

Issue 630

PS

May  
2005

THE  
PREVENTIVE  
MAINTENANCE  
MONTHLY

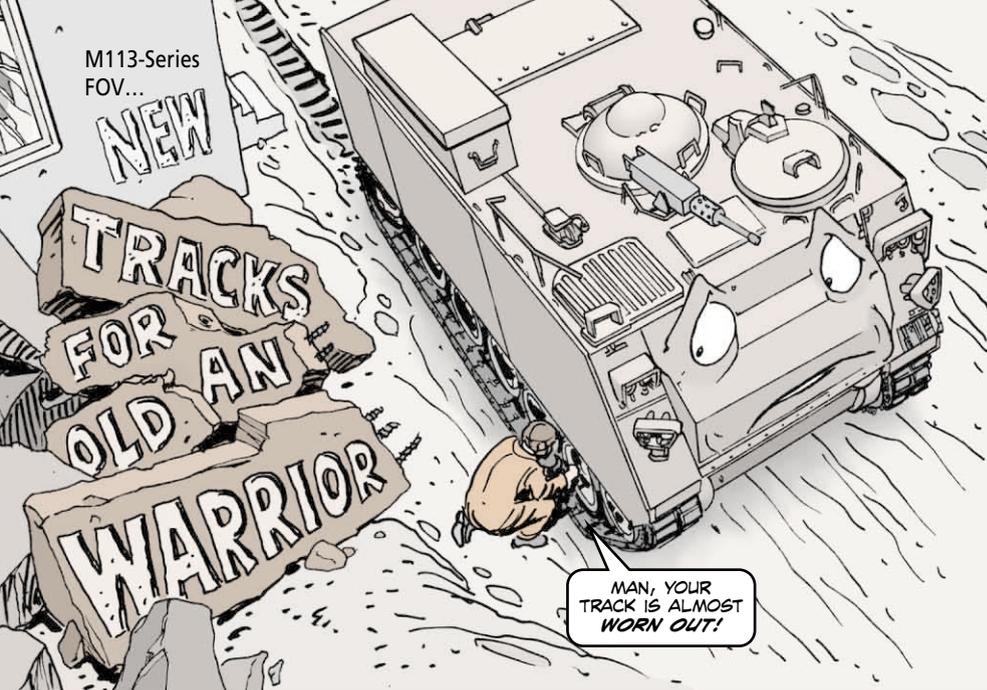
TB 43-PS-630

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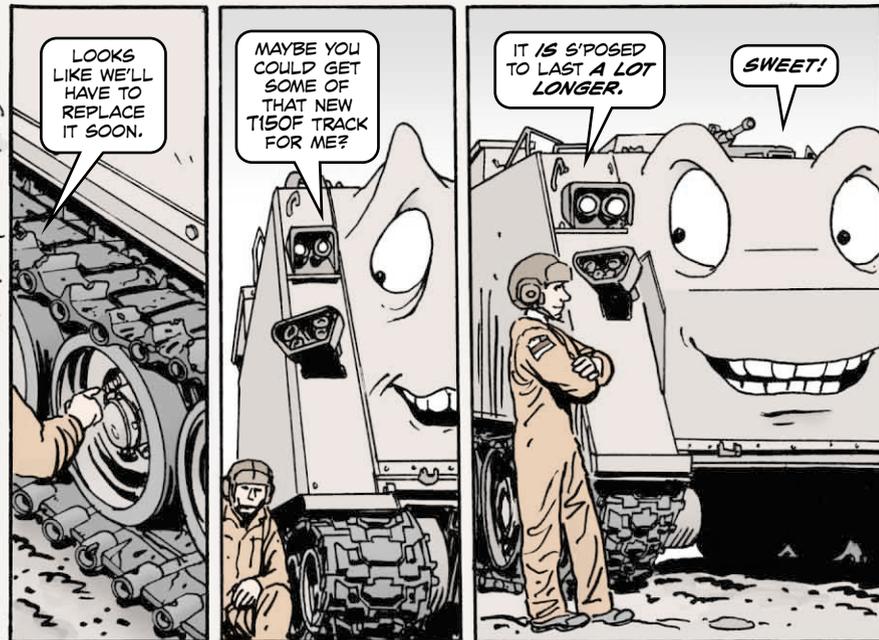


*THIS IS WHY  
YOU DO PM!*

M113-Series  
FOV...



MAN, YOUR TRACK IS ALMOST WORN OUT!



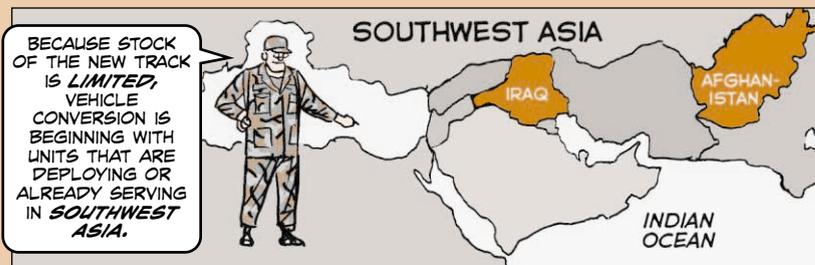
LOOKS LIKE WE'LL HAVE TO REPLACE IT SOON.

MAYBE YOU COULD GET SOME OF THAT NEW T150F TRACK FOR ME?

IT IS S'POSED TO LAST A LOT LONGER.

SWEET!

There's a new track available for your M113-series vehicles, crewmen. T150F is a double-pin track that lasts longer and performs better than the old T130E1 single-pin track you're used to.



BECAUSE STOCK OF THE NEW TRACK IS LIMITED, VEHICLE CONVERSION IS BEGINNING WITH UNITS THAT ARE DEPLOYING OR ALREADY SERVING IN SOUTHWEST ASIA.

SOUTHWEST ASIA

IRAQ

AFGHAN-ISTAN

INDIAN OCEAN

TB 9-2530-369-20-1, *Modification to Convert M113A3 FOV Carriers, M113A2 FOV Carriers, M548A1/A3 Carriers and OSV/MBT Vehicles T130E1 Track to T150F Track*, will soon be published to provide guidance on the conversion process.

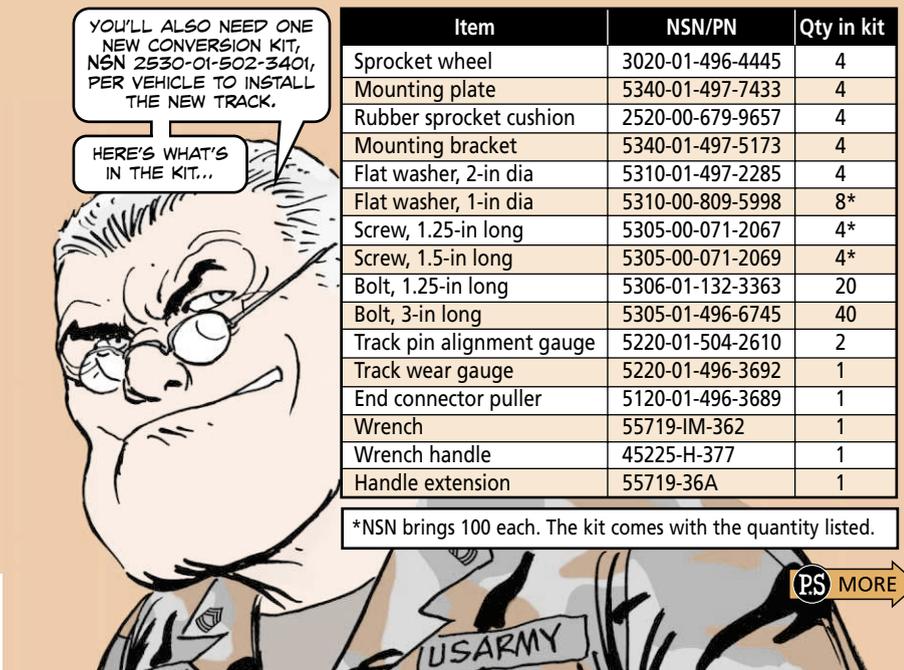
Each new track shoe comes with NSN 2530-01-496-4444. It takes 63 track shoes for the left side and 64 for the right side of M113 FOVs. The M548 takes 66 track shoes for each side.

YOU'LL ALSO NEED ONE NEW CONVERSION KIT, NSN 2530-01-502-3401, PER VEHICLE TO INSTALL THE NEW TRACK.

HERE'S WHAT'S IN THE KIT...

Item	NSN/PN	Qty in kit
Sprocket wheel	3020-01-496-4445	4
Mounting plate	5340-01-497-7433	4
Rubber sprocket cushion	2520-00-679-9657	4
Mounting bracket	5340-01-497-5173	4
Flat washer, 2-in dia	5310-01-497-2285	4
Flat washer, 1-in dia	5310-00-809-5998	8*
Screw, 1.25-in long	5305-00-071-2067	4*
Screw, 1.5-in long	5305-00-071-2069	4*
Bolt, 1.25-in long	5306-01-132-3363	20
Bolt, 3-in long	5305-01-496-6745	40
Track pin alignment gauge	5220-01-504-2610	2
Track wear gauge	5220-01-496-3692	1
End connector puller	5120-01-496-3689	1
Wrench	55719-IM-362	1
Wrench handle	45225-H-377	1
Handle extension	55719-36A	1

\*NSN brings 100 each. The kit comes with the quantity listed.

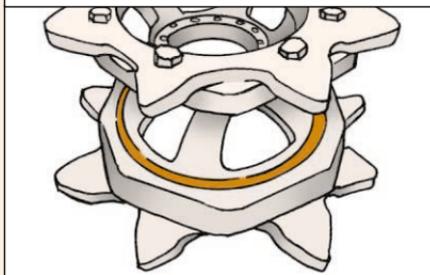


## Correct Sprocket Carrier Needed

Before you convert your vehicle to the new T150F track, make sure you've got the correct sprocket carrier.

Some vehicles still have the old-style sprocket carrier, NSN 2520-00-679-7960. The old sprocket carrier will not allow the 3-in mounting bolts to tighten all the way. The added length of the 3-in bolts is needed because of the additional weight and stress of the T150F track.

Old-style sprocket carriers, NSN 2520-00-679-7960, are too thin for 3-in mounting bolts



New sprocket carriers, NSN 2520-00-678-8382, have bosses that make them thicker



So check those sprocket carriers before converting to T150F track and replace them with NSN 2520-00-678-8382 if necessary.

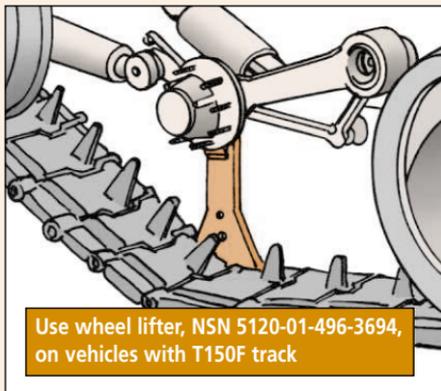
## After the Conversion

If your vehicle has already been converted to the new track, you may have already noticed a problem. The roadwheel lifter (dog bone), NSN 5120-01-062-5607, that's part of the organizational maintenance tool set, doesn't work with T150F track. That makes it hard to replace roadwheels.

Order wheel lifter, NSN 5120-01-496-3694, as a replacement for the old dog bone. Until it arrives, mechanics can use the 8-ton hydraulic hand jack, NSN 5120-00-595-8396, to raise the roadwheel arm.

Position the jack on the track below the roadwheel arm. Make sure the jack is centered on the arm spindle. You might want to use a piece of wood between the jack and roadwheel arm to help center the jack and protect the arm spindle.

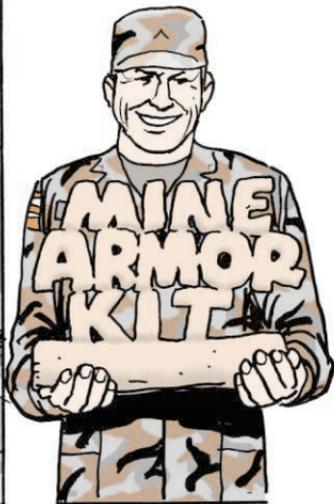
Raise the roadwheel arm high enough to keep it from hitting the center guides when removing the roadwheel.



Use wheel lifter, NSN 5120-01-496-3694, on vehicles with T150F track



# Protect Yourself!



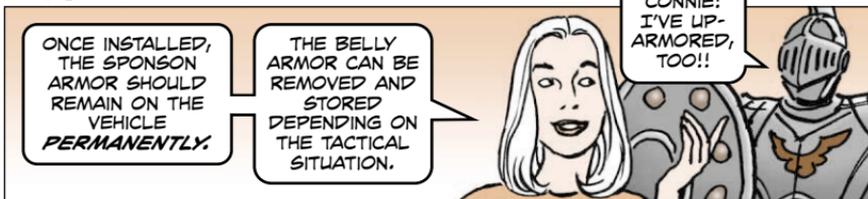
**N**eed some additional protection from mines and small arms fire on your M113A2/A3? Then the mine armor kit, NSN 2540-01-498-9827, is for you.

The kit consists of a 3/4-in thick belly plate and a 3/8-in thick plate for attaching under the driver's side sponson.

The M113A3 has pre-drilled mounting holes for the belly armor, but not for the sponson armor. You'll need to have holes drilled and tapped and mounting inserts installed before it can be mounted. You'll find the inserts listed in Fig 230 of TM 9-2350-277-24P.

The belly and sponson armor also works with all other A3 variants and all A2s, but mounting inserts have to be installed before either plate can be mounted on those vehicles. Instructions come with the kit.

Be forewarned that when belly plates are mounted on A2 models, they obstruct the access plate on the bottom of the hull. That means you'll have to remove the belly plate in order to service the filters.



M1A2  
SEP Tank...



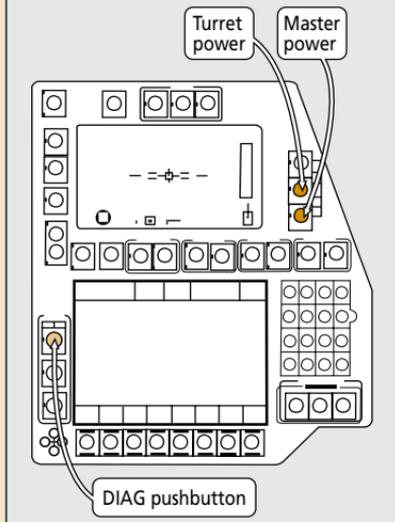
**ASK FOR A  
RE-DEAL**

If your M1A2 SEP still has any of the older Army embedded GPS receiver (AEGR) circuit cards, NSN 5998-01-463-1005 (PN 12438580 or 110100), don't play the hand you were dealt.

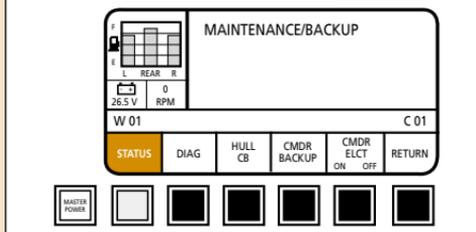
Any older AEGR cards found in the turret mission processing unit (TMPU) and the improved launch electronics control unit (ILECU) during repair should be turned in now! Those cards need to be upgraded to the new version, NSN 5998-01-496-5901 (PN 12438580-2).

