

Issue 537

PS

August
1997

TB 43-PS-537

THE PREVENTIVE MAINTENANCE MONTHLY

WHAT
THE...?!

POCKETA
POCKETA
POCKETA

MAYBE THIS
WILL GIVE US ENOUGH
LOAD TO STOP THE
WETSTACKING.

Approved for
Public Release;
Distribution Is
Unlimited

Wetstacking
... See Page 38

GO WITH WHAT YOU'VE GOT

Ever hear somebody say, "Hey, they'll never expect us to take this old equipment into combat!" Or, "We're getting new vehicles next year. Why should we maintain this stuff?"

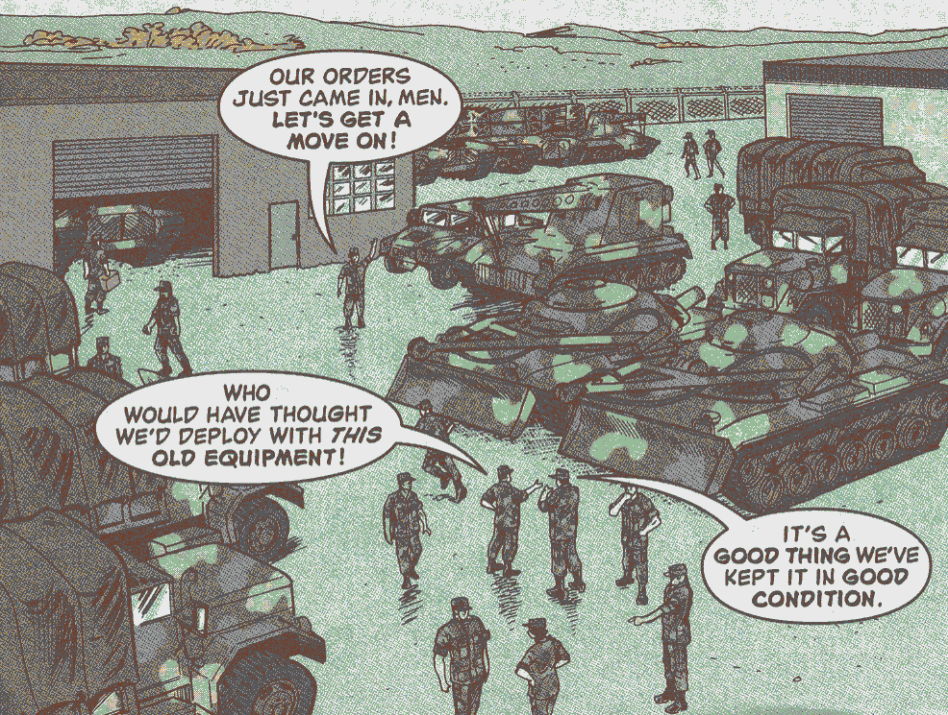
Truth is, soldiers usually have to fight with what's on hand. The answer is the same yesterday, today and tomorrow: **You go with what you've got.**

Equipment on the drawing boards or the assembly line won't help you one bit when the balloon goes up. That's why it's so important to keep what you've got in the best condition possible.

First of all, learn how to operate your equipment right. Goofed-up operation will do more damage in a few seconds than a whole company of mechanics can fix in days.

Next, get real friendly with your gear's TMs—they have all the info you need for keeping your equipment up-to-snuff.

And, finally, make sure you keep your equipment maintained, lubed and clean. That's called preventive maintenance and it's the best insurance you can have when it's time to go with what you've got.





THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-537, 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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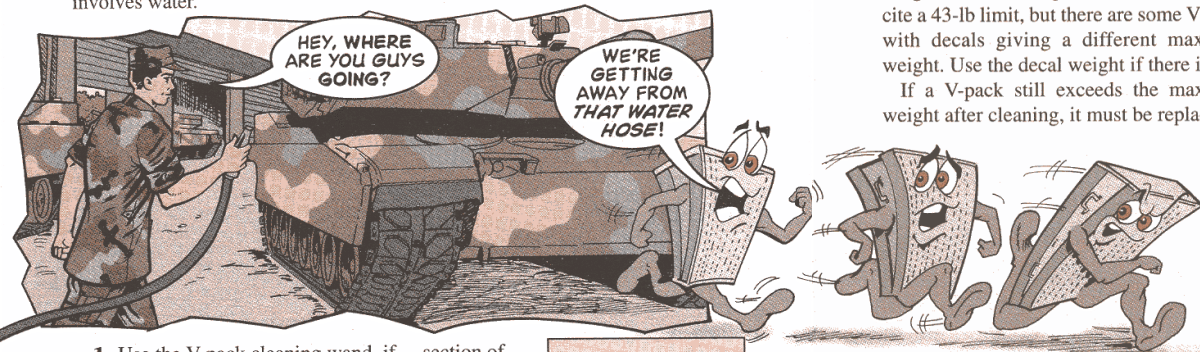
NO WATER FOR V-PACKS

Some guys think that cleaning the V-packs on their M1-series tank means washing them. Those same guys usually end up with damaged V-packs.

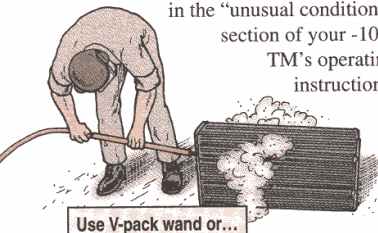
Here is the right way to clean V-packs:

Crews

Crews can clean V-packs only when there is no time to get a mechanic on the scene to do the job. There are only two acceptable methods—and neither involves water.



1. Use the V-pack cleaning wand, if it's available. You'll find info on this in the "unusual conditions" section of your -10-2 TM's operating instructions.



Use V-pack wand or...

2. Shake the V-packs, making sure not to hit them against anything harder than your hand. Hand-brush dirt and dust from the elements. This info is found in the "emergency procedures"

section of your -10-2 TMs.

Which-ever method you use, notify your unit maintenance folks as soon as possible that you had to clean the packs. They can then clean them properly.



...shake V-pack gently

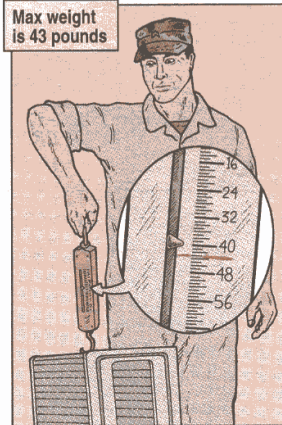
Mechanics

Mechanics clean V-packs with compressed air only—no water. The compressed air can come from another tank engine powering the cleaning wand kit, or it can come from a motorpool compressor. Either way, it should never exceed 90 psi.

Once all the dirt and dust are blown out, weigh each of the V-packs. The -20-1-3 TMs cite a 43-lb limit, but there are some V-packs with decals giving a different maximum weight. Use the decal weight if there is one.

If a V-pack still exceeds the maximum weight after cleaning, it must be replaced.

Max weight is 43 pounds



M2/M3-Series Bradley...

Keep IR Cable Able

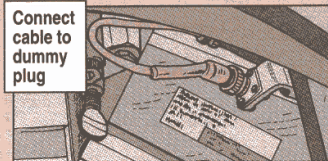
Drivers, you're supposed to remove and lock up your Bradley's IR night sight after every operation.

But that's not all you're supposed to do.

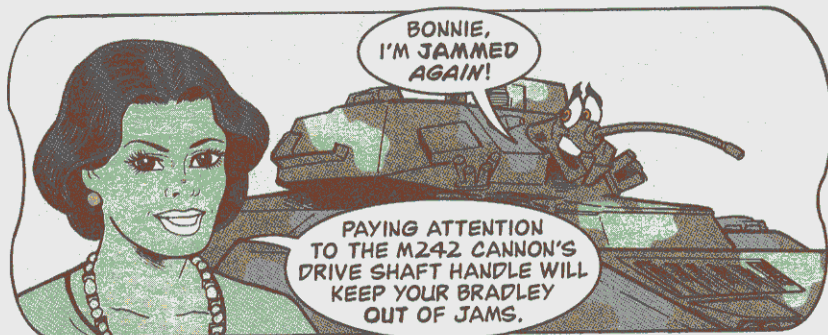
After you've disconnected the sight, remember to hook the 1W17P10 night sight cable, NSN 5995-01-271- 0367, to the dummy plug on the hatch. Otherwise, the cable dangles below the edge of the hatch. When the hatch is closed, the cable connector gets caught and crushed.

If you **do** forget and the cable connector is ruined, DS can replace the connector, NSN 5935-01-132-1570. That'll save your unit more than \$200 compared to the cost of a new cable.

Connect cable to dummy plug



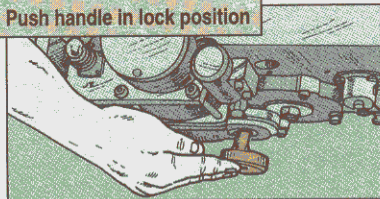
STAYING OUT OF JAMS



If the handle is not locked in correctly, the M242 will fire one round and jam.

When you install the feeder, put the feeder full forward on the receiver. Push up on the drive shaft handle. It should easily lock in place.

Push handle in lock position



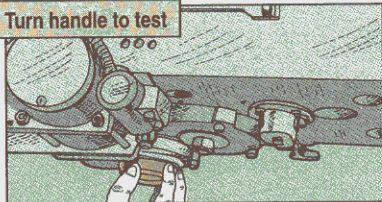
If it doesn't, reposition the feeder and try again. If the handle still won't easily lock, stop and tell your repairman.

Once the drive shaft handle locks in, twist it counterclockwise. If it turns more than $\frac{1}{2}$ inch, the handle is not going to stay locked in.

Unlock the drive shaft handle and put the bolt in SEAR. Lock the handle in place and turn it counterclockwise.

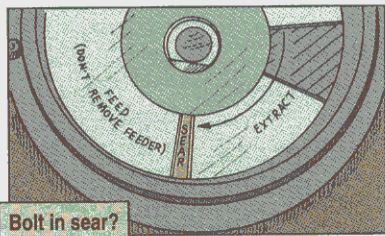
If it still turns more than $\frac{1}{2}$ inch, your M242 probably has a timing problem. Time for you to call your repairman.

Turn handle to test



Dry Firing

Before you dry fire, make sure the drive shaft handle is locked and doesn't turn too much and the bolt and feeder are timed to SEAR. Otherwise, the gun jams.



A Clean Launch

Dear Editor,

Many times we Bradley repairmen are asked to check out TOW launchers that are sending false info to the control panel. When the crew selects TOW, the control panel indicates that missiles aren't loaded in the launcher or the missiles aren't armed.

The problem is almost always dirt. Dirt clogs both the launcher and missile connectors and causes those false messages to the control panel.

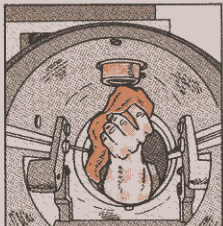
You can usually prevent dirt problems by installing the launcher



Use cover!

cover before hitting the road. The cover seals out most dirt. If you don't have a launcher cover, NSN 1005-01-126-7797, use a garbage bag.

If you still get false prompts when you select TOW, gently wipe clean the launcher and missile



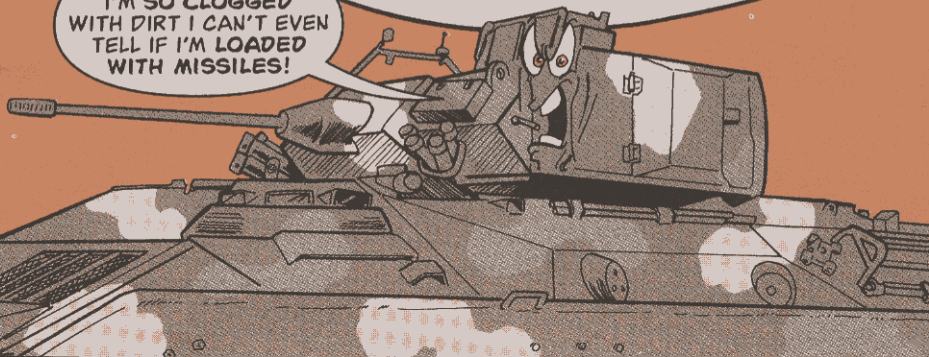
Wipe out launcher and missile connectors

umbilical connectors with a dry, clean rag. If dirt's the problem, that will solve it.

SPC Marcus Burks
SGT Robert Fritz
SGT Bobby Rice
PFC Kubani Brown
3/7 Inf, Ft Stewart



COUGH, HACK...
I'M SO CLOGGED
WITH DIRT I CAN'T EVEN
TELL IF I'M LOADED
WITH MISSILES!



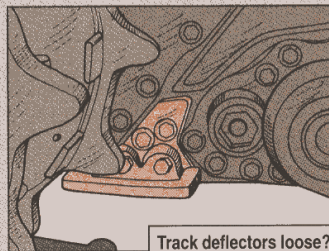
Get a PM Facelift



But you can keep your vehicle feeling young with these PM tips:

Track Deflectors

Before moving out, take a look at the track deflectors. They protect the roadwheel arms from track slap. If the bolts are loose, the deflector can



Track deflectors loose?

DRIVERS,
CHANCES ARE YOUR
MLRS IS SHOWING
ITS AGE.

get caught in the track and break off. Tell your mechanic about loose bolts.

Hardware

At first glance, it may seem cheaper and easier to re-use bolts, screws and self-locking nuts on the MLRS's suspension, steering and braking components. It's **not**.

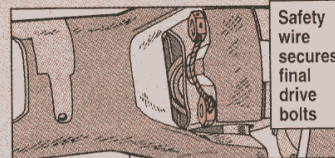
Used hardware won't hold. It works loose and falls out. That results in damaged components. Toss that old hardware and replace it with the parts called out in the parts TM.

