

Issue 614

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January
2004

THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-614

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Public Release;
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**YOU SAID YOU DID
PMCS ON THE TRUCK
BEFORE WE LEFT!**

**YOU SAID ALL
THAT HISSING
NOISE WAS FROM
THE RADIATOR!**

**YOU HAVE
ANY OTHER
BRIGHT
IDEAS?**

**YEAH! DO YOU
THINK THERE'S
ANYTHING IN
THE PS INDEX
ABOUT TIME
TRAVEL?**



The index begins
on page 27

WHAT'S PS WORTH TO YOU?



Some things are just plain useful. Some things have intrinsic value. And, sometimes the accountants amongst us want to quantify value and usefulness.

It's no different with PS. We know we have a good product. We know we are serving your needs. We take pleasure in your comments, and telephone calls, and emails that express your appreciation. Unfortunately, it's not enough.

The accountants want quantitative analysis of just how well we fill your needs. The only way to do that is to get information from you, our readers. We didn't want to burden you with a readership survey that would impose on your time. But we still need some quantitative means of evaluating our magazine.

So, here goes. We **are** conducting a readership survey. But, we are asking for volunteers to answer 21 questions. If you're willing to participate please send an email to:

psmag@logsa.redstone.army.mil

Please title the subject line as SURVEY REQUEST. You can also fax us a request at: DSN 645-0961 or (256) 955-0961. We'll even accept snail mail requests at: Commander, Logistics Support Activity, PS Magazine Survey (AMXLS-AM), 5307 Sparkman Circle, Redstone Arsenal, AL 35898-5000.

You can also complete the survey online at:

<http://www.logsa.army.mil/psmag/psonline.htm>





THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-614, 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.

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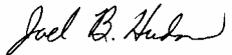
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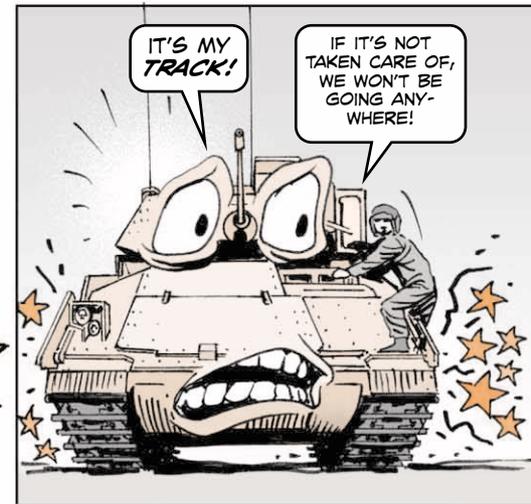
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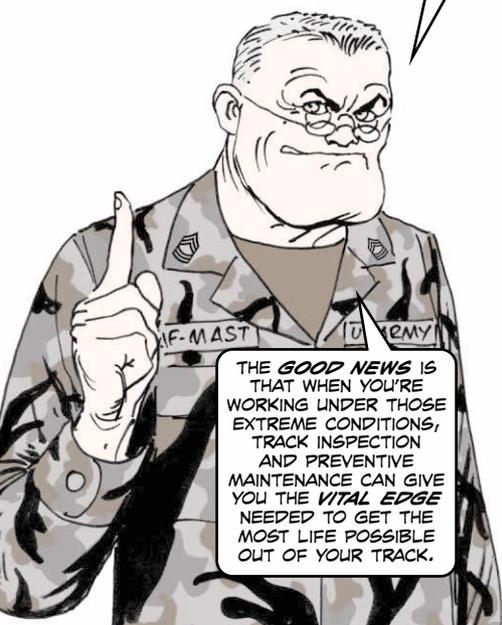
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BEAT THE HEAT WITH PM!



LET'S FACE IT, CREWMEN. DESERT OPERATIONS ARE TOUGH ON YOUR BRADLEY'S TRACK.

HEAVY LOADS, LONG HOURS OF OPERATION, HIGH SPEEDS AND EXTREME HEAT ALL COMBINE TO WEAR OUT TRACK MUCH FASTER THAN IT WOULD NORMALLY.



THE GOOD NEWS IS THAT WHEN YOU'RE WORKING UNDER THOSE EXTREME CONDITIONS, TRACK INSPECTION AND PREVENTIVE MAINTENANCE CAN GIVE YOU THE VITAL EDGE NEEDED TO GET THE MOST LIFE POSSIBLE OUT OF YOUR TRACK.

Track Shoe Wear

T157 and T157I track shoes have several critical wear areas:

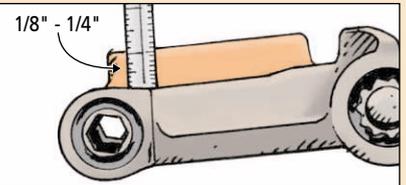
- grouser height
- center guide thickness
- pad thickness
- sprocket window width
- bushings

When one shoe wears out, it can have a negative effect on the others, so proper inspection during your before-and after-operation PMCS is vital.

Follow the Condition Code F wear guides below from TM 9-2530-200-24, *Standards for Inspection and Classification of Tracks, Track Components and Solid-rubber Tires*.

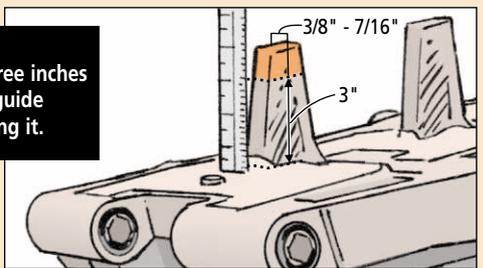
Condition Code F means the track shoe or pad is repairable if it's replaced **when** it reaches this level of wear. Components and pads worn beyond these limits are not repairable. It costs a lot more to replace track than to repair it.

Grouser height:
1/8-in to 1/4-in measured from the top of the bushing boss to the top of the grouser. Anything more than 1/4 inch is still OK to use.

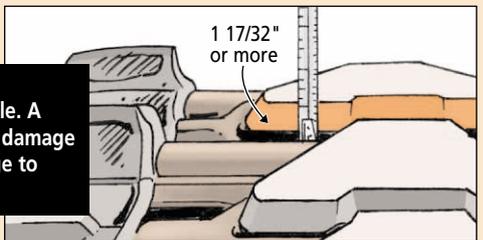


Center guide thickness:
3/8-in to 7/16-in at a point measured three inches up from the shoe surface. If the center guide measures more than 7/16 inch, keep using it.

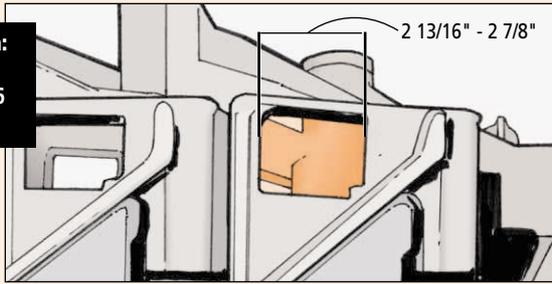
While you're at it, check for broken or bent center guides. They can cause the track to override and damage the roadwheels and support rollers. They can even throw a track.



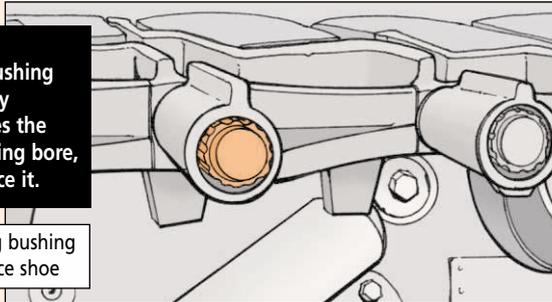
Pad thickness:
Less than 1 17/32-in thick is unserviceable. A pad worn down enough to allow metal damage to the grouser can cause enough damage to make the track shoe non-repairable.



Sprocket window width:
2 13/16-in to 2 7/8-in.
Anything less than 2 13/16 inches is still usable.



Bushings:
Off-center pins indicate bushing wear and should be closely watched. If the pin touches the inside surface of the bushing bore, the shoe's no good. Replace it.



Pin touching bushing bore? Replace shoe

Also, watch for pins that stick out more on one side of the shoe than the other. One of the locking nuts could be loose or missing. The locking nuts are a one-time-use item, so make sure your mechanic uses a new one if they are loose or damaged.

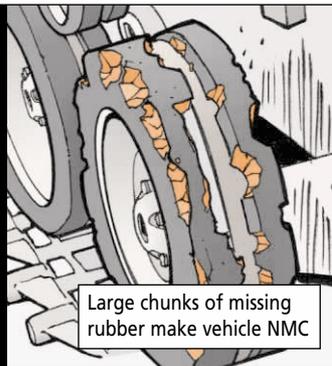
Wheel Inspection

ROADWHEELS, IDLER WHEELS AND SUPPORT ROLLERS SHOULD BE INSPECTED FOR WEATHER CRACKING, CHUNKING AND TREAD SEPARATION. HERE'S WHAT TO LOOK FOR...



Weather cracking:
If weather cracks extend completely across the tread surface and are deeper than 1/4 inch, the wheel is unserviceable.

Chunking:
For roadwheels, one missing chunk of rubber that measures three by four inches or larger is enough to make your vehicle NMC. Depth of the chunking doesn't matter. Even smaller chunks can make the roadwheel unserviceable if they cover more than 20 percent of the tread surface.



Large chunks of missing rubber make vehicle NMC

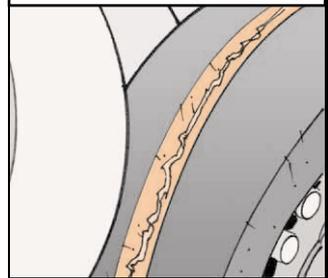


Small chunks OK if they cover less than 20% of tread

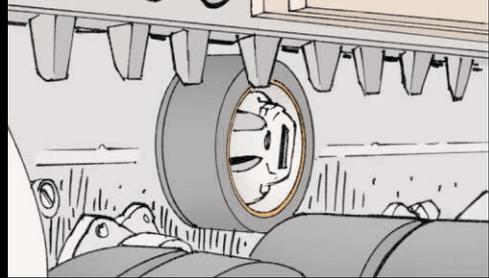
For support rollers, it only takes a chunk measuring one inch by two inches to cause a deadline. Again, the depth of the chunking doesn't matter and a collection of smaller chunks that cover more than 20 percent of the tread surface make the support roller unserviceable.

Tread separation:
Separation of the tread that is one inch or wider and goes around 75 percent of the roadwheel makes your vehicle NMC. The same goes for support rollers, except the separation only has to be 1/2 inch or wider.

Check for separation that extends 75% around roadwheel



Check support rollers for separation, too



THERE ARE A COUPLE OF THINGS YOU CAN DO TO PREVENT SOME OF THIS TREAD DAMAGE.

First, check for loose hardware. Loose lug nuts allow the roadwheels and support wheels to wobble. That further strips the lug bolt threads and eats away at the wheel's mounting holes.

The more the wheels move, the greater the chance that the center guides will hit and damage the tread.

Second, remove track debris whenever possible. Rocks thrown up by the track can lodge between the roadwheel arms. That results in gouging and deep cuts or grooves in the tread.

Shocks and Hubs

Good shock absorbers generate heat during operation. If any of your shocks are cool or only slightly warm to the touch, report 'em. They aren't doing the job and can cause excessive track wear.

Roadwheel hubs are the exact opposite. If they generate excessive heat, it's a good sign that the bearings are failing. Tell your mechanic.

Be careful when checking for hot shocks or hubs. Either one can generate enough heat to burn you.

Shocks should be hot after operation

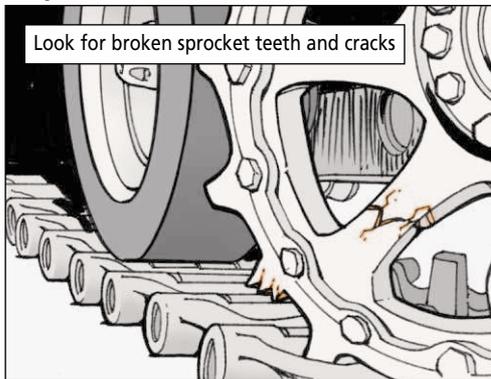


Sprockets

Check the drive sprockets on your Bradley for broken teeth, cracks, excessive wear and loose mounting bolts.

When replacing or reversing a sprocket, make sure all mating surfaces are clean before reinstalling the parts. Pay special attention to bolts and the surface of the sprocket where the bolt mounts. Dirt between these areas can cause the bolt to loosen or break.

Look for broken sprocket teeth and cracks



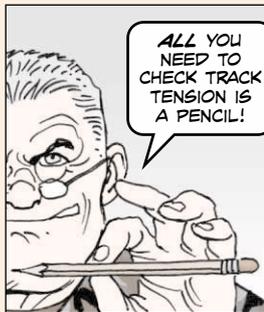
Track Tension

Improper track tension will wear out track fast! Track that's too tight cups sprocket teeth and strains shoe pins. Track that's too loose gets thrown, damaging roadwheels and support rollers.

Keep track tension just right by checking it after every operation. Let the vehicle roll to a complete stop on firm, level ground. Stop the engine and try turning the rear support roller with one hand.

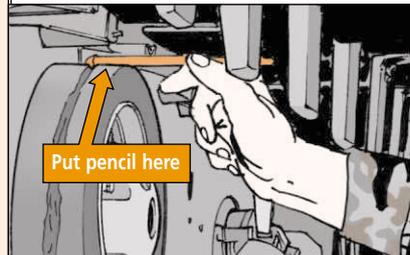
The roller should turn freely, but with only enough room between the track and roller for a pencil to pass through.

