

Issue 717

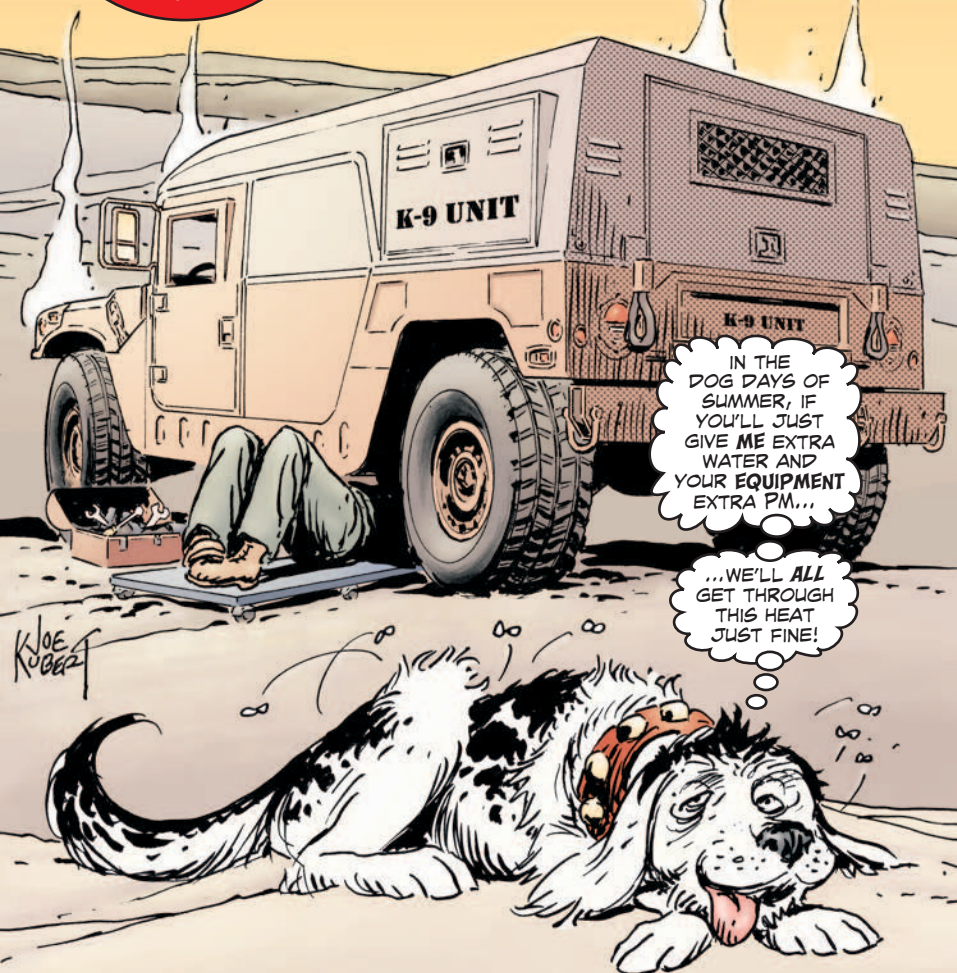
PS

August
2012

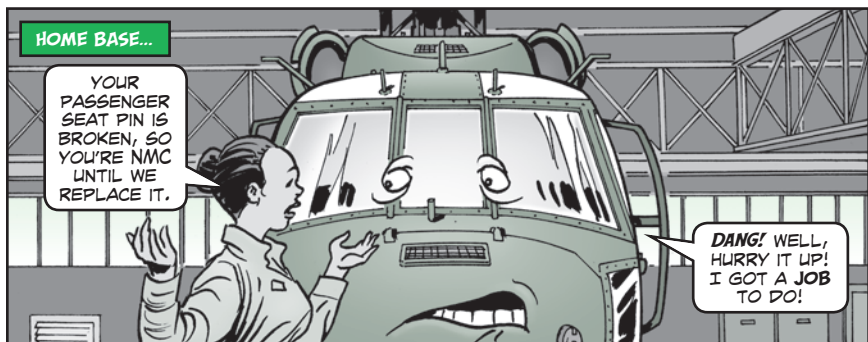
THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-717

Approved for
Public Release;
Distribution is
Unlimited



Back to Normal



Equipment maintenance may not follow normal practice when you're deployed.

Preventive inspections may need to be more frequent. Equipment may need cleaning more often than TMs recommend. Oil, grease and other fluids may need to be changed more often. Short equipment operational life spans may follow if maintenance doesn't keep pace with OPTEMPO.

Sometimes deployments require fixes to equipment that keeps it temporarily running in ways that aren't normal. Doing "whatever it takes" to maintain readiness can become routine.

The problem is that some Soldiers haven't been around the Army long enough to understand what normal maintenance practices are. Deployment routines are usually costly to maintenance budgets. They can also create risks to equipment and harm to the Soldiers who operate and maintain it.

That's why technical manuals and unit standard operating procedures (SOP) are the standard. Using them is the BEST and SAFEST means of lengthening equipment life and protecting Soldiers.

When you aren't deployed, follow the TMs and the unit SOP. They're your best bet to getting the job done right.



THE PREVENTIVE MAINTENANCE MONTHLY

ISSUE 717 AUGUST 2012

TB 43-PS-717, 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. The use of product or company names does not constitute endorsement of those products, services or companies by the U.S. Army. The use of non-DoD hyperlinks, along with their content, does not constitute endorsement by DoD or DA. Neither DoD nor DA exercises any editorial control over, and cannot vouch for, content on non-DoD websites.



COMBAT VEHICLES

Track Maintenance in the Desert
M777A2 Set Screw Clarification
Stryker Air Filter PM
M1-Series Tank M48A1 Gas Particulate Filter

2



SMALL ARMS

39

2-4 Machine Gun Mount Fabrication 39
5 M249 Machine Gun Barrel with Gunner's Shield 40-41
6-8 M2 Machine Gun Gun Turn-in 40-41
9 M2A1 Machine Gun Gage Rust Prevention 42-43



WHEELED VEHICLES

M149A2 Water Trailer Maintenance
Combat and Tactical Vehicle Chock Block NSNs
Jack Stands Inspection Criteria
PLS PM in the Heat

10



SOLDIER SUPPORT

43

10-12 PS Magazine Social Media URL Roundup 43
12 Hydration System Parts, NSNs 44
13
14-15



MRAP/ROUTE CLEARANCE

16

RCV Buffalo A2 PM, Safety Tips
MK III VMMD Husky Transmission Filter Door
M160 Light Flail Warmup and Cool Down

16-18
19
20-21



COMMO/ELECTRONICS

45

AN/TAS-8(V) and (V)2 LRA53 Parts Turn-in 45
Computer Keyboard Cleaning 46-49
S-842/G and S-842A/G Shelter ECU Covers 50-51



AVIATION

22

OH-58D Blade Reminder
OH-58D IFF Antenna Caution
CH-47D/F Engine Stand Strut Safety
UH/HH-60M Seat Track Cleaning
AH-64A/D T355 Panel Removal

22 RF-ITV Global Help Desk 51
23 EOD Publication Released 51
23 Finding ETMs and IETMS Online 52-55
24 PBUSE Catalog Fix for GCSS-Army 56
25 OPLOG Planner Updated 57
26 Unit-Level Ground Equipment Usage Reporting 58-59
PS Magazine Unit Subscriptions 59

AMC: Strength Behind the Might 27-33



MISSILES

34

HIMARS Maintenance Tips 34-36
Patriot Missile System Tire Pressure 36
Firefinder, Sentinel Radar Safety Tips 37-38

Connie's Post Scripts 60-61

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

Just write to:

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

Or email to:

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

Internet address:

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

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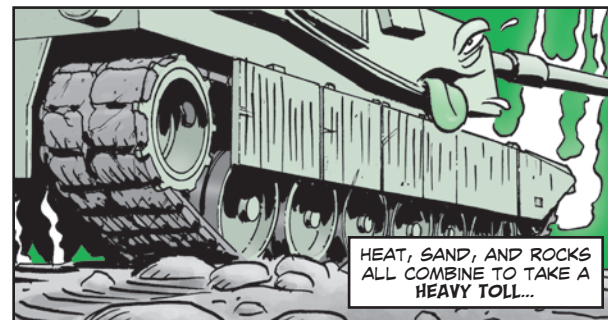
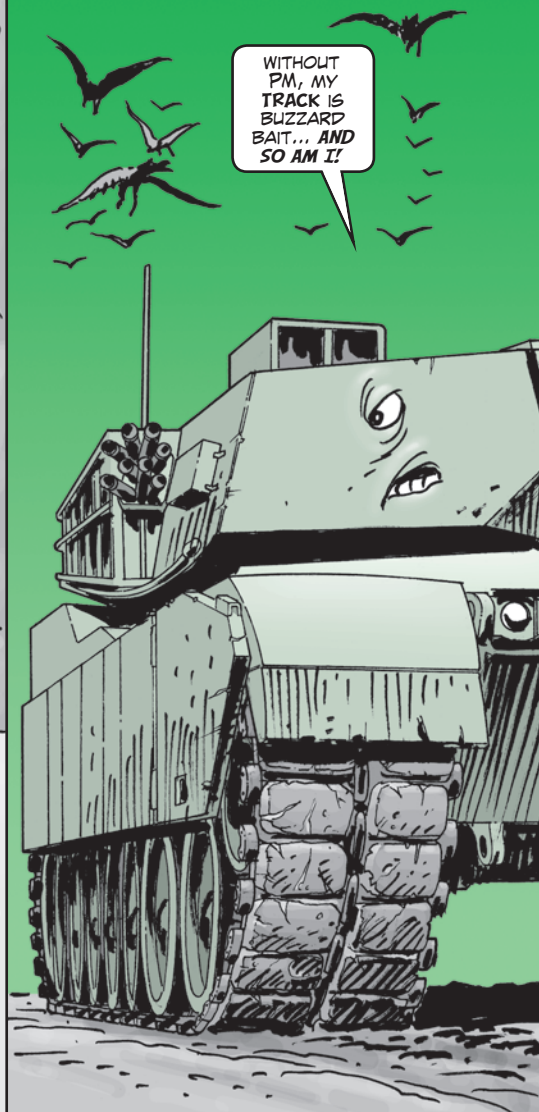
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STAY ON TRACK IN THE DESERT



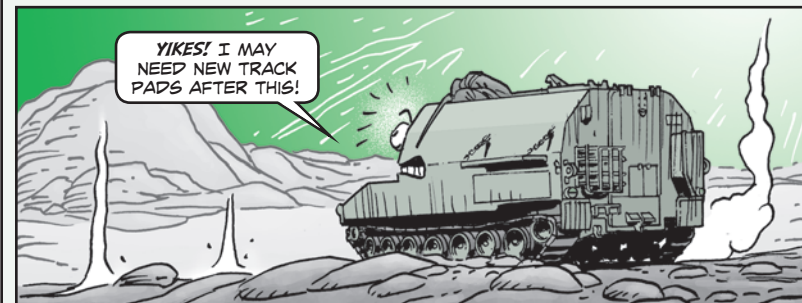
WITHOUT PM, MY TRACK IS BUZZARD BAIT... AND SO AM I!



Heat

Air temperatures of up to 120°F are bad enough, but the ground absorbs the heat and can get as hot as 165°F!

Those temperatures are extremely hard on rubber parts. Heat makes track shoes soft and weakens their resistance to sharp rocks and plant spines. High temperatures also increase rubber/metal separation on roadwheels.



Pay special attention to shoes and roadwheels during PMCS. Replace pads that are severely damaged or worn down to the grouser.

Roadwheels with tread separation on each side up to the entire circumference of the wheel that is 1 inch or wider for M1-series tanks and M88A1/A2 recovery vehicles, ³/₄ inch or wider for M113-series FOV, or ¹/₂ inch or wider for M2/M3-series Bradley, M109-series howitzers and MLRS should be replaced.

Also, replace roadwheels that have chunking extending across half the width or more of the outer rubber surface in one or more spots.

Track Tension

Because metal expands and contracts with the ups and downs of temperature, maintaining proper track tension is essential in the desert.

During the heat of the day, track parts expand and the track runs looser. That results in thrown track.

At night and early in the morning, it's much cooler. Track parts contract and the track runs tighter. The track can bind, causing bent road arms, damaged end connectors and more.

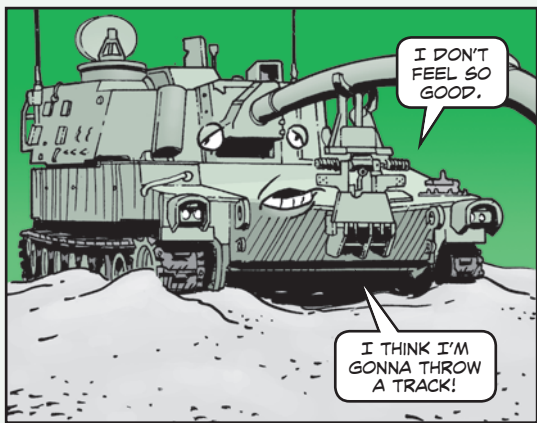
Check track tension often in the desert. Don't try to make it extra loose or tight to compensate for temperature changes. Your best bet is to adjust it according to the TM.



Driving

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

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



Check It Out

For more information on track, check out TM 9-2530-200-24 (Mar 06), *Standards for Inspection and Classification of Tracks, Track Components and Solid-Rubber Tires*.

WHAT HAPPENED TO THE SET SCREWS?

THIS TM SAYS WE HAVE TO REMOVE TWO SET SCREWS FROM THE M777A2'S TRAVERSE BEARING COLLAR BUT THE THING IS...

...THERE ARE NO SET SCREWS! WHAT DO WE DO?

CONTACT HALF-MAST, HE'LL KNOW WHAT TO DO!



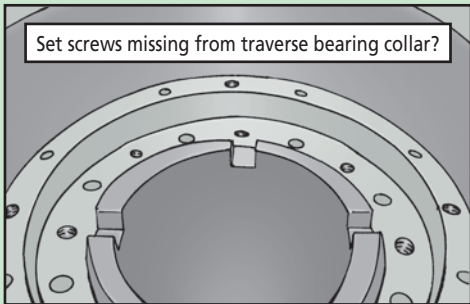
Dear Half-Mast,

I'm a bit confused about a step in the M777A2's TM 9-1025-215-24&P. Under the *Torque the Traverse Bearing Inner and Outer Collars* maintenance instructions, Step 7 says to "remove two set screws."

Our supported unit has 19 of these howitzers, but none of them come with set screws to secure the outer collar. Am I missing something here?

Mr. R.D.

Set screws missing from traverse bearing collar?



Dear Mr. R.D.,

Good catch, Sir. According to TACOM, a design change was introduced in Feb 08 that removed the set screws from some M777A2s. The next update to the IETM should include the following note for the traverse bearing collar maintenance instructions:

"Steps 7 and 9 through 11 detail maintenance action with regard to removal and installation of set screws (1) that are not present in all M777A2 configurations. If set screws (1) are not present, skip Step 7 and Steps 9 through 11."

Half-Mast

Stryker... **DON'T YOU *DARE* FORGET THE AIR!**



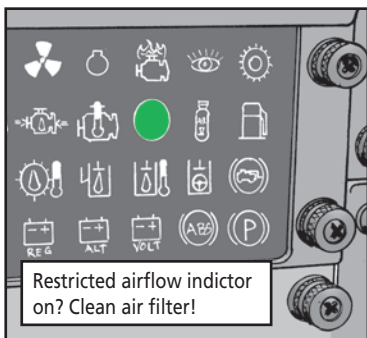
DRIVERS, YOUR STRYKER NEEDS CLEAN AIR AND LOTS OF IT TO KEEP OPERATING IN THE DESERT.

THE ONLY WAY TO KEEP THE CLEAN AIR FLOWING IS BY PRACTICING **GOOD AIR FILTER PM.**

THERE ARE SOME **CRUCIAL DIFFERENCES** BETWEEN THE AIR FILTER USED ON THE STRYKER AND THOSE USED ON **OTHER** VEHICLES.

Air Flow

The restricted airflow indicator on the driver's panel will light up when the air filter is clogged. But if you're operating in the desert, it's a good idea to clean the filter more often—even **before** the indicator light comes on.



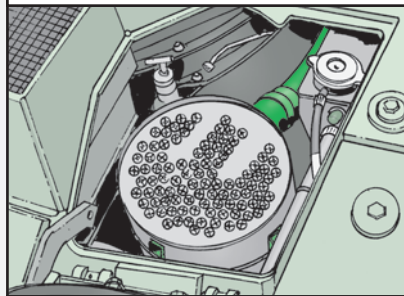
In the desert, plan on cleaning the air filter at least weekly—and sometimes even daily—depending on conditions. Pay attention to engine performance, too. If it begins to suffer, a clogged filter could be the reason.

SO MAINTAIN 'EM BY THE TM AND TAKE CAREFUL NOTE OF THESE TIPS!

Removal

Before you can clean a clogged filter element, you'll have to remove it. Here's how:

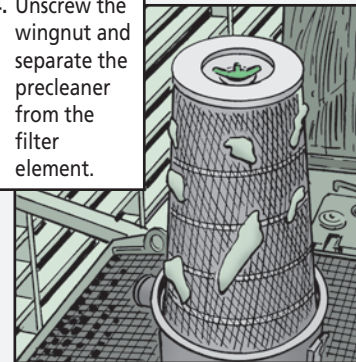
1. Disconnect the scavenger hose from the connector on the precleaner.



2. Release the three latches that hold the precleaner to the air cleaner housing.

3. Remove the filter assembly from the housing and turn it upside down.

4. Unscrew the wingnut and separate the precleaner from the filter element.



5. Inspect the gasket, NSN 5331-01-461-1526, and filter element, NSN 2940-01-460-4902. If they're damaged, replace them.

Cleaning

Turn the precleaner upside down and shake it to remove dirt and sand. Then wipe it off with a clean, damp cloth and set it aside.

Clean the filter element by blowing out dirt and sand with low-pressure air—no more than 30 psi.

Make sure you use air from another vehicle, not your own. Running your Stryker to build up air pressure will allow unfiltered air into the engine.

On most Army vehicles you blow air from the inside of the filter elements out to get rid of dirt and sand. **However**, the Stryker air filter element is the exact opposite.

Direct a jet of low-pressure air from the **outside in**. That loosens sand and dirt and allows it to fall out through the center channel.

If you don't have compressed air available in the field, shake and tap the element gently with your hand to loosen as much dirt and sand as possible. Don't hit it against anything harder—like the ground or the side of your vehicle—or you'll damage the element.

Give the filter a more thorough air cleaning as soon as you can.



Cleaning, Part 2

Sometimes you can't get the filter element clean just by using compressed air.

In cases of stubborn dirt, soak the element in a solution of general purpose detergent, NSN 7930-00-985-6911, and warm water. Gently move the element in the solution to help loosen and remove dirt.

After cleaning for 15 minutes, remove the element from the solution and rinse it thoroughly with clean water from a low-pressure hose.

Let the element completely air dry before reusing it. You can also use low-pressure air to help dry the element faster.

Make sure you write down in the vehicle log book each time the filter is cleaned using the detergent solution. Once it has been cleaned with detergent six times, let your mechanic know. It may need to be replaced.

Air Filter Housing

Once you've finished cleaning the element and plate, don't forget about the housing.

If the element was badly clogged, there may be some of that dirt and sand in the bottom of the housing that needs to be cleaned out. Some loose sand and dirt may fall out of the element as you're removing it.

