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THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-550

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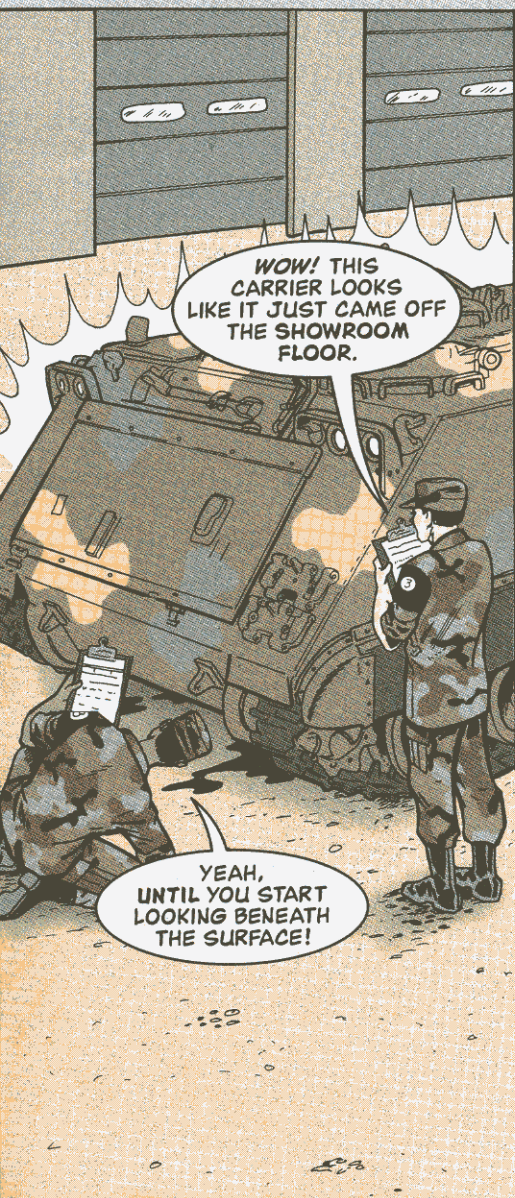
BUBBLE WRAP?
ERR... WE... UMM...
SEEM TO BE OUT
OF THAT.

POP POP POP
POP POP POP

POP POP POP
POP POP POP

Get Bubblewrap And More!
... See Pages 54-57

What Did You Learn?



So, the inspector just walked out the gate. How did you do?

A lot depends on your attitude about preventive maintenance. If you tried to pull the wool over his eyes by going heavy on the spit and polish, you probably didn't do too well. Inspectors know the difference between a good maintenance program and, uh, fertilizer.

If you didn't do so well, try to remember these points during the next inspection:

- ✎ The inspector isn't your enemy. Sure, he has to write you up for things that aren't up to snuff. That's his job. But he does it to make **you** better.
- ✎ Ask questions. You'll find that the inspector is usually willing to answer your questions. And if you show a **real** interest in wanting to improve, you often will.
- ✎ Listen to suggestions. Most inspectors have seen enough maintenance operations to know what works and what doesn't. Take advantage of their advice.
- ✎ Follow recommendations. When you get "gigged" for something, there's a reason. Quite often, that "gig" will tell you exactly how to fix the problem and improve your overall maintenance.

Inspections are a fact of life. Make the best of 'em and your maintenance operation can't help but get better.



THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-550, The Preventive Maintenance Monthly, is an official publication of the Department of the Army, providing information for all soldiers assigned to combat and combat support units and all soldiers with unit maintenance and supply duties. All information published has been reviewed and approved by the agency responsible for the equipment, publication or policy discussed. Application of the information is optional with the user. Masculine pronouns may refer to both genders.

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

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FMTV ...

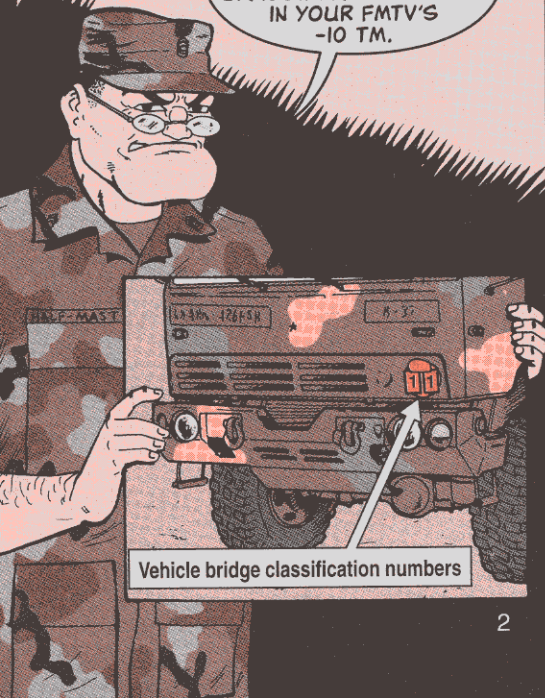
Vehicle Bridge Classifications

There's confusion among FMTV users when it comes to vehicle bridge classification information. The tables in the -10 TMs for the FMTVs have no numbers, and info put out earlier is wrong.

That means few soldiers know for sure whether the truck they're driving can safely cross a military bridge.

The classification info, shown by a number on the round sign on the truck's grille area, represents the weight of your vehicle. The number must be equal to or less than the weight number marked on a bridge if you are to cross safely.

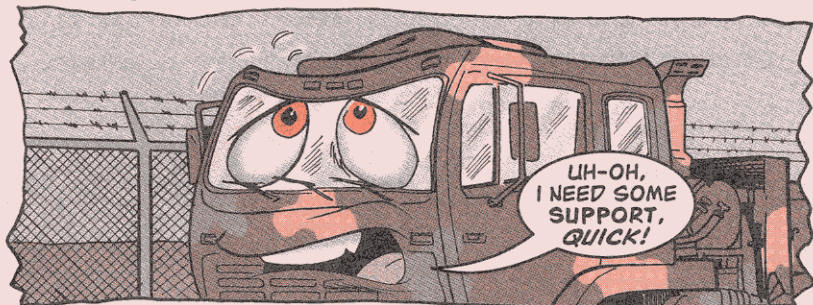
TO CLEAR UP
THE CONFUSION,
ADD THIS INFORMATION
TO THE VEHICLE BRIDGE
CLASSIFICATION TABLE
IN YOUR FMTV'S
-10 TM.



Vehicle bridge classification numbers

Vehicle	Bridge classification
M1078	11
M1078 w/w	11
M1079	11
M1079 w/w	12
M1080	8
M1081	11
M1081 w/w	12
M1083	16
M1083 w/w	16
M1084 w/MHE	17
M1085	16
M1085 w/w	16
M1086 w/MHE	17
M1088	22
M1088 w/w	23
M1089	22
M1090	16
M1090 w/w	17
M1092	8
M1093	16
M1093 w/w	17
M1094	17
M1094 w/w	17
M1096	8

Support the Ring Mount



The cab of your FMTV cannot safely support the M66 ring mount without help. Without reinforcement, the cab will crack from the weight and vibration of the mount.

That's why your support shop must add installation kit, NSN 1005-01-381-5431, to reinforce the cab when they install the gun mount. If mounts have already been installed on your FMTVs, check that the installation kit was used. You can tell by looking for a support between the roof and the top of the dashboard. If it's not there, notify support ASAP.

To protect the mount from rain and dirt, use a canvas cover, NSN 2540-00-909-3745.



Radio Installation Kits

You'll need a little printed help to install SINCGARS radio sets in your FMTV...like TB 11-5820-890-20-92 and TB 11-5820-890-20-101.

The -20-92 TB gives installation instructions for kit, MK-2715, to install AN/VRC-89/91/92-series radio sets. The -20-101 TB gives installation instructions for kit, MK-2400, to install AN/VRC-87/88/90-series radio sets.

**IF YOU DON'T
HAVE THESE TBs, HAVE
YOUR PUBS CLERK ORDER THEM
ASAP. YOU NEED THEM BEFORE
YOU INSTALL THE RADIOS.**



Troop Seat Strap Replacement



Dry rot and other weather conditions have turned the original troop seat stowage straps on some FMTVs into rags.

If the straps on your trucks show signs of brittleness, cuts, tears or shredding, don't go looking for the replacement information in your truck's -24P.

What will be added to Fig 232 in both FMTV -24Ps is a belt, NSN 2540-01-438-5919. It's 1½ inches wide with a quick-disconnect fastener. It must be riveted to the troop seat.

Don't Store Fuel

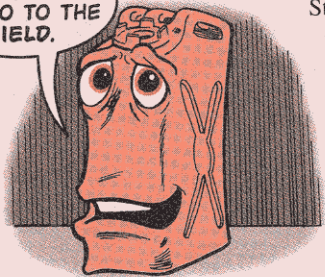
Your field exercise is over and you've got 5-gal cans of leftover fuel. Put that fuel into any vehicle that needs it, but don't store it.

If you store the cans outside, rain gets in. Store them inside or outside, and heat and cold cause condensation—more water—inside the can.

Either way, the fuel is contaminated. Use it, and you can ruin an injector pump.

Storing fuel is also dangerous. A spark could blow up the can, the storage shed and anyone nearby.

KEEP ME
EMPTY UNTIL
WE GO TO THE
FIELD.



HMMWV ...

Keep
It Clean
with
Air

AHHHH!!
THAT REALLY
HITS THE
SPOT!

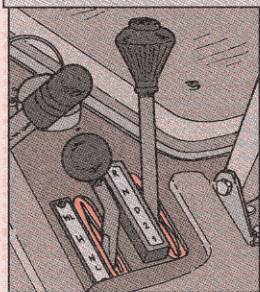
It's a good bet that seat belt retractors and transmission and transfer boots rarely get cleaned. It's also a good bet that they get real dirty.

And dirt can cause the seat belt retractors and gear shifters to move slowly or hardly at all.

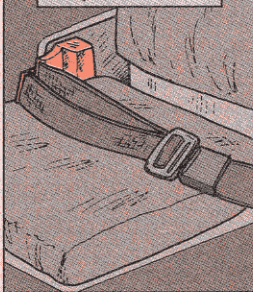
Next time your HMMWV is in the service bay for a semiannual or annual service, take the compressed air hose and chuck to the retractor and shifter boots. Make sure you put safety goggles on first, though.

Blow dirt out of ...

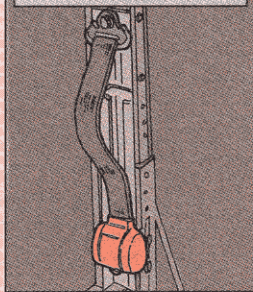
...transfer and shifter boots



...lap belt retractor



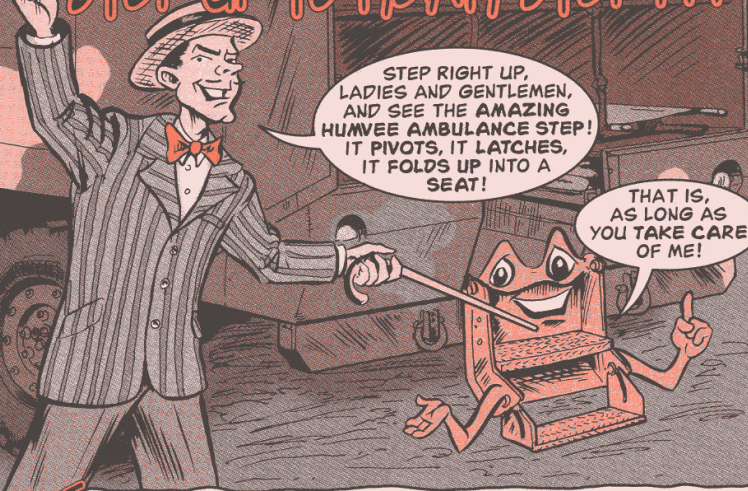
...shoulder belt retractor



Then, crawl underneath the HMMWV and blow out the stuff around the shifter linkages for the transmission and transfer. Make sure the linkages get lube after you clean 'em up.

A trip to the field or training at NTC probably means the cleaning needs to be done before your next scheduled service. Don't wait when you know there's lots of dirt on these parts.

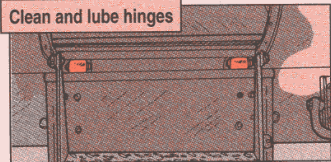
STEP UP TO REAR STEP PM



The rear step assembly on hardshell HMMWV ambulances will pivot, latch, fold up and turn into a seat—as long as you do your preventive maintenance.

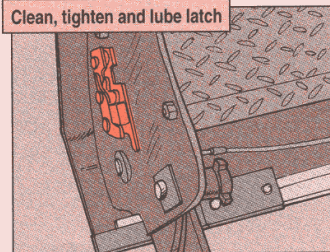
There are enough moving parts and attaching hardware to keep you real busy. Here are the biggies:

- **Hinges.** Keep them clean and lubed with seasonal grade OE/HDO.



- **Latches.** Located on both sides of the steps, they are open targets for dust and

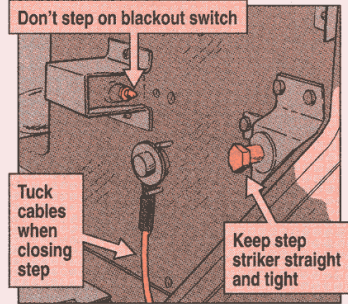
dirt. Plus, the hardware loosens from use. Dirt and loose hardware make latching difficult. Keep the latches clean and tight, and use OE/HDO to keep them locking. Make sure the latch cable is attached securely and works the latches to open the steps.



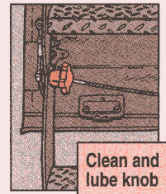
- **Step retention cables.** The retention cables are nicked, twisted and broken if they get trapped between the step assembly and the frame. Tuck the cables out of the way as you close the steps.
- **Step strikers and the blackout switch.** Make sure the strikers are bolted tight. If the strikers are loose or crooked because they're bent, the step assembly will not close right. A bent striker must be replaced.

The blackout switch sticks out like a sore thumb, so avoid hitting it like you'd avoid hitting a sore thumb. If the blackout lights don't come on when the step assembly is lowered and the interior light switch is set to either NORMAL or B/O, get the switch checked out.

- **Bottom step fold-down feature.** Keep the knob clean and lubed so it'll



secure the bottom step when the assembly is closed and the step becomes an attendant seat. Also clean and lightly lube the step rails.



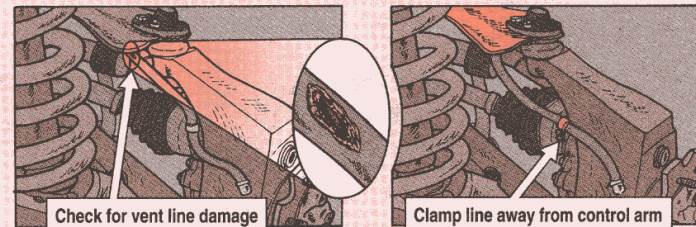
HMMWV . . .

Prevent Vent Line Damage

Look your good eye on the rear geared hub vent line next time you change a HMMWV's hub oil.

If that vent line's routed wrong, it can get rubbed holey by the upper control arm. Then water can get into the hub oil, causing gear damage and failure.

The key to mounting the vent line is getting the clamp situated at a 45° angle to the bracket (toward the wheel). That keeps the line away from the control arm.



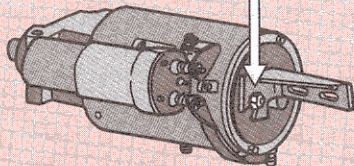
STARTER BRACKET WRAP-UP

The starter on a HMMWV stands a better chance of staying in place and at work if you use the latest bracket and locknut to hold the starter stud.

If the stud end of the starter is not mounted securely, the other starter mounting bolts eventually loosen. A loose starter means broken teeth on the starter or the flywheel.

The front stud on the starter nestles into a slot in the latest bracket, NSN 5342-01-413-9005, and is held in place by a serrated flange hex locknut, NSN

Locknut present and torqued?



5310-00-355-5645, torqued to 15–19 lb-ft.

Make sure the locknut is in place and tight at every scheduled service.

