

Issue 620

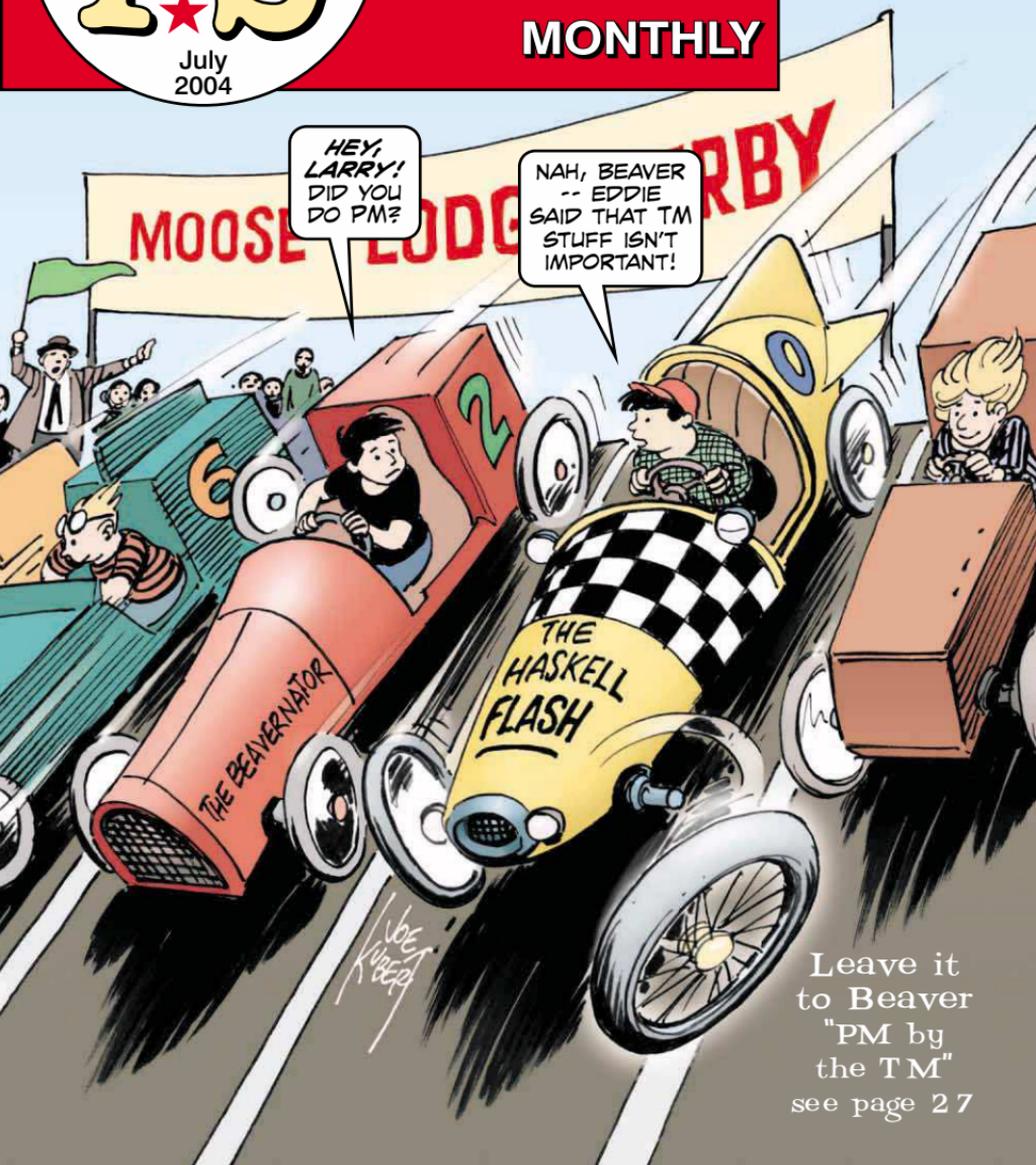
PS

July
2004

THE
PREVENTIVE
MAINTENANCE
MONTHLY

TB 43-PS-620

Approved for
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Leave it
to Beaver
"PM by
the TM"
see page 27



"We have the world's best equipment." That's a statement that was proven over and over during the challenge of Operation Iraqi Freedom.

But never forget that even the world's best equipment can't do its mission without maintenance—tough, sweaty, back-breaking maintenance.

Now that some of you are finally coming home, there's another battle to fight. You've got to stand toe-to-toe with the enemy of all equipment that must be transported from one side of the world to the other: Neglect.

Your equipment will miss a lot of preventive maintenance on the long trip back. So don't try to put off until later what you should be doing now.

There's sand and dirt in that equipment. It's in transmissions, engines, radiators, brakes, axles and final drives. Even closed systems, like the Bradley's transmission, may be contaminated.

So how do you prepare now for what might happen tomorrow? Pull your annual services—complete, total, top-to-bottom, front-to-rear—as soon as possible!

After all, preventive maintenance is what it takes to win this war, too.



THE
PREVENTIVE
MAINTENANCE
MONTHLY

TB 43-PS-620, 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.

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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 35898-5000

Or e-mail to:

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

Internet address:

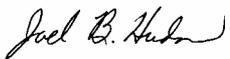
<http://www.logsa.army.mil/psmag/pshome.html>

By order of the Secretary of the Army:

PETER J. SCHOOMAKER

General, United States Army Chief of Staff

Official:



JOEL B. HUDSON

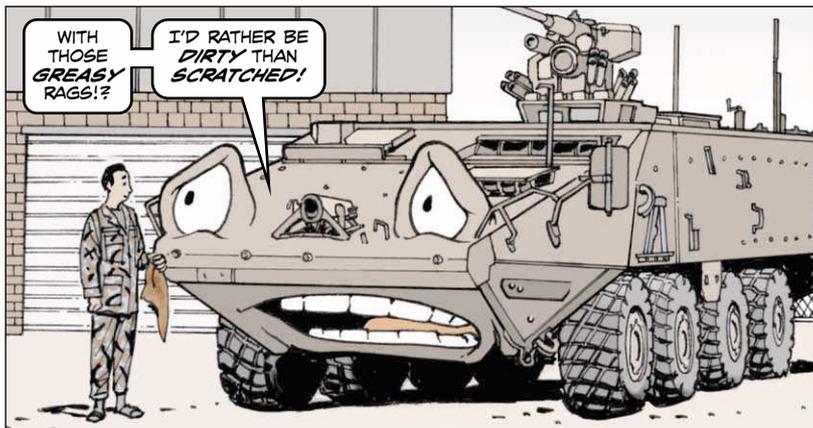
Administrative Assistant to the Secretary of the Army

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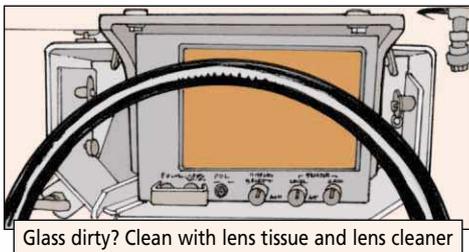
DO YOU DO WINDOWS?



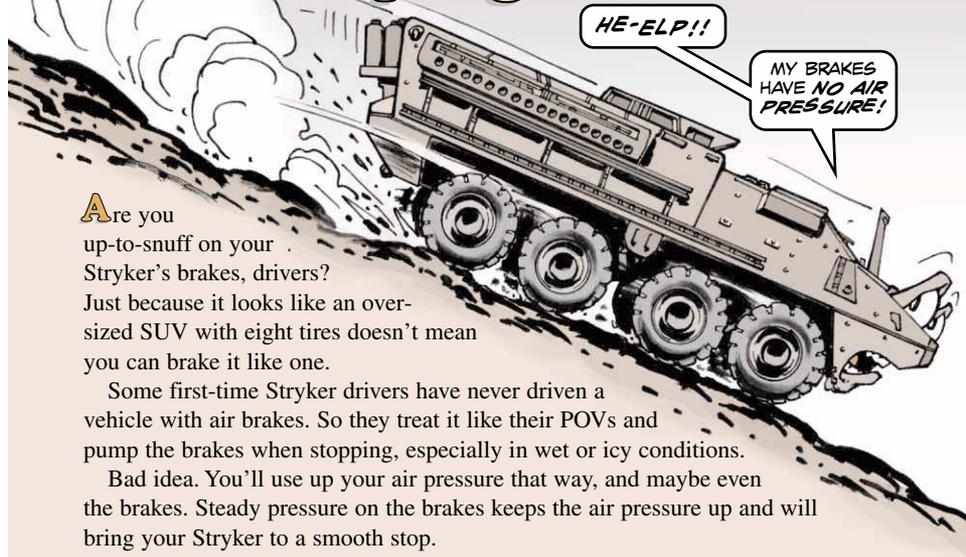
When the driver's vision enhancer (DVE), video display terminal (VDT), or remote weapons system (RWS) sights on your Stryker get dirty, **don't** use a shirt tail or a greasy rag to wipe them off.

Using whatever's handy to clean those items will lead to scratching. Eventually, the glass gets so bad that you have trouble seeing through it.

Your best bet is to use lens tissue, NSN 6640-00-285-4694, and lens cleaner, NSN 6850-00-227-1887, for cleaning.



NO Pumping Air Brakes



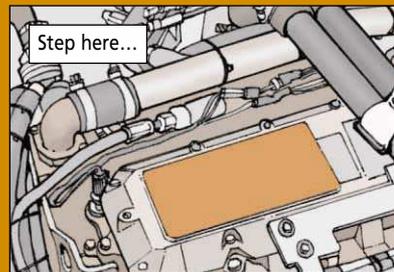
NO STEP ZONE

HEY, WATCH THE FEET!

That's what the Stryker would like to say every time you mechanics put your size 12s on the thermal control manifold in the engine compartment.

Stepping on the manifold can loosen or even crack the seals on the two quick-disconnect couplings. Then you've got a hydraulic leak to fix.

Instead, use the non-skid step on top of the rocker cover.

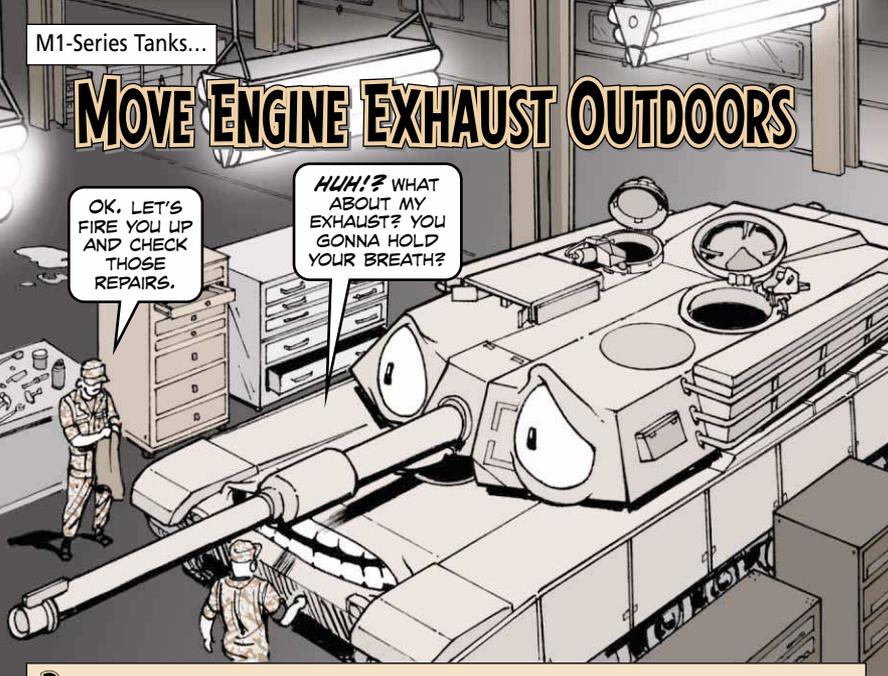


M1-Series Tanks...

MOVE ENGINE EXHAUST OUTDOORS

OK, LET'S FIRE YOU UP AND CHECK THOSE REPAIRS.

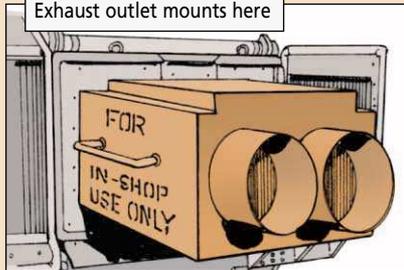
HUH!? WHAT ABOUT MY EXHAUST? YOU GONNA HOLD YOUR BREATH?



Running your tank engine indoors can be downright dangerous. Besides the usual health problems with exhaust gases, the exhaust itself is much too hot.

The US Army Armor School at Ft Knox developed an exhaust outlet that lets you safely funnel hot exhaust gases under or through modified maintenance bay doors. The exhaust outlet can be used with the powerpack in or out of the tank.

Exhaust outlet mounts here



Use exhaust extensions to carry exhaust out of maintenance bay



To get a copy of the plans, call MSG Half-Mast at DSN 645-0893, (256) 955-0893, or send an email to:

psmag@logsa.redstone.army.mil

Or you can write to:
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AMXLS-AM, Bldg 5307
Redstone Arsenal, AL 35898-5000

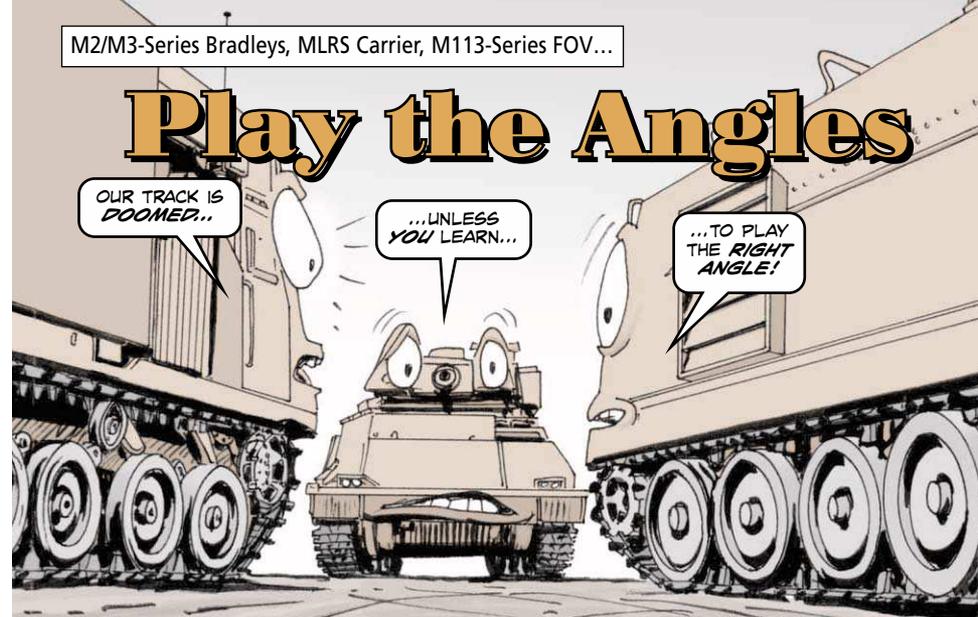
M2/M3-Series Bradleys, MLRS Carrier, M113-Series FOV...

Play the Angles

OUR TRACK IS DOOMED..

...UNLESS YOU LEARN...

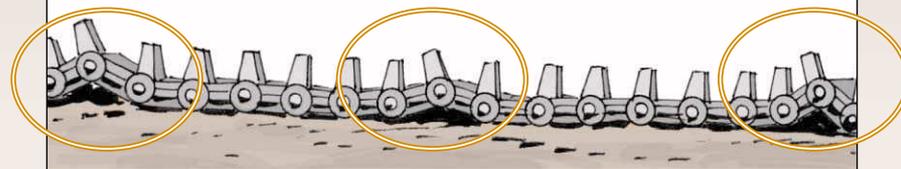
...TO PLAY THE RIGHT ANGLE!



When assembling single pin track on your Bradley, MLRS or M113, you'd better play all the angles!

When assembling track on the ground, you've got to properly angle the shoe before inserting the pin. If you don't, the bushing will fail and you'll be back out there replacing track shoes.

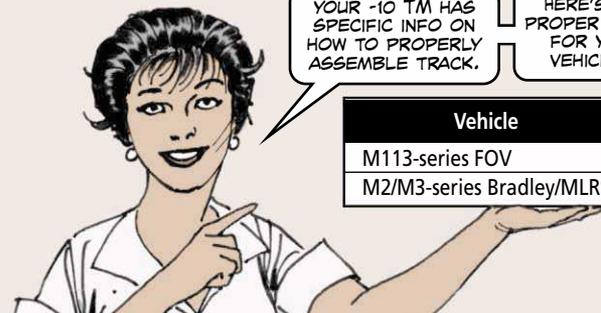
Track looks "wavy" when shoes are joined at wrong angle



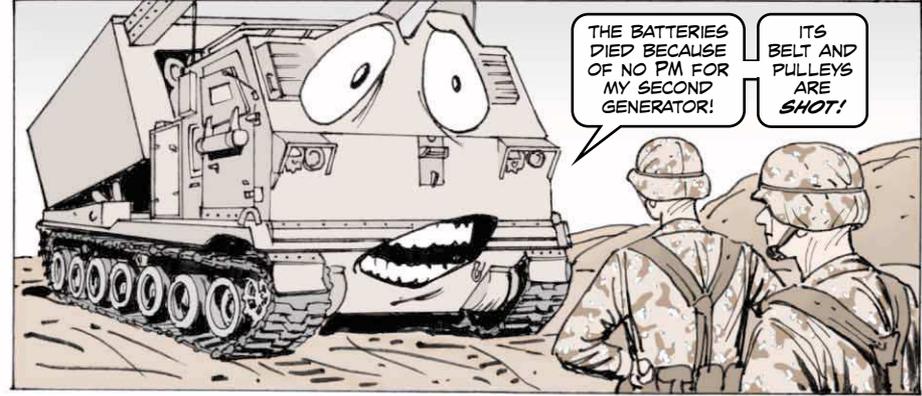
YOUR -10 TM HAS SPECIFIC INFO ON HOW TO PROPERLY ASSEMBLE TRACK.

