

Issue 604

PS

March
2003

THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-604

Approved for
Public Release;
Distribution is
Unlimited

MY VEHICLE
WON'T RUN!
I'M STUCK IN
THE MIDDLE OF
NOWHERE!

THIS NEVER
WOULDA
HAPPENED...

...IF YOU
HAD DONE
GOOD PM,
PRIVATE
DOLITTLE!

JOE
KUBER

YOU
TELL
HIM!

SEE PAGE 27

ULLS-G/A and SAMS...

REPORTING MAINTENANCE DATA



HALF-MAST, MY UNIT'S MTOE DOESN'T AUTHORIZE ENOUGH MECHANICS TO MAINTAIN THE EQUIPMENT.

AND MY TDA ISN'T GETTING US ENOUGH MANPOWER, EITHER.

WELL, GENTLEMEN, IT'S LIKE THIS...

The number of mechanics your unit gets is determined by the man-hours needed to keep your equipment operational through the Army's Manpower Requirements Criteria (MARC) Program.

One source for this man-hour data is you—the unit soldier who makes the day-to-day maintenance operations data entries into ULLS-G/A and SAMS.

You can be the strongest or the weakest link in the chain that leads to whether the unit has enough soldiers to do the maintenance mission or not.

Right now, maintenance man-hour data is only captured and forwarded to the Logistics Integrated Data Base (LIDB) by SAMS. Maintenance man-hour data entered into ULLS will eventually be sent to SAMS. SAMS will forward the data to LIDB. Look for a software change package that makes that change soon.

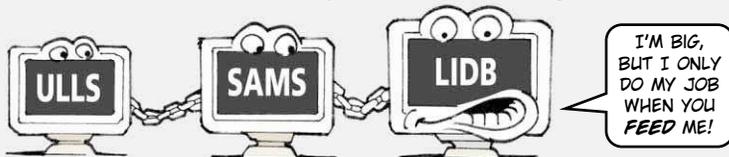
Unit NCOs and officers, your role is important in this, too. You must train the clerks and then monitor how the data is entered. Only accurate and complete data will make sure valid requirements are in the TOE and your MTOE or TDA matches your needs.

Where does the entered data go? SAMS maintenance records (eventually including ULLS data) are forwarded to the LIDB.

LIDB collects data from all field organizations and passes it up to the folks that make the manpower decisions for your unit.

So, the next time you complain about being short-handed, make sure the maintenance data is being entered and entered correctly into ULLS-G/A and SAMS.

For more information, check out: <https://www.usafmsrdd.army.mil>



THE
PREVENTIVE
MAINTENANCE
MONTHLY

TB 43-PS-604, 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. Masculine pronouns may refer to both genders.

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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.

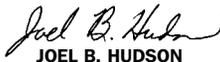
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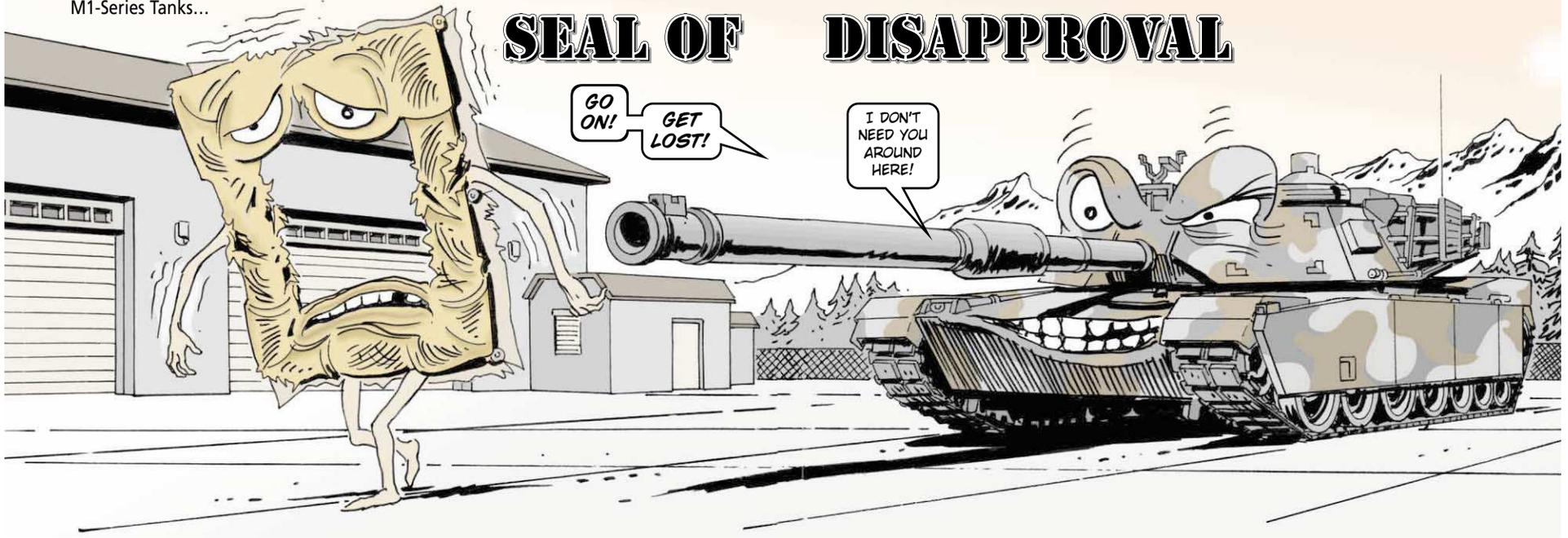
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 0301402

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M1-Series Tanks...

SEAL OF DISAPPROVAL



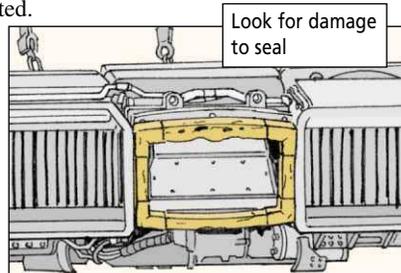
A small leak from your tank's exhaust grille door seal can do a lot of damage. A torn, crushed or brittle seal lets hot exhaust cook the engine and transmission oil coolers and oil cooler crossover hose.

That heat can cost you an engine or transmission as the overheated oil breaks down and moving parts don't get lubricated.

Even worse, the heat makes the oil cooler crossover hose brittle. If it cracks open and leaks oil onto the hot exhaust manifold... well, that's a fire in the making.

If you spot a bad seal, replace it using new mounting screws. Those old screws have been through a lot of heat and will snap if you try to reuse 'em.

Some tanks use seal, NSN 5330-01-099-6331, that's held in place with 18 screws, NSN 5306-01-309-7031. Other tanks take seal, NSN 5330-01-320-3692, that's mounted with six screws, NSN 5305-00-988-7794. Check the old seal to make sure you order the right replacement.

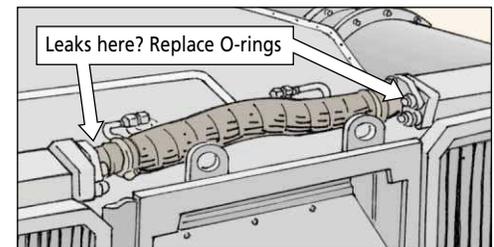
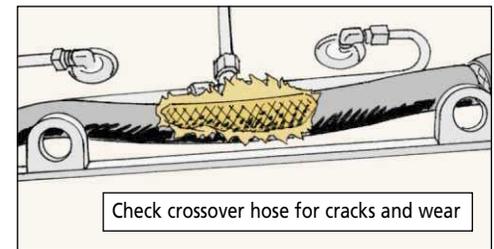


Coat the threads of the new screws with antiseize compound, NSN 8030-00-597-5367. Then torque 'em to 120-130 lb-in. They'll come out much easier next time.

Next, scan the oil cooler crossover hose for cracks and wear. If the hose is damaged, replace it with NSN 4720-01-067-9039.

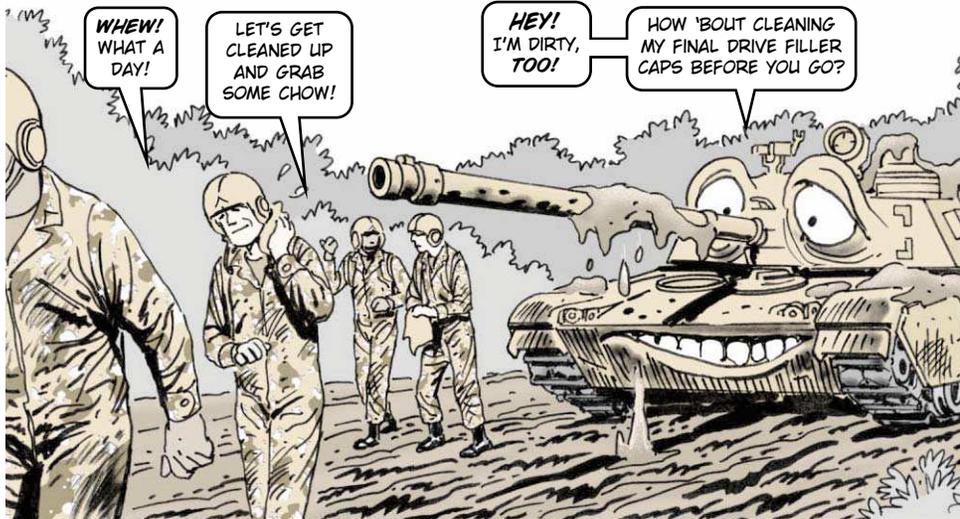
Secure the hose so it doesn't touch the exhaust duct or the top deck. If the hose touches, it'll burn, so loosen the mounting bolts and reposition it. Torque the bolts to 46-68 lb-ft.

Start the engine and check where the hose clamps to the oil coolers. If you see any leakage, the O-rings could be bad. Replace 'em with NSN 5331-00-165-1944.



M1-Series Tanks...

CONTENTS UNDER PRESSURE?



Dear Editor,

When in the field, mud and dirt buildup on your tank is a foregone conclusion. But when it builds up around the final drive filler caps, you've got a problem.

Dirt clogs the vent hole on each of the filler caps. When that happens, pressure can build until the final drive seal ruptures.

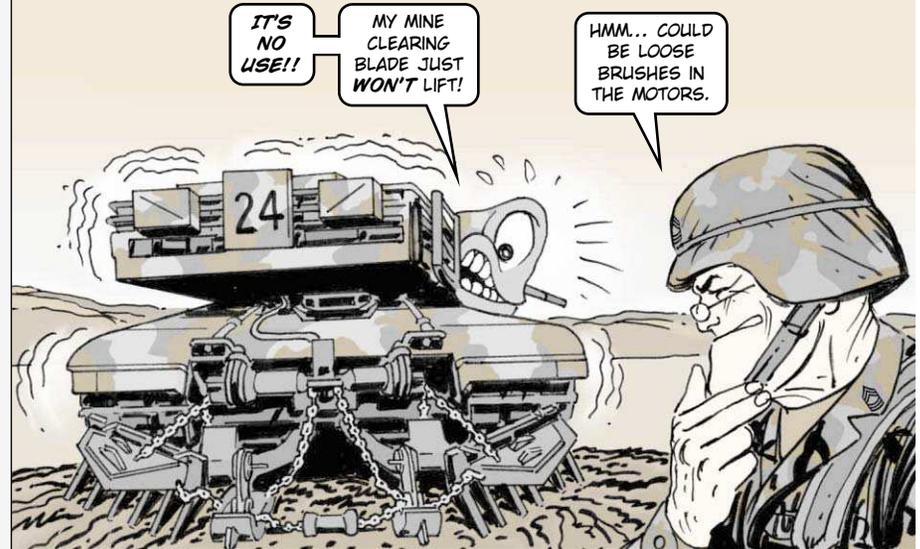
To protect our tanks, we've started checking the final drive filler caps at the end of a mission. Unclogged vents make for a healthy final drive.

1LT Justin Fregia
1/3d ACR
Ft Carson, CO



From the desk of the Editor
That's an idea we don't mind plugging!

BRUSH UP ON MINE BLADE REPAIRS



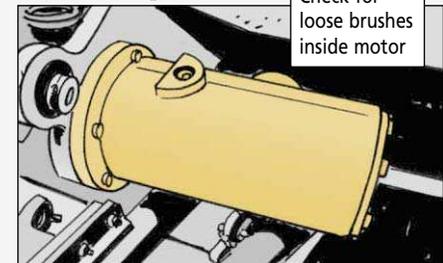
The mine clearing blade on an M1-series tank won't be clearing much of anything if the lifting mechanism, NSN 2590-01-277-0060, isn't working, mechanics.

But before your unit pays more than \$7,000 for a new lifting mechanism, consider this: Every part is replaceable. You'll find them listed in Fig C-3 of TM 9-2590-509-23&P.

The number-one lifting mechanism problem is loose electrical brushes in the motors. That's especially true if the operator does a lot of "combat drops" or changes the motors' direction without first letting the mine blade come to a complete stop. Reinstalling the brushes usually fixes the problem.

If not, the brushes may be burned out. Install new brushes, NSN 5977-01-412-0758. You'll need four brushes for each motor.

If one of the motors, NSN 6105-01-277-0295, still won't work, you may need to replace it. At around \$3,500, that's still a lot cheaper than ordering a new lifting mechanism.



M2/M3-Series Bradleys, MLRS Carrier...

SHOCKINGLY GOOD PM



LOOKS LIKE JONESY'S GOT A BAD CASE OF THE SHAKES!

NAH. HE'S JUST GOT BAD SHOCKS ON HIS BRADLEY.

UNLESS YOU PRACTICE GOOD PM ON YOUR BRADLEY'S OR MLRS' SHOCK ABSORBERS...

...YOU'LL BE SHOCKED AT HOW ROUGH THE RIDE CAN BE, CREWMEN.

SO GIVE THOSE SHOCKS A GOOD ONCE OVER AFTER EVERY OPERATION.

HERE'S WHAT TO LOOK FOR...



- Good shock absorbers generate heat during operation. If any of the shocks are cool or only slightly warm to the touch, report 'em. They aren't doing their job.

Check shocks for heat



Watch your hand when making this check, though. Good shocks can get hot enough to burn you.

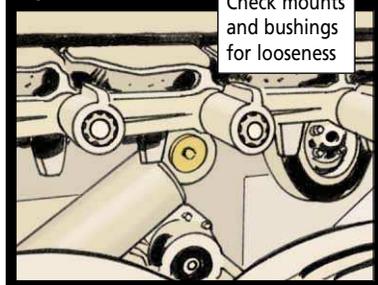
- Eyeball the shock absorbers for oil leaks. Report any that are leaking.

