

Issue 523

PS

June
1996

THE
PREVENTIVE
MAINTENANCE
MONTHLY

TB 43-PS-523

Read and
heed, then
pass along!

IS YOUR
EQUIPMENT
PREPARED...

... FOR
THE FIGHT
OF YOUR
LIFE?

Approved for
Public Release;
Distribution Is
Unlimited

CAN YOU
SURVIVE
IMMORTAL
COMBAT?

SEE PAGE 27

Out of Sight, Out of Mind

Equipment packing and storage are not glamorous jobs. And yet without proper packing and storage, you won't move... you won't shoot... you won't communicate.

Some soldiers are now getting ready to deploy. What they take needs to be packed carefully and what they leave needs to be stored right.

Before you put any equipment in storage, clean, preserve and pack it like its TM says. A properly stored piece of equipment can be removed from storage and be in the same condition as when it was put in storage.

Before you pack any equipment, have a packing plan. A good packing plan starts by thinking about unpacking. Will your equipment survive the trip?

What will you need first when you reach your destination?

Storage and packing all too often fall into the realm of out-of-sight, out-of-mind. But eventually everything stored and everything packed will see the light of day. Whether that light reveals a pleasant surprise or an ugly mess is up to you.





THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-523, 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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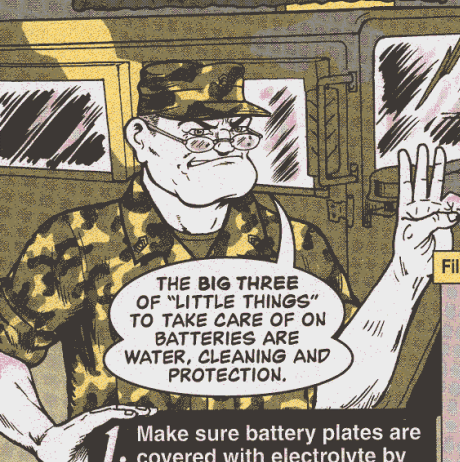
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AS EASY AS

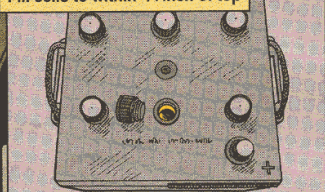
ONE-TWO-THREE

Take care of the little things (like doing PM on lead-acid batteries) and the big things (like starting problems) will take care of themselves.



THE BIG THREE OF "LITTLE THINGS" TO TAKE CARE OF ON BATTERIES ARE WATER, CLEANING AND PROTECTION.

Fill cells to within 1/4 inch of top



1. Make sure battery plates are covered with electrolyte by adding distilled water when needed.

The chemical action between the electrolyte and the cell plates produces electricity. Without it, batteries discharge and die.

Remember, more is not better. Too much water—like filling cells to the top—is just as bad as too little. When the cell is too full, electrolyte is flushed out during charging. Since the battery can't recharge itself, it dies. Fill cells with distilled water to within 1/4 inch of the filler cap necks.

You can get six 1-gal bottles of distilled water with NSN 6810-00-682-6867. Get one 5-gal bottle with NSN 6810-00-356-4936.

In a pinch—to save the battery—rainwater, air conditioner condensation or even tap water will do. Filter it through a clean cloth before using it, though.

Fill the battery using battery filler syringe, NSN 6140-00-643-4492. Carry a supply of water in battery filler, NSN 6140-00-635-3824. Both items are in the Common shop sets.

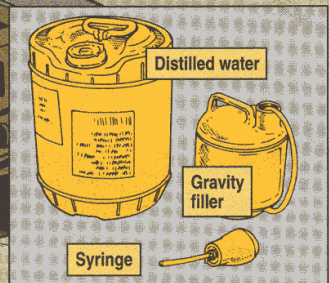
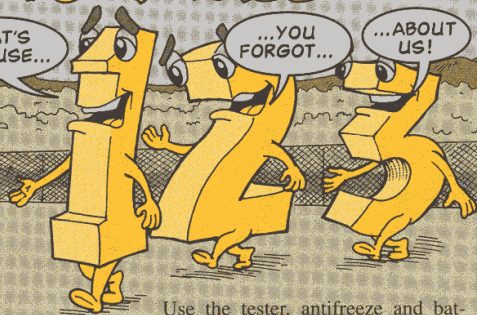


I CAN'T BELIEVE THE BATTERY'S DEAD!

THAT'S BECAUSE...

...YOU FORGOT...

...ABOUT US!



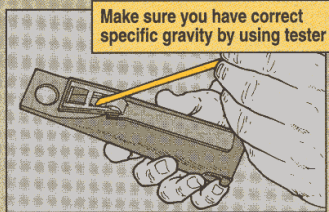
Even with the syringe, you can overfill, so be careful.

In hot weather, electrolyte expands. If batteries were full at cooler temps, they'll be overfull when it's hot. You can remove water with the syringe, too.

Run the engine for 15 minutes after adding water in freezing temperatures. The charging system will then mix the water and electrolyte. A fully charged battery won't freeze down to -90° F.

You can tell how much charge a battery has by measuring the electrolyte's specific gravity.

Use the tester, antifreeze and battery, NSN 6630-00-105-1418. The right charge is shown by a specific gravity reading of 1.280.



Put the battery tester to work when:

- ⊕ Pulling the equipment's semiannual service.

- ⊖ You suspect acid was flooded out by overfilling with water.

- ⊕ You're troubleshooting the charging system.

- ⊖ Cold weather is just around the corner.

- ⊕ You're putting the battery into service for the first time.

Instructions are on the tester, but more information is printed on Pages 3-2 through 3-8 of TM 9-6140-200-14.

2. Keep dirt and corrosion cleaned off.

Corrosion eats up metal parts on and around batteries. Dirt and corrosion also hold moisture. This moisture can close the circuit between the positive and negative terminals and discharge your battery.

SCRAM, YOU DIRTBALLS AND CORROSION CREEPS!



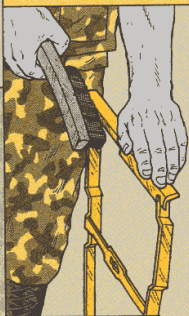
UH-OH, PM IS ON TO US!

Wipe off light dirt and corrosion with a cloth. To fight heavy corrosion, take out the battery and any metal parts that can be removed. Scrub the battery with a baking soda and water mix. Mix 1/2 pound of soda in a gallon of water. A pound of baking soda is NSN 6810-00-264-6618. Get 100 pounds with NSN 6810-00-290-5574.

WE'RE THE TEAM TO TACKLE CORROSION!



Use wire brush to scrape off rust and old paint



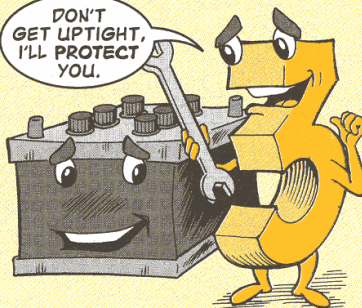
Soak metal parts in the mix, then use a wire brush to scrape off rust and old paint. Use a torch and scraper, if necessary, but only on the metal parts you've removed.

Work with the torch only in places where there's no danger of fire. Keep it away from the battery, too. It can explode.

After cleaning, rinse with lots of clean water and dry well. Protect bare metal with bituminous coating compound, NSN 8030-00-290-5141. Shine up battery posts and clamps with brush, battery terminal, NSN 5120-00-926-5175.

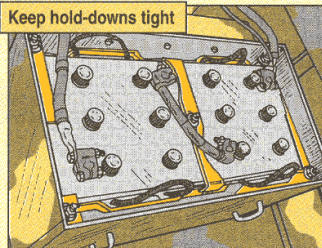
3. Protect against damage.

DON'T GET UPTIGHT, I'LL PROTECT YOU.

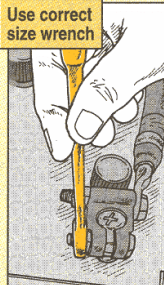


Snug battery hold-downs tight enough to keep the battery from banging around, but not enough to crack it.

Keep hold-downs tight



Use correct size wrench



Protect terminals and cable connectors, too. Always use the right-size wrenches, not an adjustable wrench, when loosening or tightening nuts.

Never overtighten the connectors. That can stretch the clamp and loosen the connector's grip.

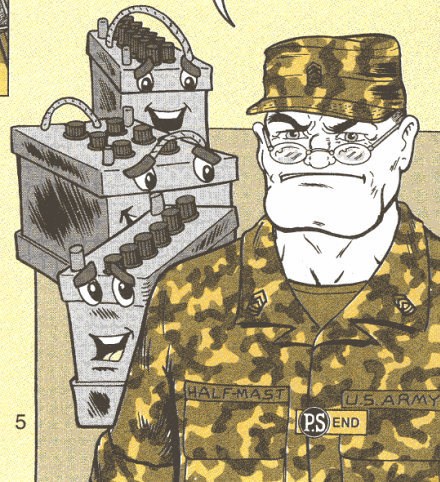
Loosen the bolt to remove the connector. Never pry it off with a screwdriver. Chances are you'll break the battery post.

Assure tightness of battery connectors visually or with an easy touch, not with a pair of pliers or other tools.

Support long cables with tiedown straps, NSN 5957-00-074-2072.

When you change a cable, remove the bolt and the cable only. Leave the terminal connected to the battery post. That keeps your connection secure.

IF YOU DO THESE LITTLE THINGS, AND FOLLOW THROUGH ON PROBLEMS REPORTED BY THE OPERATORS, BATTERIES WILL LIVE A LONG AND PRODUCTIVE LIFE.



Rear Axle Clatter



Drivers, if you hear loud popping noises coming from the rear of your truck when you turn a corner, don't panic.

That noise is coming from the rear axles. The outer wheels rotate faster than the inner wheels when turning a corner. As torque builds up between the clutch plates in the differential, the plates "pop" to help release torque pressure. No damage is being done.

M915A2, M916A1 ...

Lower the Pressure

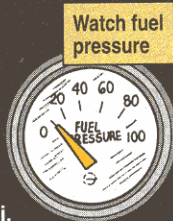
TM 9-2320-363-10's PMCS puts too much pressure on your truck, drivers. It'll come up NMC every time.

So, ease off. In Item 34e, the fuel pressure check, drop the call for 35 to 65 psi. Change it to "check that fuel pressure gauge reads more than 7 psi." The Not Ready/Available If: column should read "Gauge reads less than 7 psi."

This is a BEFORE operation check while the engine is idling. At idle, the engine fuel pressure will never reach 35 psi.

You should then add the following to Item 36 (a DURING operation check):

- ✓ Check that the fuel pressure gauge reads 35 to 65 psi.
- ✓ Equipment is Not Ready/Available If: The gauge reads less than 35 psi.



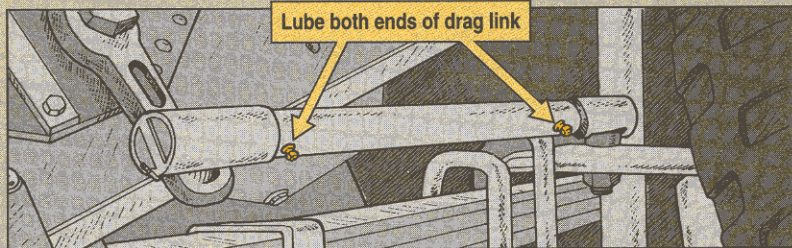
Missing Link Lube?

OHH,
MY ACHING
ARMS!

WELL, MAYBE
NEXT TIME YOU'LL
REMEMBER TO LUBE
THE DRAG
LINK.

Remember to lube the drag links on your vehicles that have them. Without lube, links can freeze up, making steering a muscle-building experience.

Lube them the right way. Remove the cotter pins from each end and loosen the end caps two or three turns.

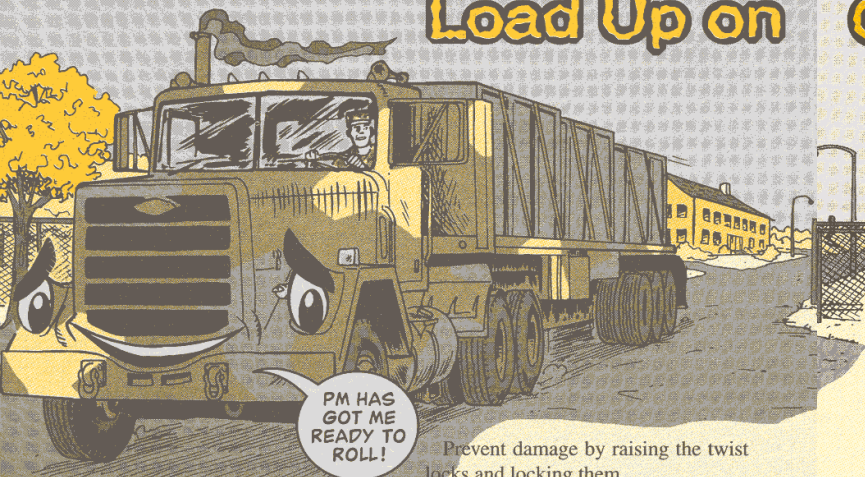


That lets grease get out to the ends of the drag link where it's needed.

Once you've lubed the link, tighten the end caps. Then back them out one-half turn or less to line up the holes for the cotter pins.

Always use new cotter pins, too. Old ones are weaker and can fail.

Load Up on Cargo Hauling PM



PM HAS GOT ME READY TO ROLL!

Prevent damage by raising the twist locks and locking them.

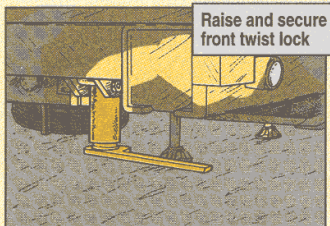
Twist-lock handles aren't built to be used as steps. When you've got to climb onto—or off—the trailer, use something else for a step. Try the rear end protection bar, for example.

