

PS**THE
PREVENTIVE
MAINTENANCE
MONTHLY****ISSUE 647 OCTOBER 2006**

TB 43-PS-647, 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.

**COMBAT VEHICLES**

Stryker Bilge Water Disposal
Stryker NBC/M3 Heater
M1-Series Tank Turret Race Ring Lubing
M113-Series FOV Regulator Ground Strap
M2/M3-Series Bradley M242 Gun Card
MLRS Carrier Engine Blowby
M109A6 Paladin Driver's Hatch Pin

**WHEELED VEHICLES**

M939A1/M939A2 FOV Add-on Armor Info
HMMWV Air Intake Tube
HMMWV Seatbelts
M915-Series Truck Kit for Trailer ABS

**MISSILES**

Patriot Missile Repair Info Online

**SMALL ARMS**

Machine Gun Mount NSN Changes
MK19 Machine Gun Adjusting Tool Use
M249, M240B Machine Guns Barrel Marking
M249 Machine Gun Barrel Comparison
M2 Machine Gun New Safety Device

**COMBAT ENGINEERING**

RTCH Maintenance Tips
DEUCE PM Pointers
D7G Tractor Gear Shifting Caution
Sherlock Holmes & the Faithful Fusilier

2

**AVIATION**

UH-60 Series Jettison Door Handle
UH-60 Series Tail Wheel Lock Pin
Aircraft Tire Inflation
OH-58D MMS Shroud Clamps

**COMMUNICATIONS**

3-KW TQG Push-pull Switch NSN
5-KW TQG Engine Oil Filler Cap NSN
SINGGARS Mounting Blind-rivet Nuts
AN/CYZ-10(V)3 DTD Lube Caution
PP-848B/U Universal Battery Charger
Night Vision Device Helmet Mounts

**SOLDIER SUPPORT**

Arctic Space Heater Operator's Checklist
Desert Camo Cold Weather Parkas
Cold Weather Socks
Cold Weather Clothing Articles in PS Magazine

**CBRN**

M17A3, A/E32U-8 Decon Filters and Caps
M100 Decon System Explained

**TOOLS**

Portable Battery Impact Wrench
Grease Adapter Kit Parts NSNs

**LOGISTICS MANAGEMENT**

Army Sustainment Command Support
Operator's Permit Clarification
Connie's Post Scripts

35

35

36-37

37-38

39

40

40

41

42

43

44

45

46

46-48

49

50-51

51

52

52-53

54-55

56

56

57

58

58-59

60

61

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

Just write to:

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

Or e-mail to:

psmag@logsa.redstone.army.mil or
half_mast@us.army.mil

Internet address:

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

By order of the Secretary of the Army:

PETER J. SCHOOMAKER
General, United States Army Chief of Staff

Official:

Joyce E. Morrow
JOYCE E. MORROW

Administrative Assistant to the Secretary of the Army

0621402

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.

Issue 647

PS

October
2006

THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-647

Approved for
Public Release;
Distribution is
Unlimited

HOLMES!
WE CAN'T
POSSIBLY
INSPECT
EVERY RIFLE
IN LONDON!

I'M NEARLY
DONE, WATSON.

IT APPEARS THAT
OUR MODERN
FUSILIERS HAVE
CONTINUED
THE **GOOD**
MAINTENANCE
PRACTICES
OF THEIR
ANCESTORS.

JOE
KUBER



SEE PAGE 27

The Direction of Good PM



NCOs, have you ever had to assemble an item by following incoherent directions? Not much fun, is it?

It seems like more and more the things that need assembly come with confusing directions. Often the directions are in several languages and you feel like you're using one of the foreign language directions even when you're reading English!

When you give directions on how to perform preventive maintenance to the soldiers that work for you, you may think your presentation is crystal clear when it's really as clear as mud.

There are reasons for muddled directions:

- It could be the information you're giving is out-of-date. When you were hands-on with a piece of equipment, you did PM on the A-model. The D-model is in your shop now and the instructions you have passed on have, well, passed on!
- It could be you know the equipment so well that your mind performs steps that your mouth skips over.
- It could be you're in too big of a hurry. After all, an abundance of time is not something most NCOs have.
- It could be you assume too much. What you were taught in a maintenance course may not be taught today.

If you want your soldiers to do PM right, time and time again, keep your knowledge up-to-date and walk them step-by-step through the job that needs to be done. Show them first-hand the preventive maintenance action and the steps they need to follow to do that action correctly.

NCOs, we at PS believe there is nothing more important than preventive maintenance. Join us in that belief by making your PM directions simple, precise, step-by-step and easy to follow.

THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-647, 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 647 OCTOBER 2006

	COMBAT VEHICLES	2		AVIATION	35
Stryker Bilge Water Disposal		2	UH-60 Series Jettison Door Handle		35
Stryker NBC/M3 Heater		3	UH-60 Series Tail Wheel Lock Pin		36-37
M1-Series Tank Turret Race Ring Lubing		4-5	Aircraft Tire Inflation		37-38
M113-Series FOV Regulator Ground Strap		6-7	OH-58D MMS Shroud Clamps		39
M2/M3-Series Bradley M242 Gun Card		7			
MLRS Carrier Engine Blowby		8		COMMUNICATIONS	40
M109A6 Paladin Driver's Hatch Pin		9	3-KW TQG Push-pull Switch NSN		40
			5-KW TQG Engine Oil Filler Cap NSN		41
	WHEELED VEHICLES	10	SINGGARS Mounting Blind-rivet Nuts		42
M939A1/M939A2 FOV Add-on Armor Info		10-12	AN/CYZ-10(V)3 DTD Lube Caution		43
HMMWV Air Intake Tube		13	PP-848B/U Universal Battery Charger		44
HMMWV Seatbelts		14	Night Vision Device Helmet Mounts		45
M915-Series Truck Kit for Trailer ABS		15			
	MISSILES	16		SOLDIER SUPPORT	46
Patriot Missile Repair Info Online		16	Arctic Space Heater Operator's Checklist		46-48
			Desert Camo Cold Weather Parkas		49
	SMALL ARMS	17	Cold Weather Socks		50-51
Machine Gun Mount NSN Changes		17	Cold Weather Clothing Articles in PS Magazine		51
MK19 Machine Gun Adjusting Tool Use		18-19			
M249, M240B Machine Guns Barrel Marking		20		CBRN	52
M249 Machine Gun Barrel Comparison		21	M17A3, A/E32U-8 Decon Filters and Caps		52-53
M2 Machine Gun New Safety Device		21	M100 Decon System Explained		54-55
	COMBAT ENGINEERING	22		TOOLS	56
RTCH Maintenance Tips		22-23	Portable Battery Impact Wrench		56
DEUCE PM Pointers		24-25	Grease Adapter Kit Parts NSNs		57
D7G Tractor Gear Shifting Caution		26			
				LOGISTICS MANAGEMENT	58
			Army Sustainment Command Support		58-59
			Operator's Permit Clarification		60

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

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

Or e-mail to:
psmag@logsa.redstone.army.mil or
half.mast@us.army.mil

Internet address:
<https://www.logsa.army.mil/psmag/pshome.html>

By order of the Secretary of the Army:

PETER J. SCHOOMAKER
 General, United States Army Chief of Staff

Official:

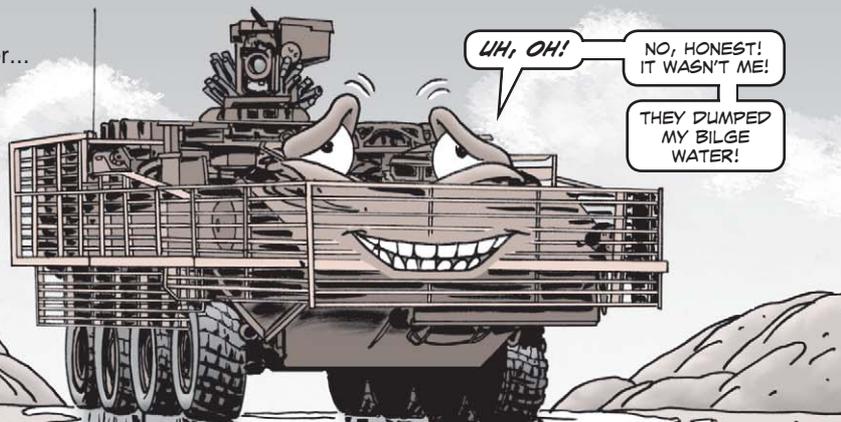
JOYCE E. MORROW
 Administrative Assistant to the Secretary of the Army

0621402

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.

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

Stryker...



UH, OH!
 NO, HONEST!
 IT WASN'T ME!
 THEY DUMPED
 MY BILGE
 WATER!

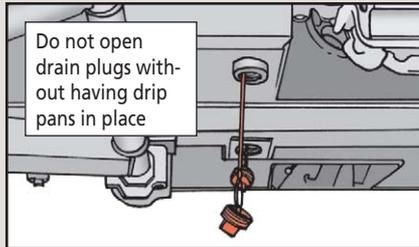
BILGE WATER BREAKDOWN

Any bilge water that collects in your Stryker probably contains a lot more than just water. It may also be mixed with oil, antifreeze, hydraulic fluid, fuel, and lots of other hazardous materials.

Needless to say, dumping hazardous materials onto roads, motor pool parking lots, and other paved and unpaved areas is an environmental no-no. Contaminated bilge water will seep into the ground or flow to storm sewers and eventually into surrounding bodies of water.

That puts your unit or installation in direct violation of the Clean Water Act and can result in a stiff fine stateside. You can also receive fines from foreign governments for dumping contaminated bilge water while overseas.

To prevent spills, keep all drain plugs in place. If the drain plugs must be removed while the vehicle is parked, position a drip pan, NSN 4910-00-387-9592 or 4910-01-481-6297, directly under each drain plug hole to catch whatever comes out. Dispose of the drip pan contents in an appropriate container following installation regulations and requirements.

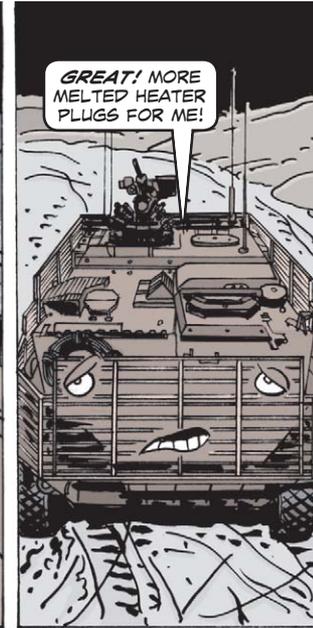


Before discharging bilge contents, you should first contact your installation environmental coordinator. He'll determine where and under what conditions the bilge can be drained. Under no circumstances should you purposely add any oil, fuel, chemicals, soaps or solvents to bilge water before discharging it.

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

Stryker...

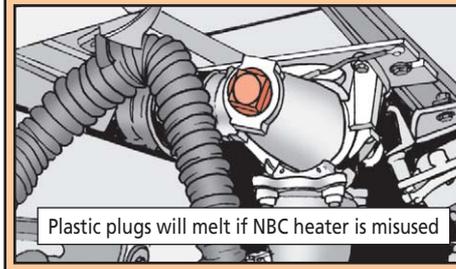
HEATER MELTDOWN



It's surprising just how cold it can get in the desert at night. That makes it very tempting to keep warm however you can.

Soldiers being transported in Strykers often use the NBC/M3 heater as a way to warm themselves when temperatures drop. They stick the hose inside their uniforms and turn up the heater full blast.

Unfortunately, the heater wasn't designed for that. The unit overheats and the two plastic plugs at both ends of the heater melt.



Replacement plugs aren't available, so a new heater, NSN 4240-00-807-6856, has to be ordered to repair the heater. That'll set your unit back more than \$200.

Check out WP 0070 00-1 in TM 9-2320-311-10-1 for proper operation of the NBC/M3 heater.

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

IT TAKES LUBE TO WIN THE RACE

WHAT'S GOING ON?

CREAK

SQUEEEK

GROAN

I JUST LUBED YOUR RACE RING!

OUCH! YEAH, BUT YOU DIDN'T INSPECT IT FOR CONTAMINATION!

Crewmen, contaminated or skimpy lube means your tank turret's race ring assembly will soon come to a grinding halt.

Why?

Sometimes the race ring just doesn't get lubed monthly like it's supposed to. At other times, grease gets washed away and dirt is forced in when high pressure water or steam is used for cleaning.

No matter what the reason, too much dirt or too little lube leads to damage to the springs, ball bearings and the race ring itself. Pretty soon, your tank is out of commission.

PS 647

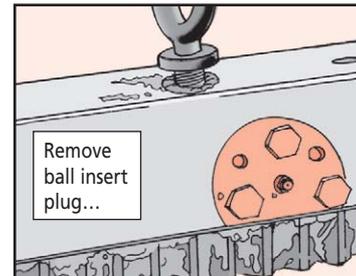
HERE'S HOW TO INSPECT THE TWO TYPES OF RACE RINGS...



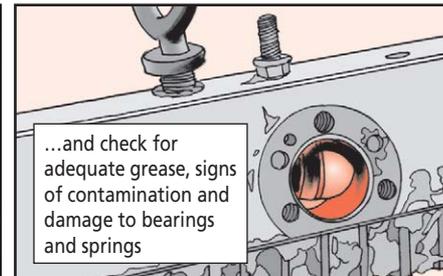
[Click here for a copy of this article to save or email.](#)

Ball Bearing Race Ring

1. Remove the ball insert plug, NSN 2530-01-364-4956. Look for contamination, unserviceable grease, damaged ball bearings and damaged or turned springs.



Remove ball insert plug...



...and check for adequate grease, signs of contamination and damage to bearings and springs

2. Reinstall the ball insert plug and traverse the race ring 90°. **Never traverse the turret without the plug in place or the springs will jam up and the bearings will fall out.**

3. Remove the plug at the new position and inspect again. Continue until you've inspected the race ring at four separate 90° positions. Reinstall the plug after the final inspection.

If you find any contamination or damage, tell your mechanic. He'll contact support maintenance so they can perform the race assembly ball and spring replacement procedure listed in the -34-2-2 TMs.

One more thing: Make sure the ball insert plug that comes with your tank, stays with your tank. The race ring assembly and ball insert plug are a matched set and have to stay together.

Wire Race Ring

There are no inspection criteria for tanks equipped with the wire race ring, NSN 1015-01-433-7999. You'll still need to lube it monthly, though.

Trouble is, those race rings don't have easy access to the lubrication fittings. The harder the fittings are to reach, the less likely they are to be lubed.

With your unit commander's permission, you can now fix that problem by having your mechanic install a modified shield and guard with new lube fittings. The modification makes lubing the race ring during PMCS much easier.

HERE ARE THE PARTS YOU'LL NEED...

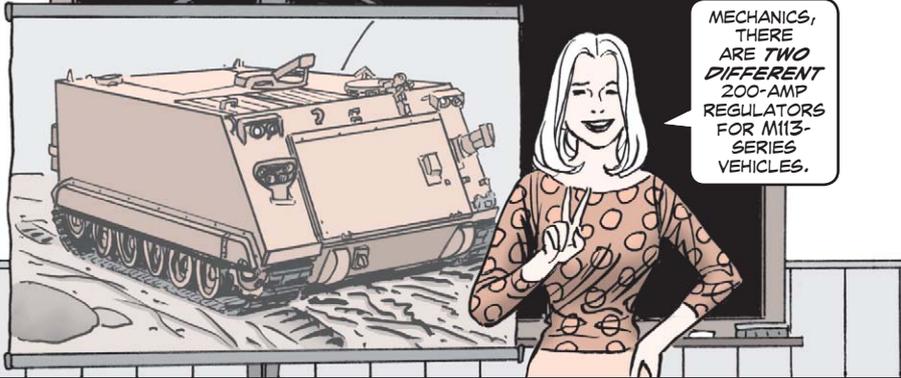


Item	NSN	Qty
Lubrication fitting	4730-00-050-4208	3
Shield assembly	5340-01-495-4274	1
Elastic cord assembly	4020-01-072-4558	1
Guard	5340-01-505-2887	1

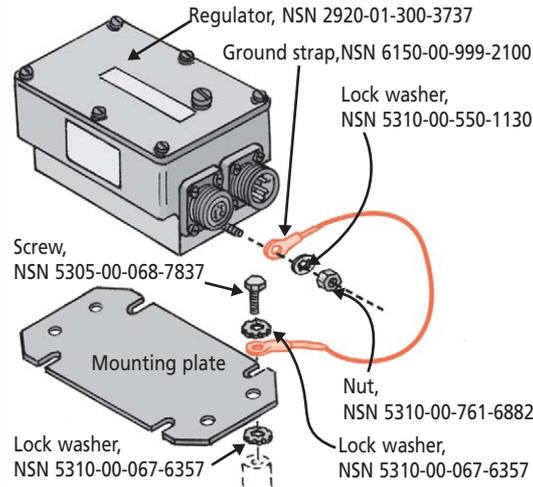
For detailed instructions on how to install the modified shield and guard, contact TACOM-Rock Island at DSN 793-2777 or (309) 782-2777. The email address is:

@ria.army.mil

GROUND STRAP REMINDER



ONE HAS A BUILT-IN **INTERNAL** GROUND AND THE OTHER REQUIRES AN **EXTERNAL** GROUND STRAP.



