

Issue 543

PS

February
1998

THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-543



PM
ENLIGHTENMENT
... SEE PAGE 27

Approved for
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PM Makes Sense

Preventive maintenance lets your equipment operate better and longer. It can mean the difference between victory and defeat on the battlefield.

So it makes sense that you make PM a regular habit—sort of second nature. Check out your equipment while you're using it. Make every operation a sort of Be-Your-Own-Inspector deal.

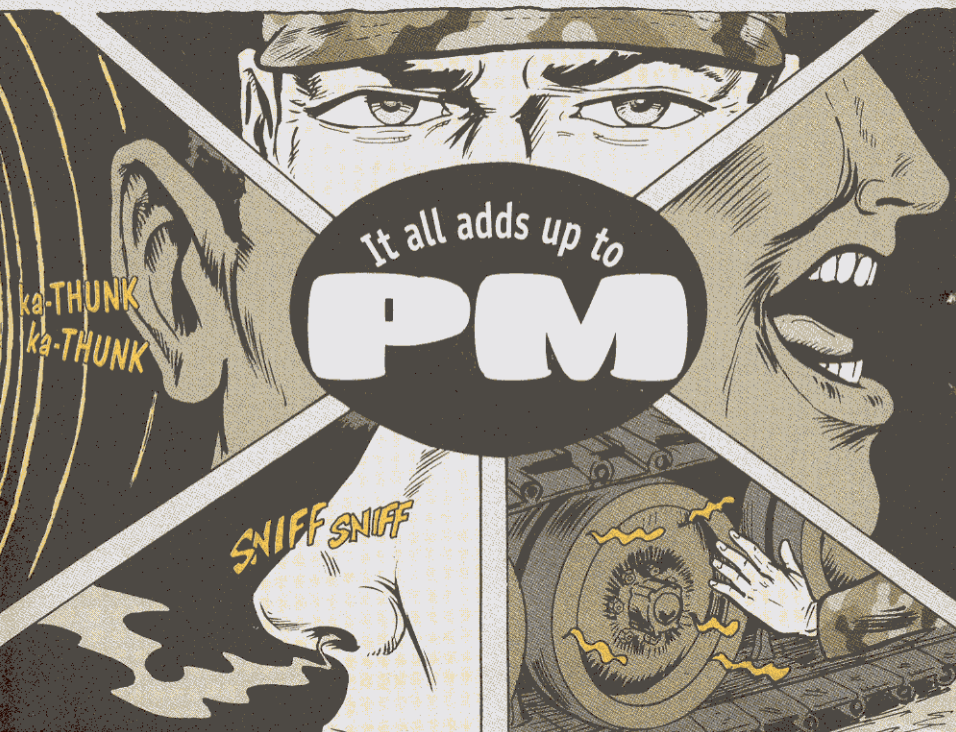
Like, for instance, when you're driving a vehicle, or firing a gun, or doing any one of the many things your MOS calls for you to do.

If your equipment doesn't sound right, or gives off an unusual smell, or feels too tight or too loose, check it out then and there if you can. Or make a note to do it first chance you get. If you don't have the authority to fix it yourself, tell the guy who does.

The important thing is to catch the problem early. Most anything going bad can easily be fixed if it's spotted in time.

In other words, keep your senses in tune with your equipment—eyes, ears, nose and hands to detect and fix, and mouth to yell for help if you need it.

It just makes sense.





THE PREVENTIVE MAINTENANCE MONTHLY

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TB 43-PS-543, 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, questions on maintenance and supply problems, and questions or comments on material published in PS. Just write to:

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General, United States Army Chief of Staff

Official:

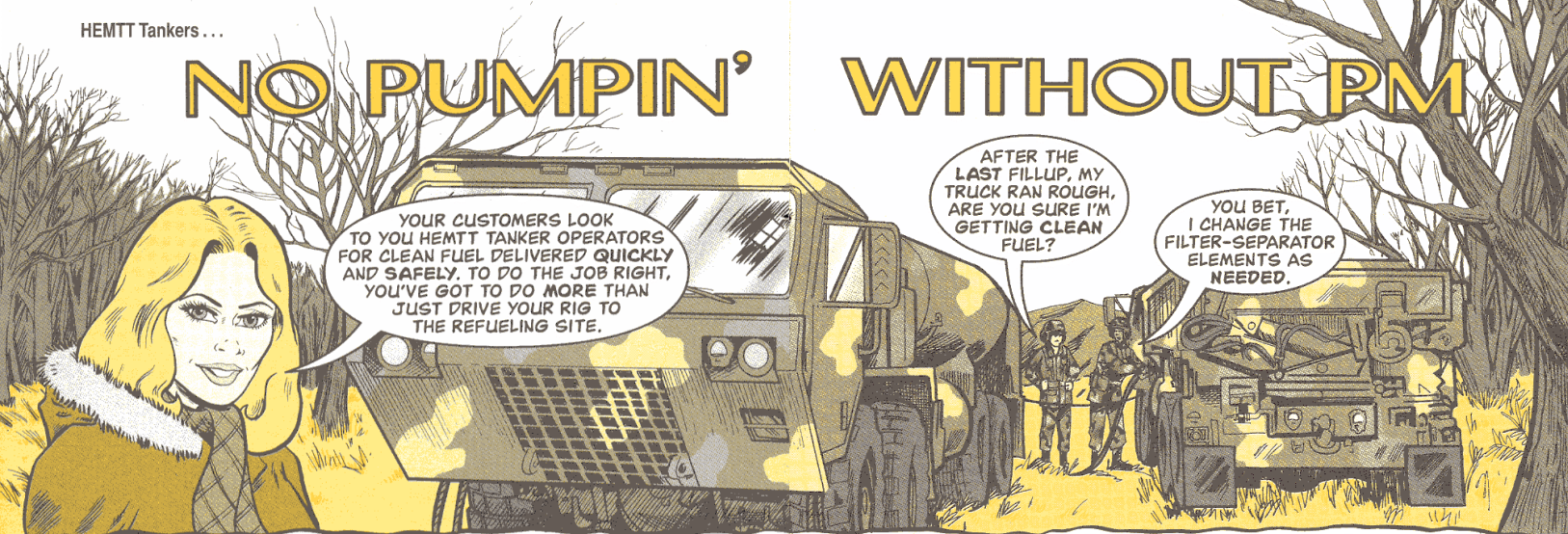
Joel B. Hudson
JOEL B. HUDSON

Administrative Assistant to the Secretary of the Army
04341

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NO PUMPIN' WITHOUT PM



YOUR CUSTOMERS LOOK TO YOU HEMTT TANKER OPERATORS FOR CLEAN FUEL DELIVERED QUICKLY AND SAFELY. TO DO THE JOB RIGHT, YOU'VE GOT TO DO MORE THAN JUST DRIVE YOUR RIG TO THE REFUELING SITE.

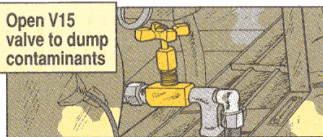
AFTER THE LAST FILLUP, MY TRUCK RAN ROUGH, ARE YOU SURE I'M GETTING CLEAN FUEL?

YOU BET, I CHANGE THE FILTER-SEPARATOR ELEMENTS AS NEEDED.

Open V15 Valve

Open the V15 valve before you even think of pumping fuel. That's **supposed** to get rid of water and other contaminants that have been filtered out of the fuel you've pumped.

Open V15 valve to dump contaminants



We said "supposed to" because the fuel filter-separator elements won't do the job forever. They've got to be changed at least every two years (some units say every six months when the fuel being pumped is known to be going bad).

Eyeball the differential pressure gauge for a check on clogging. If the gauge shows between 15–20 psi, the filters are clogged and must be changed.

Differential pressure gauge show clogging?



If you get gunk out of the V15 valve, great! If nothing comes out, though, chances are the V15 valve is clogged—which backs up more water and gunk.

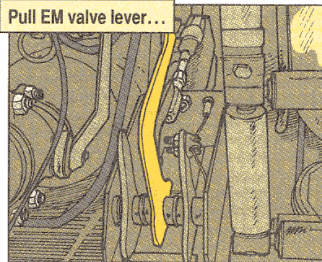
As soon as the tanker is empty, or when it's convenient to unload the fuel, have your mechanic disassemble and clean the valve—and replace the filter-separator elements.

Practice Emergencies

Exercise the emergency fuel shutoff system before you leave the motor pool. It's easy:

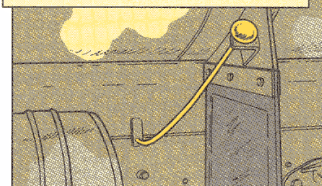
1. Pull back on the MANUAL CONTROL EM VALVE lever. That opens the V1 emergency valve, letting you dispense fuel.

Pull EM valve lever...



2. Pull out the EMERGENCY SHUTOFF control. That should throw the MANUAL CONTROL EM VALVE forward, closing the V1 valve. That stops fuel flow during a spill or fire.

...then EMERGENCY SHUTOFF control



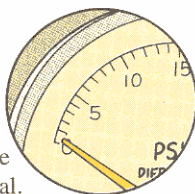
If the manual control lever doesn't move, tell your mechanic. It needs adjustment, lube or replacement. Make sure your mechanic oils the lever during lube services, too.

Old Gauges Need Replacing

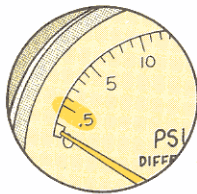
Operators, many M978 fuel tankers still have the old-style differential fuel pressure gauges. They're not as reliable as the newer, more durable gauges that come with NSN 6685-01-362-4272.

The old gauges start at 5 psi, the new gauges start at .5 psi. So the new gauges help you keep up better with the dirt in your filters.

As the fuel filter gets dirty, the pressure differential should increase. That's normal. The new gauge lets you note pressure differences under 5 psi.

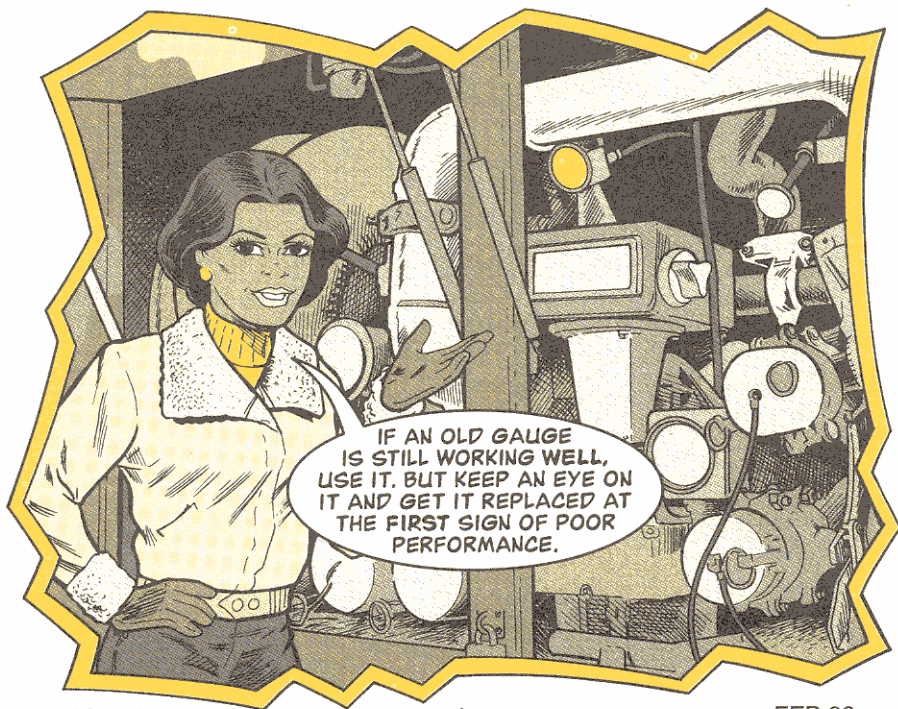


Old gauge



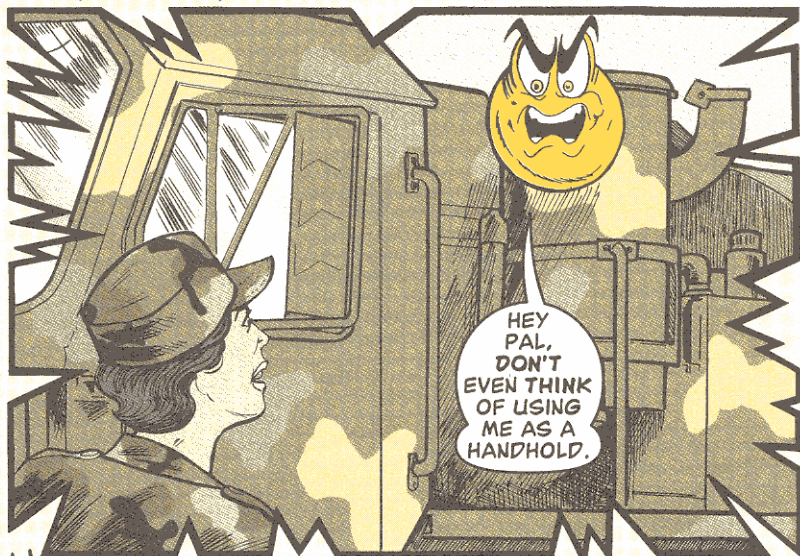
New gauge

If the old gauge reads zero or less when you're pumping fuel, the gauge is bad. Let your mechanic know that it needs to be replaced with the newer gauge, shown as Item 12, Fig 291 of TM 9-2320-279-20P.



IF AN OLD GAUGE IS STILL WORKING WELL, USE IT. BUT KEEP AN EYE ON IT AND GET IT REPLACED AT THE FIRST SIGN OF POOR PERFORMANCE.

PRESCREEN'S NOT A HANDLE



Never use the HEMTT engine's air filter prescreen as a handhold—you could yank it off!

Then leaves, gravel and trash can clog or tear the air filter element. If the engine gets too little air, or too much dirt, it suffers.

Next time you have to pull yourself up, use only the handhold between the fender well and air filter bracket assembly.

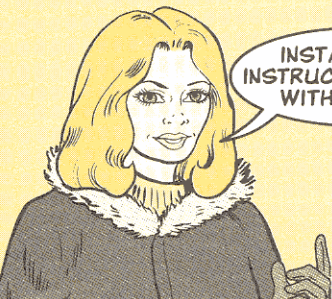
If the prescreen comes off, get it put back on before you move out again. Don't risk engine problems.

M915 Coolant Filter Kit

Give your M915 tractor truck's engine a longer life by installing a coolant filter kit like the one used on the M915A1.

The filter keeps the cooling system clean and helps prevent corrosion.

Order the kit with NSN 2940-01-184-1877. Get replacement filters with NSN 4330-00-274-4712.



INSTALLATION
INSTRUCTIONS COME
WITH THE KIT.

REINFORCE RING MOUNT

Dear Half-Mast,

At NTC we found that the vibration of the M36 machine gun ring mount was breaking apart our 2½- and 5-ton truck cabs. We had to replace one cab. Is there any way to stop this?

1LT B.A.

DO YOU
FEEL BETTER NOW
THAT I'VE REPLACED
THAT OLD RING
MOUNT?

YES, AND THE
CAB REINFORCEMENT
KIT HAS ME FEELING
ROCK SOLID!

Dear Lieutenant B.A.,

Yes, but the first thing you need to do is replace your M36 mounts with M66 mounts, NSN 1010-00-701-2810. The M36 is obsolete.

