

PS**THE
PREVENTIVE
MAINTENANCE
MONTHLY**

TB 43-PS-680, 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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Stryker Driver's Vision Enhancer Power
M1-Series Tank Replenisher Level
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PREVENTIVE
MAINTENANCE
MONTHLY

TB 43-PS-680

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BOYS, I WANT TO
BE ABLE TO MOVE
FAST AND SHOOT
STRAIGHT!

LET'S MAKE SURE THIS
GUN IS READY FOR
TOMORROW'S BATTLE!

Gettysburg,
page 27



TO TRAIN OR NOT TO TRAIN? (THAT'S NOT THE QUESTION!)



Every day new Soldiers enter units. They are fresh out of school and raring to go as new mechanics.

One problem, though. You can't send a new aviation mechanic to fix a problem on a bird if he or she has never been walked through a maintenance procedure with a senior mechanic. Telling a new mechanic to grab a TM, ETM or an IETM and go to work on a bird is asking for trouble.

This could happen with some units that no longer have their senior mechanics around to instruct and pass on their maintenance knowledge and experience to new mechanics.

There's an ol' saying that goes "loose lips sinks ships." Well, the same is true if you turn a new mechanic loose to work on a bird without supervision. It's a recipe for damaged components that could put your bird or any piece of equipment on the NMC list.

It's important that senior mechanics train, oversee and instruct junior mechanics on the ins and outs of preventive maintenance.

Walking a new mechanic through steps to inspect, remove, repair and install builds confidence and experience they need to do the job. Senior mechanics need to be there to answer questions and to help Soldiers learn all they can about taking care of equipment.

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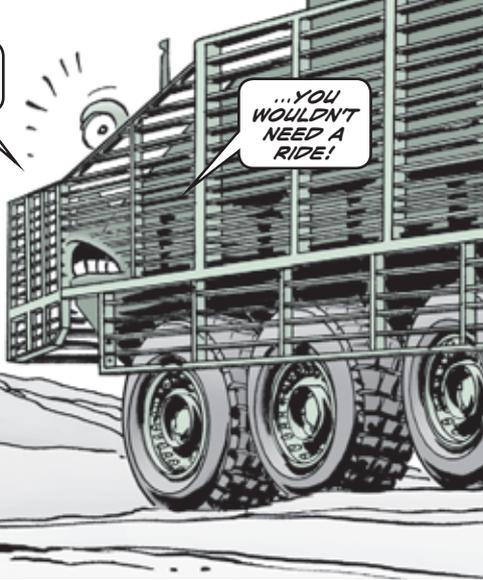
Stryker...

OIL'S WELL THAT ENDS WELL

IF YOU'D JUST CHECKED MY OIL LEVELS...



...YOU WOULDN'T NEED A RIDE!



DRIVERS, OIL IS THE LIFE BLOOD OF YOUR STRYKER'S ENGINE.

WITHOUT ENOUGH OF IT, THE ENGINE MAY BURN OUT AND YOU'RE LEFT THUMBING A RIDE.



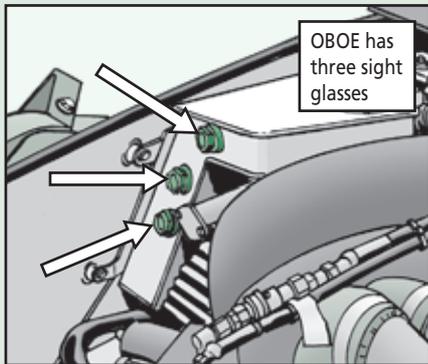
OBOE

The on board oil exchanger (OBOE) is just what it sounds like—an oil exchange system. Every 10 hours of operation, the OBOE takes approximately 1/4-gal of oil from the engine and injects it into the fuel system where it's burned off.

The OBOE then replaces that engine oil from its 1.71-gal reservoir. When full, the OBOE can continue to replace the burned-off engine oil for about 60 hours before running dry.

When empty, the OBOE continues drawing oil from the engine for burn-off. Eventually there's not enough oil for the engine and it burns up!

There are three sight glasses on the side of the OBOE—one at the top, one in the middle, and one near the bottom. If you see oil in the top sight glass, you're good to go. If you can't see oil in the bottom sight glass, the OBOE is **WAY** overdue for a fill-up.



OBOE has three sight glasses

Engine Oil

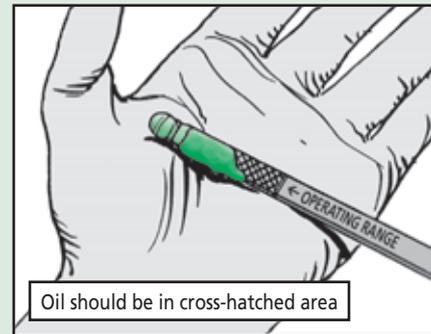
Some drivers figure as long as they keep the OBOE filled, there's no need to check the engine oil. Wrong!

Sure, a full OBOE will replenish that burned-off engine oil. But that doesn't mean you couldn't have a leak or oil contamination. And the only way to know is to check the engine oil!

Always make sure your Stryker is on level ground before checking the engine oil level. Also, the engine must be shut down at least 20 minutes before you pull the dipstick.

The oil level should be in the crosshatched area of the dipstick. Look for whitish blobs that indicate water contamination. Take a sniff, too. That's the best way to tell if the oil is contaminated with fuel.

While you're checking the oil level, take a close look at the dipstick tube for cracks or leaks. Oil overflow, discolored oil, or a cracked dipstick tube deadlines the vehicle.



Oil should be in cross-hatched area

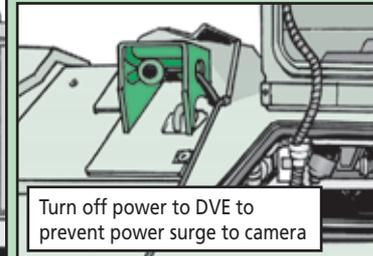
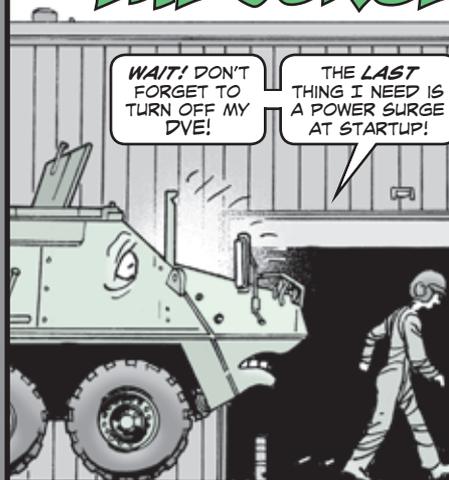
Stryker...

STOPPING THE SURGE

Drivers, when the day's over and you're parking your Stryker in the motorpool, make sure you shut off power to the driver's vision enhancer (DVE).

WAIT! DON'T FORGET TO TURN OFF MY DVE!

THE LAST THING I NEED IS A POWER SURGE AT STARTUP!



Turn off power to DVE to prevent power surge to camera

If you forget, a power surge at the next startup could damage the DVE camera, NSN 5855-01-525-1631, or the DVE screen, NSN 5980-01-525-1688.

If that happens, you're looking at a hefty bill. A new camera costs almost \$11,000. A new screen will set your unit back more than \$3,600.

Low Replenisher Level Is Bad News!

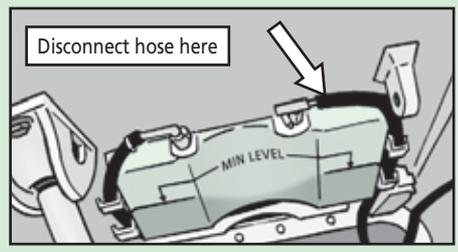


When was the last time you checked and topped off the FRH level in your tank's replenisher, crewmen? If you haven't been doing the before and after PMCS checks, you could be putting yourself in danger!

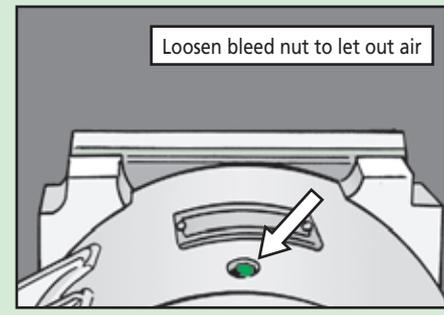
If the hydraulic fluid level is below the MIN LEVEL mark on the replenisher, the main gun could recoil out of battery the next time it's fired. When that happens, the cannon shears its retaining bolts and slams into the ammo compartment.

IF THE REPLENISHER OIL LEVEL IS LOW, ADD SOME FRH NOW. HERE'S HOW...

1. Park the tank on level ground.
2. Make sure you're wearing long sleeves (rolled down), rubber gloves, goggles and a faceshield. FRH contains a chemical which can cause paralysis if it's taken internally. FRH can also be absorbed through the skin, so wash thoroughly with soap and water if you get any on you.
3. Disconnect the hose from the plug on the top right side of the replenisher.



4. Uncoil the hose by sliding it out of the six retaining clips around the outside of the replenisher.
5. Extend the hose through the loader's hatch.
6. Put the small BII funnel, NSN 7240-00-404-9793, in the hose and slowly add FRH, NSN 9150-00-111-6256, until the fluid level reaches the MIN LEVEL mark on the replenisher.
7. Remove the funnel, slide the hose back through the retaining clips and reattach it to the plug on top of the replenisher.
8. Depress the main gun slightly below the level position.
9. Loosen the bleed plug below the gun mount ID plate using a $\frac{9}{16}$ -in socket and wrench. Allow all the air to escape until you see FRH starting to flow from the bleed plug, then retighten it. Wipe up any FRH with a rag and dispose of it properly.
10. Recheck the FRH level in the replenisher. If the fluid level is still below the MIN LEVEL mark, go back to step 3.



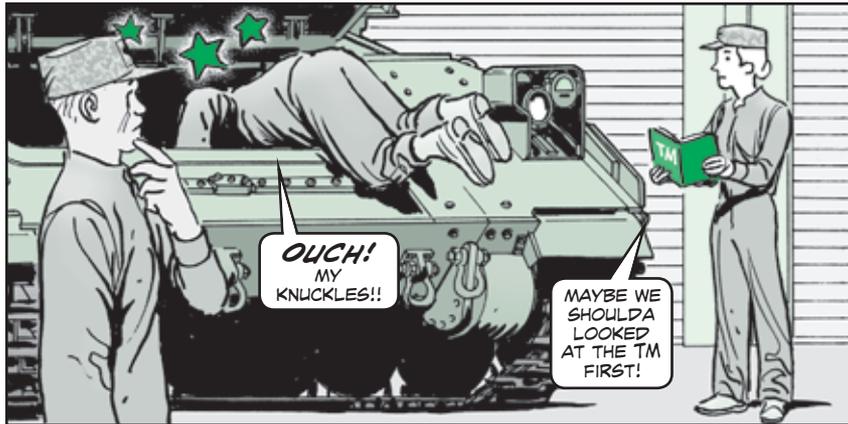
M1A1 TUSK Thermal Sight/Day TV System Kit NSNs

Fig 6F12 of TB 9-2350-264-12&P-1 (Aug 07) lists the wrong NSNs for the power filter module, wiring harness and bracket used on the M1A1 TUSK's (Tank Urban Survivability Kit) thermal sight/day TV system kit. Use NSN 6150-01-553-6539 for the wiring harness shown as Item 1. NSN 2350-01-553-6537 brings the power filter module listed as Item 2. Use NSN 5340-01-553-6540 to get the bracket shown as Item 7.

M2A3/M3A3 Bradley Servo Power Amp

Use NSN 7025-01-542-3024 to order a new Block 1 servo power amp for your M2A3/M3A3 Bradley. NSN 7025-01-542-3026, which is listed for Item 13 in Fig 132 of TM 9-2350-294-24P-2 (Sep 00 w/Ch 5, Feb 07), brings a pintle pin.

KNUCKLE BUSTER DILEMMA



Dear Half-Mast,

When it's time to pull the powerpack on a Bradley, new mechanics always seem to scratch their heads when it comes to the prop shaft on the right side of the engine compartment.

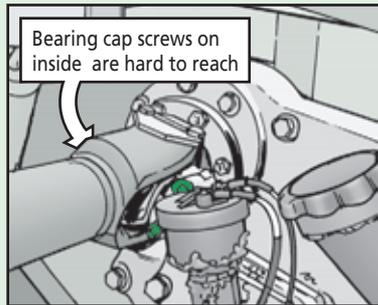
Two of the bearing cap screws are easy to reach. The problem is with the other two. Both screws are behind the prop shaft, so trying to get a wrench on 'em just results in busted knuckles.

The answer to the problem is in the TM, but for some reason it always seems to be overlooked.

You need to tow the Bradley forward about a foot. That rotates the prop shaft 180° and brings the two hidden screws to the outside so they can be easily removed.

Can you pass the word? We're starting to run out of bandages!

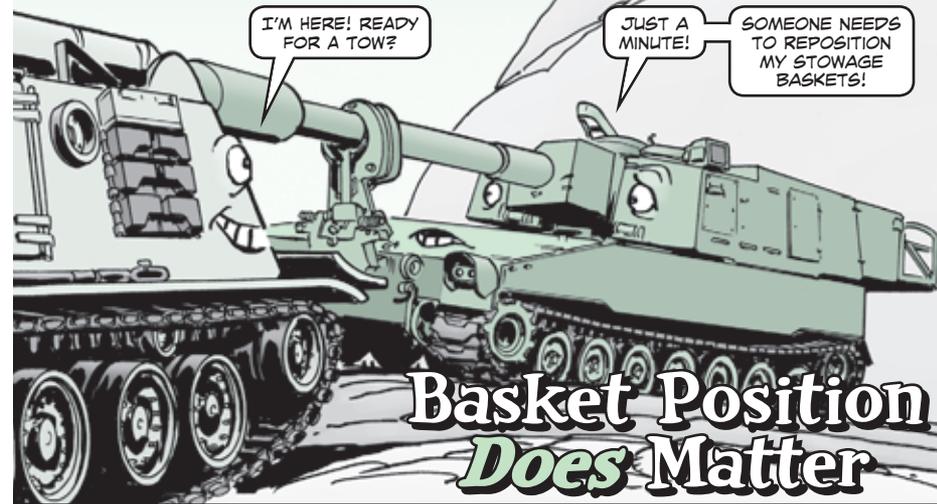
SFC S.T.B.



Dear Sergeant S.T.B.,

Consider the word passed. Mechanics, this is just another reason why it's important to follow the TM step-by-step when performing a maintenance task. You won't miss an important step and you'll keep the skin on your knuckles!

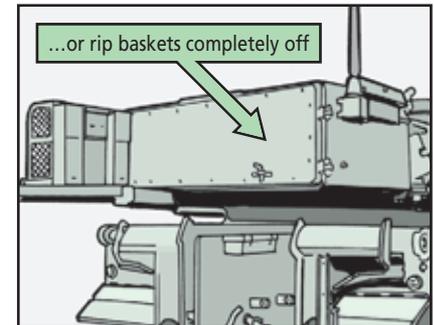
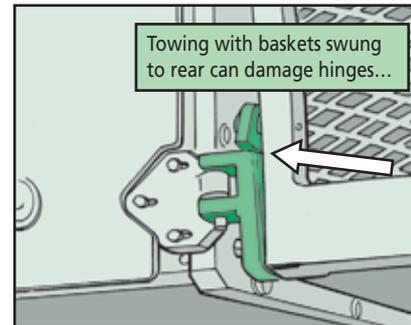
Half-Mast



Basket Position Does Matter

How you prepare a disabled M109A6 Paladin for towing may determine whether or not you're a basket case by the time you get back to the motor pool.

If the Paladin's stowage baskets are locked in the rear position and a tow bar is used, the baskets may hit the M88A1 recovery vehicle during turns. That can damage the baskets or even rip them completely loose. It doesn't do the M88A1 any good either.



So lock the baskets in the forward position to keep them out of the way during towing.

That step makes the baskets the widest portion of the howitzer, so you may need to return them to the rear position when towing through a narrow area. Just remember to lock the baskets in the forward position once you're back in the open.