EITHER WAY, THE REGULATOR **MUST** BE GROUNDED.

BOTH REGULATORS COME UNDER NSN 2920-01-300-3737 AND THAT'S WHERE THE PROBLEM BEGINS.



Suppose you're replacing a bad regulator that happens to be one of the internally grounded ones. You order a new one expecting to receive the same type, but instead get one that requires an external ground strap.

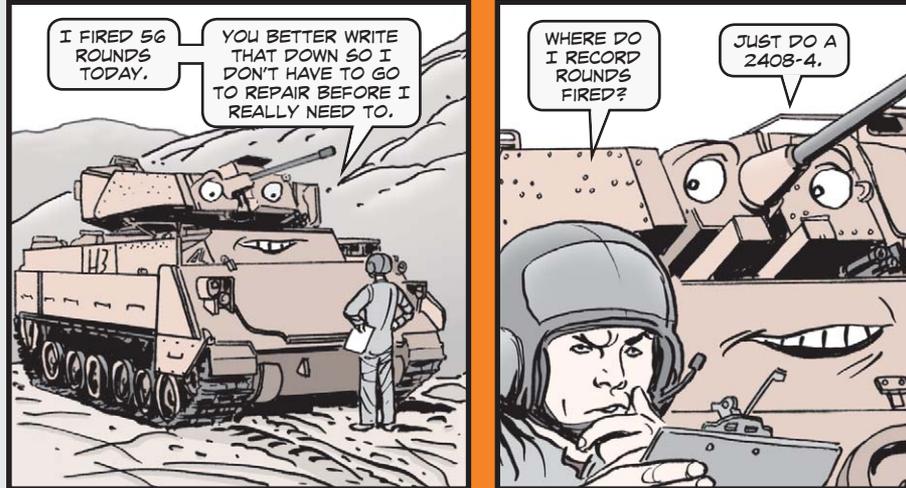
Since there are no installation instructions or ground strap included in the packaging, you have no idea that it's any different from the one being replaced. So, you install it just like the one you removed.

You now have an ungrounded regulator that's going to burn up!

TACOM's fix is to require that all new regulators be installed with an external ground strap. The external ground strap won't hurt internally-grounded regulators and is essential for externally-grounded ones.

Attach the ground strap, NSN 6150-00-999-2100, to the regulator with lock washer, NSN 5310-00-550-1130, and nut, NSN 5310-00-761-6882. The other end of the strap connects to the regulator mounting plate with two lock washers, NSN 5310-00-067-6357, and screw, NSN 5305-00-068-7837.

How to File M242 Gun Card



Some units are unsure how to file DA Form 2408-4, *Weapon Record Data*, for their Bradley's M242 gun.

DA PAM 750-8 in Para 5-4 (h and i) gives you everything you need to know about filling out a 2408-4 card. But the most important rules to remember are:

- Update the card every time the M242 is fired.
- Make a new card when the old one is filled.
- Keep the old card 90 days or until the new card has been filled, whichever comes first. Then it's OK to throw away the old card.

If you don't keep the old card on-hand, you could lose the record of how many rounds the M242 has fired. Then expensive parts have to be replaced before they need to be because you can't prove how many rounds have been fired.

There is no need to send M242 2408-4s in like you do for howitzers and mortars. Just keep them safely stored in your unit.

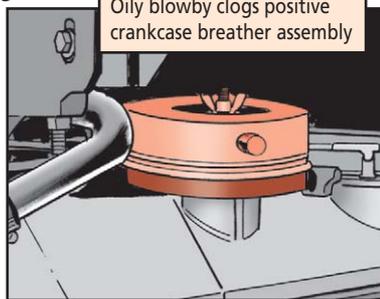
Give Blowby the Bye-bye



Drivers, a diesel engine and low idle are a nasty combination for your MLRS. When you run the engine at low idle, fuel and oil aren't completely burned in the combustion chambers. Leftover fuel—blowby—is expelled through the positive crankcase breather valve.

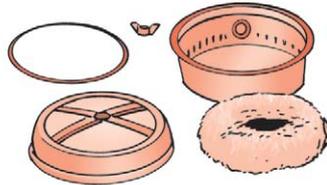
Eventually, the breather valve gets clogged with oily sludge. You get lower power output and fewer miles per gallon.

Oily blowby clogs positive crankcase breather assembly

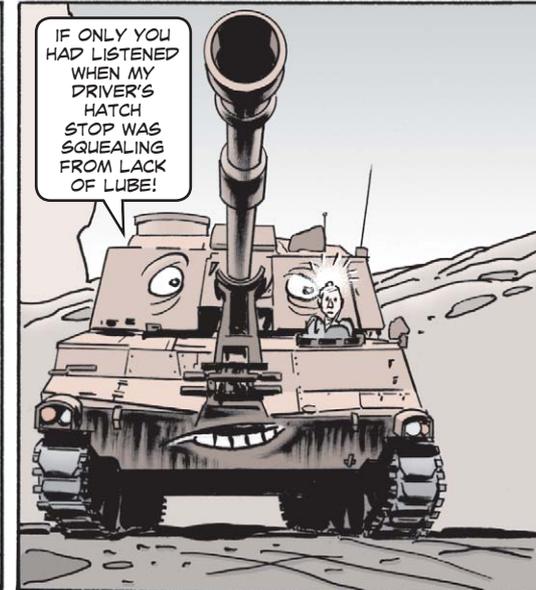


You can prevent most of those problems by running your vehicle at high idle—about 1,200 rpm—when possible. But when you **do** see oil, have your mechanic disassemble the valve and clean it with dry cleaning solvent.

Disassemble valve and clean components



Silence Is Golden



Scre-ee-ech!

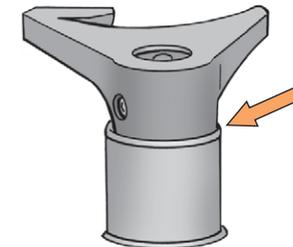
If that's the sound the driver's hatch stop makes on your M109A6 Paladin, then you've got a rust problem.

On some older Paladins, the shoulder pin inside the hatch stop is made of carbon steel. It rusts easily, making it hard to lock open the hatch.

If the hatch isn't properly secured, you'll also be hearing bells—right after the hatch swings closed on your head.

Stop **all** the sound effects by lubing the pin quarterly with OE/HDO, NSN 9150-00-186-6681. Just a few drops where the pin attaches to the stop will do the trick. Then exercise the stop to spread the oil along the length of the pin.

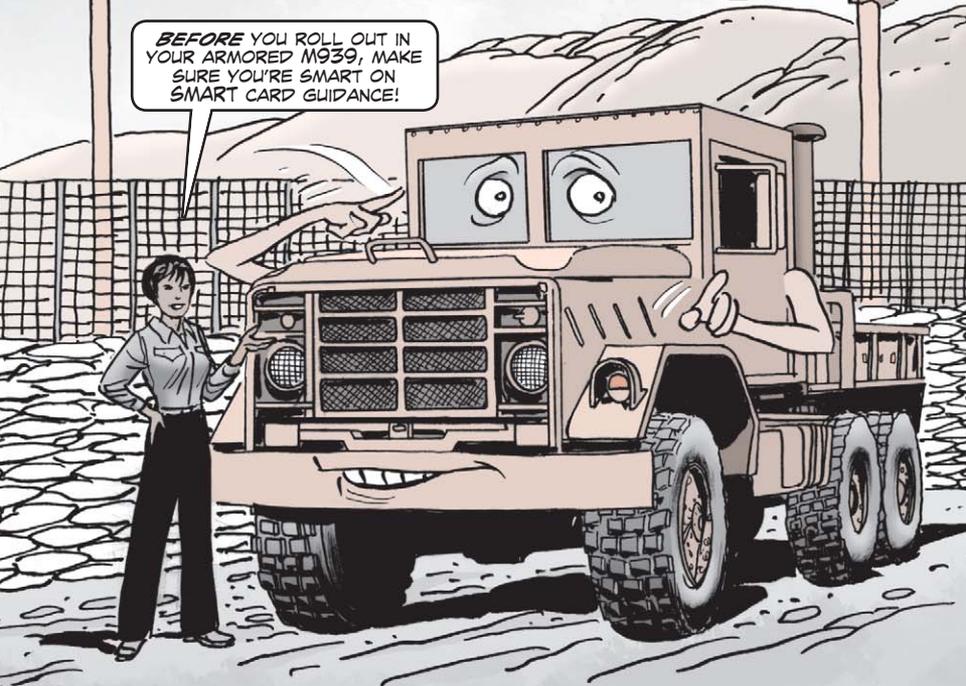
If the pin is already corroded, notify your mechanic. He'll replace it with NSN 5315-00-133-7968.



Put a few drops of OE/HDO here

Armor Kit Smart Card Tips

BEFORE YOU ROLL OUT IN YOUR ARMORED M939, MAKE SURE YOU'RE SMART ON SMART CARD GUIDANCE!



Just as extra weight on people affects how they move, the extra weight on armored M939s affects how they operate. So if you're driving an armored M939, listen up! You need to know how the add-on armor (AoA) kit affects your now heavier vehicle.

The extra protection that the AoA kit gives you results in reduced levels of visibility, brake system performance, stability and handling. It also increases stopping distances and the weight of the doors.

To help avoid potential hazards, the truck headshed has prepared an operational SMART card. Before heading out, review it and follow its guidance. There should be a copy in the inside pocket of the log book. Not there? Get a copy online:

https://aeaps2.ria.army.mil/commodity/soum/tacom_wn/06/M939_Armor-Smart-card2.doc

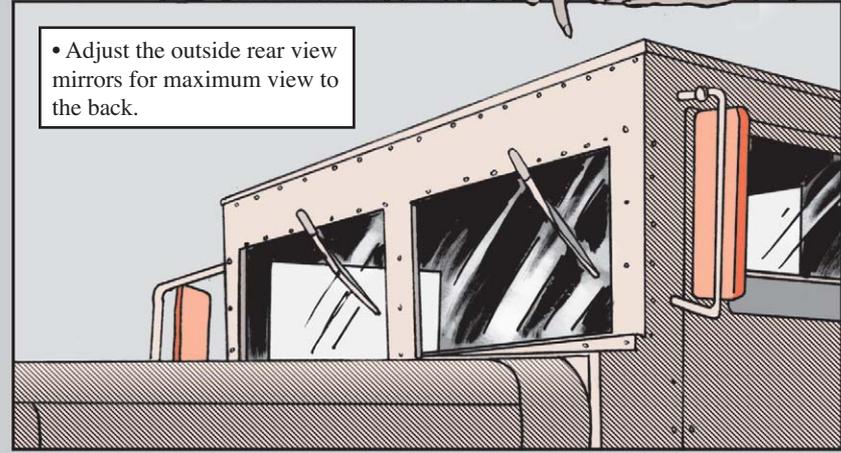
THAT'S ALL WELL AND GOOD, BUT I DON'T HAVE A CARD AND I DON'T HAVE INTERNET ACCESS.



NO PROBLEM. HERE'S THE CARD INFO...



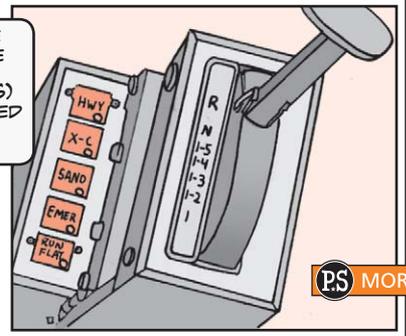
• Adjust the outside rear view mirrors for maximum view to the back.



- The co-driver assists the driver with observations to the right of the vehicle during all operations.
- Use extra caution while turning and negotiating intersections.
- Always use a ground guide when backing the vehicle.



DISABLE THE CENTRAL TIRE INFLATION SYSTEM (CTIS) ON ALL ARMORED M939A2 MODELS.

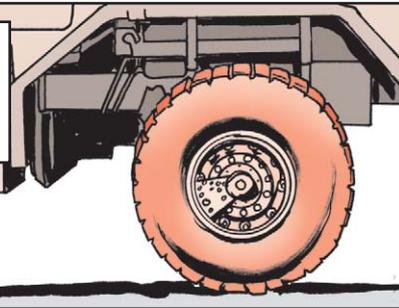


INFLATE TIRES TO THE PROPER AIR PRESSURE PRIOR TO MOVING THE VEHICLE. USE 90 PSI FOR WRECKERS, AND 70 PSI FOR ALL OTHER MODELS.



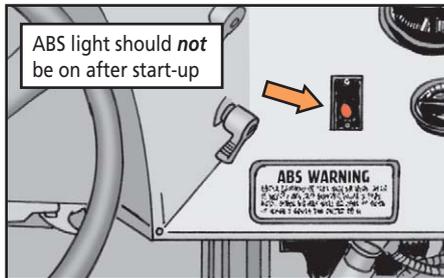
Inflate tires to 70 psi, except for wreckers

Inflate wrecker tires to 90 psi



- Decrease speeds prior to turning.
- Ensure the anti-lock braking system (ABS) is working properly. The ABS lamp should not be illuminated.
- Increase vehicle separation distances during convoy operations.
- Use extra caution while driving on inclines and slopes.
- Avoid parking on inclines to make it easier to open and close the heavier doors.
- Be alert for possible heat stress symptoms during extreme heat operations.
- Adhere to a strict PMCS schedule, and be alert to vibration, play, looseness, or unusual noises.

ABS light should *not* be on after start-up



PERFORM DAILY VISUAL PMCS INSPECTIONS TO AREAS PRONE TO CRACKING, SUCH AS THE FORWARD CAB MOUNTS, REAR CAB MOUNT CROSS MEMBER, FIREWALL AND FLOOR PANELS.

USE A FLASHLIGHT AND INSPECTION MIRROR TO HELP IDENTIFY CRACKS FROM OUTSIDE OR UNDERNEATH THE TRUCK. CRACKS RENDER YOUR VEHICLE NMC.



PS
END

HMMWVs...



PREVENT CRACKING DUE TO SLACKING

NO STEP is painted in big letters right on top of your HMMWV's air intake tube. But some folks aren't taking heed to what it says, since the tube looks sturdy. Looks can be deceiving, though.

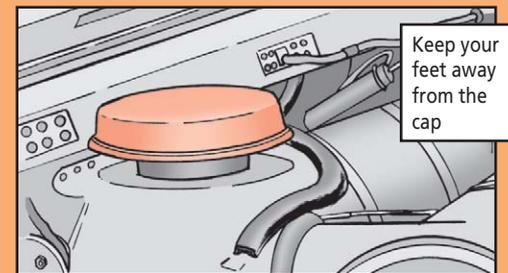
When a boot bears down on the air intake tube, it cracks. And cracks let dirt, dust, and crud get sucked into the engine. Your feet can also damage the air intake cap. So be sure to keep your boots off of that, as well. If you don't, then your HMMWV may soon be heading for repair.

Damage can also be done outside of your HMMWV if you step on or walk on the hood. This is slack behavior, and can lead to a crack, so **don't** do it! The plastic grill looks tough, just like the fiberglass hood, but it will also crack under a soldier's weight. Keep your feet where they belong.

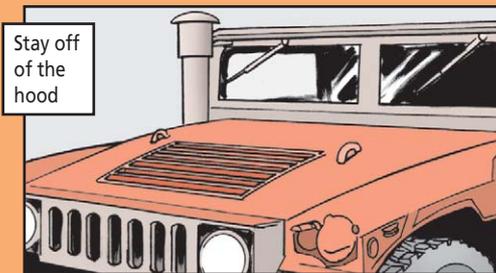
NO STEP means don't step here!



Keep your feet away from the cap



Stay off of the hood



Super-Sized Seatbelts



LET'S MOVE OUT.

HEY, BIG FELLA! YOU'RE IN LUCK.

WE'VE GOT A 'SEAT BELT' THAT WILL FIT EVEN YOU!



HAVEN'T YOU GUYS HEARD? NOW THERE'S AN OFFICIAL EXTENDED SEATBELT AVAILABLE!!