If there's more room than that, the track is too tight. If the roller won't turn at all, the track is too loose. Either way, it's time to make some adjustments.



To tighten track tension:

1. Place a pencil between the track and the rear support roller.



2. Wipe the lube fitting with a clean cloth and pump grease into the track adjuster.

Pump in grease to tighten track



3. Watch the pencil. The tension is right when there's just enough room between the track and the rear support roller for the pencil to fit.

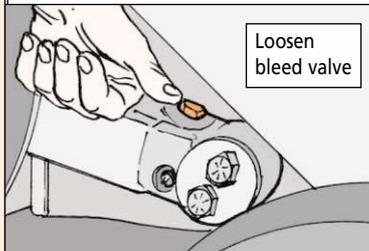
4. Keep an eye on the track adjuster piston, too. The maximum extension for the piston is 3 1/2 inches. If you've reached that limit and the track is still too loose, you'll need to remove a track shoe and start over.

Piston extended to 3 1/2 inches? Remove a shoe



To loosen track tension:

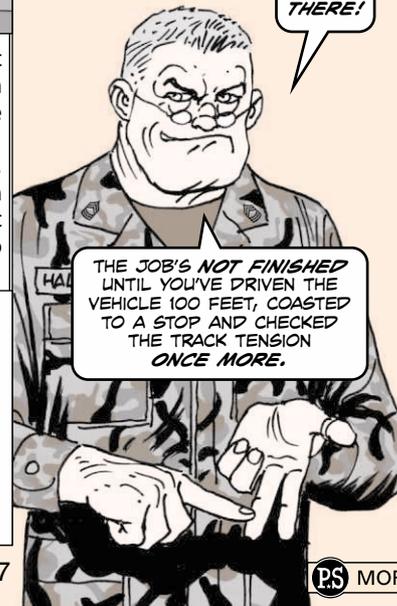
1. Once again, place a pencil between the track and the rear support roller.
2. With a 5/8-in open-end wrench, loosen the track adjuster bleed valve just enough to allow grease to flow.



3. Watch the pencil. When there's just enough room between the track and the rear support roller for the pencil to fit, the tension is right.

4. Re-tighten the bleed valve and wipe away excess grease.

DON'T STOP THERE!

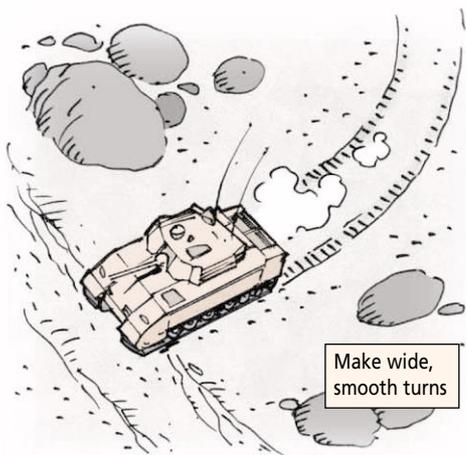


Driving

Be wary of a lack of steering response. That indicates sand is building up between the treads and sprockets or idler wheels. If you allow the buildup to continue, the sand will throw the track.

Try “shaking” the vehicle with the steering or backing up to remove sand buildup. Remove accumulated sand by hand at your next stop.

Make wide, smooth turns instead of sharp, hard turns in your Bradley. That’ll eliminate some of the sand accumulation and put less stress on track pads.

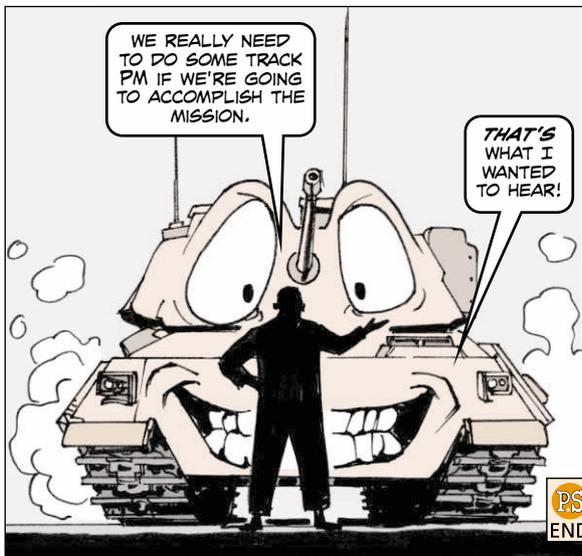


THE INFORMATION IN THIS ARTICLE **ALSO** APPLIES TO THE MLRS CARRIER.



WE REALLY NEED TO DO SOME TRACK PM IF WE'RE GOING TO ACCOMPLISH THE MISSION.

THAT'S WHAT I WANTED TO HEAR!



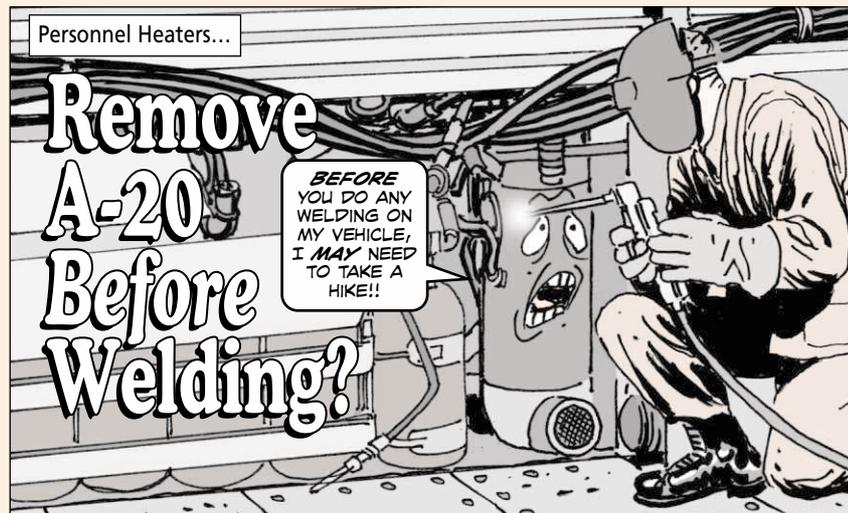
Bradley Turret Travel Lock

Having problems with the turret travel lock on your M2A2/M3A2 Bradley? Don't try to fix it yourself. Tell your mechanic. He'll adjust, repair or replace the travel lock following the instructions in Chap 9 of TM 9-2350-284-20-2-2.

Personnel Heaters...

Remove A-20 Before Welding?

BEFORE YOU DO ANY WELDING ON MY VEHICLE, I **MAY** NEED TO TAKE A HIKE!!

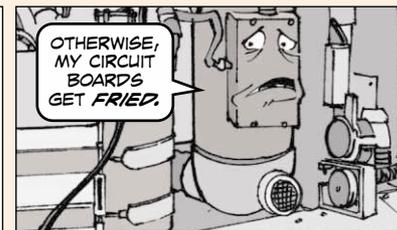


Got any electric arc or resistance welding scheduled for your combat vehicle? Better check to see if it's equipped with an A-20 personnel heater, NSN 2540-01-396-2826, first.

IF IT IS, YOU'LL HAVE TO FOLLOW THESE GUIDELINES **BEFORE** WELDING.

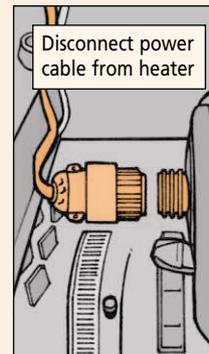


OTHERWISE, MY CIRCUIT BOARDS GET **FRIED**.



1. Disconnect the vehicle power cable at the heater's MS power connector, **not** from the control panel.
2. If the heater has any accessory items disconnect the cables.
3. Make the welding ground point as close as possible to the welding area.
4. If the heater is between the area being welded and the welding ground point, **remove the heater**.

Disconnect power cable from heater



Disconnect accessory cables **before** welding



CLOBBER ENGINE SLOBBER



Drivers, you're asking for trouble when you run the heavy equipment transporter's diesel engine for long stretches at low idle.

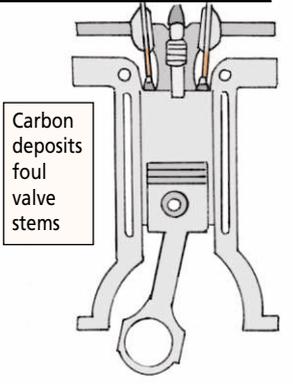
You're asking for even **more** trouble if you continually start the engine and shut it down before it has a chance to warm up.

It's plain and simple—diesel engines work best at normal operating temperatures. They run smoother and last longer.

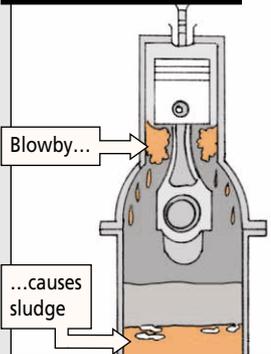
HERE'S WHAT HAPPENS WHEN YOU DON'T LET THE ENGINE HEAT UP TO NORMAL OPERATING TEMPERATURES...



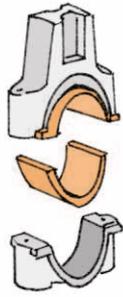
- Fuel and oil are not completely burned in the combustion chambers, leaving carbon deposits on the engine's valve stems. Carbon hinders valve operation, resulting in burned valves and bent push rods.



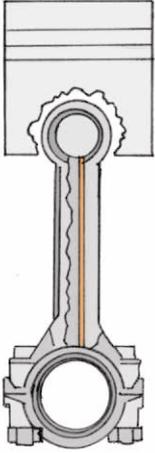
- Condensation and unburned fuel—known as blowby—slip past the pistons and into the crankcase. That blowby in the crankcase mixes with oil to make acid and sludge.



- Engine oil breaks down. Poor lubrication burns up bearings.



- Sludge blocks lube passages. Oil can't get through to do its job, so heat and friction tear up your engine.



You drivers can get rid of slobber buildup by running the heavy equipment transporter under a full load for 1 to 2 hours. That way the engine will reach normal operating temperatures and burn off excess fuel and oil.

GEEZ! LOOK AT ALL THIS SLOBBER! WHAT HAVE YOU BEEN FEEDING THIS GUY?

IF YOUR ENGINE IS SLOBBERING, YOU'RE NOT OPERATING IT RIGHT.



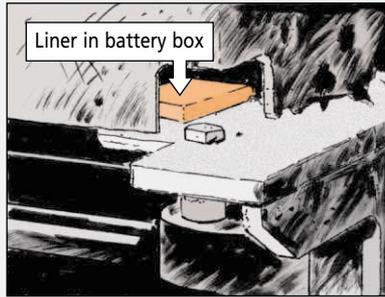
BATTERY BOX LINER NSN

NSN 6160-01-389-1966 GETS A ROLL OF BATTERY BOX LINER!



Acid spills from batteries causes corrosion on the bottom of battery boxes. But that acid doesn't have to get a free shot. Use NSN 6160-01-389-1966 to get a roll of battery box liner for tactical, CCE/MHE and combat equipment.

The liner works like a sponge that absorbs and neutralizes battery acid. Cut the 1/4-inch thick liner to fit the bottom of your vehicle's battery box.



HERE ARE SOME NUMBERS TO HELP YOUR PM!



M1070 HET O-RING

NSN 5331-01-357-0846 gets an O-ring for the counterbalance valve in the heavy equipment transporter's auxiliary winch. The O-ring is missing from the valve body that's shown as Item 18, Fig 221 of TM 9-2320-360-24P.

HET BATTERY DISCONNECT KIT

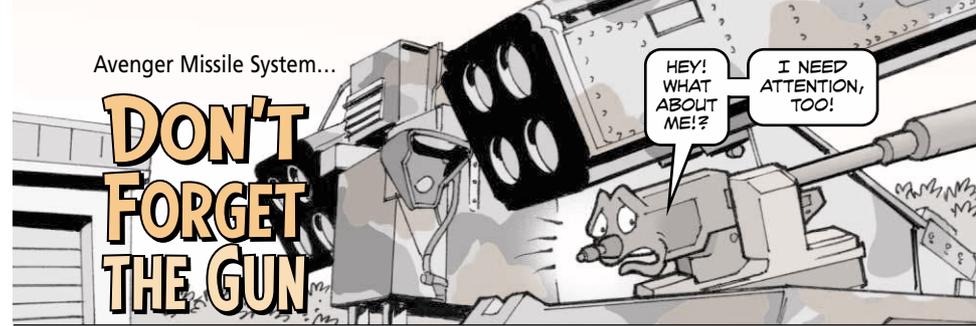
Batteries are known to run down on the M1070 heavy equipment transporter (HET). You mechanics can put an end to dead batteries with a battery disconnect kit that comes with NSN 5930-01-494-9353. Installation instructions come with the kit.

BII 12-VOLT CABLE ASSEMBLY

NSN 6150-01-478-6510 gets the 12-volt cable assembly for the M915A2 and M916A1/A2 tractor trucks. This NSN replaces the parts info shown as Item 6, Page B-4 of TM 9-2320-363-10.

Avenger Missile System...

DON'T FORGET THE GUN



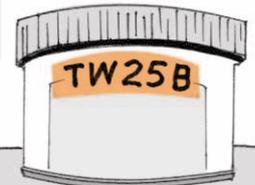
Unfortunately, too many Avenger units do **forget** the M3P machine gun when it comes time for PMCS. The M3Ps are stored down in the arms room, not at the motor pool, and no one bothers to go get them. The Avenger gets a thorough PMCS, while the M3P is ignored...until it's time to fire it. Then it's discovered the gun has corrosion or its lube has dried up and caked and gummed up moving parts.

