

Issue 721

PS

December  
2012

# THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-721

Approved for  
Public Release;  
Distribution is  
Unlimited

MAKE SURE  
THOSE HOOK-  
UPS ARE  
SECURE!

**Soldiers... hooking up lunette trailers  
to your FMTVs? See page 12!**



## Act on Those **Bright** Ideas



- The Army's Supply and Maintenance Assessment Review Team (SMART) for logistics-related ideas: <https://smart.lia.army.mil/index.cfm>
- The Army Suggestion Program (ASP) for all other ideas: <https://asp.hqda.pentagon.mil/public/default.htm>





# THE PREVENTIVE MAINTENANCE MONTHLY

ISSUE 721 DECEMBER 2012

TB 43-PS-721, The Preventive Maintenance Monthly, is an official publication of the Department of the Army, providing information for all Soldiers assigned to combat and combat support units and all Soldiers with unit maintenance and supply duties. All information published has been reviewed and approved by the agency responsible for the equipment, publication or policy discussed. Application of the information is optional with the user. Masculine pronouns may refer to both genders. The use of product or company names does not constitute endorsement of those products, services or companies by the U.S. Army. The use of non-DoD hyperlinks, along with their content, does not constitute endorsement by DoD or DA. Neither DoD nor DA exercises any editorial control over, and cannot vouch for, content on non-DoD websites.



## COMBAT VEHICLES

Stryker Exhaust Blanket Fire Hazard  
M2/M3-Series Bradley Battery Box Shorts  
M777A2 Loose Muzzle Brake  
M777A2 Loose Towing Lunette  
M777A2 Temperature Affects Equilibrators



## WHEELED VEHICLES

Vehicle Passenger Limits Update  
HMMWV Fitted Covers  
FMTV, Lunette Trailer Safety Chain Hooks  
BF Goodrich, Uniroyal Tire Recall  
MRAP MEL Guidance  
PLS Service Kits  
FMTV Door Seal NSN  
HEMTT A4 Spare Tire Strap Removal  
MRAP Match Model to NSN  
MRAP Stow Universal Combat Lock Tool  
M998 HMMWV Oil Pan Torque Fix  
HMMWV Fabricate Seat Covers



## SOLDIER SUPPORT

Advanced Combat Helmet Pads Not Liners  
Universal Camouflage Mechanic's Coveralls



## COMMO/ELECTRONICS

Type II Large Capacity Field Heater Solenoid  
FDECU Refrigerant and Contamination  
Night Vision Equipment Reminders

A PM Chuckie Brown Special

2



## AVIATION

35

2 AN/APR-39 Radar Warning Antenna Torque 35  
3 AH-64A/D Mounting Rocket Launchers 36-37  
4-5 AGSE FARP Helmet Parts Info 37-38  
6 UH-60 Series Tail Rotor Gearbox Hardware 39  
7



## MISSILES

40

Patriot Missile System Trailer Torque Rod Checks 40-41



## UAV

42

10-11 Shadow Unmanned Aircraft System PM 42  
12-13



## LOGISTICS MANAGEMENT

43

14 Army Publication DOL Website 43  
14-15 ARSNT Serial Number Checks 44  
16 GCS-Army Forum Opens 45  
17 TMs from Authorized Sources Only 46-47  
17 HMMWV LRA53 Mounting Explained in ETM 47  
PQDRs for CECOM Equipment 48-49



## SMALL ARMS

49

18-19 M2 Machine Gun M3 Recoil Amplifier 49  
21 M240-Series Machine Gun Parts NSNs 50-53  
New M249 Machine Gun New Buttstock Available 54  
M249 Machine Gun Gage NSN 54  
Tritium Fire Control Device Turn-in 55  
Spider Munition Control Unit Trainer Reset 56-57  
M224 Mortar MWO Upgrades 56-57

MSG Half-Mast McCanick's Answer Dept. 58-59

Connie's Post Scripts 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-GP)**  
**5307 Sparkman Circle**  
**Redstone Arsenal, AL 35898**

Or email to:

**half.mast@us.army.mil** or  
**usarmy.redstone.logsa.mbx.psmag@mail.mil**

Internet address:

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

By order of the Secretary of the Army:

**RAYMOND T. ODIERNO**  
General, United States Army Chief of Staff

Official:

*Joyce E. Morrow*

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

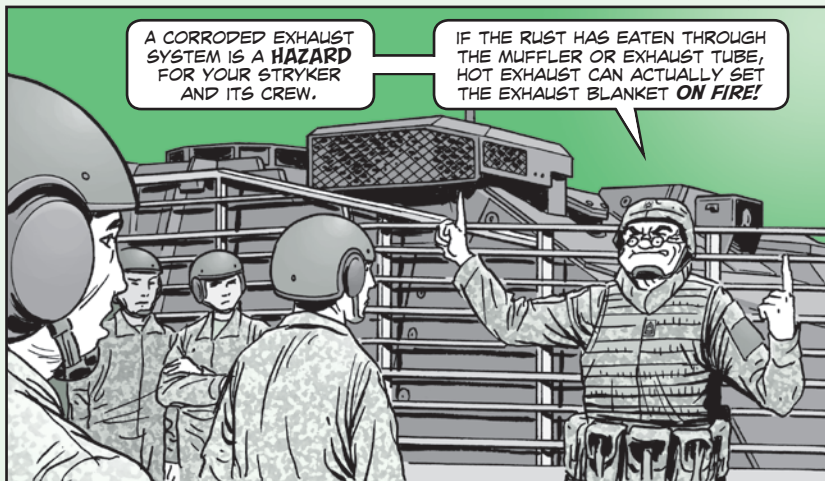
1229012

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-GP), 5307 Sparkman Circle, Redstone Arsenal, AL 35898-5000.



# Stryker... **STOP EXHAUST BLANKET FIRES!**



FOLLOW THE **INSPECTION INSTRUCTIONS** IN TACOM MAINTENANCE ACTION MESSAGE 12-009 **RIGHT NOW** TO MAKE SURE YOUR STRYKER'S EXHAUST SYSTEM IS **GOOD TO GO**.

YOU CAN ACCESS THE MESSAGE AT:  
[https://tulsa.tacom.army.mil/safety/mam/tacom\\_wn/MA12-009.html](https://tulsa.tacom.army.mil/safety/mam/tacom_wn/MA12-009.html)

INSIDE THE MESSAGE, YOU'LL FIND A LINK TO A **SPECIAL EXHAUST SYSTEM CHECKLIST** THAT TAKES YOU STEP-BY-STEP THROUGH THE INSPECTION PROCESS.

**DOWNLOAD** THE CHECKLIST AND USE IT TO **LOOK OVER** YOUR STRYKER.





**ZAP!**

**YEOW!**  
WHAT JUST  
HAPPENED  
TO MY  
BATTERIES!?!

## Cut Those Shortcuts Short

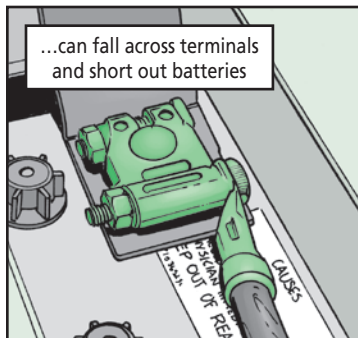
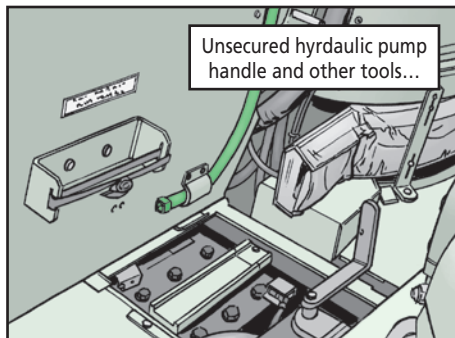
Drivers, a shortcut can go one of two ways. If it works, it'll get you where you want to be faster. If not, you might not get there at all.

The front and rear battery boxes on your Bradley are a good example. The covers for the battery boxes are supposed to be bolted down, but some drivers keep 'em loose. That shortcut makes it easier and quicker to access the batteries when you need to.

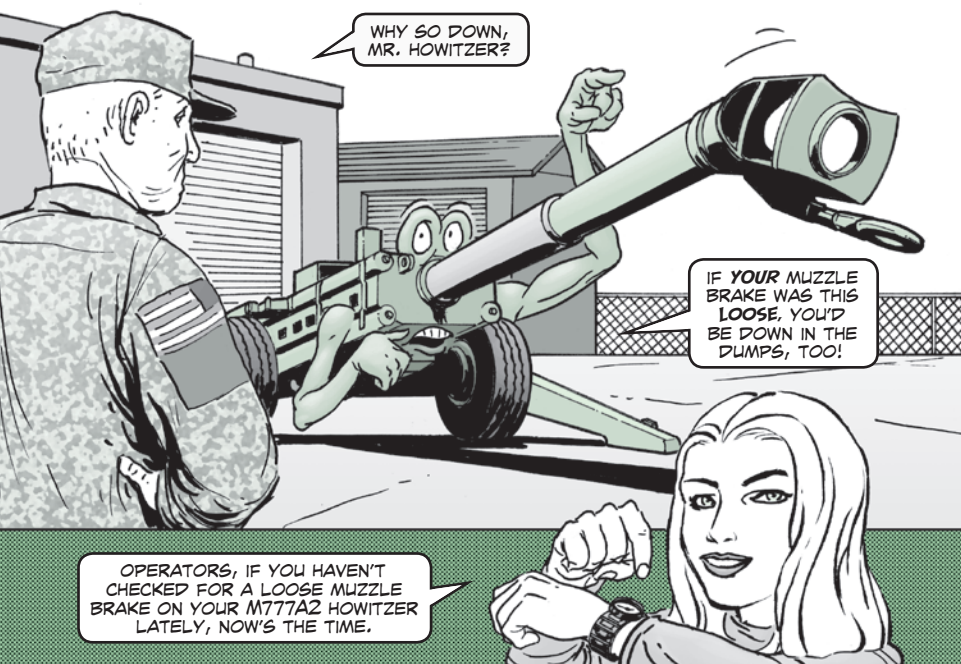
But here's the problem. Vibration during operation can bounce those unsecured covers around. That same vibration can rattle around loose tools and other items, like the hydraulic pump handle if it's not secured to the wall next to the battery boxes.

If any of those metal items fall into the battery box, they can short out the batteries. That great shortcut just cost you some serious downtime.

So keep the battery boxes covered. It may take a little more time to remove 'em when you need access to the batteries, but it sure beats the alternative!



# FIND THE **KEY** TO LOOSE MUZZLE BRAKE



Seems quite a few howitzers have been found with loose muzzle brakes lately. That can result in damage to the muzzle brake key. While that's not necessarily a safety concern, a damaged muzzle brake key can eventually damage the thrust collar teeth because of looseness or vibration.

To check for a loose muzzle brake, grab hold of the lunette and towing eye and try to move the muzzle brake up and down. If you notice any free play, look closely to see whether it's the towing eye or the muzzle brake that is moving.

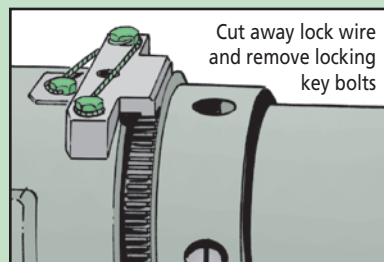
If there's no movement at all, you're good to go. If the towing eye is moving, make sure its long nut is properly torqued to 350 lb-ft.

If it's the muzzle brake that's loose, you've got some work to do.

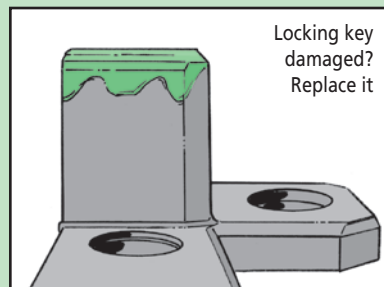
Push up and down on towing eye to check for movement



1. Use a set of side-cutting pliers to remove the lock wire from the locking key's mounting bolts.



2. Remove the locking key's bolts using a  $\frac{9}{16}$ -in socket wrench.
3. Lift out the locking key and check it for damage. Replace a bad locking key with NSN 5315-01-531-4476.



4. Use a spanner wrench to loosen and free the thrust collar from the muzzle brake.
5. Make sure the muzzle end of the cannon tube is visible to centered in the witness hole of the muzzle brake and the towing eye is at the 6 o'clock position. Then insert a 4"x 4"x 8' timber, NSN 5510-00-220-6178, into the end of the muzzle brake to support it.
6. Insert the muzzle brake alignment tool into the muzzle brake to keep it from rotating.

7. Rotate the thrust collar counterclockwise until it contacts the muzzle brake.
8. Using the spanner wrench, tighten the thrust collar while rocking the muzzle brake up and down with the wooden stave. Continue tightening the thrust collar until all play is gone from the muzzle brake.
9. With the muzzle brake alignment tool still installed, slide the key down to align with the teeth on the thrust collar. You may need to tighten the thrust collar a bit more to align it. **Never** loosen the collar to get it aligned.
10. Remove the muzzle brake alignment tool.
11. Apply CLP to the muzzle brake locking key and insert it so that the teeth on the key line up with the teeth on the thrust collar. Don't force it or you'll damage the locking key! If the locking key won't go in, reinstall the muzzle brake alignment tool and repeat step 9.
12. Remove the timber.
13. Install and torque the bolts to 30 lb-ft. Undamaged bolts can be reused.
14. Lock wire the front mounting bolt to the key. Then lock wire the two rear mounting bolts together.

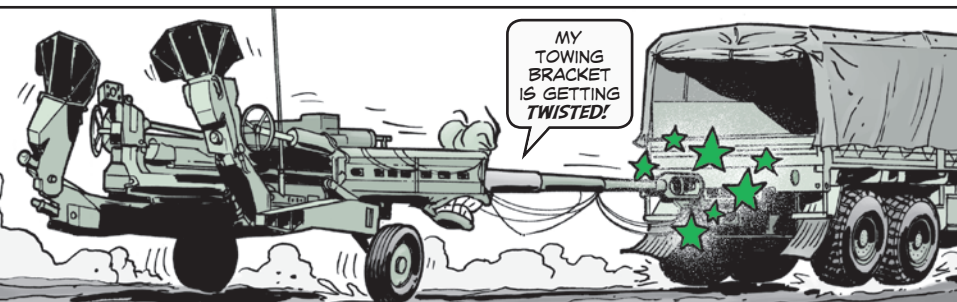
MAKE A NOTE OF THIS **NEW PROCEDURE** UNTIL IT'S ADDED TO THE IETM.

M777A2

Towed

Howitzer...

# KEEP TOWING LUNETTE TIGHT

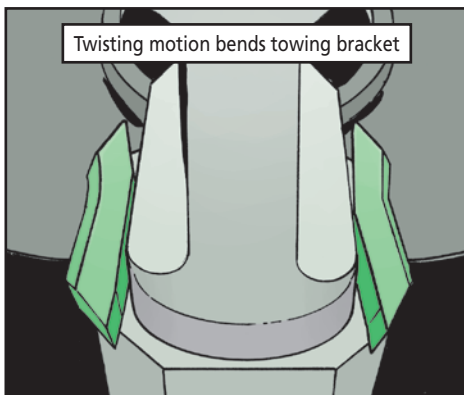


A LOOSE LUNETTE ON  
YOUR M777A2 HOWITZER'S  
MUZZLE BRAKE CAN CAUSE  
NO END OF **PROBLEMS!**

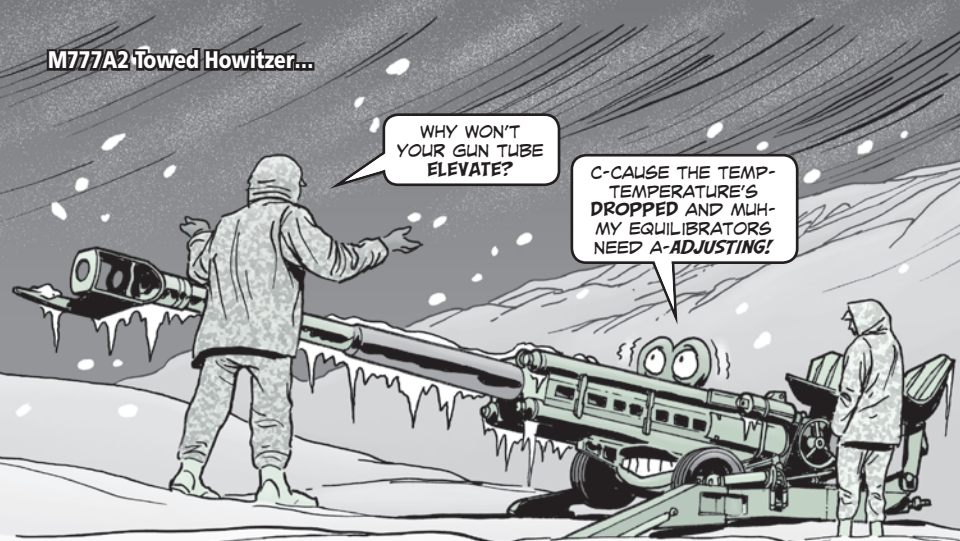


If the lunette isn't tightened down properly, it allows a twisting motion during towing. It doesn't take too much twisting to damage the muzzle brake's tow bracket. The fix requires a depot-level welding and re-machining of the bracket.

