

Issue 681

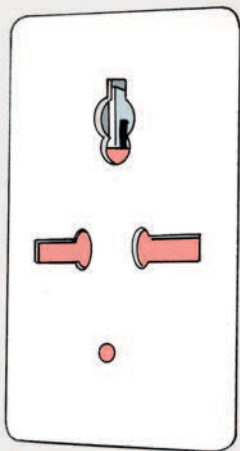
PS

August
2009

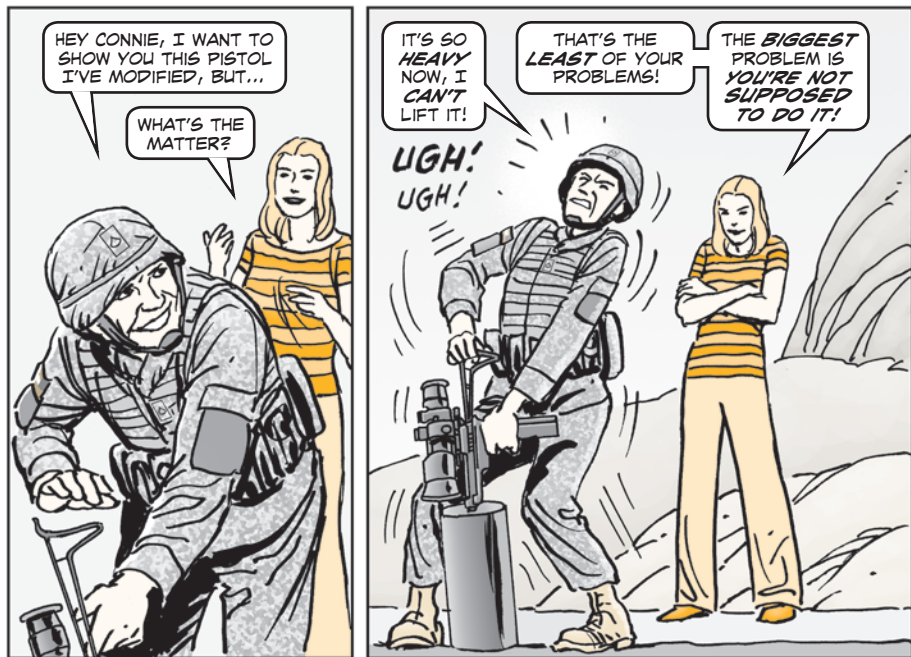
THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-681

Approved for
Public Release;
Distribution is
Unlimited



**ELECTRICAL
SAFETY
PROBLEMS?
SEE PAGE 40...**



NO ANDS OR BUTS! NO MODS!

Soldiers continue to try to improve the performance of their weapons by modifying them.

That is a big no-no! Unauthorized modifications to weapons are strictly forbidden. Para 3-1.e in AR 750-10 clearly states: "Commanders will not allow their equipment to be modified unless there is an official MWO."

Why is the Army so strict about modifications? Because they want to ensure through thorough testing that any modifications will not injure Soldiers, damage the weapons, or cause the weapons to stop firing in battle.

Here are some examples of unauthorized modifications:

Converting an M16A2 rifle to an M4 carbine. Installing an M4 buttstock on an M16A2 receiver or converting the rifle from burst to fully automatic will cause firing stoppages, malfunctions, and possible injury.

Installing an aiming laser or an ergonomic pistol grip or a silencer on an M9 pistol. None of these have been tested, so there is no way to know how they could affect the pistol. That's a risk you don't need.

Changing a basic M240 machine gun (coaxial) to an M240B (dismounted infantry). Adding and removing components can hurt the performance of the M240.

So, Warfighters, give your weapons a break and protect yourself and your unit by staying away from unauthorized weapons modifications. The only help your weapon needs is for you to follow the PM and PMCS in the -10 TM.

PS**THE
PREVENTIVE
MAINTENANCE
MONTHLY**

TB 43-PS-681, 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.

ISSUE 681 AUGUST 2009**COMBAT VEHICLES**

JCIMS Identification Panels
Stryker Hatch Safety
AN/VIC-3(V) CVC Helmet Replacement Parts
MLRS Carrier Steering Cable

**WHEELED VEHICLES**

HMMWV Unauthorized Mods
M1114 UAH Impact Wrench
FMTV Driveshaft PMCS
M931/M932 5-ton Tractor Trailer Lights
M915 FOV Armor Door NSNs
Vehicle Battery Solar Pulse Chargers

**SMALL ARMS**

M249 Machine Gun Extractor Pins
M240 Machine Gun Sear Safety Check
M240B Machine Gun Rail Kit Installation
M4/M4A1 Carbine Buttstock Available
Headspace Gages ID Tag

**MISSILES**

Avenger Missile System Tools
TS-4530/JPM Radar Test Set Battery Sticks
Dragon Missile System Turn In

2

**AVIATION**

35

2-4 AH-64A/D Tail Wheel Inner Tubes 35
5 CH-47F MFD Cleaning 36
6-8 No High-Pressure Water Cleaning 37
9 OH-58D Step Cautions 38-39
Aircraft Hydraulic Bleeder and Filler Turn In 38-39

**COMMUNICATIONS**

40

10-14 Electrical Outlet and Plug Safety in SWA 40-43
15 CAT 5 Cable and RJ Connector NSNs 44-45

**CBRN**

46

20 M41 PATS Alcohol, Care 46-47
M40-Series Mask Stowing 48-49

**SOLDIER SUPPORT**

50

22 HAZMAT Storage 50-54
23 Tactical Water Purification System Filters 55

**LOGISTICS MANAGEMENT**

56

24-25 Dispatch Assistance 56
24-25 National Guard COMET Program 57
26 PMCS Types Explained 58-59

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

Or email to:

logsa.psmag@conus.army.mil or
half.mast@us.army.mil

Internet address:

<https://www.logsa.army.mil/psmag/pshome.cfm>

By order of the Secretary of the Army:

GEORGE W. CASEY, JR.
General, United States Army Chief of Staff

Official:


JOYCE E. MORROW

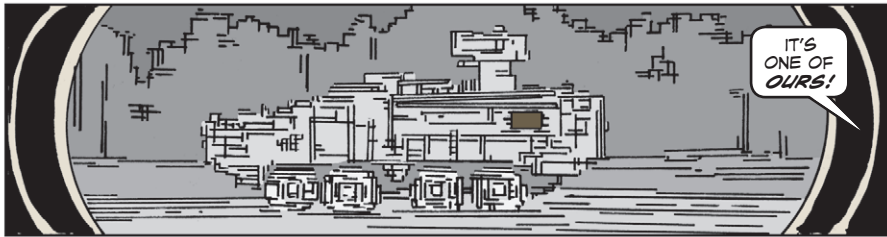
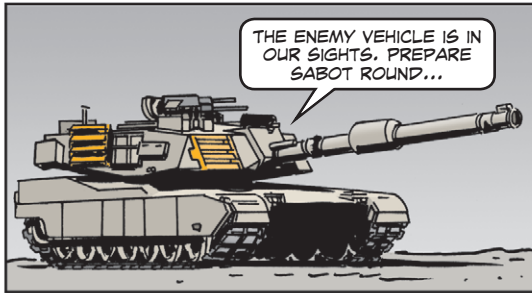
Administrative Assistant to the Secretary of the Army

0914906

PS, The Preventive Maintenance Monthly (ISSN 0475-2953) is published monthly by the Department of the Army, Redstone Arsenal, AL 35898-5000. Periodical postage is paid at the Huntsville, AL post office and at additional mailing offices.

Postmaster: Send address changes to PS, The Preventive Maintenance Monthly, USAMC LOGSA (AMXLS-AM), 5307 Sparkman Circle, Redstone Arsenal, AL 35898-5000.

JCIMS PROTECTS FROM FRIENDLY FIRE



THE BATTLEFIELD IS A *CHAOTIC* AND *DANGEROUS* PLACE.

BEING SHOT AT BY SOMEONE ON YOUR OWN SIDE ONLY MAKES THINGS *WORSE*.

THAT'S WHY BOTH YOU AND YOUR VEHICLE NEED THE PROTECTION OF THE JOINT COMBAT IDENTIFICATION MARKING SYSTEM (JCIMS).

JCIMS is composed of combat identification panels (CIPs), thermal identification panels (TIPs), and Phoenix infrared beacons. All three items have been around for quite a while. But if you need to refresh your memory, check out the following PS articles:

CIPs, Pages 2-5 of PS 646 (Sep 06):
<https://www.logsa.army.mil/psmag/archives/PS2006/646/646-02-05.pdf>

TIPs, Pages 6-7 of PS 594 (May 02):
<https://www.logsa.army.mil/psmag/archives/PS2002/594/594-06-07.pdf>

Phoenix beacons, Pages 46-47 of PS 589 (Dec 01):
<https://www.logsa.army.mil/psmag/archives/PS2001/589/589-46-47.pdf>

Integrating JCIMS into unit training plans and SOPs is an effective way to reduce the risk of friendly fire casualties. As the items continue to be fielded, Active and Reserve BCTs will be contacted by the Product Director, Target Identification and Meteorological Sensors (PD TIMS) to schedule new material information briefings and new equipment training. Fielding priority has been established by HQDA G3.

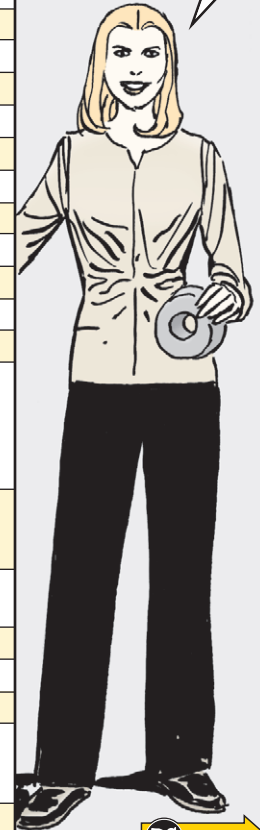
Accountability

CIP kits are now CTA 50-909 items as listed in SB 700-20. As accountable items documented in the unit's TOE, CIP kits **must** be removed from any vehicle being returned to depot for RESET, rebuild or disposal.

Keep the CIPs, TIPs and Phoenix beacons to reuse on the replacement vehicle you receive. This will protect you on the battlefield and ensure property accountability is maintained.

Vehicle	CIP Kit, NSN	LIN
M1A1/A2 tank	2350-01-394-2534	K41354
M60A1 AVLB	2350-01-392-1566	K41286
M88A1 recovery vehicle	2350-01-394-2531	K27523
M88A2 recovery vehicle	2350-01-563-8452	TBD
M2/M3-series Bradleys	2350-01-398-5170	K41388
M113A2/A3 FOV	2350-01-398-5168	K41490
M270A1 MLRS	2350-01-398-5171	K41558
M992A2 ammo carrier	2350-01-398-5178	K27591
M109A2-A6 SP howitzer	2350-01-398-5180	K41422
M578 recovery vehicle	2350-01-421-7060	K41626
SEE	2320-01-398-5163	K41184
M9 ACE	2320-01-399-6774	K41456
D5B tractor	2320-01-400-1809	K41320
M93A1 Fox CBRN vehicle	2350-01-398-5173	K41252
M998, M1038, M1097, M966, M1025, M1026, M1113, M1151, M1152, M1165, Cargo/Scout/TOW HMMWVs	2320-01-398-7194	K41762
M996, M997 HMMWV ambulance, M1037 S250 shelter HMMWV	2320-01-398-7188	K93075
M1114, M1165 Up-armored HMMWV	2320-01-472-5884	K41694
HMMWV Avenger	2320-01-398-7197	K27455
HEMTT/PLS FOV	2320-01-484-7833	K61981
FMTV/LMTV	2320-01-483-9056	K61881
M1126, M1127, M1128, M1130, M1131, M1132, M1134 Stryker	2320-01-501-9527	C85240
M1129, M1133, M1135 Stryker	2320-01-501-9531	C85308

THESE LINE ITEM NUMBERS (LIN) HAVE BEEN ASSIGNED TO CIP KITS TO HELP WITH PROPERTY ACCOUNTABILITY...



Installation

The rigors of combat combined with extremely high temperatures have been hard on CIP panels mounted with hook-and-pile. Some of those panels have fallen off and been lost.

To keep those panels on, the installation procedures have been changed. Instead of spray adhesive primer, NSN 8040-00-938-6860, mounting hardware such as bolts and pop rivets are now used to securely mount the panels to the vehicle.

A CIP installation instruction handbook is now available for download at the PD TIMS website: <https://peoiews.monmouth.army.mil/TIMS/index.htm>

A CD-ROM with detailed installation instructions and a list of NSNs for all Class IX repair parts is also available. Request a copy by calling Michael J. Murphy at DSN 987-0377 or (732) 427-0377.

Stryker Alert: The CIPs kits for Strykers have been modified and can now be mounted on vehicles both with and without slat armor.

Panels mounted on the bustle rack brackets were previously held on with hook-and-pile. Effective immediately, all units should apply an emergency modification by drilling holes through the panel and mounting bracket and securing the panel to the bracket using a bolt and wing-nut.

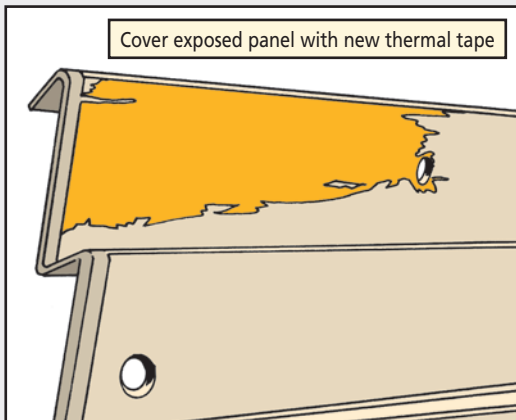
This modification will keep the panel from being blown off the bracket during movement while still allowing easy removal and reversal of the panel.

Maintenance

Whenever the thin coat of CARC paint wears off your CIP, the panel starts to look like a large silver mirror. That's something you probably want to avoid on the battlefield!

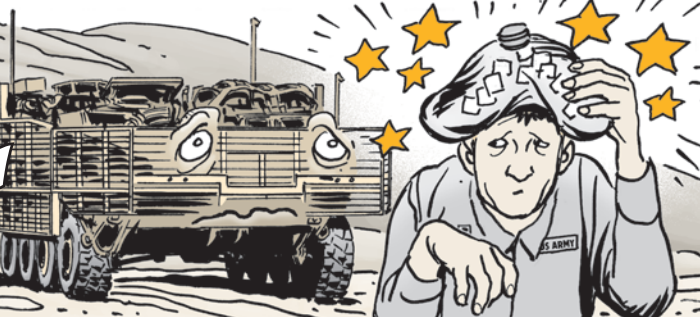
Cover the exposed portions of the CIP with new thermal tape, NSN 8135-01-518-2504. This brown tape comes in 150-ft rolls and is easily applied over tape that has lost its CARC coating.

Do not remove the old tape. Simply clean the old taped surface with soap and water, then rinse, dry and apply the new tape over the old. Thermal tape without the CARC coating still provides the proper thermal signature, but the silver reflective surface still needs to be covered by CARC to prevent non-thermal recognition.



Stryker...

**AVOID
A HATCH
HANG
OVER!**



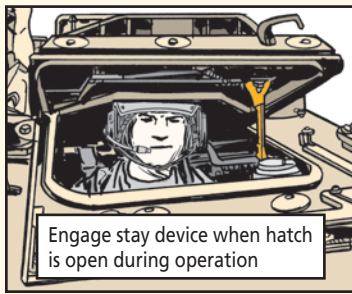
Most crewmen eventually learn the lesson, even if it takes a conk on the head: The driver's hatch is too heavy to stay open on its own during operation!

There are two safety devices designed to keep the hatch in place and your head from getting a heavy-duty dent: the stay device and the detent assembly.

Stay Device

The stay device is a spring-loaded pivot support bar with a sliding latch. It's located on the interior left-hand side of the driver's compartment.

When used properly, the stay device holds the hatch open at the 10° and 25° positions—the only two positions allowed for driving the vehicle. If the hatch springs or the detent assembly should fail, the stay device keeps that 250-lb hatch from landing on your head. But only if you use it!



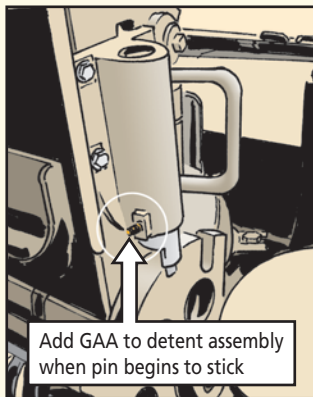
Detent Assembly

As the hatch is raised to each position, the spring-loaded pin on the detent assembly engages the teeth on the interlock plate to keep it in place.

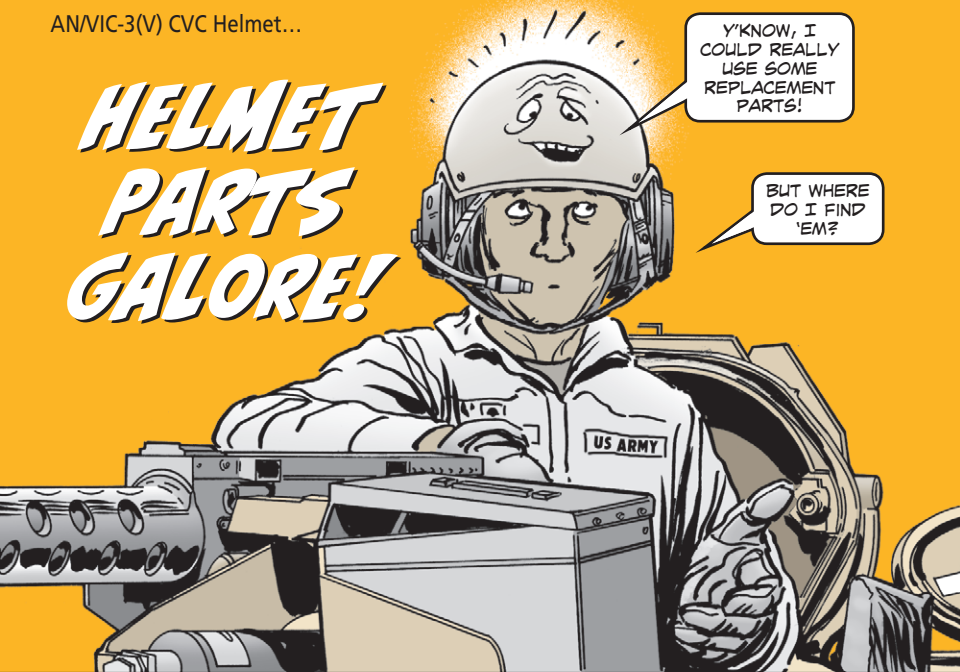
If you don't lube the detent assembly, the pin can begin to stick. When that happens, the pin may not fully engage the interlock plate and could slip loose during operation.