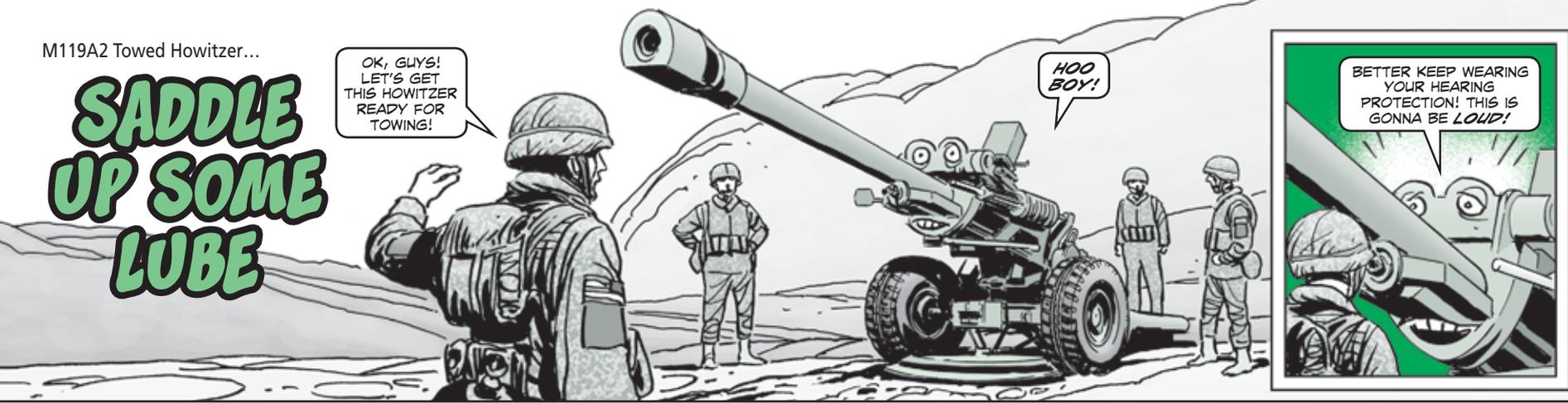
Any time you must tow a Paladin with the baskets in the rear position, use a ground guide to prevent damage during turns.

SADDLE UP SOME LUBE

OK, GUYS! LET'S GET THIS HOWITZER READY FOR TOWING!

HOO BOY!

BETTER KEEP WEARING YOUR HEARING PROTECTION! THIS IS GONNA BE LOUD!



SKREEE-EEE-EEEK

BEEN *IGNORING* THE SADDLE PINTLE LUBE FITTINGS ON YOUR M119A2 HOWITZER LATELY?

WHAT?

YOU'LL HAVE A LOT HARDER TIME IGNORING THAT EAR-SPLITTING **SKRE-E-E-EK!** WHEN MOVING THE GUN TO THE TRAVEL OR FIRING POSITION.

WITHOUT REGULAR LUBE, THE SADDLE PINTLE **DRIES UP!**

THAT MAKES IT A LOT **HARDER—AND NOISIER—** TO TRAVERSE AND MOVE THE GUN TO AND FROM THE TRAVEL AND FIRING POSITIONS.

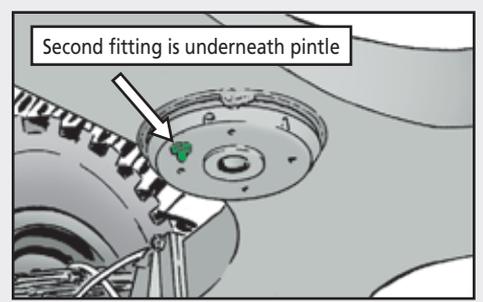
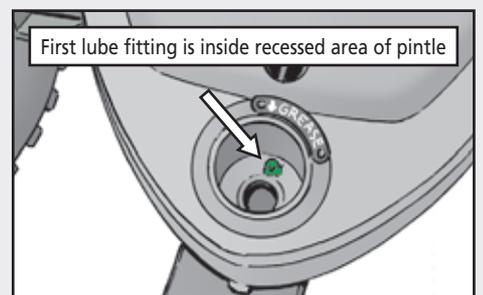
EVENTUALLY, IT MIGHT **NOT MOVE AT ALL!**

‘Course, location of the grease fittings is part of the problem. The first grease fitting is located on top but inside the recessed portion of the pintle. Its position is marked by a small metal plate, NSN 9905-01-341-8591. The plate is labeled GREASE and has an arrow that points to the fitting.

Unfortunately, that plate is usually either missing or covered with dirt. The pintle itself can fill with dirt, too. That also makes the fitting hard to find.

The second fitting is under the pintle, so it’s easy to overlook unless you know where to find it.

Lube both of the fittings weekly with WTR, NSN 9150-00-944-8953. Your howitzer—and your eardrums—will thank you.



M113A3 FOV Radiator Hose Clamp

The radiator hose clamp, NSN 4730-00-278-2523, shown as Item 3 in Fig 49 of TM 9-2350-277-24P (Oct 03), is too large. Instead, use NSN 4730-00-277-6204 (CAGE 58536, PN A-A-52506-F-06) to get the smaller clamp you need for the M113A3 FOV.

M109-Series Howitzer Bore Evacuator

Page J-4, Para J-6.d.(4), of TM 9-1000-202-14, *Evaluation of Cannon Tubes*, says to use molding material when looking for pitting on your M109-series howitzer’s bore evacuator. However, no NSN is provided for the molding material. Get it with NSN 9330-01-564-4432. Instructions on how to apply it are on the container.

M1117 Armored Security Vehicle...

Lube So Your ASV Lasts!

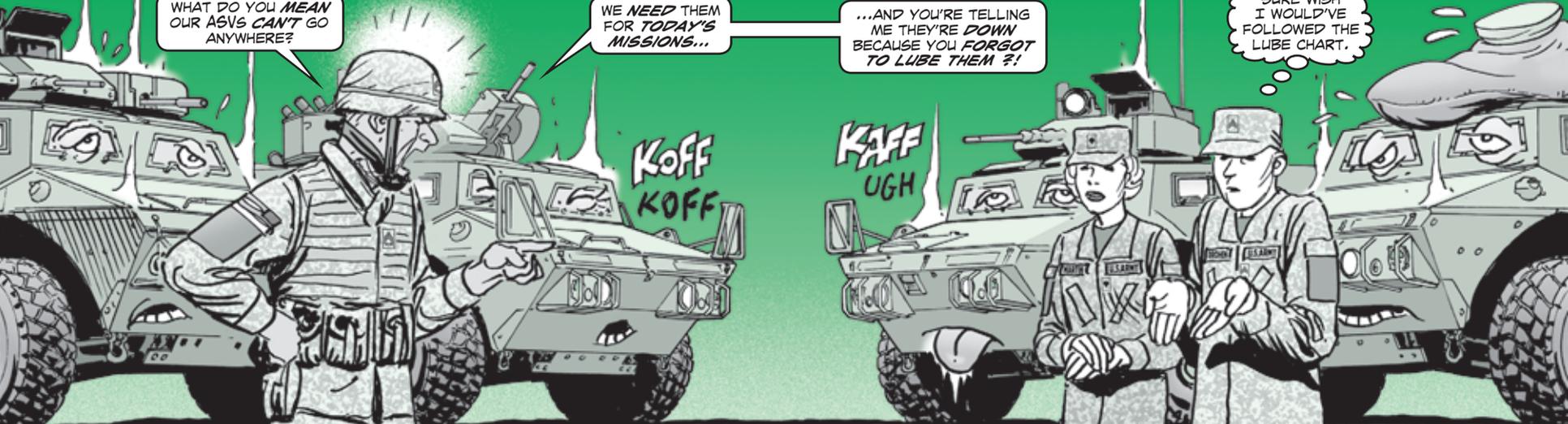
OH MY OH MY

WHAT DO YOU MEAN OUR ASVS CAN'T GO ANYWHERE?!

WE NEED THEM FOR TODAY'S MISSIONS...

...AND YOU'RE TELLING ME THEY'RE DOWN BECAUSE YOU FORGOT TO LUBE THEM ?!

SURE WISH I WOULD'VE FOLLOWED THE LUBE CHART.



Dear Editor,

One of the ASV Field Service Representatives (FSRs) here in Iraq brought something to my attention. It appears that many units are not following the lubrication charts shown in Para 4-7 on Page 4-13 of TM 9-2320-307-24, especially when it comes to the wheel ends.

The wheel ends (or wheel hubs) are listed as Item B in the lube chart. The basic requirement is to check and fill wheel ends quarterly or every 3,000 miles.

While checking the fleet here, the ASV FSR and unit maintenance personnel noticed that many of the wheel end check points had not been touched. In fact, CARC paint was still over the check/fill ports! These ASVs were either very low on lube, had contaminated lube, or in some cases, had NO GO 85W140 lubricant in them.

Would you remind the field to follow lubrication charts to prevent damage to the ASV? It sure would help out with ASV maintenance.

D. A. V.
TACOM LAR
Iraq

HERE'S WHAT THE EDITOR HAS TO SAY...



Editor's note: Readers, note this reminder. And remember that operating conditions in the sandbox may require more lubing than what the lube chart in your ASV's maintenance manual prescribes.

Here are some other lube-related pointers to keep in mind:

- Eyeball the lube chart carefully.

| Item | Lubricant | Capacity | Procedure | Interval (whichever occurs first) |
|---------------|-----------|-----------|--|--|
| A. Winch | GO 85W140 | 1-1/4 Pt. | Check and Fill Drain and Refill Clean and Coat | Monthly or 1,000 Miles (1,600 Km) Annual or 12,500 Miles (20,000 Km) Semi-Annual or 6,000 Miles (9,600 Km) |
| B. Wheel Ends | GO 85W140 | 0.8 Pt. | Check and Fill Drain and Refill | Quarterly or 3,000 Miles (4,800 Km) Biennially or 24,000 Miles (38,000 Km) |

- Before and after lubrication, wipe off all oil fill holes, level plugs and grease fittings.
- Clean lubrication equipment before and after each use.
- Operate lubrication equipment carefully and spread the lube evenly.
- Every 1,000 miles, monthly, or as operating conditions require, lubricate your ASV's door and hatch hinges and latches, control clevises and pins, control levers, cables, seat belt hinge latches and moving seat parts with CLP, NSN 9150-01-054-6453.

Don't Let the CHU Fall on You!

IN LATE 2008, A SOLDIER DIED WHEN HE WAS CRUSHED BY A CONTAINER HANDLING UNIT (CHU).

THE SOLDIER WAS ACTING AS A GROUND GUIDE WHILE THE PLS OPERATOR USED THE 1,600-LB CHU LIFTING FRAME TO MOVE MILVANS.

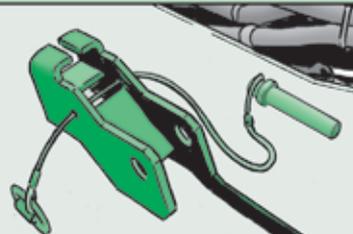


THEY WERE ON THE LAST LIFT OF THE DAY WHEN THE GROUND GUIDE MOVED BETWEEN THE PLS AND A MILVAN. UNFORTUNATELY, THE TEAM WASN'T USING THE CHU'S BAIL BAR LOCKING DEVICE. THE LIFTING FRAME FELL OFF THE CHU'S HOOK, CRUSHING THE GROUND GUIDE.

PREVENT THESE ACCIDENTS FROM HAPPENING TO YOU OR YOUR FRIENDS.

USE THE BAIL BAR LOCKING DEVICE.

IT'S STOWED ON THE CHU TO PROTECT YOU!



Use CHU's bail bar locking device to protect lives

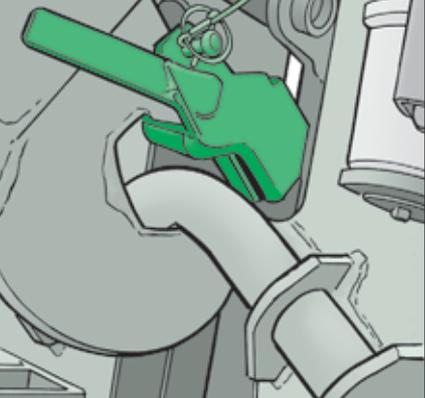
FOR SAFETY, THE BAIL BAR LOCK **MUST** BE USED WHEN OPERATING THE CHU ON YOUR PLS OR HEMTT.

IT'S A FAILSAFE DEVICE THAT YOU HAVE TO PROPERLY USE.

SO BEFORE YOUR NEXT CONTAINER-MOVING MISSION, EYEBALL PARAGRAPHS 2-32 THROUGH 2-44 IN TM 9-2320-364-10 FOR YOUR PLS.

EYEBALL PARAGRAPH 2-10.11 IN TM 9-2320-304-14&P OR THE LATEST HEMTT IETM'S LHS OPERATING INSTRUCTIONS, TOO.

Properly installed bail bar lock



MAKE SURE YOU KNOW HOW TO USE THE BAIL BAR LOCK AND WHAT TO DO TO STAY SAFE.

AND NOTE THESE TWO REMINDERS...

- Before using the CHU, check the bail bar lock for a missing or damaged pin or lock pin, or a deformation greater than $\frac{3}{16}$ of an inch. If you find damaged or missing parts, your PLS or HEMTT is not mission capable.
- Make sure you and your buddies stay out of harm's way on every lift while operating the CHU.

Stay clear when CHU is lifted!



FAB FABRICATION FOR WHEEL BEARING WRENCH



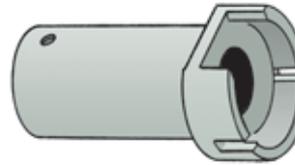
Dear Editor,

While performing wheel maintenance on our HEMTT, we discovered a problem. Paragraph 12-2 in TM 9-2320-279-20-2 covers the wheel and drum assembly wheel bearing and stud removal and installation for the number 1 and 2 axles. On Page 12-8, the TM says to tighten down the locknut to 100 lb-ft, loosen 1/2 turn, and retighten to 50 lb-ft using the wheel bearing wrench.

Here's the question we had: How do you torque the locknut down when there is no place for a torque wrench to attach to the tool?

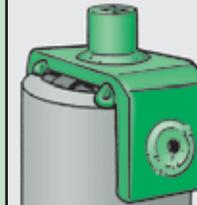
Our solution was to weld an adaptor to the end of the bearing nut socket, NSN 5120-01-279-4789. And use a 1/2 drive torque wrench. Your readers can benefit from this tip.

Take bearing nut socket, NSN 5120-01-279-4789, and...



...weld an adaptor to the end of it so it looks similar to this

Side view



Top view



B. V.
QA/Maintenance Coordinator
TACOM Transportation Support
Ft Leonard Wood, MO

Editor's note: Thanks for the tip, Sir. Readers, make a note of this. Also, Page F-33 in Appendix F of TM 9-2320-279-20-3, (Apr 87, w/ Ch8, Jul 05), gives fabrication instructions for the socket, which is a similar solution. The fabrication uses bearing nut wrench, NSN 5120-01-279-4789, and gives instructions to weld a plate with an opening for a torque wrench to the socket. TACOM says the current socket, PN 3335074 and NSN 5130-01-520-9330, has a square drive end.

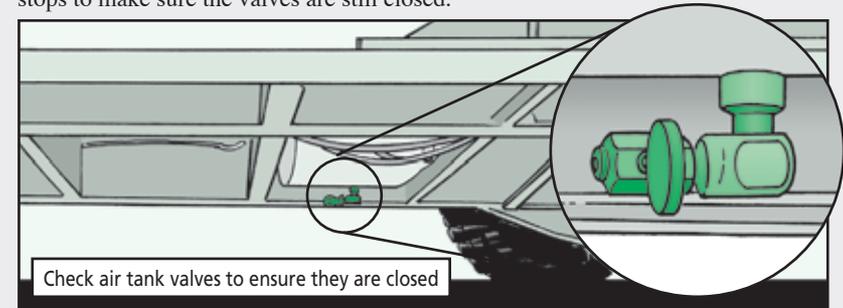
M989A1 HEMAT Trailer...

DON'T BRUSH OFF AIR TANKS

Cross-country driving can have a bad effect on your M989A1 HEMAT trailer.

Brush smacks against the side of the trailer, hitting the air tank valves. That can actually knock open the valves and drain out the air. No air means no brakes or locked spring brakes on the rear wheels.

So when you hit the back country, take a quick look at the trailer's air tanks during stops to make sure the valves are still closed.



HMMWV...

WHOLE LOTTA SHAKIN' GOIN' ON!



You HMMWV drivers are well acquainted with vibration, especially when you go through the shake, rattle and roll of cross-country driving.

What you may not know is that vibration is just the first step of a domino effect that can cause real damage to your truck.

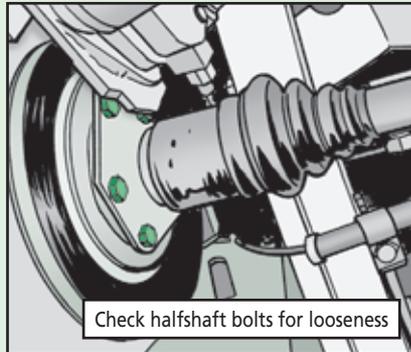
As you rock and roll over hill and dale, vibration can loosen the halfshaft bolts. As they back out, the bolts catch on the brake caliper adapter and eventually break off.

Then the brake rotor wobbles and wears out the brake pads. Being brakeless in a moving vehicle is bad news!

You can't do anything about the vibration, but you can keep a close eye on the halfshaft bolts. The time to look is during PMCS and whenever you stop for a few minutes while in the field.

