

Issue 562

# PS

September  
1999

## THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-562



Approved for  
Public Release;  
Distribution  
is Unlimited

# FOLDING KILLS MASKS

Store your mask upright with the lenses facing away from the body!

Do **NOT** fold your mask for storage!

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**THE  
PREVENTIVE  
MAINTENANCE  
MONTHLY**

TB 43-PS-562, 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 to:

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

Or E-mail to:  
[psmag@logsa.army.mil](mailto:psmag@logsa.army.mil)

Internet Address:  
<http://www.logsa.army.mil/psmag/pshome.html>

By Order of the Secretary of the Army:

**ERIC K. SHINSEKI**

General, United States Army Chief of Staff

Official:

*Joel B. Hudson*  
**JOEL B. HUDSON**

Administrative Assistant to the Secretary of the Army  
9919303

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# Fix Field Fixes

Dear Editor,

It was late at night and in the middle of an exercise. An M2 Bradley was down with a broken accelerator spring.

Since the mechanic had no spare part, he welded a nail to the end of the broken spring and curved it around to do a hasty repair. The job done, the Bradley went on its way.

After the vehicle was turned in— with no note on the DA Form 2404 or 5988-E about the field fix—another mechanic was doing annual services when he tried to remove the spring. It broke at the weld.

The small end piece, with the nail, hit him in the cheek and went under his safety glasses, lacerating his eye lid. It took 17 stitches to repair the damage.

The field mechanic was doing his job by keeping the Bradley moving. But, no follow-up was done to make sure a proper replacement part was ordered and installed.

The injured soldier was lucky. He will have a scar. But he will be able to see it with both eyes!

MSG Andy Whitish  
WAARNG Safety Office  
Camp Murray, WA

FROM THE DESK OF THE Editor

Your message is clear. Field fixes are often needed, but don't forget to report them. You'll save equipment for sure, and possible injury to your buddies. So, fix these "fixes" as soon as you can.

WHEN AN UNREPORTED FIELD FIX...

THIS OUGHT TO HOLD FOR NOW.

...MEETS AN UNSUSPECTING MECHANIC... ACCIDENTS HAPPEN!

SPINK

OW!  
MY EYE!!

MORAL: ALWAYS REPORT FIELD FIXES!

DA FORM 2404



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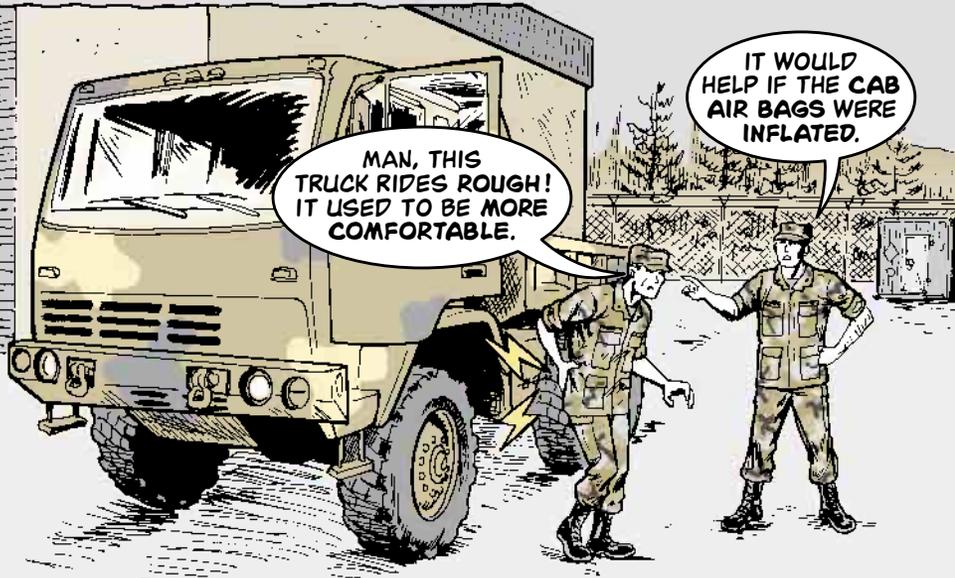
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# Keep Cab Bags Inflated



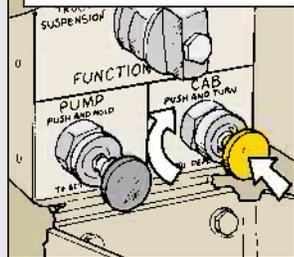
**B**efore operation, drivers, make sure the CAB function control knob on your FMTV's hydraulic control box is pushed in and turned all the way to the right. If it's turned completely, the knob will stay pushed in.

That ensures that the cab air bags are inflated. If you drive on deflated cab air bags, they get damaged—and you get a hard ride.

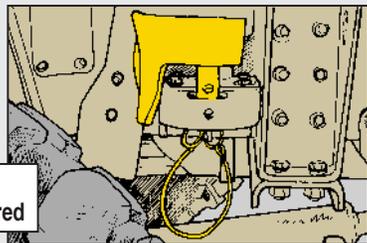
The only times the air bags are deflated are for air transport and maintenance.

And, the only time the cab tiedown bracket (located near the air bags) is secured to the frame is just before air transport. Driving with the cab locked down or with the air bags deflated will damage the cab and the air bags.

**Normal operation: push in and turn clockwise to inflate**



**Drive with cab tiedown unsecured**



# Ignore Battery Box Diagram

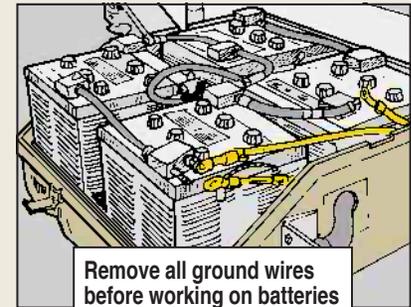


**M**echanics, there's nothing but trouble headed your way if you disconnect the negative battery cables on your FMTV using the battery box diagram.

The diagram under the box lid fails to show the second ground connection that must be removed. **Both ground terminals must be disconnected** before you begin working on the electrical system or removing or replacing batteries. Otherwise, you could be injured or killed from electrical shock or battery explosion.

The correct method for disconnecting and connecting the ground cables is shown in Para 7-46 on Page 7-188 of TM 9-2320-365-20-3 (2 1/2-ton models) and Para 7-57 on Page 7-288 of TM 9-2320-366-20-3 (5-ton models).

Two leads are fastened to one battery cable terminal lug, and the other is fastened to a second lug. Get 'em all.



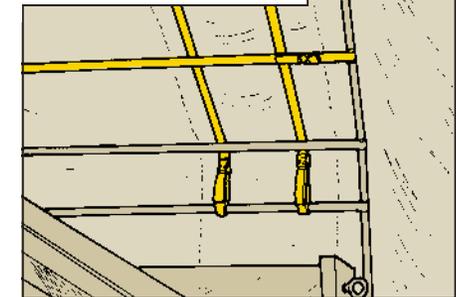
# More Support for Soft Cover

**I**f rain or snow is causing water puddling problems for your FMTV's soft top cover kit, add more support.

Support strap assembly, NSN 5340-01-453-4678, goes between the top cover and the bows to keep the cover from sagging.

The assembly is made of webbing that attaches to the roof support tubing on both sides of the truck and to the end bows.

**Support straps stop puddling**



HEMTT ...

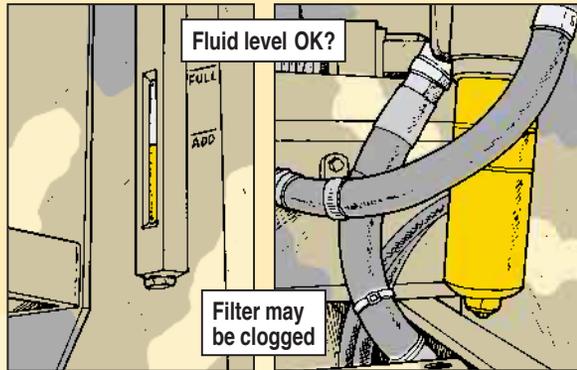
# FLUID PM LIFTS CRANE

**F**orget or ignore hydraulic fluid PM on your M977, M984E1 or M985 HEMTT crane and you'll soon be left with a truck that's NMC.

Low fluid or a clogged filter will eventually stop a crane from lifting, which leaves you out of commission until a fix is made.

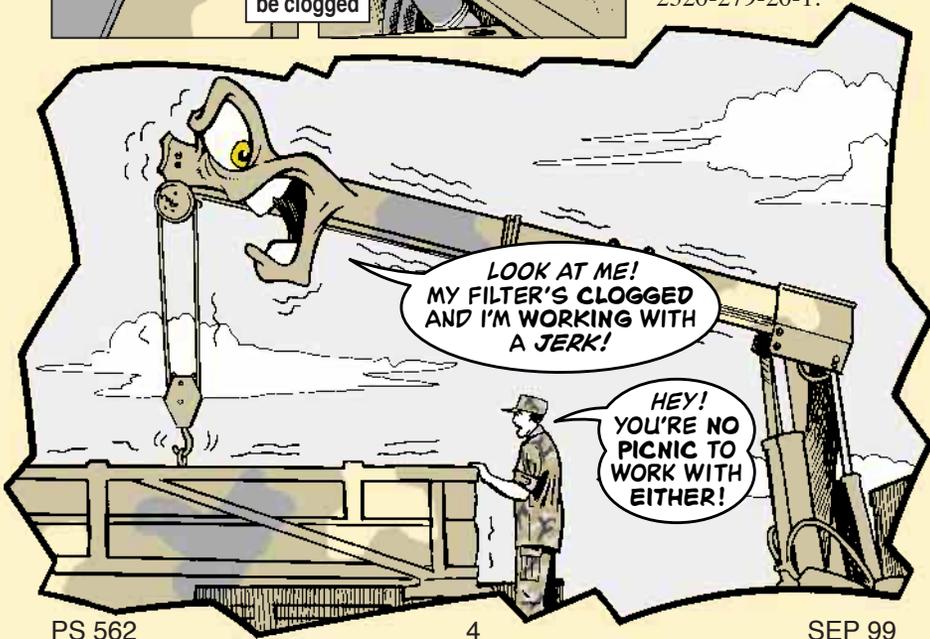
Even before the crane stops working, it will jerk when it moves, as dirty or contaminated fluid bypasses a clogged filter.

So, eyeball the fluid level on the hydraulic reservoir's sight glass before every operation. The fluid level should be between ADD and FULL after the vehicle



is warm.

If the fluid level's right and the crane still doesn't work or jerks during operation, let your mechanic know. He'll check the crane and hydraulic system troubleshooting instructions in TM 9-2320-279-20-1.



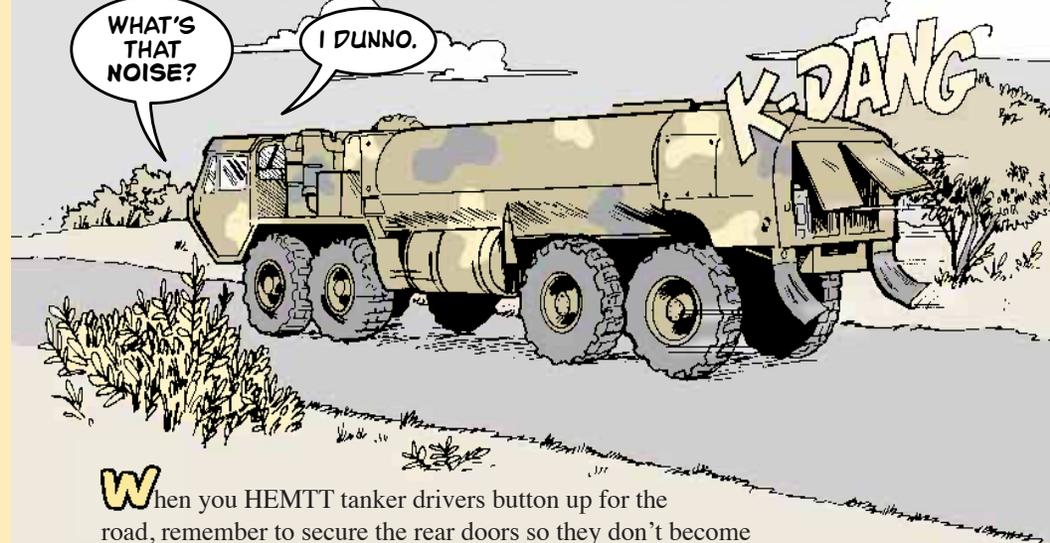
HEMTT Tankers ...

# Closed? Try Locked

WHAT'S THAT NOISE?

I DUNNO.

K-DANG



**W**hen you HEMTT tanker drivers button up for the road, remember to secure the rear doors so they don't become wings as you're trucking down the road.

Securing them is no problem if the door latches work properly. Close the doors on your tanker and make sure the latches hold the doors shut. If they don't, get your mechanic to repair or replace them.

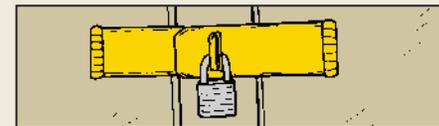
Some soldiers take no chances with door latches by locking the two hinged hasps, NSN 5340-01-360-0950, and a hasp staple, NSN 5340-01-361-1467, that come on most tankers.

If your tanker doesn't have the hasps and staple, mount the hasps using 10 solid rivets, which are about 1/4 inch in diameter and 1/2 inch long. There is no

NSN for this rivet, so check locally for a replacement. The staple is mounted using four rivets,

NSN 5320-01-358-9270.

Once the hasps and staple are installed, use a padlock, NSN 5340-00-158-3805, to secure the doors.



# Diagnose Starting Trouble

Has this happened to you?

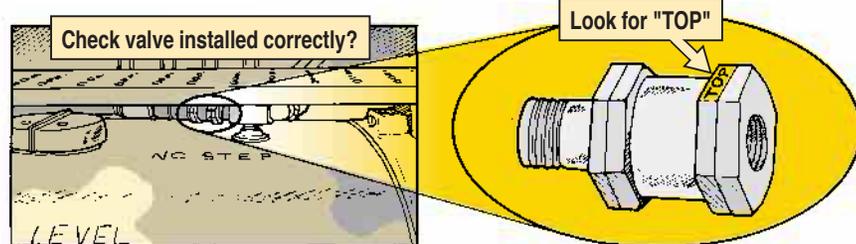
Your M1074 tractor doesn't start right off. But, you keep cranking and eventually the engine coughs into life. It runs very rough for a while, then idles normally.

You have no more starting troubles that day, so you shut down and the truck sits overnight.

The next morning you go through the same hard-starting stuff.

So, what's the problem?

Have your repairman check the one-way check valve on top of the fuel tank. It's supposed to keep fuel from draining back into the tank after shutdown, so there's fuel available at startup. If the valve is installed wrong, or is defective or clogged, fuel drains back into the tank, making for hard starts next time or no starts at all.



Look for the word "TOP" imprinted on a valve flat at the inlet end. If the word "TOP" is parallel to the top of the fuel tank, the valve's installed right. Otherwise, it must be reinstalled.

This info will be added to Para 4-6 of TM 9-2320-364-20-2 and to the troubleshooting procedures in the -20-1.

A clogged valve is a real possibility because fuel tank gunk doesn't get filtered out until after the fuel passes through the check valve.

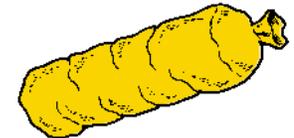


# Update PLS Parts Pub

Sharpen your pencils, mechanics, and make these changes to the palletized loading system (PLS) tractor truck's TM 9-2320-364-24P.

## Aftercooler Filter Kit

The foil filter element in the PLS's aftercooler filter assembly is made to be cleaned and reused. But, if the element gets torn or becomes unusable, order a filter kit with NSN 5330-01-377-2460. The kit includes Items 2-10 and 13 from Fig 231.



## Winch Drum



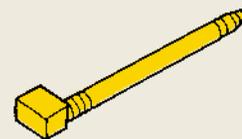
NSN 3950-01-389-3600 gets the hand-operated winch drum on the tractor truck's spare tire carrier. The parts info shown for Item 35 in Fig 318 is wrong.

## Quick Disconnect Coupling

NSN 4730-01-347-0828 gets the quick disconnect (female) coupling shown as Item 9 of Fig 20 and Item 30 of Fig 264. The NSN shown in the TM is no longer available.



## CTIS Tube Assembly



Need a left-hand or right-hand tube assembly for your tractor truck's CTIS wheel valves? Order NSN 4710-01-425-2122 for the right-hand assembly and NSN 4710-01-357-5666 for the left. Make a note of these NSNs until they're added to Item 15 in Fig 266.

# Keep Your TMs



**J**ust a reminder for those of you running 2 1/2-ton trucks:

There are three different series of TMs for M44-series vehicles. Information on maintaining components **unique** to M44A2-series trucks is found only in the TM 9-2320-361-series.

Info on maintaining components **common** to both M44A2-series and M44A1-series trucks is found in 9-2320-209-series TMs.

Info on maintenance **unique** to the new M35A3 trucks is found only in 9-2320-386-series TMs.