Final Drive Bolts

You may have noticed a new type of final drive bolt coming with NSN 5306-00-051-4072. This bolt has pre-drilled holes in the head for safety wire.

I JUST NEED
A PM NIP HERE
AND A TUCK
THERE!

While the TM doesn't require safety wire on the final drive bolts, wire does help keep the bolts in place. It also gives operators something to look for when checking the bolts for looseness during their **AFTER** operation PMCS.



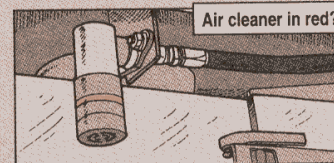
Safety wire secures final drive bolts

Radiator Plenum Seal

Check the radiator's plenum seal at least semiannually for cracks and tears. A bad seal lets in dirt, sand and insects that will coat the radiator fins and overheat your engine.

Air Filters

eyeball the air cleaner indicator in the engine compartment **BEFORE**



Air cleaner in red?

every operation. If the indicator is in the red, double check it like this:

1. Push the reset button.
2. Start the engine, and after warm-up, hold the accelerator pedal all the way down for five seconds. Then let the engine idle for about 30 seconds.
3. Cut the engine and recheck the indicator. If it's in the red again, remove and clean the air filter V-pack.

Door Seals

The cab is over-pressurized during firing to prevent toxic fumes from entering the cab. If the door seals aren't in good shape, rocket exhaust gas can enter the cab.

Check the rubber seals **BEFORE** every operation. If they are dry or brittle, get 'em replaced.

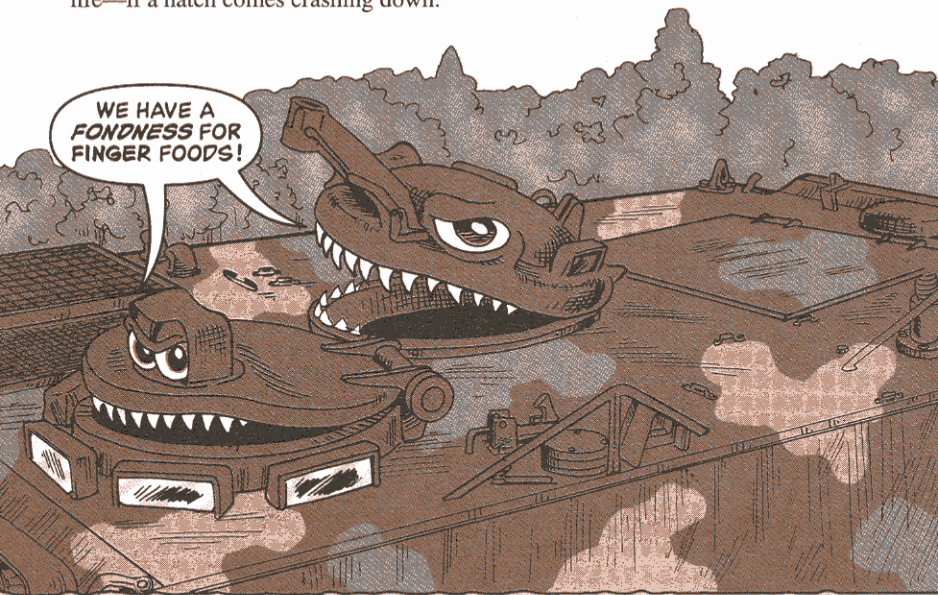
Door seals damaged?



PLEASE DON'T FEED THE HATCHES

Crewmen, if you think M113-series carrier hatches are heavy enough to stay open on their own, you've got a painful lesson coming.

Heavy as they are, those hatches still come flying shut when your vehicle hits a big enough bump. You could end up losing your teeth, fingers—even your life—if a hatch comes crashing down.



But it doesn't have to happen. It takes only a few seconds to stick the safety pin through the bracket to lock that latch in place.

Play it safe. Lock open the hatches before moving out. If the locking pin's missing, have your mechanic install a new one. NSN 5315-01-266-6508 gets the pin used for all M113-series FOVs except the M981 FISTV and M901 ITV. For these vehicles, the driver's hatch pin comes with NSN 5340-01-265-0528. The gunner's hatch uses a manual control handle, NSN 5340-01-240-7321.

Pin locks hatch in place

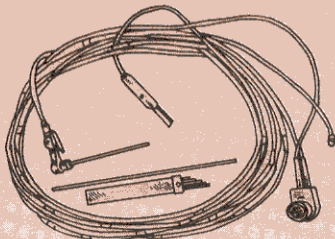


A CUT ABOVE

THIS ECD
CUTS LIKE A HOT KNIFE
THROUGH BUTTER!

Crewmen, cutting combat vehicle armor is a slow process with the old acetylene torch from your M88A1 recovery vehicle. And any time you work with acetylene, there's always a small risk of explosion involved.

Relax. The new exothermic cutting device (ECD), NSN 3433-01-327-4609, is now available. The ECD slices through armor faster than acetylene, and without the danger of explosion.



ECD eliminates acetylene dangers



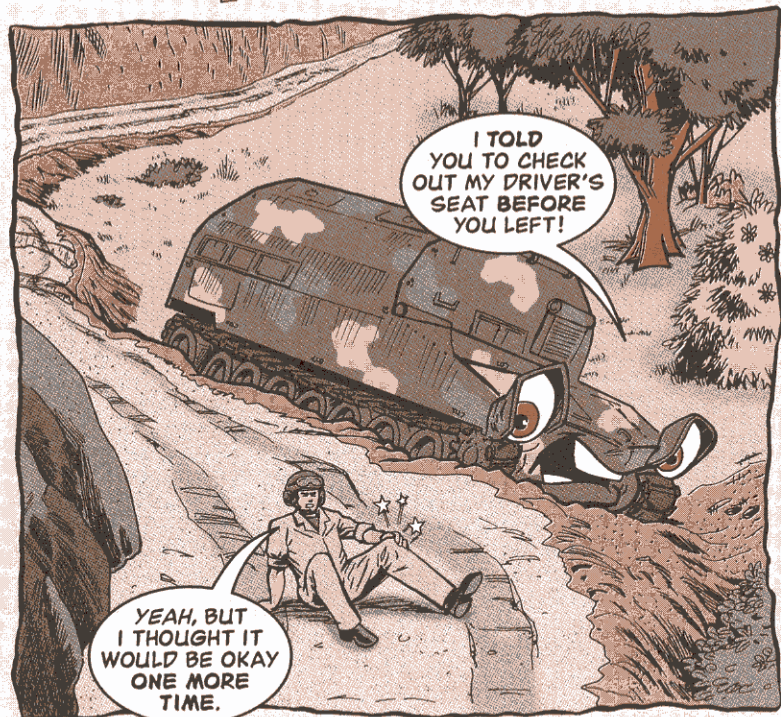
Until the ECD is added to the Additional Authorization List in TM 9-2350-256-10, use Appendix A of CTA 50-970 as your ordering authority.

Rods for the ECD come in packages of three, in these sizes:

Size (inches)	NSN
1/4 x 22	3439-01-325-7641*
3/8 x 36	3439-01-325-7642
3/8 x 18	3449-01-346-2545

* Order on a DD Form 1348-6 from S9G and put "NSN not on AMDF" in the Remarks block.

Keep Your Seat



Drivers, you depend on the seat in your M992-series ammo carrier and M109-series howitzer to keep you in position to see how to drive. If the seat drops suddenly, you can't see where you're going.

Keep your seat by following these PM tips before every operation:

☞ Eyeball the seat adjusting lever for cracks, breaks, or a worn plunger.

Adjusting lever damaged or worn?



☞ Look for elongated plunger holes in the seat support.

☞ Test the seat by moving it to several positions. The seat should easily hold your weight in each position.

If you notice any problems, call in your mechanic.

UP OR DOWN?

Dear Half-Mast,

When an M110A2 SP howitzer is parked in the motor pool for a while, what's the correct position for the spade?

About half of us think the spade should be raised, while the other half think the spade should be lowered onto wooden blocks. Can you set us straight?

SFC R.J.R.

Dear SFC R.J.R.,

You bet I can, Sergeant. The spade should always be raised when not in use. That protects the chrome spade rods from corrosion. It also keeps the rods from being damaged when soldiers climb up on the vehicle from the rear.

Half-Mast



You've Got the Power!

Batteries make your Avenger go. If they're weak, your Avenger's weak. It won't have enough juice to rotate and shoot.

BUT THAT'S NOT ALL THE PROBLEMS WEAK BATTERIES CAUSE. LISTEN UP!

Poorly charged batteries often boil out their electrolyte. Every time electrolyte boils out, the battery loses charge capacity and the acid damages batteries and sometimes the Avenger itself.

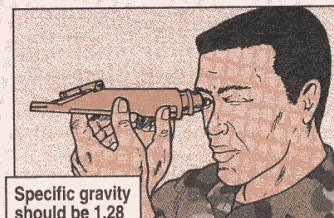
STEAMED!? I'M BURNING MAD!!

Poorly charged batteries also freeze easier and have more problems with sulfuric acid caking around the terminals.

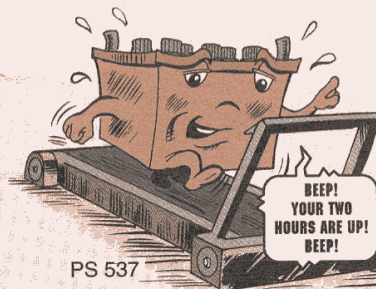
It takes so much current to charge badly discharged batteries that often the power control box and the alternator/regulator are knocked out. So what can you repairmen do to keep Avenger batteries charged for action? Lots.

Begin by making sure all your Avenger batteries have a specific gravity of 1.28 (± 0.05). You may need to run the vehicle for as long as 16 hours

to get that kind of charge. That's right, 16 hours.

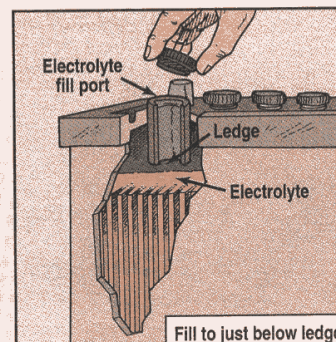


Once the batteries are properly charged, operate your Avenger at least

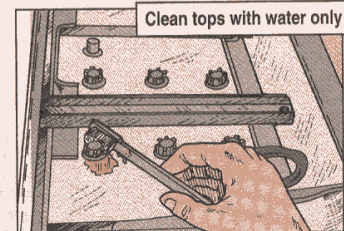


two hours every week to maintain the charge. Keep records on each Avenger to make sure they get the two hours.

Fill battery cells to just below the cell ledge. The battery cap says fill the cell to the ledge. **Forget that.** At that level, the battery's more likely to boil over.

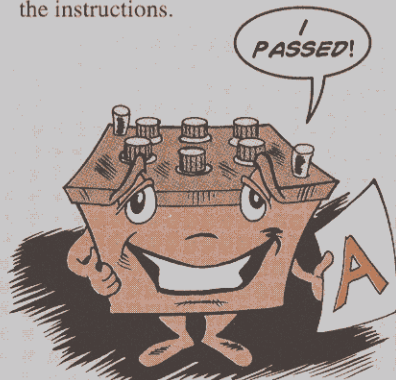


If batteries leak acid, neutralize it with baking soda and rinse with clean water. Keep baking soda away from the tops of batteries where it can contaminate electrolyte. Clean the battery tops with water only.



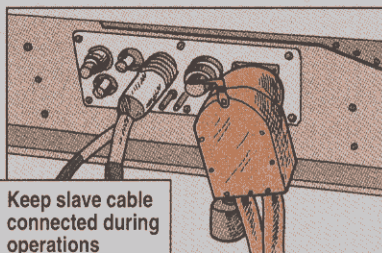
If a battery is badly discharged, charge it before you add distilled water to the electrolyte. This will reduce the amount of electrolyte boiled out during charging.

At least quarterly, test the batteries and charging system to make sure the electrical system's working and the batteries are charged and matched. TM 9-6140-200-14, Maintenance Manual for Lead-Acid Storage Batteries, has the instructions.

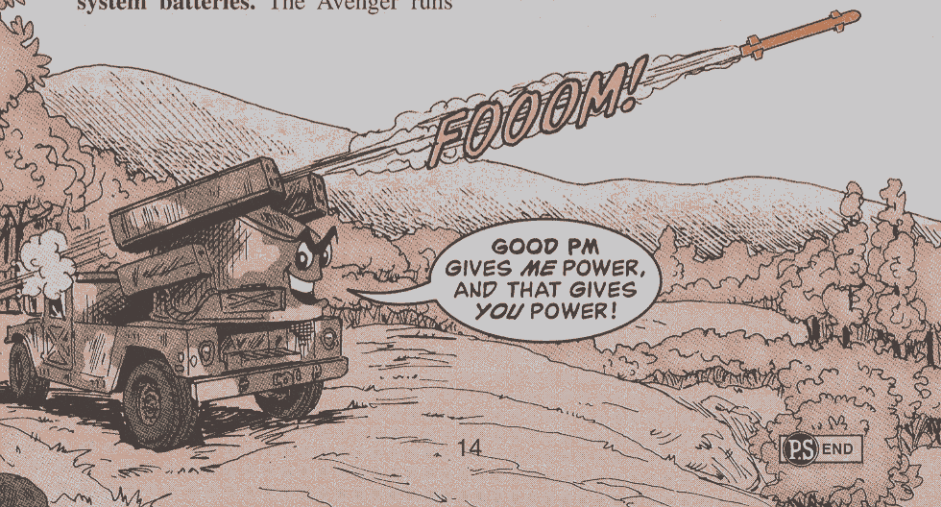
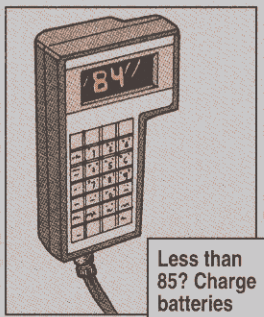


Never run the Avenger with the slave cable disconnected from the system batteries. The Avenger runs

on both the system and vehicle batteries. Using only system batteries reduces the power available.



