

Issue 538

PS

September
1997

THE
PREVENTIVE
MAINTENANCE
MONTHLY

TB 43-PS-538



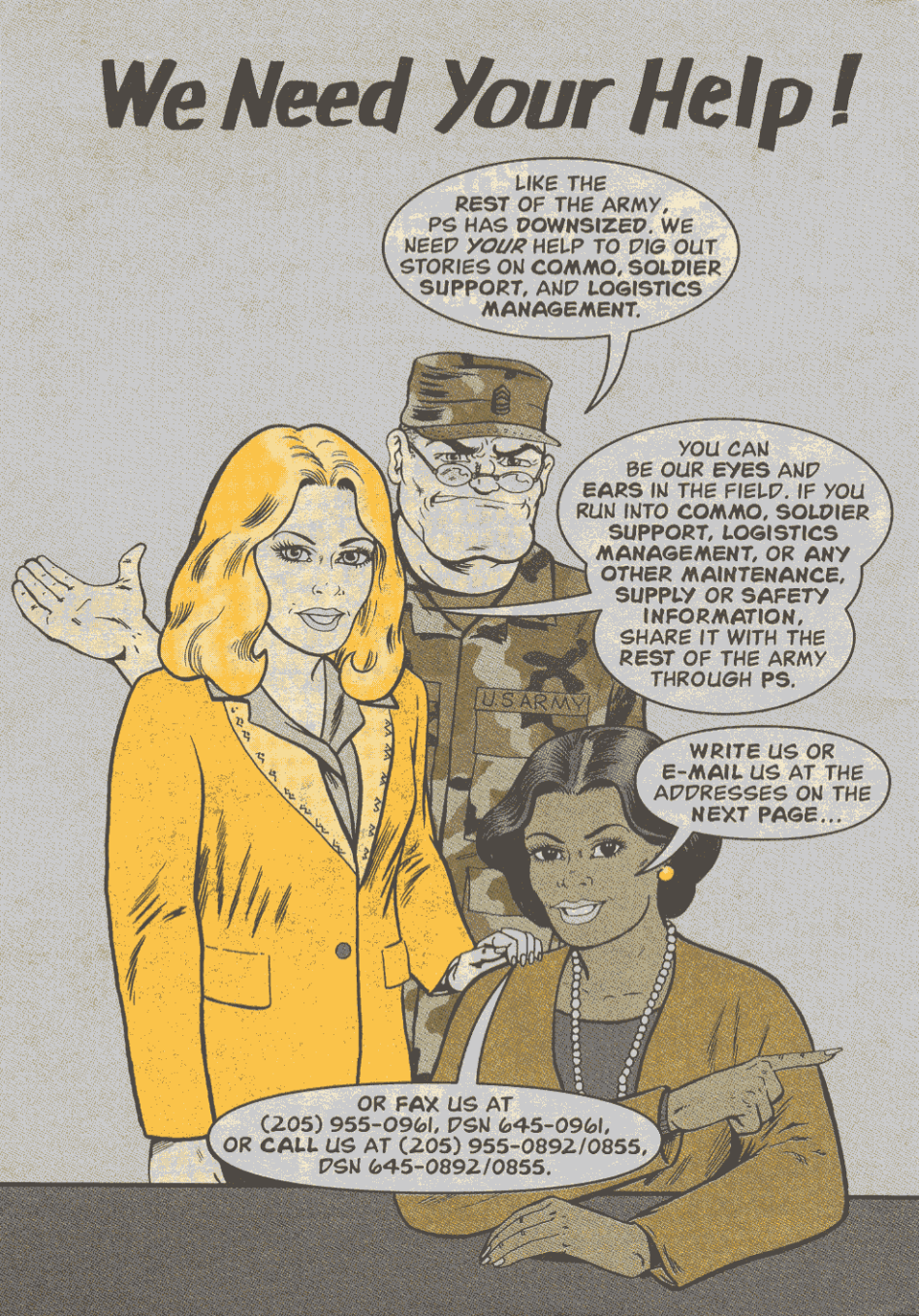
The Mark of

PM

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... See Page 27

We Need Your Help!



LIKE THE REST OF THE ARMY, PS HAS DOWNIZED. WE NEED YOUR HELP TO DIG OUT STORIES ON COMMO, SOLDIER SUPPORT, AND LOGISTICS MANAGEMENT.

YOU CAN BE OUR EYES AND EARS IN THE FIELD. IF YOU RUN INTO COMMO, SOLDIER SUPPORT, LOGISTICS MANAGEMENT, OR ANY OTHER MAINTENANCE, SUPPLY OR SAFETY INFORMATION, SHARE IT WITH THE REST OF THE ARMY THROUGH PS.

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THE
PREVENTIVE
MAINTENANCE
MONTHLY

TB 43-PS-538, 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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KEEP THAT HARDSHELL WORKING

Just a little PM goes a long way in keeping the cargo shell door's hatch in good working order.

Here are two important PM tips:

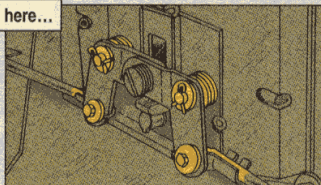
✓ Every 3,000 miles or six months, lube all hatch-latching mechanisms with PL-S, just as the lubrication order on Page G-5 of TM 9-2320-280-10 says.

The mechanisms do a lot more than just open and close. They also work like hinges so you can open the hatch from the front or the rear.

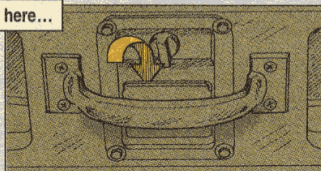
Use PL-S here...



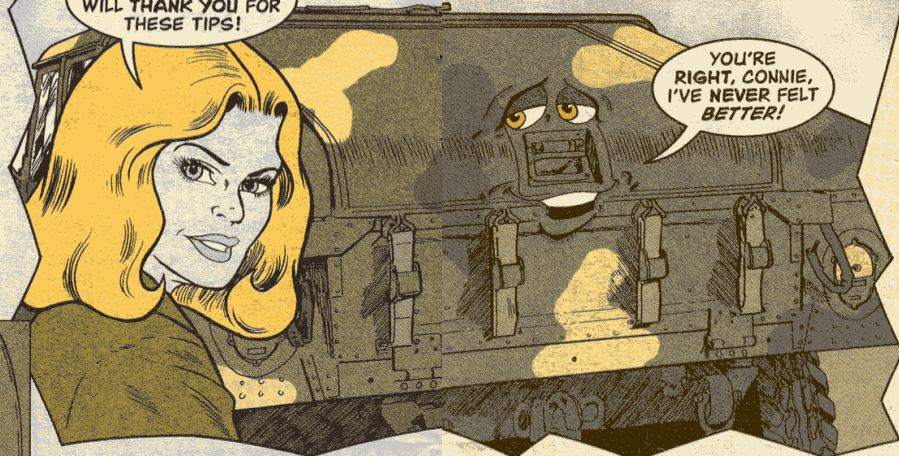
here...



here...



BELIEVE ME,
YOUR HARDSHELL
WILL THANK YOU FOR
THESE TIPS!

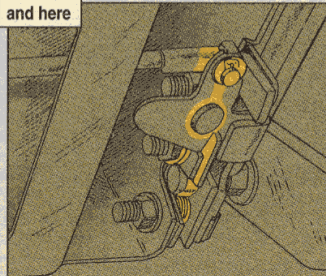


YOU'RE
RIGHT, CONNIE,
I'VE NEVER FELT
BETTER!

here...

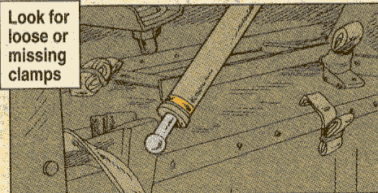


and here



✓ Eyeball the gas springs often to make sure the bushings and clamps are in place at each end of the tubes. The bushings keep dirt, bugs and other crud out of the rods. If the bushings are gouged or missing, let your mechanic know.

Look for
loose or
missing
clamps



If the clamps are loose, the bushings are soon going to be missing. Get your mechanic to tighten the clamps.

Check Starter Bolt Length

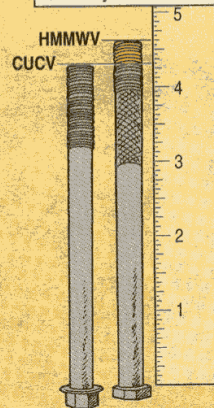
Don't fall victim to "any bolt will do" when installing starters on your HMMWV.

Sure, there are several bolts that come close to what you need—CUCV starter bolts come to mind—but only one will work.

That's NSN 5305-01-285-4923. It's 4 5/8 inches long—just the right length. Any longer and you can't get it tight. If you have doubts about the bolt you're about to use, get out the ruler and measure.

CUCV starter bolts are only 4 5/16 inches long. Not enough threads engage to hold the bolt (and the starter) in place.

Don't use CUCV starter bolts in your HMMWV



Protect Cooler Fins

The most common damage to the HMMWV's cooling system is bent radiator and oil cooler fins.

Fins get bent by feet, tools and other heavy stuff during PMCS and repair work.

Bent fins restrict or stop air flow through the cooler and radiator, leading to engine and transmission overheating.

What's really bad about this damage is that it's all preventable—with a fin protector that you can make yourself. Using a piece of $\frac{3}{4}$ -in plywood, cut like so:

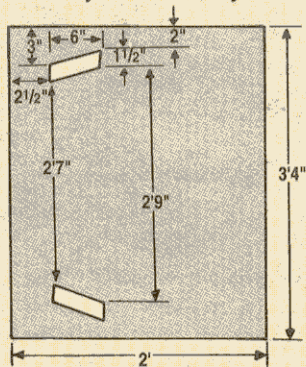
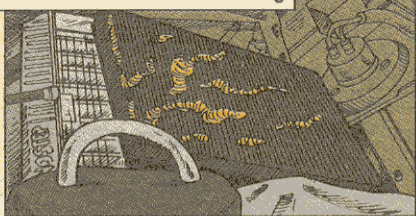
The measurements are approximate, so you may need to adjust a little for your HMMWV.

Round off the edges and paint the board to prevent splinters.

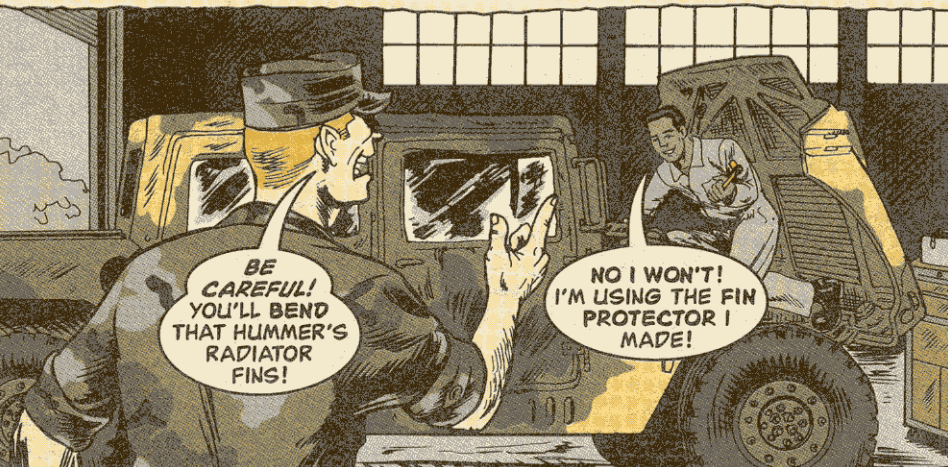
To use the board, remove both eye-hook seals and slip the cover over the two lifting rings. Lay it flat on the oil cooler frame.

After you've finished your PMCS or repair work, take the cover off, replace the eye-hook seals and check for bent fins. A fin-straightening tool, NSN 5120-00-157-2180, is in the Common shop sets.

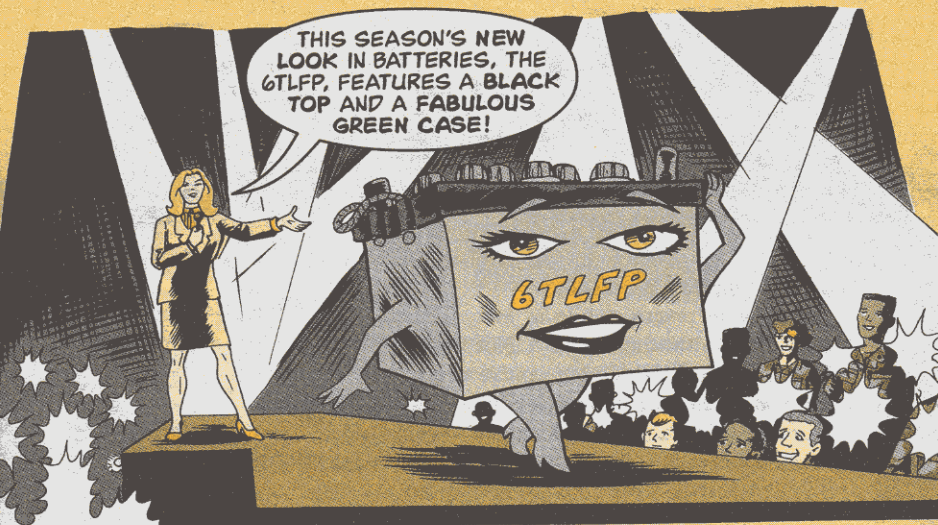
Bent fins can cause overheating



Measurements are approximate



New and Different!



The latest lead-acid battery for military vehicles, the 6TLFP, NSN 6140-01-431-1172, looks different and is maintained differently than the batteries it replaces.

The 6TLFP has a green case and a black top. It also comes overpacked with improved electrolyte, which is not available in the supply system.

When used and maintained correctly, the 6TLFP will provide power for three to five years.

So what's the right use and maintenance?