Don't expect the armorer to be taking care of your unit's M3Ps. Usually, that's the Avenger crews' jobs. At least monthly, get your M3Ps out of the arms room and give them a good PMCS. Look for corrosion and signs the lube is drying up. Clean and lube the gun if necessary.



THE TWO MOST COMMON MISTAKES WHEN IT COMES TO CLEANING AND LUBING THE M3P ARE USING THE WRONG LUBRICANT AND PUTTING ON THE WRONG AMOUNT.

Use TW-25B only



TW-25B, NSN 9150-01-439-0859, is the only lube to use on the gun. CLP is not strong enough to stand up to the heat the M3P produces during firing. (The elastic cradle, though, is lubed with LSA, not TW-25B.)

If the M3P is just going to sit in the arms room, give all parts a heavy lube. It's a different story for firing, though. Parts take different amounts of lube then. See the chart on the next page for what parts get what lube.

HEY, I'M GONNA SIT, SO A HEAVY COAT OF LUBE IS ALL I NEED.



NOT ME, I'M FIRING TOMORROW. SOME OF MY PARTS NEED A LIGHT COAT!

Spares Spare You Trouble In Field



Dear Editor,

Here at Ft Hood we've found taking a few spare parts to the field spares us downtime and problems with our MLRS.

An Extra Adapter

The W19 and W20 cables are the interface between the launcher and rockets and must be connected and disconnected often. Both cables have adapters to protect the cable connectors. With all the connecting and disconnecting, the adapters get plugged with dirt or damaged. Then the W19 or W20 doesn't make a good connection and you can't fire.

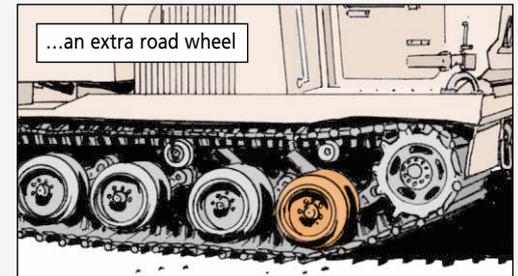
The field fix is usually just to remove the adapter and plug in the cable without the adapter. The problem with that is that then the cable itself is often damaged. Cables are expensive to replace. We avoid damaged cables by taking at least one extra W20 adapter, NSN 5935-01-238-5896, and one W19, NSN 5935-01-155-9847, to the field. If an adapter has problems, we just replace it. Adapters are much cheaper than cables.



Take extra adapter to the field and...

Extra Road Wheel

A damaged road wheel can stop you in your tracks in the field. And often it can take quite a while to get a replacement. So we just put an extra road wheel in the support truck. If a road wheel is damaged, we put on the replacement and get back to business.



...an extra road wheel

SSG Shaun Tobin, SSG Jeremy Larson
1/21st FA
Ft Hood, TX

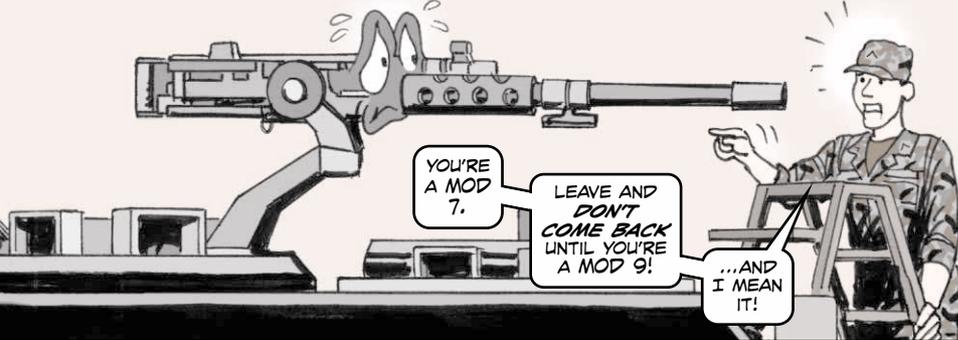
From the desk of the Editor

In PS 525 (Aug 96), we pointed out that electrical contact cleaner is also a good way to handle dirty cable adapters. Just remove the adapter and spray it with the cleaner. Circuit board cleaner works or you can order cleaning solvent with NSN 6850-01-371-8048.



Spray dirty adapter with contact cleaner

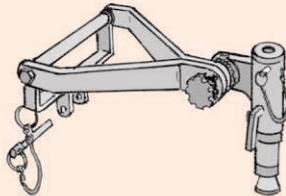
MK64 MOUNTS MODIFIED?



MWO 9-1010-231-30-2 (Mar 98) modified the MK64 machine gun mount from Mod 7 (NSN 1010-01-179-7616) to Mod 9 (NSN 1010-01-412-3159). All units should have had the MWO done to their MK64s by now. Unfortunately, that's not the case and units are trying to order parts for the Mod 7 that are no longer available.

Units should immediately check to see if their MK64s have been modified to Mod 9 and that their property books show the change. Mod 9s use the universal pintle adapter and the larger catch bag with the velcro side. If your mounts haven't been modified, TACOM Rock-Island still has a limited number of the MWO kits available.

Universal Pintel Adapter

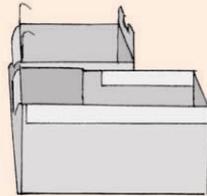


Mod 9 Additions

Ammunition bracket handknobs



Larger catch bag/ frame assembly



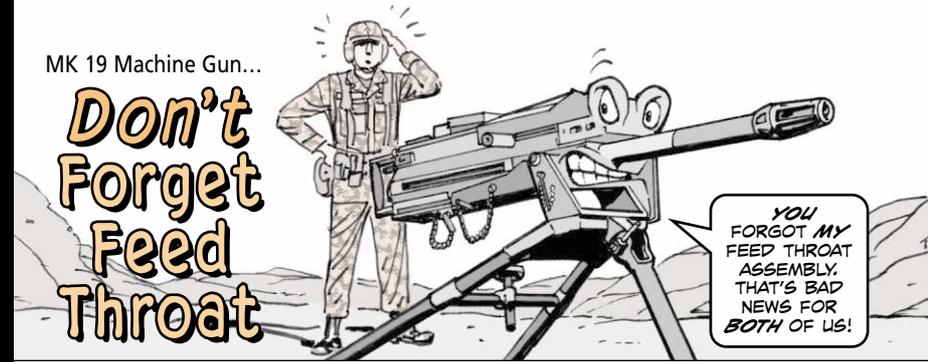
For more information, contact William Jensen at DSN 793-3677/(309) 782-3677 or email: bill.jensen@us.army.mil



MAKE SURE YOU HAVE THE OCTOBER, 2000 EDITION OF TM 9-1010-231-13&P.

IT HAS THE LATEST PARTS INFO FOR THE MK64.

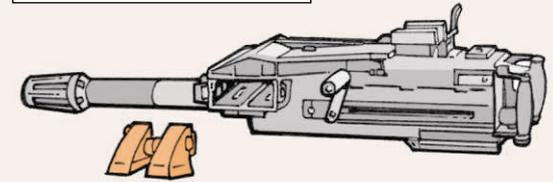
Don't Forget Feed Throat



Lots of units who have deployed have shipped out their MK 19 machine guns without the feed throat assemblies. It's easy to forget the feed throat assembly because it's usually stored separately in the arms room from the rest of the gun.

But without the assembly, your MK 19s will have firing stoppages. So when you ship out your MK 19s, make sure you're also shipping out the feed throat assemblies too.

Remember feed throat assembly



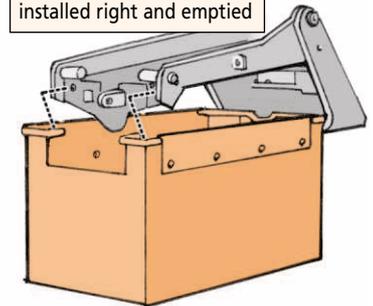
CATCH MK93 CATCH BAG PROBLEMS

If you don't catch MK93 mount catch bag problems on your MK 19 machine gun, they will catch you during firing.

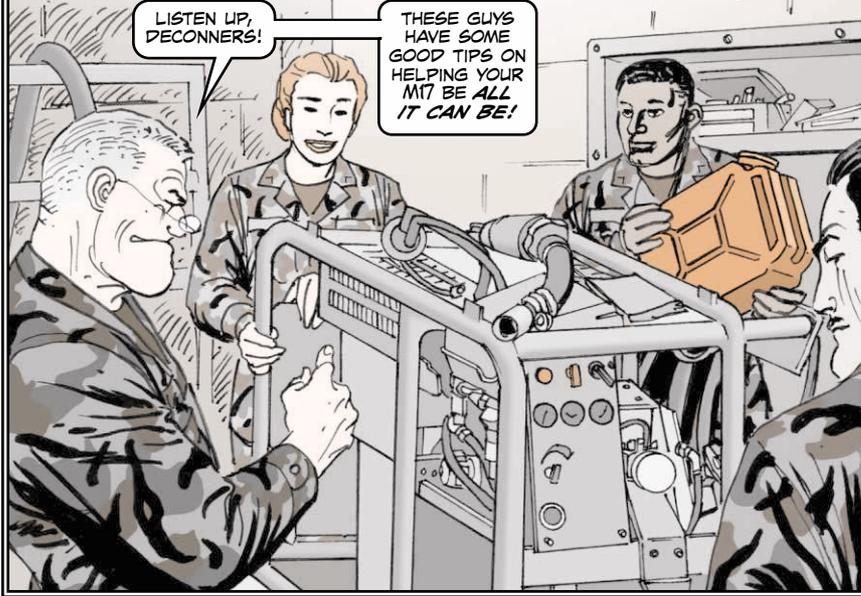
A catch bag that's installed wrong or is not emptied of spent cartridge cases lets cases pile up under the bolt. That makes it difficult for the bolt to move and the firing pin hits the next cartridge before it's fully chambered. The cartridge case ruptures and the projectile doesn't make it out of the barrel. The next round can blow up the barrel.

Make sure the catch bag is installed correctly. Keep an eye on the bag during firing. Empty it when it's almost full.

Make sure catch bag is installed right and emptied



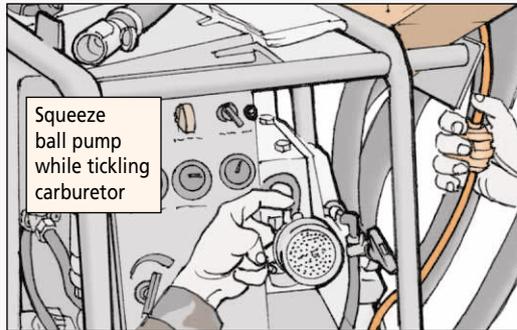
The WORD on Deconning



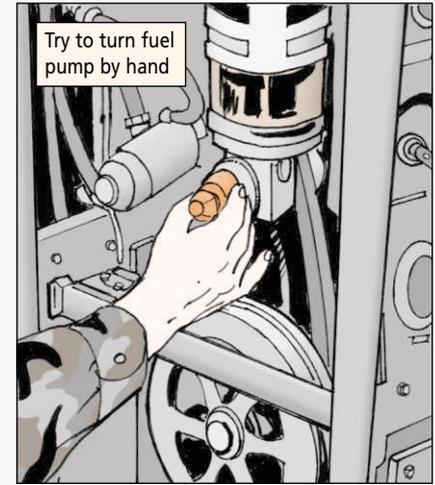
Dear Editor,

Based on our unit's experience maintaining and using the M17 decon, we've come up with a few suggestions for getting the most out of your M17s.

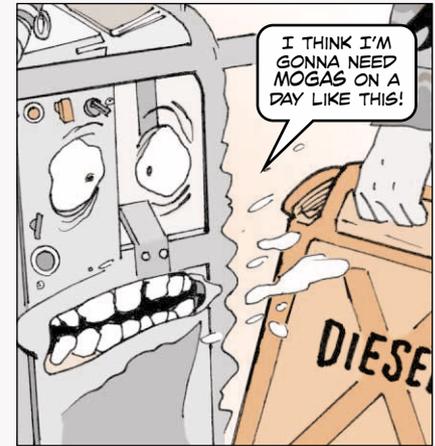
- When you start up, you're supposed to squeeze the ball pump on the fuel line until fuel fills the fuel filter. Then you go to the carburetor and tickle it until fuel comes out the drip plate. That usually takes 5 minutes. You can do the job in 1 minute if you hold the tickler down while you pump the ball pump.



- If your M17 hasn't been used much, take off its heater fuel pump belt and try to turn the pump by hand. If it won't turn, corrosion or dried fuel may have locked it up. If you try to run the pump in that condition, pump parts will likely snap and the pump will be ruined. Unfortunately, the pump costs \$2,000. Sometimes direct support can cure a stuck pump by removing the fuel suction line from the fuel pump inlet and filling the pump inlet with penetrating oil or carburetor cleaner and letting it sit overnight. Then try to turn the pump by hand. If it turns, you're ready to go. If it doesn't, direct support will need to take the fuel pump apart and lubricate it.



- When starting a cold heater, it's a good idea to first use MOGAS and then switch to diesel later. The heater is hard to start when cold with diesel. See the temperature guidelines on Page 2-32 in TM 3-4230-228-10.



- Before you replace what you think is a bad igniter, first use a multimeter to check the voltage output from the stator. See Test 8 on Page 3-11 of the -23&P. Lots of times a bad stator or step-down transformer is the problem, not the igniter. That quick check can save you repair time. Direct support will need to replace a bad stator.