You can prevent that expensive damage by making sure both the washer, NSN 5365-01-528-9349, and long nut, NSN 5310-01-528-9347, are in place. Then keep the long nut torqued to 350 lb-ft.





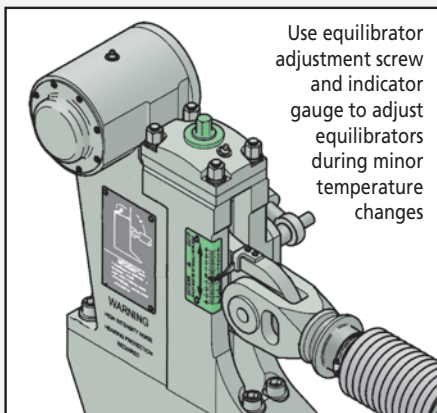


## TEMPERATURE CHANGE AFFECTS EQUILIBRATOR PRESSURE

Crewmen, it's not unusual to see some major temperature fluctuations when cold weather sets in. As temperatures fall, so does the nitrogen pressure in your M777A2 howitzer's equilibrators.

If the equilibrators aren't kept balanced during these temperature changes, it can get really hard to elevate or depress the cannon for firing.

If the cannon tube's balance can't be adjust +/- three divisions, call in your mechanic. He'll add additional nitrogen to the equilibrators to balance the cannon tube by following the Maintenance/ Top Carriage/Equilibrator System/ Charging the System procedure in the IETM's TM 9-1025--215-24&P.



Use equilibrator adjustment screw and indicator gauge to adjust equilibrators during minor temperature changes

By the way, you'll find lots more helpful M777A2 info at this website:

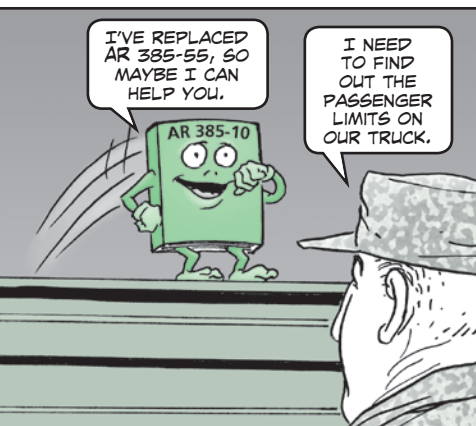
<http://www.mtripleseven.com>

# VEHICLE PASSENGER LIMITS UPDATE



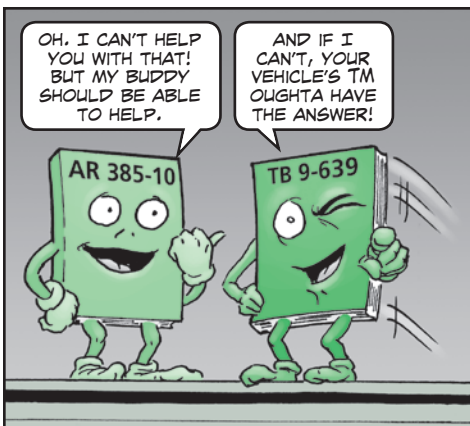
HOW MANY  
OF US CAN FIT  
IN THE TRUCK?

I DUNNO! AR 385-55 IS  
SUPPOSED TO TELL US,  
BUT I CAN'T FIND IT!



I'VE REPLACED  
AR 385-55, SO  
MAYBE I CAN  
HELP YOU.

I NEED  
TO FIND  
OUT THE  
PASSENGER  
LIMITS ON  
OUR TRUCK.



OH, I CAN'T HELP  
YOU WITH THAT!  
BUT MY BUDDY  
SHOULD BE ABLE  
TO HELP.

AND IF I  
CAN'T, YOUR  
VEHICLE'S TM  
OUGHTA HAVE  
THE ANSWER!

Dear Editor,

On Page 11 of PS 709 (Dec 11), you mention AR 385-55, *Prevention of Motor Vehicle Accidents*, as a source to get passenger limits for vehicles not listed in your article. This is incorrect, because AR 385-55 no longer exists. It was replaced by Chap 11 of AR 385-10, *The Army Safety Program*.

Also, AR 385-10 doesn't prescribe passenger limits, except to refer the reader to TB 9-639, *Passenger-Carrying Capacity of Tactical and Administrative Vehicles Commonly Used to Transport Personnel*, (which you mentioned on Page 10) or the appropriate vehicle TM.

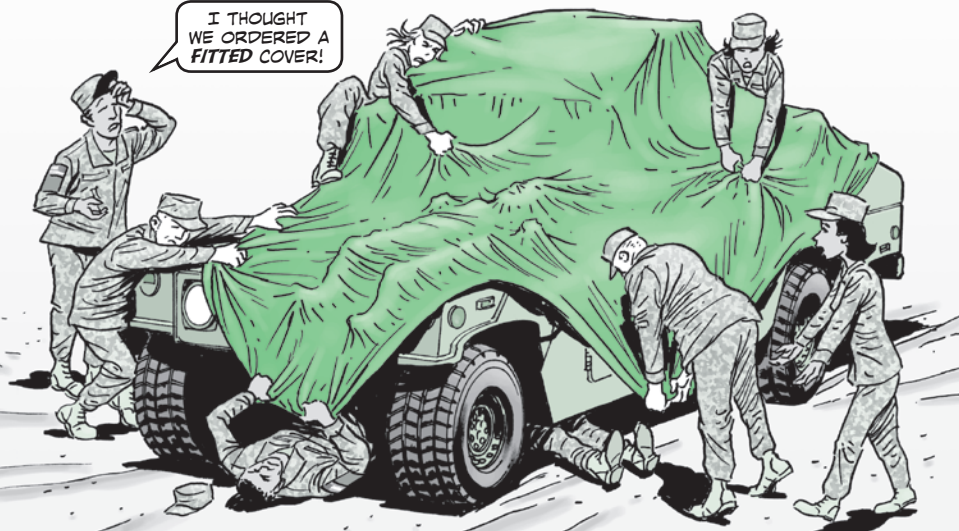
CW5 Christopher D. Volkert  
Division Maintenance Officer  
G-4, 4th Infantry Division  
Fort Carson, CO

*Editor's note: Thanks for bringing this to our attention, Chief Volkert. We made a mistake and appreciate the update.*

HMMWVs...

# Fitted Covers **NOT** a Perfect Fit

I THOUGHT  
WE ORDERED A  
**FITTED** COVER!



Dear Half-Mast,

When my unit ordered a few of the HMMWV covers you mentioned on Page 10 of PS 707 (Oct 11), we found out that NSN 2540-01-330-6177 isn't really a fitted cover. It brings a tan soft top for a 4-seater HMMWV. Which NSN brings a fitted cover that's a perfect fit?

SGT S.B.

Dear Sergeant S.B.,

Sorry about the confusion. Here's what you should know.

The "fitted" cover, NSN 2540-01-330-6177, is actually the crew area soft top cover. It can cover the turret tray if needed.

TACOM LCMC says that the tarpaulin, NSN 2540-00-587-2532, will fit over the turret with an objective gunner protection kit (OGPK) installed. But if you have the overhead cover also, it probably won't be fitted the way you'd like.

You can search in FED LOG for other tarp options. Or you can use one of the choices we've provided. Just add your own straps or band to hold the tarp in place if you want it to fit better.

Remember, these cover options are intended for use during storage, not while your HMMWV is in use.

*Half-Mast*



# HOOK-UP ON TRAILER SAFETY CHAIN HOOKS



Dear Editor,

Would you please tell your readers not to bend the hooks on trailer safety chains to fit the shackles on the back of FMTVs? You told us on Pages 11-13 of PS 673 about NSNs for larger hooks and extensions for the chains. That should've been enough to stop people from bending open hooks, but we're still seeing this in the field.

Robert L. Matson  
ARFORGEN-LBE Specialist  
TACOM LCMC  
Fort Hood, TX

**Editor's Note:** Can do, Sir. To give you a little history, the FMTV manufacturer increased the size of the FMTV's tow shackles to meet new air transport and rail tie-down requirements. When this happened, the tow shackles fit the size and weight of the FMTV trailer, but not the smaller hook size of the lunette trailers that must be towed.

Instead of bending open hooks, follow these steps to ensure the trailer safety chains are the right fit:

1. Remove the current hook and connecting link from the forward end of the trailer safety chains.
2. Couple the trailer to the FMTV at a 45-degree angle.
3. Attach the new safety chain hook to the FMTV tow shackle opposite the trailer angle.
4. Cross the safety chain under the trailer tongue. Then pull the end of the chain and eye or clevis end of the new hook toward each other.
5. Measure the distance between the eye or clevis of the hook and the end of the safety chain. Add the length of one more chain link. That will be the cut length for the extension chain.
6. The connecting link joining the  $\frac{3}{8}$ -in extended chain to the original  $\frac{3}{8}$ -in chain will add the correct amount of slack to the safety chain without its being too long or too short.

Your lunette trailer or dolly set has a  $\frac{3}{8}$ -in safety chain. Use these materials when your towing vehicle is an FMTV:



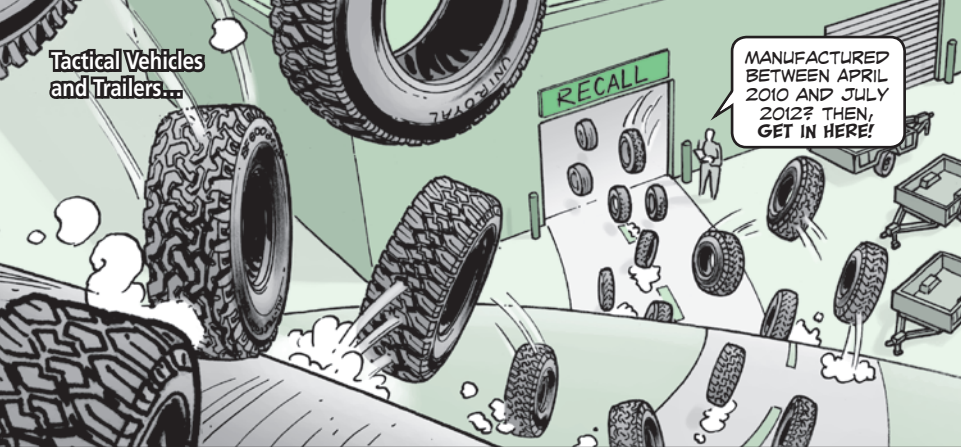
Length of chain extension to be determined by user

And here are a few special reminders:

When attaching to a truck that has no extended pintle, you'll need to shorten the trailer safety chains so they're not too long and drag or get caught on underbrush or commo wire. One way is to twist the chain several times to take up the slack.

If you have an M105A3, M101A2 or -A3, or a lunette trailer with a surge brake device, you have to adjust the length of the breakaway cable/chain. Make it a bit shorter than the safety chains. Then if the trailer disconnects from the tow pintle, the breakaway cable/chain will fully actuate the trailer brakes before the slack in the safety chains is taken up.

Consider this the latest and greatest guidance on this issue.



## BF Goodrich® and Uniroyal® RECALL Tires

**H**ave your vehicle's tires had tread loss or rapid air loss resulting from tread belt separation? That increases the risk of a crash! LT235/85R16 and LT245/75R16 tires that come with NSN 2610-01-148-1635 (BF Goodrich®) and NSN 2610-01-439-6224 (Uniroyal®) and were manufactured between April 2010 and July 2012 may fit this category.

These tires have been recalled, so check to see if you have them. You'll need to replace them. They belong on the M116A2 light cargo trailer, M101A2 cargo trailer, M1008 commercial utility cargo vehicle (CUCV), M1008A1 CUCV, M1010 CUCV, the CUCV ambulance, M1028 CUCV, M1028A1 CUCV, M1028A3 CUCV, M1031 CUCV and a variety of other commercial vehicles (light trucks, vans, ambulances) and light engineer equipment. The tires are either stocked in 65 SSAs throughout the Army, were originally supplied with the vehicle, or were supplied locally.

THIS TABLE AND THE DOT CODE ON YOUR TIRE SHOULD HELP YOU IDENTIFY THESE RECALLED TIRES.

THE **LAST FOUR DASHES** IN THE DOT SEQUENCE COLUMN INDICATE THE DOT PRODUCTION PERIODS.

Tire description	DOT sequence	DOT production periods (inclusive)
LT235/85R16 120Q LRE Uniroyal Laredo HD/H	BF0R JDUU ----	1310 to 2912
LT235/85R16 120Q LRE BF Goodrich Commercial T/A A/S	BF0R JD11 ----	1310 to 2912
LT245/75R16 120Q LRE Uniroyal Laredo HD/H	BE11 JDUU ---- BF11 JDUU ----	1310 to 0312 1311 to 5211
LT245/75R16 120Q LRE BF Goodrich Commercial T/A A/S	BE11 JD11 ---- BF11 JD11 ----	1310 to 0312 1311 to 5211

### Example of DOT Tire Code

Find DOT code on tire's sidewall and note last 4 digits of the date code indicating the 2 digit week and 2 digit year of production. 0402 means the 4th week of the year 2002

Department of Transportation  
Tire size code  
Date of manufacture

**DOT NC M7 ABCD 0402**

Manufacturer's plant code  
Group of optional codes

CONUS users with recalled tires can do a one-for-one replacement at no charge through a Uniroyal® or BF Goodrich® dealer. Find the one closest to your unit by calling 1-800-637-5527. Or you can visit online locators:

<http://www.uniroyaltires.com>

or

<http://www.bfgoodrichtires.com>

*No SDRs or PQDRs are needed.*

OCONUS users should submit an SF-364, *Supply Discrepancy Report*. Demilitarize recalled tires by cutting the bead and submitting a completed DD Form 1348-1 to DLA's Disposition Services. **Respond by 31 Dec 2012.**

Questions? Contact DLA for assistance:

[DSCC.TiresTeam@dla.mil](mailto:DSCC.TiresTeam@dla.mil)

### MRAP MEL Guidance

Need maintenance expenditure limit (MEL) guidance for inspecting battle and catastrophic damage to your Army MRAP vehicles? Take a look at TACOM maintenance action message 12-018:

<https://tulsa.tacom.army.mil/SAFETY/message.cfm?id=MA12-018.html>

The link to the MEL guidance document is inside this message. You'll need your CAC card to open this link.

### PLS Service Kits

Get the annual service kit for the palletized loading system (PLS) with NSN 2590-01-539-6378. That kit also includes the semi-annual kit, NSN 2590-01-521-9985. Make a note until the kits are added to TM 9-2320-364-14&P in EM-0206, *IETM for M1074, M1075, M1076, and M1077 PLS* (Apr 09).

### FMTV Door Seal

Get the door seal for the family of medium tactical vehicles with NSN 5330-01-568-0585. This NSN replaces the parts info shown as Item 2 in Fig 201 of TM 9-2320-365-24P and Item 2 in Fig 268 of TM 9-2320-366-24P.



MRAPS...

# WHAT'S OUT THERE?

I HAVE NO IDEA!

Dear Half-Mast,  
Where can I find the model numbers for the various types of MRAPs?

For example, the HEMTT has the M977 cargo, M978 fuel tanker and M984 wrecker. Do MRAPs have model numbers like that?

MSG R.F.

MSG R.F., THE MINE RESISTANT AMBUSH PROTECTED (MRAP) VEHICLES HAVE BEEN REAL LIFE SAVERS IN IRAQ AND AFGHANISTAN.

HERE'S AN NSN LIST OF ALL THE CURRENT MODELS...

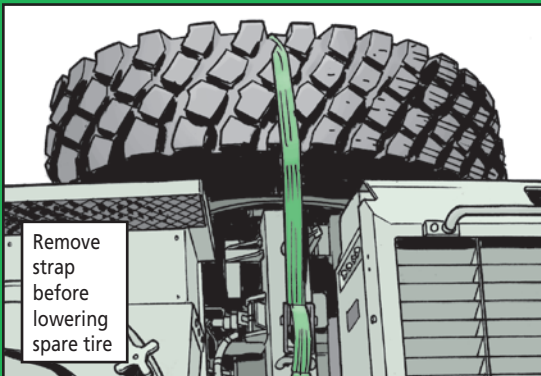
Model	NSN 2355-
M1232 RG33L-CAT2	01-552-4677
M1233 RG33 HAGA Ambulance	01-558-1053
M1237 RG33 Plus	01-562-6675
M1237A1 RG33 HAGA Plus	01-564-4340
M1238 RG33 SV SOCOM	01-557-3100
M1238A1 RG33 ASV (SOCOM)	01-596-6962
M1239 RG33 AUV (SOCOM)	01-572-7419
M1224 MaxxPro Base	01-553-4634
M1224A1 MaxxPro MEAP	01-561-0281
M1234 MaxxPro Plus	01-562-6146
M1234A1 MaxxPro Plus Ambulance	01-562-6152
M1235 MaxxPro Dash	01-567-2879
M1235A1 MaxxPro Dash ISS	01-582-6466
M1235A2 MaxxPro Dash ISS Ambulance	01-594-2407
M1249 MaxxPro Recovery Vehicle (MRV)	01-590-2719
MK5A RG31-CAT 1	01-552-5581
M1221 RG31-CAT 2	01-552-5169
M1221A1 RG31A2 DO4	01-568-7688
M1221A2 RG31A2 DO4 W/RTR	01-572-7980
M1236 RG31A3 EM	01-570-7996
XM1223 Cougar-CAT 1 & -CAT 2	01-552-5565
M1220 BAE TVS Caiman Base	01-561-2717
BAE TVS Caiman Plus	01-590-1660
M1248 BAE TVS CMTV	01-561-2717
M1240 M-ATV	01-575-9632
M1245 M-ATV (SOCOM)	01-586-8070
M1240A1 M-ATV	01-596-1330

HEMTT A4...

