

**PS****THE  
PREVENTIVE  
MAINTENANCE  
MONTHLY**

TB 43-PS-665, The Preventive Maintenance Monthly, is an official publication of the Department of the Army, providing information for all soldiers assigned to combat and combat support units and all soldiers with unit maintenance and supply duties. All information published has been reviewed and approved by the agency responsible for the equipment, publication or policy discussed. Application of the information is optional with the user. Masculine pronouns may refer to both genders.

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

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**PS, the Preventive Maintenance Monthly**  
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Issue 665

PS

April  
2008

# THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-665

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DO YOU KNOW HOW TO  
USE THIS NEW AN/PSS-14  
MINE DETECTOR?

YEAH! I PICKED  
UP SOME GOOD  
TIPS IN PS  
MAGAZINE.



**SEE PAGES 52-53  
FOR THOSE TIPS!**



Stryker...

# COVER IS FOR WASH TIME



IF IT'S RUB-A-DUB-DUB TIME FOR YOUR STRYKER, MAKE SURE YOU INSTALL THE ENVIRONMENTAL COVER **FIRST!**

DON'T FORGET MY RUBBER DUCKY!



Don't wash Stryker without environmental cover in place

Without the cover, wash water gets into the engine air intake and exhaust. When that happens, you could blow the pack. So before you get that hose, grab the environmental cover and secure it in place!

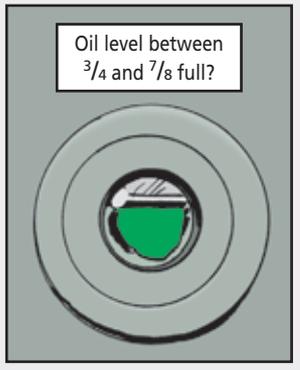
# TAKE YOUR TIME ON HUB CHECK

The sight glass on each of your Stryker's wheel hubs makes it easy to check the oil level.

Unless you try to do it too early. Oil levels in the wheel hubs should be checked after operation—but not until about an hour has passed. That allows the oil to run back from the planetary gears into the hub so you get an accurate reading in the sight glass.

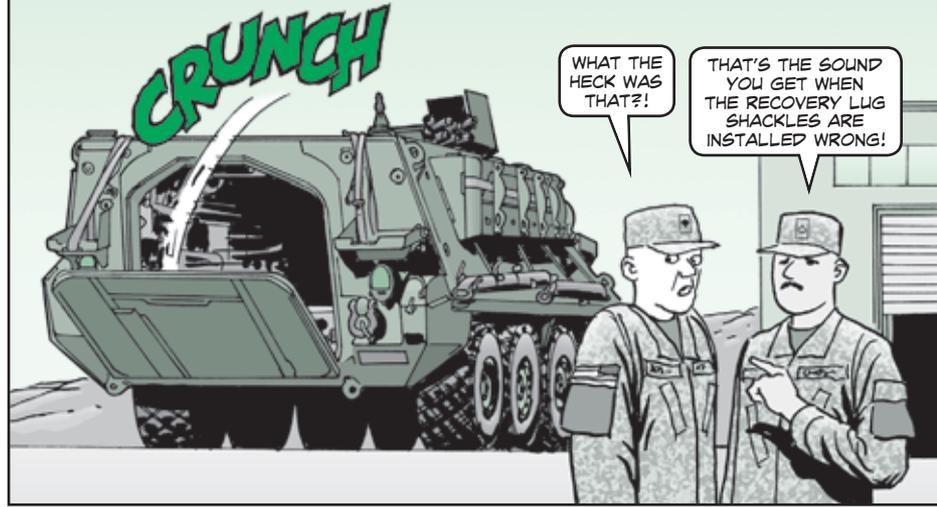
Checking too soon will make you think the level is low. Then, oil is added causing overfilling. That can lead to blown seals—a mess and lots of work.

The correct oil level should be between  $\frac{3}{4}$  and  $\frac{7}{8}$  full in the sight glass.



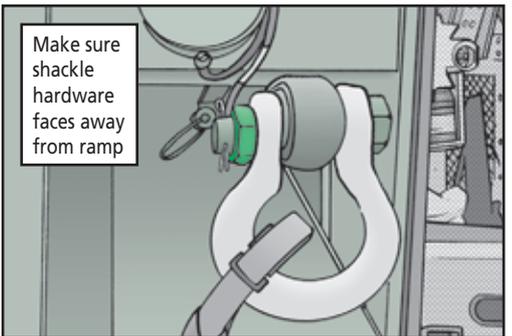
Stryker...

# AVOID THE SHACKLE CRUNCH



If the shackles are installed with the retaining nut and cotter pin facing inside, the ramp could hit them as it's lowered.

To prevent the damage—and the noise—make sure the retaining nut and cotter pin are installed facing away from the ramp. Then double-check the shackles as part of your before-operation PMCS.



**M1A1 AIM Tank RHN**

Use NSN 6110-01-514-7369 to order a redesigned hull networks box (RHN) with container (NSN 8115-01-509-8851) for your M1A1 AIM tank with embedded diagnostics. The NSN listed as Item 1 in Fig 153 of TM 9-2350-264-24P-1 has the wrong supply class. Make sure you use the container when returning an unserviceable RHN to prevent damage during transport. The RHN, NSN 6110-01-517-1380, without a container is a terminal item, but is still available until stock is depleted.

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# Adding Some RHNB Info

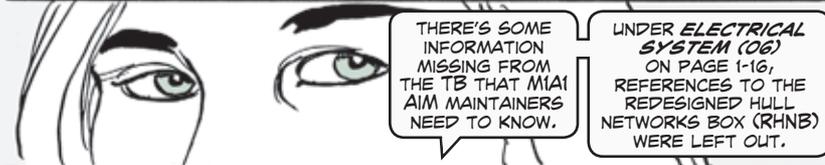


OK, I GOT THE PENCIL!

NOW WHAT?



IF YOU'VE JUST RECEIVED THE NEWEST REVISION OF TB 9-2350-283-23-1 (JUN 07), M1 ABRAMS TANK CONFIGURATION MATRIX, LISTEN UP!



THERE'S SOME INFORMATION MISSING FROM THE TB THAT M1A1 AIM MAINTAINERS NEED TO KNOW.

UNDER **ELECTRICAL SYSTEM (06)** ON PAGE 1-16, REFERENCES TO THE REDESIGNED HULL NETWORKS BOX (RHNB) WERE LEFT OUT.



SO TAKE OUT YOUR STUBBY PENCILS AND ADD THE FOLLOWING...

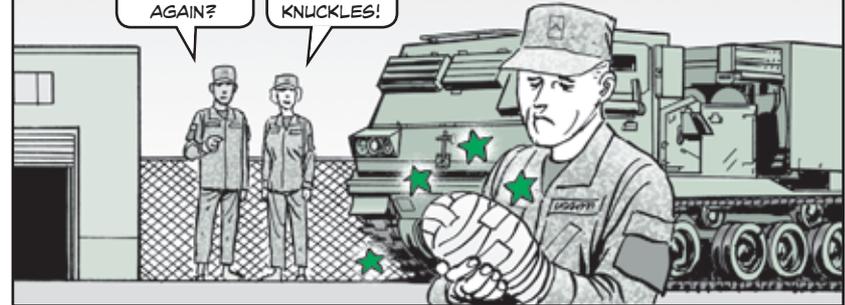
Nomenclature	Part Drawing Number	A1	AIM	AIM BLK 1	SEP V1	SEP V2	REMARKS
RHNB with container	57K4140		X	X			
RHNB without container	12993533		X	X			

MLRS Carrier...

LET ME GUESS... JONES HAD TO RAISE THE CAB ON HIS MLRS AGAIN?

**YEP!** THAT POOR GUY'S GONNA RUN OUT OF KNUCKLES!

# PUT AWAY THE KNUCKLE-BUSTER!



Dear Half-Mast,

TM 9-1450-646-10 tells us to raise and lower the cab on our MLRS with the 1/2-in drive ratchet and 5-in extension from the BII. Problem is, the cab jerks and bounces a lot. With the close clearances, it's pretty easy to bust your knuckles.

Isn't there a better way to do the job while saving our skin? How about using an electric impact wrench to get the cab up and down?

SSG I.A.I.

Dear Sergeant I.A.I.,

Do **not** use **any** kind of power tool to raise or lower the cab of your MLRS. That can damage the lift mechanism and you can be injured if the cab falls.

There is another way to make cab lifting and lowering easier and all you'll need is a \$14 tool.

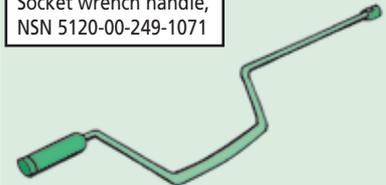
Socket wrench handle, NSN 5120-00-249-1071, has a brace-type speeder handle with a single revolving handgrip. The tool makes lifting and lowering the cab quick and easy while saving a lot of wear and tear on your knuckles.

Table B-1 of CTA 50-970

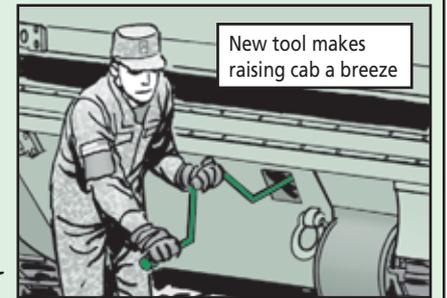
is your authority for ordering the handle.

*Half-Mast*

Socket wrench handle, NSN 5120-00-249-1071



New tool makes raising cab a breeze



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

# KEEP TIGHT CONTROL

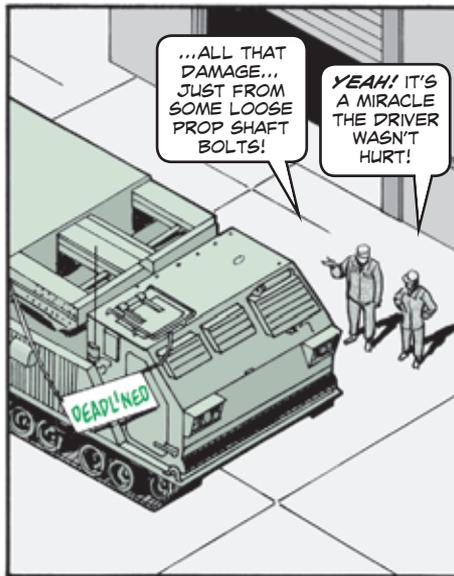
IT'S A SHAME...

DEADLINED



...ALL THAT DAMAGE... JUST FROM SOME LOOSE PROP SHAFT BOLTS!

YEAH! IT'S A MIRACLE THE DRIVER WASN'T HURT!



MECHANICS, A LOOSE PROP SHAFT IN YOUR BRADLEY OR MLRS IS A DANGEROUS PROPOSITION.

IF THE SHAFT POPS LOOSE, IT FLAILS AROUND, TEARING UP THE TRANSMISSION, BRAKE LINKAGE, AND EVEN THE DRIVER IF IT BREAKS THROUGH THE FIREWALL.



So take control of the situation. Check for loose prop shaft bolts during semiannual services. Never reuse loose bolts 'cause they won't stay tight. Replace them with new bolts, NSN 5306-01-132-3369, and torque them to 85-95 lb-ft. Use the torque wrench to tighten once, loosen and then tighten again.

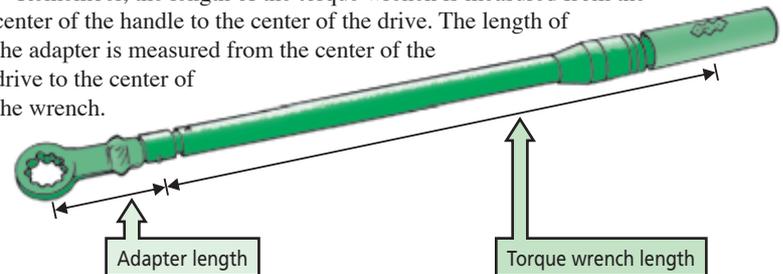
Some of the bolts can't be reached with the end of the torque wrench, so you'll need the 4-in torque wrench adapter, NSN 5120-01-315-5708, called out in the Special Tools appendix in your -20-1-5 TMs.

The adapter keeps the torque wrench from touching the bearing cap and other parts. If it touches, you'll get an incorrect reading and the bolts may not stay in place.

When using the adapter, remember that it adds to the length of the torque wrench. So the actual applied torque will be more than what the torque wrench dial or scale shows.

To use the adapter correctly, you must convert the torque value before you start. It'll keep you from under-torquing or over-torquing the bolts.

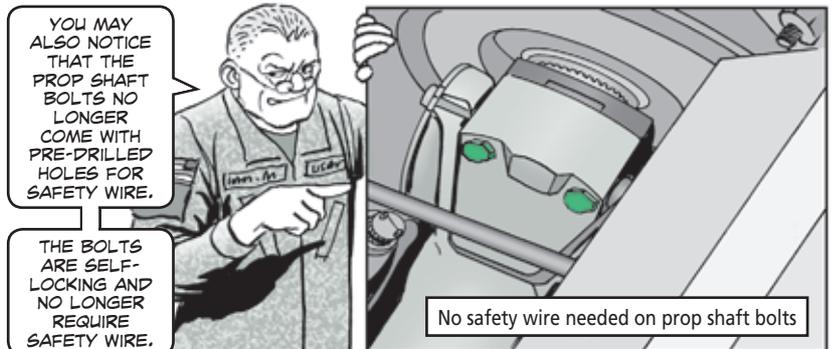
Remember, the length of the torque wrench is measured from the center of the handle to the center of the drive. The length of the adapter is measured from the center of the drive to the center of the wrench.



YOU MAY ALSO NOTICE THAT THE PROP SHAFT BOLTS NO LONGER COME WITH PRE-DRILLED HOLES FOR SAFETY WIRE.

THE BOLTS ARE SELF-LOCKING AND NO LONGER REQUIRE SAFETY WIRE.

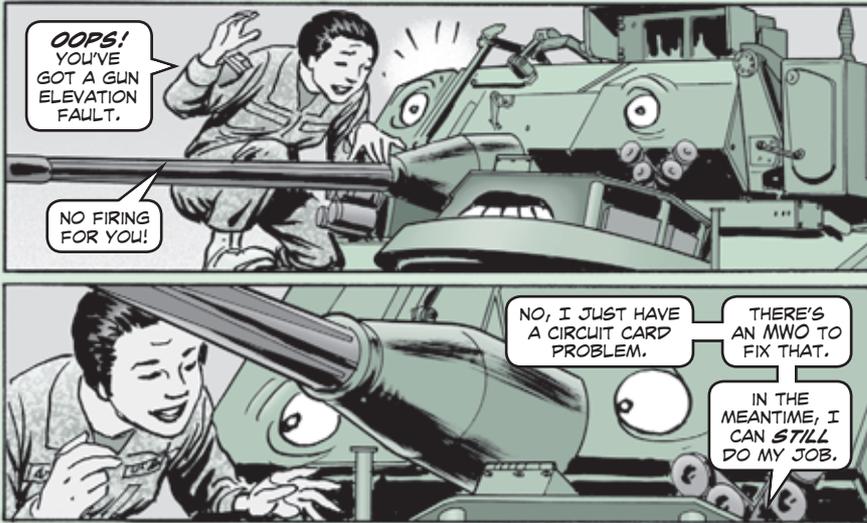
No safety wire needed on prop shaft bolts



The conversion formula is the same for both the Bradley and the MLRS:

$$\text{CORRECTED READING} = \text{REQUIRED TORQUE VALUE} \div \frac{\text{TORQUE WRENCH LENGTH} + \text{ADAPTER LENGTH}}{\text{TORQUE WRENCH LENGTH}}$$

# CIRCUIT CARDS CAUSING FALSE FAULTS



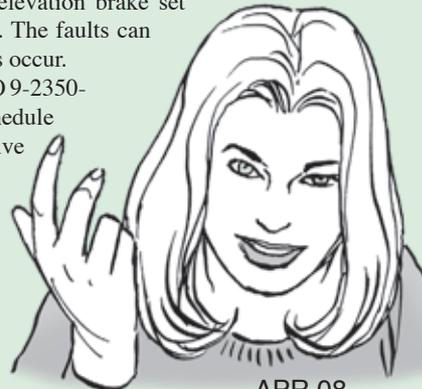
If you have a new A3 Bradley or A3 BFIST turret drive control unit or the A12 or A13 circuit cards have recently been replaced, you may be getting false faults.

