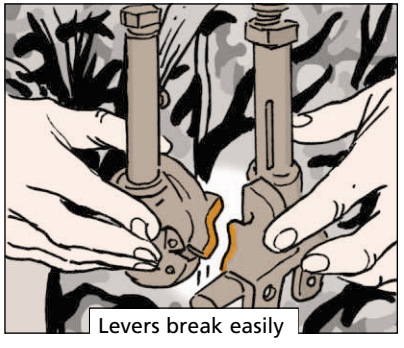
Also make sure the ID (identification) cannon plugs are fully seated before you lower the racks. If they're not pushed in completely, the rack crushes them and your Volcano flunks its self-test.


Plugs fully sealed?

After you connect the cables to the rack, get help to lower the rack carefully. If you let the 220-lb rack slam down on the cables, you'll need new cables.

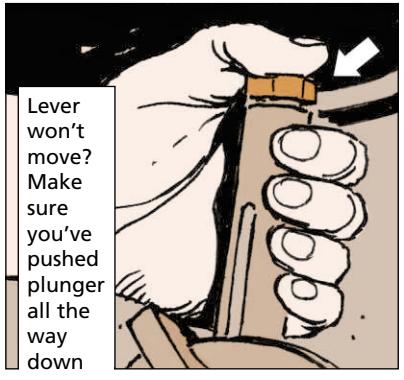
Levers

Careful with the arming and latching levers. A misplaced boot, a tossed duffel bag, or too much muscle can snap a lever right off.


Levers break easily

Likewise, never force the levers. If a lever doesn't move easily, make sure you've pushed its plunger all the way in and its opposite lever—arming or latching—is in the correct position. If that doesn't do the trick, try blowing out sand and dirt around the levers with an air hose.

Pins



Before you leave the motor pool, make sure the two locking pins for each rack are in place. If a pin is missing, the rack bounces around and destroys cables and cannon plugs.

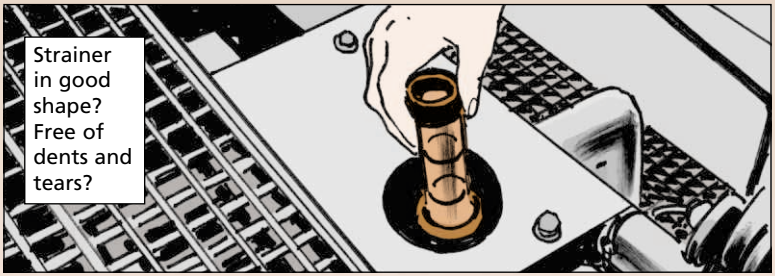

Locking pins in place?

PUT DOWN DIRTY OIL

The DEUCE is one tough workhorse, but dirty oil in its hydraulic system can make it turn up lame in a hurry.

So keep your oil supply covered and protected. Then before you add hydraulic fluid, wipe off any dirt around the DEUCE's filler cap. If it's raining or dusty, use a clean rag around the oil can nozzle and filler hole while you add oil.

Also be careful when adding oil. The oil can nozzle can tear a hole in the side of the strainer or knock out its bottom. Then dirt has a straight path to the tank. Check out the strainer. If it's damaged or missing, tell your mechanic.



Finally, replace the cap and snug it down when you're finished.

Use these oil PM tips and you'll keep the dirt where it belongs-- out in front of the blade!

FILTER FACTS

Operators, you don't have to replace the 22-ton crane's primary filter element every time the restriction indicator shows red.

You can often save the cost of a new element by cleaning the old one with compressed air or warm, soapy water.

When you use air, blow out from the inside of the element, since the dirt's on the outside of the filter.

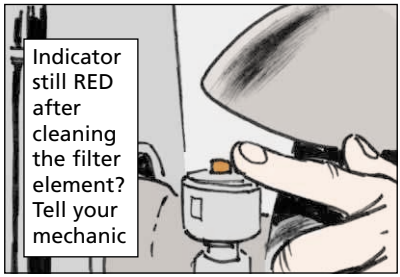
Then hold the nozzle at an angle to blow loose dirt from the outside. That keeps you from damaging the paper element.

To get rid of oily dirt, you'll need to wash the filter element with detergent, NSN 7930-00-282-9699, and warm water.

Rinse away the soap with warm water and let the element dry before you put it back in the crane.

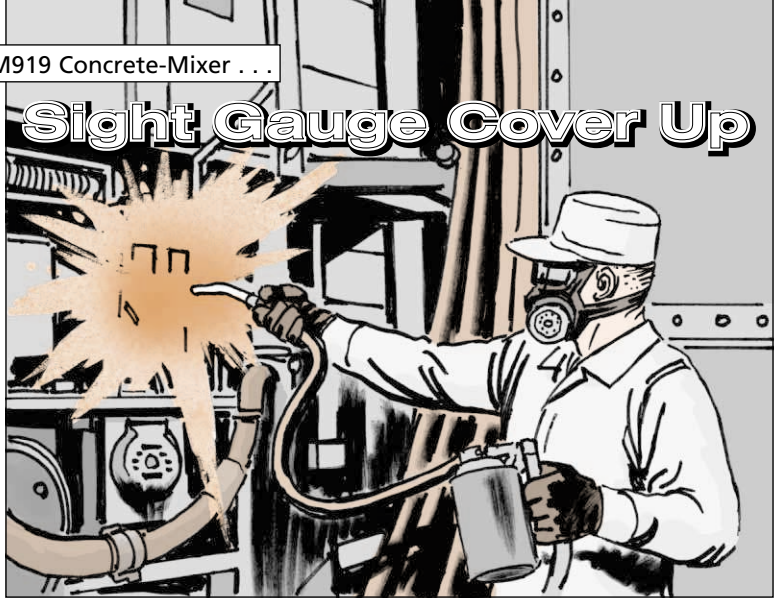
Replace the filter element, NSN 2940-01-438-5680, after six cleanings or if it's ripped, torn or won't come clean.

If the indicator still shows red after cleaning the filter element, tell your mechanic.



M919 Concrete-Mixer . . .

Sight Gauge Cover Up

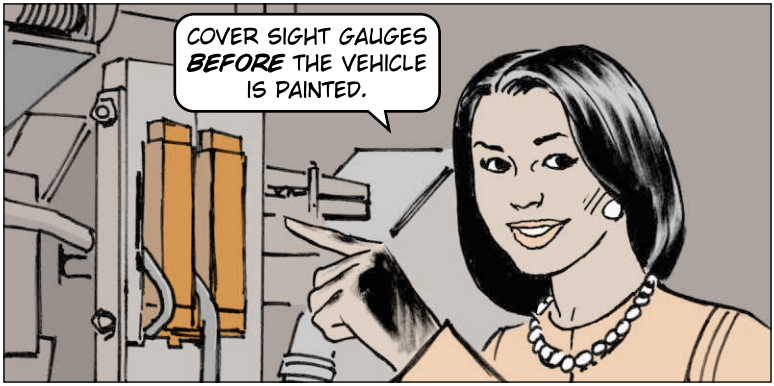


Every good operator knows it's important to keep an eye on the sight gauges behind the mixer's cement bin. Those gauges monitor cement flow and water-to-cement ratios.

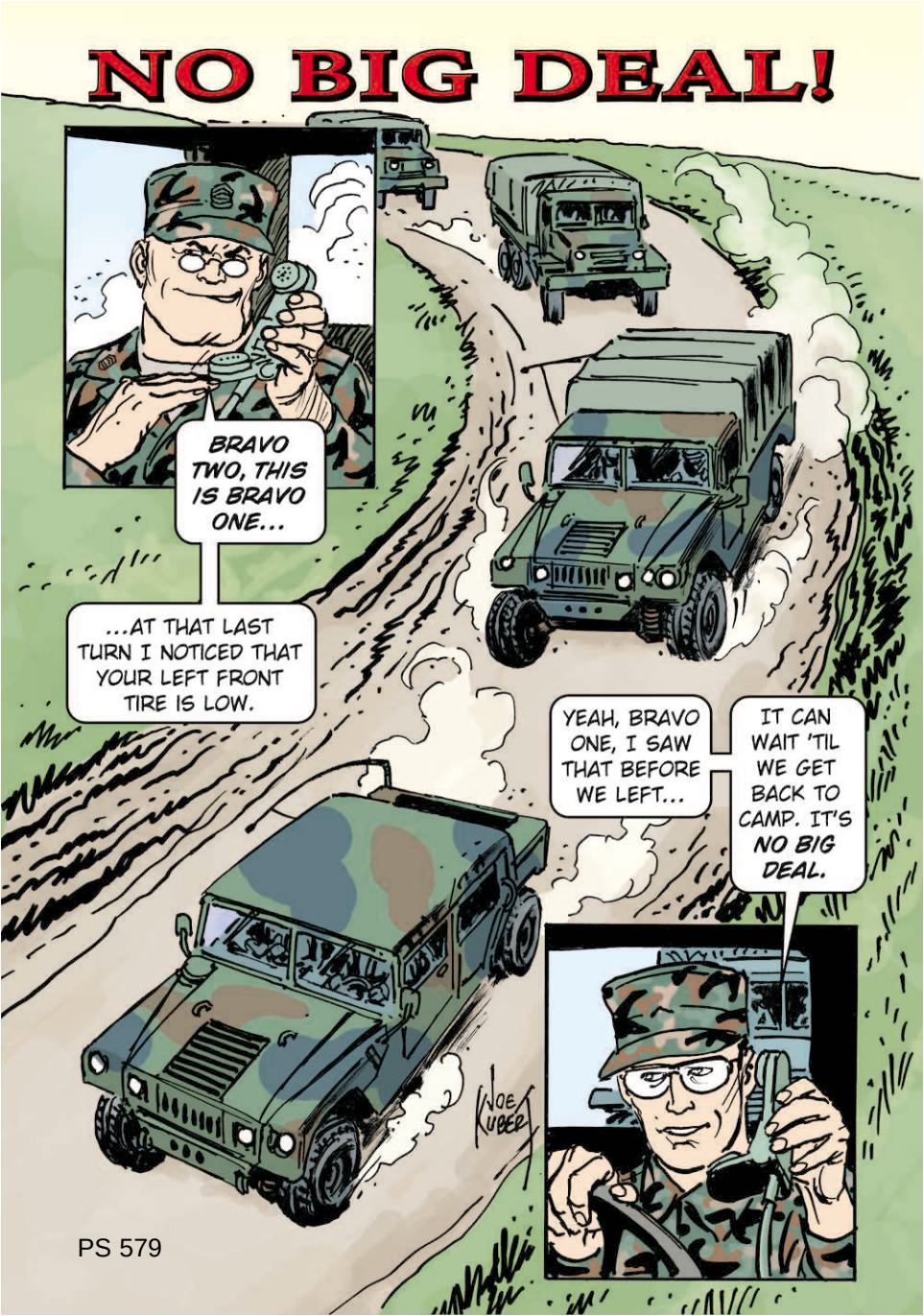
But, some paint shops spray right over the sight gauges. Then your operation is guesswork.

Save yourself all that guesswork by using masking tape to cover sight gauges before your mixer goes to the paint booth.

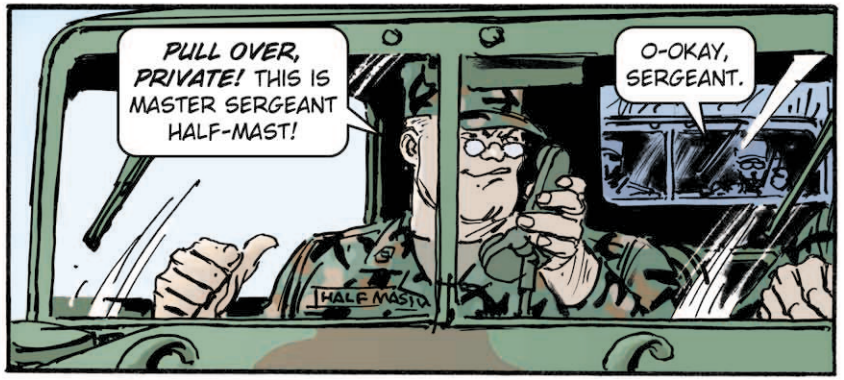
Tape over the JOG, RAISE and LOWER switches on the winch control box, too. Those switches control the mixing trough during concrete placement.