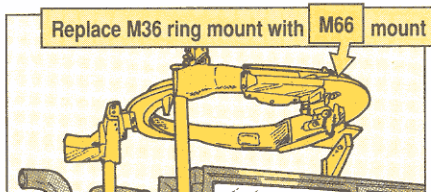
Then, to mount the M66 on the M939-series 5-ton trucks, your support will need the machine gun mounting kit, NSN 1005-01-432-3339, and the cab reinforcement kit, NSN 2590-01-436-9144.

For the M44-series 2½-ton and M800-series 5-ton trucks, your support will need mounting kit, NSN 1005-01-226-4589, and cab reinforcement kit, NSN 2590-01-322-2694.

Mounting instructions come with the kits.

Once the M66 is installed, unit maintenance can replace most parts of the reinforcement kit. The parts breakdowns are found in the -20P TMs for the trucks.

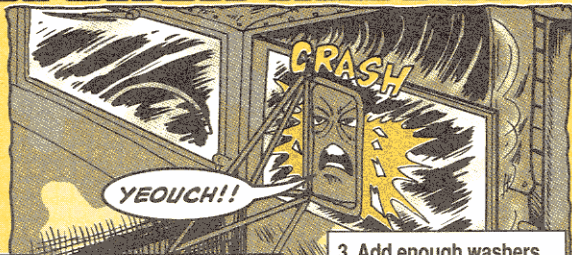
Half-Mast



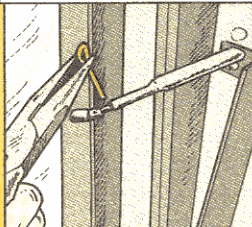
STOP BROKEN MIRRORS

Stop breaking rear-view mirrors with free-swinging cab doors by adding some washers to the check rod.

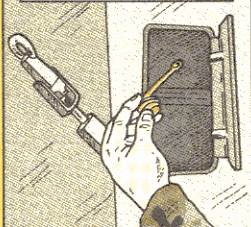
Here's how:



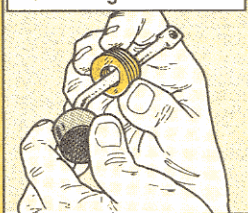
1. Open cab door. Remove cotter pin from check rod



2. Open vent door and pull out check rod



3. Add enough washers, NSN 5310-00-809-5997, to check rod to keep door from hitting mirror



4. Put check rod back in door. Lock it in place with cotter pin. If you need a new pin, get it with NSN 5315-00-059-0205

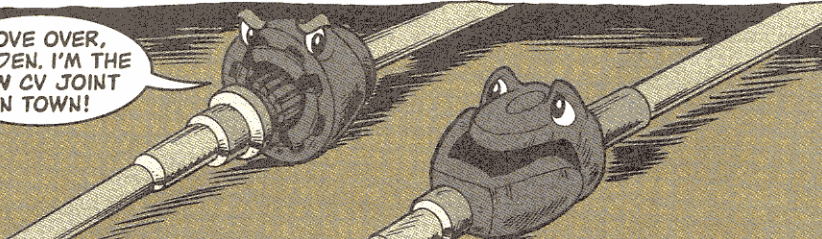
Crack Down on Tire Wear

Your M939-series truck just had a front-end wheel alignment, but excessive tire wear is still a problem. What gives? It could be the truck's Carden-style CV joints. They can cause premature tire wear, especially on older trucks.

To prevent that wear, have your mechanic put in new, more durable CV joints on both front drive shafts. NSN 2520-00-734-6985 gets the left side CV joint. NSN 2520-00-734-6984 gets the right side joint.

Those NSNs replace the CV joints shown in Fig 111 of TM 9-2320-272-20P.

MOVE OVER, CARDEN. I'M THE NEW CV JOINT IN TOWN!



Signal Switch May Be Saved

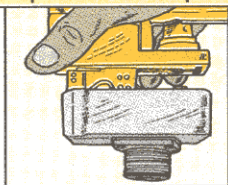
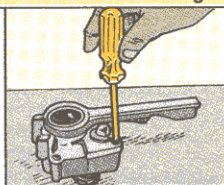


Many a turn signal switch ends up in the scrap heap when all that's wrong with it is dirty or corroded contacts.

You may be able to save the cost of a new switch by following these cleaning directions for the switch in HMMWVs and similar switches in other vehicles.

1. Disconnect the battery ground.
2. Disconnect the switch from the steering column.
3. Disconnect the wiring harness plug from the switch.
4. Remove the screws from the signal arm plate, and then remove the plate.

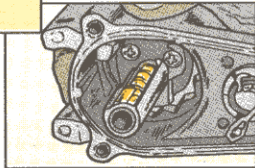
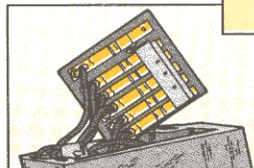
Remove screws from signal arm plate and remove plate



5. Spray the switch's contacts with spray lubricant/cleaner, NSN 6850-00-003-5295. The

cleaner has an alcohol base that dries quickly. **Do not sand the contacts** with sandpaper or an emery board. That only removes the contact's protective coating that fights corrosion.

Spray these contact areas



6. After cleaning, reassemble the switch and install it. If your vehicle's turn signal still doesn't work, replace it with the switch called for in your vehicle's parts manual.

Canvas Extension Needed?

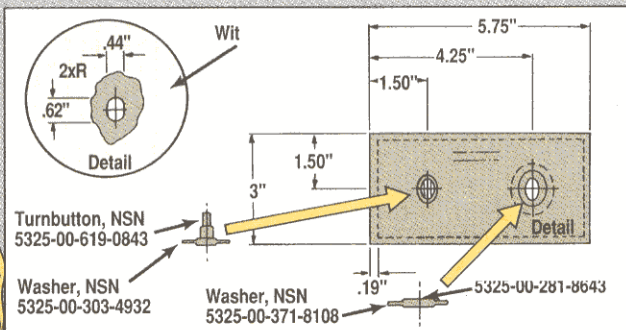


Take one HMMWV that's had the 3-point seat belt MWO applied. Try to install a new soft top cover. Discover that there's not enough canvas to fit around the B-pillar pad added by the MWO.

What do you do?

Get your canvas shop to make and add a 3 x 5³/₄-in extension to the soft-top cover. Or use the extension from the old cover if it's still serviceable. Then wrap the extension around the pad and B-pillar.

HERE ARE THE DIMENSIONS AND PARTS FOR THE EXTENSION.





No, we're not talking about getting in touch with your kinder, gentler side. We're talking about the stoplight switch on HMMWVs.

If the switch is not adjusted right, a light touch on the brake pedal may not make the stoplights come on, leaving your rear a target for following traffic.

So check to see if your stoplights work as designed. It's simple enough:

While another soldier watches at the rear of the vehicle, depress the brake pedal. The stoplight should come on within $\frac{1}{4}$ inch of pedal travel.

If the lights don't come on until the pedal's depressed more than $\frac{1}{4}$ inch, get your mechanic to do some stoplight switch maintenance.

The adjustment info for basic and A1 models is on Pages 4-98 and 4-99 of TM 9-2320-280-20-2.

For A2 models, see Pages 4-100 and 4-101.

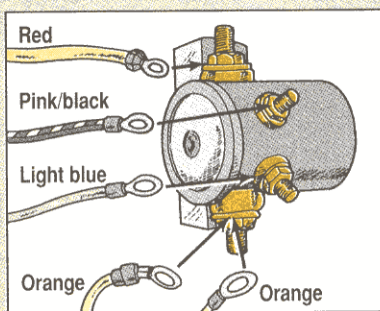
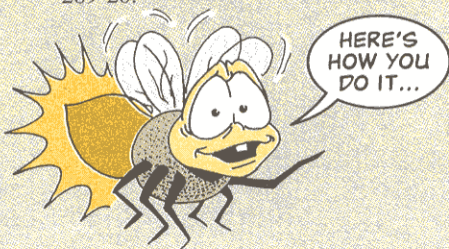
Note that the reference to $\frac{1}{2}$ inch of pedal travel on Page 4-98 is incorrect. One-quarter inch is right.

CUCV...

Hooking Up Glow Plug Relay

It's real easy to get confused when you hook up the glow plug relay on your CUCV.

That's because relay, NSN 5945-01-192-8653, doesn't resemble the relay shown on Page 4-25 of TM 9-2320-289-20.



Cool Down Before Hose Down

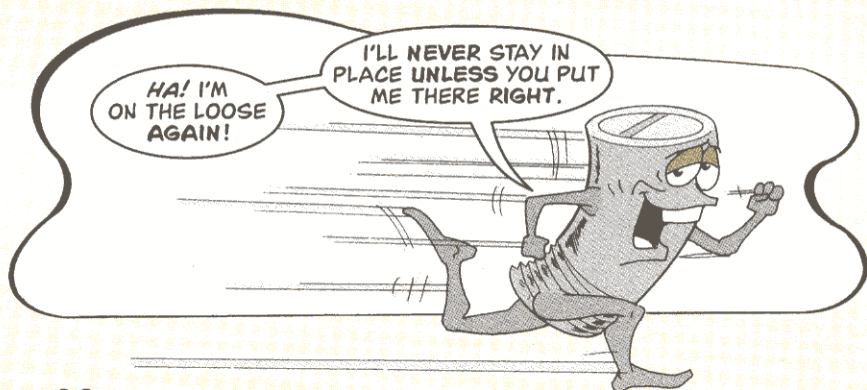
A well-meaning driver can destroy components of a hot engine by washing them with water. One example is the fuel injection pump on CUCV engines.

The casing on a hot pump cools off quickly when it gets sprayed with water. Problem is, the pump's inner shaft and bearings are still hot. The temperature difference cracks the pump's shaft.

So, let your vehicle's engine cool down about an hour before you hose it down.



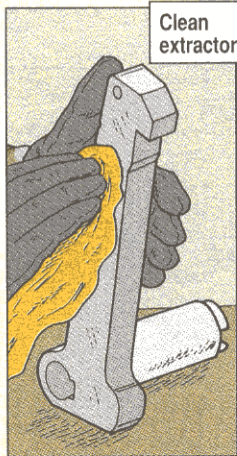
Keep Setscrew in Its Place



Mechanics, replacing a broken or missing setscrew, NSN 5305-12-189-0277, in the breech mechanism of the M1A1 tank's left extractor can be a real pain.

That's why you should make sure you do it right the first time.

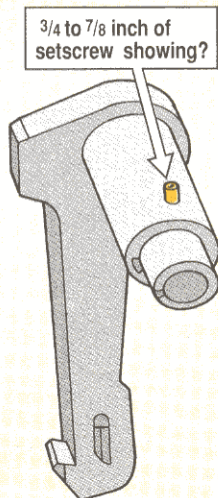
First, clean the extractor with dry cleaning solvent, NSN 6850-00-285-8011, and a clean rag, NSN 7920-00-205-1711. Cleaning gets rid of old sealing compound, carbon and grease that can keep the setscrew from bonding



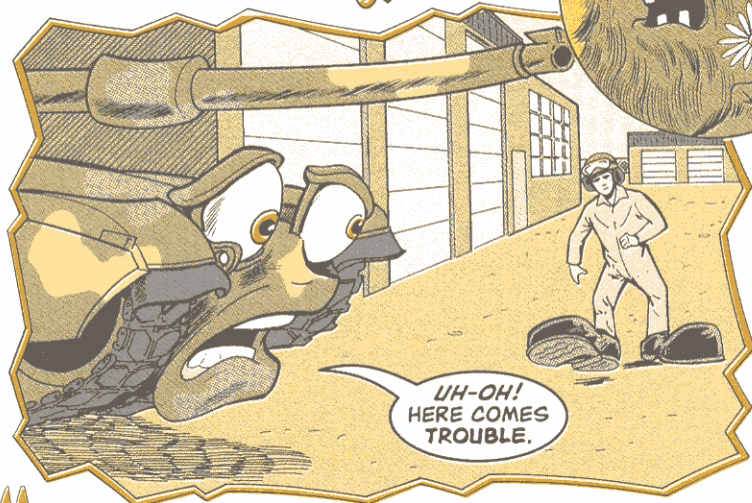
tightly to the extractor. Pay special attention to the threads in the setscrew hole.

Next, coat the threads of the new setscrew with sealing compound, NSN 8030-01-025-1692. If you forget the sealing compound, the setscrew will vibrate loose and fall out.

Finally, screw the setscrew in place. Leave between $\frac{3}{4}$ and $\frac{7}{8}$ inch of the set-screw showing. Get the setscrew too tight and it'll break. Then you'll have to drill it out.



Beware of Bigfoot



Mechanics have a nickname for many of you tank commanders: *Bigfoot*.

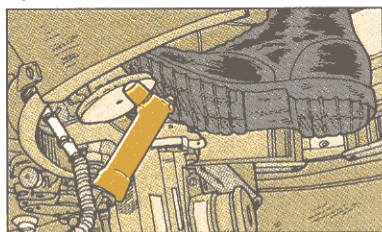
Your poorly placed feet are ripping cables and connectors loose, snapping switches, and breaking gauges.

Here are two of the biggest problem areas:

- **The M2 machine gun's elevation/depression handle.** The handle sticks out a bit, so watch out for it when getting into the tank. It's easy to hook the handle with your foot and snap it off.

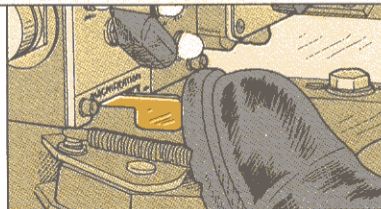
- **The gunner's primary sight (GPS) 3x/10x MAGNIFICATION switch.** If you've been using your foot to flip this switch, stop.

It may be quicker and easier than bending down to do it with your hands, but your foot exerts a lot more pressure. The switch snaps off and the GPS has to go to depot for repair.



Watch where you step when entering tank

Keep feet away from MAGNIFICATION switch



Shoe Your Sling

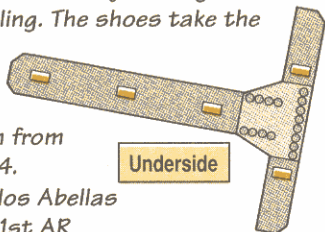
Dear Editor,

The M1 tank's engine and transmission sling, NSN 4910-01-086-6837, is too heavy to lug around the motor pool, so most mechanics end up dragging it where it's needed.

That puts a lot of wear and tear on the sling's rivets. Enough damage could let the sling collapse in the middle of a lift. You don't want to be nearby if that happens.

We've stopped the wear and protected the rivets by welding small aluminum shoes to the underside of the sling. The shoes take the wear instead of the rivets.

Position the shoes like this:



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

SSG Carlos Abellas
A Co, 1/81st AR
Ft Knox, KY

OH,
MY ACHING
RIVETS!

FROM THE DESK OF THE Editor



This sling idea will probably keep somebody out of one! Sergeant Abellas was also recognized and rewarded by the SMART suggestion program.

BDARs for Training, Too



Battlefield Damage Assessment and Repair (BDAR) is not just for the battlefield.

Para 4-40d of AR 750-1, Maintenance Management Update 14 (Aug 94), says "Non-destructive BDAR procedures **will** be incorporated into peacetime maintenance training."

In other words, low-risk BDAR repairs to equipment can be made as part of battlefield **training**, as long as your CO approves it. Low-risk means the BDAR repairs will not cause further damage to your vehicle **or** you.