When crews operate with the engine off, they must keep an eye on the battery indicator. Once the indicator shows less than 85 percent, start the engine and charge the batteries.



It's the Diodes



Dear Editor,

If your MLRS charging system isn't doing the job and you're running into dead launcher batteries, the problem may be blown diodes.

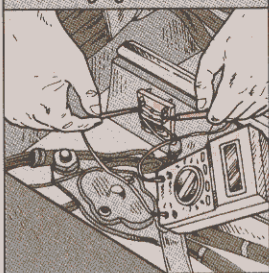
Our normal troubleshooting turned up nothing wrong. But then somebody thought to check the four diodes in the CB1 box. They were blown. Once they were replaced, we were back in business.

Usually just a look will tell you if any of the diodes are blown. Blown diodes have a charred area in the center of the tube.

If you have doubts, test them with a multimeter. If you find very high or very low resistance and it's the same resistance when you reverse the probes, then the diode's blown. A good diode will show the opposite resistance—very low or very high—when the probes are reversed. Support can replace the diode.

SPC David Ferrell
703d MSB
Ft Stewart, GA

Not charging? Check diodes



Bolt Needs Jolt of PM

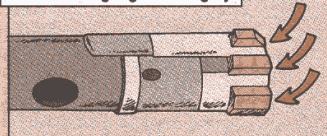
As the bolt goes, so goes your M16 rifle. If the bolt and bolt carrier become gunked with carbon, they can't move, extract, or eject. Then your M16 can't shoot...and you're a soldier with no protection.

Give your bolt the PM jolt it needs.

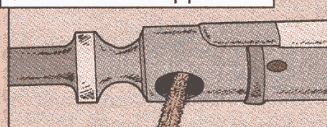
Use an old bore brush and CLP (or RBC) to get every speck of carbon and dirt off the bolt locking lugs. Also clean the chamber and its locking lugs with a chamber brush and CLP. You'll need lots of elbow grease to get them completely clean. Dirty locking lugs make it difficult for the bolt to lock and unlock.

Clean inside the bolt by running a pipe cleaner in and out of its holes until all carbon's gone. Clean the bolt face around the firing pin hole with a patch. A dirty bolt causes sluggish firing or no firing.

Clean locking lugs thoroughly



Clean inside bolt with pipe cleaner



Run a worn bore brush through the carrier key ALL the way. If you don't clean out all carbon, you do get short recoil. Report a loose or burred key. A bad key makes for bad mating with the gas tube.

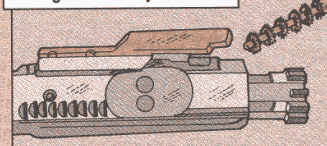
NOW HEAR THIS: Cotton swabs are for your ears, not carrier keys.

The swab's cotton plugs the key. Once the cotton gets in, it's very tricky to get out.

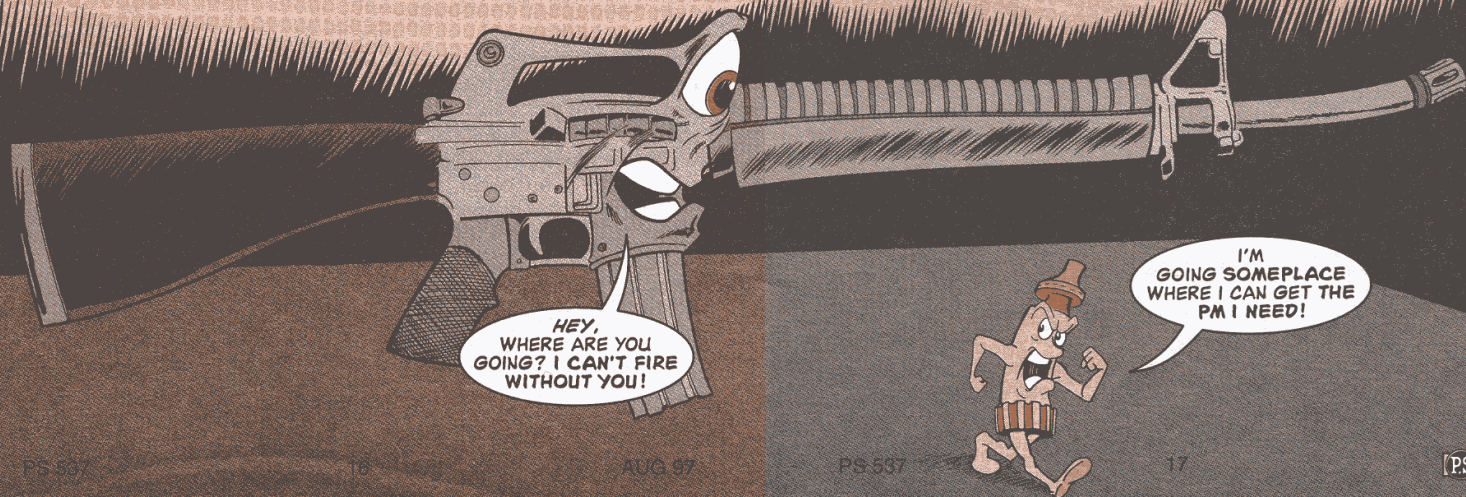
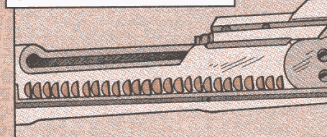
Brush out all carbon in the bolt carrier notches. If they're gunked with carbon, the forward assist won't assist much.

Never use the firing pin as a cleaning instrument. That blunts its point and blunts its chance of igniting a round. Use a bore brush or pipe cleaner to clean.

Run a worn bore brush completely through carrier key

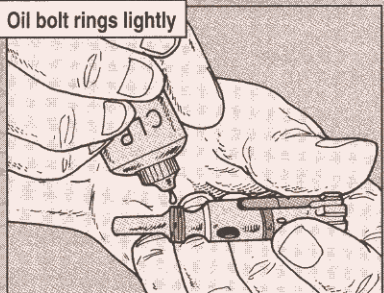


Clean carbon out of notches



The bolt rings need oil or they will get too hot and worn to collect the gas pressure needed to push the bolt back. Just a drop or two of CLP on the rings when you clean your rifle is enough.

Oil bolt rings lightly



Remember to gap the rings, too. If the gaps aren't staggered, the rings lose too much gas to do their job.

Stagger ring gaps

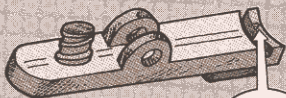


Give the area under the extractor lip a good cleaning. A dirty extractor jams the rifle.

If the extractor spring isn't strong, the extractor has a tough time extracting and your rifle jams. Make sure the spring has the little rubber insert. Without the insert, the spring is weak. Report a missing insert.

If the spring is loose, push in its large end and turn it clockwise until it seats.

Eyeball the extractor lip for chips. Chipped lips have trouble clamping onto cartridges. Tell your armorer.



Check extractor lip for cracks or chips



PM



**WOW!
THAT'S JUST
THE JOLT I
NEEDED!**

A Better Safety Pin



Cotter pins have never been the safety device of choice for holding the pins in lifting shackles on 2 1/2- and 5-ton trucks.

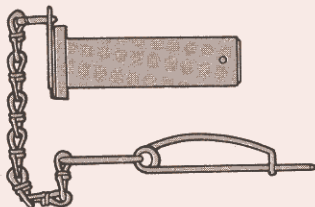
You've got to straighten them before you pull them out (most often with a pair of pliers), keep up with them after they're removed, and then reinstall them.

You do all this in the dark, in rain or snow, with gloves on, or in full MOPP gear. Yeah, you love cotter pins.

Well, trade all of 'em in for shackle pin, NSN 5315-00-741-2924, and safety pin, NSN 5315-00-741-8971. The shackle pin comes with a chain, to keep the safety pin from disappearing. The safety pin looks and acts a lot like the safety pin once used on diapers.

This safety pin is nothing new. Lots of wheeled vehicles used them in the old days. It's still a good idea.

Shackle pin and chain assembly



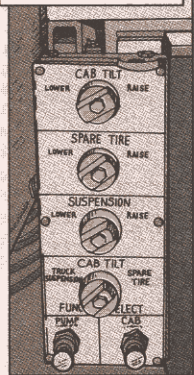
USE YOUR HYDRAULICS WISELY



The built-in hydraulic assists for the cab and suspension are real back-savers, but you have to use them wisely to prevent damage.

☆ Once you've used one of the hydraulic function controls, leave it in the last position used until the system is powered up next time.

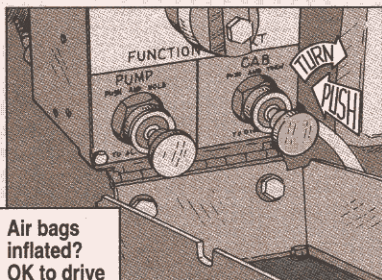
Leave function control knobs in position of last use



For example, you've raised the cab after service. Leave the cab tilt function control at RAISE until you are ready to lower the cab again.

Otherwise, the system will begin to lower the cab as soon as you turn it on. This could be extremely dangerous if you aren't ready for it.

☆ Before operations, always make sure the CAB function control knob is pushed in and turned to the right. That ensures that the cab air bags are inflated.



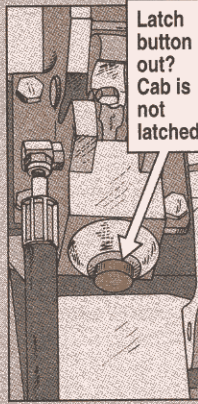
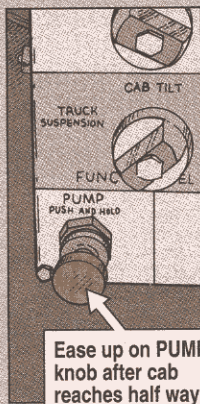
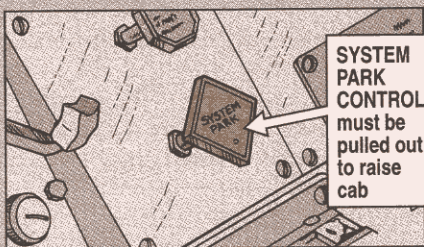
If you drive on deflated cab air bags, they get damaged—and you get an awful ride.

Cab-Raising Experience

From the "lessons learned already" files at fielding sites for the FMTV 2 1/2- and 5-ton trucks:

- You won't get the cab to raise unless the parking brake is applied. There's an interlock switch that prevents it. If the cab still won't raise after you've applied the brake, do your -10 TM troubleshooting.
- When you're raising the cab, ease off the hydraulic system PUMP knob when the cab passes the halfway point to full open. Let the cab's weight take it down as much as it will go.
- When you've lowered the cab, you must make sure the cab hydraulic latch is locked before driving the truck.

That means you hold the PUMP knob until you can see that the button on the right side of the latch is **in** (flush with the latch body). If the button is **out**, the cab is **not** locked.



**UNLESS YOU
APPLY THE PARKING
BRAKE, THE CAB JUST
WON'T RAISE.**

Are Your Batteries Hot?

Not if they've just been installed from stock; **not** if you just added distilled water to the cells; and **not** if you've just pulled PMCS on your vehicle.

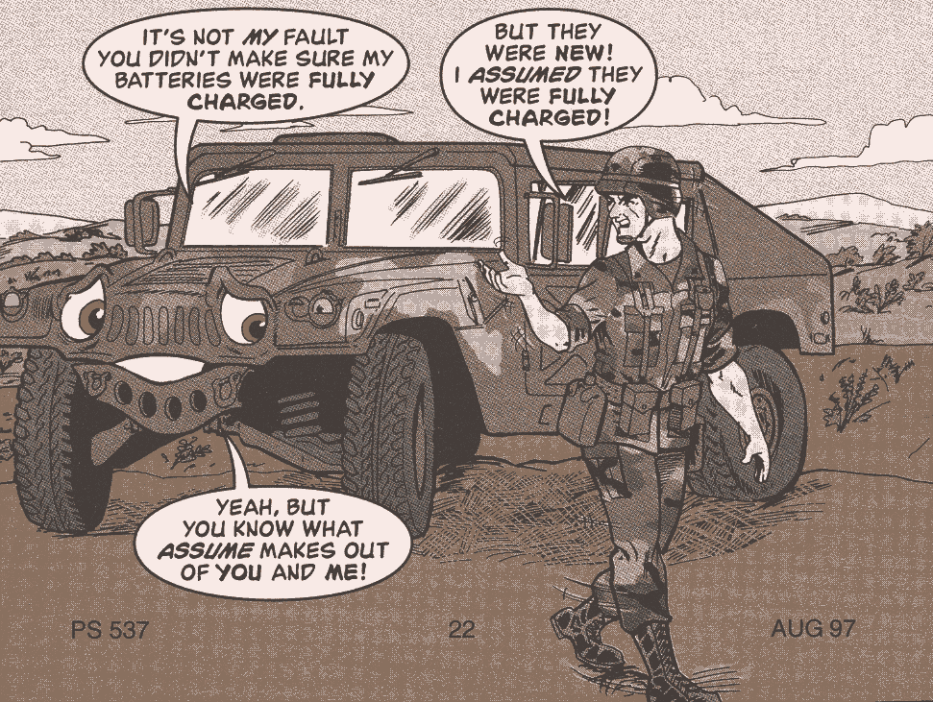
The batteries in these situations need charging to bring them up to "hot" standards. Assuming they're charged can leave you cold and alone (or hot under the collar—and still alone) when they won't start your vehicle.

A battery that's just been installed from stock needs three hours of operation to be completely charged.