Adding Trestles May Help

The jacking instructions on Pages 8-2 through 8-5 of TM 9-2320-280-20-2 are pretty specific on where trestles are placed after raising the HMMWV.

Problem is, the truck may be overbalanced to the front or rear, depending on its configuration. That is, an M1037 or M1042 carrying a shelter is rear-heavy, while an empty M998 is front-heavy.

If you see that a HMMWV is not steady after placing it on the trestles as shown in the TM, consider adding a trestle in the area of the most weight.

But keep the trestles on the flat portion of the frame rails or cross members.

YOU CAN ADD AN EXTRA TRESTLE OR TWO TO MAKE ME STEADIER.



No More Bottle Blow-offs

WHAT THE...?
THE WINDSHIELD
WASHER BOTTLE
BLEW!

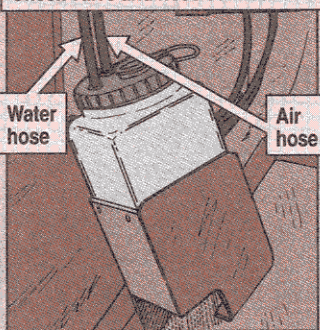
There are two reasons why those floor-mounted windshield washer bottles blow their tops.

If you are using any control valve other than NSN 4820-01-161-0200, or if you have the hoses connected wrong, there's too much pressure on the bottle.

Replace the control valve if it is not the one called for in your parts TM. The control valve that was used when the washer bottle was mounted above the passenger seat gives it too much pressure.

Then make sure the air hose is connected to the VAL port and the water hose is connected to the NOZ port. That will keep the system pushing windshield fluid out onto the windshield, not out the top of the bottle. Consider labeling the hoses so re-connecting them is a cinch.

Check valve and hose connections



Tow Light Bar for M936/M936A1

If you use a tow light bar on your M936 or M936A1 wrecker, use NSN 6220-01-377-9133 to get it. The bar shown in the Additional Authorization List on Page C-5 of TM 9-2320-272-10 (Aug 96) is for the HEMTT.

APU Needs Exercise



THE APU BATTERY IS DEAD. WE'LL HAVE TO SLAVE START.

REGULAR PM WOULD HAVE SAVED THAT BATTERY.

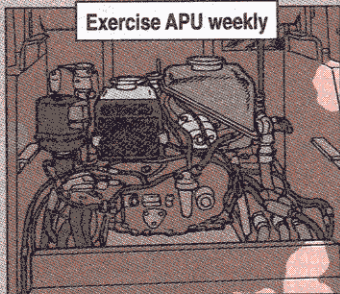
Auxiliary power units like the one on the M1000 HET semitrailer must be maintained like any other engine.

That means you've got to exercise the APU once a week for about 30 minutes to keep the battery charged. Do it more often if you don't use the trailer every week.

PMCS checks without sufficient charging time can kill a battery. And what's an APU if it won't start? Just another engine that must be slave started.

So, run your APU engine for at least 30 minutes once a week in conjunction with before-operations checks. That'll help keep the battery ready to start the APU when you need it.

Exercise APU weekly



Trailer Leg Spring


Use NSN 5360-00-886-8064 to get the safety latch spring for the rear leveling leg of M101A2 and M101A3 3/4-ton trailers equipped with the rear stabilizer kit. The NSN is not in Fig 24 of TM 9-2330-202-14&P, so make a note until it's updated.

M1070 HETS Work Light

NSN 6240-01-341-3771 gets the replacement lamp for the portable work light that's shown as Item 40 on Page B-12 of TM 9-2320-360-10. The lamp is not shown separately.

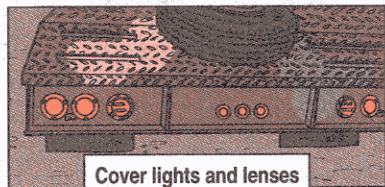
Paint Cover-up

A paint job can make your vehicle look like new. But there are some areas on your vehicle that you don't want covered with paint.



TAKE TIME TO COVER UP THESE AREAS WHEN PAINTING.

Lights, lenses and windows: You have to be able to see and be seen.



Data plates, warning decals and operating instructions: Don't paint



anything you'll need to see, use or refer to again.

Hydraulic cylinder rods: Paint will keep them from moving smoothly, and can tear up the cylinder's gaskets.



Exposed seals and gaskets: Paint ages and cracks rubber.

So, before you send your equipment off for painting, use paper or masking tape to cover these areas. Never use grease. Grease can smear onto the areas you want painted, and keep the paint from sticking.

MBD Needs TLC PDQ

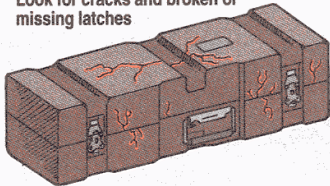
Very few repair parts are available for a tank's M26A1/M27A1 muzzle bore-sight device (MBD), so expert PM should be the rule, not the exception. Otherwise, you'll be ordering a new MBD when something goes bad.

Storage Case

Moisture is the MBD's biggest enemy and the carrying case is its first line of defense. Protect the case so it can protect the MBD.

◆ Never use the case as a stepladder while boresighting. That'll crack the case and ruin its ability to seal out moisture.

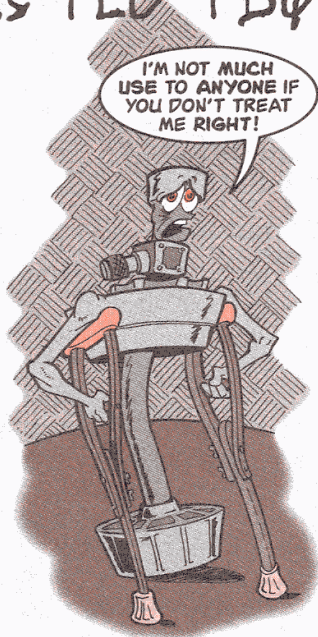
Look for cracks and broken or missing latches



If the case is already cracked, replace it. NSN 1265-01-439-8621 gets a new case with inserts. NSN 1240-01-440-3475 gets a case minus the inserts. The new case is designed to hold either the 105mm or 120mm MBD.

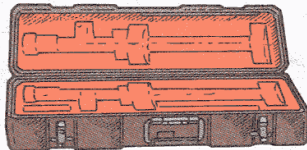
◆ Look closely at the gasket seal. A loose seal is an open invitation to moisture. Reattach a loose seal with adhesive, NSN 8040-00-262-9028.

◆ Air-dry a wet case thoroughly. Corrosion sets in when the MBD is stored



before the inserts are completely dry. When that happens, the entire unit has to be replaced.

Air-dry wet case before storing MBD



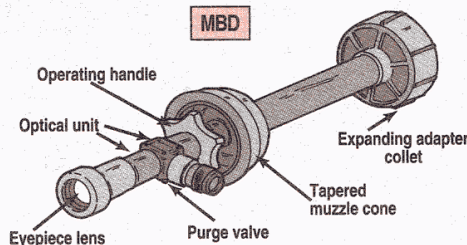
Replace worn, damaged or mildewed inserts. A new upper insert comes with

NSN 1240-01-440-3476. NSN 1240-01-440-5143 gets a new lower insert.

MBD

Here are some other things you can do to extend the life of the MBD:

◆ Treat the device with extra care. Dropping or hitting the MBD will create nicks and burrs on the expanding adapter collet and tapered



muzzle cone. That keeps the MBD from fitting inside the cannon tube properly. If your mechanic can't file these spots smooth, you'll have to order a new MBD.

◆ Keep the eyepiece and optical unit covered with their lens caps. That prevents scratches, cracks and condensation. Lost caps can't be replaced, so use plastic bags held in place with rubber bands if necessary.

◆ Make sure the purge valve core cap is in place to keep out moisture. A replacement cap comes with NSN 4820-01-235-0223.

◆ Exercise the operating handle by working it back and forth. If left in the same position for too long, the handle will freeze and the MBD has to be replaced.

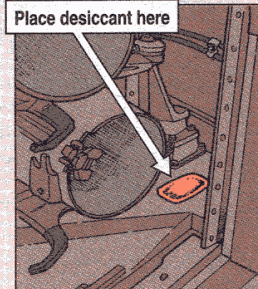
Keep Ammo Compartment Dry

It only takes a little moisture to give corrosion a start in your tank's ammo compartment.

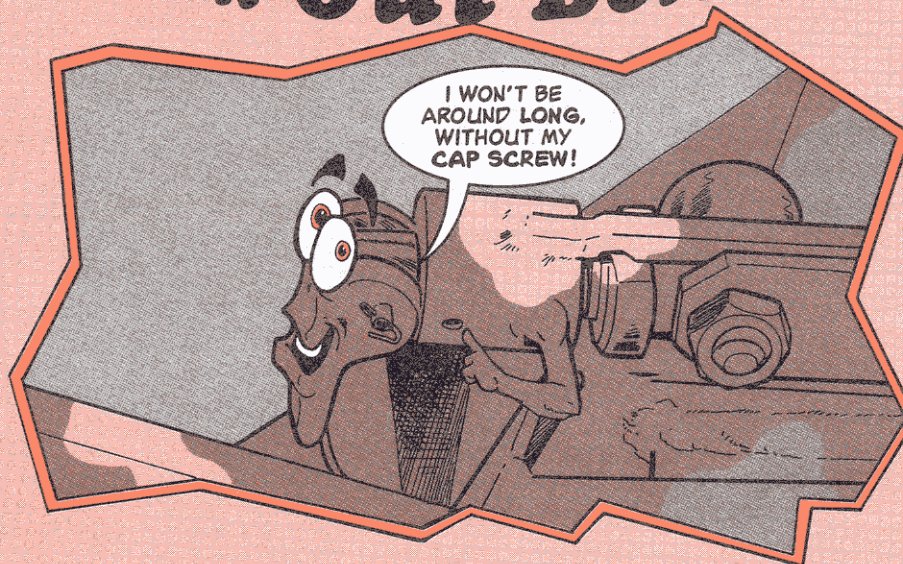
Sure, you can slow the damage by occasionally wiping out any condensation that forms in the ammo compartment. But to really put the brakes to corrosion, you've got to stop moisture from appearing in the first place.

A few bags of desiccant do the trick. Just open each ammo door and put a bag on the floor between the ammo tube and the compartment wall. NSN 6850-00-935-9794 gets a drum of 240 bags of desiccant.

When it's time to pull PMCS on the hull ammo compartment, check the desiccant bags. If they're moist to the touch or if the compartment walls are wet, replace the desiccant.



Look Out Below!



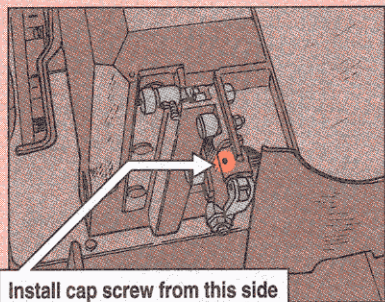
CLUNK! What's that, you ask? It could be the manual control lever for the stub base deflector/loading tray hitting the floor of your tank.

The lever, NSN 5340-01-176-8766, is attached to a fastener stud that screws into the loading tray. The stud is held in place with a cap screw, NSN 5305-00-978-9372.

Unfortunately, a lot of those cap screws aren't installed properly and turn up missing in action. With no cap screw, vibration slowly loosens the stud until it and the lever fall out. The stud and lever get lost under the floor plates and you end up ordering new ones.

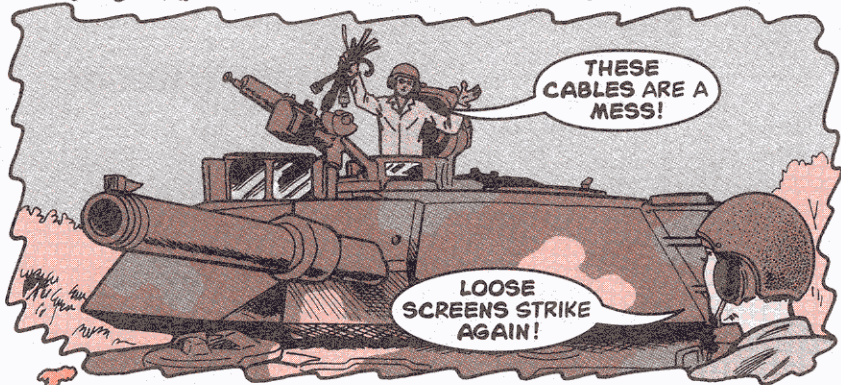
Before you replace a missing cap screw, remember to apply a dab of

sealing compound, NSN 8030-01-025-1692, to the threads like it says in the -20-2-4 TMs.



The sealing compound keeps the cap screw locked in place. That means the control lever will be there when you need it.

BAD VIBRATIONS



Tankers, spend any time at all in the turret of an M1-series tank and you'll soon learn that the turret basket screens need to be watched closely. Vibration is the reason.

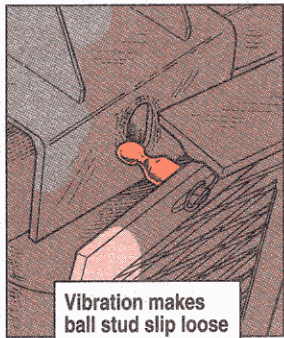
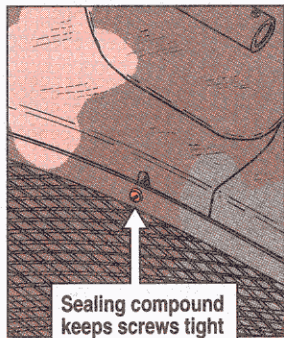
Each screen is held in place with a screw, NSN 5305-01-388-5093, and ball stud, NSN 5307-01-100-8166.

Vibration either loosens the screw until it falls out or works the ball stud loose from the friction receptacle on the back of the turret wall bracket.

In either case, the top of the screen sags outward. The next time the turret is traversed, the screen snags and rips cables and connectors.

Stop loose screws by applying a little sealing compound, NSN 8030-00-081-2339, to the threads before tightening. Also, put a flat washer, NSN 5310-01-389-9681, between the screw and the screen.

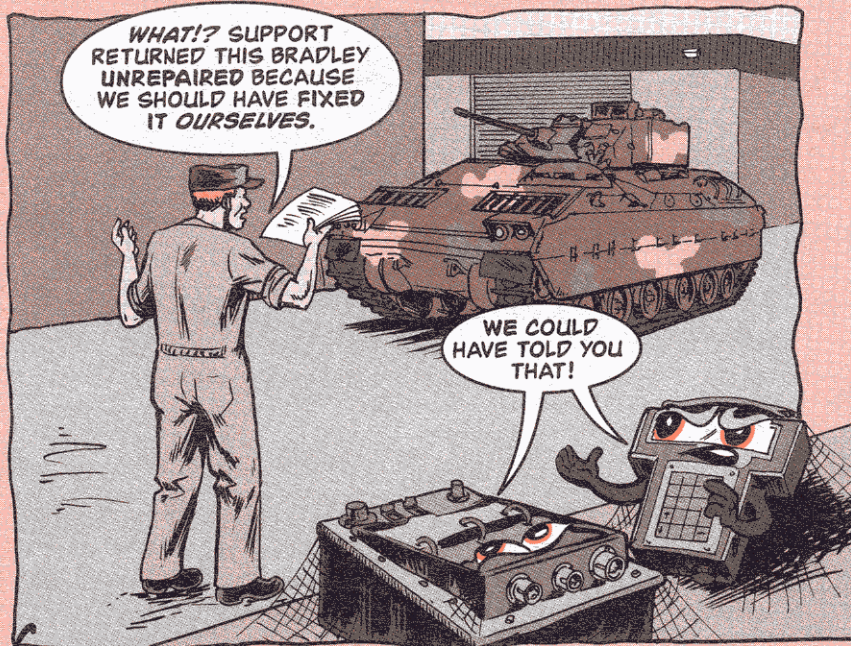
If the ball stud comes loose, use pliers to pinch the two tabs on the friction



receptacle back together. That provides enough tension to hold the ball stud in place.

If one of the tabs breaks off, replace the friction receptacle with NSN 5340-01-100-8138.