Does your trailer have an obvious bend toward the bed front? That's probably why 35- and 40-ft containers won't sit flush and why the removable container locks (F pins) can't be installed right.

Kee your M872s moving supplies with these preventive maintenance tips:

Bed and Boards

The front container tie-down twist locks will damage M915-series tractors if you leave them down. During turns, the lock handle hits the splash guards.



Raise and secure front twist lock



If trailer bends towards bed front, report it

If you notice a bend or have other "security" problems, let your mechanic hear about it. Never haul containers that you cannot lock into place.

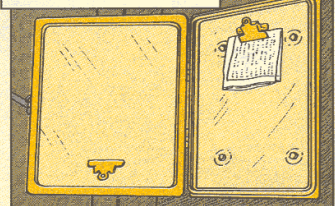
Use NSN 5315-01-270-1875 to get the bulkhead pin that's not identified in TM 9-2330-359-14&P. Make a note in Fig 48 of Change 2.

You'll find the rubber mounting grommet for side clearance lights in Fig 1 of the -14&P. The grommet is Item 10.

Box-er Shorts

Is your trailer's pamphlet box shot? Get a new one with NSN 2540-01-100-3894. It's not in the -14&P, so make a note.

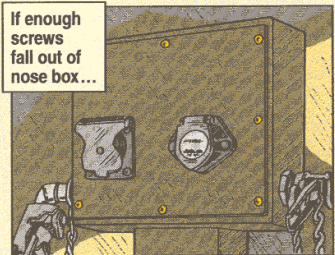
Get new pamphlet box with NSN 2540-01-100-3894



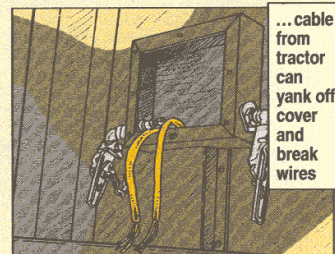
Air lines need protection as they pass through the nose box. Grommets, NSN 5325-00-291-9366, keep the lines from rubbing through, which would cause air pressure loss. The grommets are Item 5 in Fig 12.

Eyeball the nose box for loose screws. Vibration can shake the screws loose until they fall out. Without a tight seal, water gets into the box and can short out the electrical connections necessary to light your trailer.

If enough screws fall out of nose box...



... cable from tractor can yank off cover and break wires



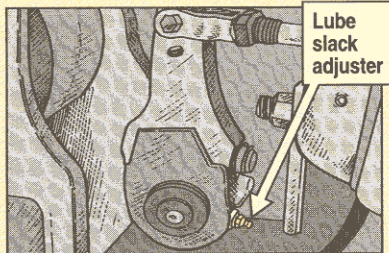
Running Gear

You need wrench, NSN 5120-00-203-4766, to tighten the lug nuts. It has openings of $\frac{13}{16}$, $\frac{13}{16}$, $1\frac{1}{4}$ and $1\frac{1}{2}$ inches.

To get the correct grease seal for the hub, you've got to do a little extra work. NSN 5330-01-049-4093 is right for the seal, but you can get three different seals with that NSN.

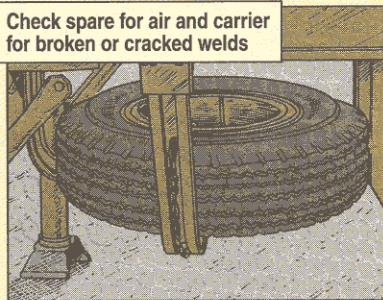
Order on a DD Form 1348-6, using that NSN, part number B370036BGO and CAGE 01212. Write "2B" in card columns 65 and 66. That tells supply not to substitute.

Before a mission, check the slack adjusters on your trailer brakes. Make sure the adjusters and camshafts get lubed. There are six fittings on each axle. Without lube, brake freezeup is a real possibility—and real trouble on the road.



Always check the spare tire for air pressure. Nothing's worse than a flat spare. While you're checking, look at the welds on the spare carrier. You don't want to lose the spare/carrier while you're moving. Report any broken or missing welds to your mechanic.

Check spare for air and carrier for broken or cracked welds

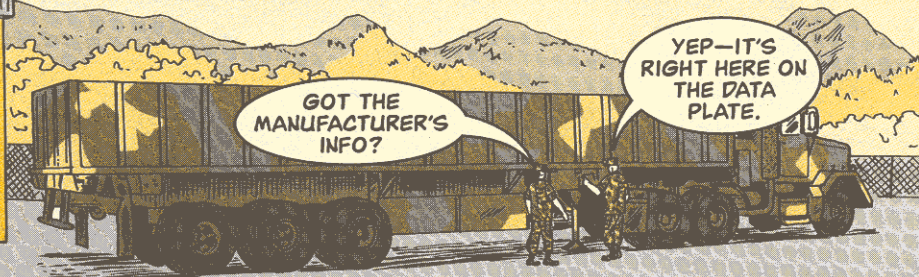


Too Many Cooks?

Trust the Usable On Code (UOC) in the -14&P to get you the right part for your trailer. More than one manufacturer builds 872s, so the UOCs not only identify models, but manufacturers, too.

You need to know that info, so check your trailer's data plate.

Also, don't be put off if a repair part you get from supply looks different from the original. Remember that more than one manufacturer is involved. If the part fits and works, use it.








Add a Grease Fitting



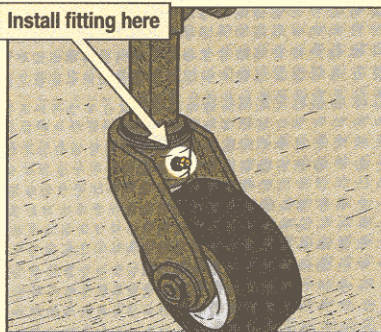
Cut your annual service workload, mechanics, by installing a grease fitting on the M796 4-ton bolster trailer's landing leg support plate.

Up to now, you've had to remove the bearings in the plate and repack them every year. You can put a stop to that with this info:

-  Take apart the landing leg according to Pages 5-5 through 5-8 in TM 9-2330-287-14&P.
-  Using an 11/32-in drill bit, drill a hole into the support retainer plate.
-  Tap the hole completely through with a 1/8-in NPT tap.
-  Install a 1/8-in lube fitting, NSN 4730-00-050-4208.
-  Reinstall the plate according to Pages 5-8 through 5-11.

Be careful not to over-lubricate the bearings. Just a couple of pumps should be enough.

Then every year you add a little grease instead of doing a teardown.



Abuse It and Lose It

Abuse any piece of equipment long enough and it'll break down. That's a fact of life.

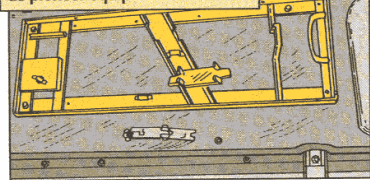
Because it's a recovery vehicle, some soldiers think the M88A1 is indestructible. Wrong! The M88A1 needs as much care as any vehicle it recovers.

Use these tips to keep your recovery vehicle on the job:

Keep It Together

When you take rigger seats, pioneer equipment racks, and auxiliary power unit covers off for PMCS, repairs or training, make sure you put them back on when you're through. Without all of its parts, the M88A1 can't do its job.

Don't leave off components such as pioneer equipment racks



Lubing

Always lube and exercise your M88A1's components like the TM tells you.

Lube and exercise components such as blade lock and blade



For example, don't forget the boom pins and blade latch.

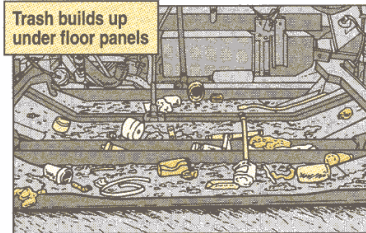
If rust or corrosion gets to either of them, your vehicle is out of business. Your M88A1 will have to go to higher maintenance to have the parts replaced.

Too much lube can be a problem, too. Never overflow oil levels. Take the M88A1's engine, for instance.

Keep It Clean

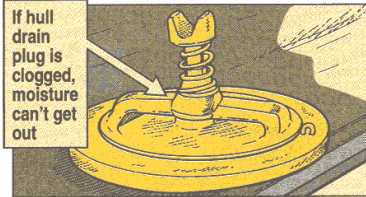
Trash, dirt and oil have a habit of building up under the M88A1's crew compartment floor panels.

Trash builds up under floor panels



In some cases, the buildup is bad enough to clog the hull drain plugs. When that happens, you'll have to pull the floor panels and shovel out the muck.

If hull drain plug is clogged, moisture can't get out



Clogged hull drain plugs also let oil and water sit under the floor panels. Water causes rust and corrosion. That destroys wiring harnesses, hydraulic lines, fire extinguisher tubes and other parts.

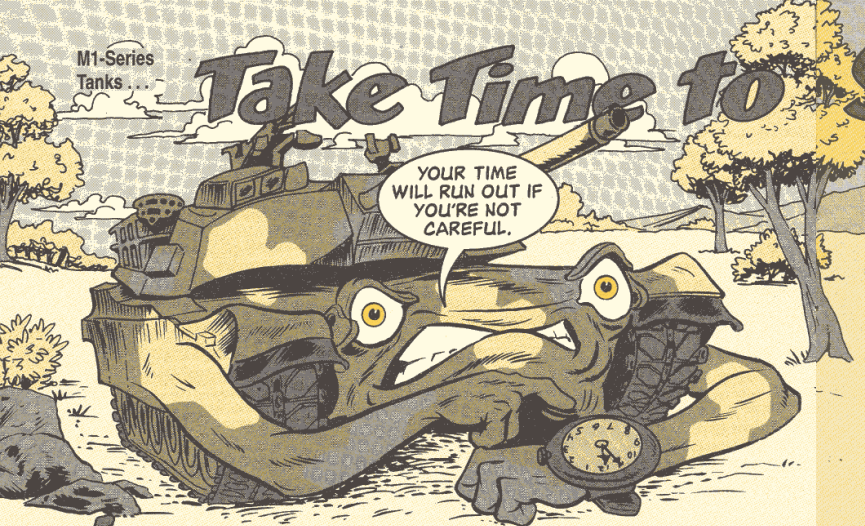
And when you combine the oil with MRE wrappers, cans, paper and other trash that's tossed out of sight under the floor panels, you've got other problems just waiting to happen.

Prevent these problems by cleaning under the floor panels at least once a year.

Since the powerpack is set at a slight angle, overfilling the crankcase can cause oil to blow out the filler tube and onto the hot powerpack—especially when driving on a slope. That's a real fire hazard.

Check your LO and add only the amount of oil indicated by the dipstick.

Take Time to Stay Alive



It only takes a few seconds to go from being a perfectly healthy crewman to a perfectly dead one. That's what happens when you don't think safety inside the turret of an M1-series tank.

Follow these tips to keep yourself in good operating condition:

- Check all turret safety guards. Missing or improperly installed guards can't protect you when the turret is in operation.

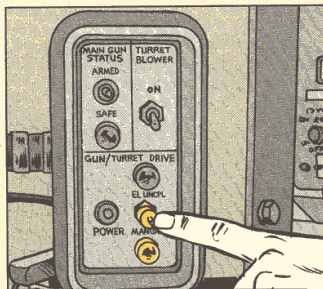
Check the guard pads, too. Guards protect you from serious injury, but you can still get bruised or cut if the pads are worn out. Replacement pads aren't available, so your mechanic will have to install new guards.

- Make sure the intercom system is used whenever the tank turret is traversed. That way, even when you can't see your buddies, you can keep track of them.

- Never reach or lean over the breech—for any reason—during operation. If it moves and you're in the way, you suffer.

- Keep your feet out of the turret basket when in the loader's or gunner's position.

If you're a mechanic working on the gun, be sure ALL unnecessary



Keep GUN/TURRET DRIVE switch in MANUAL to head off sudden movement.

power is off. Keep the turret and gun locked if possible. Use the GUN/TURRET DRIVE switch on the loader's panel. In MANUAL, it prevents sudden movement.

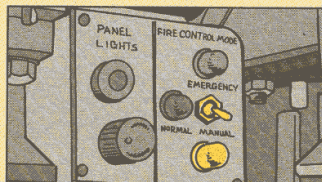
- Alert the crew and make sure all areas around the turret, main gun, and breech are cleared before operation and before using palm switches. Depressing the palm switches can cause the main gun or turret to move suddenly if **any one** of the following is true:

- The MRS lever is in the IN position.

- The GUN/TURRET DRIVE switch on the loader's panel is in the POWERED position and FIRE CONTROL MODE switch on the gunner's primary sight is in the NORMAL or EMERGENCY position.

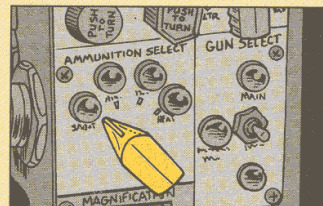
- The GUN/TURRET DRIVE switch is moved to or from the EL UNCLPL position.

- The FIRE CONTROL MODE switch is in the NORMAL or EMERGENCY position and the main gun is over the rear deck and below 0° elevation.



Main gun may move if FIRE CONTROL MODE switch is not in MANUAL position.

- The AMMO SELECT switch is moved from one ammo position to another.

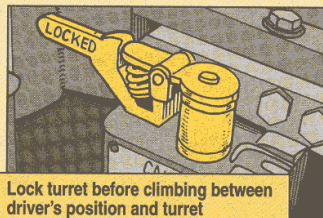


Do not move AMMO SELECT switch while palm switches are depressed.

- The TARGET RANGE switch is changed.