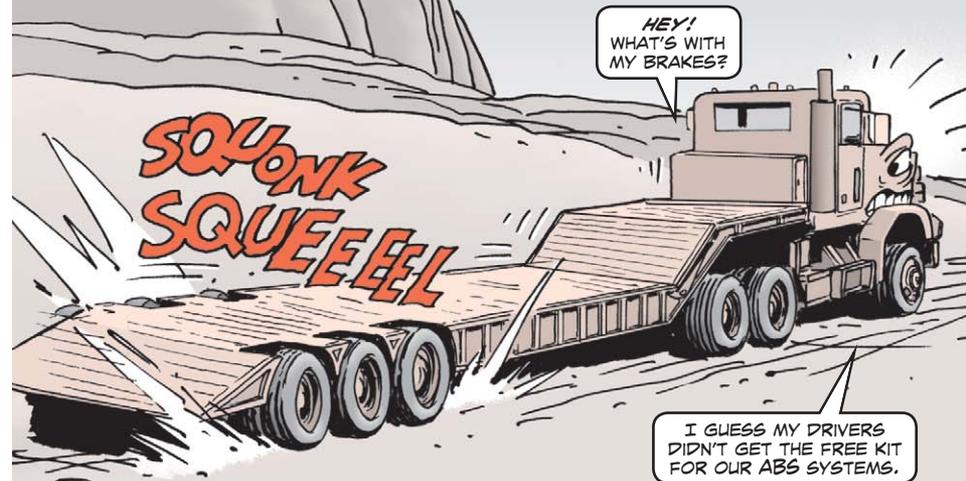


Dear Half-Mast,
When I've got on my full battle rattle, the HMMWV seatbelt assembly straps aren't long enough for me to use. Larger soldiers like me need to wear our seatbelts, too! Is there an extended seatbelt that can fix this problem?
CWZ B.I.G.

Dear Chief B.I.G.,
Although your problem seems to be a super-sized one, it's not. Try using NSN 2540-01-495-0817. It'll get you a longer strap made of a slicker material that allows for a smoother retraction. This improved seatbelt assembly replaces NSN 2540-01-315-3358 and NSN 2540-01-315-3143.
Half-Mast

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

Free Kit for Tractor Truck ABS



HEY! WHAT'S WITH MY BRAKES?

SQUONK SQUEEEL

I GUESS MY DRIVERS DIDN'T GET THE FREE KIT FOR OUR ABS SYSTEMS.

Fleet users, there's a free kit available to power the pin in the inter-vehicular cable receptacle on certain M915A2, M915A3, M915A4, M916A1, and M916A2 tractors. This allows the vehicle ABS system to communicate with the trailer ABS.

The kit provides continuous power to Pin 7 at the seven-way 12-volt trailer receptacle located on the tractor. Note that only trucks with the following serial numbers are affected by this kit:

- **M915A2:** All serial numbers
- **M915A3:** 902163-902167, F70198-F70204, F83323, H76647-H77198
- **M915A4:** B10592-B10596, F57501-F57595, F57616-F57636, F82596, F82662-F82683, F82689-F82695, F82697-F82716, G70505, G79031, H43165-H43194, H58823-H58832, H58838-H58907, H58913-H58932, H66557-H66571, H72548-H72584, J51638, J53164-J53183, J56570-J56627, J56194, J98083-J98103, J98462-J98645, K01115-K01171, K51069-K51126, K67267-K67270, K70237-K70267
- **M916A1/A2:** All serial numbers

To get the kit, contact TACOM at DSN 786-6557, (586) 574-6557, or e-mail: [@us.army.mil](mailto:us.army.mil)
Or contact TACOM at DSN 786-6168, (586) 574-6168, or e-mail: [@us.army.mil](mailto:us.army.mil)

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

PATRIOT REPAIRER INFO NOW ONLINE



Dear Editor,

We at the Patriot Training Detachment at Ft Bliss have started a website to help Patriot repair people get the latest info on keeping the Patriot on its toes.

Among the services you will find on the site are:

- Patriot maintenance advisories for the last five years
- maintenance log software
- results of quarterly maintenance reviews
- troubleshooting aids
- bench stock lists
- maintenance personnel rosters for Patriot units around the world

To get to the site, start with the AKO home page:

<https://www.us.army.mil/suite/login/welcome.html>

Use your AKO password to sign in. From there follow this chain:

1. Files
2. U.S. Army Organizations
3. TRADOC
4. Schools
5. Ordnance
6. OMEMS
7. Patriot Training Detachment

You will need to request access to view the site. To do that, email me:

@us.army.mil

You can also email me any questions about the site.

We hope the Patriot community finds our work helpful.

CW3 Philip Hill
Patriot Training Detachment
Ft Bliss, TX

Editor's note: I have no doubt Patriot folks will find your site very helpful. Thanks for alerting us.

Machine Gun Mounts...

MOUNT NSNs HAVE CHANGED

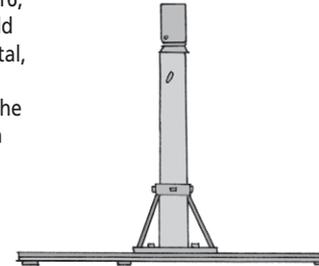


PS 621 (Aug 04) gave you practically everything you needed for mounting machine guns on your trucks. If you don't have a copy of the article, go to:

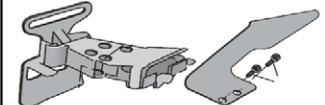
<https://www.logsa.army.mil/pub/psissues/A/621/621-14-21.pdf>

Since then, some of the NSNs have changed and some new items have been added. These changes have already been made to the online PS article. Make these changes to your own copy:

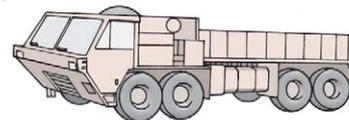
On Pages 14, 16, 18, and 20, add the M7 pedestal, NSN 1005-01-518-9037, to the items that can be used with the HMMWV.



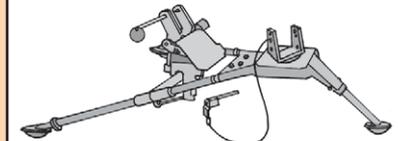
On Pages 14 and 15, change the NSN for the ammo adapter bracket assembly to 1005-01-468-0552. The link deflector is now part of the assembly.



On Pages 15, 17, 19, and 21, the NSN for the HEMTT mounting kit changes to 1005-01-519-2126 and the NSN for the PLS mounting kit changes to 1005-01-523-6549. The M66 mount ring is no longer part of the kits.



On Page 16, change the M122 machine gun tripod mount NSN to 1005-00-710-5599.

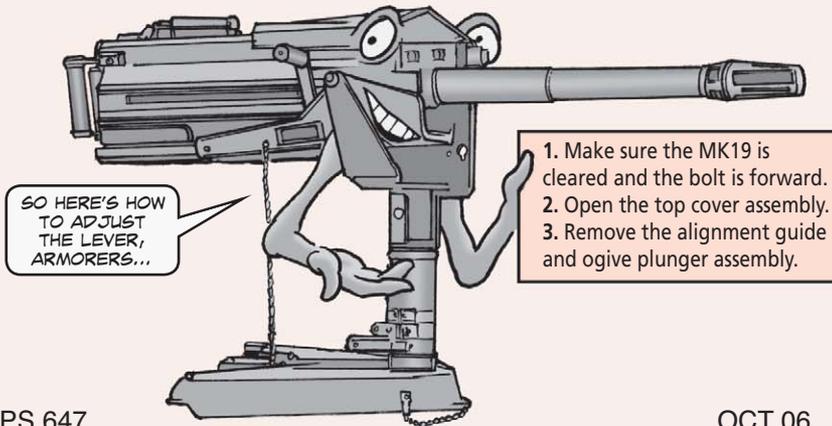


On Pages 18, 20, and 21, change MK93 MOD 1 to MK93 MOD 2, NSN 1010-01-502-7547.

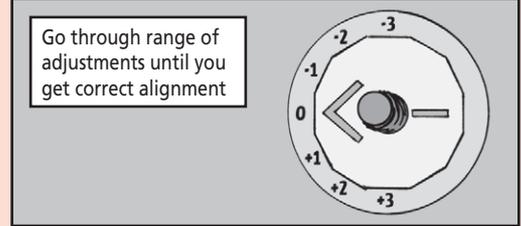
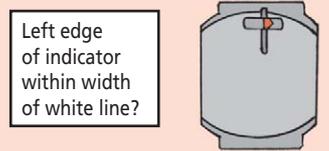
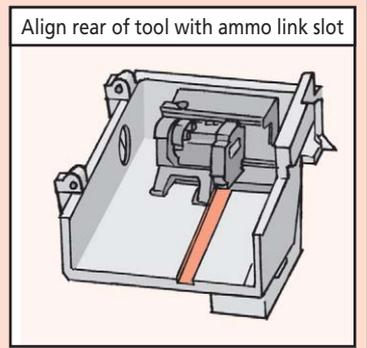
HOW TO USE TOOL



MWO 9-1010-230-50-1 changed the MK19's fixed secondary drive lever to an adjustable lever. Adjusting the lever is the armorer's job, but in too many arms rooms the instructions for using the adjusting tool have disappeared. And there is no help in the TM.



4. Place the feed slide adjustment tool into the feeder base between the round positioning block and primary pawl with the rear of the tool aligned with the ammo link slot.
5. Make sure the secondary drive lever is positioned all the way to the right. Close the top cover.
6. Going through the ammunition entrance, push the tool with your finger against the round positioning block. The tool will audibly click into position.
7. Pull the bolt fully to the rear without stopping. Move the handles forward and up.
8. Look at the tool through the ogive plunger hole. If the lever is adjusted correctly, the left edge of the indicator should be within the width of the white painted line. If the adjustment is correct, remove the tool and you're done. If the alignment is not correct, continue with Step 9:

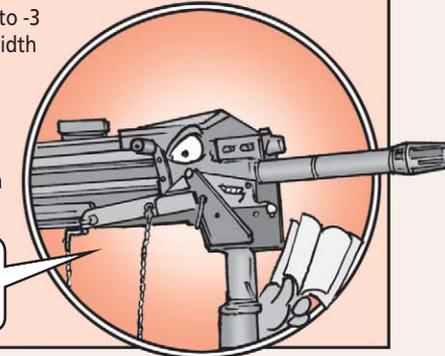


9. Open the cover and remove the secondary drive lever. Remove the screw and the locating washer on top of the secondary drive lever. Move the selector bushing so the next higher number aligns with the arrow on top of the secondary drive lever.
10. Assemble the secondary drive lever and do the alignment check again. If the left side of the indicator is still not within the width of the white line, remove the lever again and move the selector bushing so the next lower number aligns with the arrow on top of the secondary drive lever.

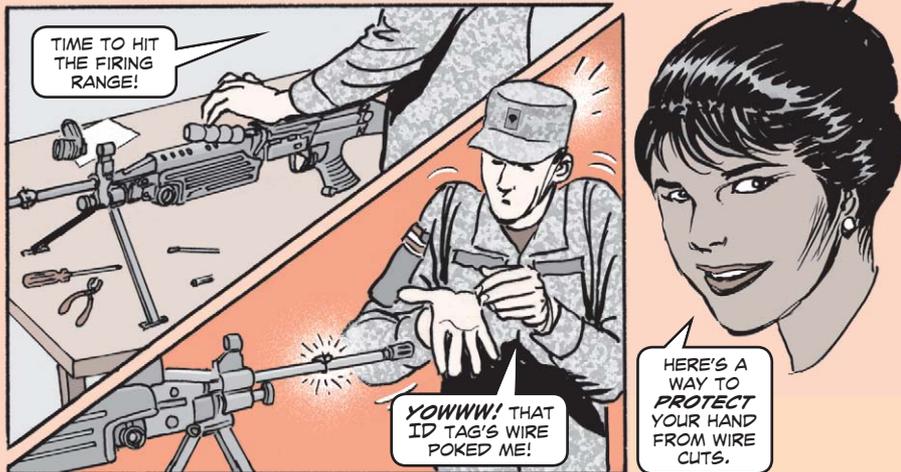
Keep doing this step at each setting from +3 to -3 until the left die of the indicator is within the width of the white line.

If you adjust the selector bushing from +3 to -3 and still can't get the correct alignment, the MK19 needs to go to direct support.

If you lose the adjusting tool, you can order a new one with NSN 1005-01-467-9435.



SAFER BARREL MARKING

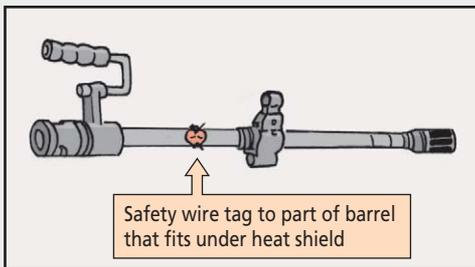


Dear Editor,

Over the years PS has run several articles about the best way to mark barrels, such as painting the number on the barrel or safety wiring a dog tag with the number to the barrel's carrying handle.

I have one other suggestion: Safety wire the tag on the barrel where it fits under the heat shield. That way the wire ends can't cut a soldier's hands. But when the barrel isn't mounted the tag is still easily readable.

Douglas Stewart
DOL/COMET
Ft Lewis, WA



Editor's note: Good idea, Mr. Stewart. Painting the number on the barrel or safety wiring a dog tag to the carrying handle or under the heat shield are all good ways to ID barrels.

Whatever way armorers ID barrels is up to them. The important thing is to do it. Barrels are headspaced to specific machine guns. If the wrong barrel is used with a machine gun, it can damage the weapon and injure the soldier. That's why a soldier needs to have an easy way to make sure he has the right barrel.

Order regular dog tags with NSN 8465-00-242-4804 and round dog tags with NSN 8050-00-473-6336.

Short Vs Long

Dear Half-Mast,

Is it OK to use a short barrel on an M249 that came with the standard barrel or a standard barrel with an M249 that came with a short barrel? We're not sure if it's safe.

E.P.

Dear Mr. E.P.,

As long as you get the barrels headspaced to that particular M249, it's fine to use either barrel. Both barrels were designed to be used with all M249s.

But remember you should not fire blanks with the short barrel. With the short barrel, the increased bolt unlocking velocity can damage the receiver's inner rail. Eventually, the Army will have a blank firing attachment (BFA) for the short barrel. PS will let you know when the BFA is available.

If you get short barrels, be sure to keep the standard barrel. You will need to turn in the standard barrel with the M249 when it goes to overhaul. Do not send short barrels to overhaul. You won't get them back.

Half-Mast

New Safety Available?

Dear Half-Mast,

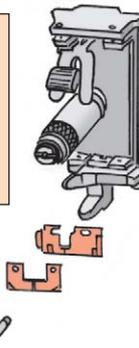
Is there a new safety device available for the M2 machine gun? We've heard there is, but we can't find any info on it.

1LT J.D.

Dear Lieutenant J.D.,

Yes, there is a new safety device, but it can be used only when the M2 is mounted on the M1A2 and M1A2 SEP tanks.

New safety device can be used only with M1A2 and M1A2 SEP tanks



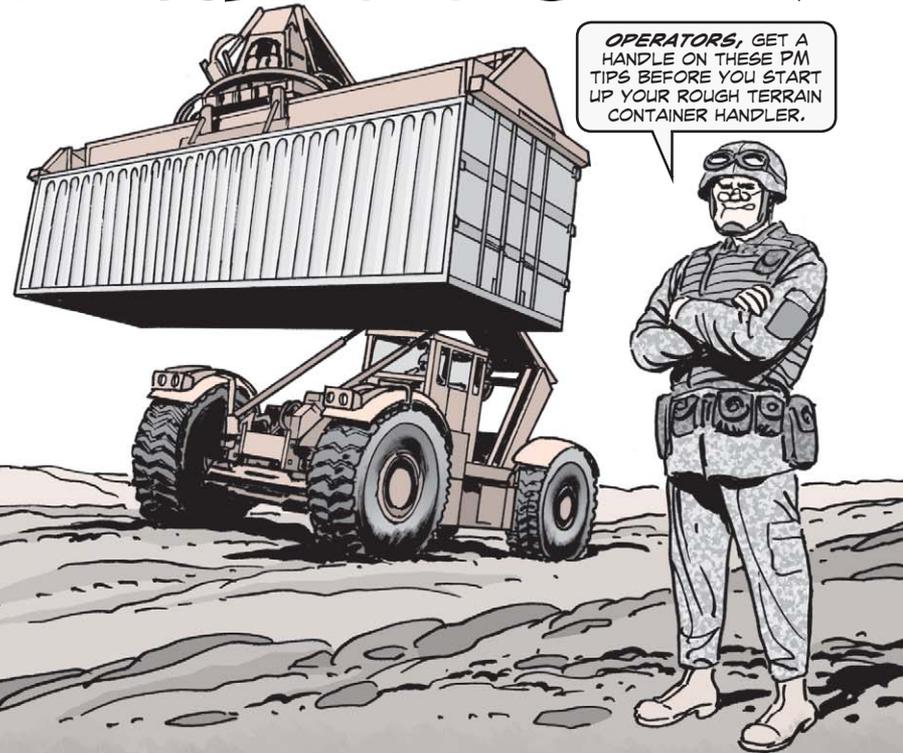
The safety kit comes with NSN 5340-01-387-3058 and the instructions for installing it are in TB 9-2350-264-23-1, M2 Machine Gun Preparation for Safety and Replacement of Handle Frames and Grips. The TB is on the ETM website:

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

The modification makes the M2 non-standard. When the weapon is removed from the tank it must be put back in its normal configuration to be classified mission capable.

