

Issue 679

PS

June  
2009

# THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-679

Approved for  
Public Release;  
Distribution is  
Unlimited

HOW DO  
YOU HOPE  
TO DEFEAT  
ME?

YOU DON'T  
EVEN TAKE  
CARE OF  
YOUR  
EQUIPMENT!

MAYBE HE  
DOESN'T,  
BUT I  
DO.

SEE  
PAGE  
27!

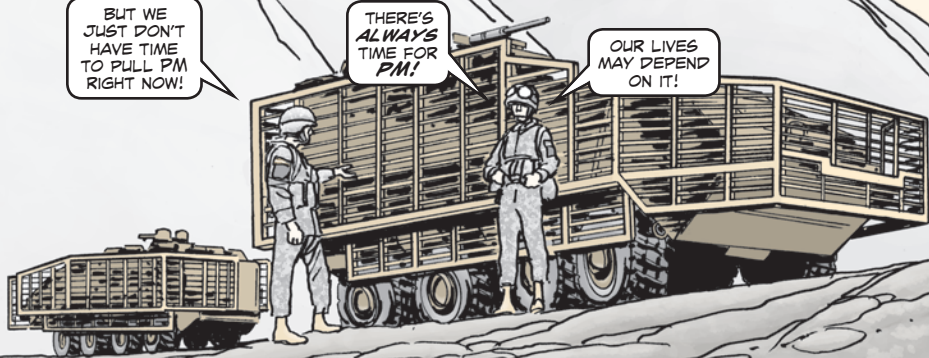


# ***The World's Best PM for the World's Best Equipment***

BUT WE  
JUST DON'T  
HAVE TIME  
TO PULL PM  
RIGHT NOW!

THERE'S  
***ALWAYS***  
TIME FOR  
***PM!***

OUR LIVES  
MAY DEPEND  
ON IT!



***Y***ou have the world's best equipment and you're proving it in some of the world's worst conditions. In the desolate, rocky mountains of Afghanistan and the barren, sandy deserts of Iraq, both you and your equipment were given a tough job to do. And you've both done it well.

But never forget that even the world's best equipment is incapable of doing its mission without preventive maintenance. That means tough, sweaty, elbow grease maintenance.

Sure, your time's at a premium. When you and your equipment seem to be always on the go, it's easy to say you'll take care of PM later.

Good intentions won't remove the sand that could jam your rifle, though. It won't check for contaminated fluids in your HMMWV or for tire wear on your Stryker.

NEGLECTING GOOD,  
TIMELY PM WILL PUT  
YOUR LIFE AT RISK IF  
EQUIPMENT FAILS.

SO  
TAKE NO  
CHANCES.

DO PM BY THE  
BOOK AND ENSURE  
THAT THE WORLD'S  
BEST EQUIPMENT  
GETS THE WORLD'S  
BEST PREVENTIVE  
MAINTENANCE.



**WE HAVE THE WORLD'S BEST EQUIPMENT**  
***Take Care of It!***



# THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-679, The Preventive Maintenance Monthly, is an official publication of the Department of the Army, providing information for all soldiers assigned to combat and combat support units and all soldiers with unit maintenance and supply duties. All information published has been reviewed and approved by the agency responsible for the equipment, publication or policy discussed. Application of the information is optional with the user. Masculine pronouns may refer to both genders.

ISSUE 679 JUNE 2009



## COMBAT VEHICLES

Stryker Height Leveling  
Stryker Wheel Hub Plug O-Rings  
M1-Series Tank Final Drive Oil  
M88A1 Recovery Vehicle Regulator Reset  
M2/M3-Series Bradley M242 Gun  
M113-Series FOV Combat Lock  
M109 Howitzer, M992A2 Fan Blade Screens



## WHEELED VEHICLES

FMTV Cab Support Mounts  
M939-Series Truck Hydraulic Oil Reservoir  
Shelter Tiedown  
Trailer Brake Air Hose Hookups  
Vehicle Characteristics Data  
Rhino Assistance Available in SWA



## MISSILES

Avenger Missile System Battery PM



## SMALL ARMS

M240H Machine Gun Mount  
CCMCK Safety Reminders  
Lube Differences  
M2 Machine Gun Finish Standard



## AVIATION

HGU-56/P Helmet Liners  
COMSEC Avionics Correction  
UH-60 Vibration Analyzer Bracket  
AN/APR-39 Radar Warning Antenna

2



## COMMUNICATIONS

40

2-3 Night Vision Goggle Safety 40-41  
3 AN/PYQ-10(C) Key Loader Component 42  
4-5 PP-8496/U SDD1 Battery Testing 43  
5 AN/PRC-148 MBITR Rechargeable Batteries 44-45  
6-7 CX-13295/G Fiber Optic Cable Care 44-45  
8  
9



## COMBAT ENGINEERING

46

10 IMG MaxxPro/Plus MRAP Switch 46  
10 MRAP Caiman Air Tank Check 47  
11 Case Backhoe Loader Digging Tips 48-49  
12-14 130G AOA Grader Blade Marking 49



## TOOLS

50

15 Jack Stand Safety 50  
16 Impact Wrench Sockets 51  
17 SECM Socket Adapter Added 51  
18



## CBRN

52

18-21  
22 Fox NBC Maintenance Tips 52-53  
M256A2 Chemical Agent Detector Kit 54  
22 M40/M42-Series Mask Harness NSNs 55  
23 M40/M42-Series Mask PMCS Cards 55  
24-25 AN/VDR-2 Radiac Set PM 56-57  
26



## LOGISTICS MANAGEMENT

58

35 Retained OCIE PCS Shipments 58-59  
35-36



## SOLDIER SUPPORT

60

37 Force Provider Latrine Respirator 60  
38  
39

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

Just write to:

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

Or email to:

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

Internet address:

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

By order of the Secretary of the Army:

**GEORGE W. CASEY, JR.**

General, United States Army Chief of Staff

Official:

*Joyce E. Morrow*

**JOYCE E. MORROW**

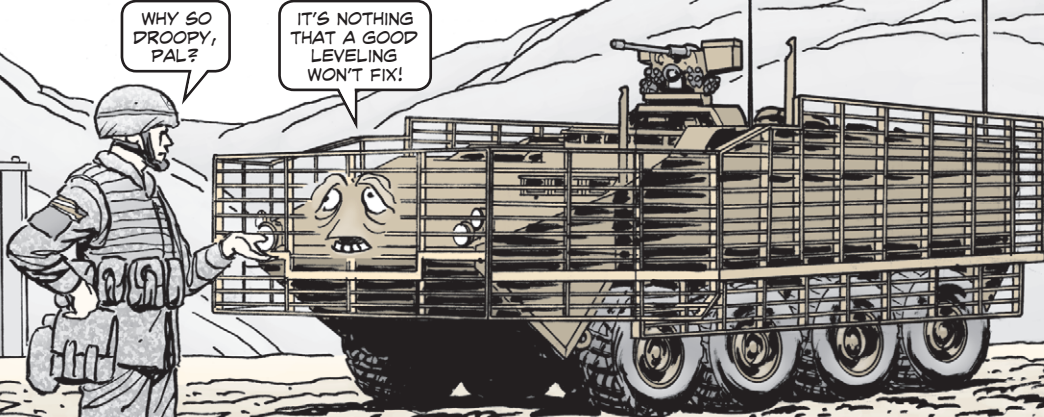
Administrative Assistant to the Secretary of the Army

0909302

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

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

# DROOPY STRYKER NEEDS SOME HELP

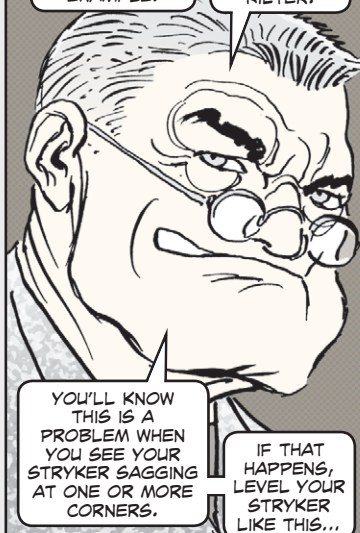


THE EXTRA WEIGHT OF YOUR STRYKER'S SLAT ARMOR CAN CAUSE A LOT OF LITTLE PROBLEMS, CREWMEN.

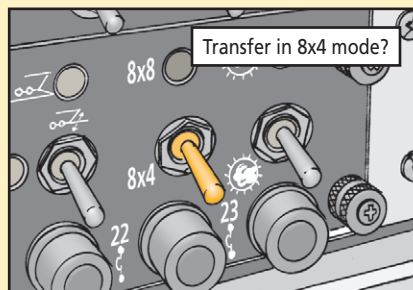
THAT MEANS YOU HAVE TO STAY ON TOP OF THEM SO THEY DON'T BECOME BIGGER PROBLEMS.

THE HEIGHT MANAGEMENT SYSTEM (HMS) IS A GOOD EXAMPLE.

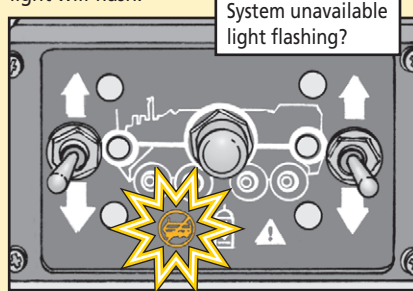
THE EXTRA WEIGHT CAN KNOCK THE HMS OUT OF KILTER.



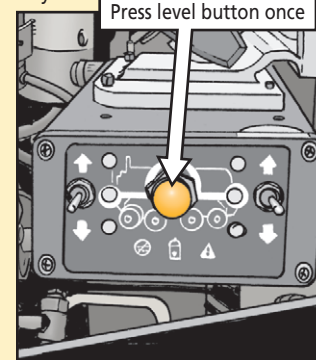
1. Start the vehicle.
2. Make sure the transfer is in 8x4 mode.



3. Drive the vehicle over a smooth, level stretch of road. The Stryker **must** be moving faster than 0.3 mph, at constant speed, and in a straight line. If not, the system unavailable light will flash.



4. While driving, press the center level button on the HMS panel one time. The front and rear middle LEDs will start flashing. The flashing will continue during the leveling process, which could take up to four minutes. Once the vehicle is level, the flashing will stop and the two LEDs will stay on.

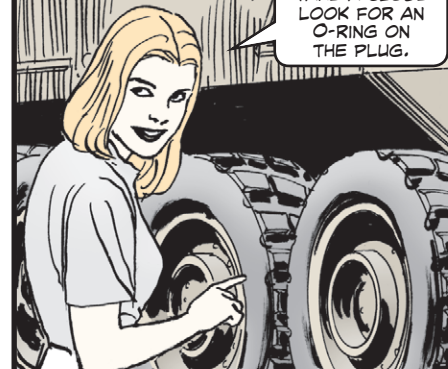


5. If your Stryker does not level on the first attempt, try it again. If it fails a second time, or if the system fault or low nitrogen lights come on, tell your mechanic.

Stryker...

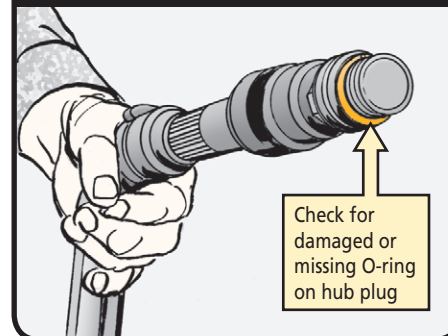
## HUB LEAKING? LOOK FOR O-RINGS!

CREWMEN, WHEN YOU NEED TO ADD OR DRAIN OIL FROM THE HUBS OF YOUR STRYKER, TAKE A CLOSE LOOK FOR AN O-RING ON THE PLUG.

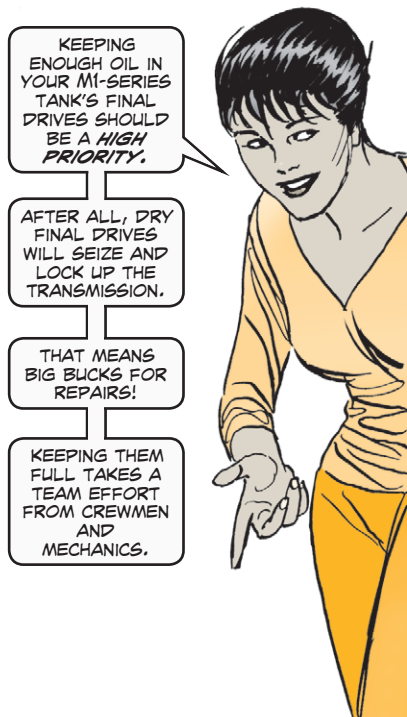
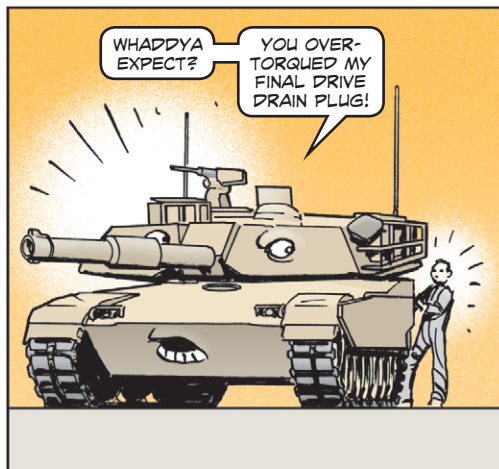
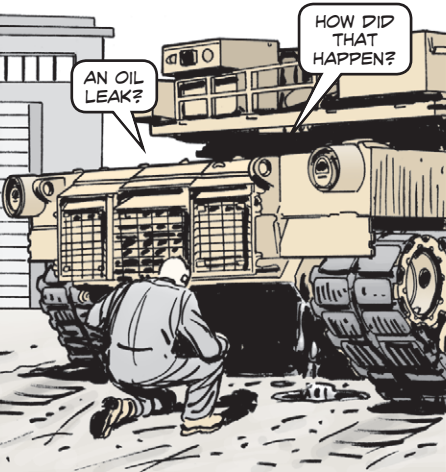


If that O-ring is missing or damaged, you won't get a good seal and the hub can leak. If the hub goes dry, it'll burn up.

Replace missing or damaged O-rings with NSN 5330-12-156-4524. If the old O-ring is undamaged, you'll need to wipe it off before reinstalling the plug. If there's a lot of dirt or sand on the O-ring, it won't seal properly and you've got leak problems again.



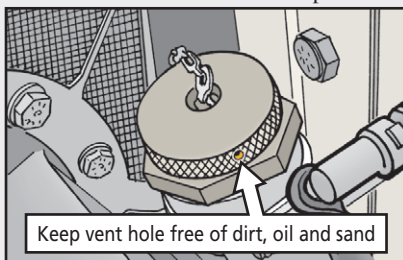
# A PLUG FOR *FINAL DRIVE CHECKS*



## Crewmen

Using the -10 TM's PMCS charts, inspect the final drives weekly for oil leaks, especially at the drain and check plugs. Report any leaks to your mechanic.

While you're at it, take a quick look at the final drive filler cap. Dirt, oil and sand can clog the vent hole on each of the filler caps. When that happens, pressure can build until the final drive seal ruptures.

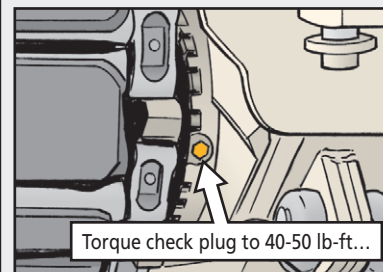


If you're in Southwest Asia, you may need to check the filler cap more often — like after every mission.

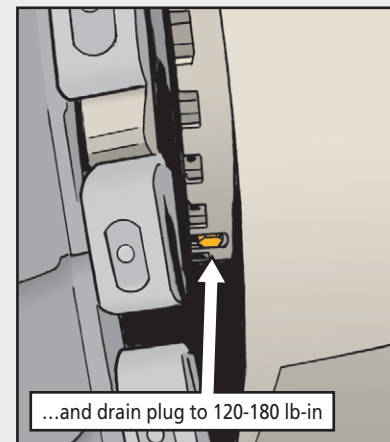
## Mechanics

After checking the final drive oil levels during semiannual services, make sure you use the right torque when replacing the drain and check plugs.

Although both plugs look the same, they don't take the same torque. The check plug is tightened to 40-50 lb-ft, but the drain plug can't take that kind of pressure. It either cracks — and leaks — or shears off altogether.

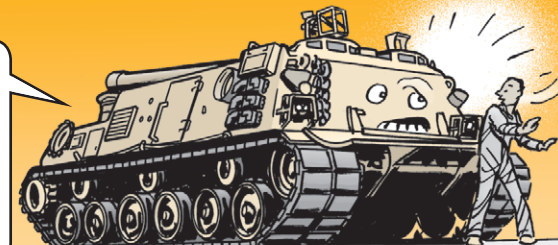


Make sure you torque the drain plug to 120-180 lb-in. Yes, that's pound-inch! You'll find the step-by-step instructions in the -20-1-4 TMs.



## M88A1 Recovery Vehicle...

**GIVE MY RESET BUTTON A SHOT!**

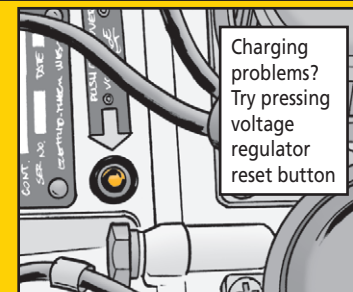


Having charging problems with an M88A1, mechanics? The problem could be the generator. Then again, maybe it isn't.

Before you go through the lengthy troubleshooting procedures in TM 9-2350-256-20-1, take a quick look at the voltage regulator.

You may not realize that the voltage regulator has a reset button. Many times, just pressing the reset button will solve those charging problems.

