

Issue 670

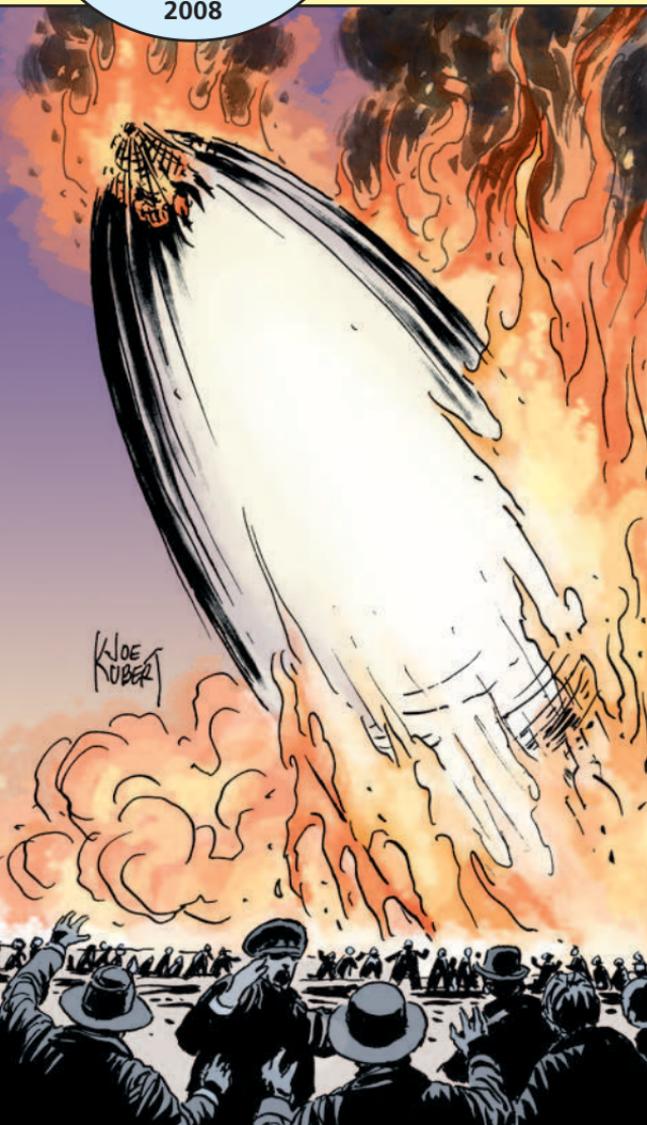
PS

September
2008

THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-670

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WHAT REALLY BROUGHT DOWN THE HINDENBURG

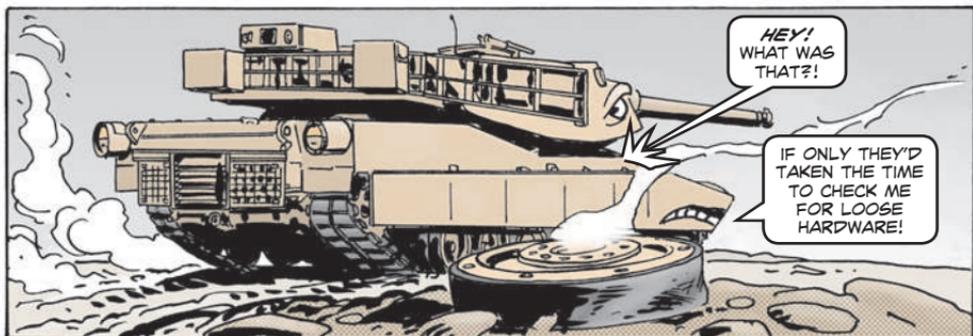
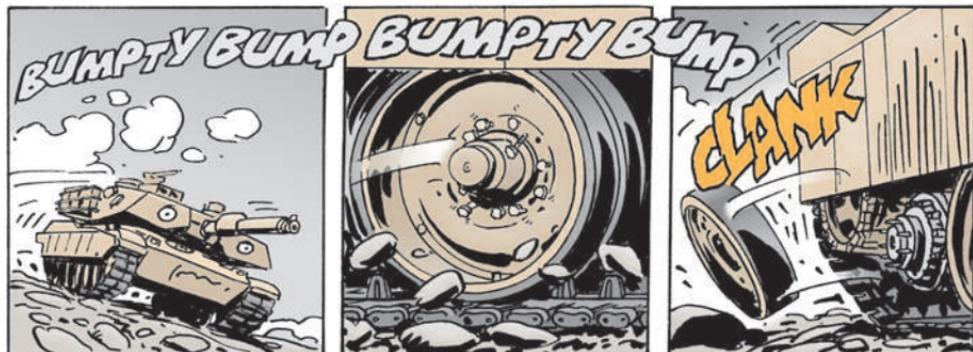
?

WAS IT:

- A LOVESICK RIGGER?
- A CIRCUS ACROBAT?
- A DEPRESSED TRAVELER?
- A RIP IN THE FABRIC?
 - LIGHTNING?
- INCENDIARY PAINT?
- TWO MYSTERIOUS RIFLEMEN?

LEARN THE
SHOCKING TRUTH...
STARTING ON
PAGE 27!

LOOSE HARDWARE IS NO GAME



Each bolt, nut and screw on your vehicle is a vital cog that keeps your vehicle FMC. Some are more critical than others, but each one has a job to do.

Bolts are a lot like dominoes lined up in a row. Knock one domino over and it strikes the next in line...then the next and the next until they all fall down.

A similar chain reaction happens when a bolt fails. More stress is put on the bolts around it. Another fails and another until your vehicle is stopped dead in its tracks.

A piece of equipment breaks down every day because of a bolt somebody overlooked. Don't let that somebody be **you!**

Check **all** bolts for shiny spots or corrosion around the head or nut. If a bolt is covered with dirt or grease, wipe it off. If a bolt is hard to reach or see, crawl under your vehicle with a flashlight and check it out up close.



PS**THE
PREVENTIVE
MAINTENANCE
MONTHLY**

TB 43-PS-670, 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 670 SEPTEMBER 2008**COMBAT VEHICLES**

Stryker Startup and Shutdown Reminders
M1-Series Tank Breech Operating Cam
M1-Series Tank Service Brake Cable
M2/M3-Series Bradley Fuel Shutoff Valves
M2/M3-Series Bradley Track Connecting
M88A1 Recovery Vehicle Roadwheel Lubing
M109-Series Howitzer Copperhead Extractor
M1068, M577A2 Quick Release Pin
M1059 Smoke Generator Strainer

**WHEELED VEHICLES**

FMTV Cab Door Safety Bracket
Tractor Truck, Semitrailer Loads
M105/M101/M116-Series Trailers Brakes
Common Light Bulbs

**MISSILES**

MLRS EU, EB, Fire Control Unit Cables

**SMALL ARMS**

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M16 Rifle, M4/M4A1 Carbine Spring Assembly
M249 Machine Gun Sling Adapter
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You are invited to send PS your ideas for improving maintenance procedures, questions on maintenance and supply problems and questions or comments on material published in PS.

Just write to:

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

Or email to:

logsa.psmag@conus.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:

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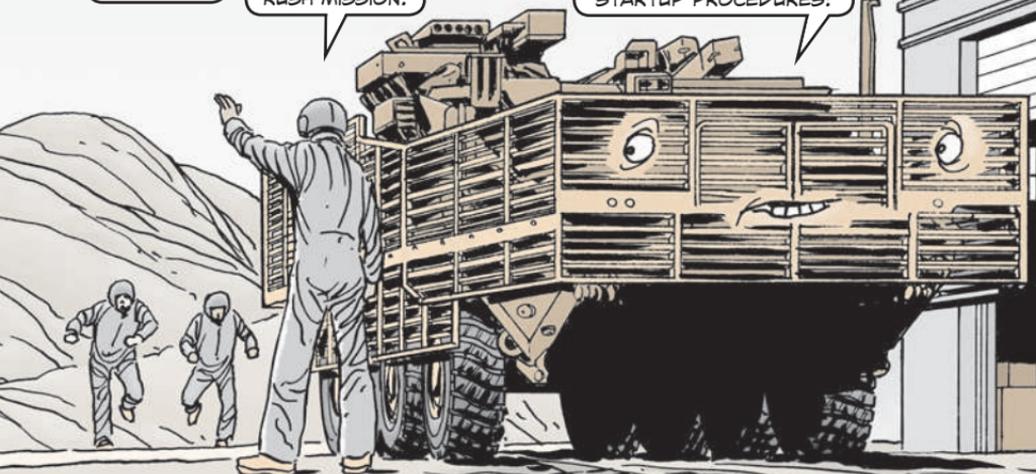
Stryker...

Turbocharged PM

HURRY UP
GUYS!

WE'VE GOT A
RUSH MISSION!

THAT DOESN'T MEAN YOU
CAN RUSH THROUGH MY
STARTUP PROCEDURES!



DRIVERS, THE
STRYKER IS A RUGGED
VEHICLE—AS LONG AS
YOU TREAT IT RIGHT.

THAT MEANS YOU
HAVE TO START IT UP
AND SHUT IT DOWN
THE RIGHT WAY.

IF YOU DON'T,
YOU'LL SOON
BE ASKING YOUR
MECHANIC TO
REPLACE THE
TURBOCHARGER.



Startup

Gravity drains oil out of the turbocharger when the Stryker's been sitting for a while. So make sure you idle the vehicle for 30 seconds or so before moving out. And **don't** rev the engine while you're waiting!

Idling lets enough oil circulate to the turbocharger's bearings to prevent any damage.

Shutdown

The turbocharger continues to spin for a short time after shutdown. Of course the oil stops circulating as soon as you shut off the engine. That means you need to cool down the turbocharger **before** shutting down the engine.

Run the engine at low idle for at least three minutes before shutdown.

The circulating oil cools the turbocharger and lubes the bearings so there's no overheating after the engine is shut down.

Cam Setting Makes a Difference



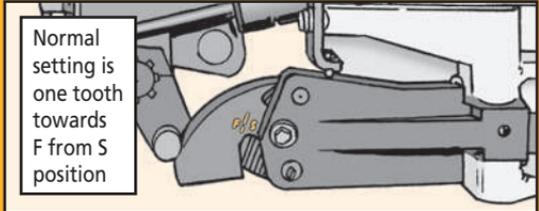
In cold weather, the recoil can slow way down for the main gun on your M1-series tank. The colder it gets, the slower the recoil.

That's why the breech has an adjustable operating cam. When the temperature plummets, you can adjust the cam so the breech opens and ejects the stub bases faster.

Unfortunately, some crewmen are adjusting the cam to operate the breech as fast as it can even during warm weather. They figure the faster the stub bases eject, the faster they can reload and fire again.

But setting the cam to the F (fast) setting doesn't speed up the recoil. It just forces the stub base to be ejected more aggressively. That causes extra stress and wear on the breech components and can lead to premature failure.

So, check the cam in your tank now. The normal operating position is one tooth towards F from the S (slow) position. Then, adjust the cam only if it becomes necessary—when the stub bases eject too slowly because of cold weather.

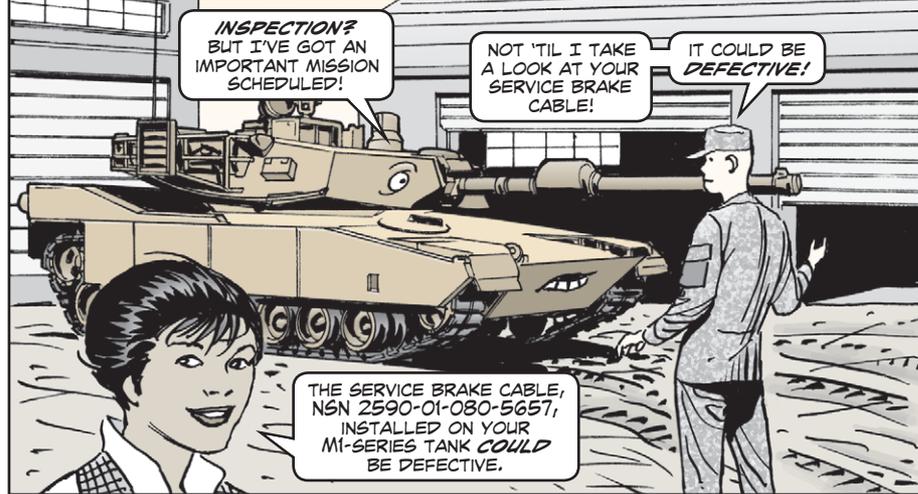


Normal setting is one tooth towards F from S position

You'll find the instructions for adjusting the cam starting on Page 3-266 of TM 9-2350-264-10-2, Page 3-160 of TM 9-2350-288-10-2, and Page 3-188 of TM 9-2350-388-10-2.

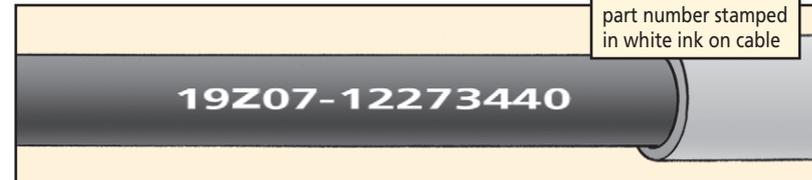
And don't forget to return the cam to its normal setting when that cold snap ends.

Check the Brake for Goodness Sake!



Further inspection means removing the tank's powerpack. It's up to your commander to decide whether the inspection should be done right away or at the next scheduled service.

There are two manufacturers of the black service brake cables. The only way to tell the difference between the two cables is by the CAGE and part number stamped in white ink on the cable's plastic outer sheathing. There is no standard location for the stamping, so it could be anywhere on the cable.

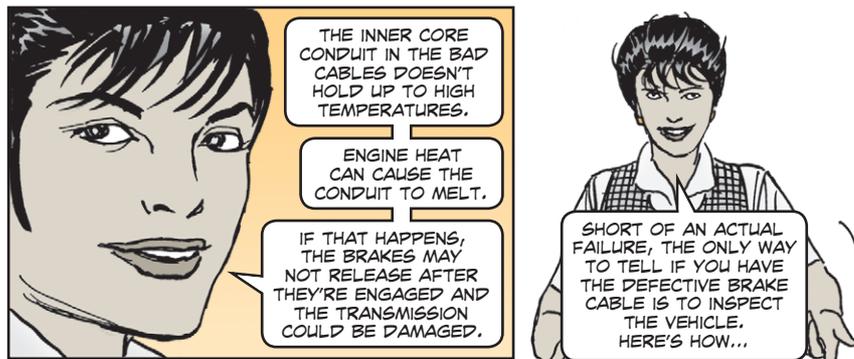


The bad cables will have 19207-12273440 stamped on the cable. Note that the "2" in the 19207 may appear to look like a Z. These cables should be replaced and an SF 368, *Product Quality Deficiency Report*, submitted for credit and disposition instructions.

The good black service cable will be white stamped with 72166-12273440. You can continue to use these cables.

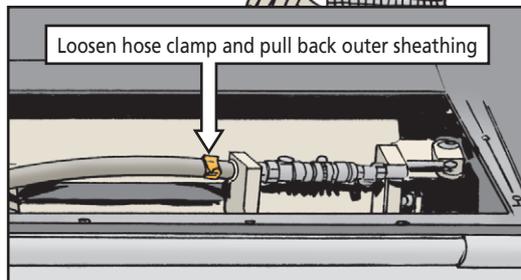
For the complete scoop, check out TACOM Ground Precautionary Message 08-010. You can find it online at the AEPS website:

https://aeps2.ria.army.mil/commodity/Gpm/Tacom_WN/08/gpm08-010.html



Access the service brake cable through the exhaust duct door panel assembly. Loosen the hose clamp holding the outer sheathing on the cable in place.

If the service brake cable is green, you're good to go. However, if the cable is black, you're not finished.

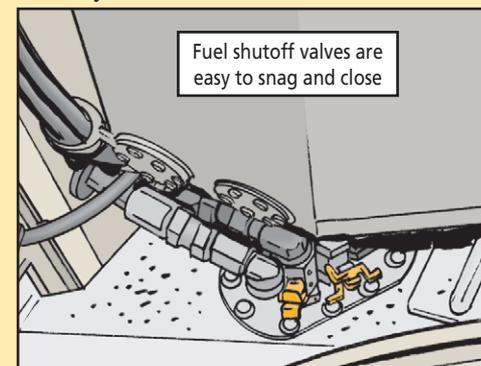


CHECK THE VALVES FIRST!

If your Bradley or its personnel heater won't start, don't pull your hair out! The problem could be caused by an accidentally closed fuel shutoff valve.

The valves are located inside the bottom of the turret wall. With the close confines of the Bradley turret, it's easy for a misplaced foot or loose gear to snag one of the valves and turn it off.

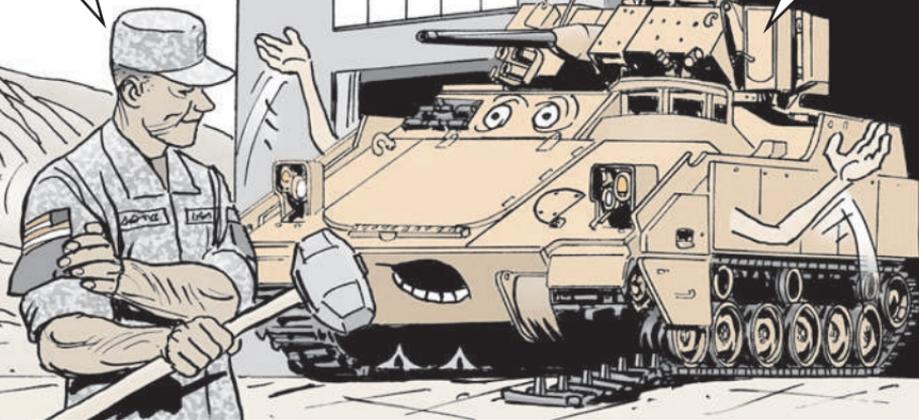
So, if your Bradley's engine or heater won't start, make the shutoff valves your first check. It might save your mechanic some troubleshooting time and you a whole lot of embarrassment.



CONNECTING TRACK MADE *EASY*

OK! TIME TO GET THAT TRACK BACK TOGETHER!

WAIT! THERE MUST BE AN EASIER WAY!