Half-Mast

A Handle on PM

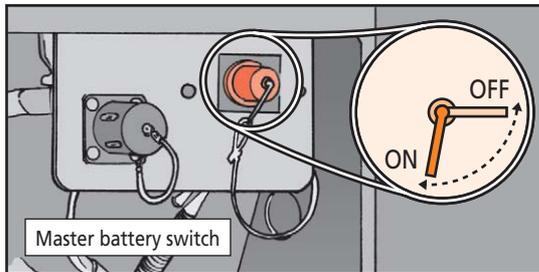


OPERATORS, GET A HANDLE ON THESE PM TIPS BEFORE YOU START UP YOUR ROUGH TERRAIN CONTAINER HANDLER.

Master Disconnect Switch

The batteries on the RTCH can run down, especially if the vehicle sits for long periods of time.

You operators can put an end to dead batteries. Turn the master disconnect switch to the OFF position after the day's run. You'll find this same info on WP 0005 00-1 of TM 10-3930-675-10.



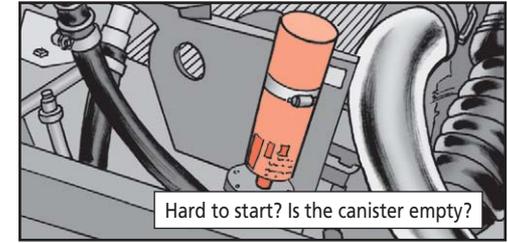
Master battery switch

Rough Start Reminder

Your RTCH may be hard to start when the temperature drops below freezing.

The cold weather starter system has a fuel canister that automatically injects ether into the engine when you push the cold start button.

If your handler is hard to start, chances are the ether canister is empty. Have your mechanic replace it.



Hard to start? Is the canister empty?

Stuck in the Muck

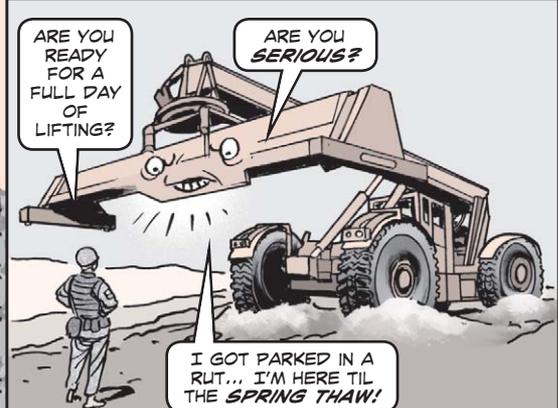
Conditions at the worksite can fool you.

Mud that is wet and soft during the day can freeze and become hard as concrete at night. A handler left sitting in mud at the end of the day will be frozen on its wheels the next morning.

Even with all of the handler's weight, you can't rock the vehicle loose. You'll end up putting too much stress on the engine, transmission and drive train components.

FOLLOW THE INFO ON WP 0006 00-5 OF THE -10 TM AND KEEP THESE POINTERS IN MIND BEFORE THE SUN GOES DOWN...

- Park your handler on high ground if possible. Water drains downhill, so the mud won't be quite as deep.
- Avoid parking in deep ruts worn by other vehicles. Some are deep enough to bottom out your vehicle's hull. Leave it there and your handler will be there until spring!



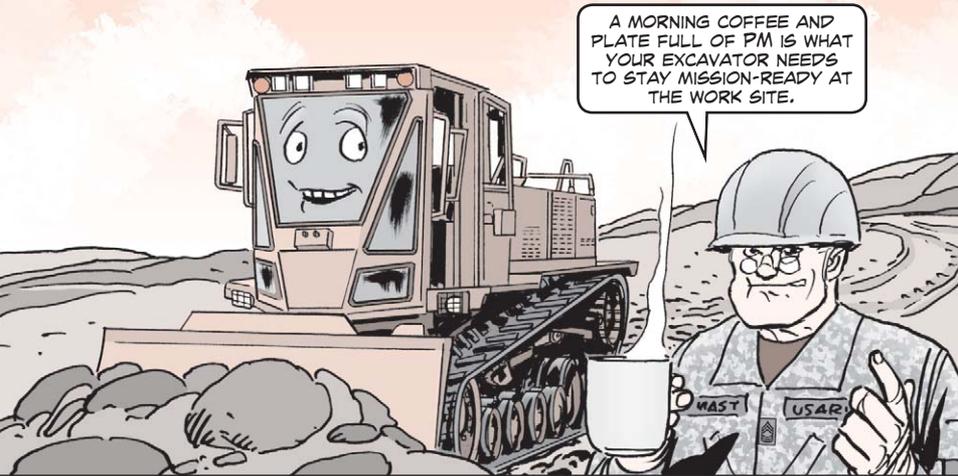
ARE YOU READY FOR A FULL DAY OF LIFTING?

ARE YOU SERIOUS?

I GOT PARKED IN A RUT... I'M HERE TIL THE SPRING THAW!

- Use planks or brush to make a raised or dry surface. Keep the tires out of mud, ice or snow if possible.
- Use a shovel to scoop out mud between and around the tires. If there's no mud, it can't freeze.

A Plate Full of PM

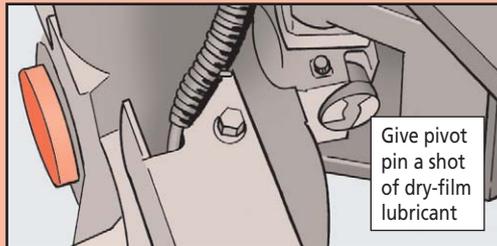


Blade Lower Pivot Pin

The blade lower pivot pin rusts in place when the excavator sits too long without exercise.

When that happens, you can't elevate or lower the blade until the rust breaks free, causing lots of wear and tear on the vehicle's front-end hydraulics.

It just can't be said enough—exercise your excavator! Operate the blade **at least once a week**. That way rust won't "freeze" the pin in place. A shot of dry-film lubricant spray, NSN 9150-01-260-2534, keeps rust on the pivot pin at bay.

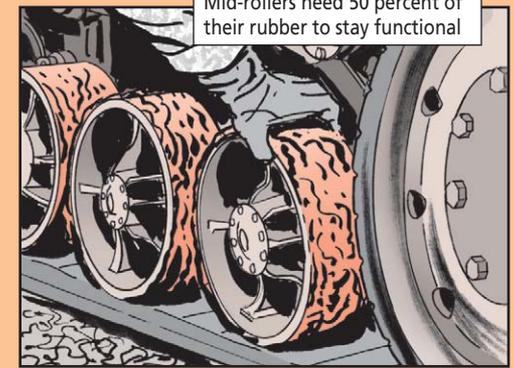


Enough Rubber?

Get down on your hands and knees and take a good look at the rubber on the mid-rollers and front and rear idler wheels.

These excavators are racking up more and more hours of use. So how much rubber is enough?

According to the PMCS check on Page A-4 of TM 5-2430-200-10, the mid-rollers need 50 percent of their rubber to stay functional. The front and rear idler wheels are NMC if they're missing more than 25 percent of their rubber. That's it—plain and simple.



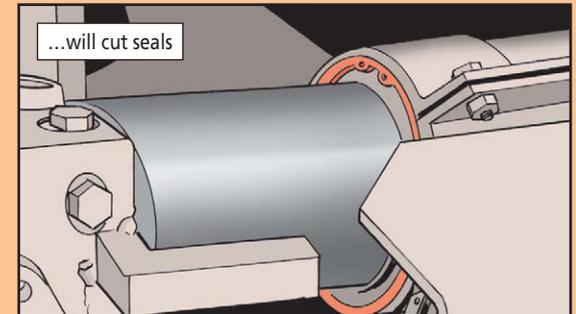
Dried Mud = Cut Seals

Operators, your DEUCE can work in mud up to its catwalk platform. But eventually, the mud will harden around the vehicle's drive wheels, scraper bars, mid-rollers, front and rear idler wheels, and belt guides.

Once hard, that mud prevents the mid-rollers from turning properly. Flat spots form on the rollers and cause extra wear on the rubber track.

Also remember that any dried mud that builds up on the cylinder rods will scrape or cut the rod's seals when the rod retracts or extends. Damaged seals lead to fluid leaks, which lead to an NMC excavator.

So when you see mud and dirt buildup after the day's run, wash it off before it dries and hardens.



HEY!
STOP SLAMMING
THOSE GEARS
INTO REVERSE!!!

**DON'T WIND
AND
GRIND**



You've just pushed a load of debris out of the way and you and your dozer are heading back for more.

When you slammed the dozer's gears into reverse and moved out, you probably heard something that didn't sound right...the grinding noise of the transmission's gears!

It didn't sound right because every time you shift in or out of reverse without reducing speed you put unnecessary strain on your dozer's transmission. That's bound to shorten its life.



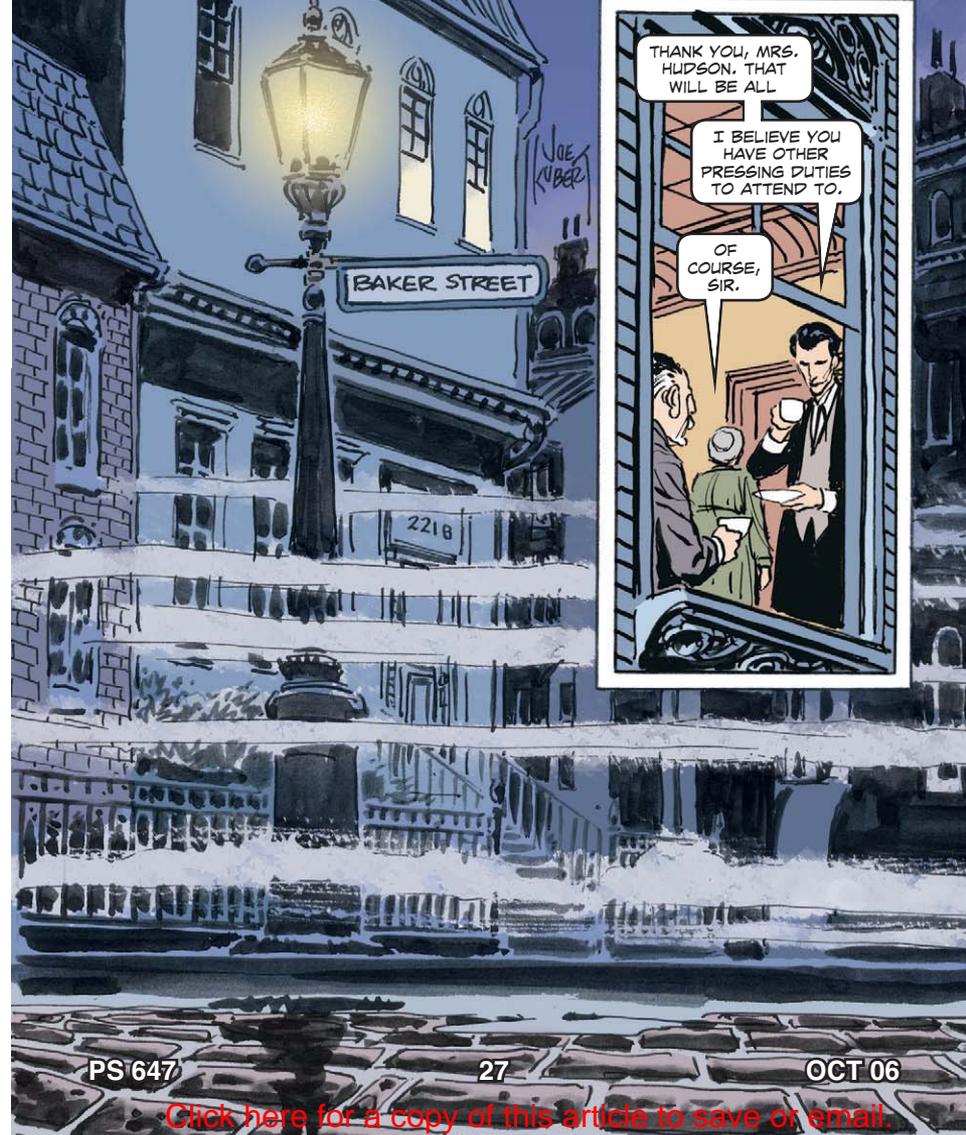
DON'T WIND
AND GRIND
'EM! INSTEAD,
KEEP THESE
POINTERS IN
MIND...

1. While your dozer's still on the move, push down the decelerator pedal. That slows down engine speed without changing the governor setting.
2. Stop your CAT dozer dead in its tracks.
3. Shift in or out of reverse.
4. Then ease up on the decelerator pedal to speed up the engine and return it to the governor control setting.

Decelerate
to shift
into or out
of reverse



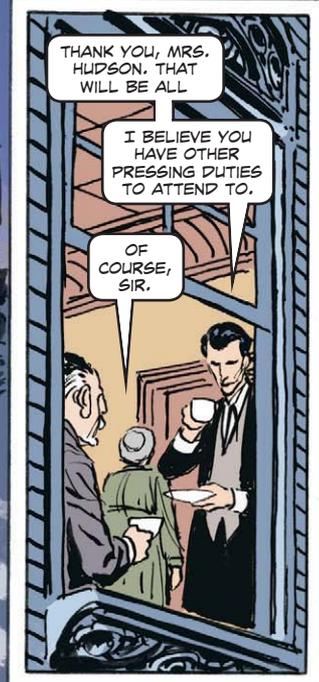
SHERLOCK *and the* ADVENTURE of the FAITHFUL FUSILIER

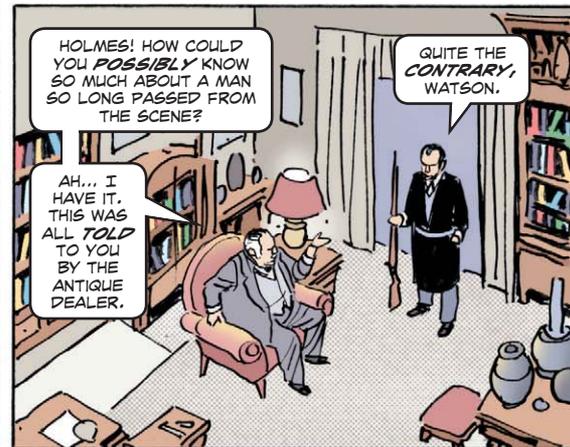
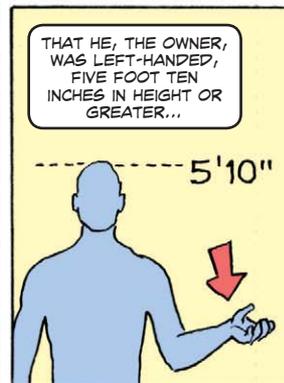
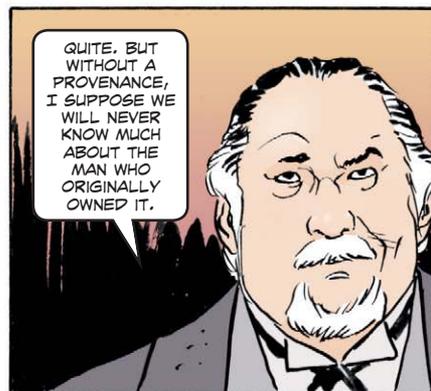
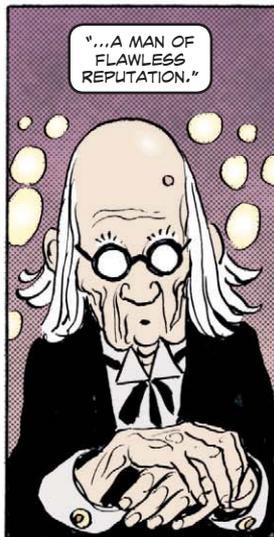
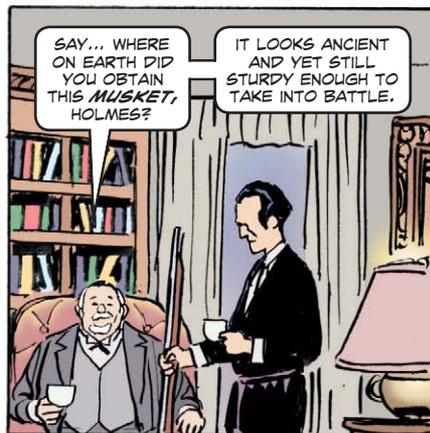
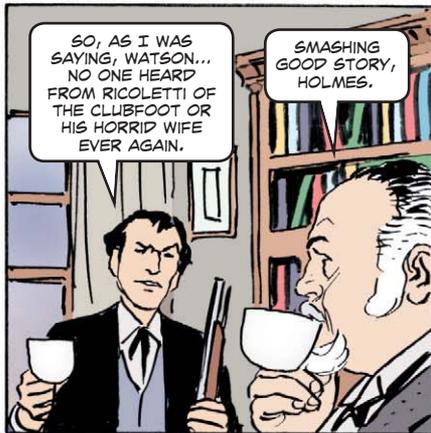


THANK YOU, MRS. HUDSON. THAT WILL BE ALL

I BELIEVE YOU HAVE OTHER PRESSING DUTIES TO ATTEND TO.

