Issue 524

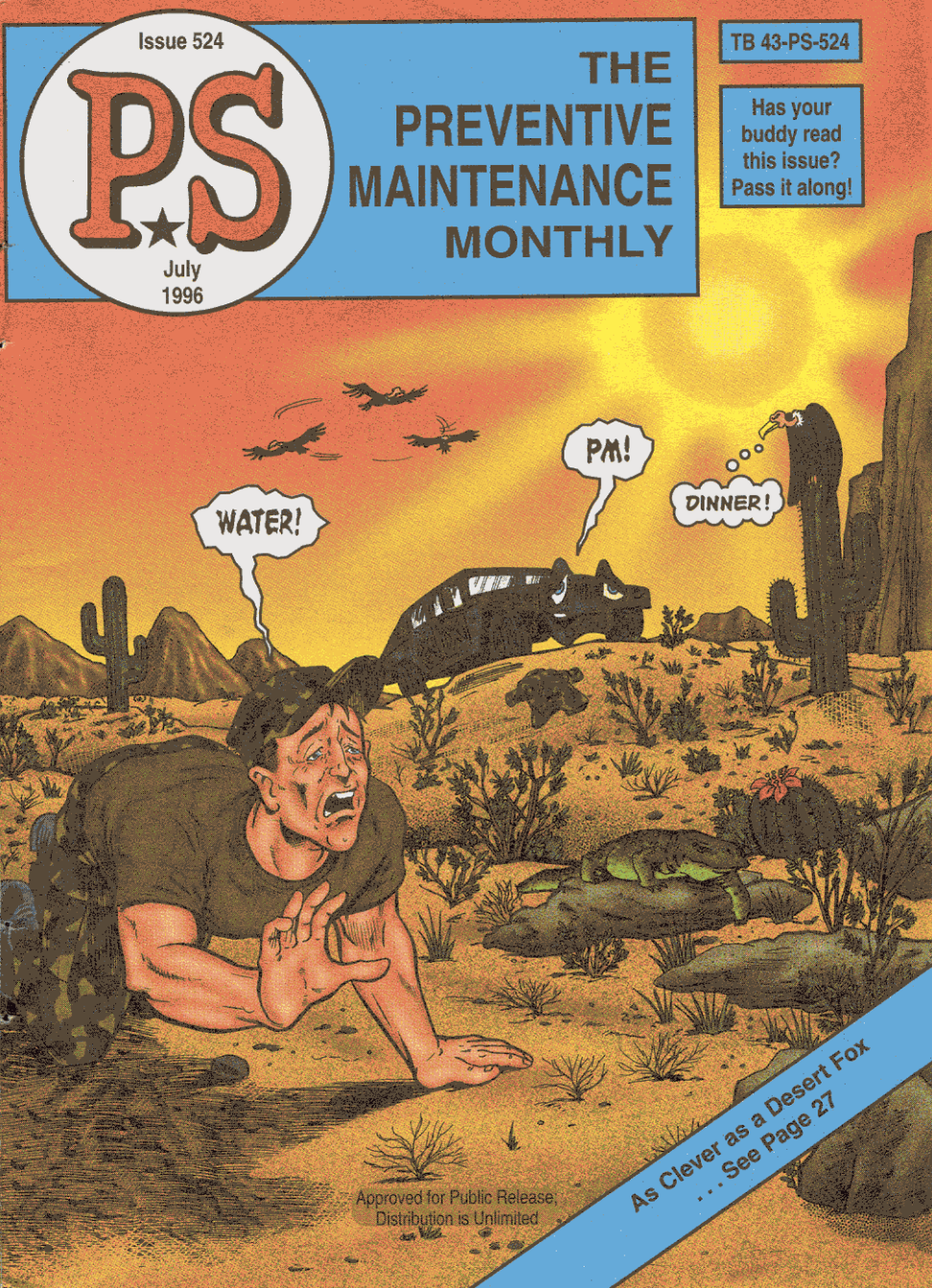
PS

July
1996

THE PREVENTIVE MAINTENANCE MONTHLY

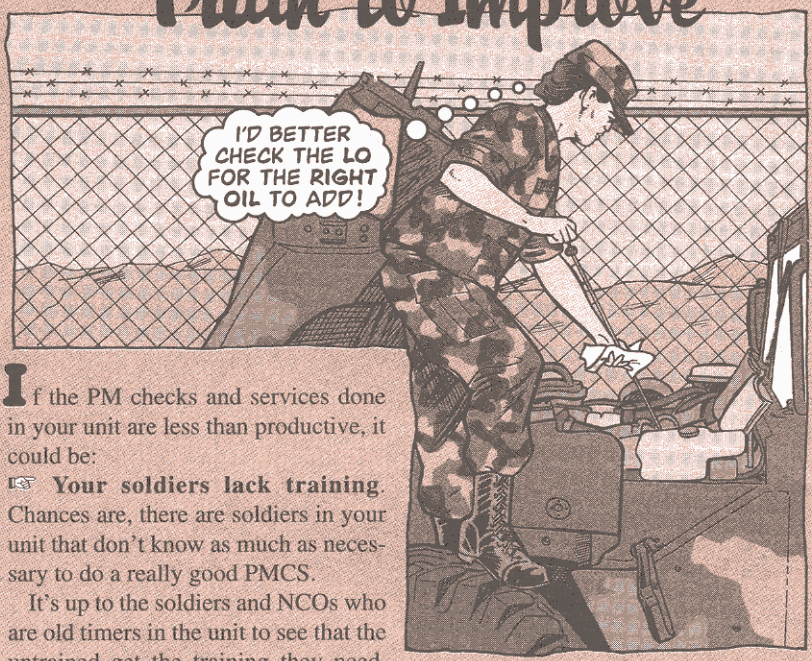
TB 43-PS-524

Has your buddy read this issue? Pass it along!



As Clever as a Desert Fox
. . . See Page 27

Train to Improve



If the PM checks and services done in your unit are less than productive, it could be:

☞ **Your soldiers lack training**. Chances are, there are soldiers in your unit that don't know as much as necessary to do a really good PMCS.

It's up to the soldiers and NCOs who are old timers in the unit to see that the untrained get the training they need. After all, they're part of your team now. They need to understand that without good PMCS, you and your equipment can't roll when the mission calls.

You never know what equipment your unit may be called on to use or maintain, so train on everything you need to accomplish the mission.

☞ **They aren't using the TMs**. PMCS performed without the right manuals can be wasted PM. Teach all soldiers to always use the TM, because no one's memory is perfect. Never guess when the TM contains all the answers.

☞ **They don't know how to use the TMs**. If soldiers in your platoon don't know how to use the TMs, devote some "Sergeants' Time" to a class on **how to use** them. And a little practical exercise with the TM and equipment at the same time will reinforce the book knowledge.

Remember, there is no excuse for bad PM or untrained soldiers. Both can kill soldiers or equipment.

☞ **You're not checking on their work**. Check your unit's work daily. You'll know if your soldiers need a refresher. You'll know where the problem areas are.

Soldiers who are confident in themselves and their skills are the best equipped in combat. And it doesn't hurt morale in peacetime, either.

PS THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-524, 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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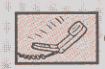

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You are invited to send PS your ideas for improving maintenance procedures, questions on maintenance and supply problems, and questions or comments on material published in PS. Just write to:

MSG Half-Mast
The Preventive Maintenance Monthly
Bldg. 5307
Redstone Arsenal, AL 35898-7466

Or E-mail to:

psmag@logsa-emh2.army.mil

By Order of the Secretary of the Army:

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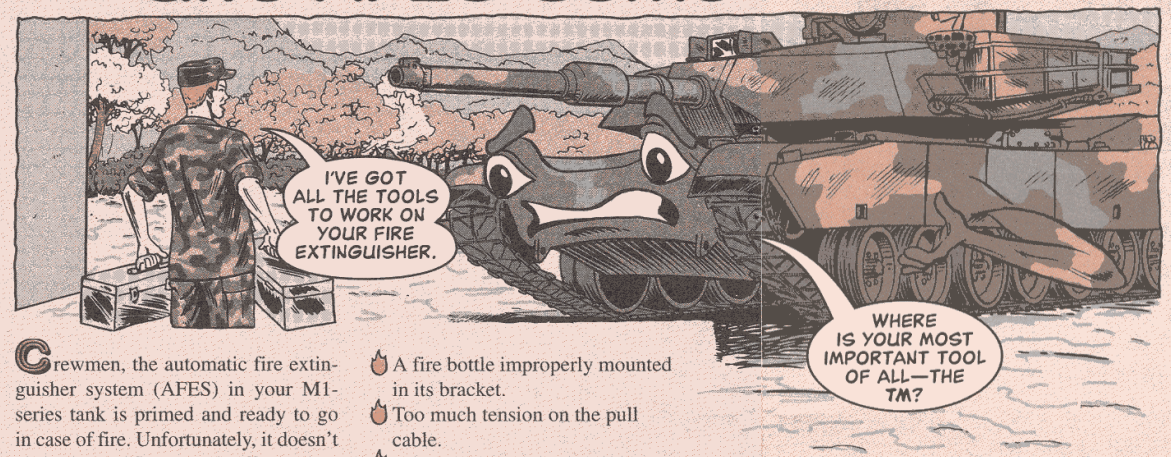
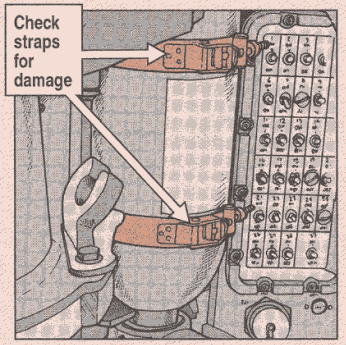
Give AFES Some TLC



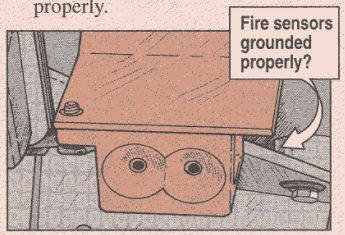
Crewmen, the automatic fire extinguisher system (AFES) in your M1-series tank is primed and ready to go in case of fire. Unfortunately, it doesn't always take a fire to set it off.

In fact, sometimes it takes very little. Any one of these seemingly harmless problems can cause an accidental discharge:

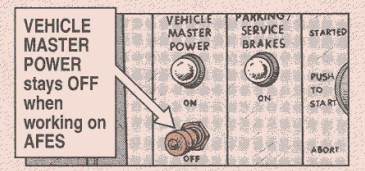
- Damaged fire bottle brackets, pads or straps.



- A fire bottle improperly mounted in its bracket.
- Too much tension on the pull cable.
- Sensors that aren't grounded properly.



- Vehicle master power switch ON when performing maintenance on the AFES.



- Cut, loose, or damaged harnesses and connectors. The damage can be caused by moisture, dirt or corrosion and broken, bent, loose or missing shells and inserts.

Preventing accidental discharge is easy—just make sure all TM procedures are followed for operation, maintenance, repair and training on the AFES.

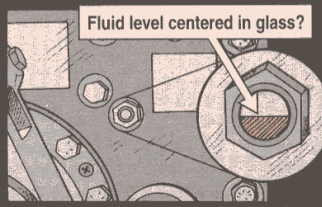
If you still have accidental discharge problems—even after troubleshooting—take a look at TACOM ground precautionary messages 94-08 (IPM1, M1 and M1A1) and 94-13 (M1A2). They provide additional troubleshooting procedures that may help.

If you need a copy of the messages, see your TACOM LAR or write to Half-Mast.

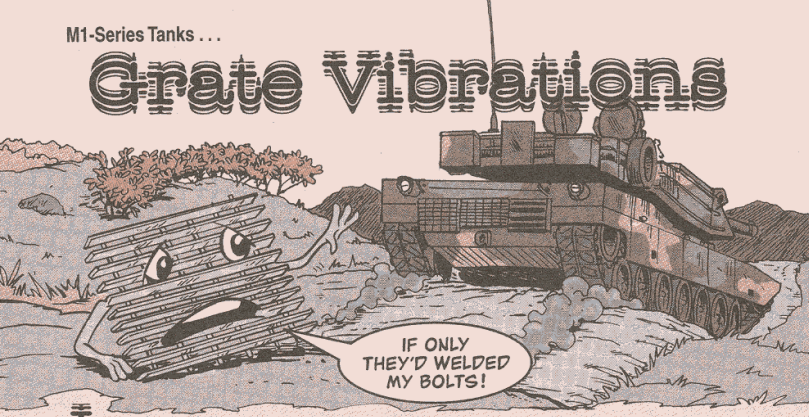
Look for Leaks

Tankers, the mine clearing blades and rollers used on your M1-series tank are no lightweights.

The stress of pushing that extra weight makes the front shocks leak oil. If you ignore them long enough, they'll go dry and fail. Whenever you use a blade or roller, check the fluid level in the shocks each time you stop. Fill 'em with lubricating oil, MIL-L-23699, as needed.

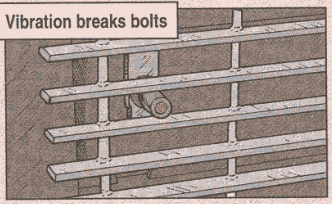


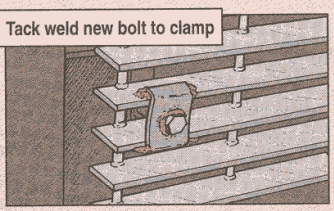
Grate Vibrations



It's a fact of life—enough vibration will cause any bolt to loosen or break. Just ask your mechanic next time he replaces the oil cooler or engine exhaust grates on your M1-series tank.

Each grate is held in place by four bolts. Unless you retighten the bolts occasionally, they come loose. You end up leaving one or more of the grates lying on the side of the road.





If you're tired of that happening, TACOM now says your mechanic can use tack welds to hold the bolts in place—as long as you have your commander's OK. Here's how:

1. Remove the grate hardware and toss the washers and bolts.
2. Install the old clamps, NSN 5340-01-073-7675, and new bolts, NSN 5305-00-115-9526. M1A2 tanks use metal plates instead of clamps.
3. Torque the bolts to 30 lb-ft.
4. Tack weld the clamp or metal plate to the grille door. Then tack weld the bolt to the clamp or metal plate.

The tack welds will keep the bolts from loosening, but are easy to break loose when it's time for the bolts to come out.

JUST SAY STOP

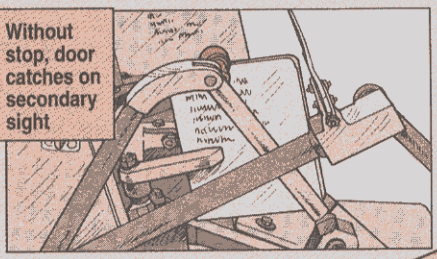
STOP

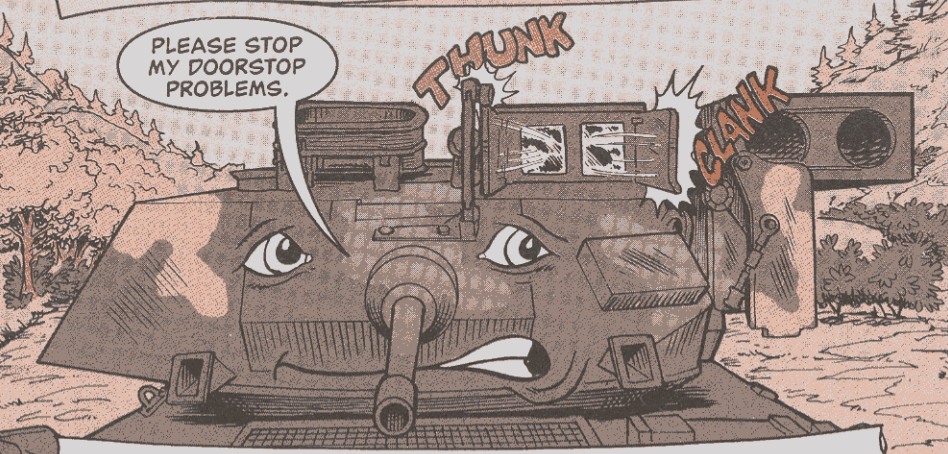
Dear Half-Mast,

We've had problems with the doors on the newer version of the Bradley's integrated sight unit (ISU). They swing open too far. The left door hangs up on the TOW launcher and the right one catches on the secondary sight when the M242 cannon is raised. We've ended up with ISU doors that can't be opened from the inside.

What can we do?

SGT A.M.