HERE'S THE PROPER ANGLE FOR YOUR VEHICLE...

Vehicle	Track	Angle
M113-series FOV	T130/T130E	20°
M2/M3-series Bradley/MLRS	T157/T157I	15°



GENERATE SOME PM

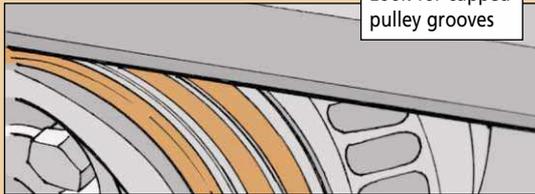


THE MLRS' SECOND GENERATOR IS ONLY AS GOOD AS ITS V-BELT AND PULLEYS, MECHANICS.

IF EITHER ARE WORN OR OUT OF ALIGNMENT, ALL THAT'LL BE GENERATED ARE PROBLEMS.

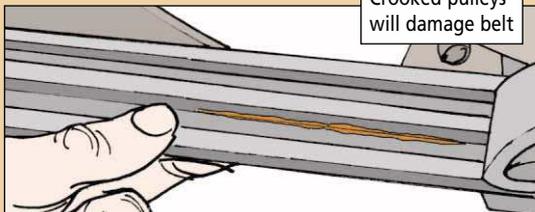
Pulleys

The V-belt passes over the pulleys at high speed. That builds up a lot of friction between the belt and the pulley grooves. So take a close look at the sides of the grooves on each pulley. If the grooves are cupped, the pulley is no good. Replace it.

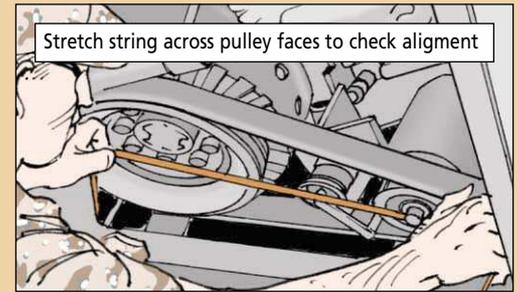


Next, eyeball the pulleys where they come in contact with the V-belt. If the belt bottoms out on a pulley, the grooves are too worn and the pulley should be replaced.

Check to make sure the pulleys are straight. A belt running on crooked pulleys will wear out much faster than on aligned pulleys.



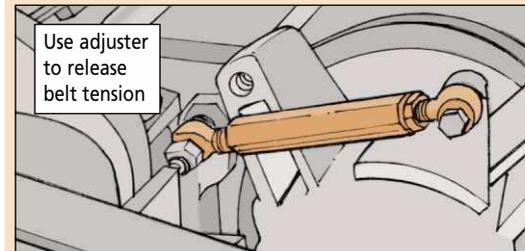
Hold one end of a string across the face of the pulley on the harmonic balancer and the other end across the face of the pulley on the bearing unit. Pull the string tight. If there are no bends in the string and no gaps between the string and the pulley faces, the pulleys are in alignment.



V-belt

When changing a V-belt, don't stretch or roll it onto the pulley. There's a good chance the V-belt will suffer damage and early failure.

Always release tension first, then slip the V-belt in place.

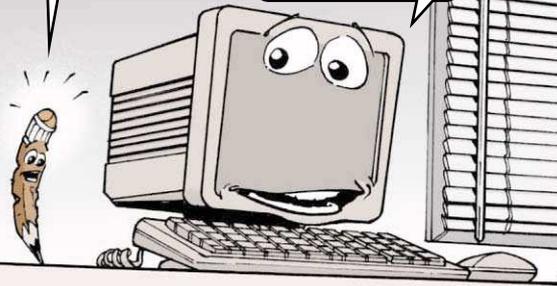


Once the V-belt is in place, don't rely on a "calibrated thumb" to adjust the tension. Always use a scale to measure deflection. Then, after the vehicle has been operating a few hours, check and adjust the tension again if needed.

Weapon Card Goes Cyberspace

I GUESS MY DAYS ARE NUMBERED!

THESE DAYS YOU'RE NO PLACE UNLESS YOU'RE IN CYBERSPACE!!

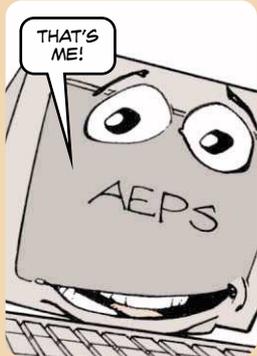


So you've just returned from the range. That means it's time to update your DA Form 2408-4, *Weapon Record Data Card*. Since the only way to determine gun tube life is to keep track of the number and types of rounds fired, the form's important.

So time to grab your stubby pencil, fill out the form and mail it in, right?



Now, with the help of the Army Electronic Product Support (AEPS) website, the DA Form 2408-4 has entered the 21st Century. The new on-line system allows armor, artillery and mortar units to input firing and non-firing data directly into an electronic version of the 2408-4.



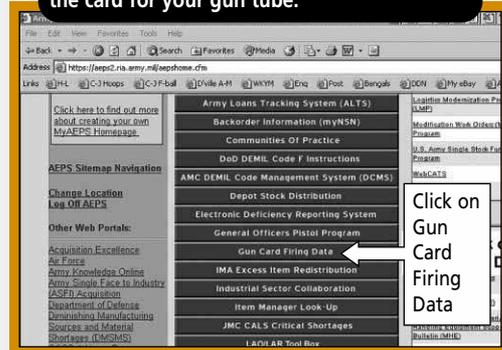
The electronic 2408-4 is now the **required medium** for reporting firing and non-firing data. This is important for your safety.

All current tank, artillery and mortar weapons firing data has already been entered into the system, so all you have to do is print out a current card to take to the range with you. Then, when you return from the field, update the system on-line just like you currently do with the paper card.

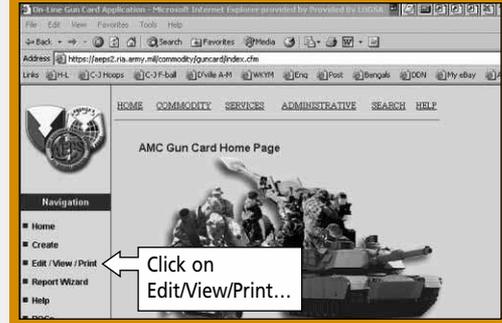
THE NEW SYSTEM MEANS NO MORE LOST CARDS!
AND IT'S EASY FOR A UNIT TO RESEARCH THE FIRING HISTORY OF ANY PARTICULAR GUN.

Go to the AEPS website at <http://aeps.ria.army.mil/aepspublic.cfm> If you don't already have a user name and password, click on Access Request Form and follow the directions.

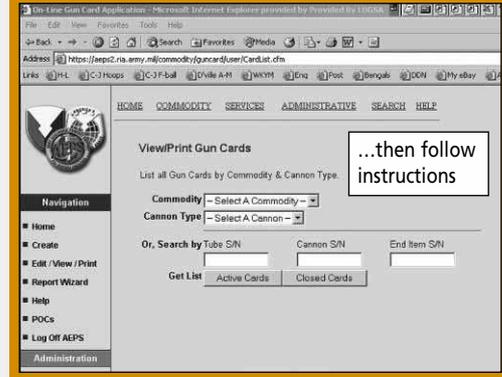
After you get a user name and password, click on Enter AEPS. Select the Gun Card Firing Data button under Popular Applications. Next, click on Edit/View/Print in the left-hand column and follow the instructions for accessing the card for your gun tube.



Click on Gun Card Firing Data



Click on Edit/View/Print...



...then follow instructions

DEPLOYED UNITS WHO DO NOT HAVE WEB ACCESS SHOULD MAIL IN THE DA FORM 2408-4 SO THE DATA CAN BE ENTERED INTO THE SYSTEM FOR YOU.

MAIL THE CARDS EACH APRIL AND OCTOBER FOR ACTIVE DUTY UNITS AND EACH OCTOBER FOR NATIONAL GUARD/RESERVE UNITS TO...



US Army TACOM
AMSTA-LC-LETT (AEPS Help Desk)
1 Rock Island Arsenal
Rock Island, IL 61299-7630



Mortars:

Joe Schmidt,
DSN 793-3369 or (309) 782-3369,
schmidtj@ria.army.mil

Artillery:

Gary Rogers,
DSN 793-0030 or (309) 782-0030,
rogersg@ria.army.mil

Armor:

Gordy Bieri,
DSN 793-2189 or (309) 782-2189,
bierig@ria.army.mil

Technical problems:

AEPS Help Desk,
DSN 793-0699 or (888) 564-4357,
TACOM-RI-AEPS-Helpdesk@ria.army.mil

HOW DO I GET A WEAPON SHIELD?

HOW COME YOU HAVE A WEAPON SHIELD AND I DON'T?

WHAT MAKES YOU SO SPECIAL?

CALM DOWN. NOW YOU CAN GET A WEAPON SHIELD, TOO!



Dear Half-Mast,
How do I get a weapon shield for the HMMWV that protects the machine gunner? I've seen the shields on HMMWVs but can't locate an NSN for the shield.

MSG C.W.

THE GUNNER SHIELD CAN NOW BE USED ON M1025/M1026 HMMWVs.



Dear MSG C.W.,

There is good news and bad news on the HMMWV weapon shield. The good news is that although the shield was originally designed only for the M1114 Up-armored HMMWV, it now can be used on the M1025/M1026 also. The weapon shield kit, NSN 2510-01-498-4996, contains the shield, brackets, adapters, hardware and installation instructions and costs around \$1,560.

The bad news is that there aren't many weapon shield kits available. If your unit wants the weapon shield, submit a funded requisition to TACOM using the correct Priority Designator and Project Code. If you have questions about ordering the shield, contact TACOM's Herb Reeves at DSN 786-8180/COM (313) 574-8180 or email reevesh@tacom.army.mil

The weapon shield weighs 116 pounds and must be considered as part of the vehicle payload. If you're installing it on the M1114 for the first time, you will need the turret stop ring, NSN 2510-01-501-2691. If you install the shield on an M1025/M1026 with a serial number prior to 189936, you will need to install the improved turret lock ring, NSN 2590-01-192-4525.

Half-Mast

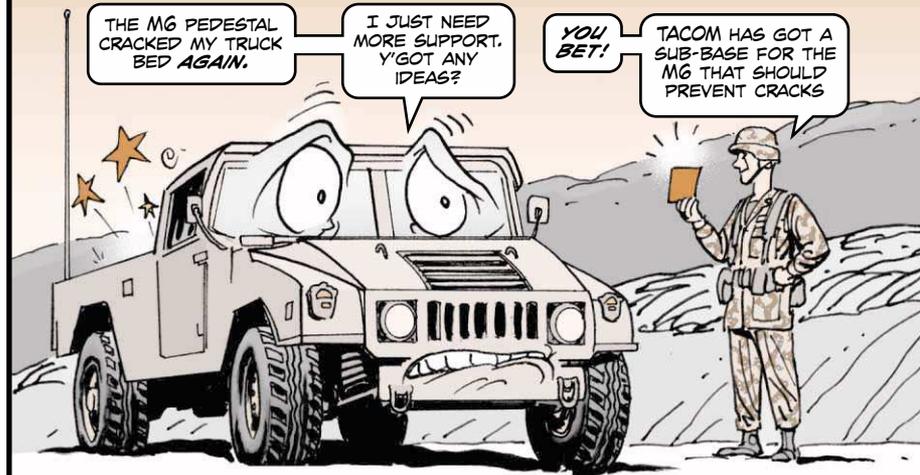
STOPPING M6 PEDESTAL CRACKS

THE M6 PEDESTAL CRACKED MY TRUCK BED AGAIN.

I JUST NEED MORE SUPPORT. Y'GOT ANY IDEAS?

YOU BET!

TACOM HAS GOT A SUB-BASE FOR THE M6 THAT SHOULD PREVENT CRACKS



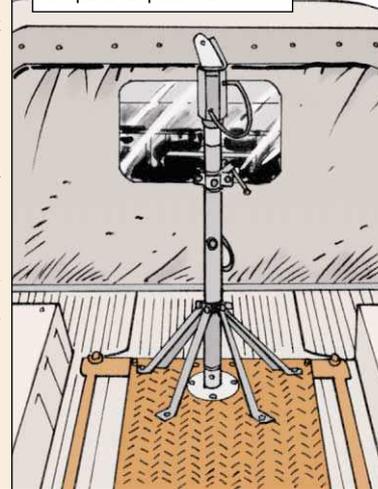
Units mounting the M6 pedestal over the back wheel wells of HMMWVs in order to increase their range of fire, hear this: That can damage the pedestal and the HMMWV's bed. But there is a fix. If you can locally purchase steel stock, nuts, bolts, and washers and are able to do welding, contact TACOM-Rock Island for field fix instructions and a parts list. The POC is Bill Jensen, DSN 793-3677/(309)782-3677, or email

jensenW@ria.army.mil

Or you can order an adapter kit with NSN 1005-01-514-4332 for \$130. All you need to do is bolt and tack weld the pieces together. If you want the kit, contact TACOM-RI's Sandy Miller at DSN 793-0566/(309) 782-0566 or email

millers2@ria.army.mil

Install M6 pedestal platform on quick fix platform

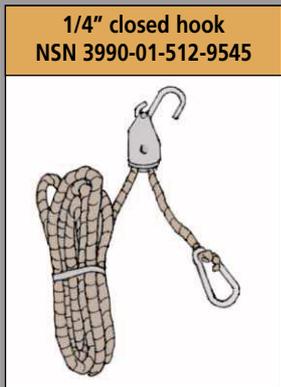
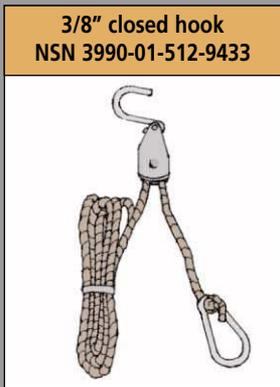
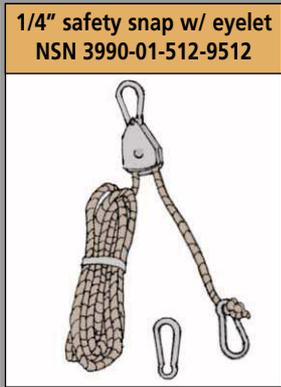
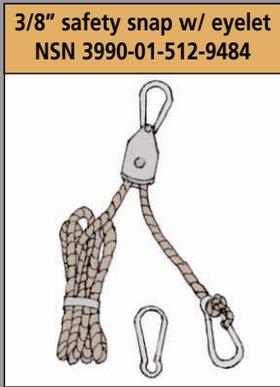
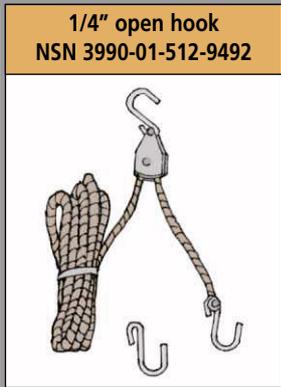
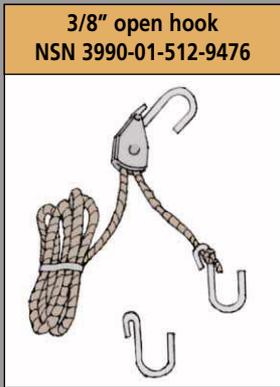


Cargo Tie-down Kit

A snug fit in the right place can make all the difference when it comes to delivering the goods in your truck.

Use a universal quick tiedown kit, NSN 3990-01-512-9476, to bundle cargo and gear bags in place, keep tents and tarps snug, or tether cargo nets.

The kit includes a black 12-ft nylon rope with adjustable locking device. At one end of the rope is a powder-coated snap (or open) hook. A 2-in open (or closed) hook attaches to the locking device with its push button release.



GIVE WATER A CHILL!



Hot days in the sun means hot water in your water buffalo.

Put some "chill" in the water with the help of a small mobile water chiller that comes with NSN 4130-01-315-7583.

Use the chiller on all M149-series trailers, the 250- and 400-gal water trailers, the 50-gal fabric drums and even 5-gal cans.

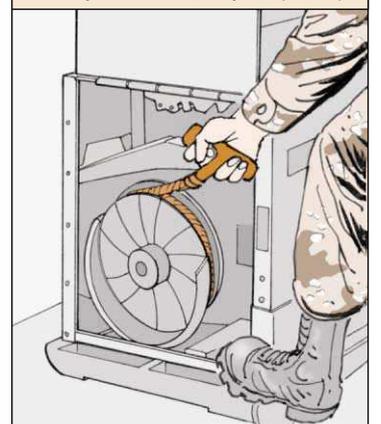
To mount the chiller, modify the trailer using the mounting kit that comes with the chiller.

The chiller is powered by an 18-hp gas engine. It has an electric starter to help you get it going. **But don't use it!** The chiller doesn't have a battery, so you have to connect it to an external power source.