BDAR kits are not part of any tool set. They must be bought at the unit's expense. Each kit contains the parts needed to make all battlefield repairs on disabled equipment—both low-risk and otherwise—to get it working again so the mission can be completed. Here are the kits:

If you'd like to learn more about BDAR training and tool requirements, have your pubs clerk order FM 9-43-2,

Recovery and Battlefield Damage Assessment and Repair.

M1-series tank	NSN 2510-01-327-4170
M2/M3-series Bradley/wheeled and special purpose vehicles	NSN 2510-01-327-4171
M88A1 recovery vehicle	NSN 5180-01-327-4172

Take Care of the Ramp

Drivers, don't move out until you're sure your Bradley's ramp is up and locked. That means checking the ramp indicator light.

If the ramp's left completely down or even partway down, you'll learn the hard way about equipment damage:

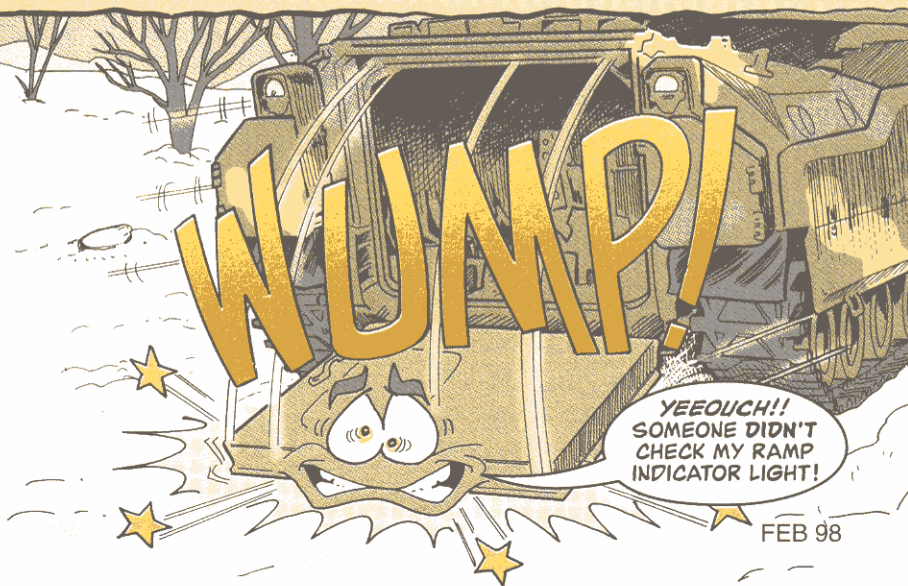
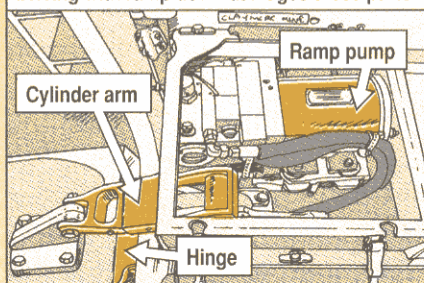
- ➡ Bumps and jars will warp a lowered ramp. That keeps the ramp from sealing properly.
- ➡ Locks get broken and hinges are damaged.
- ➡ Moving with an open ramp will also break the cylinder arm and ramp pump.

That ramp also serves as an armored door. If it's messed up and can't do its job in combat, your vehicle—and everybody in it—makes an inviting target.

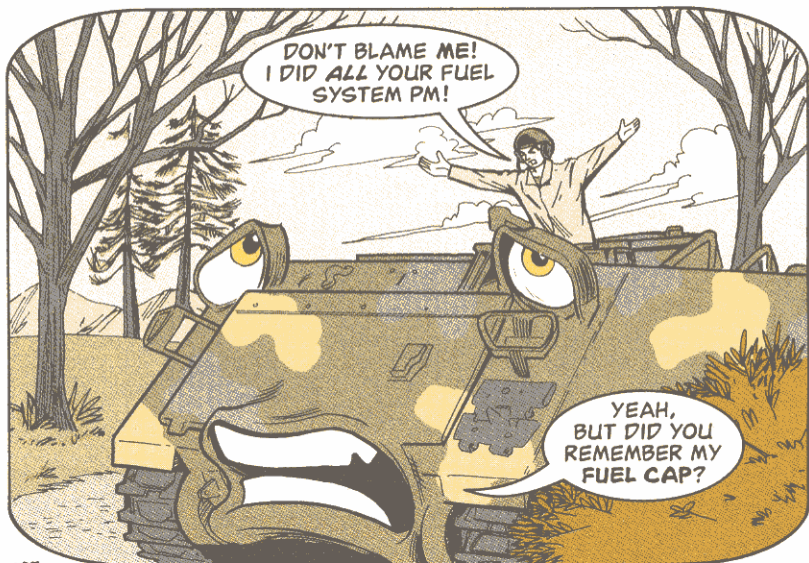
Double-check the ramp before you move out. Make sure it's up and locked. Just because you "think" the ramp is up won't cut it. Make sure!

Never drop the ramp too hard or on uneven ground, either. That puts a big strain on ramp hinges and can cause warping.

Driving with ramp down damages these parts:



The Fuel Cap's Important, Too

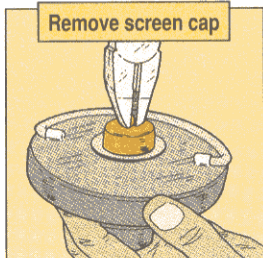


To keep fuel in your M113-series carrier moving takes good PM on every component of the fuel system—including the fuel cap, NSN 5340-01-083-5674.

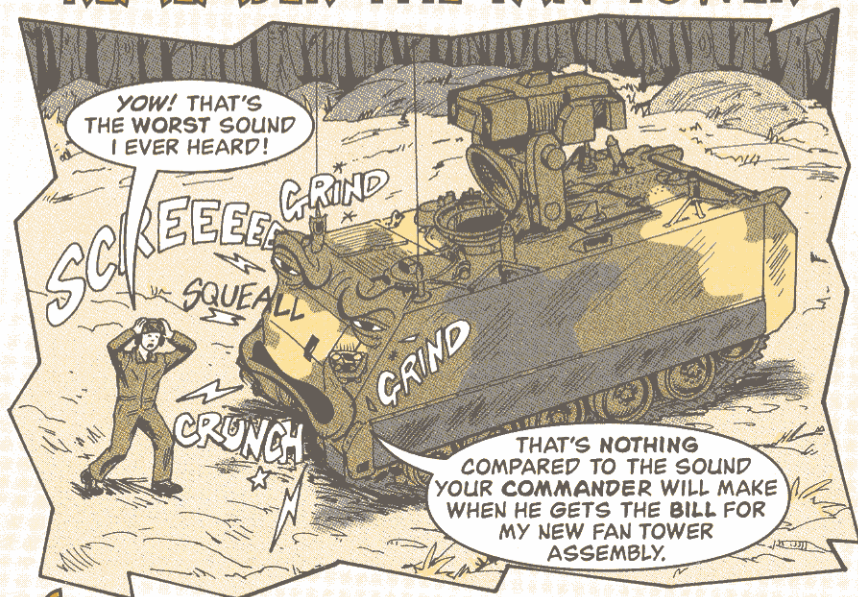
Some folks forget that there's a screen cap and rubber vent grommet under the head of the fuel cap. If it's not cleaned every six months—more often in dusty, sandy environments—the cap gets plugged with dirt. That creates a vacuum and causes fuel flow problems.

Here's how to clean the cap:

1. Grip the tang in the center of the fuel cap with a pair of pliers and pull the screen cap out.
2. Eyeball the grommet in the fuel cap. If it's damaged, replace the entire fuel cap with NSN 5340-01-387-4007. That gets a new fuel cap that is easier to install and remove.
3. Clean the screen cap with dry cleaning solvent.



REMEMBER THE FAN TOWER



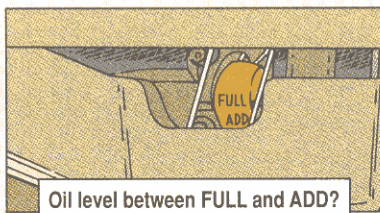
Crewmen, tie a string around your finger or write yourself a note, but don't forget to check the oil in your FISTV's fan tower assembly.

The fan tower is in a hard-to-reach place, so it's easy to forget. Unfortunately, when the oil level gets low enough, the bearings seize up and the fan tower is ruined.

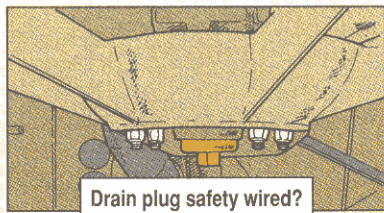
Until you get a replacement, your vehicle is NMC.

Eyeball the fan tower's sight glass once a week. If the level is between FULL and ADD, you're good to go.

While you're at it, make sure the drain plug is safety-wired in place. Otherwise, vibration shakes it loose and the fan tower loses all of its oil.



Oil level between FULL and ADD?



Drain plug safety wired?

PROOF IS IN THE PADDING.



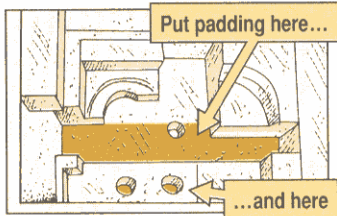
EXTRA PADDING
MEANS HAPPY
LANDINGS!

Dear Editor,

The padding in the G/VLLD's carrying case isn't always up to the job. Two of our G/VLLDs ended up with broken objective lens housings when we set the cases down on rocky ground.

We protect our G/VLLDs and save expensive repairs by putting extra padding in the cases. We cut out padding from old sponges or foam rubber for the holes for the connectors and the slot down the center.

SGT David Limbaugh
1/320th FA
Ft Campbell, KY



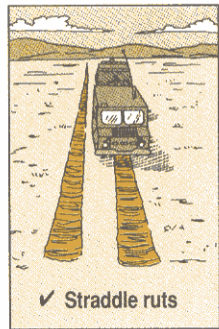
SUSVs...

Traveling on Rough Ground

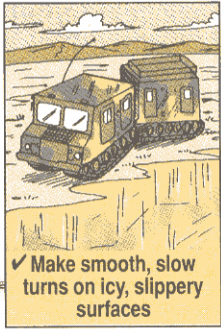
Drivers, your SUSV doesn't have an inclinometer, but it *will* roll over when angling up or down slopes steeper than 40°.

That means you've got to pay close attention when traveling over rough or hilly ground, especially in deep snow.

✓ Never approach a slope at an angle, with one side of the vehicle higher than the other. Maintain a steady speed and drive straight up and straight down a slope.



✓ KEEP
YOUR LOAD IN
BALANCE.



Personnel Heater Side-step

Dear Half-Mast,

While warming up our SUSV in extremely cold weather, it takes forever for the personnel heater to warm up the cars.

Is there anything we can do to speed up the process?

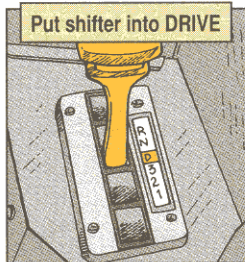
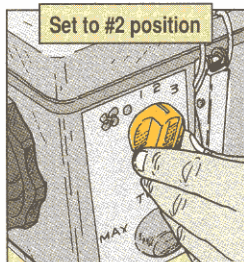
SFC M.S.F.



Dear Sergeant M.S.F.,

Try this:

- Make sure the engine and transmission fluid levels are between ADD and FULL.
- Let the engine warm up for five minutes.
- Turn the heater fan switch to the number 2 position.
- Set the emergency parking brake.
- Put the gear shifter in DRIVE. Don't rev the engine.



The personnel heater will start cranking out the heat for both cars.

This side-step is a little different than the procedure shown on Pages 2-52 and 2-53 of TM 9-2350-285-10. The headshed approves this procedure, but you should get your CO's OK before using it.

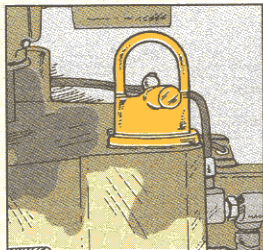
Half-Mast

Stubborn Wheel Locks?



If the wheel locks on your M198 howitzer won't turn easily by hand, something's wrong...and forcing them will only add to your trouble.

First, make sure you've relieved pressure on the locks. Pump the ram hydraulic pumps like it says on Page 2-58 of TM 9-1025-211-10. Then try to turn the locks.



Never force stuck wheel locks



Relieve pressure with hydraulic pumps

Still no go? Could be the locks need lubing or cleaning—or both. Give each lock a couple shots of WTR and try turning 'em again.

If they're still stuck, call your mechanic and he'll clean the locks.

Above all, never force the locks with a hammer or cheater bar. They'll bend and you'll end up buying new locks.

You and your mechanic can head off lock problems by making sure both wheel locks get a monthly shot of WTR, like it says in Note 31 of TM 9-1025-211-10, Page F-17.



D7/D8 Dozers...

BE YOUR OWN INSPECTOR

OPERATORS, YOU CAN'T
BULLY YOUR WAY THROUGH
D7 OR D8 DOZER PM.

You've got to go over it step-by-step from front to rear.
Use your D7's TM 5-2410-233-10, the D8's TM 5-2410-234-
14&P-1 and this checklist to get the job done.

OVERALL—Caked mud, rust, body damaged, broken welds, fuel or water leaks?

★ FRONT END ★

**HEADLIGHTS, WORKING
LIGHTS**—Glass cracked, broken,
clouded? Wires broken? Lenses
loose? Lamps burned out?
Mountings loose?

**RADIATOR
GRILL**—Bent
in, mud-caked,
cracked? Broken
hinges, pins
missing?

RADIATOR—Fins bent,
clogged with mud or
foliage? Leaks? Low
water level?

BLADE MOLDBOARD—Broken,
loose or cracked welds?

BLADE END BITS—Worn? Bolts missing?

BLADE CUTTING EDGE—
Worn? Bolts missing?

★ LEFT SIDE ★

HYDRAULIC LINES—
Kinked, badly chafed,
leaking or fittings loose?

LIFT CYLINDER—Any leaks? Bolts
loose? Piston rod dry or scored?

TILT BRACE—
Bent or loose?

PUSH ARM—Broken, cracked or mounting loose?

BODY NUTS AND BOLTS—Loose or
missing? Eyeball the track area
where they're coated with mud, too.

BATTERIES—Cracked or leaking?
Terminals corroded or loose?
Caps missing? Holddown loose
or missing? Electrolyte low?

TRUNNION—Loose? Bolts missing?

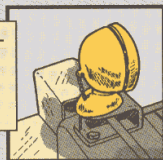
BATTERY BOX—Cover
missing? Hinges broken or not
lubed? Latches broken?