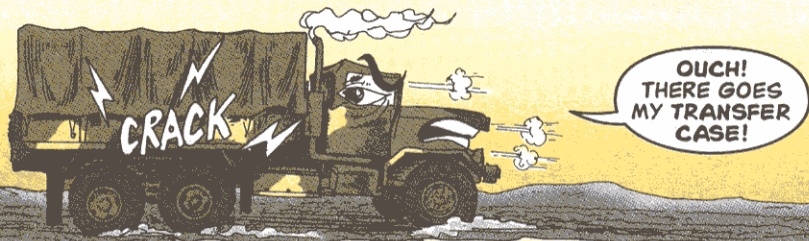
Use them as sets. In other words, it would be best if all your vehicle's batteries were 6TLFPs. Although the 6TLFP can be used with older-style batteries, you'll get better performance if you use them as sets.

If you must mix the new batteries with older ones, compare the specific gravity of the batteries **before** installing them.

If the difference in specific gravity between any batteries is more than 0.020, charge the weaker battery. Otherwise, the stronger battery does all the work and soon is no better than the weaker one.

If your unit does not have a battery charger, get your DS/GS unit to do the charging.

REVERSE SHIFT WARNING

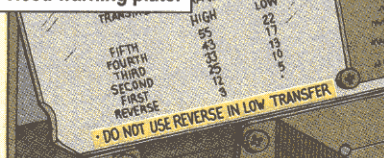


Drivers, when you hop in the cab of your M939/A1/A2 5-ton truck, take a look at the warning plate on the dash.

Operating in reverse while in low range will crack the transfer case. Not only is your truck NMC, but you've tied up some major bucks in repair bills.

So, for your truck's sake, operate in reverse only in high range.

Heed warning plate!



Right Start on -A2 Wheel Parts

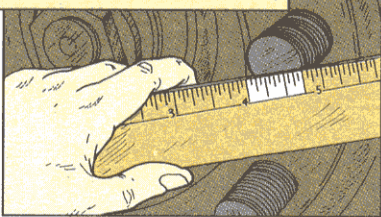
There are two different wheel assemblies for M939A2-series trucks, even though Fig 157 of TM 9-2320-272-20P shows only one.

M939A2 models serial-numbered 501 and above don't use the one shown. Instead, they use wheel, NSN 2530-01-303-0801. It has $\frac{3}{4}$ -in nuts and studs (Items 6 and 14) and a different O-ring. The wheel will work on older M939A2s and -A1s, but only if you replace **all** parts.

Here are the NSNs:

Item	NSN
O-ring	5330-01-314-7598
Stud	5306-01-314-6742
Nut	5310-01-102-2711

Newer M939A2s use $\frac{3}{4}$ -in studs



The wheel assembly shown in the TM fits early -A2s (serial numbers up to 500) and all M939A1s. It uses $\frac{5}{8}$ -in studs and nuts.

Not sure which you have? Measure the face of the stud.

PMCS Changes

HERE'S
MY IDEAL
IDLE RANGE,
650-750
RPM.

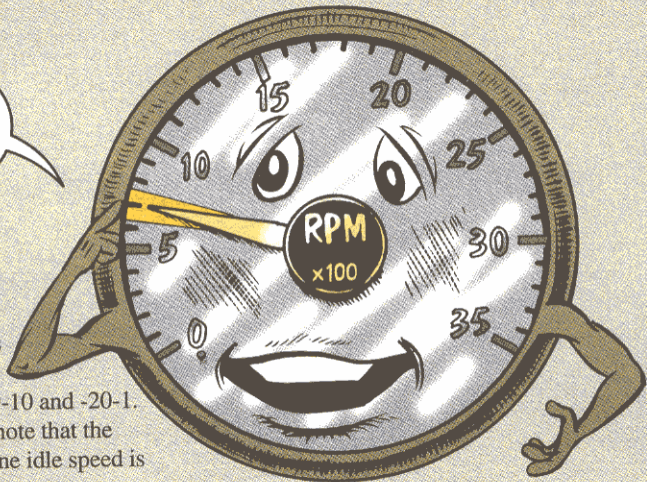
There have been a couple of changes to HEMTT PMCS in TMs 9-2320-279-10 and -20-1.

Drivers need to note that the recommended engine idle speed is now 650-750 rpm.

If your truck doesn't idle in that rpm range, get your mechanic on the job.

Checks and services made at idle, including those for the parking brakes, are affected by this change.

For mechanics, note that you no longer have to do a parking brake test as part of your PMCS. That requirement was removed by Change 2 (Apr 93) to the -20-1.



Fuel Bowl Protection

Many a plastic bowl on the HEMTT's water separator has been cracked or shattered by rocks, feet and other things.

There's a ready-made fuel bowl shield available that'll take care of that problem.

Use NSN 2540-01-383-2252 to get the shield only. If your vehicle has never had the shield, you'll need to drill three holes and buy some hardware.

Drill 3/8-in holes in the fender and mount the shield with three capscrews, NSN 5305-00-269-3211; three lock washers, NSN 5310-00-637-9541; and three nuts, NSN 5310-00-655-9544.










Shield prevents damage












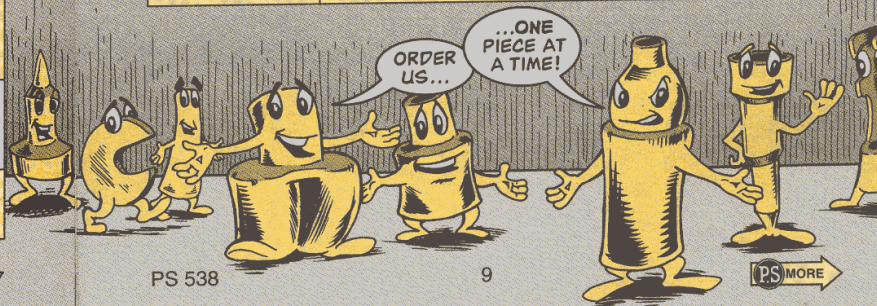
ONE PIECE AT A TIME

If you need a kit that has all the waterproof electrical connectors—also known as Packard connectors—used on tactical vehicles, stop searching. There's no such kit available.

You're gonna have to order 'em one piece at a time.

NSN	Description	Quantity
5999-00-057-2929	Adapter, connector, "Y"  1	1
5975-00-660-5962	Cable nipple (Male shell for 16 AWG wire)  2	100
5935-00-833-8561	Connector (Male shell for 14 AWG wire)  3	1
5935-00-399-6673	Connector (Ribbed male shell for 14 AWG wire)  4	1
2590-00-695-9076	Shell, headlight circuit (Male shell for 12 AWG wire)  5	1
5935-00-691-5591	Shell, electrical connector (Female shell for 16 AWG wire)  6	1
5935-00-572-9180	Connector (Female shell for 14 AWG wire)  7	1
5935-00-695-9077	Shell, electrical connector (Female shell for 12 AWG wire)  8	1
5999-00-926-3144	Electrical contact for 16 AWG wire  9	1

NSN	Description	Quantity
5999-00-057-2929	Electrical contact for 14 AWG wire  10	1
5999-00-925-6495	Electrical contact for 12 AWG wire  11	1
5940-00-846-5012	Ferrule, electrical connector, (Female solder terminal for 12, 14, and 16 AWG wire)  12	5
5940-00-399-6676	Terminal assembly (Female crimp terminal for 12, 14, and 16 AWG wire)  13	1
5310-00-656-0067	Slotted washer for 16 AWG wire  14	100
5310-00-833-8567	Slotted washer for 14 AWG wire  15	100
5310-00-595-7044	Slotted washer for 12 AWG wire  16	100
5310-00-298-8903	Flat washer (Terminal retainer for 12 AWG only)  17	100
5970-00-833-8562	Insulator (Plastic insert for 14, 16 AWG wire)  18	100



Before you use the connectors, though, here's how to make connecting a little easier:

★ Match the parts with the wire (12, 14, or 16 AWG wire).

★ Use washer, NSN 5310-00-298-8903, instead of plastic sleeve, NSN 5970-00-833-8562, when working with 12 AWG wire.

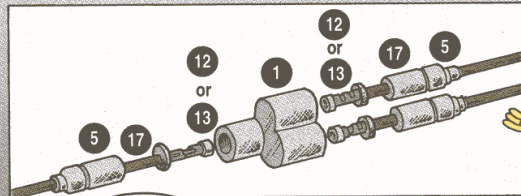
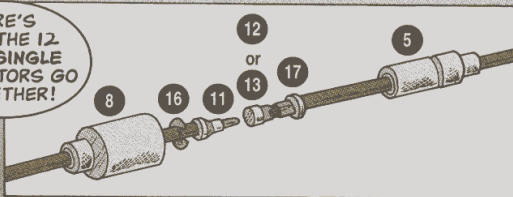
★ Use the two types of male shells (ribbed and plain) to identify the positive (+) and negative (-) hookups on polarized units. For instance, always use ribbed for positive and plain for negative—or vice-versa.

★ Never mash down on the rubber shells to get a good connection. You'll just mangle the female connector and make it tougher to get a connection.

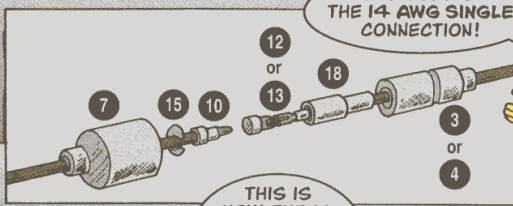
★ Distinguish between the two types of female connectors—crimp-on and solder. The connector with a solid sleeve gets crimped on the wire. With the other type, you bend the larger tabs around the insulated part of the wire and the smaller tabs around the bare wire. Then add a dab of solder.



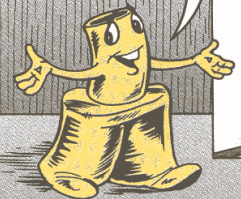
HERE'S HOW THE 12 AWG SINGLE CONNECTORS GO TOGETHER!



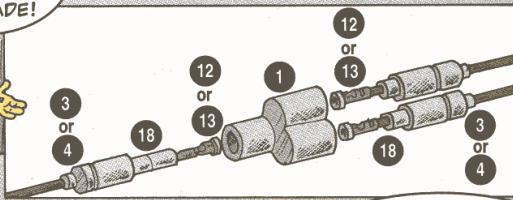
DOUBLE CONNECTORS FOR 12 AWG WIRE GO LIKE THIS!



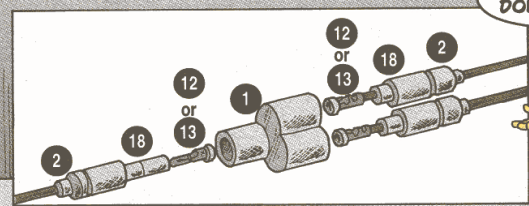
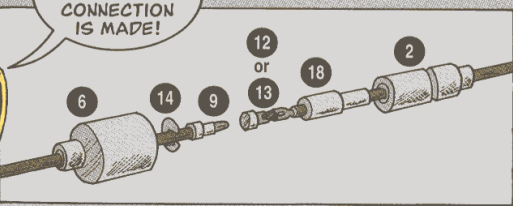
AND HERE'S THE 14 AWG SINGLE CONNECTION!



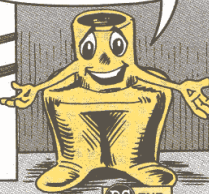
HERE'S HOW THE 14 AWG DOUBLE CONNECTORS ARE MADE!



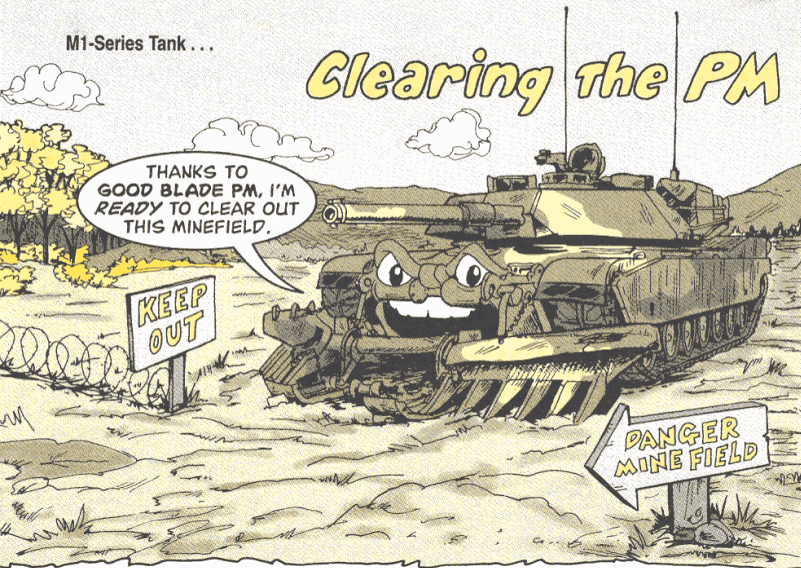
THIS IS HOW THE 16 AWG SINGLE CONNECTION IS MADE!



AND FINALLY, HERE'S THE 16 AWG DOUBLE CONNECTION.



Clearing the PM Minefield

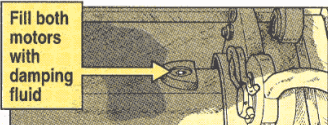


Operators, it takes regular doses of PM to keep your M1-series tank's mine clearing blade on the job. Follow the good words in TM 9-2590-509-10, then use these PM tips:

Motors

If the blades come crashing down when the electrical or manual blade release is used, too little oil or oil contamination could be the culprit.

So, use the electrical switch to raise and lower the blades once more. If they come crashing down again, have your



mechanic drain the old oil from each motor and replace it with four ounces of damping fluid, NSN 9150-00-607-0897.

Water Damage

Heavy rain or high pressure water seeps into the relay box if any of the cover assembly bolts are missing or if the cover seal is missing or damaged. Water buildup causes electrical shorts.