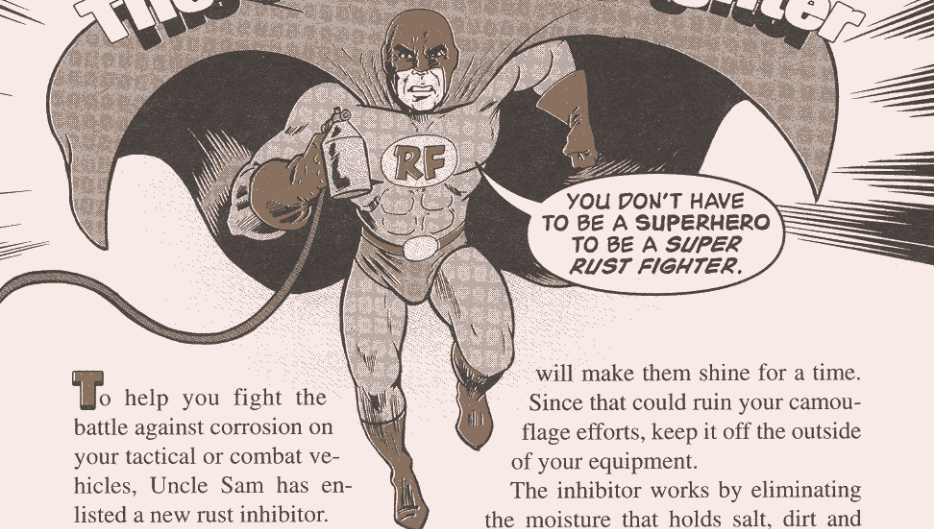
It's a similar situation after you've added distilled water to a battery. The vehicle needs to run at 1,000–2,000 rpm for at least 20–30 minutes to get a full charge.

Furthermore, PMCS starts and stops don't do anything to keep batteries charged. The effect of starting during a PMCS is a net energy loss, as more energy is removed from the batteries than is put back.

If your vehicle is not used regularly, some operation at 1,000–2,000 rpm is needed after a weekly PMCS to maintain a full battery charge. Check your TM for specific info. If it has none, idle your vehicle for at least 20–30 minutes.



The New Rust Fighter



To help you fight the battle against corrosion on your tactical or combat vehicles, Uncle Sam has enlisted a new rust inhibitor.

If you apply it every eight months or so to the underneath and inside areas of your vehicles, it will slow

will make them shine for a time. Since that could ruin your camouflage efforts, keep it off the outside of your equipment.

The inhibitor works by eliminating the moisture that holds salt, dirt and other pollutants that eat up metal. It also lubes moving parts and penetrates existing rust.

It's petroleum-based and contains no silicones, solvents, CFCs, or anything else classified as hazardous material.

Order the new inhibitor in the following quantities:

NSN 8030-01-414-	Quantity
7423	16-oz bottles (12)
8947	5-gal container
7430	55-gal drum

All quantities come with application instructions. The drum comes with a spray applicator and instruction tape.

It will take about two gallons to treat a HMMWV and up to three gallons for a 2½-ton or 5-ton truck.



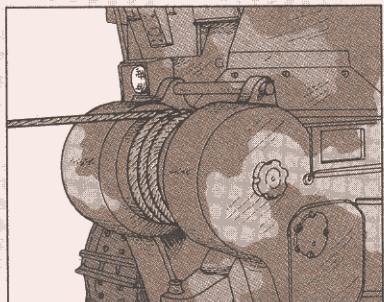
the spread of new rust and even clean up old rusted areas.

It won't harm painted surfaces, plastics, rubber, glass or wiring, but it

ABLE WINCH CABLE

Operators, here are some things you can do to keep the winch on your D5B tractor good to go:

✔ Always leave at least three loops of cable on the winch drum when pull-



Leave at least three loops of cable on drum

ing a load. That keeps the pressure off the attaching hardware and on the cable—where it should be.

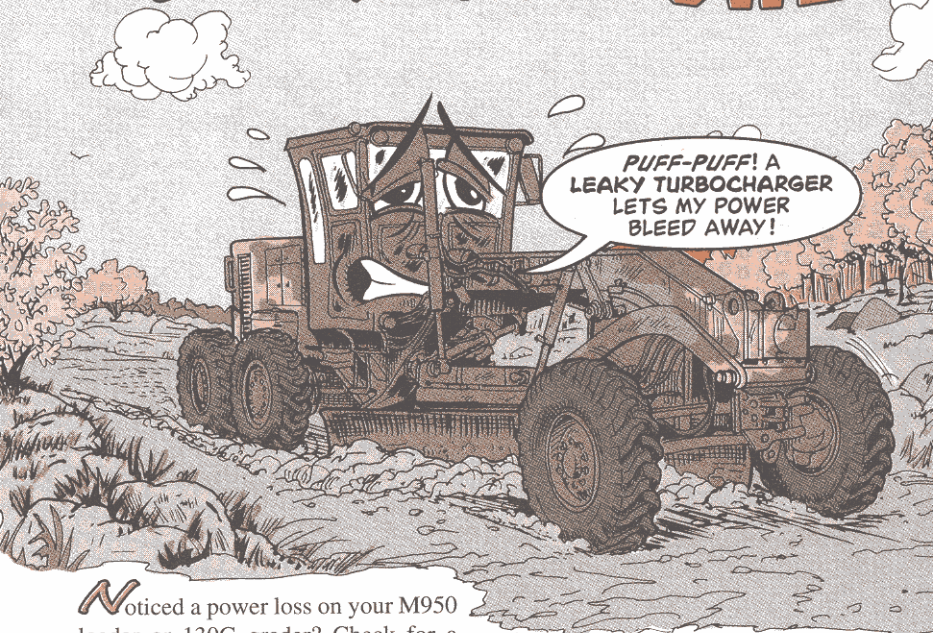
✔ Keep the winch cable as straight as possible behind the tractor. Pulling a load at an angle puts too much stress on the winch drum and attaching hardware. Also, your sight is blocked by the rollover protective structure (ROPS) during operations. That's an accident just waiting to happen.

✔ Use leather gloves, NSN 8415-00-634-4658, during winching operations. The gloves will protect your hands from burrs and broken wires that are hidden by dirt and grease.

A large illustration of a D5B tractor in a forest setting, pulling a heavy load. The tractor is equipped with a winch and a cable. In the foreground, a character is shown from the chest up, wearing a hard hat, glasses, and a work jacket. He has a stern expression and is pointing his finger. A speech bubble originates from him.

REMEMBER
TO KEEP YOUR DOZER'S
WINCH CABLE AS STRAIGHT
AS POSSIBLE WHEN
PULLING A LOAD.

Align Coupling for POWER



Noticed a power loss on your M950 loader or 130G grader? Check for a turbocharger coupling leak.

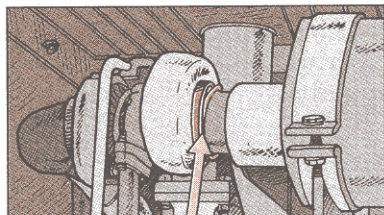
If the coupling is misaligned or if its seal rings are damaged, some turbo boost is being lost during operation.

Eyeball the coupling for misalignment (crooked connection to the muf-

fler), signs of leakage (carbon stains) or seal ring damage (cracks, splits, tears and hardened surfaces). If you find misalignment or leakage, tell your mechanic.

He'll loosen the muffler-to-turbo connection. Then, he'll turn the muffler so that the coupling is straight. While he's doing that, he'll look at the condition of the seal rings. If they're damaged, he'll replace them, the packings and the gaskets.

Once everything's OK, he'll tighten the connection, and you'll have your power back.



Look for misalignment or signs of leaks here

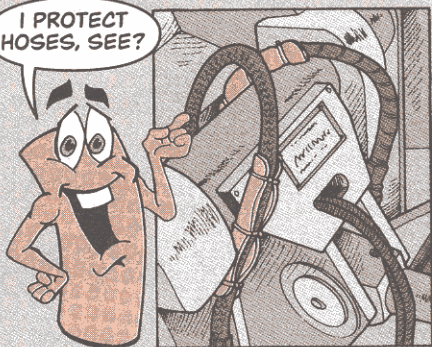
SNUB HOSE RUB

The hydraulic hoses between the 950B scoop loader's bucket and lift rack get a raw deal. When the bucket is raised, the hoses rub against the top hitch tube on the lift rack.

Enough rubbing and they leak.

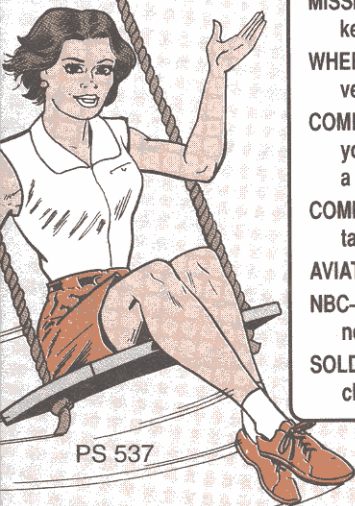
Stop that rub by wrapping a piece of rubber tubing around the hoses where they wear. Hold the tubing in place with tie strap, NSN 1080-01-022-8633.

I PROTECT HOSES, SEE?



Readers Quiz

HERE ARE SOME QUESTIONS ABOUT THE EQUIPMENT FEATURED IN THIS ISSUE OF PS. TAKE A SWING AT THEM.



COMBAT VEHICLES—What are the two ways to clean air filter V-packs on M1-series tanks? (Pages 2-3)

MISSILES—How often do you need to run the Avenger to keep its batteries charged? (Pages 12-14)

WHEELED VEHICLES—What can you do to keep your vehicle's batteries "hot"? (Page 22)

COMBAT ENGINEERING—How many loops of cable should you leave on your D5B tractor's winch drum when pulling a load? (Page 24)

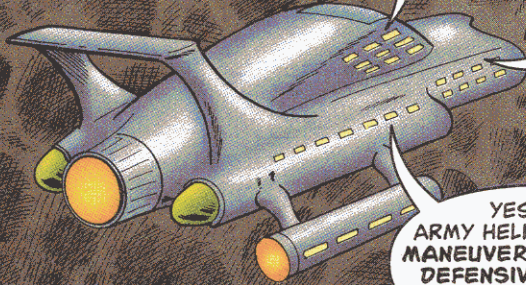
COMMO—What is "wetstacking" and how do you keep your tactical quiet generators from doing it? (Pages 38-39)

AVIATION—How can you prevent NATS tool theft? (Page 45)

NBC—What's the best thing for the Fox's probe when you're not in the field? (Pages 46-47)

SOLDIER SUPPORT—Why should you never use bleach to clean your ALICE? (Pages 50-52)

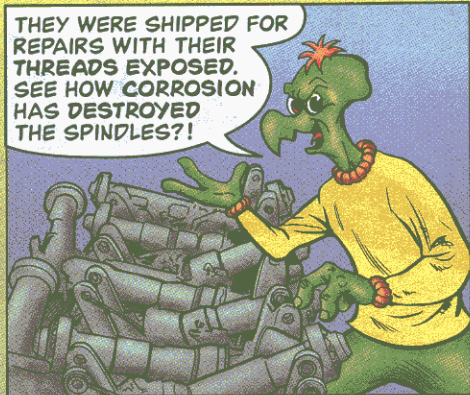
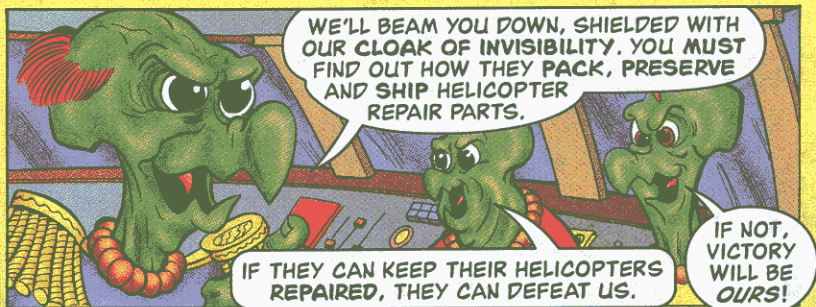
Spacey Invaders

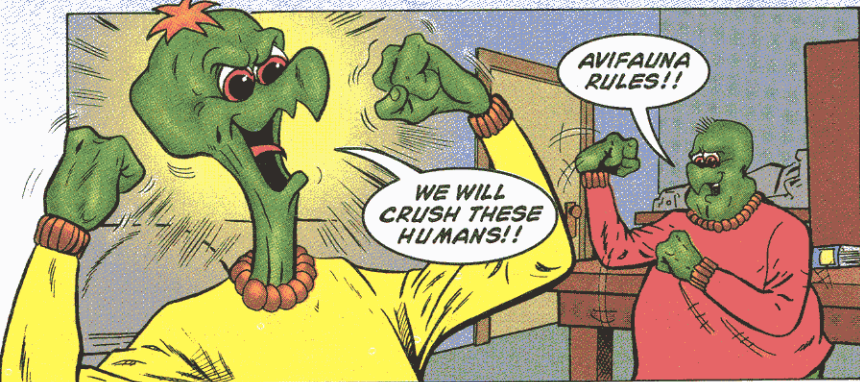



THERE
SITS EARTH...
FAT AND RIPE FOR
THE PLUCKING!
HA-HA-HA!

ONLY ONE
THING CAN STOP
US—THOSE
INFERNAL ARMY
HELICOPTERS!

YES, ONLY
ARMY HELICOPTERS CAN
MANEUVER THROUGH OUR
DEFENSIVE MAZE AND
REACH OUR COMMAND
CENTER.







Wherever the place of the fight,
On Earth, in space, day or night,
We tell you no lie,
Helicopters will fly,
If parts are packed and shipped right!

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

LOOK HOW CORRODED THESE TRANSMISSIONS ARE! THEY WERE SHIPPED WITHOUT THEIR PROTECTIVE COVERS!

