

Issue 525

PS

August
1996

THE
PREVENTIVE
MAINTENANCE
MONTHLY

TB 43-PS-525

Read and
heed, then
pass along!



PM

WISE...

...ERR

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Listen up . . .

Words of Wisdom

The roar of engines, air compressors, shop equipment, hammering or gunfire can ruin your hearing.

Hearing loss is usually painless and so gradual that you may not notice it. By the time you realize you're not hearing as well as you once did, the damage has been done.

Keep your hearing sharp! If you're working in a noisy area, or your TM says to wear hearing protection when operating your equipment, wear earplugs, muffs or ear canal caps. Even if the noise doesn't seem loud, it can cause damage.

Here's an easy check to see if your work area is noisy enough to require hearing protection. Have a buddy stand about three or four feet away and talk normally. If you cannot hear or understand him, chances are the background noise exceeds the safety limit.

If your hearing has been damaged, sound off! Tell your safety or preventive medicine people about it. They'll test your work area for dangerous noise levels and decide if hearing protection is needed. All the details are in DA Pam 40-501 and AR 40-5.

Hearing loss is the most preventable occupational hazard. Remember, **you** can prevent it!





THE
PREVENTIVE
MAINTENANCE
MONTHLY

ISSUE 525 AUGUST 1996

TB 43-PS-525, The Preventive Maintenance Monthly, is an official publication of the Department of the Army, providing information for all soldiers assigned to combat and combat support units and all soldiers with unit maintenance and supply duties. All information published has been reviewed and approved by the agency responsible for the equipment, publication or policy discussed. Application of the information is optional with the user.



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

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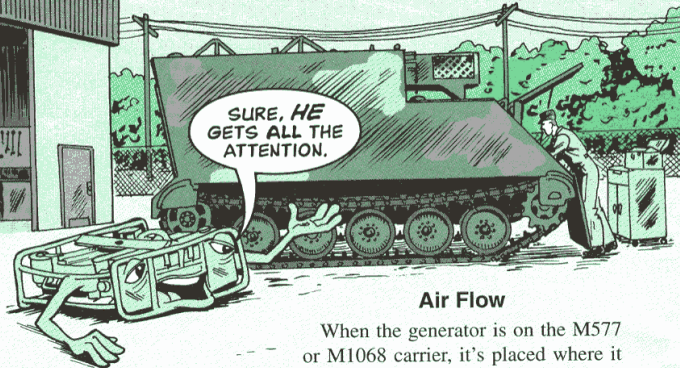
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Generate the Power



A 4.2-KW generator powers the computer system, radios, lights, and fax machines in your M577 or M1068 command post carrier. But, it can't power anything if you forget to pull PMCS.

The carrier's TM doesn't give PMCS for the generator, so before you start, get copies of TM 5-6115-596-14 on the generator and TM 9-2805-262-14 and LO 9-2805-262-12 on the generator's 6-HP engine.

After you've done your PMCS, pay special attention to these areas:

Starting Safety

When you use the starting rope to turn over the engine, the knotted end of the rope flies off the starter pulley.

That knot can smack you in the eye and cause serious injury.

To avoid eye damage, use goggles, NSN 4240-00-052-3776, whenever you start your generator.

Air Flow

When the generator is on the M577 or M1068 carrier, it's placed where it could easily be stepped on. Make sure you don't step on the shutter assembly. The shutter automatically opens when the engine needs a shot of cool air to keep running. A bent or jammed shutter assembly won't cool down your generator's engine when things get hot.

Shutter bent? Get it repaired or replaced

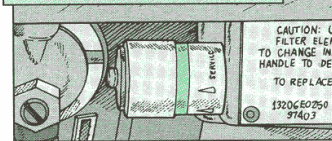


Check the shutter often. Make sure the shutter moves easily and then springs back to its original position.

Air Filter Facts

You could be changing your generator's air filter more often than necessary.

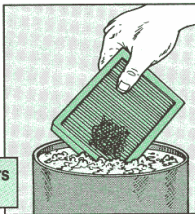
Keep generating if indicator is clear



In a pinch, your unit maintainer can clean the filter by blowing a low pressure (30 psi) jet of air from the clean side through to the dirty side.

If filters, NSN 2940-00-876-2212, are in short supply, keep dirty ones on the job by washing them in mild soap and water to extend their life. Make sure you dry them thoroughly before you put them back in, though.

Wash filters in a pinch



Never run an engine without a filter. Dust or dirt in your engine is more trouble than a dirty filter.

Fuel Tips

⚡ Clean the fuel sediment bowl every time the generator is used. If you don't, the carburetor could plug up and the generator won't start.

If the sediment bowl is metal you have to take it off and check.

If bowl is metal, take off to check

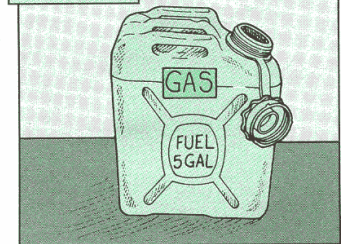


⚡ Never grab the first fuel can you find and fill the fuel tank. The 4.2-KW generator uses gasoline only.

Diesel fuel stops it cold. Spark plugs won't ignite the fuel. The fuel tank and lines have to be drained and cleaned.

If your commander OKs it, label all fuel cans DIESEL or GAS in lusterless black paint. Get a gallon of paint with NSN 8010-00-297-0547.

Label fuel cans



⚡ Eyeball the fuel before you add it to the tank. Make sure it's clean.

If it's dirty, it'll just clog up filters. When you pour fuel from cans, make sure the gas tank's screen is in place and clean. Its job is to screen out dirt and gunk that foul fuel.

⚡ Add fuel additive, NSN 6810-00-242-3645, to separate water from fuel.

⚡ Keep fuel cans 50 feet away from the generator and always have a fire extinguisher handy.

The final word in fuel safety is to never add fuel to a hot engine. A fire can shut down your set—and you—for good.

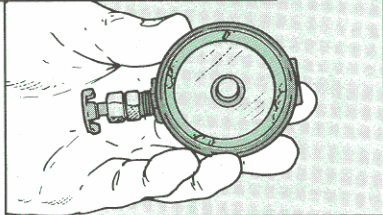
Exercise

Your generator needs to be exercised regularly. That doesn't mean just before each trip to the field, either.

Exercise is best when it's regular and often—like every week. Your generator gets sluggish when it doesn't get regular workouts.

Seals and filters dry out. Gaskets crack. Batteries get weak or die. Here's how to exercise your 4.2-KW generator: Before exercising, remove the generator from the vehicle like it says

Seals get dry without exercise



in TM 9-2350-261-10 or TM 9-2350-277-10.

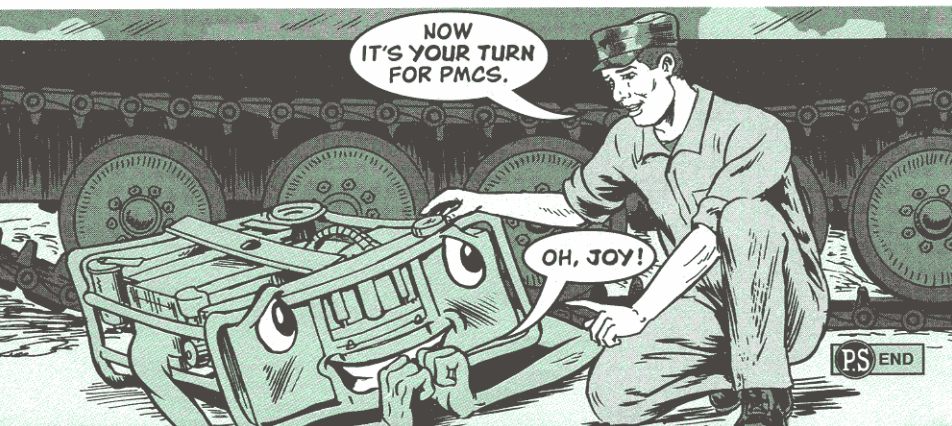
- ⚡ Start the M577, then the generator.
- ⚡ Switch off the M577.
- ⚡ Turn on all the lights. That gives the generator a load and the brushes in the starter are exercised.

More To Do

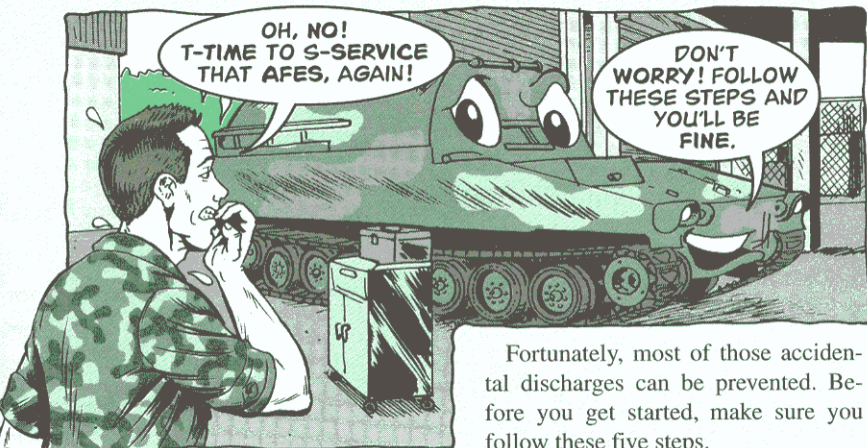
Make sure all hardware is tight before operating your generator. When traveling cross-country, the generator vibrates so much that the nuts and bolts shake loose.

Cover things like cables and the fuel sediment bowl before you spot paint.

Line up connections when you hook up the NATO slave cable to these generators. If the cable is at an angle, it could cause arcing and damage the connector.



AFES Maintenance Made Easy



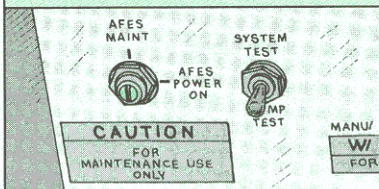
Mechanics, pulling maintenance or removing bottles on the M992 ammo carrier's automatic fire extinguisher system (AFES) can be nerve-racking, especially if the system goes off when it's not supposed to.

FORGET JUST ONE OF THESE STEPS AND THE AFES CAN DISCHARGE WITH NO WARNING. THEN YOU'VE GOT EVEN MORE WORK TO DO.



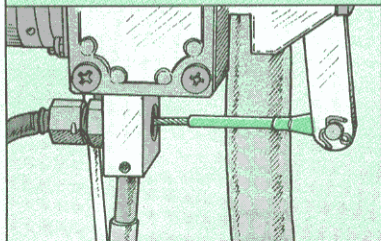
Fortunately, most of those accidental discharges can be prevented. Before you get started, make sure you follow these five steps.

1. Turn MASTER SWITCH ON.
2. Turn the test and alarm panel switch to AFES MAINT.



3. Turn MASTER SWITCH OFF.
4. Put the locking pin in place.

5. Disconnect the manual discharge cable from the extinguisher bottle.

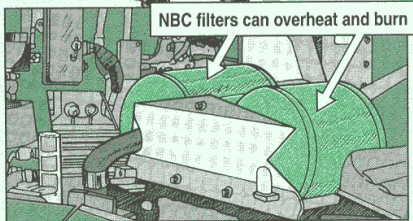




THAT'S ONE WORD THAT ALL TANKERS DREAD.

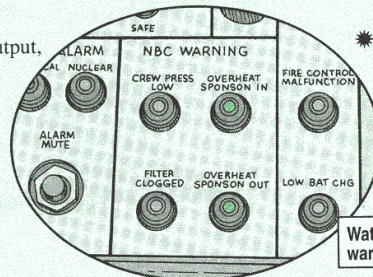
Too many fires are caused by M48 NBC filters that overheat when the air cycle machine fails. You can prevent M48 overheating by watching for these warning signs:

- Low or no air flow at the NBC hose sockets.



NBC filters can overheat and burn

- There is no output, or no noticeable change in output, at the NBC exhaust.



- The OVERHEAT SPONSON IN or OVERHEAT SPONSON OUT lights come on or messages are displayed.

Watch for these warning lights

If any of these things happen, the filters can catch fire unless you shut down the main NBC system immediately. If necessary, you can activate the backup NBC system. While the backup system doesn't provide cooled air, it does give you filtered air from outside the tank.

TACOM SOUM 96-10 has the correct procedures for inspecting a suspect air cycle machine. It also lists some new NMC criteria that won't show up in the TMs for awhile.

Can't find the SOUM? See your TACOM LAR or write to Half-Mast.

Wait for Phase 5

If the gunner's primary sight on your M1A1 tank has Phase 4 of the Armament Enhancement Initiative modification installed, there is no programmed ballistic solution for the staff round. If you try to check the firing circuits while the AMMO SELECT SWITCH is in STAFF, you'll get a fire inhibit every time.

The Phase 5 modification will include the missing ballistic solution. Until then, save yourself some aggravation. Keep the AMMO SELECT SWITCH out of STAFF.

