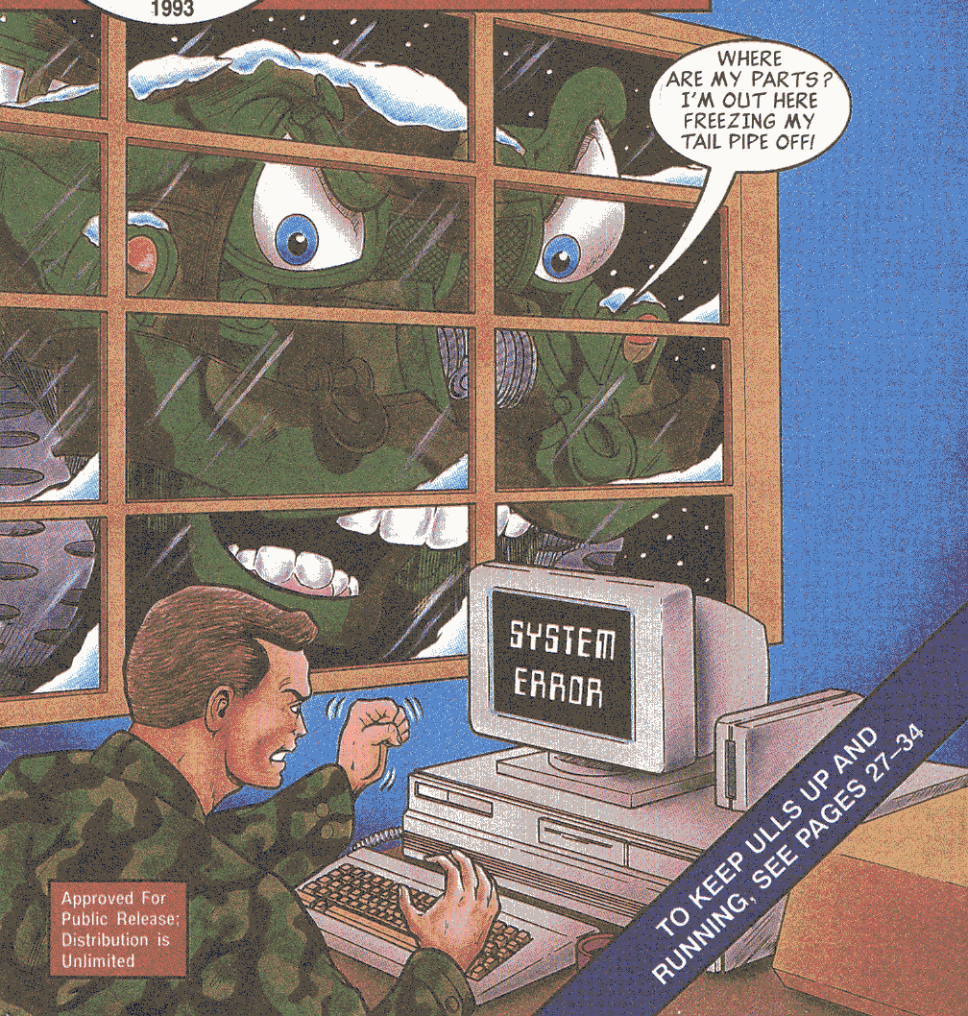
Issue 492

PS

November 1993

THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-492



TO KEEP ULLS UP AND RUNNING, SEE PAGES 27-34

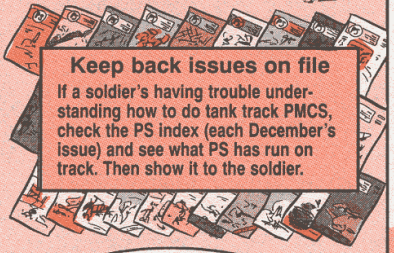
Operators Need PS, Too

Make sure they see PS

When you spot something in PS that would help—like how to read tire tread—tear it out of the magazine or get it copied. Put it somewhere where soldiers will see it: Bulletin boards, next to the place where keys or weapons are checked out, around vending machines, in dayrooms.

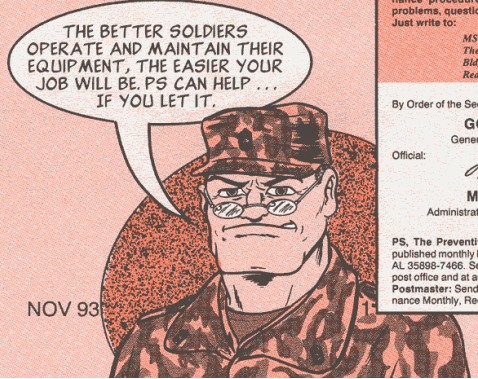
Use PS for training

If you're teaching something like timing an M2 machine gun, make enough copies of the PS story on timing for the entire unit. The copies will give them something to refer back to in the field.



Keep back issues on file

If a soldier's having trouble understanding how to do tank track PMCS, check the PS index (each December's issue) and see what PS has run on track. Then show it to the soldier.



PS THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-492 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.

ISSUE 492 NOVEMBER 1993

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

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The Preventive Maintenance Monthly
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Redstone Arsenal, AL 35898-7466

By Order of the Secretary of the Army:

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

Official:

MILTON H. HAMILTON
Administrative Assistant to the Secretary of the Army

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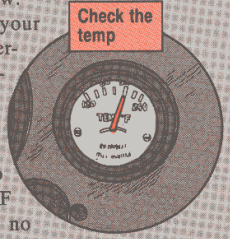
Get Hot on Cooling PM

The best time to do your cooling system PM is before cold weather sets in.

Here's how:

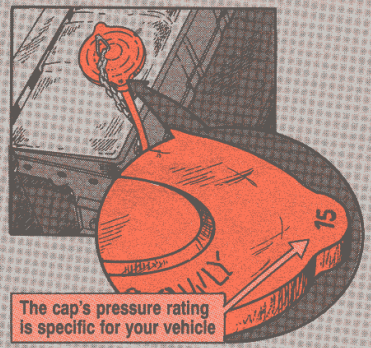
Eyeball your engine's operating temperature. A cooling system should be able to reach 160° F to 180° F no matter how cold it is outside. If yours won't, have the thermostat checked. It may be stuck open and need replacing.



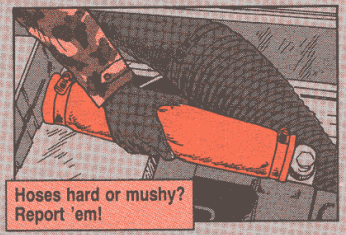
Systems that always run at more than 200° F also need attention. They might have a bad thermostat, a clogged radiator, a bad radiator cap or filthy coolant. The air flow may even be blocked.

Air-cooled systems don't need much attention. They need a good flow of air with all the airflow shrouds in place. To speed up heating in zero weather, you can partially cover the air intake grills with canvas when starting. Just be sure to take it off after the engine reaches operating temperature.

Look at your radiator cap. It should be the one your TM calls for. Just any cap won't do. The pressure rating of the cap is vital. A rating too low cuts the boiling point of your coolant. A rating too high builds up pressure that'll pop radiator seams or blow hoses.



Hoses need to be touched as well as looked at. They have to withstand heat, pressure and vibration. They're rubber, so they rot, harden and crack with age. Report any bad hoses that you find. Look over the radiator. Look for leaks on the top tank, front and back of the core, and bottom tank.

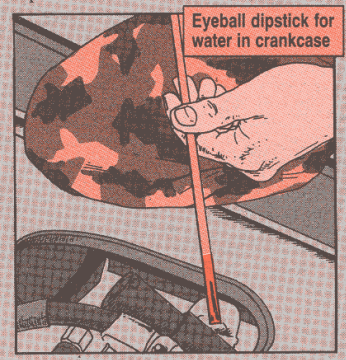


Leaks may not show up when the engine's cold. Look for rust or odd-colored dribbles where coolant has leaked and dried. Later, when you've got the engine running at operating temperature and pressure, check those places again for wet spots. Use a flashlight during both inspections.

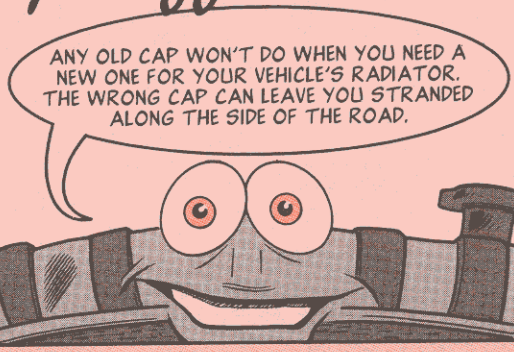
Finally, take the radiator cap off. If the cooling system is hot, open the filler cap slowly until all pressure is gone. Use a rag or glove to protect your bare hand from the hot cap.

The coolant should at least cover the top of the core. It should be almost clear—it'll be colored by the anti-freeze. If your coolant is muddy-looking or has bits of junk in it, your cooling system needs draining and flushing—maybe even cleaning. Report it.

If you see a rainbow of oil slime on top of the coolant, you've probably got a leak inside your engine. Exhaust gas or oil is getting into your cooling system. Pull the crankcase dipstick and check for water in the oil. Little blobs will show on the dipstick. Either way, report it.



Cap Off Radiator



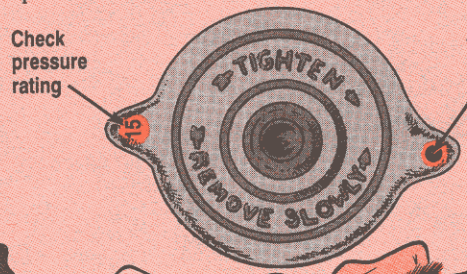
Caps are rated for pressure. A radiator needs the right amount of pressure to do its cooling thing.

Pick a cap with too low a rating and coolant can boil off. A higher-rated cap will cause blown hoses or radiator seals, letting the coolant blow, too.

Use the cap in your vehicle's TM if you can. If not, check the PSI rating on the top of the cap. Find a cap with a rating as close as possible to the old one. Cap pressure is also usually listed in the -10 manual's equipment data section under cooling systems.

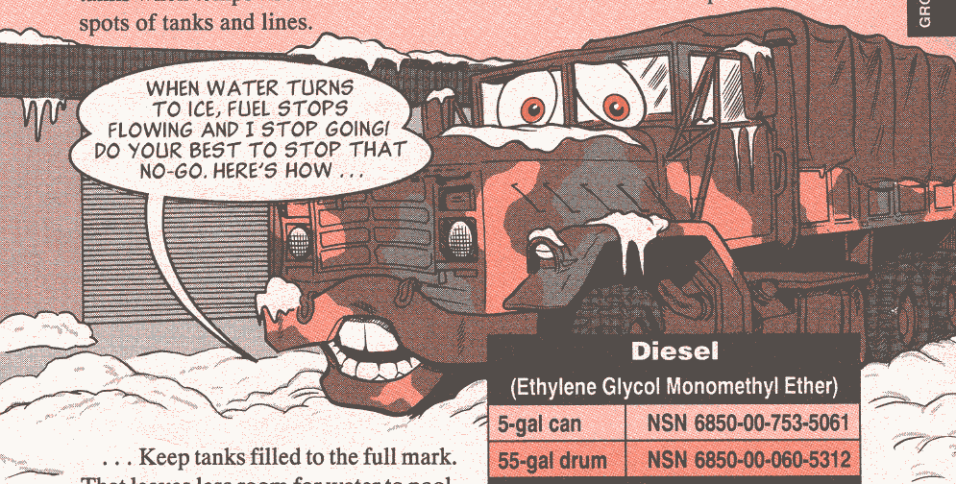
If lost caps are a problem, use chain to keep them around. NSN 4010-00-786-5485 brings chain by the foot. NSN 5315-00-514-2660 brings retaining pins to attach the chain.

If the cap doesn't have a hole for the chain, you can make one with the drill, NSN 5133-00-293-1849, in the Common shop sets. A 1/16-in hole should do the trick.



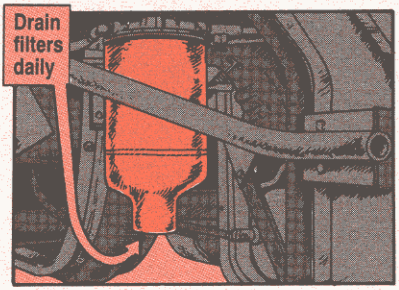
PM MELTS Ice Woes

Water in fuel lines can turn to ice in freezing weather. That can stop your vehicle cold. This moisture starts out harmlessly enough. Condensation forms inside fuel tanks when temps rise and fall. Trouble starts when the moisture pools in the low spots of tanks and lines.



. . . Keep tanks filled to the full mark. That leaves less room for water to pool.

. . . Refuel with care. Don't let water or snow fall into the fill pipe.



. . . If you're getting more water than usual when you drain filters, consider having the fuel tank cleaned out.

. . . Add icing inhibitors to the fuel. There are two kinds: One for diesel and Jet A-1 fuel, and one for gasoline.

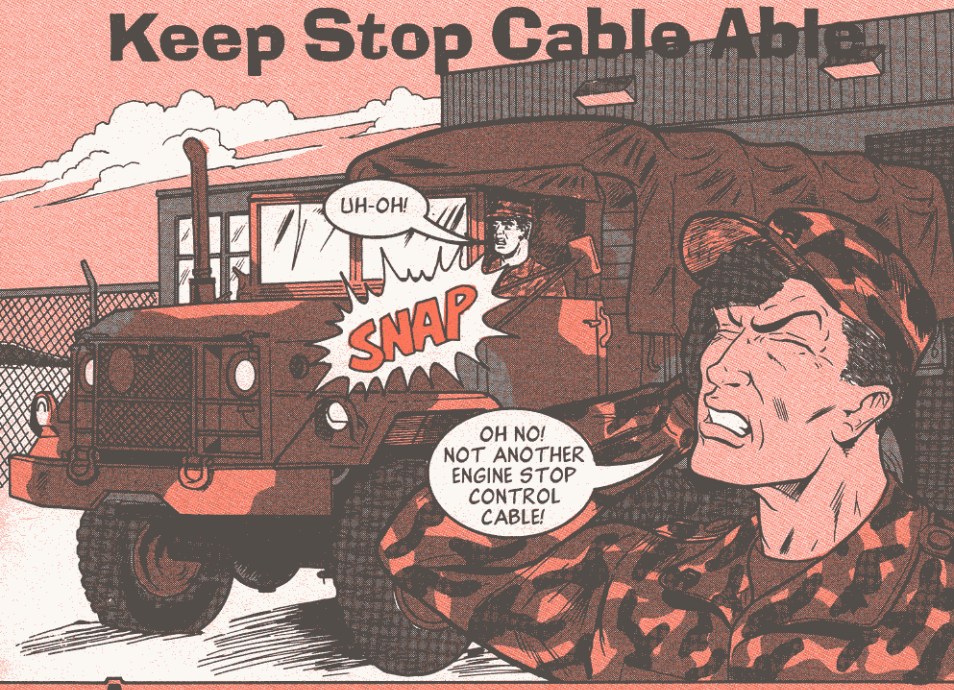
Diesel (Ethylene Glycol Monomethyl Ether)	
5-gal can	NSN 6850-00-753-5061
55-gal drum	NSN 6850-00-060-5312
(Diethylene Glycol Monomethyl Ether)	
55-gal drum	NSN 6850-01-089-5514

Gasoline (Methanol)	
1-gal can	NSN 6810-00-597-3608
5-gal can	NSN 6810-00-275-6010

Mix one pint of additive with 40 gallons of fuel. Pour the additive in first. If you're adding less than 40 gallons of fuel, use this mix: 30 gallons, 2/3 pint; 20 gallons, 1/2 pint; 10 gallons, 1/3 pint.

Engine performance suffers when too much additive is used. If you're using JP-8 jet fuel, don't add icing inhibitor—it's already in there. Jet A-1 doesn't have the inhibitor, so treat it like diesel fuel.

Keep Stop Cable Able



A light touch and a little lube will keep the go in your engine stop control.