The detent assembly is supposed to be lubed as required, so do it whenever the pin shows any sign of sticking. Just pump in GAA, NSN 9150-01-197-7693, until you see clean grease coming out around the locking pin. Then wipe off the excess grease so it doesn't attract dirt and sand.

It takes both safety devices to keep your noggin from taking a knocking. So use 'em both!



HELMET PARTS GALORE!



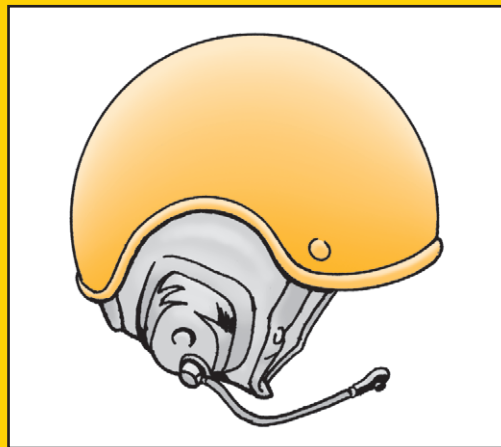
KEEPING YOUR AN/VIC-3 CVC HELMET UP-TO-SNIFF MEANS FOLLOWING THE PM ADVICE IN TM 11-5830-263-20&P (APR 00).

TAKE A LOOK AT THESE NSNs FOR PARTS THAT YOU CAN REPLACE AT THE FIELD LEVEL.



Helmet Shell

- Small/medium, NSN 8470-01-389-3815
- Large, NSN 8470-01-389-3821



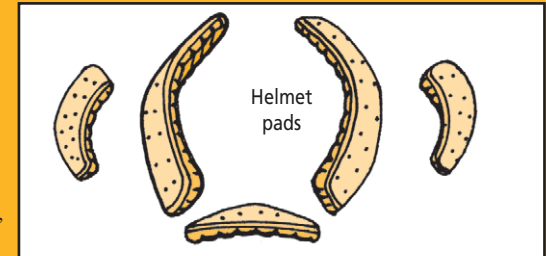
(Note: The shell does **not** come in X-Large)

Electrical Assembly Headset



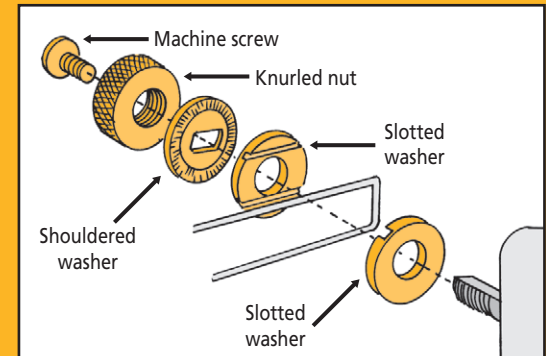
Helmet Pads (5 Pieces)

- Small/medium, NSN 8415-01-470-2845 (used in small/medium helmet liner, NSN 8415-01-470-2821)
- Large, NSN 8415-01-470-2856 (used in large helmet liner, NSN 8415-01-470-2840)



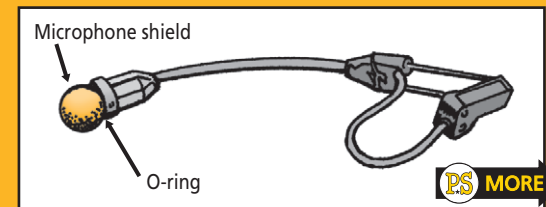
H-374(V) Microphone and Boom Mounting Assembly

- Machine screw, NSN 5305-00-489-0742
- Knurled nut, NSN 5310-01-443-9064
- Shouldered washer, NSN 5310-01-443-9063
- Slotted washer (2 ea), NSN 5310-01-444-6389



M-175/VRC One-piece Microphone, Boom and Cable Assembly

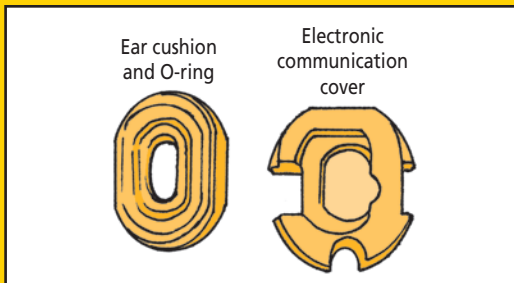
- Microphone shield, NSN 5965-01-411-1856
- O-ring, NSN 5331-00-248-3836



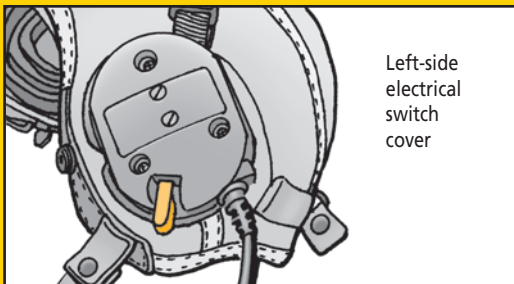
PS MORE

Electrical Assembly Headset (continued)

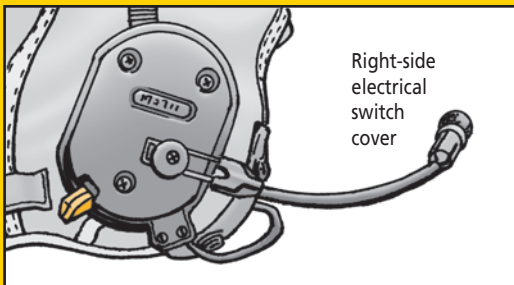
- Ear cushion and O-ring, NSN 5965-01-418-5535
- Electronic communication cover, NSN 5895-01-464-0223



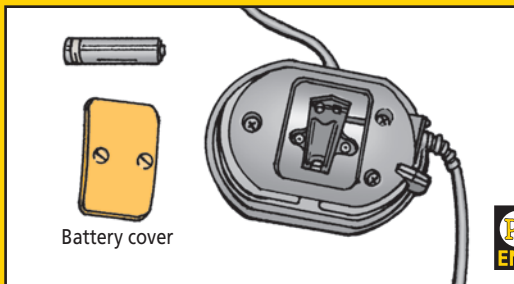
- Electrical switch cover (left side, push-to-talk), NSN 5930-01-464-9981



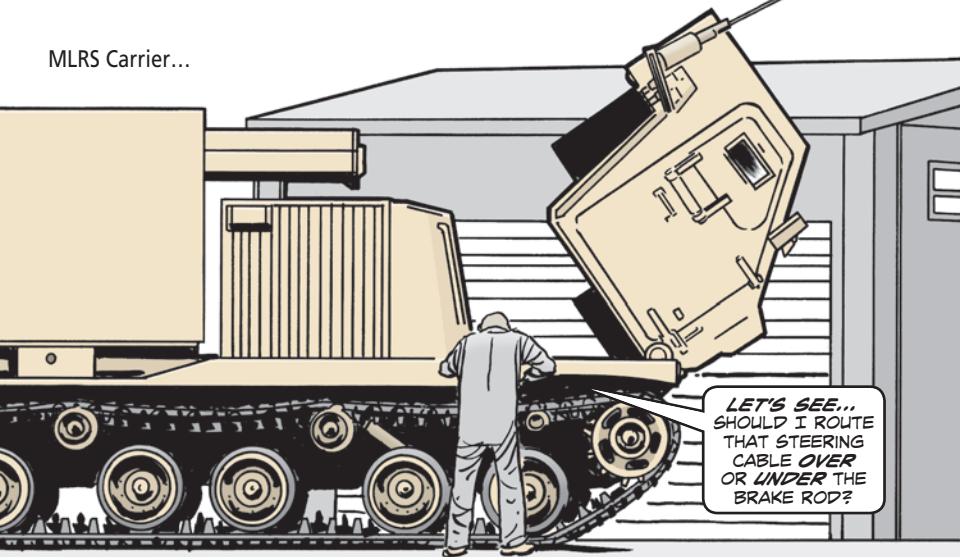
- Electrical switch cover (right side, active noise reduction/talk-through circuit), NSN 5930-01-464-9985



- Battery cover, NSN 6160-01-464-0221 (for headset, NSN 5965-01-464-0220 only)



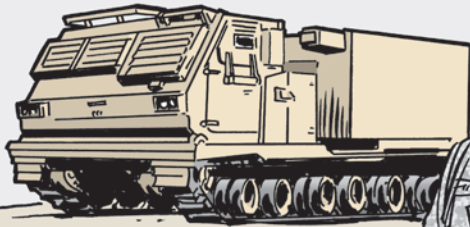
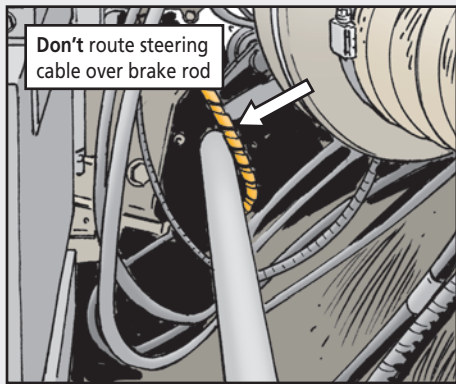
PS
END



OVER OR UNDER? *UNDER!*

Mechanics, when reinstalling the powerpack on an MLRS, you've got a decision to make. When reattaching the steering cable, do you route it over or under the brake rod?

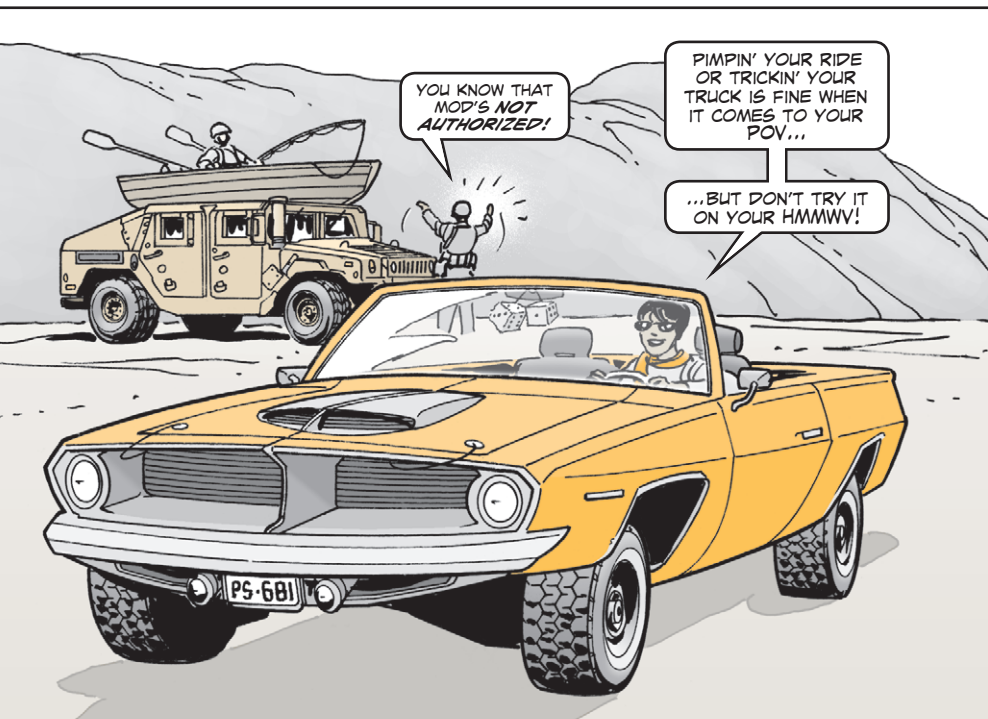
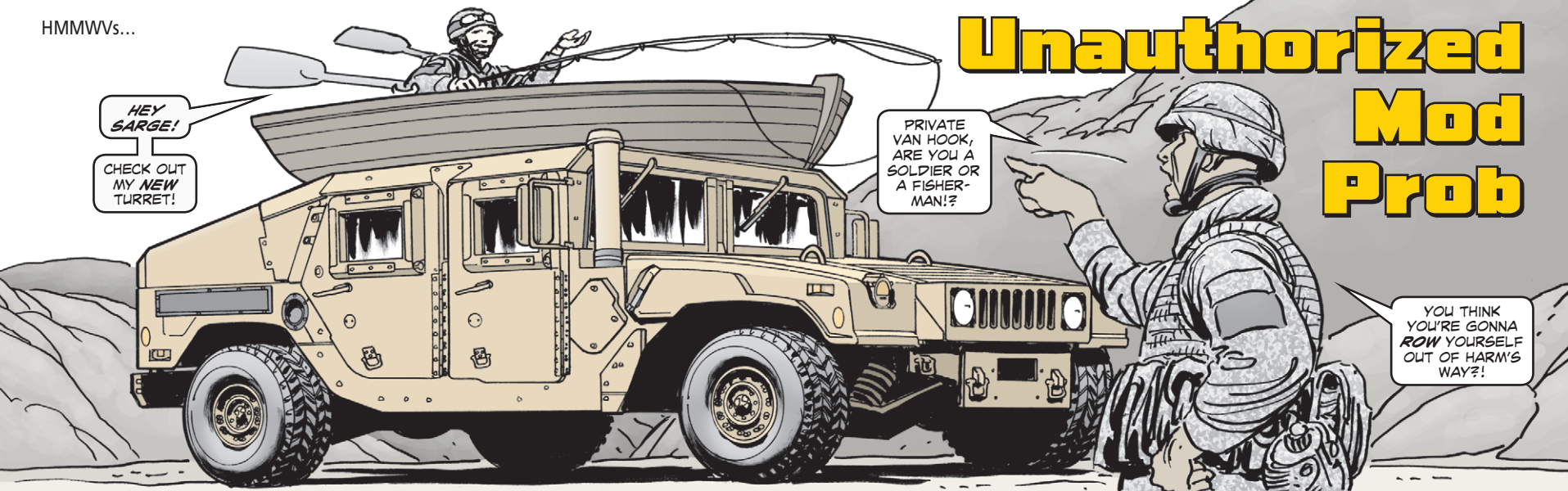
If you choose to go over the brake rod, you've created a serious problem. When the cab is lowered, the steering cable gets pinched between the brake rod and the underside of the cab. That can result in a loss of steering.



SO DO THE MLRS—
AND ITS CREW—A FAVOR.

MAKE SURE YOU
ROUTE THE STEERING
CABLE *UNDER* THE
BRAKE ROD WHEN
REINSTALLING THE
POWERPACK.

Unauthorized Mod Prob



Unauthorized modifications can compromise your HMMWV's capabilities. They can also affect safety and crew survivability. And in up-armored HMMWVs, they can degrade ballistic and blast protection and add unhealthy weight to the vehicle, creating structural problems.

Avoid all this by complying with TACOM GPM 02-018 and TACOM GPM 08-006. These messages describe the hazards that come with unauthorized mods. You can get both on the AEPS website:

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

UNAUTHORIZED MODS ARE PROBLEM MODS.

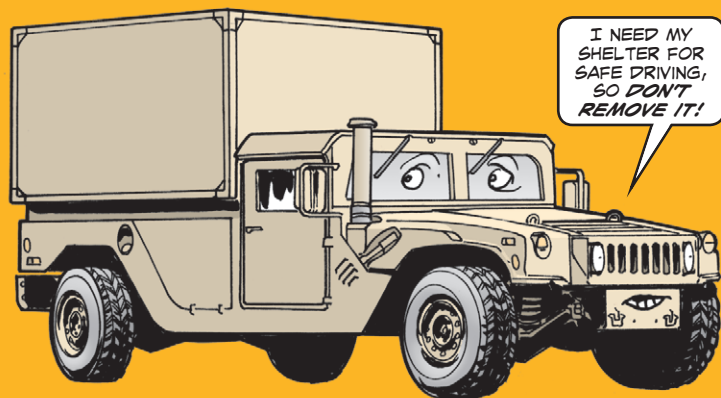
HERE ARE SOME THINGS TO CONSIDER...



Basic Problem Mods

- Mounting storage racks on the front and rear of the vehicle to accommodate extra fuel or water cans is a problem mod. These racks can cause the vehicle to go over its gross vehicle weight (GVW). The containers, especially fuel, mounted on the exterior of the vehicle are safety hazards during a crash. Containers mounted in the front can block airflow and degrade cooling performance.

- Removing the shelter from the M1037 or M1113 HMMWV and using the truck as a cargo or troop carrier is a problem mod. The heavy-duty springs won't compress properly without the weight of a shelter carrier or a 1500-lb equivalent. The resulting bounce can affect the driver's ability to maintain control of the vehicle.

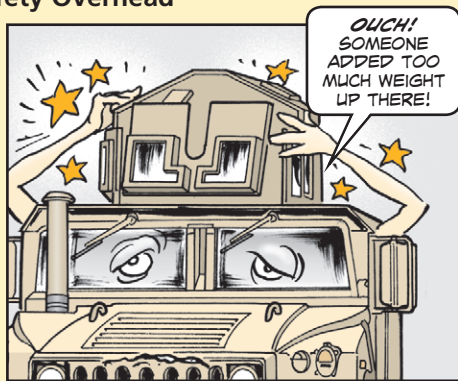


- Installing bucket-style seats in your basic model HMMWV without using conversion kit, NSN 2590-01-393-3796, and adapter kit, NSN 2540-01-429-9903 — for ambulances and shelter carriers only—is a problem mod. These kits provide additional parts required to meet the approved configuration.