Your mechanic can replace a missing or damaged seal with NSN 5330-01-277-5647. New bolts come with NSN 5305-00-269-3235. NSN 5310-00-584-5272 gets new lock washers.

Lifting Belts

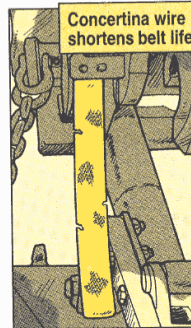
Take care of the mine clearing blade's lifting belts and they won't let you

down. That means using the right lifting techniques.

Always make sure you back the vehicle 8-10 feet before lifting the blades. That keeps the blades from hanging up on anything that'll snap the belts.

Never use the mine clearing blade to recover mired vehicles or to lift anything. Either the lifting belts will break or the motors will burn out.

Never drive the blade through concertina wire. It'll nick and cut the belts. When that happens, your mechanic has to replace them with new belts, NSN 4020-01-289-8249.



Depth Adjustment

When you're training with the mine clearing blade, keep the adjusting plate set at its shallowest depth—eight inches. That saves wear and tear on your tank's engine and the blade's teeth.

More Help

If you're having trouble mounting the mine clearing blade, or just need some refresher training, contact your local TASC video library and order TVT 5-21, Blade, Mine Clearing, M1 Tank Mounted. The PIN is 707727.

Thanks for the Support

Dear Editor,

The M1-series tank's travel lock, NSN 3040-01-074-8999, is also a great safety tool. We use it to prevent accidental movement whenever someone needs to work on the breach.

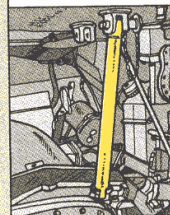
Unfortunately, when the main gun is raised so that you can work on top of the breach, the travel lock isn't long enough to use.

We've fixed this safety problem by making a new support. Our metal shop built an exact duplicate of the travel lock except that it measures 22¹/₈ inches long.

The new support is placed between the breach and the turret ceiling and held in place with the travel lock pins.

CW3 Gene Wolske
MATES, TXARNG
North Ft Hood, TX

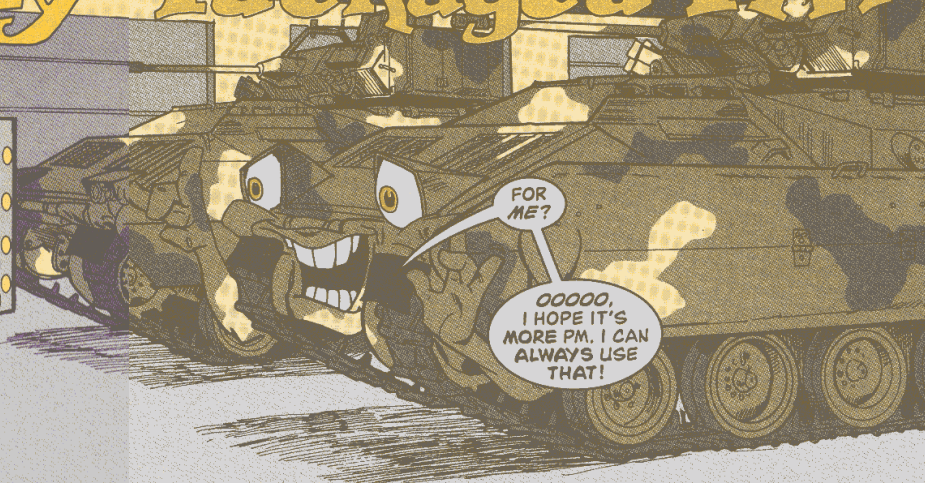
Homemade support keeps breach from moving



FROM THE DESK OF THE Editor

Now that's an idea we can support!

Neatly Packaged PM

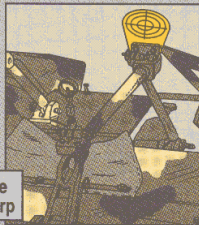


Commanders, when it comes to taking good care of your Bradley, nothing beats the info in the -10 TMs.

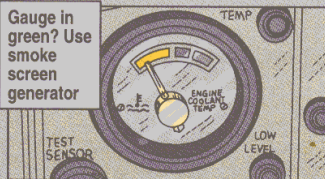
Of course, that doesn't have to be your only source. Here's a neatly packaged bundle of PM tips to keep your Bradley in good shape:

✓ **Commander's secondary sight.** Before covering your Bradley with a tarp, remember to fold down the plastic sight on the commander's secondary sight. If you forget, the sight will snap off.

Fold sight before covering with tarp

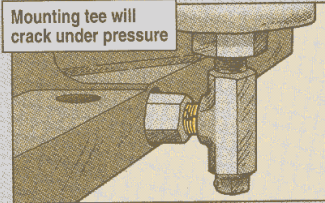


✓ **Smoke screen generator.** Make sure the engine is at normal operating temperature when using the smoke screen generator. Otherwise, unburned fuel pools up in the exhaust and leaks into the bilge. That's a fire hazard.



✓ **Transmission low oil pressure switch.** The mounting tee for this switch can't take much pressure without breaking or cracking. That includes a care-

lessly placed foot. Cracks will start an oil leak that could result in a fire.



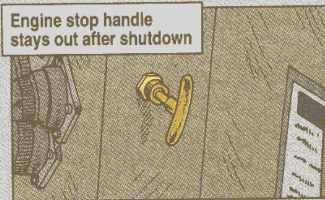
✓ **Batteries.** Out of sight, out of mind can leave you out of action when it comes to the turret emergency batteries. Discharged batteries mean no backup power.

Check the batteries for loose clamps and low electrolyte. Also, look for corrosion on terminals, and water and dirt on

top of the batteries and in the battery tray. Corrosion, dirt and water on top can short across connections and discharge the batteries.

✓ **Engine stop handle.** After you pull out the engine stop handle at shutdown, leave it out! If you push the handle back in, fuel can leak into the engine oil. Don't push the handle in until you're ready to start the vehicle again.

Engine stop handle stays out after shutdown



✓ **Fuel cap.** Bradleys with the old-style fuel cap tend to collect a lot of dirt and sand around the fuel filler neck. A torn fuel seal lets this gunk trickle into the fuel system.

Stop those problems by ordering the new-style fuel cap, NSN 5340-01-418-8526. Until the new cap arrives, fix the old, leaky one by cutting out a piece of rubber inner tube a little larger than the fuel cover. Clean out any dirt from around the filler neck, then place the homemade seal over the fuel cap and latch down the cover.

New fuel cap keeps out dirt and grit



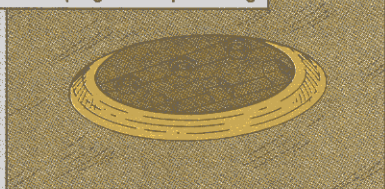
✓ **Sprockets.** Reverse final drive sprockets when they're worn down to the wear circles. You'll get more wear out of the sprockets and keep vehicles on the road.

If the sprocket wears too far past the circle, it hooks the track shoes and throws the track. When both sides of the sprocket are worn to the circle, replace the sprocket.

✓ **Hull drain plugs.** Make sure the hull drain plugs are closed right and tight before operation. Do it wrong and the plugs hang loose. Then they get knocked off by rocks and brush. You'll have to replace them before you can ford your Bradley.

Wipe each plug free of any mud or sand that might prevent it from seating properly. Make sure the plug's bar is placed firmly between the hull's two mending plates, then tighten the plug in place.

Loose plugs turn up missing

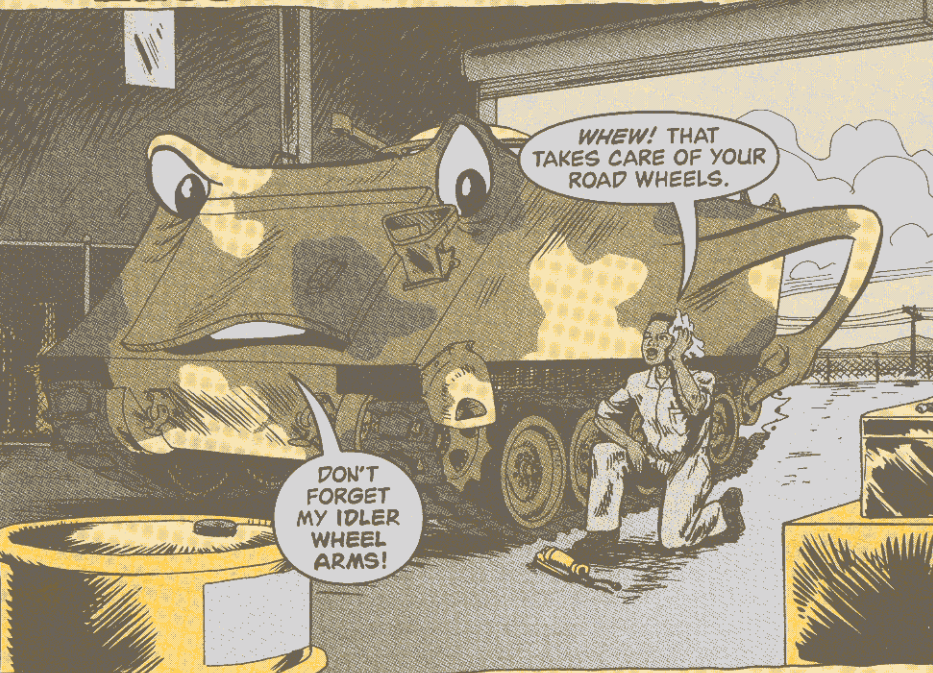


✓ **Lubing.** If it moves, lube it. That means hatch hinges, seat slides, cargo and driver hatch switches, ballistic shield door hinges, and the commander's hatch pop-up release pins. A squirt of CLP quarterly will keep those moving parts moving smoothly.

DON'T
YOU WAIT FOR A
SPECIAL OCCASION TO
TREAT YOUR BRADLEY
TO A PRESENT
OF PM.



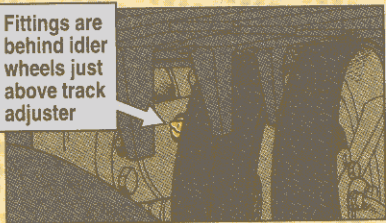
Lube the Idler Wheel Arms



Grewmen, what you can't see **can** hurt you, especially when it comes to lubing the idler wheel support arms on your M113-series carrier.

Support arms sit behind the idler wheels and are often covered with mud, so the grease fittings are easy to miss.

Fittings are behind idler wheels just above track adjuster

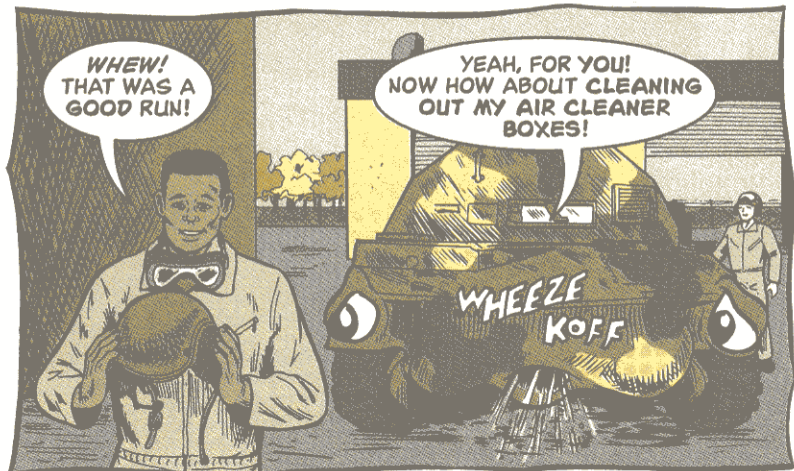


If you forget too often, though, the bearings dry out and the idler arm freezes. When the arm won't move, you can't adjust track tension. Your vehicle is NMC.

Lube both idler arms with GAA every 150 hours, 1,500 miles or semi-annually, whichever comes first. Clean the fittings with dry cleaning solvent first to keep dirt from mixing with the grease.

Put a dab of lube on the grease fittings immediately after washing or fording the vehicle, too. That'll keep the valves from rusting.

A Little Air Box PM

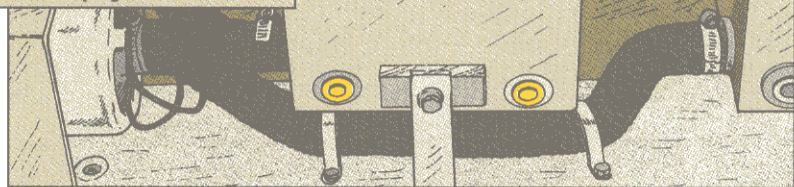


Crewmen, if you've been tooling around the countryside in your M109-series howitzer or M992-series ammo carrier, you can almost bet the air cleaner boxes need cleaning.

That's because dust and grit collect at the bottom of the boxes even under normal conditions. Air induction system exhaust fans just can't remove all the dust and grit.

Next time you pull a service, open the two plugs at the base of each airbox. Blow out all the dirt and sand with low-pressure air—no more than 30 psi should

Remove plugs and blow out dirt



do it. If the dirt and sand have hardened—which is what happens when water gets mixed in—you'll probably have to break up the mess with a knife or screwdriver.

Never try to clean the boxes by hosing them out with water. That leads to rust, which causes even more clogging problems.

Take No Back Seat to Shorts

HEY! MY
TURRET WON'T
MOVE!

CHECK
YOUR POWER
HARNES.

Shorts in the turret power harness at the rear of your M109A2-A5 howitzer usually can be traced directly to the commander's seat.

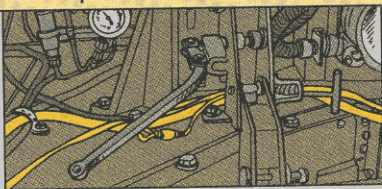
When the seat is folded down, the harness gets caught between the seat mount and the turret wall. When the insulation gets cut,

your howitzer ends up with a short—and no power to the turret.