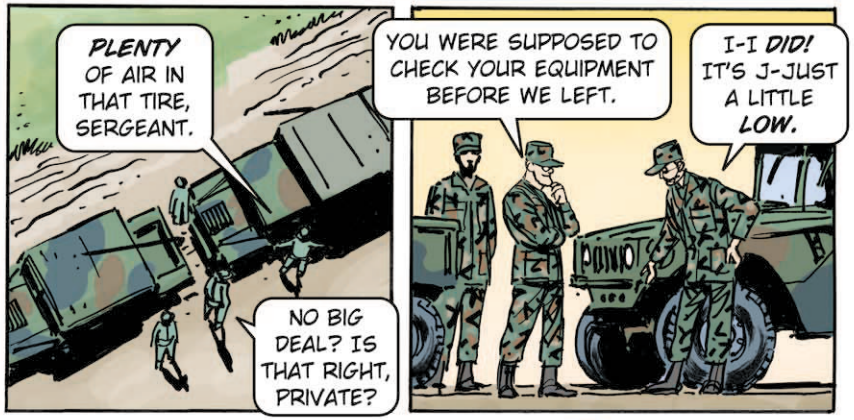


NO BIG DEAL!



PS 579


PULL OVER, PRIVATE! THIS IS MASTER SERGEANT HALF-MAST!
O-OKAY, SERGEANT.
HALF MAST

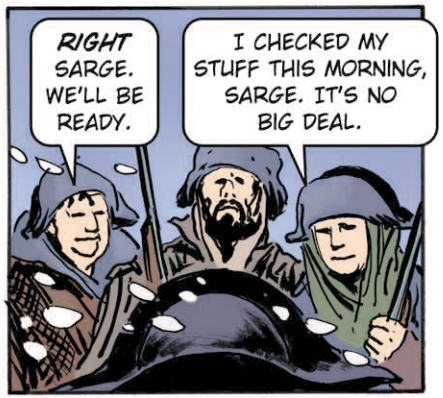

PLENTY OF AIR IN THAT TIRE, SERGEANT.
NO BIG DEAL? IS THAT RIGHT, PRIVATE?
YOU WERE SUPPOSED TO CHECK YOUR EQUIPMENT BEFORE WE LEFT.
I-I DID! IT'S J-JUST A LITTLE LOW.


LITTLE, HUH? LEMME TELL YOU HOW LETTING "LITTLE" THINGS SLIDE CAN COST YOU... AND YOUR BUDDIES.
"BACK WHEN WE WERE FIGHTING FOR OUR INDEPENDENCE, GEORGE WASHINGTON AND HIS COLONIAL ARMY WERE FREEZING THEIR BUTTS OFF IN VALLEY FORGE..."

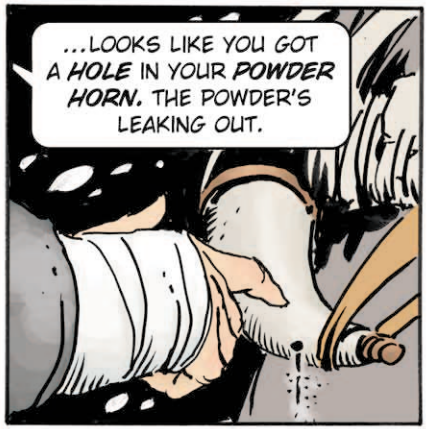

OKAY, MEN... WE'RE GOING TO SAY 'HELLO' TO THE HESSIANS ENCAMPED ON THE OTHER SIDE OF THE DELAWARE.
WHEN, SARGE?


AT DAWN, IT'S GOING TO BE A SURPRISE PARTY—AND ALL OF YOU ARE INVITED. WE'LL BE CROSSING THE DELAWARE...
B-BUT... THE RIVER'S FROZEN, SARGE...


NOT QUITE. THERE'S ICE... BUT WE'LL GET THROUGH.
CHECK YOUR EQUIPMENT! MUSKET, POWDER, FLINT. MAKE SURE ALL'S IN WORKING ORDER.


RIGHT SARGE. WE'LL BE READY.
I CHECKED MY STUFF THIS MORNING, SARGE. IT'S NO BIG DEAL.


MUSKET. CANTEEN. FLINTS. POWDER-- HOLD IT, TOM...

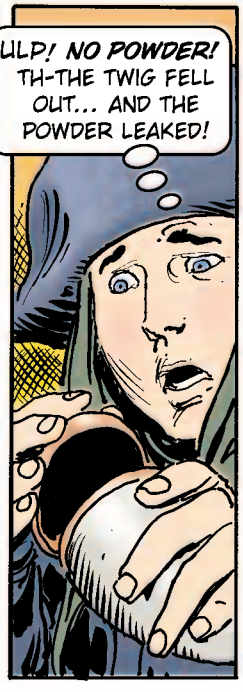

...LOOKS LIKE YOU GOT A HOLE IN YOUR POWDER HORN. THE POWDER'S LEAKING OUT.


I DON'T THINK YOU DID A VERY GOOD CHECK THIS MORNING, TOM.
THIS TWIG WILL PLUG IT. NO BIG DEAL.
"IN THE FREEZING NIGHT, THE SMALL ARMY OF RAGGED COLONIALS BOARDED THEIR ROWBOATS..."
BRRR... IT'S TOO *COLD* FOR A BOAT RIDE.
LET'S HOPE THE HESSIANS THINK SO, TOO, TOM.
"SLOWLY... SILENTLY... THE WOODEN CRAFTS MADE THEIR WAY THROUGH THE FRIGID WATERS OF THE DELAWARE RIVER..."
GEE... WHAT A *PAINTING* WE'D MAKE, EH, TOM?
YES... BUT... A PAINTER WOULD *FREEZE HIS* FINGERS OFF!


"THE BOATS CAME TO A SCRAPING HALT ON THE PENNSYLVANIA SIDE OF THE DELAWARE RIVER..."
"QUICKLY AND QUIETLY THE COLONIALS STEPPED INTO THE SOFT SNOW..."
PSST... DID YOU REPAIR YOUR POWDER HORN, TOM?
OF COURSE. IT WAS NO BIG DEAL.
"IN THE LEAD, WASHINGTON GAVE THE SIGNAL TO ADVANCE AND ATTACK..."


"THE HESSIANS WERE CAUGHT NAPPING. FAST ASLEEP, IN FACT. THEY'D BEEN CELEBRATING, DRINKING AND EATING. THEY NEVER HEARD THE COLONIALS COMING... UNTIL IT WAS TOO LATE."

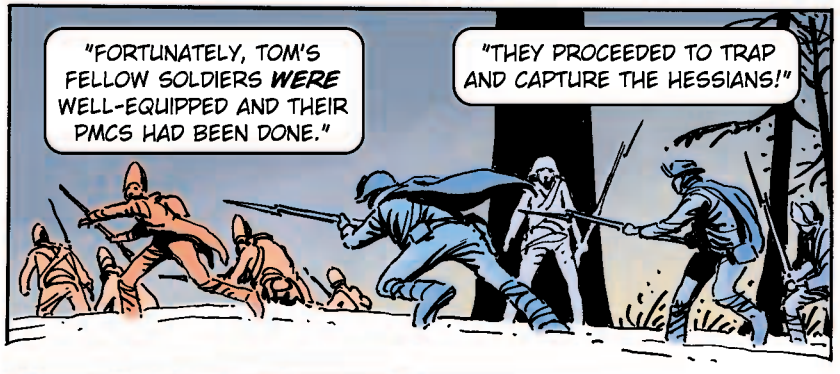

I- I'D BETTER LOAD UP AGAIN. SOME POWDER IN MY MUSKET...

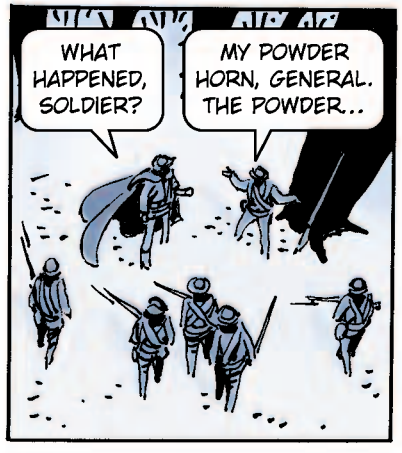

ULP! NO POWDER! TH-THE TWIG FELL OUT... AND THE POWDER LEAKED!

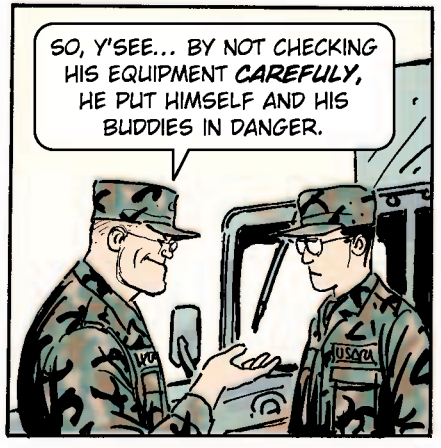

WHAT'LL I DO? I CAN'T FIGHT WITHOUT A MUSKET!
I SHOULD'VE CHECKED MY GEAR... AND REPAIRED OR REPLACED THE HORN...

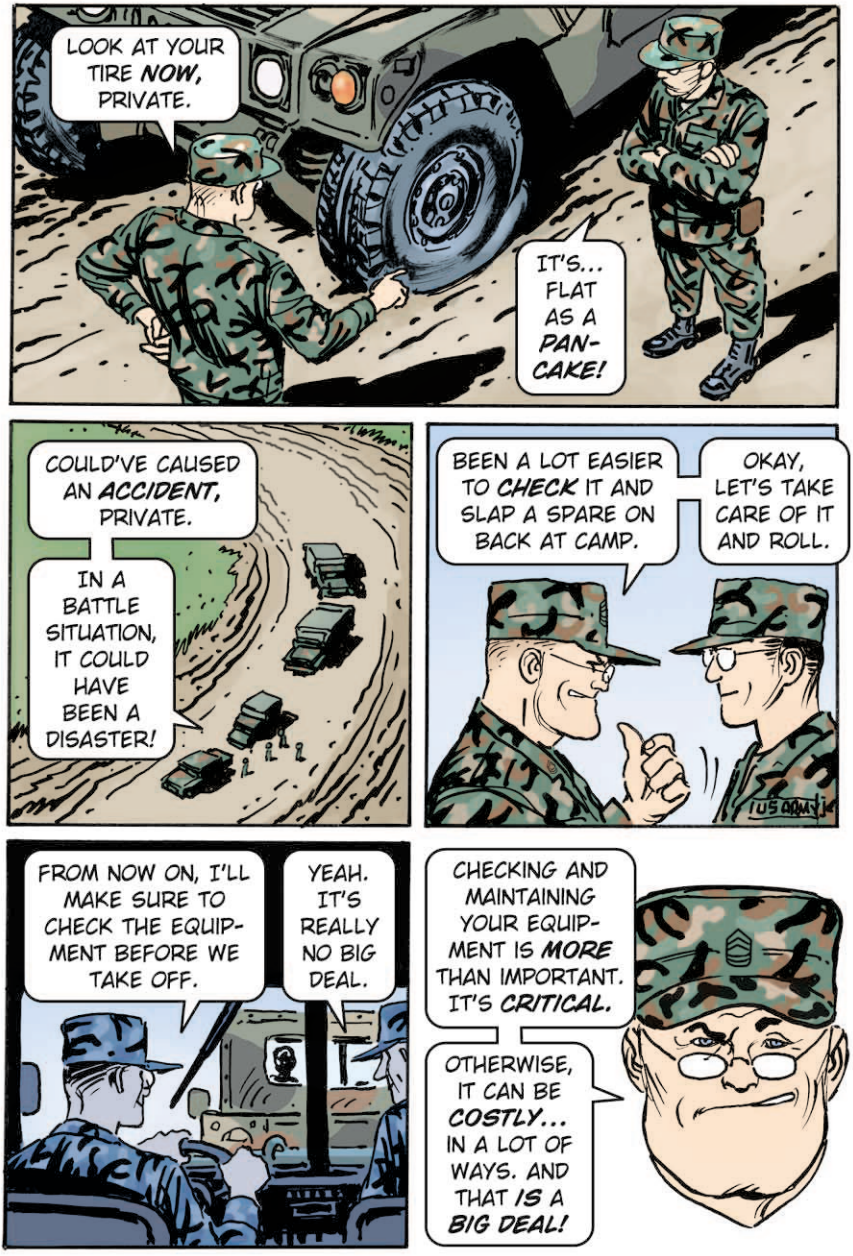

I'VE GOT TO GET OUT AND FIGHT...
...BUT... WHAT GOOD'LL I BE WITH NO MUSKET?