Look for leaks here



- Feel the shock absorber mounts and bushings. They should be nice and tight. Let your mechanic know about any loose ones.

Check mounts and bushings for looseness



- From the front of the vehicle, look straight down the track line at the shock absorbers. Checking from that angle makes it easy to find bent shocks. Report any shock absorbers that aren't straight.

Report bent shocks



MLRS Carrier...

KEEP THE WET OUT



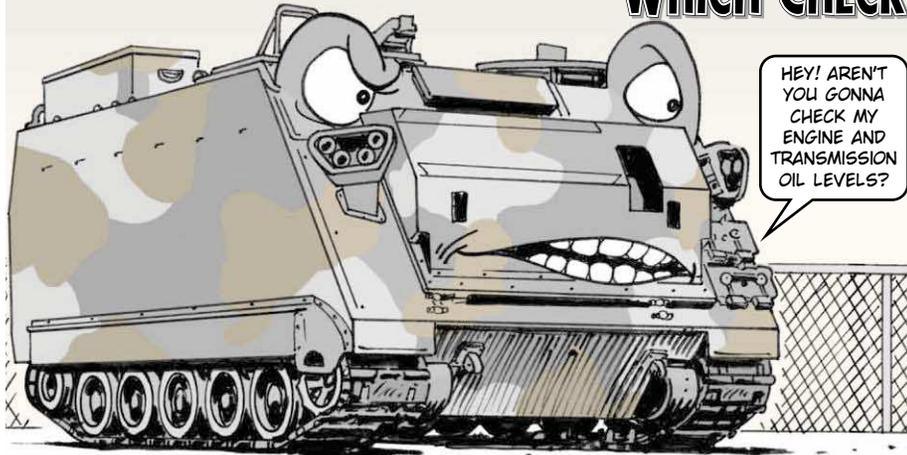
KEEP YOUR MLRS ELECTRONICS DRY WITH A WATER-PROOF TARP!

When water collects in the MLRS's hull, it shorts out cables, corrodes connectors and gets inside line replaceable units.

Leaving the hull drain plugs open lets out excess water, but doesn't keep components from getting wet in the first place.

Prevent water damage by covering the cab and engine portion of your MLRS with a waterproof tarp. A 12x17-ft OD green tarp, NSN 2540-00-587-2532, will do the trick. Or order a 12x17-ft tan tarp with NSN 2540-01-330-8062.

WHICH CHECK IS CORRECT?

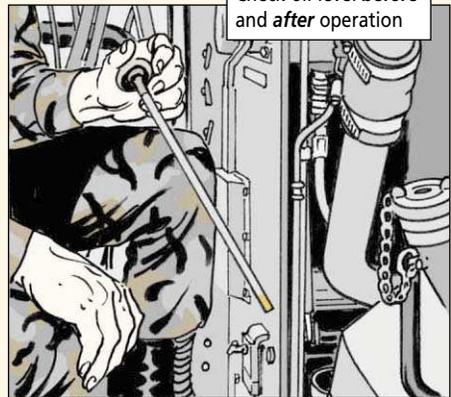


IS YOUR CAP ON?



Dear Half-Mast,
I'm confused about exactly when we're supposed to check the transmission and engine oil levels for our M113-series carriers. The lube orders (LO) say to do a before-operation cold check on both, while the PMCS charts in the -10 TMs say to do an after-operation hot check on both.
I get different readings based on whether I do a hot or cold check, so I never know whether I have too much, too little or just the right amount of oil. Which check is right?
SFC D.R.M.

Dear Sergeant D.R.M.,
TACOM says you should be making both checks.



The cold check makes sure you have enough oil to operate the vehicle without causing damage. It won't give you a completely accurate reading, but it does keep you from driving the carrier if it's dangerously low on oil.

The oil level should be at or slightly above the dipstick's F (full) mark for a cold check. That's because oil expands slightly when it's cold.

If the level is below the L (low) mark, call your mechanic to check for leaks. If it's very far above the F mark, he may need to drain some oil.

The hot check is the most accurate—and the one the dipstick was designed to make. After the engine reaches operating temperature (160-230°F), shut down the engine, wait 3-5 minutes, and check the oil level. You should get readings between the L and F marks.

If either oil level is below the L or above the F, call in your mechanic.

Half-Mast

The NATO slave receptacle on your command post carrier is supposed to carry current, not water. But water is what you get if the dust cap is missing.

The receptacle faces straight up. Without the cap, the receptacle fills up when it rains or when you wash your carrier.

Water corrodes the receptacle's metal contacts. It may not carry current the next time you need to slave start a dead vehicle or hook up the 4.2-KW or 5-KW generators.

If the dust cap on your carrier is damaged or missing, get your mechanic to replace it with NSN 5340-01-059-0114. That NSN includes the 6-in attachment cord, but not the screw, NSN 5305-00-984-6212, lock washer, NSN 5310-00-045-3296, and flat washer, NSN 5310-00-014-5850, needed to mount the cap and cord.

Until the new cap and cord come in, cover the receptacle with a plastic bag and a rubber band.



M992A2 Ammo Carrier...

Hook-and-Pile's Gotta Go



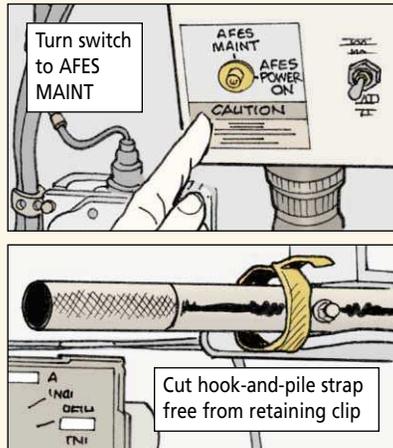
Drivers, if the AFES manual pull handle on your ammo carrier is still held in place with a hook-and-pile strap, it's time to have your mechanic get rid of it.

The hook and pile strap was designed to keep the handle from accidentally slipping out of its retaining clip and setting off the engine fire extinguisher. Unfortunately, the strap does its job a little **too** well.

In an emergency, the extra seconds needed to open the strap before pulling the handle can be disastrous.

That's why TACOM says the strap's gotta go. Here's how:

1. Deactivate the AFES by turning the alarm panel maintenance switch to AFES MAINT. Then, put a locking pin in the valve actuator of the engine fire extinguisher bottle.
2. Open the hook and pile strap on the manual pull handle and cut it loose from the retaining clip.
3. Double-check the manual pull handle to make sure it is still firmly secured by the retaining clip.
4. Remove the locking pin from the engine fire extinguisher bottle and return the AFES alarm panel switch to AFES POWER ON.



M109A6 Paladin...

LUBED HATCH MEETS ITS MATCH

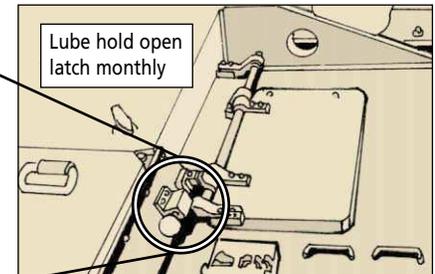
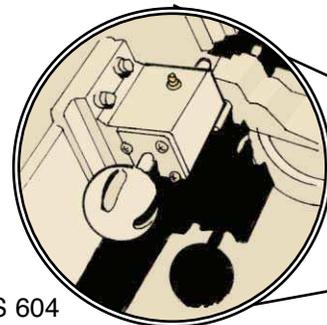
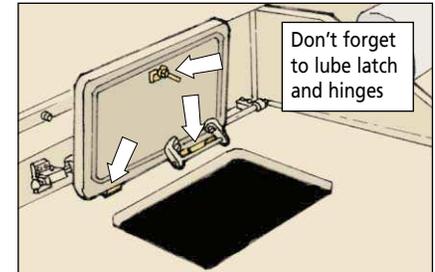


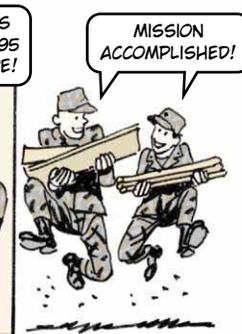
If there's a fire in the cab of your Paladin, you need to get out now, gunner! But it'll be slow going if you haven't been lubing the hinges, handle and hold-open latch on the gunner's escape hatch.

Without proper lube, the hinges rust and the handle sticks. If you do manage to force the hatch open, a rusty hold-open latch won't keep the heavy door out of the way while you squeeze through.

Take the time to lube the escape hatch now so you won't have to wonder if it'll open later. Quarterly, put a few drops of OE/HDO, CLP or OEA on the hinges and handle. Make sure you wipe up any excess oil to keep it from attracting dirt and sand.

Lube the hold-open latch monthly with a few squirts of GAA.





Dear Editor,

Every time we prepare for convoy operations, we have to scramble around looking for the flags and signs required. Inevitably, something has been misplaced and we have to beg or borrow what we need until it can be replaced.

We put a stop to that by putting together a kit that includes everything you need for convoy operations. Our canvas shop sewed together a bag that holds the signs in a large pocket, the flags and staffs in a medium pocket, and an info packet, some 550 cord and "hundred mile an hour" tape in a small pocket.

The info packet includes a parts inventory photo and list, a convoy brief, departure report, convoy commander's checklist, and a 9-line MEDEVAC and SALUTE report format.

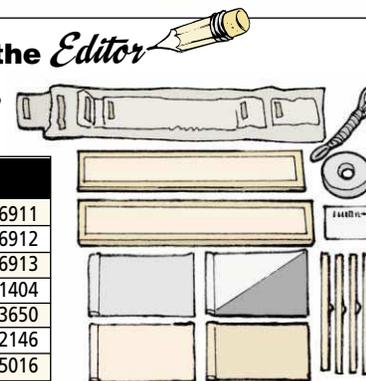
Once complete, the kits go on our HHC commander's hand receipt and are signed out to the platoons that need them. That keeps the units accountable and makes sure everything's available the next time it's needed.

CPT Jeff Fair
2/35th Inf
Schofield Barracks, HI

From the desk of the Editor

Excellent idea, Sir. For those who want to put together a kit, here's what you'll need:

| Item | NSN |
|------------------------------------|------------------|
| Black & white flag for Cdr vehicle | 8345-00-543-6911 |
| Blue flag for lead vehicle | 8345-00-543-6912 |
| Green flag for rear vehicle | 8345-00-543-6913 |
| Orange flag for trail party | 8345-00-227-1404 |
| Flag staff, 3-ft, 4 ea | 8345-00-242-3650 |
| 550 cord, 700-yd | 4020-00-240-2146 |
| Tape, 2-in x 60-yd | 7510-00-266-5016 |

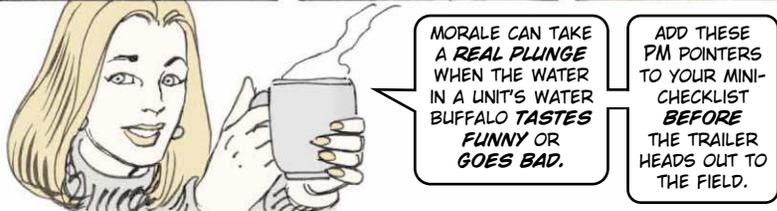


The convoy signs aren't available by NSN. You'll have to make them following the instructions in Appendix P of FM 55-30, Army Motor Transport Units and Operations.

If you don't have a copy of the FM, view it on-line at the TRADOC Reimer Digital Library. Point your browser to:

<http://155.217.58.58/cgi-bin/atdl.dll/fm/55-30/toc.htm>

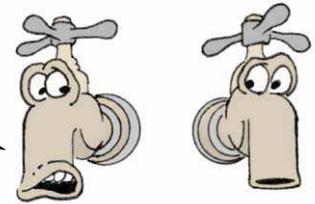
KEEP WATER FLOWING



Water Faucet Update

Use NSN 4510-01-433-0396 to get a faucet made to dispense potable water from the water trailer. The stock number shown for Item 1, Fig 28, in TM 9-2330-267-14&P cannot be used for potable water.

WE MAY LOOK SIMILAR— BUT I'M SAFE AND YOU'RE NOT!

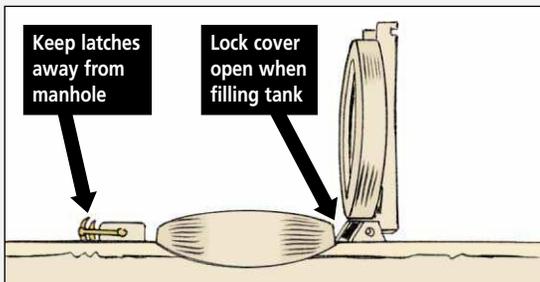
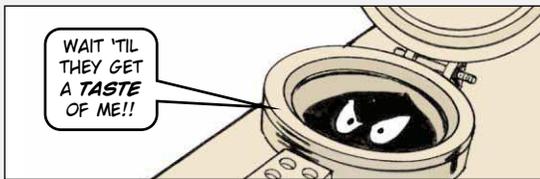


Manhole Seal Reminder

It takes just a moment of carelessness to poke a hole in the manhole cover seal on the water trailer.

If you don't get the cover latches out of the way, any time the cover closes the seal takes a poke. Any hole in the seal can lead to contamination of your unit's drinking water.

In addition to making sure the latches are out of the way, lock the cover open while filling the tank. That way, the cover can't close unless you want it to.



Stop the Drip

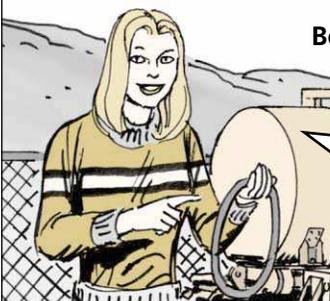
A leak around the plastic plug, NSN 4730-01-086-1620, under your water trailer probably means it was overtightened when last installed.

Overtightening strips threads, causing leaks. It also makes the plug hard to remove.

So head off leaks and removal problems by wrapping every new plug's threads with antiseize tape, NSN 8030-00-889-3535, and by lightly snug-ging it in place. That way, the plug can be used several times.



Better Seal Deal

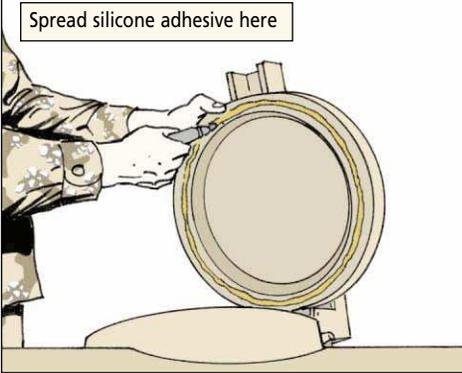


IF YOU'VE **ALREADY** POKED A HOLE IN THE SEAL, YOU CAN REPLACE IT WITH AN IMPROVED SEAL THAT WILL MAKE LEAKS A THING OF THE PAST.