Look for shiny areas under and around the bolt heads. If you see a loose bolt, report it. Your mechanic will replace the bolt, NSN 5306-01-185-7048, and install a new two-piece lock washer, NSN 5310-01-457-3292.

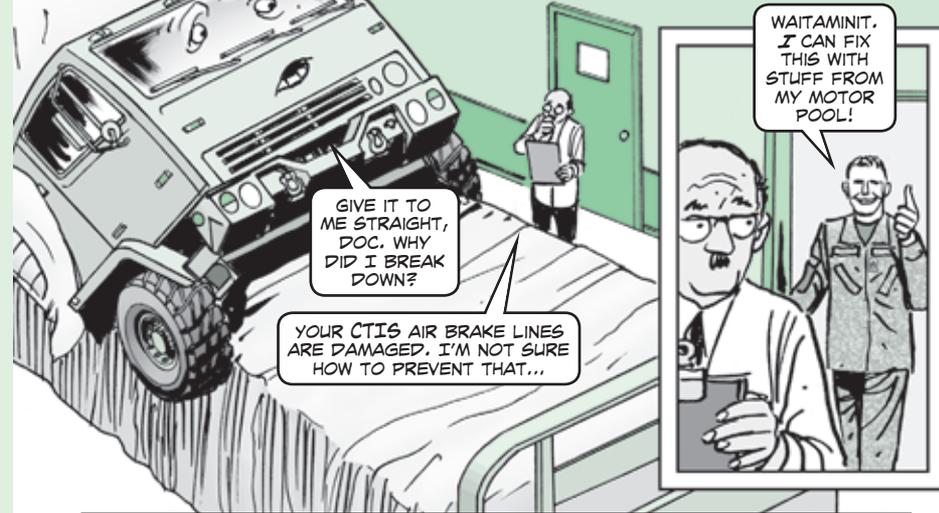
Never reuse the lock washer. It won't hold the second time around. It's a one-time use item. Also, make sure all bolts and washers are replaced any time the disc rotor or halfshaft assembly is replaced.



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

FMTV...

Preserve CTIS Air Brake Lines



Dear Editor,

While servicing our FMTV, I noticed that the front CTIS air brake lines had been damaged—even punctured! This happened because the brake lines rubbed against each other whenever the steering knuckle assembly turned.

Unnecessary breakdowns or early replacement of these lines can be easily avoided using my solution that was approved by the Army's SMART program.

This fix is cheap, works on all FMTVs, extends the life of the hoses and cuts down on maintenance costs. Plus, the materials needed to do the work can be found in any motor pool.

First, cut the zip ties that hold the ABS cable. Then install two 5/8-in wide nylon-coated loop clamps, NSN 5340-00-725-5280. Interconnect these clamps with each other at the top of the CTIS main lines using bolt, NSN 5306-01-330-8490; washer, NSN 5310-01-359-8806; and nut, NSN 5310-01-429-7239.



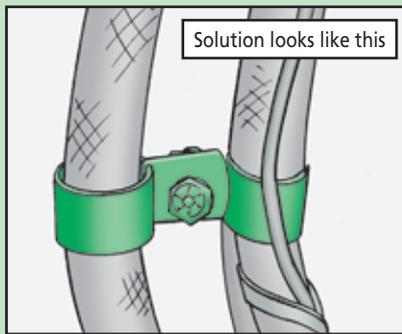
[Click here for a copy of this article to save or email.](#)

It's all right if you don't have these exact NSNs. The important thing is that the parts fit snugly and have a protective coating on them so they don't chafe the lines.

Also, make sure the hose clamps are the same diameter as the hoses to avoid slippage. Finally, secure the ABS cable back to one of the CTIS hoses with a zip tie after installing the clamps.

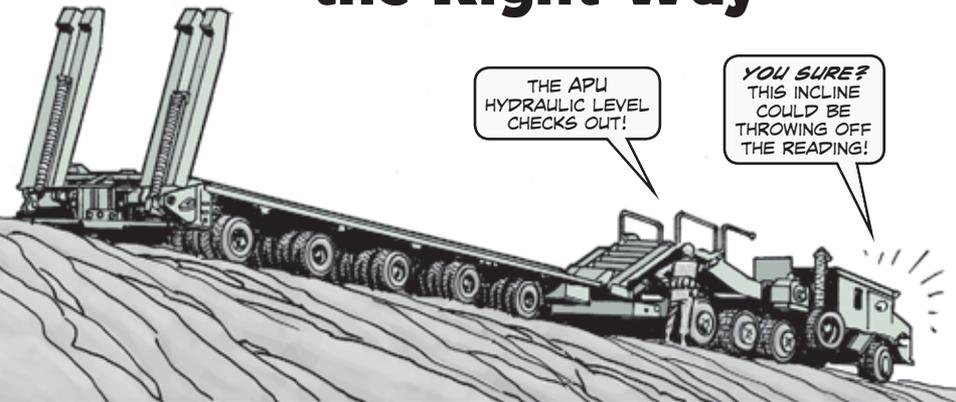
SSG J.E.B.
137th QM Co.
Iraq

Editor's note: This tip extends the life of your FMTV's CTIS air brake lines. Thanks, Sergeant Bascovsky.



M1000 HET
Semitrailer...

Check APU Reservoir the Right Way



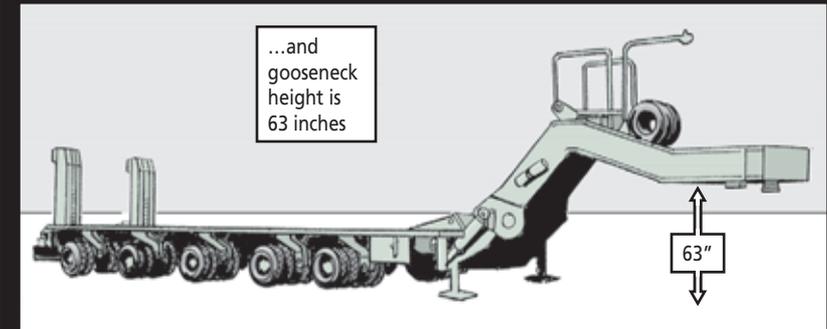
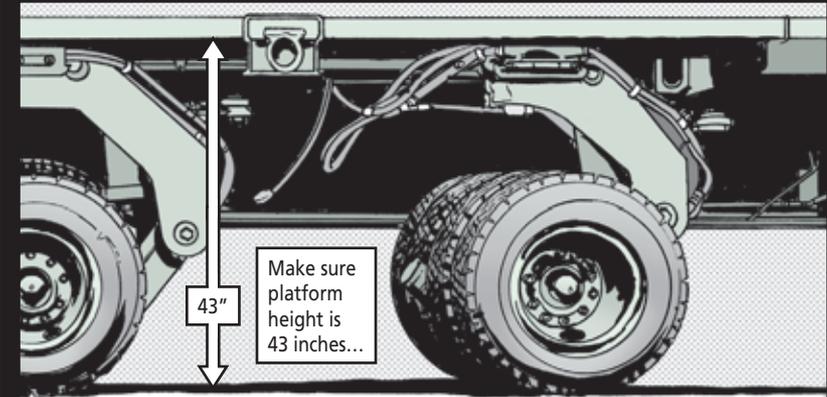
When checking the auxiliary power unit (APU) hydraulic reservoir level on the semitrailer's gooseneck, a lot of operators just take a quick look at the indicator tube.

Being in a hurry can lead to trouble, especially if you're parked on uneven ground or the trailer's platform or gooseneck height is off. Either one could mean you get a FULL reading even if the hydraulic fluid level is low or high.

Too little fluid and you can't raise or lower the trailer. Too much fluid can blow seals.

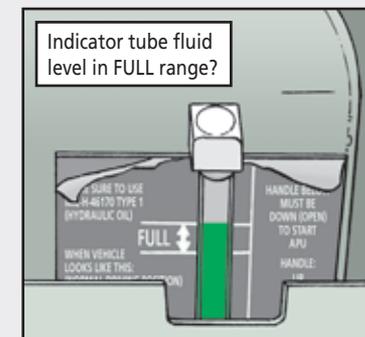
Here's how to get a good hydraulic fluid level reading:

1. Start the APU.
2. Make sure the trailer is parked on level ground with no side slopes.
3. Set the platform height at 43 inches and the gooseneck height at 63 inches.
4. Shut down the APU.



Now it's OK to check the hydraulic reservoir fluid level. The fluid in the indicator tube should measure within the FULL range on the reservoir's decal. If the decal is missing or too damaged to read easily, get your mechanic to replace it with NSN 7690-01-357-4882.

A reservoir that's too full should be drained following the instructions starting on Page 4-69 of TM 9-2330-381-14 (Nov 94 w/ Ch 4, Apr 08). If the reservoir is low, add fluid following the instructions that start on Page 4-67 of the TM.



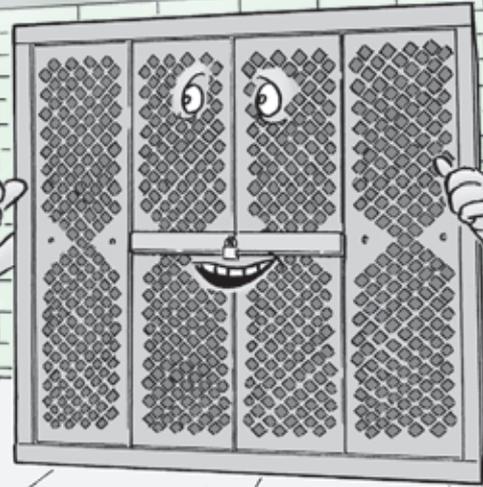
Small Arms...

RACK ALTERNATIVES EXPANDED

WHAT TH-!? WHERE DID EVERYTHING GO!?

WHO'S GOT TWO THUMBS AND ALL THE ARMS FROM THE ARMS ROOM?

THIS GUY!



SURE, THE ABOVE MAY BE AN EXAGGERATION, BUT THE POINT IS CLEAR: THE SPACESAVER MAKES A **BIG** DIFFERENCE IN YOUR ARMS ROOM!

SPACESAVER'S UNIVERSAL RACK SYSTEM IS A MODULAR RACK SYSTEM THAT CAN BE ADAPTED FOR ALL ARMY SMALL ARMS, EVEN PISTOLS.

HERE ARE SOME OF THE BENEFITS OF THE SPACESAVER UNIVERSAL RACKS...



Flexibility—The racks can be used to store all small arms, their optics and other accessories. Every inch of the rack can be used for some sort of storage. Because weapons can be stored with their optics installed, the optics don't need to be re-zeroed.

Security—Spacesaver racks have locking arms with steel lock rods that prevent the doors from being opened. That meets Army security standards. Because the racks can be ganged together, no chains or welding are necessary for security.

Space efficiency—The tall Spacesaver rack (61 inches high) is for the larger weapons like the M2 machine gun. The standard Spacesaver rack (45 inches high) works well with smaller weapons. Both are 16.25 inches deep and 42 inches wide, which allows weapons to be stored with their optics attached. Spacesaver racks also have retractable doors, which makes it easier to use adjacent racks without the doors blocking each other.

Visibility—All racks have perforated doors, sides, and backs that allow inventory of the contents without having to open up the racks.

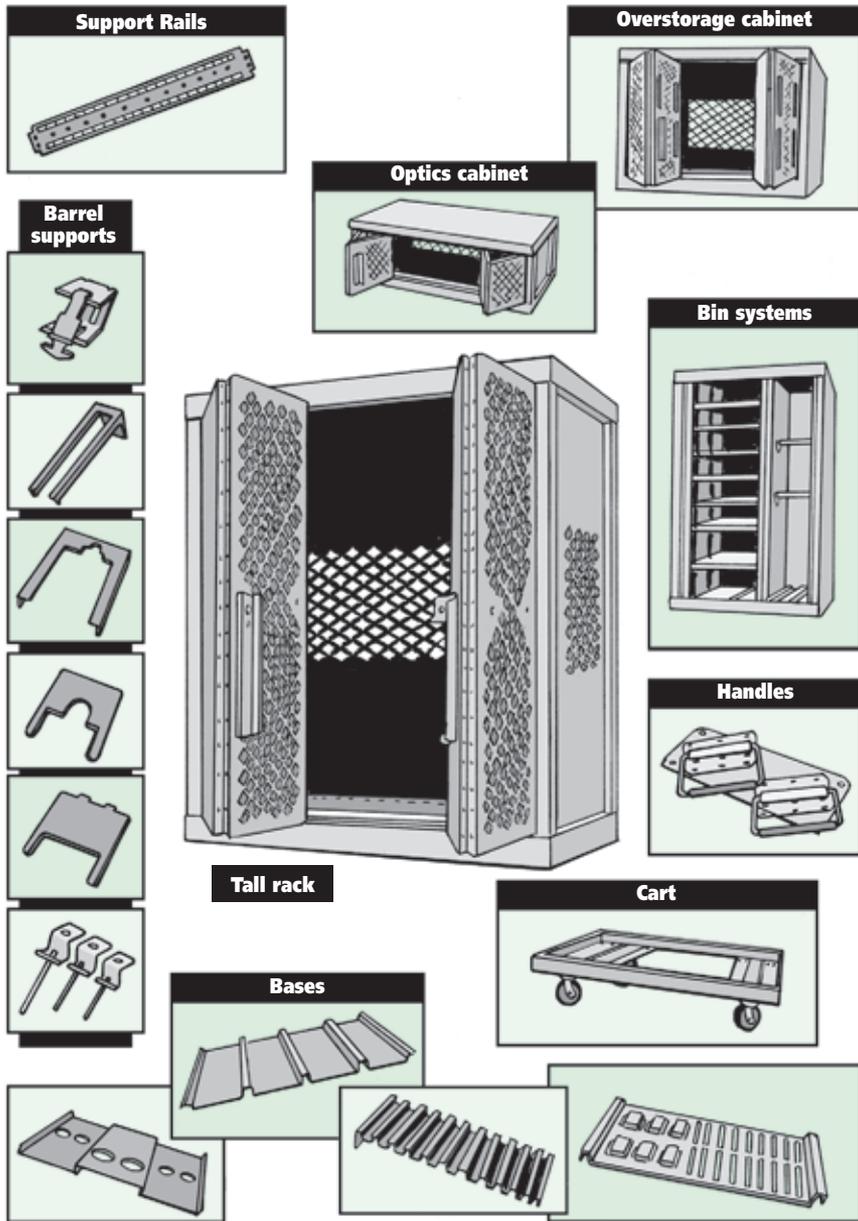
Durability—The new racks are constructed of heavy gauge metal. The parts of the rack that contact weapons have a vinyl coating or are made of thermoplastic.

Mobility—A specially designed cart can transport the racks.

Transportability—Optional handles, barrel supports and a universal base let you transport weapons safely in the racks. Space-saver recently began offering mini-racks, which are slightly more than half the width of regular racks, making them lighter and easier to transport.

SPACESAVER RACK COMPONENTS AND THEIR NONGS ARE ON THE NEXT PAGE!





HERE ARE THE AVAILABLE SPACESAVER RACK COMPONENTS AND THEIR NSNs.

THE NON-TRANSPORT CABINETS CAN BE TRANSPORTED IF YOU PURCHASE OPTIONAL HANDLES, BARREL SUPPORTS AND UNIVERSAL BASES.

THE TRANSPORT CABINETS COME WITH THOSE ITEMS ALREADY INSTALLED.



| Standard non-transport cabinets (45 inches wide) | |
|--|--------------|
| Weapons | NSN 1095-01- |
| M2 (holds 2 M2s and 4 barrels) | 550-8020 |
| M16/M4 (holds 10) | 523-4304 |
| M240B/G (holds 6) | 550-7893 |
| M249 (holds 6) | 523-4303 |
| MK 19 or mortar tubes (holds 4) | 550-7881 |

| Standard transport cabinets (45 inches wide) | |
|--|--------------|
| Weapons | NSN 1095-01- |
| M2 (holds 2 M2s and 4 barrels) | 550-7885 |
| M16/M4 (holds 10) | 550-5429 |
| M240B/G (holds 6) | 550-7890 |
| M249 (holds 6) | 550-5431 |
| MK 19 or mortar tubes (holds 2) | 550-7863 |

| Mini non-transport cabinets (22 inches wide) | |
|--|--------------|
| Weapons | NSN 1095-01- |
| M16/M4 (holds 5) | 561-5353 |
| M240B/G (holds 3) | 561-5366 |
| M249 (holds 3) | 561-5390 |
| M2 (holds 1 M2 and 2 barrels) | 561-5419 |
| MK 19 (holds 1) | 561-5422 |

| Mini transport cabinets (22 inches wide) | |
|--|--------------|
| Weapons | NSN 1095-01- |
| M16/M4 (holds 5) | 561-5359 |
| M240B/G (holds 3) | 561-5379 |
| M249 (holds 3) | 561-5403 |
| M2 (holds 1 M2 and 2 barrels) | 561-5431 |
| MK 19 (holds 1) | 561-5442 |

More bin systems and individual parts are available through Spacesaver and will eventually be added to the Army system.