OF COURSE, SIR.







HE CONFESSED TO ME, RATHER SHEEPLISHLY, THAT HE KNEW NOTHING AT ALL ABOUT THE ORIGINAL OWNER.

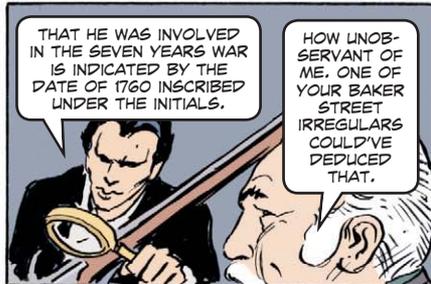
THEN YOU MUST ENLIGHTEN ME, HOLMES. *HOW* DO YOU KNOW OF HIS POSITION AND HIS SERVICE TO THE KING?

THAT IS THE *EASIEST* PART.

NO, WATSON, IT IS ALL RIGHT *HERE...* IN *FRONT* OF YOU... *IF* YOU KNOW WHERE AND HOW TO LOOK.

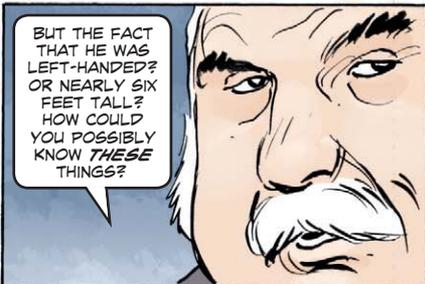


SEE THE BRASS PLATE ON THE BUTTSTOCK? IT IS INSCRIBED KRRC. A QUICK VISIT TO MY BOX OF CLIPPINGS BEGINNING WITH THE LETTER K TOLD ME THAT THIS INSCRIPTION COULD ONLY REFER TO ONE OF THE KING'S MOST TRUSTED FUSILIERS, A MEMBER OF GEORGE II'S KING'S ROYAL RIFLE CORPS.



THAT HE WAS INVOLVED IN THE SEVEN YEARS WAR IS INDICATED BY THE DATE OF 1760 INSCRIBED UNDER THE INITIALS.

HOW UNOBSERVANT OF ME. ONE OF YOUR BAKER STREET IRREGULARS COULD'VE PEDITCED THAT.

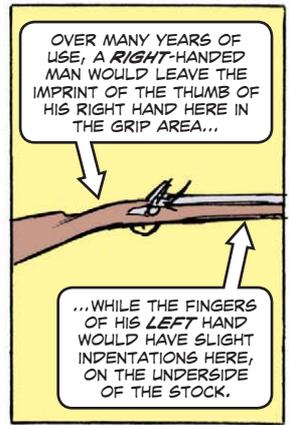


BUT THE FACT THAT HE WAS LEFT-HANDED? OR NEARLY SIX FEET TALL? HOW COULD YOU POSSIBLY KNOW *THESE* THINGS?



LOOK HERE, WATSON... AT THE HAND GRIP AND THE BARREL.

SEE THOSE FAINT INDENTATIONS?



OVER MANY YEARS OF USE, A *RIGHT*-HANDED MAN WOULD LEAVE THE IMPRINT OF THE THUMB OF HIS RIGHT HAND HERE IN THE GRIP AREA...

...WHILE THE FINGERS OF HIS *LEFT* HAND WOULD HAVE SLIGHT INDENTATIONS HERE, ON THE UNDERSIDE OF THE STOCK.



AS YOU CAN SEE THESE FAINT IMPRESSIONS ARE JUST THE *OPPOSITE*, THUS IMPLYING A *LEFT*-HANDED MAN.

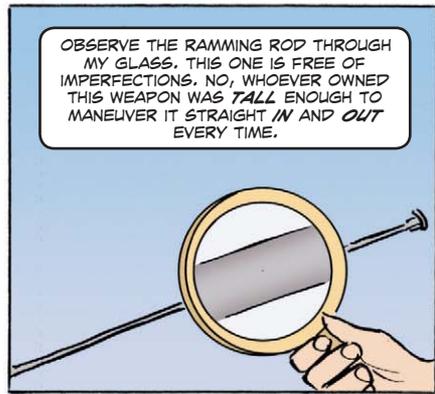
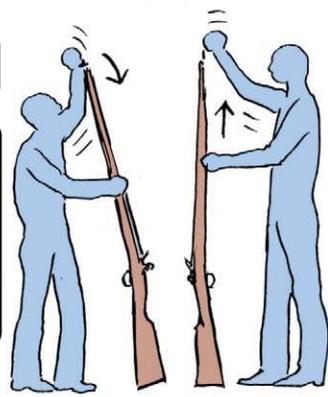


OF COURSE! AND HIS HEIGHT?

ELEMENTARY, WATSON.

THIS MUSKET IS AN UNUSUALLY *LONG* WEAPON.

A MAN OF *SHORT* STATURE WOULD TEND (EVER SO SLIGHTLY) TO SCRAPE OR BEND THE ROD GETTING IT DOWN INTO AND OUT OF THE MUZZLE.



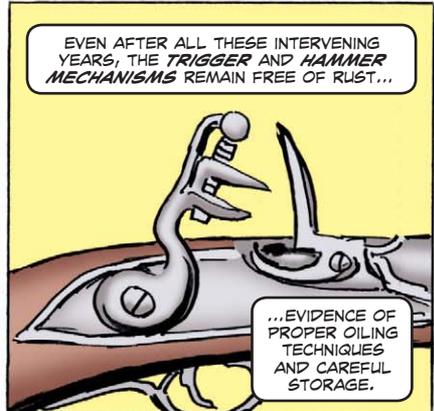
OBSERVE THE RAMMING ROD THROUGH MY GLASS. THIS ONE IS FREE OF IMPERFECTIONS. NO, WHOEVER OWNED THIS WEAPON WAS *TALL* ENOUGH TO MANUEVER IT STRAIGHT *IN* AND *OUT* EVERY TIME.



IT ALL SOUNDS SO *SIMPLE* WHEN YOU EXPLAIN IT! BUT WHAT OF YOUR ALLUSION TO 'PREVENTATIVE MAINTENANCE'?

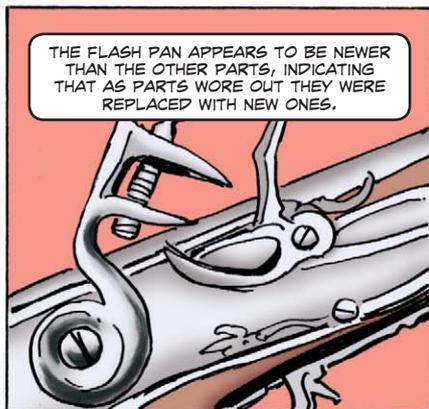


"PREVENTIVE MAINTENANCE." AGAIN, WATSON, MY GLASS WILL TELL THE TALE. SEE HOW CAREFULLY THE OWNER MAINTAINED THIS WEAPON?



EVEN AFTER ALL THESE INTERVENING YEARS, THE *TRIGGER* AND *HAMMER* MECHANISMS REMAIN FREE OF RUST...

...EVIDENCE OF PROPER OILING TECHNIQUES AND CAREFUL STORAGE.



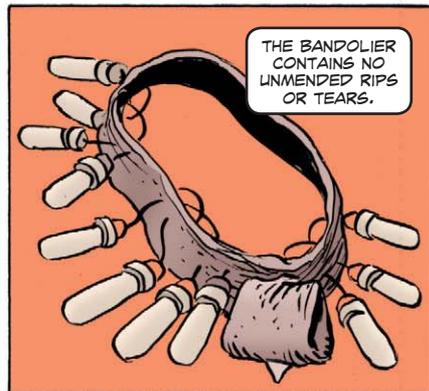
THE FLASH PAN APPEARS TO BE NEWER THAN THE OTHER PARTS, INDICATING THAT AS PARTS WORE OUT THEY WERE REPLACED WITH NEW ONES.



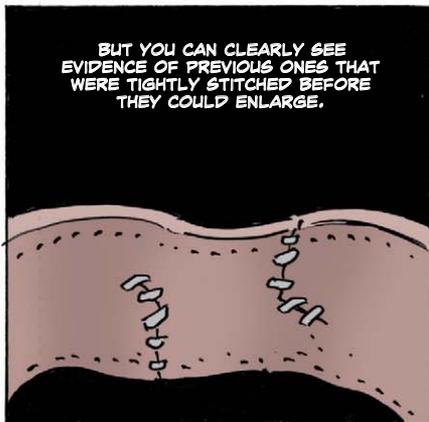
THE POWDER FLASK STILL HELD A RESIDUE OF BLACK POWDER, WHICH I EXAMINED UNDER MY MICROSCOPE.



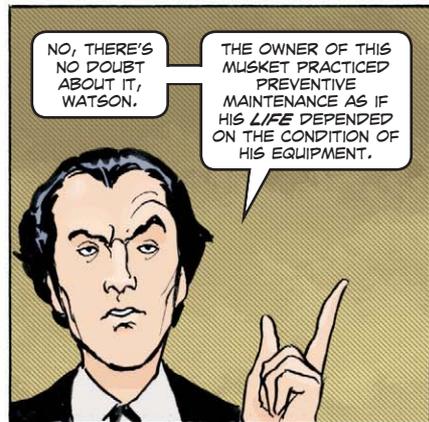
I QUICKLY ASCERTAINED THAT OUR UNKNOWN FUSILIER USED ONLY THE *FINEST* QUALITY POWDER AVAILABLE TO HIM AT THE TIME.



THE BANDOLIER CONTAINS NO UNMENDED RIPS OR TEARS.



BUT YOU CAN CLEARLY SEE EVIDENCE OF PREVIOUS ONES THAT WERE TIGHTLY STITCHED BEFORE THEY COULD ENLARGE.



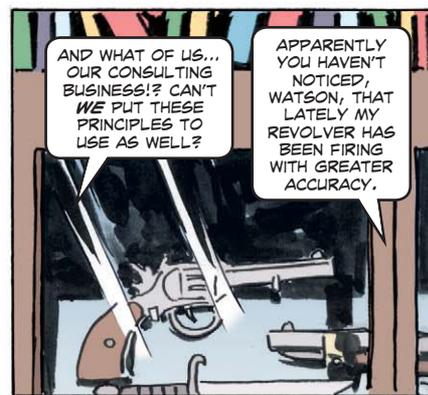
NO, THERE'S NO DOUBT ABOUT IT, WATSON.

THE OWNER OF THIS MUSKET PRACTICED PREVENTIVE MAINTENANCE AS IF HIS *LIFE* DEPENDED ON THE CONDITION OF HIS EQUIPMENT.



PREVENTIVE MAINTENANCE... WHAT A SIMPLE, BUT VITAL CONCEPT. WHY SCOTLAND YARD MUST HEAR OF THIS!

I'VE ALREADY SENT INSPECTOR LESTRADE A MONOGRAPH ON PM THAT I PUBLISHED LAST WEEK.



AND WHAT OF US... OUR CONSULTING BUSINESS!? CAN'T *WE* PUT THESE PRINCIPLES TO USE AS WELL?

APPARENTLY YOU HAVEN'T NOTICED, WATSON, THAT LATELY MY REVOLVER HAS BEEN FIRING WITH GREATER ACCURACY.



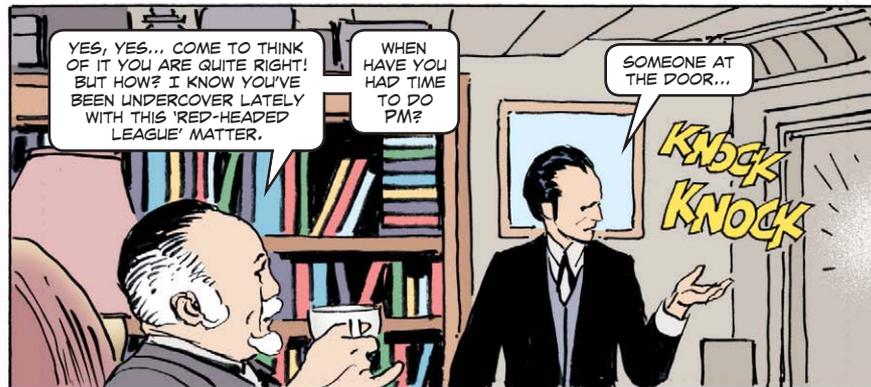
OUR CARRIAGE WHEELS HAVE BEEN TURNING WITH LESS SQUEAKING AND WOBBLING.



OUR PLUMBING HAS BEEN WORKING WITHOUT STOPPAGE.



AND MY VIOLIN HAS NEVER SOUNDED SO SWEET.

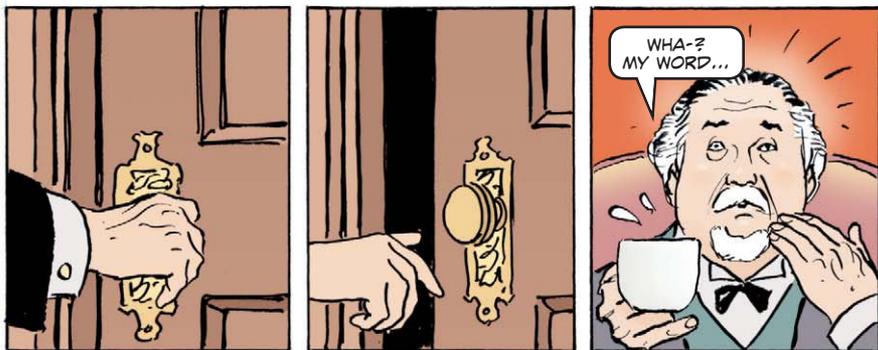


YES, YES... COME TO THINK OF IT YOU ARE QUITE RIGHT! BUT HOW? I KNOW YOU'VE BEEN UNDERCOVER LATELY WITH THIS 'RED-HEADED LEAGUE' MATTER.

WHEN HAVE YOU HAD TIME TO DO PM?

SOMEONE AT THE DOOR...

KNOCK KNOCK



WHA-? MY WORD...



WILL THAT BE ALL FOR THIS EVENING, MR. HOLMES?

YES, MRS. HUDSON... THAT WILL BE ALL.



UH-60 Series...

HANGIN' IT UP

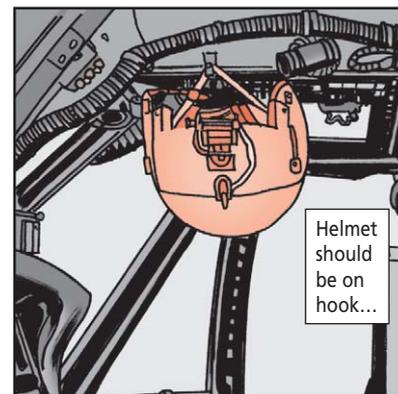
YOU CAN SHUT 'ER DOWN.

YOU IN THE COCKPIT, PUT YOUR HELMET ON THE HOOK... **NOT** MY JETTISON DOOR HANDLE.

IT COULD BE AN UGLY SITUATION!

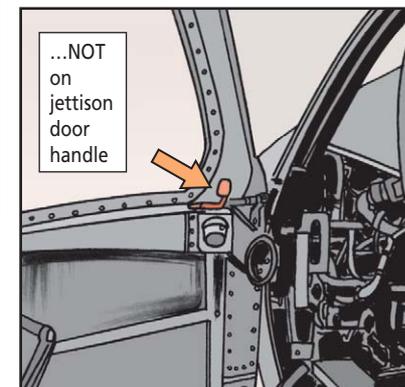
Pilots and co-pilots, there's an old song that goes, "Papa was a rolling stone, wherever he laid his hat was his home."

Not so for your HGU-56/P aircrew integrated helmet system (AIHS). Its only home is located on the upper console inside the Black Hawk cockpit.



Helmet should be on hook...

Some pilots and co-pilots treat the emergency jettison door handle like a hat rack, hanging their helmets and other equipment on it. **Don't!** That can break the safety wire, bend the handle or worse, jettison a cockpit door.

