

Issue 642

PS

May  
2006

# THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-642

Approved for  
Public Release;  
Distribution is  
Unlimited

JACK,  
I KEPT  
TELLING  
YOU TO DO  
PM ON  
YOUR AXE!

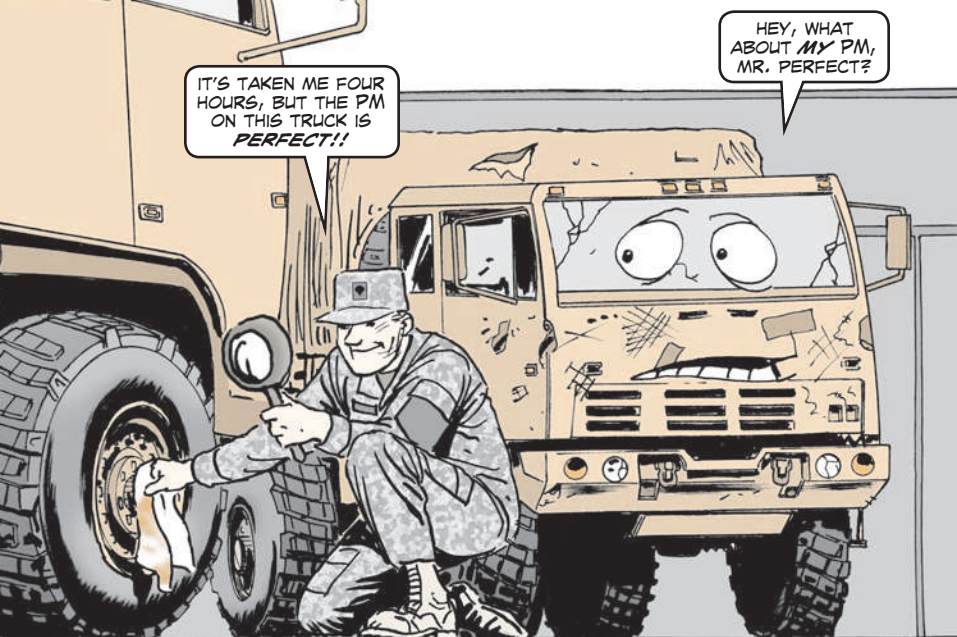
BUT, NOOOO!

YOU JUST  
WOULDN'T  
LISTEN!

JOE  
KUBER

Jack and the PM Beanstalk  
page 27

# The **PROBLEM** with Perfectionism



Sometimes, “*the perfect is the enemy of the good.*” Before you grumble that aiming for perfection has to be a good thing, consider this: It’s not a good thing if aiming for perfection takes time away from doing the day-to-day things that have to be done.

It’s like this: When you are aiming for perfection, and nothing short of it will do, the temptation is to put everything off until there is time to do it all, and do it all perfectly. Guess what? That time will never come!

But a little bit of PM done every day will keep your maintenance enemies at bay. Fifteen minutes now is a lot better than a fictional, perfect four hours someday or when you have the time to devote to perfect PM, which might never—probably won’t ever—get here.

Don’t wait for that perfect time or those perfect conditions to take care of your PM business. Do it now, today, with the 15 minutes you can squeeze out now. Wipe off that moisture, check those fluid levels, tighten those bolts, meet that immediate need that is right in front of you.

Do it again tomorrow, and the next, and the next, and you’ll find that you have taken care of PMCS.



# THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-642, 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 642 MAY 2006



## COMBAT VEHICLES

Stryker Vent Fan Air Intake  
M1134 ATGM Stryker ITAS Reminder  
M1-Series Tank Gun Tube DU Contamination  
M1-Series Tank Bore Evacuator Service  
M1-Series Tank High-pressure Cleaning Caution  
M1-Series Tank Parts Manual Clarification  
M577A2/A3 Command Post Map Board  
M88A1 Recovery Vehicle Periscope Pads  
M88A1 Recovery Vehicle Seat Assembly  
M109A6 Paladin Cannon Elevation Cylinder



## WHEELED VEHICLES

M939-Series Truck ABS Dashboard Light  
2 1/2-ton M35A2-Series Truck Parking Brake  
M1070 HET Transmission Cooler Hose  
HMMWV Improved 3-point Seatbelt NSNs



## MISSILES

Hellfire Missile System Launcher Containers  
MITAS Starting and Unlocking Problems



## SMALL ARMS

Machine Gun Mount Weapon Shields  
M66 Ring Mount Installation on LMTVs  
M2 Machine Gun Buffer Body Assembling  
MK19 Machine Gun Firing Insurance  
M249 Machine Gun Magazine Well Check



## CBRN

M12 Decon Suggestions

2



## COMBAT ENGINEERING 24

2 SECM Socket Set Check 24  
3 New Ready Welder Available 25  
4 RT 240 RTCH Cylinder Rod 26  
5

6-7



## AVIATION 35

6-7  
7 HGU-56/P Helmet Liner 35  
7 UH-60A/L/HH-60L AMSS Kit Storing 36-37  
8 OH-58D Mast-Mounted Sight Suggestion 38  
9 OH-58D Tail Boom /IFF Antenna Caution 39

10



## COMMUNICATIONS 40

10 Satellite Commo Terminal RF Radiation Leakage 40-41  
11 SINCGARS Complaints and Solutions 42-46  
12-13 OE-254 Antenna Turn-in 46  
12-13 AN/PSN-13 DAGR Software Updates 47

14



## SOLDIER SUPPORT 48

14 Detergents for Army Combat Uniform 48  
15 Storage Bin Information 49  
16 Online Specs and Standards 50-51  
16-17 Advanced Combat Helmet Fitting Procedures 52-55

18

19

20

21

22



## LOGISTICS MANAGEMENT 56

ETMs and IETMs Loaded on MSDs 56-58  
PS Magazine Hot Topics 58  
Driver's Badge Requirements Change 59

22-23

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

Just write to:

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

Or e-mail to:

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

Internet address:

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

By order of the Secretary of the Army:

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

Official:

*Joyce E. Morrow*  
**JOYCE E. MORROW**

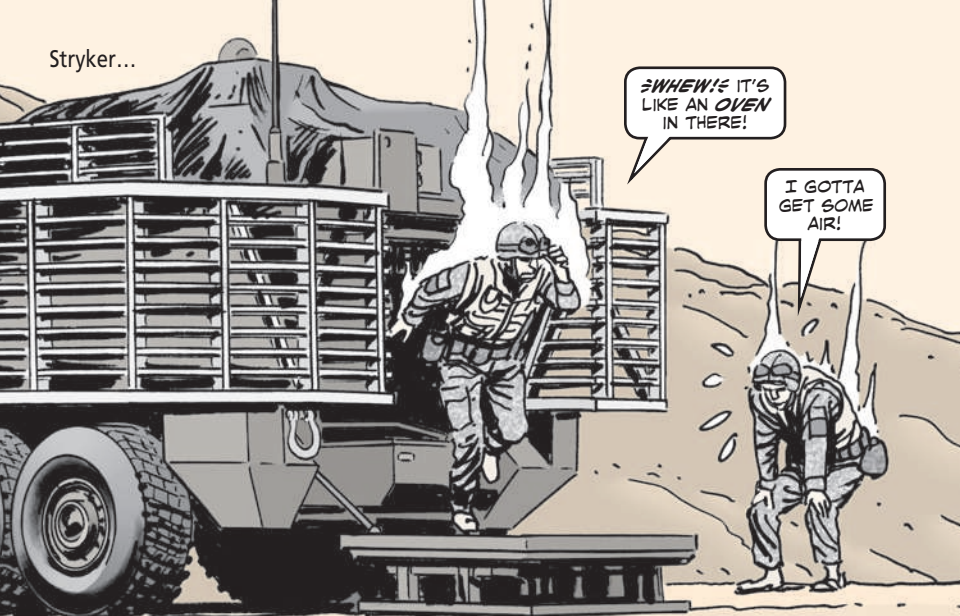
Administrative Assistant to the Secretary of the Army

0605904

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

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

Stryker...



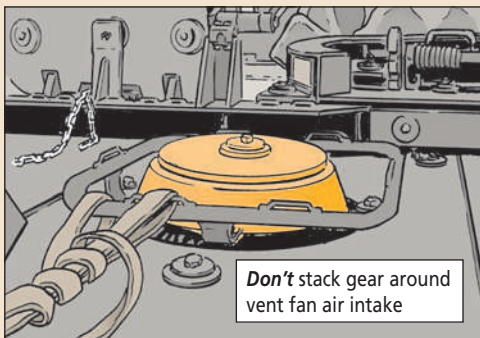
## Keep the Air Flowing

It gets downright hot in Iraq, so any air flow you can get inside your Stryker is precious. That's why you need to be careful where you store your gear on top of the vehicle.

The metal rail that goes around the vent fan air intake looks like a good place to tie down gear. Unfortunately, stacking gear around the fan chokes off the air flow that's used to cool the interior of the vehicle. So it'll make you very unpopular with those sweaty guys that are riding along inside.

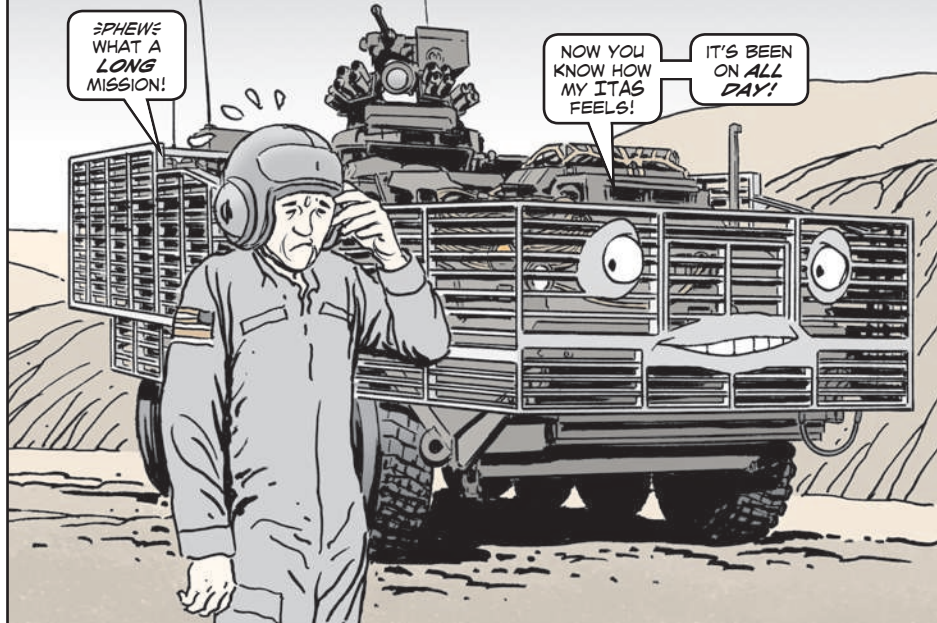
It's also unsafe. When the automatic fire extinguisher system (AFES) is discharged to put out a fire, the fan automatically reverses to vent Halon out of the vehicle. It can't do that very well if the fan is blocked by mounds of gear.

So, when you find what looks like a good location for storing your gear, make sure it's not next to the vent fan air intake.





# Less Is MORE

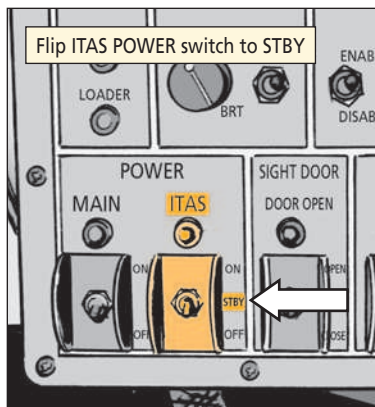


**T**oo much of a good thing isn't necessarily a good thing, crewmen. In fact, sometimes less is more. That's especially true for the improved target acquisition system (ITAS) on your anti-tank guided missile Stryker.

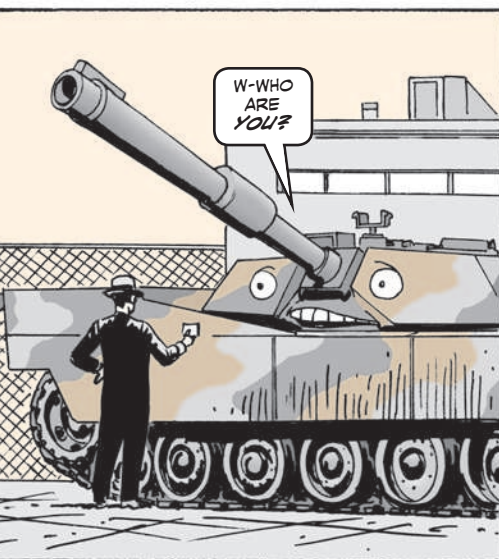
In most cases, the ITAS is left on all the time. Unfortunately, constant use can shorten the life of the ITAS. It also puts a constant drain on the vehicle's batteries.

THE SOLUTION IS AS *EASY* AS FLIPPING A SWITCH.

JUST FLIP THE ITAS POWER SWITCH TO *STAND-BY* MODE WHENEVER THE ITAS ISN'T NEEDED.



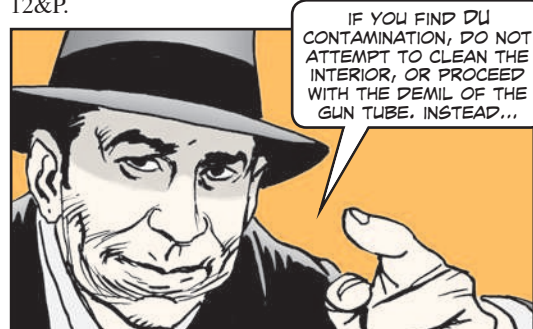
# Be a Gun Tube Detective



**B**efore disposing of the gun tube on an M1-series tank, it's important to do a little investigative work first.

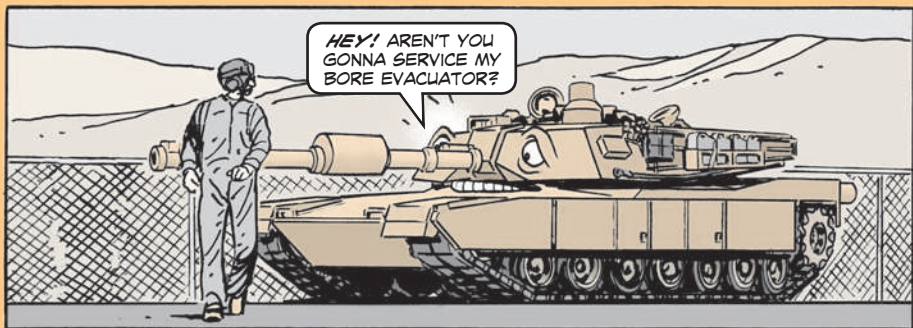
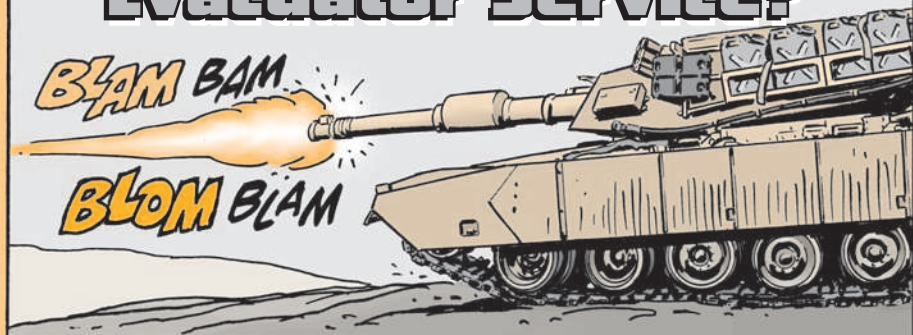
Worn-out gun tubes may have depleted uranium (DU) residue on their interior surfaces. So check the muzzle end of the tube with radiation detection equipment before disposal.

The AN/VDR-2 or AN/PDR-77 with the beta shield open works well. Just follow the instructions in TM 11-6665-251-10, TB 11-6665-365-10 or TM 11-6665-365-12&P.



...completely seal both ends of the gun tube with tape. Mark or tag the gun tube as radioactively contaminated with DU and notify your local radiation safety officer. He'll contact the Industrial Operations Command (AMSIO-DMW) for disposal instructions.

# Bored with Evacuator Service?

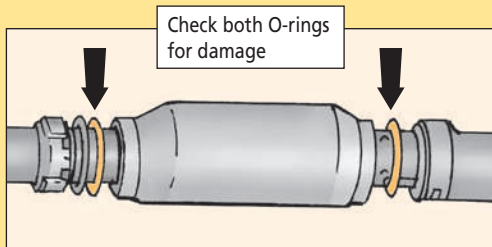


Crewmen, after firing the main gun on your tank, don't forget to service the bore evacuator. It's a required after-operation PMCS check in your -10 TMs.

A lack of service causes excessive pitting. That results in a gun tube that has to be condemned before its time.