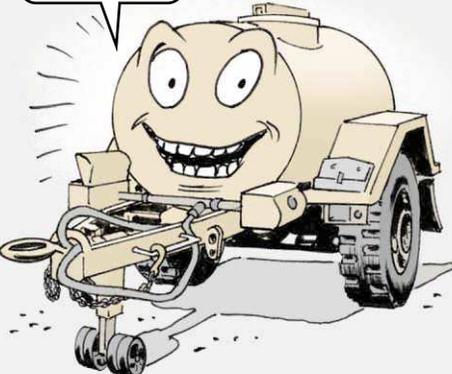
BUT THAT SEAL, NSN 5330-01-317-9640, IS ONLY AS GOOD AS ITS INSTALLATION.

HERE'S WHAT TO DO...

Spread silicone adhesive here



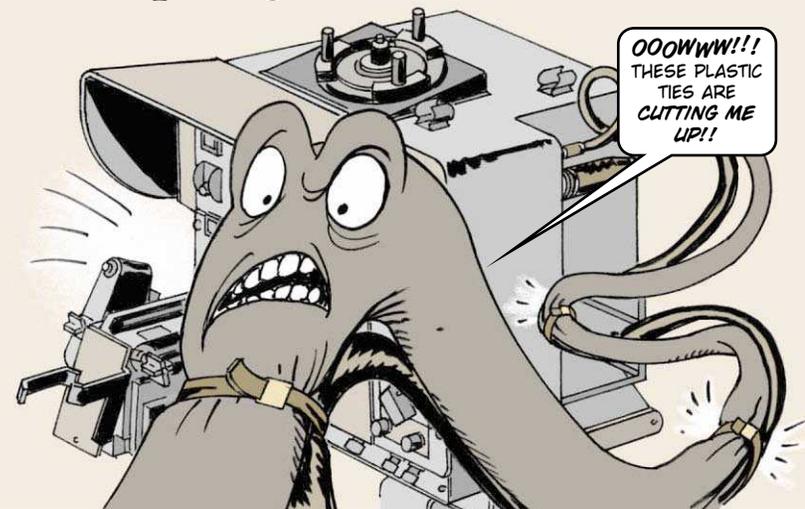
THE NEW SEAL **SEALS OUT** LEAKS— IF YOU INSTALL IT **CORRECTLY!**



1. Remove the manhole cover.
2. Scrape off the old seal and toss it.
3. Sand the outer 1½ inches of the underside of the cover with emery paper.
4. Use denatured alcohol to wash the sanded area. Be careful not to touch the sanded and washed area with your bare hand. Oil or dirt from your hand can keep the sealant from working properly.
5. Let the cleaned area dry.
6. Spread a 1-in wide band of silicone adhesive, NSN 8040-00-118-2695, around the outside cover.
7. Slip the seal onto the cover.
8. Put a little more sealant around the inside of the seal where it meets the cover.
9. Now lay the cover with the seal side down on a smooth, flat surface, such as a work bench. Let the sealant cure for 24 hours.
10. Rinse the cover with clean water.
11. Install the manhole cover on the tank.

Avenger Missile System...

Taping RCU Cables

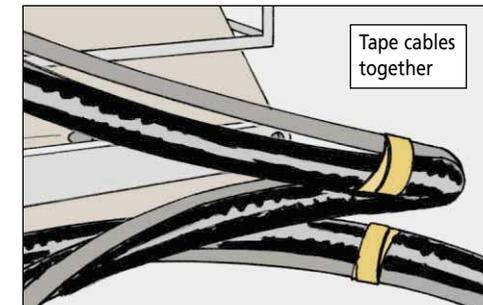


Dear Editor,

Most units use heavy-duty plastic ties to secure the cables for the Avenger's remote control unit (RCU). The ties work great for holding the cables together, but we found they often cut into the cables when they were being wound or unwound and caused shorts. It's expensive to replace cables.

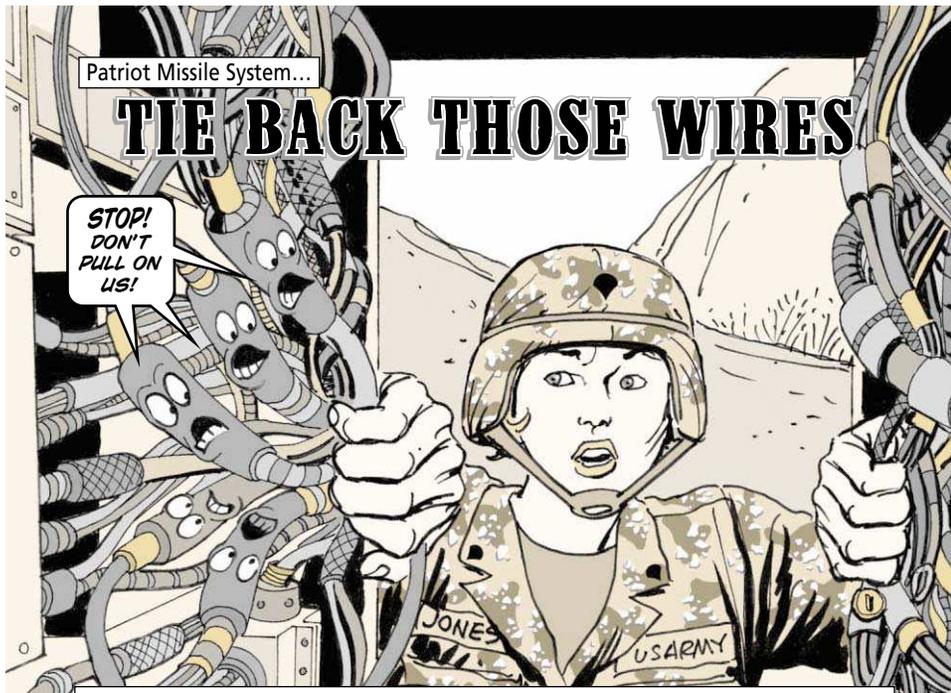
We've had better luck securing the cables with duct tape. The tape keeps the cables together but doesn't cut into them. Of course, tape doesn't hold forever, so you need to check it weekly and retape the cables if necessary. But that's a lot better than having to replace cables.

CW2 Mark Hoskins
D Btry, 1/3 ADA
Ft Stewart, GA



From the desk of the Editor

If you don't cinch the ties tight, they will be less likely to cut the cables. But tape ensures you don't damage cables.



Patriot Missile System...

TIE BACK THOSE WIRES

STOP!
DON'T
PULL ON
US!

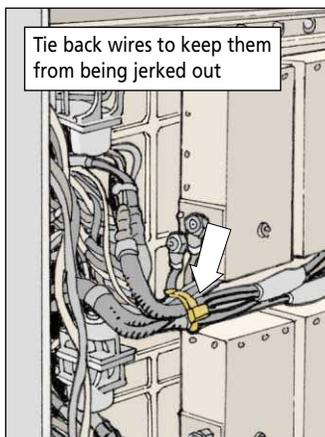
Dear Editor,

When soldiers enter the Patriot's AN/MPQ-53 radar, they often put their hands around the door frame to pull themselves inside. The trouble is that they accidentally catch the wires hanging just inside the door and pull them out. Of course, ripped-out wires cause all sorts of radar problems.

We've found you can protect wires by tying them back so they don't dangle and can't be accidentally grabbed. Twist ties are good for this.

It's also a good idea for soldiers to take off any gear they're wearing before they go in the radar. There's not much room in there. If you're wearing lots of gear, it will catch on wires and tear them out.

SSG Wallace Layne
SGT Brian Duff
549th Maint Co, 6/52 ADA
Ausbach, Germany



Tie back wires to keep them from being jerked out



AMG LIKES LIGHT OIL

Dear Editor,

Both in Germany and in the desert we had trouble with leaking mast seals on the Patriot's antenna mast group (AMG). Once the seals started leaking, we had trouble building up enough air pressure to raise and lower the masts. We sometimes had to increase the pressure well above 35 psi to raise the mast.

We found the problem was the 30W oil used to lubricate the masts. In the desert, it collected sand that ground up the seals. In the cold, the oil sometimes got so stiff it couldn't lube. Then the seals dried out and started to leak.

By switching to a lighter lube like WD-40 or refrigerant oil, NSN 9150-00-664-4449, we had far fewer mast problems. These lubes didn't collect as much sand and were less likely to freeze in the cold.

SGT Lawrence Arrindell
507th Maint Co
Ft Bliss, TX

I JUST
CAN'T SEEM
TO RAISE IT!

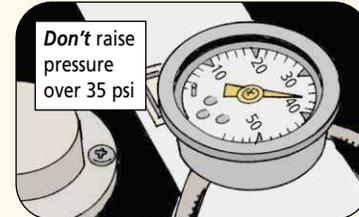
I THINK
YOUR SEALS
ARE GIVING
OUT!



From the desk of the Editor

Your seal suggestion gets our seal of approval. No matter how much trouble Patriot crews have raising the AMG masts, they should never raise the air pressure more than 35 psi. If they do, the masts can actually shoot off. Tell your repairman. The mast probably has leaking seals.

Don't raise
pressure
over 35 psi



Patriot Missile System...

PATRIOT CREWS, TAKE THE DROOP OUT OF SLAVE CABLES WITH THIS TIP.

SLAVE CABLES MUST NOT DROOP



Dear Editor,

Slave cables that droop between the Patriot tractors and trailers are slave cables that won't be slaving much longer. A drooping cable can catch on the tractor's drive shaft and be ripped out. That can also short out the battery.

We've found simply attaching the slave cable to the air line tree with a bungee cord or rigging clip from a parachute keeps the cable safely away from the drive shaft.

SSG Antonio Griffin
D Co, 5/7 ADA
Babenhausen, Germany

Drooping slave cable gets caught on drive shaft



Attach cable to air line trees



PS 604

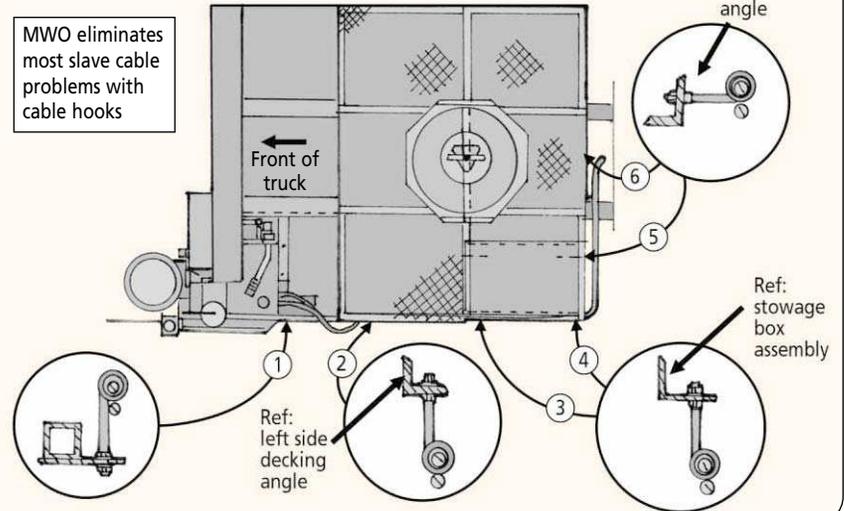
20

MAR 03

From the desk of the Editor

Make sure your trailer has been modified with MWO 9-2320-279-20-8. It added hooks and clamps to help hold the slave cable and in most cases should take care of drooping cables. If it doesn't, your suggestion is the next stop. Thanks.

MWO eliminates most slave cable problems with cable hooks



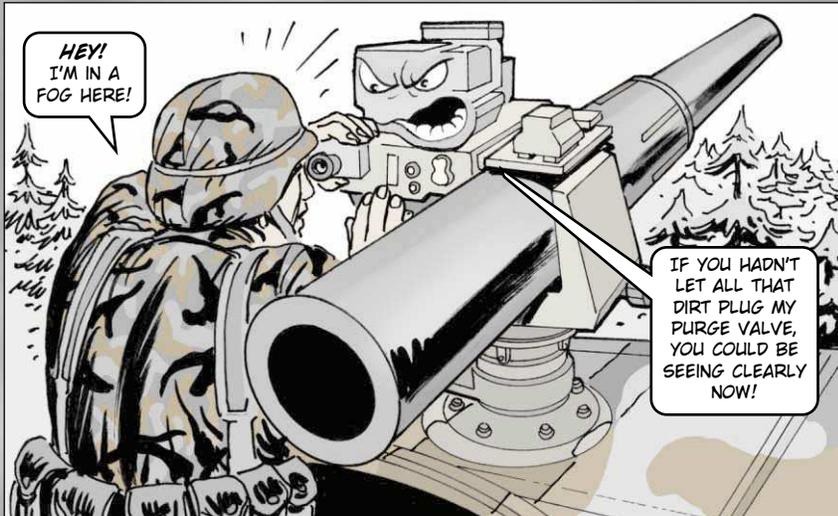
PS 604

21

MAR 03

TOW 2 Missile System...

Cheap Purging Valve Caps

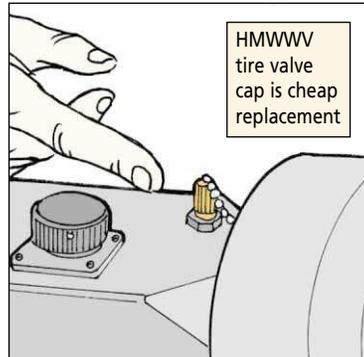


Dear Editor,

The purging valve caps for the TOW missile's AN/TAS-4D night sight often disappear or get cracked. Then dirt gets in the valve and makes it difficult to purge the sight. Since the cap doesn't have an NSN, units must order a whole new purging valve assembly just to replace the cap. That costs more than \$200.

A cheap substitute for the cap is the HMWWV's tire valve cap. Your motor pool should have plenty of them. If it doesn't, you can get 100 caps for less than \$2 with NSN 2640-01-098-2029.

SSG Ronald Welch
64th FSB
Ft Carson, CO



From the desk of the Editor

A tip of the cap for your money-saving tip. Thanks.

M240B Machine Gun...

Adapting M122 Tripod for M240B



Dear Half-Mast,

MWO 9-1005-245-20-1 converted our M122 tripods to M122A1s by replacing the flexible mount with a fork assembly and pintle assembly so that it could be used with the M240B machine gun. Our problem is that we need a new fork assembly and we can't find an NSN for it. Can you help?