Of course, this doesn't complete the list of problem mods, but you get the picture. All unauthorized mods should be removed from HMMWVs. All HMMWV field mods **MUST** be authorized by PM-Light Tactical Vehicles before they can be applied.

Safety Overhead

Problem mods also show up on up-armored HMMWVs with turret gunner protection kits (GPK) or objective gunner protection kits (O-GPK). These mods add weight to the upper roof and turret area of the HMMWV, raising the center of gravity (CG). That adversely affects vehicle stability and drivability, and leads to component fatigue and overloading of the roof support system.



Have You Seen These Mods?

Adding plates to up-armored HMMWV roof and armor plates and adding additional ballistic glass to the O-GPK are problem mods. They can add about 600 pounds to the already heavy up-armored HMMWV! Extra weight on or near the top of the vehicle increases the likelihood of vehicle rollover.



Heavy Weight Means Heavy Price

MAKING YOUR UP-ARMORED HMMWV HEAVIER WITHOUT THE TRUCK HEADSHED'S APPROVAL MAY COST YOU A HEAVY PRICE.

ADDED WEIGHT FROM UNAUTHORIZED MODS...

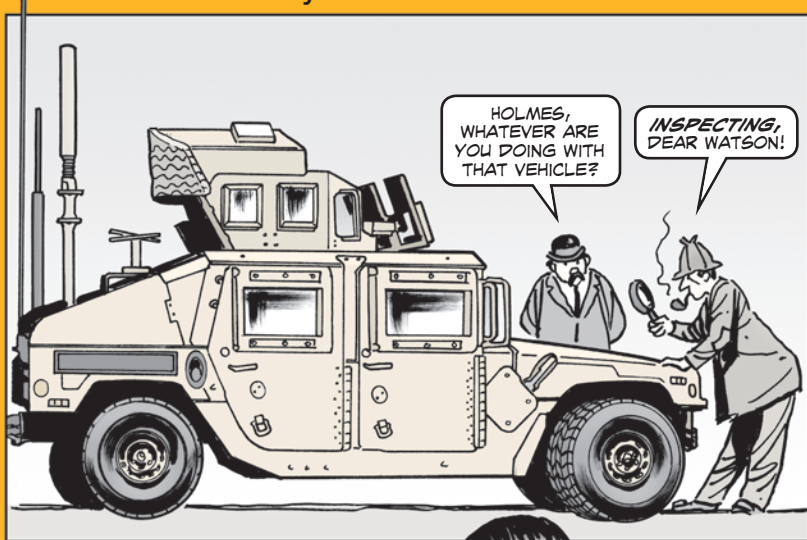


- reduces the suspension travel beyond the limitations of HMMWVs equipped with fragmentation kit 5 (FK5) and O-GPK. This degrades acceleration and fuel mileage, and increases vehicle fatigue, ground clearance and braking distance.
- negatively impacts weapon station readiness. The turret bearing reaches its load carrying capacity with the application of O-GPK. Extra weight shortens turret ring and battery life and slows down the rotation speed of the battery-powered motorized traversing unit (BPMTU).
- exceeds the capacity of the roof support system, leading to catastrophic roof cave-ins!



SO REMOVE ALL PROBLEM MODS TO THE ROOF OF UP-ARMORED HMMWVs AND GPK AND O-GPK. THEN PLUG ANY HOLES WITH GRADE 8 FASTENERS.

A Key Preventive Measure



IF YOUR HMMV HAS FIELD MODS THAT HAVE BEEN APPROVED, INCREASE PMCS.

WHEN IT COMES TO ADDED ROOF WEIGHT ON UP-ARMORED HMMV'S WITH GPK OR O-GPK, AT LEAST DO THE FOLLOWING...



- Inspect fasteners for breaks, stretching, looseness, cocked heads, or hole lengthening.
- Inspect seams, flanges and joints for straightness or local deformation as an indication that fasteners may have been stretched or holes lengthened.
- Thoroughly inspect adjacent areas for damage, distortion or misalignment.
- Inspect the up-armored HMMV roof and support pillars for potential fatigue.

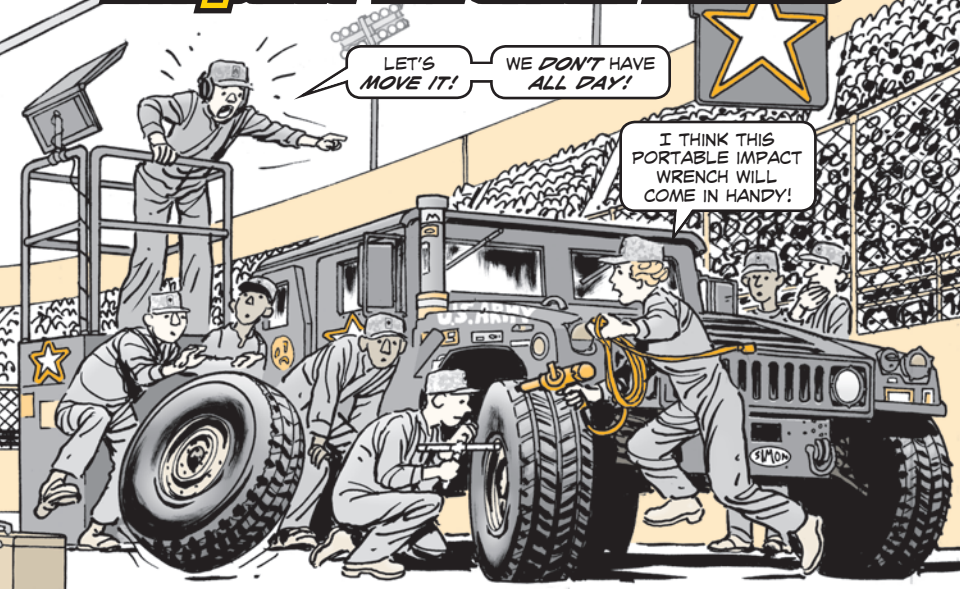
REPORT ALL DEFICIENCIES TO FIELD MAINTENANCE.

THEY'LL GET YOU SQUARED AWAY.



M1114 Up-Armored HMMWV...

Impact Wrench NSNs



Dear Half-Mast,

We have to be "NASCAR quick" out there to change tires on our M1114s. That's why I'm searching for a good portable impact wrench, but I haven't found one yet. Can you help?

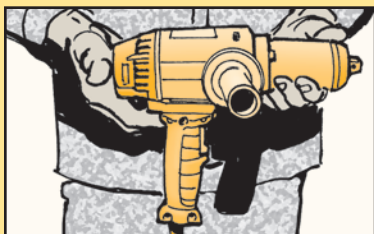
1LT L.A.

Dear Lieutenant L.A.,

Either NSN 5130-01-536-6492 or NSN 5130-01-363-0964 will get you a good portable, electric impact wrench. But you'll need to buy a $\frac{7}{8}$ -in socket to remove the lug nuts since the socket you need isn't provided. Use NSN 5130-01-400-0177 to get the socket.

The additional authorization list (AAL) in TM 9-2320-387-10 will be updated to reflect these NSNs.

Half-Mast



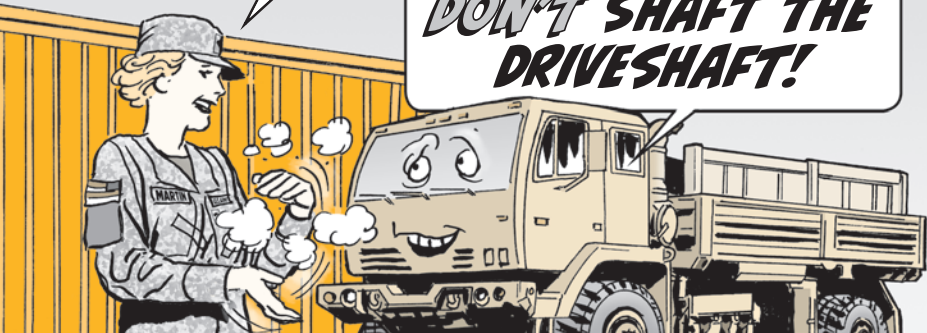
NSN 5130-01-536-6492 or NSN 5130-01-363-0964 brings a good portable, electric impact wrench

FMTV...

YOUR DRIVESHAFT'S
TAKEN CARE OF. NOW
YOUR PMCS IS **DONE**.

THAT'S RIGHT! PMCS IS
ONLY TRULY DONE IF YOU...

**DON'T SHAFT THE
DRIVESHAFT!**

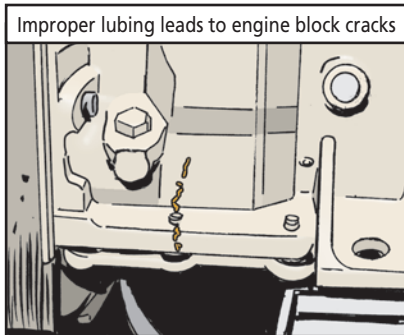


Proper driveshaft PMCS is important! Without it, your FMTV's driveshaft can be shafted.

Some early model FMTVs developed cracking on the rear section of the engine block. Product improvements, such as thicker engine blocks and new design driveshafts, were developed and used over the years to reduce cracking. But even with improvements, this problem hasn't completely gone away.

Here's where you come in. Giving poor PM the shaft can help save the driveshaft and engine.

Inadequate lubrication of the driveshaft universal joints leads to premature wear. Over time, vibrations in the driveline can occur as the universal joints begin to wear out. Left unchecked, these vibrations can continue traveling to the rear portion of the engine block and cause cracks near the oil pan housing area and starter motor mounting flange. Also, lack of lubrication in the driveshaft's slip joint can lead to excessive end play in the driveshaft universal joints.



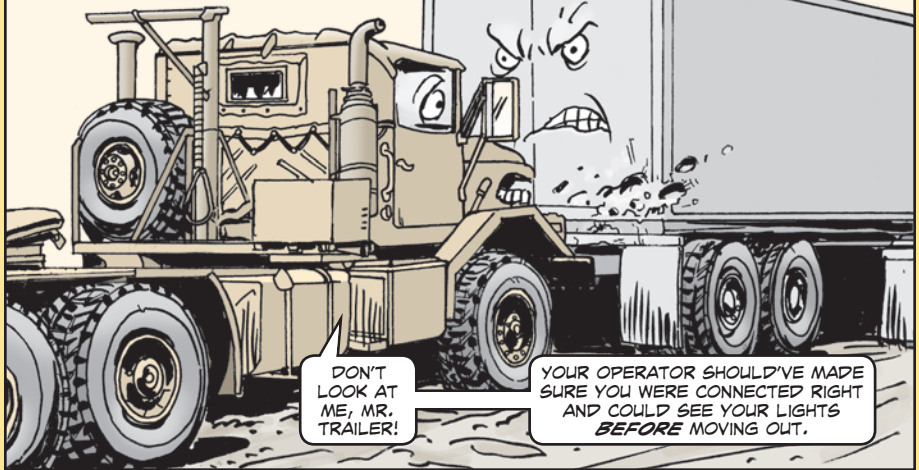
Put a stop to this by performing all of the PMCS and required lubrication for the driveshaft components. Refer to your FMTV's operators and maintenance tech manuals, and keep this in mind:

- Operators, every 30 days, lubricate the driveshaft universal slip joint and all universal joints with GAA grease.
- Mechanics, every 6 months or 6,000 miles, lubricate all the driveshaft universal joints with GAA. Then perform the driveshaft hinging inspection. No more than 0.006 inch of play is allowed. Also, perform the radial end play inspection. No more than 0.020 inch of play is allowed.

For more info, eyeball TACOM MAM 09-018 online:

https://aeps2.ria.army.mil/commodity/mam/tacom_wn/mam09-018.html

CAN YOU SEE THE LIGHT?



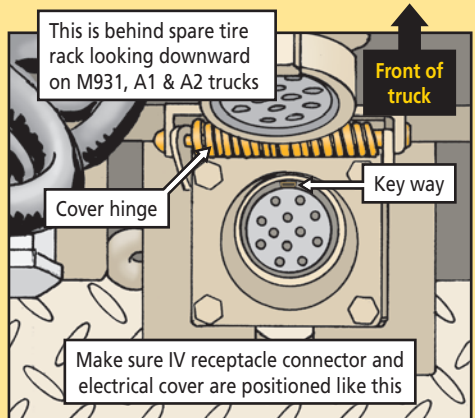
Does your unit have M931/M931A1/M931A2, M932/M932A1/M932A2 or M931A1P1/M931A2P1/M932A1P1/M932A2P1 tractor trucks? If so, you might want to make sure you can see the light. I'm talking about the *trailer* lights.

The problem is, the intervehicular (IV) receptacle connector can be installed incorrectly. If it's installed wrong, you won't see the trailer lights when you should, possibly causing rear-end collisions, injury to personnel and damage to equipment. And the procedures in TM 9-2320-272-24-3 don't give enough information to prevent this from happening.

TACOM GPA 08-022 lays out instructions for inspecting and correcting this connection issue. If you haven't already, go ahead and inspect your truck to ensure the IV receptacle connector and its electrical connector cover are *properly* positioned and installed.

Eyeball TACOM GPA 08-022 for more information on this. It's on the AEPS website:

https://aeps2.ria.army.mil/commodity/Gpm/Tacom_WN/08/gpm08-022.html



Armor Door NSNs

WE'RE GONNA NEED NEW INTERIOR DOOR PANELS FOR OUR M915, BUT I CAN'T FIND THE NSNs FOR THESE PARTS.

WELL, LET'S WRITE **MASTER SERGEANT HALF-MAST!**

HE'LL LET US KNOW WHAT TO DO!



Dear Half-Mast,

I need to order the interior door panels that come in the side protection armor kit for M915 tractor trucks. But TB 9-2320-302-13&P-1 doesn't show NSNs for those parts. Can you help?

SSG I.V.

Dear Sergeant I.V.,

Yes, I can. Those missing NSNs will be added to TB 9-2320-302-13&P-1 in a future update. In the meantime, go to Fig 4 in the TB and pencil in these NSNs where they belong. Use:

NSN 2540-01-571-0251 for Item 15, PN 0257040912-00 (right hand);

NSN 2540-01-571-0255 for Item 15, PN 0257040913-00 (left hand);

NSN 2540-01-571-0247 for Item 16, PN 0257047760-00 (right hand);

NSN 2540-01-571-0244 for Item 16, PN 0257047785-00 (left hand).

Half-Mast

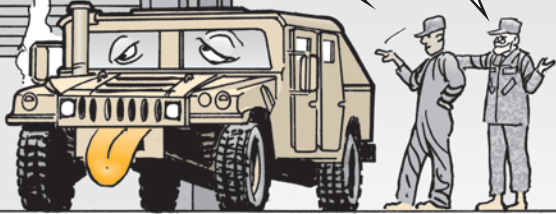
Vehicle Batteries...

**SOLAR
PULSE
CHARGE
THEM!**

THE
BATTERY
IS DEAD
AGAIN!

THAT'S IT!
I'M GOING TO
GET A NEW
BATTERY!

DON'T TURN IN THOSE
BATTERIES, JUST USE
A SOLAR TRICKLE
CHARGER!



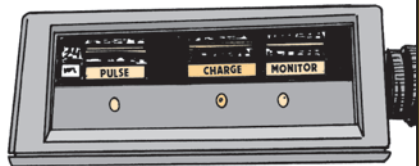
Your vehicle won't start. You've determined it's the battery. You can slave it or jump it, or pull the battery and replace it.

Jumping and slaving are temporary fixes. The problem will return. And pulling the battery too often means that batteries are disposed of when they could be recovered.

Here's a better solution, if your commander approves it. Use a solar trickle charger, NSN 6130-01-558-5371, that plugs directly into the NATO socket of your vehicle. The solar charger is a tool that counteracts the gradual discharge and will keep your charged batteries at full capacity while they're sitting in the vehicle, if the vehicle is sitting in hours of direct sunlight. The solar charger is not a charger to recharge dead batteries. It will not generate enough power to operate anything accidentally left on such as lights, radios or sensors.

The solar charger has red and green flashing LED lights that tell you when the battery voltage has dropped below 22 volts, when it is being charged or pulsed, when it is fully charged, or if the unit is not operating due to insufficient sunlight.

Inside the "box" there's a circuit board that produces a high frequency pulse to enhance the charge current, plus a 3 LED light battery monitoring system to keep you aware of the condition of your batteries

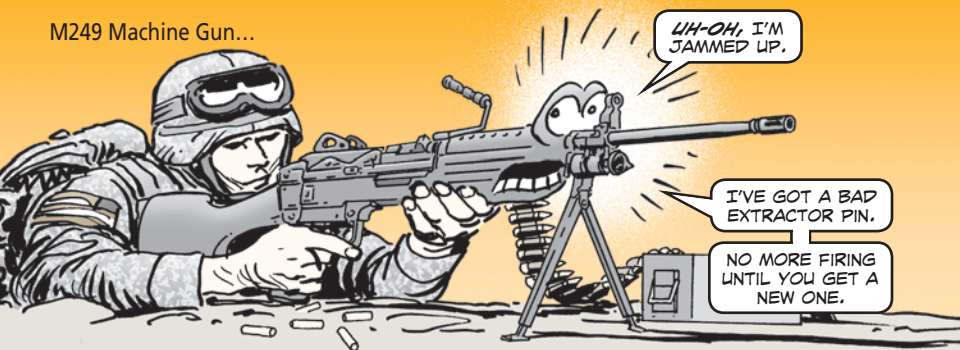


Your job is easy. Just secure the solar panel to the hood, roof or deck of the vehicle with a hook-and-pile strip, connect it to the NATO socket and let the sun do the rest!

When the vehicle goes for maintenance, you can remove the charger and leave it at the unit until the vehicle comes back.

The 9" X 11" solar panel is mounted on an angled box for better solar collection and will supply 200 milliamps at 28 volts and produce 1/2 amp-hour of charge current per 24 hours of sun.