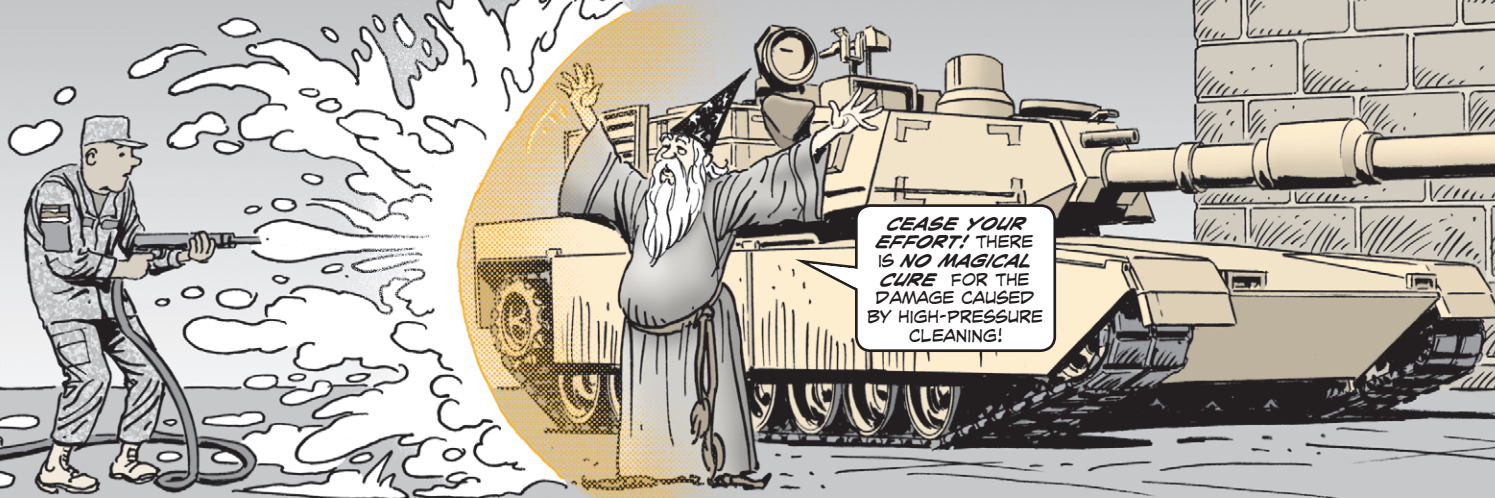
The instructions for servicing the bore evacuator start on Page 3-247 of TM 9-2350-264-10-2, Page 3-138 of TM 9-2350-288-10-2, and Page 3-165 of TM 9-2350-388-10-2.

Pay special attention to the O-ring at the front and rear of the bore evacuator. Your tank is NMC if either O-ring is torn, cut, gouged or deformed in any way. Your mechanic will replace damaged O-rings using NSN 5331-01-498-9953.





**CLEAN  
IS NOT  
EVERY-  
THING**



Crewmen, a nice clean tank is the whole point behind a trip to the wash rack. The last thing you want is to cause any damage.

That's why it's vitally important that you follow all the steps in the cleaning and lubrication PMCS section of your -10-1 TM. Those steps outline all the precautions needed to make sure your tank not only comes out of the wash rack clean, but also battle-ready.

Pay special attention to the precautions in Para 13 for the use of steam, high-pressure water, and high-pressure air when cleaning.

If you're not careful, high-pressure water, air or steam can force their way into the electronic muzzle reference sensor, roadwheel hubs, the turret race ring and other components.

When that happens, damage is inevitable. And what good is a clean tank that is NMC?

The cleaning and lubrication sections start on Page 2-46 of TM 9-2350-264-10-1, Page 2-43 of TM 9-2350-288-10-1, and Page 2-40 of TM 9-2350-388-10-1.

## PARTS MANUAL PERPLEXITY

**I DON'T GET IT! THAT PART NUMBER'S GOT TO BE IN HERE SOMEWHERE!!**

Baffled by mismatching part numbers in your tank's parts manual? Before you start pulling hair, take a look in the back of the manual for the supplemental cross-reference index.

During a routine TM change, the cross-reference index is not updated. Instead, a supplemental cross-reference is added to the end of the index. The supplemental cross-reference index updates obsolete or changed part numbers.

When the TM undergoes a revision, the cross-reference index is updated and the supplemental index goes away.

So, if you can't find the right part, look for the supplemental cross-reference index. You'll save yourself a lot of frustration—and the cost of a hair transplant!

**AND BRIEFLY SPEAKING...**



## M577A2/A3 Map Board

Order the map board for your M577A2 and M577A3 command post carriers with NSN 6675-00-842-2967. Although it's listed as Item 22 in Fig 272 of TM 9-2350-261-24P (Aug 05) and Item 18 in Fig 283 of TM 9-2350-277-24P (Oct 03), neither figure shows a drawing of the map board. That makes it hard to find.

## M88A1 Periscope Pads

Use NSN 2590-00-678-8334 to get a new crash pad for the driver's and mechanic's periscopes on your M88A1 recovery vehicle. The pads aren't listed in TM 9-2350-256-24P-1 because they have to be welded on.



# TWO-PIECE SEAT BRINGS *Relief*



Dear MSG Half-Mast,

The driver's and mechanic's seats, NSN 2540-00-657-9725, on our M88A1 come as a one-piece assembly—a metal seat with the fabric cushion glued to it.

That's fine until the cushion wears out. Then you either have to spend some bucks to order a new seat assembly or deal with a sore bum from no cushioning.

It seems wasteful to throw away a perfectly good seat just because the cushion wears out. Is there any way to order a replacement cushion for our seats?

SFC M.B.H.

Dear Sergeant M.B.H.,

You bet! TACOM has heard you loud and clear and now offers the seat assembly as two separate pieces.

The seat pan comes with NSN 2540-00-740-4668 and the seat cushion with NSN 2540-01-473-4063. Ordering just the cushion will save you more than \$80 over the cost of the entire seat assembly.

The new cushion slips on and comes with spring-type ties that hold it in place. The old one-piece seat assembly is now a terminal item, so make a note of the new NSNs until TM 9-2350-256-24P-1 can be updated.



M109A6  
Paladin...

# HOW MANY DRIPS?

HEY! WE GOT  
A LEAK ON  
THE ELEVATION  
CYLINDER!

DID YOU  
COUNT THE  
NUMBER OF  
DROPS?

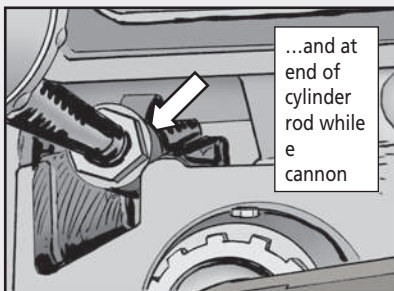
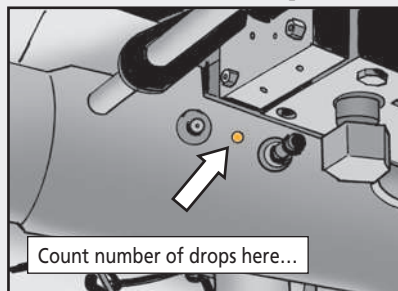
THAT'S  
WHAT THE  
TM SAYS  
TO DO!

Just because you've spotted oil leaking from the vent holes on your Paladin's elevation cylinder doesn't mean you've got a problem, crewmen.

When the cannon is elevated and depressed, it's normal to see several drops of oil coming from the two vent holes on the elevation cylinder. It's the **number** of drops that tell you whether or not there's a problem.

Page 2-75 in TM 9-2350-314-10 (Feb 99, w/Ch 4) says to check the cylinder monthly like this:

1. Elevate and depress the cannon three times.
2. Wipe down the elevation cylinder with a clean cloth.
3. Watch the center vent hole and the vent hole on the end of the cylinder rod while someone else elevates and depresses the cannon 25 more times.



If you see no more than six drops of oil from each vent hole during this time, everything's OK. But if you see more than six drops from either vent, the elevation cylinder's leaking too much. Call your mechanic. He'll determine if your howitzer needs to go to DS for repair.

# ABS Light ON and OFF

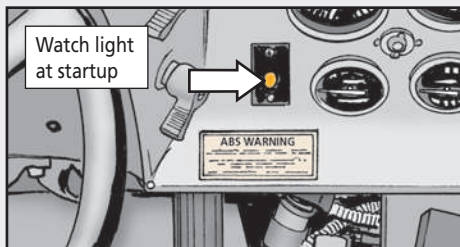


YOUR ABS  
LIGHT IS  
**ON!**

THE ABS IS  
OUT. KEEP  
ME **BELOW**  
40 MPH.

**O**perators, the ABS light on the 5-tonner's dashboard does two things: It lets you know the anti-lock braking system is working, and when it's not.

Simply put, the light comes on for about three seconds at startup. Then, it goes off when the system is working properly. If the light doesn't come on, the bulb probably needs to be replaced. Until the bulb is replaced, assume the ABS is not working. When the light stays on, you **know** something's wrong with the ABS. Either way, you must change your driving style.



Stay safe behind the wheel and take TM 9-2320-272-10 to heart. Keep these pointers in mind when the roads are wet and the ABS is malfunctioning—when the ABS light stays on or there's no light at all at startup.

- Slow down to a maximum speed of 40 mph.
- Remember to apply the brakes gradually when stopping. Sudden stops lock the wheels, and can stall the engine and cause the truck to lose power steering.



Have your mechanic install a warning sticker, NSN 7690-01-530-5506, just under the ABS light.

It carries the following warning...

## ABS WARNING!

Steady illuminated lamp indicates a malfunctioning anti-lock brake system.

If malfunctioning, use gradual braking techniques listed in TM 9-2320-272-10 (Operation w/o ABS).

40 mph maximum speed with steady lamp.

# PARKING BRAKE CHECK

CHECK MY  
**PARKING BRAKE,**  
I SEZ...

CHOCK MY  
**WHEELS,**  
I SEZ...

BUT  
**NOOOOOO!**

**D**rivers,  
to make sure  
the parking brake can  
hold your truck, test it like so:

1. Idle engine at 800-850 rpm
2. Set parking brake
3. Shift transfer into LOW
4. Shift transmission into 2d gear, not 5th as before
5. Slowly release clutch

If the engine stalls before the truck moves, the parking brake is adjusted correctly.

If the truck moves, increase braking action by turning clockwise the knob on top of the brake handle.

Keep checking and adjusting until the brake holds when the clutch is slowly released.

If you adjust the brake as much as possible and the truck still moves as you release the clutch, your truck is NMC until the parking brake is repaired.

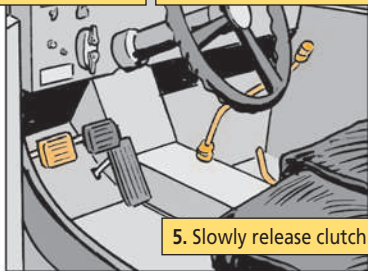
1. Idle engine at 800-850 RPM



2. Set parking brake



3. Shift transfer into LOW



4. Shift transmission into 2nd gear, not 5th gear as before

5. Slowly release clutch

## How to Park

Park your truck on flat, level ground whenever possible. If you can't, park with the engine facing uphill. Use chocks as an extra safety factor.

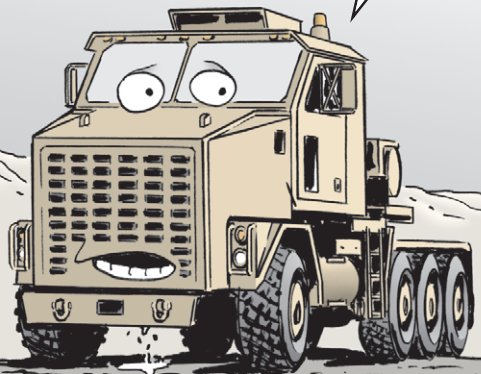
If you must park with the engine facing downhill, be aware that the parking brake will not hold more than 14,640 pounds on a 40 percent grade. Chocks are suggested here, too.



M1070 HET...

## RUB OUT RUBBING PROBLEM

OH, NO! MY TRANSMISSION COOLER LINES HAVE SPRUNG A LEAK!

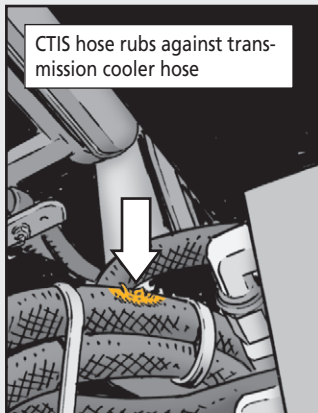


Dear Editor,

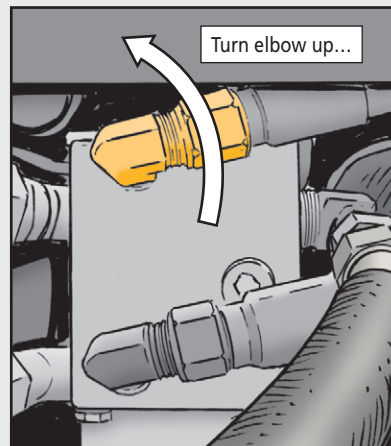
I've found a common problem while inspecting M1070 HET tractors here in Qatar.

It seems the transmission cooler hoses at the bottom of the radiator are getting rubbed by a CTIS hose just above the No. 1 differential. Enough of that rubbing creates a leak.

CTIS hose rubs against transmission cooler hose

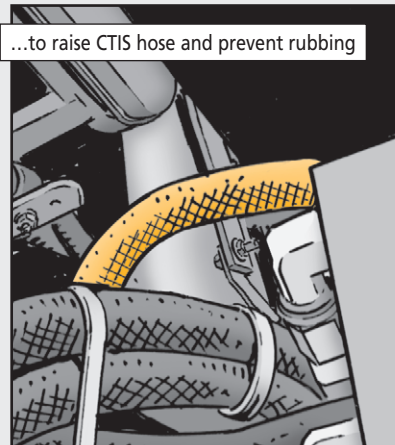


Once a worn hose is replaced, I have my mechanics turn the elbow, NSN 4730-00-231-3014, on the front differential air manifold up a bit. That raises the CTIS hose enough to keep it from rubbing the new cooler line.



Turn elbow up...

...to raise CTIS hose and prevent rubbing



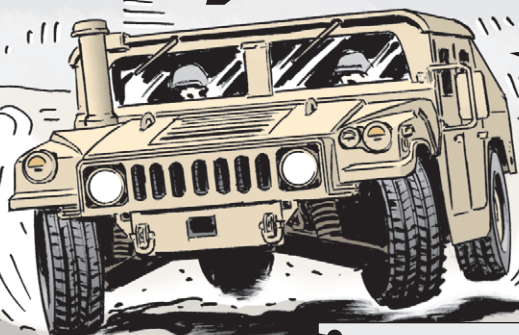
Curtis Knott  
Technical Inspector  
ITT/AMC Qatar

**Editor's note:** Your suggestion rubs us the right way! Mechanics, make this adjustment to keep your HET fleet rolling.

HMMWVs...

## Improved 3-Point

## Seatbelt NSNs



THIS 3-POINT SEATBELT WORKS GREAT!

Dear Half-Mast,  
Our motorpool is filled with HMMWVs. What is the NSN for the vehicle's improved 3-point seatbelt assembly?

SSG R.S.

Dear Staff Sergeant R.S.,

Use NSN 2540-01-495-0817 to get the 3-point seatbelt assembly for your HMMWV. The belt is made of slicker material for better retraction.

And keep this list of seatbelt MWO kits available for the different HMMWV models with serial numbers in the 1 to 99,999 range that have not yet been upgraded to 3-point seatbelts.

*Half-Mast*

NSN 2540-01-	Vehicle Application
387-4018	Front, non-armor trucks, such as M998, M1037, M1038
387-4036	Rear, non-armor trucks, such as M998, M1037, M1038
387-1144	Front and rear, basic armor trucks, such as M1025, M1026
455-1629	M996, 2-litter ambulance
455-2739	M997, maxi-ambulance

Hellfire  
Missile  
System...

*WHEW! THIS  
TARP MAKES A  
BIG DIFFERENCE  
IN THIS RAIN!*

*THAT GUY IS  
LUCKY! MY CRATE'S  
STARTING TO LEAK!*

*EVERYONE'S GONNA  
BE IN FOR A BAD  
SURPRISE WHEN  
THEY TRY TO USE ME!*

## COVER LAUNCHER CONTAINERS

**T**he containers that Hellfire missile launchers are shipped in can't totally protect the launchers in storage without your help.

If the containers are left sitting outside on the ground with no covering, water can seep inside them and mix with the outgassing of the chemicals used to treat the wood the containers are made of. That mixture can cause severe corrosion. In addition, moisture can get into the launcher electronics assembly (LEA) and damage it.

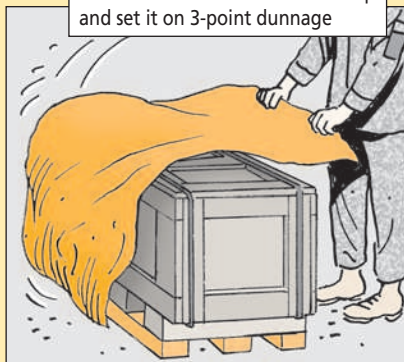
If you must temporarily store launchers outside in their containers, put the containers and their pallets on 3-point dunnage (boards at least 4 x 4 x 88 inches) and cover them with a tarp.