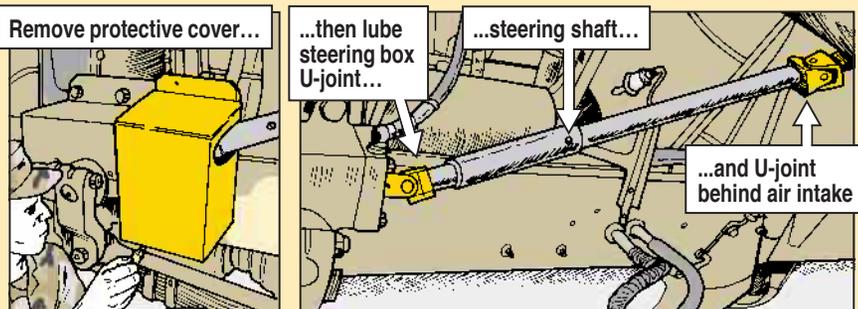
Bottom line—keep all of the TMs that cover your vehicles. They will come in handy.

## Snub No Grease Fittings

**O**perators, overlooking the three grease fittings on your 5-ton truck's steering gear shaft now can mean hard or erratic steering later.

But, some of you **are** overlooking those fittings, especially the one at the U-joint under the steering pump's protective box.

Make sure each fitting gets four or five shots of grease during scheduled service.



# Tire Chains by the Numbers

**I**n most cases, your operator's manual provides an NSN for tire chains in the additional authorization list (AAL). But not every -10 TM has the info.

Plus, the -10s don't give you replacement cross chain and swivel hook NSNs for the chains. So, here are some common tire sizes and the right chain info:

Tire size	Chain assembly (Pair) NSN 2540-	Cross chain NSN 2540-00-933-	Swivel hooks NSN 2540-00-937-
7.50x16	00-528-7360	6960	0405
8.25x20	00-933-9025	N/A	0404
9.00x20	00-933-9024	6916	0404
9.50Rx16.50	00-057-0204	6916	0404
10.00x15	01-185-8306	6916	0404
10.00x20	N/A	6916	0404
10.00x20 (dual tires)	00-933-9020	6916	0404
11.00x16	00-933-6933	6915	0404
11.00x20	00-933-9022	6915	0404
11.00x24	00-933-6935	6915	0404
12.00x20	00-933-6922	6915	0404
14.00x20	00-933-9033	6992	0404
14.00x24	00-933-9023	6992	0404
16.00x20	00-933-6937	Not Available	

If dual tire chains for your size tires are not listed here, use singles on the outside tires. Parts are the same for same-size single and dual chains.

If your vehicle has a tire size not listed here, have your supply clerk check out FSC 2500 for other chains. Authority to order chains comes from Appendix A, CTA 50-970.

# Get a Good Ground

**O**ne spark is all it takes to turn your fuel-loading or refueling operation into a catastrophe.

Where will that spark come from? Static electricity.

This is the same kind of electricity you feel when you walk on a carpet and reach for a metal object, or touch another person.

Static electricity also comes from the friction of fuel flowing through a hose or fuel falling through the air. As the static charge builds, it tries to jump across any gap separating it from other parts of the system.

If there are fuel vapors in the gap when a spark flashes across—

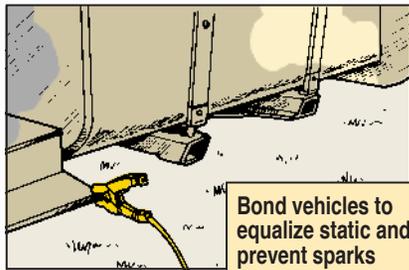
**KABLAM!!**

—that's all she wrote.

## Set a Bonding Path

You can't prevent static, but you can prevent it from arcing or sparking with grounding and bonding.

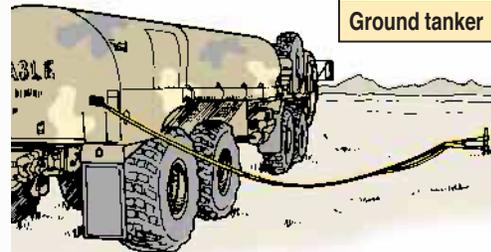
**Bonding** is connecting a wire from your tanker to the vehicle you're going to refuel. It equalizes any static electricity on the vehicles. You can also bond vehicles by grounding each to the same ground.



Bond vehicles to equalize static and prevent sparks

# Ground

**Grounding** is hooking up a vehicle to a ground rod so that static will flow into the earth. You drive a rod into the ground and connect a ground strap from the vehicle to it, or you hook the strap onto a water pipe or other grounded metal.



Ground tanker

That should keep a spark from turning into an explosion or fire.

For more on grounding, see your vehicle operator's TM and FM 10-71, Petroleum Tank Fuel Operations, with Changes 1 and 2.

## Make-do Cargo Strap Sleeves

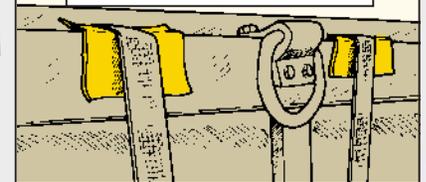
Dear Editor,

The protective sleeves on the HEMAT's cargo straps get lost easily, and using the straps without sleeves causes excess wear and tear when hauling stuff like MLRS pods.

The sleeves aren't available by themselves through the supply system, and it's way too expensive to order cargo straps just because the sleeves are missing.

So, I use cardboard or a piece of split rubber hose under the straps where they hit the cargo. This reduces wear and tear just like the

Replace missing sleeves with cardboard or split rubber hose

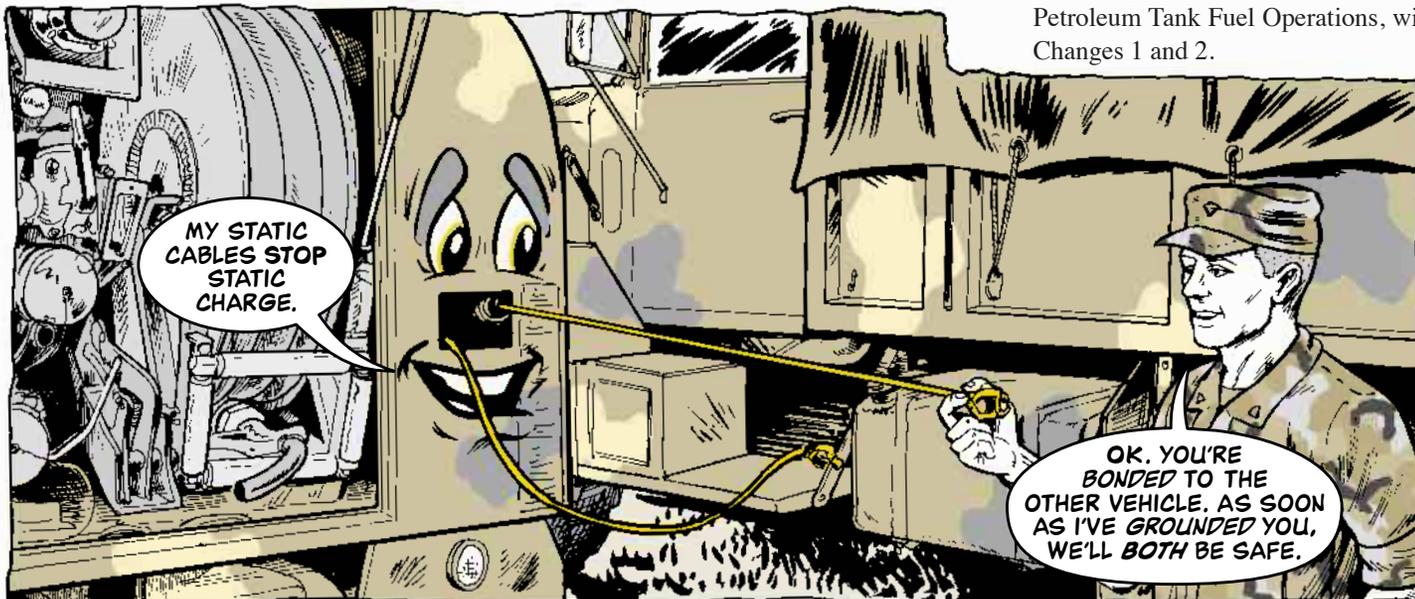


sleeves do, but saves our unit money.

SPC Gregory Record  
1/14th FA  
Ft Sill, OK

FROM THE DESK OF THE Editor

Sounds like a winner. You might also contact your local canvas repair shop and ask if they can make replacement sleeves.

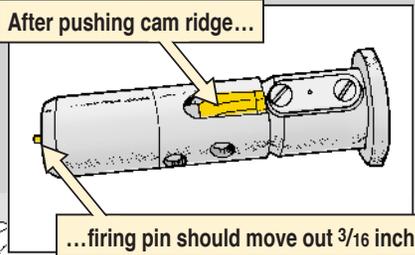


# Assemble It Right!

**I**f you put the M1A1 tank's firing mechanism assembly back together wrong, you'll break the firing pin when you fire the cannon or manually open the breech.

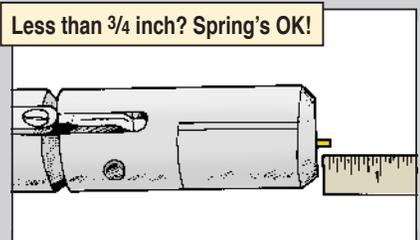
Since broken pins must be replaced before you can fire the cannon again, make sure you assemble the firing mechanism right the first time. Here's how:

1. Check the assembled mechanism by pushing down on the cam. If the firing

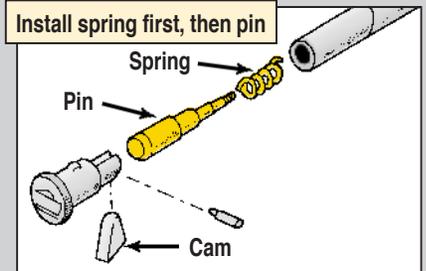


pin moves out about  $\frac{3}{16}$  inch, the cam is installed right. If the pin doesn't move, reassemble the mechanism.

2. Measure the distance from the face of the firing mechanism to the tip of the firing pin. If the distance is  $\frac{3}{4}$  inch or more, the spring is installed wrong.

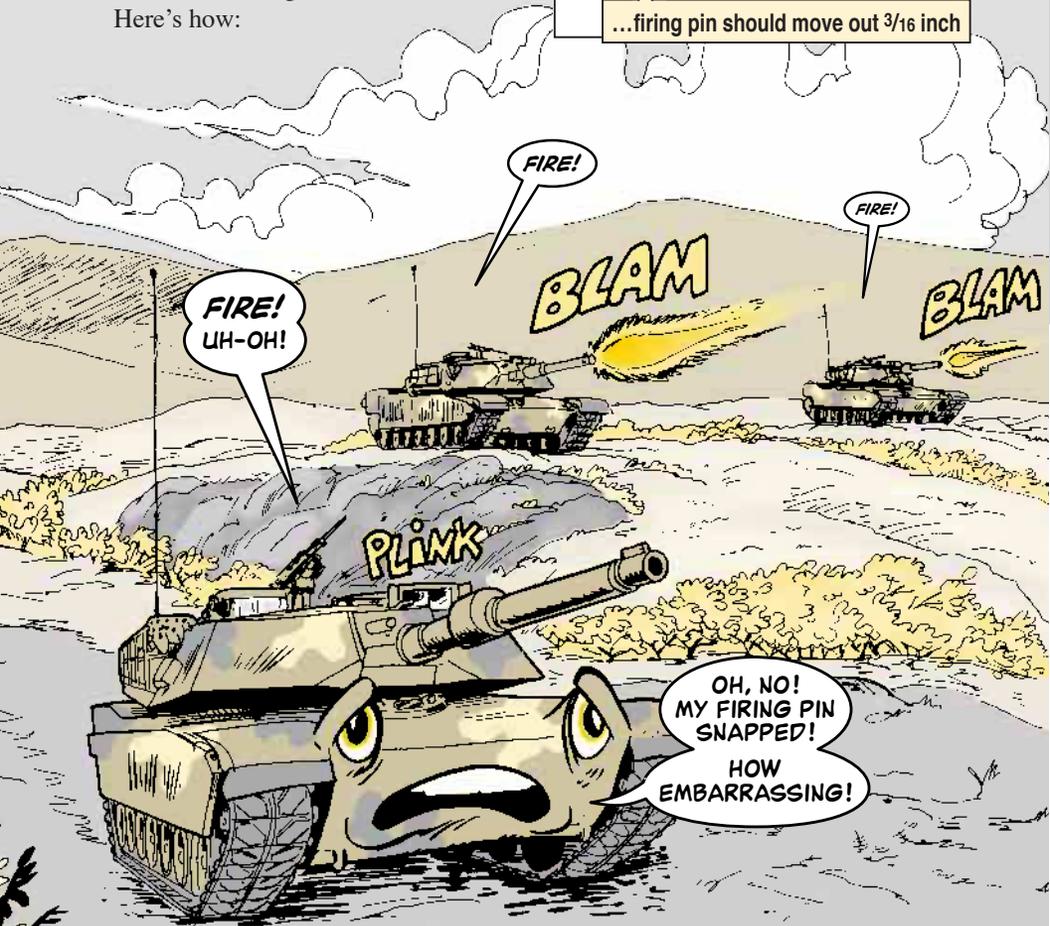


the mechanism back together. If the spring is installed after the firing pin, the pin will break during firing or when you manually open the breech.



3. Disassemble the mechanism and make sure the spring is installed before the firing pin when you put

4. Use no oil when you assemble the mechanism. That attracts dust and dirt that gum up the assembly. Dry off all parts before putting the firing assembly back together.

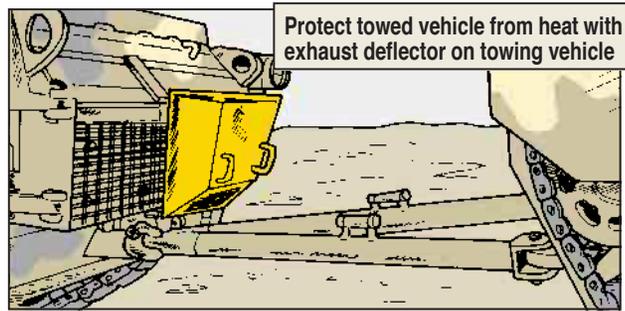


## Exhaust Deflector Plans

**A**n engine exhaust deflector is a must if you're towing one tank with a second one. The deflector connects to the exhaust grate of the towing tank and prevents heat damage to the disabled tank's vision blocks, hatch covers and other front end components.

But you won't find a deflector in the supply system. You have to make it.

The plans are in Fig 7 of Appendix D in the -20-1-5 TMs. If you have problems mounting the deflector on your tank, grind down the deflector's lower hook a bit to help it fit.



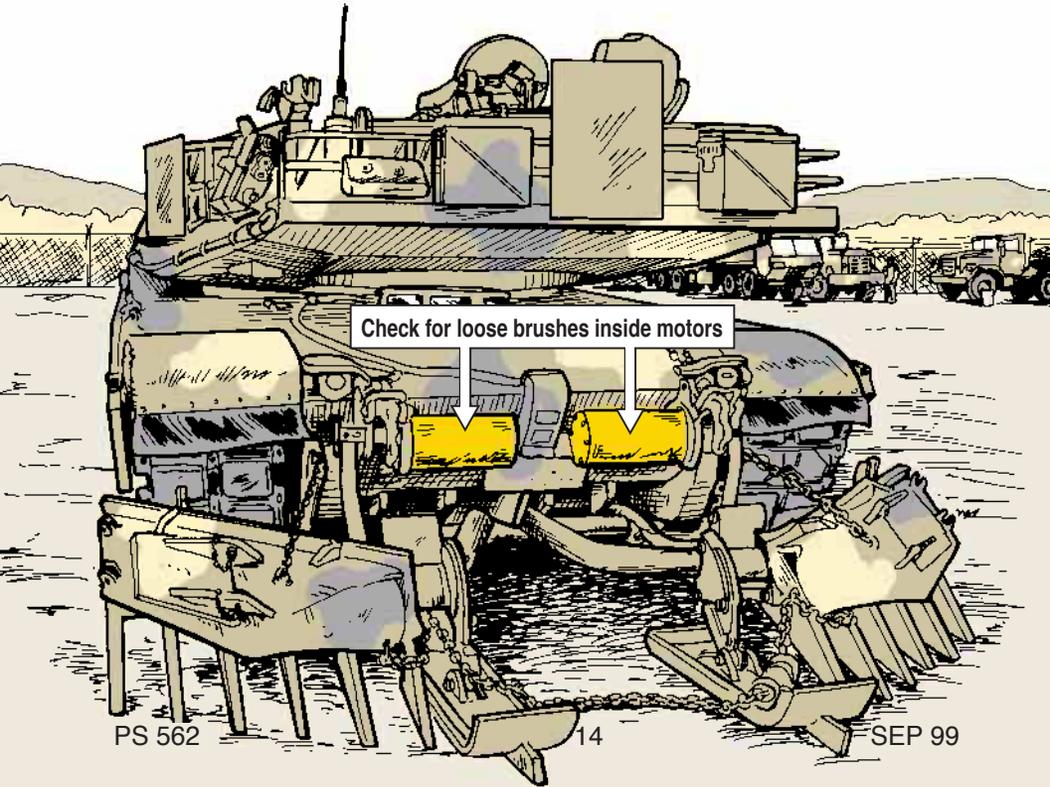
# Repair Mine Blades

**M**echanics, replacing the mine clearing blade's entire lift mechanism, NSN 2590-01-277-0060, will cost your unit more than \$8,000. That's a lot of dough, if all that's needed are minor repairs.

So before you trash that lift mechanism and order a new one, consider this: **Every** part of the lifting mechanism is replaceable. The parts are listed in Fig C-3 of TM 9-2590-509-23&P.