STE-M1/FVS Program 1870

Stop using STE-M1/FVS test program 1870 to identify turret faults in your M1-series tank. The test can cause sudden movement of the turret—bad news if someone is in the way. Until TACOM modifies the test program, use test program 1800 to isolate turret faults. TACOM Ground Precautionary Message 96-02 (011650Z Nov 95) has the complete scoop.

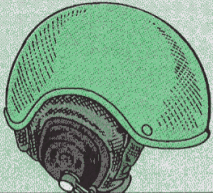
CONSOLIDATED PARTS PARADE

If you're serious about keeping your CVC helmet up to par, you'll also have to keep up with three different manuals.

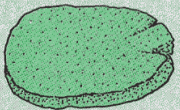
Chapter 4 of TM 10-8400-203-23 covers helmet PM and parts, TM 11-5965-286-14 has communications PM and TM 11-5965-286-23P contains repair parts for the MK-1697/G headset-microphone kit.

HERE'S A LIST OF NSNs FOR PARTS YOU CAN REPLACE AT UNIT LEVEL.

Small/medium shell, NSN 8470-01-389-3815



Large shell, NSN 8470-01-389-3821

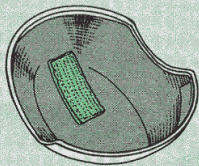


Right filler pad, NSN 8140-01-063-1910
Left filler pad, NSN 8140-01-063-1909

Receiver retainer, NSN 8140-01-093-0590



Hook and pile pad kit, NSN 8415-01-207-1196



Earphone filler pad, NSN 8140-01-099-7869



Plate spacer, NSN 5365-01-076-8073



Cord, NSN 5995-00-302-7521

Don't get rid of your helmet shell just because the rubber edging's torn or missing. Repair it. NSN 9390-00-710-4355 brings a 36-in strip of edging. NSN 8040-00-165-8614 gets you a quart of adhesive.

Earphone cushion, NSN 5965-00-135-0505

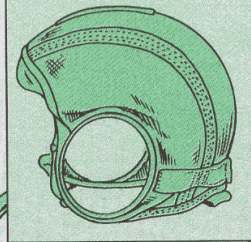
Boom guide assembly, NSN 5965-00-135-0547

Microphone, NSN 5965-00-937-1851

Inner helmet liner
Small, NSN 8415-00-134-9396
Medium, NSN 8415-00-134-9397
Large, NSN 8415-00-134-9398

Center pad set
Small, NSN 8415-00-163-9040
Medium, NSN 8415-00-163-9042
Large, NSN 8415-00-163-9044

Side pad set
Small, NSN 8415-00-163-9041
Medium, NSN 8415-00-163-9043
Large, NSN 8415-00-163-9045



Brow pad, NSN 8415-00-163-9046

Tab attachment kit, NSN 8415-01-207-1197

Switch lever, NSN 5930-00-114-4362

Chin strap, NSN 8415-00-163-9052

Chin strap pad, NSN 5340-00-134-3846

Clothing clip, NSN 5965-00-135-0545

Grommet, PN SM-B-436118 CAGE 80063 (if not available from salvage, order on DD Form 1348-6 using part number and CAGE from RIC B16)

Protect your CVC helmet with a waterproof carrying bag, NSN 8415-00-782-2989. Appendix A of CTA 50-970 is your authority for ordering.

Elbow Grease Is the Answer

There is no elegant or sophisticated solution to some MLRS problems. That's the case with these commonly asked questions on corrosion in the battery box and the launcher. The only answer is elbow grease.

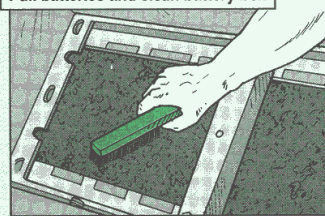


Q: What kind of paint can we put on the MLRS battery box to stop corrosion?

A: The battery bible—TM 9-6140-200-14—suggests using an epoxy coating kit, NSN 8010-01-313-8702, or a bituminous compound, NSN 8030-00-290-5141.

Your best bet for stopping corrosion, though, is to pull the batteries every 90 days. Clean out any corrosion with a

Pull batteries and clean battery box

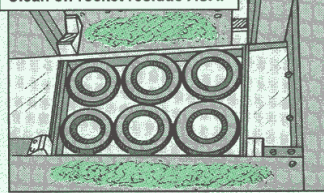


wire brush and spot paint if necessary. Then coat the box with corrosion preventive compound, NSN 8030-01-127-3683.

Q: What is the best way to deal with corrosion and pitting in the launcher caused by rocket exhaust deposits?

A: Once pitting has done its dirty work, there's nothing you can do. The old solutions have been judged environmentally unsafe. So, the only solution is good ol' PM.

Clean off rocket residue ASAP



Just Clean It

Dear Editor,

The W19 and W20 cables, which are the interface between the MLRS launcher and the rockets, are hooked up and unhooked several times a day. As a result, the adapters on the cable connectors get dirty. Pretty soon the crew is getting UMBILICAL CONNECTOR NOT CONNECTED or SNVT (short/ no-voltage tester) faults.

Repairmen often replace the cables to correct the faults. That works, but cables are expensive. It's quicker and cheaper to clean the adapters.

When we get these faults, we remove the adapters and spray them with electrical contact cleaner. That usually erases the



faults. NSN 6850-01-371-8048 gets an environmentally-safe cleaner. Circuit board contact cleaner works, too.

Pete Williams
USA Field Artillery Center
and School
Ft Sill, OK

As soon as possible after firing, clean off all firing residue. Pay attention to the front of the launcher, booms, actuators, and pod holddowns.

Spray CLP-5, NSN 9150-01-054-6453, on the deposits and let it soak 10 minutes. Wipe away deposits with a rag. For stubborn deposits, use more CLP-5 and green cleaning pads.

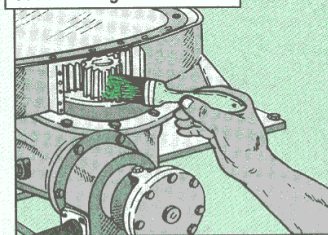
MLRS Briefly

Other MLRS questions we hear:

Q: In the desert, is it OK to use aviation grease on the launcher's ring gearing bearing? It seems to work better in sandy areas.

A: Yes. Your local hangar should have some. Or you can order some with NSN 9150-00-985-7245.

Use aviation grease in desert



Q: Is the launcher mission capable without training pods?

A: Yes.

Q: What is the NSN for the igniter on the personnel heater on the launcher?

A: NSN 2540-12-167-3599. It's Item 15 in Fig 16 of TM 9-2540-205-24&P.

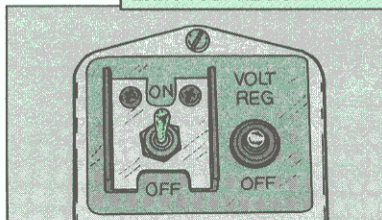
FROM THE DESK OF THE Editor

Cleaning is certainly better than replacing. Thanks.

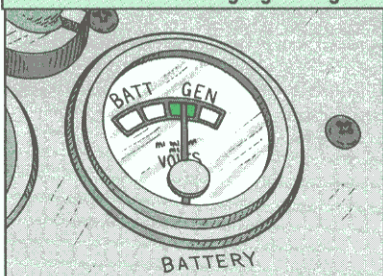
HANDS OFF VOLTAGE SWITCH

Drivers, the VOLT REG switch in your Paladin is strictly **off limits**. As long as it's ON, the voltage regulator cuts on and off automatically to keep the batteries charged.

Leave VOLT REG switch on...



...even when BATT GEN gauge is in green



Some drivers think this is a manual system. When they see the BATT GEN gauge in the green, they flip the VOLT REG switch to OFF to keep the batteries from overcharging. That just keeps the generator from coming back on when the batteries do need charging.

When the batteries go dead, the driver reports a charging problem. Precious time and money are wasted looking for a generator problem that doesn't exist.

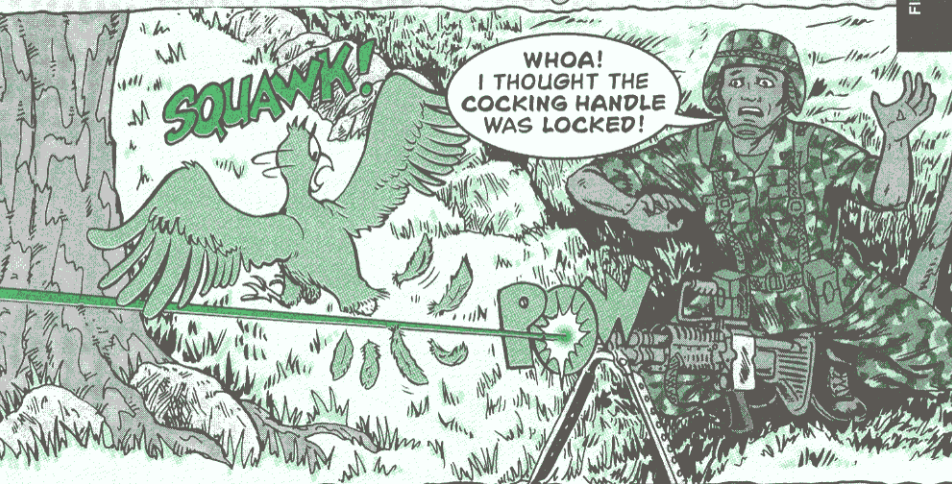
Don't waste the batteries or your mechanic's time. Leave the switch alone!



I DON'T GET IT.
EVERY VEHICLE I GET HAS
CHARGING PROBLEMS!

THAT'S 'CAUSE
YOU WON'T LEAVE THE
VOLTAGE REGULATOR
SWITCH ALONE!

All the Way Back



Gunners, when you have a live round jammed in your M60 machine gun, be sure to pull the cocking handle all the way back—and lock it—before you remove the round. Otherwise, it could accidentally fire, even with the M60 on SAFE.

TM 9-1005-224-10 tells you that when you have a stuck, unfired round to pull the cocking handle “rearward” and put the M60 on SAFE.

But if the cocking handle is not locked to the rear, the bolt can go forward and jam against the sear—or worse yet, fire.

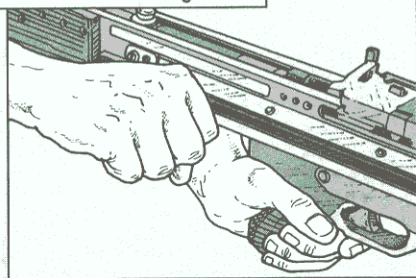
The only way to unjam it is to wait 15 minutes for the barrel to cool, then remove the barrel and the pistol grip.

If you have to take off the barrel or pistol grip, **always** use the two-person method. One of you holds the charging handle back while the other removes the barrel or trigger mechanism. That way, the M60 can't possibly fire.

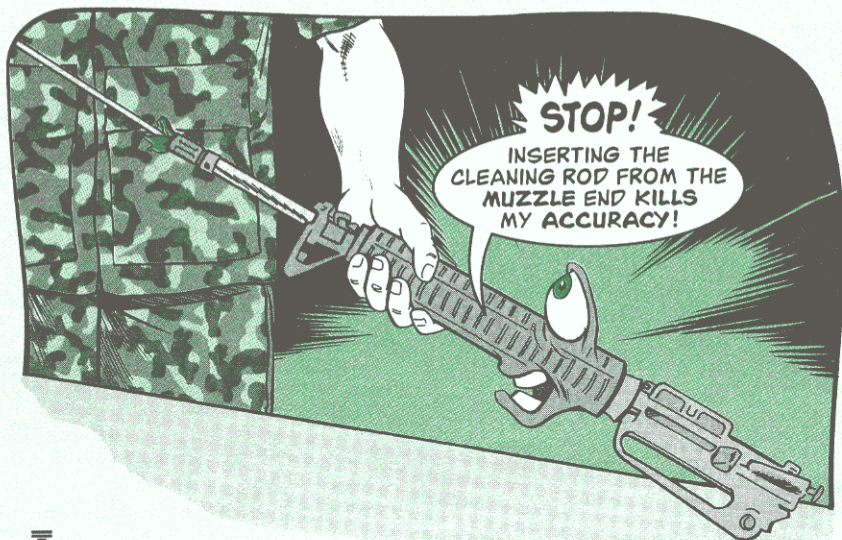
Keep everyone out of the way of the muzzle while you're working on the weapon.

PS 525

Pull and lock cocking handle



SMOOTHER CLEANING

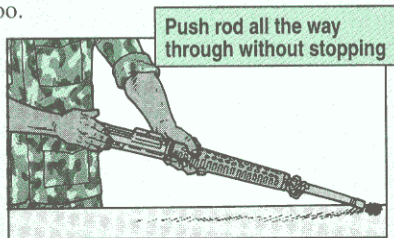


The last two inches of your rifle or machine gun barrel determine the accuracy of your shooting. That's why you should never insert a cleaning rod from the muzzle end. It wears down the barrel grooves.