★ REAR END ★

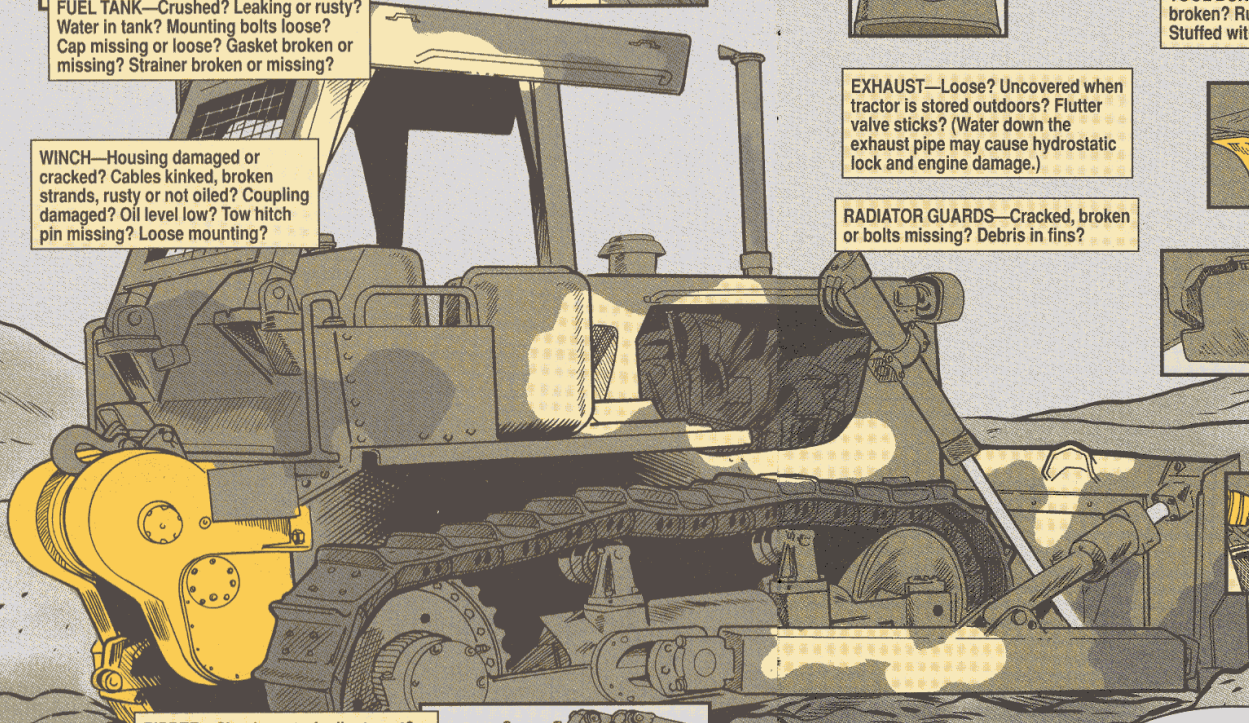


FUEL TANK—Crushed? Leaking or rusty? Water in tank? Mounting bolts loose? Cap missing or loose? Gasket broken or missing? Strainer broken or missing?

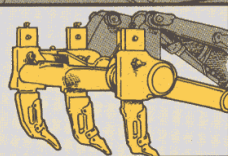
REAR FLOOD LIGHTS—Glass broken or clouded? Wires broken or frayed? Mounting loose? Burned out?



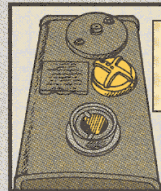
WINCH—Housing damaged or cracked? Cables kinked, broken strands, rusty or not oiled? Coupling damaged? Oil level low? Tow hitch pin missing? Loose mounting?



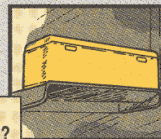
RIPPER—Shanks out of adjustment? Hydraulic hoses broken, worn, cracked or kinked? Hydraulic cylinders bent? Piston rod dry or scored? Gaskets leaking? Frame cracked or bent? Pins worn, missing or peening? Mounting bracket stud nuts missing or loose?



★ RIGHT SIDE ★



DOZER HYDRAULIC TANK—Filler screen broken? Gasket missing or deteriorated? Cap missing or oil low? Filter cover assembly cracked? Screws or bolts missing?



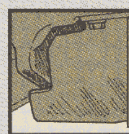
TOOL BOX—Lid catches broken? Rusty or broken? Stuffed with junk?

EXHAUST—Loose? Uncovered when tractor is stored outdoors? Flutter valve sticks? (Water down the exhaust pipe may cause hydrostatic lock and engine damage.)

RADIATOR GUARDS—Cracked, broken or bolts missing? Debris in fins?



FRONT CRANKCASE GUARD—Cracked or broken? Bolts missing? Pull hook broken or mounting loose? Debris in guard?



REAR CRANKCASE GUARD—Cracked or broken? Bolts missing? Access cover broken, missing or loose? Debris in guard?

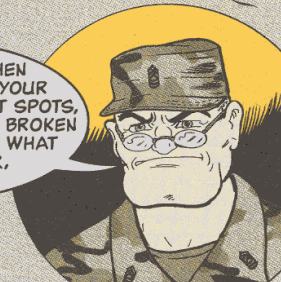
TILT CYLINDER—Leaks or bolts loose? Piston rod badly scored or dry?



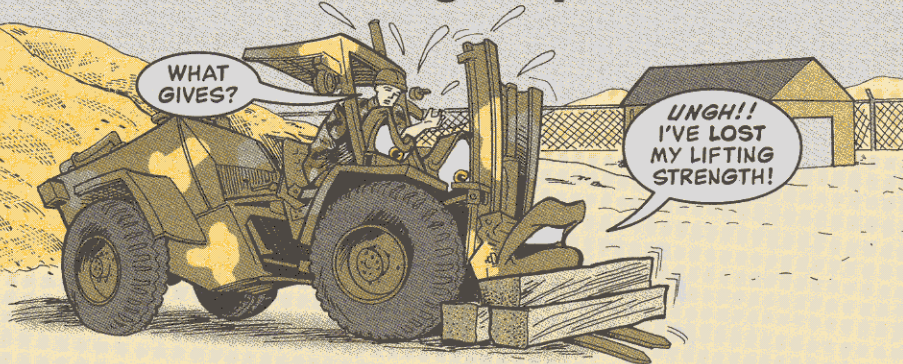
PS END

TRACK FRAMES—Cracked or loose? Missing bolts? Broken parts? Mud-packed?

AS ALWAYS, WHEN WALKING AROUND YOUR DOZER, LOOK FOR WET SPOTS, DANGLING WIRES AND BROKEN OR MISSING PARTS. WHAT YOU CAN'T FIX, REPORT.



Loose Fitting Drops Lift



Mechanics, an M4K forklift that can't lift a load isn't a forklift—it's NMC.

If you find a forklift that lifts erratically, it probably has a hydraulic leak. The usual suspect is the elbow fitting that connects the hydraulic line to the main hydraulic lift cylinder.

Vehicle vibration loosens the fitting and lets hydraulic fluid leak out. A loss of fluid starves the vehicle's hydraulic pump. Then the forklift won't lift.

Check out that elbow. Raise the forks a foot off the ground. Turn off the engine, then get on your hands and knees and eyeball the elbow fitting—it's directly under the forklift's lift rack.

If it's leaking, tighten the fitting and add hydraulic fluid until the dipstick shows FULL.



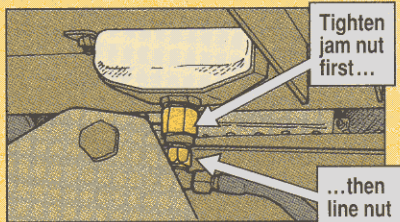
SEE ...

Evaporator Bottle Will Break

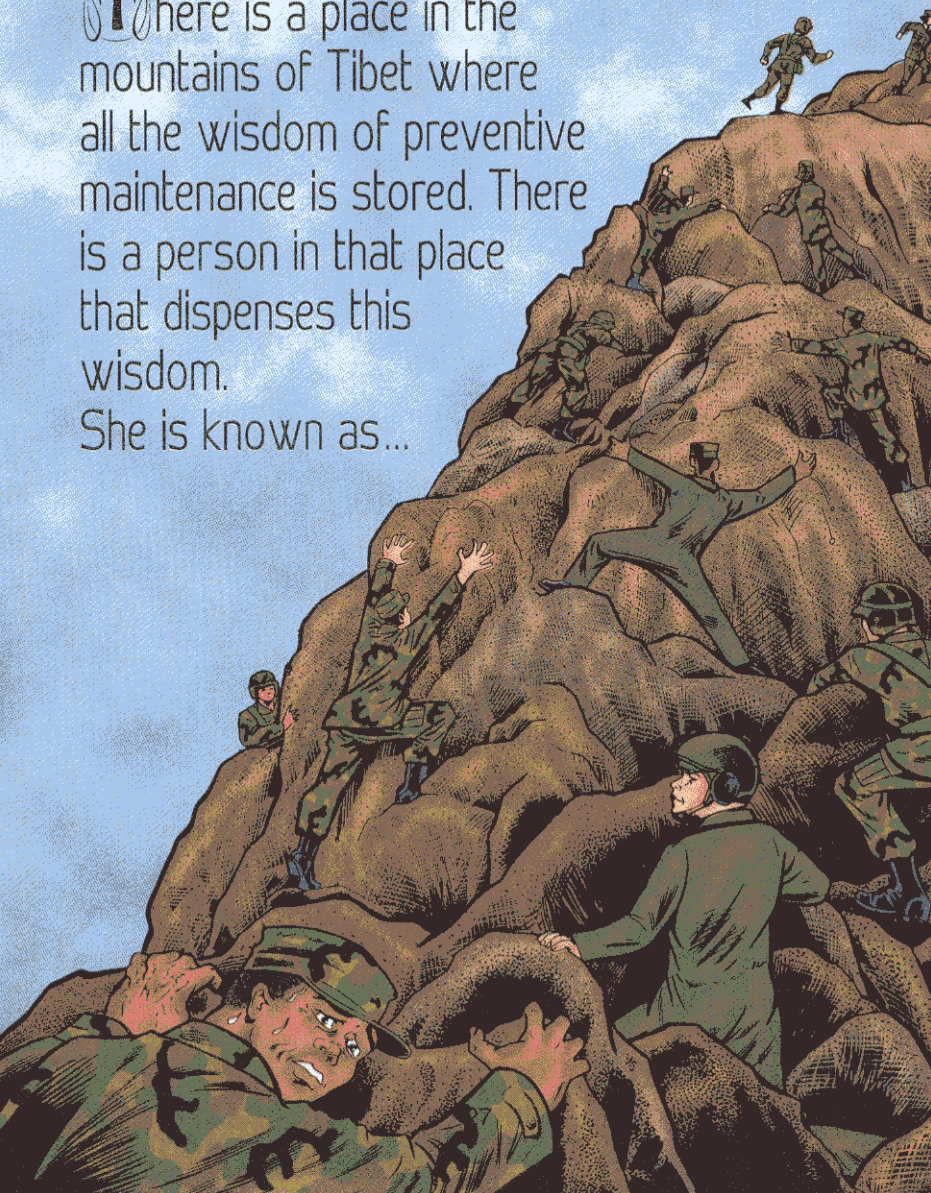
Handle the SEE's alcohol evaporator bottle carefully when tightening the fittings that attach the outlet line.

The plastic bottle breaks easily if much twisting is done, and its threads strip if nuts are overtightened.

Tighten the jam nut before you tighten the line nut. If you run the line nut down too tight, you can strip bottle threads or break the bottle.



There is a place in the mountains of Tibet where all the wisdom of preventive maintenance is stored. There is a person in that place that dispenses this wisdom. She is known as...



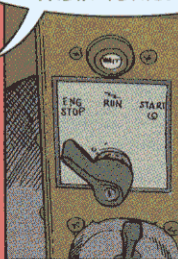
...The Connie Lama



OH, GREAT CONNIE LAMA, WHY DO THE GLOW PLUGS KEEP BURNING OUT ON OUR HMMWVs?



BECAUSE OPERATORS DO NOT WAIT FOR THE WAIT LIGHT TO GO OUT BEFORE THEY START THEIR VEHICLES.



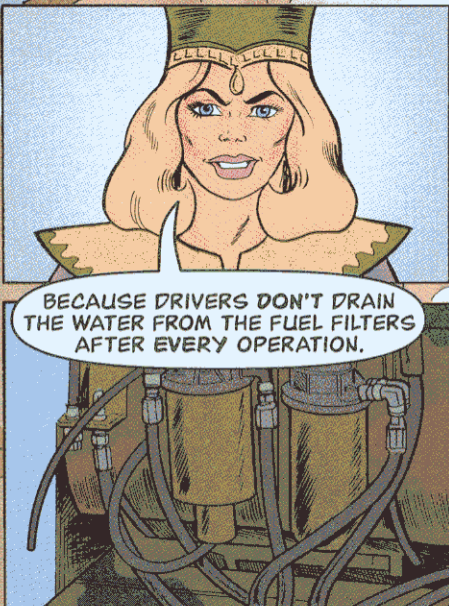
YOU ARE TRULY WISE, CONNIE LAMA.



OH, MOST WISE AND WONDERFUL CONNIE LAMA, WHY DOES RUST AND GUNK BUILDUP ALWAYS FORM A PLUG IN THE BOTTOM OF THE FUEL/WATER SEPARATOR ON OUR BRADLEYS?

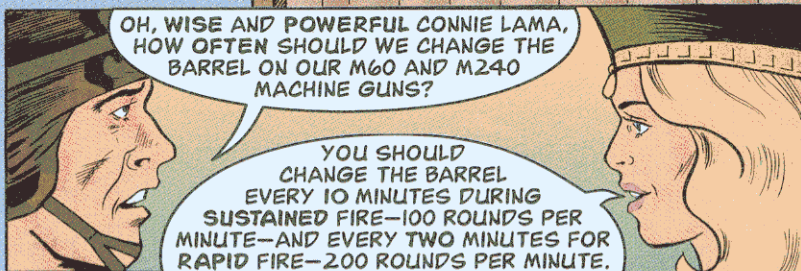


BECAUSE DRIVERS DON'T DRAIN THE WATER FROM THE FUEL FILTERS AFTER EVERY OPERATION.



OH, WISE AND POWERFUL CONNIE LAMA, HOW OFTEN SHOULD WE CHANGE THE BARREL ON OUR M60 AND M240 MACHINE GUNS?