Spacesaver will help units design a layout for their arms rooms and supervise installation for free. For an additional price, Spacesaver will install the racks. To arrange a meeting with Spacesaver, call (800) 492-3434 or email: ssc@spacesaver.com

You can also visit the Spacesaver website: <http://uwr.spacesaver.com>

Standard Racks

The old standard Army racks for specific weapons are still available:

| Rack | Weapons | NSN 1095- |
|------|----------------------|-------------|
| M11 | M1, M14 rifle | 00-897-8755 |
| M12 | M16 rifle/M4 carbine | 00-407-0674 |
| M13 | M249 machine gun | 01-197-7902 |
| M14 | M9/M11 pistol | 01-236-2203 |
| M15 | MK 19 machine gun | 01-216-9295 |
| | M240 machine gun | 01-466-2065 |

The universal rack, which can be used for any weapon, comes with NSN 1095-01-454-6320.

For any standard rack questions, contact TACOM at DSN 793-7251/(309) 782-7251. For rack certification questions, contact DSN 793-1797/4268 or (309) 782-1797/4268.

Visit the small arms rack website:

http://tri.army.mil/lc/cs/csl/small_arms_storage_racks.htm



LOOK FOR BARREL EXTENSION CRACKS



A CRACKED BARREL EXTENSION ON YOUR M2 MACHINE GUN CAN LEAD TO DAMAGE TO BOTH THE WEAPON AND, MORE IMPORTANTLY, TO YOU.

THAT'S WHY IT'S **CRITICAL** THAT YOU SPOT BARREL EXTENSION CRACKS ASAP.

OF COURSE, THE BEST COURSE IS TO OPERATE YOUR M2 SO YOU DON'T CAUSE CRACKS.



HOW DO YOU DO THAT?

DON'T LET THE BOLT SLAM FORWARD ON AN EMPTY CHAMBER OR WITH THE BARREL NOT INSTALLED.

THAT DAMAGES NOT ONLY THE EXTENSION, BUT ALSO THE BARREL AND BOLT.

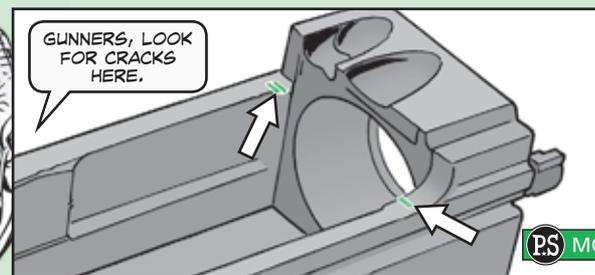


Before headspacing, make sure the barrel is completely screwed in the barrel extension so that the breech end of the barrel protrudes through the barrel extension. This is a **must** before headspacing because if the barrel isn't completely screwed in you'll get bad headspacing. If the barrel can't be screwed in completely, tell your repairman. He can inspect the barrel extension threads for damage as shown in Step 3 of WP 0010 of TM 9-1005-213-23&P.

Another **before firing** check gunners need to do is look for cracks in the barrel extension. Lift the feed tray and eyeball the barrel extension side rails for cracks around the forward corners. If you spot cracks, tell your repairman. Any M2 with cracks should not be fired.



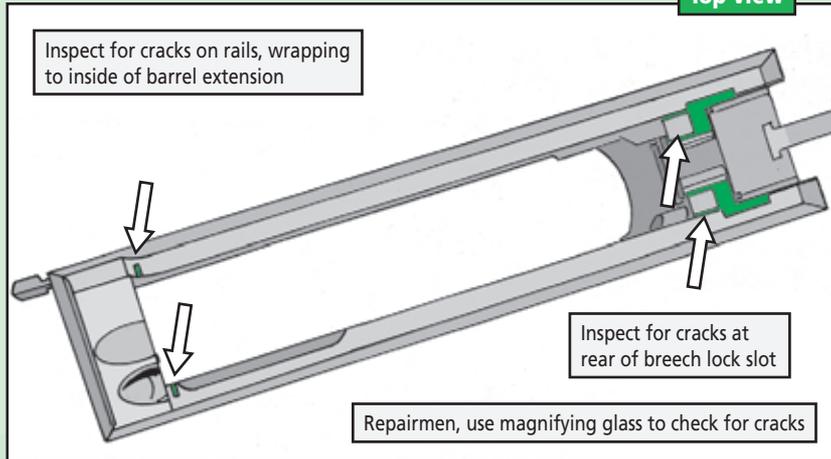
GUNNERS, LOOK FOR CRACKS HERE.



PS MORE

Repairmen, when M2s come back from the field you should check the barrel extension side rails for cracks, particularly in the forward corners. Use a magnifying glass, NSN 6650-00-133-7743. If you detect or even suspect cracks, send the M2 to the next level of maintenance. They can use the dye penetrant kit, NSN 6850-00-826-0981, to make a thorough inspection of the barrel extension.

Top view

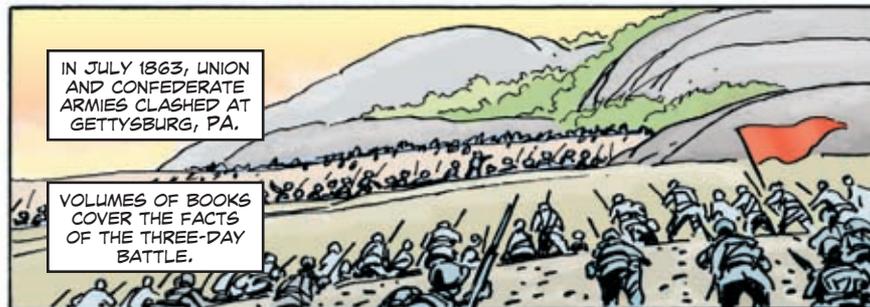


HERE ARE THE INSTRUCTIONS FOR USING THE KIT...

1. The area to be inspected must be free of all substances like oil and solid film lubricant. Spray a small amount of the kit's cleaner/remover on the area and allow the cleaner/remover to dry. Wipe off the area with a clean cloth.
2. Spray on only enough penetrant to wet the area. Let the penetrant set for 10 minutes, but no longer. You don't want the penetrant to dry.
3. Wipe off the penetrant with a dry, clean cloth. If some of the penetrant has dried, spray cleaner/remover on a clean cloth and wipe off the dried penetrant. Don't flush the surface with cleaner/remover—that spoils the test.
4. Shake the developer can well and spray a thin, even coat of developer over the area being inspected. Give the developer a few minutes to work. Any cracks will show up as a change in color. Cracks make the M2 unserviceable and it should be turned in.
5. If there are no cracks, spray cleaner/remover on the area. Let it dry and wipe off the area with a clean cloth. Then apply solid film lubricant.

SEE TACOM MAINTENANCE ADVISORY 09-017 FOR MORE INFO.

GETTYSBURG THE EVE OF BATTLE

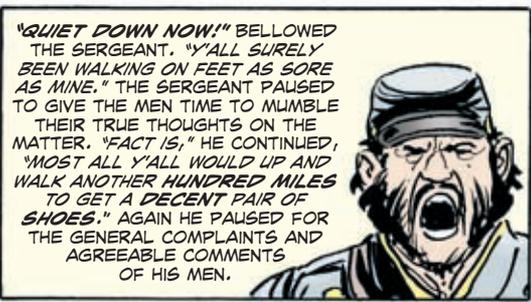




CONFEDERATE PRIVATE NED ANDERS GROANED AS THE SERGEANT CALLED THEM BACK TO THE ROAD, WHO WOULD HAVE GUESSED THE SUMMER SUN COULD BE AS HOT AND VEXING SO FAR NORTH OF VIRGINIA?

HE'D ALWAYS THOUGHT PENNSYLVANIA WAS A COOL PLACE.

BUT THEY'D BEEN MARCHING ALL DAY AND HIS FEET WERE SORE AND HOT AND DUSTY.



"**QUIET DOWN NOW!**" BELLOWED THE SERGEANT. "Y'ALL SURELY BEEN WALKING ON FEET AS SORE AS MINE." THE SERGEANT PAUSED TO GIVE THE MEN TIME TO MUMBLE THEIR TRUE THOUGHTS ON THE MATTER. "FACT IS," HE CONTINUED, "MOST ALL Y'ALL WOULD UP AND WALK ANOTHER HUNDRED MILES TO GET A DECENT PAIR OF SHOES." AGAIN HE PAUSED FOR THE GENERAL COMPLAINTS AND AGREEABLE COMMENTS OF HIS MEN.



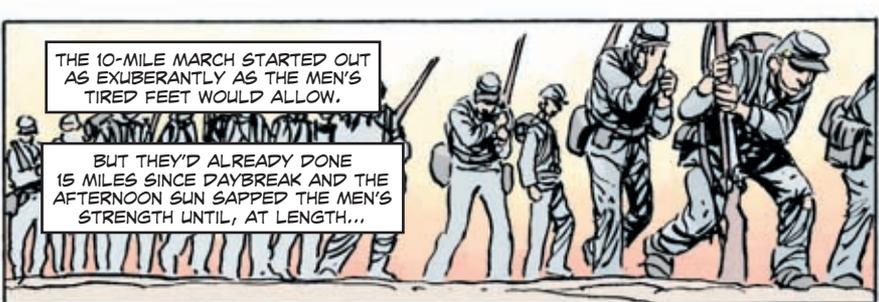
"TIS A FACT THE COLONEL JUST GOT WORD THERE'S A WAREHOUSE FULL OF SHOES NOT ANOTHER 10 MILES EAST OF THIS HERE SPOT!" HE PAUSED, LETTING IT SINK IN. "Y'ALL WANT TO GO GET THOSE SHOES?"



THE RESPONSE WAS EVEN MORE BOISTEROUS THAN HE EXPECTED.



"WELL, WHAT ARE Y'ALL WAITING FOR? MOVE OUT!"



THE 10-MILE MARCH STARTED OUT AS EXUBERANTLY AS THE MEN'S TIRED FEET WOULD ALLOW.

BUT THEY'D ALREADY DONE 15 MILES SINCE DAYBREAK AND THE AFTERNOON SUN SAPPED THE MEN'S STRENGTH UNTIL, AT LENGTH...



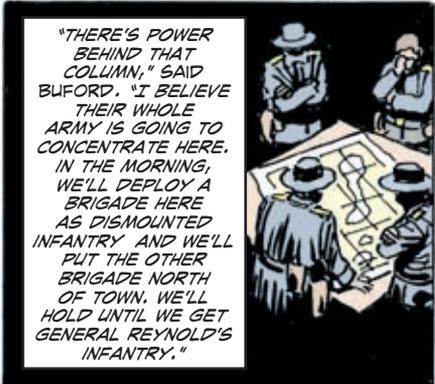
...PRIVATE ANDERS FELL EXHAUSTED WHEN MG HENRY HETH DECIDED HIS MEN NEEDED REST BEFORE RAIDING THE SMALL TOWN FOR SHOES AND SUPPLIES.

SERGEANTS DID WHAT THEY COULD TO EVENLY DISTRIBUTE FOOD AND AMMUNITION, BUT THE SUPPLY WAGONS WERE MILES AWAY, AND EVEN THEY DIDN'T HAVE FULL AMMUNITION STOCKS.

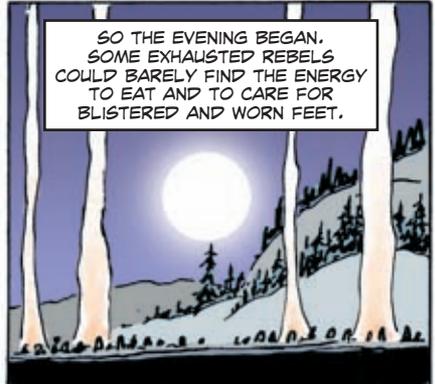
MANY SOLDIERS, USED TO HUNTING, SAW TO THEIR WEAPONS, BUT OTHERS, LIKE ANDERS WERE JUST TOO DRAINED TO CARE.



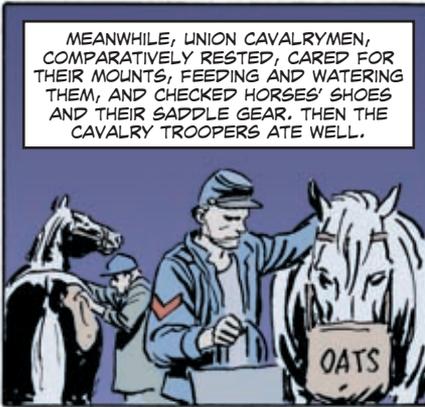
MEANWHILE... SERGEANT PETER LONIGAN HELD THE UNION CAVALRY'S FIRST DIVISION COLORS AS HE SAT HIS SADDLE. HIS COMMANDER, BG JOHN BUFORD, AND THE TWO BRIGADE COMMANDERS WERE WATCHING THE CONFEDERATE TROOPS STUMBLE INTO BIVOUAC.



"THERE'S POWER BEHIND THAT COLUMN," SAID BUFORD. "I BELIEVE THEIR WHOLE ARMY IS GOING TO CONCENTRATE HERE. IN THE MORNING, WE'LL DEPLOY A BRIGADE HERE AS DISMOUNTED INFANTRY AND WE'LL PUT THE OTHER BRIGADE NORTH OF TOWN. WE'LL HOLD UNTIL WE GET GENERAL REYNOLD'S INFANTRY."



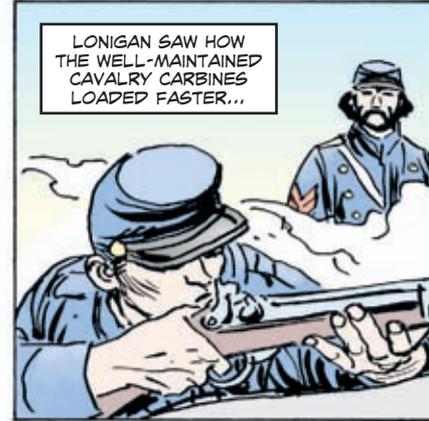
SO THE EVENING BEGAN. SOME EXHAUSTED REBELS COULD BARELY FIND THE ENERGY TO EAT AND TO CARE FOR BLISTERED AND WORN FEET.



MEANWHILE, UNION CAVALRYMEN, COMPARATIVELY RESTED, CARED FOR THEIR MOUNTS, FEEDING AND WATERING THEM, AND CHECKED HORSES' SHOES AND THEIR SADDLE GEAR. THEN THE CAVALRY TROOPERS ATE WELL.



IN THE EVENING, SERGEANT LONIGAN AND HIS FELLOW NCOs INSISTED THE MEN CLEAN AND SERVICE THEIR CARBINES AND PISTOLS. INSPECTIONS FOLLOWED ON EACH WEAPON...



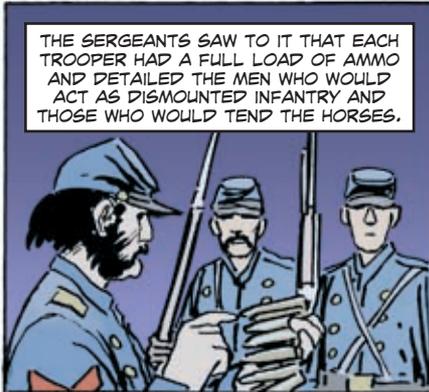
LONIGAN SAW HOW THE WELL-MAINTAINED CAVALRY CARBINES LOADED FASTER...



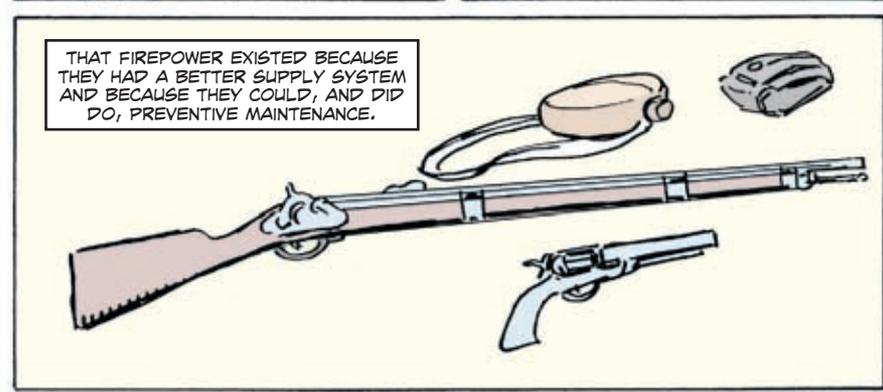
...AND ALMOST NEVER MISFIRED AS THE FRESH UNION TROOPERS MET AND HELD OFF GENERAL HETH'S CONFEDERATE DIVISION.



...AND ON THE CANNONS, AS WELL.