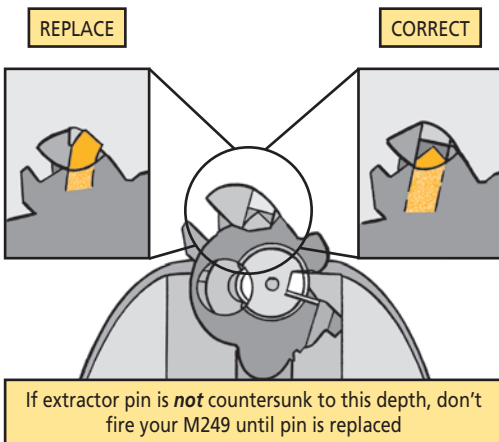
EXTRACT BAD EXTRACTOR PINS

Some bad M249 machine gun extractor pins have gotten into the Army supply system. They need to be extracted ASAP.

A bad extractor pin can break or back out of the bolt, causing the M249 to stop firing. If an extractor pin fails while the bolt is locking in place, the bolt can jam in the barrel extension, which prevents the firing pin from striking the primer. That could lead to a cook-off. If the pin fails while the bolt is unlocking, the spent cartridge won't be extracted.

Unless your M249s are new or have just come from overhaul at Anniston Depot, their extractor pins, NSN 1005-01-225-8340, should be replaced. All extractor pins in gun extractor parts kit, NSN 1005-01-383-0168, should also be replaced.

But you don't need to stop firing your M249s until the new extractor pins arrive. What you do need to do is check the extractor pin before firing, during PMCS and maintenance, and every 500-1,000 rounds. The extractor pin should be countersunk to the depth shown here:



If the pin seems to be working out, don't fire the M249 until you get the pin replaced.

For more information, see TACOM LCMC GPA 09-011:

https://aeps2.ria.army.mil/commodity/gpm/tacom_wn/gpa09-011.html

Sear Safety Check Part II

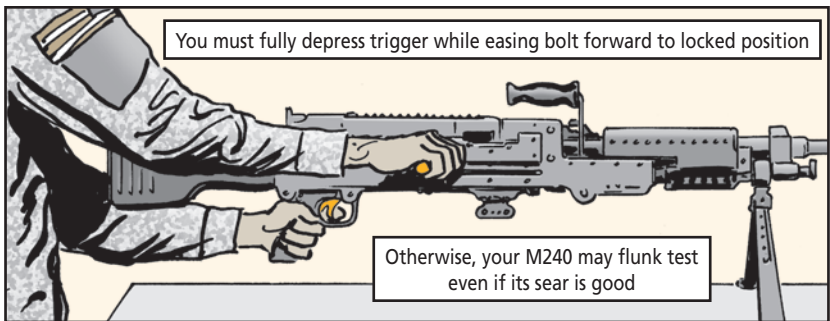


In PS 675 (Feb 09), we told you how to make sure your M240 machine gun's sear was still in good enough shape for safe firing. But an important guideline was left out that is causing M240s to flunk the test.

Here's the check: After clearing your M240, move the safety to **F** (fire) and pull the cocking handle completely to the rear to lock back the bolt. Then return the cocking handle to the forward locked position. Place the safety in the **S** (safe) position and depress the trigger. Nothing should happen.

Next move the safety to **F** and hold the cocking handle to the rear while you fully depress the trigger. Then ease the bolt forward until it locks. You should not be able to move the safety to **S**.

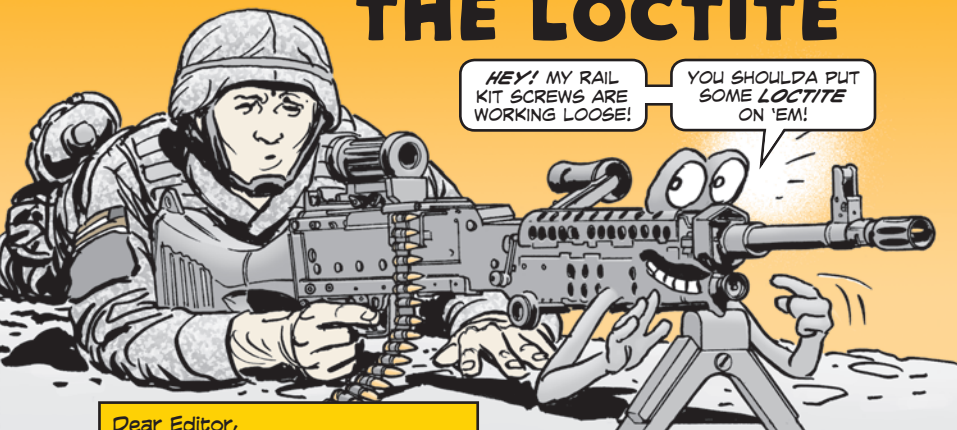
Here's the important guideline: **If the trigger is not fully depressed and held there while easing the bolt fully forward to the locked position, the weapon will fail this test even if the sear is good.**



If your M240 does flunk this test, it shouldn't be fired. Your field repairman needs to check it out.

The reason sears wear out fast is because gunners don't pull the trigger fully to the rear when firing and don't release the trigger fully when they're finished firing. So remember to pull the trigger completely back to keep the sear healthy. It also helps the sear to store your M240 with the safety on **F** and the bolt locked forward.

DON'T FORGET THE LOCTITE



Dear Editor,

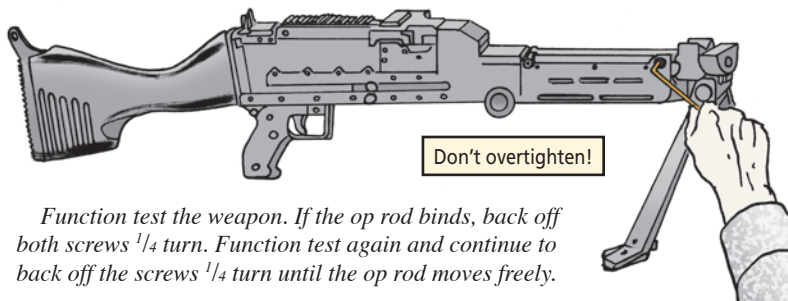
In PS 671, you gave instructions on Page 21 for installing the rail kit. But I think you left out an important step:

Before installing the two long screws, you should first clean off any grease on the screws and then apply a drop of Loctite 246, NSN 8030-01-499-3589, on their threads. That will help the screws stay tight.

Gary Becker
Weapons Inspector
Ft Leonard Wood, MO

Editor's note: Good point, Gary. For those that missed the article, here's the scoop:

Over-tightening the rail kit screws can cause the op rod to bind in the gas tube. After you clean the screws and put Loctite on their threads, install them and tighten them with your fingers. Then use a $5/32$ -in hex wrench to tighten the front screw no more than three complete turns. Tighten the rear screw $1/4$ turn.



Function test the weapon. If the op rod binds, back off both screws $1/4$ turn. Function test again and continue to back off the screws $1/4$ turn until the op rod moves freely.

M4/M4A1
Carbine...



New Buttstock Available

Dear Half-Mast,

We've heard there's a new M4 carbine buttstock available that has a rubber recoil pad and holds a battery. How can we order one?

CPL J.S.

Dear Corporal J.S.,

The enhanced sliding buttstock was originally part of the Rapid Fielding Initiative, but now has been classified as AAL in WP 0031-1 in the latest edition of TM 9-1005-319-23&P. Order this buttstock with NSN 1005-01-544-9825.

This buttstock has a sloping cheek weld that gives a better sight picture, too.

Half-Mast

M2, M3P Machine Guns...

Tag ID for Headspace Gages

Dear Editor,

Both the M2 machine gun and the Avenger's M3P machine gun have headspace and timing gages. In some instances, the two gages have been mixed up and Soldiers have tried to time and headspace an M2 with the M3P gages or visa versa. Plus it can be difficult to ID the gages to make sure they receive their yearly calibrations at TMDE.

We made gage ID easy with an ID tag, NSN 5810-01-393-2942. You can label the gages M2 or M3P on the tag, plus TMDE can paste a bar code on the tag to help track calibration. The tag costs less than \$3.

SGT Robert Dowling
3-4 ADA
Ft Bragg, NC

Tag helps you ID gages



Editor's note: We gage your suggestion to be a good one. Thanks.

Avenger Missile System...

Extra Tools Do Job Extra Fast

CHIEF HARDING HAS SOME SUGGESTIONS FOR TOOLS THAT CAN HELP YOU DO REPAIRS **QUICKER AND EASIER!**



Dear Editor,

We've found adding a few extra tools to our Avenger tool kits can make repair jobs go extra fast.

The drill used for replacing inserts in the Avenger's turret is difficult to get into tight spots, which makes the job sometimes exasperating. So we put together a kit for replacing inserts with these tools:

- Dremel XPR 400 and six 5/16-in drill bits
- Dewalt DW423 random orbital sander and Bosch 1297D palm sander. Both need dust collection pouches so you don't breathe in the dust, which can be hazardous.
- 50-ft extension cord
- 10 sheets of 60- to 80-grit sandpaper
- 15 paper cups and 15 tongue depressors (NSN 6515-00-324-5500 brings 100 depressors for \$1.99) for mixing the compound
- 10cc syringe for injecting the compound. You can probably get these from your local medical people.
- 6 A inserts, 8 W inserts, and 12 X inserts from the Avenger repair kit

With these tools and materials, you can quickly replace inserts. Most of these items can be purchased at home improvement stores.

It's a bit different with the small arms tool kit. It has more tools than you need to repair and maintain the Avenger M3P machine gun. Instead of carrying around the whole tool kit, we made up our own M3P-specific tool kit with these tools:

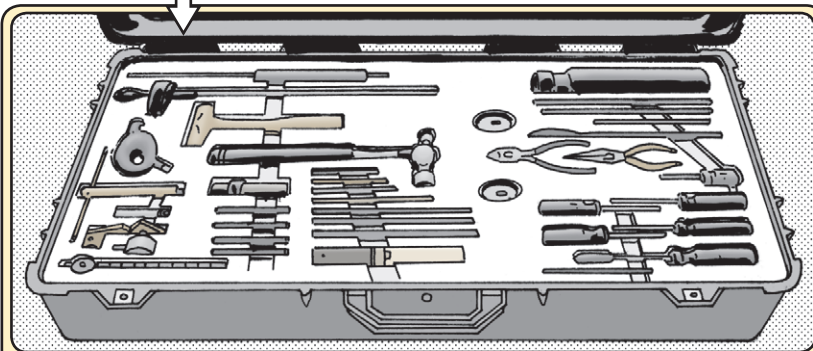
- the standard pliers, wrenches, punches, files, stones, and jeweler's screwdrivers
- a caliber bar for boresighting
- the M3P headspace and timing gage
- the feeler gage
- .032- and .051-in lacing wire
- a breaker bar

We added a crowfoot attachment, NSN 5120-00-229-2773, to torque the breech lock cam nut and a set of calipers with a 6-in dial.

Both tool kits can be kept in one of the standard tool cases made by companies like Pelican.

CW2 Anthony Harding
3-4 ADAR
Ft Bragg, NC

M3P tool kit looks like this



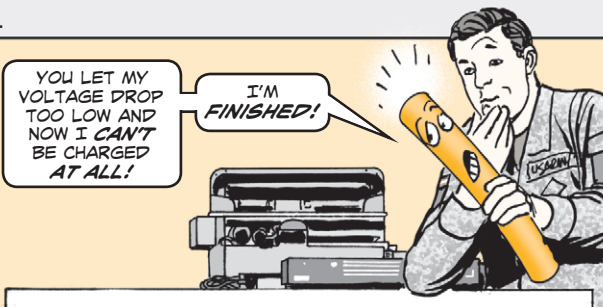
Editor's note: Thanks for the tool suggestions, Chief. Avenger units that spend much time replacing inserts might want to spend the extra money for these tools.

TS-4530/UPM Radar Test Set...

STICK TO BATTERY STICK CHARGING

YOU LET MY VOLTAGE DROP TOO LOW AND NOW I CAN'T BE CHARGED AT ALL!

I'M FINISHED!



If you don't stick to battery stick charging for your TS-4530/UPM radar test set, you won't be able to charge the stick—period.

The rechargeable battery stick, NSN 6625-01-517-3116, can't be charged if its voltage drops below 5.5 VDC.

But if you refresh the battery stick at least quarterly like it says on WP 0024 00-1, Item 6, in TM 43-6625-916-12, you should have no problem.

The general description in WP 0002 00-1 in the TM gives the power info on the radar test set. It can be powered by the battery stick or by six commercial C-size NI-CAD, NiMH or alkaline batteries or by an external power supply.

But remember, any attempt to charge batteries other than those battery sticks supplied or commercial C-size NI-CAD rechargeable batteries could result in battery explosion and cause your injury or death.

Turn in Dragon!



The Dragon has fired its last missile. The Army has classified all Dragon missiles as condition code H (condemned) and wants the Dragon equipment in the table below turned in.

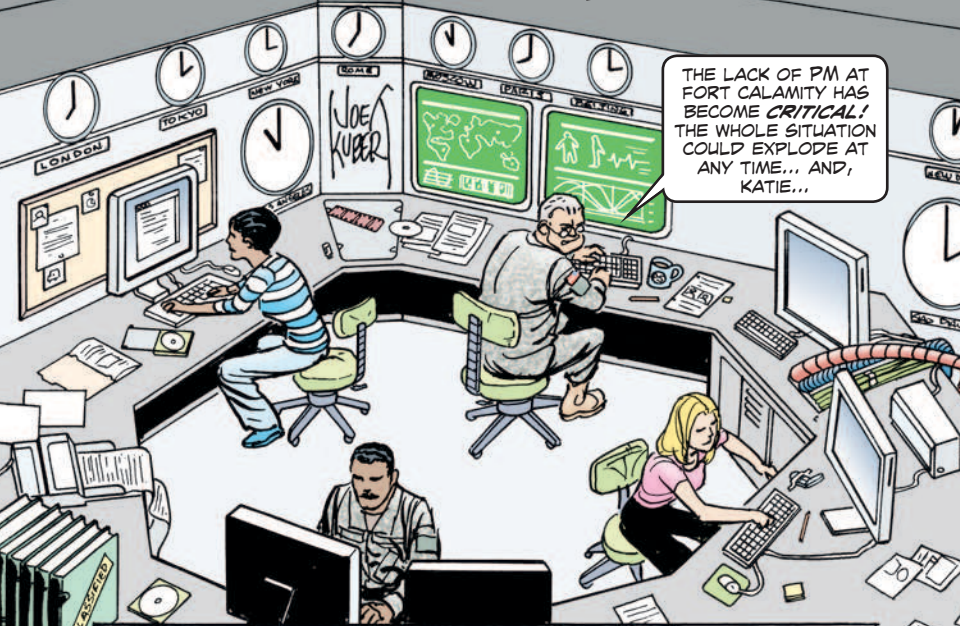
Some of the items have both line item number (LIN) and non-standard line item number (NSLIN) or just one or the other. You may need to search your property book for both LINs and NSLINs.

LIN	NSLIN	NSN	Nomenclature
C65800	RC3007	1430-01-030-1437	Case, Guided Missile Infrared Tracker
J95305	NA	1427-00-163-8959	Guided Missile and Launcher Surface Attack: M222
J95307	NA	1427-00-163-8960	Guided Missile and Launcher Surface Attack Practice: M223
M66857	NA	6920-00-165-6369	Monitoring Set, Guided Missile System: AN/TSQ-T1
M74526	RC4064	1440-01-030-8438	Mount, Guided Missile Launcher System: M175
N23721	RC3007	1430-01-046-9594	Night Vision Sight-Tracker: Infrared An/TAS-5
N76466	XA201H	6920-00-107-0667	Pedestal, IR Transmitter Guided Missile System: M5
P41891	NA	6920-01-299-2284	Precision Gunnery Training System (PGTS) Indoor
P62088	NA	6920-01-299-2677	Precision Gunnery Training System (PGTS) Outdoor
S58775	NA	6625-01-090-0103	MILES Simulator M62F
T61430	MB3503	4935-01-063-9784	Tracker Test Set Supplemental Kit: (TOW/Dragon)
V79430	MB3503	4935-00-124-5585	Test Set, Guided Missile Infrared Tracker: AN/TSM-114
W80715	RC3007	1430-00-078-8340	Tracker, Infrared Guided Missile SU-36 (X0-1)/P
X00233	XA2009	6920-00-175-6327	Trainer, Launch Effects Guided Missile: M54
X18673	FA5004	5850-00-071-4482	Transmitting Set, Infrared: M89
X18673	NA	5850-01-147-7124	Transmitting Set, Infrared: M89E1
Y43845	XA2022	6920-00-339-1042	Trainer, Handling, Guided Missile Launcher
NA	00232A	4935-00-595-5239	Test Set, Guided Missile System
NA	61430T	4935-00-595-5246	Test Kit, Supplemental, Guided Missile System

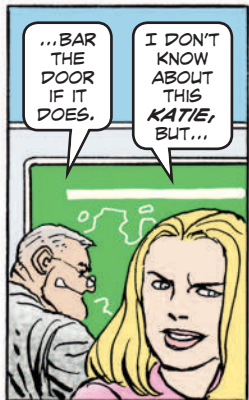
For disposition instructions on any of these items, contact Steve Lee at DSN 746-4718, (256) 876-4718, or email: steven.lee4@us.army.mil

24

HOURS OF PREVENTIVE MAINTENANCE



THE LACK OF PM AT FORT CALAMITY HAS BECOME **CRITICAL!** THE WHOLE SITUATION COULD EXPLODE AT ANY TIME... AND, KATIE...

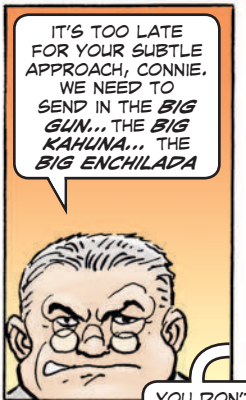


...BAR THE DOOR IF IT DOES.

I DON'T KNOW ABOUT THIS **KATIE**, BUT...