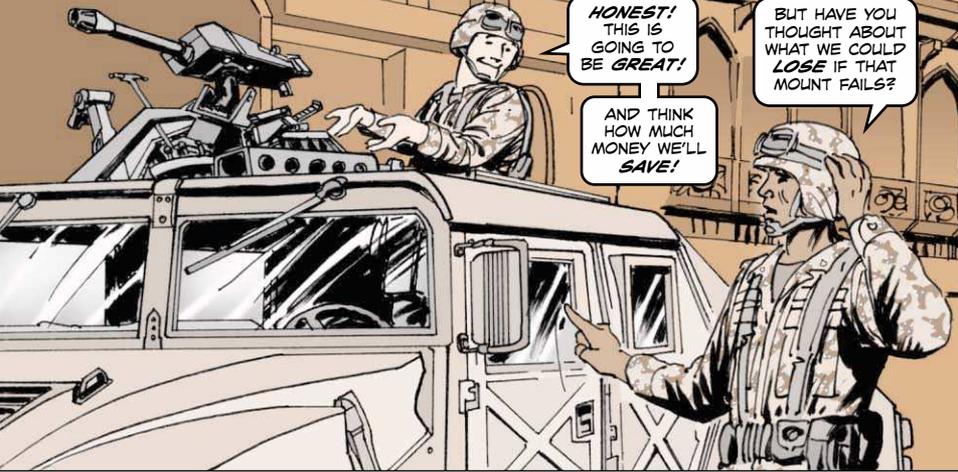
The instructions on the chiller's data plate say you can use either 12-volt or 24-volt auxiliary power to start the engine—but don't believe it. Twelve volts will do the job, but 24 will burn out the starter.

You won't find tactical trucks with a 12-volt electrical system, so your best bet to start the chiller is with muscle power only.

To safely start chiller, only use pull rope



NO FABRICATIONS ALLOWED



HONEST!
THIS IS GOING TO BE GREAT!

BUT HAVE YOU THOUGHT ABOUT WHAT WE COULD LOSE IF THAT MOUNT FAILS?

AND THINK HOW MUCH MONEY WE'LL SAVE!

Some units are looking to save money by fabricating their own machine gun mounts. Those units should immediately **stop** looking at fabrication as a way of saving a few dollars. That kind of savings can cost lives.

Before a piece of equipment is fielded by the Army, it undergoes lots of testing for safety and reliability. And when you're talking about something that must withstand the force of an M2 machine gun firing, all that testing is critical. If a machine gun mount fails, bullets could go flying where they're not supposed to or a machine gun could topple off a tank or truck. Either situation would be a disaster. **So no fabrication when it comes to machine gun mounts!**

No modifications are allowed, either. Any modification could affect the safety and reliability of the mount. Need something in writing to show your commander? Para 3-11 in AR 750-1 says: "Modifications or alteration of Army materiel is forbidden, except as authorized by AR 750-10." Para 3-1e in AR 750-10 states: "Commanders will not allow their equipment to be modified unless there is an official MWO." There are exceptions to this rule for special missions, but any modifications must go through channels for approval.

USE **ONLY** THE MOUNTS THE ARMY AUTHORIZES FOR YOUR MACHINE GUNS.



THE BEST SOURCE FOR MOUNT INFO IS TM 9-1005-245-13&P.



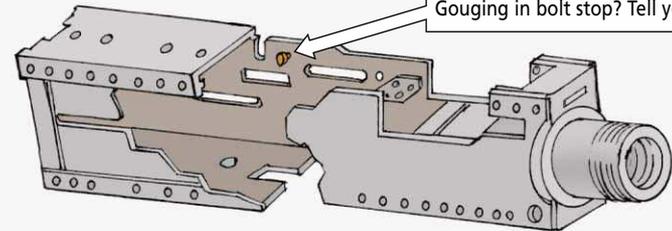
Troubles with Your Stud?



Dear Half-Mast,
We have run into problems on our M2 machine guns with the notched stud on the side plate that acts as a bolt stop on some M2s. Sometimes gouges develop on the stud and then the extractor arm catches on the gouge. The M2 fires once and stops. Do you know what could be causing this gouging?

SPC J.D.

Gouging in bolt stop? Tell your armorer



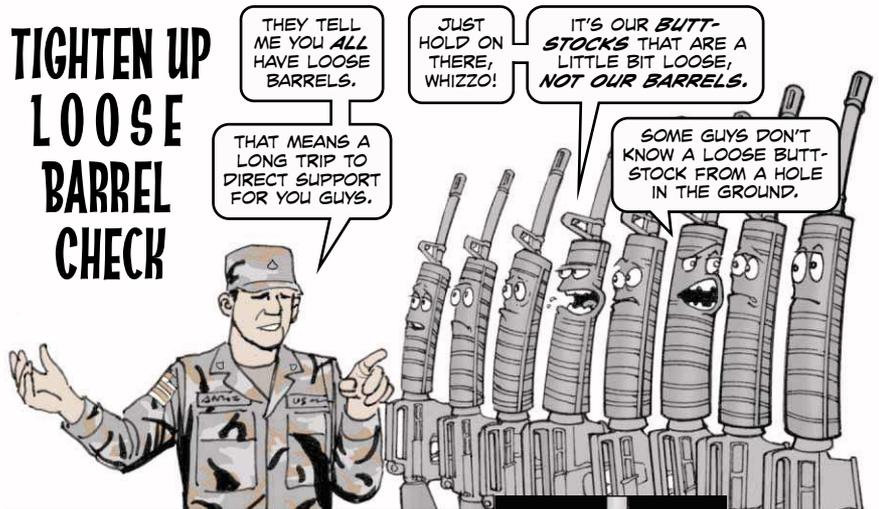
Dear Specialist J.D.,
First of all, only some M2s use the notched stud as a bolt stop. If your M2 is one of these, the extractor arm and stud should not come into contact as long as the cover is closed during firing. If the stud is being gouged by the extractor arm, it could be caused by:

- a cover extractor cam that is worn, broken or missing
- a cover that is not latched or becomes unlatched during firing
- a cover that is out of tolerance with the cover latch

Tell your armorer if you notice gouging on the stud. He and direct support need to find the problem.

Half-Mast

TIGHTEN UP LOOSE BARREL CHECK



THEY TELL ME YOU *ALL* HAVE LOOSE BARRELS.

JUST HOLD ON THERE, WHIZZO!

IT'S OUR *BUTT-STOCKS* THAT ARE A LITTLE BIT LOOSE, *NOT OUR BARRELS.*

THAT MEANS A LONG TRIP TO DIRECT SUPPORT FOR YOU GUYS.

SOME GUYS DON'T KNOW A LOOSE BUTT-STOCK FROM A HOLE IN THE GROUND.

Dear Editor,

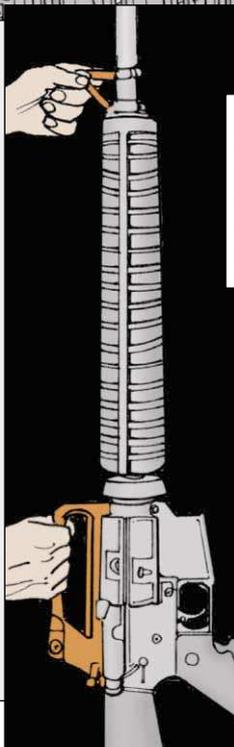
Riflemen and armorers are supposed to check that their M16s and M4/M4A1s don't have any play in the barrel. If the barrel is loose at all, the weapon shouldn't be fired.

The problem is that soldiers often hold the buttstock with one hand while twisting the barrel with the other. The buttstock may have some slight side-to-side movement, which is OK. But sometimes they mistakenly think it's the barrel, not the buttstock, that's loose, and they think they have a problem.

Avoid that mistake by holding the carrying handle with one hand and gripping the barrel around the front sight with the other. First make sure the carrying handle is tight if you have an M16A4 or M4/M4A1. Gently twist the barrel in both directions. If you feel any movement, send the gun to direct support.

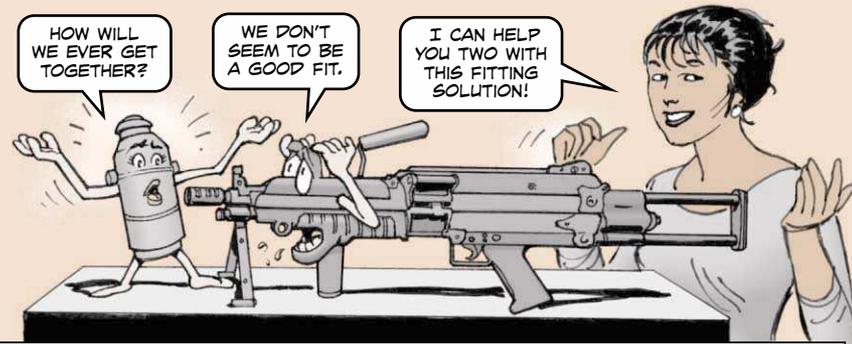
Don Whetstone
James Fletcher
Ray Johnson
Raytheon
Ft Bliss, TX

(Editor's note: I think you've got a good grip on that problem. Thanks.)



Hold by carrying handle and grip barrel by front sight

Mounting AN/PVS-4 on Machine Guns

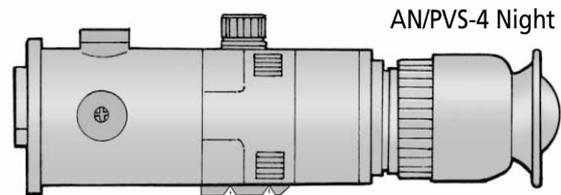


HOW WILL WE EVER GET TOGETHER??

WE DON'T SEEM TO BE A GOOD FIT.

I CAN HELP YOU TWO WITH THIS FITTING SOLUTION!

To mount the AN/PVS-4 night sight on your M240B or M249 machine gun, you use the adapter and rail grabber assembly. Here are the parts you'll need:



AN/PVS-4 Night Sight

- adapter, NSN 4933-01-447-8991
- 2 screws, NSN 5305-01-015-5686
(Install with 5/32" hex key)
- rail grabber assembly, NSN 5340-01-449-8533
- 2 screws, NSN 5305-00-928-9540
(Install with 1/8" hex key)

INSTALL THE SIGHT LIKE THIS...



1. Remove the two screws for the the sight's metal adapter with a 5/32-in hex key. Take off the adapter and store it and the screws in a sealed plastic bag in the sight's case.
2. Position the adapter/rail grabber assembly so that the rail grabber fits on the front portion of the night sight. Align the two holes in the adapter with the two holes in the bottom of the night sight and secure the adapter with the two screws, NSN 5305-01-015-5686. Tighten them snug with a 5/32-in hex key.
3. Position the rail grabber assembly knob on the left side of the machine gun. Turn the knob counterclockwise to loosen it and then attach the rail grabber assembly to the gun's top rail. Turn the knob clockwise until it extends and clicks a few times. You're done.

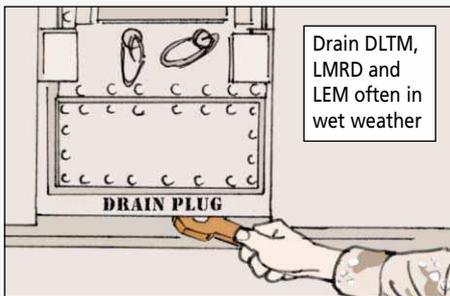
SOP FOR DLTM, LMRD AND LEM



Dear Editor,

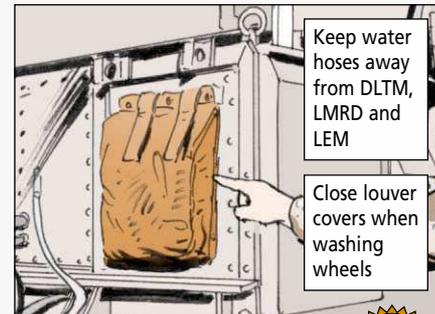
The data link terminal module (DLTM), launcher missile round distributor (LMRD), and launcher electronics module (LEM) on the Patriot's launcher just don't get the PMCS attention they deserve. As a result, they suffer electrical damage from moisture or overheat from lack of air. Those can be expensive fixes, besides killing missile launches. We've found these pointers will keep the DLTM and LEM pointed in the right direction:

• **Drain them.** This is something Patriot crews often forget. Water builds up inside the DLTM, LMRD or LEM, which causes electrical damage and corroded connectors. The TM recommends draining them monthly, but if you're operating in a rainy area every other day would be better. We open up their drain plugs when we begin PMCS and close them when we're finished.



• **Clean the fans in the DLTM, LMRD and LEM, especially in the desert.** If the fans are running constantly in the desert, they will soon be caked with sand. If the fans aren't cleaned, they'll eventually burn out and the DLTM, LMRD or LEM will overheat. We clean the fans daily when we're operating. We've found the easiest way to clean the fans is to take them out of the DLTM, LMRD or LEM and blow them off with an air hose.

• **Keep water hoses away from the DLTM, LMRD and LEM.** They're not completely waterproof. High-pressure water will get inside their components and cause all sorts of damage. On all Patriot components you should never clean with hoses above the wheel level. And even then you should fasten the louver covers on both the DLTM, LMRD and LEM to make sure water can't accidentally get in them.



CW2 Isaac Smith, PFC Bobby Jackson
Ft Bliss, TX



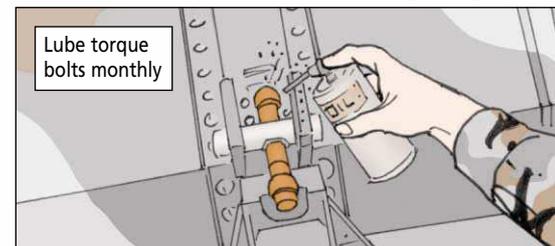
LUBE TO PREVENT FROZEN TORQUE BOLTS



Dear Editor,

If a torque bolt on the Patriot launcher becomes frozen with corrosion, you can break the bolt trying to turn it. Then you've got to spend two or more hours cutting off the bolt with a hacksaw. That is not an afternoon of fun.

It's easy enough to prevent frozen torque bolts. Every month give all the bolts a light coat of an oil like WD-40. Run the bolts up and down to work the lube in. That's much easier than getting out the hacksaw.



SSG Jose Diaz
SSG Paul Bary
SFC Earlie Poole
SSG Verdie Johnson
Ft Bliss, TX





Safely Skinning Your Mask

Dear Editor,

If you're not careful when you remove your M40/M42-series mask's second skin, you can break the drink tube off where it connects to the mask facepiece. Then the mask is ruined.

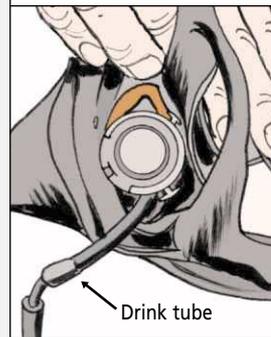
At the U.S. Army Chemical School, we teach this method for removing and installing the second skin to prevent damaging the drink tube.

Work the second skin off from the top to bottom of the mask. When you've worked the skin off to the outlet valve, pull off the skin first from the opposite side of the valve from the drink tube. Then slide the skin off over the drink tube.

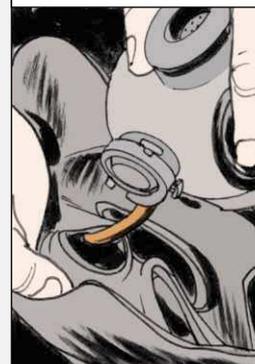
When you put the second skin back on, first put the drink tube through the outlet valve hole and then work the skin over the outlet valve, beginning with the side with the drink tube.

Once the skin is in place around the outlet valve, you can fit it on the rest of the mask without danger to the drink tube. The whole point of "skinning" the mask this way is to keep pressure off the drink tube.

Remove skin first from outlet valve on opposite side of drink tube



Slide the skin off over the drink tube



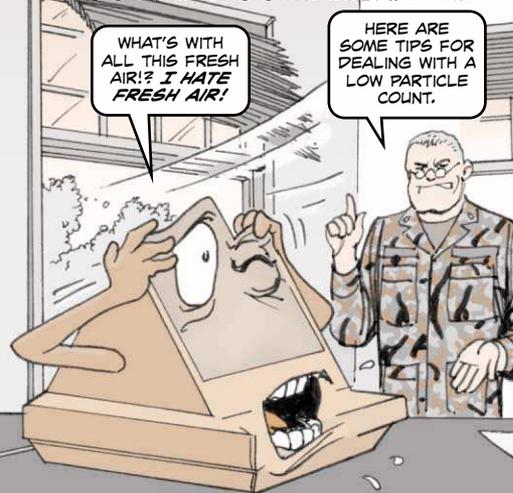
Put drink tube through skin's outlet valve hole first when putting skin back on



SFC Michael Ebanks
U.S. Army Chemical School
Ft Leonard Wood, MO

(Editor's note: You do know mask skinnin', pardner. Thanks.)

BOOSTING YOUR PARTICLES



As you NBC NCOs know, to use PATS to check a mask you need a particle count in the room's air of at least 1,000 particles per cubic centimeter.

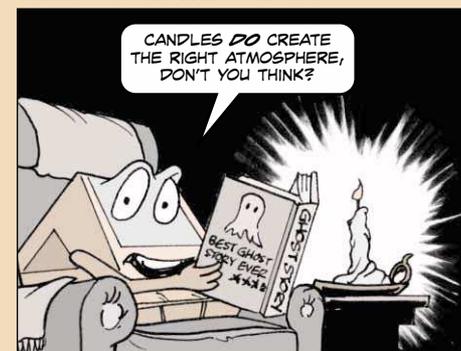
If it's lower than that, you can't test. When you have trouble with a low particle count, try these remedies:

- Shut off any ventilation in the room or move to a room with little ventilation. Usually, the more ventilation in a room the lower the particle count. If the NBC room is one that isn't completely walled in, you may need to move into one of the unit offices that has a door that can be shut.