LAY DOWN YOUR ARMS!


"FORTUNATELY, TOM'S FELLOW SOLDIERS WERE WELL-EQUIPPED AND THEIR PMCS HAD BEEN DONE."
"THEY PROCEEDED TO TRAP AND CAPTURE THE HESSIANS!"

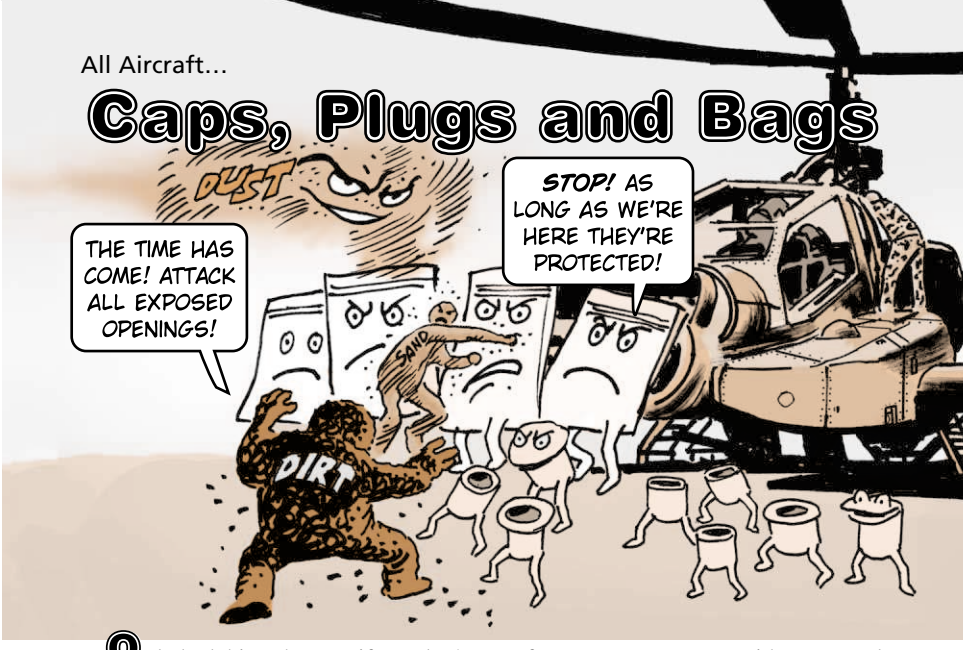

WHAT HAPPENED, SOLDIER?
MY POWDER HORN, GENERAL. THE POWDER...


SO, Y'SEE... BY NOT CHECKING HIS EQUIPMENT CAREFULY, HE PUT HIMSELF AND HIS BUDDIES IN DANGER.


LOOK AT YOUR TIRE NOW, PRIVATE.
IT'S... FLAT AS A PANCAKE!
COULD'VE CAUSED AN ACCIDENT, PRIVATE.
IN A BATTLE SITUATION, IT COULD HAVE BEEN A DISASTER!
BEEN A LOT EASIER TO CHECK IT AND SLAP A SPARE ON BACK AT CAMP.
OKAY, LET'S TAKE CARE OF IT AND ROLL.
FROM NOW ON, I'LL MAKE SURE TO CHECK THE EQUIPMENT BEFORE WE TAKE OFF.
YEAH. IT'S REALLY NO BIG DEAL.
CHECKING AND MAINTAINING YOUR EQUIPMENT IS MORE THAN IMPORTANT. IT'S CRITICAL.
OTHERWISE, IT CAN BE COSTLY... IN A LOT OF WAYS. AND THAT IS A BIG DEAL!

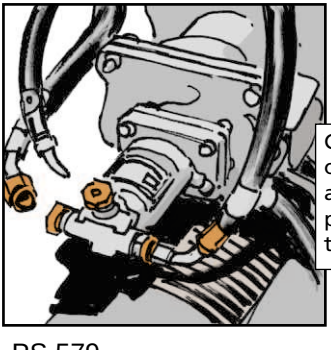
All Aircraft...

Caps, Plugs and Bags



Only bad things happen if you don't cap, bag, or cover lines, tubes and fittings when you pull PM on your aircraft.

- Dirt gets into open lines, contaminates fluids and grits up connectors so they won't seal.
- Moisture dilutes lube and keeps it from doing its job.
- Threads get smashed and delicate connector pins get broken or bent.



Cover openings and protect threads

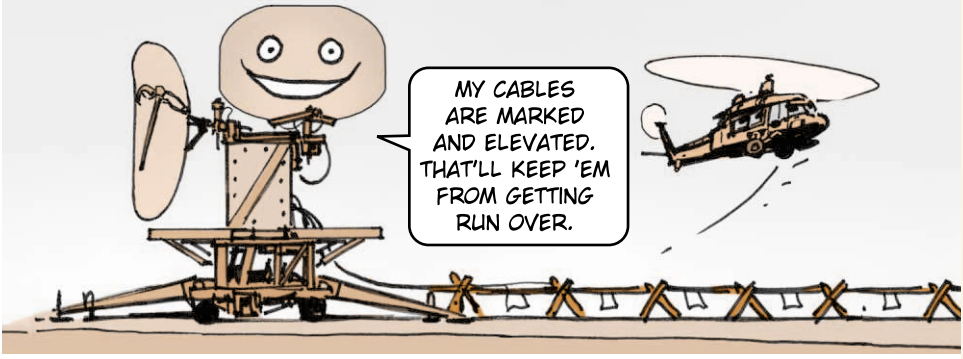
If components come with caps and plugs, use them. Always save caps and plugs that come with hoses, lines and fittings for re-use. If you have no caps and plugs, a good PM practice is to bag or wrap all exposed openings and lines to prevent fluid spills, moisture and dirt buildup.

Plastic bags are also great for holding nuts, bolts, cables and larger components that are removed during maintenance and might get dirty or lost. Here are a few common bag sizes:

Size (inches)	NSN 8105-00-
8 x 6	137-9133
10 x 8	137-9134
12 x 10	137-9136
12 x 12	837-7757

Make sure you tag all bags so everything goes back where it's supposed to go.

PROTECT ALL CABLES

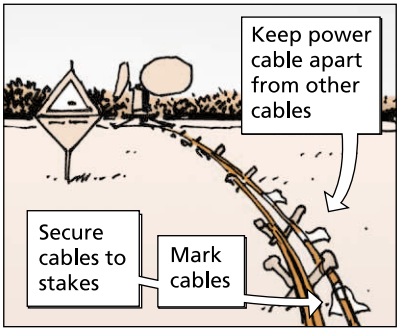


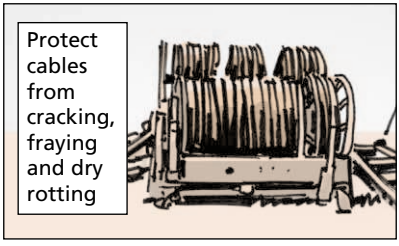
Air traffic controllers, if your AN/TPN-18A radar is having power problems, check its weakest link–-the power and data cables.

These cables are at the mercy of the elements, vehicles and airfield mowers.

When you set up your radar, protect its cables from vehicle tracks and mower blades and wheels. They can crush or cut delicate cable wires and knock out your radar.

A good rule of thumb to protect the cables is to elevate them above ground about 6 inches and mark 'em with white cloth or tape. Always separate the power cable from the others to prevent video interference. An easy way to get cables off the ground is to lay 'em on crossed tent stakes that are nailed or tied together. Then, tie the cables securely to the stakes with cable ties or engineer tape, remembering to tie the power cable off by itself.





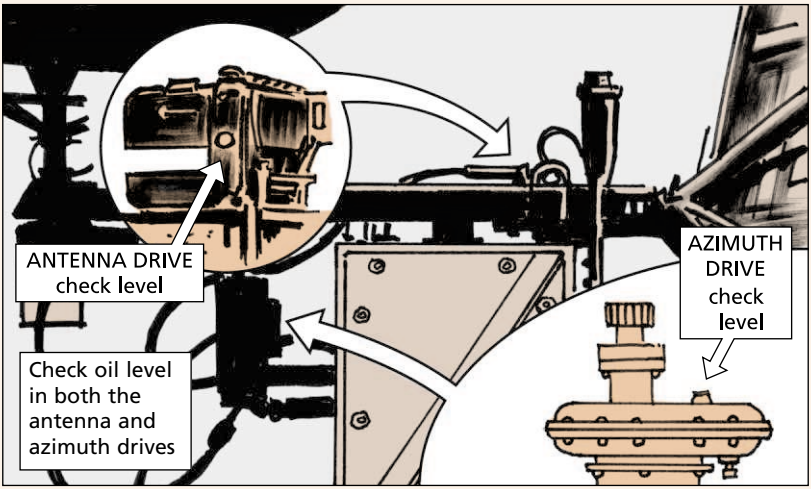
Next, make sure the cables are greased with silicone compound, NSN 6850-00-295-7685. That'll keep bad weather from cracking, fraying and dry rotting the insulation.

Of course, always follow the good PM words in the AN/TPN-18's TM 11-5840- 281-12-1.

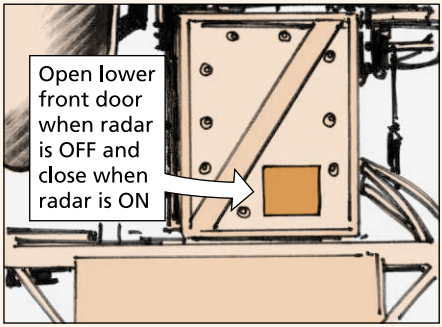
ATC EQUIPMENT COLD FACTS

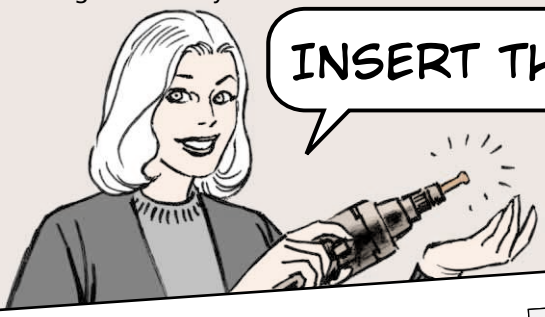
Army aviators fly in good and bad weather. But when the weather turns bad, the AN/TPN-18 tactical radar set is what the aviator depends on to guide him safely home. So, make sure the radar is ready to do its part—even in winter's grip.

First, check out the gear lubricating oil in the azimuth and elevation gear case assemblies. It must be an all- weather gear lubricating oil, like NSN 9150-01-152-1094, and it must be at the correct level. See the procedure in paragraph 5-9 in TM 11-5840-281-12. All-weather lube oil keeps gears moving when others thicken up and cause gear failure.



Next, **open** the lower front door of the radar set when you turn it **off.** The open door lets air in and equalizes the inside and outside temperatures. That prevents condensation inside the radar set, which means circuits won't short out when you power up. The door must be closed when the unit is powered up because of the electrical hazard it poses when the radar is on.

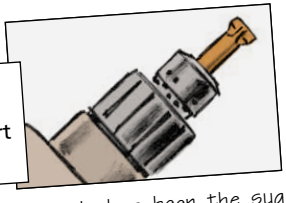




Dear Editor,

Every Avenger unit spends lots of time replacing screw inserts on the turret because they pop out easily when screws are overtightened. Many inserts are lost because they aren't held securely in place while the epoxy—used to glue them in—hardens. Before we do the insert replacement procedure in Para 14-6 of TM 9-1440-433-24-2, we start at the bottom.

We've found that a 5/16-in diameter bolt that's at least 1 1/2 inches long works perfectly for cleaning out the old epoxy from an insert hole. Just stick the bolt in your electric drill and go to work on the old epoxy.


