



THE PREVENTIVE MAINTENANCE MONTHLY

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TB 43-PS-778, 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. The use of product or company names does not constitute endorsement of those products, services or companies by the U.S. Army. The use of non-DoD hyperlinks, along with their content, does not constitute endorsement by DoD or DA. Neither DoD nor DA exercises any editorial control over, and cannot vouch for, content on non-DoD websites.

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MSG Half-Mast

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PS

★
September
2017

THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-778

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YOU THREE
LOOK
REALLY FIT
FOR YOUR
AGE.

THAT'S 'CAUSE
WE MAKE PM
OUR NUMBER ONE
PRIORITY!

**For details on
preserving M113s,
see Pages 4-8.**

Stock Current TMs...

...and Use Them!

WELL, BUDDY, YOU'RE IN LUCK! IT'S TIME FOR YOUR MONTHLY PMCS...
...AND I JUST **FOUND** YOUR TM!



WAITAMINIT! THAT TM'S SO OLD ITS NUMBER IS IN **ROMAN NUMERALS!** WHEN WAS THE LAST TIME YOU GOT THESE TMS UPDATED?



PS writers go to the field several times each year to talk to Soldiers first-hand about what kind of equipment and maintenance problems they're experiencing.

Two problems that surface nearly every trip are that many motor pools, arms rooms, CBRN rooms and other maintenance shops aren't stocking current TMs and that the -10 TMs aren't going to the field with Soldiers.

Ignoring the importance of TMs dooms your equipment to failure. TMs are written by the equipment experts to guide you through PMCS, troubleshooting, repairs, and ordering parts. If you don't have the most current TMs, you are missing out on changes to procedures and NSNs, changes that could be critical. And if the TMs never leave the motor pool, they do no good to the Soldier in the field who actually operates the equipment. He must try to remember what he learned in school years ago, instead of being able to flip open the -10 TM to do troubleshooting.

Worried about TMs not making it back to the motor pool? Don't be. Your pubs clerk can order replacements for free.

Not sure what TMs you need or if your TMs are current? LOGSA's Publications Tailored Index Listing (PTIL) can give you a complete list of the pubs you need for your equipment and the current edition of each pub. Contact them at DSN 645-8586, (256) 955-8586, or email: usarmy.redstone.logsa.mbx.eopdb@mail.mil Be sure to include your UIC and the levels of maintenance you are authorized to perform.

The LOGSA ETM site gives the latest version of almost all TMs. Go to:

<https://liw.logsa.army.mil/etmapp/#/etm/home>

Make sure your TMs are up-to-date and that they reach the people who need them. Those are crucial steps to equipment readiness and mission success.

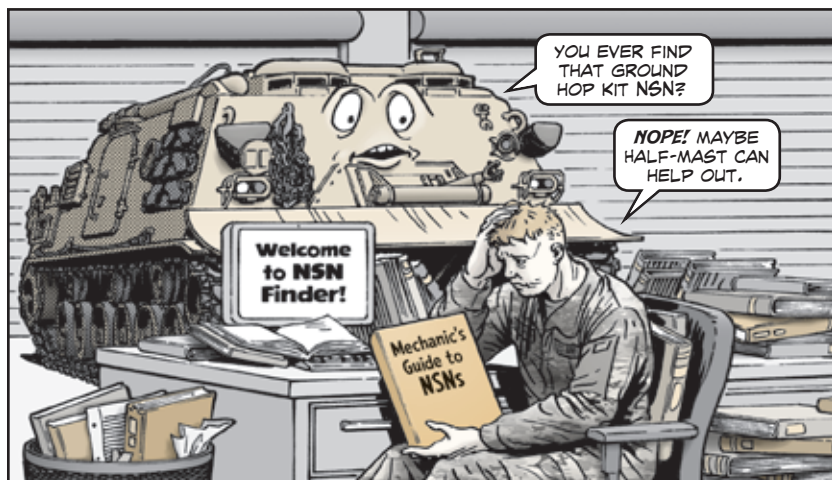


COMBAT VEHICLES

- Need a Ground Hop Kit?
- Good PM Keeps Carriers Rolling Along!
- Don't Push M242 Indicator Rod!
- Keep RWS Lenses Capped!



NEED A GROUND HOP KIT?



Dear Half-Mast,

Can you help me out with the NSN for the M88A1 recovery vehicle's ground hop kit? Also, I need the transmission caps to use when ground-hopping.

SGT C.D.H.

NO PROBLEM, SERGEANT!
THERE **ISN'T** A SINGLE NSN FOR
THE GROUND HOP KIT.

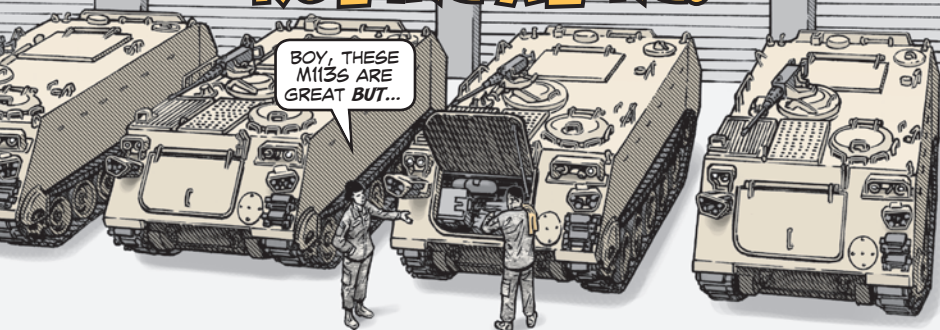
YOU'LL HAVE TO
ORDER THE KIT
BY ITS INDIVIDUAL
COMPONENTS

YOU'LL FIND THESE ITEMS
LISTED IN FIG 463 OF
TM 9-2350-256-13&P IN
IETM EM 0355 (MAY 15):



Component	NSN	Qty
Accessories cable assembly	6150-00-615-8737	1
Generator cable assembly	2920-00-614-7203	1
Starter cable assembly	6150-00-614-7543	1
Ground cable assembly	6150-00-674-8738	1
Engine primer (purge pump) hose assembly	4720-01-044-8393	1
Main and return fuel line hose assembly	4720-01-041-3375	2
Ground hop air filtration kit	2815-01-334-3270	1
Transmission caps	2590-00-330-8642	1

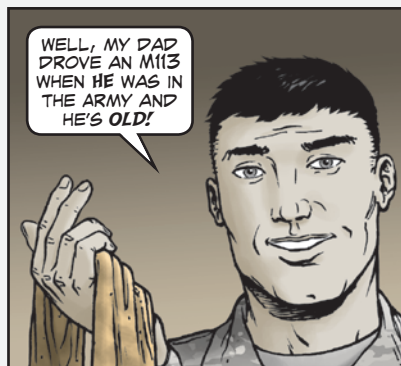
GOOD PM KEEPS CARRIERS ROLLING ALONG!



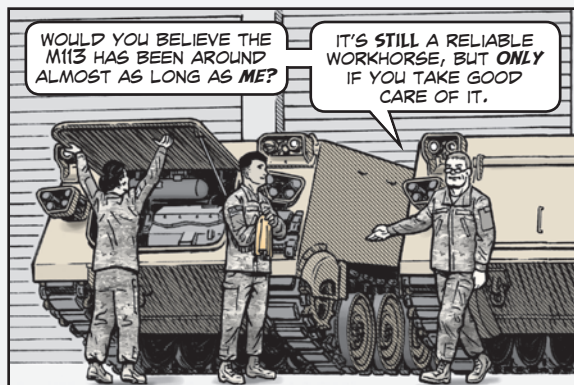
BOY, THESE M113S ARE GREAT BUT...



...THEY SURE DO NEED A LOT OF PREVENTIVE MAINTENANCE.



WELL, MY DAD DROVE AN M113 WHEN HE WAS IN THE ARMY AND HE'S OLD!



WOULD YOU BELIEVE THE M113 HAS BEEN AROUND ALMOST AS LONG AS ME?

IT'S STILL A RELIABLE WORKHORSE, BUT **ONLY** IF YOU TAKE GOOD CARE OF IT.



HERE'S HOW YOU CAN KEEP YOUR M113-SERIES CARRIER COMBAT READY AT ALL TIMES!

Oil Check



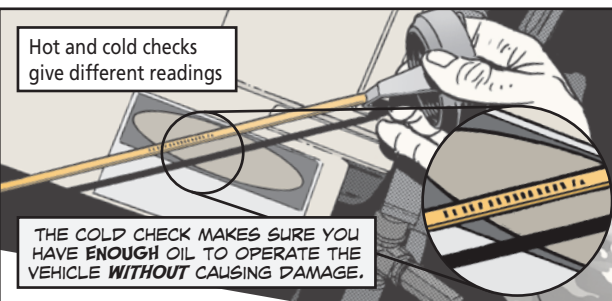
ENGINE AND TRANSMISSION OIL IS THE **LIFEBLOOD** OF **ANY** VEHICLE, AND THE M113 IS NO EXCEPTION.

BUT YOU MIGHT BE CONFUSED ABOUT HOW TO **BEST** CHECK THE OIL LEVELS.

THE PMCS CHARTS IN THE -10 TMS SAY TO DO AN **AFTER-OPERATION HOT CHECK**. WHILE THE LUBE ORDERS (LO) SAY TO DO A **BEFORE-OPERATION COLD CHECK**, OR **BOTH** A HOT AND COLD CHECK.

THE READING YOU GET IS BASED ON WHETHER YOU DO A HOT OR COLD CHECK.

THE RIGHT THING IS TO DO **BOTH CHECKS**.



Hot and cold checks give different readings

THE COLD CHECK MAKES SURE YOU HAVE **ENOUGH** OIL TO OPERATE THE VEHICLE **WITHOUT** CAUSING DAMAGE.

THE READING **WON'T** BE COMPLETELY ACCURATE, BUT IT DOES KEEP YOU FROM DRIVING THE CARRIER IF IT'S DANGEROUSLY LOW ON OIL. THE OIL LEVEL SHOULD BE **AT OR JUST ABOVE** THE DIPSTICK'S F (FULL) MARK FOR A **COLD CHECK**.

IF THE LEVEL IS BELOW THE L (LOW) MARK, GET YOUR MECHANIC TO CHECK FOR LEAKS. IF IT'S VERY FAR ABOVE THE F MARK, HE MAY NEED TO DRAIN SOME OIL.

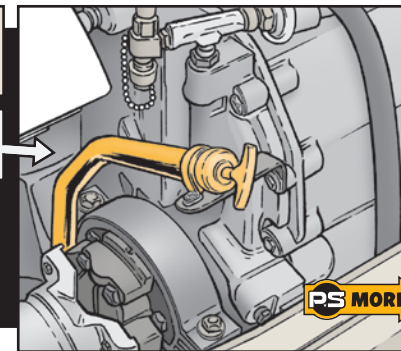
THE **HOT CHECK** IS THE **MOST ACCURATE** AND THE ONE THE DIPSTICK WAS DESIGNED FOR.

TO CHECK THE **ENGINE OIL**, SHUT THE ENGINE DOWN AFTER IT REACHES OPERATING TEMPERATURE. CHECK THE OIL LEVEL AFTER WAITING 3-5 MINUTES.

YOU'LL NEED TO CHECK THE **TRANSMISSION OIL LEVEL** WHILE THE ENGINE IS RUNNING AT OPERATING TEMPERATURE (160-230°F).

YOU SHOULD GET READINGS BETWEEN THE L AND F MARKS.

IF **EITHER OIL LEVEL** IS **BELOW THE L OR ABOVE THE F**, LET YOUR MECHANIC KNOW **RIGHT AWAY**.



PS MORE

Fuel Cap PM

DIRT, SAND AND OTHER CONTAMINANTS CAN **SIDELINE** YOUR CARRIER IF YOU'RE NOT DILIGENT ABOUT PM ON **EVERY** COMPONENT OF THE FUEL SYSTEM, INCLUDING THE **FUEL CAP**, NSN 5342-01-083-5674.

IF YOU **DON'T** CLEAN THE SCREEN CAP AND RUBBER VENT GROMMET ON TOP OF THE FUEL CAP, THE CAP GETS **PLUGGED WITH DIRT**, CREATING A VACUUM AND CAUSING FUEL FLOW PROBLEMS.

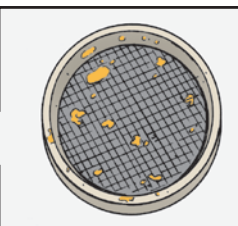
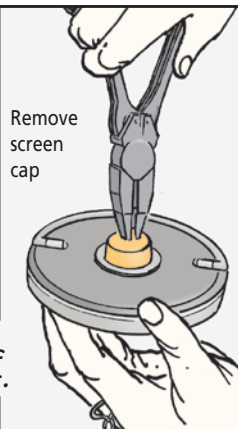
SO BE SURE TO CLEAN THE CAP AND GROMMET **EVERY SIX MONTHS**—MORE OFTEN IN DUSTY OR SANDY ENVIRONMENTS.

HERE'S HOW TO INSPECT AND CLEAN THE CAP AND GROMMET:

1 Grip the tang in the center of the fuel cap with a pair of pliers and pull the screen out.

2 Take a close look at the grommet in the fuel cap. If it's damaged, replace the entire fuel cap.

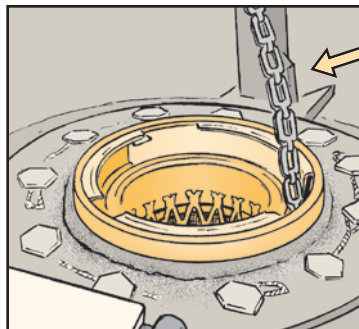
3 Clean the screen cap with dry cleaning solvent.



THEN CHECK UNDERNEATH THE BOTTOM OF THE **FUEL CAP**.

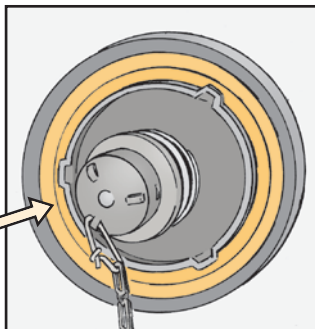
DIRT AND SAND CAN COLLECT AROUND THE FILLER NECK, KEEPING THE CAP FROM SCREWING ON PROPERLY.

THAT CAN BEND THE METAL LIP INSIDE THE FUEL TANK OPENING, WHICH CAN **DAMAGE THE GASKET** ON THE UNDERSIDE OF THE FUEL CAP.

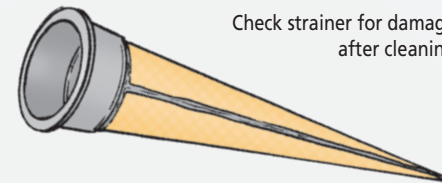


BRUSH AWAY ANY DIRT OR SAND FIRST **BEFORE** OPENING THE FUEL CAP.

AND THEN MAKE SURE THE FILLER NECK AREA IS **CLEAN** **BEFORE** CLOSING THE FUEL CAP.



PULL OUT THE **FUEL STRAINER** INSIDE THE FILLER NECK BEFORE SCREWING THE FUEL CAP BACK INTO PLACE. IF THE STRAINER IS CLOGGED WITH SEDIMENT, CLEAN IT WITH SOLVENT AND INSPECT THE STRAINER FOR CUTS OR TEARS. IF YOU FIND **DAMAGE**, REPLACE THE STRAINER USING NSN 4730-00-701-3921.