- Never move between the driver's position and the turret unless everyone in the turret knows you are moving AND you know the turret is locked.

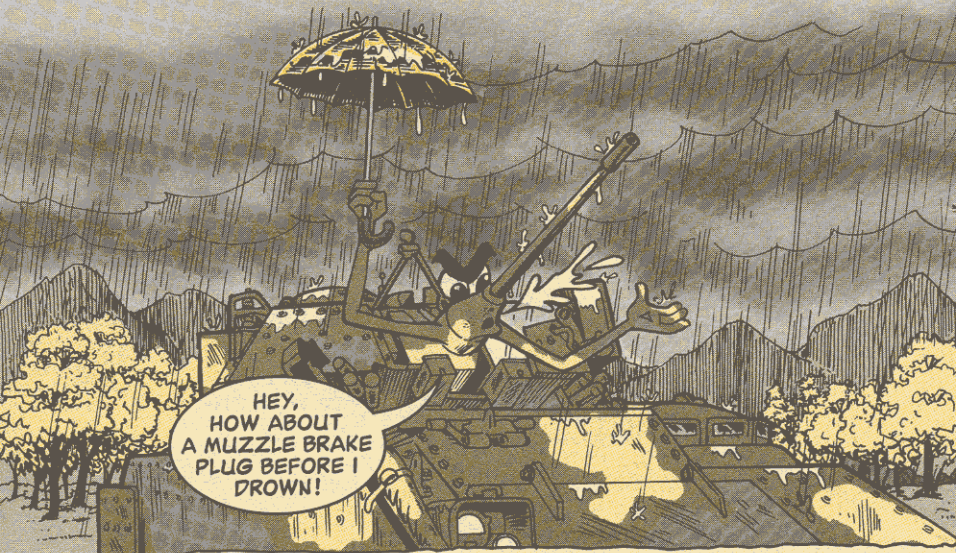
- Keep the driver's hatch closed whenever the turret or gun is unlocked and turret power is ON.



Lock turret before climbing between driver's position and turret.

The list of soldiers killed or badly hurt in accidents caused by violating these rules continues to grow. Stay off that list by thinking safety every minute you're in the turret.

A RUSTY REMINDER



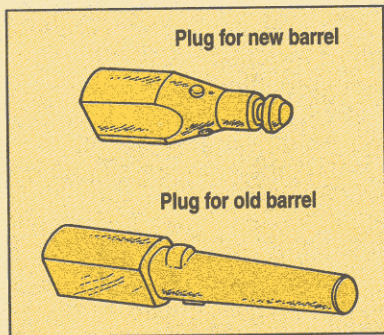
Iivers, before you lock up your Bradley for the night, take a few seconds to protect the 25mm gun.

When you leave the gun elevated and uncovered, rain and condensation run down the inside of the barrel. Eventually, you get a cannon full of rust.

Things get even worse if your Bradley's left in storage with the gun up. Over time, enough water can pour through the cannon to short out electrical connectors and cables inside the vehicle.

The damage is easy to prevent. Just lower the gun to 0 mils at the end of the day and cap it with a muzzle brake plug.

For Bradleys with the new barrel, PN 12524507, use plug, NSN 5340-01-370-9476. The old barrel, PN 12524001, takes plug, NSN 1005-01-256-9640. Both plugs are listed in Section II, Components of End Item, in the -10-2 TMs.



Fuel for Thought

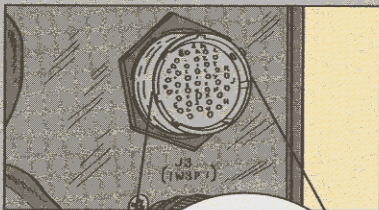
Dear Editor,

A sputtering or dying engine could mean you've got a bad fuel pump on your MLRS.

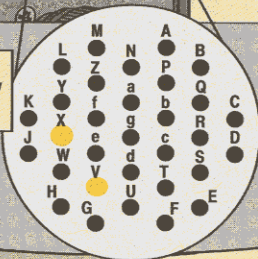
Used to be, the only way to find out for sure was to drain the fuel tanks, remove both fuel pumps and check them.

We came up with an easier way to test the fuel pumps using a voltmeter. Here's how:

1. Disconnect the 1W3P1 cable from the J3 receptacle.
2. Check the front fuel pump by inserting the voltmeter's red probe in the X receptacle and the black probe against one of the screws on the panel. If you get a reading of 24 volts, the fuel pump is OK.
3. Test the rear fuel pump the same way using the V receptacle.




Use voltmeter to test X and V receptacles



SSG James Barnes
OKARNG
Ft Sill, OK

—GASP, CHOKE!—
I THINK ONE OF MY
FUEL PUMPS IS
GOING BAD!

FROM THE DESK OF THE Editor 
You pumped out a good solution to
that problem. Good work!

WE'LL
FIND OUT FOR
SURE!

Decisions, Decisions

I GUESS WE'D BETTER CHECK THE OIL LEVELS BEFORE WE GET GOING.

WAITAMINIT! I THOUGHT THAT WAS AN AFTER CHECK!

Dear Half-Mast,

Should we check engine and transmission oil levels before or after the operation of our M113-series vehicles?

The PMCS tables in TM 9-2350-277-10 and TM 9-2350-261-10 tell us to check the oil levels after operation. LO 9-2350-277-12 and LO 9-2350-261-12 tell us to check them before operation.

Which is right?

SSG W.S.S.

Dear Sergeant W.S.S.,

Follow the information in your -10 TMs. The LOs will be changed. Checking the engine and transmission oil levels should be an **AFTER** operation check.

TACOM has decided that a hot check is more accurate. It also reduces the number of **BEFORE** checks so you can get your vehicle moving a little sooner.

Half-Mast

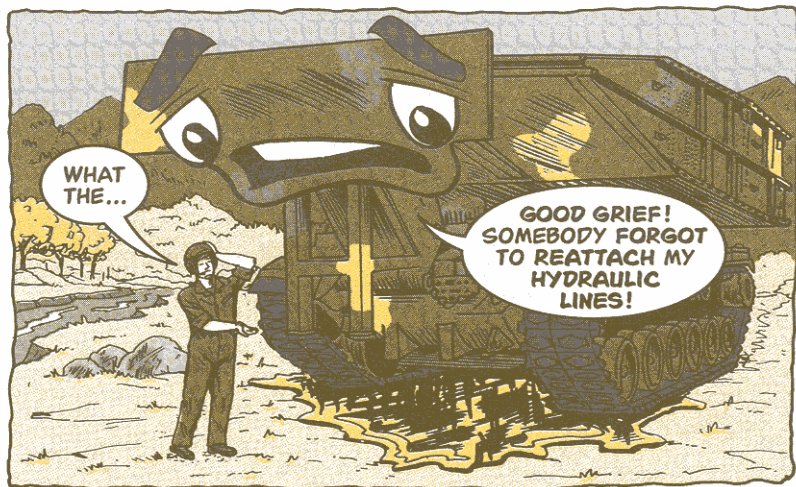
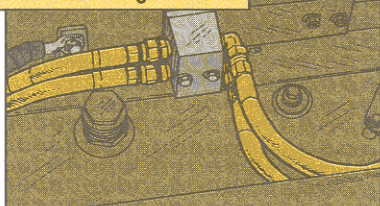


Remember to Remember

Crewmen, when it's time to pull the back deck on your AVLB, you can avoid a big, goeey mess if you remember to disconnect the two hydraulic lines from the holddown manifold.

Forget to follow the procedures in TM 5-5420-227-24 (M48A5 AVLB) or TM 5-5420-228-24 (M60A1 AVLB) and the deck will disconnect them for you—the hard way. Then you'll have to explain a massive spill of hydraulic fluid to your environmental officer.

Disconnect these lines
before removing back deck



Just because you remembered to disconnect the lines doesn't mean you're out of the woods, either. Forgetting to reattach the lines once the deck's back in place will get you into a heap of trouble, too.

The next time you use the bridge—most likely while you're in the field—hydraulic fluid is going to come squirting out of those forgotten lines. And this time you won't have the concrete pad in the motor pool to help contain it.

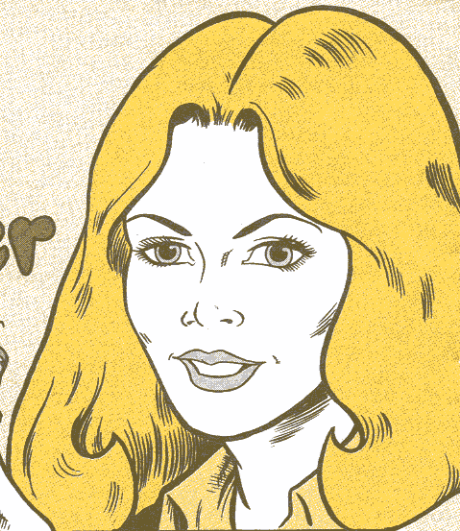
So do yourself a favor. Make a note, tie a string around your finger, do whatever you have to—just make sure you remember to disconnect and reconnect those hydraulic lines.

SEE ...

Keep Prefilter Clean

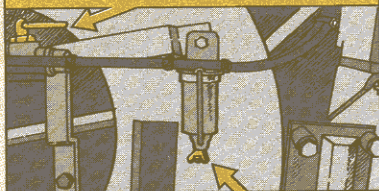


I MAY BE LITTLE, BUT I DO A BIG JOB!



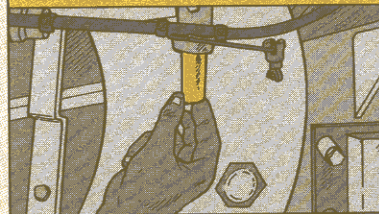
The small emplacement excavator's fuel prefilter is small and clogs quickly. To keep dirty fuel from stopping your SEE in its tracks, you have to clean the prefilter weekly. Here's how:

1. Close fuel shut-off cock



Then, loosen wing nut and push clip aside

2. Unscrew bowl, then strainer



3. Take clean rag and wipe any crud out of bowl



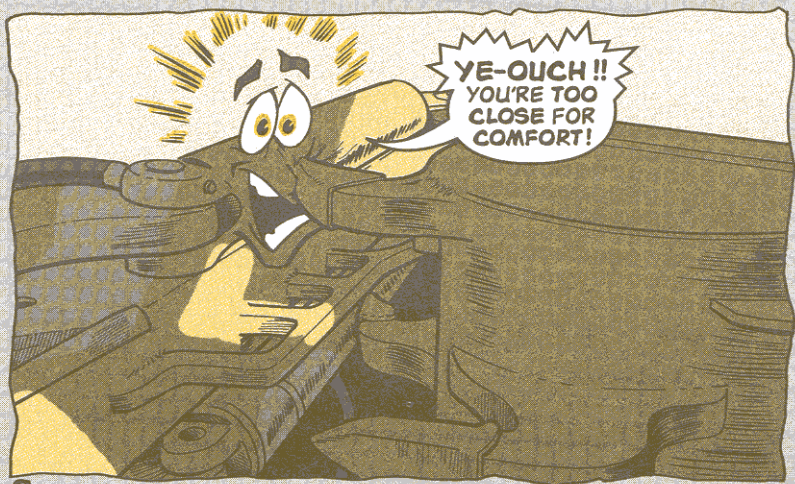
WASH ME IN CLEAN DIESEL FUEL.



5. Screw strainer and bowl back in place
6. Push clip back in place and tighten wing nut
7. Open fuel shut-off cock

Never run your SEE without a prefilter strainer.

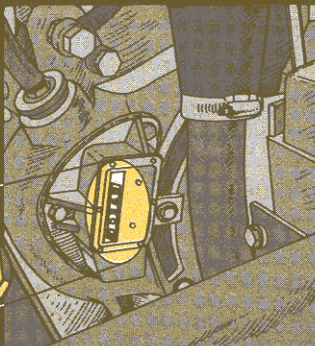
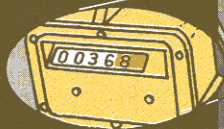
Backhoe Bucket Blues



Stowing the SEE's backhoe with the new ripper bucket can cause big problems. The new bucket, NSN 3830-01-361-8209, has longer ripper teeth than the old one. Get careless and the teeth bang against the boom cylinder. All that banging damages the cylinder rod, causing the rod's seals to leak. Play it safe. Stow the bucket with the ripper teeth at least three inches from the boom cylinder.

Count All Digits

The last digit on your small equipment excavator's hourmeter might be 10 times as big as you think it is.



That last digit—the red one—counts hours, not tenths of hours. Knowing that could keep you from missing important maintenance services.

If you get the time wrong, you'll also get the service interval wrong. That could lead to major maintenance problems on your SEE.

Tips for the Grader Good

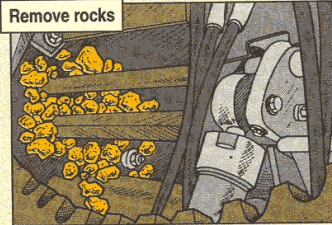
Safety and PMCS go hand in hand with the CAT 130G grader.

Before you do any PMCS or other maintenance, make sure the engine's off, the blade's down and the parking brake is applied.

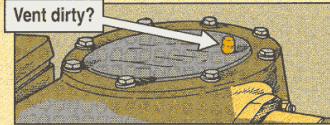
'Course, if you're going to work on the blade, you'll need to block it so it can't fall. Lower the moldboard onto blocks.

After you're safely prepared, do your regular PMCS per TM 5-3805-261-14&P-3 and Supplemental Operating Maintenance and Repair Parts Instructions (SOMARPI) 5-3805-261.

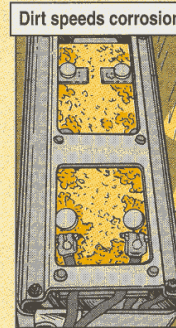
Then do this for a tip-top job: Look at the circle drive to see if it has collected rocks or other trash. If it has, clean it out or it'll damage the circle drive. Make sure the duo-cone seals for the pinion and the circle drive housing are clean and dry.