The faults are caused by A12 (PN 1298633) and A13 (PN 12986337) circuit cards. They can cause false faults when you run the vehicle diagnostic management (VDMS) gun elevation and TOW elevation tests using A12 and A13 circuit cards with Intel A80486DX4WB100 processors with a vehicle version identification (VVID) not upgraded to the 8.00.15-18 configuration.

The false faults are fault code 40210 (gun elevation brake set test) and 40310 (TOW elevation brake set test). The faults can be ignored if no other turret functional problems occur.

This circuit card problem is corrected by MWO 9-2350-294-30-19, which installs VVID 8.00.15-18. Schedule your A3 Bradleys for the MWO. If you receive new A3 Bradleys, use your maintenance support device (MSD) to make sure their VVID has been upgraded to VVID 8.00.15-18.

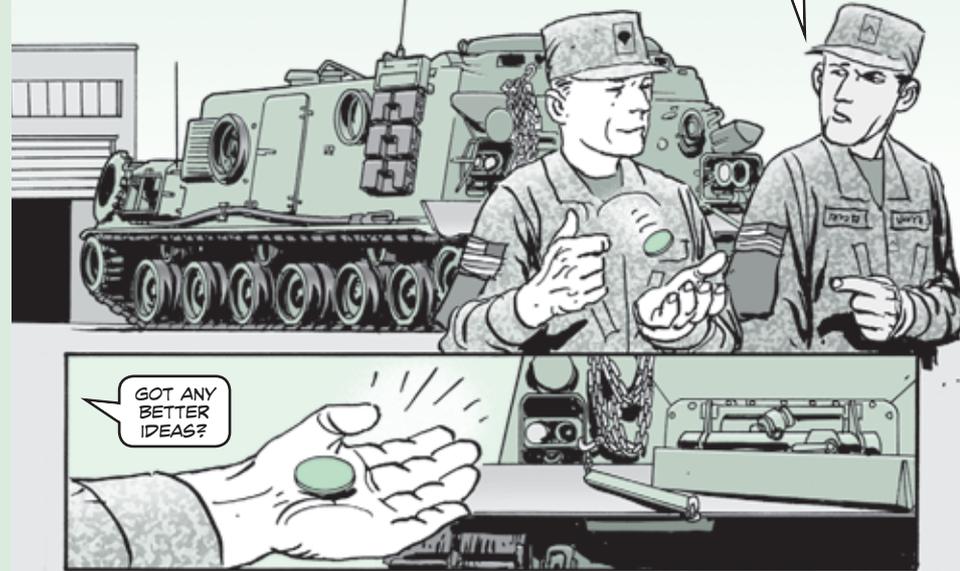
IF YOU HAVE QUESTIONS ABOUT THE MWO, CONTACT TACOM'S AT [us.army.mil](mailto:us.army.mil) OR DSN 793-0722, (309) 782-0722.



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# DON'T LEAVE CHOICE TO CHANCE

ARE YOU *SURE* FLIPPING A COIN IS THE BEST WAY TO PICK A TORSION BAR?



Dear Half-Mast,

The left and right torsion bars for the M88A1 recovery vehicle are Items 28 and 29 in Fig 192 of TM 9-2350-256-24P-1.

Our problem is that the TM doesn't specify which is left and which is right. We only need one torsion bar and we'd rather not flip a coin. Can you help us out?

SSG G.A.B.

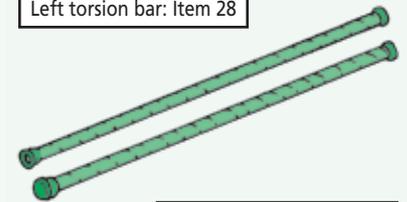
Dear Sergeant G.A.B.,

Keep those coins in your pocket, Sergeant. Item 28, NSN 2510-00-703-5900 (PN 7035900), is the left torsion bar. Item 29, NSN 2510-00-703-5899 (PN 7035899), is the right.

Since there's no way to tell which one's which from the drawing, make a note in your TM.

*Half-Mast*

Left torsion bar: Item 28



Right torsion bar: Item 29

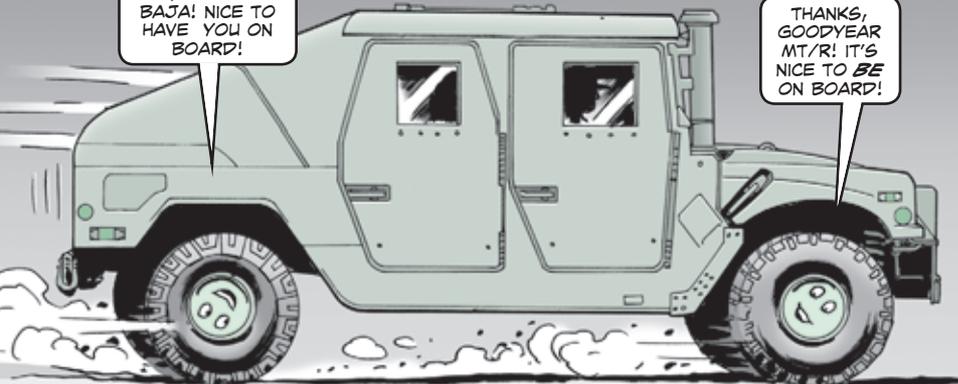
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HMMWVs...

# MORE TIRE OPTIONS ADDED

HEY, GOODRICH BAJA! NICE TO HAVE YOU ON BOARD!

THANKS, GOODYEAR MT/R! IT'S NICE TO BE ON BOARD!



To meet the growing demand for HMMWV tires, TACOM LCMC has added more options to the inventory. Now users in SWA can use Goodrich Baja and Goodyear MT/R tires and tire and wheel assemblies or continue using Goodyear MT tires and tire and wheel assemblies.

The Goodrich Baja and Goodyear MT/R tires and tire and wheel assemblies can be mixed with each other, but **don't** mix them with the Goodyear MT tires and tire and wheel assemblies. And make sure the spare tire on your HMMWV is compatible with the tires on the ground.

Units outside of SWA must order only Goodyear MT tires or tire and wheel assemblies until around May 2008. By then, there should be enough Goodrich Baja and Goodyear MT/R tires and tire and wheel assemblies in supply to support every unit.

For more information, eyeball this visual aid that outlines tire compatibility issues: [https://aeps2.ria.army.mil/commodity/soum/tacom\\_wn/07/tire-fitment-chart.ppt](https://aeps2.ria.army.mil/commodity/soum/tacom_wn/07/tire-fitment-chart.ppt) Or view the safety-of-use message itself:

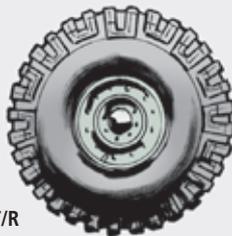
[https://aeps2.ria.army.mil/commodity/soum/tacom\\_wn/08/soum08-002.html](https://aeps2.ria.army.mil/commodity/soum/tacom_wn/08/soum08-002.html)



Baja

Only new versions can be mixed

Both come with NSN 2610-01-541-4090



MT/R

Up-armored HMMWVs...

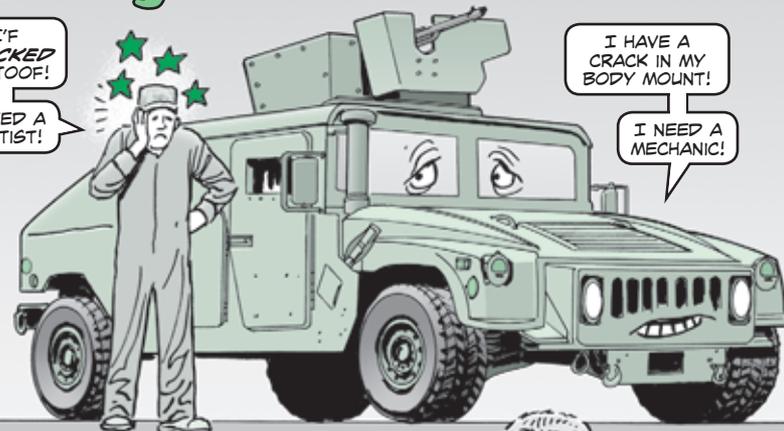
# Kit Corrects Body Mount Cracks

I'F CRACKED MY TOOF!

I NEED A DENTIST!

I HAVE A CRACK IN MY BODY MOUNT!

I NEED A MECHANIC!



HAVE YOU FOUND CRACKS IN THE BODY MOUNTS OF YOUR UP-ARMORED HMMWV?

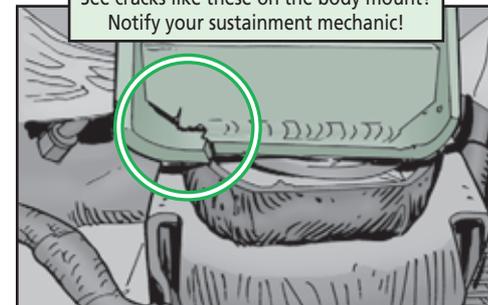
IF YOU HAVE, YOU'RE NOT ALONE.



That's why TACOM LCMC found a solution to this growing problem. Sustainment-level maintainers can fix your HMMWV using a repair kit and a Huck Bolt installation tool.

The repair kit, NSN 2590-01-549-6438, allows repairers to fix any cracks found in the front right or left body mount brackets by replacing defective body mounts. The kit contains both of the front body mount assemblies and enough spacer washers and rubber insulators to repair all six body mount locations.

See cracks like these on the body mount? Notify your sustainment mechanic!



To decrease down time, sustainment-level maintainers can order the Huck Bolt installation tool before getting the kit. It is available from Champion Charter, (906) 486-9932, using PN 256 W/99-12-90 Nose or from Gage Bilt Products, (800) 521-1363, using PN GBP 722-W/LB08-713-20 Nose.

Lead-Acid Batteries...

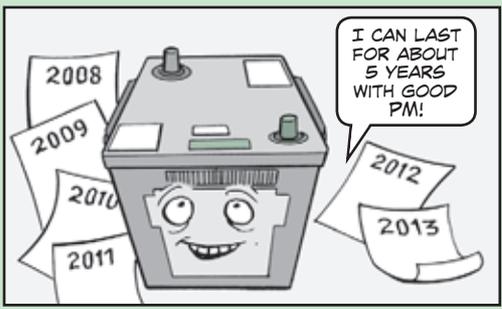
**LIFE-SAVING TIPS FOR THE HAWKER!**



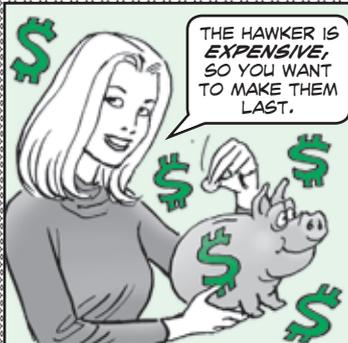
TREAT ME RIGHT SO I'LL AGE WELL!



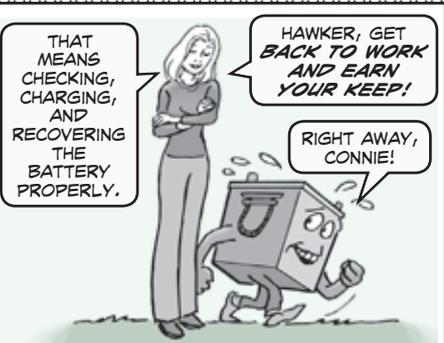
Your Hawker Armasafe Plus (A+) batteries, NSN 6140-01-485-1472, can last for four to five years when maintained properly. But they can still become completely discharged *if* switches are left on or *if* the batteries are not properly monitored during extended use.



I CAN LAST FOR ABOUT 5 YEARS WITH GOOD PM!



THE HAWKER IS EXPENSIVE, SO YOU WANT TO MAKE THEM LAST.

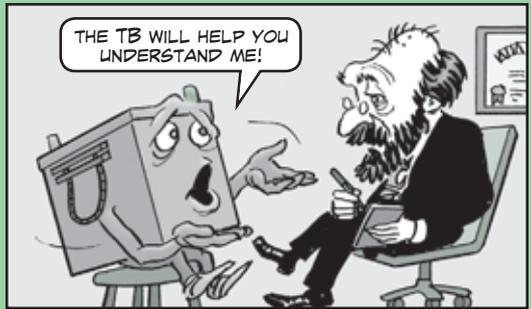


THAT MEANS CHECKING, CHARGING, AND RECOVERING THE BATTERY PROPERLY.

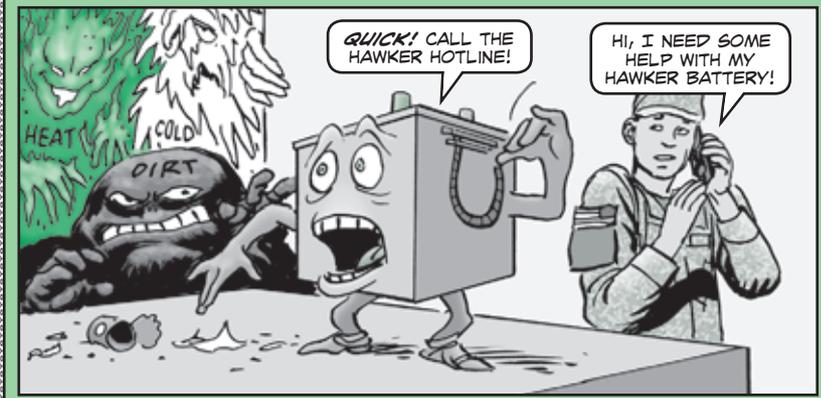
HAWKER, GET BACK TO WORK AND EARN YOUR KEEP!

RIGHT AWAY, CONNIE!

To help you with this, TARDEC's Team Power published TB 9-6140-252-13 in April 2007. It gives maintenance and recovery procedures for the Hawker, so eyeball it for details. And if you need help right away, call the 24-hour Hawker hotline at (877) 485-1472.



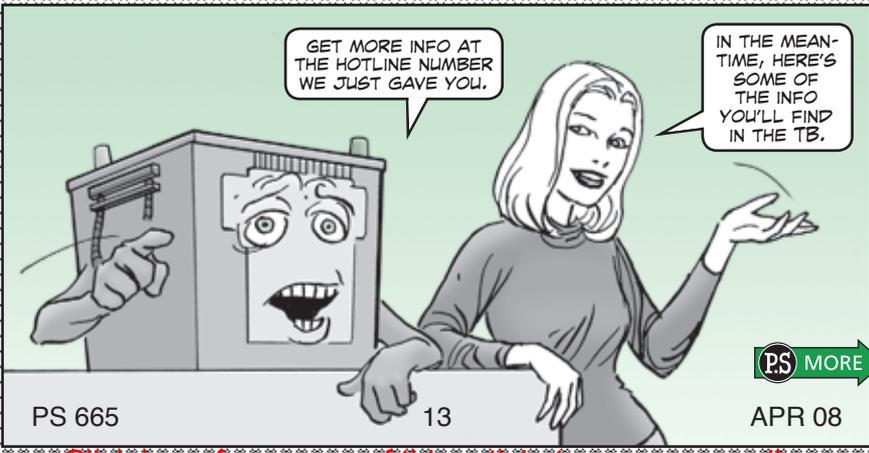
THE TB WILL HELP YOU UNDERSTAND ME!



QUICK! CALL THE HAWKER HOTLINE!