Use bolt to clean out insert hole

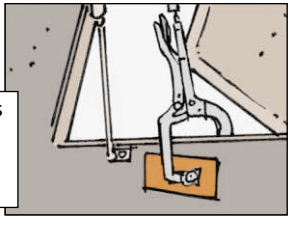
Another big help has been the suggestion you ran in PS to use a piece of fiberglass to hold the insert in place while the epoxy hardens. Can you run that again for other Avenger crews?

SPC James Baulch
SPC Zeke Ryan
1/2 ACR
Ft Polk, LA

From the desk of the *Editor*

No problem.

Once you have the insert in place, fasten a 2x4-in piece of fiberglass or something similar over the insert with tape or a clamp. Leave the fiberglass in place for 24 hours while the epoxy hardens. If the insert wiggles to the touch after 24 hours, put the fiberglass over the insert for another 24 hours. That's usually long enough.


Fiberglass holds insert in place

But units can save on insert repairs by not forcing the turret screws in the first place. That's what pops them out. The torque you need is listed Appendix F of the -24-2 TM.)

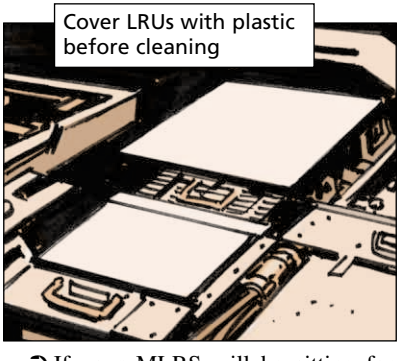
GIVE WATER THE HEAVE-HO

Water from hoses and rain has a way of getting inside the line replaceable unit (LRU) boxes on your MLRS. When that happens, the fire control system shorts out and you can't fire.

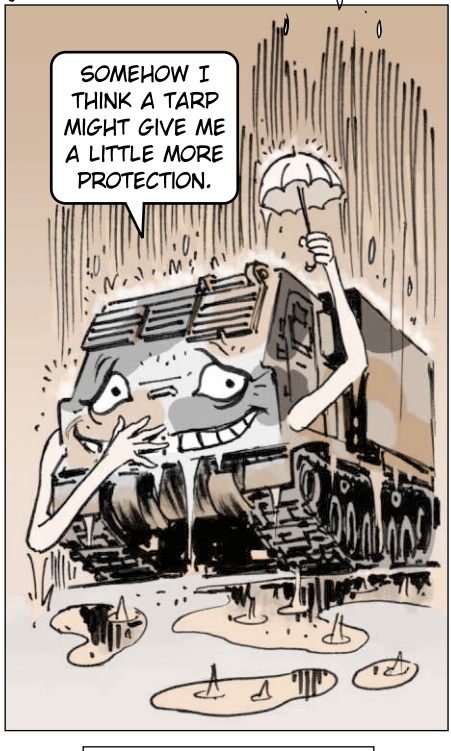
So keep your MLRS combat ready with this diligent preventive maintenance:

➲ Never use high-pressure water above the tracks.

➲ Cover LRU boxes with plastic when cleaning the rest of the hull.



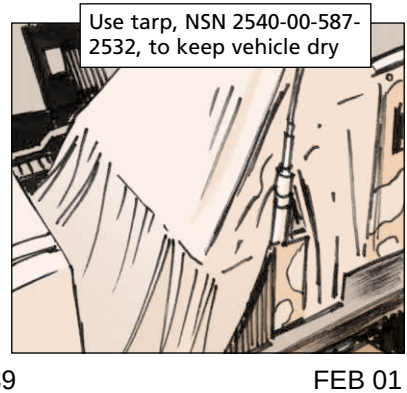
Cover LRUs with plastic before cleaning



➲ If your MLRS will be sitting for long periods, open the hull drain plugs. That lets rainwater drain out as fast as it enters the vehicle.

➲ Whenever possible, park your MLRS on a slight incline with the rear of the vehicle a bit lower than the front. That helps water drain out quickly.

➲ Keep the cab and fire control system covered with a tarp to keep out rainwater. NSN 2540-00-587-2532 brings a 12x17-ft waterproof tarp.

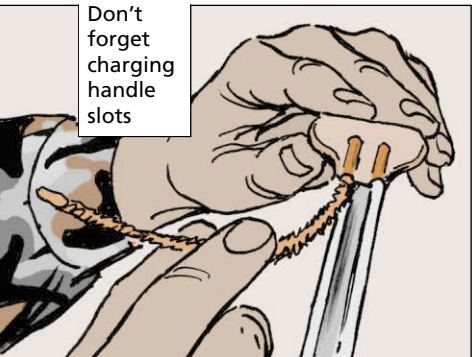


Use tarp, NSN 2540-00-587-2532, to keep vehicle dry

The Complete Cleaning

On the field, a good basic cleaning of your M16 rifle or M4A1 carbine like it shows in TM 9-1005-319-10 is fine. You clean the bore and bolt and that will keep your weapon firing. But when you return to your unit, do the complete cleaning. Clean those areas that won't stop your rifle from firing, but can make firing more difficult if they're not cleaned.

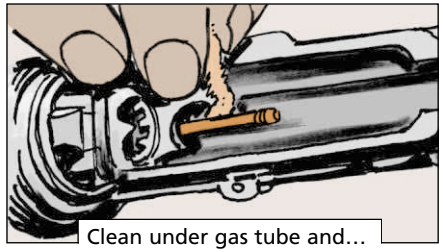
Charging handle: If you don't clean the charging handle, eventually you'll have trouble charging. So, pull out the handle from the receiver and clean it with CLP and a cloth. Use a pipe cleaner dipped in CLP to clean out the handle and receiver slots.

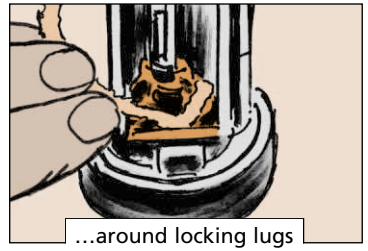

Don't forget charging handle slots

Slip ring: If the slip ring collects too much dirt, you'll have trouble putting on or taking off the handguards. So, have a buddy hold down the slip ring with both hands while you work out any sand or dirt with a dry pipe cleaner or toothbrush. Don't put CLP under the slip ring. Lube attracts more dirt.

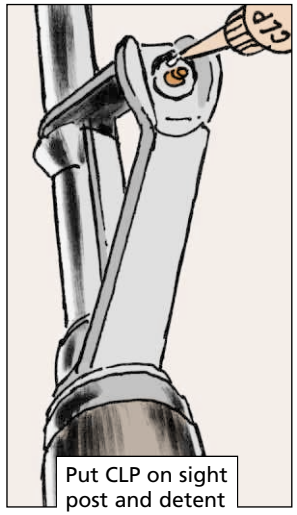

Push down and clean under slip ring

Gas tube and locking lugs: If they get too gunked up, bolt action slows. So, use your chamber brush to loosen carbon around the lugs. Then clean the lugs and clean under the gas tube with a pipe cleaner and CLP.


Clean under gas tube and...

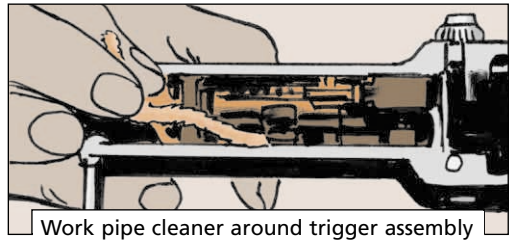

...around locking lugs

Front sight post: If the post sticks, you can't adjust it. That means you miss what you're shooting at. So, clean around the post with a toothbrush. Depress the detent and give it a drop of CLP. Work the detent and post up and down until they move smoothly.

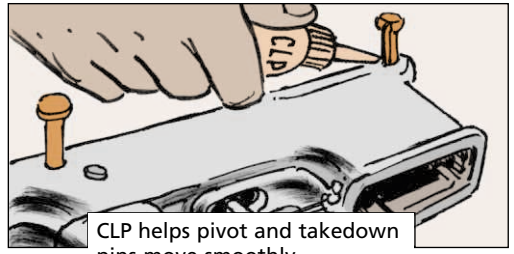


Put CLP on sight post and detent

Trigger assembly: If the inner workings of the trigger assembly get too dirty, the trigger will bind. The best way to clean out the assembly is to put CLP on a pipe cleaner and gently clean out dirt from the assembly. Don't take apart the trigger assembly for cleaning. That's your support's job.

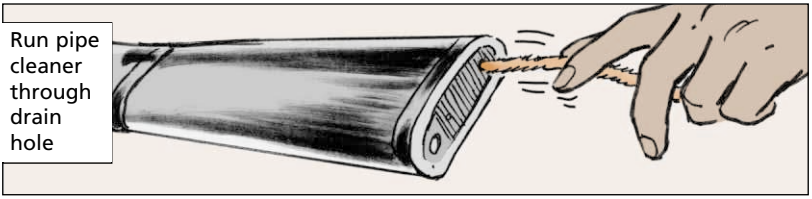

Work pipe cleaner around trigger assembly

Takedown and pivot pins: If the pins stick, you'll have trouble disassembling your weapon. So, put a stripe of CLP down each pin and work them in and out of the receiver until they move easily.

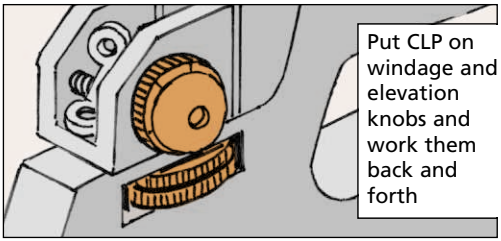


CLP helps pivot and takedown pins move smoothly

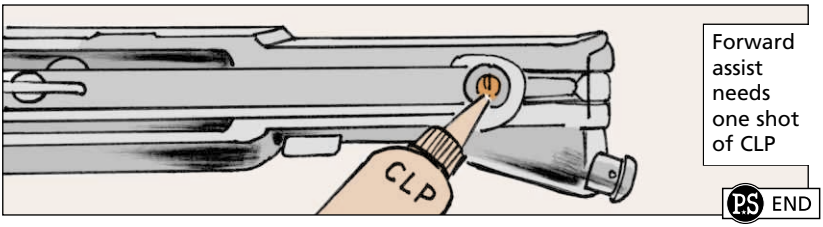
Buttstock drain hole: If the hole's plugged, moisture collects inside the buttstock and soon corrosion is chewing up the lower receiver. So, run a pipe cleaner through the hole.



Windage and elevation knobs: If the knobs stick, you can't adjust the rear sight. So, put a couple of drops of CLP on each knob and turn the knobs until they move smoothly. Return them to their original position.



Forward assist: If the forward assist won't budge, you may not be able to lock the bolt forward. So, squirt one shot of CLP in the forward assist port inside the upper receiver. Run the forward assist back and forth until it is moving smoothly.



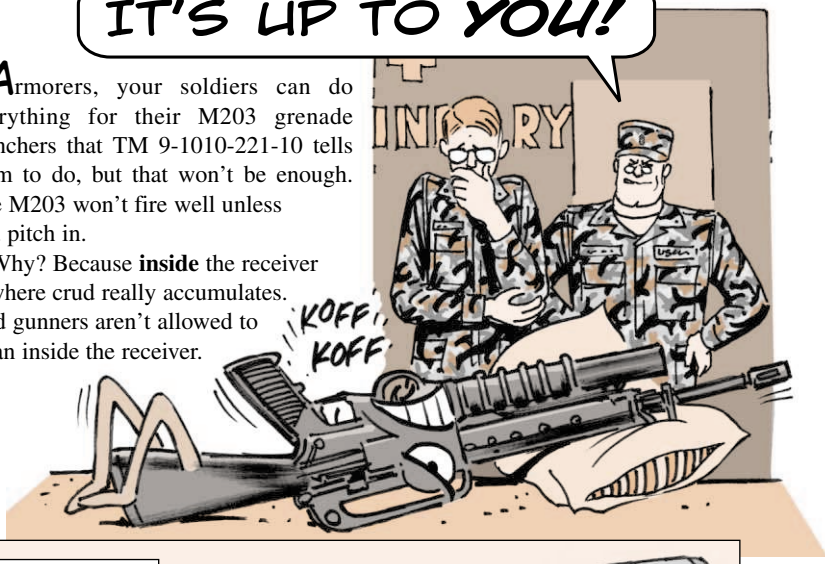
NEW M240B/G GUN RACK

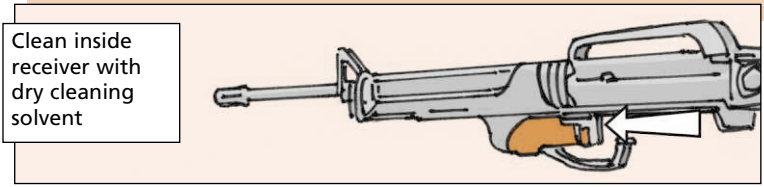
A storage rack made specifically for the M240B/M240G machine guns is available with NSN 1095-01-466-2065. The NSN is being added to the additional authorization list (AAL) in TM 9-1005-313-10. When bare spots show up after you start using the rack, touch them up with olive drab enamel, NSN 8010-00-848-9272.