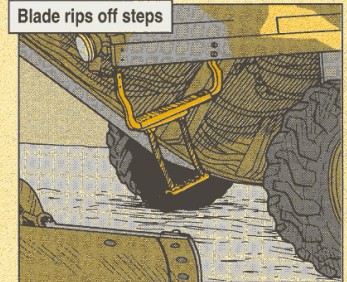
If the circle drive vent is caked with dirt, tell your mechanic. He'll clean the vent.



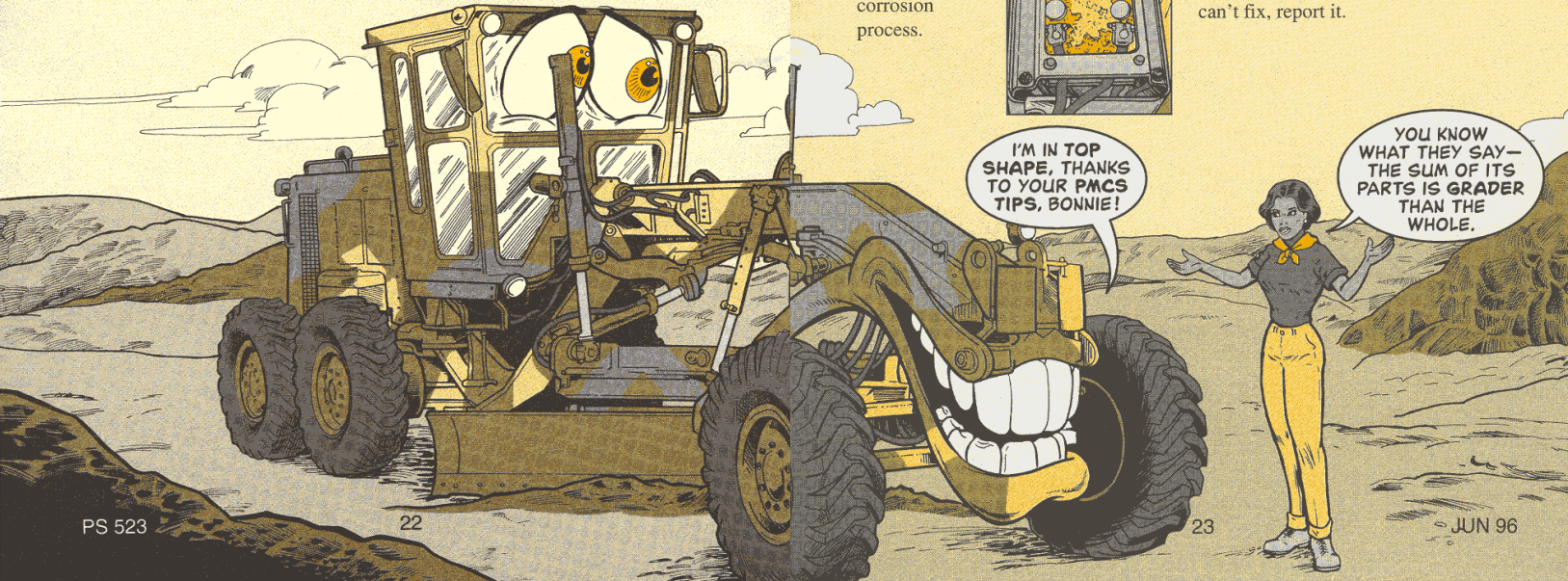
Always keep the batteries clean. They collect sand and dust, which can turn to mud and speed up the corrosion process.



When you operate the grader, be careful not to catch the step ladder with the blade. If you do, the ladder is gone and your first step will be a long one.



Finally, if you find any problem you can't fix, report it.



PM for Life

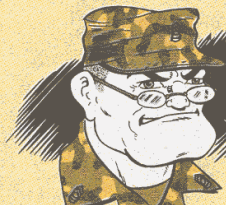


HYDRAULIC OIL IS THE BLOOD THAT FEEDS MY MUSCLES.

Your equipment's hydraulic system is like muscle and blood. It delivers energy to the machine's blade, backhoe or scoop loader for pushing, pulling, lifting and digging. It lubricates components and keeps them operating smoothly.

But, hydraulic systems need care and maintenance to prevent breakdowns.

Life



HERE ARE SOME THINGS TO KEEP IN MIND BEFORE AND AFTER OPERATION.

Look for weather-damaged hoses



Like all rubber products, hydraulic hoses become brittle and inflexible when exposed to the elements. Keep a close eye on your equipment's hoses in extreme cold and heat. Look for any signs of leakage:

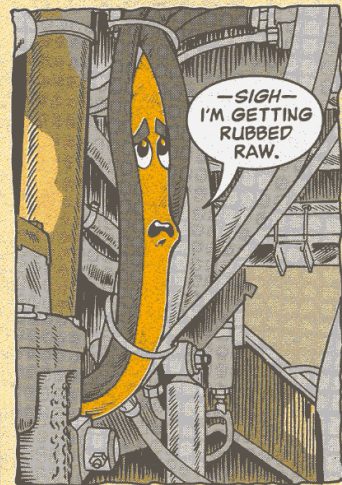
- 🔧 Oil stains
- 🔧 Dirty fittings
- 🔧 Low oil levels in the hydraulic fluid reservoir.



Oil-soaked hose or machine

Wear safety goggles when tracking down a leak. Pinhole leaks in a high pressure system can penetrate the skin and clothing. Use a piece of cardboard to find the leak.

Abrasion from contact with other hoses or machine parts causes wear on the hose cover and wire reinforcement. A hose that's rubbed raw means trouble. Call in your mechanic to re-route the hose or replace it.



-SIGH- I'M GETTING RUBBED RAW.

Fluid Checks

Hydraulic fluid also lubricates transmission and hydraulic components. See your gear's LO for the fluid to use.

A PMCS includes eyeballing the fluid level. A low level could mean there's a leak in the system.



HOWDY,
SLUDGE
IS THE
NAME.

Sludge
buildup?

eyeball the fluid dipstick closely. Do not add oil to the system if you see sediment, sludge or lacquer formations. Instead, have your mechanic drain and flush the system and fill it with fresh oil.

The smell of burned oil on the dipstick or in the hydraulic fluid reservoir can mean the oil is either saturated with air or the pump has air in it.

—PHEW!—
WHAT'S THAT
SMELL? WHOOPS—
HEH-HEH—IT'S
ME!

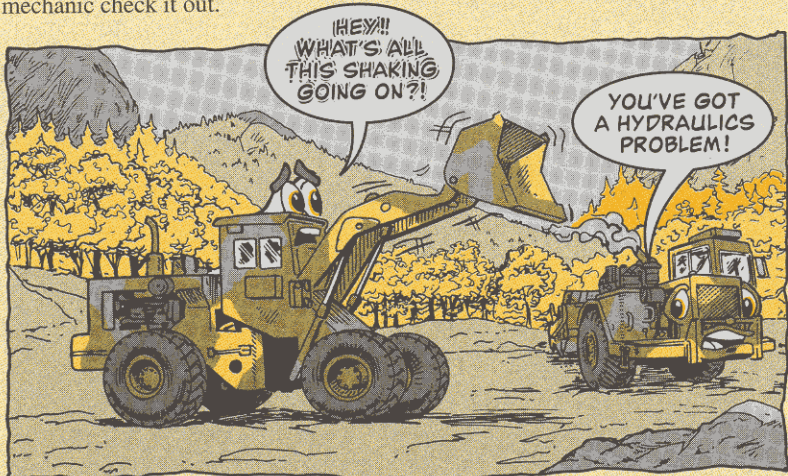


Oil smell
burned?

This happens when air pockets in the hydraulic system go from vacuum pressure to high pressure in a fraction of a second. Enough heat is generated to scorch the oil around the air pocket. If you smell burned oil, report it.

Smooth Operation

Finally, make sure the hydraulic cylinders on your equipment operate smoothly. If you see jerky or erratic movement, it could mean the hydraulic fluid level is low, there's air in the system, or a cylinder rod is bent. Play it safe and have your mechanic check it out.



HEY!!
WHAT'S ALL
THIS SHAKING
GOING ON?!

YOU'VE GOT
A HYDRAULICS
PROBLEM!

IMMORTAL COMBAT

The more things change, the more they stay the same. Knowing how to perform good PM, and then doing it right the first time, every time, is the only way to defeat the Poor PM Villains. As our story opens, they're trying to catch our soldier heroes unprepared yet again.



I FILLED UP THE FILTERS WITH WATER, ICEMAN! NOW IT'S YOUR TURN!

I'LL FREEZE THE WATER AND CUT OFF THE FUEL FLOW!



I DON'T THINK SO!

RAIDER!!



WE'D BETTER DRAIN THE FUEL FILTERS BEFORE THE WATER FREEZES.

ARGGH!!

GOOD IDEA.

WE WON'T GIVE UP THAT EASILY, RAIDER.



AH-HA! I'LL
GET INTO THE
WATER ENTRAPMENT
AND RUIN THE
AVIONICS!

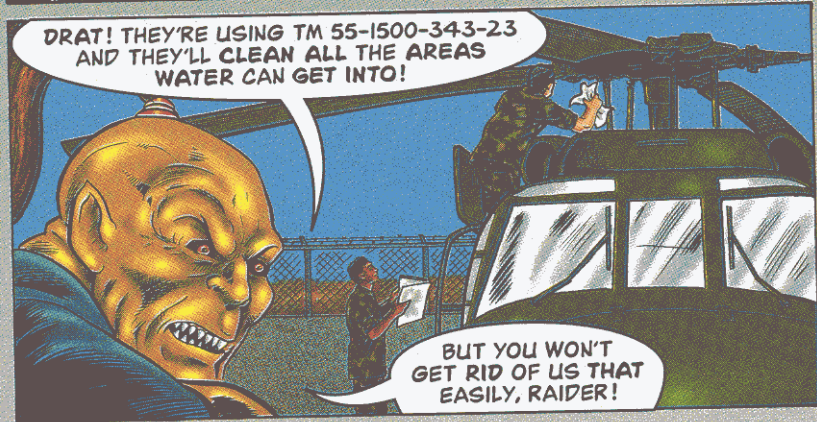
YEAH!
THEN I'LL
FREEZE
IT!



THESE BIRDS
WILL NEVER GET OFF
THE GROUND!



I DON'T
THINK SO!



DRAT! THEY'RE USING TM 55-1500-343-23
AND THEY'LL CLEAN ALL THE AREAS
WATER CAN GET INTO!

BUT YOU WON'T
GET RID OF US THAT
EASILY, RAIDER!

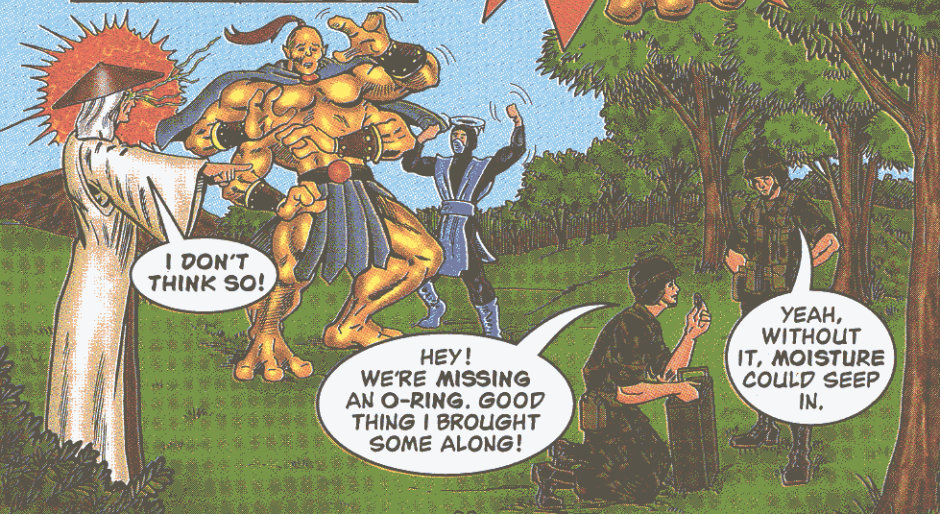


PS-S-ST, HIS
RADIO IS MISSING
AN O-RING.

GO
GET HIM,
GEARO!




I'LL STOP
HIS COMMO BY
GETTING INTO
THE RADIO!



I DON'T
THINK SO!

HEY!
WE'RE MISSING
AN O-RING. GOOD
THING I BROUGHT
SOME ALONG!

YEAH,
WITHOUT
IT, MOISTURE
COULD SEEP
IN.



PM NEVER CEASES, AND THAT IS THAT.
GEAR AT THE READY IS MORE THAN A STAT.
SO STRIVE WITH ALL MIGHT,
TO FIGHT THE GOOD FIGHT,
'CAUSE YOU'RE ENGAGED IN IMMORTAL COMBAT!

Filters drained?

PM by the TM?

O-rings installed?

Prepared to stay dry?

Weapons need extra care?

Tent air dried before stowed?

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

HERE'S MY CHANCE
TO GET INTO THEIR
WEAPONS! THAT'LL PUT
A DAMPER ON THEIR
FIGHTING ABILITIES!

AND
I'LL HELP BY
FREEZING THEIR
ALREADY SOAKED
FEET!

WE'LL STOP
THE SOLDIERS AND
THEIR WEAPONS!

EXACTLY!



I DON'T
THINK SO!



WE
BETTER GET OUR
WEAPONS DRIED
OUT!