EARTHLINGS MUST NOT KNOW THEY NEED TO SAVE THE TRANSMISSION COVERS WHEN THEY GET A TRANSMISSION FROM DEPOT FOR THE EVENTUAL RETURN TRIP.

WHAT A MESS THIS IS. WATER MUST BE DRAINED FROM ALL PARTS BEFORE PACKING!

YEAH, AND THE OPENINGS MUST BE COVERED WHILE WAITING FOR PACKING AND DURING SHIPPING.

PARTS WITH CAVITIES OR SUMPS WILL COLLECT WATER, CAUSING CONTAMINATION AND DETERIORATION.

WE WILL ANNIHILATE THEM!!

THEY WILL FEEL THE FORCE OF THE BIRD!

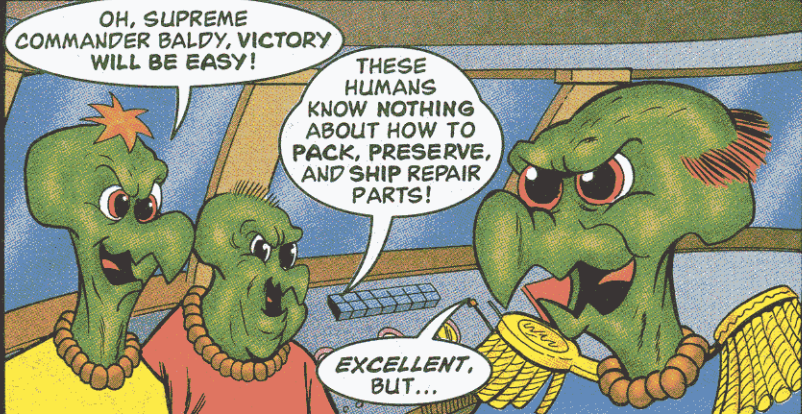
LOOK AT THOSE ENGINES! NO PROTECTIVE COVERS ON THE INLETS OR THE OUTLETS!

AND THE METAL SHIPPING
CONTAINERS ARE IN POOR
CONDITION. THEY HAVEN'T
BEEN CLEANED INSIDE AND
OUT WITH DETERGENT.
STEAM CLEANING WOULD
HAVE BEEN EVEN BETTER!

SHIPPING
CONTAINERS OF ALL
KINDS MUST BE IN
GOOD SHAPE!

PARTS
PACKED IN
POORLY SEALED
CONTAINERS WILL BE
CONTAMINATED
AND
DETERIORATE.

WE'VE
SEEN ENOUGH!
LET'S REPORT
BACK!



OH, SUPREME
COMMANDER BALDY, VICTORY
WILL BE EASY!

THESE
HUMANS
KNOW NOTHING
ABOUT HOW TO
PACK, PRESERVE,
AND SHIP REPAIR
PARTS!

EXCELLENT,
BUT...



...UNFORTUNATELY
I'VE STARTED TO MOLT AND
WE MUST MIGRATE BACK
TO OUR PLANET. WE
CANNOT ATTACK
NOW. WE WILL
SOMEDAY,
THOUGH.

BUT, SIR! WHAT
IF THE HUMANS LEARN
FROM THEIR MISTAKES AND
CORRECT THEM?



HA HA HA!
HAVE THEY
EVER ?!

Slide Guide Rails

The mating between your SINCGARS receiver-transmitter and its AM-7239 vehicular amplifier-adaptor (VAA) happens at either the J7 or J8 connector or both. Unfortunately, it's more often a collision than a mating.

The collision is caused by misalignment.

Without alignment, pins are bent and connector shells are damaged.

Misalignment is easy, but so is alignment, if you use peel-and-stick guide rails. The guide rails, which stick to the inside wall of the mount, give you a track to follow as you slide the receiver-transmitter into the VAA.

The guide rails are free. Get them from your SINCGARS field service representative or from CECOM by calling DSN 987-3043 or (908) 427-3043. Or write CECOM at:

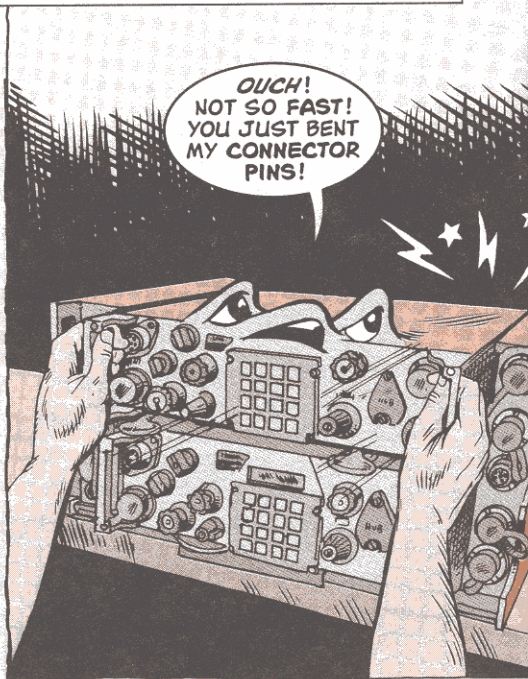
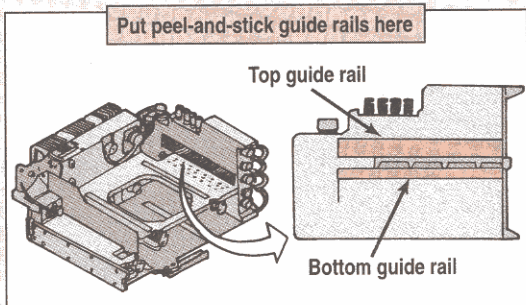
PM TRCS
ATTN: SFAE-C3S-TRC-RMD
Bldg 456
Ft Monmouth, NJ 07703-5505

Or e-mail them at:

ruff@doim6.monmouth.army.mil

There are two sets of guide rails in each package. One set is for either the plain or B-model VAA and the other set is for the A model. The guide rails come with application instructions.

Of course, the guide rails only do their job if you do yours. Your job is to go slow and make the connection with care.

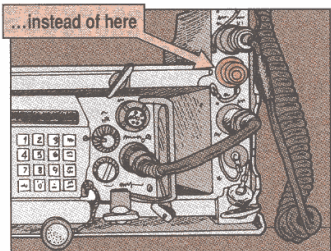
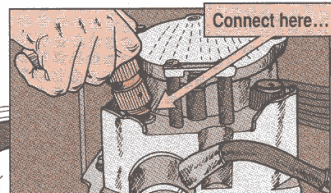


Your H-250 handset won't be too handy if you don't take care of it.

Cable Slack

When you talk on the SINCARS while sitting in the driver's seat of your vehicle, cut the cable some slack.

Connect the H-250 handset to the J2 connector on the LS-671 loudspeaker, instead of the AUD-DATA connector on the amplifier-adaptor.



That'll give you more freedom of movement and less strain on the handset cord and connector.

The loudspeaker is mounted below the radio shelf in a tight space, so hookup can be awkward. Put a light coat of silicone, NSN 6850-00-880-7616, on the handset connector's O-ring, and hookup will be a snap.

Keep Handset Handy

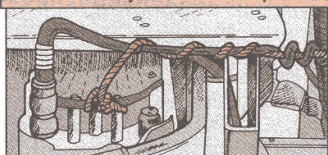


Strain Relief

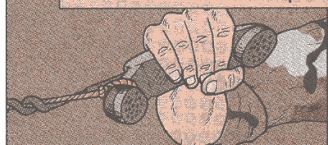
If you often stretch the handset cord to the limit while moving around, here's a fix to keep it from breaking:

Cut off three feet of nylon cord, NSN 4020-00-246-0688, and tie one end to the radio's loudspeaker. Thread the

Tie one end of nylon cord to loudspeaker...



...and other end above mouthpiece



cord through the handset cable's coils and tie it above the mouthpiece on the handset.

The cord acts like a short leash and keeps you from stretching the handset cord until it breaks.

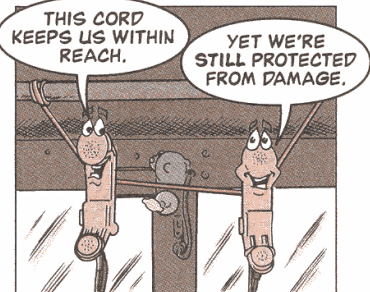
When you're not using the handset, you probably clip it to the bracket under the radio, right? That's fine, unless you're wearing a protective mask carrier on your hip. Then when you sit in the bucket seat, the mask smacks the handset and breaks the clip.

Try using one of these methods to keep your handset out of danger:

Hang It Up

Cut off another three feet of nylon cord and tie each end to the front canvas bow in the HMMWV cab. Clip

the handset on the cord, up out of harm's way. Put it in the middle of the windshield, so it doesn't block your view.



Some folks protect the handset by putting adhesive-backed hook-and-pile fastener tape on the handset and the radio. NSN 8315-01-115-7617 brings you the hooks. Get the pile with NSN 8315-01-043-9881.

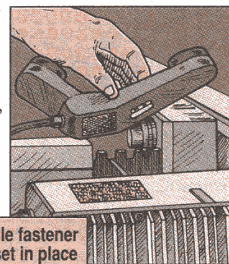
Here's how to do it:

Cut off a 2-in sheet of hooks and put it on the back of the handset.

Cut off a 4-in sheet of pile and fasten it to the top of the MT-6353 mounting base or the AM-7238 power amplifier-adaptor or to the radio's shelf.

When you're done talking, stick the handset on the pile.

It stays in place, out of the way, but you can grab it quickly.



ALL ABOUT WETSTACKING



The ideal load for your tactical quiet generator (TQG) is 80 percent. An 80 percent load heats the generator up to normal operating temperature and loads the generator into the most fuel and cost efficient operating range.

Unfortunately, even the smallest TQGs, the 5- and 10-KW, are too big for some communications missions. You just can't get that 80 percent load. Sometimes you can get by with 60 percent, maybe a little lower. But when you hit the 50 percent range, the TQG starts to wetstack.

Wetstacking

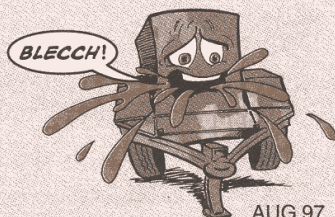
Wetstacking is the buildup of diesel fuel and carbon residues in the engine and exhaust system of the generator. This buildup leads to cooler, rougher running engines with reduced power, hard starting and more smoke. That leads to maintenance headaches.



There are two reasons for wetstacking: One, at light loads the diesel engine fuel-metering system does not operate as effectively as at higher loads. Two, diesel engines do not reach full operating temperatures at light loads.

This metering problem lets fuel pass through the engine without burning. Most of that unburned fuel becomes carbon buildup.

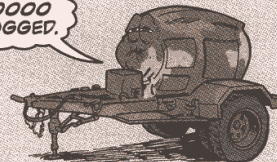
The lower engine temperature reduces thermal expansion of the internal engine components, which increases the gap between piston and cylinder walls. That increased gap allows more oil to enter and move through the combustion chamber as slobber.



WETSTACKING

The lower temperatures also let some of the combustion products that normally leave the engine as a gas to condense out of the exhaust stream, clogging mufflers.

I'M
SOOOO
CLOGGED.



No Load Banks

If you think a dedicated load bank will solve the low load problem, think again. There are no portable load banks authorized or available for dedicated loading of the TQGs.

Here's how to win the fight against wetstacking:

- ➊ Select the right size generator for the mission load and profile so that the load factor is as close to 80 percent as possible. You can also adjust the electrical distribution system to match the capacity of the generator set.
- ➋ Shut off the generator if there's not going to be a load for a while. Then make sure someone is available to restart the generator before the load is applied. Starting and stopping the generator won't hurt after it has run long enough to charge the batteries.
- ➌ If your mission requires high loads for short periods of time, with minimal or low loads in between, burn and clean

out engine slobber residue as part of normal PMCS. You do this by running the generator at an 80-100 percent load long enough to heat the engine to full operating temperature and burn out the carbon and slobber. It should take from one to two hours.

If your mission requirement won't let you meet that load, your local Director of Logistics or Director of Public Works has load banks and they will let you "burn out" your generators. Ask about them.

➍ Remove the muffler on 5- and 10-KW TQGs and clean it. See your generator TM for the procedure.

➎ Latch on to a copy of FM 20-31, Electric Power Generation in the Field. It tells you how to calculate loads and set up power distribution systems. Get in touch with your ATCOM LAR if you need help.

Although generators can be started and stopped frequently, and run at low loads, they perform best with large, continuous loads.

LARGE CONTINUOUS
LOADS KEEP THE BATTERIES
CHARGED, CIRCULATE NEW FUEL
INTO THE TANK AND HEAT THE
GENERATOR TO NORMAL
OPERATING TEMPERATURES.



When A Handle Isn't

Some of you are making a mistake, but it's not really your fault. You see, it does *look* like a handle.

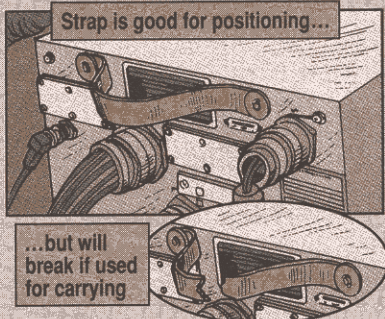
We're talking about some of the electronic units on your Apache, like the laser, TADS and power supply assembly. A plastic strap that stretches across the front of the unit looks like a carrying handle.



But it's **not**! That strap's there to help you maneuver the unit into place and then to aid in removing it from the aircraft.

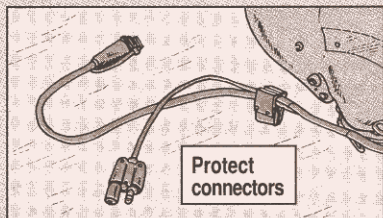
If you carry the unit by the plastic strap, the strap will break and the unit will crash to the hangar floor.

