

PS**THE
PREVENTIVE
MAINTENANCE
MONTHLY**

TB 43-PS-640, The Preventive Maintenance Monthly, is an official publication of the Department of the Army, providing information for all soldiers assigned to combat and combat support units and all soldiers with unit maintenance and supply duties. All information published has been reviewed and approved by the agency responsible for the equipment, publication or policy discussed. Application of the information is optional with the user. Masculine pronouns may refer to both genders.

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Stryker Towing Caution
M1 Tank, M104 Wolverine Oil Drip Clarifications
M1 Tank Sight Glass Cleaning
M2/M3 Bradleys Armor Plating Question
Hand-held Terminal Unit Field Fix

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

Just write to:

MSG Half-Mast
PS, the Preventive Maintenance Monthly
USAMC LOGSA (AMXLS-AM)
5307 Sparkman Circle
Redstone Arsenal, AL 35898-5000

Or e-mail to:

psmag@logsa.redstone.army.mil or
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Internet address:

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THE PREVENTIVE MAINTENANCE MONTHLY

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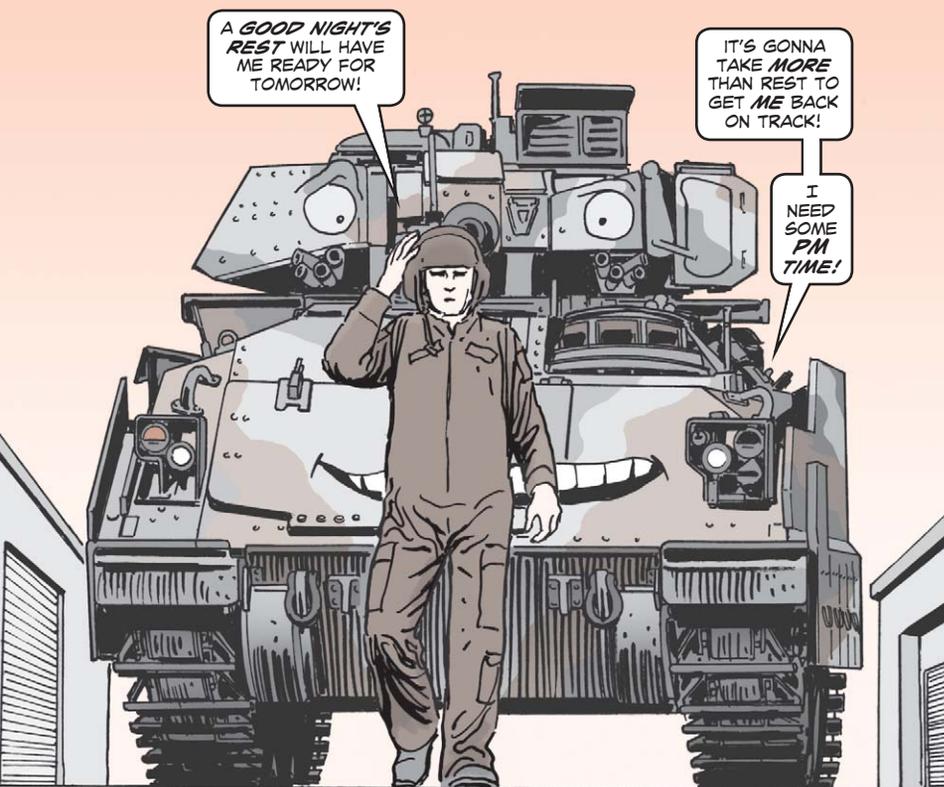
Approved for
Public Release;
Distribution is
Unlimited

OUR FIREFINDER IS
CHOKING! STAND
BY WHILE I SUCK
SOME SAND!



**Find Firefinder PM
on Pages 18-21!**

Time Heals All Wounds?



You've heard the old saying, "Time heals all wounds." While that might be true for people, time does just the opposite to your equipment.

Over time, your equipment takes a real beating. Trucks and tanks are driven through mud and sand. Rifles are fired and fired again. Radios have to transmit despite dirt and rain. And helicopters are flown in all types of weather.

When the job's done and the day is over, you can't expect a night's rest to make your equipment work good as new. No, it takes PM to heal those wounds.

PM keeps the suspension system in your truck and tank bouncing back. It keeps your rifle lubed and firing, your radio dust- and moisture-free, and your bird in the air where it belongs.

So when it comes to your equipment, try some new words of wisdom. Let's make the new saying "PM time heals all wounds."

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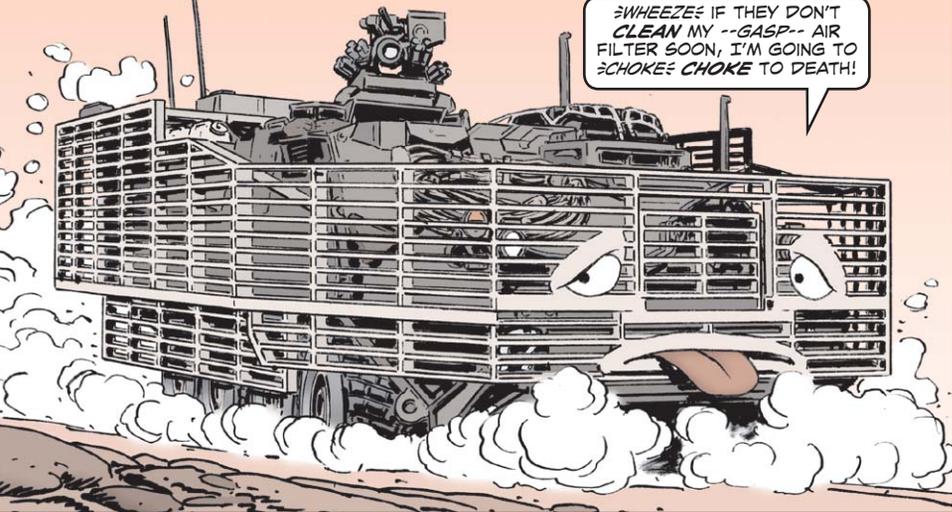
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Stryker...

TO 'AIR' IS HUMAN

≡WHEEZE≡ IF THEY DON'T CLEAN MY --GASP-- AIR FILTER SOON, I'M GOING TO ≡CHOKE≡ CHOKE TO DEATH!



Drivers, you know how important it is to keep vehicle air filters clean in the desert. Well, the air filter element on the Stryker is no different.

Or is it?

Of course a clean air filter is vital if you want to keep your Stryker running. But there are a few crucial differences between the air filter on the Stryker and the ones used on other vehicles.

Air Flow

The Stryker has no air flow indicator or warning light to let you know the air filter is clogged. So you've got to clean it on a regular basis.

In the desert, you'll need to clean the air filter at least weekly—and sometimes even daily—depending on conditions. Pay attention to engine performance. If it begins to suffer, a clogged filter could be the reason.



Cleaning

The best way to clean is by blowing out the air filter element with low-pressure air. But you've got to do it right.

Most every vehicle air filter used by the Army requires you to blow air from the inside out to get rid of dirt and sand. **The Stryker air filter element is the exact opposite.**

First, unscrew the wingnut on top of the element and remove the bottom of the intake. Wipe the plate clean with a damp cloth.



With the open end down, blow low-pressure air from the **outside in**. That loosens sand and dirt and allows it to fall out through the center channel.

Make sure you use the tire inflation port on another vehicle, not your own. Running your Stryker to build up air pressure will allow unfiltered air into the engine.

If you don't have compressed air available in the field, turn the element upside down and shake it. You can also tap it lightly against your hand to loosen as much dirt and sand as possible. Don't hit it against anything harder—like the ground or the side of your vehicle—or you'll damage the element.

Give the filter a more thorough air cleaning as soon as you can.



Air Filter Canister

Once you've finished cleaning the element and plate, don't forget about the canister.

If the element was badly clogged, there may be a lot of dirt and sand in the bottom of the canister that needs to be cleaned out. Some loose sand may also fall out of the element as you're removing it.

Either way, if you don't get rid of it, that sand and dirt will immediately end up in the filter element as soon as the engine is started.

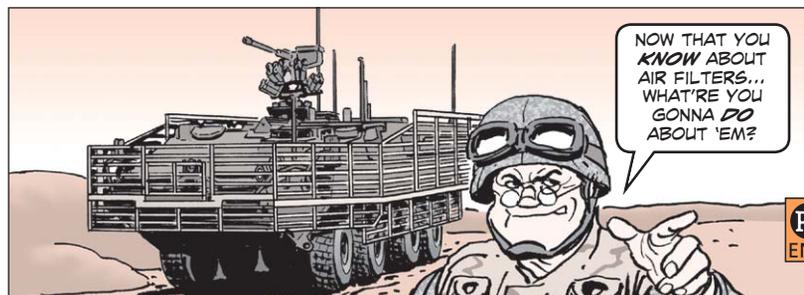


Watch Out for Water

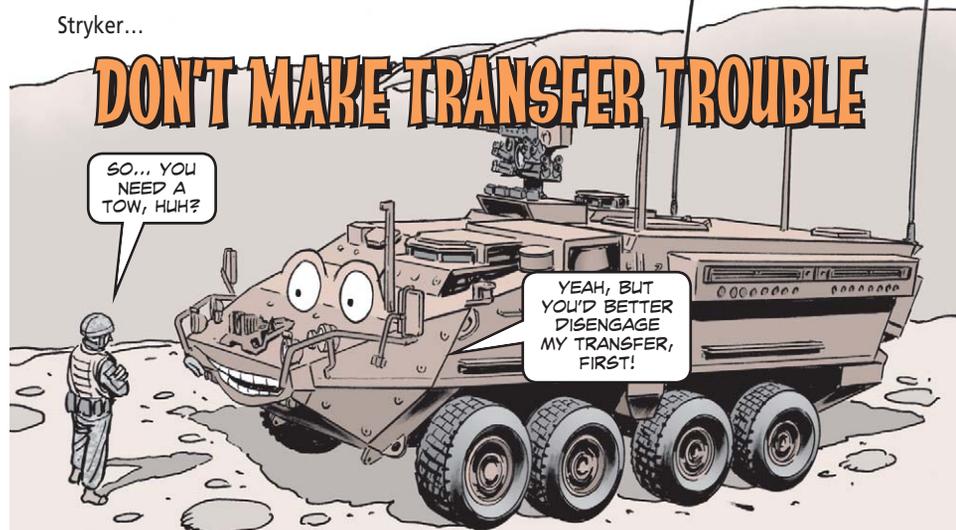
Ever notice water inside the air filter canister once the element is removed? That means you're probably not using the environmental cover when the vehicle is parked.

Without the cover, rain and wash water enter the air inlet and pool at the bottom of the canister. The water combines with dirt and sand and eventually dries to a hard, concrete-like consistency.

The only way to get it out is to chip it loose with a screwdriver or chisel. That can cause a lot of damage to the canister bottom. So use the environmental cover whenever your Stryker isn't in use.



Stryker...



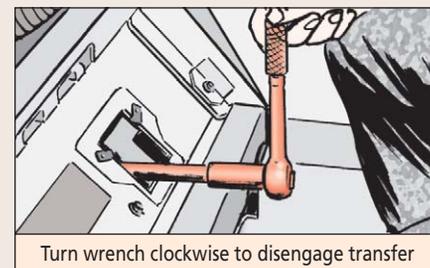
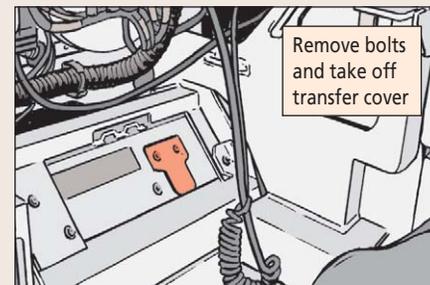
Preparing to tow a disabled Stryker, mechanics? Make sure you remember to disengage the transfer first!

If you forget, you'll not only damage the transfer, but you can also blow the turbocharger and tear up the back four tires. That's going to mean a lot of extra work for you, not to mention the cost!

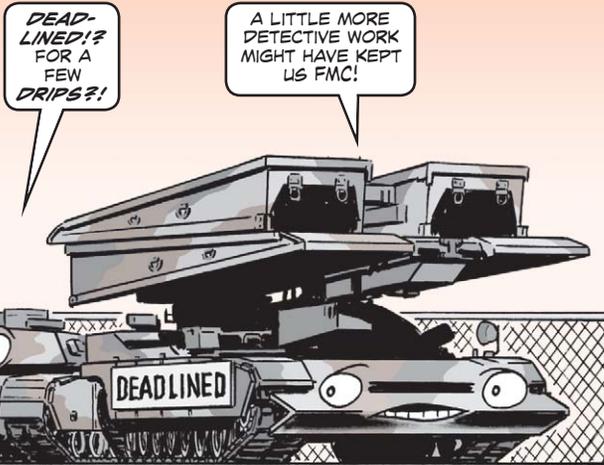
Disengage the transfer like this:

1. Remove the two bolts holding the transfer cover in place. Take off the cover.
2. Attach the socket wrench extension, NSN 5120-20-000-7448, from your BII to a 1/2-in drive socket wrench.
3. Slip the extension into place in the transfer compartment.
4. Turn the wrench nine turns clockwise until it stops.

Before you start towing, **double-check** to make sure the transfer is disengaged. Shift the engine to neutral and tow forward very slowly. If you can feel the vehicle dragging, the transfer is not completely disengaged.



DRIPS CAN BE A DRAG



Mechanics, if you've heard it once, you've heard it a thousand times: Class III oil drips are bad news and make a vehicle NMC.

That's true most of the time. But there are a couple of circumstances where you need to do a little more detective work before you deadline the vehicle.

Recuperator

During engine start-up and shutdown, whether the engine is installed or out for ground hop operations, you may observe oil dripping from the drainage and weep holes on the engine's recuperator. You might also notice blue smoke coming from the exhaust.

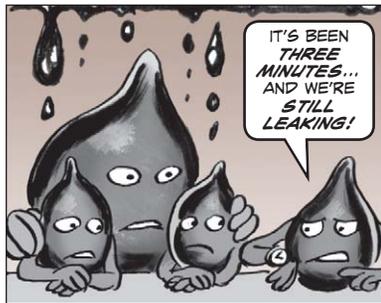
Either situation may or may not indicate a problem. To find out for sure, follow these steps:

1. Start the engine and run it at idle speed for three minutes.

2. After three minutes, check the recuperator drainage and weep holes for oil leaks. If you see no leakage, you can stop the test and shut down the engine. The tank is FMC.

3. If you see oil leakage after three minutes, continue to run the engine at idle for another 10. Check for leakage again. If you see **any** oil leakage after 15 minutes of operation at idle speed, the vehicle is NMC. Report the leak to your support.

Make sure you have the oil and coolant hoses hooked up to the engine when performing this test during ground hop!



Reduction Gear Box

During low rpm operation, you may notice a continual drip from the #10 seal area of the reduction gear box (RGB) without blue exhaust smoke or a measurable oil loss.

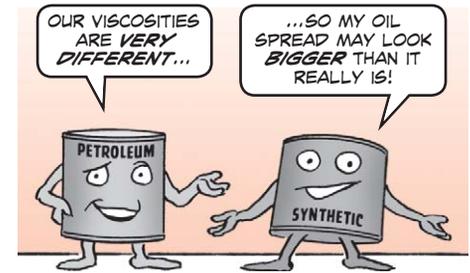
The viscosity of the RGB's synthetic oil is quite different from petroleum-based oil. So any oil spread you see may make the leak appear worse than it really is.

As long as the oil accumulation does not exceed one ounce per hour, the vehicle is FMC. Report any leak that exceeds one ounce.

You'll find the complete scoop in TACOM maintenance advisory message 05-048. Get a copy from your TACOM LAR or check it out online:

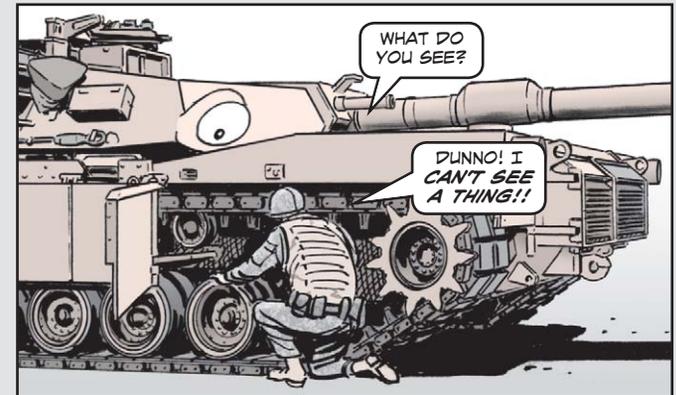
https://aeps2.ria.army.mil/commodity/mam/tacom_wn/05/mam05-048.html

You'll need your AKO or AEPS login and password to access the website.