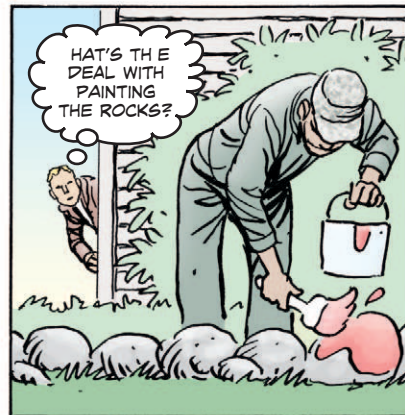
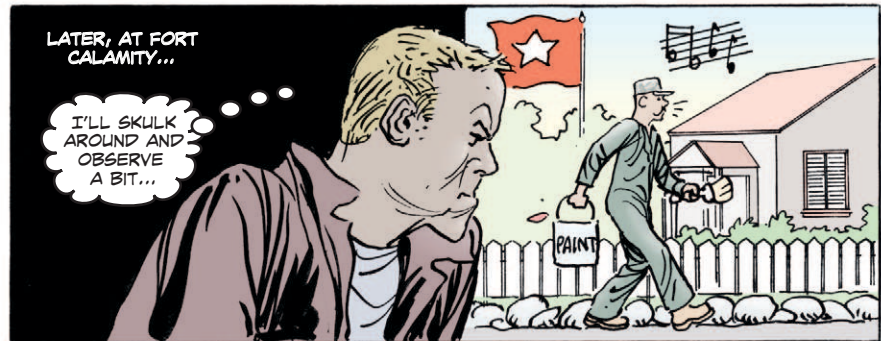
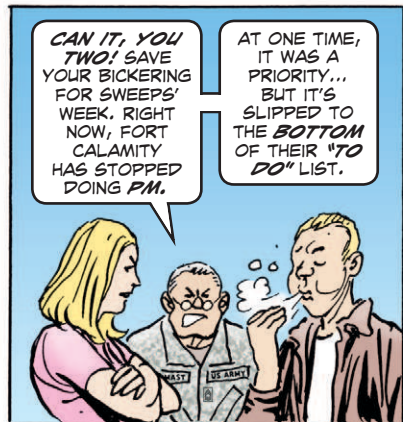
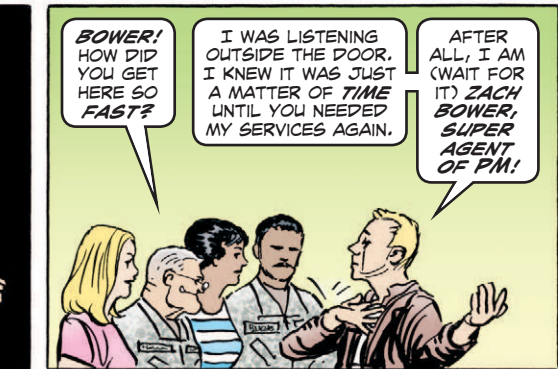
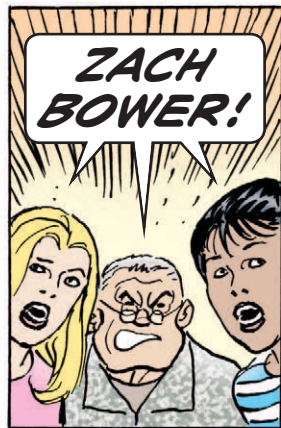
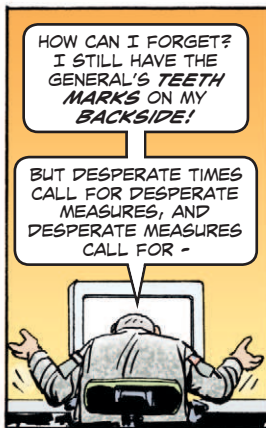


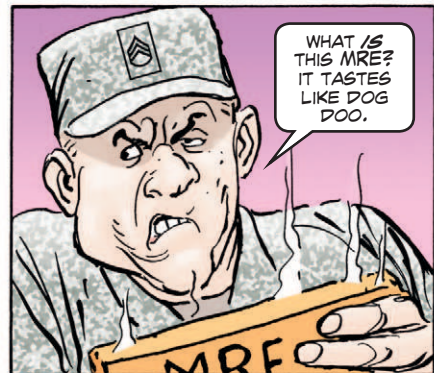
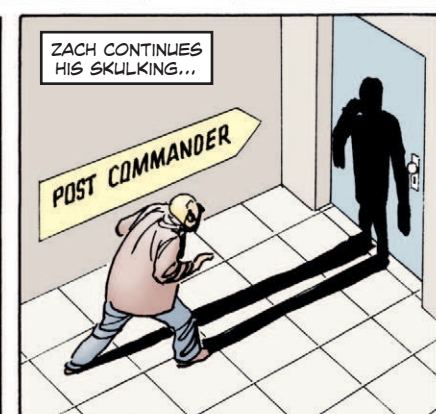
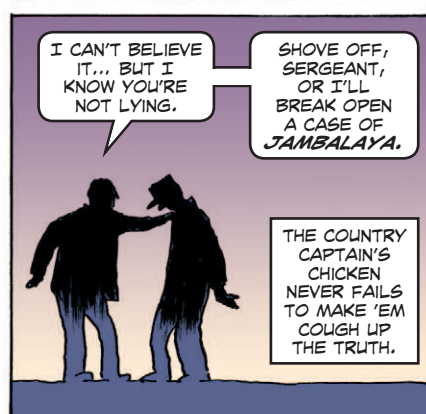
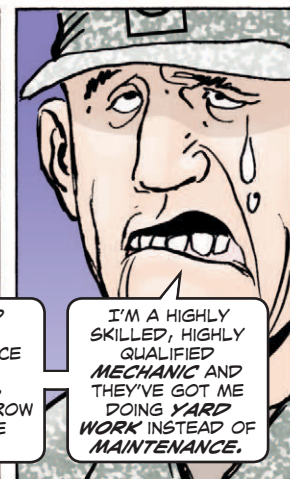
...I CAN HOLD DOWN THE FORT. DO YOU WANT ME TO GO THERE AND SPREAD THE **PM** WORD?



IT'S TOO LATE FOR YOUR SUBTLE APPROACH, CONNIE. WE NEED TO SEND IN THE **BIG GUN... THE BIG KAHUNA... THE BIG ENCHILADA**

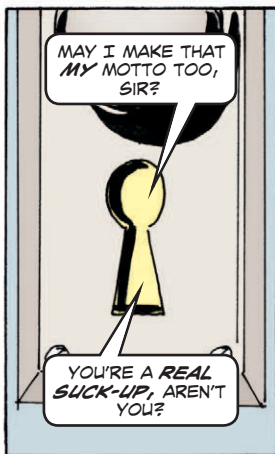
YOU DON'T MEAN...?





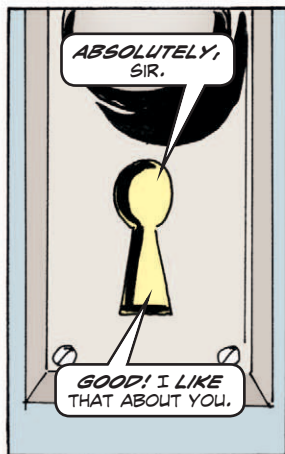


...IF IT LOOKS GOOD, IT IS GOOD.



MAY I MAKE THAT MY MOTTO TOO, SIR?

YOU'RE A REAL SUCK-UP, AREN'T YOU?



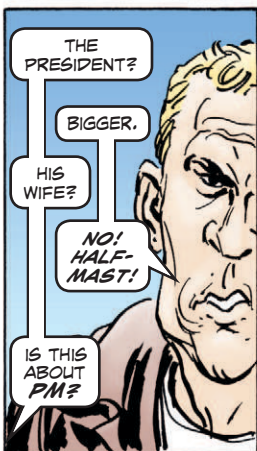
ABSOLUTELY, SIR.

GOOD! I LIKE THAT ABOUT YOU.



ZACH BOWER! WHAT ARE YOU DOING HERE?

I'M ON A MISSION FROM THE BIG MAN HIMSELF.



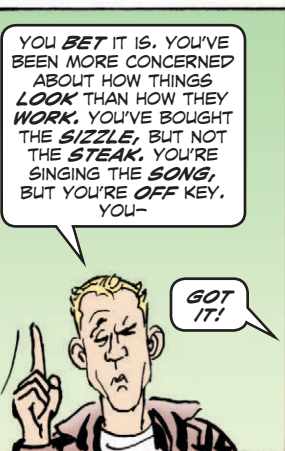
THE PRESIDENT?

BIGGER.

HIS WIFE?

NO! HALF-MAST!

IS THIS ABOUT PM?



YOU BET IT IS. YOU'VE BEEN MORE CONCERNED ABOUT HOW THINGS LOOK THAN HOW THEY WORK. YOU'VE BOUGHT THE SIZZLE, BUT NOT THE STEAK. YOU'RE SINGING THE SONG, BUT YOU'RE OFF KEY. YOU-

GOT IT!



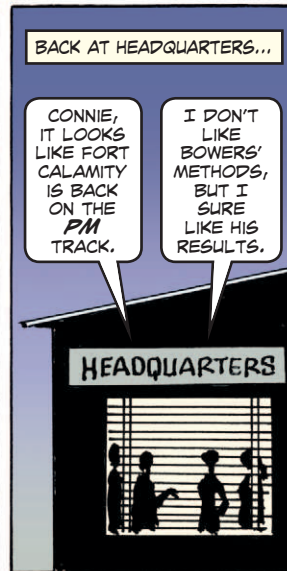
WE'LL PUT PM BACK AT THE TOP OF OUR TO-DO LIST IF YOU PROMISE NOT TO SAY ANOTHER WORD AND LEAVE RIGHT NOW.

I'M OFF.

YOU CAN SAY THAT AGAIN.



I'M OFF!

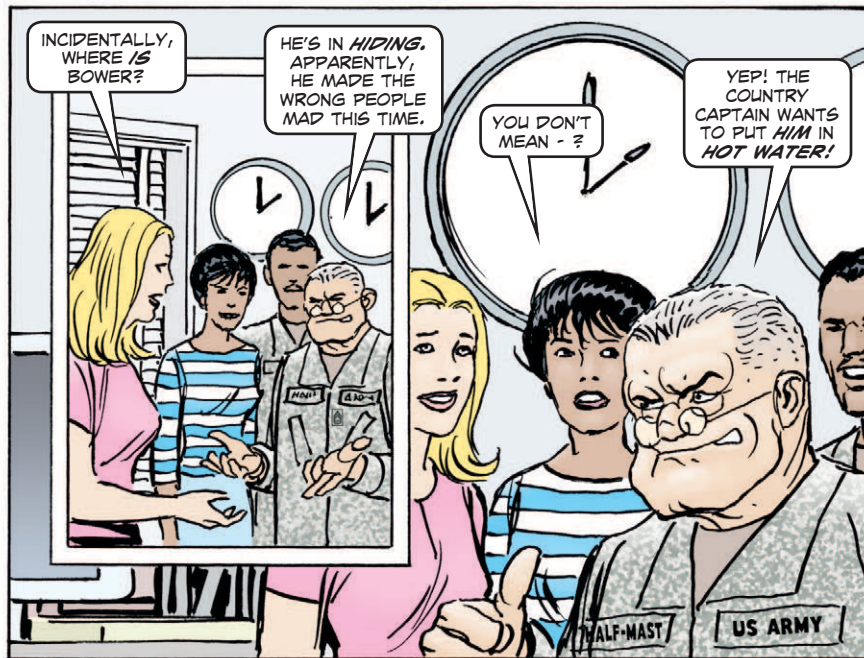


BACK AT HEADQUARTERS...

CONNIE, IT LOOKS LIKE FORT CALAMITY IS BACK ON THE PM TRACK.

I DON'T LIKE BOWERS' METHODS, BUT I SURE LIKE HIS RESULTS.

HEADQUARTERS



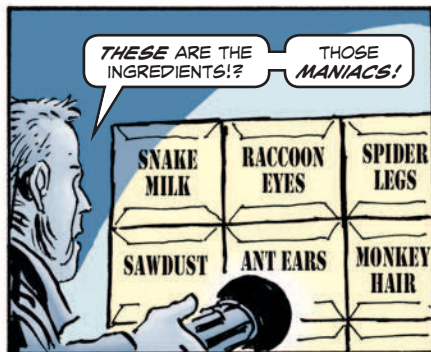
INCIDENTALLY, WHERE IS BOWER?

HE'S IN HIDING. APPARENTLY, HE MADE THE WRONG PEOPLE MAD THIS TIME.

YOU DON'T MEAN - ?

YEP! THE COUNTRY CAPTAIN WANTS TO PUT HIM IN HOT WATER!

TICK-TOCK-TICK-TOCK-TICK-TOCK-T
NEXT ON **24** HOURS OF PREVENTIVE MAINTENANCE



TICK-TOCK-TICK-TOCK-TICK

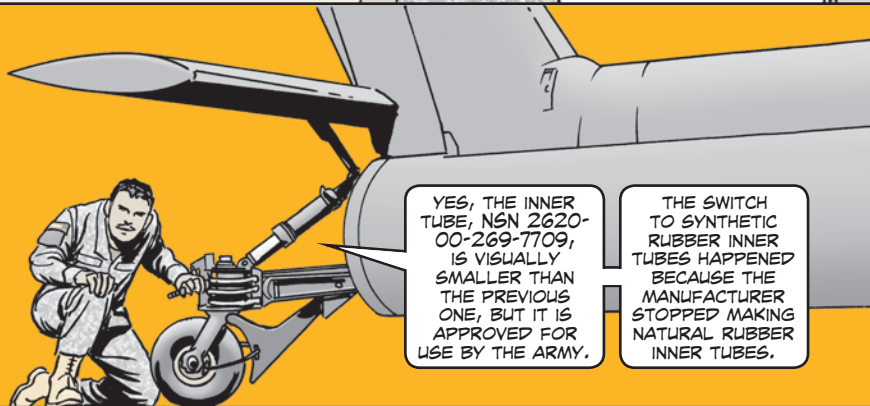
AH-64A/D...

AS THE TIRE
TURNS



MECHANICS,
ARE YOU
WORRIED
ABOUT
USING THOSE
SMALLER
INNER TUBES
YOU'VE BEEN
RECEIVING...

...THE
ONES
FOR YOUR
AH-64
TAIL
WHEEL
TIRE?

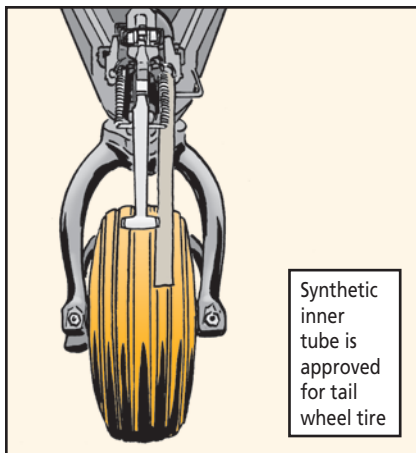


YES, THE INNER
TUBE, NSN 2620-
00-269-7709,
IS VISUALLY
SMALLER THAN
THE PREVIOUS
ONE, BUT IT IS
APPROVED FOR
USE BY THE ARMY.

THE SWITCH
TO SYNTHETIC
RUBBER INNER
TUBES HAPPENED
BECAUSE THE
MANUFACTURER
STOPPED MAKING
NATURAL RUBBER
INNER TUBES.

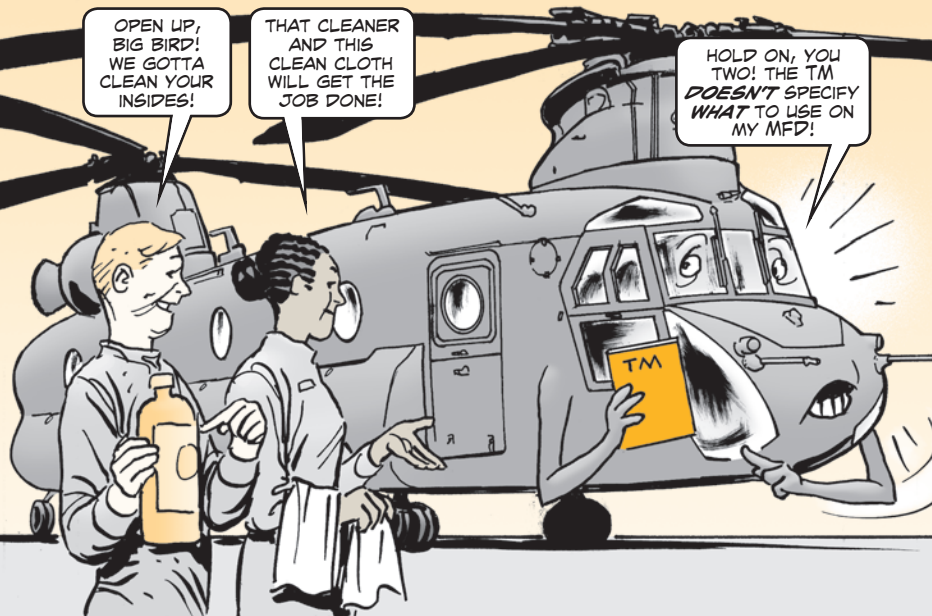
The change to synthetic rubber also has the benefit of maintaining air pressure. The manufacturer says the butyl rubber tubes hold air 10 times better than natural rubber. Reports from the field said that the natural rubber tube would lose as much as one percent a day. The new, synthetic rubber inner tube should lose air slowly, as little as one percent a month. That's a big difference for your bird's tail wheel tire.

The AMCOM head shed says go ahead and install the new tubes. They meet all the Army's requirements and specifications.



Synthetic
inner
tube is
approved
for tail
wheel tire

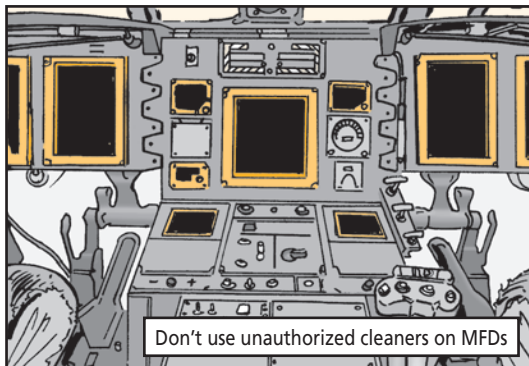
MFD Cleaning



The new F model Chinooks are showing up at units. With them, mechanics, there'll be new maintenance tasks required to take care of this bird with its new avionics and more.