SPC M.D.

Dear Specialist M.D.,

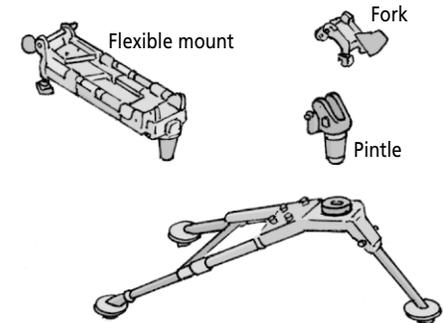
You bet. Actually, there are four parts for the fork assembly:

- adapter, NSN 1005-01-225-1156
- flat washer, NSN 5310-00-809-4058
- cartridge deflector, NSN 1005-01-470-5701
- socket cap screw, NSN 5305-00-052-9329

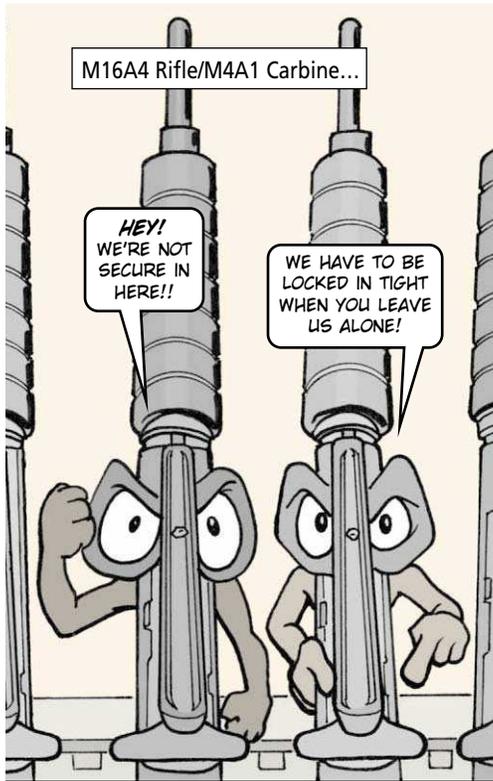
The other parts needed for the MWO are the pintle, NSN 1005-01-461-2656, and two rings, NSN 5325-00-753-3929.

If you have the M240B, your M122s should have been converted to M122A1s. If they haven't been, contact TACOM-Rock Island's Kathy Johnston at (309) 782-7338/DSN 793-7338 or e-mail johnstonk@ria.army.mil. She can help you get the MWO, which can be done by you armorers.

Half-Mast



Fork and pintle assemblies
replace flexible mount



M16A4 Rifle/M4A1 Carbine...

Racking your

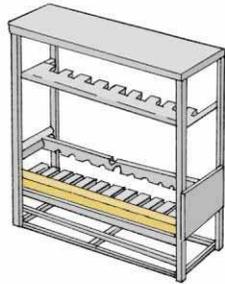
M16s and M4A1s

Some armorers are scratching their heads about how to make the M4A1 carbines and M16A4 rifles fit in the M12 rack. Well, STOP SCRATCHING. Here's what you need to know:

M4A1 Carbine

To lock M4A1s in the M12 rack, you need an adapter bar on the rear of the arms rack. Your support makes the bar following the instructions on Page 2-70 in Change 4 to TM 9-1005-319-23&P.

Adapter bar



M16A4 Rifle

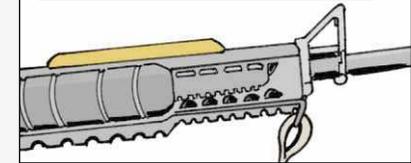
To lock the M16A4 in the M12 rack, you may need to move back the carrying handle one notch to the rear. The carrying handle must be returned to the original position for firing to maintain the zeroing.



Mounting Rail System

But if the mounting rail system is installed on the M16A4 or M4A1, more drastic action may be needed. The rack's locking bar may no longer close and a single locking bar may be needed. To get instructions for a single locking bar, contact TACOM-Rock Island's James Rollins at (309) 782-1797/DSN 793-1797 or e-mail rollinsj@ria.army.mil

Mounting rail installed? Rack locking bar may need to be installed



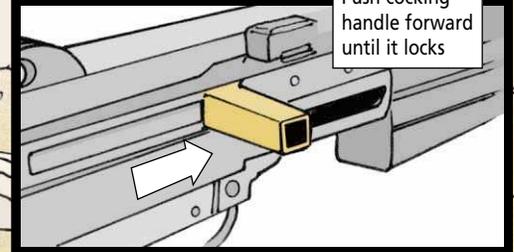
Any M12 racks that are fitted with the adapter bar or single locking bar must be certified as secure. Contact your local TACOM-Rock Island logistics assistance representative or James Rollins for details.

M249 Machine Gun...



REMEMBERING THIS COCKING POINT SAVES YOUR M249 THAT ONE-WAY TRIP TO THE BONEYARD.

Remember to push the cocking handle forward until it clicks in place after you lock back the bolt. If you forget, the handle is left flapping. During firing, the handle bangs against the cocking handle assembly stop and wears out the receiver rails and handle over time. Worn-out rails are not fixable. Your M249 is on a one-way trip to the boneyard.



M1064-Series Mortar Carrier...

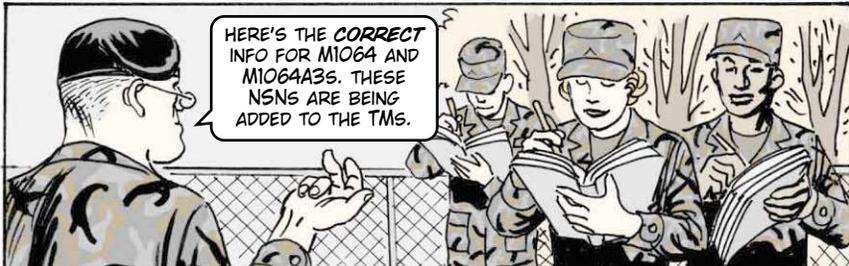
MORTAR NSNS HAVE CHANGED



"NSNS FOR THE MOUNT BASEPLATE LISTED IN FIG 298 OF TM 9-2350-261-24P (APR 98) ARE FOR THE M106A2 MORTAR ONLY."

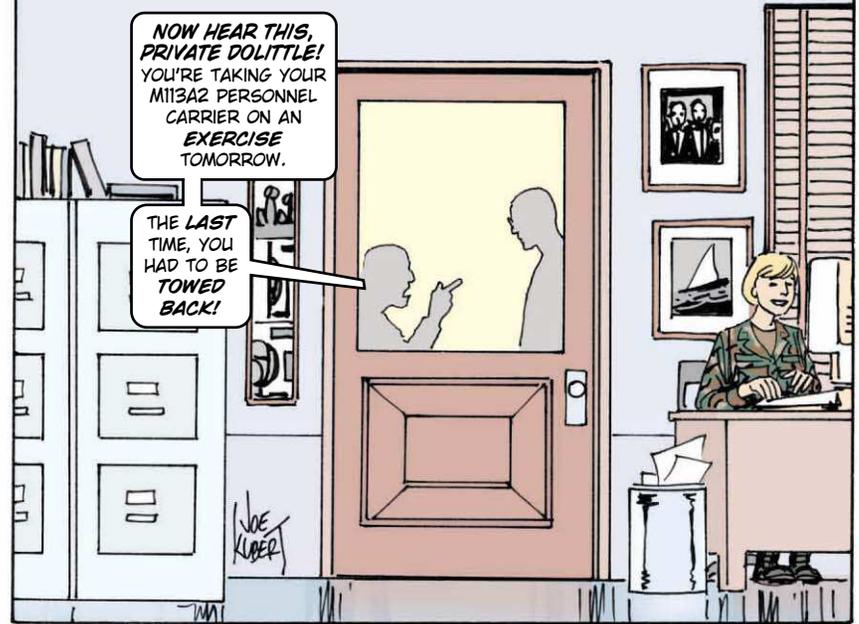


"AND THE NSNS LISTED IN FIG 307 OF TM 9-2350-277-24P (JUL 94) ARE GOOD FOR THE M106A2 ONLY."



- Lever release mount bracket, NSN 5340-01-286-0470
- Locking pin assembly, NSN 5315-01-386-3977
- Rubber bumper, NSN 5340-01-285-7512
- Manual control handle, NSN 5340-01-285-0135
- Plate spacer, NSN 5365-01-292-7763

PRIVATE DOLITTLE



PS 604

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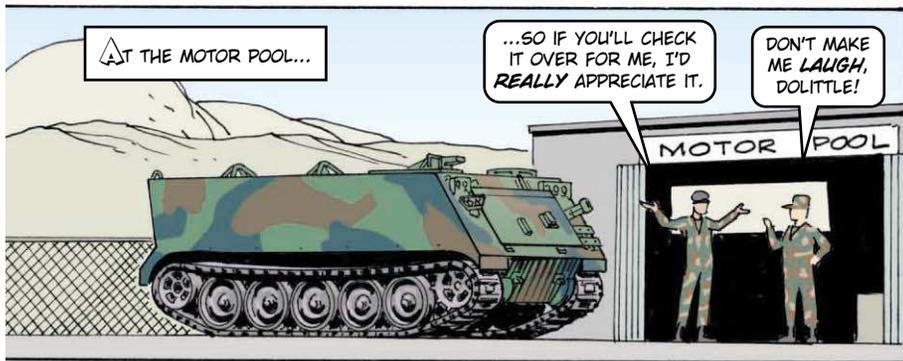
MAR 03



IF I DON'T MAKE IT THROUGH TOMORROW'S EXERCISE, I'LL LOSE MY WEEKEND PASS. AND I WON'T GET TO SEE CINDY LOU.



I'LL TALK TO THE MECHANIC AT THE MOTOR POOL ...TO MAKE SURE MY VEHICLE DOESN'T BREAK DOWN.



AT THE MOTOR POOL...

...SO IF YOU'LL CHECK IT OVER FOR ME, I'D REALLY APPRECIATE IT.

DON'T MAKE ME LAUGH, DOLITTLE!



FIRST-LINE PREVENTIVE MAINTENANCE IS YOUR RESPONSIBILITY. MY JOB IS TO REPAIR OR REPLACE BROKEN EQUIPMENT.

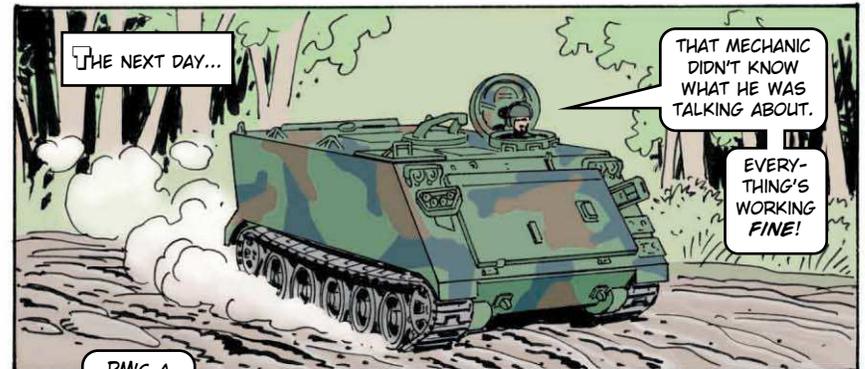


YOUR JOB IS TO PREVENT BREAK-DOWNS.

SO YOUR VEHICLE WILL LAST.



BUT, YOU'VE NEVER DONE YOUR PART. SO YOU'RE GONNA HAFTA LEARN THE HARD WAY.



THE NEXT DAY...

THAT MECHANIC DIDN'T KNOW WHAT HE WAS TALKING ABOUT.

EVERY-THING'S WORKING FINE!



PM'S A WASTE OF TIME. MY VEHICLE'S RUNNING LIKE A TOP...



...SMOOTH AS SILK. AND—



UGH... WHA' HAPPENED?



TH-THE HATCH COVER CAME DOWN ON ME.

OOOH... MY HEAD. I- I FEEL DIZZY...

THAT WAS SOME SMACK YOU TOOK ON THE OL' NOGGIN'!

WH-WHO SAID THAT?

ME!!



Y- YOU'RE...
A BIRD!

THAT'S
RIGHT!

THAT KNOCK ON YOUR
HEAD MUST'VE CLEARED
YOUR BRAIN!



AND IT'S ABOUT TIME
YOU HUMANS LISTENED
UP! I COULDA TOLD
YOU THAT HATCH COVER
WAS ABOUT TO FALL...



YOU FORGOT TO
USE THE SAFETY
PIN TO HOOK THE
HATCH IN PLACE!



I- I DON'T
BELIEVE
THIS! I
NEVER KNEW
ANIMALS
COULD
TALK!

SURE
WE CAN
TALK.
QUESTION
IS, WILL
YOU
LISTEN?



WE CAN TELL YOU
A FEW THINGS ABOUT
HOW THE LACK OF PM
PUT YOUR VEHICLE IN
THE SHAPE IT'S IN.

PM'S HOW
WE SURVIVE
IN THE WILD.

Y- YOU'RE
A RACCOON!



YOU GOT THAT
RIGHT! NOW...
LET'S TAKE A
LOOK INSIDE
YOUR VEHICLE.



GO AHEAD.
EXCEPT FOR
THAT HATCH,
MY CARRIER
IS RUNNING
JUST FINE.



"LET'S CHECK THE SIGHT GLASS
ON THE FAN GEAR BOX IN THE
ENGINE COMPARTMENT."



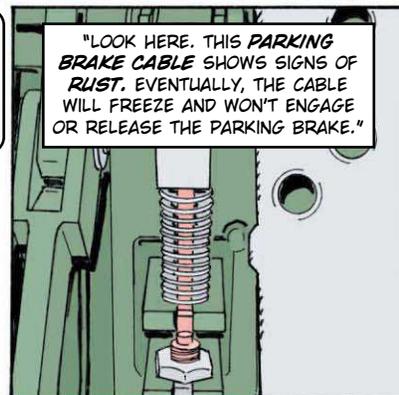
THE FAN IS IMPORTANT...
BECAUSE IT EXHAUSTS THAT MIGHT
LEAK INTO THE TROOP
COMPARTMENT.

UH-
OH! I
DIDN'T
CHECK
THAT.