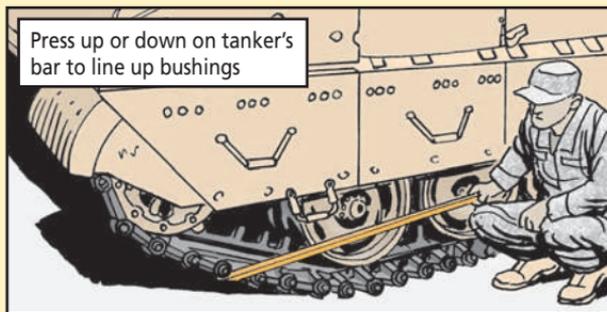


Dear Editor,

Reconnecting broken track or installing new track on your Bradley can be a real pain. Even when using the track connector, we still sometimes have problems lining up the bushing holes just right so that the connecting pin will slide in.

A lot of guys try to bang home the pin with a sledgehammer. That may work in the short run, but it causes damage to the pin and bushings that will eventually result in track failure.

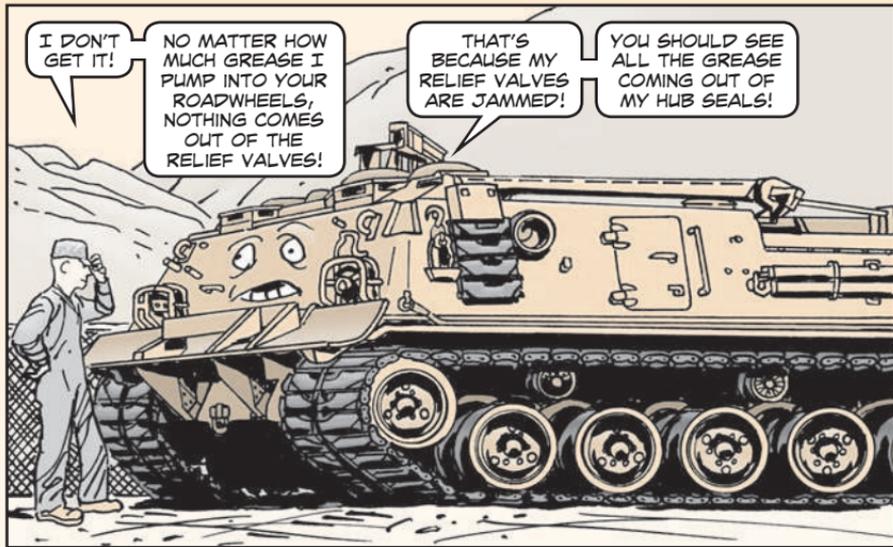
We've found that you can use a tanker's bar to help with the connection. Just wedge the end of the bar between the two shoes and pull up and down to manipulate the bushings until they line up. Then the pin slides in easily.



PVT Gregory Easton
SGT Robert Monroe
3/1 AD STB
Ft Riley, KS

Editor's note: A simple solution to a tough problem! Good work!

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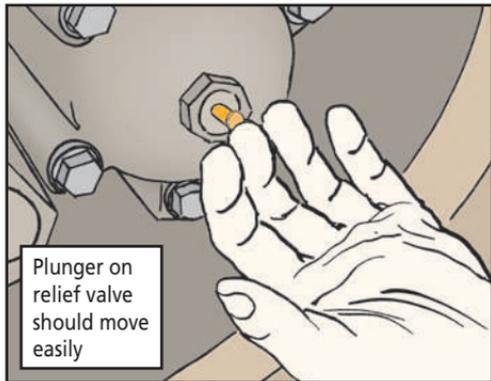


A roadwheel relief valve that's clogged with dirt and sand won't relieve pressure when you pump in new grease. The pressure grows until something gives—usually the hub seal.

When the seal goes, so does the lube. The result is burned-out bearings.

So before adding new grease, use a cloth to wipe away any dirt and sand from the relief valve. Then pull out the valve plunger.

If it slides out smoothly and pops back in when you release it, the valve's OK. If it doesn't, replace it with relief valve, NSN 4820-01-070-7670.



Safe Storage for Copperhead Extractor



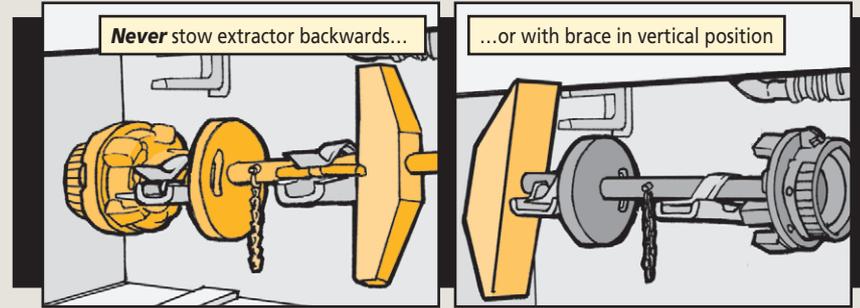
CREWMEN, IF YOU GET CARELESS WITH HOW YOU STORE THE COPPERHEAD EXTRACTOR, YOUR M109-SERIES HOWITZER COULD BE LEFT WITH A NASTY BITE.

SSSSSS



SOUNDS LIKE SOMEBODY DIDN'T PROPERLY STOW YOUR COPPERHEAD EXTRACTOR!

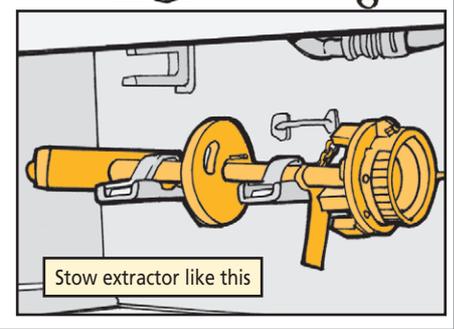
If you store it backwards, or with the brace in the vertical position, the brace bangs into the wiring harness that powers the slip ring contact arms. Banging wears away the harness cover and leads to arcing and electrical failure.



The same problems occur when the brace isn't tightened in place, even if the extractor is stowed properly. Vibration shifts the brace around until it snags the wiring harness.



Slide the brace forward on the extractor shaft until it touches the end of the ratchet handle. Turn the drive nut on the shaft end counter-clockwise until the brace is held firmly against the ratchet handle. Then, turn the extractor so that the brace is horizontal and facing away from the rear door when it's stored in the cab rack. That way, you avoid harness damage altogether.



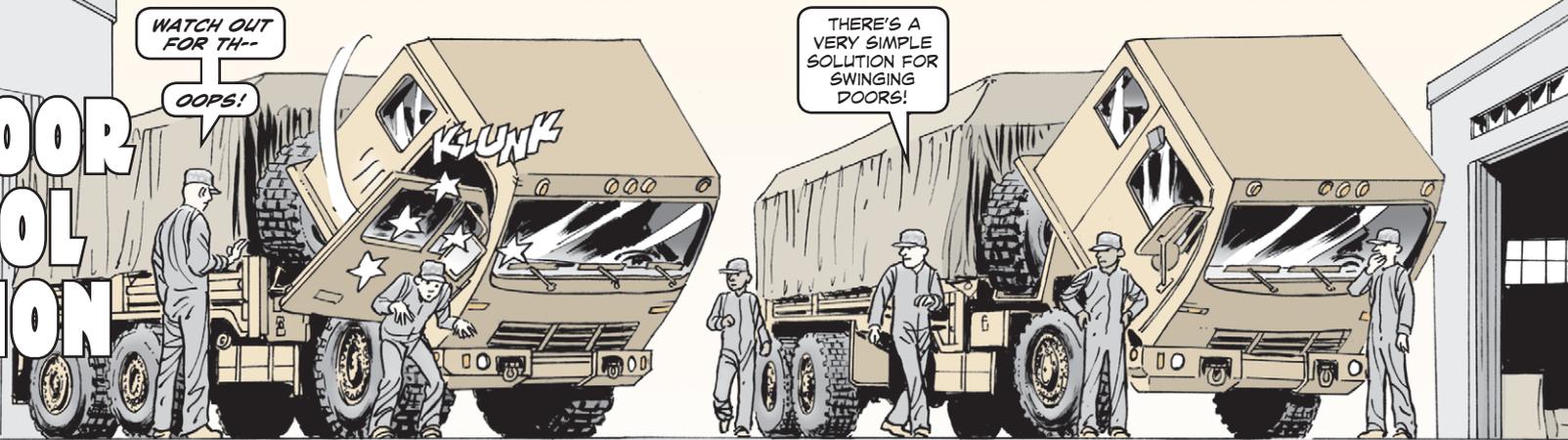
M1068, M577A2 Quick Release Pin

The NSN for the commander's platform assembly quick release pin, listed as Item 17 of Fig 239 in TM 9-2350-261-24P, is no longer available. Order the replacement pin with NSN 5315-01-452-8840, PN MS17984C650, and CAGE 80205.

M1059 Smoke Generator Strainer

Use NSN 4330-01-485-9879 to get a new strainer assembly for your M1059 smoke generator carrier. The NSN shown as Item 21 in Fig 375 of TM 9-2350-261-24P on EM 0040 is wrong.

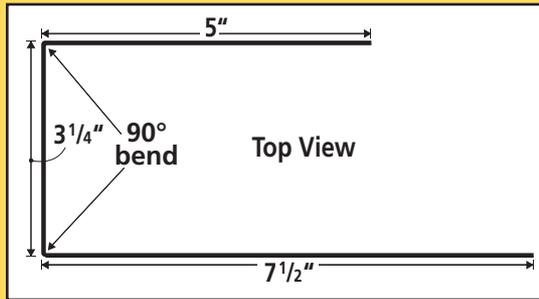
CAB DOOR CONTROL SOLUTION



Dear Editor,

Recently we pulled maintenance on some FMTVs, and the cab doors opened when the cab was raised. Imagine our surprise! This was a hazard to anyone standing near the doors and could have damaged equipment.

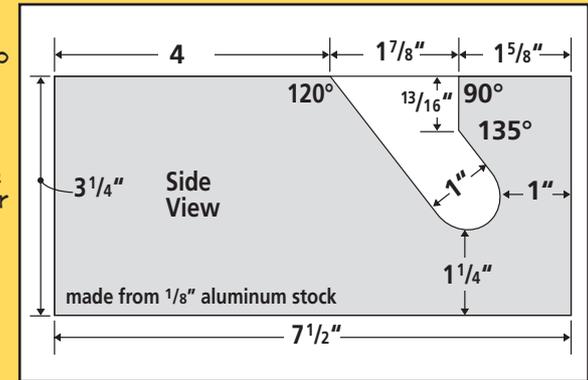
Here's a solution I developed that I think PS readers might want to try. Using 1/8" aluminum stock, I fabricated a safety bracket that slides over the seatbelt mounting hardware and through the door's open window.



The bracket is U-shaped and acts as a lock-out device so the door won't open.

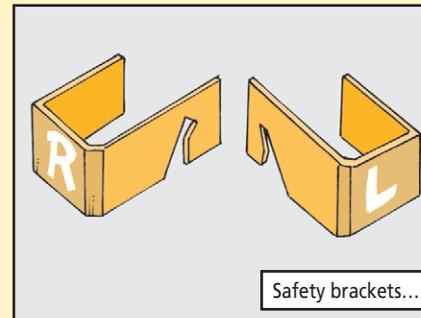
The left and right brackets are mirror images of each other. The notch fits over the bracket on the shoulder seatbelt. This simple bracket can be made using the dimensions in these drawings.

Curtis Shelton
DOL-IMD
Fort Campbell, KY

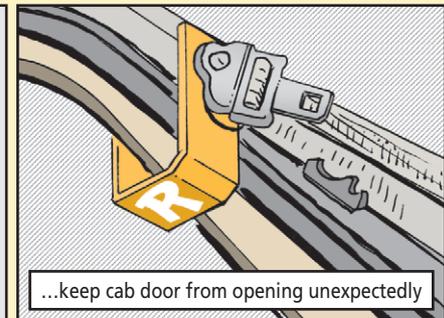


Editor's note: Great idea, Mr. Shelton! Normally, FMTV cab doors don't pop open when the cab is raised. But it **can** happen if the door isn't fully latched or properly adjusted, or if the cab is bent out of alignment. And on older models, the door can open when the linkage becomes weak or loose.

TACOM LCMC approved some linkage changes to solve this problem, but not every truck was updated with the improved hardware. So if the cab door on your FMTV opens when the cab is raised, inspect the door linkage and door for proper adjustment. Check the cab structure for damage, too. And to be on the safe side, make this safety bracket.



Safety brackets...



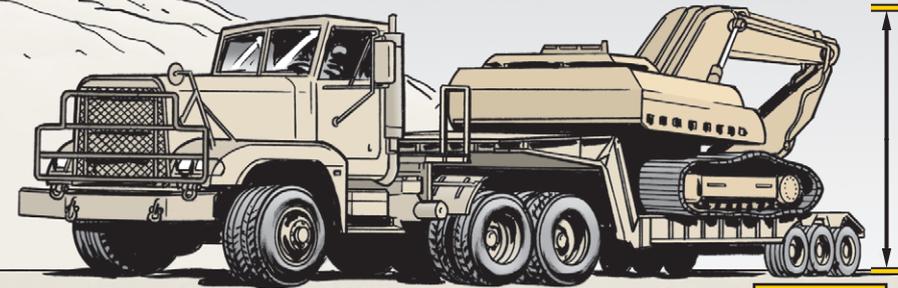
...keep cab door from opening unexpectedly

TRANSPORTING A LOAD

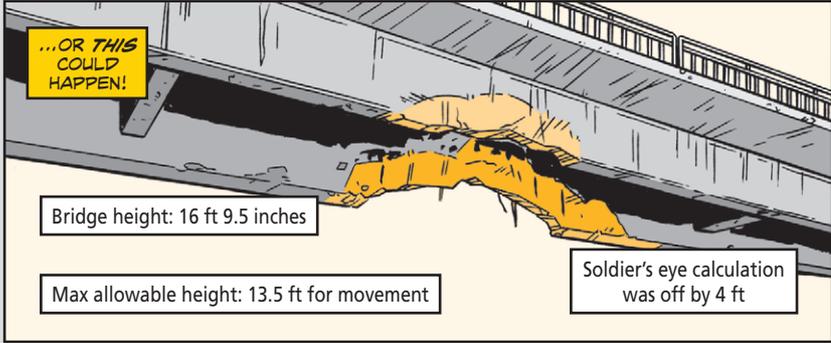
OPERATORS... MAKE SURE YOU KNOW THE DISTANCE FROM...

...HERE...

...TO HERE.



Some time back, an M916A3 tractor was hauling a hydraulic excavator on an M870A1 semitrailer. The excavator's boom collided with a pedestrian overpass. The collision backed up traffic on the five-lane interstate for 14 hours. About a million bucks in damages was the final result!
The investigation report revealed the rig's load height was almost 4 feet over the maximum allowable limit!



...OR THIS COULD HAPPEN!

Bridge height: 16 ft 9.5 inches

Max allowable height: 13.5 ft for movement

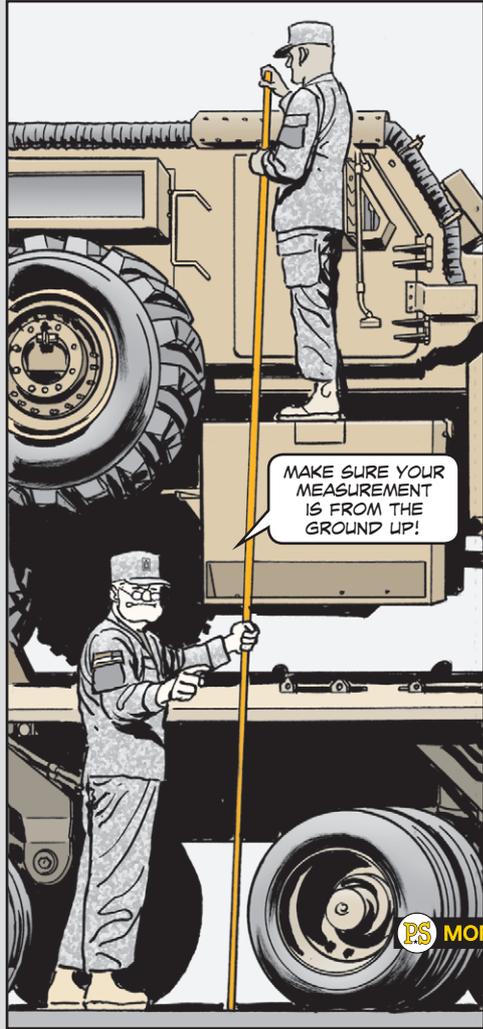
Soldier's eye calculation was off by 4 ft

Listen up! The restriction limit of a load height is 13 feet 5 inches for CONUS, and 13 feet 1 inch for OCONUS. The width of the load in both CONUS and OCONUS is restricted to 8 feet. You'll find this info spelled out in the Military Surface Deployment and Distribution Command Transportation Engineering Agency's (SDDCTEA) TEA PAM 70-1, *Transportability for Better Deployability*.

SO HOW DO YOU MEASURE LOAD HEIGHT ACCURATELY? ONCE THE LOAD IS POSITIONED FOR TRANSPORT AND SECURED TO THE TRAILER'S PLATFORM, DO THIS...



Using an adjustable-length measuring pole or a 25-ft retractable measuring tape, measure from the ground straight up to the highest point of the vehicle or load. This measurement cannot exceed 13 feet 5 inches. If any part of the vehicle or load exceeds these limits, reconfigure the load before movement. Or see the Oversize Cargo section on the next page.



PS MORE



WHAT EXACTLY IS THE DRIVER OF A TRACTOR AND SEMITRAILER RIG RESPONSIBLE FOR WHEN HE HEADS OUT FOR THE DAY'S RUN?

You'll find the answer in Para 10-1e of FM 55-30, *Army Motor Transport Units and Operations*. It says, "The **driver** supervises the loading of his vehicle and ensures that his cargo is properly loaded and secured against movement. He further ensures that the load is balanced and does not exceed the vehicle capacity as noted on the data plate. He uses the vehicle tarpaulin to protect the load from the weather and pilferage.
Once the driver accepts the load from the shipper, he alone is responsible for its safe delivery! The **driver should not accept an unsafe load and must resolve any dispute before moving.**"
Nevertheless, when an accident happens, it gets the attention of everyone—all the way up the chain of the command.

Avoid a Load Tip Over



HERE ARE SOME THINGS TO KEEP IN MIND TO HELP PREVENT A LOAD FROM TIPPING OVER...

- Place the heaviest items at the bottom of the load.
- Avoid stacking heavy items too high.
- Slow the vehicle before turning.
- Watch and listen for possible load shifting.

