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2002

THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-600

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AMMO OPERATIONS
PART 1 (OF 3) • SEE PAGE 25



THE ARMY'S MAINTENANCE STANDARD

"SOMEWHERE, SOMETIME, THE SUCCESS OR FAILURE OF CRITICAL NATIONAL POLICIES WILL ONCE AGAIN REST IN THE HANDS OF A FEW GOOD, WELL-LED SOLDIERS, WHO TRAINED WELL IN TIME OF PEACE TO FIGHT WELL IN TIME OF WAR."

FM 100-1

Operators, most decisions in the Army go from the top down—where you and your unit's equipment will be sent when the balloon goes up, for instance. But information on how ready that equipment is to do its job comes from the bottom up.

The person best suited to determine what state your equipment is in...is you.

Think about that the next time you pull preventive maintenance check and services (PMCS).

Correct what you can and report what you can't. Don't fudge it. If it's not ready, say so.

Your input on the inspection worksheet is your commander's eyes and ears for determining readiness. And readiness helps decide which units are ready for the important assignments.

Make sure your report tells it like it is.

PS

**THE
PREVENTIVE
MAINTENANCE
MONTHLY**

ISSUE 600 NOVEMBER 2002



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

Just write to:

MSG Half-Mast
PS, the Preventive Maintenance Monthly
USAMC LOGSA (AMXLS-AM)
5307 Sparkman Circle
Redstone Arsenal, AL 35898-5000

Or e-mail to:

psmag@logsa.redstone.army.mil
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By order of the Secretary of the Army:

ERIC K. SHINSEKI

General, United States Army Chief of Staff

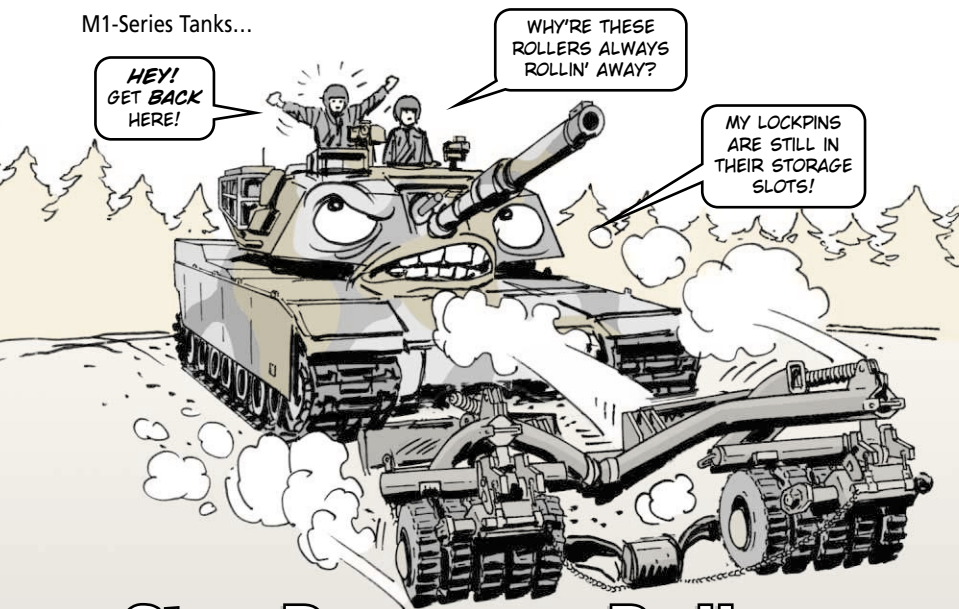
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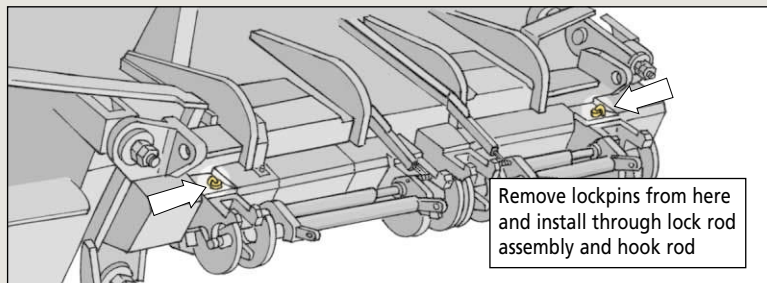
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Stop Runaway Rollers

There are a whole lot of steps to follow when installing the mine clearing roller on your M1-series tank. One of the most important is securing the angle brackets with two lockpins, NSN 5315-00-628-4001.

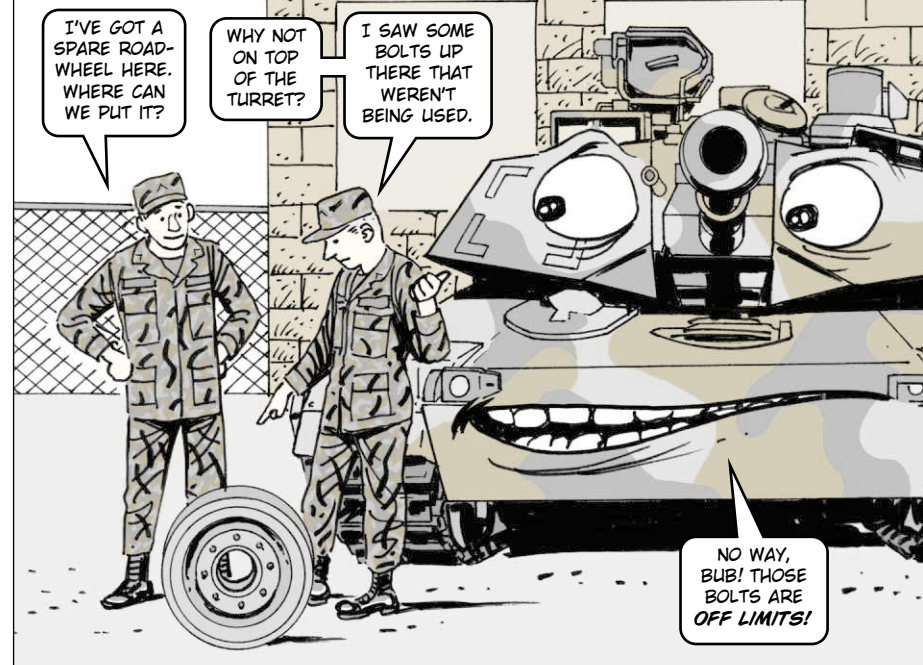
The lockpins are stored in holes on top of the outboard mounting brackets. But if they stay there, the mine rollers can slip loose when the tank is moving.



So remember to remove the lockpins and slide them through the lock rod assembly and hook rod. That'll keep the rollers in place.

The only time the lockpins should be in their storage slots is when the roller is being used for a breaching or mine clearing operation.

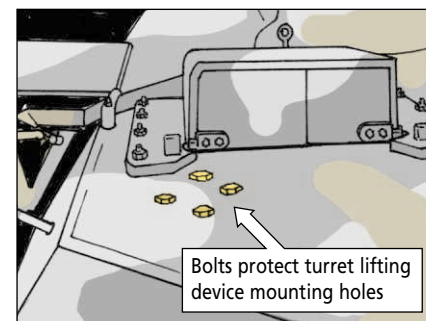
PUT TURRET BOLTS TO PROPER USE



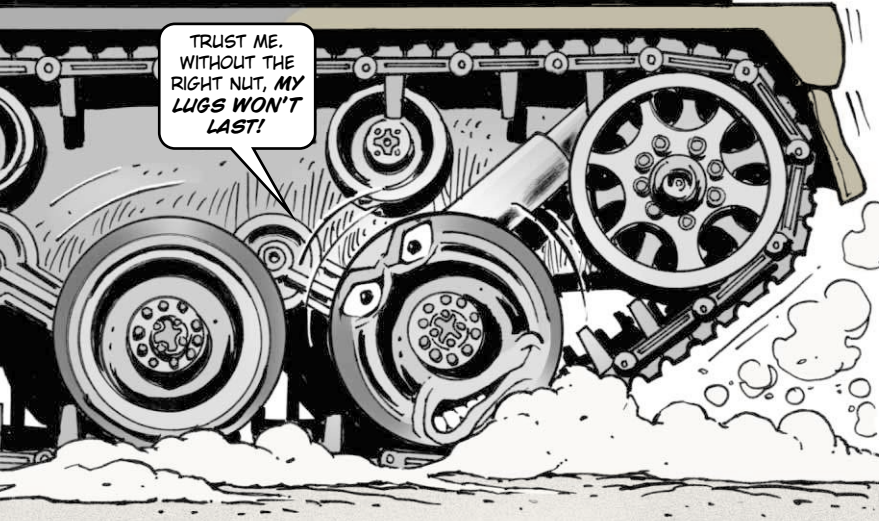
The 11 bolts, NSN 5305-01-014-5124, on top of your tank's turret are there for a reason, crewmen. And it's not for mounting flag brackets, road-wheels, lights or any other hardware.

Those bolts protect the threads inside each of the holes where the turret lifting device is attached. Mess up the threads and there's no way to separate the turret from the hull for support-level repairs.

If you've removed any of the bolts or some come up missing, check the holes to make sure they're clean and free of debris. Then, add a little antiseize compound, NSN 8030-00-597-5367, to the threads before reinstalling the bolt. That prevents corrosion and reduces wear and tear on the threads.



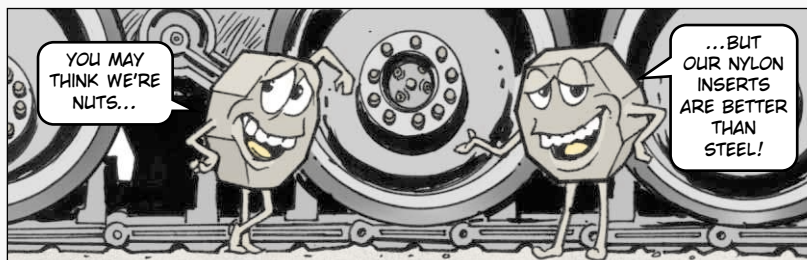
NEW NUTS PROTECT LUGS



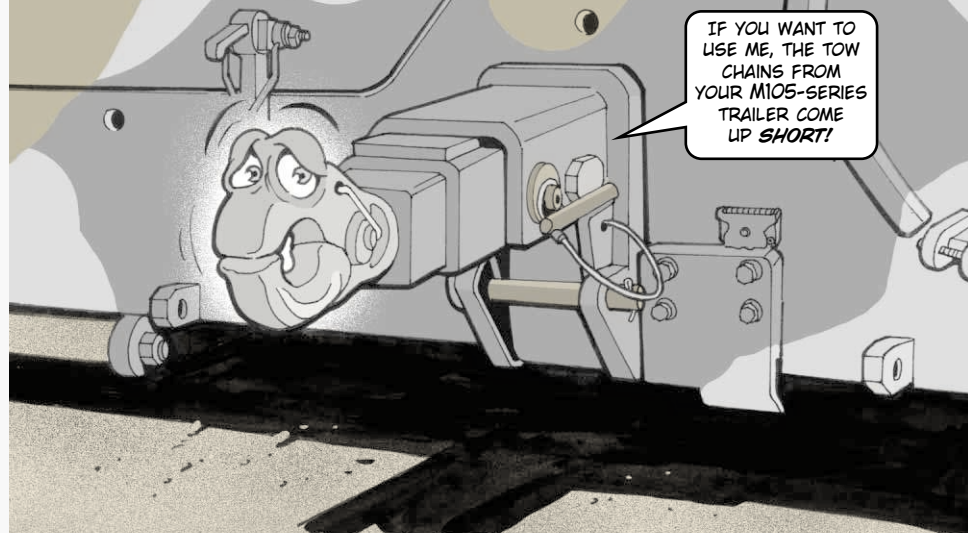
Stop using NSN 5310-00-241-6664 to order new, self-locking roadwheel nuts for your M2/M3-series Bradley and MLRS carrier.

That NSN brings one of two different style nuts. The first, which has a nylon insert, is OK. The second, however, uses crimped steel threads for locking. The crimped nut chews up the threads on the roadwheel lugs.

To get only the nuts with the nylon insert, use NSN 5310-00-175-2710. Make a note until the parts manuals are updated.



Tow Chains Too Short

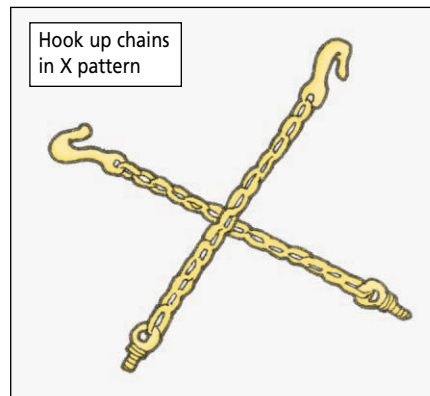


If your M113A3 is equipped with a tow pintle extension, NSN 2540-01-458-4846, you're going to have a hard time towing an M105-series trailer.

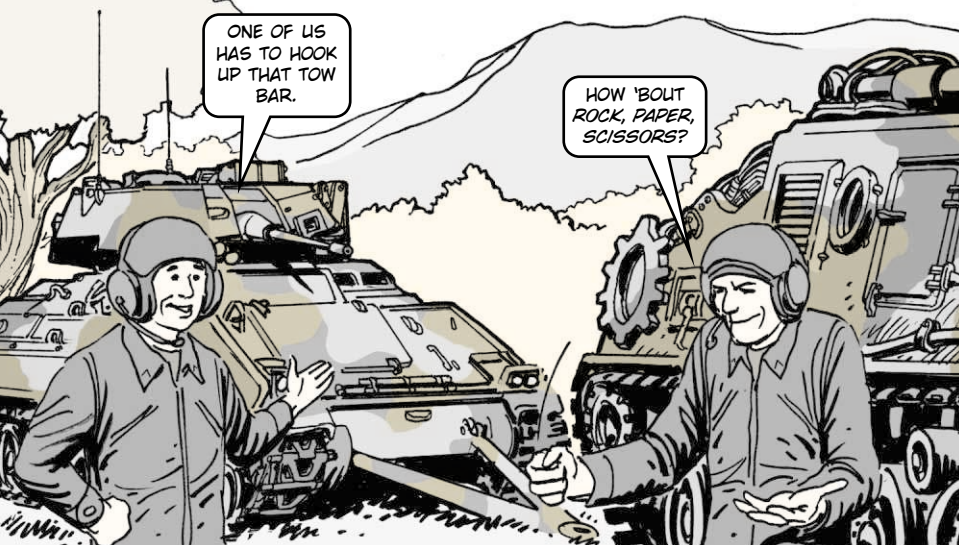
That's because the trailer's towing chains, NSN 4010-00-741-1027, are only 25 inches long. They're too short to make a hookup and it's never safe to tow the trailer without chains.

The solution is to use the longer chain assembly, NSN 4010-01-447-0753, from the M200-series trailer. Connect the chains in an X pattern to the two shackles, NSN 4030-01-369-7612, that are attached to the carrier's ramp tiedowns.

When the mission is completed, make sure you go back to the original chains for the trailer. They are the correct length for towing with anything other than the M113A3 with a tow pintle extension.



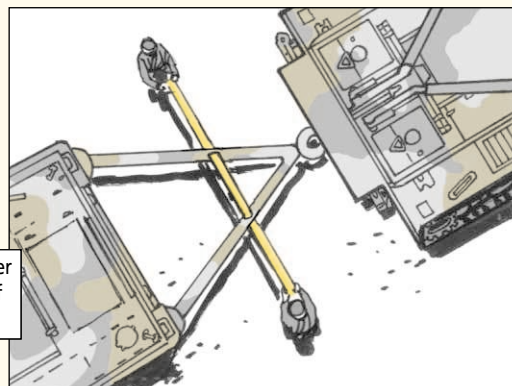
A LIFT FOR TOW BAR HOOKUPS



Hooking up the tow bar when recovering a disabled combat vehicle is one of the most difficult—and dangerous—jobs you have to do, mechanics.