Not sure which cards are in your vehicle? Here's how to check your M1A2 SEP with software version 4.0.

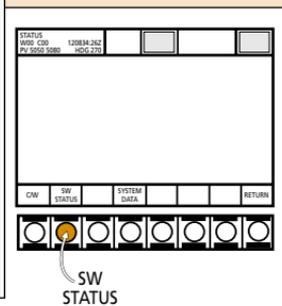
1. Make sure the tank's MASTER POWER and TURRET POWER are on.
2. Press the DIAG push button on the Commander's display unit (CDU) to enter the diagnostic menu.



3. Press the STATUS pushbutton to enter the status menu.



4. Press the SW STATUS pushbutton to enter the software status menu. If the screen shows an AEGR software version of 2.2.2 or below, you need a replacement AEGR card.



Turn in unserviceable cards following your regular turn-in procedures. Your TACOM LAR can help.

Questions? Contact TACOM-RI's Alan Shannon, DSN 793-0125 or (309) 782-0125, or James Barber, DSN 793-6632 or (309) 782-6632.

Or send an email to: [alan.sherman@us.army.mil](mailto:alan.sherman@us.army.mil) or [james.j.barber@us.army.mil](mailto:james.j.barber@us.army.mil)



## Bradley/MLRS Now on AKO

Good news for you Bradley and MLRS crewmen. PS Magazine and various newsletter articles are now available for access on the Army Knowledge Online (AKO) website.

That makes it very easy to log on and search for specific subjects or read about current updates.

If you're not already an AKO member, sign up for access at:

<https://www.us.army.mil/suite/login/welcome.html>

After you've logged on, click on the Files icon at the top of the page. In the left-hand column on the next screen, click on U.S. Army Organizations, then AMC on the main screen, followed by TACOM.

Select the block next to Bradley - MLRS and click Subscribe at the top of the page. Click on Bradley - MLRS, then Instructions and finally on Instructions\_1. This opens a PDF file that tells how to access all the Bradley and MLRS articles.

Address: <https://www.us.army.mil/suite/portal/index.jsp>

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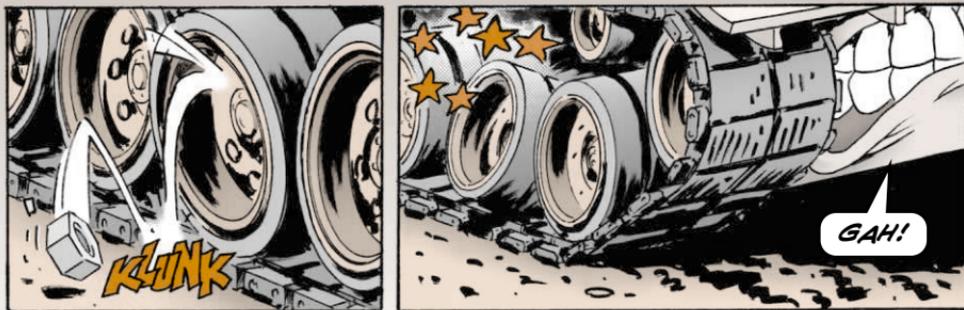
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104	Adobe Acrobat	648	oleg.slavch	07/29/04	07/29/05	1

Questions? Contact the Bradley/MLRS Mobility Group at DSN 786-8289 or (586) 574-8289 or send an email to: [BradleyMLRS@tacom.army.mil](mailto:BradleyMLRS@tacom.army.mil)

# Keep Roadwheel Nuts Tight



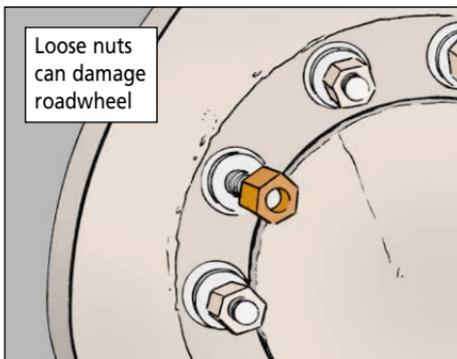
Just because the roadwheel nuts on your M88A1 recovery vehicle are torqued tightly in place doesn't mean they'll stay there, mechanics.

In fact, with all the weight and pressure they're under, loose roadwheel nuts are almost inevitable. When one nut loosens, it increases the pressure on the others, setting off a chain reaction of loose nuts.

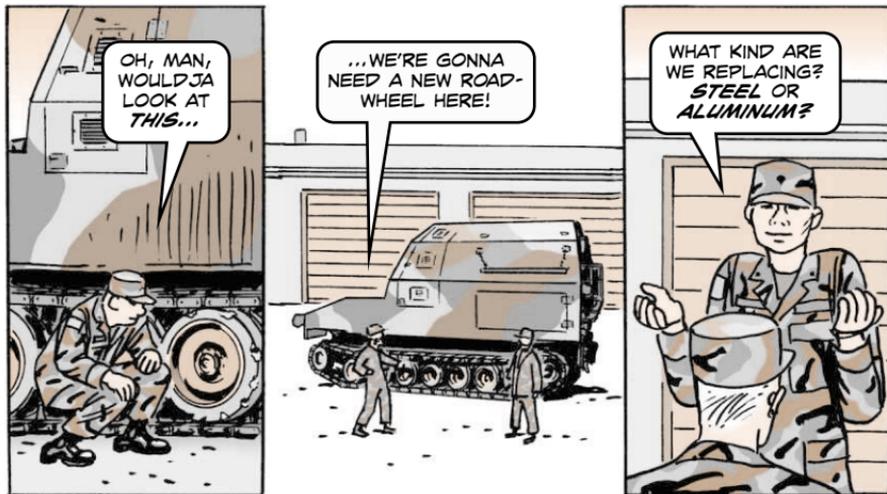
The roadwheel wobbles, snapping off the studs, and can cause a thrown track.

Look for shiny spots around the flat washer under the roadwheel nut. That's a sure sign of a loose nut.

Replace missing nuts with NSN 5310-01-064-3910 and flat washers with NSN 5310-00-809-9514. Retorque loose nuts to 320-350 lb-ft.



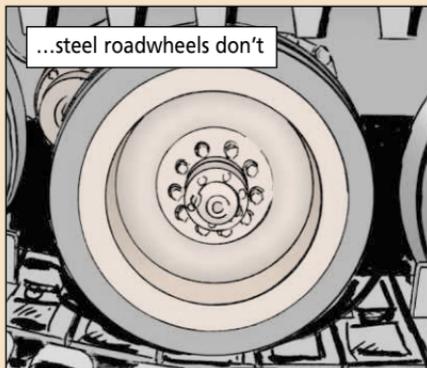
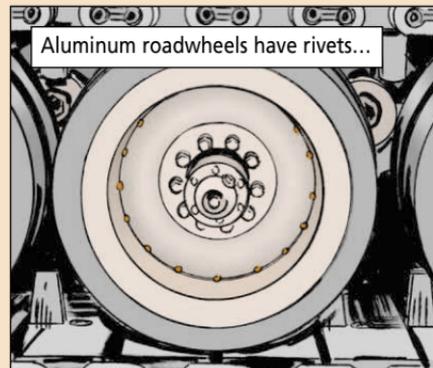
# NO MiX 'n' Match Roadwheels



Mechanics, aluminum and steel roadwheels are both used on M109-series howitzers and M992A2 ammo carriers. That's okay as long as you follow a simple rule: Each road arm must have either two steel or two aluminum roadwheels.

When it's time to replace a roadwheel, only steel ones are authorized. So if you've got one bad aluminum roadwheel, you'll have to replace both on that road arm with steel ones.

Can't tell 'em apart? The aluminum wheels, NSN 2530-00-801-6702, have 18 small rivets equally spaced around the rim. There are no rivets on the steel wheels, NSN 2530-01-310-2237.



# Tow Pintle



JUST GOTTA HOOK 'EM UP AND WE'RE GOOD TO GO!



UH! UH!!



MMPH!

# Needs PM, Too



GAH!! WHAT'S WITH THIS TOW PINTLE ANYWAY!? IT WON'T OPEN!



THAT'S BECAUSE YOU NEVER DID ANY PM ON IT!

FEW THINGS ARE MORE FRUSTRATING THAN A TOW PINTLE THAT WON'T OPEN OR CLOSE WHEN YOU NEED IT TO.

BUT THAT'S WHAT YOU HAVE TO LOOK FORWARD TO IF YOU DON'T APPLY A LITTLE PM NOW.

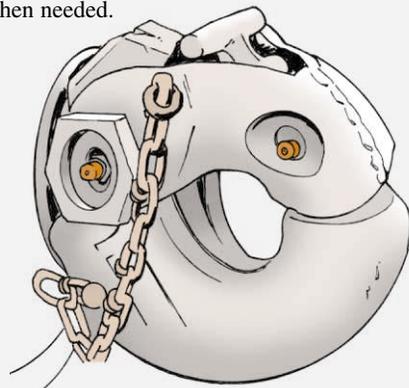
## Lubing

Follow the lubrication order completely. The number of grease fittings on your tow pintle will vary depending on the vehicle.

Lube them all, not just the ones that are handy or in plain view. Miss a lube point and your pintle will come down with a severe case of lockjaw!

The proper amount and type of lube that's applied like the LO says will go a long way toward keeping the pintle ready to go when needed.

Lube all grease fittings!

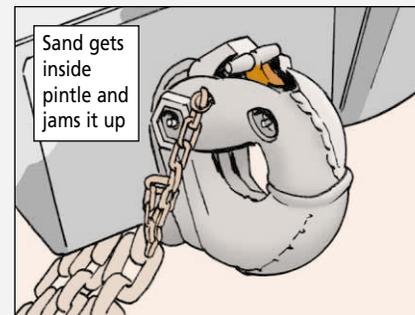


## Keep the Dirt Out

If the tow pintle on your vehicle is covered in mud, dirt, corrosion or too much paint, clean it or report it to your mechanic.

Pay special attention to the tow pintle when driving your vehicle in dusty, sandy conditions. Sand thrown up by tracks or wheels will end up in the pintle's nooks and crannies. By the time you get where you're going, the pintle is jammed full and impossible to open.

Avoid that problem by turning the pintle upside down before you leave. Gravity will help dirt and sand fall out and keep the pintle clear.



Sand gets inside pintle and jams it up



## M917 Pressure Valve

Use NSN 4820-01-132-0583 to get the airbag pressure valve for the M917 dump truck. This NSN replaces the one shown as Item 14, Fig 176 of TM 9-2320-273-24P.

## Blackout Light Assembly

Use NSN 6220-01-088-5915 to get the blackout-tailight assembly for the M915A2, M916A1/A2 tractor trucks and the M917A1 dump truck. The NSN replaces the parts info shown as Item 19 in Fig 88 of TM 9-2320-363-24P.

PLS...

# CAB INSULATION

YOUR PLS IS IN EXCELLENT CONDITION... AND I CAN'T EVEN FIGURE OUT HOW TO REPLACE MY INSULATION.



SEE?

HOW'D YOU DO IT?

HIRE A MAID?



NO, YOU JUST NEED TO WORK HARD AND IT HELPS TO KNOW THE NSNs. F'RINSTANCE, THE NSN FOR PLS CAB INSULATION IS 2510-01-511-5603.



Dear MSG Half-Mast,

The cab insulation inside our unit's M1074 palletized loading system is looking pretty shabby.

Is there an NSN for the insulation?

SGT C.D.

Dear SGT C.D.,

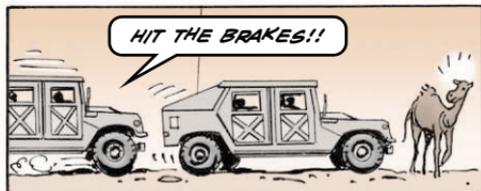
Order the PLS cab insulation with NSN 2510-01-511-5603.

This NSN gets a 60-ft roll of polyester foam that's one-half inch thick and 54 inches wide. Para 17-19 of TM 9-2320-364-20-5 has the lowdown on replacing the insulation. These instructions have the measurements you need for each piece of insulation.

Make a note of the NSN until it's added to Page BULK-2 of the -24P.

*Half-Mast*

# Give Brakes the Soft Touch



**G**etting rear-ended is not a pleasant experience, drivers. But it can happen if your brake lights don't come on when they're supposed to.

When checking the brake lights, some drivers mash too hard on the brake pedal. Since the brake lights come on, they figure everything's OK.

Then, when they get on the road and press lightly on the brakes to slow down gradually, the brake lights are nowhere to be found. The next thing you know—**CRASH!**—you're rear-ended.

When doing PMCS Check 38 in TM 9-2320-280-10, you should only press the brake pedal about  $\frac{1}{4}$  inch. If the brake lights don't come on, tell your mechanic—even if you can trigger the brake lights by pressing harder. He'll adjust the brake light switch following Para 4-60 (basic and A1 models) or Para 4-61 (A2 models) in TM 9-2320-280-20-2.

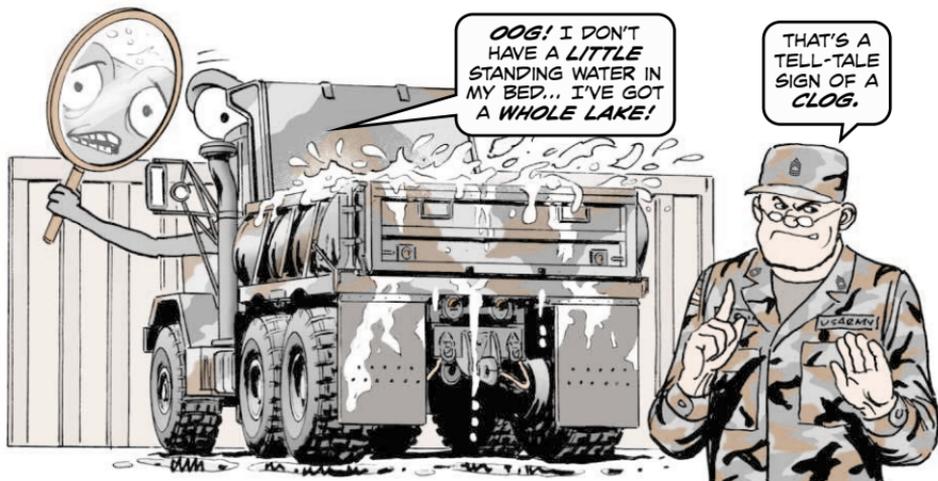
Press brake pedal  $\frac{1}{4}$  inch to check brake lights



Don't stomp on pedal!



# DUMP BED REMINDERS



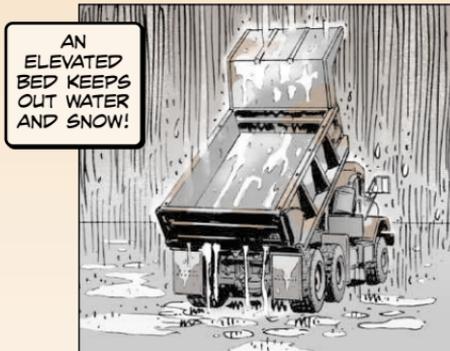
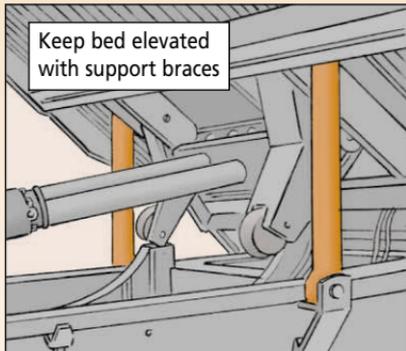
**S**tanding water in the dump truck's bed is the tell-tale sign of clogged drain holes.