Either way, if you don't get rid of it, that sand and dirt will immediately end up in the engine as soon as the vehicle is started.

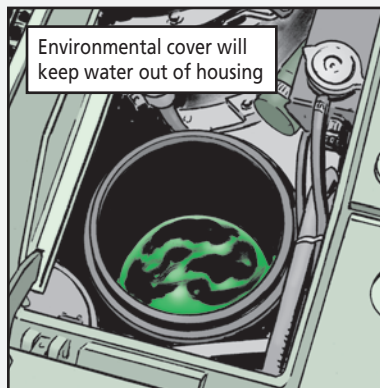
If one is available, a small vacuum works best to clean out the housing.

Watch Out for Water

Ever notice water at the bottom of the air filter housing once the element is removed? That means you're probably not using the environmental cover when the vehicle is parked.

Without the cover, rain and wash water enter the air inlet and pool at the bottom of the housing. The water combines with dirt and sand and eventually dries to a hard, concrete-like consistency.

The only way to get it out is to chip it loose. That can cause a lot of damage to the housing. So use the environmental cover whenever your Stryker isn't in use.



FILTER A HAZARD TO HANDS AND EYES

HOLY COW!
WHAT
HAPPENED
TO YOU!?

I HAD A LITTLE
DISAGREEMENT WITH
AN M48A1 FILTER
CONTAINER!

Mechanics, when replacing the M48A1 gas particulate filter unit, NSN 4240-01-363-1311, on an M1-series tank, be **very** careful as you open the filter's container.

The container is opened by pulling on a key tab that removes a metal strip around the container. Both the metal strip and the edges left on the container are very sharp and quite capable of giving you a nasty cut. So make sure you're wearing cut-resistant gloves when opening the container.

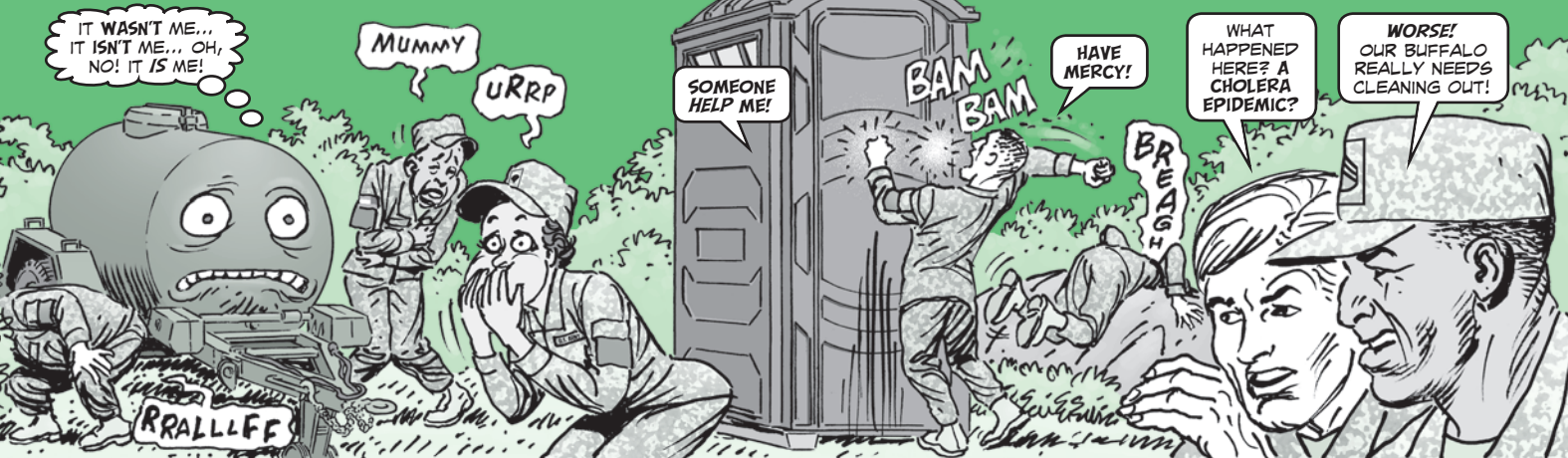
When opening
container,
watch out for
sharp edges on
metal strip...

...and
container
rims

EYE PROTECTION
IS A **MUST**, TOO.

WHEN THAT METAL
STRIP PULLS LOOSE
FROM THE CONTAINER,
THE TENSION CAN MAKE
IT **SNAP BACK**, PUTTING
YOUR EYES AT RISK!

Good Ways to Keep Water Flowing



MORALE CAN TAKE A REAL PLUNGE IF THE WATER IN YOUR UNIT'S WATER BUFFALO GOES BAD!

ESPECIALLY IF THERE'S NO OTHER DRINKING WATER AROUND!

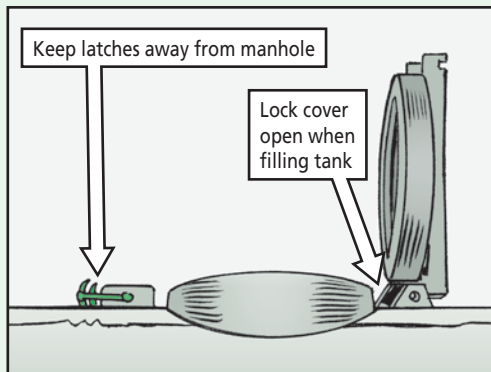
SO MAKE SURE YOU USE THESE PM POINTERS BEFORE YOU TAKE YOUR M149A2 WATER TRAILER OUT TO THE FIELD.

Manhole Gasket Reminder

It only takes a moment of carelessness to poke a hole in the manhole cover gasket on the water trailer.

If you don't get the cover latches out of the way, any time the cover is closed, the gasket takes a poke. A hole in the gasket can lead to contaminated drinking water.

Besides making sure the latches are out of the way, lock the cover open while filling the tank. That way, the cover can't close until you want it to.

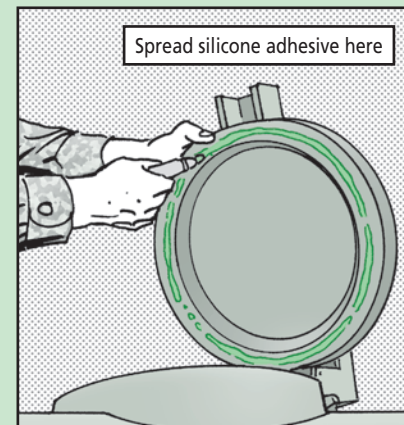


Better Seal Deal

There's an improved manhole cover seal that will make leaks a thing of the past. But that seal, NSN 5330-01-317-9640, is only as good as its installation.

Here's what to do:

1. Remove the manhole cover.
2. Scrape off the old seal and toss it.
3. Sand the outer 1½ inches of the underside of the cover with emery paper.
4. Use denatured alcohol to wash the sanded area. Be careful not to touch the sanded and washed area with your bare hand. Oil or dirt from your hand can keep the sealant from working properly.
5. Let the cleaned area dry.
6. Spread a 1-in wide band of silicone adhesive, NSN 8040-00-118-2695, around the outside cover.
7. Slip the seal onto the cover.
8. Put a little more sealant around the inside of the seal where it meets the cover.
9. Now lay the cover with the seal side down on a smooth, flat surface, such as a work bench. Let the sealant cure for 24 hours. (We think it's a good idea to also put some type of cover on the manhole of the trailer to keep out contamination.)
10. Rinse the cover with clean water.
11. Install the manhole cover on the tank.

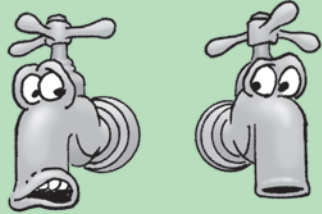


PS MORE

Water Faucet Update

Use NSN 4510-01-433-0396 to get a faucet made to dispense potable water from the water trailer. The part number shown as Item 1 in Fig 28 of TM 9-2330-267-14&P cannot be used for potable water.

WE MAY
LOOK
SIMILAR-BUT
I'M **SAFE...**
AND **YOU'RE**
NOT!



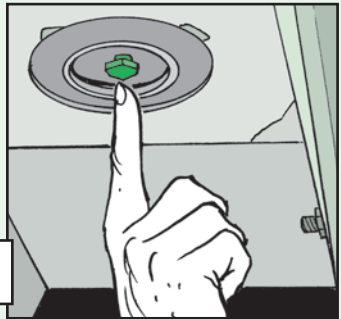
Stop the Drip

A leak around the plastic plug, NSN 4730-01-086-1620, under your water trailer probably means the plug was overtightened.

Overtightening strips threads, causing leaks. It also makes the plug hard to remove.

Head off leaks and removal problems by wrapping every new plug's threads with anti-seize tape, NSN 8030-00-889-3535, and by lightly snugging it in place. That way, the plug can be used several times.

Wrap plug with
anti-seize tape



Combat and Tactical Vehicles...

HANDY CHOCK BLOCK INFO

NEED CHOCK BLOCKS
FOR YOUR COMBAT
VEHICLE OR TRUCK?

IF NONE ARE LISTED IN YOUR TMS,
MAKE YOUR OWN OR FIND SOME
THAT'LL WORK FROM THIS LIST...

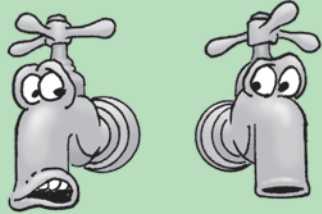


NSN	Material	Size (LxWxH in inches)
2540-01-271-7167	Rubber	7x6.5x5.38
2540-00-678-3469	Wood	8x9.5x8
2540-01-459-4266	Rubber	9x15x6
2540-00-288-2873	Aluminum	9.5x8x5.75
2540-00-769-5048	Steel	11.25x11.5x5.5
2540-00-912-1848	Aluminum alloy	12x15x9.375
1730-00-294-3695	Wood	14x6x4
2540-01-165-6136	Wood	15.5x7.75x5.75
2540-01-184-4897	Aluminum alloy	18x18x1.75

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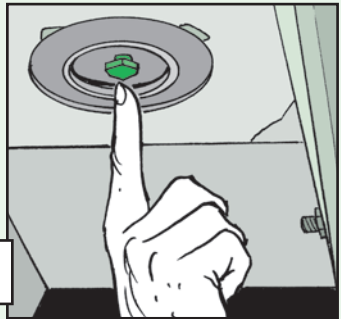
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2540-00-769-5048	Steel	11.25x11.5x5.5
2540-00-912-1848	Aluminum alloy	12x15x9.375
1730-00-294-3695	Wood	14x6x4
2540-01-165-6136	Wood	15.5x7.75x5.75
2540-01-184-4897	Aluminum alloy	18x18x1.75

I WONDER
WHERE I CAN
FIND HOW TO
CHECK YOU OUT
FOR SAFETY?

GOSH!
YOU DON'T
KNOW JACK
ABOUT JACK
STANDS!

BETTER GET
A COPY OF
TB 43-0156!

WHERE ARE INSPECTION CRITERIA?

Dear Half-Mast,

Where do you
find criteria for
making sure jack
stands are safe?
We just aren't sure
and jack stands are
not something
you want to take
chances with.

Mr. H.W.

Dear Mr. H.W.,

TB 43-0156, Safety Inspection and Operation of Vehicle Support Stand, has the word on checking out 5- and 7-ton jack stands, but you can also use its PMCS for the 10-ton stand. The TB is at the LOGSA ETM website:

<https://www.logsa.army.mil/etms/welcom1.cfm>

It's a good idea to stencil the jack stand capacity on at least two places on the stand. The capacity is supposed to be stamped on the jack stand, but sometimes it's been painted over. It's also a good idea to stencil the date of the last inspection on the jack stand so you can easily tell when the six-month limit for the next inspection has been reached.

For more info on jack stand maintenance, check out Pages 7-9 of PS 704 (Jul 11):

<https://www.logsa.army.mil/psmag/archives/PS2011/704/704-07-09.pdf>

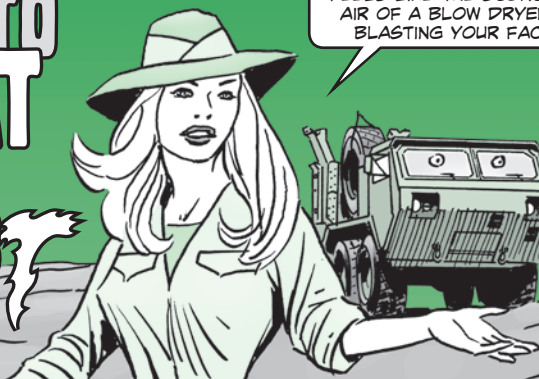
Half-Mast

Unmarked jack stands can be overloaded



PLS...

HOW TO BEAT THE HEAT



SOME PLACES IN THE SANDBOX CAN GET SO HOT IT FEELS LIKE THE SCORCHING AIR OF A BLOW DRYER IS BLASTING YOUR FACE!



IF YOU FEEL THIS WAY, YOUR M1074, M1075 AND M1076 PLS PROBABLY DO, TOO.

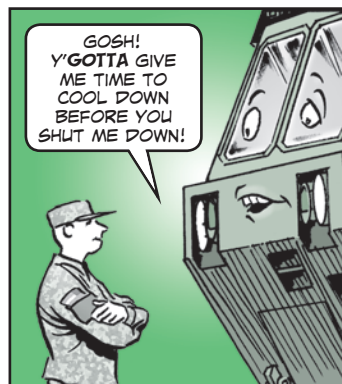
YOU'RE DARN RIGHT WE DO!

SO CHECK OUT THE INFORMATION BELOW FROM GTA 43-01-012 FOR WAYS TO HELP YOUR PLS BEAT THE HEAT!

AND REMEMBER TO STILL EYEBALL YOUR VEHICLE'S -10 TM AND OTHER MAINTENANCE MANUALS FOR PMCS GUIDANCE.

PMCS Tips

1. Inspect add-on armor (AOA) for missing or loose bolts weekly.
2. Check cab mount bushings for over-compression.
3. Inspect the escape hatch position, latches and latch hardware to ensure they're properly placed and not worn out.
4. Check the air conditioner. If it isn't blowing cold air, have maintenance check it for leaks before your mission.
5. AOA requires frequent checks. Conduct vehicle checks at each stop during missions.
6. Idle the engine before shut down to allow time for cool down.
7. Drain the fuel/water separator daily.



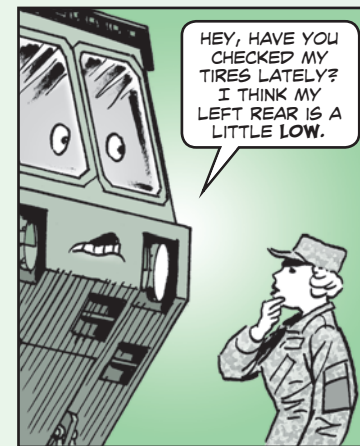
GOSH! Y'GOTTA GIVE ME TIME TO COOL DOWN BEFORE YOU SHUT ME DOWN!

Armor Concerns

1. AOA affects vehicle handling, so make sure you factor in greater stopping distances due to the extra weight of the PLS. The added weight will affect engine exhaust brake operation. Reduce speed before turning.
2. Do not park on slopes if possible. If the door flies open, the extreme weight of it can cause injury to personnel or damage to equipment.
3. AOA causes excess wear on the PLS' engine, drive line, brakes, suspension and steering components. Make sure they're serviced.
4. AOA reduces visibility, so stay alert and be sure your assistant driver is also alert.

Operating in Extreme Temperatures

1. Check fluids daily, including the batteries (if you don't use maintenance-free batteries in your PLS).
2. Check tire pressure daily.
3. Check batteries for cracks.
4. Replace worn engine belts.
5. Clean air filters and radiator fins daily.
6. Keep air conditioner fins free from dirt and sand.
7. Wipe dirt away from the fuel tank's lid before opening it.
8. Keep the outside of the vehicle free from dirt and sand. If they cake up on your PLS, your vehicle can overheat.
9. Watch all gauges and indicator lights for proper readings.
10. Cover windows when not in use. That keeps the inside of the vehicle cooler.



HEY, HAVE YOU CHECKED MY TIRES LATELY? I THINK MY LEFT REAR IS A LITTLE LOW.

Recommended Fluids and Lubricants

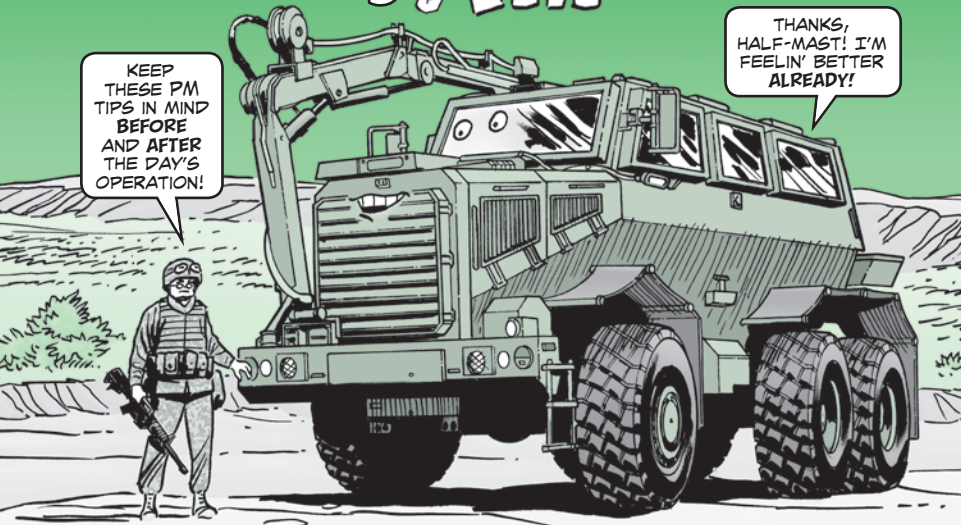
When temperatures reach 100°F:

1. Use OE/HDO 40 in the engine.
2. Use 15W/40 in the transmission.
3. Use a mixture of 50% water and 50% antifreeze in the radiator.
4. Lubricate the PLS and PLS trailer often, wiping off fittings first.