Of course, the best thing to do is keep the launcher inside the hangar where it has plenty of protection against the elements.

Any time your unit receives a launcher, do a complete PMCS on it as soon as possible and test it with the AN/AWM-101A test set. If you find corrosion or any other problems, contact your local depot maintenance tech (DMT) or the Joint Attack Munitions System (JAMS) Project Office:

**[msslPMJAMS@mssl.army.mil](mailto:msslPMJAMS@mssl.army.mil)**

Cover launcher container with tarp  
and set it on 3-point dunnage



HERE'S A  
STRYKER  
STORY FOR  
ALL YOU  
STRYKER  
LIKERS!

**...UNLOCKING STOPS**

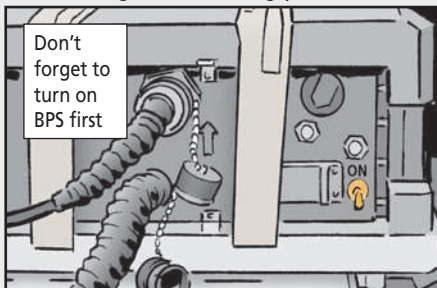
Dear Editor,

We have a couple of suggestions that will help MITAS (modified improved target acquisition system) crews avoid starting and unlocking problems.

- Remember the correct starting procedure for the MITAS: Turn on the BPS (battery power supply) and make sure it passes the BIT (built-in test). Then turn on the main power, then the TAS (target acquisition system). Many operators forget the BPS because it's not on the control panel, but is by the gunner's feet. If you use the wrong sequence, you get faults that a repairman must clear.

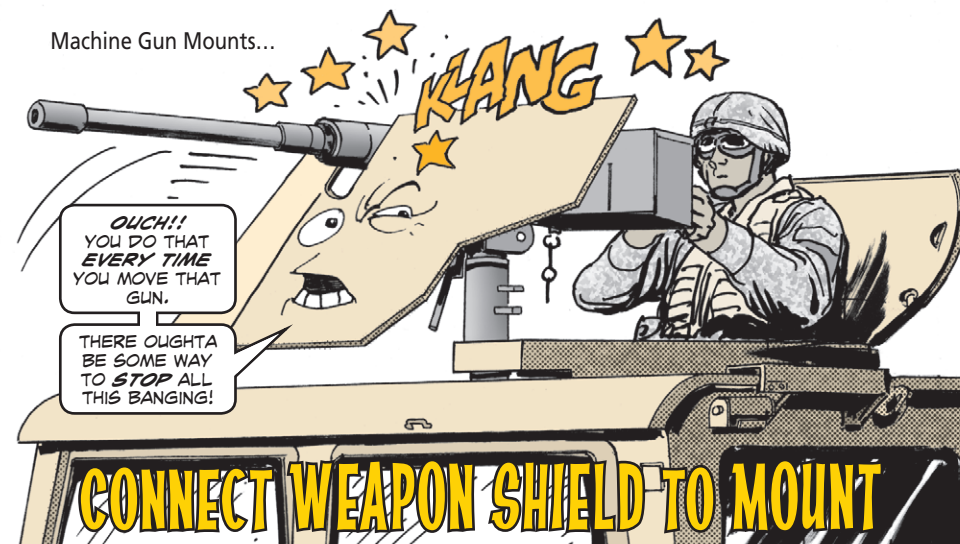
- In the desert, keep the lock for the rails for the TAS covered with a plastic bag or tape over the lock's keyways. We found in Iraq that sand gets inside the keyways and jams the lock. You break the key trying to unlock it. If sand does get in the lock, sometimes it helps to blow it out with an air hose.

SGT David Lawes  
SPC Gerald Morton  
296th MSB  
Ft Lewis, WA



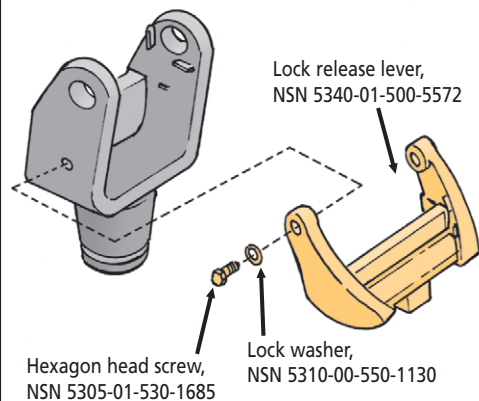
*Editor's note: I think you've found the keys to these MITAS problems. Thanks for sharing them with us.*





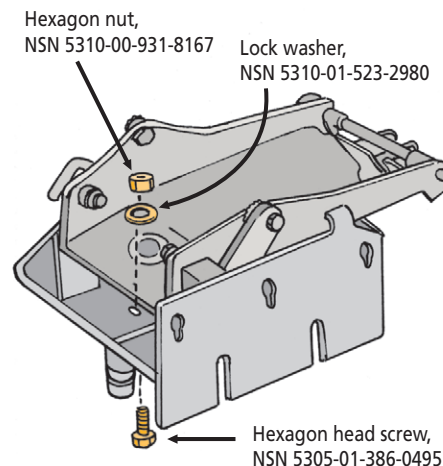
The weapon shield used with the different machine gun mounts has a problem—the shield is not connected to the mount. So when you swing the machine gun around, it bangs into the shield, which is not good for the machine gun or shield. Fortunately, there are easy fixes to connect the shield to the mounts:

**M197 mount**—To fire the M240B and M249 machine guns on the M197 mount with the weapon shield, you need to install the following:



With the pintle mounted and facing front, remove the screw and lanyard from the right side. Slide the lock release lever over the outside of the pintle so that the lever holes line up with the tapped holes of the pintle. Insert the hexagon screw with the lockwasher into the left side of the lever and pintle holes. Tighten the screw. Make sure the square protrusion on the bottom of the lever seats snugly into the groove of the pintle adapter of the weapon shield.

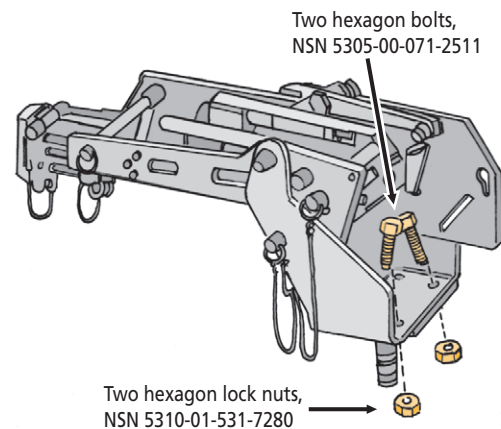
**MK64 MOD 9 mount**—To fire the M2 or MK19 machine guns on the MK64 with the weapon shield, you need the following:



From the bottom of the carriage, insert the screw into the tapped hole to the rear of the pintle. Thread the screw far enough through the hole to attach the lock washer and nut to the opposite end. Insert the carriage and cradle into the pintle adapter of the shield. Make sure the head of the screw fits into the locking groove of the pintle adapter. You may need to adjust how much the screw protrudes. Tighten the nut.

Gunners will need to use the catch bag while firing to prevent casings from interfering with rotation of the vehicle's ring.

**MK93 MODs 1 and 2 mounts**—To fire the M2 and MK19 machine guns on the MK93 MODs 1 and 2 mounts with the weapon shield, you need the following:



Insert the MK93 MOD 1 or 2 carriage and cradle into the pintle adapter of the shield. Insert one bolt into the front hole of the carriage. Maneuver the carriage back and forth while inserting the second bolt into the other front hole. The bolts will be at an angle. Put on the lock nuts and tighten them as much as possible. This locks the carriage and cradle in alignment with the groove in the shield.

This is an interim fix for the MK93. An MWO will be issued by TACOM for a permanent fix. Watch PS for news on the MWO.

Gunners will also need to use the catch bag while firing on the MK93 to prevent casings from jamming the ring.



Ring  
Mount...

# OUR NEW RING MOUNT WON'T TURN!



Dear Half-Mast,

We just got new M66 ring mounts, NSN 1005-00-701-2810, for our LMTV trucks. We've installed them, but we can't get them to rotate freely. There were no instructions that came with them. *Help!*

CPT N.D.

Dear CPT N.D.,

I think I can help you help yourself. Did you use the FMTV/LMTV installation kit, NSN 1005-01-381-5431? The M66 ring mount won't work correctly without the kit, which includes a cab reinforcement brace and a ring spacer that lets the ring revolve properly.

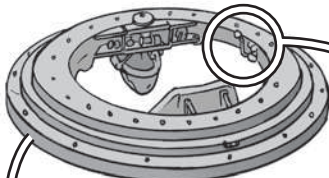
Did you lube the M66's felt surfaces with CLP? NSN 9150-01-054-6453 gets you a spray bottle of CLP.

Did you grease the ring's bearings with GAA and work the ring back and forth until the ring moves smoothly? Until the felt surfaces and bearings are lubed, a new M66 won't rotate smoothly.

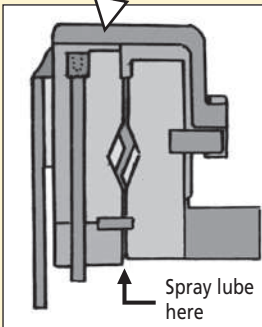
Did you make sure the M66's brake is off? It won't move if the brake is on.

If none of these tips help, you need to fill out a QDR (quality deficiency report) to get the M66 fixed or replaced. You can do this online at <https://aeps.ria.army.mil/>, which requires your AKO login and password.

Grease bearings and turn ring back and forth to work in grease

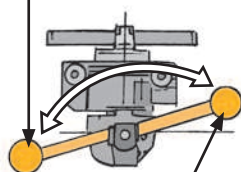


Is brake off?



Spray lube here

Position of lever when brake is on



Position of lever when brake is off

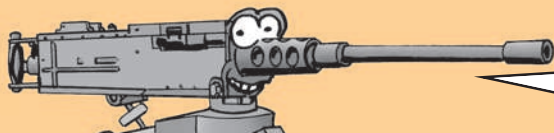
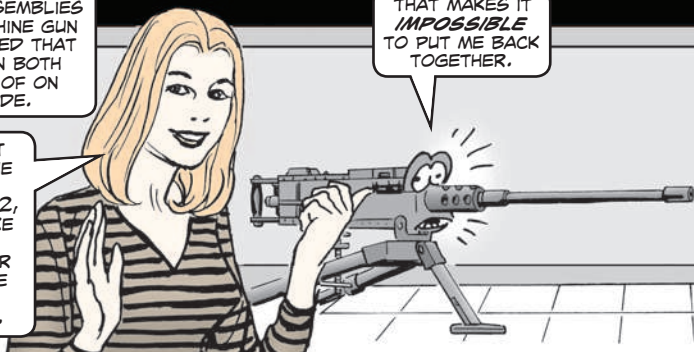
*Half-Mast*

# ASSEMBLING BUFFER BODY WITH EXTRA SLOT

MORE THAN 800 BARREL BUFFER BODY ASSEMBLIES FOR THE M2 MACHINE GUN HAVE BEEN FIELDIED THAT HAVE A SLOT ON BOTH SIDES INSTEAD OF ON JUST ONE SIDE.

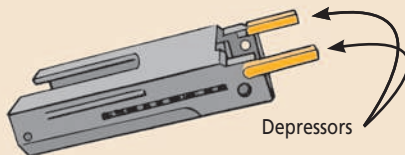
THAT MAKES IT **IMPOSSIBLE** TO PUT ME BACK TOGETHER.

THE EXTRA SLOT DOESN'T HURT THE OPERATION OR SAFETY OF THE M2, BUT IT DOES MAKE IT POSSIBLE TO STICK THE BUFFER ASSEMBLY IN THE BUFFER BODY **UPSIDE-DOWN**.

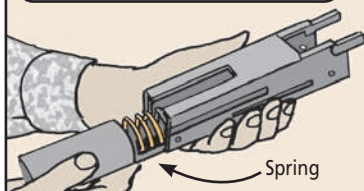


IF YOU HAVE A BUFFER BODY ASSEMBLY WITH AN EXTRA SLOT, HERE'S HOW TO CORRECTLY INSTALL THE BUFFER ASSEMBLY...

1. POSITION THE BUFFER BODY ASSEMBLY SO THE TWO LOCK DEPRESSORS ARE POINTED AWAY FROM YOU AND ARE ON TOP OF THE ASSEMBLY.



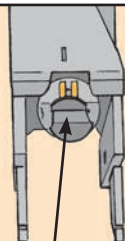
2. PUT THE BUFFER ASSEMBLY SPRING-FIRST IN THE BORE OF THE BUFFER BODY.



3. ALIGN THE BUFFER ASSEMBLY GUIDE SO IT ENGAGES THE SLOT ON THE RIGHT SIDE OF THE BUFFER BODY. SLIDE THE BUFFER ASSEMBLY INTO THE BUFFER BODY UNTIL THE GUIDE CONTACTS THE FAR END OF THE SLOT.



WHEN THE BUFFER ASSEMBLY IS INSTALLED RIGHT, THE HOOKED ENDS OF ITS ROD POINT UP.



MK19  
Machine  
Gun...

HERE ARE A  
COUPLE OF  
TIPS FROM  
GUYS WITH  
SPECIAL FORCES  
FOR FIRING  
INSURANCE.

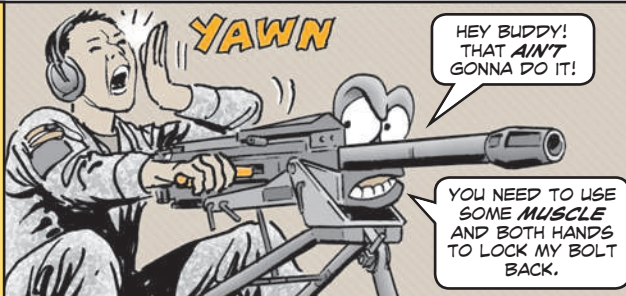


# Firing Insurance

Dear Editor,

Through our work supporting the Special Forces at Ft Lewis, we've come up with two tips to keep MK19s firing happily:

- Make sure you pull the bolt all the way back. It requires a bit of muscle and both hands. If you don't lock the bolt back completely, you may have problems like misfires.



- Fire at least five rounds at a time if possible. If you fire fewer, particularly just one at a time, it often jerks the rounds so much that the links between rounds are stretched. That can put the rounds in the wrong position for firing.

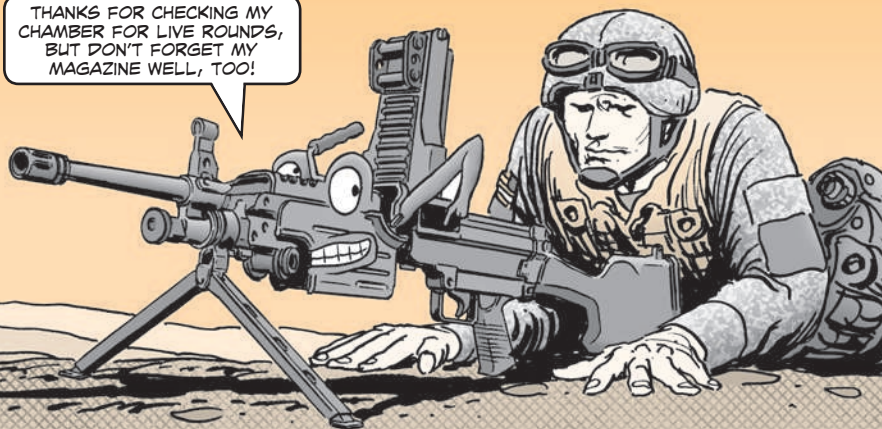


Aubrey Nabb  
Jacob Moore  
1st Special Forces Group  
Ft Lewis, WA

*Editor's note: Those tips are good firing insurance. Thanks for sharing.*

# CHECK MAGAZINE WELL, TOO

THANKS FOR CHECKING MY CHAMBER FOR LIVE ROUNDS, BUT DON'T FORGET MY MAGAZINE WELL, TOO!



Dear Editor,

Every good M249 gunner knows at the end of firing you need to check if a round is left in the M249's chamber to prevent an accidental firing. To do that, you lock the bolt back, put the M249 on SAFE, raise the feed cover and eyeball the chamber.

We suggest one other check. We had an actual case at Ft Polk of a round being accidentally left in the magazine well. So it's a good idea after you've checked the chamber to open the feed tray cover and feel in the magazine well for a round. Better safe than sorry!

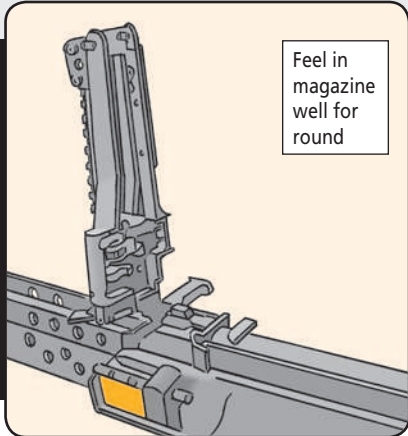
Martin Weaver  
Alexander Zelich  
546th Maint Co  
Ft Polk, LA

**Editor's reply:**

Yes, surprises are no fun when it comes to live ammo. Thanks for the tip. It's also a good idea to run a cleaning rod down the muzzle to make sure no rounds are stuck in the barrel.