IT'S UP TO YOU!

Armorers, your soldiers can do everything for their M203 grenade launchers that TM 9-1010-221-10 tells them to do, but that won't be enough. The M203 won't fire well unless you pitch in.

Why? Because **inside** the receiver is where crud really accumulates. And gunners aren't allowed to clean inside the receiver.

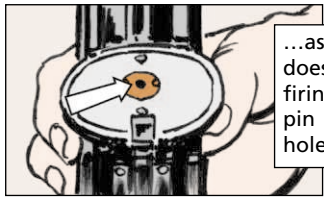




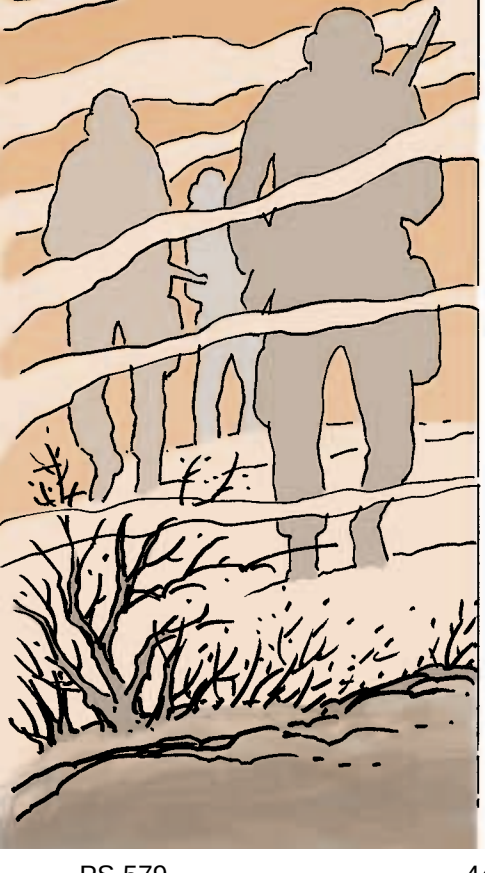
So, monthly, **you** need to take off the receiver backplate and check out the insides.

If it's dirty, clean the follower guide with CLP. Wash the receiver with dry cleaning solvent, wipe it out, and let it air dry. Then lightly lube the trigger assembly and safety detent with CLP.

One thing your gunners can do is to not load up the firing pin hole, safety detent, and trigger with CLP. Those areas need light lubing—just a few drops—daily in the field. If gunners put on more, it turns into gunk inside the receiver. And you're back to square one.



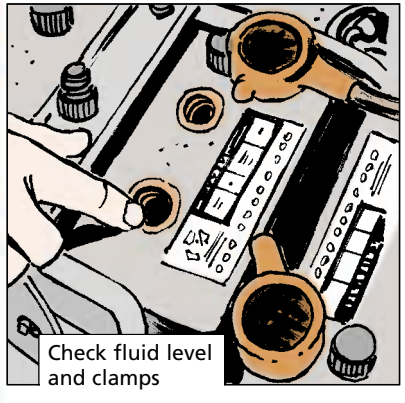
SMOKE WITH THIS PM



Smoking your M56 smoke generator is much easier if you light up with PM.

PMCS

Batteries--The PMCS in TM 3-1040-282-10 doesn't mention the HMMWV batteries, but that doesn't mean you can forget them. If the vehicle batteries are dead, so is your ability to blow smoke.

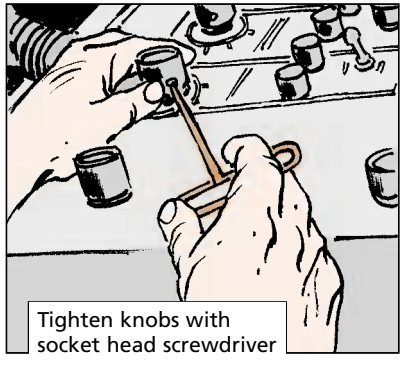


Check fluid level and clamps

At least monthly, check the electrolyte level in all battery cells. Feel clamps for looseness. Look for corrosion around terminals. Tell your mechanic if you spot problems you can't fix.

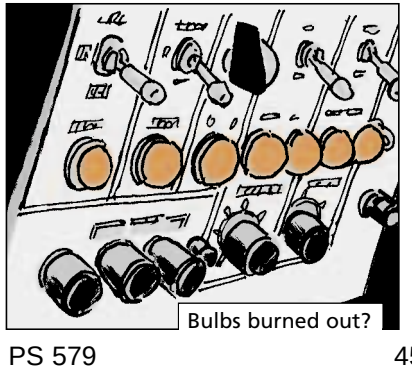
Control panel cables--If any of the three cables are loose, the control panel has trouble controlling smoking, plus the cable pins are more likely to get bent if something hits the cable. Just feel the cables for looseness and hand tighten any loose ones.

Control panel knobs--If the knobs are loose, they can pop off and then you can't adjust things. So feel the knobs for looseness. If any are loose, tighten them with the socket head screwdriver that's part of your tool kit.



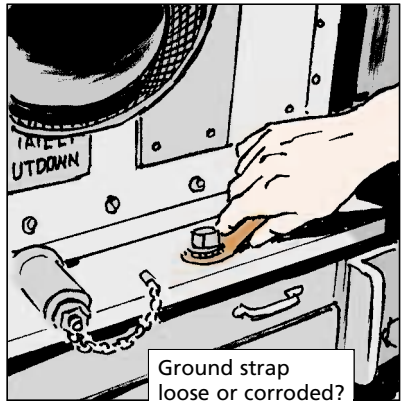
Tighten knobs with socket head screwdriver

Control panel lamps--If any of the lamp bulbs are burned out, you've lost your warning and indicator lamps. That could be dangerous to you and the M56. So simply hit the LAMP TEST button. If any lamps don't light, replace them with the on-board spares, following the procedure in Para 3-7 in TM 3-1040-282-10. If lamps still don't light, tell your repairman.



Bulbs burned out?

Ground strap--If the ground strap is loose or corroded, you could have an electrical hazard, plus the system won't run right. Tighten a loose ground strap with your adjustable wrench. Your repairman can rub out corrosion with a mixture of baking soda and water and a wire brush.



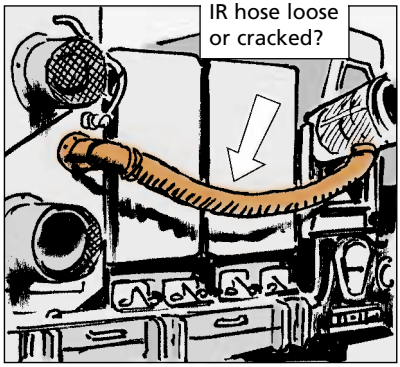
Ground strap loose or corroded?

Fog oil tanks--The plastic tanks can spring leaks and make an oily mess. Oil in the channel between the tanks means at least one tank is leaking. Tell your repairman.

Oil in channel?

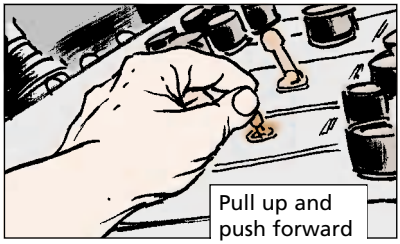
PS MORE

IR bleed air hose--If the hose is cracked or loose, the M56 can't put out much IR (infrared) smoke. So feel both ends of the hose for looseness and eyeball the length of the hose for cracks or bulges. Fix a loose hose by repositioning and tightening the hose clamp. Tell your repairman about a cracked or bulging hose.



Toggle Switches

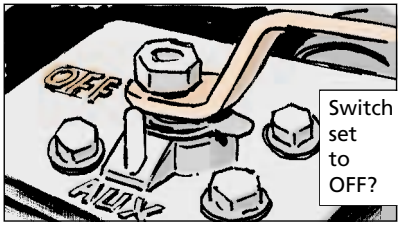
It's pull up and push forward when you turn on the toggle switches on the control panel. If you forget to first pull up, you can bend or break the switch. Try to keep things like helmets and packs away from the control panel. They can break the switches. Keep a box over the control panel when you're not operating to protect the switches.



Shutdown

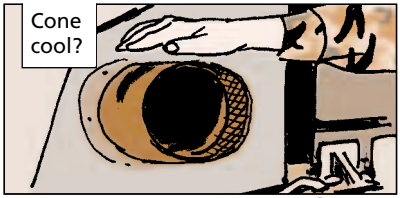
At shutdown, make absolutely sure the visual obscurant three-way valve, which acts as the fog oil ON/OFF switch, is set to OFF.

Otherwise, fog oil drips out of the dispersion cone (turbine exhaust) or collects in the turbine combustor section, causing false starts and fuel to collect in the section. If you **do** ever forget to set the switch to OFF and you **do** find oil has dripped out of the cone or collected in the section, your repairman needs to



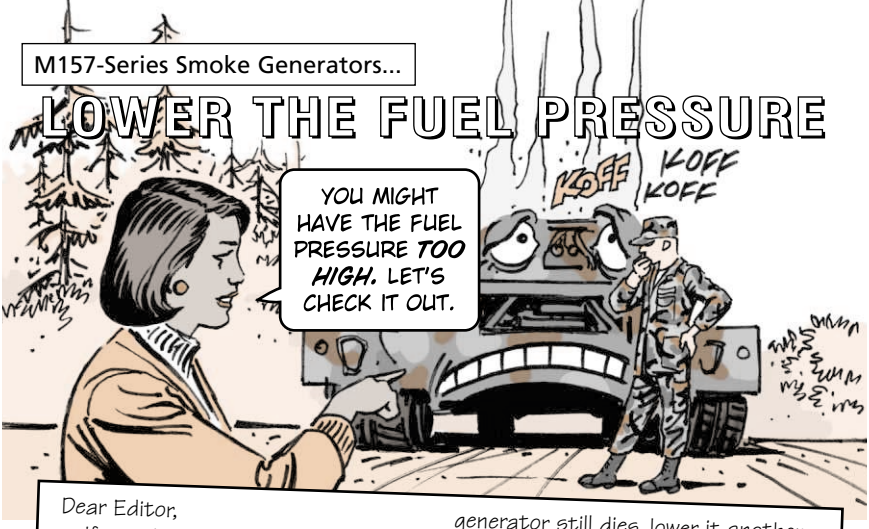
clean the visual obscurant check valve and drain the turbine combustor section. Both procedures are in Para 2-12 in TM 3-1040-282-20.

Wait at least 15 minutes after shutdown before putting a tarp or the storage and transit cover on your M56. Otherwise, the hot dispersion cone burns a hole in the tarp. To make sure the cone has cooled, hold your hand over the cone without touching it. If you still feel heat, wait longer for it to cool.



M157-Series Smoke Generators...

LOWER THE FUEL PRESSURE



Dear Editor,

If your M157-series smoke generator starts but then immediately dies, you may have a fuel pressure problem. TM 3-1040-279-12&P says the fuel pressure should be 100 psi +/- 5 psi. But that's too high on some generators. The M157 gets too much fuel and floods out.

If your M157 starts and dies, have your repairman lower the fuel pressure 10 psi by following the procedure in Para 4-12 in the -12&P. If the generator still dies, lower it another 10 psi. Some generators must have their pressure lowered to 67 psi before they run smoothly.

Kim Poehling
Rich Dixon
SBCCOM-Rock Island

From the desk of the *Editor*

You've taken the pressure off good smoking. Thanks.

