

TS 43-P5-736, 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.



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M777A2 Howitzer Website



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

Just write to:

MSG Half-Mast
PS, the Preventive Maintenance Monthly
USAMC LOGSA (AMXLS-GP)
Bldg. 3303
Redstone Arsenal, AL 35898

Or email to:

half.mast@us.army.mil or
usarmy.redstone.logsa.mbx.psmag@mail.mil

Internet address:

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

By order of the Secretary of the Army:

RAYMOND T. ODIERNO
General, United States Army Chief of Staff

Official:



GERALD B. O'KEEFE

Administrative Assistant to the Secretary of the Army

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PS

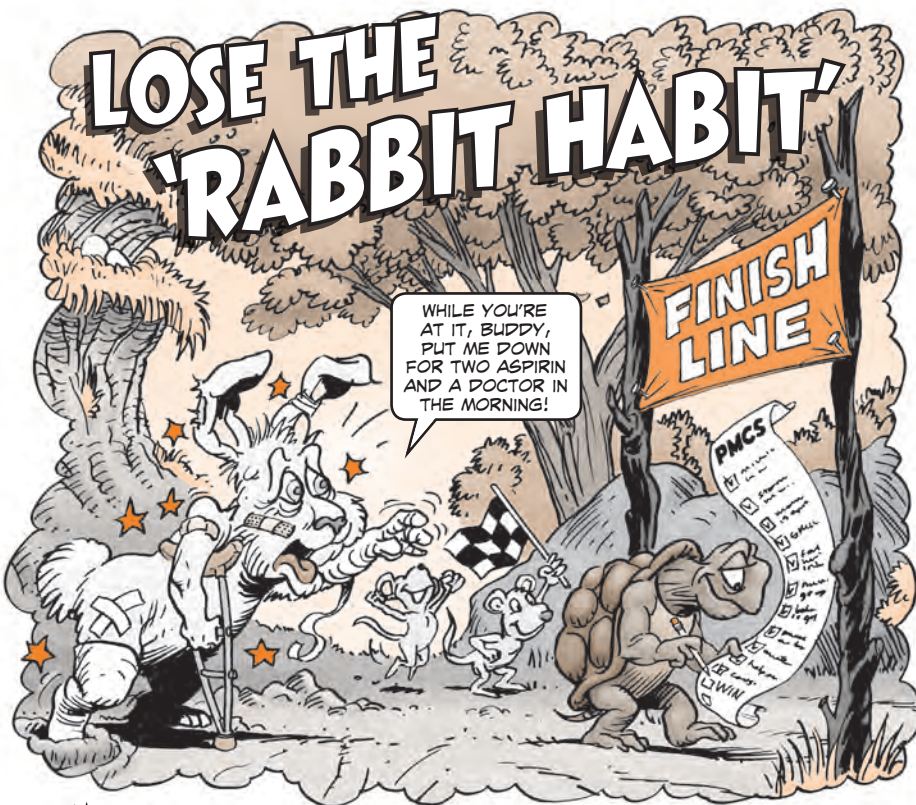
THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-736

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AT THIS TIME OF THE
YEAR, TEAMWORK IS
CRITICAL TO SUCCESS.
THE SAME IS TRUE
WHEN IT COMES
TO **PREVENTIVE
MAINTENANCE.**



Many of us know the old fable about the tortoise and the hare. There's a good lesson there.

While it's tempting to cut corners to save time, remember that rushing through PMCS, especially those oh-so-essential checklists, can result in ugly consequences.

It's not usually new Soldiers who are guilty of cutting corners. Most of 'em still go by the book because they haven't memorized it yet.

The worst danger is the kind that comes with complacency—like the long-time chief mechanic who's memorized the ins-and-outs of PMCS and thinks the checklist in his head is good enough. We don't argue the expertise part. Chief probably does know his job inside-out, even upside down. But it only takes forgetting a critical step **once**.

The Army's *Knowledge* magazine is full of first person stories—hard lessons learned when overconfidence outweighed common sense for just a sec.

These true-life tales are sober reminders that, though a visual checklist may seem like a crutch to some of us, it sure beats the real kind of crutches. It also rings true that saving a stitch of time now isn't worth stitches later. So let's lose that 'rabbit habit.' Purposeful and steady wins the PMCS race.



ISSUE 736 MARCH 2014

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By order of the Secretary of the Army:

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 General, United States Army Chief of Staff

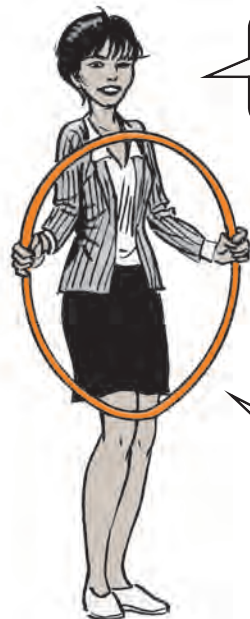
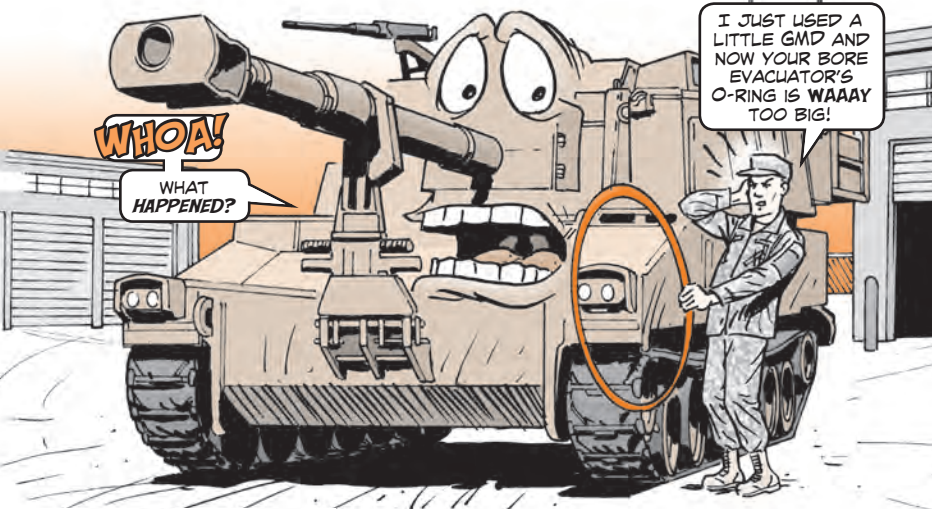
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SWITCH GREASE TO STOP O-RING SWELLING



CREWMEN, O-RINGS FROM THE BORE EVACUATOR ON THE PALADIN'S GUN TUBE SOMETIMES **SWELL** SO MUCH AFTER BEING REMOVED FOR MAINTENANCE THAT THEY CAN'T BE REINSTALLED.

THAT'LL PUT A STOP TO **ANY** FIRING MISSION IN A HURRY!

Using grease other than GGP or GAA can make O-rings swell

Normal size

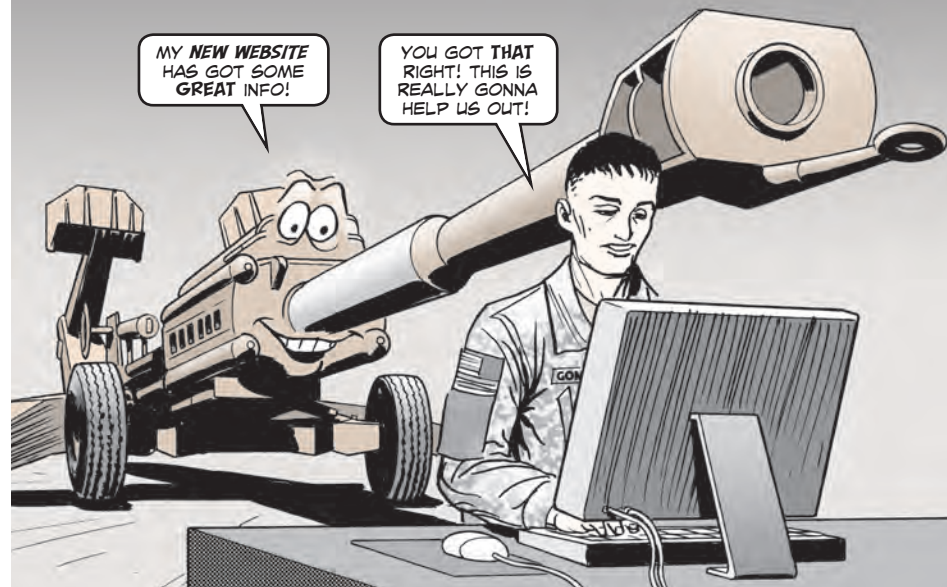
Swollen

TESTING HAS SHOWN THE SWELLING IS CAUSED BY GMD, SO STOP USING THAT GREASE **NOW**.

INSTEAD, USE GENERAL PURPOSE GREASE (GGP) OR GAA WHEN LUBING O-RINGS.

Get a 14-oz tube of GAA with NSN 9150-01-197-7693. A 1³/₄-lb can comes with NSN 9150-01-197-7690 and NSN 9150-01-197-7689 gets you a 6¹/₂-lb can.

Get a 1³/₄-lb can of GGP with NSN 9150-00-985-7316 and a 35-lb can with NSN 9150-00-823-8047.