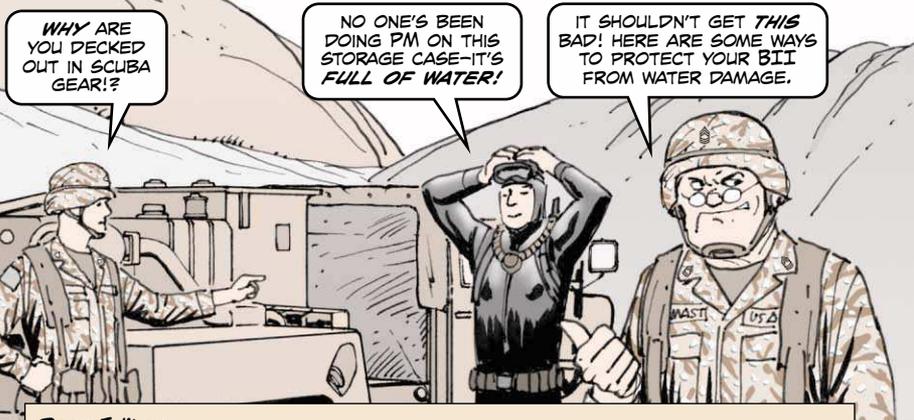
- Use plastic (like you cover windows with) to create a small tent and do the testing in there.



- If there is no fire hazard from anything in the room, burn a candle no closer than 6 feet from the PATS. Wait 2 minutes after lighting the candle to do the PATS self-test.



THE CASE OF THE LEAKING STORAGE CASE



Dear Editor,

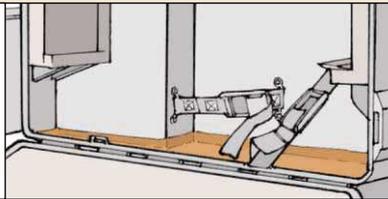
We have lots of trouble with the M56 smoke generator's weapons storage case not sealing out water. The M56s sit between missions and nobody thinks to open the weapons storage case during PMCS. When the case is opened, operators find standing water in the bottom and any BIL that's been stored in the case starting to rust.

We suggest smoke units open up the storage cases every week and check for water. If you find any, mop it up. It's a good idea to just leave a big sponge in the case to make it easier to mop up the water.

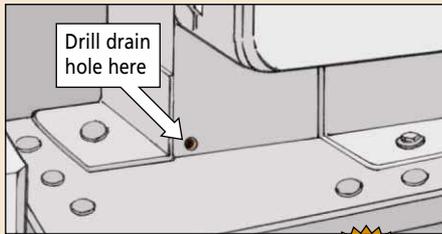
If you're in an area with lots of rain, have your direct support drill a drain hole in each end of the case no larger than 3/16 inch and about 1/4 inch from the bottom and front side edges. Empty the case before drilling. Touch up the area with paint to prevent corrosion. That way water can't collect.

SFC Cecil McCabe
U.S. Army Chemical School
Ft Leonard Wood, MO

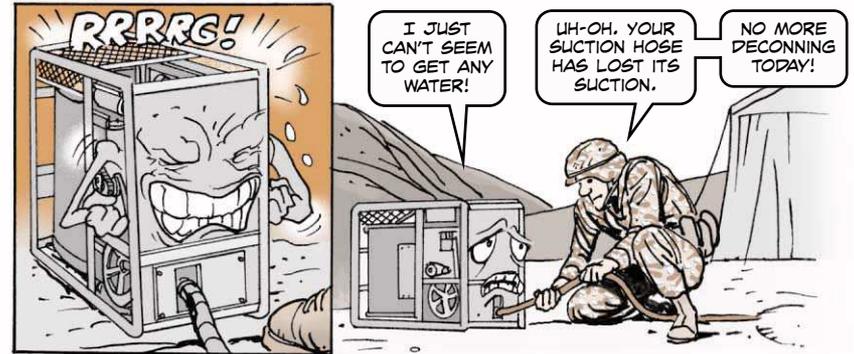
Check weapons storage case weekly for standing water



Drill drain hole here

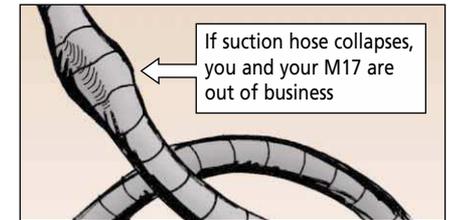


SUCK IT UP ON HOSE CARE



Once your M17-series decon's suction hose dies, so does your deconning. You can't decon without water and you can't get water without a suction hose.

The reason a suction hose gives out is usually that a section of it collapses. Anytime water pressure starts dropping, make the suction hose your first check. If the hose has collapsed, there's no fix except to replace the hose. That's why it's a good idea to have backup hoses available. When you have any M17 hoses made, order extras. You'll need them.



Suction hoses usually collapse either from the heat or from being stuffed in the storage box. There's not much you can do about the heat, but you can store hoses correctly. Here's how:

- Starting with the filter end, coil the suction hose inside the box, making sure the hose is not kinked. It takes two people to do this.
- Coil the branch hose on top of the suction hose, placing the wands and shower in the center.
- Coil the pressure hoses individually and put them at each end of the box.
- Coil the syphor injector hose and put it in the middle.

A correctly packed storage box looks like this

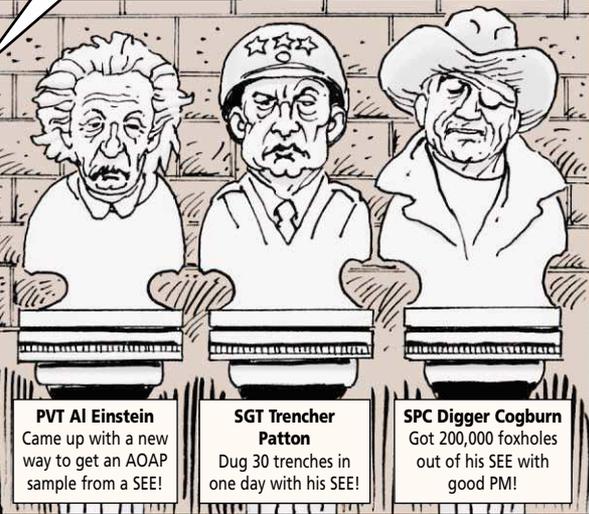


BUMPS IN THE ROAD

SEE Hall of Fame

NOT ALL SEE OPERATORS ARE OLD HANDS WHEN IT COMES TO DRIVING AND OPERATING THE SMALL EMPLACEMENT EXCAVATOR AT THE CONSTRUCTION SITE.

HERE ARE SOME HELPFUL POINTERS TO KEEP IN MIND FOR NEW OPERATORS—AND SEASONED ONES, TOO. THEY'LL HELP SMOOTH OUT SOME OF THOSE BUMPS IN THE ROAD.



PVT Al Einstein
Came up with a new way to get an AOA sample from a SEE!

SGT Trencher Patton
Dug 30 trenches in one day with his SEE!

SPC Digger Cogburn
Got 200,000 foxholes out of his SEE with good PM!

Clutch Pedal No-No

Using the excavator's clutch pedal as a footrest is a big no-no! Any bump or pothole you hit disengages or engages the SEE's transmission. This yo-yo effect puts a lot of unnecessary wear and tear on the clutch and transmission—like wearing out the clutch disk or the release bearing. End result—your excavator is going nowhere!

So play it safe and keep your foot off the clutch pedal while driving the SEE.

Keep your foot off clutch pedal while driving

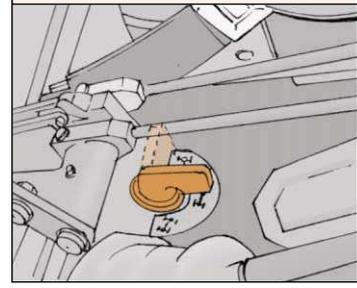


Four-Wheel Drive

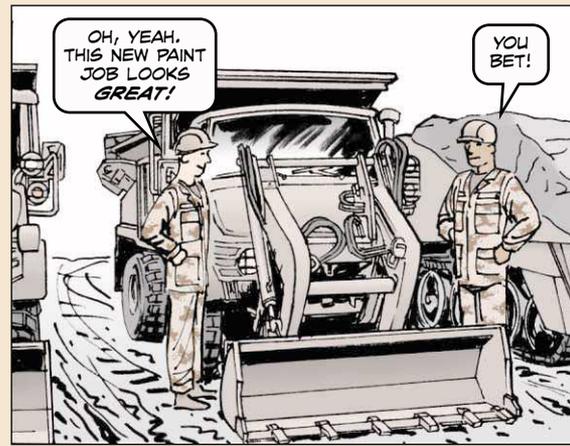
Don't engage either of the SEE's four-wheel drive options when a wheel is spinning in sand, dirt or mud. You'll damage a differential or U-joints if you do.

Instead, engage the four-wheel drive **before** getting into the soft stuff. If you forget and wheels start spinning, **STOP!** Then, switch into four-wheel drive and move out. Also, never drive on a hard surface road with the differential locks engaged. That puts a strain on differentials, U-joints and tires.

STOP -- then shift to four-wheel drive



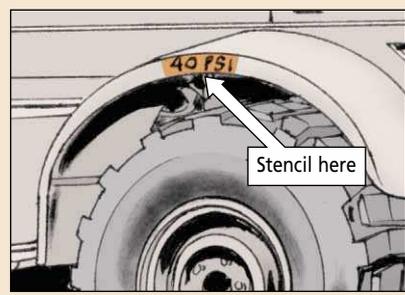
TIRE PSI REMINDER



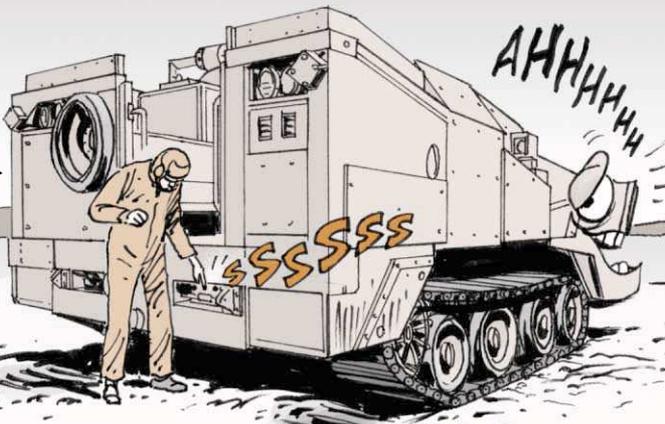
The excavator just got back from the paint shop looking like new...except.

Before the vehicle heads out of the motorpool, you mechanics have to make sure "40 PSI" is stenciled on the fenders as a reminder to your operators.

The excavator needs just 40 psi per tire for both highway and cross-country driving. Any more or any less air pressure leads to sidewall damage.

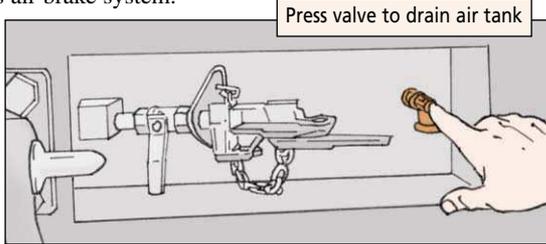


**GIVE
BRAKES
A
BREAK**



Operators, high daytime temps and cool nights in the Iraqi desert cause condensation to form in your ACE's air brake system.

To keep the earthmover's brakes braking, drain the air tank daily. Hold the valve open until air stops escaping. That keeps moisture from stopping your ACE in its tracks.



Step Away from Relay

A step in the wrong spot can mean disaster for your armored combat earthmover.

What gives? Some well-meaning mechanic pulls the vehicle's rear access panels for maintenance and uses the master relay's protective box as a step. All that weight breaks the box's mounting bracket, shorting the master relay. The end result is your earthmover is dead in its tracks!



KEEP YOUR BOOT OFF THE RELAY'S PROTECTIVE BOX!



GEE, MRS CLEAVER... THAT CERTAINLY IS A LOVELY DRESS.



BEAVER, PLEASE TELL WALLY THAT EDDIE IS HERE.





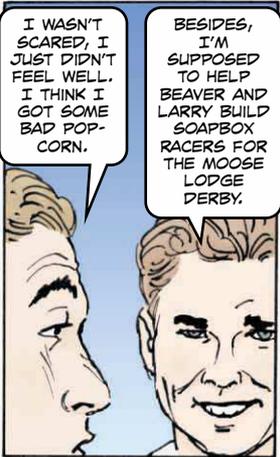
HEY EDDIE... WHAT'S UP?

SAY, CLYDE, HOW ABOUT WE GO OVER TO THE RIALTO?



THEY'RE SHOWING "THE BEAST WITH 12 LEGS." WE CAN EVEN BRING THE SQUIRT ALONG.

DON'T YOU REMEMBER LAST TIME WE SAW A MOVIE LIKE THAT YOU GOT SO SCARED YOU THREW UP?



I WASN'T SCARED, I JUST DIDN'T FEEL WELL. I THINK I GOT SOME BAD POP-CORN.

BESIDES, I'M SUPPOSED TO HELP BEAVER AND LARRY BUILD SOAPBOX RACERS FOR THE MOOSE LODGE DERBY.



RACERS? HEY... I'M AN EXPERT ON THAT STUFF. I TELL YOU WHAT-- YOU HELP BEAVER WITH HIS AND I'LL HELP LARRY.



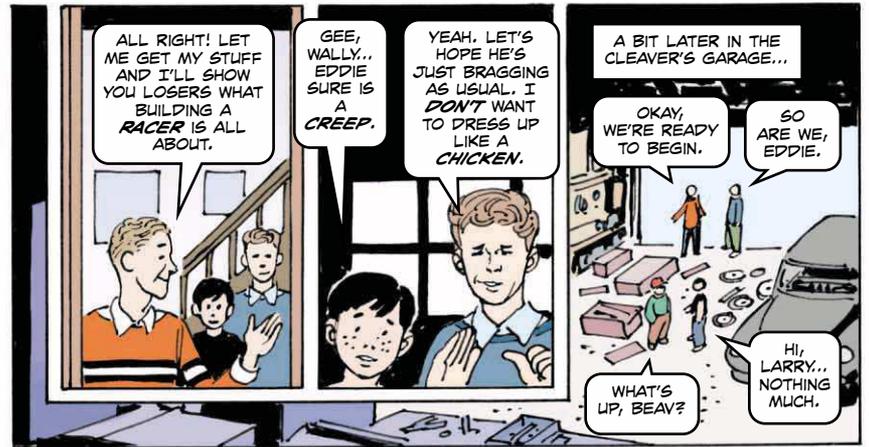
AND JUST TO MAKE IT INTERESTING, LET'S SAY THE LOSER HAS TO DRESS UP LIKE A CHICKEN AND WALK UP AND DOWN THE STREET FOR AN HOUR.

CHICKEN? ARE YOU CRAZY?



WHAT'S A MATTER, ACE? AFRAID OF A LITTLE COMPETITION? ARE YOU CHICKEN? CLUCK, CLUCK.

WELL, OK, EDDIE, IF IT'S THAT BIG A DEAL TO YOU.



ALL RIGHT! LET ME GET MY STUFF AND I'LL SHOW YOU LOSERS WHAT BUILDING A RACER IS ALL ABOUT.

GEE, WALLY... EDDIE SURE IS A CREEP.

YEAH. LET'S HOPE HE'S JUST BRAGGING AS USUAL. I DON'T WANT TO DRESS UP LIKE A CHICKEN.

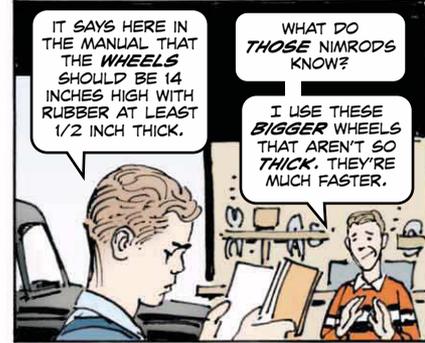
A BIT LATER IN THE CLEAVER'S GARAGE...

OKAY, WE'RE READY TO BEGIN.

SO ARE WE, EDDIE.

HI, LARRY... NOTHING MUCH.

WHAT'S UP, BEAV?



IT SAYS HERE IN THE MANUAL THAT THE WHEELS SHOULD BE 14 INCHES HIGH WITH RUBBER AT LEAST 1/2 INCH THICK.

WHAT DO THOSE NIMRODS KNOW?

I USE THESE BIGGER WHEELS THAT AREN'T SO THICK. THEY'RE MUCH FASTER.



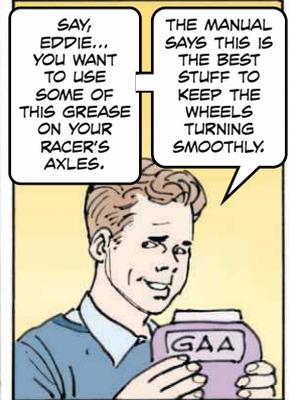
I DON'T KNOW, EDDIE. I THINK YOU SHOULD BE DOING WHAT THE MANUAL SAYS.

HEY, BEAVER! HELP ME FIND GRADE 4 BOLTS. THAT'S WHAT IT SAYS WE'RE SUPPOSED TO USE FOR THE STEERING LINKAGE.



YOU GUYS BELONG IN GRADE 4.

THESE BOLTS WILL WORK JUST FINE FOR THE LINKAGE.