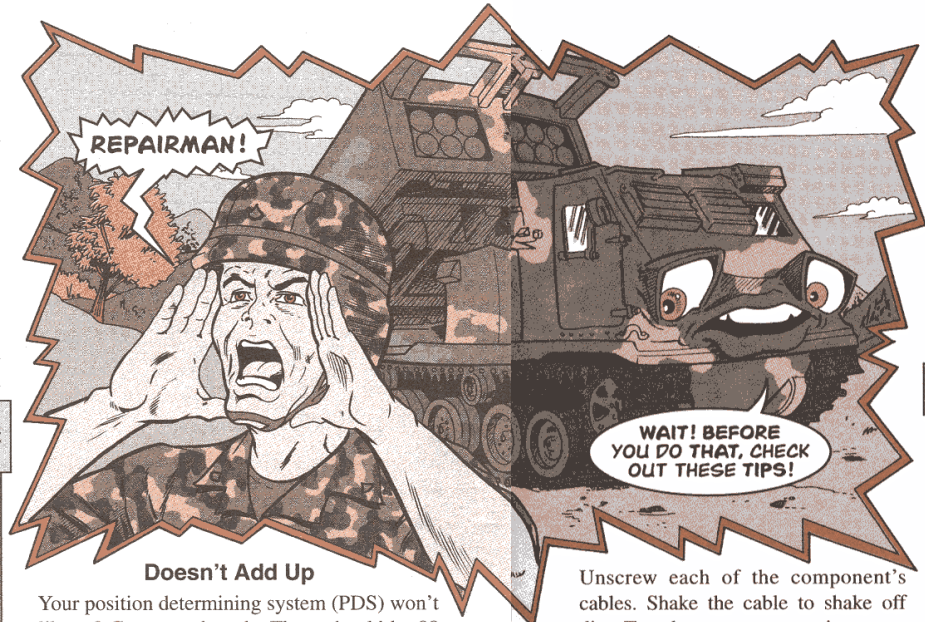
Dear Sergeant A.M.,

There's nothing wrong with the doors that a good stop wouldn't cure. The right ISU door is probably missing its doorstop, NSN 5340-01-318-9854, and its left door catch, NSN 5340-01-313-4781. The two have to be removed when the door cables are adjusted. Sometimes they're not put back on or are put on wrong. Your mechanic can stop doorstop problems.

Half-Mast

No Trouble Troubleshooting

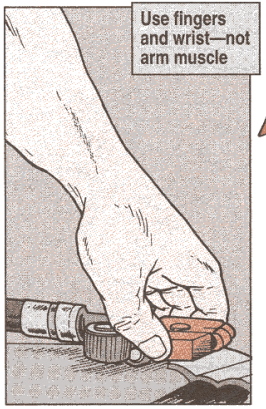
If your MLRS is giving bad prompts or just won't fire, give these troubleshooting tips a shot before you shout for your repairman.



It's the Batteries

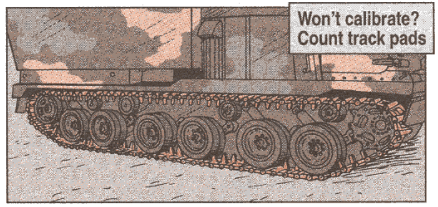
Problems with the fire control panel? Connections on the launcher batteries may be loose.

Feel for loose connections at all six batteries. Grab the clamp with your thumb and two fingers. Slowly try to turn the clamp on the post. Do not jerk it or you'll damage it. Also make sure the clamp is all the way down on the post. Your repairman fixes loose battery clamps.



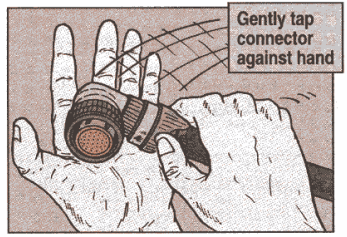
Doesn't Add Up

Your position determining system (PDS) won't calibrate? Count track pads. There should be 88 on the right side, 89 on the left. If there's one pad too many, remove it and calibrate again.



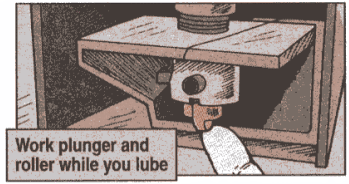
Good Connections

Think something like the electronics unit has gone out? It may just be a poor connection. Unscrew each of the component's cables. Shake the cable to shake off dirt. Tap the connector against your palm to knock out dirt. Never bang the connector against something hard. That damages it. Hook up the cables and try again.



To the Limit

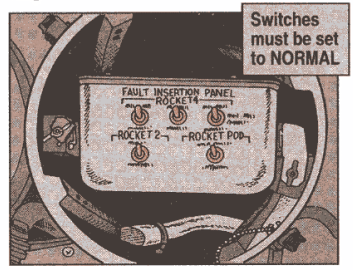
Bad prompts or launcher won't fire? It may be caused by sticking limit switches. The CAGE DOWN limit switch sticks the worst. Push in all 10 limit switches to see if they're moving freely.



Unstick a stuck switch by squirting on lubricant, NSN 9150-00-823-7860, as you work the switch's plunger. An artist's brush cleans out dirt.

Whose Fault

Launcher won't work and nothing else helps? Pull the cover off the No. 4 launch tube and check the fault insertion panel. All the switches must be set to NORMAL or the launcher can't respond.

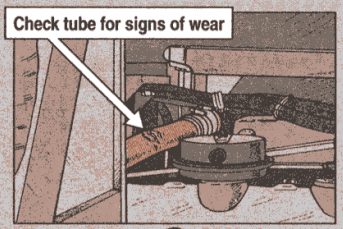


Ups and Downs

Operators, raising and lowering the cab on your MLRS is a fairly simple procedure. Trouble is, it can also cause damage.

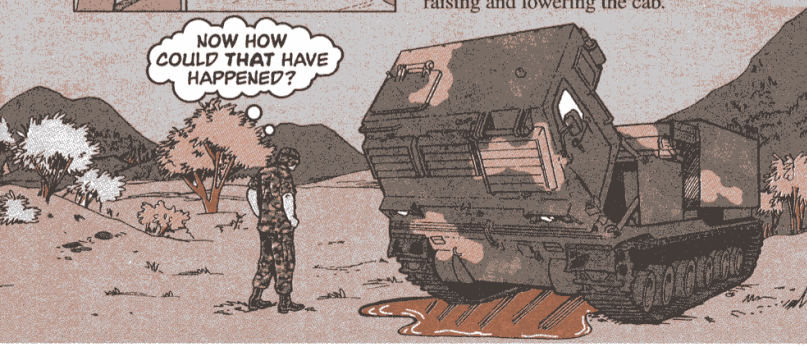
On some vehicles, metal coolant tube, NSN 4720-01-351-4082, sticks out slightly from the engine compartment. When that happens, the base of the cab rubs against the tube as the cab is raised and lowered.

Enough rubbing causes a leak in the coolant tube. Pretty soon you've got an overheated engine.



The fix is simple. Just get your mechanic to loosen the clamp holding the tube to its connecting hose. Then, push the tube one or two inches farther into the hose and retighten the clamp.

That gives enough clearance for the coolant tube and takes the rub out of raising and lowering the cab.



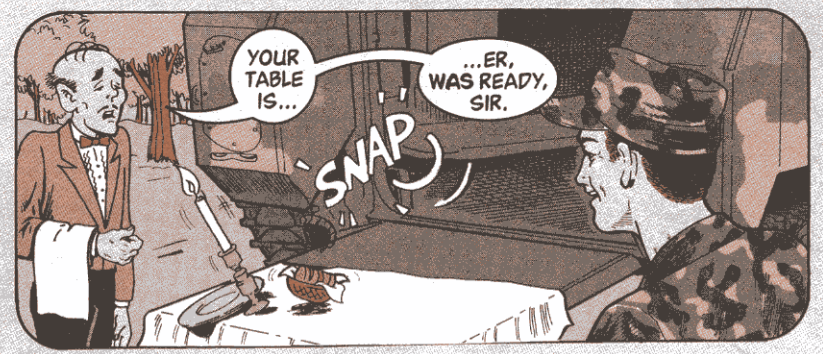
Bradley/MLRS Torque Conversion

The torque wrench conversion formula on Page 17 of PS 517 contains a misprint. The required torque value should be **divided** by the last portion of the formula. Here's the correct formula:

$$\text{Corrected reading} = \text{Required torque value} \div \left(\frac{\text{Required torque wrench length + adapter length}}{\text{Torque wrench length}} \right)$$

M113-Series Personnel Carriers . . .

Bon Appètit!



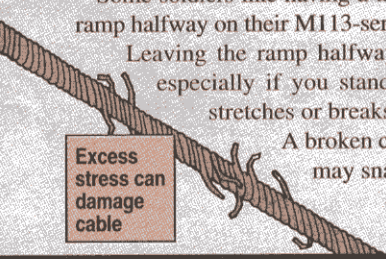
A table is a handy thing in the field. It gives you a convenient place to eat, sit, or put your gear.

Some soldiers like having a table so much that they make one by lowering the ramp halfway on their M113-series personnel carrier. That's when problems start.

Leaving the ramp halfway down puts a lot of stress on the ramp cable, especially if you stand or put heavy objects on the ramp. The cable stretches or breaks if it's abused too often.

A broken cable won't close the ramp door. A stretched cable may snap when you least expect it.

So do yourself a favor. Keep the ramp completely raised or lowered—not somewhere in between.



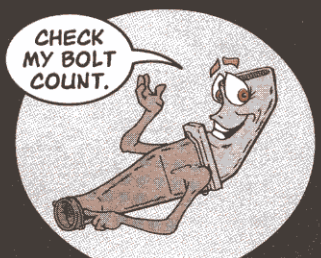
M992-Series Ammo Carrier . . .

Choose the Right Exhaust

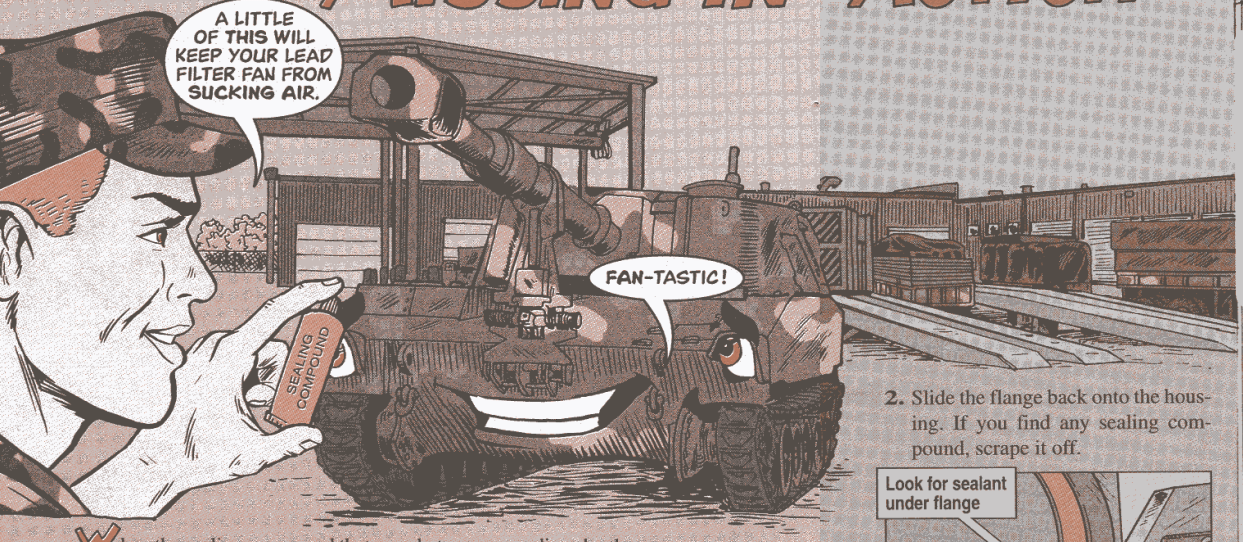
Mechanics, before you order a new exhaust pipe for that M992-series ammo carrier, take a close look at the exhaust duct.

There are two types of exhaust pipes available—a 2-bolt, NSN 2990-01-334-4324, and a 3-bolt, NSN 2990-01-038-8087. The 2-bolt pipe fits only the 2-bolt duct. The 3-bolt pipe goes only with the 3-bolt duct. You can't mix 'em.

One more word of advice. If either duct needs replacing, order the 2-bolt duct, NSN 2990-01-335-7412. It's easier to install and costs about $1,100 less than the 3-bolt duct, NSN 4720-00-756-3606.

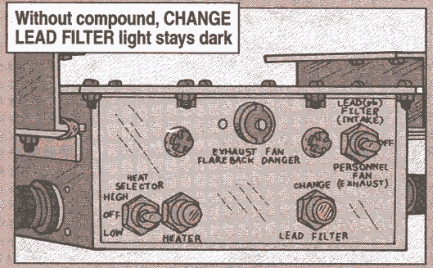


Missing in Action



When the sealing compound that goes between the Paladin's lead filter fan housing, NSN 4140-01-373-3399, and its telescoping flange is missing, you've got problems.

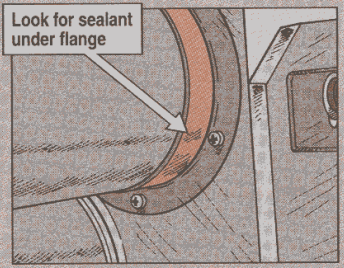
Without a seal, air is pulled in between the housing and the flange. That throws off the readings by the pressure sensor in the fan and can keep the CHANGE LEAD FILTER light from coming on when it's supposed to. You could end up breathing lead particles forced through an already full filter.



As each Paladin comes in for its next scheduled service, look between the fan's flange and housing. If you see no sealing compound, you'll need to apply it.

Here's how:

1. Remove the six mounting screws from the flange.
2. Slide the flange back onto the housing. If you find any sealing compound, scrape it off.



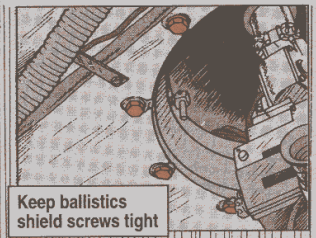
3. Clean the housing, including the area that was covered by the flange, with dry cleaning solvent. When it's dry, apply a bead of sealing compound, NSN 8040-00-118-2695, around the housing and where the fan housing and telescoping flange overlap.
4. Slide the flange back into place and replace the six mounting screws.

Loose Screws

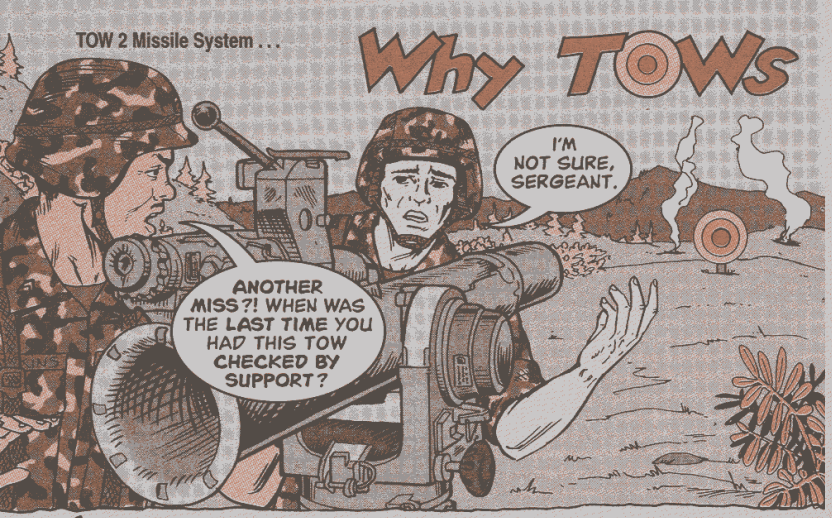
Operators, if you ignore a loose screw on your howitzer's panoramic telescope ballistics shield long enough, it'll turn into a broken screw.

If enough screws loosen or break, the shield shifts. That damages the shield gasket, causing leaks.

When you're doing your AFTER operation PMCS, take a close look at the screws. Tighten loose ones.



Why TOWs Miss the Target

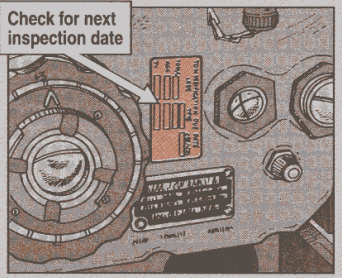


When a TOW missile system is up on its toes and everything is working right, it hits the target 98 percent of the time. But most TOW units don't have that kind of success. So why do TOWs fail?

No verification

Practically everything in the TOW system—sights, traversing unit (TU), boresight collimator—needs to be checked out by support every six months. In too many units, this isn't happening. The result is that gradually the TOW loses its ability to track the target—where you tell the missile to go is not where it goes.

It's easy to see if your TOW has been checked. Just look at the verification stickers. They show the date of the last verification. More than six months? It's time for a trip to support.



The most critical checks are the bridge clamp and the boresight alignment tests. Above all else, get those done.

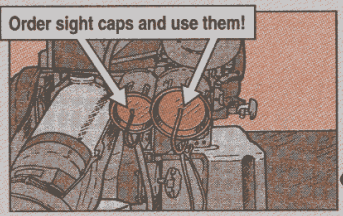
Poor sight protection

The TOW is a line-of-sight system. If you can't see anything, you can't hit anything. And that's often the case. TOWsters clean the sight lenses with their shirttails.

Soon the lenses are so scratched everything is a blur. Or they leave the lens protective caps off. Sand does a job on the lenses.

Lenses are expensive. Lens tissue, NSN 6640-00-663-0832, and cleaning solution, NSN 7930-00-880-4454, are cheap. Order lots of both and send them to the field.

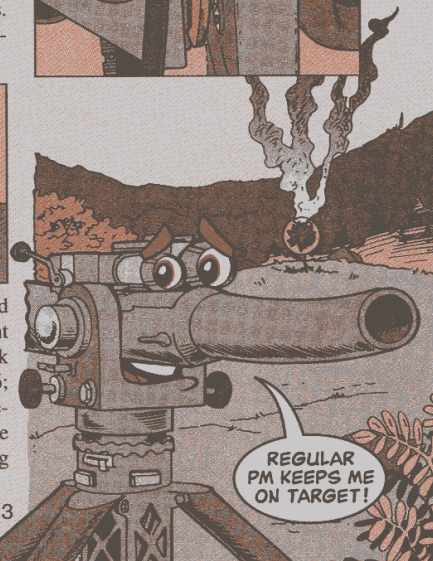
Before the sights leave the shop, make sure they all have protective caps. If they don't, use plastic bags or anything that will protect lenses.