Insert the cleaning rod from the chamber end of the barrel only. Push the rod smoothly all the way through the barrel and out the muzzle.

That way, the rod cannot rock from side to side, and there's less chance of damage to the rifling of the barrel.

Never reverse direction until you have pushed the rod completely through the barrel. Reversing wears barrel grooves, too.



Clean 'em Right... Once

Some inspectors think that rifles, machine guns, and pistols must be cleaned not once, but three times, to pass inspection.

That's a myth that needs to die.

Three are two too many if you do it right the first time.

All operator TMs for small arms say to clean weapons after so many rounds fired or after so much time. If you clean and lube a weapon like the TMs show, it's clean—clean enough for firing, for storage, **and for inspection.**

If the weapon is going back to the arms room for storage, it doesn't need to be cleaned again for 90 days...unless it's fired or shows signs of corrosion.

Clean your weapon once by the book...and stop. You've done your job.

Inspectors should put away their white gloves, too. A weapon that has been properly cleaned and lubed will have a film of CLP or some other lubricant. So the old white glove test isn't a good test for a clean weapon.



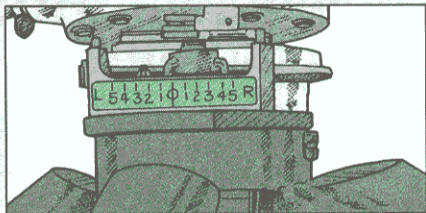
Scale Down Problems



Dear Editor,

No matter how well a TOW gunner prepares a range card and identifies target reference points, once he puts his eye to the sight, all that disappears. He loses those reference points and depth perception. He's reduced to scanning back and forth until he finds the target.

A simple homemade scale makes sighting easier. Engrave or paint a scale like the one shown below on a 6-in x 1-in piece of thin metal:



Mark off the scale in 1/2-in intervals. White or luminous paint will help you see the scale numbers in near-darkness. Glue or spot weld the scale on the preclude (or flat) part of the traversing unit.

The point of the TU azimuth locking handle is the pointer for the scale. Gunners and squad leaders can use the scale as a reference when they prepare their range cards. There is no need to swing the TOW back and forth to find the target. The scale will put the gunner in the area of the target.

CPT Jeffrey D. Church
Ft Irwin, CA

FROM THE DESK OF THE Editor 

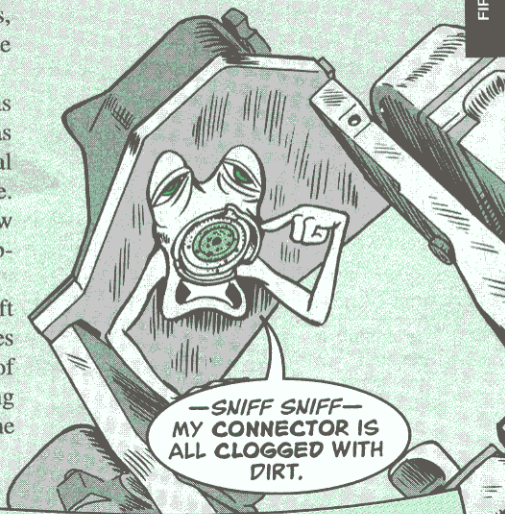
On a scale of 1-10, I would give your suggestion a 10. Thanks.

Air Is the Answer

If the TOW's arming lever sticks, you're stuck. The missile can't be armed.

Sometimes the solution may be as close as the nearest air hose. If dirt has clogged the traversing unit umbilical connector, the arming lever can't move. Use an air hose to thoroughly blow out the connector. If dirt was the problem, the lever should work.

If no air hose is handy, try a soft brush on the connector. That sometimes works. Regularly brushing dirt out of the connector will prevent the arming lever from sticking. It's item 2 in the PMCS in TM 9-1425-450-12.



Protecting the Avenger W80

Dear Editor,

The W80 cable probably gets broken more than anything else on the Avenger. Stuff is tossed in the storage well that hits the W80. Or things bounce around in the well and hit the cable.

It doesn't take much of a whack to tear the W80's cable from the connector. No W80 means no remote control unit. It takes almost \$600 to replace the cable.

We protect the W80 by leaving the NATO slave cable hooked up as much as possible. The heavy-duty connector shields the W80.

SFC Lawrence Ashton

**US Army Ordnance Missile Munitions Center and School
Redstone Arsenal, AL**

FROM THE DESK OF THE Editor 

Sometimes common sense is not so common. Thanks for a practical way to protect W80s.

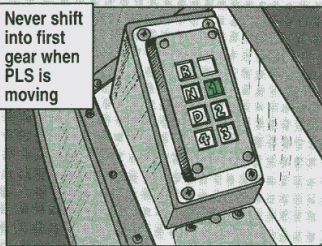
Back to Operator Basics

Careful is the mode when you operate the palletized loading system (PLS) truck. It's different from anything else the Army has, as some new operators have found out.

Here are some tidbits to keep in mind that others learned the hard way:

- Never shift the transmission into first gear while the PLS is moving. So much torque will be applied to the drive train that components will be damaged.

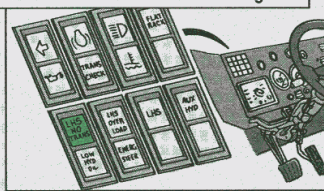
Never shift into first gear when PLS is moving



- Do not back up while the LHS hook arm is attached to a flatrack. A flatrack roller could get caught in a pothole or uneven ground damaging cylinder rods and the flatrack. That would damage cylinder rods.

- Never drive the PLS with the NO TRANS light on. When the light is on, the crane load locks are not engaged and the LHS is not fully stowed. You can lose your load and damage your equipment.

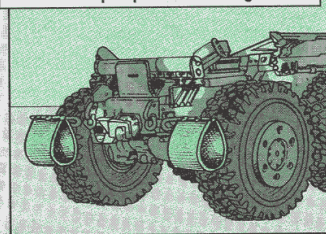
Never drive PLS with NO TRANS light on



- Keep an eye out for overhead powerlines or other obstructions before beginning load handling system (LHS) operations. The LHS hook reaches a height of 17 feet 2 inches when lifting a standard shipping container.

- The mudflaps hang real close to the tires—so close that it's a good idea to hook 'em up any time you're traveling in mud or snow. It's easy for the flaps to "catch" and be pulled over the tires. Be sure to hook 'em before you load a flatrack.

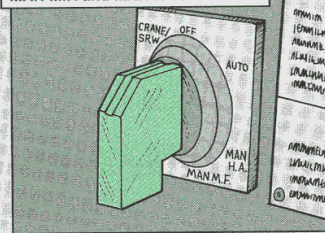
Hook mudflaps up before loading flatrack



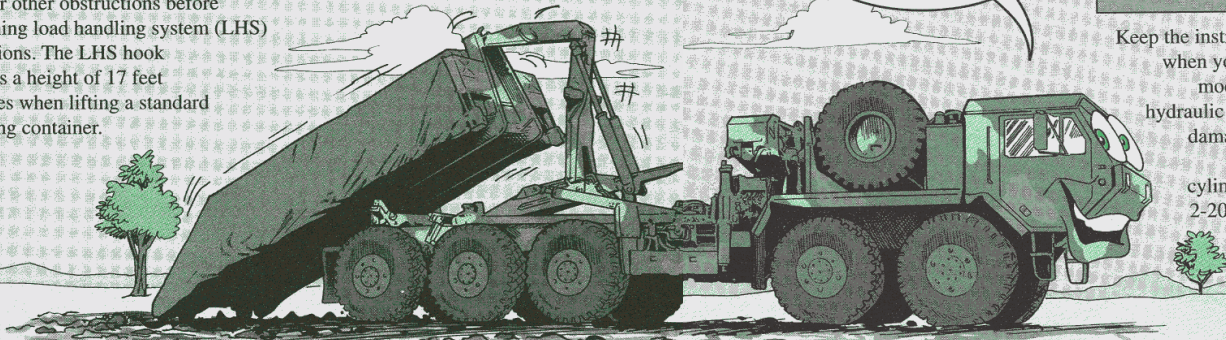
DON'T BACK UP WITH THE FLATRACK HOOKED UP TO MY LIFT ARM.

- Do not "oversteer" the PLS. If necessary, turn the steering wheel as far as it'll go, then let off a little so hydraulic pressure won't blow hoses or cause leaks.
- You must be extra careful using LHS MANUAL mode when loading and unloading flatracks. In MANUAL mode, you control every part of the loading and unloading process. You must follow the steps exactly or damage can result. In AUTO mode, the cycle is controlled by the LHS.

Be extra careful using MAN H.A., MAN M.F. and MAN TRANS modes



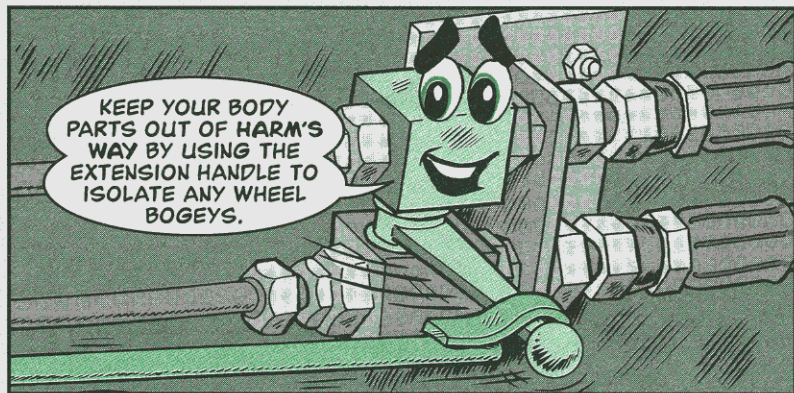
Keep the instructions in front of you when you must use MANUAL mode. That'll help prevent hydraulic seal, hose and cylinder damage, roller damage, and hook arm/main frame cylinder damage. See Pages 2-203 through 2-215 in TM 9-2320-364-10 for the details.



M1000 HET Trailer ...

Out of Harm's Way

When you must use your HET trailer's suspension isolation valve to isolate any of the 10 wheel bogeys for maintenance or service, use the suspension isolation extension handle from your BII.



That way, you don't have to put any part of your body between the bed and wheel. Then you won't be hurt if the bed falls.

M1070 Headlight Assembly

NSN 6240-01-420-8320 gets the headlight assembly for the M1070 HET tractor truck. The NSN shown as Item 8 in Fig 65 of TM 9-2320-360-20P is wrong.

HET Access Cover

NSN 5340-01-325-1410 gets the streetside deflector's access cover for the M1000 HET semitrailer. The NSN for Item 8 in Fig 47 of TM 9-2330-381-24P is wrong.

M747 Semitrailers ...

1,000-Mile Lug Nut

NSN 5310-01-412-6360 gets a "fixed washer" lug nut for M747 semitrailers that lets you stretch the re-torquing interval from 50 to 1,000 miles.

It's only for B-type trailers (serial number 201 and above) and A-type trailers (serial number 1-200) that have been converted to B-type hubs.

Torque the new lug nuts to 450-500 lb-ft. Give them one check after 50-100 miles. From then on, re-torque them after 1,000 miles or at the semiannual service. Never mix old and new nuts on the same trailer.

CLAMP DOWN ON WHEEL RIMS



WHEELED VEHICLES

Mechanics, take it easy on yourself and on the wheel lugs when it's time to assemble M939A1 and M939A2 wheel rim halves. Use the wheel assembly tool, NSN 4910-01-219-4490, from Fig 362 of TM 9-2320-272-20P.

Without the tool, you run the risk of ruining threads on wheel lugs as you try to tighten each side evenly.

The tool lets you clamp the rim halves together before you start tightening the lug nuts. Just follow the word on Page 8-10.5 of the TM 9-2320-272-20-2 to assemble a tire.