Oversize Cargo

Before operating a rig with a heavy or odd-sized load, check with your unit movement officer to determine if the load complies with local, state or foreign government laws for movement on public highways. That way he can issue any special permits that may be needed to move the load off the installation. Measure both the height and width of the trailer with its cargo. A load that exceeds the maximum measurements **must** be reported to the Battalion Movement Officer for the necessary clearance and permits.

When you have further questions or need help, get a copy of AR 55-162, *Permits for Oversize Overweight, or other Special Military Movements on Public Highways in the United States*.

Overhead Clearance

What it comes down to is this: know the overhead clearance needed for your vehicle. Signs on most overpasses show the clearance in feet and inches.

When transporting a load and you're not sure your load will clear a bridge or overpass, approach the bridge slowly enough that you can stop before a collision occurs if the cargo will not clear.

You also need to pay attention to other hazards, such as low hanging objects, electrical wires, traffic lights and tree limbs.

Publications

The following publications should be available in the motor pool and you should use them when you have questions or need more info on transport operations:

AR 385-55, *Prevention of Motor Vehicle Accidents*

AR 600-55, *The Army Driver and Operator Standardization Program (Selection, Training, Testing and Licensing)*

FM 4-01.40, *Army Transport Units and Operations*

FM 21-305, *Manual for the Wheeled Vehicle Driver, Trucks, Tractors, Semitrailers and Special Purpose Vehicles*

FM 55-15, *Transportation Reference Data*

SDDC MTMC TEA PAM 55-20, *Tiedown Handbook for Truck Movements*

STP 55-88M14-SM-TG, *Soldier's Manual and Trainer's Guide 88M, Motor Transport Operator—Skill Levels 1, 2, 3, and 4*

TC 21-305-20, *Training Program for Wheeled Vehicle Accident Avoidance*

TEA PAM 70-1, *Transportability for Better Deployability*

(Take a close look at the Vehicle Sizes and Weights Chart in TEA PAM 70-1.)



BRAKE DRAG IN THE BAG



Dear Half-Mast,

Our unit has received M105A3 trailers to replace the -A2 models. But we are having trouble with the brakes dragging while going down the road. We couldn't find a solution in the TM, and have ended up burning up the brakes on several trailers!

The brakes are adjusted, the master cylinder is at 3/4 full, and the parking brake is okay. When brake dragging occurs, we have to crack the bleeders, or loosen the brake line at the rubber hose near the master cylinder to unlock the brakes. What's the best solution?

SSG T.M.

Dear Sergeant T.M.,

It's certainly not normal to have brakes drag going down the road! Here's what TACOM LCMC recommends:

1. Start by checking the hand brake system. Make sure the hand brake cable is returning completely. If either side is sticking, replace both of them.
2. Next, check the hand brake handle. Lube it and make sure it functions properly. Fix any problems you find.
3. Finally, inspect the surge brake device. If it's damaged, rusted, or not functioning properly, that may be the culprit behind the brake dragging. There aren't any repair or replacement parts for it, so you'll have to order a new surge brake assembly.

Right now, TM 9-2330-324-14&P doesn't cover troubleshooting the surge brake device adequately, but the plan is to fix that at the next update. Until then, keep this info in your motor pool. See WP 0004 00-1 in the TM.

By the way, a smaller version of this surge brake device is used on M101 and M116 trailers. So the brake troubleshooting procedure I just told you about applies to those models, too.

Half-Mast

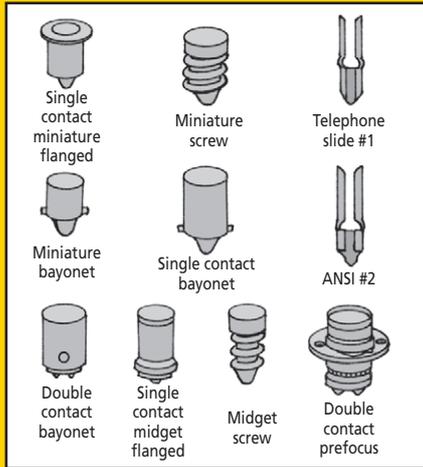
Light Bulb NSNs

Need a replacement for a common automotive bulb? Finding one is not always easy.

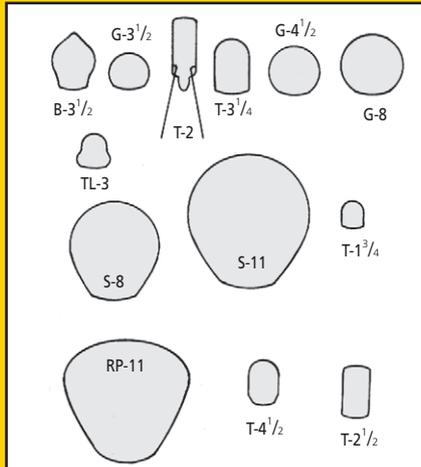
Most bulbs are imprinted with standard trade numbers. That's helpful if you're going to an auto parts store, but not if you need an NSN!

Using the wrong bulb can cause blown, dim or flashing lights. So eyeball this list the next time you need a replacement for a common automotive bulb:

Base Shapes



Lamp Shapes



Trade Number	NSN 6240-	Base Shape	Lamp Shape	Amps	Volts
PR2	00-155-7786	Single contact miniature flanged	B-3 1/2	0.5	2.34
PR3	00-155-7916	Single contact miniature flanged	B-3 1/2	0.5	3.57
PR4	00-984-1887	Single contact miniature flanged	B-3 1/2	0.27	2.33
PR6	00-155-8675	Single contact miniature flanged	B-3 1/2	0.3	2.47
PR7	00-155-7915	Single contact miniature flanged	B-3 1/2	0.3	3.7
PR12	00-299-6767	Single contact miniature flanged	B-3 1/2	0.5	5.95
PR13	00-844-1758	Single contact miniature flanged	B-3 1/2	0.5	4.75
PR15	00-044-5026*	Single contact miniature flanged	B-3 1/2	0.5	4.82
14	00-797-2650	Miniature screw	G-3 1/2	0.3	2.47
24E1	00-155-7837	Telephone slide #1	T2	0.035	24
24X	00-178-9941	ANSI #2	T2	0.035	24
44	00-057-2887	Miniature bayonet	T-3 1/4	0.25	6.3
47	00-155-8706	Miniature bayonet	T-3 1/4	0.15	6.3
49	00-155-8683	Miniature bayonet	T-3 1/4	0.06	2
55	00-012-5588	Miniature bayonet	T-3 1/4	0.41	7
57	00-012-7934	Miniature bayonet	G-4 1/2	0.24	14
67	00-155-8717	Single contact bayonet	G-6	0.59	13.5
89	00-143-3159	Single contact bayonet	G-6	0.58	13

Trade Number	NSN 6240-	Base Shape	Lamp Shape	Amps	Volts
93	00-014-2454	Single contact bayonett	S-8	1.04	12.8
120MB	00-939-7859	Miniature bayonet	T-2 1/2	0.025	120
157	00-975-0865	Miniature screw	G-6	1.1	5.8
243	00-155-7898	Miniature screw	TL-3	0.27	2.33
312	00-155-7923	Double contact bayonet	S-11	1.29	28
313	00-155-8714	Single contact bayonet	T-3 1/4	0.17	28
327	00-155-7836	Single contact midget flanged	T-1 3/4	0.04	28
328	00-155-7857	Single contact miniature flanged	T-1 3/4	0.2	6
330	00-851-4352	Single contact miniature flanged	T-1 3/4	0.08	14
335	00-270-4698	Midget screw	T-1 3/4	0.04	28
338	00-542-6571	Single contact miniature flanged	T-1 3/4	0.06	2.7
345	00-683-0560	Single contact miniature flanged	T-1 3/4	0.04	6
382	00-965-1381	Single contact midget flanged	T-1 3/4	0.08	14
387	00-763-7744	Single contact miniature flanged	T-1 3/4	0.04	28
407	00-965-6059	Miniature screw	G-4 1/2	0.3	4.9
425	00-519-1520	Miniature screw	G-4 1/2	0.5	5
1034	00-295-1184	Double contact bayonet	S-8	1.8/0.59	12.8/14
1062	01-071-1507	Double contact bayonet	RP-11	0.92	40
1133	00-155-8687	Single contact bayonet	RP-11	3.91	6.2
1156	00-924-7526	Single contact bayonet	S-8	2.1	12.8
1157	00-889-1799	Double contact bayonet	S-8	2.1/0.59	12.8/14
1183	00-019-3120	Single contact bayonet	RP-11	6.25	5.5
1184	00-155-8684	Double contact bayonet	RP-11	6.25	5.5
1195	00-019-3096	Single contact bayonet	RP-11	2.96	12.5
1196	00-295-2729*	Double contact bayonet	RP-11	3.04	12.5
1224	00-155-7841	Double contact bayonet	G-6	0.16	34
1490	00-196-4501	Miniature bayonet	T-3 1/4	0.16	3.2
1630	00-669-6516	Double contact prefocus	S-8	2.75	6.5
1813	00-155-7967	Miniature bayonet	T-3 1/4	0.1	14.4
1815	00-155-7859	Miniature bayonet	T-3 1/4	0.2	14
1819	00-155-8707	Single contact bayonet	T-3 1/4	0.04	28
1820	00-143-3173	Miniature bayonet	T-3 1/4	0.1	28
1822	00-267-1167	Miniature bayonet	T-3 1/4	0.1	36
1829	00-266-9940	Miniature bayonet	T-3 1/4	0.07	28
1847	00-583-9610	Miniature bayonet	T-3 1/4	0.15	6.3
1850	00-044-5025	Miniature bayonet	T-3 1/4	0.09	5
1855	00-143-3175	Miniature bayonet	T-4 1/2	0.8	6.3
1864	00-765-8443	Miniature bayonet	T-3 1/4	0.17	28
1866	00-924-7504	Miniature bayonet	T-3 1/4	0.25	6.3
1891	00-770-3372	Miniature bayonet	T-3 1/4	0.24	14

*Order on a DD Form 1348-6 and put "NSN not on AMDF" in the REMARKS block.

Once you have the right light bulb to install, put a thin coat of silicone grease, NSN 6850-00-963-5402, on the base. That stops corrosion between the bulb base and its socket, and makes it easier to remove the bulb.

EU AND EB SOP

YOU REALLY SHOULD HAVE DONE A BETTER JOB PROTECTING MY EU AND EB!



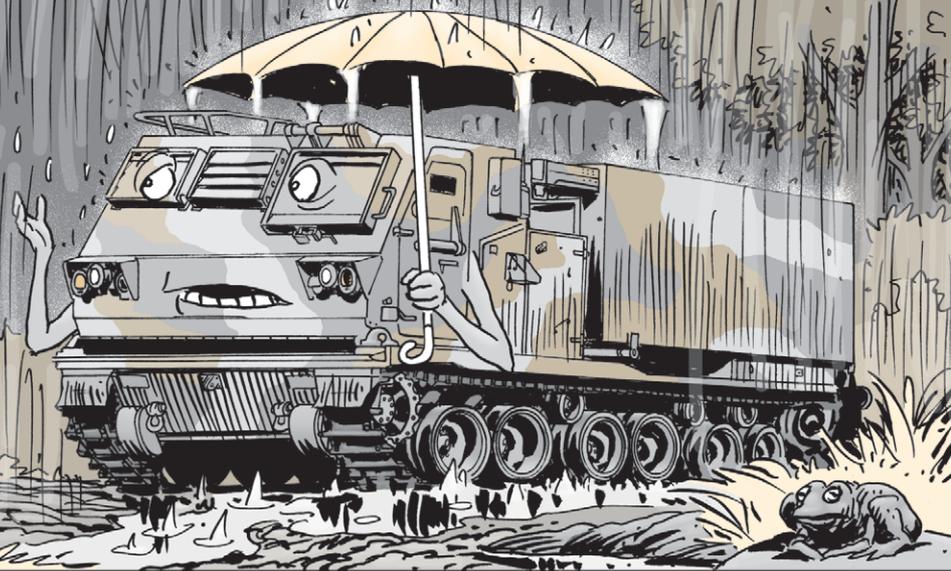
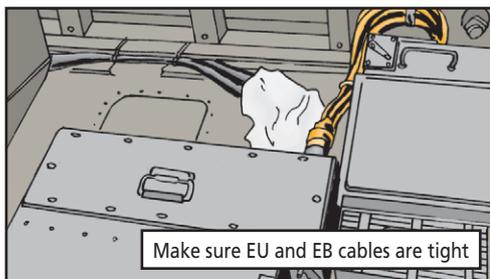
THE ELECTRONICS UNIT (EU) AND ELECTRONICS BOX (EB) ARE THE HEART OF YOUR MLRS.

IF THEY HAVE PROBLEMS, COUNT ON YOUR MLRS HAVING MAJOR PROBLEMS.

MAKE THESE EU AND EB CHECKS SOP.

Check cables. The cables for the EU, EB, and fire control unit sometimes aren't completely tightened after maintenance. Then you get fire control panel faults and LDS malfunctions, which can cost you troubleshooting time figuring out what's the problem. Before you fire, make sure all the cables to the EU, EB, and fire control unit are tight, especially the J5 and J7. If you start getting faults, make these EU and EB cables your first check.

Be careful connecting the cables. The cable connectors should slide in place easily. If one doesn't, check that you have it correctly aligned. Don't force it.

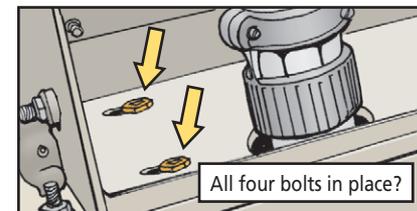
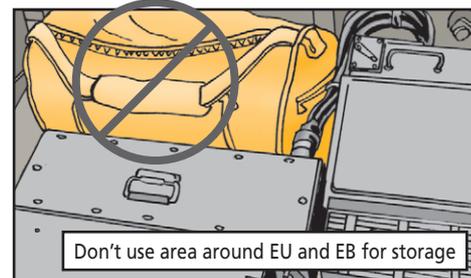


No storage. The area around the EU and EB may look like convenient places for storage, but they're definitely not. If you stick stuff like chock blocks or duffel bags there, the launcher will crush them when it's stowed.

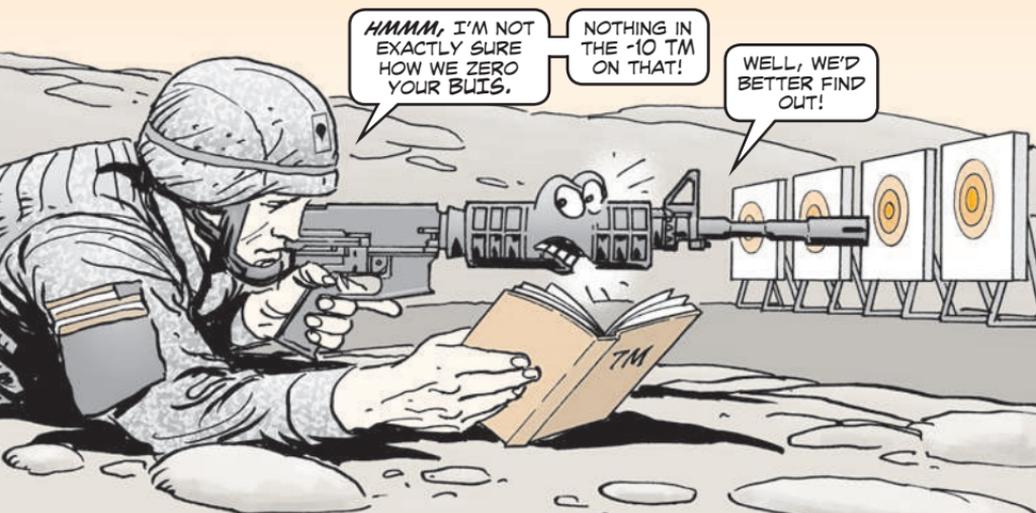
Keep 'em dry. If water gets inside the EB or EU, it causes all sorts of serious electrical problems. Keep hoses away from the EB and EU. Never spray water on the boxes. If you take your MLRS through the wash rack, make sure you first cover those boxes with a tarp.

Leave the lids on the EU and EB. Only support should take off the lids. If you remove them, the gaskets that keep the lids watertight are ruined.

Make sure all four bolts that hold the EB to the battery box are in place and are tightly screwed in with the correct washers and gaskets. Often the two bottom bolts are forgotten and that can let water into the EB.



WHAT'S THE ZERO MARK?



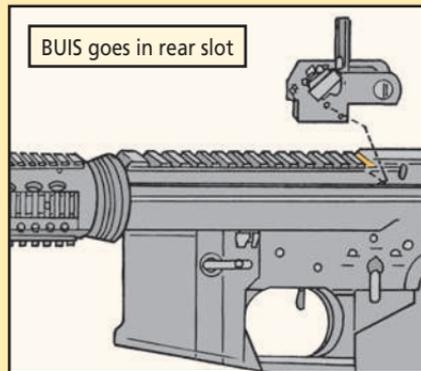
Dear Half-Mast,

When you zero the M16A4 rifle or the M4/M4A1 carbine with the backup iron sight (BUIS), do you place its knob on the white line or on the 300-m mark?

CW3 D.C.

Dear Chief D.C.,

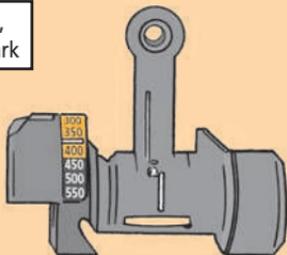
Good question. First of all, for accurate zeroing, the BUIS must be in the last slot to the rear.



For the M4/M4A1, the line on the left-side cam must align with the 300-m mark. For the M16A4, the line should be between the 300-m and 400-m marks.

For M4/M4A1,
use 300-m mark

For M16A4,
set sight
between
300-m and
400-m
marks

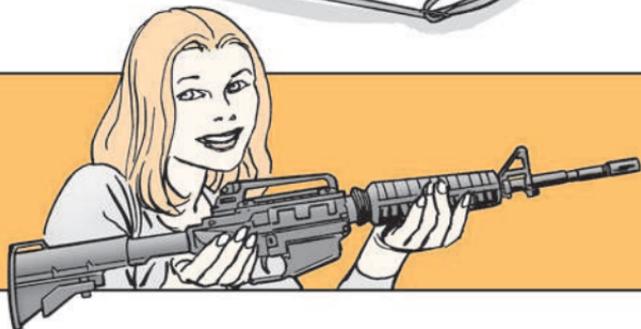


Half-Mast

GO FOR THE GOLD!