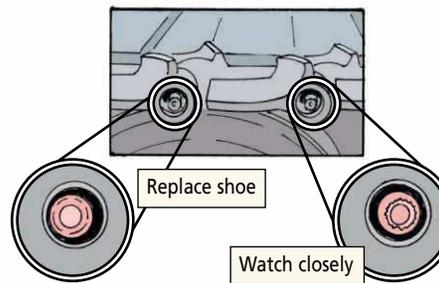
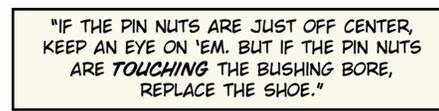
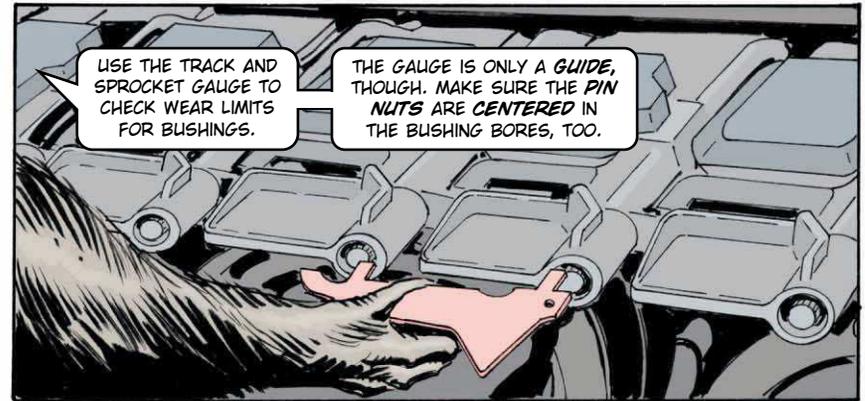
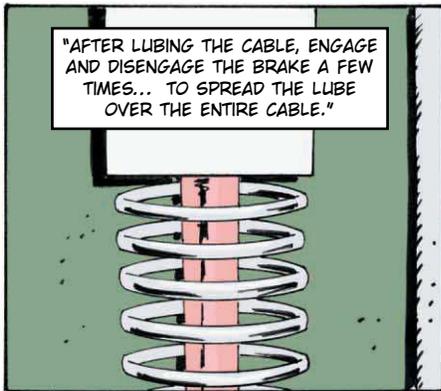


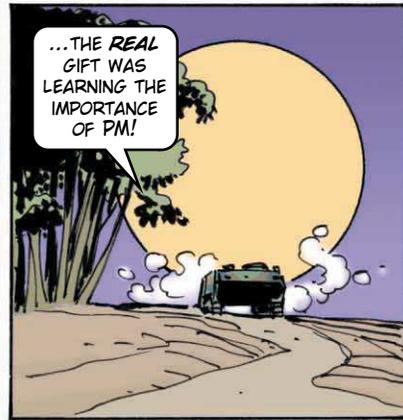
YOU SHOULD BE
ABLE TO SEE OIL AT
THE HALFWAY POINT
IN THE SIGHT GLASS.
RIGHT, BIRD?

RIGHT, RACCOON.
THAT LACK OF OIL
IS GONNA LET
THE BEARINGS
SEIZE... AND RUIN
THE GEARBOX.



"LOOK HERE. THIS PARKING
BRAKE CABLE SHOWS SIGNS OF
RUST. EVENTUALLY, THE CABLE
WILL FREEZE AND WON'T ENGAGE
OR RELEASE THE PARKING BRAKE."





All Aircraft...

TAKE HOT OIL SAMPLES WHEN?



Dear Rotor,

As QC inspector at Ft Knox's Army Aviation Support Facility, I've noted a potential source of confusion concerning oil sampling.

TB 43-0106, which provides oil sampling info for aeronautical equipment, says that oil samples are required within 15 minutes of equipment shutdown and while the component/equipment is still warm.

However, TB 43-0211, which is the source of info for nonaeronautical equipment oil sampling, has on Page 35 info on taking aeronautical samples. The confusion then comes in a Q&A section on Page 38. "Must I always take a hot sample?" The answer printed is "No." This is only true for non-aeronautical equipment, however.

In aviation, the requirement has always been to take a warm oil sample like it says in TB 43-0106. I believe some note should be added to TB 43-0211 so the source of confusion is removed.

Linda Norris
QC Inspector
Ft Knox AASF

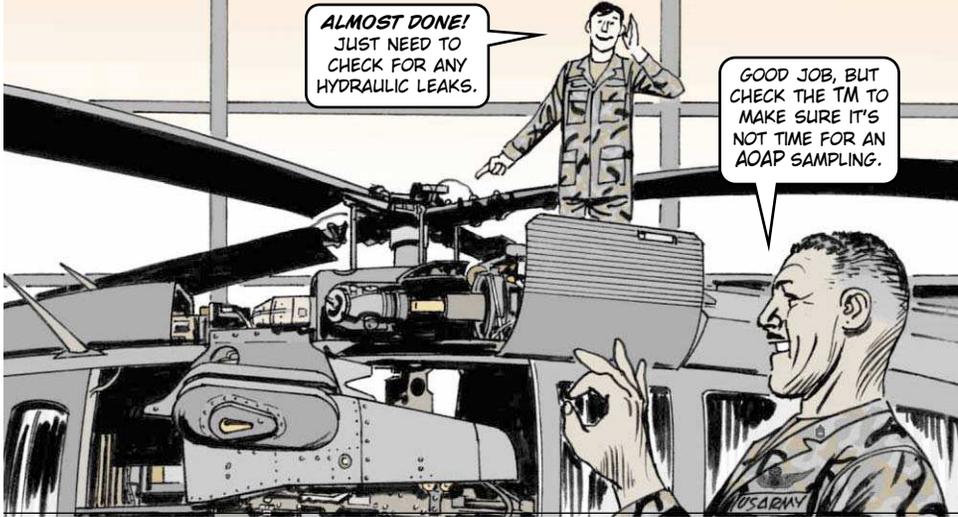


All Aircraft...

STOP Hydraulic Oil Contamination

ALMOST DONE!
JUST NEED TO
CHECK FOR ANY
HYDRAULIC LEAKS.

GOOD JOB, BUT
CHECK THE TM TO
MAKE SURE IT'S
NOT TIME FOR AN
AOAP SAMPLING.



When a surgeon performs an operation, he operates with clean tools in an environment that is as free as possible of contaminants which can infect the body.

Without surgery SOP, patients could get sick and die from the infection.

Likewise, mechanics, you need to treat your bird's clean hydraulic systems with clean tools and hydraulic oil in a clean environment. When you perform maintenance, such as adding or changing hydraulic oil or removing and installing components on your bird's hydraulic systems, keep them free of contaminants. Keep contaminants out of the process.

Before flushing hydraulic systems, inspect, service and clean or purify the hydraulic servicing unit or hydraulic test stand to be used. That way you won't introduce outside contaminants into your hydraulic oil.



- Aircraft hydraulic fluid must be clean so hydraulic systems remain operational.
- Aircraft hydraulic systems are easily contaminated if you use leftover open cans of hydraulic oil. Always use a fresh can of approved oil per your TM. The can lid and can opener must be clean, too.
- Always use clean rags to wipe off exposed lines and openings. Use of dirty rags or tools will contaminate hydraulic systems.
- If your TM says not to mix different types of hydraulic oils, then don't mix them.
- Whenever your aircraft is undergoing any type of hydraulic maintenance, it's especially important to ensure all component/line openings are capped or covered. If a new component is being installed, be sure to remove all the preservative fluid that was shipped in the part.

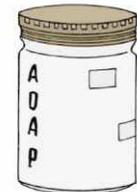
HERE ARE SOME
OTHER HYDRAULIC
SYSTEM CHECKS TO
MAKE **BEFORE**
EVERY FLIGHT...



- ✓ Eyeball all hydraulic pumps and reservoir sight glasses for oil level and color.
- ✓ Check for hydraulic fluid leaks. If you find any, refer to the aircraft TM for proper corrective action now. Later might not come around.
- ✓ Eyeball indicator buttons, and if popped, change hydraulic filters. Dirty filters allow contaminants to bypass the filter and muck up the hydraulics.
- ✓ Make sure all hydraulic systems are protected from moisture, dirt, and other fluids.
- ✓ Be sure that all exposed hydraulic pistons are wiped down during preflight.

Follow your TM's hydraulic servicing and maintenance procedures exactly. Take no shortcuts or you and your bird could be put in harm's way.

Keep your bird's hydraulic system's life blood clean and it won't get sick from contaminated fluid. For example, AH-64A/D AOAP sampling should be done every 50 hours. Check out TB 1-1520-238-116 for the details.



UH-60A/L...

THE HUNT FOR PARTS



WE NEED TO ORDER MORE PARTS TO GET THIS PHASE DONE.

I'LL GO CHECK TO SEE WHAT WE HAVE IN BENCH STOCK.

GOOD NEWS! YOU CAN ORDER A PHASE KIT FROM DLA.

GREAT! THAT SURE BEATS HUNTIN' FOR NUTS AND BOLTS!

IT'LL HAVE ALL THE PARTS YOU NEED TO GET THE JOB DONE.

Mechanics, are you trying to scrounge up bench stock like nuts, bolts, and washers to complete the 500-hour phase maintenance on your Black Hawk?

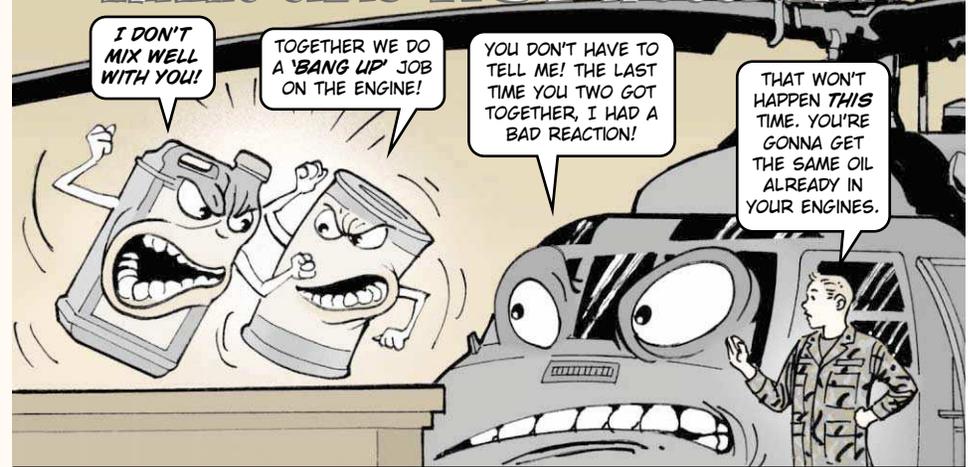
Well, the hunt is over. No more waiting for parts on order. No more ordering parts piecemeal while NMC aircraft sit in the hangar waiting for a part or a component to be shipped.

You can complete that phase maintenance **on time** now that DLA offers a 500-hour phase maintenance kit. NSN 5330-01-478-6529 brings you 139 replacement line items. Its contents are broken down into six aircraft sections with all items identified by part number, and NSN.

If you need a copy of the content list for the kit, contact your local DLA representative, or Ann Oglesby at DLA AMCOM, DSN 788-6403, (256) 842-6403 or e-mail ann.oglesby@redstone.army.mil. You can also request a copy of the content list from George McFall at the Defense Supply Center Philadelphia, DSN 444-8159, (215) 737-8159, or e-mailing gmcfall@dscp.dla.mil. Provide your name and unit address in the request.

UH-60/AH-64...

MIXING OIL IS NOT A GOOD MIX



I DON'T MIX WELL WITH YOU!

TOGETHER WE DO A 'BANG UP' JOB ON THE ENGINE!

YOU DON'T HAVE TO TELL ME! THE LAST TIME YOU TWO GOT TOGETHER, I HAD A BAD REACTION!

THAT WON'T HAPPEN *THIS* TIME. YOU'RE GONNA GET THE SAME OIL ALREADY IN YOUR ENGINES.

Mechanics, if the oil in your bird's engine sight gauge looks milky or shows any discoloration, it could be mixed oil and not oil/water contamination.

When you service your oil system, add the same brand and type oil that's already in the engine. If the oil you have on hand is a different brand or another specification than what's already in the aircraft, drain the old oil from the oil tank like it says in Para 1-114 of TM 1-2840-248-23.

Mixing different brands of oils creates a potential for additive interaction. That could cause oil foaming. If oil foams, the engine can choke, the sump can flood and oil can be pushed out.

It's also bad for you to use open leftover cans of oil. Dirt in oil can cause engine oil contamination.

Table 1-4 of TM 1-2840-248-23 lists the primary and alternate lubricating oil specifications authorized for use. Also make a note that oil specification MIL-L-23699 has been changed to MIL-PFR-23699.

So remember, a mixture of ingredients is good for making a cake, but when it comes to mixing different brands of approved engine oils, it's not a good mix for your engines.

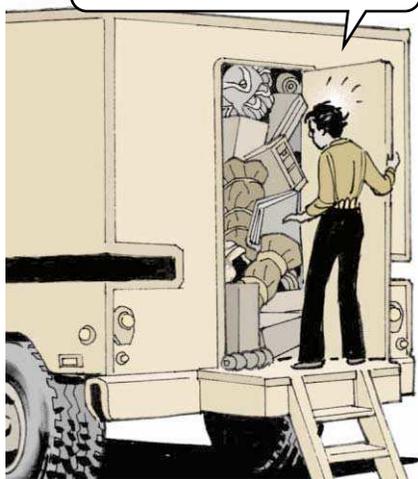




PACKING YOUR COMMO SHELTER AND YOUR MSE GENERATOR TRAILER TO GO TO THE FIELD CAN BE A REAL CHALLENGE.

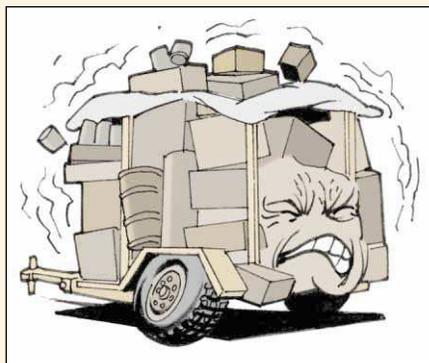
THERE'S **SO MUCH STUFF** AND **SO LITTLE ROOM**.

HERE ARE SOME OF THE **COMMON PACKING PROBLEMS** AND HOW TO **OVERCOME THEM...**



Trailer

Loading your MSE generator trailers with extra gear and fuel creates heavy problems. The weight of extra gear—camouflage netting, poles, cots, tents, fuel cans—cracks the trailer's leaf springs. It also causes the fenders to rub against the tires. Extra fuel on board is a fire hazard.

