

Issue 497

PS

April  
1994

# THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-497



HOW  
DID THE ACCIDENT  
HAPPEN?

SMITTY WAS  
CARELESS AND POORLY  
SUPERVISED!

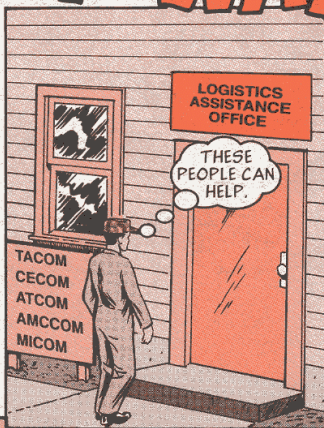
Approved for  
Public Release;  
Distribution Is  
Unlimited

The Deadly Triangle  
... See Page 27



# LAO'S the WAY to GO

**W**HEN YOU HAVE A MAINTENANCE OR SUPPLY PROBLEM THAT YOU CAN'T SOLVE, HELP IS AS CLOSE AS THE NEAREST LAO (LOGISTICS ASSISTANCE OFFICE).



IF LARS DON'T HAVE THE ANSWERS, THEY KNOW WHERE TO GET THEM. THEY HAVE CONTACTS WITH EQUIPMENT MANAGERS, ENGINEERS, DEPOT REPAIR SPECIALISTS AND PUBS FOLKS.

THE US ARMY MATERIEL COMMAND'S LAO PROGRAM HAS LOGISTICS ASSISTANCE REPRESENTATIVES (LARS) ALL OVER THE WORLD WHOSE JOBS ARE TO SOLVE YOUR MAINTENANCE AND SUPPLY PROBLEMS.



If you don't know where your LAO is, check out Appendix C of DA Pam 738-750 in the latest Maintenance Management UPDATE. It has a list of all LAOs in the Army with addresses and phone numbers.



Questions about the LAO program? Call Comm (205) 955-0788 or DSN 645-0788, or write:

USAMC Logistics Support Activity  
ATTN: AMXLS-LL  
Redstone Arsenal, AL 35898-7466



THE  
PREVENTIVE  
MAINTENANCE  
MONTHLY

TB 43-PS-497. 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.

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You are invited to send PS your ideas for improving maintenance procedures, suggestions for articles, or comments on material published in PS. Just write to:

MSG Half-Mast  
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By Order of the Secretary of the Army:

**GORDON R. SULLIVAN**  
General, United States Army Chief of Staff

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*Milton H. Hamilton*  
**MILTON H. HAMILTON**  
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# Don't Trail on Trailer PM



If your PM lags behind on your Patriot trailers, soon the trailers can't go and the Patriot is stuck. Hitch up to this trailer PM to keep your Patriot on the road.

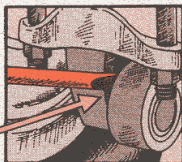
Before you go to the field, test the trailers' trunnion torque rods.

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Place the flat end of a 3-ft crowbar or 36-in pinch bar between the torque rod and the mounting bracket. Push on the bar so that the hook end moves 4 to 6 inches. Let up on the bar.

Place bar between rod and mounting bracket



If the torque rod returns to its original position, the rod's OK. If it doesn't, get it replaced. A bad torque rod hurts the trailer's suspension alignment.

Exercise the outriggers at least monthly. If the outriggers sit unused, the oil seals dry out and leak. The ball screws also need to move in and out of the ball nuts or they don't get a coating of lube. Screws rust and freeze the outriggers in place.

While you have the outriggers extended, clean off any sand or dirt with a rag. Use a cleaning pad to rub off any rust. Give the outrigger lube points a shot of GAA.

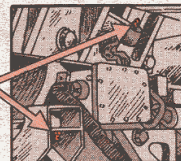
Remove dirt and sand from outriggers



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Make sure you clean the outrigger upper/lower and interlocking limit switches, too. Brush off any debris around the switches and lube them with engine oil. If the switches stick, the actuator will crush the relay assembly when the outrigger is raised.

Clean limit switches and lube them with engine oil



Keep high-pressure water away from the trailers' electrical boxes. Water gets in electrical components such as the Digital Azimuth Converter and shorts them out.

Eyeball all the outrigger rod ends for cracks or chips that can score the outrigger tubes.

Watch the outriggers as you raise or lower them. If a pad snags, the strut weld will break. When a pad snags, bump it with your hand or foot. If that doesn't free it, reverse the outrigger's direction. If that doesn't work, stop and call for help.

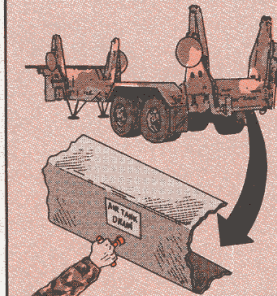
Bump pad if it snags



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Drain the air reservoir every day you operate. Otherwise, condensation builds up. Water then gets in the brake system and causes corrosion and eventually brake failure.

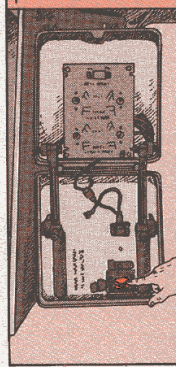
Drain reservoir after each day's use



Before moving out, doublecheck that you've shut and latched all outrigger control panels.

If a panel's left open, it bounces up and down during travel and cracks the level bubble. You'll have trouble leveling the launcher or radar.

Close panel to protect level bubble



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3



# Keep Lamps Burning

Dear Editor,

We were running through lots of LCSS bulbs for the test results display's lamp driver until we discovered the culprit—corrosion.

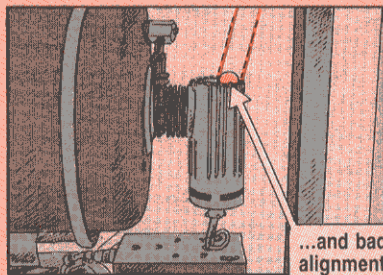
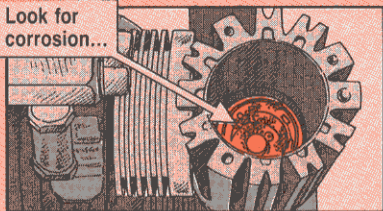
Corrosion in the lamp socket was limiting the current that could get to the bulb. To compensate, we would turn up the lamp driver's resistor to get more light. The extra current would worsen the corrosion and burn up the bulb fast.

Once we took apart the socket and cleaned out the corrosion with a stiff, non-metallic brush, we began to get the full life out of the bulbs.

Bulb life can also be affected by the bulb's alignment. If the bulb filament isn't in a straight line with the socket and parallel to the electronics rack, the socket is bad and needs to be replaced.

**SSG Daniel Walker**  
Redstone Arsenal, AL

Look for corrosion...



...and bad alignment

FROM THE DESK OF THE Editor

You've certainly helped those little lights shine. Thanks!

DON'T LET  
CORROSION SHORTEN THE  
LIFE OF BULBS.



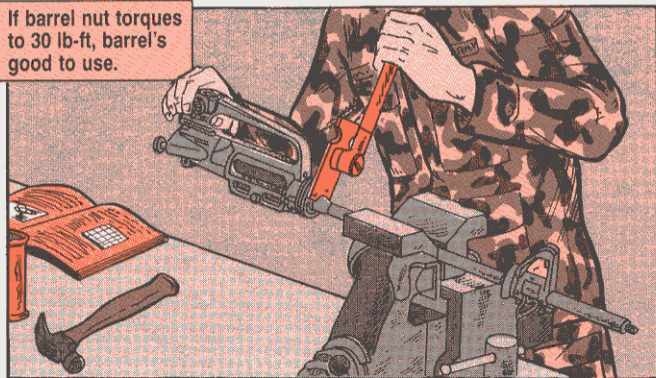
# Don't Roll Out Those Barrels



Some M16 rifle barrels are taking that final roll to the graveyard when they've still got some life in them.

The M203 grenade launcher is damaging some M16 barrel nut teeth. But that doesn't mean the barrel's shot. As long as the barrel can still be torqued to 30 lb-ft and can pass its other inspections, it's good to fire.

If barrel nut torques to 30 lb-ft, barrel's good to use.



You will need to have support put the M203 on another rifle with good barrel nut teeth.

If a new barrel is put on, the barrel with bad teeth should be inspected. If it passes inspection, it should be kept for future use.



## THE PMCS

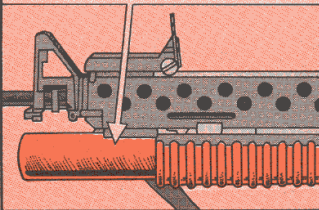
## PATH TO SUCCESS

HEY! WHERE ARE YOU GOING?

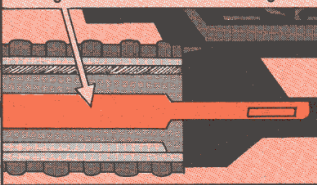
I'M HEADING FOR SUCCESS!

**T**he path to a successful firing of your M203 must always begin with PMCS. Make these checks the first steps in your journey:

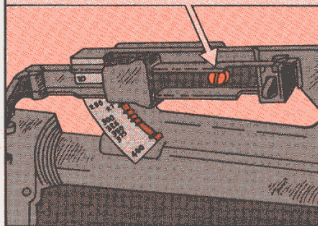
**BARREL.** Out-of-round, dented, or cracked? The aluminum barrel is what gets damaged most on the M203. A bad barrel causes short fires and poor accuracy.



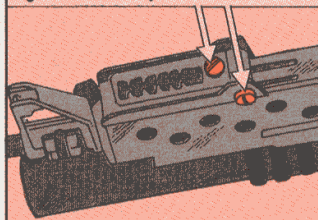
**BARREL EXTENSION.** Loose at all? A loose extension keeps the barrel from closing and the launcher from firing.



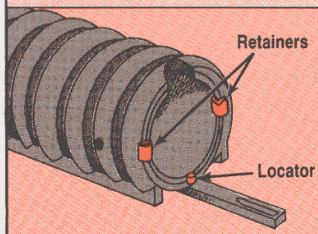
**QUADRANT SIGHT.** Pivot screw tight? Teeth broken? Whole sight loose? If your sight's in bad shape, so will be your accuracy.



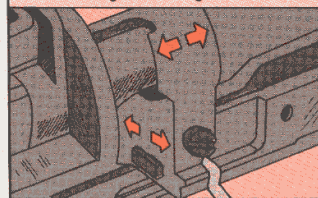
**LEAF SIGHT.** Screws tight? A slipping sight kills accuracy.



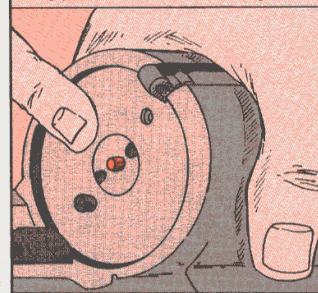
**CARTRIDGE LOCATOR AND RETAINERS.** Broken, bent, chipped, or missing? A damaged locator or retainers will cause extracting and firing problems and make it difficult to close the barrel.



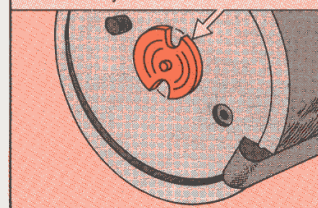
**M203 MOUNTING BRACKET.** Any movement along the barrel? Side-to-side play more than 1/8 inch each side of center for a total of 1/4 inch? A loose bracket leads to dangerous firing.



**FIRING PIN.** Stick out? A protruding firing pin causes accidental firings.



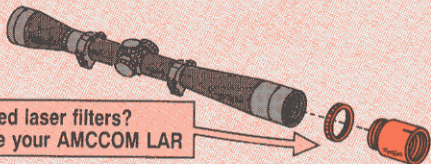
**BREECH INSERT.** Loose when you try to turn it? Sticks up above the breech face? A faulty insert causes misfires.





# Laser Protection for Snipers

Snipers, get laser protection for your M24 sniper rifle with the external mount assembly (laser filters), NSN 1240-01-380-6326. The first filter assembly is free, along with a change to TM 9-1005-306-10 that explains how you install them and where you store them. If you didn't get the assembly, contact your AMCCOM logistics assistance representative (LAR). Or write:



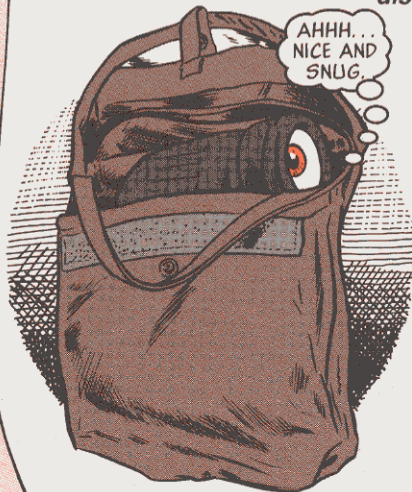
AMCCOM  
ATTN: AMSMC-LSS  
Rock Island, IL 61299-6000

## M22 Binoculars . . .

### A Case for a Good Case

Dear Editor,

*The M22 binoculars do not come with a carrying case. As a result, M22s are left loose in vehicles and bounce around without protection. Optics are cracked and knocked out of alignment. Lens covers disappear and lenses get dirty and scratched.*



*A cheap case for the binoculars is the M249 machine gun's ammo case, NSN 8465-01-157-4834. The M22 fits sideways in the case snugly, holding the lens covers in place. If the binoculars take a fall, the case protects them. It can be attached to the individual load bearing equipment (LBE). And it costs only \$7.40.*

SSG David G. Mertens  
Wadena, MN

FROM THE DESK OF THE Editor

*You've made a good case for your suggestion. Thanks!*



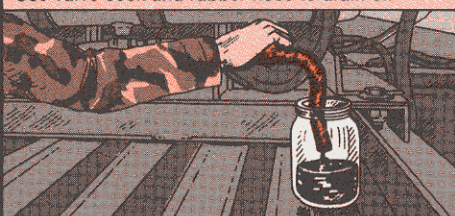
# NO PAIN DRAINING

Draining the M157 smoke generator fog oil tank can be a real mess . . . if you don't replace the drain plug with a valve cock, NSN 4820-00-287-5617.

Draining with the plug makes it practically impossible to drain the tank without getting oil all over the bed of the truck or track. That makes for a safety hazard. If the fog oil gets on the ground, you've got environmental problems.

The drain cock lets you control the flow. Plus, if you connect an old rubber hose to the cock, you can easily drain the oil into a jar. An old M3 smoke generator hose, NSN 4720-00-809-2889, does the job.

Use valve cock and rubber hose to drain oil



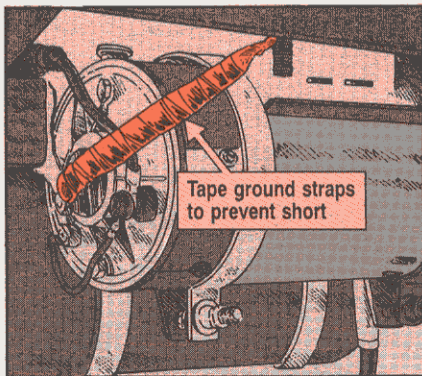
## Protecting Your Ground

Dear Editor,

We've had trouble with the ground strap to the M157 smoke generator's air compressor touching the compressor's positive cables. That shorts out the main power cable to the compressor and you have no compressor.