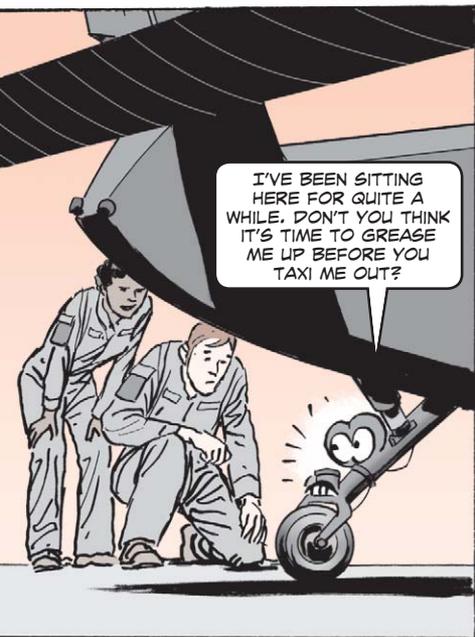


...NOT on jettison door handle

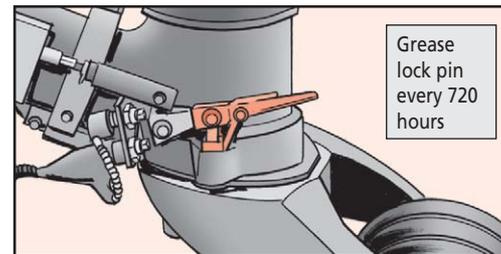
Always hang your helmet where it belongs and keep all equipment off the jettison handle. That prevents a damaged door and airframe, possible frustration or injury to personnel and unnecessary repair on the bird!

The last thing you need is a cockpit door flying off the hinges in the hangar or on the flight line because of the weight of a helmet hanging on the jettison door handle.

TAIL WHEEL LOCK PIN LOCKUP, LOWDOWN



Take care of any problems you find during inspection and you won't be seeing a pin malfunction on the caution advisory panel upper console in the cockpit. Lubricate the tail wheel lock pin every 720 hours like the TM says.



If oil or lube accidentally get on the teflon wear plate, clean it with cheesecloth and wash the plate with soap and water before it deteriorates.

You can find good inspection and maintenance info in TM 1-1520-Black Hawk.

Crews, having trouble with your Black Hawk's tail wheel lock pin sticking or locking?

First, troubleshoot the system like it says in WP 0071 of TM 1-1520-Black Hawk.

Then, at your next periodic inspection, use a magnifying glass to make sure the pin is not bent or rusted from flying in humid environments for long periods. And, inspect the entire tail wheel yoke assembly to prevent problems. That prevents lockups and shearing of the pin if the bird is towed or taxied.

If your bird is going to be down for a lengthy period, follow the lubrication procedures in WP 1668.

Move the locking pin up and down manually to make sure it moves freely. If the pin won't move freely or actuate properly, put a drop or two of penetrating oil, NSN 8030-01-418-9008, on the pin.

Enough grease on the lock pin ensures the locking or unlocking actuation of the tail wheel. Be patient and attentive when activating the tail wheel lock mechanism with the tow bar attached. The pin will bend easily. Rush, and someone will be replacing the lock pin.

Also, check to make sure the nut on the locking pin assembly has the proper torque of 30-60 in-lbs.

All Aircraft... AIRCRAFT TIRE INFLATION



DON'T TAKE SHORTCUTS. IT COULD BE DEADLY.



Inflating an aircraft tire, especially from high pressure nitrogen cylinders, is hazardous.

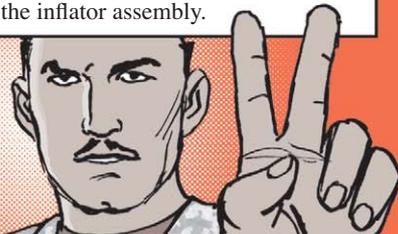
There are two ways to protect yourself and your buddies from injury or death by exploding tires.

If the tire is off the aircraft, make sure it is placed in an approved tire cage, NSN 4910-01-459-7080.

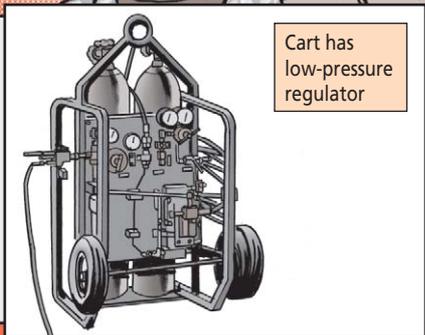
If the tire is installed, make sure you're using an approved tire inflation setup, one which allows you to stand clear of the tire as it is inflated and which has a safety valve to prevent over-inflation.

The old standby is the tire inflation kit that's authorized in your AVUM No. 2 tool set, NSN 6685-00-124-4336. The safety valve on the kit should be set to no more than 10 to 15 psi over the maximum inflation pressure of the tire you are inflating. Even then, stand back a full hose length as stated on the inflator assembly.

THERE ARE ONLY TWO EXCEPTIONS TO THE NEED TO USE THE TIRE INFLATION KIT...



- If you are using the low-pressure output of the standard high-pressure nitrogen-servicing cart, NSN 1740-01-327-6831. This cart has a low-pressure regulator and a fixed 175 psi safety valve.
- If you are using the nitrogen backpack with the new low pressure servicing kit. It also has a low-pressure regulator and a 160 psi relief valve.

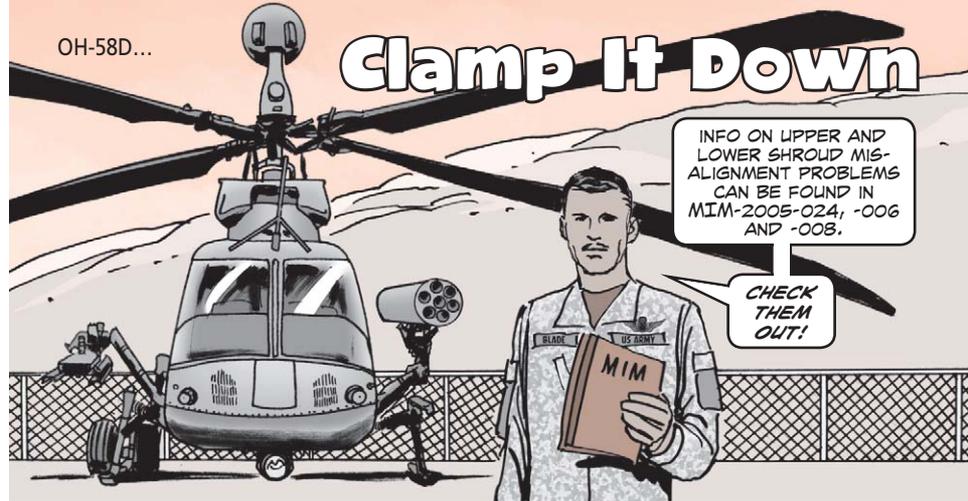


The AMCOM headshed says the "make item" tire cage plans shown in Fig. 5-1 of TM 55-2620-200-24, *Inspection, Maintenance Instructions, Storage, and Disposition of Aircraft Tires and Inner Tubes*, does not fit the Army's application. A change to the TM has been requested to identify only the stocked tire cage.

PS END

OH-58D...

Clamp It Down



Mechanics, the black clamps on the inside of your Kiowa Warrior's mast mounted sight (MMS) may contribute to alignment problems because some of the bolts used to secure the black clamps bottom out before the clamps can be adequately tightened. This condition may contribute to a misalignment of the upper and lower MMS shrouds. There are corrective actions, OH-58D-MIM-05-006, that can be taken to alleviate this problem and allow the black clamps to be considered as serviceable.

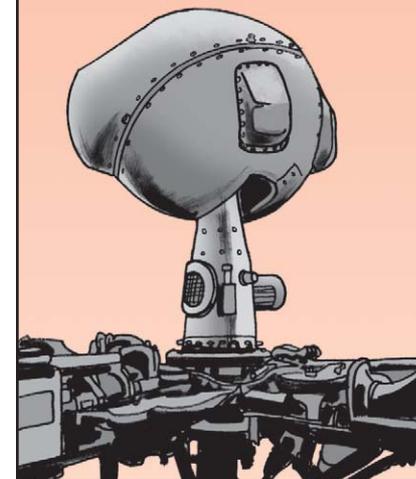
There are also new clamps available that are green in color, NSN 1260-01-521-7683, and have tighter tolerances than the old black clamps, NSN 1260-01-227-7480.

The green clamps prevent the bolts from bottoming out. That lets the clamps grip the upper and lower shroud cover flange without using washers.

The old black and the new green clamps can be used in combination. Wear on the upper and lower flange will determine if you need a washer when you use the black clamps. So units should continue to order the old clamps until the stock is exhausted. You can find all this good info in OH-58D-MIM-2005-024, -006 and -008.

Make a note until TM 9-1240-778-23 is updated.

Misalignment problems? Check your MIMs



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

Push-Pull Switch NSN

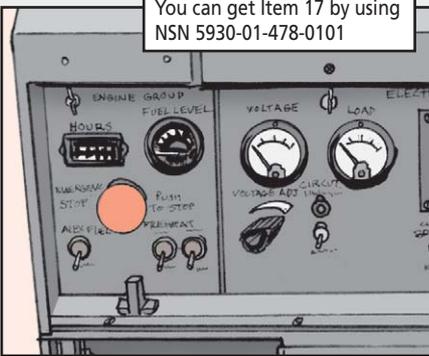
WHAT'S THIS?
WE ORDERED
PUSH-PULL
SWITCHES!

IT MUST BE
SOMEONE'S
BRIGHT IDEA
OF A JOKE.

Dear MSG Half-Mast,
We needed Item 17 of Figure 5 of TM 9-6115-639-23P, a push-pull switch for the control panel assembly on our 3-KW tactical quiet generator.
So we ordered it using NSN 6240-00-155-7836. That's the NSN that the part number, MS25327-327, given in the TM crossed to.
Unfortunately, instead of a push-pull switch, we got an incandescent lamp.
What's the right NSN for the switch?
PVT M.S.

Dear Private M.S.,
TM 9-6115-639-23P (1 Apr 2001) is obsolete. Get you pub's clerk to order TM 9-6115-639-13&P (15 Aug 2005). The push-pull switch is Item 17 of Fig 14, NSN 5930-01-478-0101.

You can get Item 17 by using NSN 5930-01-478-0101

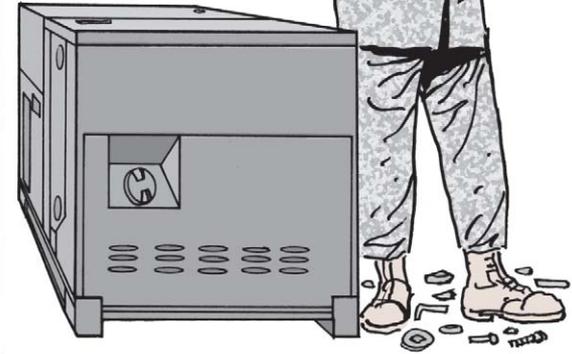


Half-Mast

PUT A CAP ON IT



WHAT
THE
HECK?!

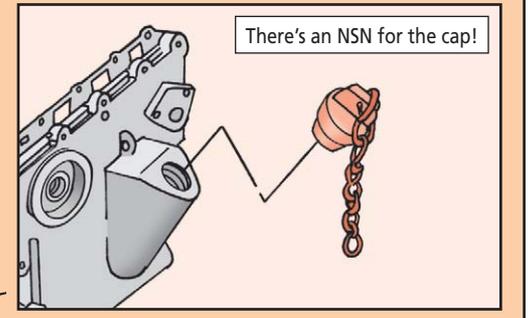


SOME-
THING'S
SCREWY!

Dear MSG Half-Mast,
TM 9-2815-252-24P lists the engine parts for our 5-KW tactical quiet generator. One of the parts is the oil filler cap, Item 8 of Figure 7. The part number given for the cap is 186-6023. Put that part number into FED LOG and it yields NSN 5305-01-235-2944, which brings a screw, not a cap!
Can you give us the right NSN for the oil filler cap?
SGT G.A.

Dear Sergeant G.A.,
Yes! The FED LOG has been updated and the supply system has added the cap. Part number 186-6023, CAGE 44940, now crosses to NSN 2930-01-528-1963, which brings the cap with chain. The cap fits the 10-KW TQG, too.

Half-Mast



There's an NSN for the cap!

SINGGARS...

**KALUMP
BUMPBUMP!**

OH NO!

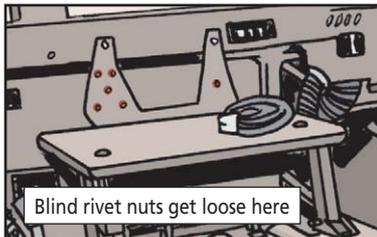
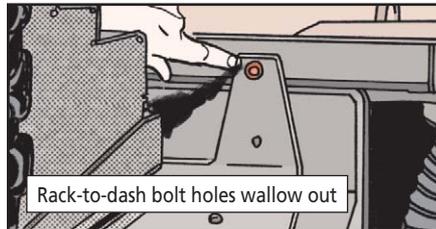
THE NUTS ARE
DAMAGED AND
LOOSE AGAIN!

A MOUNTING PROBLEM



Some maintenance and repair on HMMWVs require opening the dashboard. This means unbolting and pulling back the SINGGARS radio rack. This has caused the almost universal problem of the rack-to-dash bolt holes wallowing out. Most of you have come up with your own ways to solve this problem.

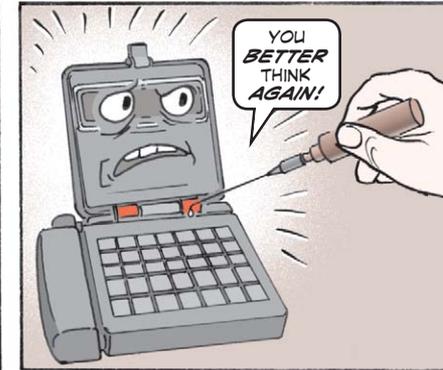
Now there's another similar problem in the same area. The blind-rivet nuts used to bolt the SINGGARS installation kit to the radio rack are getting damaged and loose. These damaged, loose nuts cause the radio to vibrate excessively, which leads to commo failure and equipment problems.



Ironically, it's vehicle vibration that causes the nuts to loosen in the first place. There's no way to stop this normal vibration, so DOLs should keep a supply of these blind-rivet nuts on hand. Order the nuts with NSN 5310-01-411-3422. Drivers, any time you notice excessive movement between the mount and the rack, take the vehicle to your DOL to get the rivets replaced.

AN/CYZ-10(V)3 DTD...

A LUBE NOT TO USE



Dear Editor,

For years, we have added a drop or two of cleaner, lubricant, preservative, (CLP) to the hinges of our data transfer devices (DTD). This dramatically increased the life of the hinges.

Recently, we've seen MILITEC-1, NSN 9150-01-415-9114, being used on weapons. So, I replaced the CLP I used on the DTDs with MILITEC-1.

The first time I used it, the next day I found the plastic rear hinge section, NSN 5810-01-350-8386, was fractured and broken.

I guessed I had over-tightened the screws which is a common problem that cracks the hinges and case.

So, I put two new rear hinge sections on the DTD and added just a little bit of residual MILITEC-1 for lubrication. The next morning, I found both the rear hinges were cracked!

After further testing, I believe the problem is a chemical reaction created by the MILITEC-1.

Please spread the word.

MSG Stanley Harrell
172 SBCT
Mosul, Iraq

Editor's note: Thank you, Master Sergeant, for the heads up. That's a fact. MILITEC-1 is not an authorized lubricant for weapons either. The jury is still out over this controversy and the debate goes on. Look to future pages of PS to give you the verdict.

In regard to this particular problem, here's the word we want to spread: Tests are being run to see if MSG Harrell is right and there is a problem using MILITEC-1 on DTDs. Until a conclusion is reached, use CLP to lube the hinges and not MILITEC-1. This is just a precaution because DTDs are in short supply. Check with your CECOM LAR to get the latest info on this problem or call DSN 879-6408 or (520) 538-6408.

"Charger on the Move" is Here



Want to fast charge BB-326, BB-390, BB-2590, BB-388, BB-516, BB-2800, BB-2847 and MBITR batteries in your vehicle while on the move?

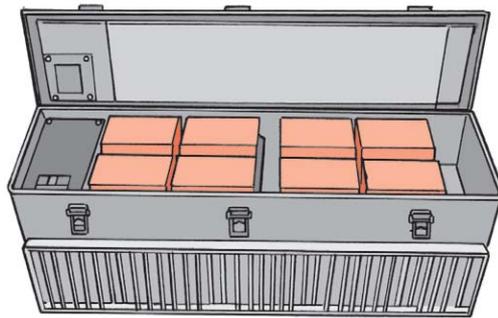
Order the vehicle-mounted charger, PP-8481B/U, NSN 6130-01-527-2726.