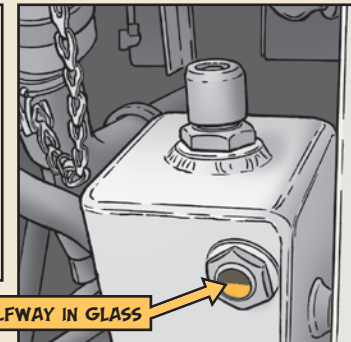
Check strainer for damage after cleaning

Ramp Reservoir

NOT ONLY DO YOU NEED TO CHECK YOUR M113'S RAMP HYDRAULIC RESERVOIR FLUID **EVERY DAY**...

...YOU NEED TO CHECK IT THE **RIGHT** WAY.

ALWAYS PARK THE VEHICLE ON LEVEL GROUND BEFORE CHECKING THE FLUID. IF YOU PARK IT ON AN INCLINE, THE SIGHT GLASS READING MIGHT MAKE IT APPEAR THERE'S EITHER TOO MUCH OR TOO LITTLE HYDRAULIC FLUID IN THE RESERVOIR.



FLUID SHOULD BE HALFWAY IN GLASS

IF YOU ADJUST THE LEVEL BASED ON A FAULTY READING, YOU COULD END UP WITH **TOO MUCH** OR **TOO LITTLE** HYDRAULIC FLUID.

TOO MUCH

MEANS A BIG MESS WITH FRH **LEAKING** OUT OF THE HYDRAULIC SYSTEM TANK BREATHER.

TOO LITTLE

COULD MAKE YOUR RAMP ACT FUNNY OR STOP WORKING ALTOGETHER.

DON'T FORGET THAT THE RAMP HAS TO BE **ALL THE WAY DOWN** WHEN YOU CHECK THE FLUID!

FOLLOW THE RAMP LOWERING INSTRUCTIONS IN THE -10 TM. IF YOU READ THE RESERVOIR SIGHT GLASS WHILE THE RAMP IS **CLOSED** OR **PARTIALLY OPEN**, THE RESERVOIR WILL APPEAR TO HAVE **TOO LITTLE** HYDRAULIC FLUID.



CHECK OUT THE **LUBRICATION TABLE** ON CARD 21 OF LO 9-2350-261-12 (JUL 90, W/CH 4, JUL 97) FOR THE M113A2 AND CARD 19 AND 20 OF LO 9-2350-577-13 (MAY 12, W/CH 1, SEP 13) FOR THE M113A3.

THEY HAVE MORE INFORMATION ABOUT KEEPING THE HYDRAULIC SYSTEM UP AND RUNNING IN **ALL** CONDITIONS.

**ONE
PS MORE
PAGE!**

M113A3 Steering Bearing

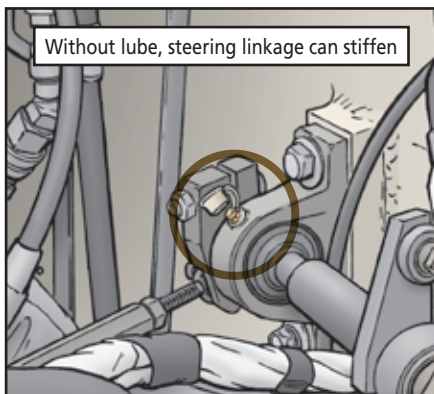


THE **STEERING** ON THE M113A3 GETS **STIFF** AND **HARD** TO TURN WITHOUT **REGULAR** LUBE.

THERE ARE **THREE** LUBE **POINTS** FOR THE **STEERING** CONTROL BEARINGS.

MOST CREWMEN REMEMBER THE **TWO** ON THE **STEERING** SHAFT.

BUT THE **THIRD** ONE, LOCATED IN THE **ENGINE** COMPARTMENT, IS **OFTEN** **MISSED**.



LUBE ALL **THREE** FITTINGS WITH **GAA** SEMIANNUALLY OR EVERY **1,500** MILES, WHICHEVER COMES FIRST.

TIME TO LUBE MY **STEERING** FITTINGS AGAIN!

1,500
Miles!

Also,

BE SURE TO CHECK THE FITTINGS AFTER WASHING OR FORDING THE VEHICLE. IF THEY'RE **WET**, GIVE THE **STEERING** CONTROL BEARINGS ANOTHER LUBING.



DON'T PUSH M242 INDICATOR ROD!

I APPRECIATE ALL YOUR PMCS,
BUT PLEASE KEEP YOUR HANDS OFF
MY RECOIL INDICATOR ROD.

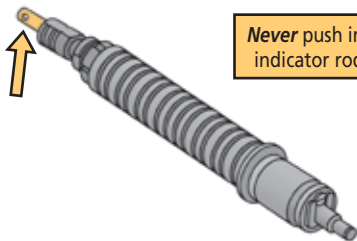
IF YOU
PUSH IT IN,
IT MAY **NOT**
COME BACK
OUT!

Bradley crewmen used to check the recoil fluid level for the M242 automatic gun by pushing in the indicator rod.

Don't do that!

All the recoil mechanisms have been replaced. If you push in the indicator rod on the new recoils, it can damage the recoil and lead to leaks.

To check the recoil fluid levels, repairmen should follow the procedure in WP 0049-00 in TM 9-1005-200-23&P (Jun 01).



Stryker...

Keep RWS Lenses Capped!

THE SUN IS BLINDING
ME! WHERE ARE MY
LENS CAPS?

Dear Editor,

Stryker units need to remember the importance of keeping the lenses for the remote weapon station (RWS) capped when they're not firing.

If the lenses are facing the sun without caps, the lenses can be burned out. That's a very expensive fix.

Of course, a big problem is that the caps disappear and nobody bothers to order more. Don't make that mistake. Order replacements with these NSNs:

- thermal imaging module (TIM), NSN 5895-01-573-6699
- visual imaging module (VIM), NSN 6760-25-150-4631

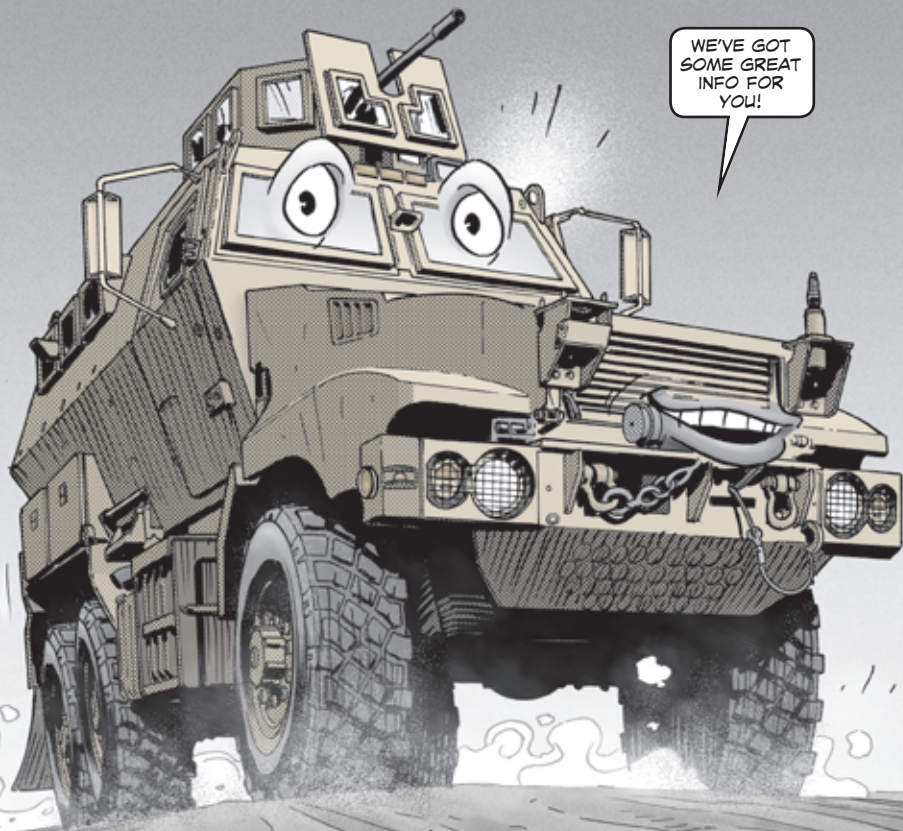
These caps aren't cheap. The TIM cap runs close to \$600 and the VIM cap almost \$150. So keep track of them.

Until the caps come, use the RWS cover, NSN 2590-25-150-4724, to protect the lenses and the entire RWS. Use the cover any time the Stryker will sit for long periods.

CPT David Anderson
Ft Carson, CO

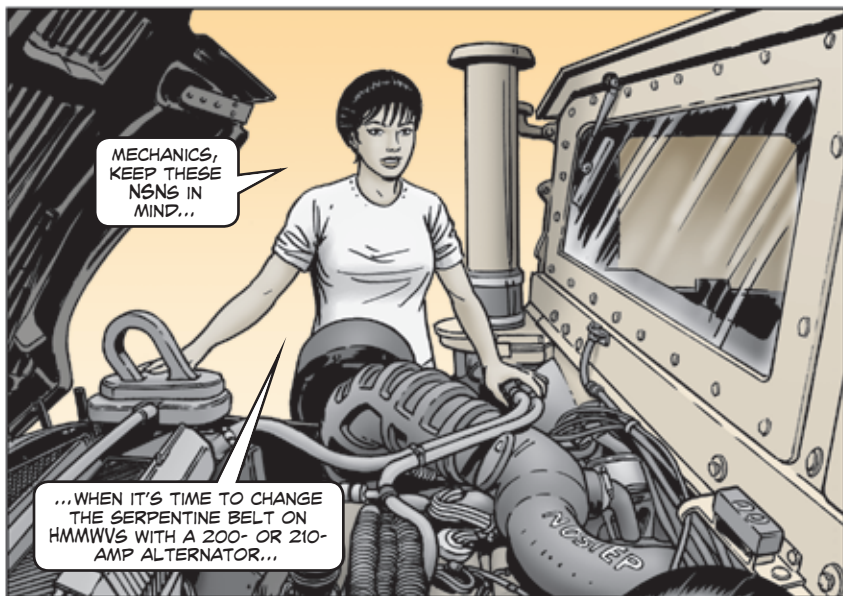
Editor's note: A tip of
the cap to you, Captain.
Use those caps!

PS TACTICAL VEHICLES



- Need a New Serpentine Belt?
- M1097R1 HMMWV Protective Control Box
- A Cure for the Bracket Cracker
- Need SECM Help?
- Look for Leaks on A/C Compressor

Need a New Serpentine Belt?



HMMWV Model	NSN 3030-
A2-Series M1113/M1114 (SN 196900 and below)	01-466-9476
A2-Series M1113/M1114, M1151A1, M1152A1, M1165A1 & M1167 (SN 196901 and above)	01-488-5606

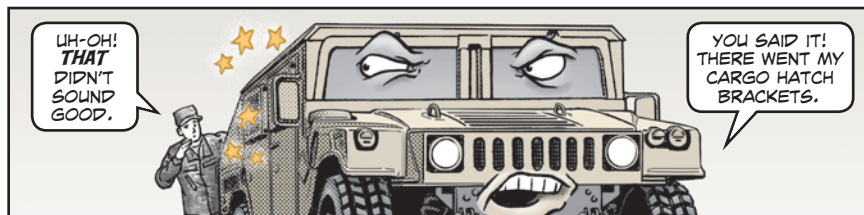
NOTE THAT M998s USE **ONLY** V-BELTS.
THERE IS **NO** AUTHORIZED MWO THAT
CHANGES THAT VEHICLE'S CONFIGURATION
TO A SERPENTINE BELT.



M1097R1 HMMWV Protective Control Box

Order a new protective control box for your M1097R1 HMMWV with NSN 6110-01-542-7901. NSN 6110-01-470-1931, which is shown as Item 6 in Fig 59 of TM 9-2320-280-13&P in IETM EM 0338 (Jan 14), is a terminal item.

A CURE FOR THE BRACKET CRACKER



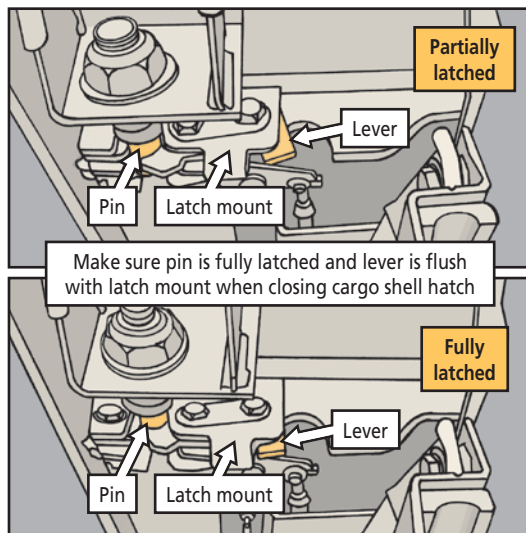
Dear Half-Mast,
I'm looking for some guidance on the cargo hatch hinge brackets for HMMWVs. One of the units we support is reporting a lot of cracked bracket welds. Should these brackets be re-welded? Or is there a stronger bracket?

SSG S.P.D.

Dear Sergeant,

Good question. Cracked bracket welds can make your vehicle NMC if you're hauling equipment in the cargo area, so it's a problem that needs to be fixed.

One reason for the failure is when the hatch is opened from the rear position before the forward latch is completely closed to the second detent. When that happens, the added leverage can result in a cracked or failed bracket.



Prevent this problem by reviewing and practicing the opening and closing procedures for the cargo shell hatch. They're found in WP 0043 of TM 9-2320-387-10 (Sep 12) and in TM 9-2320-387-13&P (IETM EM 0323, Apr 14) under Operation Under Usual Conditions, Cargo Shell Door Operation (M114, M1151, M1151A1, M1167).

Some units have tried welding the brackets as a quick fix, but that's not an authorized repair. TACOM has approved a much stronger bracket that fits the same and holds up better than the original bracket.

Get the new left-hand bracket with NSN 2590-01-574-8770 and the new right-hand bracket with NSN 2590-01-574-8782.

Installation instructions are available on AKO:

<https://www.us.army.mil/suite/doc/23922086>

Half-Mast



HERE'S A LIST OF WEBSITES YOU'LL WANT TO KEEP HANDY...



SECM Knowledge Page:
<https://www.us.army.mil/suite/folder/17073357>

SKOT Group webpage for tool replacement and warranty info:
<https://tools.army.mil>

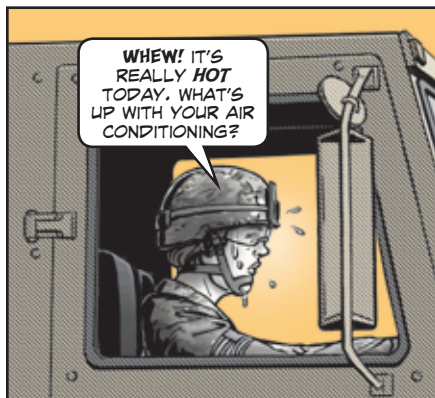
Army Enterprise Systems Integration Program (AESIP).
This is a new SKO site for current supply catalogs and component lists:
<https://www.aesip.army.mil/irj/portal>

Sets, Kits and Outfits Online (historical supply catalogs only):
<https://liw.logsa.army.mil/>

Click on [App Warehouse](#) and search for SKO.