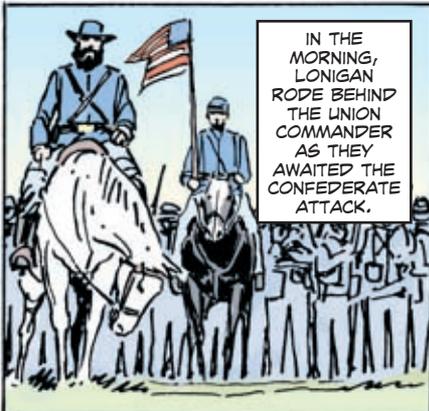
THE SERGEANTS SAW TO IT THAT EACH TROOPER HAD A FULL LOAD OF AMMO AND DETAILED THE MEN WHO WOULD ACT AS DISMOUNTED INFANTRY AND THOSE WHO WOULD TEND THE HORSES.



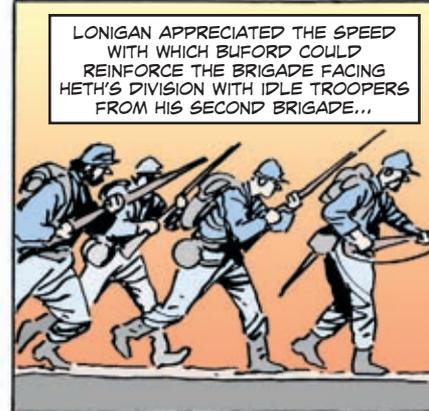
THAT FIREPOWER EXISTED BECAUSE THEY HAD A BETTER SUPPLY SYSTEM AND BECAUSE THEY COULD, AND DID DO, PREVENTIVE MAINTENANCE.



WITH ALL IN READINESS, THE TROOPERS RESTED AND WAITED FOR THE COMING BATTLE.



IN THE MORNING, LONIGAN RODE BEHIND THE UNION COMMANDER AS THEY AWAITED THE CONFEDERATE ATTACK.



LONIGAN APPRECIATED THE SPEED WITH WHICH BUFORD COULD REINFORCE THE BRIGADE FACING HETH'S DIVISION WITH IDLE TROOPERS FROM HIS SECOND BRIGADE...



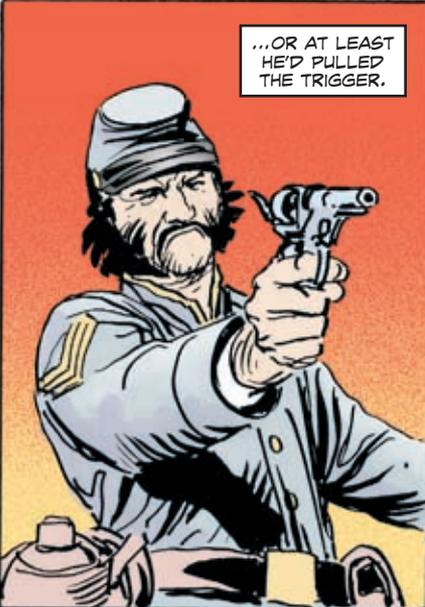
...WHO WERE WAITING TO BLOCK CONFEDERATE UNITS COMING FROM THE NORTH OF THE TOWN.



ANDER'S UNIT MOVED UP, IN LINE OF BATTLE THEY PREPARED TO FIRE EN MASSE AT THE UNION LINE.



HIS SERGEANT SIGHTED THE UNION COLOR BEARER RIDING BEHIND THE LINE, DREW A BEAD, AND ON THE ORDER, FIRED...



...OR AT LEAST HE'D PULLED THE TRIGGER.



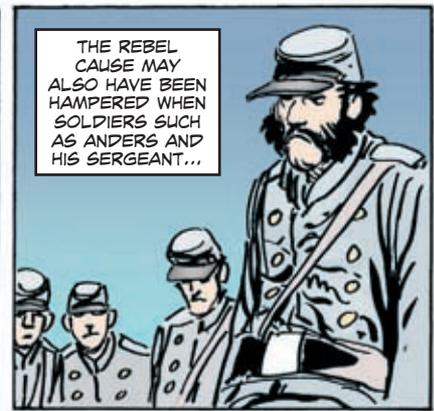
BUT THE HAMMER DIDN'T FALL BECAUSE DIRT HAD JAMMED THE HAMMER.



HETH'S DIVISION WAS HAMPERED BOTH BY A LACK OF SHOES...



...AND A SUPPLY CHAIN THAT COULDN'T PROVIDE MATERIEL AS QUICKLY AS NEEDED.



THE REBEL CAUSE MAY ALSO HAVE BEEN HAMPERED WHEN SOLDIERS SUCH AS ANDERS AND HIS SERGEANT...



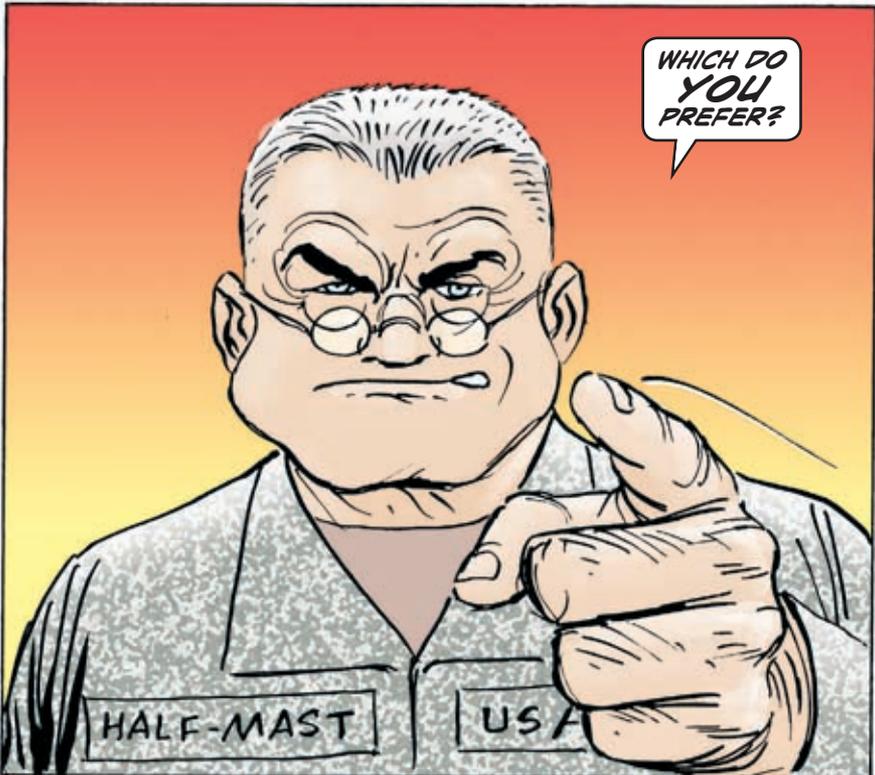
...FOUND THEIR POWDER WAS DAMP...



...OR THEIR PISTOL AND MUSKET HAMMERS FOULED.

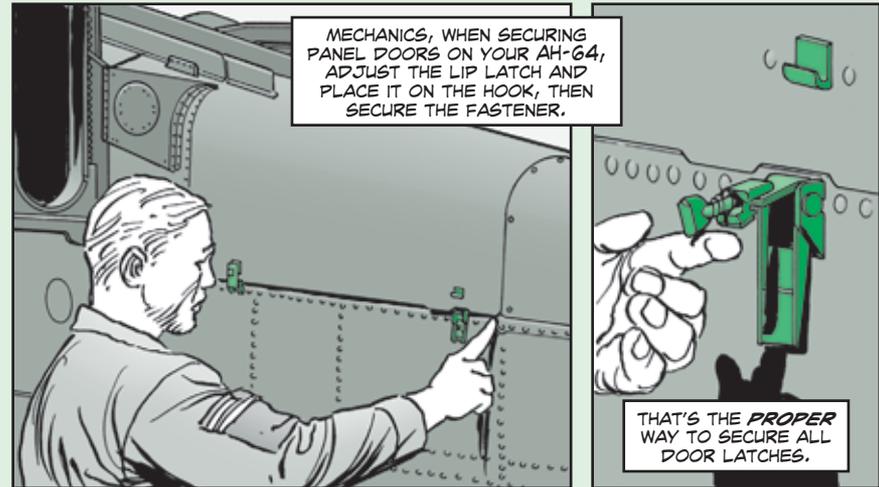


THE ATTENTION YOU GIVE TO PREVENTIVE MAINTENANCE NOW MAY MEAN THE DIFFERENCE BETWEEN LIFE AND DEATH, OR VICTORY OR DEFEAT.



WHICH DO YOU PREFER?

AH-64D... **DON'T SLAM THEM SHUT!**



MECHANICS, WHEN SECURING PANEL DOORS ON YOUR AH-64, ADJUST THE LIP LATCH AND PLACE IT ON THE HOOK, THEN SECURE THE FASTENER.

THAT'S THE *PROPER* WAY TO SECURE ALL DOOR LATCHES.



USING YOUR HAND TO SLAM DOWN THE FASTENER WITH THE LIP LATCH ADJUSTED TOO TIGHT ELONGATES THE HOOK PORTION OF THE LATCH.

DOING THIS REPEATEDLY PUTS STRAIN ON PANEL DOORS, DAMAGES THE LATCHES, AND LOOSENS RIVETS.



DON'T SLAM THE PANEL DOOR LATCHES SHUT IF THEY'RE TOO TIGHT.

TAKE THE TIME TO ADJUST AND SECURE THEM THE *RIGHT* WAY.

THAT SAVES YOU FROM HAVING TO REPAIR DAMAGED LATCHES THAT CAN'T TAKE THE ABUSE.

OH-58D...

SO, I GOT A LITTLE TRIGGER HAPPY.

CONTINUOUS FIRING OF GUN

WELL, LOOK AT WHAT YOUR FUN COST MY GUN!

HISSSS

Pilots, shooting rounds continuously from your .50-cal gun until it's empty may be fun, but when you're done your gun pays the price.

Proper operation of the gun means following the burst restrictions covered on Page 1-21 of TM 9-1090-214-23&P.

For non combat (sustained): 50 rounds per minute effective rate of fire, which means any combination of bursts not to exceed 50 rounds within a one minute period.

For non combat (maximum): 150 round burst followed by complete cooling—10 minutes.

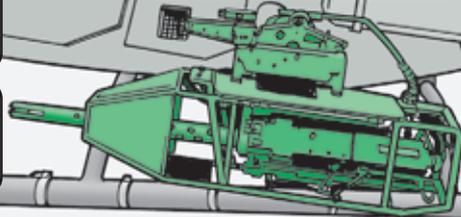
For combat: Continuous firing is unrestricted.

Exceeding these burst restrictions will overheat the gun and lead to weapon stoppage. It can also cause a cookoff—a round in the gun going off accidentally.

IF YOU WANT TO CONTINUE TO SHOOT, MOVE, AND COMMUNICATE...

...DON'T CONTINUALLY SHOOT WITH THAT TRIGGER-HAPPY FINGER.

Follow burst restrictions for gun



CH-47...

COVER OPENINGS BEFORE WASHING

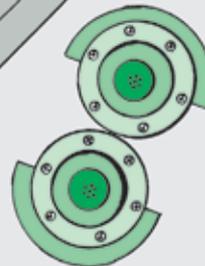
IT'S TIME FOR ANOTHER WASH.

COVER MY PORTS FIRST!

MECHANICS, YOU ALREADY KNOW HIGH PRESSURE WATER IS NOT GOOD FOR YOUR CHINOOK OR ANY OTHER BIRD.

It is **not** good if water gets into openings on your airframe. So at your next aircraft washing, cover airframe openings with aircraft covers or barrier material, NSN 8135-00-282-0565, to keep water out.

Take care to cover the pitot static ports and tubes. That keeps moisture from entering the lines of the pitot-static system, which will affect readings on flight instruments like your airspeed and vertical speed indicators.



Cover holes before washing



IF YOU DON'T WANT TO HEAR A MOUTHFUL FROM THE ELECTRICIAN WHO HAS TO DRAIN AND DRY THE PITOT-STATIC SYSTEM, KEEP ALL OPENINGS COVERED WHILE WASHING YOUR BIRD.

CH-47D/F...

NEW TORQUE WRENCHES FOR TORQUING



Mechanics, there are two new torque wrenches in the supply system for use on your Chinook. These wrenches will replace the current wrenches now being used.

Order torque wrench, NSN 4920-01-546-0471, for the forward and aft transmission mount bolts. The new wrench replaces NSN 4920-01-232-7706.

Order torque wrench, NSN 5120-01-563-5988, for the forward and aft rotor head retaining nuts. This new wrench replaces NSN 5120-01-136-2084.

Both wrenches have digital readouts, weigh much less than the current wrenches and cost less, too.

UH-60 Series...

Rotating Rotor Blades

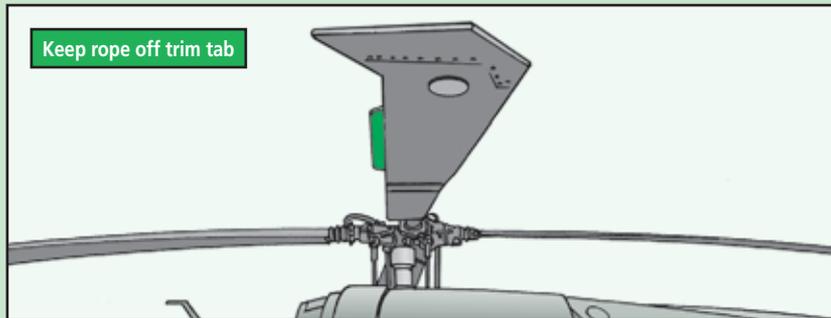
Mechanics, rotating Black Hawk blades may be a simple job, but it isn't as cut-and-dry as you may think.

Throwing a rope over the blades to turn them is OK, but keep the rope off the trim tab.

The trim tab is thin and light. Throwing a rope over the blade's trim tab and pulling can bend or break the tab. A damaged trim tab knocks the blades out of track.

Not only will the trim tab need repair but the rotor blades will need retracking and rebalancing.

Keep the rope off the trim tab when rotating blades. Your rotor shop will appreciate it.



Clothing...

GET YOUR AVIATOR UNDER-GARMENTS HERE!



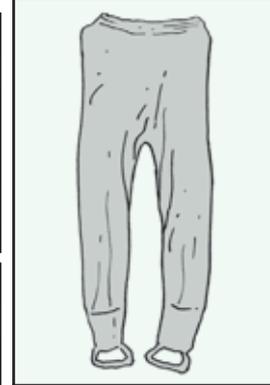
UNDER-GARMENTS—WE ALL WEAR THEM. WE ALL NEED THEM.

WITHOUT THEM, CLOTHING JUST WOULDN'T FEEL RIGHT.

BUT FOR AVIATORS, NOT JUST ANY UNDIES WILL DO!

If your flyer's undergarments look worn out, ask your supply to order from the list below.

Need a special size flyer drawers?



Use NSN 8415000DRW902 and request a special measurement.

Need a special size undershirt?



Use NSN 8415000UND904 and request a special measurement.

| Flyer Drawers | | |
|---------------|------|----|
| NSN 8415- | SIZE | UI |
| 00-467-4075 | S | PR |
| 00-467-4076 | M | PR |
| 00-467-4078 | L | PR |
| 00-467-4100 | XL | PR |
| 01-043-4036 | XS | PR |

| Flyer Undershirt | | |
|------------------|------|----|
| NSN 8415- | SIZE | UI |
| 00-485-6547 | S | EA |
| 00-485-6548 | M | EA |
| 00-485-6680 | L | EA |
| 00-485-6681 | XL | EA |
| 01-043-8375 | XS | EA |

LAST BUT NOT LEAST, NSN 8415-01-268-3473 BRINGS YOU THE ANTI-FLASH HOOD.