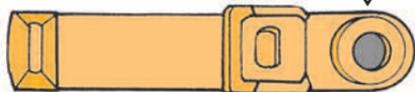


THE M16 RIFLE AND THE M4/M4A1 CARBINE CAN NOW USE THE SAME EXTRACTOR SPRING ASSEMBLY.



THAT MEANS IN THE NEAR FUTURE THE M16 AND M4 WILL ALSO USE THE SAME BREACH BOLT ASSEMBLY.

New extractor spring is gold with a black insert



The old extractor spring assembly, NSN 5360-01-424-5899, is still in stock and may be ordered for use only on the M16. The old breach bolt assembly, NSN 1005-01-422-3770, is also still in stock and may be ordered only for the M16.

Once stock of the two assemblies are exhausted, order only the newer extractor spring assembly, NSN 5360-01-505-2886. It's gold colored—the old one is dark colored. Order the new breach bolt assembly with NSN 1005-01-505-1035.

Sling Adapter BII or AAL?

SAY, THIS NEW SLING SWIVEL ADAPTER WILL SURE STOP THE SLING HOOKS FROM CRACKING YOUR UPPER RECEIVER HOLES.

BUT IS ALL THIS NEW STUFF BII OR AAL?



Dear Half-Mast,

We read in PS 661 (Dec 07) about the new sling adapter for the M249 machine gun. Will the adapter replace the sling snap hooks as BII or are they going to be considered AAL? And if they're AAL, do units need to keep the snap hooks?

SSG R.G.

Dear SSG R.G.,

Good question. The front mounting kit, NSN 1005-01-529-8406, and one quick-release swivel, NSN 1005-01-529-9309, are now part of the standard configuration. They are repair parts, not BII or AAL. The rear mounting kit, NSN 1005-01-529-8408, and the second quick-release swivel, NSN 1005-01-529-9309, are AAL.

These parts were designed to prevent wear where the sling attaches to the receiver. Too much wear means the receiver must be coded out. If your M249, though, has the standard buttstock, you don't need the rear mounting kit, because the kit actually costs more than the \$15 buttplate. But if your M249 has the collapsible buttstock, the rear mounting kit and swivel are a good buy if you're attaching the sling to the buffer assembly because the assembly costs \$320 to replace.

Units do need to keep the snap hooks from the sling. You can use the sling as is with the snap hooks attaching it to the swivels. If you wish to get away from the old sling with the snap hooks, you can order the Bulldog Sling, NSN 1005-01-533-4093, which has carabiner attaching hardware.

If you have questions about the M249, contact TACOM-RI's Matt Williams at DSN 793-1918, (309) 782-1918, or email:

matthew.williams22@us.army.mil

New M68 Sight TM Available

The M68 reflex sight has a new TM. TM 9-1420-413-13&P replaces TM 9-1420-413-12&P. The -13&P includes changes for the M68 Comp M2, NSN 1240-01-411-1265, and provides new maintenance and parts info for the M68 Comp M4, NSN 1240-01-540-3690. The TM is available at the ETM site: <https://www.logsa.army.mil/etms/online.cfm>

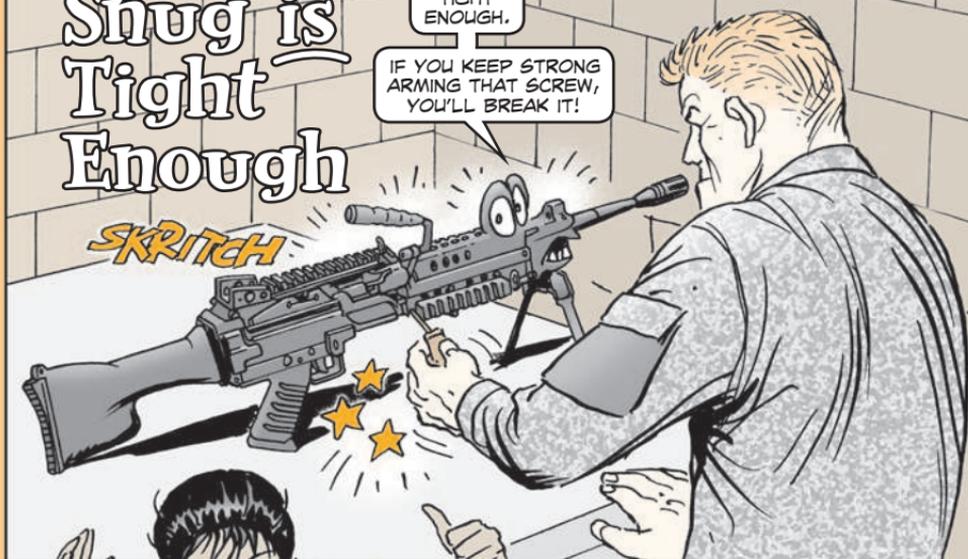
Your pubs clerk can order you a paper copy.

Snug is Tight Enough

HEY,
THAT'S
TIGHT
ENOUGH.

IF YOU KEEP STRONG
ARMING THAT SCREW,
YOU'LL BREAK IT!

SKRITCH



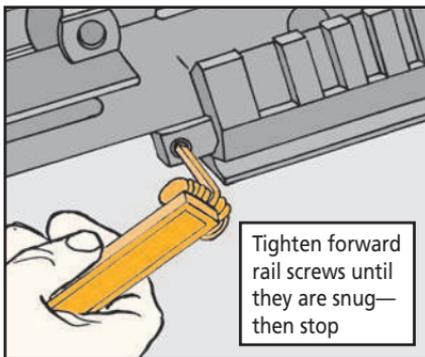
TIGHTENING AND TIGHTENING
THE SCREWS FOR THE M249
MACHINE GUN'S FORWARD
RAILS ISN'T NECESSARY.

The screws are self-locking, so once they're tightened snug the forward rails should be tight. If you continue to tighten the screws, you strip or break them.

If the rails aren't tight, armorers, remove the screws and the forward rails. Check the receiver holes where the forward rails' studs go. If the holes are out-of-round, the M249 needs to be turned in because you will never be able to securely mount the forward rails to the receiver.

Out-of-round holes are usually caused by your repairman mistakenly thinking the forward rails don't fit. So he enlarges the holes. That makes it impossible to keep the forward rails tight.

If the studs don't fit into the holes easily, your repairman should use a rubber mallet to tap the forward rails into place. That should do the trick. Enlarging the holes accomplishes nothing but ruining the receiver.



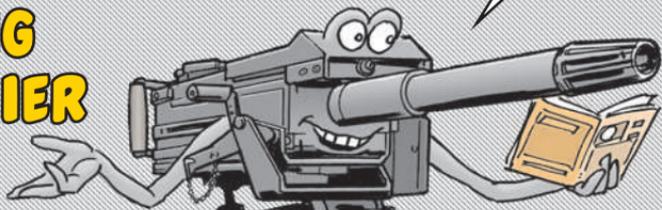
Tighten forward
rail screws until
they are snug—
then stop

NEW COUPLING FOR EASIER LINKING

THIS IS
GOOD
NEWS!

NOW YOU CAN ADD
INDIVIDUAL ROUNDS
TO MY AMMO BELT
OR JOIN BELTS.

THIS WILL
SAVE LOTS
OF TIME.

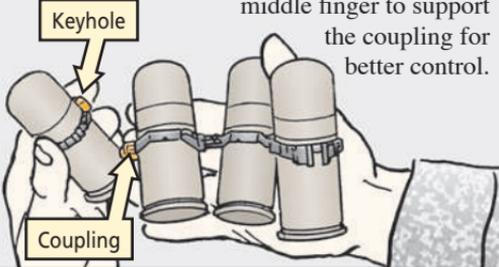


The Army is fielding a new pivoting coupling that lets MK 19 gunners link individual grenade rounds or partial or full ammo belts together without hand tools. The new couplings are gold, not black like the old ones. Before using them, heed these warnings:

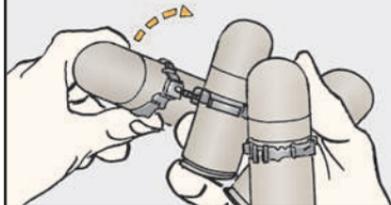
- Do not couple target practice and high explosive rounds together. You don't want any confusion over what you're firing.
- Do not re-couple rounds if the link is off the rotating band. The link or rotating band may be deformed, which would cause the MK 19 to stop firing.
- Do not uncouple belted ammo. That can damage the coupling and keyhole.
- Improperly linked ammo can cause the MK 19 to stop firing.



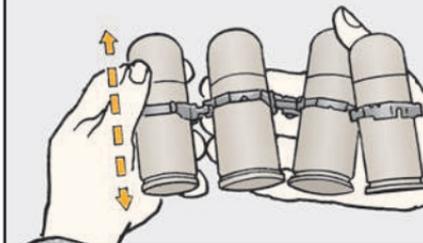
1. Hold the round 90° from the mating round. Align the keyhole and coupling. Use your middle finger to support the coupling for better control.



2. Fully insert the coupling into the keyhole, then rotate the round to align with the adjoining rounds.



3. Tug on the newly attached round to ensure it's secure.



WHO DISASSEMBLES COVER ASSEMBLY?



IT SAYS RIGHT HERE THAT AS YOUR ARMORER I CAN TAKE YOUR TOP COVER ASSEMBLY APART.

NO, NO, NO! ONLY SUPPORT CAN DO THAT.

CHECK WITH HALF-MAST.

Dear Half-Mast,

TM 9-1010-230-23&P is confusing on what level of maintenance should disassemble the MK 19's top cover assembly. WP 004700-1 says the armorer should inspect, remove and repair the top cover assembly.

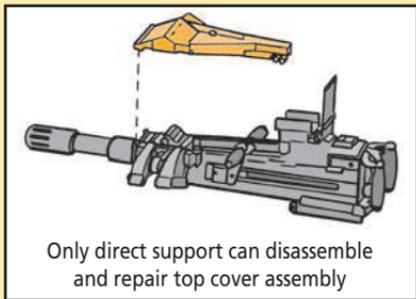
But the note on the next page says not to disassemble the top cover unless you need to replace a part. In the repair parts list on WP 010500-3/4, it states that all the top cover repair parts are at the direct support level. So what's right?

D.H.

Dear Mr. D.H.,

The armorer is **not** authorized to disassemble the top cover assembly. The only part of the assembly the armorer should inspect is the latch mechanism. All repairs and disassembly of the top cover should be done by support. The TM will be changed to make this clear. Thanks for pointing this out.

Half-Mast



Only direct support can disassemble and repair top cover assembly

Ammo Pouch NSN?

HERE'S HOW TO GET MORE AMMO POUCHES FOR ME!



Dear Half-Mast,

Is there an NSN for the M240B machine gun's ammo pouch? We could sure use more of the pouches.

SSG J.B.

Dear Sergeant J.B.,

Yes, you can order more pouches with NSN 1005-01-529-8411. Each pouch holds 50 rounds.

Half-Mast

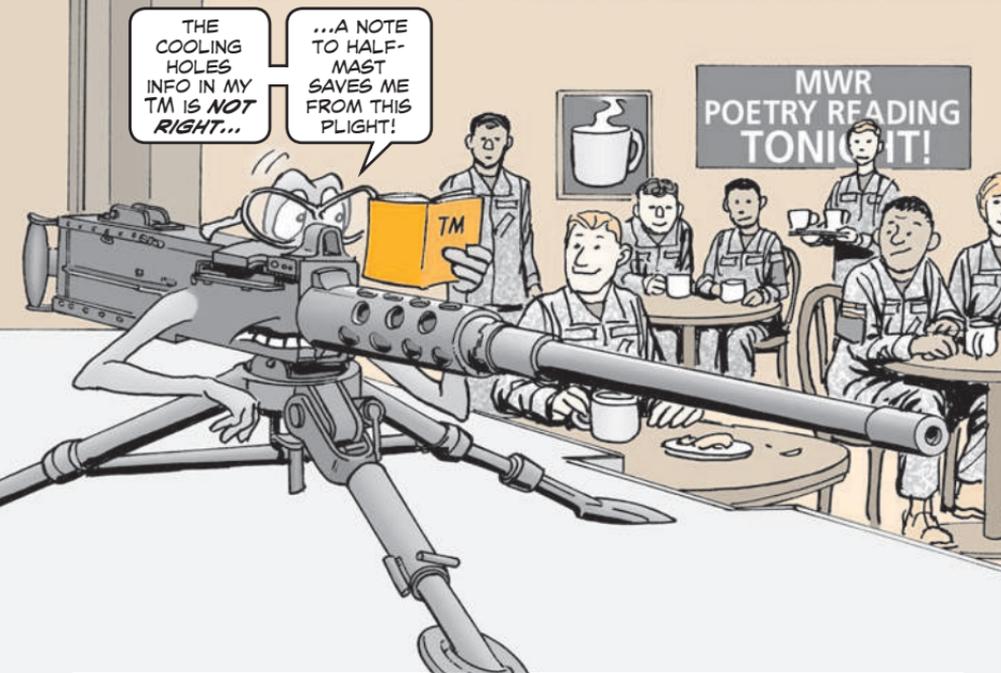


Pouch comes with NSN 1005-01-529-8411

WHAT IS COOLING HOLE STANDARD?

THE COOLING HOLES INFO IN MY TM IS **NOT RIGHT...**

...A NOTE TO HALF-MAST SAVES ME FROM THIS PLIGHT!



Dear Half-Mast,

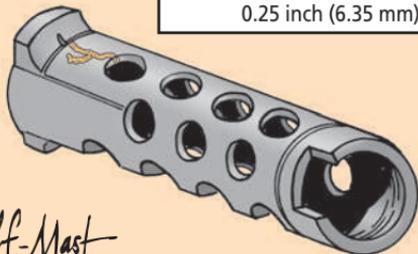
TB 9-1000-247-34 says that cracks up to 1/4 inch long are permitted at cooling holes, but Step 3 on WP 0020 00 in TM 9-1005-213-23&P says "Cracks up to 0.025 inch (0.635 mm) maximum in length are permitted at holes". That's quite a difference. What's right?

CW3 W.C.O.

Dear Chief W.C.O.,

Step 3 in the TM should read 0.250 inch (6.350 mm), so make a note in your TMs until this is corrected. The rest of Step 3 is correct: "No more than four cracks allowed per support. No more than two cracks allowed in succession in any direction. Original surface imperfections are permitted."

Cracks can't be longer than 0.25 inch (6.35 mm)



Half-Mast

IT HAPPENED ON THE HINDENBURG

DATELINE: LAKEHURST NAVAL AIR STATION, NEW JERSEY, MAY 6, 1937.

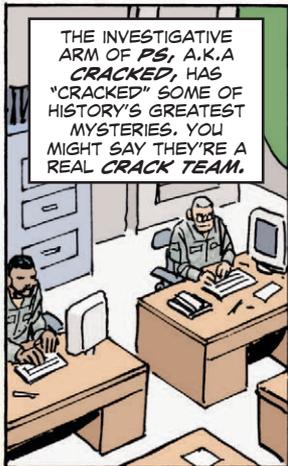
THIRTY-SIX PEOPLE DIED TODAY WHEN THE ZEPPELIN LZ129 HINDENBURG BURST INTO A BALL OF FLAME AND PLUNGED TO THE GROUND.

AT 804 FEET IN LENGTH, THE HINDENBURG WAS THE LARGEST RIGID AIRCRAFT EVER BUILT.

THE CAUSE OF THE FIRE THAT LED TO THE DESTRUCTION HAS NEVER BEEN DETERMINED.

PREVENTIVE MAINTENANCE CITY, USA, MAY 6, 2008. AFTER 71 YEARS, THE REASON THE HINDENBURG MET ITS FIERY FATE IS BEING INVESTIGATED BY THE ARMY'S PS, THE PREVENTIVE MAINTENANCE MONTHLY.

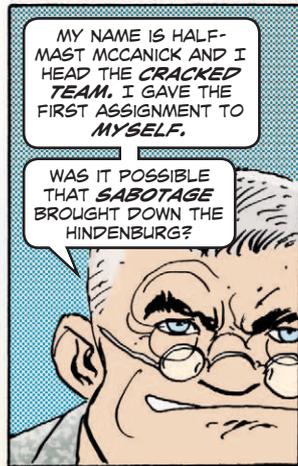




THE INVESTIGATIVE ARM OF **PS**, A.K.A. **CRACKED**, HAS "CRACKED" SOME OF HISTORY'S GREATEST MYSTERIES. YOU MIGHT SAY THEY'RE A REAL **CRACK TEAM**.



THEN AGAIN, YOU MIGHT **NOT**. THEIR EFFORTS TO SOLVE THIS HINDENBURG CASE STARTED BY VERIFYING OR DEBUNKING THE OTHER THEORIES ABOUT THE TRAGEDY.

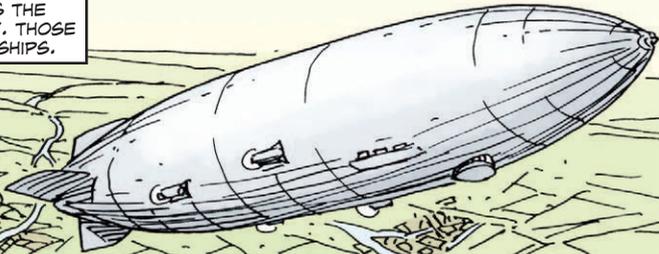


MY NAME IS HALF-MAST MCCANICK AND I HEAD THE **CRACKED TEAM**. I GAVE THE FIRST ASSIGNMENT TO **MYSELF**.

WAS IT POSSIBLE THAT **SABOTAGE** BROUGHT DOWN THE HINDENBURG?

THE HINDENBURG WAS THE PRIDE OF NAZI GERMANY. THOSE NAZIS LIKED THEIR AIRSHIPS.

COULD SOMEONE WHO DID **NOT** LIKE THE NAZIS PLANT A **BOMB**?



TWO PEOPLE WERE VIEWED AS POSSIBLE SUSPECTS. ONE WAS **ERIC SPEHL**, A RIGGER ON THE HINDENBURG.