## Spare Tire Strap Snap

Before removing the spare tire on top of your HEMTT -A4 truck, don't forget to first take off the strap that holds the tire in place. Otherwise, the strap will break when you lower the spare tire.

If you need a replacement strap, get it with NSN 3990-01-577-2673. This NSN isn't in the TM yet, so make a note until it's updated.



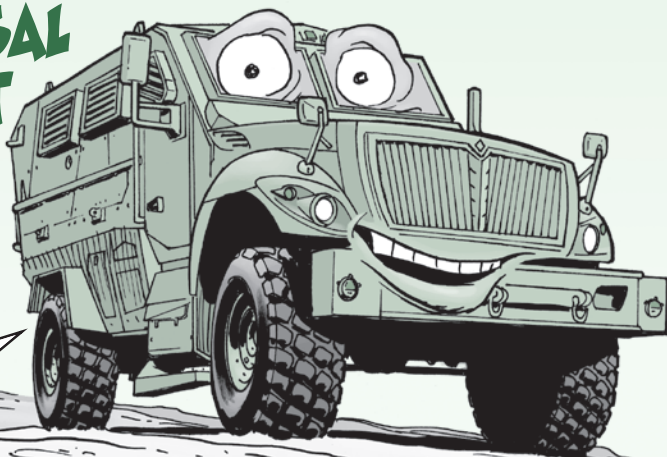
Remove strap before lowering spare tire



MRAPs...

# UNIVERSAL COMBAT LOCK TOOL

GET A  
UNIVERSAL  
COMBAT LOCK  
TOOL AND KEEP  
IT HANDY IN MY  
BII STOWAGE  
BOX!

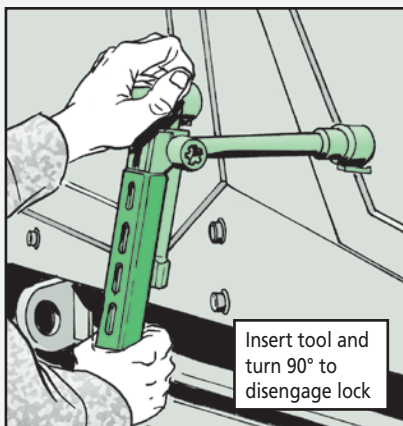
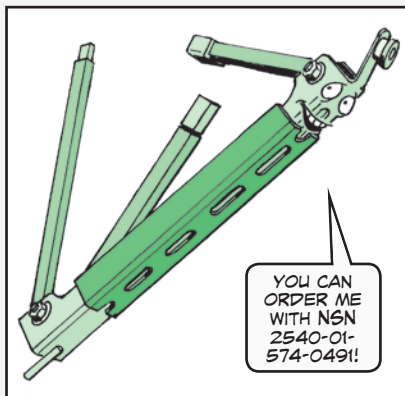


**H**elp is on the way!

Don't get trapped in your MRAP in the event of a vehicle rollover or explosion. For emergency entry, NSN 2540-01-574-0491 gets a universal combat lock tool (UCLT). It can be used by rescuers to open the combat locks on each of the different MRAP vehicles.

Just insert the tool into the vehicle's combat lock housing and turn it 90 degrees to disengage the lock.

Keep the UCLT in the vehicle's exterior BII stowage box. That way it can be grabbed quickly in an emergency.



For more information, check out TACOM SOUM 10-004:

[https://tulsa.tacom.army.mil/safety/soum/tacom\\_wn/soum10-004d.html](https://tulsa.tacom.army.mil/safety/soum/tacom_wn/soum10-004d.html)

HMMWV...

HO HO HO!

## CORRECT M998 Oil Pan Torque

Dear Half-Mast,

One of our mechanics was replacing an M998 oil pan following instructions in the HMMWV IETM, TM 9-2320-280-14&P (EM 0254, Jul 05). But he found a problem. The torque values listed for an oil pan bolt caused the bolt to snap.

What torque should we use?

CW4 B.B.

Dear Chief B.B.,

*The solution is a snap, Sir.*

*Mechanics should tighten the two studs, NSN 5307-01-196-4717, and 20 capscrews, NSN 5305-01-150-9781, to 48-120 lb-in. Torque the two large capscrews, NSN 5306-01-230-3354, to 156-240 lb-in.*

*You can find the correct torque info on Page 3-8 of TM 9-2320-280-20-2 (Jan 96, w/Ch 3, Jul 04) and Page 2-166 of TM 9-2815-237-34 (Jan 96, w/Ch 2, Jul 04).*

*We recommend you make a note in the -14&P IETM until the updated manual is released.*

*Half-Mast*

Dear Editor,

On Page 13 of PS 694 (Sep 10), you advised SSG J.C.U. to get seat covers directly from a vendor, but I have a better idea. Why not go to the fabric repair facility on post and have the fabric repairer make a new seat cover in the shop?

I was a fabric repairman, and we could turn out seat covers and other custom products by the roll.

Back then, Soldiers at Ft. Wainwright, AK, could go to the installation maintenance facility. They would remove the old cover and use it as a template. A new one could be sewn up in 2-3 days max. This would cut shipping costs, reduce required logistical support and take a huge chunk out of the turnaround time.

I appreciate your continued support for our troops.

Dan Johnsen  
DA Civilian  
USAG Humphreys,  
Korea

**Editor's note:** Mr. Johnsen, thanks for sharing this fab option with us. Readers, if you don't have access to a fabric shop that can help you with this, you'll need to order a new seat from your TM. The seat cover vendor, Isringhausen, Inc., no longer sells individual seat covers.

## Seat Cover Repair Option

# PADS FINER THAN LINERS

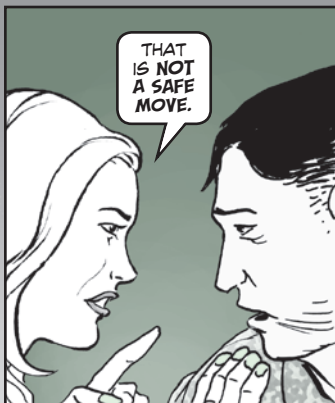
RECENTLY, SOME SOLDIERS HAVE BEEN REMOVING THE SUSPENSION PADS FROM THEIR ADVANCED COMBAT HELMETS (ACH).



WE'VE BEEN, UH, REPLACING THE PADS WITH THE GENTEX® THERMOPLASTIC LINER (TPL®) KIT.

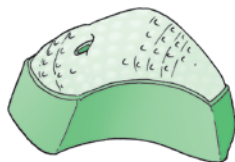


THAT IS NOT A SAFE MOVE.



THE TPL® KIT IS DESIGNED TO MAKE AVIATION HELMETS MORE **COMFORTABLE**.

IT'S **NOT** INTENDED FOR USE IN THE ACH.



THE LINER INSIDE AN ACH **DOES NOT** PROTECT YOUR HEAD AGAINST BLUNT IMPACT...



TPL is for aviation helmets, **NOT** for ACH

...BUT THE ACH SUSPENSION PADS **DO** PROTECT YOU.



SUFFERING A HARD BLOW TO THE HEAD WHILE WEARING THE LINER COULD GET YOU

**INJURED OR DEAD.**

IF YOU HAVE THE TPL® KIT INSTALLED IN YOUR ACH, **REMOVE IT.**

REPLACE IT WITH A SET OF ACH SUSPENSION PADS, LIKE IT SAYS IN WP 0021 OF TM 10-8470-204-10 (MAY 10).



## Two Pad Sizes

Suspension pads come in two sizes:  $\frac{3}{4}$  inch thick (also known as size 6), and 1 inch thick (also known as size 8).

You can order size 6 pads individually or in sets of seven. A set includes one circular crown pad, two trapezoidal pads and four oblong/oval pads.

You can order size 8 pads individually, but not in sets. Also, the crown pad is not available in size 8. You must order it in size 6.

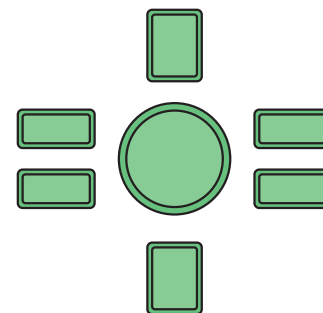
### Size 6 Suspension Pads

Description	Qty	NSN 8470-
Set	1	01-546-9420
Circular crown	1	01-546-9415
Trapezoidal	1	01-546-9407
Oblong/oval	1	01-546-9356

### Size 8 Suspension Pads

Description	Qty	NSN 8470-
Trapezoidal	1	01-547-2795
Oblong/oval	1	01-547-2802

Pads come in two sizes...



... $\frac{3}{4}$  inch thick and 1 inch thick

For more information on suspension pads, see the article on pages 48-51 of PS 704. You'll find it at:

<https://www.logsa.army.mil/psmag/archives/PS2011/704/704-48-51.pdf>

## Ground Precautionary Action

Read the whole story in TACOM Ground Precautionary Action (GPA) Message 12-014. You'll find the message on the TACOM-Unique Logistics Support Applications (TULSA) website:

<https://tulsa.tacom.army.mil>

From the homepage, click on Safety First in the left-hand banner. When you reach the TACOM LCMC Safety First web page, search on Ground Precautionary Actions.

GPA 12-014 applies to all five ACH shell sizes:

ACH Size	NSN 8470-
Sm	01-529-6302
Md	01-529-6329
Lg	01-529-6344
X-lg	01-529-6365

## ID the TPL® Kit

Each kit contains two labels. One label has the size and part number. The other label identifies the liner as Individual Fitted Helmet Liner made by Gentex®.

The TULSA website has a Word document that identifies the kits by size, NSN, PN and ALSE number:

[https://tulsa.tacom.army.mil/SAFETY/gpm/tacom\\_wn/TPLNSNTableLink.docx](https://tulsa.tacom.army.mil/SAFETY/gpm/tacom_wn/TPLNSNTableLink.docx)

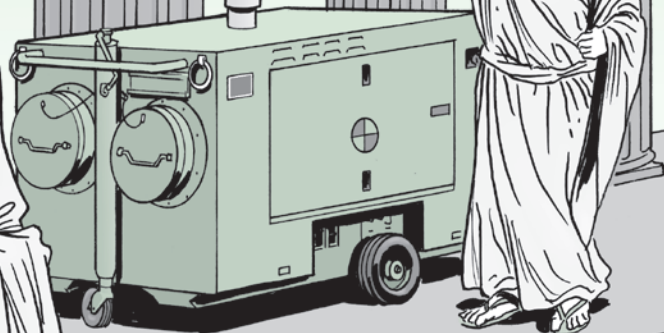
Again, none of the TPL® liners should be used in the ACH.



## Large Capacity Field Heater, Type II...

# THE FAULT, DEAR BRUTUS...

...MAY NOT BE IN OUR MAIN CONTROL BOXES, BUT IN OUR SOLENOIDS!



Dear Editor,

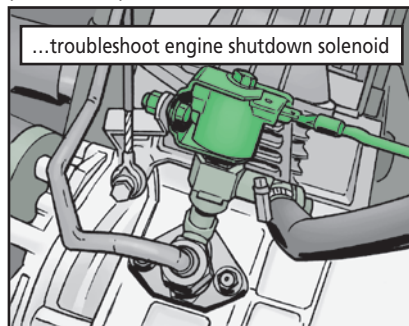
Recently, I was running some tests on several large capacity field heaters (LCFH), Type II. One of the heaters failed and fault code H562 appeared on the LED display of the operator control panel. Fault code H562 indicates a short circuit at the diesel engine fuel solenoid relay driver on the main control box printed circuit board.

WP 0012-12 of TM 10-4520-265-14&P (Jun 09) calls for the following action if you get fault code H562:

- 1 Turn the power switch to OFF and disconnect the negative battery terminal.
- 2 Replace main control box assembly like it says in WP 0074 of the TM.



If you get fault code H562...



...troubleshoot engine shutdown solenoid

After some troubleshooting with a multimeter, I found the real problem: A shorted engine shutdown solenoid triggered fault code H562. The solenoid reading was .004 ohms. It should have been around .075 to .078 ohms.

So, before you replace the main control box, check the resistance at the engine shutdown solenoid. If you get a low reading, it's the solenoid that needs replacing, not the main control box.

The solenoid, NSN 4810-01-568-7755, is Item 185 in Fig 8 (Sheet 10 of 10) of the TM.

SSG Rafael Rosario  
CSMS  
110th Maint Co  
Devens, MA

**Editor's note:** Great work, Sergeant. You saved a bundle by replacing the engine shutdown solenoid. It costs a small fraction of what the main control box costs. The TM is in line for an update. Until then, make a note to change the corrective action on WP 0012-12, Table 1. LCFH Type II Fault Code Troubleshooting Procedures. If you get fault code H562, troubleshoot the engine shutdown solenoid before you do anything else.

Clothing...

## WHAT THE WELL-DRESSED MECHANIC WEARS

PLANNING TO DO A LITTLE MECHANICAL WORK?

FEEL THE NEED TO "BLEND IN"?

HERE ARE THE AVAILABLE SIZES...

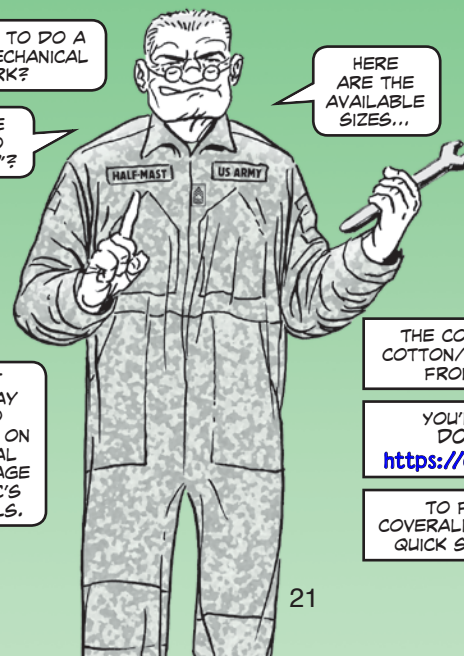
Size	NSN 8415-
Small	01-534-7375
Medium	01-534-7376
Large	01-534-7377
X-large	01-534-7383
XX-large	01-534-7387

THEN IT MIGHT PAY YOU TO STOCK UP ON UNIVERSAL CAMOUFLAGE MECHANIC'S COVERALLS.

THE COVERALLS ARE MADE OF COTTON/NYLON TWILL AND HAVE A FRONT, SLIDE FASTENER.

YOU'LL FIND THEM AT THE DOD EMAIL WEBSITE:  
<https://dod-email.dla.mil/acct/>

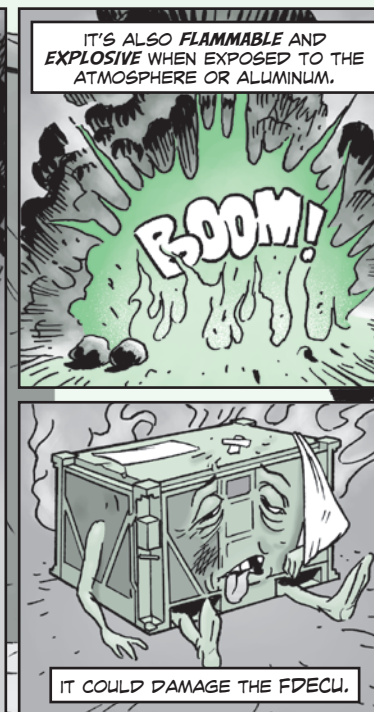
TO FIND OTHER KINDS OF COVERALLS ON THE WEBSITE, DO A QUICK SEARCH FOR COVERALLS.





# CONTAMINATED REFRIGERANT A GRAVE RISK

UNITS THAT HAVE FIELD DEPLOYABLE ENVIRONMENTAL CONTROL UNITS (FDECU), MODELS 2, 3, 4, 5 AND 9, NSN 4120-01-449-0459, PAY CLOSE ATTENTION!

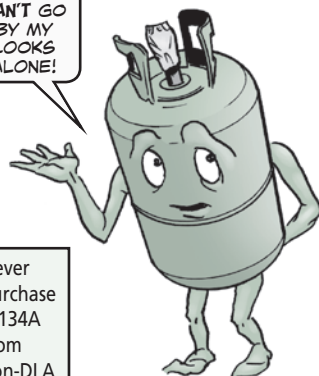


## Bad Refrigerant

The root of the refrigerant problem is the source of supply. The FDECU uses R-134A refrigerant, which must be ordered only through the Defense Logistics Agency (DLA). R-134A ordered through DLA is considered safe. But R-134A purchased OCONUS from non-DLA sources may be contaminated with R-40.

Cylinders holding contaminated R-134A may have legitimate-looking vendor's labels that say the contents are R-134A. Don't be fooled. These labels are forged. You can't be sure of the contents of the cylinder just by looking at the label. You must check the supply records.

YOU CAN'T GO BY MY LOOKS ALONE!



Never purchase R-134A from non-DLA sources

## Which FDECUs Are at Risk?

These FDECUs are suspected of having contaminated R-134A:

- FDECUs that have been deployed OCONUS in the last 36 months.
- FDECUs that have not been deployed OCONUS but have no records proving repairs and services were done using DLA-certified refrigerant.

FDECUs that have not been deployed OCONUS and have records proving repairs and services were done using DLA-certified refrigerant are considered safe.