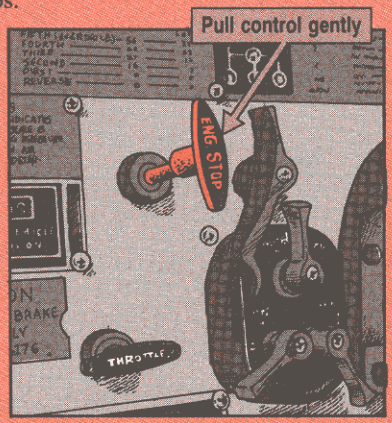
Don't jerk the handle when you want to stop. That'll eventually break the cable. Pull it out—gently—until the engine stops.

If the control is hard to move, pull it out and lube the cable behind the handle with silicone grease, NSN 6850-00-880-7616.

Put a couple of drops of oil on the other end of the control, too.

If the control won't stop your engine now, get your unit mechanic to look it over. It could be kinked, broken or need adjustment.

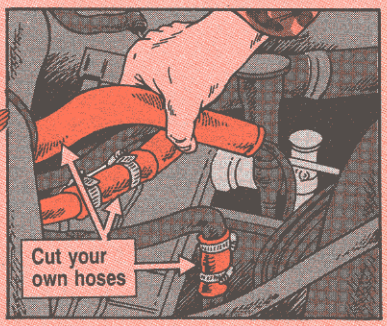
In an emergency, you can stop your truck's engine by shifting into 5th gear, holding the brake and letting out on the clutch.



HMMWV . . .

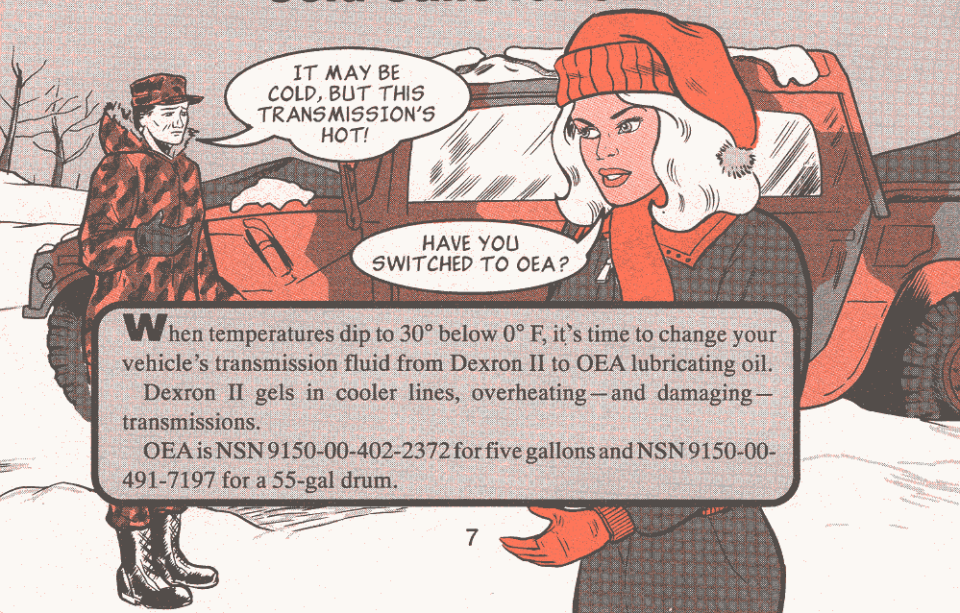
Make Heater Hoses

The hoses, Item 4 in Fig 274 of TM9-2320-280-20P, are made from bulk hose, NSN 4720-00-241-4435. You can cut it easily into the 2 1/2-in pieces you need.



You'll also want to replace any broken or worn-out hose clamps with NSN 4730-01-088-7798.

Cold Calls for OEA

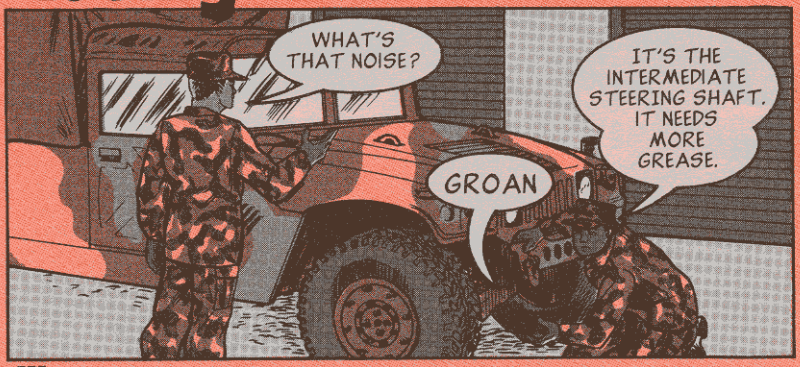


When temperatures dip to 30° below 0° F, it's time to change your vehicle's transmission fluid from Dexron II to OEA lubricating oil.

Dexron II gels in cooler lines, overheating—and damaging—transmissions.

OEA is NSN 9150-00-402-2372 for five gallons and NSN 9150-00-491-7197 for a 55-gal drum.

Lubing—More and Less



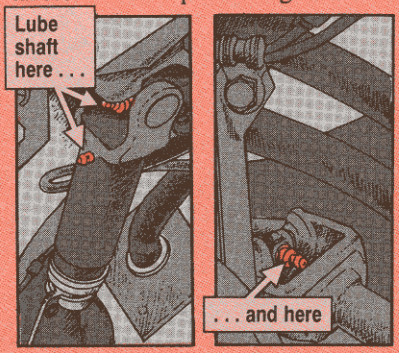
When the going gets tough, the intermediate steering shaft on the Humvee needs more grease.

On the other hand, the upper control arm ball joint needs less than you may think.

Steering Shaft

LO 9-2320-280-12 says lube the shaft every 3,000 miles or semiannually. That's in normal operation.

When driving isn't normal—high or low temps, high speeds, or long distances—more frequent lubing is needed.

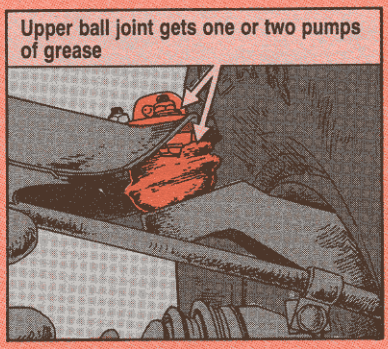


To save U-joints, you should hit all three grease fittings on the shaft every 1,000 miles. Note there are **three** fittings. Some operators forget the lower knuckle fitting because it's out of sight under the alternator.

Ball Joint

Grease the upper ball joint like the LO says—at 3,000 miles or semiannually.

But don't overlube it. Too much grease fills up the rubber boot. Hit a good bump and you'll pop the boot. Then you have to replace the ball joint.



Match Locking Hubs

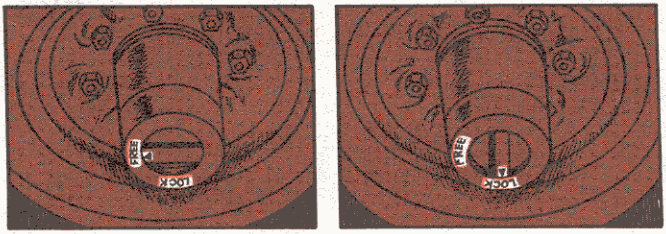
Four-wheel drive? OK. Two-wheel drive? OK again. Three-wheel drive? Forget it!

Driving your CUCV with one front hub locked into four-wheel drive can cause big-time damage to the drive train. It can also ruin tires.

While one front tire is rolling free, the other is being pushed. That creates uneven tire wear and cupping.

Two-wheel drive is the ticket for good roads. When the going gets bad — mud or rough terrain — switch to four-wheel drive.

Make sure what drive mode your truck's in before you take off. Check both front wheels. If hub handles are in LOCK, you're four-wheeling. FREE means only the rear wheels are driving.



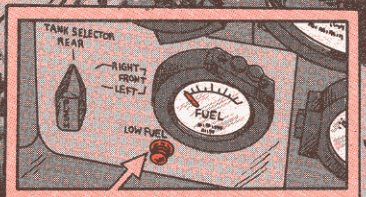
The markings can be hard to read. A colorful reminder is to paint over the word FREE or LOCK, plus the arrow on the handle.

M1-Series Tanks . . .

Fuel Transfer EnLIGHTenment

I JUST DON'T UNDERSTAND WHY THE FUEL WON'T TRANSFER!

Drivers, there's a little note in the -10 TMs under "Transfer Fuel" that deserves your attention. It says fuel cannot be transferred until the LOW FUEL LEVEL light comes on.



Low fuel light off? Fuel won't transfer!

The light will only come on when the rear tank fuel level gauge reaches 1/8-full. When that happens, transfer fuel to the rear tank by setting the vehicle master power switch to ON and turning the fuel tank selector switch to RIGHT FRONT.

When the fuel gauge reads between 1/4-full and empty, stop transferring from the right front tank or you'll burn up the transfer pump. Either turn the selector switch to LEFT FRONT to continue transferring fuel, or to REAR which stops the fuel transfer.

Remember, once you turn the switch back to REAR, you won't be able to move more fuel until the LOW FUEL LEVEL light comes back on.

WHEN IS HE EVER GOING TO LEARN ABOUT FUEL TRANSFER?

FILL 'ER UP

Mechanics, before you exercise the gun mount recoil mechanism on that M1A1 tank, check the level of hydraulic fluid in the gun mount exerciser (GME).

Without fluid, the GME doesn't work properly. Then packings and seals dry out, causing sliding surfaces to wear.

If fluid level is low, top it off with MIL-H-46170 hydraulic fluid, NSN 9150-00-111-6256, only. Stay away from substitutes. Other hydraulic fluids will damage the pump seals.

Hot Off the Presses

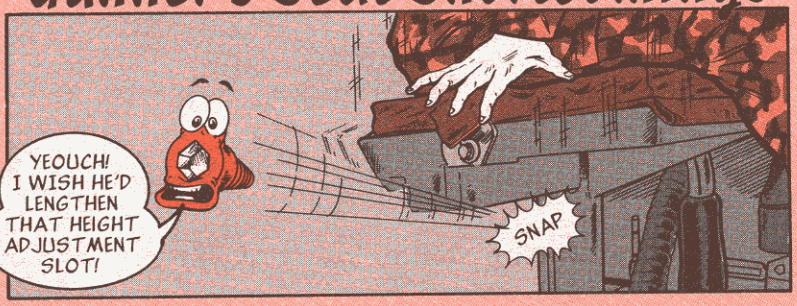
Two fire prevention checks and safety procedures booklets are available from the Project Manager for M1-series tanks.

One booklet is for crews and the other is for unit maintenance personnel. Both include all you'll need to keep your M1 as fire-proof and safe to operate as it can be, **when used with –10 and –20 manuals.**

TO ORDER THE BOOKLETS, WRITE TO:

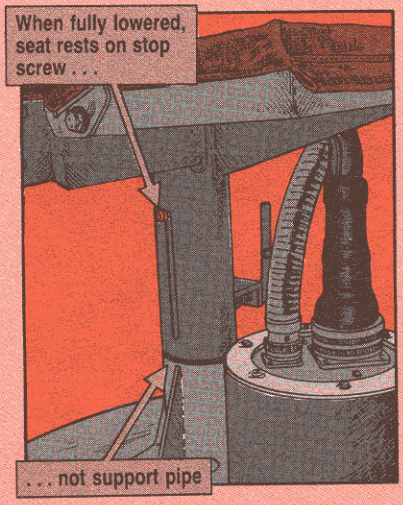
OFFICE OF THE PROJECT MANAGER
ABRAMS TANK SYSTEM
ATTN: SFAE-ASM-AB
WARREN, MI 48397-5000

Gunner's Seat Shortcomings



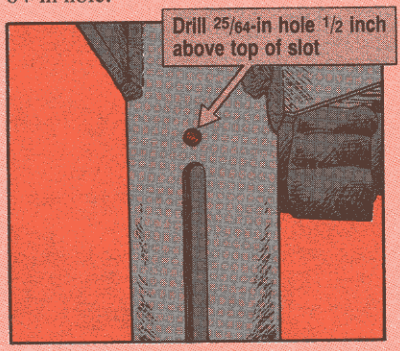
Mechanics, everytime an ITV or FISTV gunner lowers his seat all the way, you can count on having to replace a broken stop screw.

That's because the height adjustment slot is too short to allow the seat to rest against the lip of the support pipe. When the adjustment handle is in the unlocked position, the entire weight of the seat (and the gunner's body) presses down on the stop screw, snapping it off.



Prevent that damage by lengthening the height adjustment slot. Here's how:

1. Remove the seat assembly from the support pipe.
2. Measure 1/2 inch up from the top of the height adjustment slot and drill a 25/64-in hole.



3. Cut out the area between the slot and hole with jig saw, NSN 5330-00-889-7745.
4. Smooth the rough edges of the slot with metal file, NSN 5110-00-241-9152.
5. Reinstall the seat assembly.

Appendix A of CTA 50-970 is your authority for ordering the jig saw and metal file.

KEEP IT CLIPPED

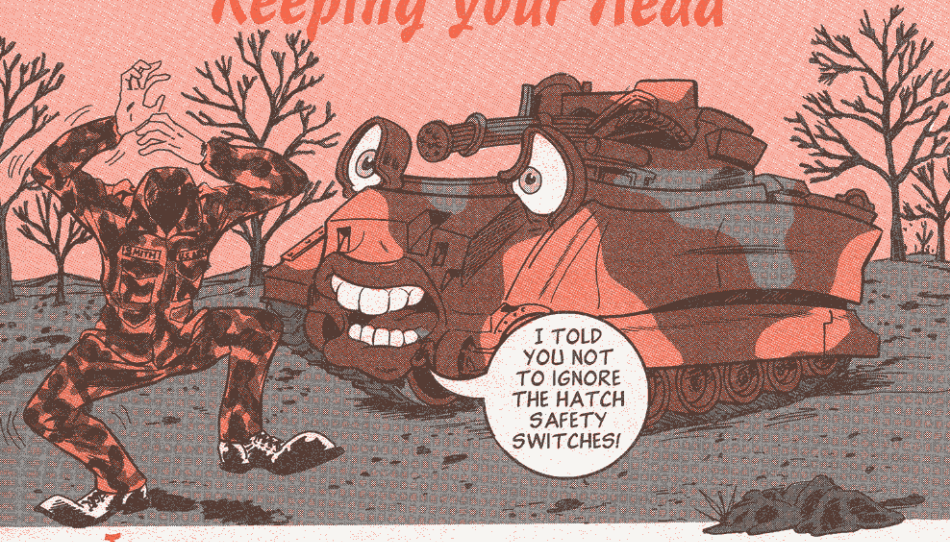
You're facing a real stowage problem when you try to store your M16A2 rifle in a M981 FISTV or M901A1 Improved TOW Vehicle. That's because the stowage clip was meant to hold the older M16A1 rifle.

Rifle stowage bracket	5340-01-329-8582
5.56 ammo decal	7690-01-075-7915
Self-locking nut	5310-00-087-4652
Hex head screw	5305-00-543-4372

After the new bracket's in place, scrape off the old 7.62 ammo decal and clean the surface with drycleaning solvent, NSN 6850-00-281-1985. Touch up the area with paint, NSN 8010-01-211-9645, then stick on the 5.56 ammo decal.

The new clip will still hold the M16A1 rifle. The complete scoop's on Pages 3-9 and 3-10 of TB 43-0001-39-4 (Mar 93).