GOT QUESTIONS?
SEND AN EMAIL TO:
PLS2@conus.army.mil



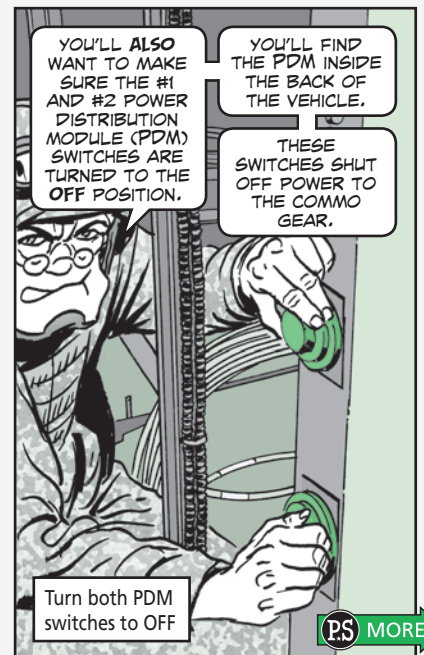
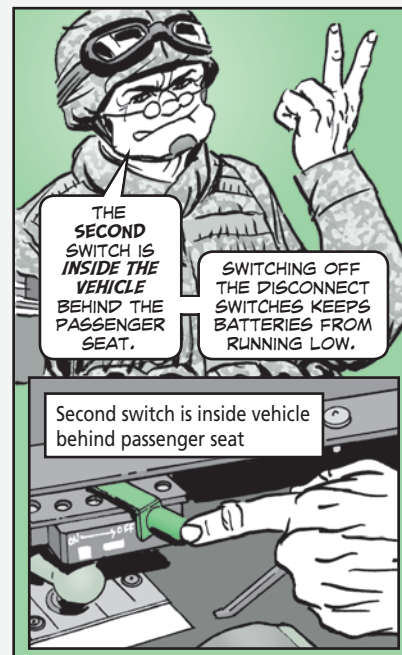
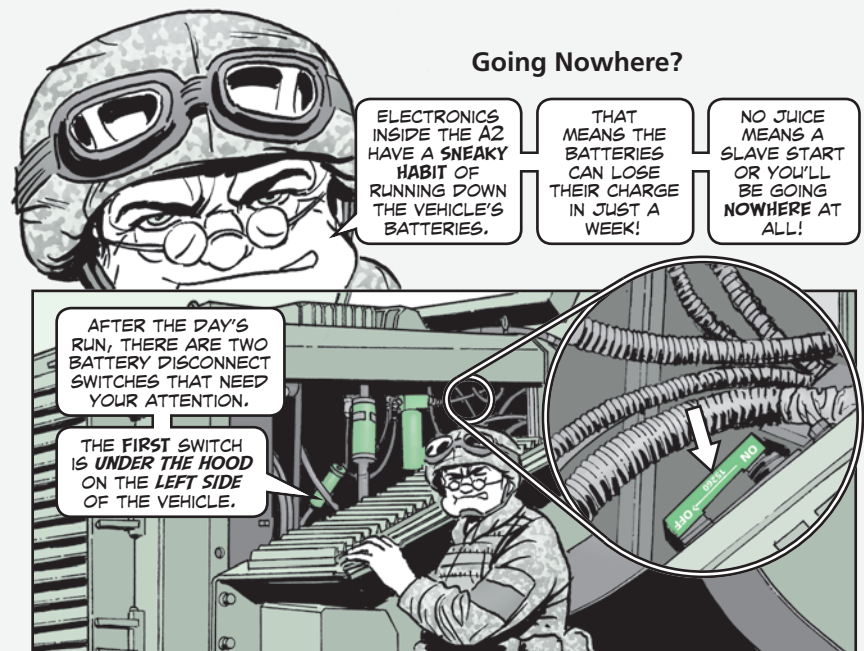
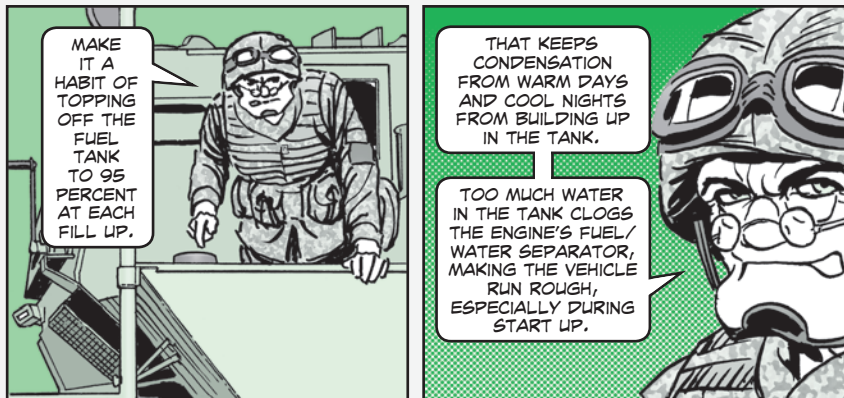
Making PM Work



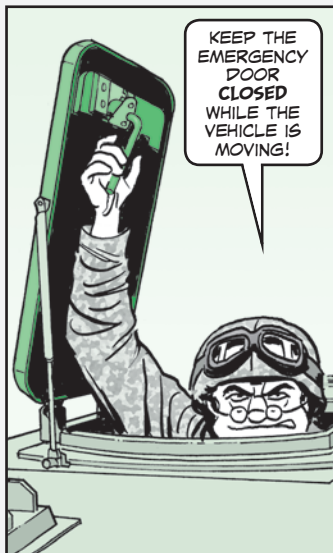
The new Buffalo A2 is a route clearance vehicle (RCV) equipped with infrared technology and ballistic-blast protection. It has a 30-ft robotic arm and claw that's operated from within the armored hull via a mounted-camera and sensory equipment. The claw probes debris and dirt to detect and safely expose mines and IEDs.

So crewmen, keep these PM pointers in mind. They'll keep your A2 mission-ready as the vehicle racks up more miles on the rough road ahead.

Fuel Tank Fill Up



Emergency Door Reminder



KEEP THE
EMERGENCY
DOOR
CLOSED
WHILE THE
VEHICLE IS
MOVING!

SOME
CREWMEN
LEAVE THE
DOOR OPEN
TO KEEP AIR
CIRCULATING
INSIDE
THE HULL.
THAT'S A
BAD IDEA.

LEAVE THE
DOOR OPEN
AND IT
CAN COME
CRASHING
DOWN ON
YOUR HEAD...



ALSO, LEAVING THE
DOOR OPEN IS AN EASY
TARGET FOR A THROWN
GRENADE, AND THAT'S
NOT GOOD EITHER!

Using the Ladder

WHEN CLIMBING
DOWN THE
LADDER IN THE
BACK OF THE
A2, MAKE SURE
YOU'RE **FACING
THE VEHICLE.**

DO NOT
STEP DOWN
THE LADDER
WITH YOUR
**BACK TO THE
VEHICLE!**

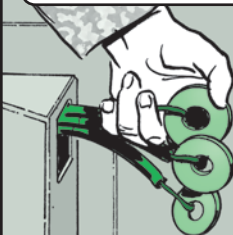
BATTLE-
READY
GEAR
GETS HUNG
UP IN THE
LADDER
STEPS,
CAUSING
YOU TO
SLIP AND
FALL
OFF THE
LADDER!



Get the Water Out

YOU'VE GOT TO DRAIN THE AIR TANKS
ON YOUR A2 **EVERY DAY** AFTER
OPERATION. IF YOU FORGET,
MOISTURE BUILDS UP.
IT CREATES CORROSION THAT **PLUGS
UP** THE ENTIRE AIR SYSTEM, INCLUDING
BRAKE VALVES AND CYLINDERS. IT CAN
ALSO LEAD TO **BRAKE FAILURE.**

SO, DRAIN WATER FROM THE PRIMARY
AND SECONDARY AIR TANKS ON THE
DRIVER'S SIDE OF THE VEHICLE. THE
TANK HAS **THREE** PULL CABLES.
BY THE WAY, YOU'LL FIND THIS LISTED
AS CHECK 209 IN WP 0093-86 OF TM
9-2355-352-10 (SEP 11).



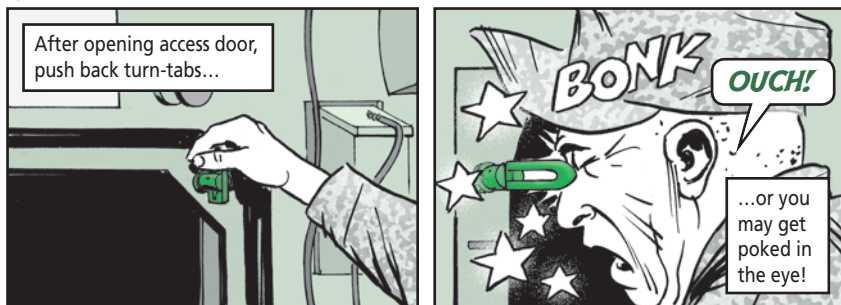
BEWARE OF THE TURN-TAB!



You can get a real “eyeful” from the turn-tabs that hold the transmission filter’s access door in place!

OK, now that we’ve got your attention...

These tabs need to be pushed back after you open the door so they’re not sticking out. A tab left sticking out can poke you in the eye, or jab you in the forehead, when you lean forward to look at the filter.

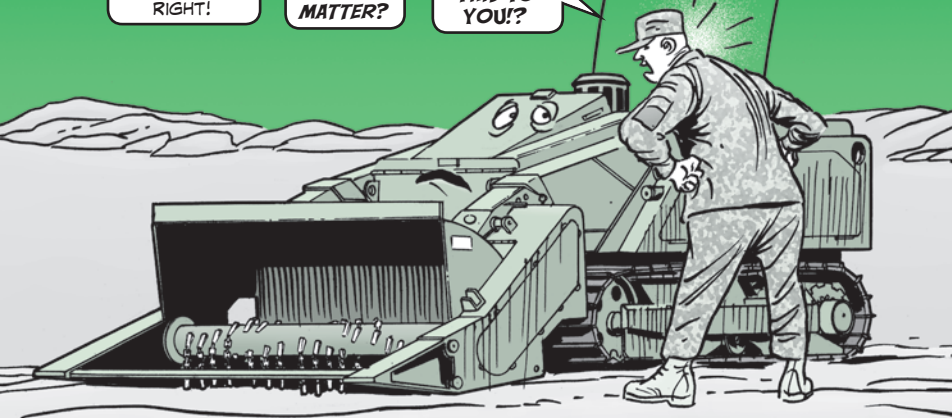


M160 Warmup and Cool Down

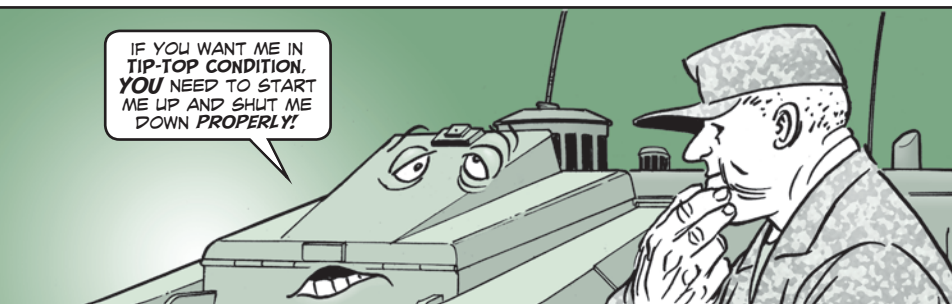
YOU'RE
NOT RUNNING
RIGHT!

WHAT'S
THE
MATTER?

WHO DID
THIS TO
YOU!?



IF YOU WANT ME IN
TIP-TOP CONDITION,
YOU NEED TO START
ME UP AND SHUT ME
DOWN **PROPERLY!**



OPERATORS, PAGES 24-26 IN WP 0005 OF TM 9-2350-392-10 (SEP 11) ARE LOADED WITH GOOD INFO ON STARTING UP OR SHUTTING DOWN YOUR M160 SYSTEM.

HERE'S WHAT YOU NEED TO REMEMBER TO KEEP ME MISSION-READY...

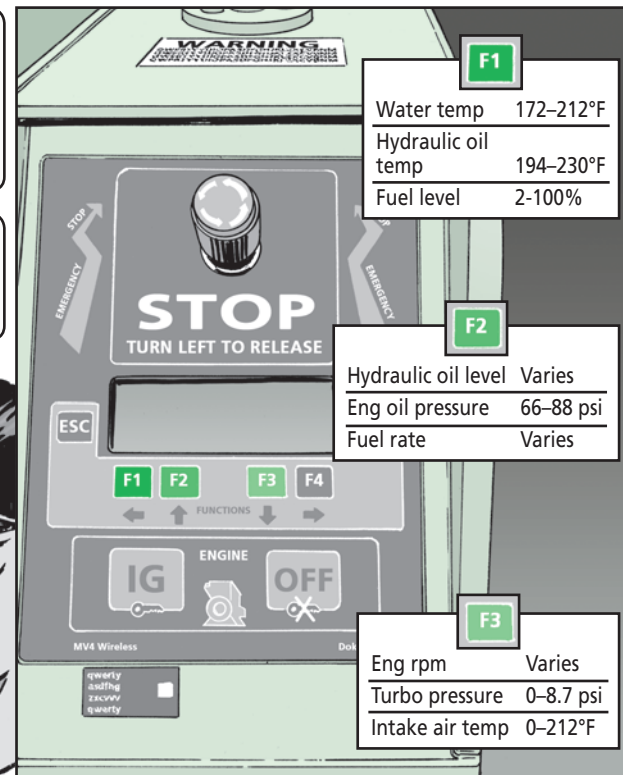


AFTER THE VEHICLE HAS WARMED UP APPROXIMATELY FIVE MINUTES, CHECK FOR THESE READINGS ON THE VEHICLE CONTROL PANEL.

NORMAL VEHICLE READINGS DEPEND ON CLIMATE, BUT HERE'S THE GENERAL RULE OF THUMB...



Warm It Up



Warming up the M160 gives the oil time to lubricate the vehicle's parts. It also lets the engine warm up enough to boil off condensation caused by normal engine breathing. That way, you won't have to worry about condensation mixing with the oil and forming a sludge that'll clog the engine.

So, once the M160 is warmed up and operating, check these readings, especially those for water temperature and engine oil pressure. They should be within normal operating range.

Cool It Down

After operation, let the M160 cool down before shutting it off. Idle the M160 for 2–3 minutes. The engine needs to cool down after operations to prevent excessive heat in the engine, particularly in the turbocharger center housing.

Overheating can crack the block, warp a head or valves, or bake the oil until it's not slick enough to lube the bearings. Cooling down also lets the turbocharger slow down, reducing coking in the turbocharger bearings.

Hold Your Horses!

I TOLD YOU TO LEAVE THOSE BLADES ON THE SAW HORSES INSIDE THE HANGAR, **NOT OUTSIDE!**

YEAH, **NOW** I KNOW WHY!

D'OH!

Mechanics, you may have to literally hold your horses if you set blades on saw horses outside the hangar.

Saw horses, and any Kiowa Warrior rotor blades that you put on them during scheduled inspection or maintenance, can be damaged by debris thrown by rotor wash. High winds can blow saw horses and blades to the ground. Don't leave blades outside the hangar.

What starts out as routine scheduled blade inspections by the aviation support battalion (ASB) can quickly turn into major repair or replacement of damaged blades.

BE WISE!

BRING THOSE BLADES INSIDE THE HANGAR AND PLACE THEM ON PADDED SAWHORSES.

THAT WAY, THEY'RE PROTECTED FROM WIND AND ROTOR WASH.

Get **Low** Before You Go!

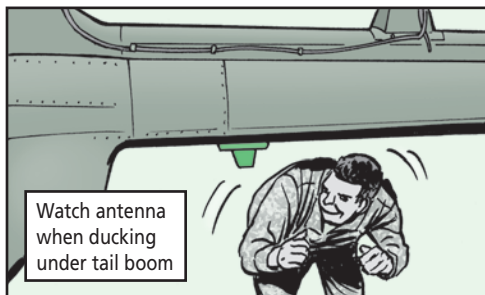


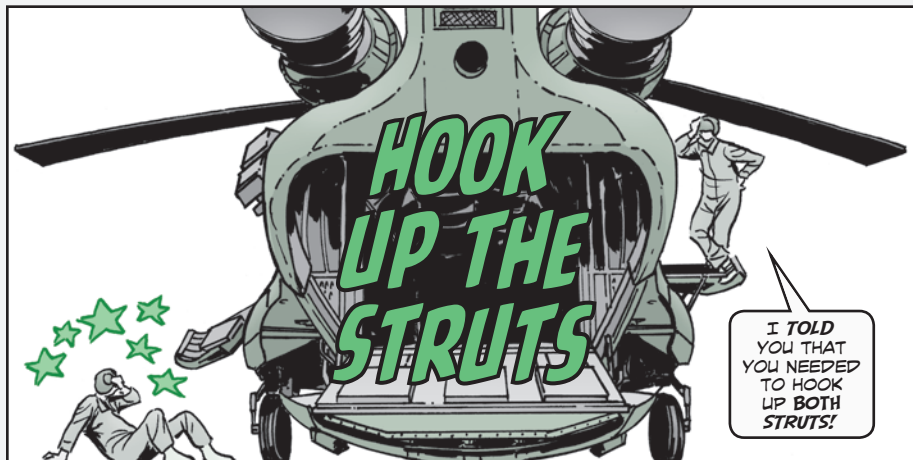
Doing maintenance on your Kiowa Warrior often means going back and forth, around and underneath your aircraft tail boom. But pay attention when you do.

When moving around your Kiowa, especially when ducking under the tail boom, you need to get as low as you can go to avoid hitting your head or back on the identification friend or foe (IFF) antenna. If you break the antenna, your aircraft is unidentifiable.

Steer clear of the antenna. The IFF antenna can be broken easily if you bump it. That can make your aircraft partially mission capable. That's OK for normal operations back at home base, but for tactical situations, your aircraft is NMC until it's fixed.

So make it a habit to think limbo when you go under the tail boom.





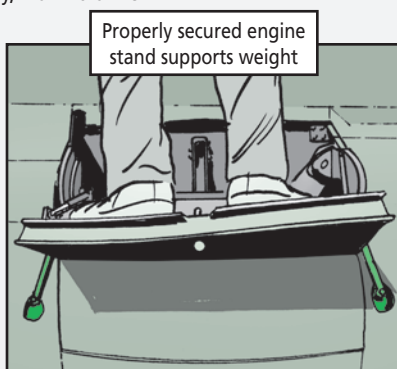
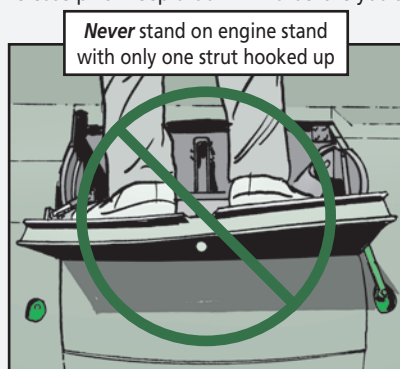
Maintenance on your Chinook shouldn't be approached lightly, mechanics. Careless maintenance will almost always end with damage to your aircraft and injury to you.

Use of the engine stand provides a case in point. The first step to using the stand is to hook up both struts to the airframe so the stand can support your weight while you work on the engine.

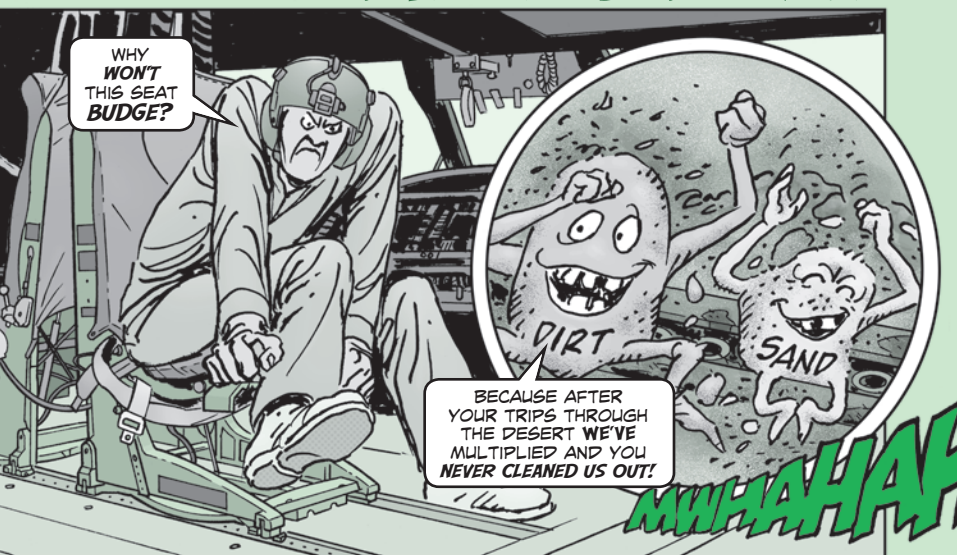
If only one strut gets hooked up, you're gambling that nothing will happen while you stand on it.