HI, I NEED SOME HELP WITH MY HAWKER BATTERY!

Battery maintenance training is available by the manufacturer of the Hawker, too, at no cost to the government! You'll be trained how to properly maintain and recover all types of lead-acid batteries.



GET MORE INFO AT THE HOTLINE NUMBER WE JUST GAVE YOU.

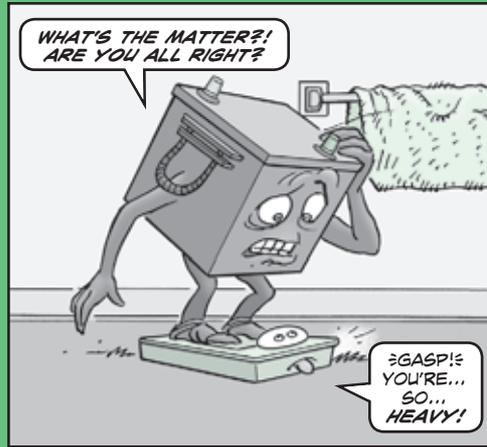
IN THE MEAN-TIME, HERE'S SOME OF THE INFO YOU'LL FIND IN THE TB.

## Battery Highlights

The Hawker A+ battery is:

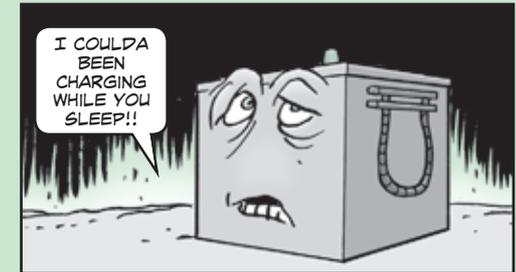
- heavy, so it requires a two-person lift
- recoverable and can be recharged multiple times from voltages as low as 0.24VDC
- a 12VDC battery with 1,225 cold cranking amps
- a valve-regulated lead-acid (VRLA) battery
- a completely sealed, absorbed glass mat (AGM) technology that contains only a small amount of electrolyte in each cell chamber

Also, *practically no maintenance beyond checking and recharging (if needed) is required*, except for removal of dust, dirt or very rare corrosion buildup on the exterior of the battery.



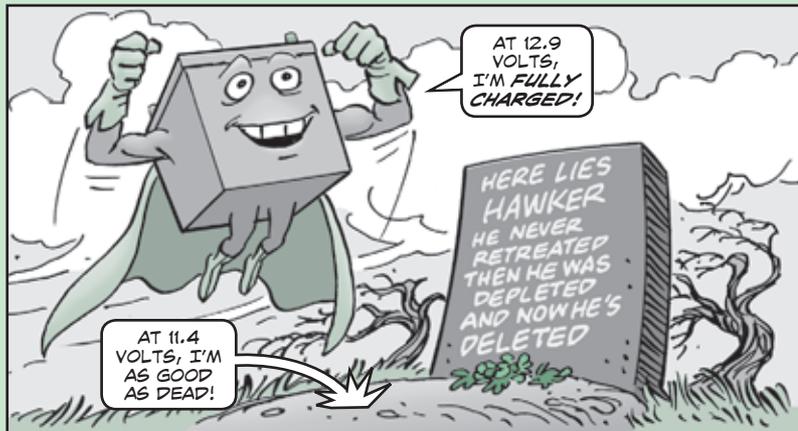
Before installing or replacing a battery or set of batteries, the batteries should be charged until the OCV reaches at least 12.85VDC and the amperage meter on the charger reads less than 1 AMP for one hour. For best results, charge overnight.

If replacing one battery in a group of good, used batteries, it is best to use a used battery of the same manufacturing cycle rather than a new one, if possible. Or you should replace all batteries in the group with new batteries and redistribute the used serviceable batteries.



## Placing New Batteries Into Service

The Hawker A+ battery's state of charge (SOC) is determined by measuring its open circuit voltage (OCV) for a "rested" battery (not charged or discharged within the last 8 hours). Even though it is called a 12-volt battery, it **must** read 12.9 volts to be 95% - 100% charged (SOC). At 11.4 volts (OCV), the Hawker is 0% charged.



## Before You Charge

Before charging, test the Hawker using this test equipment:

- multimeter or voltmeter that reads in 1/10th VDC increments
- battery analyzer (such as PulseTech or Midtronics brands) or load tester (any brand)

But before testing or recovering any battery, do this:

- Check the top, sides, and bottom for cracks, dents, leakage or swelling in the battery case and lid.
- Make sure terminals are not melted, bent, or damaged.
- Check to be sure vent caps are in place.

Do not attempt to replace missing vent caps. Missing caps indicate a bad cell in the battery, so the battery needs to be replaced. If a vent cap is elevated, follow the guidance in the TB.



After performing the visual inspection, test the battery for potential internal electrical damage, using a battery tester-analyzer. But if you don't have a battery analyzer, go on and charge the battery anyway.

Remember that many testers will not give a reading if OCV is less than 7VDC. If no reading is given or no internal damage is indicated, go ahead and charge. Or charge the battery for 24 hours and retest it with a multimeter and analyzer. If there's no change in voltage after that, you've got a bad battery.

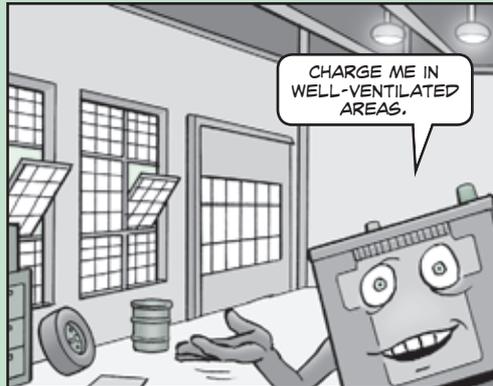
### Charging the Battery

After pre-charge inspection and testing, the Hawker battery can be charged either inside or outside of the vehicle. Attach charger leads directly to the battery or through the vehicle's 24VDC NATO slave connection.

Charge your batteries in well-ventilated areas. If you don't, personnel injury or death could occur from hydrogen gas build-up or an explosion.

While charging, stop right away if you see signs of melting or swelling or if the surface of the case is too hot to touch. To avoid the risk of an explosion, **don't** handle the battery until it has cooled off for a couple hours.

**If your charger is an older version and has no adjustments, it may not be compatible with AGM batteries.** Closely monitor its usage to make sure it doesn't damage the batteries being charged; be aware of heat or the smell of gas.



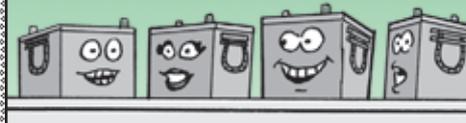
OUT OF THE VEHICLE, I CAN BE CHARGED INDIVIDUALLY...

... OR WE CAN BE CHARGED AS A GROUP.

USE THE FOLLOWING PROCEDURES...

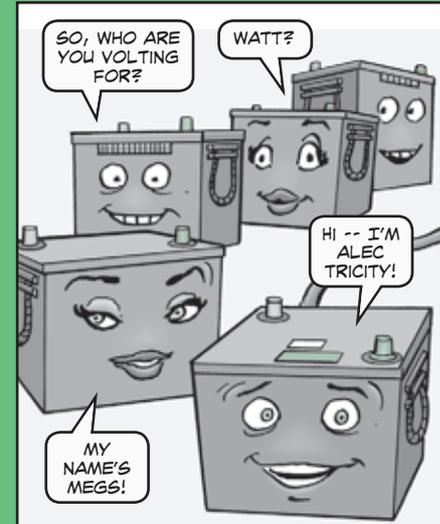


### Buss Bar Multiple Battery Charging



UNITS WITH CHARGERS THAT HANDLE MORE THAN ONE BATTERY AT A TIME SHOULD...

- Group the batteries for charging by OCV ranges: 0-5.9VDC, 6.0-9.9VDC, and 10.0 or more VDC.
- Connect the batteries to a standard constant applied voltage buss bar charger set. Then adjust the output voltage to between 14.7VDC and 15.2VDC. Input voltage at the battery should be between 14.2VDC and 14.7VDC. For good connections, clamps, wiring and contacts must be tight and clean with minimal corrosion.
- Allow for at least 10 AMP charging current per battery on the buss. Higher buss charge current will help shorten the battery charge time.
- Charge batteries for 24 to 48 hours, but it won't necessarily take that long.
- Remove any battery that shows signs of excessive heat, gassing, leakage, or swelling while charging, but let it cool off first. The replacement for that battery should be one with similar OCV plus or minus 1VDC.
- Know that batteries are finished when the charge current (amp meter on charger) drops to less than 1 AMP per battery and holds there for 3 hours. For example, if 12 batteries are on buss, then overall current should be less than 12 AMP.
- Test batteries individually.

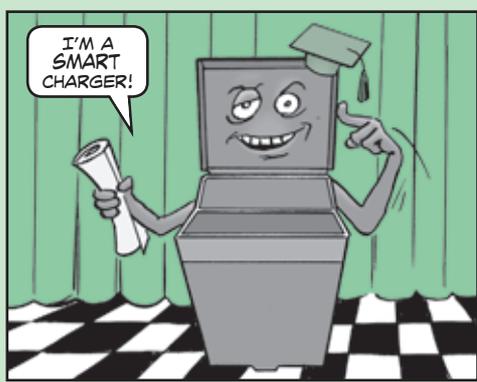


### Single Battery Charging Procedures

- Units with chargers that handle only one battery at a time should:
- Connect the charger to the battery posts. Ensure both clamp connections are clean and tight.
  - Use a constant voltage charger of newer technology, if possible. It may have multiple charge settings, such as an "AGM setting". If the charger has this setting, use it.
  - If voltage is adjustable, set it between 14.2VDC and 14.7VDC. There should be at least 10 AMP current available for charging.

PS MORE

- If the battery charger doesn't have adjustments or switches (and is not a SMART Charger, like the PulseTech brand) and output voltage is greater than 15.0VDC, the battery should be closely monitored, at least every 15 minutes, during the first two hours of charging.
- If the battery shows signs of gassing, leakage, swelling, or excessive heat when touching the exterior as you charge, stop charging right away!



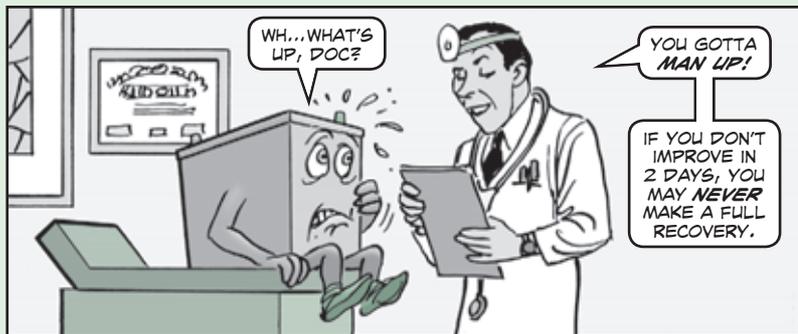
### NATO Slave Receptacle (24VDC) Charging

Connecting the charger to the vehicle's NATO slave receptacle is another charging option, but ensure all current drawing devices are OFF.

Like single battery charging, it is best to use a newer constant voltage charger, with multiple charge settings. And if the charger has adjustable voltage output capabilities, set it between 28.4VDC and 29.4VDC.

If the battery charger doesn't have adjustments or switches (and is not a SMART Charger, like the PulseTech brand) and output voltage is greater than 30.0VDC, closely monitor the battery every 15 minutes during the first two hours of charging.

Charge batteries for 12 hours or longer. Severely depleted batteries (OCV less than 10VDC) can take two to three days to recharge. If OCV voltage is not improved (greater than 10VDC) after two days, it may never make a full recovery.

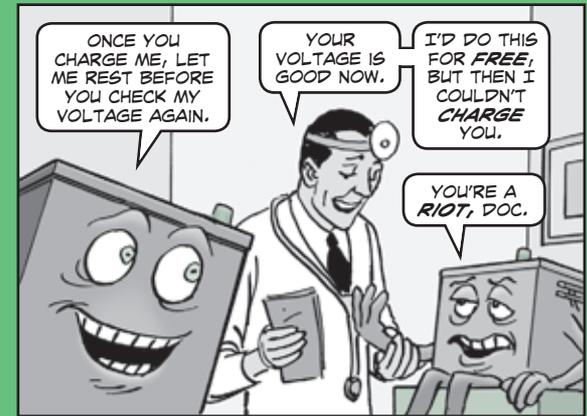


You're done charging when the charge current (amp meter on charger) drops to less than 1/2 AMP per battery and holds there for 3 hours. Automatic chargers will stop charging and give a screen reading of "Charge Complete".

Test the batteries individually.

### Post-Charge Testing

You'll need to check the voltage one more time before using the batteries. But your batteries need to rest after charging. Remove the batteries from the charger and allow them to cool off overnight if possible. Batteries that are heated from charging may give incorrect readings.



If battery OCV is above 12.85VDC and load voltage is above 10.80VDC after the rest period, the battery can be reissued.

If a battery is below those readings, it needs additional charging. Battery disposal is recommended if the battery still falls below 12.85V open circuit and 10.80V loaded voltage after one additional 24-hour charging cycle.

### Final Note on Battery Recovery

Many batteries require several diagnostic pulsing cycles before they will take a charge. In some cases, as many as five cycles on a charger may be required to begin to break down the deposits built up on the cell plates.

Following this, you can usually connect the battery to another charger with good results. Often a rest period of several hours between charges will also give positive results.

Batteries with voltages higher than 10 volts charge without much difficulty. On the other hand, batteries with voltages between 4 and 10 volts often take multiple attempts to recover.

Once the battery begins to take current, it usually does so quickly, however. Batteries below 4 volts usually take a couple of days before the chargers can diagnose the battery condition and begin to recover the batteries.



# OVERHAULED WEAPONS DO NEED GAUGING

DON'T WORRY ABOUT GAUGING ME.

I'VE JUST COME BACK FROM OVERHAUL, SO I'M GOOD TO GO!

WELL, LET'S DO THE GAUGING AND MAKE SURE.

NO SENSE TAKING CHANCES!



Dear Editor,

I couldn't disagree more with your article on Page 16 in PS 659 (Oct 07) saying that new weapons or weapons coming back from depot overhaul don't need to be gauged. You said new and overhauled weapons were proof-fired and gauged before they were shipped.

We have found this just isn't true. Just last month we received 11 M2s back from depot and six of them failed gauging. When the M4 carbine was fielded to us, more than 100 had defective bolts.

In both instances, we filed equipment deficiency reports and the problems were fixed at no cost to us. If we had waited a year to do gauging, we couldn't have done this since EDRs must be filed in a timely manner. Plus we would be issuing defective weapons.

So I think from my experience that units should definitely gauge new and overhauled weapons as soon as they receive them.