STE-M1/FVS BEFORE SUPPORT



Some of you repairmen are wasting your time and your support's time by not troubleshooting with STE-M1/FVS before you send Bradleys out for repair.

When you don't use STE-M1/FVS, you miss problems that you can fix yourself: weak batteries, loose cable connections, turret faults, and a faulty power conditioner unit.

Support is never pleased when they discover the problem is something you could have fixed yourself. And they will immediately send the Bradley back so **you** can fix it yourself.

That wastes their time—and it wastes yours, too, because you had to fill out work orders and get the Bradley over to support. And you still have to fix the problem yourself.

Make your job and support's job easier by testing with STE-M1/FVS:

- whenever a self-test fault needs tracing
- whenever an electrical component is replaced
- before firing TOWs
- before semiannual services

What Goes In Must Come Out

Water—from rain, condensation or washing—that gets inside the MLRS's CB1 fuse box is supposed to go right back out again through the drain hole. But if the drain hole gets clogged, that water's going nowhere.

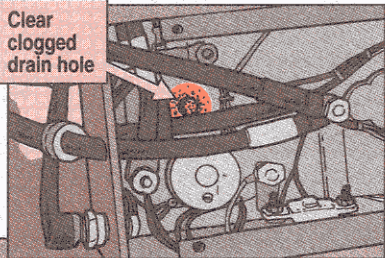
Eventually, trapped water will build up enough to reach the box's fuse and diodes. **ZAP!** The CB1 fuse box is shorted out.

Stop that problem by keeping the drain hole cleaned out.

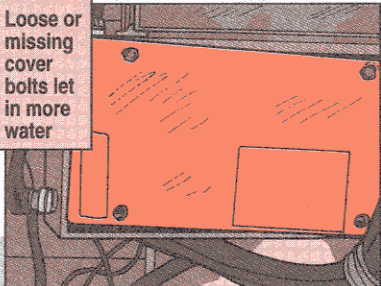
While you're at it, check the condition of the gasket on the CB1 box cover. If the gasket is worn, cracked or missing, replace it with NSN 5330-01-408-2470. Order the gasket on a DD Form 1348-6 and put "NSN not on the AMDF" in the Remarks block. Glue the new gasket in place with adhesive, NSN 8040-01-068-2423.

Next, make sure the fuse box's cover bolts are tight. Loose bolts will fall out and let more water in.

Clear
clogged
drain hole

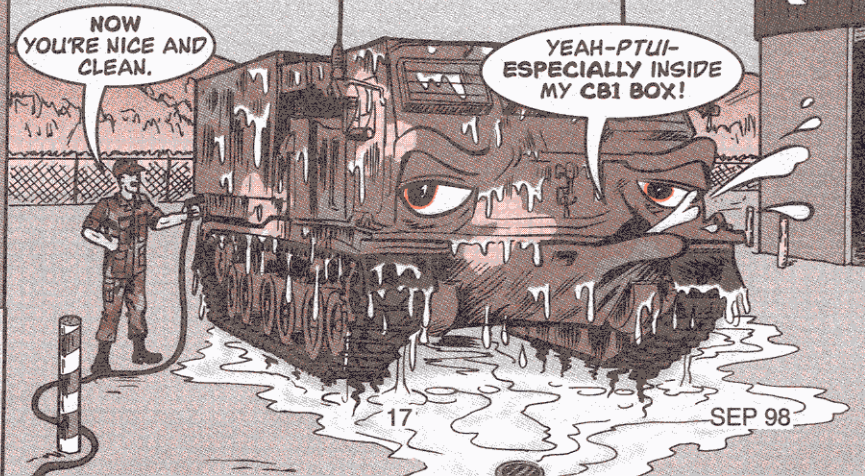


Loose or
missing
cover
bolts let
in more
water



NOW
YOU'RE NICE
AND
CLEAN.

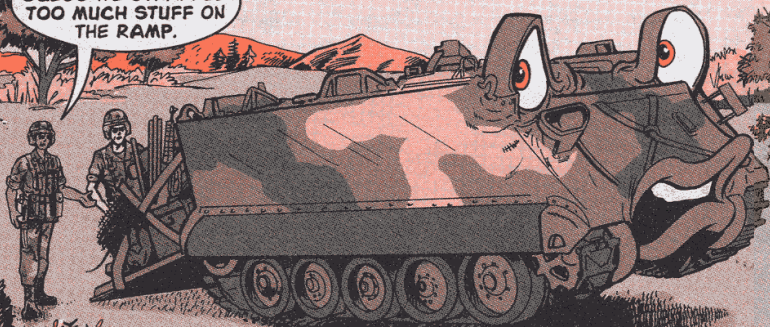
YEAH-PTUI-
ESPECIALLY
INSIDE
MY CB1 BOX!



Ramp DOs and DON'Ts

HM-MMM...! GUESS WE STRAPPED TOO MUCH STUFF ON THE RAMP.

OH, REALLY?! WHAT BROUGHT YOU ROCKET SCIENTISTS TO THAT CONCLUSION?!

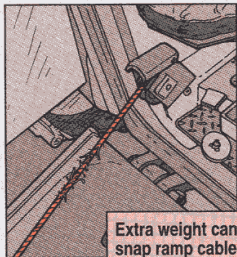


Crewmen, TMs 9-2350-261-10 and 9-2350-277-10 have the **DOs** for taking care of the ramp on your M113-series carrier. Here are some **DON'Ts**. **DON'T** store equipment on the ramp. The ramp is not a storage rack for tent poles, concertina wire and camouflaging nets. All that extra weight will break the ramp cable or damage the hydraulic pump.

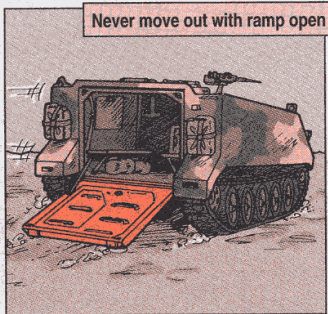
The ramp is for getting cargo and troops in and out of the vehicle fast, not for carrying things.

DON'T move the carrier while the ramp is down or not fully locked. That warps the ramp so it won't seal. It also breaks locks and damages hinges. Moving with an open ramp can snap the ramp cable and damage the pump.

Make sure the ramp is fully up and locked before you move out.

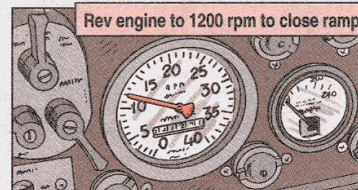


Extra weight can snap ramp cable



Never move out with ramp open

DON'T race the engine to raise the ramp faster. It takes 15-20 seconds to raise the ramp at 1,200 rpm. It'll go up quicker at higher rpm—if the ramp pump survives, that is. Go steady and save the pump.



Rev engine to 1200 rpm to close ramp

DON'T drop the ramp too hard or drop it on uneven ground. That puts a strain on the hinges, pump and cable. Once again, slow and steady is the way to go.

M88A1 Recovery Vehicle ...

Slave Receptacle Washout

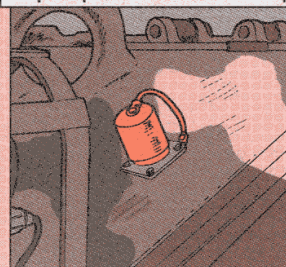
Crewmen, the NATO slave receptacle on your M88A1 recovery vehicle is supposed to carry electrical current, not water. But water is what you get if the dust cap is missing.

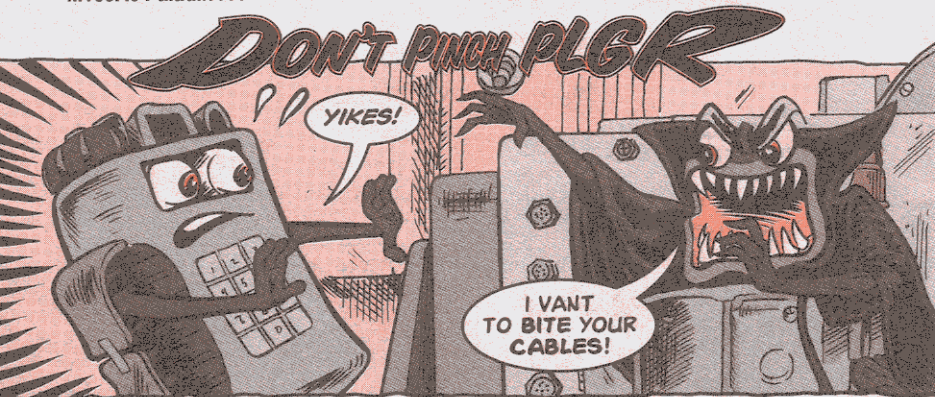
The receptacle faces up at an angle. Without the cap, the receptacle fills up when it rains or when you wash your vehicle.

Water corrodes and rusts the receptacle's metal contacts. It may not carry current the next time you need to slave start a dead vehicle.

If the dust cap and cable assembly is missing, get your mechanic to replace it with NSN 5340-01-059-0114. Until the new cap comes in, cover the receptacle with tape.

Keep receptacle covered with dust cap



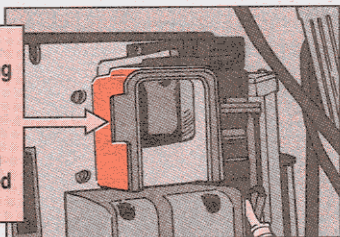


Crewmen, if your Paladin has the new precision lightweight global positioning system receiver (PLGR) mount, NSN 5340-01-417-1874, pay close attention to how you route the cables when you install the PLGR.

If you don't, the cables get jammed and pinched against the metal rim of the mount. Enough of that abuse will cut the cables and kill the PLGR.

Use the recessed slot on the side of the mount for routing the cables. That keeps the pressure off and the PLGR plugging along.

When installing PLGR, route cables through recessed slot



Paladin Switch Fix

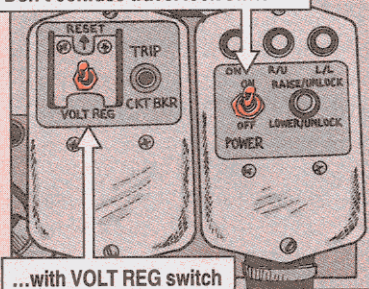
Some drivers think they can operate the M109A6 Paladin by feel. So how would you feel about dead batteries?

If you reach down to flip the travel lock switch without looking, you could easily flip the VOLT REG switch instead. The switches sit side by side.

If the VOLT REG switch is OFF, the generator won't come on. That means your Paladin's batteries aren't being charged. Pretty soon, they go dead.

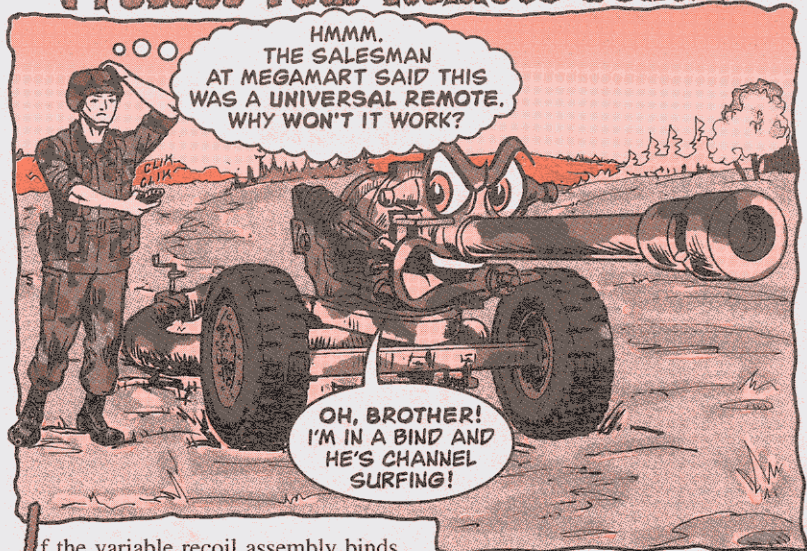
Protect those batteries. Make sure the switch you flip is the right one.

Don't confuse travel lock switch...



...with VOLT REG switch

Protect Your Remote Control



If the variable recoil assembly binds on your M119A1 howitzer, it can snap the pin in the remote control lever. There goes the remote control.

A simple check before firing can prevent most binding.

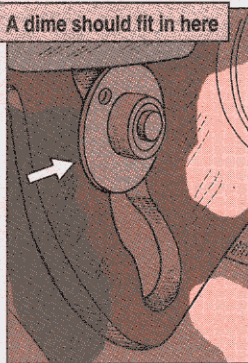
Look to see if there is space about the thickness of a dime between the brass spacer and the cam follower.

If there's more or less space, tell your repairman. The howitzer headshed now authorizes unit-level

repairmen to adjust the cam follower, with the procedure on Page 3-91 in TM 9-1015-252-34 with one change: Para 6 should show a clearance of .035 to .045 inch for the cam follower, not .025 to .03 inch.

If support can't provide a copy of Page 3-91, then repairmen should contact their ACALA logistics assistance representative.

Crewmen can help the cam follower do its job by keeping it clean. Use a non-metallic scouring pad to rub off all corrosion, paint, and dirt from the bearing surfaces of the follower. Give the follower a light coat of CLP to keep it moving smoothly—unless you're operating in the desert. Then forget the CLP. It will only attract sand.



Tracking Your Volcano

Dear Half-Mast,

We know it's important to track when our Volcanos are used. If the dispenser control unit (DCU) and launcher rack electrolytic capacitors aren't charged at least once a year, they lose their charge and develop a permanent short. In PS 532, you recommended that we write the date of each firing on a piece of tape and stick it on a Volcano storage case. That way you know when the Volcano was last fired.

But what happens if the lids for DCU cases are switched or the tape comes off the case? You're left with either inaccurate information or no information.

Sergeant M.S.F.

KEEPING
TRACK OF WHEN
YOUR VOLCANO'S USED IS
THE ONLY WAY TO KNOW
WHEN CAPACITORS
NEED CHARGING.

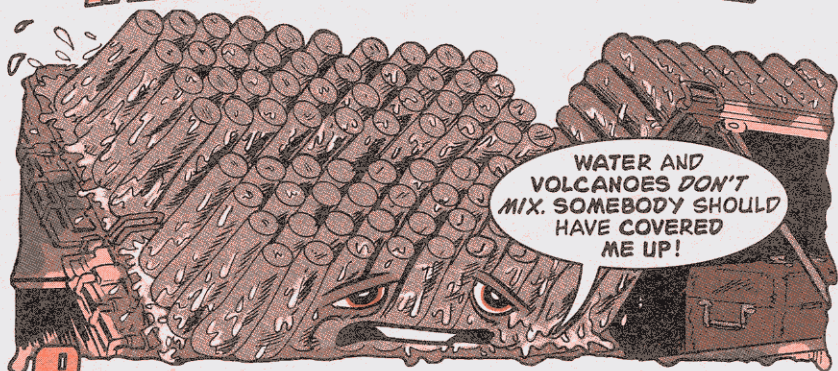


Dear Sergeant M.S.F.,

You make a good point. Volcano units should, of course, be following the forms requirements in DA Pam 738-750 like it says in the Volcano TMs. As a substitute for tape, you can maintain a DA Form 2408-4, Weapons Record Data card, for each Volcano in your unit. Note on the card Volcano firing dates and when support charges the capacitors. That lets you quickly check when a Volcano was last used and when capacitors need charging. Remember, each Volcano in your unit needs to be used or charged every 12 months. If you're not sure when your Volcano was last used, get the capacitors charged.

Half-Mast

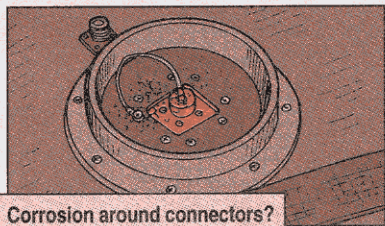
KEEP IT DRY



A Volcano that's been sitting in water won't be spewing any mines. Water leads to electrical problems and corrosion, which lead to a Volcano that's lost its fire.