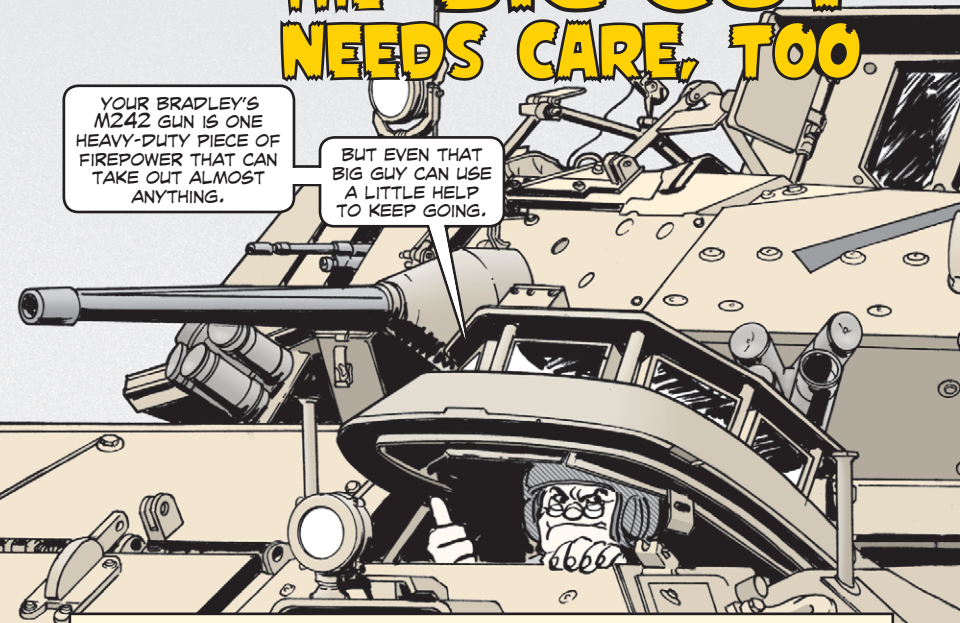
So give it a try. Then if the charging problems persist, start troubleshooting!



# THE BIG GUY NEEDS CARE, TOO

YOUR BRADLEY'S  
M242 GUN IS ONE  
HEAVY-DUTY PIECE OF  
FIREPOWER THAT CAN  
TAKE OUT ALMOST  
ANYTHING.

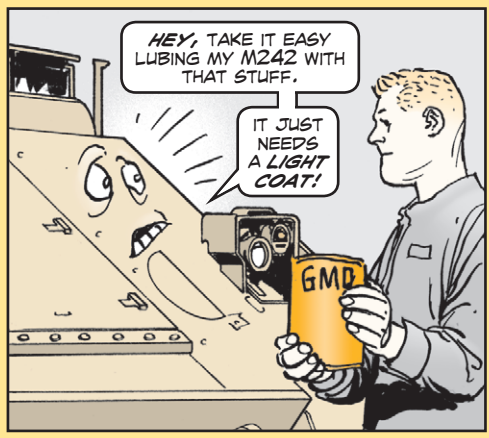
BUT EVEN THAT  
BIG GUY CAN USE  
A LITTLE HELP  
TO KEEP GOING.



**Keep it clean**—Don't let the links pile up in the plenum chamber during firing. If too many links collect in the chamber, the M242 has trouble ejecting links and the feeder jams.

**Lubing**—Sure the M242 needs lubing, just like any weapon. But too much lube can be a bad thing. If you plaster it with GMD, the M242 will be harder to clean because all that lube attracts dirt and sand. Plus it's more likely to jam. A light coat of GMD is all that's needed on the track and bolt and inside the receiver and breech.

One place you don't want to lube is on the face of the bolt—that can cause malfunctions.



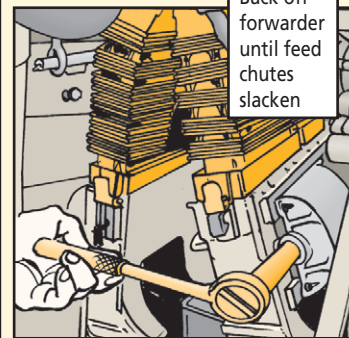
HEY, TAKE IT EASY  
LUBING MY M242 WITH  
THAT STUFF.

IT JUST  
NEEDS A  
LIGHT  
COAT!

GMD

**Take off the tension**—After you've finished loading the M242, take the tension off the feed belt. Otherwise, rounds will jam because two rounds are trying to load at once. After loading, back off the forwarder by pulling the release lever while slowly backing off with the ratchet wrench until the feed chutes slacken.

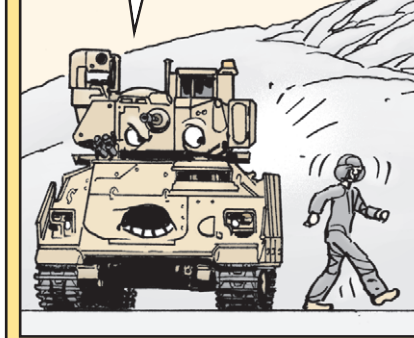
Back off  
forwarder  
until feed  
chutes  
slacken



**Timing is everything**—Make sure you time the feeder every time you install it. If you don't, the M242 won't feed properly. To time the feeder, turn the worm gear until it locks into the sear position.

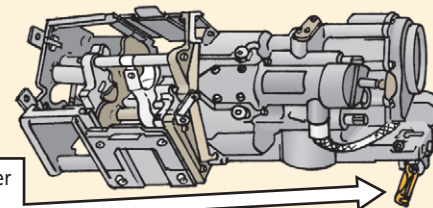
WHAT DO YOU  
MEAN YOU DON'T  
HAVE THE TIME TO  
TIME MY FEEDER?

MAKE  
TIME!

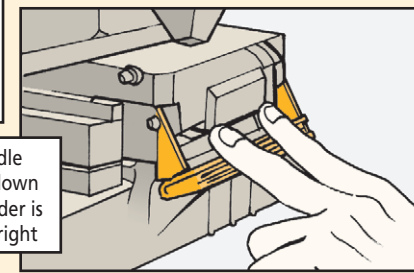


**Handle feeder carefully**—When you remove the feeder, remember to put the feeder handle in the down position before you lay it on the ground. Otherwise, you damage the feeder's 14-pin connector and the M242 is NMC until the connector is fixed.

When you install the feeder, make sure it's correctly positioned on the receiver. Then push in the drive shaft handle until the feeder is locked in place. This aligns the feeder and receiver and protects the 14-pin connector. Once the drive handle is locked in place, the feeder handle should lock in the down position easily. If it doesn't, tell your repairman. Something's wrong.



Put feeder  
handle  
down  
before  
putting  
feeder on  
ground



Feeder handle  
should go down  
easily if feeder is  
positioned right

# Searching for the Combat Lock



Dear Half-Mast,

A lot of the newer drivers of M113-series vehicles don't realize that the power plant access door has a combat lock. So when it's time to do PMCS, the driver can't figure out why the access door won't open.

Time is wasted when a mechanic is called in to fix a non-existent problem. Since time is money, can you let drivers know when and how to engage and disengage the combat lock?

MAJ C.G.

Dear Major C.G.,

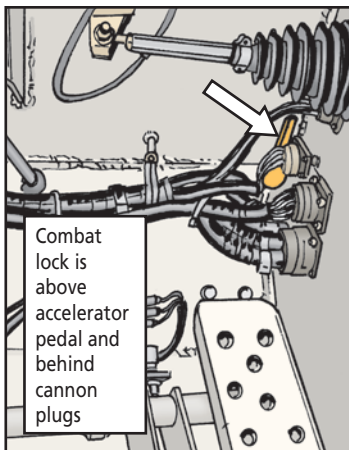
You bet, Sir!

Part of the problem is that the combat lock is so well hidden. If you didn't know it was there, you'd never find it.

Drivers, you'll find the lock behind the cannon plugs above the accelerator pedal in the driver's compartment. To engage the lock, rotate the handle to the vertical position. To disengage, rotate the combat lock handle to the horizontal position.

The combat lock should always be engaged during operations and while parked in the motorpool. That protects the engine compartment from unauthorized access.

*Half-Mast*



M109-Series SP Howitzers, M992A2 Ammo Carrier...

WHAT HAPPENED  
TO PHILLIPS?

HE DIDN'T  
USE FAN  
BLADE  
SCREENS  
WHEN HE WAS  
WORKING ON  
A PALADIN.

HEARD  
HE LOST  
A COUPLE  
FINGERS!

## FAN BLADES LOVE FINGERS

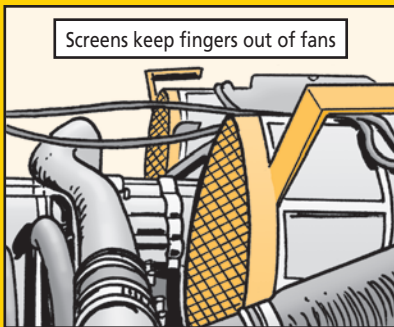
**G**et too close to the cooling fan blades on your howitzer or ammo carrier and they'll make finger food out of your hands. That's why fan blade screens should **always** be used during maintenance on a running engine.

The screens, NSN 2510-01-247-2976, keep fingers, hands and anything else from being pulled into the blades as you check for leaky hoses, pipes and fittings.

Each screen has hooks and a thumbscrew and locknut to secure it to the fan shroud. The screens should be used only during scheduled maintenance, though. Remove them before regular vehicle operation or the engine will overheat.

As a reminder to use the screens, put a warning decal, NSN 7690-01-244-9849, on both fan tower shrouds. You'll need general purpose cleaner, NSN 7930-00-515-2477, to clean the shrouds before applying the decals.

Screens keep fingers out of fans



Put  
warning  
decal  
on fan  
shroud

### WARNING

A PROTECTIVE FAN SCREEN  
MUST BE INSTALLED PRIOR  
TO DOING MAINTENANCE IN  
THE ENGINE COMPARTMENT  
WHEN ENGINE IS RUNNING  
OR WHEN RUNNING ENGINE  
IN GROUND HOP MODE.  
HIGH AIR FLOW CAN SUCK  
HANDS INTO FAN IMPELLER

### WARNING

DO NOT REACH INTO  
ENGINE COMPARTMENT  
WHEN ENGINE IS RUNNING  
OR WHEN RUNNING ENGINE  
IN GROUND HOP MODE.  
HIGH AIR FLOW CAN SUCK  
HANDS INTO FAN IMPELLER

# CAB RESTS EASY ON RUBBER MOUNTS

OUCH! I  
WISH THEY'D  
REPLACE MY  
CAB SUPPORT  
MOUNTS!

THESE  
BUMPS ARE  
KILLIN' ME!

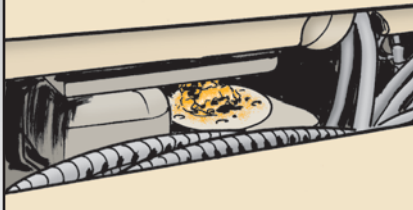
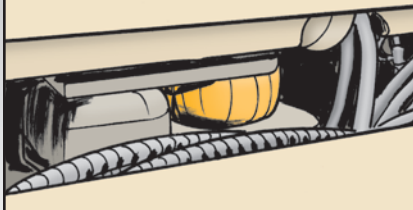
DRIVERS, WHEN DOING YOUR  
WEEKLY PMCS ON YOUR FMTV,  
**DON'T FORGET** TO TAKE A LOOK AT  
THE FRONT CAB SUPPORT MOUNTS.

THE UPPER MOUNT, NSN 5342-01-371-7973,  
AND LOWER MOUNT, NSN 5342-01-371-7258,  
WILL DETERIORATE OVER TIME.

FIRST YOU'LL NOTICE SPLITS IN  
THE RUBBER. SOON AFTER THEY'LL  
BEGIN TO DISINTEGRATE.

Report cracking on cab support mounts...

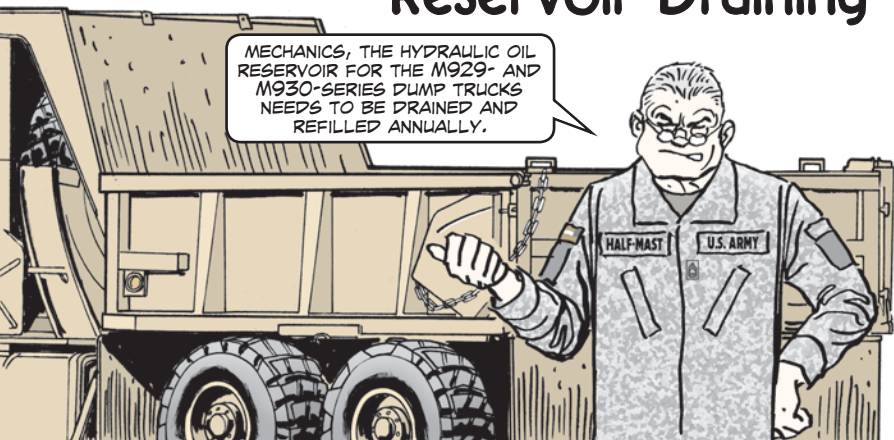
...before they start to disintegrate



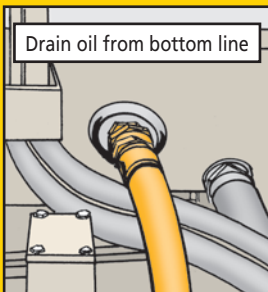
Without the mounts, every bump during operation makes the cab rock and bounce. And when you raise or lower the cab, it can tilt, putting extra stress on the hydraulic struts. The problems are even worse if your truck has add-on armor.

If you notice cracks, tell your mechanic. New rubber mounts can save you a lot bigger repair bill later.

# Hydraulic Oil Reservoir Draining

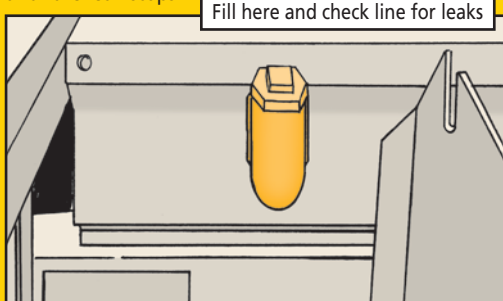


Since there's no drain plug, disconnect the oil line at the bottom of the tank. Make sure you let the oil cool before you loosen the line, so you won't get a hot oil bath.



While reconnecting the line, be sure not to cross thread the fitting. If you strip the threads, the truck will have to go to support to get the hose replaced.

Refill the tank and check the line for leaks. If it's leaking, tighten the fitting  $\frac{1}{8}$  turn or one flat at a time until the leak stops.

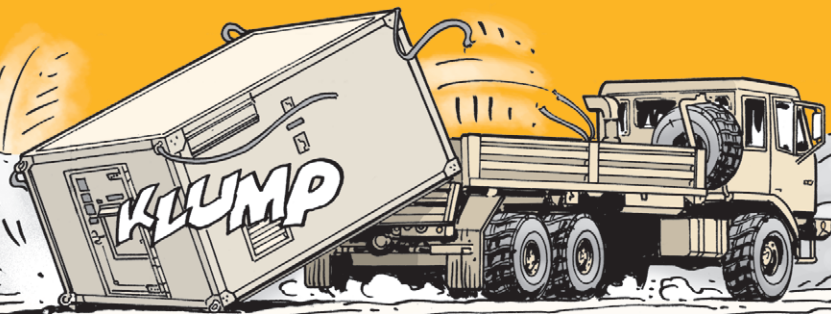


## Test with Bed Flat

Make sure the dump bed is completely lowered before you check the fluid level in the hydraulic reservoir.

When the bed's up, the fluid is in the lift cylinders. You won't get a true reading of the amount in the reservoir. Adding fluid with the bed up can blow seals when the bed comes down.

# The Right Type of Hookup



**S**ecure a shelter to a 2 1/2- or a 5-ton FMTV truck. Sounds simple enough, but can you do it the right way?

Troops have enough to think about while conducting vehicle operations. Properly securing and checking loads removes one possible problem—shifting loads—from their list of things to be concerned about.

Some units use many types of tiedown methods to secure their shelters. But only the authorized method should be used to secure storage and equipment shelters to 2 1/2- and 5-ton cargo trucks.

HERE'S THE GUIDANCE THEY **SHOULD** HAVE FOLLOWED...

## Tiedown Requirements

There are three different tiedown kits for securing the S-280 shelter to FMTVs. The M1085 uses NSN 3990-01-494-6074 (PN 57K4447), the M1083 uses NSN 3990-01-488-4320 (PN 57K4378), and the LMTV model 1078 uses NSN 3990-01-494-6071 (PN 57K4449).

The correct tiedown method is explained in the following publications:

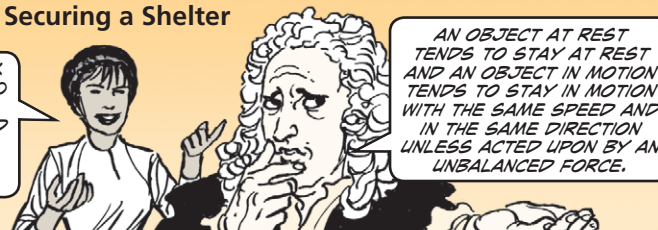
- TM 9-2320-392-20, EM 0195, under "Special Purpose Maintenance Work Packages"
- Military Traffic Management Command Transportation Engineering Agency (MTMCTEA) Pamphlet 55-20, *Tiedown Handbook for Truck Movements*
- TM 10-5411-207-14, *Operator's, Unit, Direct Support, and General Support Maintenance Manual for Shelter, Electrical Equipment S-280C/G*
- TM 11-5411-216-14&P, *Operator, Unit, Direct Support (DS), and General Support (GS) Maintenance Manual for Electronic Equipment Storage Shelter: S-744/TSM-191 V*

Each publication calls for the use of a steel, multiple-leg sling assembly, NSN 3940-00-805-5533. (*Note that this item used to be NSN 3940-00-846-9858.*) This NSN may still appear in some documents; however, only the new NSN, 3940-00-805-5533, should be used when ordering the sling assembly.

This sling assembly is used to lift the shelter on and off a 2 1/2- and 5-ton cargo truck and to secure the shelter to the vehicle. It comes with all of the hardware needed for both tasks, including the plate and eyebolt assembly. For many shelters, the sling assembly is the only basic issue item that comes with them.

## Correctly Securing a Shelter

THINK BACK A MINUTE TO SIR ISAAC NEWTON AND HIS FIRST LAW OF MOTION...



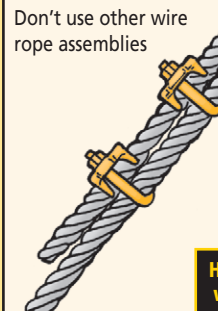
AN OBJECT AT REST TENDS TO STAY AT REST AND AN OBJECT IN MOTION TENDS TO STAY IN MOTION WITH THE SAME SPEED AND IN THE SAME DIRECTION UNLESS ACTED UPON BY AN UNBALANCED FORCE.