Feel in magazine well for round

THANKS, FOR CHECKING, GUYS!



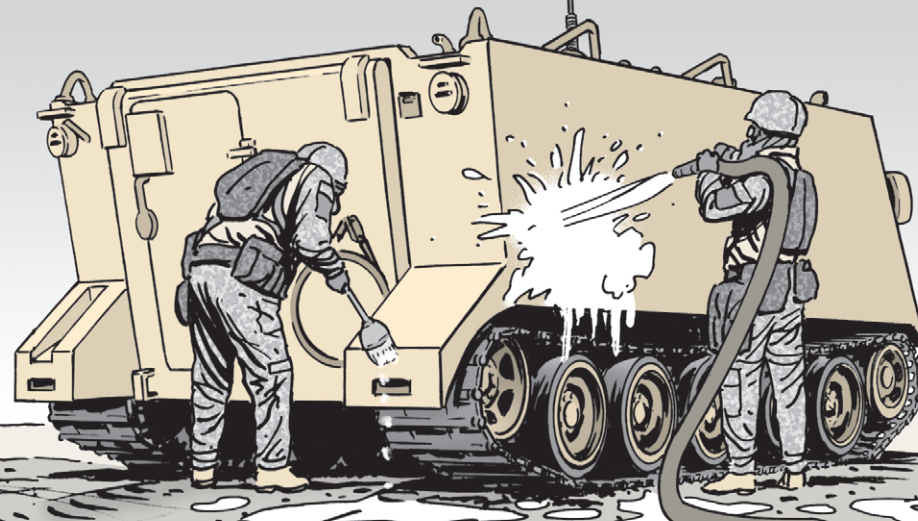


# DECONNING MADE EASY

DECONNERS!  
THERE'S **GOOD NEWS** FROM  
THE CHEMICAL  
SCHOOL  
INSTRUCTORS...

...THEY'VE  
COME UP  
WITH WAYS  
TO **IMPROVE**  
DECONNING.

HALF-MAST USAR



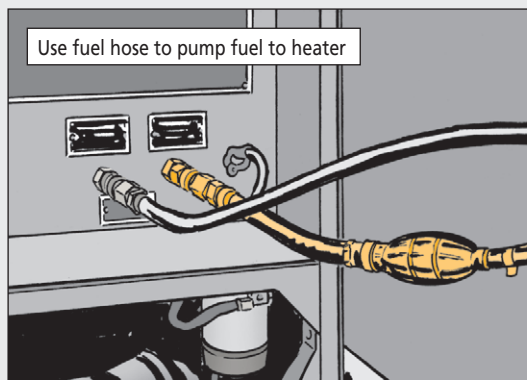
Dear Editor,

We've come up with three suggestions at the U.S. Army Chemical School to make deconning with the M12 decon easier:

- With the new diesel M12 you have to make sure to turn on the fuel valve before startup. Otherwise, the M12 will run for about five minutes and shut down. Then when you do open the valve you don't have enough fuel pressure to operate the heater.

The TM says the solution is to run the M12 for two minutes until the fuel pressure to the heater stabilizes. That usually doesn't work.

We've found it easier to use the M12's fuel line priming bulb, NSN 2910-01-516-1451, to prime the heater. Just connect the quick disconnects to the suction line to the heater and turn on the heater's electrical system to start the fuel pump. But make sure the heater thermostat is in the OFF position or the burner will light when the fuel pressure is high enough.



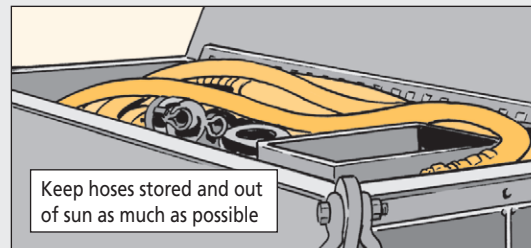
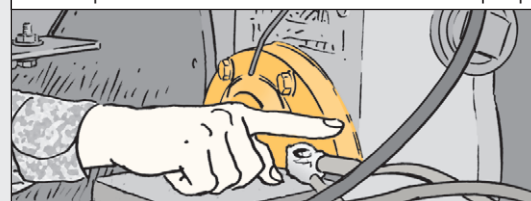
Give the bulb several squeezes to send fuel to the heater pump and watch the heater's fuel pressure gauge. The gauge should come up to a steady 150 psi. Then turn off the heater pump and reconnect the M12 to the heater. You should be in business.

- In the desert, sand can eat up the pump seals. To protect seals, it's a good idea to daily wash off sand around the pump with low-pressure water.

- The desert sun will dry rot the hoses faster if they're left exposed to the sun. Prevent dry rot by keeping the hoses rolled up and covered as much as possible.

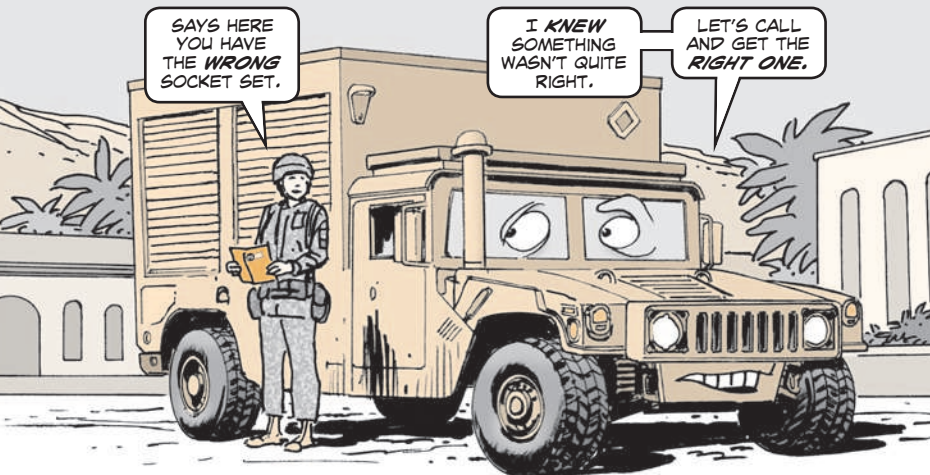
SSG Patrick Fox  
SSG Thomas Flynn  
84th Chemical,  
US Army Chemical  
School  
Ft Leonard Wood, MO

Use low-pressure water hose to clean out sand around pump



Keep hoses stored and out of sun as much as possible

# CHECK FOR WRONG SOCKET SET



**S**ome SECMs (shop equipment, contact maintenance) were fielded with a standard length  $\frac{3}{8}$ -in drive metric socket set that's wrong. They should have, in Drawer CB4, a  $\frac{3}{8}$ -in drive metric deep socket set (8mm through 19mm), which has deeper sockets.

Check the data plate on the rear of the SECM shelter for one of these serial numbers:

208752	209063	209122
208946	209066	209123
209022	209070	209131
209035	209082	209135
209039	209087	209146
209043	209091	209151
209046	209107	209154
209047	209115	209162
209054	209119	

If your SECM has one of these numbers, you have the wrong socket set. Contact your local TACOM logistics assistance representative or state surface maintenance manager for help getting the correct set.

Or you can contact TACOM-Rock Island at DSN 793-4674/(309) 782-4674 or email:

**lori.leebold@us.army.mil**

You will receive a new socket set and a foam insert to hold the tools in the drawer. Keep the old socket set to use as spares.

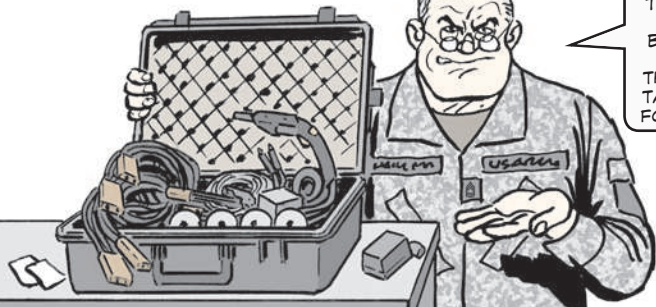


# NEW READY WELDER AVAILABLE

THE NEWEST VERSION OF READY WELDER IS NOW AVAILABLE WITH NSN 5130-01-522-1379.

THE READY WELDER IS A COMPACT, BATTERY-POWERED WELDING SYSTEM THAT CAN EASILY BE TAKEN TO THE FIELD FOR WELDING JOBS.

IT PUTS OUT UP TO 350 AMPS OF WELDING POWER.



THE NEW VERSION, READY WELDER II, HAS A "COLD SWITCH" TRIGGER RELEASE TO CUT OFF POWER WHEN YOU'RE NOT WELDING-A GOOD SAFETY FEATURE.

## HERE'S WHAT YOU GET WITH READY WELDER II...



- four spools of wire (two of flux core steel, two of aluminum)



- two 20-ft extension cables
- a waterproof, airtight, heavy-duty carrying case

- integrated cold switch

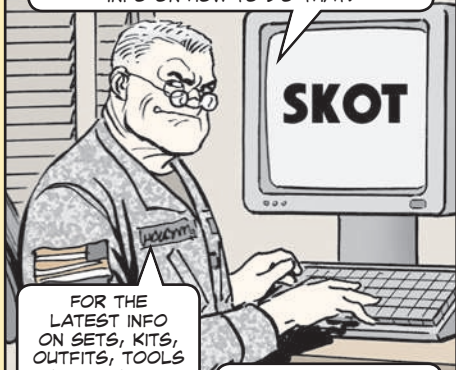
- NATO power plug



- extra circuit board

- 15 feet of cable

IF YOU HAVE AN **OLDER** READY WELDER AND WANT TO UPGRADE IT, GO TO <http://www.readywelder.com> AND CLICK ON MILITARY NEWS FOR INFO ON HOW TO DO THAT.



FOR THE LATEST INFO ON SETS, KITS, OUTFITS, TOOLS AND TRAINING SYSTEMS, VISIT THE PM SKOT WEBSITE:  
<http://pmskot.army.mil>

IF YOU HAVE SKOT QUESTIONS, CALL TOLL-FREE 1-877-476-7568 OR EMAIL: [pm-skot@ria.army.mil](mailto:pm-skot@ria.army.mil)



RT 240  
RTCH...

OPERATORS, MAKE SURE YOU  
EYEBALL THE CYLINDER RODS  
ON YOUR ROUGH TERRAIN  
CONTAINER HANDLER (RTCH)  
*BEFORE* USING IT.

## CYLINDER ROD SAVER

There are several yards of cylinder rod exposed to the elements. That means any grit or sand on the rods will scrape or cut seals when the rod is extended or retracted. Damaged seals lead to fluid leaks, which lead to NMC equipment. If you find any grit or sand, get rid of it.

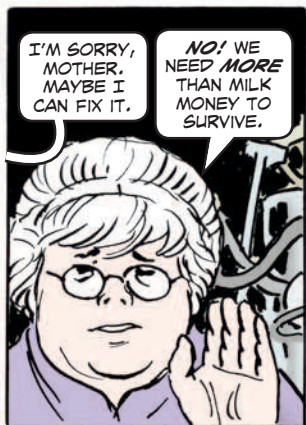
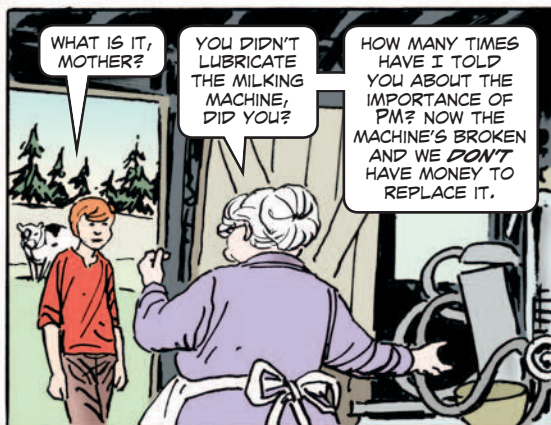
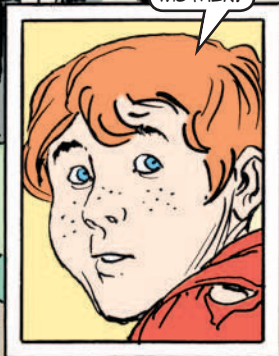
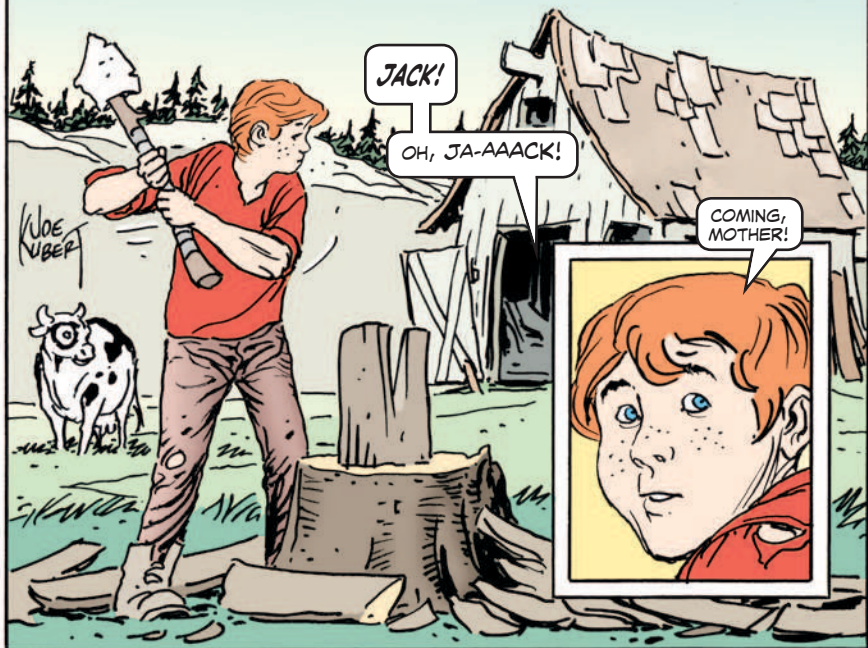
Another rod saver, no matter what the weather, is to exercise the cylinders weekly. This fights rust by spreading a thin coat of oil on the rod. Rust, like grit and sand, will scrape and cut the rod's seal.

If the RTCH is going to sit longer than a month and you're not going to be able to exercise the cylinders, coat the polished cylinder rod with a light coat of hydraulic fluid. Before startup, wipe off the rods to remove any grit or sand that has settled on the rods.