Keeping Your Head



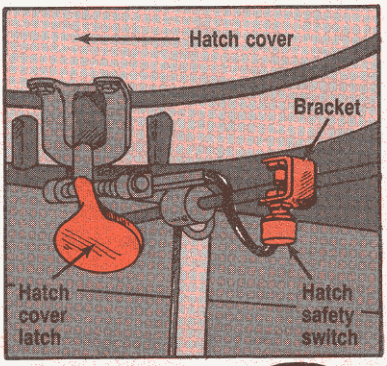
The surest way for you Vulcan crews to lose your heads — literally — is to ignore the hatch safety switches. If a switch stops working, one of two things happens:

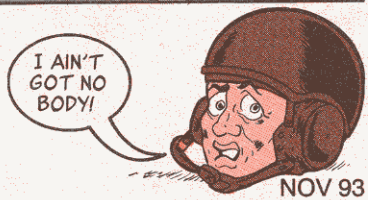
- The Vulcan won't fire in the area of the hatch, even if the hatch is closed.
- The Vulcan will fire and traverse over the hatch, even with the hatch open. If someone's head is sticking out, start planning the funeral.

Give hatch safety switches the attention they deserve. As part of your BEFORE OPERATIONS PMCS, try to traverse with the gun depressed as much as possible and the hatches open. If a switch fails, report it. Never operate a Vulcan with a bad switch.

Never bang down the hatch. That damages the switch. Guide the hatches down with your hands.

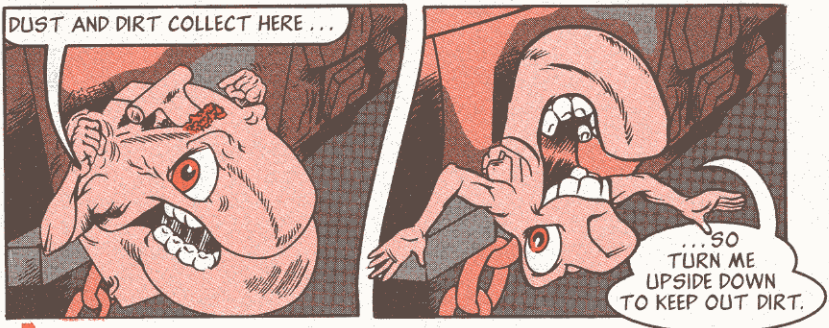
Never use the switches to cheat the Vulcan's safety system. That is begging for trouble.





Tow Pintles . . .

KEEP PINTLE DIRT-FREE



Few things are more frustrating than a tow pintle that will not open when you need it. But that's exactly what can happen when you drive your vehicle in dusty, sandy conditions.

Sand thrown up by tracks or wheels ends up in the pintle's latch. By the time you get where you're going, the latch is jammed full and it's impossible to open the jaw.

Avoid that problem by turning the pintle jaw down. If you're using the pintle, tie a rag around it to keep out dirt.

M113-Series FOV . . .

Shocks Need Rough Treatment

To get a good shock absorber test on your M113-series carrier, you've got to get rough.

Even good shocks may not be warm after a test run on a smooth road, so take your carrier for a good run over rough terrain or a bumpy course.

That type of trip will leave only bad shocks cold, so your PMCS will give true results.

PREPARING FOR BATTLE

There's a time and place for everything. For Battlefield Damage and Repair (BDAR) kits, the time is war and the place is the battlefield.

These kits have the parts for mechanics to make battlefield repairs on disabled equipment to get it working again so the mission can be completed.

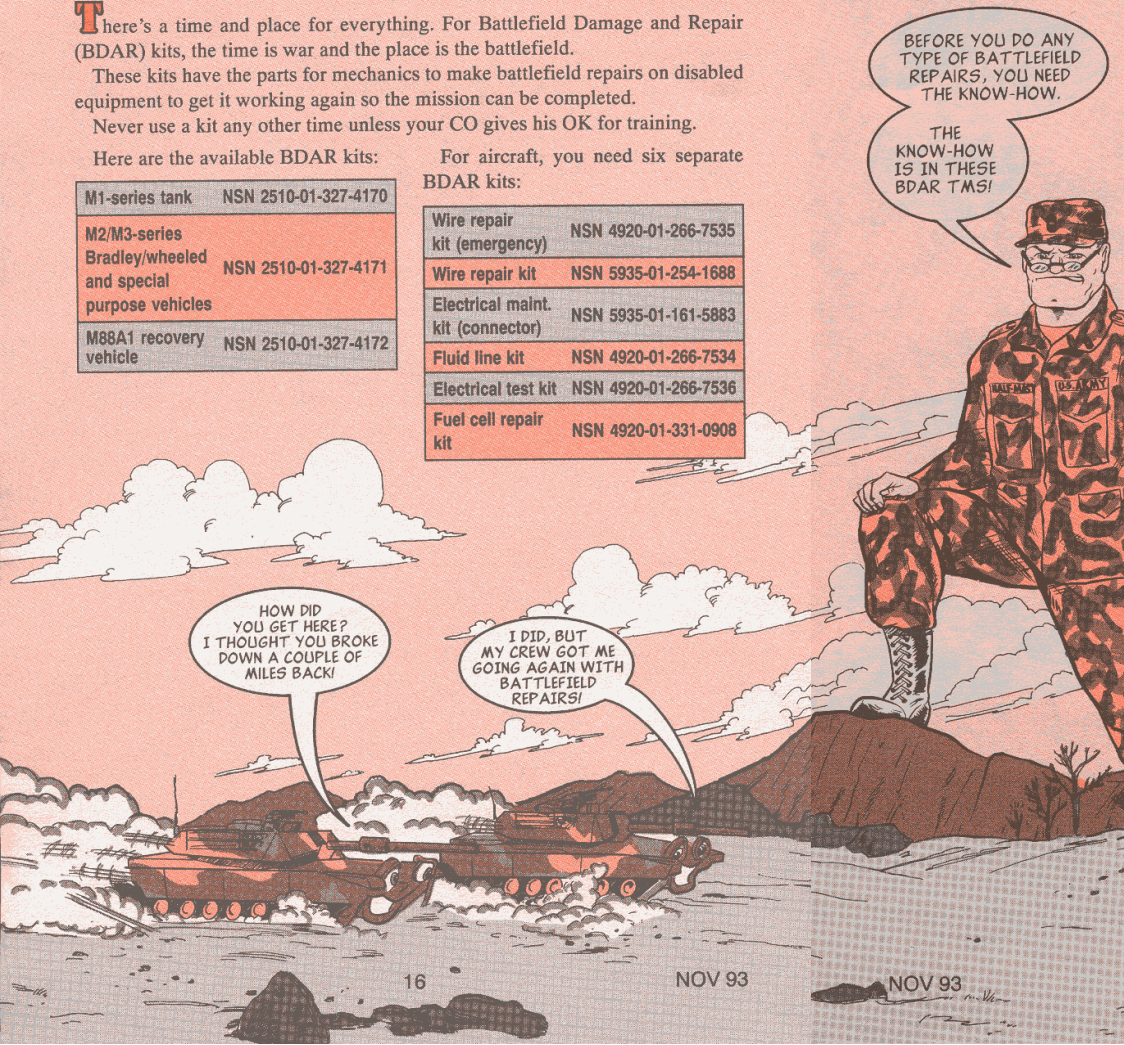
Never use a kit any other time unless your CO gives his OK for training.

Here are the available BDAR kits:

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 2510-01-327-4172

For aircraft, you need six separate BDAR kits:

Wire repair kit (emergency)	NSN 4920-01-266-7535
Wire repair kit	NSN 5935-01-254-1688
Electrical maint. kit (connector)	NSN 5935-01-161-5883
Fluid line kit	NSN 4920-01-266-7534
Electrical test kit	NSN 4920-01-266-7536
Fuel cell repair kit	NSN 4920-01-331-0908



TM 3-251-BD	Chemical Defensive Materiel
TM 5-3835-222-BD	POL Equipment
TM 5-4120-394-BD	Environmental Control Unit
TM 9-1000-257-BD	105MM Howitzer Series
TM 9-1000-258-BD	155MM Howitzer Series
TM 9-1005-321-BD	PIVADS
TM 9-1425-485-BD	Lance
TM 9-1425-646-BD	M270 MLRS Launcher
TM 9-1425-1586-BD	Chaparral
TM 9-1450-646-BD	M993 MLRS Carrier
TM 9-2320-356-BD	Tactical Wheeled Vehicles
TM 9-2350-200-BD-2	M1/IPM1/M1A1 Tank
TM 9-2350-252-BD	M2/M3, M2A1/M3A1 Bradley
TM 9-2350-255-BD	M1 Tank
TM 9-2350-273-BD	M48/M60-Series Tank
TM 9-2350-274-BD	M109-/M110-Series Howitzer
TM 9-2350-275-BD	M113 FOV
TM 9-2350-276-BD	General Combat Equipment
TM 9-6115-624-BD	Generators
TM 11-5800-215-BD	Commo/Electrical Equip.
TM 55-1520-210-BD	UH-1H Huey
TM 55-1520-228-BD	OH-58 Kiowa
TM 55-1520-237-BD	UH-60 Black Hawk
TM 55-1520-244-BD	AH-1 Cobra

Dragon Missile . . .

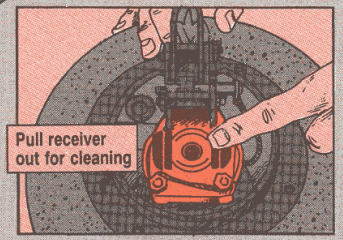
Don't Let

If you expect your launch effects trainer (LET) to prepare you for the real thing, you've got to give it real PM. Don't let your LET down. Target these points.

Cleaning

If the receiver's not cleaned, everything gets gummed up with carbon and the LET won't fire. If it gets too gummed up, you can't even take it apart.

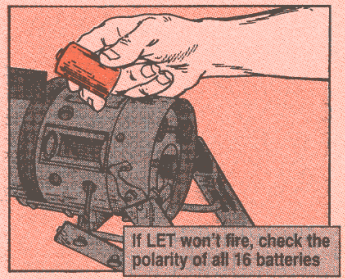
After training, pull out the receiver and clean the cartridge chamber with soapy water and a small arms chamber brush. Clean the rest of the receiver with soapy water and an acid swabbing brush. If soap won't get rid of carbon, use rifle bore cleaner (RBC), NSN 6850-00-224-6658. Wipe the receiver dry.



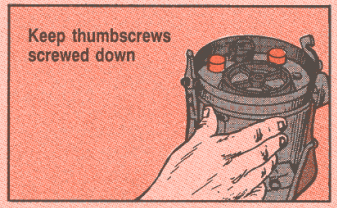
LET Down

Batteries

If the LET won't fire, suspect the batteries. If just one of the 16 batteries is reversed, the LET has no power.



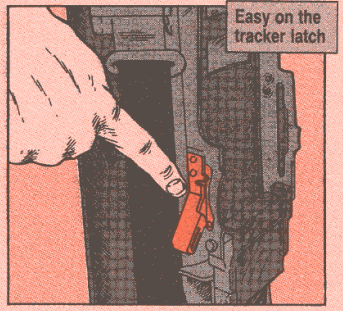
Batteries all point in the same direction? Tighten the battery thumbscrews. Both must be tight for electricity to flow. Keep the thumbscrews tight, except when you're replacing batteries. If the thumbscrews stick out, they get bent. That means no power until the thumbscrews are replaced.



When you remove batteries, count 'em. Eight should come out of each compartment. The last battery often sticks in place, and unless you know it's out, it swells and bursts and the whole tube assembly is finished.

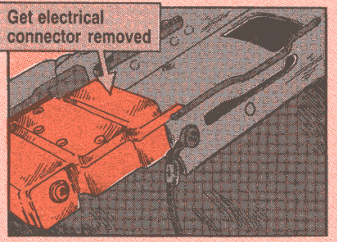
Tracker Latch

It doesn't take much rough handling to bend the tracker latch. Then you can't lock the tracker in place and the mounting assembly has to be replaced. Pull back the latch just enough to release the tracker.



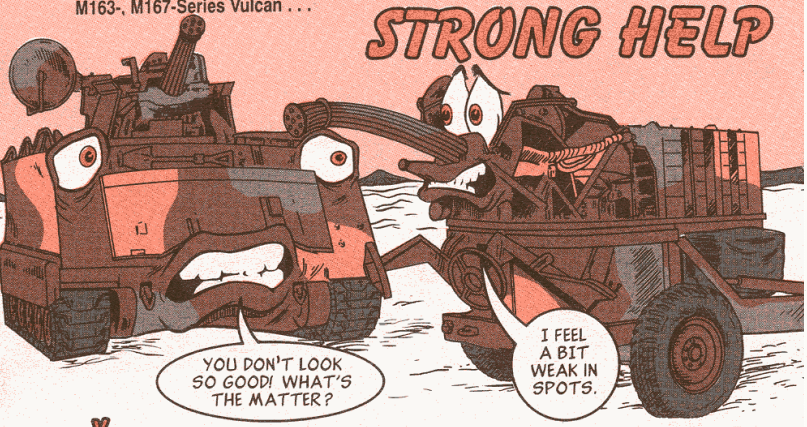
Old Rounds

If you're training with an old round, make sure its electrical connector has been removed before you use it. The connector can damage the tracker. Your repairman should send the round to support for modification before it's used for training.



M163-, M167-Series Vulcan . . .

STRONG HELP

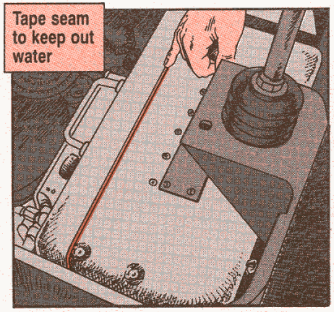


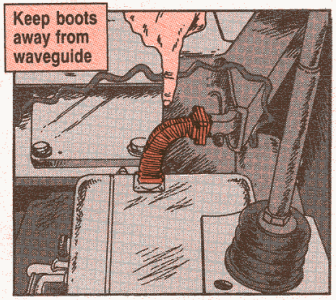
Your Vulcan is a firing machine that can throw out a wall of lead. But every machine is only as strong as its weakest part. If you ignore these weak spots, your Vulcan won't be able to hit a wall, much less fire a wall of lead.

Radar

All the radar components—receiver-transmitter (RT), computer, power supplies—die fast if water gets in their cases. Keep their case seams taped to seal out water. Take tape, NSN 8315-00-253-6293, to the field in case you have to reseal cases.

Watch the waveguide as you climb in and out of the gunner's compartment. One good bump breaks the waveguide and the Vulcan's deadlined.



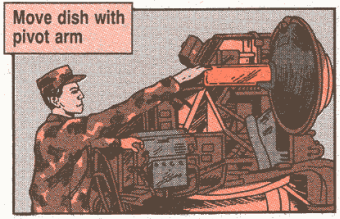


Never operate with a cracked waveguide or think that taping cracks fixes the waveguide. That's heavy-duty radiation going through the waveguide and tape won't stop leaking radiation.

FOR WEAK SPOTS

Dish

Hands off the dish. If you use the antenna dish as a handle to move the dish, the servo mechanism brakes are ruined.



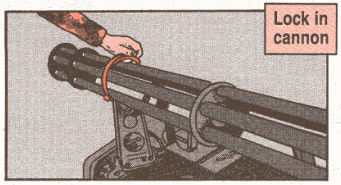
Once you get the antenna in place, lock it in with the antenna stow bolt. If you forget, the antenna swings loose and bashes into something.

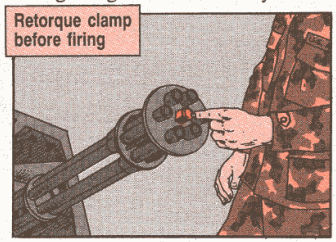
Keep the antenna covered as much as possible, especially in wet areas. Corrosion sets in fast and locks up the antenna or makes it move erratically.

Cannon

The cannon must be locked in, too. If it's not, it waves back and forth during travel and destroys the azimuth drive assembly. Test the cannon lock and brakes before you leave the motorpool. If they can't hold the cannon in place, it won't matter if the cannon's locked for travel. It will break loose.

Before firing, retorque the muzzle clamp to 600-650 in-lb. If the torque is less, the muzzle clamp can work loose during firing and the barrels fly off.