So carry the unit cradled in your two hands and use the strap only to position it during installation and removal.



PROTECT IHADSS

The harness assembly, NSN 5995-01-186-8601, on your Apache's integrated helmet and display sighting system costs about \$7,000.



The yellow dust cap, NSN 1270-00-550-7342, that hangs next to the harness connector costs about \$35.

Too many of you are letting the \$35 item dangle, which leads to the destruction of the \$7,000 item.

No dangling!



USE THE DUST
CAP TO PROTECT
THE HARNESS
CONNECTOR.

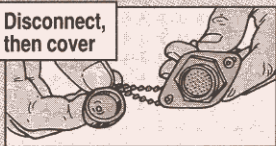
Too many harness assemblies are being replaced because the connectors have bent or broken pins. The yellow dust cap protects the connectors.

Prevent broken or bent pins



It's up to you to reverse this trend. Every time you disconnect the harness assembly, slip the dust cap over the connector. Make the disconnect process two steps, instead of one. **Disconnect**, and then **cover**.

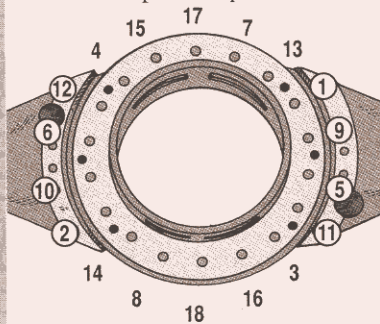
Disconnect,
then cover



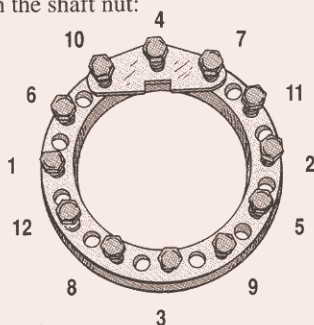
Numbered and Sequenced

The lower pressure plate and the main rotor shaft nut on a Black Hawk's main rotor head have bolts that must be removed and installed in numerical sequence, beginning with number 1. Give each bolt $1/4$ -turn, then move to the next bolt in sequence. This ensures that a constant pressure is maintained on each bolt so that none will fail. Each bolt hole is numbered on the pressure plate and the nut, but time, paint and the nut locking plate hide those numbers.

Here's how the holes are numbered on the lower pressure plate:



Here's how the holes are numbered on the shaft nut:



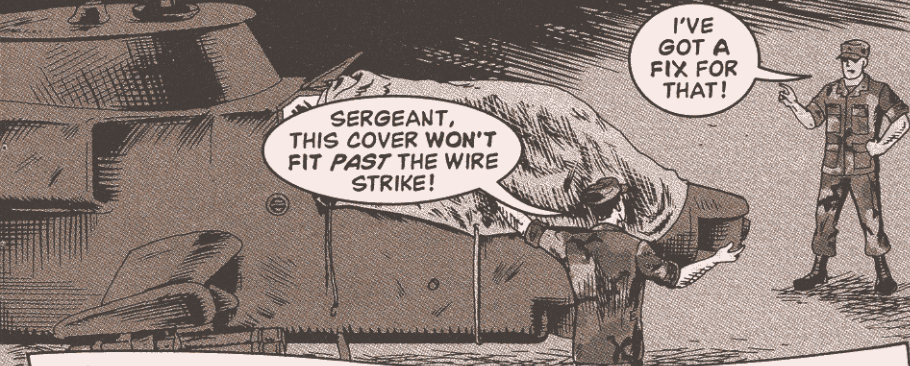
Use these loosening and tightening patterns when working on the pressure plate and shaft nut.

TIME,
PAINT...

...AND
THE LOCKING
PLATE HIDE MY
NUMBERS.

SO YOU MIGHT
WANT TO KEEP
THIS INFORMATION
HANDY!

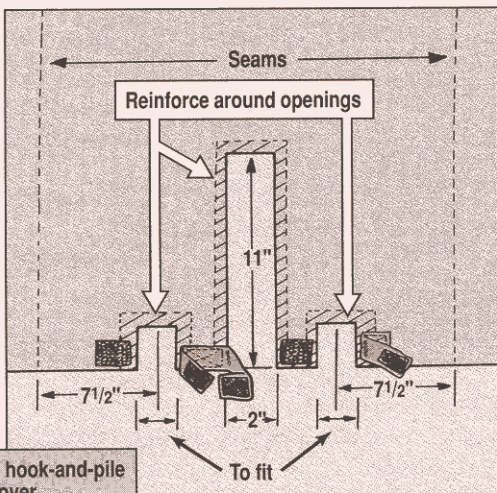
Make a Cover That Fits



Dear Windy,

The canopy cover for the AH-1F Cobra was not made to fit around the wire strike. The location of the wire strike stretches the cover and leaves the canopy exposed.

We modify the cover to make it fit. We cut three slots and sew nylon straps and a hook and pile fastener to the cover to hold the cut pieces in place.



Use nylon straps and hook-and-pile fasteners to secure cover

Now our Cobras are covered and the wire strike is not a problem.

**1SG Andy Bolinger
OHARNG**

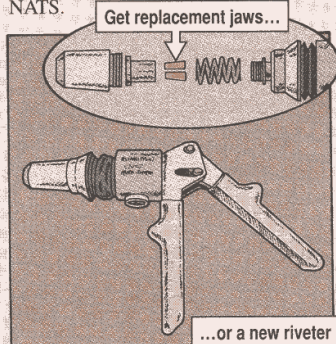
Good job, Andy. OK, mechanics, 1SG-Bolinger has provided enough info to get you started on modifying your Cobra covers if you need to.

Windy

NATS RIVETER REPAIRS

Airframe repairers, are you having blown hydraulic seal or worn-jaw problems with the D-100-1 riveter, NSN 5120-01-283-0320, in your new aviation tool set (NATS)?

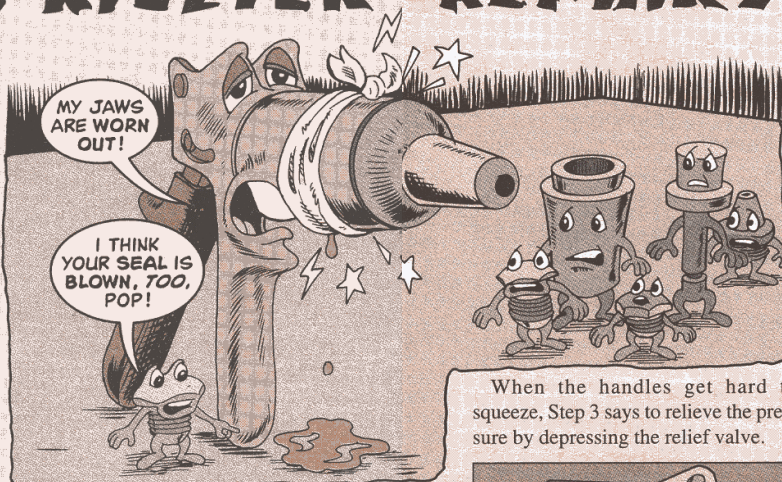
If you are, you can get replacement jaws, NSN 5120-01-430-5378, or a new riveter, NSN 5120-01-430-5345. You may even get them free. The riveter has a 12-month manufacturer's warranty that began the day you got your NATS.



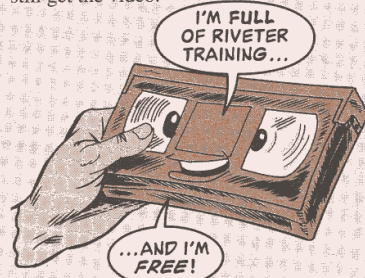
Not sure of the exact day you got your NATS? Give the manufacturer the tool's serial number. If you're covered, he'll tell you.

To replace the jaws or to order a new riveter (a blown seal cannot be replaced or repaired) call Fastening Systems International at (800) 344-2393. Or write to them at:

Fastening Systems International
PO Box 1372
1206 East MacArthur St E
Sonoma, CA 95476

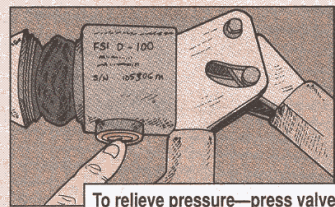


While you're at it, ask for part number F701. That's a free video on how to use the riveter. Even if the warranty on your riveter has expired, you can still get the video.



If you haven't had a blown seal yet, you will if you're not closely following Step 3 in the operating instructions.

When the handles get hard to squeeze, Step 3 says to relieve the pressure by depressing the relief valve.



Then squeeze the handles together. The pressure should release. Slide the riveter up on the rivet stem, regrip and continue to pull until finished.

You also protect jaws by using the adapter that comes with the riveter for use with small rivets.



F187 adapter

Stop, Thief!

Most aviation mechanics think the tools in the new aviation tool set (NATS) are pretty neat things to have. Thieves think so, too.

The set comes with a padlock for the front of the case, but the side of the case can be, and has been, pried open.

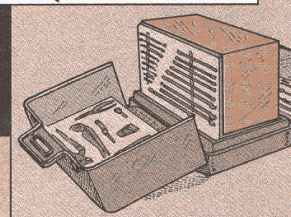
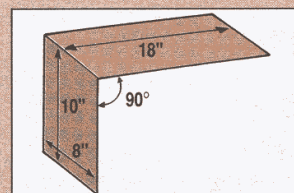
New sets are being made to defeat prying thieves. You can do the same on your old set like this:

1) Cut a piece of metal sheeting 28 inches long by 8 inches wide.

2) Put a 90° bend in the sheet at 10 inches.

3) Put the long end of this new security device on top of the foam tower. Put the short end down the side farthest from the handle lock.

Now, if a thief pries open the side, he'll get nothing but frustration for his trouble.



PM Keeps

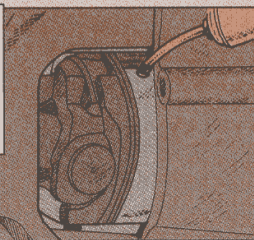
To sniff out chemical threats, the Fox needs not only its sophisticated sensing devices, but a sound vehicle to carry them. Keep the Fox prowling with this vehicle PM:

Lubing—When the Fox fords or swims rivers or rolls through deep mud, the axle drive propeller shafts, steering axle shafts, power steering hydraulic cylinder, and marine drive propeller shafts can all lose their lubrication. Without lube, the Fox will have a hard time moving and turning.

After a rough mission, lube the shafts and hydraulic cylinder with GAA like it says for the ON CONDITION intervals in LO 9-6665-376-12.

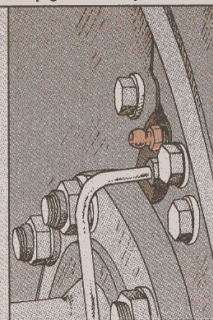
What you don't want to lube are the brake bleeder valves on each wheel. The valves are often given a shot of grease because they look like lube fittings. With grease in the fittings, you can't bleed the brakes.

Grease shafts after going through water or mud



Fox Prowling

Keep grease away from bleeders

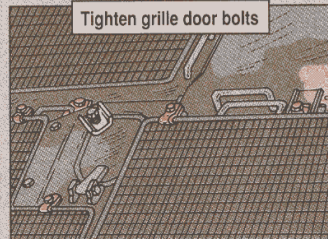


wrench in your tool kit, tell your repairman. He has a wrench that gives more torque.

Engine compartment—If the bolts for the engine compartment grille doors come loose, the doors bounce up and down during travel and crack the air conditioning evaporators. The AC loses refrigerant and the Fox is deadlined. Tighten the bolts after you finish your BEFORE PMCS. If the doors are opened during a mission, make sure the bolts are retightened.

If you have trouble tightening the grille door bolts with the

Tighten grille door bolts

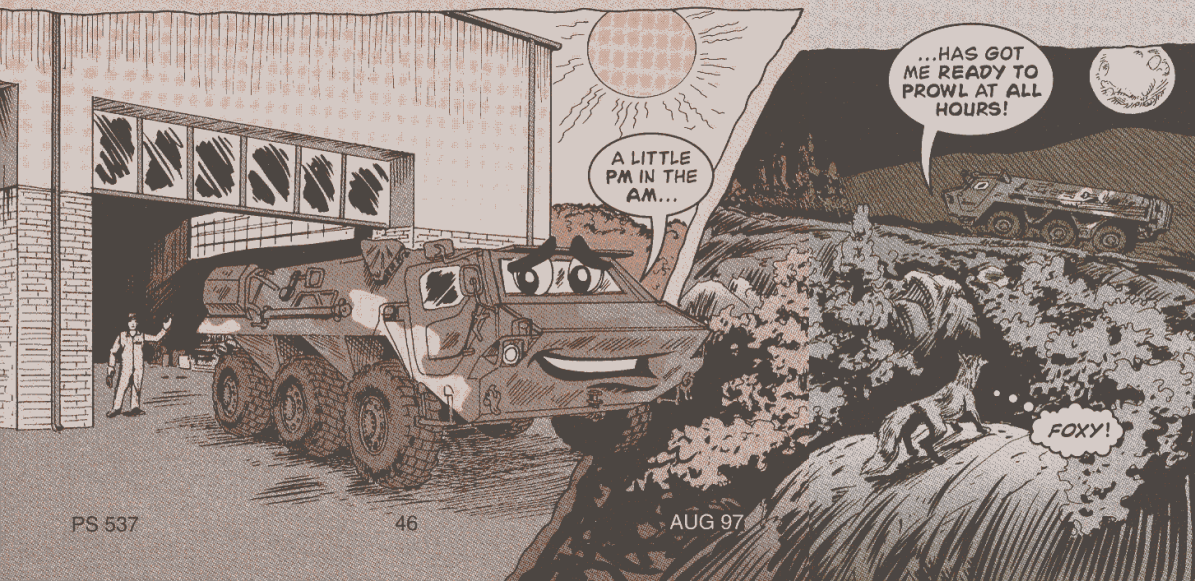
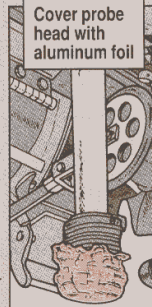


Don't let the grille doors slam, either. Guide them into place.