The solution is simple: Tape the ground strap with electrical tape. Since we've done that, shorts are long gone.

SGT Christopher Britt  
Ft Bragg, NC



FROM THE DESK OF THE Editor

A short solution to shorting problems that's grounded in good sense. Thanks.



# Put the BRAKES



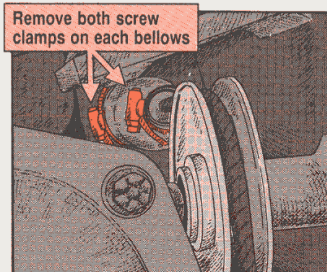
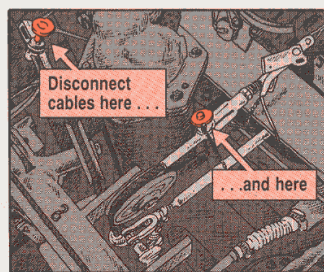
**M**echanics, if drivers report they're having trouble releasing the parking brakes on their M1-series tanks, it's probably because the cables are jammed.

In sandy areas, grit slowly works its way under the rubber protection bellows. When enough grit accumulates, the cables jam. The PARKING SERVICE BRAKES light comes on and stays on, no matter how hard you try to release the brakes.

Here's what to do:

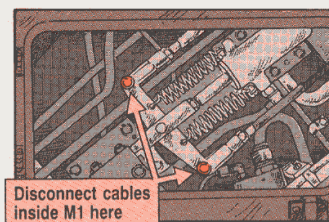
1. Open the top left grille door and both precleaner doors. Disconnect the parking brake cables by removing the quick-disconnect pin from the clevis.

2. Remove the protection bellows by loosening the two screw clamps and sliding the bellows, clamps, and spacer off the cable.



# on Cable Jams

3. Open the access door inside the turret and disconnect the parking brake



cables by removing the pin, washer and cotter pin from the clevis.

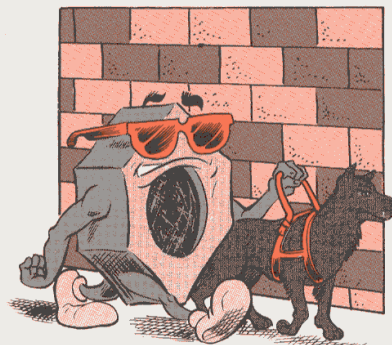
4. Work the parking brake cables back and forth with one mechanic holding each end until the sand works itself out and the cables slide freely.

5. Put a light coat of CLP on the exposed cables at both ends.

6. Reattach the cables. Make sure the bellows are firmly attached to the spacer and sleeve nut. That helps keep out dirt and sand.

## Seeing Is Believing

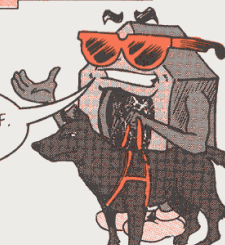
Never use wire brushes, screwdrivers or knife blades to clean the glass. All you need is water and a piece of clean cloth.



**C**lean the shock absorber sight glass on an M1-series tank the wrong way and you'll see damage beyond belief.

That's because the wrong cleaning method scratches and clouds the sight glass surface. Then you can't see to check for oil.

EASY ON  
THE ROUGH STUFF.  
KEEP MY "EYE"  
OPEN.





# Fuel Filter Foulup



**D**rivers, if you want to keep your Bradley's FUEL FILTER CLOGGED light off, you'll have to pay close attention to your fuel filter PMCS.

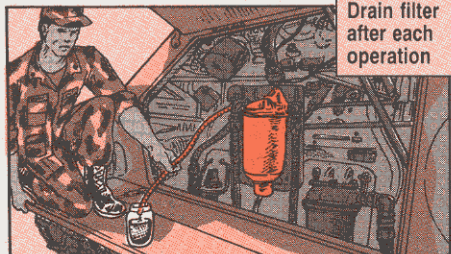
The -10-1 TMs say to drain off water accumulation after every operation. If you forget, the water causes rust and gunk buildup that forms a plug in the bottom of the separator. The water builds until the fuel flow is cut. On comes the FUEL FILTER CLOGGED light.

Things get even worse in the winter. The water freezes into a solid plug that cuts the fuel off altogether. As the ice expands, it can also crack the canister.

Changing the filter doesn't help, either. The only way to fix

the problem is to have your mechanic remove and clean the separator with liquid detergent, NSN 7390-00-990-7391, mixed with water.

Prevent that problem by draining the filter after each operation. Just drain the fuel filter into a clear container until clean fuel comes out. Make sure you dispose of the fuel in an approved hazardous waste container.





# You'd Better Do Windows

The coating on the thermal imaging sight on your Bradley or M1-series tank must be cleaned — and cleaned right — or you won't get the most from your night sight.

Cleaning the window right means you should:

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



2. Soak a lens tissue, NSN 6640-00-285-4694, in alcohol, NSN 6810-00-753-4993, and clean the window with light pressure. During freezing weather, clean the window with lens cleaning solution, NSN 7930-00-664-6910, mixed with clean warm water.



3. Flush off the alcohol with clean water.

I'M READY TO CLEAN YOUR THERMAL IMAGING SIGHT.



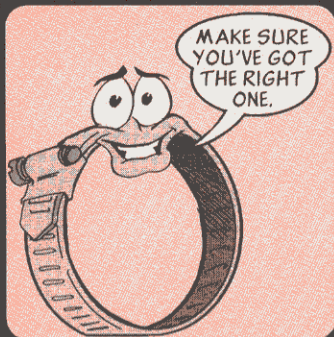
4. Dry the windows by wiping lightly in a single direction with clean lens paper.

If you want a good-to-go night sight, make sure you follow these tips:

- Never wipe off dried mud or dirt without wetting the surface first. That'll scratch the surface.
- Never scrape ice off the window or put any kind of tape directly on the window surface. Again, you'll scratch the window or peel off the reflective coating.
- Keep dirty rags and cloths away from the windows.
- Forget about spraying high-pressure water on the window during vehicle cleaning.

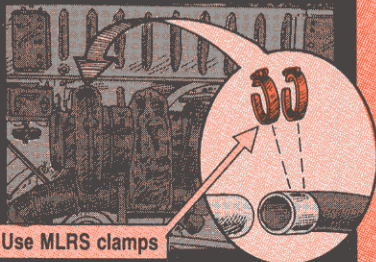


## Turbo Clamp Replacement



**N**ext time you order the turbo-charger air outlet hose clamp for your Bradley, use NSN 5340-01-112-7793.

That clamp, which is already being used for MLRS carriers, will work on both 500- and 600-HP Bradley engines.



The old clamp, shown as Item 162 of Fig 87 in TM 9-2350-252-24P-1 and Item 164 of Fig 83 in TM 9-2350-284-24P-1, will not work on the 600-HP engine.

## Let the Water Out

**W**ater from rain and snow has a nasty habit of hiding out in machine gun mount legs, causing corrosion in warm weather and freeze cracks in cold weather.

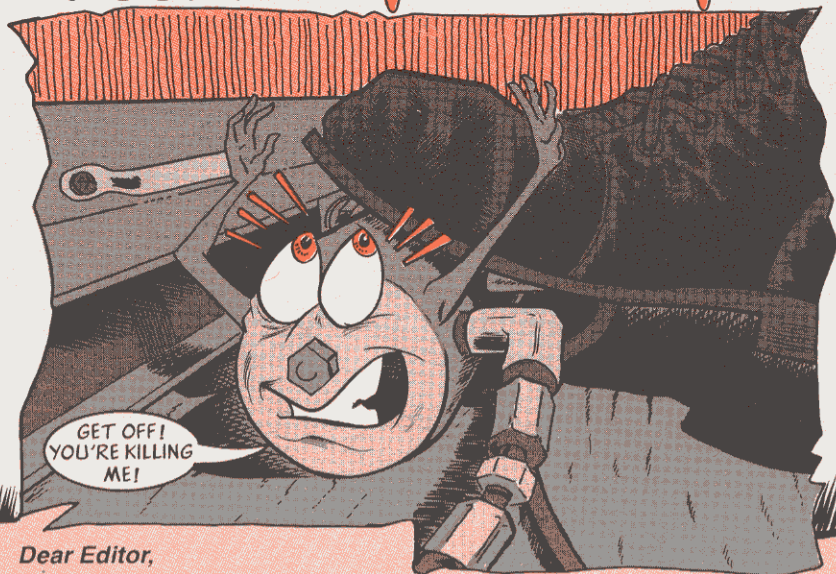
Unit mechanics can stop the problem by drilling a 1/4-in hole in each mount leg near the bottom weld. Once all the water drains out, use CARC paint, NSN 8010-01-229-7546, to touch up the hole.

If your mounts already have drain holes, check occasionally to make sure they're open. If they get plugged, ream them with anything handy.





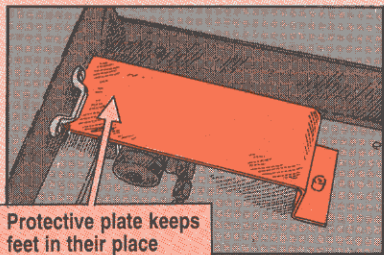
# Fuel Pump Coverup



Dear Editor,

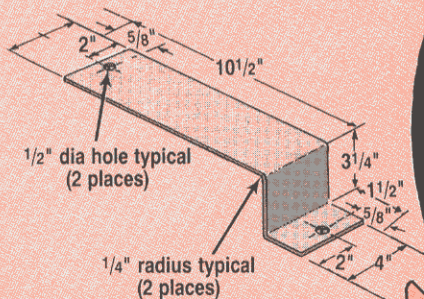
We've come up with a way to keep feet off the personnel heater fuel pump when the floor plates in M113A2/A3 carriers are pulled for cleaning.

We made a permanent protective plate that helps keep Mr. Bigfoot at bay. Make the cover with a 15 1/4-in X 4-in piece of 1/8-in steel plate.



Protective plate keeps feet in their place

Here's how:



SFC George L. Danay  
OMS 10, WIARNG

FROM THE DESK OF THE



That solution will make Mr. Bigfoot tread more lightly. Thanks!



# Keep Batteries

# Physically Fit



**D**rivers, it pays to keep your combat vehicle batteries in shape — unless you never plan to start the engine.

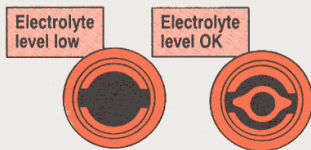
Doing it right means doing it by the book. The TMs say to check the batteries once a week to keep 'em in tip-top condition. Here's how:

## Electrolyte

Check the electrolyte level in each cell with a flashlight. If the level's right, you'll see an eye shape in the fill hole.

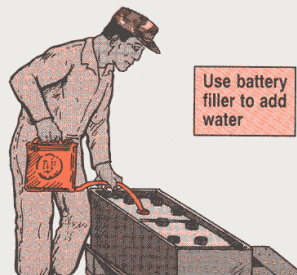
If not, fill the cell to the bottom of the filler cap neck with distilled water. NSN 6810-00-682-6867 gets six 1-gal jugs. Get one 5-gal container with NSN 6810-00-356-4936.

If you're out of distilled water, use rainwater or even tap water. Just make



sure you filter it through a clean cloth first.

Use the gravity battery filler, NSN 6140-00-635-3824, from the No. 1 Common shop set when adding water. That'll keep you from accidentally flushing out the electrolyte.



Use battery filler to add water

## Hold-downs

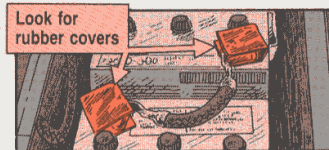
Battery hold-downs should be snug. Using both hands, try to move the battery. If it shifts, get your mechanic to tighten the hold-downs.



Battery moves? Call mechanic

## Connections

Using your thumb and two fingers, try to twist the cable clamps on the posts. Try to move the cable-to-clamp connections, too. If they're loose, report it.



While you're at it, look for rubber covers on the positive terminal clamps. They keep dropped tools or other metal from causing a short circuit across the battery. If they're missing, get your mechanic to put on new ones, NSN 5940-00-738-6272.

## Corrosion

Clean light corrosion off the battery and nearby metal parts with a clean rag. If the corrosion is too heavy to be wiped away, let your mechanic handle it.

## Battery Terminals

Put a light coat of GAA on the top, sides and bottom of the terminal clamps. That'll help stop corrosion. Do not remove the clamp to grease the battery post. Only mechanics are allowed to remove the clamps.





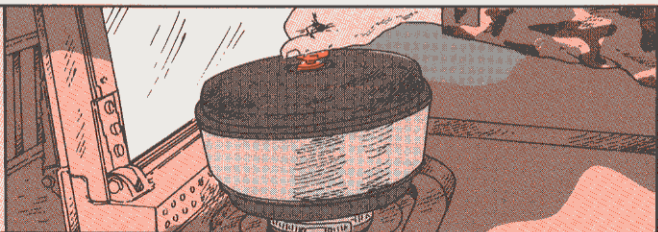
# Let It Breathe Easier



**T**o help put a stop to clogged air cleaner elements, add a precleaner, NSN 2940-01-302-8028, to your Humvee. Units should get their commander's OK before ordering a precleaner.

When you see when it's dirty, clean it like so:

▼ Remove the pre-cleaner lid by unscrewing the wing-nut.



▼ Use a clean rag to wipe out dust and dirt particles that collect inside the pre-cleaner.





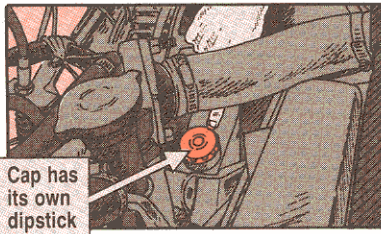
# DON'T FILL 'ER UP

**W**hen you check the hydraulic fluid level in your Humvee's power steering pump, use the dipstick.

You can't just eyeball the level and fill the reservoir to the top. That blows seals, causing leaks that KO the power steering system. Overfilling also speeds wear on the pump.

Check the level when the engine is cold. Clean the area around the cap before removing it. The pump cap has

its own dipstick. Keep fluid between the COLD and HOT marks. If it's below COLD, add enough to bring it between the two marks.



**...T**o spray propellants and solvents on ballistic glass and plastic windows. The charge in spray can cleaners and bug sprays causes cracks in ballistic glass. Solvents can do the same thing to the glass, but they're really murder on the plastic windows.