NSNs for night sight caps are listed in TM 9-5855-1450-24P. The op sight doesn't come with caps, but these work fine: large, NSN 5340-01-121-8776; small, NSN 5340-00-855-7993; eyepiece, NSN 5340-01-087-1298. These are cheap, so order extras. Use string to tie the caps to the sights.

Traveling with sights mounted

Except in combat, you should never move out with the sights mounted. The TU index plate is not strong enough to handle the bouncing weight of the sights during travel. If the plate is bent, you've lost the alignment between the sights and the launch tube. There goes accuracy. Wait 'til you're ready to fire to mount the sights.

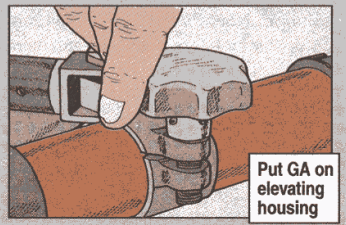


Getting It Ready To Fire

If your unit is getting the new M120/M121 mortar, there are a few things armorers should do before it goes to the field.

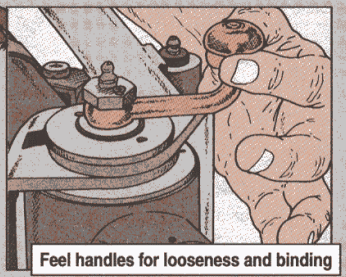
Send the mortar to support. Some M120/M121s weren't packed with enough grease. Firing them in that condition damages parts. Support can check them out and lube them if necessary.

Wipe off any grease that's on the elevating housing and replace it with aircraft grease (GA), NSN 9150-00-145-0268. The lube that comes on the


Put GA on elevating housing

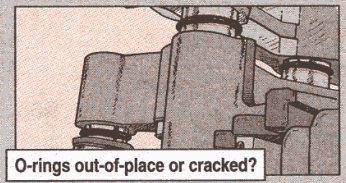
pins from the factory is packing grease and won't do the job.

Feel the traversing and elevation handles for too much play. Adjust them if necessary. If the handles bind, they need lubing with GA.


Feel handles for looseness and binding

Make a note that the grease gun for the M120/M121 can use male **and** female fittings. The mortar has both fittings.

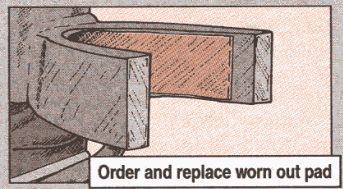
Make sure the three O-rings—one on each buffer and one on the elevation shaft—are in place and show no signs of cracking. Missing or leaking O-rings let water in the mount. The mount can rust out from the inside.


O-rings out-of-place or cracked?

It won't matter how good the O-rings are if high-pressure water is used around the mortar. Water is forced past the M120/M121's seals and corrosion begins. Make sure your unit knows to keep hoses away from the mortars.

Also make sure crews know to listen for the click when they lock the tube in the mount. The click means the tube is locked to stay.

The M120's trailer has a stick-on pad to protect the mortar tube. Eventually that pad wears off. You can replace the pad yourself. NSN 1015-01-320-6538 brings a ready-to-use pad and NSN 9320-01-412-7773 gets a sheet that has enough material for several pads.


Order and replace worn out pad

Solvent Only, Please!

The new biodegradable cleaners are great for lots of cleaning jobs, but they are definitely not great for rifles, machine guns, and mortars.

These new cleaners are water-based and do not rapidly evaporate. If they're used on small arms, the cleaners get in internal parts and don't dry up. Soon corrosion's starting to do a number on your weapon.

When you need extra cleaning punch, use dry cleaning solvent. It's authorized by your TMs and it dries quickly.

If any new cleaners are OK'd for small arms by the Army, you'll see it in PS. Otherwise, clean by the book.

Are You Covered?

The only protection your truck or trailer's cargo has against the elements is canvas.

And it's a sure thing that holey or ripped canvas will never protect cargo—or passengers—from weather's worst.

Inspect

Get a line on the condition of your canvas by inspecting the fabric, webbing, stitching and seams. Look for holes, tears and missing material. Also look for dirt, grease and mildew.

Clean

Wash off any dirt, grease and mildew with mild soap, water and a soft bristle brush. Allow the canvas to dry before making any repairs.

Repair

You can use tentage repair kit, NSN 8340-00-262-5767, to patch holes and tears. Don't worry that the kit is for tents. It works on any canvas.

The word on using the kit is in Chapter 6 of FM 10-16. Any cover that can't be patched with the repair kit should be turned in for repair.

If you've made repairs and you still have leaks, re-treat the canvas with coating, NSN 8030-00-281-2346. That's best done with the canvas installed on the truck or trailer.

Preserve

Details on applying the coating are on Page 4-25 of TM 10-8340-211-13.

That's a tent TM, but you use the same procedure. Treating is also covered in Chapter 14 of FM 10-16.

Cover the entire canvas, and let the first coat dry four hours. Then coat the seams again. Make sure the canvas is completely dry before taking it off the truck or trailer.

Also remember that the coating is flammable while it's wet, so keep flames away. Have a fire extinguisher handy, too.

Store

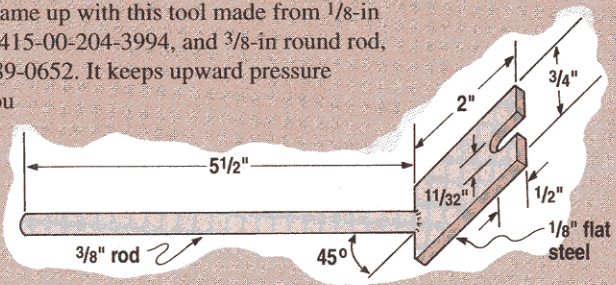
Before storing your canvas after it has been cleaned and preserved, be sure to do these things to keep it in good shape:

- Make sure the canvas is dry before it's rolled up. Then, don't roll it up too tightly. That way air can circulate around it.
- Don't put canvas where there are water leaks or open doors or windows.
- Store the canvas on pallets or dry dunnage. Wet wood means wet canvas, which means mildew. If it's real wet where you are, separate each layer of canvas with dry dunnage so air can circulate as much as possible.
- If you smell mildew around your stored canvas, find out where it is and clean it away. If you don't, all your canvas will soon be mildewed, too.

Glow Plug Removal Tool

Here's a SMART suggestion that may pay off for everybody who has to deal with swollen glow plugs in HMMWVs.

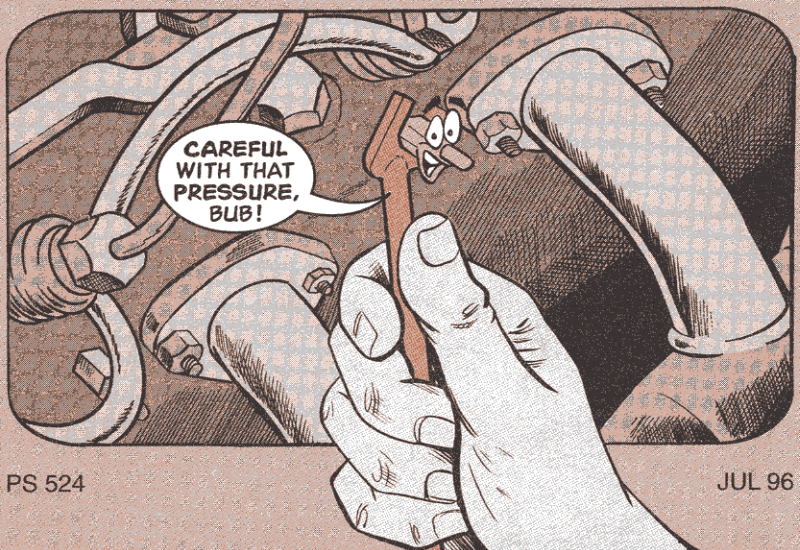
Using the basic idea sent in by SPC Joseph Morris of Ft Wainwright, AK, the truck headshed came up with this tool made from 1/8-in flat steel, NSN 9415-00-204-3994, and 3/8-in round rod, NSN 9510-00-189-0652. It keeps upward pressure on the plug as you slowly turn the plug out.



Be sure when you make the tool that the open end of the fork is no more than 11/32 inch wide. Use an old glow plug as a guide. The forked end fits behind the hex head of the plug. If the fit is poor, you may need to grind down the fork end thickness from 1/8 inch to 1/16 inch.

To use the tool, place the fork behind the hexhead of the plug with the angle portion against the fuel injector nozzle for leverage. Slowly turn the plug out while applying steady outward pressure on the plug.

Too much pressure or turning the plug too fast can break the tip. Then, the HMMWV goes to support.

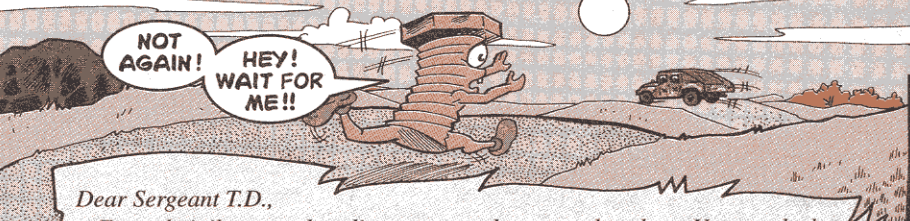


Rear Halfshaft Bolt Help

Dear Half-Mast,

What is the best way to keep rear halfshaft bolts tight on our HMMWVs? We have put on new lock washers twice in the last three months, but the bolts still work loose.

SGT T.D.

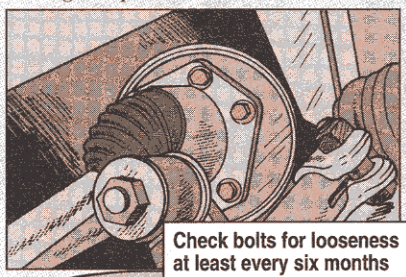


Dear Sergeant T.D.,

Eternal vigilance and sealing compound are your best bets. Use new lock, washers, NSN 5310-01-185-7218, and sealing compound, NSN 8030-01-171-7628, every time you replace a halfshaft bolt.

The rest of the time keep an eye on those bolts. Check 'em for looseness at least every six months and more often if necessary. Use a torque wrench every time you check the bolts. Torque bolts to 48 lb-ft.

Half-Mast



Check bolts for looseness at least every six months

Automatic Transmissions . . .

Dexron III on the Job

Dexron III is the new fluid for automatic transmissions.

It's an improvement over Dexron II, and replaces it in all applications. Don't use Dexron II in any vehicle that calls for Dexron III. It may not hold up and could lead to equipment failure.

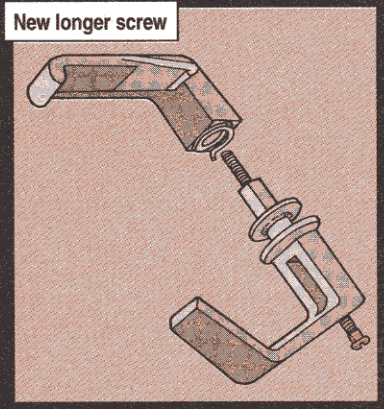
Dexron III is available in 1-qt plastic bottles with NSN 9150-00-698-2382 and 55-gal drums with NSN 9150-01-114-9968.

Door Handle Fix

Eyeball Pages 3-11 through 3-18 of TB 43-0001-39-7 (Dec 95) for the fix to end all fixes for door handles on soft-side HMMWVs.

Many of you already use a form of this fix, in which a single screw holds both the outer and inner handles together as a unit.

If you don't have a copy of the TB, contact MSG Half-Mast by fax, DSN 645-0961 (commercial 205-955-0961).

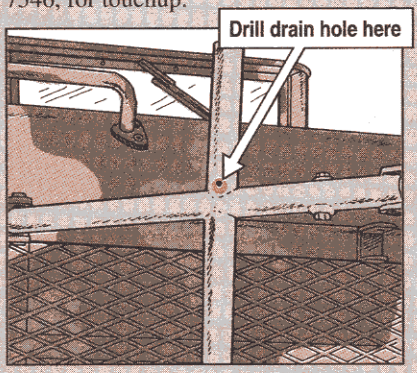


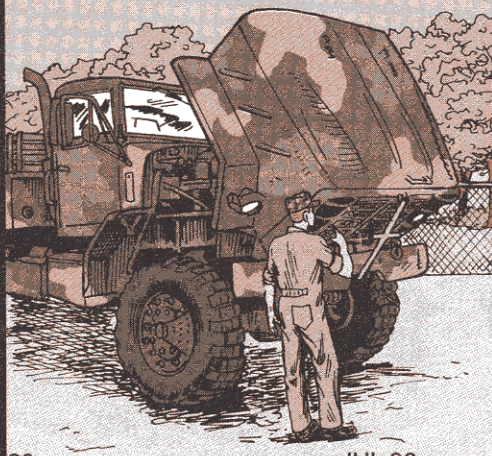
Drain Hood Support

Mechanics, the hood support on M939-, A1-, and A2- series 5-ton trucks is hollow and fills with water. That means corrosion—and possible tube splits in the winter.

Let the water drain by drilling 1/8-in hole in the bottom of the handhold.

Use CARC paint, NSN 8010-01-229-7546, for touchup.





M984 HEMTT Wrecker-Recovery Vehicle . . .

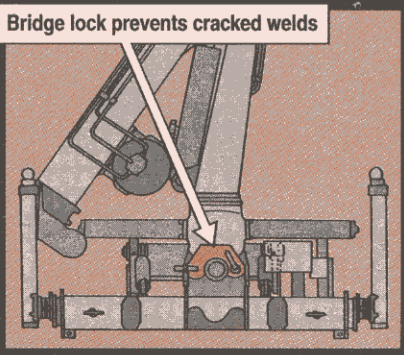
Check HIAB Crane Welds

Before you do anything else with your M984's HIAB crane, check it and the boom fold-down cylinder mounting brackets for weld cracks.

Cracks in the mounting bracket welds can break the crane loose from the truck frame. You don't want to be anywhere near if that happens.

If you find cracked welds on a HIAB crane or cylinder mounting bracket, let your sergeant know that your M984 is NMC. The welds must be repaired by general support before the crane is safe to use again.

To prevent weld cracking, always engage the bridge lock before operation. Check out Pages 2-44 through 2-46 of TM 9-2320-354-10 for the right method.



HEMTT . . .

Replace the Dust Cap

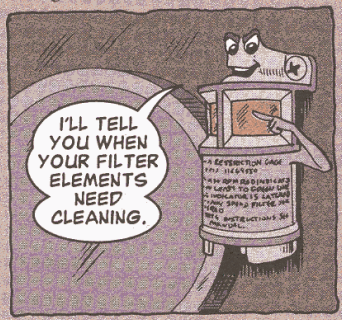
Mechanics, dust caps on the HEMTT's air brake chambers get lost, letting water, dust and dirt get into the chambers. That can cause brake failure.

Take a walk around the motor pool and see if any HEMTTs are missing dust caps. If you find a missing cap, replace it with a new cap, NSN 5340-01-163-2073. It's a little bigger than the old one, so it should stay put.

Clean 'em First

Unless the elements in your vehicle or equipment cannot be cleaned—and your TM will tell you—you're wasting money if you just replace them with new ones every time. Many filter elements can be cleaned three times before they must be replaced.

Your unit may not have filter element cleaning machines or use a cleaning service. That's fine. You can still clean 'em with compressed air or with detergent and water. Just follow the specific cleaning instructions in the TM.



Remember that each time you open the air intake system to look at the element, you can damage the element or contaminate the system. So, service them only when restriction indicators show there isn't enough air getting through.

If your vehicle or equipment doesn't have a restriction indicator, use the time or mileage intervals in your TM. Remember, those intervals are affected by extremes.

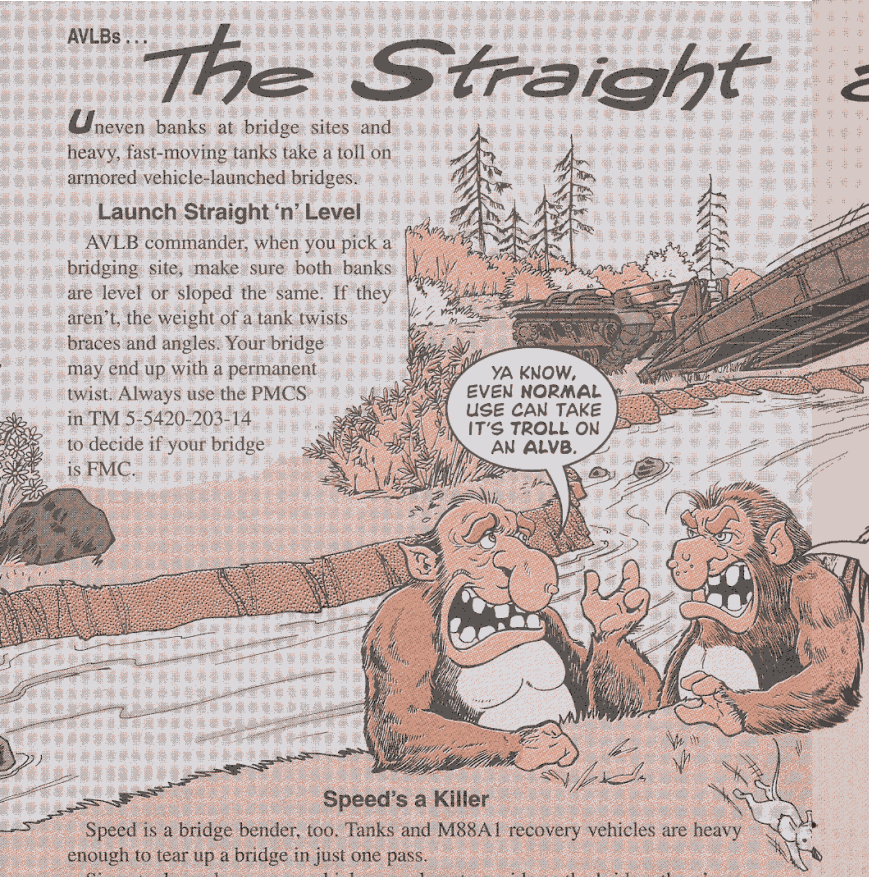
AVLBs . . .