Also, make sure both quick-release pins are fully inserted. If they aren't, they can come loose while you are standing on the work platform. Then the platform becomes unsteady when you stand on it. It can either fold closed or pivot outward causing you to fall off the platform. Either way causes injury to you and damage to the aircraft.

The engine stand may look strong, but it still needs both struts and fully inserted quick-release pins. Keep that in mind before you say, "It'll hold me."



SAND IN THE SEAT TRACKS

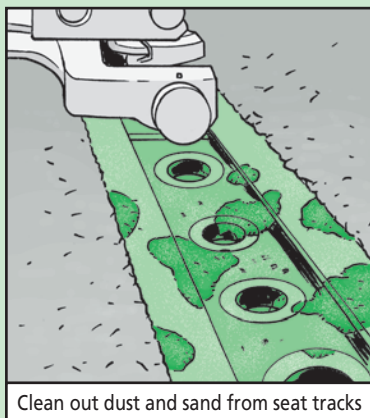


Crew chiefs, when Black Hawks land in dust or desert sand, the stuff goes everywhere inside the aircraft.

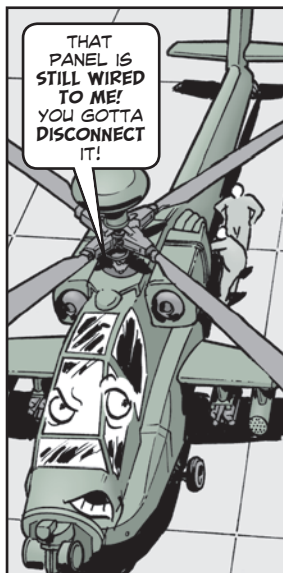
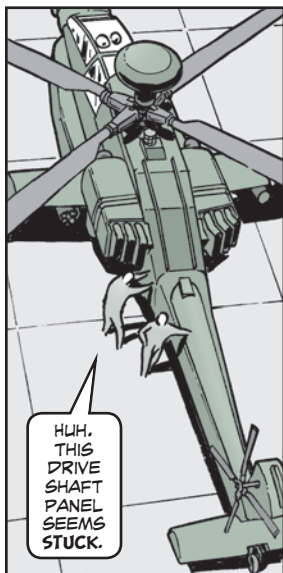
Sand and dust can build up in the tracks and holes on the UH-60M gunner's and medical attendant's seat pallets on the HH-60M. So, after landing your bird, your seat tracks will need some attention.

Yes, that means you have to break out a brush and vacuum's crevice tool to get the sand out of the seat tracks. If you don't, the tracks clog up with gunk. Then the seats will get stuck and you won't be able to move them in the tracks.

Once you get the sand out of the tracks, have one of your buddies sit in the seat and try to move it to ensure it slides. You may need to give him a little push to work the seat loose if it's been stuck. Once the seat slides freely, make sure it latches properly, then double check the track and its holes for any more sand or debris that may have worked loose.



FAULTY PANEL REMOVAL

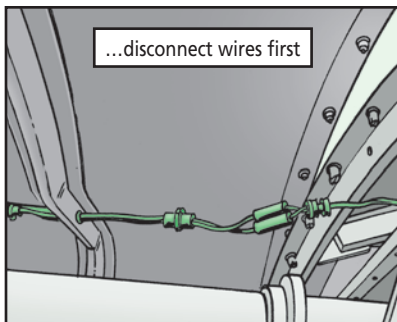
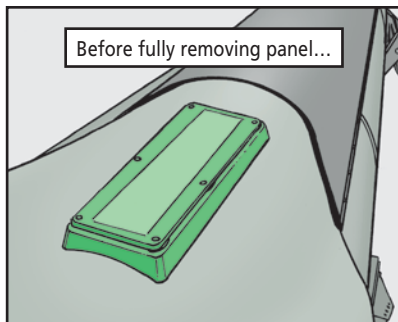


Mechanics, when your AH-64 aircraft is due for a 250-hour scheduled inspection of the drive shaft, don't be in a rush to snatch off panels.

Before removing a panel, you need to know if there is wiring connected to it.

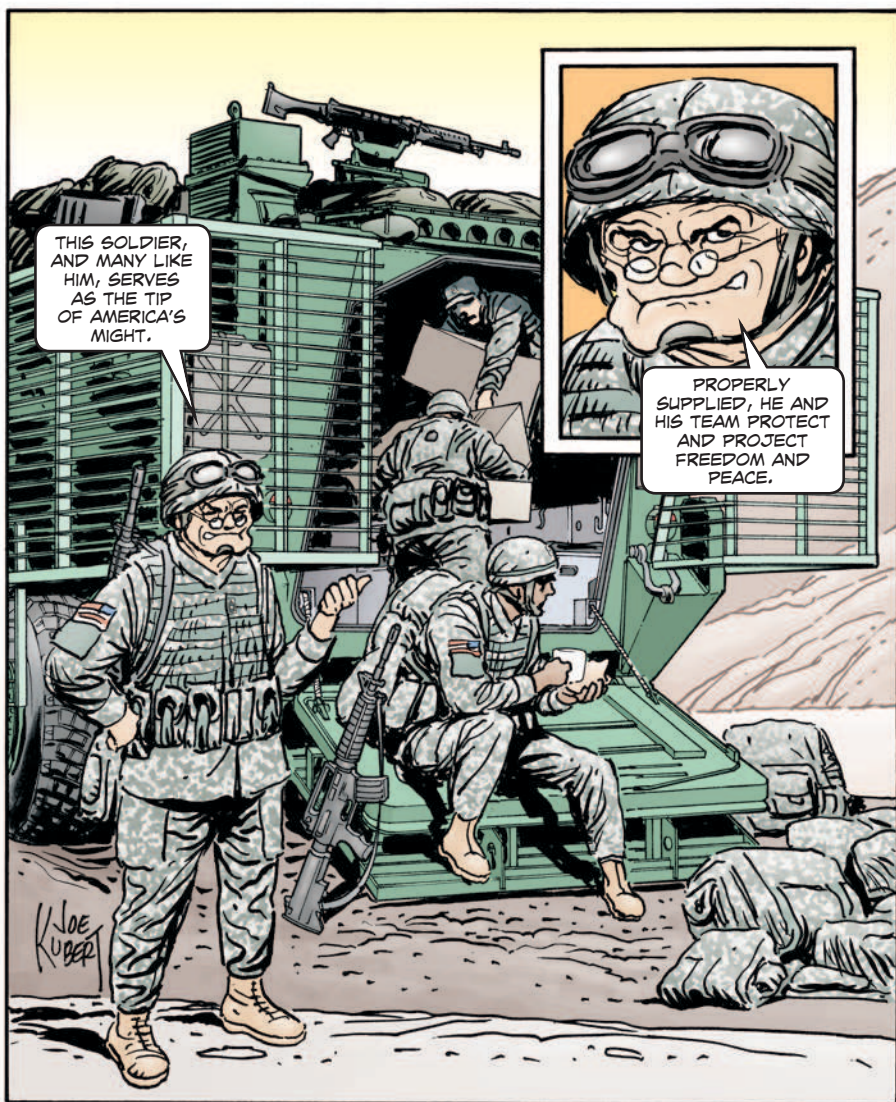
To inspect the drive shaft properly, the drive shaft panels must be removed. One of those panels, the T355 panel, has a rear formation light attached to it. If you rush to remove the panel before disconnecting the wires, you could rip them out!

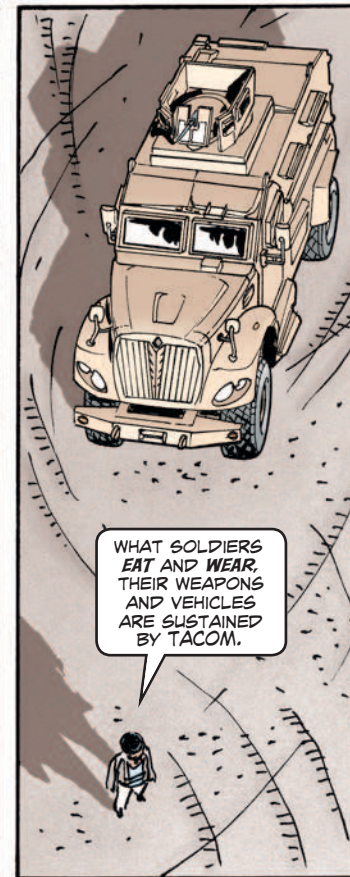
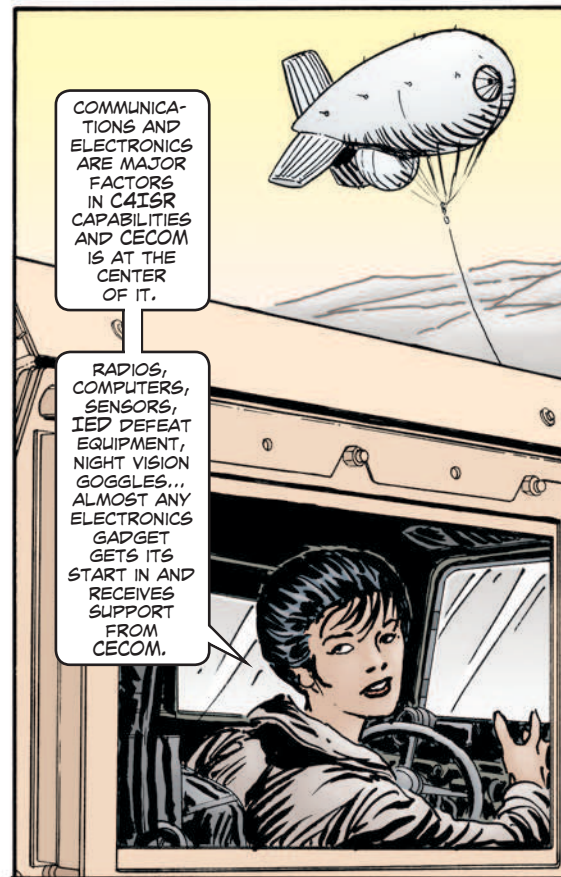
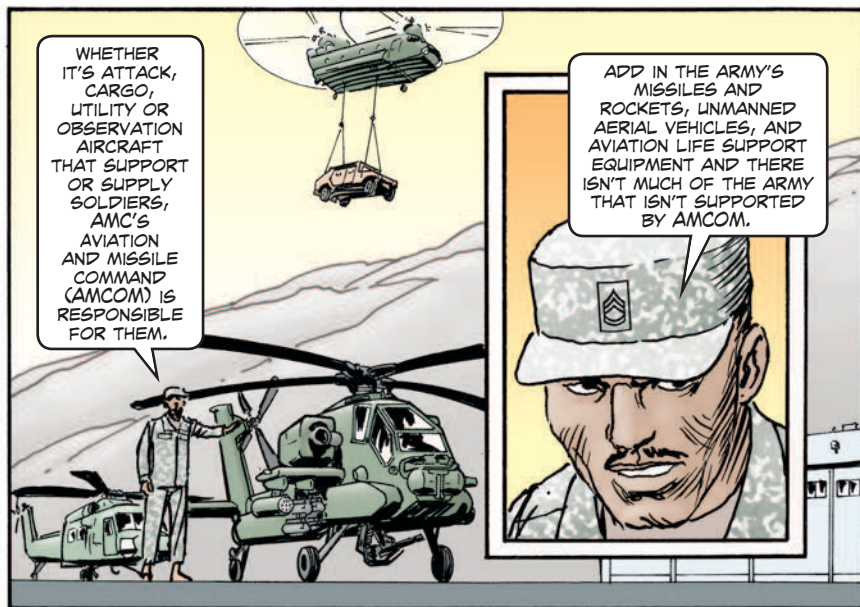
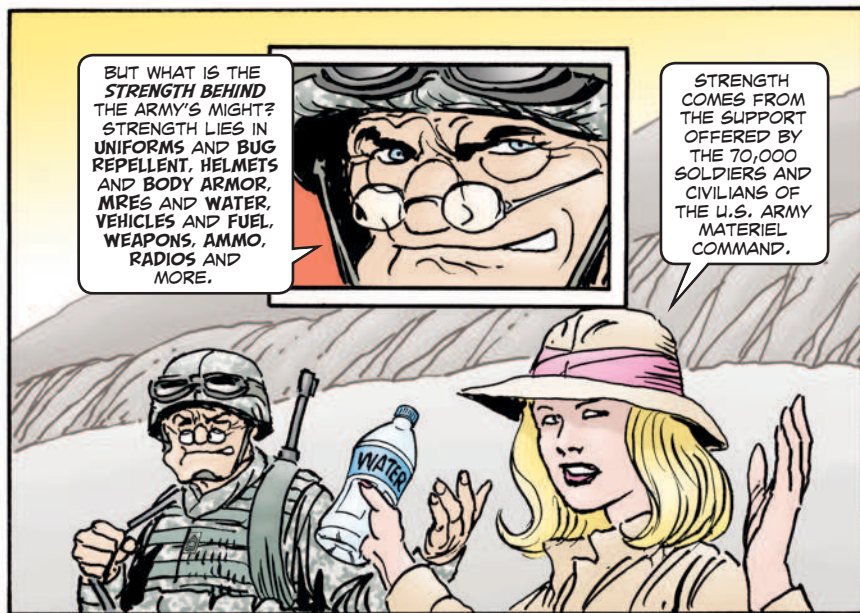
So make sure the rear formation light is disconnected first before removing screws and panels. That way, you'll avoid turning an inspection into a repair job to replace wiring, pins and the light.

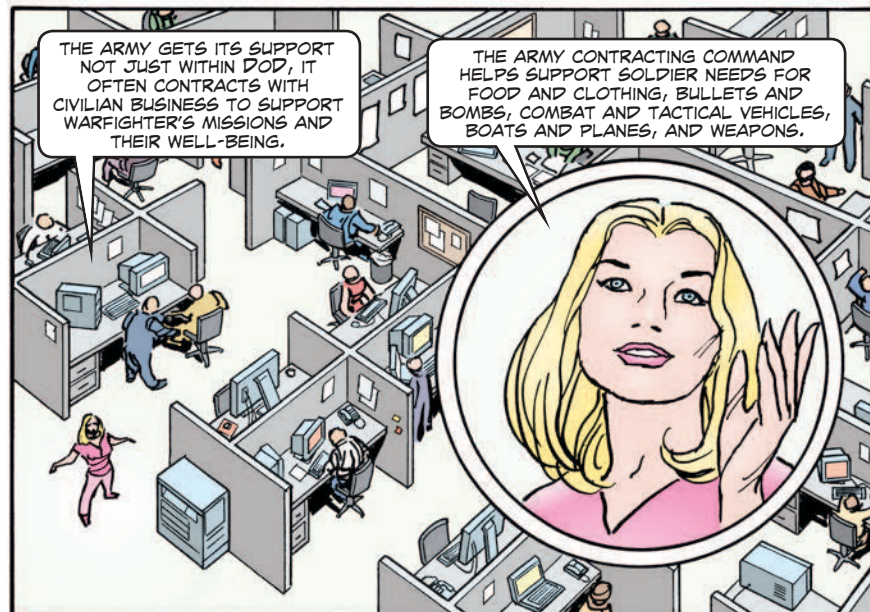
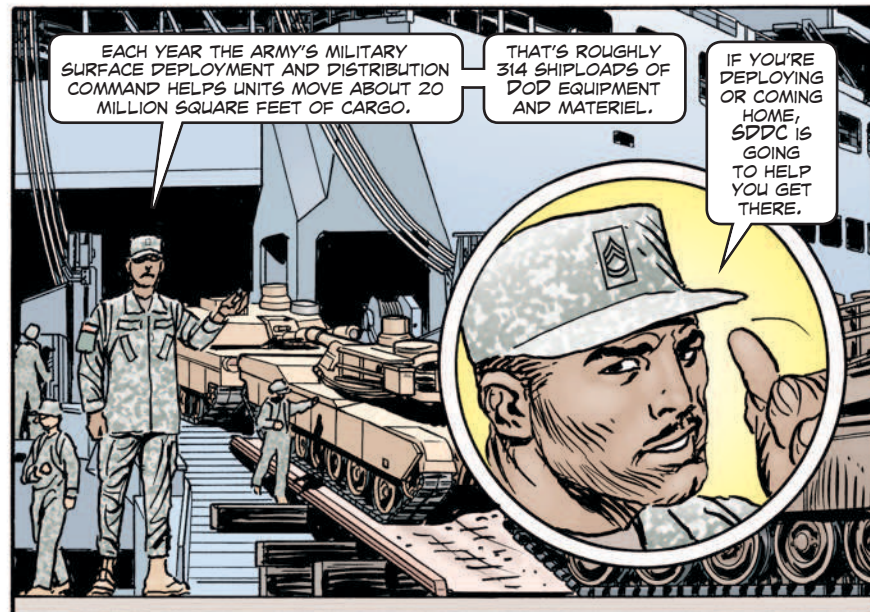
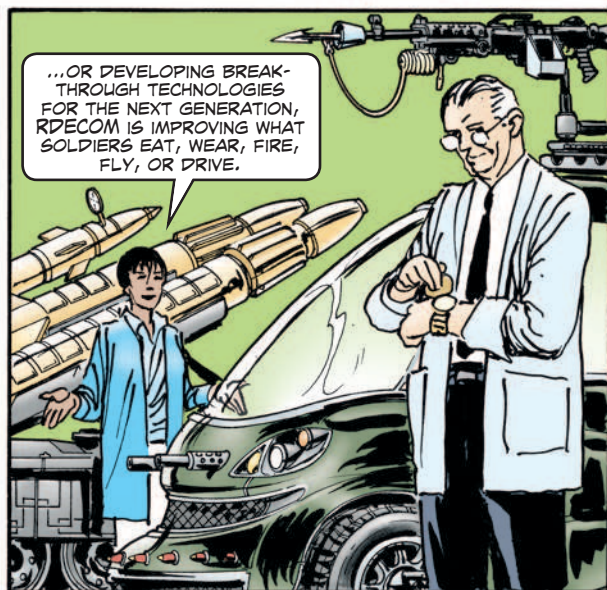
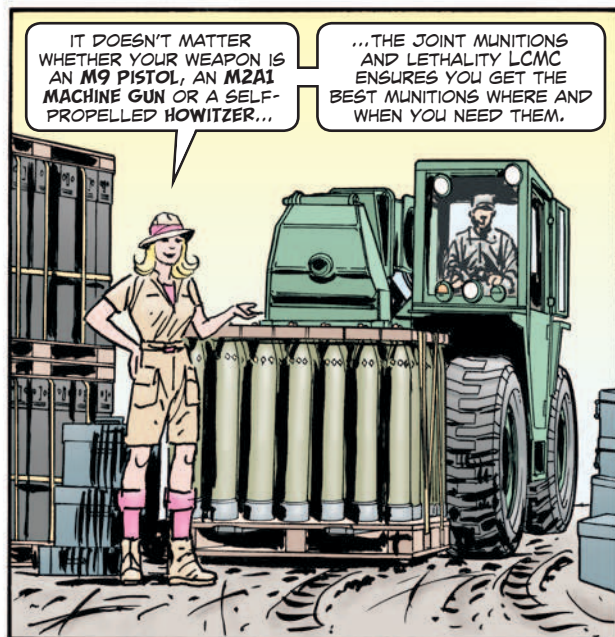