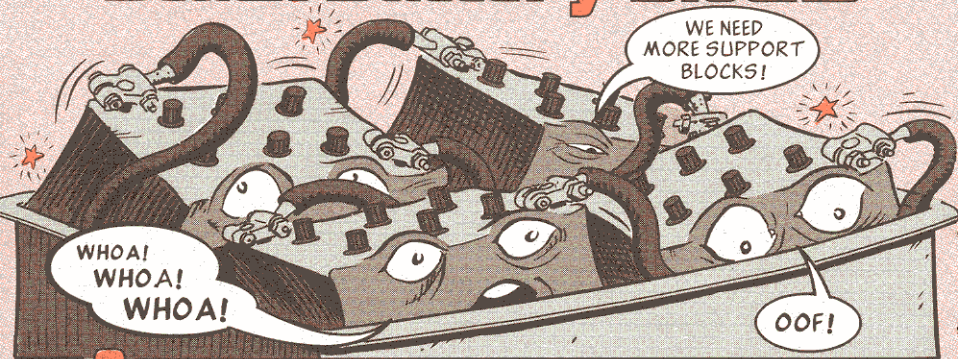
To keep windows clear and clean, do this:

- ✓ Wash the windshield with detergent and water, using a soft, clean cloth.
- ✓ Apply hand cleaner, NSN 8520-00-782-3509, with a clean soft cloth or sponge.
- ✓ Wipe off the cleaner immediately with a dry cloth.

The hand cleaner gets rid of any dirt that soap and water won't touch. It also won't harm glass or plastic windows.



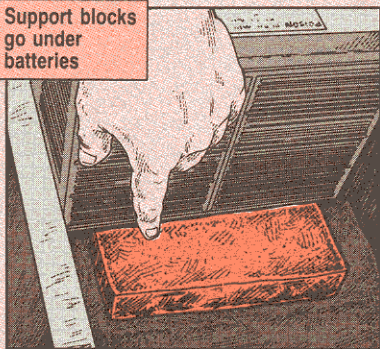
# Stack Battery Blocks



**O**ne set of support blocks is not always enough when it comes to keeping batteries in M939-series truck battery boxes.

The blocks go under the batteries and snug them up against the battery retainer. That keeps the batteries from bouncing around and getting damaged.

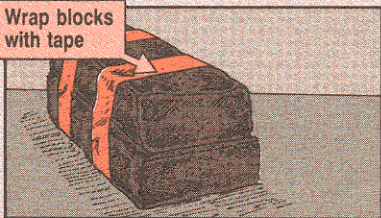
**Support blocks go under batteries**



One set of blocks — Items 9, 10 and 11 in Fig 64 of TM 9-2320-272-20P — is enough if your truck has the battery heating pad from the truck's winterization kit. If it doesn't, you need to double up on the blocks.

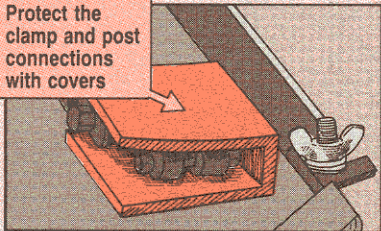
Order enough blocks for two complete sets. Wrap like blocks together with 2-in duct tape, NSN 7510-00-515-0319. That gives you the right height to keep the batteries in place.

**Wrap blocks with tape**



A further safety hint: To stop even slight contact between the battery posts and battery retainer, order rubber boots, NSN 5940-00-738-6272, for each battery post.

**Protect the clamp and post connections with covers**





HEMTT ...

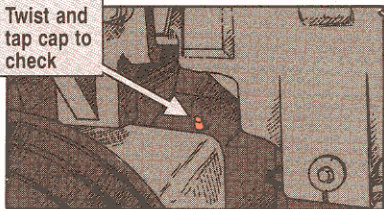
# VENT VALVE VENTING PROBLEMS

Remember the vent valves on all four axles during weekly checks, drivers. Your HEMTT could be brakeless if you forget.

If the valves won't vent, your vehicle blows seals. Oil leaks out. Enough leakage and the oil soaks the brake pads. Then you'll have a hard time stopping.

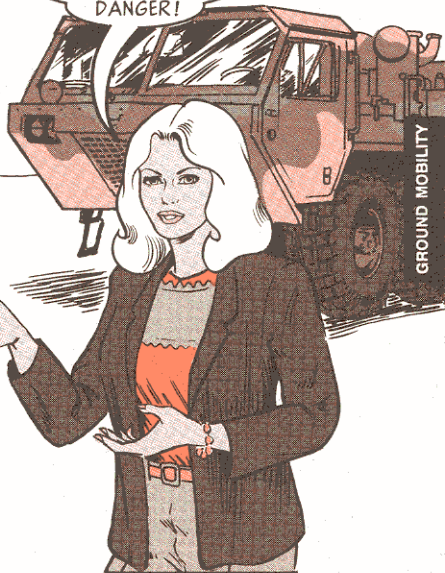
It's easy enough to check a vent valve. Crawl underneath and twist the cap to loosen any dirt inside. Tap the cap. It should depress and spring right back.

Twist and tap cap to check



If not, get your mech to remove the valve and clean it. Use solvent and an air hose.

DON'T LET  
CLOGGED VENT VALVES  
PUT YOU IN  
DANGER!



## Slow Down, Save Tires

**D**rivers, always operate within your HEMTT's limits—speed, load and tire pressure—or you'll find those big tires throwing rubber.

Most limits are spelled out in the chart on Page 3-61 of TM 9-2320-279-10-1. The towing information is wrong, though.

Towing speeds for all HEMTTs—not just the M984E1—are as shown on Page 1-13 of the -10-2. They're also on a yellow sticker on the wrecker's driver-side door.

Those towing speeds are:

	Loads to 50,000 lbs	Loads over 50,000 lbs
Level road	35 MPH	30 MPH
Hilly road	30 MPH	20 MPH
Off road	15 MPH	15 MPH



# Trailer Ready? Check!



**N**aturally, you check the obvious things—lights, brakes, tires—before your trailer rolls out for a long haul. Here are a few not-so-obvious things to check out, too.

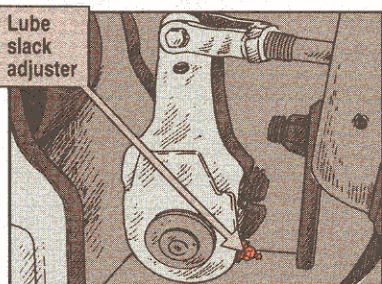
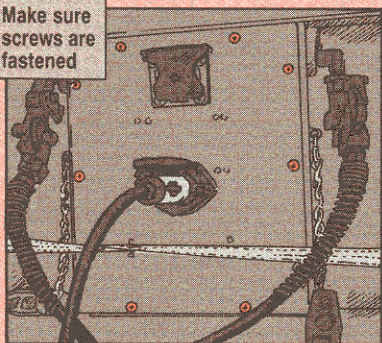
**LIGHTS** OK, the brake lights work and the turn signals flash. Now, check the nose box. That's where the juice comes from to light up your trailer.

Eyeball the screws that hold the nose box cover. Vibration can shake the screws loose and they fall out.

Without a tight seal, water gets inside the box and can short out connections.

If enough of the screws back out, the cable from the truck can yank the cover off, breaking electrical wires.

Make sure screws are fastened



Lube slack adjuster

**BRAKES** Before you hit the road, you check out the brakes with a stop from 5 MPH or so. Smart.

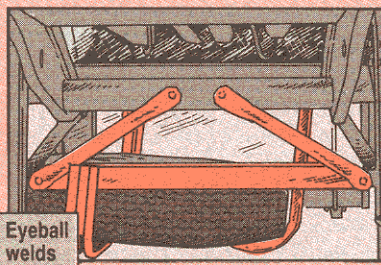
You should also check the guts of the brakes—the slack adjusters.

Make sure the slack adjusters and camshafts get lubed. There are six fittings on each axle. Without lube, the brakes can freeze up. If that happens on the road, you're in deep trouble.

**TIRES** No flats, right? What about the spare.

While you're at the spare, check out the welds on the spare tire carrier. You wouldn't want the carrier to break loose anywhere, but if it goes while you're headed down the road, it's big trouble.

If you find broken or missing welds, tell your mechanic.



Eyeball welds



ROWPU ...

# ASK Not OK

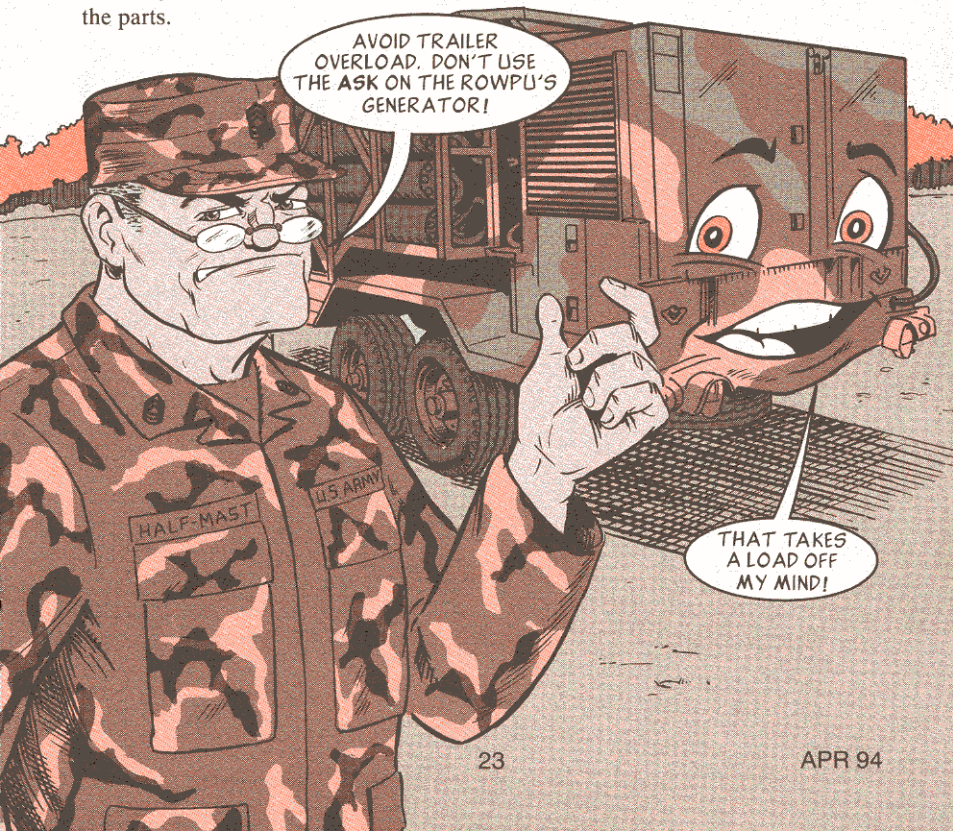
**N**ever use an acoustic suppression kit (ASK) on a 30-KW generator set that's mounted on a trailer with the 600 GPH Reverse Osmosis Water Purification Unit (ROWPU).

It's unsafe. The ASK weighs 1,426 pounds. The additional load would damage the trailer's suspension system and increase the likelihood of an accident. The ROWPU and the generator already put the trailer at the top of its load capacity.

Preventive maintenance is hard to perform on the ROWPU with the ASK installed. The ASK has to be removed to reach the chemical feed pump and its pipes.

The ASK makes it difficult to operate, transport and store the ROWPU. The ASK takes up the space between the ROWPU and generator set that is normally used to stow the chemical feed cans, distribution pump and portable step.

If you have a ROWPU with the ASK, or get a replacement generator that has it, contact your ATCOM LAR. He'll tell you how to take it off and what to do with the parts.






SEE...

# FUSE BURNOUT RAMPANT

There's been a rash of 16-amp fuse failures in the SEE's hydraulic cooler fan and windshield heater circuit.

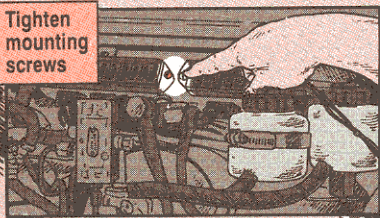
Here's why:

 Vibration loosens the fuse panel under the hood. Then, fuses shake loose and short out.

 Water gets in — causing the fan's motor to short-circuit and blow a fuse. Stamp out rampant fuse burnout like so:

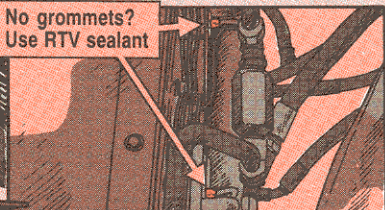
**1.** Tighten the fuse panel's mounting screws to keep the panel from vibrating loose. That way the fuses won't work loose or pop out of the panel.

Tighten mounting screws



**2.** Eyeball each fan motor's wiring access hole. If you see a rubber grommet, your SEE's OK. The grommet keeps water out. No grommet? Use a dab of RTV sealant, NSN 8040-01-331-7470, to make a good seal around the wiring.

No grommets?  
Use RTV sealant

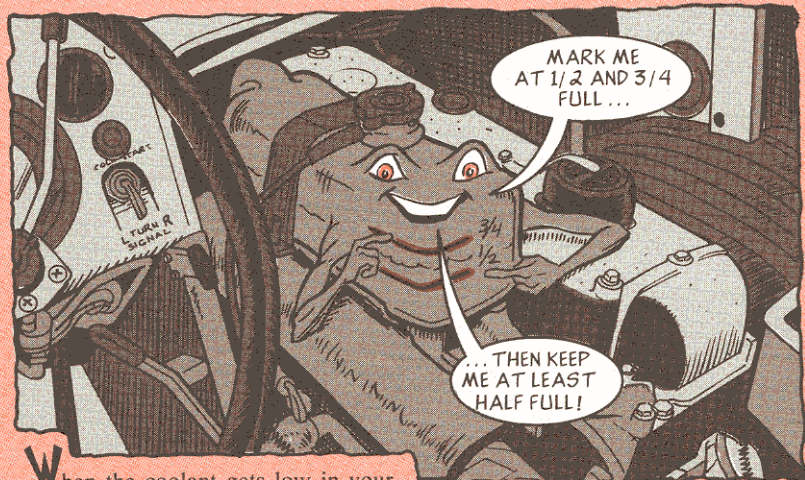


WHY SO  
BURNED OUT,  
BUDDY?

MY FUSES ARE  
FRIED, DUDE!



# GET LEVEL WITH COOLANT



**W**hen the coolant gets low in your small emplacement excavator, the engine overheats. It could seize — and leave you stranded.

Your PMCS tells you to keep the expansion tank half full. Problem is, there are no markings on the tank.

You operators can do yourselves and the SEE a favor. Mark the tank. Use a permanent marker and label the expansion tank.

No more guess work. Just add coolant when the tank's below half full.

## Feet Off the Cap

**K**ep your feet off the cap to your SEE's service brake antifreeze reservoir.

You'll break the cap. This lets water and dirt get in the reservoir.

To help you remember, get your mechanic to put a decal plate on the tool box just above the cap. It says, "CAUTION — WATCH YOUR STEP." Get it with NSN 9905-01-054-0450.