And water that sits long enough in the dump bed causes it to rust out—not good!

So eyeball the drain holes in the front corners of the bed for dirt and leaves. Watch for holes that are painted over. Then, remove any debris or paint by running the tip of a ballpoint pen or small screwdriver through the holes to open 'em up.

Another way to keep water and snow out of the dump bed, especially when your 5-tonner sits for long periods of time, is to keep the bed elevated. Use the dump body support braces (bedlocks) to hold the bed up and keep pressure off the dump body's main hydraulic cylinder.

Page 2-19 of TM 9-2320-272-10 tells how to use the dump body's bedlocks.



# Bigger is Better

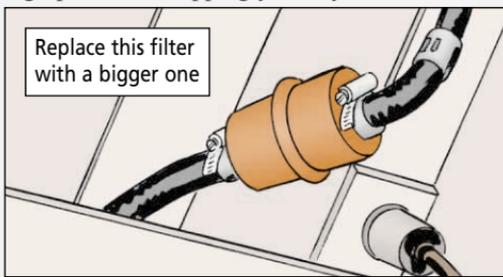


**A** clogged sink in your bathroom is a real hassle. Sometimes you have to call in a plumber to get rid of the clog.

A clogged fuel filter on your M939A2-series 5-ton truck is a real hassle, too. That small in-line fuel filter can clog up fast . . . stopping you in your tracks.

Order a bigger and better in-line fuel filter kit with NSN 4930-01-387-1147.

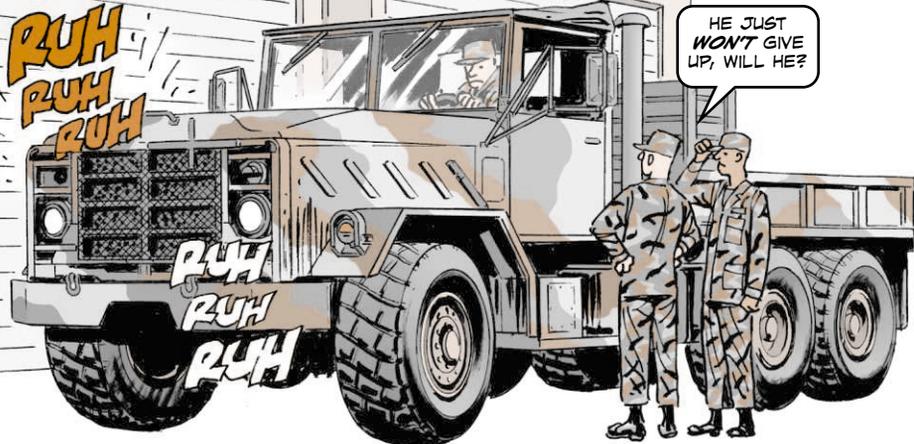
You won't need a plumber to have this kit installed. But you will need a buddy in direct support to make the initial changeover on the vehicle. Instructions come with the kit.



## HMMWV Seatbelt Assembly

Use NSN 2540-01-495-0817 to get an improved seatbelt assembly for the HMMWV. The assembly has a longer strap (about 8 inches) made of a slick material which provides a smoother retraction.

# Reset STOP Lever



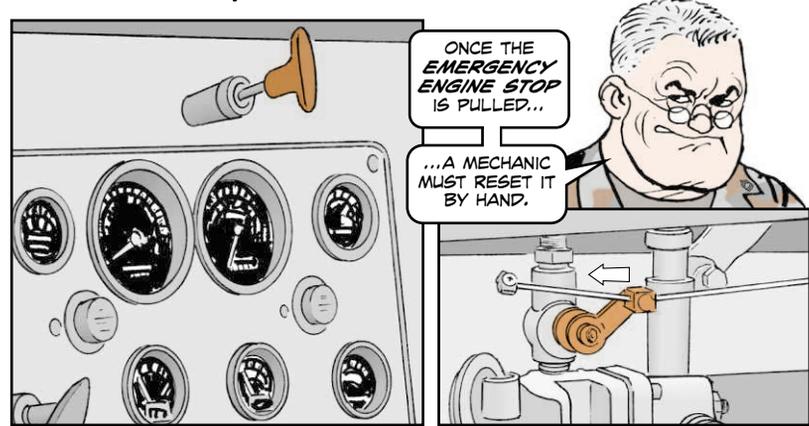
HE JUST WON'T GIVE UP, WILL HE?

# by Hand



BET HE USED THE EMERGENCY ENGINE STOP LEVER WHEN HE SHUT DOWN!

Operators, once the EMERGENCY ENGINE STOP lever is pulled on your M939/A1 truck, you won't be able to restart it until the hood is raised and the fuel cutoff valve is manually reset.



ONCE THE EMERGENCY ENGINE STOP IS PULLED...

...A MECHANIC MUST RESET IT BY HAND.

You're fooling yourself if you think it's just a matter of pushing the EMERGENCY ENGINE STOP lever back in. You'll just keep cranking an engine that won't start. That drains the batteries and can burn up the starter.

Remember that the EMERGENCY ENGINE STOP lever is for **emergencies** only. Use both the battery ON/OFF switch and the START/RUN/OFF switch to shut down the engine under normal conditions.

Shutdown procedures should be closely followed on all M939's equipped with antilock braking system (ABS). Otherwise, the electronic control unit (ECU) may be damaged, faults created, and the ABS valves will stop working. Turn the vehicle light switch off and turn the ignition switch to the OFF position. Then wait for the engine to completely stop before turning the battery switch to the OFF position.

If you **must** use the lever, call in your mechanic to reset it and check out the problem before trying to start the engine again.

## M916A1/A2, M917A1 Rear Axle Brake Camshafts

NSN 2530-01-446-7969 gets the righthand (curbside) brake camshaft for the truck's rear bogie axle. It's also used on the lefthand front bogie axle. Order NSN 2530-01-446-6784 when you need the lefthand (streetside) rear and righthand front brake camshaft. Both NSNs replace the parts info shown as Item 21, Fig 195 of TM 9-2320-363-24P.

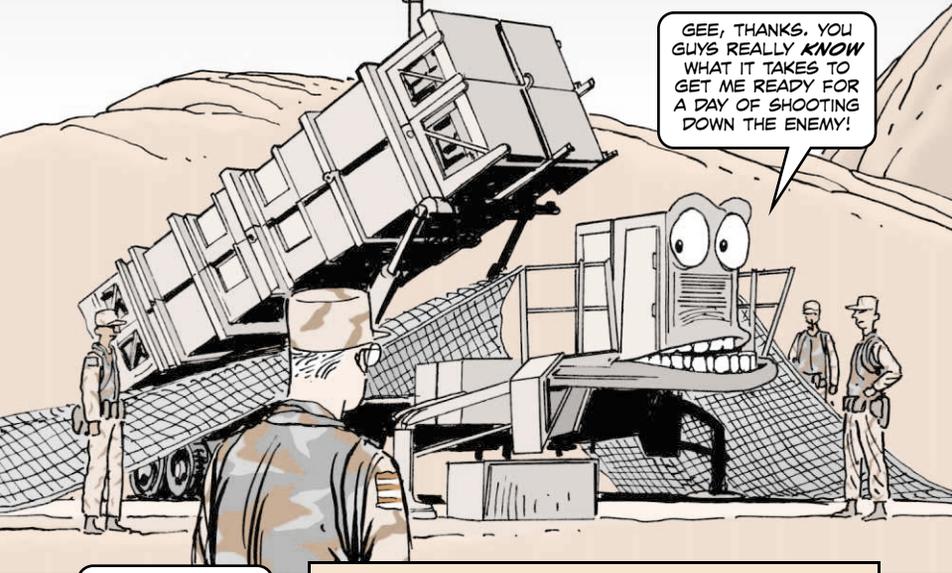
## M101A3 Trailer Bow

Use NSN 2540-00-693-0744 to get the steel bow for the 3/4-ton trailer. This bow is used on all models in the M101-series trailers, and is shown as Item 21 of TM 9-2330-202-14&P.

THEY MAY BE SMALL, BUT THESE ARTICLES ARE LOADED WITH GOOD INFO!



# QUICK STEPS TO GOOD LAUNCHING

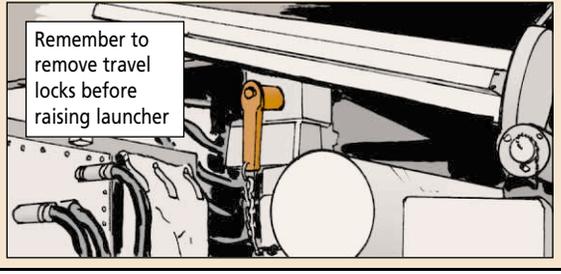


GEE, THANKS. YOU GUYS REALLY *KNOW* WHAT IT TAKES TO GET ME READY FOR A DAY OF SHOOTING DOWN THE ENEMY!

TAKING A FEW QUICK PM STEPS CAN HELP YOUR PATRIOT LAUNCHER STEP UP WHEN IT COMES TO LAUNCHING.



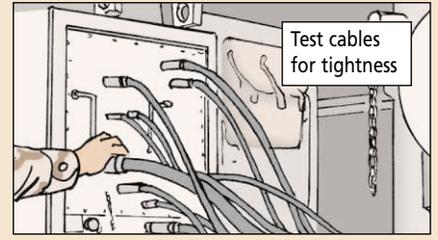
- **Remove the travel locks before raising the launcher.**  
Sounds simple, but every year some Patriot crew forgets. And that can bend the launcher platform, which is a big league repair. Before you hit the button to raise the launcher, visually check that both travel locks have been removed. And make sure the locks have lanyards. Otherwise, the locks will disappear.



Remember to remove travel locks before raising launcher

- **Pay attention to cables.**

If the cables that connect to the rear of the launcher are loose or in bad condition, you're going to have power problems and firing faults. Feel all the cable connectors to make sure they're tightly screwed on. Make sure none of the cables are kinked—that could damage cable wiring.



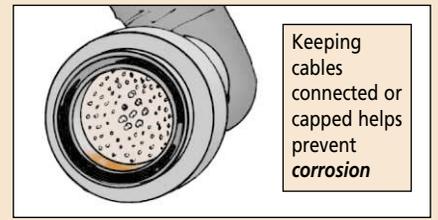
Test cables for tightness

Look for cuts in the cables' covering. Cuts let water corrode the cable's wiring. Cover small cuts with electrical tape to seal out water. Cuts larger than an inch need your repairman's attention. He may need to put shrink tubing over them.



Look for cuts in cables

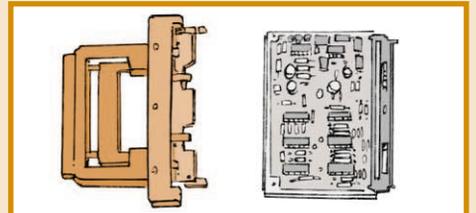
Keep cables connected as much as possible. That keeps dirt and moisture out of the connectors. If you do have to disconnect cables, screw on their protective caps. If the caps have disappeared, tie a plastic bag over the connector. Order new caps.



Keeping cables connected or capped helps prevent corrosion

- **Take it easy with circuit cards.**

They're expensive and critical to the launcher. Make sure the power is completely turned off before installing a circuit card. Just flipping off the 28V switch is not enough. Otherwise, the circuit card can be zapped when you plug it in.

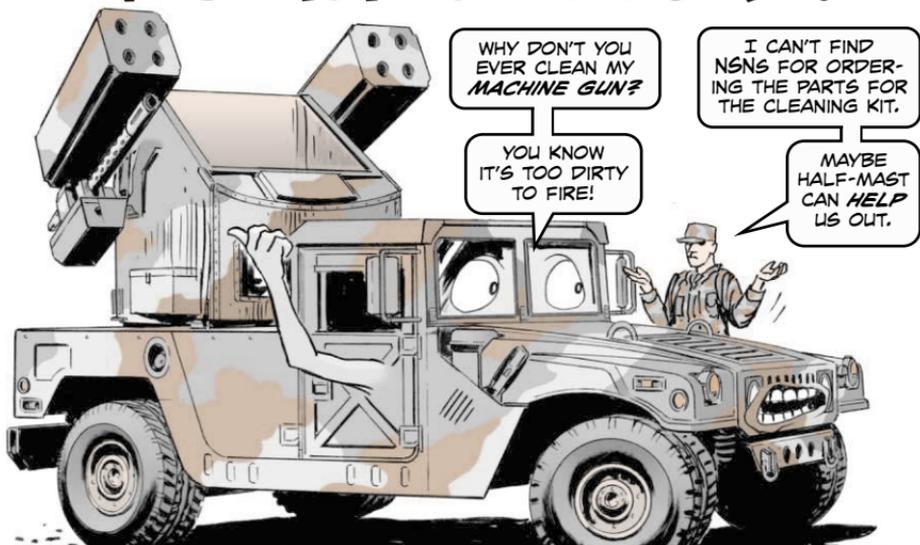


Use card extractor to remove and install circuit cards

Use the circuit card extractor to remove and install circuit cards. Using pliers can damage the card. Make sure you're putting the card in the right slot. If the card doesn't slide in easily, you've probably got the wrong slot. Forcing the card can damage it and the slot.



# NEED M3P CLEANING KIT?



Dear MSG Half-Mast,

Can you get me an NSN breakdown of the Avenger's M3P cleaning kit? You can't order the whole kit anymore and the TM lists only part numbers for the kit's components.

SGT K.W.



Dear Sergeant K.W.,

You got it. Here goes:

- ordnance weapon bag, NSN 8105-00-921-5821
  - headspace and timing gauge, NSN 5280-13-116-6359
  - ruptured case extractor, NSN 4933-00-716-0041
  - safety rod and accessories, NSN 5410-13-116-9122,
- consisting of:

- loop, NSN 1005-13-116-9129
- safety rod, NSN 5410-13-116-9123
- sensor gauge, NSN 5220-13-116-9121
- swab holder, NSN 1005-00-716-2704
- spiral cleaning brush, NSN 1005-00-716-2702
- small cleaning brush, NSN 1005-00-766-0915
- bore brush, NSN 1005-00-550-4037
- handle, NSN 1680-13-117-2829
- 8.6-in cleaning rod, NSN 1005-00-556-4102
- 50-in cleaning rod, NSN 1005-00-653-5441

Pictures of the cleaning kit parts are on Pages B-1 thru B-5 in TM 9-1425-433-10.

Half-Mast

# BATTERY MAT HELPS TOO



RUBBER IS GOOD FOR STOPPING BATTERY BOX CORROSION, BUT A BATTERY MAT IS EASIER.

Dear Editor,

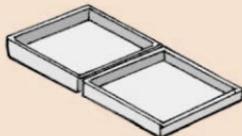
I read in PS 623 (Oct 04) the suggestion on Page 13 that Avenger crews spray the bottom of the battery box with a rubber coating to prevent corrosion from ruining the box.

An easier fix would be an acid neutralizing battery mat. The mat will soak up any battery acid and prevent the acid from corroding the bottom of the battery box. And there's no need to clean the bottom of the battery box with baking soda and water. You can just replace the battery mat.