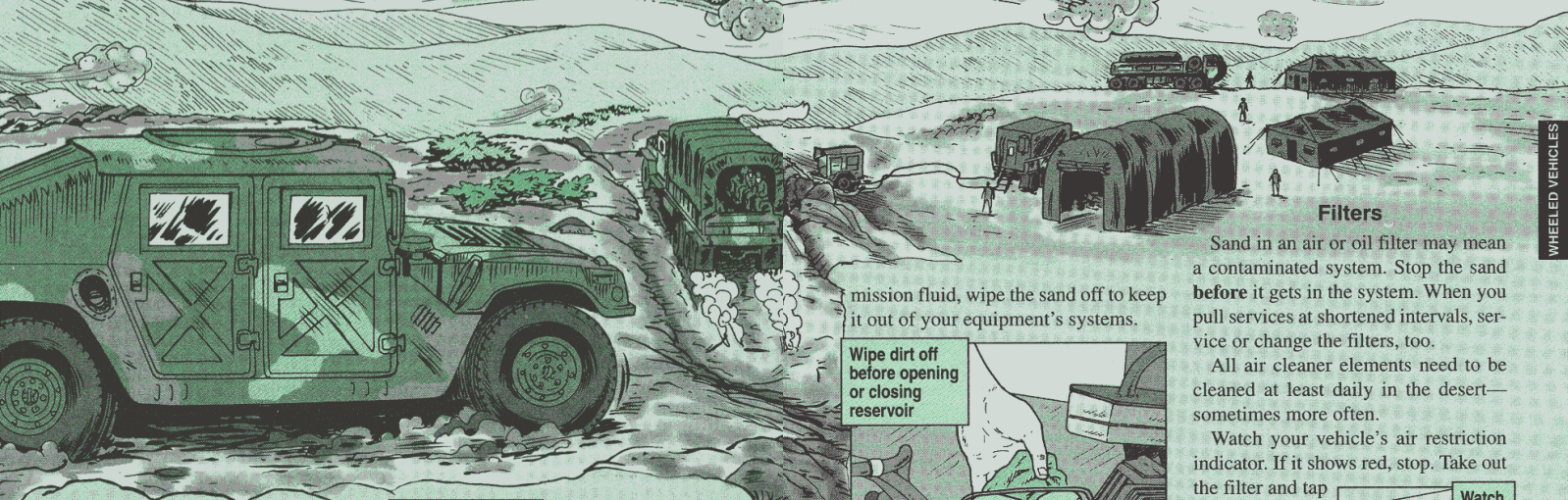
Rear Brake Spiders for 5-Ton

Make notes in Figs 115 and 116 of TM 9-2320-272-20P of the correct NSNs for rear brake spiders on M939-series 5-ton trucks.

Use NSN 2530-01-286-3257 to get the non-asbestos brake shoes now used on these trucks.

Spider	NSN 2530-01-
Forward rear axle RH	123-1229
Forward rear axle LH	124-6530
Rear rear axle RH	134-6618
Rear rear axle LH	125-4280

Shifting Sands



When your equipment is out in the blowing sand, lube and filters get mighty crucial.

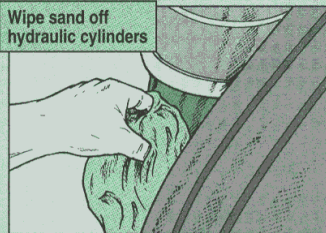
In the desert, remember to keep an eye on hydraulic cylinders, brake master cylinder caps, air cleaner elements and oil filters... anything involving lube or air.

Lubing

Too little lube and parts lock up.

Yet, too much lube catches sand and turns your lube into sandpaper.

If there's sand on a hydraulic cylinder rod, wipe it off. Sand on the rod cuts oil seals, causing leaks.



Wipe sand off hydraulic cylinders

Cut the oil change intervals in half. For instance, if the LO says to change the oil every 12,000 miles, change it at 6,000. Change the oil more often if the conditions are really bad.

Before opening any lube cap, whether it contains oil, brake or trans-

mission fluid, wipe the sand off to keep it out of your equipment's systems.

Wipe dirt off before opening or closing reservoir



Then check the inside of all caps, openings, dipsticks and fill ports one more time before you replace the caps.

Never leave lids off grease and oil containers. Sand gets in the cans if the lids are off. Keep grease guns protected, too.

Before plugging in the grease gun, wipe off grease fittings. Otherwise, you pump in sand.

When the bearing is lubed, leave it. If you wipe off excess grease after lubing, you push sand past the bearing's seal.

Filters

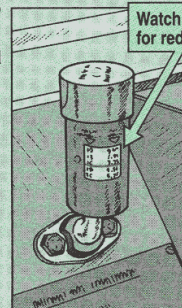
Sand in an air or oil filter may mean a contaminated system. Stop the sand before it gets in the system. When you pull services at shortened intervals, service or change the filters, too.

All air cleaner elements need to be cleaned at least daily in the desert—sometimes more often.

Watch your vehicle's air restriction indicator. If it shows red, stop. Take out the filter and tap it to knock out most of the sand and dirt. Never bang it against a rock or tire. That bends the filter's edge.

Use an air hose to blow away stubborn dirt and sand. Make sure it's no more than 30 psi. If the vehicle still can't get enough air, get your mechanic to wash or replace the filter.

Remember, sand-free systems may decide the outcome of a battle.



Repair Parts

HEMTT Winch Knob

NSN 5355-01-367-2773 gets a replacement knob for the HEMTT's recovery winch selector valve. Make a note until the knob is added to Fig 265 of TM 9-2320-279-20P.

CUCV Loop Clamp

NSN 5340-01-167-8369 gets the loop clamp that holds the transmission oil cooler lines in place. The parts info for the clamp, shown as Item 4 in Fig 62 of TM 9-2320-289-20P, is wrong.

M915 Shackle Pin

The lifting shackle pin for your M915 tractor truck is NSN 5315-01-163-6026. It was left out of TM 9-2320-273-24P. A cotter key to hold the pin in place is NSN 5315-00-059-0217.

M9 ACE V-Belt

NSN 3030-01-344-6929 gets a matched set of V-belts for the water pump on the M9 armored combat earthmover. Jot down the NSN until it shows up in the -20P TM.

M915A2/M916A1 NATO Cover

NSN 5340-01-315-7223 gets the NATO slave receptacle cover for the M915A2 and M916A1 tractor trucks. This is the same cover that's used on the HMMWV. Make a note until the cover is added to TM 9-2320-363-24P.

250 CFM Compressor Filter

NSN 2940-01-186-0592 gets the oil filter element shown as item 9 in Fig 74 of TM 5-4310-452-24P for your 250 CFM compressor. The NSN shown in the TM is wrong.

M1062 Vent Spring

The M1062 semitrailer's vent cover lever and spring assembly is missing from Fig 46 of TM 9-2330-384-14&P. To get one, use PN 18775MS and CAGE 13226 on a DD Form 1348-6. Make a note until the TM is updated.

Auger for SEE

NSN 2590-01-384-6857 gets an earth auger for the backhoe on the small emplacement excavator. The auger is being added to the components of end item list in TM 5-2420-224-10.

M1022 Brake Chambers

NSN 2530-01-286-7858 gets the air brake chambers for the rear wheels on the M1022 dolly set. Make a note until the NSN is added to Fig 8 of TM 9-2330-379-14&P.

5-Ton Fuel Cap Gasket

NSN 5330-01-299-6616 is the new, cheaper fuel cap gasket for M939-series trucks. It costs less than \$2. The current gasket, NSN 1680-00-575-1432, costs more than \$60. Make a note until Items 3, 11 and 21 in Fig 23 of TM 9-2320-272-20P are updated.

M809 Snatch Block

Use NSN 3940-00-630-9931 to get the 10-ton snatch block for your M809-series 5-ton trucks. The NSN shown in the Additional Authorization List of TM 9-2320-260-10 is wrong.

M9 ACE Grease Fitting

Use NSN 4730-00-911-9226 to get the grease fitting for the ACE's track adjusting cylinder. The new NSN is a lot cheaper than the current Item 16 in Fig 182 of TM 5-2350-262-24P. Make a note of the NSN until the TM is updated.

Tube for 2 1/2-Ton

NSN 4720-00-235-5478 gets the rubber tubing for your M44-series truck's windshield washer. The tubing shown as Item 1 in Fig 245 of TM 9-2320-361-20P is no longer available.

ACE Roadwheels, Pads

Want some free M9 ACE roadwheels or track pads? TACOM has 3,300 slightly used pads without nuts and washers, and 300 new aluminum roadwheels to give away. For info, e-mail spitzerr@cc.tacom.army.mil or call DSN 786-8236, commercial (810) 574-8236. Faxes go to -7592. Aluminum wheels go only on No. 2 roadarms. Use steel everywhere else.

M870A1 TM Flip-flop

Make a note in TM 5-2330-378-14&P that Items 20 and 21 in Fig 1 are transposed. Item 20 is actually the M870A1's 24-volt electrical receptacle connector, while Item 21 is the 7-way receptacle.

PLS Headlight

NSN 6240-01-420-8320 gets the headlight assembly for the palletized loading system truck. The NSN shown as Item 3 in Fig 90 of TM 9-2320-364-24P is wrong.

Wheel Bearing Wrench

Wheel bearing adjusting nut wrench, NSN 5120-01-145-5793, was accidentally deleted from the revised version of SC 4910-95-A74 for the No. 1 Common shop set. The wrench is used on HEMTTs and M939-series 5-ton trucks. Make a note in the supply catalog until it's updated.

Glow Plug Warning Label

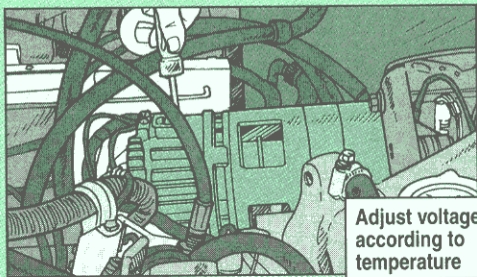
NSN 7690-01-267-7370 gets a warning label to stick on the dashboard of a CUCV or HMMWV that reminds drivers to wait until the glow plugs are ready before they try to start the engine. It says: DO NOT START ENGINE UNTIL THE WAIT LIGHT GOES OUT.

Drop Voltage in the Heat

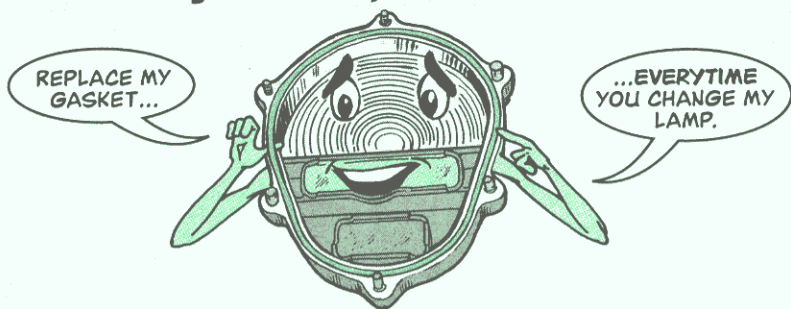
Mechanics, if your unit is going to operate where the temperature is 95 degrees or higher every day, adjust the voltage on generators and alternators to the minimum charging rate. If you don't, the charging system will overheat and ruin batteries.

The minimum charging rate varies from vehicle to vehicle, but it is about 26.5 volts. See your equipment's TM for the exact charging rate.

Of course, some generators and alternators can't be adjusted. Have operators keep an eye on the battery gauges on those vehicles. If the gauge needle goes into red, they should report it.



Penny Saved, Dollar Burned!



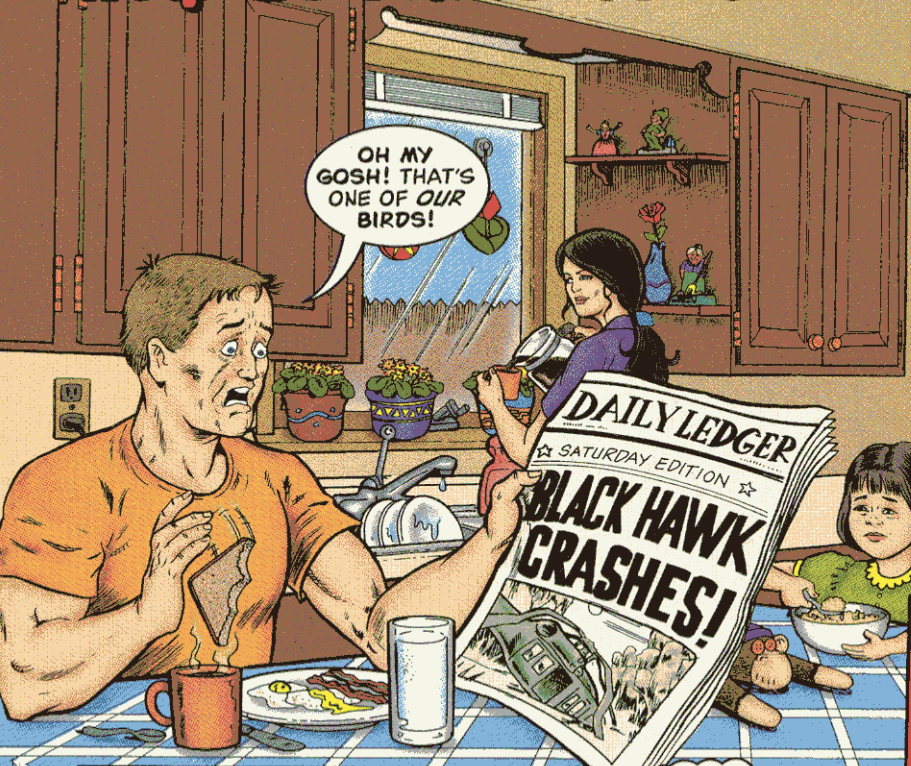
Pennies saved usually turn into dollars saved. Sometimes, though, saved pennies turn into waste dollars.

Like trying to save the cost of a new gasket when you replace a turn signal, stop, tail, parking or blackout marker lamp in a composite light.