Make sure the harness is out of the

way so it won't get caught. If it's not, let your mechanic know so he can reroute the harness to clear the seat mount.

Reroute power harness behind seat mount



M109A6 Paladin . . .

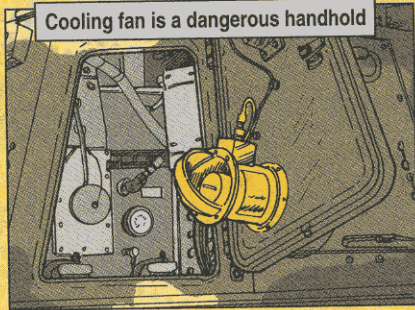
Break That Handhold Habit

Using the hydraulic compartment cooling fan as a handhold for climbing up on the M109A6 Paladin is a bad habit. Nip that bad habit in the bud—before it nips you.

The fan is temperature-controlled. In other words, you never know when it might come on. If your fingers are curled inside at the wrong time—**OUCH!**

So, unless you want to be known as “Stubby”, find another way to climb the Paladin—like up the tracks at the front corners of the howitzer.

Cooling fan is a dangerous handhold



Run Down Bad Relays

Dear Editor,

The most common cause of starter problems on our M578 recovery vehicles and M110A2 howitzers is a bad starter relay. Problem is, "they" say you have to put on a new starter relay to find out for sure.

No more. We've discovered a quick and easy way to check for bad relays when our vehicles won't start. Here's how:

Disconnect cable

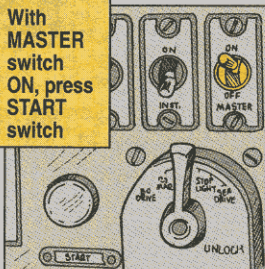


1. Disconnect the electrical cable from the starter relay.

2. Connect the A and C receptacles with a piece of wire.

3. Turn the MASTER switch to ON and push the START switch. Just

With MASTER switch ON, press START switch



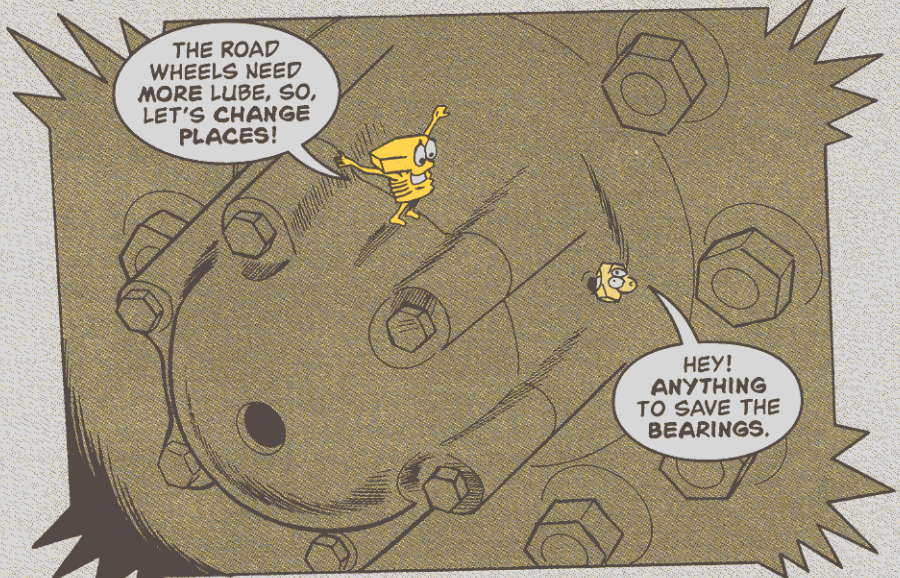
make sure no one's touching the wire.

If the engine starts, you know it's a bad relay. Replace it with NSN 5945-00-636-8778.

MATES 64
COARNG
Ft Carson, CO



A Switch in Time Saves...Bearings?



THE ROAD WHEELS NEED MORE LUBE, SO, LET'S CHANGE PLACES!



HEY! ANYTHING TO SAVE THE BEARINGS.

Roadwheel bearings burn out because they don't get enough lube during the pumping cycle. That's because the grease always takes the easy way out.

When the grease shows up at the relief valve, you naturally stop pumping. But the outside bearing still doesn't have enough lube on it, so it runs hot and eventually burns up.

You can beat burnout by pulling this quick switch:

1. Remove the pipe plug in the roadwheel hubcap.
2. Remove the relief valve and adapter bushing and reinstall them in the hubcap.
3. Put the pipe plug in the hole where the relief valve was and pump in more lube. When the lube comes out of the relief valve in the hubcap, you can be sure there's enough grease for both bearings.
4. Finally, move the pipe plug and relief valve back to their original places. That will protect the fitting from damage.



Reverse pipe plug...

...and relief valve...

...before pumping lube

Solar Powered PM

ASK A COMBAT VEHICLE CREWMAN OR MECHANIC WHAT'S THE HARDEST PART OF HIS JOB AND HE'LL USUALLY POINT TO THE BATTERIES.



UMPH! IT SEEMS LIKE I JUST REPLACED THESE BATTERIES!

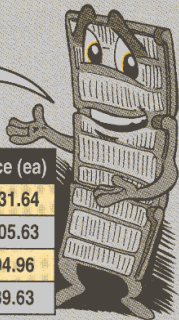
SOLAR ENERGY KEEPS MY BATTERIES AS GOOD AS NEW!

Even with top-notch PM, the best you can usually hope for is a year of battery service. So how would you like to extend battery life?

It's possible with a new battery conditioner and maintainer that's available for all vehicles with 12-, 24- or 36-volt batteries.

This battery conditioner/maintainer uses the sun to keep the battery's lead plates free of electron-slowing sulfates. Clean plates mean a fully charged battery with a longer life and less cost to your unit for battery replacement.

MY COST DEPENDS ON HOW MANY YOU ORDER!



Each unit comes with a solar panel, circuit box and 25 feet of wire.

You'll need three units for each M1-series tank or M2/M3-series Bradley. The HMMVV takes only one.

A frame, NSN 6130-01-396-4074, is available for the M1-series

Units	NSN 6130-01-	Price (ea)
1-99	392-8347	\$131.64
100-999	417-9073	\$105.63
1,000-4,999	417-9079	\$94.96
5,000+	417-9291	\$89.63

tank. The frame holds all three solar panels and helps protect them.

For installation instructions or more information, call Ft Hood's AMC-FAST office at DSN 737-7145 or (817) 287-7145. Or call TACOM at DSN 786-8751 or (810) 574-8751.

MLRS...

Carbon Cleanup Made Easy

Dear Editor,

Cleaning off the baked-on carbon that covers the back end of your MLRS after firing is a royal pain. It takes hours of work and lots of CLP and elbow grease to get the job done.

We make our job a lot easier by keeping a can of non-stick cooking spray handy. We give all problem spots a good spray before firing. That keeps the carbon from sticking and makes cleanup a breeze.

SSG Christopher Lenning
2/4th FA
Ft Sill, OK



I'M READY TO HELP!

FROM THE DESK OF THE Editor
You really cleaned up a sticky situation with that idea! Get a 22-oz can of non-stick cooking spray with NSN 8945-01-419-5579 or NSN 8945-01-419-4914. Both are local purchase items.

⊕ Passing the Accuracy Test ⊕

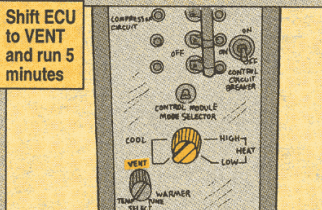
The integrated family of test equipment (IFTE) has very sophisticated components to do very sophisticated missile tests. Moisture and haste can make those components flunk the accuracy test. Help the IFTE to pass like this:

Dry Up Moisture

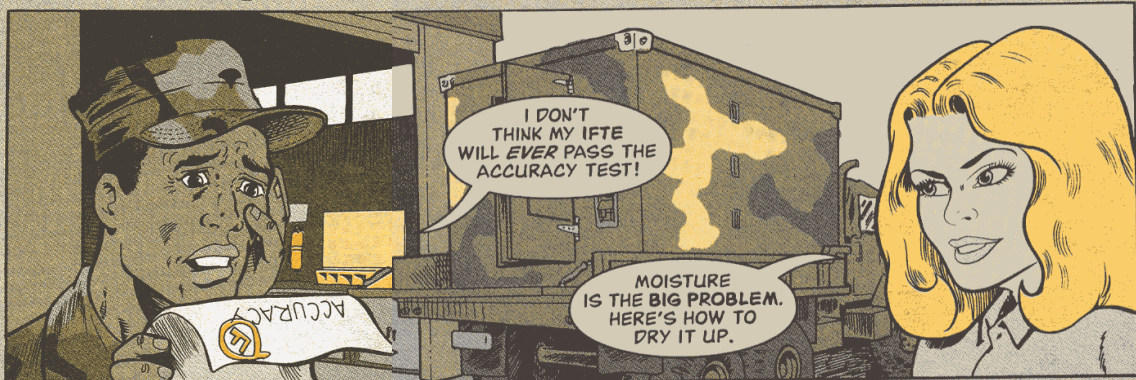
If it's humid or rainy, keep moisture out of the IFTE van where it can cause electrical shorts and corrosion. At startup, turn on POWER CIRCUIT BREAKER 3, shift the ECU to VENT, and let the ECU run for 45 minutes to blow out any moisture.



At shutdown, shift the ECU to VENT and let it run five minutes to get rid of any moisture that's collected.



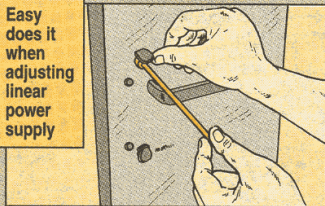
Any time you're operating where there's no NBC threat, open the door



vent. Moisture blows out instead of building up inside the van.

No Rush

Adjust the linear power supply s-l-o-w-l-y. Otherwise, the rapid voltage fluctuations can cause the IFTE to crowbar.

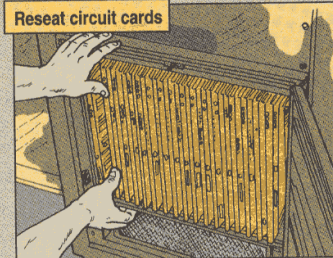


When using a weapon system test program set (TPS), run all the survey tests before actually testing equipment. And before running another TPS, do those survey tests again. That's the only way to ensure valid results. Otherwise,

a good component could flunk when the IFTE is really the problem.

Troubleshooting

If the IFTE fails to self-test after it's been moved or sat idle for weeks, reset the failed circuit cards. Movement can jar the cards loose.

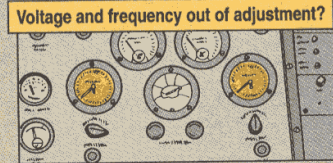


If that doesn't cure the problem, try reseating the interconnection device (ICD). If it's loose, you have a poor connection with the IFTE receiver. This

often happens because soldiers absent-mindedly lean on the ICD.



If the IFTE reboots while you're doing a test, check the voltage and frequency on the generator. Voltage spikes or too much or too little power can cause booting problems.



A Valve of a Different Color

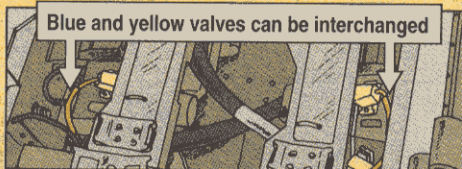
Dear Half-Mast,

The Avenger's standard vehicle-mounted launcher has a solenoid valve with a blue cable, NSN 4810-01-239-0972, and a solenoid valve with a yellow cable, NSN 4810-01-239-0973. In a pinch, is it OK to substitute one valve for the other?

SGT S.S.

Dear Sergeant S.S.,

There is an ample supply of **both** valves in the supply system. But in a pinch, the solenoid valves



can be used interchangeably. Just make sure the valve's routed to the correct connector on the launcher electronics assembly.

Half-Mast

Readers Quiz

HERE ARE SOME QUESTIONS ABOUT THE EQUIPMENT FEATURED IN THIS ISSUE OF PS. SEE IF YOU KNOW THE ANSWERS.

- WHEELED VEHICLES—What's new about the 6TLFP battery? (Page 5)
- COMBAT VEHICLES—How can you prevent damage to the relay box on an M1 tank's mine clearing blade? (Pages 12-13)
- MISSILES—How can you prevent moisture damage to the integrated family of test equipment (IFTE) when you're operating in humid or rainy weather? (Pages 24-25)
- SMALL ARMS—Where can you get a lock for the MK 19 machine gun rack? (Page 38)
- NBC—Where do you look for instructions on the M41 protection assessment test system (PATS)? (Page 43)
- COMMO—What is the usual result of a careless SINGARS cable hookup? (Page 48)
- AVIATION—Why is safety cable a better choice than lockwire? (Pages 52-53)
- SOLDIER SUPPORT—What are your choices when it comes to hearing protection? (Page 54)
- LOGISTICS MANAGEMENT—Who should you tell if you find an overpriced item on the AMDF? (Page 58)

The Mark of

PM

♪ OUT OF THE NIGHT, ♪
♪ WHEN THE FULL MOON IS BRIGHT...
COMES THE HORSEMAN KNOWN AS ZORRO!
THIS BOLD RENEGADE,
♪ CARVES PM WITH HIS BLADE... ♪
♪ IN THIS, OUR STORY OF ZORRO! ♪

FORT
MONTEREY

IT'S GOOD
TO BE BACK HOME
FROM SPAIN.

HOW ARE
THINGS HERE,
SERGEANT
GARZIA?

NOT SO GOOD, DON DIEGO.
SO MUCH HAS CHANGED SINCE
YOU LEFT! WE HAVE A NEW
ALCALDE, CAPTAIN
MENASTANO, AND
HE DOESN'T THINK
PREVENTIVE
MAINTENANCE
IS VERY
IMPORTANT.



I
CAN SEE
THAT.