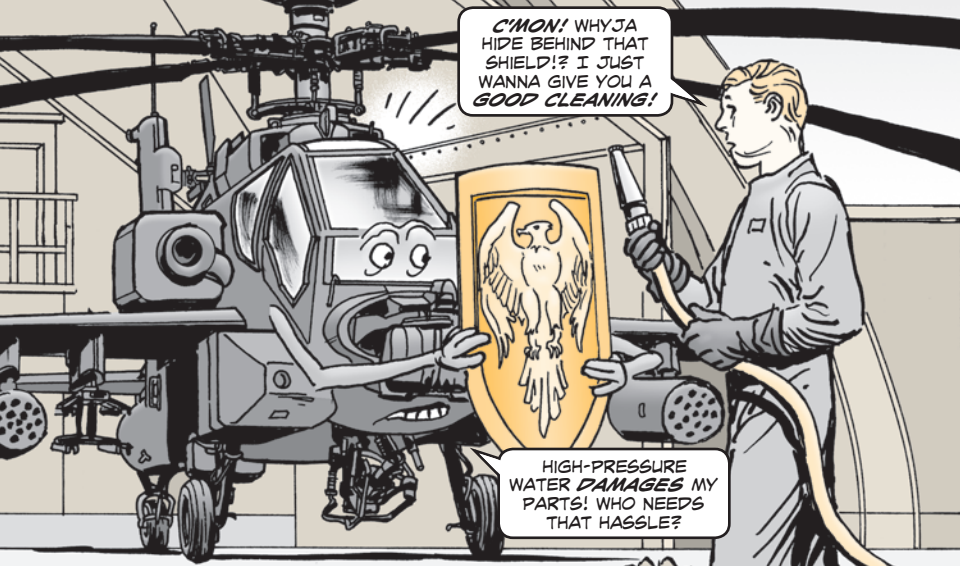
When you first enter the new bird, check out the digital cockpit and all the multi-functional display (MFD) screens.

There are dos and don'ts for MFD screens. **Don't**, at any time, use unauthorized glass cleaners on them. That's because commercial cleaners contain abrasive chemical substances that will scratch the screen and impact NVG viewing.



Do, at all times, use the authorized glass cleaner, NSN 7930-01-442-5969, and the wipes that come with it. Make a note until the cleaner is added in the next IETM change. This will include procedures for cleaning the MFDs.

HIGH-PRESSURE WATER A NO-GO!



THE WORD ON USING HIGH-PRESSURE WATER ON YOUR BIRD IS...
DON'T!

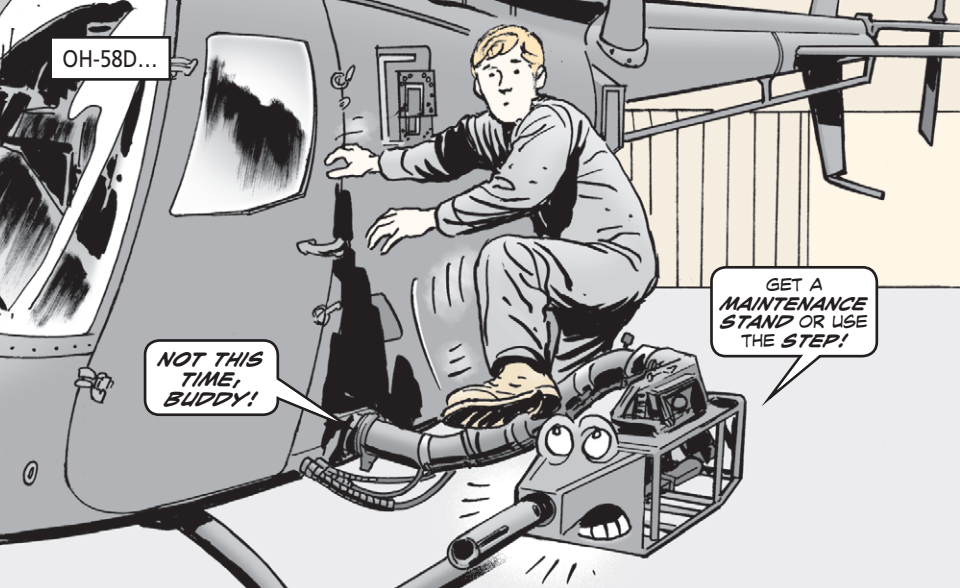
There's no doubt high-pressure water will clean your bird, but the consequences will be costly repairs. High-pressure water damages wire bundles, seals, the finish, connectors, electrical components, and washes grease out of lubricated parts.

Use low-pressure water and a little elbow grease while cleaning your bird. Never try to blast away the grime.

After every washing, check for standing water in your bird and remove the water to prevent corrosion.

Stay up on aircraft washing and corrosion control by following the good words in TM 1-1500-344-23, *Cleaning and Corrosion Control*, and TM 1-1500-204-23, *General Aircraft Maintenance*.

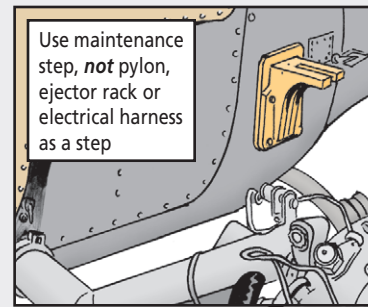
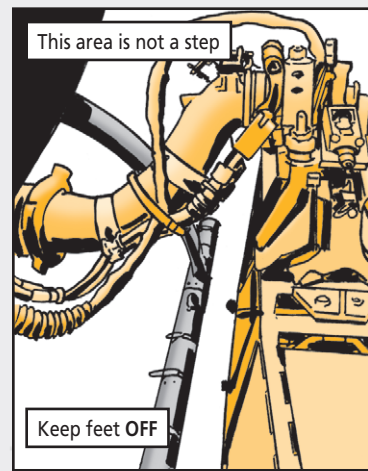
Wash your bird as often as local operating conditions require. And remember to follow your engine manual TM when cleaning your engine. See the washing instructions described in the IETM for the Longbow, D-model and TM 1-1520-238-23-1.



WHERE DO YOUR FEET BELONG?

Repairers, your feet shouldn't be on your Kiowa Warrior's universal weapons pylon (UWP), the ejector rack or the electrical harness.

When doing maintenance, use either a maintenance stand or your bird's maintenance step to go top-side. But keep those big feet away from the pylon, the ejector rack and the electrical harness.



Stepping on the ejector rack's jettison cable damages insulation and crushes internal wires. Also, the force of your weight can bend or damage the UWP and knock out proper clearances between the weapons and other parts of the airframe.

And now that your bird has a different jettison rack, look for new repair procedures in Para 4-87 of TM 9-1090-214-23&P and TM 9-1095-212-23&P.

A **CRUSHED ELECTRICAL HARNESS** CAN PREVENT EJECTION OF A FAILED WEAPON IN AN EMERGENCY OR CAUSE PREMATURE MISFIRING OF THE EJECTOR RACK.

IF EJECTOR SYSTEMS FAIL TO WORK PROPERLY YOU AND YOUR BIRD ARE IN HARM'S WAY.



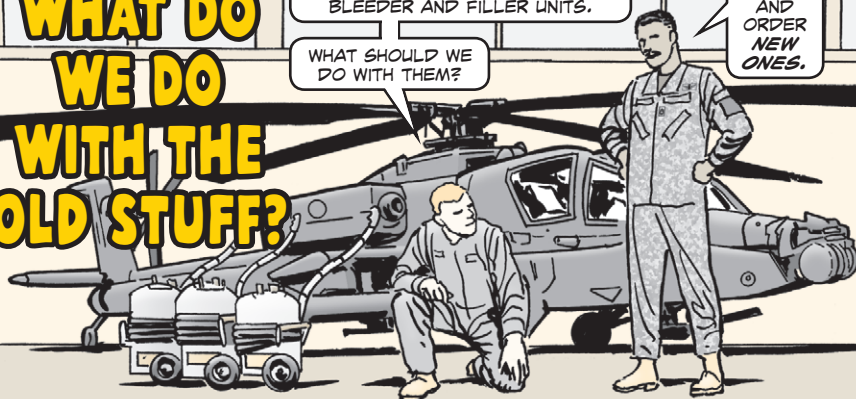
All Aircraft...

WHAT DO WE DO WITH THE OLD STUFF?

WE'VE GOT A LOT OF THESE OLD BEAT-UP AIRCRAFT HYDRAULIC BLEEDER AND FILLER UNITS.

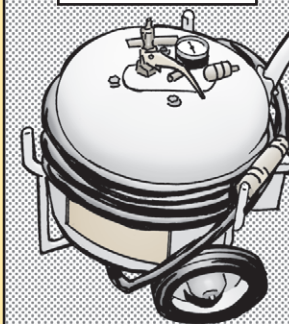
WHAT SHOULD WE DO WITH THEM?

TURN 'EM IN AND ORDER **NEW ONES**.



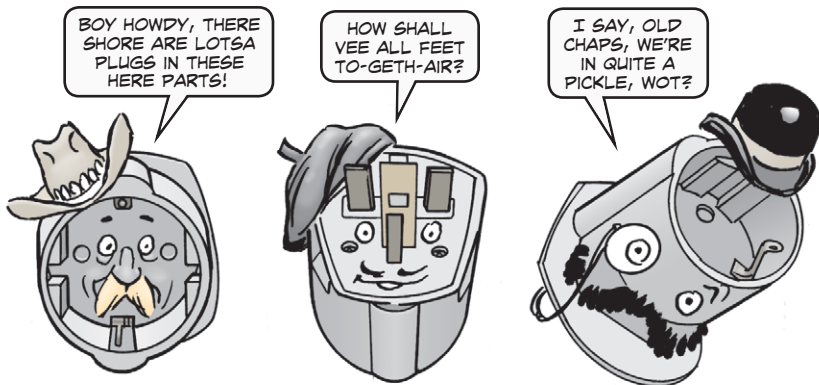
Dear Sergeant Blade,
My unit has some beat-up aircraft hydraulic bleeder and filler units, NSN 4910-00-245-1832, lying around the hangar in need of repair. What can we do with them since there are no repair procedures in the TM?
SGT S.S.

Turn in old units and order new ones



Dear Sergeant S.S.,
No problem. Here's what you do with those ole' units. Turn them in and order new ones. The maintenance repair (MR) code is "Z", non-repairable/no repair authorized. If you want to know if an item is repairable or not, check the MR codes in FED LOG/AMDF on NSNs.

Rotor Blade



ELECTRICAL OUTLET AND PLUG SAFETY IN SWA

Dear Editor,

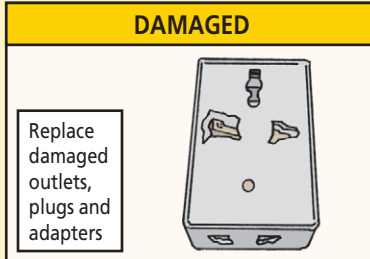
It's a must that Soldiers and civilian workers know the good, bad and ugly when it comes to electrical plugs, adapters and outlets in Southwest Asia (SWA). Injuries and damage are the result if a Soldier uses the wrong combination of plug-to-outlet.

Here are a few pointers which will help educate Soldiers and civilians who are already in SWA and those who are heading here:

1. Know the voltage! The electrical generation here on Camp Taji conforms to the International Electrical Code, which means that outlet in your wall is providing 220 volts. If you plug in a piece of equipment designed to run at 110 volts, go ahead and order a replacement, because the one you plugged in is now fried! To run at 110, you need an adapter or transformer that "steps down" the 220V to 110V. Other installations and countries may have different combinations of voltage and outlets. It is important to check what is used at each location when you arrive.

2. There's a good chance that the outlet on your wall is designed to British Standard (BS) 1363. That means it can carry 250 volts of AC at 50 Hz. These outlets are fused at 3, 5, 10 or 13 amps.

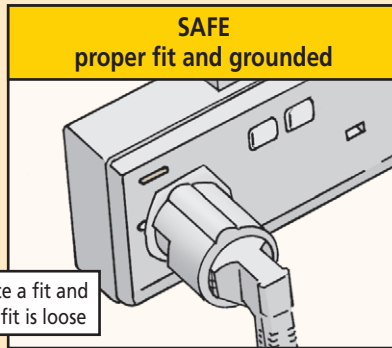
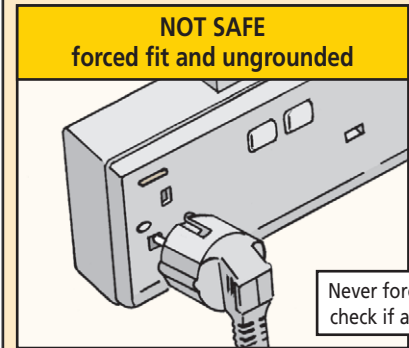
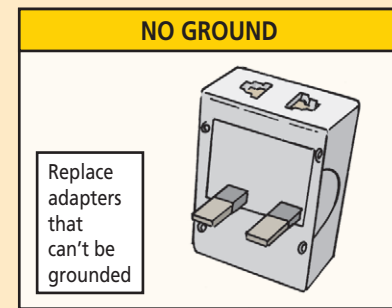
However, most of the equipment plugs are designed to European Standard CEE 7/7 or 7/16. This leads to a compatibility problem since the British outlet has a "safety gate" that must be triggered open by the plug before the outlet is hot. But the European plugs don't have a pole to open the gate! Forcing the plug into the outlet damages the outlet and makes it useless for different plugs and also makes it a safety hazard.



3. Adapters from the European plugs to the British outlets are available, but not all of them are created equal. Choosing the right adapter is critical.

Unlike US or British plugs, the European plugs don't have a male ground lead. The grounding on these plugs is provided by a small metal strip which must contact a corresponding ground in the adapter or outlet. If you're plugging a device into a power strip, the power strip must be properly grounded.

4. Universal adapters for US style plugs are not universally safe or universally designed and manufactured the same. One important difference is how well the adapter stays plugged in. Make sure the plug fits snugly into the outlet. A loose fit leads to arcing and overheating.



Never force a fit and check if a fit is loose

5. Finally, I've put together a chart that shows safe and unsafe plugs, outlets and adapters I have encountered here at Taji.

William S. Shirley
RMS/AFCAP
Camp Taji, Iraq

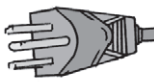
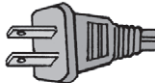
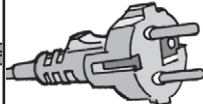



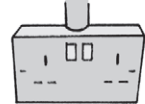

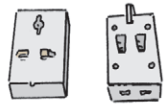
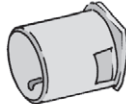


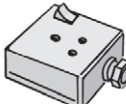


BILL SHIRLEY HAS DONE A GREAT SERVICE TO ALL OF US WITH THIS CRITICAL ADVICE AND EXCELLENT CHART.

IF YOU HAVE INFORMATION TO ADD, WRITE US AND WE'LL PUT THE WORD OUT.

NOW TURN THE PAGE AND TAKE A LOOK AT MR. SHIRLEY'S CHART...

Plug Adapter Combinations — — Safe/Unsafe

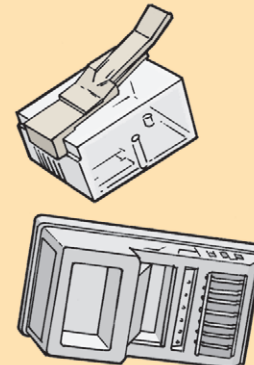
Outlet or Adapter		Plugs							
		US (NEMA 5-15 or 1-15) Plug		European (CEE)	7/7 or 7/16 Plug	British Stand (BS 1363) Plug 13 amp		British Stand (BS 546) Round Pin Plug 15 amp	
		Grounded (Type B, 5-15)	Un-grounded (Type A, 1-15)	Grounded (7/7) (Type F or E/F hybrid)	Un-grounded (7/16) (Type C)	Grounded (Type G)	Un-grounded	Grounded (Type D)	Un-grounded
						Not illustrated		No known use or availability	
British BS 1363 Grounded outlet		N/A	N/A	UNSAFE Not grounded	UNSAFE	OK	OK	N/A	N/A
Universal to British Style BS 1363 13 amp grounded		OK	OK	UNSAFE Not grounded	OK	OK	OK	N/A	N/A
Universal to British Style BS 1363 13 amp un-grounded		UNSAFE Not grounded	UNSAFE Not grounded	UNSAFE Not grounded	UNSAFE Not grounded	UNSAFE Not grounded	UNSAFE Plastic tab Not grounded	N/A	N/A
European to British Style BS 1363 13 amp grounded		N/A	N/A	OK	OK	N/A	N/A	N/A	N/A
US/European combination to British Style BS 1363 13 amp un-grounded		N/A	UNSAFE No polarity	UNSAFE Not grounded Improper size	UNSAFE Improper size	N/A	N/A	N/A	N/A
Universal to Round Pin BS 546 15 amp grounded		OK	OK	UNSAFE Not grounded	OK	OK	OK	N/A	N/A
Round Pin BS 546 15 amp grounded		N/A	N/A	N/A	N/A	N/A	N/A	OK	UNSAFE
Round Pin BS 546 15 amp un-grounded	N/A	UNSAFE	UNSAFE	UNSAFE	UNSAFE	UNSAFE	UNSAFE	UNSAFE	UNSAFE

GET YOUR STOCK NUMBERS HERE!

NEED SOME RJ CONNECTORS TO USE WITH THAT CABLE?

WELL, HERE ARE A FEW CHOICES...

NSN 5935-01-	Type
420-8184	RJ-11, 4-wire, strand or solid
370-1187*	RJ-45, flat, strand or solid
370-1855*	RJ-45, round, strand or solid
464-4436*	RJ-45, round, solid
483-7216	RJ-45, strand shield
559-5413*	RJ-45, strand unshielded
510-9863*	RJ-45, solid shield
483-1510*	RJ-45, solid unshielded



WANT TO IDENTIFY YOUR NEW CABLES WITH COLORED ELECTRICAL TAPE?