If you use the old gasket again, water will get into the assembly and cause rust that freezes the lamp base to the socket. You'll end up doing the job all over again—and spending more maintenance dollars.

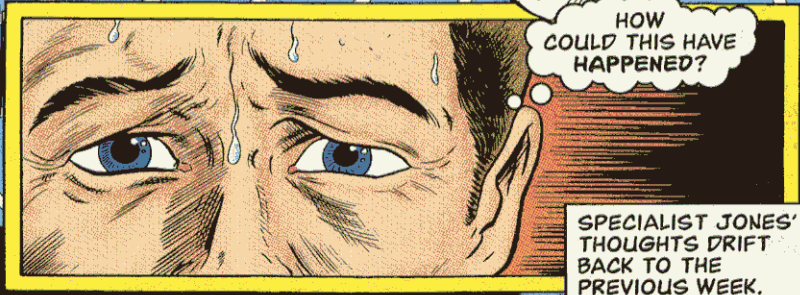
It's smarter and cheaper in the long run to use a new gasket each time you open the light.

Nothing More Important Than...



OH MY GOSH! THAT'S ONE OF OUR BIRDS!

DAILY LEDGER
SATURDAY EDITION
BLACK HAWK CRASHES!



HOW COULD THIS HAVE HAPPENED?

SPECIALIST JONES' THOUGHTS DRIFT BACK TO THE PREVIOUS WEEK.

Monday...

BOY, I'VE
GOT A FULL
WEEK OF PM
AHEAD.

C'MON, JONES,
THE CO SAYS WE'VE
GOT MOTOR STABLES
TODAY.

MAINTENANCE

710	1/2				
711					
712					
713					
714					
715					

BUT, I'VE
GOT A LOT OF
PM THAT NEEDS
TO BE DONE ON
THAT BLACK
HAWK.

IT'LL HAVE TO
WAIT UNTIL TOMORROW,
JONES. THERE'S NOTHING
MORE IMPORTANT
THAN MOTOR
STABLES.

Tuesday...

HEY, JONES,
YOU DIDN'T
CHECK THE LIST.
THE CO SAYS
YOU'VE GOT 9MM
QUALIFYING
TODAY.

BUT I'VE
GOT ALL THAT
PM TO CATCH
UP ON FROM
YESTERDAY.

BETTER
GET GOING.
THERE'S NOTHING
MORE IMPORTANT
THAN 9MM
QUALIFYING.

Wednesday...

NOTHING'S GOING TO
STOP ME FROM DOING
MAINTENANCE TODAY!

COMMANDING
OFFICER

HEY, WHERE'S
SMITH? HE'S GOT
DUTY DRIVER
TODAY.

SMITH'S
GOT THE
FLU.

THINGS THAT MUST BE DONE

DO NOT ERASE!

1	PREVENTIVE MAINTENANCE
2	<i>Painting</i>
3	<i>Area Beautification</i>
4	
5	
6	
7	
8	
9	
10	

THINGS THAT MUST BE DONE!
① Preventive Maintenance
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩

In today's Army there's much to be done,
Personnel shortages add to the fun.
Commanders, it's up to you,
To keep one thing ringing true,
Preventive Maintenance must stay number one!



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



OK,
THEN GET
JONES.

YES, SIR,
NOTHING MORE
IMPORTANT THAN
DUTY DRIVER.

-SIGH!-

Thursday...

GEE, HOW MUCH LONGER IS THIS CHANGE OF
COMMAND CEREMONY GOING TO GO ON?
WELL, I GUESS IT CAN'T BE HELPED.
THE CO SAYS THERE'S NOTHING
MORE IMPORTANT THAN A
CHANGE OF COMMAND CEREMONY.

WELL, AT LEAST
I CAN GET SOME
PM DONE THIS
AFTERNOON.

DON'T COUNT ON
IT—WE HAVE A TRUCK
TO UNLOAD.

YEAH, RIGHT, NOTHING'S
MORE IMPORTANT THAN
UNLOADING A TRUCK.

Friday...

FINALLY, I CAN GET SOME PM DONE.

C'MON, JONES—SERGEANT MADDUX HAS CALLED A MEETING IN THE HANGAR BAY.

THE CO SAYS WE HAVE TO GET ALL THE BIRDS IN THE AIR—SO IF IT'S NOT RED-XED, WE DON'T MESS WITH IT TODAY.

HUH?

GOSH, SERGEANT, I HAVEN'T HAD A CHANCE TO DO ANY PM THIS WEEK!

STOW IT, JONES. THERE'S NOTHING MORE IMPORTANT THAN GETTING THOSE RED-X'S CHANGED.

SPECIALIST JONES' THOUGHTS ARE INTERRUPTED.



I'LL GET IT.

JONES!
DID YOU HEAR ABOUT THE
CRASH!?



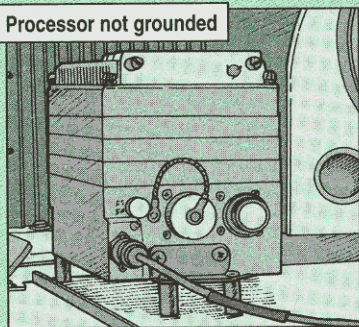
THE CO
SAW WHERE NO
PREVENTIVE MAINTENANCE
WAS DONE ON THAT BIRD LAST
WEEK AND HE'S MAD AS HELL!
DON'T YOU KNOW THERE'S
NOTHING MORE IMPORTANT
THAN PREVENTIVE
MAINTENANCE?

Ground Detecting LRUs



The line replaceable units (LRUs) that make up an aircraft's AN/APR-39 radar signal detecting set must be grounded, avionics techs. All too often the ground is not established when an LRU is installed nor maintained when a component is replaced.

Processor not grounded



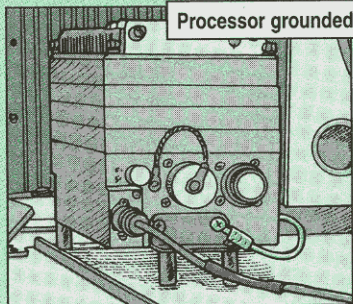
tool set, but has been issued to OH-58D avionics shops.

If the resistance is not low enough, and you've installed the ground correctly, the ground strap is the problem. Replace it with ground strap, NSN 6150-00-163-1231.

A good ground should allow no more than 2.5 milliohms resistance. Higher resistance generates false detections/warnings.

To make sure of the resistance, use milliohm meter, NSN 6625-01-350-8774. This meter is not currently in an avionics

Processor grounded



A Limited Self-Test

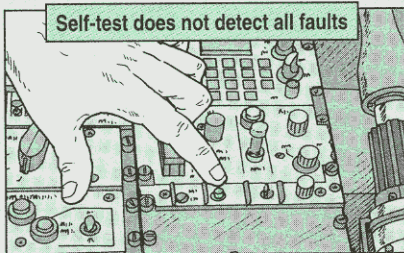
If you believe the AN/APR-39 radar detecting set's self-test checks out the entire system, you're wrong...maybe dead wrong.

The self-test will detect faults in the indicator display, control head, processor, receivers and the wiring in between these components only.

The self-test does **not** detect incorrect antenna installation, bad antenna-detectors, bad connectors or faulty cabling.

To completely test the AN/APR-39 system, you must "shoot" each antenna with the flight test simulator gun, SM-674A, frequently. Follow the directions that came with the gun.

Make a note about this near the self-test info in TM 11-5841-294-12.



Grinding the Gearbox

The chip detector tells you there's metal swimming in your Huey's tail rotor gearbox, but the oil sample says it's clean. There's a good chance you're seeing the birth of water-caused corrosion in your gearbox.

To stop the corrosion, stop water intrusion.

Some water gets in through the vented filler cap. When you're cleaning in the gearbox area, make sure no cleaning chemicals or water is sprayed or dripped on the cap.

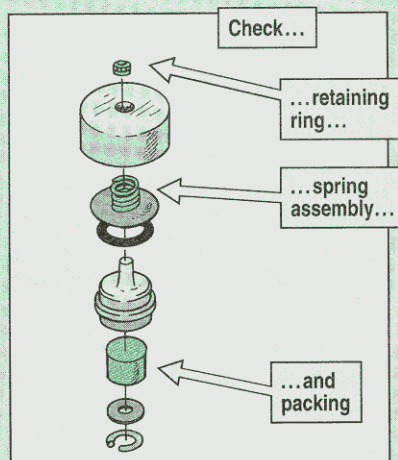
It's important to keep the cap in top shape, too. It's one of your last lines of

a workbench. Press on the washer that holds the packing in place and then release it. If the washer springs back against the retaining ring, the packing is OK. If it doesn't spring back, it's worn out.

Replace the packing with NSN 5350-00-286-4851. Use enough packing to put the washer under tension, then insert the retaining ring. Coat the packing with lubricating oil, NSN 9150-00-985-7099 or NSN 9150-01-209-2684.

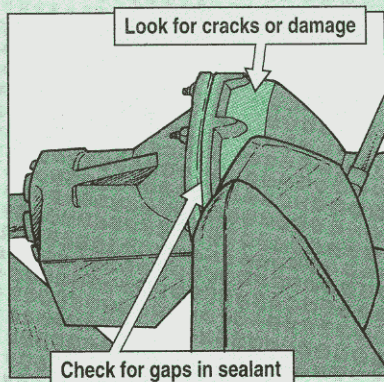
Now take a close look at the gearbox case for cracks, corrosion or damage. Check where the sleeve assembly mates to the case. Look for gaps in the sealant around the studs. Check the predrilled holes in the sleeve assembly to make sure they're sealed right.

Most jobs around the tail rotor gearbox are done at AVIM level, but preventing water intrusion and corrosion is an AVUM job.



defense in keeping water out of your gearbox. Check the retaining ring, the spring assembly, the chain and pin, the washer and the packing for wear.

To check the aluminum packing for wear, lay the filler cap upside down on

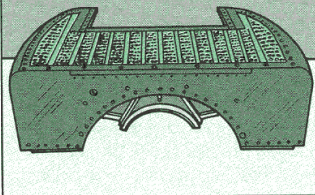


ACTIVE IPS PM

Your Huey's improved particle separator (IPS) is an inert air induction system. It will do its job just by sitting there on the engine, but only if you're not inert in doing your preventive maintenance.

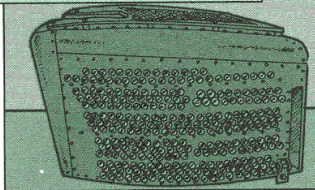
At the heart of good PM is keeping the IPS and engine clean.

Keep IPS clean



Check the vortex inlet tubes and ejector slots for debris. Clean the slots by blowing debris out through the bleed air inlet fitting with 60 PSI air.

Check vortex inlet tubes for debris



Check for airflow. If the flow is still restricted, clean the tubes and slots using an air/solvent vaporizing gun with 60 PSI air pressure and one quart of cleaner, NSN 6850-00-181-7594.

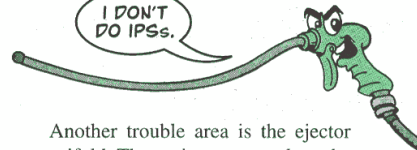


The IPS has an engine wash-block fitting as part of the engine inlet. It lets you flush the engine without removing the upper half of the IPS. Always use the block when washing an engine with IPS.

Connect your wash equipment to the wash-block fitting. Use a maximum of five PSI pressure. Too much force will not allow the wash solution to enter the inlet.

Some units have been removing the top half of the IPS and using a wash wand. Don't do it. You **won't** get the wash solution where it belongs and you will get it where it doesn't.

I DON'T DO IPSs.



Another trouble area is the ejector manifold. The easiest way to clean the ejector manifold is to disconnect the P3 hose from the engine fitting. Fill the hose with cleaning solvent and then reconnect it. Use antiseize compound on the P3 hose fitting.

Motor the engine. The solvent and air will purge the manifold of debris.

Check to see if the IPS drain tube is missing or blocked. When water enters the IPS without the drain tube installed or with the drain tube blocked, it drips into the hell hole and creates corrosion. Make a replacement drain tube from the instructions in Appendix D of TM 55-1520-210-23-3.

If your drain tube is installed and not blocked, disconnect it, clean and inspect the flapper valve and reinstall it.

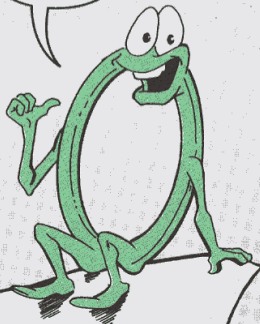
The best PM solution to most cleaning problems is to keep the IPS covered.

One final word when cleaning in and around the IPS: watch your feet. A misplaced foot will damage a tube.

AH-1P, E, F...

A Leaking Tail Quill

TRY ME,
AND I'LL
KEEP
YOU LEAK
FREE.