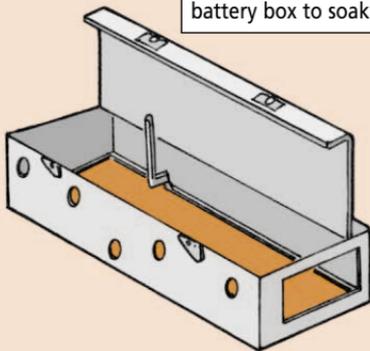
Order a 100-ft roll of heavy duty battery mat with NSN 6160-01-395-5943.

Of course, if batteries are boiling over regularly they're probably being overcharged. The Avenger charging system should be checked out.

William Ellis  
Army Field Support Command  
Rock Island, IL



Put battery mat in bottom of battery box to soak up acid



*Editor's note:* You've certainly taken that battery acid problem to the mat. Thanks, Mr. Ellis.

# WHAT YOU NEED FOR PM



Dear Editor,  
During the inspections we make as members of Ft Drum's COMET (Command Maintenance Evaluation and Training Team), we find many arms rooms are lacking the supplies they need to maintain their weapons. It would be a good idea for PS to publish the NSNs for the different small arms cleaning kits so that armorers could easily order more when they run out.

Wayne Lambert  
Mike Ferari  
COMET  
Ft Drum, NY

*Editor's note: That's an excellent idea, but unfortunately there are no NSNs for complete cleaning kits. The items in each kit must be ordered individually and their NSNs are listed in the EXPENDABLE/DURABLE SUPPLIES and ADDITIONAL AUTHORIZATION LIST sections in the back of the -10 and -23&P TMs for each weapon. Here are the NSNs for the common items most arms rooms will need:*

• **CLP**

1/2 ounce, NSN 9150-01-102-1473

4 ounces, NSN 9150-01-079-6124

1 pint, NSN 9150-01-054-6453

7 gallons, NSN 9150-01-053-6688

• **Rifle bore cleaning compound (RBC)**

2 ounces, NSN 6850-00-224-6656

8 ounces, NSN 6850-00-224-6657

1 gallon, NSN 6850-00-224-6663

• **Arctic lubricating oil (LAW)**

1 quart, NSN 9150-00-292-9689

• **Weapons lubricating oil (LSA)**

2 ounces, NSN 9150-00-935-6597

4 ounces, NSN 9150-00-889-3522

1 quart, NSN 9150-00-687-4241

1 gallon, NSN 9150-00-753-4686

• **Pipe cleaners**

pack of 32, NSN 9920-00-292-9946

• **Wiping rags**

50-lb bundle, NSN 7920-00-205-1711

• **Cleaning swabs**

package of 1,000, NSN 1005-00-912-4248

• **Toothbrush**

NSN 1005-00-494-6602

• **Dry cleaning solvent**

1 gallon, NSN 6850-01-474-2319

• **Solid film lubricant**

16-oz spray can, NSN 9150-01-260-2534

UH-OH... I BENT MY CATCH BAG FRAME.

NOW WE HAVE TO ORDER A WHOLE NEW BAG ASSEMBLY.

MAYBE NOT. I THINK YOU CAN ORDER BAG ASSEMBLY PARTS NOW.



# NSNs for Catch Bag Parts

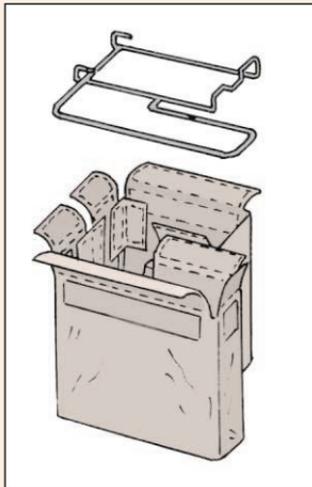
IF SOMETHING BREAKS ON THE CATCH BAG ASSEMBLIES FOR THE MK 64 OR MK 93 MACHINE GUN MOUNTS, YOU **NO LONGER** HAVE TO ORDER A WHOLE NEW ASSEMBLY.

WITH THESE NSNs YOU CAN ORDER INDIVIDUAL PARTS...



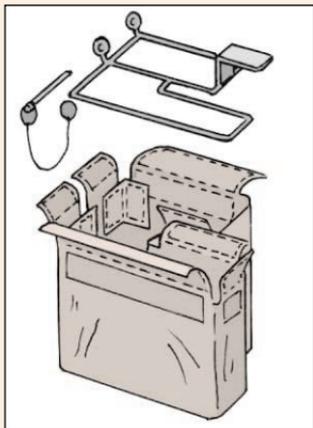
MK 64 catch bag assembly (Mod 9), NSN 1005-01-418-4360

- catch bag frame, NSN 1005-01-516-3961
- cartridge catch bag (olive), NSN 1005-01-388-5702
- cartridge catch bag (sand), NSN 1005-01-388-5685

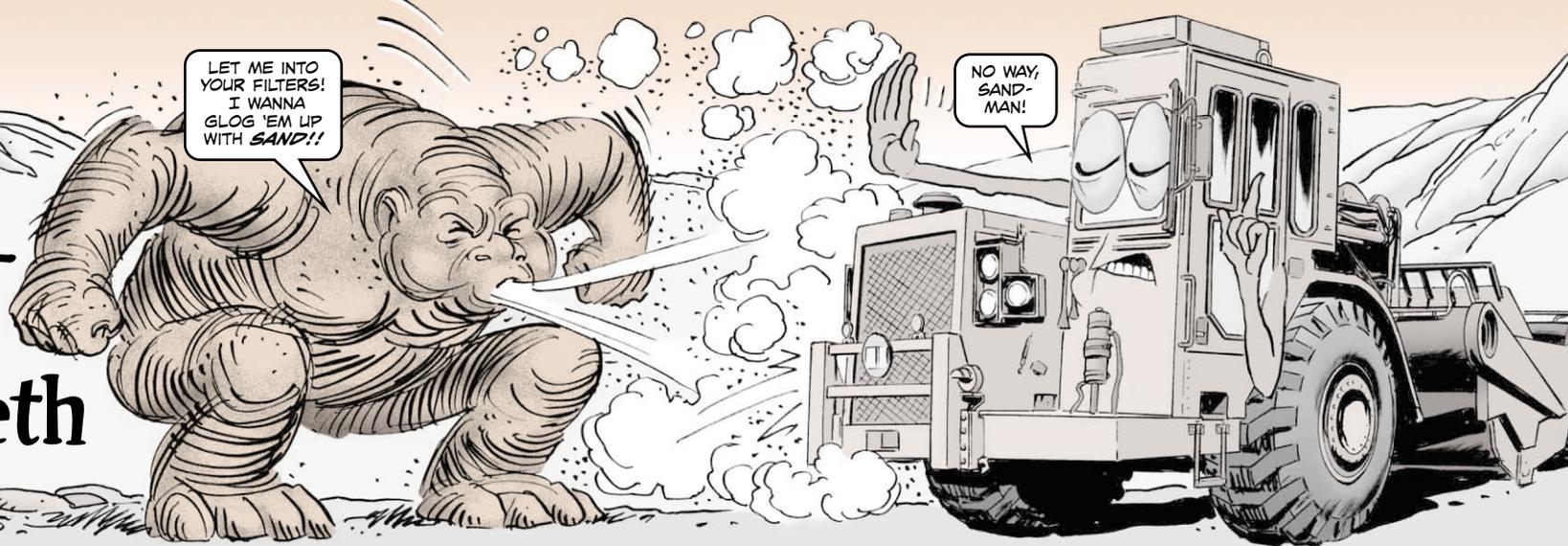


MK 93 catch bag assembly (Mod 1), NSN 1005-01-388-5679

- catch bag frame, NSN 1005-01-513-9741
- cartridge catch bag (olive), NSN 1005-01-388-5702
- cartridge catch bag (sand), NSN 1005-01-388-5685
- locking pin, NSN 5315-01-385-9216



# The Sand-man Cometh

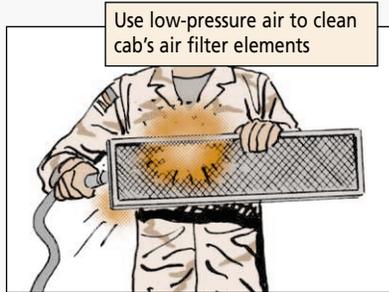


**T**hese scrapers are racking up many hours as they keep moving sand at faraway work sites. Stay up on the info in TM 5-3805-248-14&P-1 and keep these pointers in mind.

## Cab Filters

Both filter elements for the cab's air system are located on the roof of the scrapper's cab. Most of the time, the air system keeps clean air circulating inside the cab, no matter how dusty the worksite is.

But a loss of fresh air inside the cab is a signal for you to remove the filter elements to see if they're clogged with dust and sand. If they are, clean the filter elements only with low-pressure air.



## Vents Open and Close

Make sure the cab vents are closed after the day's run. That way dust and sand stay out of the cab.

## Air Tank Reminder

Scorching hot days and cool nights in the desert mean condensation is forming in the scrapper's air brake system.

Condensation leads to corrosion, slow stops and brake failure.

After the day's run, open the manual draincocks on the two air tanks near the cab step on the roadside. Both of these tanks are overlooked because they're located under the cab platform.

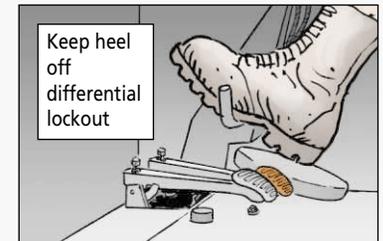
Make sure the draincocks are closed when you finish.



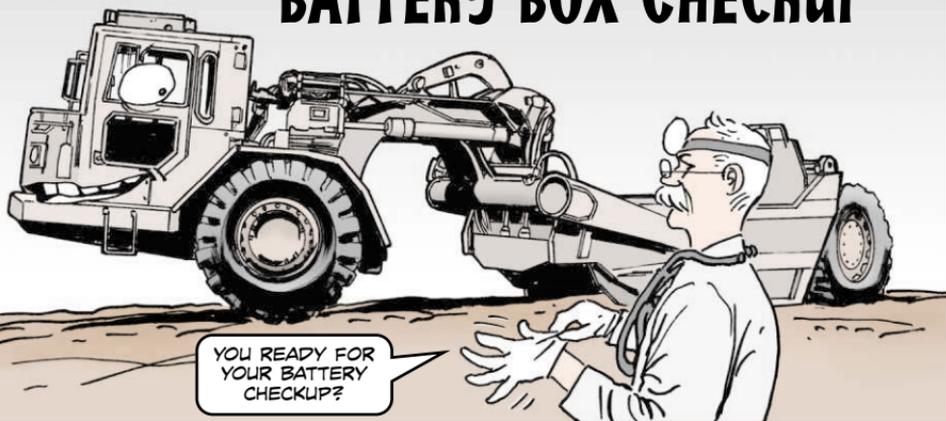
## Differential Lockout

Using the scrapper's footrest is a great idea—unless your heel rests against the differential lockout. Any bump the scrapper hits engages and disengages the differential. That overpressurizes that transmission and blows its internal differential seal. End result: Your scrapper is going nowhere!

So use the footrest, but keep your boot away from the differential.



# BATTERY BOX CHECKUP



Operators, your scraper's batteries and battery box need their checkups every so often, just like you do.

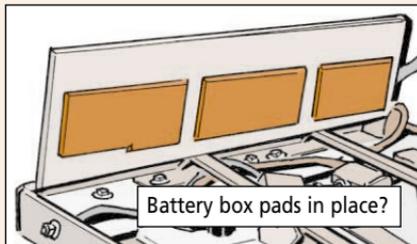
The box collects sand and dirt that turns into mud during wet weather. Mud holds moisture that can close the circuit between the positive and negative terminals. A closed circuit causes the batteries to discharge and die.

With the box open, remove any sand you find. Then make sure the foam pads on the box's access doors are in place. The pads keep the doors from touching the battery clamps, battery posts and the box's support. Without the pads in place, the batteries can be shorted out.

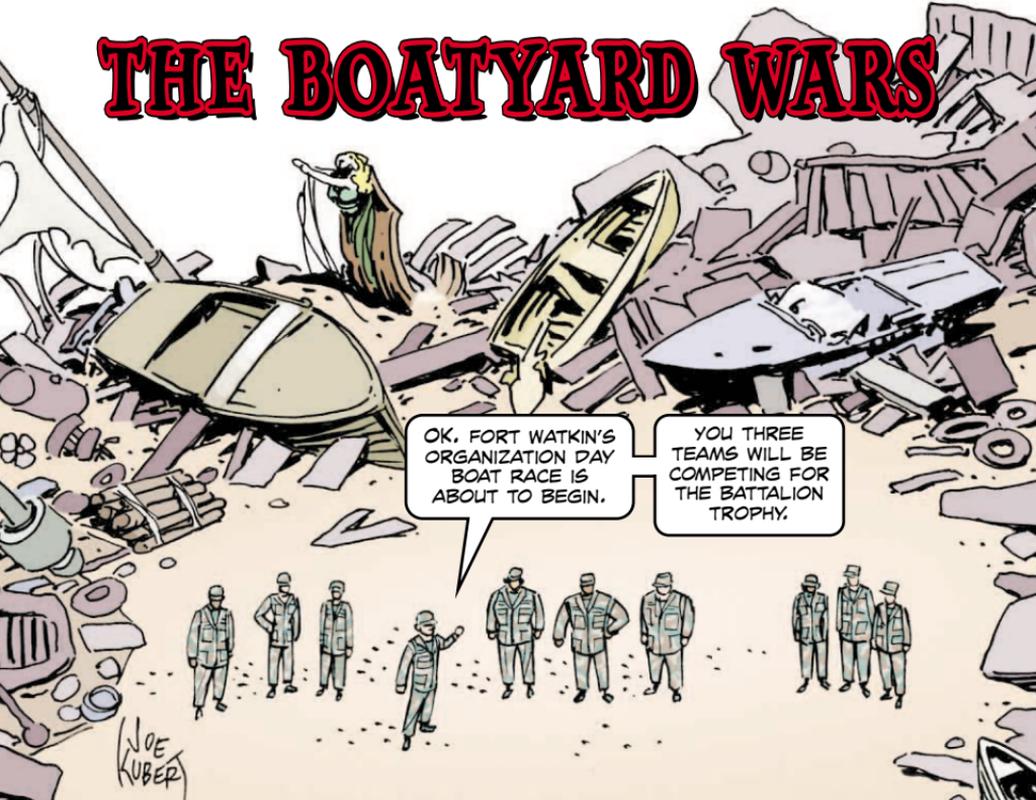
If a pad is torn or missing, your mechanic can replace it. NSN 9320-00-060-9363 brings a 24 x 24-in rubber sheet. Keep the pads in place with adhesive, NSN 8040-00-142-9193. This NSN will bring you ten 1-oz bottles.

Any time the batteries are removed, eyeball the condition of the battery box. Mop up any moisture you find in the bottom of the box. It could cause the box to rust.

Your mechanic can use a wire brush to scrape off rust and old paint. After cleaning, protect the bare metal inside the box with bituminous coating compound, NSN 8030-00-290-5141.



# THE BOATYARD WARS



OK, FORT WATKIN'S ORGANIZATION DAY BOAT RACE IS ABOUT TO BEGIN.