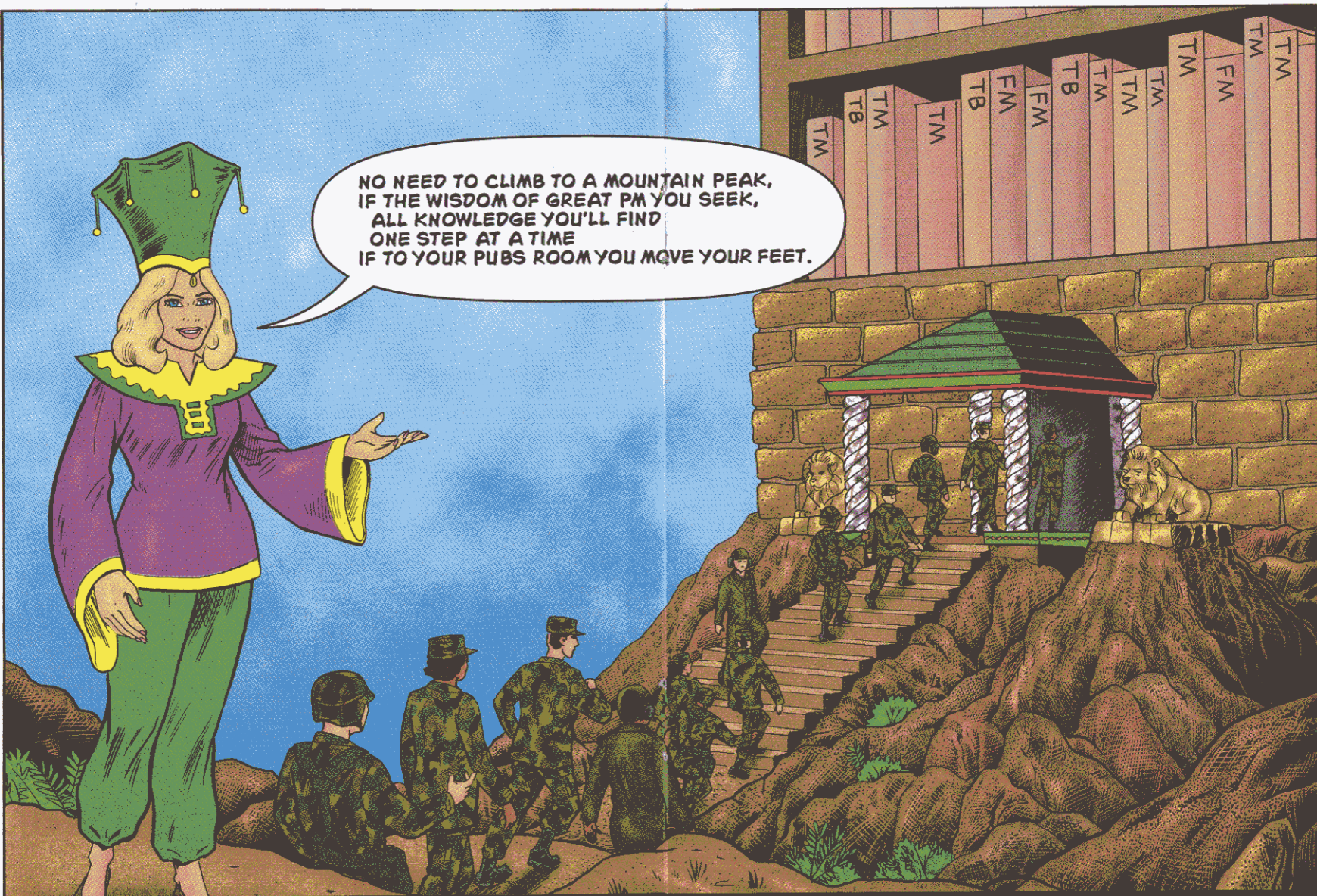
YOU SHOULD CHANGE THE BARREL EVERY 10 MINUTES DURING SUSTAINED FIRE—100 ROUNDS PER MINUTE—AND EVERY TWO MINUTES FOR RAPID FIRE—200 ROUNDS PER MINUTE.



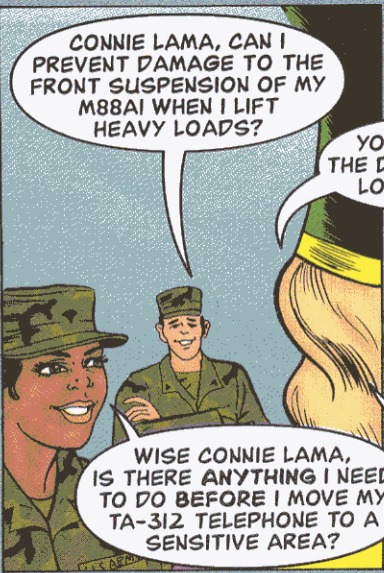
OH, GREAT ONE, HOW OFTEN SHOULD WE DRAIN THE AIR RESERVOIR ON OUR PATRIOT MISSILE TRAILER TO KEEP CONDENSATION FROM BUILDING?

YOU MUST DRAIN THE RESERVOIR AFTER EACH DAY'S USE.

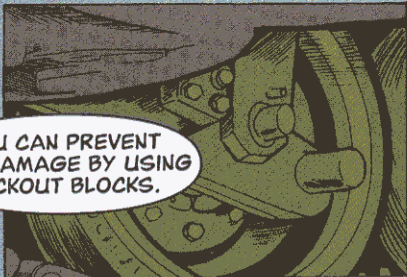




WE HAVE THE WORLD'S BEST EQUIPMENT ...*Take care of it*



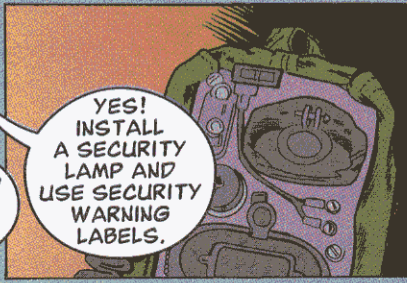
CONNIE LAMA, CAN I PREVENT DAMAGE TO THE FRONT SUSPENSION OF MY M88A1 WHEN I LIFT HEAVY LOADS?



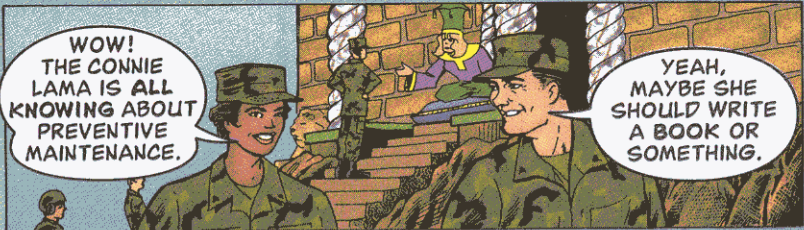
YOU CAN PREVENT THE DAMAGE BY USING LOCKOUT BLOCKS.



WISE CONNIE LAMA, IS THERE ANYTHING I NEED TO DO BEFORE I MOVE MY TA-312 TELEPHONE TO A SENSITIVE AREA?

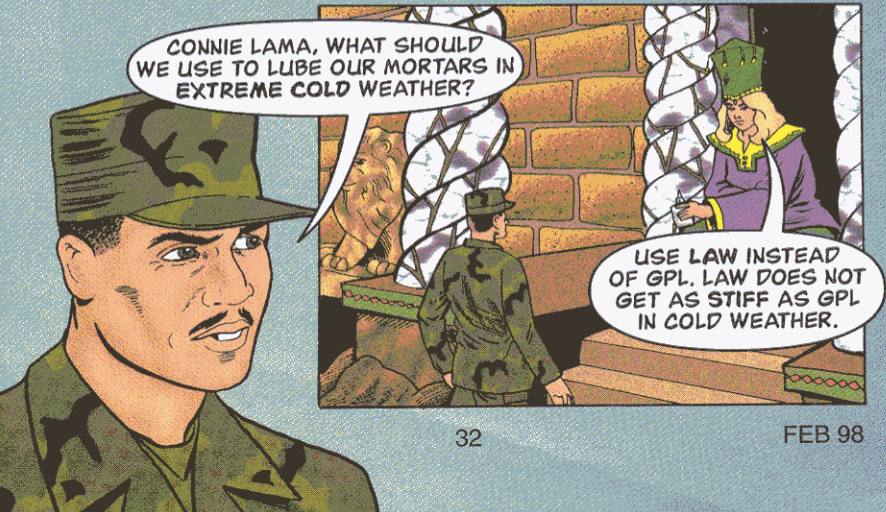


YES! INSTALL A SECURITY LAMP AND USE SECURITY WARNING LABELS.



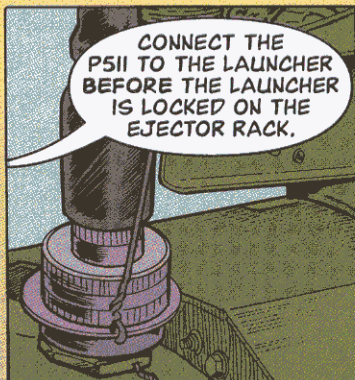
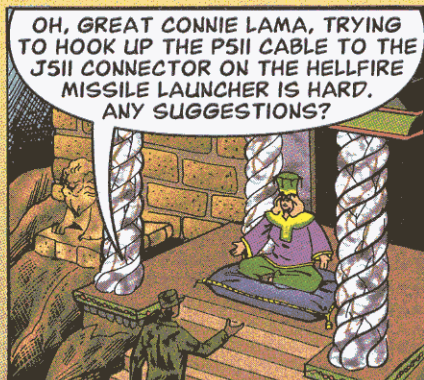
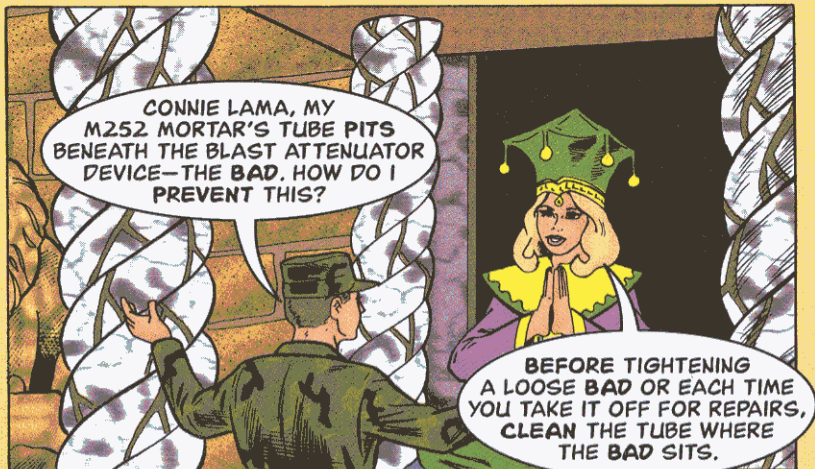
WOW! THE CONNIE LAMA IS ALL KNOWING ABOUT PREVENTIVE MAINTENANCE.

YEAH, MAYBE SHE SHOULD WRITE A BOOK OR SOMETHING.



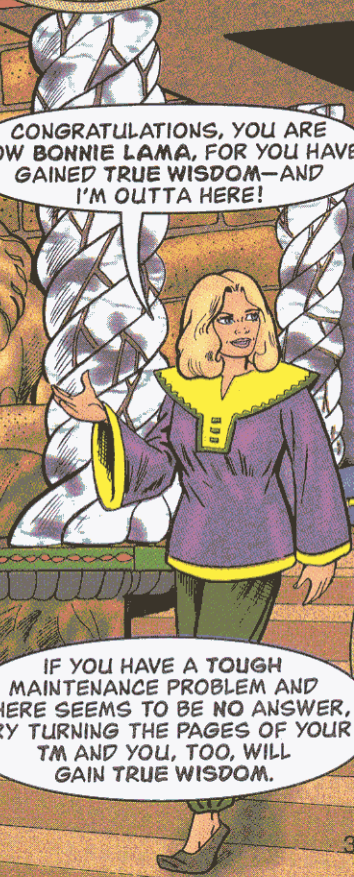
CONNIE LAMA, WHAT SHOULD WE USE TO LUBE OUR MORTARS IN EXTREME COLD WEATHER?

USE LAW INSTEAD OF GPL. LAW DOES NOT GET AS STIFF AS GPL IN COLD WEATHER.





THESE SOLDIERS MAKE
THIS LONG JOURNEY IN THEIR QUEST
FOR PM KNOWLEDGE, YET ARE NOT ALL
THEIR QUESTIONS ANSWERED IN
THEIR TECHNICAL MANUALS?



CONGRATULATIONS, YOU ARE
NOW BONNIE LAMA, FOR YOU HAVE
GAINED TRUE WISDOM—AND
I'M OUTTA HERE!



IF YOU HAVE A TOUGH
MAINTENANCE PROBLEM AND
THERE SEEMS TO BE NO ANSWER,
TRY TURNING THE PAGES OF YOUR
TM AND YOU, TOO, WILL
GAIN TRUE WISDOM.

Fixing Your Skirt

Dear Half-Mast,

What do you do when the Avenger skirt net is torn? We can't find an NSN for it.
G.E.

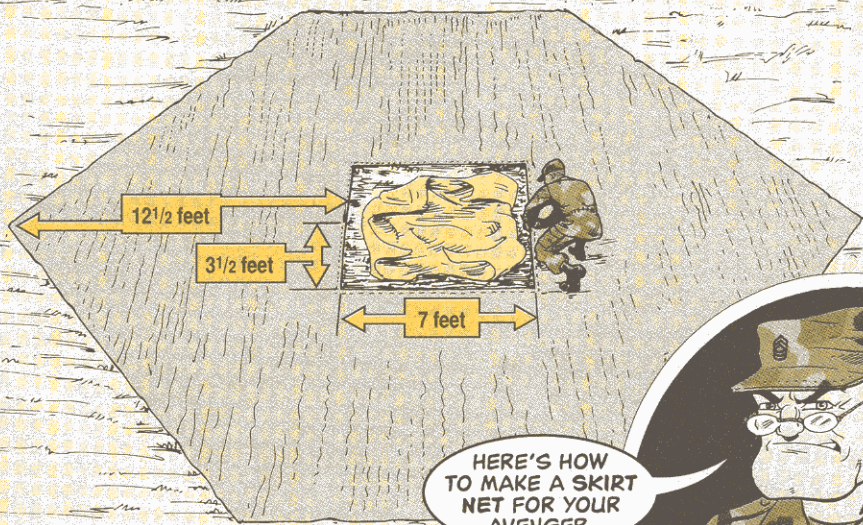
Dear Mr. G.E.,

There is no NSN for the net. If the net isn't too damaged, use the repair kit, NSN 1080-00-107-8563, to repair it. Instructions come with the kit.

If the net can't be repaired, order a hexagon camouflage net, NSN 1080-00-107-8112, and modify it like this:

1. Spread out the net fully.
2. From the left side of the widest point of the net, measure $12\frac{1}{2}$ feet to the right.
3. Measure and cut out a 7-ft square as shown.
4. Use ties from the repair kit to attach a cord, NSN 4020-01-041-0788, around the edges of the cut-out square to secure the net in place.

Half-Mast

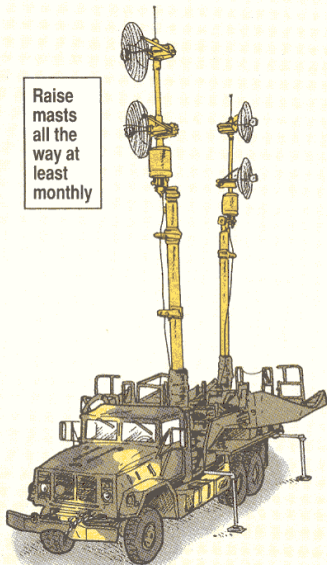


Antenna Mast Group PM Should Be SOP

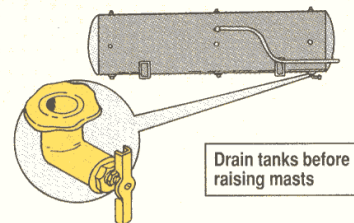
Your Patriot battery will be deaf and dumb if the antenna mast group (AMG) is not up to snuff. Keep Patrioteers communicating like this:

Masts. Mast sections have seals that prevent leaks. Unless the masts are raised, those seals get no lubrication and they dry out. Leaks start and the masts have trouble standing tall. Raise the masts at least monthly—and raise them **all** the way or **all** the seals won't be lubed.

Raise masts all the way at least monthly

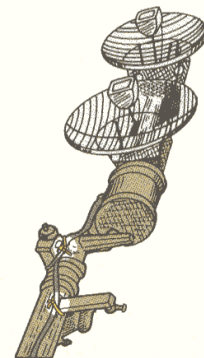


Before you raise the masts, drain the compressor air inline filter and the mast air tank. If you don't, condensation forms inside the tank and moisture shoots into the masts. Corrosion starts and seals rot.