A BROKEN HINGE
IS AN OPEN INVITATION
TO ENEMIES.



OUR GUNS
SHOULD INSTILL
FEAR IN THE
HEARTS OF OUR
ENEMIES.

THE ONLY
THING THESE GUNS
WILL INSTILL IN OUR
ENEMIES IS
LAUGHTER.

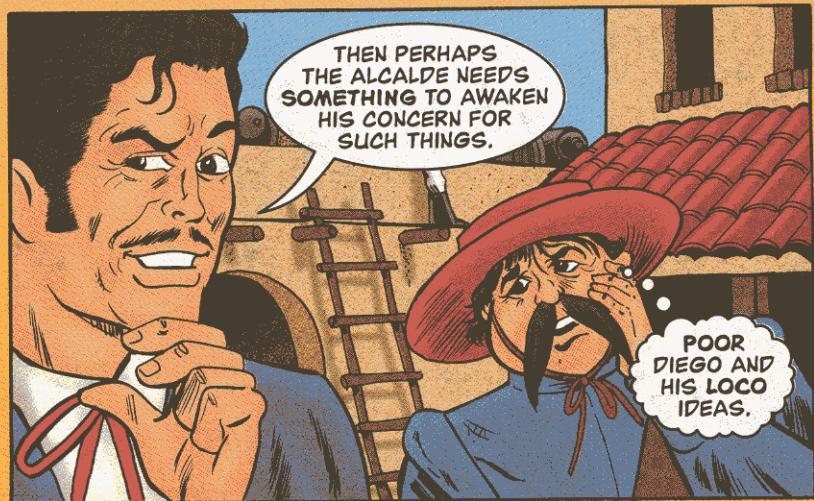


THIS SWORD
COULD CUT BUTTER,
BUT
NOT MUCH ELSE.



PERHAPS IF AN
ENEMY COMES
FOR BREAKFAST,
THEN WE'LL BE
PREPARED
FOR HIM.

THE ALCALDE
SAYS THAT THERE HAVE BEEN
NO ATTACKS IN YEARS, SO WHY
WASTE TIME WITH PM.



LATER...

GOOD EVENING, FATHER. DOING PM ON YOUR GUN, I SEE.

JUST AS I'VE ALWAYS TOLD YOU, SON. NOTHING BEATS PM.

BERNARDO, I'VE PULLED PM ON MY SADDLE, BRIDLE, BIT AND STIRRUPS.

DID YOU TAKE CARE OF MY WHIP AND MY SWORD?

THANK YOU, GOOD FRIEND! YOUR ATTENTION TO THE IMPORTANT DETAILS OF PM WILL HELP ME TEACH THE EVIL ALCALDE A LESSON.

BEWARE MENASTANO... EL ZORRO WILL MAKE YOU REMEMBER THE IMPORTANCE OF PM!

SWOOSH
SWOOSH
SWOOSH

LATER THAT NIGHT...

MY MISSION IS ALMOST COMPLETED. I'VE CARVED "PM" ON ALL THE AREAS OF WEAKNESS I SHOWED SERGEANT GARZIA EARLIER.

CAPTAIN MENASTANO! THERE IS AN INTRUDER!

WHO DARES TO DISTURB MY SLEEP?!

YOU MAY CALL ME... EL ZORRO!

YOU NEED TO LEARN A LESSON, EL ZORRO!

WHAT? CORROSION MUST'VE WEAKENED THE BLADE!

HMMM... SEEMS LIKE I'M NOT THE ONE WHO NEEDS TO LEARN A LESSON.

SNAP

HSWOOMS
HSWOOMS
HSWOOMS



GET HIM, YOU FOOLS!

SHREEEEEEEE

AHA! NOW YOU SHALL FEEL THE HOT LEAD OF MY PISTOLA!



AY, CARAMBA!

SPLASH

TAKE THIS, EL ZORRO!

HUH? DRAT!

PLOP

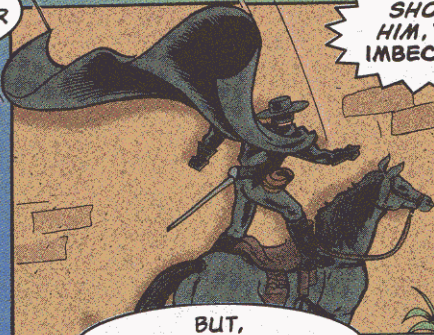


IT IS UNFORTUNATE FOR YOU THAT YOU FORGOT ABOUT PM, ALCALDE!


SWOOSH



GOOD NIGHT, ALCALDE!
I LOOK FORWARD TO OUR NEXT MEETING!



SHOOT HIM, YOU IMBECILES!




BUT, ALCALDE, THE CANNONS WON'T FIRE!




AND OUR RIFLES ARE FALLING APART!

LET'S GO, TORNADO!



SENOR ALCALDE, THE GATES FELL DOWN!
THE LOOSE BOLTS COULD NO LONGER HOLD THEM!



EL ZORRO HAS ESCAPED THIS TIME, BUT FORT MONTEREY WILL BE PREPARED FOR HIS NEXT VISIT!

A FEW
DAYS
LATER...

IT IS REMARKABLE, DON
DIEGO, BUT THE ALCALDE HAS
CHANGED HIS PRIORITIES OVERNIGHT!
PREVENTIVE MAINTENANCE IS
NOW AT THE TOP OF
HIS LIST.

TRULY
AMAZING, SERGEANT
GARZIA.

FORT
MONTEREY

AND ALL IT TOOK
WAS ONE SHORT VISIT
FROM A 'FOX'!

ZORRO! THE FOX,
SO CUNNING AND FREE...
ZORRO! WHOSE M,
COMES AFTER A P!
ZORRO...ZORRO...ZORRO

Dirty Magazines



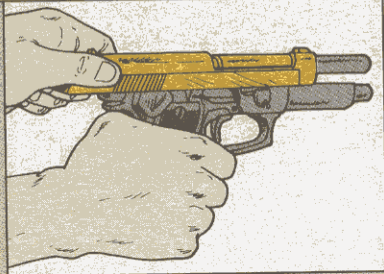
A magazine for the M9 pistol that won't feed reliably is a magazine that needs to be replaced.

One simple test weeds out bad magazines. Load the magazine with dummy rounds and manually cycle the pistol

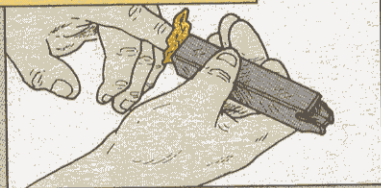
until all rounds are ejected. If even one round won't feed, pitch the magazine.

Keeping magazines clean helps their springs last longer. When you return from firing, take each magazine apart

Round failed to feed? Replace magazine



Cleaning extends spring life



and wipe the insides and spring with a clean cloth.

Do not store the magazines loaded. The springs will lose their spring.

Subtract Extractor Problems



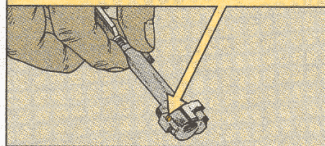
THE ADDITION OF A LITTLE PM AND NEW PARTS CAN SUBTRACT EXTRACTOR PROBLEMS FROM YOUR M249 MACHINE GUN.



In the Field

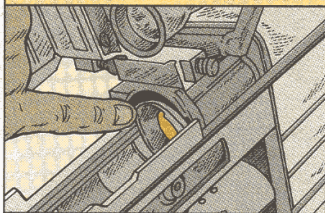
Most extractor problems in the field can be handled easily. Here's how:

Any time the extractor pin is sticking out, replace the extractor, extractor pin, extractor spring, and guide pin.

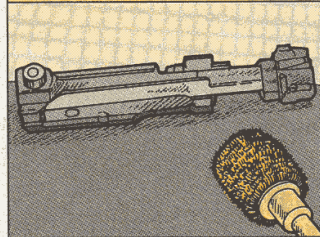


Replace all these parts whenever you disassemble the bolt to prevent future extractor problems.

Look for a stuck cartridge case in the chamber. Remove a stuck case with a cleaning rod like it says in TM 9-1005-201-10.

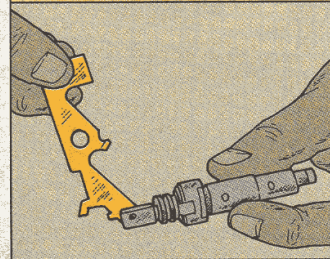


Check the chamber, bolt, and slide assembly for carbon buildup. Clean them if necessary with your chamber brush and CLP.



Wipe off the CLP when the carbon's gone or you'll get more carbon fast.

Look for carbon in the gas cylinder and gas regulator. Clean out carbon with your scraper.



If that doesn't solve the problem, the extractor probably needs replacing.

Extracting and Locking

Dear Half-Mast,

Our TM 9-1010-230-10 says not to use the MK19's extracting tool on a stuck M383 HE round. But is it safe to use the tool on M430 rounds, since they're also high explosive?

Also, how do we get the special lock you need for the MK 19 storage rack?

SFC J.W.

Dear Sergeant J.W.,

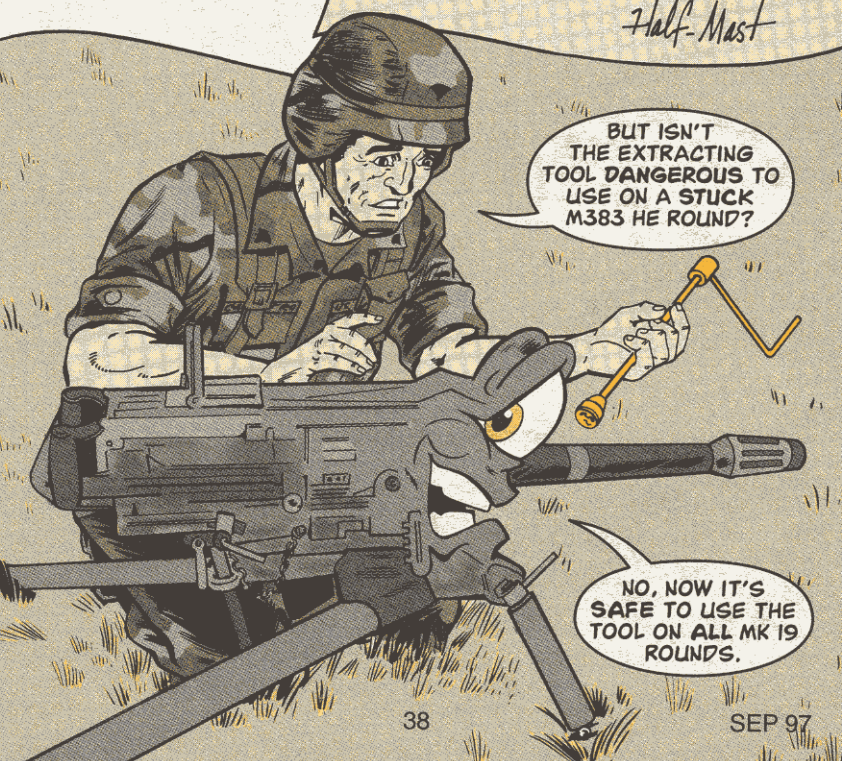
It's safe to use the extracting tool on all MK 19 rounds. TM 9-1010-230-10 (Nov 96) deleted the HE round warning. There is no NSN for the lock. You must order it directly from:

American Lock Co
ATTN: Dave Anderson
3400 W. Exchange Rd
Crete, IL 60417

Or call (800) 323-4568.

Ask for the 5202-series KD (keyed difference) lock with a 3-in shackle and key retention.

Half-Mast



BUT ISN'T THE EXTRACTING TOOL DANGEROUS TO USE ON A STUCK M383 HE ROUND?

NO, NOW IT'S SAFE TO USE THE TOOL ON ALL MK 19 ROUNDS.

Sight Right with Sight Tool

YOU WON'T NEED THOSE GUYS ANYMORE.

If your unit is still using a nail or pen to adjust the front sight on the M16 rifle, get with the program, armorers.

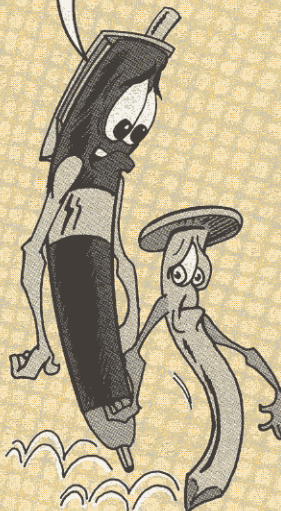
There has been a tool available for some time that fits the sight like a glove fits your hand. The tool makes adjusting the sight a snap, and it doesn't hollow out the sight notches like a nail does.

Best of all, you don't have to order it and wait six months for it to come. Support fabricates it for you.

Plans for the M16A1 tool are on Page E-1 in TM 9-1005-249-23&P. For the M16A2 tool, see Page E-2 in TM 9-1005-319-23&P.

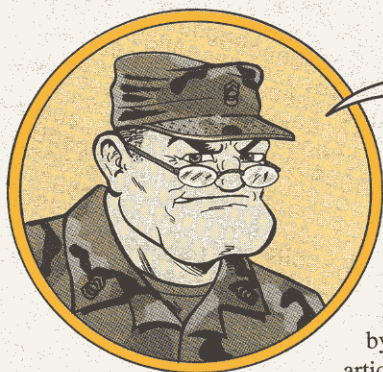
Keep the tools in the arms room and wait until you get to the field before you hand them out. That will help the tools stick around longer.

C'MON, WE'D BETTER BE GOING.