The Straight and Narrow

Uneven banks at bridge sites and heavy, fast-moving tanks take a toll on armored vehicle-launched bridges.

Launch Straight 'n' Level

AVLB commander, when you pick a bridging site, make sure both banks are level or sloped the same. If they aren't, the weight of a tank twists braces and angles. Your bridge may end up with a permanent twist. Always use the PMCS in TM 5-5420-203-14 to decide if your bridge is FMC.



Speed's a Killer

Speed is a bridge bender, too. Tanks and M88A1 recovery vehicles are heavy enough to tear up a bridge in just one pass.

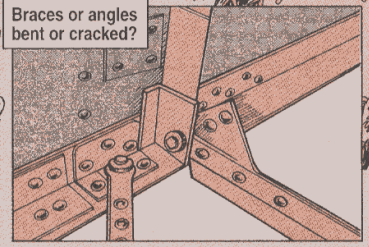
Since tanks and recovery vehicles are almost as wide as the bridge, there's no margin for steering error.

To prevent damage to the bridge, drivers of vehicles crossing the bridges should keep these tips in mind:

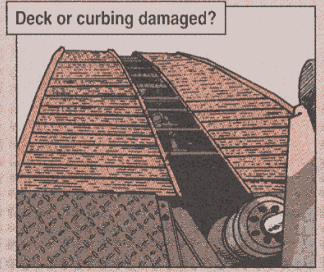
- Keep the vehicle centered on the bridge.
- Top speed on the bridge should be no more than eight mph for normal/caution crossing, and three mph for risk crossing.
- Never stop, accelerate or shift gears while on the bridge.

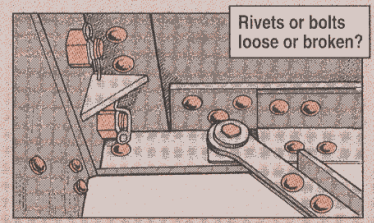
After-Crossing Checks

After tanks have crossed your bridge, check carefully for any damage to the deck or curbing. Then look for bent, twisted or cracked bracing, and angles.



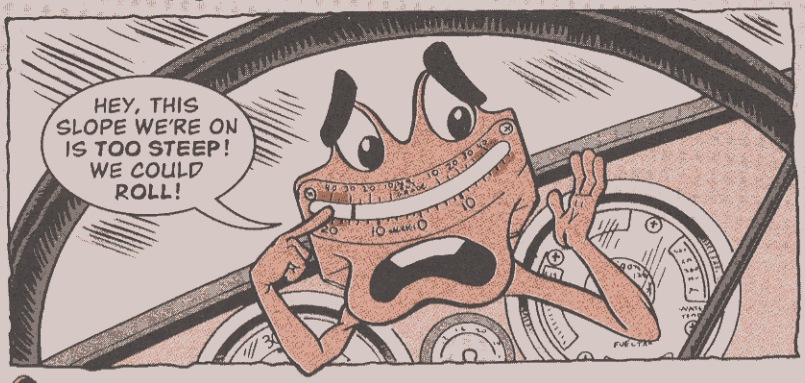
Look for broken or loose rivets or bolts, too. A shiny spot or rust around the head of a fastener is a tipoff that it's loose. Report any problems you find.





SEE . . .

Watch Those Hillsides



Operators, your SEE has a high center of gravity. That means it's top-heavy, especially when you're hauling a bucket of dirt.

Balanced and slow is the way to go when traveling over rough or hilly ground. Keep that balance in mind by keeping an eye on the inclinometer.

When a side slope approaches 17 degrees, as shown on the inclinometer, you need to find another direction. Side slopes of more than 17 degrees may cause SEE rollover.

Play it safe. Have your mechanic tape or mark the inclinometer's 17-degree mark with bright paint or tape as a reminder.

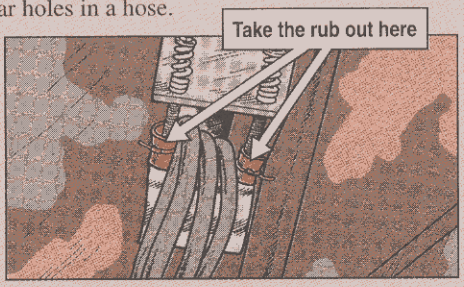
6K Variable Reach Forklift . . .

Hoses Rubbed Raw?

The hydraulic hoses under the boom on your 6K variable reach forklift get a raw deal. The hoses rub against the tensioners when the boom is extended or retracted. All that rubbing can wear holes in a hose.

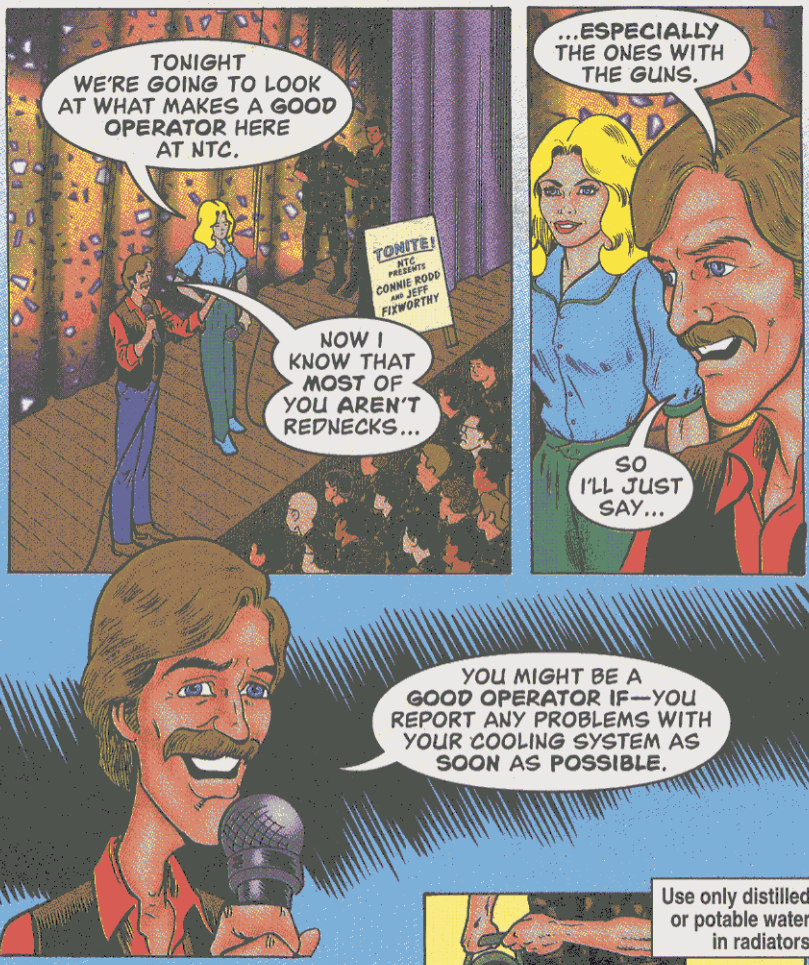
Fluid leaks, and then there's not enough hydraulic pressure to operate the boom.

Stop that rub by wrapping a piece of rubber tubing around the threads of the boom hose tensioners. Hold the tubing in place with a tie strap, NSN 5975-00-570-9598.



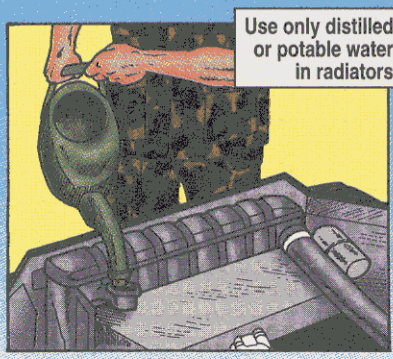

As Clever as a Desert Fox
TONITE!
NTC PRESENTS
CONNIE RODD AND JEFF FIXWORTHY
CURTAIN OPENS...
JEFF, IT'S GOOD OF YOU TO TEAM UP WITH ME TO GET OUT THIS INFORMATION.
THANKS, CONNIE. I'M SO USED TO TALKING TO REDNECKS THAT IT'LL BE A PLEASANT CHANGE TO TALK TO THIS FINE GROUP OF SOLDIERS...

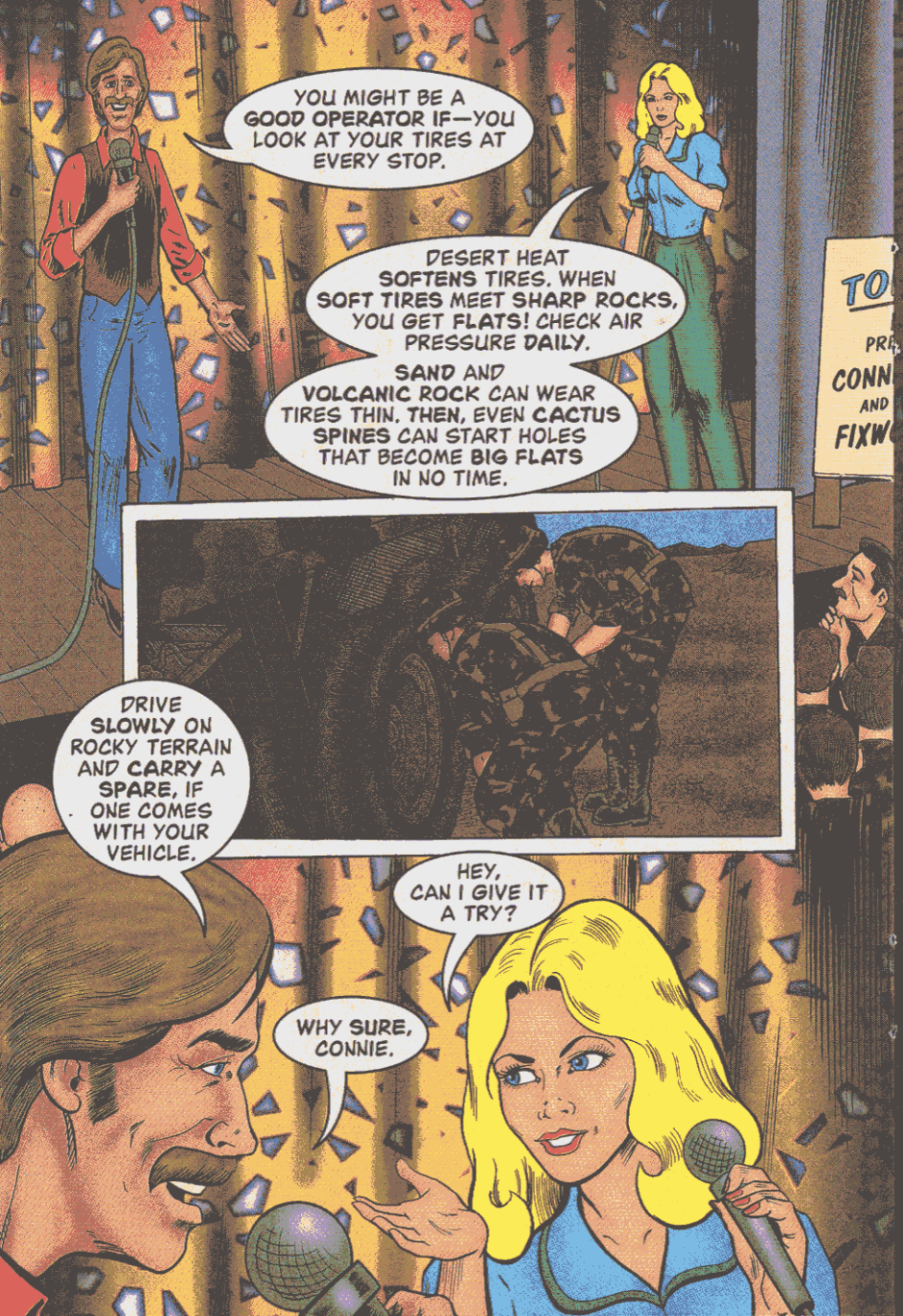

...ESPECIALLY THOSE WITH GUNS!
MP
HEY, GUYS, I'LL TRY TO CONTROL MYSELF, OKAY?
JEFF, LET'S GET ON WITH THE SHOW.
AS MOST OF YOU KNOW, DESERT TERRAIN—LIKE ROCKS AND SAND—IS TOUGH ON EVERY PART OF YOUR EQUIPMENT.