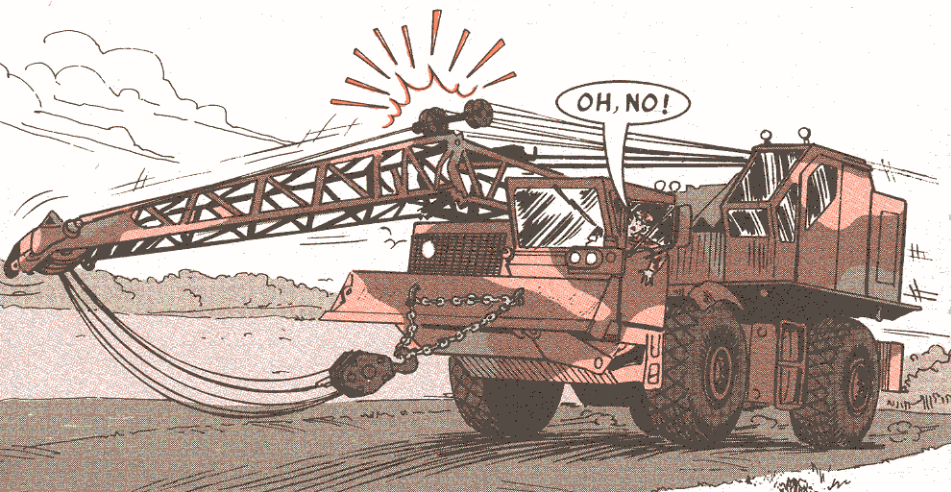
Here's how it goes:

- \* Use the decal as a template.
- \* Drill four 1/8-in holes.
- \* Pop rivet the plate in place. Use NSN 5320-00-510-7823 to get a package of 100 pop rivets.





# RAISE BOOM FOR MOVING

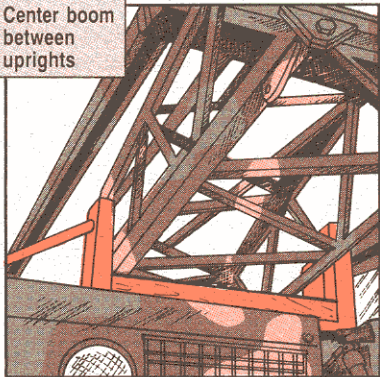


**N**ever lay the crane's lattice boom in the cradle when driving to your next job site. If you do, you may get there with a bent boom!

Here's how to get ready for travel:

✓ Lower the boom gently into the cradle. Center the boom between the

Center boom  
between  
uprights



upright posts and about eight inches above the cradle.

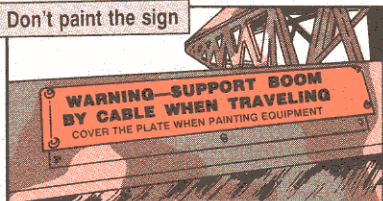
✓ Tie the end of the boom down by fastening its hook to the front tiedowns. Take the slack out of the hook block hoist cable to cut down on bouncing.

That'll make for a smoother ride and easier handling.

During breaks you can rest the boom on the cradle — but remember to raise it back up before you move out!

If your crane has a CAUTION plate, be sure to mask it before the crane's painted.

Don't paint the sign





# THE Deadly Triangle

BE ALL  
YOU CAN BE!  
RIGHT ON,  
HUH,  
CONNIE?

SURE THING,  
EXCEPT FOR BEING AN  
ACCIDENT STATISTIC!

INJURY ACCIDENTS  
TO DATE 1994

TRAFFIC	14
MAINTENANCE	23

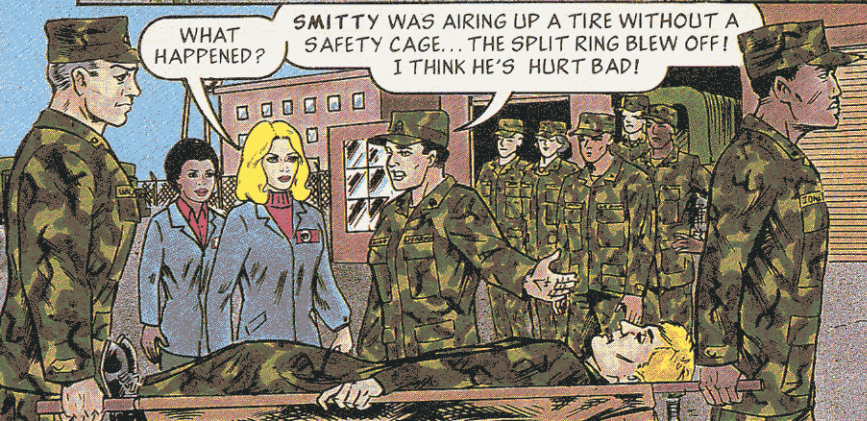
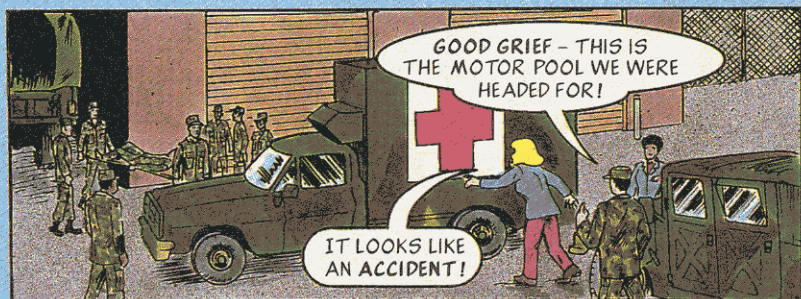
Be All  
You Can Be!

OF ALL THE COLD STATISTICS,  
THAT'S ABOUT THE COLDEST!

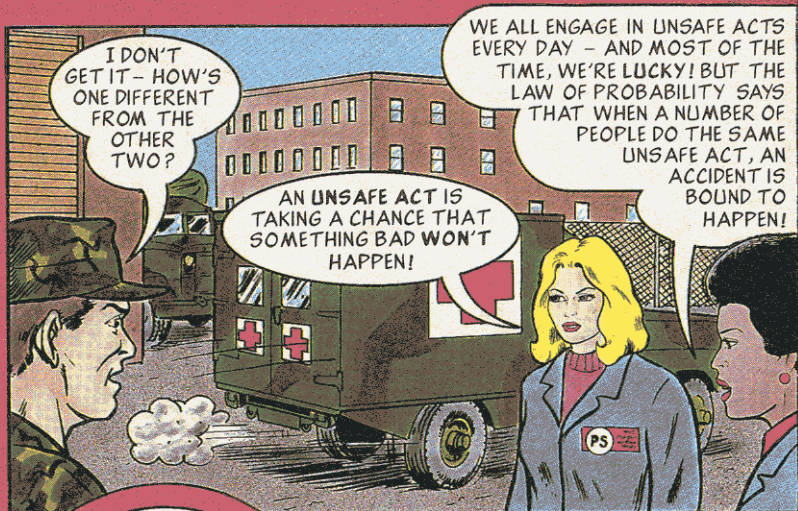
THE THING  
ABOUT BEING AN  
ACCIDENT STATISTIC,  
IS THAT IT CAN BE  
FATAL!..WHAT?

...OH-OH...AN  
AMBULANCE!

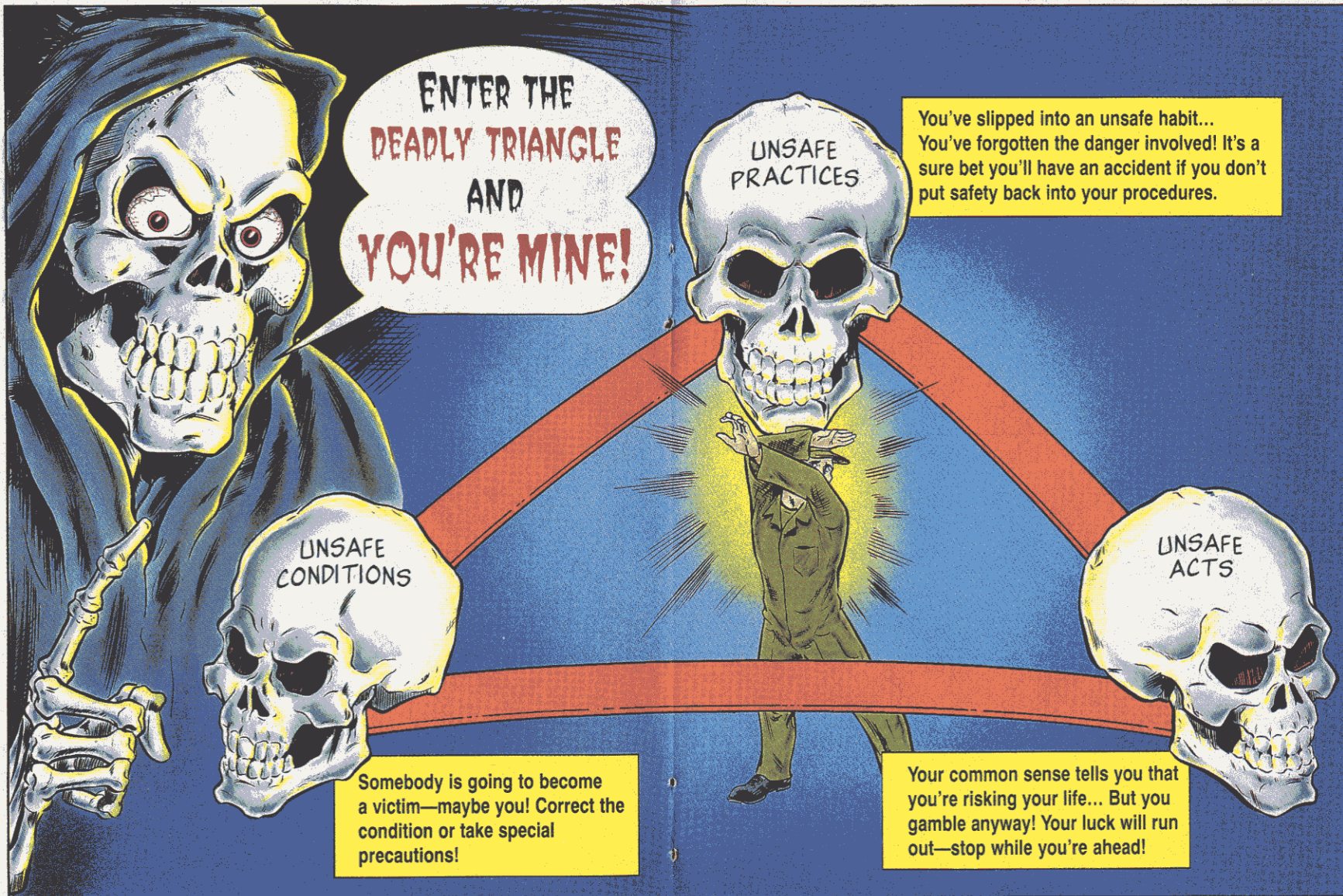










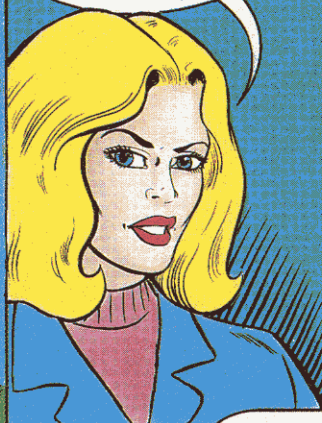


**WE HAVE THE WORLD'S BEST EQUIPMENT ...***Take care of it*

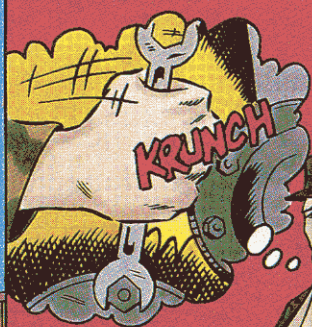
IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.



WHEN AN **UNSAFE ACT** BECOMES A HABIT, YOU'VE GOT AN **UNSAFE PRACTICE** THAT'S BOUND TO CAUSE AN ACCIDENT SOONER OR LATER!



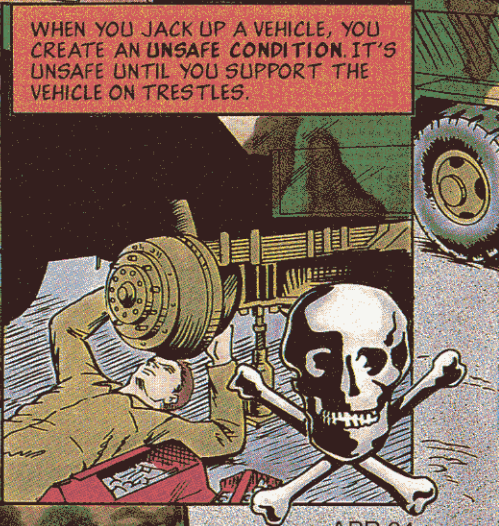
IF YOU MAKE A PRACTICE OF PUSHING A WRENCH INSTEAD OF PULLING, YOU MAY LEARN THE EASY WAY - JUST SKINNED KNUCKLES INSTEAD OF A BROKEN HAND!



AN **UNSAFE CONDITION** IS WHERE YOU HAVE AN ACCIDENT WAITING TO HAPPEN. THE CONDITION ITSELF RARELY CAUSES AN ACCIDENT - IT'S YOUR FAILURE TO RECOGNIZE THE CONDITION AND TAKE PREVENTIVE ACTION THAT RESULTS IN ACCIDENTS!



WHEN YOU JACK UP A VEHICLE, YOU CREATE AN **UNSAFE CONDITION**. IT'S UNSAFE UNTIL YOU SUPPORT THE VEHICLE ON TRESTLES.





THERE'RE ALL SORTS OF **UNSAFE CONDITIONS** WHEN YOU'RE WORKING WITH WINCHES, CABLES AND OTHER RECOVERY EQUIPMENT. OIL OR GREASE - EVEN A PAPER CLIP - ON THE FLOOR IS AN **UNSAFE CONDITION!**

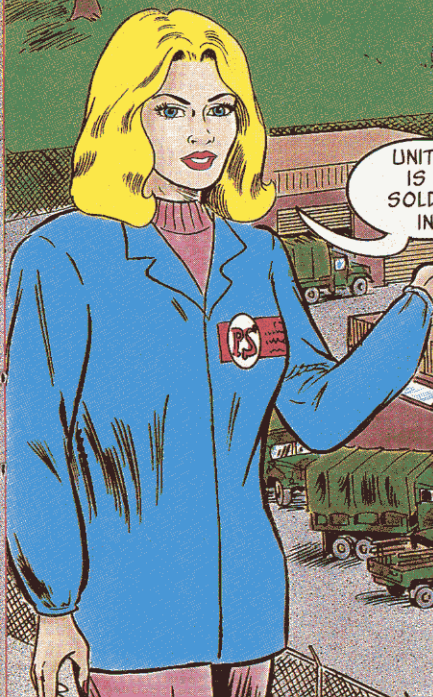
YOU FIGHT **UNSAFE CONDITIONS** BY CORRECTING THEM WHEN YOU CAN, AND BY BEING **SAFETY CONSCIOUS** WHEN YOU CAN'T! YOU KEEP SLIPPERY STUFF OFF THE FLOOR!



ACCORDING TO STATISTICS, ALMOST ONE OUT OF EVERY FIVE ON-DUTY MILITARY AND CIVILIAN PERSONNEL INJURIES OCCUR DURING MAINTENANCE ACTIVITIES.