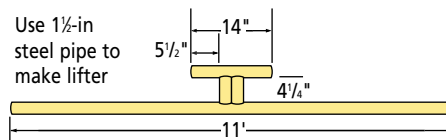
Not only is that tow bar pretty darn heavy, but who wants to stand between several tons of metal that might move suddenly?

The solution is a home-made tow bar lifter. It makes your job a lot easier and safer. You won't have to stand between vehicles to hook up the tow bar. And, with two people lifting, the load is a lot lighter.



The 11-ft long lifter is made of 1½-in diameter steel pipe that is ⅝ inch thick. It has a 14-in long tee made from the same pipe and fits in the V-shaped end of the tow bar.

Use 1½-in
steel pipe to
make lifter



After attaching the tow bar to the disabled vehicle, two people use the lifter to hold the tow bar up. The recovery vehicle driver makes the hookup with the help of the ground guides.

The lifter is designed to work with all Army tow bars and recovery vehicles, including the 5-ton wrecker.

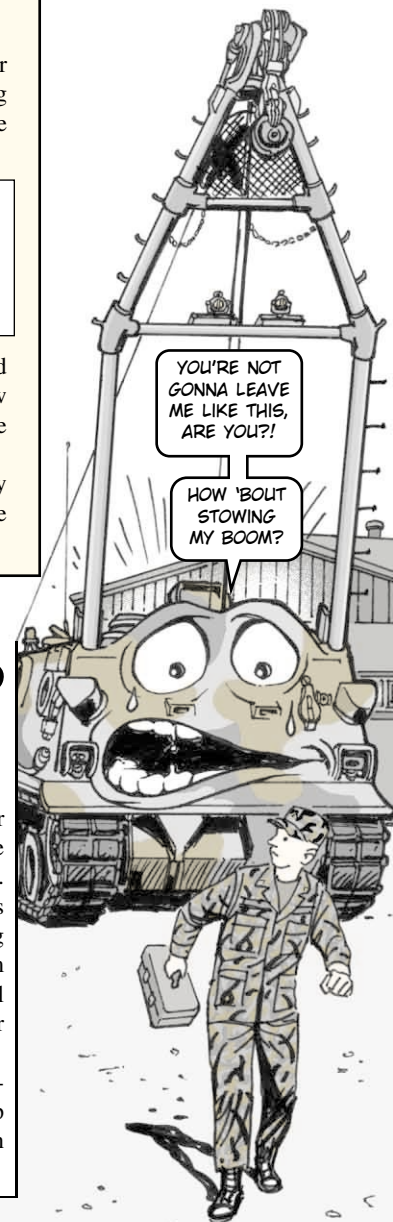
M88A1 Recovery Vehicle...

No ROOM FOR BOOM DOOM

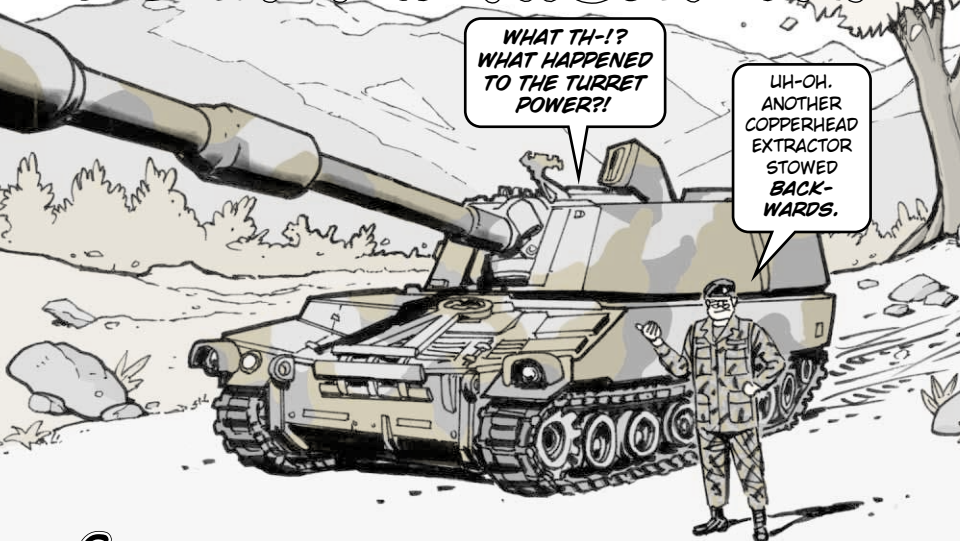
Do you leave the boom on your M88A1 up or down after operation? If you leave it up, the boom may go **BOOM!** the next time it's used.

When the boom is left up, gravity drains the hydraulic fluid into its reservoir, leaving behind an air pocket. The next time the boom is lowered, the air pocket can let the boom fall suddenly. That spells doom for equipment or personnel that happen to be in the way.

Follow the information in Item 14 of TM 9-2350-256-10's PMCS tables. **Always** keep the boom in the stowed (travel lock) position when it's not in use.



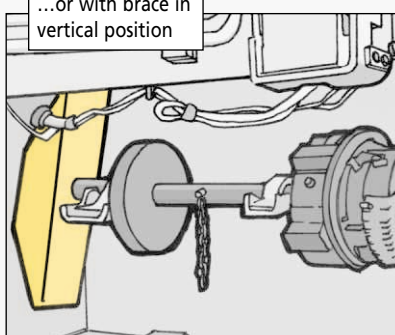
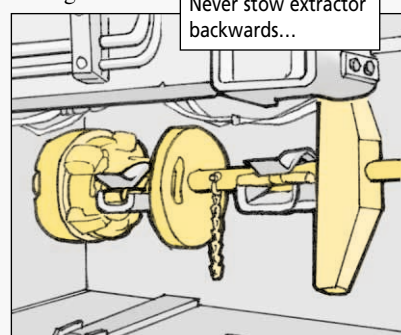
DO IT THE RIGHT WAY



Crewmen, there's only one right way to stow the Copperhead extractor in your M109-series howitzer.

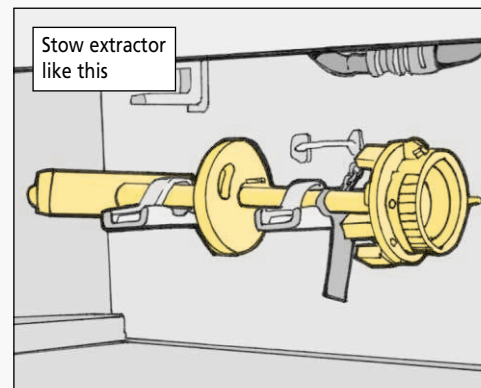
If you store it backwards, or with the brace in the vertical position, the brace bangs into the wiring harness that powers the slip ring contact arms. Banging wears away the harness cover and leads to arcing and electrical problems.

The same problems occur when the brace isn't tightened in place, even if the extractor is stowed properly. Vibration shifts the brace around until it snags the wiring harness.



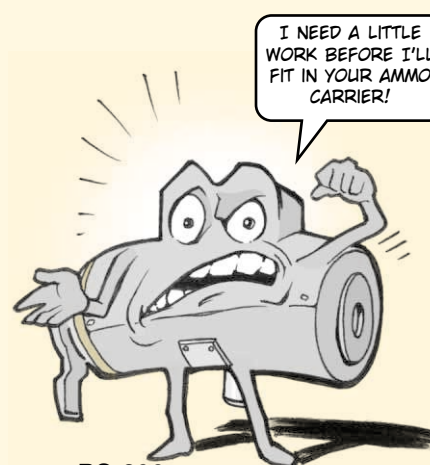
Slide the brace forward on the extractor shaft until it touches the end of the ratchet handle. Turn the drive nut on the shaft end counterclockwise until the brace is held firmly against the ratchet handle.

Then, turn the extractor so that the brace is horizontal and facing away from the rear door when stored in the cab rack. That way, you avoid harness damage altogether.



M992A2 Ammo Carrier...

NEW HEATER NEEDS MOD



That new A-20 Global personnel heater, NSN 2540-01-396-2826, will need a few modifications before you install it in an M992A2 ammo carrier, mechanics.

The existing fuel pump doesn't provide enough pressure for the new heater. Also, the personnel heater cradle assembly doesn't allow enough clearance to install the new heater.

Modification instructions and a list of parts you'll need are found on Pages 3-22 through 3-25 of TB 43-0001-62-8 (Jan 99). If you need a copy of the pages, see your local TACOM logistics assistance representative or write to MSG Half-Mast.

Give Fuel Pumps a Rest

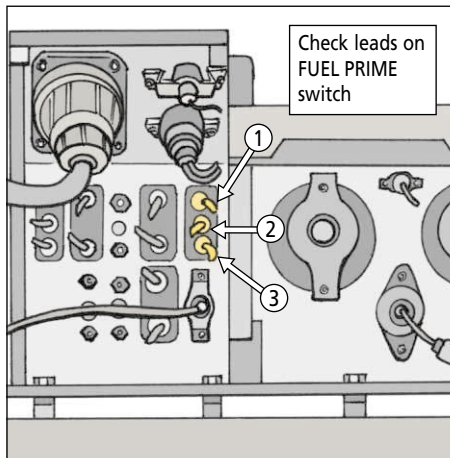
→WHEW→
THAT WAS A
GOOD WORKOUT,
HUH?

YEAH, BUT I
CAN'T REST! MY
FUEL PUMPS
ARE STILL
RUNNING.

Everyone can use a little exercise, but running continuously will burn you out in no time. The same holds true for the fuel pumps on your M992A2 ammo carrier.

Some pumps are running nonstop—at least until they burn out—because the leads for the electrical wiring on the FUEL PRIME switch on the driver's instrument panel are reversed.

Right now, take a look at the FUEL PRIME switch leads on the back of the instrument panel. Make sure they're installed like so:



① Lead 76 (1) connects to the top terminal of the FUEL PRIME switch and goes to breaker #5 in the circuit breaker panel.

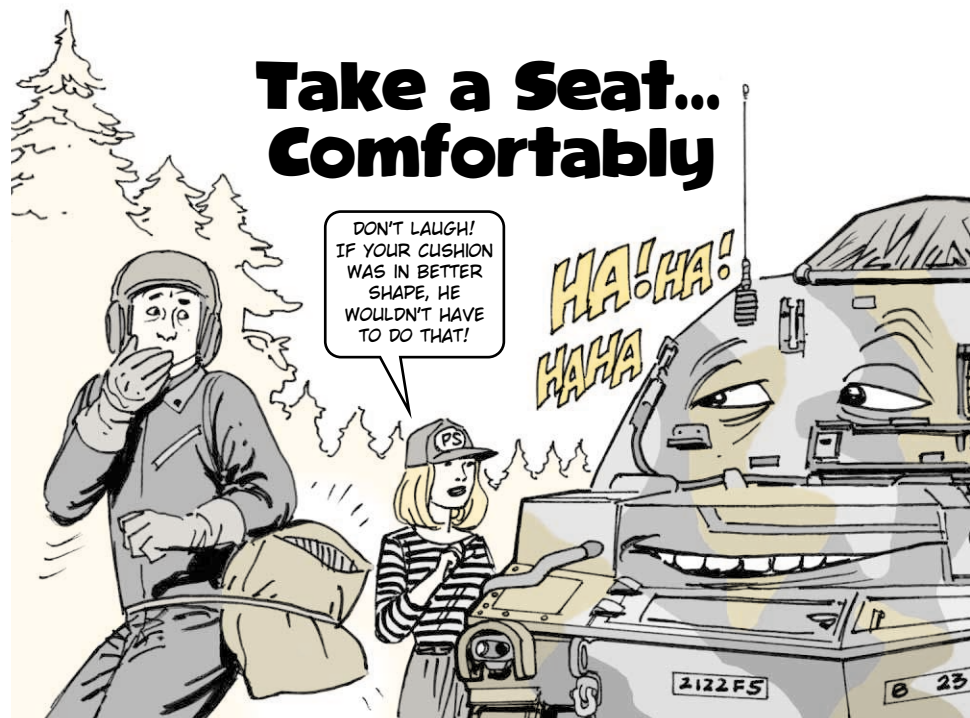
② Lead 76 (2) connects to the middle terminal and goes into wiring harness, NSN 6150-01-396-2828, and then to the right and left fuel pumps.

③ Lead 588 (3) connects to the bottom terminal of the FUEL PRIME switch and goes to the GLOW PLUG switch on the driver's instrument panel.

Take a Seat... Comfortably

DON'T LAUGH!
IF YOUR CUSHION
WAS IN BETTER
SHAPE, HE
WOULDN'T HAVE
TO DO THAT!

HA! HA!
HAHA



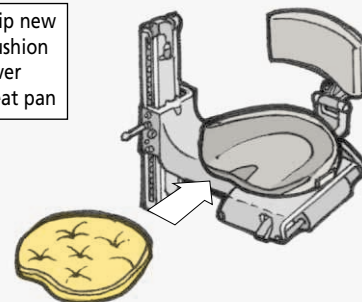
When the driver's seat cushion in your ammo carrier wears out, it's a real kick in the pants. You can either strap a pillow in place to protect your posterior, or replace the entire driver's seat pan, NSN 2540-00-560-2169.

The pillow is a bit awkward and a new seat pan is pretty expensive, so most drivers suck it up and keep using the worn-out cushion.

Good news! Now you can put that cushion problem behind you by ordering just the seat cushion, NSN 2540-01-473-4063. It costs less than the entire seat pan, so you save money. Plus, the new cushion saves a lot of wear and tear on your backside.

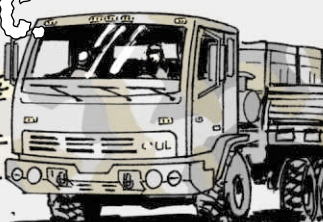
JUST SLIP THE
NEW CUSHION
OVER THE
EXISTING SEAT
PAN AND YOU'RE
READY TO HIT
THE ROAD!

Slip new
cushion
over
seat pan



COOLING SYSTEM T.L.C.

DRIVERS,
WHEN IT'S COLD
OUTSIDE, DON'T
FORGET ABOUT
YOUR ENGINE'S
COOLING
SYSTEM.



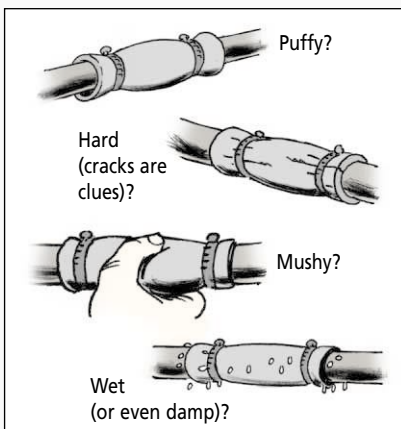
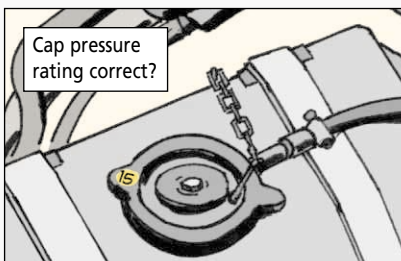
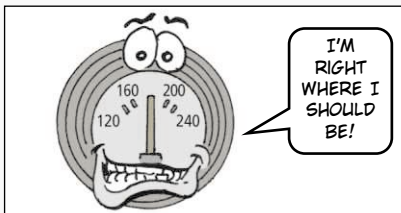
No matter the temperature, your vehicle's cooling system should be able to reach 160 to 180°F. If yours won't, have the thermostat checked. It may be stuck open and need replacing.

A vehicle system that always runs at more than 200°F also needs attention. A bum thermostat, a clogged radiator, a bad radiator cap or filthy coolant may be the culprit. The engine's air flow may even be blocked.