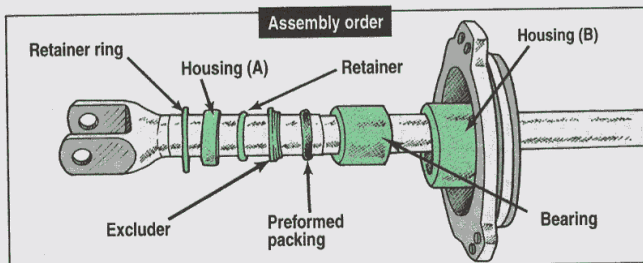


Dear Windy,

We have had many problems with leaking AH-1 tail rotor control quills. Sometimes these quills leak immediately after assembly with all new parts! At best, they're leak-free for only a few operating hours.

The problem is the excluder and packing don't form a snug fit inside the housing. When this happens, oil seeps between the outside of the excluder and the inside of the housing. A poor fit also allows oil to leak between the excluder and the control tube.

To solve this problem, we added a retainer, NSN 5330-00-835-7712, between items 67 and 68 in Fig 68 of TM 55-1520-236-23P-1, and assembled the control quill like this:

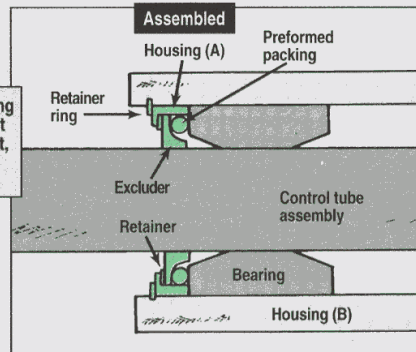


PS 525

40

AUG 96

Before installing housing (A) into housing (B), put small amount of sealant, MIL-S-8784E, between bearings



The addition of the retainer makes a snug fit which stops leaks.

Crew 2, AASF#2

107th Cav, OHARNG

ATCOM puts its seal of approval on this fix. So, if your quill's leaking, add the retainer and follow the new assembly instructions.

Windy

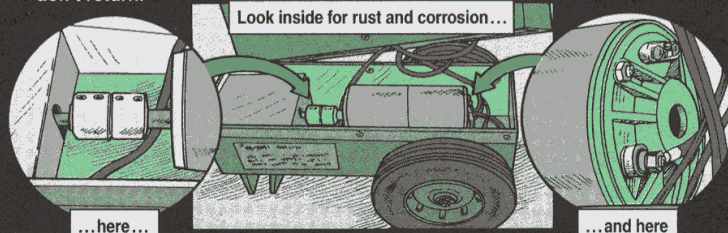
Ground Support Equipment...

Pop the Top

To spot trouble, sometimes you've got to lift the hood. That's the case with the universal wash unit, NSN 4920-01-185-6215.

Soap, water, and high temperatures are the ingredients of corrosion.

If you've got a problem, solve it with the info in TM 1-4920-456-12&P. Use the TM for preventive maintenance tips to make sure rust and corrosion don't return.

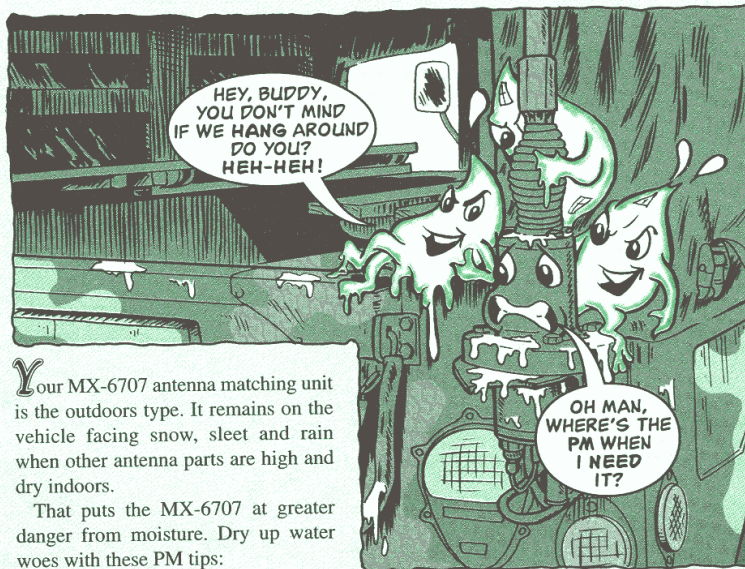


PS 525

41

AUG 96

Moisture Menaces



Your MX-6707 antenna matching unit is the outdoors type. It remains on the vehicle facing snow, sleet and rain when other antenna parts are high and dry indoors.

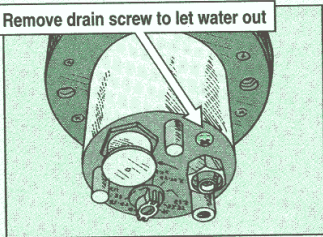
That puts the MX-6707 at greater danger from moisture. Dry up water woes with these PM tips:

Drain Game

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

Remove the drain screw to let the water out. Even with the screw removed, all the water may not drain out. Some water may be held inside, blocked by a vacuum in the base. To make sure all the water drains, stick a hollow coffee stirrer or electrical insulation sleeving, NSN 5970-00-729-2969, in the drain hole to release the vacuum.

Remove drain screw to let water out



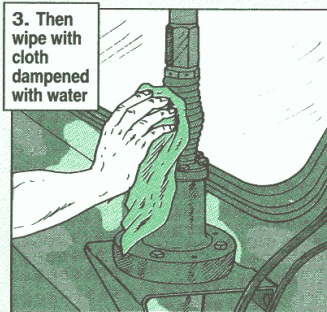
Matching Unit

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

No Pressure

If you wash your vehicle with a high pressure water hose, keep it away from the matching unit. The high pressure forces water into the unit. Instead, clean the matching unit this way:

1. Turn off the RT.
2. Remove caked-on dirt with a clean cloth.
3. Then wipe with cloth dampened with water



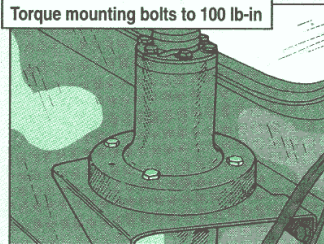
Steel Ring

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

Make sure the mounting bolts are tightened correctly. Torque the bolts to 100 lb-in, like it says in TM 11-5985-PS 525

262-14 and TM 11-5820-401-20-1. Tightening too much cracks the plastic cover, and water gets in.

Torque mounting bolts to 100 lb-in

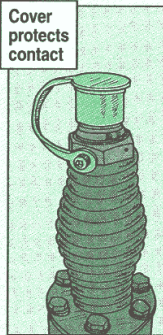


Cover Up

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

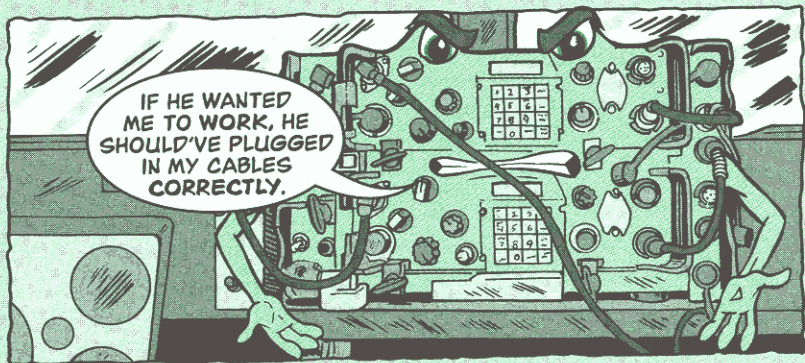
Always cap the matching unit when you remove the antenna elements. Use antenna base cover, NSN 5895-01-135-

Cover protects contact



2307. When you put the cover on, rock it back and forth in line with the strap. If you twist the cover onto the matching unit, you could break the strap. If you don't have a cover, a plastic sandwich bag and some masking tape will do.

Reflections on Connections

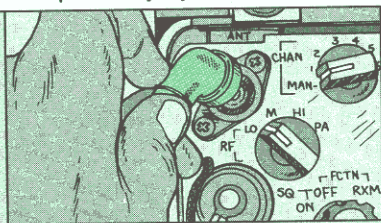


Careless cable hookups bend pins and strip keys out of connectors. They guarantee your commo a trip to the shop.

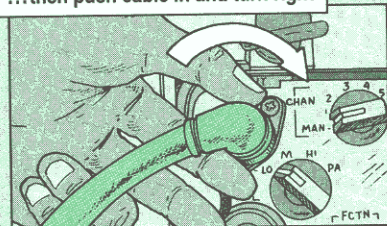
That's why you need to take extra care when making connections on your SINGGARS radio—especially with the RF cables and connectors. They're not as rugged as other cables and connectors on the radio, so they're more prone to damage from a sloppy hookup.

The secret to making a successful connection is playing it straight. Line up the RF cable keyway with the connector key. Push the cable **straight** in. Turn the cable to the right. To unhook the cable, push the connector in a little, turn it to the left and pull **straight** out.

Line up cable keyway with connector key...



... then push cable in and turn right



If you push or pull the cable at even a slight angle, you risk breaking the center pin. You'll have to replace the cable. If the pin lodges in the receptacle, support will have to replace the connectors on the receiver-transmitter (RT) or the power amplifier. On some older models, they may have to replace an entire front panel or subassembly.

Let The Current Flow

Dear Half-Mast,

Help! I put a fresh BA-5800 power battery in my AN/PSN-11 precision lightweight GPS receiver (PLGR), and nothing happened when I pushed the ON button. What gives?

SFC D.C.

WHAT'S THIS?! I JUST PUT IN A NEW BATTERY AND STILL NO POWER?

SOUNDS LIKE A CASE OF PASSIVATION.



Dear Sergeant D.C.,

You've run into a common problem known as battery passivation. It happens when a layer of oxide forms under the terminals inside the battery casing, blocking any juice from getting through.

In most cases, it's easy to fix. Just push the ON button three or four times, pausing 30 seconds between each push. That should break down the oxide layer and allow current to flow. If you still can't turn on the PLGR, replace the power battery.

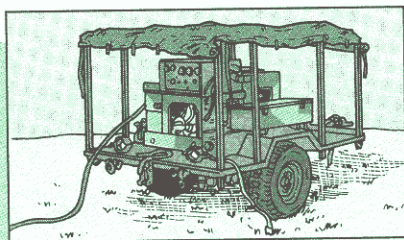
Half-Mast

Think in **Threes**

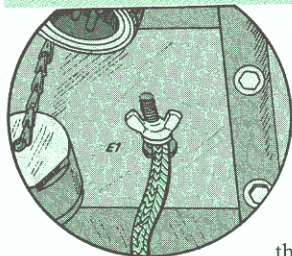


If your MSE line-of-sight (LOS) radio terminal or radio access unit (RAU) is not grounded in **three** places, it's not safely grounded. Here's where to ground the LOS or RAU:

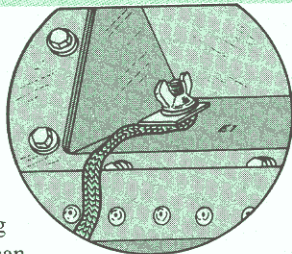
- 1. Generator.** Run a ground wire from the ground terminal in the terminal box to the trailer's ground lug. Run another ground wire from the trailer's ground lug to earth ground.



- 2. S-250 shelter's power entry panel.** Ground the E1 ground lug.



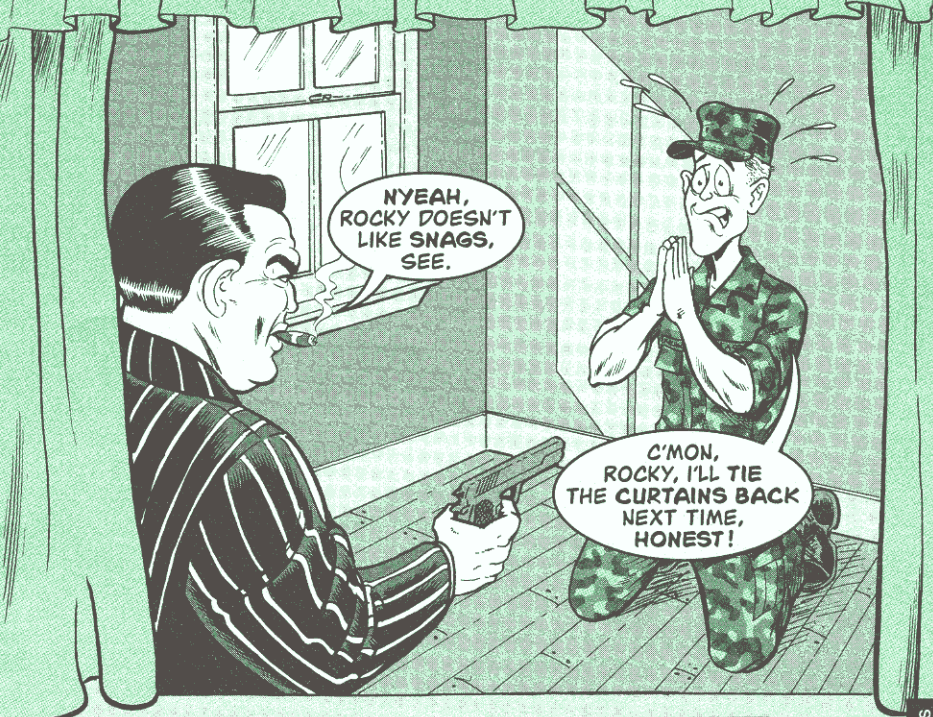
- 3. S-250 shelter's signal entry panel.** Ground the E1 ground lug.