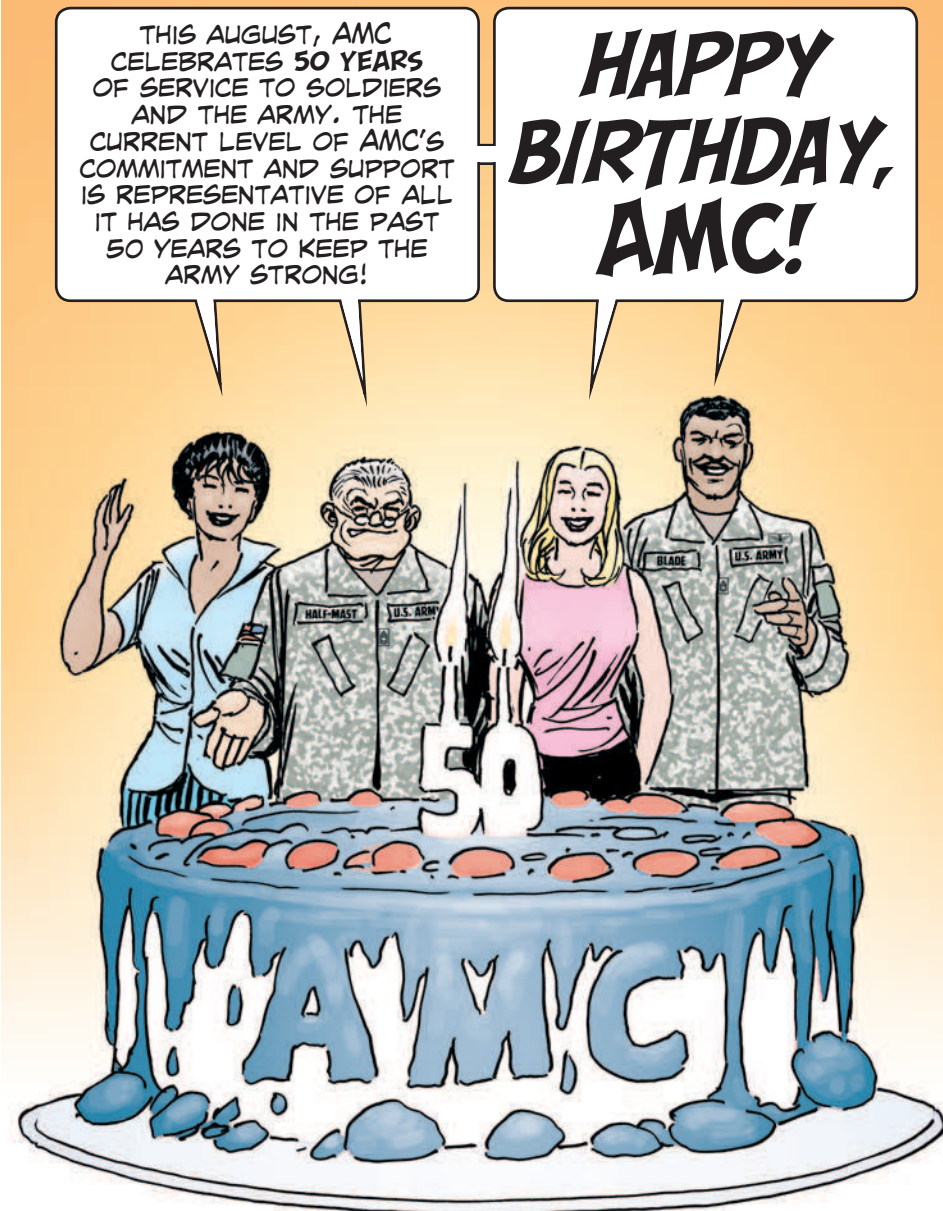
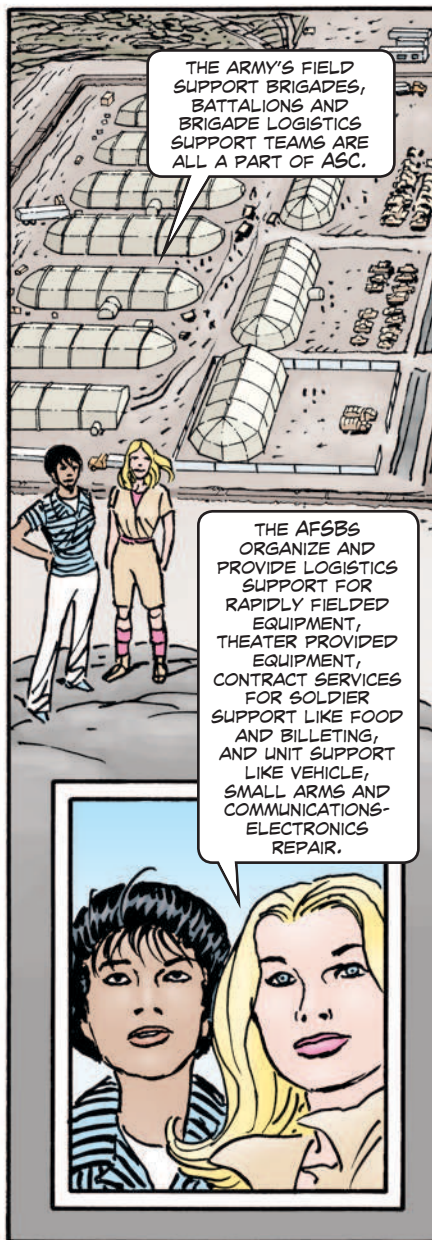
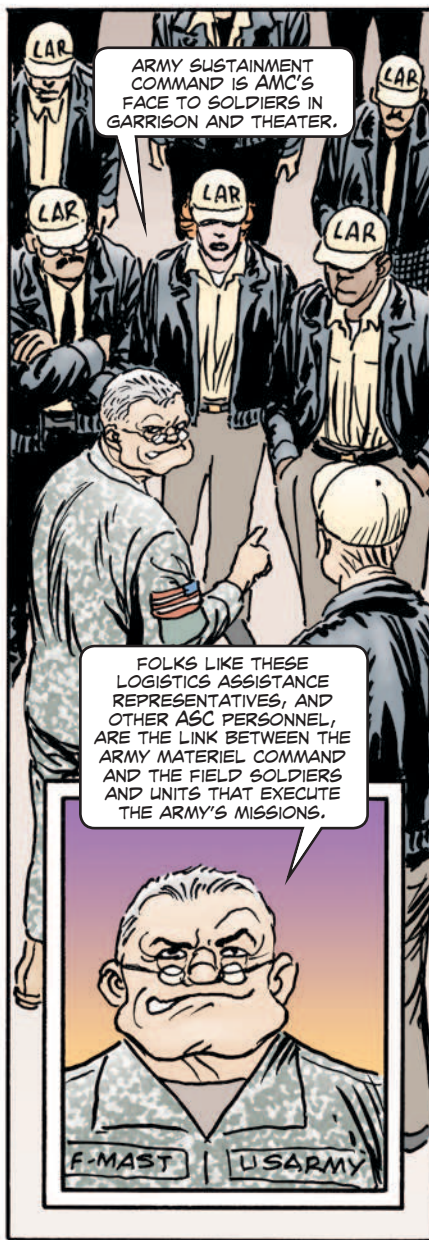
AMC

Strength Behind the Might

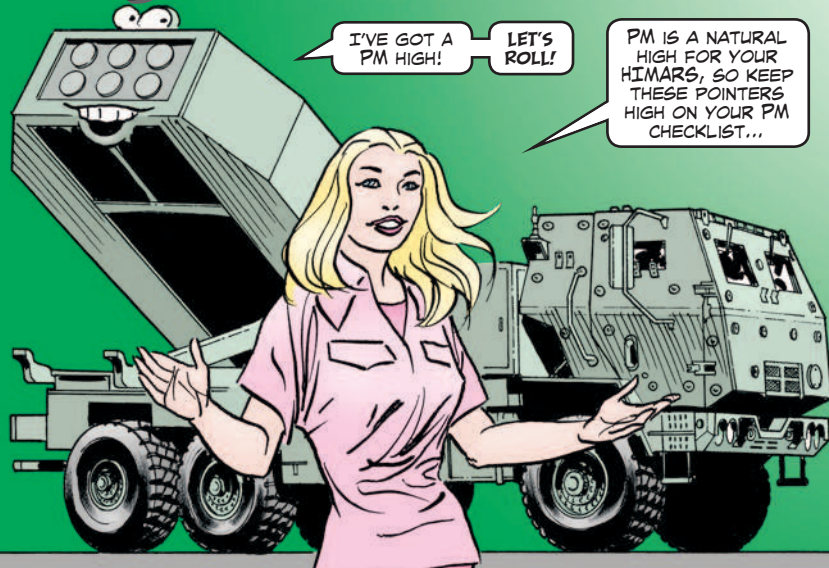








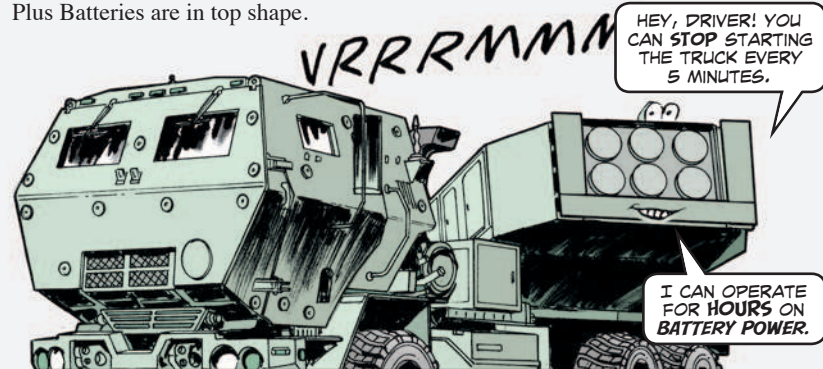
High on HIMARS PM



Don't start up truck every few minutes—If the batteries are in good shape, your HIMARS can operate on battery power alone for several hours.

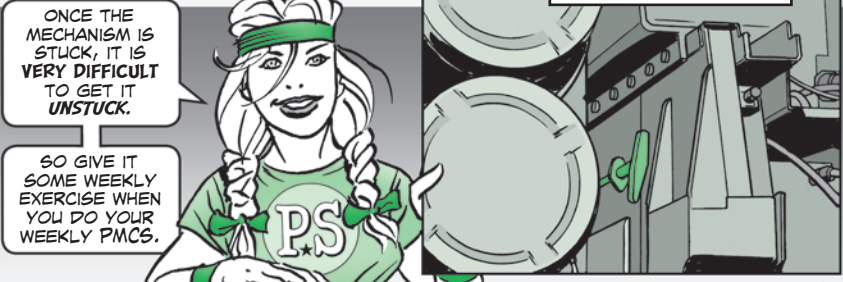
Starting up the truck frequently will actually reduce battery life because it takes so much power to start the engine. If you have doubts about the strength of the batteries, check the battery gauge on the dash.

Always do battery maintenance like it says in the HIMARS PMCS, your unit SOP and in TM 9-6140-200-13 and TB 9-6140-252-13 to ensure your Hawker Armasafe Plus Batteries are in top shape.



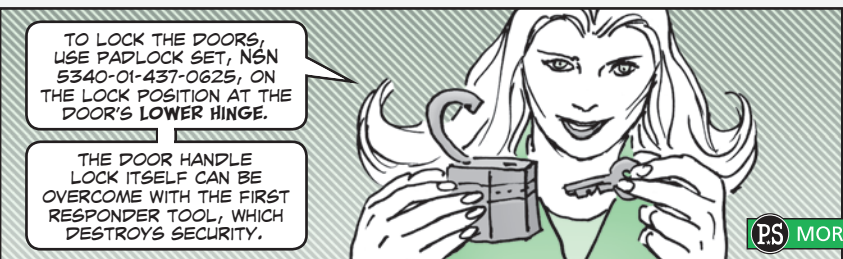
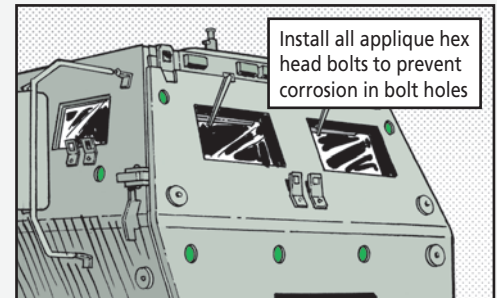
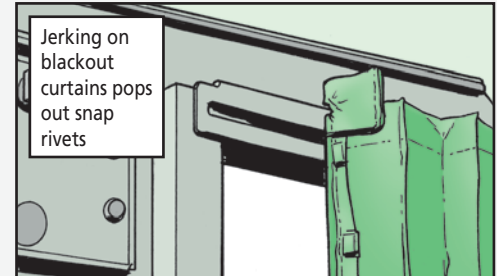
Exercise jury strut release mechanism—If you exercise the mechanism weekly, you will save your repairman so much trouble. If the mechanism is left untouched week after week, eventually its cable sticks.

Exercise jury struts weekly



ICP pointers—With improved crew protection (ICP), there are a few things to keep in mind:

- Don't jerk on the blackout curtains. That can tear out the snap rivets that hold them in place. Slide the blackout curtains to the side while holding them near the top of the curtain to avoid pulling out their snap rivets.
- Don't leave out the hex head bolts for the applique. All the bolts need to be installed to prevent corrosion in the bolt holes. When you remove the applique and bolts, install paint plugs, NSN 5340-01-567-6558, in place of the bolts. Remember the applique mounting bolts have special threads, so their bolt holes should only be cleaned with the spiralock tap that's part of your BIL.

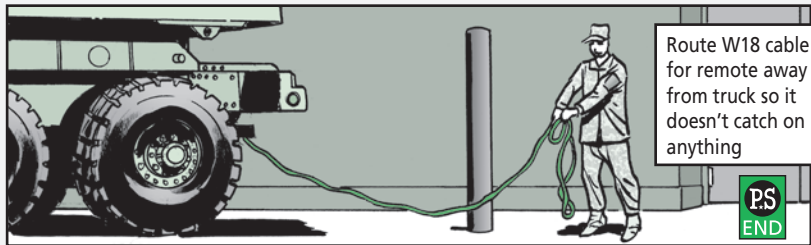


Clean out GDU fault log— Weekly, go into the gunner's display unit (GDU) and clean out any faults in the maintenance manager fault log. Too many faults in the log can throw faults into the HIMARS system and then you've got needless troubleshooting.

Clean out faults in GDU fault log weekly



Route W18 cable carefully — When you're operating the launcher module (LM) remotely, make sure to route the W18 cable away from the vehicle. Otherwise, when the LM is moved the cable can catch on something like the tire and be ripped out.



Patriot Missile System...

THE TM SAYS INFLATE YOUR TIRES TO 65, BUT I'M NOT SURE THAT'S RIGHT.

I'VE GOT **NEW TIRES** SINCE THAT TM CAME OUT! MY **NEW TIRES** NOW NEED **105 PSI**.

What is the CORRECT Tire Pressure?

Dear Half-Mast,

What is the correct tire pressure for the Patriot's M860A1 trailer 445/65R tires? We are getting trailers that have TP 105 stenciled over the bumper, but the trailer TM says the pressure should be 65 psi.

W.R.

Dear Mr. W.R.,

Actually the Firestone® bias tire, NSN 2610-00-142-5136, that had been used for the Patriot trailer is no longer available. It has been replaced with the 445/65R22.5 Goodyear® or Michelin® radial tire that comes with NSN 2610-01-286-5798. The radial should be inflated when the tire is cold to 100-105 psi. If you still have the old bias tires and they're still good, inflate them cold to 65 psi and continue to use them. Just don't mix bias and radial tires on the same trailer. This info will be added in the next change to TM 9-2330-357-14&P.

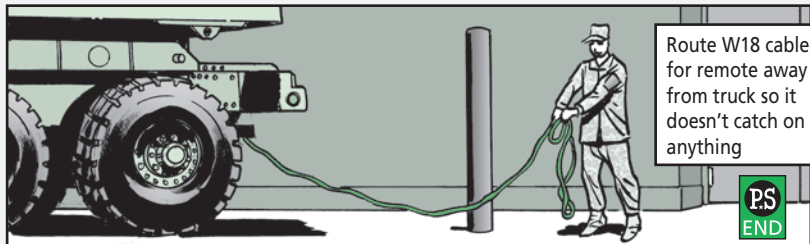
Half-Mast

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Half-Mast

TIPS TO KEEP YOU SAFE!

HERE ARE
SOME HIGH
VOLTAGE
TIPS FROM
FT SILL!

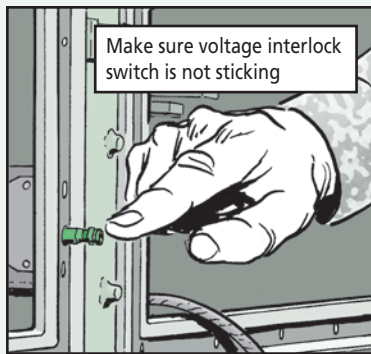


Dear Editor,

Both the Firefinder and Sentinel radar systems generate a tremendous amount of juice that could easily electrocute someone if a safety device fails. Here are two tips to ensure those devices work:

- On both the Firefinder and Sentinel, the high voltage interlock switch is supposed to pop out whenever you open the compartment door. That shuts down the voltage and makes it safe to work inside the compartment.

But sometimes the switch can stick, especially if you're operating around lots of blowing sand or dirt. So, as part of your BEFORE PMCS, it's a very good idea to make sure the switch is actually popping out when you open the compartment door. If it's sticking, tell your repairman so he can clean the switch.



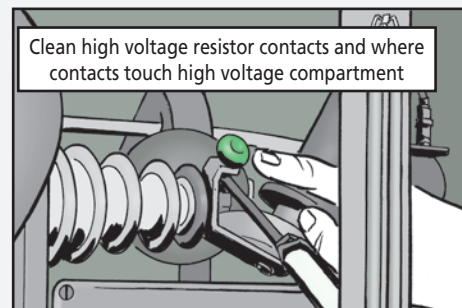
- The Firefinder and Sentinel high voltage resistor swings down and discharges any electricity in the high voltage compartment. The Firefinder Q-37V (9) does away with the resistor. But if its contacts are dirty, all that electricity might not discharge and you could be in for a nasty shock. Avoid that shock by cleaning the contacts for the high voltage resistor monthly with technical isopropyl alcohol, NSN 6810-00-753-4993. While you're at it, clean the area where the resistor contacts the high voltage compartment.

The Firefinder's radar processor has vents that pull in much-needed cool air. Of course it's important you keep those vents clear so they don't plug up and cause the processor to overheat.