The charger comes with two universal adapters to charge the above batteries, and AC and DC power cables.

Whether set up in your commo shop or installed in a vehicle, the charger will charge two batteries at a time, then automatically move to the next two batteries in line.

The charger can hold eight BB-2590s or a mix of BB-390s by using two bulk adapters, J-6581/U, NSN 5940-01-494-7116.

Other features on this new charger are a "charge status" indicator for each charging position, a low voltage vehicle battery cutoff, a top-off charge capability, upgradable software, and a blackout button.



Charger can hold eight batteries



NIGHT VISION DEVICE HELMET MOUNTS

Dear Half-Mast,
Is the same mounting bracket for night vision devices used on the PASGT helmet and the advanced combat helmet (ACH)? What's used on the CVC helmet?
CW2 R. D. D.

Dear Mr. R. D. D.,

Here's what you need to mount the AN/PVS-7B, AN/PVS-7D and AN/PVS-14 night vision devices on the PASGT helmet, the ACH, and the CVC.

Start with the helmet mount assembly, NSN 5855-01-457-2953. If you're wearing a PASGT helmet, you have all you need! If you break the front bracket assembly, you can order a new one with NSN 5340-01-505-5835.

Helmet mount assembly

New issue is supplied with PASGT front bracket assembly only.

PASGT front bracket assembly

ACH/CVC front bracket assembly kit

Kit includes a two-piece, screw and post fastener.

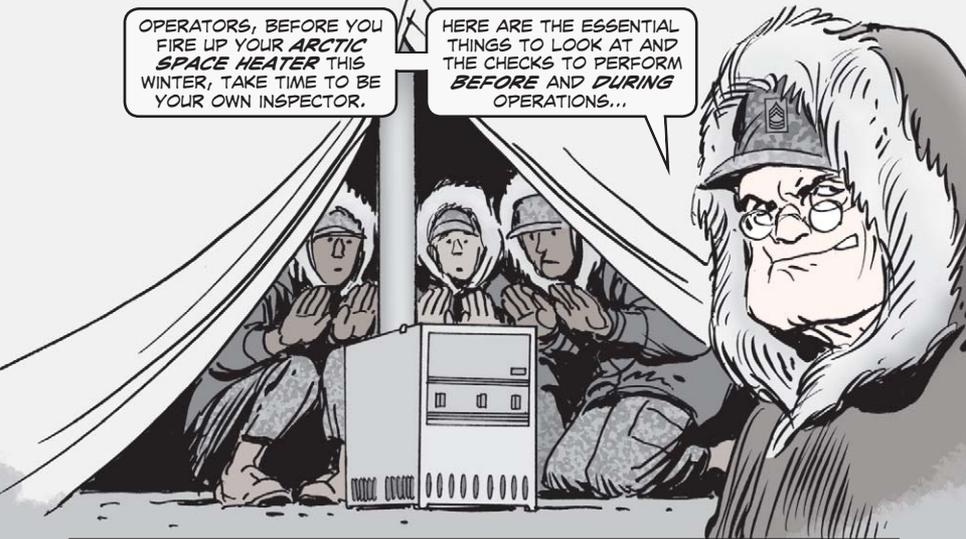
However, if you're wearing the ACH or a CVC, you'll also need a different front bracket assembly. Order it with NSN 5340-01-509-1467. A two-piece, screw-and-post fastener comes with this assembly. You can get the screw alone with NSN 5305-00-182-9265 or the post alone with NSN 8470-01-144-5367.

Half-Mast

AN OPERATOR'S CHECKLIST

OPERATORS, BEFORE YOU FIRE UP YOUR ARCTIC SPACE HEATER THIS WINTER, TAKE TIME TO BE YOUR OWN INSPECTOR.

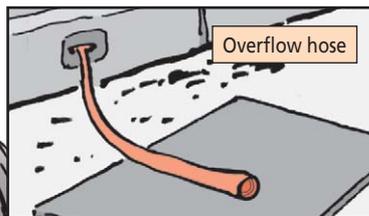
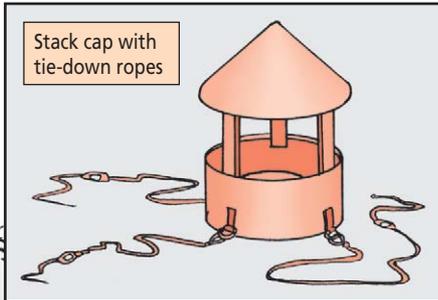
HERE ARE THE ESSENTIAL THINGS TO LOOK AT AND THE CHECKS TO PERFORM BEFORE AND DURING OPERATIONS...



Inventory

Does the heater have all its parts?

- rear door
- stack cap with tie-down ropes
- fuel control valve
- gravity feed adapter
- front door
- burner cover
- overflow hose
- fuel supply hose
- six stack sections
- reaming tool
- lid
- solid fuel grate

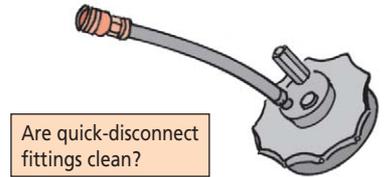
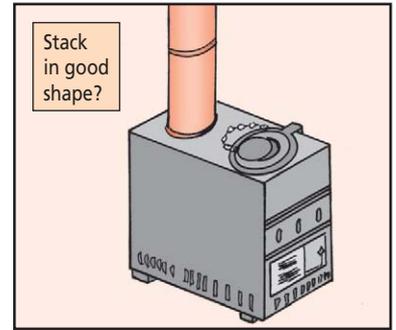


FOR MORE INFORMATION ABOUT PARTS, SEE WP 0002, LOCATION AND DESCRIPTION OF MAJOR COMPONENTS, IN TM 10-4520-261-12&P.

Condition of Parts

What's the condition of the parts?
Are they in good working order?

- Stack has no broken seams, missing sections or carbon, soot or creosote build-up.
- Fuel hoses have no cuts or holes. Quick-disconnect fittings are clean. O-rings are in good shape, not cracked, cut or flattened. Priming valve does not leak.
- Fuel control valve has a heat shield with all screws present. Quick-disconnects are clean. Priming cup is in good shape.
- Heater body has no large dents that might prevent the lid or stack from fitting.
- Lid has a working sight glass.
- Fuel hose from the fuel control valve to the burner is in good shape. Hose has no cracks, cuts or dry rot.



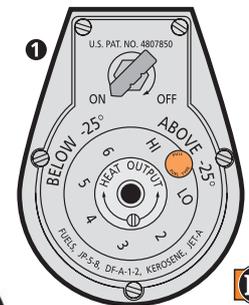
Setup and Before Operations

Is the heater set up and fueled properly? Any sign of problems?

- Use only authorized fuel: DF1, DF2 or DFA diesel, JP8, Jet A or kerosene.
- Stack is put together using all six sections. A cap is attached and tied off to stakes in the ground.
- For liquid fuel operation, solid fuel grate is removed and burner cover is installed in the door frame.
- Fuel control valve is set to the proper temperature setting: either below -25°F or above -25°F.
- No fuel is leaking under the heater, at the priming valve, the gravity feed adapter or the fuel control valve quick-disconnects.

Fuel control valve set to proper temperature?

DO NOT START THE HEATER IF FUEL IS LEAKING.



During Operations

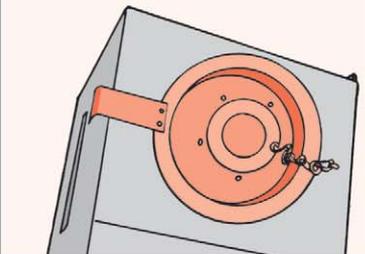
Is the heater running properly? Any sign of leaks?

- Lid is in place.
- No fuel is leaking under the heater, at the priming valve, the gravity feed adapter or the fuel control valve quick-disconnects.

IF FUEL IS LEAKING, SHUT DOWN THE HEATER IMMEDIATELY!



Lid in place?



NEVER TRY TO RE-LIGHT THE BURNER WHEN IT IS HOT. HOT FUEL VAPOR COULD EXPLODE. WAIT UNTIL THE BURNER HAS COOLED, THEN RE-LIGHT IT.

IF YOU FIND ANYTHING YOU CAN'T FIX, REFER IT TO UNIT MAINTENANCE. FOR THE FULL STORY ON WHAT TO LOOK FOR, SEE WP 0010, PREVENTIVE MAINTENANCE CHECKS AND SERVICES, IN TM 10-4520-261-12&P.



Get Your Education

YOU **MUST** BE TRAINED AND LICENSED TO SET UP AND OPERATE HEATERS.

IT'S SPELLED OUT IN CHAPTERS 6 AND 7 OF AR 600-55, THE ARMY DRIVER AND OPERATOR STANDARDIZATION PROGRAM (SELECTION, TRAINING, TESTING AND LICENSING).

PS END

Cold Weather Parkas...

AT LAST! WE HAVE THE NSNs, SIZES, AND LENGTHS FOR THE DESERT CAMO COLD WEATHER PARKAS!

I HOPE THEY GET HERE **BEFORE** THE SUMMER DOES!



FOR YOU DESERT DWELLERS

On Page 47 of PS 638, we listed the NSNs, sizes and lengths for woodland camo cold weather parkas. This time around, we've done the same for desert camo cold weather parkas. Here they are:

NSN 8415- 01-470-	Size	Length
2065	X-small	X-short
2066	X-small	Short
2068	X-small	Regular
2070	X-small	Long
2074	Small	X-short
2076	Small	Short
1944	Small	Regular
1949	Small	Long
1951	Medium	X-Short
1952	Medium	Short
1953	Medium	Regular
1954	Medium	Long
2818	Large	Short
2828	Large	Regular
2833	Large	Long
2841	X-large	Regular
2844	X-large	Long

The parka is waterproof. It comes with a slide fastener in the front, a hook-and-pile fastener at the waist and a drawstring hood.

SOON...

HOT DIGGITY! THESE THINGS ARE GREAT!



LAST DEFENSE AGAINST FROZEN FEET



Night falls. You're standing a lonely post in some rugged mountain pass far from home. You brace yourself against howling, wind-driven snow stinging your face. The temperature hovers around freezing, but with the wind chill it feels more like sub-zero.

You've endured fierce winters before, so you're prepared. Clothed in cold weather gear—parka and trousers, balaclava and hood, insulated boots and mittens—you're dry, warm and safe.

You're also wearing **extreme cold weather socks**, because you know that feet and toes are especially vulnerable to frostbite. Frostbite can numb and cripple your feet and leave you stranded in a white-out blizzard beyond the reach of help.



TO GET THE UTMOST PROTECTION AND WARMTH, CHOOSE COLD WEATHER SOCKS FROM THESE NSNs...

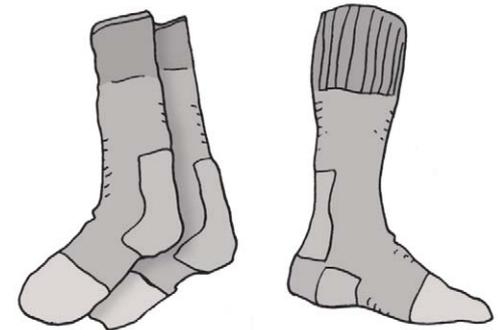
NSN	Sock Size	Men's Shoe Size	Women's Shoe Size
8415-01-511-0446	Small	NA	4 to 6
8415-01-511-0453	Medium	5.5 to 8.5	6.5 to 10
8415-01-502-2744	Large	9 to 12.5	10.5 to 13
8415-01-502-2745	X-large	13 to 15	NA

[Click here for a copy of these articles to save or email.](#)

These heavy, over-the-calf socks were made for wear in sub-zero temperatures on rugged terrain. Here are some of their features:

Wear extreme cold weather socks in sub-zero temps

- light gray heather color
- full padding at the ankle, instep and leg relieves boot and lace pressure
- padding in the ball and heel protects the foot and helps prevent blisters
- the toe is 100% worsted wool for warmth



Because of the thickness of these socks, you may need to wear cold weather boots one-half size larger than you normally would. Wear the socks when you're being fitted for cold weather boots.

None of these socks is found on the AMDF. Order on DD Form 1348-6 and put "NSN not on the AMDF" in the REMARKS block.

DEFEAT WINTER'S FURY

Here comes Winter pounding on your door, ready to launch its full fury against you: rain, snow, ice, wind and numbing cold. But you still have time to prepare for the onslaught. Start by reading some back issues of PS, the Preventive Maintenance Monthly. The following articles are packed with PM tips about cold weather clothing:

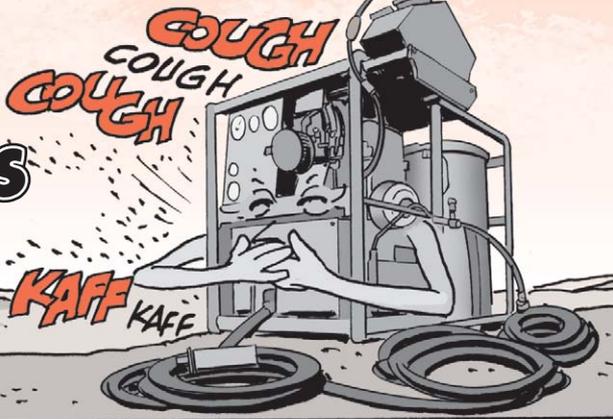
Subject	PS Issue Number	Page (s)
Cleaning cold weather clothing	638	46-47
Anti-contact gloves	638	51
Patching extended cold weather clothing system (ECWCS)	636	50-51
Special OPS cold weather clothing	636	52-53
CVC cold weather underwear	636	54-56
Washing cold weather underwear	624	55
Cold weather clothing facts	623	49-51
Extreme cold weather hood	623	52-53
Cold weather trigger finger mittens	623	54-56
ECWCS water repellency	622	51-53
ECWCS underwear	613	48-49

READ THE STORIES ONLINE AT THE PS WEBSITE:
<https://www.logsa.army.mil/psmag/psonline.cfm>



M17A3,
A/E32U-8
Decons...

PM Weapons for the Desert



THIS SAND IS KILLING ME. MY AIR FILTER IS WORTHLESS OUT HERE.



GOOD NEWS, MR. DECON. THERE ARE NEW FILTERS AND WATER ASSEMBLY CAPS SPECIALLY MADE FOR THE DESERT.

THE FINE SAND OF SOUTHWEST ASIA HAS DAMAGED M17A3 AND A/E32U-8 DECONS BECAUSE THEIR AIR FILTERS AND WATER HOSE FITTING CAPS COULDN'T SEAL IT OUT.

THAT'S NO LONGER A PROBLEM THANKS TO THE NEW AIR FILTERS AND CAPS NOW AVAILABLE.



IF YOU'RE IN THE DESERT OR SCHEDULED TO GO THERE, ORDER THESE ITEMS...

M17A3

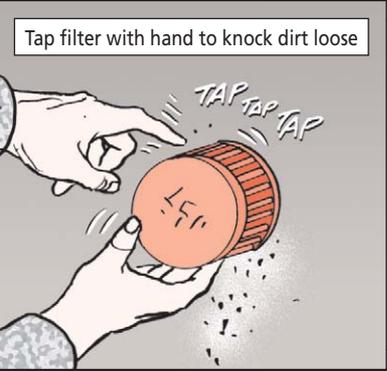
- air filter, NSN 2940-01-529-8953
- inlet cap, NSN 4730-00-485-5055
- outlet cap, NSN 4730-00-929-0791

A/E32U-8

- air filter, NSN 2940-01-529-8953
- inlet cap, NSN 4730-00-485-5055

THERE IS NO DESERT OUTLET CAP FOR THE A/E32U-8.

To clean both filters, tap the filter element with your hand to knock dirt loose. Gently brush out the dirt with the soft bristle brush in your tool kit. Spray K&N air filter cleaner that's part of the cleaning kit, NSN 5895-01-512-0412, on the entire filter element and let it soak in for 10 minutes. Never use gas, caustic solvents, strong detergents, high-pressure water, or steam on the element. They damage the filter.



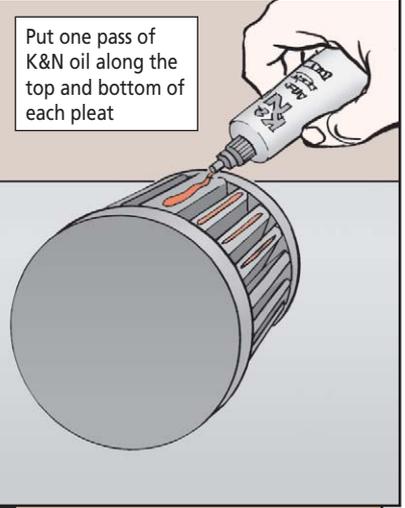
Tap filter with hand to knock dirt loose

Then rinse off the filter from the inside out with low-pressure water. Shake off excess water and let the filter air dry. Never use compressed air, an open flame, or a dryer. They damage the filter.