M777A2 Howitzer Has **New** Website

THE M777A2 HOWITZER HAS A **NEW WEBSITE...**

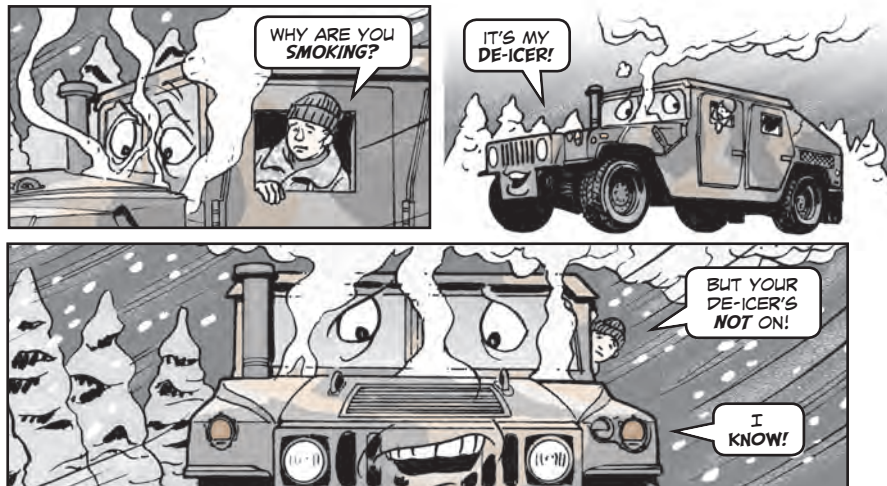
<https://picac2as2.pica.army.mil/jpmo-website/index.htm>



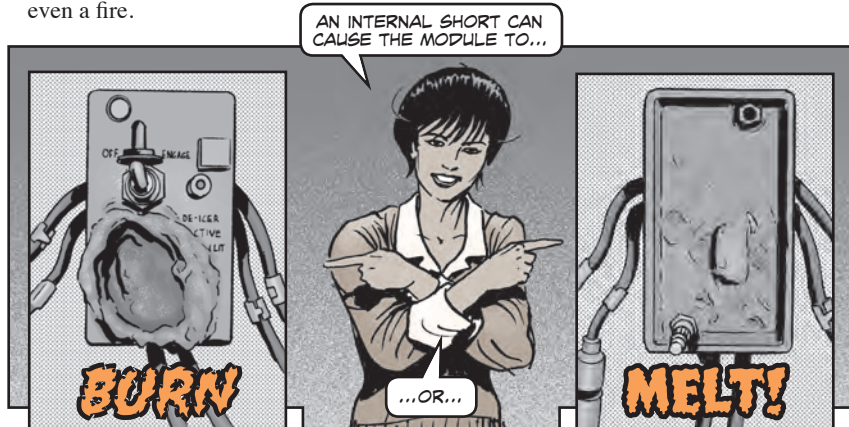
AT THE WEBSITE, YOU'LL FIND...

- IETMs
- Computer-based training
- Digital Fire Control System (DFCS) software information and updates
- White papers
- MWOs and their instructions
- Student handouts
- Traversing assist kit
- Sample data collection info
- AIMS/CECOM/TACOM/USMC POCs
- Transportability
- Tactics, techniques and procedures (TTP)
- RESET disposition instructions
- M94 software version 3.3
- PS articles
- PC training

Disconnect to Protect Windshield De-Icer



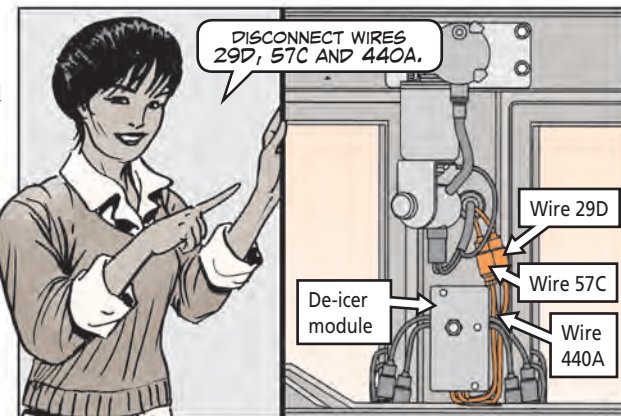
If you haven't already heard, mechanics, there's a problem with the windshield de-icer module, NSN 2540-01-560-2062, that may be installed on some up-armored HMMWVs. The culprit is a short that can result in overheating, smoke and maybe even a fire.



The short is likely caused by a transient voltage surge that occurs if the HMMWV is improperly slave started or operated with low batteries. This can happen even if the de-icer is **not** being used because the module is connected to DC power whenever the vehicle is running.

Disconnect to Protect

De-icer modules on up-armored HMMWVs should be disconnected. Mechanics, disconnect the three power and ground cables—wires 29D, 57C and 440A—to reduce the risk of damage to equipment or injury.



And keep all four 441 leads that run from the de-icer module to the windshield connected. Get de-icer disconnection procedures at:

[https://tulsa.tacom.army.mil/Maintenance/
?t=gpm&f=HMMWVDeiceDisProc.pdf](https://tulsa.tacom.army.mil/Maintenance/?t=gpm&f=HMMWVDeiceDisProc.pdf)

Reconnect to De-ice

Whenever windshield de-icing is needed to complete a mission, it's OK for mechanics to reconnect power leads to the de-icer module. Just pay close attention for signs of overheating.

If overheating occurs, make sure the three power and ground cables from the de-icer module are immediately disconnected. Mechanics should also disconnect them as soon as you're done de-icing.

Slave Starting Solution

Improper slave starting can create this short, but keeping batteries charged and properly slave starting your HMMWV can prevent it. For correct slave starting procedures, take a look at TACOM's maintenance action message, MA 11-041, *Slave Starting Procedures for High Mobility Multipurpose Wheeled Vehicle (HMMWV) Family Of Vehicles*. It's available at:

https://tulsa.tacom.army.mil/maintenance/mam/tacom_wn/ma11-041.html

Future Fix

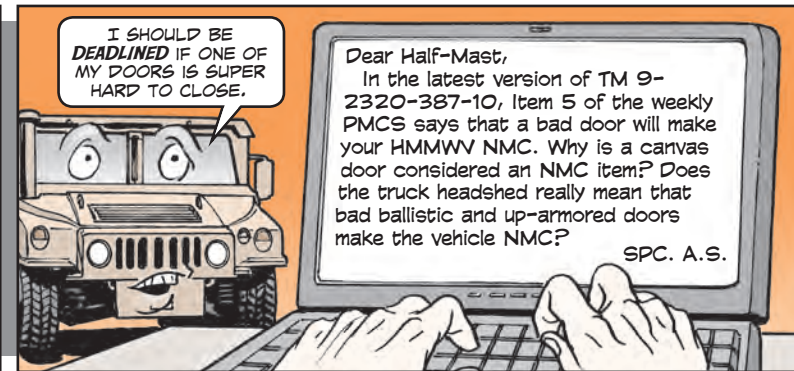
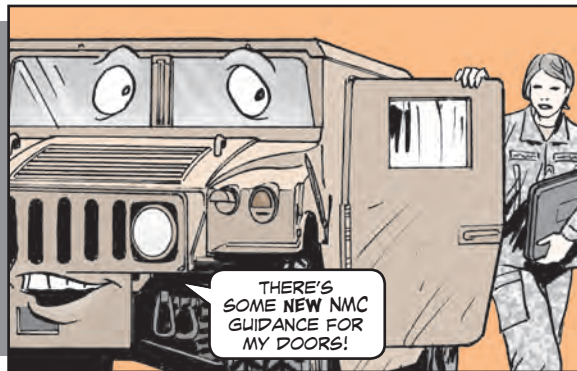
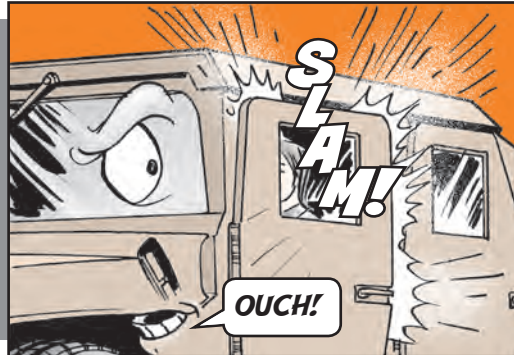
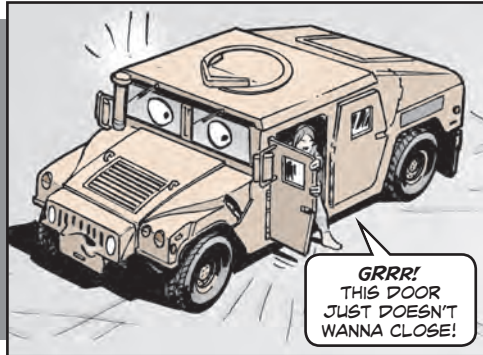
An upgraded de-icer module is in the works. We'll tell you when a replacement is available.

Need more info? Contact TACOM's Nathaniel Zachary at DSN 786-4306, 586-282-4306 or email: nathaniel.j.zachary.civ@mail.mil

You can also contact TACOM's David Stein at DSN 786-8398, 586-282-8398 or email: david.a.stein6.civ@mail.mil

NMC Criteria For

Doors Being Updated



Dear SPC. A.S.,

You're right. That is what
TACOM LCMC meant. They will
include the correct information in
a future TM update. Until then,
note these comments from the
HMMWV maintenance experts:

For doors with ballistic qualities,
the NMC criteria will be changed to:

Item Number 5 Under "weekly"
PMCS for Doors and Windows
(M1114, M1151A1, M1152A1,
M1165A1, M1167)

1. Check door for proper operation.
NMC= Excessive force is required to operate.
2. Check door latch for proper operation.
NMC= Door does not latch.
3. Check combat lock for proper operation.
NMC= Combat lock does not lock
4. Inspect inner surface of door glass (spall liner) for complete breaks, delamination, scratches, gouges, tape, decals, adhesives, or blurred vision.
NMC= Bond between glass and frame is separated from glass or frame. Any complete break on inner surface of glass. Any digs, gouges, or scratches on inner surface of glass. Any complete break on inner surface of glass.
5. Inspect outer surface of door glass for a complete break.
NMC= Any complete break of outer surface of door glass.