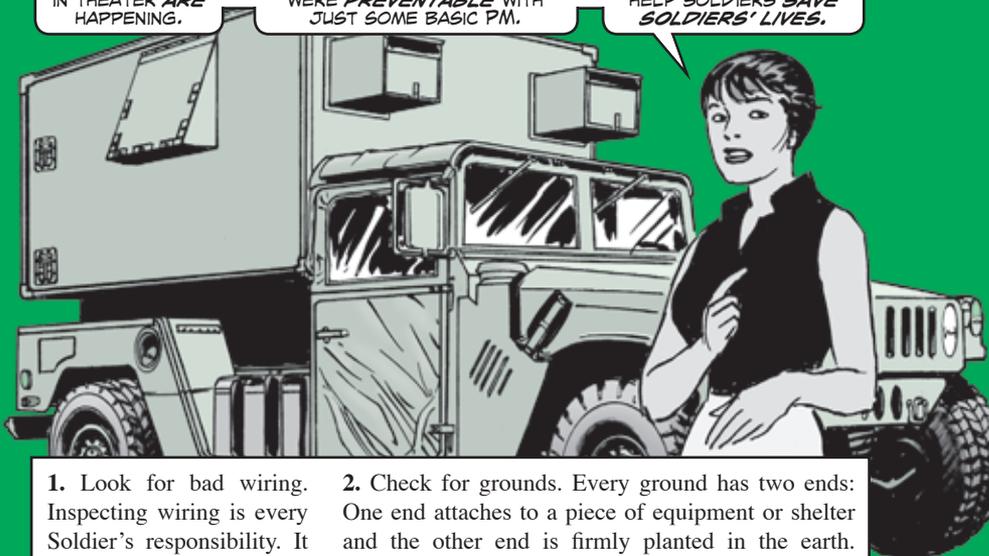


ELECTRICAL SAFETY SAVES LIVES

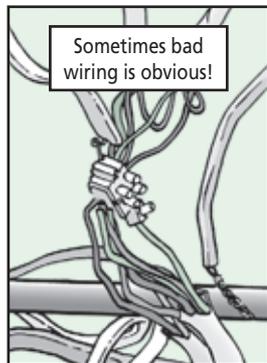
ELECTROCUTIONS IN THEATER ARE HAPPENING.

THESE DEATHS ARE SAD AND, UNFORTUNATELY, EVEN SADDER, MOST OF THE DEATHS WERE PREVENTABLE WITH JUST SOME BASIC PM.

HERE ARE SOME PM TIPS FROM THE PROGRAM MANAGER'S OFFICE FOR MOBILE ELECTRIC POWER THAT WILL HELP SOLDIERS SAVE SOLDIERS' LIVES.

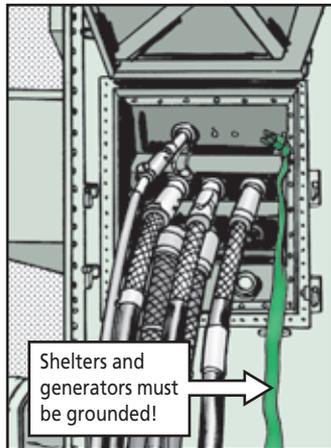


1. Look for bad wiring. Inspecting wiring is every Soldier's responsibility. It may not be your job to fix a wiring problem, but it is your job to report it.



Sometimes bad wiring is obvious!

2. Check for grounds. Every ground has two ends: One end attaches to a piece of equipment or shelter and the other end is firmly planted in the earth.

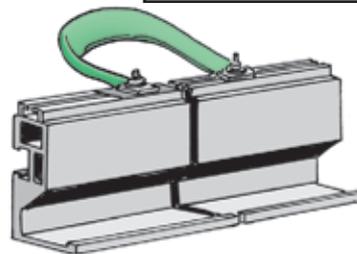


Shelters and generators must be grounded!

Every Soldier needs to notice grounds and be able to trace them from the equipment to the earth. Grounding situations that look wrong or hazardous need to be reported. It's always better to be safe than sorry.

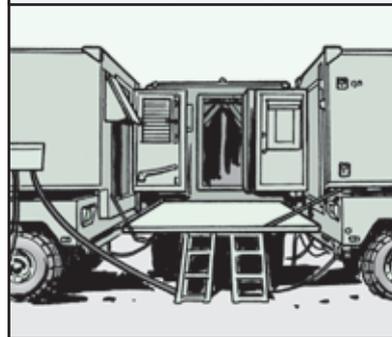
3. Equipment grounding conductors (EGCs) or bonding wires are just as important as earth grounds and also need to be checked. They are for your protection, too! Equipment specialists need to ensure that a low-impedance path to clear the mobile power equipment circuit breakers is in place and intact. Use your TM to check for a damaged EGC and the steps to take if you find one.

Equipment bonding is as important as grounding



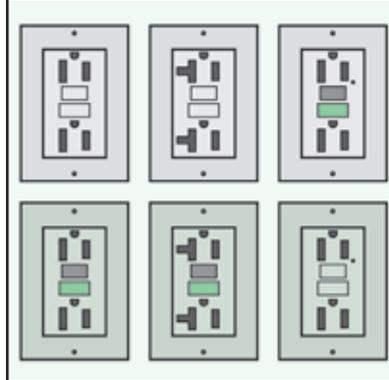
4. Co-located shelters need to have their grounds bonded. A voltage difference between two shelters can lead to shocks and, yes, even electrocution! It's best that this bond is done at the ground connections of the power generation equipment—to avoid ground loops.

Bond shelters together and ground them!



5. Ground fault circuit interrupters (GFCIs) and circuit breakers need to be checked. They are for your protection. But if they are also not maintained, they will not work. And if they don't work, they won't be protecting anyone! Check 'em! Test them at least monthly. And for goodness sakes, opening a ground circuit does not cure a circuit breaker tripping problem. It just creates another problem—a hazardous one!

Check for GFCIs and check to see they work



Whether it's mobile power equipment or fixed installations, nominal voltage cannot be taken for granted in electrical systems in theater. All Soldiers are on the inspection team for spotting electrical problems. Qualified Soldiers must verify voltage, good grounding, good wiring, good bonding and ensure that all electrical safety procedures are followed.

For help, get a copy of CECOM pamphlet TR 98-6, *Earth Grounding and Bonding*. Email CECOM for a copy:

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

Also, take the training courses at:

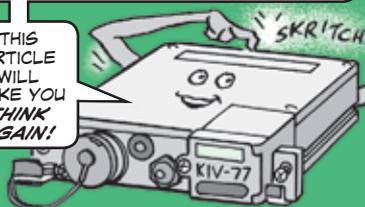
http://www.monmouth.army.mil/cecom/safety/training/training_electric.htm

THINK YOU KNOW ALL ABOUT

Shipping, Storing, Stocking and Tracking

THE KIV-77 OR THE APX-118?

THIS ARTICLE WILL MAKE YOU THINK AGAIN!



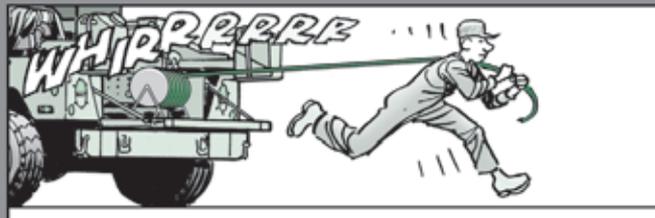
Contrary to what you may believe, controlled cryptographic items (CCI) RT-1836(C)/APX-118(V), RT-1912(C)/APX-123(V), KIV-16, and KIV-77 ARE NOT REQUIRED to go through the COMSEC custodian account for reporting or documentation.

Contrary to what you may believe, they ARE NOT REQUIRED to be documented in the communications security material control system (CMCS).

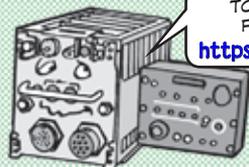
Contrary to what you believe, they ARE REQUIRED to be managed through normal logistics and property book channels as high dollar value items with all the security requirements these items demand.

Controlled cryptographic items must be tracked by serial number through the unit's location DODAAC and reported to the B16 (CECOM LCMC) item manager within 24 hours of a transaction.

Connectors and Caps



... AND ANOTHER UG-1870 CONNECTOR BITES THE DUST WHILE ANOTHER CX-11230 CABLE GOES TO SUPPORT FOR REPAIR.



TO DETERMINE THE ITEM MANAGER FOR YOUR EQUIPMENT, LOG ON: <https://irc3.monmouth.army.mil/12log>

ONCE AT THIS SITE, CLICK ON NIINS/PNIINS AND ENTER THE NIIN OF THE ITEM. THEN CLICK ON GO.

ON THIS WEB PAGE, LOCATE THE ANAL CD BLOCK. PUT THE MOUSE CURSOR OVER THE FIVE DIGIT ANALYST CODE. THE ITEM MANAGER'S NAME, PHONE NUMBER AND EMAIL ADDRESS WILL SHOW UP.



BE READY TO PROVIDE TO THE ITEM MANAGER THE...

- item name
- item NSN
- item serial number
- origination DODAAC
- destination DODAAC
- date of action

To ship CCI:

FILL OUT AND ATTACH A GREEN TAG DD-1577-2 TO THE ITEM IDENTIFYING THE FAILURE.

FILL OUT A DA-1149 OR DD-1348-2 AND PUT IT IN THE SHIPPING CONTAINER ALONG WITH THE ITEM.

MARK THE SHIPPING CONTAINER WITH "CCI" IN TWO-INCH LETTERS ALONG WITH THE SERIAL NUMBER.

USE A SHIPPING SEAL THAT CANNOT BE REMOVED OR REPLACED WITHOUT IT BEING OBVIOUS.



NOW, SHIP THE ITEM TO...

W90CGG
AMSEL-TY-MX-A-T
ATTN: Gene Golembeski, Jr.
11 Hap Arnold Blvd
Tobyhanna, PA 18466.

It's not speed that kills the CX-11230 cable when you pay it out—it's the sudden stop. Like when you get to the end of a 1/4-mile reel before you're ready for it.

Save cables by going slow and keeping an eye on the reel. Have a signal with the driver so you can let him know when the end is near.

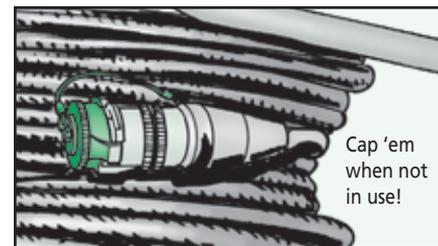
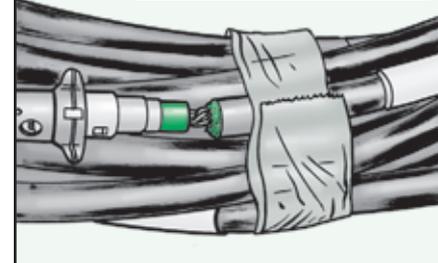
Go slow when you reel the cable in, too. Have someone hold the connector off the ground, if you can.

Once a CX-11230 cable is disconnected, its connectors are at the mercy of dirt and water that can make them useless—unless you use protective caps.

So put caps on all the connectors. When you have two connectors connected, put the two caps together, too. That keeps dirt or mud out of them.

If a cap, NSN 5999-00-136-9040 or NSN 5999-01-146-3414 for the UG-1870A/G cable, is missing, get your repairman to replace it.

Another cable must be repaired



Cap 'em when not in use!

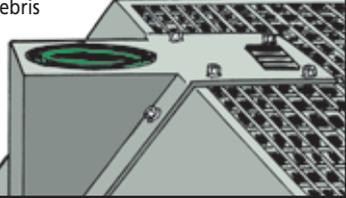
NO EXHAUST COVER, SO... CLEAN IT!

Don't look for or try to order an exhaust cover for the 100-kw generator. There isn't one!

The exhaust system needs to be open to vent excess moisture. Otherwise, water will accumulate and get into the engine.

However, when the generator is not running, the exhaust system collects leaves, paper and other debris. That's where you come in. You should check the exhaust regularly and remove any restrictions that inhibit good venting.

Exhaust has clearance around edge that collects debris



BATTERY CABLE LOOSE?

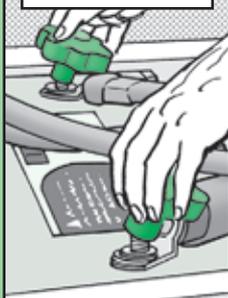
Battery cross-over cables on the 100-kw generator are working loose and then refusing to be tightened.

Say no to their refusal by adding a lock washer, NSN 5310-01-531-6129, between the tightening knob and the cable connector on both ends of the cable.

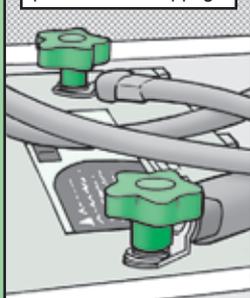
Remove the tightening knobs that hold the cable to the battery post. Put a lock washer over both posts. Tighten the knobs back in place.

Now the cable should stay tight!

Remove both end connectors and add a lock washer

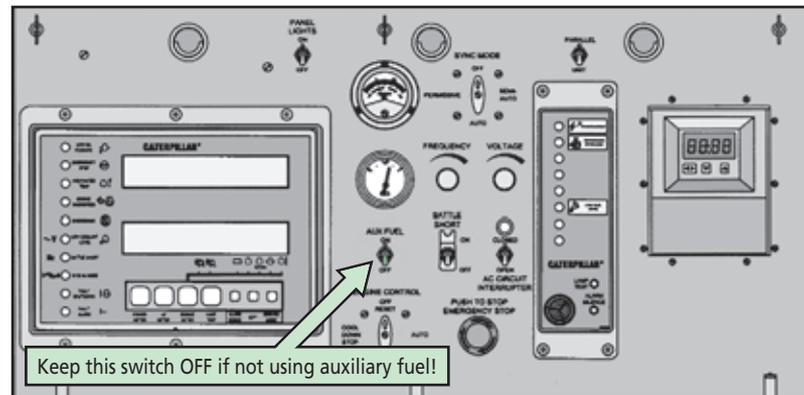


Replace and tighten end connectors to prevent cable slippage



AUXILIARY FUEL PUMP ADVICE

If you're not using the auxiliary fuel pump on your 100-kw generator, make sure the auxiliary fuel switch on the electronic modular control panel is switched to OFF.



Keep this switch OFF if not using auxiliary fuel!

If the switch is left in the ON position, the fuel pump will run continuously and the pump will be damaged!

WHEN YOU'RE USING THE AUXILIARY FUEL PUMP TO TRANSFER FUEL TO YOUR GENERATOR'S FUEL TANK FOR PROLONGED GENERATOR USE, YOU *MUST* MAKE SURE...

- the pump is never operated unless it is connected to a fuel source.
- there is a constant supply of fuel in the auxiliary location, such as a 55-gal drum or a fuel bladder.
- the fuel pickup line is secured to the fuel source and cannot be knocked loose.



When You Need the *Right* Key

WELL, YOU'RE NOT GOING ANYWHERE IF THE KEY TO YOUR CONSTRUCTION EQUIPMENT GETS LOST.



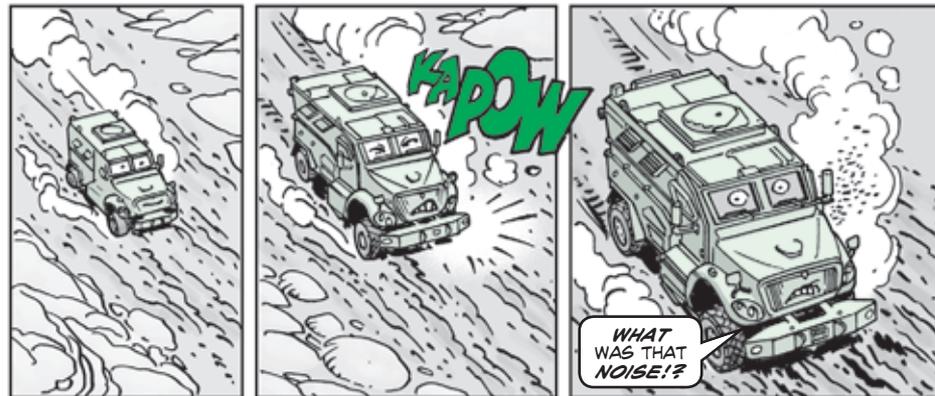
HELLO? WHERE IS EVERYONE?

DON'T LET THAT VEHICLE JUST SIT IN THE MOTOR POOL! ORDER NEW KEYS OR KEY BLANKS.