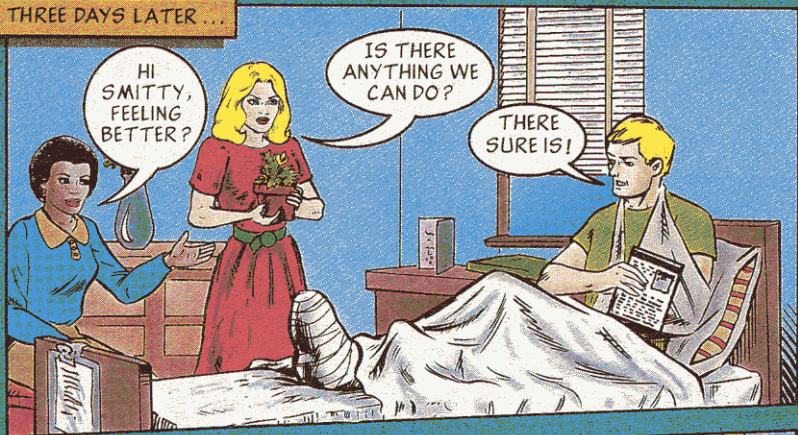


UNIT MAINTENANCE IS WHERE MOST SOLDIERS ARE HURT IN ACCIDENTS!





THREE DAYS LATER ...





# Take the Maintenance Challenge

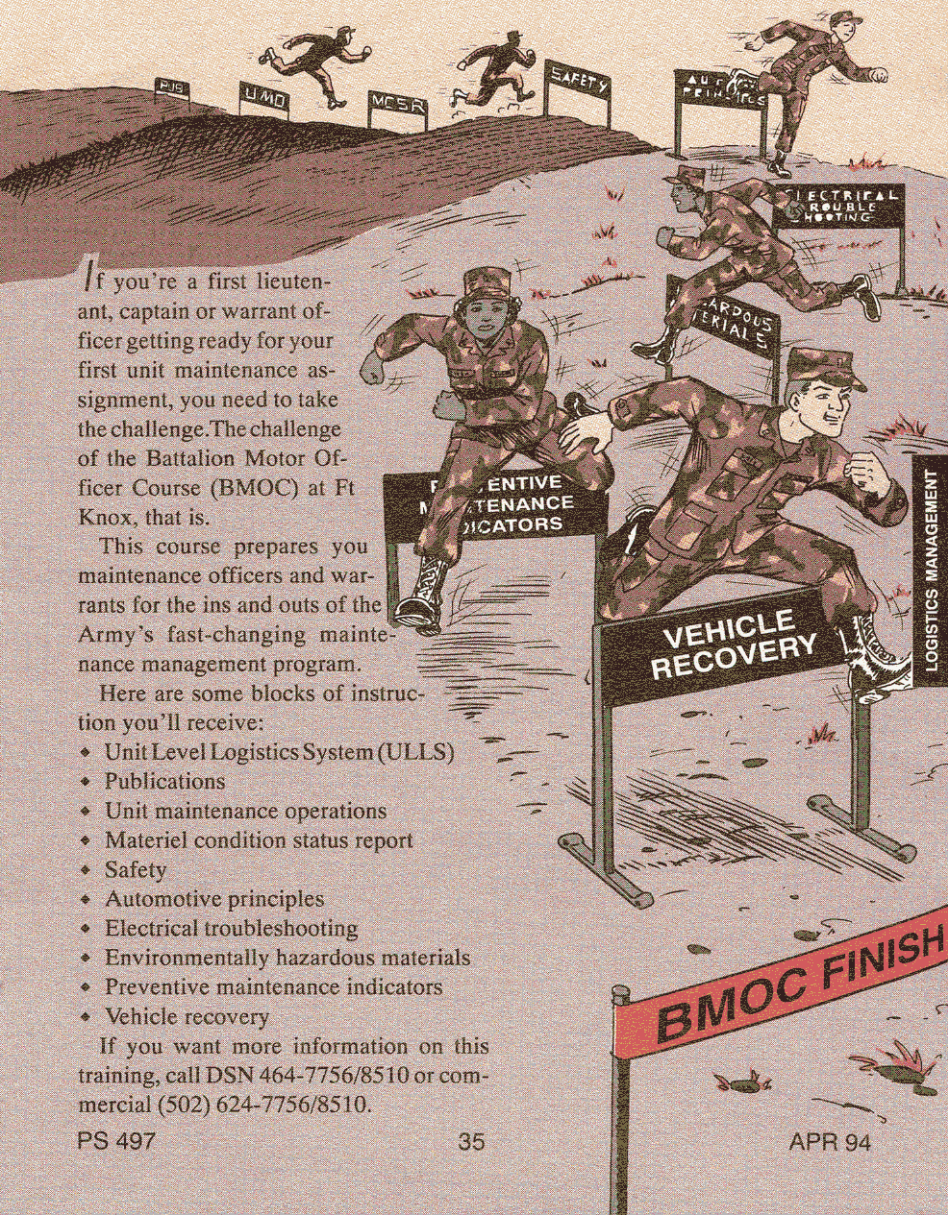
If you're a first lieutenant, captain or warrant officer getting ready for your first unit maintenance assignment, you need to take the challenge. The challenge of the Battalion Motor Officer Course (BMOC) at Ft Knox, that is.

This course prepares you maintenance officers and warrants for the ins and outs of the Army's fast-changing maintenance management program.

Here are some blocks of instruction you'll receive:

- ♦ Unit Level Logistics System (ULLS)
- ♦ Publications
- ♦ Unit maintenance operations
- ♦ Materiel condition status report
- ♦ Safety
- ♦ Automotive principles
- ♦ Electrical troubleshooting
- ♦ Environmentally hazardous materials
- ♦ Preventive maintenance indicators
- ♦ Vehicle recovery

If you want more information on this training, call DSN 464-7756/8510 or commercial (502) 624-7756/8510.

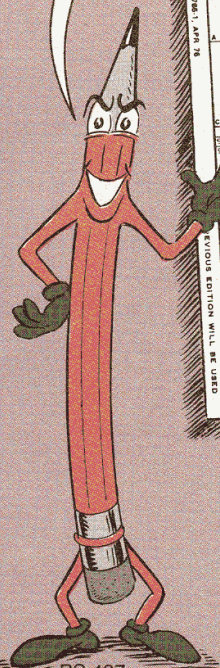




# Your Name's on the Line

**W**hen you receive items from your Supply Support Activity (SSA), double-check them before you sign the receipt document. Or you may have to pay for what's missing!

YOU'RE RESPONSIBLE FOR MAKING SURE EVERYTHING'S CORRECT, LIKE ...



PS 497

DA FORM 2786-1, APR 76		REQUEST IS FROM		19th Engr. Bn. FT. KNOX, KY.	
DOC IDENT	REQ IDENT	FSC	STOCK NUMBER	ADD	UNIT OF ISSUE
1	2	3	4	5	6
SEND TO:		23200110771\$6 EA00001			
A		B			
C		D			
E		F			
G		H			
I		J			
K		L			
M		N			
O		P			
Q		R			
S		T			
U		V			
W		X			
Y		Z			
AA		AB			
AC		AD			
AE		AF			
AG		AH			
AI		AJ			
AK		AL			
AM		AN			
AO		AP			
AQ		AR			
AS		AT			
AU		AV			
AW		AX			
AY		AZ			
BA		BB			
BC		BD			
BE		BF			
BG		BH			
BI		BJ			
BK		BL			
BM		BN			
BO		BP			
BQ		BR			
BS		BT			
BU		BV			
BW		BX			
BY		BZ			
CA		CB			
CC		CD			
CE		CF			
CG		CH			
CI		CJ			
CK		CL			
CM		CN			
CO		CP			
CQ		CR			
CS		CT			
CU		CV			
CW		CX			
CY		CZ			
DA		DB			
DC		DD			
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EQ		ER			
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EW		EX			
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FC		FD			
FE		FF			
FG		FH			
FI		FJ			
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FM		FN			
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HS		HT			
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HW		HX			
HY		HZ			
IA		IB			
IC		ID			
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IG		IH			
II		IJ			
IK		IL			
IM		IN			
IO		IP			
IQ		IR			
IS		IT			
IU		IV			
IW		IX			
IY		IZ			
JA		JB			
JC		JD			
JE		JF			
JG		JH			
JI		JJ			
JK		JL			
JM		JN			
JO		JP			
JQ		JR			
JS		JT			
JU		JV			
JW		JX			
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KY		KZ			
LA		LB			
LC		LD			
LE		LF			
LG		LH			
LI		LJ			
LK		LL			
LM		LN			
LO		LP			
LQ		LR			
LS		LT			
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LW		LX			
LY		LZ			
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OC		OD			
OE		OF			
OG		OH			
OI		OJ			
OK		OL			
OM		ON			
OO		OP			
OQ		OR			
OS		OT			
OU		OV			
OW		OX			
OY		OZ			
PA		PB			
PC		PD			
PE		PF			
PG		PH			
PI		PJ			
PK		PL			
PM		PN			
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PY		PZ			
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QE		QF			
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QK		QL			
QM		QN			
QO		QP			
QQ		QR			
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QY		QZ			
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RK		RL			
RM		RN			
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RQ		RR			
RS		RT			
RU		RV			
RW		RX			
RY		RZ			
SA		SB			
SC		SD			
SE		SF			
SG		SH			
SI		SJ			
SK		SL			
SM		SN			
SO		SP			
SQ		SR			
SS		ST			
SU		SV			
SW		SX			
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TA		TB			
TC		TD			
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UA		UB			
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UE		UF			
UG		UH			
UI		UJ			
UK		UL			
UM		UN			
UO		UP			
UQ		UR			
US		UT			
UU		UV			
UW		UX			
UY		UZ			
VA		VB			
VC		VD			
VE		VF			
VG		VH			
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VK		VL			
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WO		WP			
WQ		WR			
WS		WT			
WU		WV			
WW		WX			
WY		WZ			
XA		XB			
XC		XD			
XE		XF			
XG		XH			
XI		XJ			
XK		XL			
XM		XN			
XO		XP			
XQ		XR			
XS		XT			
XU		XV			
XW		XX			
XY		XZ			
YA		YB			
YC		YD			
YE		YF			
YG		YH			
YI		YJ			
YK		YL			
YM		YN			
YO		YP			
YQ		YR			
YS		YT			
YU		YV			
YW		YX			
YY		YZ			
ZA		ZB			
ZC		ZD			
ZE		ZF			
ZG		ZH			
ZI		ZJ			
ZK		ZL			
ZM		ZN			
ZO		ZP			
ZQ		ZR			
ZS		ZT			
ZU		ZV			
ZW		ZX			
ZY		ZZ			

... THAT THE ITEM IS FOR YOUR UNIT. MATCH THE DOCUMENT NUMBER AND THE UNIT NAME ON THE RECEIPT DOCUMENT. DON'T SIGN FOR THE ITEM UNLESS IT'S FOR YOUR UNIT!

... THE QUANTITY RECEIVED AGREES WITH THE QUANTITY SHOWN ON THE RECEIPT DOCUMENT!

... THE ITEM IS WHAT YOU ORDERED, AND IT'S IN GOOD CONDITION!

... THE SERIAL, LOT, OR REGISTRATION NUMBER - IF REQUIRED - IS CORRECT ON THE RECEIPT DOCUMENT. IF THE SERIAL NUMBER IS NOT ON THE RECEIPT DOCUMENT, ENTER IT!

... THE END ITEM HAS ALL ITS COMPONENTS. MAKE A LIST OF ALL COMPONENT SHORTAGES. USE THIS LIST AND THE TM OR SC TO PREPARE THE HAND RECEIPT SHORTAGE ANNEX.

Report any problems to the SSA issue clerk. Make sure all problems are corrected *before* you sign the receipt document.

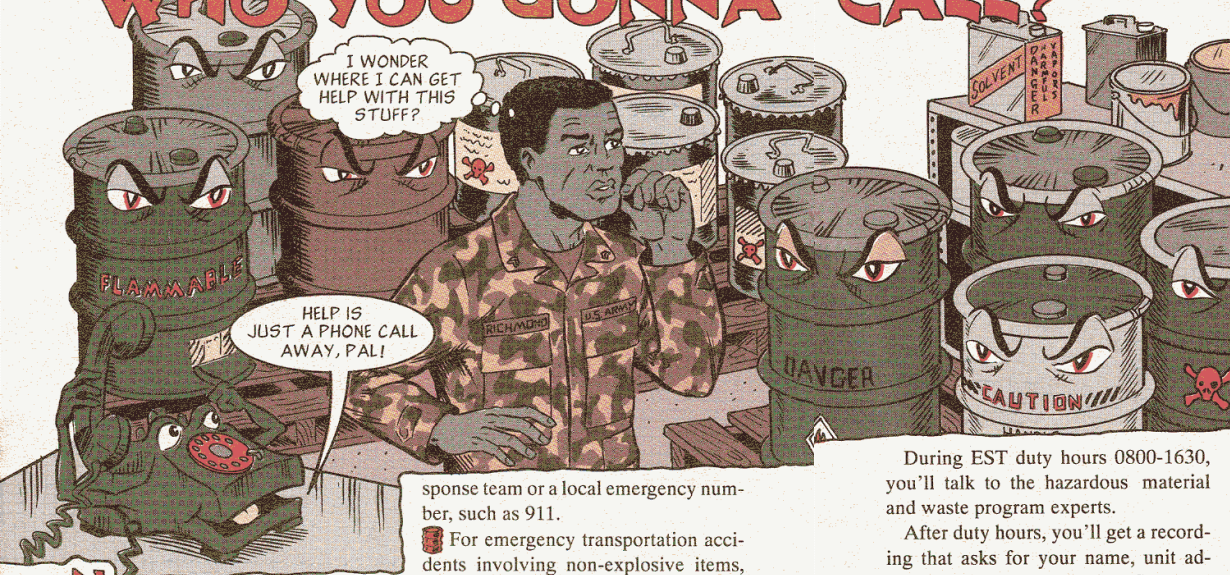
Check out DA Pam 710-2-1 in the Unit Supply Update for more details on receiving supplies.

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37



# WHO YOU GONNA CALL?



**N**ow, repair and maintenance of your equipment not only involves doing the task or service, but also knowing how to manage, use and dispose of the supplies used to perform the job.

Things such as engine and transmission fluids, cleaning solvents, and paint can be hazardous to the environment if you spill them or dispose of them in the wrong way.

So where do you go for help with your hazardous material (HAZMAT) and waste concerns?

On a hazardous materials or waste emergency, call your facility's spill re-

sponse team or a local emergency number, such as 911.

For emergency transportation accidents involving non-explosive items, contact the DOD emergency response hazardous transportation hotline at 1-800-851-8061. If the accident involves DOD munitions or explosives, call DSN 227-0218 or commercial (703) 697-0218 or (703) 528-8230.

For other situations, call the Defense General Supply Center's Hazardous Technical Information Services (HTIS) hotline.

Get in touch with the HTIS folks by calling:

DSN 695-5168 or  
Commercial (804) 279-5168 or  
Toll-free 1-800-848-4847

During EST duty hours 0800-1630, you'll talk to the hazardous material and waste program experts.

After duty hours, you'll get a recording that asks for your name, unit address and telephone number. Someone will get back to you as soon as possible, usually the next working day.