The number one lifting mechanism problem is loose brushes in the motor, NSN 6105-01-277-0295. So, if you install new brushes, NSN 5977-01-412-0758, the motor is usually as good as new. The savings are considerable, even if you have to replace all four brushes—\$52 versus \$8,000 for a new lift mechanism.

If the lifting mechanism still won't work after troubleshooting, send it to DS for repair instead of ordering a new one. You'll save a lot of money your unit needs to repair or replace something else.



# Get a Handle on It

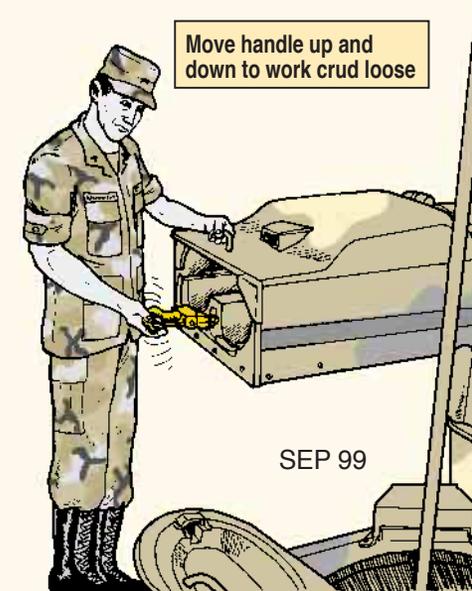


**C**rewmen, when cleaning the TOW launcher on your M2/M3-series Bradley, pay special attention to the loading handle.

Over time, the handle gets jammed with dirt and sand. Your weekly PMCS tells you to open and close the handle once while cleaning the launcher, but that's not enough to work out all the crud that accumulates.

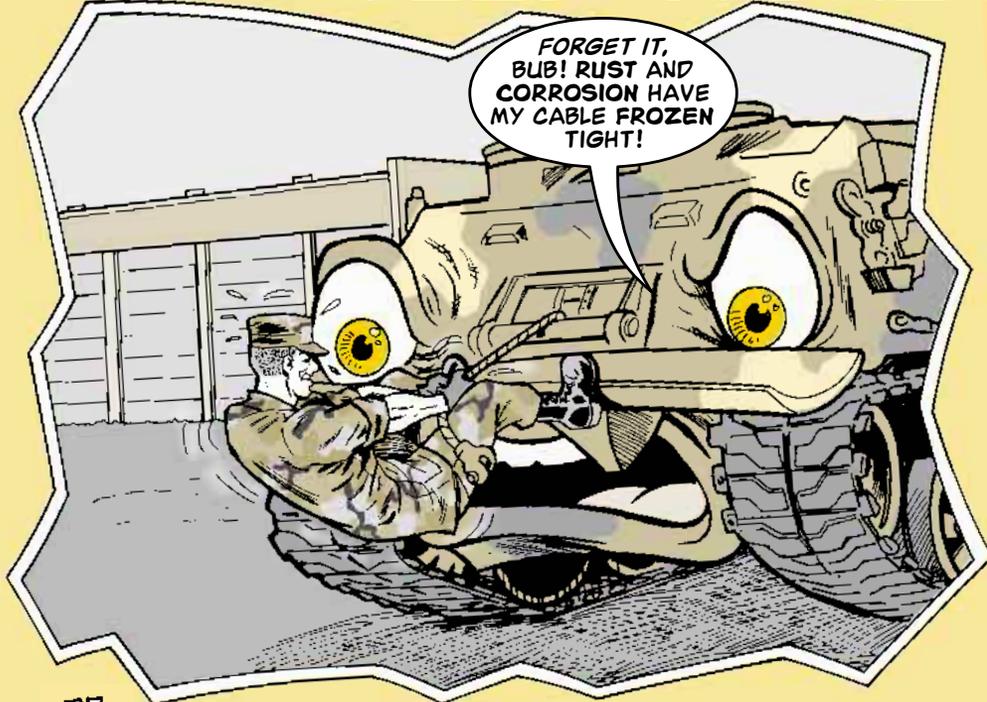
The handle will get harder and harder to move until...well, let's just say you won't be loading the launcher.

When cleaning the launcher, do both yourself and the launcher a favor by moving the handle up and down several times. A few extra seconds spent here will loosen the crud and keep the handle moving freely.



Move handle up and down to work crud loose

# KEEP CABLE



**M**echanics, without regular cleaning and lubing, the wire cable on your M88A1's main or hoist winch will turn into a rusty mess.

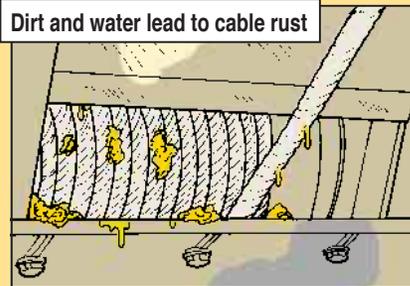
You not only can't use it for recovery operations, but another M88A1 will have to pull out the corroded cable so it can be cleaned or replaced.

Regular cleaning and lubing of the winch cable is the only way to prevent that. But first, you have to know when and how to do it.

## When to Clean and Lube

❖ Clean the cable daily when the winch is being used. If you put it off, dirt and water will settle into the cable

strands, giving corrosion the foothold it needs.



❖ Semiannual cleaning and lubing is a must. Rain, temperature changes, dust, and humidity gunk up the cable, even if the winch goes unused for the full six months.

# CLEAN

## How to Clean and Lube

Never handle the cable with your bare hands. Broken or frayed strands will slice your hands. Wear a pair of leather gloves for protection. Then:

1. Unwind the entire cable and soak it with OE/HDO-10.
2. Scrub the cable with a nylon bristle brush to loosen dirt and other particles.



3. Wipe the cable with several clean cloths. Use a spiraling motion, following the direction of the strands. That wipes away loose dirt and keeps it from lodging between the strands.

4. Coat the cable with chain and wire rope lubricating oil (CW), or OE/HDO-10 if CW isn't available. After the excess oil drips off, rewind the cable.



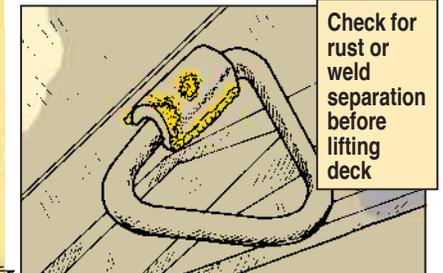
# LOOK OUT BELOW!



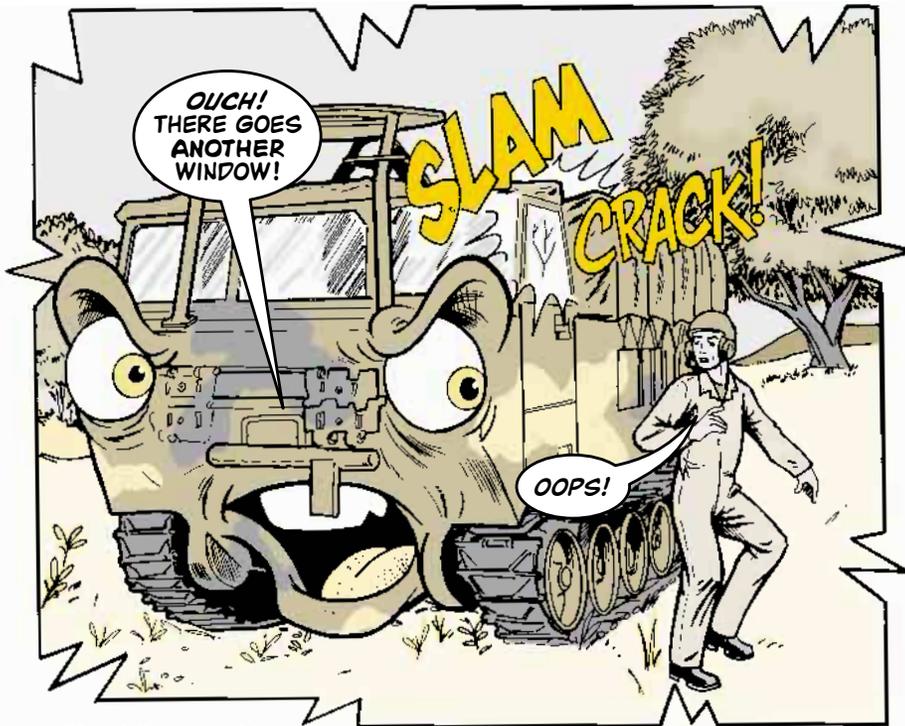
**B**efore you can pull your AVLB's powerpack, you have to remove the engine deck. That may not be as easy as it sounds, though.

The metal sling points on the engine decks of many AVLBs are starting to wear out. Since the deck weighs in at about a ton, that's an invitation to disaster—especially if you happen to be in the wrong place when the sling points give way.

Before lifting the engine deck, eyeball the sling points closely. If you see rust that goes beyond the surface or notice separation in any of the welds, report it. And don't lift the deck until your mechanic checks it out.



# Beware of the Crack Attack



*Slam! Cra-a-a-ck!*

What was that? If you just slammed the door on your M548-series cargo carrier, chances are it was the sound of a window breaking.

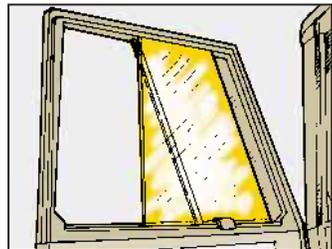
The windows are safe from slamming doors as long as they are closed. The channel each window fits in gives it enough support to stand up to the stress.

But when the window is open—watch out!

Close the doors a little more carefully when the windows are open.

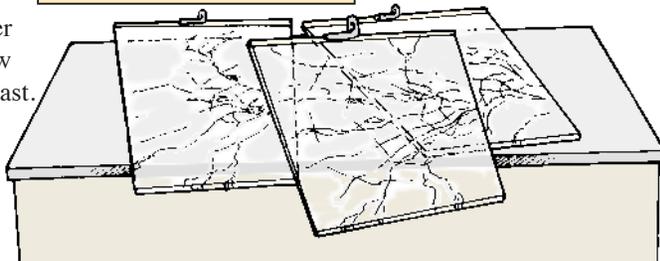
Better still, keep the windows closed. Either way will make window cracks a thing of the past.

PS 562



Slamming door with window open...

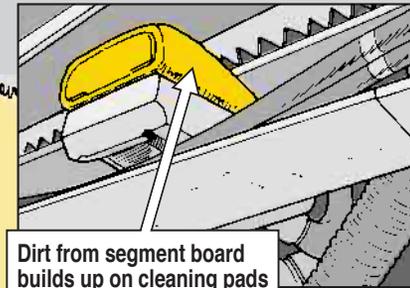
...results in pile of broken glass



# H Pull the Pads

Having problems with intercom distortion on your M109A6 Paladin? It could be caused by a buildup of debris on the segment board cleaning mechanism's cleaning pad.

Para 3-8.17 of TM 9-2350-314-10 says to leave the cleaning pads in place

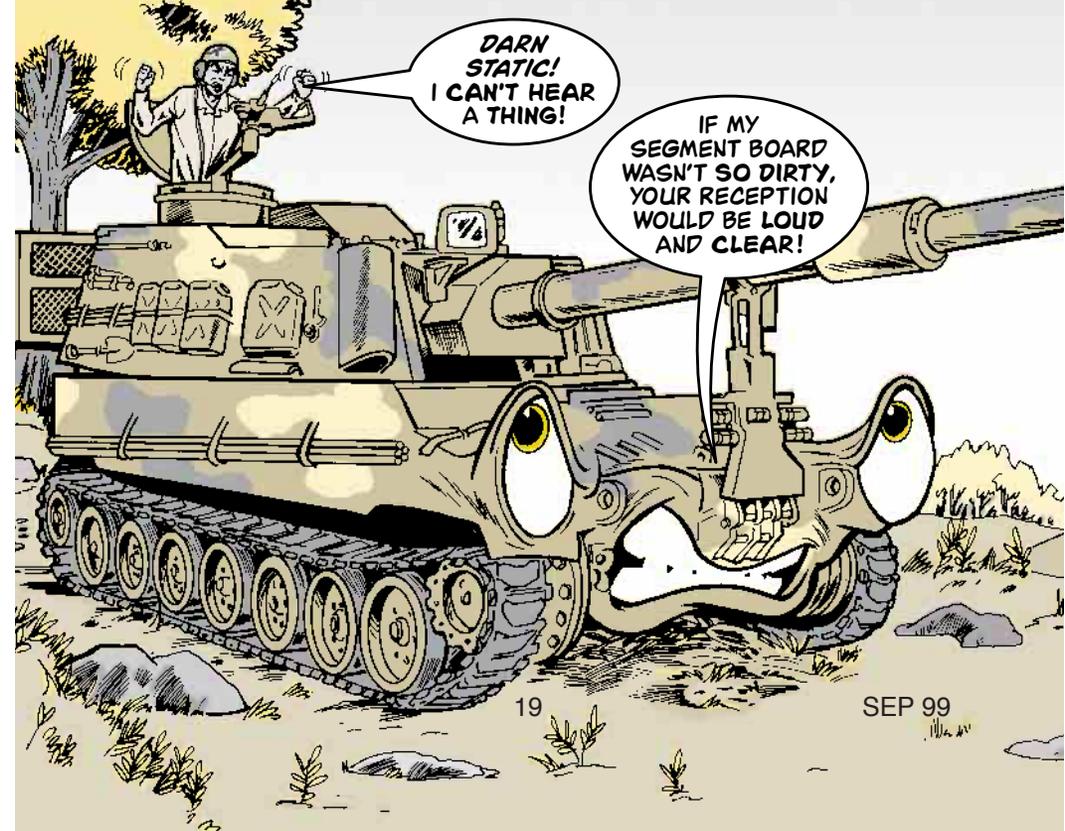


all the time. But when dirt and other debris build up, the pads begin making contact with the segment board. That creates interference on the intercom.

To keep that from happening, ACALA now recommends that the next time the segment board needs cleaning, you should install new cleaning pads. Then, when you're finished cleaning, remove the pads.

With the pads removed, dirt buildup is no longer a problem and neither is your intercom.

Make a note of this change until the TM is updated.



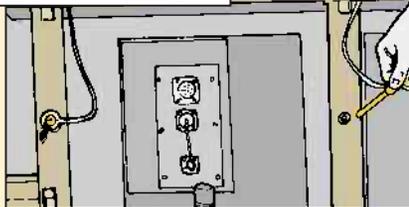
# Locked In and Tied Down

If the MK-155 mine clearance line charge bounces around during travel, the launcher is whacked out of alignment. Eventually, the launcher rail and support posts are damaged. So for travel, think **locked in and tied down**.

Before you move out:

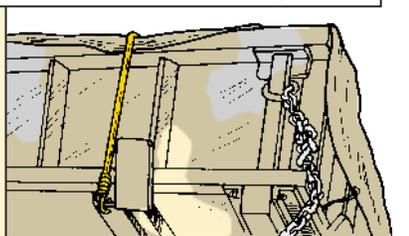
- ☑ Remove the locking pins.
- ☑ Place dunnage from the rocket motor on top of the line demolition charges as a cushion for the rocket motor.
- ☑ Move the pump lever slightly toward RELEASE and slowly lower the launcher rail until the rocket just rests on the dunnage.
- ☑ Put the locking pins in the LOCK holes.

Install both locking pins before moving out



- ☑ Tie the launcher rail down with several bungee straps connected together. Run the strap over the launcher rail and hook it to each side of the tub.

Secure launcher rail with bungee cords



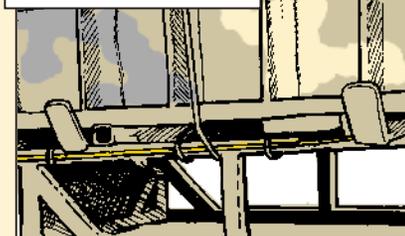
- ☑ Move the pump valve lever to HOLD.

When you prepare to fire, be sure to remove the pins and the bungee cords—they're easy to forget. If the pins are left in the LOCK holes and you try to raise the launcher, the pin holes get rounded out and then the support posts must be replaced.

Something else that needs to be tied down is the W5 cable. If it's left dangling during travel, it can be snagged by tree limbs and such. The W5 is ex-

pensive to replace. Use the pigtails on the upper left side of the launcher frame to tie off the W5. If the pigtails are missing, use tiedowns.

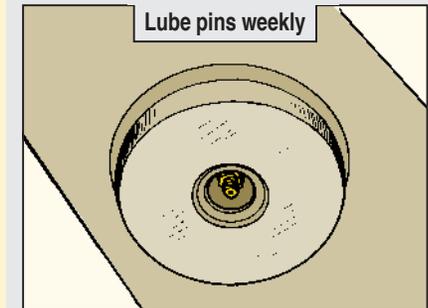
Tie W5 cable to frame rail



## Some Fitting Grease PM

Operators, a lack of lube will eventually cause the pivot pins on the scoop loader's clamshell bucket to seize up. When that happens, the pins will bind and break. Then your construction operations come to a screeching halt.