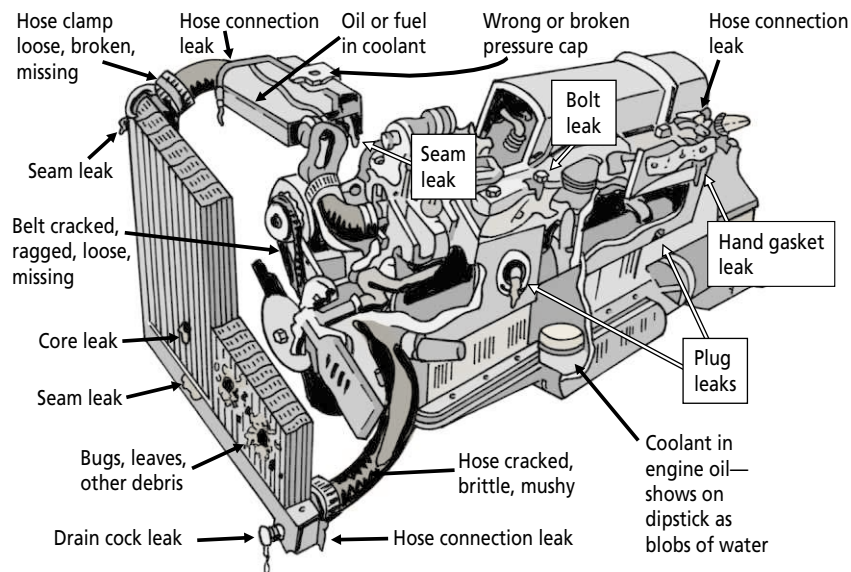
To speed up heating in freezing weather, you can partially cover the air intake grilles with canvas when starting the vehicle. Be sure to remove the cover after the engine reaches operating temperature.

Look at the 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. Too low a rating lowers the boiling point of your coolant. Too high builds up pressure that'll pop radiator seams or blow hoses

Hoses need to be touched as well as looked at. They must withstand heat, pressure and vibration. They're rubber, so they rot, harden and crack with age. That's why you need both eyes and hands to detect bad hoses. Report any bad hoses that show these signs.



Any leaks or other cooling system problems?



Check the radiator. Look for leaks on the top tank, front and back of the core and bottom tank.

Leaks may not show up when your engine is cold, so look for rust and odd-colored dribbles where coolant has leaked and dried.

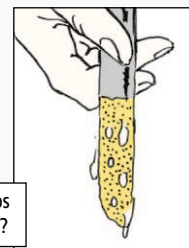
Later, when you've got the engine running at operating temperature and pressure, check those places again for wet spots. Use a flashlight during both inspections.

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 be at least over the top of the core. It should be almost clear—and colored by the antifreeze.

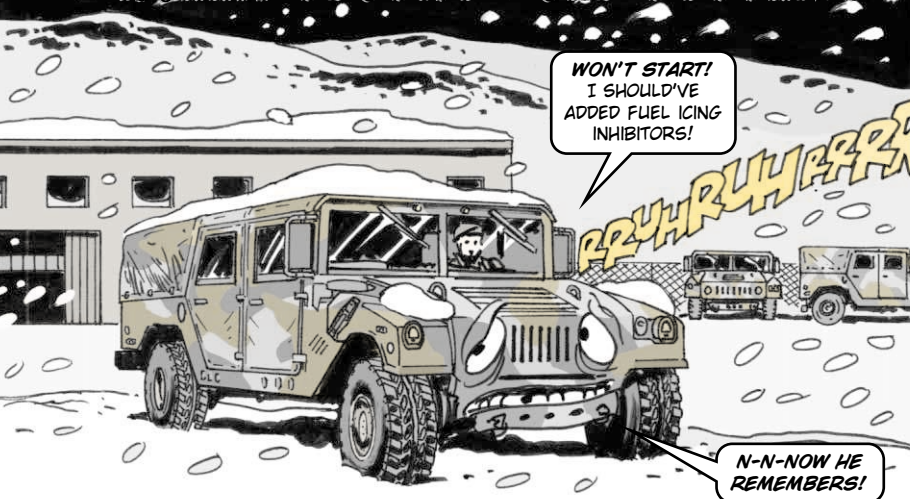
If your coolant is muddy-looking or has bits of junk in it, your cooling system needs draining and flushing, maybe even cleaning. Report it.

If you see a rainbow of oil slime on top of the coolant, you've probably got a leak inside the 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.



Note, drivers, that air-cooled systems don't need much attention. All they need is a good flow of air—meaning all the airflow shrouds must be in place.

FROZEN SLUSHY FUEL SYSTEMS



Slushy snow cones were great when you were a kid. But any type of slush in a vehicle's fuel system is a different matter.

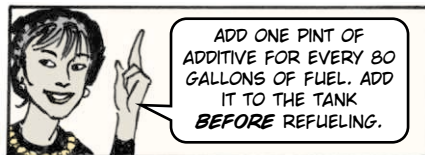
In cold weather, water in the fuel system can turn slushy and freeze up. Then your vehicle won't start.



- ✦ Drain fuel filters daily, just like your PMCS says.
- ✦ Refuel with care to keep water or snow out of the tank.
- ✦ Keep the fuel tank filled to the FULL mark to stop condensation.

✦ Add icing inhibitor to diesel and jet fuel after you fill the tank. Get it with:

Qty	NSN 6850-01-
5-gal can	377-5074
55-gal can	089-5514



Remember, more is not better! You can damage the engine if you add more than one pint of additive to 80 gallons of fuel. At the least, engine performance suffers.

If you use JP-8 jet fuel, don't add icing inhibitor—it's already in there! Jet A-1 does not have the inhibitor, so treat it just like diesel fuel.

TIRE CHAINS MAKE A DIFFERENCE

Skating on ice can be graceful and beautiful. Driving on ice is a different story.

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

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

Tire size	Chain assembly (Pair) NSN 2540-	Cross chain NSN 2540-00-933-	Swivel hooks NSN 2540-00-937-
9.00x20	00-933-9024	6916	0404
9.50x16.50	00-057-0204	6916	0404
10.00x15	01-185-8306	6916	0404
10.00x20	00-933-9034	6916	0404
10.00x20 (dual tires)	00-933-6917	6915	0404
11.00x18	00-933-6933	6915	0404
11.00x20	00-933-9022	6915	0404
11.00x24	00-933-6935	6915	0404
12.00x20	00-933-6922	6915	0404
14.00x20	00-933-9033	6992	0404
14.00x24	00-933-9023	6992	0404
16.00x20	00-933-6937	Not available	

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

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

Detecting Just Got Better ... and Safer

THROUGH RESEARCH AND TESTING, THE ARMY HAS FOUND THE OLD METHODS OF OPERATING THE AN/PSS-12 MINE DETECTOR DIDN'T ALWAYS FIND MINES. **THAT'S DANGEROUS.**

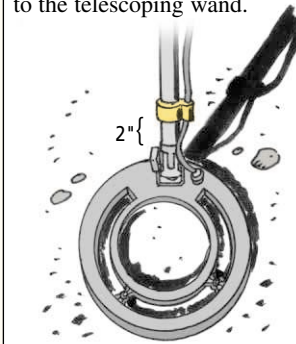
SO HERE ARE THE NEW, IMPROVED WAYS TO MAKE SURE YOUR DETECTOR DETECTS MINES BEFORE THEY FIND YOU.



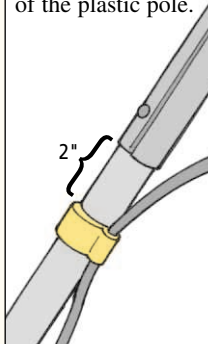
Be More Sensitive

The cable that runs from the search head to the electronics unit can affect the detector's sensitivity if it's not connected correctly. To connect the cable:

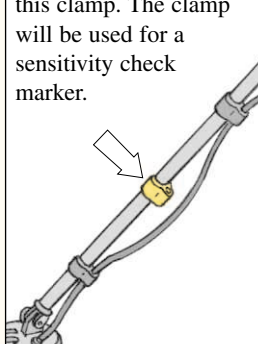
1. Attach the cable to a bottom cable clamp placed 2 inches above the wing nut that attaches the search head to the telescoping wand.



2. Attach the cable to a second cable clamp placed 2 inches from the top of the plastic pole.



3. Attach a third cable clamp halfway between the two clamps. But don't attach the cable to this clamp. The clamp will be used for a sensitivity check marker.



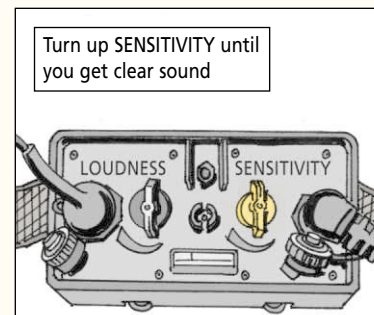
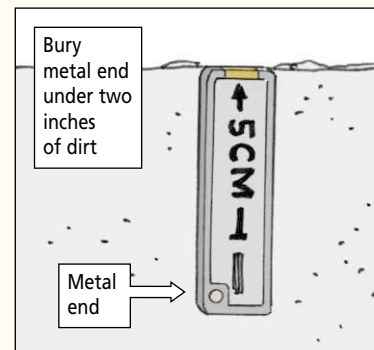
DO NOT ATTACH THE CABLE TO THE UPPER ALUMINUM SHAFT. THAT HURTS SENSITIVITY!



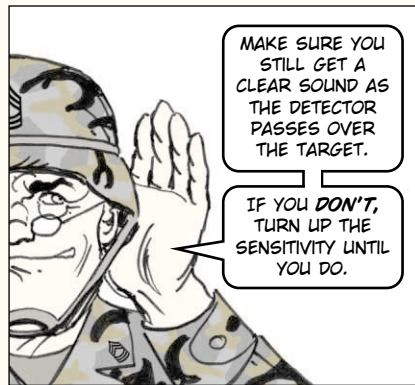
Set the sensitivity of your mine detector **before** you go in the minefield by using a sensitivity target. Use a disarmed mine that is the most difficult type to detect and that is the kind you will most likely encounter. Its metal content should be the same as an armed mine. If you don't have a disarmed mine, use the 5-cm test piece that comes with AN/PSS-12.

Bury the target in soil like you'll find in the mine field and where there is no metal clutter. Bury it at the deepest depth you expect to find a mine. If you're using the test piece, bury it vertically with the metal end down. If you're not sure what depth mines will be buried, bury the test piece so the inside metal piece is under 2 inches of dirt. This puts the top of the test piece flush with the surface.

Place the detector head right over the target and then turn up the SENSITIVITY knob until you get a clear sound from the detector. A higher sensitivity setting gives more false alarms, but a lower setting may cause you to miss mines.



Float the detector head over the target, just grazing the ground, sweeping at a rate of about 1 foot per second.

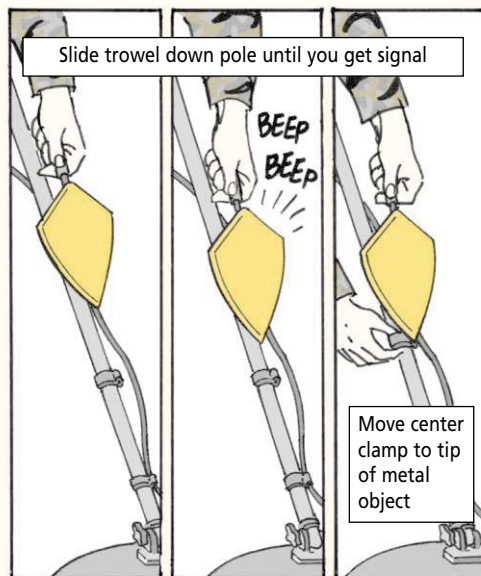


Keep It Close and Slow

The word used to be to keep the head 2 inches or less above the ground while sweeping. No more! Let the head graze the ground. And don't sweep 3 feet per second like you were taught—sweep 1 foot per second. Closer and slower sweeping dramatically increases your chances of finding a mine.

Keep It Sensitive

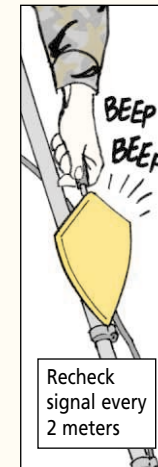
The detector's sensitivity varies over time as you're sweeping, so you need to keep checking it. As soon as you've made the initial sensitivity setting, put the head over ground where there is no metal to trigger a signal. Take a metal object like a trowel or bayonet and slide it down the wand until you get the same signal from the detector you heard with the head over the target. Move the center cable clamp that you placed on the wand to the tip of the trowel or bayonet. Compare the signal from the mine or test piece with the signal from the metal object touching the clamp.



The clamp is now your sensitivity mark. After every 2 meters of sweeping, touch the clamp with the metal object. If the signal has softened, turn up the sensitivity knob. If it's louder, turn down the sensitivity. Don't move the clamp.

If you have to frequently adjust the sensitivity, the batteries probably need to be replaced. Weak batteries can hurt your detector's performance long before the low battery light comes on.

Sweep no faster than 1 foot per second and overlap each sweep and the edge of the lane you're checking by at least one half the width of the detector head.



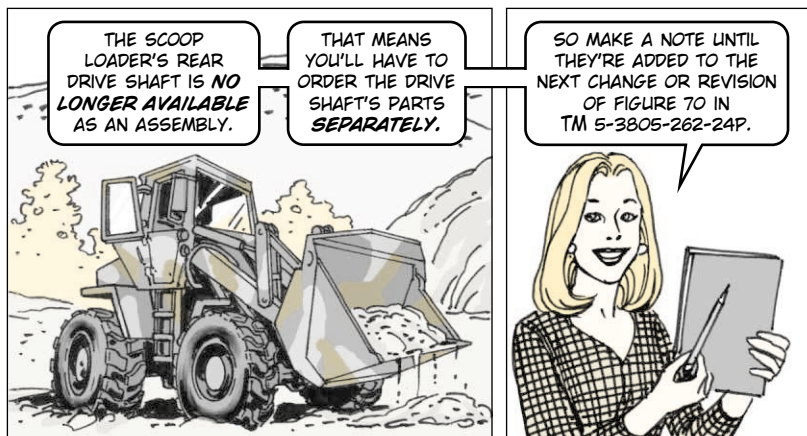
SOUM For Good Detecting



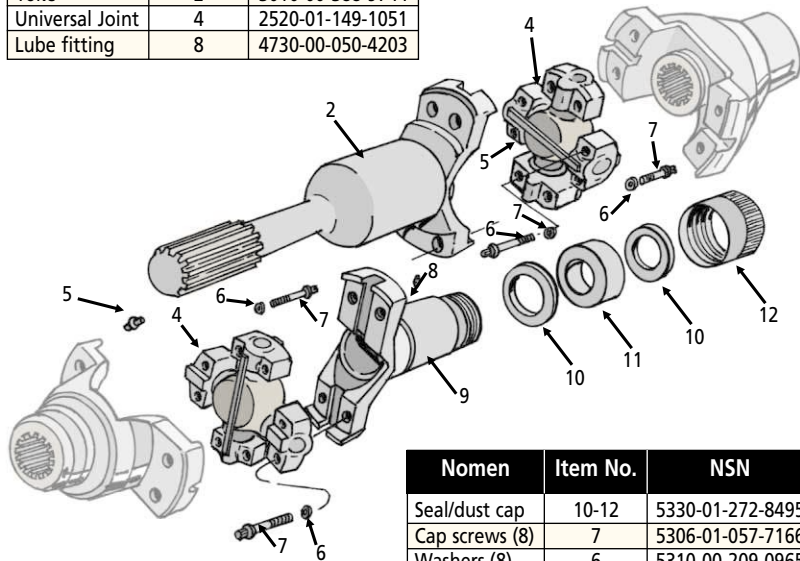
M9 ACE Tee Fitting

NSN 4730-00-466-7496 gets the tee fitting for the earthmover's fire extinguisher. The NSN shown as Item 23 in Fig 45 of TM 5-2350-262-24P is wrong.

DRIVE SHAFT PARTS UPDATE



Nomen	Item No.	NSN
Yoke	9	3010-00-375-7642
Yoke	2	3010-00-388-9744
Universal Joint	4	2520-01-149-1051
Lube fitting	8	4730-00-050-4203



Nomen	Item No.	NSN
Seal/dust cap	10-12	5330-01-272-8495
Cap screws (8)	7	5306-01-057-7166
Washers (8)	6	5310-00-209-0965

LOAD UP ON BRAKE PM

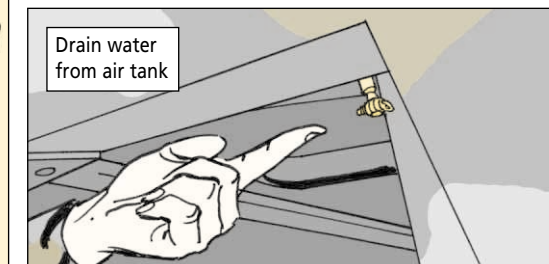


Bleed the Brakes

Make sure you drain the scoop loader's air brakes after every mission. If you don't, you'll end up with some real problems down the road, including brake failure.