CW3  
SFC  
IAARNG

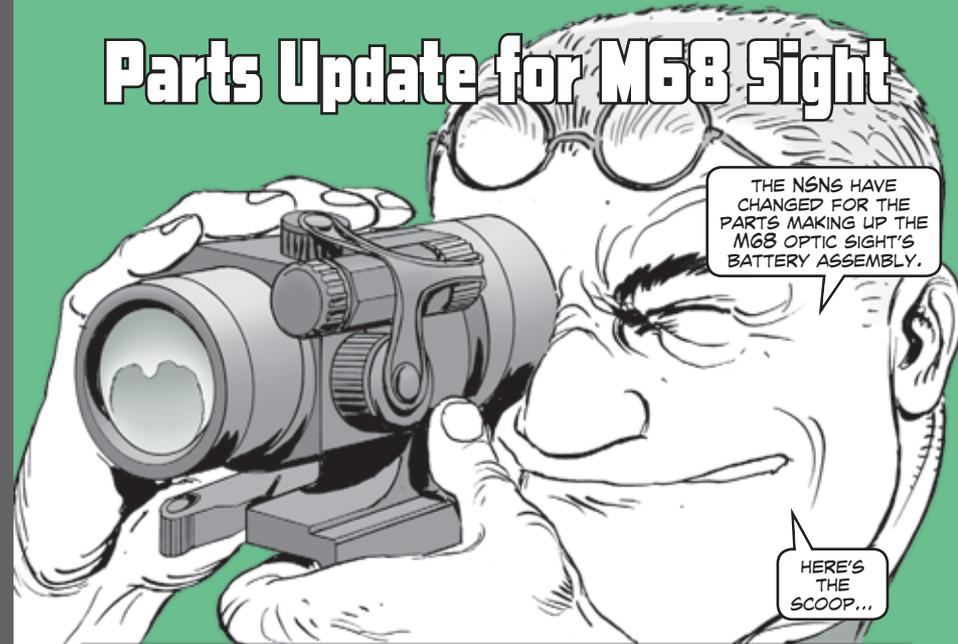
*Editor's note: MSG (Ret) at Ft Dix wrote us that he also had encountered defective weapons coming from the manufacturer or the depot. So your experience is not isolated.*

*The TM does not require you to gauge new or overhauled weapons. But what TMs require is the **minimum** necessary to keep your weapons in top shape. Units always have the option to do more. Units will know their weapons are battle ready if they gauge them upon receipt. It's worth the trouble.*

# Parts Update for M68 Sight

THE NSNs HAVE CHANGED FOR THE PARTS MAKING UP THE M68 OPTIC SIGHT'S BATTERY ASSEMBLY.

HERE'S THE SCOOP...



- Rubber strap, NSN 5340-01-555-6132, replaces the elastic strap, NSN 5340-01-511-2153. The new strap will work with both the old and new battery retainer and battery cap.
- Battery retainer, 6160-01-527-1695, replaces the old battery sleeve, NSN 3120-01-510-2337. The new battery retainer requires the new rubber strap, NSN 5340-01-555-6132. The old strap isn't long enough.
- Battery filler cap, NSN 6160-01-555-6133, replaces the cap that came with NSN 6140-01-511-2154. The new cap can be used only with the new battery retainer and strap, so you must order all three.

## New Parts



Rubber strap



Battery retainer



Battery filler cap

MAKE A NOTE UNTIL THE M68's TM 9-1240-413-12&P IS UPDATED.



# SHOTGUN BREACHING CARTRIDGE AVAILABLE

THE ARMY NOW HAS A BETTER SHOTGUN CARTRIDGE FOR BREACHING DOORS!

A 12-gauge shotgun cartridge is now available that is designed specifically to breach padlock hasps and deadbolts, knobs and hinges on wooden doors.

The M1030 cartridge, NSN 1030-01-475-7440, can be used with both the Mossberg 500/590 and Remington 870 shotguns. Its DODIC is AA54. It has a brown tip and the cartridge is stamped "12GA, BREACHING, M1030".

The cartridge minimizes the ricochet hazards of breaching operations, but soldiers should still wear ESS land ops goggles when firing M1030s. NSN 4240-01-540-5576 brings green goggles and NSN 4240-01-540-5580 brings the desert tan version.

MK19 Machine Gun...

THIS SHOULDN'T TAKE LONG.

A LOT OF THESE CHECKS SAY "NOT FOR ARMY USE".

THAT'S WRONG!

YOU SHOULD BE DOING THOSE CHECKS, TOO!

## Army Does It, Too!

Dear Half-Mast,

In the semiannual maintenance listed in the MK19's TM 9-1010-230-23&P, it says under several of the checks "Not for Army Use". Marines are required to check important components like the bolt and sear assembly, but the Army is not. This doesn't make sense, because without the checks you won't spot problems before they lead to the MK19 failing in the field. What gives?

C.G.

Dear Mr. C.G.,

You're right, that doesn't make sense. Anywhere in the semiannual maintenance where it says "Not for Army Use", cross that out. The Army should be doing those checks and services, too. This will be corrected in the next revision of the TM.

Half-Mast

Small Arms...

# EVEN EASIER LUBING

STENCIL BRUSH REPORTING FOR DUTY, SIR!

GOOD! WE'VE GOT A LOT OF LUBING AHEAD OF US!

Dear Editor,

We saw the suggestion in PS 652 (Mar 07) about using a sponge soaked with CLP and a brush for big lubing jobs in the arms room.

Something else that works well for big lubing jobs is a stencil brush. You fill it with CLP and then use the brush to apply the CLP. You can even control how much CLP is applied by how long you hold down the brush's button.

NSN 7520-00-248-9285 brings the brush for a bit more than \$30.

SPC  
269th MP CO  
TNARNG  
Murfreesboro, TN

*Editor's note: Excellent idea, Specialist. You can probably find a similar brush cheaper at your local hardware store.*

Small Arms...

# Security Chain NSNs?

Dear Half-Mast,

In facilities not manned 24 hours a day, armorers are required to secure small arms racks and containers weighing less than 500 pounds to the floor or walls with bolts or heavy-duty chains equipped with padlocks. Do you have NSNs for chains that meet the security requirement?

SGT T.D.

Dear Sergeant T.D.

Sure. Chains for securing racks and containers must be heavy-duty, hardened, welded, straight-link galvanized steel that's at least  $\frac{5}{16}$  inch thick. NSN 4010-00-149-5583 brings 550 feet of such chain, NSN 4010-00-184-3476 brings 400 feet, and NSN 4010-00-171-4427 brings 20 feet.

Remember, you can chain racks and containers together so that they exceed the 500-lb requirement. If you use bolts to secure the racks and containers, they must be spot welded, brazed, or peened to prevent easy removal.

Half-Mast

# IRU NEEDS TLC

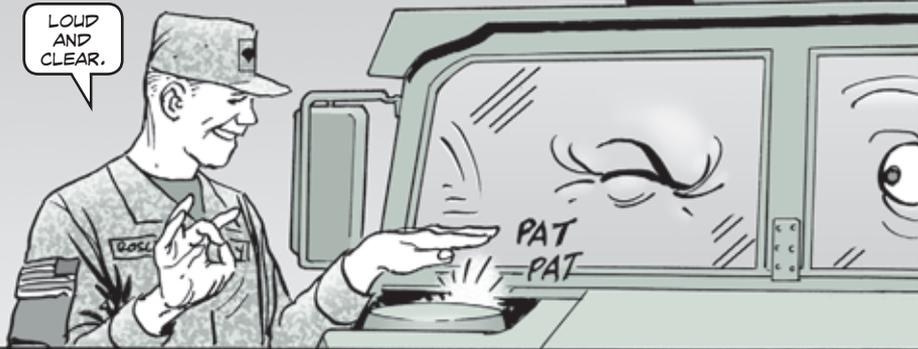
SINCE I HAVE THIS SLEW-TO-CUE, I'M GOING TO NEED MORE CARE, ESPECIALLY FOR MY IRU.

ARE YOU READING ME?



LOUD AND CLEAR.

PAT PAT

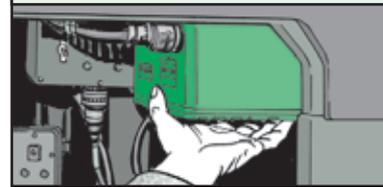


If your Avenger is equipped with the slew-to-cue configuration, that means it's also equipped with the inertial reference unit (IRU). The IRU is going to need a bit of tender, loving care if it's going to help point the Avenger in the right direction.

TLC begins with proper installation. The IRU is mounted to the HMMWV with three mounting bolts. The bolt on the rear driver side of the IRU is not easily accessible and isn't checked often. If it's missing or loose, the IRU vibrates during operation and travel. This vibration hurts the performance of the LNS (land navigation system) and can damage the IRU.

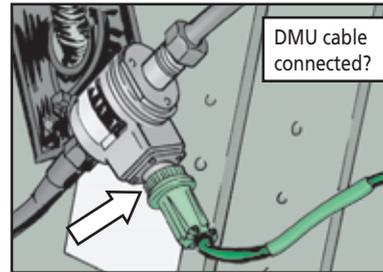
During PMCS, make sure all three bolts are present and tight. The easiest way is to just feel the IRU for looseness.

Make sure all three mounting bolts are tight. Feel IRU for looseness



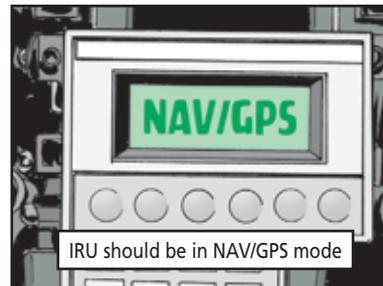
Also check that the distance measuring unit (DMU) is installed and its cable is connected. Without the DMU, the IRU won't know how far you've traveled.

DMU cable connected?



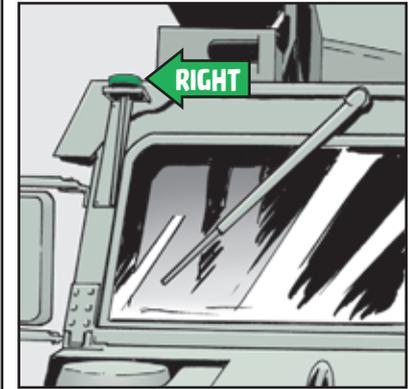
Make sure the GPS receiver is communicating with the IRU by checking the control display terminal (CDT). The IRU should be in the NAV/GPS mode. If the IRU is in the NAV mode only, it's not talking to the GPS receiver. Tell your repairman.

IRU should be in NAV/GPS mode



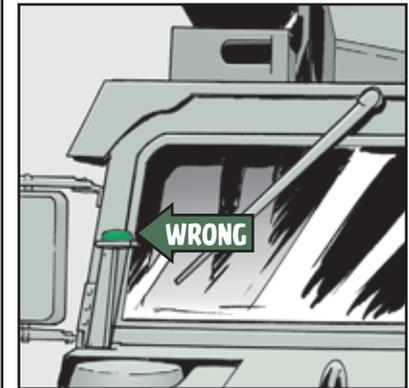
Finally, ensure that the GPS receiver antenna is mounted in the right spot. It should be here...

RIGHT



...not here.

WRONG



WHEN YOU REMOVE THE IRU, USE A LITTLE MORE TLC.

STORE AND TRANSPORT IT ONLY IN A BOX THICKLY LINED WITH FOAM.

AND REMEMBER, ONLY ONE IRU TO A BOX.



# Dragon is Dead! Turn It In



The Dragon has fired its last missile. The Army has classified all Dragon missiles as condition code H (condemned) and wants the following Dragon equipment turned in:

LIN	NSN	Nomenclature
C65800	1430-01-030-1437	Case guided missile infrared tracker
J95305	1427-00-163-8959	Guided missile and launcher surface attack, M222
J95307	1427-00-163-8960	Guided missile and launcher surface attack practice, M223
M66857	6920-00-165-6369	Monitoring set guided missile system, AN/TSQ-T1
M74526	1440-01-030-8438	Mount guided missile launcher system, M175
N23721	1430-01-046-9594	Night vision sight-tracker infrared, AN/TAS-5
N76466	5855-00-107-0667	Pedestal IR transmitter guided missile system, M5
P41891	6920-01-299-2284	Precision gunnery training system (PGTS) indoor
P62088	6920-01-299-2677	Precision gunnery training system (PGTS) outdoor
T61430	4935-01-063-9784	Tracker test set supplemental kit, (TOW/Dragon)
V79430	4935-00-124-5585	Test set guided missile infrared tracker, AN/TSM-114
W80715	1430-00-078-8340	Tracker Infrared guided missile SU-36 (X0-1)/P
X00233	6920-00-175-6327	Trainer launch effects guided missile, M54
X18673	5855-01-147-7124	Transmitting set infrared, M89E1
X18673	5850-00-071-4482	Transmitting set infrared, M89
XA2022	6920-00-339-1042	Trainer, handling, guided missile launcher
S58775	6625-01-090-0103	MILES simulator M62F
J17565	1670-01-035-7727	Jump pack

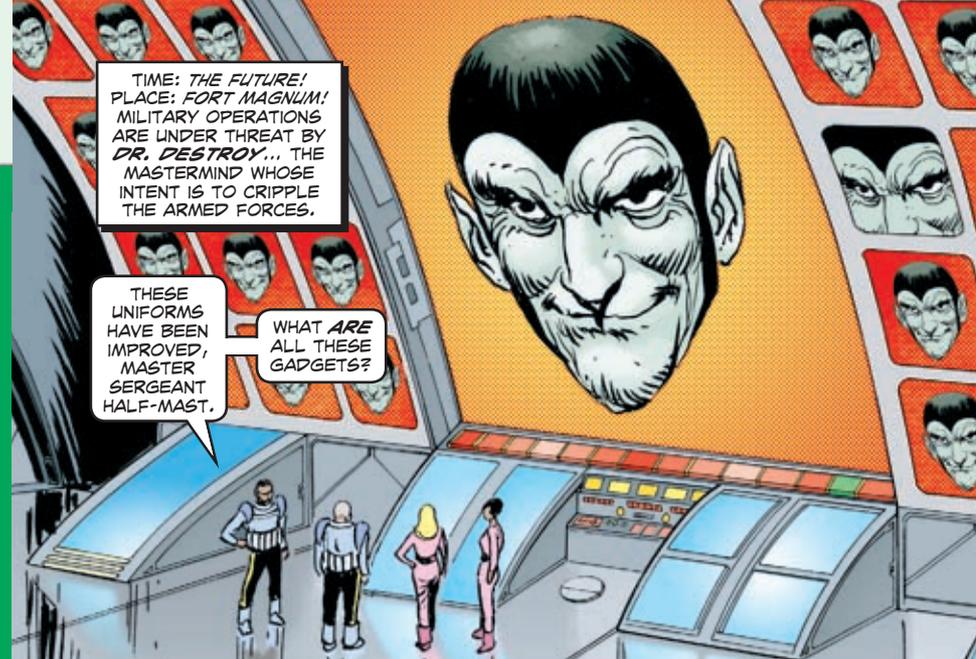
For disposition instructions on the two PGTS items and the MILES simulator, contact at DSN 826-4771, (757) 878-4771, or email [us.army.mil](mailto:us.army.mil)

For disposition instructions on the M222 and M223 launchers, contact at DSN 746-4359, (256) 876-4359, or email [us.army.mil](mailto:us.army.mil)

For disposition instructions on the jump pack, contact at DSN 256-6033, (508) 233-6033, or email [us.army.mil](mailto:us.army.mil)

For disposition of all other items, contact at DSN 788-7499, (256) 842-7499, or email [us.army.mil](mailto:us.army.mil)

# The Nemesis of PM!





WE'VE RECEIVED NEW INTELLIGENCE THAT DR. DESTROY IS ON THE LOOSE AND PREVENTIVE MAINTENANCE IS IN PERIL!

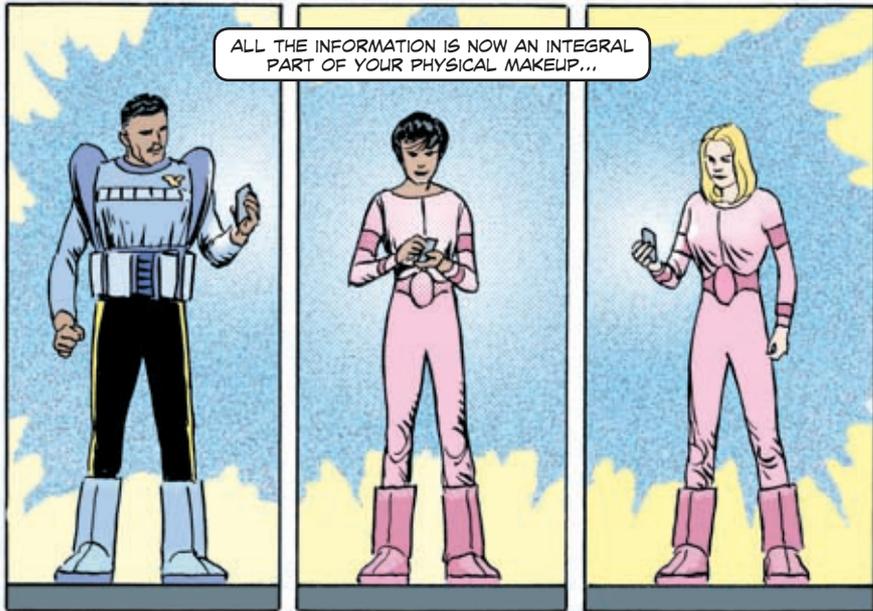
WE MUST CAPTURE HIS GOONS AND NEGATE THEIR PM INHIBITOR DEVICE.