M1-Series Tanks...

WHAT YOU SEE IS WHAT YOU GET



Clean your M1-series tank's shock absorber sight glasses the wrong way and what you **won't** see is the oil level.

That's because the wrong cleaning method scratches and clouds the sight glass surface.

Never use wire brushes, knife blades or screwdrivers to clean the glass. All you need is your hand, a little water and a piece of clean cloth.

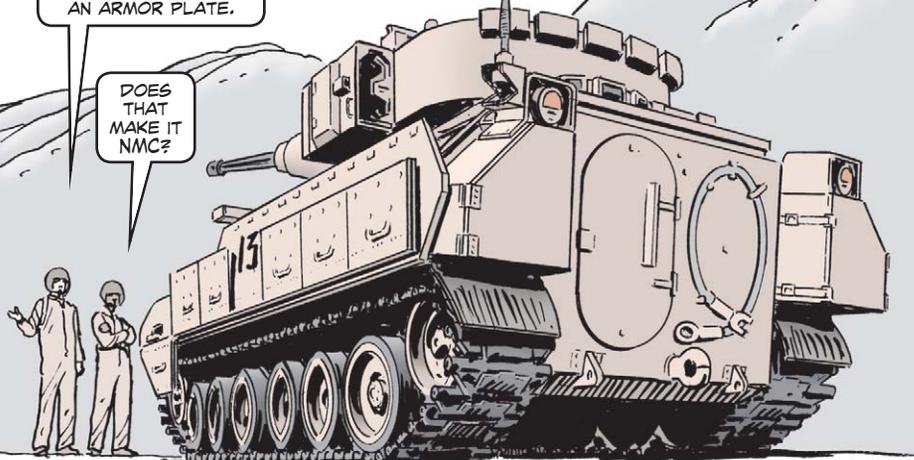
Easy on the rough stuff. Keep that "eye" open and you'll see what you've been missing!



ARMOR PLATED PROBLEM

WE'VE GOT A MISSION, BUT MY BRADLEY IS *MISSING* AN ARMOR PLATE.

DOES THAT MAKE IT NMC?



Dear Half-Mast,

I'm stationed in Iraq and we've had a big question come up. If any of the armor on the Bradley is missing or damaged (small bullet holes), is the vehicle considered NMC?

I've been unable to find anything in the TMs that cover this. And we have several vehicles being used that have missing or damaged armor. Can you help?

CW3 J.S.S.

Dear CW3 J.S.S.,

Sure can, Chief. According to TACOM, all Bradley armor must be present and the vehicle must be sealable in an NBC environment for the vehicle to be considered fully mission capable.

Vehicles with missing armor may not be able to stop penetration by bullets and other rounds. And if the armor has holes in it, the vehicle won't seal in an NBC environment.

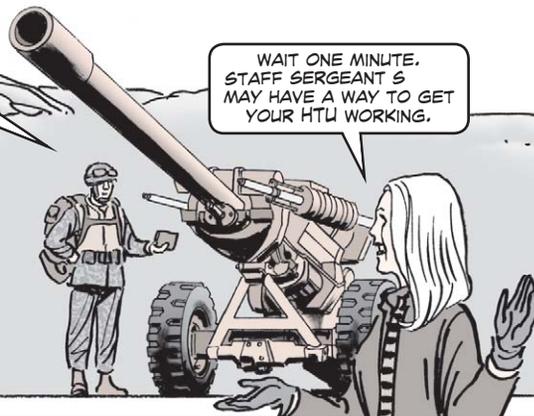
TACOM will soon be adding a general statement to this effect in the PMCS section of the -10 TMs.

Half-Mast

UH-OH, I'M GETTING AN *INVALID* CONFIGURATION. GUESS THE BATTERY IS BAD. NO FIRING TODAY.

WAIT ONE MINUTE. STAFF SERGEANT S MAY HAVE A WAY TO GET YOUR HTU WORKING.

HTU SOP for NO-GO



Dear Editor,

It's not unusual to run into hand-held terminal units (HTU) that have defective batteries that cause them to not operate properly or at all. That stops artillery targeting in the field.

I've found a way that sometimes can keep your HTU going in the field until you can get the battery replaced:

If you get a message when you power up the HTU saying the system configuration is invalid and asking you to press F1 or F2, press F2. That puts you in the BIOS setup.

After updating the date and time, configure the BIOS like this:

```
diskette A: NOT INSTALLED
boot disk 0: Auto 1
disk 1: NOT INSTALLED
internal disk: boot disk 0
speaker control: ON
color enhance: OFF
PCMCIA slot: Slot 1
PCMCIA HDD Type: Integral
Page 2 (page down)
power management: DISABLED
system idle after: DISABLED
system standby after: DISABLED
system suspend after: DISABLED
```

With any luck, this will get your HTU going.

If you power up the HTU and have no visible screen even though the green power light is on, use this code: **F2, ESC, F5, ESC, F4**. After about 15 seconds, the HTU should shut down and then reboot and give a visible screen. You will need to set the BIOS again and enter the settings previously noted (in the shaded area).

SSG C S

Ft Bliss, TX

Editor's note: Good suggestion, Sergeant. This is a field fix only. As soon as possible, get the HTU internal battery replaced.

If you're using forward observer software (FOS), the "boot disk 0: Auto 1" may need to be set differently. See the FOS software loading instructions for the correct BIOS boot disk parameters.

If you have an external VGA monitor, CECOM's David Fisher points out that it can be plugged into Port J4 and the screen output will appear on the monitor. This lets you confirm the battery problem and gives your repairman access to the CMOS battery settings without the guesswork of using the key sequence.

NO DECKING SUBSTITUTES

USE ONLY PURPLEHEART WOOD, NSN 5510-01-454-8568, OR APITONG WOOD, NSN 5510-01-525-6325, WHEN YOU REPLACE THE DECKING.



Mechanics, reports from the field say units are replacing deck boards with unapproved wood or rubber/composite products that actually cover the semitrailer's existing decking.

These modifications mean your semitrailer will end up with problems like sagging, bent rails, cracked welds and busted cross members.

Plain and simple, use only purpleheart wood, NSN 5510-01-454-8568, or apitong wood, NSN 5510-01-525-6325, when you replace the decking. These types of wood are stronger and more durable than any other boards you can use. They resist both rotting and ultraviolet rays, repel water and require little or no maintenance.

Stronger boards mean you'll need a carbide blade to cut them. Same goes for drilling holes. Drill bits will need carbide tips.

When ordering these NSNs, the unit of issue is board feet (BF). Each board that you get will measure 16 feet 4 inches long x 9 7/8 inches wide x 1 7/8 inches thick. So, each board equals 27.21 BF.



THE MINIMUM ORDER UNDER THESE NSNs IS 250 BF. YOU NEED 325 BF TO COMPLETELY RE-DECK ONE TRAILER.

HERE ARE THE BOARDS YOU NEED TO DO THE JOB...

Number of Boards	Width (inches)	Length
4	7 3/8	7' 1/2"
2	5	17' 1/2"
4	7 3/8	16' 3/8"
2	5 1/2	16' 3/8"
2	5 3/4	13' 7"
2	4 15/16	13' 7"
4	4 15/16	16' 3/8"
2	4 15/16	12' 9"

Alternators & Kits

HEY, HALF-MAST! THERE ARE LOTS OF ALTERNATORS... WHICH ONE DO I NEED?



Dear Half-Mast,
Can you provide me with good NSNs for the HMMWV's 100-amp alternator and parts kit? These items (Fig 35 of TM 9-2320-280-24P-1) show up as terminal in FED LOG.

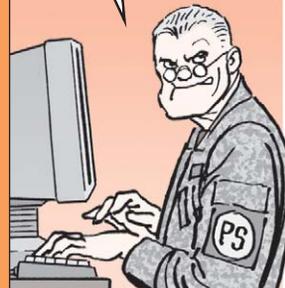
SFC M.S.F.

Use NSN 2920-01-407-0532 to get the 100-amp alternator for the M998 and M998A1 HMMWVs. NSN 2920-01-455-1626 gets the parts kit to install it.

Matter of fact, jot down these NSNs for alternators and parts kits available for different model HMMWVs:

- 200-amp alternator, NSN 2920-01-420-9968, and parts kit, NSN 2920-01-455-1630, for M998 and M998A1 HMMWVs.
- 400-amp alternator, NSN 2920-01-466-1855, and parts kit, NSN 2920-01-465-1096, for M998 and M998A1 HMMWVs, except the M996, M997, M996A1 and M997A1.
- 400-amp alternator, NSN 2920-01-466-1855, and parts kit, NSN 6115-01-473-2303, for M998A2-series (except the M997A2 and M1035A2), M1113 and M1123, with serial numbers below 196901.
- 400-amp alternator, NSN 2920-01-466-1855, and parts kit, NSN 2920-01-509-4688, for M1025A2, M1043A2, M1045A2, M1097A2, M1113 and M1123 HMMWVs, with serial numbers 196901 and above.

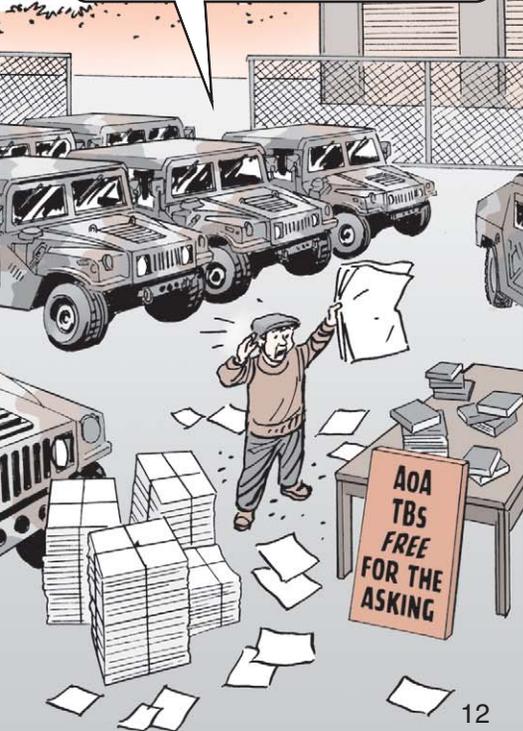
YOU BETCHA, SERGEANT F!



Half-Mast

**EXTRA! EXTRA!
HMMWVs
GET ADD-ON
ARMOR TB!**

**YOUR AOA TB IS
AVAILABLE FROM THREE
ONLINE SITES!**



A new technical bulletin, TB 9-2510-251-24, for HMMWV add-on armor has been published.

The TB can be downloaded from the AKO, LOGSA and AEPS websites. The 17 MB file loaded more quickly on AKO and slowest on AEPS. Here's how to use these sites to get the TB.

Log on to the AKO website and then change the URL to read:

<https://www.us.army.mil/suite/doc/4384468>

After logging on to the LOGSA ETM website, go to the search page and type in the TB number.

<https://www.logsa.army.mil/etms/welcom1.htm>

On the secure AEPS site click on the Commodity tab. Under the pull-down menu for "Go Directly To A Commodity Category select Tactical, Non-Tactical, Other Automotive Vehicles. Scroll down to and click on High Mobility Multipurpose Wheeled Vehicle (HMMWV). Click on the Bulletins tab. Select HMMWV FOV's Add on Armor (AOA) and Associated Component (TB 9-2510-251-24). The AEPS secure website URL:

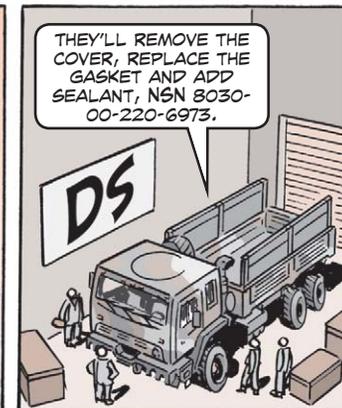
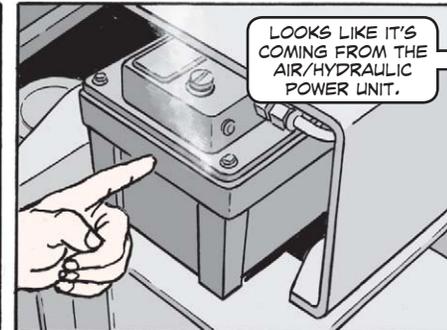
<https://aeps2.ria.army.mil>

Questions concerning the publication can be directed to TACOM: (586) 574-6577 for maintenance, (586) 753-2373 for logistics, or (586) 574-6277 for publication questions. The DSN prefix for these numbers is 786.

FMTV...

SNEAKY GASKET LEAK

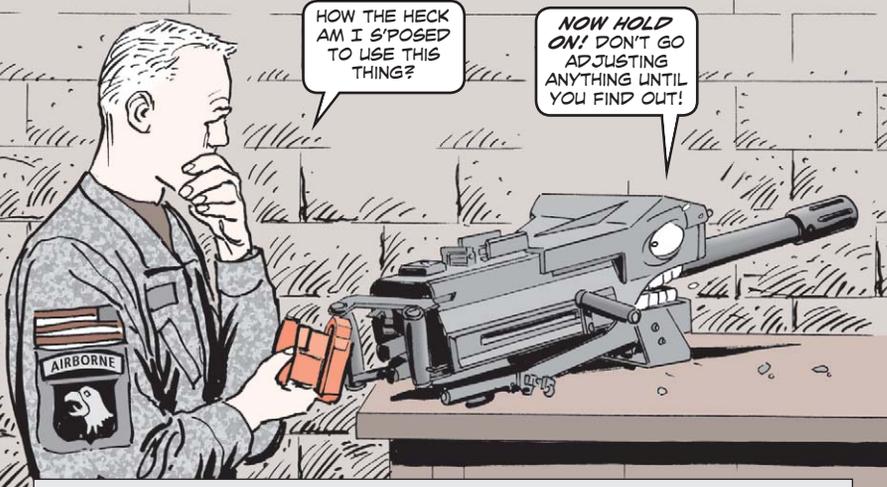
DRIVERS, WHILE RAISING OR LOWERING THE CAB ON YOUR FMTV HAVE YOU NOTICED A **SMOKY MIST** COMING FROM THE VEHICLE'S AIR/HYDRAULIC POWER UNIT?



M66 Ring Mount Cover NSN Wrong

PS steered you wrong on Page 13 in PS 627 (Feb 05) on the NSN for the cover for the M66 ring mount when it's on the MTV (5-ton model). There is only one cover NSN for the M66 regardless of what it's mounted on: NSN 1005-00-707-0725.

HOW DO YOU USE LEVER TOOL?



Dear Half-Mast,

We have the new tool for adjusting the MK19 machine gun's secondary drive lever, but we don't know how to use it and there's nothing on it in the TM. Where do we go for instructions?

SGT J.R.

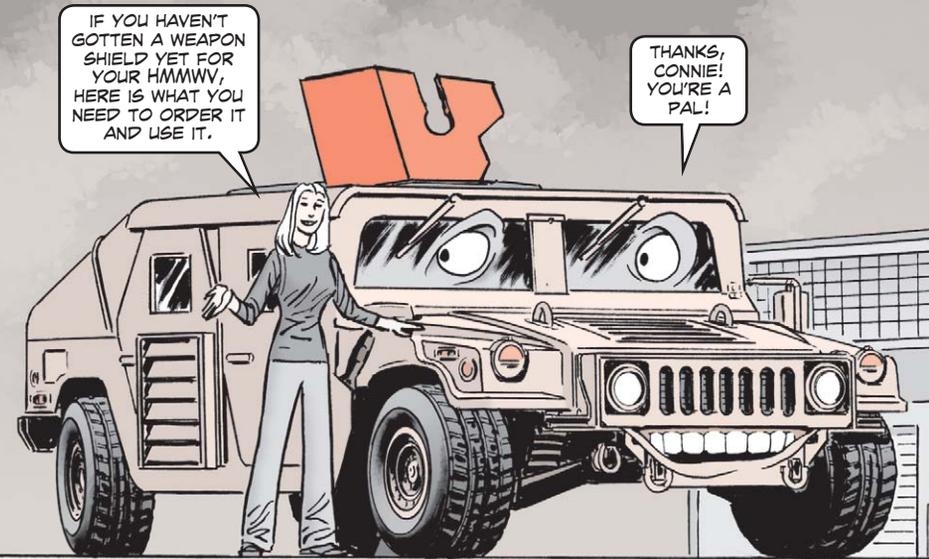
Dear Sergeant J.R.,

MWO 9-1010-230-50-1 changed the MK19's fixed secondary drive lever to an adjustable lever. The lever is adjusted with the tool, NSN 1005-01-467-9435, that you have. Instructions on how to use the tool should have come with it. If they didn't, or the instructions disappeared, contact TACOM-Rock Island at DSN 793-1903/(309) 782-1903 or email

hallp@ria.army.mil

If your MK19s haven't been modified, let TACOM-Rock Island know. All MK19s should have been modified by now.