HERE'S A LIST YOU NEED TO KEEP HANDY...

| Equipment | Item | NSN |
|--------------------|--------------------------------|------------------|
| M915-series trucks | Ignition switch | 2920-01-092-9134 |
| | Lock cylinder w/key | 2540-01-155-3601 |
| | Key blanks | 5340-00-357-9269 |
| M917A1 dump truck | Ignition key and lock | 5340-01-371-1658 |
| C530A roller | Ignition switch w/key | 2920-01-043-9994 |
| SP 848 roller | Ignition key (only) | 5930-01-039-2939 |
| | Switch with key | 2920-01-318-7906 |
| RS-28 Tampo roller | Ignition lock switch w/key | 2920-01-185-3686 |
| SEE | Ignition switch key | 5930-12-166-1092 |
| | Door key | 5340-01-240-1777 |
| | Battery key | 5930-12-121-7198 |
| | Hood wrench | 5120-01-235-2605 |
| 621B scraper | Disconnect switch key | 5930-00-715-1939 |
| 130G grader | Battery disconnect key | 2920-00-775-7691 |
| | Battery disconnect switch key | 5930-00-715-1939 |
| D7G tractor | Ignition switch key | 5340-01-257-6042 |
| | Battery disconnect switch key | 5930-00-715-1939 |
| D8 tractor | Battery disconnect switch key | 5930-00-715-1939 |
| MW24C scoop loader | Key blank | 5340-01-275-7751 |
| 815F compactor | Ignition lock switch w/out key | 2920-01-258-3471 |
| | Key only | 5340-01-257-6042 |
| HYEX | Door/fuel/ignition key | 5315-01-475-0393 |
| HMEE BHL Type III | Key not yet available | |
| IHMEE | Key not required | |

LOOSE SENSOR WIRE

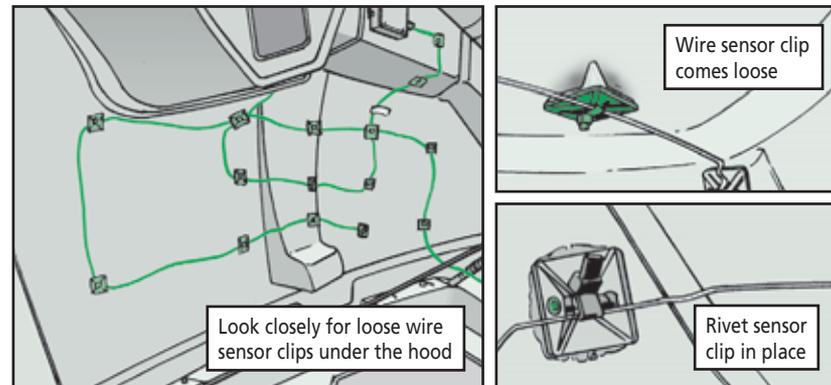


MRAP users, a loose sensor wire can cause the engine fire suppression system (FSS) to activate—without warning—while your MaxxPro is running.

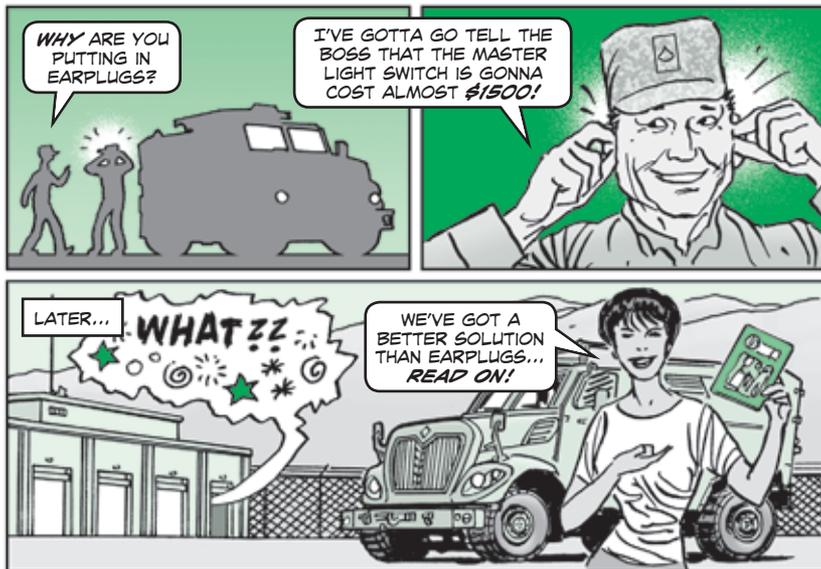
When this happens, you'll hear a loud explosion go off under the hood, followed by a fine, gray chemical dust that covers the engine and everything else nearby. Talk about a mess!

Here's the problem: high operating temperatures in SWA cause the wire's sensor clips to come loose or just fall off. A loose wire that touches the engine makes the suppression system do its thing—that is, go off!

So, eyeball the sensor clips to see if they're loose. Find a loose clip? If so, use a ³/₁₆-in diameter rivet, NSN 5320-01-232-7730, and rivet the clip back in place. Then use sealant, NSN 8040-01-010-8758, to seal both sides of the sensor clip, under and on top of the hood. For more information, see TACOM MAM 08-056.



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. That switch had a sticker on it with NSN 5930-01-491-9893. This switch is identical to the original one, CAGE 19207, 59666, or 47P61, but only 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.

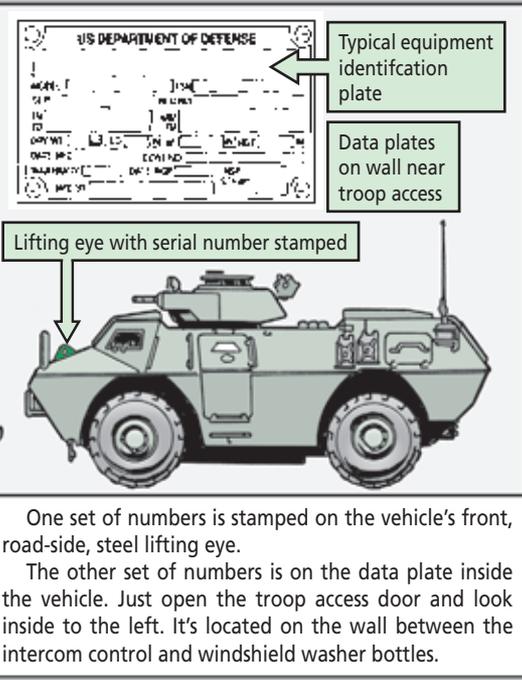
SSG J. A. O.
54th Engr Bn
Camp Striker, Iraq

Editor's note:

Thanks for the money-saving tip that will help other units out there.

Armored Security Vehicle...

SERIAL NUMBER LOCATION



One set of numbers is stamped on the vehicle's front, road-side, steel lifting eye.

The other set of numbers is on the data plate inside the vehicle. Just open the troop access door and look inside to the left. It's located on the wall between the intercom control and windshield washer bottles.

D7G
Tractor...

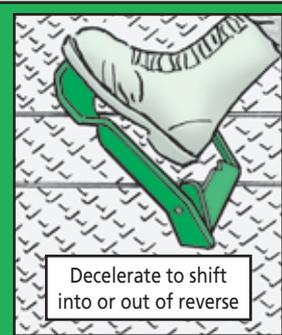
Shift Like This

Operators, remember to reduce the dozer's engine speed every time you shift in and out of reverse. A wind-and-grind momentum will shorten the transmission's life.

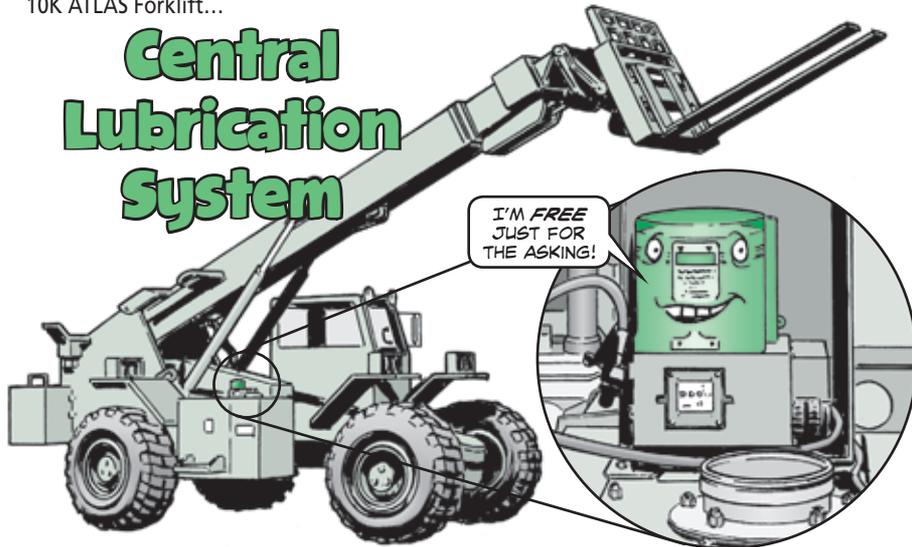
HERE'S THE
LOWDOWN...



1. While your dozer's still on the move, push down the decelerator pedal. That slows engine speed without changing the governor control setting.
2. Stop your dozer dead in its tracks.
3. Shift in or out of reverse.
4. Ease up on the decelerator pedal to speed up the engine until it reaches the governor control setting.



Central Lubrication System



All grease fittings on the ATLAS 10K forklift's front/rear axles and front/rear steering cylinders work in tandem with each other for smooth operation. Problem is—many of these fittings are overlooked during scheduled services.

Now, just for the asking, a FREE Central Lubrication System (CLS) is available from the forklift's headshed. The CLS mounts on the curbside of the forklift and automatically injects grease into the axle's lube points at a preset time interval during operation. In a nutshell, the CLS extends the "life of the lift" in your forklift. But before you shoot off a request, have the following info ready:

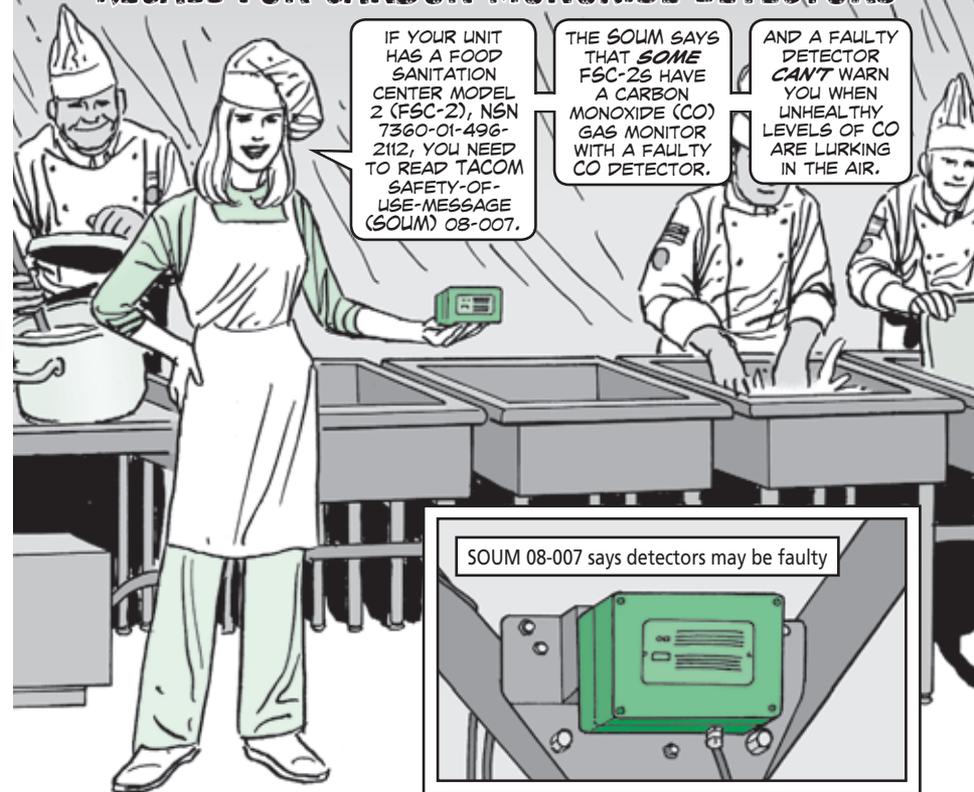
- the forklift's serial number
- the ship to address complete with "ship to" DODAAC and "mark for" UIC.
- POC and phone number
- vehicle registration number and Unique Item Identification number

By the way, the CLS does not apply to 10K ATLAS forklifts that have been through or are scheduled for a RESET program or that came from the production line in the last two to three years (S/N 10KA1981 and above). If you have any questions, you can email:

[@us.army.mil](mailto:us.army.mil) or
[@conus.army.mil](mailto:conus.army.mil)



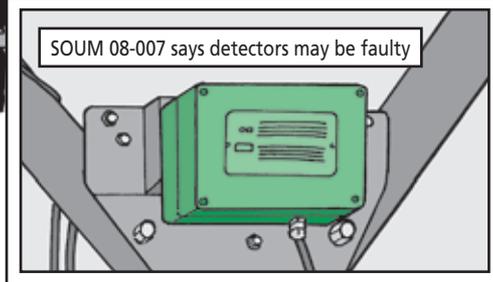
RECALL FOR CARBON MONOXIDE DETECTORS



IF YOUR UNIT HAS A FOOD SANITATION CENTER MODEL 2 (FSC-2), NSN 7360-01-496-2112, YOU NEED TO READ TACOM SAFETY-OF-USE-MESSAGE (SOU) 08-007.

THE SOUM SAYS THAT *SOME* FSC-2s HAVE A CARBON MONOXIDE (CO) GAS MONITOR WITH A FAULTY CO DETECTOR.

AND A FAULTY DETECTOR *CAN'T* WARN YOU WHEN UNHEALTHY LEVELS OF CO ARE LURKING IN THE AIR.



The manufacturer has issued a product recall for detectors in FSC-2s with the following serial numbers:

8301 through 8323, 8325, 8327, 8329 through 8337, 8344, 8350, 8359, 8374 through 8377, 8380, 8386 through 8388, and 8394.

For the complete story, get TACOM SOUM 08-007. It covers inspection, manufacturer's POC, replacement parts, compliance reporting and more. The SOUM's on the Army Electronic Product Support (AEPS) website:

https://aeps2.ria.army.mil/commodity/soum/tacom_wn/08/soum08-007.html

To log in, you'll need your AKO user name and password or your common access card (CAC) and PIN.

Rail Cars...

SET THE HAND BRAKES

OH BOY... WE'RE GONNA HEAR ABOUT THIS ONE!!!

RAIL ACCIDENTS DAMAGE RAILCARS AND LOADED MILITARY EQUIPMENT...

...NOT TO MENTION CAUSING POSSIBLE INJURY OR DEATH TO ANYONE NEARBY.

Twice in recent years, rail cars loaded with equipment rolled free from staging areas on Army installations and struck other rail equipment. Both incidents happened after the cars were loaded and left unattended.

To avoid accidents, keep these PM pointers in mind before heading down the track:

● Before loading, check with Army rail crews to make sure the rail car's hand brake is set. This procedure follows the *Air Brake and Train Handling (ABTH)* rule book, paragraphs 22.3 and 22.3.2 on pages 39-42, that's available through the US Army Transportation School. Page 627 of the rule book has a chart that shows the number of hand brakes that must be set before a car is uncoupled from the locomotive and left unattended.



Set rail car's hand brake this way...

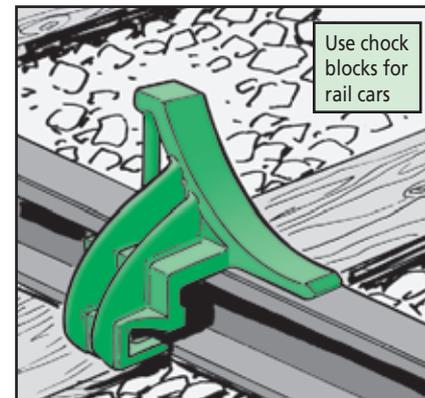


...or this way

● Put chock blocks in place before loading or unloading. You'll find this info on Page 506 of the *General Code of Operating Rules (GCOR)*.

Chock blocks are not available in the Army's supply system—yet! In the meantime, you can order them on this website: <http://www.aldonco.com>

Once on the website, click on the Catalog tab. Then click on rail dock safety and these product categories: rail skids, wheel chocks or car wheel blocks.

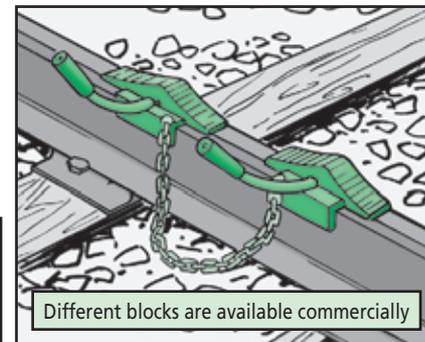


Use chock blocks for rail cars



FOR MORE INFO ON CHOCK BLOCK PRODUCTS, TAKE A LOOK AT THESE WEBSITES...

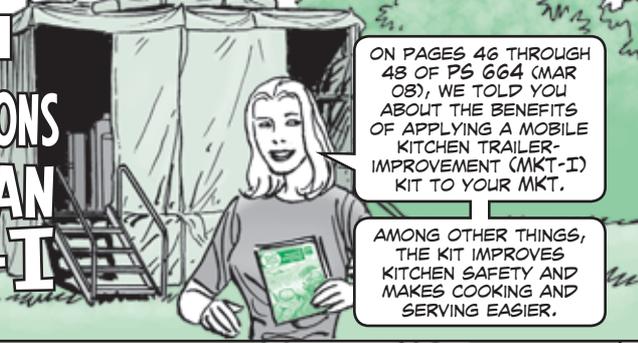
- <http://www.emedco.com>
- <http://www.harmersteel.com>
- <http://www.rail-chocks.com>
- <http://www.nolancompany.com>



Different blocks are available commercially

Mobile Kitchen Trailer...

MORE REASONS TO GET AN MKT-I



ON PAGES 46 THROUGH 48 OF PS 664 (MAR 08), WE TOLD YOU ABOUT THE BENEFITS OF APPLYING A MOBILE KITCHEN TRAILER-IMPROVEMENT (MKT-I) KIT TO YOUR MKT.