Mount

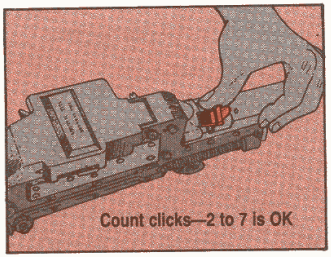
If the mount binds, it makes everything that moves the mount work harder and eventually break down. The mount binds because it's not lubed. The LO says you lube it every six months with LSA. But it may need help more often.

Manually move the mount during weekly PMCS. If it binds, lube its bearing. Remember, you must completely rotate the mount as you lube to completely lube the bearing.

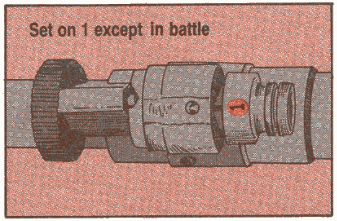
Careful Counts

Just being a little more careful when you take care of your M240 can make a big difference when you get ready to fire. Carefully target these tips:

Barrel. Clicks count when it comes to screwing in the barrel. If it takes fewer than two or more than seven clicks of the barrel release, the headspacing's bad. Fired in that condition, your M240 could blow up, lose the barrel, or ruin the receiver threads.

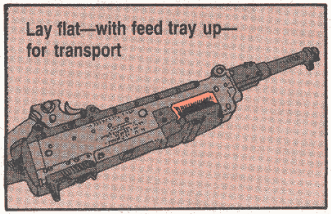


Rate of Fire. Keep the regulator at 1 except when your M240 slows way down during firing. Firing on positions 2 or 3 is like driving your family sedan 50 MPH in second gear—plenty of power, but awfully hard on parts. The heat burns out the barrel lining and ruins accuracy.



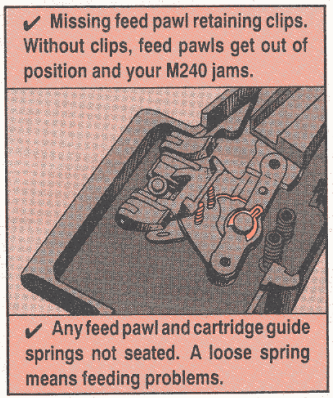
Fire on 2 or 3 only in battle. And clean your M240 as soon as possible, especially the gas system. That usually takes care of sluggish firing.

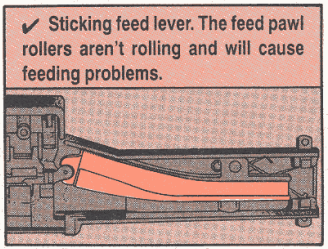
Transport. If you can't mount your M240 for transport, lay it flat with the feed tray up. If you stand it on end, it falls. Even a small dent in the receiver extension causes slow—or no—firing. A bent gas tube can mean a ruined receiver.

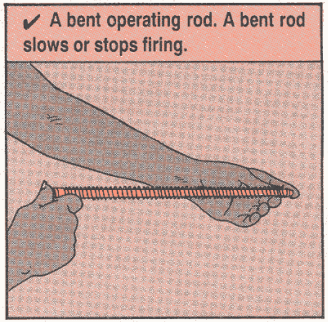


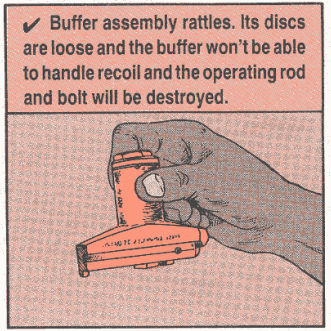
Keep the feed tray cover closed, too. One good jolt bends the cover pin and the cover won't close.

PMCS. Before you go to the field, check for:



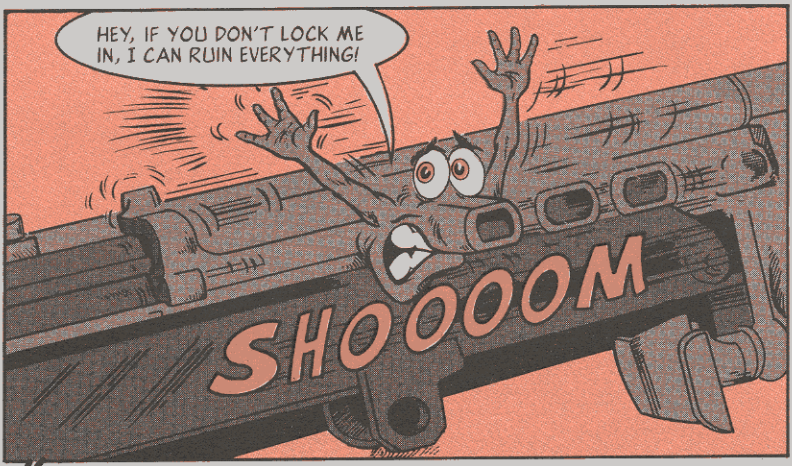






M249 Machine Gun . . .

Don't Go Off Half-Cocked



Know what the No. 1 reason is that M249s get junked? Gunners go off half-cocked!

Gunners forget to push the cocking lever forward after they lock back the bolt. As a result, the lever's left flapping. During firing, it bangs against the locking pin. Eventually, that enlarges the pin hole. The pin falls out and the cocking lever flies off.

The lever banging back and forth also wears out the receiver rails. Enlarged pin holes and worn-out rails are unfixable. Time for the junkyard.

Keep your M249 firing straight and strong by pushing the cocking lever forward until it clicks after cocking. Do it every time.

If the cocking lever hangs up on the lock pin, a few drops of CLP on the pin will unhang the lever.

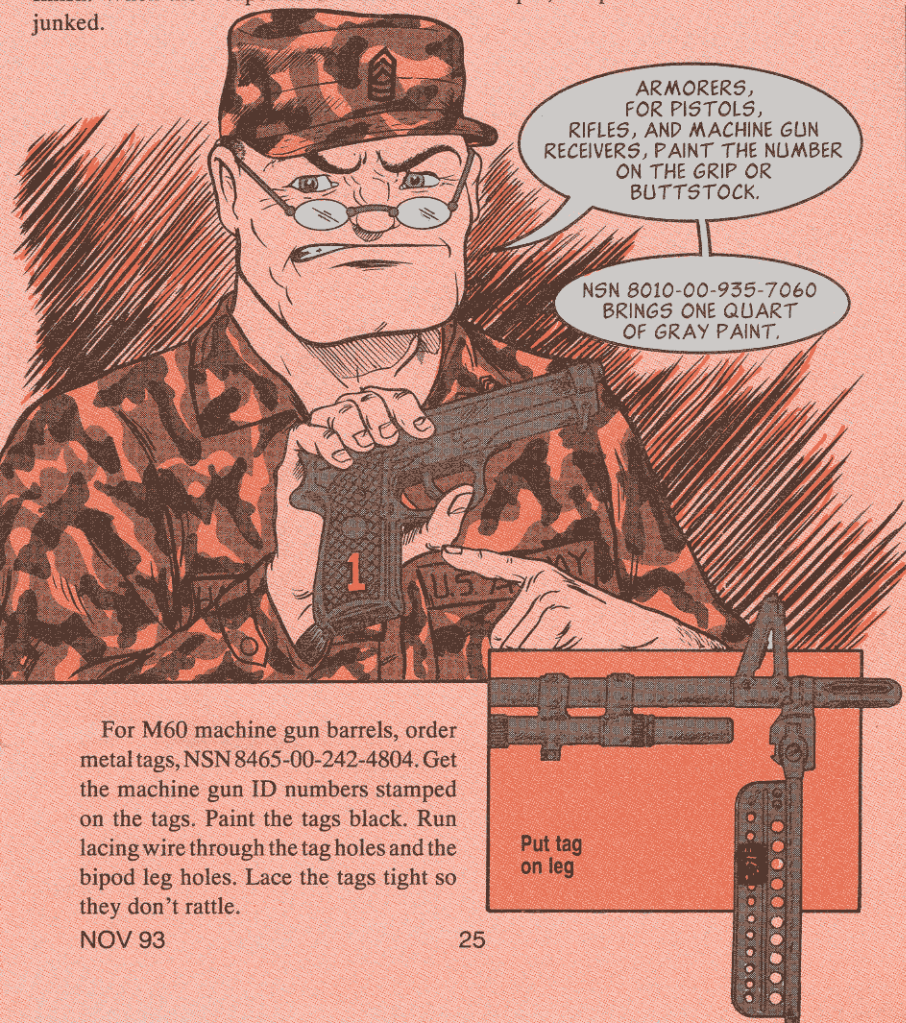
Socket Sub for M242 Repair

Use 4-MM, 1/4-in drive socket, NSN 5120-01-026-9406, as a substitute for the 5/32-in socket called for to remove the M242 gun feeder electrical connector. The 4-MM socket is part of both the No. 1 and No. 2 Common automotive shop sets.

GOOD MARKS

Armorers know that it's important to ID their unit's rifles, machine guns, and pistols. Without ID, you can't track them in the property book and on weapons cards and, in the case of machine guns, keep the correct spare barrel with the weapon it's headspaced for.

Problem is, some armorers scratch or stamp the number in the weapon's metal. That pretty much stamps out the weapon's life by ruining the metal's protective finish. When the weapon is overhauled at the depot, the parts marked must be junked.



For M60 machine gun barrels, order metal tags, NSN 8465-00-242-4804. Get the machine gun ID numbers stamped on the tags. Paint the tags black. Run lacing wire through the tag holes and the bipod leg holes. Lace the tags tight so they don't rattle.

Pistol-Packin' PM

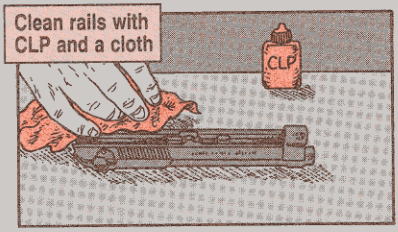
Pack this PM with your M9 pistol to keep it packed up and ready to fire:

Trigger bar spring: Take care cleaning the magazine well so that you don't knock the trigger bar spring loose—an easy thing to do. A loose spring disappears and your M9 can't fire. When you're through cleaning, make sure the spring's still connected.

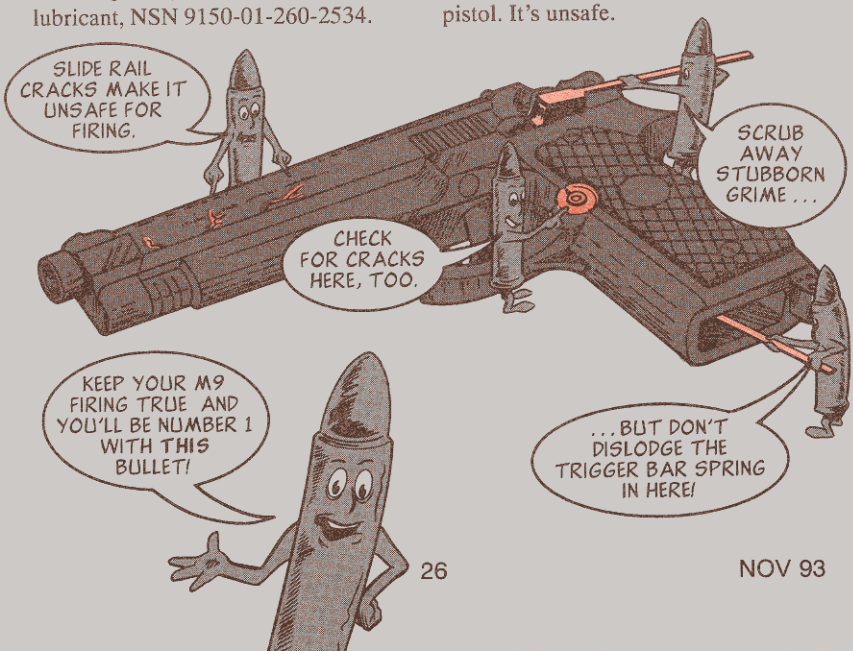
Stop shiny spots: Dull is good. Shiny is bad. Shiny spots mean the pistol's finish has been rubbed off and corrosion is just around the corner. Shiny spots also point you out to the enemy.

Stop shiny spots by keeping wire brushes and scouring pads away from your pistol. Clean it with CLP and a cloth. For tough spots, use a toothbrush. Touch up shiny spots with a solid film lubricant, NSN 9150-01-260-2534.

Rails: Pay particular attention to the rails on the receiver and slide during PMCS: If the rails are gritty, the repeated back-and-forth of the slide quickly wears away the rails and you need a new pistol. Clean and lube the rails with a cloth and CLP.



Cracks: Focus on the slide rails and around the magazine catch when you look for cracks. If you spot any cracks in the receiver or slide, do not fire your pistol. It's unsafe.



ULLS Well That Ends Well
With Computer PM


HMMM . . .
I WONDER WHAT'S WRONG WITH THIS COMPUTER?
WARNER
U.S. ARMY
WARM-UP TIME AND PM KEEP COMPUTERS IN TIP-TOP SHAPE.
NEVER TURN ON ALL COMPONENTS AT ONCE.
INSTEAD, TURN ON ONE PIECE AT A TIME TO PREVENT DAMAGE TO FILES AND EQUIPMENT.


IF YOUR MONITOR IS BLANK, THE SYSTEM MUST READ AND ACCESS FILES WHEN IT FIRST COMES ON.
BLO
U.S. ARMY
U.S.
IF AN INCREASE IN POWER HAPPENS WHEN THESE FILES ARE ACCESSED, THE DATA IN THOSE FILES CAN BE DAMAGED.
WHEN YOU POWER UP YOUR SYSTEM, IT'S AS SIMPLE AS REMEMBERING PMCS
"P" FOR PRINTER.
"M" FOR MONITOR.
"C" FOR COMPUTER OR CPU.
"S" FOR SYSTEM OPERATIONAL.
THAT'S GOOD INFO. GOT ANYMORE TIPS?


IF YOUR ULLS IS A MESS,
YOU'LL ALWAYS BE IN DISTRESS.
KEEP YOURSELF ON THE BALL
OR COMPUTERS WILL FALL.
GREAT MAINTENANCE GIVES GREAT SUCCESS!
HABLO
U.S.ARMY
WARNER
U.S.ARMY
I COULDN'T
HAVE SAID IT
BETTER.
WE HAVE THE WORLD'S BEST EQUIPMENT ...Take care of it


JUNK PILED AROUND A COMPUTER OR A COMPUTER TOO CLOSE TO A WALL WILL CAUSE IT TO GET HOT AND BURN OUT.
SO KEEP YOUR COMPUTER AT LEAST SIX INCHES FROM THE WALL AND KEEP EVERYTHING ELSE CLEARED AWAY FROM THE VENTS. VENTS HAVE TO BREATHE TO KEEP THE COMPUTER GOING!
U.S. ARMY
ULLS END USER MANUAL
HEY, I WAS LOOKING FOR THIS MANUAL.
TAKE TIME TO READ SECTION 3 OF YOUR ULLS END USER MANUAL AND GET FAMILIAR WITH THE HARDWARE.
SECTION 3
NOT KNOWING ULLS HARDWARE IS LIKE TRYING TO COMPETE WITHOUT BEING PREPARED!


CLEANLINESS IS REALLY IMPORTANT AROUND COMPUTERS. SMALL OBJECTS, LIKE THIS THUMB TACK, CAN GET INTO SMALL OPENINGS AND DAMAGE THE EQUIPMENT.
SODA
RIGHT! IF THIS SODA GETS KNOCKED IN THE PRINTER, IT'LL SHORT OUT!
SODA
KEEP LABELS SECURE ON YOUR DISKS. LOOSE LABELS COULD GET STUCK IN THE FLOPPY DISK DRIVE AND DAMAGE THE READ/WRITE HEADS, DISK DRIVE OR MOTOR.
U.S. ARMY
ALWAYS KEEP MORE THAN ONE BACK-UP TAPE! YOU SHOULD HAVE AT LEAST FIVE DAYS OF BACK-UP TAPES IN CASE OF A POWER FAILURE OR IF FILES ARE ACCIDENTALLY DELETED! YOUR BEST BET IS TO BACK-UP DAILY.