Half-Mast



HMMWV Weapon Shield Update

We told you in PS 620 (Jul 04) that there is now a weapon shield available for the M1114 up-armored HMMWV and the M1025/M1026 HMMWVs.

The shield kit comes with NSN 2510-01-498-4996 and contains the shield, brackets, adapters, hardware, and installation instructions. It costs around \$1,560.

The weapon shield weighs 116 pounds and must be considered part of the vehicle payload. If you're installing a shield on the M1114 for the first time, you need the turret stop ring, NSN 2510-01-501-2691. If you install the shield on an M1025/M1026 with a serial number prior to 189936, you will need to install the improved turret lock ring, NSN 2590-01-192-4525.

Now the new info: Once the shield is installed, you can mount the MK19 or M2 machine guns on the MK64 MOD 9 gun mount, NSN 1010-01-412-3159, or MK93 MOD 2 gun mount, NSN 1010-01-502-7547.

But these systems don't have a way to lock the mount's carriage and cradle to the shield. So when adjusting the horizontal axis of the mount, the gunner needs to move the universal pintle adapter to move the shield in sync with the mount's carriage and cradle.

TACOM ground precautionary messages 06-003 and 06-007 give ways to connect the shield to all the mounts. A PS article in issue 642 (May 06) will explain how to connect the shield to the MK64, MK93, and M197 mounts.

M68 Reflex Sight...

Where Do I Find M68 Sight Info?

YOU'RE A BIG HELP SIGHTING, BUT I SURE WISH I COULD FIND OUT HOW TO TAKE CARE OF YOU!

I HAVE MY OWN TM. GET A COPY!



Dear Half-Mast,

We use the M68 reflex sights on our M16 rifles and M4 carbines. Where do you go for info on repair, calibration, parts, and operating instructions? I can't find anything in the weapons TMs on the M68.

C.V.

Dear C.V.,

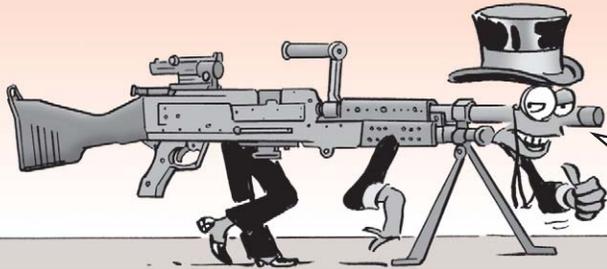
The M68 actually has its own pub, TM 9-1240-413-12&P. You can access it on the Internet: <https://www.logsa.army.mil/etms/online.htm>

You will need to apply for a password to use the ETM site.

Half-Mast

M240B Machine Gun...

Do I Need a Discriminator?



I, SIR, HAVE BECOME SO DISCRIMINATING THAT I NO LONGER NEED A DISCRIMINATOR TO FIRE BLANKS.

Dear Half-Mast,

How do I get a discriminator and blank firing attachment (BFA) for my M240B machine gun? I can't find anything on them in the TM.

SPC C.C.

Dear Specialist C.C.,

Good news. You no longer need a discriminator to fire blanks with the M240B machine gun. You do need, though, the BFA, NSN 1005-01-480-0289.

Half-Mast

M249 Machine Gun...

What's the Difference Between AR and LMG?

NOW YOU HAVE TWO CHOICES OF M249-THE AR AND THE LMG!



AND WE BOTH GET THE JOB DONE!



Dear Half-Mast,

Our unit has been told that we will be receiving M249 light machine guns. How is that different from a regular M249?

Mr. B.S.

Dear Mr. B.S.,

There are two roles for the M249 machine gun: the automatic rifle (AR) and the light machine gun (LMG).

The automatic rifle replaces some of a unit's M16 rifles. It comes with a 100-round assault pack, NSN 1005-01-334-1507.

The light machine gun replaces some M60 machine guns. It's fielded with a tripod adapter assembly, NSN 1005-01-225-1156, and ammunition bracket adapter, NSN 1005-01-425-6541.

Half-Mast

M16-Series Rifle, M4/M4A1 Carbine...

How Do I Get A Filler?

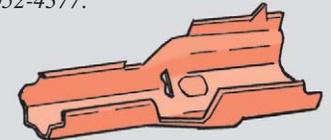
Dear Half-Mast,

We noticed in PS 631 (Jun 05) you said to use a magazine filler to load ammo in M16-series rifle and M4/M4A1 carbine magazines. Trouble is that many times at the range, ammo is not issued with the M3 bandoleer, so we don't get a filler. Is there a way to order the filler?

SPC S.B.

Dear Specialist S.B.,

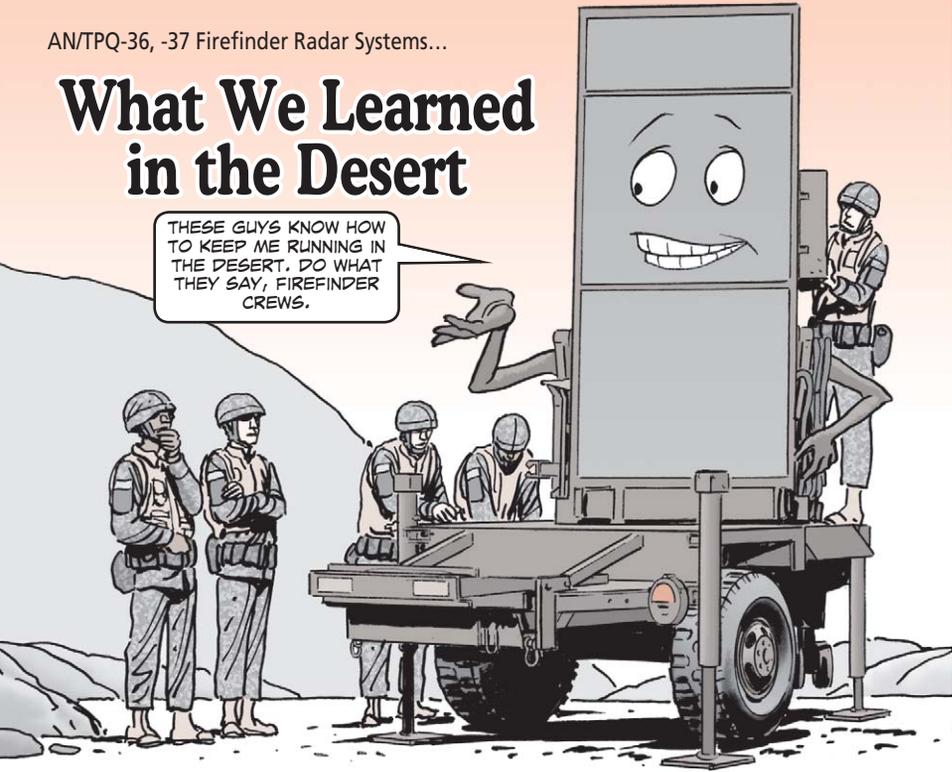
Sure is. Just use NSN 1005-00-052-4377.



Half-Mast

What We Learned in the Desert

THESE GUYS KNOW HOW TO KEEP ME RUNNING IN THE DESERT. DO WHAT THEY SAY, FIREFINDER CREWS.



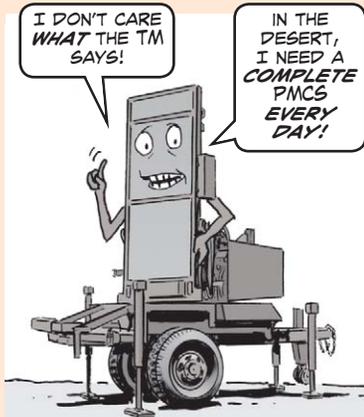
Dear Editor,

From our tour in Iraq helping to keep a Firefinder radar system operating, we learned several valuable lessons that will make things easier for other Firefinder crews:

Forget what the TM says about how often to do PMCS—do a complete PMCS daily.

In the desert, the Firefinder needs all the PMCS help you can give it. We tried to do a complete PMCS every single day and would do two PMCSs daily if we had the time.

In addition, we tried to spend two solid hours daily working on one specific area in the Firefinder, covering every possible problem. There are so many things to worry about with the Firefinder that it's easy to overlook something. Devoting our complete attention to one specific area every day helped us catch things we might have missed otherwise.



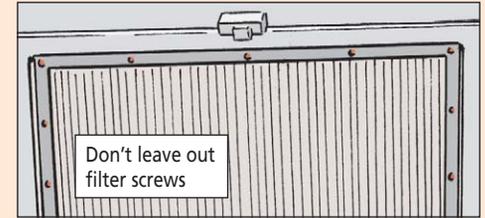
Clean filters daily.

The Firefinder filters weren't intended for the Iraq desert. If you don't take them off daily and blow them out, the filters clog up and components start to overheat. Use low-pressure air to blow them out, but not a truck air hose, which can have moisture in its air system. You don't want filters even slightly moist since the moisture draws sand.



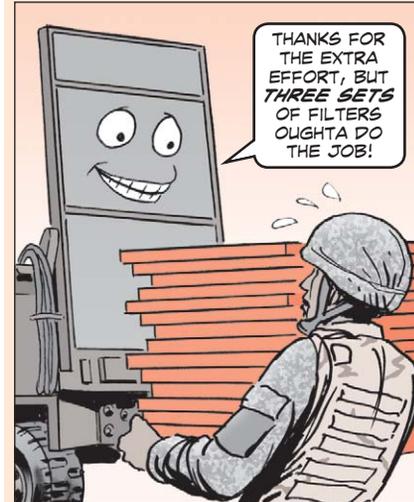
Don't leave out filter screws.

Some crews leave out a few screws in each filter so they can remove the filters easier. But then sand can get in through the screw holes, which defeats the purpose of the filter. Screw in all the screws.



Get three sets of filters.

Then you can just swap out filters when they need cleaning and you have a spare set for replacing damaged filters. Store the filters in sealed plastic bags to seal out sand.



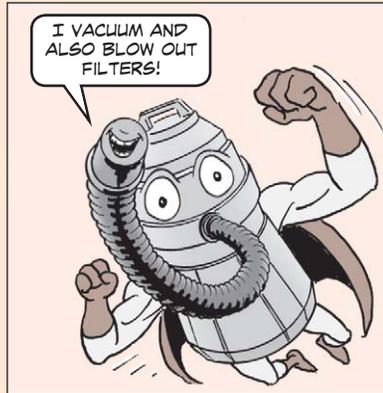
For the -36, you need extras of these filters:
curbside, NSN 4130-01-097-5912;
roadside, NSN 4130-01-110-7547;
inverter, NSN 4130-01-098-7899.

For the -37, you need extras of these filters:
filter cooler, NSN 5840-01-101-7070;
filter cooler, NSN 5840-01-101-7071;
filter cartridge, NSN 5840-01-101-7068
(comes in pairs);
BSU filter, NSN 4130-01-092-3485
(comes in pairs);
BSU filter, NSN 4130-01-325-0044
(comes in pairs).



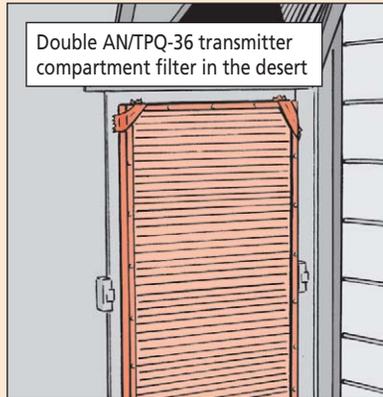
Get a good vacuum cleaner.

We used a 400-Hz vacuum, NSN 7910-00-530-6260, that sucked up sand in the shelters and compartments and then could be reversed to blow out filters.



Double the filter on the AN/TPQ-36's transmitter compartment.

Sand was getting through this filter so we taped a second filter over it to double its protection.

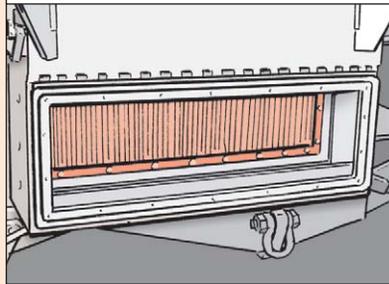


CW3 K E
SSG T L
Ordnance Training Detachment
Ft Sill, OK

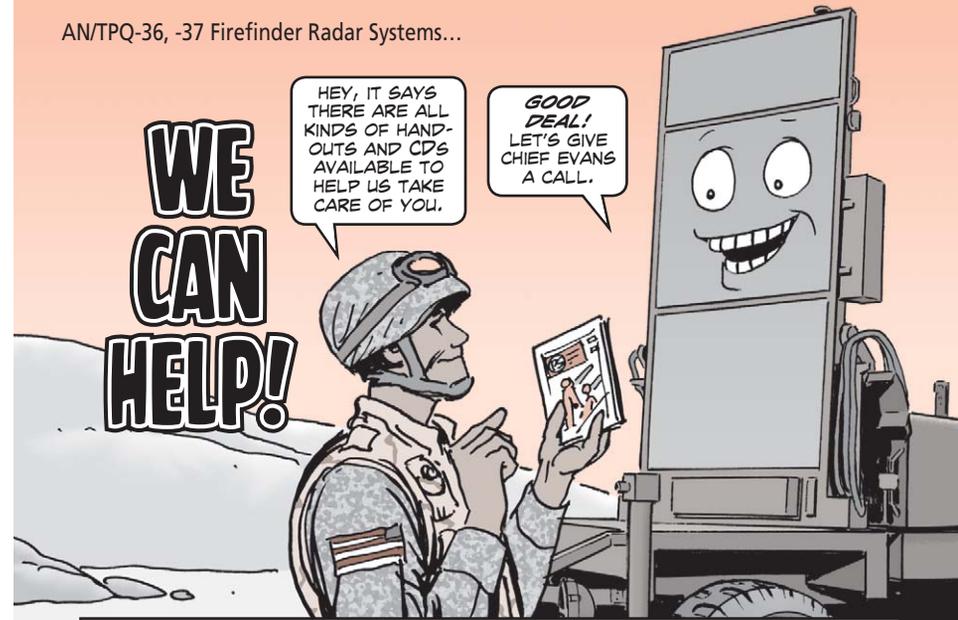
Don't forget the filters in the AN/TPQ-37's signal processor and the AN/TPQ-36's inverter regulator.

These are the two most overlooked filters for the Firefinder. If they become too dirty, the signal processor or inverter regulator overheats and shuts down.

Don't forget AN/TPQ-37 signal processor and AN/TPQ-36 inverter regulator filters



AN/TPQ-36, -37 Firefinder Radar Systems...



Dear Editor,

The AN/TPQ-36 and -37 Firefinder radars are sophisticated systems that require intensive care to work right. At the Ft Sill Ordnance Training Detachment, we've developed a few publications that can help Firefinder crews everywhere keep their radar systems spotting enemy fire:

- Handout 11-5840-355-30-1, which contains all the schematics for the -37, plus troubleshooting tips
- CECOM Firefinder job aid, which includes all the Firefinder alignments and troubleshooting for the repairman in both book and CD form
- a DVD of all the -37 alignments for versions 5, 6, and 8
- all of the exercise booklets for the Firefinder course here at the Ordnance School

To get any of these aids, just contact me at DSN 639-2655/(580) 442-2655

In addition, we would like to hear any suggestions for other Firefinder products we might provide.

CW3
Ordnance Training Detachment
Ft Sill, OK

Editor's note: The next step is up to you, Firefinder crews. Take Chief E up on his offer to help.

HOSE REEL REMINDERS

IHMEE...

READY
WHEN YOU
ARE!

LET
'ER
RIP!



OPERATORS,
HERE ARE SOME PM
POINTERS FOR THE
HOSE REEL ON THE
INTERIM HIGH MOBILITY
ENGINEER EXCAVATOR.

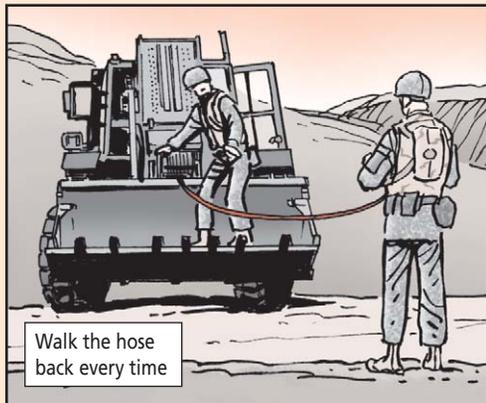


Walk the Hose

Easy does it when you walk the tool's hydraulic hoses away from or back to the excavator.

Do not yank on the hoses or let them snap back into the spool. Sooner or later this yo-yo treatment breaks the recoil spring inside the spool. Then you can't rewind the hoses.