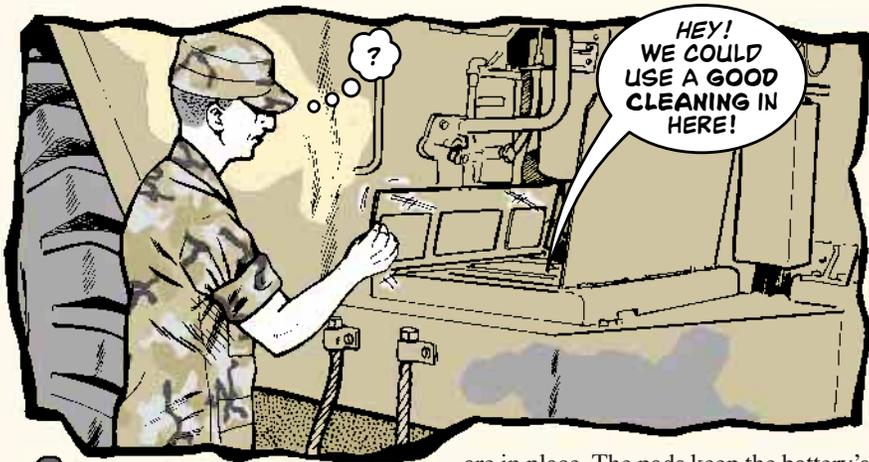
So lube the bucket's pivot pins every week. Pump grease into the fittings until you see clean grease oozing out. Four to five shots of grease should do it.



If a fitting clogs and won't take grease, report it. Have your mechanic replace the fitting, NSN 4730-00-050-4208.



# Don't Just Scrape



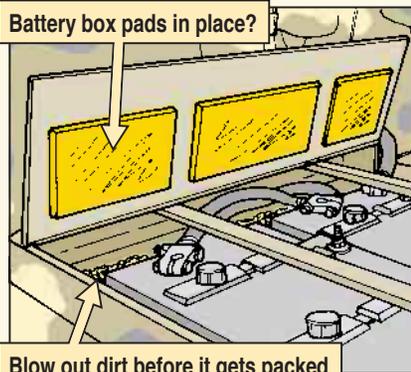
Operators, even a workhorse like your 621B scraper needs some TLC to keep it scraping.

Follow the operator info in TM 5-3805-248-14&P-1 and use these PM tips to keep your scraper mission-ready.

## Battery Box Lowdown

Check the batteries during weekly PMCS.

With the battery box open, make sure the foam pads on the box's access doors



are in place. The pads keep the battery's clamp, post connections and the box's support rails from touching the access door.

Without the pads in place, the batteries can short out. If a pad is torn or missing, your mechanic can replace it with NSN 9320-00-060-9363. Keep the pads in place with cyanoacrylic adhesive, NSN 8040-00-142-9193. This NSN will bring you ten 1-oz bottles.

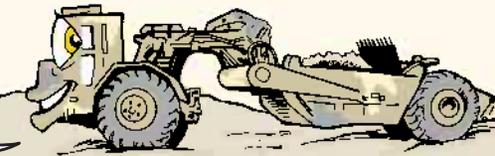
Dirt and sand settle around the batteries in the box. When the dirt gets wet and packed in, the batteries are a bear to get out. Clean out the box if it needs it.

## Torque Talk

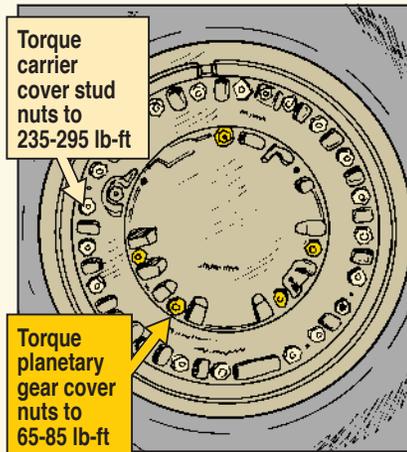
The nuts on the 621B's front wheels take different torques.

Too much torque on the planetary gear cover will put the squeeze on the O-ring underneath. Then the O-ring will leak oil. Low or no oil means the bearings will burn out.

# by with PM



Since you won't find the torque values in the TM, use these:

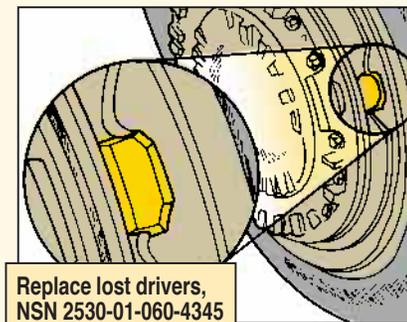


## Tire PSI Reminder

Check the scraper's tire pressure before operation. Front tires get 60 psi and rear tires get 40 psi.

Low front tires may slip on the rim, causing 'em to overheat and blow out. Or the tire-to-rim seal is broken and the tire goes flat.

When you have a flat front tire, you may lose the driver—that little piece

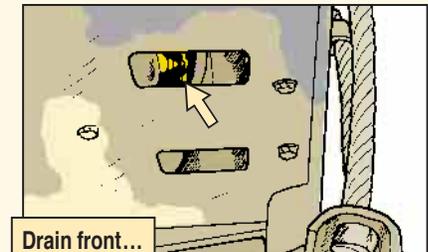


of metal that ties together the final drive and the side ring. Without it, there's no way to deliver power to the wheel. Get a new driver with NSN 2530-01-060-4345.

## Drain Air Tanks

A drop in temperature increases condensation in the scraper's air brake system. Condensation leads to corrosion, slow stops, and brake failure.

After each day's operation, open the manual drain cocks of the two air tanks near the cab step (curbside).



Then, open the manual drain cock of the scraper's rear air tank behind the scraper's bowl. Because of its location, this tank is the one that's usually missed. Make sure all the drain cocks are closed when you finish.

# LOCK IN ON THIS BUCKET PM

OK, THESE BUCKETS ARE ALL ON THE GROUND.

GOOD! DID YOU CHECK THEIR DRAIN HOLES?

TRAVEL LOCKS TAKE A LOAD OFF MY HYDRAULICS.

Operators, you can save your SEE's bucket and its hydraulic system lots of grief by following these traveling and parking rules.

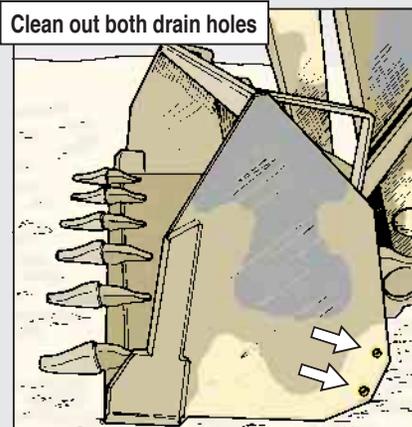
## Drop the Bucket

When you park your SEE, make sure the bucket is resting flat on the ground.

That takes the weight off the lift cylinders and it keeps water from pooling up in the bucket.

Also, make sure the bucket's drain holes aren't clogged with debris or dried mud. Plugged holes keep water from draining out.

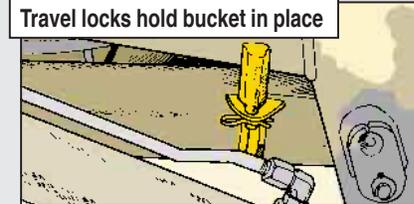
Water that sits in the bucket causes rust and splits welds when it freezes in the winter.



## Use Travel Locks

Before traveling long distances with your SEE, make sure you install the loader's travel locks.

They hold the bucket in place about a foot above the ground. That way the bucket's weight won't ride on the hydraulic cylinders—which can blow seals or hydraulic lines—and the bucket won't hit the ground if the cylinders let it drop—a potentially dangerous situation.

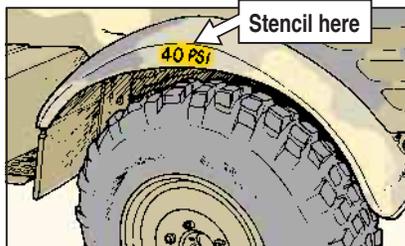


The locks also keep the bucket teeth pointed up and out of the way of ground obstacles.

Pages 2-87 and 2-88 of the TM 5-2420-224-10 tell you how to install and remove the travel lock's spring clips.

## Tire Pressure Check

Mechanics, there are still SEEs out there with the wrong tire pressure marked on their fenders. The SEE needs just 40 psi per tire for both highway and cross-country driving. Any more or any less air pressure leads to sidewall damage. So, stencil "40 PSI" on each fender as a reminder to your operators.



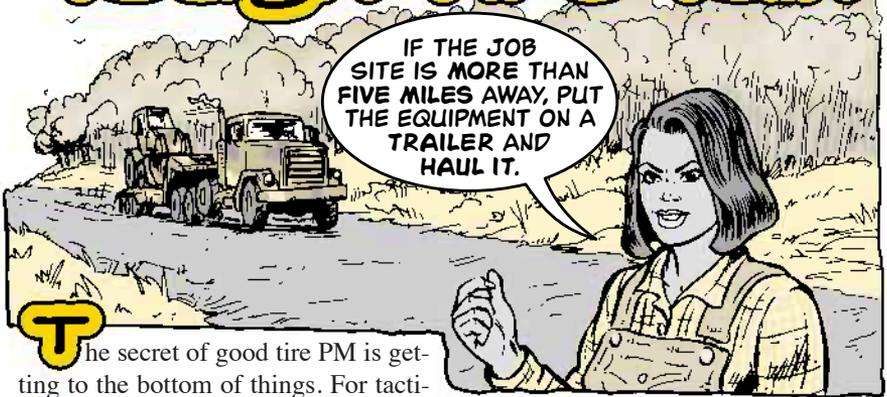
## SEE Side Mirror

NSN 2540-01-417-5833 gets the small emplacement excavator's side view mirror. The NSN shown for Item 10 in Fig 219 of TM 5-2420-224-24P is wrong.

## 621B Scraper Battery

NSN 6140-01-250-2113 gets the battery for the 621B scraper. The battery shown on Page 76 of TM 5-3805-248-14&P4 is no longer available.

# Tough Tire Talk



**T**he secret of good tire PM is getting to the bottom of things. For tactical vehicles, it's where the rubber meets the road. But for wheeled construction equipment, it's a different story.

The large tires on wheeled construction equipment are made for off-road use. When you drive them on hard surfaces, the tires wear out sooner, especially if they're underinflated.

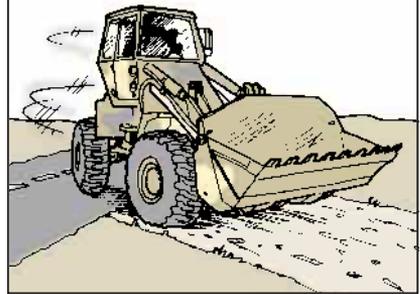
Operator manuals for the grader, scoop loader and scraper say you can drive the vehicle between work sites—**if** the site is less than five miles away. If you do drive it, try to stay off hard surfaces like concrete and asphalt. If the job site is more than five miles away and the road is concrete or asphalt, put the vehicle on a trailer and haul it.

If you must drive the vehicle on a hard-surface road, make sure tire pressure is right before you start. Both too much and too little air pressure wears out tires.

Most tire problems on construction equipment come from poor equipment

operation, so keep these tips in mind when you get behind the wheel:

**Dropping vehicle speed before leaving road puts less stress and strain on tires**

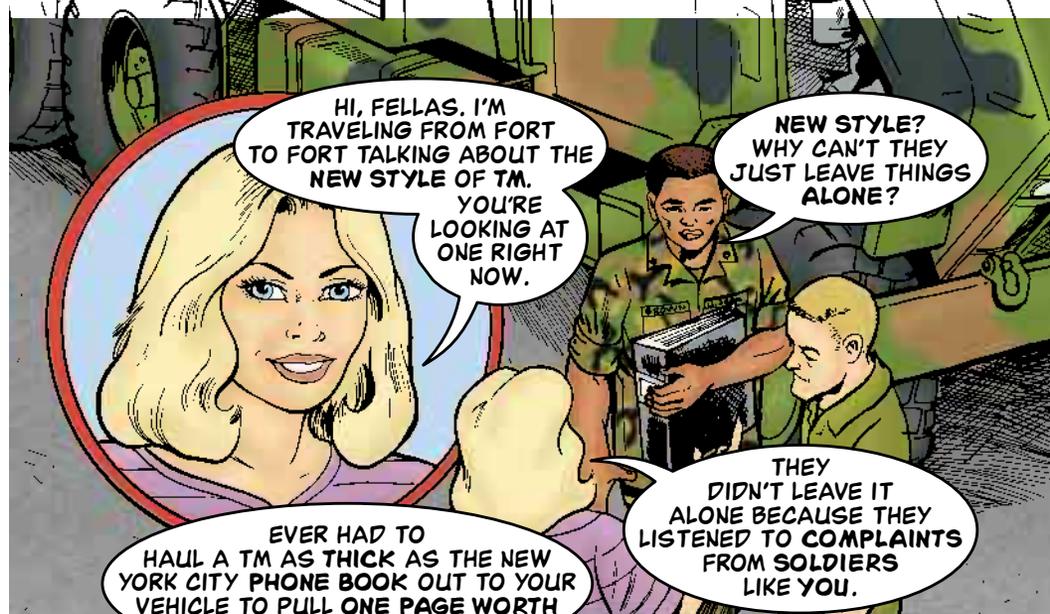
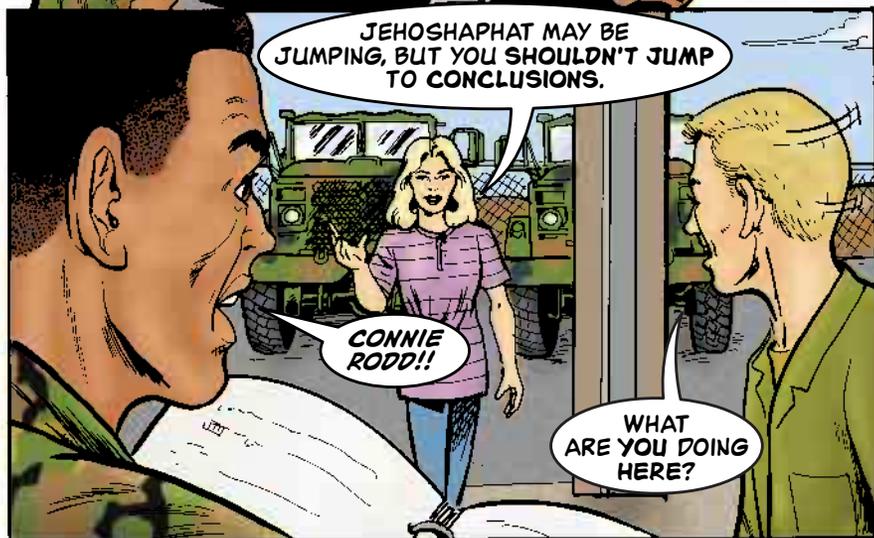
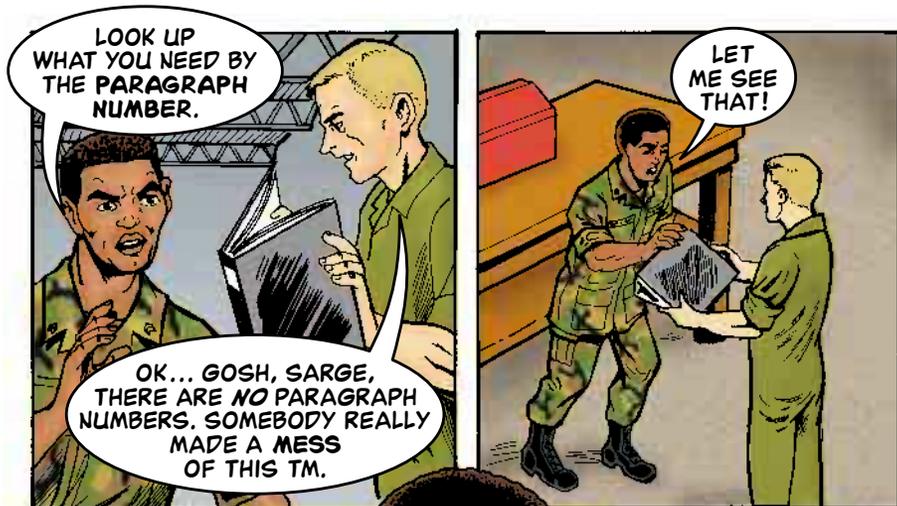


**Never ride brakes—heat from brake drum can cause premature tire failure**



# NOT YOUR FATHER'S TM







EVER SPEND AN HOUR FLIPPING BACK AND FORTH FROM PAGE TO PAGE TO GATHER INFORMATION SCATTERED THROUGHOUT THE TM?

I'LL, SAY! I CAN'T TELL YOU HOW MANY TIMES I'VE SAID THAT I WISH THIS STUFF WAS ALL IN ONE PLACE.

I'LL BET YOU A DINNER YOU'RE GOING TO LIKE WHAT'S BEEN DONE.

WELL, THESE NEW TMs SOLVE THOSE PROBLEMS AND OTHERS, TOO.

YOU'RE ON!



THE NEW TMs ARE CALLED MIL-STD-40051 TMs, BUT I CALL THEM WP TMs. THE WP STANDS FOR WORK PACKAGES AND THAT'S THE BIGGEST DIFFERENCE IN THESE TMs COMPARED TO THE OLD ONES.

THE INFO IN THESE TMs IS BROKEN DOWN INTO SELF-CONTAINED, TASK-ORIENTED WORK PACKAGES. THESE WPs CAN BE PULLED OUT AND TAKEN TO THE PIECE OF EQUIPMENT TO PERFORM THE TASKS. YOU WON'T HAVE TO LUG THAT TM AROUND ANYMORE.

PLUS, JONES AND I CAN BOTH USE IT AT THE SAME TIME.