To keep you informed of new regulations on hazardous materials and technical and training concerns, DGSC publishes a quarterly bulletin. To get on distribution, write:

Defense General Supply Center  
ATTN: DGSC-SHS  
8000 Jefferson Davis Highway  
Richmond, VA 23297-5670

Or fax your request to:

Commercial (804) 279-4194

Or send your request over E-Mail using address:

gss5089@dgsc.dla.mil

## HAZMAT VIDEO AVAILABLE

There's a training video that'll help you handle and control hazardous materials and waste in your motor pool. The film gives you information on:

- Using products that are less hazardous
- Ordering only what you'll use
- Recycling
- Disposing of hazardous waste
- Handling spills

Get this video by having your training and audiovisual folks order "Every Little Bit Hurts," PIN 709223DA.

HELP KEEP  
YOUR MOTOR POOL  
SAFE WITH THIS  
INFO!





# Training Is Required



IT TAKES  
SPECIAL TRAINING TO  
SAFELY HANDLE HAZARDOUS  
MATERIALS. HERE'S HOW  
TO GET IT.



If you're involved with HAZMAT, training is a must. In fact, it's the law.

So where can you get HAZMAT training?

You get it from the Logistic Support Activity's Packaging, Storage, and Containerization Center (PSCC) at Tobyhanna Army Depot. HAZMAT training courses meet Department of Transportation requirements.

A one-day course is designed to provide the general awareness training required for all personnel who receive, transport, handle, store, or package HAZMAT.

A 2 1/2-day course covers packaging, marking, labeling, Government Bill of Lading requirements, and placards on transport vehicles.

If requested, the LOGSA PSCC folks will go to your unit and conduct HAZMAT training. Remember, however, that these classes will not qualify you to certify HAZMAT shipments.

To get more information on HAZMAT training, call:

DSN 795-7070 or  
Commercial (717) 894-7070

Or write:

LOGSA Packaging, Storage, and  
Containerization Center  
ATTN: AMXLS-TP-T  
11 Midway Road  
Tobyhanna, PA 18466-5097

Or fax:

DSN 795-7894  
Commercial (717) 894-7894

Or use E-mail:

pscpcpg@tobyhanna-emh1.army.mil



# Workshop Works Wonders

Need some information about packaging Stock Funding Depot Level Repairable (SFDLR) items for turn-in?

If you do, you might want to consider the LOGSA packaging workshop.

This is no ordinary packaging workshop, though. You won't have to do any packaging. Here's what you will get out of this workshop:

- ❖ How to package field returns and depot-level repairables.
- ❖ Information on the equipment and materials required to do unit-level packaging.
- ❖ Ways to make it easier for your unit to get full credit for turned-in materiel under the SFDLR program.

You also get pointers on how to work more closely with your local Director-

ate of Logistics (DOL). If asked, LOGSA packaging folks will sit down with DOL and unit representatives to work out a packaging assistance agreement. This agreement helps the SFDLR program work for both of you.

To get more information on this packaging workshop, call:

DSN 795-7682 or  
Commercial (717) 894-7682

Or send your request by E-mail:  
psccpkg@tobyhanna-emh1.army.mil

Or fax:  
DSN 795-7894  
Commercial (717) 894-7894

Or write:  
LOGSA Packaging, Storage, and  
Containerization Center  
ATTN: AMXLS-TP-P  
11 Midway Road  
Tobyhanna, PA 18466-5097







# What's Available

A cartoon illustration of a woman with dark skin and short black hair, wearing a white long-sleeved shirt and a black skirt, with a red scarf draped over her shoulders. She is holding a CD-ROM in her right hand and standing next to a desk. On the desk is a computer monitor displaying some text, a keyboard, and a CD-ROM drive. A speech bubble from a window behind her says "GET THESE CDs TO HELP YOU."

GET  
THESE CDs  
TO HELP  
YOU.

**B**esides ARMYLOG and FEDLOG, you can get two other products on compact disc (CD) to use on your new Compact Disc-Read Only Memory (CD-ROM) player. Here are the products available:

 DA Pam 25-30, Consolidated Index of Army Publications and Blank Forms

 SB 38-101, Spare/Repair Part to End Item

To get the latest available copy of these items, get your pubs clerk to order them from Baltimore Pubs Center over AUTO-DIN or on DA Form 4569. The unit of issue is EA.

To get future changes of these CDs, the clerk needs to add them to your 12-series forms. Use DA Form 12-04-E block 0654 for the DA Pam 25-30, and DA Form 12-34-E, Block 4451 for SB 30-101.



[illegible]A detailed illustration of a hand holding a red pen, poised to write on a document. The hand is rendered with fine lines and shading, showing the grip and the way the pen is held. The pen is a vibrant red color with a silver-colored tip. The document being written on has several lines of text, some of which are partially visible: "B.", "C.", "1000", "ACTION P", "NAME, FR", "25a. To", and "26. b". The overall style is that of a technical or instructional manual illustration.

Also report any sudden surges of power that zap your equipment. This E3 damage is caused by electrostatic discharge (ESD), improper grounding, or faulty maintenance.

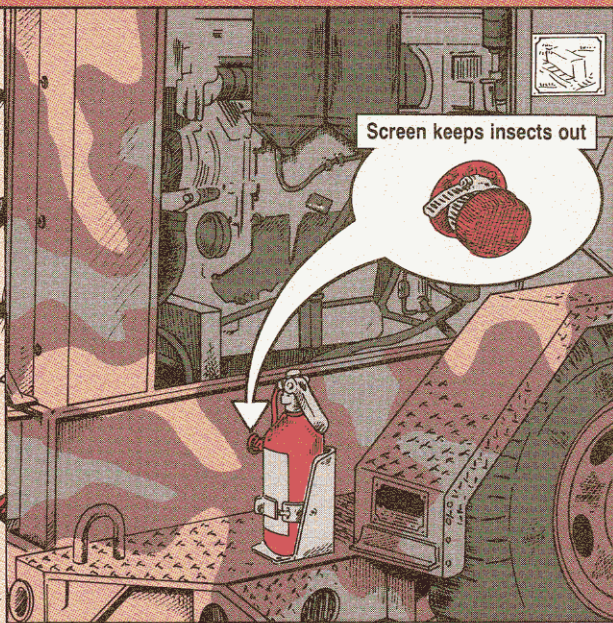
If you can't tell if the failure or damage was caused by E<sup>3</sup>, send in an SF 368 anyway.

Make sure that under Block 22 you pinpoint the failure or damage as being caused by E<sup>3</sup> interference or discharge.



# Get the Bugs Out

WARMER WEATHER MEANS INSECTS GALORE: FLYING THROUGH THE AIR, CRAWLING ON THE GROUND, CAMPING IN YOUR EQUIPMENT. AND THAT SPELLS TROUBLE FOR YOUR 100-KW DED GENERATOR, NSN 6115-01-036-6374.



Insects build nests and lay eggs in the generator's coolant drain port. If enough bugs make their homes there, they'll clog the port.

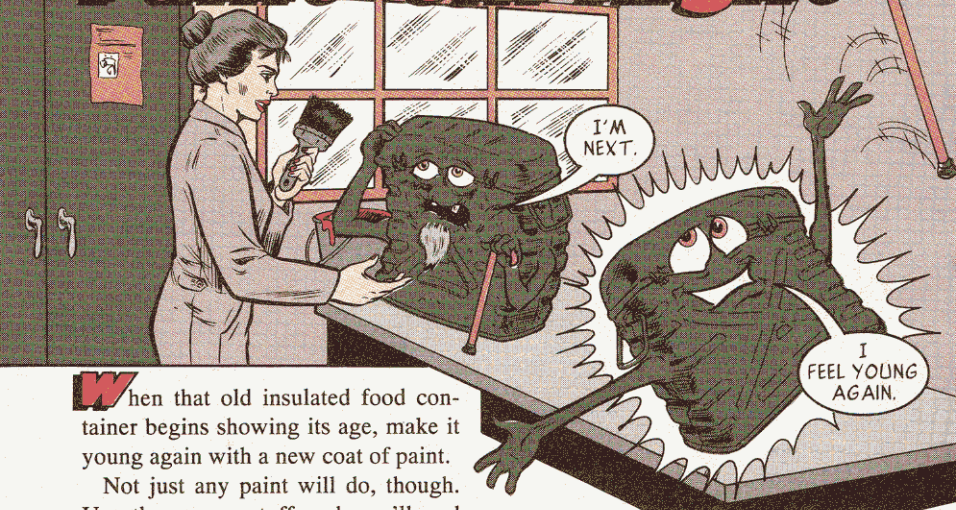
If the port's clogged, you won't be able to drain coolant from the radiator or the engine. You also won't have a way to vent an overflow of coolant if pressure builds up in the radiator.

Put a small piece of window screen, NSN 5335-00-889-3281, over the drain port to keep out insects. That NSN brings a roll 30 inches by 100 feet. Share with other units unless you can find a fine mesh screen elsewhere.

Cut a 2-in square of screen, using scissors or the metal shears, NSN 5110-00-221-1085, found in the General Mechanics Automotive Tool Kit. Bend the screen over the port and hold it in place with a hose clamp, NSN 4730-00-908-3194.



# Paint 'em Right

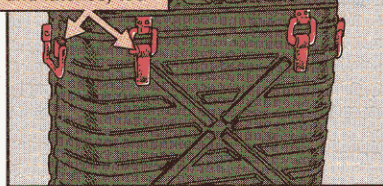


**W**hen that old insulated food container begins showing its age, make it young again with a new coat of paint.

Not just any paint will do, though. Use the wrong stuff and you'll end up with paint in your food — not a very healthy idea.

Paint over the container with the same olive drab semi-gloss enamel that's already on it. Get a quart with NSN 8010-00-081-0809 or a gallon with NSN 8010-00-297-0586.

Paint the handles and latches, too



NSN 8010-00-087-1953 will get you a quart of paint thinner. A gallon comes with NSN 8010-00-160-5794. You'll need it for thinning the enamel and for cleanup.

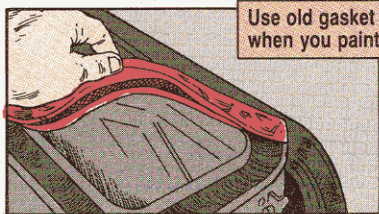
PS 497

## Gasket Coverup

Think twice before throwing away that old cover gasket. It can come in handy when you're ready to paint food containers.

Instead of struggling with masking tape, put the old gasket on the container and close the lid. Then paint the entire container.

Use old gasket when you paint



When the paint's dry, peel off the old gasket and replace it with a new one, NSN 5330-00-032-2722. Save the old gasket for the next time you repaint.

45

APR 94



# SPLICE OF LIFE

1

DEAR HALF-MAST, OUR UNIT USES A LOT OF O-RINGS, AND WE'VE ALWAYS HAD A PROBLEM KEEPING ENOUGH ON HAND. THEN WE FOUND OUT ABOUT TWO O-RING SPLICE KITS THAT ARE AVAILABLE. WE NOW MAKE OUR OWN O-RINGS.

ONE OF THE KITS, NSN 5180-01-329-8736, COMES WITH LOW TEMPERATURE O-RING MATERIAL GOOD FOR APPLICATIONS UP TO 200°F.

3

THE OTHER KIT, NSN 5180-01-329-8737, HAS HIGH TEMPERATURE MATERIAL GOOD FOR APPLICATIONS ABOVE 200°F.

**MATERIAL**

PN 420-V,  
VITON 75,  
ASTMD-2000,  
2 HK 715,  
B35 C12,  
F15

**DRILL BITS**  
1/16 & 1/8-IN  
DIAMETER

**O-RING SIZES**

1/8, 3/16, 1/4,  
5/16-IN  
DIAMETER,  
3-FT LENGTH  
CORD STOCK

**CONNECTOR**

1/16 & 1/8-IN  
DIAMETER,  
4-IN LENGTH

2

HERE'S WHAT'S IN THE KIT:

**MATERIAL**

PN 420,  
BUNA-N 70,  
ASTMD-2000,  
5 BG, -715,  
A14, B14,  
B014,  
E034 F17

**DRILL BITS**  
1/16 & 1/8-IN  
DIAMETER

**O-RING SIZES**

1/8, 3/16, 1/4,  
5/16-IN  
DIAMETER,  
3-FT LENGTH  
CORD STOCK

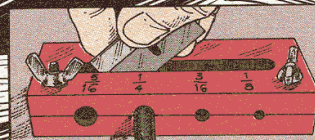
**CONNECTOR**

1/16 & 1/8-IN  
DIAMETER,  
4-IN LENGTH

4

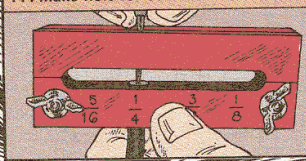
EACH KIT ALSO COMES WITH A 0.07-OZ TUBE OF ADHESIVE, INSTRUCTIONS, MATERIAL SAFETY DATA SHEETS AND A SPLICING TOOL FOR CUTTING THE CORD STOCK AND MAKING THE DOWEL AND HOLE CONNECTION. THE DOWEL AND HOLE MAKE IT EASY TO LINE UP THE ENDS OF THE CORD STOCK AND CREATE A TIGHT JOINT.

WE USE THE O-RINGS ON ELECTRIC MOTORS, PUMPS, VEHICLES, AIR CONDITIONERS, REFRIGERATORS, AND A VARIETY OF OTHER EQUIPMENT. THE O-RINGS ARE NOT FOR USE ON AIRCRAFT OR MISSILE COMPONENTS.

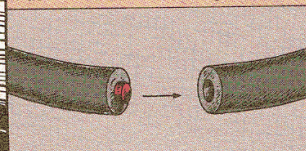


Use splicing tool to cut cord stock ...

... make hole for connection



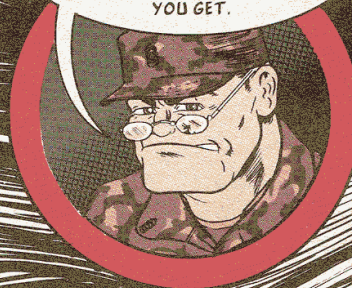
Push dowel into hole for tight fit



IN SOME CASES WE CAN INSTALL THESE O-RINGS WITHOUT TEARING DOWN A PIECE OF EQUIPMENT. YOU CAN'T ALWAYS DO THAT WITH A MANUFACTURED O-RING.

CW2 FOREST A. PARKER  
WYARNG

SOUNDS LIKE YOU'VE FOUND THE SPLICE OF LIFE. BUT IF YOU USE A SPLICED O-RING IN A CRITICAL PLACE, LIKE IN A HIGH-PRESSURE HYDRAULIC LINE, REPLACE IT WITH A MANUFACTURED O-RING FIRST CHANCE YOU GET.



## Arms Room Help

If humidity is high in your arms room, order a dehumidifier, NSN 4440-00-566-0616. It will suck up much of that moisture. Use Chap 63 of CTA 50-909 as your ordering authority.

WHEW...  
IT ISN'T THE  
HEAT, IT'S THE  
HUMIDITY!