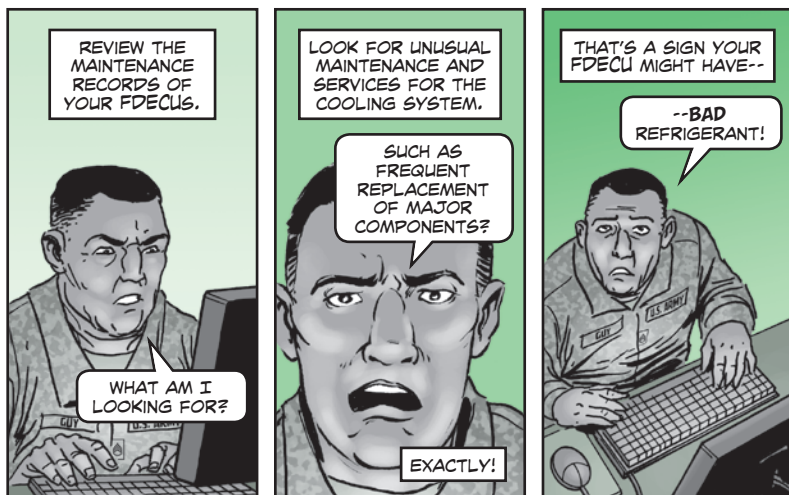
## WARNING!

If you suspect your FDECU has contaminated refrigerant, do not service or remove the refrigerant from the FDECU. Do not perform preventive maintenance checks and services on the refrigeration system components, tubing, fittings and outside coil. Do not perform scheduled or unscheduled maintenance. Do not prepare the FDECU for shipment or storage.

PS MORE



## Review and Report



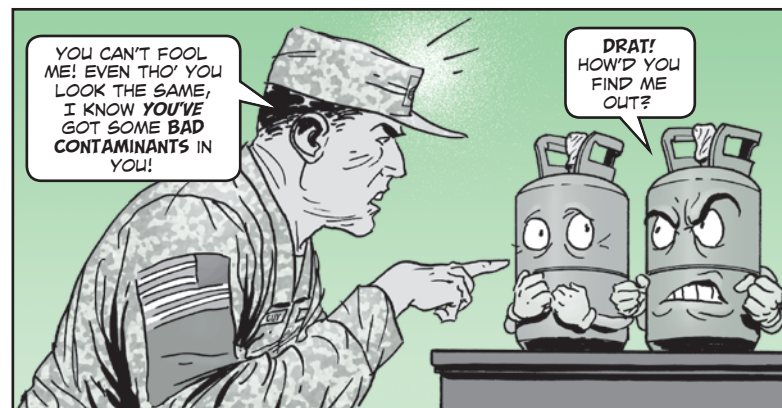
Instead, identify the model, serial number and location of the suspect FDECU. Report suspect FDECU and unusual maintenance and services to CW5 Bobby McQuaid, HQDA G-4, (703) 614-0747, or email:

[bobby.mcquaid@conus.army.mil](mailto:bobby.mcquaid@conus.army.mil)

Or contact Sydney Mapp, Integrated Logistics Support (ILS) Manager, CECOM Logistics and Readiness Center, DSN 648-4737, (443) 395-4737, or email:

[sydney.w.mapp3.civ@mail.mil](mailto:sydney.w.mapp3.civ@mail.mil)

## Get the Real Thing



FROM NOW ON, ORDER R-134A REFRIGERANT ONLY THROUGH DLA.

DEPOTS AND CONTRACTORS MUST ALSO ORDER THROUGH DLA.

HERE'S A HANDY CHART OF THE AVAILABLE CYLINDERS OF R-134A...

Cylinder (in lbs)	Application	NSN 6830-
30	Non-automotive	01-390-9622 01-561-7307
30	Automotive	01-412-6362 01-534-3686 01-559-0817
43	Non-automotive	01-534-3775* 01-534-4652 01-559-0837*
43	Automotive	01-370-6207

\*These NSNs are not on the AMDF. Order them on DD Forms 1348-6 and put "NSN not on AMDF" in the REMARKS block.

FOR THE COMPLETE STORY, GET **CECOM SAFETY OF USE MESSAGE (SOU) 2012-001**.

THE MESSAGE DISCUSSES ROOT CAUSES, HAZARDS, INSPECTION, REPORTING AND MORE.

IT ALSO INCLUDES AN ATTACHMENT WITH TWO SPREADSHEETS...



- one for recording FDECU serial #, location, dates deployed and last date serviced
- another for recording cylinder size (lb), brand name and quantity on hand

You'll find the SOUM at the US Army CECOM Directorate for Safety website:  
<https://cecomsafety.apg.army.mil/safety/safety%20messages/>



# Say Good Night to Night Vision Problems

Dear Editor,

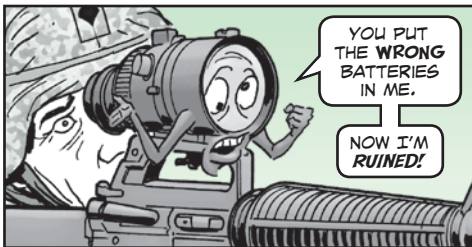
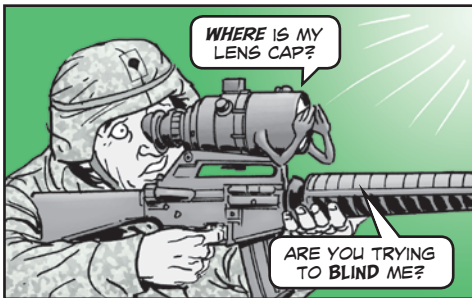
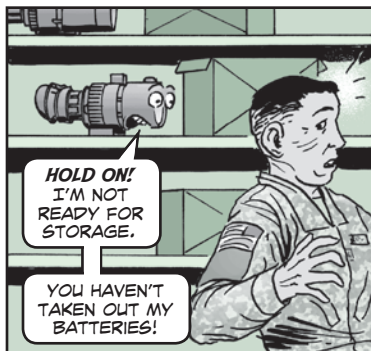
Here at the Ft Carson DOL, we run into problems with night vision goggles and sights that are costing units thousands of bucks. But remembering a few rules can stop that money from going down the drain:

***Don't leave batteries in night vision equipment.*** Sounds pretty basic, but each year we lose lots of sights and goggles because the batteries weren't removed when the equipment was stored. The batteries leak and that eventually destroys the sights. Before you turn in your goggles or sight, remove the batteries. Armorers should double-check that the batteries have been removed before they store the night vision equipment. Armorers should also make sure the goggles or sight was given a PMCS and a DA Form 2404 was completed.

***Leave the lens caps and lens interference filter (LIF) on as much as possible.*** The caps protect the sights and goggles from the sun and bright lights and the LIF protects against lasers, both of which can ruin the image intensifier. The intensifier can cost as much as \$2,500. If the caps are missing, the sight or goggles are NMC.

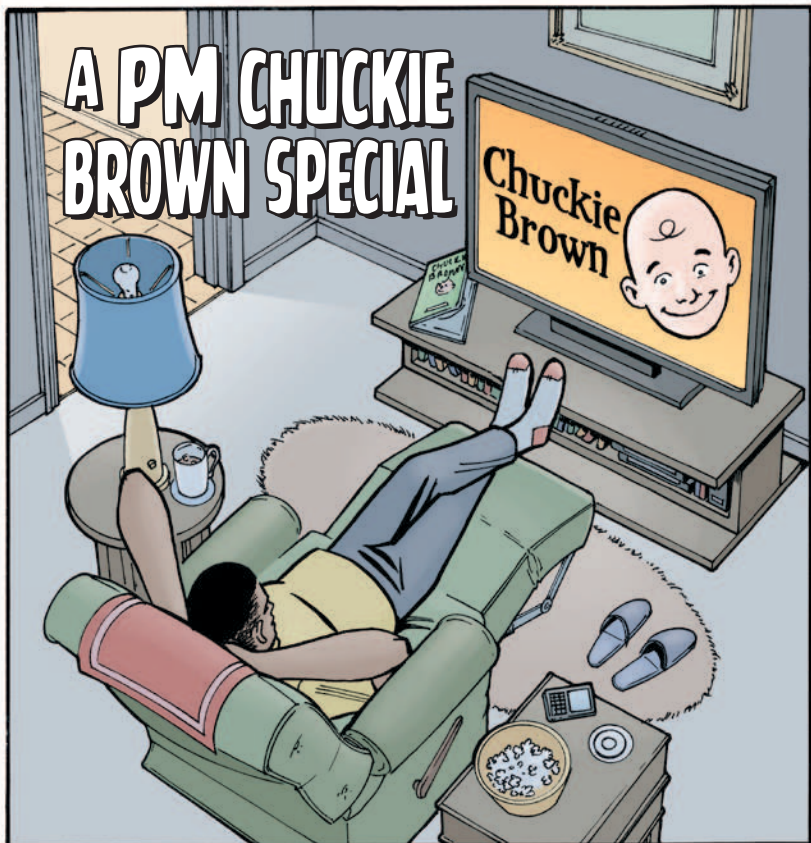
***Don't substitute batteries in the night vision goggles or sights.*** The wrong batteries can put out the wrong voltage, which could ruin the goggles or sight's circuitry. Use only the batteries specified by the -10 TM.

Nick Valdez  
DOL  
Ft Carson, CO

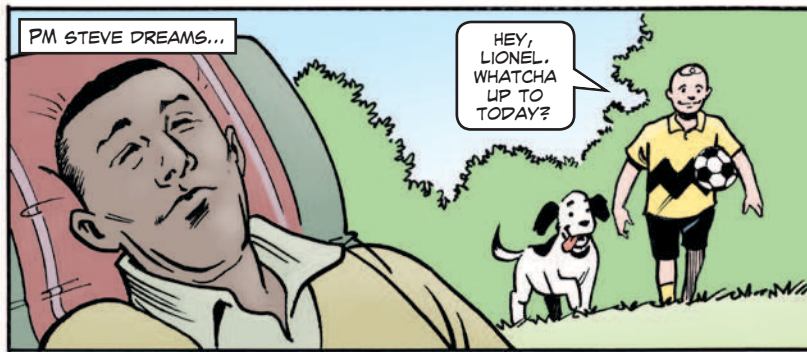


*Editor's note: I can clearly see these are good night vision tips. Thanks for sharing.*

# A PM CHUCKIE BROWN SPECIAL

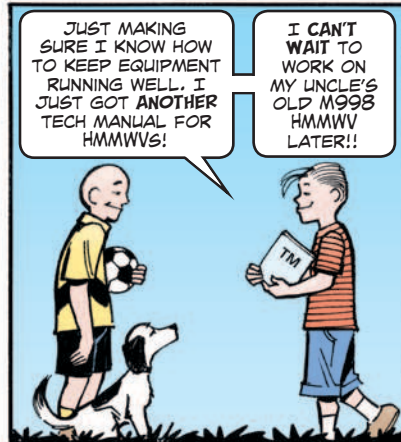






PM STEVE DREAMS...

HEY,  
LIONEL.  
WHATCHA  
UP TO  
TODAY?

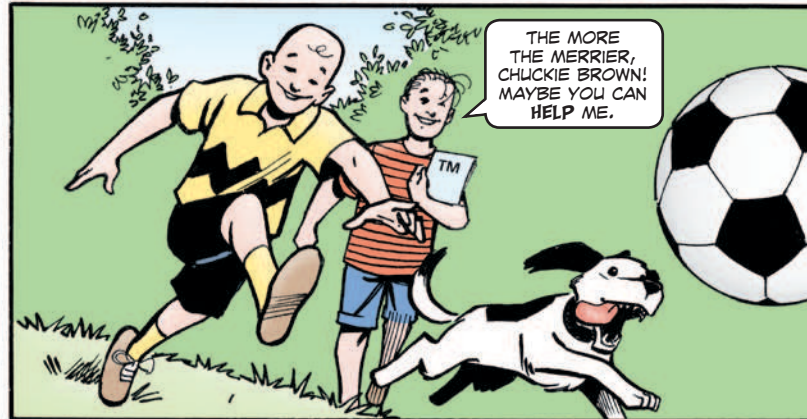


JUST MAKING  
SURE I KNOW HOW  
TO KEEP EQUIPMENT  
RUNNING WELL. I  
JUST GOT **ANOTHER**  
TECH MANUAL FOR  
HMMWVS!

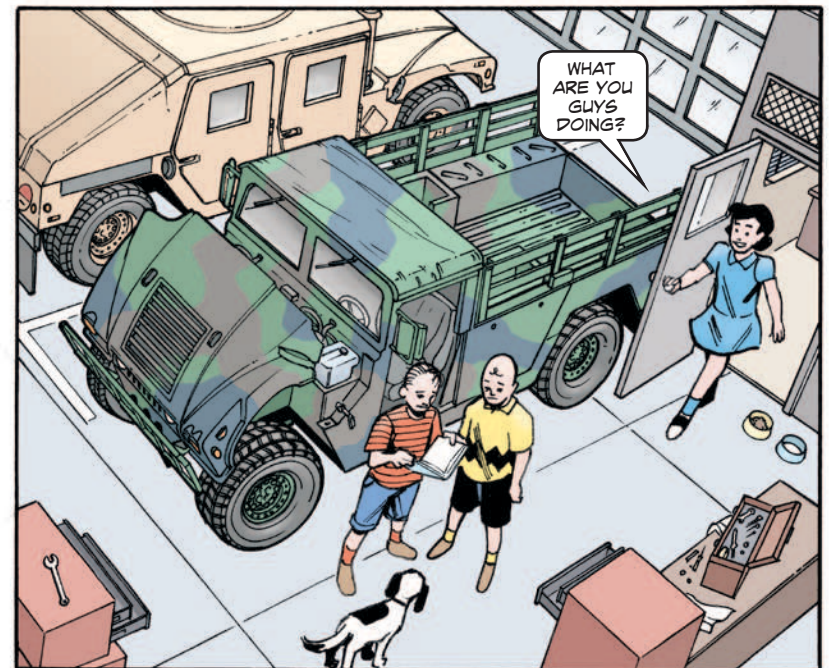
I CAN'T  
WAIT TO  
WORK ON  
MY UNCLE'S  
OLD M998  
HMMWV  
LATER!!



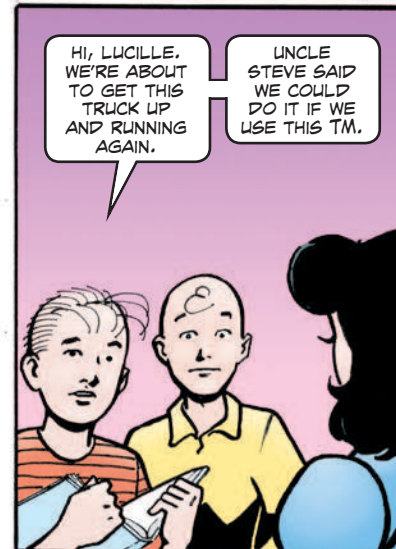
WELL, I'M NOT  
DOING **ANYTHING**.  
JUST PLAYING  
AROUND WITH MY  
SOCCER BALL. MIND  
IF SNUPPY AND I  
TAG ALONG?



THE MORE  
THE MERRIER,  
CHUCKIE BROWN!  
MAYBE YOU CAN  
HELP ME.



WHAT  
ARE YOU  
GUYS  
DOING?



HI, LUCILLE.  
WE'RE ABOUT  
TO GET THIS  
TRUCK UP  
AND RUNNING  
AGAIN.

UNCLE  
STEVE SAID  
WE COULD  
DO IT IF WE  
USE THIS TM.

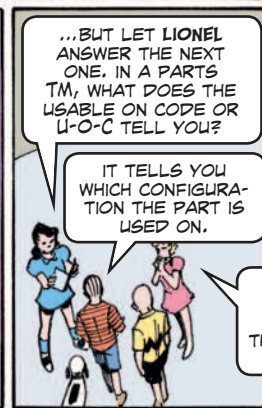
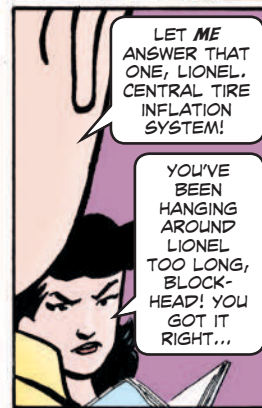
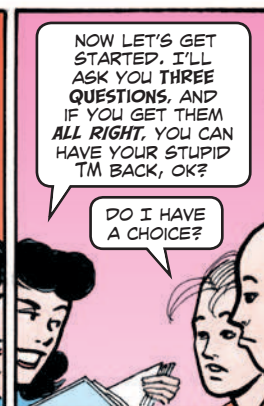
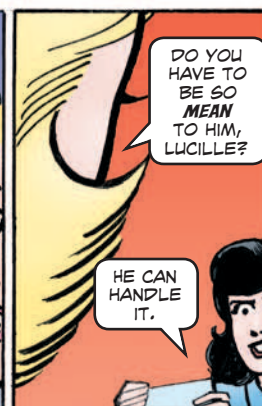
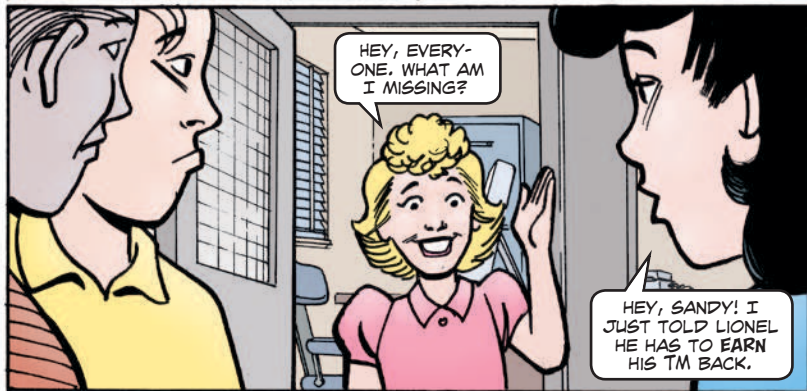


I JUST DON'T  
GET YOU AND  
UNCLE STEVE'S  
FASCINATION  
WITH PREVENTIVE  
MAINTENANCE. I  
MEAN, WHAT'S  
THE **BIG DEAL**?