Turn in M43 Masks

If your unit has damaged or excess M43 (Types I and II) protective aircraft masks, turn them in immediately. The Army needs them to repair and get back to Apache units. After removing the mask canister and battery, turn in the mask with a DD Form 1348M or DD Form 1265, Report of Excess. See Para 7.12B in AR 725-50 for instructions.

The mask should be sent to:

Pine Bluff Arsenal
Depot Operations
Field Service Stock Non-ammo
(ATTN: Terry Brodnax)
53 990 507th St
Pine Bluff, AR 71602-9500

Dispose of the canister and battery as hazardous waste.

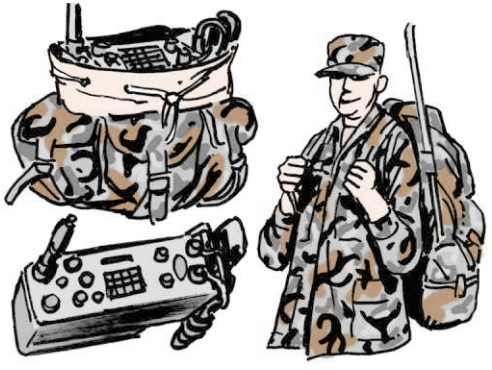
Questions? Call SBCCOM's Frank Fuoto at (309) 782-4285, DSN 793-4285, or e-mail **fuotof@ria.army.mil**.

BB-390A RECHARGEABLE RUMORS

Some of you are not giving the BB-390A rechargeable battery, NSN 6140-01-419-8187, a fair shot to do your SINCGARS' power job.

Here are some of the rumors the soldier's grapevine is spreading about the BB-390As.

RUMOR: THE BB-390As DON'T HAVE ENOUGH LIFE BETWEEN CHARGES. WE'RE ONLY GETTING 3 TO 6 HOURS OF USE OUT OF THEM.



This is a real problem, but it's easily solved. The BB-390As need a break-in period. If you use them straight out of the box, you'll probably only get about 6 hours of use out of them.

When you get a new BB-390A, fully charge it before the first use with the PP-8444/U charger, NSN 6130-01-427-9604 or PP-8444A/U, NSN 6130-01-443-0970. Use it in garrison or other locations where the battery's first use time of only a few hours will not be too important.

Prior to the next charge cycle, ensure the BB-390A is fully drained in your equipment or by the PP-8448/U discharger, NSN 6130-01-430-3108.

Then recharge the battery.

Repeat the discharge/charge cycle one more time.

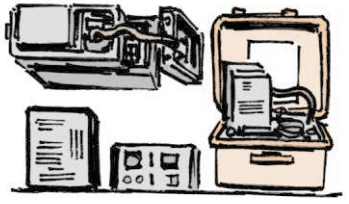
After the next charge, you should start getting 12 to 18 hours of use between recharges.

RUMOR: IT'S IMPOSSIBLE TO GET A **BB-390A** FULLY CHARGED. NO MATTER HOW LONG YOU CHARGE IT, THE STATE OF CHARGE (SOC) INDICATOR WILL NEVER SHOW A FULL CHARGE.

A BB-390A should take about 2 hours to fully recharge. If after 2 hours, the SOC indicator does not show a full charge—at least four out of the five segments lighted—the problem is probably with the indicator, not the battery.

Check the charge with a voltmeter. Use pins 1 & 4 and 2 & 5 to check each 12-volt section of the battery. If you get 13.25 volts or more on each section of the battery, your battery is fully charged and the SOC indicator is damaged.

RUMOR: THE BA-5590 BATTERY, **NSN 6135-01-036-3495,** COSTS LESS THAN $100. ONE **BB- 390A,** A CHARGING UNIT AND AN ADAPTER, **NSN 5940-01- 427-9110,** COSTS MORE THAN $1,000. IT JUST DOESN'T MAKE SENSE TO SPEND THAT MUCH MONEY.



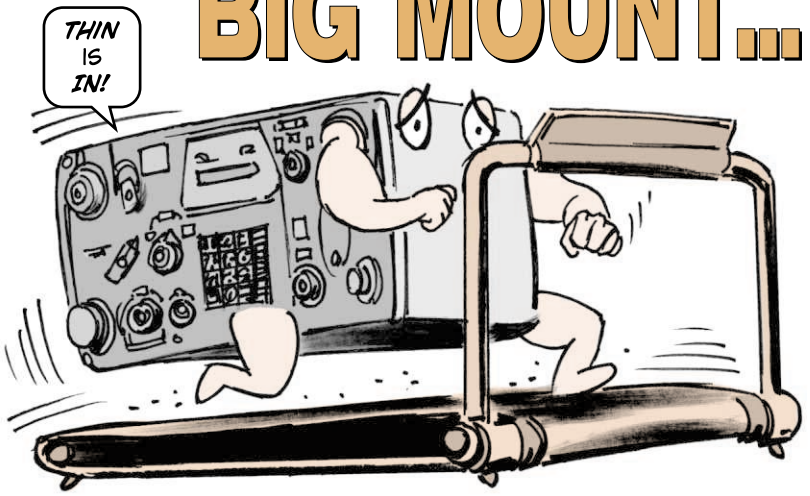
The small picture shows it's true that you can get about 15 BA-5590s for the cost of one BB-390A and its necessary rechargeable hardware. But the big picture shows the real cost savings comes from using the rechargeable.

A BA-5590 lasts about 24 hours and then it's dead. A BB-390A can be recharged more than 200 times. Every charge after the first 15 saves your unit the cost of one BA-5590.

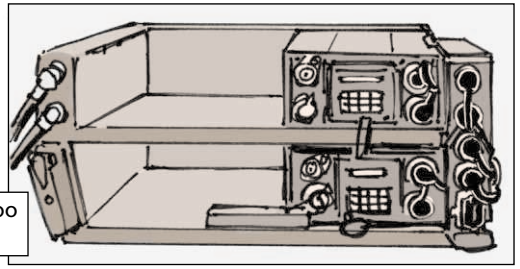
Even though there is some cost to recharging, before the BB-390A dies your unit will have saved several thousand dollars for each SINCGARS!

Don't listen to the grapevine and forget the rumors. Give the BB-390A a fair shot to do your SINCGARS power chores. Clinging to the BA-5590 for training and garrison duties is not only costing your unit money, but it's going against the directive on rechargeable battery use in DA memo DALO-SMR, 29 Aug 97.

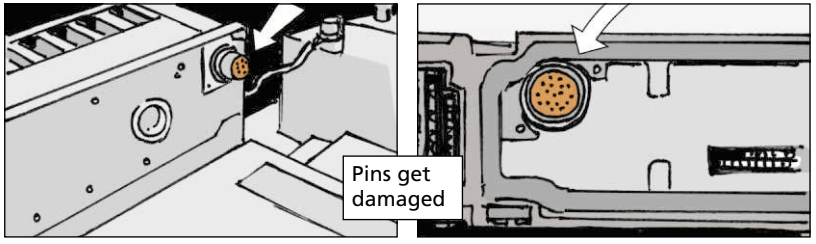
BIG MOUNT...



Your SINCGARS vehicle mount was made for a fat RT. The new ASIP E-model SINCGARS is slim and takes up only half the mount. This extra room is causing a few problems.



First, the hookup between the RT and its mount is harder to make. It's a small problem on the top RT where the connection can be seen, but it's a big problem on the bottom RT, where you can't see the connection being made. The result is usually bent and broken connector pins.

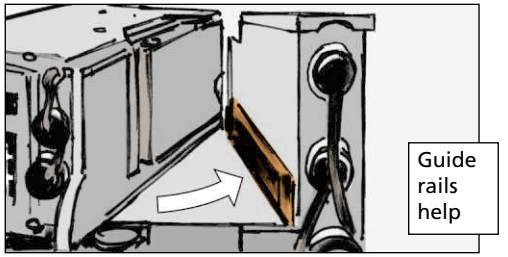


...little radio

The hookup is hard because there is leeway on both sides of the RT. You can't just butt the RT next to the mount and shove. Many mounts require a vertical adjustment of the RT, too!

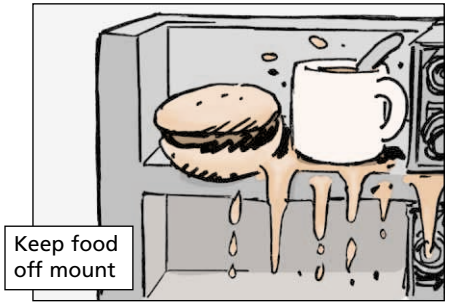
The only solution is patience and care when installing the RT. You have to ease the RT into the mount until you feel the connectors meet. Then carefully push the connectors together.

Guide rails, NSN 5975-01-467-4678, help some. The rails close the gap between the right side of the radio and the mount. But don't depend on them entirely. Even with the rails, the connector and receptacle are usually not perfectly aligned.



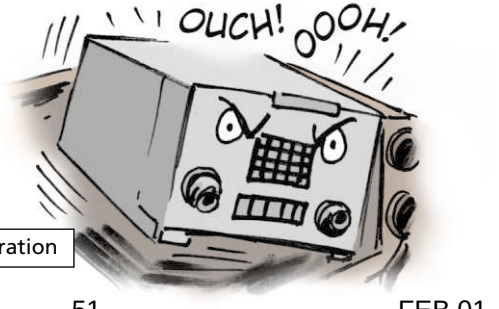
Next, the extra room begs to serve as a storage area. Those pleas better fall on deaf ears. Storing extra equipment, like cables and batteries, in that space provides ammunition for knocking off knobs and cracking display windows.

Don't use that space to lay out your lunch or to set your morning coffee.

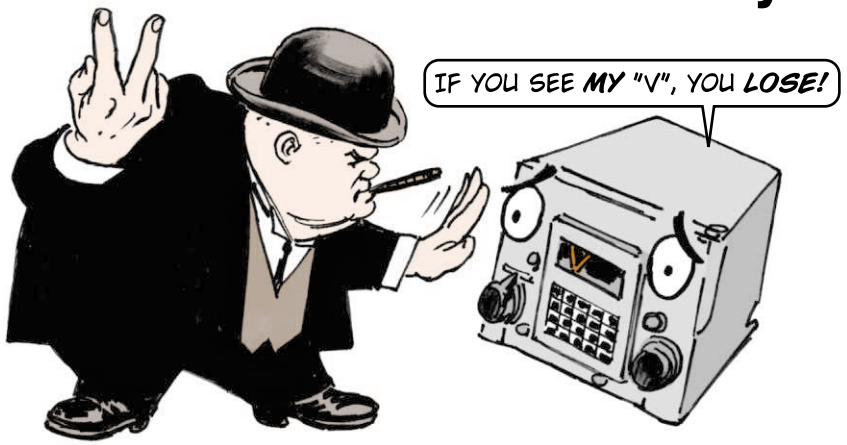


Just leave that extra space empty.

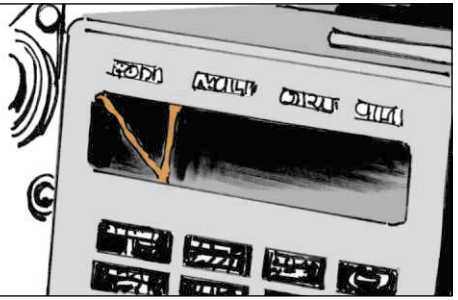
Finally, be aware of vibration problems your vehicle might cause. Even a locked down RT with guide rails has some room to move in these large mounts. Be sensitive to how much vibration your RT is getting.



This "V" Ain't for Victory

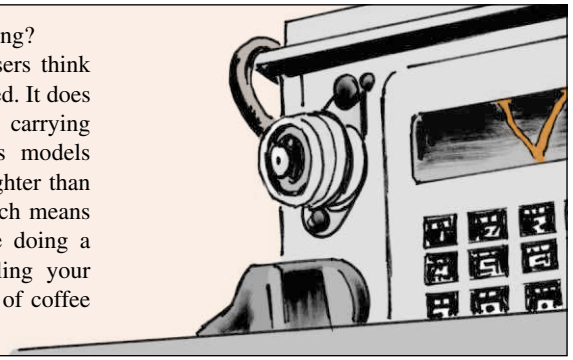


If your unit has the new advanced SINCGARS improvement program (ASIP) E-model RT, the chances are good you've seen a "V" in the display window that doesn't belong there. That "V" is a v-shaped crack and far too many RTs are showing up with them!