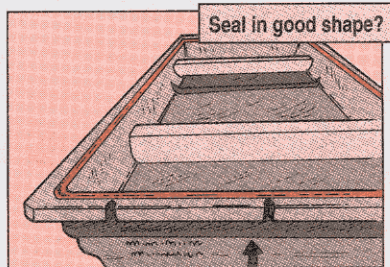
That's why you need to keep an eye on Volcanoes that are stored outside in their containers. The containers are supposed to be watertight, but sometimes they're not. One Volcano unit found several inches of water in their mine dispenser.

Open the containers, at least monthly, especially after a heavy rain. Look for standing water and corrosion, particularly around the electrical connectors.

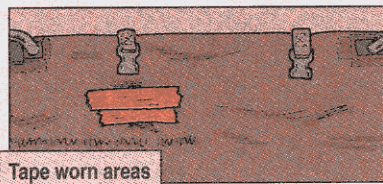


Make sure the container seal is glued

in place and in good condition. If you spot problems, tell your repairman.



Protect the protective cover for the launcher rack with 100-mph tape. When the mine holes in the rack start to rub holes in the cover, put a couple of strips of tape across the worn areas. That way the rack wears on the tape, not the cover.



NO MUD, NO CRUD

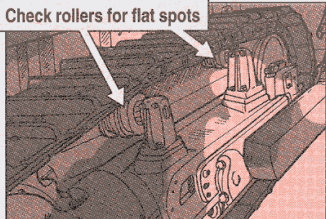
Operators, before you leave the motor pool, make sure all the mud on your dozer is washed off. Two areas that need special attention are the track and carrier rollers, and the rock guard on the blade's tilt cylinders.

Track and Carrier Rollers

The dozer's track and carrier rollers take a lot of abuse during operation. Inside the roller's housing are grease-packed bearings and O-rings that keep the roller turning. Without lube, the roller stops turning, which causes flat spots on the roller and extra link wear.

Duck your head between the top and bottom track. Feel for loose cap bolts

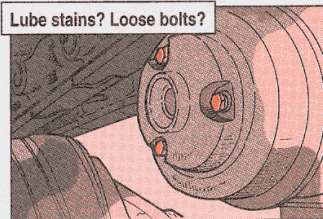
Check rollers for flat spots



and look for lube stains or metal discoloration on the housing. Loose bolts mean dirt gets in—and lube leaks out.

Report any damage to the roller. Support might have to replace it.

Lube stains? Loose bolts?



Clean Rock Guard

The rock guard on the dozer blade's tilt cylinder is a haven for mud, small rocks, dirt and sand.

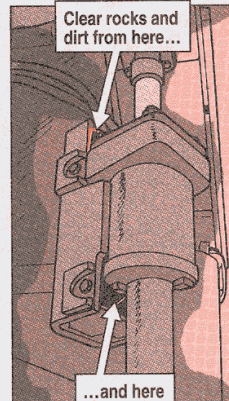
All that crud breaks down the hydraulic hoses inside the rock guard.

When hydraulic hoses start to rot, they leak. Without hydraulic oil, the

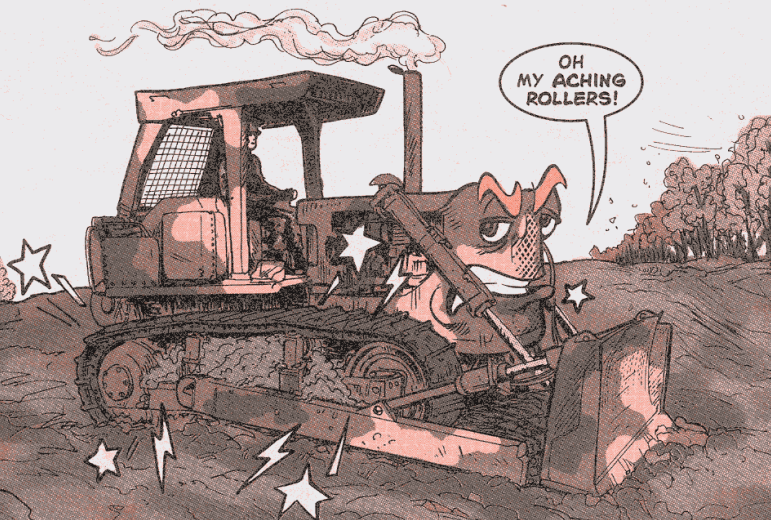
blade won't retract, elevate or push dirt forward.

Use a high-pressure hose on the tilt cylinder's rock guard. You may have to get your mechanic to remove the rock guard so you can get out all that hard-packed crud.

Clear rocks and dirt from here...



...and here



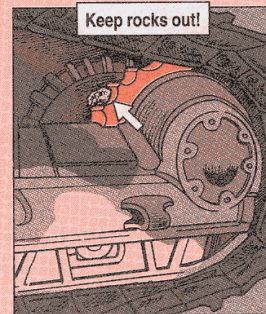
Rock In, Rock Out

A rock lodged between your tractor's sprocket segment gear mounting bolts and the final drive housing can wear a hole in the housing PDQ. If enough oil leaks out, the final drive burns out. Then you're stuck in the boonies until help arrives.

So, keep the rocks out and when you're working in sticky, heavy dirt, clean out the crud around the track after each operation.

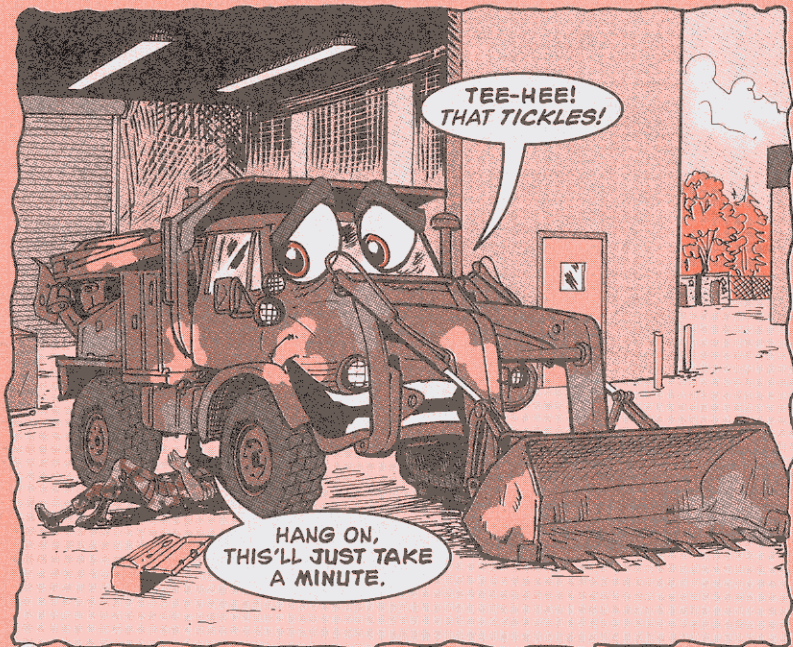
Never let your tractor sit long with packed-in mud, rocks and debris. That stuff hardens like cement. Then you can't get it out without tearing up more track parts.

Keep rocks out!



SEE...

Transmission Fluid Check...Where?

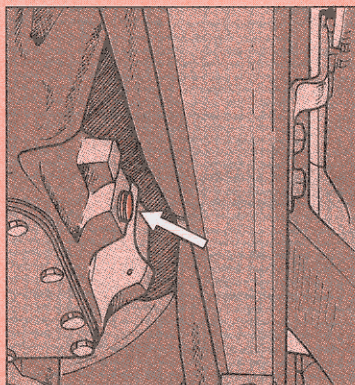


Operators, just because the SEE's transmission fluid level check was left out of TM 5-2420-224-10 doesn't mean *you* can leave it out.

Make the check each quarter. That means crawling under the curbside of the vehicle to find the fill hole on the side of the transmission box.

Always check the level when the vehicle is cold. If you can hold your hand on the transmission box, it's cool enough.

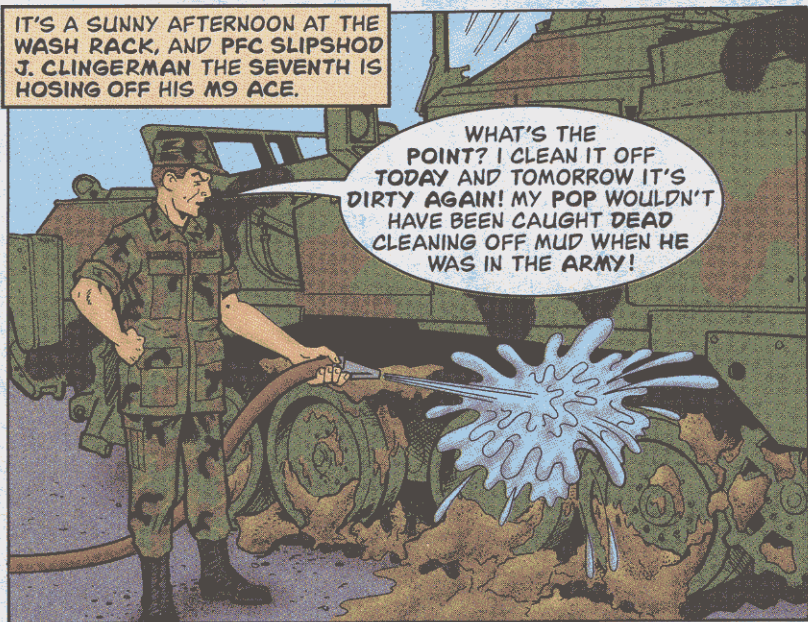
The oil level should be within $\frac{1}{2}$ inch of the fill plug. Stick your little finger into the fill hole up to the first joint. If you touch oil, the level's OK.



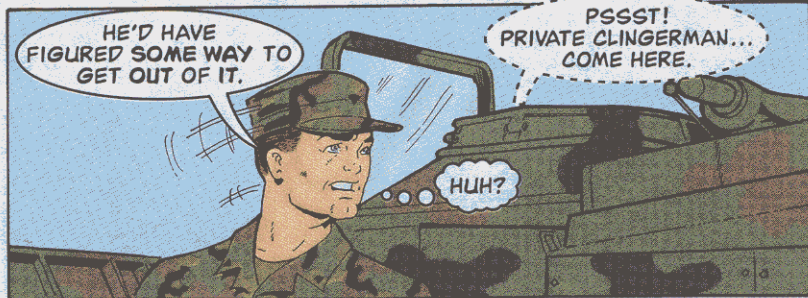
Check transmission fluid level quarterly

PM IN TIME

IT'S A SUNNY AFTERNOON AT THE WASH RACK, AND PFC SLIPSHOD J. CLINGERMAN THE SEVENTH IS HOSING OFF HIS M9 ACE.



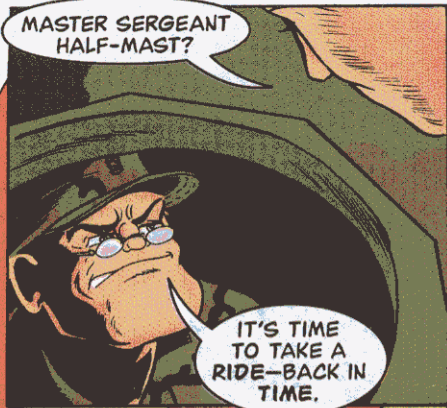
WHAT'S THE POINT? I CLEAN IT OFF TODAY AND TOMORROW IT'S DIRTY AGAIN! MY POP WOULDN'T HAVE BEEN CAUGHT DEAD CLEANING OFF MUD WHEN HE WAS IN THE ARMY!



HE'D HAVE FIGURED SOME WAY TO GET OUT OF IT.

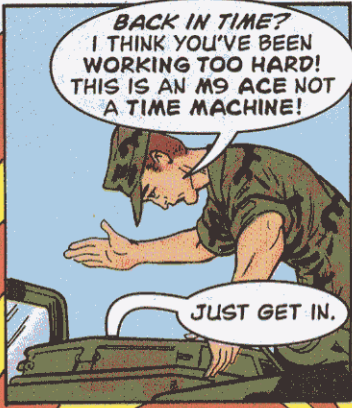
PSSST! PRIVATE CLINGERMAN... COME HERE.

HUH?



MASTER SERGEANT
HALF-MAST?

IT'S TIME
TO TAKE A
RIDE—BACK IN
TIME.



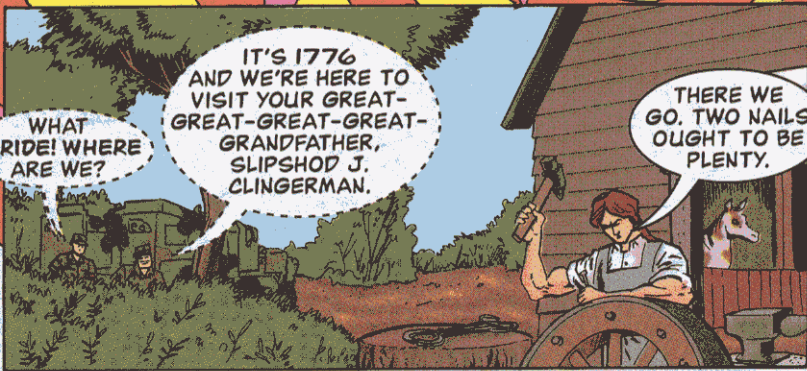
BACK IN TIME?
I THINK YOU'VE BEEN
WORKING TOO HARD!
THIS IS AN M9 ACE NOT
A TIME MACHINE!

JUST GET IN.

WHOA!
WHERE ARE WE
GOING?



JUST FASTEN
YOUR SEATBELT
AND HANG ON!



WHAT
A RIDE! WHERE
ARE WE?

IT'S 1776
AND WE'RE HERE TO
VISIT YOUR GREAT-
GREAT-GREAT-
GRANDFATHER,
SLIPSHOD J.
CLINGERMAN.

THERE WE
GO. TWO NAILS
OUGHT TO BE
PLENTY.



I KNOW OTHER BLACKSMITHS USE FOUR, BUT THEY'RE JUST OVERLY CAUTIOUS.



BUT... WHAT'S HE DOING? PEOPLE'S SAFETY IS RIDING ON THAT WHEEL. SHOULDN'T HE USE FOUR NAILS?

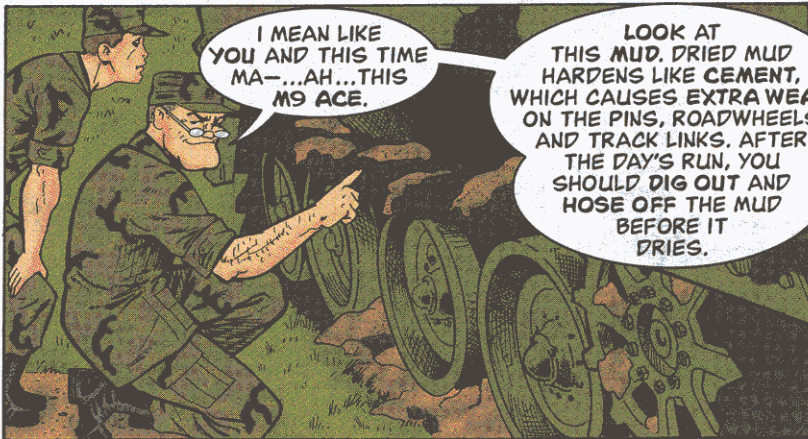
OF COURSE, HE SHOULD! BUT HE DOESN'T CARE ABOUT SAFETY—OR PM.

HE'S TRUE TO HIS NAME... SLIPSHOD! AND EVERY ONE OF HIS DESCENDANTS HAS BEEN A STRANGER TO PM AND SAFETY.