Questions? Send an email to:
usarmy.detroit.tacom.mbx.ilsc-skot-group-actions@mail.mil

Look For **LEAKS** on A/C Compressor



OPERATORS, DURING WEEKLY PMCS, YOU NEED TO DO AN AIR CONDITIONING LEAK CHECK ON YOUR FMTVAIP2, HIMARS AND LVAD TRUCKS.



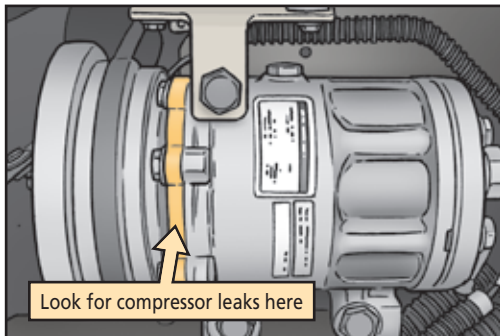
SPECIFICALLY, LOOK FOR **COOLANT LEAKS** COMING FROM THE A/C'S COMPRESSOR SHAFT SEAL.

TO SEE IF THERE'S A LEAK, START THE VEHICLE AND SET THE A/C CONTROLS LIKE THIS:

1. Turn the fan switch to HIGH.
2. Set the heat control switch to COLD.
3. Turn the fresh air/recirculation switch to either position.
4. Turn the vent/defrost control switch to either position.
5. Turn the A/C switch to the ON position and let all the vehicle's systems run for at least five minutes.

NOTE: IF THE AMBIENT TEMPERATURE IS **BELOW 65°F**, TURN THE HEAT CONTROL SWITCH TO HOT AND THE FRESH AIR/RECIRCULATION SWITCH TO RECIRCULATION. KEEP THE CAB DOORS CLOSED AND WAIT WHILE THE CAB WARMS TO 65°F. THEN TURN THE A/C SWITCH TO THE **ON** POSITION.

YOU'LL WANT TO LOOK FOR **COOLANT LEAKS** IN AND AROUND THE **COMPRESSOR SHAFT SEAL**. IF YOU SPOT ANY, REPORT THEM TO YOUR MECHANIC.



- 
- Watch Where You Step!
 - Grease Fitting a Tall Order

PS CONSTRUCTION

WATCH WHERE YOU STEP!

Operators, follow these simple reminders when climbing into and out of your Husky's cab.

TIME TO GET TO WORK!

MAKE SURE YOU CLIMB IN THE RIGHT WAY. THOSE PUPPIES COULD DO ME A LOT OF DAMAGE!

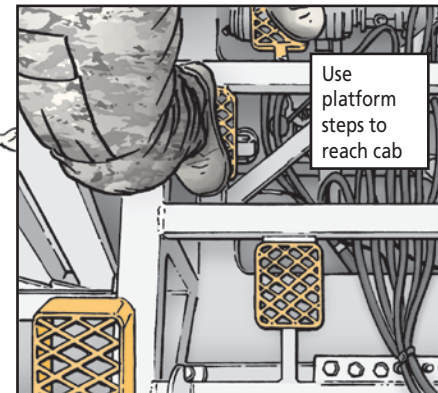
THE PLATFORM STEPS BEHIND THE CAB ARE THE ONES TO USE WHEN ENTERING OR LEAVING THE CAB. THOSE STEPS HAVE A ROUGHENED SURFACE SO YOUR BOOTS WON'T SLIP.

DON'T USE THE PLATFORM RAILS TO MOVE AROUND AND ABOUT THE CAB. YOU'LL SLIP OFF!

Behind the Cab



Use platform steps to reach cab



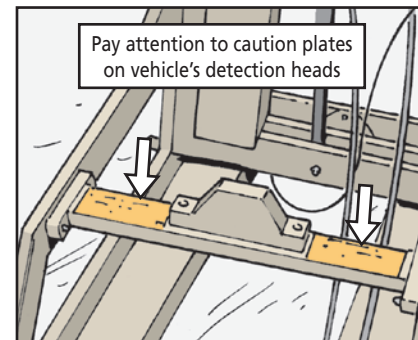
Detection Panel CAUTION

When working around the Husky, pay special attention to the CAUTION plates on the vehicle's detection heads.

CAUTION
DO NOT STEP ON
DETECTION HEADS

The plates are there for a good reason: to keep you from stepping on the detection heads! Your weight will break the heads, bringing mine detection operations to a screeching halt!

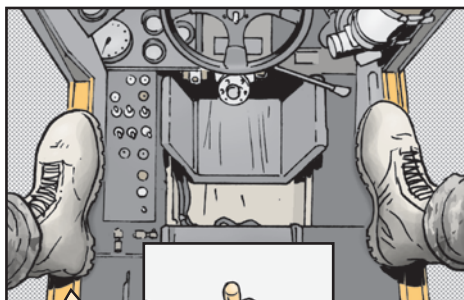
Pay attention to caution plates on vehicle's detection heads



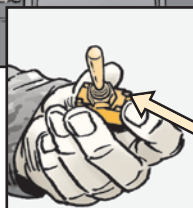
Cab Ledge Steps

Easy does it when climbing up to the vehicle's cab. Place your feet on the window ledges only when lowering yourself into the cab.

And keep your feet away from the operator switch panel on the left and the detector panel on the right. A misplaced foot will bust the switches. Not only is that a costly replacement, but a busted switch means your Husky can't do its job during landmine and IED detection operations.



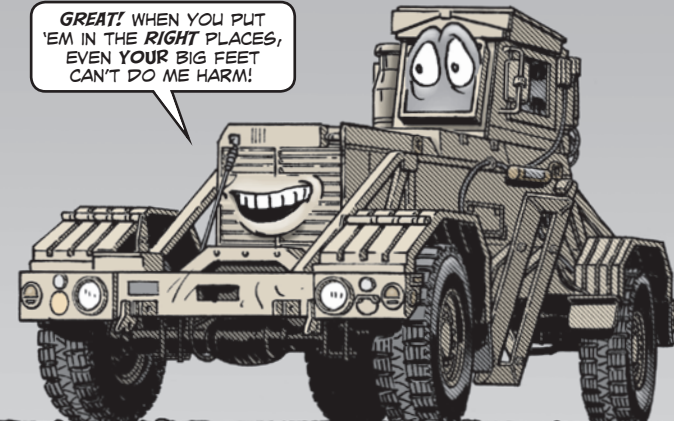
Place feet on window ledges...



...to avoid breaking expensive switches!

WELL, HOW'D I DO?

GREAT! WHEN YOU PUT 'EM IN THE RIGHT PLACES, EVEN YOUR BIG FEET CAN'T DO ME HARM!



Grease Fitting a Tall Order

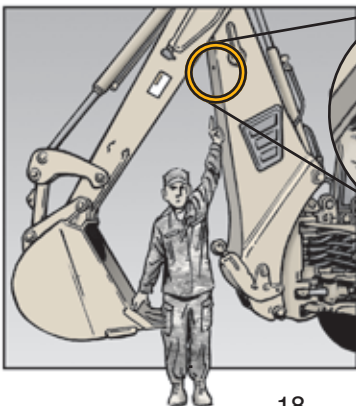
SURE, I'M TALLER THAN YOU. BUT WE'RE STILL GONNA NEED A LADDER TO REACH THAT LUBE FITTING!



It's a fact: Nine out ten operators will probably *miss* at least one of the **19** grease fittings on the HMEE-1's backhoe!



On the rear of the backhoe is a small opening that's there for one reason: to give you access to the grease fitting most often missed!



That's because the fitting is located about three feet above your head when the backhoe's in the elbow position. That makes it **easy** to miss.

You'll find the fitting listed as #19 in Fig 9 of the lubrication instructions from TM 5-2420-232-13&P in IETM EM 0330 (Feb 13). Lube it daily with GAA.

- Be Safe With Rescue Baskets
- TM Updates Coming for External Rescue Hoist!
- Protect AGPU with Cocoon Cover
- Get Some Aircraft Sun Shades



MEDEVAC...

BE SAFE WITH RESCUE BASKETS

DIDJA HEAR ABOUT THE INCIDENT WITH THE RESCUE BASKET?

YEAH, BAD NEWS!

DO YOU THINK THERE'S A PROBLEM WITH OUR RESCUE BASKET?

THE PROBLEM WAS **USER ERROR**. THEY DIDN'T CONNECT THE HOOK TO **BOTH** LIFTING EYES ON THE BASKET.

THAT'S THE RIGHT WAY TO RESCUE PERSONNEL!

THE ISSUE IS THE SMALL CABLE THAT'S USED TO CONNECT THE TWO LIFTING EYES. IT'S THERE TO KEEP BOTH LIFTING EYES CLOSE TOGETHER SO THEY CAN BE EASILY JOINED BY THE RESCUE HOOK.

Small cable is there only to keep lifting eyes together

IT'S VITAL THAT **ALL** MEDEVAC PERSONNEL KNOW THAT THE LIFTING HOOK **MUST** BE CONNECTED TO **BOTH** LIFTING EYES ON THE RESCUE BASKET.

IN THE INCIDENT, THE OPERATOR ATTACHED THE LIFTING HOOK **ONLY** TO THE TOP LIFTING EYE. WHEN THE BASKET WAS LIFTED, THE **SMALL CABLE**, WHICH IS **NOT** RATED TO HOLD A LOAD, HELD JUST LONG ENOUGH FOR THE BASKET TO GET HIGH IN THE AIR.

THE CABLE SNAPPED AND THE OCCUPANT WAS DUMPED OUT AND FELL TO HIS DEATH.

TO AVOID ACCIDENTS LIKE THIS, DISCONNECT ONE END OF THE SMALL CABLE AND CONNECT BOTH LIFTING EYES TOGETHER WITH A **LOCKING CARABINER**. THE CARABINER SERVES THE SAME FUNCTION AS THE SMALL CABLE—KEEPING THE LIFTING EYES CLOSE TOGETHER...

...WHILE REMINDING THE HOIST OPERATOR TO CONNECT BOTH LIFTING EYES ON THE RESCUE BASKET WITH THE LIFTING HOOK. MAKE SURE TO REMOVE THE CARABINER BEFORE ATTACHING THE HOOK TO BOTH LIFTING EYES.

THE MEDEVAC HEADSHED HAS LEARNED OF A **POTENTIAL SAFETY ISSUE** WITH RESCUE BASKETS, PNs 495 AND 499-B.

THE SAFETY ISSUE IS **NOT** THE RESULT OF A MANUFACTURER'S DEFECT, BUT A **POTENTIAL USER ERROR**.

A RECENT FATALITY OCCURRED IN ANOTHER COUNTRY THAT USES THE SAME RESCUE BASKET AS MEDEVAC.

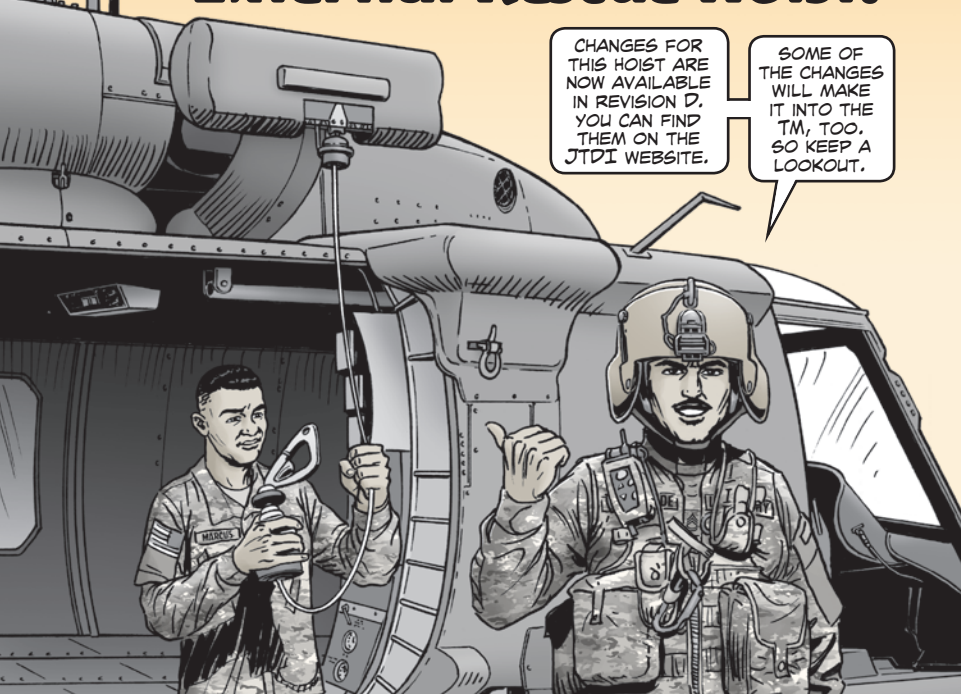
MISSING ONE SMALL STEP CAN HAVE **DEADLY** CONSEQUENCES.

IF YOU'RE UNSURE ABOUT A PROCEDURE, ASK YOUR FLIGHT INSTRUCTOR FOR HELP.

TM Updates Coming for External Rescue Hoist!

CHANGES FOR THIS HOIST ARE NOW AVAILABLE IN REVISION D. YOU CAN FIND THEM ON THE JTDI WEBSITE.

SOME OF THE CHANGES WILL MAKE IT INTO THE TM, TOO. SO KEEP A LOOKOUT.



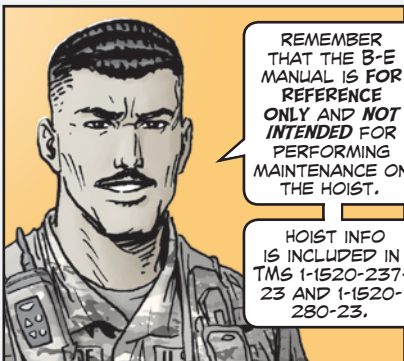
OPERATORS, IF YOUR H-60 AIRCRAFT HAS THE BREEZE-EASTERN (B-E) EXTERNAL RESCUE HOIST INSTALLED, MAKE A NOTE THAT REVISION D OF THE MANUFACTURER'S OPERATION AND MAINTENANCE MANUAL (TD-01-006) IS NOW AVAILABLE.

GET IT ON THE JTDI WEBSITE:
<https://www.jtdi.mil>

YOU CAN ALSO FIND THE REVISION ON THE (B-E) WEBSITE, BUT YOU'LL NEED TO REGISTER FOR ACCESS:

<https://portal.breeze-eastern.com>

RELEVANT CHANGES WILL APPEAR IN FUTURE UPDATES TO TM 1-1520-237-23 AND -280-23.



REMEMBER THAT THE B-E MANUAL IS FOR REFERENCE ONLY AND NOT INTENDED FOR PERFORMING MAINTENANCE ON THE HOIST.

HOIST INFO IS INCLUDED IN TMS 1-1520-237-23 AND 1-1520-280-23.