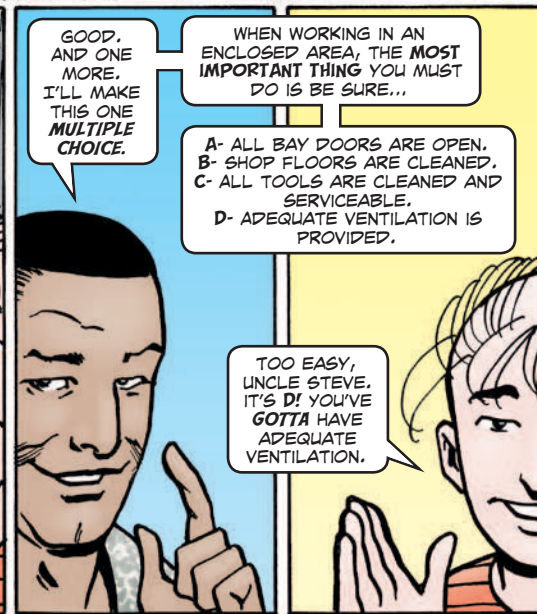
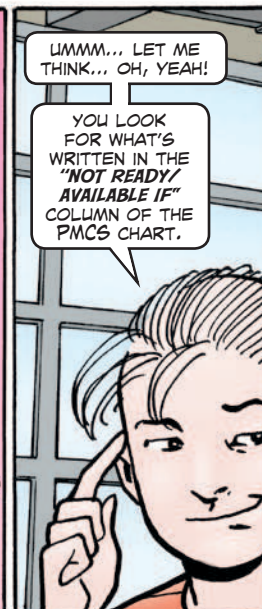
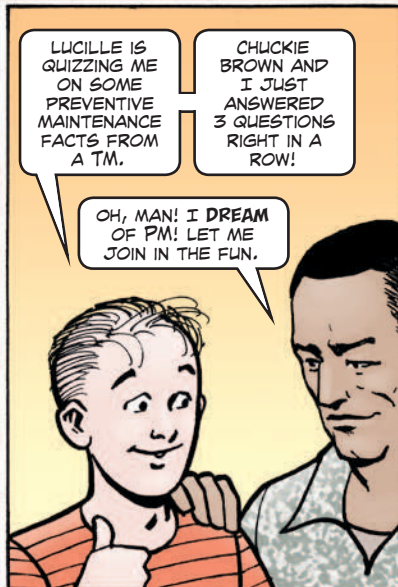
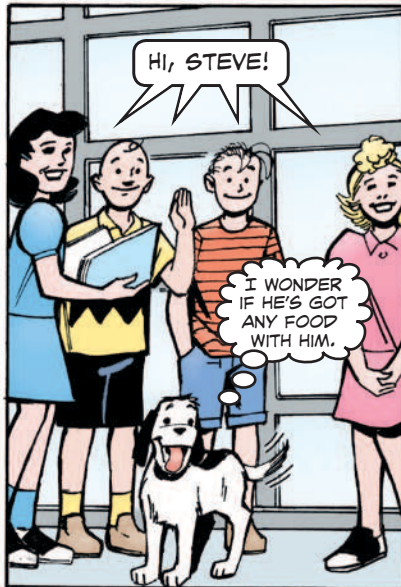
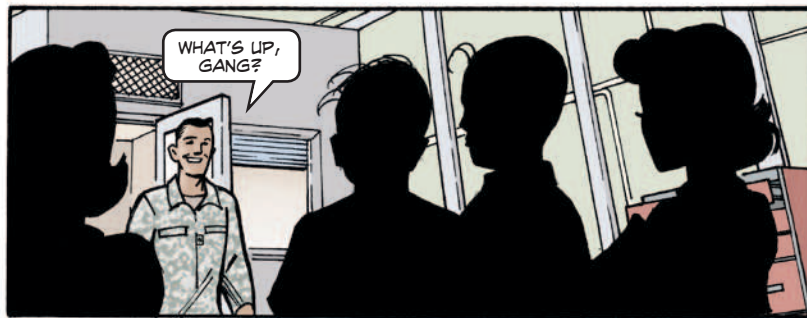


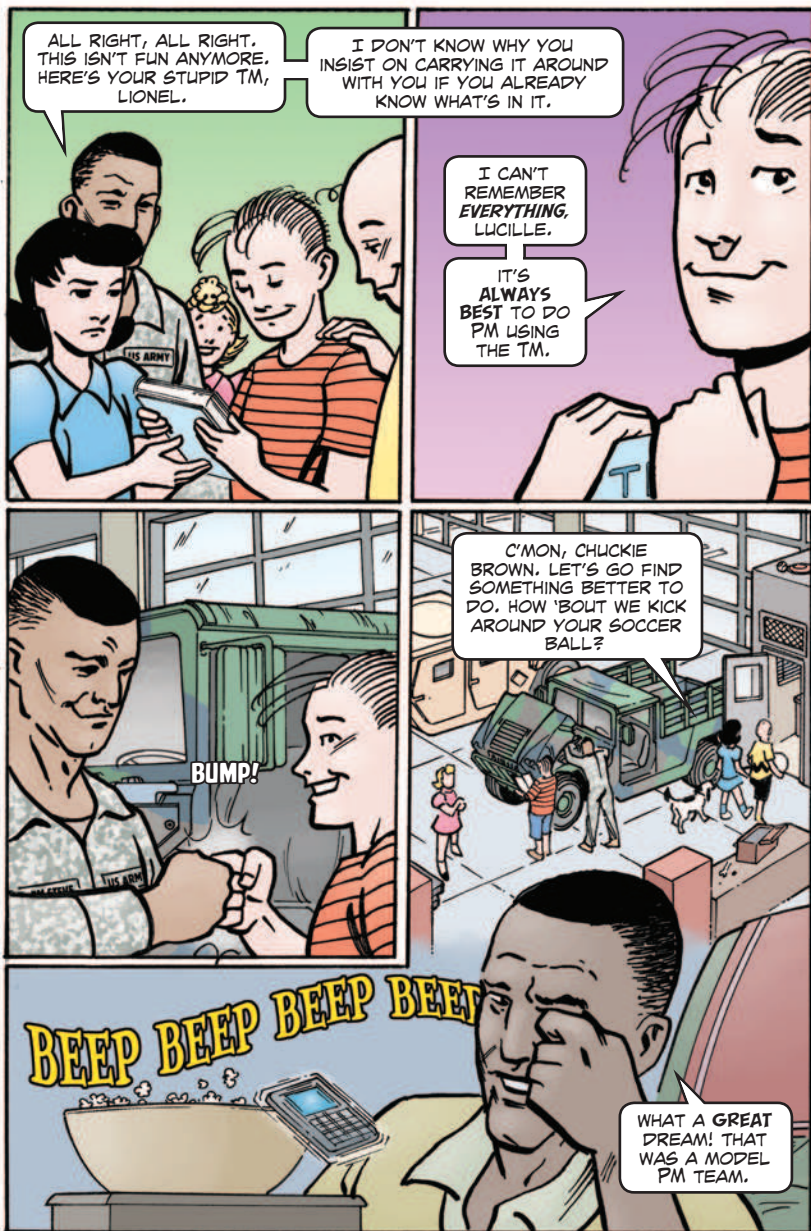
I'LL  
PRETEND  
YOU **DIDN'T**  
SAY THAT.













# TOO TIGHT IS TOO MUCH!



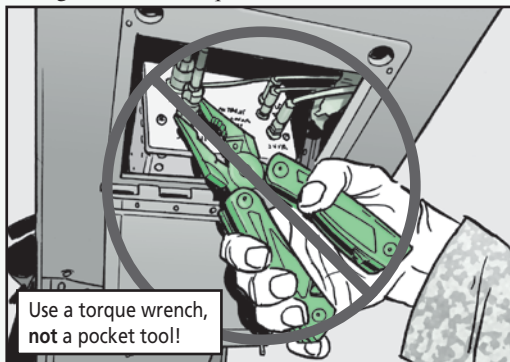
**M**echanics, the AN/APR-39 radar warning antenna connectors and receivers in your helicopters shouldn't be as tight as can be.

It doesn't matter what aircraft you're working on, these connectors and receivers are always 8 lb-in of torque. Any more than that and you've got broken connectors and wires.

For example, the antennas in the front of the aircraft and the APR-39 aft receiver located in the Black Hawk tail cone get the same torque.

Problem is, mechanics use a pocket tool when installing connectors and usually over-tighten them. If that happens, you can kiss the connector goodbye because it **will** break, causing failures in the system.

Using the wrong tool can cause damage. Always use a torque wrench set to 8 lb-in to tighten connectors and receivers.



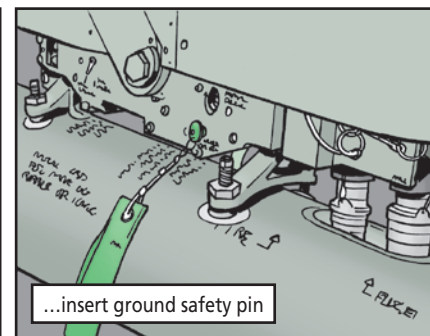
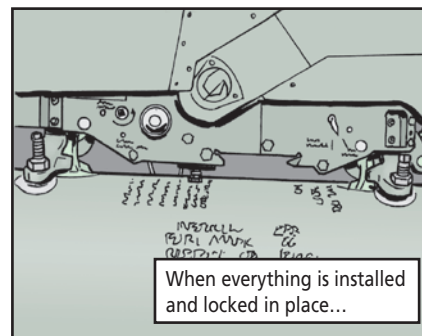
# ROCKET LAUNCHER SECURE?



**M**echanics, pay attention to detail when installing the rocket launcher on your AH-64's wing stubs. It's a three-person job.

Ensure the jettison plunger on the pylon rack is retracted to the uppermost position. Make sure the sway brace bolts are fully retracted and remove the ground pin. Lift the rocket launcher at both ends and position the suspension lugs in the openings where the suspension hooks are retracted.

When attaching the launcher to the rack, make sure the rack hooks are completely engaged and seated inside the suspension lugs. Don't let go of either end of the launcher until the third person makes sure the hooks lock into place through the suspension lugs and then inserts the ground safety pin. Once the pin goes in, you're safe to let go because the hooks are then secured.



The launcher is heavy. Letting go too soon without the hooks being fully engaged, can lead to the launcher dropping on your feet or falling to the floor. A dropped launcher must be inspected by a technical inspector for serviceability like the Longbow IETM and TM 9-1055-460-13&P says.

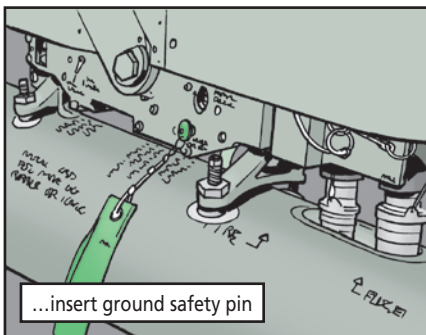
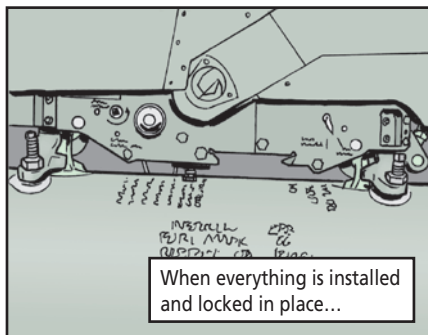
Once the launcher is installed properly, make sure the sway braces are tightened until they touch the launcher. Using two torque wrenches, simultaneously tighten the front sway braces  $\frac{1}{4}$  turn and then the rear sway braces  $\frac{1}{4}$  turn. Alternately tighten the forward and rear braces  $\frac{1}{4}$  turn until the braces are torqued to 100 in-lbs. After torquing the sway braces, torque each jamnut to 200 in-lbs. Proper torque keeps the launcher from moving during firing. If the launcher is not properly secured, you'll have erratic rocket trajectories and missed targets.

As a final step, remember to lower the jettison plunger until it makes contact with the surface of the launcher. Then back off until the clearance is 0.010 +/- 0.002 inches. You will need to use a feeler gauge for this last step.

AGSE...

## Army FARP Helmet and Parts Info





The launcher is heavy. Letting go too soon without the hooks being fully engaged, can lead to the launcher dropping on your feet or falling to the floor. A dropped launcher must be inspected by a technical inspector for serviceability like the Longbow IETM and TM 9-1055-460-13&P says.

Once the launcher is installed properly, make sure the sway braces are tightened until they touch the launcher. Using two torque wrenches, simultaneously tighten the front sway braces  $\frac{1}{4}$  turn and then the rear sway braces  $\frac{1}{4}$  turn. Alternately tighten the forward and rear braces  $\frac{1}{4}$  turn until the braces are torqued to 100 in-lbs. After torquing the sway braces, torque each jamnut to 200 in-lbs. Proper torque keeps the launcher from moving during firing. If the launcher is not properly secured, you'll have erratic rocket trajectories and missed targets.

As a final step, remember to lower the jettison plunger until it makes contact with the surface of the launcher. Then back off until the clearance is 0.010 +/- 0.002 inches. You will need to use a feeler gauge for this last step.

AGSE...

# Army FARP Helmet and Parts Info

SERGEANT BLADE, WE'VE GOT FARP OPERATIONS COMING UP AND WE DON'T HAVE ANY HELMETS OR PARTS AND CAN'T FIND ANYTHING BESIDES WHAT'S ON MY HEAD!

YOU'RE IN LUCK SOLDIER, 'CAUSE THIS ISSUE OF PS HAS ALL YOU NEED TO KNOW ABOUT FARP HELMETS.

BUT ASSEMBLY IS ON YOU!

PS MORE



Dear SFC Blade,

During forward area refueling point (FARP) operations, we have a lot of trouble locating parts and sizes for the HGU-25/P and the AGU-24/P FARP ground support helmet. Can you tell us how to order the helmets and get the parts?

SSG P.S.

Dear SSG P.S.

Sure, no problem! The flight deck/ground support helmets are used by all branches of service but the Army has only one approved color for FARP operations. It's brown. You can't order a complete helmet from the supply system. You must order the parts and assemble them piece by piece like it says in Chapter 2 of FM 10-67-1 (Apr 98), Concepts and Equipment of Petroleum Operations.

NEED  
A FARP  
HELMET?

YOU MUST  
ORDER THE  
PARTS AND  
ASSEMBLE  
IT!



Remember, there are two types of helmets. One is the AGU-24/P, which comes with a headset and a microphone and is typically used by the PAD chief. The PAD Chief is in charge of all operations at the assigned pad, including weapons, fuel, safety and FOD operations when ammo is present. The HGU-25/P has the hearing protector, also known as the aural protector, and is worn by other personnel. Here are the authorized parts for the Army FARP helmet.

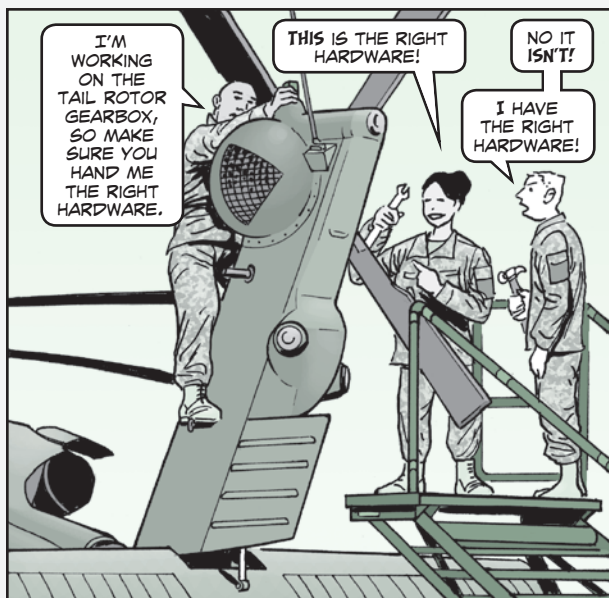
Item	NSN	Size
Helmet cloth	8145-00-861-3527	6 3/4
Helmet cloth	8145-00-071-8785	7
Helmet cloth	8145-00-071-8786	7 1/4
Helmet cloth	8145-00-071-8787	7 1/2
Pad back	8145-00-178-6830	N/A
Pad front	8145-00-178-6831	N/A
Shield back	8145-00-178-6855	N/A
Shield front	8145-00-178-7013	N/A
Microphone headset	5965-01-204-8505 (for type AGU-24/P)	N/A
Aural protector	4940-00-759-3290 (for type HGU-25/P)	N/A

This should end your trek for the elusive FARP helmet and its parts. And check out the field manual for info on all Army petroleum operations, too!