You must ground all three with separate ground wires and rods to avoid a possible shock. Not grounding the signal entry panel can create an additional problem: signal interference.

And while we're on the subject, look at the terminals and ground lugs for dirt, grease, corrosion and paint. They can kill a good ground connection. Remove dirt and grease with solvent, NSN 6850-00-281-1985. Use sandpaper or a wire brush to get rid of any corrosion or paint.

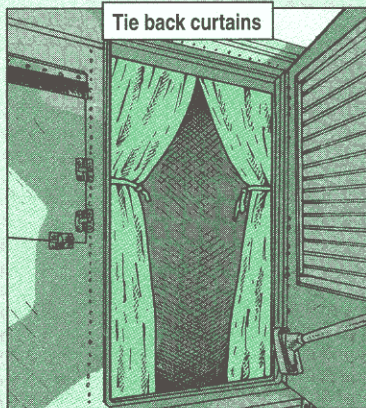
It's Curtains for You



When you pack up your gear and load it into your mobile subscriber equipment shelter, stay clear of the blackout curtains. Antennas, ground rods, tool boxes and other gear can snag and tear them.

Same thing happens if you shut the shelter door when the curtains are down. The door handle can snag them.

So, if you want to stay in the dark, keep the curtains out of the way when you load the shelter or shut the door. Gather the curtains to the sides of the doorway and tie them with the cloth ties out of harm's way.



What's at Stake



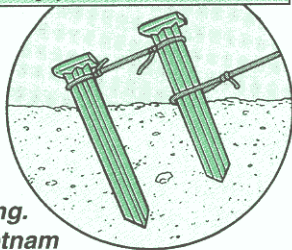
Dear Editor,

Over the years I've seen mast antennas topple, injuring soldiers and damaging equipment. The main reason they collapsed was that they were erected on soft ground, such as sand or shale. The guy stakes worked loose and failed to support the antenna's weight. Along came a stiff breeze and down went the antenna and mast.

I've found a way to strengthen the mast antenna—even in soft ground. Use two guy stakes to anchor each guy line. Drive the stakes deep into the ground and tie them in tandem. This double-staking method can handle more stress than a single stake. It increases the holding power of the stakes and lessens the risk of the antenna collapsing.

I've used double staking as far back as Vietnam and, most recently, with the New Jersey National Guard at Fort Dix, NJ. It hasn't let me down yet.

Two guy stakes improve support



LTC David M. Fiedler
NJARNJ

FROM THE DESK OF THE



And you haven't let us down. Your suggestion wins our support. By the way, if you need extra guy stakes, you'll find the NSNs in the components of end item list in the antenna's -10 TM. For more information on safely erecting mast antennas, read TB 43-0129.

RETAIN THIS IDEA

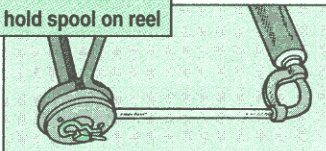
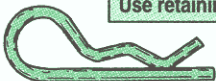
Dear Editor,

Replacing the DR-8 spool on an RL-39 reel unit poses its own special problem: Operators have to remove the cotter pin on the reel before removing the spool. You need pliers or lineman's tools to remove the cotter pin, but operators normally don't carry these tools.

We've found a way to change spools without tools. We use a retaining pin, NSN 5315-01-188-4490, to hold the spool on the reel.

You can easily put the retaining pin in the reel and take it out by hand. It's also small enough to be taped to the reel as a spare, the same way the cotter pin was. The retaining pin lasts longer, too. A cotter pin usually breaks after several changes.

Use retaining pin to hold spool on reel



Members of Howlin' Commo
3/9th FA
Ft. Sill, OK

FROM THE DESK OF THE Editor

You've pinned down the answer to a reel problem.



The Latest Style

Some commo batteries are sporting a new look these days. The Army's olive drab, BA-3030, BA-3042, BA-3058, BA-3090 and BA-200 batteries are out of style and out of the system. They've been replaced by colorful commercial batteries—with new NSNs.

Use the table below to choose commercial batteries by NSN according to the number of packages you need. For instance, if you want to order between one and 22 packages of D cell batteries, use NSN 6135-00-835-7210. If you need 23 to 54 packages, use NSN 6135-00-835-7210. If you need 23 to 54 packages, use NSN 6135-01-382-9198, and so on.

The number of batteries per package is 12, except for the AA battery, which has 24 per package.

Army Battery	Old NSN 6135-	Commercial Battery	New NSN 6135-	Number of Packages
BA-3030	00-930-0030	D cell, alkaline	00-835-7210 01-382-9198 01-382-9200	1-22 23-54 55 and up
BA-3042	00-935-5301	C cell, alkaline	00-985-7846 01-382-9210 01-382-9212	1-37 38-79 80 and up
BA-3058	00-935-2587	AA, alkaline	00-985-7845 01-382-9206 01-382-9208	1-36 37-74 75 and up
BA-3090	01-063-1978	9-volt, alkaline	00-900-2139 01-382-9203 01-382-9204	1-23 24-50 51 and up
BA-200	00-050-3280	6-volt, carbon zinc	00-643-1310 01-382-9194 01-382-9195	1-10 11-22 23 and up

WE'RE BETTER LOOKING...

...AND
JUST AS
STRONG.

Locking Ring Is the First Thing

BONNIE, MY GENERATOR KEEPS DRIFTING OFF. WHAT CAN I DO?

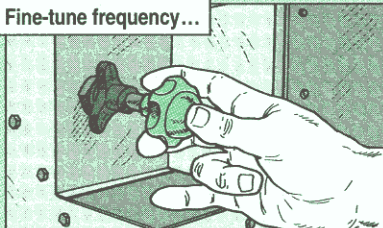
WHOO-WHOO!

DID YOU CHECK THE LOCKING RING, SPECIALIST?

Operators, what do you do if the output frequency on your 5- or 10-KW tactical quiet generator (TQG) starts to fluctuate? Run off to find a generator mechanic? Not exactly.

The first thing you do is make sure the locking ring on the FREQUENCY ADJUST control is tight. The locking ring holds the control at the setting you want. A loose ring can let the frequency drift.

Fine-tune frequency...



...then snug locking ring



So, after you've fine-tuned the frequency with the FREQUENCY ADJUST knob, turn the locking ring clockwise until it's snug. Snugging the ring not only keeps the frequency stable, but also saves wear and tear on the FREQUENCY ADJUST control cable.

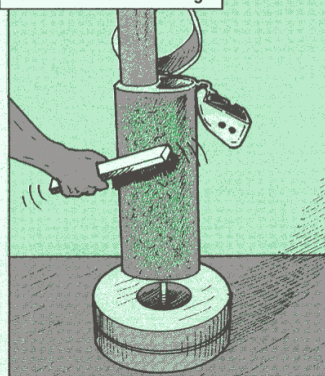
If the frequency still fluctuates, you probably have a bad frequency meter, control or cable. Call in your unit maintainer to troubleshoot.

There's one word you need to remember before you store your immersion heaters—*rustproof!* When you take the time to rustproof, you head off major problems.

Here's how you do it:

- Wipe off any grease or moisture.
- Remove all rust, corrosion, and loose paint with a wire brush, scouring pad or extra-fine sandpaper.

Remove rust before storage



Rustproof Before Storing



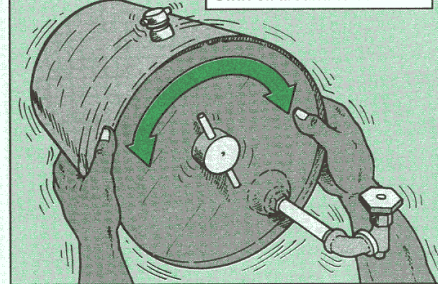
- Add touch-up paint to exposed areas. Paint **only** the parts your heater's technical manual says you can. Get the paint with NSN 8010-00-081-0809.
- Use solvent to clean the unpainted parts, like the heater body and hanger screws. After it dries, apply corrosion preventive compound, NSN 8030-00-251-5048.

Before you use the heater again, be sure you wash it in hot water to remove the corrosion preventive compound.



- Coat the inside of the fuel tank with lubricating oil, NSN 9150-00-111-3199. Pour about eight ounces of oil into the empty tank. Put the cap back on and gently swirl the oil evenly around. Drain the excess oil.

Swirl oil around to coat tank



Be sure you flush out the lube oil with a little clean fuel before using the tank again. The oil smokes if you leave it to mix with the first tank of fuel.

- Put a light coat of lubricating oil on the smoke-stack sections, too.
- Wrap grease-proof barrier paper, NSN 8135-00-224-8885, around the burner.

Now, your immersion heater is ready for a few weeks of storage. If the heater is going to be in storage longer, be sure you check it for rust every 90 days.

ULLS Adds RDDs



If you forget to put a RDD (required delivery date) on your high-priority supply requisitions, the DLA transportation people have up to 21 days to ship your repair part. That means you carry the end item as NMCS for that period of time.

You won't forget the RDD if you're under ULLS. ULLS has a feature that asks the clerk a series of questions on all high-priority repair parts requests.

The first question asks if the equipment is NMCS. If you answer **yes** and your unit location is OCONUS, the RDD field defaults to "999".

If your unit location is CONUS, you're then asked if the unit will deploy in the next 30 days. If you answer **yes**, ULLS automatically puts in "999" for the RDD. If your answer is **no**, the system puts an "N" in the first position of the RDD and prompts the clerk to fill in the number of days within which the part must be received.

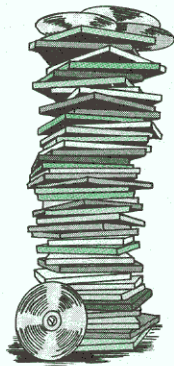
If you answer **no** to the NMCS question, you'll be asked if the equipment is ANMCS (anticipated not mission capable supply). When you say **yes**, ULLS automatically puts an "E—" in the RDD field. If you answer **no**, the input of a RDD is optional and the request is treated as routine.

If you're not under ULLS, tie a string around your finger. Write yourself a note. Do whatever you have to do, but don't forget to add the RDD.

CD-ROM Tower

Since units are receiving more and more information on CD-ROM, they often need more than a standard CD-ROM reader. Get an ISA SCSI controller and a seven-drive CD-ROM tower with NSN 7025-01-413-5857. Or an

EISA SCSI controller and a CD-ROM tower with NSN 7025-01-413-5862. These NSNs are not on the AMDF yet, so you'll need to order them on DD Form 1348-6.



Diesel Fuel ...

DRAIN IN CLEAR BOTTLES



THAT TAKES CARE OF THAT JOB.

YOU'LL NEVER KNOW IF YOU GOT ALL THE CONTAMINATION OUT OF THE SYSTEM USING THAT SODA CAN.

Your TM tells you to drain fuel filters daily. It doesn't tell you what to drain them into.

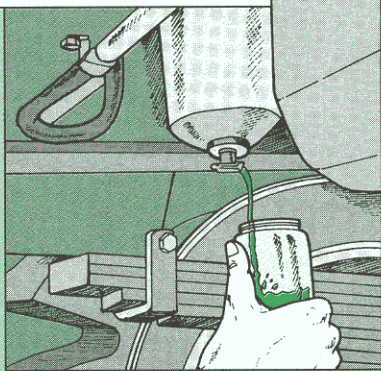
If you drain the filters into something you can't see through, it's hard to tell when all the contamination has been removed.

To solve this problem, use a clear bottle to drain off the contaminated fuel. That way you can see when the fuel runs clear.

If the fuel is clear and there are no contaminants, pour the sample back into the fuel tank.

Always pour contaminated fuel into an approved waste container.