The sling leg assembly's tension is an important unbalanced force that will keep the shelter on the back of the truck and keep it from shifting rearward or forward under quick acceleration or deceleration.

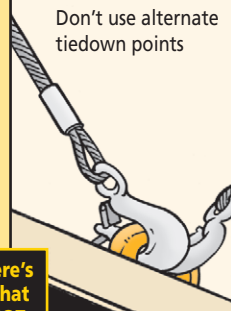
Although empty shelters weigh approximately 1,400 pounds, they could have a payload weight of up to 5,000 pounds, resulting in a total shelter weight of 6,400 pounds. You should **never** use nylon cargo straps to secure a shelter to a 2 1/2- and 5-ton cargo truck because the shelter and its contents are too heavy. Nylon straps stretch and they're no match for a shifting shelter!

When securing a shelter to a 2 1/2- and 5-ton FMTV cargo truck, you must ensure that the tension of the tiedowns will keep the shelter in place. Place the turnbuckles low, near the bed of the truck—not at the top of the shelter—so you can reach them. Then you can make sure the tiedowns are tight and have the proper tension.

Don't use other wire rope assemblies

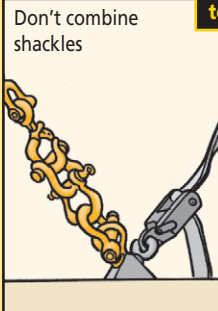


Don't use alternate tiedown points



Here's what **NOT** to do!

Don't combine shackles

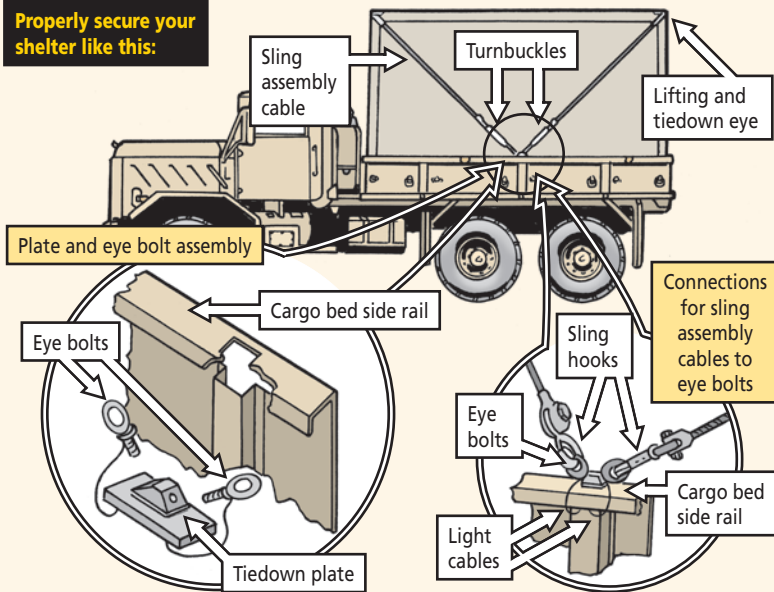


Don't use nylon cargo straps



PS MORE

**Properly secure your shelter like this:**



Proper tension is applied to each sling leg by hand-tightening the turnbuckle until it's tight. Then you'll need to turn it an additional half turn using a bar or wrench inserted into the turnbuckle's opening.

## Avoid Common Mistakes

Common mistakes made by units include using:

- unauthorized wire rope assemblies
- various combinations of shackles
- alternate tiedown points on the cargo truck
- nylon cargo straps to secure shelters

## That's a No Go!



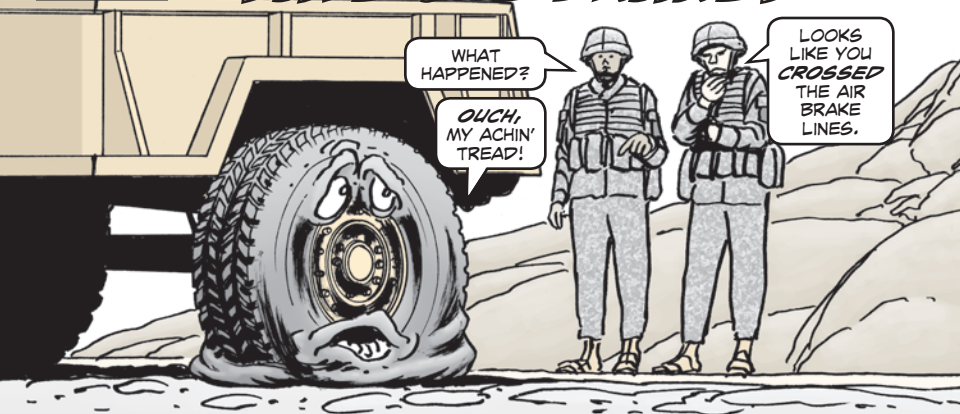
WE CAN'T CHANGE THE FIRST LAW OF MOTION THAT SIR ISAAC NEWTON IDENTIFIED MANY YEARS AGO.

BUT WE ***CAN*** SECURE OUR LOADS SAFELY TO PROTECT BOTH SOLDIERS AND CARGO FROM DAMAGE BY USING THE RIGHT TYPE OF HOOK-UP.

READING THE APPROPRIATE EQUIPMENT TECHNICAL MANUALS AND REVIEWING MTMCTEA PAMPHLET 55-20 WILL HELP YOU SECURE YOUR HEAVY SHELTERS ***CORRECTLY AND SAFELY*** ON 2 1/2- AND 5-TON FMTV CARGO TRUCKS.

Trailer  
Hookups...

# SAVE THE BRAKES

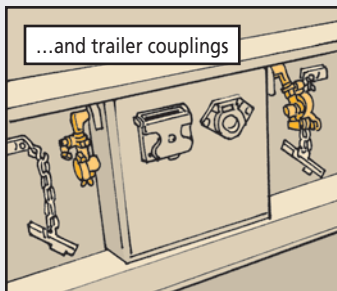


**"CAUTION"** is the word to keep in mind when you hook up the brake air hoses from a trailer to your 2½- or 5-ton truck. If you cross the air lines, the trailer brakes will lock up, burn out or ruin the tires.

So-o-o-o, make sure your trailer's hooked up right!

It's not hard to do. Just locate the **SERVICE** and **EMERGENCY** air couplings. Make sure you use the TM to verify where they are on your trailer.

It's a good idea to color-code the trailer air hose connectors and the truck's gladhand couplings. A dab of blue paint on the **SERVICE** connectors and red on the **EMERGENCY** pair will keep things straight.

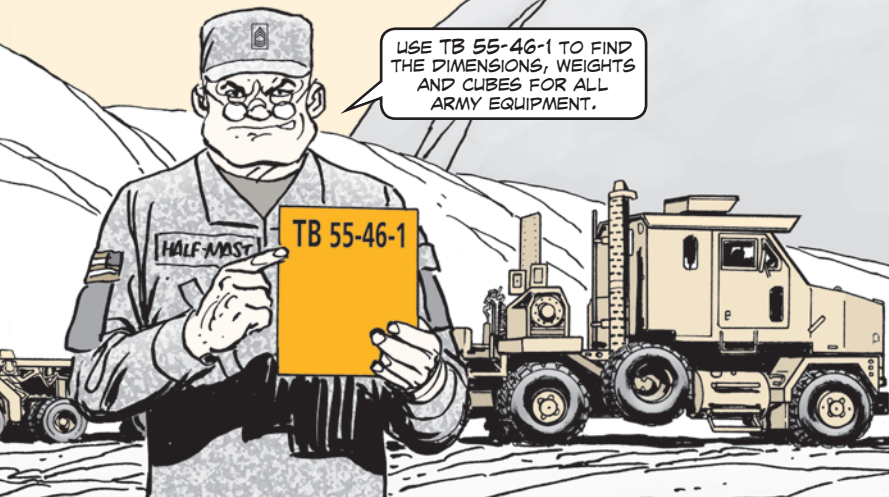


YOU CAN ALSO ADD A **SERVICE** OR **EMERGENCY** ID PLATE TO YOUR TRUCK'S GLADHANDS...



ID Plate	2 ½-ton truck NSN 9905-00-	5-ton truck NSN 9905-00-999-
SERVICE	740-9721	7370
EMERGENCY	774-4284	7369

# VEHICLE CHARACTERISTICS DATA



Dear Half-Mast,

As a master planner for the Arizona ARNG, I need to enter information on the DD Form 1390/91 that identifies wheeled and tracked equipment longer than 30 feet.

Could you advise me if there's a document that lists the Army's vehicles and their specifications, specifically length? Generally, the MTOEs identify whether they are tracked or not. But it seems that because the same chassis can be used for fire fighting and well-drilling equipment, the lengths of the trucks also vary depending on what they're used for.

Mr. E.S.

Dear Mr. E.S.,

Here's what you need:

Information on dimensions, weights and cubes for all Army equipment is on the CD-ROM and web versions of TB 55-46-1, Standard Characteristics (Dimensions, Weight and Cube) for Transportability of Military Vehicles and Other Outsized/Overweight Equipment.

Also, the IETM for TB 55-46-1 can be found at the Transportation Engineering Agency website: <http://www.tea.army.mil/pubs>

*Half-Mast*

Rhino...

# Help Available through FSRs

I HEAR YOU'RE A  
GOOD MEDIC. CAN  
YOU DO *ANYTHING*  
TO HELP MY RHINO?

SORRY. I CAN'T,  
BUT *PS* HAS A LIST  
OF FOLKS WHO CAN!

ON PAGE 10 OF *PS* 658 (SEP 07), WE  
TOLD YOU WHO TO GO TO WHEN YOU  
NEED REPAIR PARTS FOR YOUR RHINO.  
BUT THAT INFO HAS *CHANGED*.

FOR HELP WITH RHINO ISSUES,  
CONTACT THE FOLLOWING PM IED  
DEFEAT/PROTECT FORCE (PF) FIELD  
SERVICE REPRESENTATIVE (FSR)  
SITES IN THE SANDBOX...

## IRAQ

**Baghdad** - Wayne Hales or Derrick Scott  
[dennis.hales@us.army.mil](mailto:dennis.hales@us.army.mil)  
[derrick.scott@iraq.centcom.mil](mailto:derrick.scott@iraq.centcom.mil)  
DSN 318-822-7756; 312-987-5130,  
ext. 6825/6824

**Balad** - Tyrome Tukes or Aichatou Ousmane  
[tukest@mmcs.army.mil](mailto:tukest@mmcs.army.mil)  
[aichatou.ousmane@us.army.mil](mailto:aichatou.ousmane@us.army.mil)  
DSN 312-987-5130, ext. 6271/6283

**Mosul** - Greg Akery or Takneeshea Davis  
[akeryG@mmcs.army.mil](mailto:akeryG@mmcs.army.mil)  
[takneeshea.davis@us.army.mil](mailto:takneeshea.davis@us.army.mil)  
DSN 312-987-5130, ext. 5850

**Q-West** - Rodney Marrero or Mike Lopez  
[rodney.marrero@iraq.centcom.mil](mailto:rodney.marrero@iraq.centcom.mil)  
[michael.lopezorellano@us.army.mil](mailto:michael.lopezorellano@us.army.mil)  
DSN 318-827-6255

**Tikrit** - Steven Rolen or Bea Zarate  
[steven.rolen@mmcs.army.mil](mailto:steven.rolen@mmcs.army.mil)  
[beatriz.zarate@us.army.mil](mailto:beatriz.zarate@us.army.mil)  
DSN 312-987-5130, ext. 8560/8567

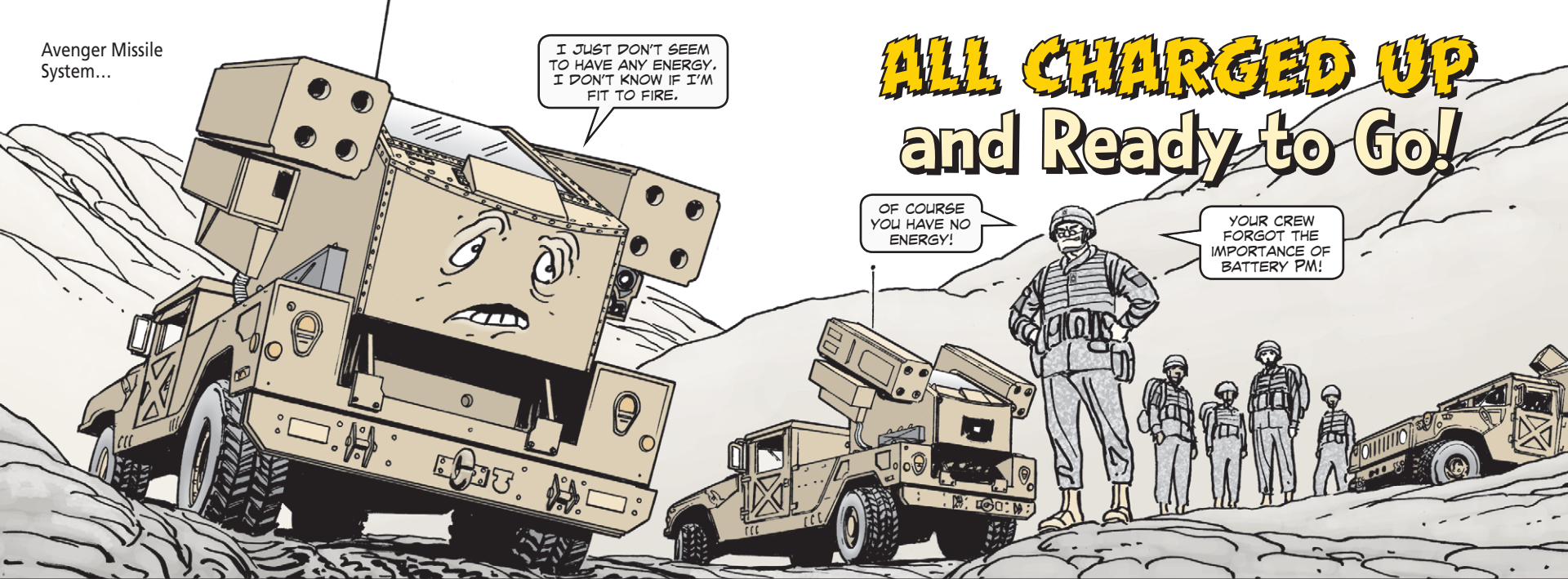
## AFGHANISTAN

**Bagram** - Dexter Lee or Everett Croskey  
[dexter.lee2@us.army.mil](mailto:dexter.lee2@us.army.mil)  
[croskeye@mmcs.army.mil](mailto:croskeye@mmcs.army.mil)  
DSN 312-987-5130, ext. 3815

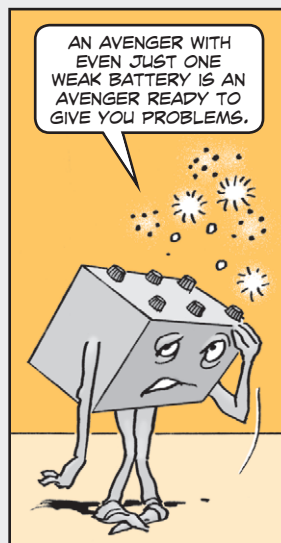
**Kandahar** - Jerry Howard or Willie Dizon  
[jhoward@r4-inc.com](mailto:jhoward@r4-inc.com)  
DSN 318-841-1531

**Salerno** - SFC Clem  
DSN 318-851-1125  
or Darren Snay  
[daren.snay@afghan.swa.army.mil](mailto:daren.snay@afghan.swa.army.mil)  
[dsnay@r4-inc.com](mailto:dsnay@r4-inc.com)  
DSN 318-851-0052

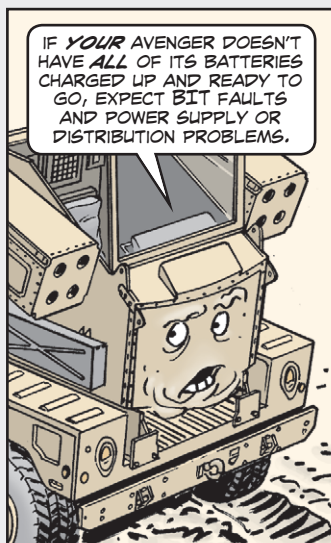
**Sharana** - John Lucas or John Gessler  
[jlucas@r4-inc.com](mailto:jlucas@r4-inc.com)  
[jgessler@r4-inc.com](mailto:jgessler@r4-inc.com)  
DSN 312-987-5130, ext. 1489, or  
DSN 318-841-3014



# ALL CHARGED UP and Ready to Go!



AN AVENGER WITH EVEN JUST ONE WEAK BATTERY IS AN AVENGER READY TO GIVE YOU PROBLEMS.



IF YOUR AVENGER DOESN'T HAVE ALL OF ITS BATTERIES CHARGED UP AND READY TO GO, EXPECT BIT FAULTS AND POWER SUPPLY OR DISTRIBUTION PROBLEMS.



SO THE MOST PRODUCTIVE AVENGER PMCS YOU CAN PERFORM IS ON THE BATTERIES.

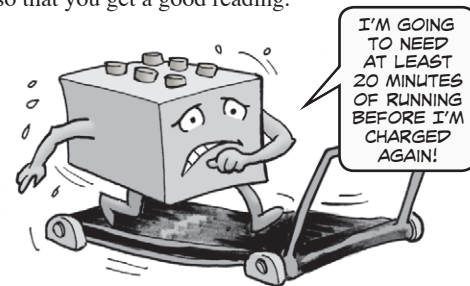
## Repairmen

First, get a hand-held battery load tester, NSN 6130-01-447-7294. It will quickly tell you a battery's state of charge or if it's bad.

If you add distilled water to a battery, charge the battery before you test it. That mixes the water and electrolyte so that you get a good reading.

To charge the batteries, start the HMMWV and run it for 20 minutes at 1,200-1,500 rpm. Then test and charge longer if necessary. Once the Avenger is properly charged, have the operators charge the batteries for 20 minutes during weekly services.

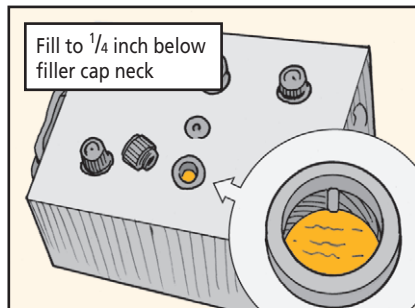
Of course, all that charging won't do much good if the HMMWV charging system is in bad shape. At least every six months, test the charging system like it says in Para 2-29 in TM 9-2320-280-20-1.