To make the hoses, recoil spring and hose spool last longer, always walk the hoses back.

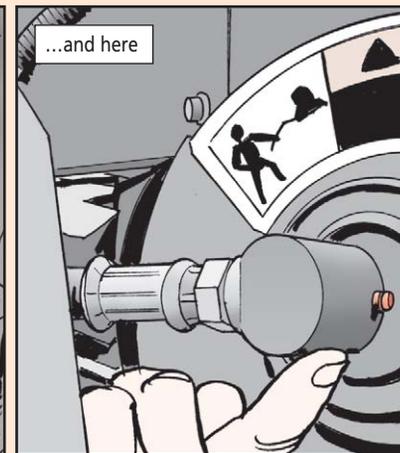


Walk the hose
back every time

Lube Fittings

Make sure the hose reel bearings get lubed. You'll find the grease fittings on each end of the hose reel. A few shots of grease every month work best. That way the spool rolls back and forth smoothly.

Put the hose reel's cover back in place after the lube job. That way the cover will protect the rubber hydraulic hoses from the elements.



GOOD AIR FLOW



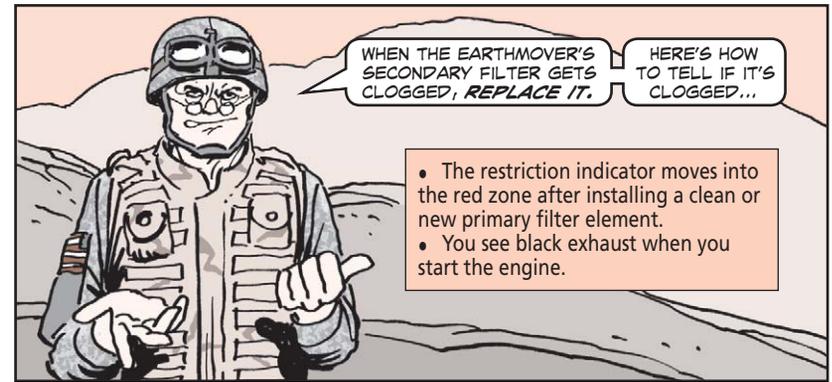
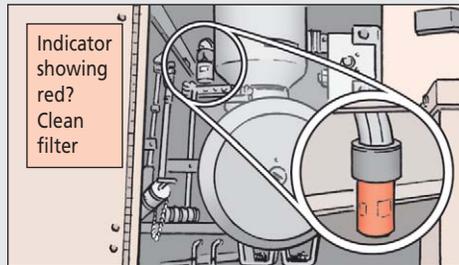
The DEUCE needs clean air—and lots of it—to keep the vehicle's engine running smoothly. Stay on top of the info in TM 5-2430-200-10 and keep these PM pointers in mind before the day's run.

Air Filter Brush-off

A clean air filter element is crucial, especially in dusty and sandy areas, like the desert.

Keep an eye on the air cleaner restriction indicator next to the canister. If the indicator moves from yellow to red, open the canister and pull out the air filters. The secondary filter is inside the primary.

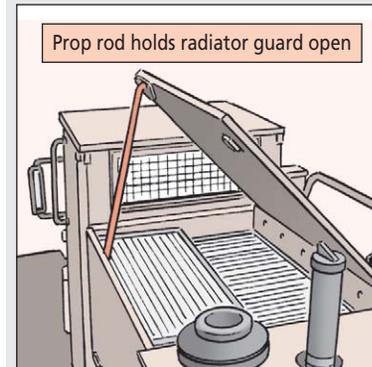
Use low-pressure air, 30 psi or less, from inside to outside to remove dust and sand from the primary air filter element. Never bang the filter on a hard surface. That damages it. Replace the primary air filter element once a year, or after six cleanings.



Clean Radiator Fins

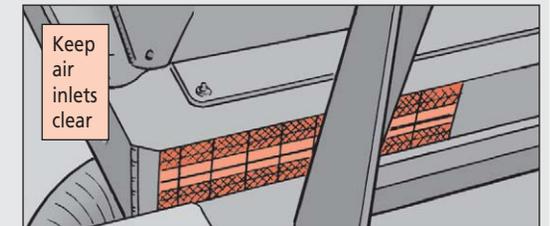
To keep the DEUCE running cool, the radiator fins need to be cleaned.

Use the prop rod to keep the radiator guard open. Look for leaves, sand and trash wedged between the radiator's fins. Clean the fins only with low-pressure air.



While you're at it, look for bent cooling fins. Bent fins stop airflow through the radiator and can cause both the engine and transmission to overheat. You can keep the fins straight by keeping feet, tools and other heavy things off them.

Once the fins are cleaned and the radiator guard is back in place, make sure items like camouflage netting and duffel bags are kept off the radiator's air intake grills. They can also restrict airflow.



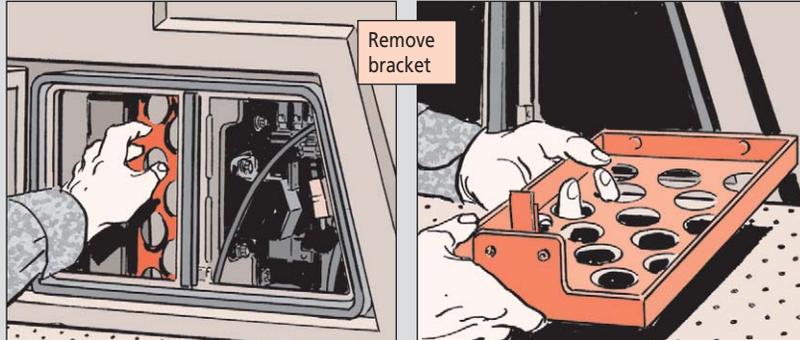
Cab Air System

The filter elements for the cab air system keep the air clean inside the cab, regardless of how dusty the worksite conditions are.

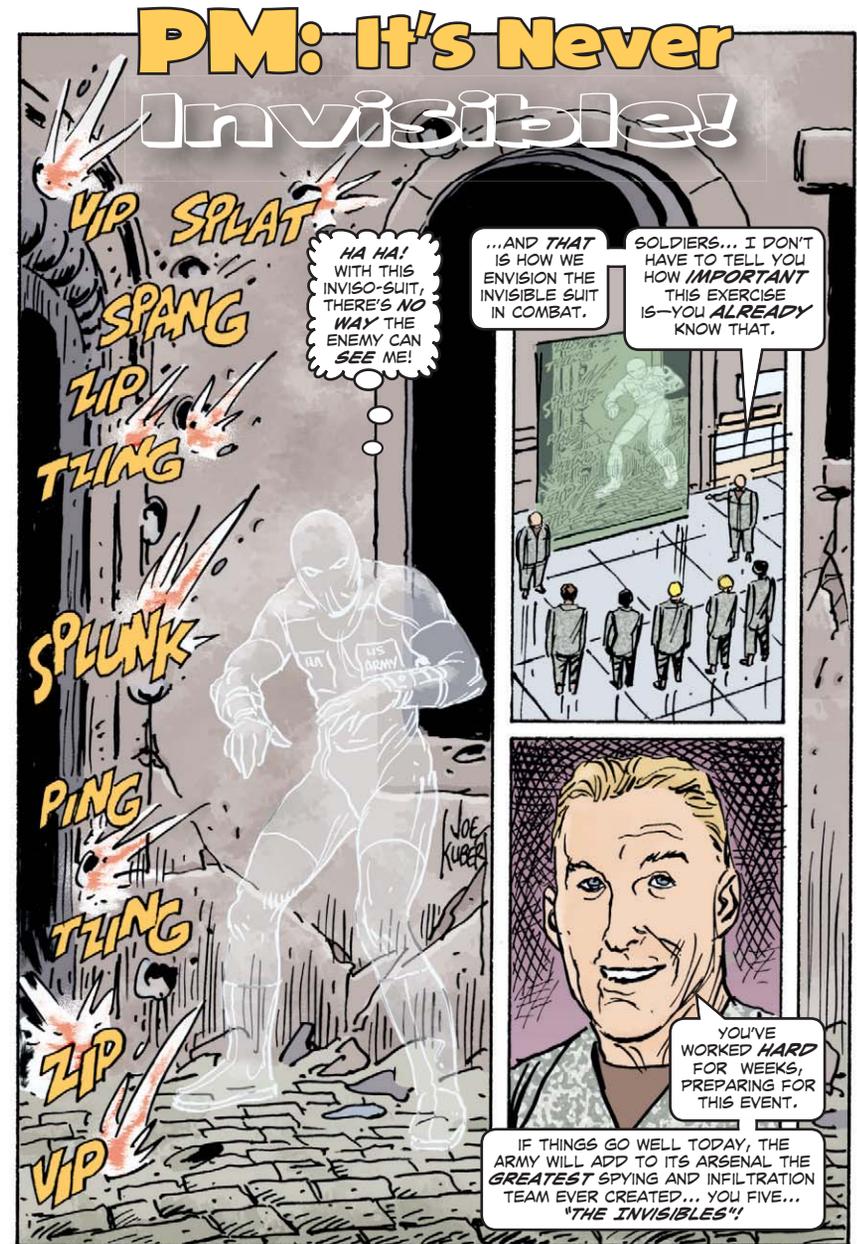
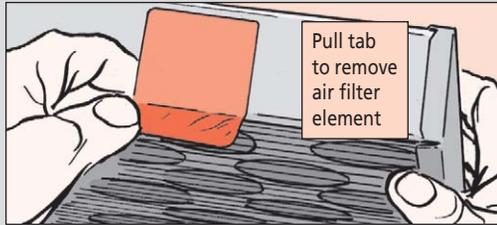
The system's internal filter element is under the operator's seat. So keep any tools and chains, duffel bags, hats or gloves away from air inlets.

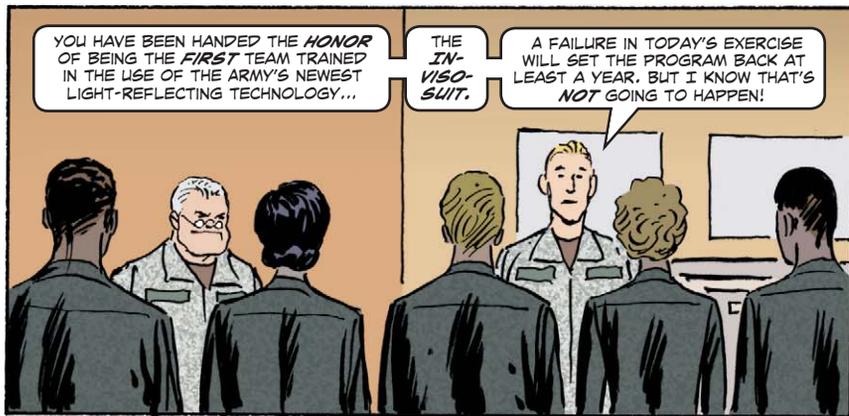
You'll find the system's external filter behind the curbside access door under the cab.

To get at the filter, open the door, then open the latch at the bottom of the filter bracket, and remove the bracket.



Remove the filter element by pulling on its tab. Lightly tap the filter element against your hand to remove the dust and sand. You can also use low-pressure air, 30 psi or less, to remove dust and sand from the filter element.

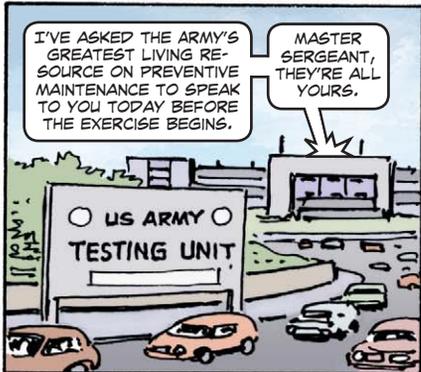




YOU HAVE BEEN HANDED THE **HONOR** OF BEING THE **FIRST** TEAM TRAINED IN THE USE OF THE ARMY'S NEWEST LIGHT-REFLECTING TECHNOLOGY...

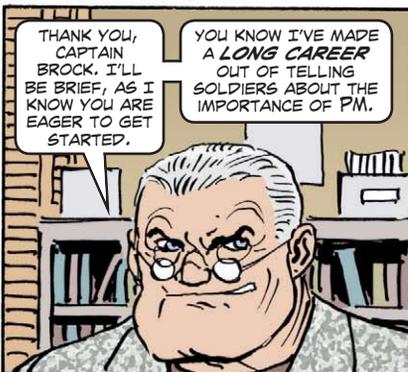
THE **IN-VISO-SUIT**.

A FAILURE IN TODAY'S EXERCISE WILL SET THE PROGRAM BACK AT LEAST A YEAR. BUT I KNOW THAT'S **NOT** GOING TO HAPPEN!



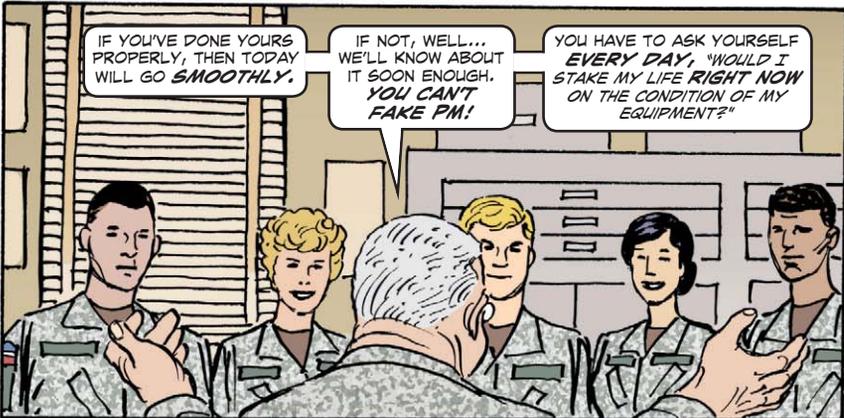
I'VE ASKED THE ARMY'S GREATEST LIVING RE-SOURCE ON PREVENTIVE MAINTENANCE TO SPEAK TO YOU TODAY BEFORE THE EXERCISE BEGINS.

MASTER SERGEANT, THEY'RE ALL YOURS.



THANK YOU, CAPTAIN BROCK. I'LL BE BRIEF, AS I KNOW YOU ARE EAGER TO GET STARTED.

YOU KNOW I'VE MADE A **LONG CAREER** OUT OF TELLING SOLDIERS ABOUT THE IMPORTANCE OF PM.



IF YOU'VE DONE YOURS PROPERLY, THEN TODAY WILL GO **SMOOTHLY**.

IF NOT, WELL... WE'LL KNOW ABOUT IT SOON ENOUGH. **YOU CAN'T FAKE PM!**

YOU HAVE TO ASK YOURSELF **EVERY DAY**, "WOULD I STAKE MY LIFE RIGHT NOW ON THE CONDITION OF MY EQUIPMENT?"



THANK YOU, MASTER SERGEANT, FOR THOSE **CHALLENGING WORDS**.



SOLDIERS, ATTENTION! GO GET INTO YOUR **IN-VISO-SUITS**. WHEN YOU RETURN MY GUEST AND I WILL MAKE A **FINAL REVIEW**.



OUR RESEARCH FOLKS DREAMED UP THIS CONCEPT FIVE YEARS AGO.



IT'S TAKEN THAT LONG TO ARRIVE AT THIS PROTOTYPE TEAM. THE IDEA IS QUITE SIMPLE-

SOLDIERS WEARING THE **IN-VISO-SUITS** SLIP BEHIND ENEMY LINES, GATHER INFORMATION AND THEN RETURN.



THE ENEMY NEVER EVEN KNOWS THAT THEY WERE THERE!



JUST HOW DO THESE CRAZY THINGS WORK?



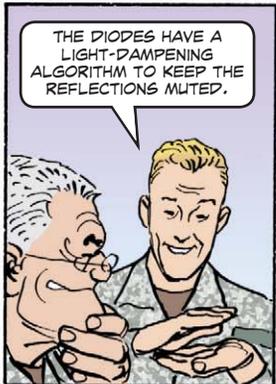
HERE'S THE KEY. EACH SUIT IS MADE UP OF THOUSANDS OF PHASE-INVERTING DIODES.



EACH DIODE ABSORBS THE LIGHT STRIKING IT AND BASICALLY EMITS THE SAME WAVELENGTH BACK.



BUT UNLIKE A MIRROR, THERE IS NO SHININESS TO GIVE AWAY THE SOLDIER'S LOCATION, NO REVEALING GLINTS OF LIGHT.

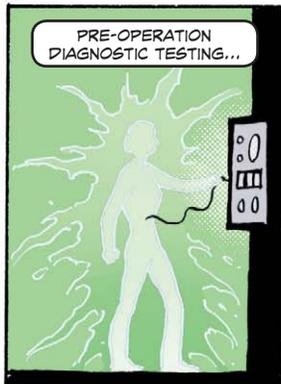


THE DIODES HAVE A LIGHT-DAMPENING ALGORITHM TO KEEP THE REFLECTIONS MUTED.