Drain fuel into clear container



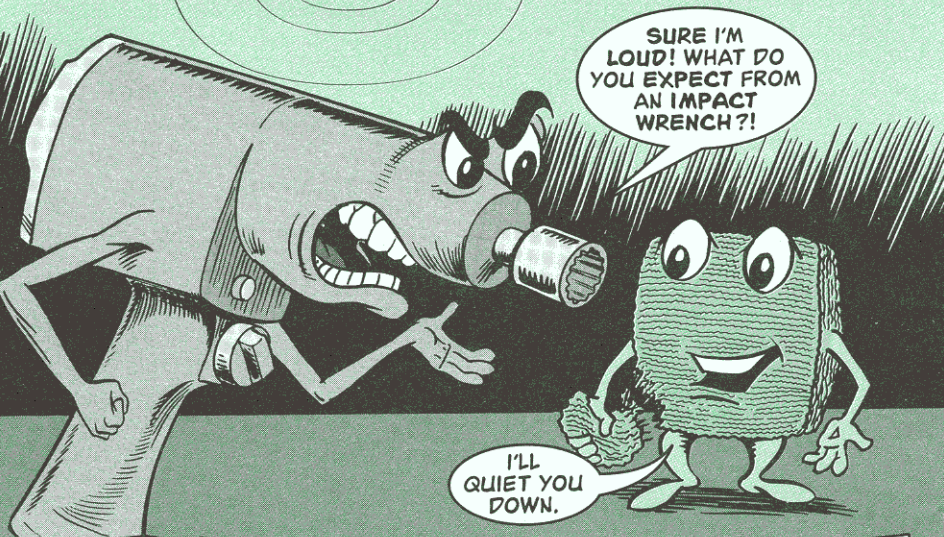
ULLS-G Publications

Beginning with ULLS-G Software Change Package 05, these pubs will only be available on diskette or CD:

- ULLS End User Manual
- ULLS Operator/Supervisor Training Program of Instruction
- Operator's Tutorial (Ground)

Get them from your local Combat Service Support Automation Office computer folks.

A Sound Idea



Dear Editor,

The pneumatic impact wrenches we use in our shop make one heck of a racket. The loud noise is more than just annoying—it's a health hazard that can damage your hearing.

We found a way to cut down the noise by rolling up pieces of scouring pad and putting them in the exhaust ports of the wrenches. It's a simple remedy that won't hurt the performance of the wrench. And, it costs only pennies.

NSN 7920-00-753-5242 got us a pack of ten 6 x 9¹/₂-in pads. We cut the pads into smaller pieces that would fit into the impact wrench.

The 3/8-in drive wrench needs two pads cut to 2 x 3 inches each.

The 1/2-in drive wrench needs two pads cut to 1 x 3 inches.

The 3/4-in drive wrench needs two pads cut to 1/2 x 3 inches.

Douglas R. Fletcher
CSMS 2, SDARNG

FROM THE DESK OF THE Editor 

We've been scouring the countryside for a fix like this. Thanks. But, don't forget your hearing protection!


LET OFF STEAM


Trying to track down accurate information about your steam cleaner is enough to get you steamed. The large number of cleaners in the system makes the search confusing.

There are two national stock numbers for most of the steam cleaners in the Army inventory: NSN 4940-00-186-0027 and NSN 4940-00-473-6218. Those two NSNs represent a wide variety of manufacturers and model numbers.

With so many different brands and models out there, it's no surprise that people have trouble finding publications, repair part numbers, and answers to operations and maintenance questions.

The folks that manage steam cleaners—the Armament and Chemical Acquisition and Logistics Activity (ACALA)—can help. Here are some of the services they offer:

 Manufacturers' addresses and customer service phone numbers to help you find repair part numbers and get answers to operations and maintenance questions.

 Commercial publications available for your steam cleaner if no DA pub is in print. If your cleaner has a commercial pub, ACALA can send you a copy.



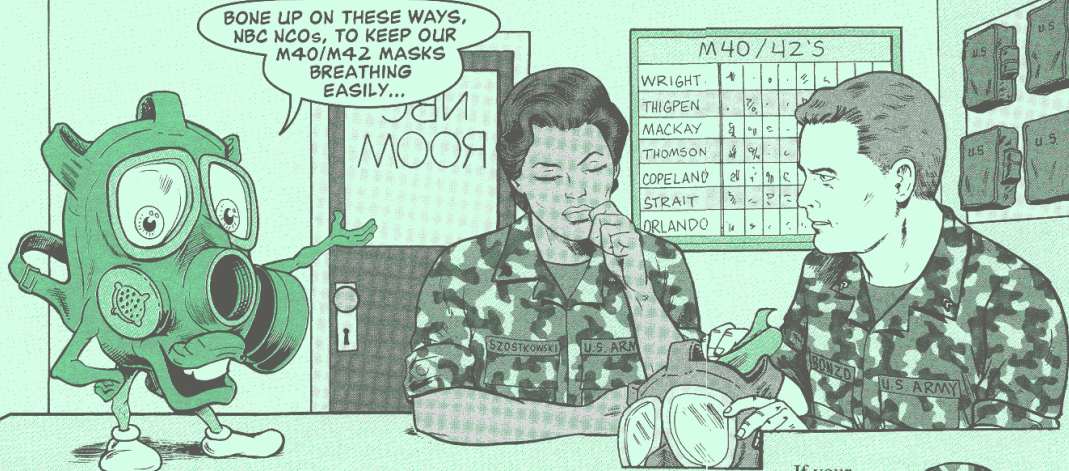
You can let off steam by writing to ACALA at this address:

**Armament and Chemical Acquisition
and Logistics Activity
ATTN: AMSTA-AC-CTT-E
Rock Island, IL 61299-6000**

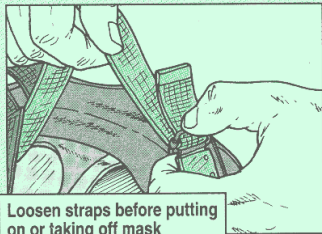
Or you can call DSN 793-1947 or commercial (309) 782-1947.

Make sure you provide the manufacturer's name and model number of your steam cleaner when you write or call.

Problems UNmasked

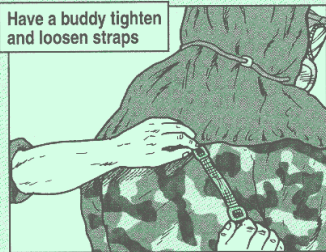


Emphasize to your unit that the M40/M42 is not the M17 mask, especially when it comes to putting it on and taking it off. Loosen the cheek straps only when you take off the mask. The hood straps must be as loose as possible for both operations. Tight straps may be ripped off.



Loosen straps before putting on or taking off mask

The best method is the buddy system. Have soldiers tighten and loosen each other's straps. That's easier than twisting themselves into pretzels to get at the back straps. Plus it makes for less jerking on the straps, which also tears them.



Have a buddy tighten and loosen straps

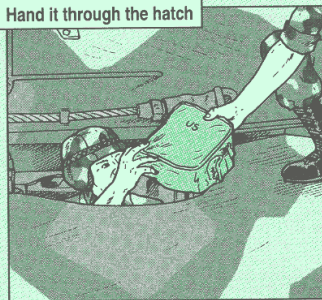
If your soldiers spend much time climbing in and out of truck cabs, have them wear the M40 carrier on the leg. That makes it less likely the carrier will catch on the door frame and damage the mask.



Use leg if you spend lots of time in trucks

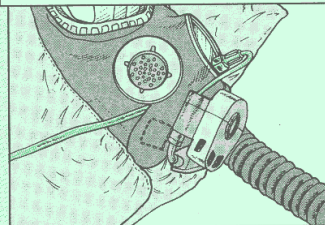
Whenever possible, tankers should unhook the M42 carrier and hand it through the hatch. There's no easy way to get through the hatch wearing the carrier.

Hand it through the hatch



When not using the microphone with the M42 mask, tankers should disconnect the microphone cord from the mask connector. Otherwise, the cord can catch on something and be ripped out at the connector. Route the cable behind the outlet valve cover sleeve to keep it from disappearing.

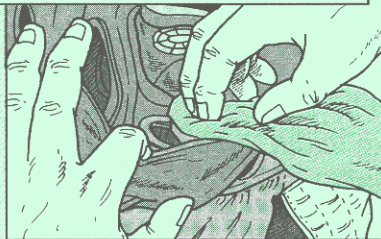
Unhook microphone cord when not in use. Route cable behind outlet valve cover sleeve



Stow the M42 in the carrier so the facepiece faces the carrier opening flap. The mask should be upside-down with the eyelenses at the bottom of the carrier facing out.

Cleaning sand out of the M40/M42 mask takes extra care or you scratch up the lenses. Tell the troops to do it like this. Shake out as much of the sand as possible. Wipe out the inside of the mask with a soft, dry, clean cloth.

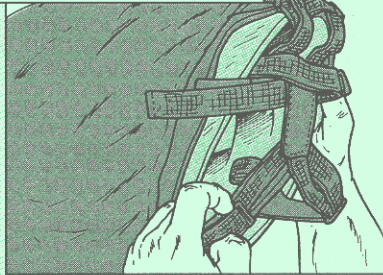
Wipe inside of mask with dry, clean cloth



Hold onto the faceforms that come with the masks—and don't let them out of the NBC room. That keeps them from disappearing. Put the faceforms in the masks when the masks won't be used for more than 30 days. They help the masks keep their shape.

If you do need more faceforms, order them with NSN 4240-01-260-8697.

Keep faceform and use it for storage longer than a month



PS END

Chemical Agent Monitor . . .

Response to No Response

Dear Half-Mast,

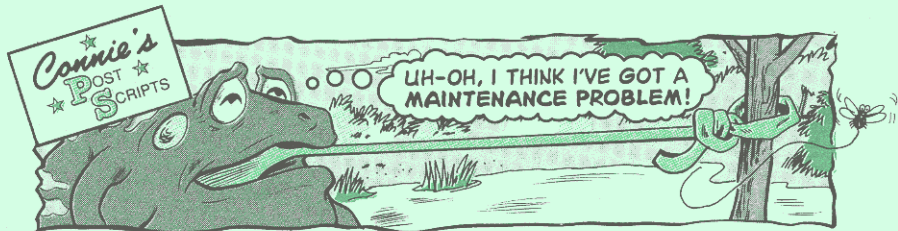
Our CAMs often won't respond in the H mode. What should we do?
SGT R.G.

Dear Sergeant R.G.,

For most CAM problems, the solution is to run it. If the CAM isn't run at least 30 minutes per week, you can lose the H mode. Before you turn it in, though, run the CAM for up to 72 hours straight. If that doesn't fix the problem, the drift tube module and the sieve pump probably need to be replaced. Ask support to check it out.

Remember, you do not need to waste CAM batteries to run the CAM in the NBC room. Get the training battery assembly, NSN 6910-01-333-3631, and use the cheaper D cell batteries to power the CAM while you exercise it.

Half-Mast



RTAIS Support Ended

The Remote Terminal AMDF Inquiry System is no more, as of 1 Jun 96. If you need AMDF data, and RTAIS was your only source, call LOGSA's Customer Support Center for info on how to get ARMYLOG or FEDLOG distribution. Call DSN 645-0499, commercial (205) 955-0499 or toll-free 1-800-878-2869.

MIIC Address Change

The address for the Major Item Information Center has changed. Now when you need information from DES, REQVAL, LOGTAADS, TAEDP, ACSP, DAMPC, UIT, or CBS-X, write:

USAMC
Logistics Support Activity
ATTN: Major Item Center
Redstone Arsenal, AL 35898-7466

HEMTT Sling

NSN 1450-01-425-2548 gets a lifting sling for M985 HEMTTs. The sling is used to pick up tactical missile pods. Make a note until the sling is added to the additional authorization list in TM 9-2320-279-10.

Hold the Hacksaw

Next time you install exhaust system parts, use antiseize compound on the hardware. The compound, NSN 8030-00-105-0270, keeps hardware working in temperatures up to 1,050°F.

NBC Hotline

If you have questions about operation and maintenance of your chemical equipment, call the chemical maintenance hotline. The toll-free numbers are answered 24 hours a day. In the United States, call toll free 1-800-831-4408. In Germany, call 0130810280. In Korea, call 0078-14-800-0335.

Get ULLS Electronic Bulletin

If you have e-mail capability, you can get ULLS info sent directly to your mailbox. To get on distribution for the ULLS electronic bulletin, drop an e-mail message to:

mccammog@lee-dns2.army.mil

The Max Is Here

A seven-in-one pioneer tool is now available with NSN 5120-01-416-8568. You get a shovel, ax, mattock, pick, broad pick, rake and hoe. The kit will show up in the basic issue items lists of the FMTV, M2A2 Bradleys, M1113 and M1114 enhanced capacity HMMWVs, and rebuilt 2 1/2-ton trucks.

PS Apology

PS regrets that some of its readers were offended by the use of the term "rednecks" in the July issue. To those who were offended, PS apologizes and renews its commitment to guard against the disparagement of any ethnic or cultural group.

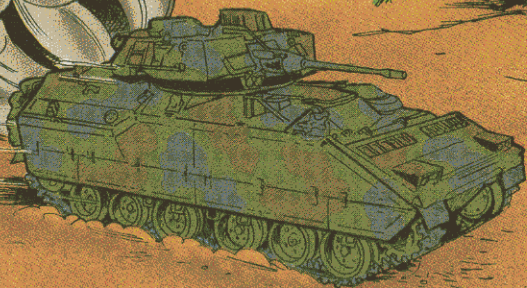
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