DOWNLOAD THE UPDATED INTEL INTO YOUR ARTIFICIAL INTELLIGENCE UNIFORMS...



...NOW!



ALL THE INFORMATION IS NOW AN INTEGRAL PART OF YOUR PHYSICAL MAKEUP...



...AND THE SOURCES HAVE BEEN PROGRAMMED TO SELF-DESTRUCT.



C'MON... DR. CHANG IS WAITING TO INTRODUCE US TO MORE NEW EQUIPMENT.



I AM CHANG. PLEASE PAY STRICT ATTENTION.



THIS IS A SUSPENDO BEAM... USE IT TO LEVITATE OBJECTS!

IF YOU LIKE THIS, YOU'RE REALLY GOING TO LIKE WHAT I'VE GOT NEXT...



LATER, AS BLADE APPROACHES UNIT ALPHA'S LINE OF EAGLE HAWKS...

HALF-MAST, I'M SCANNING NOW. THE AIRCRAFT SHOWS SIGNS OF PM DEACTIVATION, WHICH CAN ONLY MEAN...



...UNIT ALPHA IS UNDER ATTACK!



OKAY, BLADE... YOU'RE NOT GOIN' ANYWHERE!

TAKE HIM OUT NOW!



BLADE USES HIS SUSPENDO BEAM WITH ELEVATING EFFECT...

WHERE IS DR. DESTROY AND THE WEAPON?

L-LET US DOWN!

I'LL TALK!

FOOL! YOU'LL DOOM US ALL! IF YOU TALK...



...DESTROY WILL CRIPPLE US!

TALK NOW, OR YOU'LL BE HANGING AROUND FOR A LONG TIME!

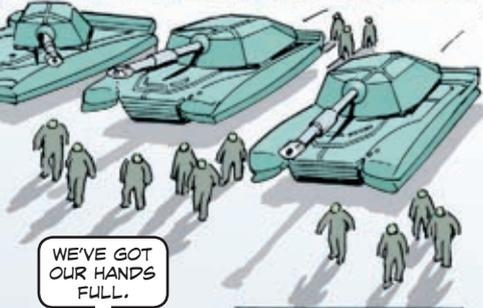


BLADE, THIS IS HALF-MAST.

WHAT'S HAPPENING?



WE HAVE A SITUATION HERE AT ARMOR COMMAND.



WE'VE GOT OUR HANDS FULL.

GET OVER HERE! TRIPLE TIME!!



SORRY, GUYS... GOTTA RUN!

GROAN



I'M HERE HALF-MAST.

GOOD! BONNIE AND I WILL HANDLE THE GOONS.

YOU AND CONNIE FOCUS ON THE TANKS.



SERGEANT HALF-MAST, I'M DETECTING INCOMING MISSILES.

BONNIE, DEPLOY OUR INHIBITOR SHIELD!



THE SHIELD'S PROTECTING US.



THIS IMPULSE UNIT WILL STOP THOSE GOONS.



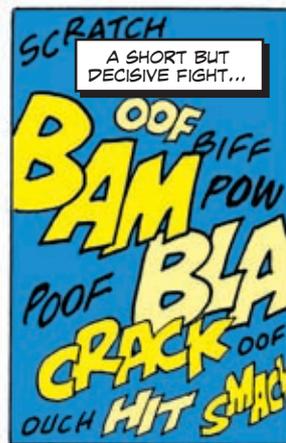
MAYBE YOU WON THIS SKIRMISH, BUT DR. DESTROY'S GONNA SQUASH YOU!



MEANWHILE, CONNIE AND BLADE ARE BUSY WITH THE TANKS...

THOSE TANKS ARE FIRING NASTY BOMBS.

ACTIVATE MISSILE DEFENSE FLARE!





YOU CAN'T DO THIS TO ME. I'M THE PM NEMESIS!

OH, YEAH? WELL YOU'RE ABOUT TO GET ERASED.

PREVENTIVE MAINTENANCE MAKES YOU A HERO...

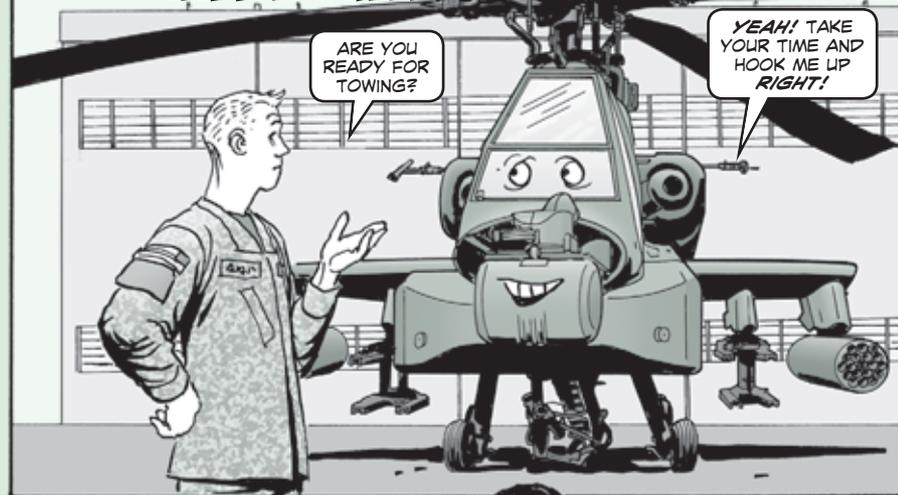
...AND KEEPS YOUR EQUIPMENT MISSION CAPABLE.

NOW THE QUESTION IS, WOULD YOU STAKE YOUR LIFE ON THE CONDITION OF YOUR EQUIPMENT, RIGHT NOW?



AH-64AVD...

# GETTING READY FOR TOWING



ARE YOU READY FOR TOWING?

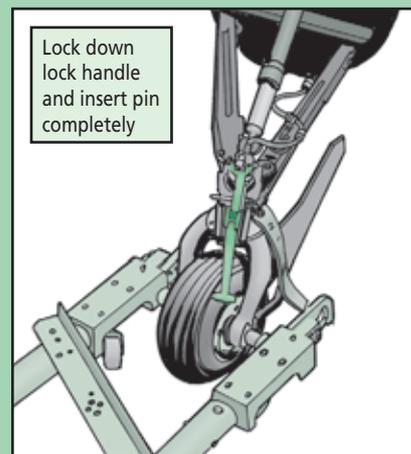
YEAH! TAKE YOUR TIME AND HOOK ME UP RIGHT!

MECHANICS, DON'T GET IN A HURRY-UP MODE WHEN IT'S TIME TO TOW AN AH-64.

Too often the quick release pin either isn't in place before towing or gets missed when preparing your bird for the tow bar. If that happens, you'll shear the tail wheel lock actuator. Then your bird is NMC.

To avoid tearing your tail wheel apart, always press the lock handle down first and fully insert the quick release pin. Just be careful! The lock handle can pop back up before inserting the pin. Then hook up the tow bar and you're ready to tow your bird.

And don't forget the ground guides. They keep you from running into something.



Lock down lock handle and insert pin completely

# WATCH WHERE YOU TREAD!



YO!  
YOU'RE NOT  
PLANNING TO  
STEP ON ME,  
ARE YOU?!



UH... I  
GUESS  
NOT.

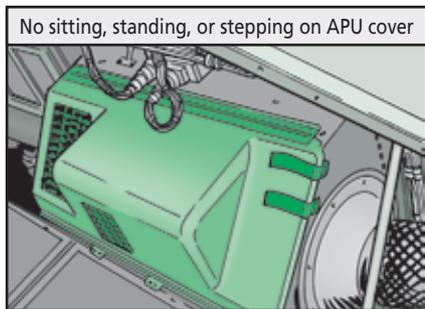
YOU'D **BEST** NOT! I'M  
AN APU COVER, NOT A  
FOOT STOOL!

**M**echanics, always pay attention where your feet, rear and hands go when working on your AH-64.

For example, the APU cover provides just a little protection for the auxiliary power unit (APU). But as tempting as it may be, the cover is not a chair, a work stand or a step. It's just a cover for protecting the APU.

Standing, sitting or stepping on the cover will break it. The cover can't handle your weight. Worse, a cracked APU cover can rub against an APU fuel line over time and cause a fuel leak. That's not good!

So, when you're walking on the catwalk area and working around the APU cover, think of the cover as part of the APU, not part of your bird's airframe. And stay off it!



[Click here for a copy of this article to save or email.](#)

# PROTECT GENERATORS, PITOTS FROM WATER



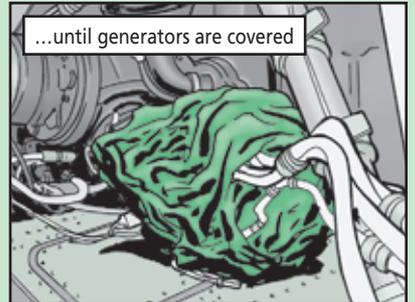
HEY CHARLIE! YOU GOTTA  
**PROTECT** YOUR GENERATOR IF  
YOU'RE GONNA POWERWASH!!

IT'S COOL!  
CHARLIE'S  
GOT ME WELL  
PROTECTED!

**N**ot taking precautions to protect your AH-64A/D from water during washing is no laughing matter.

During your next aircraft washing, make sure the No. 1 and 2 generators are bagged and tied first.

Water directed at unprotected generators will cause them to fry during aircraft startup and give a mechanic some unnecessary maintenance grief.

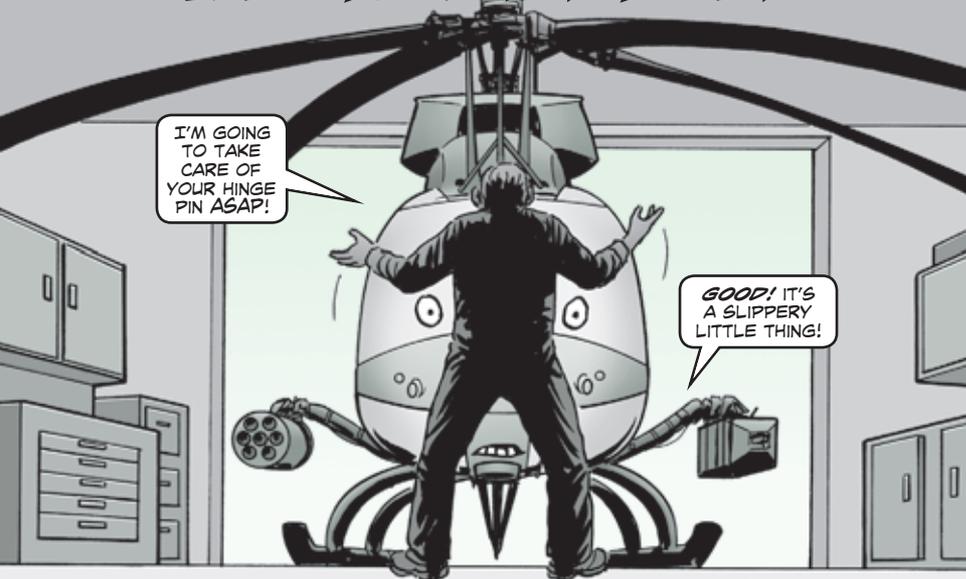


A dry generator after washing means your bird will be up and running. A wet generator means your bird will be NMC.

And while washing your bird, make it a habit to cover the pitot tubes so water doesn't enter them either. Water in pitot tubes means the pilot and co-pilot can't tell their airspeed and windspeed.

[Click here for a copy of this article to save or email.](#)

# SLIPPERY HINGE PIN

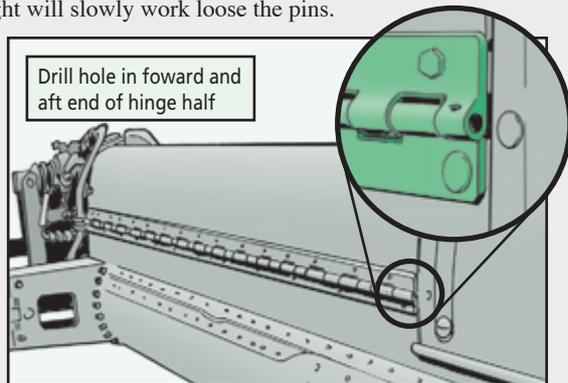


Grew chiefs, eyeball your Kiowa Warrior's tail rotor shaft cover hinge pins. Tail boom vibrations during flight will slowly work loose the pins.

Loose hinge pins can slide back into the tail rotor gearbox area. That's like throwing a wrench into a fan. If the pins get caught in the gearbox, it can shear off pieces of the pin that become FOD.

Your flight could come to an abrupt end if the tail rotor is damaged by chewed pieces of the hinge pin rod.

So keep those slippery hinge pins in place. When you remove and install the tail rotor drive shaft covers, ask your airframe mechanic to drill a hole using a No. 55 drill bit in the forward and aft end of the hinge pin and hinge like it says in paragraph 2-3-11 of TM 1-1520-248-23. Then add safety wire, NSN 9505-00-293-4208, to keep the pins from sliding out either side of the hinge.



# TRANSMISSION AND FREEWHEEL OIL FILTERS



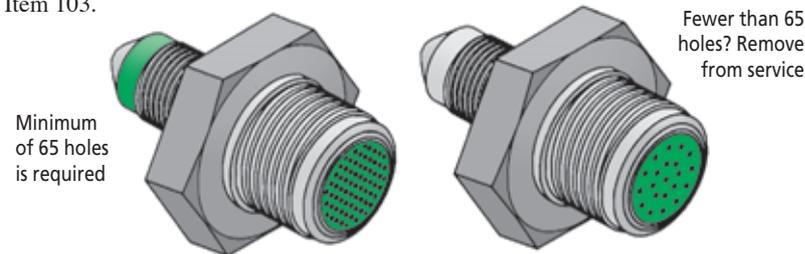
Mechanics, inspect your Kiowa Warrior's transmission and freewheel oil system filter, NSN 4730-01-214-1465, to make sure you have the right configuration.

Examine the filter unit screen hole pattern. If it doesn't have at least 65 holes, replace it with the correct filter.

The filter unit will not affect the normal operation of your bird, but the AMCOM headshed wants the incorrect filters replaced at the unit's earliest convenience. They put out a maintenance information message (MIM) OH-58D-MIM-2006-011 as a heads-up to units that the part was incorrectly manufactured.

To receive the correct filter, order it through normal supply channels.

If the oil filter unit on your bird has a minimum of 65 holes, then your aircraft is good to go. You can reference the part in EM-0256, IETM 1-1520-248-23P, Fig 89, Item 103.