Repairmen, take care when you pull or install the powerpack. It's easy to bust the AC evaporators when you're maneuvering the powerpack.

Probe—In the motor pool, wrap the probe sampling head in aluminum foil. Foil prevents the head from absorbing exhaust fumes that can work their way into the mass spectrometer and cause bad readings. Foil also helps the head last longer by keeping it clean and dry.

Cover probe head with aluminum foil



SMOOTHER SMOKING

A few extra checks on the M157 smoke generator before you leave the motor pool can mean smoother smoking in the field.

Fuel line quick-disconnects: Dirt is thrown up on the quick-disconnects during travel and can jam their sleeves. Then you can't connect the fuel lines.

If the disconnects don't move easily, spray some penetrating oil, NSN 9150-00-529-7518, under the sleeves and carefully work them back and forth until they do move freely.

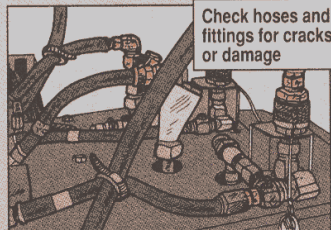
Be sure to wipe the oil off the quick disconnects so they don't attract more dirt, of course. The new M157A2 will not use quick disconnects.

Dangling hoses: If the fog oil hoses stick out above the cab, you can count on them catching on something and being ripped off.

Pull the slack out of hoses and tie them off to the intake lines with tie-downs, NSN 5340-01-276-9232.

The M157A2 will eliminate the hose problems.

Leaking lines: Eyeball the fog oil and fuel line connectors for dirt



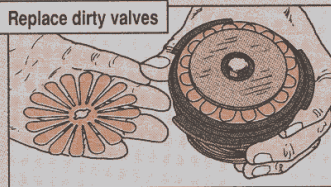
Check hoses and fittings for cracks or damage

buildup. Lots of dirt usually means the lines are leaking and attracting dirt. Check the hoses for cracks, cuts, or damaged fittings.

Engine head: A dirty head valve causes poor compression, which makes for difficult starting and sputtering performance. Replace a dirty valve. Take extra valves to the field in case you need them.

A good way to make sure the valve is sealing well is to look for spaces

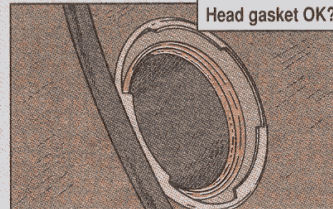
Replace dirty valves



between the valve reeds and the engine head's seating face. Spaces mean you may need a new valve. But first make sure that the machine bolt, lock washer, back stop washer, and valve backstop are installed correctly and are tightly screwed in.

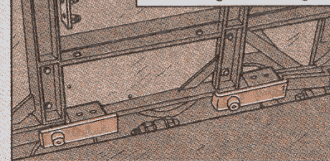
While you have the head off, take a look at the copper head gasket. Make sure it's not missing, cracked, or dented. A bad gasket makes for hard starting.

Head gasket OK?



Wedge blocks: Each smoke generator needs two wedge blocks tightly bolted on. They almost never are. As a result, the generators bounce around and stuff like the fuel solenoid, engine head, and fuel pump are damaged. If the blocks are loose, tighten them. If one's missing, tell your repairman. He can order more with NSN 3040-01-248-8921.

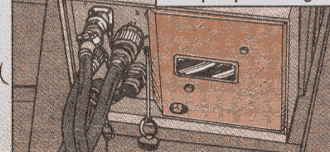
Both wedge blocks tight?



Side container panels and fuel pump motor cover: The panels and cover are often left off. Without the panels, the electrical circuits are defenseless against dirt and moisture. Without the fuel pump cover, the wires running to the fuel pump motor and the motor itself are just waiting to be ripped out.

If the panels and cover are in place, tighten the bolts that hold them on so they stay in place.

Fuel pump cover tight?



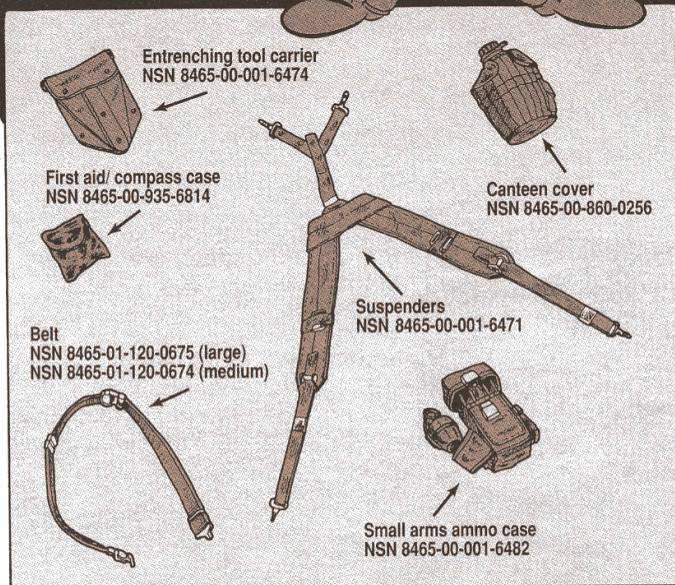
THANKS TO ALL THAT PMCS OUR CREW DID BEFORE WE LEFT...

...WE'RE SMOKING SMOOTHLY!

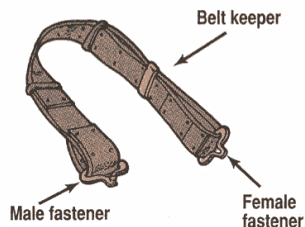
A Friend To Hang With

TAKE CARE
OF ME AND I WON'T
LET YOU DOWN!

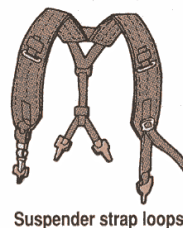
Our all-purpose lightweight individual carrying equipment will be there when you need it... if you replace worn, broken, or missing parts when they need it.



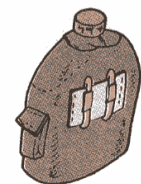
Replace belt keepers with NSN 5340-00-753-5581, female fasteners with NSN 8315-01-287-0604 and male fasteners with NSN 8315-01-287-0603.



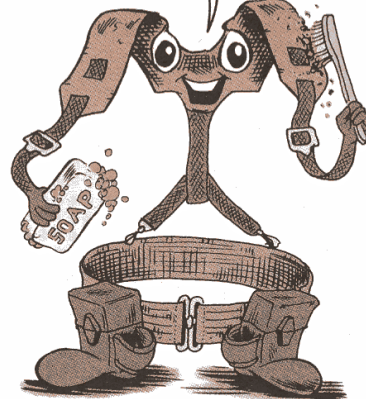
Get the suspender strap loop with NSN 5340-01-062-6751.



Replace keepers with slide on the small arms ammo case, the first aid/compass case, the canteen cover and the entrenching tool carrier with NSN 5340-00-753-5580.



NOW THAT YOU'VE
GOT THE PARTS, YOU'LL
NEED TO KNOW HOW TO
CLEAN THEM AND THE
REST OF ME.



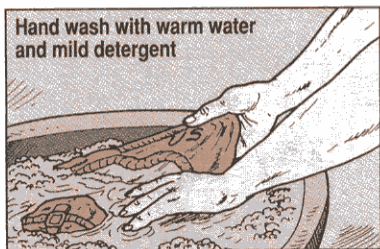
Cleaning

1. Brush off caked-on or dried-in dirt with your hands. Never use anything sharp that will cut the fabric or webbing.



After you remove the heavy stuff, wipe away the loose dirt with a soft brush or cloth.

2. Dip the ALICE in a bucket of warm, soapy water. Stay away from washing machines, chlorine bleach, yellow soap, cleaning fluids and solvents. They make ALICE a pale shadow of its former self and break down the fabric.

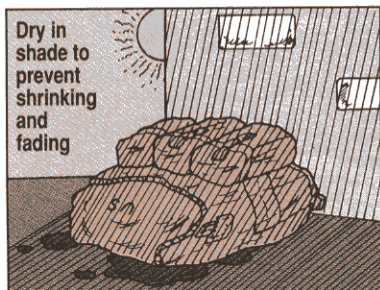


NSN 7930-00-929-1221 gets a mild detergent that cleans well even in hard water.

3. Eyeball the fabric for stubborn soiled spots. Give 'em another scrubbing with a soft cloth. Then dip the ALICE again in the soapy water.

4. Rinse your ALICE thoroughly in clean, warm water. Then stretch the fabric back to its original shape.

5. Air-dry it in the shade or indoors. Never use clothes dryers and keep the ALICE away from direct sunlight, heat or open flames—they'll fade and shrink the fabric.



Repairs

Users can repair small rips, tears, and loose seams on the canteen cover, the ammo case and the compass case.

If the tear is less than an inch long, repair it with tape, NSN 8315-00-958-0744, or safety pin, NSN 8315-00-787-8000.

For tears or rips up to three inches, use the needle and thread from the tent-age repair kit, NSN 8340-00-262-5767.



OIL AND GAS TO GO

Nothing will turn your chain saw into a glorified hand saw quicker than the wrong fuel mix or no bar lube.

Two-cycle engines cannot run on straight gasoline. It ruins pistons and cylinder heads.

These engines must have an oil-gas mixture—usually a pint of oil for every two gallons of gas. Your saw's manual gives the right mix, which you should prepare in a fuel can, not in the saw's gas tank.

Get pint cans of two-cycle engine oil with NSN 9150-00-117-8791.

Don't spare the chain oil. Use the thumb oiler (if your saw has one) while you're cutting. Don't wait until the chain starts squeaking and the bar turns blue from heat.

OE/HDO-30 engine oil is the one to use, except in cold weather. Then OE/HDO-10 is the right one. In arctic conditions, use OEA.

Top off the chain oil tank every time you refill the gas tank.

If your saw has a sprocket-tip bar, use a needle nose adapter, NSN 4930-00-200-1841, on your grease gun to lube the sprocket. Grease every time you refuel.

TO MAKE
ME RUN I NEED
A TWO-CYCLE
COCKTAIL!

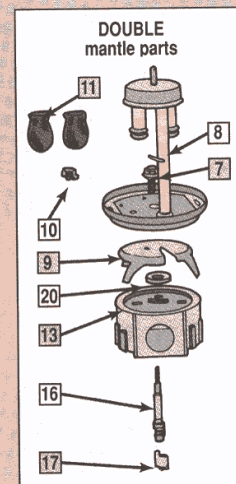
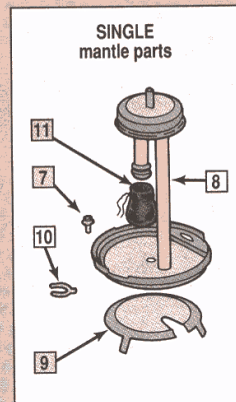
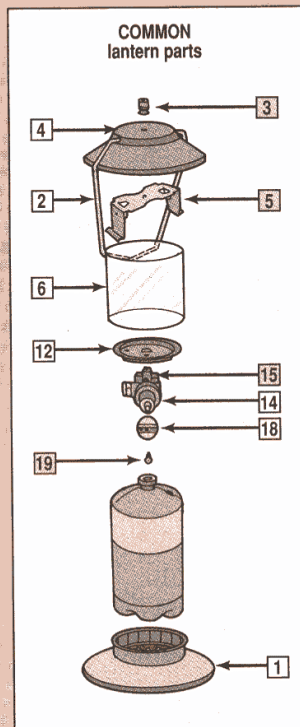
IT TAKES
A MIXTURE OF
TWO GALLONS
OF GAS...

...AND
A PINT OF
TWO-CYCLE
OIL!

Parts to Light Up the Night



Here are the available parts for your Model 5151C700, single-mantle lantern, NSN 6260-01-124-7467, and Model 5154B700, double-mantle lantern, NSN 6260-01-124-7468:



No.	Item	PN / NSN
1	Lantern base (single mantle) Lantern base (double mantle)	5151B5451 5114G1031
2	Bail (both)	5114A4231
3	Ventilator nut (both)	220-441
4	Ventilator (both)	5107B4851
5	Bail Bracket (both)	5152A1041
6	Globe (both)	6260-01-340-5360
7	Screw (both)	5114B060
8	Burner assembly (single mantle) Burner assembly (double mantle)	5151A6621 5154D6621
9	Heat shield (single mantle) Heat shield (double mantle)	5154A1151 5154-1151
10	Spring clip (both)	231A3111
11	Mantle (both)	6260-00-270-4060
12	Spacer plate (single mantle) Spacer plate (double mantle)	5152A1601 5154D4601
13	Collar assembly (double mantle only)	5154-5911
14	Regulator valve (single mantle) Regulator valve (double mantle)	5152A5251 5154-5261
15	Gas tip (single mantle) Gas tip (double mantle)	5107A2181 5152A2181
16	Ignitor assembly (double mantle only)	5154-5851
17	Cam follower (double mantle only)	5154-1101
18	Knob assembly (both)	5154A1491
19	Knob screw (both)	5154D029
20	Washer (double mantle only)	5154-320

Part number requests go on DD Form 1348-6. Use CAGE code 80309.

During the next few years, the Army will be putting many of its current paper publications on compact discs (CD) through the Electronic TM (ETM) program.

Soon, many TMs, TBs, SBs and more will be available on CD for use on contact test sets, and desktop, notebook, and laptop computers.

For now, paper maintenance manuals and paper changes for unit-level and higher pubs will still be sent to those who want them.

Manuals with operator-level information (-10, -12, -13, for example) will continue to be printed on paper indefinitely, even if they're part of an electronic manual.