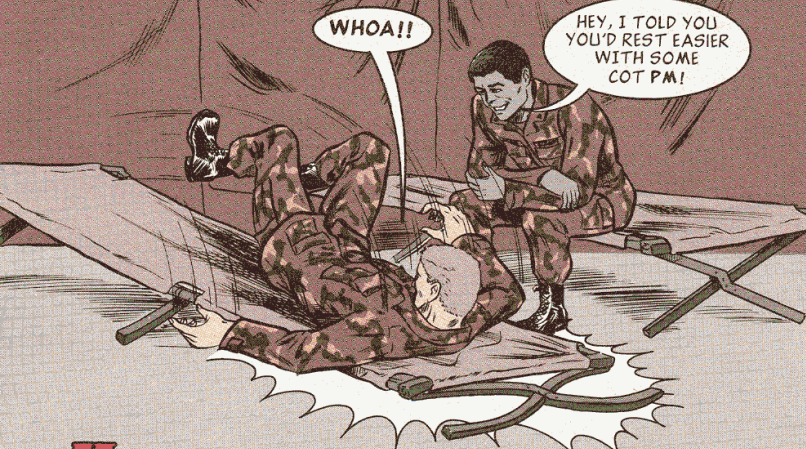


## STE/ICE-R VTM

There's no need to order a new vehicle test meter (VTM) for your STE/ICE-R test set. You won't get it. TACOM says the SMR code should be XAOFD. That means you have to get a complete STE/ICE-R test set, NSN 4910-01-222-6589, to get the VTM.

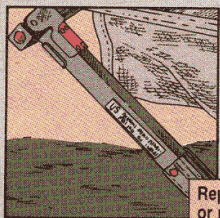


# Lois



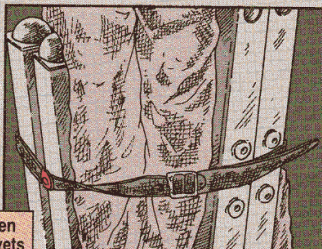
**H**ere are a few things you can do for your aluminum cot to help you get a good night's sleep. Look for:

**1. Broken or missing rivets**—There are no replacement rivets for the aluminum cot. You can replace a rivet with machine screw, NSN 5305-00-050-9236; washer, NSN 5310-00-933-8120; and nut, NSN 5310-00-934-9760.



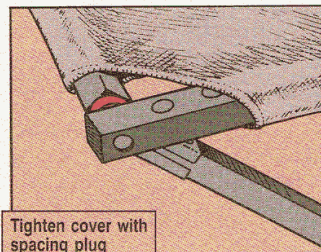
Replace broken or missing rivets

**2. Damage to the rivet holding the tiedown strap**—Replace it with self-tapping screw, NSN 5305-00-432-4251, and washer, NSN 5310-00-809-3078.



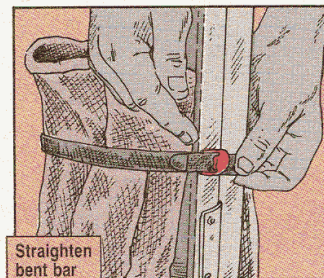
# About Cots

**3. Sinkin' and saggin' cover**—Use spacing plugs, NSN 7105-00-935-0434, between the end stick and frame to tighten the cover. A new cover may be tight enough without the plugs, so store spacers in an end stick . . . until you need 'em.



Tighten cover with spacing plug

**4. Bent bar on tiedown strap**—If the bar is bent when you slip the tab through the slot, the tab gets caught and tears off. Straighten the bar with a screwdriver so that the tab will glide through easily.

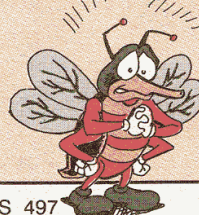


Straighten bent bar

## New Deet Can't Be Beat

**D**eet cream insect repellent repels insects much longer than the old liquid. Use NSN 6840-01-284-3982 for a box of twelve 2-oz tubes. Use the 2-oz bottle of liquid Deet, NSN 6840-00-753-4963, only on the insect repellent jacket used in the tropics. Use NSN 6840-01-278-1336 for a box of 12 cans of repellent for treatment of uniform, tentage and mosquito netting.

## Insect Bar Frame



**U**se NSN 7210-00-267-5641 to get a wooden insect bar frame to use on the collapsible canvas cot. Get the insect netting with NSN 7210-00-266-9736.



# PACK 'EM RIGHT

POOR PACKING OF YOUR NBC MASK IN ITS CARRIER CAN RUIN THINGS LIKE THE SEAL AND EYELENSES ... PLUS LEAVE IT A TANGLED MESS WHEN YOU SUDDENLY NEED IT.

YOU CAN PACK IT IN, BUDDY ...

... SINCE YOU DON'T KNOW ANYTHING ABOUT PACKING A MASK!

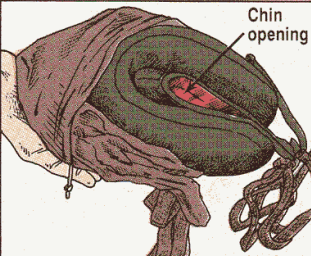
Here's the scoop on proper packing:

## M17 Mask

Hold the hood away from the facepiece before you fold it over the facepiece. That smooths out the hood so it won't be so wadded that air can't keep it dry and prevent dry rot.

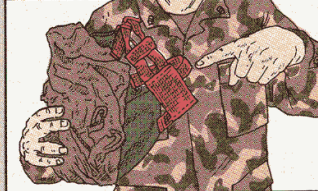


Fold the hood so it doesn't cover the chin opening. That way the hood falls naturally in place when you snatch the mask out of the carrier.

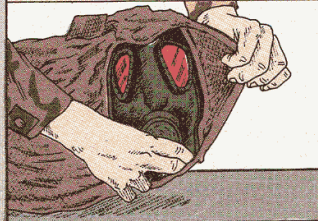


Chin opening

Let the head harness hang free when you put the mask in the carrier. If the harness is pulled to the side, it loses its snap and can't hold your mask tight.



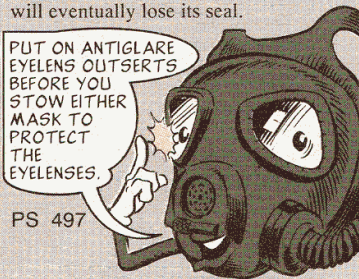
Put the mask upright in the carrier so the lenses face up and out of the carrier. That way the mask will already be in the position to be put on when you pull it out of the carrier.



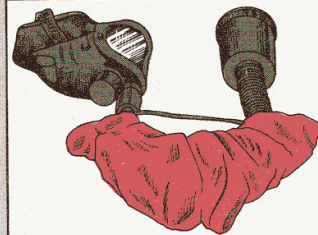
## M24/M25A1 Mask

Use the faceform if your mask will be left in the carrier for more than a few days. No faceform means the facepiece will eventually lose its seal.

PUT ON ANTIGLARE EYELENS OUTSERTS BEFORE YOU STOW EITHER MASK TO PROTECT THE EYELENSES.



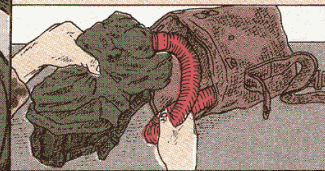
The M24's hood should be allowed to hang on the hose. Fold the hood to the side of the facepiece and wrap the hood's straps and neck cord around the hose.



Leave the M25A1's hood attached to the facepiece and wrap it around the facepiece.



On both masks, fold the hose in the facepiece. Put the mask upright in the carrier with the eyelenses facing away from the canister.

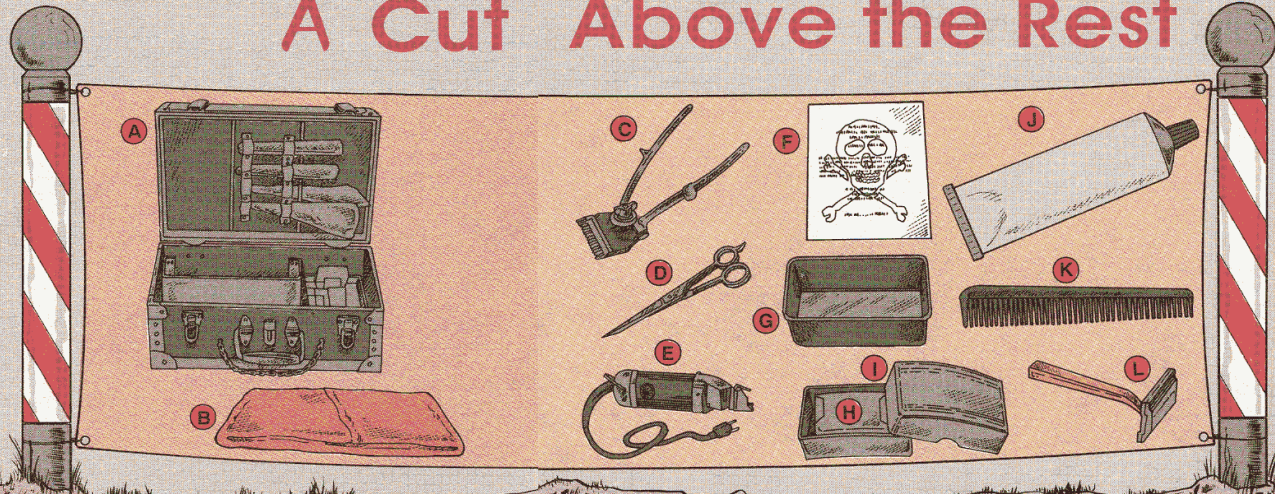






# A Cut Above the Rest

**W**ant to be a barber who's a cut above the rest? A list of components for your barber kit, NSN 3590-00-058-1837, can't be found in any pub. But, here's your shortcut to barber kit NSNs.



Item	NSN	Qty
<b>A</b> Case	3590-00-240-2926	1
<b>B</b> Cloth	3590-00-162-5630	1
<b>C</b> Hand clipper, size 0, with blade set	3590-00-170-8462	1
<b>D</b> Shears	3590-00-161-6913	1
<b>E</b> Electric clipper with accessories: (accessories not available separately)	3590-00-892-4525	1
<b>F</b> Disinfectant	6840-00-753-4797	1
<b>G</b> Disinfecting tray	3590-00-926-3838	1
<b>H</b> Soap, box of 72	8520-00-129-0803	1
<b>I</b> Soapbox	8530-00-261-8275	1
<b>J</b> Shaving cream, box of 12	8520-01-303-4039	1
<b>K</b> Hair comb	8530-00-543-7727	1
<b>L</b> Disposable Safety Razor, box of 360	8530-01-347-9576	1

## M13 Decon ...

## Train Without DS2

**T**here's an easier way to train with the M13 decon, NBC NCOs. The M13 practice decon apparatus (DAP) eliminates the problems of storing, handling and training with DS2, because the DAP comes empty — no DS2 to worry about.

Order the complete practice DAP with NSN 4230-01-345-5172. Order just the training container with NSN 4230-01-298-1044 for 1/4 the price of the complete DAP.

Fill the training container with water or a mixture of equal parts water and antifreeze for cold weather. If you use antifreeze, get permission from your local environmental coordinator.



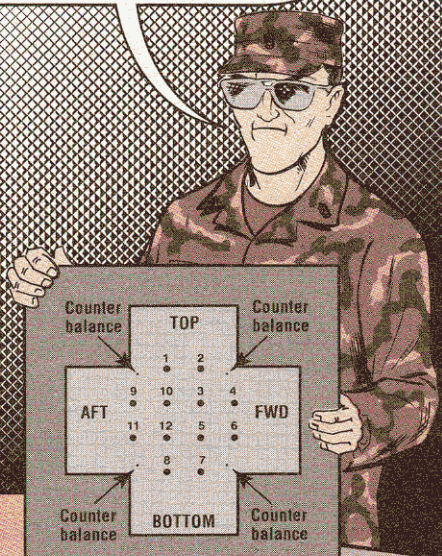


# Tail Rotor Bolt Board

WHEN YOU REMOVE THE TAIL ROTOR ON BLACK HAWKS, IT'S EASY TO GET THE RETENTION PLATE HARDWARE MIXED UP. WHEN THAT HAPPENS YOU'VE GOT TO STOP AND FIGURE OUT WHAT GOES WHERE.

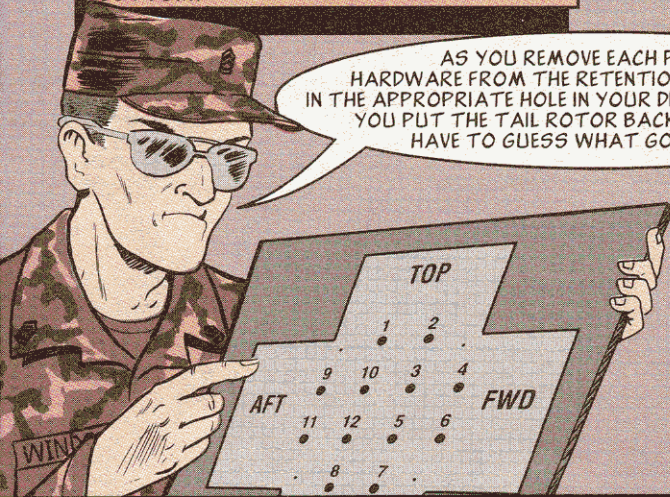
?

BY MAKING A BOLT DISPLAY BOARD, YOU'LL MAKE SURE ALL THE HARDWARE IS REINSTALLED IN THE RIGHT HOLES.



MAKE THE BOARD FROM A THIN PIECE OF STYROFOAM OR PLYWOOD. CUT OUT A 2-FT SQUARE PIECE AND DRAW IN THE SHAPE OF A TAIL ROTOR RETENTION PLATE. DRILL  $\frac{1}{2}$ -IN. HOLES FOR EACH BOLT AND MARK THE BOARD FWD, AFT, TOP AND BOTTOM.

AS YOU REMOVE EACH PIECE OF HARDWARE FROM THE RETENTION PLATE, PUT IT IN THE APPROPRIATE HOLE IN YOUR DISPLAY BOARD. WHEN YOU PUT THE TAIL ROTOR BACK ON, YOU DON'T HAVE TO GUESS WHAT GOES WHERE.

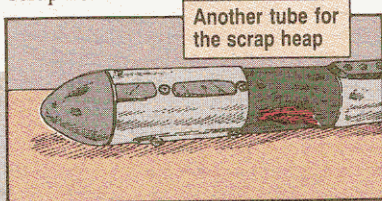




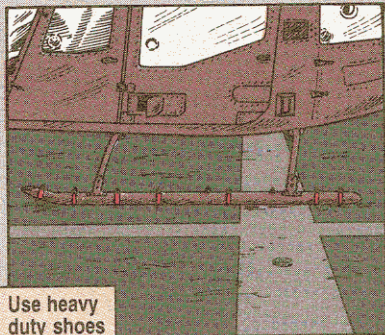
# WEAR YOUR SHOES

You can watch 10 grand sprout wings and fly away every time you replace skid tubes.