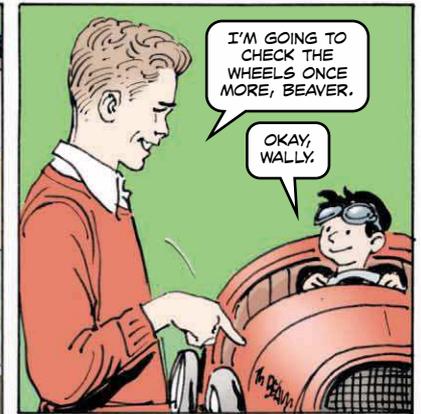
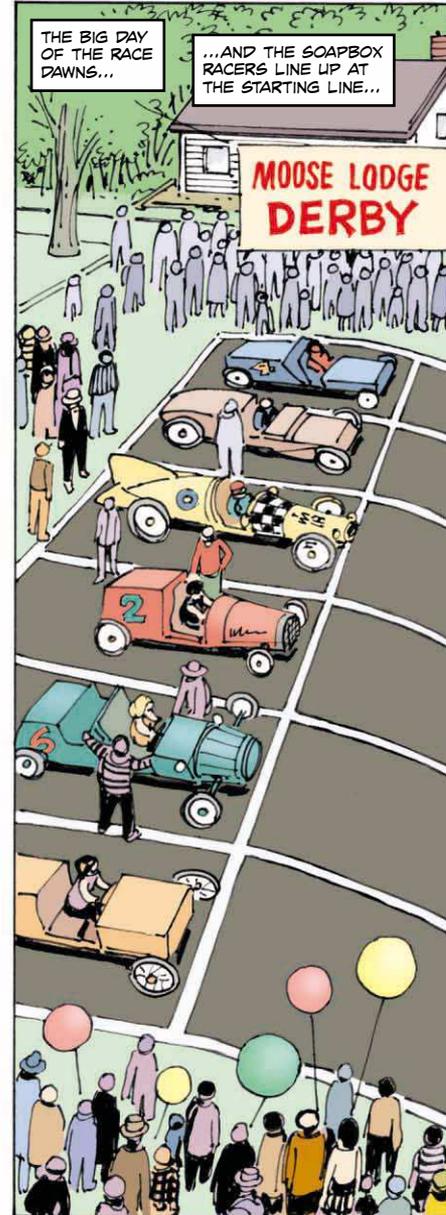
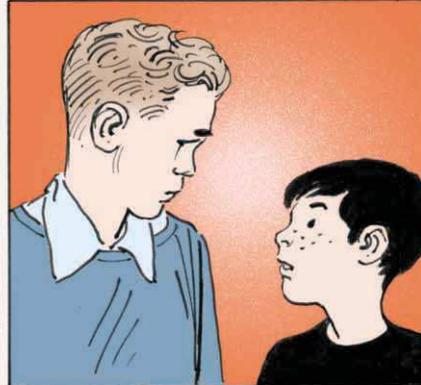
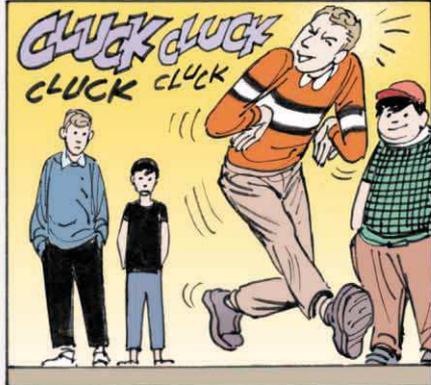
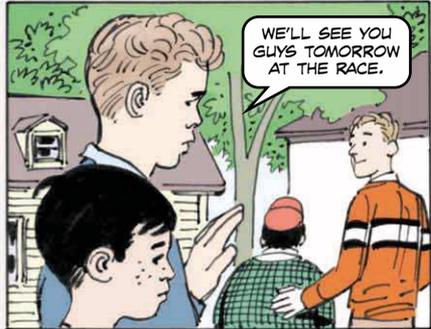
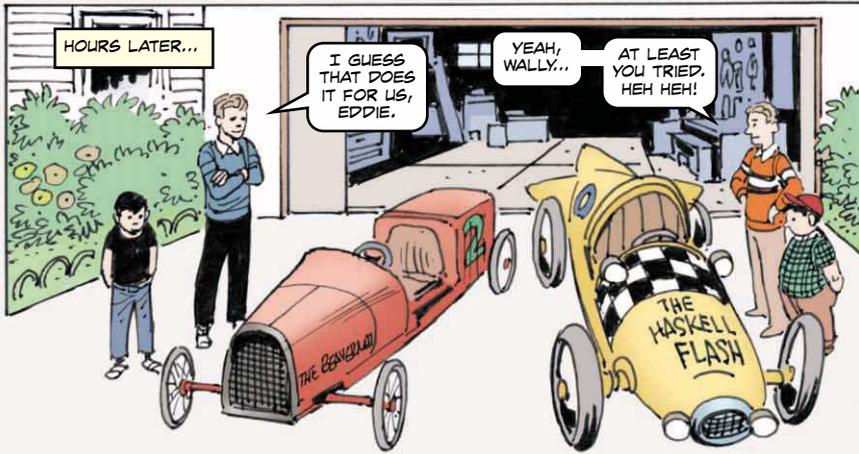
SAY, EDDIE... YOU WANT TO USE SOME OF THIS GREASE ON YOUR RACER'S AXLES.

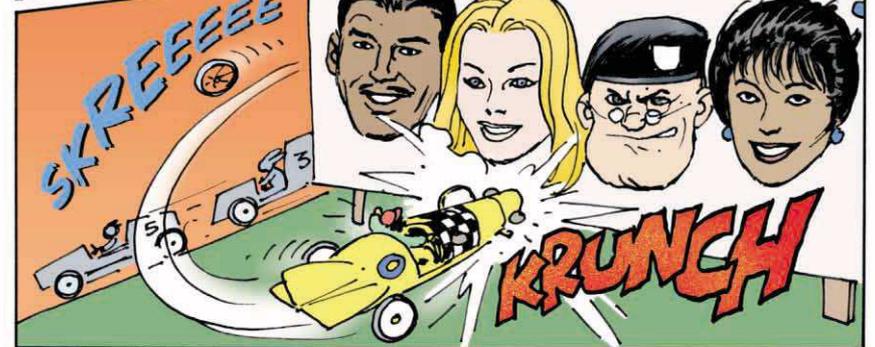
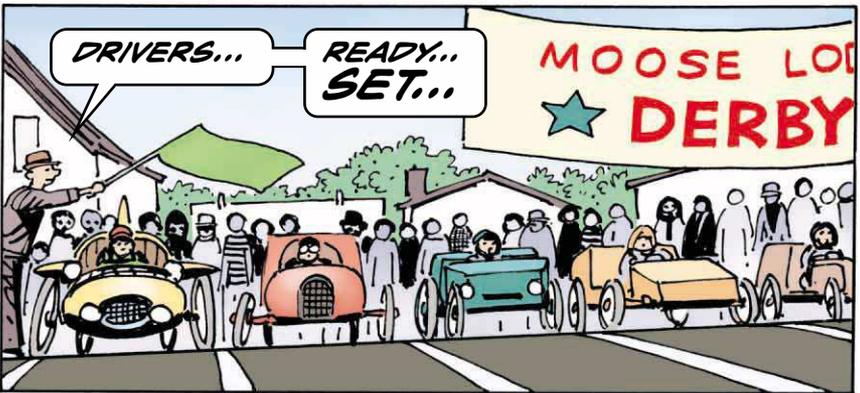
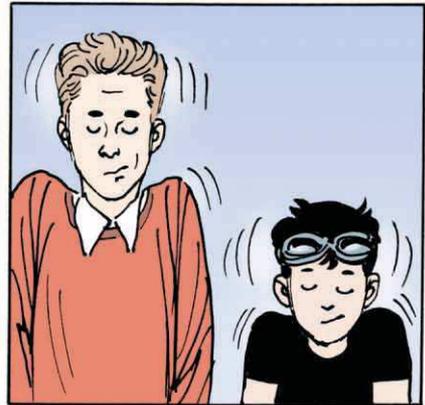
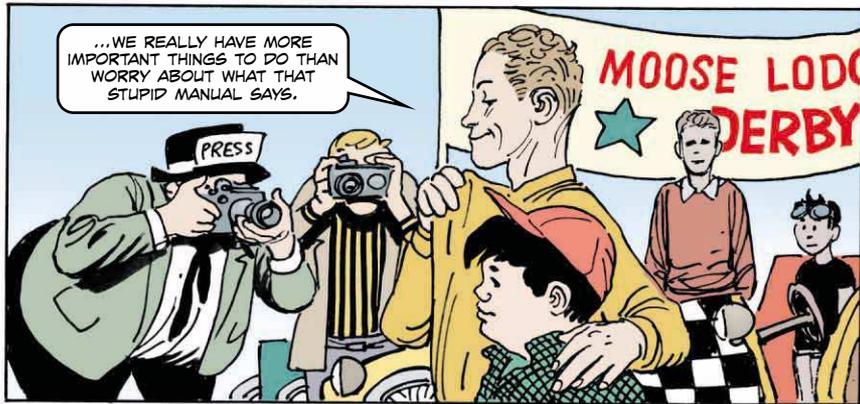
THE MANUAL SAYS IT IS THE BEST STUFF TO KEEP THE WHEELS TURNING SMOOTHLY.

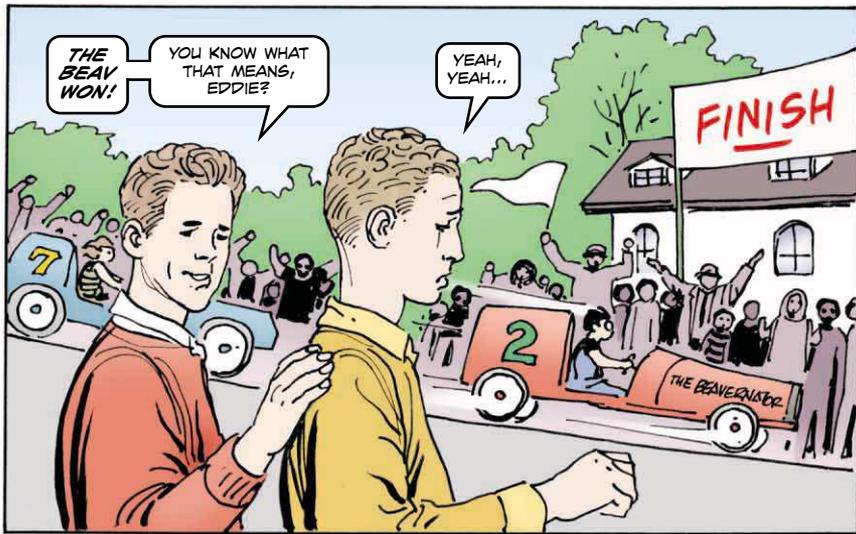


NO WAY! SOME OF THE GUYS AT THE SERVICE STATION TOLD ME THIS IS THE STUFF TO USE.

THOSE GUYS ALWAYS KNOW BETTER THAN YOUR BOOK EXPERTS.







THE BEAV WON!

YOU KNOW WHAT THAT MEANS, EDDIE?

YEAH, YEAH...

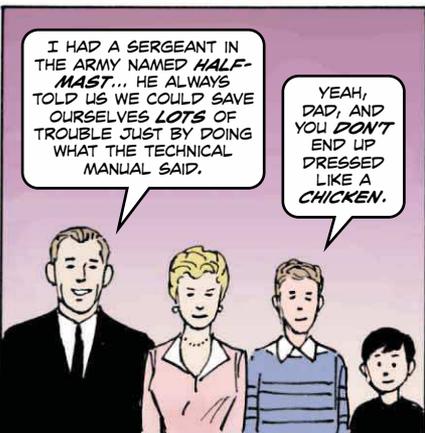
FINISH

THE BEAVER



LATER THAT DAY IN FRONT OF THE CLEAVER HOUSE...

CLUCK CLUCK CLUCK



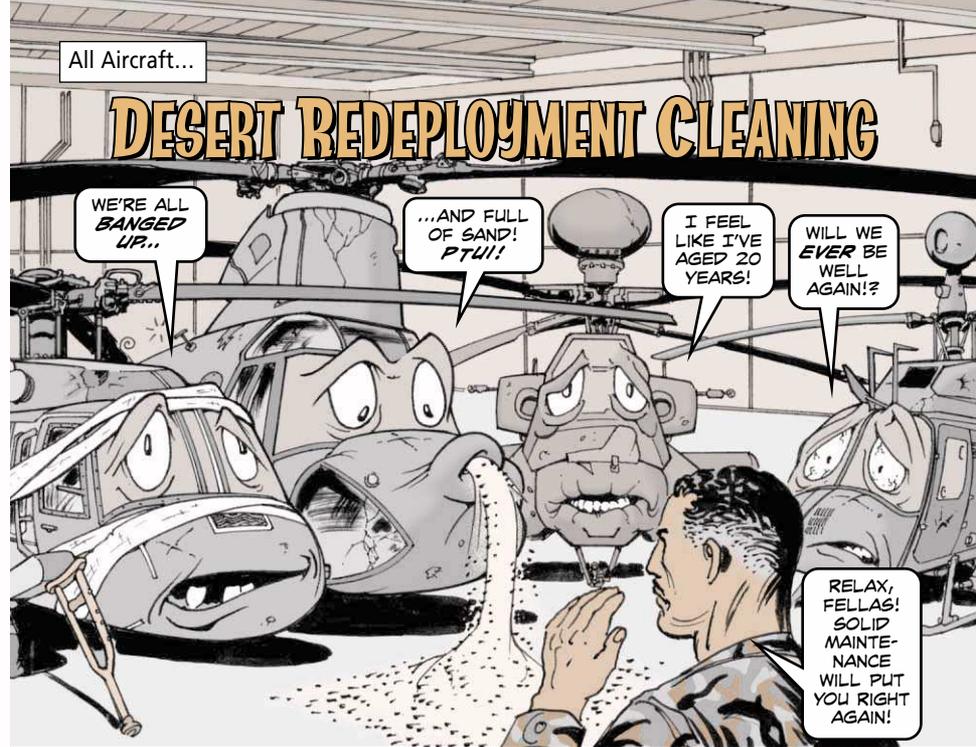
I HAD A SERGEANT IN THE ARMY NAMED **HALF-MAST**... HE ALWAYS TOLD US WE COULD SAVE OURSELVES **LOTS** OF TROUBLE JUST BY DOING WHAT THE TECHNICAL MANUAL SAID.

YEAH, DAD, AND YOU **DON'T** END UP DRESSED LIKE A **CHICKEN**.



BUT EDDIE SURE MAKES A **GOOD** CHICKEN.

CLUCK CLUCK CLUCK



All Aircraft...

DESERT REDEPLOYMENT CLEANING

WE'RE ALL **BANGED UP**...

...AND FULL OF SAND! **PTUI!**

I FEEL LIKE I'VE AGED 20 YEARS!

WILL WE **EVER** BE WELL AGAIN!?

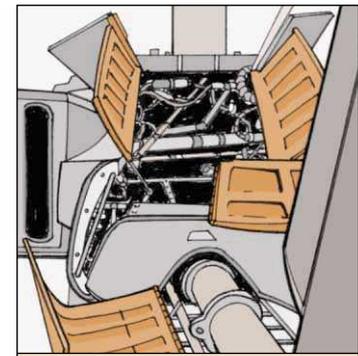
RELAX, FELLAS! **SOLID** MAINTENANCE WILL PUT YOU **RIGHT** AGAIN!

Well, you've served your time in the sandbox, and redeployed to your home station. But this is no time to kick back and relax!

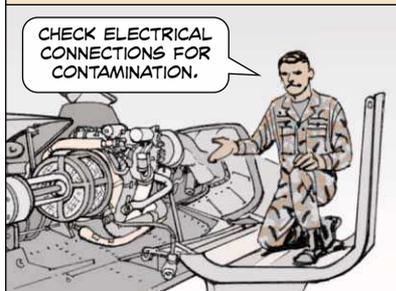
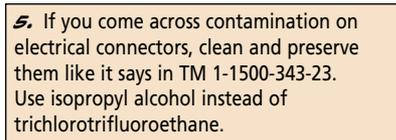
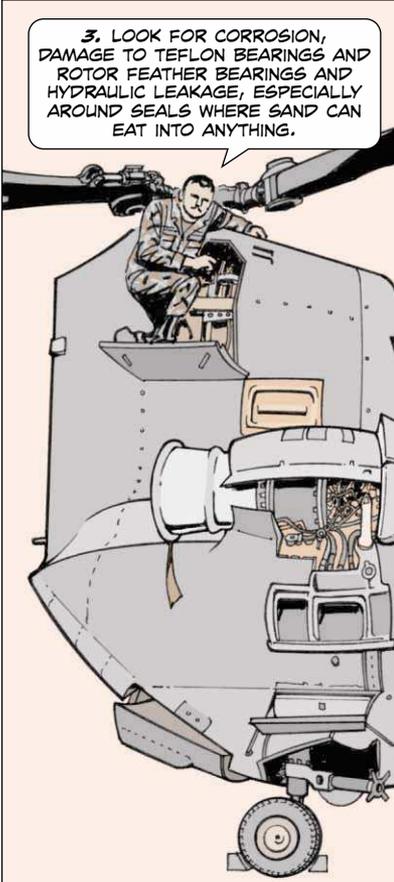
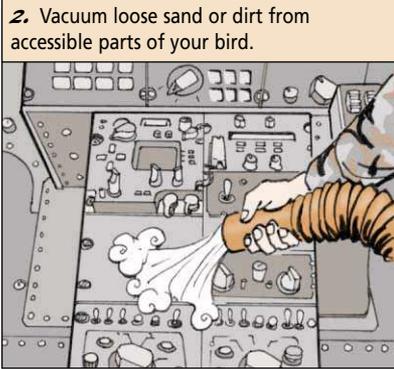
Your bird put in long hours in the sand and had a long sea voyage home. But sand (remember the sand?) got into every nook and cranny, and the salt air and sea spray may have added salt and moisture to the mix. Now you need to get busy to restore your helicopters to their pre-deployment condition.