YOU MIGHT BE WONDERING WHY THE B-E MANUAL IS FOR REFERENCE ONLY. WHILE IT'S TRUE THAT ONLY THE TM SHOULD BE USED FOR MAINTENANCE, THE B-E MANUAL IS USEFUL BECAUSE:

- it contains good information about hoist cables in general and explains cable design, complexity and the factors that affect cable life.
- it clarifies approved TM procedures using photos.
- it has a detailed parts section that includes NSNs and part numbers not found in the TM. Remember, you'll need to submit a DD Form 1348-6 to order parts that have no NSN.
- it can be used as guidance to generate a Maintenance Engineering Call (MEC), which allows the Aviation Engineering Directorate (AED) to provide approved documents that authorizes requesting units to perform maintenance not found in the TMs. If there's a maintenance procedure you believe can be performed at unit level, but it's not in the TM, get with your LAR and use the original equipment manual to generate the new maintenance instructions. AED must approve the MEC before the maintenance can be performed, but approval is more likely with manufacturer support.

What's Up with Cables?

THERE WAS SOME UNDERSTANDABLE CONFUSION IN THE PREVIOUS REVISION DEALING WITH **CABLE LUBRICATION**.

THE REVISION SEEMED TO INDICATE THE HOIST CABLES HAD TO BE COMPLETELY FREE OF LUBRICATION BECAUSE IT MIGHT INTERFERE WITH THE TENSIONING SYSTEM.

YET NEW CABLES FROM SUPPLY COME PRE-LUBRICATED.

THE ACTUAL INTENT WAS THAT NO ADDITIONAL LUBRICATION BE ADDED TO THE CABLES. THE LUBE THAT IS ALREADY ON THE CABLES IS OK.

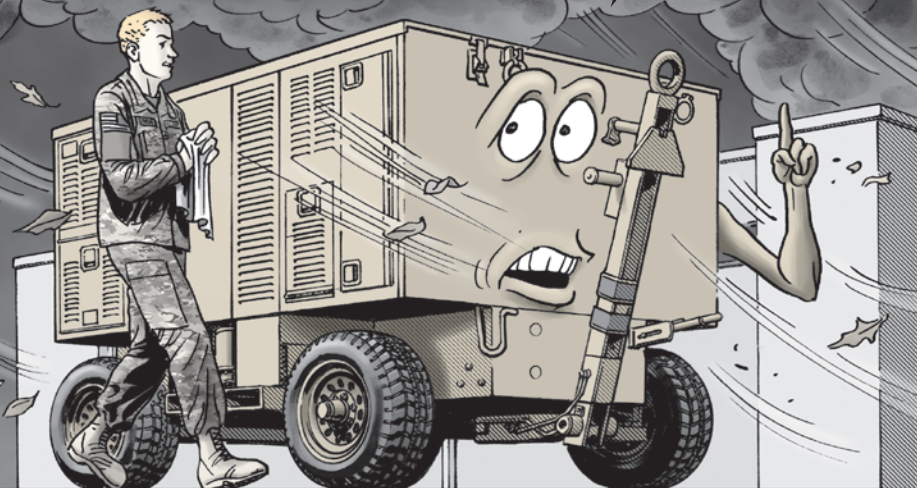
ALWAYS CHECK YOUR TMS FOR HOIST INFORMATION, AND **REMEMBER:** REVISION D OF TD-01-006 IS FOR INFORMATIONAL PURPOSES ONLY!



Protect AGPU with Cocoon Cover

MY DAY IS **DONE**.
TIME TO SHUT YOU
DOWN.

NOT SO FAST,
BUDDY. YOU NEED TO
COVER ME UP **FIRST!**



MECHANICS,
YOUR
AIRCRAFT
DEPENDS ON
THE POWER
PROVIDED BY
THE AVIATION
GROUND
POWER UNIT
(AGPU).

SO TO
KEEP THE
AGPU GOING
STRONG, THE
HEADSHED IS
PROVIDING A
**PROTECTIVE
COVER** TO
SHIELD IT
FROM THE
ELEMENTS.



CARE AND MAINTENANCE INSTRUCTIONS **HAVEN'T**
BEEN ADDED TO TM 1-1730-229-13 YET, SO
PAY SPECIAL ATTENTION TO THE FOLLOWING:

Warnings

- Always remove the cover before starting the AGPU engine.
- Do not install the cover until after shutdown and when the AGPU is cool to the touch. Heat from the exhaust area could ignite or melt the cover.
- Properly secure the AGPU cover at all times, whether installed or not, to keep it from becoming FOD on the flight line. When removed from the AGPU, store the cover inside the hangar or in a safe area. **DO NOT** store it inside the AGPU. That blocks air flow, causing heat damage to internal components.
- As an added precaution, use two people to remove and install the cover.

Care and Maintenance

CLEAN THE
COVER WITH
**MILD SOAP AND
WATER**. HOSE IT
OFF WITH WATER
AND ALLOW
IT TO AIR-DRY
COMPLETELY.

**STORING A
WET COVER IS
AN INVITATION
TO MILDEW
DAMAGE.**

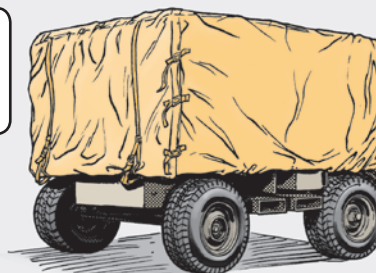


REMOVE LARGE SNOW
ACCUMULATION AND
BE CAREFUL NOT TO
DAMAGE THE COVER.
LARGE PUDDLES OF
RAINWATER SHOULD BE
REMOVED AS WELL.

HOWEVER, SMALL
AMOUNTS OF PUDDLING
FROM RAIN ARE
NORMAL AND WILL
EVAPORATE IN DRY
WEATHER.

AGPU Cover Installation

USE A
COVER TO
PROTECT
THE AGPU
FROM
WEATHER!



FOLLOW THESE STEPS FOR COVER INSTALLATION:

1. Inspect the AGPU's exterior surface for sharp edges, bent sheet metal and protruding screws and bolts and repair them. They can snag, tear or wear against the cover.
2. Before installing the cover, make sure the AGPU is shut down and cool to the touch, including the exhaust door top. All required PMCS should be completed.
3. Orient the cover with each side facing in the proper direction and drape it over the AGPU's top. Pull the sides down evenly all around to prevent binding. Secure all hook-and-pile fasteners and buckles. Secure the lower straps to the four corner tie downs to keep the cover from blowing off the AGPU.

NOTE: A step ladder may be needed, depending on the height of the installers.

4. The area covering the AGPU's master control panel and tow arm can be opened by disconnecting the buckles and separating the hook-and-pile fasteners for access. That allows you to move the AGPU using the self-drive mode without removing the cover. The cover can also remain in place for tow mode.

**PRINT THIS ARTICLE FROM THE PS WEBSITE AND KEEP IT HANDY UNTIL
THE MAINTENANCE INSTRUCTIONS FOR THE AGPU COVER GET ADDED TO
TM 1-1730-229-13.**

Get Some Aircraft Sun Shades

SWELTERING HEAT IS NO LAUGHING MATTER. USE THE AIRCRAFT SUN SHADES TO KEEP THE CHINOOK COOL INSIDE DURING THE SUMMER.



MECHANICS, ON A HOT SUMMER DAY THE SUN CAN HEAT UP THE INSIDE OF A CHINOOK LIKE IRONS IN A FIRE!



YOU THINK I LOOK HOT? CHECK OUT THE GUYS INSIDE!



KEEPING THE INTERNAL TEMPERATURE OF YOUR HELICOPTER COOL IS IMPORTANT, *ESPECIALLY* IF YOU'RE WORKING INSIDE IT.

TO KEEP THOSE TEMPS DOWN, USE **SUN SHADES** TO BLOCK THE SUN.

THERE ARE TWO SUN SHADES KITS AVAILABLE.

NSN 1680-01-661-1895

BRINGS YOU THE COCKPIT SHADES FOR THE:

- left, center and right windshield
- left and right eyebrow window
- left and right chin bubble
- upper and lower, left and right jettison doors.

BOTH KITS COME WITH A CASE TO HOLD THE SHADES.

NSN 1680-01-661-1937

BRINGS SUN SHADES FOR ALL THE CABIN WINDOWS.

THE CHINOOK HEADSHED IS ADDING THESE NSNs TO THE FLYAWAY EQUIPMENT SECTION OF THE PARTS TM...



...SO BE ON THE LOOK OUT FOR THESE UPDATES!

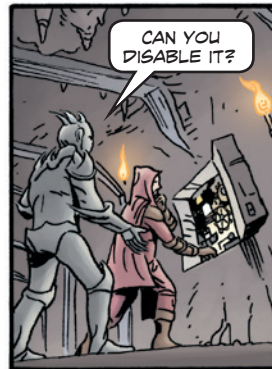
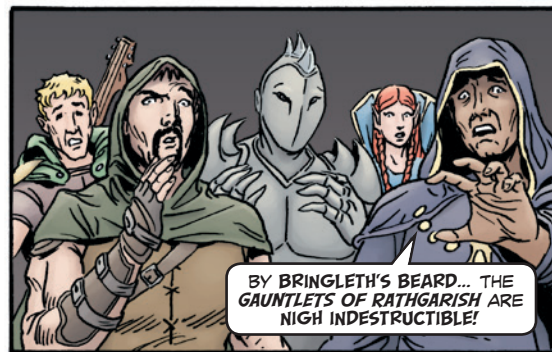
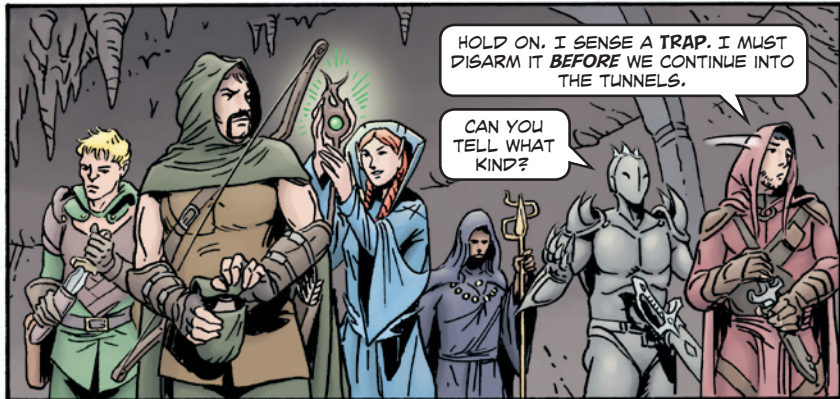
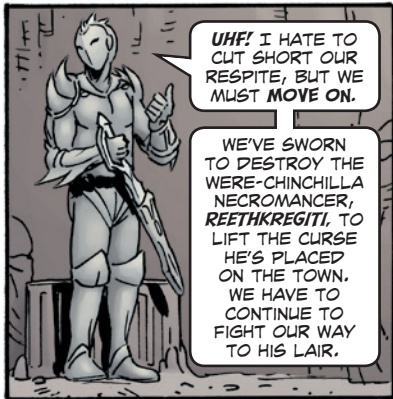
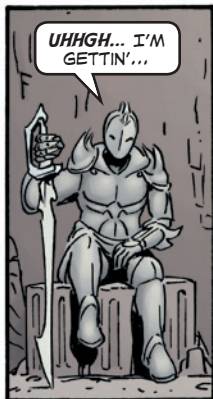
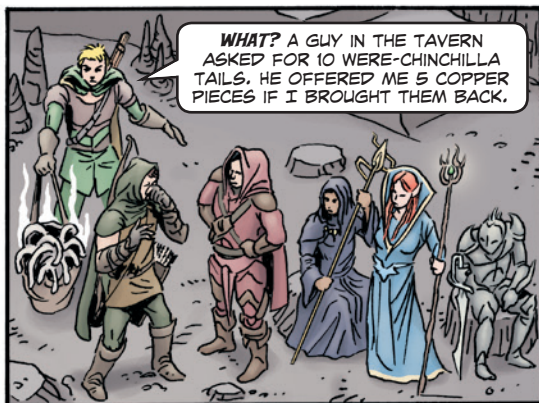
Dungeons & Dragons

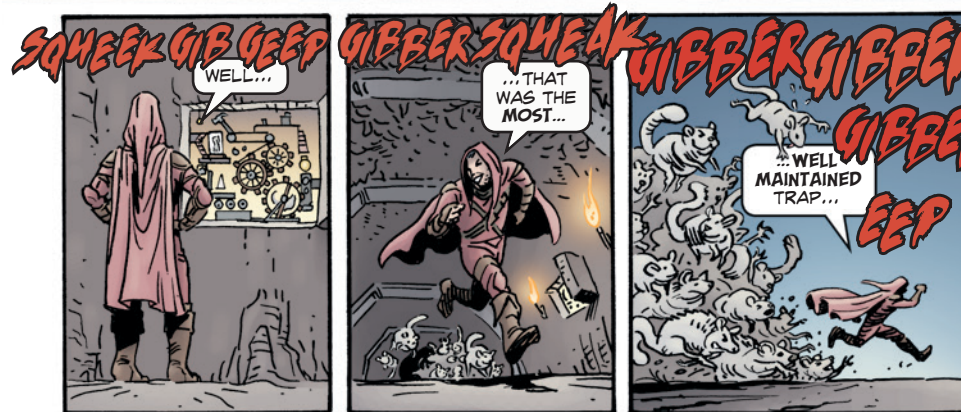
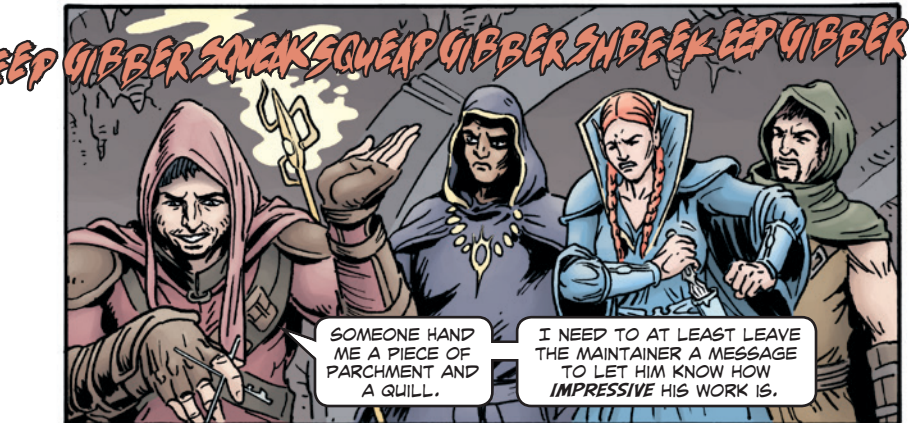
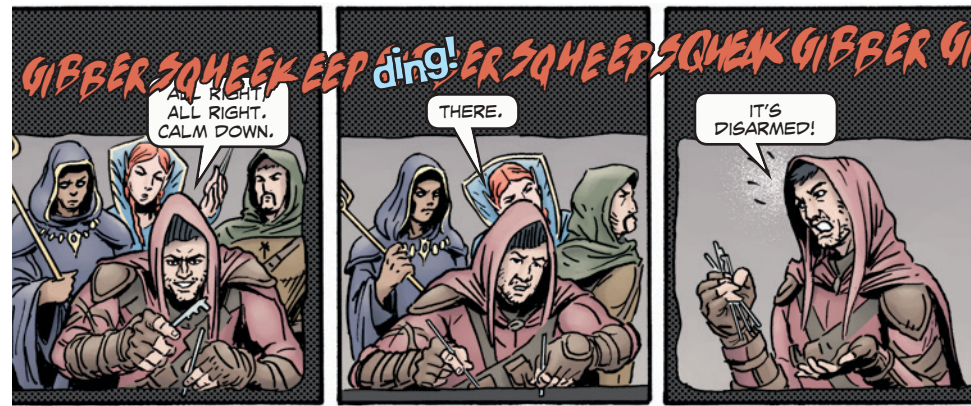
THIS WAY
EVERY-
ONE.