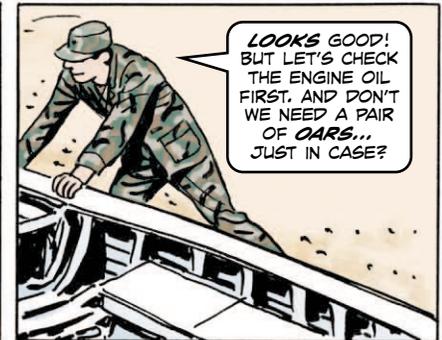
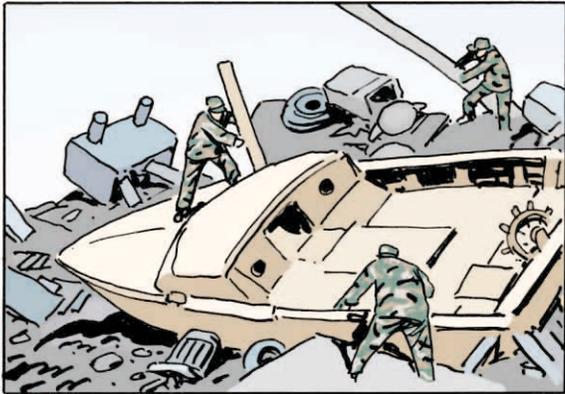
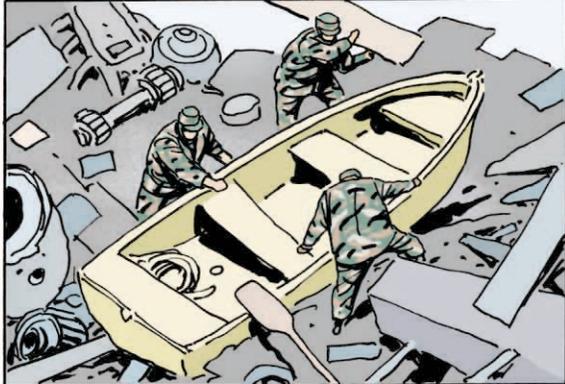
YOU THREE TEAMS WILL BE COMPETING FOR THE BATTALION TROPHY.

JOE KUBER

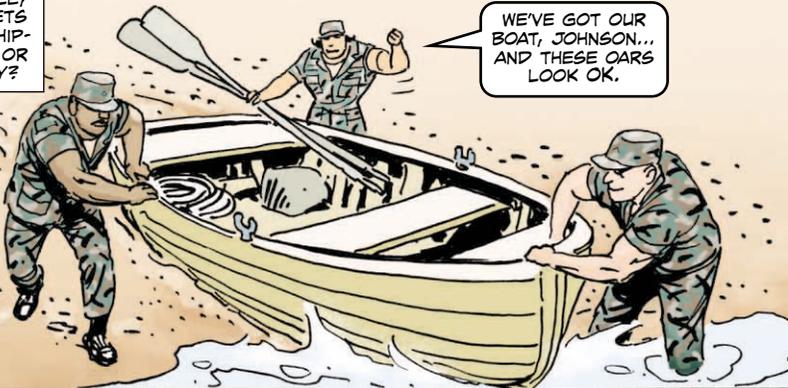
ALPHA UNIT GIVES US PRIVATE JONES, PFC MILLER AND SPECIALIST HERNANDEZ...

...REPRESENTING DELTA UNIT IS PRIVATE CHANG, PFC JOHNSON, AND PRIVATE WILLIAMS.

...AND THE OMEGA TEAM IS SERGEANT PALMER, PFC JONES, AND PRIVATE SIMS.



MEANWHILE,  
DELTA GETS  
THINGS SHIP-  
SHAPE... OR  
DO THEY?



WE'VE GOT OUR  
BOAT, JOHNSON...  
AND THESE OARS  
LOOK OK.



LET'S SEE IF  
OMEGA'S AS  
FULL OF HOT  
AIR AS THE  
OTHERS...

WHEN ALL IS  
SAID AND DONE,  
WE **WILL** WIN  
THE RACE. WHY?



'CAUSE WE'RE  
THE **OMEGAS!**



YEAH, CHANG...  
BUT SHOULDN'T  
WE TAKE THAT  
**BOAT REPAIR**  
**KIT** AND SOME  
**EXTRA OARS?**



NO TELLIN' HOW  
LONG THEY'VE  
BEEN SITTING IN  
THIS JUNK PILE.

LET'S TAKE  
CARE OF  
MAINTENANCE  
**BEFORE** WE  
SAIL.



THAT'S  
**RIGHT!** WE  
DO WHAT WE  
HAVE TO DO  
TO GET  
WHERE WE  
HAVE TO GO!



HEY, SERGEANT PALMER, I  
TOOK CARE OF THE ROPE PM  
AND SEWED UP THE SAIL.



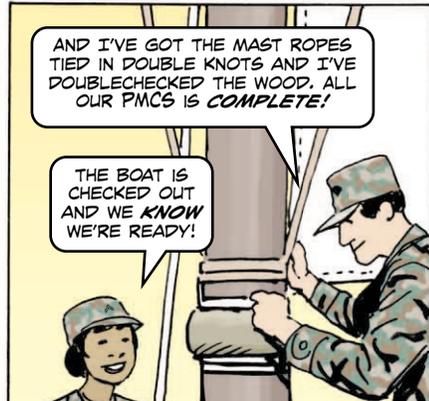
**LISTEN UP!**  
THEY DON'T  
CALL US DELTA  
FOR NOTHING.

WE GOT THE  
MUSCLE TO WIN.  
WE DON'T **NEED**  
THE EXTRA  
WEIGHT OF THE  
KIT AND OARS.  
**FORGET 'EM!**



WE GOT  
THIS RACE IN  
**THE BAG!**

WE'RE  
**NUMBER**  
**ONE!**



AND I'VE GOT THE MAST ROPES  
TIED IN DOUBLE KNOTS AND I'VE  
DOUBLECHECKED THE WOOD. ALL  
OUR PMCS IS **COMPLETE!**

THE BOAT IS  
CHECKED OUT  
AND WE **KNOW**  
WE'RE READY!



TWO HOURS  
LATER...

**READY...  
SET...  
GO!!**



UH, OH! WHAT'S HAPPENING?!

CHECK THE ENGINE, MILLER!



LOOKS LIKE NO ENGINE OIL. HERNANDEZ, I THOUGHT YOU SAID WE HAD OIL.



AND JONES, A VISUAL INSPECTION WASN'T ENOUGH.

NOBODY LISTENED TO ME... AND WE LEFT THE OARS BEHIND!



OK, SO WE OVERLOOKED A FEW THINGS. IF WE WANT TO GET TO THE OTHER SIDE, WE'RE GONNA HAVE TO PADDLE WITH OUR HANDS!



HEY, LOOK! ALPHA'S DEAD IN THE WATER!!

ROW FASTER AND TAKE THIS RACE!



FASTER!



PONG



PING



UH-OH!



WILLIAMS! WHY DID YOU LEAVE THE BOAT REPAIR KIT BEHIND!?

I TOLD YOU WE SHOULD'VE TAKEN CARE OF THE PROBLEMS FIRST BEFORE WE LEFT!

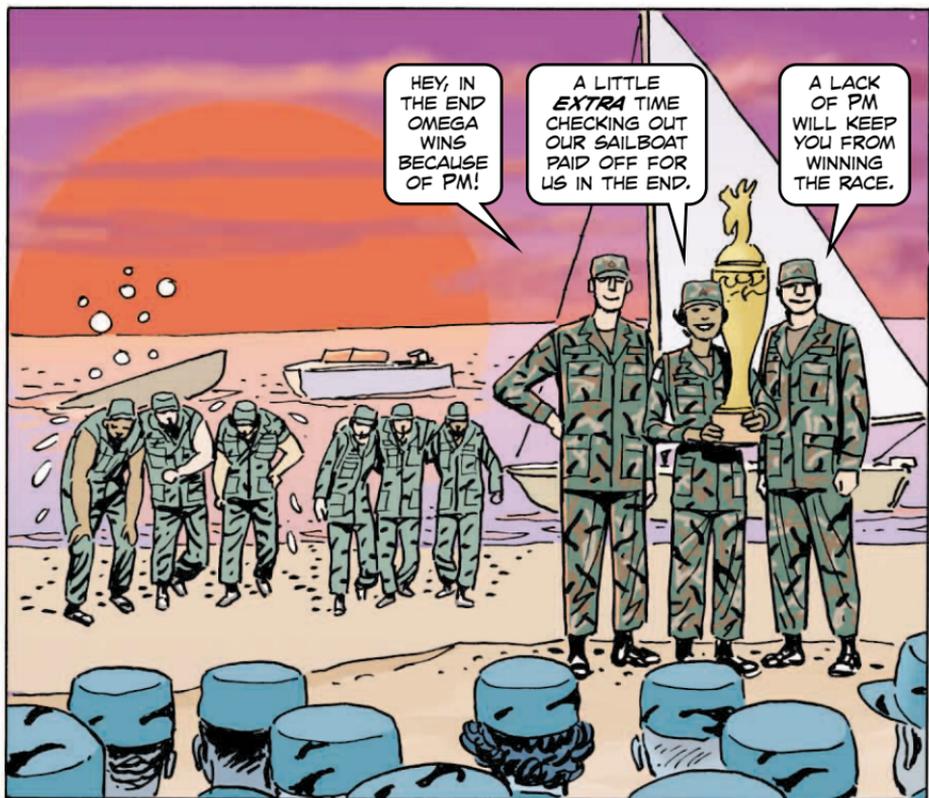
ALL OUR MUSCLE AND MASS CAN'T FIX THE BOAT NOW... NOT WITHOUT THE STUFF WE NEED!



HEY! WE STILL GOT A CHANCE. LET'S JUMP IN THE WATER AND SWIM FOR IT!



SEE YOU GUYS AT THE FINISH LINE!!



HEY, IN THE END OMEGA WINS BECAUSE OF PM!

A LITTLE *EXTRA* TIME CHECKING OUT OUR SAILBOAT PAID OFF FOR US IN THE END.

A LACK OF PM WILL KEEP YOU FROM WINNING THE RACE.

EQUIPMENT *SHOULD NOT* BE TAKEN FOR GRANTED.

*PREVENTIVE AND MAINTENANCE* ARE NOT DIRTY WORDS.

YOU HAVE TO GET IN THERE AND GET YOUR *HANDS DIRTY* TO MAKE SURE YOUR EQUIPMENT IS UP TO SNIFF.

THE BATTLE IS NOT NECESSARILY WON BY THE SWIFT, BUT BY THOSE WHO TAKE TIME TO DO MAINTENANCE FIRST.

FROM BOATS TO HELICOPTERS TO TANKS AND TRUCKS, *NOTHING* MOVES OR LASTS LONG WITHOUT PM.

THOSE WHO *IGNORE* PM WILL *ALWAYS* END UP "DEAD IN THE WATER."



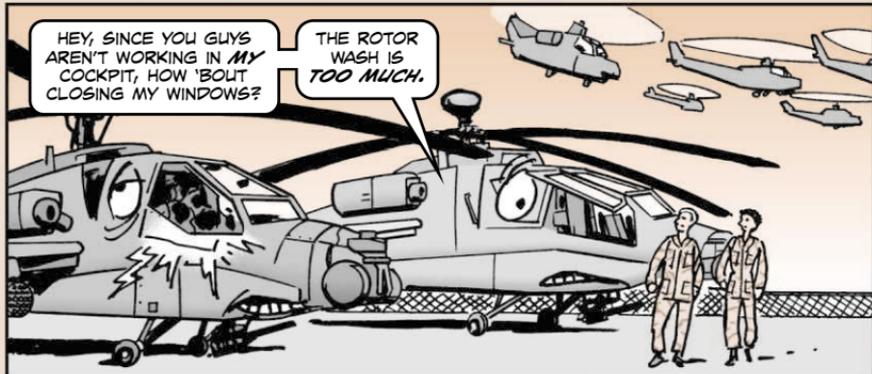
**SLAAM  
BAAAM**

WHA-A-A?



HEY, SINCE YOU GUYS AREN'T WORKING IN MY COCKPIT, HOW 'BOUT CLOSING MY WINDOWS?

THE ROTOR WASH IS TOO MUCH.



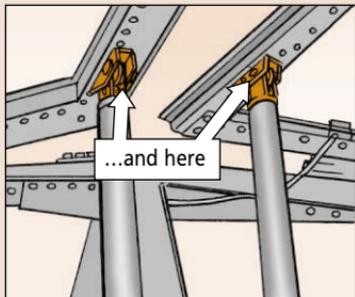
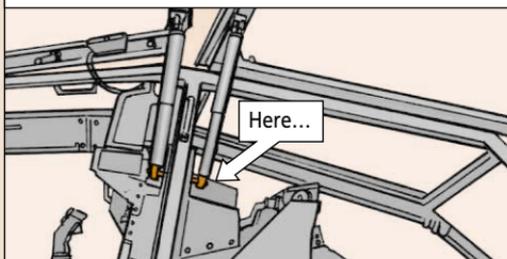
**M**echanics, that **SLAM-BAM** is the sound of your AH-64 A or D model open cockpit windows crashing down from rotor wash.

While on the flight line doing pre-flight inspections, maintenance or just working around your bird, it's safer and better to keep the cockpit windows closed when you're not inside.

If you don't, the force of rotor wash can blow on the windows and stretch the cables and damage the struts and supports. That can cause the windows to crash down on you. Damaged windows won't close properly.

To avoid this problem and possible harm to yourself, don't work on your bird with the windows open in strong winds or in aircraft rotor wash.

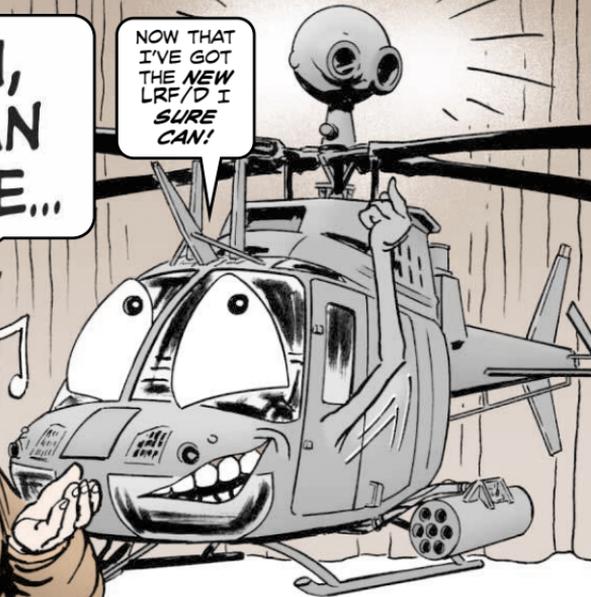
Wind from aircraft flying over put pressure on struts



OH-58D...

OHHHH,  
SAY CAN  
YOU SEE...

NOW THAT  
I'VE GOT  
THE NEW  
LRF/D I  
SURE  
CAN!

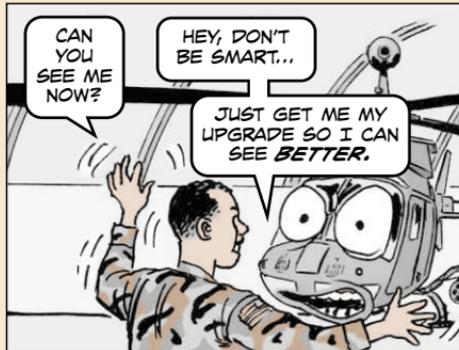


The Kiowa Warrior's laser range finder (LRF/D) inside the mast-mounted sight (MMS) is being upgraded to see better. The upgrade will extend the life of the laser and, increase its reliability, accuracy and mean time between failures, too.