SFC Jose Hernandez
 181st Chem Bn
 Derrick Colton, SBCCOM Logistics Assistance Representative
 Ft Hood, TX



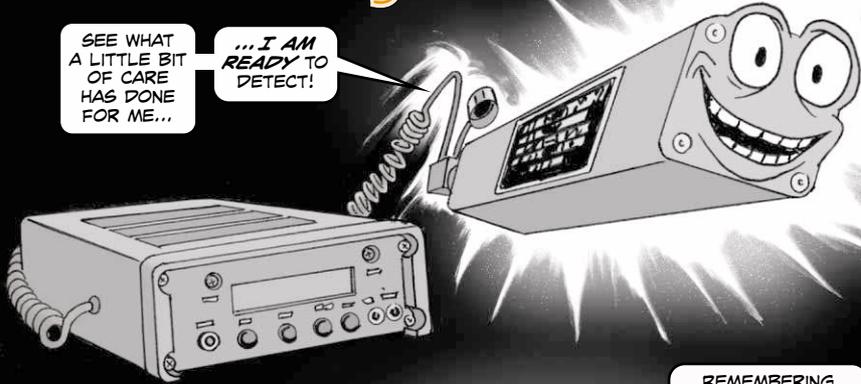
From the desk of the Editor

You do have the word on good deconning—several in fact. Thanks.

Radiating Good Health

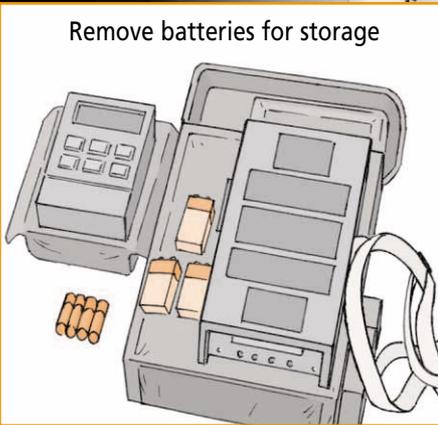
SEE WHAT A LITTLE BIT OF CARE HAS DONE FOR ME...

...I AM READY TO DETECT!



REMEMBERING THESE TWO TIPS WILL HELP YOUR RADIAC EQUIPMENT RADIATE GOOD HEALTH...

Most NBC rooms have at least some radiac sets and radiac meters: generally AN/VDR-2s, UDR-13s, IM-93s, and AN/PDR-75s. Normally, radiac equipment doesn't need much care, but unfortunately the equipment often gets no care. Then it doesn't work.



Remove batteries for storage

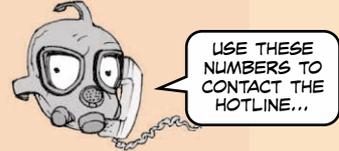
- Don't store radiac equipment with the batteries installed. The batteries can leak and that corrodes the battery contacts and can damage the radiac equipment itself.
- Every month take all the radiac sets and radiacmeters out of the cabinet and turn them on and make sure they're working properly. In many NBC rooms, radiac equipment isn't used for months and problems aren't spotted until the item is needed.

Chemical Equipment Hotline



Where do you turn when you have questions about your protective mask, decon equipment, smoke generator, chemical alarms, or other chemical/biological equipment? The Chemical Equipment Hotline!

The hotline, which is managed by the Edgewood Chemical and Biological Center, will either answer a question directly or refer you to the person who can answer the question. Calls received during non-business hours are recorded on voicemail and answered on the next work day.



Toll free: 1-800-831-4408
DSN/commercial: 584-1166/(410) 436-1166
Fax: DSN 584-3912/ (410) 436-3912
Email: CEH@sbccom.apgea.army.mil



M40/M42-Series Masks...

How to Get PMCS Card?

Dear Half-Mast,
 The PMCS card that comes with the M40/M42-series masks makes it easy for soldiers to do a thorough inspection of their masks. Unfortunately, over time those cards should disappear. Is there any way to get more?
 SGT D.K.

Dear Sergeant,
 Sure. You can order more cards with NSN 7690-01-491-9282 for about \$1.45 each.
 Half-Mast

HYEX...

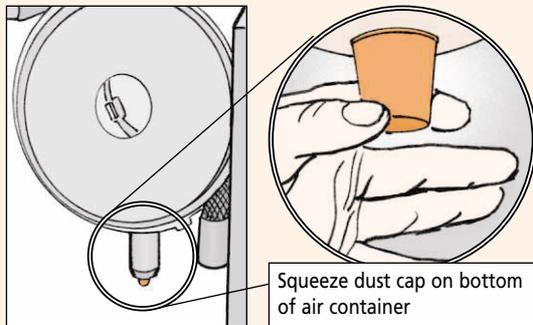
A SQUEEZE WILL DO!

!GASPE
!GASPE
...NEED
AIR...
!GASPE
LOTS...
OF IT!

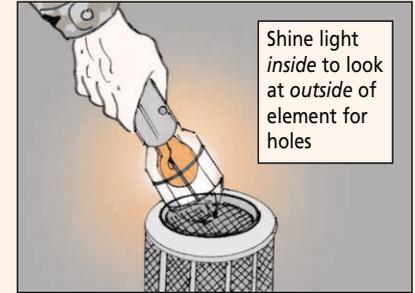


Clean air filters are important for all vehicles, but they're crucial on a HYEX. The engine will run rough or not at all if the filters are clogged. A dirty filter steals power and forces the excavator to struggle with any load in the backhoe.

Operators, it's a good idea to squeeze the dirt out of the dust cap on the bottom of the air canister every day. This is especially true if you're in a dusty or sandy area. This gets rid of the dirt from the canister, but not from the primary or secondary air filters.



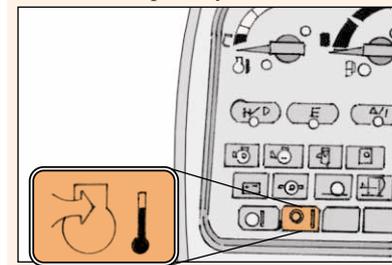
Take the primary filter out and tap it real good with the heel of your hand to loosen dirt. Then shake it and tap some more. This will knock enough junk out of the filter to keep you going until you can replace it or clean it with low-pressure air (30 psi or less). Never bang the filter on a rock or hard surface. You can dent it, which causes a poor seal.



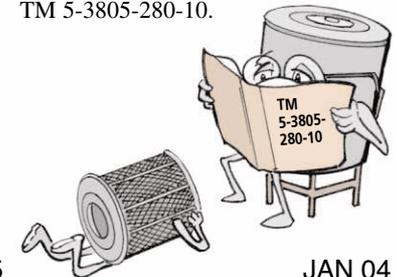
- the primary filter is damaged and needs to be replaced.
- after 1,000 hours of operation or annually.



Keep an eye on the air cleaner indicator light on the operator's station inside the cab. When the light turns red, stop and clean the primary filter.



You might want to bone up on how the canister and air filters fit together before you start excavating. That means you'll want to take a look at Pages 2-6, 11-5, 14-9 and 14-10 of TM 5-3805-280-10.



STOP TURBO BURN- OUT!

2003 INDEX NOT INCLUDED

Way too many turbochargers on the engines of commercial construction equipment are ending up at support and DOL shops for repair or replacement.

How come, you ask?

While transported on the back of a semitrailer, the exhaust pipe on this type of equipment can face directly into the wind. That means air is being forced down the exhaust pipe into the turbocharger during transport.

All that forced air causes the turbocharger's impeller to spin without lubrication. Without oil being pumped to the impeller bearings, they burn out. The end result is no turbocharger.

So how do you prevent turbocharger burnout?

Use duct tape, NSN 5640-00-103-2254, and tape over the exhaust stack. That way no air gets forced down the stack and into the turbocharger.

Just remember to remove the tape before vehicle startup.

IT MAY FEEL
GOOD TO YOU
NOW...

...BUT YOUR
TURBOCHARGER'S
GONNA HATE YOU
LATER!

CH-47D...

HERE'S SOMETHING YOU NEED TO REMEMBER, AND NEVER FORGET, CHINOOK CREW MEMBERS.

Pressure on Shut-off Valve

Remember to complete the primary and secondary checks before single point refueling of a Chinook's FWD, MAIN and AFT fuel tanks. They are spelled out in Task 1-51 of TM 55-1520-240-23-1.

Forget these checks, which means you don't check the position of the ALL TEST float switch on the fuel cell shut off panel before refueling, and you could damage the shutoff valve.

If the ALL TEST float switch was left in the FLOW position during a previous refueling, remember to flip it back to the PRI OFF position before pressure refueling.

If the ALL TEST switch is left in the FLOW position while the fuel tanker hose is hooked to the aircraft and the nozzle lever is opened to allow fuel flow, the flow won't stop within the required 4 seconds, like the TM says.

And, if you exceed 55 psi, you could end up with a fuel spill to clean up.

So think about the next soldier who'll be refueling your bird. He or she will appreciate it if you flip the ALL TEST float switch from FLOW back to PRI OFF after refueling is done.

Course, always refer to the refuel station overhead panel instructions to keep you straight. When all the left- and right-hand, AFT, FWD and MAIN fuel tanks reach the desired fuel levels, don't forget to set all the refuel valve switches back to the PRI OFF position.

Refer to refuel procedure on overhead panel above

PERFORM ALL CHECKS BEFORE REFUELING

FUEL CELL SHUTOFF VALVE TEST

REFUEL VALVE	LH	PRI OFF	FLOW	SEC OFF
REFUEL VALVE	RH	PRI OFF	FLOW	SEC OFF
		AFT	MAIN	FWD
		PRI OFF	FLOW	SEC OFF
		ALL TEST	LIGHT	PWR ON
		PRI OFF	ON	ON
		FLOW	OFF	OFF
		SEC OFF		OFF

MAIN ROTOR BIFILAR E-X-P-A-N-D-A-B-L-E PIN

ARE YOU
READY TO
TRY AGAIN?

YEAH,
HOW 'BOLT
GETTIN' ME
A HAMMER...

...THIS
EXPANDABLE
PIN IS ONE
TOUGH COOKIE
TO GET ON
AND OFF!

HOLD
ON!

NO NEED
FOR A
HAMMER.
USE THIS
TOOL!



Dear SFC Blade,

The Black Hawk's bifilar expandable pins, NSN 5315-01-112-2991, are tougher than nails to remove.

The procedure in paragraph 5-4-27 of TM 1-1520-237-23-3 makes good sense. It tells you to hold the pin with a hex wrench to remove the expandable nut, NSN 5310-00-923-4219.

However, when we try to remove the bifilar expandable pin with a crow's-foot wrench and a breaker bar or an open-end wrench, there's only limited space inside the bifilar to get a turn on the nut.

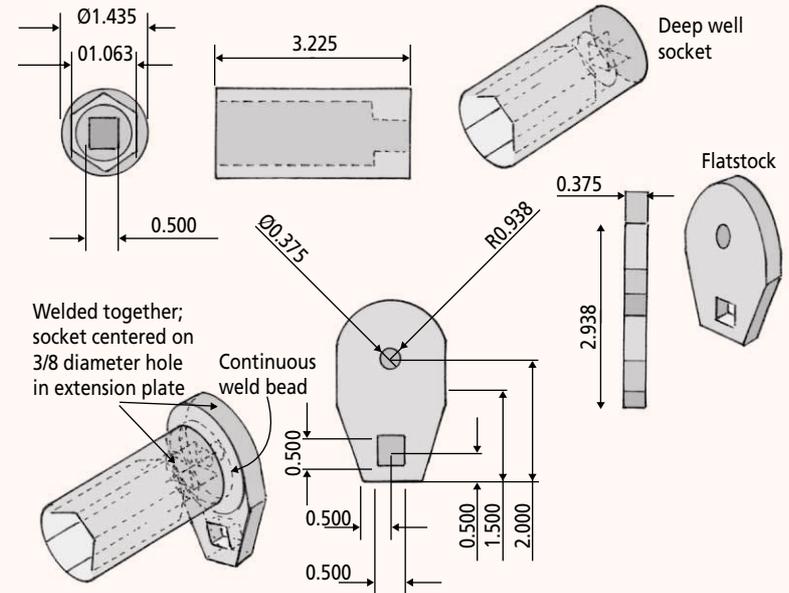
And when reinstalling the nut, we have trouble torquing the nuts to the required 1,090 to 1,205 in-lbs using a crow's-foot.

We solved the bifilar space problem by using a 1 1/16-in, 1/2-in drive hex head deep well socket, NSN 5120-01-431-3859. We weld a piece of 0.375-in flat stock on top of the socket and drill a hole through the center for the hex wrench. We also cut a 1/2-in square hole into the stock for a breaker bar or a torque wrench.

Using this method brings the wrench out of the bifilar into the open area to make it easier to remove and install the pin and properly torque the nut.

When torquing the nut, be sure the tool is at a right angle to the wrench. That way, you don't have to refigure the torque valve.

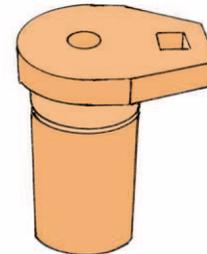
Here are the plans a tool shop can use to make the tool.
The cost is around \$22.



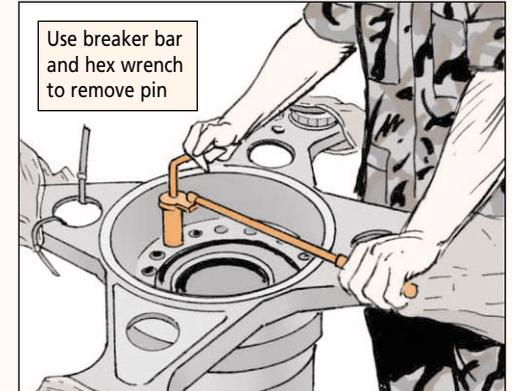
Welded together;
socket centered on
3/8 diameter hole
in extension plate

Continuous
weld bead

Tool should look like this
after fabrication



Use breaker bar
and hex wrench
to remove pin



SGT Andres Chamorro, Jr
MA Army National Guard

Dear SGT Chamorro,
This smart idea adds another tool to a mechanic's arsenal of
tools. Keep the ideas coming in.