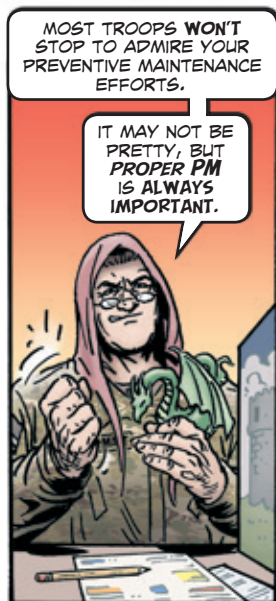
QUICKLY!

REST HERE FOR A
MOMENT. DRINK YOUR
POTIONS AND ALLOW
THE HEALER TO TEND
TO YOUR WOUNDS.

I'VE NEVER FOUGHT
OFF **SO MANY**
WERE-CHINCHILLAS IN
MY- **WHAT** IS THAT
WRETCHED **SMELL?**



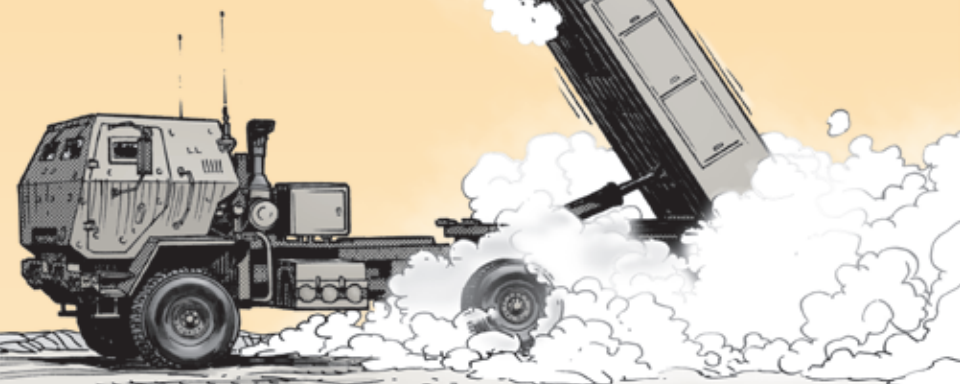




PS MISSILES

- Getting the Right Drain Cock!
- Think Clean and Fresh!
- A Cheaper Way to Protect Gages
- Remember 4-3-2-1 to Keep CROWS Flying!

ALSO
FEATURING
**TOOLS
AND SMALL
ARMS**



PS CBRN

- CBRN Advice from COMET
- Want to Keep Breathing? Change Canisters!
- Step Up to Spray Bar for Easier M12A1 Deconning

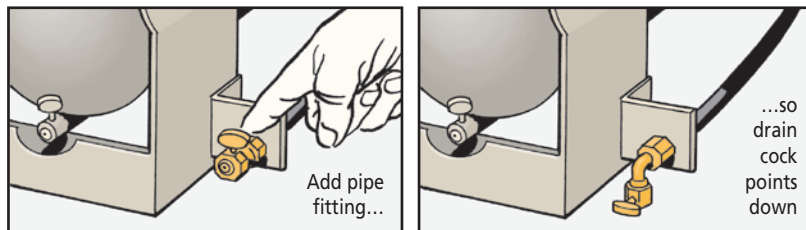


GETTING THE RIGHT DRAIN COCK!



Pages 40-41 of PS 718 (Sep 12) pointed out the problem of draining the HIMARS' hydraulic relief valve. The drain cock points straight out, so when you open it, hydraulic fluid sprays on you. That's quite a mess. It's also a bad idea to get hydraulic fluid on your clothing or skin.

PS recommended installing a 90-degree elbow pipe fitting that points the flow down. That way any fluid goes right into a container.



UNFORTUNATELY, THE NSN WE GAVE FOR THE ELBOW PIPE FITTING NOW BRINGS A **STRAIGHT** ADAPTER, AS AMCOM LAR TED REYNOLDS POINTED OUT.

SO USE NSN 4730-00-842-3162 TO ORDER THE ELBOW PIPE FITTING.



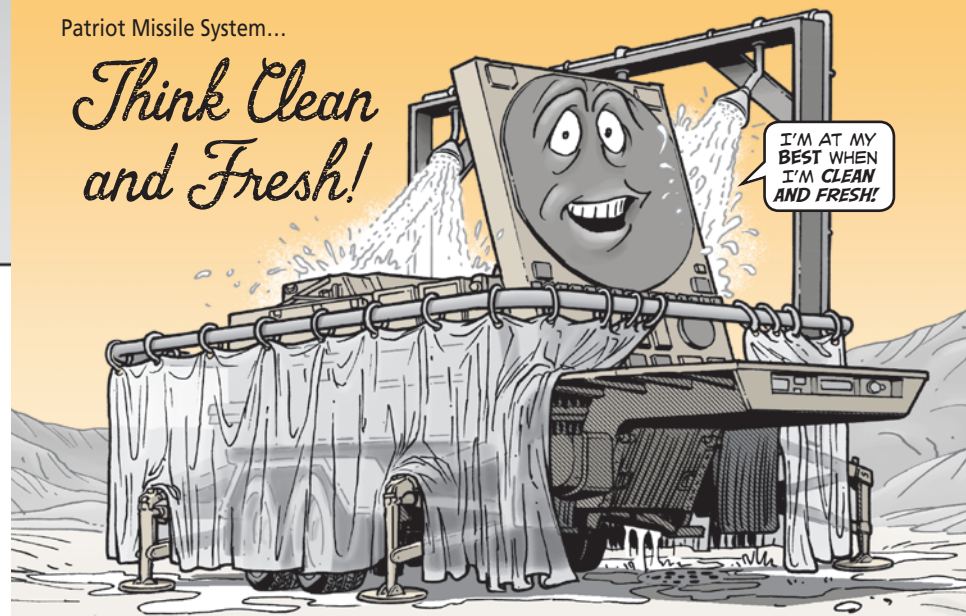
Repairmen should follow the procedures in IETM 9-1055-1646-13&P for removing the old air bleed valve and installing the elbow pipe fitting.

Then HIMARS crews need to make sure to bleed the air system daily, including the launcher hydraulic system bleed valve at the rear of the three vehicle air tanks. Otherwise, air pressure builds up in the reservoir and causes incorrect fluid readings. The pressure can eventually damage the reservoir.

But it's important to first bleed the air system before the hydraulic system. That reduces the force of the hydraulic fluid. Bleed the hydraulic fluid into a container so you can safely dispose of it.

Patriot Missile System...

Think Clean and Fresh!



WHEN IT COMES TO YOUR PATRIOT MISSILE SYSTEM, THINK **CLEAN AND FRESH.**

BECAUSE THE PATRIOT HAS **SO MANY** ELECTRONIC COMPONENTS, IT NEEDS **LOTS OF FRESH AIR** TO KEEP THEM FROM OVERHEATING AND SHUTTING DOWN.



THE INTERIORS OF PATRIOT MAJOR END ITEMS LIKE THE AN/MPQ-65 RADAR SET AND THE AN/MSQ-132 ENGAGEMENT CONTROL STATION (ECS) NEED TO BE KEPT **AS CLEAN AS POSSIBLE** SO DIRT AND SAND AREN'T SUCKED INTO ELECTRONICS!

PS MORE

CLEAN FILTERS ARE A **MUST** FOR THE AN/MPQ-65 AND ECS.

THE PATRIOT OFTEN OPERATES IN SANDY AREAS. BLOWING SAND MEANS THE FILTERS NEED TO BE BLOWN OUT AT **LEAST DAILY**.

A WISE INVESTMENT IS TO BUY **TWO SETS OF FILTERS**. THAT WAY YOU CAN ROTATE FILTERS, WHICH GIVES YOU TIME TO THOROUGHLY WASH AND DRY ONE SET **WITHOUT STOPPING OPERATIONS**.

Blow filters out at least daily when operating

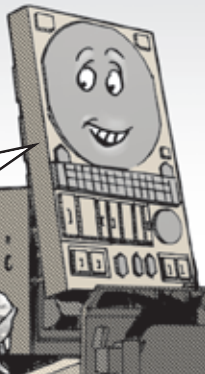


DON'T FORGET THE RADAR'S CLET (COOLER, LIQUID ELECTRON TUBE) NOW HAS **FIVE FILTERS** AND THEY ALL NEED TO BE KEPT CLEAN. ANY TIME THE CLET RESISTIVITY IS LOW, THOSE FILTERS NEED TO BE CHECKED.

OF COURSE, IT **WON'T** MATTER HOW CLEAN THE FILTERS ARE IF THE RADAR AIR DUCTS THEMSELVES PLUG UP. QUARTERLY, CLEAN THE TRANSMITTER BAY AIR DUCTS LIKE IT SAYS IN TM 9-1430-1601-10-1.

THE PATRIOT HAS **RACKS AND RACKS** OF CIRCUIT CARDS. IF THOSE CARDS GET **DIRTY**, YOU GET **FAULTS**. AT LEAST QUARTERLY, BLOW OUT THE CIRCUIT CARD RACKS WITH LOW-PRESSURE AIR.

THANKS FOR KEEPING MY FILTER **CLEAN!** Y'KNOW, MY AIR DUCTS COULD REALLY USE A CLEANING **TOO**. AND WHILE YOU'RE AT IT, HOW 'BOUT BLOWING OUT MY CIRCUIT CARD DRAWERS AND VACUUMING INSIDE?



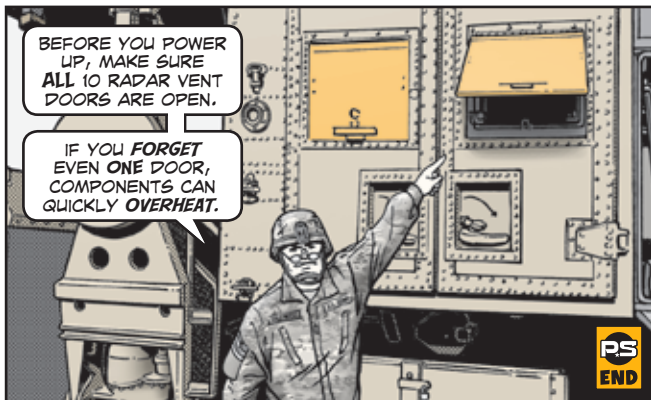
KEEP THE ECS AND RADAR DOORS SHUT AS MUCH AS POSSIBLE SO SAND AND DIRT **CAN'T** GET IN.

VACUUM INSIDE WHENEVER THE FLOOR GETS **DIRTY**. AND WIPE OFF THE CIRCUIT CARD RACKS.

ANY LOOSE DIRT WILL BE SUCKED UP INTO THE **ELECTRONICS**.

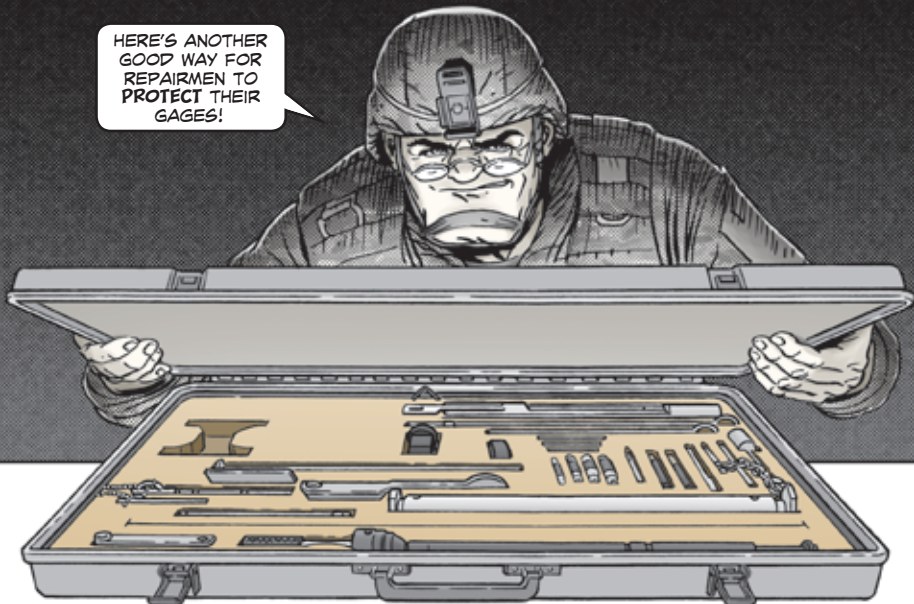
BEFORE YOU POWER UP, MAKE SURE **ALL 10 RADAR VENT DOORS** ARE OPEN.

IF YOU **FORGET** EVEN **ONE** DOOR, COMPONENTS CAN QUICKLY **OVERHEAT**.



A CHEAPER WAY TO PROTECT GAGES

HERE'S ANOTHER
GOOD WAY FOR
REPAIRMEN TO
PROTECT THEIR
GAGES!



Dear Editor,

Page 44 of PS 771 (Feb 17) had a great storage case suggestion from CW3 Don Gilmore for protecting all the expensive gages repairmen use.

We have a cheaper suggestion: the **M249 machine gun's accessory case**, NSN 1005-01-158-2226. It costs only \$61.

We used an exacto knife to cut out places to put the various gages. Then we cut a piece of plywood to separate one side from the other, which keeps the gages from falling out.

The case does a good job protecting the gages and is easy to move from unit to unit.

SGT Robert Mitchell
ALARNG

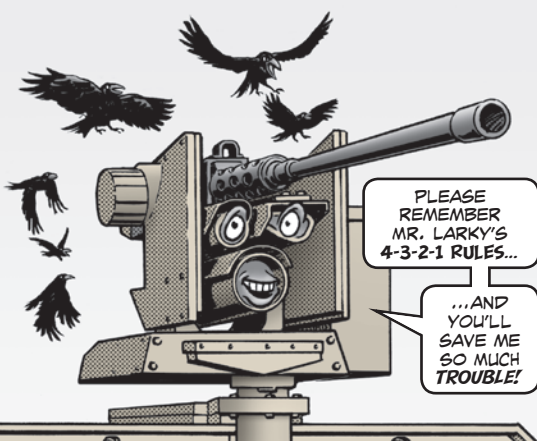


NOW THAT'S A **GOOD WAY TO SAVE MONEY!** UNITS WILL NEED TO DECIDE WHAT IS THE BEST CASE FOR THEM BASED ON HOW LARGE THEIR GAGE SET IS.

CW3 GILMORE'S WAS QUITE EXTENSIVE AND WOULD NOT FIT IN THE M249 ACCESSORY CASE. BUT THE M249 CASE WOULD WORK GREAT FOR SOMETHING LIKE **SMALL ARMS GAGES**. FOR LARGER SETS, A CASE WITH SEVERAL LAYERS OF FOAM INSERTS WILL BE NEEDED.

THE INTERNET OFFERS **MANY POSSIBILITIES!**

REMEMBER 4-3-2-1 TO KEEP CROWS FLYING!



Dear Editor,

From my years working with the M153 CROWS II as both an instructor and as a logistics assistance representative, I offer these tips to keep your CROWS flying:

Remember 4-3-2-1. This rule will save CROWS from so much damage. Before operating CROWS, remember:

4

4 covers. The environmental, laser range finder (LRF), visible imaging module (VIM) and thermal imaging module (TIM) covers must all be removed.