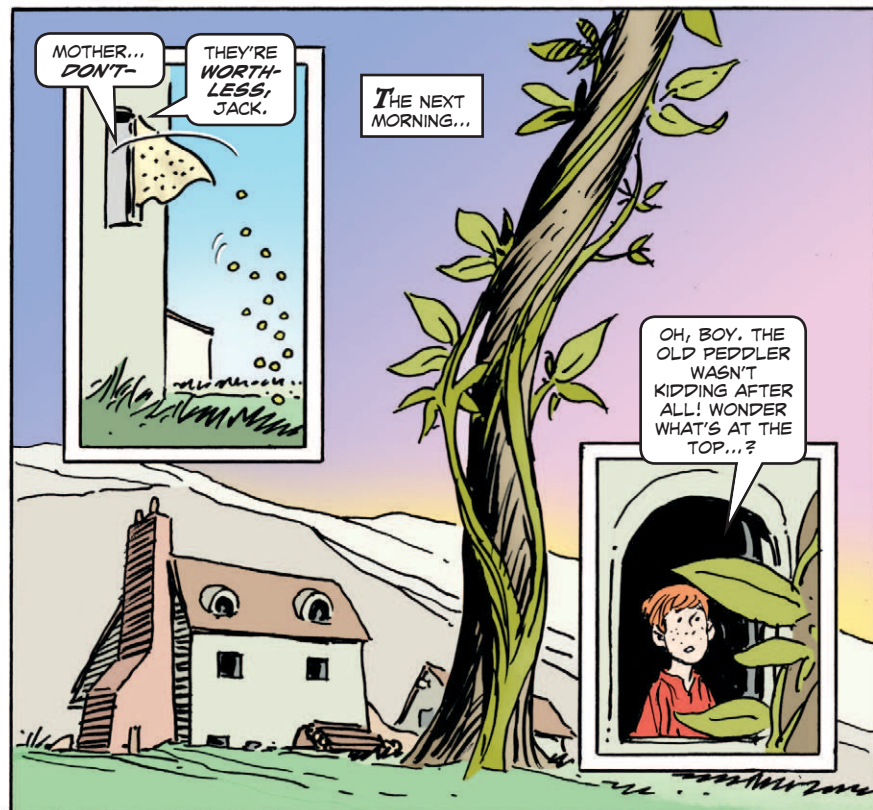
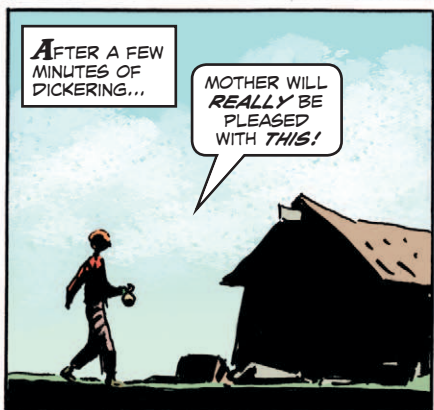
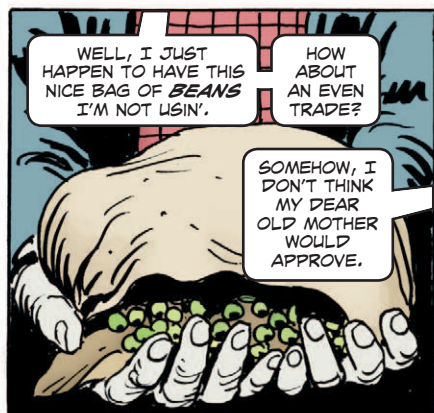
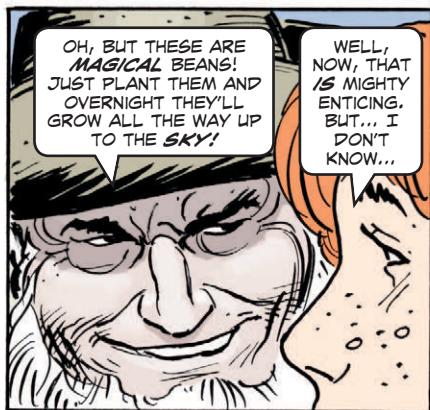
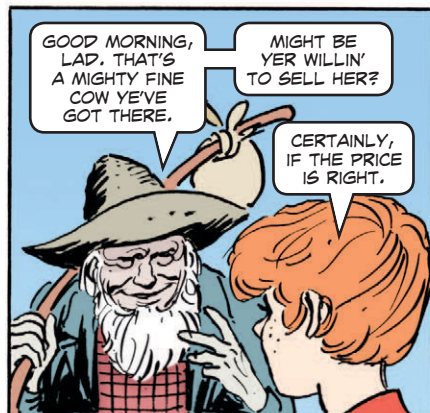
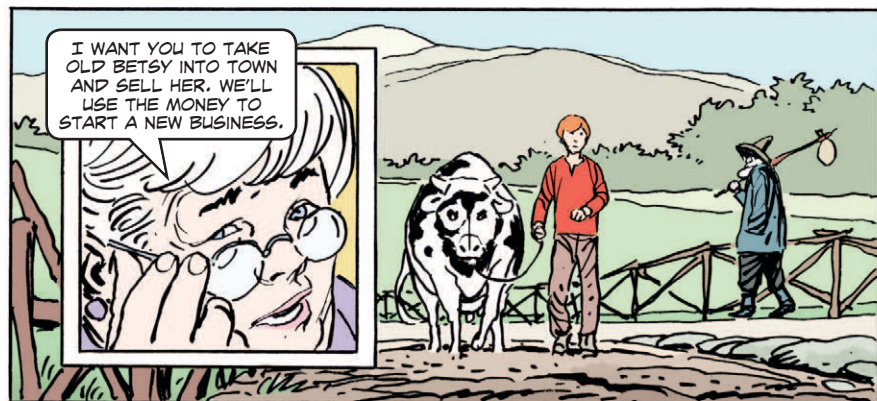
Remove grit, sand or rust  
before starting



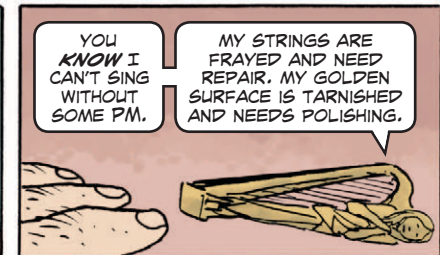
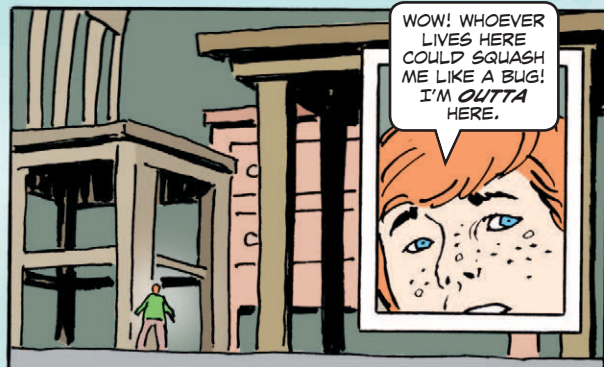
# JACK AND THE PM BEANSTALK



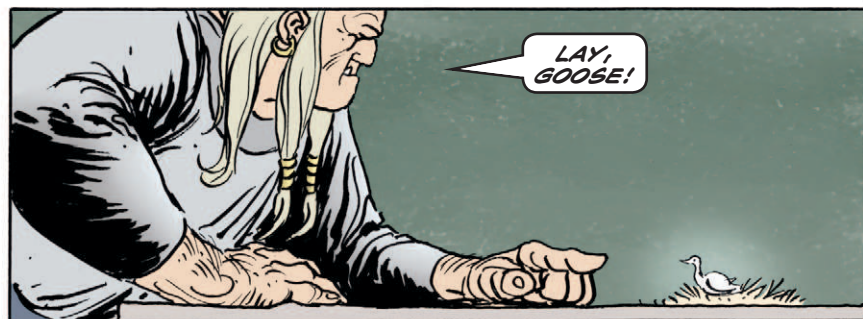










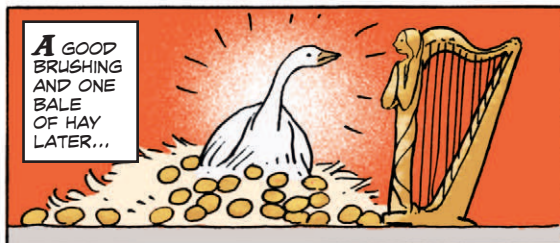


LAY,  
GOOSE!

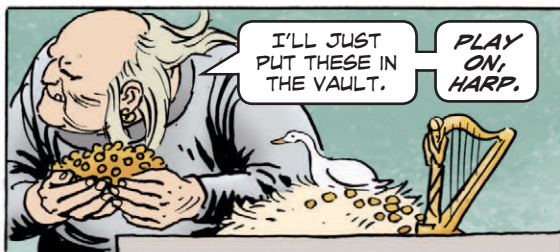


WAITAMINIT! YOU  
KNOW MY EGGS ARE  
NOTHING BUT **FOOL'S  
GOLD** WITHOUT PM!

MY FEATHERS NEED  
BRUSHING, AND THE  
HAY IN MY NEST  
NEEDS CLEANING.

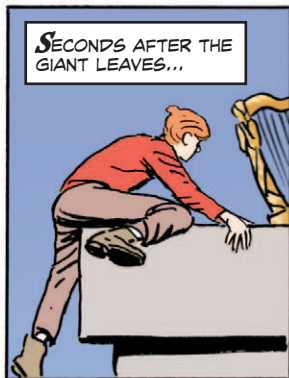


A GOOD  
BRUSHING  
AND ONE  
BALE  
OF HAY  
LATER...



I'LL JUST  
PUT THESE IN  
THE VAULT.

PLAY  
ON,  
HARP.



SECONDS AFTER THE  
GIANT LEAVES...

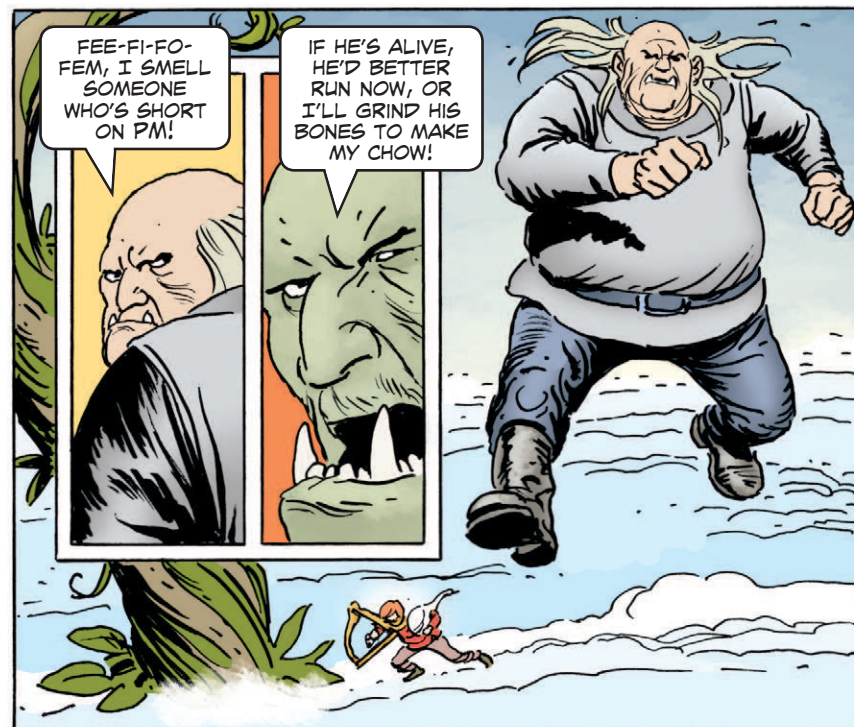


MOTHER WILL FOR-  
GIVE MY LACK OF  
PM WHEN I COME  
HOME WITH **THESE  
TREASURES!**

HELP!  
I'M BEING  
HARP-  
NAPPED!

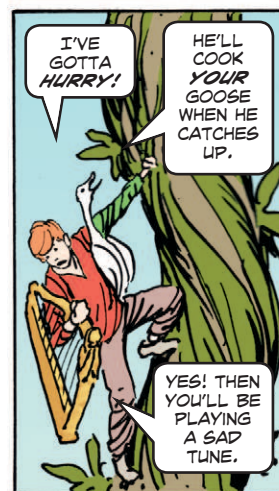


AAAAAK!



FEE-FI-FO-  
FEM, I SMELL  
SOMEONE  
WHO'S SHORT  
ON PM!

IF HE'S ALIVE,  
HE'D BETTER  
RUN NOW, OR  
I'LL GRIND HIS  
BONES TO MAKE  
MY CHOW!



I'VE  
GOTTA  
HURRY!

HE'LL  
COOK  
**YOUR**  
GOOSE  
WHEN HE  
CATCHES  
UP.

YES! THEN  
YOU'LL BE  
PLAYING  
A SAD  
TUNE.

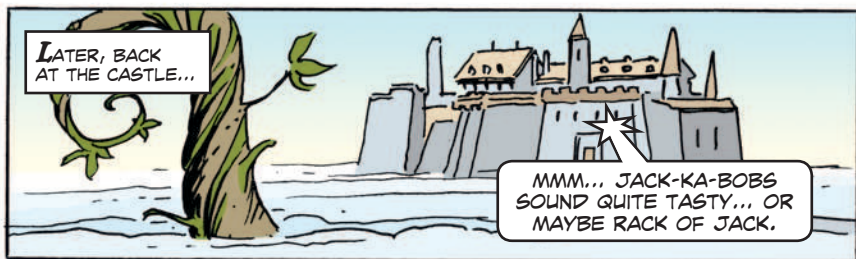


MY  
TRUSTY  
AXE WILL  
BRING  
THAT  
GIANT  
DOWN TO  
SIZE!



UH, OH! MOTHER  
WARNED ME THE AXE  
NEEDED PM! WHAT  
AM I GONNA DO!?





# HELMET LINER NOT SAFE FOR USE



**A**ircrews and ALSE shops, make no mistake about it. The Oregon Zetaliner you got through the USAARL helmet problem fit program for your aircrew integrated helmet system (AIHS) is not authorized.

The Army has not approved the Zetaliner for general use. Units issued test helmets with the Zetaliner should contact Sergeant Michael Christie at U.S. Army Aeromedical Research Laboratory (USAARL), (334) 255-6849, for guidance.

The Zetaliner has failed the impact test and increases your risk for head injury. Check your helmet. If it has a Zetaliner, let your ALSE tech remove it and install the authorized thermal plastic liner (TPL) instead.

Here are the approved TPLs for your HGU-56/P helmet.

NSN 8415-01-	Size
394-9999	XXS
395-0000	XS
395-1555	S
395-0001	M
395-0002	L
395-0003	XL

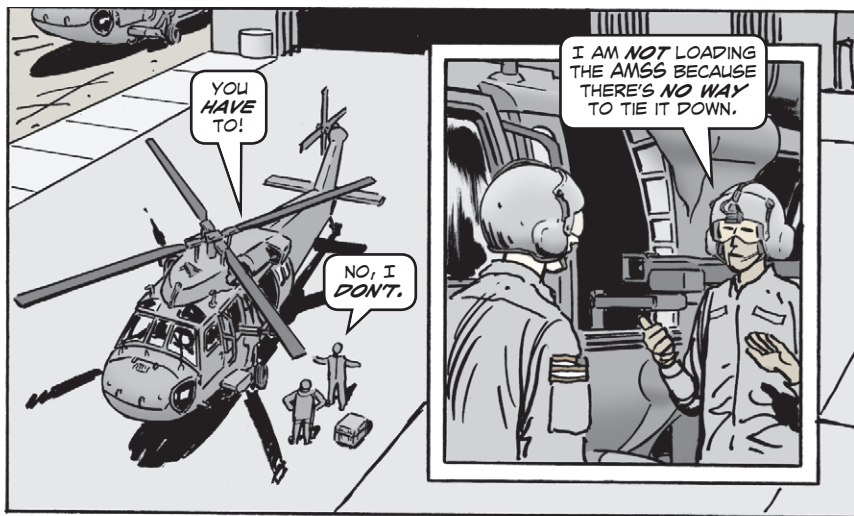
The info is in PM AW message ALSE 05-01. Make a note until the IETM, EM 0205, TM 1-1680-377-13&P is updated. The TM is not available on the LOGSA website, but can be downloaded from the document section of the Air Warrior Website:

**<https://airwarrior.redstone.army.mil>**

You'll have to apply for a password. Contact John Jolly, (256) 876-6538, DSN 746-8492, or email:

**[john.jolly@us.army.mil](mailto:john.jolly@us.army.mil)**

# Storing AMSS



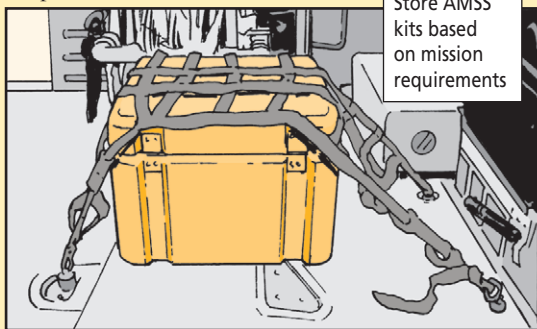
HAVING DIFFICULTY STORING AN AIRCRAFT MODULAR SURVIVAL SYSTEM (AMSS) KIT IN YOUR BLACK HAWK FOR A DESERT MISSION?

The problem has been that once the ammo boxes for the M-60 machine gun are secured in the cabin, there's no place to secure the AMSS because the front of the Black Hawk cabin floor doesn't have tiedown rings.

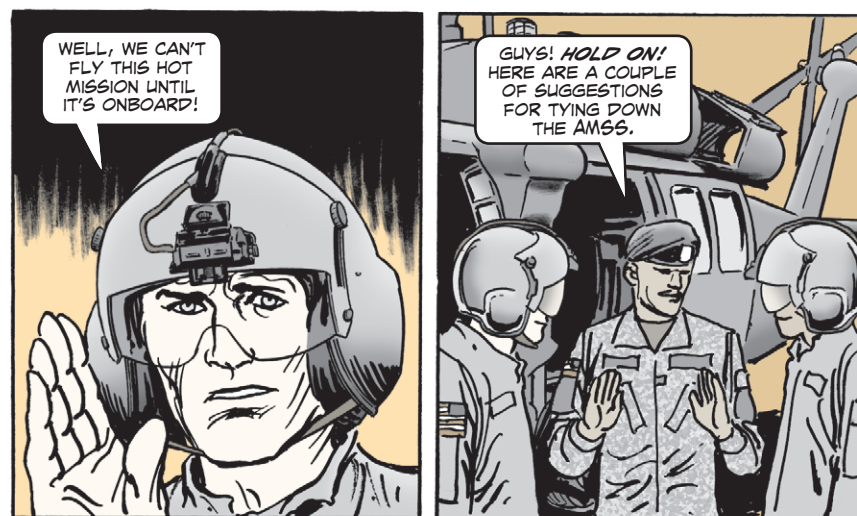
To allow for changing mission requirements, the Air Warrior IETM, ETM 0250 TM 1-1680-377-13&P, tells you to store the AMSS in the bird but does not say how.

Here how: Use the cargo netting, NSN 1670-01-136-9759, that's listed in TM 1-1520-237-23P-1, Page 185, Item 3. Also use four old Huey quick-disconnect adapters, NSN 1680-01-085-7826.

Store AMSS kits based on mission requirements



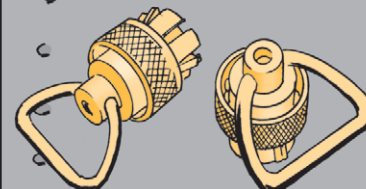
# Kit for Missions



Place your AMSS kit in the front cabin. Attach the four QD adapters to the floor. Then attach the netting clip to the adapters' D-rings. The kit is tight and secure.