Rotor Blade

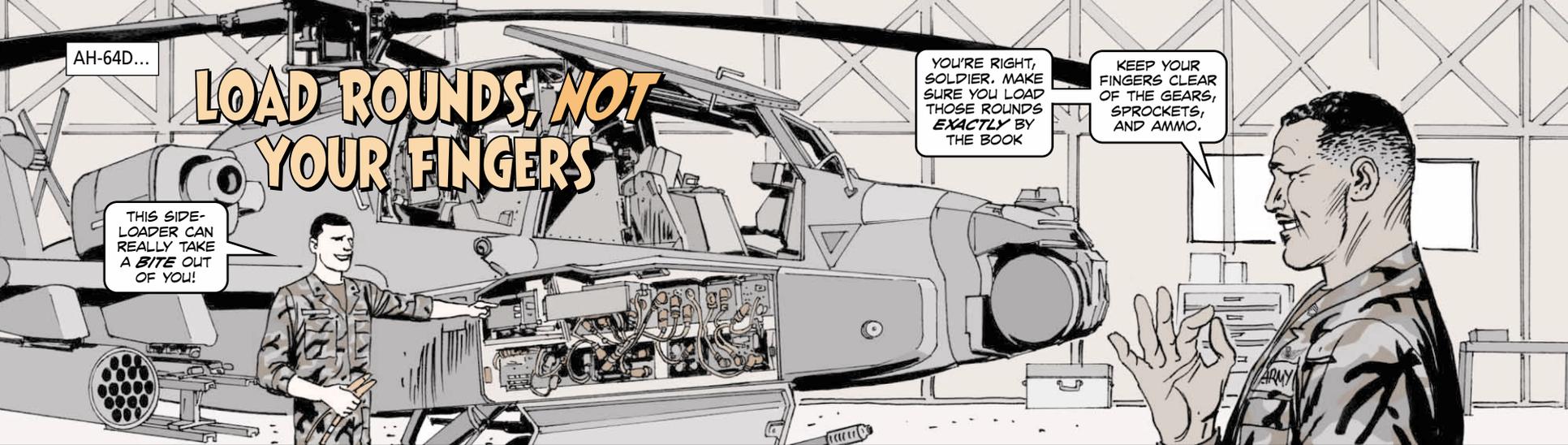
AH-64D...

LOAD ROUNDS, NOT YOUR FINGERS

THIS SIDE-LOADER CAN REALLY TAKE A BITE OUT OF YOU!

YOU'RE RIGHT, SOLDIER. MAKE SURE YOU LOAD THOSE ROUNDS EXACTLY BY THE BOOK

KEEP YOUR FINGERS CLEAR OF THE GEARS, SPROCKETS, AND AMMO.



Dear SFC Blade,

We have a problem with soldiers getting their fingers caught in the side-loader while loading 30mm ammo on the Apache.

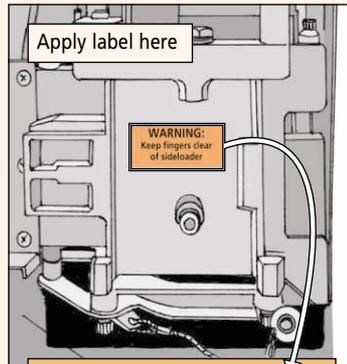
During field exercises, because of the rapid pace of the forward area ammo refueling point (FAARP) operations, soldiers don't always pay attention to the warnings or cautions in the IETM about the side-loader.

The lip inside the loader is damaged when the declutching block is inserted wrong. When ammo trays are damaged, rounds won't load correctly and may fall out.

In either case, the armament soldiers use a finger to push the round into the loader while uploading and then CRUNCH... their finger gets smashed between the round and the loader.

We've come up with a way to remind soldiers to keep their fingers out of harm's way. We made a warning label out of sticker paper with black lettering and placed it on the side-loader as a reminder. It says, "WARNING: keep fingers clear of side-loader."

SSG William Poppo
2/101 Avn
Ft Campbell, KY



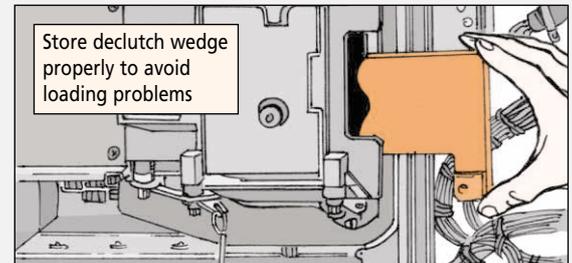
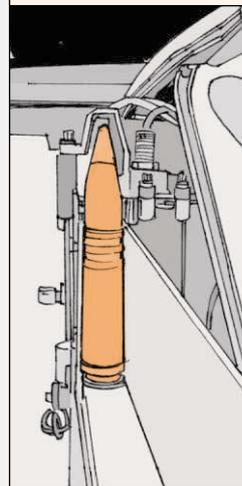
WARNING:
Keep fingers clear
of side-loader

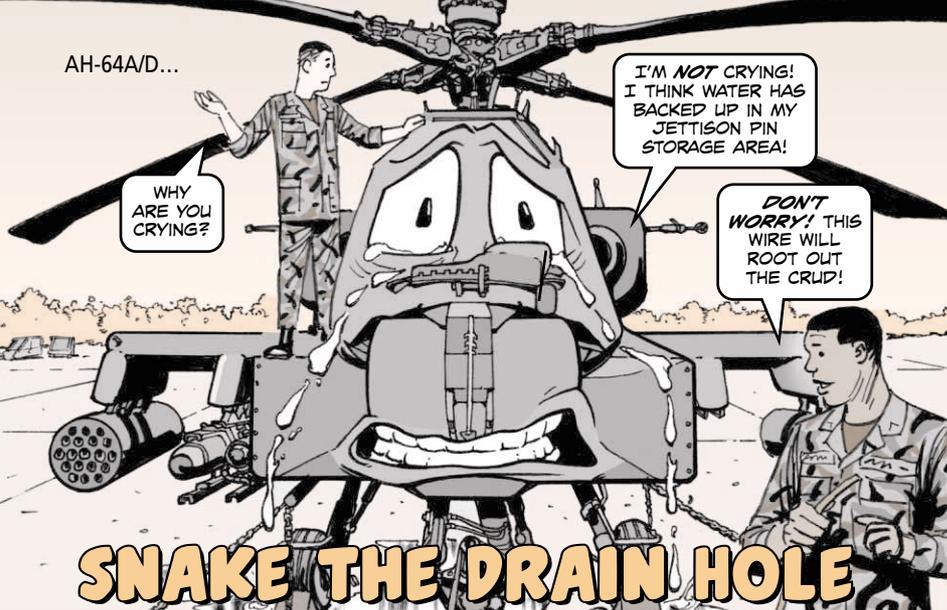
Dear SSG Poppo,

Good idea, especially when you're hustlin' to load ammo. Remember, keep fingers clear of the side-loader gears, sprockets and ammunition. Head off loading problems by never using damaged ammo trays and correctly stowing the declutch wedge like the IETM says.

Rotor Blade

Keep fingers within guide tabs, especially when loading loose rounds





SLAKE THE DRAIN HOLE

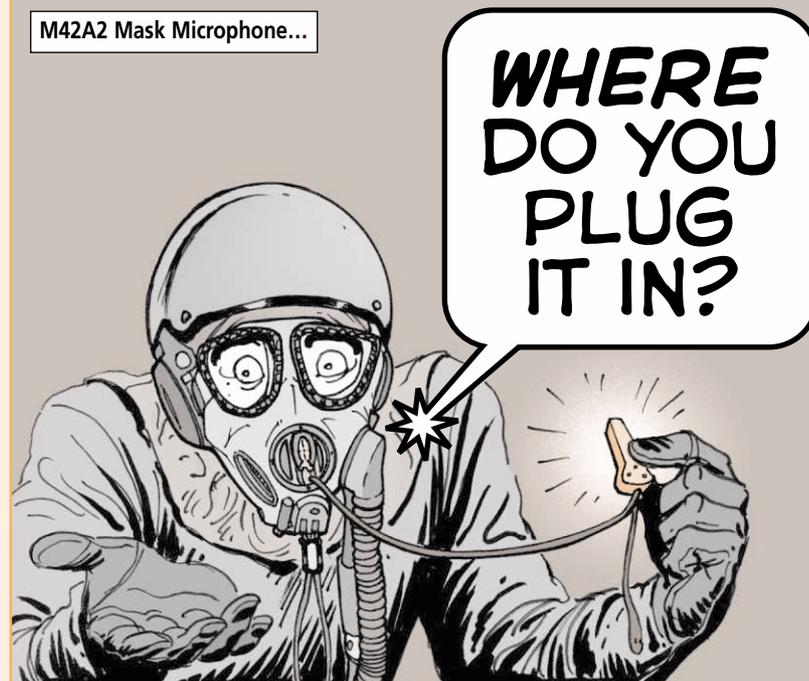
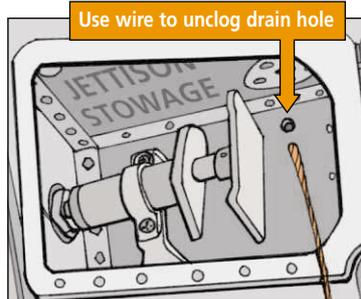
Standing water inside the canopy jettison handle access door (T50) of your Apache means you need a rotor rooter job, repairers.

The canopy jettison handle sits forward of the copilot gunner window (CPG) under a quick release panel for the ground crew to blow off the side panels in an emergency evacuation.

Just because it's out of sight doesn't mean you should put it out of mind. If you do, and water backs up into the canopy housing because of a clogged drain hole, you can bet your bottom dollar that the canopy jettison system will short out. Plus, water can also seep into the forward avionics bay and cause damage to components.

So when you perform your 10-hour/14-day inspection like it says in TM 1-1520-238-PMS, eyeball the drain hole inside the canopy jettison pin stowage area to make sure it's not filled with water.

To unclog the drain hole, use a 6-ft, long, 1/16-in diameter wire. Attach a "Remove Before Flight" streamer, NSN 8345-00-673-9992, and swedge, NSN 4030-00-960-1654. Smooth out all the burrs with a piece of crocus cloth and lightly coat the wire tip with RTV and let dry. Snake the drain hole with the wire to get the crud out. When the drain is clear, remove the wire to prevent a FOD problem.

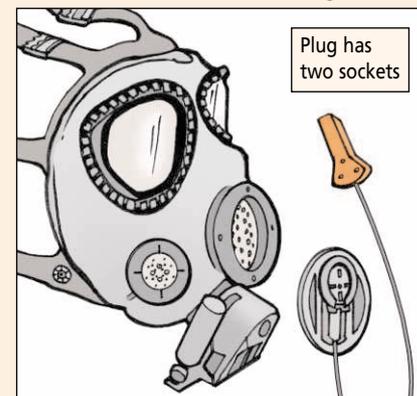


The M42A2 chemical/biological mask uses a dynamic microphone, NSN 5965-01-414-2257. When wearing a CVC helmet and plugging into the AN/VIS-3 communications system, one end of the microphone cord plugs into the front voicemitter socket of your mask. But some folks aren't sure where the other end goes.

Here's where the confusion comes in. The microphone cord plug, JJ-055, has two sockets. But the receptacle in the CVC helmet has three pins!

Here's the scoop: Use that receptacle to plug in the microphone cord, but only use the first two pins. The third pin provides DC power to electrical microphones, which your mask mike isn't. Your microphone is dynamic, which means it requires no electrical power.

So—plug it in and don't worry about the third pin!



WHEN A BATTERY GOES BLOODEY!



THERE YOU ARE, MINDING YOUR OWN BUSINESS, WHEN A LITHIUM-SULFUR DIOXIDE BATTERY STARTS HISSING AND POPPING AND FILLING THE AIR WITH AN ODOR OF ROTTEN EGGS.

WHAT DO YOU DO? WHAT DO YOU DO?



First, get away from the battery! Your natural tendency will be to get closer and see what is happening. You'll want to investigate. **Don't!** Get away from the area until the noise stops and the odor dissipates. Alert others in the area to get away, too. While you're doing this, report the incident.

Second, if you have been exposed to any expelled materials—solids, liquids or mists—wash the areas of exposure immediately. Don't wait around to see what happens. The stuff coming from the battery can be as harmful as sulfuric acid and it will burn you if left on your skin.

If you can smell a sulfurous odor, chances are your eyes have been exposed and could be damaged by acid burns. Flush your eyes immediately with water. If you're wearing contact lenses, get them out and then flush out your eyes again. Don't put your contacts back in until they are thoroughly cleaned and you have contacted your doctor.

Finally, if you experience a battery venting and detect any strong odors, seek medical attention, even if you don't notice any symptoms. This is a better-safe-than-sorry situation.

Reporting the Incident

Battery incidents causing equipment damage or injury must be reported to CECOM. CECOM will need the usual stuff: like your name; phone number; organization; location of the incident; battery type and NSN; battery contract number and date code; and the battery manufacturer.

They'll also need the conditions of the incident—was the battery in storage, being shipped or handled, in use in equipment, being tested, charged or disposed of. How serious was the incident? Was the incident violent? (Did the battery explode?) Were there any injuries? How severe? Was there any equipment damage?