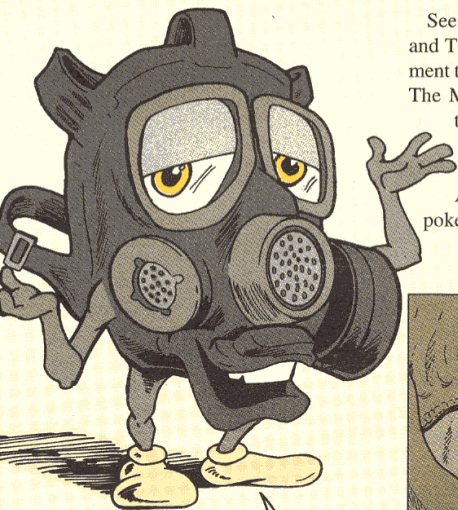
Armorer's Tool Kit

IF YOU NEED HELP INVENTORYING THE SMALL ARMS REPAIRMAN'S TOOL KIT, CHECK OUT PAGES 27-34 OF PS 466, SEPTEMBER 91.



SC 5180-95-CL-A07, which covers the kit, has had only two changes since then. Hand file set, NSN 5110-00-204-2685, and drive pin punch set, NSN 5120-00-883-3003, can now be ordered only as sets, not by individual components. Need a copy of the article? Contact Half-Mast.

A Few Things to Remember



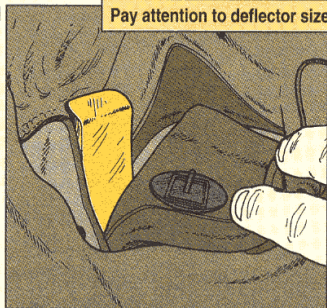
HERE ARE A FEW THINGS THAT NBC NCOs MUST REMEMBER ABOUT M40 AND M42 MASKS...

Except for the waterproof bag and cleaning supplies, nothing from the old M17 or M24/M25A1 masks can be used on the M40 or M42 masks. So there's no point in saving any other stuff from your old masks. Turn it in.

Just because a soldier wore a medium M17 mask does not mean he or she will wear a medium M40. Check and make sure.

See the -20&P TMs for the masks and TC 3-41 for the protective assessment test system (PATS) for sizing info. The M40/M42 air deflector comes in two sizes, M-L and S. The size is marked on the bottom of the deflector. Pay attention to size. A large deflector in a small mask pokes the wearer in the face. A small deflector in a large mask lets the mask fog up.

Pay attention to deflector size



The M40 and M42 masks feel differently than the old masks. Air circulates inside around the lenses in the new masks to keep them from fogging. Make sure everyone in your unit knows this so they don't think something's wrong when they feel cool air around their foreheads.

Optical Inserts

Masks cannot be worn with regular glasses or contacts. Soldiers must get optical inserts. They're free from your base optician.

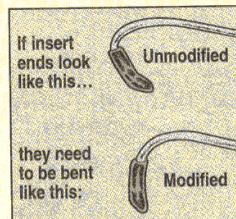
Some inserts may need to be modified slightly.

Use ordinary pliers to bend the rubber-coated ends of the retainer outward.

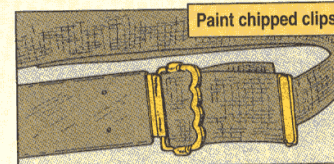
When you install the inserts, the retainer ends should touch the mask eyewall.

Harness Clips

Keep an eye on the harness clips. With use, paint chips off the clips. No



paint leads to corrosion. Touch up chipped clips with black lacquer, NSN 8010-00-085-0559.



Hearing Help

If soldiers in your unit have trouble hearing each other while wearing masks, order amplifiers, NSN 5895-01-381-9012. Made specially for the M40 mask, the amplifiers can project sound quite a distance.

M17-Series Decon . . .

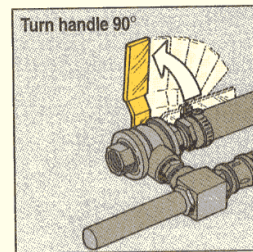
Halfway Is Better


Dear Editor,

Page 2-6 in TM 3-4230-228-10 says to push the handle of the injector control valve of the M17 decon all the way to the left to shut off the valve.

That lets hot water pour out of the opening in the valve. Someone could be burned. But if you pull up the handle halfway so it sticks straight up, the valve is completely shut off.

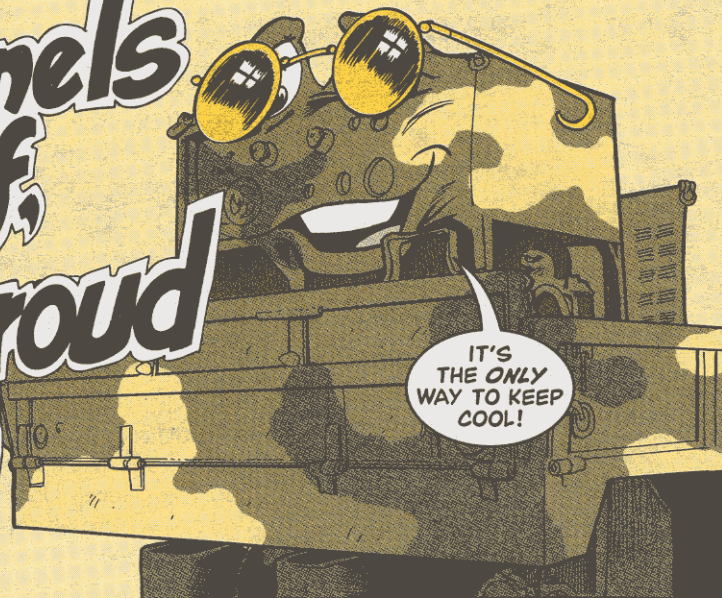
SSG Abraham Lincoln Kyle
KSARNG
Hiawatha, KS



FROM THE DESK OF THE Editor 

You have a handle on that safety problem. The next change to the TM will show the valve handle in the OFF position you suggest.

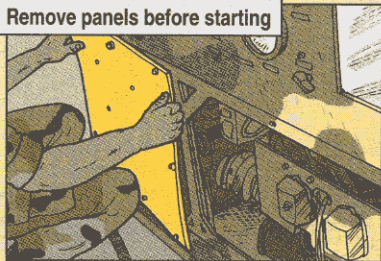
Panels Off, Shroud On



The M12A1 decon's 20-hp engine generates lots of heat when it's running. To keep it cool, just remember "panels off, shroud on."

If the side panels are left on during operation, heat has nowhere to go. It builds until the engine overheats, which can lead to warped pistons and a major engine rebuild. Before you start the M12, take off all five panels.

Remove panels before starting

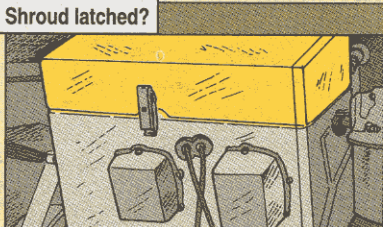


But keep the engine shroud in place. It directs the cool air around the engine for the best heat relief.

Make sure the shroud is latched in place before start-up.

The shroud won't do much good, though, if it doesn't fit. And it won't fit unless it's been modified. The shroud wasn't designed for the M12. Support can make it fit with the info on Page 2-77 in TM 3-4230-209-30&P (Sep 86).

Shroud latched?



This and That About PATS

HERE ARE A FEW THINGS NBC NCOs NEED TO KNOW TO KEEP THEIR NEW M41 PATS TESTING TRUE...

TC 3-41 explains how PATS works and how to use it. If the training circular didn't come with your PATS, have your pubs clerk order it.

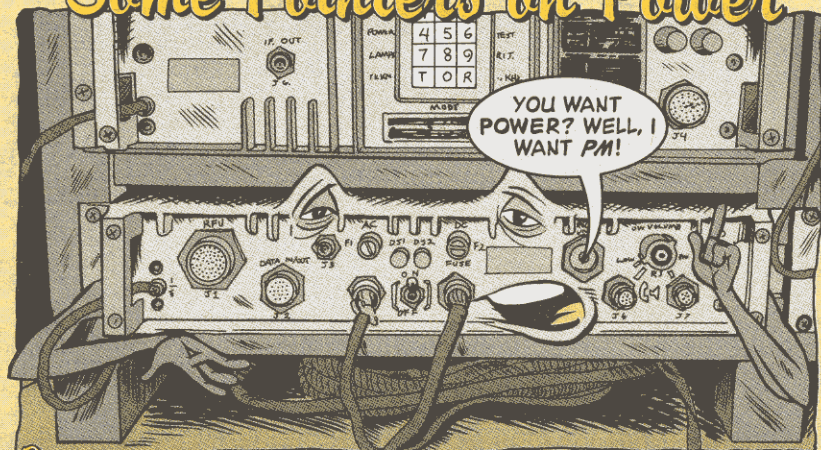
Use these NSNs to order parts and supplies:

Item	NSN
Battery, BA-5874/U	6135-01-090-5364
Drink valve retaining lever	5340-01-378-2883
Plastic case	6625-01-377-5875
Carrying case	6625-01-377-5874
HEPA filters	4240-01-340-3715
Storage cap	5340-01-378-2291
Alcohol wick kit	9390-01-379-6385
115/230-volt adapter	6130-01-379-7122
Alcohol capsule	4240-01-382-3584
Twin tube assembly	4240-01-382-3652
Drink tube adapter	4240-01-382-3558
M17 drink tube extension	4240-01-382-3635
Alcohol cartridge	4240-01-382-3519
M40/M42 drink tube extension	4240-01-382-3614
Line cord/AC adapter	6150-01-111-1717
Alcohol	6810-01-382-2904



PATS needs **calibrating** every 18 months or 500 hours of use. Use the REPORT OF EXCESS procedure in Chap 7 of AR 725-50 to turn in the PATS for calibration. Be sure to turn in all the accessories, except the battery, alcohol, and video tape. The accessories will be needed for calibration.

Some Pointers on Power

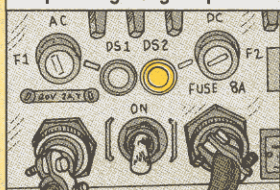


Operators, has this ever happened to you? You turn ON the S1 power switch on your AN/GRC-226 radio's AM-7345 amplifier, but the DS2 power lamp doesn't light up. That tells you the amp is not getting DC power.

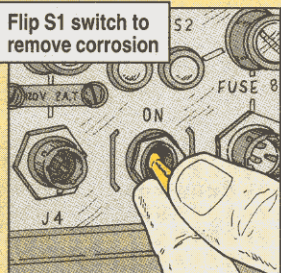
Before you call in unit maintenance, try these things to get your radio back on line:

1. Unhook the AC and DC power cables from the amp before you do anything else. You don't want to take the chance of getting shocked or burned.
2. Flip the S1 switch ON and OFF several times.

DS2 power lamp doesn't light? Amp's not getting DC power



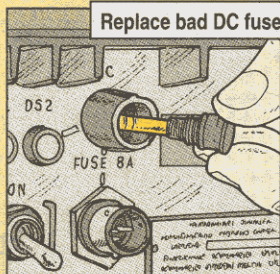
Flip S1 switch to remove corrosion



This removes corrosion that can build up in the switch. Corrosion makes for a bad connection.

3. Look at the DC fuse. If it's burned, discolored or the metal is torn, replace it with NSN 5920-01-317-8432.

Replace bad DC fuse



It's also possible the DC power cable is damaged. Ask unit maintenance to test it with a multimeter. They should get 28 Vdc, ± 5 Vdc with the vehicle running. Anything else—replace the cable.

Temporary Power

What do you do if you need immediate power for your mobile subscriber equipment (MSE), but your trailer-mounted generator is down for service or being prepared for startup?

At times like these it's OK to temporarily power your MSE equipment with your HMMWV. Just don't do it for more than 45 minutes at a stretch or you'll risk burning out the truck's voltage regulator.

If the voltage regulator goes out, you'll have no charging system for the HMMWV. Then, your equipment will start drawing power from the shelter's backup batteries. Those batteries provide only about 10 minutes of power—then your equipment crashes and you lose programmable data.


Remember, use the HMMWV for no more than 45 minutes to power your equipment. That should be enough time for a crew to perform basic services on the trailer-mounted generator or to prepare it for startup.



45 MINUTES
IS MY TEMPORARY
POWER LIMIT!

Generators . . .

Maintenance by Monitoring

	H ₂ O temp	Oil Temp	Volts	Amps	Hertz	% Load	Fuel
100	<div><p>Dear Editor, <i>Generators need to be monitored when they're being used so that you can note deviations from normal readings and anticipate equipment failure. To help monitor generators, I made a reading sheet to keep a running history of each generator's performance. It works!</i></p><p>SFC Steven D. McGuffey 309th Trans Ft Story, VA</p></div> <div><p>FROM THE DESK OF THE Editor </p><p><i>Anticipating and preparing for trouble is PM at its best. Use your reading sheet to supplement DA Form 2404, Equipment Inspection and Maintenance Worksheet. Monitoring will also help reduce a common cause of generator failure...running out of fuel!</i></p></div>						
200							
300							
400							
500							
600							
700							
800							
900							

Facts on Fax PM



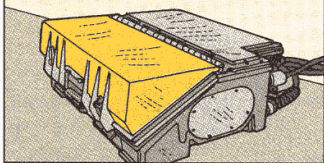
Your AN/UXC-7 facsimile will send images from one user to another as fast as lightning unless you've snuffed it with poor PM.

To make sure you always have clear images, give it this PM treatment:

Use the Cover

When the fax is mounted in a vehicle, keep the cover on when you're not using it. Otherwise, dust and dirt will clog moving parts.

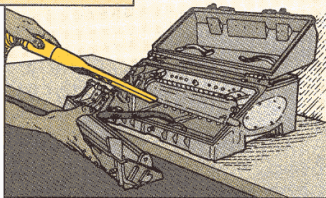
Use cover to protect fax



PS 538

When you get back from the field, or any time you see dirt in it, vacuum out the fax.

Vacuum out dirt



Forget about oiling or lubing the fax. It doesn't need it, and lube will just gum up parts and make 'em stick together.

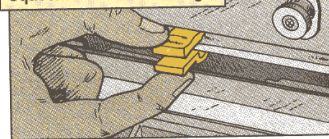
Margin Release

When you reset the margin, squeeze the margin release tab. If you don't, it

46

wears the teeth on the drive belt and causes belt slippage.