Rinse off filter from the inside out with low-pressure water

When the filter is dry, re-oil it with K&N air filter oil that's also part of the cleaning kit. Put one pass of oil along the bottom and top of each of the filter's pleats. Let the oil soak into the filter for 20 minutes. Apply more oil to any filter areas that are still white. Never use any other oils on the filter except in emergencies.



Put one pass of K&N oil along the top and bottom of each pleat

MEET THE ARMY'S NEW DECON SYSTEM, THE M100. I THINK YOU'LL LIKE IT.

What's an M100?

Dear Half-Mast,
We are starting to get M100 sorbent decon systems (SDS) and really don't know much about them. Are they replacing the M11 and M13 decons? Do you store it on vehicles like you did the M11 and M13? Where can we go for more info on the M100?
M.W.

Dear Mr. M.W.,

Good questions. Because DS2 is no longer going to be used for deconning by the Army, the M100, NSN 4230-01-466-9095, is replacing M11s and M13s. The M100 replaces the M13 on a ratio of 3:1 and the M11 1:1.

The M100 uses the same sort of vehicle mounting bracket as the M11. The M100 consists of two decon kits packaged within a case with a strap to attach the case to the mounting bracket. The M100 comes with an instruction card on how to secure the case to the mounting bracket.

The bracket, NSN 5340-01-466-5928, has the same hole configuration as the M11, so mount it where you mounted the M11's bracket.

The M100 has its own pub, TM 3-4230-236-10, which is on the ETM site:

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

Information can also be found at

<http://www.ecbc.army.mil>

When you go to the site, first click on decontamination, then Sorbent Decontamination System M100.

NOTE THE CONTACT INFO FOR THE CONFIGURATION MANAGER HAS BEEN CHANGED TO DSN 793-1780 (309) 782-1780 AND THE EMAIL TO: thomas.w.green@us.army.mil



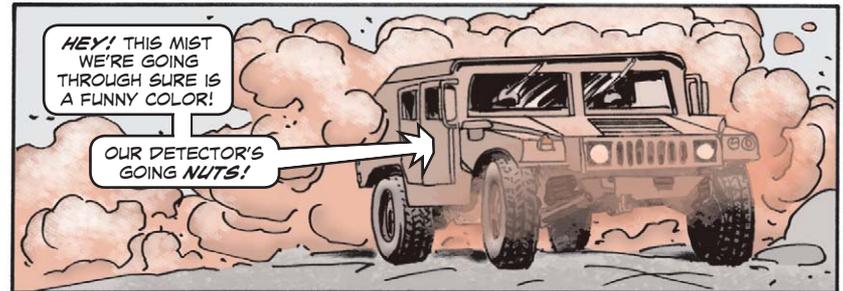
Here are some of the M100's capabilities:

- Fits the M11's size envelope but weighs less
- Allows two operators to simultaneously do decon operations, thus cutting decon time
- Requires no water
- Operates at temperatures between -25° F and 120° F
- Decontaminates a 12.5 square meter surface contaminated with 10 grams of agent per square meter in less than 15 minutes
- Has a shelf life of a minimum of 5 years, which is extendable
- The reactive sorbent powder is non-toxic and non-corrosive
- The reactive sorbent powder does not interfere with operation of NBC detectors and monitors, such as the ACADA, M43A1 detector and ICAM
- The reactive sorbent powder is environmentally friendly and poses no storage or transportation risks

Half-Mast

HEY! THIS MIST WE'RE GOING THROUGH SURE IS A FUNNY COLOR!

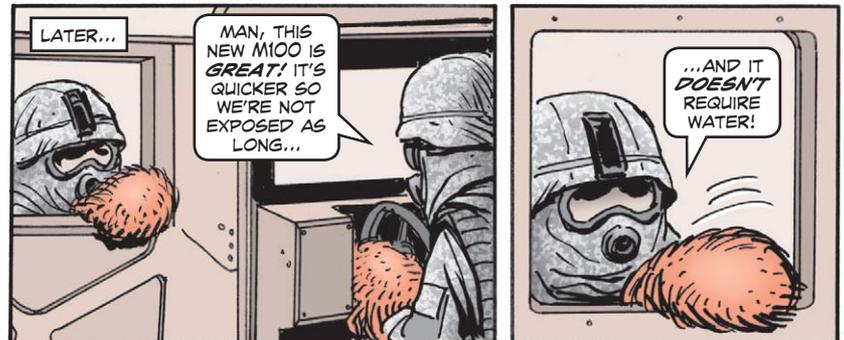
OUR DETECTOR'S GOING NUTS!



LATER...

MAN, THIS NEW M100 IS GREAT! IT'S QUICKER SO WE'RE NOT EXPOSED AS LONG...

...AND IT DOESN'T REQUIRE WATER!



IMPACT WRENCH THAT'S MOBILE



It's tough to do field repairs without an impact wrench. But most impact wrenches need an AC power source, which you often don't have in the boondocks.

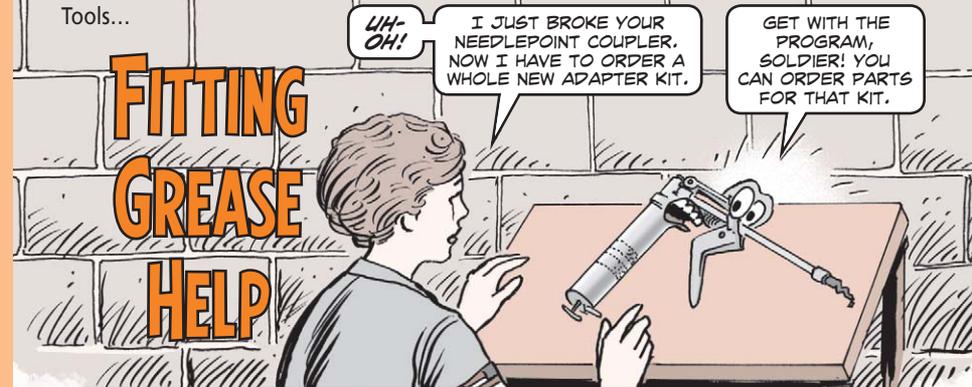
Now there is a impact wrench, NSN 5130-01-536-6492, that's mobile and can operate on battery power and then be recharged.

- Maximum output torque for removing nuts, 450 lbs-ft
- Maximum output torque for tightening nuts, 425 lbs-ft
- Impact wrench weighs 8.5 pounds
- Power pack weighs 21 pounds
- Power cord six feet long
- 12-volt DC motor has double ball bearings
- On-board battery provides up to 625 amps
- On-board battery charger gives long-lasting battery life
- Limited one-year warranty
- Designed to perform the same work as a 1/2-in drive pneumatic impact wrench

HERE ARE SOME OF THE WRENCH'S FEATURES...



FITTING GREASE HELP



Mechanics don't want to have to order a whole new grease adapter kit just because they need a specific adapter. In the case of grease adapter kit, NSN 4930-01-178-8848, you don't need to. Its parts can be ordered separately.

The kit is part of these tool kits: Common #1 and #2; Shop Equipment, Automotive Maintenance and Repair; and Mechanical Maintenance Shelter MTD.

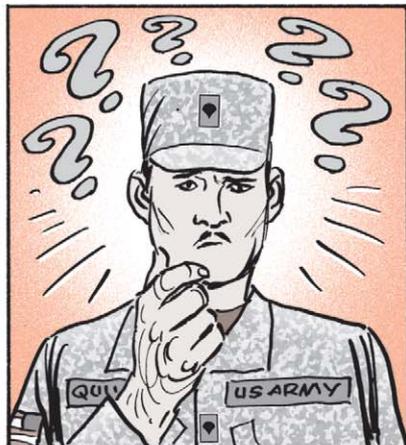
HERE ARE THE KIT'S PARTS!



THOSE PARTS WITHOUT AN NSN SHOULD BE ORDERED FROM ALLIED TECHNOLOGIES, WHICH HAS A CAGE CODE OF 58039.

Item	PN	NSN
Right-angle coupler	KDS	(no NSN)
Needlepoint coupler	KDN	4930-01-104-8867
Flexible extension	KDF21	4930-01-103-8203
Filler adapter	J65	4930-01-103-7585
Grease coupler	KY	4930-01-104-4617
3-in needlepoint coupler	KZSNR	4930-01-105-1560
8-in rigid extension	KDE8	4930-01-103-8207
Hypodermic needle coupler	KZHY	4930-01-104-4597
Long needlepoint coupler	KZDXL	4930-01-103-9127
Flashlight	FL2222	6230-01-178-9039
Long needlepoint only	DXL	4930-01-103-9126
13-in flexible extension	KDF13	4930-00-796-8708
1/4-in 28 extractor	EXT1428	(no NSN)
1/8-in 18 extractor	EXT	(no NSN)
Needlepoint coupler	KZD	4930-01-104-0936
Right-angle coupler	KDR	4930-01-103-8204
Long zerk coupler	KZX	4930-01-103-8206
Buttonhead coupler	KGR	4930-01-103-8209
Buttonhead coupler	KSR	4930-01-103-8208

My DISCOM is Gone - Dude, Where's My Support?



Soldiers in modular units are beginning to realize the old division and corps support commands have disappeared.

Theater sustainment commands overseas will continue to perform many of the old DISCOM and COSCOM functions, but with a new partner: Army Sustainment Command (ASC). In CONUS, the new command will take up the endless battle for better soldier support.

While the Army is increasing the number of loggies in division and corps G4 shops as it eliminates DISCOM/COSCOMs, ASC—a part of Army Materiel Command—will be providing services in the areas of materiel management and distribution.

The ASC will be the Army's primary sustainment organization at the operational level in CONUS. ASC's new Distribution Management Center, its Army field support brigades (AFSBs) and battalions, and partners such as the Logistics Support Activity (LOGSA), will work together to meet materiel and supply management, materiel readiness reporting, and Class VII visibility and management.

The new command won't simply be a copy of corps or division materiel management centers. ASC, LOGSA, the Installation Management Agency, and other partners will cut obsolete and inefficient processes. That's a step that will reduce logistics burdens on company and battalion-level personnel.

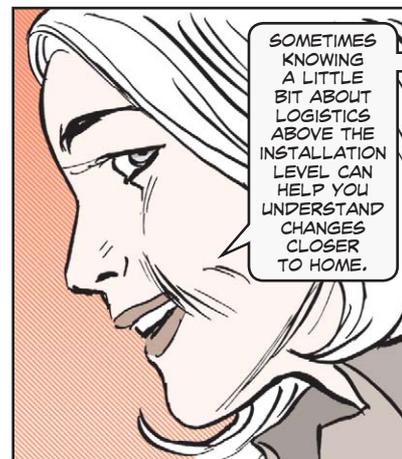
ASC will also support deployed forces by providing logistics capabilities through contracted services (LOGCAP) and establishing logistics support elements or deploying AFSBs.

The result will be focused logistics that enable maneuver commanders to focus on warfighting while ASC provides a single source for answers and expertise for maintenance, supply and other logistical support.

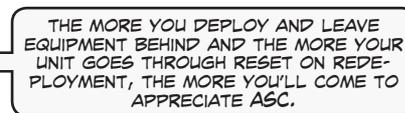


DISCOMS AND COSCOMS ARE DISAPPEARING WITH MODULARIZATION. NEW ORGANIZATIONS, SUCH AS ARMY SUSTAINMENT COMMAND, WILL BE TAKING UP THE SLACK.

YOU MAY NOT INTERACT WITH ASC AS MUCH AS YOU DID WITH DMMCS, BUT IT'LL HELP TO UNDERSTAND SOME OF WHAT'S GOING ON IN LOGISTICS SUPPORT.



SOMETIMES KNOWING A LITTLE BIT ABOUT LOGISTICS ABOVE THE INSTALLATION LEVEL CAN HELP YOU UNDERSTAND CHANGES CLOSER TO HOME.

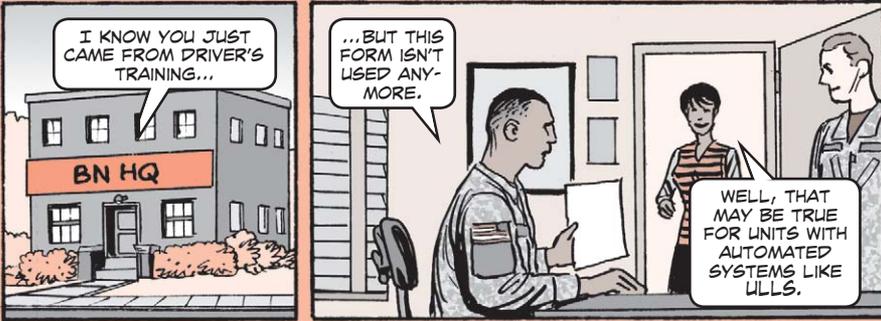


THE MORE YOU DEPLOY AND LEAVE EQUIPMENT BEHIND AND THE MORE YOUR UNIT GOES THROUGH RESET ON REDEPLOYMENT, THE MORE YOU'LL COME TO APPRECIATE ASC.



JUST THE SUPPORT I NEED!

WHICH OPERATOR'S PERMIT IS AUTHORIZED?



The absence of OF 346, *US Government Motor Vehicle Operator's Identification Card*, from DA Pam 750-8, TAMMS (Aug 05) has led some organizations to conclude it's no longer authorized. They argue that the ULLS generated DA Form 5984-E, *Operator's Permit*; *U.S. Army Motor Vehicle Operator's Identification Card*, must be used without exception.

However, some offices, such as driver testing stations, don't have ULLS computers. So they issue OF 346s.

So, both forms are authorized, but the DA Form 5984-E should be used when ULLS systems are available.

The operator qualification data from the DA Form 348, another hardcopy form, is loaded to the unit's ULLS-G system. The DA Form 5984-E is generated from this data.

During dispatch operations, the ULLS-G computer reviews operator data for the dispatcher and verifies equipment qualifications.

If you need the OF 346, NSN 7540-00-634-3999, it's a GSA item that can be ordered by calling Federal supply customer assistance at (800) 525-8027.



Smart Card Available for M114

Operators, do you want easy access to safety-related maintenance information for your M114 up-armored HMMWV? Then get the combined safety smart card! Go online and download it, using your AKO login and password: <https://www.us.army.mil/suite/doc/5344575>

M1 TANK FIRE EXTINGUISHER CHANGE

Hand-held Halon 1301 fire extinguishers, NSN 6830-00-555-8837, are no longer available for use in M1-series tanks. All requisitions for replacement fire extinguishers will be disapproved with a rejection status code of CJ. The replacement is a water-potassium acetate fire extinguisher, NSN 4210-01-519-0942. To get the new fire extinguisher together with a mounting bracket, order NSN 4210-01-519-4385. The Halon extinguishers will be replaced through attrition, so only replace those that are used or have expired. Make a note until the TMs can be updated with the new info.

M1151 Front Springs a Problem

If your new M1151s are sitting low on the front springs, you could bottom out on rough terrain. That's because the armor and overloading of vehicles in Southwest Asia demands the use of M114 front springs, NSN 5360-01-457-8029, instead of M1113 front springs on these trucks. If your M1151's serial number is lower than 235652, install the M114 front springs. Go to the AEPS website for details on how to do the work: <https://aeps2.ria.army.mil>

POC for Firefinder DRUH

On Page 19 in PS 641 (Apr 06) we told you to contact Ed Sabecky for turn-in and shipment info on Firefinder radar dynamic reference units-hybrid (DRUH). That should have been Pete Sabecky, who can be reached at (570) 895-9007 or @tobyhanna.army.mil

ARMY DIRECT ORDERING FOR CLOTHING

Soldiers deployed in support of Operation Enduring Freedom and Operation Iraqi Freedom can now replace worn-out Army combat uniforms (ACU) and ACU accessory items through an online ordering program called Army Direct Ordering (ADO).

The program allows soldiers to submit orders for items that need replacement. Here's the website address: <https://army.kyloc.com/>

The website provides instructions on setting up an account, submitting orders and selecting a unit validator (an approving official).

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?

Click here for a copy of this article to save or email.

Click here for a copy of these articles to save or email.

A soldier in a green helmet and camouflage uniform is positioned inside the turret of a tank. The soldier is firing a machine gun, with a bright muzzle flash visible. Several missiles are flying through the air around the tank, some with red trails. The scene is set against a purple and orange sky. The text "Take advantage of the armor around you!" is written in a bold, yellow, outlined font at the top of the image.

Take advantage of the armor around you!

**Stay at
nametag
defilade!**

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