GOOD
THING WE
BROUGHT
DRY SOCKS!
AH-HHH...
THAT'S
MUCH
BETTER.



GIVE UP, GEARO! YOU
POOR PM VILLAINS CAN'T
WIN THIS ONE!


YOU
HAVEN'T WON
YET, RAIDER!

WE HAVE ONE
MORE CHANCE, GEARO.
WE'LL RUIN THE TENTS SO
THEY CAN'T BE USED
AGAIN!



WE'RE TOO LATE.
THEY'VE ALREADY ERECTED
THEIR TENTS TO THOROUGHLY
DRY OUT BEFORE THEY'RE
PUT AWAY.

WHEN WILL
YOU LEARN? GOOD
MAINTENANCE KNOWLEDGE,
PRACTICE, AND TRAINING
WILL WIN THE BATTLE
EVERY TIME.



BE WARNED,
RAIDER. WE'LL BE
BACK WHEN YOU'RE
NOT SO WELL
PREPARED!



I DON'T
THINK SO!

Protect Roof Skin



The roof of your commo shelter may look tempting as a place to store equipment, or to move your gear to the field. But that ruins the shelter's roof. Things like ground rods or concertina wire cut and tear the shelter roof's skin.

Make sure you look at the roof if you've been hauling cargo on top of your shelter. If you see a puncture or broken seam, get it fixed immediately.

Find out what you can fix and what tools and materials you need to do the work from TB 43-0124, Maintenance and Repair Procedures for Shelters. It tells you everything you need to know to complete repairs at the unit level.

If you have no choice but to load gear on your shelter's roof, be sure you put pallets or plywood under the equipment. That way the roof doesn't get damaged.

For more information, see TM 10-5411-205-13 for the S-250 shelter and TM 10-5411-207-14 for the S-280 shelter.

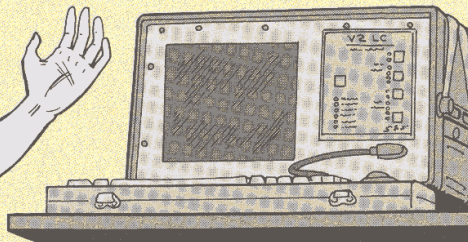
HARD LIFE FOR A HARD DRIVE



WHOOOPS!

OUCH!!
THAT REALLY
SCRAMBLED MY
DATA!!

CLUNK



The removable hard disk drive (HDD) is the brains behind your AN/PSM-80 electronic systems test set. It contains everything from operating software to electronic technical manuals to information on equipment being tested.

If the HDD fails, so does your test set. That's why you should handle it with care. Here's how to protect it:

No Shocks or Jolts

Inside the HDD are metal disks and floating write-and-record heads. A shock or jolt to the HDD can move the heads out of tolerance. Then they can't read the disks.

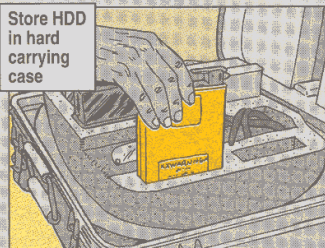
Hard knocks can also force the heads against a disk, destroying data or damaging the disk surface.

Never drop, throw or otherwise man-handle the HDD. Don't even put it in

your pocket and drive your HMMWV over rough terrain. The bouncing could be enough to damage it.

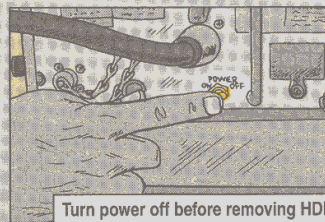
Play it safe. When you're through using the AN/PSM-80, remove the HDD and store it in the hard carrying case for accessories. The case's foam inserts cushion the HDD against sudden impact. If you don't have a case with you, keep the HDD in the test set during transport. Just make sure the POWER switch is OFF.

Store HDD in hard carrying case



Park It

Never remove the HDD when the test set is up and running. If you do, the heads won't park in a stable position. Loose heads are at greater risk



Turn power off before removing HDD

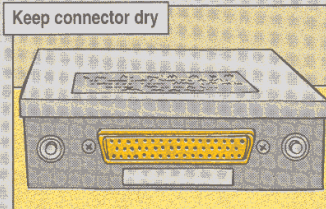
for damage. Remove the HDD only after the power is turned OFF and the heads are parked.

Wet Won't Work

Even though the HDD is a sealed unit, moisture's still a threat. It can corrode the connector over time. What's more, a wet connector plugged into the test set can cause a short and burn up internal parts.

Keep the HDD dry and clean. As soon as you remove it from the test set, store it in the accessory case.

Keep connector dry



Which One's Broken?

If your AN/PSM-80 fails to respond the way it should, here's a quick way to tell if the problem's with the HDD or the test set itself:

Put a substitute HDD in your set. If the set boots up, the problem is most likely with your HDD. To replace your HDD, order it through normal supply channels. If the set doesn't boot up with the substitute HDD, the problem's most likely with the test set. Report it to your TMDE support team. They'll troubleshoot, repair and return your test set.

Dry Facts for Antennas

Moisture gradually builds up inside the AB-15 antenna base insulator bowl when it sits on your vehicle day after day. That leads to rust, which fouls contacts and blocks radio reception.

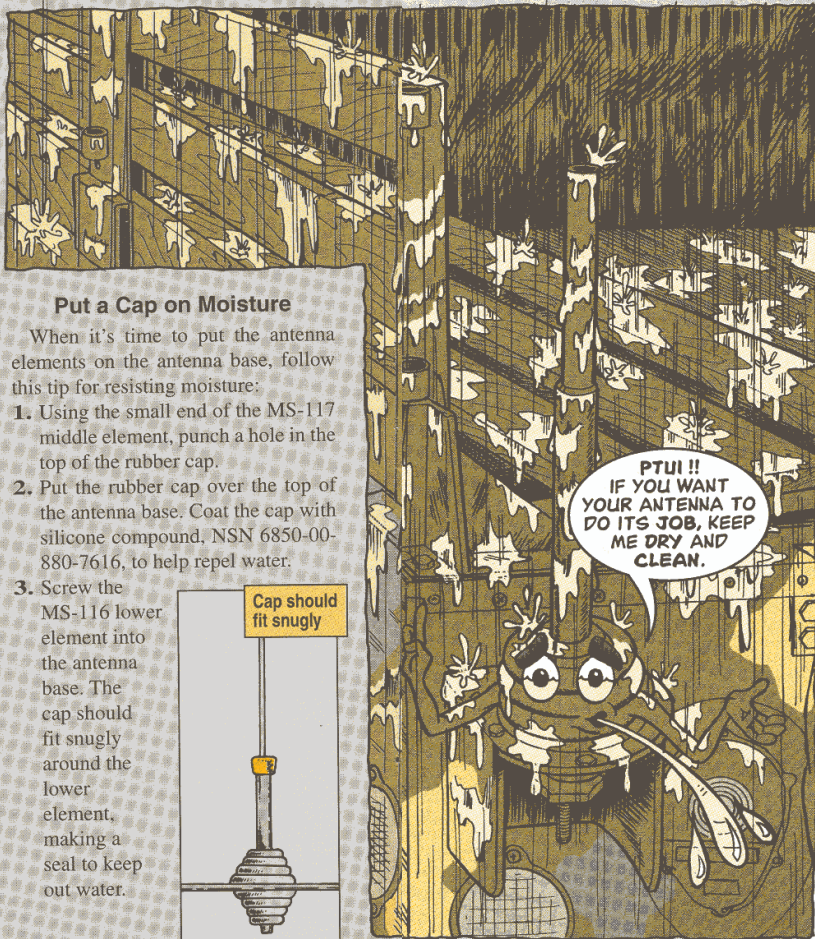
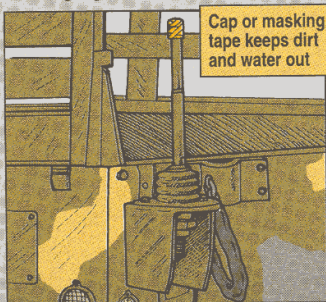
Keep the bowl dry. Take it apart often and wipe it out with a clean rag.

Take bowl apart and wipe dry



See cracks? Get your unit repairer to replace the insulator.

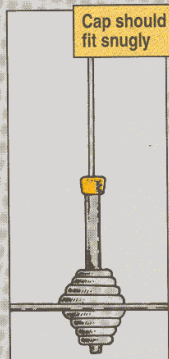
When you remove the antenna elements, put a rubber cap, NSN 5999-00-264-9213, over the top of the antenna base to keep out dirt and water. If you don't have a rubber cap, use masking tape.



Put a Cap on Moisture

When it's time to put the antenna elements on the antenna base, follow this tip for resisting moisture:

1. Using the small end of the MS-117 middle element, punch a hole in the top of the rubber cap.
2. Put the rubber cap over the top of the antenna base. Coat the cap with silicone compound, NSN 6850-00-880-7616, to help repel water.
3. Screw the MS-116 lower element into the antenna base. The cap should fit snugly around the lower element, making a seal to keep out water.



Fit for Duty

Just because a battery fits doesn't mean it fits the bill.

Sure, a 1.5-volt AA alkaline battery will fit in the memory battery compartment of the AN/PSN-11 precision lightweight GPS receiver (PLGR). But the AA can't cut it as a memory battery. It lacks the power to hold on to programmable data.

Using the AA alkaline battery can cause the loss of the cryptovisible key, PLGR almanac, waypoints, satellite information and other stored data.

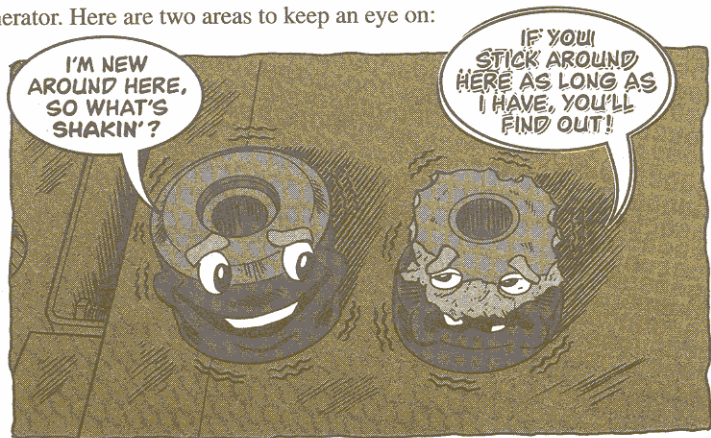
There's only one memory battery for the PLGR: the 3.6-volt LS6 lithium battery, NSN 6135-01-301-8776. Anything else is simply unfit.

Use only the LS6 lithium battery



Too Much Shakin' Going On

Small diesel engines are known shakers. The 2-cylinder 5-KW tactical quiet generator's diesel engine is no exception. All that shaking takes a toll on your generator. Here are two areas to keep an eye on:



Engine Mount Dismount

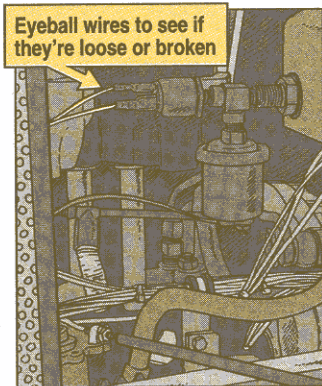
The 5-KW shakes so much it may tear apart its rubber engine mounts. When that happens, the engine vibrates even more—causing more damage.

In addition to normal PMCS, a good rule of thumb is to eyeball the mounts every 100 hours of use to see if the mount bolts are loose. Tighten them when they get loose, and replace the rubber mounts if they're damaged.

Wire Disconnect

The two electrical wires on the **Low Oil Pressure** switch can shake loose, too, or break off at the wire's terminal clip. A busted or disconnected wire means the engine shuts down—the generator won't start.

Play it safe. Before startup, eyeball the clips. Make sure they're good and tight. If the wire breaks off at the clip, remove the old clip and replace it with NSN 5940-01-112-9746. The clip is Item 8 in Fig 12 of TM 9-6115-641-24P.



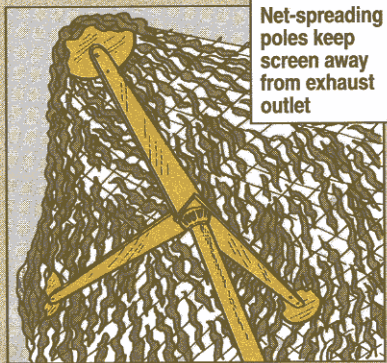
Keep Screens Clear of Exhaust



COMMUNICATIONS

A camouflage screen near your generator's exhaust outlet is too close for comfort. Hot exhaust melts or burns the screen. And that's not the worst of it. Scraps of burned screen settle over the generator, clogging air intake ports. Without cooling air, the generator overheats.

So, keep your screen clear of the exhaust outlet. Tie a net-spreading pole to the trailer to hold the screen away from the exhaust. Hang it at least two feet above the exhaust and at least two feet from the sides of the generator.



Net-spreading poles keep screen away from exhaust outlet

Set up extra net-spreading poles and firmly stake down the screen. Plenty of poles and stakes help make your screen stable and keep it away from the exhaust even in a wind. Otherwise, the wind could whip the screen against generator hot spots. Leaving space not only protects the screen, it also allows a steady flow of air to cool the engine.

Just keep an eye on the poles once you've planted them. They can shift around, leaving the screen draped over the exhaust.

Snow can shift the screening, too. Brush it off before it gets too heavy.

When you take down the screen, keep it away from the generator's hot areas or wait until the generator cools.

Don't Spare the Rod

AUTO CRAFT SHOP

A cleaning rod is your best tool for getting rid of carbon in your M16 rifle. But to get the best results, you have to know the ins and outs of using the rod.

For instance:

It's easier to pull than to push the cleaning rod through the bore.