WORK PACKAGES ARE THE REASON THERE ARE NO PARAGRAPHS AND NO TRADITIONAL PAGE NUMBERS. EACH WP IS A SELF-CONTAINED DOCUMENT. EACH PAGE OF THE WP HAS A WORK PACKAGE PAGE NUMBER. THE FIRST WP IS 0001 AND EVERY PAGE OF THAT WP WILL START WITH THAT NUMBER. THE NEXT WP IS 0002 AND EVERY PAGE IN THAT WP WILL START WITH THAT NUMBER.

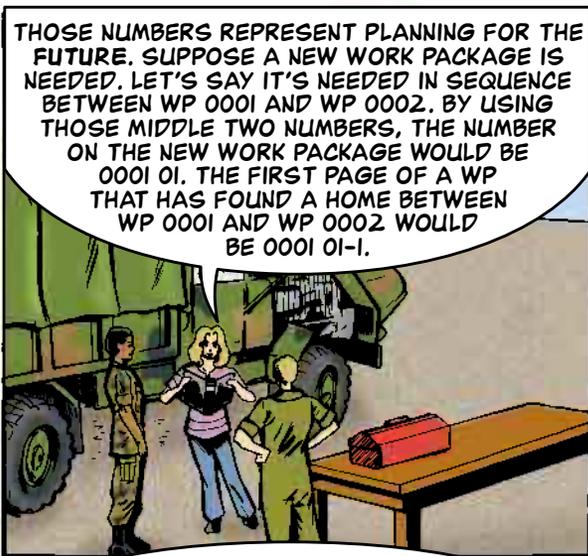
GET IT?

GOT IT. BUT WHAT ARE THESE OTHER NUMBERS?

THAT'S YOUR PAGE NUMBER WITHIN THE WORK PACKAGE. SEE, 0001 00-1 IS THE FIRST PAGE IN WP ONE, 0001 00-2 IS THE SECOND PAGE.



I GET IT. BUT WHAT ABOUT THE TWO NUMBERS IN THE MIDDLE?



THOSE NUMBERS REPRESENT PLANNING FOR THE FUTURE. SUPPOSE A NEW WORK PACKAGE IS NEEDED. LET'S SAY IT'S NEEDED IN SEQUENCE BETWEEN WP 0001 AND WP 0002. BY USING THOSE MIDDLE TWO NUMBERS, THE NUMBER ON THE NEW WORK PACKAGE WOULD BE 0001 01. THE FIRST PAGE OF A WP THAT HAS FOUND A HOME BETWEEN WP 0001 AND WP 0002 WOULD BE 0001 01-1.



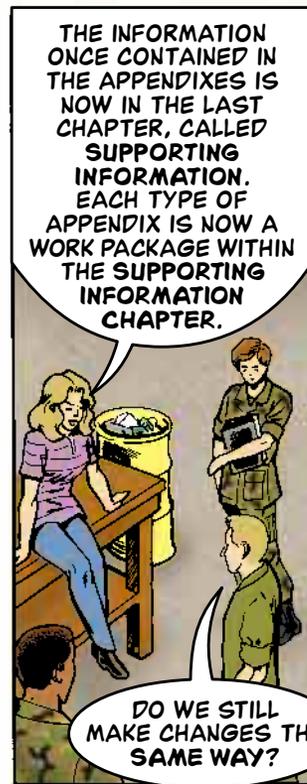
THAT MAKES SENSE. WHAT ARE THE OTHER CHANGES?

THE NEW TMs STILL HAVE CHAPTERS, BUT THERE ARE NO SECTIONS. IN THE TABLE OF CONTENTS, YOU WILL SEE CHAPTER NUMBERS FOLLOWED BY WORK PACKAGE SEQUENCE NUMBERS.

I HAVE A QUESTION.



WHAT HAPPENED TO THE APPENDIXES?



THE INFORMATION ONCE CONTAINED IN THE APPENDIXES IS NOW IN THE LAST CHAPTER, CALLED SUPPORTING INFORMATION. EACH TYPE OF APPENDIX IS NOW A WORK PACKAGE WITHIN THE SUPPORTING INFORMATION CHAPTER.

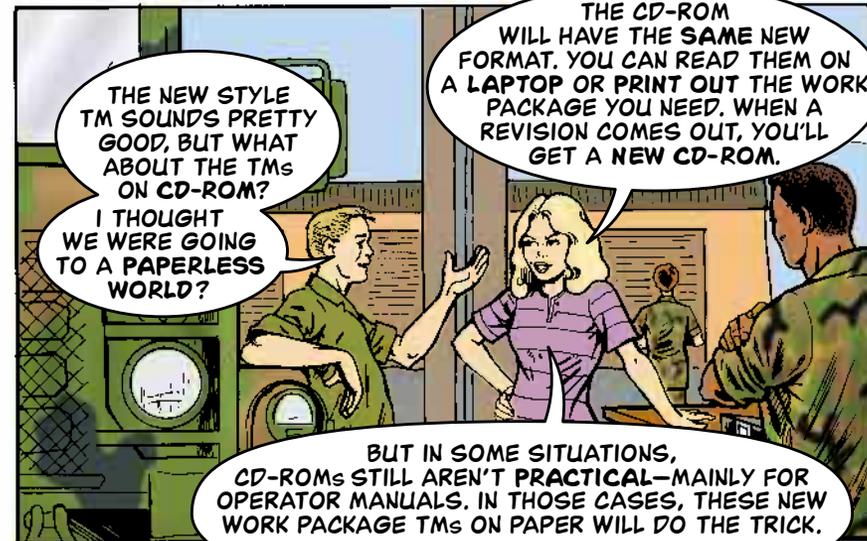
DO WE STILL MAKE CHANGES THE SAME WAY?



NO, NOT EXACTLY. YOU'LL STILL RECEIVE A CHANGE PACKAGE, BUT WHEN A WORK PACKAGE HAS CHANGES, YOU'LL GET A WHOLE NEW ONE. JUST PULL THE OLD WP OUT AND PUT THE NEW ONE IN.



WOW, THAT'S GREAT. OUR PUBS CLERK WILL LOVE IT.



THE NEW STYLE TM SOUNDS PRETTY GOOD, BUT WHAT ABOUT THE TMs ON CD-ROM?

I THOUGHT WE WERE GOING TO A PAPERLESS WORLD?

THE CD-ROM WILL HAVE THE SAME NEW FORMAT. YOU CAN READ THEM ON A LAPTOP OR PRINT OUT THE WORK PACKAGE YOU NEED. WHEN A REVISION COMES OUT, YOU'LL GET A NEW CD-ROM.

BUT IN SOME SITUATIONS, CD-ROMS STILL AREN'T PRACTICAL—MAINLY FOR OPERATOR MANUALS. IN THOSE CASES, THESE NEW WORK PACKAGE TMs ON PAPER WILL DO THE TRICK.



DON'T FEEL BAD, I HAD A SURE THING.



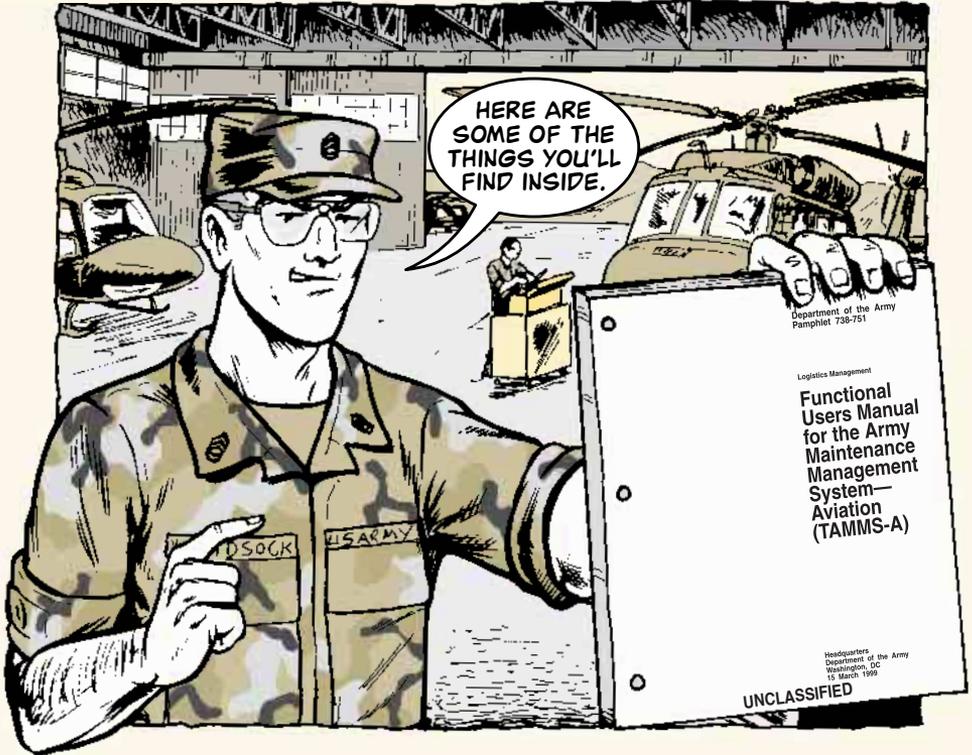
WE KNOW JUST THE PLACE WHERE YOU CAN HAVE IT YOUR WAY.

AND WE DON'T EVEN HAVE TO GET OUT OF THE CAR!

MY MOTHER TOLD ME NEVER TO BET.

# DA Pam 738-751

The long-awaited update of DA Pam 738-751, *Functional Users Manual for the Army Maintenance Management System—Aviation (TAMMS-A)*, has been printed.



- Policy and procedure for the Unit level Logistics System-Aviation (ULLS-A).
- Policy and procedure for documentation of component repair at AVIM and depot levels of maintenance.
- Aviation Life Support Equipment (ALSE) and Aviation Night Vision Goggle (NVG) record-keeping procedures.
- Standard Army Maintenance System (SAMS) policy and procedure.

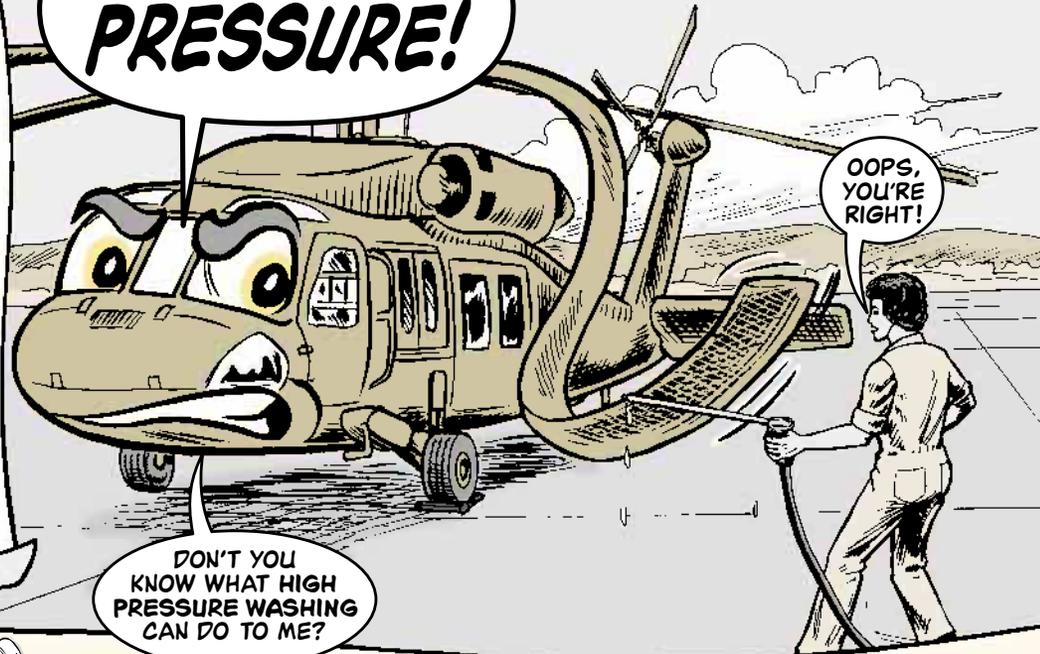
- Phase maintenance and periodic inspection documentation procedures.
- DA Form 2408-14-1 replaces DA Form 2408-14.
- Incorporation of forms and records instructions previously published in TB 1-2840-248-20-3, TB 1-2840-214-20-1, TB 1-1500-348-30 and TB 55-1520-238-23.

Dear Editor,

I've noticed that some aviation units use high pressure washers to clean their aircraft. Pressure washers can develop very high pressure, sometimes in excess of 1,500 psi. That pressure can harm numerous items on the birds, including bearings, composite panels, and painted surfaces. Can you help me get the word out to units to keep that high pressure off their birds?

CW4 George Dugan  
AMCOM  
Redstone Arsenal, AL

**NO HIGH PRESSURE!**



**DON'T YOU KNOW WHAT HIGH PRESSURE WASHING CAN DO TO ME?**

**FROM THE DESK OF THE Editor**

Sure can—and will—right now.

You're right on target on pressure-washing. Para 3-3.9, on Page 3-22 of TM 1-1500-344-23, Aircraft Weapons System Cleaning and Corrosion Control, says to use no more than 175 psi nozzle pressure when you use a water hose. The softer, the better. A soft spray is all an aircraft can handle.

Here are some other targets to keep in sight when cleaning your aircraft:

- **Don't overdo the chemicals.** Aircraft cleaning calls for the use of cleaning chemicals. The right amount cleans the area as intended. Too much

causes run-off that can damage wiring and bearings, as well as doing the environment no good.

Start your chemical-cleaning job with a dampened cloth. If the dirt is stubborn, add water to dampen the cloth more. If there's danger of run off, protect the areas that could be damaged by wrapping them in waterproof paper, NSN 8135-00-753-4662, and preservation sealing tape, NSN 7510-00-852-8180.

- **No lint, please.** Sure, you can grab just any old rag for any old cleaning chore, but use only a clean, lint-free cloth on your bird. Lint can clog a

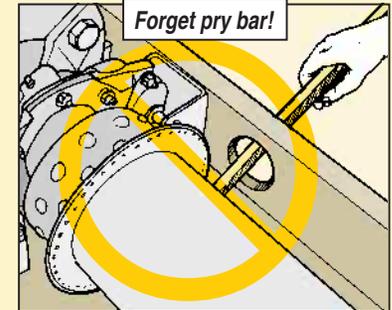
filter, ruin an electrical contact, or pollute a vital fluid. Don't take that chance.

- **Wipe it up.** Any standing water left on the aircraft after cleaning needs to be wiped up. Water corrodes—standing water corrodes absolutely.

- **Prevent corrosion.** When you finish your cleaning job, it looks good, right? But you're not done yet. You're only halfway home. Now you must add corrosion prevention compound (CPC) to all the areas called out in your TMs. Don't forget those areas that your local SOP says need CPC. NSN 8030-01-347-0979 gets you a 16-oz spray can of CPC.

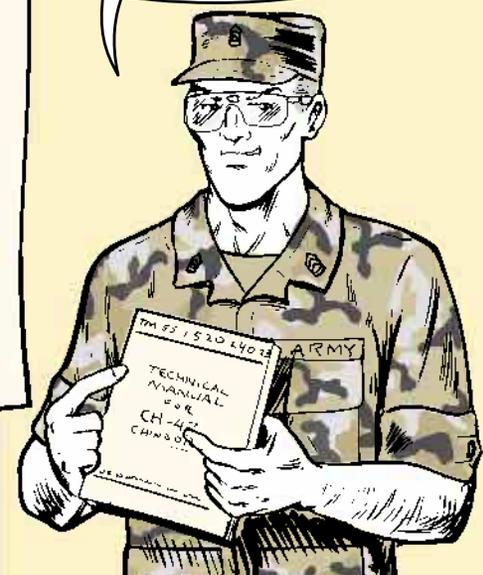
## Forget Pry Bar

**F**orget the pry bar when it comes to removing drive shaft mount nuts and bolts on your Chinook.

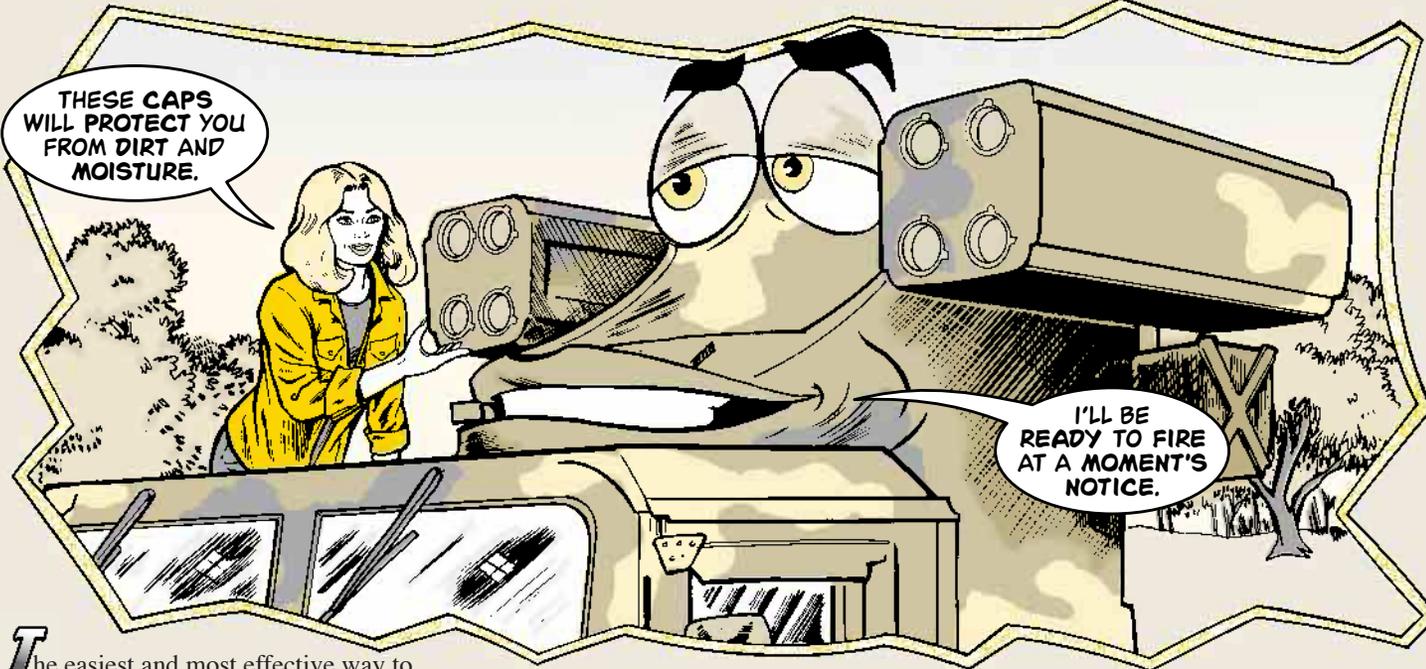


Drive shafts are balanced tubes. Using leverage to raise the drive shaft for easier access to the lower nut and bolt can throw the tube out of balance. Then it would need rebalancing, or perhaps even replacing.