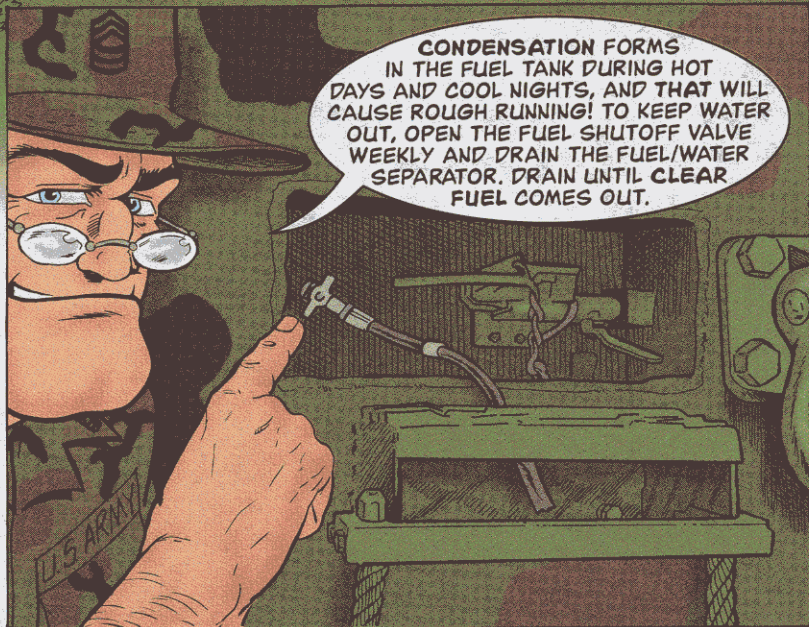
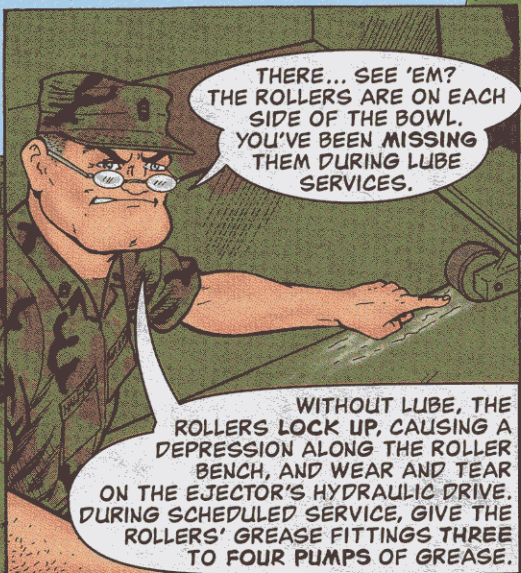
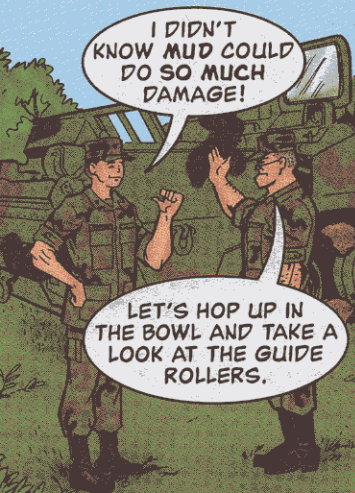
YOU'RE LOOKING AT THE MAN THAT STARTED AN ENTIRE FAMILY LINE OF SLACKERS.

SLACKERS? WH-WHAT DO YOU MEAN?



I MEAN LIKE YOU AND THIS TIME MA—...AH...THIS M9 ACE.

LOOK AT THIS MUD. DRIED MUD HARDENS LIKE CEMENT, WHICH CAUSES EXTRA WEAR ON THE PINS, ROADWHEELS AND TRACK LINKS. AFTER THE DAY'S RUN, YOU SHOULD DIG OUT AND HOSE OFF THE MUD BEFORE IT DRIES.





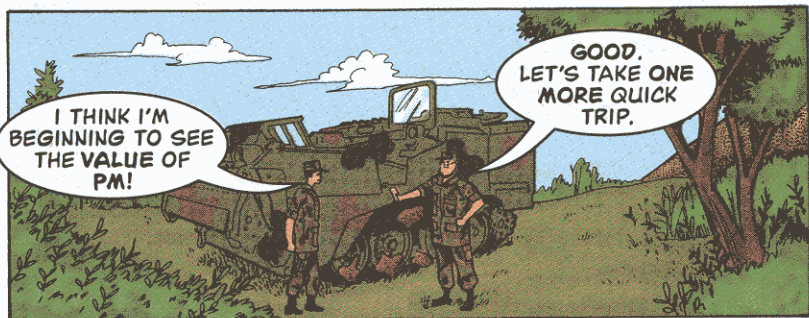
I DIDN'T KNOW
A LITTLE WATER COULD BE
SUCH A BIG PROBLEM!

THERE'S MORE.
FORDING CAN FILL THE
ACE'S SPONSON WITH WATER!
THE WATER FREEZES AND CRACKS
THE SPONSON AND DAMAGES THE
APRON'S HYDRAULIC HOSES
AND CONNECTORS!



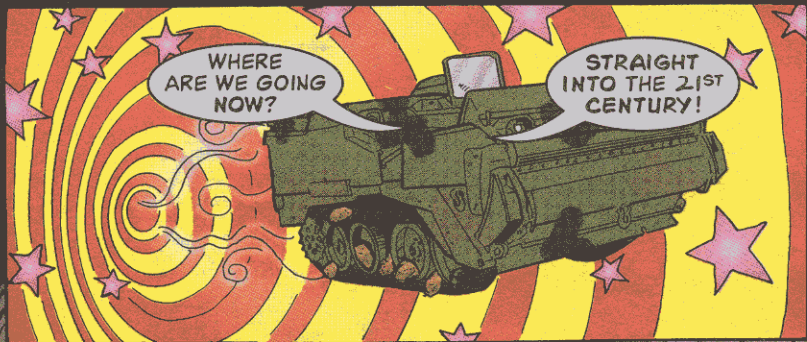
TO LET WATER
OUT, REMOVE BOTH LEFT
AND RIGHT HYDRAULIC
ACCESS PLATES.

THEN USE LOCTITE,
NSN 8030-00-081-2339,
ON THE SELF-LOCKING SCREWS
WHEN MOUNTING THE ACCESS
PLATES. THAT KEEPS 'EM
GOOD AND TIGHT— AND
KEEPS WATER OUT.



I THINK I'M
BEGINNING TO SEE
THE VALUE OF
PM!

GOOD.
LET'S TAKE ONE
MORE QUICK
TRIP.



WHERE ARE WE GOING NOW?

STRAIGHT INTO THE 21ST CENTURY!

WOW!
WHAT AN AWESOME TANK!

YEP.
DIFFERENT EQUIPMENT,
BUT AS YOU'LL HEAR,
THE SAME POOR PM STORY.

THE SERGEANT SAID FOUR DROPS, BUT TWO DROPS OF GALLIUM ARSENIDE OUGHTA DO IT. HE DOESN'T KNOW BANTHA-BREAD FROM CYCLOTRONS.

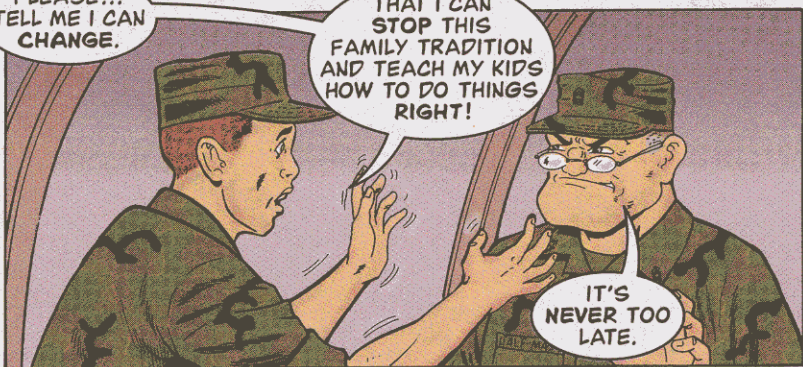


FOUR DROPS
WOULD JUST BE
A WASTE!

LET ME GUESS...
SLIPSHOD CLINGERMAN
THE TENTH?

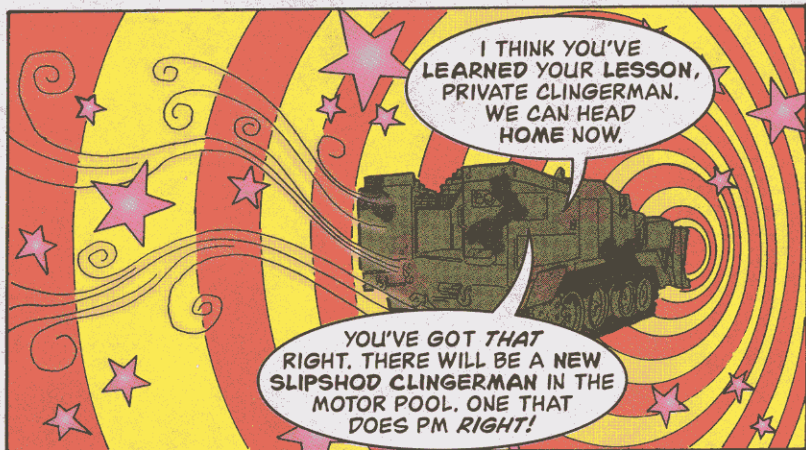
THE
NINTH.

PLEASE...
TELL ME I CAN
CHANGE.



THAT I CAN
STOP THIS
FAMILY TRADITION
AND TEACH MY KIDS
HOW TO DO THINGS
RIGHT!

IT'S
NEVER TOO
LATE.



I THINK YOU'VE
LEARNED YOUR LESSON,
PRIVATE CLINGERMAN.
WE CAN HEAD
HOME NOW.

YOU'VE GOT THAT
RIGHT. THERE WILL BE A NEW
SLIPSHOD CLINGERMAN IN THE
MOTOR POOL. ONE THAT
DOES PM RIGHT!

SEVERAL DAYS LATER...

LET'S SEE
WHAT ELSE THE
-10 TM SAYS.

PRIVATE
CLINGERMAN
CHECKING THE
TM? THAT'S
ODD.

THE TRANSFORMATION
IS UNBELIEVABLE, HALF-MAST!
HOW DID YOU DO IT?

SIMPLE... A
HITCH THROUGH
TIME SAVES
CLINGERMAN
NUMBER
NINE!

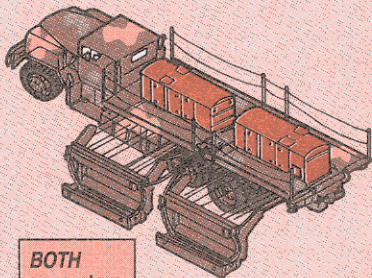
EPP III Danger

There's a big—and dangerous—difference between the Patriot's electric power plant (EPP) II and the EPP III.

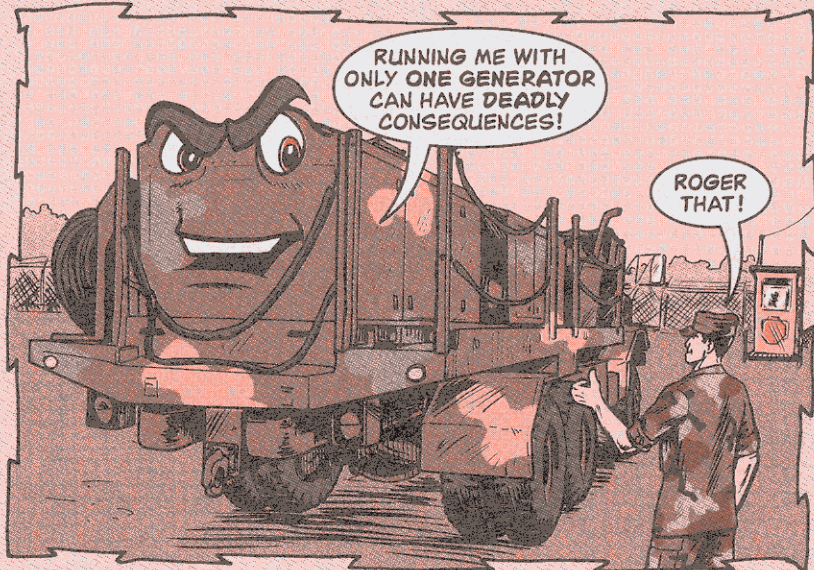
The EPP II can be safely operated with one or both of its two generators. Not so with the EPP III. Its two generators are wired together through the power distribution unit (PDU).

If the EPP III is turned on with one generator missing, power remains at the terminals for cables L1, L2, and L3. If one of the cables is hooked up and left lying on the metal walkway, a soldier stepping on the walkway would be electrocuted. Anyone touching a live terminal would also be electrocuted.

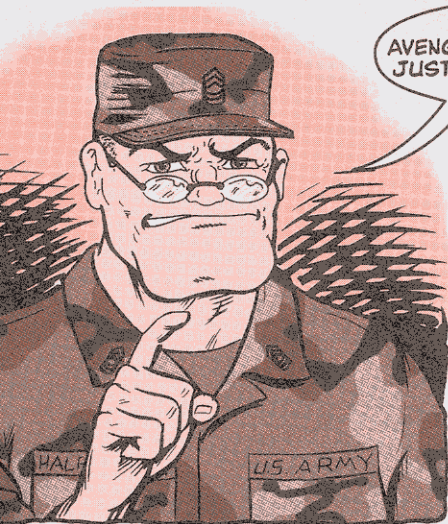
Never operate the EPP III unless both generators are in place. Before turning on the EPP III, look to see that none of its electrical connectors are exposed.



**BOTH
generators
must be
mounted!**



Avenger Boresighting on Target



BORESIGHTING YOUR AVENGER'S M3P MACHINE GUN JUST GOT EASIER THANKS TO THESE POINTERS...

Make sure the spacer plate is on right. The plate's recessed area should face the boresight and the plate's smooth part should face the mounting nuts. That keeps the boresight assembly secure on the mount.

Make sure there is no paint on the threads of the boresight screws. Paint makes it difficult to adjust the boresight. If necessary, remove paint with dry cleaning solvent.

Clean the screw threads and lube them lightly with TW-25B, NSN 9150-01-439-0859.

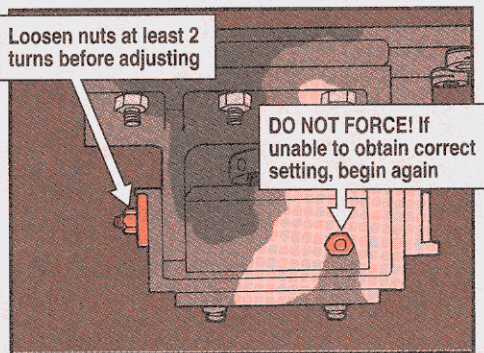
Check that there are two washers on each of the two screws that hold the boresight on the rear mount. Fewer than two causes the boresight to bind.

Loosen the mounting plate nuts two turns before you boresight.

Now you're ready to do the boresighting procedure that begins on Page 16-39 in Change 5 to TM 9-1440-433-24-2.

Do not force the traverse adjusting screw against its stops while you're boresighting. If you can't get the correct setting, start again, paying particular attention to the FLIR alignment. If the FLIR is aligned, the M3P will be, too.

When you've finished boresighting, don't forget to tighten the mounting plate nuts.



HEADS UP ON HEADSPACING

Headspacing is a critical check for rifles and machine guns. If the space between the bolt face and the chamber isn't just right, not only will the gun fire poorly, but it can also blow up.

Armorer's, make sure support has headspaced every machine gun and rifle before you let it go to the field. Active units should have weapons headspaced annually, while Reserve and National Guard units should do it every other year.

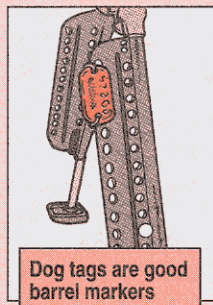
Remember, if you replace a barrel or bolt, the weapon must go to support for headspacing before it's fired.

Check that every machine gun barrel, including the spare barrel, is clearly marked with the weapon serial number. The easiest way is to stamp the number on a dog tag and attach the dog tag to the bipod leg or barrel leg with lacing wire. The dog tag should be painted a flat color so it doesn't reflect. Or just paint the number on the barrel with any heat-resistant paint.