WHEN DUST AND DIRT GET ON A TAPE, THE COMPUTER CANNOT READ IT. THAT'S WHY YOU NEED TO SWAP YOUR BACK-UP TAPES FOR NEW ONES EVERY 6 MONTHS OR SO. IF THE AREA IS EXTREMELY DUSTY, CHANGE TAPES EVERY 3 MONTHS.
LATER . . .
SO, WHAT DO YOU THINK SERGEANT HABLO?
I THINK YOU'VE GOT ULLS COMPUTER PM UNDER CONTROL.
HABLO
U.S. ARMY
JUST A LITTLE PREPARATION WILL KEEP YOUR ULLS IN TIP TOP OPERATION!
WHEN PAUL SPEAKS ABOUT LOGISTICS MANAGEMENT, SOLDIERS LISTEN.

Remove It or Not?

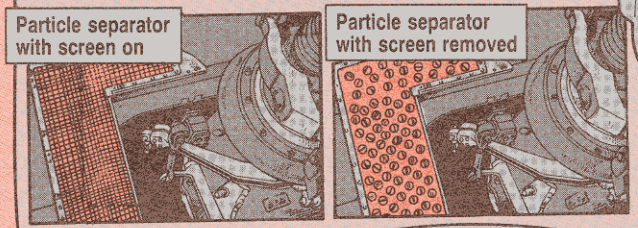
Dear Windy,

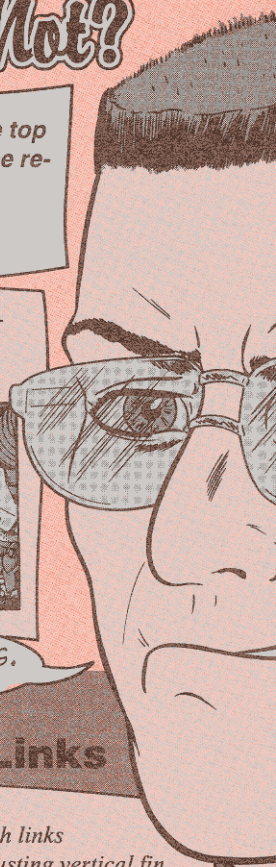
There is some confusion as to whether or not the top screen of the improved particle separator should be removed before flights in freezing rain. Should it or shouldn't it?

SFC F.H.G.

Dear Sergeant F.H.G.,

Yes, you should remove the upper screen when icing conditions are probable. The pilot makes that decision. Look for this info to be added to TM 55-1520-210-10.





Setting Tail Rotor Pitch Links

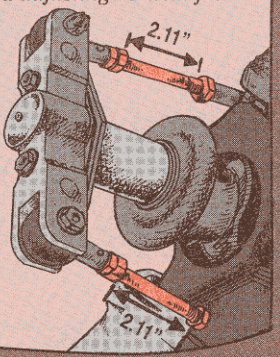
Dear Windy,

The note on Page 5-147 of TM 55-1520-210-23-1 sets the pitch links to 2.11 inches between jamnuts and eliminates the need for tracking. Is it a field expedient method? We've had some links that we can't adjust down to 2.11 inches.

SGT J.C.F

Dear Sergeant J.C.F.,

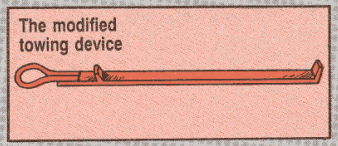
This method of setting pitch links to a nominal setting and adjusting vertical fin clearance should be used only if Vibrex is not available. If you do use this method, remember that the initial setting of 2.11 inches will not be retained if additional adjustment is required for vertical fin clearance.



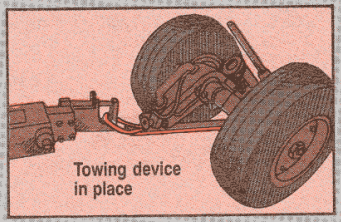
Get a Handle on Ground Handling Wheels

Moving Huey and Cobra ground handling wheels can be a back-breaking job. There's a good work aid shown in Fig 1-7 of TM 55-1520-236-23-1 that helps ease the pain. But other top mechanics have come up with good ways of their own. Here are two:

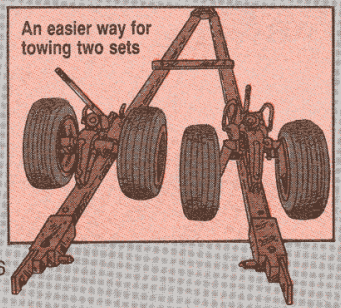
1. Make a device that allows you to hook the wheels directly to the tow bar without lifting the wheels. It's basically the same device as the one in the TM, but instead of putting a handle on the work aid, shape a piece of 5/16-in round steel stock into a loop and weld it onto the bottom section.



Just slip the loop onto the hook assembly of a tow bar leg and you're ready to go. Since you need two sets of wheels for each bird, hook up one set to each leg.

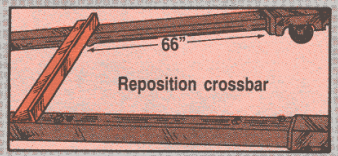


2. Or you can modify the tow bar, itself, to hold two sets of wheels.



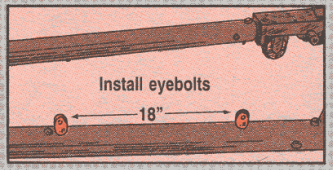
The only parts you need for the modification are four eye bolts, NSN 5306-00-883-4462, four concave washers, NSN 5310-00-888-9553, and four nuts to fit the bolts.

Remove the crossbar from the legs of an old tow bar and reinstall it 66 inches from the tow bar wheel housings. That

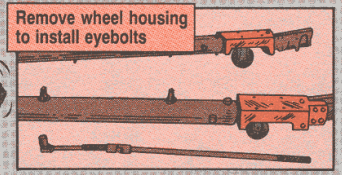


keeps the ground handling wheel assemblies from rubbing together when they're installed on the two bar legs.

Install two eye bolts exactly 18 inches apart in each leg of your tow bar. Drill

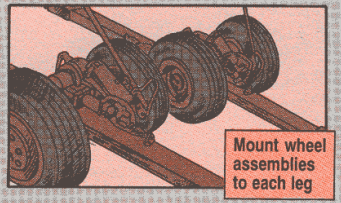


one 1/2-in hole in each leg. Use one of the existing holes in each leg for the other eye bolt. You'll have to remove the wheel housing from each leg to install the hardware.



To fasten the eye bolts to nuts inside each leg, place the nut in the appropriate size socket, attach the socket to a socket wrench and attach the wrench to a breaker bar. The whole thing's got to be at least 30 inches long to reach the holes. Then thread each bolt through the hole into the nut and tighten.

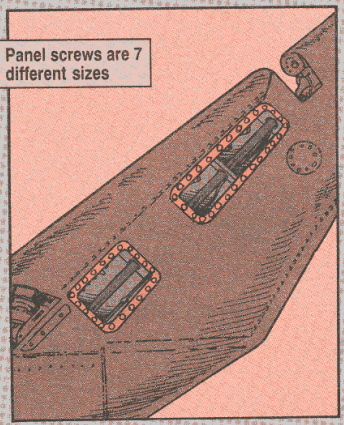
When you've installed the eye bolts, simply mount your Cobra wheels to each leg of the tow bar.



Work Aid for Vertical Fin Panels

Dear Windy,

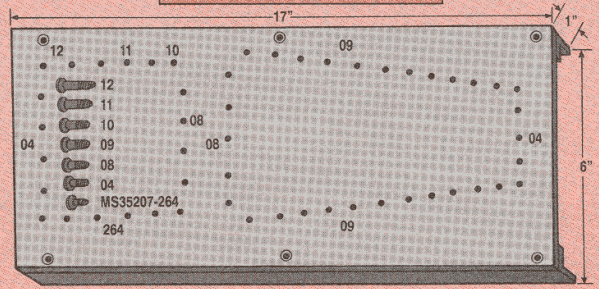
Part of the 25-hr inspection of the Cobra is to check the tail rotor control tubes for wear at the bulkhead grommets. To make this check, both left hand panels for the vertical fin have to be removed. These two panels are held in place by 52 screws, of which there are seven different sizes. Keeping track of all the screws and making sure the right screws get back to the right holes is tough to do. I made a work aid to hold the removed screws.



I used a 6×17-in piece of scrap aluminum, NSN 9535-00-242-8604. I drilled the holes with a # 7 drill bit, then reamed out the holes with a 100-degree countersink bit. This makes screws easy to install and remove.

Here's how the board looks:

The finished work aid looks like this

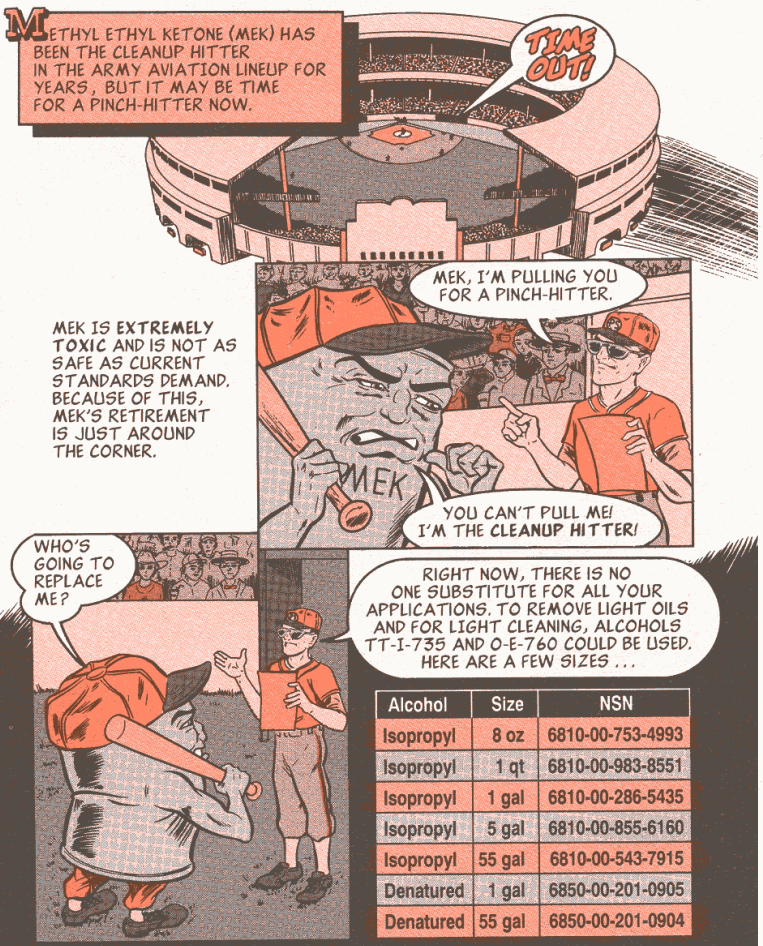


I marked on the board the proper size screws and glued examples of the seven screws right to the board for quick reference. I also pop-riveted scrap aluminum legs to the board to compensate for the length of the screws.

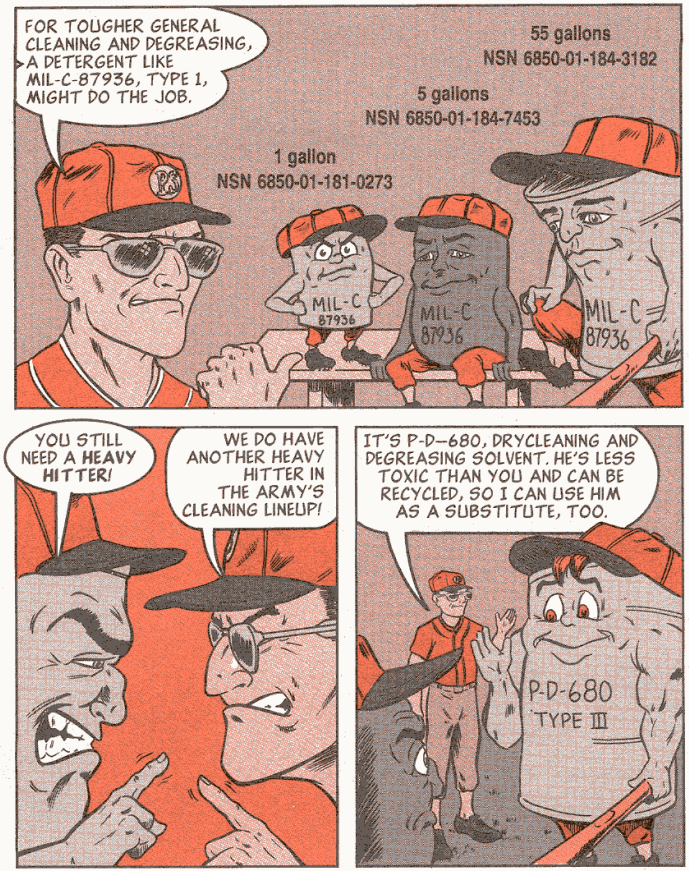
Now as I remove a screw from the vertical fin panels, I put it in its place in the work aid.

1SGT Andy L. Bolinger
OHARNG

Pinch-Hitting for MEK

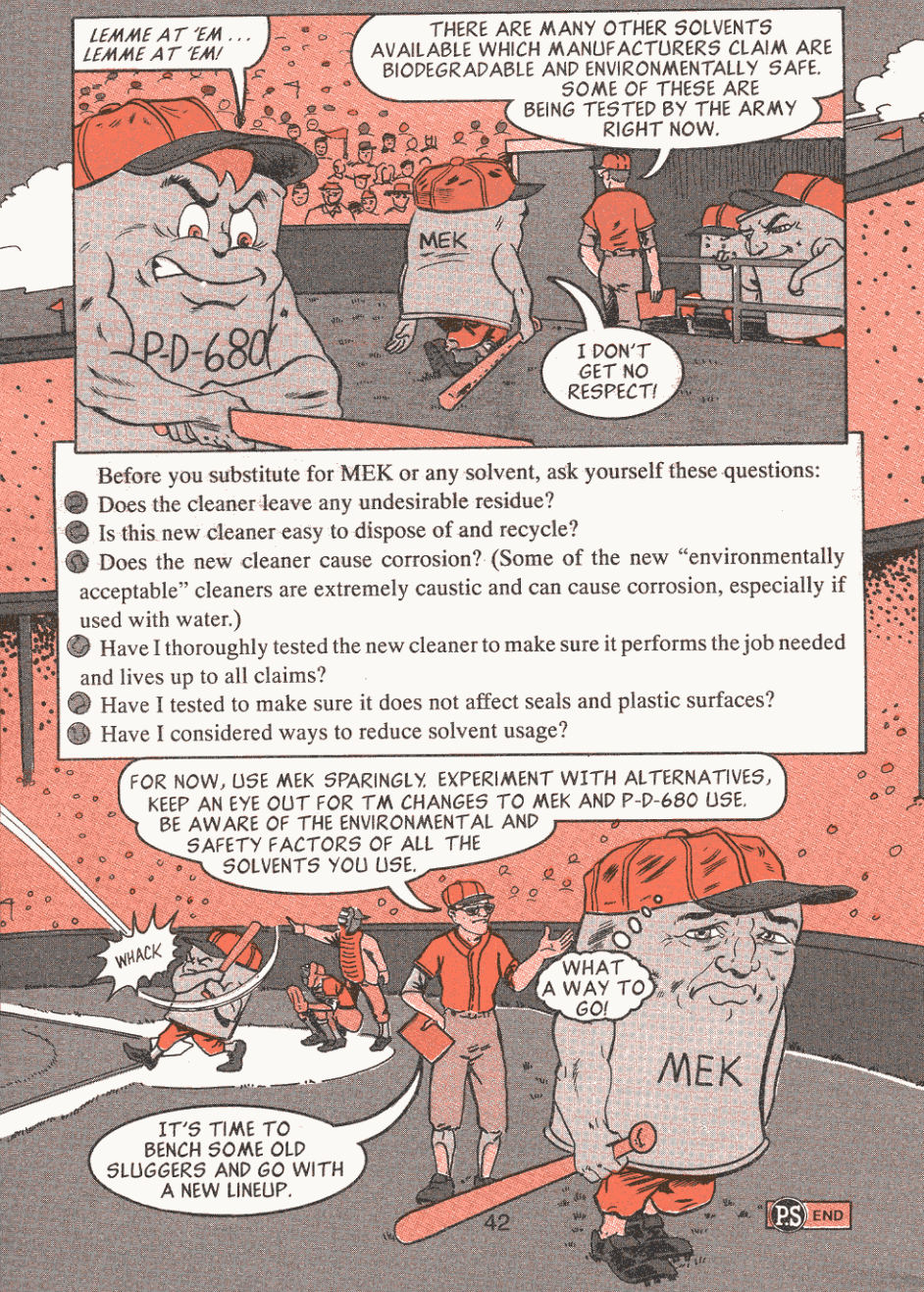


Alcohol	Size	NSN
Isopropyl	8 oz	6810-00-753-4993
Isopropyl	1 qt	6810-00-983-8551
Isopropyl	1 gal	6810-00-286-5435
Isopropyl	5 gal	6810-00-855-6160
Isopropyl	55 gal	6810-00-543-7915
Denatured	1 gal	6850-00-201-0905
Denatured	55 gal	6850-00-201-0904



The newest version of P-D-680, Type III, has less odor and is not as flammable as the older types. It does take longer to evaporate, though. Get a 5-gal can with NSN 6850-01-331-3349 or a 55-gal drum with NSN 6850-01-331-3350.