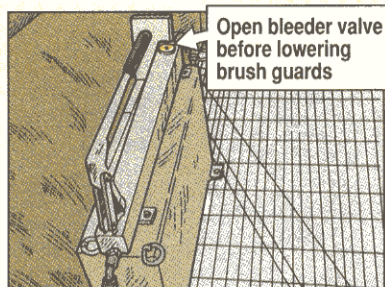
Also check that the cables for the antenna amplifier assemblies are tied back. If the cables dangle, count on them being ripped off when the amplifiers are lowered.

Make sure amplifier cables are tied back **BEFORE** raising masts



If a mast won't stay up or the pump motor runs more than 10 minutes an hour, the seals are leaking. Your repairman needs to replace seals ASAP or the pump motor will burn out.

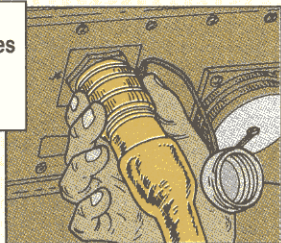
Brush guard pump. Before you lower the brush guards, open the bleeder valves on the guards' hydraulic pumps. Otherwise, the air pressure ruins the pumps' O-rings and they start leaking hydraulic fluid. If the leaks get bad enough, you can't budge the guards.



Cables. The power and RF cables are too heavy for their connectors. It doesn't take much to pull out a connector. There is no way to protect the connectors except by being careful. Don't jerk the cables or throw them

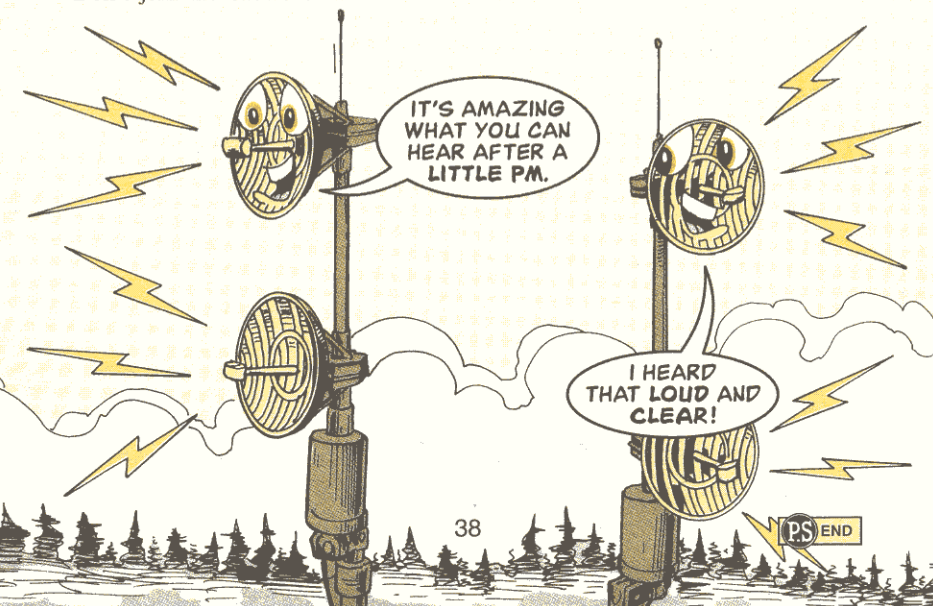
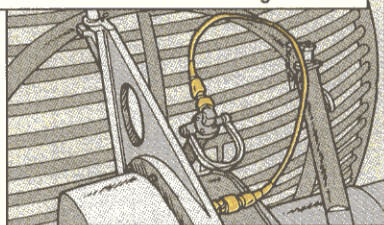
around. If you need to reposition them, disconnect 'em first.

Disconnect heavy cables before you reposition them



Before you stow the antenna feedhorn, disconnect the W1 cable. That protects the delicate cable from being snagged and ripped apart.

Disconnect W1 before stowing feed horn



M72 LAW ...

Don't Monkey with the LAW!

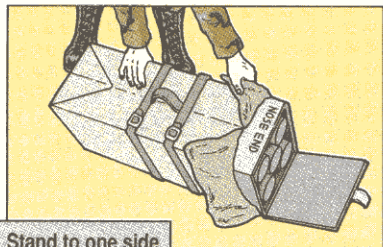
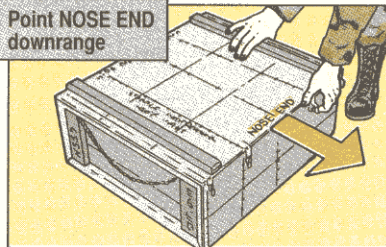
NEVER MONKEY AROUND WITH AN M72 LAW, OR YOU'LL FIND OUT THE MONKEY IS YOU. HANDLE IT WRONG, OR CARELESSLY, AND IT CAN FIRE, TAKING YOU—OR PARTS OF YOU—WITH IT.

SO, HANDLE WITH CARE BEGINS THE MOMENT YOU GET A LAW.



Before you open the box, point it NOSE END downrange or in the safest direction.

Never stand in front of the NOSE END to unpack the box, or use anything sharp to open the box.



As you unpack each weapon, check:

Trigger safety handle:
Not in SAFE position?

Front sight: Broken? (Sight
contains radioactive material
and requires special handling)

Sling: Frayed?

Tube: Cracked?
Dented? Missing
or loose parts?

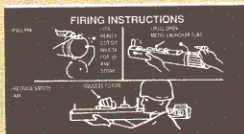
Rear hook: Loose or bent?

Nomenclature labels: Blurred,
incorrect or missing?

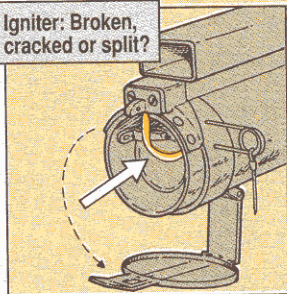
Igniter: Broken,
cracked or split?

U.S. ARMY
LAUNCHER, ROCKET M 190
LOT
OPERATING TEMP. -10° to +135°
STORAGE TEMP. -40° to +140°

Practice item label



Practice & tactical item label



Problems? Turn in the LAW.

Always
carry the
LAW slung
over your
shoulder.
Never carry
an extended
launcher.

Extend
the launcher
only when
you're ready
to fire by snapping it open. If you extend the launcher too slowly, it will not cock. If you try to cock it twice with no success, close the launcher



Carry position

carefully by the procedures in Section
X of TM 9-1340-214-10.

When ready to fire, pull pin...



swing cover down...

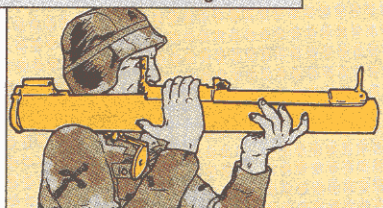


...and snap launcher into locked position

If the cocked weapon doesn't fire immediately when you pull the trigger, keep it on your shoulder in the firing position and push the trigger safety to **SAFE**.

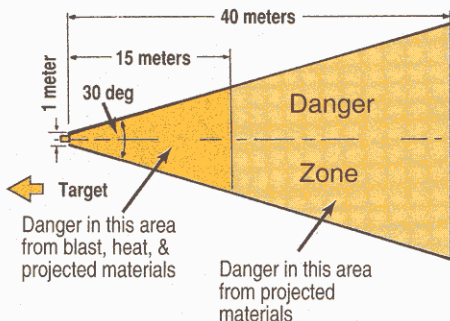
Keep it on your shoulder for 10 seconds. Then, with the launcher still aimed downrange, take it off your shoulder. After waiting one minute, try again to cock the weapon and fire.

Keep LAW on shoulder for 10 seconds after switching to SAFE



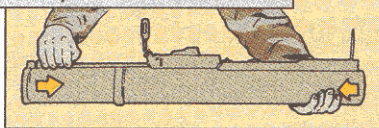
If it **still** won't fire, keep the LAW pointed downrange at the target, put it on **SAFE**, and wait 10 seconds. Carefully lay the LAW on the ground facing downrange and get away from the weapon. Remember to stay **out** of the

danger zones, because the weapon can **still** fire! Call range safety.



If you don't fire after you have cocked the LAW, close it carefully. Keep the weapon pointed downrange with your hands clear of both ends of the LAW. Then follow the procedures in Section X of TM 9-1340-214-10.

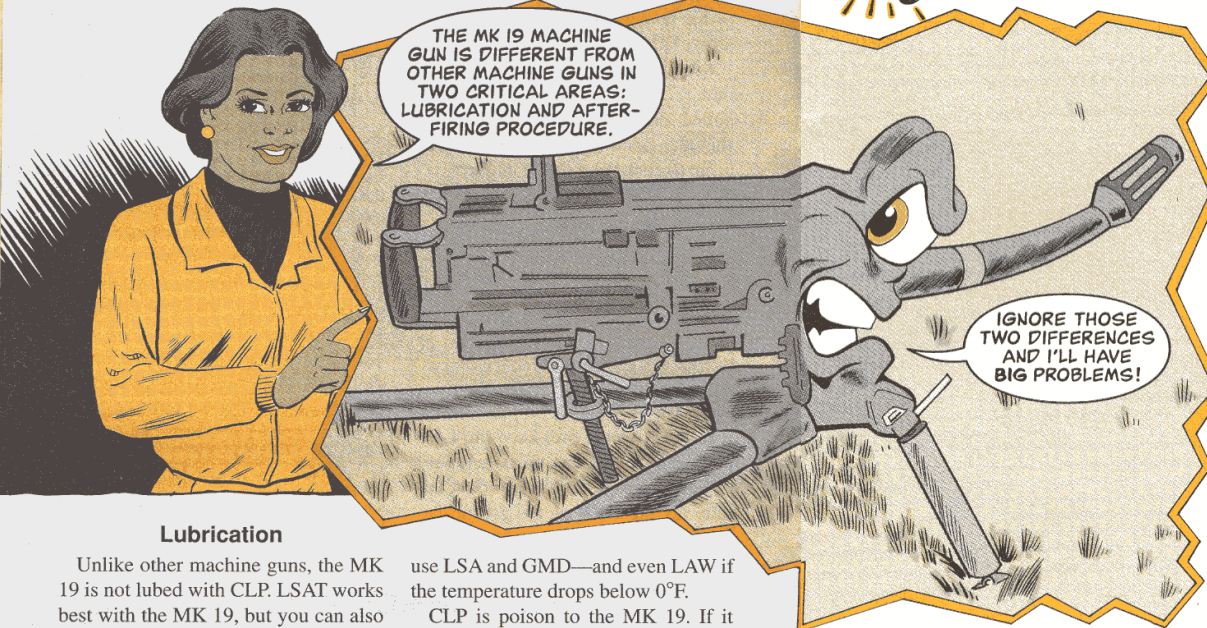
Never put hands over tube ends



THANKS FOR THE TIP, NOW I KNOW THE LAW.

JUST REMEMBER TO FOLLOW THE PM LAW ON LAW!

Differences Make a Big Difference



Lubrication

Unlike other machine guns, the MK 19 is not lubed with CLP. LSAT works best with the MK 19, but you can also

use LSA and GMD—and even LAW if the temperature drops below 0°F.

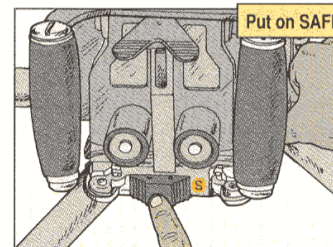
CLP is poison to the MK 19. If it mixes with LSAT, it turns into a gooey mess. Moving parts have a hard time moving and it's very difficult to clean off. Never lube your MK 19 with CLP. Anytime you change lubes, completely clean off the old lube.

After Firing

Unlike other machine guns, the MK 19 does not automatically eject the last round. When it stops firing, there's still a live round or round case on the boltface. Safety demands you remove the round like this:

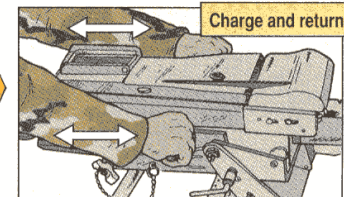


- ☐ Point your MK 19 downrange and put it on SAFE.

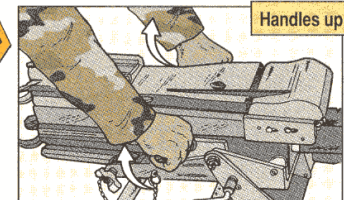


- ☐ Remove the case catch bag.

- ☐ Charge your weapon and return the charger handles to the forward position.

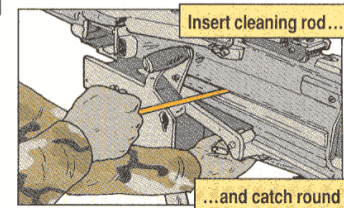


- ☐ Rotate the handles up.



- ☐ Push your cleaning rod through the receiver rail as close as possible to the bolt face.

- ☐ Push down on the round so it moves away from the bolt and out the bottom of the gun. Catch it as it falls out.



- ☐ Do not relink or fire ammo which has been cycled through the weapon.

...and catch round

Jump on Choked

Dear Half-Mast,

Sediment is collecting in the bottom of our M157 smoke generator fog oil tanks. It then gets in the fog oil pumps and destroys them. Is there any way to clean out the sediment?

SGT E.J.

I CAN'T DO MY JOB IF MY FOG OIL PUMP IS CLOGGED WITH SEDIMENT.

YEAH, I KNOW, BUT WHAT CAN I DO?

Dear Sergeant E.J.,

It's difficult to get all sediment out of the bottom of the tank because the drain plug isn't low enough on the tank to drain out every drop of oil. Your best bet would be to drain out as much oil as you can. Then steam clean the bottom of the tank to free any sediment stuck there.

Put enough water in the tank so that the level is above the drain plug. With the help of a buddy, unfasten the tank and tilt it toward the drain plug. Open the plug and drain the tank as much as possible. That should clean out most of the sediment.

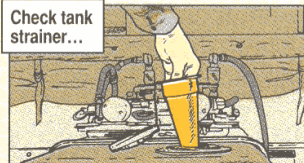
The best way to **prevent** sediment problems is to keep sediment out of the fog oil tank in the first place. Start by using the cleanest fog oil possible. If you notice trash in fog oil when you open a barrel, open another barrel. Keep the lids on the barrels as much as possible so that the oil stays clean. Make sure the strainer is in place before filling the tank.

Pumps

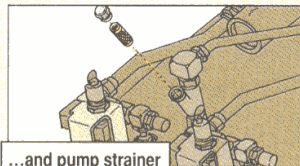
HERE'S HOW TO KEEP YOUR TANK CLEAN.

Before you go the field, pull out the fog oil tank strainer. If it's dirty, clean it with dry cleaning solvent. The strainer stops most sediment from getting in the tank.

Check tank strainer...



Also check the strainer screens for the fog oil pumps and clean them with dry cleaning solvent if necessary. They prevent sediment from ruining the pumps.



...and pump strainer

Of course, if tank or pump strainers are in bad condition, get them replaced. If they can't screen out trash, your M157's heading for trouble.

Half-Mast

Keep Your M157 Out of a Sling

Dear Editor,

Airborne units must slingload the M157 smoke generator, which leads to a problem: When the slingload hook is released, it often falls on the hoses to the fog oil tank. **WHAM!** The hose connections are crushed and the M157 can't get fog oil.

Solution: Pile camouflage netting bags (or anything similar) over the hose connections before slingloading.

Protect hose connections



The bags absorb the impact of the hook and protect the hoses.