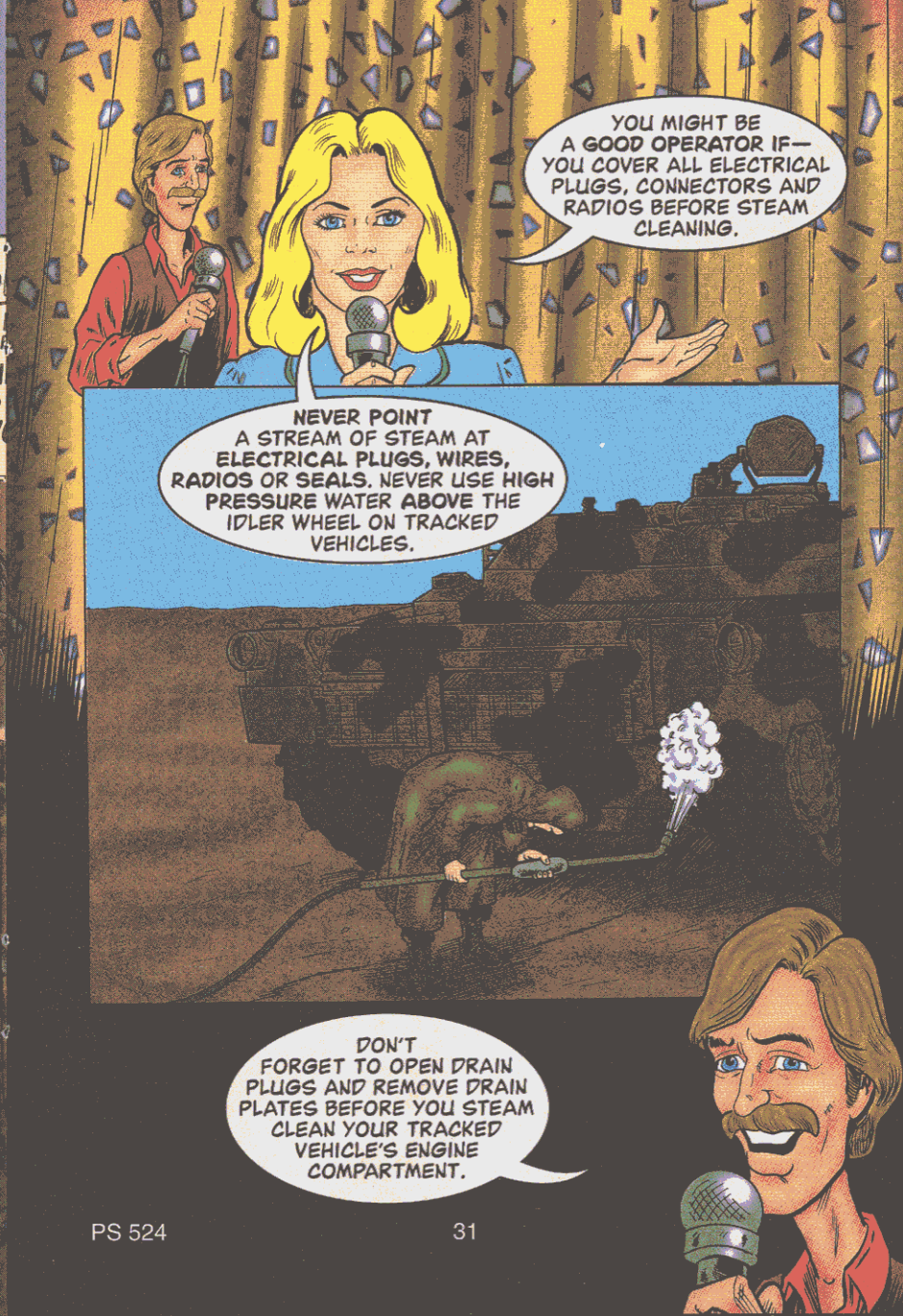


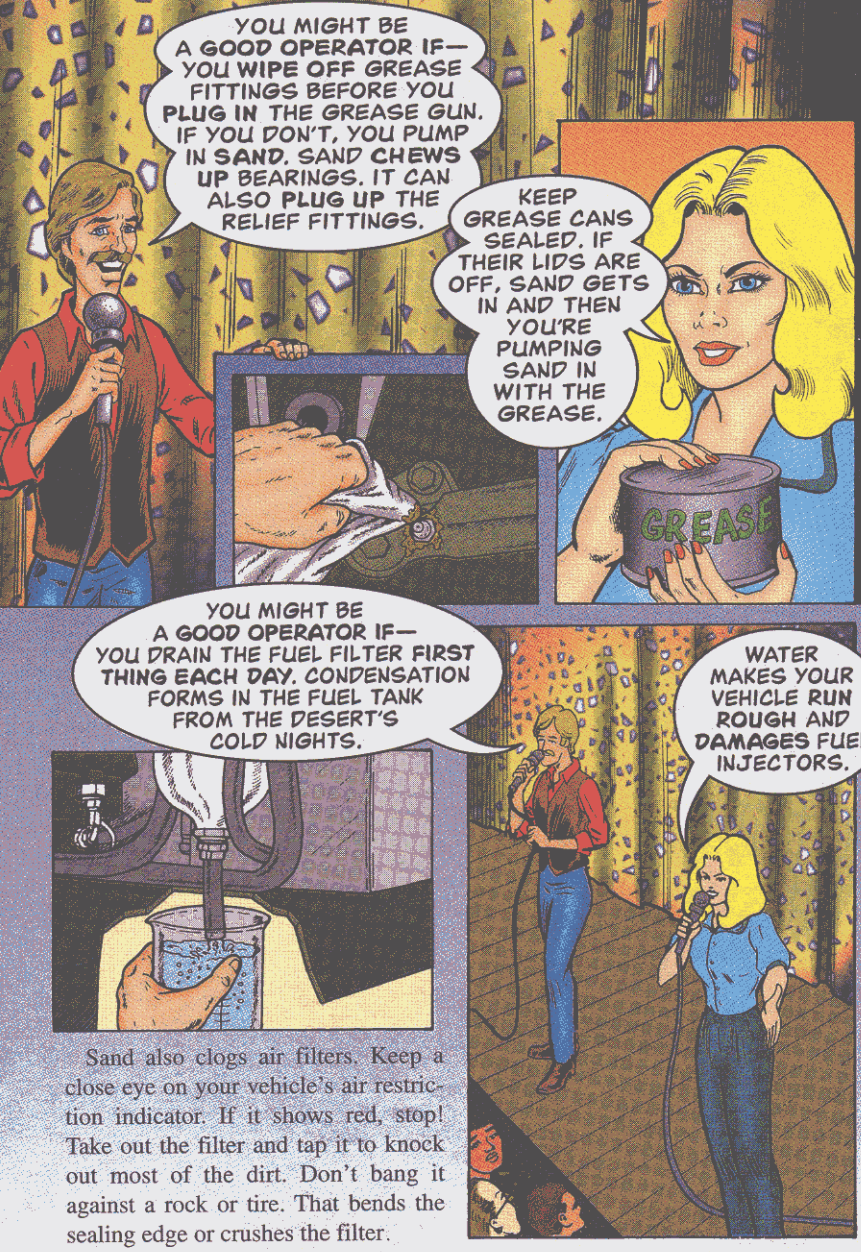
Make sure your water-cooled engine has a thermostat installed and that it works right. You'll go nowhere in this desert without a good cooling system.

Remember, local water at NTC should not be used in cooling systems. It has a high mineral content, which will clog up the systems. Use distilled or potable water only.

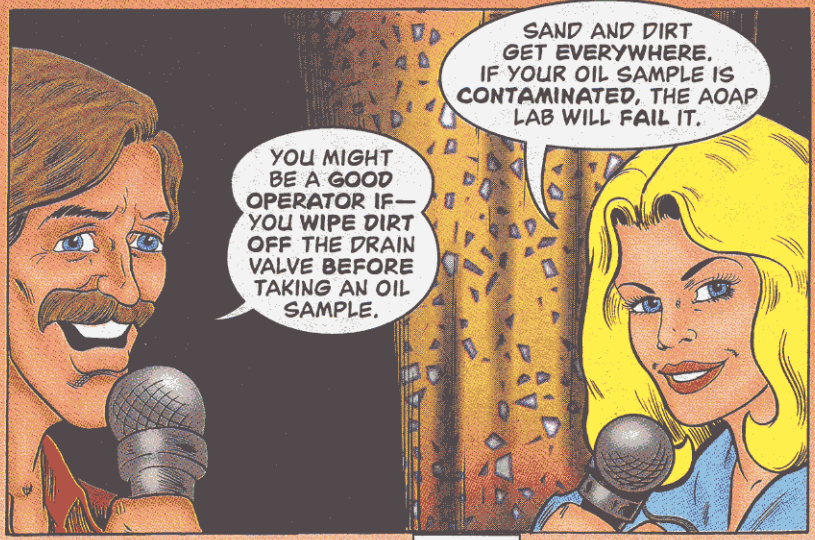



YOU MIGHT BE A GOOD OPERATOR IF—YOU LOOK AT YOUR TIRES AT EVERY STOP.
DESERT HEAT SOFTENS TIRES. WHEN SOFT TIRES MEET SHARP ROCKS, YOU GET FLATS! CHECK AIR PRESSURE DAILY.
SAND AND VOLCANIC ROCK CAN WEAR TIRES THIN. THEN, EVEN CACTUS SPINES CAN START HOLES THAT BECOME BIG FLATS IN NO TIME.
DRIVE SLOWLY ON ROCKY TERRAIN AND CARRY A SPARE, IF ONE COMES WITH YOUR VEHICLE.
HEY, CAN I GIVE IT A TRY?
WHY SURE, CONNIE.


YOU MIGHT BE A GOOD OPERATOR IF—YOU COVER ALL ELECTRICAL PLUGS, CONNECTORS AND RADIOS BEFORE STEAM CLEANING.
NEVER POINT A STREAM OF STEAM AT ELECTRICAL PLUGS, WIRES, RADIOS OR SEALS. NEVER USE HIGH PRESSURE WATER ABOVE THE IDLER WHEEL ON TRACKED VEHICLES.
DON'T FORGET TO OPEN DRAIN PLUGS AND REMOVE DRAIN PLATES BEFORE YOU STEAM CLEAN YOUR TRACKED VEHICLE'S ENGINE COMPARTMENT.



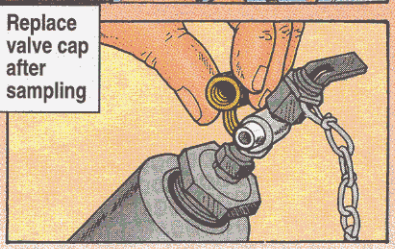
Sand also clogs air filters. Keep a close eye on your vehicle's air restriction indicator. If it shows red, stop! Take out the filter and tap it to knock out most of the dirt. Don't bang it against a rock or tire. That bends the sealing edge or crushes the filter.



Let a little oil drain from the valve into a container. This clears dirt from the line. Wipe off the oil, then collect the sample.

After collecting the sample, replace the valve cap immediately.

If you have to use a sampling pump, use a new tube **every** time.




WELL, YOU'VE BEEN A GREAT AUDIENCE, ESPECIALLY YOU GUYS WITH THE GUNS. G'NIGHT, Y'ALL.
GREAT JOB, JEFF. THANKS FOR HELPING OUT.
A FEW MOMENTS LATER...
HEY, CONNIE. WHAT WOULD YOU SAY TO LOSING THESE GUN JOCKEYS AND FINDING A QUIET PLACE TO TALK? Y'WANNA?
AUTHORIZED PERSONNEL ONLY
STAGE ENTRANCE
I'D SAY, YOU MIGHT BE A GOOD OPERATOR IF— YOU LOST THE BAD MOVES.

Increase Your Reach

What do you do when there's not enough clearance between the load and the helicopter during slingloading hookup? Like when your load is a HMMWV with a shelter?

How about increasing your reach with 5-ft long reach pendants?

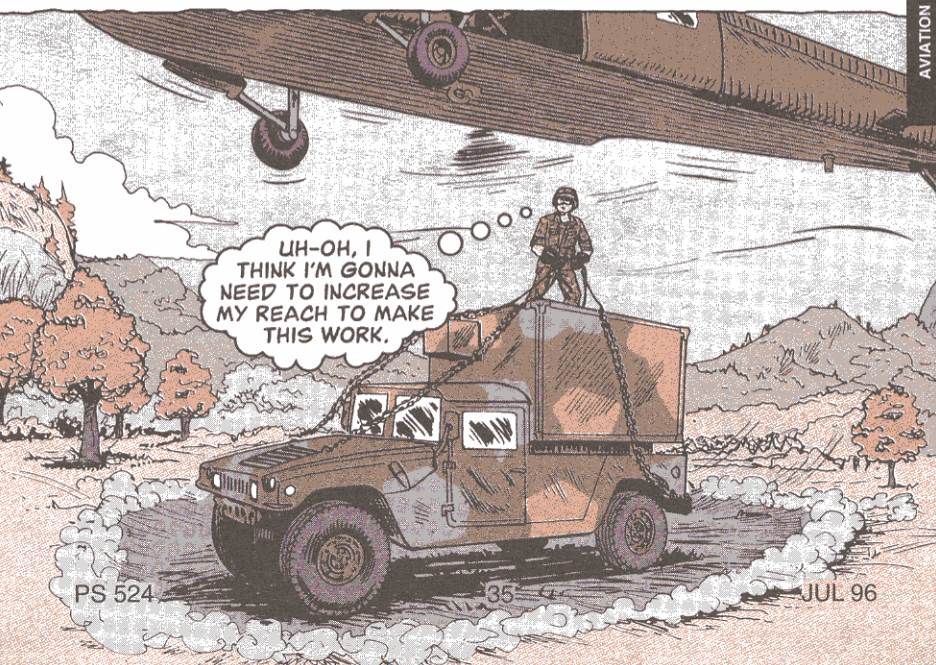
There are two pendants available that can be used with all externally carried loads: NSN 4020-01-337-3185 brings a 5-ft long, 25,000-lb capacity pendant. This pendant will work with either the CH-47 or the UH-60.

There is also a lighter, easier-to-use pendant. Order this 5-ft long, 11,000-lb capacity pendant with NSN 4010-01-365-3115.

Before using these pendants, bone up on your air transport knowledge by reading the info on reach pendants in Chapter 8 of FM 55-450-3, Multiservice Helicopter External Air Transport: Basic Operations and Equipment.

Also, read ATCOM's SOUM-ATCOM-95-007, 14 Aug 95. This message tells you on which loads reach pendants are needed.

Remember that increased separation between load and aircraft may change flight characteristics. Using pendants gives the load a greater chance to spin, which could destroy the pendant and cause a dropped load.



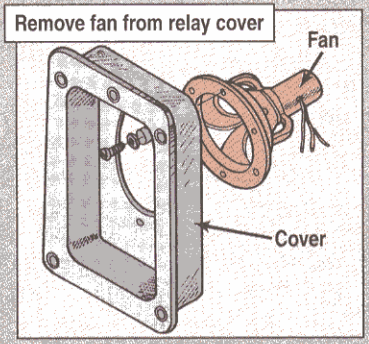
Some FANtastic PM

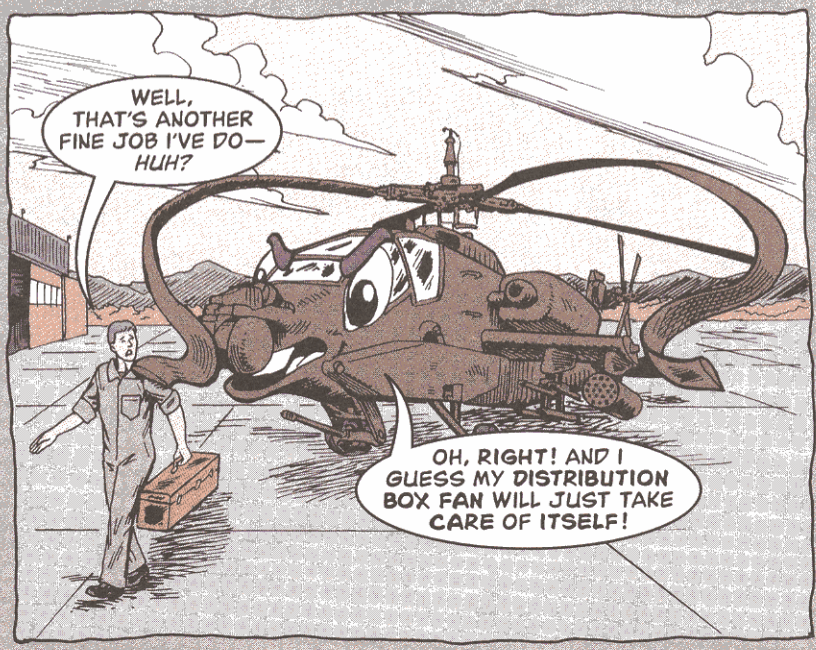
There are no good excuses when an Apache's distribution box ventilating fan binds or freezes because of dirt or corrosion buildup. There is a reason, though. Someone didn't do PM.

Keep the fan clean and corrosion free. Here's how:

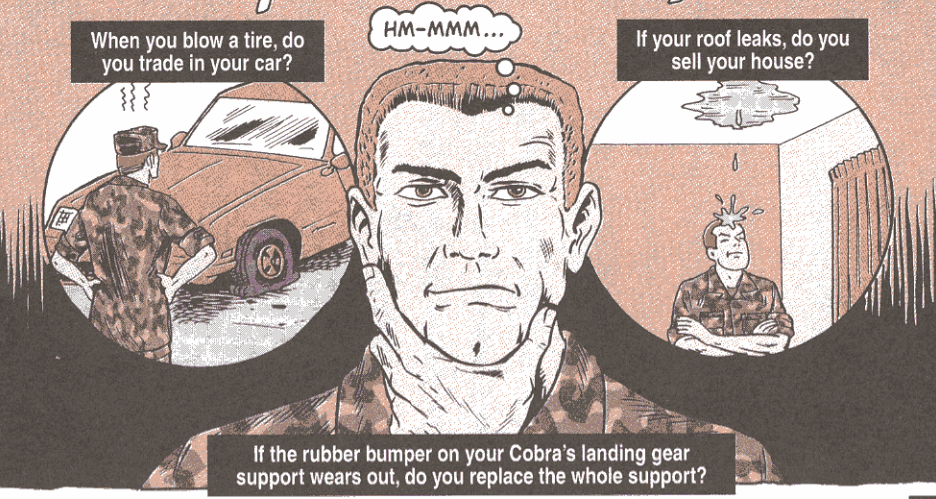
1. Remove the fan from the relay cover.
2. Vacuum loose dirt from the blades.
3. Clean stubborn dirt, grease or oil from the blades and housing with a clean rag dampened in dry cleaning solvent, NSN 6850-01-331-3350.
4. Dry the fan thoroughly with a clean, lint-free cloth, NSN 7920-00-044-9281.

If the fan and surrounding area show any signs of corrosion, use the steps in Para 1.49 of TM 1-1520-238-23 to deal with it.





Baby Rubber Bumpers



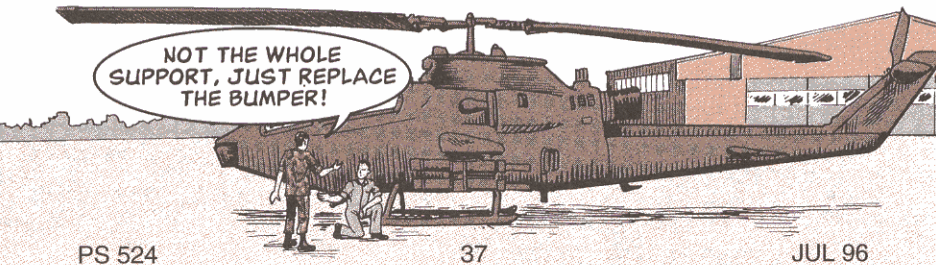
How you answered the first two questions is your business, but if you answered yes to the last question, it's Uncle's business.

Too many of you are replacing the landing gear support, NSN 1620-00-168-5559, when all you need to replace is the rubber bumper, NSN 5340-00-936-5551.

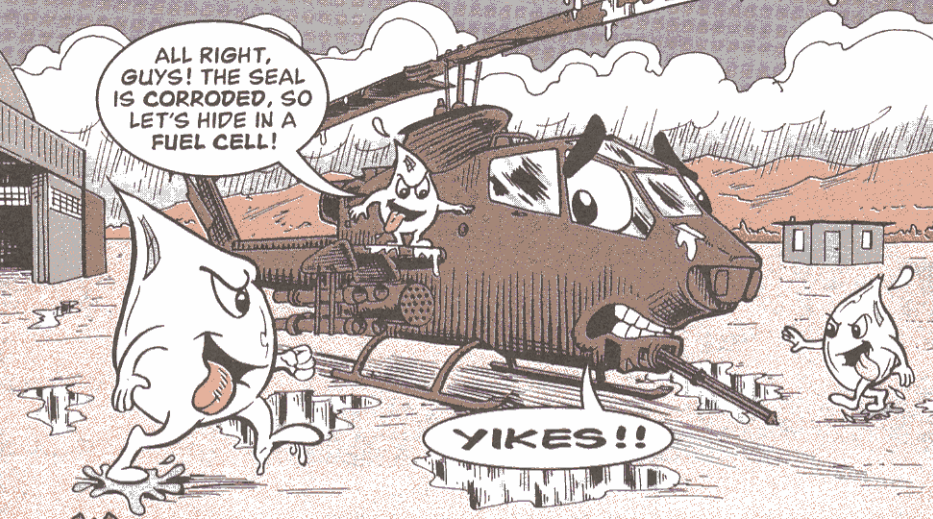
The support, Item 12 in Fig 30 of TM 55-1520-236-23P, costs $50. The bumper, Item 12A, cost $2. And, because some mechanics are replacing the support, it is now in short supply.