When you turn in an LRF/D for repair, and requisition one from the supply system, you will get one of the upgraded NSN configurations, depending on what's on hand at the time you order.

All of the old and new configurations are 100% interchangeable. The upgraded LRF/D will be just a drop-in.

Current NSNs 1240-01-	Replacement NSNs 1240-01-
255-7719	511-9268
261-7857	511-9282
287-8051	512-8675
352-8201	512-8676



ELSE...

# Hook It, Pile It



**ELSE** techs, more and more it looks like everybody's ELSE shop needs hook-and-pile fastener tape.

All types of aviation life support equipment (ALSE) need the hold and quick-release ability that hook-and-pile fasteners give you.

Item	Width (inches)	Color	NSN 8315-
Hook	1	Olive green	00-106-5973
Hook	1.5	Olive green	00-151-6481
Hook	2	Olive green	00-450-9837
Hook	2	Black	00-926-4931
Hook	4	Sage green	01-187-7773
Pile	1	Olive green	00-106-5974
Pile	1.5	Olive green	00-151-6483
Pile	2	Olive green	00-498-6631
Pile	2	Black	00-926-4930
Pile	4	Sage green	01-187-7774

Use the sage green hook-and-pile for attaching organizational and unit patches on aircrew flight clothing. The color matches the hook-and-pile already on the clothing. Order the sage green from S9T on a DD Form 1348-6. Note in the REMARKS block that the NSN is not on the AMDF.

All Aircraft...



# Bye-Bye P-D-680

Mechanics, P-D-680 cleaning solvents have been around a long time. As of right now, P-D-680 Types I, II and III are cancelled and have been replaced with environmentally safer cleaning solvents.

Aviation and ground support users, do not order P-D-680 of **any** type from the supply system. Instead, order MIL-PRF-680, the safer cleaning solvents with the following NSNs:

MIL-PRF-680 Type I		MIL-PRF-680 Type II		MIL-PRF-680 Type III	
NSN	Size	NSN 6850-	Size	NSN 6850-01-474-	Size
6850-01-474-2302	1 gal	01-474-2319	1 gal	2318	1 gal
2309	5 gal	00-246-6112	5 gal	2320	5 gal
2313	55 gal	01-474-2317	5 gal	2321	5 gal
		01-474-2719	55 gal		
		01-474-2316	55 gal		

When using these hazardous solvents, be cautious. The flash points are 100°F for Type I, 140°F for Type II and 200°F for Type III. Use all safety precautions when using flammable liquids.

Wear the appropriate protective gear, such as face shield, rubber gloves and a respirator if required by your local environmental SOP.

All Aircraft...

# CORROSION TEAM UPDATE



It must be a Monday! You've got aircraft corrosion problems and can't find the corrosion team.

Don't fret. The team is now called the PEO Aviation Corrosion Prevention and Control Center of Excellence (CPC CoE). They provide assistance with corrosion prevention and control to all aircraft maintenance personnel worldwide.

If your unit needs help, the CPC CoE assistance team will send two representatives to your unit.

Their assistance consists of a 2½-hour classroom session followed by a 1-hour hands-on session with your bird. You will learn the basics of corrosion, repair techniques, stopping and preventing corrosion and types of materials to prevent corrosion. The team can assist with other corrosion problems too, whether it's on an airframe or on a piece of aviation ground support equipment (AGSE).

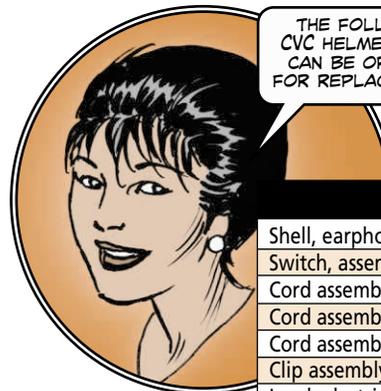
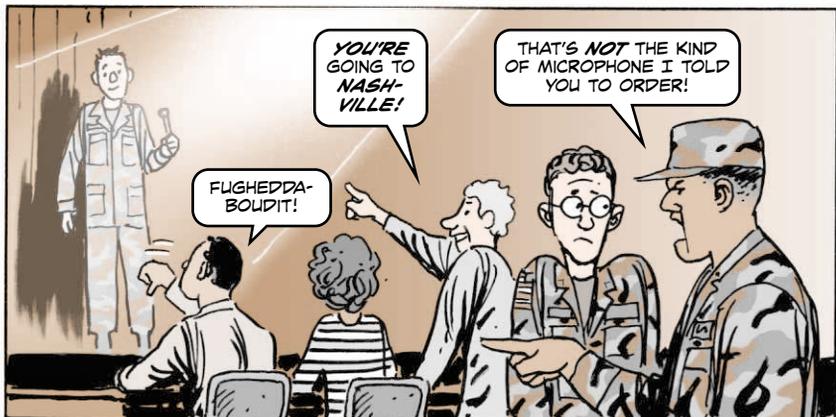
You can find corrosion information on the CPC CoE website at:

<http://www.amss.redstone.army.mil/agse>

To request a visit, contact the corrosion hotline at DSN 897-0209, (256) 313-0209 or email:

[cpc-coe@peoavn.redstone.army.mil](mailto:cpc-coe@peoavn.redstone.army.mil)

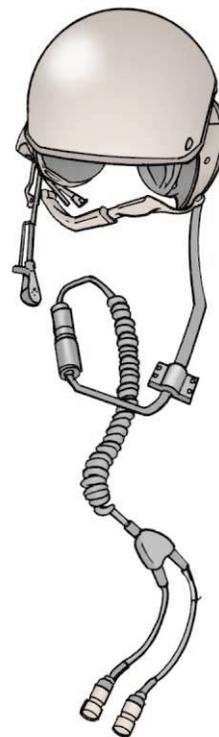
# ALL THE PARTS!



THE FOLLOWING CVC HELMET PARTS CAN BE ORDERED FOR REPLACEMENTS.

THE ITEM MANAGER IS ELLEN THOMAS, DSN: 444-8071, EMAIL: ellen.thomas@dla.mil

Nomenclature	NSN
Shell, earphone	5965-01-063-1332
Switch, assembly	5930-00-114-4359
Cord assembly, electrical	5995-00-302-7519
Cord assembly, electrical	5995-00-302-7515
Cord assembly, electrical	5995-00-302-7521
Clip assembly	5340-00-134-3846
Lead, electrical	5995-00-302-7520
Handle, switch	5930-00-114-4362
Washer, lock	5310-00-022-1117
Screw, machine	5305-00-494-7334
Screw, machine	5305-00-224-0783
Earcup, sub-assembly	5965-01-076-8026
Pad, cushioning (A)	8415-01-099-7869
Pad, cushioning (A)	8415-01-063-1910
Pad, cushioning (A)	8415-01-063-1909
Spacer, plate	8415-01-076-8073
Earphone	5965-00-135-0506
Microphone, dynamic	5965-00-937-1851
Guide boom assembly	5965-00-135-0547
Liner, CVC, small (A)	8415-00-134-9396
Liner, CVC, med (A)	8415-00-134-9397
Liner, CVC, large (A)	8415-00-134-9398
Pad, setting, center, small (A)	8415-00-163-9040
Pad, setting, side, small (A)	8415-00-163-9041
Pad, setting, center, med (A)	8415-00-163-9042
Pad, setting, side, med (A)	8415-00-163-9043
Pad, setting, center, large (A)	8415-00-163-9044
Pad, setting, side, large (A)	8415-00-163-9045
Pad, setting, pad brow (A)	8415-00-163-9046
Pad, setting, pad helmet, chin (A)	8415-00-163-9048
Pad, setting, strap assembly, chin (A)	8415-00-163-9052
Attachment kit (strip, adhesive, label)	8415-01-207-1196
Attachment kit (screws, washer, strap, nut)	8415-01-207-1197
Shell, CVC, sm/med (B)	8470-01-389-3815
Shell, CVC, large (B)	8470-01-389-3821
Liner, CVC, med (B)	8415-01-470-2821
Liner, CVC, large (B)	8415-01-470-2840
Pad, setting, med (B)	8415-01-470-2845
Pad, setting, large (B)	8415-01-470-2856



**NSN** 5965-00-313-8958 for the MK-1697/G headset-microphone kit used with the CVC helmet is a reference number only. You cannot use it to order an MK-1697/G assembly!

If you need the entire MK-1697/G, you must order a new CVC helmet or order **each** part of the headset-microphone and put it together.

The CVC helmet has two versions, DH-132A and DH-132B, with three different sizes...

NSN	Size	Version
8470-01-130-8180	small	A
8470-01-130-3794	medium	A
8470-01-130-3795	large	A
8470-01-389-3822	small	B
8470-01-389-3823	medium	B
8470-01-389-3818	large	B

The A-version is no longer issued.

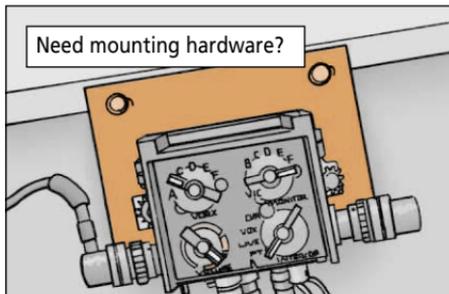
# Solve a Mounting Problem



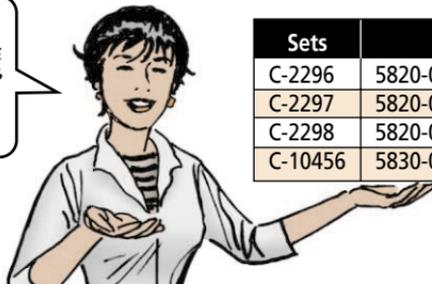
Chances are your howitzer, tank or personnel carrier has said goodbye to the AN/VIC-1(V) intercommunication set by now and said hello to the AN/VIC-3(V). If not, you might be in need of mounting hardware for the VIC-1 components.

For the audio-frequency amplifier, AM-1780C/VRC, NSN 5996-01-520-5679, you need mounting hardware, NSN 5340-00-254-6401.

The four intercommunication control sets each have their own hardware. None of the bags of hardware have NSNs, so they must be ordered by part number on a DD Form 1348-6.

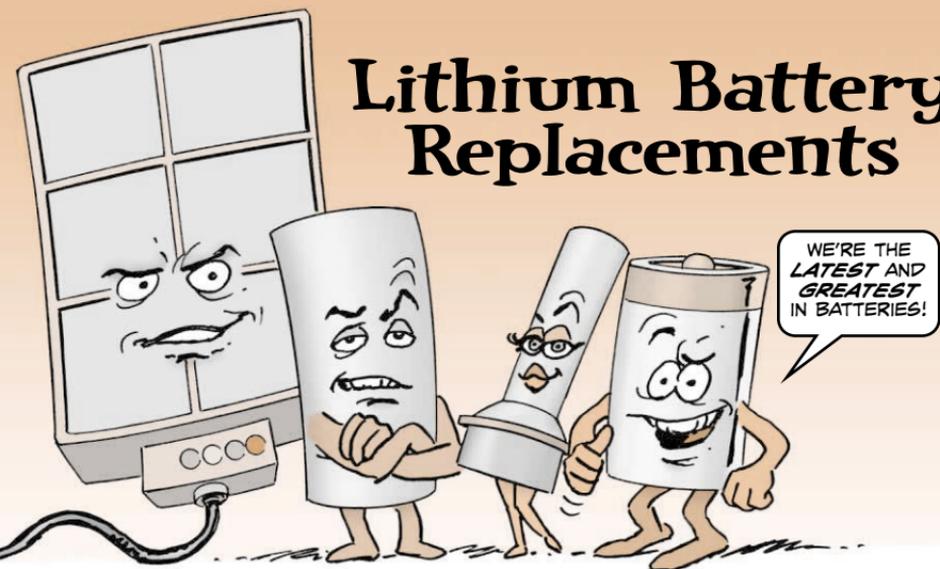


HERE ARE THE SETS, THEIR NSNS AND THE PART NUMBERS FOR THEIR MOUNTING HARDWARE...



Sets	NSN	Hardware PN
C-2296	5820-00-892-3337	SM-B-415268
C-2297	5820-00-892-3338	SM-B-415252
C-2298	5820-00-892-3339	SM-B-415234
C-10456	5830-01-082-0804	SM-B-415269

# Lithium Battery Replacements



HERE'S AN UPDATE ON OLD LITHIUM BATTERIES AND WHAT HAS REPLACED THEM...

I'M RETIRING AND LETTING THE NEW GUYS SUPPLY THE POWER!

Old Battery	Replacement Battery	NSN 6135-01-
BA-1372	BA-5372	214-6441
BA-5112	BA-5112A	439-6229
BA-5557	BA-5557A	448-4680
BA-5567	BA-5567A	447-5082
BA-1567	BA-5567A	447-5082
BA-5588	BA-5588A	447-5083
BA-5590	BA-5590B	438-9450
BA-5598	BA-5598A	447-5081
BA-5599	BA-5599A	447-4001
BA-5600	BA-5600A	441-0402
BA-5800	BA-5800A	440-7774
BA-5847	BA-5347	455-7946
BA-5847	BBA-5347	455-7946
BA-1568	BA-5368	455-7947
BA-1574	BA-5374	455-9646



The BA-5093, NSN 6135-01-216-9771, is also available. There is also a zinc-air alternative to the BA-5590 and BA-5390. It's the BA-8180/U, NSN 6135-01-500-0572. To use zinc-air batteries you'll need adapters like the one for the ASIP, which is NSN 5940-01-504-3218.

These batteries are now managed at S9G in Richmond, VA. For more good battery info go to the web at:

<http://lrc7.monmouth.army.mil/ipm>

# Getting the Right Order

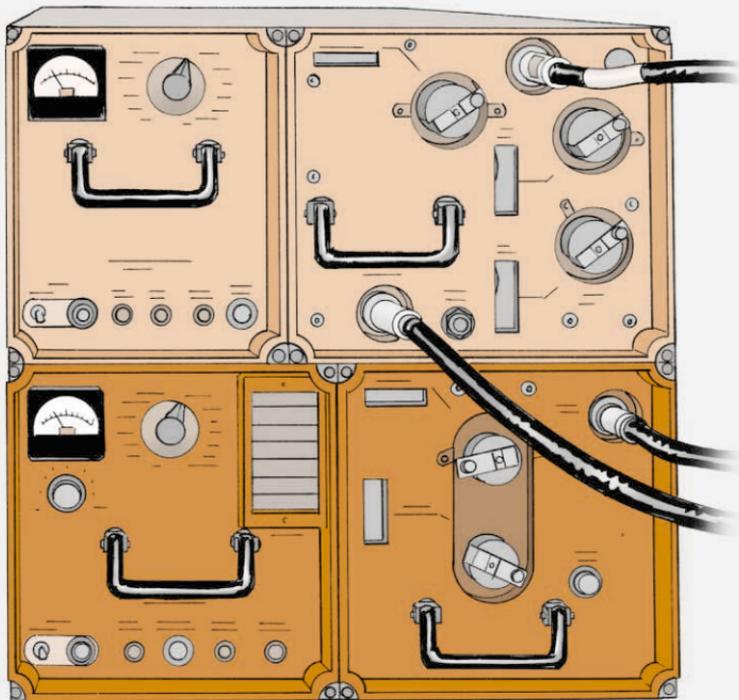
**A**bandon the idea of getting the AN/GRC-103 radio set receiver and case with NSN 5820-01-144-6007.