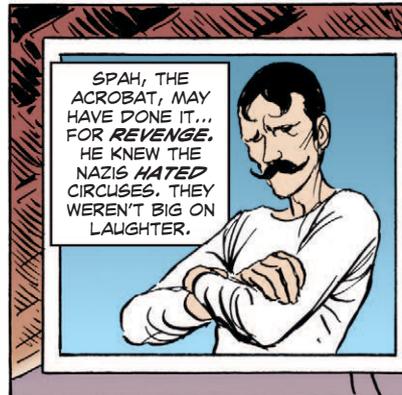
THE OTHER WAS **JOSEPH SPAH**, AN ACROBAT... ALONG FOR THE RIDE.



SPEHL MAY HAVE DONE IT OUT OF **LOVE**. SPEHL'S GIRLFRIEND WAS A COMMUNIST AND SHE **HATED** HITLER AND HIS THIRD REICH.



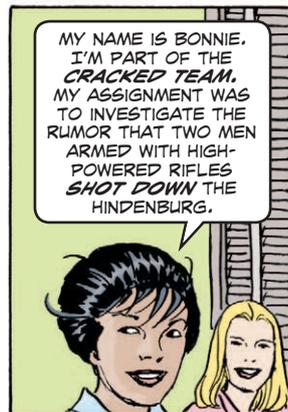
INSTEAD OF A **DIAMOND**, DID SPEHL GIVE HER AN **AIRSHIP**? NOT LIKELY. SPEHL DIED IN THE FIRE. **LOVE'S HOT**, BUT YOU DON'T IMMOLATE YOURSELF FOR IT.



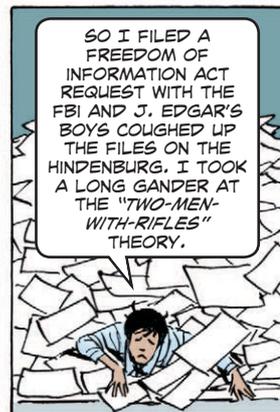
SPAH, THE ACROBAT, MAY HAVE DONE IT... FOR **REVENGE**. HE KNEW THE NAZIS **HATED** CIRCUSES. THEY WEREN'T BIG ON LAUGHTER.



BUT HE BARELY ESCAPED WITH HIS LIFE AS HE SLID DOWN A MOORING ROPE TO SAFETY. NO... SPAH WAS INTO **BACKFLIPS**, NOT **BOMBS**.



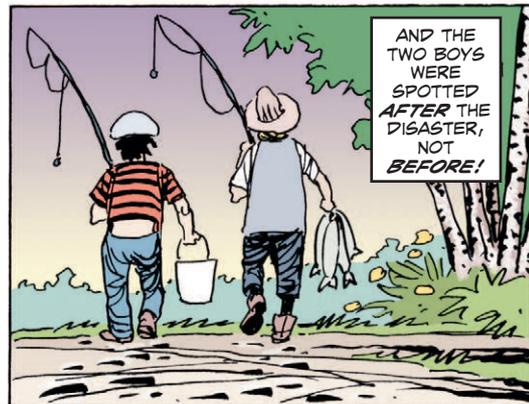
MY NAME IS **BONNIE**. I'M PART OF THE **CRACKED TEAM**. MY ASSIGNMENT WAS TO INVESTIGATE THE RUMOR THAT TWO MEN ARMED WITH HIGH-POWERED RIFLES **SHOT DOWN** THE HINDENBURG.



SO I FILED A FREEDOM OF INFORMATION ACT REQUEST WITH THE FBI AND J. EDGAR'S BOYS COUGHED UP THE FILES ON THE HINDENBURG. I TOOK A LONG GANDER AT THE "TWO-MEN-WITH-RIFLES" THEORY.



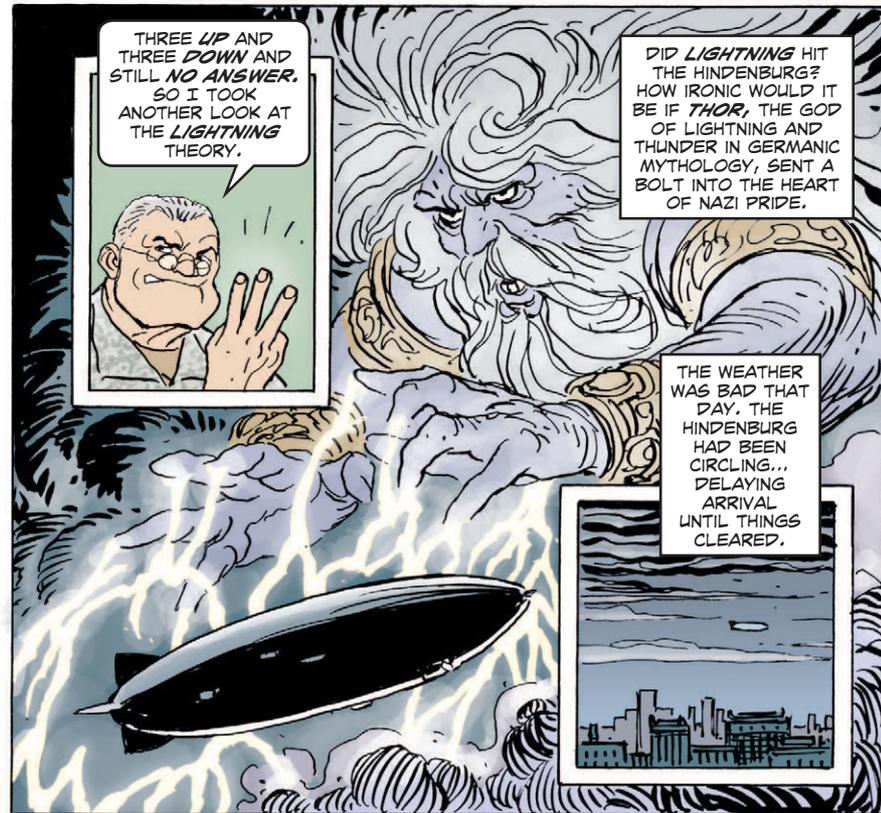
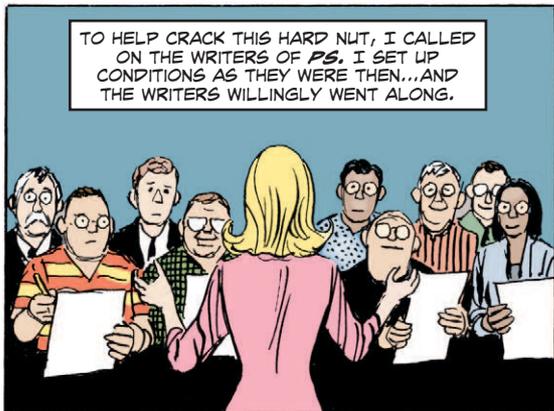
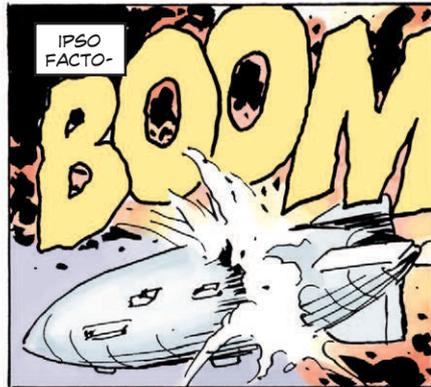
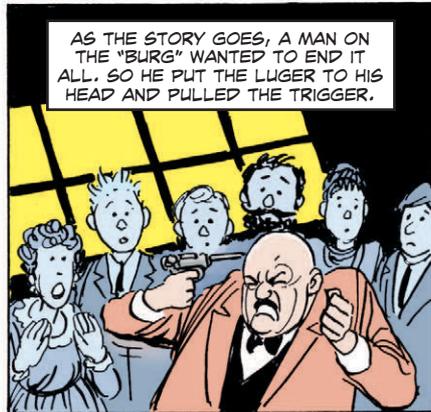
IT TURNS OUT, THE MEN **WEREN'T** MEN, BUT **BOYS**. THE RIFLES WEREN'T RIFLES, BUT **FISHING POLES**.

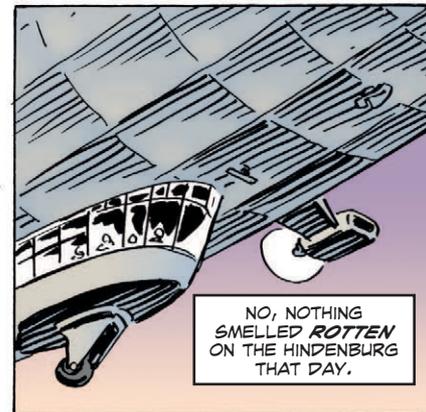
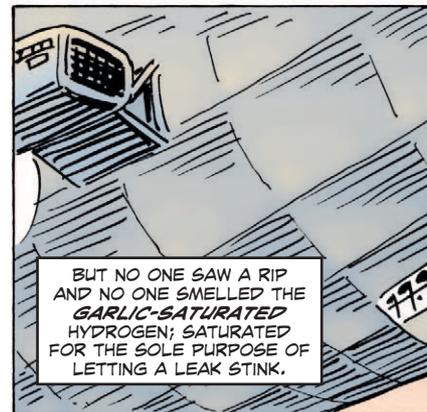
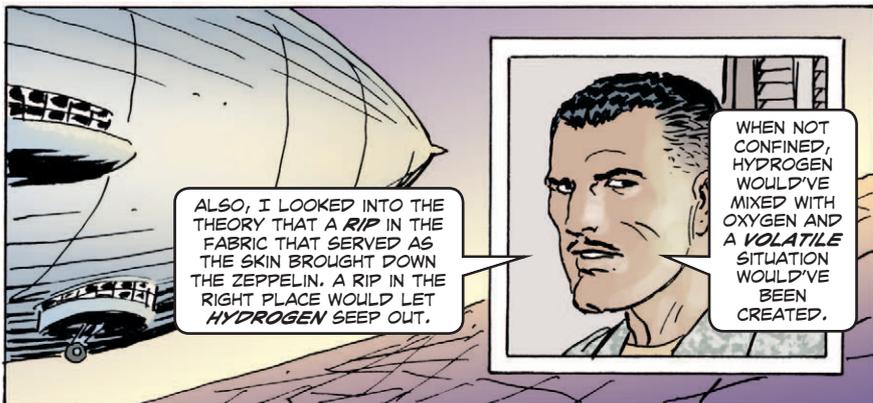
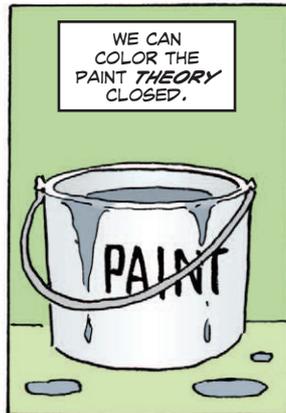
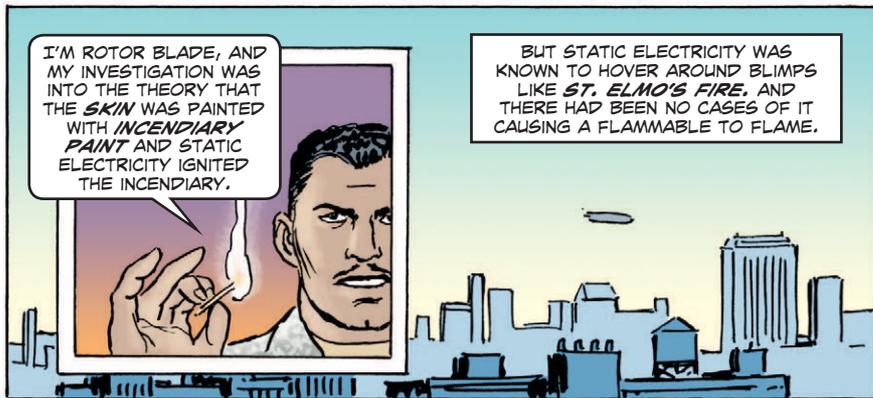


AND THE TWO BOYS WERE SPOTTED **AFTER** THE DISASTER, NOT **BEFORE!**



ANOTHER **RED HERRING** FILED AND FRIED.

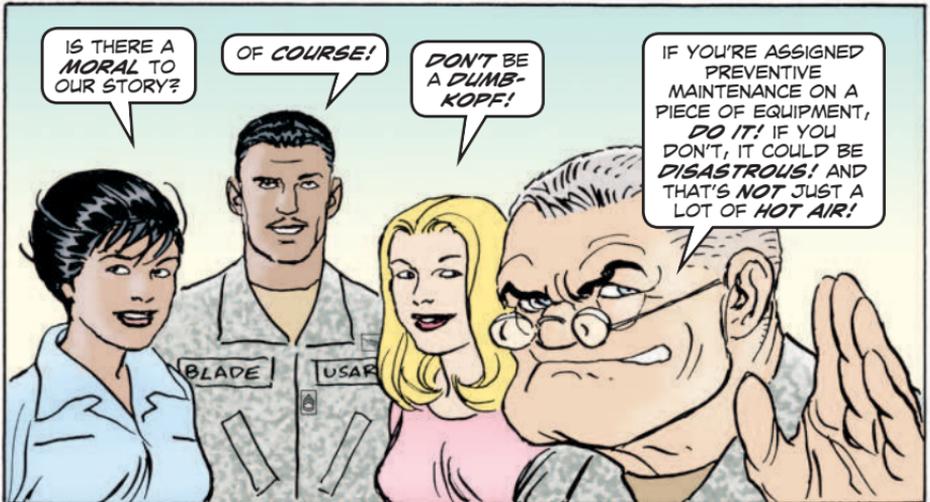
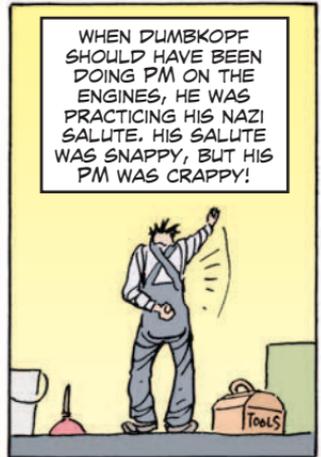




"WE'VE CRACKED IT!"
CONNIE SHOUTED AND BONNIE ECHOED HER, AND WE ALL KNEW WHAT BROUGHT DOWN THE MIGHTY HINDENBURG. IT WAS...NOW, WAIT FOR IT...YOU'LL NEVER GUESS! HERE-IT-COMES...

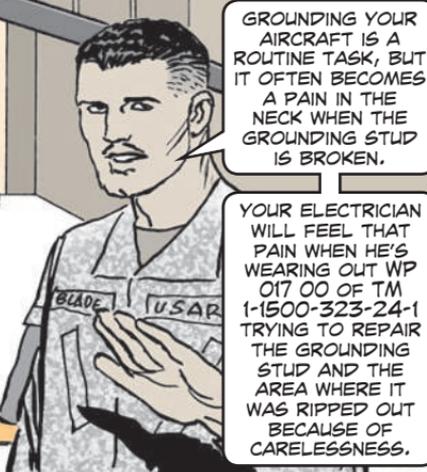
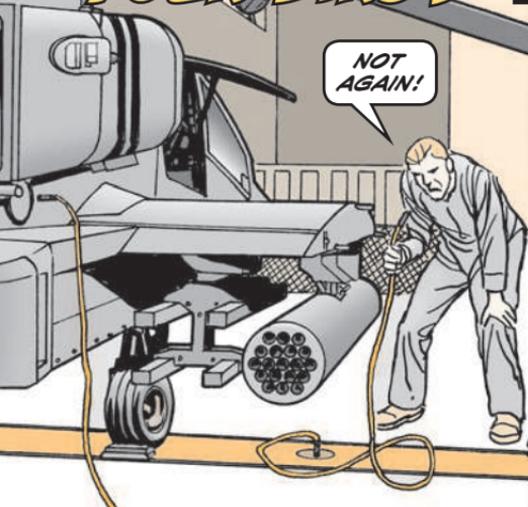
A LACK OF PREVENTIVE MAINTENANCE!

WE WERE JUST AS SURPRISED AS YOU ARE.



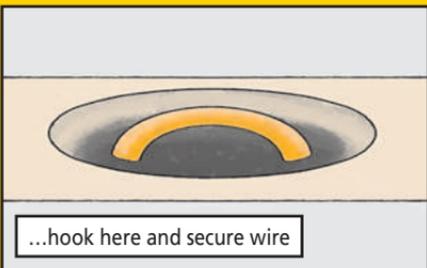
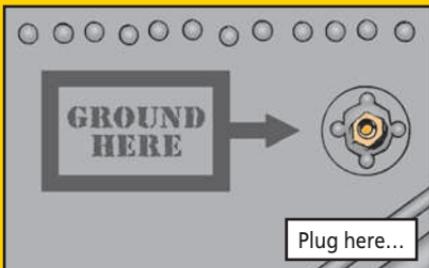
All Aircraft...

GROUNDING YOUR BIRDS



YOUR ELECTRICIAN WILL FEEL THAT PAIN WHEN HE'S WEARING OUT WP 017 00 OF TM 1-1500-323-24-1 TRYING TO REPAIR THE GROUNDING STUD AND THE AREA WHERE IT WAS RIPPED OUT BECAUSE OF CARELESSNESS.

None of this has to happen. Rushing to disconnect a ground cable leads to broken parts. The only way to disconnect from a grounding point is to reverse how you hooked it up.



Too many mechanics grab the ground cable and yank it like it's a vacuum cleaner cord. Is that the way you disconnect your head phones from your stereo system? Yanking means you'll be calling the electrician for repair and that means aircraft downtime.

Carelessness is another key killer of grounding studs. A dropped tool, a misplaced foot, or a poorly placed maintenance stand could lead to a snapped grounding stud if the wire gets caught or tangled in anything.

Awareness is the key. Know where you are and where the grounding point is at all times. Remember, Kiowa Warriors have two grounding receptacles on the right side of the bird. For grounding and hangar shop practices, check Chap 2 of TM 1-1500-204-23-1.

RIVETS GALORE



AIRFRAME REPAIRERS, REMOVE AND INSTALL RIVETS LIKE IT SAYS IN CHAPTER 7 OF TM 1-1500-204-23-10.

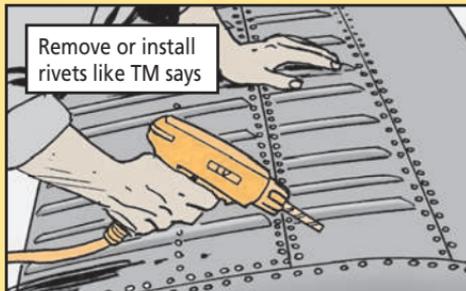
IF YOU'RE NOT DOING THAT, THEN YOU'RE PUTTING YOURSELF IN HARM'S WAY.