Or, use the QD adapters and one SK LB aircraft cargo tie-down, NSN 1670-00-725-1437. Attach the two rings to the floor. Position your AMSS between the rings and route the strap through the AMSS handles and secure it to the two adapters. This solution has been used successfully in the Chinook.

Attach four adapters to cabin floor where needed





# Keep MMS Lookin' Up

HOW DID  
THAT  
HAPPEN!?

I TOLD YOU...  
**HOW YOU  
STORE THE  
MMS MAKES A  
DIFFERENCE!**

**M**echanics, is your Kiowa Warrior's mast-mounted sight (MMS) lettin' in too much water when it rains?

If the answer is yes, the problem could be that the seal between the upper and lower shrouds of the MMS is not seated correctly.

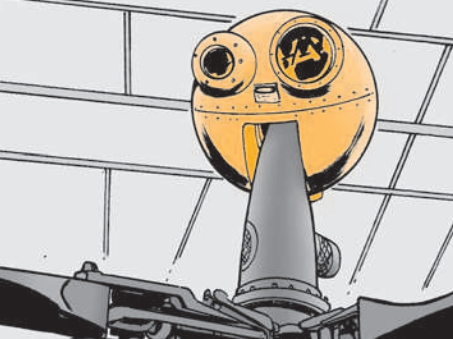
The excess water gets into the MMS by running down the seam between the upper and lower shrouds.

Sometimes the seal gets pinched and allows water inside the MMS that's stowed in the normal position. A visual inspection isn't enough to tell if the seal is pinched.

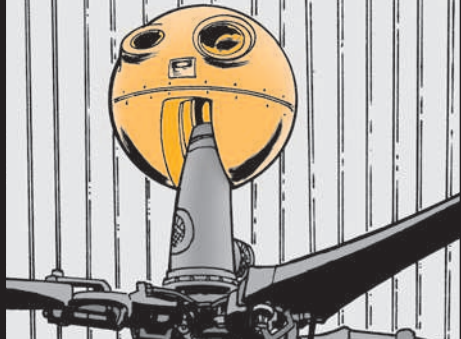
The MMS has desiccant inside to absorb water and moisture. If too much water gets in because of a crushed or pinched seal, the desiccant will become totally saturated. Then, additional moisture will accumulate, allowing internal electrical components to short out. Check the indicator.

If your bird's MMS takes on too much water, you'll have to call your AVIM shop to fix the problem. But to avoid future moisture problems, position the MMS in the full up position. The seam between the upper and lower shrouds should be parallel to the ground in this position, which will keep the majority of the water out of the seam and out of your MMS.

MMS in normal position can  
increase water intrusion



The up position allows water to drain away  
from seal and reduces water intrusion





# Watch Where You're Goin'



**P**ilots, re-arming the Hellfire or rocket launcher on your Kiowa Warrior is simple. But pay attention while walking around the bird.

If you duck under the tail boom to go from one side to the other, stay clear of the identification friend or foe (IFF) antenna. Break it and your bird is unidentifiable.

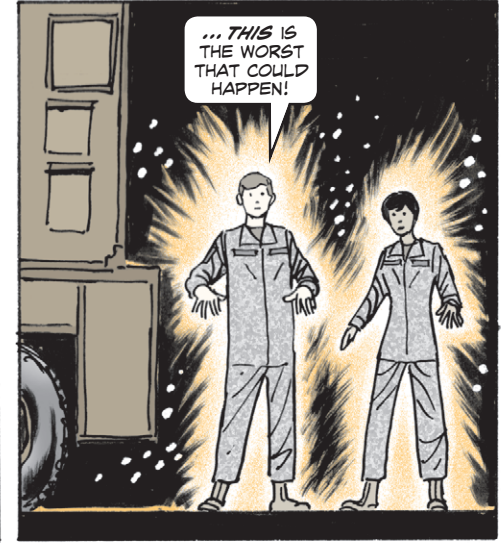
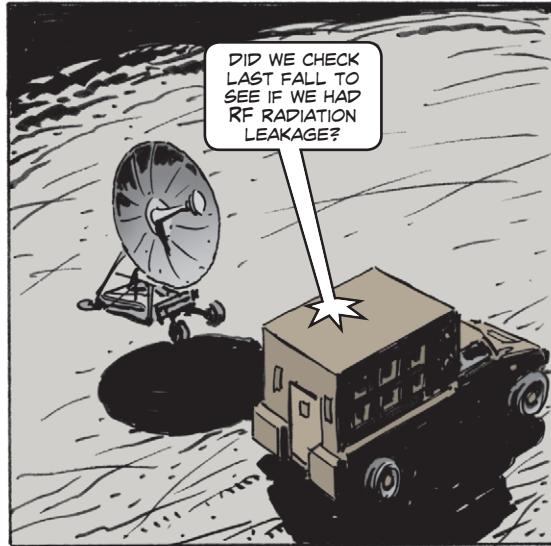
Make it a habit to place your hand on the **boom** near the antenna to block yourself from bumping into it as you duck underneath the tail boom.

The IFF antenna can be damaged or broken easily if you bend or bump it. That can make your bird partially mission capable. That's OK for normal operations at home base, but for tactical situations, your bird is NMC until it's fixed.



# RF RADIATION

# LEAKAGE REPORT



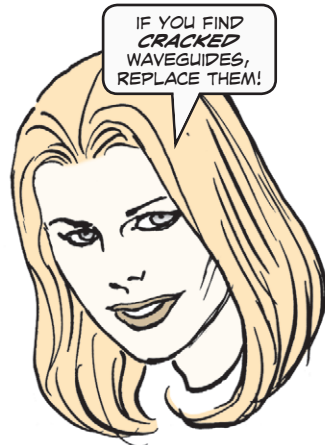
In the Fall of 2005, CECOM gave you a heads-up in Ground Precautionary Message (GPM) 2005-005 about possible radio frequency radiation leakage in satellite communications terminals. The leakage was a significant health hazard to soldiers working inside the shelters near the high power amplifier.

So, if you operate satellite communications terminals AN/TSC-85C, AN/TSC-85D(V)1, AN/TSC-93C, or AN/TSC-93D(V)1, it might be a good idea to make sure the advice given in CECOM GPM 2005-005 to find and correct the problem was followed.

The problem was cracks in the waveguide elbow that allowed radio frequency radiation to leak. The waveguide elbow gets a lot of flexing during maintenance so it's easy for cracks to appear.

But those cracks should have been found during routine quarterly radio frequency radiation leakage testing. But apparently some routine tests were not done as routinely as they should have been!

Why not do a quarterly radio frequency radiation leakage test right now? If you're using TM 11-5895-1433-12-12, you'll find the test in Section 4-6.1. If you're using TM 11-5895-1786-13, you'll find the test in Table 5-2 and Para 5-6 in Chapter 5.



If the tests show you have a radio frequency radiation leakage problem and no cracks are visible, you may need to replace a damaged or missing HPA waveguide gasket, NSN 5999-01-071-6256. You'll find the gasket between the HPA elbow waveguide and the waveguide that carries the RF to the waveguide switch, NSN 5985-01-056-2851.

While in the area, make sure the waveguide coupling, NSN 5985-00-569-5849, and proximity switch, NSN 5930-01-056-2855, are properly aligned.

FOR MORE INFORMATION, SEE YOUR LOCAL CECOM LAR FOR A COPY OF THE GPM. YOU CAN ALSO CONTACT THESE CECOM POCS...



steven.chan@us.army.mil  
robert.weir@us.army.mil  
DSN 987-7473 or (732) 427-7473  
DSN 992-8875 or (732) 532-8875

And one final word: Do not permanently override the fault safety override switch on the fault alarm monitor unit. The override switch is to be used only when performing maintenance. It is not to be used so you can continue to use a terminal with a safety fault!



# Operating Below E-Level

IF YOU'RE NOT AN E-MODEL, THEY **FORGET** ALL ABOUT YA!

AHH, THIS NEW GENERATION... THEY DON'T KNOW WHO CAME **BEFORE** 'EM!"

I GOT SOLDIERS USING ME **EVERY DAY!** BUT DO I GET THE MAINTENANCE I SHOULD? PFF... **NO... I DO NOT.**

THEY TELL ME THEY LOOK FOR UPDATES ABOUT US, BUT THEY DON'T FIND **SQUAT!**

SOME SINGGARS OPERATORS, MAINTAINERS AND REPAIRERS HAVE BEEN FEELING A BIT **SHORT-CHANGED** LATELY.

SEEMS LIKE EVERYONE, INCLUDING PS, HAS BEEN PUTTING OUT GOOD INFO ON THE ASIP - E-MODEL - SINGGARS AND **NOT SAYING** MUCH ABOUT THE OLDER MODELS (NON-ICOM RADIOS EXCLUDED).

BUT THE OLDER MODELS ARE STILL GETTING A LOT OF **USE!**

IF YOU'RE OPERATING A SINGGARS BELOW E-LEVEL, THIS ARTICLE OF COMMON COMPLAINTS AND THEIR SOLUTIONS FOR THESE OLDER GUYS IS JUST FOR YOU!

**AT LAST!** A LITTLE RESPECT FOR THE ELDERLY.

## "It Won't Maintain a Fill"

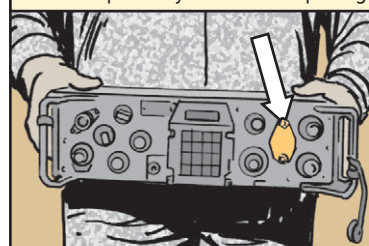
Maintainers wish they had a nickel for every time they've heard the phrase, "My SINGGARS won't maintain a fill." They would all be retired and living la vida dulce in the Caribbean.

When a SINGGARS won't maintain a fill, the problem is usually in one of these two areas:

### 1. The holdup battery (HUB):

The HUB, NSN 6135-01-214-6441, is the backup battery for memory retention. If your main power source is switched off or fails, the HUB jumps in and holds your data. With your SINGGARS powered up, it will tell you when your HUB battery needs replacing by flashing a diamond-shaped light at you from the HUB display. The light stays on, but **doesn't** flash when the HUB battery is spent.

The holdup battery could need replacing

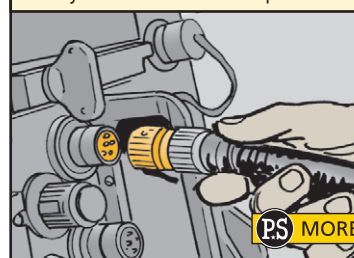


Look for that light, but take one more step to ensure you're never without an operating HUB. Get a stick-on file label, NSN 7530-00-223-6611, and write the battery installation date on it. Trim the label to fit above the keyboard display. Although this extra step will not tell you how much use the battery has had, it will tell you how long it has been in your RT and how fresh it is. If it's been in your RT longer than six months, replace it.

### 2. Dirty connectors:

Sometimes a fill problem is nothing more than a dirty connection between the fill cable and the fill device or between the fill cable and the RT. If any of the connections are dirty, clean them with a disposable applicator (foam swab), NSN 6515-00-564-8242 and Citra-Safe, NSN 6850-01-378-0616, to clean electrical connectors.

A dirty connector creates fill problems



Make sure your connectors have O-rings and inserts. Without them, you won't have a tight connection.



## "It Won't Key"

When the switch is pressed on your handset and the transmitter won't key, chances are good that you have a problem in one of these three areas:

### 1. Dirty connectors:

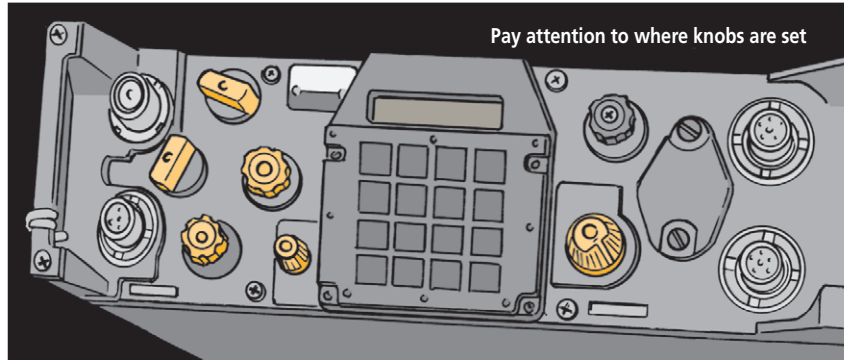
We hate to repeat ourselves, but if the connector on your handset or on the RT is dirty, you may as well build a fire and learn smoke signals. It's amazing what a little dust or sand can do to an audio connection.

So, save yourself some embarrassment by keeping your connectors clean. Nothing will give you a red face more than telling a repairer that your radio won't key only to have him take a minute to clean the connector and put you back in business.

### 2. Where your knobs are set:

If you think a dirty connector is embarrassing, think how a knob set in a position that won't allow you to key your radio will make you feel. Time and time again, repairers are called on-site to repair a radio that won't key only to find a control knob set in the wrong position.

If you are going to operate an older-model SINCGARS, you must have more than a passing acquaintance with the operator's manuals, TM 11-5820-890-10-6, -7 and -8. Operating a vehicular radio is a step-by-step process. Skip a step or two and you're back to smoke signals. Get to know your operator's manuals well.



### 3. Circuit card:

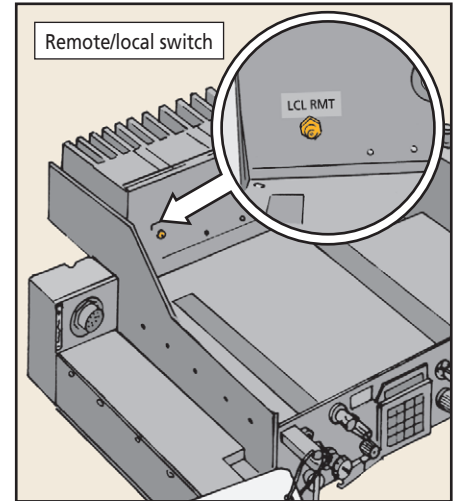
Sometimes a radio that won't key is legitimately in need of repair. If you, the operator, have cleaned all cable connections and have your knobs set right and the RT still won't key, get your repairman on the job. Chances are the problem is a burned-up circuit card.

## "It Won't Power Up"

In the range of problems that SINCGARS repair people hear, "*It won't power up*" is high on the list. When these words are heard, chances are good that you have a problem in one of these three areas:

### 1. Remote/local switch:

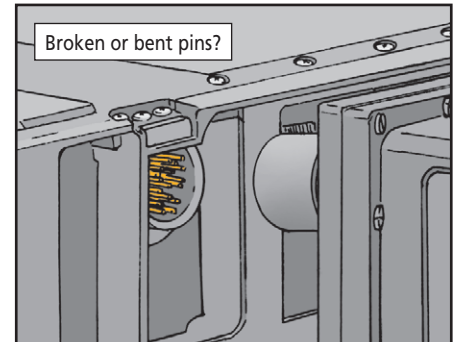
SINCGARS mounting adapters AM-7239B, AM-7239C and AM-7239D have a remote/local (RMT/LCL) switch. The RMT/LCL switch determines the location of the ON/OFF control for the radio system. The RMT setting gives ON/OFF control to the remote loudspeaker, LS-671, or the VIC system. The LCL setting gives ON/OFF control to the adapter. If a handset is all that is being used, the switch needs to be in the LCL setting. Repair folks are the only ones supposed to be switching that switch. But it's all right to check the switch position if you're having problems.



### 2. Broken or bent connector pins.

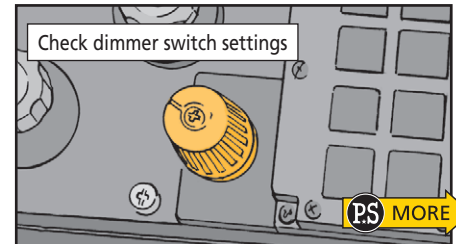
The hookup between the RT and its mount has produced thousands of broken and bent pins and hundreds of hours of repair work over the years. All of that misery could have been avoided, if patience had been practiced.

As you slide an RT into its mount, **take your time!** Ease into the connection. Never force it. You'll feel it mate. You'll know when you're good to go. **Don't** let the force be with you!



### 3. The dimmer switch.

A broken dimmer switch or one set to its lowest point might lead you to believe that your RT is not working. Check that switch before you yell for help.



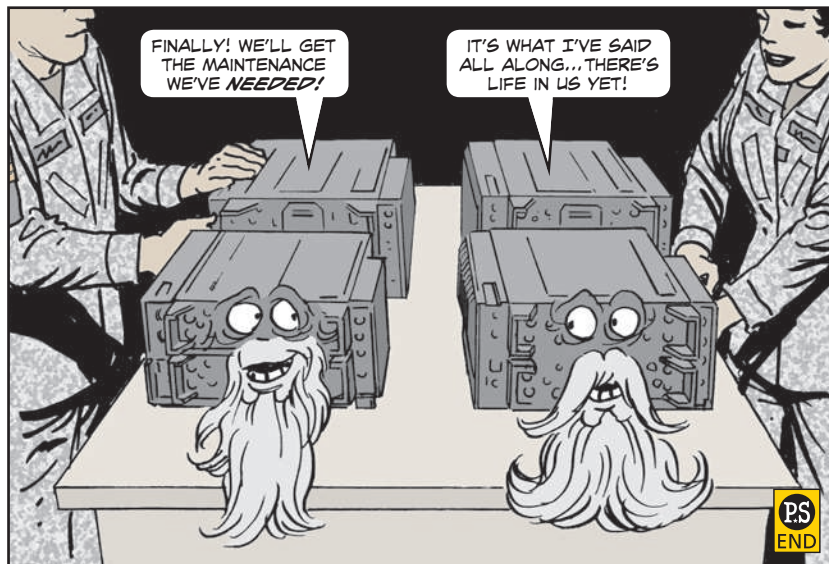
## "I Don't Know What's Wrong. The Whole Thing Is Messed Up."