**STAY ON THE SAFE SIDE AND FOLLOW THE INSTRUCTIONS FOR TASK 6-14 IN TM 55-1520-240-23.**



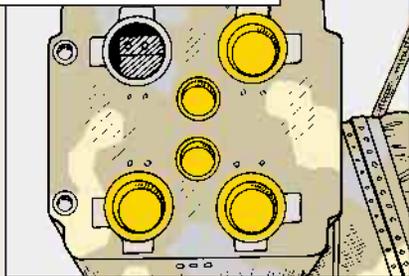
# Good Firing Begins with Caps



The easiest and most effective way to make sure the Avenger fires well is to use the protective caps for the system's standard vehicle mounted launchers (SVML).

The caps seal out dirt and moisture that douse your Avenger's fire.

Caps keep out moisture and dirt—replace missing caps



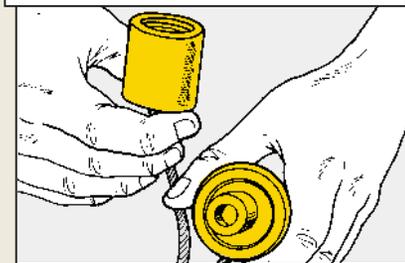
Caps are cheap—less than 40 cents each. The SVML electronics aren't. So, repairmen, order lots of caps because they will disappear. And make sure the caps are in place when Avengers leave and return to the motor pool.

Order the rear caps with NSN 5340-00-855-7993, the front hole caps with NSN 5340-00-157-5624, and caps for the pressure gauge holes with NSN 5340-01-348-6514.

Caps are also now available for the cryogenic ports and the missile electronic ports. Order the cryogenic caps with PN 495-500006 and CAGE 15090 and the electronic cap with PN 495-500005 and CAGE 15090 on DD Form

1348-6. Use routing identifier code (RIC) B17 on your request.

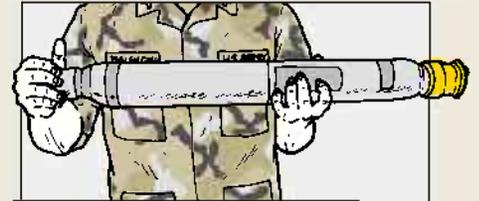
Order new electronic and cryogenic caps



Since the caps are new, make sure your crews know to use them. Without the caps, the ports collect water and dirt and you have coolant and electrical problems.

If you don't have the caps yet, cover the ports with tape.

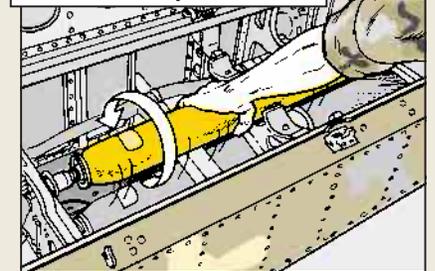
Protect the connectors of the coolant reservoir bottles with collars when the bottles aren't installed. If you need more collars, order them with NSN 1440-01-281-1195.



Use protective collar when coolant reservoir bottle is not hooked up

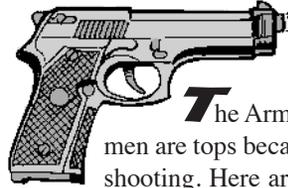
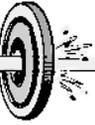
When Avengers are parked in the motor pool, release the pressure in the coolant reservoir bottles. Open each bottle's quick release clamp and twist the bottle three turns counterclockwise until you hear a hiss.

Turn bottle counterclockwise three turns until you hear a hiss



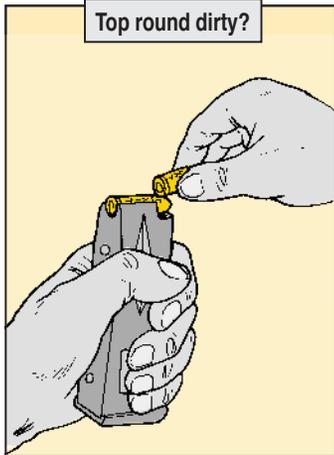
Close and latch the quick release clamp. If the bottles are left hooked up, the 6,000 pounds of pressure eventually causes leaks in the coolant system.

# Sharp Shooting



The Army's top marksmen are tops because they know shooting. Here are their tips for staying on target with your M9 pistol:

● The top round in the magazine is the one most likely to be dirty and cause a jam. Before you shoot, check the top round and wipe it clean if necessary. Better yet, wipe clean all the rounds and the inside of the magazine.



- Focus on the front sight post, not the target. If the target's in sharp focus, you'll probably miss it.
- When sighting for a still target, always move your pistol onto the target from the bottom up. For a moving target, swing toward it from behind the target.
- If your hands tremble when you're sighting, relax. You're gripping the



pistol too tight. Let your non-trigger finger hand do most of the work of keeping the pistol steady.



## M203 Grenade Launcher ...

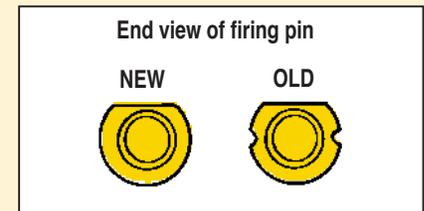
### Check for Bad Firing Pins

Firing pins for the M203 grenade launcher were replaced years ago because they caused misfires.

Unfortunately, the old firing pins (with notches) keep showing up. Right now, armorers, eyeball all your M203s for old pins.

If you find any of the old pins, get support to replace them *immediately!*

Don't let M203s with old pins go to the field. The correct pin comes with NSN 1010-00-348-8433.



# The Bolt Doctor



NEXT PATIENT, PLEASE!



YA GOTTA HELP ME, DOC. MY BOLT HAS SEEN BETTER DAYS!

**F**or many problems with your M60 machine gun bolts, you armorers can be your own bolt doctor. Here's the prescription:

Minor chips, dents and gouges are OK on the rear top of the bottom lug. Stone them smooth. If the front of the bottom lug is burred or has sharp edges, stone the raised or rough areas smooth. If you can't, support needs to replace the bolt.

Burrs on the back side of the stripping lug are OK as long as they can be stoned smooth. And, even if the front left corner of the stripping lug is worn away, the bolt is still usable. But cracks, chips, dents or gouges on the back side of the stripping lug mean the bolt is shot.

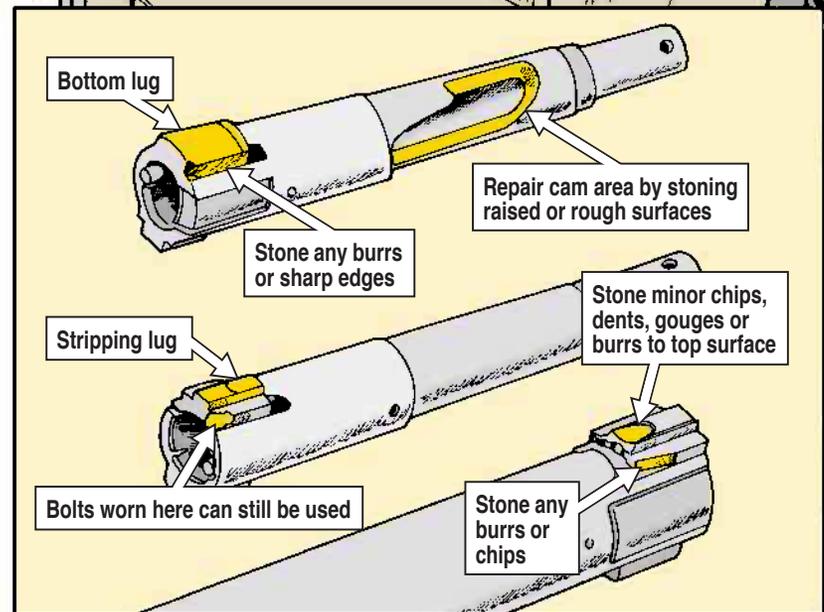
Check the cam area for raised or rough areas. They can be stoned smooth. But gouges or cracks in the cam area mean it's time for a new bolt.

Any cracks anywhere on the bolt make the bolt unusable.

Most of this bolt damage can be avoided if you outlaw dry firing in your unit. When the bolt slams forward on an empty chamber, the bolt locking lugs are damaged, as well as the barrel socket and operating rod tower.

Show your unit how to ride the bolt forward—hold the charging handle to the rear, squeeze the trigger and ease the bolt forward—when the chamber's empty.

For function testing, provide your unit with dummy rounds, NSN 1305-00-926-4009.



# Better Barrel Marking

Dear Editor,

Because the M249 machine gun is specifically headspaced for its two barrels, it's important that only those two barrels be used with the gun. Using other barrels could damage the M249 bolt and the barrel itself because of incorrect headspace. So, it's critical the barrels are ID'd so there are no mix-ups.

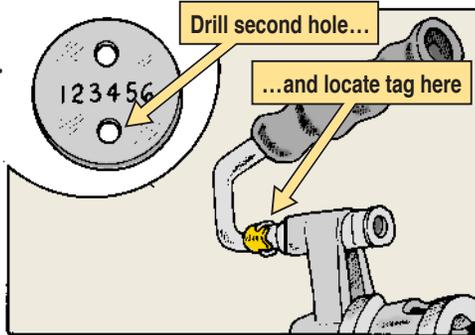
Tying a dog tag to the bipod doesn't work with the M249 because its bipod is part of the receiver. What does work is bending a round tag, NSN 9050-00-473-6336, so it can be tied to the carrying handle.

After the tag has been stamped with the receiver ID number, drill a second  $\frac{5}{32}$ -in hole in the tag.

Use pliers to bend the tag in a U-shape with the ID number facing out. Tie the tag around the base of the carrying handle by running lacing wire through the tag holes. Use pliers to bend the tag as tight as possible to the handle so the tag won't rattle. Use lacing wire pliers to tie off the lacing wire. Tuck the wire ends under the tag.

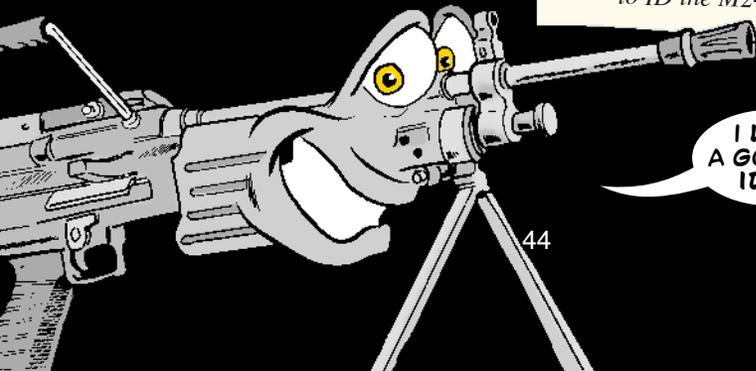
If you don't have round tags, use a regular dog tag, NSN 8465-00-242-4804. Paint the tag black or coat it with solid film lubrication so you don't get any reflection on the battlefield.

Robert Vick  
AMSA 108 (G)  
Bismarck, ND



**FROM THE DESK OF THE Editor**  
I think you've tagged onto a good idea. This would also be a good way to ID the M240B barrels.

I LOVE A GOOD ID IDEA!

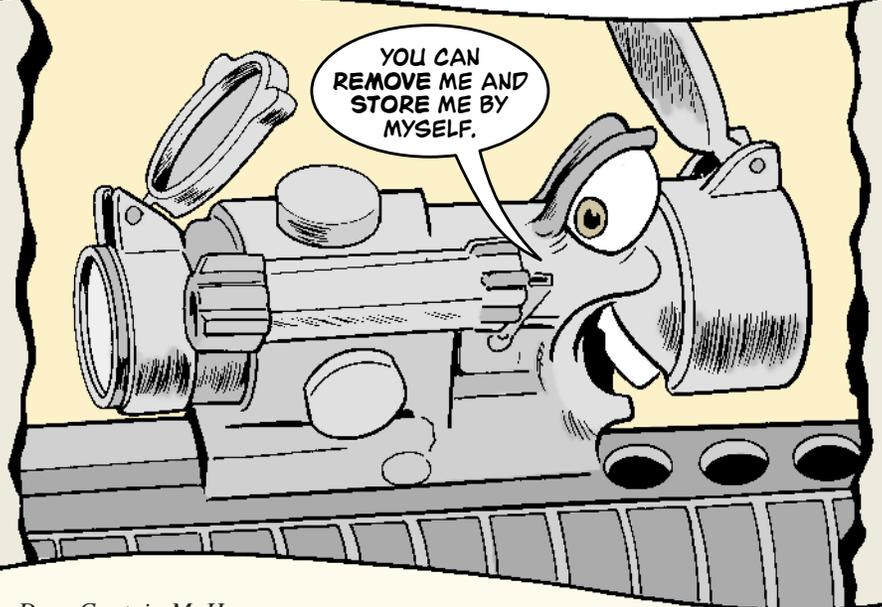


# REMOVE SIGHT FOR STORAGE

Dear Half-Mast,

How do you store an M16 rifle or M4 carbine that has the M68 close combat optic sight mounted on it? The sight prevents the rack from locking.

CPT M. H.



Dear Captain M. H.,

As you've discovered, Sir, you can't store M16s or M4s with M68s installed. You must remove the sights from the weapons before storing the weapons in the rack. No problem, though. The sights are designed to retain their zero when removed and reinstalled.

The M4 has several slots on the upper receiver where the sight can be installed. So be sure to reinstall it in the same slot the sight was zeroed at originally or you'll have poor accuracy. Since there's only one slot on the M16 sight mount to install the sight, that's not a problem with the rifle.

Be sure to secure the M68s in a locked cabinet or locker.

Half-Mast

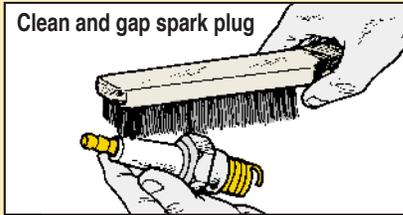
# TROUBLE-FREE

# TROUBLESHOOTING

**T**roubleshooting your M17 decon can be trouble-free if you remember a few quick checks:

\* If the engine won't start or runs rough, suspect the spark plug. It's probably fouled with carbon, which is caused by using the wrong fuel-oil mixture.

Clean the plug with the wire brush and abrasive cloth in your tool kit. Then gap it .020 to .035 inch for the JLO engine (silver fan guard) and .035 to .040 for the Cuyuna engine (black fan guard) with the gap gauge.



Remember, the **JLO engines** take one **quart** of oil per five gallons of MOGAS. The **Cuyuna engines** take one **pint** of oil per five gallons of MOGAS.

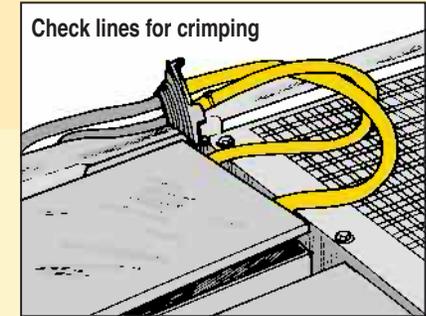
If the heater won't ignite, it's probably the heater spark plug or the mica window behind the photo cell. Clean

the plug with the wire brush and abrasive cloth. As long as its insulator isn't cracked, you're back in business. Get a cracked spark plug replaced. Wipe off the window with a clean cloth.

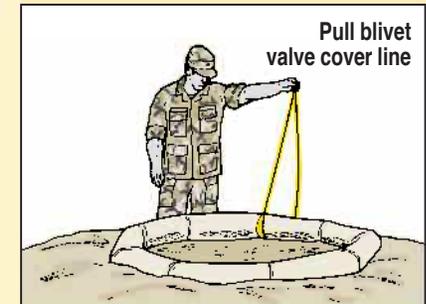
Starting problems are also caused by water-contaminated fuel. So, test the fuel for water, with water indicator paste, NSN 6850-00-001-4194, before you pour it in the M17.