BEFORE YOU START RIVETING, HERE ARE SOME "RIVETING" IDEAS.

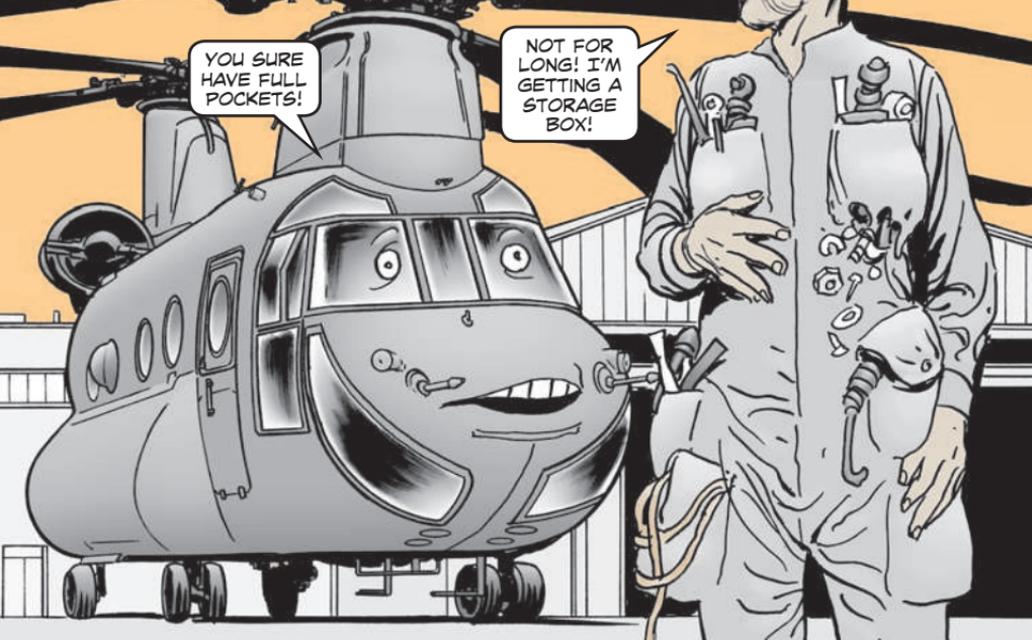
• Protect yourself by following every safety precaution. That means wear goggles, NSN 4240-00-052-3776, a respirator, NSN 4240-01-463-5449, and earplugs, NSN 6515-00-137-6345.

Dust and fumes from grinding or sanding rivets are harmful to you because rivets contain cadmium. Drilling rivets without ear protection is not good either.

• Rivets come in all different sizes and shapes, so you'll need to check your bird's TM for additional info on how to remove or install them.



PREVENT FOREIGN OBJECT DAMAGE



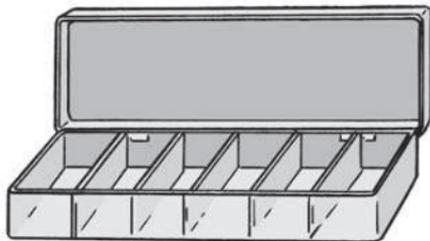
*G*rawling around an aircraft with small hardware and personal items in your pocket is tough on your bird.

Things fall out of your pocket and create foreign object damage (FOD).

To prevent FOD, use bags, tags and tape and follow general maintenance practices.

To keep track of parts so they won't fall through the maintenance cracks and to prevent loss, use the plastic containers to keep small items from different tasks separate. There are two types of plastic storage boxes, NSN 8115-00-761-8912 (six equal compartments), and NSN 8115-00-663-0212 (16 compartments), available from GSA.

Six-compartment box

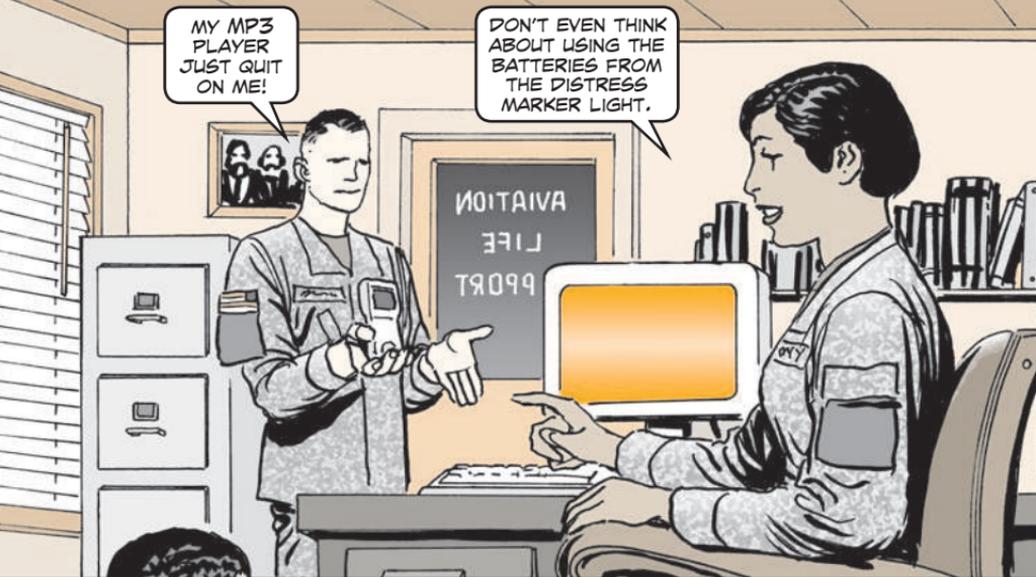


ELSE...

FOR WANT OF BATTERIES

MY MP3
PLAYER
JUST QUIT
ON ME!

DON'T EVEN THINK
ABOUT USING THE
BATTERIES FROM
THE DISTRESS
MARKER LIGHT.



AVIATORS, BATTERIES FOR
YOUR DISTRESS MARKER LIGHT,
NSN 6230-01-411-8535, ARE
INDISPENSABLE IN A FIELD
ENVIRONMENT.

So if you're 'borrowing' the batteries out of the marker and using them on personal equipment, you're putting your life in harm's way when a real emergency arises.

Using the marker batteries in other equipment drains them. When you put them back into the marker light, there might not be enough juice left to save you in an emergency. And having a marker light with no batteries means you're just carrying some useless weight!

So take some extra batteries with you for all that other electronic equipment and leave the distress marker light batteries where they belong.

Don't
borrow
distress
marker
light
batteries
for other
things



SEND YOUR COMMENTS ABOUT INDIVIDUAL PUBLICATIONS AND IETMS TO THE PUB'S PROPONENT AT THESE MAIL AND EMAIL ADDRESSES, FAX NUMBERS AND WEB SITES (WHERE AVAILABLE)...



Submit Publication Changes Online

Your AMCOM unclassified DA Form 2028s, *Recommended Changes To Publications and Blank Forms* may be submitted online: <https://amcom2028.redstone.army.mil>

You can come back to the site later to click the link to email a point of contact. The site allows you to check the progress of a submitted DA Form 2028 by AMCOM publication tracking number, action officer, and phone number.

Keep in mind the site requires Microsoft Internet Explorer 5.5 or greater on your computer.

'Course, if you prefer to mail in the hard copy of the 2028 found in the back your TM, that option is OK too. AEPS is not the preferred method of submitting DA Form 2028s to AMCOM, but, if this is the only option you have, it will be acceptable.

See additional 2028 info on the charts below for other commands.

CECOM LCMC

Commander
U.S. Army CECOM Life Cycle
Management Command (LCMC)
and Fort Monmouth
ATTN: AMSEL-LC-LEO-E-ED
Fort Monmouth, NJ 07703-5006

Email:
MONM-AMSELLEOPUBSCHG@conus.army.mil

Fax:
DSN 992-1556
Commercial (732) 532-1556

Website:
<http://edm.monmouth.army.mil/pubs/2028.html>

TACOM LCMC

with locations at Warren, MI,
Rock Island, IL, and Natick, MA

If you have internet access, TACOM prefers you submit your comments with their online DA Form 2028: <https://aeprs.ria.army.mil>

You may also mail, fax or email your letter or DA Form 2028 directly to:

TACOM Life Cycle Management Command
ATTN: AMSTA-LC-LMPP / TECH PUBS
1 Rock Island Arsenal
Rock Island, IL 61299-7630

Email:
TACOMLCMC.DAForm2028@us.army.mil

Fax:
DSN 793-0726
Commercial (309) 782-0726

These addresses/
fax numbers
are good for all
TACOM-supported
vehicles, armament,
chemical, biological,
and soldier support
systems.

Equipment Electronic Publications

Submit your comments and recommendations for electronic media the same way you would comments about individual publications. All comments and recommendations go to their respective proponent regardless of media (printed or electronic).



IMAGE INTENSIFIER TUBE UPDATE



If you order the MX-10130D/UV image intensifier tube, NSN 5855-01-504-4589, to use on your AN/PVS-7 night vision device, you may get a substitute. The substitute is MX-10130C/UV, NSN 5855-01-380-5098.

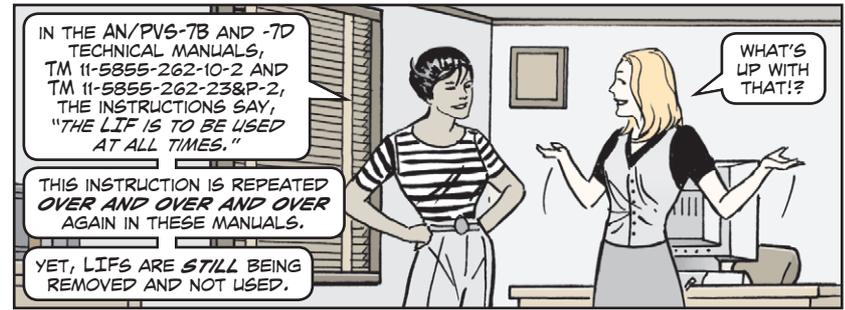
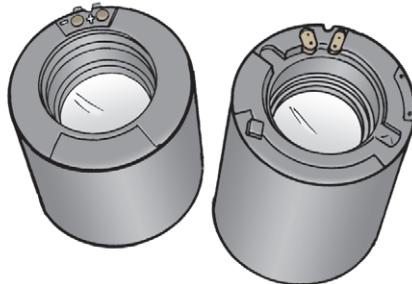
The reason for the sub is the high demand for image intensifier tubes. A lot of tubes are being replaced because of direct, bright light damage.

Your image tube cannot recover from bright light damage. The pixels in the tube will be damaged and leave a black, empty streak, an arc or spot.

While your night vision device is pretty smart by cutting off when exposed to bright light, it's not fast enough when exposed to extreme bright light, such as the light emitted by tracers, lasers, and flares.

The substitute image intensifier tube—the C tube—is identical to the D tube with the tolerance of one additional black spot. They work well and they meet all the other requirements, but the black spot standard has been reduced in order to meet the supply need.

Most of the light damage to image intensifier tubes could be prevented if the light interference filter (LIF), NSN 5855-01-379-1410, was being used.

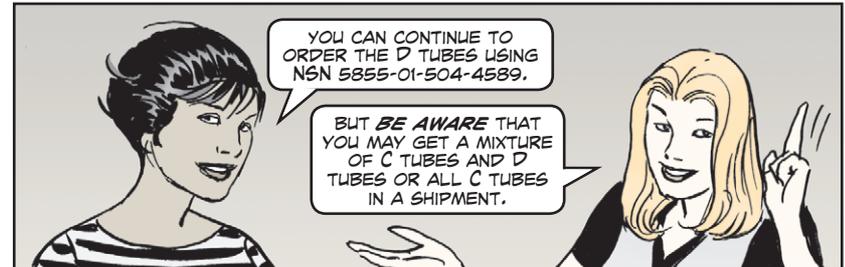
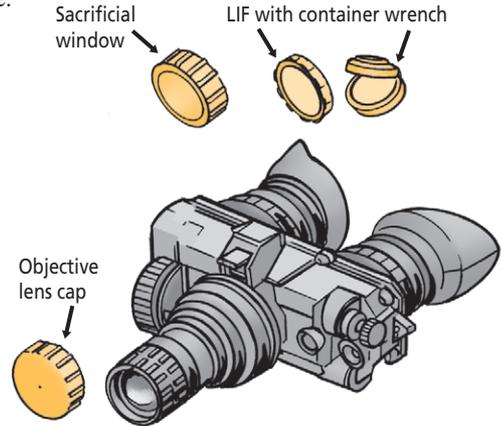


One reason may be that some of you don't think you get as good an image with the LIF in place. And you're right. There is a slight reduction in system gain, but the emphasis is on the word **slight**. If you're getting too great a reduction, try cleaning the LIF using water and lens paper, NSN 6640-01-459-4239. If it's still a problem, get a new LIF!

If the LIF is dirty or scratched or otherwise damaged, it could be you're not using the sacrificial window, NSN 5855-01-246-8271. Use it! Its job is to give its life so the LIF and the tube can survive.

Additionally, some of you are removing the LIF to attach things like the 3X magnifier and the compass. The magnifier, the compass, the sacrificial window and the lens cap will all fit into the end of the objective lens with the LIF in place.

Also, it is essential that you use the objective lens cap, NSN 5340-01-392-6608, whenever the NVG is not in use to protect the image tube from exposure to sunlight.





The Weakest Link!

Stick a magnet or a knife in your ACU pocket and take a walk to your AN/ASM-189 and -190 electronic vans. The van's tailgate chain may have a weak link and you need to find it!

The last link of the chain—the one that joins the chain to the tailgate—might be aluminum. If it is, it just might fail! This could cause a soldier to take a tumble to the ground and be hurt.

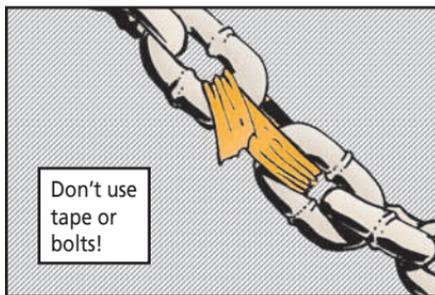
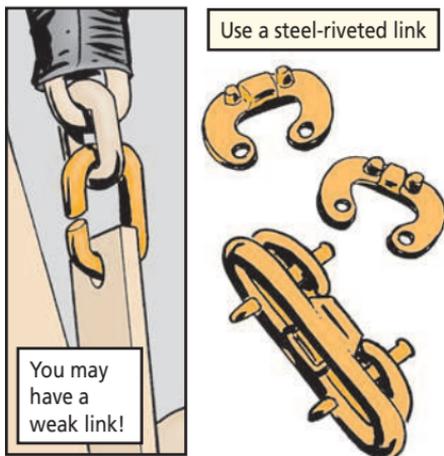
See if the magnet is attracted to the link. If it is, the link is steel and you're in good shape. Or you can use the knife and try to make a slight scratch in the link. If it scratches easily, it's aluminum!

A link that is not welded closed is another sure sign of trouble. Check all the links for gaps.

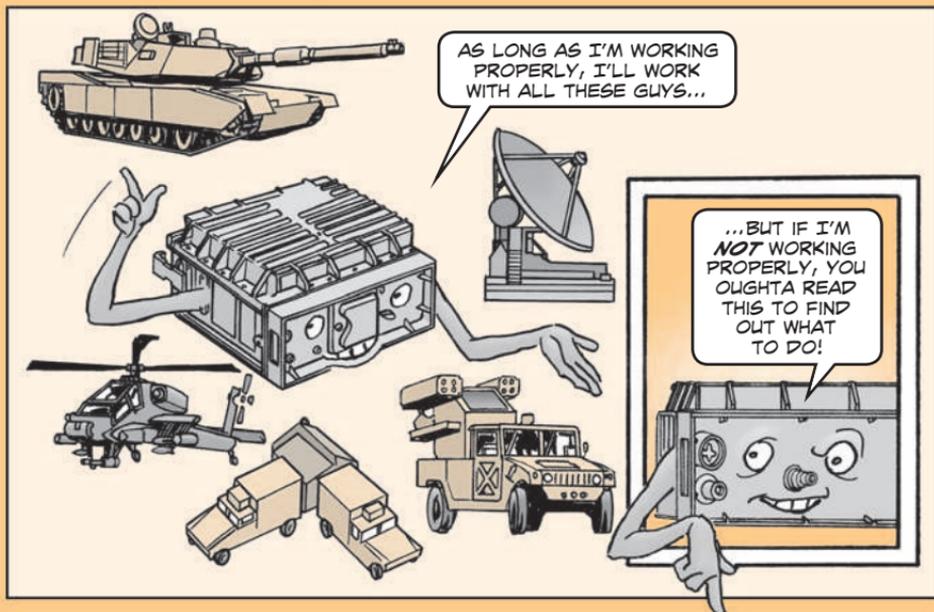
Replace an aluminum link with a steel riveted link, NSN 4010-01-218-6340.

While you're checking this last link, check them all for rust and other signs of weakness. You might want to run that magnet over all the links just in case. Only standard welded links and the steel riveted hammer-lock type that you should use as a replacement link are authorized to be in the tailgate chain.

One other thing: don't shoot yourself in the foot by using tape or other bolts to hold the support chain together. Every link should be steel and strong.



Returning Unserviceable RTs



The AN/TSQ-158, enhanced position location reporting system (EPLRS) radios,

RT-1720B(C)/G, NSN 5820-01-457-0014

RT-1720C(C)/G, NSN 5820-01-457-0012

RT-1720D(C)/G, NSN 5820-01-490-7019

RT-1720E(C)/G, NSN 5820-01-490-7025

RT-1720F(C)/G, NSN 5820-01-470-7018

RT-1720G(C)/G, NSN 5820-01-514-1408

are built and maintained by Raytheon Co.

Previously, these radios were repaired under a repair and return program. This is no longer so.

If you have a non-working radio that needs to be turned in to repair for depot level work, fill out a DD Form 1348 MILSTRIP requisition to request disposition.

The item manager will then direct the RT to be shipped to Raytheon using DoDAAC CG001Q/RIC:C1G through the Army standard

supply system. They will include a copy of the DD Form 1348 and a completed DD-1149 and DA-2407 or DA-5504. You'll receive unserviceable credit for the RT.

Submit a funded DD Form 1348 MILSTRIP for a replacement radio. You'll be charged the AMDF price for it.