You may have to submit a PQDR, SF 368, to CECOM. CECOM will let you know. You can submit a PQDR online at:

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

A user name and password are required. If you need help with this, talk to your CECOM Logistics Assistance Representative (LAR).

CECOM may ask you to send the battery or equipment to them for further evaluation.

Points of contact at CECOM for battery incidents are:

Philip D. Klimek or David Kiernan, DSN 992-0084 x6437, (732) 532-0084 x6437, Fax DSN 992-6403, (732) 532-6403, email addresses:

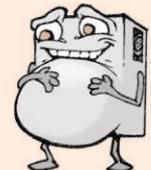
Philip.D.Klimek@us.army.mil
David.Kiernan@us.army.mil



Wash areas of exposure immediately!



NORMAL, MILD VENTINGS IN WHICH THE BATTERY BULGES OR WARPS DURING THE COMPLETE DISCHARGE PROCESS, NEED **NOT** BE REPORTED.



IT'S COOL! I'M OK!

CVC Helmet...

IT'S YOUR NOGGIN!

HELP!!
IF YOU DON'T WATCH OUT FOR ME, I CAN'T WATCH OUT FOR YOU!

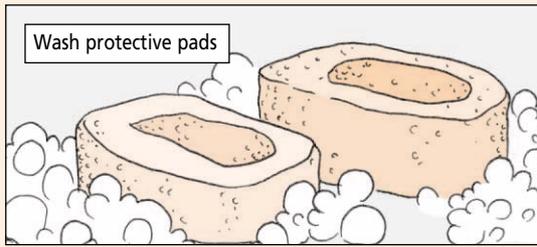


YOU'VE ONLY GOT ONE HEAD. IF YOU WANT TO KEEP IT RESTING COMFORTABLY ON YOUR SHOULDERS, REGULAR CVC HELMET PM IS A MUST.



Keep It Clean

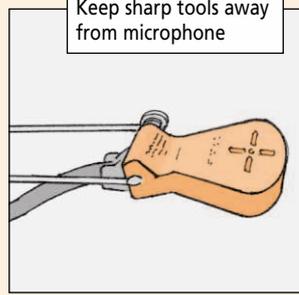
- Oil and sweat build up in the liner and destroy the fabric. Remove the liner and protective pads and wash them in mild detergent and water. Let them air dry.



- Wipe inside the shell with a soft cloth dampened in the detergent solution to get rid of dirt and fungus.
- Clean the cords, straps, microphone and the shell's rubber edging the same way.
- Tap the microphone or earphone in your hand to dislodge dirt stuck in the openings. Never clean the openings with a sharp instrument, like a pin or a pencil. You'll puncture the moisture seals.

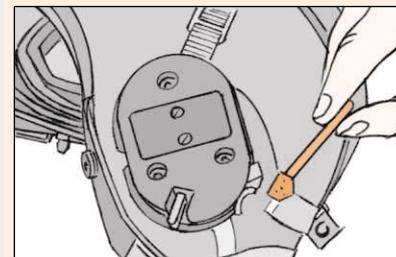
Wash protective pads

Keep sharp tools away from microphone



Keep It Working

- Clean all contacts with isopropyl alcohol and a foam swab.



- Use a dab of silicone to lube the connectors' O-rings to waterproof the connections.



Put silicone on O-rings

- The headset cords tend to dry and crack with time. Wipe down the cords with a little silicone now and then to keep them flexible.

Keep It Dry

- When you take your helmet off, lay it rightside up. Never stand the helmet on its head. A good rain will fill it up like a water bucket. Moisture in the headset creates a short. If your helmet gets a good soaking, let it air dry.



- Help waterproof your earphones by making sure the gaskets are good. Have DS look at the gaskets and replace bad ones.

Keep It Stowed



Stowing your helmet in the **WRONG** place—under the driver's seat or hanging from the intercom control box—is a sure way to get it banged up and sent to the shop.

If the adjustable seat is lowered, it can crack the shell. When the turret moves, a dangling cord can snag on the ammo racks.

Always disconnect the helmet and cord from the box and stow them in a safe place when you're not using them. If you're in the Bradley, put your helmet on a shelf. The M1 has four places where you can stow the helmet:

- The gunner hangs his CVC helmet by its chin strap from a hook at his station. The hook has a label, NSN 7690-01-100-8186, to show that it's for the helmet.
- The commander's helmet goes on the GPS sight.
- The loader hangs his helmet on the shoulder guard at his station.
- The driver puts his under the steering column or on the flat surface under the hatch lever.



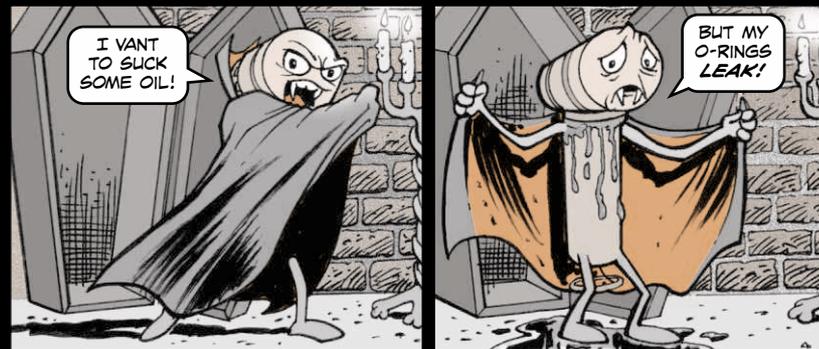
FOR EXTRA PROTECTION, STOW THE CVC IN A WATERPROOF CARRYING BAG.

YOUR SUPPLY CAN GET YOU ONE WITH NSN 8415-00-782-2989.



AOAP...

PUT THE BITE ON O-RINGS



Pump with Stand		Pump without Stand	
O-ring, NSN 5331-01-226-8750		O-ring, NSN 5331-01-226-8750	O-ring, NSN 5331-01-133-5858
O-ring, NSN 5331-00-579-8156		O-ring, NSN 5331-00-579-8156	
O-ring, NSN 5331-01-231-5216		O-ring, NSN 5331-01-231-5216	

Sampling Supplies

To mail your AOAP samples, use the leak-proof mailing kit, NSN 8125-01-193-3440. You'll get 24 of the non-aeronautical sampling bottles, mailing cartons and plastic shipping sacks.

Don't need the mailing supplies? Use NSN 8125-01-082-9697 to get 120 sampling bottles.

EYEING SOME NEW GOGGLES

The sun, wind and dust goggles (SWDG) date back to the 1950s. For years they've been the standard goggles providing ballistic and laser eye protection. But times have changed and now the Army offers you a choice: the old standby SWDG or a new generation of protective goggles.

A Closer Look

Besides the SWDG, you're now authorized to order and use the Wiley-X SG-1 goggles, the Eye Safety System (ESS) land operations goggles and the ESS low profile night vision goggles. Here are a few things you need to know about them:

- These are commercial substitutes for the **non-laser** SWDG. None of them protects your eyes from lasers. So, if you have a mission or training that requires laser eye protection, you **must** wear the SWDG with laser lenses. So far the Army hasn't authorized any substitutes to the SWDG with laser lenses.

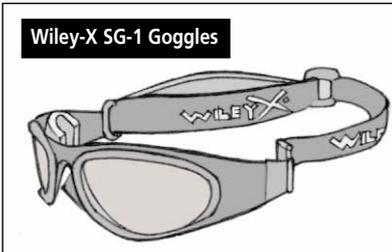
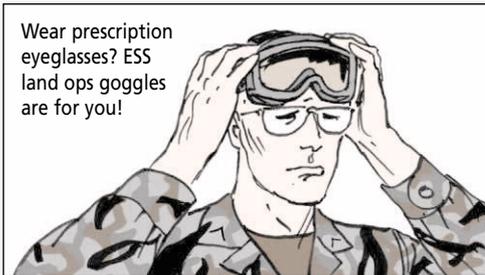
- The components of the SWDG and the new goggles are not interchangeable. For example, you can't put a SWDG lens in the commercial eyewear frame.

- If you regularly wear prescription eyeglasses, order the ESS land operations goggles. They'll fit over most glasses.

- Although ESS makes a prescription lens carrier for their low profile night vision goggles, you're not authorized to order it. The carrier has not been field tested for durability.

- It's not a good idea to fit the Wiley-X SG-1 goggles with prescription lenses. For one thing, it's costly. For another, you run the risk that the prescription lenses won't protect you as well as the ballistic lenses that come with the goggles.

Wear prescription eyeglasses? ESS land ops goggles are for you!



Here's a more detailed look at each of the new goggles, along with replacement parts:

Wiley-X SG-1 Goggles Kit

The kit comes with two pairs of ballistic lenses, one clear and one green smoke. The eyewear has black frames. A foam seal around each eye prevents dust and wind from getting in. You can detach the temples and replace them with an elastic strap that comes with the kit. One size fits all.

Item	NSN 4240-
Wiley-X SG-1 goggles kit	01-504-0994
Clear lenses	01-504-5326
Green smoke sunglass lenses	01-504-5312
Temples	01-504-6474
Elastic strap	01-504-5754
Frame (includes temple arms and elastic strap)	01-504-6524

ESS Land Operations Goggles Kit

The kit comes with two single piece ballistic lenses, one clear and one smoke gray. The lenses are made with anti-scratch and anti-fog coatings. The eyewear has an olive green frame and a black elastic strap. A foam seal between the face and the goggle frame allows ventilation while keeping dust out. You can order the kit with or without an anti-reflective sleeve that reduces glint when the goggle is not in use. One size fits all.

Item	NSN
Land operations goggles kit (with anti-reflective sleeve)	4240-01-504-0052
Land operations goggles kit (without anti-reflective sleeve)	4240-01-479-8657
Smoke gray sunglass lens (pack of 50)	4210-01-492-5725
Clear lens (pack of 50)	4210-01-492-5722

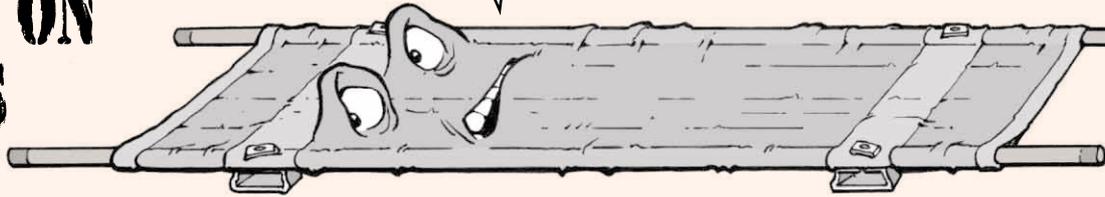
ESS Low Profile Night Vision Goggles Kit

The kit comes with two single piece ballistic lenses, one clear and one smoke gray. The lenses are made with anti-scratch and anti-fog coatings. You can order the kit in one of three frame colors: black, olive drab or desert tan. A foam seal between the face and the goggle frame allows ventilation while keeping dust out. An anti-reflective sleeve reduces glint when the goggle is not in use. One size fits all.

Item	NSN 4240-
Low profile night vision goggles kit (black frame)	01-504-6222
Low profile night vision goggles kit (olive drab frame)	01-504-5706
Low profile night vision goggles kit (desert tan frame)	01-504-5727
Smoke gray sunglass lens (pack of 50)	01-504-6143
Clear lens (pack of 50)	01-504-5641

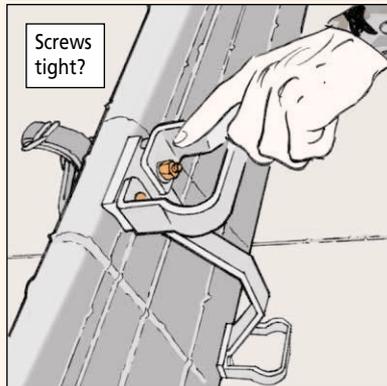
A SHORT LESSON ON LITTERS

I'M GOING TO NEED MY OWN LITTER IF I DON'T GET PM *SOON!*

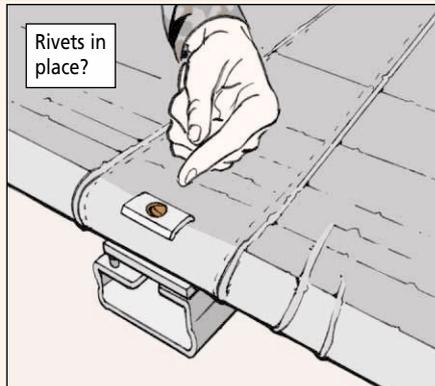


Sometimes even a medical litter, NSN 6530-00-783-7905, needs a little medical attention. Here's a small dose of care:

- Inspect the frame for cracks or wear. Make sure all screws and rivets are tight and in place.

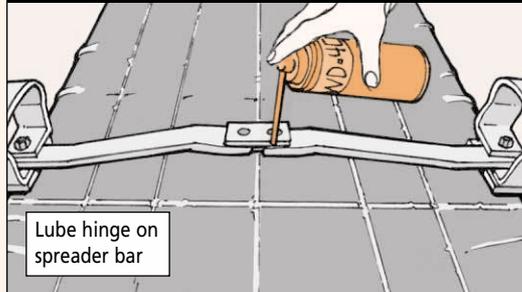


Screws tight?



Rivets in place?

- If the hinge on the spreader bar sticks or shows signs of corrosion, give it a shot of WD-40 or a similar lubricant. That'll loosen rusted parts and protect the metal against moisture. NSN 8030-01-418-9008 gets you an 11-oz aerosol can.



Lube hinge on spreader bar

- Look for tears and holes in the nylon cover and repair them while they're still small. You can either tape or patch the cover.