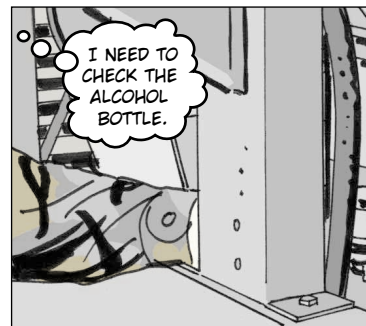
That's because moisture in the air in the brake system turns into water. Water causes rust, which plugs up brakes valves and cylinders. Eventually, you have brake failure.

Always drain the water from the scoop loader's air tank after the day's run. Just open the valve until no more water comes out. Then close the valve tightly when you're done.



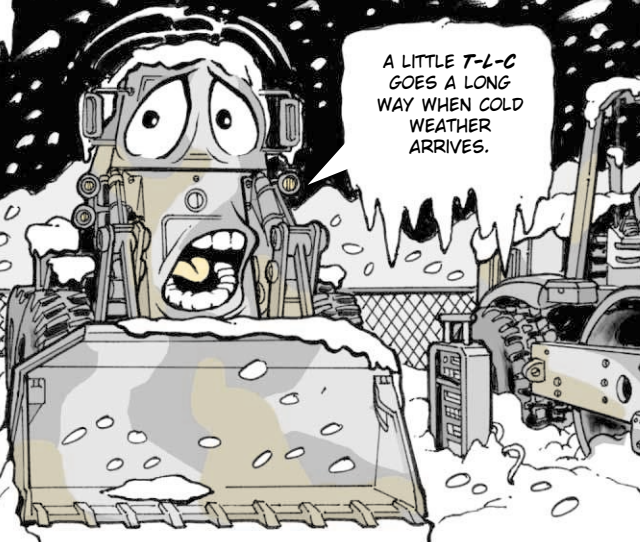
Keep Alcohol Bottle Full

An alcohol evaporator bottle is part of the scoop loader's air brake system. Check the bottle every time you open the engine's curbside access panels. The bottle is mounted directly behind a crossmember that's between both panels, so it's easy to forget. Keep the bottle at least two-thirds full.



SCOOP THESE COLD TIPS

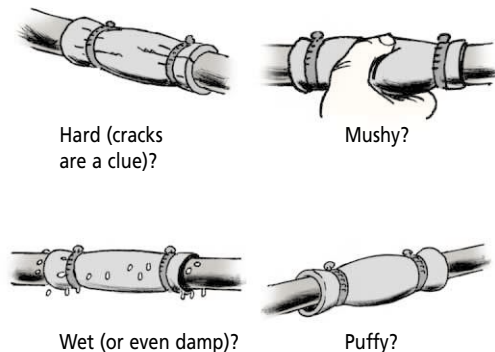
A LITTLE T-L-C GOES A LONG WAY WHEN COLD WEATHER ARRIVES.



KEEP THESE COLD WEATHER TIPS HANDY WHEN THE TEMPERATURE DROPS AND THE GROUND TURNS HARD.

TAKE A LOOK AT THE SCOOP LOADER'S HOSES. HOSES ROT, HARDEN OR CRACK WITH AGE.

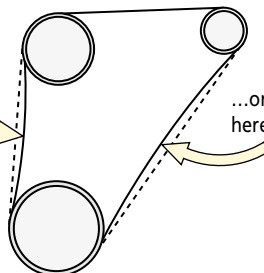
Hoses



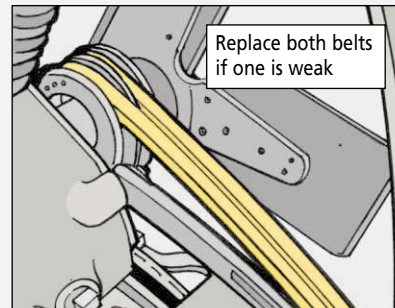
Belts

Keep drive belts tight. A quick and easy check is to use your thumb. Push down mid-way between the two pulleys with your thumb. Deflection should be about 1/2 inch—about the width of the belt—for each 12 inches of span length.

Check deflection here...



Replace both belts if one is weak



Air Cleaner

Clean off the air cleaner's inlet before starting the engine. The engine won't get much air if the air cleaner is choked with snow or ice.

In a snow or sleet storm, shield the inlet with a piece of scrap tarp to keep snow or sleet out.

Cover with a temporary shield to keep out ice and slush



IF YOU **CAN'T** ADD A COVER, BRUSH AWAY SNOW AND ICE FROM AROUND THE INLET BEFORE YOU TRY TO START THE ENGINE.



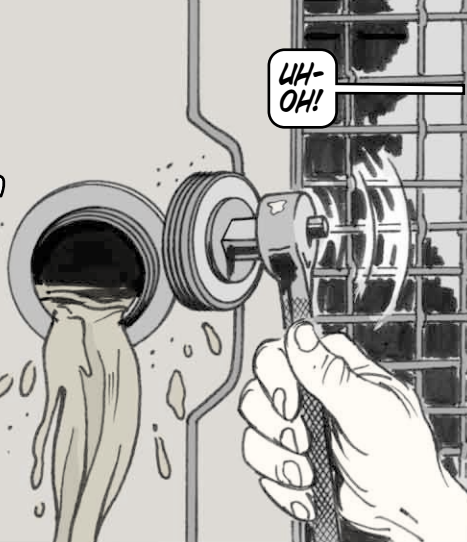
Oil Filter Element

NSN 2940-01-011-9260 gets the oil filter element for the MW24C scoop loader. The element listed for Item 13 in Fig 12 of TM 5-3805-262-24P is no longer available.

Defroster Switch

NSN 5930-01-177-9532 gets the console switch for the scoop loader's defroster fan. The switch is missing from Fig 124 of TM 5-3805-262-24P.

FUEL SEDIMENT VALVE

UH-
OH!

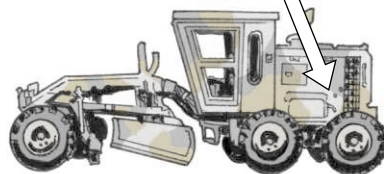
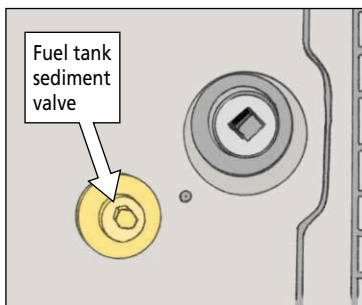
Somewhere, way back when, your momma told you not to cry over spilled milk. That's because what's done is done.

But she never said anything about spilled hydraulic oil all over a shop's floor!

On the bottom of Page 2-28 in TM 5-3805-261-10 it says to open the fuel tank's sediment drain valve to remove moisture from the tank.

Problem is, the callout for that PMCS check (#8) points to the drain valve for the grader's hydraulic tank. You're in for a big surprise when you open that valve. Several gallons of hydraulic fluid will drain out.

So make it a point to remember the fuel tank sediment valve is shown on the left in the illustration. The drain valve is shown on the right. If you don't remember, you'll be stuck with hydraulic oil on your boots, the shop floor, and something to really cry about!



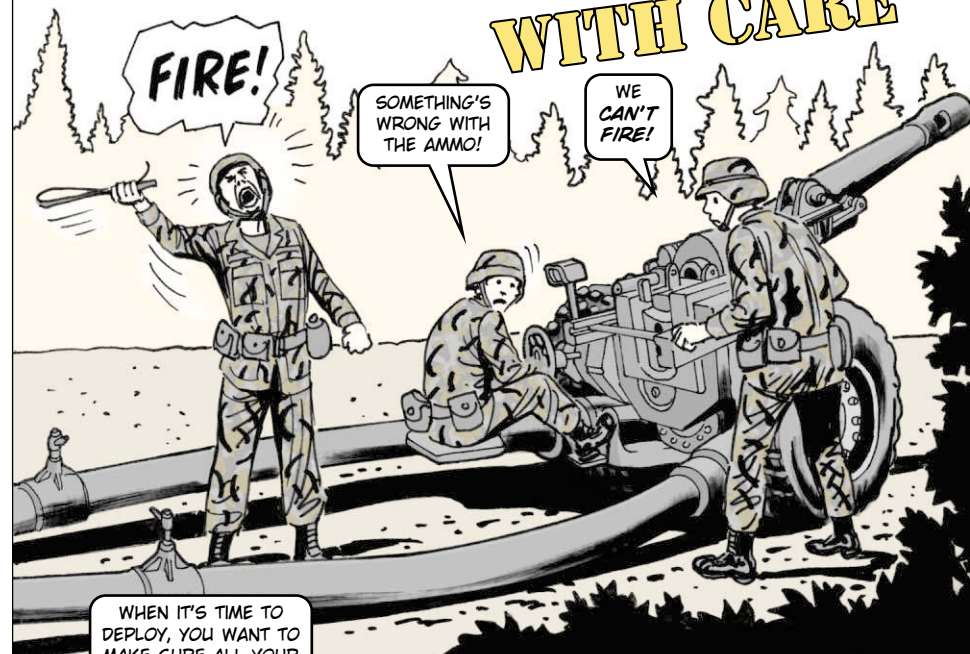
PS



THIS IS **PART 1**
OF 3 IN A SERIES
ON AMMUNITION
IN DEPLOYMENT
SITUATIONS.

•ACTION-
•ADVENTURE-
•MAINTENANCE.

Handle And Transport Ammo WITH CARE



FIRE!

SOMETHING'S
WRONG WITH
THE AMMO!WE
CAN'T
FIRE!

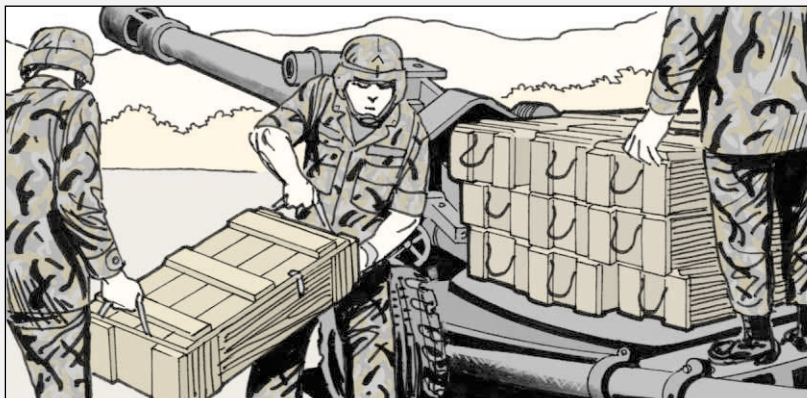
WHEN IT'S TIME TO
DEPLOY, YOU WANT TO
MAKE SURE ALL YOUR
EQUIPMENT IS
UP-TO-SNUFF.

BUT ALL THE PM IN
THE WORLD **WON'T**
HELP YOUR WEAPON IF
YOU **HAVEN'T** TAKEN
CARE OF ITS AMMO.

TO MAKE SURE
YOUR AMMUNITION
WORKS AGAINST
THE ENEMY AND
NOT YOU, TAKE
A SHOT AT THE
FOLLOWING
INFORMATION.



Safe Operations



During deployment, you'll encounter many different types of ammunition. The single most important fact to remember is: **Ammunition is intended to maim, kill and destroy!** If you are not completely sure about an item, **do not go near it, do not touch it, and do not pick it up!** There are plenty of examples of overly curious soldiers who ended up either wounded or killed, so handle ammunition carefully.



Limit the number of soldiers exposed to ammunition handling to the minimum necessary to get the job done.



Protect ammunition from dirt and sand, temperature extremes, moisture, grease, rough handling or anything else that might cause it to deteriorate.

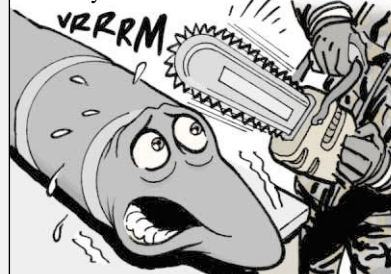


Keep ammunition in its original containers as long as possible to prevent exposure to the elements. Maintain accountability and preserve lot integrity.

Open ammunition boxes carefully. Return all inner packaging material to the container and close it to keep out moisture, sand or debris. Repack items that have been opened and not used.

Make sure proper fire extinguishers are on-hand and properly maintained. In the event of a fire, try to keep it from spreading to ammunition. If the fire does reach ammunition, **evacuate immediately!**

Never tamper with, disassemble or alter any ammunition.



Do not become careless because of familiarity with munitions.



Make sure you are properly grounded when handling ammunition items containing electric primers, exposed propellant or exposed explosive material. Static electricity and ammunition can be a lethal combination!

Ammunition that does not arm or has failed to explode after being armed is classified as a dud. **Dud ordnance poses an immediate threat!** It should not be handled or moved. Mark the location and call your local EOD support unit to remove or destroy it. You should also contact your EOD support unit if you locate unexploded ordnance.

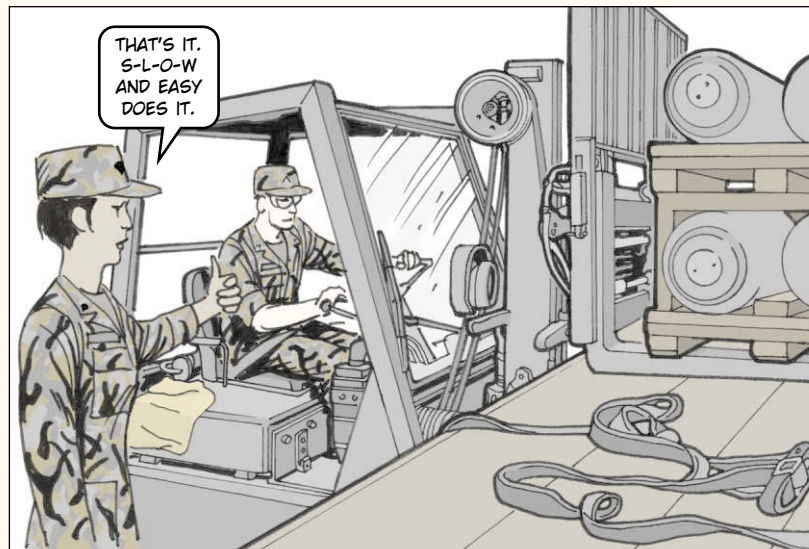
The greatest danger posed by depleted uranium (DU) munitions is the explosive hazard. The depleted uranium is radioactive, but the levels are so low that the main health risk is chemical toxicity. So follow these tips when dealing with DU munitions:

- In the event of a fire involving DU munitions, evacuate **upwind** and immediately notify your unit's NBC NCO and Safety Officer for instructions and assistance.

- If possible, place damaged DU munitions in plastic bags to contain any potential contamination. Turn them in at your ammunition supply point (ASP).

When in doubt as to the condition and proper care of ammunition, refer to DA Pam 385-64, *Ammunition and Explosives Safety Standards*, and FM 4-30.13, *Ammunition Handbook: Tactics, Techniques, and Procedures for Munitions Handlers*. Or, get in touch with a Quality Assurance Specialist (Ammunition Surveillance), or “QASAS”. A QASAS may be contacted through your ASP, range safety, or EOD personnel. You can also check with personnel from your ammunition supply organization or logistics staff element.

Loading and Unloading



Loading and unloading ammunition requires special care. Before loading, be certain all pallets, boxes and containers are in good shape, sealed tight and secured.

Maintain a tight pack using approved packing material. Brace or restrain the load as firmly as possible to prevent pallets and boxes from shifting in transit, and to protect them from bumps along the way.