The bumper is replaceable at unit level; so replace it—and not the support—when the bumper wears out.

This is good advice for the landing gear support, NSN 1620-00-168-5605, Item 28 and bumper, NSN 1620-00-877-4910, Item 28A, too.

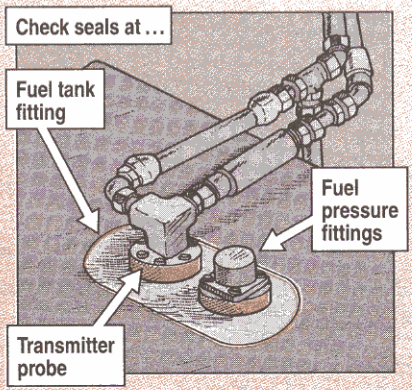


Seal Leaking Cells



Water getting into your Cobra's fore and aft fuel cells? Fuel getting out?

Could be that both problems are caused by corrosion around the vent and probe cover, Item 18 in Fig 129 of TM 55-1520-236-23P-2.



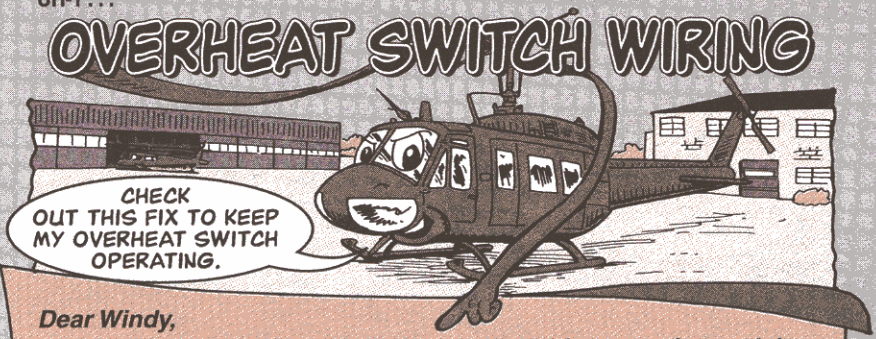
Could be that corrosion comes from a poor seal around the fuel tank fitting or the transmitter probe and fuel pressure fitting.

Bad seals let water and engine wash seep through. Next thing you know you have corrosion under the cover seal eating away the edges of the flange. A corroded flange lets water drip into the fuel cell cavity and lets fuel seep out.

To stop leaks, first check all the O-ring seals (Items 11, 16 and 20 in Fig 129). Replace bad ones.

For added protection against water, seal the areas between the pressure fitting and the cover, the fuel tank fitting and the cover, and the cover and the fuel cell. Use sealant, NSN 8030-00-616-9191.

OVERHEAT SWITCH WIRING

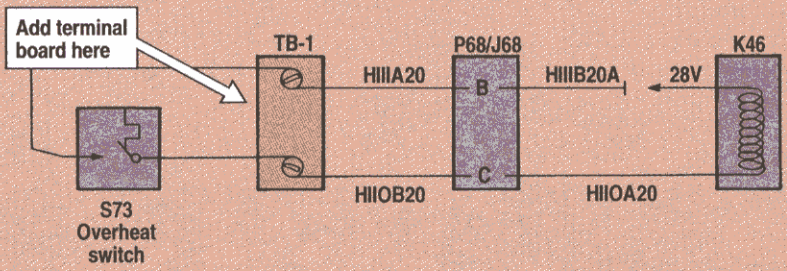


Dear Windy,

Good PM and scheduled maintenance call for removing and then reconnecting the bleed air heater overheat switch on our Hueys. To remove the switch, you must cut the wiring. To reconnect the switch, you must splice the wiring.

Eventually, the wiring becomes too short. At the very least, you have to replace it. At the very worst, you have a fire—and that has happened!

We've found a way that saves the wire and eliminates the fire hazard. We've attached a terminal board, NSN 5940-00-950-1610, to the bulkhead near the overheat switch.



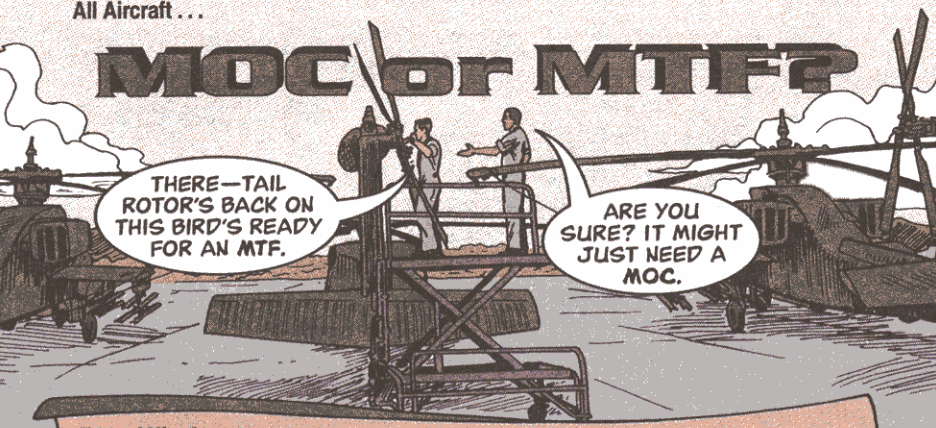
Now we can remove the overheat switch without cutting and splicing?

Gary H. Roberts
Bobby R. Collins
AASF, Frankfort, KY

A cost-saving, time-saving and safety-conscious suggestion. Cut the terminal board to fit and cover it for safety. A fast disconnect as a tie point would work, too.

Windy

All Aircraft . . .



Dear Windy,

The TM says a limited maintenance test flight (MTF) is required when a main or tail rotor head assembly is replaced, repaired or adjusted. How about the removal and reinstallation of a rotor blade so that other non-rotor maintenance can be done? Would that require only a maintenance operational check (MOC)?

Mr. T. L. S.

Dear Mr. T. L. S.,

In many cases, yes. The rule according to ATCOM is that after removing and reinstalling a rotor blade in the same location, on the same head, on the same aircraft, only an MOC is required if nothing has been done to the blade.

Windy

DA Pam 738-751 . . .

News about the New, Changes to the Old

A new DA Pam 738-751 has been drafted and is now going through the review and publishing process. That's the good news.

The bad news is, this process will take more time.

Meanwhile, make sure your 1992 copy of DA Pam 738-751 has all the changes. Many of the changes were issued in 1993 Aviation Safety Action Messages (ASAMs). Most were in GEN-93-ASAM-03, DTG 061300Z Jan 93.

If you've lost your copy of this message or need a new one, call ATCOM, DSN 693-2999/2085 or commercial (314) 263-2999/2085. Or e-mail them at AMSATRXS@EMH4.STL.ARMY.MIL

Surviving a Computer Crash

Someday, when you least expect it, your ULLS computer will crash, wrecking your ULLS supply and maintenance data.

Without a current backup tape, you'll probably never get all the information back on line.

So be prepared. Make daily backup tapes. It takes about an hour, depending on the amount of ULLS data you have.

The tape and format you'll need depend on your tape drive and software. Preformatted tapes work best since most tape drives don't automatically format as they back up. Formatting a tape takes about an hour.

Here's a list of tape drives and the backup tapes used with them:

Tape Drive	Software	Backup Tape	Format Type	Tape NSN
Irwin 40 megabyte	EZTape 1.14 or 2.02	3M DC2000 or equivalent	Kappamat	7045-01-338-6542
Irwin 80 megabyte	EZTape 2.02 or 2.20	3M DC2080 or equivalent	Rhomat	7045-01-368-4814*
Colorado 40 megabyte	Jumbo 2.5	3M DC2000 or equivalent	Thetamat Quick 40	7045-01-240-4951
Mountain 40 megabyte	Filesafe 4.5.2			
Everex 40 megabyte	FTape 2.04			
Colorado 80 megabyte	Jumbo 3.0	3M DC2120 or equivalent	Ximat Quick 80	7045-01-370-9678*

**Order on DD Form 1348-6. In the Remarks block, put "NSN not on AMDF."*

If you're unsure who the manufacturer is, call up the tape software information from your hard drive. It'll give the software name and who made it.

Warranties $ave Money

It's a fact—warranties save money. But when they're not used, everyone loses!

Warranties cover a specific time period or specific equipment operating hours.

When an item is defective or breaks down within this time limit, the manufacturer repairs or replaces it at no cost. If you don't use the warranty, precious maintenance dollars are lost that could be spent on other parts.

Warranties don't come free. The manufacturer includes the cost in the bottom-line price of the item—meaning you've already paid for it.

Here's how to tell if your equipment is under warranty:

- $ **Commercial-design vehicles**—a copy of the warranty coverage sometimes comes with the operator's manual or the -10 TM gives a warranty TB number.
- $ **Military-design equipment**—check your -10 TM. If the TM gives warranty information, a warranty decal or plate may be mounted on your vehicle's instrument panel.

If you're still unsure whether the item has a warranty, check with your Warranty Control Office (WARCO). WARCOs for ground equipment are listed in Appendix C of DA Pam 738-750. Appendix G of DA Pam 738-751 has the list of WARCOs for aircraft items.

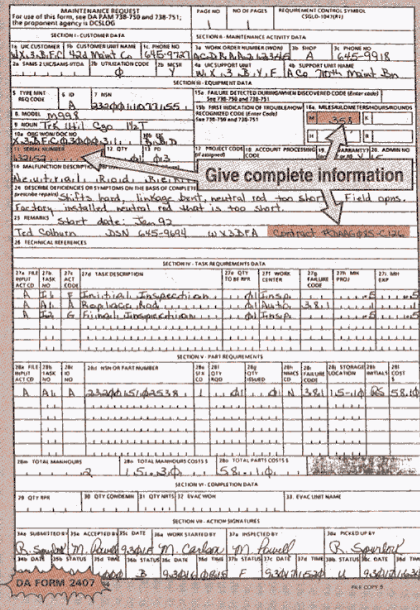
Warranty periods are shown in Block 15 of the DA Form 2408-9 that come with your equipment. However, some warranties are extended if the vehicle is placed in depot or contractor storage.

Warranty Claim Actions

It's easy to make a warranty claim. Two forms are needed—DA Form 2407, for filing the claim, and DA Form 2402, for tagging the exhibit.

In most cases, an SF 368, Product Quality Deficiency Report, is the required form to file an aviation equipment claim. Your WARCO will know exactly which forms you need to file.

It's important that you fill out these forms completely and accurately. Warranty claims can be rejected if information such as contract numbers, serial numbers and usage data (hours, miles or rounds), is left off the DA Form 2407.



Supply . . .

Managing Shelf Life

If your unit loses a high number of items because of expired shelf life, you might need shelf-life management training.

The Defense Logistics Agency has a course on how to properly manage shelf-life items, how to test an item to extend its shelf life and what to look for when the item is tested. You'll also learn how to use two DOD shelf-life databases.

For more information on this training, call DSN 695-5224/5212 or commercial (804) 279-5224/5212.

If you have general questions on Army shelf-life management, write:

LOGSA PSCC
ATTN: AMXLS-TP-P
11 Hap Arnold Blvd
Tobyhanna, PA 18466-5097

Or call:

DSN 795-7682
Commercial (717) 895-7682

Or e-mail:

psccpkg@tobyhanna-emh1.army.mil

Training on CD-ROM

If you motor transport operators (MOS 88M) need refresher training, you can get everything you need on one CD-ROM.

The Army Transportation School put together this CD-ROM to make it easier for soldiers to stay up-to-date on motor transport information. The CD-ROM has:

- Field Manuals
- Soldier training publications
- Training Circulars
- Army Training and Evaluation Programs
- Army basic vehicle database

It also has the Army commercial driver's license program.

To use the 88M CD-ROM, you'll need an IBM or compatible personal computer (386 CPU with two megabytes of RAM, VGA monitor, and mouse), a hard drive with at least 10 megabytes of available file space, MS-DOS 5.0 or higher, Windows 3.1 and a CD-ROM reader.

If you're not sure if your computer has these capabilities, check your computer support folks.

OF 346 . . .

MANUAL PERMIT PERMITTED

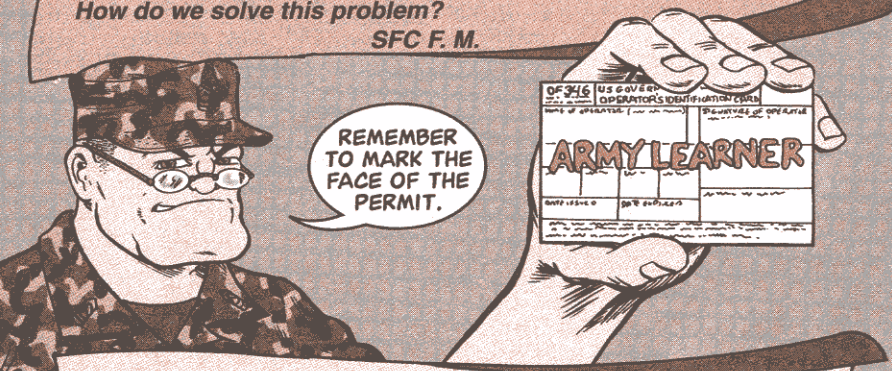
Dear Half-Mast,

AR 600-55 requires us to issue a valid OF 346 learner's permit before giving any hands-on vehicle or equipment training to operators.

When we issue the training permit through ULLS, though, it voids any Army standard permit the soldier already holds.

How do we solve this problem?

SFC F. M.



Dear Sergeant F. M.,

There's no way to issue a learner's permit through ULLS if the operator presently has a valid operator's license on the ULLS computer.

The AR 600-55 folks recommend issuing a manual OF 346 learner's permit. This special purpose permit is covered in Para 6-3(b)(1) of the AR. Be sure to stamp or mark "ARMY LEARNER" on the face of the OF 346.

Half-Mast

LOGISTICS MGT

Supply . . .

DLA Has Moved

The Defense Logistics Agency headquarters has a new address. To get the latest edition of the Customer Assistance Handbook, send your request to:

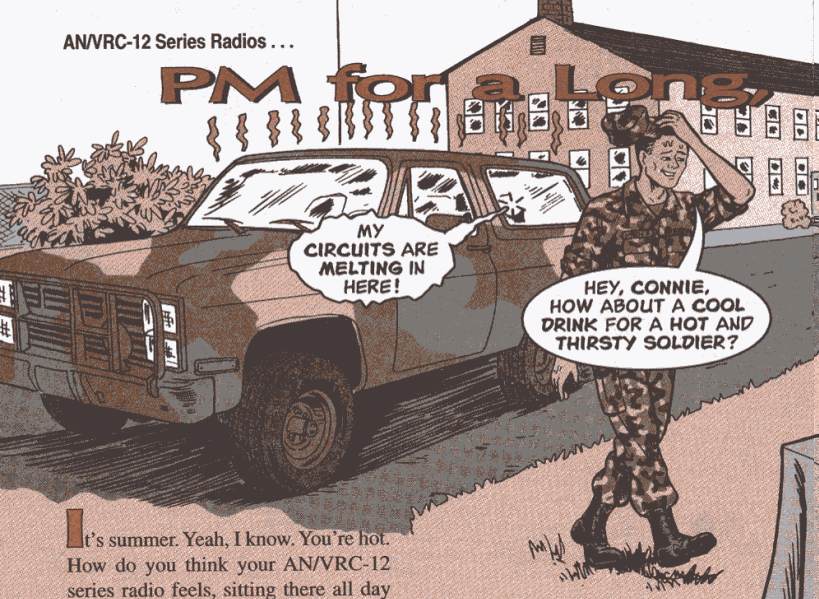
Defense Logistics Agency
ATTN: Customer Support Office (MMBC)
8725 John J. Kingman Rd, Suite 2533
Ft Belvoir, VA 22060-6221

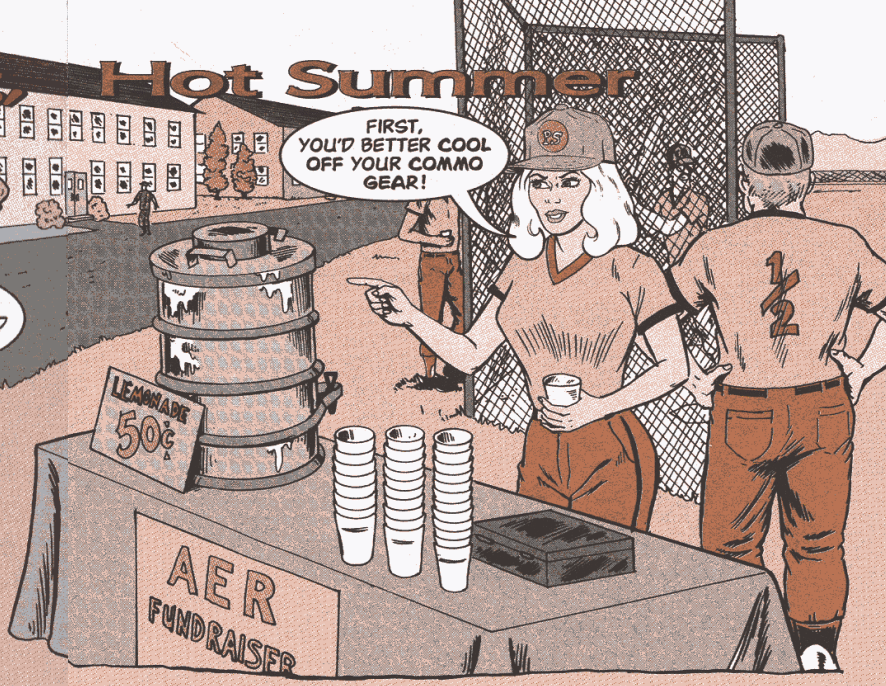
Or fax the request to:

DSN 427-7523
Commercial (703) 767-7523

Give your name, address, telephone number (DSN and commercial) and how many copies you need.