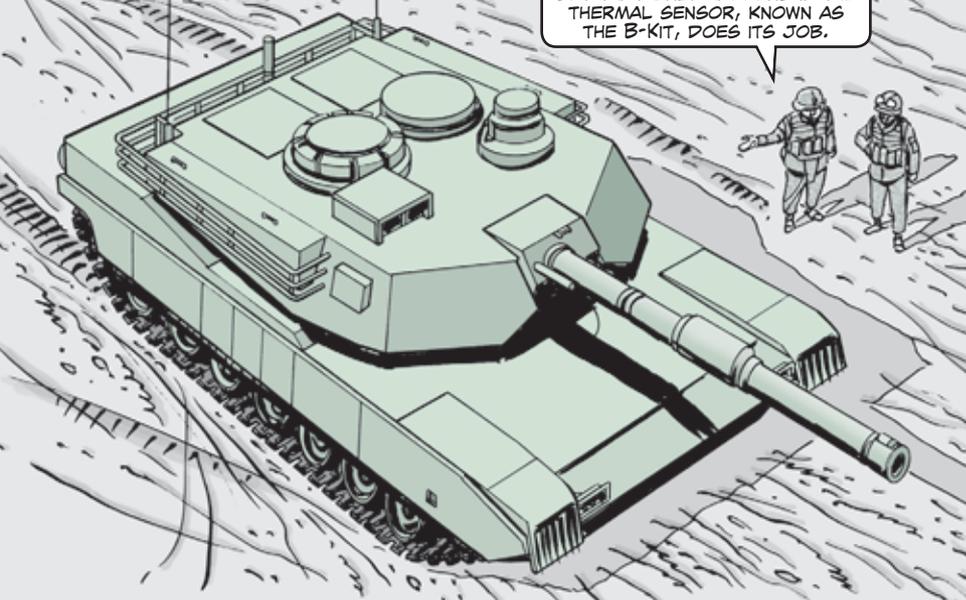


FLIR...

# PLEASE PART WITH THE PARTS!

THE ARMY'S HORIZONTAL TECHNOLOGY INTEGRATION (HTI) SECOND GENERATION FLIR (SGF) SYSTEMS LETS YOU, THE WARFIGHTER-ARMOR, MECHANIZED INFANTRY AND RECONNAISSANCE FORCES-SEE THE BATTLEFIELD CLEARER THAN EVER BEFORE.

BUT THAT ONLY HAPPENS IF THE THERMAL SENSOR, KNOWN AS THE B-KIT, DOES ITS JOB.



THE FLIR IS VITAL TO THE MISSION IN SWA... BUT IF YOU'RE THERE AND ORDERING A B-KIT PART...

CHANCES ARE YOU'LL BE BACK IN CONUS BEFORE IT ARRIVES!



THAT AIN'T GOOD, GUYS.

SO, TURN IN THOSE FLIR B-KIT PARTS FOR REPAIR.

HERE ARE THE ONES THAT ARE IN GREATEST DEMAND...



Part	NSN
Afocal	6650-01-463-4564
Imager	5855-01-464-1513
Detector/cooler bench assembly	5855-01-463-7372
Scan control circuit card assembly	5995-01-449-4403
Digitizer circuit card assembly	5998-01-449-6275
Electronic unit w/o aux power supply	5855-01-451-6430
Electronic unit with aux power supply	5855-01-451-6429
Electronic unit container	5895-01-463-3768

Remember, when you're shipping repairables, package them correctly. You don't want them to arrive at their destination in worse shape than when you sent them. When you ship the afocal, imager, and detector/cooler, you need to ship them in field reusable shipping containers. For the afocal, use container, NSN 5895-01-463-3804. For the imager, use container, NSN 5895-01-468-0935. And for the detector/cooler, use container, NSN 5895-01-468-0936.

If you have questions about FLIR parts, contact [us.army.mil](mailto:us.army.mil) at DSN 992-7036 or (732) 532-7036. Or you can email him:



RIGHT NOW, A LOT OF THEM CAN'T!

WHY NOT?



NO PARTS! WHY?



BECAUSE NO ONE IS TURNING IN B-KIT PARTS FOR REPAIR!

## AN/TAS-8A(V)1 & -(V)2 Power Cables

The LRAS3 dismantled power cables, NSN 5995-01-486-5043, are in short supply and high demand. Keep track of the cables. Store them carefully and account for them right. If your cables are bad, order new ones. But if they're just missing, hunt 'em up. Save your unit \$700 and reduce the strain on the supply system.

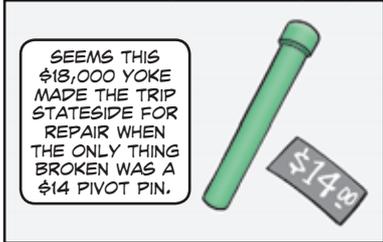
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# Did You Hear the One About...



...THE LRAS3 YOKE THAT WAS RETURNED TO CONUS FOR REPAIRS?

NO. HOW DOES IT GO?



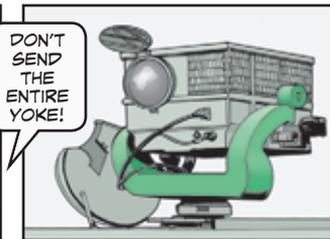
SEEMS THIS \$18,000 YOKE MADE THE TRIP STATESIDE FOR REPAIR WHEN THE ONLY THING BROKEN WAS A \$14 PIVOT PIN.



THAT'S NOT FUNNY.

NO. BUT IT IS A JOKE!

WARFIGHTERS, DON'T HURT YOUR UNIT'S EFFORTS BY SENDING AN LRAS3 VEHICLE MOUNTED YOKE, NSN 4920-01-494-5187 (GREEN) AND NSN 4920-01-486-5029 (TAN), IN FOR REPAIRS WHEN ALL IT NEEDS ARE A FEW SMALL, REPLACEABLE PARTS.



DON'T SEND THE ENTIRE YOKE!



HERE ARE SOME PARTS YOU CAN REPLACE AT YOUR UNIT AND SAVE THE YOKE A LONG JOURNEY...

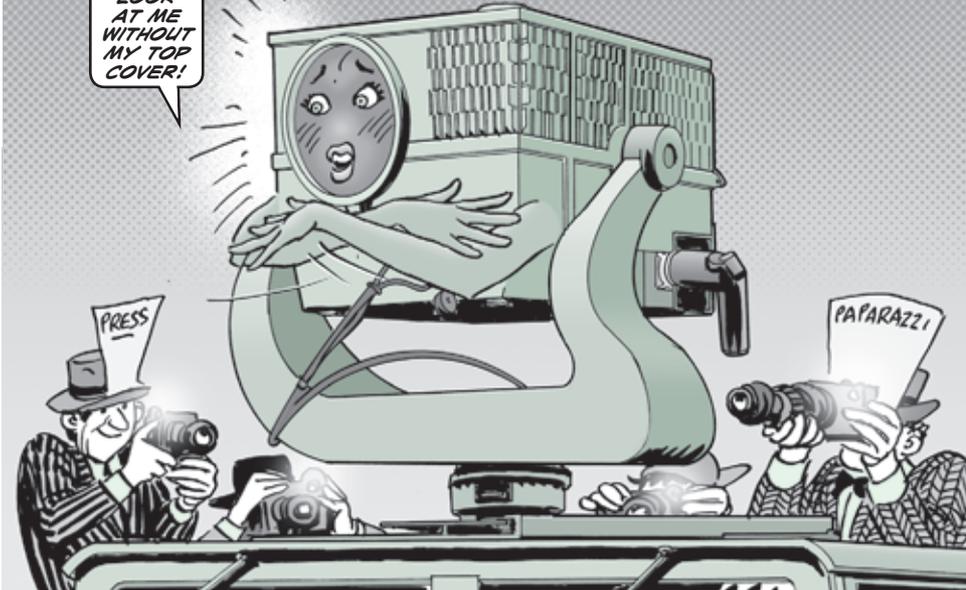
Part	NSN
Lock	5306-01-486-5037
Pivot pin	5315-01-486-5048
Latch	5340-01-486-5031
Azimuth lock knob	5355-01-486-6392
Elevation lock knob	5355-01-486-5030



REPLACE THESE PARTS WHEN NEEDED AND THE YOKE WILL NOT BE ON YOU.

# LRAS3 News: No Complete Cover!

DON'T LOOK AT ME WITHOUT MY TOP COVER!

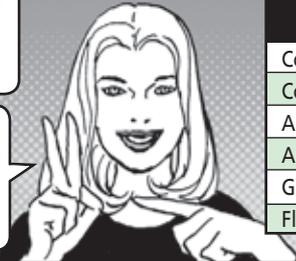


Extra! Extra! Read all about it! You can no longer get a complete top cover for your long range scout surveillance system (LRAS3).

Green top cover assembly, NSN 5340-01-506-8842, and tan top cover assembly, NSN 5340-01-486-5026, have gone the way of the dodo bird. They're extinct!

NOW YOU MUST ORDER THE TOP COVER'S INDIVIDUAL PARTS...

AND YOU'LL NEED TWO ANTENNAS AND TWO GPSIS RECEIVER CIRCUIT CARD ASSEMBLIES.



Part	NSN
Cover, tan	5340-01-486-5047
Cover, green	5340-01-494-3669
Antenna, tan	5985-01-486-5023
Antenna, green	5985-01-494-5186
GPSIS receiver CCA	5998-01-486-5020
Flexible harness	5995-01-486-5027

# IS THE APU SHOCKED?



The shock mounts that support the engine and alternator on MEP-903A, -B and -C 10-KW auxiliary power units (APU) are taking a beating and not rebounding from it.

The MEP-903A is used in the standard integrated command post system (SICPS) shelter. The MEP-903B is used in the joint tactical area communications system (JTACS) shelter. The MEP-903C is used in the warfighter information network-tactical (WIN-T) shelter.

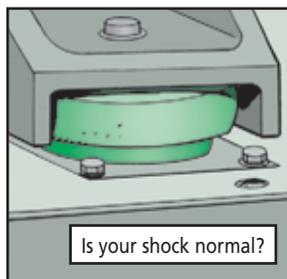
The shock mounts are on the APU to help isolate the vehicle and shelter from the APU vibration. This reduces noise and discomfort for the soldier.

The vibration isolators provide the maximum isolation when the generator is running, but still protect the APU from damage when it's transported. When shock mounts/vibration isolators fail, the APU operating noise increases and the potential for generator set damage during transportation increases, too.

## It's a Vicious Circle!

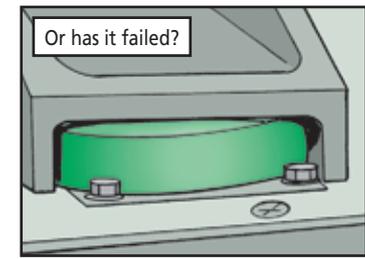
Chapter 4 of TM 9-6115-670-14&P covers the PMCS for the APU. Part of your PMCS is to, "Check for unusual wear or deterioration." Make a note that one of the areas to check are the four shock mounts—two on the engine and two on the alternator.

What you're looking for with this visual inspection is a collapsed mount. The normal height of the mount under load is about 1 1/4 inches measured from the top of the shock mount to the top of the mounting base.



A failed shock is compressed so much that the rubber elastomer touches the top of its mounting base.

If you need to order a new mount for the engine, use NSN 5342-00-597-6190. If you need a new mount for the alternator, use NSN 5342-00-684-9456. Don't mix the shocks! They have different dampening characteristics that match the needs of the load.



Training...

# Simulating SINGGARS

Dear Half-Mast,  
I was wondering how I can get my hands on a simulator program for loading and using the SINGGARS radios?

SSG E.J.M.

Dear Sergeant E.J.M.,

That's the kind of wondering we endorse! First, get your hands on your computer keyboard and type in: <https://uit.gordon.army.mil/login.html>  
This is the LandWarNet eUniversity-Signal website. Once there, you'll need to create an account in order to log in.



After you log in, click on Popular Downloads. A list will show up. Expand that list and you'll find several computer-based SINGGARS training programs you can use and copy. They include SINGGARS Multimedia Instruction, SINGGARS Radio Operation and Loading SINGGARS.

*Half-Mast*

JSLIST...

# Get Off on the Right Overshoe Foot



Soldiers don't want to get off on the wrong foot when it comes to the green or black vinyl overshoes used with JSLIST. A defective overshoe could put you one foot in the grave. Just remember this:

CBRN specialists, if you take new overshoes out of their package, you need to write on them the contract number (DLA-xxx-xx-x-xxxx), lot number, and date of manufacture (month-year) found on their identification sheet. Write the information with yellow or white indelible ink one inch from the top on the inside of both overshoes in 1/2-in tall letters. Never use POL-based markers—they can degrade the overshoes and hurt their ability to protect. NSN 7520-000-558-1487 brings 12 white markers that will work.



Overshoes produced after 2007 will already have the lot number and date of manufacture printed inside them. But you'll need to copy the contract number from the package.

The overshoes have a 15-year shelf life. Any overshoes that don't have the ID information should be used only for training or rain, mud and snow protection.

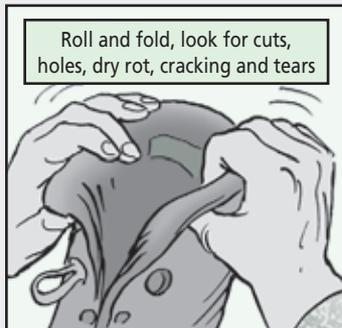
## Inspection

Any overshoes that are issued out of their packaging must be inspected before they're worn. Here's how:

First, make sure they have their ID info.

Next do the rolling fold inspection. Start with the sole and go from toe to heel and then go up both sides and down the back and finish with the top down to the toe. Grasp the overshoe with both hands, using your thumbs and index fingers. Roll and fold the overshoe, looking for cuts, holes, dry rot, cracking and tears.

Next, check that all six buttons and their button holes are in good shape and that the buttons are seated in the button holes.



Inspect the three loop fasteners for cuts, dry rot and loss of elasticity. Replace damaged loop fasteners if possible. There are two extra fastening loops packaged in the right overshoe.

Finally, do the leakage test. Secure the three fasteners and fill the overshoe to within 1/4 inch of the middle button assembly with water 73°F (+/- 5°F). Wait 15 minutes. Check the overshoe for any leaks.

If you find **any** problem, the overshoe is unusable except for training.



## New Battery for ICAM

Dear Half-Mast,  
I tried to order a BA-5800/U battery for my ICAM (Improved chemical agent monitor) but NSN 6135-01-440-7774 is a terminal item. Is there a replacement for the BA-5800/U?

SFC M.H.

Dear Sergeant M.H.,  
Yes there is. It's non-rechargeable battery BA-5380/U, NSN 6135-01-517-4954, or rechargeable battery BB-2800/U, which comes with NSN 6140-01-490-5372. Normally, the rechargeable battery should power the ICAM for 9 1/2 hours. To recharge it, you will need either the PP-8498/U charger, NSN 6130-01-495-2839, or the PP-8444/U charger, NSN 6130-01-443-0970. To charge the BB-2800/U in either charger requires an adaptor, NSN 5940-01-493-6750. It lets you charge two batteries at once.

Half-Mast

# Pouch Sets to Fit Your Mission

**MODULAR** IS THE KEY WORD WHEN TALKING ABOUT THE MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT—THE MOLLE.

THE MOLLE IS MADE UP OF REMOVABLE POUCHES AND PACKS...

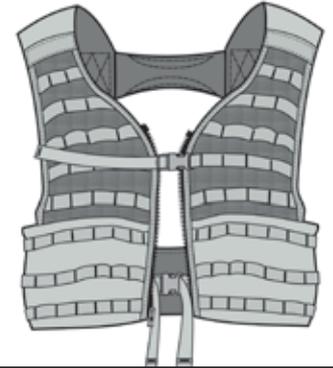
...SO IT LETS YOU TAILOR YOUR LOAD TO FIT THE MISSION.



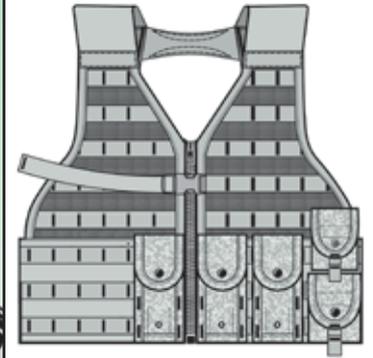
IN KEEPING WITH ARMY DOCTRINE THAT EACH SOLDIER IS FIRST AND FOREMOST A RIFLEMAN, THE BASIC MOLLE OUTFIT COMES WITH THE RIFLEMAN SET.