HAVE WE GOT COLORS FOR YOU...

NSN 5970-01-	Color and Size
017-7388	blue, 1/2 in
013-9366	green, 1/2 in
017-7389	red, 1/2 in
339-1291	red, 1/2 in
013-9369	red, 1/2 in
023-0170	white, 1/2 in
015-5060	blue, 3/4 in
111-1764	brown, 3/4 in
013-9368	green, 3/4 in
112-1833	orange, 3/4 in
013-9369	red, 3/4 in
013-9367	white, 3/4 in
174-5651	yellow, 3/4 in

YOU CAN GET 3/4-IN BLACK TAPE WITH NSN 5970-00-685-9059, 3/4-IN GRAY WITH NSN 5970-00-482-2559 AND 1/2-IN YELLOW WITH NSN 5970-00-339-1292.

ONE INCH WHITE, ELECTRICAL COLD WEATHER INSULATION TAPE COMES WITH NSN 5970-00-362-3189 AND 3/4-IN BLACK, ELECTRICAL COLD WEATHER INSULATION TAPE COMES WITH NSN 5970-00-240-0617.

LOOKING FOR 1000 FEET OF CAT 5, 4 TWISTED PAIR CABLE?

WELL, LOOK NO FURTHER...

NSN 6145-01-	Color
468-3365	Beige
561-9059	Red
561-9049	Green
561-9040	Blue
561-9034	Black
561-9031	Gray
521-1824*	White

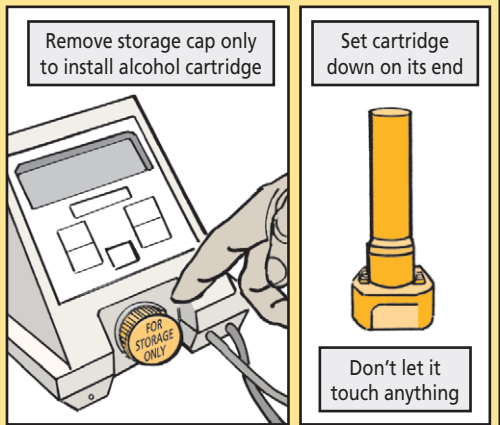
*These NSNs are not on the AMDF. Order using a DD Form 1348-6 and write in the REMARKS block, "NSN not on AMDF."



The only alcohol to use with PATS is **pure reagent grade isopropyl alcohol**, NSN 6810-01-584-3650. That's the purest alcohol available. If you use the cheap kind, the PATS optical system will clog. The only fix is to send it to the repair facility in Alabama.

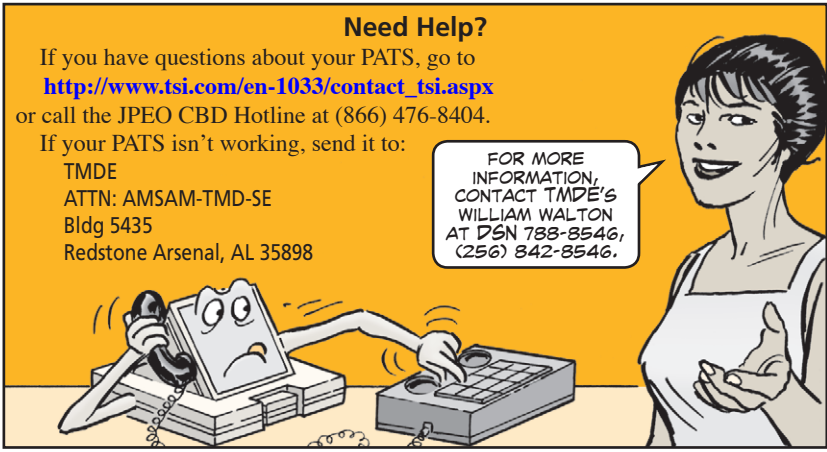
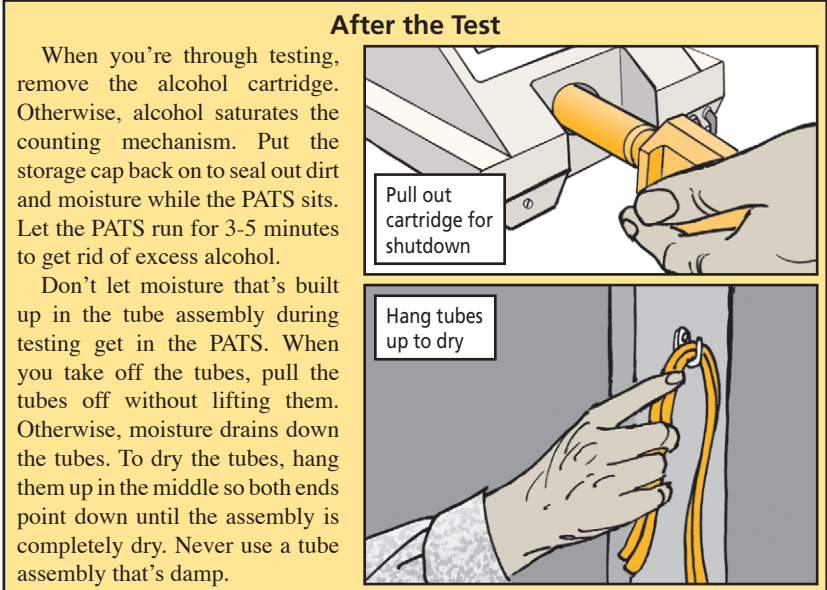
Take off the storage cap only to install the alcohol cartridge. That keeps dirt out of PATS and can cause contamination and bad readings.

Don't let the cartridge touch anything before you screw it into PATS. If you must set the cartridge down, set it upright on its end so it won't get dirty. While the cartridge is in the PATS, put the storage cap on the alcohol fill capsule to keep dirt out of the capsule.

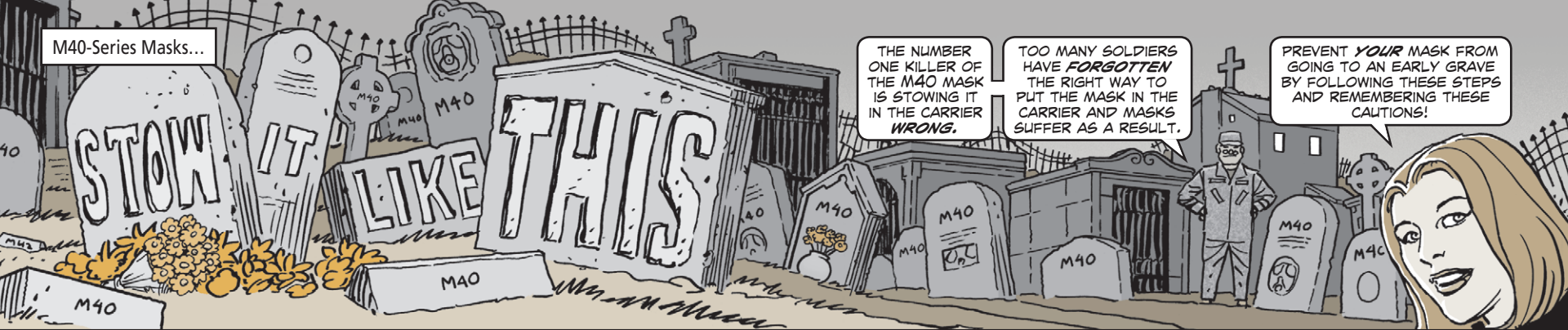


Passing the Test

Before running a PATS test, make sure the tested Soldier doesn't eat, drink, use mouthwash or smoke for at least 30 minutes before testing. The Soldier should also wash off all colognes and lotions. Soldiers should avoid gum chewing and talking during testing. Failure to follow these instructions will ruin the tests.



M40-Series Masks...



THE NUMBER ONE KILLER OF THE M40 MASK IS STOWING IT IN THE CARRIER **WRONG**.

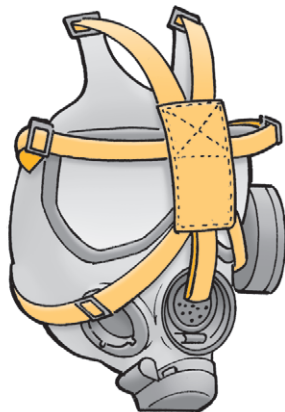
TOO MANY SOLDIERS HAVE **FORGOTTEN** THE RIGHT WAY TO PUT THE MASK IN THE CARRIER AND MASKS SUFFER AS A RESULT.

PREVENT **YOUR** MASK FROM GOING TO AN EARLY GRAVE BY FOLLOWING THESE STEPS AND REMEMBERING THESE CAUTIONS!

Here is how to stow your mask, simple and easy:

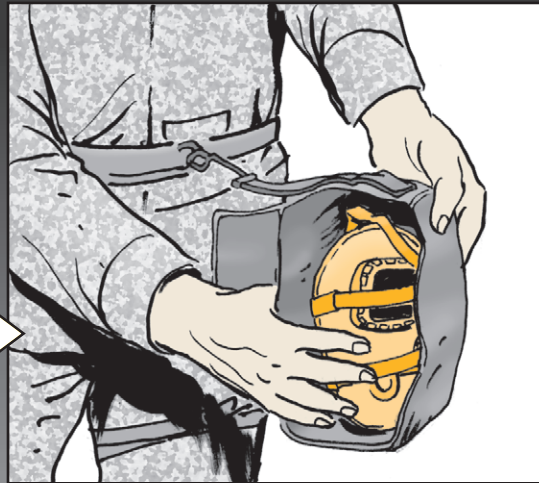
- Make sure the outserts are installed to protect the eyelenses and that the mask is free of oil and solvents that could damage the facepiece. Check that the mask is dry and clean.
- Shake out the carrier to get rid of any sand or dirt.

- Pull the head harness over the front of the mask. But don't stretch it over the canister—that ruins the harness's elasticity.

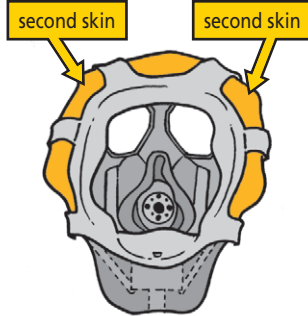


- Make sure the inside of the mask is smooth and is not distorted. If the mask is stored with wrinkles, creases set in and the mask leaks.

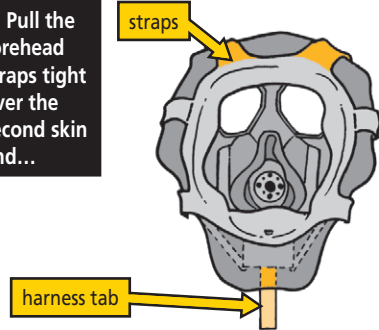
- Put the mask in the carrier with the lenses facing away from your body.



- Smooth the second skin over the front of the mask.



- Pull the forehead straps tight over the second skin and...



...pull the head harness down as far as possible by pulling on the harness tab.

REMEMBER THESE CAUTIONS:
If you ignore any of them, you'll likely ruin the mask.

- **Never** fold your mask to put it in the carrier.
- **Never** use the carrier as a pillow.
- **Never** pile stuff on the carrier.
- **Never** keep anything in the carrier other than the mask and its accessories.

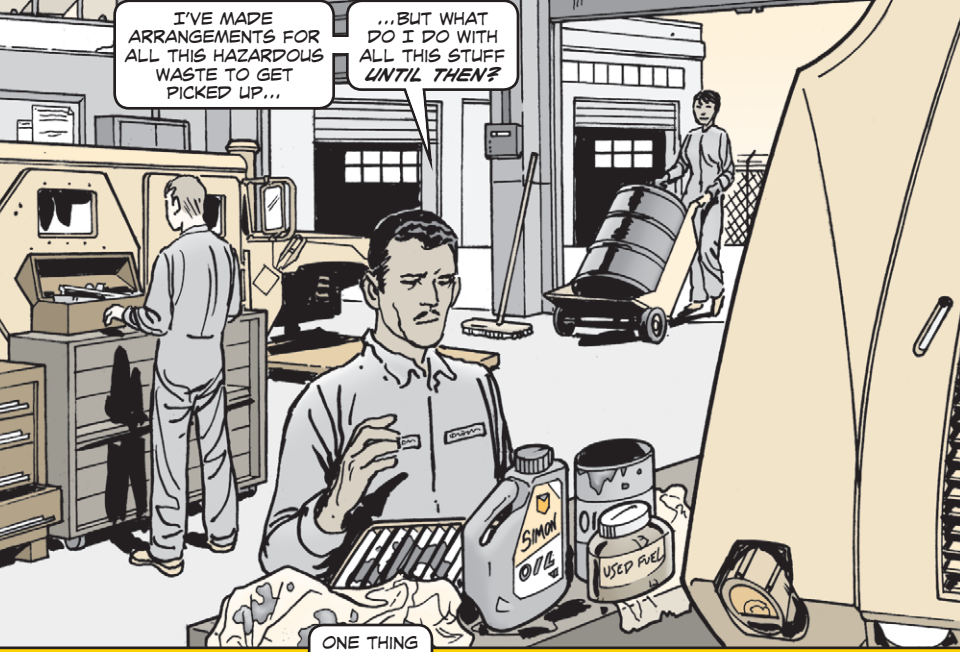


HAZMAT...

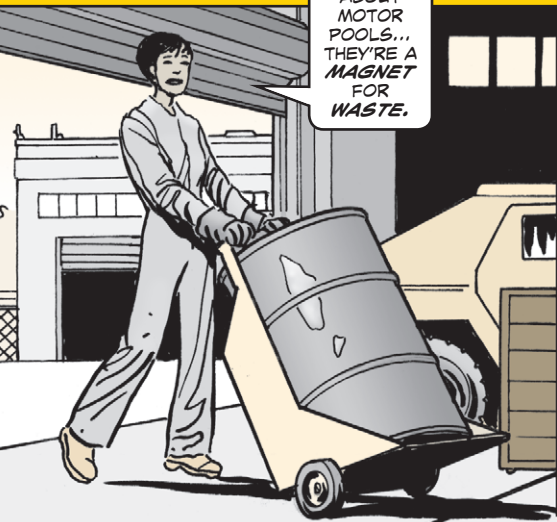
YOU CAN'T BEAT THESE DRUMS

I'VE MADE ARRANGEMENTS FOR ALL THIS HAZARDOUS WASTE TO GET PICKED UP...

...BUT WHAT DO I DO WITH ALL THIS STUFF UNTIL THEN?



ONE THING ABOUT MOTOR POOLS... THEY'RE A MAGNET FOR WASTE.



EVEN A CASUAL GLANCE REVEALS MATERIALS THAT ARE CONSIDERED **REGULATED** OR **HAZARDOUS** WASTE WHEN IT'S TIME TO GET RID OF THEM.



WE'RE TALKING ABOUT MATERIALS SUCH AS...



● dirty rags and used dry sweep



Dirty dry sweep can harm the environment

- used oil and fuel filters
- used and contaminated fuel, oil, anti-freeze, lubricants, degreasers and the like.

THESE MATERIALS CAN **HARM** THE ENVIRONMENT IF NOT STORED THE RIGHT WAY.

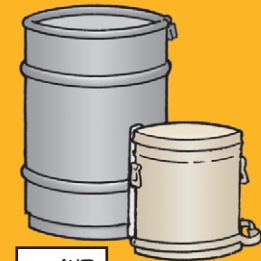


UNTIL YOUR ENVIRONMENTAL FOLKS TAKE THEM OFF YOUR HANDS, YOU NEED SAFE, TEMPORARY STORAGE FOR HAZMAT AROUND THE MOTOR POOL.

WELL, WHAT'S THE BEST WAY TO TEMPORARILY STORE ALL THIS WASTE?



IT'S SIMPLE! USE DRUMS...



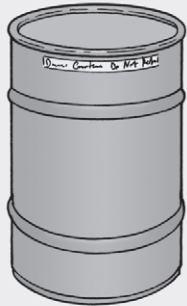
... AND WASTE CANS.

PS MORE

NOT JUST ANY DRUM WILL DO.

DRUMS FOR STORING AND SHIPPING HAZARDOUS WASTE MUST MEET UNITED NATIONS SPECIFICATIONS.

SOME OF THE DRUMS AVAILABLE IN THE SUPPLY SYSTEM ARE...



You need drums to store and ship hazardous waste

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

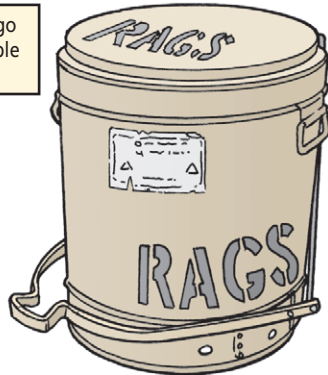
HERE ARE TWO FLAMMABLE WASTE CANS FOR DISPOSING CLOTHS AND WIPING RAGS.

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

Lid	Size (in gallons)	Color	Material	NSN 7240-00-
Foot-operated	6	Red	Steel	282-8411
Foot-operated	10	Red	Steel	256-7700



Dirty rags go in flammable waste cans

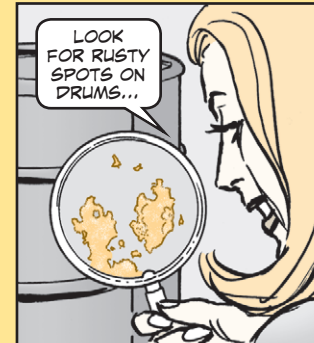


Drums Deserve Care

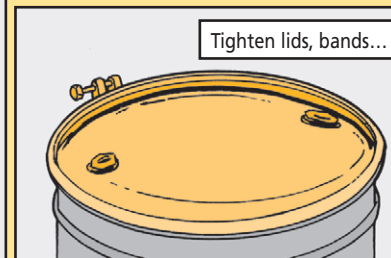
TO GET THE MOST OUT OF YOUR DRUMS, FOLLOW THESE GUIDELINES...