3

3 locks. The azimuth and elevation locks must be unlocked and the SSA clamp must be removed. **Before you shoot:**

- Disengage the azimuth (AZ) lock

- Put the ELEVATION (EL) transport lock in OPERATION

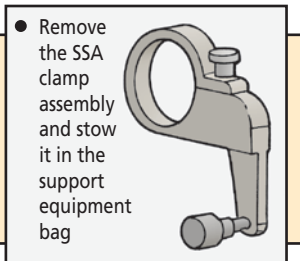
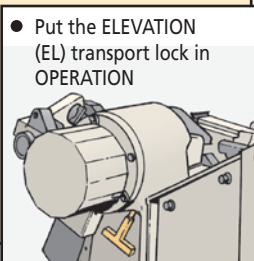
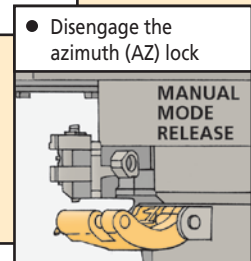
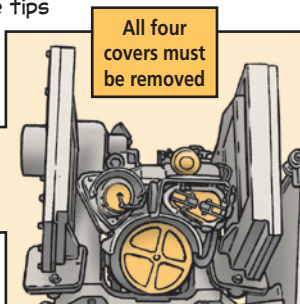
- Remove the SSA clamp assembly and stow it in the support equipment bag

2

2 mechanisms. The elevation and azimuth release mechanisms must be engaged with the pins installed. Some Soldiers mistakenly think the pins should be removed.

1

1 weapon. Only one weapon can be installed correctly on CROWS at a time. If you're switching from an M249 to an M2 for instance, you must remove all the M249 items and install all the nine items needed for the M2.



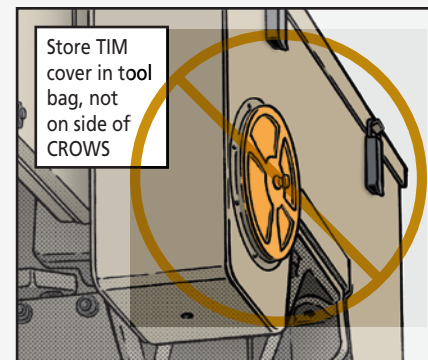
Use the covers and carefully store them when not in use. Most of the time you won't be firing with CROWS and that's when all four covers need to be on. If the CROWS is left uncovered for long periods, water can rust the hydraulic cylinder. Rust can freeze the cocking mechanism and the SSA, too.

Remove the lens covers only if you're going to fire. Very expensive lenses can quickly suffer heavy damage from flying rocks during travel.

When you remove the TIM cover, don't screw it onto the side of CROWS like the TM says. Vibration can cause the cap to work loose and fall off. Instead, store the TIM cover in the CROWS tool bag.

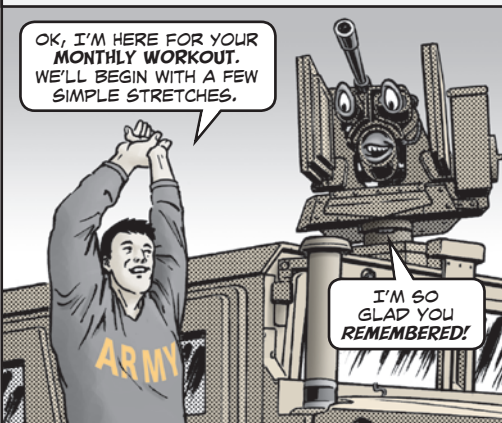
If covers disappear, replace them ASAP with these NSNs:

Cover	NSN
Environmental	5340-25-160-3971
LRF	6650-25-160-3989
VIM	6760-25-150-9879
TIM	5855-01-584-6138



Be careful when you remove the environmental cover. The cover's draw string can catch the pin on the azimuth release mechanism and pull it out. You won't realize something's wrong until you hit the road and the CROWS' arm kicks out and the system shuts down.

Operate CROWS at least monthly. That keeps its moving parts moving and operators sharp on how operate it.



Loren Larkey
Ft Polk, LA

GREAT, GREAT ADVICE, LOREN! THANKS SO MUCH FOR SHARING.



CBRN Advice from COMET

Dear Editor,

Through our work on the Command Maintenance Evaluation and Training Team (COMET), we have noticed a couple of chronic CBRN problems:

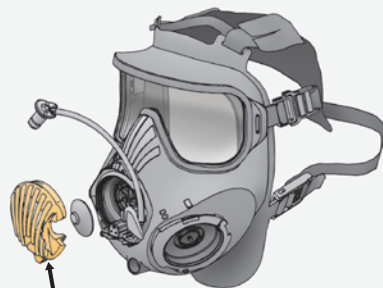
M50 Mask

Soldiers are using screwdrivers or similar tools to remove the outlet valve cover from their M50 masks. This ruins the mask.

What's the right way? WP 0025 00-2 in t M50 mask's TM 3-4240-542-13&P says to remove the drink coupler from below the fr module assembly, unwrap the external drink from around the front module, and turn the drink tube lever upward halfway so that it clears the outlet valve cover.

Place your thumb at the bottom of the cover below the communications port cover and between the cover and the front module main body. **Gently** lift the outlet valve cover away from the front module main body.

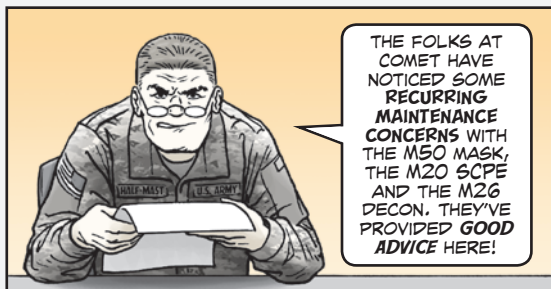
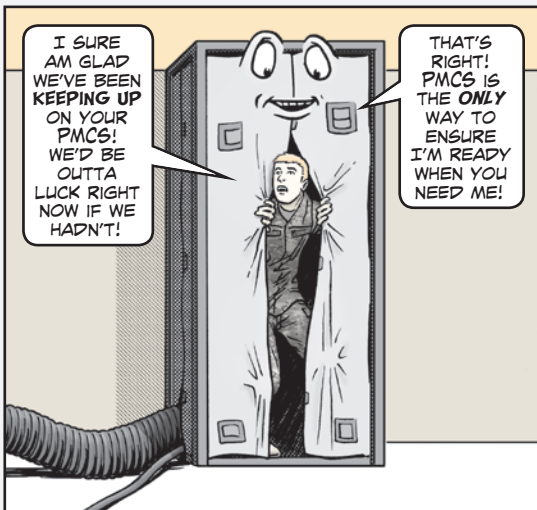
If you have trouble, **get help!**



Outlet valve cover

M20 SCPE

Don't let equipment sit forgotten. Most posts have the M20 or M20A1 simplified collective protection equipment (SCPE). Too often, no one ever checks it out... until it actually needs to be used. Then it's too late to get things like damaged cords or air ducts repaired. Both the M20 and M20A1 have semiannual PMCS that at the least needs to be done. For the M20, see Page 4-3 in TM 3-4240-288-12&P (May 93). For the M20A1, see Page 2-3 in TM 3-4240-313-20&P (Jan 11).

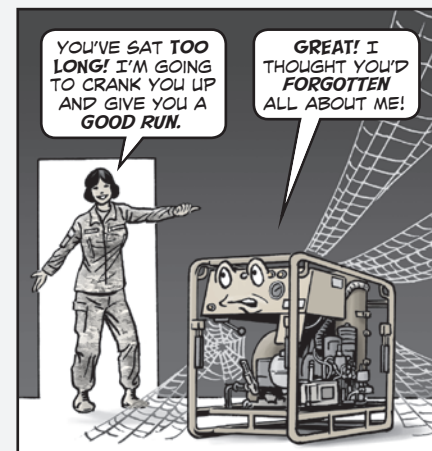


M26 Decon

The same goes for the M26 decon. If it sits for months, count on starting and corrosion problems among other things. WP 0008 in TM 3-4230-238-23&P (Nov 09) lists several quarterly PMCS checks, but units also need to start up their M26s every month and let them run. It's not that much trouble and it will mean much less trouble for M26s.

David Whitmire
JBLM, WA

Editor's note: Thanks again for sharing your experience, David. The COMET program has provided so much good info to PS over the years.



M40-series, M50-series Masks...

WANT TO KEEP BREATHING? CHANGE CANISTERS!



PS MORE

PS778

43

SEP 17

Dear Editor,

We inspect the CBRN rooms at Ft Carson as part of our work on the Command Evaluation and Training Team (COMET). We find too many M40 masks with canisters that have passed their expiration dates. Of course, that means in a chemical attack the mask may not provide any protection.

Please remind CBRN specialists how often they should change the canisters on M40 and M50 masks.

COMET
Ft Carson, CO

CANISTERS ARE **DEFINITELY** SOMETHING CBRN SPECIALISTS NEED TO TRACK. HERE ARE THE STANDARDS...



- **UNOPENED CANISTERS HAVE A 5-YEAR RENEWABLE SHELF LIFE. YOU CAN CHECK IF A CANISTER IS STILL GOOD AT JACKS:**

<https://jacks.jpeocbd.army.mil/>

YOU'LL NEED YOUR CAC CARD TO LOG IN.

FOLLOW THESE RULES ONCE A CANISTER HAS BEEN REMOVED FROM ITS PACKAGING.

- IF YOU'RE OPERATING WHERE THERE HAVE BEEN NO CHEMICAL ATTACKS AND NO BLOOD AGENT CK (CYANOGEN CHLORIDE) THREAT, CHANGE THE CANISTER **ANNUALLY**.
- IN AN AREA WITH NO CONFIRMED CHEMICAL ATTACKS BUT A CK THREAT IN A CLIMATE THAT'S **COLD AND HUMID** OR **WARM AND MODERATELY HUMID**, CHANGE THE CANISTER **ANNUALLY**.
 - CHANGE IT **EVERY 39 WEEKS** WHEN IT'S HOT AND DRY.
 - CHANGE IT **EVERY 10 WEEKS** WHEN IT'S HOT AND HUMID.
- FOR UNITS THAT HAVE EXPERIENCED CHEMICAL ATTACKS, CHANGE THE CANISTER **EVERY 30 DAYS**.

WHenever a soldier has trouble drawing breath through the canister, it should be changed.

REMEMBER THE M61 CANISTER FOR THE M50/M51 HAS A TIME PATCH. WHEN THE PATCH BEGINS TO TURN **BLUE**, HUMIDITY HAS DEGRADED THE CANISTER AND IT SHOULD BE REPLACED.



FOR MORE INFORMATION, SEE ATP 3-11.32, *MULTI-SERVICE TACTICS, TECHNIQUES AND PROCEDURES FOR CBRN PASSIVE DEFENSE* (MAY 16). CLICK THE SEARCH TAB AT:


<http://armypubs.army.mil>



THIS
SPRAY
BAR IS
GREAT!

SURE
MAKES
OUR JOB
EASIER!

Step Up to Spray Bar For Easier M12A1 Deconning



M12A1 decon units can now decon for some missions without leaving the vehicle thanks to the terrain decon spray bar (TDSB).

THE TDSB MOUNTS ON THE FRONT OF THE M12A1'S PRIME MOVER AND SPRAYS IN FRONT OF AND TO THE SIDES OF THE TRUCK. THE TDSB COMES WITH NSN 1040-01-612-3517 AND IS FREE ISSUE.

UNITS SHOULD ORDER ONE TDSB FOR EACH TRUCK USED FOR THE M12A1.

WHEN REQUISITIONING THE TDSB, PROVIDE YOUR UNIT'S PHYSICAL ADDRESS, ALONG WITH A POC AND PHONE NUMBER.

Contact these M12A1 item managers:

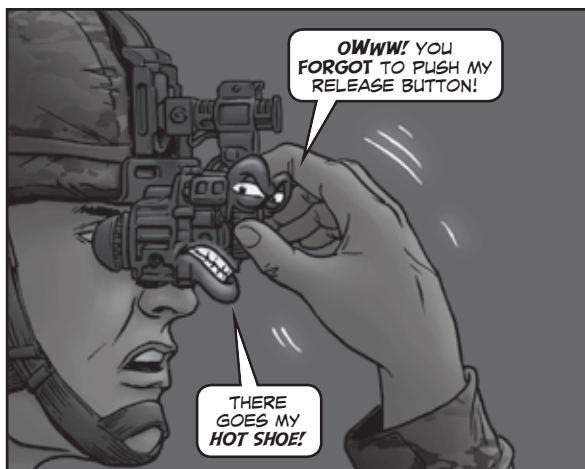
Jenalyn Pollock, (586) 282-1676, DSN 786-1676, email: jenalynregina.b.pollock.civ@mail.mil or Christopher Piwonski, (586) 282-1675, DSN 786-1675, email: christopher.j.piwonski.civ@mail.mil

For TDSB training and installation instructions, go to <https://pki.jacks.jpeocbd.army.mil/Jacks/Controls/WebCmsControls/FileHandler.aspx?documentid=fbd8938-78d7-4374-980d-d6e463cb91a2>



- Be Cool with AN/PSQ-20 Hot Shoe
- Shutting Down? Turn Off Generator Last!

BE COOL WITH AN/PSQ-20 HOT SHOE

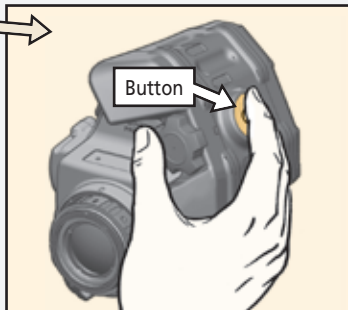
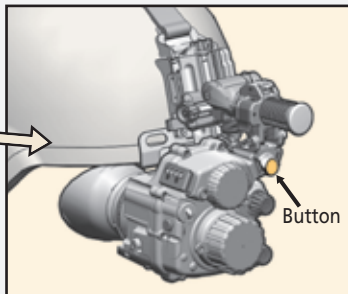


Dear Editor,

During an inspection of our unit's AN/PSQ-20-series enhanced night vision goggles (ENVG), we discovered that many had damaged hot shoes (battery connectors). If the damage is severe enough, the whole front housing has to be replaced at a cost of almost \$2K!

But Soldiers can prevent that expensive damage just by remembering the importance of the release buttons:

- When the AN/PSQ-20 is mounted, remember to press the release button before pivoting the eyepiece away from the helmet mount.
- When removing the battery pack, remember to press the release button while pivoting the battery pack away from the imaging system to remove the hotshoe connector from the receptacle.