AMAZING! AND WHAT MAINTENANCE HAS TO BE DONE TO THEM?

THREE THINGS.



PRE-OPERATION DIAGNOSTIC TESTING...



...BATTERY RECHARGING...



...AND INSPECTING THE SUIT FOR RIPS OR TEARS...



IF ANY OF THESE THREE MAINTENANCE ELEMENTS ARE NEGLECTED, THE SUIT COULD FAIL!

WHO DOES THIS MAINTENANCE?



OUR CONCEPT IS FOR EACH SOLDIER TO BE RESPONSIBLE FOR THE PM ON HIS OR HER SUIT.

THEY ARE MOLDED TO THE FORM OF EACH INDIVIDUAL, SO NO ONE CAN WEAR ANY-ONE ELSE'S SUIT.

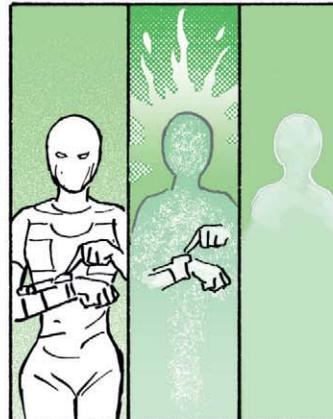
WHY DON'T YOU SELECT ONE TEAM MEMBER FOR A SHORT DEMONSTRATION.



HOW 'BOUT THE SPECIALIST?

SPECIALIST MORENO, PLEASE POWER UP YOUR INVISO-SUIT.

YES, SIR.



I WOULDN'T HAVE BELIEVED IT IF I HADN'T "SEEN" IT WITH MY OWN EYES!

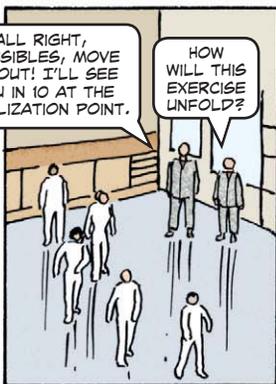


THAT'S ENOUGH, SPECIALIST.

WE DON'T WANT TO DRAIN YOUR BATTERY BEFORE THE EXERCISE.



THESE SUITS SUCK UP POWER LIKE A VACUUM CLEANER! A FULLY CHARGED BATTERY PACK WILL POWER THE SUIT FOR ABOUT AN HOUR.



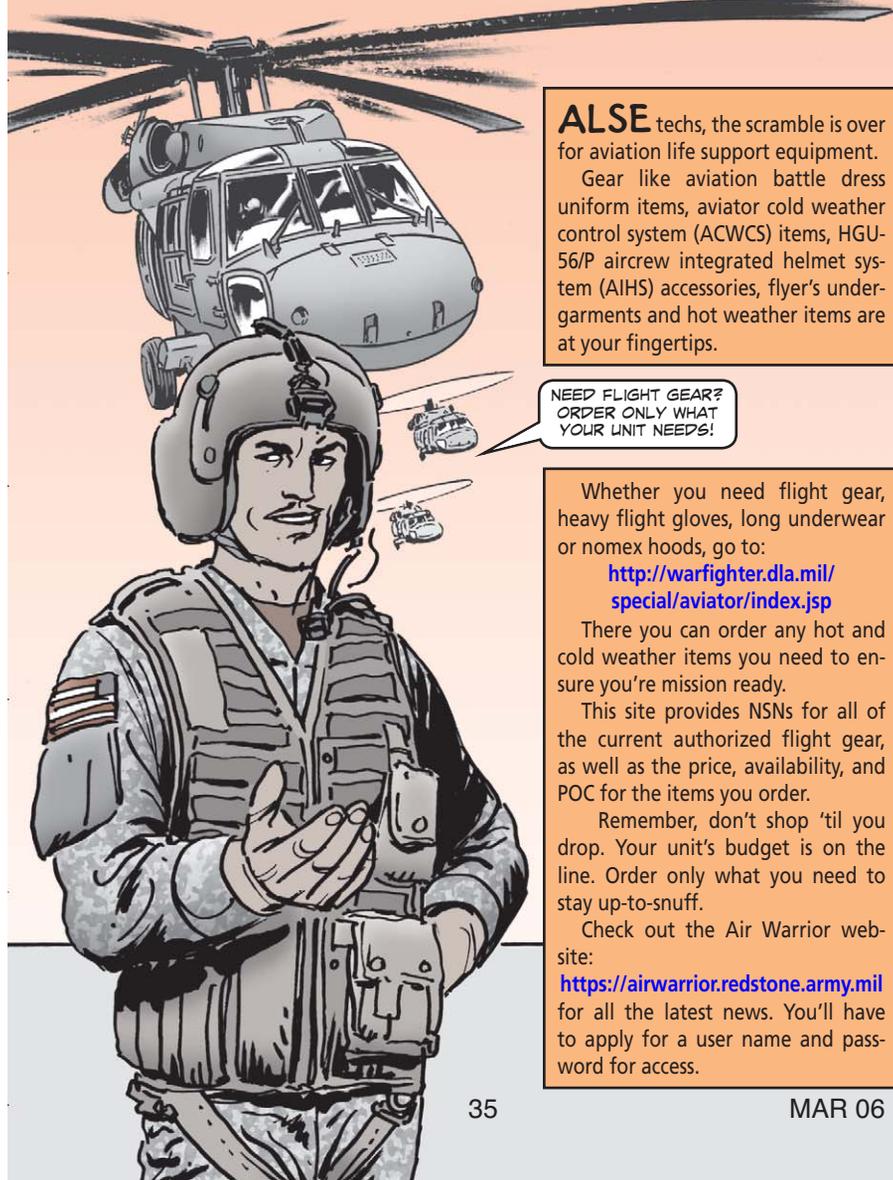
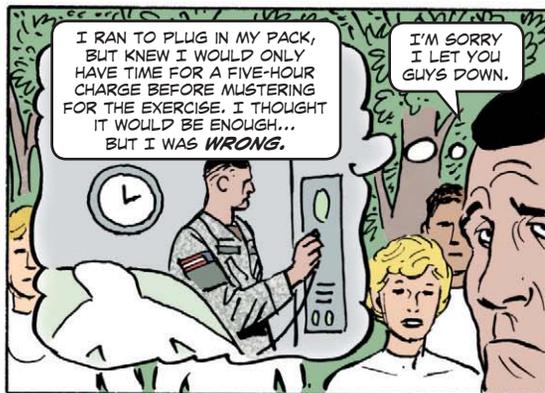
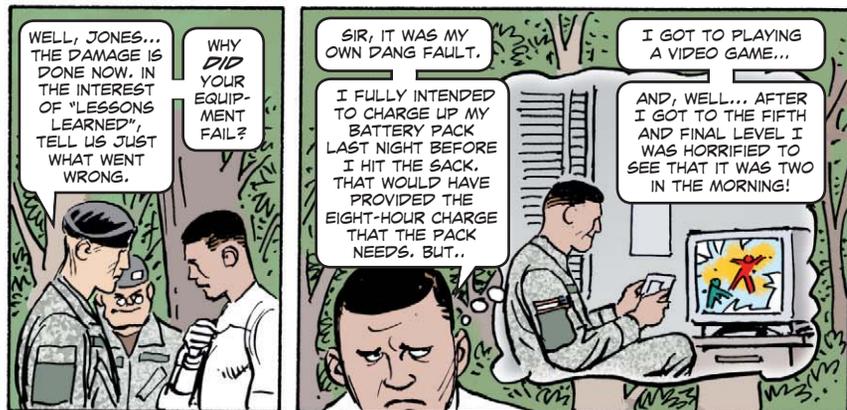
ALL RIGHT, INVISIBLES, MOVE ON OUT! I'LL SEE YOU IN 10 AT THE MOBILIZATION POINT.

HOW WILL THIS EXERCISE UNFOLD?



ELSE...

Unscrambling the Flight Gear Scramble



ELSE techs, the scramble is over for aviation life support equipment. Gear like aviation battle dress uniform items, aviator cold weather control system (ACWCS) items, HGU-56/P aircrew integrated helmet system (AIHS) accessories, flyer's undergarments and hot weather items are at your fingertips.

NEED FLIGHT GEAR? ORDER ONLY WHAT YOUR UNIT NEEDS!

Whether you need flight gear, heavy flight gloves, long underwear or nomex hoods, go to:

<http://warfighter.dla.mil/special/aviator/index.jsp>

There you can order any hot and cold weather items you need to ensure you're mission ready.

This site provides NSNs for all of the current authorized flight gear, as well as the price, availability, and POC for the items you order.

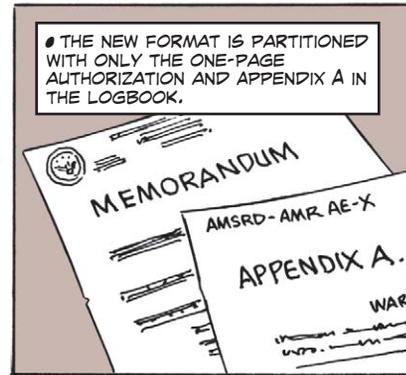
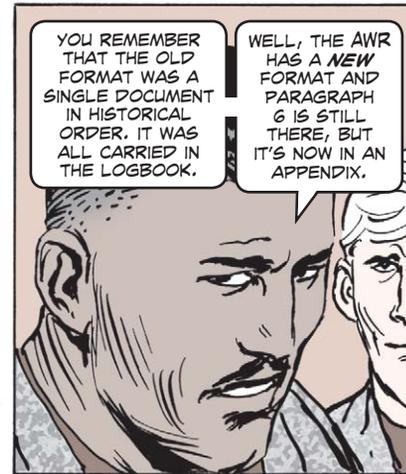
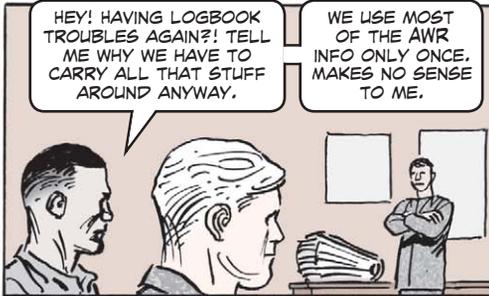
Remember, don't shop 'til you drop. Your unit's budget is on the line. Order only what you need to stay up-to-snuff.

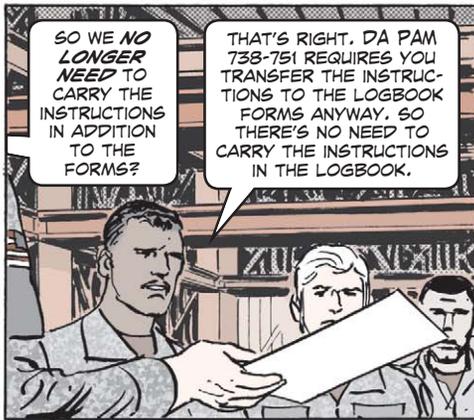
Check out the Air Warrior website:

<https://airwarrior.redstone.army.mil> for all the latest news. You'll have to apply for a user name and password for access.

The Logbook

and the AWR



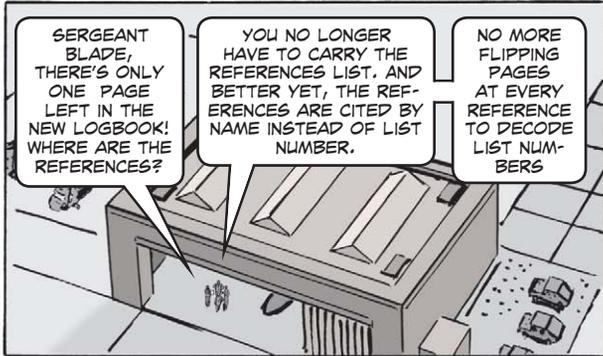


SO WE **NO LONGER NEED** TO CARRY THE INSTRUCTIONS IN ADDITION TO THE FORMS?

THAT'S RIGHT. DA PAM 738-751 REQUIRES YOU TRANSFER THE INSTRUCTIONS TO THE LOGBOOK FORMS ANYWAY. SO THERE'S NO NEED TO CARRY THE INSTRUCTIONS IN THE LOGBOOK.



AND YOU NO LONGER HAVE TO CARRY THE CONFIGURATION AND INSTALLATION DETAILS—INCLUDING QUALITY CHECKS—AFTER THE INSTALLATION IS COMPLETE.



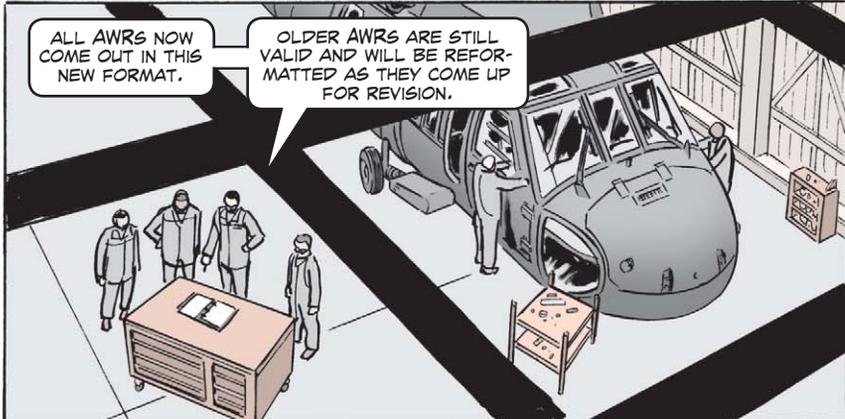
SERGEANT BLADE, THERE'S ONLY ONE PAGE LEFT IN THE NEW LOGBOOK! WHERE ARE THE REFERENCES?

YOU NO LONGER HAVE TO CARRY THE REFERENCES LIST. AND BETTER YET, THE REFERENCES ARE CITED BY NAME INSTEAD OF LIST NUMBER.

NO MORE FLIPPING PAGES AT EVERY REFERENCE TO DECODE LIST NUMBERS



OK, HERE'S THE BIG QUESTION: WHEN WILL WE GET REPLACEMENTS FOR THE OLD AWRs?



ALL AWRs NOW COME OUT IN THIS NEW FORMAT.

OLDER AWRs ARE STILL VALID AND WILL BE REFORMATTED AS THEY COME UP FOR REVISION.

HERE'S THE **OLD** AND THE **NEW** AWR FORMAT SIDE-BY-SIDE AND BROKEN DOWN IN SIMPLE CHART FORM.



Old all-inclusive format	New partitioned format
1. References	1. Scope (What and Why)
2. Scope	2. Validity (Supersedes and Terminates)
3. Configuration	3. List of appendices
4. Operations and restrictions (including installation)	4. Point of contact
5. Special inspection and instructions	Signature
6. Logbook entries	A. Restrictions and operation information
7. Termination	B. Configuration and installation details
8. Point of contact	C. Inspection, maintenance and logbook entries
Signature	D. References
Logbook Form 2408-13-1	Logbook form 2408-13-1



REMEMBER, YOU'LL STILL NEED A FULL COPY TO FILE, BUT YOUR LOGBOOK COPIES WILL HAVE FEWER PAGES.

IT SHOULD BE EASIER TO FIND INFORMATION AND DIVIDE AND PROVIDE IT WHERE NEEDED.

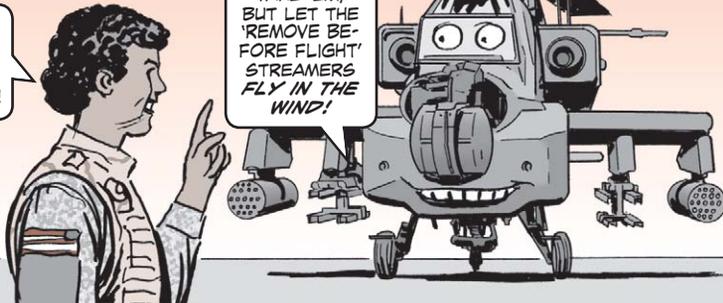


IF YOU HAVE QUESTIONS, CONTACT THE AMCOM HEADSHED.

CALL DSN 897-8408, (256) 313-8408.

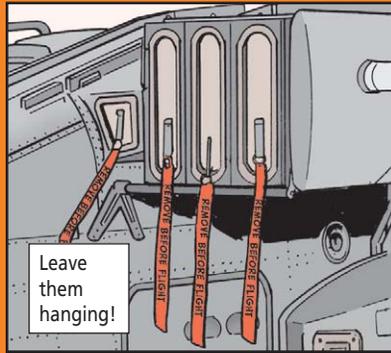
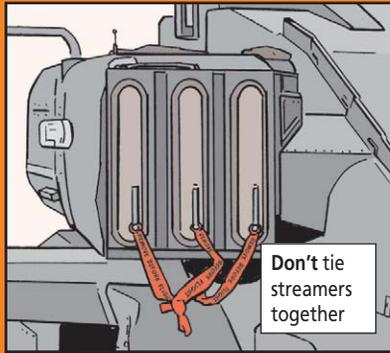
IT'S TIME FOR YOUR COVERS!