Say goodbye to the thought that you can order the transmitter and case with NSN 5820-01-085-6084.

All four items must now be ordered separately.

Get the R-1329C receiver with NSN 5820-01-163-3648.

Get the CY-4638 case for the receiver with NSN 5895-00-824-0829.



Order the T-983B transmitter with NSN 5820-01-070-5555.

Order the CY-4367A case for the transmitter with NSN 5895-01-081-5398.

Questions about parts for the AN/GRC-103? Email Frank Lentini at:  
**Frank.Lentini@mail1.monmouth.army.mil**

# FEEL FOR THE CONNECTION

**H**ooking up cables to the back of the AN/GRC-103 radio set's T-983 transmitter is a lot like playing blind-man's buff. You're blindfolded and you have to feel your way to identify the right connectors.

The biggest hookup problems are connecting the order wire (OW) and the power cable.

Get either of these wrong and you could fry a connector or damage the amplifier panel.

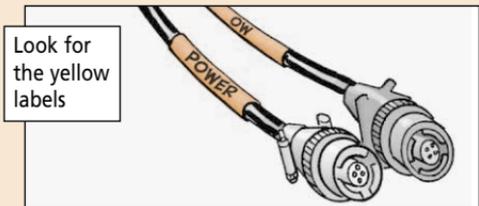
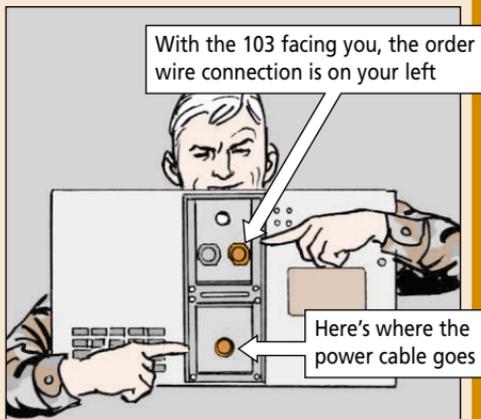
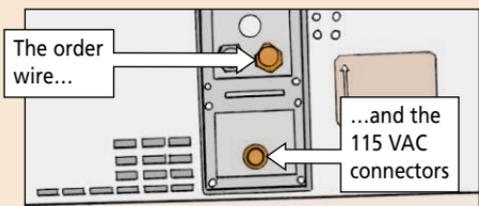
Often you make these connections while balancing the radio with your body, steadying it with one hand, and reaching back to make a blind connection with the other.

The secret to a good connection is to identify the connectors with your hand first. Reach behind the radio and find the triangle of receptacles. The one on the lower left (as your hand feels it) is the OW receptacle.

Below this triangle of receptacles is a fourth receptacle all by itself. That's the 115 VAC outlet where your power cable goes.

Now grab the correct cable. They're clearly labeled with a yellow band. Take the correct cable to the correct receptacle.

By identifying these receptacles with your hand first, it will be like taking your "blindfold" off.

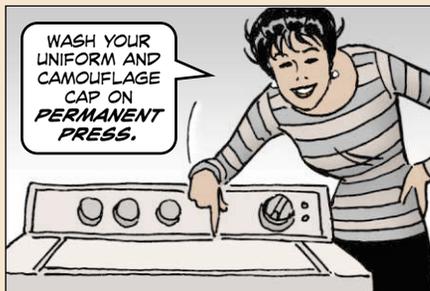


# THE LAWS OF LAUNDERING

It's time to take a stark, full-length-mirror look at yourself. What do you see staring back? Be honest. Are your BDUs fading? Wearing thin at the elbows and knees? Have the pockets, collar and cuffs frayed? Has the stitching come so unraveled you're trailing nine yards of thread and stray cats think you're a play toy? Can you no longer tell where the camouflage ends and the coffee stains begin?

Don't blame your BDUs. Maybe the problem lies with the way you do your laundry. But some simple improvements in your washing routine can change you from raggedy to stylish. Here's how to make your uniform look better and last longer:

## Machine Washing



Use warm water and a mild detergent. Never add chlorine bleach to the wash water. It fades the clothing, weakens the fabric and shortens its life.



## Hand Washing

In a pinch you can hand wash BDUs. Again, use warm water and a mild detergent. Rinse thoroughly in clean, warm water. Don't wring or twist the uniform to get excess water out—that adds wrinkles. Instead, squeeze the water out. Wrap the uniform in dry towels, then gently squeeze the bundle, letting the towels draw out moisture from the BDUs.

## Drying

It's OK to machine dry your cap, shirt and trousers. Set the dryer on permanent press cycle. As soon as the cycle is finished, remove the clothes right away and hang them up.

If you prefer to drip-dry your uniform, make sure to put it on a rust-proof hanger.



## Ironing

If you press BDUs, set the iron on a permanent press or low setting. Never iron dirty clothing. That can set dirt and stains permanently into the fabric.

## Starch

If you want your temperate or enhanced hot-weather BDUs to look crisp, starch them. AR 670-1 (3 Feb 05), *Wear and Appearance of Army Uniforms and Insignia*, Para 3-6.d, says it's OK. It also says commanders may not require soldiers to starch BDUs. Just remember, starch shortens the life of BDUs. Para 1-9.a.(5) says soldiers will not receive an increase in their clothing replacement allowance to make up for wear caused by starching.

Para 5-5.d. of AR 670-1 says soldiers are **not** authorized to starch the desert BDU.

AR 670-1 has the story on starching BDUs

Army Regulation 670-1  
Uniforms and Insignia

Wear and Appearance of  
Army Uniforms  
and Insignia

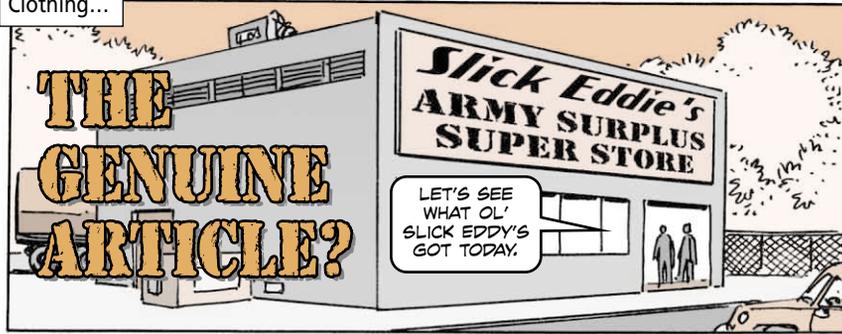
UNCLASSIFIED

**Never starch** aircrew BDUs or any NOMEX clothing. They're made to be fire- and heat-resistant and starching defeats that protection. Starch leaves a flammable residue that fills the spaces in the clothing's weave. It'll burn and so will you.

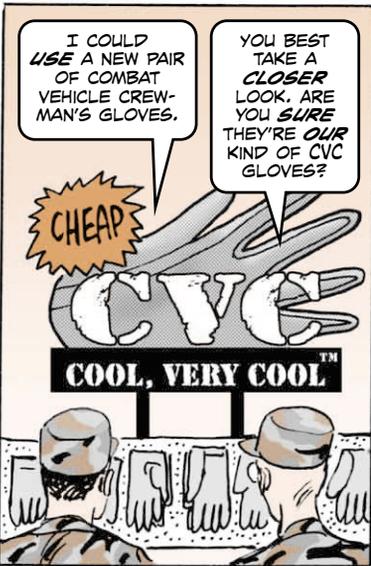
THESE LAUNDRY TIPS DO **MORE** THAN SAFEGUARD YOUR BDUs FROM WEAR, FADING AND SHRINKING.

THEY ALSO **PRESERVE** THE INFRARED PROTECTION BUILT INTO YOUR CLOTHING.

LAUNDRING ANY OTHER WAY **WEARS DOWN** THAT PROTECTION.



# THE GENUINE ARTICLE?



I COULD USE A NEW PAIR OF COMBAT VEHICLE CREWMAN'S GLOVES.

YOU BEST TAKE A CLOSER LOOK, ARE YOU SURE THEY'RE OUR KIND OF CVC GLOVES?

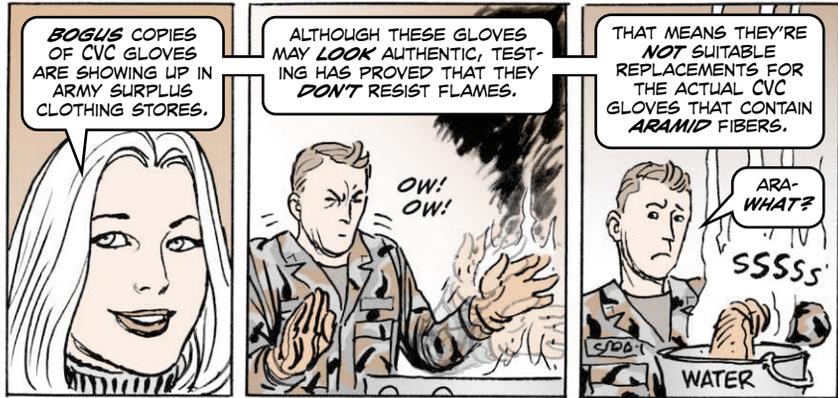


I DON'T KNOW, THEY SURE LOOK LIKE THE REAL THING. SO WHAT IF THEY AREN'T?

I'VE HEARD THERE ARE LOOK-ALIKE GLOVES THAT WON'T PROTECT YOU FROM FIRE.



THAT'S A GOOD REASON NOT TO GET 'EM.



BOGUS COPIES OF CVC GLOVES ARE SHOWING UP IN ARMY SURPLUS CLOTHING STORES.

ALTHOUGH THESE GLOVES MAY LOOK AUTHENTIC, TESTING HAS PROVED THAT THEY DON'T RESIST FLAMES.

THAT MEANS THEY'RE NOT SUITABLE REPLACEMENTS FOR THE ACTUAL CVC GLOVES THAT CONTAIN ARAMID FIBERS.



ARAMID IS DESIGNED TO RESIST FLAMES AND NOT TO MELT.

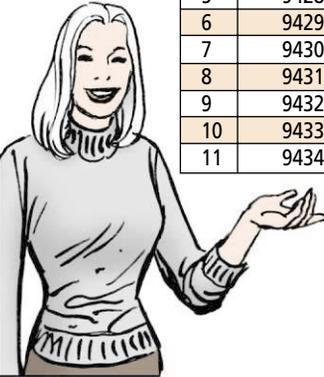
GET THE REAL CVC GLOVES, THE ONES THAT PROTECT YOUR HANDS FROM THIRD-DEGREE BURNS.

HERE ARE THEIR NSNs...

Combat Vehicle Crewman's Gloves	
Size	NSN
5	9428
6	9429
7	9430
8	9431
9	9432
10	9433
11	9434



YOU (AND YOUR HANDS) CAN'T AFFORD TO SETTLE FOR A POOR IMITATION.



## Storage Cabinets

Need storage cabinets for prescribed load list (PLL) parts? Table 63 of CTA 50-909, *Field and Garrison Furnishings and Equipment*, authorizes a number of metal cabinets for parts storage. Commanders can use the CTA as the authority to get the cabinets needed.

Mechanic's Coveralls...  
**CUT A DASHING FIGURE**

WHEN I STARTED OUT IN THE ARMY, WE DIDN'T HAVE FANCY MECHANIC'S COVERALLS LIKE THE KIND YOU KIDS WEAR TODAY.



IN THE OLD DAYS ALL WE HAD WERE STANDARD ISSUE OLIVE DRAB UNIFORMS.



IT WAS ONE KIND OF COVERALL...



...FOR ALL KINDS OF WEATHER.



NOW WE HAVE MECHANIC'S COLD WEATHER COVERALLS IN WOODLAND AND DESERT TAN CAMOUFLAGE PATTERNS.



HERE ARE THE SIZES AND NSNs...



Woodland	
Size	NSN 8415-
Small	01-414-1856
Medium	01-414-1859
Large	01-414-1862
X Large	01-490-6131
XX Large	01-490-6134

Desert Camo	
Size	NSN 8415-
Small	01-430-2313
Medium	01-430-2314
Large	01-430-2315
X Large	01-491-0232
XX Large	01-491-0239

YOU SURE CUT A DASHING FIGURE BACK THEN, MASTER SERGEANT HALF-MAST.



DIDN'T I, THOUGH?





# A Bad Slant on Cooking

**W**hen it comes to preparing a meal, you've got plenty of options. You can cook high-carb or low-carb. You can cook gourmet or you can cook on a budget. You can even cook from scratch. But there's one kind of cooking you must always avoid: Never cook in a mobile kitchen trailer (MKT) that's sitting on a slant.

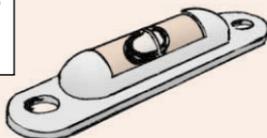
Cooking in a MKT that's not level can create a fire hazard. Grease from the grill can pool, run over the side and pour into the burner unit. Next thing you know, you're fighting a grease fire.

So, before you flip that first juicy burger or splash barbecue sauce on those wings, make sure the MKT is level. That takes more than a casual glance and some guesswork. It takes carefully watching the bench level indicators.

To set your MKT on the level, turn the jack handles to raise or lower the jacks until the bubbles are centered in the level indicators. You'll find the full procedures in work package 0005 00 of TM 10-7360-206-13.



...until bubbles are centered in level indicators



One other point worth remembering: If you can't find firm ground and have to park your trailer on soft ground, the jacks can sink and your kitchen will tilt. Avoid this problem by making a set of 12-in or larger square pads to put under the jacks.

Make the pads out of four 2x6x 12-in boards nailed or screwed together in two layers.

Use pad under leveling jack



# TAME YOUR TRASH



DO PLASTIC CUPS, CANDY WRAPPERS AND PAPER TOWELS LITTER YOUR OFFICE OR SHOP?

GET THAT LITTER UNDER CONTROL BY ORDERING PLASTIC TRASH BAGS ONLINE FROM DOD EMALL.

TO ACCESS THE DOD EMALL HOME PAGE, GO TO: <https://emall.prod.dodonline.net/scripts/emLogon.asp>



ONCE THERE, YOU'LL NEED TO REGISTER FOR A USER ACCOUNT. CLICK ON NEW USER REGISTRATION.

ENTER THE REQUIRED INFORMATION AND SUBMIT IT.

AFTER YOU RECEIVE YOUR ACCOUNT NAME AND PASSWORD, YOU CAN RETURN TO THE HOME PAGE, LOG ON AND ORDER ITEMS.

**PHEW!!**  
HERE ARE THE BAGS YOU SHOULD LOOK FOR...



If you don't need bags with a high resistance to punctures or tears, then **general purpose, high density bags** will suffice. They're suited for light-to-medium duty use. They make good office and restroom can liners.