SSG Albert Crawford
63d Chemical Co
Ft Campbell, KY

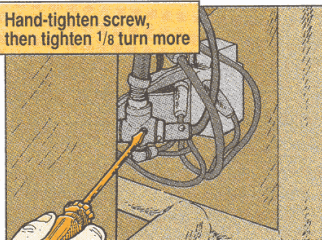


Questions? We've Got Answers!

We have trouble with the photo cells breaking on the M17 decon. Is there anything we can do to protect them?

For one thing, don't overtighten the retaining screw on the cell. Turn the cell's screw hand-tight and then give it another 1/8 turn. Stop. That's enough.

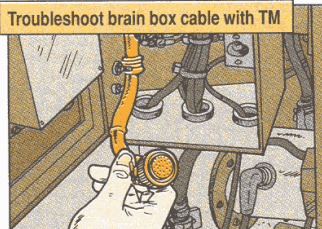
Hand-tighten screw, then tighten 1/8 turn more



Is there any way to check the cable to the "brain box"? We have trouble isolating a bad cable wire and often have to replace the entire cable.

Check out the procedure beginning with Step 2 on Page 3-11 in Change 2 to TM 3-4230-228-23&P. It shows you how to thoroughly troubleshoot the cable.

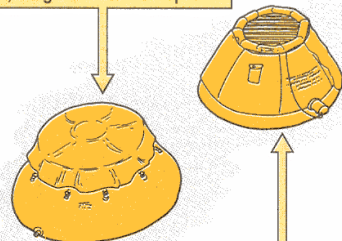
Troubleshoot brain box cable with TM



Is there any way to repair the air valve on the collapsible tank? We've had to replace the whole tank because of a bad valve.

If you have the 3,000-gal tank, you're in luck. NSN 4220-01-430-7265 brings the valve and the repair procedure is on Page 4-7 in the tank's TM 10-5430-233-12&P. There are no replacement parts for the smaller tank, so if you have the 1,580-gal tank, you'll need to replace it with the bigger tank.

3,000-gal tank can be repaired

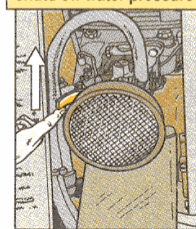


1,580-gal tank must be replaced

Is it possible to shut off the siphoning hose without shutting down the whole system when we switch to wands?

Sure. Throttle the engine down to idle. That shuts down the water pressure to the hoses. Open the quick locks, take off the injector, lock on the wands, throttle up the engine, and you're back in business.

Throttling down to idle shuts off water pressure



Fight Flight Control

A WORN OR CORRODED FLIGHT CONTROL CABLE COULD LEAD TO THE BIG DOWNER FOR YOUR AIRCRAFT. MAKE SURE THAT DOESN'T HAPPEN BY FOLLOWING THESE PM TIPS...

SPONGING

WE'VE LOST CONTROL!

GULP!
I THINK A CONTROL CABLE SNAPPED!



~ Start with your eyes. Follow a control cable's route. Look for those spots where the cable rubs on other parts of the aircraft.

SMALL RUBS
GIVE BIRTH TO BIG
WEAR PROBLEMS.



Look for wear on all sides of the cable. A quick glance will only show you the top of the cable and the top might look good. But there's always a bottom and it might have problems.

Check those hidden areas that can only be revealed by moving the controls.

Cable Corrosion

~ While you're using your eyes, use your hands and a clean, lint-free cloth, too.

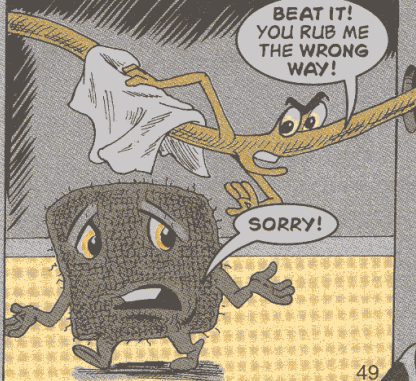
Carefully run the cloth the length of the cable. It should slide smoothly. If it snags, you've found a broken wire. Go to your TM to see if the cable needs replacing.

OUCH!
THAT'S NOT
GOOD!

~ When the job calls for removing dirt or light corrosion use a clean, dry, coarse-weave cloth or soft-fiber brush. Never clean with steel wool. It makes the cable look clean, but leaves behind small metal particles that stick in the cable and will quickly cause wear.

BEAT IT!
YOU RUB ME
THE WRONG
WAY!

SORRY!



YUCK!
WIPE ME
OFF!

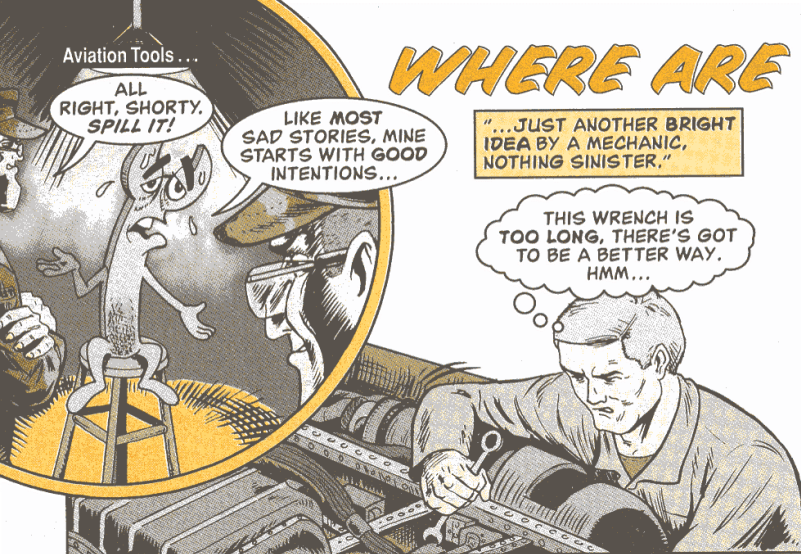
~ A clean cable needs a coat of corrosion preventive compound, MIL-C-16173, Grade IV, NSN 8030-00-062-5866 brings a gallon. A light coat is all you need. Too much will clog the cable's operation.

REMEMBER,
KEEP AN EAGLE EYE
ON YOUR CONTROL
CABLES!



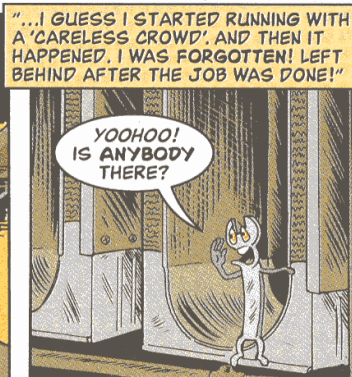
WHERE ARE

THOSE TOOLS?

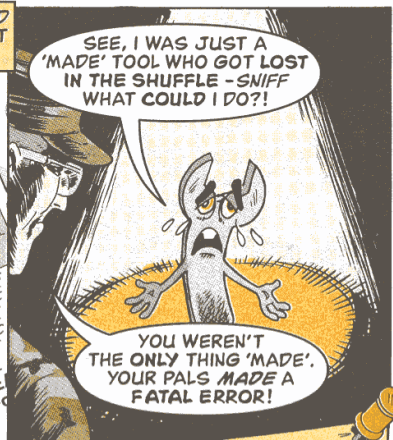


"...HE WENT BY THE BOOK, EVEN SENT IN A SMART FORM WITH HIS IDEA."

"...A FEW WEEKS LATER AND I'M THE TOAST OF THE TOOL SHOP!"



"THE NEXT DAY, THE PAPERS TOLD THE TERRIBLE TALE, AND I WAS AT THE CENTER OF PAGE ONE!"



The first step after getting a "made tool" approved is entering it in the tool inventory program. Homemade tools must be inventoried and mechanics must be held accountable for them. An unaccounted-for-tool is a disaster waiting to happen.

Maintaining the Matching Unit

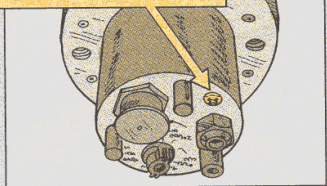
The MX-6707 antenna matching unit is in the weather everyday. To survive, the matching unit needs good PM. Here are some ways you can make sure it gets it.

Use the Drain

Drain the matching unit according to the PMCS table in your radio's TM 11-5820-401-10-1 or -2. Drain more often in wet weather or when wide swings in temperature create condensation. Also drain after fording or after the vehicle has been washed.

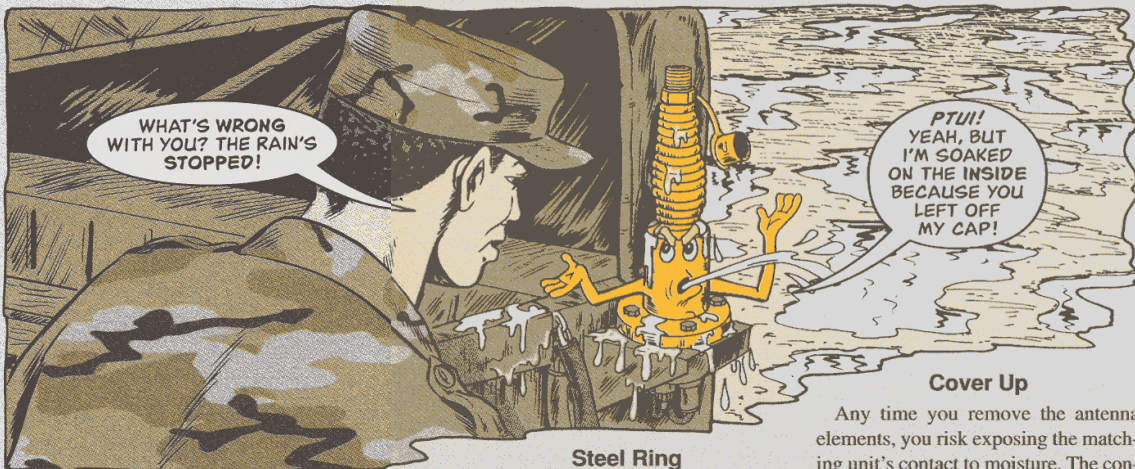
Remove the drain screw to let the water out. Even with the screw removed, all the water may not drain out. Some water may be held inside. To make sure all the water drains, stick a hollow coffee stirrer or electrical in-

Remove screw to drain water



sulation sleeving, NSN 5970-00-729-2969, in the drain hole to release the vacuum.

Make sure the drain screw has an O-ring. The O-ring helps form a tight seal to keep out water and condensation. If the O-ring's missing, order a new screw with NSN 5305-01-100-0244. It's Item 14 in Fig 4 of TM 11-5985-262-24P.



Cover Up

Any time you remove the antenna elements, you risk exposing the matching unit's contact to moisture. The contact corrodes and your signal never gets through.

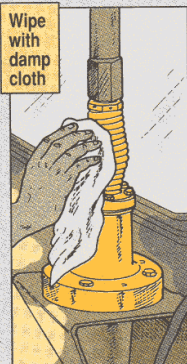
Always cap the matching unit when you remove the antenna elements. Use antenna base cover, NSN 5985-01-135-2307. When you put the cover on, rock it back and forth in line with the strap. If you twist the cover onto the matching unit, you could break the strap. If you don't have a cover, a plastic sandwich bag and some masking tape will do.



No Pressure

If you wash your vehicle with high pressure water, keep it away from the matching unit.

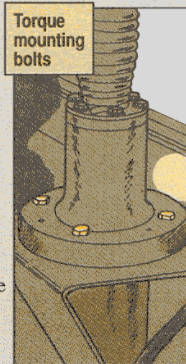
High pressure forces water into the unit. Instead, clean the matching unit this way: Turn off the RT and remove caked-on dirt with a clean cloth. Then wipe with a cloth dampened with water.



Steel Ring

Keep the steel reinforcing ring, NSN 5985-01-012-5425, in place. It helps guard against water damage.

Make sure the mounting bolts are tightened correctly. Have your repairman torque the bolts to 100 lb-in, like it says in TM 11-5985-262-14 and TM 11-5820-401-20-1. Tightening too much cracks the plastic cover, and water gets in.



GPS...

Where to Go to Know

Don't know where to turn when you have a question about operation, maintenance, training or support for your global positioning system (GPS) equipment?

Turn on to the right path by calling the GPS Help Line at DSN 992-4729 or (732) 532-4729.

The help line is always open to answer questions about GPS operations, maintenance, supply and training. The phone is answered during normal business hours, 0730 to 1700 ET. If you call after 1700 hours, you'll get a recorded message. Please leave your name, unit and location, and a DSN or commercial number. Then, briefly state your question.

You can solve many GPS problems before they become big headaches by reading the GPS quarterly newsletter, "Pathfinder." It keeps you up-to date on developments and trends about technical, operational and support issues for the GPS.

To get on distribution for "Pathfinder," call DSN 992-8406 or (732) 532-8406.

Or write to:

**Project Manager
Global Positioning System
ATTN: AMSEL-DSA-GPSR
Ft Monmouth, NJ 07703-5502**

Or e-mail:

laschi@doim6.monmouth.army.mil

Be sure to include your unit address and office symbol.



Know If You're Affiliated



If you're in the front seat of a vehicle with the AN/VRC-97 mobile subscriber equipment receiver-transmitter (MSRT), you can't see the affiliation indicating light on the RT, which is mounted in the back of the vehicle.

If you can't see the light, you can't tell if you're affiliated. If you're not, you can't receive calls.

Now you can get a remote affiliation indicator that mounts in the front seat of your vehicle that solves the problem. When the affiliation indicating light on your RT lights up, the one on the remote indicator lights up, too.

There are three remote affiliation indicator kits available:

ID-2533(V)1, NSN 6220-01-421-4394, is used on the M1008 and M1009 CUCVs, and M998 two and four-door and M1025 HMMWVs.

ID-2533(V)2, NSN 6220-01-421-4412, is used on the M1065 SUSV.

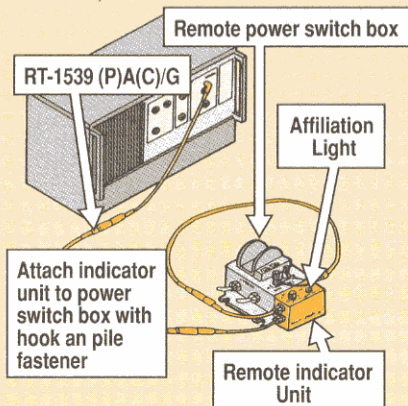
ID-2533(V)3, NSN 6220-01-421-4413, is used on the M1067 SUSV.

The kits are covered in TB 11-5800-216-13-8. If you need a copy of the TB or more information on the kits, write, call or e-mail CECOM at:

US Army CECOM
ATTN: AMSEL-RD-ST-HS-NM
Ft Monmouth, NJ 07703-5203

DSN 987-4432 (732)427-4432

romanos@doim6.monmouth.army.mil



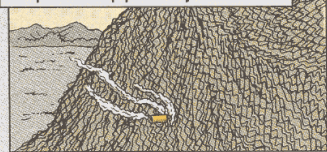
Don't Hide Your

Extra care with your camouflage screens now will pay off big later.

Head off expensive repairs by following this PM routine:

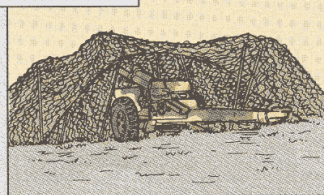
➤ Heat is murder on camouflage screens, so keep them away from anything hot, like a heater or exhaust.