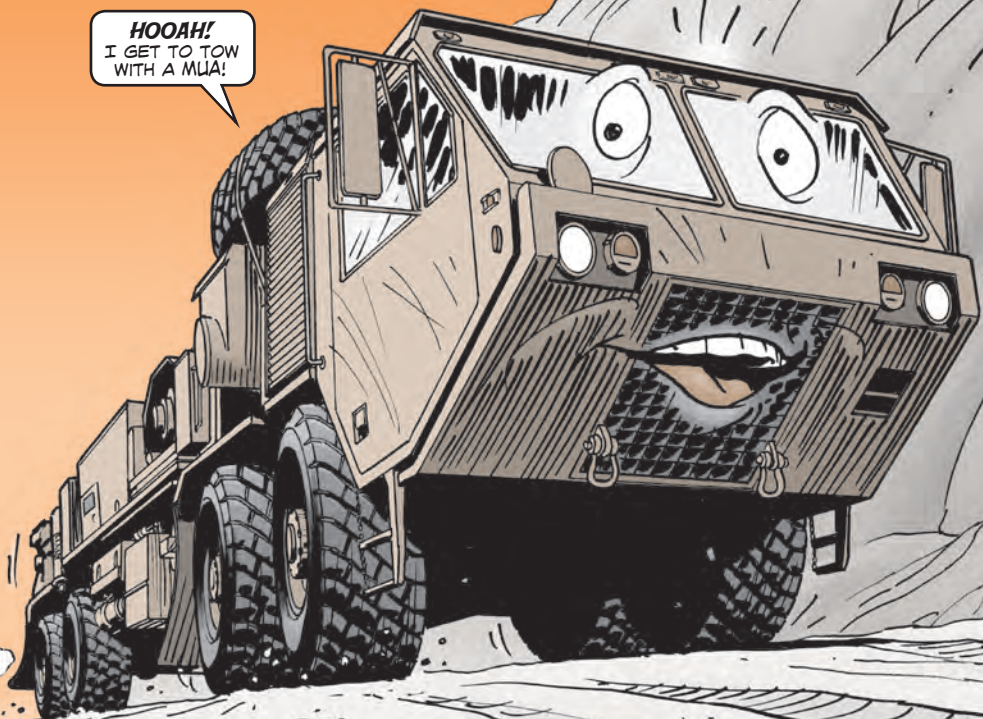
Questions? Contact TACOM's Joshua Wright at DSN 786-4345,
(586) 282-4345, and email: joshua.j.wright10.civ@mail.mil

Half-Mast

HEMTT...

Multiple Use Adapter Usage

HOOAH!
I GET TO TOW
WITH A MUA!



Dear Half-Mast,
I'm confused about the use of multiple use adapters (MUAs) with HEMTT wreckers. Can you break it down for me?

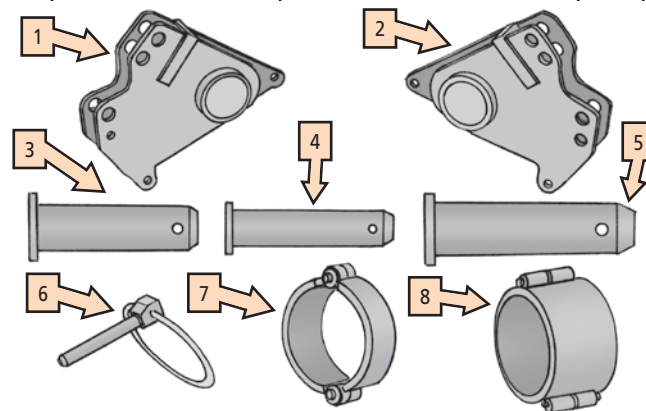
SPC J.P.

Dear Specialist J.P.,
Can do.

M984A4 wreckers and some M984A2 wreckers come with multiple use adapters (MUAs). The MUA adapters, spacers and pins are included in your wrecker's components of end item (COEI). Order NSN 2590-01-569-5574 if you need a MUA kit that includes the adapters, spacers and pins.

(1) Illustration Number	(2) National Stock Number (NSN)	(3) Description and Part Number	(4) U/M	(5) Qty. Reqd.
1	5340-01-516-2058	Adapter, Multi-Use, LH Weldment (45152) 3483699	EA	1
2	5340-01-516-2059	Adapter, Multi-Use, RH Weldment (45152) 3484856	EA	1
3	5315-01-515-6847	Pin, FMTV M/U adapter upper (45152) 3483739	EA	2
4	5315-01-515-6846	Pin, FMTV/HMMWV M/U adptr. (45152) 3483739	EA	2
5	5315-01-516-2062	Pin, MTRV/939 M/U adapter (45152) 3483735	EA	4
6	5315-01-490-7325	Pin, quick (45152) 3406240	EA	4
7		Spacer, 1.5W Multi-use (45152) 1KK602	EA	2
8		Spacer, 3.0W Multi-use (45152) 1KK601	EA	2

MUA components found in COEI



EM 0289 and TM 9-2320-421-10-1 give instructions for lifting with the MUA or older adapters. But if you're towing a FMTV with an M984A2 or M984A4 HEMTT wrecker, don't use an older adapter. You **must** use the MUA.

You won't see the MUA listed in the base HEMTT IETM or operator's manual. There are no procedures for lifting and towing with the MUA while using basic M984 or M984A1 HEMTT wreckers.

So to recap, **don't** use the MUA with basic and -A1 model M984 HEMTT wreckers. You **can** use the MUA with M984A2 and M984A4 HEMTT wreckers. You **must** use the MUA while lift towing FMTVs with M984A2 and M984A4 HEMTT wreckers.

Half-Mast

SO, THE ENGINE
LOW OIL PRESSURE
LIGHT **NOT** BEING LIT
IS "NO BIG DEAL,"
HUH?

ENGINE OIL LIGHT REMINDER

DRIVERS,
LISTEN UP!

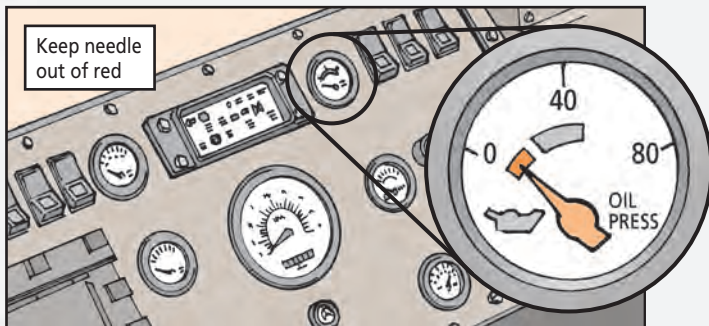
The FMTV's normal engine oil pressure is between 15-80 psi. In addition to an oil pressure gauge, your truck has an oil pressure warning light.

Do the following if the gauge or the light indicates problems:

- If the engine low oil pressure indicator lights up and the gauge reads above 15 psi, continue the mission. When the mission's over, tell your mechanic about the low reading.
- If the engine oil pressure gauge reads in the red zone and the engine low oil pressure indicator is not lit, shut off the engine and do the following:

1. Restart the engine. If the light only comes on briefly, but then goes out, continue the mission.

Keep needle
out of red



2. If the light does **not** come on, or comes on and **stays** on, turn off the engine and call in your mechanic.

Oil Pressure Switches

THERE ARE
THREE DIFFERENT
OIL PRESSURE
SWITCHES USED ON
FMTV VEHICLES.

THE PRESSURE
SWITCH USED
DEPENDS ON WHICH
MODEL FMTV YOU
HAVE.

THE **NEWER** SWITCHES HAVE
AN IMPROVED DIAPHRAGM
MADE OUT OF A MORE
DURABLE MATERIAL.

HERE'S
WHAT YOU
NEED TO
KNOW...

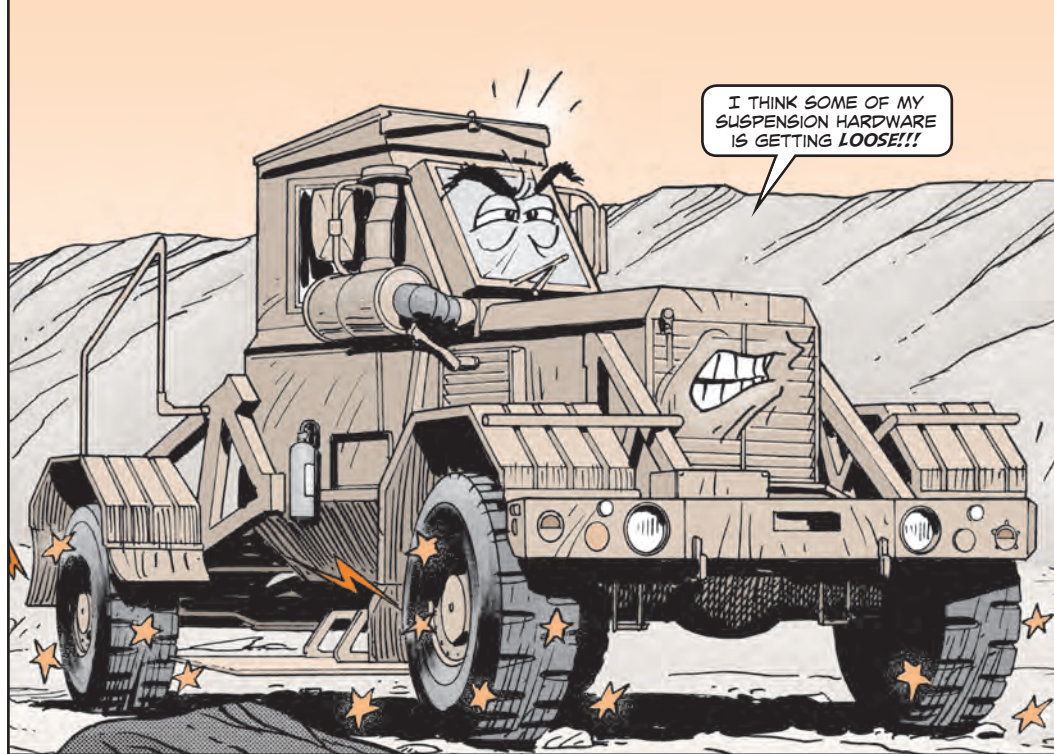
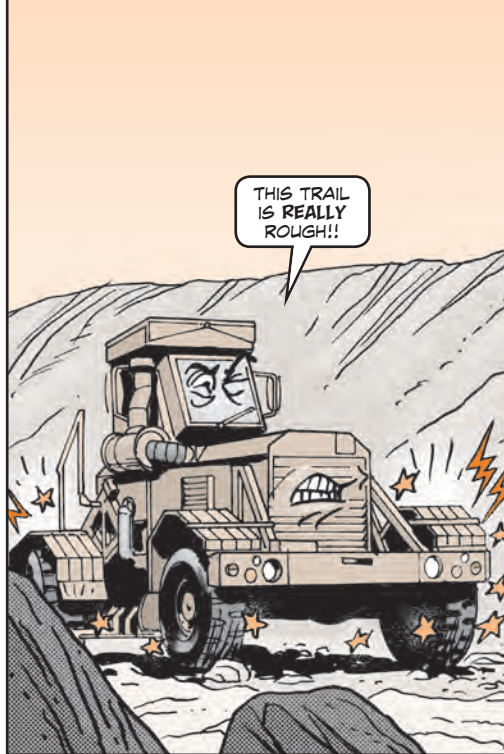
Basic FMTVs with Caterpillar 3116 engines use the analog-style 12 psi-activated pressure switch, NSN 5930-01-528-7523. This is used on trucks with serial numbers below 11,438. It replaces NSN 5930-01-384-5419, which is shown as Item 6 in Fig 68 of TM 9-2320-365-24P (Aug 05).