I'M GOING TO NEED AT LEAST 20 MINUTES OF RUNNING BEFORE I'M CHARGED AGAIN!

## Operators

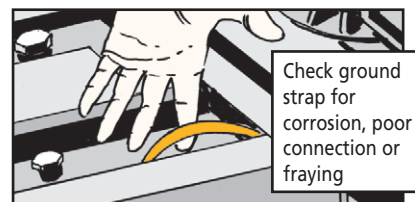
Check the batteries weekly. Remove all the battery caps and make sure the electrolyte is  $\frac{1}{4}$  inch below the filler neck or ledge. Add distilled water if necessary.



Check the terminals for corrosion. If you spot any, clean it off with the wire brush in your tool kit or a scouring pad. Neutralize corrosion with a mixture of  $\frac{1}{2}$  pound baking soda to one gallon of water.

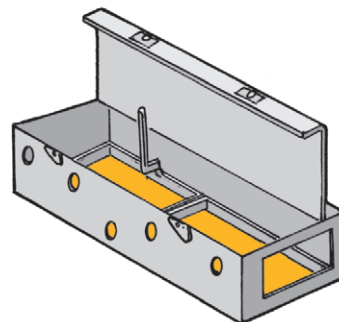


While you're checking the batteries, don't forget the ground straps. If they're broken, frayed, loose or corroded, the batteries will be weakened. Do not use the straps to maneuver batteries. You'll just break them.



Monthly, pull the batteries and check for corrosion in the battery box. If you find any, remove it with a wire brush and the baking soda-water solution. If corrosion has eaten away paint, repaint the box with the paint that comes with NSN 8030-00-290-5141.

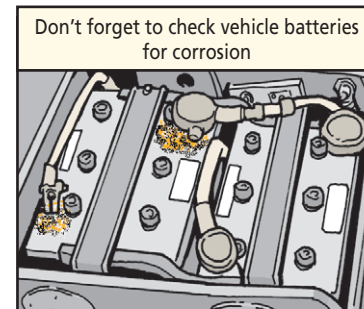
A good investment is an acid neutralizing mat for the battery box that soaks up any battery acid. Then no cleaning or painting is required—you just replace the mat. Order a 100-ft roll of heavy duty battery mat with NSN 6160-01-395-5943.



PUT THE BATTERY MAT IN THE BOTTOM OF THE BATTERY BOX TO SOAK UP ACID.

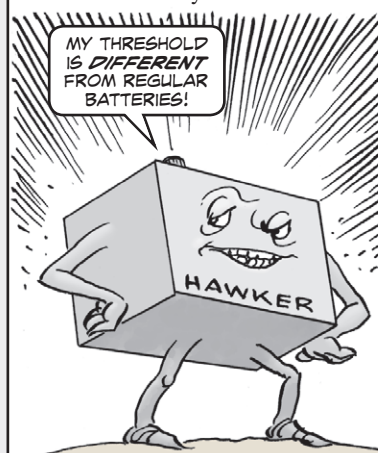


Don't forget to check the vehicle batteries. When you check the Avenger batteries, pull the seat and eyeball the vehicle batteries for corrosion. Your repairman services the vehicle batteries.



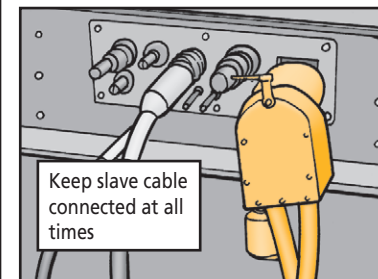
## Hawker Batteries

If your unit has gone to the new Hawker batteries, be aware that they have a different threshold than regular batteries and that will affect the BIT test. You will need to change the threshold manually for a correct test.

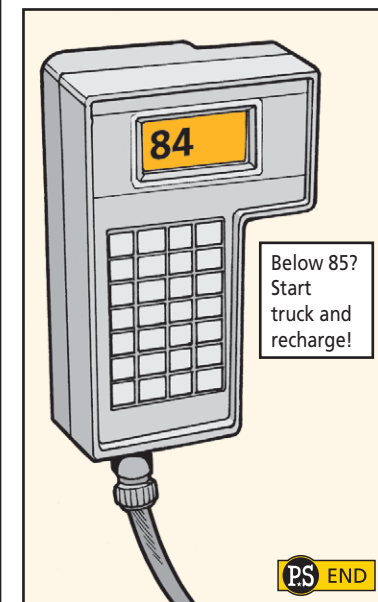


## In the Field

Keep the slave cable connected at all times. That way the Avenger can run on both system and vehicle batteries.



If you operate with the truck turned off, keep an eye on the battery indicator. Once it reads below 85, you need to start the truck and recharge the batteries. Running the ECU/PPU will also recharge the batteries.



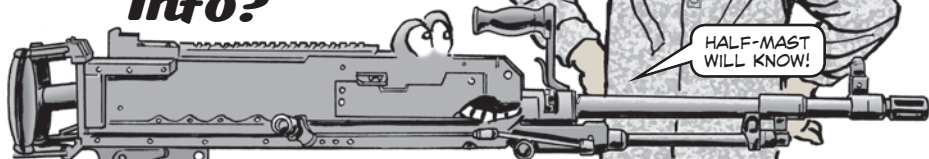
PS END

# Where Do I Find M240H Info?

“HMMM, YOU’VE  
LOST THAT  
ELASTIC CORD TO  
YOUR AMMO CAN.”

“I WONDER  
HOW WE’LL GET  
A NEW ONE?”

“HALF-MAST  
WILL KNOW!”



Dear Half-Mast,

We are starting to mount the M240H machine gun on our UH-60s and we are having trouble finding info on the M240H's mount. The elastic cord that holds the ammo can on the pintle mount sometimes flies off and we don't know how to order a replacement. Plus, we've seen on other units' M240Hs a brass deflecting tube that fits where the brass bag attaches. How do you get the tube?

SGT J.P.

Dear Sergeant J.P.,

The TMs for the M240H mount are TM 9-1005-262-13 and TM 9-1005-262-23P. They're available on the LOGSA ETM site:

<https://www.logsa.army.mil/etms/online.cfm>

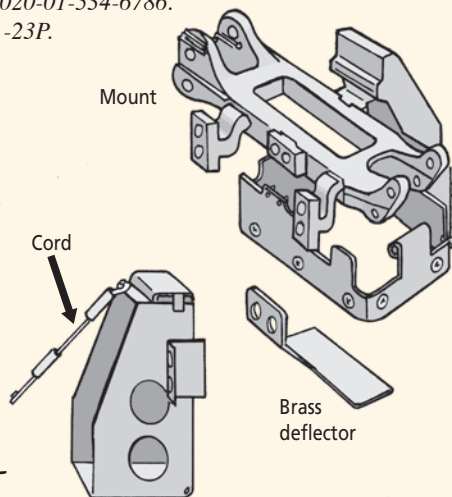
The NSN for the elastic cord is 4020-01-534-6786.

It's listed as Item 5 in Fig 15 of the -23P.

The brass deflector comes with NSN 1005-01-534-8844 and it's Item 16 in Fig 15. The tube you saw is an adapter that bolts to the cradle and forms a funnel-type collar between the base of the M240H and the cradle. It's called a cradle spacer and it comes with all new catch bag assemblies.

Unfortunately, you can't order it yet. Eventually, all the old catch bag assemblies will be replaced with the new assembly.

*Half-Mast*



CCMCK...

CCMCK MAY  
BE JUST FOR  
TRAINING, BUT  
ITS ROUNDS CAN  
STILL HURT  
YOU.

THAT'S WHY  
YOU NEED  
TO PROTECT  
YOURSELF.

# MAN-MARKING AMMO REQUIRES PROTECTION



**A**lthough the Army hasn't yet come out with the close combat mission capabilities kit (CCMCK), some units are already training with off-the-shelf man-marking munitions that are filled with wax. When one of these munitions hits a soldier, he's splattered with colored wax.

The impact of these rounds can hurt and they can cause injury if you're not protected.

**Whenever training with CCMCK or a commercial version of it, you should wear:**

- your helmet
- standard Army gloves
- your Army combat uniform (ACU) with the sleeves rolled down
- sand, wind, dust (SWD) ballistic goggles, NSN 4240-01-540-5580
- groin protector, NSN 8470-01-465-1100
- CCMCK mask, lower face and throat, NSN 8415-99-359-9160
- hearing protection, such as ear plugs

Wear face mask...



...goggles and helmet when training with CCMCK



AND  
REMEMBER  
THESE  
SAFETY  
RULES...

- Never fire at someone closer than five meters
- Never fire at someone's head

# What's the Difference in Lubes?

SO MANY CLEANING AND LUBING CHOICES.

I JUST DON'T KNOW WHAT'S BEST FOR ME!

Dear Half-Mast,

The -10 TMs for our small arms list a number of lubes and/or cleaners for our weapons, but many of us aren't exactly sure what the differences are among them. Can you help?

SGT J.D.

Dear Sergeant J.D.,

Sure can. Small arms lubricants differ in viscosity (how easily they flow), chemical composition and heat resistance. These characteristics dictate which lubricant to use according to the environmental conditions. Generally, your -10 TM is the best guide for lubricants, but here are some general guidelines to help you take care of your weapons:

**RBC** (rifle bore cleaner) is not a lubricant, it's strictly for cleaning out carbon and powder from the chamber and bore. Save it for really tough cleaning jobs. Remember when you're finished using it you still need to lube your weapon.

**CLP** (cleaner, lubricant, preservative) is usually the best choice for taking care of your weapon since it cleans, lubes, and preserves in one step.

CLP IS USUALLY THE BEST FOR YOUR WEAPON.



**LSA** (lubricant, semi-fluid, automatic weapons) and **LSA-T** (lubricant, semi-fluid, automatic weapons with Teflon) are strictly lubricants. So before using them, you first have to clean your weapon with dry cleaning solvent, MIL-PRF-680 Type II. Always de-grease thoroughly when changing lubes.

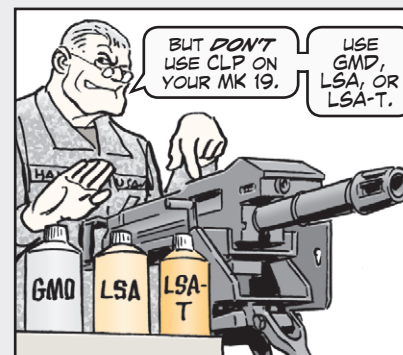
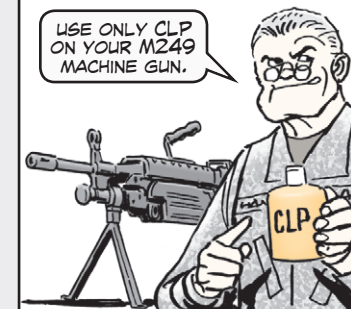
**CLP** and **LSA** can be used on most weapons as long as the temperature is -10°F or higher. When the temperature drops below 10°F, you can use **LAW** (lubricating oil, arctic, weapons). If it's below -10°F, use only **LAW** on most weapons.

There are exceptions, though. For the **M249 machine gun** and the **M3 recoilless rifle**, use only **CLP** regardless of the temperature.

On the **M231 firing port weapon**, don't use **CLP**. Use only **LSA** in normal conditions and **LAW** in extreme cold.

For the **MK 19**, never use **CLP**—it's not strong enough. Use **GMD** (grease, molybdenum disulfide) if you can get it. If you can't, use **LSA** or **LSA-T**. If the temperature drops to 0°F or below, it's OK to use **LAW**.

USE ONLY CLP ON YOUR M249 MACHINE GUN.

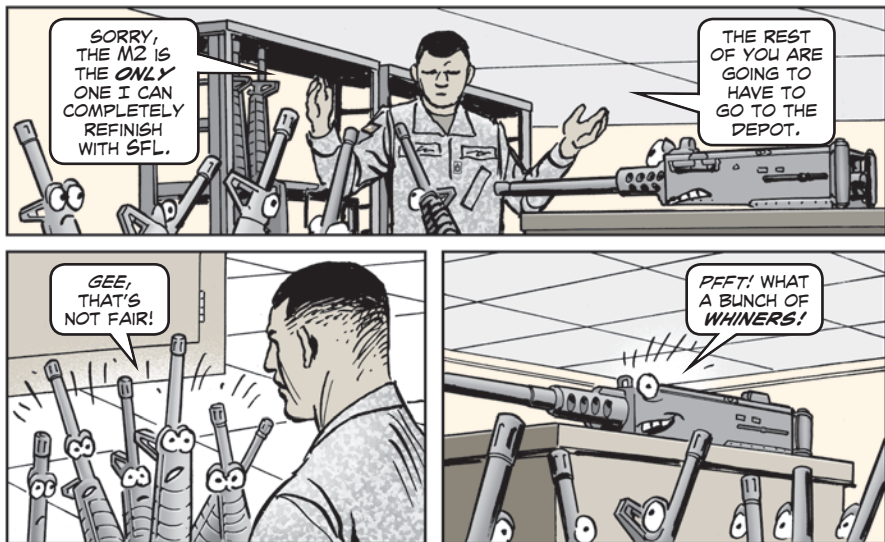


When you're lubing, remember a light lube means a film barely visible to the eye. A heavy lube means a film thick enough to spread with your finger.

If you need the NSNs for these lubricants and cleaners, see your -10 TM or Page 23 in PS 671 (Oct 08) at <https://www.logsa.army.mil/psmag/archives/PS2008/671/671-23.pdf>

Half-Mast

# M2 Only Finish Standard Change



Dear Half-Mast,

We saw on Page 21 in PS 672 (Nov 08) that the standard on how much finish can be missing on an M2 machine gun is waived during wartime.

Is the standard also waived for the other machine guns and for the rifles?

SFC A.J.

Dear Sergeant A.J.,

No. Only the M2 can be touched up during wartime with solid film lubricant (SFL), NSN 9150-01-260-2534, no matter how much of its finish is missing. For all other small arms the standard remains the same, regardless of whether a war is being fought. Generally, the standard is that if more than  $\frac{1}{3}$  of a weapon's finish is missing it must go to depot for refinishing.

Remember the procedure for touching up shiny spots with SFL: First thoroughly clean the area with dry cleaning solvent. The solvent cleans off any lubricant in the metal that will prevent the SFL from sticking. Let the weapon dry completely. Then apply the SFL to the shiny spot and let it dry for 12 hours.

Re-lube the weapon and you're done.

*Half-Mast*

# HOW DAVID BEAT GOLIATH!

C'MON, YOU  
COWARDS...  
LET'S GET  
IT ON! MAN  
TO MAN!

IF ANY OF YOU CAN  
BEAT ME, WE'LL WRAP  
THIS WHOLE THING UP  
AND CALL IT A DAY!

NO NEED  
FOR ANY BIG  
BATTLE...  
JUST TWO GUYS  
DUKING  
IT OUT.

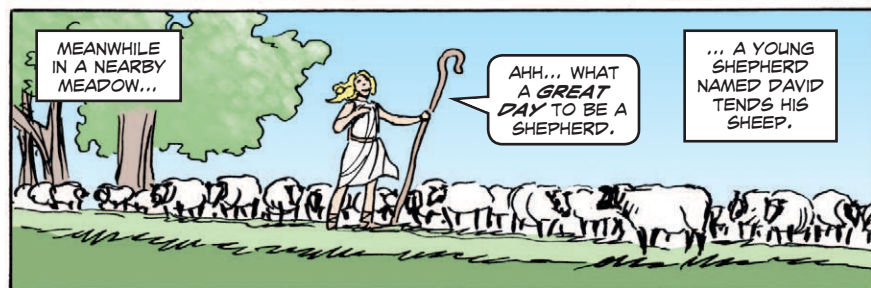
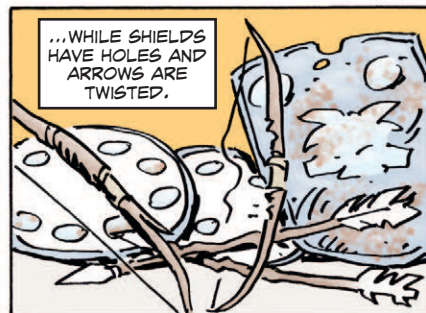
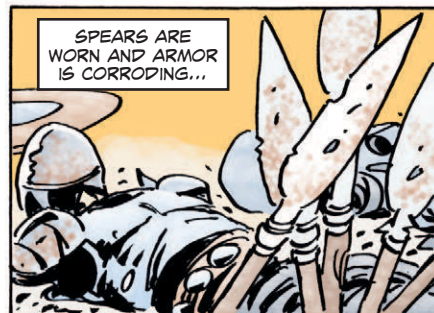
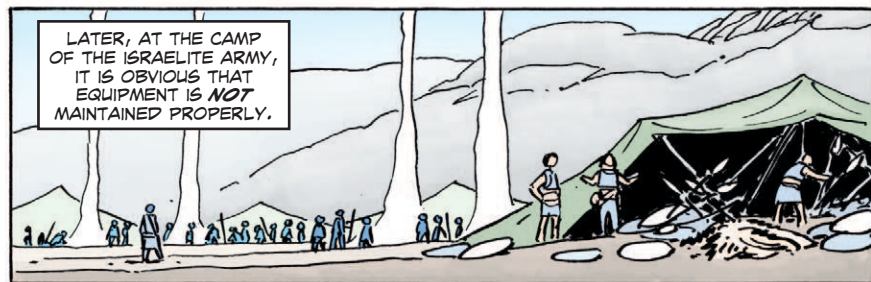
KOE  
KUBER

WHY DON'T  
YOU  
TAKE ON  
GOLIATH?

I WOULD, B-  
BUT I STUBBED  
MY BIG TOE  
LAST NIGHT.  
I WOULDN'T BE  
AT MY BEST.