"Rotor" Blade

PS END

# USE THE RIGHT HARDWARE

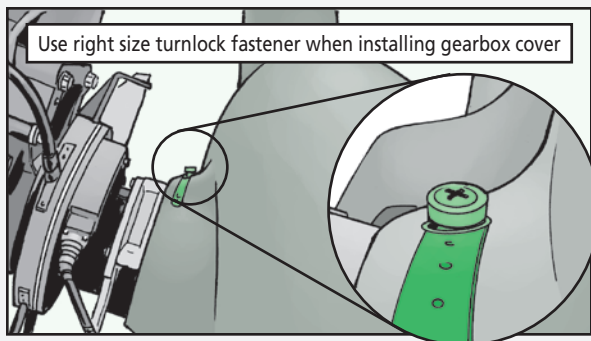


**M**echanics, the tail rotor gearbox on your Black Hawk is not the place to pick and choose which hardware to use.

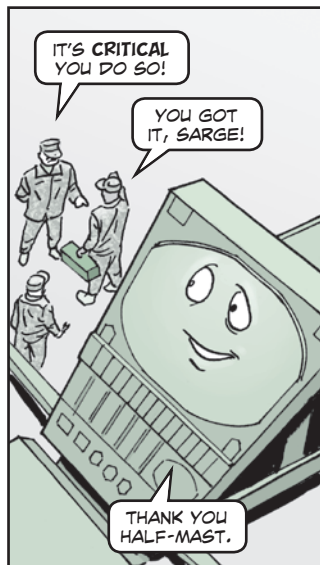
Set the conditions for success before installing the tail rotor gearbox cover by inspecting the gearbox cover for missing or damaged seals. Also, double check for missing or worn anti-chafing tape. It is better to fix it now rather than later. Test fit the tail rotor gear box cover and make sure the correct length turn-lock fasteners are where you need them.

Some mechanics use a longer fastener out of convenience. But longer fasteners can cause the cover to chafe against the gearbox.

Depending on the damage, you might need to replace the tail rotor gearbox, its gearbox cover, or both.

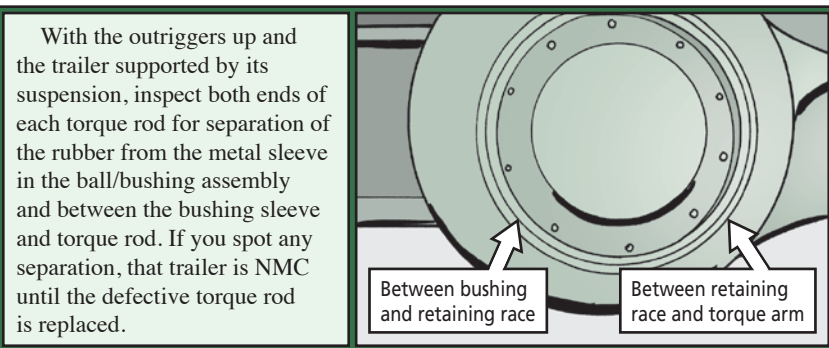


# CRITICAL TRAILER TORQUE ROD CHECKS



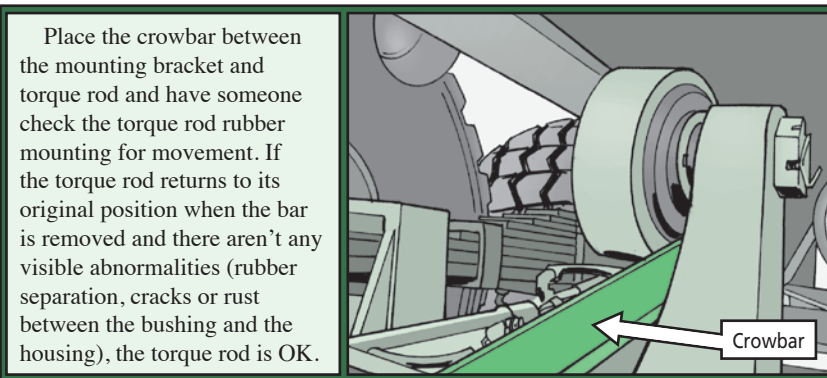
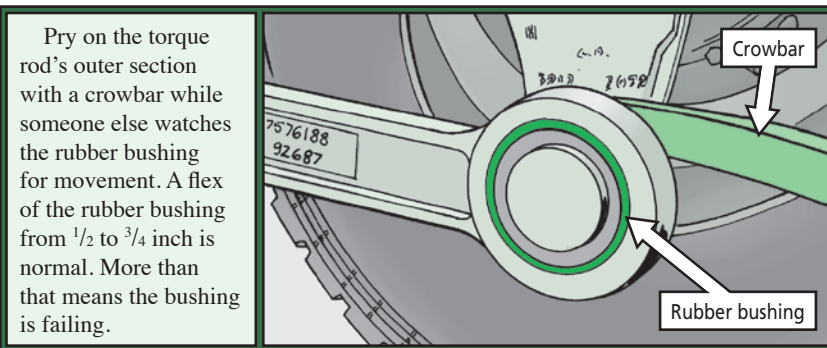
One unfortunate Patriot unit had an M860A1 trailer torque rod, NSN 2530-00-797-9189, come apart. That caused the leaf spring in the suspension to come loose and the trailer's body to fall on the axle. That is extremely dangerous both to Soldiers and to Patriot components.

Do these torque rod checks to make sure your trailers are safe.



Next, park the trailer on level ground, preferably on a hard surface, and put the outriggers down. Raise the trailer until its wheels are no more than  $\frac{1}{8}$  inch off the ground.

Look for separation between each rod's rubber and rod housing. Rust between the bushing bonding and the arm assembly is usually an indication that the bushing is going to fail.



Finally, eyeball the alignment of the torque rods. If you suspect any misalignment, replace the torque rod.

The procedure for replacing torque rods is in Para 4-52 of TM 9-2330-357-14&P (May 93).

If you find defective torque rods, submit a PQDR for each rod to:

<https://www.pdrep.csd.disa.mil>

Keep the torque rods for at least 60 days or until released by TACOM.

A trailer with a defective torque rod can't be towed, but it can be used as a launcher or radar base.

Questions? Contact TACOM's Jim Howard at DSN 786-9428, (586) 282-9428, or email:

[james.c.howard74.civ@mail.mil](mailto:james.c.howard74.civ@mail.mil)

For more information, see TACOM Safety of Use Message 12-008:

<https://tulsa.tacom.army.mil/SAFETY/message.cfm?id=SOUM12-008.html>



# Me and My Shadow ...and Our PM!

YOU CAN  
HAPPILY  
SING "ME  
AND MY  
SHADOW"  
IF YOU  
REMEMBER  
THESE PM  
NOTES...



**Check the oil**—That's about as basic as it gets when it comes to preventive maintenance, but it's critical with the Shadow. The Shadow uses oil—often 1 1/2 liters per six hours of flight. So that means before every flight, you must **check the oil**. Otherwise, the Shadow may very well take a swan dive during flight.

**Do every single step of the pre-flight checklist.** Every step of that long checklist could make the difference between the Shadow soaring or crashing. Use the checklist to give your Shadow a complete inspection before it takes off. If you're doing it right, the inspection takes about 40 minutes.

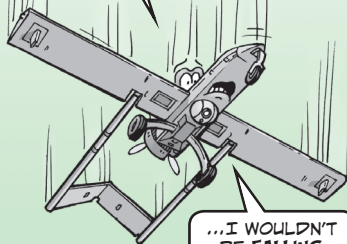
## **Pay attention to the weather.**

The Shadow isn't an all-weather aircraft. Make sure the weather is OK for flight before you launch.

## **Don't brace the launcher.**

Some people think the launcher isn't supposed to move, so they secure it in one position. That's wrong! The launcher is supposed to move some. If it can't, its beam 3 pin is sheared. Then the launcher is NMC until the pin is replaced.

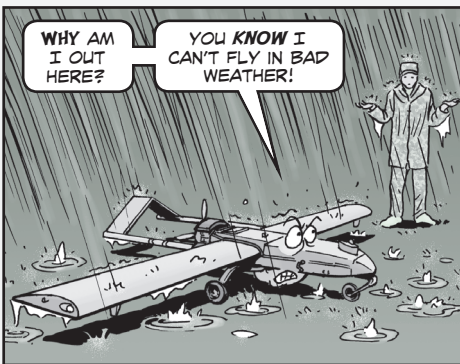
IF ONLY  
SOMEONE  
HAD CHECKED  
MY OIL...



...I WOULDN'T  
BE FALLING  
LIKE A ROCK!

WHY AM  
I OUT  
HERE?

YOU KNOW I  
CAN'T FLY IN BAD  
WEATHER!



# Army Publication DOL Website



**T**he Army Publishing Directorate is no longer the source for Army units ordering Army publications and forms. That task now belongs to the Army's Office of the Administrative Assistant through its Directorate of Logistics (DOL). The DOL's Publishing Products Index and Ordering System is at:

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

Units must have accounts with DOL to use the index and ordering system. If your unit has a pubs account, login and verify that the account info is correct. If your unit doesn't have an account, click on the DA Form 12-R link under Registration to download the form. Fill it out and send it as an e-mail attachment to:

[usarmy.stlouis.106-sig-bde.mbx.dolwmddcustsrv@mail.mil](mailto:usarmy.stlouis.106-sig-bde.mbx.dolwmddcustsrv@mail.mil)

The website provides two options for finding publications: Search and Category Browse. Under Search, you can use the publication/form number, title, IDN or PIN to get the ordering page for that publication.

Under Category Browse, you can scroll down the list of titles and categories to find what you need. If you need an Army regulation, scroll down to "AR" and expand the selection. Then scroll down the list of regulations and click on what you need. You'll get an ordering page for that publication.

Click on Help for guidance on using the new website. Click on Login or Reports and you'll get a login screen. At the bottom of the screen is a tutorial on filling out the DA Form 12-R, and instructions on how to establish an account.

So, pubs clerks, take a look at this website. Your job just got a little bit easier!

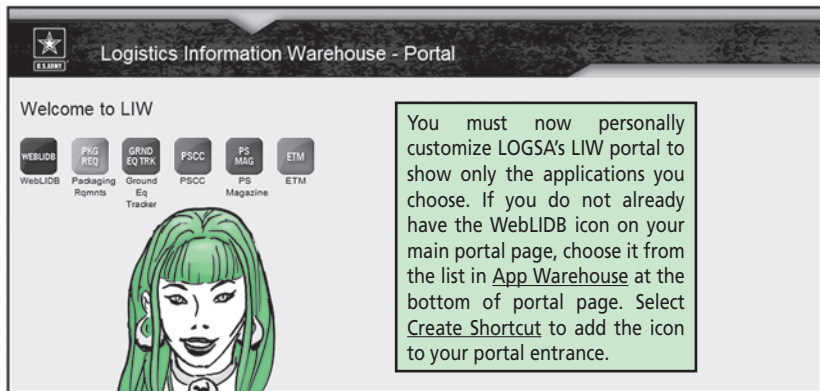
Dear Half-Mast,

I'm trying to reconcile some financial liability investigation of property loss (FLIPL) information. I was told I could access the Logistics Information Warehouse (LIW) to track items by serial number to see if another unit may have my equipment. But I don't know how to do this. Please advise.

SGT P.K.

Dear Sergeant P.K.,

Glad to help. Try the Army Serial Number Tracker (ARSNT) in LIW's WebLIDB. It pulls serial number data from many Army databases, and can identify the owner and location of a serial-numbered item. First, use your CAC to log into LIW at the Logistics Support Activity: <https://liw.logsa.army.mil/>



Logistics Information Warehouse - Portal

Welcome to LIW

WebLIDB PKG REQ GRND EQ TRK PSOC PS MAG ETM

WebLIDB Packaging Rqmts Ground Eq Tracker PS Magazine PS ETM

You must now personally customize LOGSA's LIW portal to show only the applications you choose. If you do not already have the WebLIDB icon on your main portal page, choose it from the list in App Warehouse at the bottom of portal page. Select [Create Shortcut](#) to add the icon to your portal entrance.

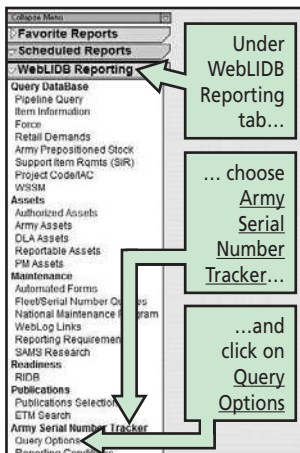
IF YOU ENCOUNTER PROBLEMS, CONTACT LOGSA'S HELP DESK SUPPORT AT

[usarmy.redstone.logsa.mbx.help-desk@mail.mil](mailto:usarmy.redstone.logsa.mbx.help-desk@mail.mil)

In WebLIDB, on the left side of the screen under the WebLIDB Reporting tab, choose Army Serial Number Tracker, and then click on Query Options.

Try the Serial Number Simple Query—Non-RATTS (Radioactive Testing and Tracking System) search first, and if you have no luck, then try the advanced one. If you are looking for serial number history, try the Serial Number History Query—Non-RATTS search.

Half-Mast



Under WebLIDB Reporting tab...

... choose Army Serial Number Tracker...

...and click on Query Options



# GCSS- Army Forum Takes Flight



**S**ustainNet recently added a new subforum to its ranks to help prepare everyone for the rollout of the Global Combat Support System-Army (GCSS-Army). GCSS-ArmyNet supports fielding, training and sustainment of the future single integrated logistics system.

GCSS-Army will affect every supply room, motor pool, support repair shop, warehouse and property book office in the Active Army, Guard and Reserve. The new forum gives GCSS-Army's future users a chance to discuss changes and challenges, and to ask questions of subject matter experts.

GCSS-ARMY  
COMPONENTS  
AND FORUM  
TOPICS  
INCLUDE...

- Maintenance
- Unit supply
- Property book
- Human resources
- Supply support activities
- Force element
- Finance
- Distribution
- Ammunition

The forum is a springboard to other resources, like the GCSS-Army Knowledge Center, strategic communications and briefings, and virtual meetings and training sessions.

You must join GCSS-ArmyNet before reading or posting to the forum. Visit:

<https://forums.army.mil/1639346>

HERE ARE  
SOME RELATED  
RESOURCES...

GCSS-Army Knowledge Center

<https://www.us.army.mil/suite/page/666795>

GCSS-Army Lead Users

<https://www.milsuite.mil/book/groups/gcss-army-lead-users>

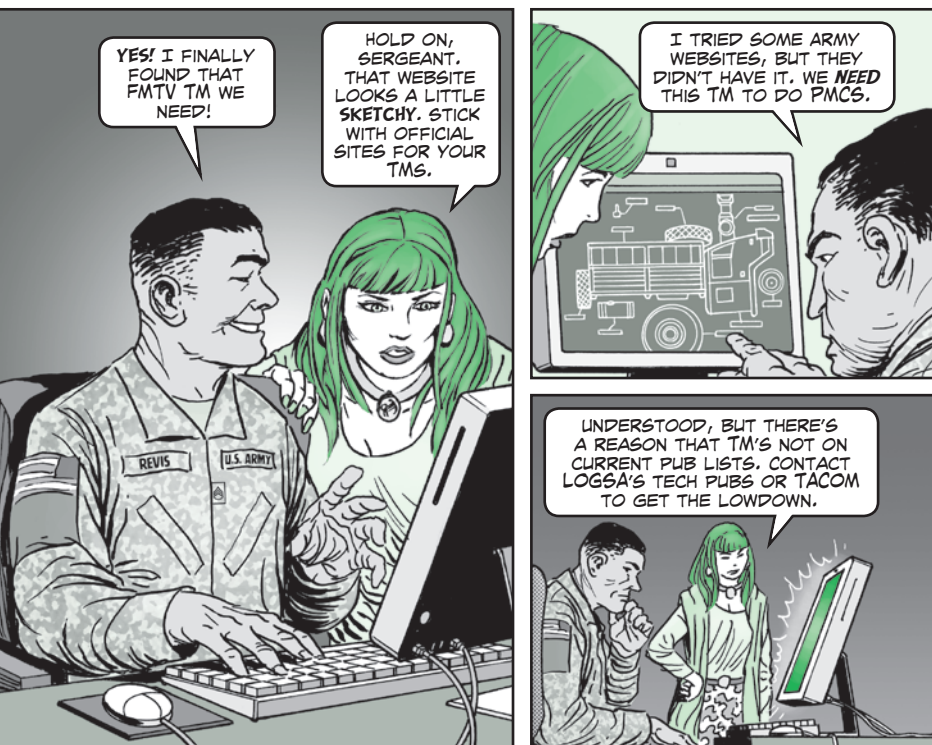
GCSS-Army in the ARNG

<https://www.milsuite.mil/book/groups/gcss-army-in-the-arng?view=overview>

GCSS-Army PM website  
(hosts draft fielding schedule)

<https://gcss.army.mil/>

# Get TMs from Authorized Sources



It's true that you can find almost anything on the Internet with a search engine. Unfortunately, that fact can be a drawback, too, at least when it comes to Army technical manuals (TMs).

Some of you have downloaded or may be tempted to download TMs from secondary sources, like commercial or foreign websites or unofficial forums. Don't do it!

TMs from unofficial websites might be draft versions, missing critical info or may be outdated. They may contain serious errors. Simply surfing unapproved websites can risk your computer's health. It's not worth the gamble.

Before you download any TM, ask this big question: Am I getting this TM from an official US government website? If so, the URL should end in .mil or .gov.

## Know Where to Go

The Logistics Support Activity (LOGSA) is the official designated repository for Army equipment TMs, except engineering and medical. LOGSA also hosts electronic technical manuals and interactive electronic technical manuals (ETMs/IETMs).