Load vehicles in accordance with AMC 19-48 series drawings using wooden dunnage or web straps. The QASAS will be able to get these drawings, or you can check them out on-line at:

<http://www.dac.army.mil/DET/>

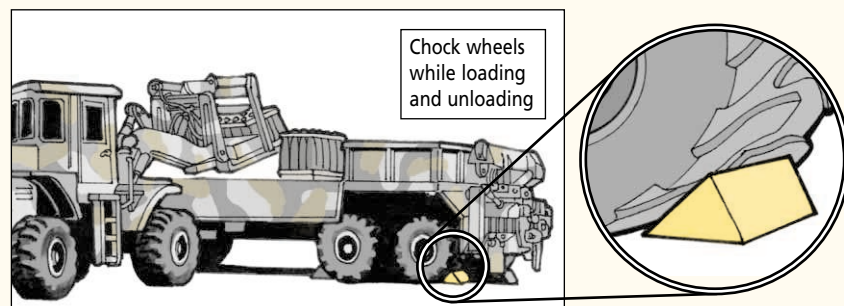
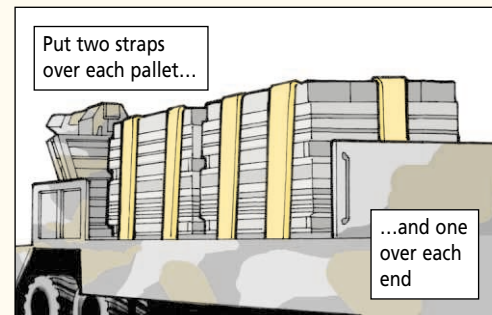
Never rely on the tarp alone to restrain ammunition in an open vehicle and never use boxes of ammunition as dunnage to block and brace your load. Remember, the ammunition load will need to be restrained both fore and aft as well as side-to-side.

A good rule of thumb when using web straps to restrain the load is to put two straps over each pallet or bundled group of boxes and one over each end of the load.

Unless you're involved in an actual battle scenario, do not load high explosive and white phosphorous or other chemical ammunition on the same vehicle. Check with your QASAS for approved transportation compatibility.

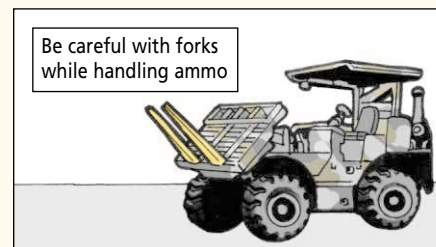
Know your vehicle's load limit and never exceed it. The weight of the ammunition will usually be listed on the side of the containers.

During loading or unloading, set the brake, turn off the engine and chock the wheels. Properly distribute the weight and secure the load to prevent movement during transport.



When loading unpalletized ammunition, do not allow more than one-third of the height of any box to extend above the vehicle sidewalls.

When handling palletized ammunition, a forklift is the best equipment to lift and move ammunition short distances. Do not strike the ammunition with the forks. When using larger forklifts, do not stick the forks all the way through the pallet or you may puncture or topple neighboring pallets.



After you have moved the pallet away from those nearby, slide the forks forward until the pallet is seated against the mast. When you're ready to move the load, keep the forks no higher than a foot off the ground to keep the pallet stable.

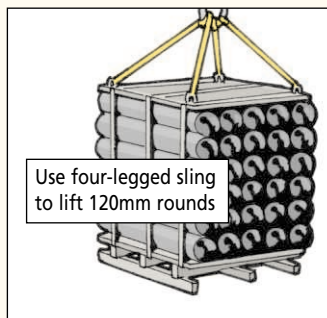
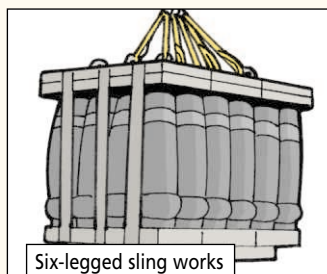
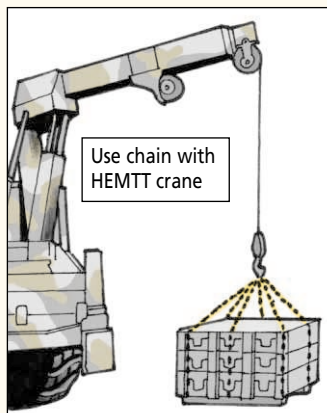
If a forklift won't do the job or isn't available, use a crane such as the one on the M977 HEMTT and a chain sling, NSN 3940-01-209-6008. Loop the two chains under opposite sides of the pallet and hook them to the two hooks on the chain sling ring.

For best results, hook the length of chain so it makes an angle of 45 to 60 degrees with the top of the pallet. If you hook the chain too long, you might not be able to lift the pallet high enough to position the load on the truck or trailer. Hooking the chain too short will create added pressure on the top edge of the containers and may damage them.

Although you can lift pallet units of separate loading projectiles with the chain sling, a specially designed six-legged sling, NSN 3940-01-241-7400, is the best way to go. It lets you lift three pallets of 155mm projectiles at one time. Since 155mm projectiles usually come banded together in bundles of three pallets, leave them that way for ease of handling.

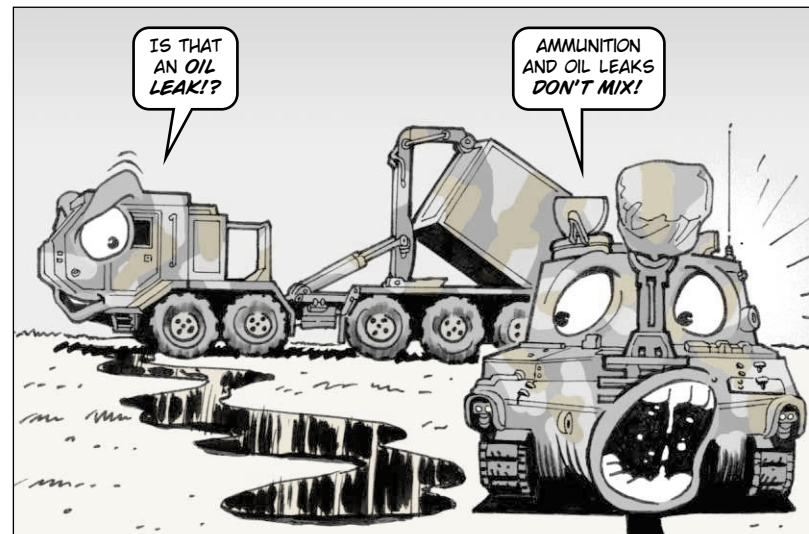
Before lifting wooden pallets, make sure the banding is not broken or missing. If you're lifting the metal field artillery projectile pallet (FAPP), make sure the top locking handles are seated firmly in place.

The six-legged sling's legs are too short to lift 120mm tank ammunition pallets. Since these pallets have four lifting rings attached to the metal top adapter of the pallet unit, use the four-legged sling, NSN 1398-01-348-4670. You'll need to order the sling on DD Form 1348-6 and put "NSN not on AMDF" in the REMARKS block. Just make sure all banding is present and tight on 120mm pallets.



YOU CAN ALSO USE THE FOUR-LEGGED SLING TO LIFT PALLETIZED PROJECTILES, BUT YOU CAN ONLY LIFT TWO PALLET OF 155MM PROJECTILES AT A TIME.

Motor Vehicle Movement

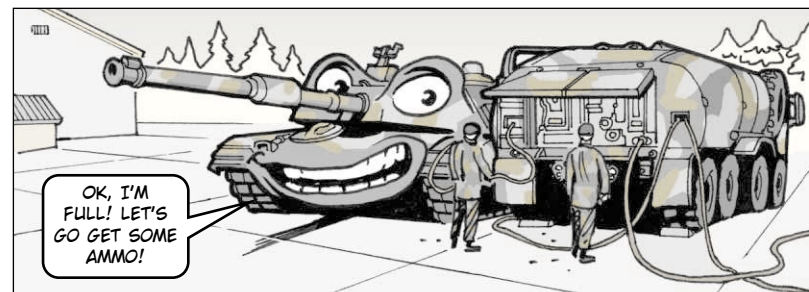


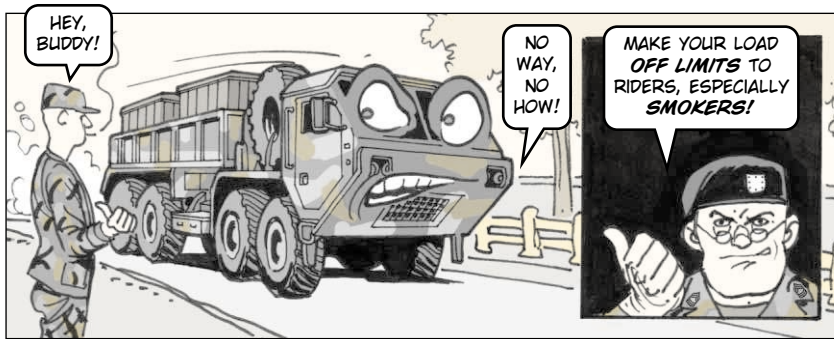
Any vehicle used to haul ammunition, or one that even goes near ammunition, must be in proper working condition. The vehicle must be clean and free of leaking fuel, grease, or anything else that could create a fire hazard.

Crew-level maintenance may be performed on a vehicle loaded with ammunition without unloading the ammunition. Higher-level maintenance and maintenance involving heat or flame-

producing devices require that the ammunition be off-loaded and moved at least 50 feet from the operation.

Fuel your vehicle **before** you load it with ammunition. If you must refuel a loaded vehicle, do so in an isolated area. When tactical situations permit, refueling a loaded vehicle should be delayed until the engine has cooled for at least 10 minutes to lessen the danger of fire from spills or overflows.





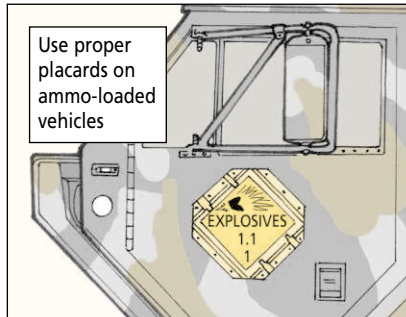
Vehicles carrying ammunition must be equipped with two serviceable fire extinguishers, rated 10BC or higher. Fire extinguishers rated 1A,10BC are even better, since they also handle paper and wood fires.

Maintain proper convoy distances when moving trucks loaded with ammunition. When parked or stopped, maintain a distance of at least 10 meters between loaded trucks. This will not keep a fire from spreading from one truck to another, but it will allow maneuvering room in the event of fire.

Maintain 10-meter distance between loaded trucks



The required checklist for all trucks carrying ammunition is DD Form 626, *Motor Vehicle Inspection*. DD Form 836, *Shipping Paper and Emergency Response Information for Hazardous Materials Transported by Government Vehicles*, provides special instructions for motor vehicle drivers. Placard ammunition-loaded motor vehicles per DA Pam 385-64; TM 38-410, *Storing and Handling of Hazardous Materials*; and all local or national requirements.



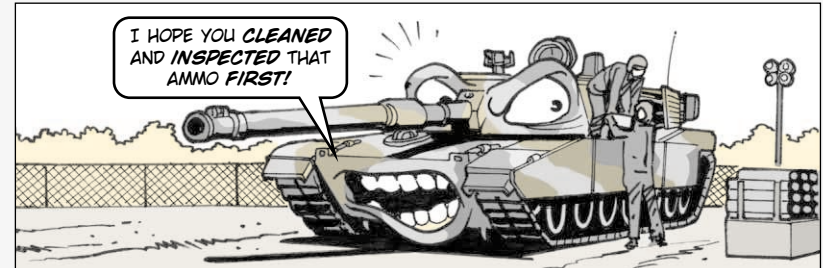
Use proper placards on ammo-loaded vehicles

YOU'RE NOT THE ONLY ONE WHO NEEDS TO KNOW WHAT YOU'RE CARRYING!



NOV 02

Combat Vehicle Ammunition



Check small arms ammunition stored in your combat vehicle regularly for contamination with dirt, grit or debris. Keep the ammunition wiped clean, but do not attempt to use oil, solvents, water or steel wool. Be especially careful that ammunition doesn't get coated with oil or grease.

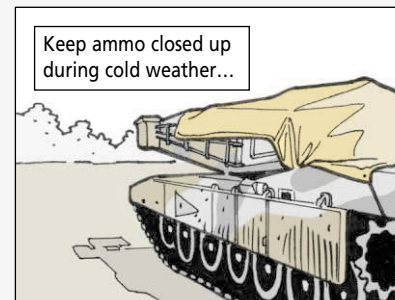
It's the same story for larger ammunition stored in your combat vehicle. Check your local SOP on unloading larger ammunition for a thorough cleaning and inspection.

When you clean, paint, grease, oil or wash inside your vehicle, either remove the ammunition or take measures to protect it. Seal the vehicle tight when you hose down the outside. Remove ammunition from floor storage on M2/M3-series Bradleys before washing.

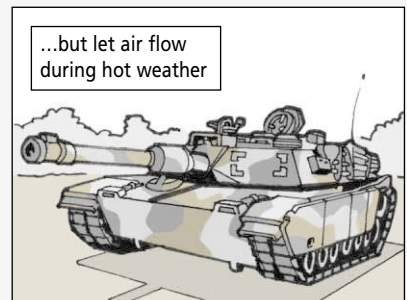
Remove ammunition from all vehicles before taking them to the motor pool or other facility for maintenance.

Post a fire plan for evacuation of combat-loaded vehicles in the parking area. The fire plan for uploaded combat vehicles will include provisions for a quarterly fire drill for crews.

In cold weather, keep ammunition compartments closed as much as possible to keep down condensation. During hot weather, open ammo compartments to allow as much ventilation as possible. See your vehicle's -10 TM and your weapon's pubs for more information on maintaining ammunition stored in combat vehicles.



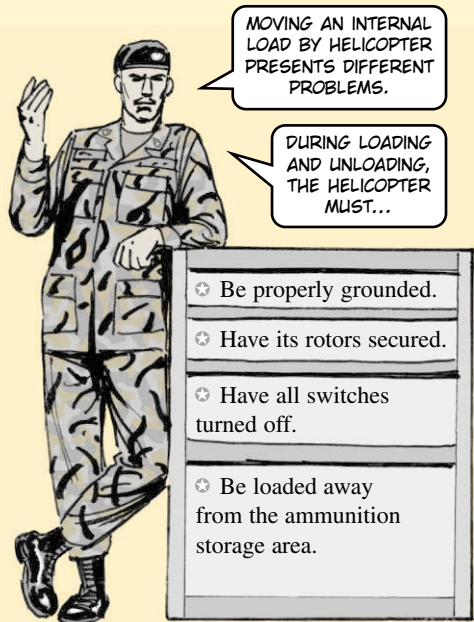
PS 600



33

PS MORE

Airlifting Ammunition



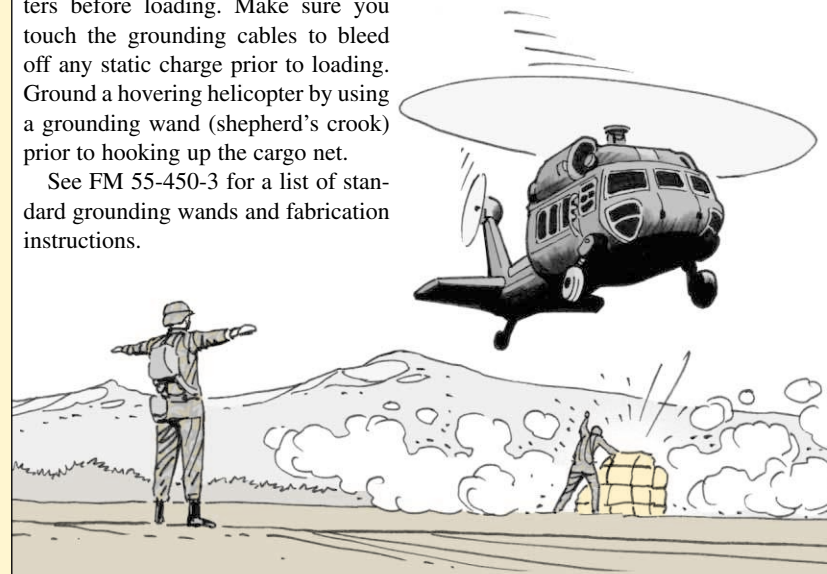
Make sure all boxes and containers are tightly sealed, clearly marked and in good shape with no leaks or burst seams. Load and secure the ammunition according to the aircraft commander's SOP.