FMTV -A1 models with Caterpillar 3126 engines use the digital-style 6 psi-activated pressure switch, NSN 5930-01-515-6564. This is used on trucks within the serial range of 11,438-25,248.

Finally, FMTV -A1 models with Caterpillar C7 engines use a digital-style pressure switch, NSN 6620-01-524-9112. That's used on trucks with serial numbers higher than 100,000. By the way, there are no trucks within the serial range of 25,249-99,999.

TOE THE LINE

OUCH!



OPERATORS, DURING THE BEFORE AND AFTER PMCS ON YOUR HUSKY, TAKE A **CLOSE LOOK** AT THE LOWER SHOCK ABSORBER BRACKET FOR LOOSE HARDWARE.

THE VEHICLE IS NMC IF THE BRACKET, BOLT, OR LOCKNUT IS LOOSE, DAMAGED, OR MISSING.



Vehicle vibration loosens the nut. Eventually, the nut and bolt come completely loose, causing a lot of wear-and-tear on the vehicle's suspension system.

There should be a line marked across the nut and bolt. If the line doesn't line up, the nut has moved. The line is for reference purposes only, though. Realigning it doesn't mean the nut is torqued correctly. Your mechanic will need to do that.

While you're at it, look for shiny spots on the nut's washer and any corrosion buildup around the nut. That indicates movement, too.

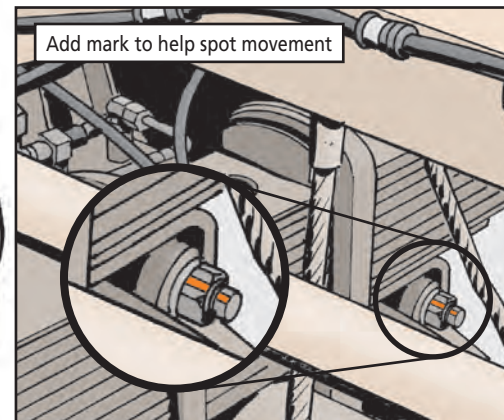
If the nut, NSN 5310-01-597-5003, and alignment bolt, NSN 5305-12-150-8323, are missing, get your mechanic to replace 'em. He'll also retighten a loose nut to 155 lb-ft.

IF THERE'S NO MARK ON THE NUT OR BOLT, USE A MARKER PEN OR A TUBE OF SEALING COMPOUND, NSN 8030-00-408-1137, TO MAKE YOUR OWN LINE ACROSS THE NUT AND END OF THE BOLT.

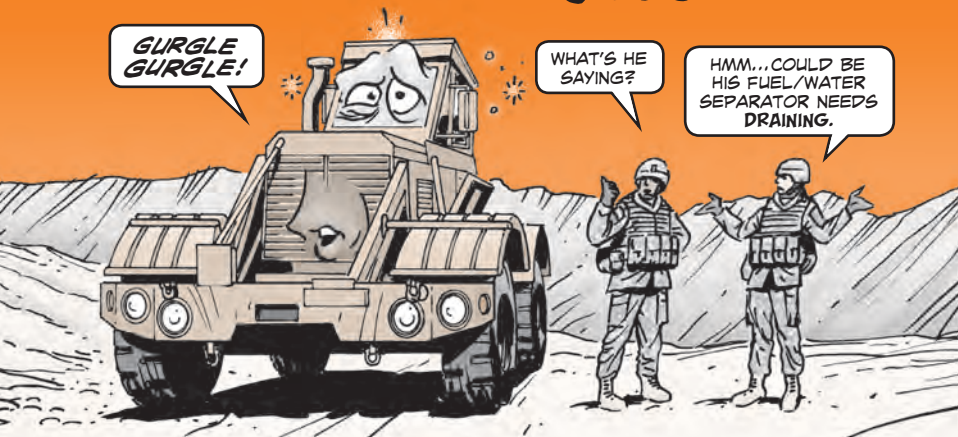
JUST MAKE SURE YOUR MECHANIC HAS TORQUED IT PROPERLY **FIRST**.



Add mark to help spot movement



GET THE WATER OUT!

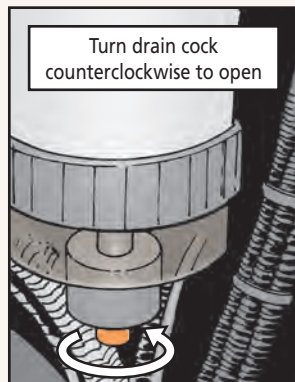
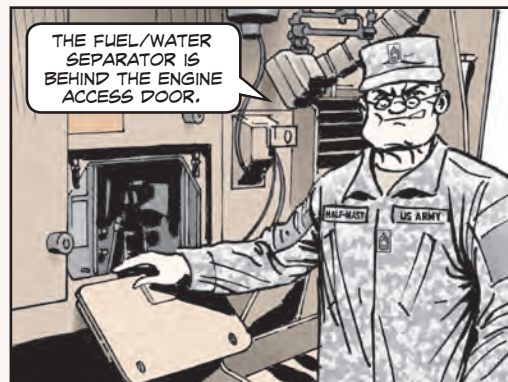


Operators, too much water in your Husky's fuel system will leave the vehicle's engine running rough or not at all.

Water gets into the fuel when warm days and cool nights cause condensation to form in the vehicle's fuel tank. You get rid of the water by draining the fuel/water separator every week like it says in TM 9-2355-316-10 (Apr 12).

The fuel/water separator is located behind the right-side engine access door. Open the separator by turning its drain cock counterclockwise. Dispose of drained fuel in an approved hazardous waste container. Never dump it down a drain or let it run on the ground.

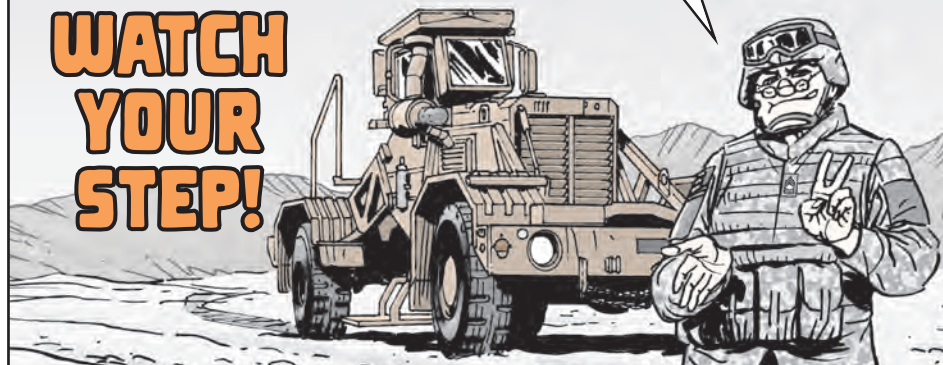
If the fuel runs clear, you're OK. If the fuel is still cloudy after you've drained half a pint or so, close the valve and report it to your mechanic.



OPERATORS, THERE ARE **TWO AREAS** ON THE HUSKY WHERE YOU HAVE TO WATCH YOUR STEP.

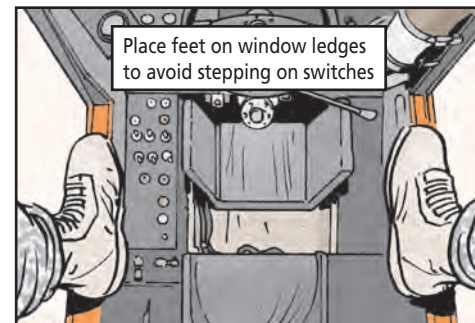
IF YOU DON'T, IT COULD MEAN THE DIFFERENCE BETWEEN A VEHICLE THAT'S A-OK OR NMC.

WATCH YOUR STEP!



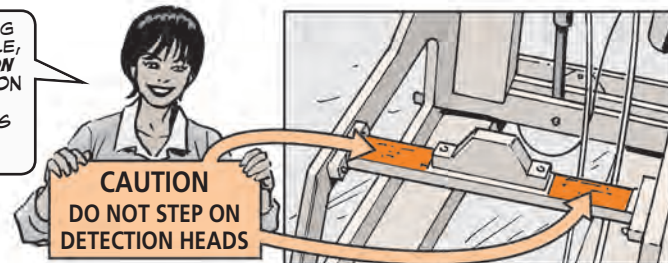
Use Cab Ledge Steps

Easy does it when you get in and out of the vehicle's cab. Place your feet on the window ledges when lowering yourself into the cab. Keep your feet away from the operator switch panel on the left and the detector panel on the right. Your weight will bust the switches. Without functioning switches, your Husky can't do its job during landmine and IED detection operations.