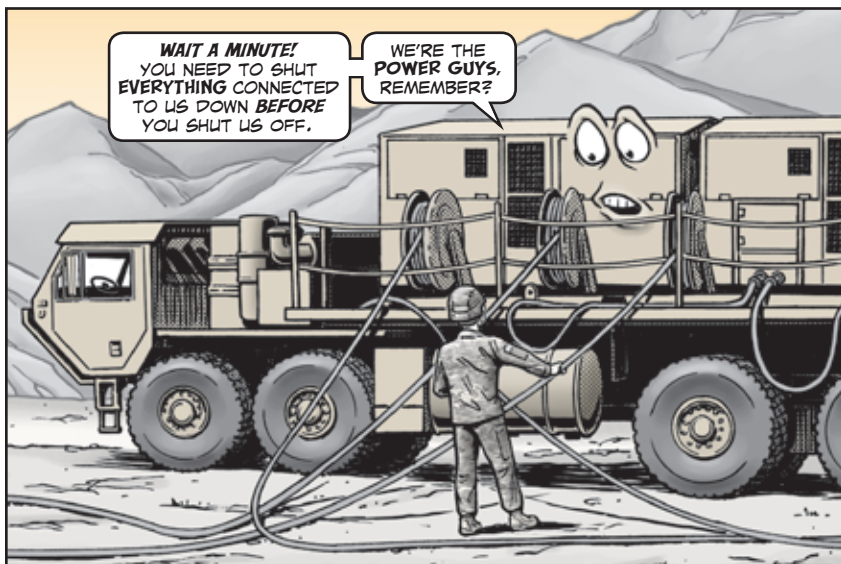
Before checking out AN/PSQ-20s, units need to do refresher training on this. If the training saves one \$2K repair, it will be well worth it.

PFC Daniel Carmona
Schofield Barracks, HI

Editor's note: A hot tip to save hot shoes! Good job, Private. This applies to all versions of the AN/PSQ-20.

SHUTTING DOWN?

Turn Off Generator Last!



Dear Editor,

After a long, hard day, Soldiers are often in a rush to shut down and get home. But one mistake Soldiers need to avoid is shutting down a generator that's powering other equipment before shutting down the equipment itself.

If something like the Patriot missile system's radar suddenly loses power, the radar's software, hard drives, and circuit and video cards could all be damaged. And you could lose any programming work you've done.

Even if the system escapes major damage, it could take hours and hours to get it up and running.

So always make sure you know what equipment is hooked up to a generator and make sure that equipment is properly shut down before you shut down the generator.

CPT David Anderson
SSG Patrick Rayburn
Ft Carson, CO

EXCELLENT TIP!
SHUT DOWN RIGHT
OR YOU'LL BE
SHUT DOWN!

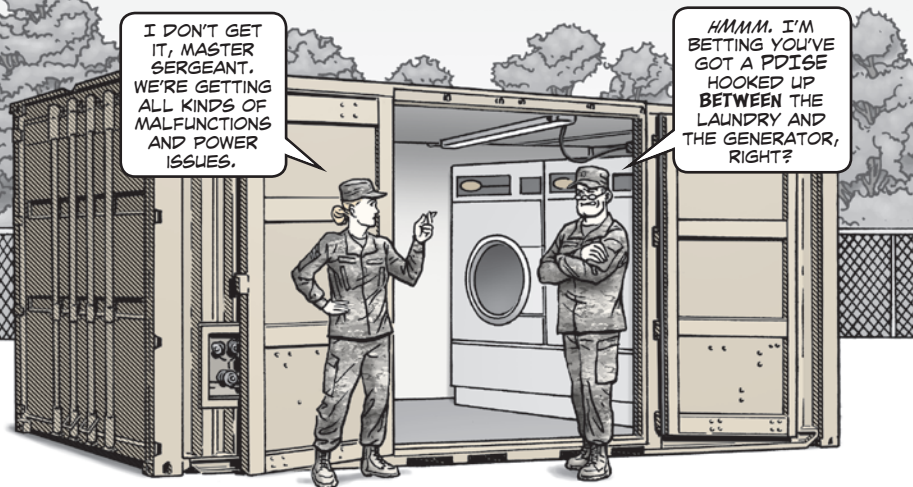


PS SOLDIER SUPPORT

- No PDISE Needed!
- New MTRCS Door Parts Available
- Keep Ventilation Hoods Clean
- Water Pump NSN Found



No PDISE Needed!



When it comes to powering your containerized batch laundry (CBL), NSNs 3510-01-527-2209 and -2210 (LIN C28019), less is more, operators.

Some units have been connecting the CBL to a Power Distribution Illumination System, Electrical (PDISE) and then hooking the PDISE to the 100-kW generator. The CBL isn't designed for use with the PDISE and such a hookup will lead to system level power issues, malfunctions and may even damage your equipment.

So when powering your CBL, skip the PDISE. A direct connection between the CBL and 100-kW generator is the way to go.

While you're at it, here are a few more important tips:

- Make sure the generator and CBL are properly grounded at the power entry points. You'll find the procedures starting on WP 0007 00-12 of TM 10-3510-226-10 (Aug 05 w/Ch 2, Feb 08).

- Ensure all phase indicators are properly illuminated before powering up the system. See WP 0007 00-16 through 00-18 of the -10 TM for details.

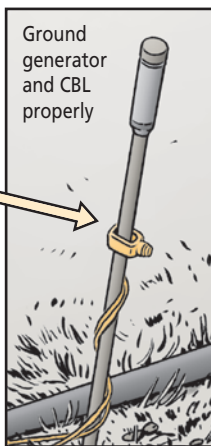
DRYER 1
PHASE STATUS

DRYER 2
PHASE STATUS



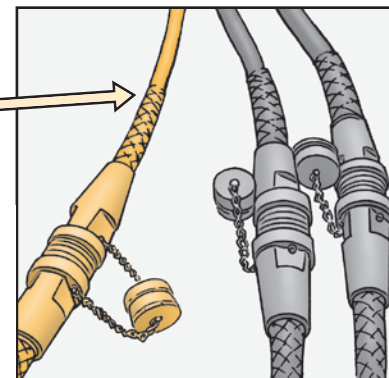
CAUTION
DO NOT OPERATE UNLESS
LIGHTS ARE LIT

Ground
generator and CBL
properly



- The electrician may have to remove a portion of the external black insulator sleeve on one of the 100A pigtails to make the generator connection. However, each individual conductor (LO, L1, L2 and L3) will keep its insulation.

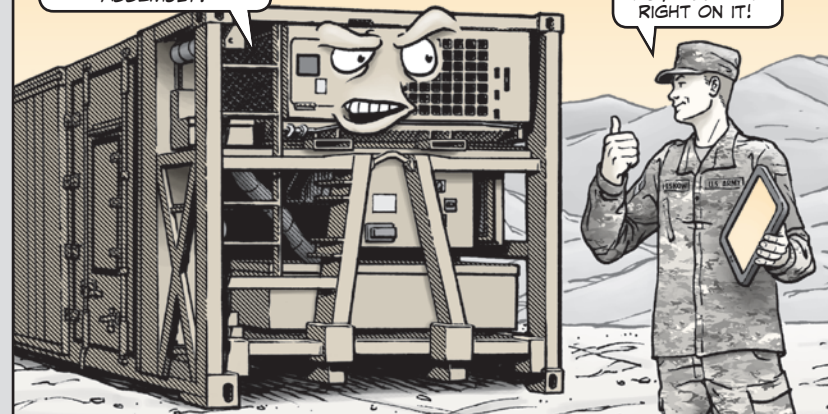
- Only MOS 12R (interior electrician), 12P (prime power production specialist), 91D (tactical power generation specialist), 91J (quartermaster and chemical equipment repairer) or a qualified civilian electrician should connect the CBL to the generator.



New MTRCS Door Parts Available

I THOUGHT YOU WERE GOING TO FIX MY REAR DOOR AND CAM-LOCK ASSEMBLY!

NOW THAT I'VE FOUND THE RIGHT NSNs IN PS, I'LL GET RIGHT ON IT!



HAVING **PROBLEMS** FINDING DOOR PARTS FOR YOUR MULTI-TEMPERATURE REFRIGERATED CONTAINER SYSTEM (MTRCS)?

MAKE A NOTE OF THESE NSNs UNTIL TM 10-8145-222-23P IS UPDATED:

Item	NSN 4130-	PN	CAGE	Price
Right door inner cam-lock assembly	01-661-4698	141-211-001	6SD02	\$763
Right door outer cam-lock assembly	01-661-4731	141-211-002	6SD02	\$763
Right door entry (includes both inner and out cam-locks)	01-661-4744	141-201-001	6SD02	\$3,000

KEEP VENTILATION HOODS CLEAN

BACK FOR SECONDS, SERGEANT?

YEP, THIS IS SOME OF THE BEST-TASTIN' GRUB I'VE HAD. NEW RECIPE?

NOPE, OLD FACT: CLEAN VENTS EQUAL BETTER FOOD.



HERE'S A **Pop Quiz** FOR THE FOOD SERVICE FOLKS:

WHEN WAS THE LAST PMCS ON YOUR KITCHEN VENTILATION HOODS?

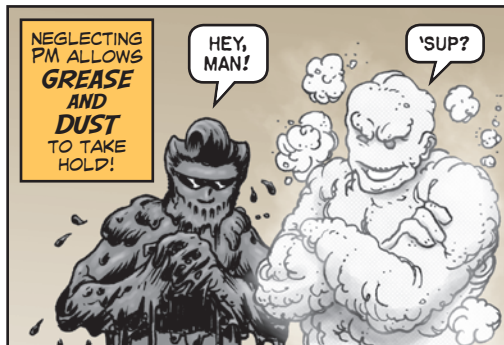
IF YOU'RE NOT SURE, THAT'S A **RED FLAG** BECAUSE NORMAL COOKING OPERATIONS PRODUCE AN **ALARMING** AMOUNT OF GREASE.

WHEN VENTILATION HOODS OR EXHAUSTS **AREN'T WORKING RIGHT**, YOU'LL NOTICE BECAUSE GREASE AND STEAM **AREN'T REMOVED** FROM THE KITCHEN.

NEGLECTING PM ALLOWS **GREASE AND DUST** TO TAKE HOLD!

HEY, MAN!

'SUP?



THIS **DEVILISH DUO** BUILDS UP ON SURFACES LIKE:

- countertops
- Flatware
- plates, pots and pans
- other food service equipment
- walls and ceilings.

THAT'S A **NIGHTMARE** FOR THE POOR GUY WHO FINALLY DOES THAT OVERDUE CLEANING. BUT IT'S ALSO A **SERIOUS** SANITATION AND SAFETY ISSUE. GREASE AND DUST BUILDUP ON POWER OUTLETS CAN CAUSE ELECTRICAL FIRES.

IF NEEDED, HOOD FILTERS SHOULD BE PROFESSIONALLY CLEANED BY APPROVED CONTRACTORS.

DO **DAILY SAFETY AND READINESS INSPECTIONS** OF KITCHEN FACILITY EQUIPMENT. WHILE GREAT-TASTING GRUB IS ALWAYS NICE, **SAFETY AND SANITATION TAKE PRIORITY!** THAT MEANS MAKING SURE OLD GREASE IS REMOVED AND HOOD FILTERS ARE CLEAN.

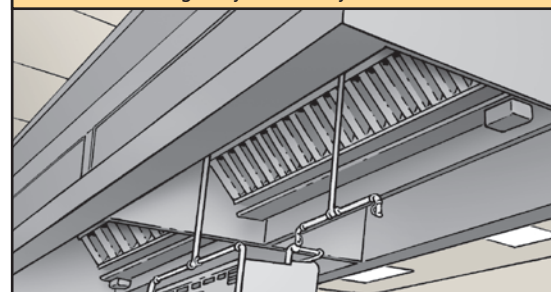
REDUCE RISK BY KEEPING UP REGULARLY SCHEDULED PMCS. YOUR LOCAL DEPARTMENT OF PUBLIC WORKS (DPW) TECHNICIANS CAN ALSO ASSIST WITH SCHEDULED MAINTENANCE AND CLEANING AS COVERED IN CHAPTER 4 IN TB MED 530, TRI-SERVICE FOOD CODE (APR 14). GET THE PUB HERE:

http://www.apd.army.mil/epubs/DR_pubs/DR_a/pdf/web/tbmed530.pdf

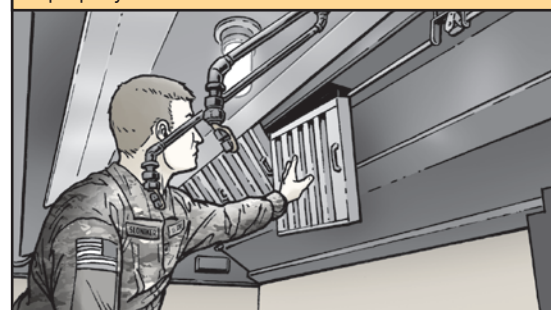
HERE ARE SOME POINTERS TO KEEP KITCHEN VENTILATION HOOD PMCS ON TRACK:

- Remember to check for visible damage to interior hoods.
- Immediately report any exhaust hood that's not working to your DPW and local fire department.
- Cleaning tips:
 - Include daily, weekly and monthly user cleaning instructions in the dining facility SOP.
 - Follow all manufacturer guidelines.

- Make sure kitchen ventilation hoods are properly cleaned and regularly checked by a certified technician.



- Ensure the exhaust system is inspected and working properly before use.



Containerized Kitchen...

Water Pump NSN Found

Dear Half-Mast,

I have an issue with a water pump that's not working in my containerized kitchen, NSN 7360-01-473-3408. Item 5 in Fig 19 of TM 10-7360-226-13&P (Aug 01, w/Ch 4, Mar 07) shows PN 2088-492-444 for the water pump. But it doesn't cross to an NSN on FED LOG.

My only option now is to order the whole sink assembly at more than \$3,300! Is there an NSN out there for just the water pump?

WO1 R.J.D.



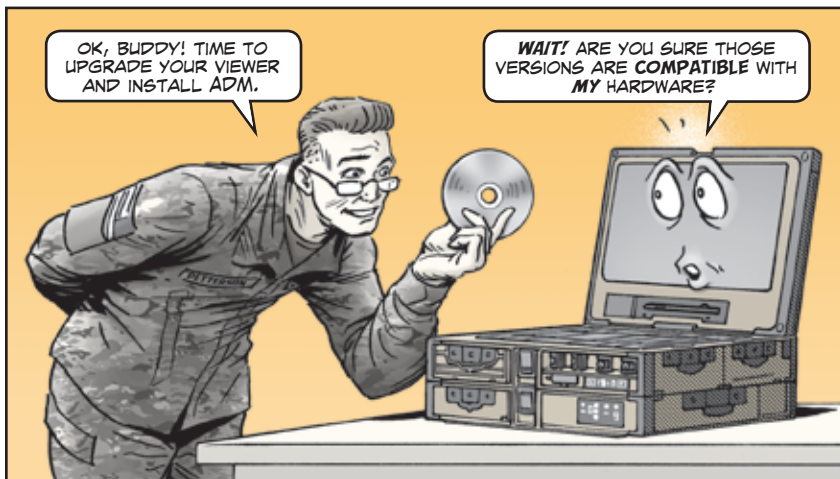
THANKS TO THE GOOD FOLKS AT THE **NATICK SOLDIER SYSTEMS CENTER**, THERE IS NOW, SIR, ORDER THE WATER PUMP WITH NSN 4320-01-486-3601.

AT \$176, THAT'S A **CONSIDERABLE SAVINGS**. MAKE A NOTE UNTIL THE TM CAN BE UPDATED.