Two Types of ETMs

Two types of ETM products will be produced. One will have major end items or weapons systems, including pubs on their components. A second type will have pubs covering common-use equipment or on general subject matter.

Here's how you'll get them:

● ETMs for major end items—like the HMMWV or Patriot—will go to pubs accounts with current subscriptions for the paper pubs. Those accounts will get a single copy of a new ETM for each type of weapon system, no matter how many end items they have.

● ETMs for grouped equipments—generator sets, tools and shop sets—will go to nearly every Army, Army Reserve and National Guard account. Once again, just one copy for each grouped equipment will be sent.

At first, only a few weapon systems will be available on CD. In following months, more systems on CD will hit the field.



Units that are already on distribution for specific publications will receive introductory ETMs automatically as they are released, beginning in July 97.

Look to the Future

Here's how to get changes and revisions to your introductory ETMs:

- Decide which ones your unit needs.
- For each of those products, submit a subscription change requirement using the Standard Army Publications System's (STARPUBS) on-line procedures. For details, see DA Pam 25-33, User's Guide for Army Publications and Forms (Sep 96).
- Include the Initial Distribution Number (IDN) shown on the cover of the CD and the quantity needed.
- Change your requirement for the paper version of the pubs contained on the CD.

Units who do not submit a subscription change requirement will not get future changes and revisions to ETMs.

Getting More ETMs

Units who need more copies of the introductory ETMs should submit a DA Form 4569 resupply order using the STARPUBS on-line procedures. Make sure you include the publication number shown on the CD cover, for example, EM 1234.

As new ETMs become available, they'll be identified by title and IDN on the US Army Publishing Agency (USAPA) website (<http://www-usappc.hoffman.army.mil>), in the USAPA Publications Bulletin and in DA Pam 25-30, Consolidated Index of Publications and Blank Forms.

Units should submit subscription requirements for new ETMs as soon as they're announced.

HMMM...
SO MANY
CHOICES.

Units in CONUS can no longer use any old drum for shipping or storing hazardous waste. Storage drums now have to meet United Nations specifications.

Here are the drums that measure up to UN standards:

NSN 8110-	Description
00-254-5713	6-gal, removable cover, steel
00-254-5714	7-gal, removable cover, steel
00-366-6809	30-gal, removable cover, steel
00-866-1728	30-gal, removable cover, steel, enamel-coated
00-030-7780	55-gal, removable cover, steel
00-292-9783	55-gal, closed head, steel
01-150-0677	55-gal, closed head, polyethylene
01-101-4055	85-gal, open head, for solids, steel
01-101-4056	85-gal, open head, for liquids, steel
01-302-4252	95-gal, removable cover, polyethylene

GET THE RIGHT

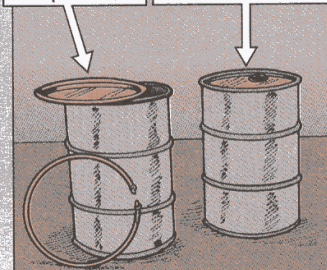


Some drums in the supply system don't meet UN standards. And, while ARMYLOG and FEDLOG show the old NSNs as terminal items, they don't show replacement NSNs. Here they are:

Old NSN 8110-	Replacement NSN 8110-
01-372-5758 00-823-8121 01-268-3007 01-292-2000	00-030-7780
01-372-5759 01-324-7939 01-269-1266 00-597-2353	00-292-9783
00-030-7779 01-289-6033	00-366-6809

STORAGE DRUMS

Get open head... ..or closed head drums

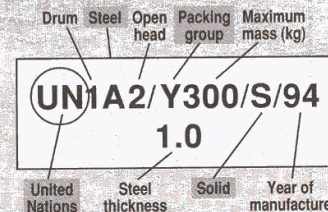


Remember, when you package hazardous wastes, the container must be compatible with the waste material. For example, strong acids or caustics should not be put in steel containers. They corrode steel, leading to leaks, spills and sometimes fires.

Explosives must be packaged in non-sparking containers so they won't detonate.

If you're not sure which drum to use, check with your local environmental folks.

Also remember that all containers with hazardous contents must have the United Nations performance-oriented packaging (POP) certification markings. Here's one example:



Check Ground First


Dear Editor,

In PS 529 you published an article on making a grounding connection in a motor pool building by attaching a static ground reel to a metal post.

You need to caution your readers that a metal post set in concrete is not necessarily an adequate ground. The concrete the post sits in is an insulator and will not provide a path to ground. The post must be grounded by some other means, such as running a wire from the pole to a circuit breaker box, or to a copper water pipe.

Gregory W. Schech

ATCOM Logistics Assistance Representative
Ft Drum, NY

FROM THE DESK OF THE Editor 

You make an excellent point. The US Army Safety Center says that not only should new grounding connections be tested before they're used, but connections already in use should be tested annually to ensure they're still good. Your safety office can help arrange the test.

Maintenance Excellence Winners

ACTIVE ARMY TOE ORGANIZATIONS

LIGHT CATEGORY

Winner: 81st QM Det, 593rd Corps Spt Gp (Fort Lewis, WA)
Runner-up: None selected

INTERMEDIATE CATEGORY

Winner: HHT, Spt Sqdn, 11th ACR (Fort Irwin, CA)
Runner-up: D Co, 122nd Sig Bn (Camp Red Cloud, Korea)

HEAVY CATEGORY

Winner: 725th Main Spt Bn (Schofield Barracks, HI)
Runner-up: 528th QM Co (Fort Lewis, WA)

HERE ARE
THE WINNERS
AND RUNNERS-UP
OF THE FY96
ARMY AWARD FOR
MAINTENANCE
EXCELLENCE.

ACTIVE ARMY TDA ORGANIZATIONS

LIGHT CATEGORY

Winner: Pusan Storage Facility (Pusan, Korea)
Runner-up: D Co, 12th Avn Bn (Fort Belvoir, VA)

INTERMEDIATE CATEGORY

Winner: 34th Spt Gp, 19th TAACOM (Yongsan, Korea)
Runner-up: Jungle Operations Tng Bn (Fort Sherman, Panama)

HEAVY CATEGORY

Winner: 751st MI Bn (Camp Humphreys, Korea)
Runner-up: 58th Trans Bn (Fort Leonard Wood, MO)

U.S. ARMY RESERVE TOE UNITS

LIGHT CATEGORY

Winner: HHD, 467th S & S Bn (Corpus Christi, TX)
Runner-up: HHD, 620th Corps Spt Bn (St. Louis, MO)

INTERMEDIATE CATEGORY

Winner: 1011th QM Co (DS) (Independence, KS)
Runner-up: Headquarters Company, 412th Engr Cmd (Vicksburg, MS)

HEAVY CATEGORY

Winner: 1007th Maint Co (GS) (Hagerstown, MD)
Runner-up: 411th Engr Cbt Bn (Honolulu, HI)

NATIONAL GUARD TOE UNITS

LIGHT CATEGORY

Winner: HHD, 540th QM Bn (Lenoir, NC)
Runner-up: HH Co, 38th Avn Gp (Phoenix, AZ)

INTERMEDIATE CATEGORY

Winner: Battery B, 1st Bn, 171st FA (Clinton, OK)
Runner-up: 1450th Trans Co (Jefferson, MO)

HEAVY CATEGORY

Winner: B Co, 434th Main Spt Bn (St. Cloud, MN)
Runner-up: 691st Maint Co (DS) (Freemont, NC)



Connie's
POST
SCRIPTS

MY WEAPON IS
ALL CORRODED! NOW
I CAN'T DISINTERGRATE
YOU, CONNIE!

YOUR
TYPE OF
PM IS
ALIEN TO
ME!

Supply UPDATE News

Unit Supply UPDATE 14 will not be replaced by UPDATE 15 as planned. Instead, each of the UPDATE's four pubs will be revised and issued separately. Be sure you're on distribution for each one. Here's the schedule:

AR 735-5	Jul 97
AR 710-2	Aug 97
DA Pam 710-2-1	Sep 97
DA Pam 710-2-2	Sep 97

Small Arms Gauging Correction

Page 29 in PS 535 was wrong when it said small arms need to be gauged and inspected by direct support every six months. For active units, gauging and inspection by support should be done annually. For the National Guard and Army Reserves, gauging and inspection should be done every two years, unless PMCS turns up problems.

HMMWV Speedometer Cable

Has your truck's speedometer cable stopped working or developed a kink because it's bent too much? Get a longer cable with a larger bend radius with NSN 2590-01-433-8553. It comes with all the parts you need, plus installation instructions. That's the word on Page 4-6 of TACOM EIR Digest TB 43-0001-39-3 (Dec 96).

Plastic-Jawed Pliers

For a soft touch on those tough-to-remove electrical connectors, try a pair of slip-joint pliers with plastic-covered jaws. There's a pair, NSN 5120-00-624-8065, in the No. 1 Common shop set.

Training for Armorers

Two video tapes are available that teach armorers how to inspect, repair, and maintain rifles and machine guns. TVT 10-109, PIN 710417DA, covers the MK-19 and M249 machine guns and the M9 pistol. TVT 10-111, PIN 710593DA, deals with the M16A2 rifle and M60 machine gun. Get the tapes from your Training and Audiovisual Support Center (TASC).

H-250 Handset O-ring

There's one replaceable part on the H-250 handset, the O-ring inside the connector. Order it with NSN 5330-00-905-6032.

HEMTT Wheel Bearing Wrench

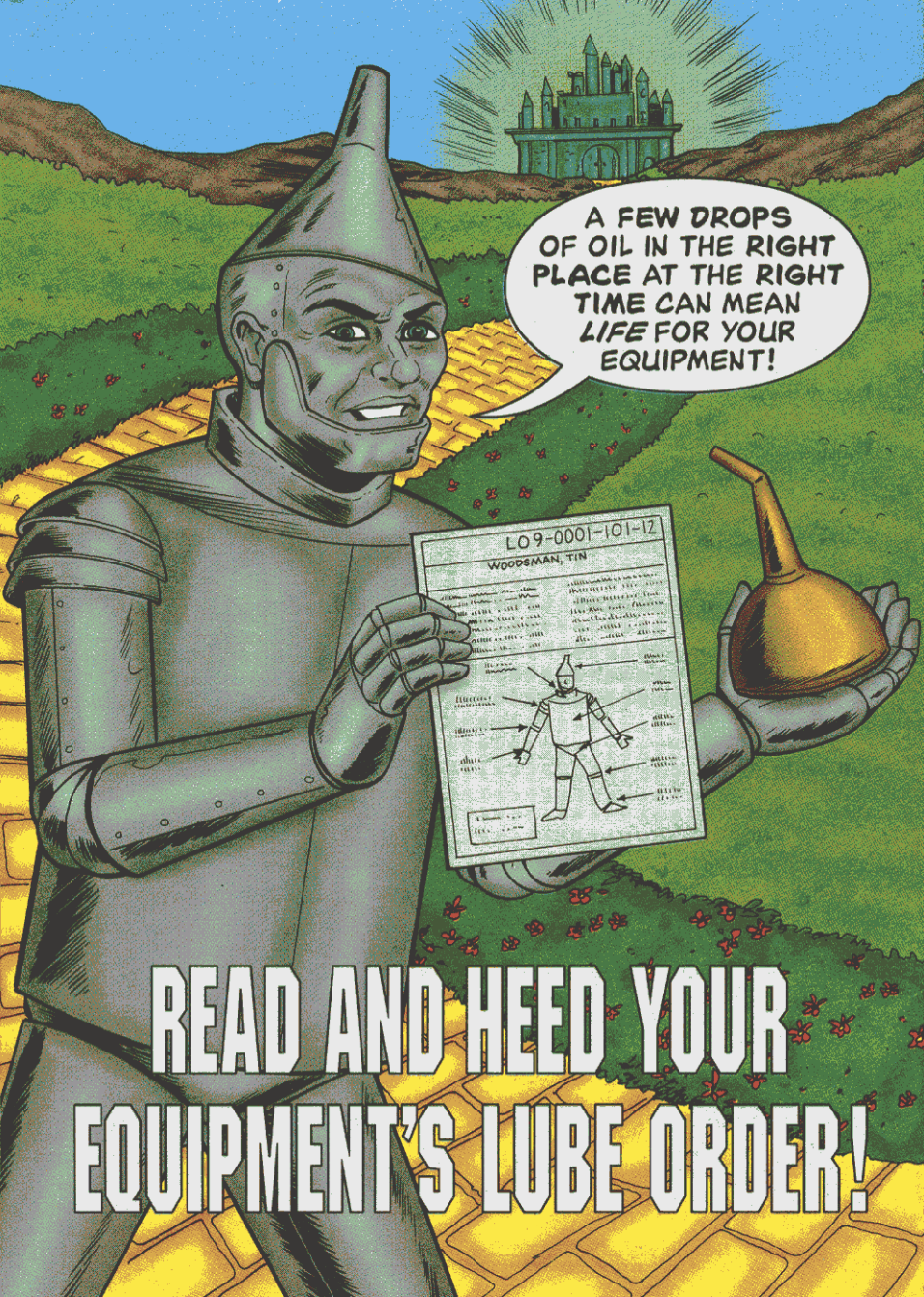
Hey, HEMTT owners! You don't have to local purchase that wheel bearing wrench we advertised on Page 61 of PS 534 (May 97). Instead, order NSN 5120-01-102-8295. While it carries a part number of 409G instead of 409GX, it is the same wrench.

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

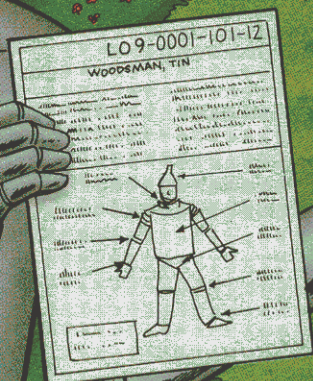
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PLACE AT THE RIGHT
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