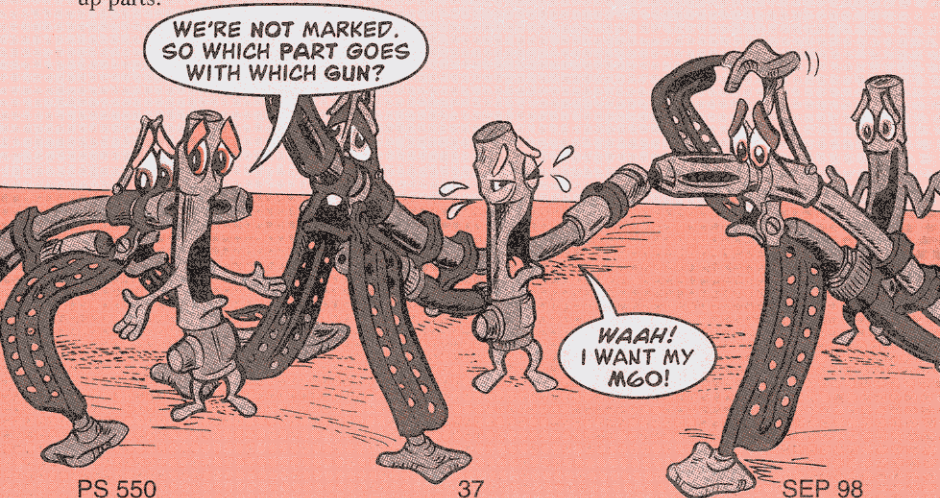
Paint or write the number on the spare barrel, too, to prevent mixups.

Teach your unit the importance of not mixing barrels and bolts.

Gunners, use only the bolt and barrels that come with your machine gun or rifle. If a group of you are cleaning your weapons together, be careful not to mix up parts.



Dog tags are good barrel markers



Small Arms . . .

A Light Lubing Touch

Dear Editor,

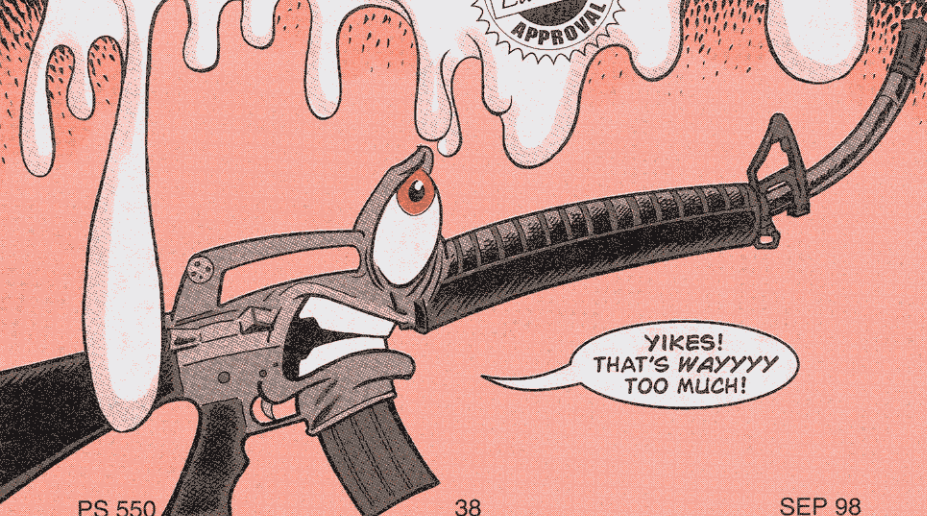
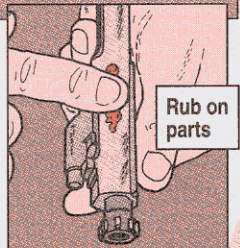
It's important to get the right amount of lube on small arms parts like a rifle or machine gun bolt. If you put on too much lube, carbon deposits build up quicker and moving parts have trouble moving.

Here's an easy way to keep a light lube light. Instead of squirting lube directly on the weapon, squirt a couple of drops on your fingertips. Rub your fingers and thumb together to spread the lube. Then lube the part by running your fingers over it.

For a light coat, you should only be able to see the lube. If you can move the lube around with your finger, you've put on too much. Wipe it off and lube again.

Lubing does no good unless you first clean the part. Otherwise, you're creating an unhealthy mixture of dirt, carbon, and metal shavings.

PFC Jay Denton
3/75th Rangers
Ft Benning, GA



LUBING LEADS TO LAUNCHING



Most of the M203 grenade launcher's firing problems can be traced to poor lubing—either too much or too little.

Gunners, the firing pin hole, trigger, and safety detent need daily lubing in the field. Lack of lube makes the trigger and safety stiff and hard to move.

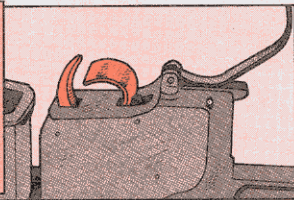
But just two drops of CLP in the safety detent, in the trigger and in the firing pin hole are all the M203

needs. More CLP attracts dirt, which forms sludge inside the receiver.

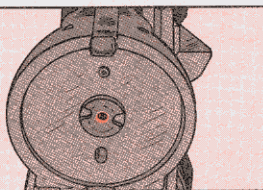
Armorer's, no matter how careful your gunners are about lubing, eventually they will need your help. If the trigger and safety are still stiff after lubing, take the receiver apart.

Clean the follower guide with CLP and a rag. Wash the receiver with dry cleaning solvent, wipe it out and let it air dry. Then lube the trigger, safety detent, and firing pin hole with CLP.

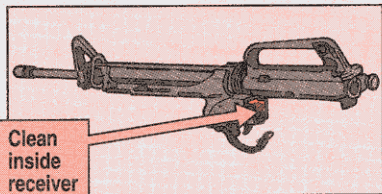
Safety and trigger need only two drops of CLP...



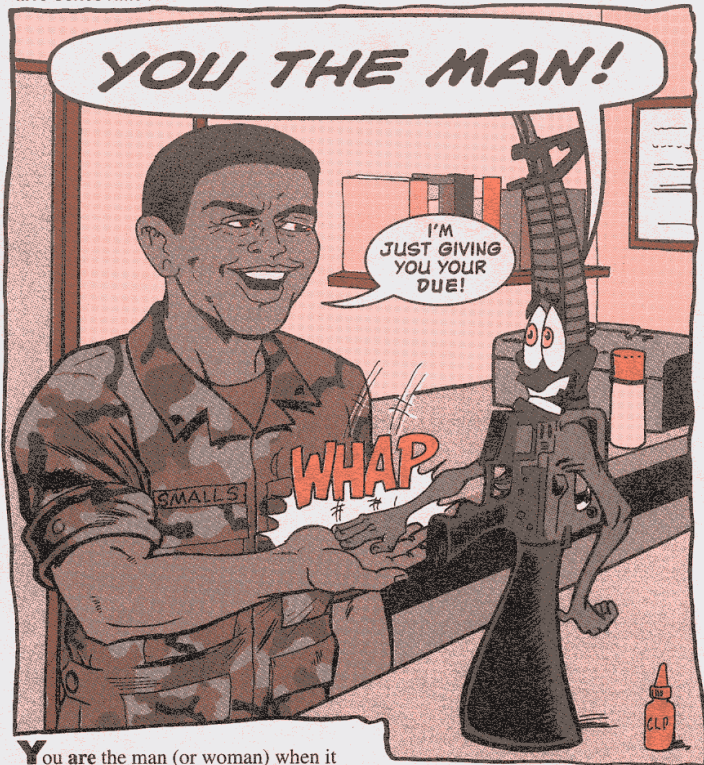
...and so does firing pin hole



Clean inside receiver



When M203s are going into storage, lightly lube the trigger, safety detent and firing pin hole. Otherwise, corrosion builds up inside the launchers while they sit.



You are the man (or woman) when it comes to lubing your M16 rifle. Since you're the one who takes care of your rifle, you're the one who can do it right...or wrong.

In too many cases, it's been wrong. Some soldiers think that if a little is good, a lot is better. They put lots of lube on their rifles. But all that lube attracts dirt and carbon. Moving parts, especially the bolt, stop moving.

The first step to being a good luber is knowing the difference between a light lube and a generous one:

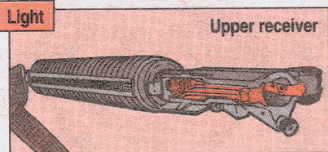
Light: A film barely visible to the eye.

Generous: Just heavy enough to be spread with the finger.

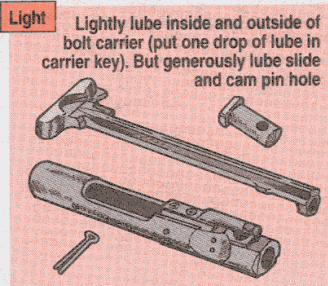
The second step is knowing what gets a light lube and what gets a generous lube.

THESE AREAS GET A LIGHT LUBE:

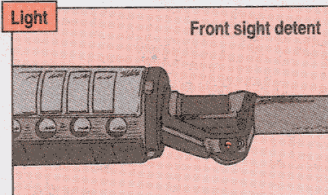
- Inside upper receiver, bore, and chamber
- Outside of barrel and front sight and under handguard



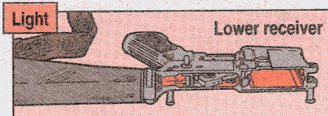
- Charging handle



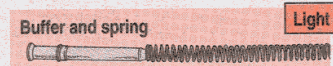
- Front sight detent—depress and put two drops of CLP on detent



- Inside of lower receiver



- Buffer and action spring

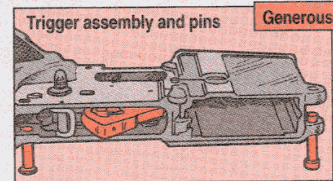


THESE AREAS GET A GENEROUS LUBE:

- Outside of bolt body, the cam pin area, and the bolt rings (but just a light coat on the extractor and cam pin)



- Takedown and pivot pins and detents
- Moving parts inside lower receiver and their pins



In the desert, though, forget all this. Sand is the problem there, not corrosion. Sand mixes with lube and forms a scouring powder that eats up your rifle.

Before going to the field, wipe all lube off the outside of your weapon. Lube internal parts normally, but clean them extra good after firing to get rid of the sand.

ARMORERS AND 1ST SERGEANTS, MAKE COPIES OF THIS ARTICLE AND USE IT FOR TRAINING YOUR TROOPS.



HORIZONTAL or

If you have trouble getting MK 19s into or out of their rack or if padlocking the rack is a problem, turn the rack sideways.

Some units find it easier to store MK 19s vertically, with the barrels pointing at the floor. That puts the heaviest part of the weapon and the padlock at the top of the rack. You don't have to bend as much, which saves wear and tear on your back.

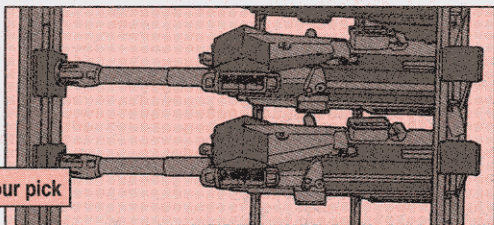
Vertical or horizontal is fine for the MK 19 and for the rack. No special maintenance or rack adjustments are required for either method.

But remember, an MK 19 should always be lifted and carried by two people. It's too heavy for one person.

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EITHER WAY IS OK FOR THE RACK.

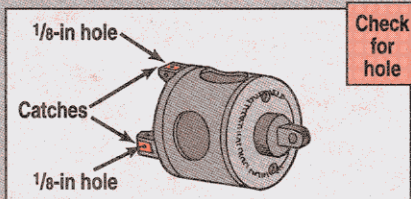


Vertical or horizontal—take your pick

Getting the Right Extractor

Several different cartridge extractors were fielded with the M120/M121 mortar. But there is only one extractor that can always remove a misfire.

You can tell if you have the correct extractor by checking for a $1/8$ -in hole in the face of the spring-loaded catches. The hole means you have the right one.



Check for hole

If there's no hole, do not use that extractor. It may not work. Instead, use the alternate misfire procedures beginning on Page 2-121 of TM 9-1015-250-10.

Then order the right extractor with NSN 1015-01-433-4471.

Stowing Made Easy

Dear Editor,

The -10 TMs for the M40-series masks tell you to fold the hood along the length of your arm when you're preparing to stow the mask. Unfortunately, some soldiers have arms too short to do that easily. We've come up with a stowing variation for them:

1. Put hood and then head harness over front of mask and let hood hang down completely



2. Use one hand to fold each side of hood inward to form a V. If you have trouble doing that, brace facepiece against your chest with your chin and use both hands



3. Tuck straps and cord into V



4. Grasp tail of hood and fold hood in half

The mask is ready to stow.

SSG Ramson Ramos
SSG Ivor Griffiths
SSG Alphonso Thomas
NBC School
Ft Benning, GA

5. Fold hood on top of facepiece so it doesn't cover chin opening



FROM THE DESK OF THE Editor 

Even soldiers with longer arms may find your method easier. Also, soldiers need to remember to never fold the mask—that ruins it—and to never store the hood under the headharness—that ruins the straps' elasticity.

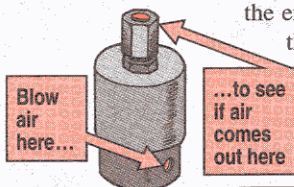
SOLENOID PROCEDURE CHANGED

A new fuel solenoid, NSN 4810-01-397-1158, is being used for the M157 smoke generator, so the installation procedure for the solenoid has been changed.

Steps 1-6 on Page 4-40 in Change 4 to TM 3-1040-279-12&P should read like this:

Note: Coat the threads of the solenoid's male pipe fitting with sealing compound, NSN 8030-00-220-6973, before installing it.

1. Blow air into one of the two side ports of the solenoid valve (22) to determine which port is the fuel supply port. If air comes out the end port, you've blown into the supply port. Install the tee (21) to this port. But if air does not come out the end port, the other side port of the solenoid valve is the fuel supply port. Install the tee (21) to that port.



2. Install the elbow (29 and 30) as one assembly to the other side port.
3. Install the fuel filter (26) on the elbows (30).
4. Install the solenoid valve (22) on the cover

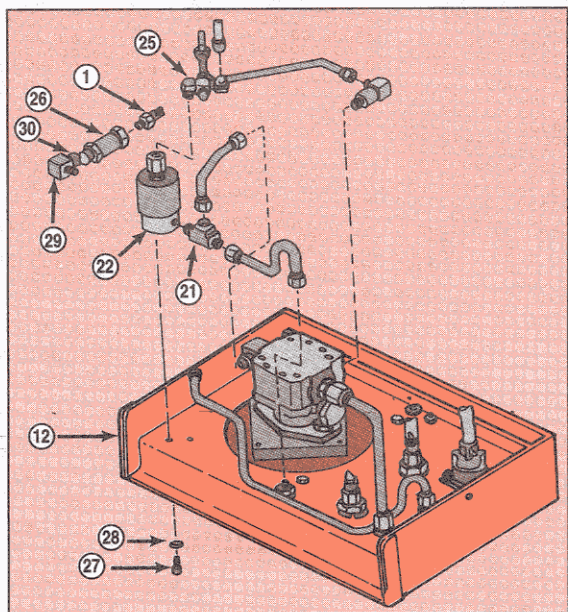
assembly (12) with two screws (27) and washers (28) from the old solenoid.

5. Connect the fuel hose assembly (1) to the fuel filter (26).

6. Install the elbow assembly (25) to the end port of the solenoid valve (22).

Beginning with Step 7, the rest of the procedure on Page 4-40 stays the same.

Change 4 to the TM includes the procedure.



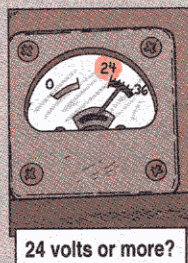
Testing Battery Life

The BA-3517/U battery check for the M43A1 chemical detector pretty much ends with pushing the BATTERY TEST button. If the battery registers at least 24 volts, it's good to go. But that doesn't tell you how long the battery will last, info that could be quite critical on the battlefield.

Use this test and table to gauge battery life:

Hook up the battery to the M43A1 and let the detector run 10 minutes to stabilize the battery. Push the BATTERY TEST button and note the voltage.