AMONG OTHER THINGS, THE KIT IMPROVES KITCHEN SAFETY AND MAKES COOKING AND SERVING EASIER.

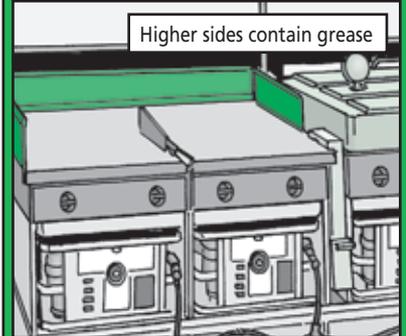
STILL NOT CONVINCED?

THINK ABOUT THESE ADDITIONAL REASONS TO ORDER AN MKT-I:

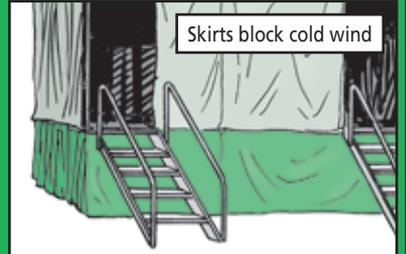


- The new green or tan covers are made of polyester with a vinyl coating. The covers are fire retardant and easy to clean. They also prevent ice build-up in the winter.
- The griddle has higher sides to contain grease and prevent fires.

- Cold weather skirts block cold wind from blowing under the trailer and help keep you warm. The skirts also provide weather protection for storage.



Higher sides contain grease



Skirts block cold wind

- A duplex outlet powers the lights and the fan. MWO 10-7360-206-30-1 installs the outlet for the modern burner unit (MBU).
- The exhaust fan assembly consists of a blower, hose and vent. Use it to redistribute heat or vent heat or smoke.
- Two 50-watt fluorescent tent lights replace a gasoline lantern. That's one less fire hazard.

Components of the MKT-I are listed on [pages 47-48 in PS 664](#).

NEED STORAGE OR SHIPMENT SPACE HELP?



OOPS.

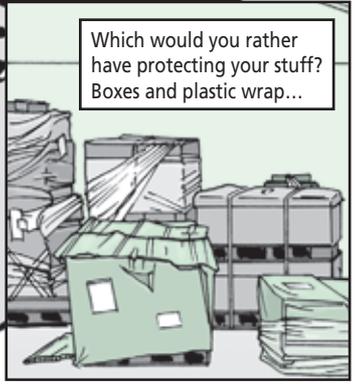
A NEW CONTAINER CAN HELP SOLDIERS AVOID THE PROBLEMS OF CRUSHED BOXES DURING TRANSPORT. READ ON...



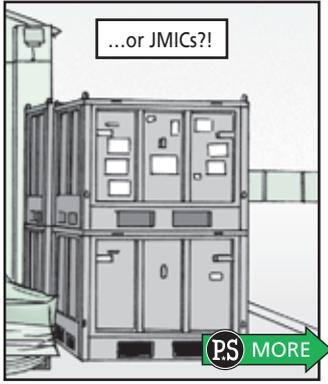
YOU KNOW SPACE IS VALUABLE WHEN YOU PACK YOUR DUFFLE FOR DEPLOYMENT.

THE SAME IS TRUE WHEN YOU PACK THE ISO CONTAINER FOR YOUR UNIT.

BUT ODD-SHAPED BOXES AND ITEMS OFTEN LEAVE GAPS. THOSE GAPS ADD UP TO WASTED SPACE AND SHIFTING LOADS.



Which would you rather have protecting your stuff? Boxes and plastic wrap...



...or JMICs?!



ULTIMATELY, WHEN YOU OPEN THE ISO CONTAINER YOU FIND **BROKEN BOXES, LOOSE CONTENTS AND DAMAGED EQUIPMENT.**

IT'S A MESS YOU CAN DO **WITH-OUT.**

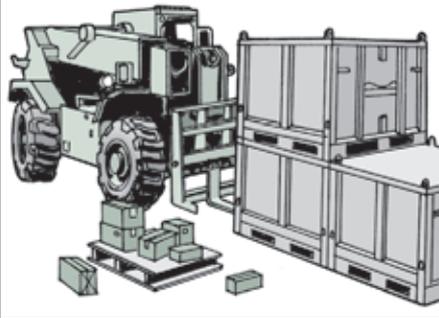
BUT THERE *IS* A WEAPON IN YOUR STORAGE AND SHIPMENT ARSENAL THAT WILL HELP YOU REDUCE WASTED SPACE AND DAMAGE TO EQUIPMENT.

IT'S CALLED THE **JOINT MODULAR INTERMODAL CONTAINER-JMIC.**

THE JMIC MAXIMIZES THE USE OF SPACE AND PROTECTS CARGO FOR TRANSPORTATION.

THE JMIC HAS PROVEN TO BE MUCH MORE THAN JUST ANOTHER BOX BY PROVIDING USEFUL STORAGE IN DEPLOYED SETTINGS.

JMICs make it easier to move supplies by forklift than having loose boxes on pallets



THE JMIC IS ALSO HELICOPTER SLING-LIFT CAPABLE USING CORNER POST LIFT EYES.



PS 680

Physical Properties

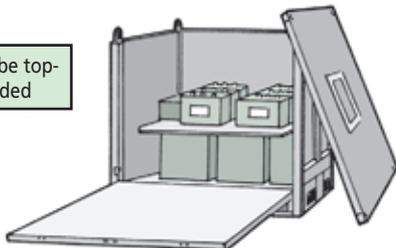
THE FULLY ASSEMBLED JMIC IS 52 INCHES LONG, 44 INCHES WIDE AND 43 INCHES TALL.

HOWEVER, JMICs CAN BE COLLAPSED TO ROUGHLY A **THIRD** OF THEIR SIZE WHEN NOT BEING USED.

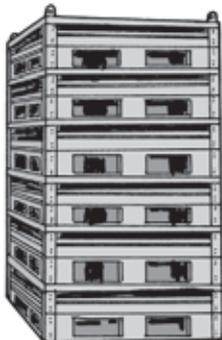
EMPTY, THE JMIC WEIGHS 329 POUNDS BUT HAS A GROSS WEIGHT CAPACITY OF 3,000 POUNDS. THEY CAN BE TOP-OR SIDE-LOADED.

JMICs CAN BE STACKED AND LOCKED TOGETHER, HAVE INTERNAL QUICK-RELEASE CARGO RESTRAINTS, AND INCLUDE A BUILT-IN SPACE FOR RFID SAVER 654 TAGS.

JMICs can be top- or side-loaded



JMICs can be collapsed and stacked for shipment or storage



Current Uses

JMIC USE IN OIF, OEF AND ELSEWHERE HAS SHOWN ITS ABILITY TO CONSOLIDATE CARGO, REDUCING THE NUMBER OF TRUCKS, SHIPS OR PLANES NEEDED TO MOVE IT.

THAT TRANSLATES INTO LOWER DISTRIBUTION COSTS AND FEWER SOLDIERS AT RISK DURING DISTRIBUTION AND RETROGRADE OPERATIONS.

JMICs CAN BE USED AS SUPPLY ROOM STORAGE CONTAINERS, PROTECTING CONTENTS FROM WEATHER AND PILFERAGE.

THE ABILITY TO DROP THE FRONT PANEL ALLOWS EASY ACCESS TO CONTENTS, AND STORAGE SHELVES AND BINS CAN BE DEVELOPED FOR USE AS CLASS IX STORAGE CENTERS.

JMICs can be stacked and shipped in ISO containers



JMICs provide convenient securable supply storage



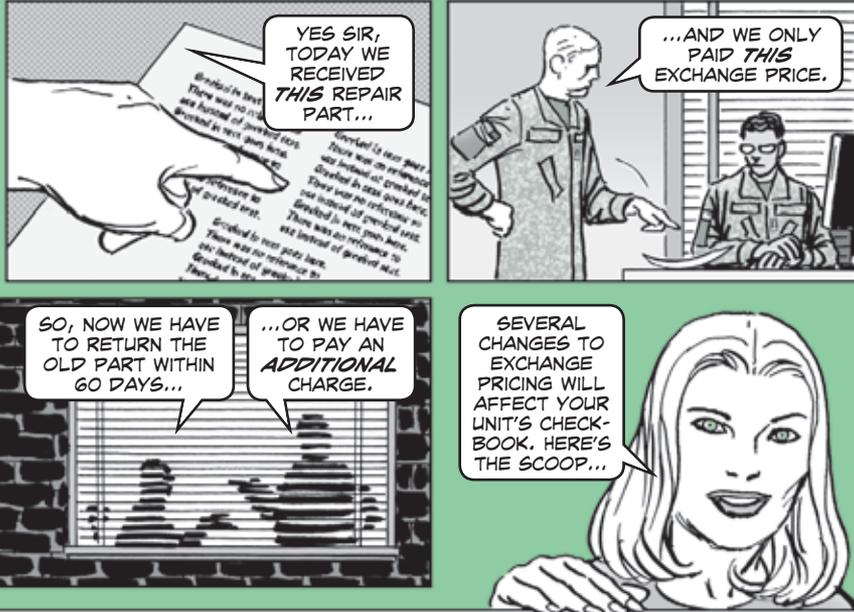
JMICs COME IN **THREE** COLORS:

- UNPAINTED ALUMINUM, NSN 8145-01-551-5311
- WOODLAND GREEN, NSN 8145-01-564-5802
- DESERT TAN, NSN 8145-01-564-5795

FOR MORE INFORMATION ON THE JMIC, EMAIL: lhdivjmic@navy.mil

PS END

THE ARMY'S NEW WAY TO MANAGE REPARABLES



Exchange Pricing (EP) in the Army has been in transition since April 2008. How EP has changed directly affects units—right in the pocketbook. Here's what you should know.

The Army was experiencing problems with granting excess credit in its logistics system. DOD Comptroller solutions became the evolving EP system.

EP rules require Army-managed NSNs that are on an existing or planned national maintenance program to have an EP and a standard price (SP).

When an EP item is issued, a like unserviceable item, as defined by the Order of Use (OOU) file, must be returned within the 60-day delay days period (DDP) or the difference between the standard and exchange price will be charged to the unit.

The intent of EP is to increase the return of reparable items to the supply system and to improve national visibility of reparables. EP also reduces the number of financial transactions by limiting unserviceable and serviceable credit to only designated EP items.

Exchange Pricing (EP): Past vs Present

| | | | |
|--|---|--|--|
| Standard Price (SP) = Latest Acquisition Cost + Cost Recovery Rate (CRR) | | Exchange Price (EP) = Loaded Repair Cost + Cost Recovery Rate (CRR) | |
| PAST ENGINE, DIESEL: Standard price: \$494,832.00 Unserviceable credit: \$246,094.00 Serviceable return rate credit: \$432,545.00 | Exchange Pricing Tenets <ul style="list-style-type: none"> • Shift from past credit on turn-in to charge of "delta" (SP minus EP) if not turned in within Delay Days Period (DDP) (60 days set by HQDA) • No unserviceable credit for Army customers • NSNs with on an existing or planned national repair program have an assigned EP value • Serviceable Exchange Price Return (SEPR) credited for serviceable turn-in | PRESENT ENGINE, DIESEL: Standard price: \$494,832.00 EP price: \$248,738.00 EP delta bill: \$246,094.00 (no turn-in) Serviceable exchange price return credit (EP minus CRR): \$186,451.00 | |

Past Practice

When a customer bought an Army-managed item they were charged a standard price (SP), which was equal to the latest acquisition cost plus an amount for cost recovery. In this example, the SP for the diesel engine was \$494,832. When the customer returned the **unserviceable engine**, they got an unserviceable credit equal to the SP minus the sum of the loaded repair cost recovery (CRR): \$246,094. The customer's net cost for the replacement part was \$248,738. If, however, the customer returned a **serviceable engine**, they got a serviceable credit of \$432,545.

The New Exchange Pricing Practice

Customers are charged the exchange price (EP) up front. But, the EP is only available for EP designated items. The EP includes the loaded repair cost and an amount for cost recovery. The EP for the diesel engine = \$248,738.

If the unit returns the **unserviceable engine** to the supply system within the delay days period (DDP), the action is complete—there are no additional customer changes. However, if the unit does not return the unserviceable engine within the DDP, it is charged the delta: the SP (\$494,832) minus the EP (\$248,738) — another \$246,094.

If a unit returns a **serviceable engine** to the supply system, they get a serviceable EP return (SEPR) credit (the EP (\$248,738) minus an amount for cost recovery). In this example, the serviceable exchange credit for the diesel engine = \$186,451.



NOW PAY
ATTENTION.

THERE'S
GOOD
STUFF
IN
HERE!



Phase I, Stand-Alone Tracking

Phase I established procedures for tracking issue and return transactions for designated EP NSNs by Department of Defense Activity Address Code (DODAAC). Three new data elements—the Exchange Price value, the Delta Bill value (the difference between the SP and the EP), and the Serviceable Exchange Price Return credit value—were added to the Army Master Data File (AMDF) on FED LOG for all EP items.

It became possible to display, review and analyze unit performance by DODAAC for matched and unmatched issues with turn-ins as measured against the DDP.

Phase II, One-for-One Credit

Last October, EP Phase II allowed credit for designated Army SARSS customers only for issue of like reparable items as set in DFAS Regulation 37-1, Chapter 13. This ended the practice of granting unserviceable and serviceable credit for all reparable turn-ins.

In December, the EP system began reporting expired DDPs on the 5th day of the month after the expiration.

Recoverable Items Tracking under EP centralized the reporting of recoverable items to the Logistics Support Activity's Logistics Information Warehouse/Integrated Logistics Analysis Program (LIW/ILAP) for issues and turn-ins of all items with a recoverability code of A, D, F, H, K or L.

Phase III, Full Exchange Pricing

Phase III implemented the full version of Exchange Pricing on May 1st.

The LIW/ILAP and Funds Control Module tracks issue and turn-in transactions. If an EP item is issued and a like unserviceable item is not returned within the established DDP, an obligation adjustment Delta Bill will be triggered and processed at DFAS to charge the unit the difference between the standard price and the EP.

When EP financial triggers are activated during Phase III they will only pertain to a recoverable NIIN that is also an EP NIIN.

EP will eventually migrate to the future Enterprise Resource Planning (ERP) systems of Global Combat Support System-Army (GCSS-Army) and Logistics Modernization Program (LMP).

For more information on Exchange Pricing see:

<http://www.ssf.army.mil/ssfweb/DesktopDefault.aspx?tabindex=5&tabid=25>

★★ Connie's Post Scripts ★★

MRAP Rear Ramp Motor

The rear ramp hydraulic motors and accumulators on MRAP MaxxPro and Maxx ProPlus ambulances are breaking down, keeping the rear ramp from fully opening or closing. Units need to call the SWA Theater Retrofit Coordinator, Mr. Mike Davis at DSN (318) 483-2739, or send an email to: michael.w.davis@iraq.centcom.mil

He will arrange for the vehicles to be retrofitted at the nearest RSA, or will send a team to the unit to complete the retrofit. Take a look at the Army Electronic Product Support (AEPS) restricted website for more info:

https://aeps2.ria.army.mil/commodity/mam/tacom_wn/RearRamp-Retrofit-Kits.xls

SINGGARS AAC of V

If you want to order a part for your SINGGARS radio and the AMDF shows an acquisition advice code (AAC) of V, order the part! Yes, an AAC of V means the item is terminal, but it also means it is still supported by the supply system as long as the current stock lasts. And, according to the supply folks, there are still many terminal item parts on the shelves for SINGGARS.

When there are no more available, the AAC will change to "Y". Additionally, the maintenance expenditure limit (MEL) for all ground SINGGARS radios has been raised to 100 percent regardless of age. This info will be in an upcoming change to TB 43-0002-11.

M113A3 FOV Engine Oil AOAP Check

Mechanics, take note of a change to the engine and transmission oil semiannual check in WP 0155 00-28 of TM 9-2350-277-20-2. The first NOTE says to avoid sampling new or overhauled engines until the second oil change. Change this NOTE to read, "Follow hardtime oil change interval (semiannually or every 1,500 miles, whichever comes first) for first two oil changes. Continue to submit AOAP samples to monitor oil condition for wear-metals, fuel and water contamination during this initial break-in period, IAW 750-1." The DA Form 2026, *Oil Analysis Request*, submitted with the sample should be outlined in RED marker indicating that it is a special AOAP sample. Indicate that the sample is from a "Break-in Engine" in the Remarks block of the form. AOAP analysis complies with the Army Warranty Program, so when an analysis shows problems, make sure you contact the warranty coordinator before performing the recommended maintenance.

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

Would You Stake Your Life ^{right now} on
the Condition of Your Equipment?

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**YOU'LL BE
SHOCKED...**



**...BY THE
SOLDIERS WHO
DON'T GROUND
THEIR EQUIPMENT!**