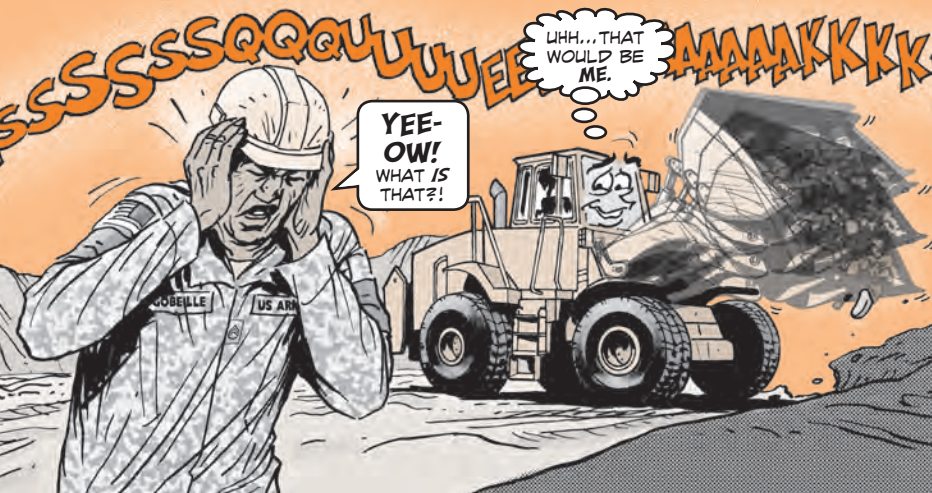
Detection Panel CAUTION

WHEN WORKING ON THE VEHICLE, **PAY ATTENTION** TO THE CAUTION PLATES ON THE VEHICLE'S DETECTION HEADS...



These plates are there for a very simple reason: Your weight will damage the detection heads! A broken head means mine detection operations come to a screeching halt!

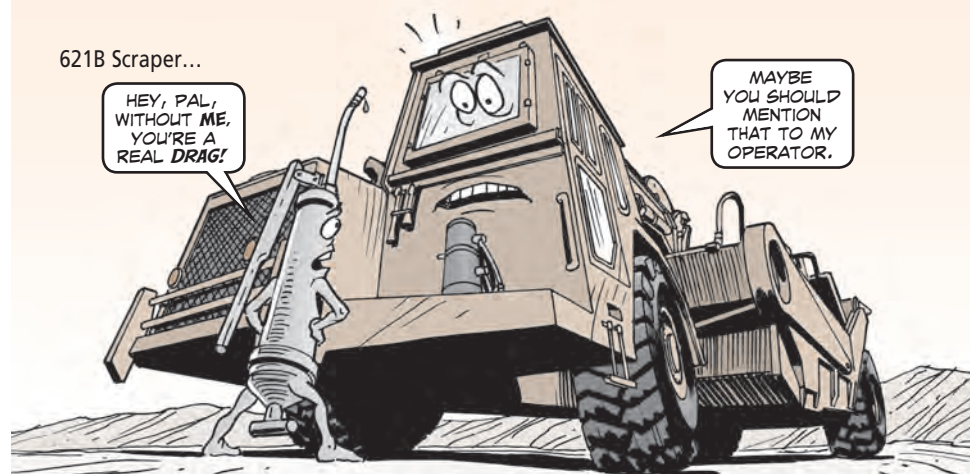
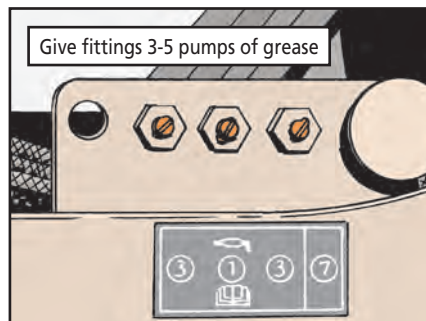
LUBE THE BUCKET WEEKLY



The pivot pins and lift arms on your wheel loader's bucket need lots of lube to do their job.

Without lube, the bucket will begin squeaking while it's being raised or lowered. You'll know the problem's getting really bad when the bucket starts moving erratically during construction operations.

The bucket's bank of grease fittings is located on the driver's side of the vehicle at ground level. Every week, give all of the fittings three to five pumps of GAA.



LUBE KEEPS ROLLERS ROLLING

Keeep thoughts of smooth rolling in mind when it's time to lube the guide rollers behind the 621B scraper's bowl.

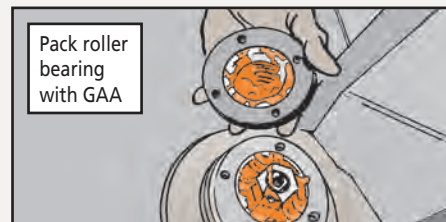
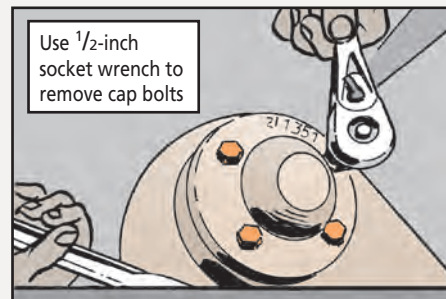
The top and bottom guide rollers behind the scraper's bowl are out of view because of their location. Each roller moves back-and-forth when the bowl is loaded or emptied. Without lube, individual rollers lock up and drag along their guide track. The end result is a lot of wear-and-tear to the roller, bowl and ejector.

Keep that from happening to your scraper by lubing the grease fittings on the bottom rollers with GAA during scheduled services.

But when you're ready to lube the top guide rollers, you'll notice there are no grease fittings. That means once a year you'll have to remove the access cap to get inside.

Use a 1/2-in socket wrench to remove the four cap bolts. Use a pry bar to hold the guide rollers in place while turning the bolts with the wrench.

Pack the access cap and the guide roller bearing with GAA. You won't find this info in the scraper's lube order, so make a note to help you remember next year.



DON'T STEP THERE!

The M9 ACE's ejector hydraulic cylinder rod looks like a handy step, especially when you step down into and around the bowl to check the vehicle's compensation pump or look for a leak in the valve bank.

Problem is, your muddy boots can scratch the cylinder rod's surface. A scarred rod tears up the cylinder's seal when the ejector moves back and forth. That causes a hydraulic leak.

Excess hydraulic oil on the cylinder rod is a sure sign the seal is shot.

So save costly repairs and downtime by staying off the cylinder rod when you need to get inside the earthmover's bowl.

HEY! I'M NOT A STEP, BUB!

WHEW! IT TOOK ME NEARLY A MONTH, BUT I FINALLY GOT THIS LITTLE STONE MOVED A BIT!

NOT BAD FOR A WORM, BUT I STOPPED THAT MASSIVE DOZER JUST BY WALKING AWAY!

SECURE HYDRAULIC LINES

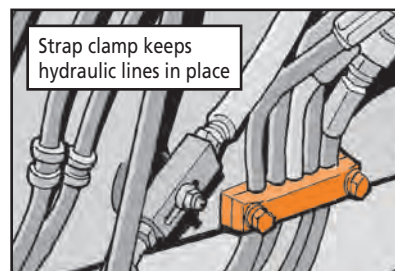
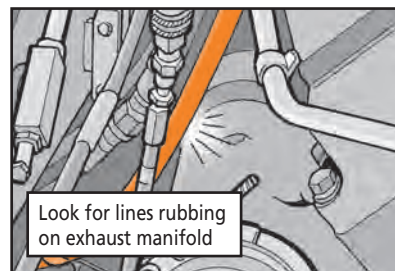
Who would imagine that the lack of a small strap clamp could stop a 27-ton earthmover dead in its tracks?

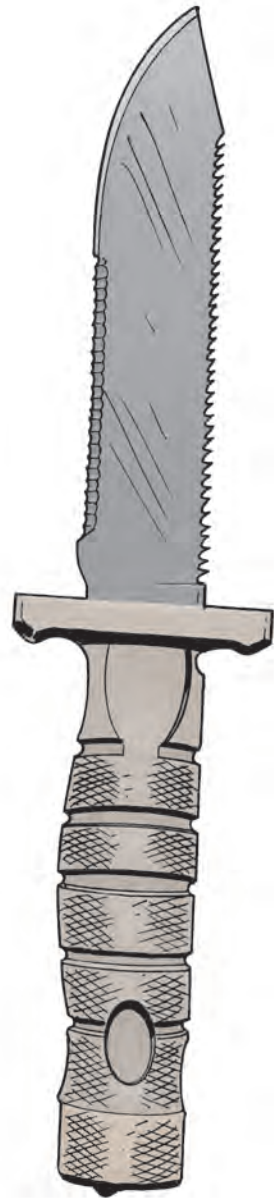
But it has happened. And that's why you mechanics need to remember the clamp when servicing the five hydraulic lines mounted directly across from the engine's exhaust manifold.

The clamp is needed to keep the hydraulic lines from touching the ACE's hydraulic manifold. If a line touches the manifold when it gets hot, the line could melt and start a fire!

The clamp gets misplaced when a hydraulic line is replaced or the engine is pulled. If the clamp's missing, replace it with NSN 5340-01-179-7530. You'll find it listed as Item 40 in Fig 156 of TM 5-2350-262-24P (Jun 12).

Until the new clamp comes in, secure the lines away from the manifold with a tie-down strap, NSN 5975-00-570-9598.





The Final Answer on the ASEK Knife



Page 20 of PS 728 (Jul 13) said the aircrew survival and egress knife (ASEK) could **only** be worn on the inside or outside of either calf. That's no longer true.

The air warrior headshed recently made a final decision on this matter. A DA Form 2028 has been submitted for TM 1-1680-377-13&P-1 to allow units to attach approved ASEKs to the primary survival gear carrier (PSGC) based on general use safety alert message 13-01.