- Wipe off water, oil or grease from the top and sides with a clean cloth. Throw away dirty rags in the flammable waste cans.
- After you've cleaned up the drum, look for rusty spots, particularly on the bottom. A rusty drum can leak and your installation's hazardous waste storage facility may refuse to accept it.
- Never use a dented, rusty or leaking drum. Replace worn-out drums as soon as possible.
- Never fill a drum all the way to the top. Leave about four inches for expansion.
- Don't mix wastes in the same drum. Only one kind of waste goes in each container. Some liquids, such as antifreeze and used oil, can be recycled as long as they haven't been mixed with anything else.
- To prevent leaks and keep out contamination, tighten lids, bands and bungs. If any are missing or damaged, replace them or use a different drum. It's helpful to keep a bung wrench handy. Use NSN 5120-00-507-4886 to get one.

LOOK FOR RUSTY SPOTS ON DRUMS...



Tighten lids, bands...



...and bungs



- State regulations vary on how much waste you can store at the unit level before it must be moved to the hazardous waste storage facility. Find out how much of each type waste you can store in the motor pool at your post.
- Use a suitable container for the kind of HAZMAT you're storing. For example, never store acids or caustics in steel containers. They'll eat through steel, causing leaks and maybe even fires.
- Mark or label drums CLEARLY before storing hazardous waste in them. That way everyone knows what's inside.
- You can reuse drums, but first you must empty and clean them. Then inspect them to make sure they're in good condition.
- If you plan to put a different kind of waste in a reused drum, remove or paint over all previous labels or markings. Then mark or label the drum to identify the new contents. That's how to avoid confusion. It's also the law.

PS MORE

Questions?

YOU MAY HAVE SOME QUESTIONS ABOUT DRUMS AND HAZMAT, SUCH AS...



- How much waste can you store in the motor pool?
- What's the right way to empty and clean drums?
- Are there specific requirements for marking and labeling?

Start looking for answers in your local hazardous waste SOP. If you don't have a local SOP, ask your unit's HAZMAT officer or NCO for guidance. He has the experience and know-how to school you in handling HAZMAT. He can also help you identify what's inside a drum if you're unsure of its contents.

HOW MUCH WASTE *CAN* YOU STORE AT UNIT LEVEL?

ASK YOUR HAZMAT OFFICER OR NCO.

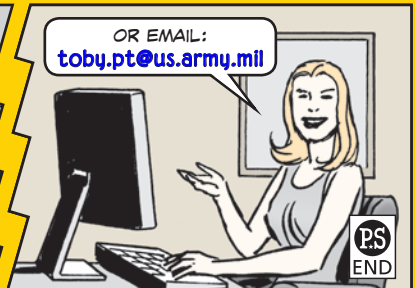


For more HAZMAT information, visit the LOGSA Packaging, Storage and Containerization Center (PSCC) HAZMAT web page:
https://www.logsa.army.mil/pssc/PSCC_WebDev/P&T/HAZMAT/hazmat.htm

YOU CAN CONTACT PSCC BY PHONE...
DSN 795-7070;
(570) 895-7070

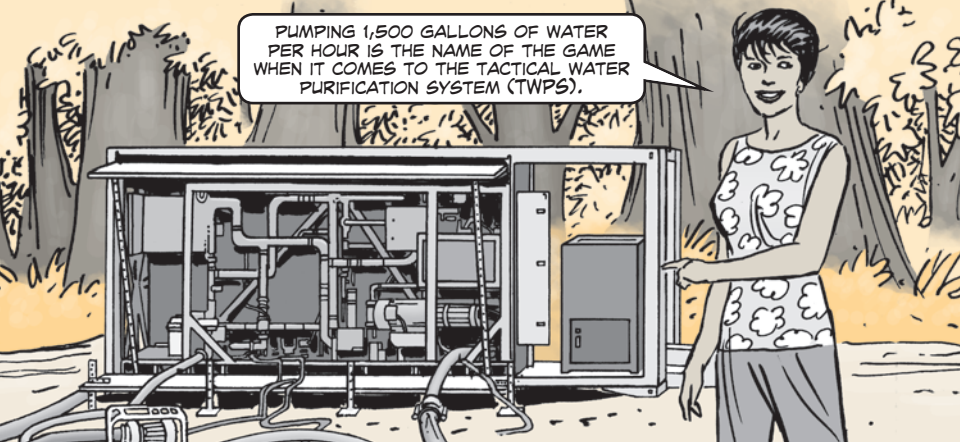


OR EMAIL:
toby.pt@us.army.mil



Let the Water Flow

PUMPING 1,500 GALLONS OF WATER PER HOUR IS THE NAME OF THE GAME WHEN IT COMES TO THE TACTICAL WATER PURIFICATION SYSTEM (TWPS).



Make sure you read through TM 10-4610-309-10 and follow these microfilter PM pointers. They'll keep your unit's TWPS mission-ready for the day's run.

Clean Microfilters

There's a new high pH cleaner being procured under NSN 6850-01-528-9969. The new cleaner, PN 2250P, comes in a 50-lb bucket. It not only cleans the TWPS microfilters but works as a preservative, too. The high pH cleaner is less expensive than the cleaner it replaces. It's not as hazardous as the caustic, NSN 6810-01-527-0510, that was used with the old cleaner.

The new cleaner also changes the chemical waste neutralization procedures shown in Table 3 on WP 18 of the -10 TM. Before discharging water to the sanitary sewer, operators no longer have to use large quantities of citric acid to adjust the pH of the microfilters cleaning waste.

Don't Toss the Microfilters

The TWPS's microfilters are **not** disposable. Cleaning combined with preservation gives them a three-to-five year service life. So don't toss 'em too soon. A new set of microfilters will cost your unit more than \$32,000!

TWO THINGS TO REMEMBER:

USE HIGH PH CLEANER, NSN 6850-01-528-9969, TO KEEP US CLEAN!

WE SHOULD LAST 3 TO 5 YEARS!



DISPATCH ASSISTANCE



WOW! MOTOR SERGEANT, YOU GOT THOSE VEHICLES DISPATCHED IN RECORD TIME!



THAT'S BECAUSE WE FOLLOWED A 3-STEP PLAN I FOUND IN PS!

Dear Editor,

I'm a Reserve Soldier with the 14th Psychological Operations Battalion in California. I've come up with a really good system for dispatching that can shave at least 30 to 40 minutes from the time it takes to dispatch vehicles—and get Soldiers to training on time. When doing the dispatches either the day before or the day of your mission, make sure that either the motor sergeant or the TAMMS clerk follows these steps:

1. Enter the key number and fuel card number on the dispatch under the REMARKS column.
2. Hand the driver a DA Form 5988-E, *Equipment Maintenance and Inspection Worksheet*, and have him do PMCS.
3. When the driver finishes PMCS and returns the keys and PMCS sheet, have him sign the dispatch before handing him the keys again.

When done for the weekend, run a dispatch control log. With that, you can hold the Soldier responsible for the keys and the vehicle. Plus, you'll have double proof of who had the keys if they get lost. It keeps your inventory straight.

SSG William Chapman
304th Psychological Operations Company
Sacramento, CA

Editor's note: Thanks, Sergeant Chapman. Readers, DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual, gives guidance for dispatching equipment. Also, your unit's SOP should outline dispatch procedures. Talk to your CO about adding this suggestion to the unit SOP.

Maintenance Management...

WE'RE THE NATIONAL GUARD COMET AND WE'RE HERE TO EVALUATE YOUR MAINTENANCE PROGRAM.

LET'S START WITH THE CONDITION OF YOUR EQUIPMENT.

Guard Has COMET, Too



Dear Editor,

We at the National Guard Bureau Maintenance Branch read your article in PS 673 (Dec 08) on the Army's COMET (command maintenance evaluation and training team) program.

The article accurately described the Active Army COMET program, but failed to mention that the National Guard has its own version of COMET, which is somewhat different than the Active Army's.

The Army's COMETs are made up of contract personnel who help units solve their logistical problems through both assistance and training. Their focus is on readiness.

With the National Guard, each state has its own COMET, whose focus is evaluating unit maintenance and equipment readiness. The National Guard COMETs, which are composed of Soldiers, evaluate but don't instruct. They evaluate maintenance management, AMSS (Army materiel status system) data, maintenance sustainability, and the condition of equipment. Each state's COMET evaluates each of that state's Guard units at least every 24 months.

If a unit needs help correcting any problems that surface during a COMET evaluation, they can turn to a maintenance assistance and instruction team (MAIT), which is described in AR 750-1. Each state has a National Guard version of MAIT ready to help units through assistance and instruction.

If you have questions about the National Guard COMET program, email:

geoffrey.k.seals@us.army.mil

or call DSN 327-7468, (703) 607-7468.

Geoffrey K. Seals
National Guard Maintenance Branch

Editor's note: Thanks for updating us on the National Guard COMET, Mr. Seals. The POC for the Active Army COMET program is Al Rounds: DSN 367-7114, (404) 464-7114, or email al.rounds@us.army.mil

Active Army COMETs are located at Forts McPherson, Bragg, Stewart, Drum, Campbell, Carson, Hood, Riley and Lewis. You can contact them through your division or brigade's G-4 or S-4 or through Mr. Rounds.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES-PMCS-ARE YOUR **MOST IMPORTANT TOOLS** FOR MAKING SURE YOUR EQUIPMENT IS READY FOR ACTION.

BUT TO **MOST EFFECTIVELY** USE THE PMCS FOUND IN YOUR EQUIPMENT'S -10 AND -20 TECHNICAL MANUALS...

...YOU NEED TO UNDERSTAND THE **DIFFERENT TYPES** OF PMCS.

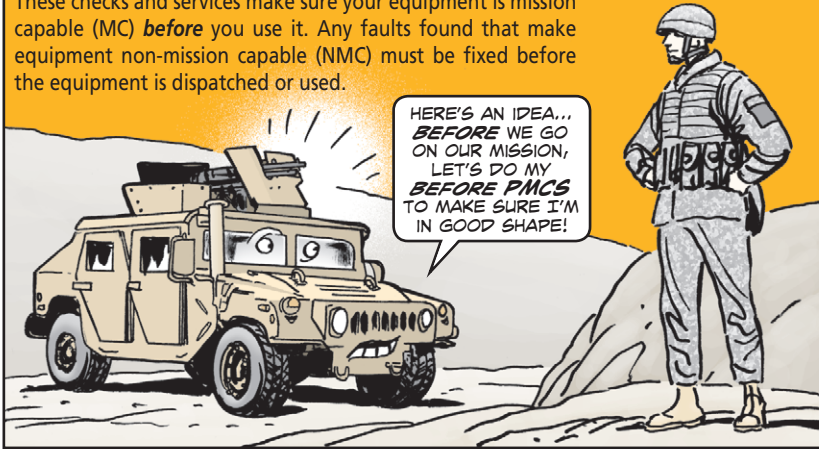
SO HERE ARE THE...



ABCs of PMCS

BEFORE OPERATIONS:

These checks and services make sure your equipment is mission capable (MC) **before** you use it. Any faults found that make equipment non-mission capable (NMC) must be fixed before the equipment is dispatched or used.



DURING OPERATIONS:

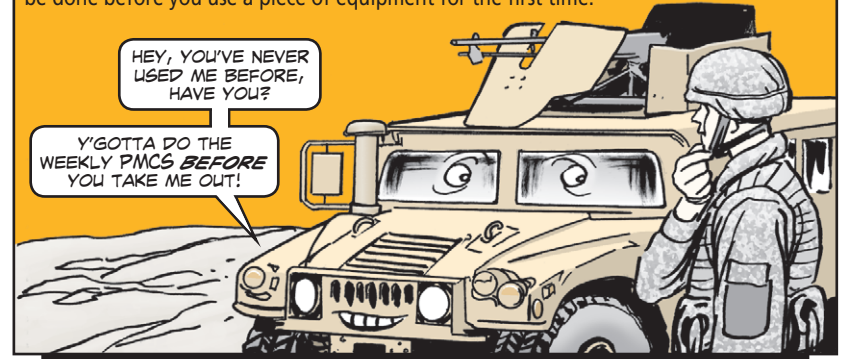
These are checks and services of your equipment that you make **during** your mission. Checking vehicle gauges as you drive or checking tires and load fasteners during stops are examples of DURING OPERATIONS PMCS.

AFTER OPERATIONS:

These are checks and services to detect if any damage or faults occurred in the field. AFTER OPERATIONS PMCS make sure equipment is maintained at 10/20 standards. Cleaning, inspecting, and lubing your weapon is an example of AFTER OPERATIONS PMCS.

WEEKLY:

Regardless of whether or not your equipment has been used, these weekly checks and services must be done to keep your equipment ready for action. Weekly PMCS should also be done before you use a piece of equipment for the first time.



MONTHLY:

Again, these checks and services should be done each month regardless of whether your equipment has seen action.

Any faults that can't be fixed on the spot should be recorded on a DA Form 5988-E or DA Form 2404.

During deployment, correction of NMC faults should begin immediately. For non-deadline faults, the goal is correcting the fault within 72 hours. When a unit is not deployed, the goal for correcting NMC faults is 48 hours and for non-deadline faults seven days.

Any time a piece of equipment is dispatched to another unit or from active patrolling to motor pool stand-by, BEFORE, DURING, and AFTER PMCS should first be done.





120mm Mortar Dust Cap

A rubber dust cap is now available for your 120mm mortar that snaps over the bore to keep out dust and moisture. Order the dust cap with NSN 1015-01-209-3482. The cap has been added to the AAL in TM 9-1015-250-10. The cap doesn't work with a mortar equipped with a blast attenuator.

AIDPMO Reassigned to SDDC

If you haven't heard, the Army Intermodal and Distribution Platform Management Office (AIDPMO) doesn't fall under LOGSA anymore. On 1 Oct 08, it became a part of the Surface Deployment and Distribution Command (SDDC). You may be wondering if you can still use those numbers you had for AIDPMO. You can because they're still at Tobyhanna and the POC info hasn't changed.

AIRCRAFT JACK STAND

On page 39 of PS 674 (Jan 09), we told you to contact the AMCOM headshed for maintenance issues on the 3-ton jack stand, NSN 1730-01-541-3186. For maintenance problems, you can now consult TM 1-1730-270-13&P, *Identifying Technical Publication Sheet for Commercial Manual (3 Ton Tripod Jack) Part Number/NSN: Model 9775-010/NSN 1730-01-541-3186*. It's a commercial manual. The TM is available on LOGSA's ETM website. You can also order hard copies on your 12-series publications account.

TM Available for Sniperscope

The AN/PVS-29 night vision sniperscope, NSN 5855-01-567-9243, now has its own TM, TM 9-5855-1916-13&P. The -29 was formerly called the AN/PVS-26, NSN 5855-01-538-8121. Its ZLIN will remain Z01240. You can access the TM at the ETM site:

<https://www.logsa.army.mil/etms/online.cfm>

Your pubs clerk can order hard copies of the TM at

<https://dol.hqda.pentagon.mil/ptclick/index.aspx>

New ECM for M915A2/M916A1 Tractor Trucks

Get the new electronic control module (ECM) for the DDEC IV engine in M915A2 and M916A1 tractor trucks with NSN 2920-01-561-7722. Its wiring harness comes with NSN 5995-01-562-0522. The ECM comes programmed and ready for installation.

M871A3 AXLE PARTS

NSN 5310-01-499-5416 now gets the keeper arm and locknut for the axle on the 22 1/2-ton semitrailer. They're presently shown as Items 9 and 10 in Fig 17 of TM 9-2330-326-14&P. They are no longer available separately, so make a note until the TM is updated.

M1A1 AIM 5A Tank Sidecar SMR Code

If a sidecar assembly, NSN 6625-01-497-1915, fails on your M1A1 AIM 5A (situational awareness) tank, don't toss it in the trash. The sidecar assembly's SMR code has recently changed to PAFLL. That means it's repairable by a special repair activity and should be turned in.

Access TM Changes ONLINE

The much requested ETM change access feature is online! You can access and download an individual change to a manual independent of the manual itself. The feature works for changes dated 1 Aug 08 or later, if available. Use the URL below to access ETMs Online on the Logistics Information Warehouse (LIW) website. Click through to its search page, enter your search criteria, click on Search, then click on the desired underlined change number. When the change opens, you can download or print it. The URL is:

<https://liw.logsa.army.mil/index.cfm?fuseaction=home.main>

SMOKE GRENADE LAUNCHERS WANTED

If your unit has any of the following smoke grenade launchers and doesn't need them, please turn them in regardless of their condition. The Army needs them.

- M239, NSN 1055-01-015-0874
- M250, NSN 1055-00-000-0138
- M257, NSN 1055-01-070-1213
- M243, NSN 1055-01-059-0560
- M259, NSN 1055-01-107-7501

For turn-in info, contact TACOM's Pam Jones at DSN 793-1954, (309) 782-1954, or email:

pamela.jean.jones@us.army.mil

Rhino FSR Update for Iraq

Page 17 of PS 679 (Jun 09) provided a list of POCs for PM IED Defeat/Protect Force Field Service Representatives (FSR) in Southwest Asia. The contact information for Iraq has changed. Here's the updated info:

Baghdad - Wayne Hales or Derrick Scott

dennis.hales@iraq.centcom.mil

derrick.scott@iraq.centcom.mil

Cell 07906402306

DSN 485-0312

MMCS: 312-987-5130, Option 1, ext. 6824/6825

Balad - Tyrome Tukes or Aichatou Ousmane

tukest@mmcs.army.mil

aichatou.ousmane@mmcs.army.mil

Cell 07810357584

DSN 312-987-5130, Option 1, ext. 6271/6283

Mosul - Greg Akery or Takneeshea Davis

akeryg@mmcs.army.mil

takneeshea.davis@us.army.mil

Cell 07810025526

DSN 312-987-5130, Option 1, ext. 5850

Q-West - Rodney Marrero or Mike Lopez

rodney.marrero@iraq.centcom.mil

michael.lopez@iraq.centcom.mil

Cell 07706610688

DSN 318-827-6255

Tikrit - Steve Rolen or Bea Zarate

steve.rolen@mmcs.army.mil

zarateb@mmcs.army.mil

Cell 07705482672

DSN 312-987-5130, Option 1, ext. 8560/8567

The information for Afghanistan is still good.

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?

**Your tools don't just
do maintenance...**



**...they *need*
maintenance, too!**