Why is this happening?

The educated guessers think the RT is being dropped. It does not have the built-in carrying handles that previous models had. It's also much lighter than previous models. Which means that many of you are doing a one-hand lift and filling your other paw with a cup of coffee or worse, another RT.



As you trek to and from your vehicle, the RT slips from your hand and the unprotected key pad meets the unyielding ground.

Crack!

"Aw, shucks!"

Now it's time for an about face and a slow march to the CE repair shop.

To help prevent the display from experiencing that death drop, use carrying strap, NSN 5340-01-461-4741.

The problem with the strap is that you have to want to use it. It's not permanently attached to the RT and is easily lost and easily forgotten.

The strap costs about $5. A new keypad (which is the repair for a cracked display) costs about $300. Seems pretty clear that the strap is the way to go.

Also, put the word out throughout your unit that the new RT is not indestructible. Carry one at a time and use both hands for the job if a strap is not available.

Finally, be aware that a snap-on ASIP display cover, NSN 5895-01-473-6804, is now available. The cover does provide some protection to your display, but should not keep you from using the strap and carrying the RT right.

GET A PATHFINDER!

If you use GPS equipment, you need to be on distribution for The Pathfinder, a quarterly newsletter published by the Global Positioning System folks at Ft Monmouth, NJ.

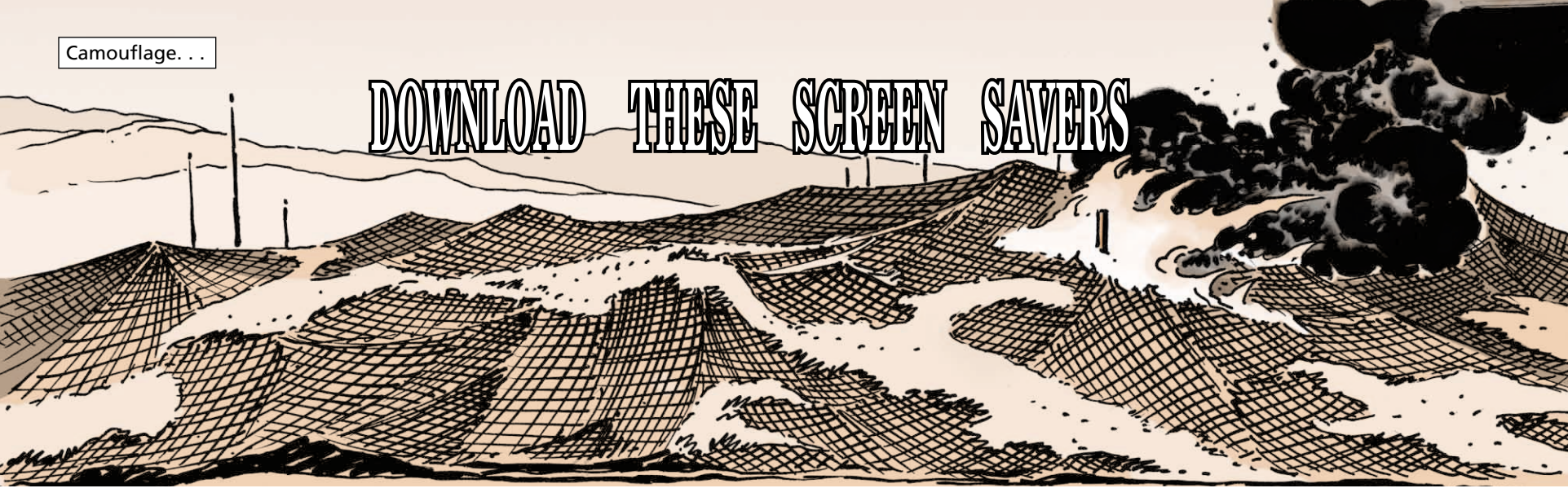
Just write, call or e-mail:

PM GPS (Pathfinder)
ATTN: AMSEL-DSA-GPSR
Bldg 283 Squier Hall
Ft Monmouth, NJ 07703
DSN 992-6137

(732) 532-6137

donald.mulligan@mail1.monmouth.army.mil

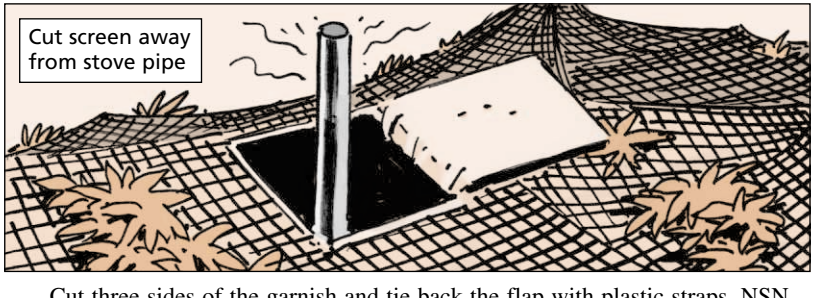
DOWNLOAD THESE SCREEN SAVERS



Your camouflage screens may be fire retardant, but they **will** burn or melt if they get near something very hot—like exhaust pipes and stove pipes—or a transmitting radio antenna.

So keep screens cool—and safe.

When you set up your screening, cut a hole in the garnish and fold it back so that the exhaust pipe, chimney or antenna is at least 8 inches from the garnish in all directions.



Cut three sides of the garnish and tie back the flap with plastic straps, NSN 1080-01-022-8633 for woodland or desert screens and NSN 5975-00-111-3208 for snow screening. That way, you can close up the hole when you're through, using the same straps.

The flap protects your radio set, too. The screen's metal content can reflect radio RF output and damage its transmitter.

Once you're set, don't think everything will stay in place by itself. Eyeball the camouflage screening daily or every hour or so during high winds or snow.

Support poles can sink into soft ground or shift around. Then screening can move and touch hot spots. High winds or snow can cause the screening to shift, too. Knock off snow before it builds up.

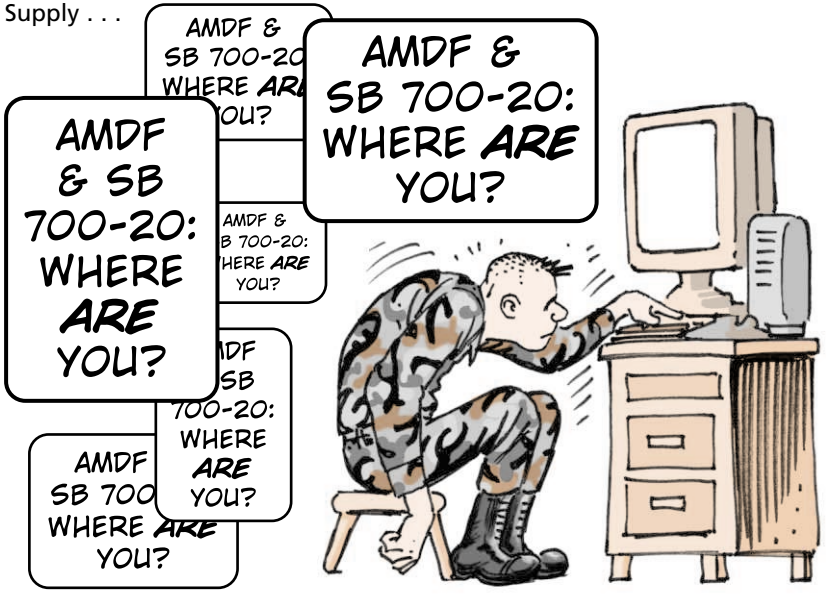
If your screening gets damaged, use a repair kit to fix it. Use only matching fabric from the proper repair kit for the job. Radar scattering screens are either Type II, III or IV. Type II screens can be repaired with Type II, III or IV fabric. Type III can be repaired only with Type III and IV and Type IV can be repaired only with Type IV. Radar transparent screens are Type I only. The following repair kits are available:

Radar Transparent	
Type I Pattern	**NSN 1080-01-**
Desert	073-3220
Snow	081-1021
Special Desert	325-4994

Radar Scattering	
Type IV Pattern	**NSN 1080-01-**
Woodland	266-1832
Desert	266-1834
Snow	266-1830
Special Desert	325-4995

The Type 1 woodland screen is no longer available. A replacement screen is in the works and should be available later this year.

Supply . . .



Some supply folks say that since FED LOG (federal logistics) replaced ARMYLOG (Army logistics), the AMDF, SB 700-20 and other Army products have just plain disappeared.

Nope! The AMDF and SB 700-20 are alive and well in FED LOG. That's good because you need the AMDF to route requisitions and the SB 700-20 to do your property book work.

FED LOG contains supply information that's used by all the military services. It also has data that's unique to each military service. For the Army, this unique data includes the AMDF, SB 700-20 and products like the packaging and freight files.

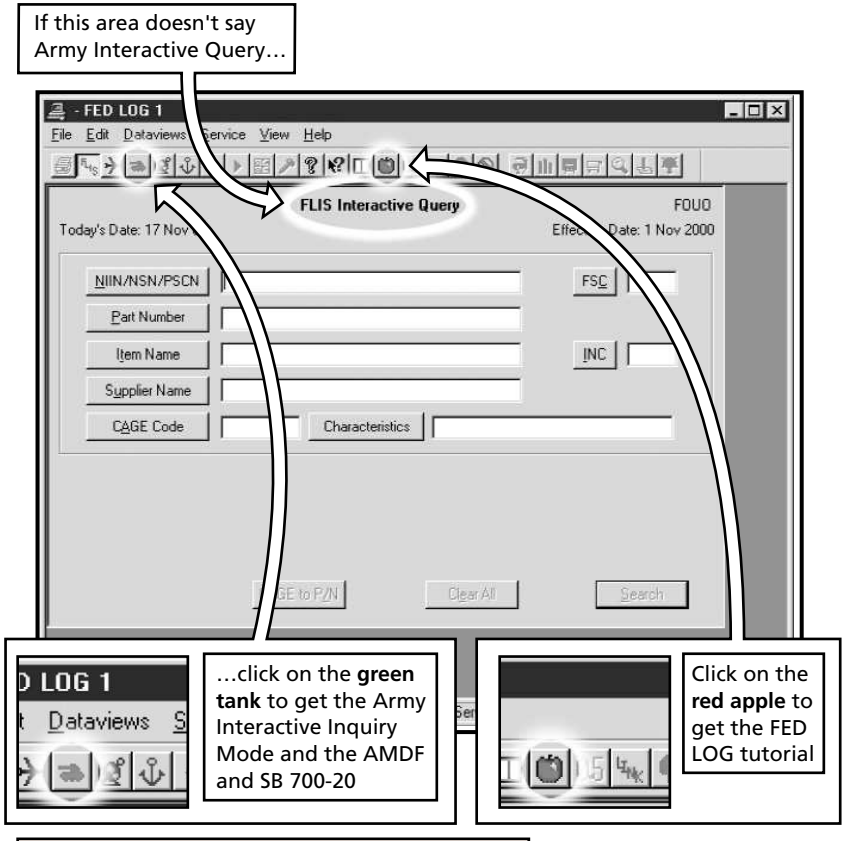
"Hold on," you say. "When I boot up my FED LOG, there's no mention of Army anything. What gives?"

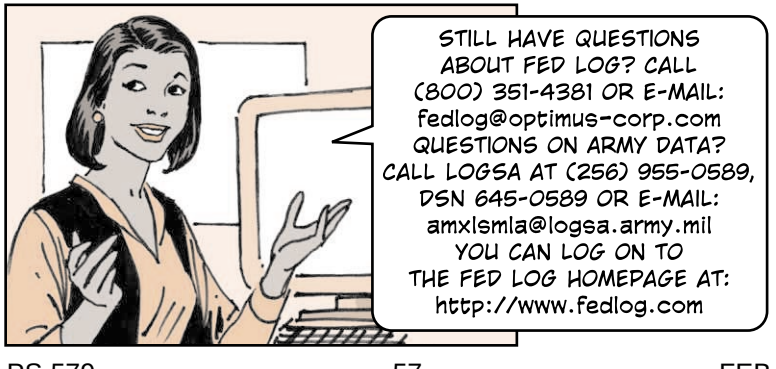
Well, when you boot up FED LOG you get the DOD file—the Federal Logistics Information System (FLIS) file. Data everyone uses is in this file.