If it's 24 or above, estimate the temperature you'll be operating in. Round the temperature off to the nearest 20° (examples: 79 becomes 80, 69 becomes 60). Then check this chart for voltage and temperature to see how many hours of life the battery has left:

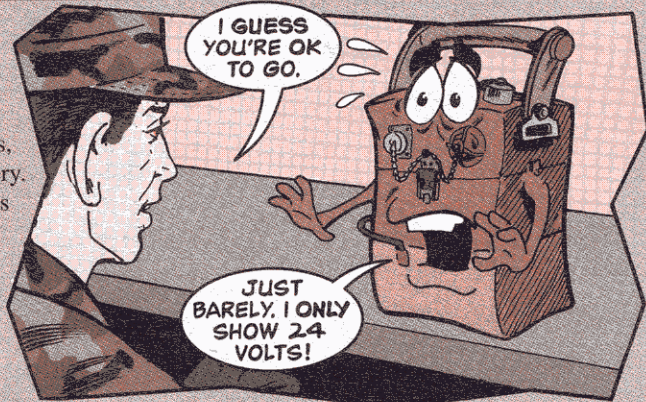


Hours of life left at:

Voltage	20°F	40°F	60°F	80°F	100°F	120°F
36	27-49	54-78	88-110	123-145	203-226	220-243
34	21-44	48-71	69-91	116-138	173-195	192-215
32	15-37	43-65	67-90	101-124	134-156	138-161
30	9-32	36-59	55-78	69-92	86-108	84-107
28	4-27	16-47	16-47	16-39	26-48	34-56
26	<i>Do not use</i>	0-20	0-20	0-21	4-26	11-33
24	<i>Do not use</i>	<i>Do not use</i>	<i>Do not use</i>	0-11	0-11	0-11

If less than five hours are left, check the battery every two hours. In critical situations, use a stronger battery. If the temperature is below 20°, use the BB-501/U battery. It's better in the cold than the BA-3517/U.

PS 550



An Honorable Discharge

If you haven't been designated by your commander to activate a battery's complete discharge device (CDD), leave it alone. Take the used battery to the turn-in point for disposal processing.

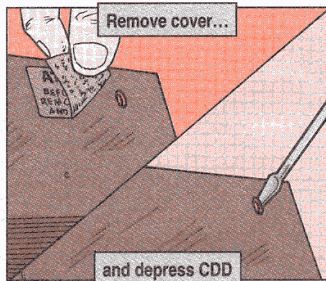
The CDD on your lithium-sulphur dioxide battery is there so that trained personnel can safely discharge the battery before disposal.

If you **have been** trained and designated to discharge lithium batteries, here's a refresher course on some of the important details.

Activating the CDD

As you activate the CDD, keep this in the back of your mind: **If the CDD is damaged during activation, the battery may vent violently during handling and disposal. So you must do it right!**

With the battery in a secure, well-ventilated area, carefully remove the label covering the CDD. You can slit it with a sharp knife or just peel it back. Never try to activate the CDD with a knife or other sharp object. You could damage or short circuit the CDD.



Once the cover is slit or removed, gently depress the CDD with a small screwdriver. Push straight down until you hear a single click.

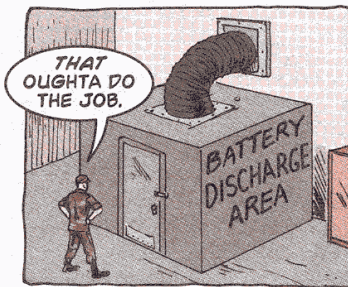
NEVER TRY TO ACTIVATE THE CDD WITH A KNIFE OR OTHER SHARP OBJECT. YOU COULD DAMAGE OR SHORT CIRCUIT THE CDD. USE A SMALL SCREWDRIVER.



Also, never twist any object in the CDD slot. This could dislodge the CDD switch causing a short circuit and a venting.

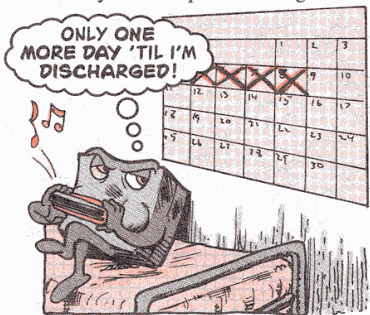
Discharging Battery Storage

In addition to being secure and well-ventilated, the discharge area must be away from people and separated from other hazardous material.



Set discharging batteries at least two inches apart on all sides.

Let the batteries sit a minimum of five days for complete discharge.



Discharging batteries may be hot. The heat could even deform the battery case. That's normal. However, if you hear a hissing sound or smell a strong, pungent odor, clear the area immediately until the odor is gone and the hissing stops.

This is a battery venting. You must dispose of these batteries as hazardous waste.



Battery Voltage Check

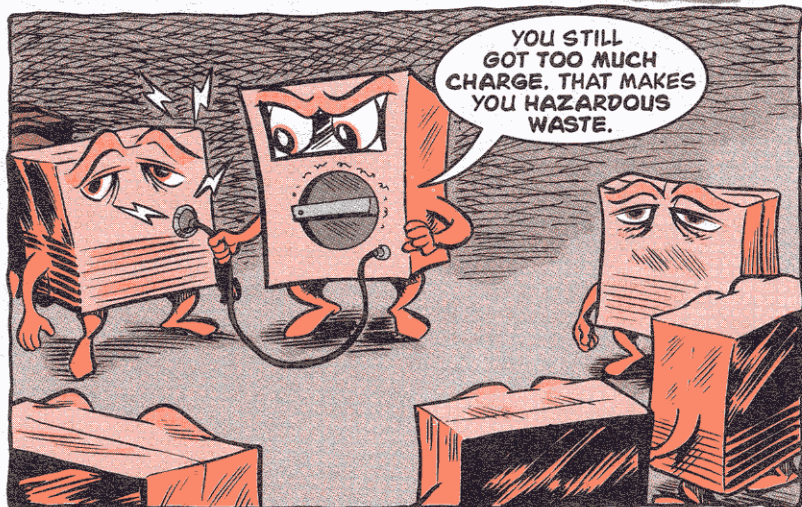
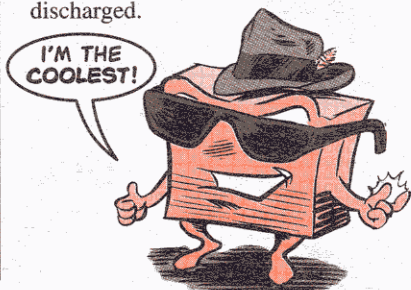
To make sure the batteries have been properly discharged, after five days measure the voltage of the discharged battery using a voltmeter.

Here's where to measure the voltage and what the voltage should read on different batteries:

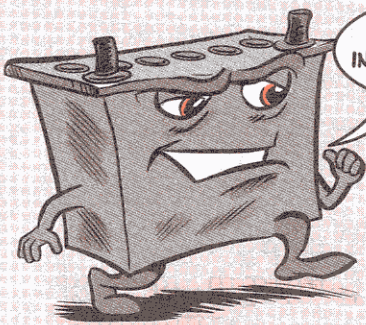
Battery	Maximum voltage	Measured between
BA-5093	9	Pos/Neg terminals
BA-5112	4	Pos/Neg terminals
BA-5557	5	Pins 1 & 4 and Pins 2 & 5
BA-5588	5	Pos/Neg terminals
BA-5590	5	Pins 1 & 4 and Pins 2 & 5
BA-5598	5	Pins Neg A1/Neg A2 & A2
BA-5599	3	Pins 4 & 6
BA-5600	3	Pos/Neg terminals
BA-5800	2	Pos/Neg terminals
BA-5847	2	Pos/Neg terminals

If the voltage is less than the maximum specified, the battery can be disposed of as non-regulated waste in accordance with local regulations. If the voltage is equal or greater than the maximum, dispose of it as hazardous waste, or depress the CDD a second time and wait an additional five days and test the voltage again. Still not low enough? Dispose of the battery as hazardous waste.

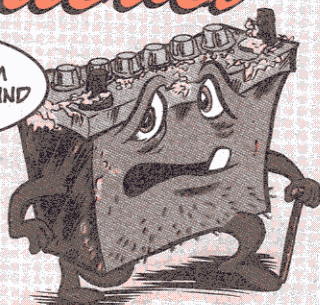
Before you pack the batteries in any container for disposal, make sure that they're cool and properly discharged.



Better Batteries



GITALONG,
OLD TIMER! I'M
IN CHARGE AROUND
HERE NOW!

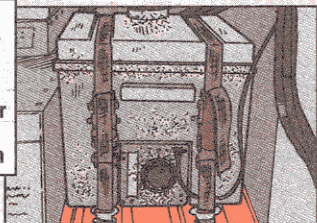


It's time to exchange those two old horse-and-buggy 2HN batteries, NSN 6140-00-057-2553, which have been powering your mobile subscriber equipment (MSE) shelters for the new thoroughbreds, NSN 6140-01-446-9554. Here's why.

The old, non-sealed, lead-acid batteries...

- **were difficult to maintain.** Checking and filling the batteries required partial disassembly of the shelter power bay. Filling the batteries caused acid to run down into the battery box, corroding the box and vent fan assembly.

Old battery can do a real number on box and fan



- **vented hydrogen.** If the "equalize charge" mode was used to quickly

charge the batteries, they often over-charged and boiled the electrolyte, releasing large quantities of hydrogen gas.

In addition to solving these two problems, the new, sealed batteries...

- are maintenance free.
- last 20% longer.
- have a wider temperature range (from -22° to +122°F).
- can be deeply discharged for many cycles.

There's no reason to wait for the old batteries to die. You can make the switch now. These new batteries have the same dimensions as the old ones, so you can make the substitution without modifications. However, **both** batteries in the shelter should be changed at the same time to obtain the best results.

Here are the shelters that use the new batteries

- AN/TRC-190 V1, V2, V3 (LOS)
- AN/TRC-191 Radio Access Unit
- AN/TTC-46 Large Extension Node Switch
- AN/TTC-47 Node Center Switch
- AN/TTC-48 Small Extension Node Switch
- AN/TYQ-46 System Control Shelters

Working Under Pressure

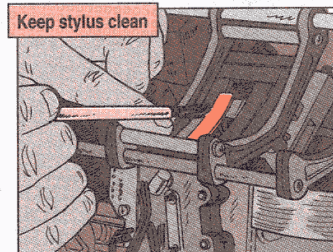


The AN/UXC-7 lightweight digital facsimile uses pressure on a stylus to print. The amount of pressure makes letters black, gray or barely readable.

This pressure is electrically controlled, but it takes an initial mechanical adjustment to establish the range of pressure. This initial adjustment is a direct support job, but some of you unit repairmen are trying to do it yourself.

You want darker print so you're screwing down that adjusting screw and creating more pressure. That pressure makes the stylus rub hard against the drum. It's not long until your fax is off to support anyway, this time to replace the stylus!

There are only two things you can do at the unit to give yourself cleaner, darker print and extend the life of your stylus: First, clean the stylus and surrounding area daily with your tool kit's small bristle brush, NSN 7510-00-550-8446.

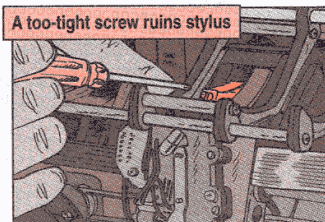


Second, always make sure you have paper in your fax before printing. The paper cushions the stylus while it prints.

If you and your fax are in the boonies and you feel you must make a stylus adjustment to meet mission needs, think small increments—and test the results after each adjustment.

A one-sixteenth turn on the adjusting screw is a good start, but never make more than a one-eighth turn. To get that increment, visualize the screw divided into quarters and never turn the screw more than half of one of those quarters at a time.

Turning counterclockwise increases the pressure, clockwise releases it.



Paper Trail

Single-carbon paper, NSN 7530-01-101-8277, and multiple-carbon paper, NSN 7530-01-082-3033, can leave a trail on your AN/UXC-7 facsimile's drum.

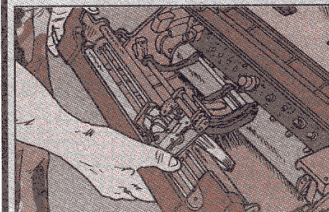
If the paper is installed right, no problem. Installed wrong, though, with no paper behind the carbon, the message gets printed on the drum. If the message is classified, you've just compromised the document.



Install paper correctly

Since it's better to be safe than sorry, use two-part carbonless paper, NSN 7530-00-145-0174, if you receive classified messages.

If you have already printed a classified message on the drum, tell your supervisor. He'll properly dispose of the drum and get a new one.



Classified info on roller? Tell your supervisor

STOP THE NUT ROLL

WHAT'S BOTHERING YOU, PAL? YOU SAY YOU'RE LOSING LOAD AND GROUND TERMINAL NUTS ON YOUR 10-KW AND SMALLER GENERATORS? YOU SAY WHEN YOUR BACK IS TURNED, THOSE NUTS ARE JUST ROLLING AWAY?

I'M OUTTA HERE!

YOU SAY YOU CAN'T FIND SAFETY CLIPS FOR THE TERMINALS IN THE TM OR ANYWHERE ELSE YOU LOOK?

HAVE I GOT A DEAL FOR YOU! MAKE YOUR OWN SAFETY CLIPS TO KEEP THOSE NUTS IN THEIR PLACE. HERE'S HOW...

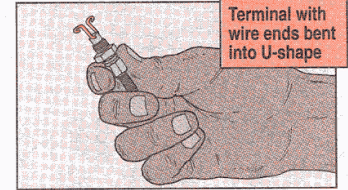
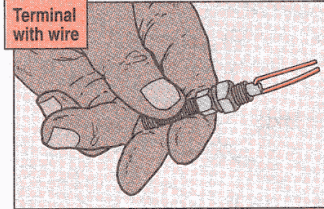
FIRST, PICK THE WIRE YOU NEED.

	Model											
NSN 9505-	002A	003A	015A	016A	017A	018A	021A	022A	023A	025A	026A	112A
00-804-3814 .042 inch	G	G	L-G	L-G			L-G			G	G	
01-049-0144 .050 inch	L	L				L			L	L	L	L
00-596-1668 .051 inch					L-G	G		L-G	G			

L = Load Terminal G = Ground Terminal

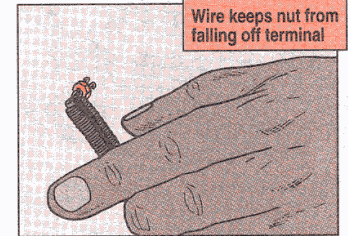
Cut off about three inches of the wire. Be sure the wire is short enough to keep the clips from touching another terminal or the generator frame in the open or closed position. We sure don't want any shorting action here. OK, put the wire through the hole in the terminal.

Bend the ends of each 90-degree angle down and around into a U-shape.

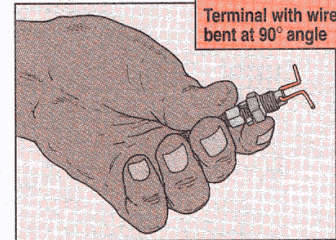


The homemade clip should hold the nut when you unscrew it to install the cable.

Hold the terminal so you can bend both ends of the wire straight up. Try to keep the wire in a straight line with the terminal body.



Next, bend the wire into back-to-back 90-degree angles. The legs of both angles should be about 1/2 inch long.



To make safety clips on larger generators, use wire, NSN 9505-00-596-1662.

NO WIRE AVAILABLE? AS A TEMPORARY FIX, YOU CAN STRAIGHTEN AN ORDINARY PAPER CLIP TO MAKE THE SAFETY CLIP. HAPPY NOW, PAL?

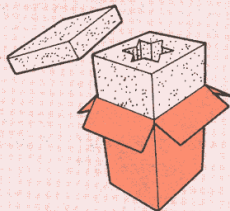
Pack It Up

Just getting your repairables delivered isn't good enough. They need to arrive in good shape, too.

That's where FAST PACK containers and other shipping materials come in handy. They keep your repairables from picking up extra damage on the trip to support.

FAST PACK Containers

Style A, Type I, Vertical star (for delicate items like meter gauges and instruments).