Pulling the rod lets the bore brush turn more easily and prevents damage to the rod.

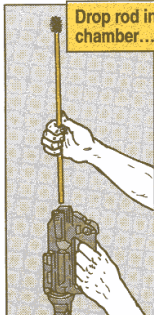
Screw the rod sections together all the way, despite what Page 17 in TM 9-1005-319-10 says. The bore brush turns easily with its sections tight.

Drop the cleaning rod down the chamber with the bore brush end last. Pull it out the muzzle.

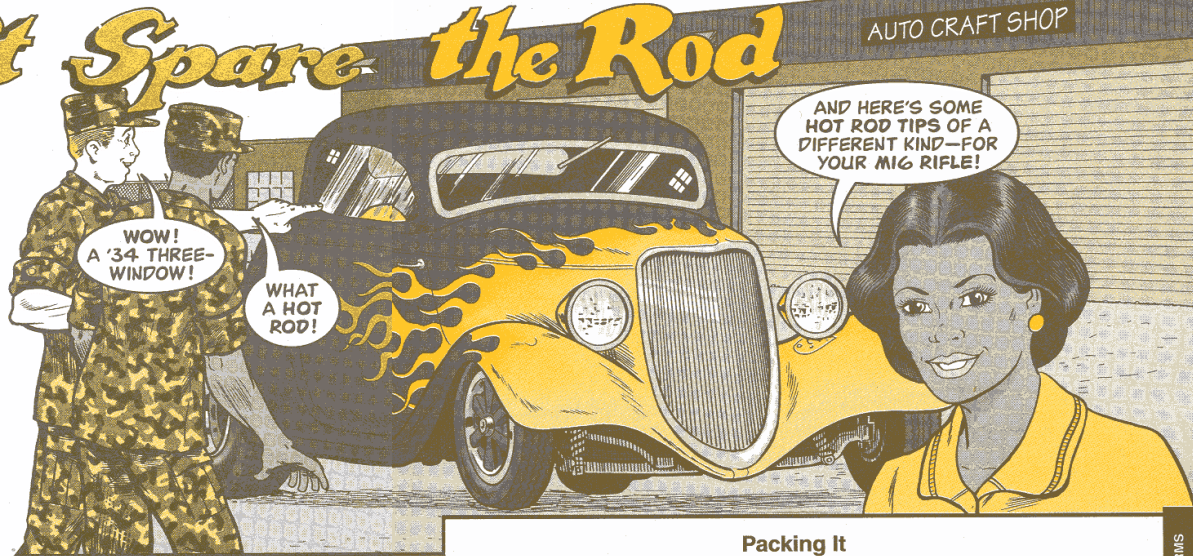
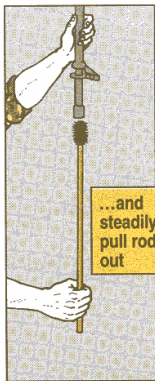
Screw two rods together



Drop rod in chamber...



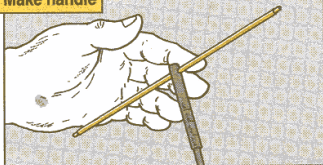
...and steadily pull rod out



Once you start pulling the rod, don't stop. If you jerk the rod back and forth, the bore brush is ruined.

Make a handle by sticking a section of the rod through the slot.

Make handle



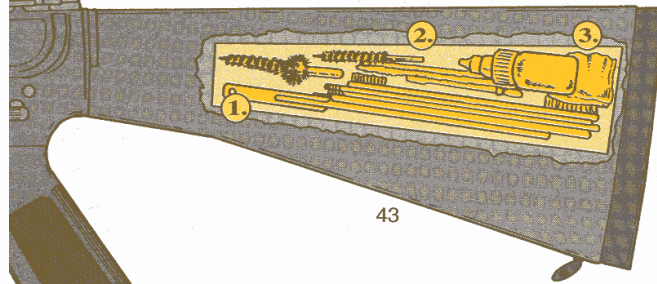
A handle makes it easier to clean the chamber and locking lugs.

If the rod tip won't screw in the rod—or the rod bends at the joints—you need a new cleaning rod. That rod will scratch the bore.

Packing It

All these hot rod tips won't do much good if you can't fit the rod in the buttstock storage compartment so you can take it to the field. Fit everything in the case like this:

1. Put the cleaning rod sections in first, with the longest section on the bottom of the case.
2. Put in the toothbrush, chamber brush, cleaning rod tip, pipe cleaners, bore brush, and CLP bottle.
3. Lay the cleaning patches underneath the bottle.
4. Hold the case's open end up and insert the case halfway in the buttstock.
5. Fold the case flap in a triangle and close the flap.
6. Push the case the rest of the way in the buttstock.



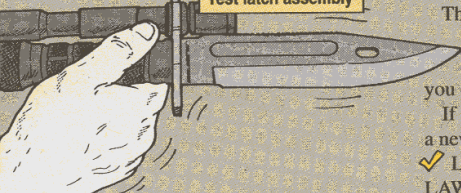


To stay on the cutting edge of bayonet PM, give your M9s this checkup quarterly:

✓ Test the latch assembly to see if the latch securely holds the bayonet on an .M16 rifle. If the spring pins, lock release levers, or helical spring needs to be replaced, see Page 2-28 in TM 9-1005-237-23&P (Jan 93) for instructions.

If the latch plate's damaged, order a new M9.

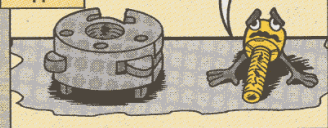
Test latch assembly



✓ Remove the socket head capscrew and inspect it for stripped threads or other problems. Replace the screw with, NSN 5305-01-278-1150, if necessary.

Screw threads stripped?

MAN, I'M STRIPPED.



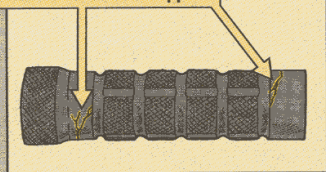
✓ Remove the handle from the bayonet-knife, paying close attention to the position of the two small holes in the handle's rear in relation to the blade

The Cutting Edge of PM



edge. Inspect the handle for cracks and chips. Cracks longer than 1/2 inch or chips larger than 1/4 inch mean the handle is shot.

Handle cracked or chipped?



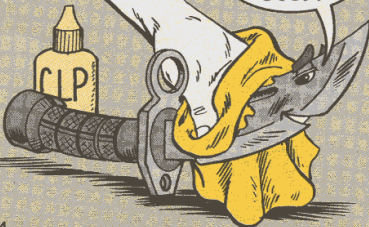
Then stop. If you disassemble the M9 any further, you won't be able to reassemble it correctly because you don't have the right tools.

If the blade's badly damaged, order a new bayonet.

✓ Lube the bayonet with CLP, LSA or LAW. Reassemble the M9 by putting the handle on the tang, the latch assembly on the handle, and screwing in the socket capscrew. Make sure the handle holes are in the same position and the bayonet fits securely on the rifle.

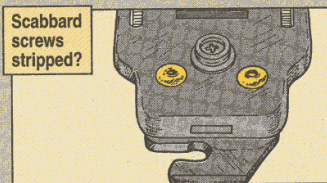
Lube bayonet

OOOO— THAT FEELS GOOD.



✓ Remove the scabbard's socket head capscrews and look for stripped threads or other damage.

Scabbard screws stripped?



✓ Inspect the cutter assembly for damage, especially the stud. If the cutter can no longer cut, support needs to replace it. The cutter's still good, though, even if the screwdriver tip is damaged, as long as the tip can still remove the capscrew.

Cutter assembly or stud damaged?



I JUST CAN'T CUT IT ANYMORE.

✓ Eyeball the sharpening stone. If the stone's too smooth or part of it is missing, knock it off with a cold chisel. Be

careful not to knock a hole in the scabbard, though.

Sharpening stone chipped or too smooth?

DON'T TRY SHARPENING THAT BLADE ON ME—I NEED REPLACING.



Take off adhesive with drycleaning solvent, NSN 6850-00-281-1985. Stick on a new stone, NSN 5345-01-275-5395, with silicone adhesive sealant, NSN 8040-00-851-0211.

On the old-style scabbard attaching assembly, if the scabbard screw, NSN 5305-00-455-2549, and stud, NSN 5325-00-842-1879, are missing, replace them.

Support replaces snaps and rivets on the old-style load bearing attaching assembly and snaps and buttons on the scabbard attaching assembly.

On the new-style scabbard attaching and load bearing attaching assemblies, if they develop problems, order new ones. The scabbard assembly comes with NSN 5340-01-275-5398, the load bearing with NSN 1005-01-278-1174.

The Top Five Lists

HERE ARE THE TOP FIVE MAINTENANCE REASONS AIR SURVIVABILITY EQUIPMENT FAILS.

5. Water intrusion
4. Corrosion
3. Broken, loose or disconnected antenna wires
2. Broken, loose or disconnected cable connections
1. Out of sight, out of mind

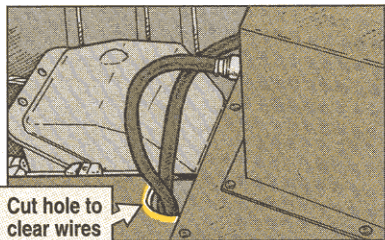
HERE ARE THE TOP FIVE MAINTENANCE REASONS YOUR AIR SURVIVABILITY EQUIPMENT KEEPS WORKING.

5. Regular inspections of seals and sealant to ensure that water can't get into antennas and Line Replacement Units (LRUs).
4. Knowing where corrosion starts, how to spot it and how to prevent it.
3. Making the cable connections called for in your TMs.
2. Treating connectors like the fragile pieces of equipment they are. Using the right torque.
1. Out of sight, but always on your mind.

MAKING THE CUT

CUT THE CORNER RIGHT WHEN INSTALLING THE AN/ALQ-144 COUNTERMEASURE SET.

When you install the AN/ALQ-144 countermeasure set you must cut a slot in the APU door to let the ALQ-144 wire through. Cut enough, but not too much.

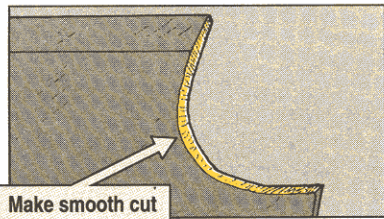


Cut hole to clear wires

With a skimpy cut, the wires from the ALQ-144 rub on the door and wear through. Next thing you know, there's a short and the set is shot!



Too small of a cutout damages wires

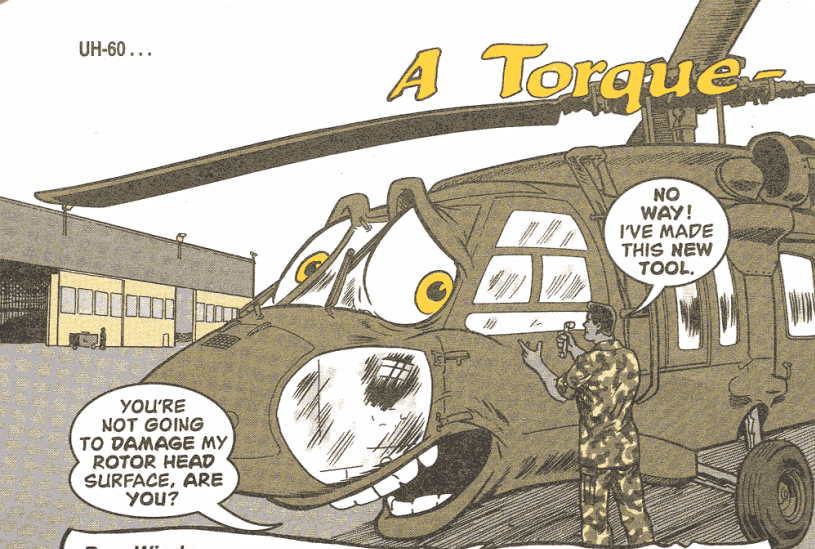


Make smooth cut

Too big a hole and you give rain, snow, dust and dirt entrance to your APU.

Cut the hole back just enough to let the wires clear without rubbing. Make the cut clean and smooth, not ragged. Then for added protection, wrap the wires with tape at the rub point.

A Torque-



Dear Windy,

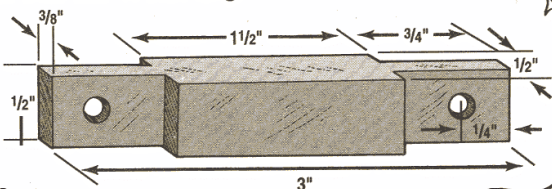
When breaking torque on the bolts holding the UH-60 main rotor head, it's easy to damage critical surfaces of the main rotor shaft. We've come up with a tool to break the torque and, at the same time, reduce the chance of damage.

All you need is a universal socket wrench, NSN 5120-00-142-5156, and a piece of steel bar stock three inches long, 1/2 inch thick and 1/2 inch wide.

Here's how to make the tool:

1. Grind down each side of each end of the bar 1/16 inch leaving ends 3/8 inch wide and 3/4 inch long.

2. Drill 3/16-in holes in both ends of the bar about 1/4 inch from the ends.



3. Remove the wrenching end and drive end from the socket wrench by removing the pins.

Breaking Tool

4. Attach both ends with the pins to the bar stock to look like this:

The drive end should rotate

180 degrees. The

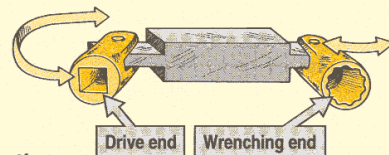
wrenching end should be flexible, but not swivel.

When you attach

the wrenching end,

place it a little closer to the

bar stock. This will give better range of movement when breaking torque and retorquing the lower pressure plate.