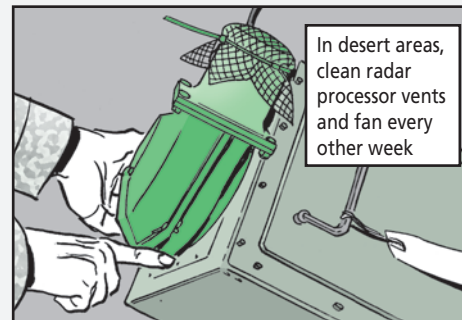
But no matter how hard you try in the desert, sand will get through the vents and filters and clog the fan. The fan has to work harder and harder and eventually it fails. We prevented that by removing the fan every other week and using compressed air to clean it. Because there are only 11 screws holding the fan assembly, you can do it in minutes.

SSG Jeremy Hicks
Ordnance Training Detachment
Ft Sill, OK

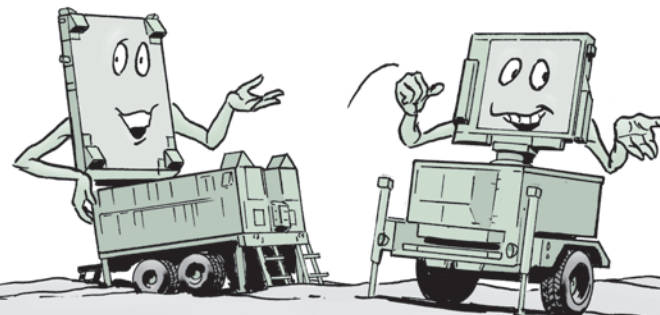
Clean high voltage resistor contacts and where contacts touch high voltage compartment



In desert areas, clean radar processor vents and fan every other week

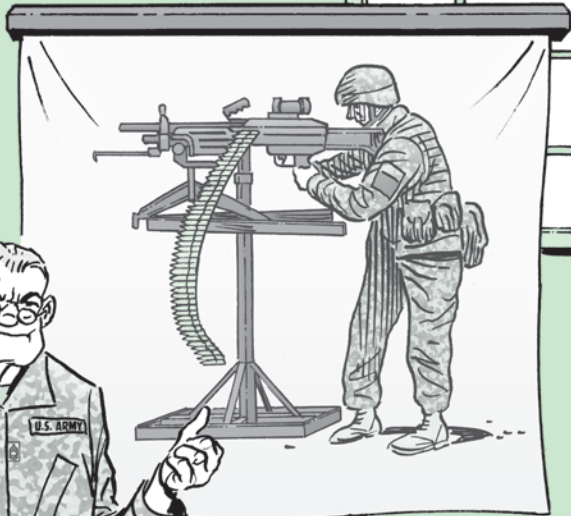


Editor's note: Sentinel and Firefinder crews need to keep these tips on their radar. Thanks for sharing them.



SOME ARMY UNITS
HAVE DECIDED THEY CAN
FABRICATE THEIR OWN
MACHINE GUN MOUNTS.

THAT COULD
TURN OUT TO BE
A **DANGEROUS**
DECISION.



DON'T Make Your Own Mounts!

Fabricated mount problems include:

- mount welds that create stress points that could weaken or even break with continued use
- the three points of contact from the tripod feet to the fabricated mount may not be secure
- the angled supports from the baseplate to the pole could pose a tripping hazard
- the method used to secure the tripod could damage the equipment it's mounted on

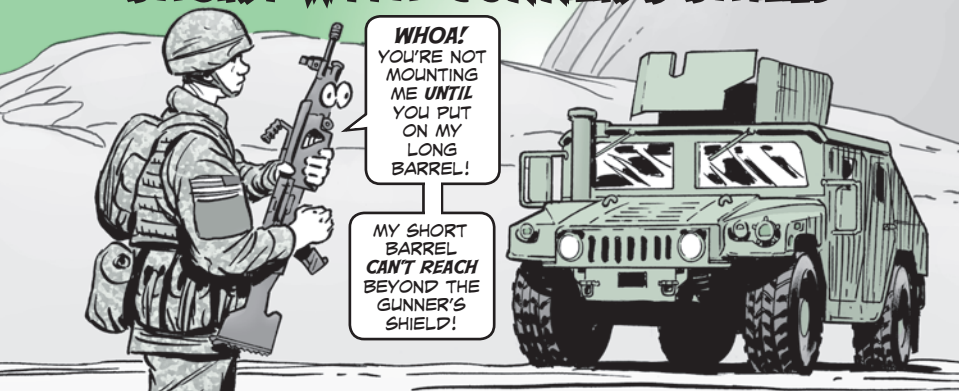
There is no need to fabricate mounts. The Army has two mounting solutions and both will do a good job supporting your M249 or M240B machine guns on either a HMMWV flatbed or on a gun tower:

- the M197 mount, NSN 1005-01-413-4098, with or without the LMG/MMG cradle, NSN 1005-01-553-0683, and the M7 pedestal, NSN 1005-01-518-9037
- the MK 93 MOD2 mount, NSN 1010-01-502-7547, with MK 93 adapter, NSN 1005-01-531-1676, and the M7 pedestal



IF YOU HAVE ANY MOUNT
QUESTIONS, CONTACT TACOM'S
AARON BENNETT AT DSN 786-1376,
(586) 282-1376, OR EMAIL:
aaron.m.bennett5.civ@mail.mil

SHORT BARREL COMES UP SHORT WITH GUNNER'S SHIELD

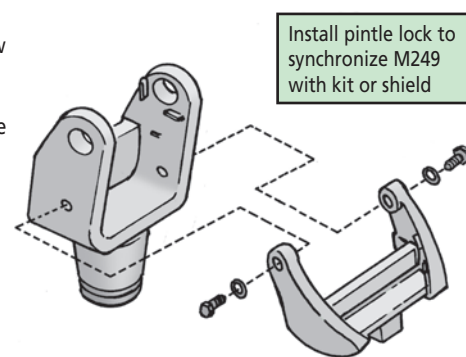


The short barrel doesn't extend past the protection kit or shield, which means bullets could ricochet off the inside of the shield and hit anyone in the vehicle. Using the M249's long barrel prevents that disaster.

Remember any machine gun used with the gunner's protection kit or shield must be synchronized so that the weapon turns with the kit or shield and the barrel stays in the center of the shield's slot. If the barrel is banging against the shield as the mount is rotated, eventually the barrel will be damaged.

To synchronize the M249 (or M240B) with the shield when the weapon is mounted on the M197 mount, you must install the pintle lock, NSN 5340-01-500-5572, like so:

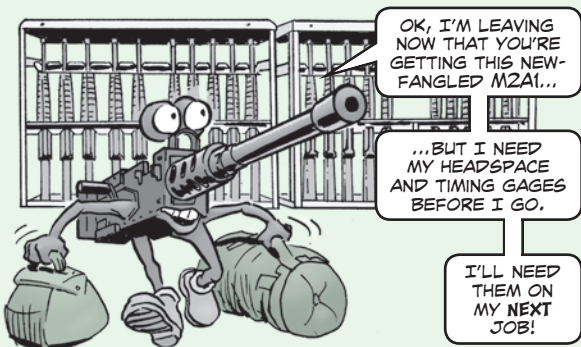
1. With the pintle mounted and facing forward, remove the screw and lanyard from the right side.
2. Slide the pintle lock over the outside of the pintle, aligning the tapped holes on the sides with the holes in the lever.
3. On the right side, insert one hexagon head screw, NSN 5305-00-685-3511, with a lock washer, NSN 5310-01-433-0941, through the lanyard tab and pintle lock and into the pintle. Tighten the screw to 10 lb-ft.
4. Insert an identical hexagon screw and lock washer through the pintle lock and into the pintle on the left side. Tighten it to 10 lb-ft.
5. Do a function test to make sure the square protrusion on the bottom of the pintle lock seats snugly into the groove of the M197 pintle adapter.



FOR MORE INFORMATION, SEE
TACOM LCMC GPA 12-012:
<https://tulsa.tacom.army.mil/safety/serviced.cfm>



Turn in Gages with M2



Dear Editor,

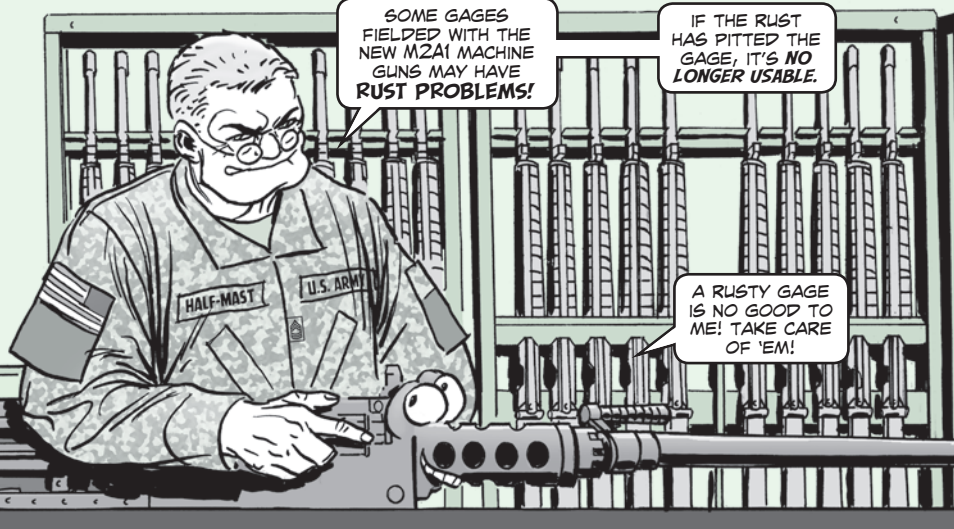
When your unit receives the new M2A1 machine gun, you will need to turn in your old M2s. You will no longer need the M2 headspace and timing gages because the M2A1 isn't headspaced and timed by you. That's done by field maintenance.

But don't turn in the M2 gages through your local calibration team. The gages need to stay with the M2 when you turn it in, because the gages are part of the M2's BII. They will be needed by whatever unit receives the M2.

Gerald Davison
TACOM LAR
Ft Riley, KS

Editor's note: I gage that to be a good tip, Gerald. Thanks for the heads-up.

SAGE GAGE RUST MUSTS



Immediately check all your M2A1 gages for rust. If you find any, clean off the rust with a plastic abrasive cleaning pad. If the rust has pitted the gage or it fails calibration at TMDE, you need to get a new gage.

Submit a product quality deficiency report (PQDR) through the Product Data Reporting and Evaluation Program (PDREP). Go to:

<https://pdrep.csd.disa.mil/pdrep/pdrephome.do>

and submit a user access request form. Once access has been granted, go to the PDREP site and follow the instructions to submit the PQDR. Then send the gage and a copy of the PQDR to:

General Dynamics Armament & Technical Products

Saco Operations

ATTN: Jeff Bernier or Frank Ruggieri

291 N. Street

Saco, ME 04072-1809

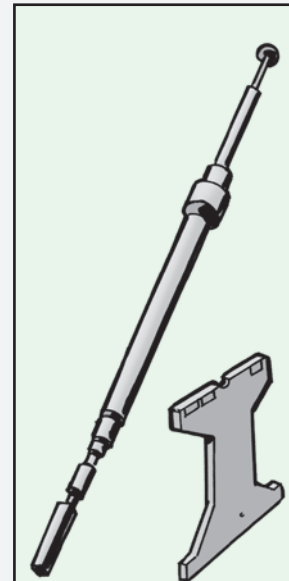
Include a return address and a POC with phone number and email. General Dynamics will rework or replace the gage at no cost to the unit.

Stopping Corrosion

Even if your new gages are free of corrosion, you want to keep them that way. At least quarterly (more often in humid environments), clean them with dry cleaning solvent, NSN 6850-00-281-1985, followed by a light coat of CLP. Before use, wipe off the gage with a soft cloth. When you're done, give the gage another coat of CLP and store it in a dry environment.

For more information, see TACOM LCMC maintenance advisory 12-017 at:

<https://tulsa.tacom.army.mil/SAFETY/message.cfm?id=MA12-017.html>



Clean gages with dry cleaning solvent, then apply light coat of CLP to prevent corrosion



Half-Mast on Facebook

<http://www.facebook.com/halfmast.mccanick>

PS Magazine on Facebook

<http://www.facebook.com/pages/PS-Magazine/141942029159748>



PS Magazine/Half-Mast on Twitter

<http://www.twitter.com/#!/HalfMastPSMag>

PS Magazine/Half-Mast blogging

<http://halfmastpsmag.wordpress.com>



PS Magazine Home Page

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

PS, the Preventive Maintenance Monthly

USAMC LOGSA (AMXLS-GP)

5307 Sparkman Circle

Redstone Arsenal, AL 35898

logsa.psmag@conus.army.mil

half.mast@us.army.mil



PARTS KEEP WATER FLOWING



Soldiering in dry desert heat is brutal. Without ample water, it can be deadly. And without spare parts for your hydration system, the water won't flow.

When carriers rip, bladders leak and bite valves get lost, you need quick replacements. Here are some NSNs for the hydration system (Hydramax) issued to you by the Rapid Fielding Initiative (RFI). Its carrier comes in a universal camouflage (UC) and Operation Enduring Freedom camouflage pattern (OCP) camo patterns that match the Army combat uniform (ACU).

The hydration system and its parts are components of the modular lightweight load-carrying equipment (MOLLE).

UC hydration system,
NSN 8465-01-525-5531
(includes carrier, shoulder and chest straps, 100-oz bladder, drink tube and bite valve)

UC bladder (100-oz),
NSN 8465-01-519-2304

UC drink tube,
NSN 8465-01-519-2385

UC bite valve,
NSN 8465-01-519-2383



UC carrier
NSN 8465-01-524-8362

NSNs for the OCP:
Hydration system,
NSN 8465-01-580-1316
Carrier,
NSN 8465-01-580-1319
Bladder,
NSN 8465-01-519-2304
Drink tube,
NSN 8465-01-519-2385
Bite valve,
NSN 8465-01-519-2383

ALL THREE PARTS TO DEPOT



IF YOU MAINTAIN
THE LONG-RANGE
ADVANCED SCOUT
SURVEILLANCE
SYSTEM (LRAS3)
INFRARED NIGHT
VISION SIGHT
(AN/TAS-8),
LISTEN
CAREFULLY!

WHEN YOU SEND THE
LRAS3'S LASER RANGE
FINDER, NSN 1240-01-486-
5003, TO THE DEPOT FOR
REPAIR, REMEMBER THIS:
**SEND THE ENTIRE LASER
RANGE FINDER.**

THE LASER RANGE
FINDER IS MADE UP
OF THREE PARTS...



- transceiver (laser)
- power supply circuit card
- range logic circuit card

SOME UNITS ARE SENDING
ONLY ONE OR TWO PARTS
TO THE DEPOT.



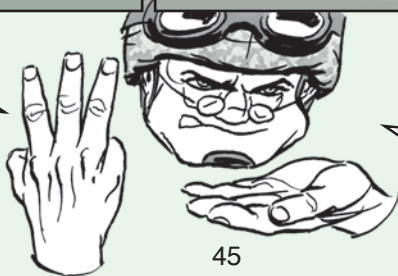
OK, NOW
WHERE'S THE
TRANSCIEVER?

**WITHOUT ALL THREE PARTS, THE DEPOT CAN'T
MAKE THE LASER RANGE FINDER WORK!**

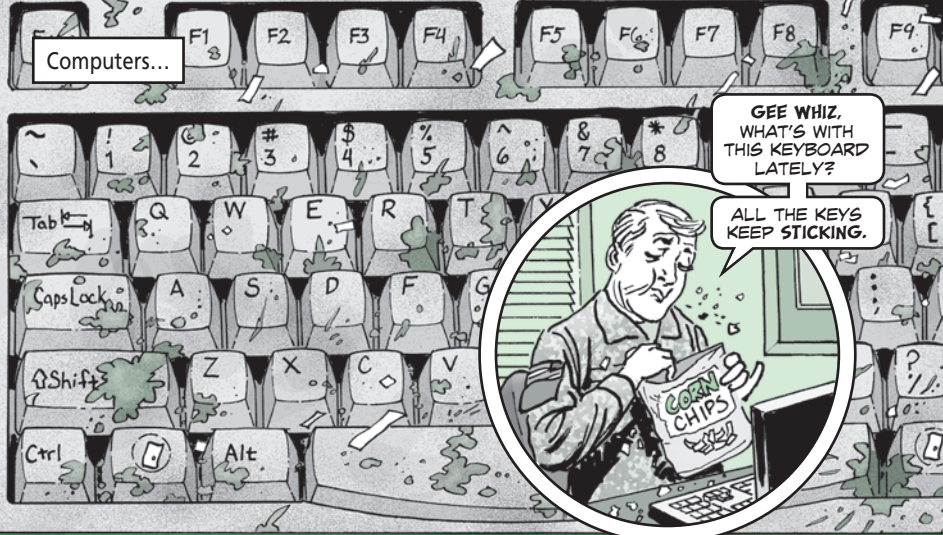
AND THE SUPPLY SYSTEM WON'T HAVE ENOUGH
WORKING LASER RANGE FINDERS TO REPLACE
THOSE THAT ARE DAMAGED!



SO PLEASE
SEND THE
DEPOT **ALL
THREE PARTS**
OF THE LASER
RANGE FINDER
FROM THE
LRAS3.



FOR MORE
INFORMATION,
CONTACT CECOM
LCMC ILS MANAGER
LISA KEEFER, DSN
848-2929, (443)
861-2929, OR EMAIL:
lisa.e.keefer.civ@mail.mil



Computers...

GEE WHIZ, WHAT'S WITH THIS KEYBOARD LATELY?

ALL THE KEYS KEEP STICKING.

THAT'S BECAUSE THE KEYBOARD COULD USE SOME CLEANING, SO IN THE MEANTIME HERE ARE...



...THE KEYS TO CLEAN KEYBOARDS!

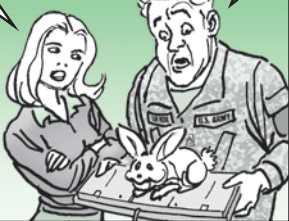
TRY SOMETHING YOU HAVEN'T DONE LATELY.

WHOA!

NOW THAT'S A DUST BUNNY!

PICK UP YOUR COMPUTER'S KEYBOARD.

TAKE A CLOSE LOOK AT THE UNDERSIDE.

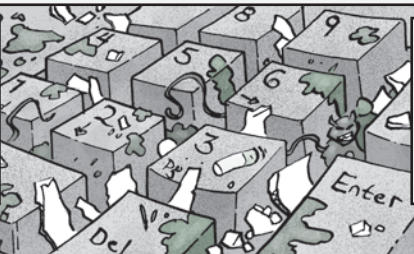


NOW EXAMINE THE TOP OF THE KEYBOARD, THE KEYS AND THE SMALL SPACES BETWEEN AND BELOW THEM.

WHAT DO YOU SEE?



IF YOU'RE LIKE **MOST** COMPUTER USERS, YOU'RE SEEING A PLASTIC LANDSCAPE LITTERED WITH TINY DEBRIS, EVERYTHING FROM DUST, SAND AND HAIR TO CRACKER CRUMBS, SESAME SEEDS AND ASSORTED BITS OF CHOCOLATE!

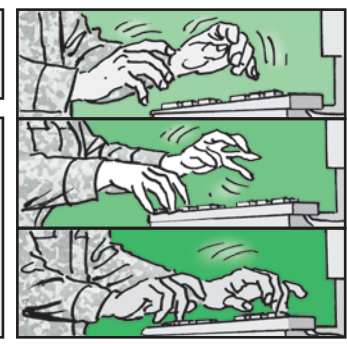


OVER TIME, THIS DEBRIS BUILDS UP; IT CAN CLOG YOUR KEYBOARD AND CAUSE THE KEYS TO STICK.