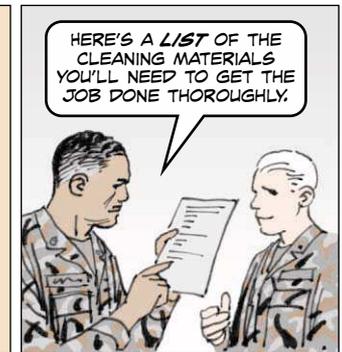
HERE'S WHAT YOU NEED TO DO...



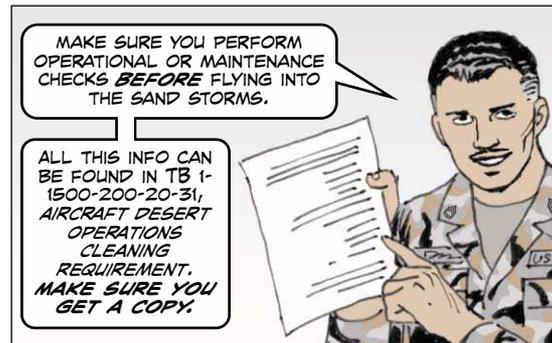
1. Open all access doors and remove all non-permanently installed panels and fairings. Inspect for damage.



7. Inspect aircraft for additional sand and clean again if necessary until all contaminants are removed.
8. When your aircraft is dry, inspect for corrosion or other defects. If any are found repair them like it says in TM 1-1500-343-34, TM 1500-344-23 and each specific aircraft TM.
9. Apply type II corrosion preventive compound (CPC), NSN 8030-00-938-1947, to water entrapment areas in your bird's mating surfaces, bilge areas and hidden corrosion prone areas.
10. Wash your bird's engine according to its TM requirements.
11. When everything is complete, button up your bird.



Nomenclature	NSN	U/I	Quan Req
Abrasive mat (280-400 grit) E	5350-00-967-5089	EA	100 Ea
Abrasive mat (180-240 grit)	3550-00-967-5093	EA	100 Ea
Abrasive mat aluminum (100-150 grit)	5350-00-967-5092	EA	100 Ea
Abrasive paper (silicon carbide)	5350-00-224-7205	PG-50	4 Shts
Abrasive paper (silicon carbide)	3550-01-043-2278	SH-50	4 Shts
Aircraft surface cleaning compound	6850-01-235-0872 or 6850-01-426-6682	GL-5	20 Gal
Chromium trioxide	6810-00-264-6517	LB-5	5 Lb
Calcium sulfate	6810-00-242-4066	LB-1	1 Lb
Corrosion preventive compound	8030-00-244-1297	GL-1	1 Gal
Corrosion preventive compound	8030-00-903-0931	PT-1	10 Pts
Corrosion preventive compound	8030-01-041-1596	CN-1	24 Cans
Corrosion preventive compound	8030-01-045-4780	QT-1	10 Qts
Corrosion preventive compound	8030-00-938-1947	LB-1	76 Cans
Corrosion preventive compound	8030-00-546-8637	CN-1	12 Cans
Corrosion resistant coating	8030-01-018-2838	QT-1	4 Qts
Isopropyl alcohol	6810-00-286-5435	GL-1	1 Gal

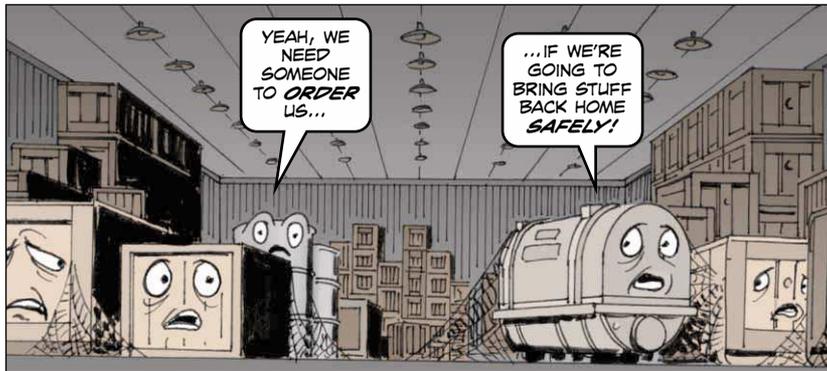


If you have any trouble getting cleaning materials, contact ACMOM's Ronnie Price or Judy Gerley at DSN 897-1312 or 897-1575 or commercial (256) 313-1312 or 313-1575. Email is

ronnie.price@redstone.army.mil
judy.gerley@redstone.army.mil



THEY'RE WAITING FOR YOU



There are a whole lot of shipping containers available for sending your aircraft's major assembly back for repair. Trouble is, those containers are sitting in warehouses collecting dust.

You need those containers to protect the major assemblies from damage during shipment. Too many are arriving with more damage than they started with. Some can't even be salvaged.



IF YOU DON'T ALREADY HAVE THE CONTAINER YOU NEED, ORDER IT FROM THIS LIST...

End Item	Major Assembly	Assembly NSN	Container NSN
UH-60	Blade, main rotor	1615-01-106-1903	8145-01-081-9236
UH-60	Gear box, accessory	1615-01-353-3825	8145-01-230-0189
UH-60	Transmission, mechanical	1615-01-230-6218	8145-01-230-0189
UH-60	Transmission, mechanical	1615-01-241-6110	8145-01-230-0189
UH-60L	Transmission, mechanical	1615-01-305-2375	8145-01-079-9652
UH-60A/Q and RH-60A	Transmission, mechanical	1615-01-503-3115	8145-01-079-9652
UH-60	Transmission	1615-01-415-8387	8145-01-079-9652
UH-60	Blade, main rotor	1615-01-106-1903	8145-01-081-9236
UH-60	Balancer, blade		8145-01-081-9236
UH-60	Turbine engine accessory section	2840-01-083-6848	8145-01-128-1842
UH-60	Turbine engine module, power		8145-01-128-1855
AH-64	Turbine engine accessory module	2840-01-121-0753	8145-01-128-1842
AH-64	Turbine engine module, power	2840-01-245-6001	8145-01-128-1855
AH-64	Blade, rotary wing	1615-01-332-0702	8145-01-235-1536
AH-64	Head assembly, main	1615-01-209-9169	8145-01-235-1530
AH-64	Transmission, main	1615-01-461-8845	8145-01-235-1535
AH-64A	APU	2835-01-172-6200	8145-01-460-9393
CH-47	Blade, rotary wing	1615-01-082-8194	8145-01-102-3048
CH-47	Head assembly, aft	1615-01-115-3607	8145-01-128-1739
CH-47	Swashplate, control		8145-00-563-9803
CH-47	Head, rotary wing		8145-01-128-1739
CH-47	Blade, rotary wing		8145-01-102-3048
CH-47	Transmission, mechanical	1615-01-315-4071	8145-01-128-1857
CH-47	Transmission, mechanical	1615-01-315-9365	8145-01-128-4725
CH-47	Transmission, mechanical	1615-01-464-3974	8145-01-128-4725
CH-47	Transmission, mechanical	1615-01-464-5563	8145-01-128-4725
CH-47	Transmission, mechanical	1615-01-287-5319	8145-01-128-4725
CH-47	Transmission, mechanical	1615-01-317-6446	8145-01-128-1856
CH-47	Transmission, mechanical	1615-01-397-9921	8145-01-128-4725
CH-47	Cylinder assembly		8145-01-131-3200
CH-47	Dampener, flutter		8145-00-400-7730
CH-47	Actuator assembly	1650-01-496-6802	8145-01-131-3200
CH-47	Actuator, thrust		8145-01-131-3200
CH-47	Shaft assembly, flexible		8145-01-128-1843
CH-47	Engine, gas turbine		8145-01-341-6301
CH-47	Engine, aircraft turbine		8145-01-469-0956
UH-60L	Engine accessory section	2840-01-284-2662	8145-01-128-1842
UH-60L	Turbine engine module, power	2840-01-286-1909	8145-01-128-1855
OH-58D	Hub assembly, main rotor	1615-01-186-4042	8145-01-222-7766
OH-58D	Mast assembly, transmission	1615-01-164-3904	8145-01-222-7765
OH-58D	Mast assembly, rotary	1615-01-243-4221	8145-01-222-7765
OH-58D	Blade, rotary wing	1615-01-239-7004	8145-01-387-1306
OH-58D	Turbine engine		8145-01-472-6660
AH-64D	APU	2835-01-413-1057	8145-01-460-9393
AGPU	APU	2835-01-180-0452	8145-01-460-9393

Global Positioning System...

WAH-HOO!



A PLGR PARTS BONANZA

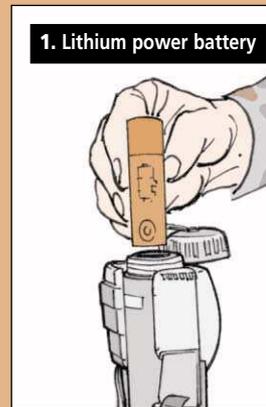
FOR SUCH A SMALL PIECE OF EQUIPMENT, I HAVE QUITE A FEW ACCESSORIES AND PARTS...

FIFTY-SEVEN AT LAST COUNT!

SEE THE NEXT PAGE FOR PICTURES OF THE NUMBERED ITEMS.

THESE ARE USED ON BOTH THE AN/PSN-11, NSN 5825-01-374-6643 AND THE AN/PSN-11(V)1, NSN 5825-01-395-3513

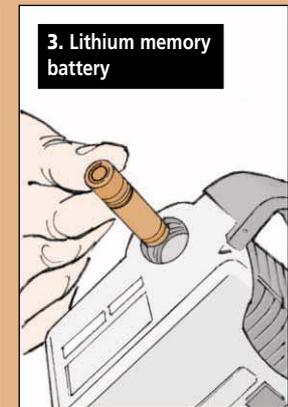
Item	NSN
AS-4333/V remote antenna	5985-01-375-4660
Remote antenna cable	6150-01-375-8662
AS-4334/U helmet antenna	5985-01-374-7757
Helmet antenna mount	5975-01-375-1301
Magnetic mount antenna	5885-01-437-0879
Lithium power battery ❶	6135-01-760-9742
NiCad power battery	6140-01-400-2902
AA alkaline battery	6135-00-985-7845
Battery holder (8 AA alkaline)	6160-01-385-4358
Power battery cap assembly ❷	5340-01-449-1029
Power battery cap	6160-01-458-4921
Power battery cap spring	5310-01-457-6779
Power battery cap gasket	5330-01-457-9994
Lithium memory battery ❸	6135-01-301-8776
Memory battery cap assembly	5340-01-449-1033
Memory battery cap ❹	5985-01-393-8577
Memory battery cap spring	5360-01-425-1141
Memory battery cap gasket	5330-01-425-3914
Power adapter	6135-01-376-2168
Vehicular installation mount ❺	5975-01-375-1302
Mount accessory kit	2590-01-429-3007
External power cable ❻	6150-01-375-8661
Fuse (2A) on power cable	5920-00-280-4960
PLGR to remote antenna cable	6150-01-375-8662
PLGR to PLGR cable	6150-01-375-8663
Personal computer cable	6150-01-375-8664
PLGR to have-quick cable	6150-01-375-8665
Laptop computer cable	6150-01-382-1551
Digital remote indicator	6625-01-456-4959
J2/J3 connector cover ❼	5340-01-449-1045
J4 connector cover ❼	5340-01-449-1036
Carrying case ❸	5895-01-375-7528
Transit case	6760-01-379-3139
Adjustable handle ❾	5340-01-425-4523



1. Lithium power battery



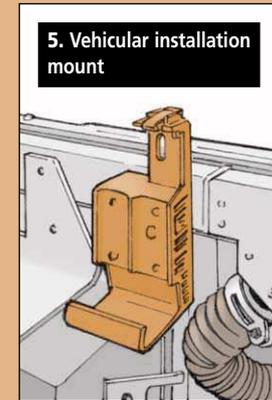
2. Power battery cap assembly



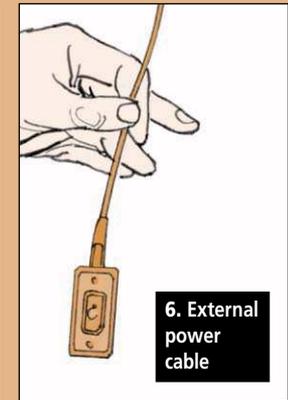
3. Lithium memory battery



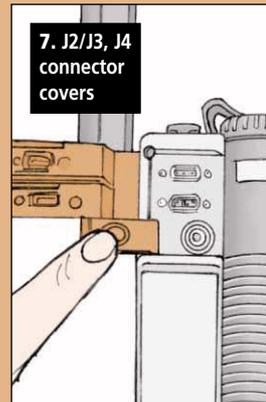
4. Memory battery cap assembly



5. Vehicular installation mount



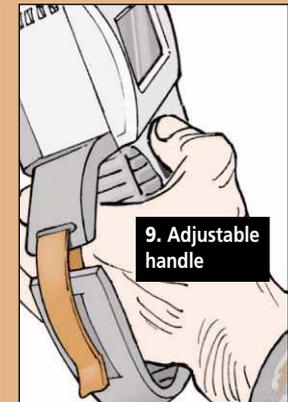
6. External power cable



7. J2/J3, J4 connector covers



8. Carrying case



9. Adjustable handle



A Word on PLGR Repairs

Although you can get the parts for the PLGR, opening the PLGR and working on its guts is a no-no! All PLGRs are still under warranty **even if the expiration sticker says it isn't.**



This means all PLGRs in need of repair go to Rockwell Collins, Inc, at this address:

DODAAC EZ7415
Rockwell Collins, Inc
ATTN: Rockwell Collins Service Center MS 139-141
(M/F AN/PSN-11 warranty)
855 35th St NE
Cedar Rapids, IA 52402-3613

Follow the mailing and packaging instructions in Para 8.2 of the PLGR's TM 11-5825-291-13.

Not sure a repair is covered under the warranty? Send in the busted PLGR anyway. Chances are it's covered and you'll get a replacement. If not, you may still get a replacement thanks to the Exclusion to Warranty repair support program run by ECOM.

When you send your PLGR in for repair, include the LS6 lithium storage memory battery. The memory battery preserves fault codes the manufacturer needs in order to diagnose and repair your PLGR.

But don't send the main power battery. That's yours to keep. It's also hazardous material and has special shipping requirements.

Only One Pub Needed

The only pub you need for your PLGR is TM 11-5825-291-13. It covers all the operation and maintenance you can do with the PLGR.

Some soldiers are holding on to TB 11-5825-291-10-2, *Soldier's Guide*, like it was a gold bar. There is still good info in the guide, but it's now 8 years old and some things have changed. So trash the TB and stick with the TM for your pubs needs.



PATHFINDER is the Path to Take

PATHFINDER is a quarterly newsletter published by the Global Positioning System folks at Ft Monmouth, NJ. It keeps you up-to-date on all the latest happenings in the GPS world.

The latest issue of *PATHFINDER* can be found at the GPS web page:

<http://army-gps.robins.af.mil>

To be notified by email when an issue is posted, send your email address to:

donald.mulligan@iews.monmouth.army.mil

Put the words "PATHFINDER request" in the subject line.

Then you'll get an email every time the latest and greatest GPS info is posted on the web site.

If you are not getting *PATHFINDER* and you would prefer getting a "hard copy" by surface mail, write or call:

PM GPS (PATHFINDER)
SFAE-IEW&S-NS-GPS
Bldg 563 Ave of Memories
Ft Monmouth, NJ 07703

DSN 992-6137 or (732) 532-6137

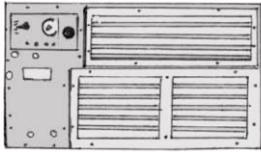
Or email them at the address above.

They'll need your complete mailing address, including building number and room number, if those are part of your address.



The Future





IT WON'T TAKE CARE OF ITSELF!

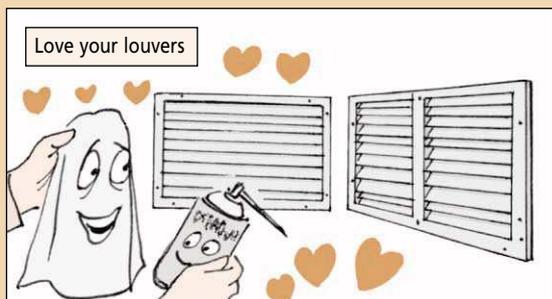
The 18,000 BTU horizontal air conditioner, NSN 4120-01-327-1316, used on many commo shelters is not self-maintaining. It is not a "run it and forget it" piece of equipment. It relies on you, the operator, to keep it up and running.



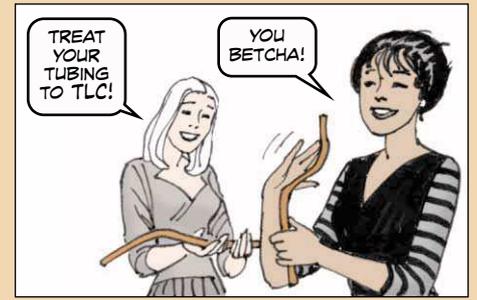
Care for your cover. The condenser cover is the clothing of your AC unit and it looks like many of your units are living in poverty! Roll the cover up and down and make sure the two ties are attached and the snaps are still there. Look for mildew, tears and excessively worn edges. If it's dirty, wash it! And then, give it a coat of rubber preserver. Make sure the screws that hold it in place are tight.