Would you believe that RTs, power supplies and power amplifiers have been opened by maintainers and water has streamed out from them? Would you believe that RTs, power supplies and power amplifiers have been opened by maintainers and they find more rust than on a 1970 Pinto?

Do not high-pressure wash the inside of a vehicle that has any SINCGARS components except the mounting base that is bolted to the vehicle. That means everything must be removed—not only the RT. If you get to the wash rack and the mounting adapter or power amplifier is still in the vehicle and you can't remove it, wrap the entire mount area with a large garbage bag and aim the wash hose away from it.

SINCGARS components are water-resistant, but not waterproof. Quit trying to prove they are!

TM 11-5820-890-20-1, -2 and -3 are used by unit and direct support maintainers to keep older SINCGARS radios up and humming.



## OE-254 Antenna Turn-In

The OE-254/GRC antenna is in short supply. So, if you've got any that are beyond field level repair, but are repairable, turn them in! Send them to:

**Tobyhanna Army Depot,  
11 Hap Arnold Blvd,  
Tobyhanna, PA 18466**

Use a RIC of BY6, an SOS of B16 and a DODAAC of W25G1W. There is no credit for the return of this major item, so you will need to submit a new requisition in order to replace it. Questions? Contact your CECOM LAR or email:

**lynda.macdonald@us.army.mil**

# **OE-254 Antenna Turn-In**

The OE-254/GRC antenna is in short supply. So, if you've got any that are beyond field level repair, but are repairable, turn them in! Send them to:

**Tobyhanna Army Depot,  
11 Hap Arnold Blvd,  
Tobyhanna, PA 18466**

Use a RIC of BY6, an SOS of B16 and a DODAAC of W25G1W. There is no credit for the return of this major item, so you will need to submit a new requisition in order to replace it. Questions? Contact your CECOM LAR or email:

**lynda.macdonald@us.army.mil**



# Keep Your Software Up-to-Date

GROOVY, MAN! CAN YOU DIG IT?

HMMM... I THINK I NEED TO UP-DATE YOUR SOFTWARE!

If you've got the AN/PSN-13 defense advanced GPS receiver (DAGR), make sure it's programmed with the right software for safety. The AN/PSN-13A does not need reprogramming. It will display software version 984-3006-001. If you're not sure which version of the DAGR you have, check the label under the battery pack.

To check the AN/PSN-13, turn the DAGR on and press the MENU key twice.

Select SYSTEM from the main menu and then select ABOUT.

The screen will show you the installed software and that should be **984-2461-011**. If it is, march on, soldier. If not, you need to reprogram your DAGR. Get on the Internet and go to:

<https://rdit.army.mil/GPS>

Click on DAGR MWO/TCTO and Software. Now, click on Download Software.

Use the CLICK HERE link at the top of the page to apply for access to the website. You should be approved within 24 hours. Once approved, enter the website and download the current software and upgrade your DAGR.

Remember, reprogramming erases user and satellite data so save any critical data before you start.

Use either the DAGR-to-PC cable, NSN 5995-01-521-3198, or the PLGR-PC cable, NSN 6150-01-375-8664. See MWO 11-5820-1172-20-1 at the RDIT website for step-by-step reprogramming instructions.

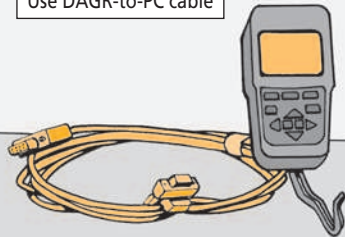
If you still need help, contact the GPS Help Desk at DSN 468-9511 or (478) 926-9511. Or email:

[wralc.lsaga.gpshelp@robins.af.mil](mailto:wralc.lsaga.gpshelp@robins.af.mil)

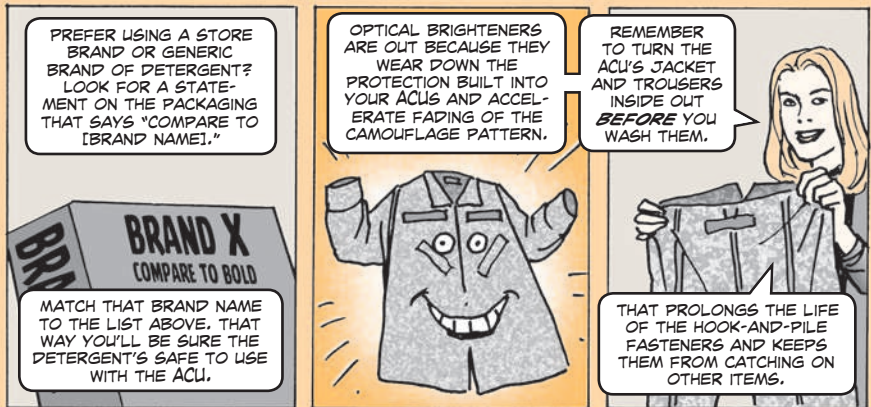
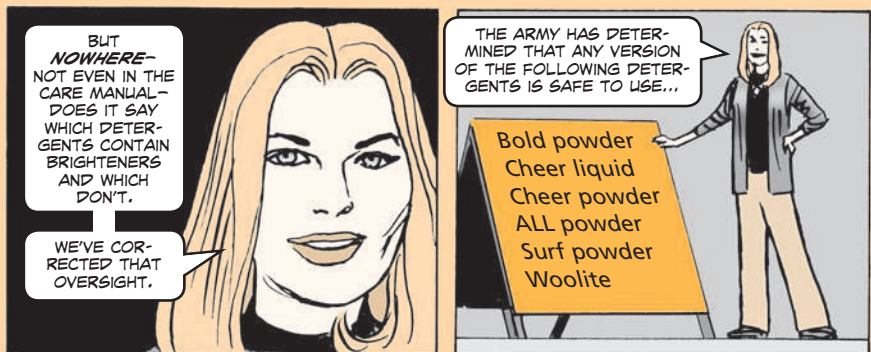
Does your DAGR have the right software?

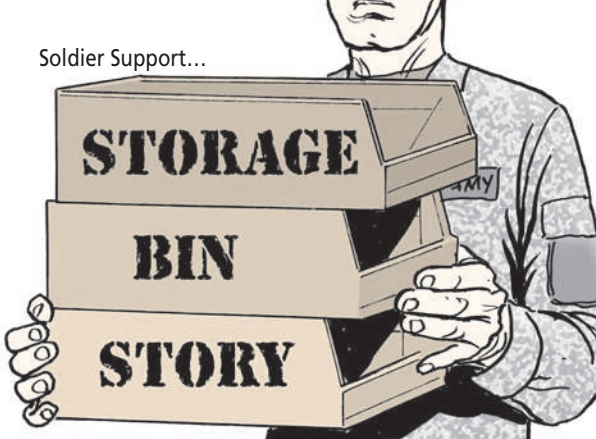


Use DAGR-to-PC cable



# Bright Not Right for ACU





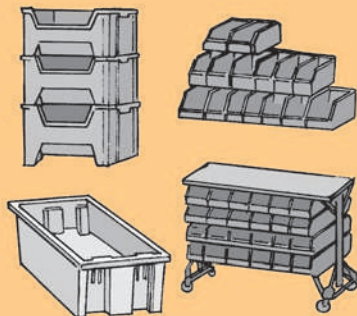
If you deal with inventories of repair parts or bench stock, you know the importance of good storage systems. They help organize your work area and expand supply space. By making it easier to stock and retrieve parts, they can spell the difference between finding what you need quickly or not finding it at all.

One recommended place to look for storage supplies is the GSA Global Supply website: <https://www.gsaglobalsupply.gsa.gov>

In order to search the site, you'll need a user ID and password. Click on [Register Here](#) on the left-hand side of the home page. On the next screen the website will ask you to submit personal information and to create a user ID and password.

Once you're registered, enter the word bin in the search field. You'll be connected to a wide selection of storage bins. Here's what you'll find:

- bins that stack on top of one another
- others that sit on shelving or hang from racks, rails and carts
- heavy-duty plastic bins that are water-, rust- and corrosion-proof
- a variety of sizes and colors
- bins on dollies
- bins that protect electronic components against electro-static discharge
- optional accessories such as dividers, label holders and bin cups





Specs and Standards...

# FIND THEM ON-LINE



LOOKING FOR SPECIFICATIONS OR STANDARDS? HEAD STRAIGHT FOR THE DEFENSE STANDARDIZATION PROGRAM (DSP) WEBSITE:  
<http://www.dsp.dla.mil>

THERE YOU'LL FIND DSP DOCUMENTS IN PORTABLE DOCUMENT FORMAT (PDF). THESE DOCUMENTS INCLUDE...

- DoD or Federal specifications/standards
- Military specifications (MIL-PRF-xxx and MIL-DTL-xxx)
- Military standards
- Military handbooks
- Commercial item descriptions (CIDs)
- Data item descriptions (DIDs)

Welcome to the DSP Home...



- WHAT'S NEW?
- ABOUT THE DSP
- INTEROPERABILITY
- SUSTAINMENT
- CMi
- ONLINE SPECS
- LIBRARY
- RELATED LINKS
- TCP DATABASE
- ISA DATABASE
- PMRWG
- HELP
- SEARCH
- FEEDBACK
- TRAINING

From the DSP home page, click ONLINE SPECS in the banner on the left-hand side of the screen.

Welcome to the DSP Home...

**Online Documents**  
Locating Specifications & Standards on the Web

"Where can I obtain (fill in the blank) specification or standard?" is the most frequent type of specification or standard desired. The good news is that specifications and standards are available online. The bad news is that specifications and standards are not always available in a format that is easy to use. The good news is that specifications and standards are available online. The bad news is that specifications and standards are not always available in a format that is easy to use.

1. Defense Standardization Program (DSP) Documents include DoD or federal (MIL-PRF-xxx), military standards, military handbooks, commercial item descriptions (CIDs), guide specifications, Joint Service Specification Guides, data item descriptions (DIDs), and other documents used in the Defense Standardization Program, such as international standardization agreements and standards.
2. NATO and other International Standardization Agreements (ISA) include Air (QSTAG), ABCA Standards, Quadripartite Advisory Publications (QAP), and NATO Standardization Agreements (STANAG), Allied Administrative Publications (AAP), and AUSCANNZUKUS handbooks.

(Click here to get DSP documents...)

(Click here to get DSP documents...)

Technical, professional, and industry associations and societies. These standards participation by DoD or other federal employees. Following the procedures in A over 9300 standards prepared by 108 NGS bodies (NGSBs). The DoD Adoption some basic information about the standards and a link to the preparing organization.

Site managed by the Defense Standardization Program Office.

Then click Click here to get DSP documents.

## Finding and Obtaining Defense Standardization Program (DSP) Documents



On the next screen, click ASSIST Quick Search.

From the same screen you can also search for documents by clicking assistdocs.com (<http://assistdocs.com>)

You can search by document ID, document number, title or federal supply class or standardization area.



**assistdocs.com**

assistdocs.com (<http://assistdocs.com>), perhaps the most user-friendly site, requires no registration and has lots of help in the [Site Overview](#). Besides all of the search capabilities offered by Quick Search, it also offers powerful full-text searches of unrestricted DSP Documents. Since this site is hosted separately from other ASSIST applications, it is usually available when the other ASSIST applications are not available.

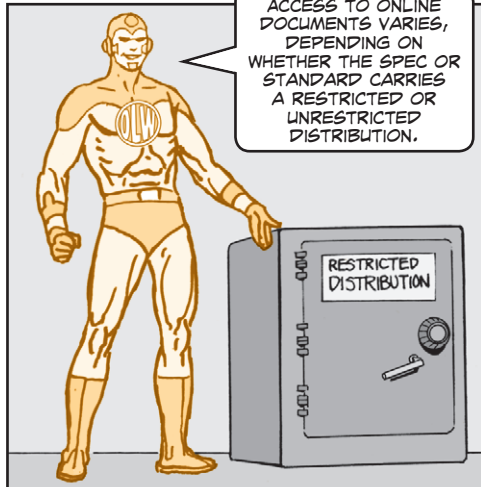
**ASSIST Shopping Wizard**

To order documents on CD-ROM or documents available only in paper, click ASSIST Shopping Wizard (<http://assist.daps.dla.mil>)

You can search by document ID, document number, title or federal supply class or standardization area.

ONLINE SPECS will also take you to links for other kinds of specifications and standards, including:

- NATO and other International Standardization Agreements
- Non-government standards
- Other government agency standards, such as those published by the Department of Energy, the Federal Aviation Administration and the National Aeronautics and Space Administration.



ACCESS TO ONLINE DOCUMENTS VARIES, DEPENDING ON WHETHER THE SPEC OR STANDARD CARRIES A RESTRICTED OR UNRESTRICTED DISTRIBUTION.



Word from the battlegrounds of Iraq and Afghanistan is that some soldiers are not wearing the new Advanced Combat Helmet (ACH) correctly. Others are wearing an ACH that fits poorly.

These problems stem from any number of reasons:

- A misunderstanding of how the ACH should be worn
- Poor pad placement
- Wrong shell size
- Wrong pad size
- Choosing the shell size of the ACH based on the shell size of the soldier's previously issued PASGT helmet.

Proper helmet size, fit and stability are critical to your mission and safety. If the ACH sits too low on the head, it interferes with your eyewear and field of vision. If it rides too high, you increase your risk of getting wounded by fragmentation from an IED or a mine. And if it's loose and unstable, it's a constant bother and a handicap.

If ACH sits too low,  
you can't see well



If it rides too high,  
you increase your risk



So before you move out on your next mission, get acquainted with these ACH sizing and fitting guidelines:

### Shell Sizing

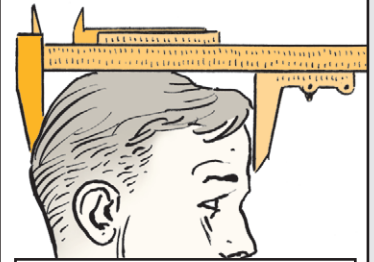
THE FIRST STEP TO  
A GOOD FIT IS TO  
CHOOSE THE **RIGHT**  
**SHELL SIZE.**

START BY HAVING  
SOMEONE MEASURE  
YOUR HEAD—  
LENGTH, WIDTH **AND**  
CIRCUMFERENCE.



**Length and width** are best measured with a caliper, NSN 5210-01-434-9493.

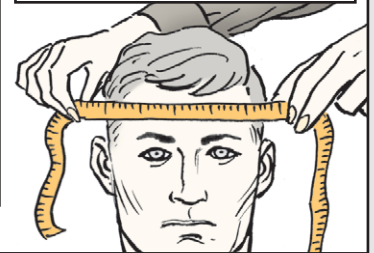
- **Length.** Put one leg of the caliper on the forehead between the eyebrow ridges. Put the other leg on the back of the head. Slide the caliper up and down the midline of the head until you find the greatest length.
- **Width.** Put one caliper leg on each side of the head and measure the greatest width.



For all measurements, sit up straight and hold your head level.

To measure **circumference**, you must use a measuring tape, NSN 8315-00-782-3520.

- **Circumference.** Wrap the measuring tape around the head just above the eyebrows and above both ears. Pull the tape snug for accuracy.



After measuring the head, use the chart below to choose the right shell size based on where the three measurements fall. Select the shell size as determined by the **largest single measurement**. For example, suppose a soldier's head has these dimensions:

**Circumference:** 21 1/2

**Width:** 6 1/4

**Length:** 8 1/2

His measurements would fall in the highlighted areas of the chart.

### Head/Shell Sizing Chart

	Head Length	Head Width	Head Circumference
Medium Helmet Shell	Up to 7 3/4 inches (198 mm)	Up to 6 1/2 inches (162 mm)	Up to 22 1/2 inches (573 mm)
Large Helmet Shell	From 7 3/4 inches (198 mm) up to 8 1/4 inches (210 mm)	6 1/2 inches (162 mm) and over	From 22 1/2 inches (573 mm) up to 23 1/2 inches (597 mm)
Extra-Large Helmet Shell	From 8 1/4 inches (210mm) and over	6 1/2 inches (162 mm) and over	23 1/2 inches (597 mm) and over

An 8 1/2-in head length would override any other measurement and would call for him to wear an extra-large shell.

If any measurement falls on the dividing line between sizes—for example, 22 1/2 inches—always select the larger size.