NSN 8105-	Suitable for:	Size in inches	Capacity in gallons	Qty
01-517-0803	light use	17 x 18	4	2000
01-517-1363	light use	24 x 24	7 to 10	1000
01-517-1365	light use	24 x 33	12 to 16	1000
01-517-1368	medium use	30 x 37	20 to 30	500
01-517-1345	medium use	40 x 48	40 to 45	250



**High performance, linear low density bags** resist punctures and tears and are intended for jobs where extra strength is needed. They can handle a mix of wet and dry loads. These bags are suitable for most office and outdoor trash, including grass clippings, leaves, recyclable materials and dining hall waste.

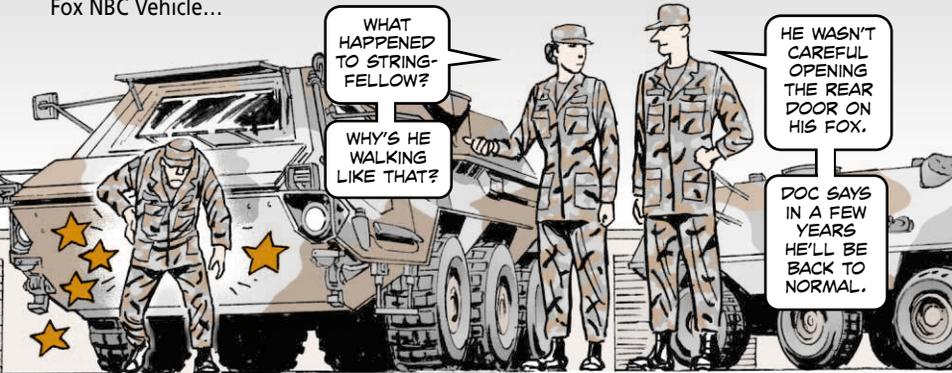
NSN 8105-	Suitable for:	Size in inches	Capacity in gallons	Qty
01-195-8730	medium use	23 x 24	10	250
01-183-9768	medium use	33 x 39	33	125
01-183-9769	heavy use	33 x 39	33	125
01-150-6256	heavy use	32 x 44	34	125
00-579-8451	light use	36 x 38	37	100

Some of the bags do not come with twist ties, so you'll need to order some from DoD EMALL. Manufacturer's part number T013 brings 100 paper-coated 8-in ties. Part number T002 brings 100 plastic-coated 8-in ties.



ALL BAGS ARE MANUFACTURED BY PEOPLE WHO ARE SIGHT-IMPAIRED AND ARE LISTED ON THE JAVITS-WAGNER-O'DAY (JWOD) PROGRAM PROCUREMENT LIST.

PURCHASING THESE BAGS ASSISTS THE ARMY IN ITS SUPPORT OF CREATING JOBS FOR PEOPLE WITH DISABILITIES.



# The Door to Door Safety

FOX CREWS WON'T DO MUCH CHEMICAL DETECTING IF THEY CAN'T GET THROUGH THE FOX'S DOORS OR HATCHES SAFELY.

AND THE DOORS CAN HURT YOU AND BE HURT IF YOU'RE NOT CAREFUL.



The rear door is what you must be most careful with. It's spring-loaded and heavy and can leave you permanently speaking in a higher octave. Check that the glove access door is closed before you open the bottom half. If you forget, the glove access will be damaged and the Fox is NMC.



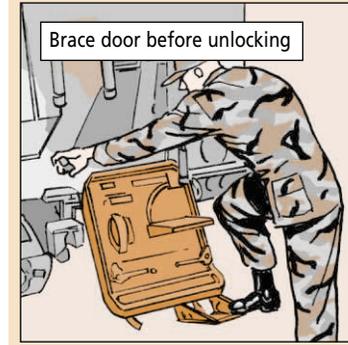
Push the bottom half down until you hear it click. That means it's locked. Push the top half up until it clicks, too.

Push top half all the way up and...

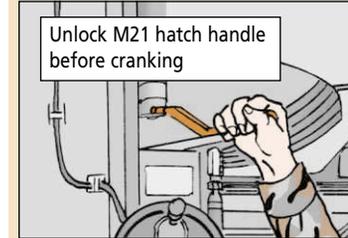


...bottom all the way down until you feel them lock into place

When you get ready to close the bottom, brace it with your foot before you unlock it. That keeps it from flying up.



Before you crank open the M21 hatch, make sure you've unlocked the hatch's handle. If you don't, you damage the crank.



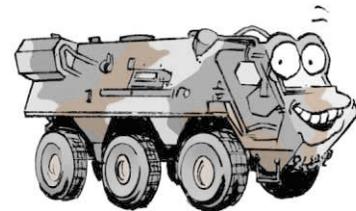
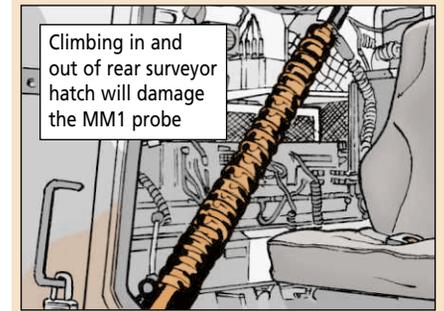
To lock the two top hatches, push the locking handles all the way to the closed position while pulling down on the latch. If you don't, the hatches aren't locked shut and they will leak.

A good BEFORE PMCS check is to eyeball the hatches for anything that could prevent a good seal. Mud and twigs sometimes keep the hatches from sealing tightly. Clean out any problems.



Don't let the grille doors for the engine compartment slam down. That ruins the detents that let you lock the doors down. Lower the doors all the way down.

Don't use the rear surveyor hatch except in an emergency. It's difficult to climb in and out of it without stepping on the MM1 probe, which is fragile and expensive.



REMEMBER! CAREFUL WITH MY REAR DOOR...

...AND NEITHER OF US WILL GET HURT!!

# PM KEEPS YOUR

# MASK IN HARNESS



AND WHAT DO YOU CALL THIS SERIES OF PHOTOS?

EET EES MY NEW MASTER-PIECE!

I CALL EET 'GAS MASK ON TOO TIGHT'!

THE HARNESS FOR YOUR M40- OR M42-SERIES MASK CAN MAKE YOUR MASK COMFORTABLE AND SECURE OR IT CAN GIVE YOU THE WORST HEADACHE OF YOUR LIFE AND RUIN YOUR MASK'S SEAL OF PROTECTION.

MAKE YOUR CHOICE COMFORTABLE AND SECURE BY HARNESSING THIS PM...

- Check the head harness' elasticity when you PMCS your mask. Gently stretch the head harness straps to make sure they still have some spring. If they don't, the head harness will have trouble keeping the mask tight enough to seal. Your NBC NCO needs to replace the head harness.



Gently stretch straps to check for elasticity

- Tighten the head harness straps so they are snug, but not so snug that you can't stick a finger under each strap. If the straps are too tight, they will give you an industrial-strength headache. Once you have the straps properly snug, loosen only the cheek straps to take off the mask. Then when you put the mask back on you need to tighten only the cheek straps to be ready for action. Those saved seconds could save your life.



Loosen only cheek straps when you take off mask

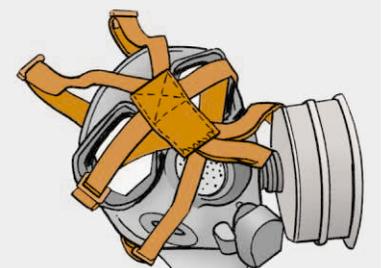
- Make sure the head harness' elastic webbing is on top and its seams point out. If you have the head harness inside-out, the crosspiece rubs and makes you a sore-head.



Webbing on top with seams pointing out?

- Store your mask with the head harness pulled over the front of the facepiece. That way you can just stick your face in the mask and pull the harness back over your head, saving more precious seconds.

Pull head harness over facepiece for storage



# Leaks are a Warning, Are You Looking?



You carefully did your Before Operations PMCS. The drip pans were clean and dry and you didn't notice any staining or seepage. Your vehicle was good to go, and you went.

Now your vehicle has a Class III leak. It doesn't much matter whether it's a radiator hose on a HMMWV, a hydraulic leak on a SEE, or an oil leak from the front transmission seal of a HEMTT.

You have a decision to make. Can you continue the mission, can you make it back to the motor pool or must you stop where you are?

Start by determining the extent of the leak. Any time a drip forms enough to drop off your vehicle you have a Class III leak, a condition that makes most vehicles Non Mission Capable. Of course, if your vehicle's leak is more like a stream of fluid, component failure could be just moments away.

So what do you do? If the TM states that a Class III leak makes the vehicle NMC if found during Before Operations PMCS, the vehicle is probably NMC as soon as you find it during operations.

First, what is your environment? Your decision may be different in a combat area than if you are at home station on a training range.

Second, what is the risk of continued operation to the crew and passengers? A fuel or oil leak in the engine compartment of many vehicles could lead to fire or explosion.

Third, what is the risk of losing the vehicle to catastrophic failure if you continue operation?

Fourth, what is the risk to the environment?

Fifth, if people are injured, equipment is damaged, or the environment is harmed due to your decision to continue operations, could criminal or civil charges be made against you? Could an investigation find you at fault and hold you financially responsible?



DRIVERS CAN PERFORM GREAT PM BEFORE OPERATIONS, BUT EQUIPMENT **DOESN'T** OFTEN BREAK DOWN IN THE MOTOR POOL.

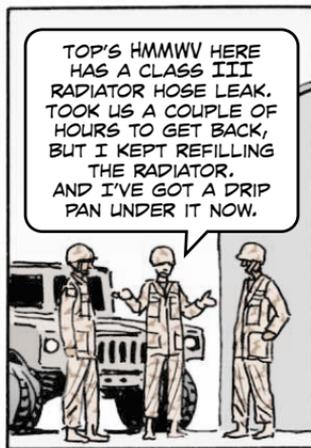
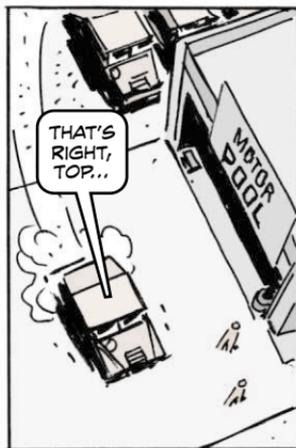
USUALLY IT HAPPENS IN **INCONVENIENT** PLACES AT **INCONVENIENT** TIMES.

THAT'S WHY DURING OPERATIONS PM IS **CRITICAL**.

RISK ASSESSMENT IS ABOUT **PROTECTING** SOLDIERS AND EQUIPMENT.

SOLDIERS MAY MAKE ASSESSMENTS BUT LEADERS MUST MAKE **CRITICAL** SAFETY DECISIONS.

SOLDIERS WHO ARE WELL TRAINED TAKE **BETTER** CARE OF THEIR EQUIPMENT AND ARE **BETTER ABLE** TO ASSESS AND AVOID HAZARDS.



HERE ARE SOME SUGGESTIONS ON HOW YOU SHOULD REACT TO CLASS III LEAKS FOUND DURING OPERATIONS.



1. How bad is the Class III leak? Contain leaks with drip pans or field expedient methods.
2. What is the actual fluid level?
3. Notify the on-site senior member of your unit and explain the nature of the leak. If not in combat operations, place the vehicle in NMC status and cease operations.
4. If the leak is due to loose fittings, carefully tighten the fittings. If leaks are due to small pin-sized holes, temporarily patch them if you can do so without creating a fire/burn hazard. Larger holes and blown seals may make operation impossible.
5. If the drip is slow and fluid levels still measure high, return to the motor pool at slow speeds with frequent stops to check the leak and fluid levels. If you can see an obvious drop in fluid levels, cease operations, shut your vehicle down, and wait for a tow.

Record the fault on the vehicle's DA Form 5988-E PMCS sheet.

IT'S BEST TO REPORT CLASS III LEAKS **DIRECTLY** TO THE MOTOR SERGEANT SO HE KNOWS ABOUT IT AS SOON AS POSSIBLE.

THE 5988-E ALSO NEEDS TO BE TURNED IN TO THE ULLS CLERK SO THE STATUS CAN BE ENTERED IN THE SYSTEM.





THESE MAY  
BE LONG,  
BUT THEY'RE  
STILL  
BRIEFS!

## Many Small Arms Parts No Longer Controlled Inventory

In the early 90s, the Army was having trouble with small arms repair parts accountability. To fix that, the Army made the repair parts items controlled inventory, which meant the parts had to be kept in locked containers behind double barrier protection with controlled access.

That made it difficult for armorers to get the parts they needed to make repairs to their weapons. The Army recognized this and over the past few years has reclassified many small arms repair parts with a Controlled Inventory Item Code of U (unclassified), which means these parts can be stocked and stored without the accountability and storage restrictions.

The Army also said Para 2-24b of AR 710-2, which states "*Bench stocks are authorized for all maintenance activities,*" applies to all unit motor pools and arms rooms as well as direct support shops. In other words, armorers can stock any unclassified small arms repair parts that qualify as bench stock in the arms room.

Armorers don't need to search for what repair parts can be ordered as bench stock for each weapon. CW2 Robert Philyaw of B Co, 2nd FSB, 2ID in South Korea has compiled a list of repair parts armorers can order broken down by weapon. You can access the list at

<https://www.us.army.mil/suite/doc/1513941>

All of these parts can be stocked on unit PLL.

## *Bradley Transmission Failure*

Bradley fighting vehicles in Iraq are racking up a normal year's mileage in a single month in addition to carrying heavy loads such as reactive armor. The transmission is taking the brunt of this punishment and needs special care:

- Take AOAP samples every 60 days and follow the lab's guidance. The lab in theater is at Camp Anaconda, Balad. Call them at DSN (312) 992-3986 (Prompt 1-7828) or email:

[AOAPIraq@mmcs.army.mil](mailto:AOAPIraq@mmcs.army.mil)

- If the mission doesn't allow for oil analysis, then IAW FM 90-3, *Desert Operations*, change the transmission fluid and filter every 750 miles, rather than the normal 1,500 miles.
- Not sure what's wrong with a transmission? Your TACOM Logistics Assistance Representative (LAR), UDLP or GD Field Service representatives can help with troubleshooting.
- Protect unserviceable transmissions from further sand or rain damage by covering all openings. Use the reusable shipping container if available, too.
- Turn in unserviceable transmissions for repair. Again, your TACOM LAR can help.

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Would You Stake Your Life *right now* on  
the Condition of Your Equipment?



# Need Help? Call COMET



**I**f your unit needs help getting on top of problems like property accountability or ordering the correct publications or mastering ULLS, you need COMET.

COMET stands for command maintenance evaluation and training team. The teams, which are usually made up of retired warrant officers and NCOs, evaluate a unit's equipment, readiness and supply posture. COMET helps solve any problems they find with assistance and training. Their work is confidential and helps a unit stay out of hot water.

The Army has COMETs at Forts McPherson, Bragg, Stewart, Drum, Campbell, Hood, and Lewis. You can contact them through your division or brigade's G-4 or S-4 or through the COMET program manager listed below.

The COMET program supports other posts and the Guard and Reserve. To arrange a COMET visit, contact COMET Program Manager Chuck Hicks at DSN 367-6649/(404) 464-6649 or email: [charles.hicks2@forscom.army.mil](mailto:charles.hicks2@forscom.army.mil)

#### COMET trains and assists in these and other areas:

- maintenance management
- shop operations
- TAMMS/PLL
- ULLS and SAMS
- tool room operations and accountability
- AOAP/TMDE
- arms room management and weapons PMCS
- supply operations
- property accountability
- SOPs
- publications

See COMET suggestion on Page 22