P.S. MORE


LEMME AT 'EM ... LEMME AT 'EM!
THERE ARE MANY OTHER SOLVENTS AVAILABLE WHICH MANUFACTURERS CLAIM ARE BIODEGRADABLE AND ENVIRONMENTALLY SAFE. SOME OF THESE ARE BEING TESTED BY THE ARMY RIGHT NOW.
P-D-680
MEK
I DON'T GET NO RESPECT!
Before you substitute for MEK or any solvent, ask yourself these questions:
Does the cleaner leave any undesirable residue?
Is this new cleaner easy to dispose of and recycle?
Does the new cleaner cause corrosion? (Some of the new "environmentally acceptable" cleaners are extremely caustic and can cause corrosion, especially if used with water.)
Have I thoroughly tested the new cleaner to make sure it performs the job needed and lives up to all claims?
Have I tested to make sure it does not affect seals and plastic surfaces?
Have I considered ways to reduce solvent usage?
FOR NOW, USE MEK SPARINGLY. EXPERIMENT WITH ALTERNATIVES, KEEP AN EYE OUT FOR TM CHANGES TO MEK AND P-D-680 USE. BE AWARE OF THE ENVIRONMENTAL AND SAFETY FACTORS OF ALL THE SOLVENTS YOU USE.
WHACK
WHAT A WAY TO GO!
MEK
IT'S TIME TO BENCH SOME OLD SLUGGERS AND GO WITH A NEW LINEUP.
P.S END

Pads Make Covers Snug

A common problem with the metal connector covers on the RT-1439's audio and retransmit connectors and the AM-7239's audio/data, data and speaker connectors is the rubber pad inside each cover tends to work loose and fall out.

Without the pad, the cover doesn't fit tight. Then dirt, dust and moisture get into the connector and knock out your commo.

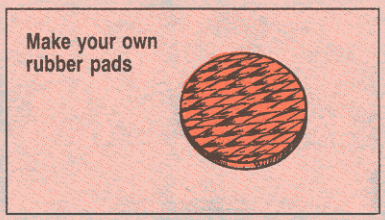
Replacement pads are not available. Only the entire metal cover is in the system.

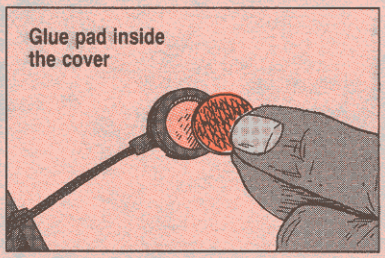
But you can make your own pad and glue it inside the cover. Here's what you need:

Item	NSN
Rubber strip	5330-00-404-7537
Leather punch	5110-00-180-0924
Glue (box of 10 1-oz bottles)	8040-00-142-9193

And here's how to make the pads:

- Lay the rubber strip on a workbench.
- Use the leather punch and a hammer to cut out a 5/8-in diameter pad. A hammer or mallet with a plastic or rubber head works best—it won't damage the punch. If you can't borrow a hammer, order a plastic-headed one with NSN 5120-01-045-9211.



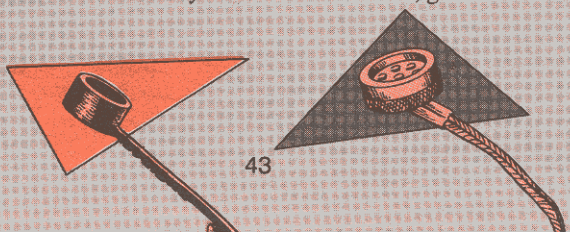


- Glue the pad inside the cover. One drop of glue is enough. Be sure not to get glue on contacts.

You can make about 38 pads from each rubber strip.

Cap Flap

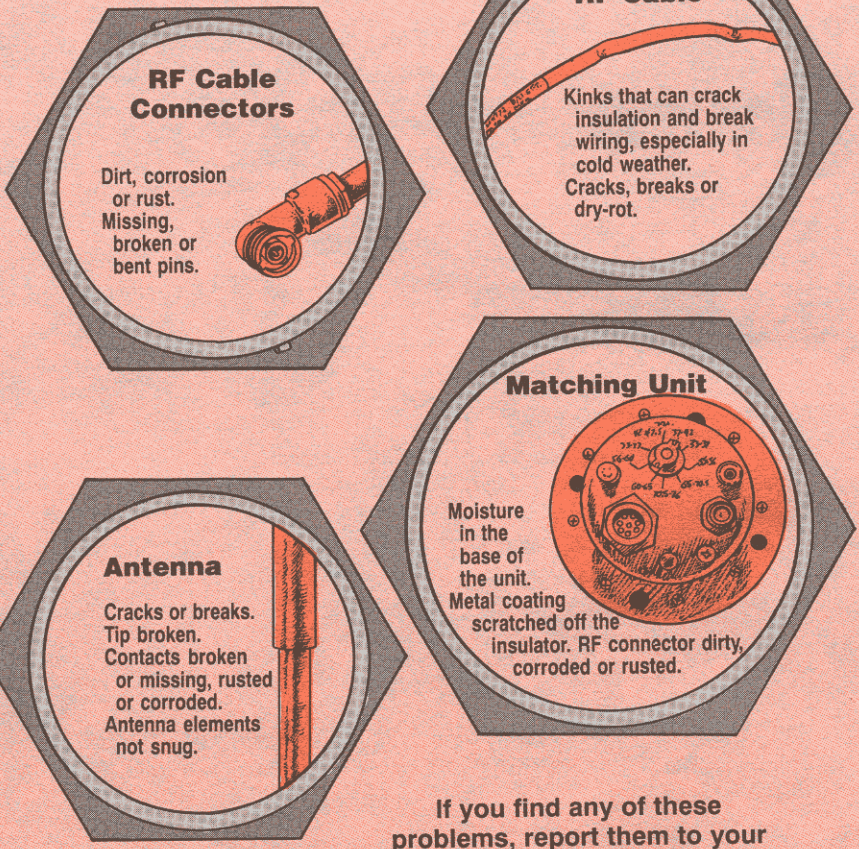
TM 11-5820-890-20P (Jun 93) does not list an NSN for the metal dust cap for the SINCGARS radio connectors. If you want a metal cover, get it with NSN 5935-01-228-0709.



Signal Not Getting Through?

Operators, if your receiver-transmitter is putting out RF power, but the signal is not getting through, the problem is not the RT. The trouble's in some part of the system, from the RF cable connector to the antenna.

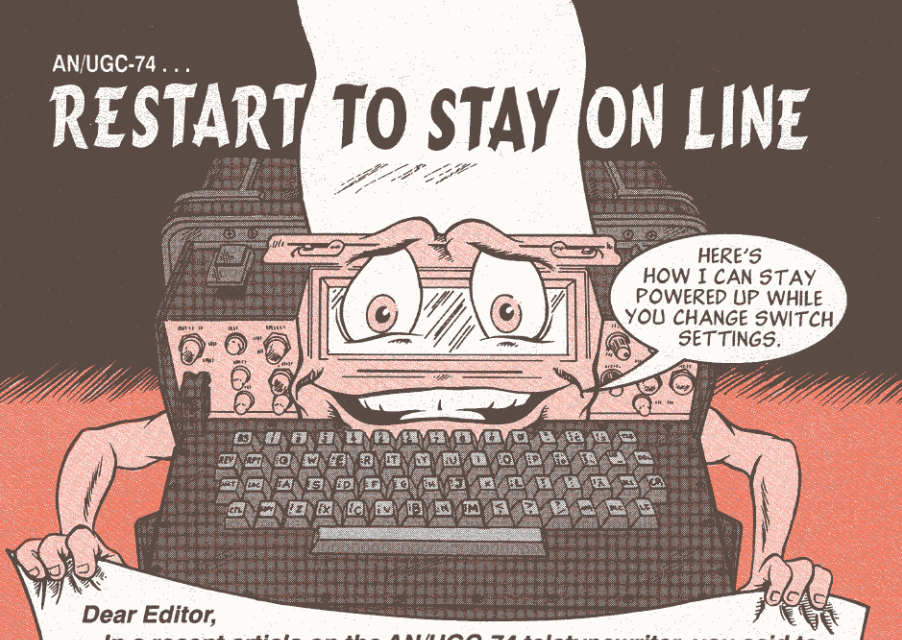
Here's what to look out for:



If you find any of these problems, report them to your unit repairman.

AN/UGC-74 . . .

RESTART TO STAY ON LINE



Dear Editor,

In a recent article on the AN/UGC-74 teletypewriter, you said to make sure the power is OFF when you change switch settings. The driver card module burns out if you keep the power ON.

The only problem is, if you cut the power, the teletypewriter goes off line and you might miss a transmission.

By following restart procedures, you can stay powered up and still change the switch settings.

With the power ON, type RES and hit the carriage return to begin restart.

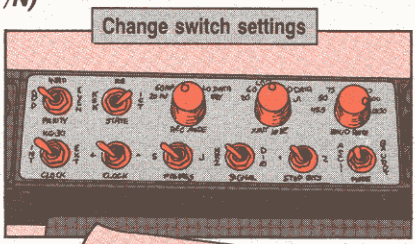
Printout reads: WARM RESTART ABORTS ALL COMM LINE ACTIVITY. ARE YOU SURE? (Y/N)

Type Y for yes and hit the carriage return.

Printout reads: CHANGE SWITCH SETTINGS AND ENTER CR TO CONTINUE.

Change the switch settings and hit carriage return.

Clarence Lindsay
Ft Gordon, GA



FROM THE DESK OF THE Editor

Sounds like a powerful idea. Thanks for the tip!

RF Output Tester . . .

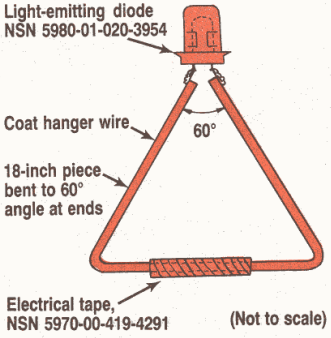
HOMEMADE ANTENNA

If your radio is receiving but not transmitting, there's a chance it's not putting out RF power. You need a handy antenna tester to tell you if you're getting RF output.

Here's how to make a tester that'll test the RF output of the AN/PRC-25, AN/PRC-77 and AN/VRC-12-series radios:

You'll need a light-emitting diode (LED), NSN 5980-01-020-3954, and an 18-in piece of 10-, 12- or 14-gauge wire. If you don't have these wires, a wire coat hanger will work.

* Bend the wire into a triangle, with the open end meeting at about a 60° angle.
* Make an insulated safety grip by wrapping electrical tape, NSN 5970-00-419-4291, around part of the wire.
* Solder the LED across the open end. Your unit's TK-101 tool kit has a soldering iron.



TESTER

Here's how to operate the tester:

* Make sure the antenna is pointing straight up. Hold the tester straight up too.
* Move the tester towards the antenna as you transmit over the radio. The LED will glow if you have RF power. While the tester won't tell you exactly how much output you have, the brightness of the LED gives you an idea of your signal strength. The brighter the better.

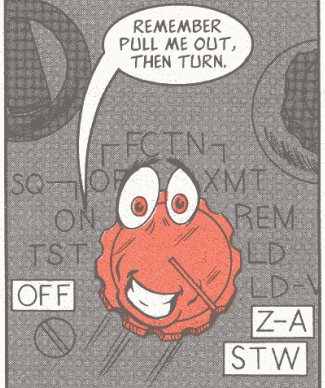

Move tester toward radio

Take care when testing the RT-524 operating on high power. Its high wattage could burn out the diode if you hold the tester too close to the antenna.

You won't need the RF tester for the SINCGARS radio. The SINCGARS RT has a signal display and a sidetone disable that tell you if it's putting out RF.

SINCGARS . . .

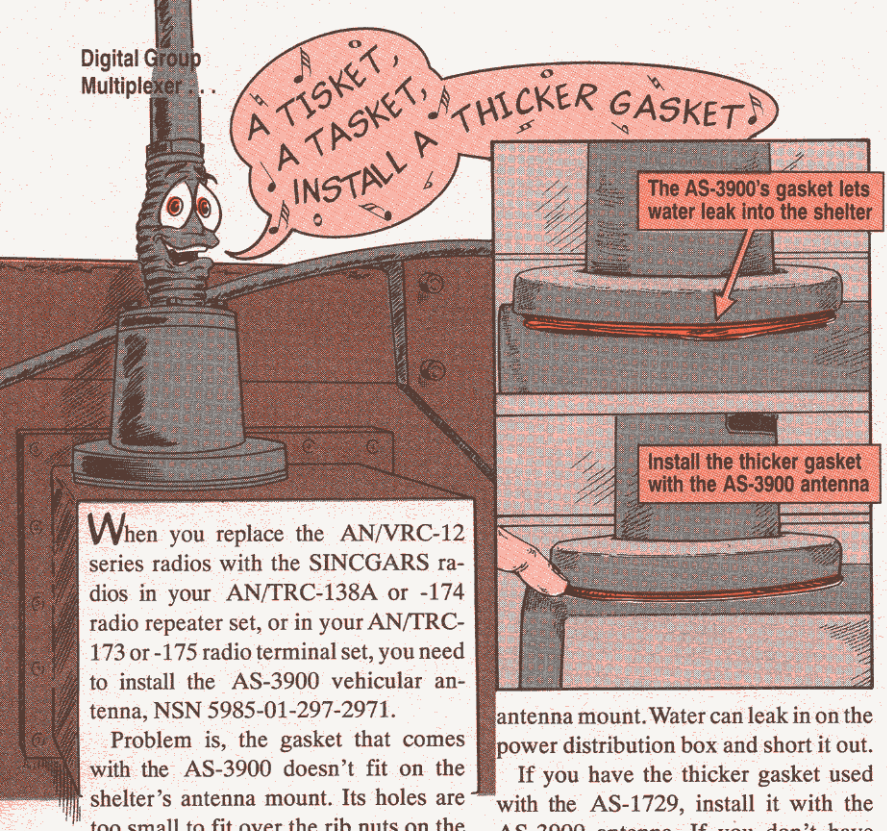
A Turn for the Better



SNAP! There goes another one. Another function knob on a SINCGARS RT-1439 or RT-1523 broke because someone tried to force it. A replacement will cost you more than $16.

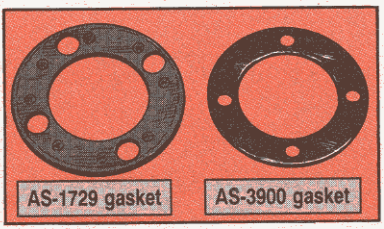
The spring-loaded knob locks in OFF, Z-A, Z-FH, STW and STBY. To move the knob to or from these settings, you must **first pull out the knob, then turn it**. If you try to force the knob without first pulling it out—SNAP.