For sling-out operations:

- ☆ Locate helicopter sling-out areas at least 550 meters from ammunition storage structures, inhabited buildings, or other vital facilities.
- ☆ Consider prevailing winds in the sling-out site selection. Select a site that helicopters could normally approach and depart without flying over magazines, inhabited buildings, personnel areas or other vital facilities. Provide a windsock or other wind direction indicator so pilots can determine the current wind direction.
- ☆ The sling-out area must have a good earthen ground. Ground helicopters before loading. Make sure you touch the grounding cables to bleed off any static charge prior to loading. Ground a hovering helicopter by using a grounding wand (shepherd's crook) prior to hooking up the cargo net.

See FM 55-450-3 for a list of standard grounding wands and fabrication instructions.



- ☆ Never use the sling-out area for long-term storage of ammunition. The only ammunition that should be present is the load the last helicopter just left or the load the next helicopter is about to pick up.

- ☆ If possible, the loads should be assembled in cargo nets, ready to be slung out, prior to the arrival of the helicopter.

FOR MORE INFORMATION ON LOAD LIMITS, SAFETY, GROUNDING AND AMMUNITION COMPATIBILITY, SEE TM 38-250, PREPARING HAZARDOUS MATERIALS FOR MILITARY AIR SHIPMENT, AND DA PAM 385-64.



More Help

THE U.S. ARMY DEFENSE AMMUNITION CENTER (DAC) MAINTAINS USEFUL AMMUNITION SUPPORT INFORMATION ON ITS WEB SITE.



Available Products

- Ammunition for Training
- Ammunition for Operations
- Ammunition for Technology
- Ammunition for USATC's
- State L. Buy-Back
- National Guard
- ALCOM Office (CPS)
- ALCOM Office (CPS)
- Public Affairs
- Operations
- Army Center
- Top Ten updates

As a member of the United States defense community, we have many unique and special capabilities that serve the ammunition industry, both government and private, around the globe. This Oklahoma-based organization is part of the U.S. Army Operations Support Command, which is the largest subordinate command under the U.S. Army Materiel Command. Together we are ready with relevant products and services to be responsive to all our customers requirements.



Know the latest about your Air Force!
Read Air Force Print News!

AN ON-LINE 24-HOUR AMMUNITION HELP SYSTEM (AMMOHELP) ALLOWS ANYONE WITH AN OFFICIAL NEED TO SUBMIT QUESTIONS REGARDING MUNITIONS, EXPLOSIVES, LOGISTICS, QUALITY, SAFETY, SECURITY, TRAINING, EQUIPMENT, OR TECHNOLOGY.



THE AMMOHELP HOTLINE IS MANNED DURING OFFICE HOURS. BUT YOU'LL NEED TO LEAVE A VOICEMAIL MESSAGE AT OTHER TIMES.



COME BACK NEXT MONTH WHEN WE DISCUSS AMMUNITION STORAGE!

- DAC Home Page:
www.dac.army.mil/
- AmmoHelp web site:
www.dac.army.mil/ammohelp/
- AmmoHelp e-mail:
ammohelp@dac.army.mil
- AmmoHelp toll-free hotline:
1-877-668-2840



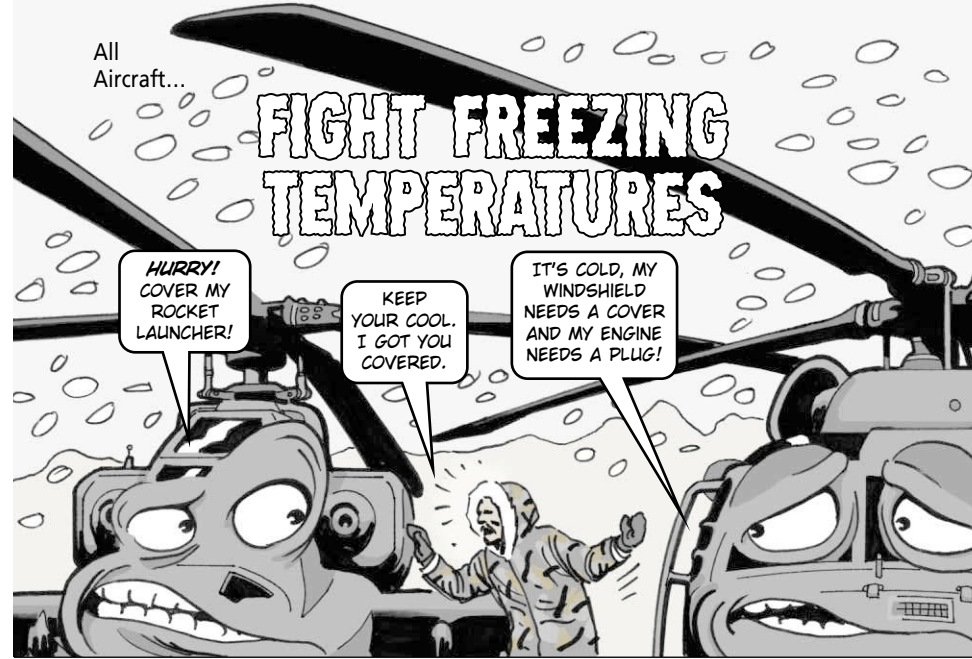
All Aircraft...

FIGHT FREEZING TEMPERATURES

HURRY! COVER MY ROCKET LAUNCHER!

KEEP YOUR COOL. I GOT YOU COVERED.

IT'S COLD, MY WINDSHIELD NEEDS A COVER AND MY ENGINE NEEDS A PLUG!



THE WINTER BLAST IS ALWAYS LOOKING FOR A CHANCE TO FREEZE YOU AND PUT YOUR BIRD ON ICE WHILE YOU'RE DOING FLIGHT LINE MAINTENANCE.

HERE ARE SOME POINTERS TO HELP YOU WIN THE COLD WAR BATTLE.

TIP ONE: Maintenance in the bitter cold means you need to bundle up and wear gloves even if you expect the job to take only 5 minutes. If you don't—and you dress like you're going to pick up the paper or check the mail—you'll rush the job, pull poor maintenance and risk exposure. Frostbite really loves toes and fingers, the most vulnerable extremities. Sure, winter clothing is bulky and makes maintenance longer. So allow yourself enough time to do the job.

TOLDJA TO WEAR GLOVES!

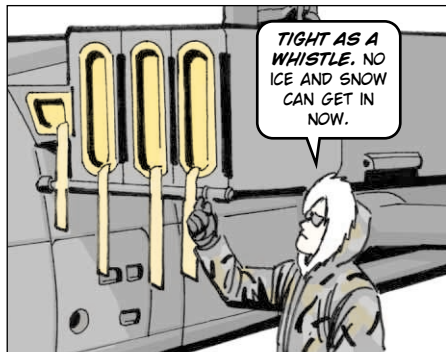
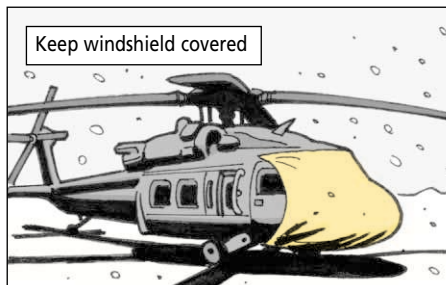
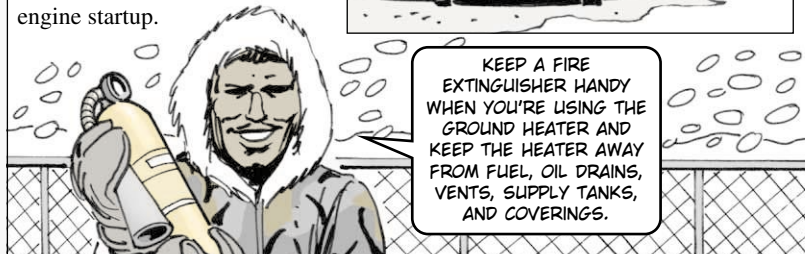
C-C-CAN'T FEEL MY FINGERS!



TIP TWO: Make sure your bird's deicing equipment, if installed, is in good working order. If your aircraft has specific covers such as rotor head covers and engine inlet plugs, use 'em. Keep the windshield covered. If the cover freezes to your bird, loosen the edges and use heat from a ground heater to loosen the rest of it.

Closely check uncovered areas during daily maintenance. Make sure freezing rain or blowing snow hasn't seeped into exposed moving parts and frozen up the works. After snow, sleet or an ice storm, take the engine inlet plugs and exhaust covers off and check for ice. If you find any, carefully thaw the engine inlet or exhaust with hot air, like your TM says.

Preheating a frozen bird brings metal and seals back to shape, and warms cold lubricants and hydraulic fluids. Preheating an aircraft reduces the strain on engines and transmissions and improves engine startup.



TIP THREE: For a long maintenance job, bring the bird inside or rig a shelter around it. Make one that will work for you.



TIP FOUR: Don't take shortcuts performing maintenance in the cold. If Old Man Winter and his cousin Mr. Freeze get to you, break your maintenance task into small portions or call your buddy to finish up, while you warm up inside from the cold outside.



TIP FIVE: Always ground your bird. The colder the weather, the drier the air; the drier the air, the more static electricity is generated. To beef up your knowledge on grounding, check out Page 2-10 in FM 10-67-1.



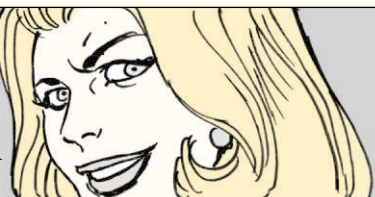
ALWAYS FOLLOW THE COLD FACTS IN YOUR OPERATOR'S, MAINTENANCE, AND GENERAL AIRCRAFT TMS AND THE COLD WON'T TAKE YOU OUT.



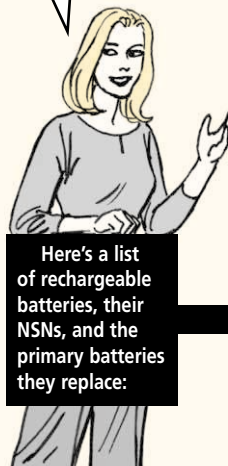
GET WITH THE
PROGRAM

RECHARGEABLE
BATTERIES ARE
HERE TO STAY.

THOSE OF YOU
RESISTING THE
EFFORT TO SWITCH
TO RECHARGEABLES
SHOULD SURRENDER
RIGHT NOW!

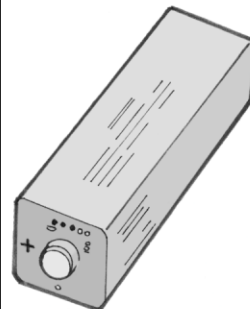


THE **GOOD NEWS** IS,
YOU WILL SOON GROW
TO LIKE THE BENEFITS
OF RECHARGEABLES.
WE GUARANTEE IT.

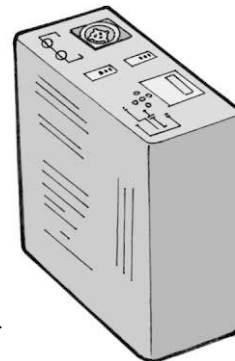


Here's a list
of rechargeable
batteries, their
NSNs, and the
primary batteries
they replace:

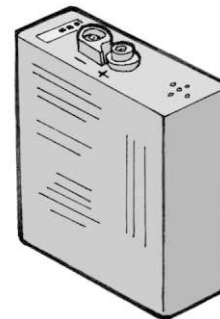
Rechargeable: BB-516A
NSN 6140-01-419-8191
Disposable equivalent: none



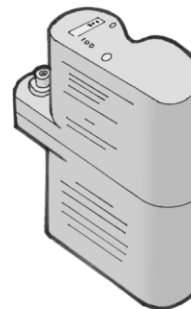
Rechargeable: BB-390B/U
NSN 6140-01-490-4317
Disposable equivalent:
BA-5590



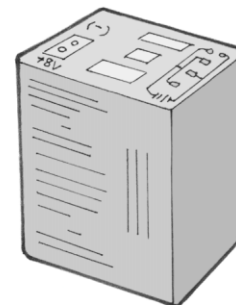
Rechargeable: BB-388
NSN 6140-01-419-8190
Disposable equivalent:
BA-5588



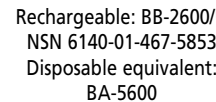
Rechargeable: BB-503A
NSN 6140-01-419-8193
Disposable equivalent:
none



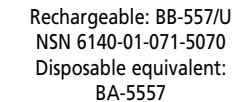
Rechargeable: BB-2847
NSN 6140-01-419-8194
Disposable equivalent:
BA-5847, -5347



Rechargeable: BB-2600/U
NSN 6140-01-467-5853
Disposable equivalent:
BA-5600



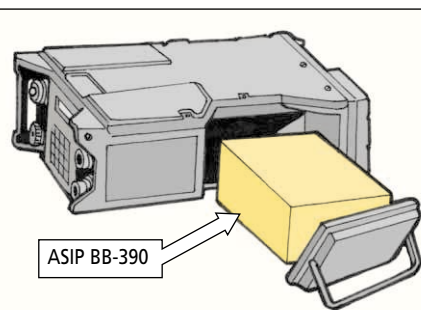
Rechargeable: BB-557/U
NSN 6140-01-071-5070
Disposable equivalent:
BA-5557



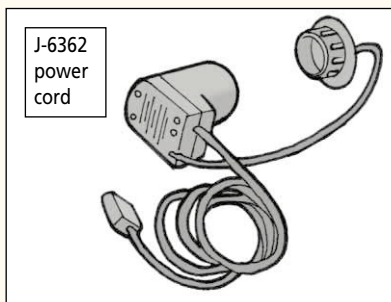
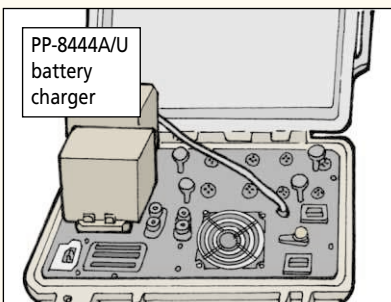
I HAVE A QUESTION. WHAT ARE THE RUN TIMES FOR THE RECHARGEABLE BATTERIES?

HERE ARE SOME COMMON RUN TIMES FOR COMMON EQUIPMENT...

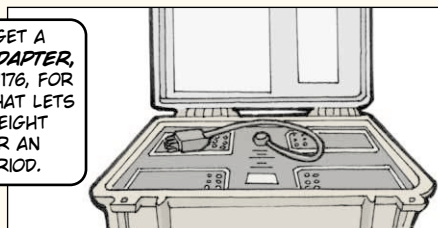
Battery	Run time (hours)	Equipment
BB-390B/U	12-24	SINCGARS
BB-388	27	AN/PRC-126
BB-2847	3-7	Thermal weapon sight



Of course, in order to use rechargeable batteries, you will need a battery charger. Order the PP-8444A/U battery charger with NSN 6130-01-443-0970. It can charge two batteries at one time. An AC power cord comes with the charger, but you will need to order the DC power cord, J-6362, NSN 5940-01-427-9395. This cord lets you power the charger from your vehicle's NATO slave receptacle.



YOU CAN ALSO GET A **MULTI-STATION ADAPTER**, NSN 5940-01-467-1176, FOR THE PP-8444A/U THAT LETS YOU RECHARGE EIGHT BATTERIES OVER AN EIGHT-HOUR PERIOD.

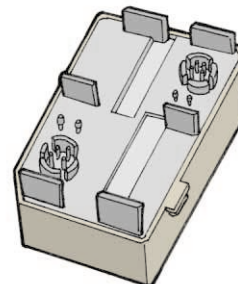


TO RECHARGE BATTERIES, YOU WILL NEED ADAPTERS THAT LETS EACH TYPE OF BATTERY FIT INTO THE CHARGER.