LOGSA's TMs are DA-authenticated. That means the Army stands behind their content. That's important, especially when it comes to safety.

If a TM is obsolete with no replacement, there's a reason. One reason may be that the equipment is obsolete, too. We know some units have older equipment they need or want to keep running. If that's the case, contact the LCMC overseeing that equipment for PMCS guidance, instead of using obsolete or rescinded TMs.

To find current equipment TMs, follow the "how to" steps we gave you on Pages 52-55 in PS 717 (Aug 12):

<https://www.logsa.army.mil/psmag/archives/PS2012/717/717-52-55.pdf>

Or visit LOGSA's ETMs Online:

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

Questions? Contact LOGSA's tech pubs ETM Customer Service at 1-800-270-1409, or email:

[usarmy.redstone.logsa.mbx.logetm@mail.mil](mailto:usarmy.redstone.logsa.mbx.logetm@mail.mil)

HMMWV...

## How DO You Mount LRAS3?

NOT SURE HOW TO MOUNT YOUR LRAS3 ON THE HMMWV? THEN READ ON!

Dear Half-Mast,

How do you mount the long-range advance scout surveillance system (LRAS3) on the HMMWV? We can't find any information on this.

SFC F.M.

Dear SFC F.M.,

You need the electronic equipment installation kit that comes with NSN 589-01-567-0814 to mount the LRAS3 on the M1114 and M1151A1. TB 11-5855-321-13 explains how to mount the LRAS3 with the kit. It's online at the LOGSA ETM site:

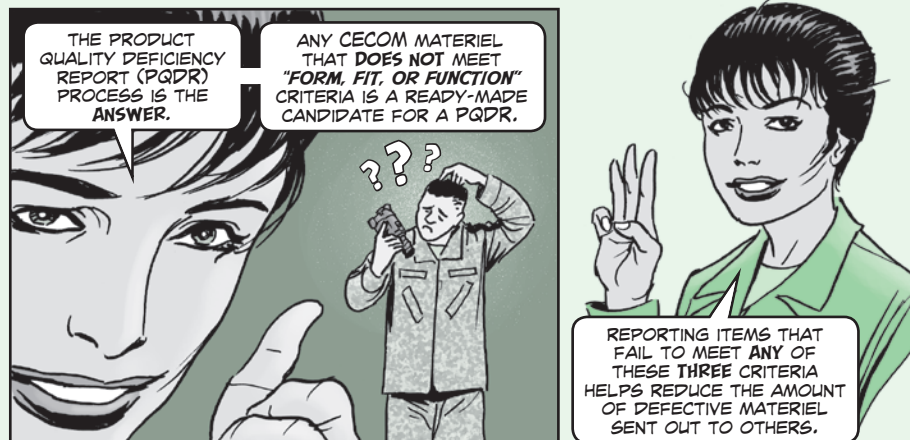
<https://www.logsa.army.mil/etms/online.cfm>

Note: You cannot mount the LRAS3 on HMMWVs with the overhead cover. The cover must be removed before the LRAS3 is installed.

Half-Mast



# CECOM PQDRs and the NMP

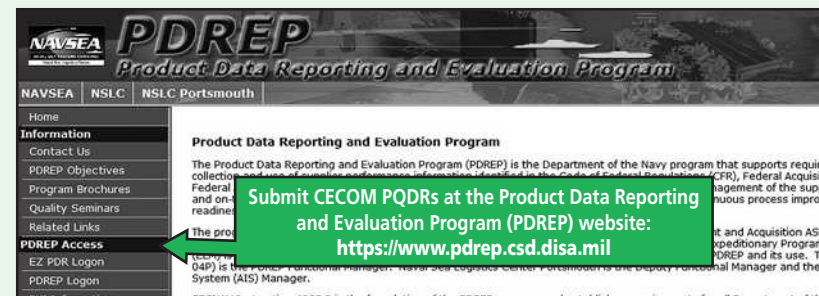


When a CECOM PQDR is received, an Army master screener reviews and then assigns it to the appropriate CECOM directorate for investigation. Depending on the outcome, the deficient item may be repaired or replaced or the unit that submitted the PQDR may receive credit.

By accurately completing the information requested on the SF-368, *Product Quality Deficiency Report*, you can help speed up the investigation.

Some CECOM items are part of the National Maintenance Program (NMP), so it's especially important to include the date and location where the materiel was last repaired. Knowing when and where the item was repaired ensures the materiel is sent to the correct location.

Repair facilities in the NMP are held to the highest quality standards, which ensures users receive materiel that has been repaired properly.



Users with a valid user ID can log on directly to the site to submit PQDRs. Individuals without a PDREP user ID can still access the site and submit PQDRs through the "EZ PDR LOGON" tab.

In order to get a user ID, you must submit an access request. The access request form is found on the PDREP website at:

[https://www.pdrep.csd.disa.mil/pdrep\\_files/accessforms/useraccess.htm](https://www.pdrep.csd.disa.mil/pdrep_files/accessforms/useraccess.htm)

If you need further help with the CECOM PQDR process, email the CECOM PQDR team at:

[usarmy.APG.cecom.mbx.lrc-leo-b16-pqdr-support-team@mail.mil](mailto:usarmy.APG.cecom.mbx.lrc-leo-b16-pqdr-support-team@mail.mil)

## M2 Machine Gun... INSTRUCTIONS FOR M3 RECOIL AMPLIFIER?



Dear Half-Mast,  
We have switched to short range training ammo for firing our M2 machine guns on the range. There is a specialized barrel used with these rounds called the M3 recoil amplifier. We can't find any info on using the M3. Can you help?

CPT J.G.

Dear Captain J.G.,  
Yes I can! The M3 has its own TM, TM 9-1005-203-13&P. It's on the ETM website:

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

Half-Mast



**NOW  
HEAR  
THIS!**

**NEW  
PARTS FOR  
M240!**

**ALL RIGHT!**  
I CAN'T WAIT  
TO GET BACK  
TO THE ARMS  
ROOM AND  
WORK ON MY  
M240!

NEW ASSEMBLIES ARE  
BEING ADDED TO SOME  
OF THE VERSIONS OF  
THE M240 MACHINE  
GUN.

**UNFORTUNATELY, IT MAY  
BE SOME TIME BEFORE  
THE ASSEMBLIES' PARTS  
ARE ADDED TO TM  
9-1005-313-23&P.**

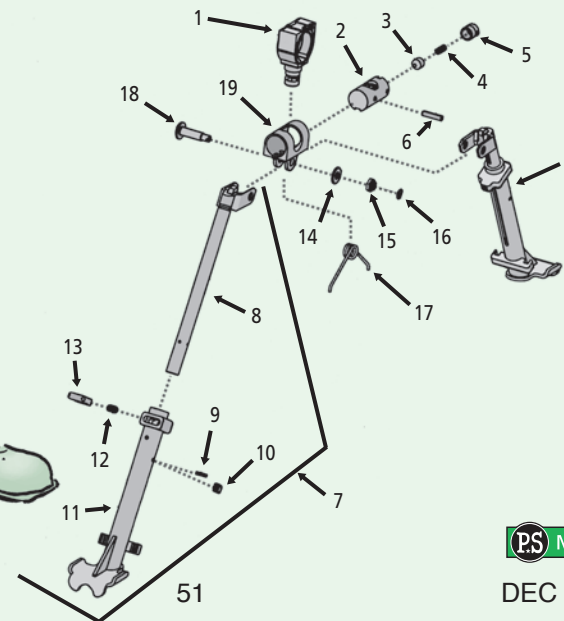
**THAT'S  
BAD!**

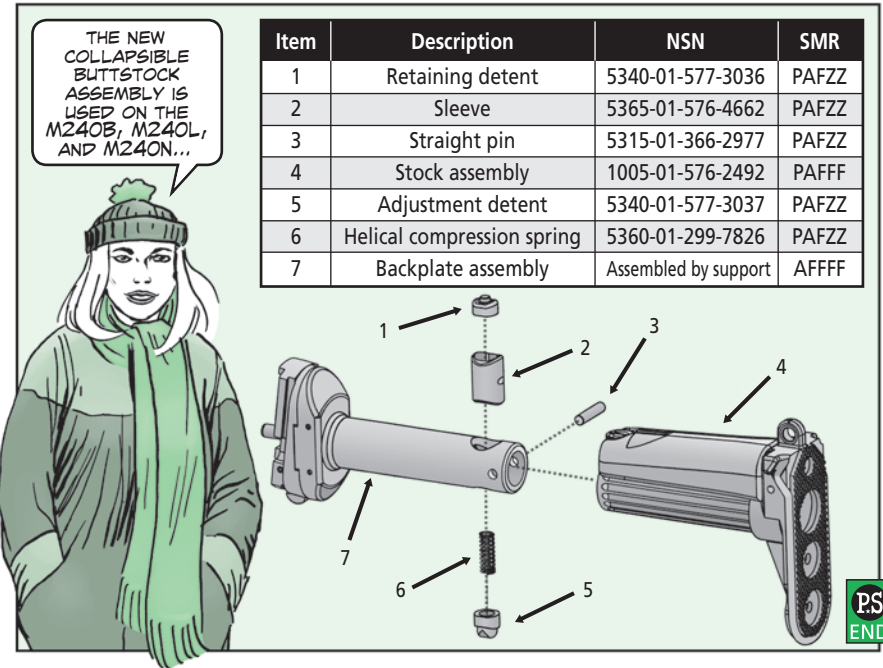
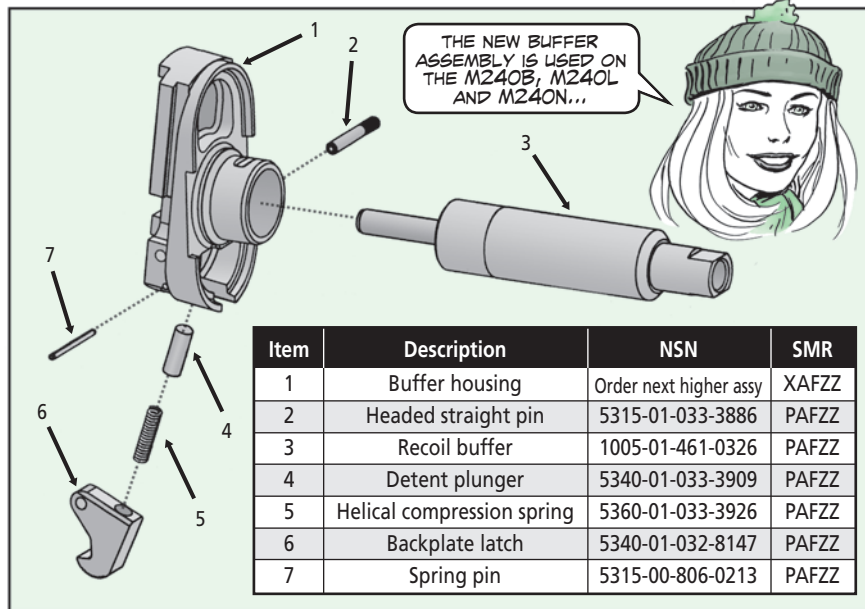
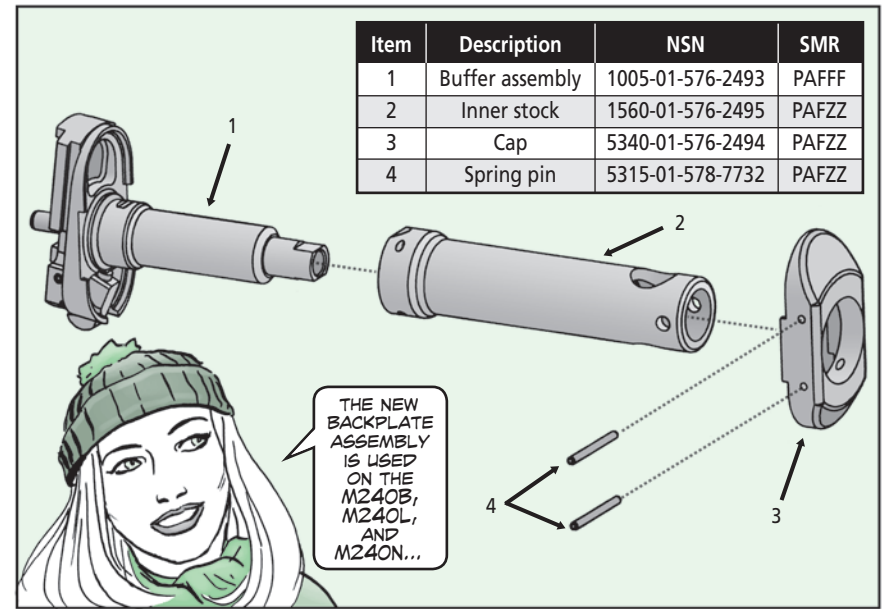
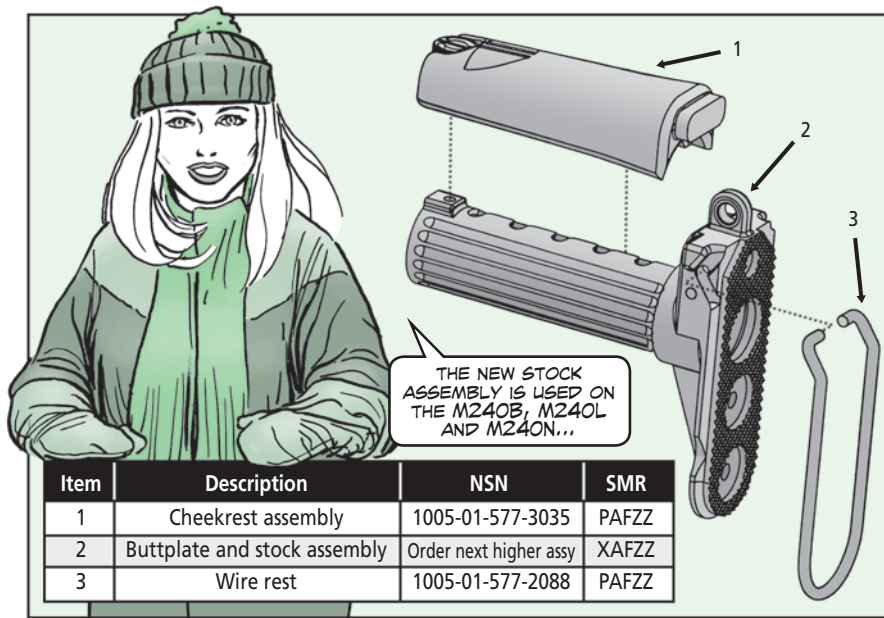
**FORTUNATELY, PS CAN  
GIVE YOU THE PARTS  
INFO RIGHT NOW...**

**THAT'S  
GOOD!**

THE NEW  
ADJUSTABLE  
BIPOD ASSEMBLY  
IS USED ONLY ON  
THE M240B.

Item	Description	NSN	SMR
1	Bipod head	Order next higher assy	XAFZZ
2	Actuating cylinder	1005-01-408-5437	PAFFF
3	Bipod retaining plunger	1005-01-408-5438	PAFZZ
4	Compression helical spring	5360-01-408-6000	PAFZZ
5	Retaining bushing	5325-01-408-6676	PAFZZ
6	Spring pin	5315-01-408-6413	PAFZZ
7	Leg assembly	1005-01-576-1338	PAFFF
8	Upper leg assembly	1005-01-575-9641	PAFZZ
9	Spring pin	5315-00-874-2511	PAFZZ
10	Guide	1005-01-577-2087	PAFZZ
11	Lower leg assembly	Order next higher assy	XAFZZ
12	Compression spring	5360-01-522-0763	PAFZZ
13	Latch	1005-01-576-1340	PAFZZ
14	Axis pin washer	5310-01-408-9052	PAFZZ
15	Axis pin leg nut	5310-01-408-9456	PAFZZ
16	Axis pin leg ring	5325-01-408-9050	PAFZZ
17	Leg spring	5360-01-408-6675	PAFZZ
18	Axis bipod leg pin	1005-01-408-6011	PAFZZ
19	Bipod body hinge head	1005-01-408-6678	PAFZZ





# New Buttstock Coming



**A** lightweight collapsible buttstock is replacing the M249 machine gun's standard buttstock, the M5 collapsible buttstock and M4 collapsible buttstock through an MWO.

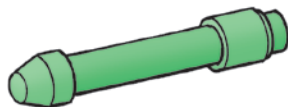
Units don't need to order the new buttstock, NSN 1005-01-576-8901. It will be installed free on your M249s through Small Arms Readiness Evaluation Teams (SARET), Total Package Fielding (TPF), and depot overhaul. Contact your local MWO coordinator for fielding info.

# NSN Changed for Gage

Dear Editor,

While trying to help our maintenance folks order new gages for the M249 machine gun, we noticed that the NSN for the headspace gage has changed to 5220-01-141-3830. It's Item 6 in Fig C-15 of TM 9-1005-201-23&P (Dec 90, w/Ch 7, Jun 02). You might want to let the field know.

Douglas Stewart  
COMET  
JBLM, WA



Headspace gage now comes  
with NSN 5220-01-141-3830

*Editor's note: We just did. Thanks, Doug. Armorers, note that this gage is a Class II item, so you'll need to order a new one through unit supply.*



Towed  
Artillery...