The knob turns freely in all the other settings.



When you replace the AN/VRC-12 series radios with the SINCGARS radios in your AN/TRC-138A or -174 radio repeater set, or in your AN/TRC-173 or -175 radio terminal set, you need to install the AS-3900 vehicular antenna, NSN 5985-01-297-2971.

Problem is, the gasket that comes with the AS-3900 doesn't fit on the shelter's antenna mount. Its holes are too small to fit over the rib nuts on the mount. What's more, the AS-3900's gasket is thinner than the gasket used



with the antenna you're replacing, the AS-1729.

The poorly fitting gasket leaves a gap between the antenna base and the antenna mount. Water can leak in on the power distribution box and short it out.

If you have the thicker gasket used with the AS-1729, install it with the AS-3900 antenna. If you don't have the thicker gasket, order it with NSN 5330-00-078-4184. If you need a gasket to protect against electro-magnetic impulses, order it with NSN 5999-01-363-9137.

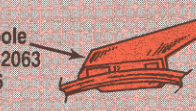
Another problem is that the screws that come with theAS-3900 antenna are about 1/4 inch too short. So keep the screws and lockwashers used with the AS-1729 and install them with the AS-3900. They'll work fine. If you don't have them, get the screws with NSN 5305-00-847-1159 and the lockwashers with NSN 5310-00-061-1258.

LC-240/U . . .

Parts for Climbers

Gaff set (includes a pair of tree and a pair of pole gaffs) NSN 4240-00-530-4289

Gaffs, pole
CAGE 82063
PN 9206



Gaffs, tree
CAGE 82063
PN9306

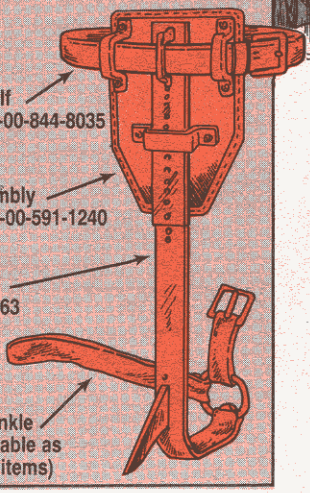
Gaff gauge (TL-144)
NSN 5210-00-267-2829

Straps, calf
NSN 4240-00-844-8035

Pad assembly
NSN 4240-00-591-1240

Leg irons
CAGE 82063
PN 9203

Straps, ankle
(not available as separate items)

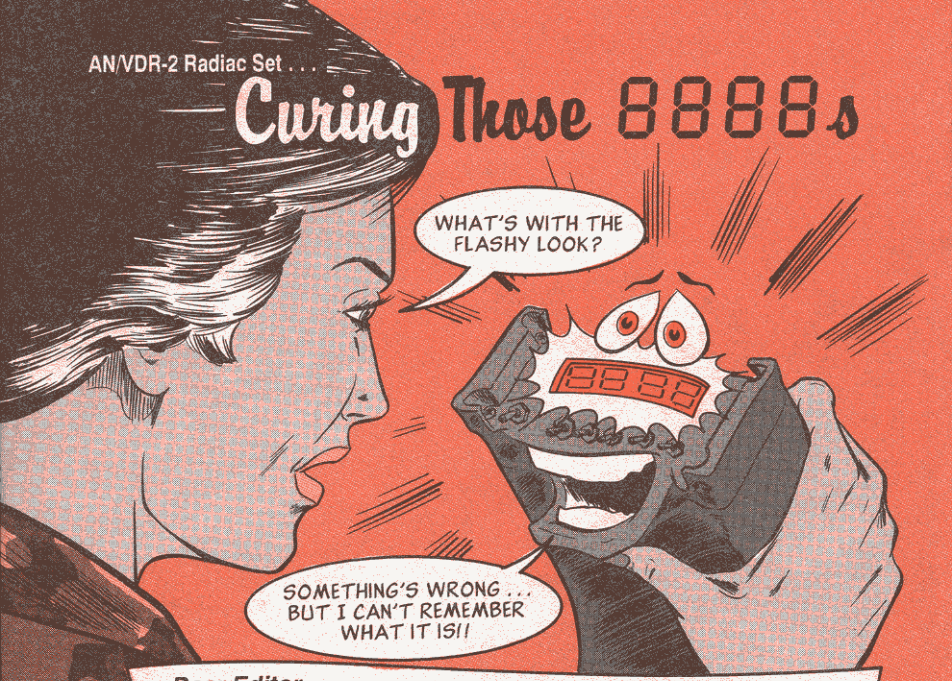


Order part-numbered items on DD Form 1348-6 from GSA using CAGE and PN.

For information on use and care of your climbers, see TC 24-20.

AN/VDR-2 Radiac Set . . .

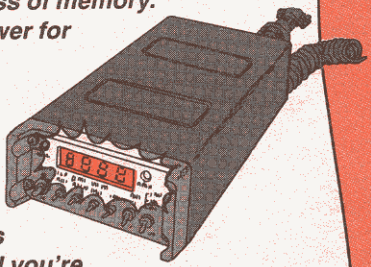
Curing Those 8888s



Dear Editor,

If you get to the end of the AN/VDR-2's self-test and end up with a flashing 8s error code, your radiac set may not have a serious problem, just a loss of memory.

Radiac sets without battery power for more than five minutes can lose some memory, which causes flashing 8s during the pre-op test.



The cure for memory loss? Let the 8s flash for 60 seconds. Then repeat the self-test. If the 8s are gone, its memory is back and you're ready to go. If not, tell your NBC NCO. Something's wrong.

SGT Daryl Spencer
Ft McClellan, AL

FROM THE DESK OF THE *Editor*

Your suggestion on flashing 8s adds up to me. Thanks.

Tracking the Source

You would be better off losing the AN/PDR-27 than its source stick, NBC NCOs.

The source stick, which is radioactive, is covered by Nuclear Regulatory Commission (NRC) regulations. That means if it's lost, you will not only be answering questions from your company commander, but also from the NRC folks.

Protect yourself. When you check out AN/PDR-27s, write down the ID

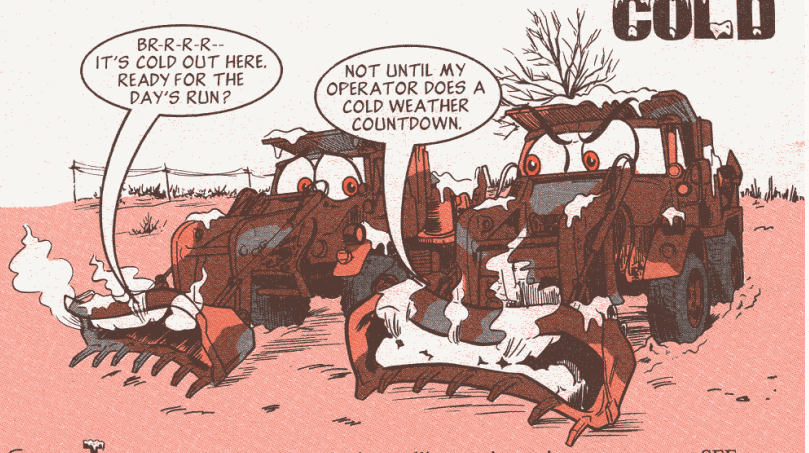
number of the source sticks next to those of radiac sets. And when they're turned back in, make sure the source sticks are also turned in.

A good way to stop disappearing source sticks is to reinforce the chains that hold the sticks to theAN/PDR-27 boxes. The chains are flimsy and break easily and the sticks vanish. Have your armorer safety wire the sticks to the boxes.

One other note: The source sticks are old and getting weak. If an AN/PDR-27 doesn't respond to a source stick, it may be the source stick, not the radiac set. Try another source stick before you troubleshoot the AN/PDR-27.

If your source stick is weak, get a new one through your local radiation protection officer (RPO). Turn in the old stick to him.

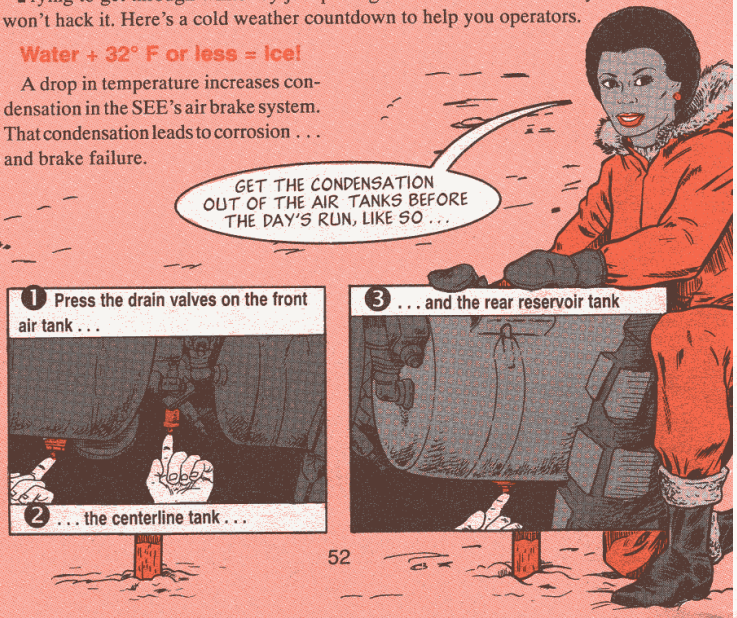
COLD WEATHER COUNTDOWN



Trying to get through winter by just pulling routine maintenance on your SEE won't hack it. Here's a cold weather countdown to help you operators.

Water + 32° F or less = Ice!

A drop in temperature increases condensation in the SEE's air brake system. That condensation leads to corrosion . . . and brake failure.

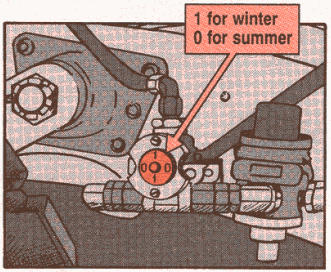


Alcohol Reservoir Full?

Before the snow flies, make sure the SEE's compressed air system antifreeze unit is set for the season. The antifreeze unit injects ethyl alcohol into the air brake system to keep water from freezing in the brake lines. Eyeball the alcohol reservoir to make sure it's filled.

Set for Winter?

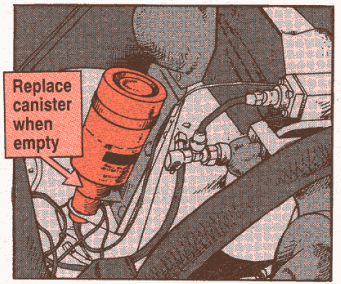
Keep the antifreeze unit setting in the number 1 (open position) for winter, or number 0 (closed position) for summer.



Keep the reservoir filled—even in summer—so dirt and dust cannot get in.

Rough Start?

Your SEE may be hard to start when the temperature drops below 32° F. The cold weather starter system has a fuel canister that automatically injects ether into the engine when you push the cold start button.



If your SEE's engine runs rough after pushing the button, chances are the fuel canister is empty. Have your mechanic replace the canister.

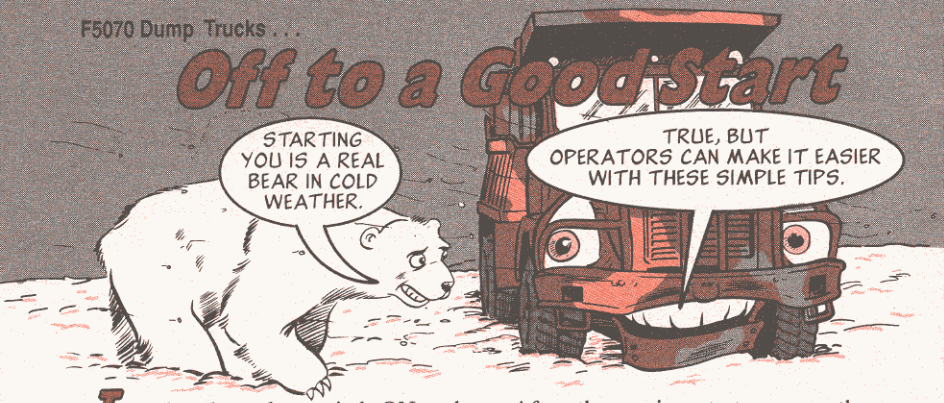
RS-28 TAMPO Roller . . .

Wheel Deal

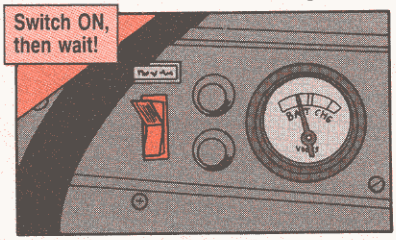
If a wheel on your RS-28 roller wears out, order a new 20-in wheel on a DD Form 1348-6 from RIC S9C with CAGE 88812 and part number VRW-229.

The old wheel is only 16 inches wide, so both wheels will have to be replaced at the same time. Otherwise the vehicle will not sit level.

Off to a Good Start



Turn the glow plug switch ON and wait 20 seconds. That lets the glow plug in the intake manifold warm up.



Have a buddy pull the compression release lever at the front of the engine. That'll let the engine turn over easier.

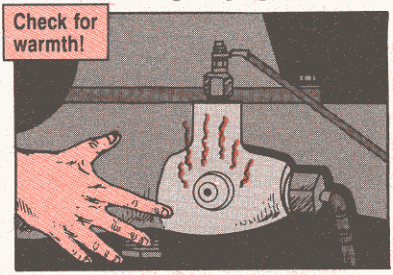
Pump the fuel pressure primary pump until you get 80-100 PSI.

Crank the engine. When it's turning over, have your buddy let go of the compression release.

After the engine starts, pump the primer slowly for a few minutes until the engine warms up and runs smoothly. Then push the primer handle in and lock it. Turn the glow plug OFF so it'll be ready for the next time.

If the engine doesn't start after 20 seconds, stop cranking and stop pumping the primer. Let the starter cool for two minutes.

Make sure the glow plug is working. If the intake manifold is warm below the glow plug, the plug's on the job. If the manifold is cold, get your mechanic to check out the glow plug.



If the plug's working, try the starting routine again. If you can't get the engine started after three attempts, stop and call your mechanic.

Seatbelt Switcheroo

The seatbelts on the 6K variable reach forklift were installed backward during manufacture.

The latch end is to be on the right side of the seat. That way the latch release won't be crushed when you shut the door.

If the seatbelts in your forklift are still installed backwards, switch them like so:

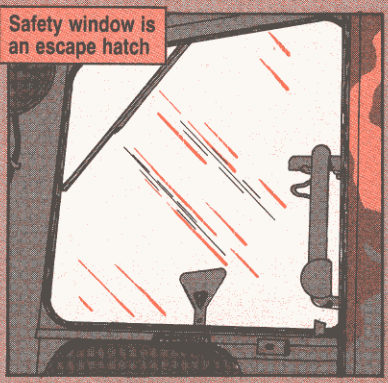
- Remove the seatbelts.
- Switch the sections from side to side. Reinstall them with the same cap screws and nuts. Order new lock washers with NSN 5310-00-209-0965 and replace the old ones.