AND THAT'S NOT THE ONLY PROBLEM WITH KEYBOARDS.

IF SEVERAL PEOPLE SHARE THE SAME KEYBOARD, IT CAN BECOME A **BREEDING GROUND** FOR GERMS AND VIRAL INFECTIONS.

REGULAR CLEANING AND DISINFECTING CAN PUT YOUR KEYBOARD BACK IN WORKING ORDER AND HALT THE SPREAD OF GERMS.



FOLLOW THE CLEANING INSTRUCTIONS IN THE USER'S MANUAL; THAT'S THE **BEST** APPROACH.

OR YOU CAN LOOK FOR TIPS ON THE MANUFACTURER'S WEBSITE.

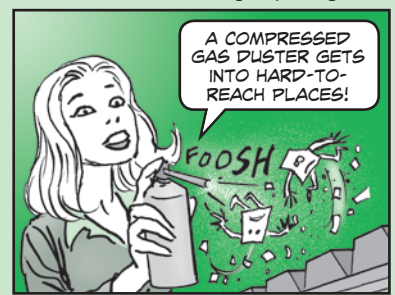
IF NEITHER A USER'S MANUAL NOR A WEBSITE IS AVAILABLE, FOLLOW THESE GUIDELINES...



Basic Cleaning Materials

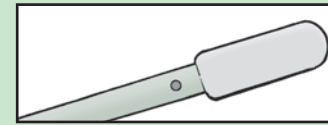
You'll need these basic cleaning materials:

- vacuum cleaner, NSN 7910-01-423-9525. NSN 7045-01-417-3206* brings a package of five replacement vacuum bags.
- tweezers
- clean, soft, lint-free cloth. A scrap from a cotton T-shirt works best.
- disinfectant wipes, NSN 6840-01-411-9963*. The wipes come pre-moistened and 60 to a dispenser.
- can of compressed gas duster to blow away debris from hard-to-reach nooks and crannies. NSN 7930-01-398-2473 brings a box of six 10-oz cans.



You can also use a paint brush to whisk away debris. Get a brush about 1/2-in wide, with the softest bristles you can find. Your local paint store or art supply shop will have one. Pull out any loose bristles before you use the brush.

- lint-free foam swabs, NSN 4920-01-243-0571. Don't use cotton swabs; they leave fibers behind.
- isopropyl alcohol, NSN 6505-00-655-8366



Foam swabs don't leave fibers behind

You can also get a keyboard/mouse cleaning kit, NSN 7930-01-406-2203*, for sprucing up your keyboard. The kit comes with a 1-oz pump-spray bottle of cleaner, a 2 1/2-oz can of compressed gas duster and eight cleaning swabs.

*These NSNs are not on the AMDF. Order them on DD Form 1348-6 and put "NSN not on AMDF" in the REMARKS block.



Cleaning Keys

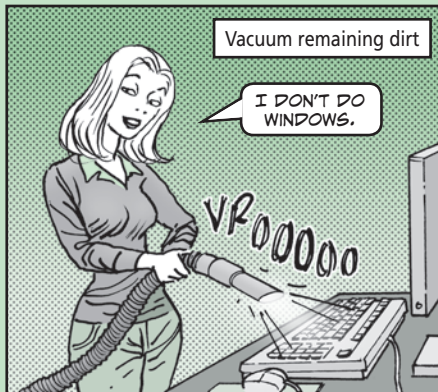
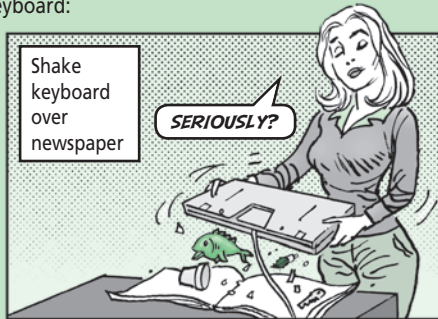
Here's the right way to clean your keyboard:

1. Log off the computer and shut down the power.
2. Unplug the keyboard from the computer.
3. Spread a sheet of newspaper on a desk or the floor. Firmly holding the keyboard, turn it upside down and shake it over the paper to dislodge the debris. Tapping its bottom or pressing the keys may help.
4. Turn the keyboard so that the keys are right side up. Tilt it at an angle. Spray compressed gas duster at the sides of the keys to loosen and remove dirt from between and under the keys.

If you don't have a can of compressed gas duster, use the paint brush to sweep away debris. You may even need to use the tweezers to pick out stubborn particles. These last two steps should get rid of most of the junk clogging your keyboard.

5. Vacuum any remaining dirt. Just make sure the keyboard doesn't have loose, "pop off" keys that the vacuum could suck up.
6. Clean both sides of the board with the disinfectant wipes. Make sure to rub the tops and sides of keys. If you don't have disinfectant wipes, use a cotton cloth dampened with isopropyl alcohol. Pour the alcohol on the cloth, not the keyboard. Wring out any excess moisture. Foam swabs dampened with alcohol also do a good job of cleaning the sides of keys.

You clean a laptop keyboard the same way. Just remember to lean the laptop on its side before using the compressed gas duster or a paint brush to clear away debris.



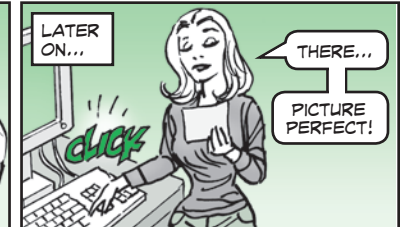
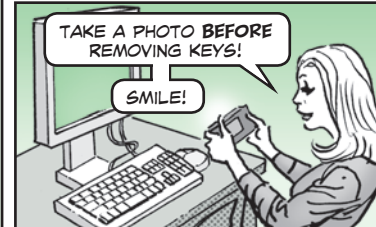
Have You Seen My Keys?

If you're highly ambitious, you can remove the keys to give your keyboard a really thorough cleaning.

Most standard desktop keyboards are of the membrane type. They allow you to remove the keys. But most laptops are made differently. The keys aren't supposed to come off. So don't try. You'll just damage the keys and posts.

Here's the right way to remove the keys:

1. Read the user's manual to find out if you can safely remove the keys.
2. Before removing keys, use a copy machine or a camera to record the layout of the keyboard. Later on, you'll be able to return each key to the right location.



3. Remove keys safely by using a keycap puller. That's a tool with two loops of wire on a handle. The loops grip the key so you can lift it straight up. Prying the keys out with a stick or screwdriver might cause damage.

You can order a keycap puller, part number 0606-0069, at the GSA Advantage website: https://www.gsaadvantage.gov/advantage/main/start_page.do

Or you can get one at your local computer supply store.

4. Remove all keys if you want. But the larger keys—such as the space bar, shift, caps lock, tab, backspace and enter—can be difficult to put back.
5. Once you've pulled the keys, clean the keyboard, posts and keys using the materials and methods described earlier.
6. Use the keyboard layout you made to return each key to its post. Press firmly but gently until it snaps into place.



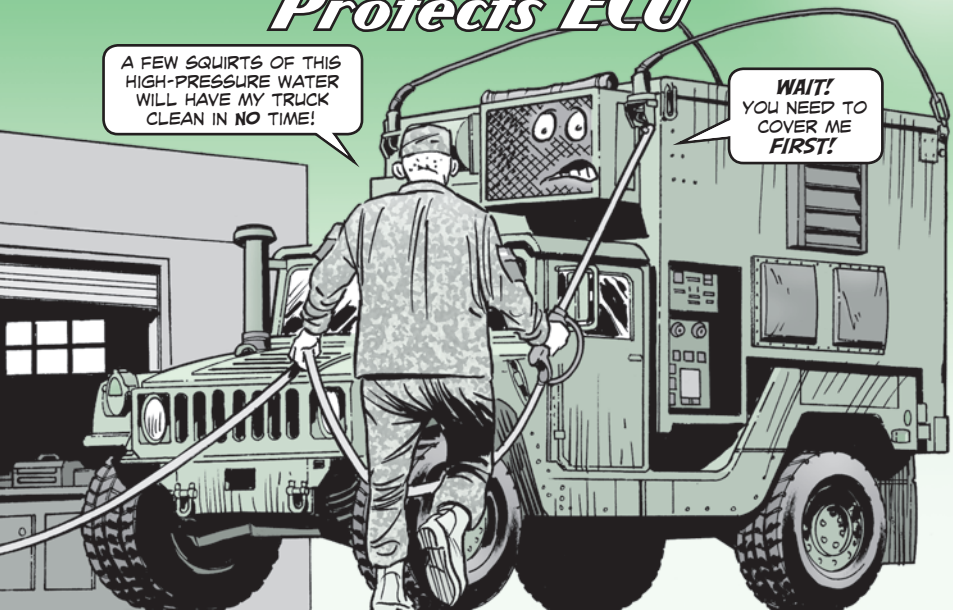
Item	NSN
Vacuum cleaner	7910-01-423-9525
Vacuum bags	7045-01-417-3206*
Disinfectant wipes	6840-01-411-9963*
Compressed gas duster	7930-01-398-2473
Foam swabs	4920-01-243-0571
Isopropyl alcohol	6505-00-655-8366
Keyboard/mouse cleaning kit	7930-01-406-2203*

*These NSNs are not on the AMDF. Order them on DD Form 1348-6 and put "NSN not on AMDF" in the REMARKS block.

Fabric Cover Protects ECU

A FEW SQUIRTS OF THIS
HIGH-PRESSURE WATER
WILL HAVE MY TRUCK
CLEAN IN NO TIME!

WAIT!
YOU NEED TO
COVER ME
FIRST!

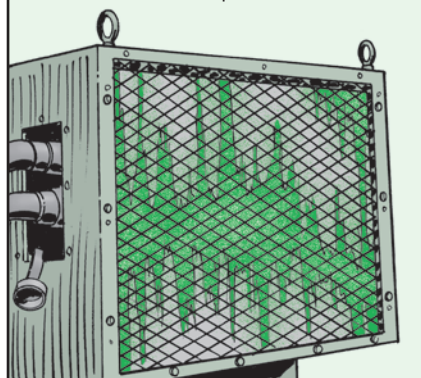


Before you wash, drive or transport your S-842/G shelter or S-842A/G arctic shelter, take this simple precaution: Roll the fabric cover down over the environmental control unit (ECU), then secure the cover with fasteners.

The cover helps protect the ECU's condenser coils when the ECU is shut down. If you leave the cover rolled up and the condenser exposed, water can corrode the coils.

Once the coils are corroded, the condenser can't let heat escape. Now the ECU won't work, and your shelter has no heat, air conditioning or ventilation. In hot weather, rising temperatures inside the shelter can damage electronic components. What's more, you're facing expensive repairs or maybe even replacement of the condenser at a cost of \$14,000.

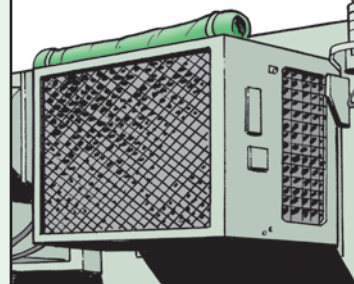
Water corrodes an unprotected condenser



Cover Up, Cover Down

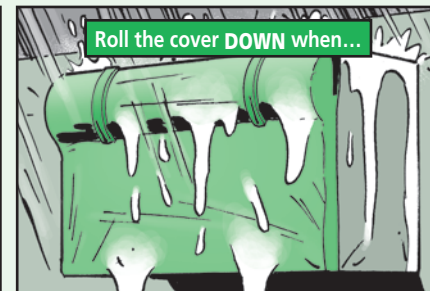
Here are the rules for using the ECU's fabric cover:

Roll the cover **UP** when...



- The ECU is running in the COOL mode. With the cover up, air can flow across the condenser coils to remove heat from the refrigerant.
- The shelter needs ventilation, and the ECU is drawing fresh (outside) air into the shelter in any mode.

Roll the cover **DOWN** when...



- Washing, driving or transporting the vehicle.
- The condenser is not in use. (The condenser is used only when the ECU is in COOL mode.)
- The ECU is running in the HEAT mode without fresh air.
- The ECU is in a shutdown period.
- The ECU and the shelter are in storage.

Inspect and Repair

Look over the fabric cover for holes, tears, mildew, fraying or worn edges. Test the snaps to make sure they close properly. If you find anything you can't repair yourself, refer it to field maintenance.

RF-ITV Global Help Desk

Call the Radio Frequency In-Transit Visibility (RF-ITV) Global Help Desk at DSN 94 plus (800) 877-7925, (800) 877-7925, or email:

help.rfitv@us.army.mil

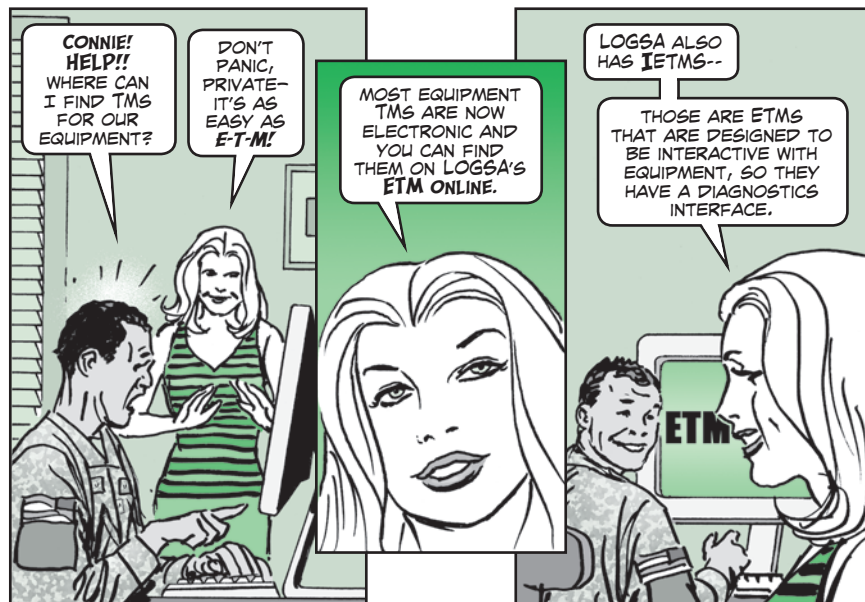
You can also get help on AKO by sending an instant message to the user name: **help.rfitv**

EOD Publication Released

Army Tactics, Techniques, and Procedures (ATTP) 4-32, *Explosive Ordnance Disposal Operations*, was released in December 2011. It offers doctrinal guidance to commanders, staffs, and leaders at all levels who are responsible for EOD operations. It's available on the Army Publishing Directorate's website:

https://armypubs.us.army.mil/doctrine/DR_pubs/dr_aa/pdf/attp4_32.pdf

How to Find ETMs and IETMs Online

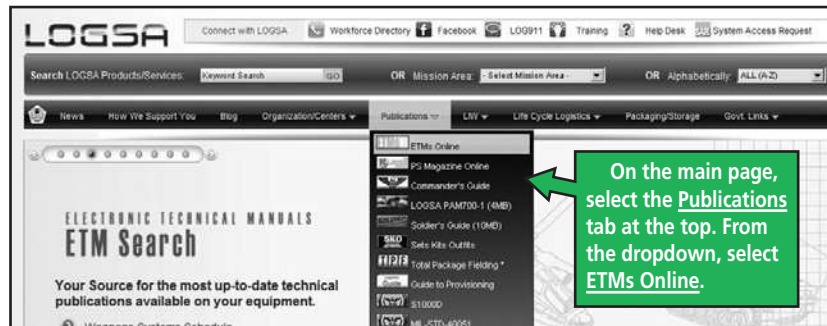


Publications are critical to a unit's mission. Without knowing the right maintenance procedures or NSNs to get repair parts, units can't keep their equipment fully mission capable.

The Logistics Support Activity (LOGSA) is the official Army publications source for Army technical and equipment manuals (except engineering and medical).

You can access these pubs from the LOGSA website at:

<https://www.logsa.army.mil/>



NOTE: The LIW portal was being redesigned as this issue went to press. The portal entrance will look different and interior visuals may vary.

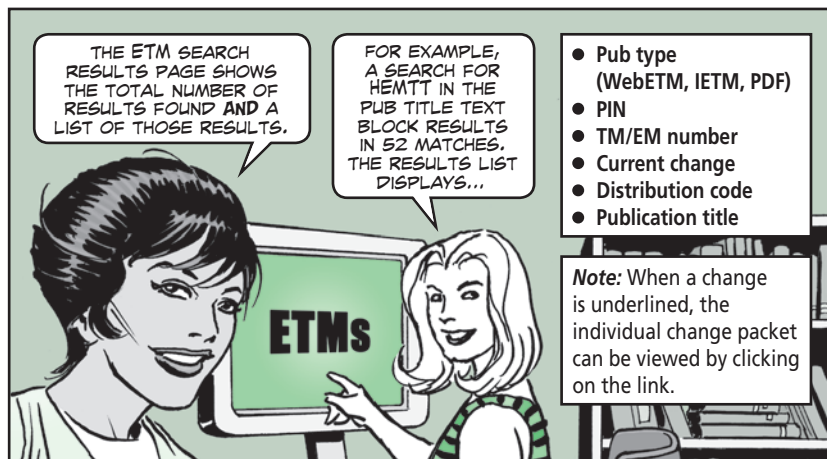
Be sure to explore features on this page, like the Weapons System Schedule listed at the bottom.

The schedule shows when weapon system CD-ROMs/DVDs will be updated. If nothing changes on a CD-ROM/DVD, an update will not be done for that period.

Now, here's how to find electronic technical manuals (ETMs) or interactive electronic technical manuals (IETMs):

- **PIN number**—If you know the PIN (publication identification number) of the pub you want (e.g. **074758**), enter it here and click **SEARCH**. Every manual has a PIN (six-digit number) on the back cover.
- **EM number**—If you know the EM number for the weapons system, you can get a list of all the manuals on a CD-ROM. Enter only the four-digit number (e.g. **0030**) of the EM. (See the Table of Fielded CD-ROMs at the bottom of the page to look up a number.)
- **Pub number**—Enter the type of pub and its number (e.g. **TM 9-2330-398-10**, or **TB 43-0209**). You can even type in just the beginning of a pub number (e.g. **TM 9-2330-**), click **Search** and get a listing of all the TMs for that series.
- **Pub title text**—Enter any word, model number or NSN that appears in the pub title. This search works if you don't have a PIN or TM number. You may want to use several variations to help find what you want (e.g. **HMMWV**, **M998**, **M1114**). Use any main word that appears on a manual's front cover. For example, searching for "AH-64" will bring up pubs specifically for the Apache helicopter, but a search with the general word "helicopter" will return all helicopter pubs.
- **LIN search**—Enter the LIN for the major item in the tech pub.
- **NIIN search**—Enter the NIIN of the major item in the tech pub. A NIIN is the last nine numbers of an NSN. If there are no results, try putting the NIIN in the Pub Title Text block and searching again.

PS MORE



Important Notes About Distribution

If you select a publication that is public release (Distribution Statement A), you'll be able to read it without logging in.

The distribution restriction code shown in the ETM search results is one to three letters in length. You can find it in the "DIS Code" column. Anything other than "A" is restricted. If the second and third letters are "NF," it means no foreign release.

Any distribution code other than "A" will forward you to the Logistics Information Warehouse (LIW) to login so you can view it.