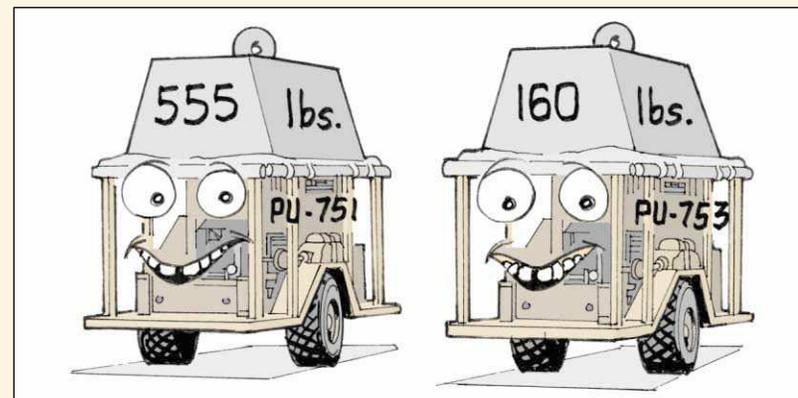


You can stow up to 555 pounds of MSE transit equipment on the PU-751 5-KW generator without damaging the trailer. The PU-753 10-KW generator can handle only 160 pounds.

Once you reach the limit, all other

gear must go elsewhere. Generally, limit gear packed on a trailer to:

- Shelter's COEI/BII
- Two 15-meter antennas or two 9-meter antennas
- Any necessary cables





On Top of the Shelter

Your shelter top has two thin layers of metal covering conductive foam and they tear quite easily. Tossing or storing heavy or sharp objects on the top just invites damage. Some of the worst offenders are concertina wire and ground rods.

The only load-bearing surfaces on your shelters are at the corners—not the roof itself!

If you have no choice but to load gear on your shelter's roof, put pallets or plywood under the equipment to protect the skin and let the corners bear most of the weight.

Also, remember that putting items on top of the shelter changes the center of gravity of the vehicle. Too tall a load is a safety hazard!

Again, only place things on top of the shelter if absolutely necessary. CECOM prefers that nothing go on top!

If your roof already has punctures or broken seams, get them fixed immediately. Shelter leaks cause electrical shorts. Find out what you can fix and what tools and materials you need to do the work in TB 43-0124, *Maintenance and Repair Procedures for Shelters*. It tells you all you need to know to do unit-level repairs.



Inside the Shelter

Looking inside a packed commo shelter can remind you of your dad's garage or your grandma's attic—stuff is stuck everywhere!

The fact is, if it must go and it can't go anywhere else, it winds up **in** your shelter. But far too often, those things that wind up in your shelter wind up breaking delicate commo equipment—switches, knobs, displays, handles, connectors and cables.

The only way to stop breakage is to plan your storage, then carefully pack and unpack.

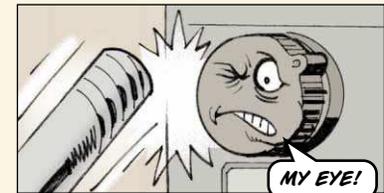
Planned storage starts with a list of what goes in the shelter, in what order, and notations next to the items that have a special area they fit in.

Store everything that doesn't go in the middle of the shelter first. Then store the middle items, putting the biggest and heaviest on the bottom.

Packing and unpacking usually causes most of the damage. Let's face it, you're always in a hurry, whether you're setting up or taking down. Items get tossed in and tossed out and often hit delicate commo equipment on the way.

Bodies move in and out grabbing equipment and bumping knobs and switches.

But here is the reality: With a good load plan in place, you can set up and take down just as fast as your neighbor, because adjustments won't need to be made and repacking won't need to be done. And just think of the time you'll save by not having to wait for your equipment to be repaired!



OE-254 ANTENNA ADVICE



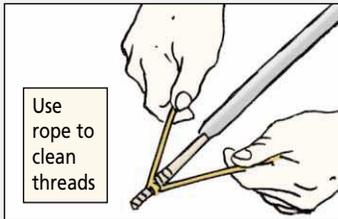
Dear Editor,

Before erecting an OE-254 antenna, the threads on the antenna elements must be cleaned and lubed. If not, corrosion quickly forms and makes it practically impossible to disassemble the antenna.

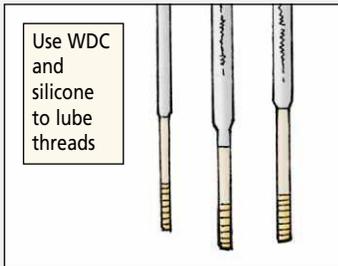
In the past, PS has recommended cleaning each element with the antenna's guide rope by looping the rope around the element threads and pulling it back and forth. This is good advice, because the friction does clean the connecting area. A small arms bore cleaner also works well to get the threads clean.

PS has also recommended using water-displacing compound, NSN 6850-00-142-9409, and silicone grease, NSN 6850-00-880-7616, on the threads.

The next step has been to wrap each connection with a layer of electrical tape, NSN 5970-00-419-4291, and here is where I disagree a bit.



Use rope to clean threads



Use WDC and silicone to lube threads

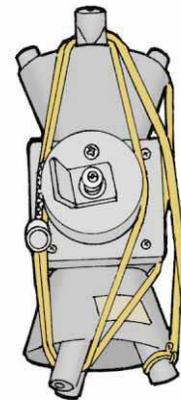
Electrical tape dries in the sun, shrinks and wears out. I recommend coaxial cable connector sealant. You can get it at your local electronics or automotive store.

Coaxial cable connector sealant is also the stuff to use to weatherproof the joint between the coax cable and the feedcone. It seems to last forever and once removed, the area looks like new.

Also, silicone grease, NSN 6850-00-880-7616, should be used on the cable/feedcone connection before the COAX-SEAL is applied.

One more thing: Do not use wire or any electrical conductor to reinforce the feedcone. It will degrade your signal and could short out your antenna.

Rope is OK, but no wire!



Brooke Clarke
Ukiah, CA

From the desk
of the Editor



Some good maintenance advice from an OE-254 antenna maintainer who knows his stuff. As a rule, PS does not endorse purchasing off-the-shelf items when the

supply system has the TM required items available. However, in this case, keeping the antennas in top-notch shape and making the assembling and disassembling job much easier takes precedence and we can recommend a trip to your local hardware or radio supply store.

OE-254 Antenna...

LET THERE BE LIGHT!



Dear Editor,

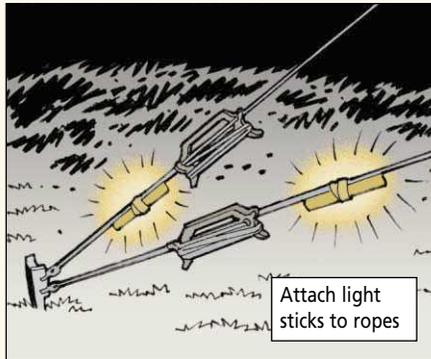
The guy ropes securing the OE-254 antenna are a tripping hazard at night. If you are in a populated area, the potential for someone to take a spill is even greater.

If you are erecting the antenna for a short period of time, use engineer tape to fasten flexible band light sticks, NSN 6260-01-230-8596, to the guy ropes.

Of course, this is only for those times when blackout conditions are not needed.

We find the sticks provide all-night illumination and provide an added touch of safety for all personnel.

SFC Gary Smith
201 Engr Bn(M)(C)

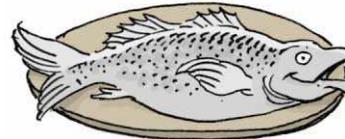


From the desk of the Editor

Flexible light sticks can serve many short-term lighting needs and this is certainly a good application. There are also IR chemical light sticks available for possible use with night vision goggles. Check with your commander before doing this. But with his okay, go for it. Thanks, Sergeant Smith.

I-REMBASS and REMBASS II...

Turn in One, Get the Other



HERE'S WHAT YOU GET WHEN YOU TURN IN THE IMPROVED REMOTELY MONITORED BATTLEFIELD SENSOR SYSTEM (I-REMBASS) TO GET THE REMBASS II SEISMIC/ACOUSTIC SENSOR SET...

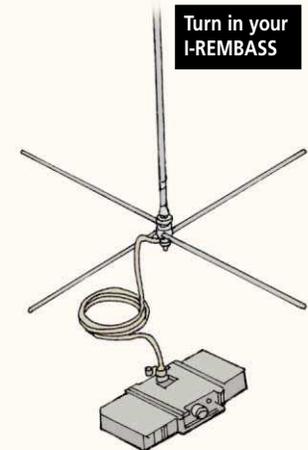
- If you are turning in an I-REMBASS set, DT-561A/GSQ, NSN 6350-01-346-3561, you'll get a REMBASS II magnetic plug-in module (MPM) motion detector kit, NSN 6350-01-477-7756.

You will have to requisition a REMBASS II seismic/acoustic sensor (SAS) motion detector kit, NSN 6350-01-477-7680, to power the MPM.

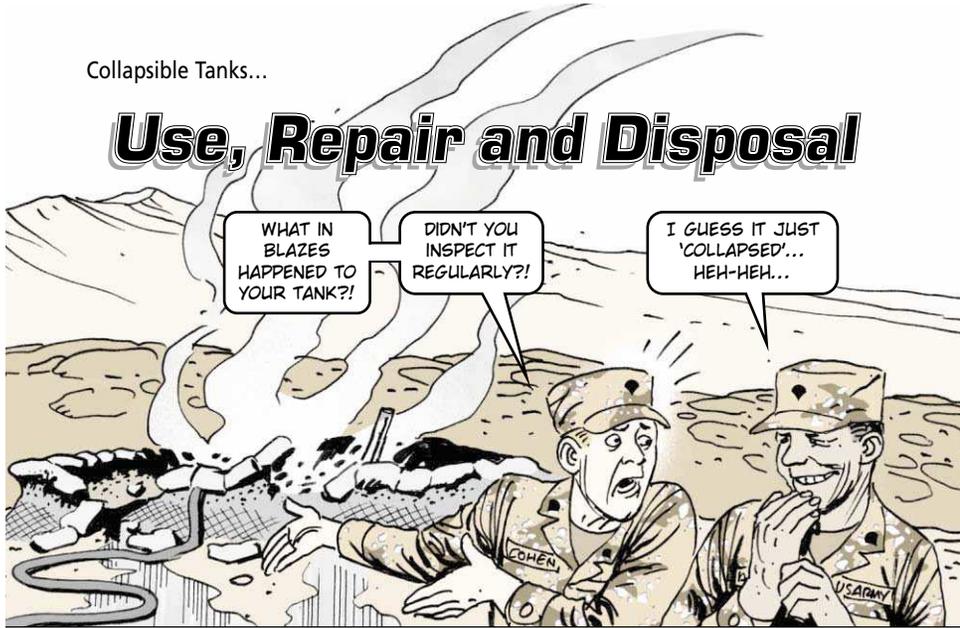
- If you are turning in a DT-565A/GSQ, NSN 6350-01-346-7717, you will receive a REMBASS II infrared plug-in module (IPM) motion detector kit, NSN 6350-01-477-7685. Like the MPM, you will have to requisition an SAS motion detector kit, since the IPM is also powered by the SAS.

- If you are turning in an I-REMBASS, DT-562A/GSQ, NSN 6350-01-348-3145, you will receive a REMBASS II SAS motion detector kit.

For further information, call the I-REMBASS folks at (732) 427-5388/DSN 987-5388 or (732) 532-3934/DSN 992-3934.



Use, Repair and Disposal



WHAT IN BLAZES HAPPENED TO YOUR TANK?!

DIDN'T YOU INSPECT IT REGULARLY?!

I GUESS IT JUST 'COLLAPSED'... HEH-HEH...

YOU CAN'T TELL MUCH ABOUT THE CONDITION OF COLLAPSIBLE FUEL OR WATER TANKS UNLESS YOU **INSPECT** THEM.

IN FACT, A VISUAL INSPECTION IS THE **ONLY** WAY TO BE SURE THAT A FUEL OR WATER TANK IS READY FOR DEPLOYMENT AND USE.

BEFORE YOU INSPECT, THOUGH, CHECK THE SHELF AND SERVICE LIFE OF THE TANKS.

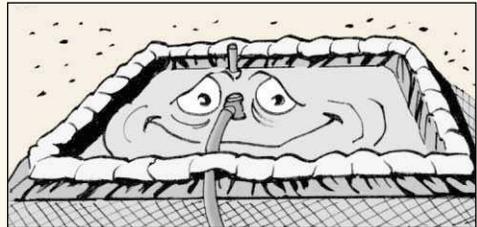


Shelf, Service Life

Fuel tanks from 3,000 to 210,000 gallons have a dry, indoor shelf life of 12 years. Fuel tanks not stored dry and indoors have a 5-year shelf life from date of receipt, or 12 years from the manufacturing date, whichever comes first.

Once fuel is put in a tank for the first time, the tank is good for 3 years max. Service life may be less than 3 years, depending on where and how often the tank is used.

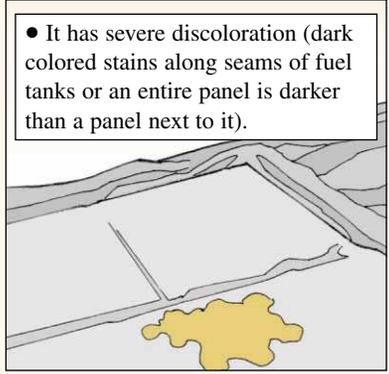
Water tanks from 160 to 50,000 gallons have no shelf or service life restrictions. So use them until they are no longer repairable.



Inspection Criteria

Dispose of a tank if:

- It has holes, tears or cuts through the coated fabric greater than 6 inches long.



- It has severe discoloration (dark colored stains along seams of fuel tanks or an entire panel is darker than a panel next to it).

- It has seams that show signs of coming apart.



- It has cracks in the exterior coating.

- It has fungus growth.



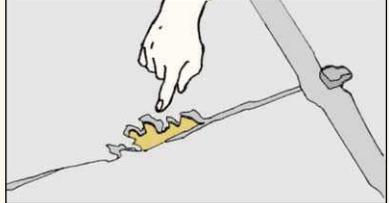
Repair a tank if:

- It has holes, tears or cuts through the coated fabric that are less than 6 inches long. Make temporary repairs using the tank's mechanical repair kit. Permanent repairs can be made with an adhesive repair kit, NSN 5430-01-359-1078 (for both fuel and water tanks).