PM for a Long, Hot Summer





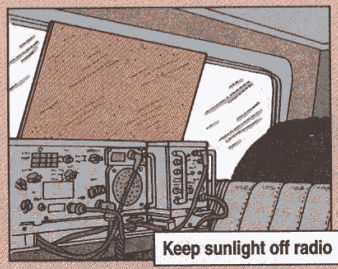
It's summer. Yeah, I know. You're hot. How do you think your AN/VRC-12 series radio feels, sitting there all day in a vehicle under a sweltering sun?

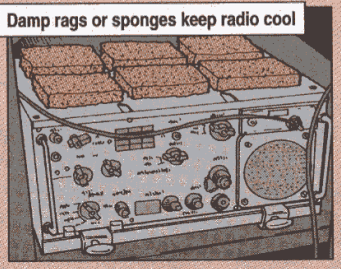
Heat from the outside plus heat from inside can shut down or damage your radio.

Here's what you operators can do to keep it cool:

Park your vehicle in a shady spot. If you can't, just keep sunlight off the radio. That could mean putting a canvas top on your vehicle or a piece of cardboard in the window.

Put damp rags or sponges on the top panel. Moisture's OK as long as the radio is buttoned up tight with all screws snugged down.

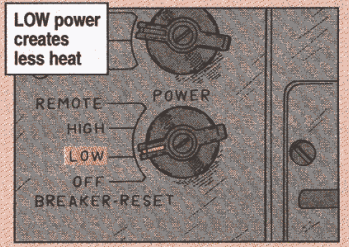

Keep sunlight off radio


Damp rags or sponges keep radio cool

Never pile BDUs, TMs, maps, etc., on top of the radio. They just hold in the heat. Don't block the blower fan, either. That restricts airflow and drives up the temperature.

The radio puts out more heat when you're transmitting. So keep transmissions short. Key your handset only when you're talking.

If you're transmitting less than 15 miles, set the power switch to LOW. LOW draws less current, creating less heat than HIGH. When you need more range, use HIGH power, of course. Just remember to switch back to LOW when you're through.

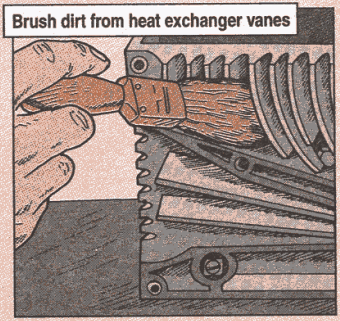


P.S. MORE

Unit maintainers can also help keep radios cool:

Keep the RT clean.

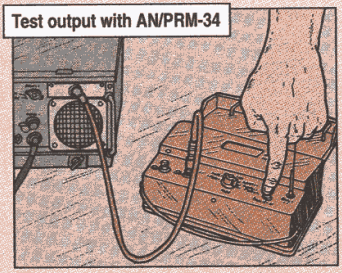
Dirt and dust inside the RT hold heat and keep air from circulating. Take off the side and rear panels. Brush dirt off the heat exchanger vanes and power transistors, like it says in the TM 11-5820-401-20-series.



Dirt can clog the blower so that it won't turn. Clean it with a toothbrush.

If you're traveling in dusty areas, clean up at least once a week. After cleaning, put the panels back on. They help the fan direct cooling air where it does the most good.

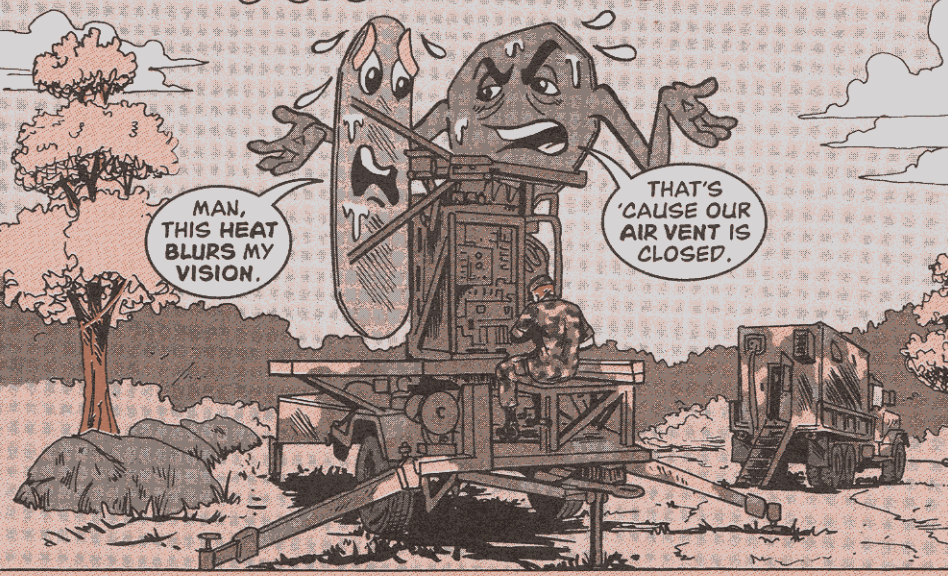
Test the radio's output with an AN/PRM-34 test set. This shows if the radio has the proper balance between forward and reflected power. Too much reflected power builds up heat and can damage the transmitter.



Test voltage output from the vehicle. Too much power—30 volts or more—overheats the radio.

AN/TSQ-71B . . .

Air Power

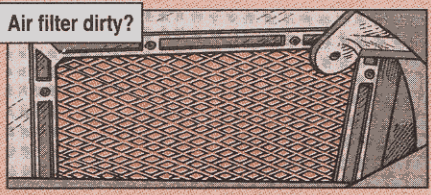


Operators, your AN/TSQ-71B landing control central needs plenty of air to stay cool. Sure, you say, you know all about keeping the S-318 shelter cool. You turn on the shelter fans, open the vents and inspect the vent filters to make sure they're clean.

But what about the AN/TPN-18A radar set? It needs cooling air as well.

During operations, open the air vent cover at the base of the receiver-transmitter on the radar set. That allows air to flow through the system. Without airflow, the interlock circuit overheats and shuts down, preventing the transmitter from operating.

When you open the vent cover, take a look at the air filter. If it's dirty, it'll choke off air to the radar set. Ask your unit maintainer to clean or replace the filter.

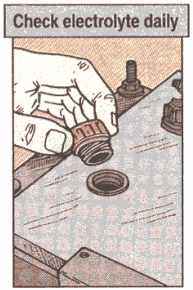


The Heat Is On

Summer heat is pure torture to your 5-KW MEP-002A, 10-KW MEP-003A and MEP-112A DED generators—especially the batteries. Constant operation in hot weather dries up cells quickly, weakening the batteries.

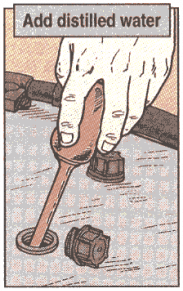
Here are two ways to protect them:

Once a Day



Check the electrolyte level daily. It should be about 1/2 inch above the top of the plates. Some batteries have a lip or indicator at the bottom of the filler hole to show where the level should be.

If the level is low, add only distilled water. NSN 6810-00-682-6867 gets a box of six 1-gallon bottles. NSN 6810-00-356-4936 brings a 5-gallon jug.

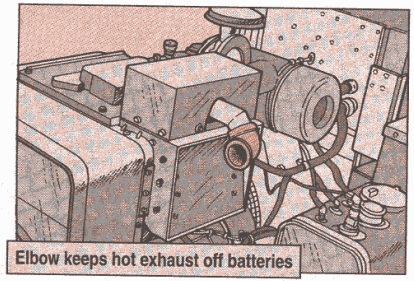


Just make sure you don't fill cells to the rims, or electrolyte will boil out of the vent caps when the batteries are charging. That sets the stage for corrosion on batteries, terminals, holddowns and trays. And, without enough electrolyte, batteries are soon dead.

TM 9-6140-200-14 has more info on the care and maintenance of lead-acid batteries.

Elbow on the Muffler

An exhaust muffler on both the 5-KW and 10-KW points directly at the batteries. When the generator runs, hot exhaust pours down over them. That heat, combined with high summer temperatures, evaporates water in the batteries.


Elbow keeps hot exhaust off batteries

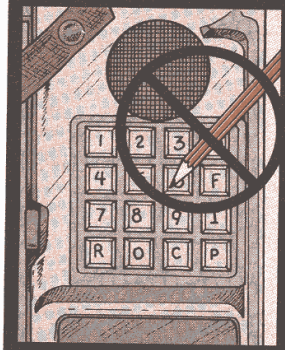
Deflect hot exhaust with a 1 1/4-in 45° elbow, NSN 4730-00-137-9218, mounted on the muffler.

You'll need an elbow for each muffler on your 10-KW DED generator—one to keep the heat off the batteries and the other to keep it off the fuel tank.

A Touchy Subject

Use a light touch when you press the keypad on your TA-1035-digital nonsecure voice telephone (DNVT).

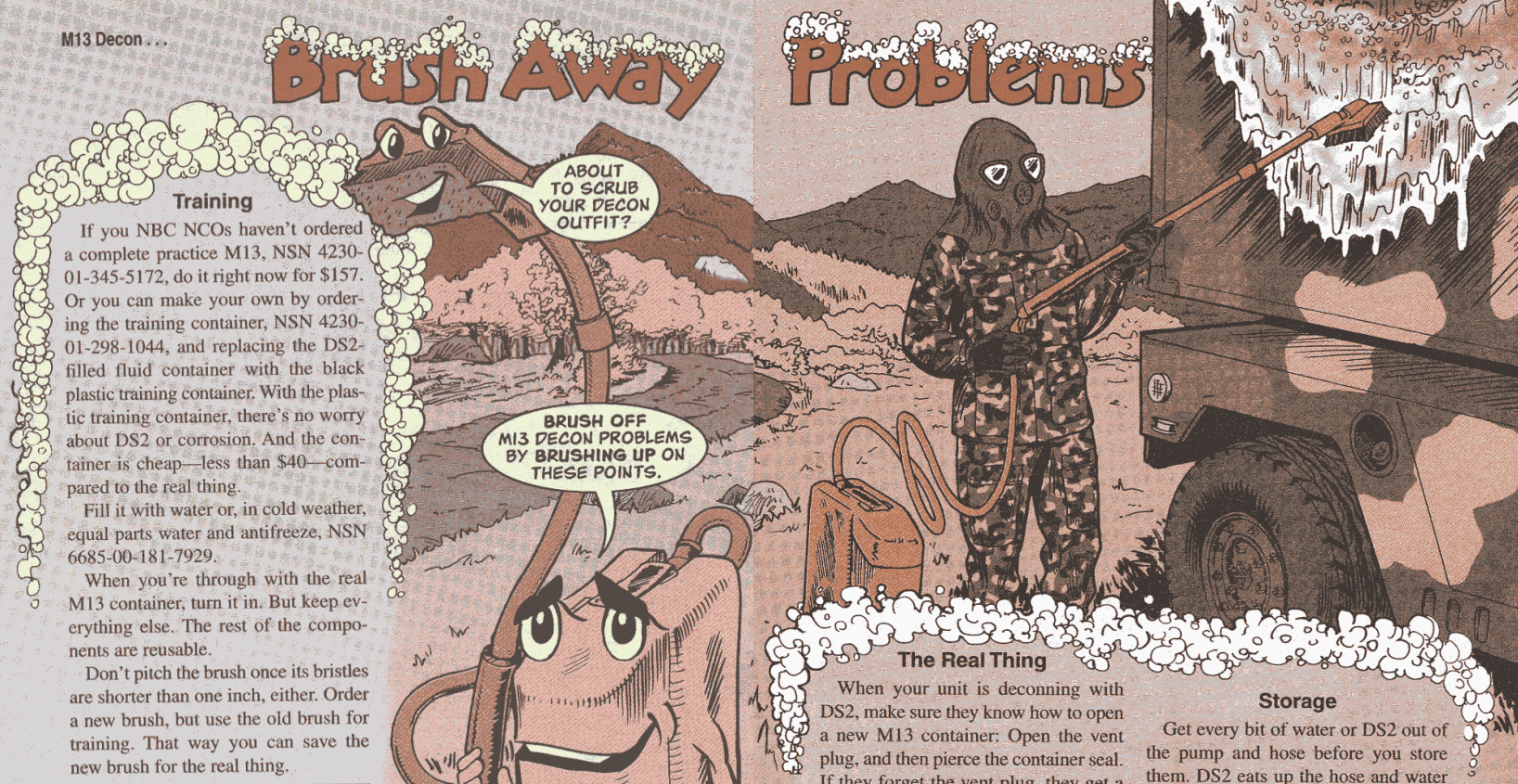
A coat of thin, metallic paint lies below the keypad. When you punch in a phone number you make contact with this metallic coating and complete the circuit.



The paint breaks up or wears away over time if you punch too hard or use a sharp object—like a pen or pencil—on the keypad. Once the paint's gone, you can't place a call.

There's one bright spot in all this: A replacement keypad, NSN 5805-01-408-5167, is now available. Direct support removes and replaces it.

Brush Away Problems



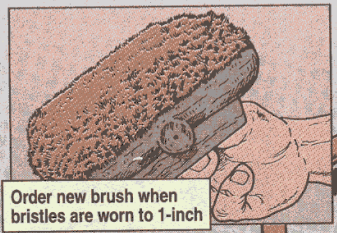
Training

If you NBC NCOs haven't ordered a complete practice M13, NSN 4230-01-345-5172, do it right now for $157. Or you can make your own by ordering the training container, NSN 4230-01-298-1044, and replacing the DS2-filled fluid container with the black plastic training container. With the plastic training container, there's no worry about DS2 or corrosion. And the container is cheap—less than $40—compared to the real thing.

Fill it with water or, in cold weather, equal parts water and antifreeze, NSN 6685-00-181-7929.

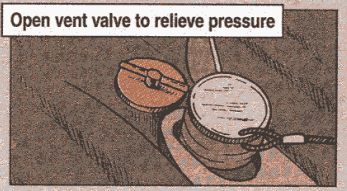
When you're through with the real M13 container, turn it in. But keep everything else. The rest of the components are reusable.

Don't pitch the brush once its bristles are shorter than one inch, either. Order a new brush, but use the old brush for training. That way you can save the new brush for the real thing.


Order new brush when bristles are worn to 1-inch

The Real Thing

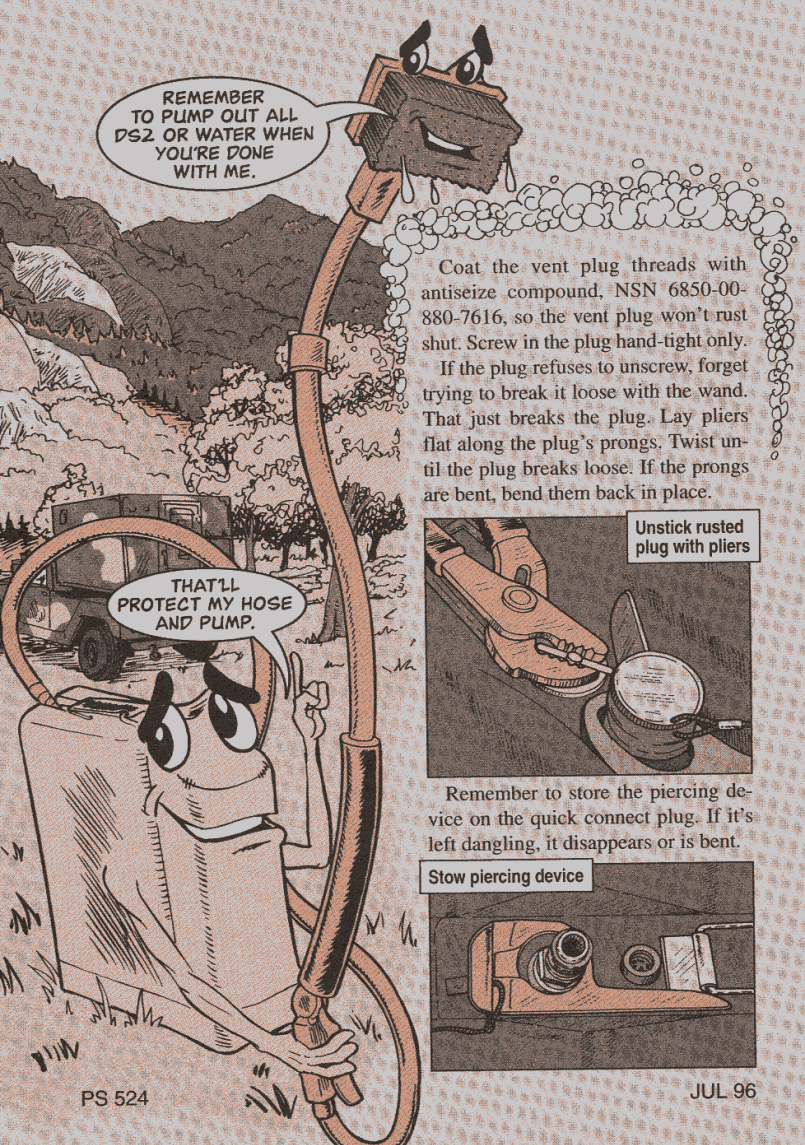
When your unit is deconning with DS2, make sure they know how to open a new M13 container: Open the vent plug, and then pierce the container seal. If they forget the vent plug, they get a face full of DS2.