ELECTRONIC TECHNICAL MANUALS
ETM Search Results

52 matching selection(s) found

	PIN	TM/EM Number	Current Change	DIS	
WebETM	075685	EM 0038		B	WETM EM 0038 HEAVY EXPANDED
IETM	084807	EM 0288		A	IETM EM 0288 TM 9-2320-326-148 MOBILITY TACTICAL TRUCK (HEM)
IETM	084809	EM 0289		A	IETM EM 0289 TM 9-2320-326-148 347-10(090515) TM 9-2320-348-10 2320-422-10(090515) TM 9-2320-4
IETM	084942	EM 0290		A	ITEM EM 0290 TM 9-2320-279-148
IETM	085645	TM 9-2320-279-148P		A	IETM EM 0290 TM 9-2320-279-148 ITEM IS INCLUDED ON EM 0290
IETM	084808	TM 9-2320-326-		A	IETM EM 0288 INTERACTIVE ELE (HEMTT) A4 (THIS ITEM IS INCL
IETM	078844	TM 9-4935-1600		DNF	IETM PATRIOT SUPPORT AND MA (BATTE MAINTENANCE CENTER) M9 (LARGE REPAIR PARTS TRAN

Distribution code B means this manual is for US government agencies only—not public release

"NF" means no foreign release

ETM Online Extras

Want to be notified when your TMs or TBs are updated? Set up automatic notifications from the ETM Search Results screen by clicking on **Update Notification** at the bottom of the page. Enter the email address you want notifications sent to and follow instructions.

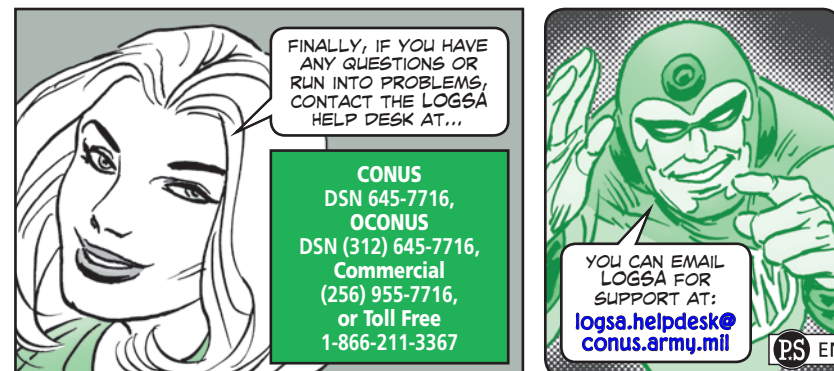
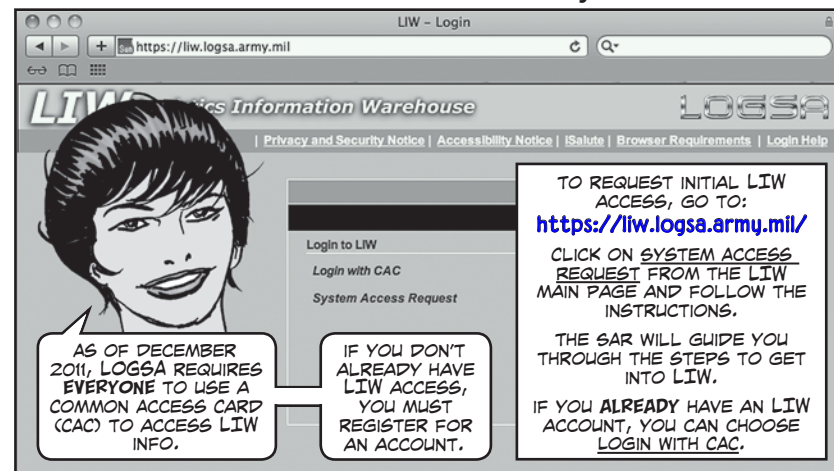
Want to see which automatic notifications you're subscribed to? Click on **View Current Notifications** at the bottom of the ETM Search Page.

For general publications guidance, check out LOGSAP 25-35, *Unit Publications Guide* (Apr 10). You can view or download it here:

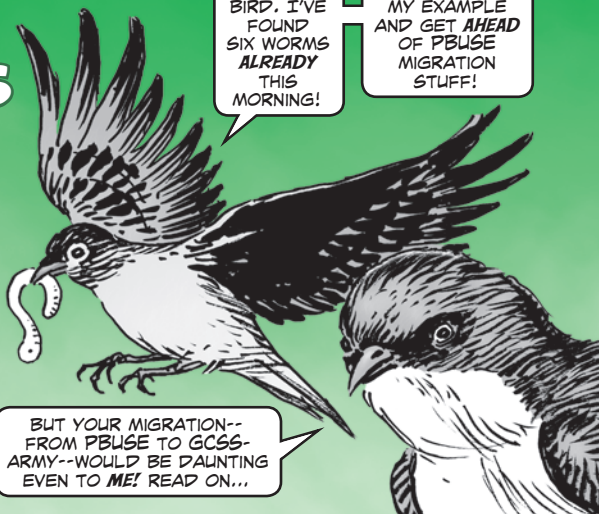
<https://www.logsa.army.mil/pubs/Pam25-35.pdf>

Finally, if you have questions about ETMs or IETMs, or need help finding a manual, contact LOGSA's tech pubs ETM Customer Service at 1-800-270-1409, or email: logsa.logetm@conus.army.mil

LIW Access Now CAC-Only



PBUSE Catalogs Need Early Bird Fix



As the Army prepares to migrate from PBUSE to GCSS-Army, cleaning up unit-level and component catalogs is an action every supply sergeant should tackle in advance.

Right now most of you can locally create items in unit-level catalogs. But once GCSS-Army goes live, that ability will go away.

The only records accepted into GCSS-Army must have valid line item numbers (LINs) and national stock numbers (NSNs) that are found in SLAMIS or FED LOG.

So take the time now to print out, check and validate all your unit's LINs/NSNs, nonstandard LINs (NSLINs) and management control numbers (MCNs).

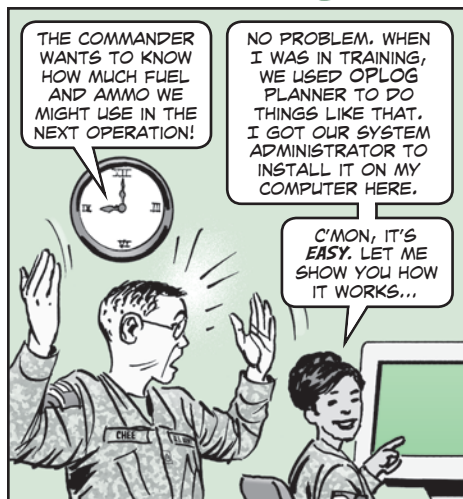
USER CREATED CATALOG LISTING (RCAT-1)																			
LIN	FSC	NIIN	Item Nomenclature	Pub Data	Unit Price	LN	SRRC	RICC	EIC	CMC	ABA	ACC	ECC	DMU	ARC	CHC	SC	Date Created	Record Type
1005	004546002		BRUSH CLEANING SM ARM		\$0.48	EA	N	0	J	2	R	A	X	U	2M			2010-10-28 08:36:52.0	S
2550	001247242		COLLAR WINCH CYLINDER		\$18.81	EA		0	J	2	R	A	X	U	9K			2010-10-28 08:33:40.0	S
3540	003448642		TRUCK HAND 35LX28H IN		\$153.11	EA		0	E	2	R	A	X	U	2B			2008-12-30 08:06:39.0	S
4110	002030565		DSPNSR 115V60H .95GPH		\$155.54	EA		0	E	2	R	A	X	U	2B			2008-11-18 13:59:32.0	S
4230	015065774		FILTER ELEMENT,FLUI		\$3.08	EA		0	J	2	R	A	X	U	9B			2007-11-15 00:27:18.0	S
4320	014523309		HEATER SPACE		\$137.60	EA		0	C	2	R								
5340	013842016		NOTEBOOK SECURITY CABLE		\$40.38	EA													
5340	014635841		PADLOCK, SET		\$77.39	SE													
5440	015062927		LADDER,EXTENSION		\$100.00	EA		0	J	2									
5920	013848503		SURGE, PROTECTOR		\$6.30	EA													
5940	001369048		MARKERSTRIP		\$2.95	EA		0	Q	2	R								
5965	014906704		HEADSET, MICROPHONE		\$66.53	EA													
6140	014133925		BATTERY, STORAGE		\$6.15	PG													
6150	014777793		SPLIT SURGE SUPPRESSOR		\$27.48	EA													
7010	014995868		COMPUTER SYSTEM,ENH		\$1,773.87	EA	S		Q	2	R	Q	N	U	2G			2010-10-12 06:59:13.0	S

Supply sergeants should verify all unit LINs/NSNs are valid in FED LOG or SLAMIS before migration to GCSS-A

When you scrub your unit's catalogs, closely eyeball any 'X' records (locally created). Any items that are not in SLAMIS or FED LOG will be dropped during conversion to GCSS-Army.

The time to start working on this issue is now. This is a case where a little PM on the books now can prevent a lot of headaches later.

OPLOG Planner Makes Planning Support a Snap!



An updated version of the Operations Logistics (OPLOG) Planner is available on AKO.

The Combined Arms Support Command (CASCOM) created the OPLOG Planner to help units estimate how many supplies they need to perform a mission. Estimates are based on G-4 approved planning factors and rates.

The OPLOG Planner is simple to use. The program asks the user questions and, depending on the answers given, produces the estimates needed to help meet mission goals.

OPLOG Planner Version 8.0, 2012 edition, offers:

- supply class consumption estimates for Classes I, II, III (B), III (P), IV, V, VI, VII, VIII, IX, mail, water and ice
- modeling data
- ability to customize reports
- annual updates

This latest version also includes Quick Operations, which lets you import existing OPLOG Planner files. You can delete unused units or organizations from the forces list and add other sister services. Manual rates are also updated and the planner has a redesigned "build custom units from equipment list" function. To download the planner and user guide, visit:

<https://www.us.army.mil/suite/files/3566671>

For more information or help with the OPLOG Planner, contact John Reith at DSN 687-0363, (804) 734-0363, or email:

john.e.reith.civ@mail.mil
or Jennifer Van Drew at DSN 687-0253, (804) 734-0253, or email:
jennifer.g.vandrew.civ@mail.mil

IMPROVING UNIT-LEVEL GROUND EQUIPMENT USAGE REPORTING

RILEY,
YOU GET
THAT
MILEAGE
LOGGED?

YEP.

THAT WAS **FAST**.
NEVER EVEN SAW
YOU GET IN THE
CAB TO CHECK THE
ODOMETER.

WELL... I JUST
MADE A ROUGH
GUESSTIMATE...
TO SAVE TIME!

NO GO. OUR UNIT'S
FUNDING DEPENDS
ON US TURNING IN
ACCURATE MILEAGE
REPORTS.

NOW THE
ARMY'S
GOING TO
BE CHECKING
THAT WE DID
IT **RIGHT**. SO
LET'S DO IT!

THE ARMY HAS
FOUND THAT
SOME UNITS ARE
UNDERREPORTING
ACTUAL MILES
ON THEIR
EQUIPMENT.

THIS IS A
PROBLEM
BECAUSE
MAINTENANCE
AND OPERATING
TEMPO FUNDING
DECISIONS HINGE
ON **ACCURATE**
ODOMETER
READINGS.

INACCURATE
REPORTS LEAD
TO INACCURATE
COST ESTIMATES!

MILEAGE IS **IMPORTANT**
WHEN IT COMES TO PMCS
AND REPAIRING OR
REPLACING EQUIPMENT.

IT'S **ALSO**
KEY WHEN
CALCULATING
FUEL AND NEED
FOR PARTS.

Part of every unit's peacetime training dollars is based on monthly odometer readings reported through SAMS-E. Incorrect reports can cut into your unit's training budget.

To reduce errors, Army commands are setting up organizational inspection programs (OIPs). These OIPs will require regular periodic inspections of the data in SAMS-1E compared to actual unit equipment odometer or hourmeter readings.

Active units will do monthly inspections and National Guard and Reserves semi-annual inspections.

All units must inspect and validate 25 percent of their equipment usage data versus the equipment's actual odometer or hourmeter readings. The equipment has to be randomly chosen and not repeated from one inspection cycle to the next.

If usage data on 20 percent or more of the equipment inspected doesn't match up, you'll have to inspect and validate 100 percent of your equipment usage data. You'll also have to report inspection results and what you did to fix any problems up the chain of command.

The best time to verify equipment usage data and update dispatch documentation is during command maintenance periods. Fix any problems before the data is sent to higher headquarters.

Additional annual training is also mandatory. SAMS-E clerks and supervisors will take SAMS-E refresher courses, and equipment operators and supervisors will review dispatch procedures.

Additional details can be found in ALARACT 070/2012. For questions, contact CW5 Darren Cook at DSN 224-1145, 703-614-1145, or email:

darren.l.cook.mil@mail.mil

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New MSD Replaces STE-ICE/R

The STE-ICE/R engine analyzer, NSN 4910-01-222-6589, is being replaced by maintenance support device-version 2 (MSD-V2) (w/ICE), NSN 6625-01-493-8968. Coordinate the STE-ICE/R's replacement requirements with TACOM LCMC's Angela Zender, DSN 786-7431, (586) 282-7431, or by e-mail at: angela.m.zender.civ@mail.mil

All unserviceable STE-ICE/R equipment should be turned in to the nearest DLA Disposition Services (formerly DRMO) upon receipt of the MSD-V2 (w/ICE).

SUSTAINMENT FORCE BOOK UPDATED

The Sustainment Force Structure Book has been updated for 2012. The book provides unit structure, covers personnel and major equipment and is a useful resource for sustainers and trainers. This edition gives an organizational breakout of all types of sustainment organizations that are coming on-line in FY13. The book is available on AKO in both PDF and XPS file versions. A CAC is required to view or download it. Visit:

<https://www.us.army.mil/suite/files/33390383>

WATERCRAFT TRANSFER CASE FLANGE

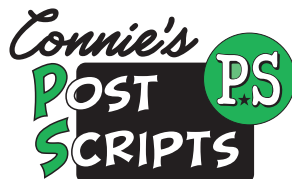
The transfer case used on the causeway ferry and warping tug of the Modular Causeway System (MCS) no longer includes the companion flange shown as Item 4 in Fig 60 of TM 55-1945-205-24P-1 and TM 55-1945-205-24P-3. Order the flange separately with PN H6.5-1-481 and CAGE 97271. To have the flange installed in the transfer case, contact the manufacturer, Dana Spicer, at (419) 866-3951. Choose option 2, then option 4, to speak to a representative.

M871R/A1R Semitrailer MEL

The maintenance expenditure limit (MEL) for all M871R and M871A1R model 22 1/2-ton semitrailers has been lowered to 10 percent. This MEL change does not affect the M871A2/A2R and M871A3 models. Make a note until this change catches up with TB 43-0002-81 (Oct 11), *Maintenance Expenditure Limits for FSC Group 23—Tactical Wheel Vehicles*.

PETROLEUM PUB: FROM FM TO TM

TM 4-43.3, *Petroleum Laboratory Testing and Operations* (May 12), has superseded FM 10-67-2 (Apr 97). The TM is a guide for staff who plan, organize, and carry out petroleum testing in theater. The change from FM to TM is part of the Army's Doctrine 2015 restructuring plan. Other publication changes will occur as TRADOC continues to revise and streamline Army doctrine.



HYEX Hose Parts Kit Not Available

The HYEX boom and arm hydraulic hose kit, NSN 4720-01-474-0022, which is shown as Item 1 in Fig 287 of TM 5-3805-280-23P-1 (Jul 11), is no longer available as a kit. The kit's down parts can be ordered separately with the NSNs on that same page. Make a note until the TM's updated.

STE-M1/FVS Not Needed with Some Bradleys

If your unit now has Bradley A3 or ODS-SA variants, you'll no longer need STE-M1/FVS test equipment. These vehicles come equipped with embedded diagnostics. Excess STE-M1/FVS sets can be turned in by contacting TACOM LCMC's Angela Zender at DSN 786-7431, (586) 282-7431, or by e-mail at:

angela.m.zender.civ@mail.mil

The STE-M1/FVS should be complete and include all critical test sets. Do not remove any items prior to turn-in.

STE-M1/FVS a Repairable Item

The STE-M1/FVS test set is a field-level repairable item. Chapters 6 and 7 of TM 9-4910-751-14&P (May 91, w/Ch 2, Mar 97) contain maintenance instructions for the test set, including troubleshooting procedures for fault isolation and maintenance tasks for field- and sustainment-level replaceable items. So get these items repaired instead of requesting a replacement. For assistance, contact TACOM LCMC's Angela Zender at DSN 786-7431, (586) 282-7431, or by e-mail at:

angela.m.zender.civ@mail.mil

6K VRRF FORKLIFT ALTERNATOR NSN

Get a new alternator for your 6K variable reach rough terrain forklift with NSN 6115-01-440-7397. It replaces NSN 2920-01-215-2199, which is shown as Item 1 in Fig 47 of TM 10-3930-660-24P (May 06).

M973/A1/A2 SUSV Battery

Get a new battery for your small unit support vehicle (SUSV) with NSN 6140-01-582-5710. This new battery is a lot cheaper than the OEM battery, NSN 6140-01-175-2500, shown as Item 34 in Fig 86 of TM 9-2350-285-24P.

FORWARD REPAIR SYSTEM PART UPDATE

If your unit has the Forward Repair System, you need to update TM 9-4940-568-24P. The part number and CAGE for the compressor control box's terminal board (Item 7 in WP 0133-3, NSN 5940-01-534-2698) has changed. The new part number is SIEM2012-TBK and the new CAGE is 8W855.

Where to Find Full Issues of PS Online

You can get more than just the current full issue of PS at our website. You can download entire PS issues back to 1999. Start out with 2012 issues at:

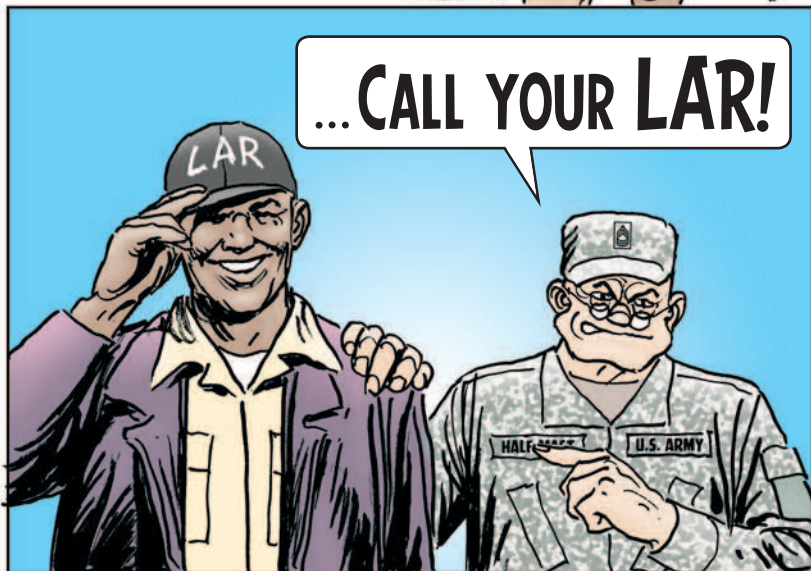
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