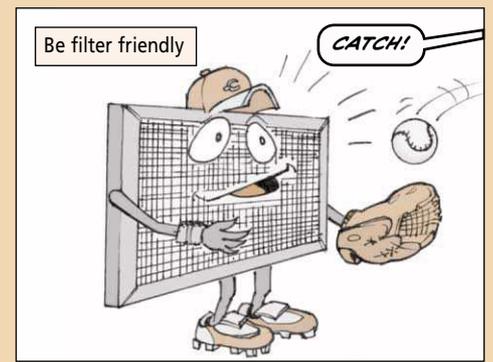
Love your louvers. The return air louver and the conditioned air supply louver must operate easily without stiffness or binding. If they're stiff or they bind, clean them and lubricate them like your TM calls for.



Treat your tubing to TLC. The condenser drain tubing carries waste water out of your unit, unless it is not connected or leaks. In either of those cases, the water puddles at the bottom of the AC unit and causes corrosion. Make sure the tubing is connected and in good shape. Look for blockages that need to be cleared out.



Be filter friendly. Air filters catch sand and dirt. That's their job. Your job is to keep them clean so they can do their job. You have the same job for the mist eliminator and the condenser coils. If you're operating in sand, this job is a daily one! If available, 30 psi of compressed air will help with the cleaning. Wear safety goggles if you use compressed air.



Be a pal to your panels. Panels, covers, screens and guards need to be kept clean. Dirt on the outside of your unit will slither its way to the inside of your unit. Wipe your unit down daily! There is no such thing as a dirt-free environment and where there is dirt, there is dirt on the AC unit.



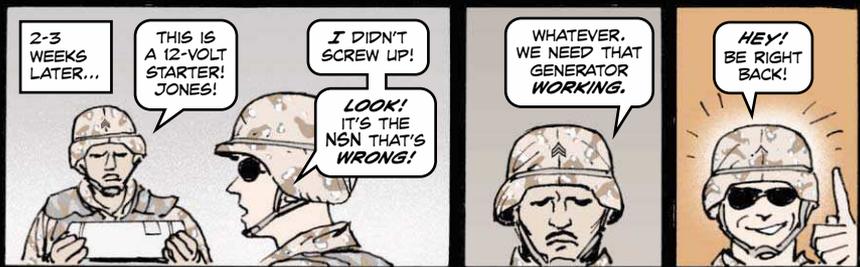
Getting a Good Start



WE NEED A NEW 24-VOLT STARTER FOR THIS GENERATOR.

ORDER IT, JONES!

YES, SIR



2-3 WEEKS LATER...

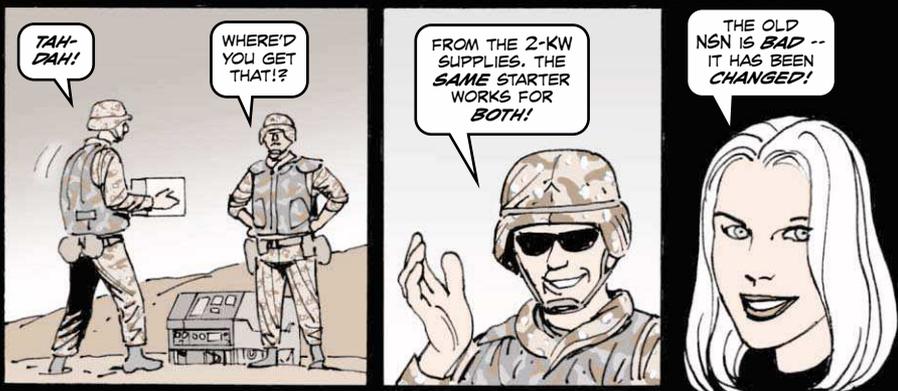
THIS IS A 12-VOLT STARTER! JONES!

I DIDN'T SCREW UP!

LOOK! IT'S THE NSN THAT'S WRONG!

WHATEVER. WE NEED THAT GENERATOR WORKING.

HEY! BE RIGHT BACK!



TAH-DAH!

WHERE'D YOU GET THAT!?

FROM THE 2-KW SUPPLIES. THE SAME STARTER WORKS FOR BOTH!

THE OLD NSN IS BAD -- IT HAS BEEN CHANGED!

If you've been using NSN 2920-21-910-1201 to order a starter for your 3-KW tactical quiet generator (TQG), stop it. That NSN bit the dust because it brought a 12-volt starter and your generator needs a 24-volt one.

To get a 24-volt starter for your 3-KW TQG, use NSN 2920-01-452-8409. So, wherever you have the old NSN squirreled away, unsquirrel it, pitch it and replace it with this new NSN.

If your unit has 2-KW TQGs, you may already have the starter in supply. The same starter is now used on both the 2 and 3.

Stay on your toes, though, about this issue. There are plans in the works to obtain an additional starter for the 3-KW with a new NSN. If and when it happens, we'll tell you about it!

A CRACKED PIPE

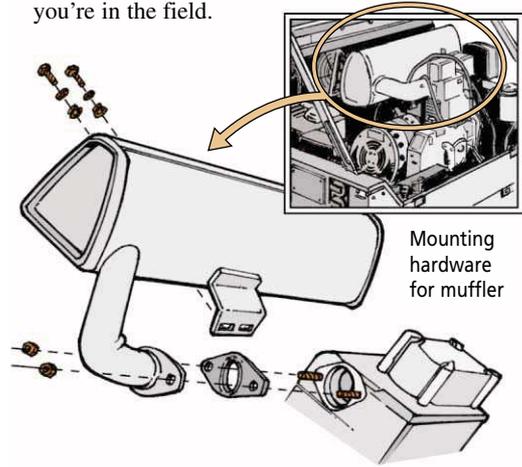


The muffler on the 3-KW tactical quiet generator takes quite a shaking while the generator is running and shaking like that doesn't create "good vibrations."

In fact, those vibrations loosen the muffler mounting hardware. With loose mounting hardware, the vibrations will crack the exhaust pipe.

A crack in the pipe or muffler could lead to an exhaust system failure.

More smoke and louder noise is not what you want out of your generator when you're in the field.



Mounting hardware for muffler

Put a trained eye on the muffler's mounting hardware. If it's loose, tighten it. If the mounting bolts have suffered thread damage, replace them. Do this check every time you run up your generator, because the last time it ran could have loosened the mounting hardware. Keep in mind that some of the mounting hardware is underneath the muffler on the back of the engine and is hard to see. For more help see page 4-89 of TM 9-6115-639-13.



Note: This article addresses the body armor, fragmentation protective vest, ground troops. This vest is being replaced by the interceptor body armor (IBA) system. A future PS Magazine article will address the IBA system.

Protection doesn't come cheap. Sometimes you have to pay for it with thorough preventive maintenance.

Take, for example, your fragmentation protective vest body armor. Considering how it protects you against shell and grenade fragments, you have a personal stake in its condition.

But when was the last time you gave your vest some PM? If it's been a while, take some action.



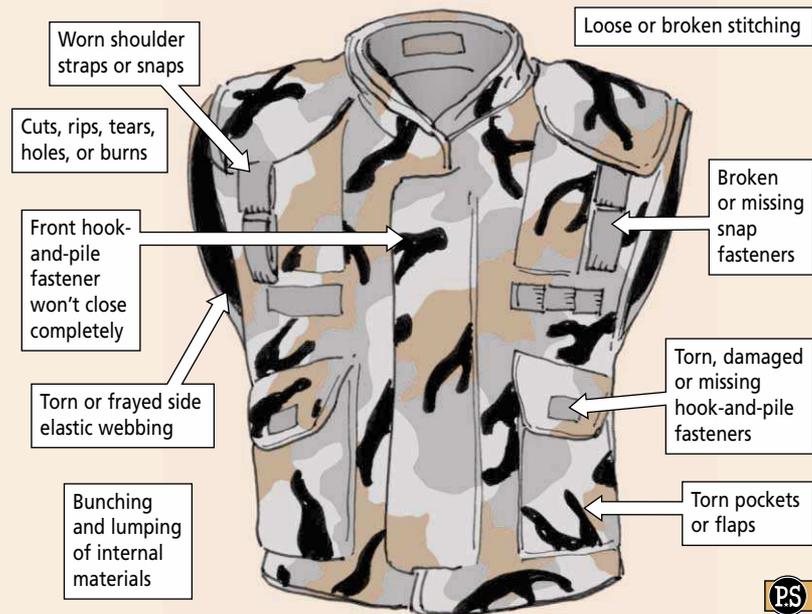
AFTER ALL, IF YOU'RE WEARING IT, YOU HAVE A "VESTED" INTEREST IN ITS EVERYDAY CARE AND CLEANING.

Inspection

Start with a close inspection of your vest. Here's what to look for:

- Cuts, rips, tears, holes, or burns
- Loose or broken stitching
- Broken or missing snap fasteners
- Torn, damaged or missing hook-and-*pile* fasteners
- Torn pockets or flaps
- Torn or frayed side elastic webbing
- Front hook-and-*pile* fastener won't close completely
- Worn shoulder straps or snaps

Depending on the amount of damage, your vest could be repaired or replaced. Ask direct support for guidance. A badly worn or damaged vest may not be worth repairing—it's not economical. Turn it in to your supply folks as unserviceable. They'll give you a replacement.



Cleaning

A vest layered with mud and grime demands a good cleaning. Washing the vest now and then helps prolong its life and makes it more comfortable to wear. Besides, the Central Issue Facility (CIF) expects you to clean it before you turn it in. Follow this cleaning advice:

- Use a cloth or soft brush to sweep away loose dirt from the hook-and-pile fastener and the outer cover. Never use a stiff-bristled brush. It'll damage the material.

- Wet the vest with warm, not hot, water. Hand-wash with detergent, NSN 7930-00-929-1221, and a soft brush. Never machine wash and dry. It causes too much wear and tear on the fabric.

- To clean heavy grease and oil, apply a mix of detergent and water directly on the spots and scrub with a soft brush. Repeat the cleaning if the stain is stubborn.

- After washing, rinse thoroughly in clean, warm water until all traces of soap are gone.

- Hang the vest to dry by sliding a stick or pole through its armholes. You can dry the vest either indoors or outdoors. Never dry it near a heater or open flame—they'll fade and shrink the fabric.

- Never use chlorine bleach, solvents, cleaning fluids or petroleum products to clean the vest. They can damage the fabric and shorten its life.

Wash by hand with detergent



After washing, hang dry



GET THE FULL STORY ON THIS PROTECTIVE VEST.

READ CHAPTER 15 OF TM 10-8400-203-23, GENERAL REPAIR PROCEDURES FOR INDIVIDUAL EQUIPMENT.

PS END

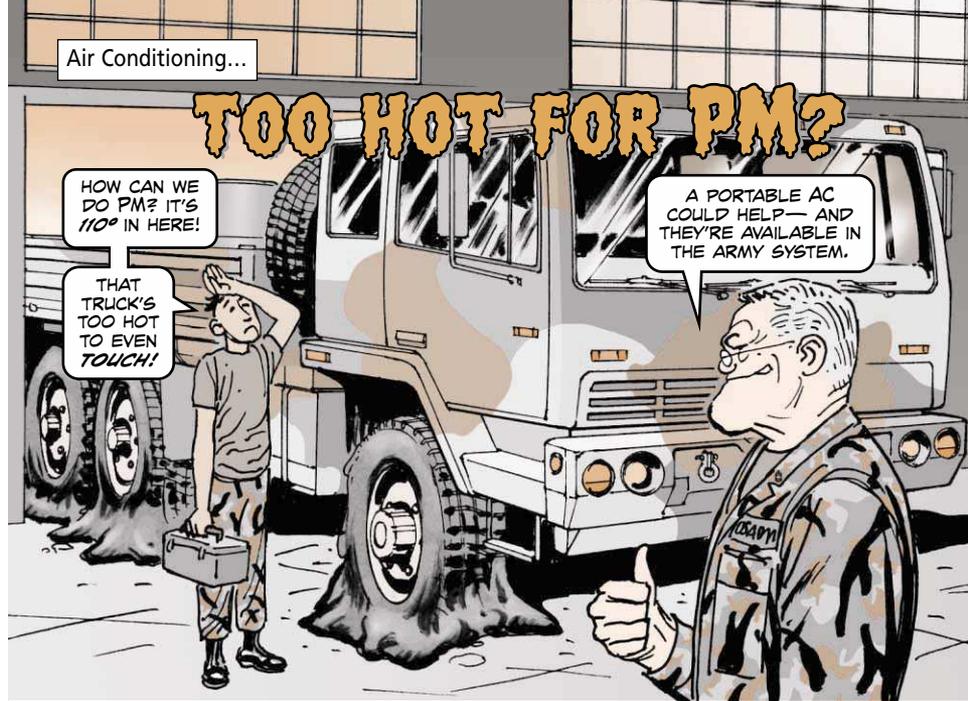
Air Conditioning...

TOO HOT FOR PM?

HOW CAN WE DO PM? IT'S 110° IN HERE!

THAT TRUCK'S TOO HOT TO EVEN TOUCH!

A PORTABLE AC COULD HELP— AND THEY'RE AVAILABLE IN THE ARMY SYSTEM.



Soldiers often have to serve and do maintenance in VERY HOT climates, as the troops in Iraq can testify. It can be torture to try to pull PM on equipment too hot to touch.

The Port-a-Cool portable evaporative cooling system helps cool heat problems in environments like a motor pool or arms room. Port-a-Cools are on wheels and can be easily moved around. They operate on a 220- or 110-volt power source and use tap water. Port-a-Cools range in size from a 16-in model that cools up to 600 square feet to a 48-in fan model that cools up to 3,500 square feet and in price from \$550 to \$2,700.

DLA has assigned NSNs to all the models and their accessories. See www.portacoolmilitarysales.com for NSNs and more info.

THIS'LL DO THE TRICK!

THAT'S COOL!



HELP FOR HELMETS!

TAKE GOOD CARE OF ME...

...AND I'LL TAKE CARE OF YOUR HEAD!



WANT TO *PROTECT* YOUR NOGGIN'?

THEN YOU'D BETTER GET *HARDHEADED* ABOUT GOOD PM FOR YOUR KEVLAR HELMET!

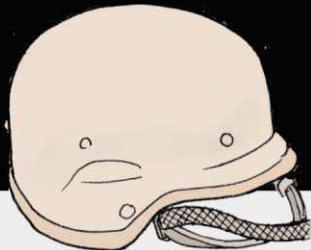
**Knok
Knok
Knok**



Inspect

Look over the helmet for cracks, chipped paint and split or cut rubber edging. Also look for loose or missing hardware on the webbing and chin strap. Inspect the webbing bands for tears or ripped stitching. If you find any problems, take it to unit maintenance for repair. They can replace the webbing, chin strap and hardware. If needed, they'll attach a new headband to the webbing. They can also repair minor cuts, pitting and chipped areas.

Look for cracks, pitting, chipped paint

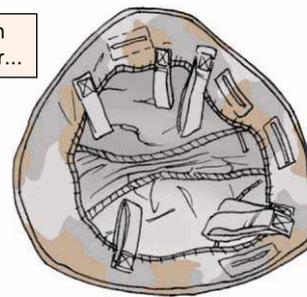


Clean

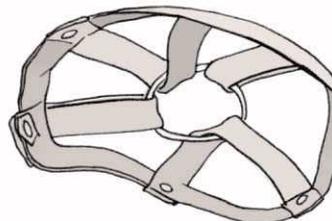
Dirt, dust, grease and grime. That's your helmet inside and out after a week in the field. To clean it, all you need is warm water, a cloth or stiff bristle brush and some mild laundry detergent.

- Take off the helmet cover, chinstrap and headband.
- Take out the webbing by removing the six mounting screws that hold it in place.
- Scrub them with warm water and detergent. If you like, let them soak for 10 or 15 minutes before washing.

Wash cover...



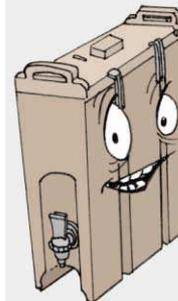
...and webbing with detergent



- Rinse them thoroughly with clean, warm water and let them air dry.

Clean the helmet shell the same way, with warm water and detergent. Then rinse it with clean water and let it air dry.

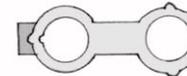
Liquid Dispenser Parts



DON'T GO THIRSTY!

GET REPAIR PARTS FOR THE 5-GAL LIQUID DISPENSER, NSN 7310-01-245-6937, IN YOUR MOBILE KITCHEN TRAILER (MKT).

Vent cap, snap-on
NSN 7320-01-213-6160



Faucet assembly
NSN 7320-01-245-9048
(includes faucet, C nut and wing nut)



Spout assembly
NSN 7330-01-250-7730
(includes spout, O-ring and hex nut)



Latch assembly
NSN 7320-01-224-0074
(includes four latches and 16 screws)

Lid gasket
NSN 5330-01-255-2588

GMTK Tools Good For a Lifetime

The modernized general mechanics tool kit, NSN 5180-01-483-0249, has a lifetime warranty against breakage under normal use due to a manufacturing defect. Even the toolbox is covered by the warranty.

Of course, the warranty **does not** cover improper use or abuse of tools or lost or stolen tools. Examples would include prying with a screwdriver or using a regular socket on an impact wrench or dragging a toolbox across the floor when it's missing a wheel.

To submit a warranty claim, go to the Army Electronic Product Support (AEPS) at <http://aeps.ria.army.mil/aepspublic.cfm> and click on SUBMIT QUALITY DEFICIENCY REPORT. To fill out the form, you will need:

- tool set NSN
- contract number DAAE20-02-D-0009
- mailing address of where to send the tool
- date of incident
- short description of incident

Warranty claims should be submitted only by someone who can approve requisitions, such as a shop chief, supply clerk, squad leader, or the commander.