I'LL GLADLY TAKE 'EM, BUT LET THE 'REMOVE BEFORE FLIGHT' STREAMERS FLY IN THE WIND!



STREAMERS IN A KNOT?

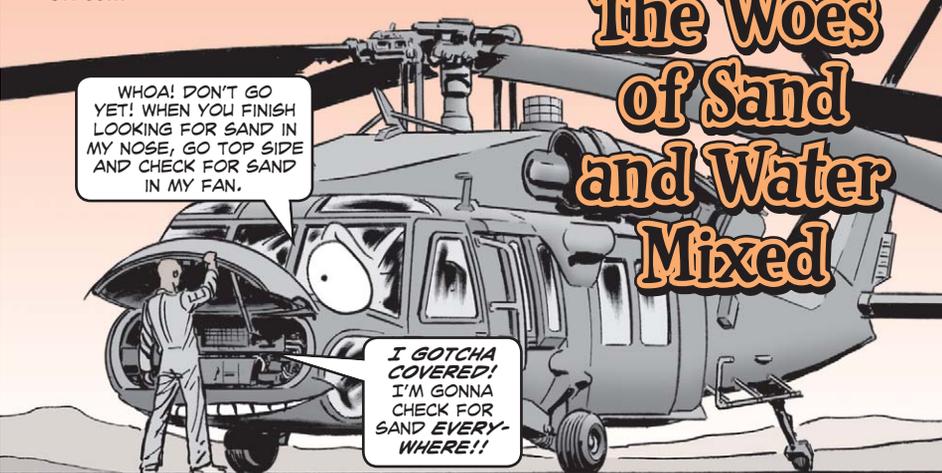
Mechanics, "Tie A Yellow Ribbon Round The Old Oak Tree" was a pretty good song. But your airframe shop won't be in a singing mood if you tie together the red REMOVE BEFORE FLIGHT streamers to prevent losing the AH-64 primary exhaust covers. Tying the streamers together causes more problems than it prevents. If one of the covers falls out on a windy day, it will swing and bang against the airframe. That means airframe damage that could've been avoided. Then your airframe shop will probably want to tie that streamer tightly around your neck for the work you're causing them! Put the exhaust covers on your bird, but leave the streamers untied.



Big and Tall Coveralls

Coveralls are not one-size-fits all. For the big and tall, TM 10-8400-201-23 stops at size 48 long for the green flight suit. NSN 8415-01-437-0741 will bring you size 52 regular for those who need that size. Write in the REMARKS block "NSN not on AMDF."

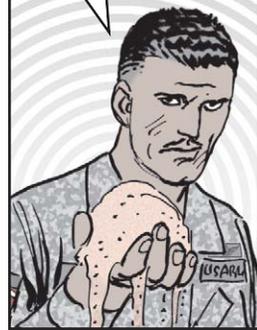
WHOA! DON'T GO YET! WHEN YOU FINISH LOOKING FOR SAND IN MY NOSE, GO TOP SIDE AND CHECK FOR SAND IN MY FAN.



The Woes of Sand and Water Mixed

SAND! IF IT'S NOT IN ONE PLACE, IT'S IN ANOTHER.

MECHANICS, YOU KNOW EVERY NOOK AND CRANNY OF YOUR BLACK HAWK IS A RESTING PLACE FOR SAND.



That's why pre-flight inspections in the desert are doubly important before washing your bird. Get all the sand out first by using a brush or vacuum, then wash. Here's why: A sand and water mixture turns to a mud-like substance that hardens when it dries.

Say you fail to vacuum or brush out settled sand at the bottom of the vaneaxial oil cooler fan. Then you wash the bird.

You could face a fan imbalance in the drive shaft, which leads to bearing failure or worse.

So wash your bird only after you've removed all hidden sand from small places.



PRC-90 Radio Test Set

Having problems finding a test set for the AN/PRC-90 radio? You need the TS-24B test set. It's covered by TM 11-6625-3203-12, *Operator's Aviation Unit and Intermediate Maintenance Manual for Radio Test Set TS-24B* (NSN 6625-01-128-8588). The TM is included on EM 0181.

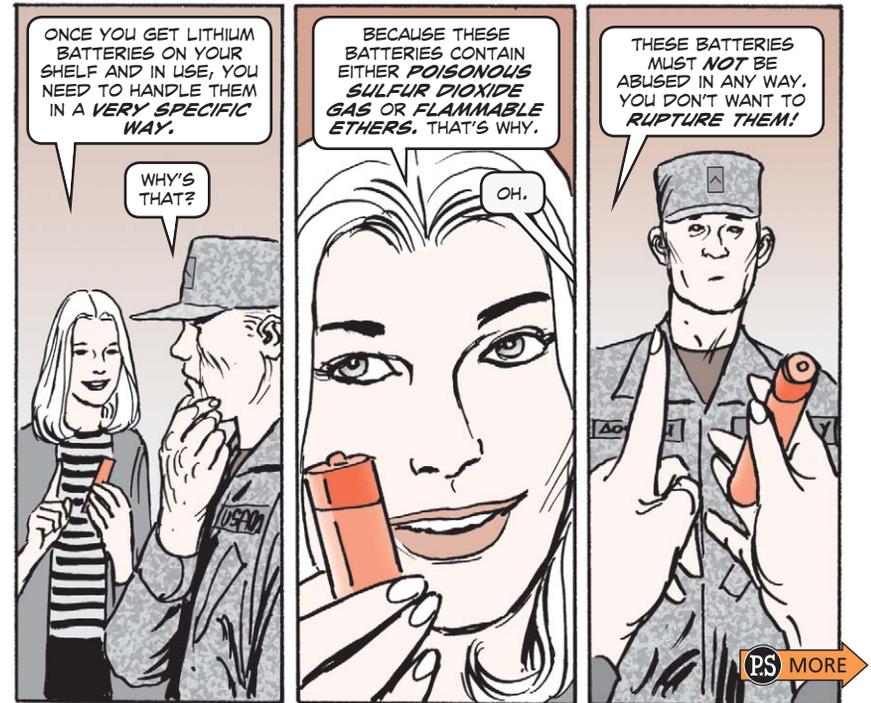


Over the last couple of years, many lithium batteries have been replaced by newer ones or gone through a change of designation, unit of issue or NSN. So purge that list of important battery NSNs you have in a green notebook in your pocket and bring it up to date.

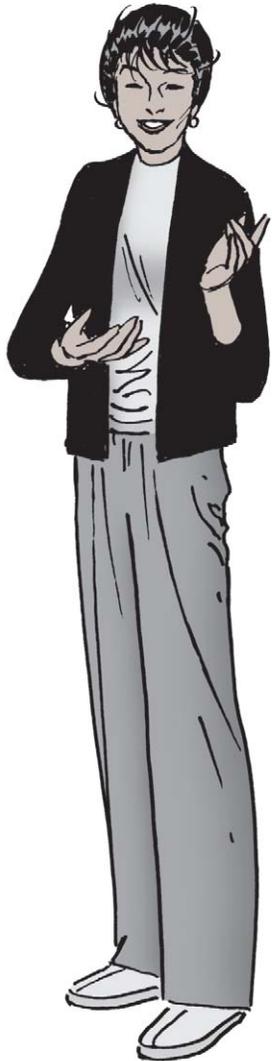
Here's what they were and what they are now. (All new NSNs are managed by Defense Supply Center, Richmond, S9G.)

Old				New		
Type	NSN	U/I		Type	NSN	U/I
BA-1372	6135-00-801-3493	PG	➔	BA-5372	6135-01-214-6441	PG (10 EA)
BA-5112	6135-01-235-4168	EA	➔	BA-5112A	6135-01-439-6229	PG (4 EA)
BA-5557	6135-01-088-2707	EA	➔	BA-5557A	6135-01-448-4680	PG (4 EA)
BA-5567	6135-01-090-5365	PG	➔	BA-5567A	6135-01-447-5082	PG (12 EA)
BA-1567	6135-01-485-7402	EA	➔	BA-5567A	6135-01-447-5082	PG (12 EA)
BA-5588	6135-01-088-2708	EA	➔	BA-5588A	6135-01-447-5083	PG (5 EA)
BA-5590	6135-01-036-3495	EA	➔	BA-5590B	6135-01-438-9450	PG (4 EA)
BA-5598	6135-01-034-2239	EA	➔	BA-5598A	6135-01-447-5081	PG (4 EA)
BA-5599	6135-01-069-8575	EA	➔	BA-5599A	6135-01-447-4001	PG (4 EA)
BA-5600	6135-01-168-2944	EA	➔	BA-5600A	6135-01-441-0402	PG (8 EA)
BA-5800	6665-99-760-9742	EA	➔	BA-5800A	6135-01-440-7774	PG (8 EA)
BA-1568	6135-00-838-0706	EA	➔	BA-5368	6135-01-455-7947	PG (10 EA)
BA-1574	6135-00-073-8939	EA	➔	BA-5374	6135-01-455-9646	PG (10 EA)

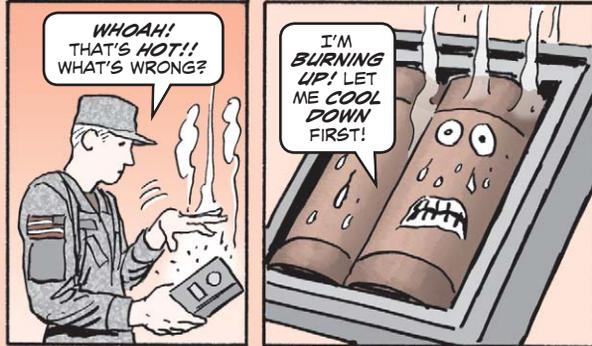
Battery BA-5347, NSN 6135-01-455-7946, has not changed. Neither has BA-5390/U, NSN 6135-01-501-0833, nor BA-5093, NSN 6135-01-216-9771.



HERE'S HOW TO HANDLE THEM PROPERLY...



- Keep batteries in their original packaging until you're ready to use them.
- During operation, if the battery compartment is hot to the touch, hisses, makes a burping sound, or if you smell sulfur, turn off the equipment and let it cool for at least an hour. Keep everyone away from the area.



- Never short-circuit, crush, puncture or incinerate batteries.
- Never use batteries that are swollen, or that won't fit easily into the battery compartment.



- Never use batteries if there is liquid in the plastic storage wrap or if they've bulged or burst.
- Never attempt to charge a primary lithium-sulfur dioxide battery.
- If you suspect bad batteries, try substituting good ones. If any defects are found, report these through normal channels.



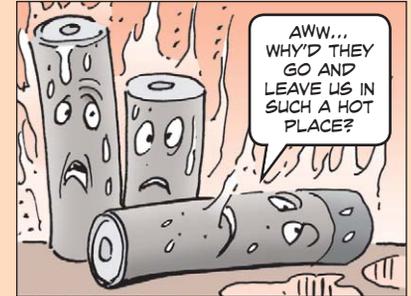
- If there is more than one prime power lithium battery in the equipment, and you find a bad one, replace all of them. Use batteries from the same manufacturer and with the same date code, if possible. Mixing batteries can lead to violent venting.
- When you aren't planning to use your equipment for 30 days or longer, take out the batteries to prevent battery corrosion damage.
- Never smoke or use an open flame in a battery storage area.



- Never use a Halon fire extinguisher on a lithium battery fire. In the event of a lithium fire, evacuate the area immediately and call for trained firefighters.



- Never store batteries near heat, flame or other hazardous materials.



- If the battery has a complete discharge device (CDD), have the person designated to discharge the battery before turn-in or disposal do his stuff.
- Have personal protection equipment on hand and use it when handling batteries that are leaking, bulging, swelling or deformed. Never handle hot batteries.
- NSN 4240-00-542-2048 will get you a face shield. Get a full body apron with NSN 8415-00-082-6108.

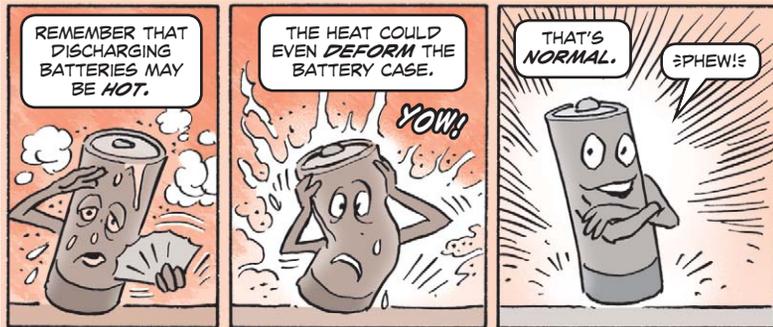




Discharging

If you're the designated battery discharge person and it's your job to activate CDDs, here's what you need to do:

- Discharge the batteries in a secure, well-ventilated area away from people and hazardous material.
- Set discharging batteries at least two inches apart on all sides.
- Let the batteries sit a minimum of five days for complete discharge.



At the end of a normal, complete discharge cycle, the amount of lithium remaining in the battery will be small enough to let you dispose of the battery as non-hazardous waste. Even so, some places may require special procedures. Check with your local environmental office for any federal, state and local requirements on battery disposal.

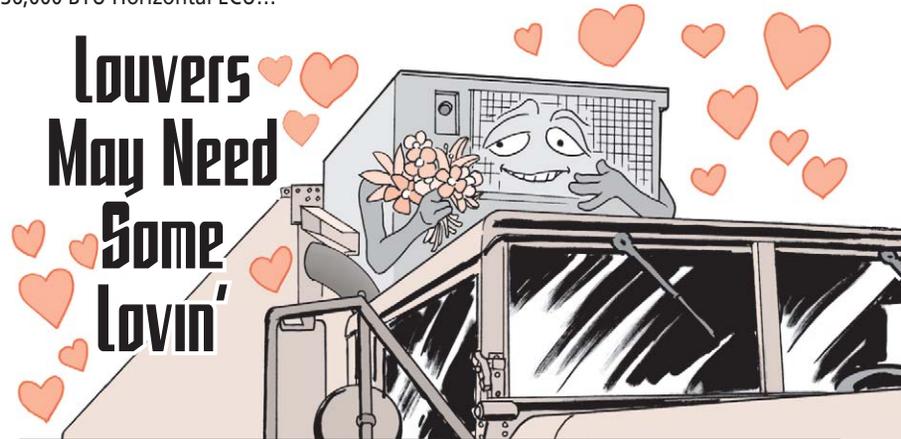
Using these are two pubs will help you to handle batteries safely:

- SB 11-6, *Primary Battery Supply and Management Data*
- TB 43-0134, *Battery Disposition and Disposal*



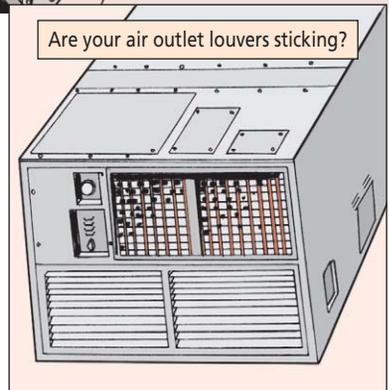
36,000 BTU Horizontal ECU...

Louvers May Need Some Lovin'



Dear MSG Half-Mast,
What's the deal with the louvers on the condenser air outlet on the 36,000 BTU horizontal environmental control unit (ECU), NSN 4120-01-467-2638? Every once in a while, the louvers don't open when the ECU is turned on and sometimes they don't close when the ECU is turned off. Of course, when they don't open, the temperature in the unit soars and the high pressure cut-out switch turns the ECU off. Haven't we given the louvers enough lovin' or what?

SGT L.C.N



Dear Sergeant L.C.N.,

Failure of the condenser air outlet louvers to open or close is due to binding of the louver actuation cables. They get out of alignment and then they bind!

The problem has been taken care of on new model ECUs—those made after Sep 04—but older models with these serial numbers:

- *2111-001A to 2111-150A
 - *2308-A4-001A to 2308-A4-175A
 - *2211-B9-0001A to 2211-B9-0118A
 - *S9500-001 to S9500-014
- may need you to fix them.

You fix them with a product improvement kit made up by CECOM. To get the kit, email: Dono.Oglesby@us.army.mil

Or call CE-LCMC at (732) 532-3990 or DSN 992-3990.