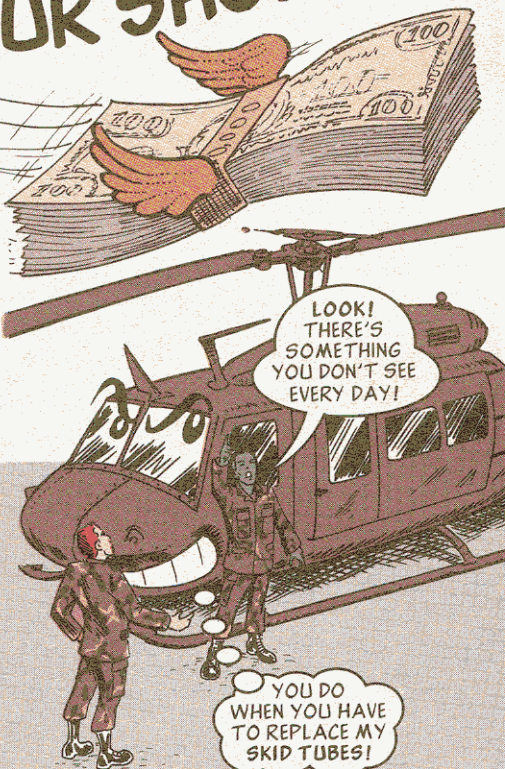
Skid tubes live a rough, short life, especially in rocky areas. A few dents put them beyond tolerance and onto the scrap heap.



Problem is, the shoes listed in your parts manual won't hold up. They're too flimsy. So, to save a ton of money and aggravation, use heavy-duty, full-length shoes. Order them for your OH-58s with NSN 1630-01-301-0945. That NSN brings a right and left shoe.



PS 497



For a pair for your Huey, use NSN 1630-01-375-1503. You can also get the Huey shoes separately. Order a left with NSN 1630-01-374-4111 and a right with NSN 1630-01-374-4110. The FEDLOG nomenclature for the shoes says *tube*, but these NSNs will bring the shoes.

There's no NSN for Cobra shoes yet, but you can order them from S9C on DD Form 1348-6 using CAGE 8V160 and PN 209-249-0949. For just a left shoe add a LH after the part number; for just a right, add RH.

55

APR 94

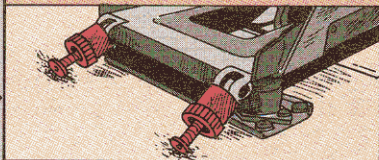


# Protect Structural Panels

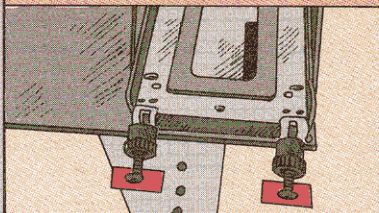
When a radio or other avionics equipment is removed from your bird, the mount thumbscrews hang down and rest on the mount panels.

WHEN YOU REMOVE ME, OR ANY OTHER AVIONICS EQUIPMENT, DON'T FORGET THE THUMBSCREWS.

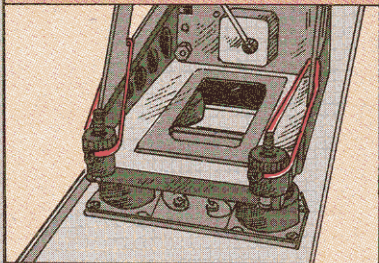
Then, when the bird flies or the engine is run up, the thumbscrews vibrate and bounce. Enough vibration wears holes in the panels.



To prevent damage, put some self-adhesive tape, NSN 8135-00-923-0591, directly on the structural panels under the thumbscrews.



Or, tie down the thumbscrews with electrical tie-down straps. NSN 5975-00-5700-9598 brings 100.





# SAFE FUEL CELL REPAIR

HERE'S THE  
SAFETY EQUIPMENT YOU NEED  
TO MAKE FUEL CELL REPAIRS.

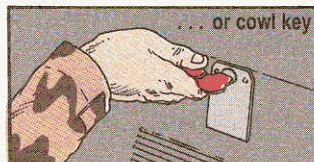
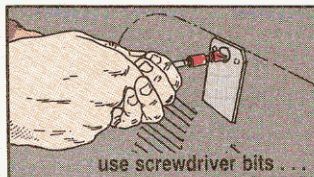
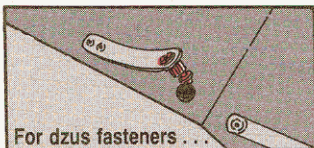
Item	NSN
2 Respirator Assemblies	4240-01-251-9403
Breathing Pump	4310-01-084-9665
Power Hose Inlet	4240-01-251-8159
Blower	4140-01-105-6326
Grounding Cable	6150-01-147-0359
Conductive Ducting	4720-01-324-0233
Gas Indicator	6665-01-294-8859

## Dzus Tools

**A** screwdriver is not the tool for tightening a dzus fastener. A screwdriver really wallows out the fastener's concave slot.

Avoid the work of replacing mangled dzus fasteners by using the right tool — either screwdriver bit, NSN 5120-00-321-4508, or cowl fastener key, NSN 5120-00-604-5007.

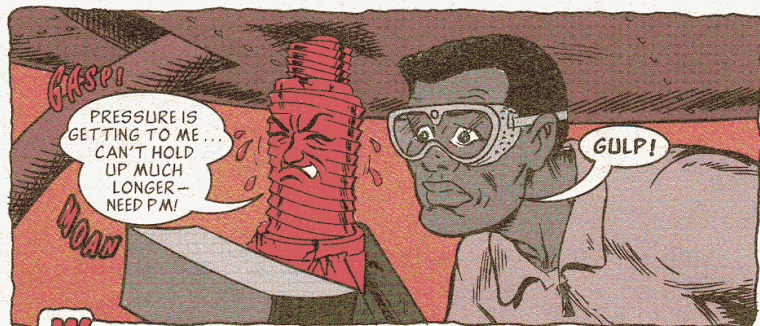
The bit is part of your general mechanics aircraft tool kit. The cowl fastener key is authorized by Appendix A of CTA 50-970.



HMMPH!  
I'LL GO  
WHERE  
I'M  
NEEDED!



# KEEPING JACKS UP



**W**hen you jack up your aircraft and start crawling around and under it, you better be sure the jacks can do the job.

If a worn-out or poorly maintained jack fails, neither you nor your aircraft may get back up in one piece.

Inspect and lube all hydraulic jacks periodically as called for in your TMs.

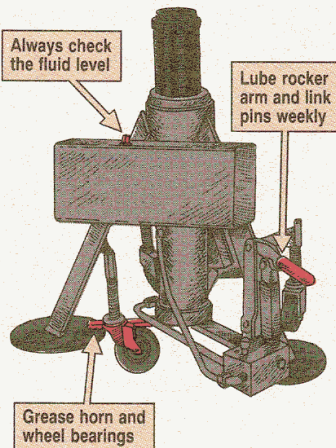
## Lube Requirements

Check the hydraulic fluid reservoir of your 3-ton tripod jack before use. Make sure the fluid level is within a half-inch of the bottom of the filler plug hole. Top it off with MIL-H-5606 or MIL-H-6083 hydraulic fluid if it's low.

Lube the pump rocker arm and link pins weekly with oil, MIL-L-7870. Brush a light film of the same oil on the jack's rams and caster legs monthly.

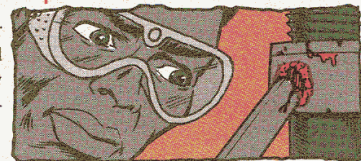
Lube the leg caster horn bearings and wheel bearings with grease, MIL-G-10924. Lube horn bearings monthly and wheel bearings quarterly.

Of course, don't wait for scheduled lube service if any of the lube points look dry or show evidence of lube contamination.



## Inspection Requirements

At least every 3 months, eyeball your jack's components for defects and cracks. If you find any, don't take any chances—replace the parts. After repair, get the jack assembly tested.

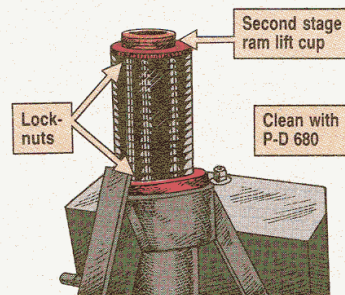


## Cleaning Requirements

Before each scheduled lubrication and inspection, give your jacks a good cleaning.

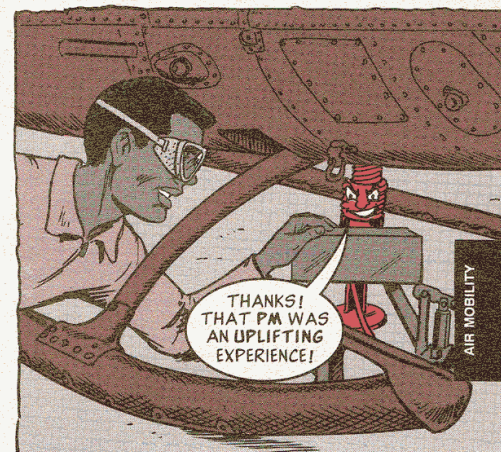
Use a mild detergent solution to wash only the painted surfaces of jack legs, outer cylinders, head, base and foot pads. The same detergent you use to wash your aircraft—MIL-C-25769—will do the job. NSN 6850-00-935-0995 gets a 55-gal drum of the cleaner.

Clean the second stage ram lift cup, ram locknuts and pump assembly with a clean cloth lightly moistened with P-D-680 drycleaning solvent.



## Safety Requirements

Be careful not to get any solvent or cleaning compound into the hydraulic system or on lubricated areas. Solvent and cleaning solutions not only dilute hydraulic fluid and lubricants, they cause rapid wear and damage to components.





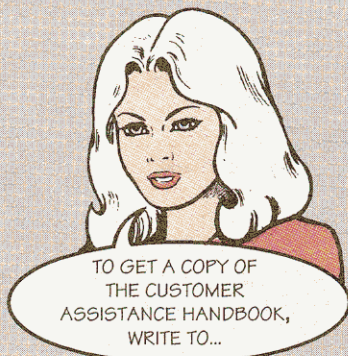
## Back to the Future

**T**he Defense Logistics Agency (DLA) processes, manages and issues many class 9 items. These are items with S9- as the first two digits in the Source of Supply (SOS) column of the AMDF.

If you get status back on a requisition and the estimated shipping date's too far in the future, you can ask DLA to give you a better shipping date. You do this by submitting a supply assistance request (SAR).

By sending in a SAR, DLA will know that your requisition is MORE urgent than similar others on back order.

Check out DLA's Customer Assistance Handbook (Page 3-1) for more information on how to send a SAR.



**Defense Logistics Agency  
HQ, Cameron Station  
ATTN: MMARC  
Alexandria, VA 22314**

Or call:

**DSN 284-7871  
Commercial (703) 274-7871**

## Reduced Prices on Repair Parts

**T**he Army has just cut prices on many SFDLR items, much like local hardware stores do when they have big sales.

Army depots have identified several long-lead-time items that are new or like-new for a reduced price initiative (RPI).

For example, on the first list is a \$410,784 UH-1 aircraft engine for \$103,370. Also, there's a \$1,114 noise suppression kit for the 10-KW generator for only \$159.

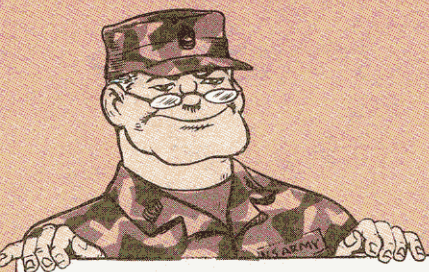
To get a copy of the current RPI listing, call:

**Toll-free 1-800-878-2869  
DSN 645-0499  
Commercial (205) 955-0499**

You'll get a recording, so just leave your name, address, telephone number and RPI request.

If you have questions on how to requisition these items, get in touch with your local supply logistics assistance representative (LAR).





PS 500

In July, PS Magazine will print its 500th issue. Since June 1951, PS has stood shoulder to shoulder with the men and women who maintained equipment through Korea, Vietnam, Grenada, Panama, Kuwait and Somalia. We've been cold and miserable and we've been hot and miserable. We've built up and we've drawn down just as the Army has.

All along, though, we've had just one objective--to provide the latest, most accurate preventive maintenance information available to the world's best soldier, you.

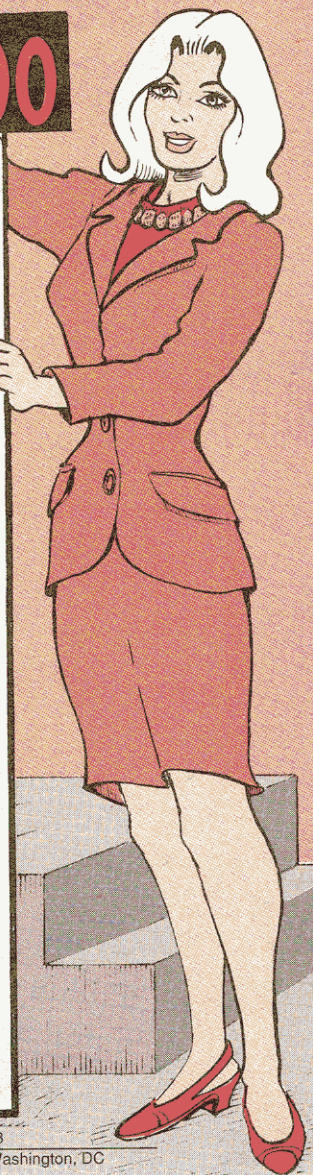
We think we've done a good job. But we need to know what you think.

- o How has PS benefitted you?
- o Has the information meant a promotion?
- o Has it helped your unit pass an inspection?
- o Has it helped prevent an accident or save a life?
- o Has it saved the Army money?
- o Has it made your job easier or let you complete one faster?

o Do you keep a library of issues on-hand to provide help in doing your job?

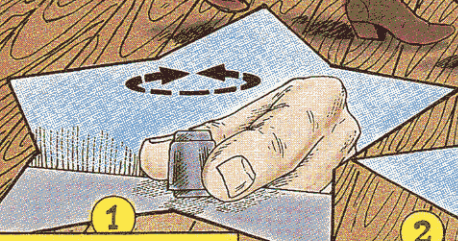
We'd like to know just how you use PS. Here are our address and fax number. Take a minute to help PS celebrate 500 issues of preventive maintenance:

**PS, The Preventive Maintenance Monthly**  
**Bldg 3325**  
**Redstone Arsenal, AL 35898-7466**  
**Fax: DSN 645-0961**  
**commercial 205-955-0961**

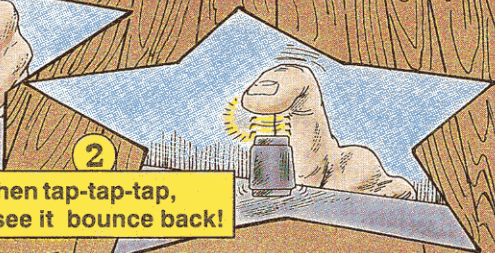




# Give Axle Housing Breathers the Ol' Two-Step...



Give 'er a twist, that goes like this...



...then tap-tap-tap, to see it bounce back!

## ...or Axle Seals Will Leak!