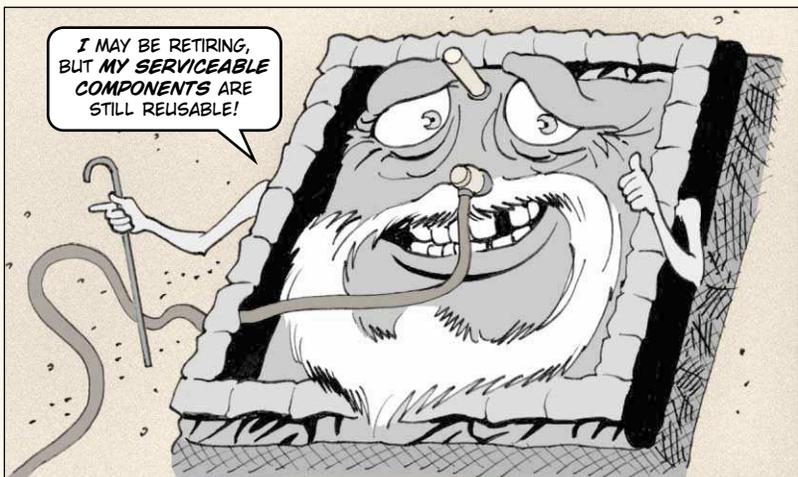
- It has abrasions that have exposed the nylon fabric underneath the outer coating. Re-coat with the adhesive repair kits listed above.

- It has blisters, which are areas where the coating appears to have separated from the fabric or where fluid has leaked between tank layers.



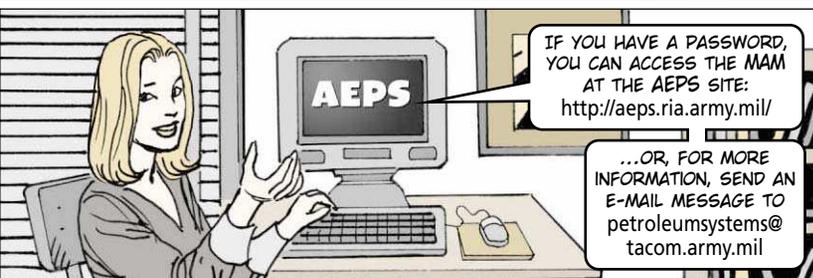
Fix this damage by puncturing and cutting away the separated coating. Temporarily repair the defect with the mechanical repair kit. Make permanent repairs with the adhesive kits listed above.

Re-use of Components



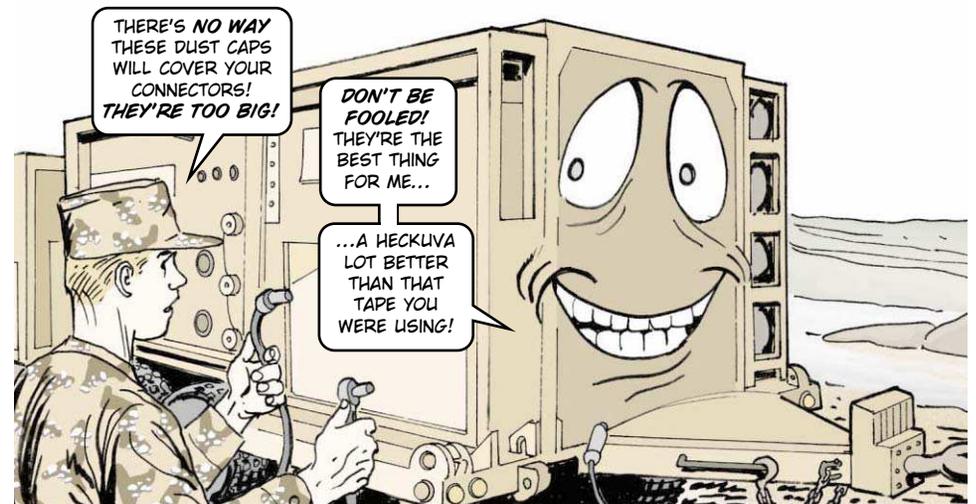
Once a tank's service or shelf life is used up, serviceable components should be removed for re-use before you get rid of the tank.

These items include berm liners, filter/discharge hose assemblies, drain hoses and control valves, gate valves and some other vent and hose assemblies.



600-GPH ROWPU...

USE THE DUST CAPS



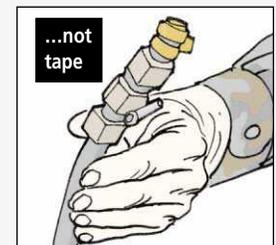
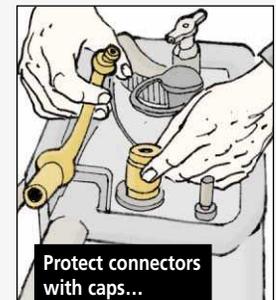
It's plain and simple...dust caps aren't much good if you don't use em.

Keep that in mind when you disconnect the chemical feed lines from the cans on your 600-GPH reverse osmosis water purification unit (ROWPU).

If you leave those lines uncovered, dust and dirt and anything gritty will get inside the chemical connectors.

Don't be fooled by the dust caps when you're ready to use 'em. They may seem too large to fit snugly over the connectors. But give 'em a try. They'll snap right in place over the groove on the connectors. Order the caps with NSN 5430-01-307-5989, 5430-01-307-2679, or 5430-01-307-4394. (Make a note that these NSNs will be added to TM 10-4610-215-10 and to the -24P.) You may have to try all three NSNs to find the right cap for your connector.

By the way, tape is no substitute for a missing connector cap. It leaves behind a sticky residue that attracts even more dust and dirt.



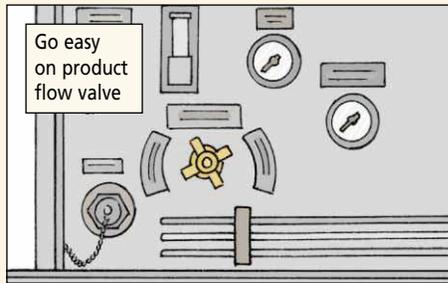
TRANSPORT AND PM TIPS



A ROWPU operator with a long face and rampant mood swings can only mean one thing: his water purification unit isn't working, or it's pumping out swamp water! Preparing the ROWPU for transport and some good PM will get rid of the long face and keep your ROWPU mission-ready.

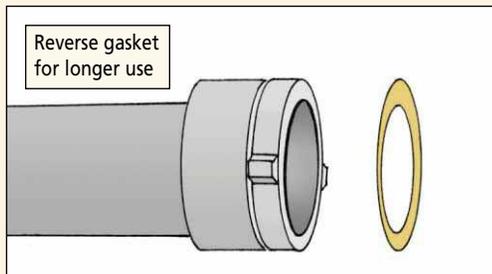
Travel Know-how

During travel, the product flow valve should be in the open, not closed, position. Also, it shouldn't be tightened. Tightening it in either position could damage the valve, because it could corrode in place. Then it takes excessive force to move the valve. The threads could be damaged or the valve stem broken off.



Get Rid of Groove

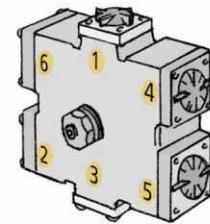
If the ROWPU's water suction hoses are quickly getting a "set" or groove in the gaskets, they're too tight. So tighten 'em just enough to hold a seal. Reverse the gaskets between uses to help keep the seals from getting grooved.



6-Way Valves

The 6-way valves are molded with numbers on them. When you take apart the valve, make sure you look at the numbers and mark the tubes with the same number as the 6-way valve connection. If you don't, you'll put your valve back together wrong.

Six-way valve has numbers 1-6 on it



Timer Reminder

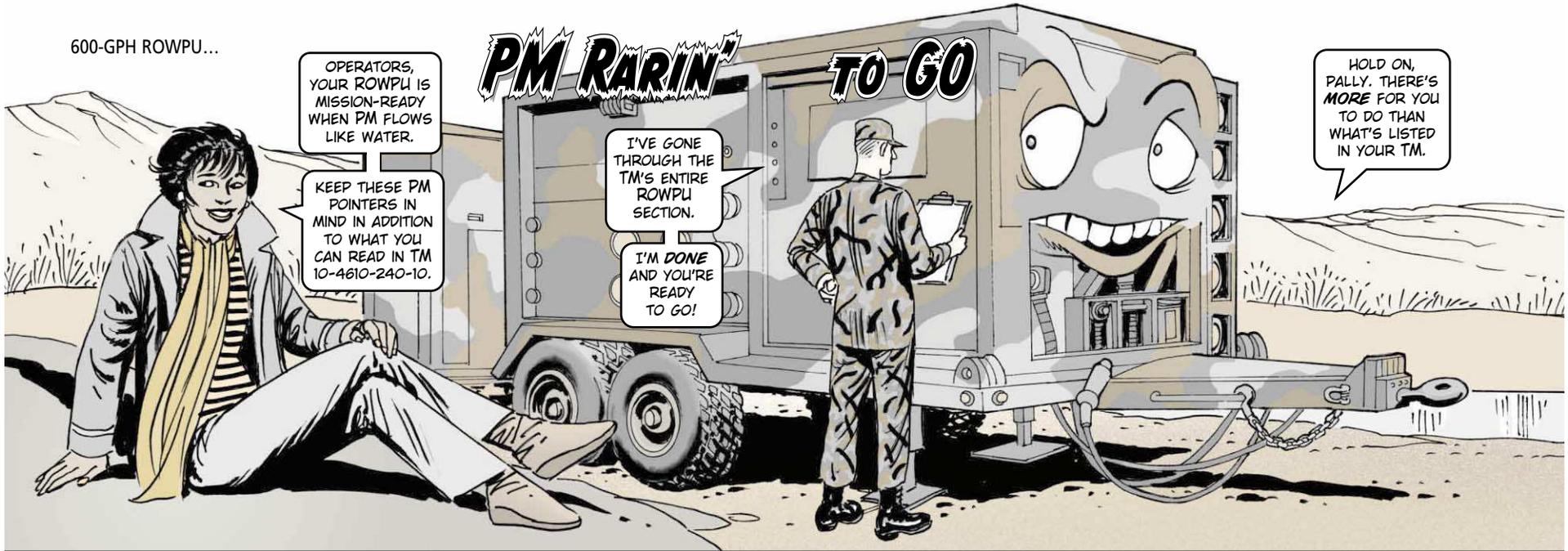
The timer has six tubes connected to it from the 6-way valve and two from the multimedia backwash piping. Mark these in the same manner. If the timer or the valve connections are wrong, the backwash cycles will be out of time. Then you can't backwash the multimedia filter, and your mission goes down the drain!

In fact, always tag, mark or identify every wire, hose, tube or line so that you can put your ROWPU back together the same way you took it apart.

Never bypass or override the timer during operations. The backwash cycle on the ROWPU cannot be controlled manually, and bypassing the timer could damage it. Worse yet, it's dangerous! If you touch the capacitor or any other "hot" part of the electrical timer, you could be seriously injured.

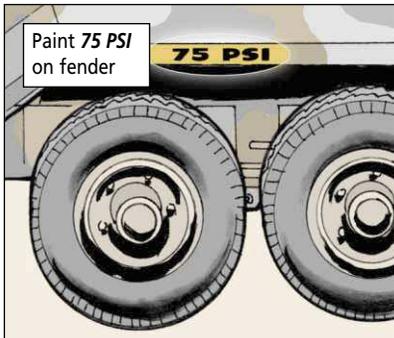
Remember, always allow the backwash cycle to complete itself naturally once it begins. Reset the switches before backwashing only if the timer is not functioning, but make no other changes.

600-GPH ROWPU...



Tire PSI

Keep the tires on your ROWPU at 75 psi at all times. Don't lower the pressure for off-road use. That puts a lot of stress on the sidewalls and can lead to a blowout. As a kindly reminder, have your mechanic paint "75 PSI" on the fender above the wheels.



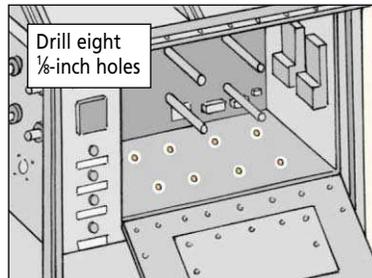
PS 604

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Junction Box Drain

Rain and water from high-pressure hoses pool inside the junction box. That water corrodes switches, relays and wiring.

Since you can't stop the water from getting in, give it somewhere to go. Have your mechanic remove the box and drill eight 1/8-in holes in the bottom of the box.



MAR 03

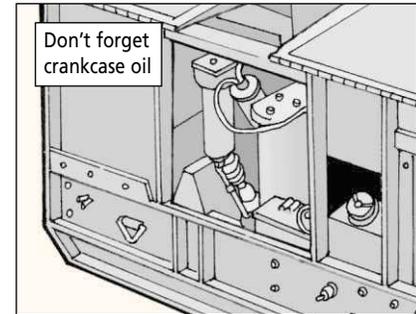
Generator Oil Level

When you pull PMCS on the ROWPU, don't forget about the 30-KW generator. If the generator doesn't run, neither does your ROWPU.

The generator is covered by the Army Oil Analysis Program (AOAP). Sample the crankcase oil like it says in the LO, and send the sample to the AOAP lab.

If a lab isn't available, have your mechanic drain and refill the crankcase oil and change the filter by the LO.

After an oil change, run the engine for five minutes and check for leaks. After shutdown, check the crankcase oil level and make sure it's at the FULL mark. Do not overfill the crankcase because too much oil will blow seals.



FOR COMPLETE GENERATOR PM, READ TM 5-6115-465-12 AND LO 5-6115-465-12.

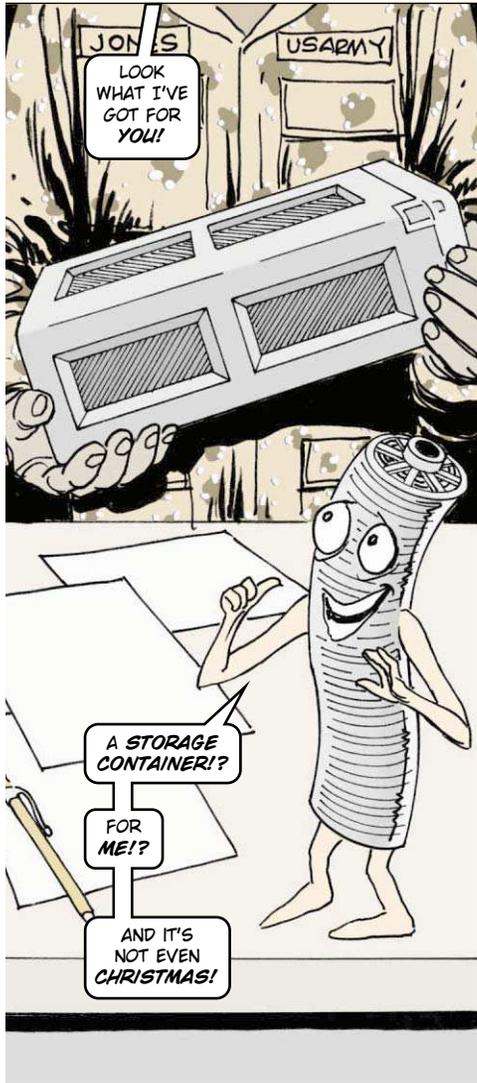
PS 604

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MAR 03



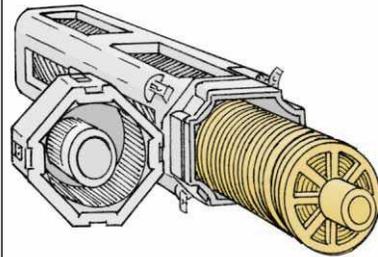
Filter Element Storage



Those 6-in diameter filter elements on the reverse osmosis water purification unit have a shortened life span if they're left lying on the vehicle exposed to the weather.