Repair tears while they're small

For taping, you'll need a roll of green repair tape. NSN 8315-01-423-6231 gets you a roll 3 inches wide and 50 feet long.

If you plan to patch the cover, the tentage repair kit, NSN 8340-00-262-5767, comes in handy. Cut a patch from the polyester material in the kit and glue it with adhesive, NSN 8040-00-264-3848.

If you find anything on your litter you can't fix or replace, turn it over to direct support.

Replacement Parts



HERE ARE THE BASIC REPLACEMENT PARTS FOR YOUR LITTER...

Item	NSN 6530-
Handle	01-247-7157
Spreader bar and stirrups	00-784-3450
Litter pad	00-137-3016
Patient strap, securing	00-784-4205
Securing strap, litter	00-784-4335
Cover, nylon	00-784-1250
Traction appliance	00-926-4732
Backrest	00-299-8353

PS 614

SAFE PAINT CLEANS UP EASY

I'M THE GUY TO USE FOR PAINTING GUIDE MARKS AND WARNING LINES IN THE MOTOR POOL!



Painting guide marks and warning lines inside your motor pool makes good safety sense—unless you're using the wrong paint.

Yellow paint, NSN 8010-00-900-3648, has been the paint of choice for years. Unfortunately, it's flammable and pollutes the air.

It also requires using paint thinner for proper cleanup. Both leftover paint and paint thinner are hazardous waste.

So, switch to yellow paint, NSN 8010-01-019-1776. It's a water-based latex that's easy to clean up. The paint is non-flammable and presents fewer health and safety hazards.

Before disposal, though, check with your environmental safety office for state or local regulations on latex paint waste.

51

JAN 04

PARTS FOR Hospital Cot

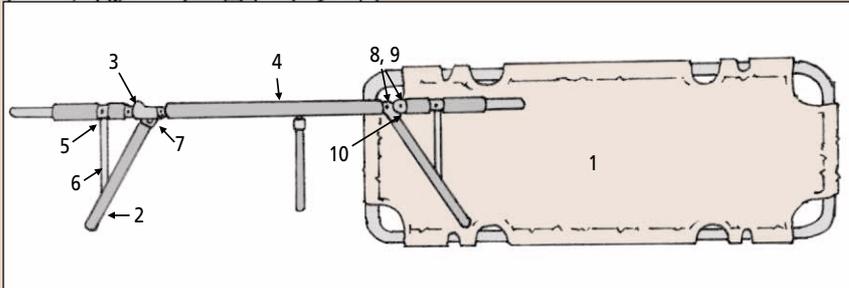


GIVE IT TO ME STRAIGHT, DOC! HOW **BAD** IS IT?

THE **BAD** NEWS IS, YOUR LEG IS BROKEN.

THE GOOD NEWS FOR **YOU** IS, REPLACEMENT PARTS CAN KEEP YOUR FOLDING HOSPITAL COT, NSN 6530-00-299-8517, IN **GOOD HEALTH**. HERE'S THE PRESCRIPTION...

Item	Description	NSN
1	Cover, hospital cot	6530-01-298-7448
2	Leg frame	6530-01-302-0219
3	End frame, cot, hospital	6530-01-300-3526
4	Frame, side, cot, hospital	6530-01-299-8088
5	Washer, flat and nut, self locking, hex	5310-00-655-7219
6	Brace, adjustable	5310-00-208-1919
7	Rivet, tubular	5320-01-299-4174
8	Screw, machine	5305-01-301-0812
9	Nut, self-locking, hex	5310-01-186-1245
10	Rivet, solid	5320-01-299-4173



AKO...

Soldier Collaboration Encouraged on AKO



I WONDER WHY THIS BRADLEY'S TURRET DRIVE IS **NMC AGAIN?**

I'VE GOT THE ANSWER!

CHECK YOUR TURRET DOOR AND COMBAT OVERRIDE SWITCH.

MOST SOLDIERS **DON'T** LIKE REINVENTING THE WHEEL.

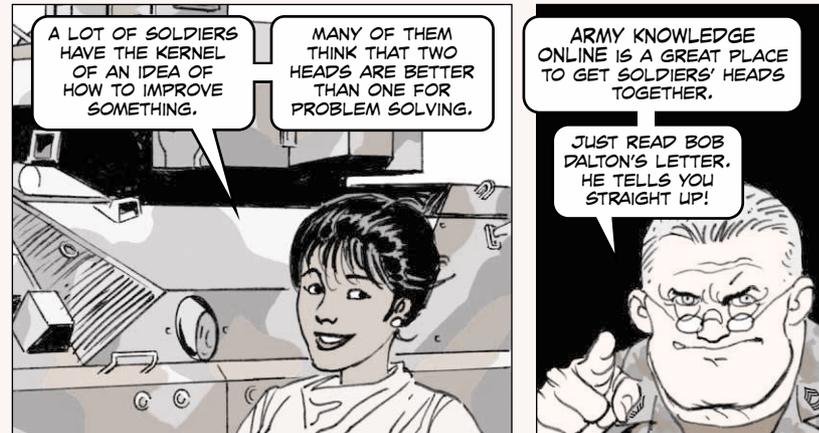


A LOT OF SOLDIERS HAVE THE KERNEL OF AN IDEA OF HOW TO IMPROVE SOMETHING.

MANY OF THEM THINK THAT TWO HEADS ARE BETTER THAN ONE FOR PROBLEM SOLVING.

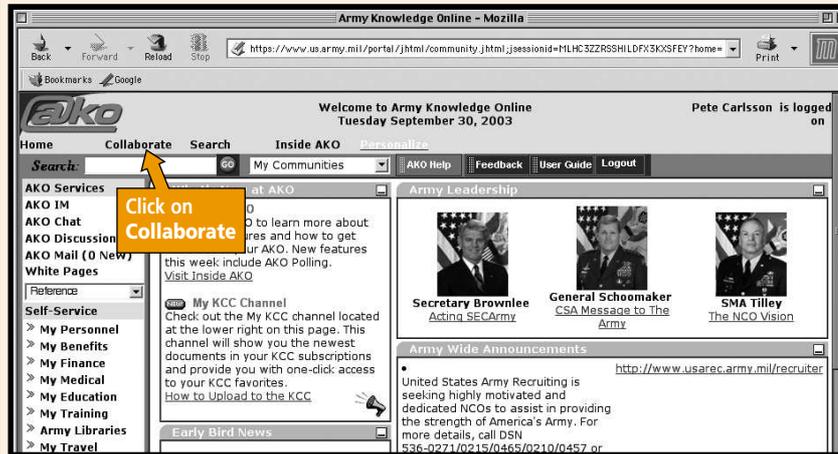
ARMY KNOWLEDGE ONLINE IS A GREAT PLACE TO GET SOLDIERS' HEADS TOGETHER.

JUST READ BOB DALTON'S LETTER. HE TELLS YOU STRAIGHT UP!

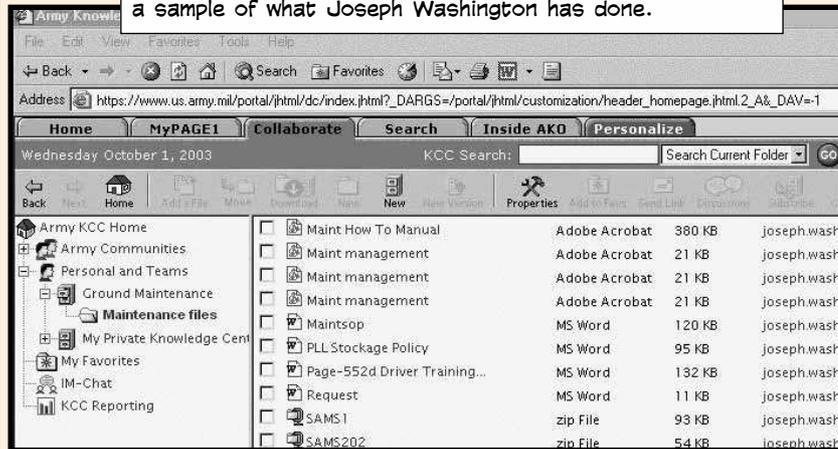


Dear Editor:

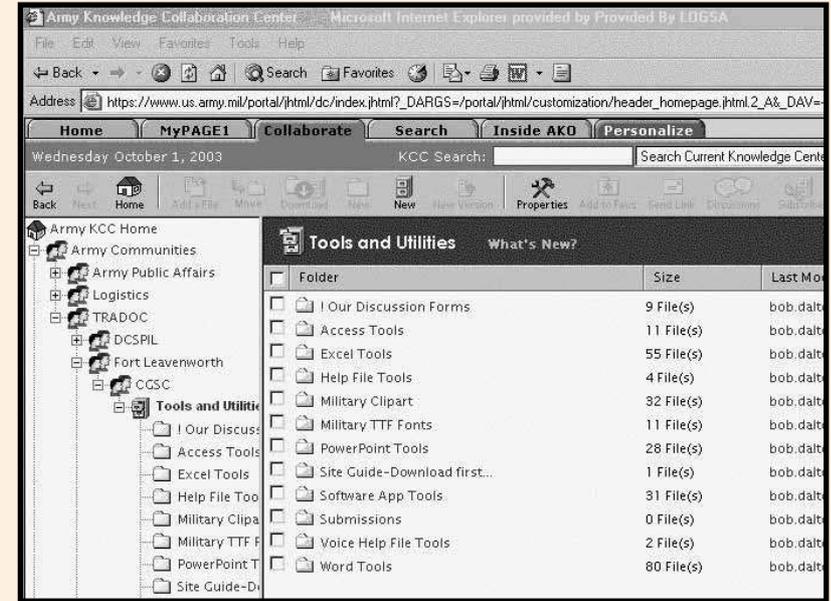
One of the primary purposes of Army Knowledge Online (AKO) is to allow collaboration between soldiers anywhere in the world 24-7. It also provides a framework to allow soldiers who have retired a way to continue contributing to the Army—to an extent not possible until AKO came along.



As one of the AKO features, active, Guard, Reserve and retired soldiers can have their own personal Knowledge Collaboration Center (KCC). They can post files in their personal KCCs to share with other soldiers or units. Here's a sample of what Joseph Washington has done.



Unfortunately, unless you are already aware of a particular personal KCC, or can manage to find it via a search, you are unlikely to know that the files in that personal KCC exist.



Ft Leavenworth's Command and General Staff College Tools and Utilities Army Community KCC (TUS KCC) was established in May 2003 to address this problem. It also collects and distributes user-designed military software tools and solutions for Windows 98 and up. These computer solutions are free.

Before a software application is accepted for posting in TUS KCC, it is first scanned for viruses. Software located at the TUS KCC is safe for use on any military computer system that uses operating systems Window 98 or above.

If a soldier, NCO or officer has developed a specialized Windows 98 or above military software application, Excel spreadsheet, PowerPoint template or something similar, we highly encourage them to submit it to the Fort Leavenworth CGSC Tools and Utilities Army Community KCC and share their software tool with everyone else in the Army.

Regards,

Bob Dalton
KCC Site Co-Administrator

Subscribing to the Tools and Utilities Site

YOU CAN SUBSCRIBE AND GAIN ACCESS TO THE FT LEAVENWORTH CGSC TOOLS AND UTILITIES SITE ARMY COMMUNITY KCC (TUS KCC) FOLDERS AND DIRECTORIES.

AFTER YOU HAVE LOGGED ON TO AKO AND SEE THE AKO MAIN PAGE, FOLLOW THESE STEPS...

1. Click on the [Collaborate](#) Tab
2. On the left side of the screen you will see the Army Communities and Personal KCCs icons.
3. Click on the [Army Communities](#) selection.
4. You will see a list of available Army Communities you can subscribe to.
5. Click on the [TRADOC](#) community name. You will see a list of communities located under TRADOC.
6. Click on the [Ft Leavenworth](#) community. You will see a list of communities located under Ft Leavenworth.
7. Click on the [CGSC](#) community. You will see a list of communities and knowledge centers located under CGSC.
8. Click on the [Tools and Utilities](#) knowledge center.
9. You will see a list of the available directories or folders under this community. Note: The Knowledge Center Identification Number for this site is: 438947
10. You can subscribe one at a time or in multiples. To subscribe one at a time, pick a folder or directory you want to have access to and click on the empty box to the left side of the folder or directory. Click on the [Subscribe](#) icon located in the tool bar above the current window. To subscribe to multiple folders at a single time, click on the box next to each folder name you want, then click on the [Subscribe](#) icon.

Once you have subscribed to the new TUS KCC you will need to download the "tus_guide.chm" file from the "Site Guide" folder. It explains the procedure for submitting files to the site and provides additional information, such as file descriptions, about the site and its contents. The "tus_guide.chm" file is a standard Microsoft HTML help file.

From the desk
of the *Editor*



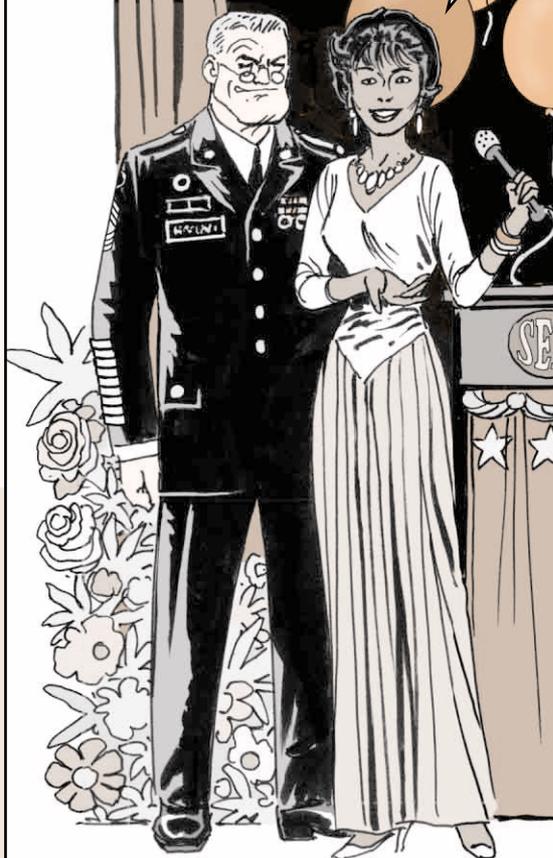
This is a great
source of help.