## Pad Sizing

The second step to a good fit is to choose the right pad size. Each helmet comes with a set of seven  $\frac{3}{4}$ -in thick suspension pads. The  $\frac{3}{4}$ -in pads are also known as size 6. One-inch thick pads (also known as size 8) are available through requisition and in spare parts kits given to units. Each set includes one circular crown pad, two trapezoidal pads and four oblong/oval pads.

The only way to determine the right pad size is to try on the helmet with the pads in it. When you first try it on, wear the standard pad configuration. That includes all seven size 6 pads placed inside the helmet like so:

- crown pad in the center of the helmet
- one trapezoidal pad in the front, another in the back
- an oblong/oval pad on each side of the trapezoidal pads

If you plan to wear other equipment with the helmet, such as a headset and microphone, make sure you wear them when you size the helmet.

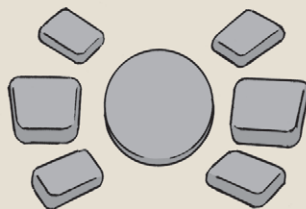
Tighten the four-point chin strap to see how the helmet and pads fit. Here's how to tell if you have a good fit:

- The ACH is snug but not too tight.
- The crown pad touches the top of the head.
- Look up with your eyes only. You should just see the rim of the ACH. If you can't see the rim, the helmet sits too high.
- Shake your head up and down and from side to side. The helmet should remain stable.

Ask a buddy to look at how your helmet fits. Here's what he should look for:

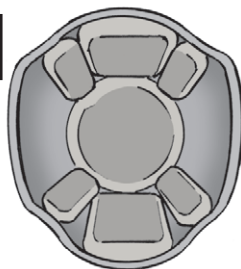
- Viewed from the front, both sides of the ACH should be level.
- Viewed from the side, the front and back should be level.
- The bottom of the ACH should come to the top of the ear canal opening.
- The front rim should rest about  $\frac{1}{2}$  inch above the eyebrows.

Suspension pads



See PS 626, page 53 for pad NSNs

Standard pad configuration



Shake your head. Helmet should stay stable



AND HERE ARE SIGNS OF A BAD FIT...



- The helmet sits too low on the head. It gets in the way of eyewear and blocks your field of vision.
- It rides high on the head, exposing too much of your forehead and ears.



- Crown pad does not touch your head.
  - Helmet fits loosely. It bounces or rotates when you shake your head.
- If you don't get the fit or comfort you want, try replacing the pad set with a different size. You can also try these other pad configurations:
- Change the position of the oval/oblong pads from vertical to horizontal or diagonal.
  - Remove up to two oval/oblong or trapezoidal pads. The crown pad must always remain in the helmet.

Over time, the pads compress and you may need to tighten the four-point chin strap to get a good fit.

During high-risk operations such as airborne, air assault, rappelling or mountaineering, you must wear the seven-pad configuration. It offers the most impact protection. You must also use the pads to cover the hardware inside the helmet.

TAP TAP  
TAPPITYTAP



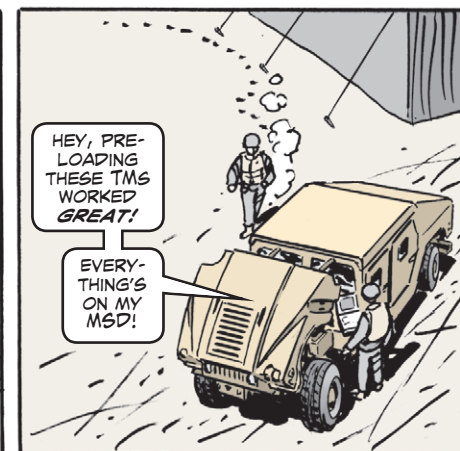
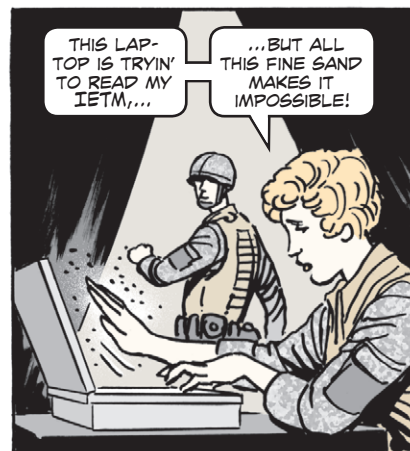
TO LEARN MORE ABOUT SIZING AND FITTING THE ACH, GO TO THESE ONLINE SOURCES...  
<https://peosoldier.army.mil>

- Safety of Use Message (SOU), TACOM SOU 05-006, Inspect soldier fit and wear of ground combat helmets
- A video showing the correct sizing and fitting procedures
- TM 10-8470-204-10, *Operator's Manual for Advanced Combat Helmet (ACH)*
- Graphic Training Aid GTA 07-08-001, ACH and PASGT Proper Wear and Adjustment



# Loading ETMs and

# IETMs on MSDs



MAINTENANCE SUPPORT DEVICES (MSDs) ARE **NOT** OFF-THE-SHELF LAPTOP COMPUTERS.

WE'RE **RUGGEDIZED** TO STAND UP TO **EXTREME** ENVIRONMENTS AND MILITARY DEPLOYMENTS.

READ THIS ARTICLE FOR PRACTICAL IDEAS ON USING THE CD-ROM DRIVE TO LOAD INTERACTIVE ELECTRONIC TECHNICAL MANUALS.

Dear Editor:

Your article on maintaining the MSD (maintenance support device) computers is good. We've found the MSD has lots of room to store data.

We have done this for two years and find that our mechanics have more information at their finger tips and they use the MSDs daily. Using the MSDs really reduces the amount of paper manuals we have to haul around, leaving room for other parts and equipment.

Another reason we load our ETMs/IETMs to the hard drive is so we don't have to use the CD drive in the field, exposing it to dust or sand. Here's how we do it:

## Setting up a Digital Library

Decide what info you want on the MSD. We load -10 to -30 TMs, LOs and some MWOs. Decide on the naming format for your files. For instance, we use (TM 9-2320-279-20-2 W C6 APR-87 061589). That defines the TM number, how many changes are included, date of the base TM, and the PIN of each pub.

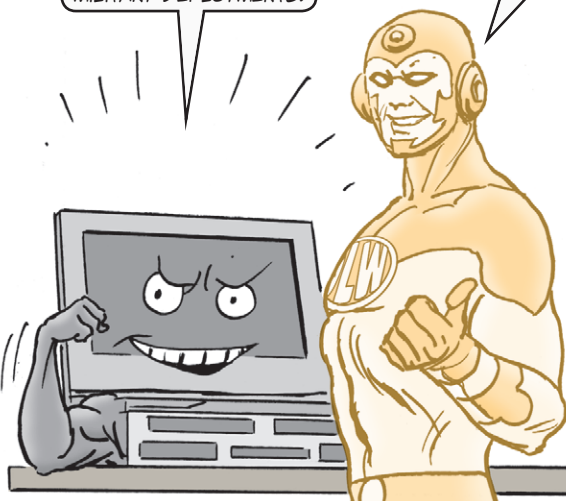
Set up a library folder on your desktop computer; you'll make all your updates using this folder. Any file you want on the MSD should also be in this folder. It helps if you create sub-folders for each type of equipment (i.e., HEMTT, HMMWV, FMTV, MISC., etc.) The desktop library serves as a great backup to your MSDs.

**[PS Note:** Keep in mind damaged MSDs are sent to the manufacturer for repair. Your MSD hard drive will be erased and the latest system software installed, meaning you'll have "lost" all those great files you loaded to the old MSD. Having a complete backup on both the main office computer and on CDs can save a lot of time.]

From the desktop computer, create a CD for each folder that is being loaded to the MSD. Load each CD to the MSD.

Protect your CD-ROM drive in dusty environments by pre-loading ETMs/IETMs before deployment. That will keep your CD-ROM drive sealed until you really have to use it.

Create a folder and sub-folders on your main computer and load all your publications, ETMs and IETMs to these folders. Then save this info to CDs. Use the CDs to load info to your MSDs and then as back-ups for the MSDs.



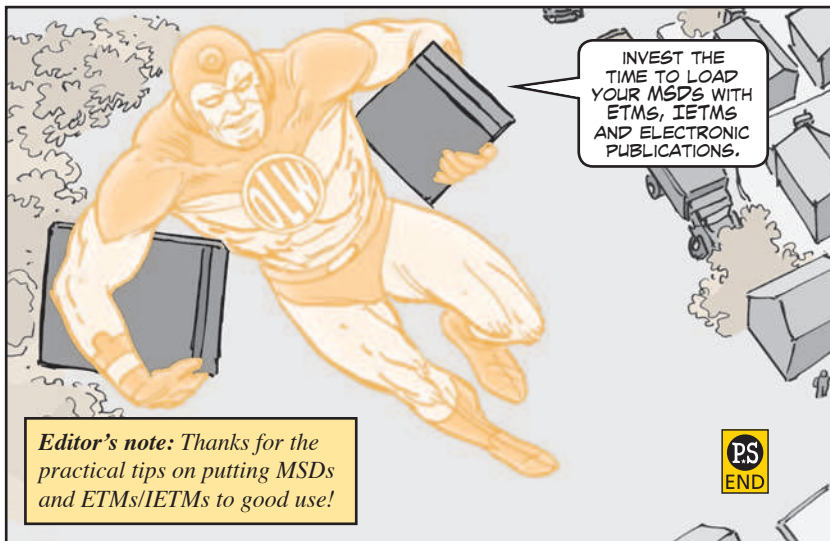
## Protecting Info on the MSD

We protect data from being accidentally erased from the MSD by placing the folders in a master folder. Then we create sub-folders matching the ones we created on the desktop computer's hard drive that are visible on the MSD's desktop screen. We create a shortcut for each TM or IETM and put the shortcuts in their appropriate sub-folders. That means the mechanics use the shortcut versions. If they accidentally delete a shortcut file it can be instantly restored from the master folder on the MSD.

Updating is as easy as posting to your desktop computer's library and creating a new CD, deleting the old info and adding the new onto the MSD. Changes can be posted in minutes, not hours.

Mr. W. Olson,  
Ft Leonard Wood, MO

Save all the CD info to a master folder on the MSD hard drive. Then create shortcut versions to place on the MSD desktop. That will help protect the info from accidental deletion by mechanics.



**PS Magazine**  
**HOT TOPICS**



WHEN MAINTENANCE  
CHANGES JUST  
CAN'T WAIT, PS  
MAGAZINE GETS IT  
TO YOU... **ONLINE!**

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

**PS Magazine**

**HOT TOPICS**



WHEN MAINTENANCE  
CHANGES JUST  
CAN'T WAIT, PS  
MAGAZINE GETS IT  
TO YOU... *ONLINE!*

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

PS 642

58

MAY 06



# DRIVER'S BADGE REQUIREMENTS CHANGE

SPECIALIST JONES, YOU'VE BEEN ASSIGNED AS THE DRIVER FOR THIS VEHICLE EVER SINCE WE DEPLOYED, HAVEN'T YOU?

THAT'S RIGHT, SARGE. I'VE DRIVEN ALMOST EVERY DAY FOR THE PAST 11 MONTHS...AND **NO ACCIDENTS, EITHER!**

WELL, THAT TAKES SOME SKILL. YOU KNOW THE ARMY JUST CHANGED ITS AWARD POLICY AND NOW YOU'RE ALMOST ELIGIBLE FOR THE DRIVER'S AWARD.

KEEP IT UP AND I'LL PUT YOU IN FOR THE AWARD.

THAT'LL BE GREAT! THANKS A LOT!

Dear Half-Mast:

I need some help in clarifying the requirements for the Driver's Badge found in Para 8-28d(2) AR 600-8-22 (Feb 95). It states the driver must: *Occupy a duty position with the title of driver or assistant driver....*

Can you clarify "Occupy a duty position"?

Thanks,  
CW3 F.S.

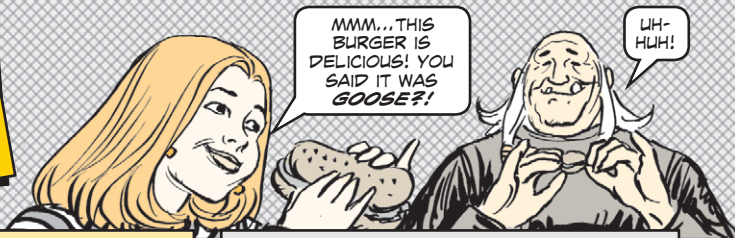
Dear CW3 F.S.,

The wording of the paragraph is restrictive to specific MOS or MTOE slots. However, Human Resources Command changed the policy in a 25 Oct 05 message titled "Army Awards Policy Clarification and Changes."

The new Para 8-28d says a soldier must **be assigned duties and responsibilities** as a driver or assistant driver of government vehicles....

Drivers need not have a specific MOS or hold a specific MTOE position. For example, a medic assigned as the assistant driver of an ambulance or a supply clerk assigned as the driver of a HMMWV is now eligible if he meets time or distance requirements as well as licensing qualifications.

*Half-Mast*



## RUBBER TIE-DOWN STRAPS

Need help holding loose gear in place on your vehicle? Rubber tie-down straps are just the ticket. Order from this list:

NSN 5340-	Size (inches)	Stretch (inches)
00-340-0980	10	10-15
01-029-9084	15	15-22
01-231-6015	25	25-37
01-029-9085	31	31-46

Each strap comes with an S-hook on each end.

## MOSSBERG SHOTGUN STUD NSN IS WRONG!

If you need the Mossberg shotgun's front swivel stud, don't order the NSN listed as Item 4 in Fig 0038 in TM 9-1005-338-13&P. It's wrong. Order NSN 1005-01-526-3298.

## Keep M9 ACE Vents Open

The engine and radiator on an M9 ACE need lots of air to keep things running cool. So never lay cargo nets, duffle bags or ALICE packs on the engine intake grilles. A covered screen causes the engine and transmission to overheat.

## COMMO SHELTER LIGHTING

Need the 24-inch fluorescent lamp that lights the AN/TRC-173 radio terminal set and the AN/TRC-174 radio repeater set? Order a box of 30 lamps with NSN 6240-00-152-2996. Get a box of ten ballasts for this lamp with NSN 6250-00-299-2884. Get a box of ten starters with NSN 6250-00-299-2884.

## ACH Front Bracket Kit Is Class IX

The front bracket kit, NSN 5340-01-509-1467, for your advanced combat helmet (ACH) includes a bracket with a threaded post and a screw for mounting it to your helmet. The bracket is used to attach night vision goggles to the ACH. But there's a problem with ordering: The FED LOG does not show a supply category of materiel code (SCMC) for the kit. The SCMC is Class IX. Make a note of it until the FED LOG is updated.

## RADIO REMINDER DECAL

Forgetting to switch off the radio before starting or stopping your vehicle engine allows a power surge that can zap the commo. So turn off the radio's power knob before the engine is turned on or off. Need a reminder? Order a caution decal, NSN 7690-00-942-7067, to put next to the vehicle's start switch. The decal reads CAUTION—TURN OFF ALL COMMUNICATIONS EQUIPMENT BEFORE STARTING OR STOPPING ENGINE.

## H-60/PT Handset Push-to-Talk Switch Cover

The H-60/PT handset, NSN 5965-00-669-9145, used on the TA-312/PT telephone is an expendable item. But you can make it a little less expendable by replacing a cracked or torn push-to-talk switch rubber cover. Order it with NSN 5930-00-173-8358.

## Corrosion TMs Superseded

Aircraft mechanics, if you use the NAVAIR 01-1A-509-1 and -2 multi-service corrosion TMs, you also need the latest copies of TM 1-1500-344-23-1 and -23-2, *Cleaning and Corrosion Control* (01 March 2005). Anything older has been superseded.

## M1114 HMMWV Cooper Seat Dangerous

The Cooper seat/restraint system sold by Black Mountain Industries is dangerous because it doesn't let the gunner quickly drop inside the HMMWV in case of a rollover. Stop buying it! If you have one, replace it with the original mesh seat, NSN 5340-01-530-1744. PM-Light Tactical Vehicles (LTV) will distribute approved gunner's restraints at no cost to the gaining unit. For more information, read SOUM 06-012 at the AEPs website:

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

## TURN IN T700 TURBINE MODULES

Mechanics, T700 power turbine modules, NSN 2840-01-245-6002, are in short supply. Turn in all unserviceable modules ASAP through normal retrograde channels to maintain RECAP production lines at Corpus Christi Army Depot. This will prevent a critical supply shortage. Ship unserviceable power turbine modules through normal retrograde channels.

## BLACK HAWK T700 ENGINES NEEDED!

Mechanics, T700 engines are in short supply! But you can help. Turn in all unserviceable engines right away. And then the supply system can get them repaired and have serviceable engines on hand to keep your aircraft mission ready. Ship unserviceable engines through normal retrograde channels.

## CHINOOK FLIGHT CONTROL CLOSET TEST

We told you in PS 637 (Dec 05) to do the integrated lower control actuator (ILCA) jam simulation test prior to the first flight of each day. That's been changed. It's now done prior to the first flight every 30 days.

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?**





**DON'T LET 'EM BUG YOU!**

TICKS

SANDFLIES

LICE

TSETSES

MOSQUITOES

FLEAS

CHIGGERS

**USE INSECT REPELLENT  
CONTAINING DEET  
SEE PS 631, PAGES 52-55**