Squeeze tab to reset margin



Keep an eye on the power impulse ribbon. If it's crimped or broken, report it.

If you still can't get an image on your fax, have your repairman look at the FM printed circuit board on the modem. If the first and fourth ATI attenuator switches are vertical, your fax is set up for civilian circuits only. All four switches must be set horizontally for military circuits. DS sets them.

PS 538

SEP 97

Movement

Movement can be hazardous to your fax's health. A loose carriage assembly and end-of-message assembly will move around and get damaged. Slide and lock the START and STOP handles before moving the fax. That'll keep the carriages fastened in place.

Here's how:

- Squeeze the tabs on the START handle and slide it to the far right. Make sure you squeeze the tabs or you'll strip the drive belt.
- Slide the STOP handle over beside the START.
- Pull the LOCK knob out and down. Now you're locked and ready to move out.

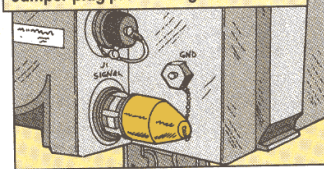
Lock in place



Cables

When your fax's signal cable is disconnected, always put the jumper plug on the signal connector. It protects the connector from moisture, dirt and sand.

Jumper plug protects signal connector



47

SEP 97

MAKE THE CONNECTION

Some things need repeating.

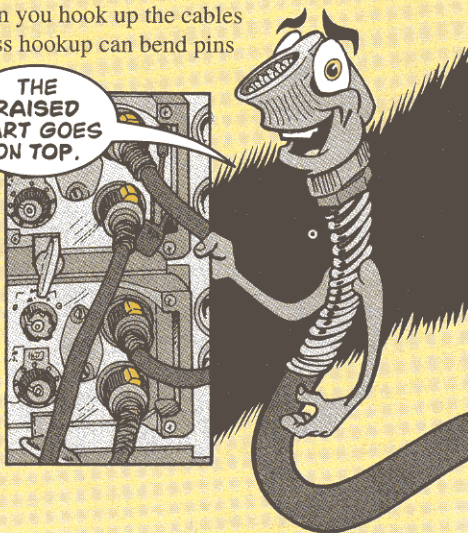
One of those is to take extra care when you hook up the cables on your SINGGARS radios. One careless hookup can bend pins or strip the keys out of a connector.

When you hook up the W4 cable or the H-250 handset connector, do it like this:

1. Depending on the type of cable connector you have, line up the flat or raised part of the cable connector with the top of the receptacle.
2. Push in the connector firmly and evenly.
3. Turn it to the right until it locks.

Make the connections gently. Slamming them together damages or breaks pins and costs you your commo in the bargain.

THE
RAISED
PART GOES
ON TOP.

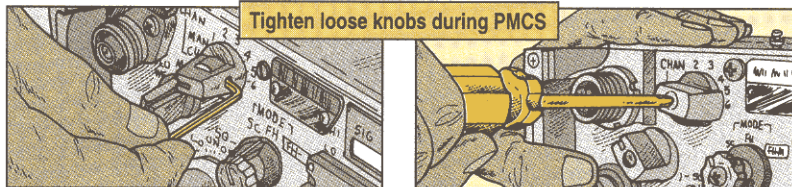


Tighten All Knobs

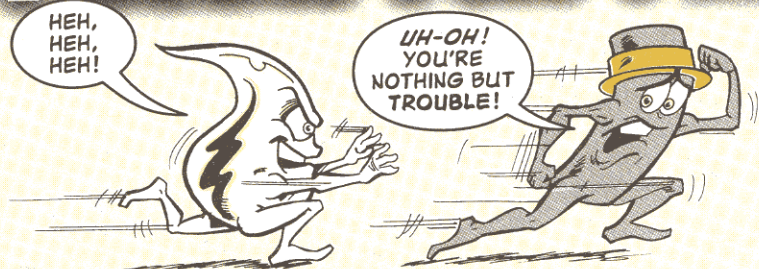
When you pull PMCS on the receiver-transmitter of your SINGGARS radio, make sure all the front panel knobs are tight.

Everyday use loosens the knobs. Loose knobs make communications difficult, because you can't adjust things like frequency or volume. Worse yet, knobs fall off and disappear, along with your communications.

Use the key set in your TK-101 tool kit or a screwdriver to tighten the fasteners on loose panel knobs. If a fastener is missing or damaged, your repairer will have to replace the entire knob. The fasteners alone are not available in the system. TM 11-5820-890-20P has replacement knobs.



PYLON PIN PM



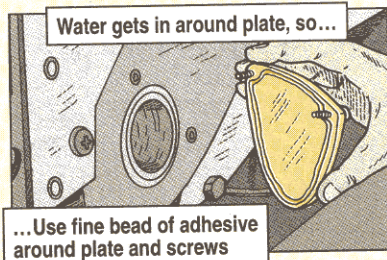
Far too many of the hollow pins that keep the Apache's pylon rack in place on its frame have water in them! Water means corrosion.

Water gets in the hollow pin around the pin cover plate.

The plate should be sealed, but many are not. Of those that are, many are not sealed right.

When you remove the pin cover plate, clean all the sealant off the plate and the pylon with acetone, NSN 6810-00-223-2739. If you don't get a clean, smooth surface on the plate and pylon, the leftover sealant creates gaps where moisture can seep into the pin.

When the surfaces are clean, seal the cover with adhesive, NSN 8040-00-833-9563.



Put the adhesive on the plate. No need to glob it on. A fine bead around the plate and screws will do the trick.

Before you put the plate back,

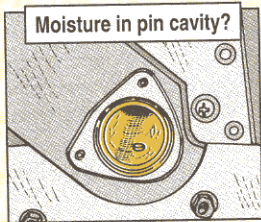
though,

check the pin for damage and to see if it's out-of-round. Make sure all the moisture is removed from the pin cavity.

Pin damaged?



Moisture in pin cavity?



Before you insert the pin, look closely at the bushings inside the pylon. Check the surfaces for any scoring or metal transfer and look for gouges and scratches.

Measure the inner diameter of the bushing to see if it's out-of-round.

Follow Para 16 in TM 1-1520-238-23-8 for what's allowed and not allowed concerning damage to the bushings and the pin.

A Pitot Tube Cover

Dear Windy,

The pitot system on our Black Hawks doesn't like water getting in it or obstructions blocking it. To prevent both, the pitot tube has a fly-away cover. But the cover does just that—flies away—when another aircraft hovers close by or a strong wind blows.

I made a better cover for the pitot tube out of 15 inches of 3/4-in heater hose. Of course



3/4-in heater hose

you'll need two covers for each aircraft. My new covers stay in place and protect the pitot system.

Here's what else you need to make each:



2 screws,
NSN 5305-00-912-7308



2 locknuts,
NSN 5310-00-167-1284



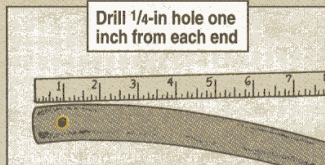
4 flat washers,
NSN 5310-00-167-0766

You'll also need the original pitot cover to attach to the new cover. Use a torn, worn one, if you can.

To make a new cover:

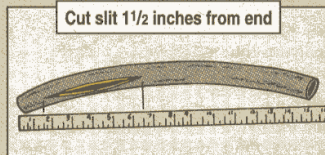
1) Lay the hose on a flat surface with the concave side on top.

2) One inch from each end, drill a 1/4-in hole through both sides of the hose.



Drill 1/4-in hole one inch from each end

3) Cut a 5-in slit on the bottom of the hose 1 1/2 inches from one end. The slit should widen in the middle to 3/8 inch and then taper back down to a point.



Cut slit 1 1/2 inches from end

4) Collapse both ends of the hose with the screws, washers and nuts. This seals the openings to keep water, snow and debris out.

Collapse both ends of hose and attach hardware



5) Before you collapse the end of the hose with the slit, attach

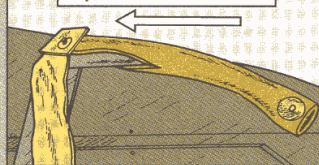
the old cover and its "Remove Before Flight" streamer.

Attach old cover with vinyl tube removed



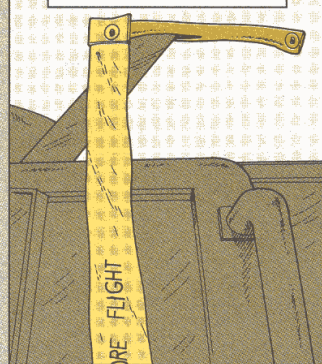
To put your new cover on, slip the hose onto the pitot tube through the widest part of the slit. Guide the hose over the tube. Be careful not to flex the pitot tube.

Slip hose on tube with care



When the new cover is in place, lower the rear section of the hose over the back of the pitot elbow.

Lower rear of hose over elbow



Joseph A. Pugliese
AASF 3
Albany, NY



SO LONG LOCKWIRE, HELLO SAFETY CABLE



Lockwire has been a pain-in-the-hand for a long time. It's slower than molasses to install. Chubby Checker would have a tough time twisting it and it will cut you faster than bad, bad Leroy Brown.

Finally, there's something better—safety cable.

Safety cable is pre-twisted. It's more flexible than lockwire. It has a permanent stop on one end and comes with a stainless steel ferrule to crimp on the other end. One special tool will put the right tension on the cable, crimp the ferrule and cut off the excess.

Here's how you install safety cable:

1. Thread the cable through the fasteners.
2. Slide the ferrule on the cable.
3. Use the tool to tighten, crimp and cut off the excess.

Thread...



...slide...



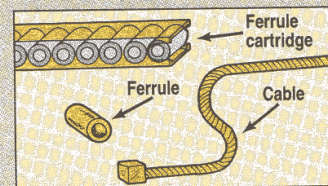
...tighten, crimp, cut off...



...inspect



Order 50 pieces of .032 diameter safety cable in 18-in lengths, with NSN 5340-01-414-6582. You also get a ferrule cartridge with 50 ferrules.



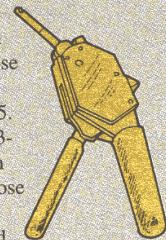
NSN 5340-01-414-6584 brings the same cable in 12-in lengths.

The installation tool is a combination of tool handle, NSN 5120-01-413-

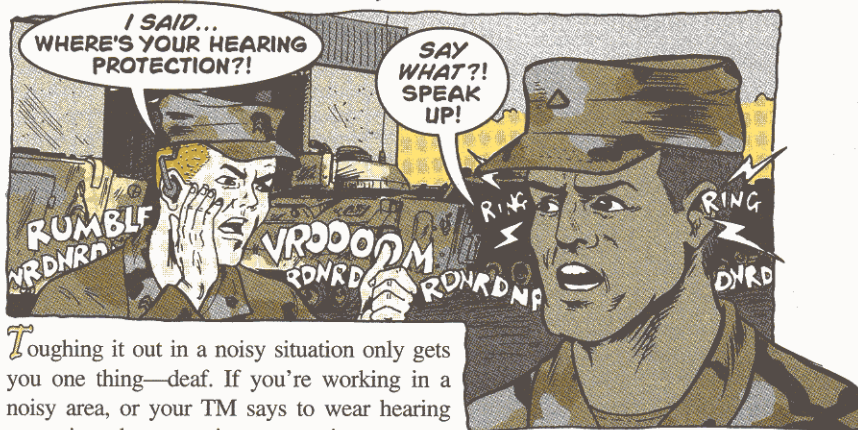
8727, and the 3-in standard crimp nose assembly, NSN 5120-01-413-8725. NSN 5120-01-413-8724 brings a 7-in extended crimp nose assembly.

You'll also need torque verification block, NSN 6635-01-416-9870, to use with a standard torque wrench to periodically check the installation tool.

For more information on the safety cable and the installation tool, call the manufacturer at (800) 327-2432 or (407) 855-6161.

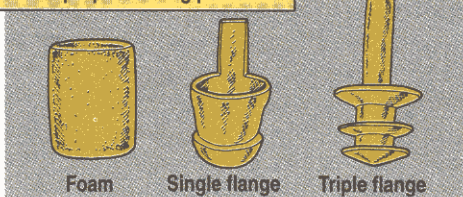


Don't Take Chances, YOU HEAR!?



Toughing it out in a noisy situation only gets you one thing—deaf. If you're working in a noisy area, or your TM says to wear hearing protection when operating your equipment, wear your ear plugs or ear muffs. Even noise that doesn't seem loud can cause damage.

Select proper hearing protection



Foam

Single flange

Triple flange

Sometimes you're told what type of hearing protection to use. If not, there are a number to choose from.

Get preformed, reusable ear plugs and ear muffs with these NSNs:

Type	NSN	Qty
Ear plugs	6515-00-392-0726	1 ea
Ear muffs	4240-00-022-2946	1 ea
Ear plugs	6515-01-149-4133	10 ea
Ear plugs	6515-01-059-1821	12 ea

All four come with headbands that let you wear them over or behind the head as well as under the chin. The ear plugs must be ordered through your medical folks and individually issued before they can be worn. **They should never be used in areas where the noise rises above 95 decibels.**

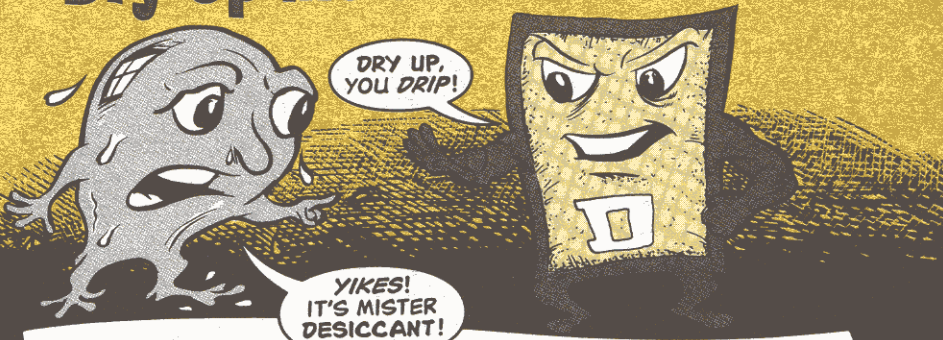
Ear muffs are considered safety items and can be purchased through regular channels.