To increase the life of the elements, take them out during extended periods between operations and store them in water-tight containers.

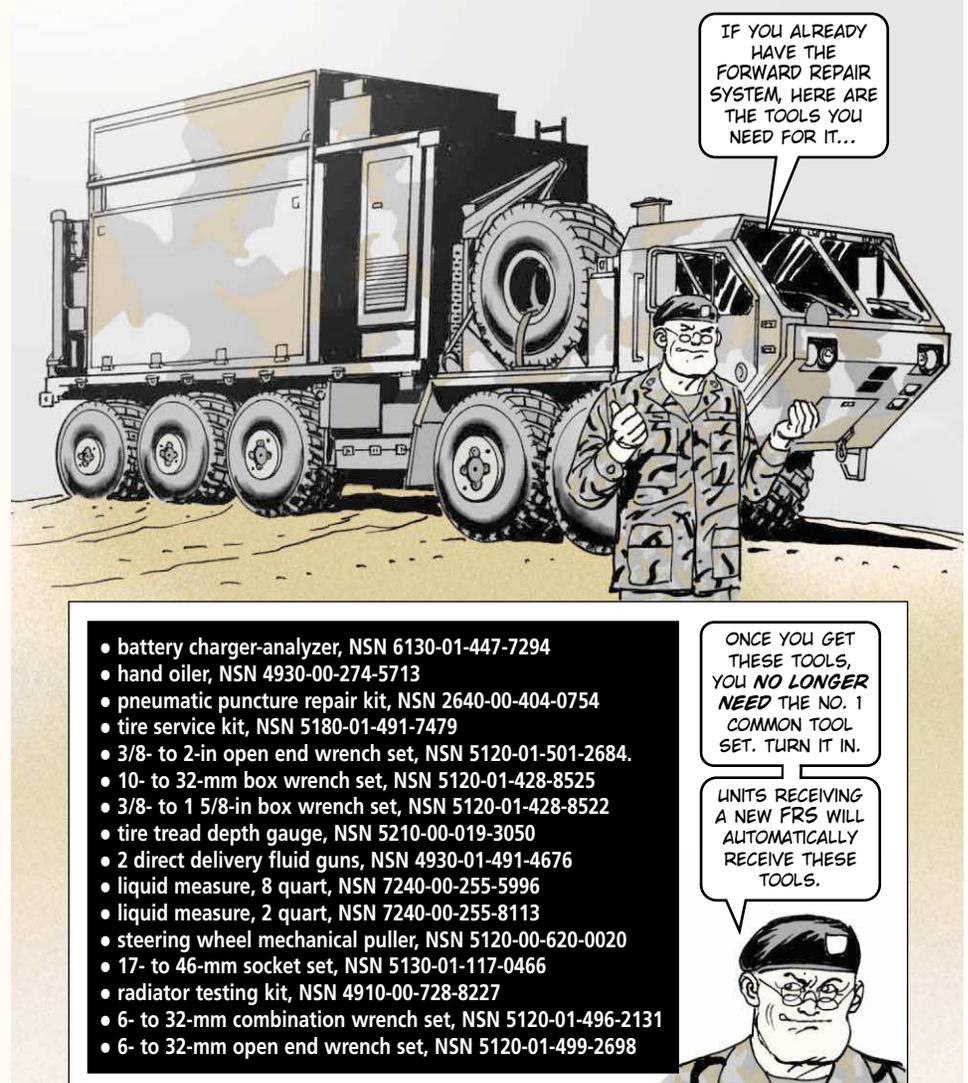
Store filter element in water-tight container



Order the reverse osmosis (RO) element reusable container assembly with NSN 4610-01-212-2704. That NSN brings you eight containers. Each container will hold one 6-in RO element and will retain the moisture that is in the element. It so happens that eight is exactly the number of containers needed for one 600-GPH ROWPU.

The desert sand-colored containers are lightweight and can be stacked four high and banded together. Store 'em in garrison or on the ROWPU.

TOOLS NEEDED FOR FRS



- battery charger-analyzer, NSN 6130-01-447-7294
- hand oiler, NSN 4930-00-274-5713
- pneumatic puncture repair kit, NSN 2640-00-404-0754
- tire service kit, NSN 5180-01-491-7479
- 3/8- to 2-in open end wrench set, NSN 5120-01-501-2684.
- 10- to 32-mm box wrench set, NSN 5120-01-428-8525
- 3/8- to 1 5/8-in box wrench set, NSN 5120-01-428-8522
- tire tread depth gauge, NSN 5210-00-019-3050
- 2 direct delivery fluid guns, NSN 4930-01-491-4676
- liquid measure, 8 quart, NSN 7240-00-255-5996
- liquid measure, 2 quart, NSN 7240-00-255-8113
- steering wheel mechanical puller, NSN 5120-00-620-0020
- 17- to 46-mm socket set, NSN 5130-01-117-0466
- radiator testing kit, NSN 4910-00-728-8227
- 6- to 32-mm combination wrench set, NSN 5120-01-496-2131
- 6- to 32-mm open end wrench set, NSN 5120-01-499-2698

2002 SUPPLY EXCELLENCE AWARDS



Active Army

MTOE Company with Property Book

Winner: HHB, 18th Field Artillery Bde, Ft Bragg, NC
 Runner-up: 77th Army Band, Ft Sill, OK

MTOE Company without Property Book

Winner: HHC, 4/123d Aviation Regt, Ft Wainwright, AK
 Runner-up: 552d MP Co, 8th MP Bde, Pusan, Korea

MTOE Battalion with Property Book

Winner: 505th Quartermaster Bn, Okinawa, Japan
 Runner-up: 205th Military Intelligence Bn, Ft Shafter, HI

MTOE Battalion without Property Book

Winner: 725th Main Support Bn, 25th ID (L), Schofield Barracks, HI

TDA Small (Lower)

Winner: HHB, 1/15th Field Artillery, 2d ID, Tongduchon, Korea
 Runner-up: HHD, 235th Base Support Bn, Ansbach, Germany

TDA Large (Upper)

Winner: 527th Military Intelligence Bn, Yongsan, Korea
 Runner-up: UNCSB-JSA Bn, 8th Army, Panmunjom, Korea

Small TDA SSA, Class 9 or ALL Classes

Winner: 80th Area Support Group (NSSG), Chievres, Belgium

Small MTOE SSA, Class 9 or ALL Classes

Winner: 71st Ordnance Co, Hanau, Germany
 Runner-up: Co G, 52d Aviation Regt, Wonju, Korea

Medium MTOE SSA, Class 2, 4, 7

Winner: 26th Quartermaster Supply Co, Hanau, Germany
 Runner-up: HQ/A Co, 801st Main Support Bn, Ft Campbell, KY

Medium TDA, SSA, Class 9 or ALL Classes

Winner: 22d Area Support Group, Vicenza, Italy
 Runner-up: 20th Support Group, Waegwan, Korea

Medium MTOE SSA, Class 9 or ALL Classes

Winner: Special Troops Bn, 98th Maint Co, Ft Richardson, AK
 Runner-up: HQ Distribution Center, 296th Brigade Support Bn, Ft Lewis, WA

Large MTOE SSA, Class 2, 4, 7

Winner: 702d Main Support Bn, 2d ID, Tongduchon, Korea

Large TDA SSA, Class 9 or ALL Classes

Winner: Regional SSA, 100th Area Support Group, Vilseck, Germany

Large MTOE SSA, Class 9 or ALL Classes

Winner: C Co, 801st Main Support Bn, Ft Campbell, KY
 Runner-up: Maintenance Troop, 11th ACR, Ft Irwin, CA

National Guard

MTOE Company with Property Book

Winner: HHD, 730th Quartermaster Bn, Asheville, NC
 Runner-up: 3631st Maint Co (GS), Santa Fe, NM

MTOE Company without Property Book

Winner: 1436th Engr Co (CSE), Flint, MI
 Runner-up: Co E, 126th Aviation Air Tactical Support, Providence, MA

MTOE Battalion with Property Book

Winner: HQ, 2d Bn, 147th Aviation, Saint Paul, MN
 Runner-up: 1st Bn, 201st Field Artillery, Charleston, WV

MTOE Battalion without Property Book

Winner: 150th Engr Bn, Meridian, MS
 Runner-up: HQ, 1-150th Aviation Bn, West Trenton, NJ

TDA Small (Lower)

Winner: HQS, 197th Regiment Regional Training Institute, Kingwood, WV
 Runner-up: HQ, 209th Training Regt, Ashland, NE

Small MTOE SSA, Class 9 or All Classes

Winner: 192d Support Bn, Salinas, PR
 Runner-up: Co B, 193d Aviation Regt, Wheeler AAF, HI

Medium MTOE SSA, Class 9 or ALL Classes

Winner: USPFO Supply Center, Lincoln, NE
 Runner-up: Supply and Services Division USPFO, Camp Douglas, WI

Large MTOE SSA, Class 9 or ALL Classes

Winner: USPFO (SSA), Alexandria, LA
 Runner-up: DOL Warehouse (DSU), Little Falls, MN

Army Reserve

MTOE Company with Property Book

Winner: 1011th Quartermaster Co (89th RSC), Independence, KS
 Runner-up: HHC, 304th CMMC (311th COSCOM), Los Angeles, CA

MTOE Company without Property Book

Winner: 650th Transportation Det (81st RSC), Wilmington, NC
 Runner-up: C/411th Engr Bn (9th RSC), Guam

MTOE Battalion with Property Book

Winner: 396th Combat Support Hospital (70th RSC) Vancouver, WA
 Runner-up: 844th Engr Bn (81st RSC), Knoxville, TN

MTOE Battalion without Property Book

Winner: 325th Quartermaster Bn (89th RSC), Belton, MO
 Runner-up: 321st Ordnance Bn, (99th RSC), Charleston, WV

TDA Small (Lower)

Winner: SETAF Augmentation Unit (7th ARCOM) Vicenza, Italy
 Runner-up: 4249th Port Security Detachment (89th RSC), Pochantas, IA

TDA Large (Upper)

Winner: Supply and Service Division—DCSLOG, 7th ARCOM, Schwetzingen, Germany
 Runner-up: HHC, 3747th Training Bde (7th ARCOM), Grafenwoehr, Germany

Small TOE SSA, Class 9 or ALL Classes

Winner: Det 1, 1011th Quartermaster Co, (89th RSC), Pittsburg, KS
 Runner-up: 1015th Maint Co, (81st RSC), Forest Park, GA



LESSONS LEARNED A CALL AWAY



LOOKING FOR A CENTRAL LOCATION FOR "LESSONS LEARNED" ON RECENT ARMY OPERATIONS?

TAKE IT FROM THE ON-LINE WARRIOR AND CHECK OUT FORT LEAVENWORTH'S CENTER FOR ARMY LESSONS LEARNED (CALL) WEB SITE.

THE SITE OFFERS DOZENS OF LINKS TO ARMY SCHOOLS, ON-LINE TRAINING MANUALS AND VIDEOS, AND "LESSONS LEARNED" FROM OPERATIONS IN AFGHANISTAN, SOMALIA, THE NATIONAL TRAINING CENTER (NTC) AND MANY MORE.

JUST POINT YOUR BROWSER TO:
<http://call.army.mil/>
 FOR MORE INFORMATION,
 CALL DSN 552-3035/2255 OR
 (913)684-3035/2255.



PS 604

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MAR 03

Connie's
 POST
 SCRIPTS



DOING PM
 SHOULD BE
 SECOND
 NATURE!



MSE Tester

Use loop interface tester, NSN 6625-01-448-8798, to take the guesswork out of connecting to circuit and packet loops of the MSE system. This hand-held, battery-operated tester can tell you where your problems are. For more information on the tester, contact the CECOM POC at DSN 992-8311 or (732) 532-8311. Or e-mail them at:

lorraine.foster@mail1.monmouth.army.mil

M1112 WATER TRAILER BEARINGS

The wheel bearing listed in TM 9-2330-397-14&P is for the bearing only. To get the race and outer bearing assembly, order NSN 3130-00-100-5997 (Fig 13, Item 25). The inner bearing and race assembly come with NSN 3130-00-100-5303 (Fig 13, Item 22).

FMTV Cargo Cover Repair Kit

NSN 2540-01-496-4442 gets a cargo cover repair kit for the FMTV 2½-ton and 5-ton trucks. This kit is used for minor repairs only. Instructions come with the kit.

M989 HEMAT SLACK ADJUSTER NSN

Use NSN 2530-01-489-0369 to get the rear slack adjuster for the ammunition trailer's mechanical brake system. The NSN shown as the first Item 1, Fig 9 of TM 9-2330-383-14&P, gets the wrong part.

MICRO RAPPEL LIMIT CHANGE

The care and use pamphlet that comes with the micro rappel system, NSN 4240-01-498-8810, limits the number of rappels to 10 before the rope has to be replaced. Actually, the rope can handle up to 50 rappels. After that, use NSN 4020-01-498-8553 for an 82-ft replacement rope. NSN 4020-01-498-9109 gets a 660-ft rope that can be cut into 8 separate 82-ft lengths.

AB-1339/G Antenna Covers

MSE units, masthead caps, NSN 5340-01-270-5083, keep the weather and the dirt out of mastheads when the AB-1339/G antenna is stored on trailers. Use them.

DISTRIBUTION: To be distributed in accordance with the initial distribution number (IDN) 340312, requirements for TB 43-PS-Series.

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

SPLIT LOCK RINGS KILL!



CAGE THE KILLER!

TM 9-2610-200-14

WARNING

PREVENT PERSONAL INJURY

Place tire and wheel in safety cage before inflating. All personnel should be at least 10 feet from the safety cage. Stay out of the trajectory of components. Minimum air hose length is 10 feet.