SGT Craig S. Downey
AASF 2, TNARNG

Dear Sergeant Downey,

Since the socket wrench for your tool costs only \$21 compared to about \$300,000 for a Black Hawk's main transmission module, it seems like a no-brainer to me. Way to go!

Windy

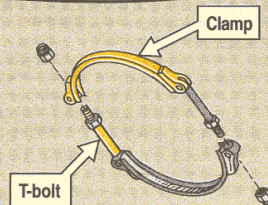
More Money, Less Risk

Dear Windy,

When a T-bolt needs replacing on the Black Hawk engine's clamp (Item 6 of Fig 284 in TM 1-1520-237-23P-2) we have to replace the whole clamp.

This seems like a waste of money since the clamp costs more than \$90. Can we replace just a bolt?

Mr. P. B. M.



Dear Mr. P. B. M.,

It may seem like a waste of money to replace the entire clamp, but the factors that lead to a damaged bolt make the clamp unreliable. It's better to spend the extra money for a new clamp than run the risk of losing an engine nose cowling in flight.

However, we salute you for being cost conscious. We encourage you and other mechanics to question high repair part prices and to always replace the lowest-level repairable part allowed.

Windy

ALSE...

SURVIVAL FIRST AID KIT

THE
FIRST
THING YOUR
SURVIVAL VEST
NEEDS IS A
COMPLETE
FIRST AID
KIT.

What is supposed to be in your SRU-21/P survival vest first aid kit, NSN 6545-01-120-2632, is about as clear as mud. But here's the latest word on what your kit should hold:

Item	NSN
Aspirin tablets (until Dec 96)	6505-00-118-1948
Bag, food sample	6695-00-118-2918
Bag, plastic	8105-00-837-7754
Bandage, adhesive	6510-00-913-7909
Bandage, gauze	6510-00-913-7906
Doxycyclinehyclate caps	6505-00-009-5060
Erythromycin ophthalmic ointment	6505-00-982-0288
Fishing kit	4220-01-181-3154
Gloves	6515-01-364-8553
Mittens, insect net	8415-01-192-2357
Loperamide Hcl caps	6505-01-238-5632
Matches	9920-01-191-3434
Povidone iodine pad (until Dec 96)	6510-01-203-6285
Povidone iodine ointment	6505-00-148-7096
Razor, surgical	6515-01-363-1212
Saw	6515-00-296-2529
Skin closure, adhesive surgical	6510-00-054-7255
Soap, toilet	8520-00-551-0375
Water purification tablets	6850-00-985-7166
Tourniquet, nonpneumatic	6515-00-383-0565
Whistle, ball	8465-00-254-8803
Instructions/contents list	7610-01-301-5255

Part of the vest, but not part of the kit:

Tourniquet, nonpneumatic	6515-00-383-0565
Whistle, ball	8465-00-254-8803

Tent Repair Kit NSN

Get a tent repair kit, NSN 8340-00-262-5767, to repair small holes and tears in your tent. Repair instructions are in FM 10-16, which comes with the repair kit. Here's what's in the kit:

 Adhesive	 Awl	 Brush	 Case
 Cloth	 FM 10-16	 Size 4 grommets	 Size 5 grommets
 Slide fastener lubricant	 Rawhide mallet	 Sailmaker's needles	 Sewing palm
 Size 5 cutting punch	 Size 6 cutting punch	 1/4" connecting rings	 1/2" connecting rings
 1" connecting rings	 Size 4 punch and die	 Size 5 punch and die	 Bent trimmer's shears
 Sling		 Thread	 Twine
 Tent line slips			

Tarps ...

We've Got You Covered

If you need to protect ammo or equipment, check out these tarps. They're resistant to fire, mildew, and water.

Size (feet)	NSN 8340-00-
10 x 6	841-6454
20 x 20	841-6455
26 x 22	577-5838
40 x 20	753-6438

USE CTA
50-90 AS YOUR
ORDERING
AUTHORITY.



First Aid Kit Refills

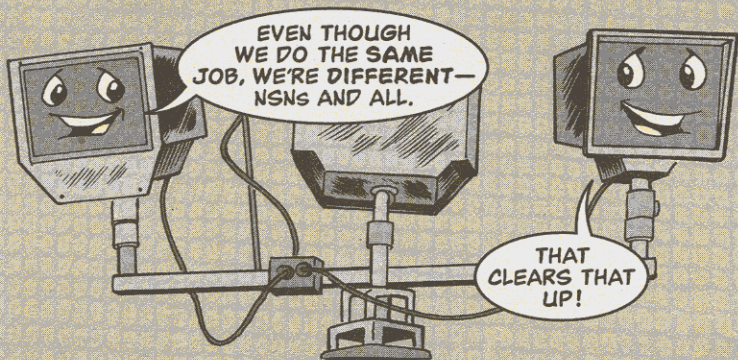
Take your first aid kit, NSN 6545-00-922-1200, to your medical support folks to get missing components replaced. They usually keep a large supply of these items.

IF THEY
DON'T HAVE
AN ITEM YOU
NEED, THEY'LL
ORDER IT USING
THESE NSNs.



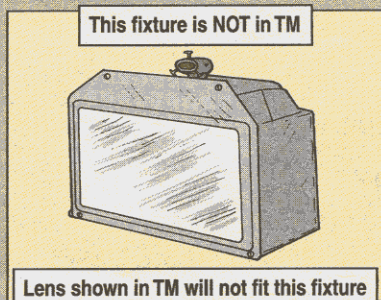
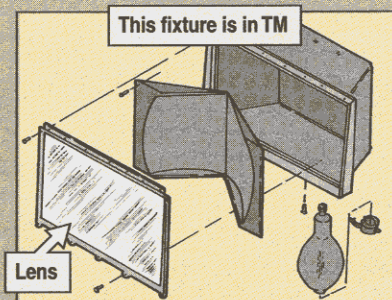
Item	NSN
Case	6545-00-131-6992
Dressing	6510-00-159-4883
Compress bandage, 2 x 2 inches	6510-00-200-3075
Gauze, 3 inches x 6 yards	6510-00-200-3185 or 6510-00-200-6206
Bandage, 37 x 37 x 52 inches (triangular)	6510-00-201-1755
Adhesive, 3/4 x 3 inches	6510-00-913-7909
Elastic bandage, 4 1/2 yards x 2 inches	6510-00-935-5820
Adhesive tape, 1 inch	6510-01-060-1639
Gauze, 3 x 36 inches	6510-01-112-6414
Blade, surgical, 2 1/2 inch	6515-00-754-0426
Glove, large	6515-01-364-8554
Bag, dental	6520-00-926-9041
Eye drops	6545-00-853-6309
Iodine	6505-00-148-7096

Clearing Up Lens NSNs



Floodlight, NSN 6230-01-137-3462, has two different fixture assemblies, each manufactured by a different company. But only one fixture assembly is shown in Fig 1 of TM 5-6230-210-13&P. It has a lens that swings out on a hinge so you can easily replace the bulb. The lens NSN is 6210-01-128-6546. Change 8 to the TM had it wrong.

If the lens frame on your floodlight has no hinge, you have to remove all the screws before you can replace the bulb. That assembly is PN SFA-8544-LB-LS. Check the sheet metal decal behind the lens frame to verify the part number.



To get a lens for that fixture, order PN L-40-GTA and CAGE 58781 on a DD Form 1348-6 from RIC S9G. The lens is made by North Star Lighting, Inc., 2150 W 16th St., Broadview, IL 60153. Their phone number is (708) 681-4330.

You can have a lens locally made, but it must be heat-tempered safety glass. If you do this, take the whole frame in to have it fitted, because once the lens is made and tempered, it cannot be trimmed.

IDEAS—YES! CHANGES—NO!!

After you get your new M40 or M42 protective masks, you may have brainstorm to improve the masks.

That's great! Some soldiers have already had M40/M42 suggestions approved and their ideas are shaping the new versions of the masks. They've gotten money and satisfaction for their proposal.

What's not so great is trying out those brainstorm on your own masks. It doesn't take much to ruin a mask's seal and, once the seal's gone, so is the mask. If you make unauthorized mask modifications, you could find yourself explaining to your CO why he's out the cost of a new mask as a result of your experimenting.

Submit your suggestion through the SMART program. The mask experts will try it out. If they like it, you'll get the credit.

But don't experiment on your own masks. Leave that to the experts.



A Sticky Job

Dear Editor,

Most chemical folks detect chemical agents with M8 paper by taping it to a stick.

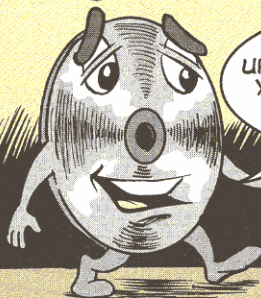
There's an easier way. Use a stick from the NBC marking set. Slip the M8 paper in the stick's slot and you're ready to detect. You don't have to worry about tape.

SSG Tommy Mullins
Ft Benning, GA

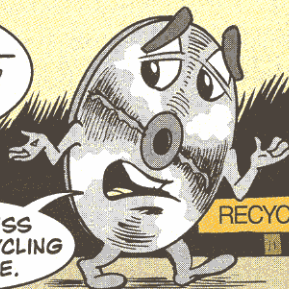
FROM THE DESK OF THE Editor 

*That's a suggestion to stick with.
Good job.*

OUT WITH THE OLD



I'M THE NEW
UPDATED ARMYLOG—
YOU'RE SCRATCHED
FROM THE
LINEUP!

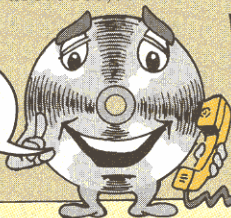


THEN I GUESS
IT'S THE RECYCLING
BIN FOR ME.

RECYCLING

When you get your new ARMYLOG, make sure you get rid of the old one. Resist the urge to pass the old CDs to a buddy...it'll only cause trouble. Each new ARMYLOG has about 100,000 data element changes.

TO GET A
CURRENT COPY,
CALL DSN 645-0782
OR COMMERCIAL
(205) 955-0782.



Or write:
USAMC LOGSA
ATTN: AMXLS-CDD
Redstone Arsenal, AL 35898-7466

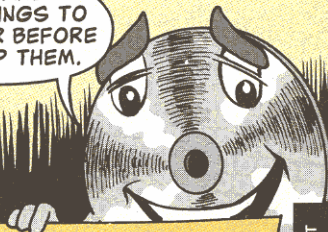
Or e-mail:
amxlsicf@logsa-emh2.army.mil

Be sure to include your AMDF customer account number or have it ready when you call.

A good way to get rid of the old CDs is to recycle them. Check with your local recycling center to see if they'll take them. If they won't, mail your discs to:

NE-SAR Systems
420 Ashwood Rd
Darlington, PA 16115-9325

HERE ARE
SOME THINGS TO
REMEMBER BEFORE
YOU SHIP THEM.



1. Send whole discs only. Never cut them in half.
2. Take discs out of mailing sleeves before shipping them.
3. Scratch discs with a sharp object, such as a nail, on both sides. This makes the disc inoperable.
4. Make sure the shipment weighs less than 50 pounds.

The Price Is Right

Wait! Before you call in an AMDF item you think is overpriced, check the item's acquisition advice code (AAC). You may be just wasting time challenging the price of some items.

Don't challenge items with AACs of:

- V or Y—These items will be deleted. All information, including the price, has been closed and will not be changed.
- L or K (CONUS)—Local purchase items. The price of the item is estimated on the AMDF. You're billed the actual cost of the item.
- J or Z—These items are not stocked. They are purchased in low quantities because the demand rate is low. The item is not pro-

duced until the requisition is received. The AMDF price is usually an estimate. You'll be billed for the invoice total of that specific procurement, plus transportation costs.

Don't challenge an item that has an "E" in the price signal (PS) column. These prices are estimated. A valid price will be established when the item is procured.



ACT	FSC 5910	NIIN 01-003-0252	ADDL	NOMENCLATURE CAPACITOR, FIXED, CER			SOS S9E	AAC V	PS	UNIT-PRICE 2.63
FC	UI EA	UM	MEAS-QTY	ETC	SCMC 9G	EC C	AEC 3	MATCAT Q2200	LCC R	RICC 0
ARC X	SRC	SCIC 0	CTIC U	ICC 4	SLC 0	DML A	ADP	PMI	MRC	RC Z
ARI	ARIL RICS			ARI EFF DT		AAC "V"? Don't challenge price				
PHRASE CODE STATEMENT			NSN/MCN			RELATED ITEM INFO OOU JTC UI UM M-QTY Q/ASY				
F-WHEN EXH USE			5910-01-114-5160							

ACT	FSC 6515	NIIN 01-420-0406	ADDL	NOMENCLATURE BIT DRILL TIBIAL-HUME			SOS S9M	AAC L	PS E	UNIT-PRICE 123.00
FC	UI EA	UM	MEAS-QTY	ETC	SCMC 85	EC B	AEC 1	MATCAT C2203	LCC R	RICC 0
ARC X	SRC A	SCIC 0	CTIC U	ICC 4	SLC 0	DML	ADP	PMI	MRC	RC
ARI	ARIL RICS			ARI EFF DT		"E" means price is estimated				
PHRASE CODE STATEMENT			NSN/MCN			RELATED ITEM INFO OOU JTC UI UM M-QTY Q/ASY				
R-REFER TO			NOT DMSB ST2D							

The price of end items, such as trucks, radios, and generators, also shouldn't be challenged. These items are "free issue" against a TOE/MTOE authorization.

To challenge a price on any other item, just use your phone.

During duty hours (0730-1600 CT) call DSN 779-6029/6515, Commercial (205) 313-6029/6515.