Your local clinic can also fit you with single- and triple-flange ear plugs that fit in a handy carrying case. NSN 6515-01-100-1674 brings 20 extra carrying cases.

Get 200 pairs of disposable foam plugs with NSN 6515-00-137-6345.

Desiccant . . .

Dry Up Moisture Problems



Dear Half-Mast,

I often run across tools and clothing that have been shut up for long periods in toolboxes, vans or storage rooms. Moisture has had a chance to do its worst and corrosion or mildew is the result. Soldiers are forced to use valuable time cleaning off all that corrosion or mildew. Sometimes the equipment has to be junked.

We soak up most of our moisture problems with desiccant. Whenever we store something like tools or clothing for long periods of time, we store a few desiccant bags with them. Most moisture goes in the bags, not on the equipment.

Here are some desiccant NSNs we've found:

NSN 6850-00-264-	Size (inches)	Qty
6564	2 $\frac{1}{4}$ x 3 x $\frac{3}{16}$	1,200
6568	3 $\frac{1}{4}$ x 3 x $\frac{5}{16}$	450
6573	4 $\frac{1}{2}$ x 4 $\frac{1}{2}$ x $\frac{1}{2}$	130
6574	5 $\frac{1}{2}$ x 4 $\frac{1}{2}$ x $\frac{5}{8}$	500
6571	8 $\frac{1}{4}$ x 3 x $\frac{1}{2}$	300
6572	8 $\frac{1}{4}$ x 5 x $\frac{1}{2}$	150

Keith A. Wilcox
MOARNG
Festus, MO

That's the way to dry up moisture problems!

Half-Mast

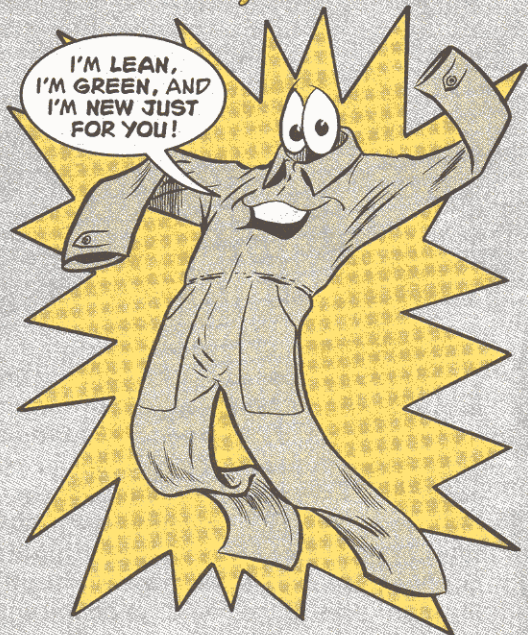
Clothing...

New Utility Coveralls Are Here

The old, white utility coveralls, NSN 8415-00-782-6366 through -6371, have been replaced by green coveralls that have a zipper front and side pass-through pockets.

Here are the NSNs to order:

NSN 8405-01-395-	Size
0940	XX-Small
0941	X-Small
1024	Small
1114	Medium
1135	Large
1137	X-Large
1140	XX-Large



Life Preserver?

Life preserver, NSN 4220-00-276-8926, may be hazardous to your health. That's the word in Safety-of-Use Message (SOU) SSCOM-96-01.

The life preserver might keep you afloat, but it can't handle you and all your field gear.



Life preserver, NSN 4220-00-202-7863, is built to handle you and your field gear, including the field pack.

If you don't have the SOU, call SSCOM at DSN 256-5451 or (508) 233-5451, or write Half-Mast.

Gloves ...

Avoid the Blisters, Mister

A few minutes in the hot summer sun is all it takes to turn your tools into finger scorchers.

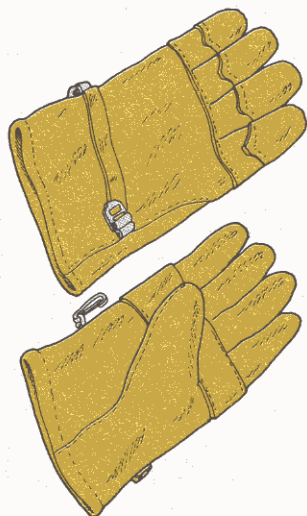
Wear gloves to protect your hands. Use these NSNs:

Heavy-duty work gloves



Size	NSN 8415-00-268-	Fits hand*	
		Length (inches)	Width (inches)
1	7871	9 ³ / ₈	4
2	7872	9 ³ / ₄	4 ¹ / ₂
3	7869	10 ¹ / ₈	5
4	7870	10 ¹ / ₂	5 ¹ / ₂
5	7868	10 ⁷ / ₈	6

Light-duty work gloves



Size	NSN 8415-01-310-	Fits hand*	
		Length (inches)	Width (inches)
1	7334	9	4 ⁵ / ₈
2	7335	9 ³ / ₈	4 ³ / ₄
3	7336	10	4 ⁷ / ₈
4	7337	10 ³ / ₈	5 ¹ / ₈
5	7338	10 ⁷ / ₈	5 ¹ / ₄

*To determine the glove size you need, measure your hand like this:

Length. Measure from the tip of your middle finger to a point two inches below your wrist.

Width. From a point ¹/₂ inch below the base of your little finger, measure across your hand.

Remember to leave a little extra room for comfort and, if necessary, for cold weather glove inserts.

Price *High?* Challenge It!

If you think you've found an overpriced item on the AMDF, let the Logistics Support Activity (LOGSA) check it out through its price challenge program.



HERE'S HOW
TO GET IN TOUCH
WITH LOGSA...

Call—During duty hours (0730-1630 CT), call DSN 897-6029/6515 or (205) 313-6029/6515.

After duty hours, dial the 24-hour hotline at DSN 645-0499 or (800) 878-2869. Leave your name, military address, telephone number, the NSN and why you think it's overpriced. They will get back to you as soon as possible.

Write—Drop a memo to:
USAMC Logistics Support Activity
ATTN: AMXLS-CIP
Redstone Arsenal, AL 35898-7466

E-mail—Send your challenge to:
pricech@logsa.army.mil

Fax—Send your price challenge to:
DSN 645-7720 or (205) 955-7720

Don't challenge items with acquisition advice codes (AAC) of V or Y (deleted items); J or Z (non-stocked items); L or K (local purchase items); items with "E" in the price signal column of the AMDF (price estimate); or end items, such as trucks, radios and generators, etc.

Protect Damaged Gear, Too!

There's a ton of equipment in today's Army getting busted up!

That includes major items and repairables that are moved between units and repair shops.

Equipment leaves a unit needing only minor repair. It winds up at support busted to pieces and fit only for junk. That means extra work for somebody—and extra money from Uncle Sam for more repair parts.

To make sure that stuff gets where it's going safe and sound, here are some pointers to keep in mind:

- ✔ Use original boxes or "fast packs" to protect fragile items. Electrostatic discharge sensitive items need special care.
- ✔ Make sure the item is repairable and all the parts that go with an item are with it.
- ✔ Pack the item as neatly and snugly as possible. Use padding where needed.
- ✔ Tag it with the NSN, nomenclature, condition code, and destination.
- ✔ Enclose all maintenance records (if required).

Then, move gear with care. No banging, dropping, slamming, rolling or bouncing.

That way, it'll come back to you sooner, and in fighting shape.

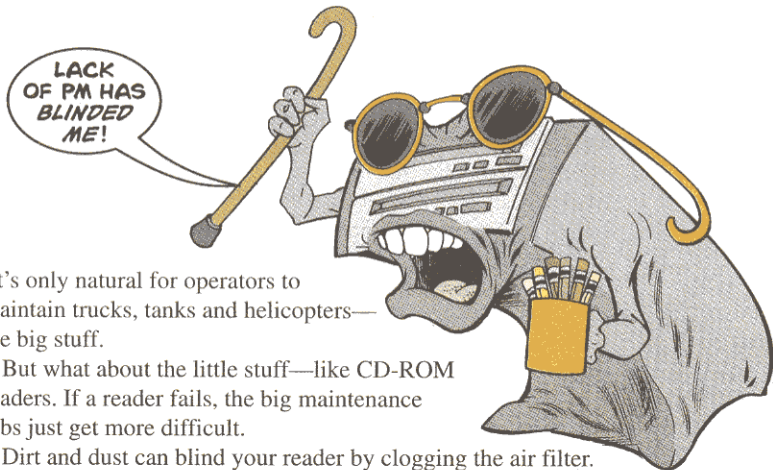
For more info on packaging field returns, contact:

USAMC LOGSA PSCC
ATTN: AMXLS-TP-P
Tobyhanna, PA 18466-5097

Call: DSN 795-7682 or (717) 895-7682.

E-mail: olollis@tobyhanna-emh3.army.mil

SWEAT THE LITTLE STUFF



It's only natural for operators to maintain trucks, tanks and helicopters—the big stuff.

But what about the little stuff—like CD-ROM readers. If a reader fails, the big maintenance jobs just get more difficult.

Dirt and dust can blind your reader by clogging the air filter.

A clogged air filter makes the vent fan work harder. That means no cool air gets circulated. As the inside temperature rises, components begin to burn up.

Save yourself costly headaches. Look at the filter to make sure it's clean. If you're in a very dusty place, look at the filter daily. If it's dirty, change it.

Check out your reader manufacturer's manual for filter ordering information.

In a pinch, you can reuse a dirty filter if you rinse it out with warm water. Be sure the filter is completely dry before putting it back in the reader, though.

After pulling maintenance on the little stuff, you can move on to the big stuff.

FED LOG Replaces ARMYLOG

ARMYLOG has gone away. It has been replaced by FED LOG.

Don't worry, though. If you now get ARMYLOG, you will automatically get the basic FED LOG (Discs 1-4).

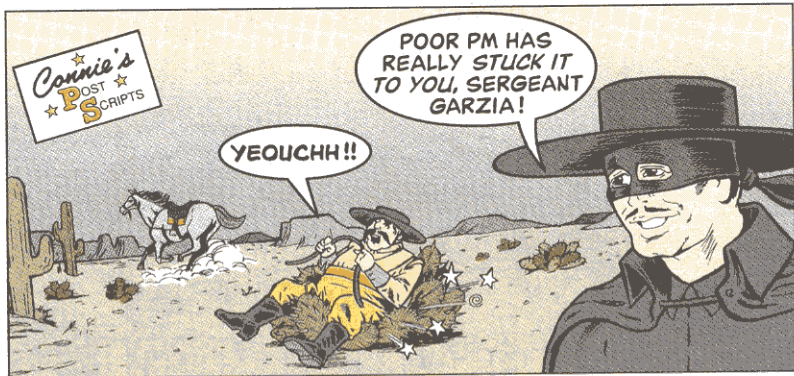
Questions? Getting too many FED LOGs? Call LOGSA at DSN 645-0782, (205) 955-0782. Or, write to:

USAMC Logistics Support Activity
ATTN: AMXLS-CIP
Bldg 3623
Redstone Arsenal, AL 35898-7466

You can also order FED LOG Disc 5, Characteristics Search, and Disc 6, Representative Drawings, directly from:

Defense Logistics Service
ATTN: DLSC-VPC (Subscription Team)
74 Washington Ave, N Station 7
Battle Creek, MI 49017-3084

Disc 5 costs \$84 a year for a monthly disc, and Disc 6 costs \$12.50 a year for a quarterly disc.



Chemical Hotline

If you have questions about the operation and maintenance of your chemical equipment, call the chemical maintenance hotline. Toll-free numbers are answered 24 hours a day. In the U.S., call (800)831-4408. In Germany, call 0130810280. In Korea, call 0078-14-800-0335. Questions may be faxed to (410) 671-3912, but it's not toll-free.

Rust Inhibitor Update

NSN 8030-01-414-7430 brings a 55-gal drum of rust inhibitor as we said on Page 23 of PS 537, but it doesn't bring a spray applicator and video instruction tape. To get a 55-gal drum of inhibitor, an applicator and video, you have to use NSN 8030-01-389-1413.

M42 Mask Hose Correction

In PS 536, we told you to keep the M42 mask hose when you turn in the M42 facepiece. Don't do that. Taking off the M42 hose ruins the facepiece. You *should* remove and keep the *M42A1* hose (the one with a star-shaped connector). You will use it with the replacement facepiece.

XM1065 Door Handle

NSN 2540-01-254-9921 gets a new door handle for the roadside door assembly on the XM1065 expandable van. The NSN shown as Item 18, Fig 22 of TM 9-2330-377-14&P is wrong.

SEE Hydraulic Filter

NSN 4330-01-224-5507 gets the filter element for the SEE's hydraulic tank. The NSN listed for Item 16 in Fig 318 of TM 5-2420-224-24P is no longer available.

Soak Up Oil Spills

To help stop injuries caused by slipping on oil spills, get a compound to soak 'em up. NSN 7930-00-269-1272 gets a 50-lb bag of absorbent compound. It's authorized by Table 1 of CTA 50-970.

ROWPU Socket Set Correction

Page 18 of TM 10-4610-215-10-HR lists the wrong NSN for the 600-GPH ROWPU's 9/16-in socket wrench socket. The correct NSN is 5120-00-189-7932. Make a note until the TM is updated.

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

Would You Stake Your Life ^{right now} on the Condition of Your Equipment?

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For sale by the Superintendent of Documents, U.S. Government Printing Office Washington, DC

HIGH PRESSURE WATER IS

DEATH

**TO ELECTRICAL GEAR,
OPTICS, AND ENGINES**



**KEEP IT BELOW AND
OUT OF THE TURRET!**