THAT SET INCLUDES THE FIGHTING LOAD CARRIER (THE VEST), HYDRATION SYSTEM, WAIST PACK, ASSAULT PACK, MAGAZINE PACK, MAGAZINE POUCHES AND MUCH MORE!

A common vest, called the fighting load carrier, comes with all configurations



Rifleman set, with three double 30-round magazine pouches and two fragmentation grenade pouches



YOU CAN ALSO ADD POUCH SETS TO THE MOLLE'S BASIC RIFLEMAN SET TO FILL THE NEEDS OF INDIVIDUAL SQUAD MEMBERS.

THE POUCH SETS ARE...

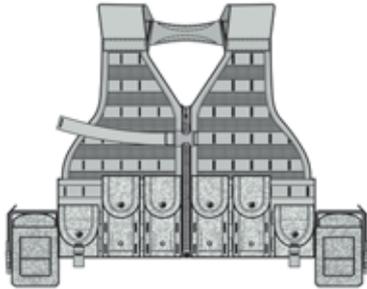
- pistol
- pistol automatic weapon (SAW) gunner
- grenadier
- medic

PS MORE

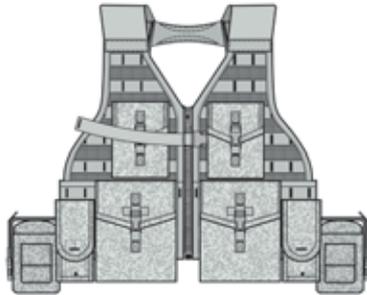
# A START ON FINDING PARTS

HERE ARE THE POUCHES FOUND IN EACH SET...

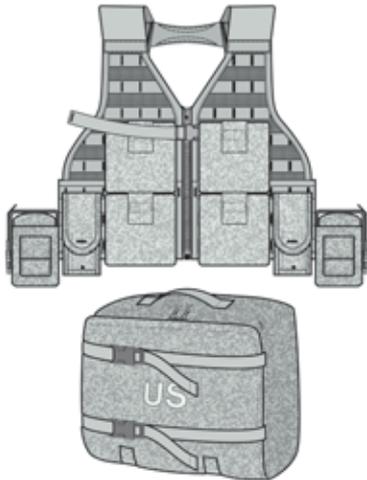
**Pistol set** has four single 9mm magazine pouches and a thigh holster extender.



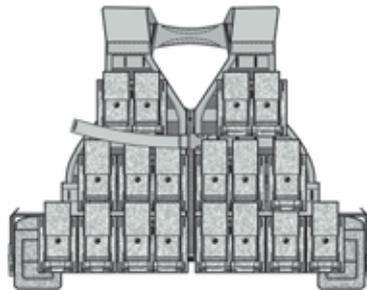
**SAW gunner set** has two 100-round magazine utility pouches and two 200-round magazine SAW gunner's pouches.



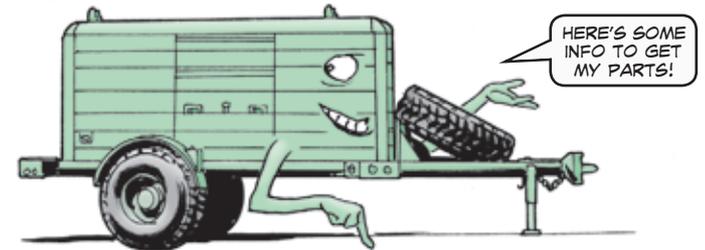
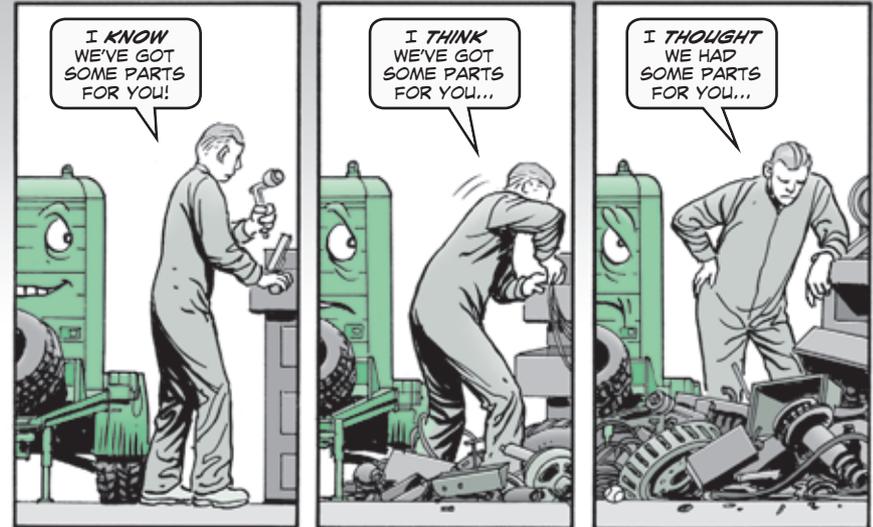
**Medic set** has one medical bag with four removable inserts. It also includes eight external medical pouches. Four pouches attach to the fighting load carrier; the other four attach to the medical bag.



**Grenadier set** has ten 40mm high explosive grenade single pouches, four 40mm high explosive grenade double pouches and two 40mm pyrotechnic round double pouches.



PS END



Dear Half-Mast,  
Help! I'm working on a PM92-133 lube unit in the shop. We're having a problem locating the right parts to keep the lube unit running. What's a good source for parts?

N.T.

Dear Mr. N.T.,

The first thing you want to do is make sure you're working with the parts info shown in TM 5-4930-244-14.

If you can't get a part through the supply system, contact the lube unit's manufacturer, Porter Manufacturing in Lubbock, TX. Call the company at (806) 747-4386 and ask for Ms. Diana Tate. You can also visit their website:

<http://www.portermfg.com>

Half-Mast

# Detecting PM for Your New Detector

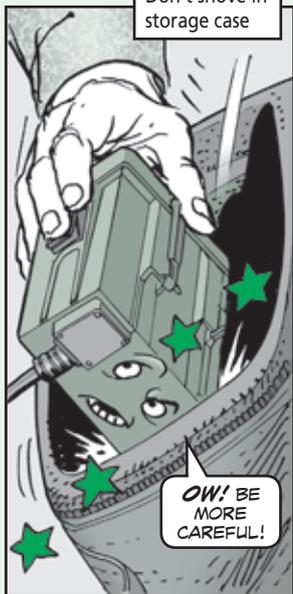
AS YOU LEARN THE DETECTING INS AND OUTS OF YOUR NEW AN/PSS-14 MINE DETECTOR, REMEMBER THESE TIPS FROM THE FT LEONARD WOOD COMBAT ENGINEERING SCHOOL...



## Packing

Don't shove the -14 in its storage case. Rough handling breaks things like the cable clamps, particularly the clamp on the yoke.

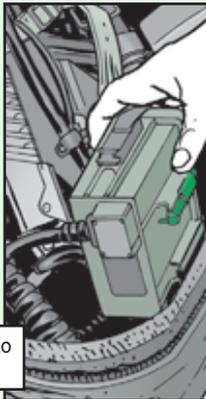
Don't shove in storage case



OW! BE MORE CAREFUL!

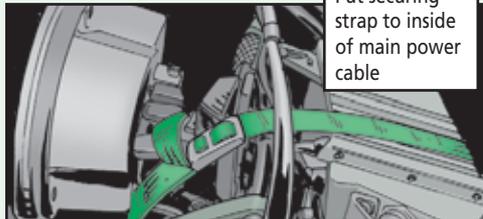
Insert the battery case in the storage case with its clip to the outside. If you store it with the clip to the inside of the case, you can damage the base of the battery cable where it connects to the battery box. If the cable is out of commission, so is the detector.

Put battery case clamp to outside of storage case



Put the securing strap to the inside of the main power cable for the search head. Otherwise, the cable will be pinched by the strap, which leads to the cable fraying and cracking.

Put securing strap to inside of main power cable



When you do the ground balance in the calibration mode, you're supposed to hold the head six to 10 inches off the ground. That distance can be hard to estimate. Use your boots as a guide. The top of the boot is about 10 inches.

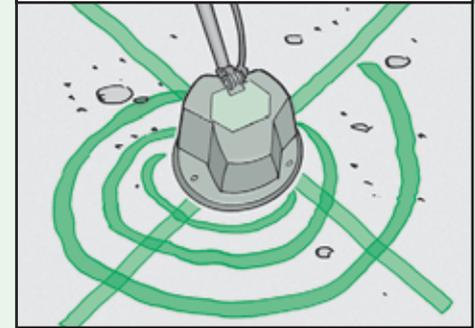
## Detecting

Hold head even with top of your boot for ground balance



Do it right when you're trying to find the center of the mine. If the metallic signature is as large or larger than the search head, use the spiral technique. If it's smaller, use the cross technique.

Do either cross or spiral location searches for center of mine depending on the metallic signature

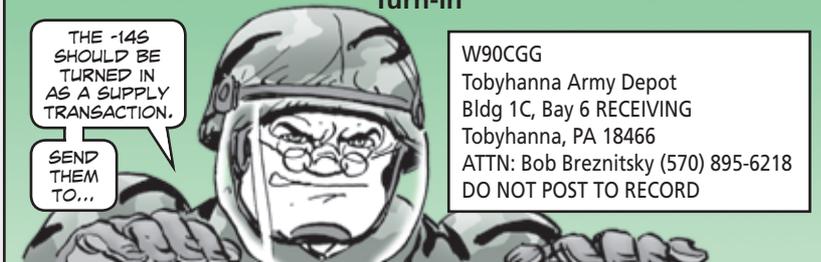


If your mine detector is not working right or is broken, turn it in for repair now. A detector that's not working right is a danger to you and your unit. The Tobyhanna Army Depot Forward Repair Activity will get you a replacement as soon as possible.

## Turn-in

THE -14S SHOULD BE TURNED IN AS A SUPPLY TRANSACTION.

SEND THEM TO...



W90CGG  
Tobyhanna Army Depot  
Bldg 1C, Bay 6 RECEIVING  
Tobyhanna, PA 18466  
ATTN: Bob Breznitsky (570) 895-6218  
DO NOT POST TO RECORD

If you have to use a DODAAC, use W90CGG. Mark the package for B16-RESET PROGRAM

Provide the transportation control number (TCN) to DSN  
992-3183, (732) 532-3183, email [us.army.mil](mailto:us.army.mil)

The TCN is a confirmation that the -14 has been shipped. Also provide McCauley the document number for your requisition for a replacement -14.

If you have any questions, contact McCauley.

Husky...

# A Blast of PM

THE INTERIM VEHICLE MOUNTED MINE DETECTOR (IVMMD) KNOWN AS THE HUSKY IS BEING WORKED AROUND THE CLOCK IN SOUTHWEST ASIA (SWA).

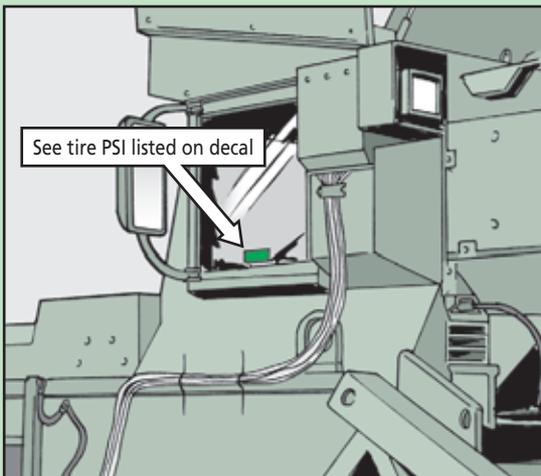
IT'S SPECIFICALLY DESIGNED TO DRIVE OVER PRESSURE-FUSED ANTI-TANK (AT) MINES WITH TIRES DESIGNED TO DRIVE OVER BUT NOT DETONATE THOSE DEVICES.



WITH THAT IN MIND, HERE ARE SOME PM POINTERS TO REMEMBER.

## Tire PSI Reminder

Depending on use, two types of tires are available. The "road" tire is for normal-use driving. The "overpass" tire is used to drive over pressure-fused AT devices. This tire is wider and has a different tread than the road tire. You'll find the psi for both of these tires on the tire pressure settings decal on the vehicle's left (roadside) window. Use the vehicle's tire pressure controller in the cab to adjust the tire's pressure.



It's **really** important to install overpass tires on the Husky prior to mine-sweeping operations. They're specially designed for this type of operation when the tires are deflated to 8.7 psi. Make sure the tire's bead spacer properly fits each tire at all times.

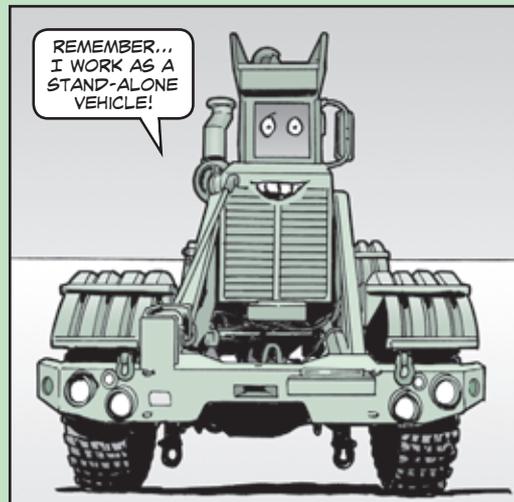
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## No Modifications!

The Husky is designed as a stand-alone vehicle. Do **not** weld a roller to the front bumper of the vehicle.

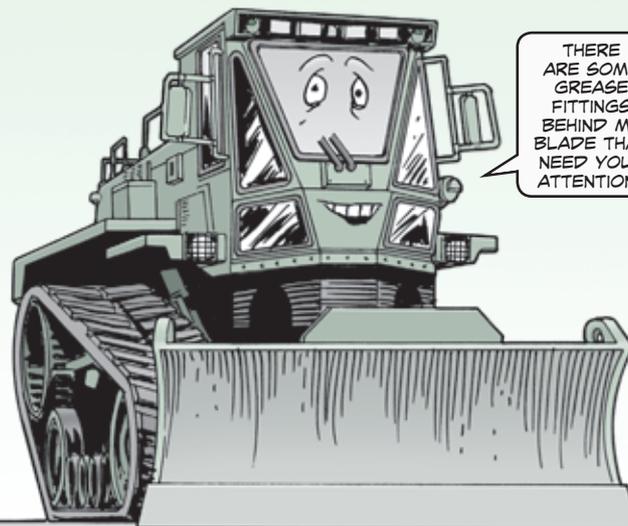
The Husky is not designed to push weight against its flexible bumper. Adding a roller to the front of the vehicle means more weight is being transmitted to the ground—causing a pressure-fused device to detonate. A detonation can cause the roller to detach from the vehicle. Then the Husky will run into or over the roller, causing further damage.

Some units are adding a cyclone blower on top of the vehicle. **Do not** put this type of attachment on the Husky, either. It hasn't been tested by the headshed.



DEUCE...

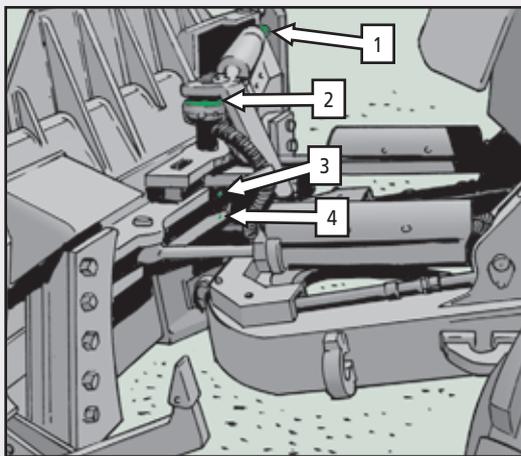
# BEHIND THE BLADE



**P**roper lubing is required when it comes to the grease fittings in the tower area behind the excavator's blade. These fittings get covered in mud and easily overlooked during scheduled services.