ASEK can be worn on PSGC vest or on inside or outside of calf



WARNING

"Incorrect mounting of the ASEK on the upper front chest of the PSGC may contribute to injury or death to personnel during a crash sequence."

NOTE

"The ASEK may be worn on the inside or outside of either calf."

The change will add steps to the procedures:

"If leg mounting is deemed undesirable, the ASEK may be worn on the PSGC, and must be positioned to avoid a head strike in case of an accident. Prior to flight, from the upright seated position, flex body full forward and chin down to the full seat and harness restraints limits. If there is interference between the ASEK and the head, adjust the position of the ASEK until it is no longer a strike hazard."

"If ASEK interferes with flight controls or required mission tasks, reposition ASEK."

ASEK Mounting Guidance

Because the PSGC was not originally designed for the ASEK, where you mount it matters. Crew member body size varies widely, so strikes zones will be different, too. Use the following individual mounting evaluation methods:

- Don all appropriate flight and survival gear worn during missions.
- Place the ASEK on your PSGC following the info in the new Steps 5 and 6.
- Secure the ASEK with the MOLLE straps.
- Sit in your aircraft crew station as you would on a normal mission.
- Make sure the ASEK isn't mounted where it can interfere with any controls. That includes interference caused by movements in the cabin and tasks such as sling loading or hoist operations.
- Check to see if the ASEK interferes with the restraint system or emergency egress.
- While upright in the seat, flex your body as far forward as the seat and harness restraints allow. If the ASEK touches your head, adjust it to avoid a hazard.

Don't put yourself in harm's way. Take the ASEK mounting guidance seriously!

NEW DEVICE ALLOWS SAFER PARACHUTING



OK,
TROOPERS,
STAND BY!



WITH
THIS NEW
ANCHORING
DEVICE, WE'RE
ALL READY TO
TAKE A **FLYING
LEAP!**



AVIATION AND
AIRBORNE
UNITS, DID YOU
KNOW THAT A
STATIC LINE
ANCHORING
DEVICE, NSN
1670-00-999-
3544, IS **NOW
AVAILABLE** FOR
PERSONNEL
PARACHUTING
FROM YOUR
BLACK HAWKS?



YEP! IT'S TRUE.
EVEN THOUGH
THE DEBATE ON
WHETHER TO
MODIFY...

...OR FABRICATE
THE FLOOR-
MOUNTED ANCHOR
LINE SYSTEM
FOR STATIC LINE
PARACHUTING
OPERATIONS HAS
BEEN RAGING FOR
YEARS.

A MEMO DATED 7 JAN 92
AUTHORIZED THE FABRICATION
OF A TEXTILE DONUT ANCHOR
LINE SYSTEM.

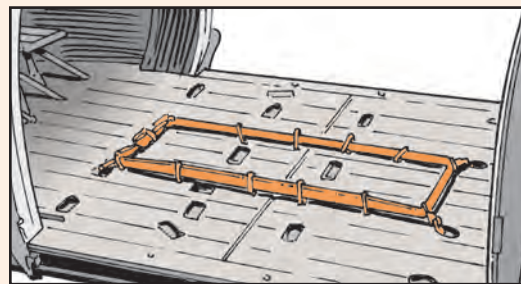
HOWEVER, FM 3-21.220
(FORMERLY FM 57-220/230)
SAID TO BUY AND MODIFY A
STABILIZED BODY (STABO)
INSERTION/EXTRACTION LOOP
FOR THIS PURPOSE.



BECAUSE OF THE CONFLICTING
GUIDANCE, MANY UNITS ORDERED
STABO LOOPS AND THEN ASKED
PARACHUTE RIGGERS (MOS 92R)
TO MODIFY THEM.
BUT THEN THERE'S THE QUESTION
OF WHO CAN CERTIFY THE SAFETY
OF THE MODIFIED LOOP.

TO SOLVE THE PROBLEM, TACOM'S AERIAL
DELIVERY EQUIPMENT TEAM REDESIGNED THE
STABO LOOP SYSTEM TO CREATE A DEDICATED
STATIC LINE PARACHUTE ANCHOR DEVICE IN UH-60
HELICOPTERS. THE REDESIGN INCLUDED...

- larger D-rings to accommodate the universal static line snap hook. That allows for quicker rigging and derigging.
- a change in buffer material from cotton to nylon.
- new snaps hooks to take advantage of newer hardware.



INSTRUCTIONS ON HOW TO USE THE DEVICE
WILL APPEAR IN TC 3-21.220, *STATIC LINE
PARACHUTING TECHNIQUES AND TRAINING*,
THAT'S IN THE WORKS.

TC 3-21.220 WILL REPLACE FM 3-21.220,
*STATIC LINE PARACHUTING TECHNIQUES
AND TRAINING*.

IF YOU'VE BEEN USING STABO LOOPS FOR
PARACHUTING, REPLACE THEM WITH THE NEW
STATIC LINE ANCHORING DEVICE.

INFORMATION ON THE OLD STABO LOOPS
WILL BE REMOVED FROM TM 10-1670-262-
12&P AT THE NEXT TM CHANGE.

THE NEW DEVICE WILL BE FEATURED IN AN
UPCOMING CHANGE TO TM 10-1670-299-20&P.

THE CONSTRUCTION OF THE NEW MODEL
USES COMMON AERIAL DELIVERY WEBBING/
HARDWARE THAT CAN BE INSPECTED USING
TM 10-1670-201-23, *GENERAL MAINTENANCE OF
PARACHUTES AND OTHER AIRDROP EQUIPMENT*.

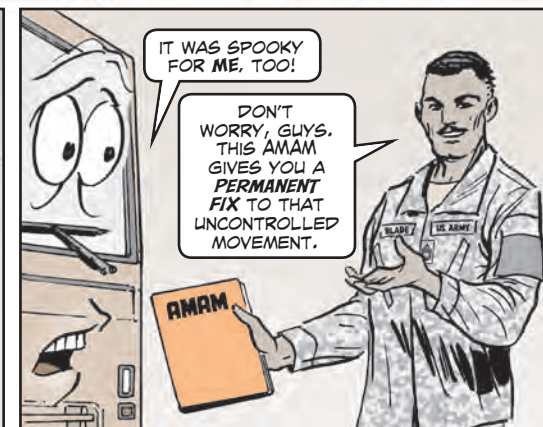
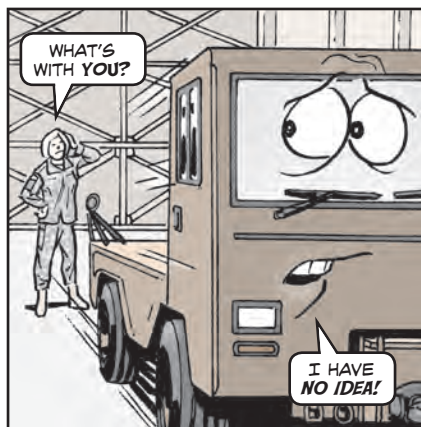
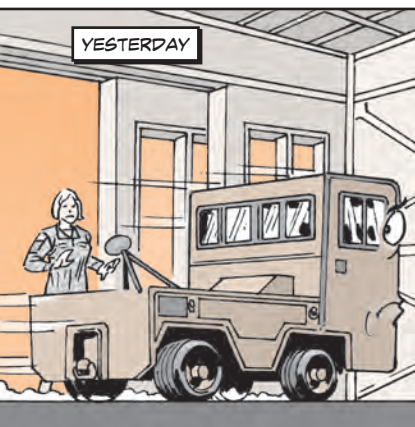
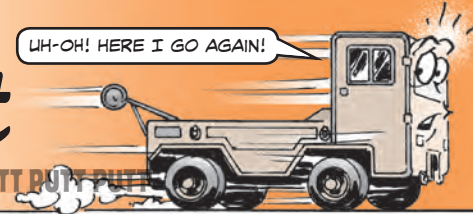
SERGEANT BLADE,
YOU **SURE** THIS NEW
DEVICE WORKS?



I'M **SURE**
OF IT. **GO!**

Stop Unexpected SATS Movement

UH-OH! HERE I GO AGAIN!



Mechanics, on Pages 25-26 of PS 733 (Dec 13), we told you how to remove a faulty diode assembly for the reverse work light on the standard aircraft towing system (SATS), NSN 1740-01-575-5662. That's because a failed diode could cause uncontrolled movement of the SATS.

By now, all the bad diodes should have been removed, based on safety action message AGSE-13-ASAM-01.

For a more permanent fix to the problem, PM AGSE and the original equipment manufacturer (OEM) came up with a solution that uses a reverse light relay assembly to stop uncontrolled movement. The details are in aviation maintenance action message AGSE-13-AMAM-01, so check it out. The new procedures will also appear in an upcoming change to TM 1-1740-221-13&P. If you don't have the message yet, here are the details.

FIRST, YOU'LL NEED THESE TOOLS TO COMPLETE THE TASK...



- Phillips and flathead screwdrivers for the operator panel latches and work light switch
- A 1/2 inch open-end wrench or socket wrench for the battery negative terminal
- A 7/16 inch open end wrench or socket wrench for the ground stud
- Nylon zip ties
- Reverse light relay assembly, part number 51777

The reverse work light assembly kits have been shipped to units. If you do not have one yet, contact Craig Sanders, DSN 788-5005, (256) 842-5005 or email:

craig.l.sanders.civ@mail.mil

SECOND, FOLLOW THESE STEPS FROM AGSE-13-AMAM-01 TO GET YOUR SATS RIDING LIKE A CHAMP.

Note

Refer to TM 1-1740-221-13&P for performing tasks.

1. Inspect the new reverse light relay assembly for damage.
2. Disconnect the SATS battery negative cable.
3. Loosen both clamp screws and open the operator dash panel.