Open vent valve to relieve pressure

Storage

Get every bit of water or DS2 out of the pump and hose before you store them. DS2 eats up the hose and water corrodes the pump. Pump the pump until nothing comes out.

Put silicone lube compound, NSN 9150-00-823-7860, on the pump shaft and work the pump several times to spread the lube. That keeps the pump seals from drying out and leaking. Once the seals are shot, the pump can't build up enough pressure to pump.



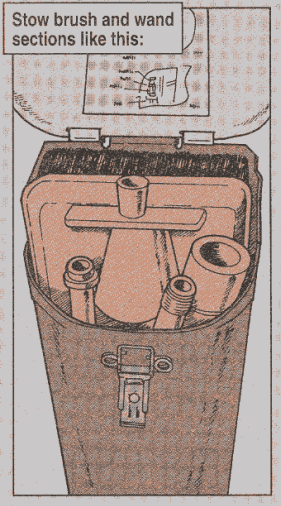
Coat the vent plug threads with antiseize compound, NSN 6850-00-880-7616, so the vent plug won't rust shut. Screw in the plug hand-tight only.

If the plug refuses to unscrew, forget trying to break it loose with the wand. That just breaks the plug. Lay pliers flat along the plug's prongs. Twist until the plug breaks loose. If the prongs are bent, bend them back in place.

Remember to store the piercing device on the quick connect plug. If it's left dangling, it disappears or is bent.

You won't get everything in the M13 storage compartment unless you do it like this:

- Fold the hose and put it in the compartment with its connectors down.
- Put the wand sections big-end down on the left side of the compartment and the pump on the right with its valve end down.
- Put the brush in with the spray end up and the bristles to the rear.



If you keep the M13 TM in the storage compartment, put it in a zip-lock bag. Otherwise, water and DS2 ruin it.

PS END

Fox NBC Vehicle . . .

Rebooting the VOS

Special mode 799 can be real handy when you're having trouble with the Fox's vehicle orientation system (VOS). When the VOS is giving you faults instead of locations, 799 is the way to go. It reboots the VOS and gives it a fresh start. To access special mode 799, press:

- SELECT
- 5
- INPUT
- 7, 9, 9
- ENTER
- 7, 7, 9, 9

When the VOS is finished rebooting, input these values: 701, 704, 727, 729. After using special mode 799, you may need to reinitialize the VOS like it says on Page 2-16 of TM 3-6665-342-10.

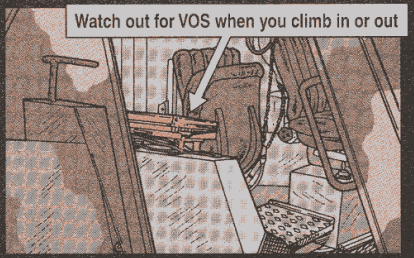
Fault 64

If you're getting fault 64 a lot, try turning off the VOS for 10 seconds and then turning it back on. That often does the trick.

If it doesn't, go into special mode 701 and check that you have the proper gyro number.

Watch Those Feet

When you step into the Fox from the commander's side, watch your feet. One misplaced foot can crunch the VOS.



NBC

COME CLEAN WITH PM

You could find yourself elbow-deep in soapsuds if you don't take care of your M-532 laundry unit. Keep it rub-a-dub dubbing with these PM tips.

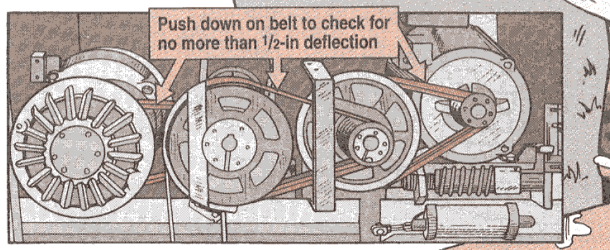
Towing

Mercury bulbs in the air temperature control break easily. So, before towing your laundry unit, put cushioning material, such as soft sponge rubber or packing paper, around them.

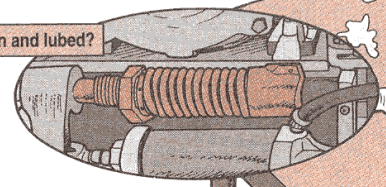
The washer-extractor tiedown mounting bolts can vibrate loose during towing. To prevent that, add an additional locknut, NSN 5310-00-045-1029, to each mounting bolt nut. The locknut NSN's not on the AMDF so order it on DD Form 1348-6. Torque the bolts to 160-180 lb-ft.

Belts and Guide Rod

Adjust the main drive belts on the washer extractor so they have a 1/2-in deflection midway between pulleys.



Clean and lube the motor base guide rod. Any binding stops the washer motor base from moving into the extract position. The motor base has to travel 1/4 inch during extraction.



Generator

Keep the 20-HP Mil Std engine TM 9-2805-259-14 handy when you work on the generator set. The engine has to put out 3,600 rpm when the extract cycle begins.

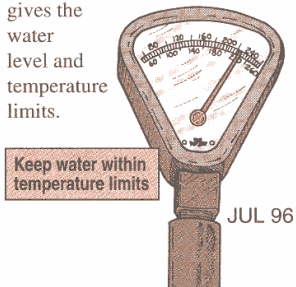
To keep the engine rpm steady at 3,600, you might have to adjust or replace the carburetor or governor, or time the magneto. Follow the procedures in the engine TM.

Never idle the engine. If you do, the frequency drops below 60 cycles and the exciter field voltage increases. This makes the regulator operate at maximum output and can burn out the power transistor.

Miscellaneous

✓ Never overload your washer. The maximum load is 60 pounds. TM 10-3510-208-12 lists the weight of certain clothing. Of course, there's no law that says you can't decrease the washer load to give the generator some relief during the extract cycle.

✓ Put the right amount of hot water in your washer. The TM gives the water level and temperature limits.



PS 524

Same NSN, Different Tools

Does this sound familiar? You're inventorying a tool kit when you discover the tools listed in the supply catalog (SC) aren't what your kit contains.

The difference could be in the number of jaws in a puller kit or in the size of sockets in a socket set. The point is, your tools don't match the component listing.

Don't panic. It's a common problem. Know why?

Over the years, Uncle Sam bought the same kind of tool set (for example, wrench set, NSN 5120-00-103-9782) from a variety of manufacturers. Even though these tool sets all carried the same NSN, each manufacturer provided a slightly different version. That's why one manufacturer's set may differ in size or number from another manufacturer's set, and both may differ from your SC.

No sweat, though, as long as you've got the tools that came with the tool set you were issued. If you're lucky, your unit kept the component list or packing sheet when the new tool set or replacement tools came in. Use them to inventory your sets. File the component list or the packing sheet with the SC for future inventories. Keep them with any SC updates, too.

If you don't already have those papers, don't give up. Start by gathering some facts to help identify your tool set. The more you know, the better. Here's what you need to know about the set:

- National Stock Number
- Manufacturer
- Commercial and Government Entity (CAGE) code
- Manufacturer's model, serial or part number

Present this information to the people who manage the tool set. In most cases, that will be the General Services Administration (GSA) or the Defense Logistics Agency (DLA).

Here are their customer assistance phone numbers:

GSA

DSN 465-7124
Commercial 1-800-488-3111

DLA

DSN 427-7500
Commercial (703) 767-7500

GSA and DLA can identify your particular tool set from the information you've provided. Once they've ID'd the set, they can usually give you a component listing for inventory or a part number for ordering. If they don't have the information on hand, they'll give you a manufacturer's point of contact.

Put Sockets in Order

Item	Size	NSN
Rail	7 3/8 inches	5340-00-124-5270
Rail	10 3/8 inches	5340-00-124-5271
Rail	16 3/4 inches	5340-00-124-5272
Clips	1/4 inch (25 ea)	5340-00-124-5273
Clips	3/8 inch (25 ea)	5340-01-270-7403
Clips	1/2 inch (25 ea)	5340-00-124-5275
Clips	3/4 inch (25 ea)	5340-00-124-5276

Appendix A of CTA 50-970 is your authority for ordering.

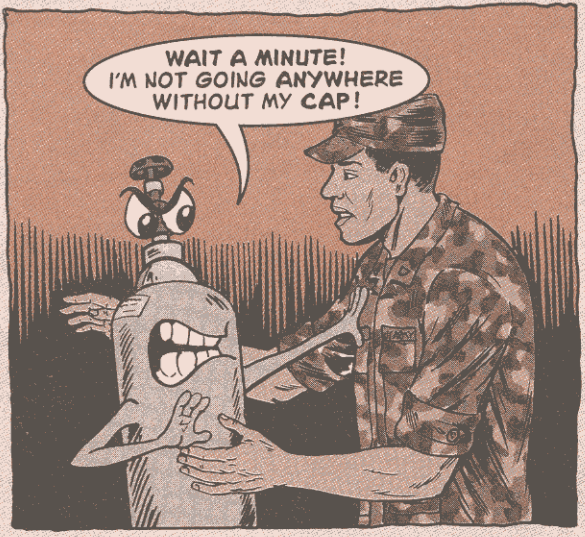
Gas Cylinders . . .

Cap 'Em for Movement

Unless you love living dangerously, make sure your acetylene, oxygen, or other gas cylinders, have protective caps in place before they're moved.

For acetylene cylinder, NSN 8120-00-268-3360, order 3½-in cap, NSN 8120-00-178-9814.

For oxygen cylinder, NSN 8120-00-268-3360, order 3⅛-in cap, NSN 8120-00-179-0076.

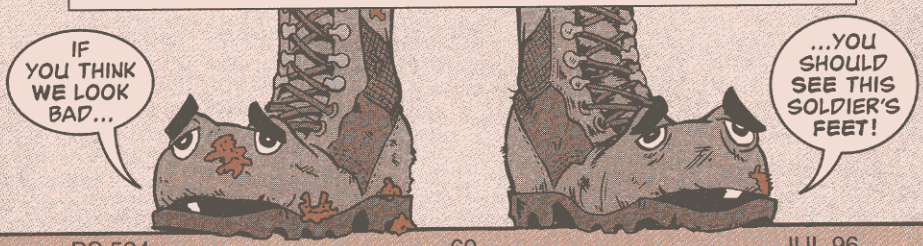


Clothing . . .

Desert Combat Boot Care

The suede desert combat boot was designed for easy care. Easy care doesn't mean **no** care, though. Take care of your boots like so:

- If they get wet, let the boots and insoles dry naturally. Never dry them with intense heat. It will destroy the nylon and leather.
- Use a moist, soapy cloth to clean the inside of the boots. After cleaning the inside, be sure to give the boots plenty of time to dry before you wear them.
- If your desert boots get dirty, brush off all mud and dust.
- Finally, never polish the boots. Polish will ruin the suede finish.



Give PS the Word

Does your outfit put out a logistics bulletin, supply and maintenance letter, or something similar? Put PS on distribution. We're always looking for PM problems and solutions. Our address is on Page 1.

Camouflage Correction

On Pages 50-51 of PS 521, some NSNs for lusterless black pressure-sensitive decals are wrong. The right NSNs for 3-in and 4-in letters, A through J, are:

Letter	NSN 7690-01-032-	
	3-in	4-in
A	0732	0741
B	0733	0742
C	2428	0743
D	2430	2434
E	2432	2436
F	0734	2437
G	0735	0744
H	0736	0745
I	0737	1402
J	0738	1403

Rigging Pub FM

Don't go looking for TM 5-725, Rigging, for help in cleaning wire rope like we said on Page 8 of PS 521. It's obsolete. Instead, get and use FM 5-125 Rigging Techniques, Procedures and Applications.

Brake Cap Needs Adapter

The vented brake master cylinder cap we advertised on Page 10 of PS 518 for M101A2 and M116A2 trailers needs an adapter to fit the filler opening. Get one with NSN 5340-01-418-9889.

MIDI CD-ROM

To get on the mailing list for the Military Item Disposal Instruction CD-ROM, use these numbers instead of the ones on Page 56 of PS 521: Fax DSN 564-2835 or call Commercial (804) 445-9192.

M1A1 Turret Slippage

Reports from the field have revealed something strange happening on a few M1A1 tanks while in emergency mode. If the turret's in full slew and you center the cadillacs without releasing the palm switches, the turret *may continue to slew.* Until the headshed finds the cause, continue operating as normal. Your tank remains FMC. If you have to operate under these conditions, just release the palm switches and the turret will stop.

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?

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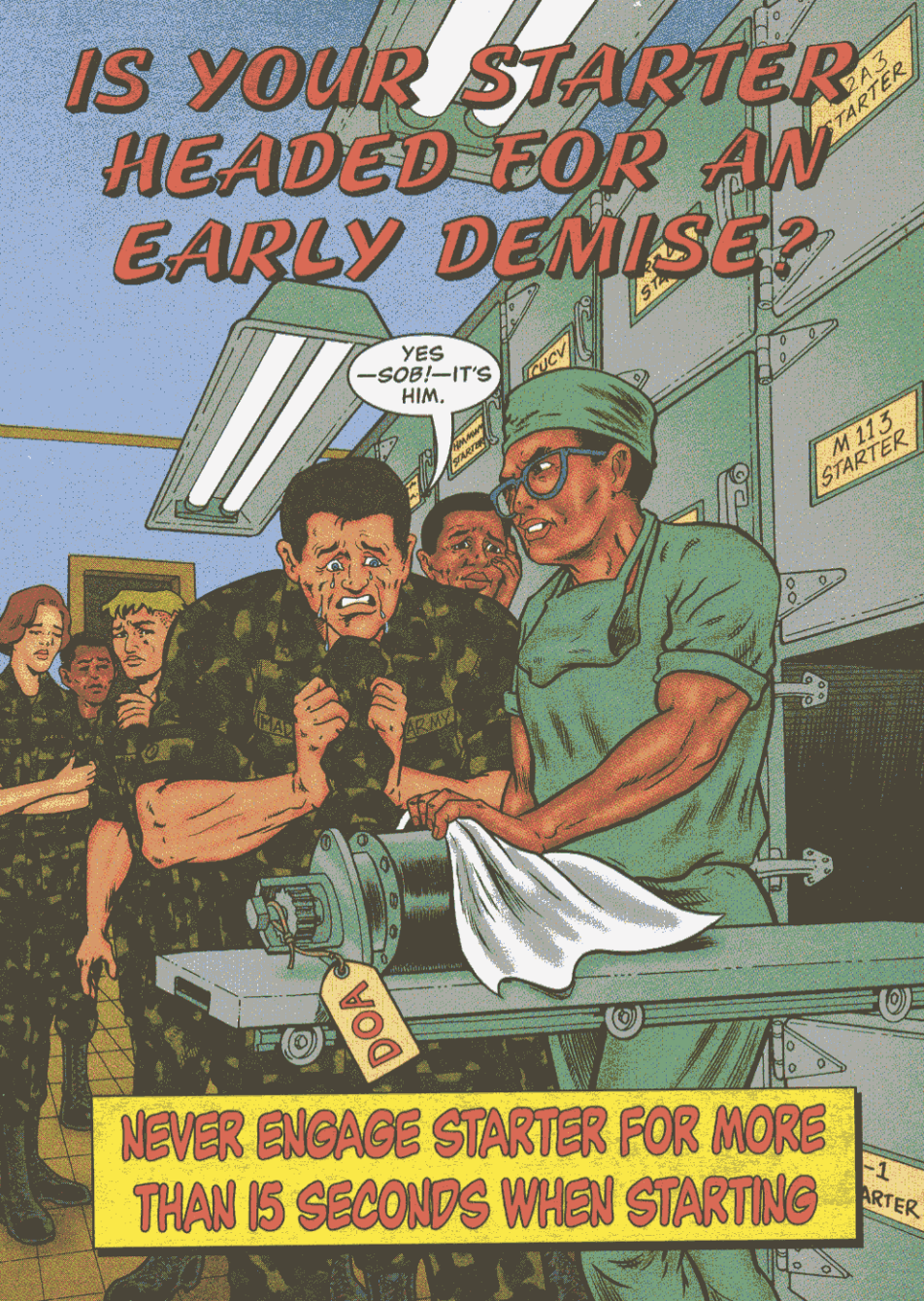
IS YOUR STARTER HEADED FOR AN EARLY DEMISE?
YES —SOB!— IT'S HIM.
M 113 STARTER
NEVER ENGAGE STARTER FOR MORE THAN 15 SECONDS WHEN STARTING