[Click here for a copy of this article to save or email.](#)

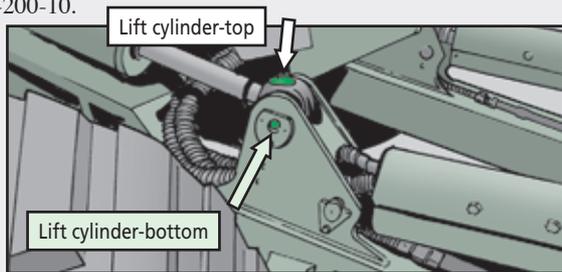
A lack of lube in the tower area causes too much strain on the cylinders and rods that angle the blade. For smooth blade movement, remember to wipe off the fittings before you start lubing. That way no grit is pumped into the rod's bearings.



- Here's what to lube:**
1. angle cylinder rod end
  2. angle cylinder head end
  3. single-tree upper
  4. single-tree lower

When you lube, pump grease into each fitting until you see clean grease oozing out. Four to five pumps should do it. Lube these fittings once a week like it says on Page 126 of TM 5-2430-200-10.

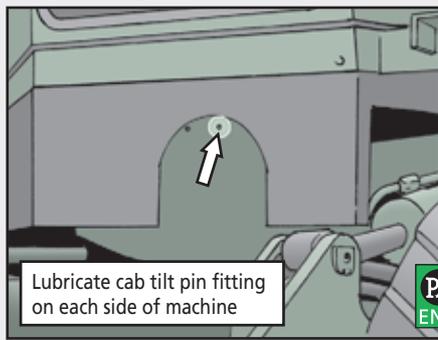
With your grease gun handy, lube these lift cylinder fittings as well for smooth blade operation. You'll find 'em on each side of the vehicle, behind the blade next to the track.



### Cab Tilt Pin Fittings

Taking a few steps back (with your grease gun still in hand) puts you next to the cab tilt pin's grease fittings. There's one on each side of the vehicle directly under the cab and above the track.

Lube puts slide and glide into the cab tilt pins when the cab is tilted up or down. Give each fitting four to five pumps of grease every three months like it says on Page 127 of the -10 TM.



PS  
END

Dry Support Bridge...

# Some Tape Will Do

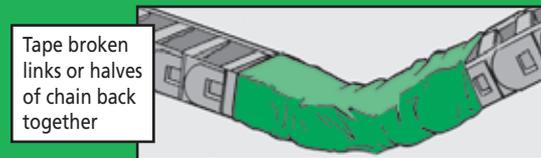
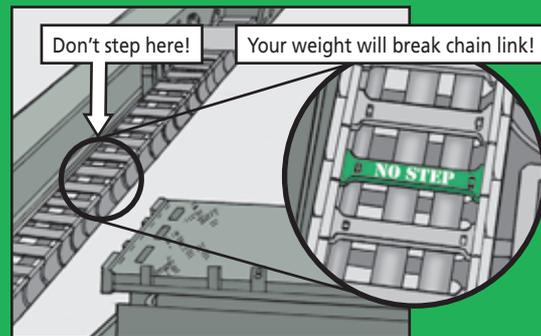
HERE'S A PM POINTER TO PROTECT THE CHAIN LINK!  
LET'S GET STARTED!



Several energy chains on the dry support bridge (DSB) protect the vehicle system's hydraulic hoses. Plastic links connect with one another to form each chain. They're designed to surround and flex with hydraulic hoses.

During travel or bridge construction, the chain links can get damaged or disconnected. And stepping in the wrong place can break the chain link!

When a chain gets disconnected, realign and reassemble the links if possible. Remove any damaged links and use duct tape or heavy-duty water-resistant tape to hold the broken links or halves of the chain together. This is a quick fix to keep you in operation until new links, found in TM 5-5420-279-23P, can be ordered.

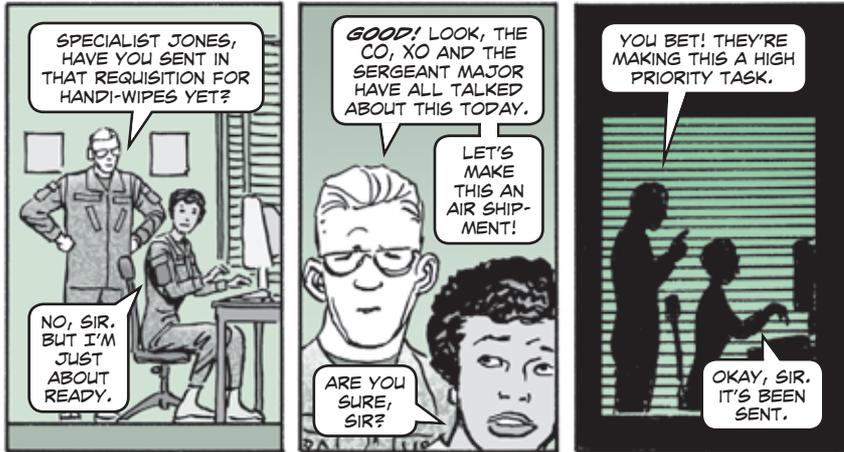


Do not replace the entire chain when a few links are damaged. Individual links are expensive, and the whole chain runs about eight times as much.

You'll find the assembly procedures for the chain links starting on Page 5-305 of TM 5-5420-279-23.

[Click here for a copy of this article to save or email.](#)

# AIR CARGO REQUIRES CLEARANCE



You can request air transportation for practically anything you order, but the Army Airlift Clearance Authority (AACAA) will ensure that air cargo dollars are used prudently.

When the source of supply (DLA, AAFES, the home installation, etc.) prepares to fill a requisition requiring air transportation, they are required to submit a DD Form 1384, *Advance Transportation Control Movement Document (ATCMD)*.

The info on the 1384 is eventually entered on the web-based Financial and Airlift Clearance Transportation System (FACTS). FACTS automates the validation of all Army air shipments by AACAA.

About 95 percent of all FACTS submissions are automatically validated and released for movement. When shipments exceed established criteria, they go to the AACAA staff who will challenge affected shipments. The AACAA reviewer contacts a POC in the geographic area of the shipment destination. That starts a three working day period for the requisitioner to make a shipment mode decision.



The POC—armed with all the transportation data on the requisition—will contact the requisitioner to determine if air transportation is actually needed.

If the POC and requisitioner reach a decision, the AACAA is notified. The AACAA then releases the shipment and directs the shipper to use an air or surface mode depending on the decision.

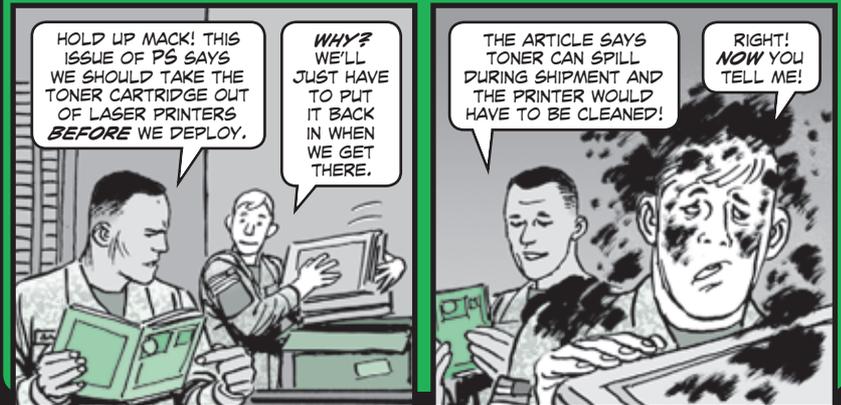
If the requisitioner does not respond within the three-day window, the AACAA diverts the shipment to surface mode.

The AACAA has an extensive website to help users through air cargo shipping. The website also discusses how to use “green sheets” to expedite shipping through Aerial Ports of Embarkation (APOE).

You'll find more information about AACAA and FACTS on the Logistics Support Activity (LOGSA) website. You'll need to use your logon and password for the Logistics Information Warehouse (LIW) to access the AACAA webpage:

<https://www.logsa.army.mil/ssc/aaca/aaca-main.cfm>

## STAMIS Deployment Tip



Dear Editor:

Thanks for the article "Tricks to Deploying STAMIS" in PS 658. An additional note for shipment is to remove the toner cartridge from laser printers. Package the toner cartridge in a clear plastic bag taped completely shut.

When a toner cartridge is left in a printer it can spill during shipment. That makes the printer useless until an expensive cleaning is performed by a trained technician with the right tools.

As a practical matter, each printer should have at least one unopened toner cartridge shipped with it.

Contractor LMR  
88th Regional Readiness  
Sustainment Command G4

*Editor's note: That's a tip that will help others avoid messy situations.*

# ★ ★ Connie's Post Scripts ★ ★

## MASK CANISTER SHELF LIFE EXTENDED

The shelf lives of the following C2A1 canister lot numbers have been extended to 30 Jun 2012:

MMB01G023015  
MMB02B027003  
MMB02H028008

The shelf life of case lot MMB02E028004 has been extended to 30 Apr 2012.

The C2A1 is used with the M40A1, M42A2, M45, M48, and MCU-2A/P masks. CBRN specialists should check their canisters for these lot numbers and mark in the new shelf life dates. Shelf life info for all CBRN equipment can be checked at

<https://jacks.jpeocbd.osd.mil/>

## FREE BATTERY CHARGING EQUIPMENT

Need to charge your Hawker AGM batteries? Free issue charging equipment is available, but quantities are limited. Get more info from \_\_\_\_\_ of the AMC Battery Management Office at CERDEC in Fort Monmouth, NJ. He's at DSN (312) 992-8941, (732) 532-8941, or email

[@us.army.mil](mailto:_____@us.army.mil)

## HINGE STOCK NSN

If you searched FED LOG for plastic hinge stock, NSN 9390-01-171-5986, used on the Black Hawk, and found the Army not listed as a user, don't panic! The Army is now listed as a user.

## HEMTT Parking Brake Valve Update

Your HEMTT's air brake system parking brake valve is shown as Item 1 in Fig 199 of TM 9-2320-279-24P, including Items 2, 3, and 4. That's a mistake! When you place your order, you'll only get the valve, not all other parts. So order each part separately. And note that this valve has a different design than the original. You may need to enlarge the mounting hole on the dash panel. Make a note until the TM is updated.

## Order BEOD Gooseneck Light by P/N

An NSN doesn't exist yet for the gooseneck light on your explosive ordnance disposal body (BEOD). But you can purchase the gooseneck light from Sunnex Inc. for \$98 using part number HS747-27RIA. Get it from David Trinks at (508) 651-0009, ext. 224, or Anders Utter at ext. 230. Their address is 3 Huron Drive, Natick, MA 01760-1314.

## Some SECM-HMMWV Data Plates Wrong

Some of the HMMWV data plates for the new SECMs (shop equipment, contact maintenance) are wrong. The data plates list the gross vehicle weight (GVW) as 11,500 pounds, when it should be 12,100. If your SECM HMMWV has the wrong HMMWV data plate, contact PM SKOT's \_\_\_\_\_ at DSN 793-8129, (309) 782-2722, or email:

[@us.army.mil](mailto:_____@us.army.mil)

He'll send you the correct plate.

## COMPRESSED AIR

Need a quick, simple way to clean dusty optics while avoiding scratches? Compressed air does the job. NSN 7930-01-398-2473 brings six 10-oz cans of compressed air.

## ABS Warning Light Sticker

Use NSN 7690-01-530-5506 to get a sticker that goes under the M939-series 5-ton truck's ABS light. It carries the following warning:

**ABS Warning!**  
**Steady illuminated lamp indicates a malfunctioning anti-lock brake system.**  
**If malfunctioning, use gradual braking techniques listed in TM 9-2320-272-10 (Operation w/o ABS).**  
**40 mph maximum speed with steady lamp.**

## AGSE Maintenance Stand

On page 35 of PS 662, we told you the maximum weight of the low-level stand is 500 pounds. That's correct when the stand is folded. The maximum weight goes up to 750 pounds when the stand is open. Make a note of these weight limits when using the stand.

## STATIC GROUNDING CABLES

If you're in need of items to make insulated static grounding cables for your bird, here are the parts you need to get the job done:

NSN	Item
4010-00-286-2681	Grounding wire, 1000-ft roll
5935-00-572-5174	Plug
5999-00-134-5844	Clip

## Kiowa Warrior Upper Shroud

In PS 646 (Sept 06), we show the upper shroud listed as NSN 1260-01-479-4629. The correct NSN for the upper shroud is NSN 1260-01-497-4629.

## WHAT MAINTENANCE AVUM CAN DO

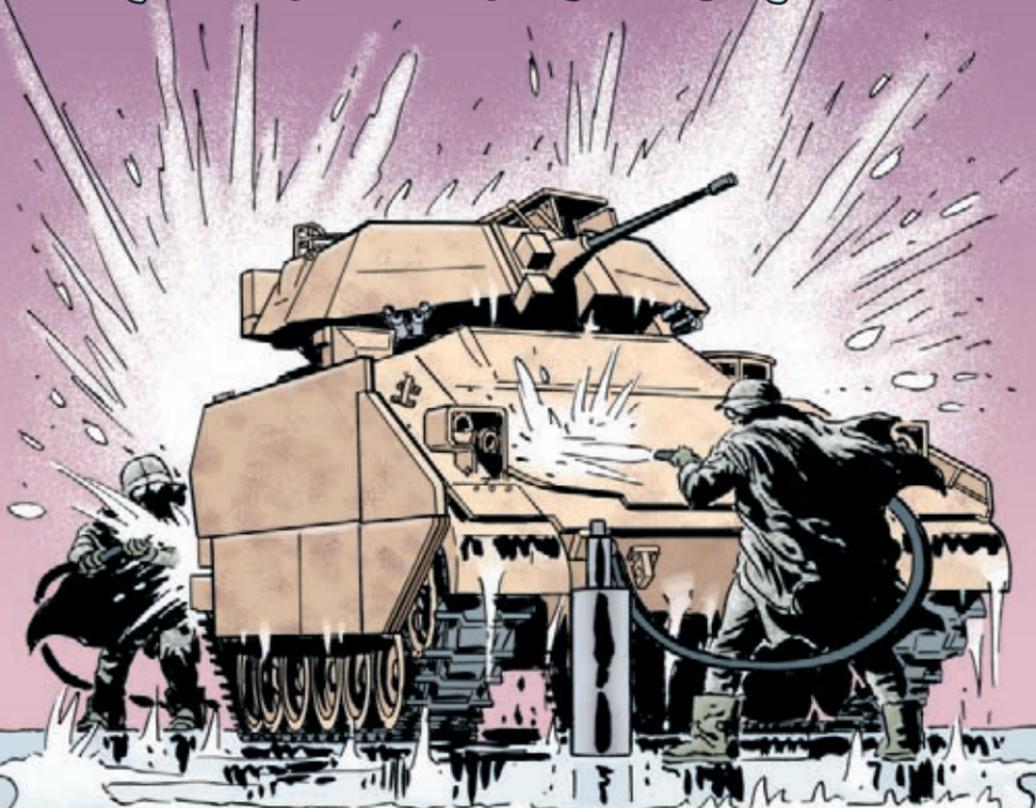
We told you on page 39 of PS 660, (Nov 07) that AVUM mechanics can do AVIM maintenance only when authorized by a LAR or an engineer who's given approval by letter. That's not correct. An AVIM shop can approve AVUM mechanics to perform AVIM maintenance only if the unit level has the expertise. AVIM must also provide the tools and supervision to make sure the task is completed correctly.

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?

[Click here for a copy of this article to save or email.](#)

# HIGH-PRESSURE WATER CAN SEND DEBRIS FLYING!



**PROTECT YOURSELF!  
WEAR YOUR HELMET,  
EYE PROTECTION, AND  
WET-WEATHER GEAR!**