\* If you can't build up fuel pressure for the heater, check the fuel lines where they come out of the fuel line compartment. If they're crimped by the

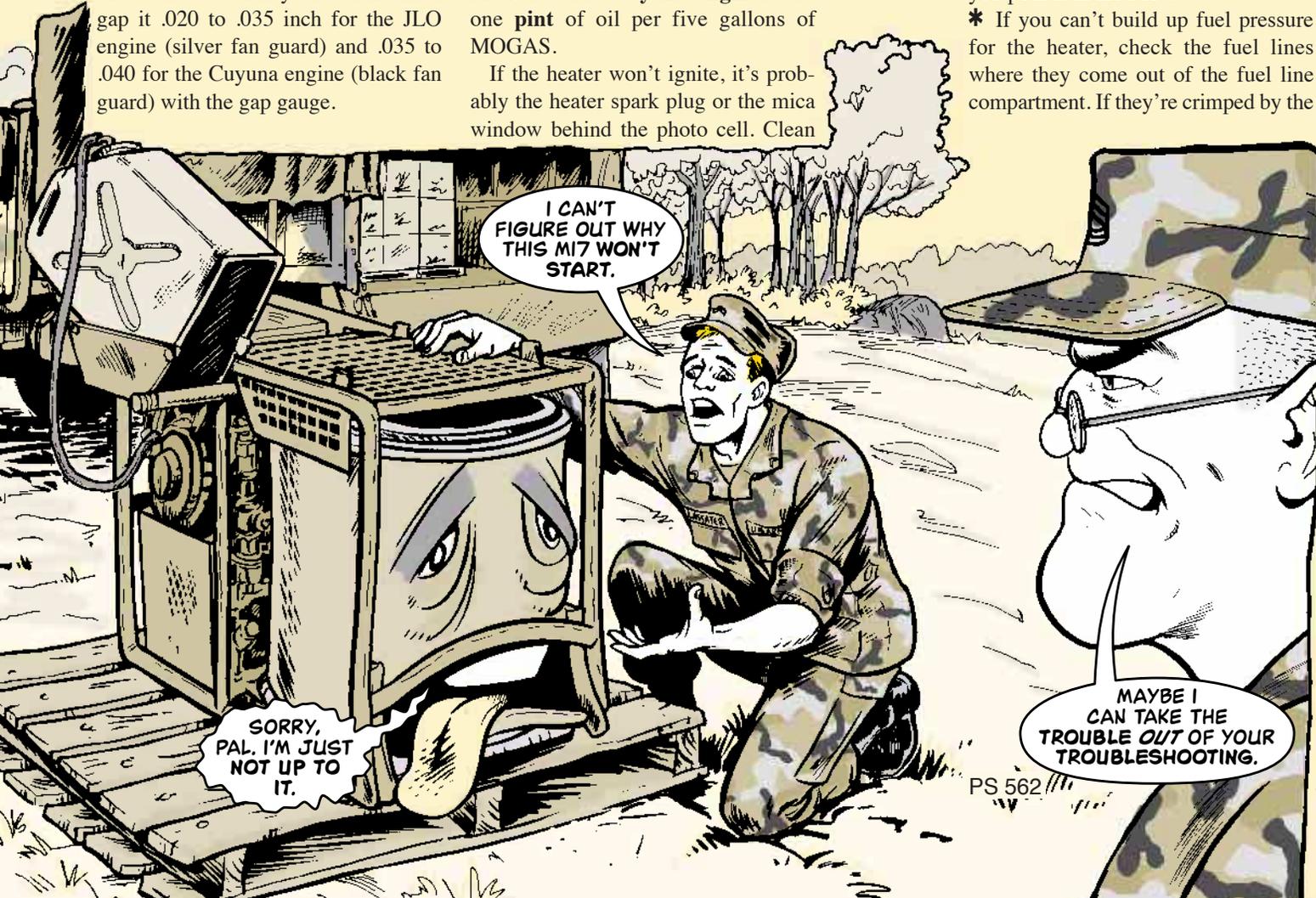
compartment's lid, the lines have trouble routing fuel. Reposition the lines. Also check the heater fuel filter for dirt and leaks. Drain out any dirt. Get a leaking filter replaced.



\* If you open the drain valve for the 1,580-gal blivet and nothing comes out, pull the string for the flap that covers the valves inside the blivet. That should start the water flowing. The 3,000-gal blivet doesn't have the flaps.



It's a good idea to check for the string before you fill the blivet. If the string's left inside the blivet, you have no way to open the flap—except climbing inside. That's not too much fun when it's cold.



# Now That's a Long Cable!



**P**owering the gun direction unit (GDU) of your battery computer system (BCS) can be a real drain on batteries. And that means a drain on your unit's pocketbook.

But you guys are smart and most of you use your vehicle's power through the NATO slave receptacle.

The problem is that those short cables tie you so close to the vehicle.

Problem solved! Order a 50-ft cable with NSN 5995-01-271-9972. It costs about \$250, but you'll make up that cost in battery savings.

Here's how you put it together:

Start with 50 feet of cable. Connect the black and red wires of the new cable to pin B (+) of the GDU cable connector.

Before closing the plug connector, add some wire straps for strain relief on the end of the new cable and apply RTV compound for a good weather seal.

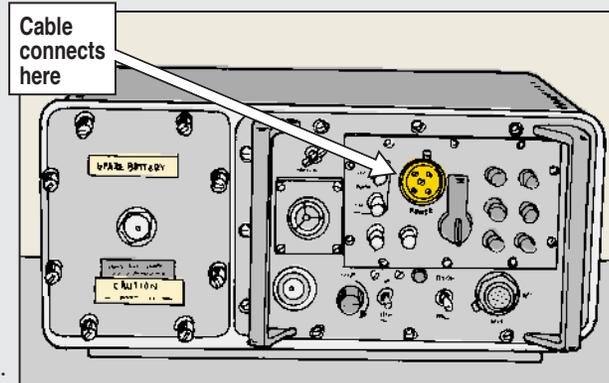
Then connect the green and white wires to pin A (-).

On the other end of the 50-ft cable, connect the black and red wires to the positive (+) terminal and the green and white wires to the negative (-) terminal.

Now you can hook up directly to a vehicle that has a NATO slave receptacle.

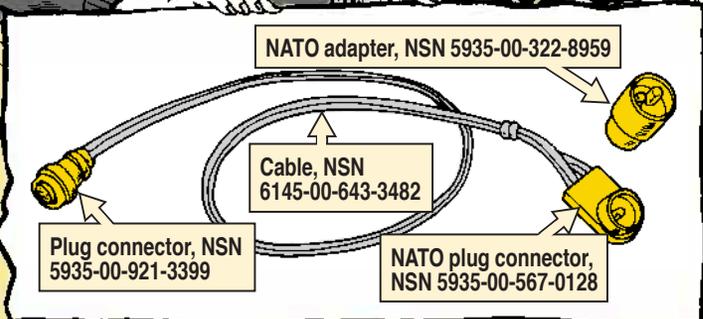
If you're hooking up to a vehicle that doesn't have a NATO receptacle, use the adapter.

And remember, when you're done, disconnect the hookup at the power source first. That'll prevent a shock or a sparking short circuit.



TO SAVE MONEY, YOU CAN MAKE A 50-FT CABLE THAT WILL COST ABOUT \$100.

HERE'S WHAT YOU NEED...



Generators ...

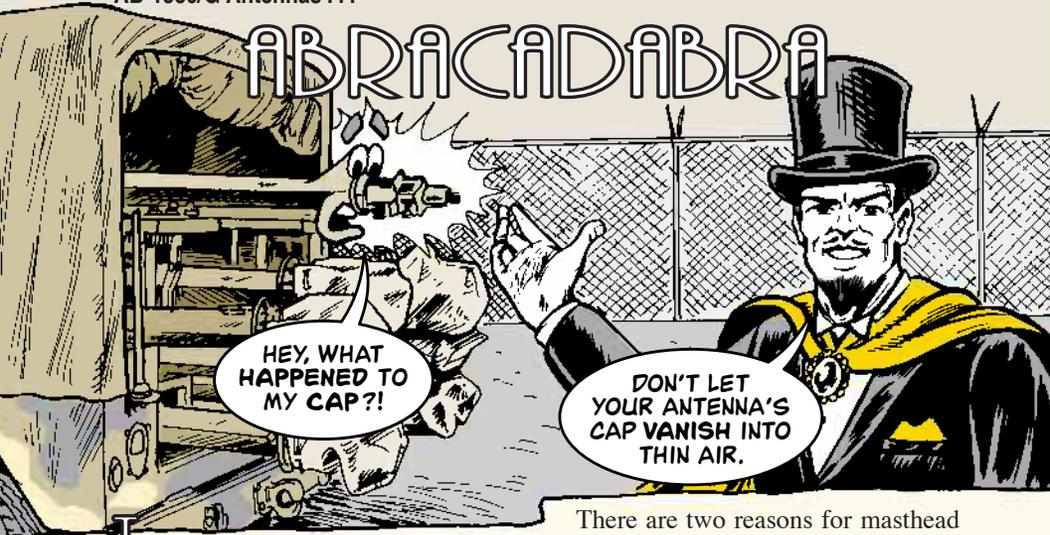
## Parts for the ASKing

**M**issing a few acoustical suppression kit (ASK) parts on your generator because you don't have a stock number or part number? You can find the ASK parts for 3-KW, 5-KW, and 10-KW DED generators in their TMs. 15-KW and 30-KW generators have no kits.

Generator	ASK NSN 6115-01-	TM
3-KW	271-1584	5-6115-615-24P
5-KW	273-7377	9-6115-584-24P
10-KW	273-7376	5-6115-585-24P

To ask ASK questions, contact CECOM at 992-7122 or (732) 532-7122. Or-e-mail them at:

[petouses@mail1.monmouth.army.mil](mailto:petouses@mail1.monmouth.army.mil)



The Great Houdini must be alive and well and serving with MSE units. He hasn't been spotted, but masthead caps are disappearing at an alarming rate.

It must be magic, right? Maybe not. Masthead caps, NSN 5340-01-270-5083, keep the weather and the dirt out of mastheads when the AB-1339/G antenna is stored on trailers. The caps do a pretty good job and at \$96 each, you don't want to replace them too often.



But they do disappear and it's not magic.

There are two reasons for masthead caps not staying put—the wind and your buddies.

Defeat the wind by anchoring the cap to the mast with the cap drawstring. Just loop the drawstring around the masthead ring and tie it off.



Defeat your buddies by stenciling some sort of identification on the cap. Some folks use their unit identification. Others use the ID number from the trailer that hauls the masts.

The headshed says using the caps is not an option. If your unit previously gave up the fight to keep the caps in place, you must order new ones, tie them down, stencil them, and renew the battle.

# Forever Tools

The general purpose electronics tool kit has been given a makeover and many of its tools have been granted eternal life.

The new kit, TK-105A/G, NSN 5180-01-460-9328, replaces the old one, TK-105/G. The new kit won't be issued until all the old kits are out of stock, but you can order the new kit now.

Many of the tools in the new kit have a lifetime warranty. Bust one and get a replacement free! Most of the tools without a lifetime warranty **do** have a limited warranty.

The TK-105A/G also has 40 more tools than the TK-105/G. These are tools that you, the guys and gals turning the wrenches, have asked for, like a cordless, electric screwdriver, a multimeter, a Maglite flashlight and Snakelight.

Another change will make your tool inventory a snap. Each tool is mounted in a foam cutout. You can tell at a glance what tools you have and what tools you're missing. The Supply Catalog for the kit is SC 5180-91-R64. It's on CD-ROM. Get your pubs clerk to order it.

For more information on the new kit, contact Len Bleier at CECOM at DSN 992-1807 or (732) 532-1807. Or e-mail him at: [bleier@mail1.monmouth.army.mil](mailto:bleier@mail1.monmouth.army.mil)



# Read Safety Messages



**B**atteries come and batteries go. But you are not letting go of some that should have gone! That's because you're not paying attention to safety-of-use messages (SOUM). The batteries listed in these SOUMs could cause severe injury or destroy equipment if not handled properly.

Three messages that some of you are ignoring are:

**SOUM 97-017**—This message deadlines all BA-5590/U batteries manufactured by SAFT under contracts DAAB07-90-C-C020 and DAAB07-88-C-C045.

**SOUM 98-001**—This message deadlines the BA-5800/U batteries manufactured by Ballard under contract DAAB07-90-C-C024 and also says not to activate the complete discharge device.

**GPM 98-002**—This message prohibits the activation of the complete discharge device for the BA-5600/U manufactured by Ballard under contracts DAAB07-90-C-C028 and DAAB07-90-D-C045.

All three of these messages can be read on the Internet at:

[www.monmouth.army.mil/cecom/safety](http://www.monmouth.army.mil/cecom/safety)

Or you can get copies by calling:

DSN 987-3112 or -6437  
(732) 427-3112 or -6437

# Out-of-Sight Batteries

**T**he internal battery pack of your uninterruptible power supply (UPS), NSN 6130-01-430-2887 or NSN 6130-01-421-7678, is supposed to give you time to shut down your attached equipment during a power failure.

But how much time you get, if any, depends on the condition of the two 12-volt lead-acid batteries in the battery pack, NSN 6130-01-436-3328.

And the condition of your batteries depends mostly on how they are stored.

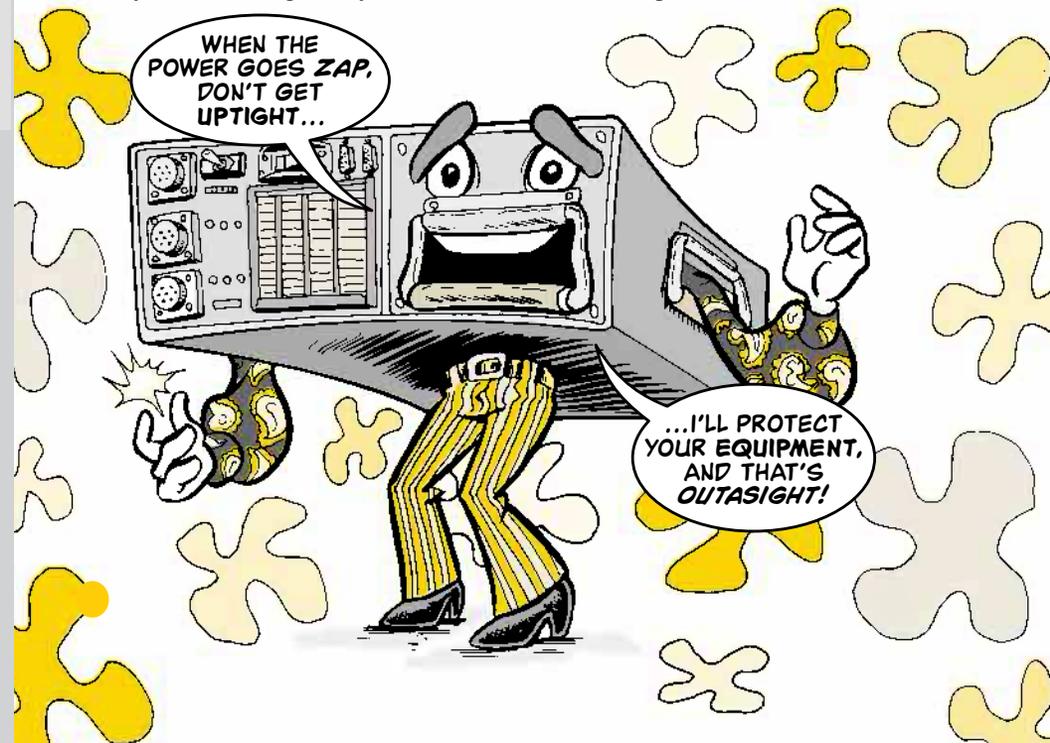
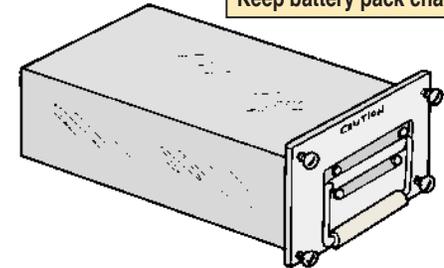
So always fully charge the batteries before long-term storage by operating the UPS for at least 24 hours at temperatures between 0–70°F.

You also need to charge batteries for 24 hours every three months during long term storage. After charging, check for swelling.

Swelling means the battery should be replaced.

If batteries are stored some place hot, they need to be charged more often or they can be damaged. Try to store batteries in a cool place.

Keep battery pack charged



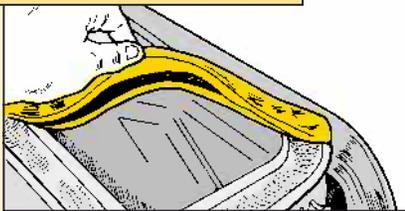
# GOODBYE, OLD PAINT

Those old insulated food containers are showing their age. Their scratches not only look unappetizing, but are also a breeding ground for rust and contaminants.

Someday you may get shiny new food containers. Until then, spiff up the ones you have with a fresh coat of paint and a new gasket.

That old gasket has one more job to do before you replace it, though. It works better than masking tape while you're painting the container. Remove it from the upper lid, put it on the outside edge of the container, and close the lid. Then paint the entire container, handles and latches, too.

Use old gasket when you paint



Not just any paint will do, however. Use the same olive drab semi-gloss

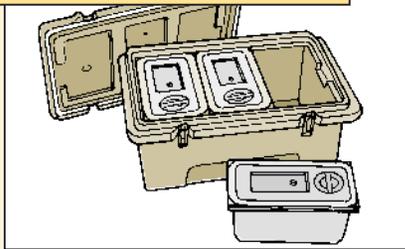
enamel that's already on the containers. NSN 8010-00-081-0809 gets a quart. If you need a gallon, use NSN 8010-01-441-5940.