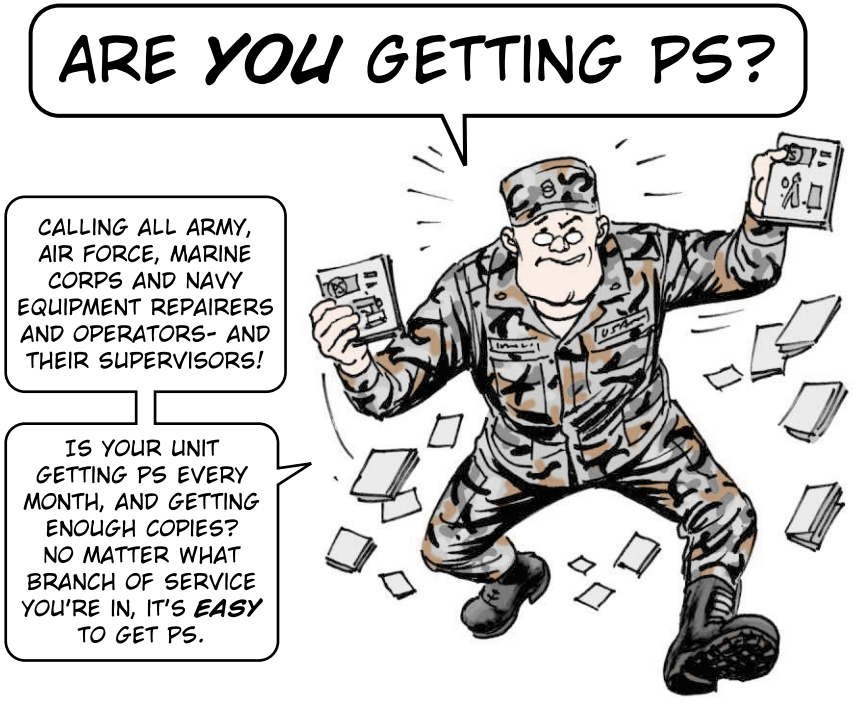
To change to the Army file, simply click on the **green tank** on the shortcut toolbar. Now you have the AMDF, SB 700-20 and other Army products at your fingertips.

Want to define FED LOG information, a code or a given field? Just click on and hold the arrow/question mark button, drag it to the code/field you want defined and let it go. Bingo! There's your answer!

Click on the red apple and the FED LOG tutorial comes up. Now you can train yourself in FED LOG capabilities–at your convenience.







ARMY

Your pubs clerk starts a pubs account by sending a DA Form 12-R to:

US Army Publishing Agency
Distribution Operations Facility
ATTN: New Account Processing
1655 Woodson Rd
St Louis, MO 63114-6128

Questions? Call the distribution facilities customer service at DSN 693-7305, Ext 268 or (314) 263-7305, Ext 268.

Once you've got your pubs account, you can order PS.

On the Internet, point your browser to **http://www.usapa.army.mil**.

Click on Publications Ordering and Subscription System. Then select Publications Ordering System. Go into Subscription Add/Change/Delete and follow the instructions.

PS is IDN 340312. Put the number of PSs you want to receive each month in the QUANTITY block.

If you can't order electronically, give the pubs folks a call. They'll help you out. Call DSN 693-7305, Ext 268 or (314) 263-7305, ext 268.

NAVY

If you want PS and already have an Army account number, follow the instructions for Army units above.

If you don't already have an Army account, you can get one by faxing or mailing a DA Form 12-R to:

Commanding Officer
NAVICP, Code 033343
700 Robbins Ave
Philadelphia, PA 19111-5098

Call them at DSN 442-5632 or (215) 697-5632. The fax number is 5914. Or, e-mail them at **louise_carroll@icpphil.navy.mil**.

If you don't have a DA Form 12-R, the folks at NAVICP will send you one. Once you have it, just fill in Sections 1, 2, and 4 and get it back to them.

To change your address, you fill in Section 3.

MARINE CORPS

Request the number of copies you need through your unit S-1 publications clerk. PS magazine is PCN 74000000000 and is requestioned through the Marine Corps Publications Distribution System (MCPDS).

You'll find other Marine Corps pubs info at **http://pubs.ala.usmc.mil/** and **http://www.marcorsyscom.usmc.mil/ps/psd/index.htm**.

AIR FORCE/ AIR NATIONAL GUARD

Order each issue individually through the Air Force publications web site **http://afpubs.hq.af.mil**. Click on Physical Products and type in PSMONTHLY in the Product Search box. Questions? Call AF customer service at (410) 687-3330 or DSN 584-4529.

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Forward a check or money order to:

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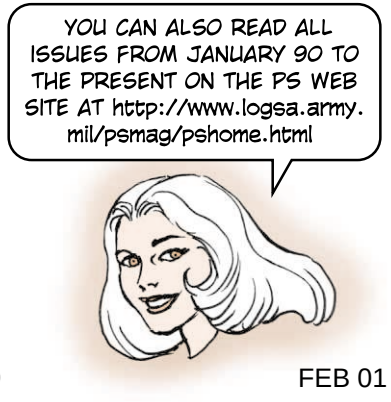
Pittsburgh, PA 15250-7954

To order with VISA, MasterCard, or Discover, call GPO at (202) 512-1800 or fax (202) 512-2250.

Ask for PS, The Preventive Maintenance Monthly, stock number 70804600000-1.

The price is $30 per year in the US, including APO/FPO addresses. The foreign address price is $37.50 per year (US currency only).



PROJECT CODES: Boon or Bust?

Project codes are issued to units in order to assure special handling and faster processing of their requisitions when that unit is assigned a special mission or operation.

But some supply and TAMMS/PLL clerks use these codes to fill routine requisitions faster. It's not authorized and bogs down the system with high priority requisitions. It also puts project-coded operations at risk because it increases the time it takes to fill supporting requisitions.

Project codes are three-position alpha-numeric codes that are assigned by the President, the Office of the Secretary of Defense (OSD), the Joint Chiefs of Staff (JCS) and DA. Project codes are controlled by the office that assigns them and are used to manage and track maneuvers, exercises and programs. Project codes assigned by OSD or the JCS may be classified, always take precedence over DA project codes, and are always easily identified because their first position is always the number 3 or 9.

The USAMC Logistics Support Activity (LOGSA) assigns, maintains and controls all DA project codes. LOGSA also receives copies of all JCS/OSD project codes and distributes them to Army MACOM and DA-appointed POCs by e-mail. These POCs issue them to units participating in operations identified to project codes.

For more information on project codes, contact the LOGSA coordinator for DA and JCS/OSD project codes at (256) 313-2495, DSN 897-2495, or e-mail: **amxlsmm@logsa.army.mil**.

Supply Excellence Awards

Page 58 of PS 571 rightly cited the 78th Signal Bn as getting an active Army honorable mention for supply excellence. It wrongly placed the unit in Korea. It is in Japan.

M35A3 CTIS Air Dryer Kit

There is a parts kit available for the CTIS air dryer on M35A3 2 1/2-ton trucks, so don't order the entire dryer just to get a filter or gasket. Kit, NSN 2530-01-442-4606, brings a desiccant canister with gasket (Items 2 and 3 from Fig 168, TM 9-2320-386-24P), a coalescing filter (Item 5), a preformed packing (Item 6) and a package of lubricant for the gasket. You don't need Item 4 anymore.

SEE Hood Latch

Order the small emplacement excavator's hood latch with NSN 5340-12-187-8938. The latch is missing from Fig 196 of TM 5-2420-224-24P.

25-Outlet Light Set

It's better to be safe than sorry, especially with the 25-outlet light set, NSN 6230-00-299-7077. That's why Communications-Electronics Command is replacing the light set's old circuit breaker, NSN 5925-01-392-9966, with a safer ground fault circuit interrupter (GFCI), NSN 5925-01-466-0676. Questions? Contact Tim Messer, DSN 992-2793/ (732)532-2793, **timothy.messer@mail1.monmouth.army.mil**.

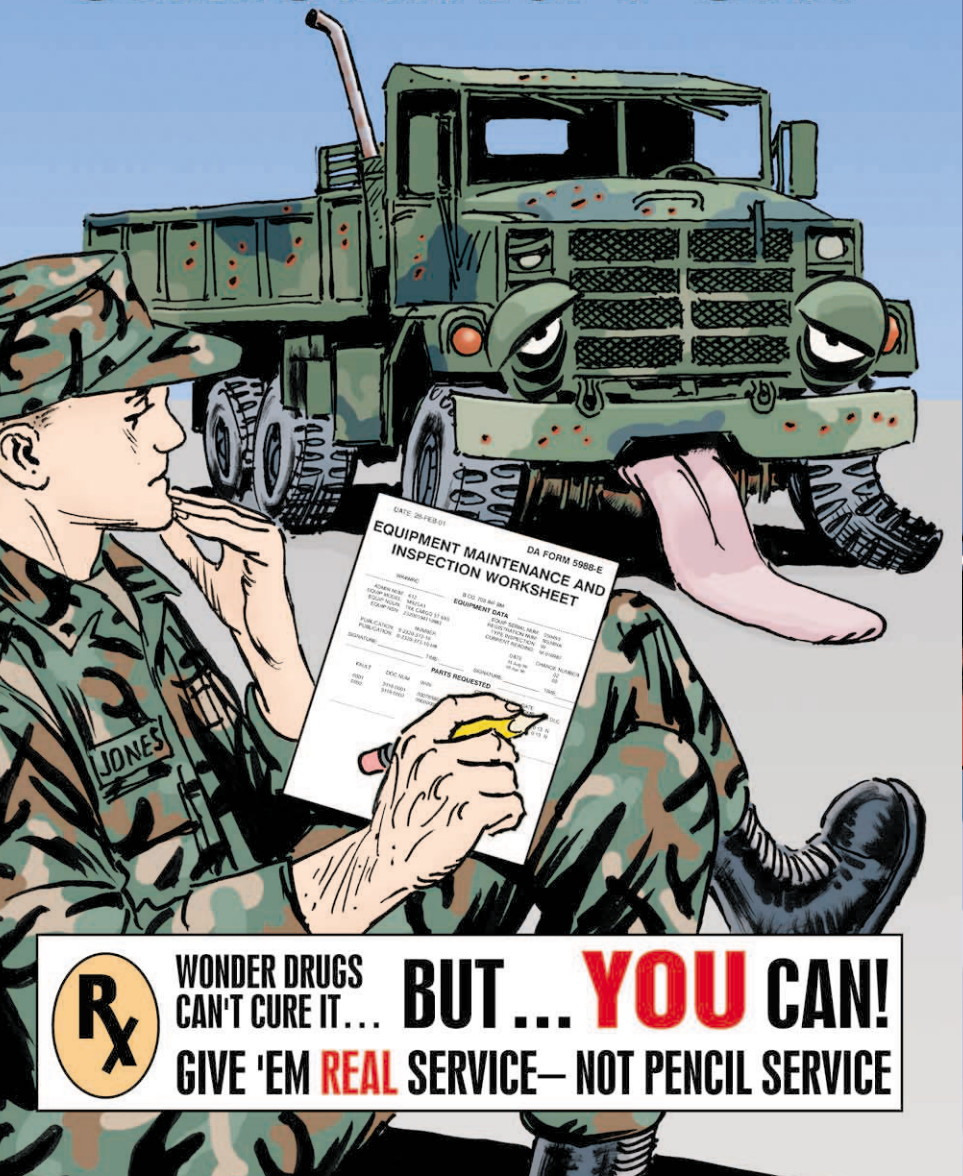
No More Battery Repair

Since the Army's newest lead-acid battery features posts that cannot be repaired, TM 9-6140-200-14, *Operator, Unit, Direct Support and General Support Maintenance Manual for Lead-acid Storage Batteries,* will be changed to eliminate all battery repair. The next TM change will delete Para 4-3, Battery Repair, including repair of case cracks, posts and filler ports.

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?

ARE YOUR VEHICLES SUFFERING FROM CHECKING POX?



Rx

WONDER DRUGS CAN'T CURE IT... **BUT... YOU CAN!**

GIVE 'EM **REAL** SERVICE— NOT PENCIL SERVICE