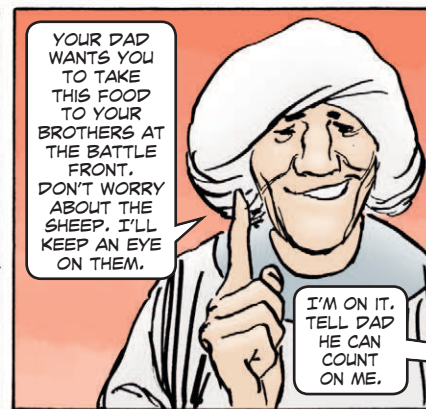
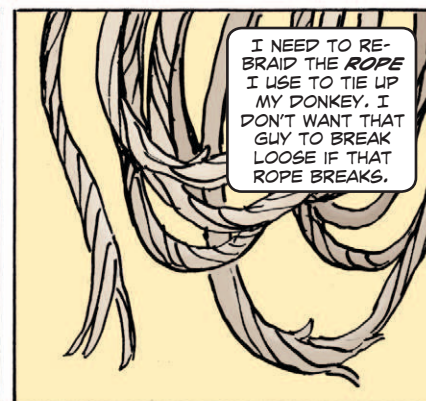
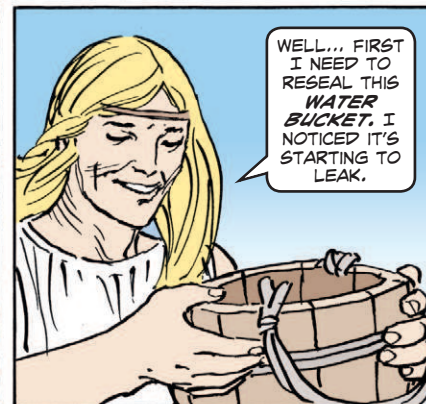
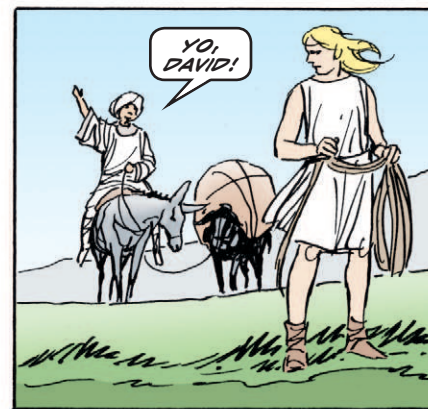
GOSH,  
I-I PULLED  
A MUSCLE  
IN MY  
SHOULDER.  
I CAN'T  
SWING MY  
SWORD WITH  
MY USUAL  
LETHAL  
FORCE.

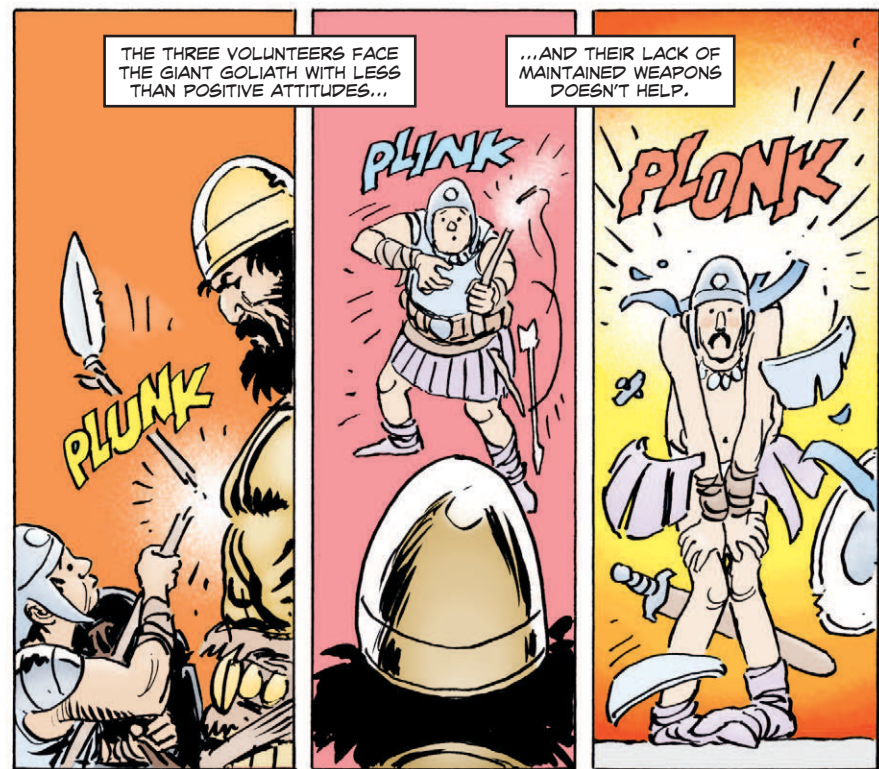
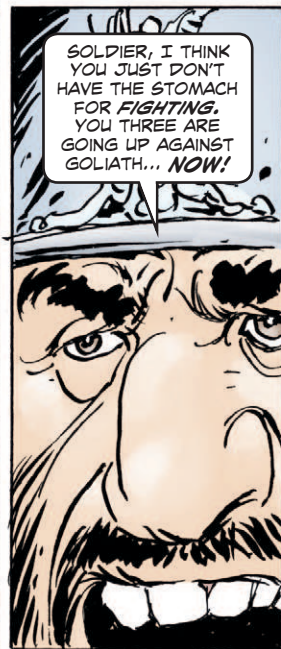
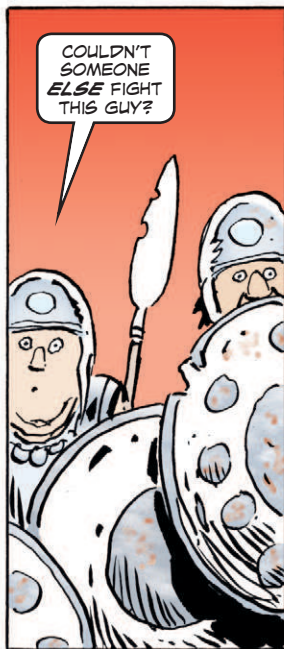
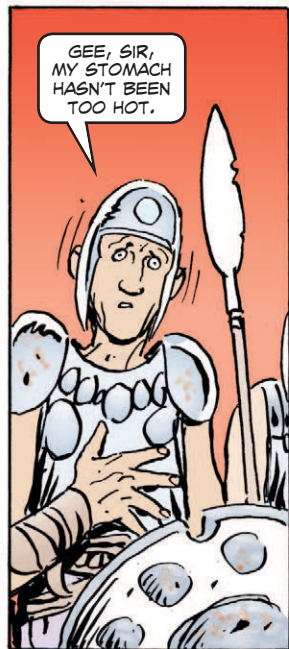
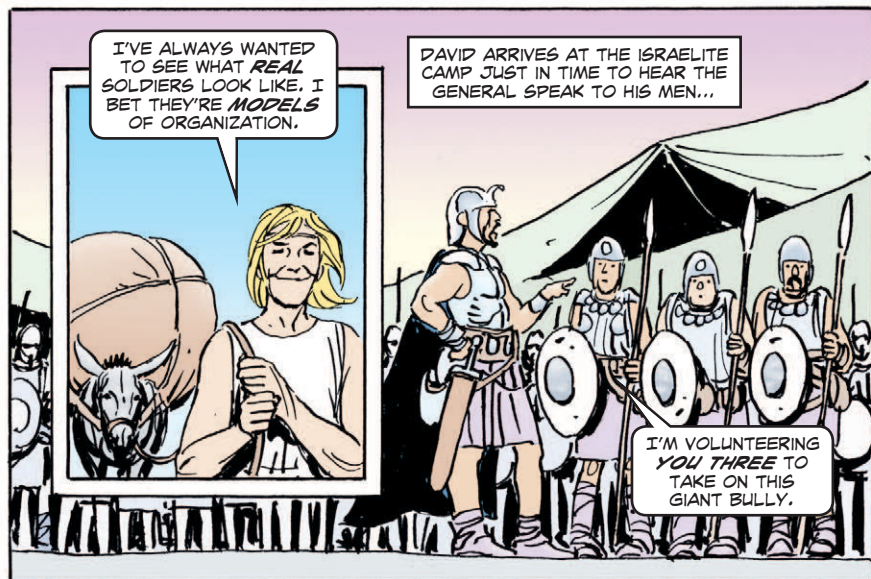
I DON'T FEEL SO HOT  
MYSELF. I THINK THAT  
LOCUST AND HONEY MRE  
I ATE WAS BAD.  
MY STOMACH ISN'T UP  
TO DEALING WITH THAT  
BIG JERK.

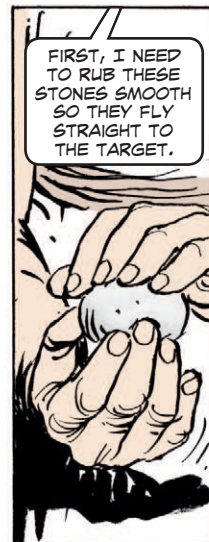
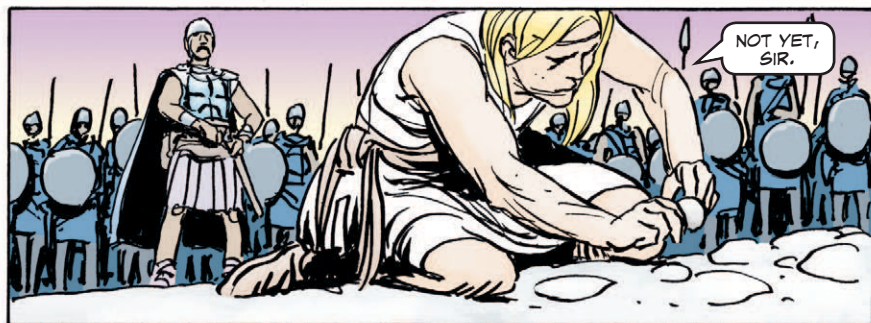
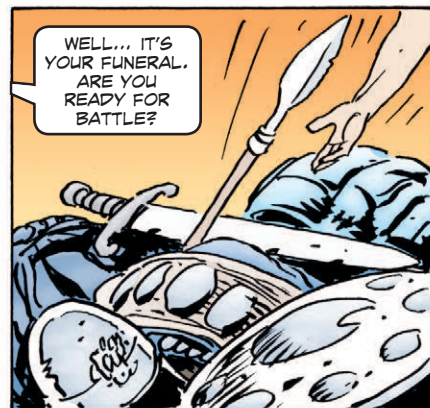
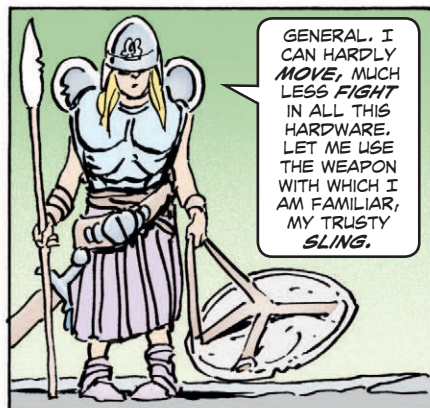
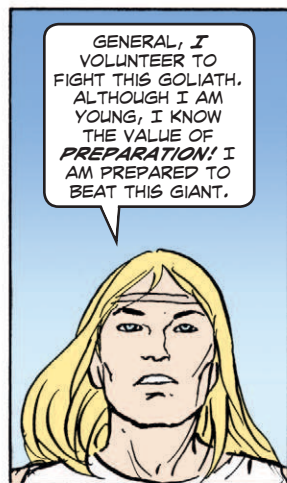


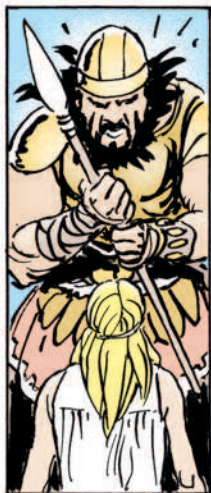
AHH... WHAT A GREAT DAY TO BE A SHEPHERD.

... A YOUNG SHEPHERD NAMED DAVID TENDS HIS SHEEP.









# NEW HELMET LINERS

## AUTHORIZED

ALSO SHOPS, THE PM AIR  
WARRIOR HEADSHED SAYS  
IT'S OK TO USE EITHER THE  
ZETA II LINER OR THE SUPER  
COMFORT LINER (SCL) IN  
YOUR AIRCREW INTEGRATED  
HELMET SYSTEM (AIHS).

THE LINERS ARE  
COMMERCIAL-  
OFF-THE-  
SHELF (COTS)  
ITEMS AND  
ARE A **DIRECT  
REPLACEMENT**  
FOR THE  
STANDARD  
THERMO  
PLASTIC LINER  
(TPL).

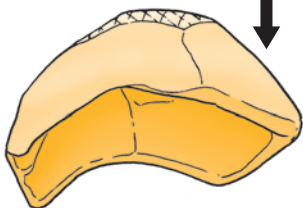
THE ZETA II  
HAS A THREE  
YEAR SERVICE  
LIFE ONCE  
INSTALLED IN  
THE HELMET.

ALSO TECHS,  
YOU NEED TO  
PERMANENTLY  
MARK ON THE  
ZETA LABEL THE  
MONTH AND YEAR  
THE LINER IS  
INSTALLED.

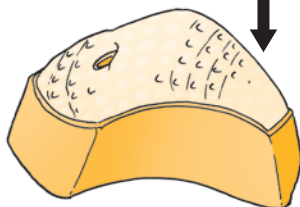
YOU CAN ORDER  
ZETA II LINERS  
FROM THE  
MANUFACTURERS  
BY PART NUMBER  
UNTIL NSNs ARE  
ASSIGNED AND  
THE IETM IS  
UPDATED.



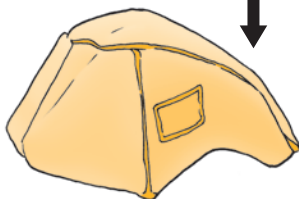
Order Super Comfort Liner...



...or Thermo Plastic Liner...

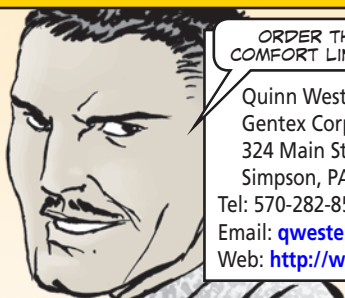


...or Zeta II Liner





Zeta II Part Number	Thickness	Size
9A-0015-101	1/4-in	XS & XXS
9A-0015-102	3/8-in	XS & XXS
9A-0015-103	1/2-in	XS & XXS
9A-0015-104	5/8-in	XS & XXS
9A-0016-101	1/4-in	S & M
9A-0016-102	5/8-in	S & M
9A-0016-103	1/2-in	S & M
9A-0016-104	5/8-in	S & M
9A-0017-101	1/4-in	L
9A-0017-102	3/8-in	L
9A-0017-103	1/2-in	L
9A-0018-104	5/8-in	L
9A-0018-101	1/4-in	XL
9A-0018-102	3/8-in	XL
9A-0018-103	1/2-in	XL
9A-0018-104	5/8-in	XL



Super Comfort Liner Part Number	Size
02D11531-8	XXS
02D11531-9	XS
02D11531-10	S
02D11531-11	M
02D11531-12	L
02D11531-13	XL

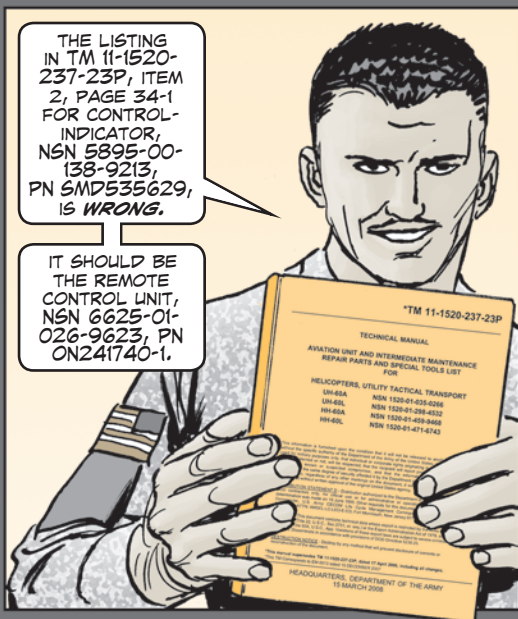
The liners give the ALSE tech flexibility in the fit of the HGU-56P helmet. Because of the uniqueness of the human head, no one liner will be the perfect universal solution, so it's important for the aviator and the ALSE tech to communicate about the comfort level of the helmet.

The Zeta liner may be better for aviators with a long, narrow head. The SCL and the TPL can be heat treated and form fitted around lumps, bumps and protrusions on the head.

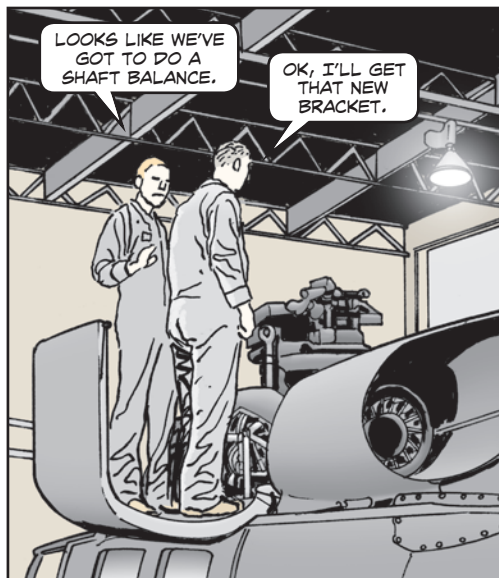
For proper inspection, care and use of the SCL and the Zeta II, check out the good words in PM Air Warrior Message ALSE 08-02.

ALSE techs, make a note that the original Zeta liner is still not approved for use in the HGU/56P helmet.

# Wrong Part Listed in TM



# Drive Shaft Bracket



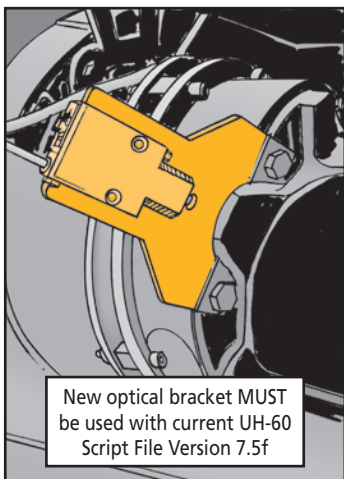
The bracket can be used with both the old and new high speed shafts and must be used with the Black Hawk AVA script file *UH\_60 75 version 7.5f* or higher.

The bracket holds the optical rpm sensor for the high speed shaft balance procedure.

Engine high speed shaft balance procedures must be completed following repair, replacement, and or reinstallation of the high speed shaft assembly. Follow the balancing procedures in WP0069 00 of TM 1-6625-724-13&P.