Safety Window Kit

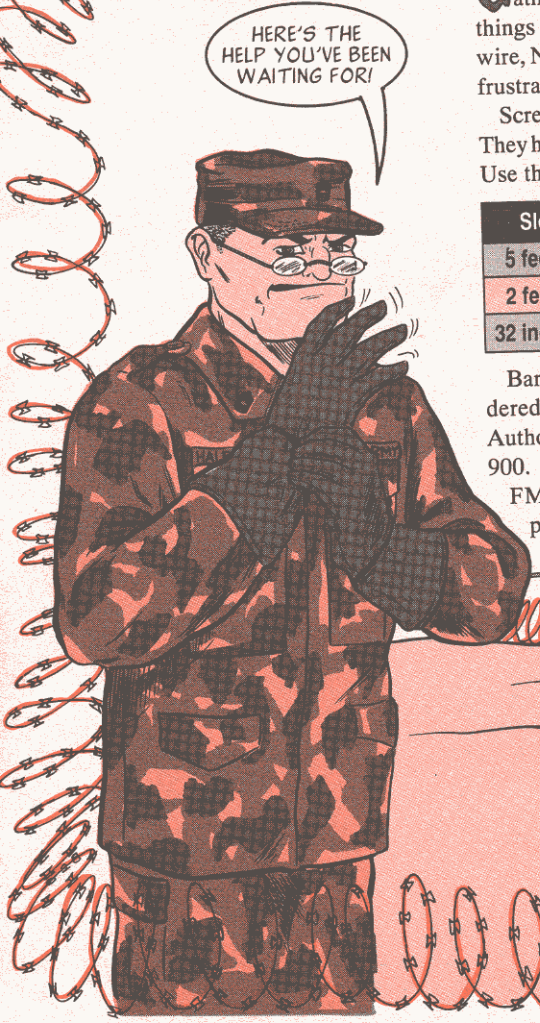
There's a replacement pull-out rear window kit available for the 6K rough terrain forklift. The old style window was glass and would break.

Kit, NSN 2510-01-357-5680, brings a plexiglass window, seal, pull tab and installation instructions. The safety glass will not break.

If the glass in your forklift is not broken, get your CS's OK before you order the kit.



Fence in These NSNs



Gathering a list of NSNs for all the things you need to put up concertina wire, NSN 5660-00-921-5516, can be a frustrating job.

Screw pickets are no longer available. They have been replaced by slotted posts. Use these NSNs to order them:

Slotted Post	NSN 5660-00-270-
5 feet with 4 slots	1587
2 feet with 1 slot	1588
32 inch with 2 slots	1589

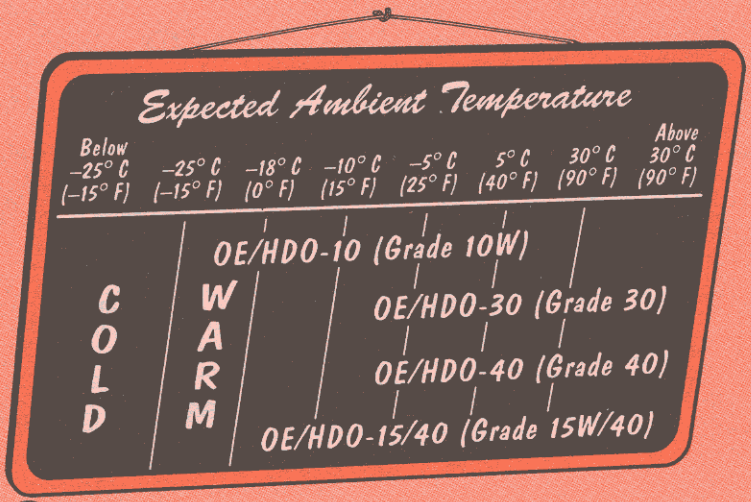
Barbed wire/tape gloves can be ordered with NSN 8415-00-926-1674. Authority to order the gloves is CTA 50-900.

FM 5-34 gives instructions for putting up concertina wire.

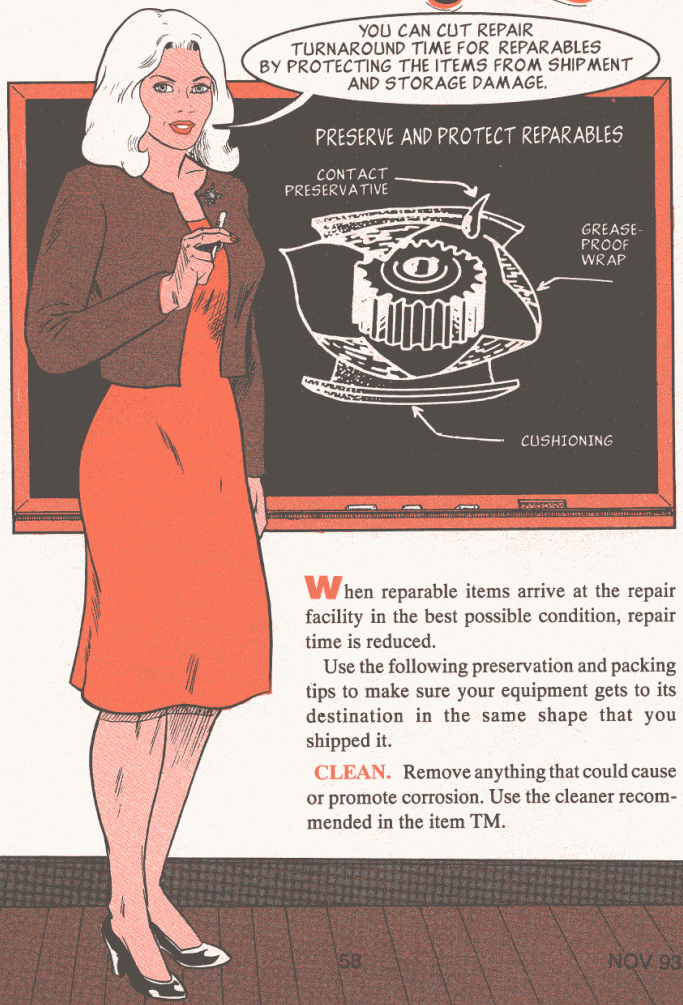
Bars Need Lubin', Too!

To reduce wear and tear on your chain saw's guide bar—lube it! Use OE/HDO-30 engine oil. It'll make your chain saw really sing.

If you're cutting in cold weather, use OE/HDO-10 engine oil. In extremely cold weather, use OEA (arctic grade oil).



Cut



When reparable items arrive at the repair facility in the best possible condition, repair time is reduced.

Use the following preservation and packing tips to make sure your equipment gets to its destination in the same shape that you shipped it.

CLEAN. Remove anything that could cause or promote corrosion. Use the cleaner recommended in the item TM.

Turnaround Time

DRY. Dry the item immediately after cleaning to remove cleaning solutions and any other moisture.

PRESERVE. If needed, provide a protective barrier by coating the item with preservative compound. Check the item TM for the correct preservative.

WRAP AND CUSHION. Wrap the item with a barrier material to keep the preservative on the item and cushion the item against knocks and bangs during shipment.

PACK. Select the right container for the item. Consider the weight and shape of the item. Block and brace the item to make sure the item doesn't move during shipment.

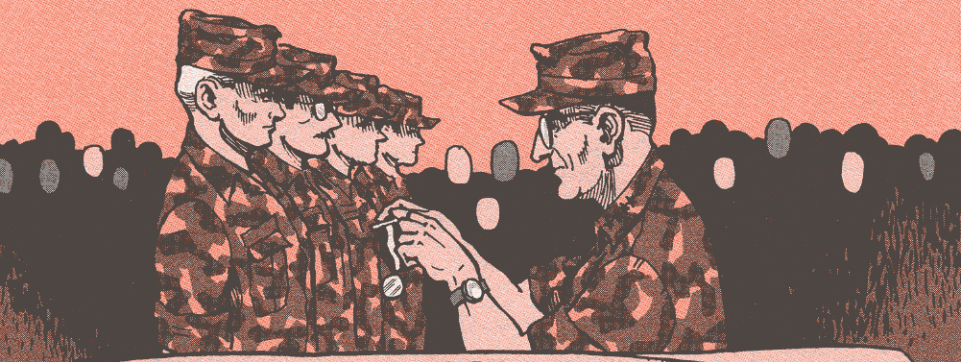
MARK. Containers should be marked in accordance with MIL-STD-129. When you consolidate unlike items in one container, be sure to put a DD Form 1750 packing list inside the container.

PREPARE. Know the packaging basics by checking out the following publications:

AR 700-15	Packaging of Materiel
DA Pam 740-1	Instructional Guide to Basic Military Preservation and Packing
MIL-STD-129	Marking for Shipment and Storage
TM 38-230-1	Packaging of Materiel—Preservation
TM 38-230-2	Packaging of Materiel—Packing

LOGSA Packaging, Storage and Containerization Center
ATTN: AMXLS-T
11 Midway Rd
Tobyhanna, PA 18466-5097
Or call:
DSN 795-7274
Commercial (717) 894-7274

TROOP SUPPORT



SUPPLY EXCELLENCE AWARDS

ACTIVE ARMY MTO&E UNITS

COMPANY, BATTERY OR TROOP

WINNER–502d ENG CO. KARLSRUHE, GERMANY
RUNNER-UP–77th ARMY BAND, FT SILL,OK

BATTALION OR SQUADRON

WINNER–204th MI BN, AUGSBURG,GERMANY
RUNNER-UP–25th FSB, SCHOFIELD BARRACKS, HI

ACTIVE ARMY TDA ORGANIZATIONS

COMPANY, BATTERY OR TROOP

WINNER–US ARMY GARRISON,FT ORD, CA
RUNNER-UP–USA TMDE ACTIVITY,REDSTONE ARSENAL,AL

BATTALION OR SQUADRON

WINNER–MATERIEL SUPPORT CENTER, TAEGU, KOREA
RUNNER-UP–MEDDAC, FT BRAGG, NC

ARMY RESERVE MTO&E UNITS

COMPANY, BATTERY OR TROOP

WINNER–388th MEDSOM, HAYS, KS
RUNNER-UP–A CO, 368th MI BN, FT DERUSSY, HI

ARMY NATIONAL GUARD MTO&E UNITS

COMPANY, BATTERY OR TROOP

WINNER–B CO (–) 135th SIG BN, SEWARD, NE
RUNNER-UP–HHC, 2d BDE, 34th INF DIV, BOONE, IA

TDA COMPANY

WINNER–HQ DETACHMENT, STATE AREA CMD, CHARLESTON, WV
RUNNER-UP–HQ DETACHMENT, STATE AREA CMD, RALEIGH, NC

BATTALION OR SQUADRON

WINNER–1st BN, 194th FA, FT DODGE, IA
RUNNER-UP–1092 ENG CBT BN, PARKERSBURG, WV

SINCGARS Publications

The publications that we listed on Pages 42–43 of PS 488 do not show up on the latest DA Pam 25–30 (C3, Jul 93). However, they are available and can be ordered on DA Form 4569 from:

USA Publications Distribution Center
2800 Eastern Blvd
Baltimore, MD 21220-2896

Humvee Access Cover

If your HMMWV doesn't have the 2-piece torque converter access cover, consider ordering it. It'll save you 1 1/2 hours of work every time you replace a starter. The cover, NSN 5340-01-311-1633, is standard on newer trucks, but you can use it on all HMMWVs.

No More MPL

Now, there's no Mandatory Parts List (MPL) portion to your PLL. HQDA message, DALO-SMZ 212018Z Mar 90, suspended the MPL requirement and Para 2-21b of AR 710-2 in Supply Update 14 will remove the mandatory requirement to stock these items. You just order MPL items when you need them.

Cabinet Caster NSN

If you ordered a mobile tool cabinet, NSN 5140-00-608-4757, we had on Page 58 of PS 488, you can put it on wheels. Just remove the front legs and put on casters, NSN 5340-00-298-7090. The $10 "wheels" make the cabinet easier to move.

HEMTT Shock Bushing NSN

To get the right-sized shock absorber bushing for a HEMTT, use NSN 5365-00-805-9421. Make a note 'til the -20P TM is updated.

Fitting Kit Cabinet

Use NSN 4730-01-112-3240 to get a replacement cabinet for brass fitting kit, NSN 4730-00-470-6625, in the No. 2 Common shop set.

Battery Terminal Cover

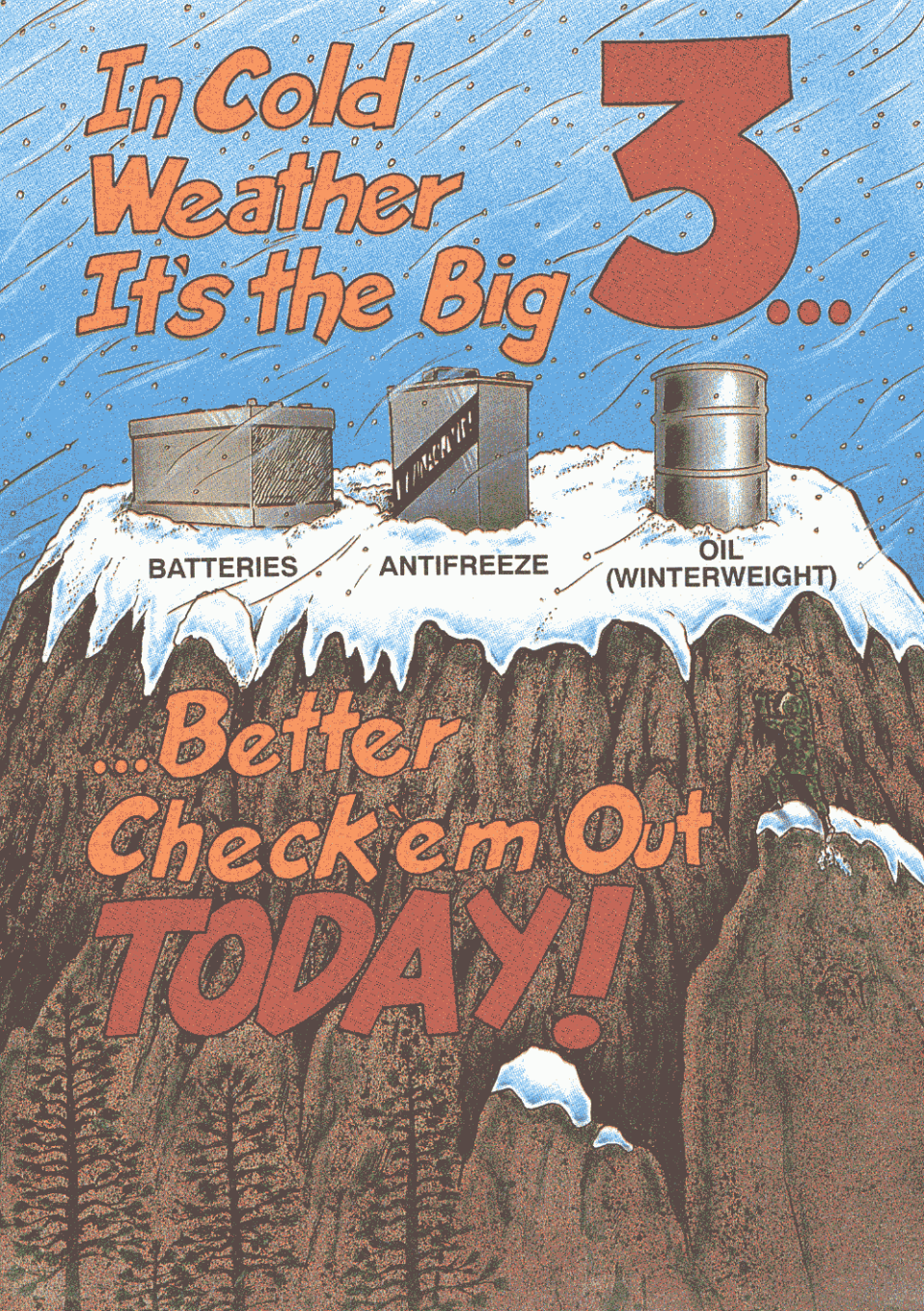
There's no NSN for the battery terminal clamp covers shown on Page 4-87 of TM 9-2320-280-20-2 for the Humvee. But you can use terminal cover, NSN 5940-00-738-6272, till an NSN is assigned. Order four covers-enough for both batteries.

Distribution: To be distributed in accordance with DA Form 12-34-E, Block 0312, for TB-43-Series

Would You Stake Your Life right now on the Condition of Your Equipment?

☆ U.S. GOVERNMENT PRINTING OFFICE: 1993 0-750-062

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C.


In Cold Weather It's the Big 3...
BATTERIES
ANTIFREEZE
OIL (WINTERWEIGHT)
...Better Check 'em Out TODAY!