Half-Mast

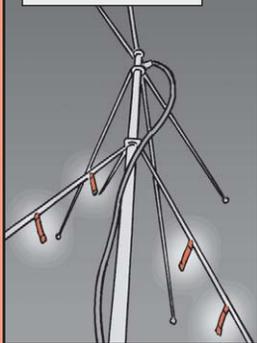
[Click here for a copy of this article to save or email](#)

HEY,
HARRY,
GOT A
LIGHT?

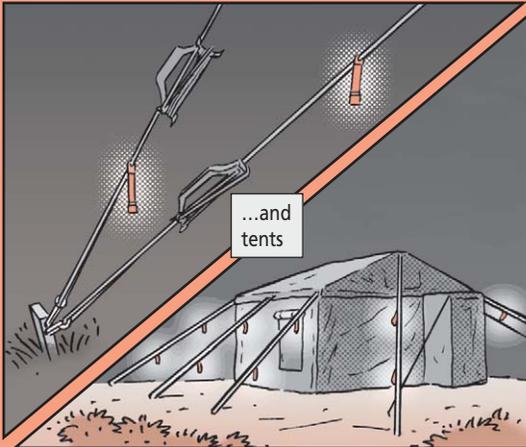


Lightsticks are handy for marking just about anything—guy wires on mast antennas, landing strips, mine fields, birthday cakes, you name it. Now the Army has a series of electronic lightsticks available. Unlike the old chemlights, these new lights operate on batteries.

Use lightstick to mark guy wires on mast antennas...



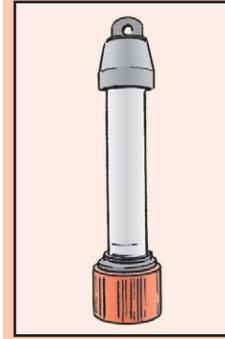
...and tents



HERE ARE SOME OF THEIR FEATURES...



- simple on/off switch



- uses two AA batteries
- batteries last 50 or 120 hours, depending on the model of lightstick
- the lightstick itself provides more than 3,000 hours of use.
- some models cast a 360° light, others a 180° light
- weighs three ounces with batteries
- five inches long, one inch in diameter
- impact resistant and durable
- waterproof to a depth of 150 feet
- available in six colors
- no bulb to replace

AND HERE ARE THEIR NSNs...



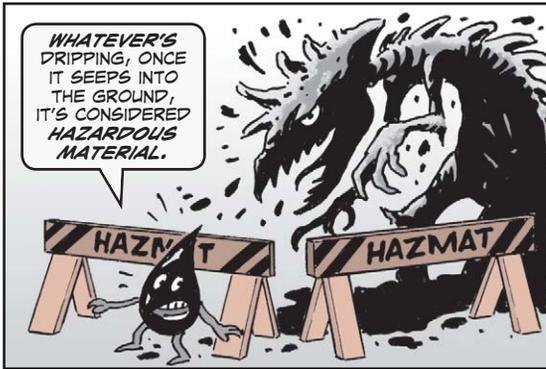
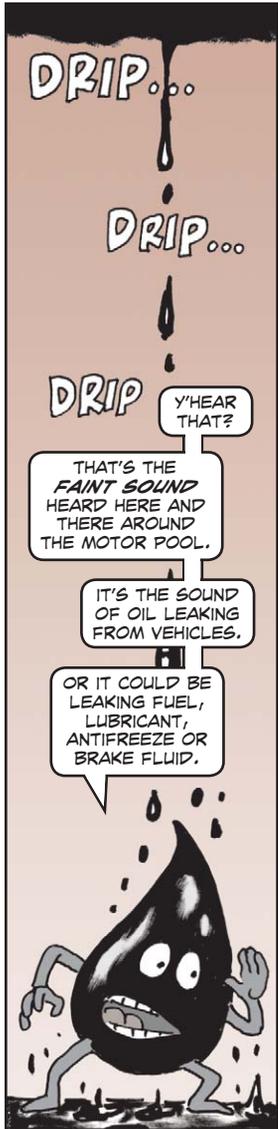
Also available are two infrared (IR) lightsticks. NSN 6230-01-496-1462 brings a lamp in which batteries will last for 50+ hours with a 360° light. NSN 6230-01-496-1461 gives you the same lamp but with a 180° light. Both lightsticks can be seen through night vision devices.

Maximum Output (in Foot Lamberts*)	Battery Life (in hours)	Visible Area	Color	NSN 6230-01-464-
5.5	120+	360°	green	8069
5.5	120+	360°	blue	8072
5.5	120+	360°	white	8073
5.5	120+	360°	yellow	8074
5.5	120+	360°	orange	8077
5.5	120+	360°	red	8078
8.5	120+	180°	green	8079
8.5	120+	180°	blue	8082
8.5	120+	180°	white	8083
8.5	120+	180°	yellow	8084
8.5	120+	180°	orange	8296
8.5	120+	180°	red	8297
10.5	50+	360°	green	8295
10.5	50+	360°	blue	8305
10.5	50+	360°	white	8306
10.5	50+	360°	yellow	8308
10.5	50+	360°	orange	8311
10.5	50+	360°	red	8313
15.5	50+	180°	green	8320
15.5	50+	180°	blue	8322
15.5	50+	180°	white	8321
15.5	50+	180°	yellow	8323
15.5	50+	180°	orange	8325
15.5	50+	180°	red	8327

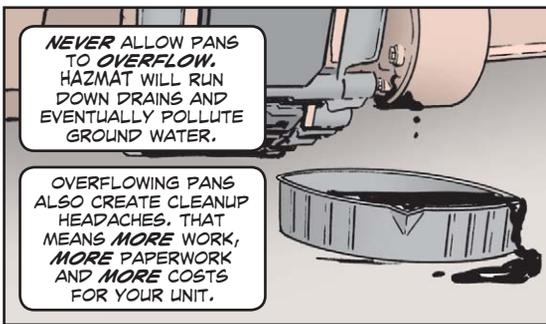
*NOTE: A foot lambert (FL) is a measurement of the light produced on the surface of the lamp. The higher the FL, the brighter the lamp.

A DRIP PAN

HAZMAT PLAN

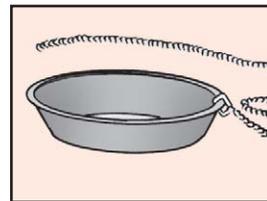


LOOK AT THE PANS **EVERY DAY**, BEFORE AND AFTER WORK. EMPTY THEM INTO APPROVED HAZMAT CONTAINERS OR DRUMS.



BUT **RUBBER** PANS WON'T CRACK, AND THEY'LL SNAP BACK IF THEY'RE CRUSHED.

NSN	Size
4940-01-490-	
2455	3 gal
2463	6 1/2 gal
2470	15 gal



NSN	Size
4940-01-	
504-5270	3 gal
504-5273	6 1/2 gal
505-0680	15 gal

REPORT ANY OVERFLOWING PANS OR SPILLS AROUND THE MOTOR POOL TO YOUR UNIT'S HAZMAT OFFICER OR NCO. HE HAS THE EQUIPMENT AND KNOW-HOW TO GET RID OF HAZARDOUS WASTE SAFELY.

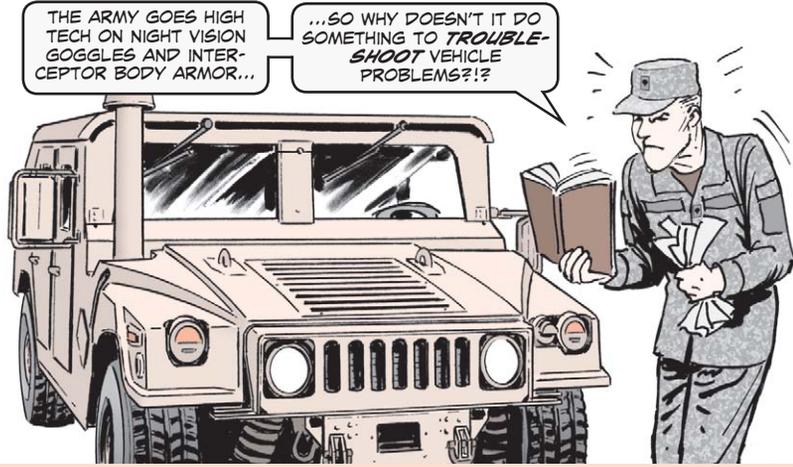
COMMON ITEMS LIKE DRY SWEEP AND RAGS BECOME SOAKED AND CONTAMINATED WITH FUEL, OIL, SOLVENTS AND THE LIKE. THEY, TOO, MUST BE HANDLED AS HAZARDOUS WASTE.

ONE OTHER THING: IT'S **NOT** JUST DRIP PANS AND THEIR CONTENTS YOU NEED TO WORRY ABOUT.



MSDs and IETMs

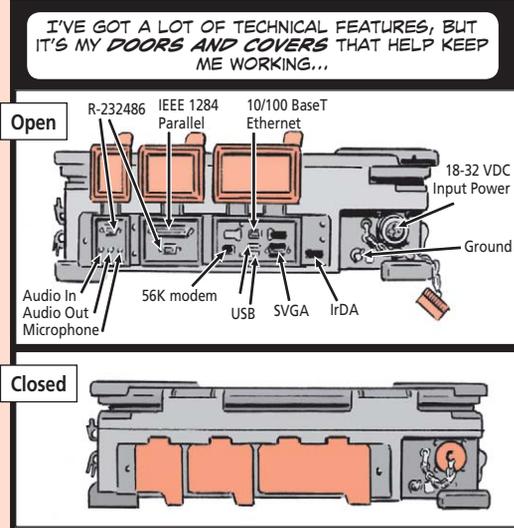
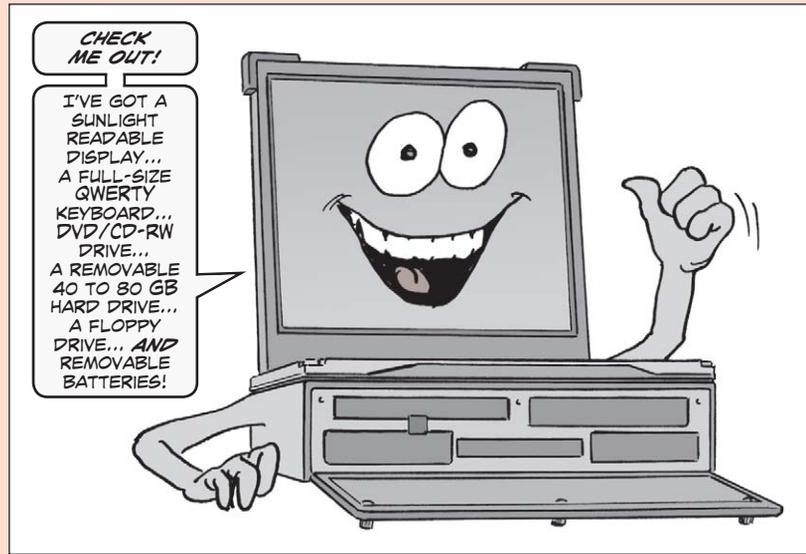
New Maintenance Tools

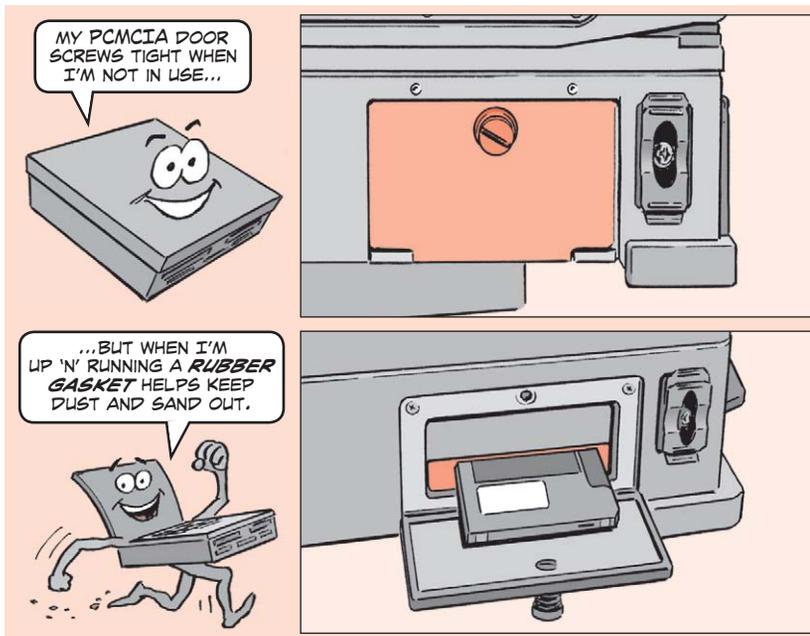


Soldiers like high tech items such as night vision goggles, HMMWV ballistic glass, Interceptor body armor, and unmanned aerial vehicles because they give them an edge over their enemies.

In the same way, the maintenance support device (MSD) with interactive electronic technical manuals (IETMs) improve the mechanic's ability to maintain the warfighter's edge.

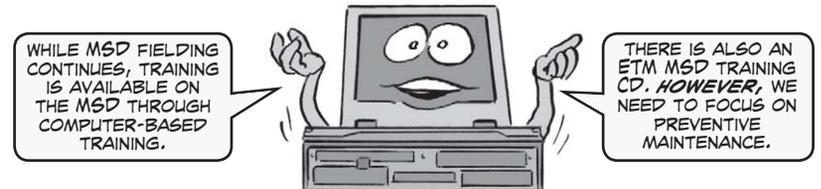
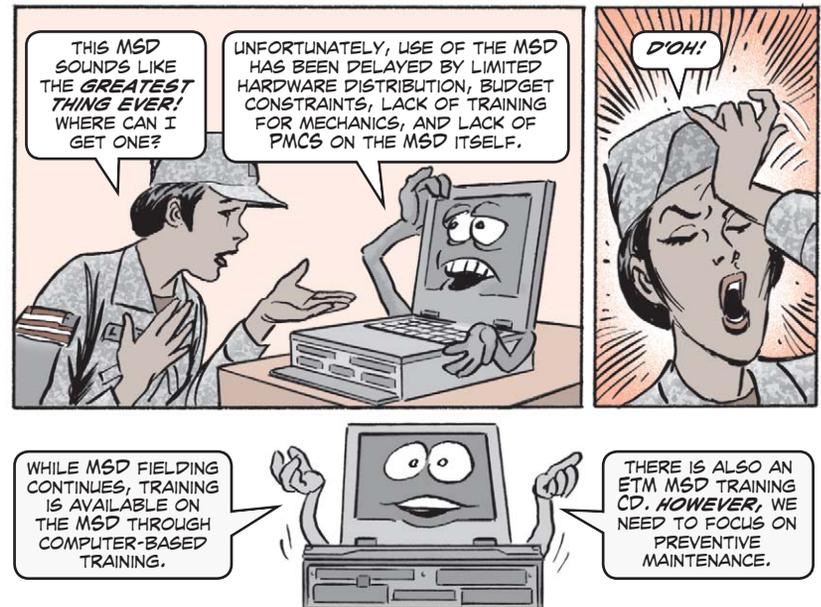
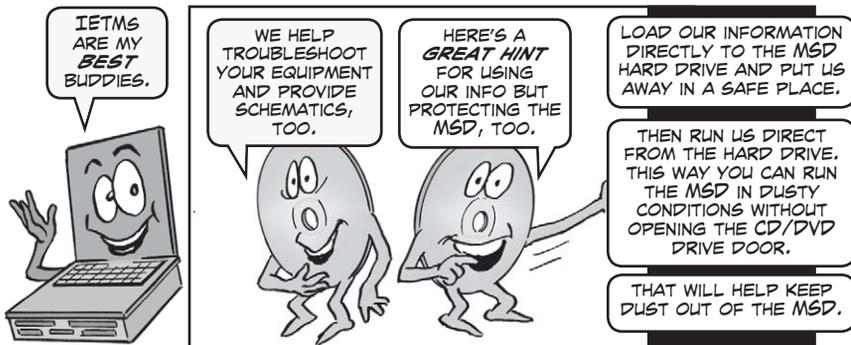
The MSD automates equipment diagnostics by electronically troubleshooting systems as varied as the Stryker, HMMWV, Abrams, Black Hawk, Javelin, Patriot, and the FMTVs, to mention a few. Its use greatly reduces human error and automates the parts ordering process.





A real value of the MSD is the ability to upload multiple IETMs giving mechanics immediate access to these new tools. Diagnostics can be run while moving through the IETM troubleshooting procedures. IETMs include great features like Point 2 Point™ schematics for electronic circuits, air and hydraulic systems. An added benefit is a reduction in the number of paper TMs the unit needs to carry.

The MSD also downloads data from your equipment and is used to load new software to your equipment.



Maintaining the MSD

The MSD is more rugged and versatile than laptop computers. It can be powered by AC or DC sources and by NATO vehicle adapters with connectors included in the carrying case. The MSD also has a display screen that is readable in sunlight. It stands up to desert hazards such as heat and sand better than laptops, but it isn't immune to damage or system failure.