Also, engine high speed shaft balance must be done if the 120-hour vibration check shows the No. 1 or No. 2 engine vibration levels above the limit of 0.50 inches per second (ips).

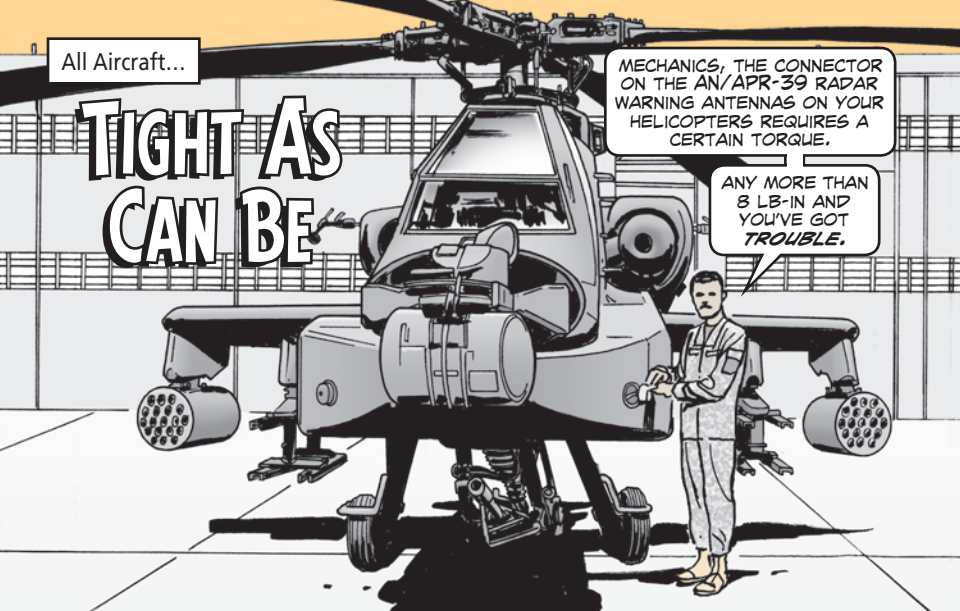
Engine high speed shaft balance procedures must be exact and the final vibration level must not be above 0.50 ips. If the aircraft is flown with vibration levels over the limit, premature failure of the high speed drive shaft assembly can result.



# TIGHT AS CAN BE

MECHANICS, THE CONNECTOR ON THE AN/APR-39 RADAR WARNING ANTENNAS ON YOUR HELICOPTERS REQUIRES A CERTAIN TORQUE.

ANY MORE THAN 8 LB-IN AND YOU'VE GOT TROUBLE.



The four antennas should be inspected for paint, fuel, dirt and damage to the radome. Look for broken or missing mounting screws on the antennas. Sometimes you remove them to inspect the connections as a part of your troubleshooting procedures.

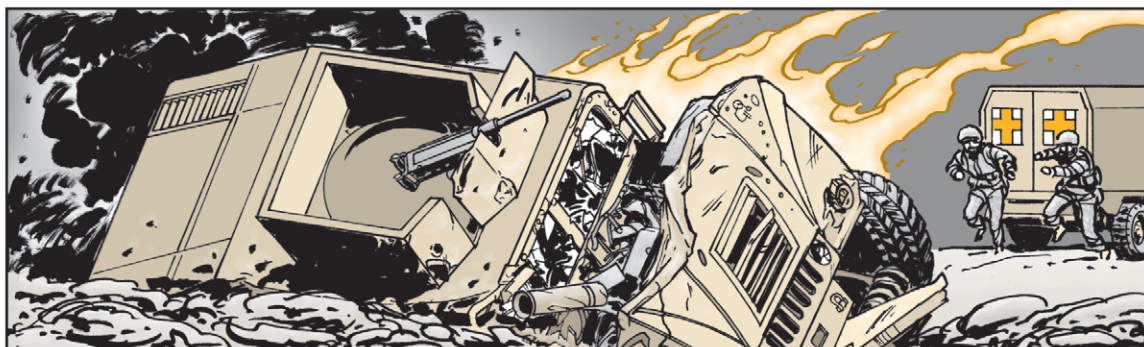
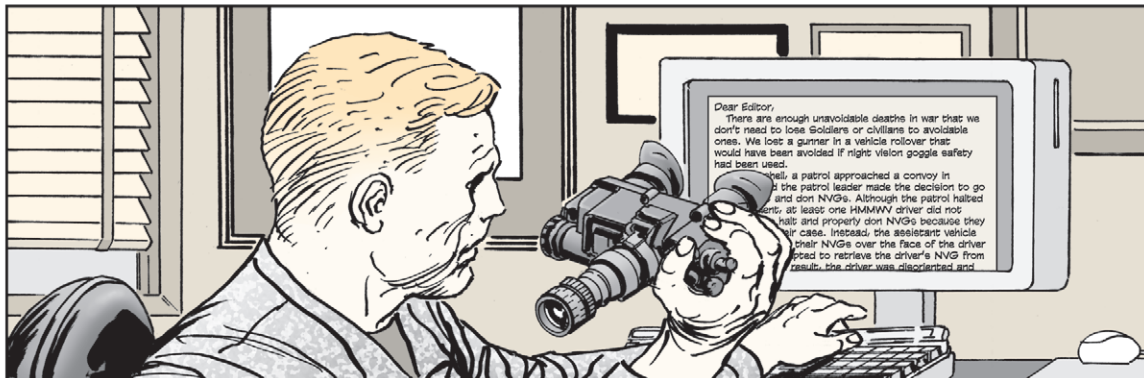
If you torque the connector more than 8 lb-in when installing it, you can kiss it goodbye because it **will** break. The extra torque on the connector ruins the wire. Since 8 lb-in is not a lot, finger tight is good enough.

Do not over-tighten connector nut



SO KEEP THE RADAR WARNING ANTENNAS DETECTING INCOMING MISSILES BY **NOT** OVER-TIGHTENING.

# IT'S A LIFE AND DEATH ISSUE



Dear Editor,

There are enough unavoidable deaths in war that we don't need to lose Soldiers or civilians to avoidable ones. We lost a gunner in a vehicle rollover that would have been avoided if night vision goggle safety had been used.

In a nutshell, a patrol approached a convoy in blackout and the patrol leader made the decision to go to blackout and don NVGs. Although the patrol halted for a moment, at least one HMMWV driver did not have time to halt and properly don NVGs because they were still in their case. Instead, the assistant vehicle commander held their NVGs over the face of the driver while they attempted to retrieve the driver's NVG from the case. As a result, the driver was disoriented and rolled the vehicle over killing the gunner.

What was the tipping point that made this practice unsafe? Well, it could have been:

- the driver had to use goggles other than those assigned to him.
- the driver did not allow time for his eyes to adjust to the optics.
- the driver did not stop the vehicle to put the goggles on and the commander did not order a momentary halt.
- the patrol leader did not realize that every element in his convoy was not ready to change over to goggles.
- the driver was not prepared for night operations and should have had the NVG at the ready.

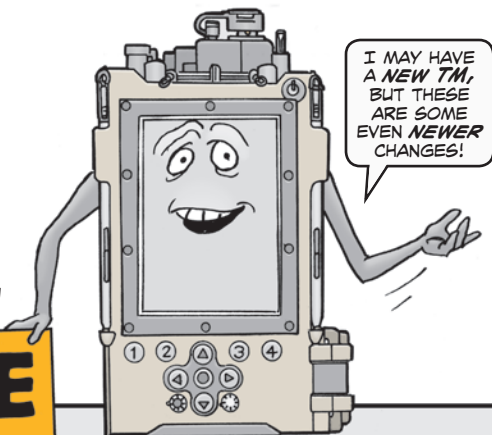
I'm very concerned about this death and don't want it to happen again. Help me spread the word.

Kingston Winget  
Transportation Branch Safety  
Ft Eustis, VA

*Editor's note: Thanks, Kingston, for this extremely important message. Commanders, ensure every Soldier under your command has been trained to use night vision goggles and that this training is documented on their driving record. Give refresher training often.*

# Simple Key Loader Component

## UPDATE



Users of the cryptographic key transfer unit, AN/PYQ-10(C) simple key loader, NSN 5810-01-517-3587, should download TM 11-5810-410-13&P. The TM is found on EM 0164 and can be accessed at the LOGSA website:

<https://www.logsa.army.mil/etms/online.cfm>

There are some changes to the TM that you should note.

**First**, the retaining ring, NSN 5310-01-524-9456, that held the lanyard to the loader is no longer available as a separate part. To get the ring, you must order the entire lanyard, NSN 5895-01-525-0352. The lanyard is Item 6 in Table 1 of WP 0038-4. Disregard the “how to” instructions on Pages 0036-10 through 0036-11. These instructions are being revised.

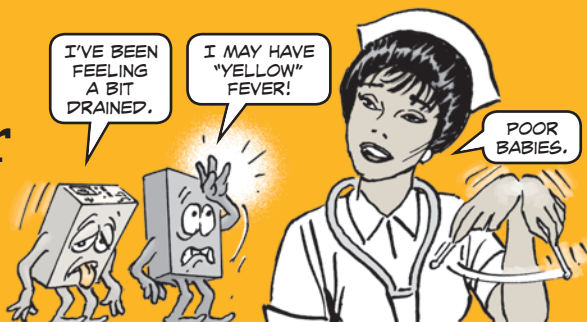
**Second**, you cannot get the USB cable, NSN 6145-01-525-2777. At one time, it was offered as an additional authorized item, but it was never fielded. Delete that NSN from your files. The replacement for the cable is USB adapter, NSN 5995-01-545-0167. It’s issued with the simple key loader. However, you can order it. It’s Item 16 in Table 1 of WP 0038-4.

Currently, there are restrictions on the use of the USB port. Other options for downloading software like using a full port cable and running the utility program should be used. However, when these restrictions are lifted, it will be good for you to have the USB adapter.

**Third**, the battery charger assembly, NSN 6130-01-548-1505, has three components that can be ordered separately. If you need just the charger, order it with NSN 6130-01-525-1640. If you need just the power cord, order it with NSN 6150-01-551-3064. If you need the AC/DC adapter, order it with NSN 6130-01-551-3902.



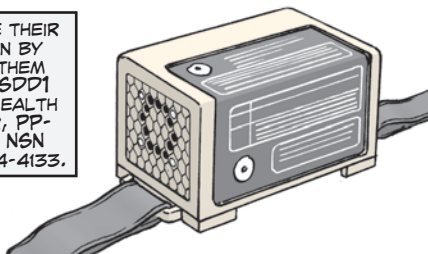
# Take a Test for Battery Health



WHAT IS THE  
CONDITION OF  
YOUR BB-2590/U  
AND BB-390B/U  
BATTERIES?

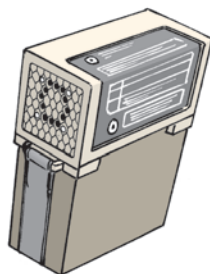
ARE THEY  
HEALTHY  
OR SICK?

DETERMINE THEIR  
CONDITION BY  
TESTING THEM  
WITH THE SDD1  
BATTERY HEALTH  
INDICATOR, PP-  
8496/U, NSN  
6130-01-494-4133.



*GLUB!*

TO TEST A  
BATTERY, THE  
BATTERY MUST BE  
FULLY CHARGED.  
ONCE THE BATTERY  
HEALTH INDICATOR  
IS ATTACHED AND  
ACTIVATED, IT WILL  
DRAIN THE BATTERY  
IN A CONTROLLED  
DISCHARGE. WHILE  
THE BATTERY IS  
DISCHARGING, THE  
HEALTH INDICATOR  
IS ANALYZING.



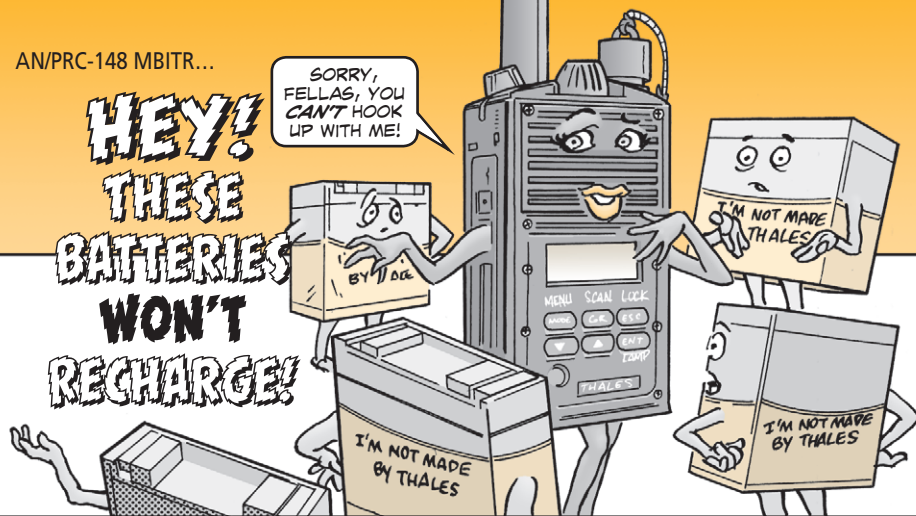
NOW PRESS THE START/RECALL BUTTON ON THE  
INDICATOR. THE LED WILL ILLUMINATE, SHOWING EITHER  
**RED, YELLOW OR GREEN.**

IF IT'S **RED**, YOUR  
BATTERY'S **DEAD!**

IF IT'S **YELLOW**,  
YOU CAN TRAIN WITH  
**THIS FELLOW!**

IF IT'S **GREEN**, YOUR  
BATTERY IS **FIT FOR  
THE SCENE!**

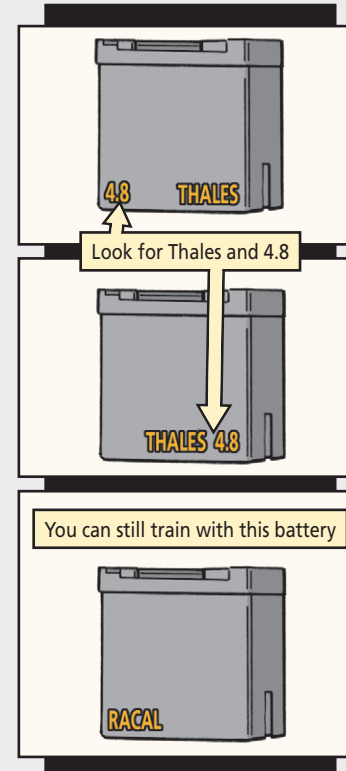
AFTER  
THE TEST,  
RECHARGE  
A YELLOW  
OR GREEN  
BATTERY  
AND  
YOU'RE  
**READY  
TO GO!**



Okay, all AN/PRC-148 MBITR or JTRS enhanced MBITR (JEM) users, let's get straight on which rechargeable batteries you can use and which ones you can't.

**You CAN use**, and should use, batteries built by Thales, NSN 6140-01-487-1153. These batteries have "4.8" and "Thales" written in white letters on the battery case.

**You CAN use**, but for training only, batteries built by Thales but without "4.8" and "Thales" written on the case and all batteries by RACAL. These batteries are well past their useful life, but may have enough life left to serve in training situations. In the long run, to prevent future confusion, you need to dispose of these batteries in accordance with local regulations and order the newer battery.



**You CANNOT use** batteries without "4.8" and "Thales" written on the case that are supplied by other vendors that have part number PRC148LI. Common sense would say to use them. But common sense lets us down this time. These batteries cannot be recharged in the Thales battery chargers and vehicular battery charger adapters! In reality, they become non-rechargeable batteries!

Are there safety issues to the user or the MBITR with these **CANNOT use** batteries. No. Not on the surface. But underneath the surface is the issue of trying to recharge these batteries and finding you can't after having planned on using them operationally. Now you do have safety issues!

**You CAN and SHOULD** submit a product quality deficiency report (PQDR) Form SF 368 on all the PRC148LI batteries you have. You can do this electronically.

Go to:

<https://aeaps2.ria.army.mil/SERVICES/SUPPLY/AMCQDR/ENTRY.CFM>

If you have question about this battery issue, contact the MBITR office:

[catherine.wodzisz@us.army.mil](mailto:catherine.wodzisz@us.army.mil)

**TAP.  
TAP.  
BLOW.  
BLOW**

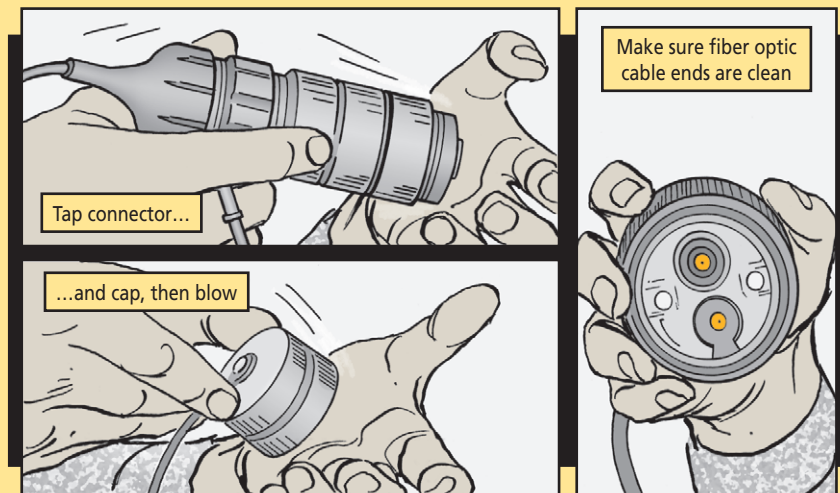
Your 300-meter, NSN 6020-01-220-5435, and 1,000-meter, NSN 6020-01-208-1147, CX-13295/G fiber optic cables are sensitive to dirt once they're disconnected. Most of you do your PM job by using protective caps on the connectors when they're not hooked up.

But extra care is needed with fiber optic cables. The fiber optics in these cables are bare at two pin-sized points in the connector. Just a little dust or dirt on these points can stop your communications.