Keep exhaust pipes away from screen



Keep screens out of artillery back blast areas, too. The screens are no match for that heat and power.

Blast area clear?



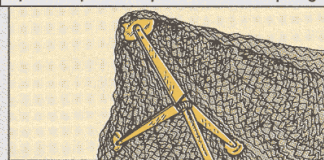
➤ Never spread screens right on top of equipment. Sharp corners, armament,



Camouflage PM

bumpers, antennas, exhaust stacks and the like will rip them before you know it. Use spreader poles to keep the screen away from sharp edges.

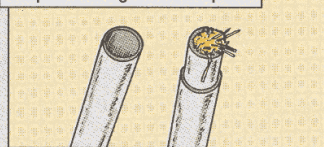
Spreader poles keep screen off sharp edges



➤ When using aluminum stakes to tighten screens, be sure the stakes catch only the screen's edge cord. Screen material wrapped around the stake will tear.

➤ Keep aluminum poles smooth by filing off any nicks or burrs. They'll go together easier and won't snag the screens. The poles will also mate easier and weigh less if you keep mud, sand, dirt and other crud out of the ends.

Keep mud and grass out of poles



➤ The poles aren't made for heavy lifting jobs, so don't use them as pry bars. They're for holding up screens...period.

➤ Before striking a screen, clear the ground underneath of all sharp objects, like stones and sticks. Otherwise you'll

end up with a torn screen when you fold it for storage.

➤ Keep screens clean by washing them with a mild detergent, NSN 7930-00-252-6797, in a barrel of water. Rinse the screens in clean water, then spread them out to air-dry.

Let cleaned screens air-dry



➤ Mend rips or tears as soon as they occur. That keeps the holes from getting larger and making the screen unserviceable.

Here are the available repair kits:

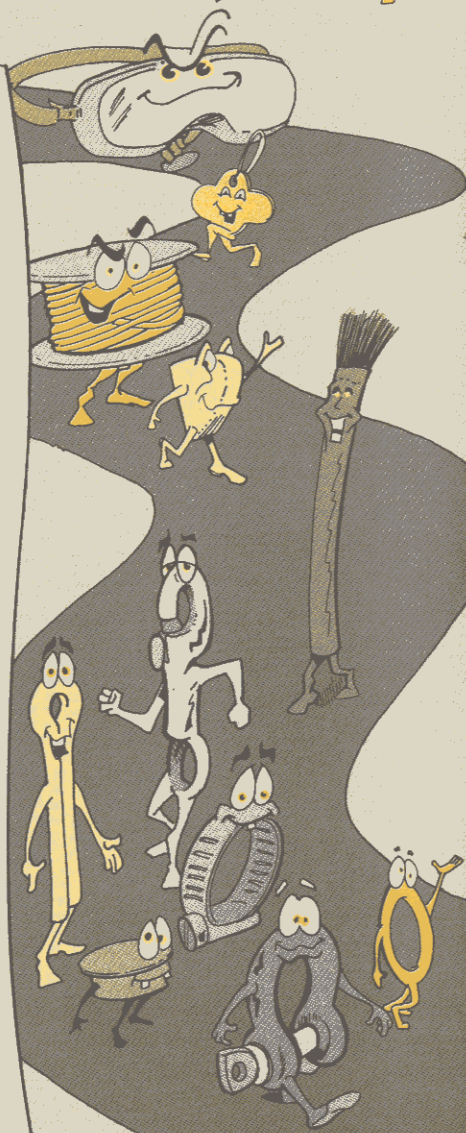
Repair Kit	NSN 1080-
Radar scattering, desert (Type II, III & IV)	01-266-1834
Radar scattering, snow (Type IV)	01-266-1830
Radar scattering, woodland (Type II, III & IV)	01-266-1832
Radar transparent, desert (Type I)	01-073-3220
Radar transparent, snow (Type I)	01-081-1021
Radar transparent, woodland (Type I)	00-107-8563

Stocking Your Workbench

Dear Editor,

We know how aggravating it is to need something simple like a cotter pin, but have no idea how to get it. Through our experience as inspectors, we've assembled a list of useful items for any workbench. We hope they'll help your readers.

Item	NSN
Cap tube (.25-in dia)	4730-00-640-0632
Cap tube (.75-in dia)	4730-00-202-8792
Knife set, craftsman's	5110-00-018-0952
Tape, 6-ft measuring	5120-00-287-3335
Stencil set, 1/2-in	7520-00-205-1760
Tire tread gauge	5210-00-019-3050
Glue stick	8040-01-039-8132
Preformed packing (assorted)	5330-00-966-8657
Tag, key (100)	9905-00-245-7826
Cleaning compound, optical	6850-00-392-9751
Sealing compound	8030-00-081-2339
Solder, tin alloy	3439-00-555-4629
Flux, soldering	3439-00-255-4571
Key, woodruff (assorted)	5315-00-271-4251
Nut (assorted)	5310-00-297-3751
Cotter pin (assorted)	5315-00-598-5916



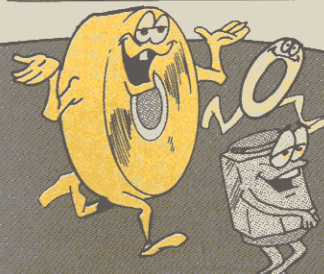
Item	NSN
Clamp, hose (6-16mm dia)	4730-00-871-6729
Shackle (5/16-in)	4030-00-282-4885
Link, chain, connecting (7/16-in)	4010-00-149-5620
Link, chain, connecting (5/16-in)	4010-00-149-5619
Snap hook	4310-01-265-6273
Pin lock	5315-00-194-2455
Hook, chain (.68-in dia)	4030-00-948-7315
Hook	7230-00-252-3394
Washer, lock (assorted)	5310-00-209-2312
Washer, flat (1/4-in)	5310-00-809-4058
Washer, flat (5/16-in)	5310-00-809-3078
Washer, flat (3/8-in)	5310-00-584-7762
Washer, flat (7/16-in)	5310-00-809-4085
Washer, flat (1/2-in)	5310-00-809-5998
Fastener (size 4)	7510-00-161-4277
Fastener (size 7)	7510-00-161-4279
Strap, tiedown	5975-00-111-3208
Pipe cleaners	9920-00-292-9946
Metric conversion chart	5180-00-000-0157
Tape, adhesive	8030-00-889-3535
Tape, antiseize	8030-00-889-3534
Padlock	5340-00-292-0902
Terminal kit, electrical	5940-00-450-5802

Item	NSN
Insulation tape (1/2-in)	5970-00-419-4291
Insulation tape (1 1/2-in)	5970-00-150-2009
Wire, non-electrical	9505-00-684-4841
Tag, shipping	8135-00-292-2351
Goggles, safety	4240-00-052-3776
Tape, pressure (2-in wide)	7510-00-266-6710
Brush, acid-swabbing	7920-00-514-2417
Wax pencil, red (dozen)	7510-00-174-3205
Wax pencil, black	7510-00-240-1526
Penlight	6230-00-635-4998
Stone, sharpening	5345-00-584-4607
Bag, plastic (4x4-in)	8105-00-837-7753
Bag, plastic (8x8-in)	8105-00-837-7755
Mirror, inspection	5120-01-313-4096
Tweezers	5120-00-293-0149
Cloth, abrasive (assorted)	5350-00-271-5950
Dresser, contact point (80 grade)	5345-00-271-6888
Dresser, contact point (120 grade)	5345-00-250-1345

Robert Falkenstein
Peter Kohler
 100th Area Support Group,
 Germany

FROM THE DESK OF THE Editor 

Whew! What a collection. Units should keep this list handy for those times when they may need one of these items. Thanks. One caution: If your TM calls for specific hardware, use it! Don't substitute.

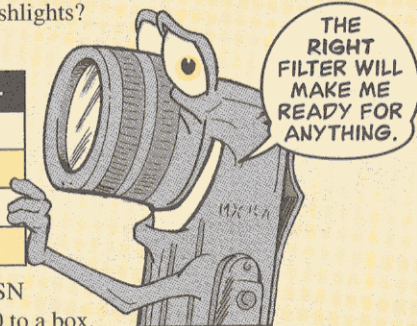


Bulbs and Filters

Looking for replacement filters for your MX-991, NSN 6230-00-264-8261, or MX-992, NSN 6230-00-269-3034, flashlights?

Here's what's available:

Filter	NSN 6230-00-
Red	111-0190
Opaque (blackout)	128-2464
Green	504-8341
Amber	504-8342



You can also get blue filters with NSN 6230-01-189-1480, but they come 100 to a box.

If your flashlight needs a bulb, get NSN 6240-00-155-8675. If you have the long, 3-cell, explosion-proof flashlight, NSN 6230-00-270-5417, order the 3-cell bulb with NSN 6240-00-155-7916.

Abrasive Disk Replacements

For you repairmen who use the abrasive disk kit, NSN 5345-01-015-1419, to smooth rough surfaces, here are the NSNs for replacement disks and holders:



Item	Qty	NSN 5345-
1-in dia disks (40 grit)	100	01-443-9787
1-in dia disks (80 grit)	100	01-214-5878
2-in dia disks (60 grit)	100	01-214-2918
2-in dia disks (80 grit)	100	01-017-9511
2-in dia disks (100 grit)	100	01-010-4418
2-in dia disks (120 grit)	100	01-443-8015
3-in dia disks (40 grit)	50	00-434-6093
3-in dia disks (50 grit)	100	00-529-3432
3-in dia disks (100 grit)	100	01-218-2049
1-in dia stiff holder	10	01-444-1912
2-in dia medium holder	10	01-386-4143
3-in dia medium holder	10	01-377-7057



THE PM
QUEST NEVER
ENDS!



MLRS Bolt Correction

Pages 6 and 7 of PS 537 listed NSN 5306-00-051-4072 for the final drive bolts on the MLRS. That's wrong. The correct NSN is 5306-01-132-3369.

Correct CAM BAT NSN

Page B-7 in Changes 1 and 2 to TM 3-6665-331-10 for the chemical agent monitor (CAM) lists the wrong NSN for the battery assembly, training (BAT). The correct NSN is 6910-01-333-3631. Make a note until the TM is corrected.

PLGR Return Address

Change the address for returning defective AN/PSN-11 and (V)1, Precision Lightweight GPS Receivers (PLGR), shown in TM 11-5825-291-13. Write in the new address:

EZ7415

Rockwell Collins, Inc

ATTN: Rockwell Collins Service Center
MS 139-141

855 35th St NE

Cedar Rapids, IA 52402-3613

For more info on returning PLGRs, contact CECOM, DSN 992-6136, or (732) 543-6136 or e-mail them at:

mcauley@doim6.monmouth.army.mil

TACOM RODs, 2028s

Note this change of address for SF 364 Reports of Discrepancy and DA Form 2028 Recommended Changes to Publication and Blank Forms, which used to go to TACOM in Warren, MI. They now go to TACOM ACALA in Rock Island, IL. RODs go to:

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

e-mail to:

rods@ria-emh2.army.mil

2028s go to:

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

e-mail to:

amsta-ac-nml@ria-emh2.army.mil

DCSLOG Pubs on the Net

You can now read AR 735-5, Policies and Procedures for Property Accountability, and AR 750-1, Army Materiel Maintenance Policies, and all other DA logistics regulations and pamphlets on the Internet. Just set your browser to the Logistics Integration Agency (LIA) website:

<http://www.lia.army.mil/>

M750 Shop Van Light

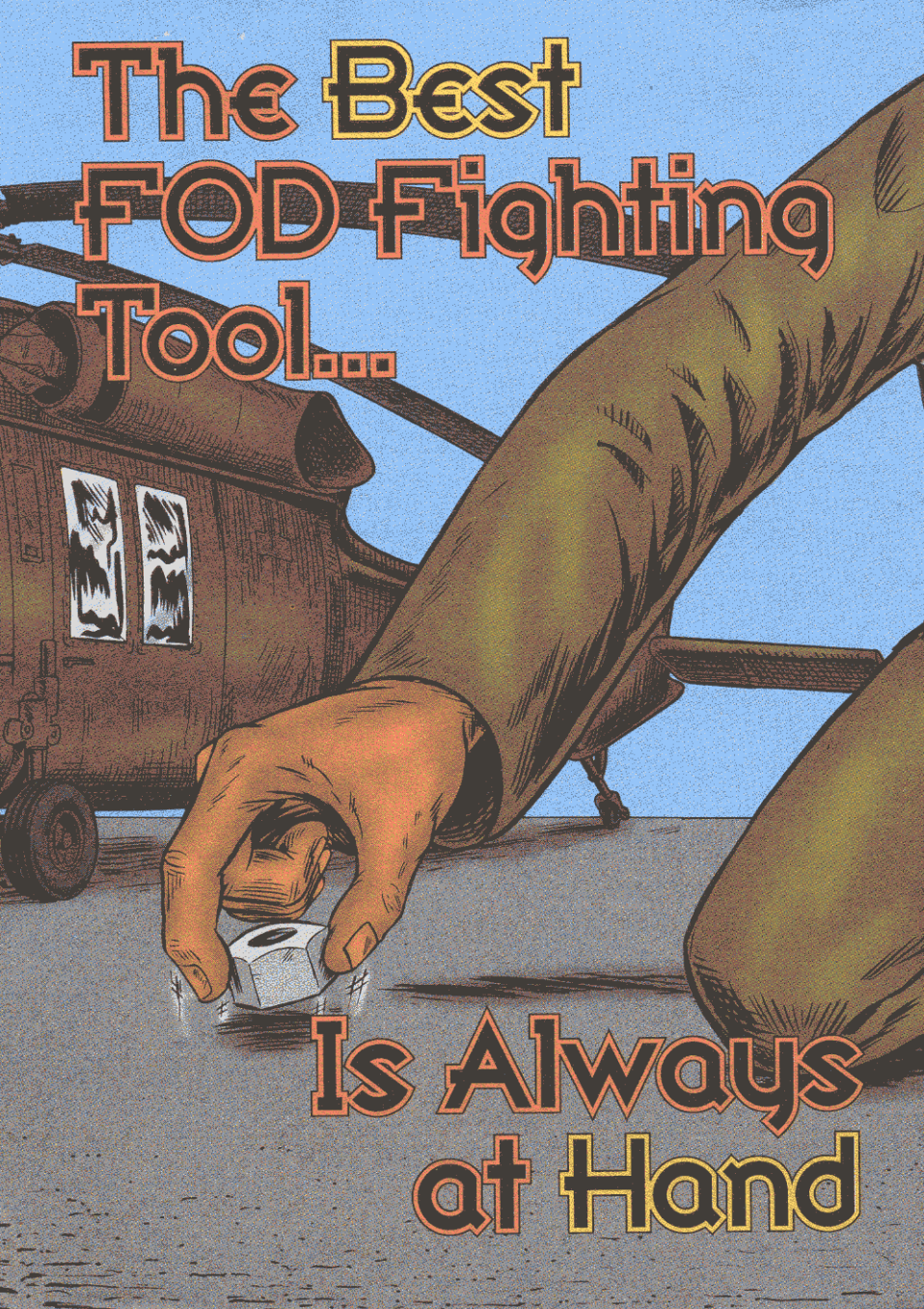
NSN 6240-01-004-3107 gets an incandescent bulb for the shop van. The NSN shown as Item 14 in Fig 15 of TM 9-2330-238-24P is wrong.

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A hand holding a small white cube with a black circle on it, set against a background of a military vehicle and a large mechanical arm.

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