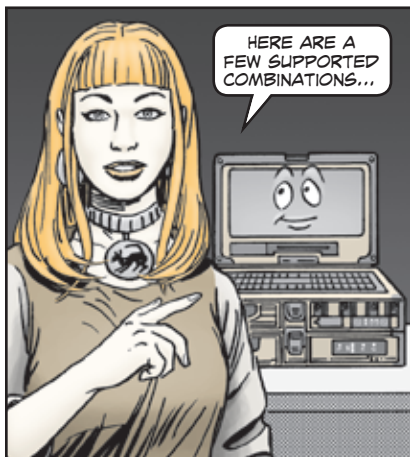
- Which Software Versions on Which Machines?
- Can We Ship It?
- Upgrade MSD OS
- Taking A Dip?



Which Software Versions on Which Machines?



QUESTIONS ABOUT **WHICH VERSIONS** OF THE ELECTRONIC MAINTENANCE SYSTEM-NEXT GENERATION (EMS-NG) VIEWER AND AUTONOMOUS DIAGNOSTIC MANAGER (ADM) WORK WITH **WHICH SYSTEM?**

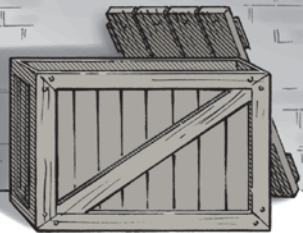


- Install Viewer V2.1.11 (and newer) on the MSD-V2 (32-bit Windows 7 AGM) and the MSD-V3 (64-bit Windows 7 AGM). This version also works on standard Army workstations (64-bit Windows 7 AGM).
- Use ADM V3.10.6 (and newer) on the MSD-V2 (32-bit Windows 7 AGM) and the MSD-V3 (64-bit Windows 7 AGM). The ADM must be used in conjunction with the Viewer and cannot function alone.
- Viewer V2.1.11X (and newer) is for vehicle platforms running Red Hat Enterprise Linux (RHEL) 6.4 (64-bit).
- Viewer V2.1.9.1 is the last version that can be installed on MSDs or computers running Windows XP.

IF YOU HAVE ANY **QUESTIONS** ABOUT MSD SOFTWARE COMPATIBILITY, EMAIL THE EMS HELP DESK AT:

support@ems-helpdesk.com

Can We Ship It?



HEY, DAVIS! HELP ME PACK UP THE LAST OF THIS SPRAY PAINT AND WE CAN CALL IT A DAY.

ROGER THAT, SERGEANT BROWN.



ON SECOND THOUGHT, DAVIS, SPRAY PAINT IS **FLAMMABLE**. THERE'S A CHANCE IT MIGHT COUNT AS HAZMAT.

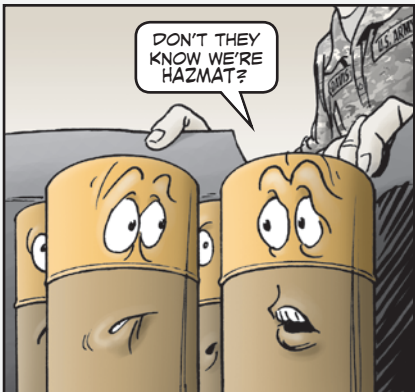
LET'S LEAVE IT UNPACKED UNTIL I CAN EMAIL THE FOLKS AT PSCC.



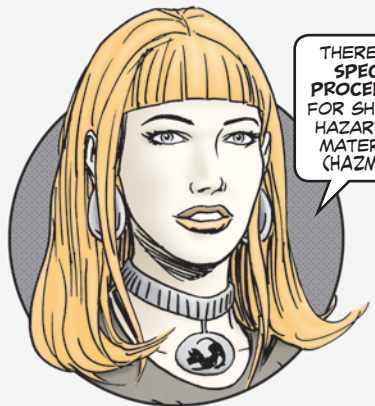
WHEW!



THEY CAN'T SHIP US IN THE SAME CRATE AS THAT OTHER STUFF!



DON'T THEY KNOW WE'RE HAZMAT?



THERE ARE **SPECIAL PROCEDURES** FOR SHIPPING HAZARDOUS MATERIALS (HAZMAT).

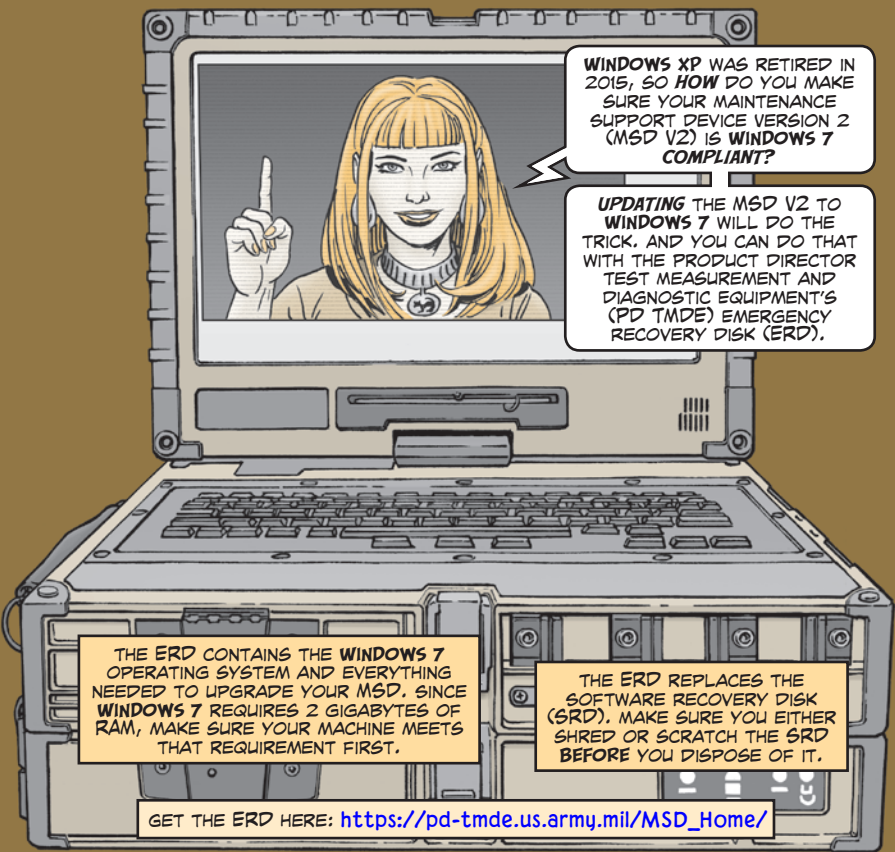
MORE THINGS COUNT AS HAZMAT THAN YOU MIGHT THINK! THE LOGISTICS SUPPORT ACTIVITY'S PACKAGING, STORAGE AND CONTAINERIZATION CENTER (LOGSA PSCC) CAN HELP TAKE THE GUESS WORK **OUT** OF WHAT COUNTS AS HAZMAT.

PSCC CAN ALSO HELP YOU **PREPARE AND SEGREGATE** HAZMAT AND ONCE IT'S READY TO SHIP, THEY WILL HELP YOU COMPLETE YOUR PAPERWORK.

EMAIL PSCC AT:
usarmy.tyad.usamc.mbx.pt@mail.mil

MSD V2...

Upgrade MSD OS



WINDOWS XP WAS RETIRED IN 2015, SO **HOW** DO YOU MAKE SURE YOUR MAINTENANCE SUPPORT DEVICE VERSION 2 (MSD V2) IS **WINDOWS 7 COMPLIANT**?

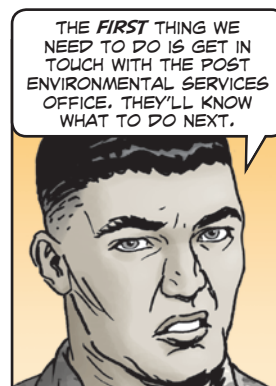
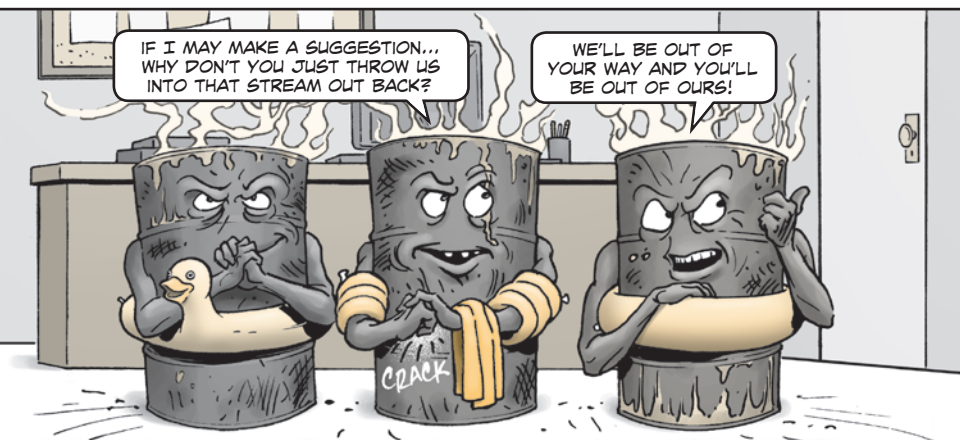
UPDATING THE MSD V2 TO **WINDOWS 7** WILL DO THE TRICK, AND YOU CAN DO THAT WITH THE PRODUCT DIRECTOR TEST MEASUREMENT AND DIAGNOSTIC EQUIPMENT'S (PD TMDE) EMERGENCY RECOVERY DISK (ERD).

THE ERD CONTAINS THE **WINDOWS 7** OPERATING SYSTEM AND EVERYTHING NEEDED TO UPGRADE YOUR MSD. SINCE **WINDOWS 7** REQUIRES 2 GIGABYTES OF RAM, MAKE SURE YOUR MACHINE MEETS THAT REQUIREMENT FIRST.

THE ERD REPLACES THE SOFTWARE RECOVERY DISK (SRD). MAKE SURE YOU EITHER SHRED OR SCRATCH THE SRD BEFORE YOU DISPOSE OF IT.

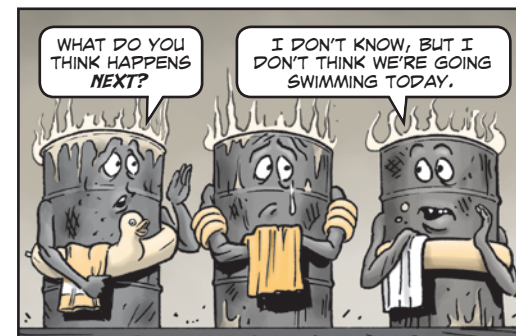
GET THE ERD HERE: https://pd-tmde.us.army.mil/MSD_Home/

TAKING A DIP?



MAKE SURE YOU GET RID OF HAZARDOUS WASTE THE **RIGHT WAY!** FOR MORE INFORMATION ON THE DLA DISPOSITION SERVICES' HAZARDOUS WASTE DISPOSAL PROGRAM GO TO:

<http://www.dla.mil/DispositionServices/Offers/Disposal/HazardousWaste/TurninSvs.aspx>





TURN IN UNSERVICEABLE APACHE TRAILING ARMS

You won't get the parts you need unless you turn in your unserviceable parts for repair. Maintenance and overhaul programs won't work unless you turn in all of your trailing arm assemblies, NSN 1620-01-147-4777, PN 1168320-101. Send the item to

**Plant 7015/RIC
Corpus Christi Army Depot
TX 78419**

M104 Wolverine DECU Check

Performing a digital electronic control unit (DECU) health check on the M104 Wolverine is shown as Item 16 in TM 5-5420-232-10 (Mar 01, w/Ch 7, Apr 09) as part of Before PMCS. However, the DECU health check should now be done monthly or after every 50 hours of operation, whichever comes first. Make a note until the TM is updated.

M1074A1/M1075A1 PLS Emergency Steering Pressure Sensor NSN

Get a replacement emergency steering pressure sensor for the M1074A1/M1075A1 palletized loading system (PLS) with NSN 5930-01-347-1468. This new, 2-prong sensor replaces the 3-prong sensor, NSN 6695-01-565-5169, shown as Item 57 in Fig 515 of TM 9-2320-319-13&P in IETM EM 0298 (Mar 10).

JLLIS Training

Need to use the Joint Lessons Learned Information System (JLLIS) but don't know how? The Defense Logistics Agency (DLA) can help! DLA offers JLLIS training online. To find out more, call the DLA Center for Lessons Learned at (804) 279-3344.

M1094 FMTV Dump Truck Drive Shaft

Get a new drive shaft assembly for your M1094 FMTV dump truck with NSN 2520-01-545-0421. It replaces NSN 2520-01-472-4497, which is shown as Item 1 in Fig 155 of TM 9-2320-366-24P-1 (Oct 05). That NSN is a terminal item.

Dodge MSD V2 Database Vacuums

Ever get the dreaded "Failed to execute database vacuum" message on your Maintenance Support Device Version 2 (MSD-V2)? Version 2.1.11 of the Electronic Maintenance System - Next Generation (EMS-NG viewer) software fixes that glitch. Download it here:

<https://www.tacom.army.mil/ems/products.html>

M9 ACE Hydraulic Kit NSN

Get a hydraulic parts kit for your M9 armored combat earthmover with NSN 2590-01-216-8646. Need replacement parts? Check out Figure 228 of TM 5-2350-262-24P (Jun 12) for a complete list.

M915A5 Air Horn NSN

Get a new air horn for your M915A5 tractor truck with NSN 6350-01-578-6222 (PN 22-68626-000). It replaces PN H00293FD, which is shown as Item 7 in Fig 258 of TM 9-2320-426-13&P in IETM EM 0308 (Aug 14).

EMS Downloads On AKO

Electronic Maintenance Software (EMS) downloads for your maintenance support device (MSD) are now available on Army Knowledge Online (AKO):

<https://www.us.army.mil/suite/folder/26121198>

An AKO account and a Common Access Card (CAC) are required to log in.

FMTV C7 Engine Fuel Hose

Get a new fuel hose for your A1/A1P2 FMTV with NSN 4720-01-553-7158. This hose has a straight connection on one end and a 90-degree connection on the other and is backward compatible on all FMTV engines. NSN 4720-01-469-9896, which is shown as Item 16 in Fig 1032 of TM 9-2320-391-13&P in IETM EM 0195 (Aug 15), brings a hose with two straight ends and can't be connected to the fuel transfer pump on C7 engines.

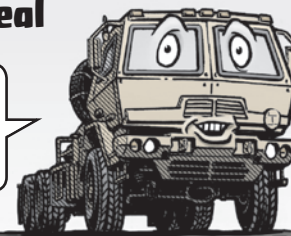
MEP-803A 10-kW Generator In-line Fuel Filter NSN

Get the in-line fuel filter for your MEP-803A 10-kW generator with NSN 2910-01-553-6571 (PN 00-24000, CAGE 30554). This filter has two threaded connections. It replaces NSN 2940-01-365-6535, which is shown as Item 21 in Fig 17 of TM 9-6115-642-24P (Oct 96). That filter has one slip-on and one threaded connection.

M1088A1P2 Brake Plunger Seal

GET A NEW BRAKE PLUNGER SEAL FOR YOUR M1088A1P2 FMTV WITH NSN 5330-01-292-9573.

IT REPLACES NSN 5330-01-350-5385, WHICH IS SHOWN AS ITEM 10 IN FIG 1128 OF TM 9-2320-333-13&P IN IETM EM 0294 (JUN 15). THAT NSN IS A TERMINAL ITEM.



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

SOMETHING OUT OF REACH?

UH? HEY! THIS ARRANGEMENT REALLY ISN'T WORKING!

TOO LATE NOW!

USE A LADDER!