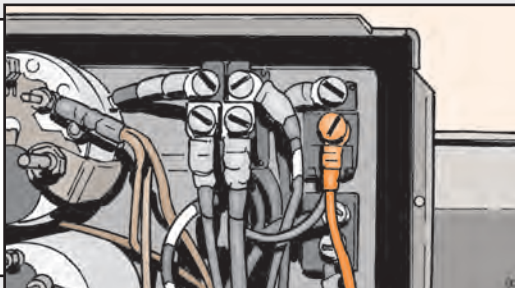


Note

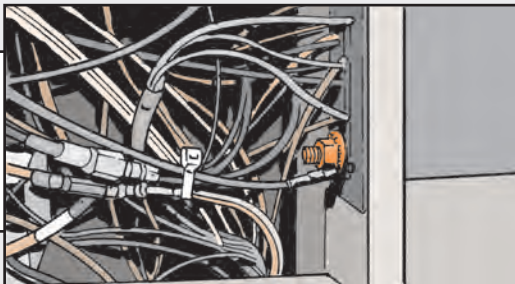
If the reverse light diode (REC1) is still connected to wires 109 and 66, remove the diode and discard it.

4. Locate wire numbers 109 and 66 inside the wiring bundle and remove any electrical tape or heat-shrink tubing from the connectors.
5. Attach wire 109 to the relay socket connector wire 109.
6. Attach wire 66 to the relay socket connector wire 66.
7. Remove any existing nylon wire ties as necessary.

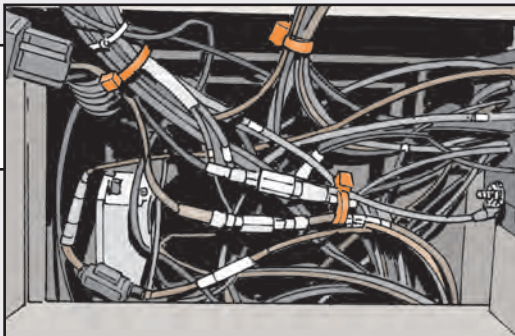
8. Remove the work light switch screw and washer from the #2 switch position and attach the relay wire #100 terminal and wire #100 to the #2 position. Secure them with a washer and screw.



9. Remove the ground stud nut and washer and attach the relay wire #2 terminal to the ground stud. Re-secure them with a nut and washer.



10. Secure the reverse light relay and wiring to the wiring bundle using nylon zip ties.

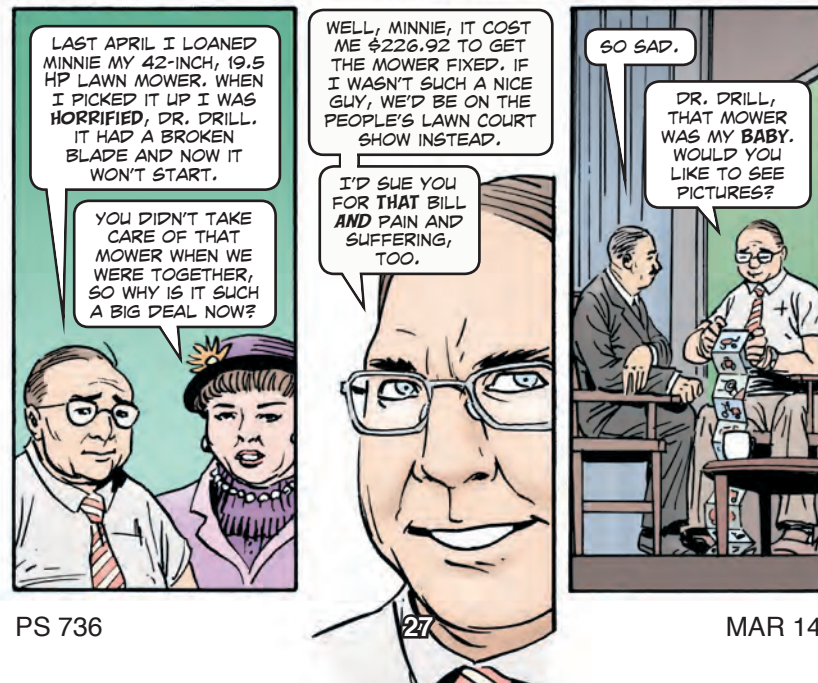
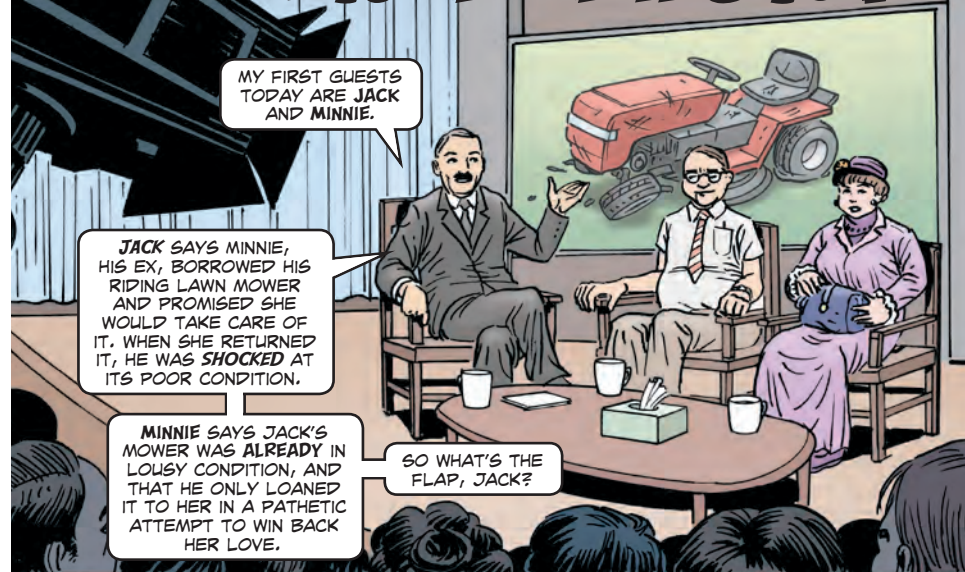


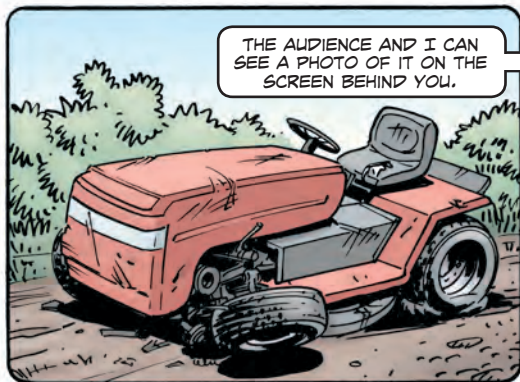
11. Close the operator dash panel and re-secure it with the clamp screws.
12. Reconnect the SATS battery negative cable.

13. Perform a maintenance operation check to verify the reverse lights illuminate while the transmission gear selector is in reverse.

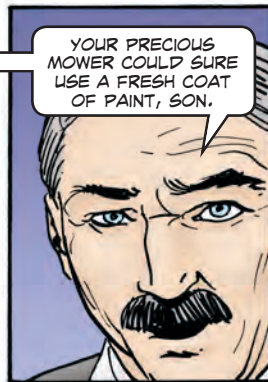
PS END

The Dr. Drill Show





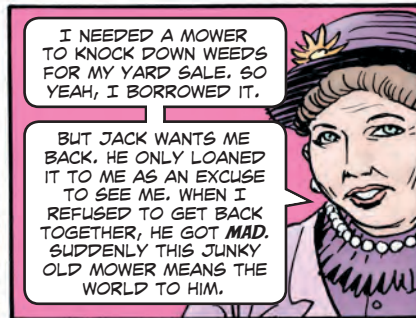
THE AUDIENCE AND I CAN SEE A PHOTO OF IT ON THE SCREEN BEHIND YOU.



YOUR PRECIOUS MOWER COULD SURE USE A FRESH COAT OF PAINT, SON.



OK, MINNIE, WHAT'S YOUR SIDE OF THE STORY?



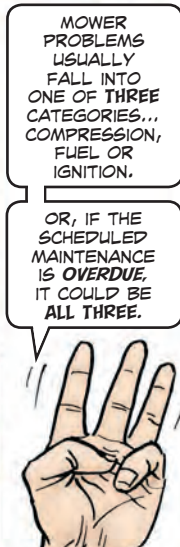
I NEEDED A MOWER TO KNOCK DOWN WEEDS FOR MY YARD SALE. SO YEAH, I BORROWED IT.

BUT JACK WANTS ME BACK. HE ONLY LOANED IT TO ME AS AN EXCUSE TO SEE ME. WHEN I REFUSED TO GET BACK TOGETHER, HE GOT MAD. SUDDENLY THIS JUNKY OLD MOWER MEANS THE WORLD TO HIM.



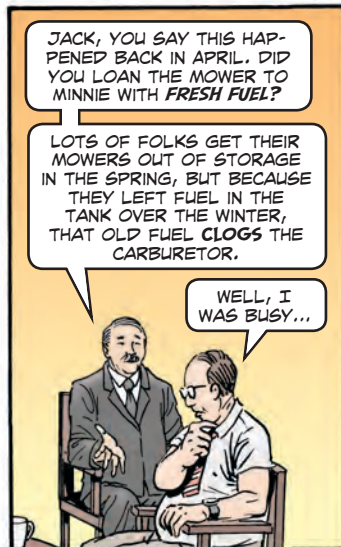
MINNIE, WHEN YOU CALLED THE SHOW, YOU TOLD MY STAFF THAT THE MOWER WAS ALREADY IN DISREPAIR BEFORE YOU BORROWED IT.

YES. IT WAS HARD TO START AND KEPT STALLING.



MOWER PROBLEMS USUALLY FALL INTO ONE OF THREE CATEGORIES... COMPRESSION, FUEL OR IGNITION.

OR, IF THE SCHEDULED MAINTENANCE IS OVERDUE, IT COULD BE ALL THREE.



JACK, YOU SAY THIS HAPPENED BACK IN APRIL. DID YOU LOAN THE MOWER TO MINNIE WITH FRESH FUEL?