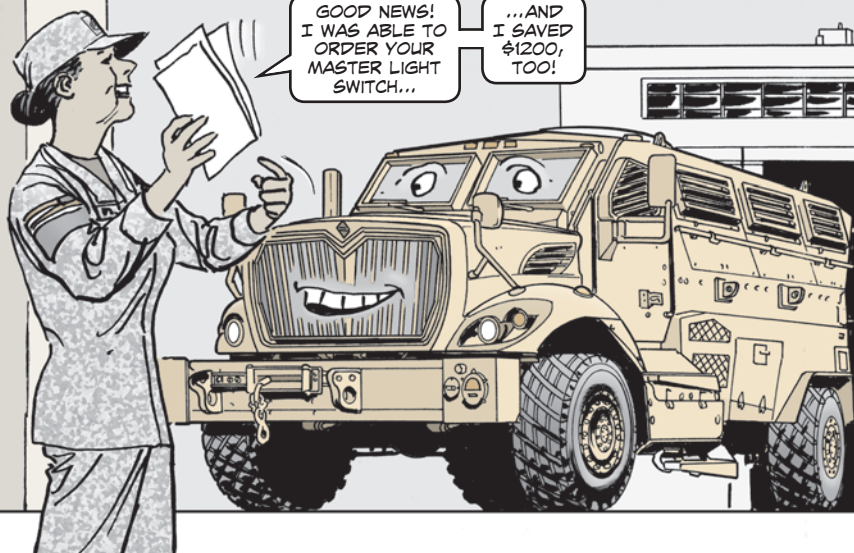
Often that little bit of dust or dirt comes from the connector cap. When you do a good thing by putting the cap on the connector, it turns out to be a bad thing when dirt or dust lands on the bare fiber optics.

So make it a regular routine to tap the connector and then the cap on your hand to free loose dirt. Then give the connector and the cap a good blow.

Now look them over. More stubborn dirt may require a brush to get out.



# Cost Saving Master Light Switch



Dear Editor,

I am writing to you about the master light switch for the IMG MaxxPro and IMG MaxxPro Plus vehicles shown in Fig 8-37.1 on Page 437 of TM 9-2355-106-24P and Fig 8-39.1 on Page 395 of TM 9-2355-318-24P-1.

My head did a double-spin when I looked in the TMs to find the switch. The switch's PN 3673425C1, CAGE 338X5, crosses over to NSN 5930-01-556-6299 and costs \$1,436.82!!!

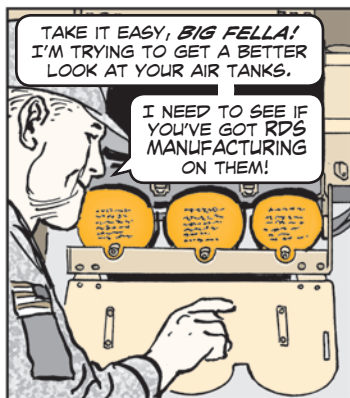
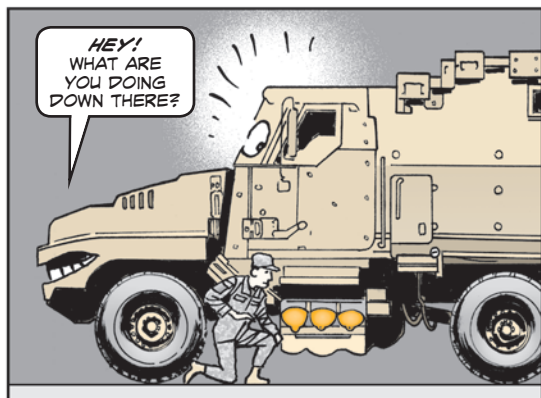
What's interesting is we removed the switch in one of our unit's IMG MaxxPros and found a sticker on it with NSN 5930-01-491-9893. This switch is identical to the original one, CAGE 19207, 59666, or 47P61, and costs \$179.48 in FED LOG. That's a savings of more than \$1,200!

I would recommend units not order the switch shown in the TMs. Instead, order the switch that comes with NSN 5930-01-491-9893. It's a lot cheaper and does the job.

SSG Jesse A Olson  
54th Engr Bn  
Camp Striker, Iraq

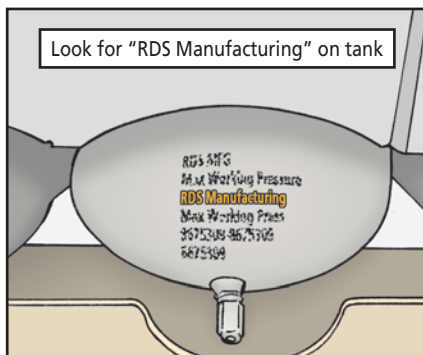
*Editor's note: Thanks for the money-saving tip that will help other units out there.*

# CAIMAN AIR TANK DILEMMA



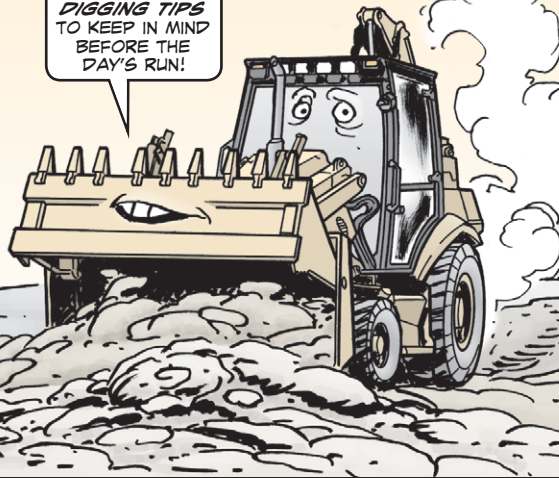
Caiman MRAP users need to take a close look at the vehicle's primary, secondary and wet tanks. These tanks are known to rupture, causing the air brake system to fail. **Not good!**

Get down on your hands and knees and see if the tank has **RDS Manufacturing** on the end of the tank. If you find a tank with these markings, use red spray paint and mark a red X on both ends of the tank. This doesn't mean your vehicle is non-mission capable, but it does mean you have to drive at reduced speeds and allow additional space between traveling vehicles until a mechanic removes the bum tank.



# TIME FOR SOME DIGGING

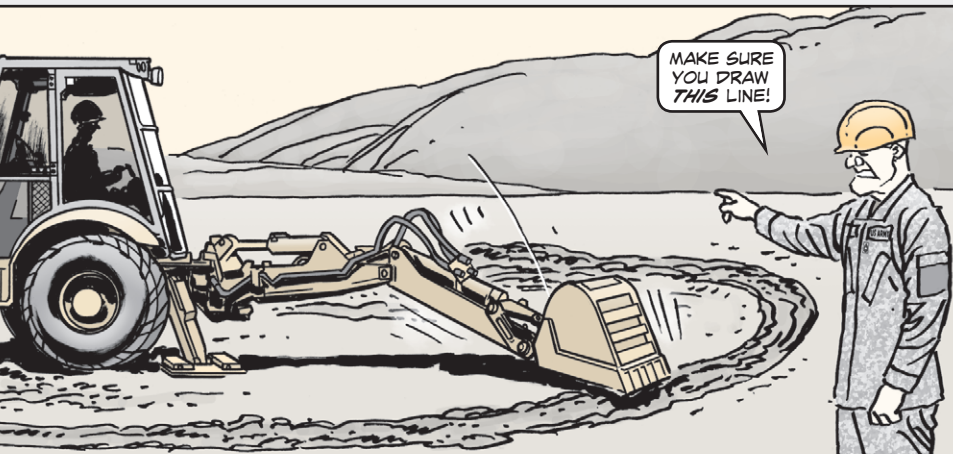
HERE'RE SOME DIGGING TIPS TO KEEP IN MIND BEFORE THE DAY'S RUN!



Safety and PMCS go hand-in-hand with the Case backhoe loader. For tip-top backhoe operations, keep these pointers in mind before and during the day's work. You'll find this info in WP 0012-8 and 0012-9 of TM 5-2420-231-10.

## Draw the Line

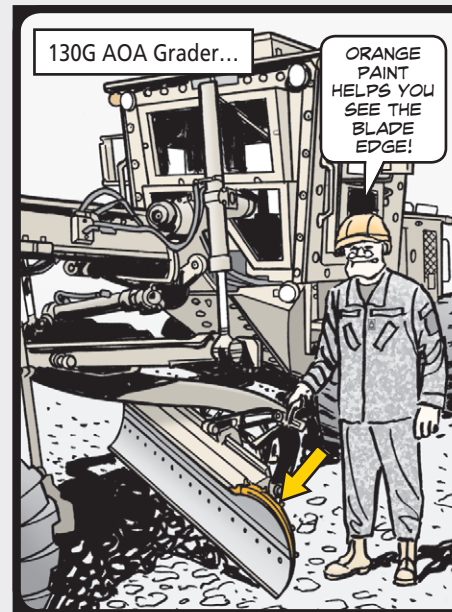
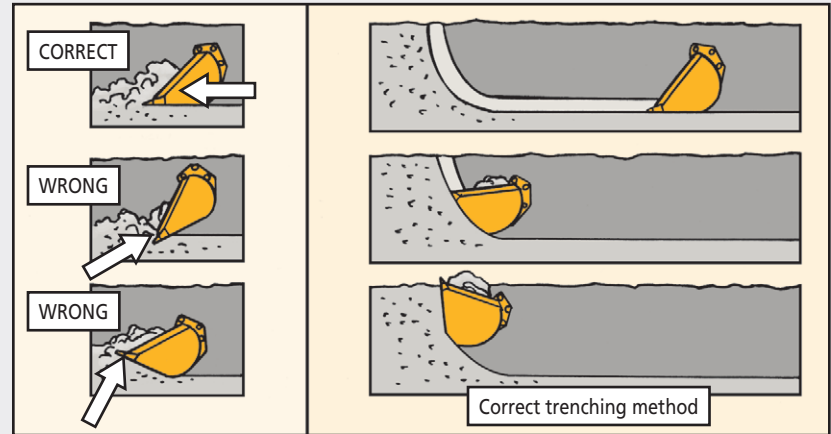
A good rule of thumb before you start digging is to extend the backhoe boom and draw a line in the dirt. This line forms a half circle that's almost 18 feet from the back of the vehicle. This half circle acts as a "danger area" warning, reminding personnel to stay out of your work area.



## Moving the Bucket

Do **not** backfill a trench with the backhoe by swinging its bucket against soil. This type of movement causes unnecessary wear and tear that damages the bucket and boom.

You'll also want to use some TLC when moving the backhoe completely to the side. In some positions, the backhoe will bump into the vehicle's stabilizers. Too much bumping will damage the stabilizer's hydraulic cylinders.



# Paint Blade Edge Orange

Operators, the edge of the blade is hard to see when you're inside the 130G grader cab with add-on-armor. Here's how to solve the problem.

Get your CO's approval to have your mechanic paint the blade's back edge with orange or yellow paint. That way you'll have a visual cue of where the blade is, especially when it's turned near the cab steps.

# IF YOU DON'T KNOW JACK

IT'S BEEN A LONG DAY.

YOU'VE WORKED **HARD** IN THE MOTOR POOL AND YOU **DESERVE** A BREATHER.

TAKE A SIP OF SPORTS DRINK, LEAN BACK AND RELAX.



**WHOA!**  
EASY THERE,  
SOLDIER.

WATCH WHERE YOU'RE—  
—LEANING.



MAKE SURE **YOU'RE NOT** LEANING AGAINST A VEHICLE SITTING ON JACK STANDS.

YOUR WEIGHT COULD NUDGE THE VEHICLE OFF THE STANDS AND ONTO ONE OF YOUR BUDDIES.



JACK STANDS ARE **EASY** TO OVERLOOK.

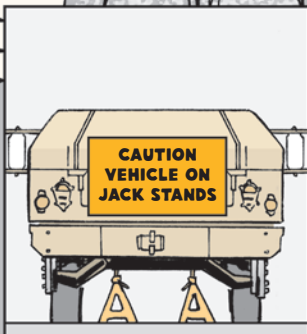
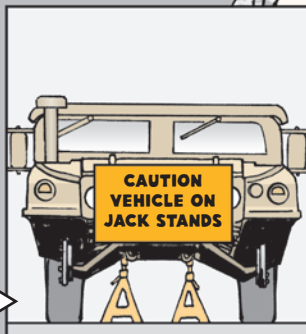
SOMETIMES YOU HAVE TO CHECK **TWICE** TO SEE THEM UNDER A VEHICLE OR TRAILER.

IT'S BEST TO TAKE A PEEK **BEFORE** YOU LEAN.

FOR SAFETY'S SAKE, HANG **BIG CAUTION SIGNS** ON ANY VEHICLE OR TRAILER THAT'S ON JACK STANDS.

HANG ONE SIGN ON THE **FRONT** AND ANOTHER SIGN ON THE **REAR** OF THE VEHICLE.

SOMETHING LIKE THIS...



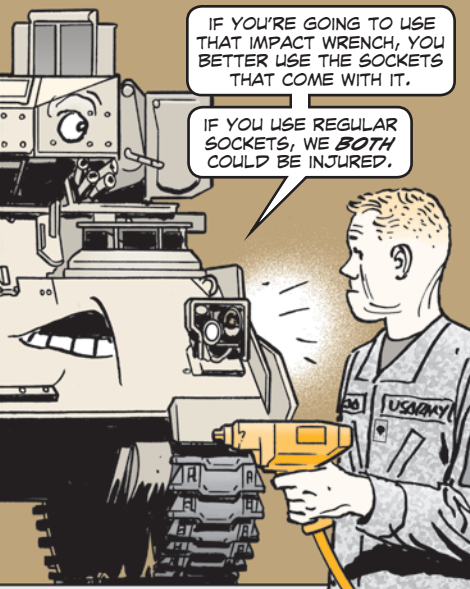
MAKE IT A MOTOR POOL SOP.

IT'LL HELP PREVENT ACCIDENTS AND ENCOURAGE PEOPLE TO TAKE A BREATHER ELSEWHERE.



Tools...

# Impact Wrench Needs Impact Sockets

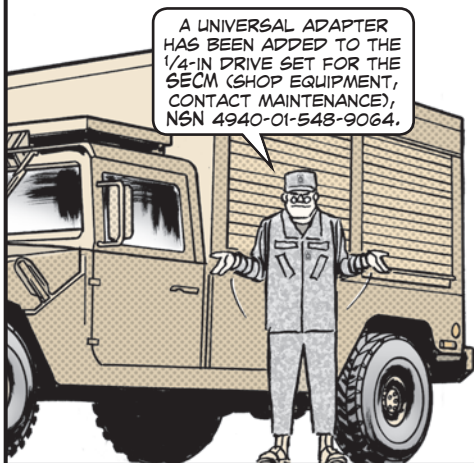


An impact wrench can do powerful work tightening or loosening nuts. It's much more powerful than a regular socket wrench.

That's why you should **never** use a regular socket with an impact wrench. The extra torque put out by the impact wrench can shatter a normal socket, sending shrapnel everywhere. That could really ruin someone's day.

When you need the extra power of an impact wrench, use the impact sockets specially made to withstand the force of the wrench. Then you can safely remove those tough nuts.

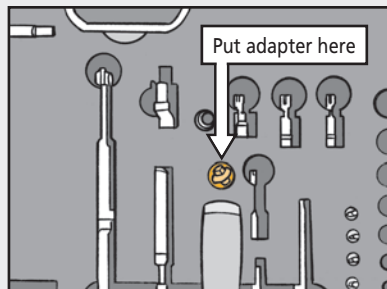
# Socket Adapter Added to SECM



The adapter can be ordered with PN TMU8B through the SKOT website:

<http://pmskot.army.mil>

Once you get the adapter, put it in drawer B4 centered between PN FS121 and PN SGT4B. Use a sharp knife to cut two slots in an X pattern in the drawer foam  $\frac{1}{4}$  to  $\frac{1}{2}$  inch long. Place the adapter in the slot and adjust the slot as necessary. You can also use a drill  $\frac{1}{4}$  to  $\frac{1}{2}$  inch in diameter to make the slots.



# Fox Needs PM Diet For Good Health



ARE YOU READY FOR YOUR NEW, IMPROVED PM DIET?

YOU BET!

NOTHING PREPARES ME FOR A DETECTING JOB LIKE A GOOD PM BREAKFAST.

YOUR FOX CBRN VEHICLE WON'T STAY HEALTHY LONG IF YOU NEGLECT ITS PM DIET.

HERE ARE FEW WAYS TO KEEP YOUR FOX SNIFFING HAPPILY ON THE CBRN TRAIL...

**Check the seals.** If the door and hatch seals are in bad shape, then **you** could be in bad shape when your Fox swims or encounters chemical agents. Bad seals prevent the Fox from building overpressure, which means it can't seal out water or chemical agents.

Before you go to the field, eyeball all the seals for cracks. Also make sure the seals haven't come out of their tracks. Report bad seals to maintenance.

You can help seals last by keeping your feet off them when you enter and exit the Fox. Stepping on the seals is what usually pushes them out of their tracks. Another good seal tip is to take off your gear before standing up in the hatch. Otherwise, your gear can catch on the hatch seal and tear or pull it out.

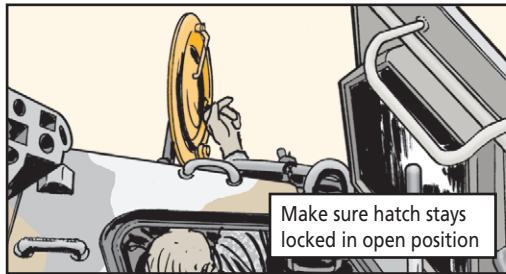
Check seals for cracks or being out of their tracks



If you don't take off gear, you can damage hatch seal

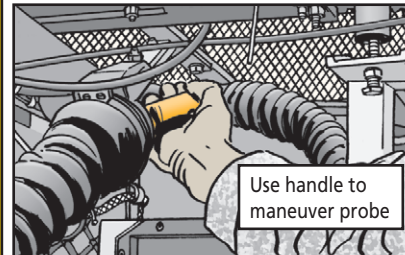


**Does hatch lock?** Save yourself a very painful injury by making sure the hatch locks in the open position and stays locked. Once you have locked the hatch up, pull on it to make sure it won't unlock. That way you can be sure the hatch won't bang down on your head or hand.



Make sure hatch stays locked in open position

**Watch where you grab probe.** Don't use the probe's boot as a handle. That can damage the boot and probe. Unlock the probe and use its handle to maneuver it.