PS END

2003 SUPPLY EXCELLENCE AWARDS

MAYBE
WE'LL SEE
YOU HERE
NEXT YEAR!



ACTIVE ARMY

MTOE Company With Property Book

Winner: HHD, 115th MI Grp, Schofield Barracks, HI
 Runner-up: HDD, 59th Sig Bn, Ft Richardson, AK
 Honorable Mention: HHC, 8th MP Bde, Yongsan, Korea

MTOE Company Without Property Book

Winner: 587th Sig Co, Stuttgart, Germany
 Runner-up: B Co, 29th Sig Bn, Ft Lewis, WA
 Honorable Mention: 69th Trans Co, Mannheim, Germany

MTOE Battalion With Property Book

Winner: 205th MI Bn, Ft Shafter, HI
 Runner-up: 95th MP Bn, Mannheim, Germany

Category B TDA (Small) (Lower)

Winner: Aviation Technical Test Center, Ft Rucker, AL
 Runner-up: 235th Base Spt Bn, Ansbach, Germany

Category B TDA (Large)(Upper)

Winner: 527th MI Bn, Camp Humphreys, Korea
 Runner-up: 2d Bn (SHORAD) 6th ADA Bde, Ft Bliss, TX
 Honorable Mention: Army Institute of Research, Walter Reed Medical Center, MD

Category C Small MTOE, Class IX

Winner: C Co, 123d Avn Regt (AVIM) Ft Wainwright, AK
 Runner-up: 558th Trans Co, Floating Craft GS, SSA, Ft Eustis, VA

Category C Medium MTOE, Class IX

Winner: 98th Maint Co, Ft Richardson, AK
 Runner-up: 3d Maint Co, SSA, 1/43rd ADA, Suwon, Korea
 Honorable Mention: A Co, 101st FSB, SSA, Ft Riley, KS

Category C Medium MTOE, Class II, IV, VII

Winner: 305th QM Co, Yongsan, Korea
 Runner-up: A Co, 701st Cbt Spt Bn (Main), 1st ID (Mech), Kitzingen, Germany

Category C Medium TDA

Winner: 20th Spt Grp, Supply Point 60, Waegwan, Korea
 Runner-up: HHC, 22d ASG, Vicenza, Italy

Category C Large MTOE, Class IX

Winner: B Co, 172d Spt Bn, Ft Wainwright, AK
 Runner-up: D Co, 702d Main Spt Bn, Camp Casey, Korea

AWARDS (continued)

ARMY NATIONAL GUARD

MTOE Company With Property Book
Winner: G Co, 185th Avn, Meridian, MS
Runner-up: 229th Engr Detachment (U), Kingwood, WV

MTOE Company Without Property Book
Winner: D Trp, 1/221st Cav, Las Vegas, NV
Runner-up: HHD, Engr Bde, 42d Inf, NYARNG, Buffalo, NY

MTOE Battalion With Property Book
Winner: HQ, 2/194th AR, Duluth, MN
Runner-up: 1/201st FA, Kingwood, WV

MTOE Battalion Without Property Book
Winner: 1088th Engr Bn (Heavy Division), Plaquemine, LA
Runner-up: 771st Trp Bn, Charleston, WV

Category B TDA (Small) (Lower)
Winner: HQ, 209th Regional Training Institute, Ashland, NE
Runner-up: 772nd Avn Trp Cmd, Williamstown, WV

Category B TDA (Large)(Upper)
Winner: Training Support Unit, Little Falls, MN
Runner-up: HQ, State Area Command, Jackson, MS

Category C Small MTOE, Class IX
Winner: B Co, 193d Avn (AVIM), Wheeler Army Airfield, HI

Category C Medium MTOE, Class IX
Winner: US Property and Fiscal Office, Supply Center, Lincoln, NE
Runner-up: US Property and Fiscal Office, S&S Division, Camp Douglas, WI

Category C Large MTOE, Class IX
Winner: US Property and Fiscal Office, S&S Fwd Distribution Point, Springfield, IL
Runner-up: US Property and Fiscal Office, Camp Beauregard, Pineville, LA

Category C Large MTOE, Class II, IV, VII
Winner: Director of Logistics Warehouse, Little Falls, MN

ARMY RESERVE

MTOE Company Without Property Book
Winner: C Co, 411th Cbt Engr Bn (Heavy), Guam
Runner-up: 411th QM Co, Brockton, MA

MTOE Battalion With Property Book
Winner: 6/52d Avn Regt, Los Alamitos, CA

MTOE Battalion Without Property Book
Winner: 320th Ord Bn, Lincoln, NE
Runner-up: 407th CA Bn (GP), Arden Hills, MN

Category B TDA (Small) (Lower)
Winner: 1102d Garrison Spt, Ft Richardson, AK
Runner-up: SETAF Augmentation Unit, Vicenza, Italy
Honorable Mention: 4212th US Army Hospital, Kingsport, TN

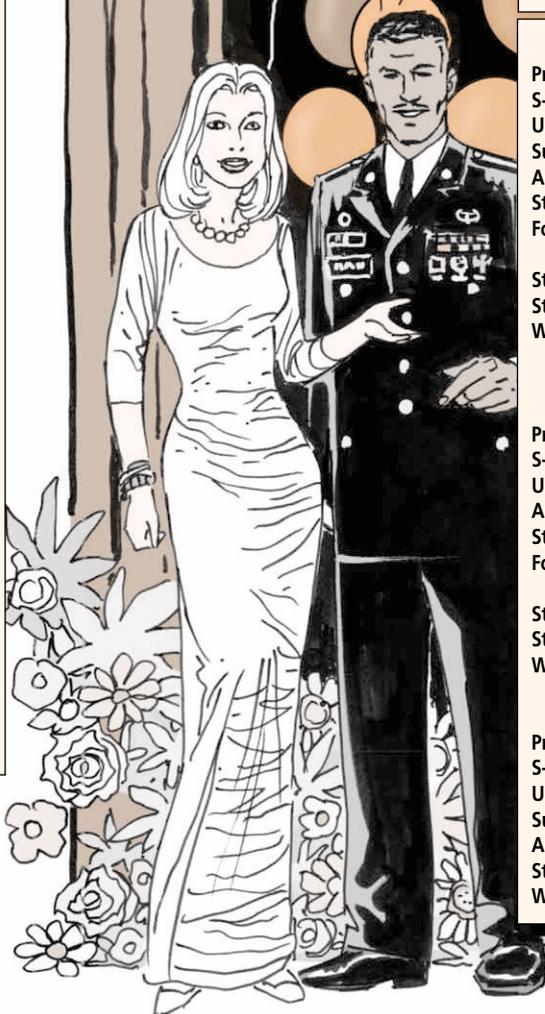
Category B TDA (Large)(Upper)
Winner: HHC, 7th ARCOM, Schwetzingen, Germany
Runner-up: Equipment Concentration Site 43, Forest Park, GA
Honorable Mention: 3747th Multi- Functional Trng Bde, Grafenwohr, Germany

Category C Small TDA
Winner: 758th Maint Co, Whitehall, OH
Runner-up: 245th Maint Co, SARSS-1, St Louis, MO



THE SEA NOW
RECOGNIZES
INDIVIDUALS.

THESE
SOLDIERS
ARE THE
BEST OF
THE BEST!



2003 BEST OF THE BEST INDIVIDUAL WINNERS

ACTIVE ARMY

Property Book Officer: CW2 Kevin E. Comer
S-4/Property Book Officer: SFC Douglas L. Adams
Unit Supply Sergeant: SGT Ulander Garcia
Supply Specialist: SGT Anusha V. Hutchinson
Armorer: SPC Joseph R. Young
Stock Record Officer: CW3 Lorenza Wills
Forward Distribution Point (FDP) NCOIC:
SSG Douglas Whittaker
Stock Control: Ms Carmen Civarelli
Storage NCOIC: SSG Ganega Dayaprema
Warehouse Specialist:
SGT Stephanie Washington-Garner

ARMY NATIONAL GUARD

Property Book Officer: SFC John W. Pawlowicz
S-4/Property Book Officer: SFC Ray A. Touns
Unit Supply Sergeant: SSG Thomas M. Queen
Armorer: SGT David P. Bouse
Stock Record Officer: WO1 Rolando Domingo
Forward Distribution Point (FDP) NCOIC:
SSG Amanda Camden
Stock Control: SFC Debra Rigor
Storage NCOIC: SFC Robert White
Warehouse Specialist: SPC Lovell Manes

ARMY RESERVE

Property Book Officer: CW3 Ronald L. Kisse
S-4/Property Book Officer: MSG Ricky Hamrick
Unit Supply Sergeant: SSG Dana Lyon
Supply Specialist: SPC Eva C. Slate
Armorer: SSG James Persinger
Stock Record Officer: SFC Louis Merritt
Warehouse Specialist: Mr. Michael L. Goodman



M1070 BATTERY SWITCH

Dead batteries and the M1070 HET tractor seem to go hand-in-hand, especially when the vehicle sits idle for long periods of time. After shut-down, the clock on the tractor's tachograph continues to draw power from the batteries. Stop battery drain by ordering a battery disconnect switch kit with NSN 5930-01-494-9353. Installation instructions come with the kit. Make a note until the NSN is added to TM 9-2330-360-24P.

Fuel Tanker TM

POL folks, listen up! If you're still using TM 9-2320-279-20P (June 1994) to get parts for your M978 fuel tanker, STOP! It's been superseded by TM 9-2320-279-24P-1 and TM 1-2320-279-24P-2.



LANDING MATS

Parking aircraft in the sand damages rotating parts on take off and landing. Also, you'll probably have problems with the bird sinking into the sand. Avoid the headaches by ordering 4 X 4, aluminum landing mats, NSN 5680-00-930-1524 or pallet and mat assembly, NSN 5680-01-176-9076.

HET Tachometer and Gauge

NSN 2541-01-494-6557 gets a new tachometer and dash panel with gauges for the M1070 heavy equipment transporter. This tachometer replaces the old-style tachograph shown as Item 1 in Fig 58 of TM 9-2320-360-24P (w/C2).

M1000 BACKING PLATE KIT

Get a backing plate kit for the M1000 HET semitrailer's brake housing with NSN 2530-01-445-9205. This new kit includes Items 1, 2, 3, 4 and 4a, Fig 17-1 of TM 9-2330-381-24P w/Change 3.

Replacing HMMWV Seat Belts

Damaged seat belts for the M998 HMMWV can be replaced with a 3-point seat belt, NSN 2540-01-495-0817. The belt is made of slicker material for better retraction. NSN 2540-01-495-4018 is an MWO kit installing 3-point seat belts on trucks still using lap belts. The kits are controlled and are being replaced in DA Master Priority List sequence.



PLS Headlight

NSN 6240-01-420-8320 gets the 12-volt headlight assembly for the palletized loading system truck. The NSN shown as Item 3, Fig 92, of TM 9-2320-364-24P is wrong.

LIFE PRESERVER UPDATE

ELSE techs, on Page 41 of PS 611 (Oct 03), we said to inspect the life preservers (LPU-10) every 120 days. That was correct as stated in multi-service Air Force/Army T.O. 145-1-102 and TM 5-4220-202-14. The Army has decided to require LPU-10 inspection every 180 days, even though Air Force message STRAP-M-97000456-CC-R says 360 days plus or minus 10 days. Questions concerning this decision can be directed to Patrick Rowe, DSN 897-6134, (256) 313-6134 or email: patrick.rowe@logsa.redstone.army.mil

5-KW and 10-KW TQG Filters

If your unit is running 5- or 10-KW tactical quiet generators, keep this list of filters handy:

Filter	NSN
Air	2940-00-934-7989
Primary fuel	2940-01-376-5666
Secondary fuel	2910-00-099-5467
Oil	2940-01-154-5127

Get the fuel filter seal kit with NSN 2815-01-139-4010.



BLACK HAWK DESERT OPERATIONS

Units, desert operations worked your birds overtime! Now it's time to get them back into shape. So be on the lookout for authorized contractor field teams and depots to do a thorough inspection and cleaning of your aircraft. They will use TB 1-1520-237-30-1 to do the work. You are not authorized to apply the cleaning TB.

Send in SINGGARS Airborne Amplifier-Oscillator

Unserviceable SINGGARS airborne amplifier-oscillators, NSN 5895-01-451-9743, need to be turned in to Tobyhanna Army Depot for repair. There is a shortage due to lack of turn-ins. Your unit will get "unserviceable credit" for each turn-in.

PLS Heater Switch

Use NSN 5930-01-207-6337 to get the heater control switch for the palletized loading system. This NSN replaces the parts info shown as Item 3, Fig 440 of TM 9-2320-364-24P-2.

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?

**WHEN SOMETHING
IS ABOUT TO POP...**



**...YOU WANT ALL THE
WARNING YOU CAN GET!**

**MAKE SURE YOUR VEHICLE'S
GAUGES AND WARNING LIGHTS
ARE WORKING RIGHT!**