After TACOM forwards the claim to the contractor, you should get a new tool within 5 days if you're in a CONUS unit or 10 days if you're OCONUS.

To purchase a replacement tool, contact Kipper Tool directly at (800) 295-9595 or email dick@kippertool.com

If you have questions about tools, contact TACOM's Daniel Stark at DSN 793-0131/(309) 782-0131 or email starkd@ria.army.mil

To see pictures or component lists of GMTK and other modernized tool kits, go to <http://tri.army.mil/LC/Ct/ctt/ctts/modsko.htm>

I'M SORRY. I'VE FAILED YOU. NOW YOU'LL HAVE TO PAY FOR A NEW SCREWDRIVER.



NO I WON'T. YOU HAVE A LIFETIME WARRANTY!

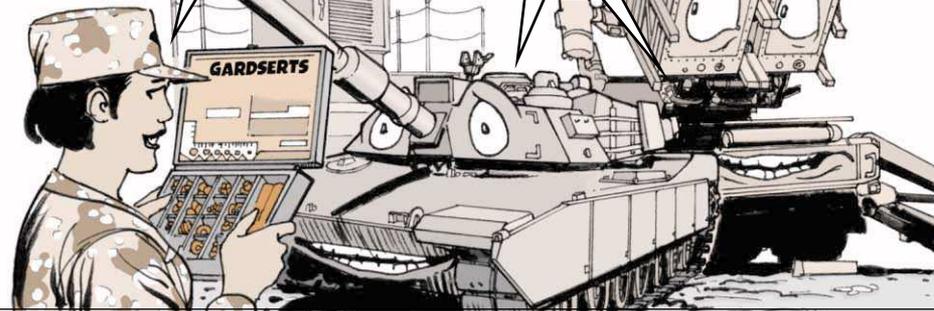
Tools...

THREAD REPAIR KIT

YOU KNOW ALL THOSE STRIPPED THREAD PROBLEMS YOU GUYS HAVE?

WELL, NOW I HAVE A KIT THAT WILL FIX THOSE PRONTO!

HOORAY! NOW WE CAN SEE SOME ACTION!



If your unit has to repair stripped threads on your equipment, the Army now has a kit available to make the job easier.

Called GARDSERTS, the kit turns thread repair into a two-step process: drilling a hole with a standard drill bit and then inserting a self-tapping insert either manually with a bolt or driving the insert in with an impact wrench.

The insert works with all steel under 50Rc, can be used on all types of metal, and is stronger than a Grade 8 bolt. The kit, which comes with NSN 5180-01-499-8893, has inserts from 1/4-20 through 3/4-10 coarse, 1/4-28 through 9/16-18 fine, and 6mm through 14mm metric. Other sizes are available from the manufacturer, who can be reached at (800) 541-9301.

The kit includes the drill bits required, the insert bolts/nuts, cutting fluid, a bolt/nut gauge, and a storage case. Instructions come with the kit.

WET BULB KIT

Why order an entire wet bulb-globe temperature kit, NSN 6665-00-159-2218 or NSN 6665-01-381-3023, when all you need is a replacement part? A whole new kit costs more than \$200. Parts are a lot cheaper, and you can order just the ones you want.

- | | |
|---|--|
| • Thermometer, small
Part Number 5-09624-01
NSN 6685-01-110-4430 | • Thermometer, large
Part Number 5-09625
NSN 6685-01-110-4429 |
| • Thermometer, medium
Part Number 5-09624-02
NSN 6685-01-110-6563 | • Calculator, wet bulb
Part Number WBG-CALCULATOR
NSN 6665-01-109-3246 |

Supplies...

TOUGH NEW BARCODE LABELS AND RIBBONS READY



A new family of barcode labels and printer ribbons have improved durability of labels, ink and adhesive.

The labels are made from a tougher base stock material that incorporates an aggressive adhesive and are used with a new resilient inking ribbon. The labels and ribbons can be used for:

- logistics
- inventory management
- asset/component tracking
- product, carton and pallet identification.



Some ribbons offer resistance to harsh military environments such as desert conditions while others are uniquely suited to adhere to surfaces that can become greasy or oily. They are available in polyester, ultra poly and Oiltak with regular and matte finishes.

A further benefit of these enhanced labels and ribbons is their overall interoperability. This means less work for field soldiers to find the proper label and ribbon combination for their printer and the intended purpose.



More information about the new family of labels and ribbons is available at:

<http://www.eis.army.mil/ait>

In the left-hand column, click on CONTRACTS. Then click on AIT I or AIT II. Next, click on CONSUMABLES and scroll down to the GSA Contract GS-35F-0495N.

The following printers can use the new labels and ribbons: the Zebra 4000, 6000, Z4M, PT400, Codewriter 4102, and Intermec 3400/4420-4000/4100-4400.

The enhanced labels and ribbons were approved for use in military barcode operations by the U.S. Army Program Executive Office for Enterprise Information Systems at Ft Belvoir, VA.



PAY ATTENTION TO THESE BRIEFS!

THERE'LL BE A TEST NEXT MONTH.



No Hurdle for PT Badge NSN

Don't exhaust yourself looking for an NSN for the Army Physical Fitness Badge that can be worn on the PT uniform. The badge is authorized by AR 600-8-22, *Military Awards*. In FED LOG's Army Interactive, the item name is BADGE, QUALIFICATION, and its nomenclature is BDG QUAL ARMY PHY FIT. The NSN is 8455-01-247-0000.

USAPD Gets New Web Address

The web address we published on the inside cover of the December 2003 issue of PS Magazine is changing. The Army Publishing Directorate (USAPD) has a new URL. Publication clerks should access their pinpoint distribution accounts by going to:

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

Location of Essentiality Codes

Looking for essentiality codes? FED LOG refers users to AR 708-1, *Logistics Management Data and Cataloging of Supplies and Equipment*, Table 7-9. The problem is that table doesn't exist. You can find essentiality codes in DA PAM 708-2 (14 Sep 00), Pages 84-85, Table 3-14.

GET SAFETY MESSAGES VIA EMAIL

OCCASIONALLY SOME OF OUR READERS ASK US TO INCLUDE A LISTING OF SAFETY OF USE MESSAGES IN PS.

USUALLY THEY SAY THEY DON'T GET ALL THE MESSAGES THAT ARE SENT OUT.

HERE'S HOW YOU CAN GET SAFETY MESSAGES IN YOUR EMAIL!

You can now receive safety messages by email. You must first get an Army Electronic Product Support (AEPS) account if you're not already registered. You can register and access the web site at:

<http://aeps.ria.army.mil/aepspublic.cfm>

To register, click on the access request form and follow the instructions.

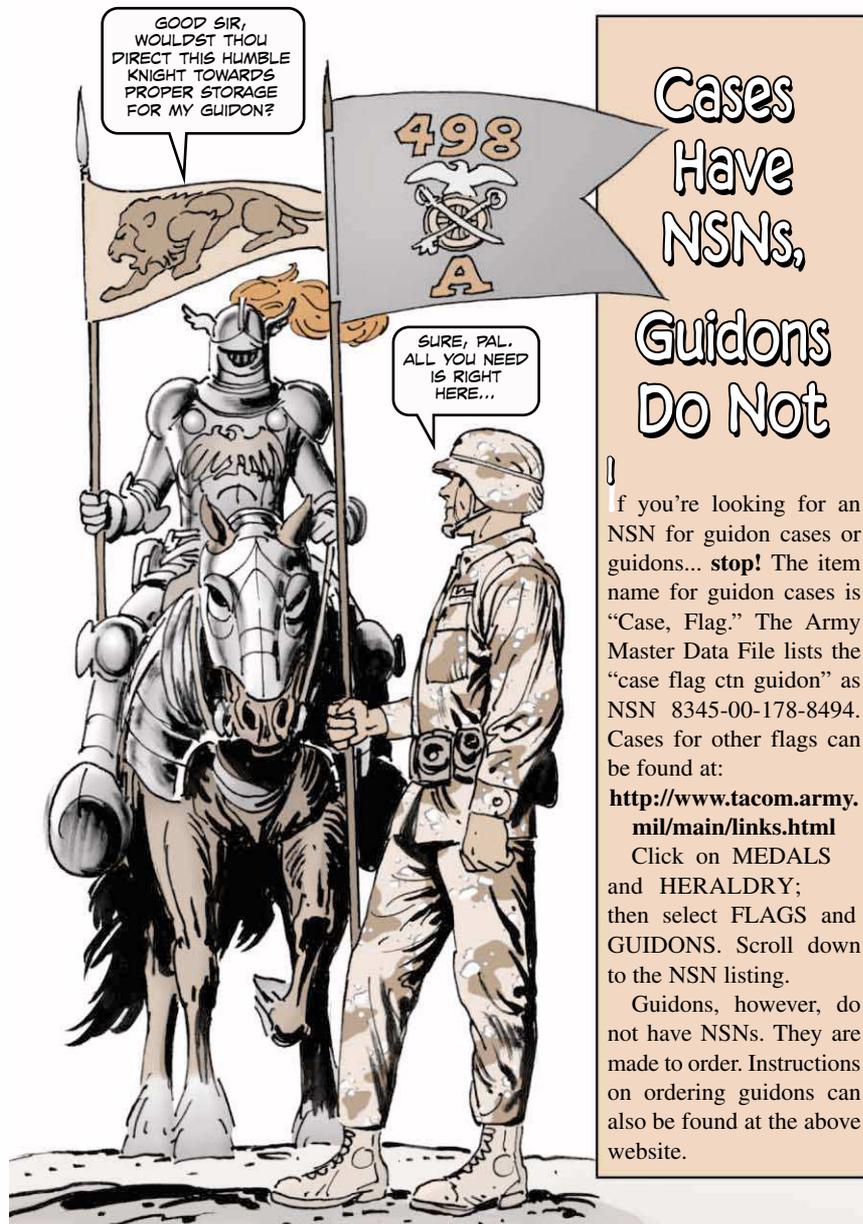
Once into the restricted portion of AEPS, scroll down the Popular Applications column to the SAFETY MESSAGES button.

You'll find field alerts; ground precautionary, maintenance advisory, safety of use, safety advisory and aviation safety messages; and ammunition information and missile information notices.

The new feature allows you to subscribe to the messages. Click on the new hyperlink: SUBSCRIBE TO SAFETY RELATED INFORMATION. In the AEPS mailing list area you can choose to obtain emails by weapons system code (BY, JE, etc.) or functionality (SOU, GPM, etc.). As new messages are released you'll get an email listing the type of message, message subject (and number), a short description, and a web link to the message.

THE TOOLS YOU ASK FOR ARE ALREADY AVAILABLE.

NOW THEY'RE JUST AN EMAIL AWAY!



Cases Have NSNs,

Guidons Do Not

If you're looking for an NSN for guidon cases or guidons... **stop!** The item name for guidon cases is "Case, Flag." The Army Master Data File lists the "case flag ctn guidon" as NSN 8345-00-178-8494. Cases for other flags can be found at:

<http://www.tacom.army.mil/main/links.html>

Click on MEDALS and HERALDRY; then select FLAGS and GUIDONS. Scroll down to the NSN listing.

Guidons, however, do not have NSNs. They are made to order. Instructions on ordering guidons can also be found at the above website.



★ Connie's

★ Post Scripts

MARKS Replaced by ARIMS

MARKS is no longer the Army's record-keeping system. Army Regulation 25-400-2 was revised effective April 18, 2003. Its new title is The Army Records Information Management System (ARIMS).

ARIMS simplifies recordkeeping; shifts retention and disposition burdens to records holding areas; improves records processing for deployed units; and provides a host of support services and automated tools on the Web.

Download the regulation from the Army Publishing Directorate website at: <http://www.apd.army.mil>

BODY ARMOR

PS would like to clear up any confusion readers may have about the body armor story on Page 54 of PS 618. The story lists NSNs for body armor, fragmentation protective vest, personal armor system for ground troops (PASGT). This is the older style body armor. The story does not address the newer style interceptor body armor (IBA). We'll address the IBA in an upcoming article.

TANK ROUNDS REVISITED

Page 12 of PS 612 said that if the primer on a round is hit by the ammo door on an M1-series tank, the round could fire inside the ammo compartment. That's not true. However, you should still make sure the round is locked into the tube with its spring clip to prevent damage.

Turn In Unserviceable Engines ASAP

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

Def Dist Depot Corpus Christi DDCT-50
540 First Street SE Bldg 1846
Corpus Christi TX, 78419-5255

To contact them call (361) 961-2500 or DSN 861-2500.

HMMWV Brake Fluid

The one and only fluid to add to your HMMWV's brake master cylinder, is silicone brake fluid (BFS), NSN 9150-01-102-9455. Never substitute hydraulic or transmission fluid. And don't confuse the master cylinder and the power steering/brake booster reservoir. The Dexron used there will swell seals and lock up your brakes.

No TM for Mossberg Shotgun—Yet

Currently there is no TM for the 500/590 Mossberg shotgun. TACOM-Rock Island (RI) is working on a TM for the shotgun, but it won't be available for several months. TACOM-RI does have, however, a CD containing the manufacturer's maintenance manual and a list of shotgun repair parts and their NSNs. Your local TACOM logistics assistance representative should have a copy of the CD. If you don't have a local LAR, contact TACOM-RI's Craig Haas for the CD at DSN 793-0023/(309) 782-0023 or email: craig.haas1@us.army.mil

ARMY MAINTENANCE AWARD NOMINATIONS

The Chief of Staff Army Award for Maintenance Excellence (AAME) recognizes units for improving and sustaining readiness. MACOMs ensure that the best units compete. They have to submit their entries NLT Dec. 15. If you believe your unit should be recognized, refer to Chap 7 and Appendix D of AR 750-1, *Army Materiel Maintenance Policy*, and review the requirements. Then contact your MACOM.

MK2 Bridge Boat Hook

NSN 2040-01-470-4391 gets a telescoping—48 to 96 inches—hook for the bridge boat. The new-style hook is all aluminum with rubber handle, floats, and fits into the bridge boat's hook holder. This NSN replaces the old hook shown in the basic issue items, Item 4 on Page B-4 of TM 5-1940-277-10 with Change 2.

Bradley/MLRS Vaneaxial Fan

The vaneaxial fan, NSN 4140-01-108-5196, used on the M2/M3 and M2A2/M3A2 Bradley and -A0 and -A1 version of the MLRS is being replaced with NSN 4140-01-310-1985. The old fan will be available until stocks run out. Both fans will eventually be replaced with the one used on the M2A3/M3A3 Bradley, NSN 4140-01-447-0025.

M1A1/A2 Race Ring Revisited

Page 2 of PS 611 had some wrong quantities listed for the parts needed to make tank wire race ring lubing easier. You'll need a total of three lubrication fittings, NSN 4730-00-050-4208, and only one guard, NSN 5340-01-505-2887.

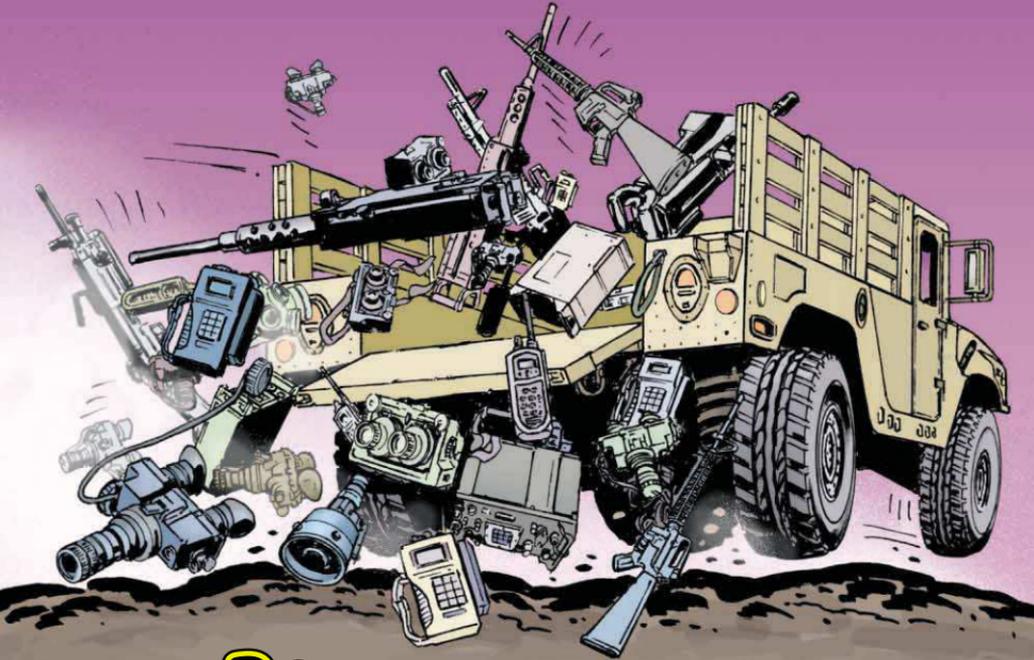
M2A3/M3A3 Engine Replacement

When your M2A3/M3A3 Bradley needs a replacement engine, make sure support installs the right one. Bradleys with a 600 WSR engine, NSN 2815-01-423-0929, should get a 600 WSR engine, not a 600 engine, NSN 2815-01-290-1290. Check the data plates on each side of the valve covers to make sure the right engine was installed.

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?

NOT PROTECTING EQUIPMENT MAKES FOR AN EXPENSIVE TRIP



HARD BUMPS CAUSE HIGH-COST DAMAGE

- PUT EQUIPMENT IN CASES
- USE PADDING
- TIE EQUIPMENT DOWN