NSN 8010-01-441-5938 will bring a quart of paint thinner. For a gallon, use NSN 8010-01-441-5940. Get plenty for thinning the enamel, and for clean-up after you've finished the job.

Peel the gasket off after the paint dries—you can save it for the next time you paint. Then give your shiny, fresh-looking container a new gasket, NSN 5330-00-032-2722.

If your old food containers are beyond help, new and improved insulated food containers are now available. Use NSN 7360-01-419-8500.

New container never needs painting



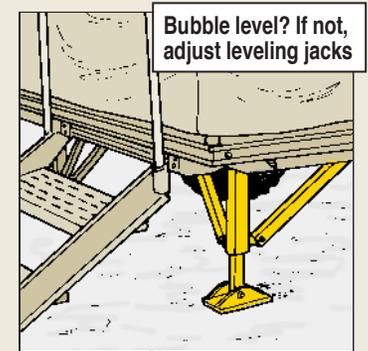
# BUBBLE, BUBBLE—WORTH YOUR TROUBLE



When you're in the field, your main concern is setting up to feed the hungry masses. That's why you should always make sure the MKT is level before you start cooking.

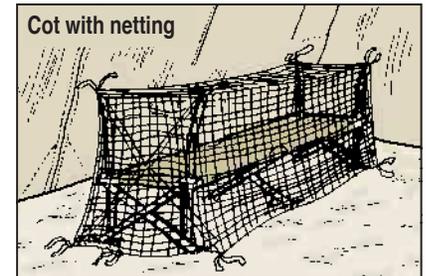
An MKT that's not level can lead to dangerous grease fires. Grease from the grill can pool, run over the side and get into the burner unit. Then you've got a major problem.

Take a few minutes to get your trailer level before cooking begins. Check the leveling bubbles on the trailer's side. If needed, make adjustments to the leveling jacks until the bubbles are centered. Follow the procedures in TM 10-7360-206-13.



## Netting Keeps the Bugs Out

When you're trying to sleep in the field, you don't want to spend your time fighting mosquitos. So keep the critters away by using netting, NSN 7210-00-266-9736. You can attach it to the collapsible canvas cot with wooden insect frame poles, NSN 7210-00-267-5641. Then the only buzzing will be from your own zzzz's.



# Now Hair This!



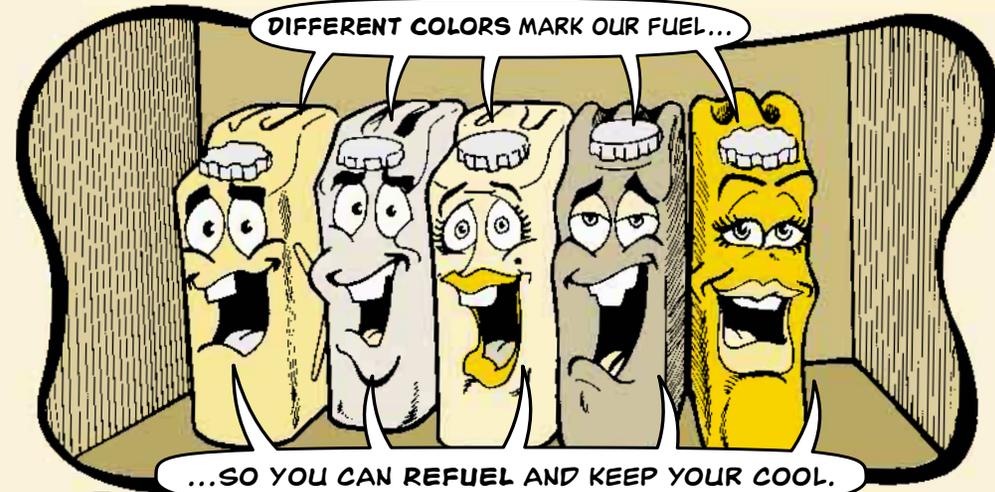
**T**rying to find a list of components for your barber kit, NSN 3590-00-058-1837, might make you pull your hair out. The parts aren't in any pub, so check out the kit's components below:

Item	NSN	Qty
Barber shears	3590-00-161-6913	2
Barber cloth	3590-00-162-5630	2
Hand hair clipper, size 0 w/blade set	3590-00-170-8462	1
Case	3590-00-240-2926	1
Electric hair clipper with accessories (accessories not available separately)	3590-00-892-4525	1
Disinfecting tray	3590-00-926-3838	1
Disinfectant	6840-00-753-4797	2
Toilet soap	8520-00-129-0803	2

Several items that once were part of the kit have been dropped. Shaving cream, hair combs, safety razors, and disposable razors are no longer in the kit. If you still need these items, you can buy them locally or through the Federal Supply Schedules program 85IIA Toiletries (special item number 852-1) for shaving creams and combs. Use special item number 852-2 for razors and blades. Information on schedules can be obtained on the Internet at:

<http://pub.fss.gsa.gov/sched>

# SHOW YOUR COLORS



**C**olor can be critical when it comes to fuel cans. You don't want to use the wrong fuel. Just ask anyone who used MOGAS in a heater when kerosene was called for. You could damage your equipment—or yourself.

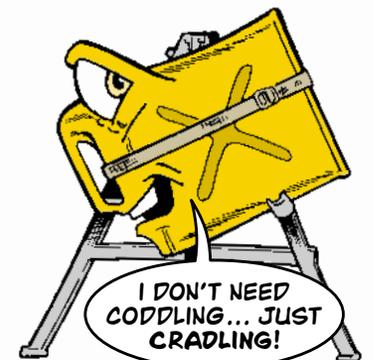
Make what's in the fuel can clear for all to see. Color-code the caps. Some folks use yellow for diesel and red for MOGAS. Some units also color code caps on the equipment for easy match-up. But get your CO's approval before you get out the paint brush.

You can also use a stencil to label DIESEL in black and MOGAS in white on the can.

Be sure to camouflage the cans when they're out in the open.

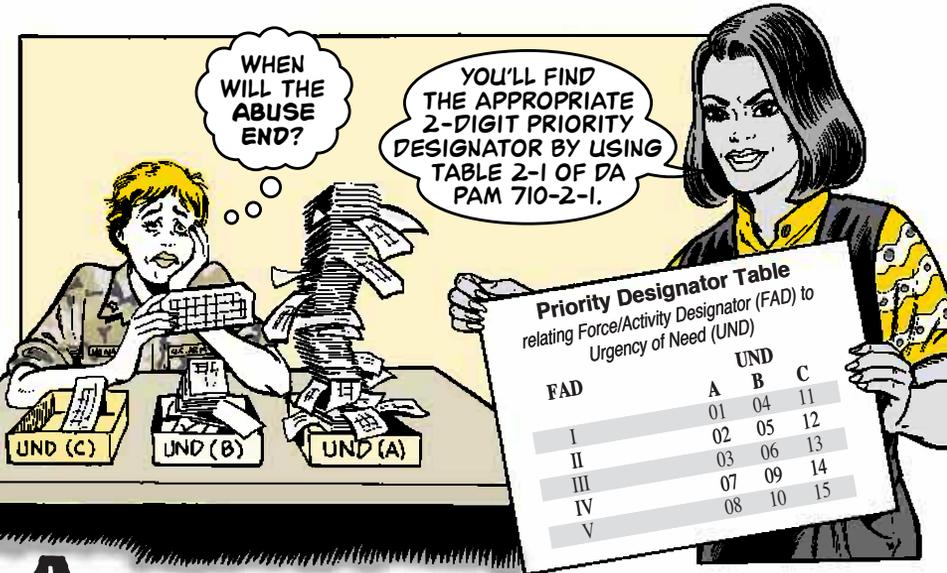
## Cradle It

**U**se NSN 7240-01-318-5222 to get a can cradle to hold the 5-gal military gas can. It's sturdy, lightweight, and can be folded for easy storage. It's ideal for use with the space heater in your tent. Replacement straps for the cradle, NSN 7240-01-318-8636, are local purchase items.



Supply ...

# No More Abuse



**A**buse is never acceptable, not even when we're talking about priority designators (PD) used for ordering parts through the supply system.

You folks—and *you know who you are*—who use a high PD when it's not needed are bogging down the system. That slows down your request, and also the request from the unit that used a high priority because it was **necessary**.

Determining the correct PD requires matching your unit's Force/Activity Designator (FAD) to its Urgency of Need Designator (UND). Table 2-1 of DA Pam 710-2-1 shows how PDs relate to FADs and UNDs.

Each unit has a FAD. It is either a I, II, III, IV or V. You can find the FAD on your unit's permanent activation orders.

Get the UND (either an A, B or C) by following the guidelines in Paras 2-2b(1), 2-2b(2), 2-2b(3) and 2-2d of DA Pam 710-2-1.

If you pick a UND of A or B, your CO (or someone he has designated in writing) must confirm the PD and validate its use per Para 2-3 of DA Pam 710-2-1. He must also initial Column H of the DA Form 2064, Document Register for Supply Actions, for each request before it goes to supply. Army Reserve units also use this method.

In the National Guard, the chiefs of Table of Distribution and Allowances (TDA) activities, or state maintenance officers are the only ones who can review and approve PDs in UNDs of A or B.

HAZMAT ...

# Check Out the P2 Library

**R**oamed through the stacks of a good library lately?

The Joint Service Pollution Prevention Technical Library—P2 for short—is one good library where your eyes can do the roaming.

You'll find P2 on the Internet, on diskette and on CD-ROM.

Two of the "books" you can open are the *DLA Environmental Products Catalog* and the *Joint Service P2 Opportunity Handbook*.

The DLA catalog contains more than 800 NSNs in 17 categories of the best environmentally friendly products available. There is also an extensive list of points of contact who can help you find a substitute for a non-friendly product you might now be using.

The opportunity handbook has information on current technologies, management practices and process changes that reduce the amount of hazardous and solid waste produced.

Note, however, that before you use any of these products, you must get commodity manager approval. You can start the approval process by going to your logistics assistance office (LAO).

Want to know more about the library or how to get a diskette or CD-ROM? Call (410) 436-3651/5222.

Want to jump right in? Go to the Internet site at:

<http://aec-www.apgea.army.mil:8080/>

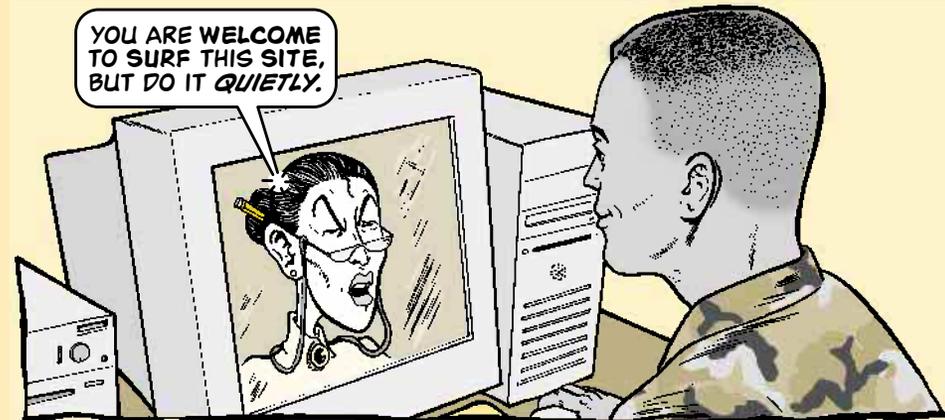
Click on PREVENTION.

Click on LINKS.

Click on POLLUTION PREVENTION TECHNICAL LIBRARY.

Everyone benefits from sharing information on new technologies, innovative equipment and environmentally friendly products and services. You can share your successful pollution prevention experience, ask questions, or comment on the P2 by e-mailing the project manager at:

[P2\\_library\\_manager@nfesc.navy.mil](mailto:P2_library_manager@nfesc.navy.mil)



# ULLS Computers Go to the Field

Now you can safely take your ULLS computer to the field.

Uncle Sam has contracts with manufacturers who custom-build ULLS computer storage containers to protect your computer from the elements and rough treatment.

Foam padding snugly holds the monitor and CPU. Hook-and-pile straps secure the printer and keyboard.

When you get to the field, you don't need to unpack it. The case bottom comes off and folds out into a handy worktable that you can set the case on—with the computer components still in it. You are in business in minutes.

Your supply support can order the computer case from GSA with a DD Form 1348-6. You need the following info on your requisition:

- GSA FSC Group 81, Part 1, Section B
- Unit POC and phone number in the REMARKS block
- Name, address and phone number of the manufacturer. Here are the current vendor names, addresses and phone numbers:

**Anvil Cases**  
15650 Salt Lake Ave.  
City of Industry, CA 91745  
800-359-2684

**Atlas Cases, Inc.**  
1380 S. Cherokee St.  
Denver, CO 80223-3209  
303-778-7058

**Barry Cases**  
2000 N. Broadway  
St. Louis, MO 63102  
800-644-3440

**Calzone Case Co.**  
225 Blackrock Ave.  
Bridgeport, CT 06605  
800-243-5152

**Garrett Container Systems, Inc.**  
123 N. Industrial Park Ave.  
Accident, MD 21520  
800-582-2540

**Hardigg Cases**  
147 N. Main St.  
South Dearfield, MA 01373  
413-665-2163

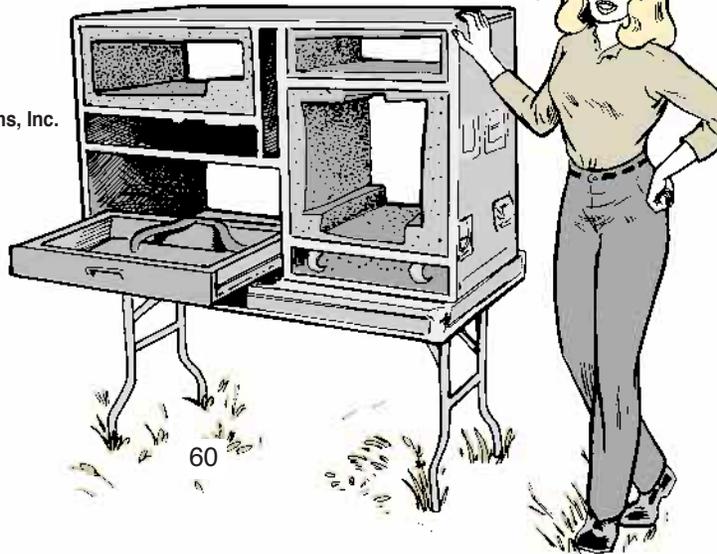
**ISM, Inc.**  
PO Box 2772  
Covington, LA 70434  
800-843-7215

**Jenson Tools, Inc.**  
7815 S. 40th St.  
Phoenix, AZ 85044  
800-426-1194

**Keal Cases, Inc.**  
PO Box 759  
Burleson, TX 76097  
800-447-9697

**Silton Co.**  
5439 E. Lamona Ave.  
Fresno, CA 93727  
800-489-3889

THE  
VENDOR YOU  
SELECT WILL  
CONTACT YOU TO  
CUSTOM-BUILD  
YOUR COMPUTER  
CASE.



WORK PACKAGE  
TMs ARE NOT ALL THAT'S NEW.  
NOW YOU CAN READ PS ISSUES  
ON THE INTERNET AT...



[HTTP://WWW.LOGSA.ARMY.MIL/PSMAG/PSHOME.HTML](http://www.logsa.army.mil/psmag/ps/home.html)

## Handle ATACMS Carefully

Army tactical missiles systems (ATACMS) are being damaged during downloading and storage. Prevent damage when downloading by reconnecting the shorting plugs to the guided missile launch assembly (GMLA) and by reinstalling the proper four GMLA skid feet before putting the GMLA on the ground. If you move a GMLA by forklift, install the forklift guides first. If you store GMLAs in the field, put them in a well-drained area on at least six inches of dunnage. Keep them covered with a tarp that's raised above the pods so air can circulate.

## NSN Update

End Item	Component	Correct NSN	TM reference	Problem w/reference
HEMTT	Steering column nut (at column's top)	5310-00-084-3916	9-2320-279-24P-1 Fig 215	Doesn't call out nut separately
HMMWV	Left-hand parking brake cable	2590-01-265-3185	9-2320-280-24P-1 Item 3 in Fig 130	Cable listed is too long
HMMWV	Water crossover tube	2930-01-460-7507	9-2320-280-24P-1 Item 13 in Fig 28	Parts info is wrong
M35A3 truck	Charged air cooler	2930-01-398-6767	9-2320-386-24P Item 8 in Fig 29	Parts info is wrong
M809-series truck	Brake master cylinder	2530-00-741-1070	9-2320-260-20P Item 1 in Fig 180	NSN no longer available
M967/M969/M970-series tankers	Engine fuel pump	2910-00-735-4013	9-2330-356-24P Item 4 in Fig 77	Info is wrong
PLS truck	Fuel tank check valve	4130-00-103-9185	9-2320-364-24P Item 13 of Fig 39	Mislabeled as "refrigeration valve"
PLS truck	air brake chamber for No. 5 axle	2530-01-408-4704	9-2320-364-24P Item 26 in Fig 228	NSN is wrong
PLS truck	headlight assembly	6240-01-420-8320	9-2320-364-24P Item 3 in Fig 90	NSN is wrong
PLS truck	CTIS controller's 3-amp circuit breaker	5925-01-351-3660	9-2320-364-24P Item 17 in Fig 71	NSN is wrong

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

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