After duty hours, dial the 24-hour hotline at 1-800-878-2869. You'll get a recording that asks for your name, address and telephone number. Give 'em that, then tell 'em the NSN for the item and why you think it's overpriced. They'll get back to you as soon as possible.

Or write:

USAMC Logistics Support Activity
ATTN: AMXLS-CIP
Redstone Arsenal, AL 35898-7466

Or use e-mail address:

pricech@logsa-emh2.army.mil

Or FAX:

DSN 645-0516
Commercial (205) 955-0516

USE
RECYCLED
OIL

WAIT!
THAT PRICE
MIGHT BE
RIGHT! DID YOU
CHECK THE
AMDF?

Executive
Order 12873,
Federal

Acquisition,

Recycling and Waste

Prevention, requires

the Army to reduce

the volume of waste it

generates. Using recycled

oil is one way to do that, if

the equipment warranty

allows. So far, only 10W30

re-refined oil is available.

Get it with these NSNs:

U/I	NSN 9150-01-413-
BX (12 1-qt bottles)	6897
CO (5 gallons)	6892
DR (55 gallons)	6990

If you have any questions about this recycled oil, call 1-800-345-6333.

Training...

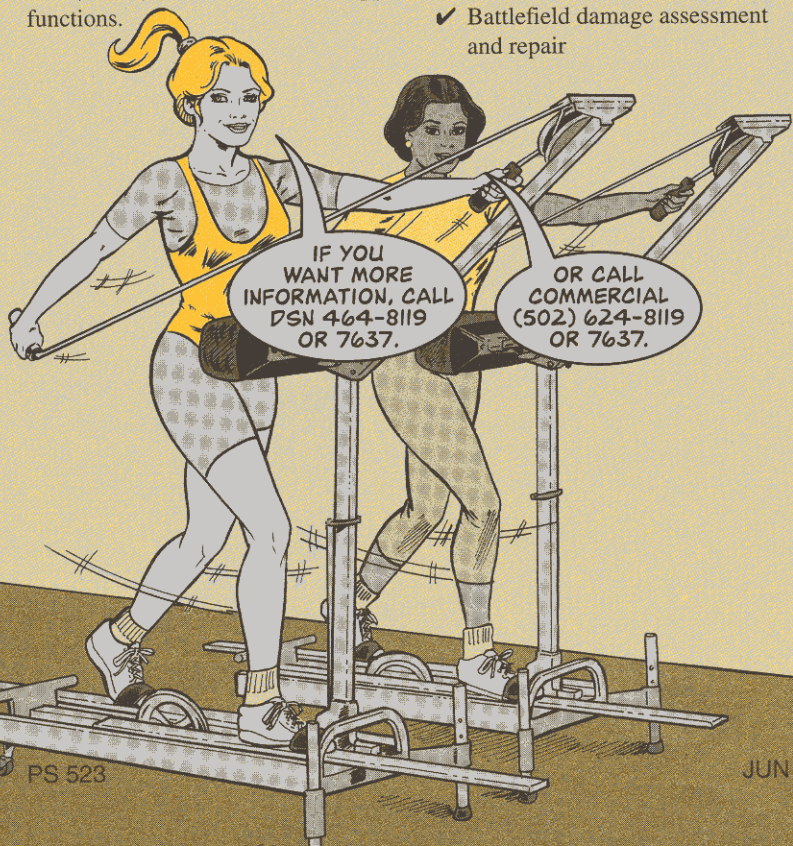
Get On Track

If you're a warrant officer, lieutenant, or captain getting ready for your first unit maintenance leadership position, you need to get on track at the Battalion Maintenance Officer Course at Fort Knox, KY.

This four-week course will prepare you for the ins and outs of the Army's fast-changing maintenance management program. It also gives special emphasis to Unit Level Logistics System (ULLS) maintenance and supply functions.

Other blocks of instruction include:

- ✓ Unit maintenance operations
- ✓ Maintenance publications
- ✓ Managing a prescribed load list
- ✓ Property accountability
- ✓ Materiel condition status report
- ✓ Environmental/hazardous materials policies and procedures
- ✓ Automotive principles and electricity
- ✓ Supervising troubleshooting procedures and scheduled services
- ✓ Battlefield damage assessment and repair



IF YOU
WANT MORE
INFORMATION, CALL
DSN 464-8119
OR 7637.

OR CALL
COMMERCIAL
(502) 624-8119
OR 7637.

BULLETIN ALERT

ARMYLOG users, get the latest logistics news by reading the bulletins in each new edition of ARMYLOG.

These bulletins not only give information about ARMYLOG, but other Logistics Support Activity (LOGSA) products and services, as well.

For example, here's what the Mar 96 bulletin list looks like:

Each bulletin gives instructions on how to access the CD-ROM file or how to request the LOGSA product.

To get into the bulletin menu, just hit F3 when the initial screen appears.

Bulletins

Beginner Instructions
 Help File Access
 Users Manual Access
 Surfin' the Web
 Incorrect Data? Use DIREP
 ARMYLOG Subscriptions
 RTAIS Subscriptions
 Microfiche Account Cancellation
 CD Recycling
 LOGSA Customer Support
 The Army Price Challenge Program
 SB 38-101 (CD-ROM)
 ARMYLOG Extraction Software
 DA Pam 25-30 (CD-ROM)
 NSN Not in the AMDF?
 FREE! FREE! FREE!
 Acquisition Advice Code "H"

Time Savers ...

Remember That Time When...

Dear Editor,

Mechanics can save themselves lots of time by keeping a notebook in their toolboxes and jotting down info they will need again.

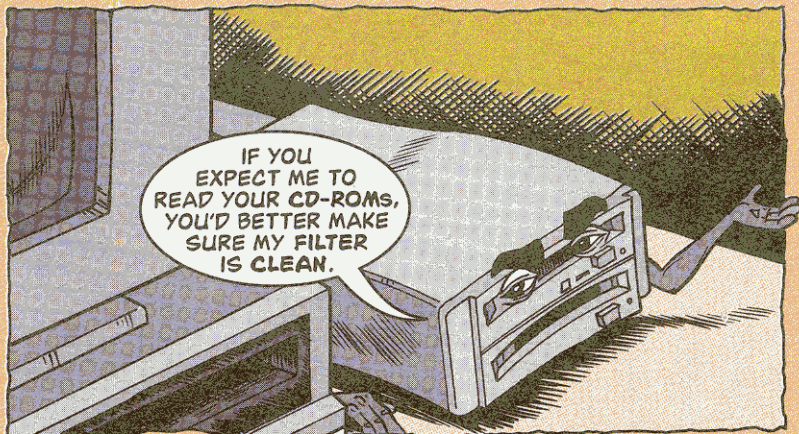
In my notebook, I put things like solutions to problems I've come up with, wiring diagrams, lube or torque requirements, and anything else that will probably be needed again. That way, I don't have to be constantly thumbing through the TM or trying to remember exactly how I fixed something before.

SPC Luke Szelaka
Camp Humphries, Korea

FROM THE DESK OF THE Editor 

That's a good idea to jot down. Remember, though, to regularly check your TMs for the latest changes and updates. Plus, use PS to stay on top of PM. Thanks.

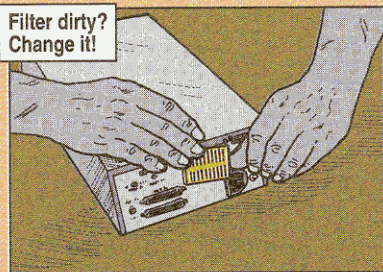
Make Filter PM TOP Priority



Filter care should be job one on your CD-ROM reader.

A dirty filter keeps cool air from circulating, causing heat buildup that can shut down your reader.

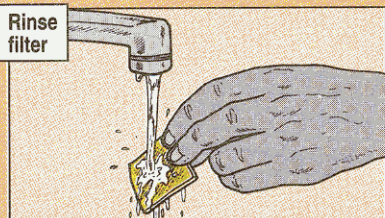
Look at the filter daily for dirt and damage. If it's dirty, change it.



If your reader is made by Sony, you can get a filter refill kit that contains eight filters. Order the kit on DD Form 1348-6 using CAGE 2S373 and PN 2470FILTERPK.

If you need a new bracket, too, order the dust kit that has four filters and a bracket. Use DD Form 1348-6 with NSN 7025-01-341-6658. Note in the Remarks block that the NSN is not on the AMDF.

If you don't have a new filter handy, rinse out the dirty one with warm water. Be sure the filter is completely dry before putting it back in the equipment, though.



If your CD reader is not made by Sony, check the manufacturer's manual for filter information.

Connie's
POST
SCRIPTS

GEAR, WE
MUST DESTROY THIS
INFORMATION!

I DON'T
THINK SO!

Save \$\$\$ on M939A2 Cooler

Use replacement transmission oil cooler, NSN 2520-01-098-5124, for all M939-series 5-ton trucks. Although TM 9-2320-358-24&P says to use a different cooler for -A2 models, -5124 works the same and fits almost perfectly—plus it costs about \$600 less.

M16 Cleaning Pan

Armors, get a cleaning pan for M16-series rifles, with NSN 4940-00-795-3595. It can be used for dry cleaning solvent as described in Chapter 2 of both TM 9-1005-319-23&P and TM 9-1005-249-23&P. The pan is also listed in the expendable/durable supplies and materials list of both pubs.

Chigger Repellent

You no longer need to go through your medical folks to order chigger repellent. The Defense General Supply Center (S9G) now codes it as a general supply item with medical applications (SCMC 3). NSN 6840-01-137-8456 gets a 4-oz bottle.

Tire Mounter/Demounter

The Bishman tire mounter/demounter, model 931A, NSN 4910-00-675-1478, is no longer available. It's been replaced by NSN 4910-01-370-9855, which accommodates wheels 15 to 44 inches in diameter and up to 40 inches wide, and tires up to 83 inches in diameter.

MRE Heater

NSN 7310-01-310-5155 gets the meal-ready-to-eat heater for M548 and M548A1 cargo carriers. The NSN shown on Page C-2 of the additional authorization list of TM 9-2350-247-10 brings you MREs, but nothing to heat them with.

Hold TD-1389 Cards

Planning to send your TD-1389(P)(V)1/G or (V)2/G multiplexer-demultiplexer to support? Remove the circuit cards first. Circuit cards A9 through A21 are designed for *your system* alone. Store them in antistatic plastic bags while you're waiting for your gear to come back.

Arms Room Lock

Armors, the NSN for the high security padlock for your arms room door has changed. The old lock, NSN 5340-00-799-8248, was discontinued. The new lock is 5340-01-217-5068.

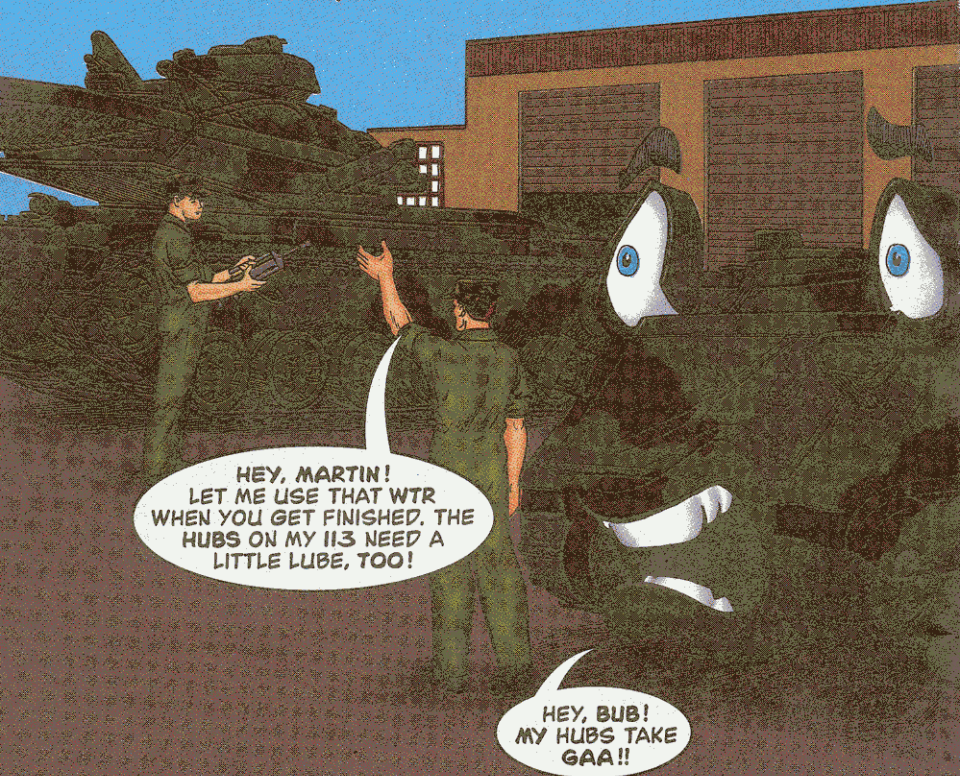
M961 FISTV Regulator

Make a note of these changes to Fig 3 of TM 9-2350-266-24P: Item 1 has been replaced by NSN 2920-01-300-3737. Delete Item 7. This cable assembly can be used only with the old regulator (Item 1). Add these parts for grounding the new regulator: Ground wire, NSN 2920-00-999-2100; lockwasher, NSN 5310-00-550-1130; and nut, NSN 5310-00-761-6882.

Distribution: To be distributed in accordance with DA Form 12-34 C-R, for TB-43-series.

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

*There's only one lube
for the job ...
THE RIGHT ONE!*



HEY, MARTIN!
LET ME USE THAT WTR
WHEN YOU GET FINISHED. THE
HUBS ON MY I13 NEED A
LITTLE LUBE, TOO!

HEY, BUB!
MY HUBS TAKE
GAA!!

*Don't share grease guns.
Follow your LO!*