If you have questions concerning this process, call the EPLRS inventory manager at C-E LCMC at DSN 992-1852 or (732) 532-1852. Or email:

joe.scalise@us.army.mil

lynda.macdonald@us.army.mil

joe.alaimo@us.army.mil

POWER SUPPLY REPAIR CHANGE

C'MON! WOULDJA JUST GET IN THE DANG BOX SO I CAN SHIP YOU BACK FOR REPAIRS!?

I'M TRYIN' TO TELL YOU... THINGS ARE **DIFFERENT** NOW! I **DON'T** HAVE TO GO BACK!!

UP UNTIL NOW, IF YOUR PP-2953D/U POWER SUPPLY, NSN 6130-01-522-3494, NEEDED REPAIR, IT WENT BACK TO THE CONTRACTOR.

BUT THAT'S CHANGED!

The power supply now is a Class 2 depot level repairable item. Turn in an unserviceable PP-2953D/U in accordance with the automatic return item list (ARIL). You'll receive unserviceable credit and you can then requisition a replacement power supply through the supply system.

If you have a PP-2953D/U that's still under warranty, make your claim with an SF 368 through the deficiency reporting system.

IF YOU HAVE ANY QUESTIONS ABOUT THESE CHANGES, CONTACT THE C-E LCMC WEAPONS' SYSTEM SUPPORT MANAGER AT DSN 987-4767 OR (732) 427-4767.

OR EMAIL THE MANAGER...
charles.puleo@us.army.mil

100-KW TQG...

Air Cleaner Filter NSNs

I ORDERED A NEW
FILTER FROM THE TM,
BUT SOMETHING'S
NOT RIGHT.



THAT'S
'CAUSE
THE TM
HAS THE
WRONG
NSN!

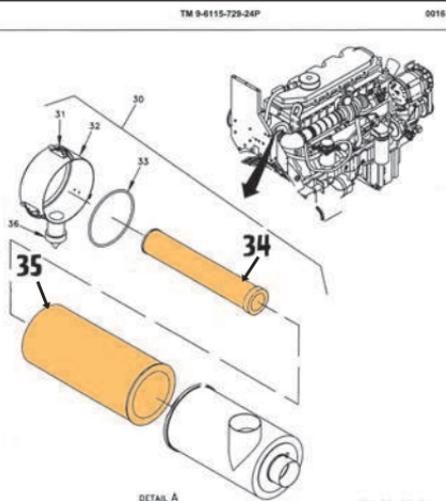
Dear Half-Mast,

I was about to order the inner intake air filter element, NSN 2940-01-158-1462, Item 34 in Fig 15 of WP-0016 in TM 9-6115-729-24P, for my 100-KW tactical quiet generator, when my chief told me that the NSN in the TM was wrong. Is my chief right? If so, what is the right NSN? And, does the outer element, Item 35, have an NSN?

SGT D. G. Y.

Dear Sergeant D. G. Y.,
Never doubt a chief.
They know! The right NSN
for Item 34 is NSN 2940-
01-559-9941. And the NSN
for Item 35 is NSN 2940-
01-560-8766. Correct the
part number, too. The right
part number for Item 34 is
P533781.

Half-Mast

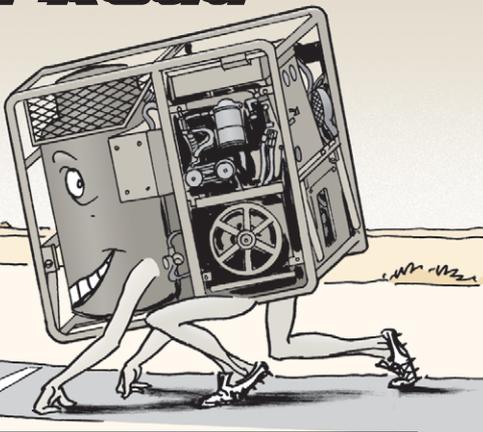


ITEM NO.	SMR CODE				CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
	ARMY	AIR FORCE	USMC	NSN				
33	PAOZZ	PAOZZ	PAOZZ	5331-01-181-2424	18265	P52-6676	.GASKET	1
34	PAOZZ	PAOZZ	PAOZZ	2940-01-559-9941	18265	P533781	.FILTER ELEMENT, INTAKE AIR CLEANER, SAFETY	1
35	PAOZZ	PAOZZ	PAOZZ	2940-01-560-8766	18265	P532966	.FILTER ELEMENT, INTAKE AIR CLEANER, PRIMARY	1

Keeping Your M17 on the Road

DECON MISSION

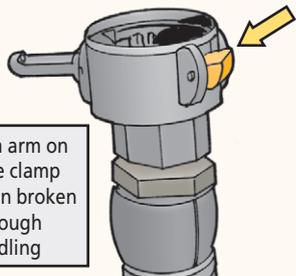
THANKS TO THESE CHEMICAL SCHOOL SUGGESTIONS, I'M READY TO HIT THE DECON ROAD.



Dear Editor,

A broken hose connector or plugged hose strainer can bring your M17 to a screeching halt. Here are a few ways to keep your M17 on the decon road:

- The cam arm on the hose connectors is often broken because soldiers sling the hoses around. A broken cam arm makes it difficult to connect the hose and very dangerous. Hot water can shoot out and scald you.

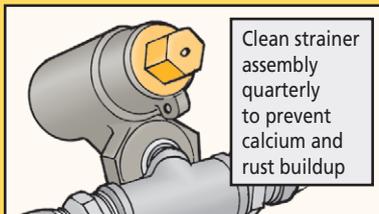


Cam arm on hose clamp often broken by rough handling

Of course, the best solution is for deconners to be careful with the hoses. Lay the hoses down—don't toss them. If the cam arm is busted, your M17 is NMC until it's replaced.

- The branch in the hose strainer assembly is designed to catch calcium and rust that would plug up your wands. They build up inside the hose screen and make it difficult to remove the strainer assembly cover. It has a brass nut and when operators try to force the nut, the nut breaks off. It then becomes a major operation to get the cover off.

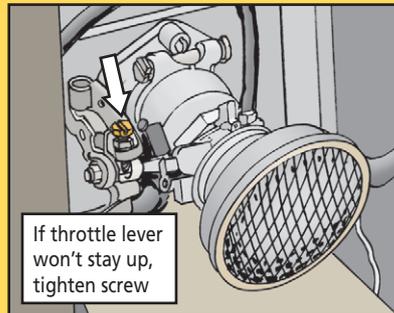
Avoid that mess by checking the strainer quarterly for calcium and rust buildup, especially on the cap threads. Clean off any buildup with a wire brush.



Clean strainer assembly quarterly to prevent calcium and rust buildup

- The throttle lever constantly gets out of adjustment. Its screw loosens from vibration so much that when you push up the lever at shutdown, it drops right back down and the engine doesn't shut off. During PMCS, push the lever up and release it. If the lever won't stay up, tighten its screw, but not so tight that the lever is difficult to move.

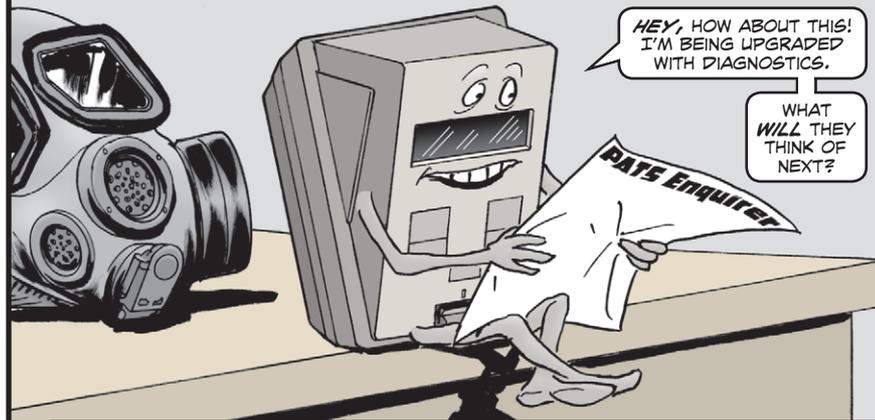
SSG William Hamlin
U.S. Army Chemical School
Ft Leonard Wood, MO



If throttle lever won't stay up, tighten screw

Editor's note: Excellent suggestions, Sergeant. They will indeed keep M17s on the road.

Watch for PATS Upgrade



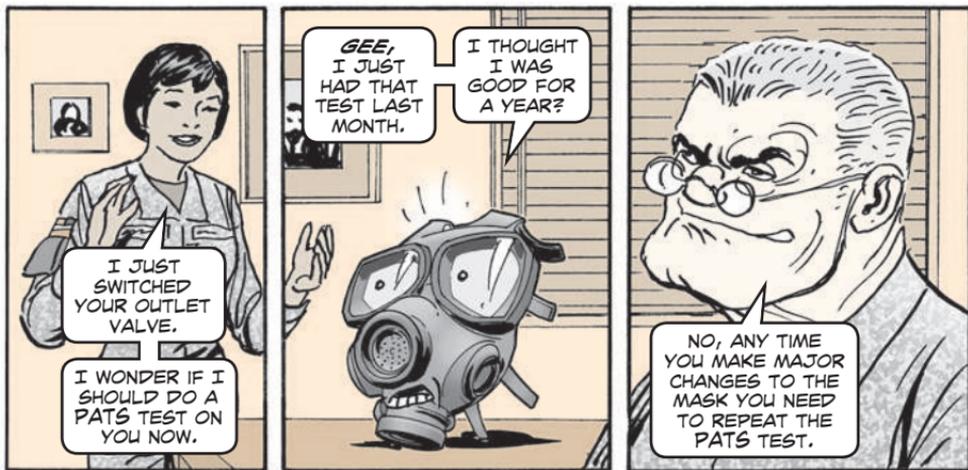
CBRN specialists, some time in the next four years your M41 PATS (protection assessment test system) is going to come back from calibration upgraded.

The upgrade will add embedded diagnostics to PATS so that PATS can self-diagnose problems. A notice in the carrying case will tell you your PATS has been upgraded.

An error code on the PATS display screen will indicate it needs attention from your local TMDE. Make sure your soldiers know that.

Remember that your PATS needs to be calibrated at least every 18 months. If it's not, it could give faulty readings.

HOW OFTEN SHOULD MASKS BE TESTED?



Dear Half-Mast,

How often are M40- and M42-series masks supposed to be tested with PATS and where is that spelled out?

SSG T.B.

Dear Sergeant T.B.,

Generally for all the CBRN protective masks the PATS test needs to be done annually. This is spelled out on Page 2-39 in the M40's TM 3-4240-346-20&P. Your commander, of course, can ask for testing more often if he thinks the mission dictates the need.

But any time there are parts replaced on a mask or major adjustments made to the mask, you should do a PATS test just to make sure everything is OK.

Examples are:

- changing canister from right to left or visa versa
- side voicemitter replaced or re-seated
- head harness replaced or drastically readjusted
- outlet valve cover and disk replaced
- internal drink tube nipple replaced

If a soldier loses or gains 10 or more pounds, the mask fit should also be tested with PATS.

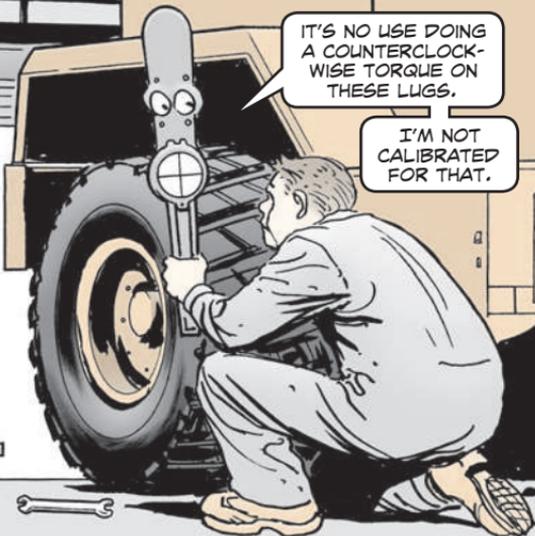
If you ever have doubts about a mask, do a PATS test.

No point in taking chances.

Half-Mast

Tools...

DEALING WITH COUNTER- CLOCKWISE TORQUE



Dear Editor,

Most mechanics don't realize that torque wrenches are calibrated by TMDE only in the clockwise direction. What makes that a problem is that some of the larger vehicles like the M939s and M977s require some wheel lugs to be torqued counterclockwise. As a result, the lugs may not be torqued correctly because the torque wrench may not give the correct reading. Disaster could follow.

Please make mechanics aware of this.

SFC David Leach
Vilseck, Germany

Editor's note:

You bet we will, Sergeant.

Units that must torque counterclockwise with their torque wrenches should ask their TMDE folks to calibrate their wrenches both clockwise and counterclockwise. When they're finished calibrating, TMDE will stick a red band with CW/CCW on the wrench showing that it has been calibrated in both directions. If a wrench doesn't have a red band on it, don't trust it for counterclockwise torquing.

If you have any questions about special calibration, contact TMDE's George Fox at (256) 955-0025, DSN 645-0025, or email: george.s.fox@conus.army.mil

CW/CCW

CW/CCW

CW/CCW

Check for red tape to make sure your torque wrench has been calibrated for counterclockwise torquing

A Gripping Tale of Hardware

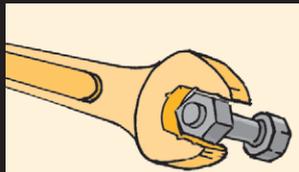
GRUMBLE
GRUMBLE
GRUMBLE

IT'S THE
CURSE
OF EVERY
MECHANIC...

...YOU'RE
STRUGGLING
TO GET A
GRIP ON
A SCREW
OR BOLT
WITH YOUR
SCREWDRIVER
OR WRENCH.

BUT YOU
LABOR
IN VAIN
BECAUSE
OF...

- a stripped-out screw head
- a bolt with rounded corners
- a worn tool
- or a bad angle on the fastener



A worn wrench can't grip a bolt

WHATEVER THE PROBLEM,
IT COMES TO A HEAD WHEN
THE TOOL SLIPS AND YOU
BUST YOUR KNUCKLES
AND RESORT TO SOME
COLORFUL LANGUAGE...

RED!
BLUE!
GREEN!
YELLOW!



BDAR Emergency Field Kit Available

UH-OH. A HOSE CLAMP
HAS BROKEN AND WE DON'T
HAVE ANY WAY TO FIX IT.

WRONG! I
BROUGHT THE NEW
BDAR EMERGENCY
FIELD KIT.

WE CAN FIX
THAT HOSE IN
NO TIME!



THIS IS NO
TIME FOR
VOCABULARY-
BUILDING
EXERCISES.

REACH
FOR SOME
GRIPPING
COMPOUND
INSTEAD.

HERE'S
HOW TO
USE IT...

• Always shake the bottle before applying gripping compound.

• To remove or insert screws, apply a single drop of compound in the slot or on the tip of the screwdriver. Put the screwdriver tip into the slot. Wiggle the screwdriver until you feel a good grip.



Apply a drop in slot...

...and wiggle
screw-
driver
till you
get a
good
grip



• To remove or insert bolts, apply two or three drops on the bolt head or the inside of the wrench or socket. Spread it on the leading edge of the bolt head or around the wrench or socket. Wiggle the tool until you feel a good grip.

Gripping
compound



NSN 6850-01-420-9041 brings a box of twelve 3-oz bottles of marine grade gripping compound for use in wet conditions. NSN 6850-01-418-8759 brings a box of twelve 3-oz bottles of gripping compound for aircraft and ground use.

You can also order these gripping compounds directly from E-Z Grip by calling (800) 650-6456 or from their website: <http://www.ezgrip.net>

ABDAR emergency field kit is now available that helps with situations requiring quick bundling, securing, fastening, or clamping.

The kit also eliminates or reduces wiring harness cuts or failures caused by bad P-clamps. The kit includes different types of ties that can be used in a variety of ways.

THE KIT
INCLUDES...

- heavy duty mounts
- dual clamp ties
- cable ties
- edge clips and ties
- hose clamps



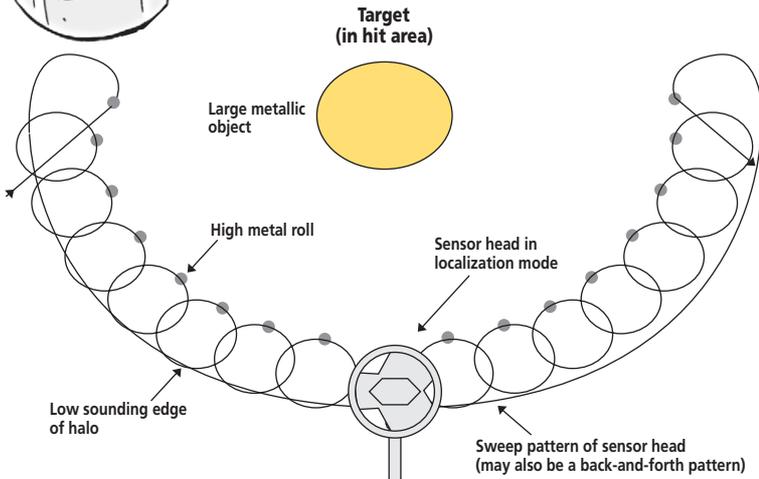
THE KIT, WHICH IS A CLASS 9
ITEM, COMES WITH NSN 5325-01-
559-2722 AND COSTS \$116.

SPIRAL TECHNIQUE EXPLAINED



THIS IS HOW IT **SHOULD** GO WHEN YOU'RE TRYING TO FIND THE CENTER OF THE MINE...

...IF THE METALLIC SIGNATURE IS AS LARGE OR LARGER THAN THE SEARCH HEAD, THEN YOU NEED TO USE THE SPIRAL TECHNIQUE. IT LOOKS LIKE THIS...



If the metallic signature is smaller than the search head, use the cross technique. For a detailed explanation of how to do both techniques, go to Section 2.9 of TM 5-6665-373-12&P. The TM should be part of the AN/PSS-14's field pack.

And practice. If you don't keep refreshing your memory on how to find mines with the detector, you may not remember how to do it right when you're in a real mine field.

Turn In

The turn-in information has changed slightly since PS 665. The -14s should still be turned in as a supply transaction. Address your label like this:

W90CGG

Tobyhanna Army Depot
Bldg 1C, Bay 6 RECEIVING
Tobyhanna, PA 18466

B16-RESET PROGRAM

ATTN: Bob Breznitsky (570) 895-6218
DO NOT POST TO RECORD

If you have to use a DODAAC, use W90CGG. Mark the package for B16-RESET PROGRAM.