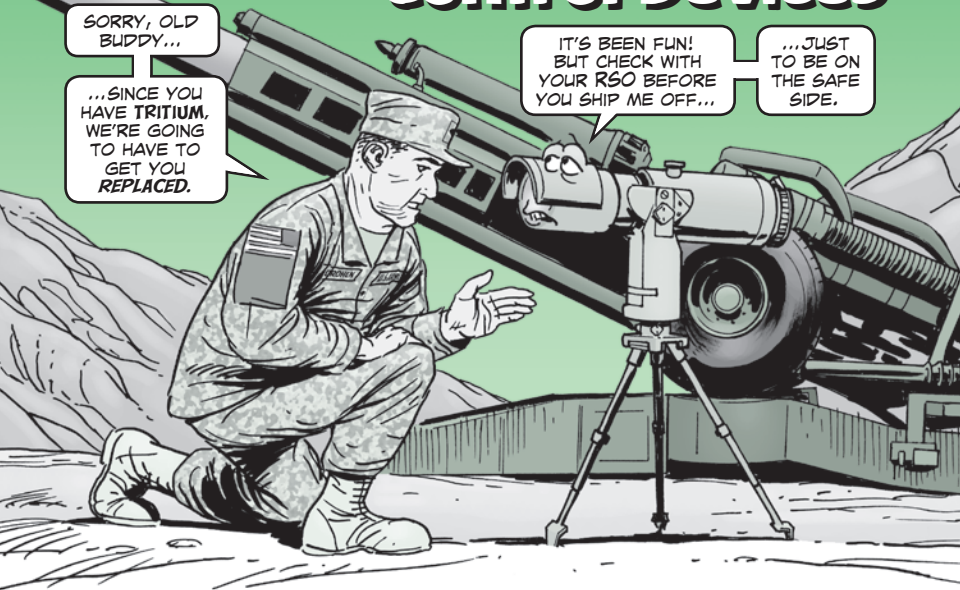
# Replace Tritium Fire Control Devices

SORRY, OLD  
BUDDY...

...SINCE YOU  
HAVE TRITIUM,  
WE'RE GOING  
TO HAVE TO  
GET YOU  
REPLACED.

IT'S BEEN FUN!  
BUT CHECK WITH  
YOUR RSO BEFORE  
YOU SHIP ME OFF...

...JUST  
TO BE ON  
THE SAFE  
SIDE.



If your unit has fire control devices containing tritium ( $H_3$ ), you need to turn them in because they pose a radiation danger if not handled properly and leaks develop.

The fire control devices will be replaced with ones that have been modified with the elimination of radioactive light sources (ERLS) kit.

The devices include the M1A1 collimator, M1A2 fire control gunners quadrant, M171 and M187 mount telescope and quadrant, the M137 panoramic telescope, M138 elbow telescope, M139 and M140 alignment devices, and M17 and M18 quadrant fire controls.

If you think you have a fire control device containing tritium, immediately contact TACOM's Towed Artillery Core Team at DSN 786-2755 or email:

[usarmy.detroit.tacom.mbx.ilsc-fa-core-team@mail.mil](mailto:usarmy.detroit.tacom.mbx.ilsc-fa-core-team@mail.mil)

Provide the NSN and quantity of fire control devices. You will be given disposition instructions if your devices do indeed contain tritium.

Remember that tritium is a radioactive source and must be handled with care. For info on safe handling, check with your local radiation safety officer (RSO). Shipping of fire control devices must be coordinated with the RSO. If you're not sure who your RSO is, contact TACOM's NRC license RSO at DSN 786-0891 or email:

[thomas.g.gizicki.civ@mail.mil](mailto:thomas.g.gizicki.civ@mail.mil)



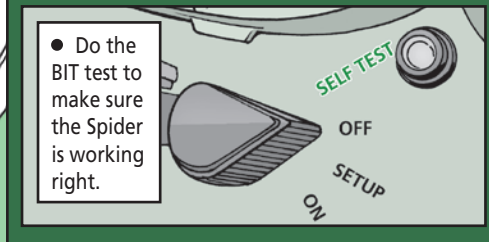
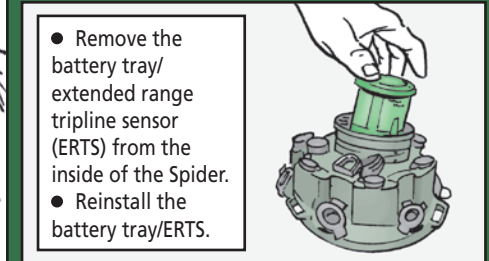
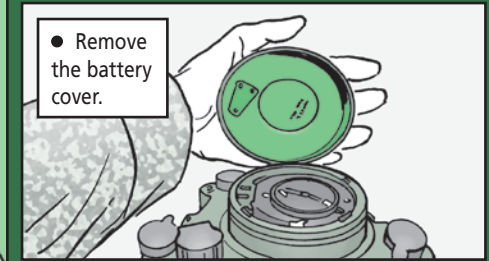
# How to Reset Your Spider

The Spider training device, NSN 6920-01-570-0648, allows Soldiers to simulate using the munition control unit (MCU) without having to fire Class V munitions or be on a firing range. The only thing the Spider can't do is launch a Class V munition like a Claymore M18A1 through the munition adapter module or fire the miniature grenade launcher.

The munition control unit must be sterilized after a safety or system malfunction. A sterilized MCU can't power up or fire any munitions.

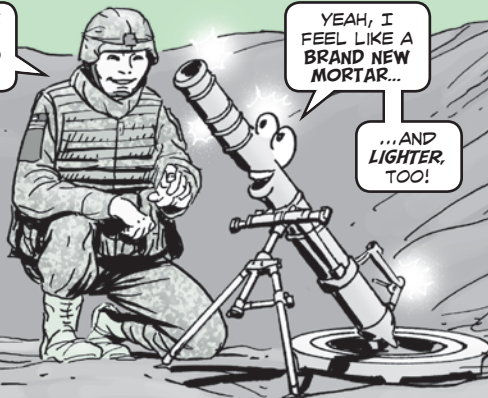


- Make sure the mission control unit trainer (MCUT) power switch is OFF.



# MWO Upgrades M224

MY GOSH, THE MWO REALLY TRANSFORMED YOU!



An MWO has just been released that will upgrade the M224 60mm mortar, NSN 1010-01-020-5626, to the M224A1, NSN 1010-01-586-2874.

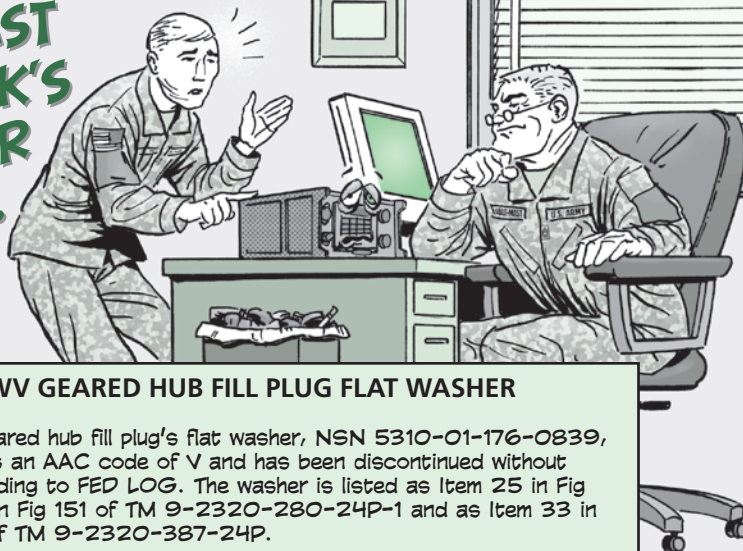
MWO 9-1010-234-23-1 reduces the M224's weight by 25 percent and makes the mortar easier to maintain and operate. The MWO will be done by teams that are traveling from post to post.

The M67 sight unit and M8 baseplate are the only M224 components that can be used on the M224A1 besides the M224's basic issue items (BI).

Before you fire the M224A1 for the first time, your support will need to borescope and do a pullover inspection of the new 60mm cannon.

For more information about the new M224A1, see TM 9-1010-233-10 or contact Tony Villacis, DSN 786-1224, (586) 282-1224, or email: [anthony.k.villacis.civ@mail.mil](mailto:anthony.k.villacis.civ@mail.mil)

# MSG HALF-MAST MCCANICK'S ANSWER DEPT.



## HMMWV GEARED HUB FILL PLUG FLAT WASHER

Dear Half-Mast,

The HMMWV geared hub fill plug's flat washer, NSN 5310-01-176-0839, PN 5573687, has an AAC code of V and has been discontinued without replacement according to FED LOG. The washer is listed as Item 25 in Fig 142 and Item 33 in Fig 151 of TM 9-2320-280-24P-1 and as Item 33 in Figs 113 and 119 of TM 9-2320-387-24P.

SFC R.

Dear Sergeant R.,

The replacement washer comes with NSN 5310-01-579-6534, PN 12518720. The new washer is copper rather than nylon. When using the copper washer, the fill plug must be tightened to 33-35 lb-ft.

Half-Mast

## M113A3 ENGINE HAS TWO ASSEMBLIES

Dear Half-Mast,

Our M113A3 needs a new engine assembly. The one we ordered has a matching NSN, but it's the old style with the manifold heater mounted on the front of the block assembly. Our vehicle needs the newer glow plug style with controller. What do I need to do to get the right engine assembly?

Mr. K.

Dear Mr. K.,

I can probably help. When ordering a new engine for an M113A3, make sure you order off the data plate located at the housing in the rear of the engine, not the front of the block.

If you order from the plate on the front of the engine block, you could either get a heater box engine or a glow plug engine. That's because both of those engines use the same block. Demands for the glow plug engine have increased as many of the heater box types have been converted, but the data plate on the front of the block was not updated.

Half-Mast

## TENT HEATERS

Dear Half-Mast,

I was wondering if you could point me in the right direction for a list of authorized heaters for tents. I searched around for quite a bit and found info pointing me to a link that no longer works.

CPT P.

Dear Captain P.,

Good to hear from you, Sir. Your first stop should be the Product Manager-Force Sustainment Systems website: <https://pmfss.natick.army.mil/index.html>

From the home page, click on Shelter Systems. On the next screen you'll see a number of links to different space heaters. These are the Army's authorized heaters for tents and shelters, known as the family of space heaters (FOSH).

You can also check out our article about FOSH on Pages 48-51 of PS 687 (Feb 10):

[https://www.logsa.army.mil/psmag/archives/ps2010/PS\\_687.pdf](https://www.logsa.army.mil/psmag/archives/ps2010/PS_687.pdf)

Half-Mast

## M40A1 MASK WATER SOURCE

Dear Half-Mast,

I am looking for a good NSN for the M40A1 Pro mask's drinking adapters that allow you to drink from a backpack hydration system. I thought I saw an article in PS a while back. Can you help me out?

SSG S.

Dear Sergeant S.,

Unfortunately, there is no safe way to connect a hydration system to the M40. That's because those systems can allow chemical agents to seep through the bladder and contaminate the water.

So while you won't breathe in the agents, you could wind up drinking them!

The only authorized hydration systems for use with the M40 are the M1961 canteen, NSN 8465-01-115-0026; the 2-qt water canteen, NSN 8465-01-118-8173; the M1 canteen cap, NSN 8465-00-930-2077; and the water canteen cap, NSN 8465-01-529-9800.

The M1 is AAL for the M40/M42 masks and works with both canteens. The water canteen cap also works with both canteens and will be used with the new M50/M51 mask.

Half-Mast

## LMTV OIL DIPSTICK TUBE

Dear Half-Mast,

How can I get an LMTV transmission oil dipstick tube? The TM doesn't provide a PN or NSN. Our truck is an M1078 LMTV, NSN 2320-01-354-3385, with a manufacturing date of 03/98.

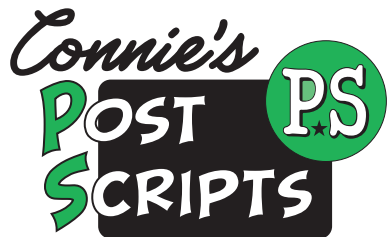
Mr. H.

Dear Mr. H.,

Use NSN 6680-01-374-4912, P/N 12414700-004, to order the gage rod/transmission dipstick assembly. The tube and dipstick come as a complete assembly.

Half-Mast





## FRS DOOR SEAL NSN

Get a new door seal for the forward repair system (FRS) with NSN 5330-01-606-6525. This NSN replaces PN RIA152104, which is shown as Item 14 in Fig 148 of TM 9-4940-568-24P (Jan 08, w/Ch 1, Jul 11). By the way, you'll need to order two seals and cut them to length for one door. It takes four seals, cut to length, to handle both doors.

## ATLAS/6K FORKLIFT SERVICE KITS

Need a service kit for your 10K ATLAS or 6K forklift? Order what you need from these NSNs:

Forklift	250-hr Kit NSN 2990-	500-hr Kit NSN 2990-	1,000-hr Kit NSN 2990-
ATLAS I		01-586-9819	01-586-9815
ATLAS II	01-600-4318		01-600-4317
6K		01-585-9284	01-585-8958

## SPARK II Debris Shield

A new debris shield is now available for the self protection adaptive roller kit II (SPARK II) that mounts to the front of your M-ATV MRAP. The shield is designed to keep dirt and debris from clogging the M-ATV's radiator and overheating the vehicle's engine. Order the debris shield with NSN 2540-01-596-0710, then go to this link for a list of the shield's parts and installation instructions: [https://tulsa.tacom.army.mil/safety/gpm/tacom\\_wn/InterfaceBracketDebrisShieldIntegrated.docx](https://tulsa.tacom.army.mil/safety/gpm/tacom_wn/InterfaceBracketDebrisShieldIntegrated.docx)

## FDECU MAY HAVE CONTAMINATED REFRIGERANT

Units that have field deployable environmental control units (FDECU), models 2, 3, 4, 5 and 9, NSN 4120-01-449-0459, pay close attention. Your FDECU could have a refrigerant contaminated with methyl chloride, also known as R-40. Methyl chloride is flammable and explosive when exposed to the atmosphere or aluminum. It could damage the FDECU. What's worse, it could injure or kill you or others. For the complete story, get CECOM Safety of Use Message (SOUM) 2012-001. The message discusses root causes, hazards, inspection, reporting and more. You'll find the SOUM at the US Army CECOM Directorate for Safety website:

<https://cecomsafety.apg.army.mil/safety/safety%20messages/>

## 350 GPM Pump Starter NSN

Get a new starter for the John Deere engine on your 350 GPM fuel and water pumps with NSN 2920-01-605-5572. Make a note until the NSN can be added to TMs 10-4320-372-24P (fuel pump) and 10-4320-226-24P (water pump).

## M871A3 Semitrailer Clearance Light

The NSN for your M871A3 semitrailer's clearance light, shown as Item 2 of Fig 2 in TM 9-2330-326-14&P (Feb 06), is a little misleading. Only the light—without the base—comes with NSN 6220-01-499-3374. Get the light and base with NSN 6220-01-595-4730 (PN 4337A). You should see this correction in a future TM update.

## M1165A1 HMMWV Has Windshield Options

On Page 61 of PS 707 (Oct 11), we provided windshield NSNs for M1165A1 up-armored HMMWVs, but didn't tell you quite enough. HMMWVs have several windshield options and the NSNs we listed (2510-01-560-1159 and 2510-01-561-2540) bring the ballistic windshield with de-ice. When ordering parts, it's always a good idea to eyeball the FLIS characteristics in FED LOG to help ensure you get what you need.

## Up-Armored HMMWV Windshield Washer Nozzle and Bracket

Need to replace the windshield washer nozzle on your M1151, M1151A1, M1152, M1152A1, M1165, M1165A1 and M1167 model HMMWVs? A new nozzle comes with NSN 2540-01-596-1571, but you'll need a new bracket to use it. Use bracket, NSN 5340-01-596-4595, with M1151A1, M1152A1, M1165A1 and M1167 HMMWVs with B kits and with M1151, M1152 and M1165 trucks. You may also use bracket, NSN 5340-01-596-4592, on M1151A1s, M1152A1s and M1165A1s with B kits. You won't find this in TM 9-2320-387-24P, so make a note until it's updated.

## MW24C Scoop Loader Windshield

Use NSN 9340-00-599-6666 to get a windshield for the 2 1/2-yd scoop loader. The parts info shown as Item 14 in Fig 110 of TM 5-3805-262-24P gets the wrong-sized windshield.

## M1112 Trailer Brake Line

The front hydraulic brake line for the M1112 water trailer comes with NSN 4710-01-436-4034. It replaces PN 12472170, which is shown as Item 3 in Fig 9 of TM 9-2320-397-14&P (Apr 00).

## M1022 Dolly Set Cable NSN Corrections

The NSNs for the interdolly and intervehicular electrical cables shown in Table 2 of WP 0102 in TM 9-2330-379-13&P (Jun 12) are wrong. Get the interdolly electrical cable with NSN 6150-01-277-0089 and the intervehicular electrical cable with NSN 6150-01-277-0088. You should see these corrections in the next TM change.

## HMEF III Contact Info

The new HMEF III backhoe loader, NSN 2420-01-532-3399, is managed under an interim contractor logistics support (ICLS) contract. If you need vehicle maintenance or repair info or special parts, email:

[dpg@cnh.com](mailto:dpg@cnh.com)

Or you can call (800) 388-6103 (CONUS) or (954) 968-0372 (OCONUS) for further assistance.

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

Would You Stake Your Life <sup>right now</sup> on the Condition of Your Equipment?

# Good PM Needs Your Best Efforts!



LATER ON...