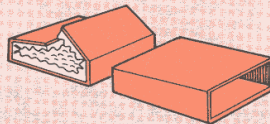


Size (inches)	NSN 8115-00-
6x6x10	192-1603
8x8x12	192-1604
10x10x12	192-1605
12x12x14	134-3655
12x12x18	050-5237
14x14x16	134-3656

WHAT HAPPENED TO HIM?

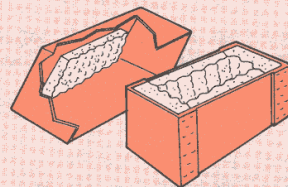
and Ship It Out!

Style D, Type II, Folding convoluted (protects flat items like circuit boards, modules and tubes).



Size (inches)	NSN 8115-
6x5x2½	00-787-2142
6x5x3½	00-787-2147
9x6x2½	00-101-7647
9x6x3½	00-101-7638
10x10x3½	01-057-1244
12x8x2½	00-787-2146
12x8x3½	00-787-2148
13x13x3½	01-057-1243
16x16x3½	01-057-1245
18x12x2½	01-019-4085
18x12x3½	01-019-4084
24x16x3½	01-093-3730

Style G, Type III, Telescoping encapsulated (for bigger items like receiver-transmitters, amplifiers, power supplies, and electronic indicators).



Size (inches)	NSN 8115-
20x14x9	00-516-0251
24x14x14	00-550-3558
24x18x16	01-015-1312
25x14x14	00-550-3574
26x9x9	01-015-1313
30x16x14	00-516-0242
30x27x14	01-094-6520
32x12x14	00-519-1825
32x18x16	01-015-1315
34x24x18	01-015-1314

WHOEVER PACKED THAT PACKAGE NEEDS SOME KNOW-HOW FAST!

CLUNK

RATTLE

PIPELINE

OOF!
THAT'LL LEAVE
A MARK!

CRASH

Style B, Type IV, Horizontal star
(for shipping long, rectangular or cylindrical items like regulators, transmitters and amplifiers).



Size (inches)	NSN 8115-01-
20x14x14	010-8956
22x16x16	006-7257

Open FAST PACKs with care. They're reusable. Instead of tearing the tape off, cut along the taped seams with a thin-bladed knife.

When ready to re-ship, just tape over the old tape with two strips of 3/4-in tape, NSN 7510-00-802-8311. Overlap the tape two inches, top and bottom. Be careful not to tape over printing or mailing instructions.

Appendix A of CTA 50-970 is your authority for ordering FAST PACK items.

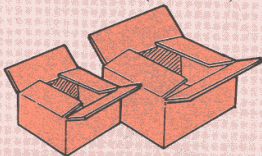
WITH
FAST PACK
CONTAINERS
AND US...



Packing Materials

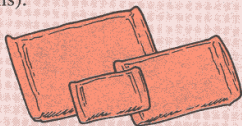
Here are some other packing materials you'll find handy:

Fiberboard boxes (lots of 25).



Size (inches)	NSN 8115-00-183-
8x8x8	9498
10x8x6	9497
12x8x8	9493
16x12x8	9487

Shipping bags, padded (for small items).

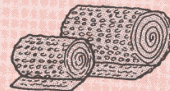


Size (inches)	NSN 8105-00-	Qty
6x10	290-0340	250
7 1/4 x 12	290-0342	100
9 1/2 x 14 1/2	281-1168	100

Electrostatic-free flexible cushion pouches (for circuit cards).

Pouch Size (inches)	NSN 8105-01-
8x8	215-0462
10x10	197-2966
11x15	215-4752
12x12	197-2965

Bubble pack material (for wrapping, cushioning, and immobilizing).



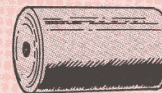
Roll Size	NSN 8135-00-
3/16-in x 24-in x 500-ft	142-9016
1/2-in x 24-in x 250-ft	926-8991

Shrouding material, plastic (for skid-mounted and palletized items).



12x100-ft roll, NSN 8135-00-579-6489

Barrier material, grease/water-proof (for wrapping items covered by corrosion preventive compound).



36-in x 100-yd roll, NSN 8135-00-753-4661

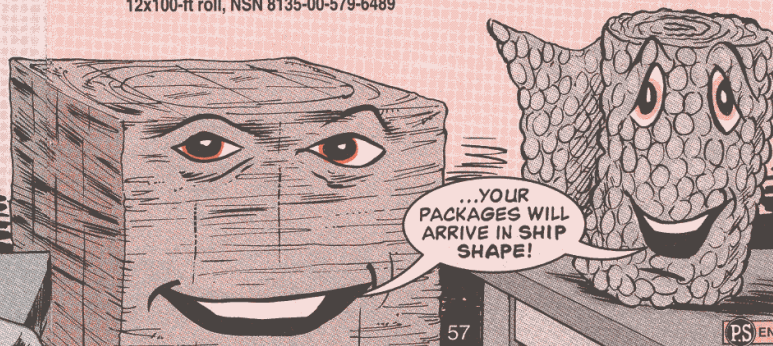
Tape, pressure-sensitive (for sealing and waterproofing).

4-in x 60-yd roll, NSN 7510-00-890-9875

Corrosion preventive compound
(for protecting machined metal surfaces).



Size	NSN 8030-00-244-
1-gal	1297
5-gal	1298



ETM Updates Not Automatic

You've just received a compact disc (CD) containing electronic technical manuals (ETM). Now, how do you make sure you get CD updates that include changes and revisions to those ETMs?

Updated CDs will **not** be sent to your unit automatically even though the first one was. You have to submit a subscription change requirement.

You can submit your change electronically to the US Army Publishing Agency (USAPA) through its web site or its bulletin board. Here's how:

Web Site

- Go to the USAPA home page at: <http://www-usappc.hoffman.army.mil>
- Click on **Army Publications Ordering and Subscription System**.
On the next screen, click on **Publications Ordering System**.
- On the next screen, click on **Subscription Add/Change/Delete**.
- You'll come to a screen headed **Subscription Changes**. This is where you fill out and submit your subscription change.
- Enter your publications account number and ZIP code.
- Enter the initial distribution number (IDN) for each CD. You'll find the IDN on the front of the cardboard mailer and on the face of the CD. You'll also find many IDNs listed in the Spring '98 Bulletin on the USAPA web site.
- Enter the quantity required.
- After filling out the form, click on **Submit Subscription**.
- For additional instructions, see the bottom of the **Subscription Changes** screen.

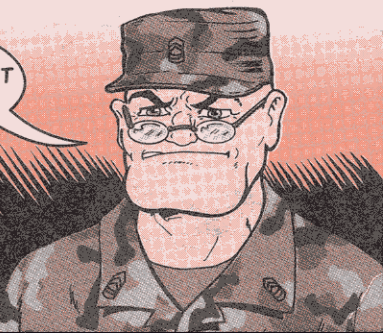
Bulletin Board

If you don't have access to the Internet, but you do have a communications modem, you can submit your subscription change by calling the USAPA publications bulletin board at DSN 221-6736 or (703) 325-6736.

If you can't submit your changes electronically, or if you need help, call USAPA customer service at DSN 221-6232 or (703) 325-6232.

Remember, you must submit a subscription change requirement for each CD in order to get future updates.

IF YOU DON'T,
YOUR UNIT WON'T GET
THE LATEST CD
VERSION.



Supply ...

DON'T BE A DODAAC DODO

SUPPLY

-SIGH-
MAYBE TODAY'S
THE DAY.

ARE
YOU SURE
YOU GOT THE
DODAAC NUMBER
RIGHT?

The Titanic might arrive before your supplies if you have the wrong Department of Defense Activity Address Code (DODAAC) on file.

Every unit has a six-digit DODAAC that identifies it for the receipt, requisition, shipment and billing of supplies.

If your unit's designation or address changes, be sure to update your DODAAC file. You'll find instructions on how to make additions, deletions or changes to your file in Chap 9 of AR 725-50.

The Defense Automatic Addressing System Center (DAASC) is the central control point that maintains the master DODAAD (DOD Activity Address Directory). Changes to a unit's DODAAC are reported to DAASC through designated central service points.

PS 550

The Army's central service point is part of the Logistics Support Activity at Redstone Arsenal, AL. If you need help with your DODAAC, call them at DSN 897-2500 (Rapid DODAAC), -2491 (Reserves), -2496 (National Guard), -2499 (Army), -2498 (Contractors) or commercial (256) 313-. Fax them at DSN 897-2829 or (256) 313-2829. E-mail them at:

mmckenri@logsa.army.mil (Rapid DODAAC)
mhopple@logsa.army.mil (Reserve)
mdaum@logsa.army.mil (National Guard)
roden@logsa.army.mil (Army)
mhill@logsa.army.mil (Contractors)

Or write to:

USAMC LOGSA
ATTN: AMXLS-MM
Redstone Arsenal, AL 35898-7466

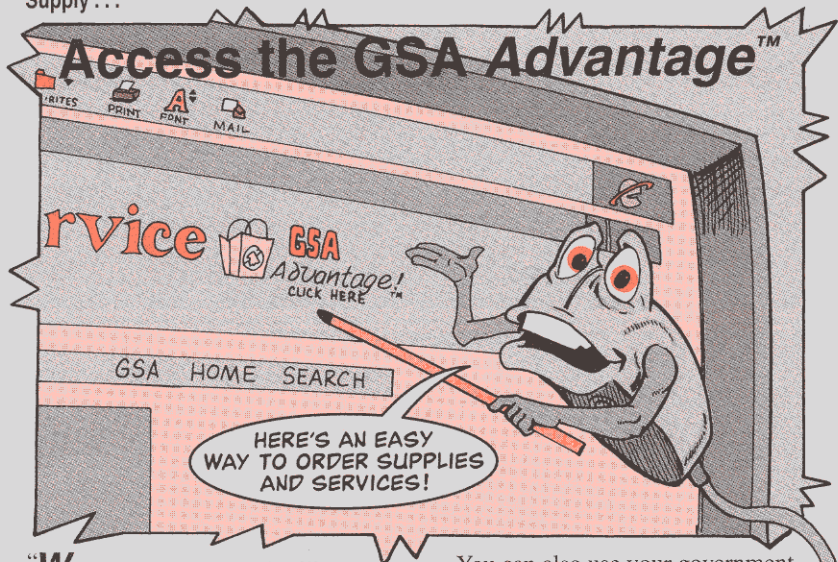
There is also a web site on the Internet for DODAAC queries. Call it up at:

<http://www.daas.dla.mil/daasinq/dodaac.htm>

For non-Army central service points, call the DAASC information center help desk at DSN 986-3247 or (937) 656-3247.

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SEP 98



“Where’s the GSA catalog?”

Ever hear those words?

How about, “I can’t find it in the book”?

Now those words should be ancient history.

The General Services Administration (GSA) has set up an Internet program called GSA Advantage™. It puts millions of items and thousands of vendors at your fingertips. You can reach the website with:

<http://www.fss.gsa.gov>

With GSA Advantage™ you can search for an item using key words, part number, vendor name or NSN. Once you find the item, you can search through all GSA sources of supply and select the best value.

You can order electronically using your DODAAC and a GSA-assigned password.

You can also use your government commercial credit card (IMPAC).

Before you log on, check your unit’s SOP for requisitioning through the Internet to meet off-line supply needs. Your first requisitioning choice is **always** the standard Army supply system.

To get a customer handbook for GSA Advantage™ call (703) 305-7359.

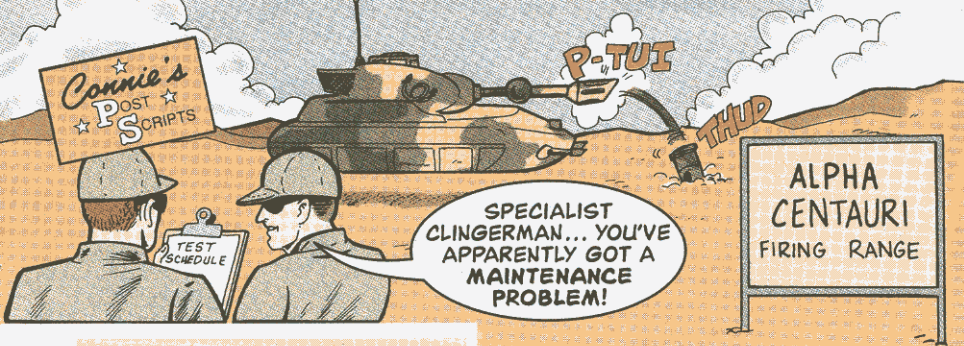
Or e-mail them at:

GSA.Advantage@gsa.gov

Or write to them at:

GSA FSS
Office of Advantage (FI)
1941 Jefferson Davis Hwy
Crystal Mall Bldg #4, RM 318
Arlington, VA 22202

With GSA Advantage™ you can forget about your fingers doing the walking through the catalog—now they just stroll across the keyboard!



TEC Light Revisited

The MLRS TEC fault light test on Page 16 of PS 546 is a bit misleading. Here's the proper sequence for the test:

1. With the engine off, turn the MASTER POWER switch to ON. The TEC fault light should come on or flash.
2. Start the engine. The TEC light should stay on or continue to flash for approximately 20 seconds, then go out.

If the TEC light doesn't come on at all or if it fails to go out after the 20-second waiting period, there is a problem with the transmission's electronics and your vehicle is NMC. Call in your mechanic.

Renew Water Repellency

Need to renew the water repellency of your cold-weather clothing? Use water-repellency additive, NSN 8030-01-408-9446. Soldier Systems Command says you can use this additive in the rinse cycle for all cold-weather clothing items.

M249 Magazine Unavailable

The M249 machine gun's new 100-round assault pack, NSN 1005-01-334-1507, is not available due to production problems. Hold off on ordering the magazine until April, 1999, when the magazine should be available.

Rechargeable Batteries

As of 1 Oct 98, using Primary (non-rechargeable) commo batteries for training and garrison duties is a thing of the past. Rechargeables are now the only batteries authorized for most training and garrison missions. It's spelled out in a Department of the Army memorandum from the Army Deputy Chief of Staff for Logistics, DALO-SMR, 29 Aug 1997. If you need a copy or info on rechargeables, call CECOM at DSN 992-4948 or (732) 532-4948. Send e-mail to brockeld@doim6.monmouth.army.mil

FMTV Wiper Refills

Refills for FMTV wiper blades are now in the supply system. Get a pack of two refills with NSN 2540-01-454-0415.

HETS Kingpin Cover

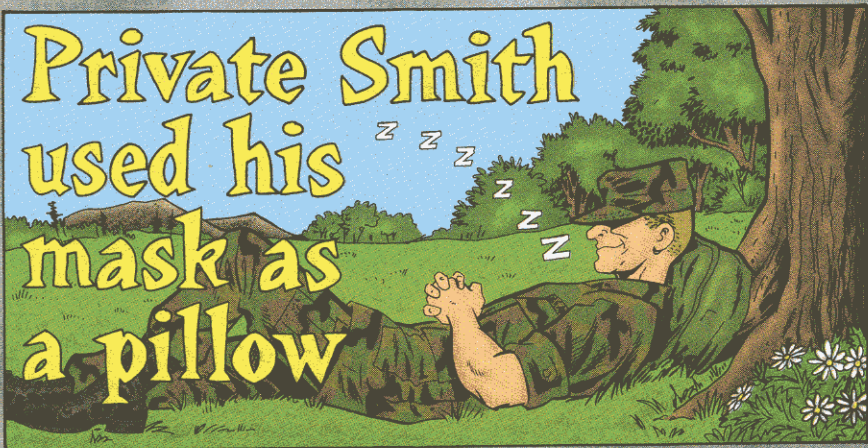
You can get a *free* cover for the kingpin on your M1000 semitrailer if the trailer's serial number is 1168 or below. Call Tank-automotive and Armaments Command at DSN 768-8070 or (810) 574-8070. If the trailer is numbered 1169 or above, order the cover with NSN 5340-01-455-8697. The cover will be added as Item 5A in Fig 33 of TM 9-2330-381-24P.

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?

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Now he sleeps
forever



Sitting or sleeping on
your mask ruins its seal!