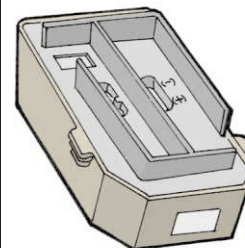
HERE'S A LIST OF BATTERIES AND THEIR ADAPTERS...



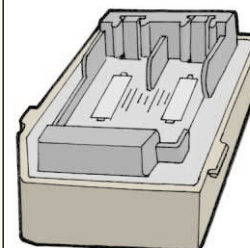
Battery BB-390
Adapter J-6357/P
NSN 5940-01-492-6570



Battery BB-388
Adapter J-6357/P
NSN 5940-01-427-8601



Battery BB-516
Adapter J-6356/P
NSN 5940-01-427-9183

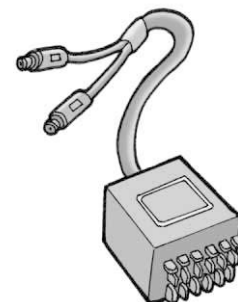


Battery BB-2600/U
Adapter J-6521/P
NSN 5940-01-467-8813

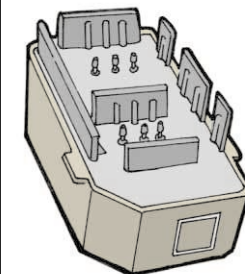
Battery BB-557/U
Adapter J-6523/P
NSN 5940-01-467-5852

Battery ICOM
Adapter J-6556/P
NSN 5940-01-467-6772

Battery BB-503
Adapter J-6355/P
NSN 5940-01-427-9247



Battery BB-2847
Adapter J-6354/P
NSN 5940-01-427-9278



If you have any questions about rechargeables, contact CECOM at DSN 992-4948 or (732) 532-4948; or e-mail them at:

**Donald.Brockel@
mail1.monmouth.army.mil**

Visit their website at:
www.monmouth.army.mil/cecom/lrc/lrchq/power/rechargebat.html

"KEEP ALIVE" GOES IT ALONE

FINALLY!
AFTER **TWENTY-FOUR HOURS** OF GRUELING SURGERY, I HAVE SUCCESSFULLY REMOVED THE CREATURE'S HEAD!

ERR... MASTER... I SHOULD HAVE TOLD YOU... ALL YOU NEEDED TO DO WAS **REPLACE THE BATTERY.**



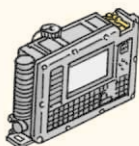
The keep alive battery (KAB), NSN 6130-01-324-2505, used in the forward entry device (FED) simplified handheld terminal unit (SHTU), can now be replaced without replacing the entire battery assembly.



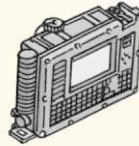
YOU CAN REPLACE **JUST THE BATTERY**

Until now, replacement of the battery required removing and replacing the assembly, NSN 7021-01-342-9109.

Assembly, NSN 7021-01-342-9109



But the assembly is **no longer available.**

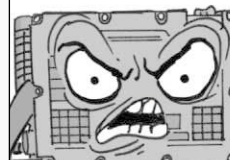


JUST REPLACING THE BATTERY REQUIRES A LITTLE **EXTRA** WORK ON YOUR PART, THOUGH. HERE'S HOW YOU DO IT...

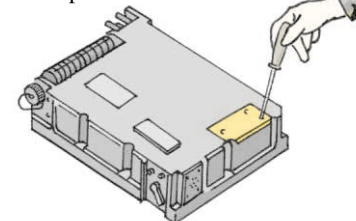


1. Leave the power running to the SHTU during KAB replacement. That way, you won't lose data stored in the RAM disk.

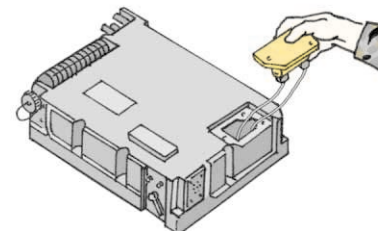
DON'T SHUT ME OFF!



2. Loosen the three screws holding the assembly to the SHTU using a cross-tip screwdriver.

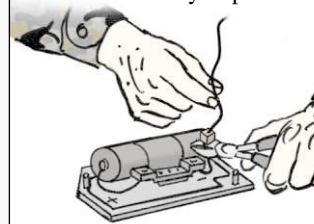


3. Lift the KAB up and carefully rotate it away from the SHTU to get to the battery leads.



4. Unplug both battery leads from the KAB assembly by pulling the connector end straight out from the KAB assembly jack. Don't pull on the wire or you could break the connection hidden under the shrink tubing.

5. With diagonal pliers, clip off the axial leads of the battery as close to the battery as possible.



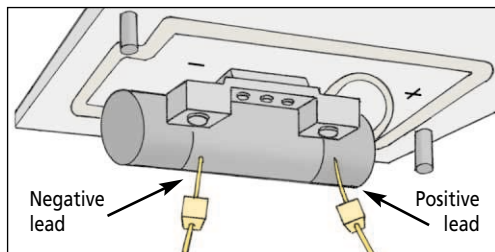
6. Depending upon the assembly you have, the battery may be held in place in one of two ways. Either a clip holds it, in which case you can remove the battery by pulling it out, or a clamp holds it, in which case you will need to remove the screw holding the clamp first.

7. Put in the new KAB with the positive end nearest the red jack on the assembly cover.

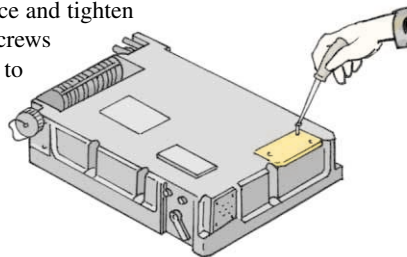
8. Position the solder tabs on the new battery so that they are parallel with the cover. If necessary, remove the plastic sleeves from the wire and trim it back to expose enough wire to do the solder job. Replace the plastic sleeves.

9. Hold the wire perpendicular to the solder tabs. Then solder the wire in place using 60/40 rosin core solder only. Cut off the excess.

10. Connect the positive lead to the red battery terminal and the negative lead to the black battery terminal.



11. Put the KAB assembly back in place and tighten down the screws to secure it to the SHTU.



SINCE YOU ARE WORKING WITH A LITHIUM-SULFUR DIOXIDE BATTERY, KEEP SAFETY IN MIND. THE GAS IS TOXIC AND THE BATTERY SHOULD BE HANDLED WITH CARE SO IT DOES NOT RUPTURE.

RFID TAGS...

IT JUST MIGHT BE THE BATTERY

DID I PUT THE BATTERIES IN STORAGE MODE?



NOV 02

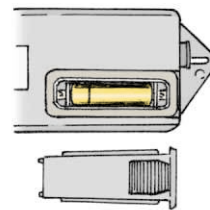
Are you getting a pile of ST-410-108 and -118 radio frequency identification (RFID) tags in the corner of your warehouse because of incorrect battery storage?

ST-410-108s and -118s piling up?



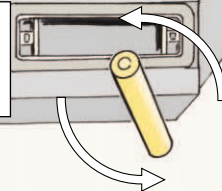
Could be the tags are just fine and the batteries inside them are the problem.

Could be a battery problem



Since you can't turn the tag on or off, the battery can drain when the tag is in long-term storage. To prevent this, the battery should be reversed and reinserted into the tag before it is put in storage. This stops a continuous drain of battery power.

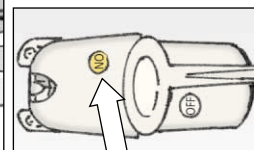
Reverse battery before storing



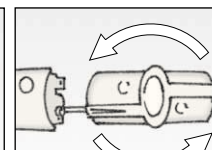
When the tag is removed from storage and ready to be used, the battery must be reversed and put right. If you don't, you'll think the tag is busted and pitch it into that growing pile in the corner.

If a tag is not working, make sure the battery is in right. If you are putting the tag in long-term storage, reverse the battery so it won't drain. No need to do that for short-term storage. The tag has a sleep mode that prevents energy drainage.

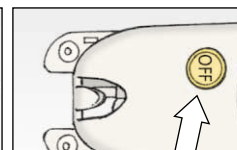
The ST-412-U1-001 tags might also be piling up for the same basic reason, but the problem is solved a little differently. The 412 tag is always kept in its tag mounting bracket in either the "ON" or "OFF" position. The status of the 412 can be verified by checking to see whether "ON" or "OFF" is visible through the hole in the tag mounting bracket. To conserve battery energy, the tag should be placed in its "OFF" position anytime it is not being used.



Putting the 412 tag away for awhile? If "ON" shows here...

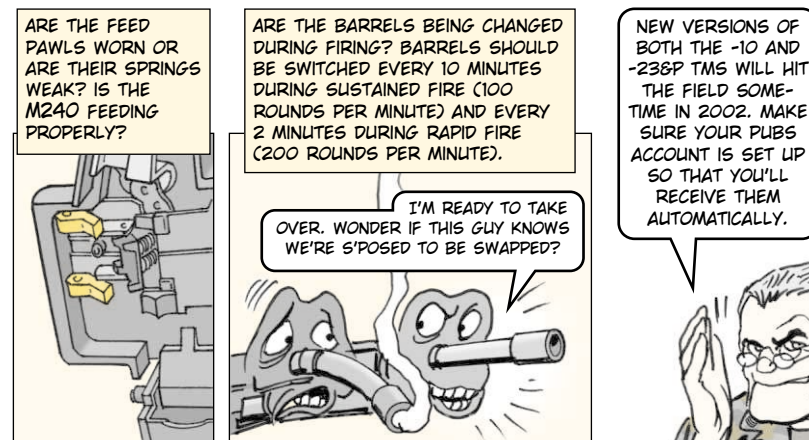
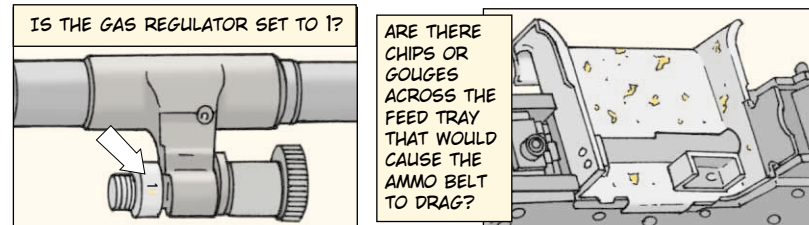
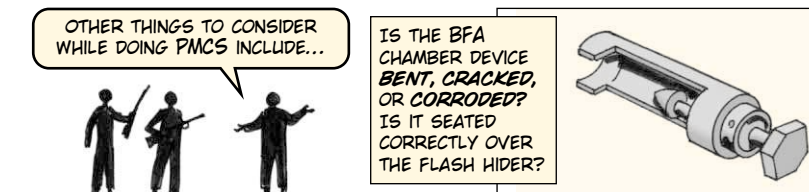
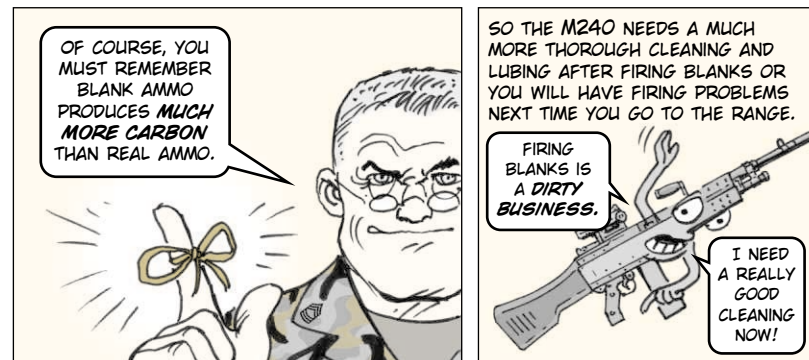
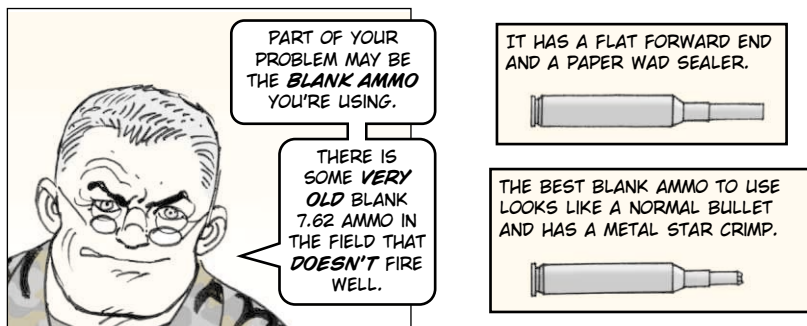
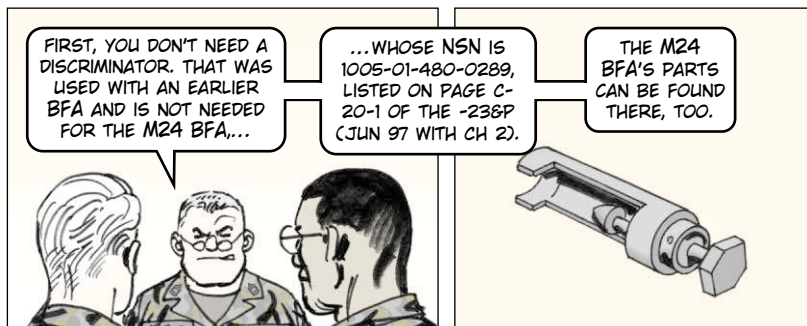


...pull apart and turn 180°...



...so that it's stored in "OFF" position

DON'T BLANK OUT WITH BLANKS



TOUCHING UP TRIPODS AND MOUNTS

THERE'S **NOTHING** IN HERE ABOUT TREATING CORROSION!? I DON'T BELIEVE IT!

UH-OH! I'M DONE FOR!

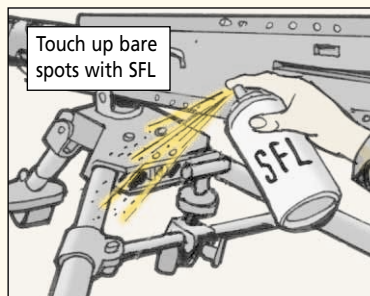
Dear Editor,

The latest version of TM 9-1005-245-13&P, which covers mounts and tripods, has nothing in it about touching up bare spots. And solid film lubricant (SFL) is no longer listed in the expendable supplies. I think that must be an oversight. If you don't touch up those bare spots, corrosion can damage tripods and mounts.

SSG Charles Clarke
Oregon National Guard

From the desk of the Editor

You're absolutely right. The procedure for touching up bare spots will be added to the next change to the TM, as will the NSN for SFL. In the meantime, clean bare spots and corroded areas on mounts and tripods with cleaning solvent, NSN 6850-01-474-2319. After the spot has dried, spray it with SFL, NSN 9150-01-260-2534.



REPLACE FACEPIECE, NOT WHOLE MASK

SHEESH. YOU'RE IN BAD SHAPE. GUESS I'M GONNA HAVE TO TURN YOU IN.

PARTS OF ME ARE **STILL GOOD!**

IT'S JUST MY **FACE-PIECE** THAT NEEDS REPLACING.

The M40-series and M42A2 masks have replaceable facepieces. So, NBC NCOs, there's no need to replace the whole mask just because the facepiece is damaged.

When a facepiece can't be repaired, replace it with the procedures in Chap 2 of TM 3-4240-346-20&P.

ORDER A NEW FACE-PIECE WITH THESE NSNs...

Size	NSN 4240-01-
Small	415-4517
Medium	415-4518
Large	416-0430

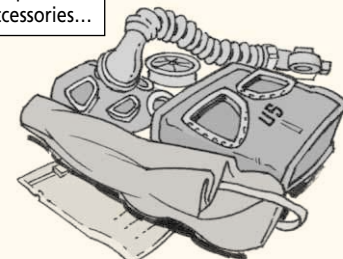


THESE FACE-PIECES WORK FOR BOTH THE M40/M40A1 AND M42A2 MASKS.