Provide the transportation control number (TCN) to Lupe Villarreal, DSN 992-3885, (732) 532-3885, email: lupe.villarreal@us.army.mil

The TCN is a confirmation that the -14 has been shipped. Also provide Villarreal the document number for your requisition for a replacement -14.

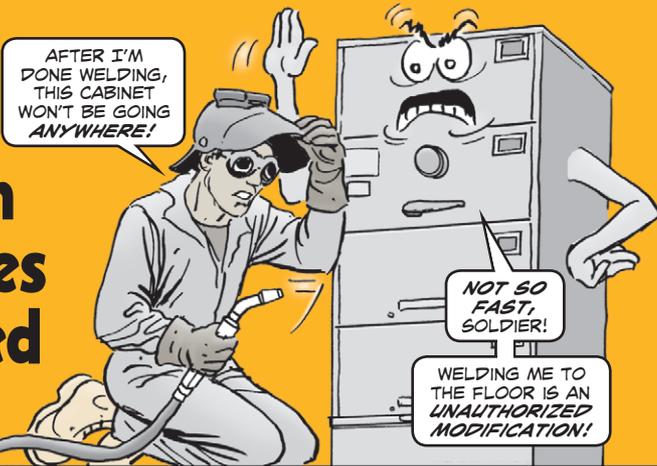
If you have any questions, contact Villarreal.

If you are in Iraq or Afghanistan, there are now four different locations where you can get immediate replacement of a malfunctioning mine detector:

- Camp Liberty, Baghdad, Iraq—Paul Sparks, DSN 312-987-2258 (ex 4005)
- Camp Anaconda, Balad, Iraq—Steve Liebig, DSN 312-992-2607 (ex 6363)
- Warehouse 3, Kabul, Afghanistan—Terry Mellin, DSN 318-237-2132 (or 2316)
- Bagram Air Field, Bagram, Afghanistan—Joe Scott, DSN 312-987-2239 (ex 6145)

You can also turn in a broken AN/PSS-14 to Camp Speicher in Tikrit, Iraq. They, however, don't have spares to give you another detector immediately. They will arrange a replacement as soon as possible. The POC there is Lou Venturi, DSN 312-987-5062 (ex 8410 or 8414).

Only Certain Changes Allowed

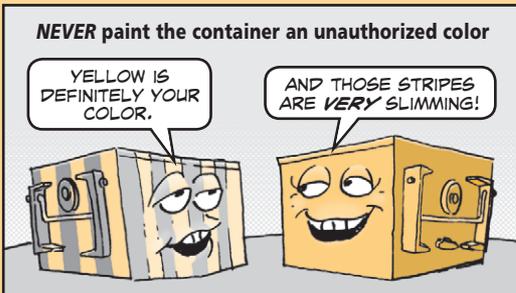
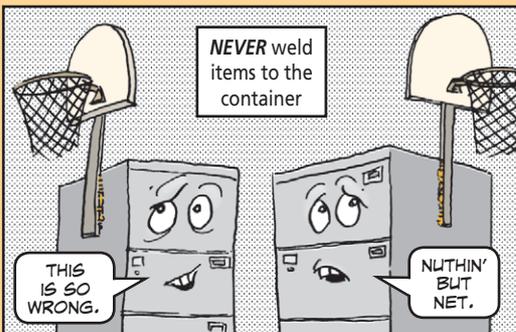


WHEN IT COMES TO MAKING PHYSICAL CHANGES TO GENERAL SERVICES ADMINISTRATION (GSA) APPROVED SECURITY CONTAINERS, THERE ARE CERTAIN THINGS YOU CAN AND CANNOT DO.

HERE'S THE RUNDOWN...

Unauthorized Modifications

- welding the container to the floor or welding items to the container
- drilling the container to attach items such as pencil sharpeners or signs
- painting the container with a color not authorized for that container
- tampering with (removing or reattaching) a GSA approval label (Only a qualified inspector can inspect and re-label a container.)
- drilling or cutting through the partition (cookie sheet) between the drawers in a multi-lock container
- grinding or modifying the container's bolts or linkage
- modifying any part of the lock
- installing an unauthorized lock



Authorized Changes

- retrofitting or replacing locks with approved locks, such as:
 - combination locks meeting Federal Specification FF-L-2740 (X-07, X-08, X-09) for security containers and vault doors storing classified information
 - combination locks meeting Federal Specification FF-L-2937 for weapons' containers, armory vault doors and field safes, including field safes containing classified information
- replacing damaged or missing parts with new or used original parts, such as drawer handles and drawer linkage components
- replacing damaged drawer heads with new or cannibalized drawer heads
- opening a container and repairing according to FED-STD-809, *Neutralization and Repair of GSA Approved Containers*
- painting the container with a color authorized for that container



CONTACT THE FOLKS AT THE DOD LOCK PROGRAM IF...

AND HERE'S WHERE TO GO...

- you have questions about regulations, maintenance or inspections for GSA approved containers.
- you have a container that you think is not GSA approved.
- you want to get a GSA container inspected to make sure it's secure.

Technical Support Hotline:
 DSN 551-1212, (800) 290-7607
 or (805) 982-1212
Email:
NFESCLock-TSS@navy.mil

Authorized Paint Colors

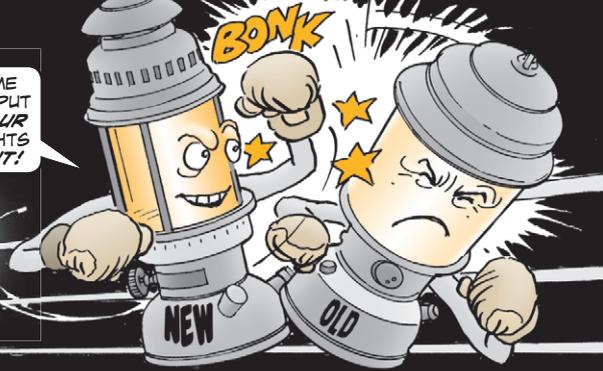
FED-STD-595B, *Colors Used in Government Procurement*, lists the following authorized paint colors for GSA-approved security containers:

Color	Item
Gray	Insulated drawer-type containers (Class 1 and 2), weapons containers and vault doors
Gray, black or parchment	Uninsulated drawer-type containers (Class 3, 6 and 7), information processing systems (IPS) containers, and map and plan containers

Lantern...

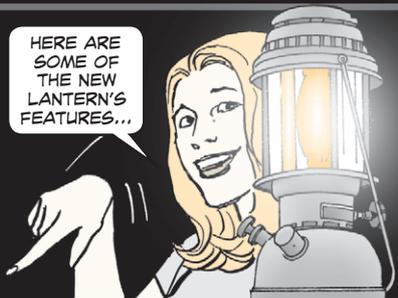
LIGHT READING

TIME TO PUT YOUR LIGHTS OUT!



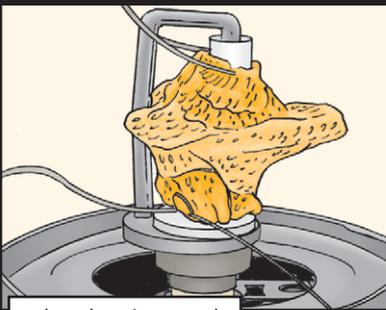
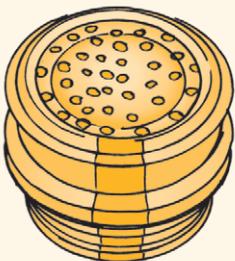
The Army is getting rid of the old gasoline lantern, NSN 6260-00-837-0996, that comes with the kitchen, company level field feeding (KCLFF). They're replacing it with a newer, safer and more versatile multi-fuel lantern, NSN 6260-01-535-1647. The manufacturer's (Britelyt) part number is MR2.

HERE ARE SOME OF THE NEW LANTERN'S FEATURES...



- solid brass construction that can stand up to rugged terrain and extreme weather
- nickel plated or military matte finish, whichever one is available
- 16 inches in height, 6 3/4 inches wide at the base

- durable, efficient, stainless steel nozzle

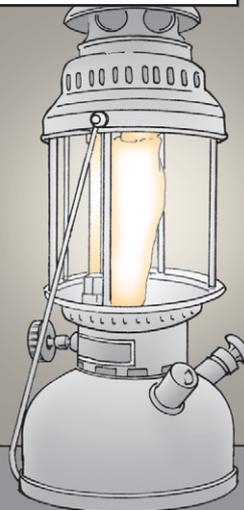


- clean-burning mantle

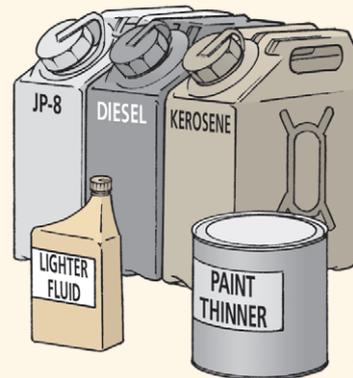


- high-performance mixing tube for improved vapor flow

- 500 candlepower, equal to 400 watts of electric light



- burns a variety of fuels, including JP-5, JP-8, kerosene, gasoline, diesel, bio-diesel, citronella oil, paint thinner, lighter fluid and mineral spirits



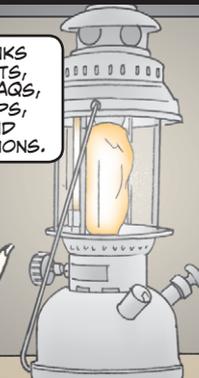
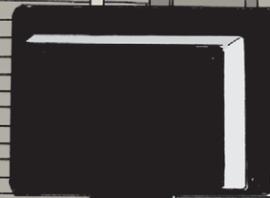
- burns 8 to 12 hours
- holds one quart (1.01 liter) of fuel

- comes with instructional DVD and booklet, tool and spare parts kit, 12 mantles and a tube of sealer

You might want to update the KCLFF's Components of End Item List in TM 10-7360-209-13&P. Illustration 21 lists the NSN for the old gas lantern. Cross it out and fill in the NSN for the new multi-fuel lantern.

FOR MORE ON INFORMATION ABOUT THE NEW MULTI-FUEL LANTERN, SEE THE BRITELYT® WEBSITE: <http://www.britelyt.com/technical.htm>

HERE YOU'LL FIND LINKS TO REPAIR PARTS LISTS, SAFETY GUIDELINES, FAQs, TROUBLESHOOTING TIPS, AND OPERATIONS AND MAINTENANCE INSTRUCTIONS.



Correcting Supply Discrepancies



Dear Bonnie,
 My supervisor handed me an incoming repair part that should have been a nut, sheet spring, NSN 5310-01-208-3739. On FED LOG it costs 48 cents.
 The item we received was a receptacle, PN 7892000188, made by Manitowoc, NSN 5310-01-208-3789, priced at \$300.
 I would appreciate any assistance you can provide.

SGT P.M.



Dear Sergeant P.M.,

You have a common supply discrepancy that requires a Supply Discrepancy Report (SDR) (formerly called a ROD, or report of discrepancy). Supply discrepancies include incorrect and misdirected material, improper or inadequate technical data or supply documentation, and an unsatisfactory condition due to improper packaging. (See AR 735-11-2, Reporting of Supply Discrepancies, (Aug 01), page 40, Glossary, Section II, Supply Discrepancy.)

The SDR is filed using an SF 364 or its electronic equivalent. You can submit SDRs online by going to the Army Electronic Product Support (AEPS) public website:

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

Look at the bottom of the center column titled Public Applications and click on Submit Supply Discrepancy Reports. Fill in all the information and submit. AEPS will automatically route it to the right source of supply for resolution.

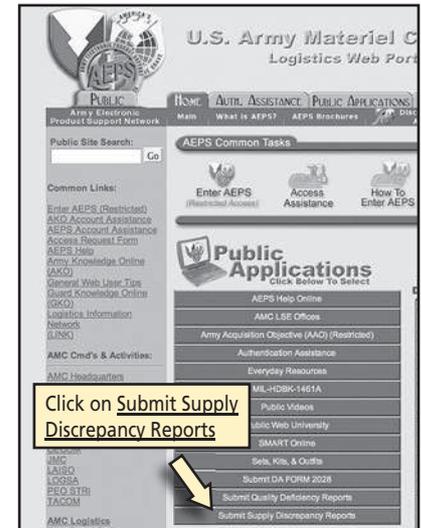
In many cases you will need to save the item in question as an exhibit. You can discuss your questions about SDRs with your logistics assistance representative. Generally, don't get rid of the item until you get disposition instructions in response to your SDR.

You might be asked to turn in the item. You may be told to resubmit your order. There are a number of things that disposition instructions can have you do.

The codes for these instructions can be found in App F, Typical Action Activity Responses Listed by Disposition/status Code, AR 735-11-2.

So, when you have a supply discrepancy, submit an SDR through the AEPS website to get resolution.

Bonnie





UNIFORMS AND FLIGHT

When the brass comes to inspect your unit, everybody wants to look their best. You can make sure that happens by following the good words in AR 95-1, Aviation Flight Regulations. And to make sure you look good in uniform, check out AR 670-1, Wear and Appearance of Army Uniforms and Insignia.

M915-Series Tractor Truck Seatbelt NSN

Need a seatbelt for your M915-series tractor truck? Item 17 in Fig 255 of TM 9-2320-273-24P needs updating, so you can't get it using part number MVSS 209. Use NSN 2540-00-894-1273 instead and pencil in this TM correction. By the way, this same seatbelt is used on M915A1 tractor trucks.

AN/PEQ-15 TM Updated

The TM for the AN/PEQ-15 advanced target pointer illuminator aiming light (ATPIAL) has been updated with new safety information and revised weapon mounting procedures. Change 1 to TM 9-5855-1914-13&P (1 Feb 08) can be found at the ETM site: https://www.logsa.army.mil/etms/online.cfm Your pubs clerk can order a paper copy.

621B SCRAPER CAMSHAFT

NSN 2530-01-064-3730 gets the left front wheel brake camshaft for the 621B scraper. TM 5-3805-248-23P gives the wrong part and NSN for Item 1 of Fig 134. Make a note of the right info until the TM is updated.

SURVIVAL GEAR

Looking for the current NSN for the flotation collar that attaches to the Generation 3, primary survival gear carrier (PSGC)? Order it with NSN 1680-01-518-7274.

ASV Auxiliary Heater~Coolant System Hose

What you see isn't what you'll get if you order Item 23 of Fig 52-12 and Item 15 of Fig 52-16 in TM 9-2320-307-24P. Change that by updating the TM with part number 41710204, NSN 4720-01-551-6430, and description Hose, Coolant Heater 5/8 x 10 ft for both items.

M997 AMBULANCE A/C CONTROL PANEL

Need the control panel for the A/C and heater control box for your M997 HMMWV ambulance? You'll have to order the next higher assembly, NSN 2540-01-265-3234, to get it. That's the complete control box shown as Item 1 in Fig 54. Make a note until TM 9-2320-280-24P-1 is updated.

3K ROWPU Suction Pump Connector

Use NSN 4730-01-552-6975 to get a suction pump connector for the 3,000-GPH ROWPU. This NSN replaces the one shown for Item 15 of Fig 129 in WP 130 of TM 10-4610-232-24P.

HSTRU Website

For a list of tools, hoses and fittings that support the hydraulic system test and repair unit (HSTRU) go to this website:

http://pmskot.army.mil/SKO_Warranty.html

Once you get into the website:

- Select CLICK HERE
• Select Replacement
In the drop down list, select Hydraulic System Test and Repair Unit (HSTRU), and enter Submit
• Provide your unit's information and select Add Tools
• Select Tool Search
Make a note that this info applies to the MX2 version HSTRU. The older model is still supported by its supply catalog.

RAID Joystick Caution

The joystick used in your rapid aerostat initial deployment (RAID) system is a vital part of the system—but is extremely sensitive and cannot be mishandled! A simple 3-ft drop to a hard surface will likely render the joystick and system inoperable. Use extreme care in handling this item and refrain from handling when the system is not in use. Additionally, be very careful not to exert any unnecessary pressure on the joystick moving in any one direction, as this can also reduce its useful life.

M872-Series Wheel Rim

Use NSN 2530-01-290-5715 to get the wheel rim for the M872 family of semitrailers. This NSN replaces the one shown as Item 16 in Fig 24 of TM 9-2330-359-14&P.

Correct Phone Number for VCI

If you need vapor corrosion inhibitor (VCI) bags for shipping M2 machine guns or other weapons, don't call the number listed in the M2's TM 9-1005-213-23&P. The number on WP 0036 00-2 and WP 0037 00-2 is wrong. To get VCI bags, call Band-All at (309) 794-9544. They ship bags within 24 hours.

MRAP Info Compiled on LOGNet

PS Magazine is gathering info about Mine Resistant Ambush Protected (MRAP) vehicles. The info can be viewed online on LOGNet: https://forums.bcks.army.mil/secure/communitybrowser.aspx?id=239599 Once in LOGNet find the PS Magazine webpages within the NEWS ITEMS/LOGISTICS MAGAZINES AND NEWSLETTERS community. Click on the MRAP button.

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?

STOP THE DIRTY DOZEN FROM STOPPING YOUR M16!

MOST OF THESE PROBLEMS COME FROM *DIRT, MOISTURE, AND NO LUBE* IN OUT-OF-SIGHT PLACES.



1 FRONT SIGHT FROZEN:
Unfreeze with lube

2 DIRT OR CARBON IN BARREL:
Clean before firing

3 LOOSE HANDGUARD LINERS:
Get new handguards

4 BOLT CARRIER DOESN'T ALIGN WITH GAS TUBE:
Tell your repairer

5 PIVOT PIN DETENT STUCK, WON'T HOLD PIN:
Free with lube

6 MAGAZINE DAMAGED OR DIRTY:
Inspect, clean, and lube follower spring; replace damaged magazine

7 TAKEDOWN PIN CORRODED OR STICKS:
Clean and lube

9 BUFFER & SPRING CORRODED:
Clean and lube

8 BUTTSTOCK DRAIN CLOGGED:
Open drain with pipe cleaner

11 CHAMBER DIRTY, CORRODED:
Clean chamber with RBC and chamber brush

12 SLIP RING SPRING BROKEN:
Get it replaced

10 REAR SIGHT STUCK:
Unfreeze with lube

CLEAN AND LUBE ALL PARTS, NOT JUST THOSE EASY TO GET TO. EXCEPT IN THE DESERT! LUBE ATTRACTS SAND. KEEP LUBE OFF OUTSIDE OF WEAPON AND CLEAN OFTEN.