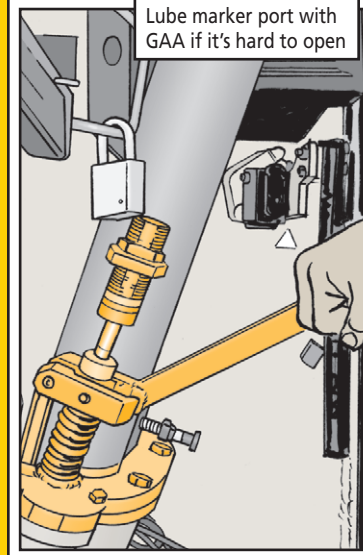
Use handle to maneuver probe

Before you hit the road, make sure the probe is locked up for travel. Otherwise, it can bang around, which ruins its membrane. After you fasten the probe's seatbelt, give it a tug to make sure it's locked in. Sometimes the seatbelt looks like it's secured when it's not.



Lock probe for travel. Give seatbelt a tug to make sure it's locked

**Marker port needs lube, too.** Don't forget the marker port during quarterly lubing. If it gets no lube attention, eventually you won't be able to open it more than halfway. Then the marker will get stuck when you try to push it out the port. Any time the port becomes difficult to open, give it a shot of GAA.



Lube marker port with GAA if it's hard to open

# M256 Detector UPGRADED

THE M256A1 CHEMICAL AGENT DETECTOR KIT IS GOING TO BE REPLACED GRADUALLY BY AN UPGRADED M256A2 KIT BEGINNING IN FY 10.



The new kit will have an increased detection capability and is packaged in a 1-liter canteen pouch that is compatible with modular load-bearing equipment (MOLLE).

Like the M256A1, the kit will contain chemical agent detector samplers (six instead of 12), instruction cards and M8 paper. The M256A2 will also have four low volatility hazard (LVH) adaptors that will let you detect from solid and liquid samples without having to heat the kit or try to contain the liquid's vapor in a can.

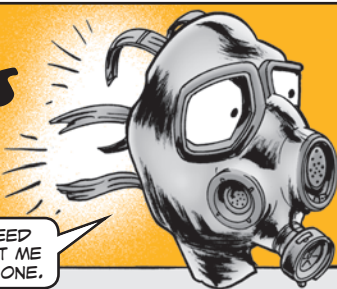
The M256A2 can be ordered as a complete item or refills can be ordered to replace components. Refills will include M8 paper, a package of six M256 vapor samplers and a package of four adaptors. That way units won't have to order an entire new M256A2 when they run out of samplers or adaptors.

The LVH refill kit, NSN 6665-01-564-3795, will be available in FY 10 and can be used with the M256A1 kit. Operator instructions will come with the refill kit. During FY 10, the M256A1 will be replaced with the M256A2, NSN 6665-01-563-7473, by attrition. Don't get rid of your M256A1s. They can still be used until their expiration dates.

THE M256A1'S TM 3-6665-307-10 WILL BE UPDATED WITH A CHAPTER 4 THAT EXPLAINS LVH OPERATIONS.

WHEN THE M256A2 HITS THE FIELD, IT WILL COME WITH A **COMPLETELY NEW TM.**

# ***Harness NSN?***



MY HEAD  
HARNESS IS  
**SHOT.**

WE NEED  
TO GET ME  
A NEW ONE.

**ONE PROBLEM!**  
THERE'S NO NSN  
FOR THE HARNESS  
IN THE TM.

Dear Half-Mast,  
I've looked in TM  
3-4240-346-20&P  
and I can't find an NSN  
for the M40 and M42  
masks' head harness.  
Can you help?

CW5 K.V.

Dear Chief K.V.,

Certainly. For some reason the NSN for the head harness was left out of the TM. The head harness for both the M40 and M42 comes with NSN 4240-01-464-7839 and its part number is 5-1-2796.

Pencil in this information in both Figs C-2 and C-4 until the TM is updated.

*Half-Mast*

# **PMCS Cards a Good Deal**



**HEY, THESE  
PMCS CARDS  
ARE A GOOD  
DEAL! YOU CAN  
BET ON IT!**

Dear Half-Mast,  
I have tried with no luck to  
get the M40/M42 mask PMCS  
cards that are laminated and  
connected with a ring. The cards  
make it easier to do the PMCS  
for the mask. Can you help?

SSG C.C.

Dear Sergeant C.C.,

Certainly. Order the cards with NSN 7690-01-491-9282 for \$1.32. You still need to keep a copy of the mask's -10 TM for help with problems not covered by the cards.

*Half-Mast*

AN/VDR-2 Radiac Set...

**DETECT  
DETECTOR  
PROBLEMS  
QUICKLY**

LET'S USE A LITTLE  
DETECTING WORK  
TO MAKE SURE  
YOU'RE READY FOR  
DETECTING.

EXCELLENT  
IDEA, MY  
GOOD MAN!

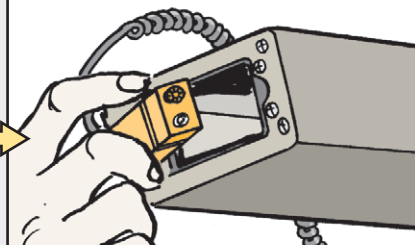
A LITTLE DETECTIVE  
WORK BEFORE YOU  
GO TO THE FIELD  
CAN HELP YOUR  
AN/VDR-2 DETECT  
WHEN IT COUNTS.

HERE ARE THE  
MOST COMMON  
PROBLEMS TO  
LOOK FOR...

**Batteries**—It's critical you put the batteries in correctly: First, make sure the power switch is off.

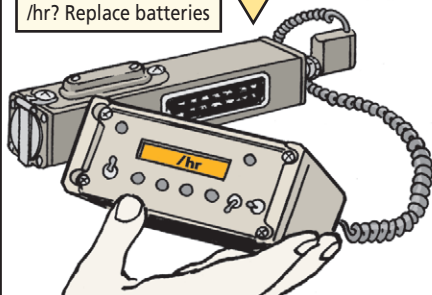
Batteries go in with large terminals on top row

The large terminal on each of the three batteries goes in the top row of the battery compartment and the small terminals in the bottom row. If you reverse a battery, the AN/VDR-2 could short circuit and overheat.

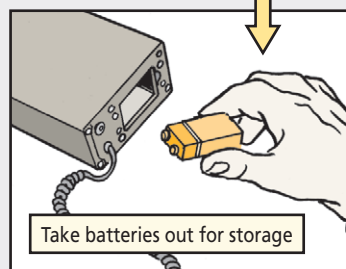


If you see "/hr", it's time to replace the batteries. For maximum battery life, replace all three at the same time.

/hr? Replace batteries

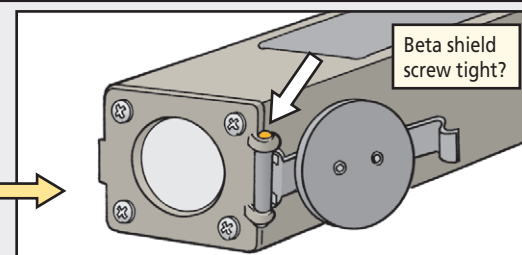


Remember when you're finished detecting, take out the batteries. If they're left in while the AN/VDR-2 sits for weeks in storage, the batteries can leak and cause expensive damage.



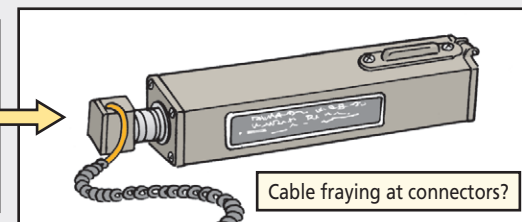
Take batteries out for storage

**Betashield**—Make sure its screw is tight. Tighten it if it's loose. If the screw works out, the shield comes off and the probe screen has no protection.



Beta shield  
screw tight?

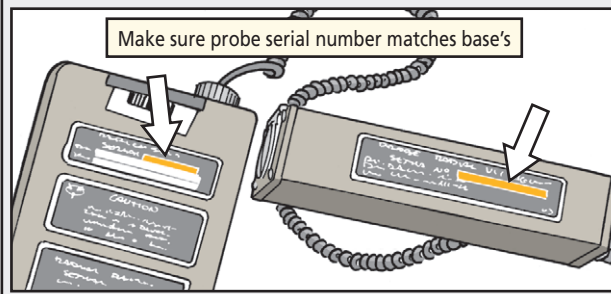
**Cable**—Check the cable for fraying at the connectors. If cable wires are exposed, they can short out and kill detecting.



Cable fraying at connectors?

### Back From TMDE

One other tip, CBRN specialists. When your AN/VDR-2s come back from calibration at TMDE, make sure the serial number of the probe matches that of the base. Sometimes they get switched and that can cause a major headache for your property book accounting.



Make sure probe serial number matches base's

FOLLOW THESE  
PM TIPS AND  
DETECTING  
WILL BECOME...  
ELEMENTARY!




# OCIE PCS Shipments



The first step to determining which equipment you keep for your PCS is to download your clothing record from the AKO MY CLOTHING link:

DATE: 2009/03/16 12:29:45 DODAAC: W36B5B				CIF - FORT BRAGG CLOTHING RECORD - AUTOMATED DA FORM 3645				PAGE 1 OF 3 CIF CODE: SE7600			
SSN/PID: RANK/GRADE: SGT/E05		NAME: JAMES, JOHN UNIT: WA1QC0 - 020918FAC BTRY MLRS		SEX: M DMOS: 13M		HOME CIF CODE: SW5600		LAST INITIAL ISSUE: 2005/11/01 EXPECTED CLEARANCE: 2013/07/24			
LAST TRANSACTION INFORMATION DOCUMENT NO: W44DUH73558089V CIF NAME: SW5600 - FORT SILL						DTTC: CLOTHING RECORD ADDITIONAL ISSUE DATE: 2007/12/21					
ISSUING CIF	MENU	LIN	SIZE	CIC	NOMENCLATURE	PARTIAL NSN	AU QTY	OH QTY	PCS TRANS	ETS TRANS	
SW5600	4EK	B13907	GREEN		BAG BARRACK CT OG 107	3692	1	1	Y	N	
SW5600	4EK	B15825	OLIVE		BAG CLOTHING WTRPROOF	6909	1	1	Y	N	
SW5600	4EK	B59567	MED OLIVE	Y	BELT INDV LC-1 MED	6488	1	1	Y	N	
SW5600	4EK	C96536	1 QT OLIVE	D	CANTEN 1QT W/M1 CAP	0026	2	2	Y	N	
SW5600	4EK	D11812	NONSZ		CARRIER INT TOOL LC-1	6474	1	1	Y	N	
SW5600	4EK	D64043	OLIVE		CASE FIRST AID LC-1	6814	1	1	Y	N	
SW5600	4EK	DA6504	MC1 GREEN		SLEEPING BAG-(A-A-55262)	0685	1	1	Y	N	
SW5600	4EK	DA6506	MC4 WDLD		BIVY COVER-(PD-95-04)	8517	1	1	Y	N	
SW5600	4EK	DA654X	MED GREEN	V	FIELD PACK WILINERS-(FIELD PACK WIL	6480	1	1	N	N	
SW5600	4EK	DA6553	MC3 BLACK		STUFF SACK.COMPRESS-(NONE KNOWN)	5428	1	1	Y	N	
SW5600	4EK	F28747	MD-L WDLD		COVER HELMET CAM MD-L	7515	1	1	N	N	
SW5600	4EK	F30391	OLIVE		COVER CANTEN LC-1	0266	2	2	Y	N	
SW5600										N	
SW5600										Y	
SW5600										N	
SW5600										N	
SW5600										N	
SW5600										N	
SW5600										N	
SW5600										N	
SW5600										N	
SW5600										N	
SW5600										N	
SW5600	4EK	T38070	MED WDLD		TROUSERS WW MED	9487	1	1	Y	N	
SW5600	4EK	U73597	OLIVE	D	SUSPNDRS TRS SCISSORS	0852	1	1	N	N	



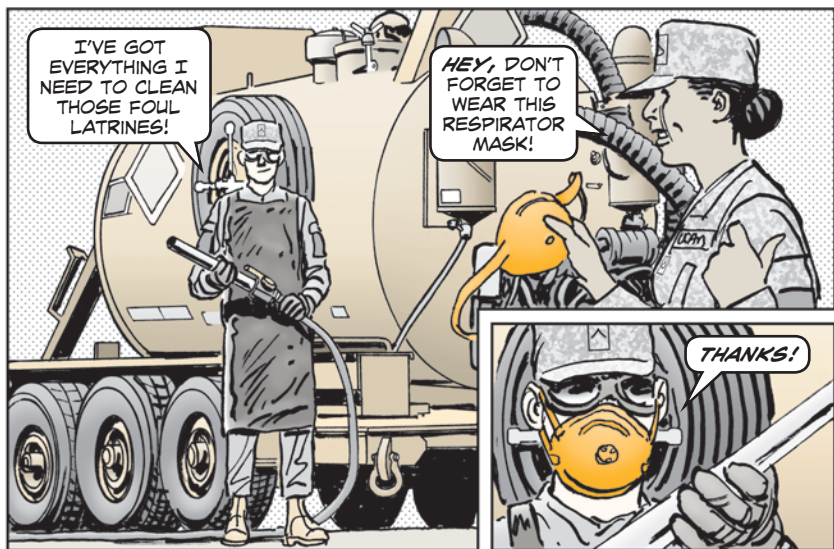
\* Found on Installation Item.

LIN GENERIC NOMENCLATURE TX	PCS TRANS	ETS TRANS
Leather Footwear	Y	Y
Head Gear with Leather Headbands	Y	Y
Insignia	Y	Y
CARRIER ENTRENCHING TOOL	Y	N
INTRENCHING TOOL HAND: COMBINATION	Y	N
LINER COLD WEATHER COAT: MENS NYLON POLYESTER QUILTED OG106	Y	N
MODULAR SLEEP SYSTEM: C/O STUFF SACK: PATROL & ICW SLEEPING BAGS, AND BIVY COVER	Y	N
FOOTWEAR COVERS CHEMI	N	N
GLOVES CHEMICAL AND I	N	N
OTV	N	N
SAPI	N	N
OVERSHOES MENS: RUBBE	N	N
J: SUITS	N	N
PONCHO LINER	N	N
IOTV	N	N
ESAPI	N	N

PCS TRANS (N) + ETS TRANS (N) =  
Item will be turned in to CIF prior  
to moving



# RESPIRATOR INFO



**T**he waste water evacuation tank trailer is critical for servicing the containerized latrines in Force Provider base camps.

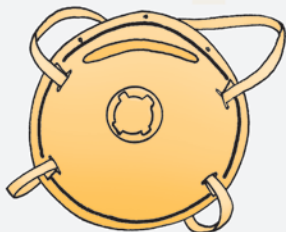
And critical for the operator are the safety items called out in Table 2 of the Basic Issue Items List in TM 10-4630-207-13&P. But the part number listed for the respirator doesn't cross to an NSN. So now what?

Well, the respirator you need is an N95 respirator with an exhalation valve. It's approved by the National Institute for Occupational Safety and Health (NIOSH). You can order the model listed in the TM from Lab Safety Supply using CAGE 6M644 and PN 48649. That'll get a box of 10 for about \$24. Your supply folks can use a government purchase card to order from their website: <http://www.labsafety.com>

According to Force Provider, it's OK to order a substitute respirator that already has been assigned NSN 4240-01-492-0177. It's not in the AMDF, so order it on a DD Form 1348-6, and put "NSN not in AMDF" in the REMARKS block.

THE ILLUSTRATION IN THE TM DOES **NOT** LOOK ANYTHING LIKE THE RESPIRATOR YOU'LL GET.

HERE'S WHAT IT SHOULD LOOK LIKE...



MAKE A NOTE OF THIS INFO UNTIL THE TM IS UPDATED.



## Connie's POST SCRIPTS



### Bad HMMWV Cooling System Hose

Some basic, -A1, and -A2 (non-turbo) HMMWV cooling system hoses, NSN 4720-01-187-3386, look normal, but are leaking and are very soft and mushy when touched. Make sure you don't have this problem by inspecting your HMMWV radiator's bottom hose during your next PMCS. Toss out a bad hose and replace it with a good one.

Bad hoses are labeled with CAGE 3B0Y2 and contract number SPM7MX-07-D-5007. You can return new and unused ASL and PLL stock for credit. For more details, see TACOM MAM 09-024 online: [https://aeps2.ria.army.mil/commodity/mam/tacom\\_wn/mam09-024.html](https://aeps2.ria.army.mil/commodity/mam/tacom_wn/mam09-024.html)

### M2 Video Link Change

On Page 22 in PS 662 (Jan 08), we gave you a link for a video on how to time and headspace your M2 machine gun. That link has changed to:

<https://aeps2.ria.army.mil/Services/Training/50Cal/headspac/headspac.cfm>

### Small Arms Support Center Contact CORRECTION

On Page 20 in PS 675 (Feb 09), we gave you the wrong contact information for the Balad and Baghdad Small Arms Support Centers. The correct information for Balad is DSN 312-987-5130 (ext. 6203) or email:

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

The contact information for the Baghdad center is DSN 312-987-5130 (ext. 6805) or email:

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

The Afghanistan Small Arms Support Center contact information is correct.

### M1022 Dolly Set Grease Seal

Use NSN 5330-01-082-7965 to get a metal seal ring (grease seal) for the M1022 dolly set's front axle. This NSN replaces the one shown as Item 18 in Fig 12 of TM 9-2330-379-14&P.

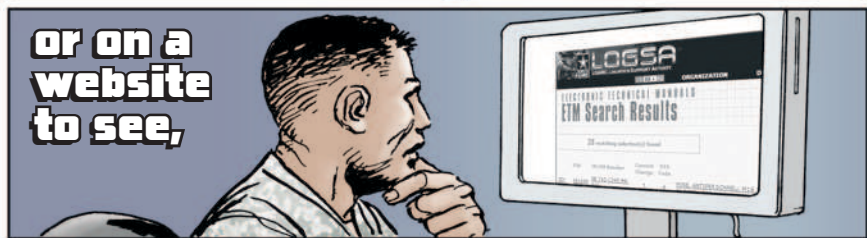
### HMMWV 6.5L Engine Oil Pan Sealant

Mechanics, use silicone sealant to make a gasket around the oil pan on the HMMWV's 6.5L detuned, naturally aspirated and turbocharged engines. Use NSN 6850-01-549-4631 to get a 75-gram tube of sealant. NSN 6850-01-549-4586 gets a 150-gram cartridge container.

DISTRIBUTION: To be distributed in accordance with the initial distribution number (IDN) 340312, requirements for TB 43-PS-Series.

**Would You Stake Your Life <sup>right now</sup> on the Condition of Your Equipment?**

# TMs... Dependable, Expendable, **Indispensable!**



**However  
they  
come...**