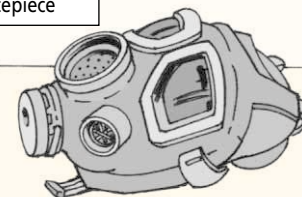
All M40-series and M42A2 mask accessories—hood, second skin, outsert sets, mask and canister carriers, canister, waterproof bag, -10 TM, maintenance cards, vision correction items and hose—should be kept and used with the new facepiece.

Turn in the old facepiece to DRMO. It can't be repaired economically. The facepiece is reportable item control code (RICC) 8, so report it as excess unserviceable. See Chap 7 in AR 725-50 for instructions.

Keep these accessories...

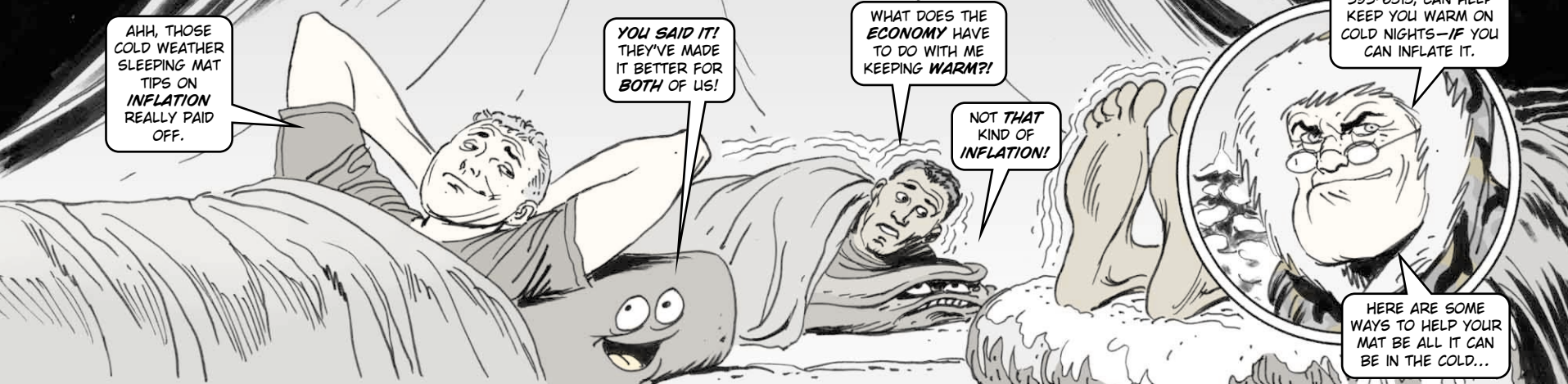


...but turn in all of facepiece



TAKING COLD

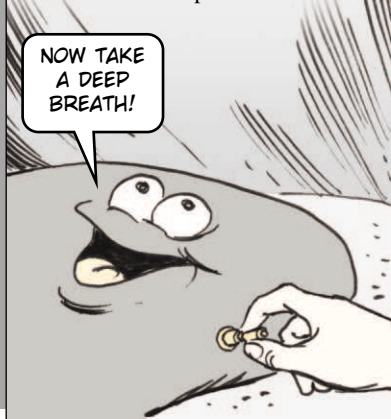
TO THE MAT



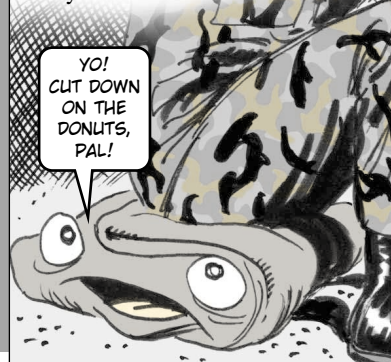
1. Carry the mat next to your body or unroll the mat and lie down on it for a few minutes before inflating it. Your body heat will warm the foam, which helps it inflate.



2. Open the valve and let the mat inflate as much as possible.



3. Close the valve, fold the mat two or three times, and sit on it. Your weight stretches the foam, increasing its ability to inflate.



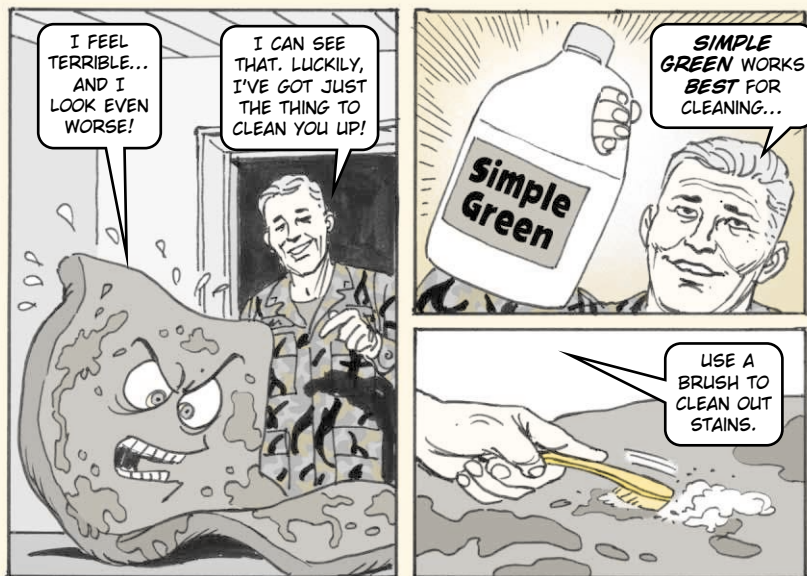
4. Open the valve again and let the mattress fully inflate.



If you're going to be sleeping on snow, over-inflate the mat a bit by blowing extra air into the mat after it stops self-inflating. That makes the mat a little firmer, but the added air increases the loft of the foam and provides better insulation. As the air in the mat cools, it also contracts. The extra air takes care of that.

When sub-freezing temperatures are the norm for several weeks, though, stop using your own air power to blow up the mat. Condensation from your breath can accumulate inside the valve, freeze, and plug the valve. Then you can't inflate or deflate the mat.

CLEANING SLEEPING MATS



Dear Editor,

Soldiers get all sorts of nasty things on their foam sleeping mats when they spend weeks in the field--stuff like tree sap and grass and berry stains. And that stuff is hard to get off.

We clean lots of sleeping mats here at clothing supply and have found one way to make cleaning mats easier:

Use a product called Simple Green. It's a cleaning concentrate that's available in the PX or can be ordered with NSN 7930-01-342-5315. Spray Simple Green on a stain, let it set a couple of minutes, then work on the spot with a soft-bristle toothbrush. It almost always erases the stain. If you can't get Simple Green, use the general purpose detergent, NSN 7930-00-926-5280, that's found around most motor pools. The detergent doesn't work quite as well, but usually gets the job done. Let the mat air dry for 24 hours.

Lloyd Owens
Denia Best
Consolidated Clothing Facility
Ft Campbell, KY

From the desk of the Editor

For more info on cleaning and maintaining your sleeping pad, see Chapter 2 in TM 10-8400-203-23.)

Get a Handle on HAZMAT



Got a new cleaner or degreaser through the supply system, but aren't sure how safe it is to use? Then the Hazardous Materials Information Resource System (HMIRS) is for you.

HMIRS is a web-based system that puts Material Safety Data Sheet (MSDS) and product record information right at your fingertips. You'll find information on ingredients, safety and health, transportation, logistics and disposal for thousands of products.

To access HMIRS, go to:

<http://www.dlis.dla.mil/hmirs/>

Once there, you'll need to apply for a login. Click on US Government Employees—Read Only. Print and fill out the application form and send it to:

HMIRS
DLIS-VSM (HMIRS Access)
Defense Logistics Information Service
74 Washington Ave N STE 7
Battle Creek, MI 49017-3084

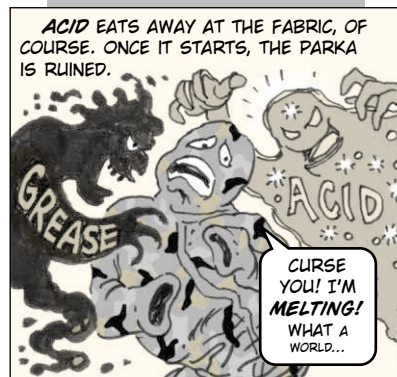
You can also fax the form to DSN 932-5925 or (269) 961-5925.

Once you receive your login ID, go back to the HMIRS web site and click on Connect to HMIRS. Type in your login (no password is needed) and click on LOGIN.

YOUR PARKA IS FOR THE FIELD, NOT THE MOTOR POOL!

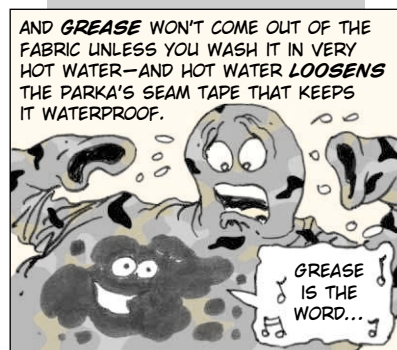


NO MATTER HOW **COLD** IT IS, IT'S NOT A GOOD IDEA TO WEAR YOUR COLD WEATHER PARKA AROUND THE MOTOR POOL. GREASE OR BATTERY ACID **RUINS** IT.



ACID EATS AWAY AT THE FABRIC, OF COURSE. ONCE IT STARTS, THE PARKA IS RUINED.

CURSE YOU! I'M **MELTING!** WHAT A WORLD...



AND **GREASE** WON'T COME OUT OF THE FABRIC UNLESS YOU WASH IT IN VERY HOT WATER—AND HOT WATER **LOOSENS** THE PARKA'S SEAM TAPE THAT KEEPS IT WATERPROOF.

GREASE IS THE WORD...



HERE'S HOW TO GET PLAIN OLD DIRT OFF YOUR PARKA...

- ★ USE WARM WATER AND DETERGENT.
- ★ WASH ON THE **PERMANENT PRESS** CYCLE.
- ★ RINSE THOROUGHLY IN **CLEAN, WARM WATER.**

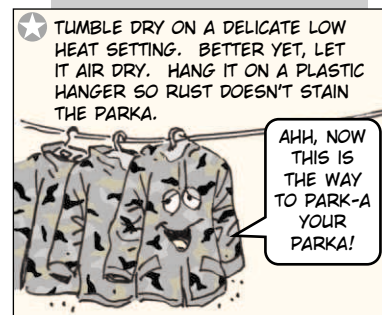


★ WHEN HAND WASHING AND RINSING, DO NOT WRING OR TWIST THE GARMENT. THAT CAN MAKE HOLES IN THE WATERPROOF BARRIER.

HEY, THAT **HURTS!**

WRINGING ME OUT RUINS MY WATER-PROOFING.

★ DO NOT BLEACH OR STARCH THE PARKA. THAT **RUINS** THE FABRIC.



★ TUMBLE DRY ON A DELICATE LOW HEAT SETTING. BETTER YET, LET IT AIR DRY. HANG IT ON A PLASTIC HANGER SO RUST DOESN'T STAIN THE PARKA.

AHH, NOW THIS IS THE WAY TO PARK-A YOUR PARKA!



EVENTUALLY, THOUGH, YOU'LL NEED A **NEW** PARKA.

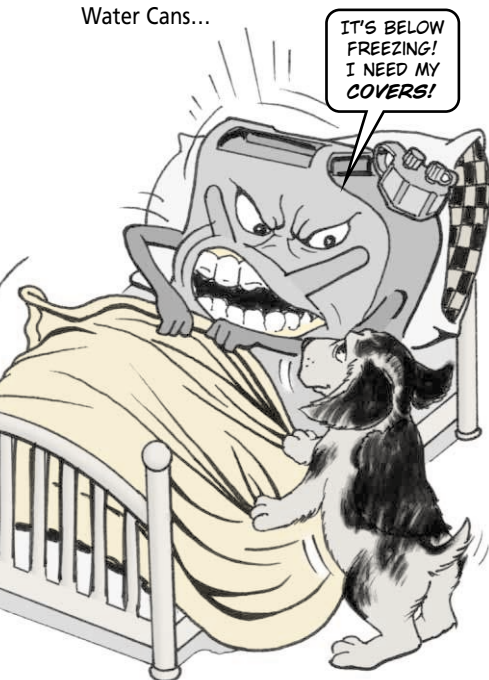
HERE ARE PARKA NSNS AND SIZES:

NSN 8415-01-228-	Size	Length
1306	X-small	X-short
1307	X-small	Short
1308	X-small	Regular
1309	X-small	Long
1310	Small	X-short
1311	Small	Short
1312	Small	Regular
1313	Small	Long
1314	Medium	X-short
1315	Medium	Short
1316	Medium	Regular
1317	Medium	Long
1318	Large	Short
1319	Large	Regular
1320	Large	Long
1321	X-large	Regular
1322	X-large	Long



AND REMEMBER, GOOD PM...

...MAKES LIFE A WALK IN THE PARKA!



WATER CANS NEED COVERS

Don't freeze your can off this winter. Keep the water in your 5-gal water cans from freezing. Use insulated covers, NSN 7240-00-125-9061.

Here are some other ideas to protect cans when the mercury heads south:

- ★ Leave room for expansion. Fill cans no more than three inches from the top.
- ★ Keep cans out of the chilling wind. Put them inside a tent or vehicle.
- ★ Keep cans off the frozen ground. Set them on planks or pallets.
- ★ Never heat a frozen can—the plastic will melt.

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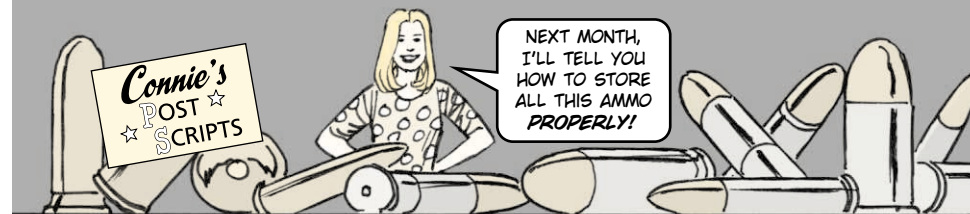
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b.(1) subscriptions	89,464	88,756
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i. Total	94,250	93,309
Percent Req'd	99.04%	99.07%

Submitted by: STUART A. HENDERSON, Production Manager



GLOW PLUG WARNING LABEL

NSN 7690-01-267-7370 gets a warning label to stick on the dashboard of a HMMWV or CUCV that reminds drivers to wait until the glow plugs are ready before they try to start the engine. It says: DO NOT START ENGINE UNTIL THE WAIT LIGHT GOES OUT.

M8A1 Alarm Kit Replaced

The M273 maintenance kit, NSN 5180-01-108-1729, for the M8A1 chemical alarm is no longer available. It contained both test and air filter paddles, which you can now order separately.

- The M293 kit, NSN 5180-01-379-6409, contains 20 air filter paddles, has no expiration date, and costs around \$170.
- M312 kit, NSN 5180-01-462-7469, brings 5 test paddles, has a 5-year non-extendable shelf life, and costs around \$55.

Test paddles must be disposed of as hazardous waste. See disposal instructions at <http://www.aeps.ria.army.mil>.

For more info, contact SBCCOM's Ron Chambers, (309) 782-2968/DSN 793-2968, chambersr@ria.army.mil or Mary McDonough, (309) 782-7240/DSN 793-7240, mcdonoughm@ria.army.mil

SNOW SHOVEL

Need a snow shovel to dig out of those deep winter drifts? NSN 5120-00-288-6529 brings a shovel with a 24-in wide blade.

M939/M939A1 THERMOSTAT

Order NSN 6685-01-141-0907 to get the thermostat for your 5-ton truck. Keep an extra one as a spare 'cause you might need it this winter.

SKO, GMTK CDs Available

TACOM-Rock Island has two CDs available that provide lots of information on sets, kits and outfits (SKO). One CD gives NSNs, pictures, specifications, and warranty info on all the tools in the general mechanics tool kit (GMKT), new aviation tool set-armament (NATS-A), TK 105 electronic repairman tool kit, and the small arms tool kit. The other CD gives the same info just for the GMKT. If you would like a copy of either CD, contact TACOM-RI's Dan Stark at (309) 782-0131/DSN 793-0131, starkd@ria.army.mil or Doug Heritage at (309) 782-1709/DSN 793-1709, heritaged@ria.army.mil

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