So how do you keep MSDs working in the desert? Here's the scoop.

DON'T...

- Pour any liquid cleaner or spray any aerosol cleaner on the MSD.
- Wipe the display screen with a dry cloth.
- Remove the removable hard drive while the system is powered on.

DO...

- Turn off MSD power before cleaning.
- Use isopropyl alcohol for cleaning.
- Gently clean the display screen with a lint-free cloth dampened in isopropyl alcohol. Turn the cloth frequently to avoid scratching the screen.
- Use commercially available cleaning kits each month for floppy disk and DVD drives. Follow kit instructions.



FOLLOW THESE
"BEFORE
OPERATIONS"
PROCEDURES...



ITEM	Procedures
MSD-B	Inspect for visible signs of damage. Check connector covers and latches to ensure proper function.
Display screen	Inspect for excessive dust or dirt. Clean as needed.
Peripheral bays	Open the access doors. Inspect drives, batteries and connectors for signs of damage. Clean drive bays as needed with a soft bristle brush.
Keyboard	Inspect for visible damage. Use a cloth dampened with isopropyl alcohol or a soft bristle brush to wipe clean. Press all keys to ensure rebound on release.
Batteries	Remove and check for damage and state of charge. Batteries should have a full charge.
Power supply/charger	Inspect the AC power cord and DC output cable for visible damage.
NATO power cable	Check cable and connectors for visible signs of damage.
Transit case	Inspect for damage and missing components. Check that the latches will securely close the case.
European power connector adapter	Inspect for completeness and damage. Check for presence of fuse. If fuse is missing or blown, replace it with a commercially available 13-amp, 250-volts AC, F-type quick-acting, fast-blow fuse.
PCMCIA cards	Check for damage. Install required cards. If no cables are attached to installed cards, close the access door before turning the system on.
PCMCIA slots and other MSD openings	<p>Ensure power is off. To clean slots/openings, remove PCMCIA cards, batteries and removable hard drive. Place removed items on a clean, stable surface. If available, use a can of commercially available compressed air to blow dust and dirt off openings.</p> <p>DO NOT USE AN AIR COMPRESSOR.</p> <p>DO NOT OPEN THE MAIN CHASSIS — THE WARRANTY WILL BE VOIDED.</p> <p>If slots/openings need cleaning from dust or finger oils, lightly wipe inside connectors with a cotton or foam swab moistened with isopropyl alcohol and let it dry.</p> <p>Re-install cards, batteries and the removable hard drive.</p>

Taking Care of Repairs

There is a five-year three-month warranty on the MSD that covers everything, including the batteries. To replace batteries or get tech assistance call the Miltope MSD hotline, 888-577-6780, or email:

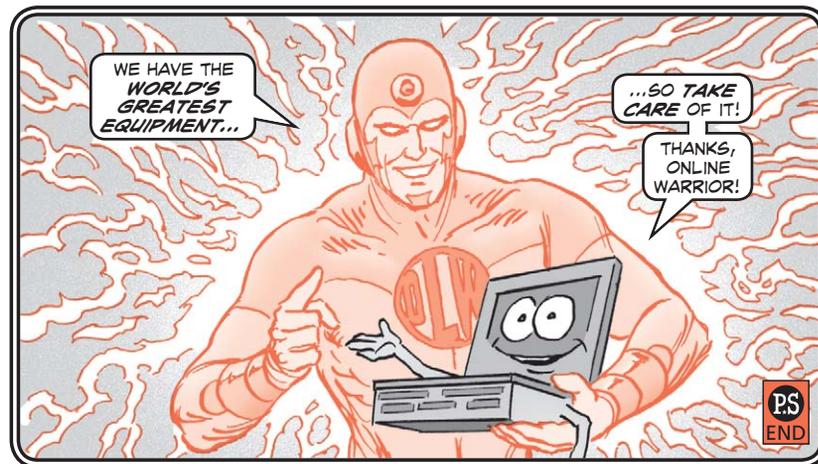
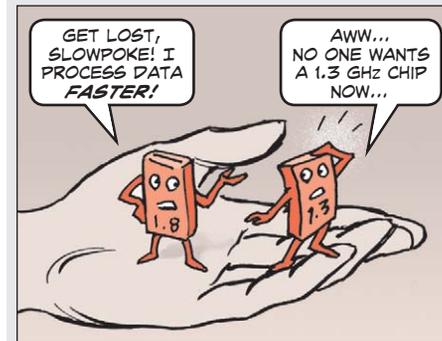
msdmail@miltope.com

TMDE/RDECOM also run a help desk for internal combustion engine vehicles, 877-564-1137.

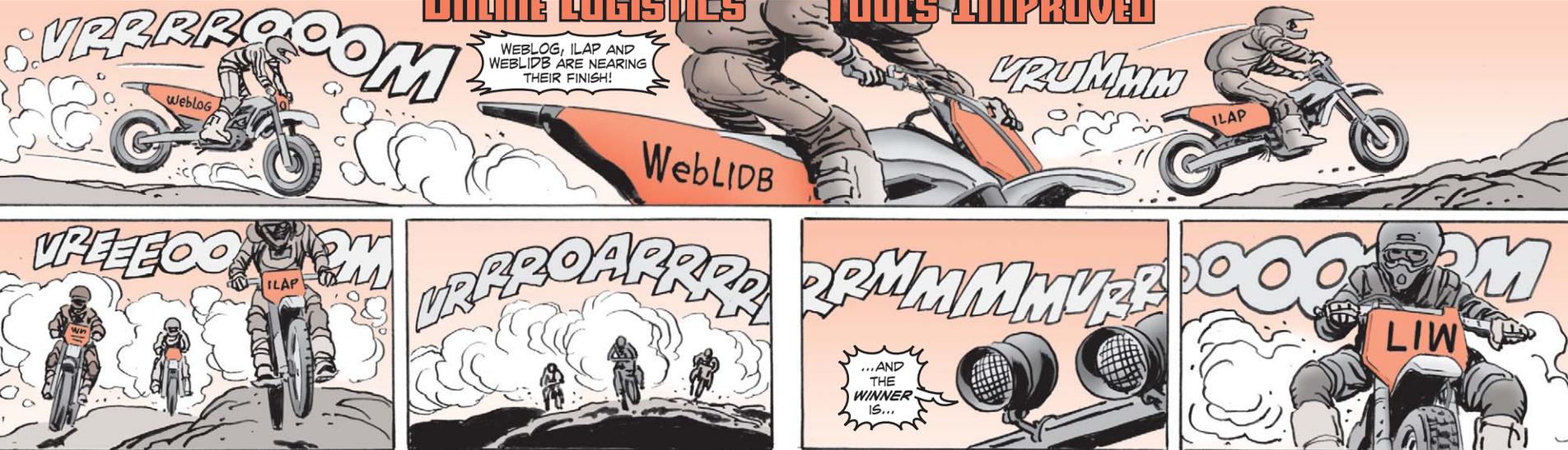
When your MSD is missing parts or not working right, call the MSD hotline. If the problem can't be fixed over the phone, you'll get instructions for returning the MSD along with prepaid shipping. If you're in SWA there's a difference in shipping times between the MSD and the newer MSD version 2. The MSD 2 contract saves 23 days of turnaround time by immediately shipping a replacement MSD after authorizing return of your damaged MSD.

Keeping Up with Change

As the system is being fielded, it is also taking advantage of technology advances. The Pentium processor has been a 1.3 GHz chip, but is now a 1.8 GHz. The 40 GB removable hard drive has been upgraded to 80 GBs. New MSDs add wireless capability.



Online Logistics Tools Improved



The web-based Logistics Integrated Database (WebLIDB), WebLOG and the Integrated Logistics Analysis Program (ILAP) all had avid fans.

Some preferred ILAP, while others used WebLIDB or WebLOG. Each tool provided good data, but they sometimes offered seemingly conflicting info based on system-specific rules and processes.

To better support warfighters, the Army is creating a single logistics data and information hub by merging WebLIDB, WebLOG and ILAP.

The new system, the Logistics Information Warehouse (LIW), will eliminate the conflicting data that occurs because of differences in reporting times, screen views, and business application rules.



The first step in this process occurred during 2005 when responsibility for ILAP was formally transitioned from the Program Manager Logistics Information Systems to the Commander, Logistics Support Activity (LOGSA). LOGSA now manages and runs ILAP, WebLIDB and WebLOG.

The merger takes the best of WebLOG, ILAP and WebLIDB to provide a single authoritative data source for logistics info. A single LIW AKO logon provides access to the full capabilities currently in WebLOG, WebLIDB and ILAP. The LIW web page makes navigation easier among the queries, reports and applications in those systems.

In 2006, the web-based LIW will include processed and raw data from supply systems such as SARSS and SAMS, maintenance systems such as SAMS and ULLS, transportation systems like the Radio Frequency ITV servers, and finance and distribution systems.

You can access the LIW tools on LOGSA's website:

<https://liw.logsa.army.mil>

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HMMWV Spare Tire Carrier

NSN 2590-01-525-1995 gets a spare tire carrier for **only** HMMWV vehicles with an airlift rear bumper: M1113 expanded capacity HMMWVs (not carrying a shelter), M1114 up-armored armament carriers, M1025A2 armament carriers, and M1097, M1097A1 and M1097A2 heavy variant cargo/troop carriers.

Weapon Shield NSN Change

TACOM ground precautionary message (GPM) 06-003 gives you a way to connect the weapon shield to the M197 machine gun mount so the shield moves with the mount. But the message has the wrong NSNs for the hexagon screws and lock washers needed to secure the lock release lever, NSN 5340-01-500-5572, to the shield. The two screws come with NSN 5305-00-685-3511 and the two lock washers come with NSN 5310-01-523-2977. If you need a copy of the message, contact your local TACOM logistics assistance representative (LAR) or TACOM at DSN 793-4403/(309) 782-4403

HEMTT Transmission Dipstick Tube

Item 13 in Fig 494 of TM 9-2320-315-14&P (IETM 0232) does not list the NSN for the M977A2 and M977A2R1 HEMTT's transmission dipstick tube. The correct part number is 3213442, CAGE 45152. That crosses to NSN 4710-01-511-3975.

HEMTT Engine with Container

Item 1 in Fig 510 of TM 9-2320-315-14&P (IETM 0232) lists a part number of 3365178 for the M977A2 and M977A2R1 HEMTT's engine with container. That part number doesn't cross to an NSN. The correct part number is 57K4539, which crosses to NSN 2815-01-500-0668.

SURVIVAL KNIVES

ALSE techs, the only knives authorized for your AIRSAVE vest is the new improved ASEK knife system. Order the knife system with NSN 1095-01-518-6832. For the knife only, order NSN 1095-01-518-6868. For the sheath only, order NSN 1095-01-518-6875. For the strap cutter, order NSN 1095-01-518-6877, and for a replacement blade on the strap cutter, order NSN 1095-01-518-6879.

Tanker Purging Solution NSNs

Use NSN 7930-01-350-7034 to get a 6-gal container of cleaning compound (purging solution) for the M978 HEMTT fuel tanker. NSN 7930-01-350-7035 gets a 55-gal container. Make sure all purging solution is out of the tanker before deployment and shipment overseas. Unload the solution by following the info in Para 2-25C in TM 9-2320-279-10-1. Then drain the tanker following Para 25-3 in TM 9-2320-279-20-3.

The Motor Pool Gets New URL

The Motor Pool, a private website featured on AKO and LOGNet, has new features and a shorter URL. To see what this website offers try:

www.themotorpool.org

M1A1 AIM STABILIZATION CHECK REVISITED

Pages 6-7 of PS 635 (Oct 05) said to use the IETM 1800 test to perform the semiannual stabilization system check for M1A1 AIM tanks with embedded diagnostics. In order to run that test, you'll need a maintenance support device (MSD) loaded with M1A1 full diagnostics software. You can request a copy or download the software yourself at the Team Armor Diagnostics website:

<http://www.teamarmordiagnostics.com/>

DSESTS Website

The manufacturer for the Direct Support Electrical System Test Set (DSESTS) has a new website to share information on DSESTS equipment inventory, test connection procedures, and maintenance advisory messages. It also contains DSESTS computer-based training, and provides links to access DSESTS, Bradley, and Abrams online maintenance manuals, diagnostics systems and discussion groups. Just go to:

<http://teamarmordiagnostics.com>

ABRAMS/BRADLEY NEWSLETTERS

The Abrams Tank Information Paper (A-TIP) and Bradley Bits newsletters are available through the Army Knowledge Online (AKO) website. Getting to them is a little tricky, though. That's why the Program Executive Office-Ground Combat Systems (PEO-GCS) website has links that provide instructions on how to get to the newsletters. Go to:

<http://www.peogcs.army.mil/CombatSystems.cfm>

and click on one of the newsletter links at the bottom of the page. Then follow the instructions. Questions? Contact PEO-GCS at DSN 786-2353 or (586) 753-2353.

MORE ON TANK BORE EVACUATOR

Mechanics, Pages 2-3 of PS 615 (Feb 04) said to replace damaged O-rings at the front and rear of the bore evacuator after the M1-series tank is fired. The O-rings help prevent flareback. What we didn't tell you is that the service kit has another O-ring that's similar in size that **shouldn't** be used. The correct O-ring, NSN 5331-01-498-9953, has four white marks on it that are 90 degrees apart.

CHEMICAL EQUIPMENT HOTLINE CHANGES NAME

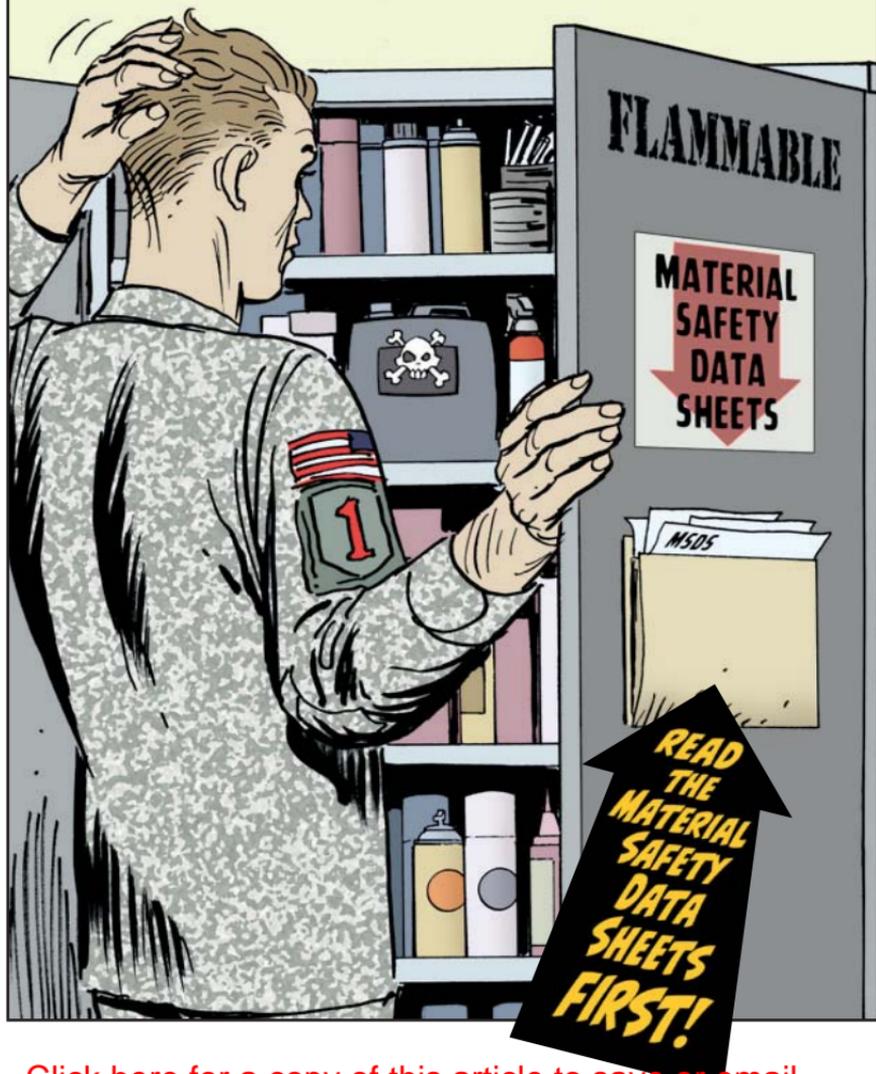
The name of the Chemical Equipment Hotline has changed to Chemical Biological Radiological Nuclear (CBRN) Hotline to better reflect the different kinds of equipment questions it will help answer. If you need assistance with any CBRN equipment, contact the hotline at (800) 831-4408 or email: ceh@ria.army.mil
Calls received during non-business hours are recorded and answered the next day.

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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