LOTS OF FOLKS GET THEIR MOWERS OUT OF STORAGE IN THE SPRING, BUT BECAUSE THEY LEFT FUEL IN THE TANK OVER THE WINTER, THAT OLD FUEL CLOGS THE CARBURETOR.

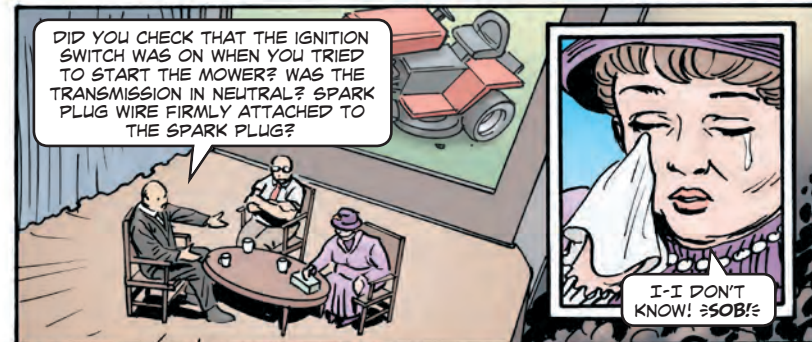
WELL, I WAS BUSY...



SAVE YOUR BREATH, SON. THIS AIN'T MY FIRST RODEO.



MINNIE, EVERY COIN HAS TWO SIDES.



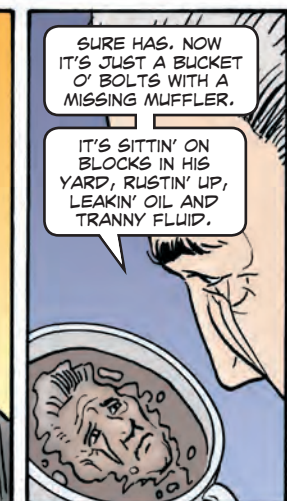
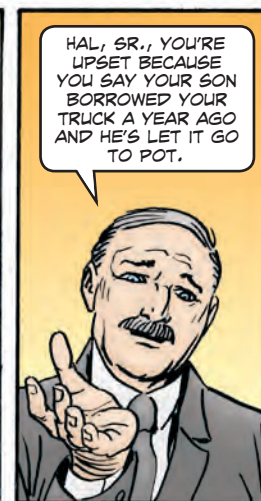
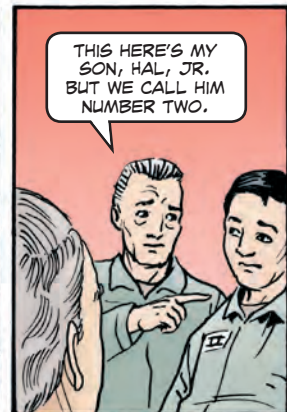
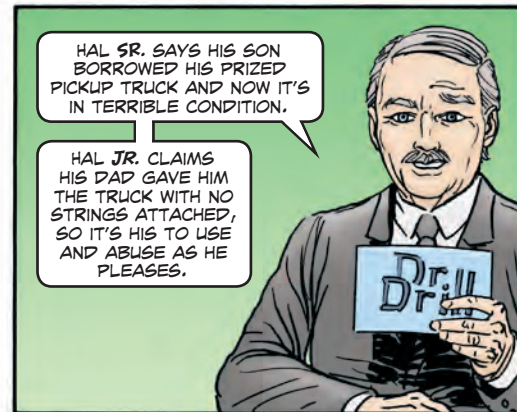
DID YOU CHECK THAT THE IGNITION SWITCH WAS ON WHEN YOU TRIED TO START THE MOWER? WAS THE TRANSMISSION IN NEUTRAL? SPARK PLUG WIRE FIRMLY ATTACHED TO THE SPARK PLUG?

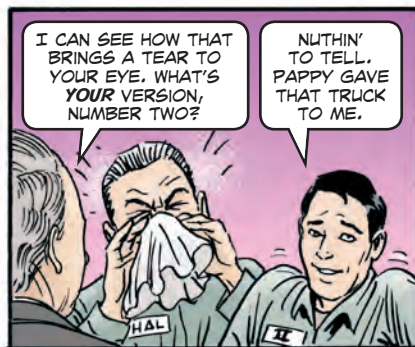


I-I DON'T KNOW! SOB!>



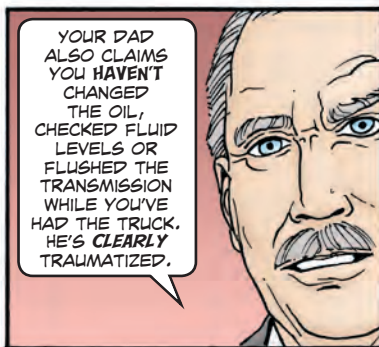
THEN I'M GUESSING YOU DIDN'T CHECK COMPRESSION, CLEAN THE SPARK PLUG OR CHECK THE GAP, EITHER.





I CAN SEE HOW THAT BRINGS A TEAR TO YOUR EYE. WHAT'S **YOUR** VERSION, NUMBER TWO?

NUTHIN' TO TELL. PAPPY GAVE THAT TRUCK TO ME.



YOUR DAD ALSO CLAIMS YOU **HAVEN'T** CHANGED THE OIL, CHECKED FLUID LEVELS OR FLUSHED THE TRANSMISSION WHILE YOU'VE HAD THE TRUCK. HE'S **CLEARLY** TRAUMATIZED.



WELL, SINCE IT'S **MY** RIDE NOW, WHO CARES?



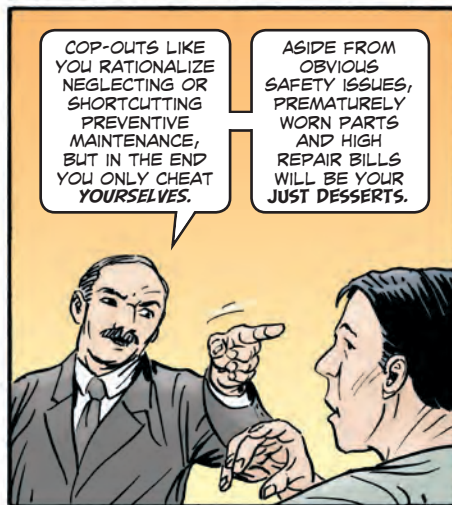
I CARE! THE AUDIENCE CARES!

THAT DOG DON'T HUNT, NUMBER TWO.

HOW CAN YOU EVEN WEAR THOSE COVERALLS WITH A STRAIGHT FACE?

BOO-YAH!
WHOOO!

YEAHH!



COP-OUTS LIKE YOU RATIONALIZE NEGLECTING OR SHORTCUTTING PREVENTIVE MAINTENANCE, BUT IN THE END YOU ONLY CHEAT **YOURSELVES**.

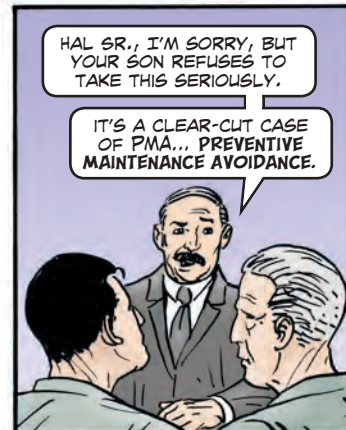
ASIDE FROM OBVIOUS SAFETY ISSUES, PREMATURELY WORN PARTS AND HIGH REPAIR BILLS WILL BE YOUR JUST DESSERTS.



DESSERT? WHERE?

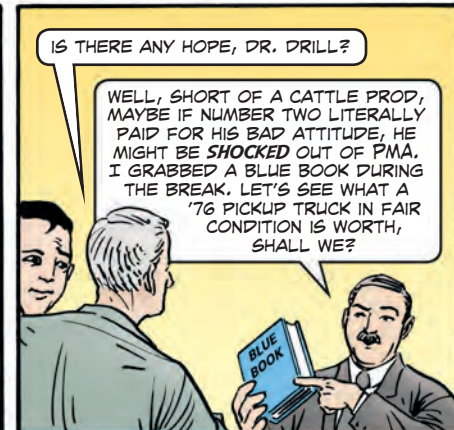
GASP!

BOO!



HAL SR., I'M SORRY, BUT YOUR SON REFUSES TO TAKE THIS SERIOUSLY.

IT'S A CLEAR-CUT CASE OF PMA... PREVENTIVE MAINTENANCE AVOIDANCE.

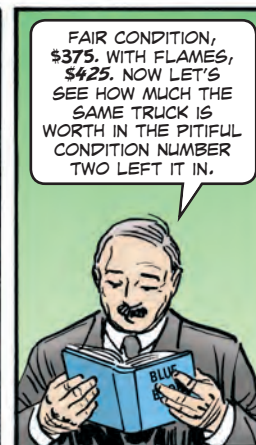


IS THERE ANY HOPE, DR. DRILL?

WELL, SHORT OF A CATTLE PROP, MAYBE IF NUMBER TWO LITERALLY PAID FOR HIS BAD ATTITUDE, HE MIGHT BE **SHOCKED** OUT OF PMA. I GRABBED A BLUE BOOK DURING THE BREAK. LET'S SEE WHAT A '76 PICKUP TRUCK IN FAIR CONDITION IS WORTH, SHALL WE?



WITH FLAMES PAINTED ON THE HOOD!



FAIR CONDITION, \$375. WITH FLAMES, \$425. NOW LET'S SEE HOW MUCH THE SAME TRUCK IS WORTH IN THE PITIFUL CONDITION NUMBER TWO LEFT IT IN.



YUP, JUST LIKE I FIGURED...\$20. AND THAT'S FOR SCRAP METAL!

GIFT OR NOT, NUMBER TWO, **ALL** VEHICLES DESERVE TO BE PROPERLY MAINTAINED.

YOU AGREED TO COME ON THE SHOW TODAY AND FOLLOW MY ADVICE. I SAY YOU NEED TO SPEND THE EFFORT AND MONEY IT TAKES TO REPAIR THE TRUCK...

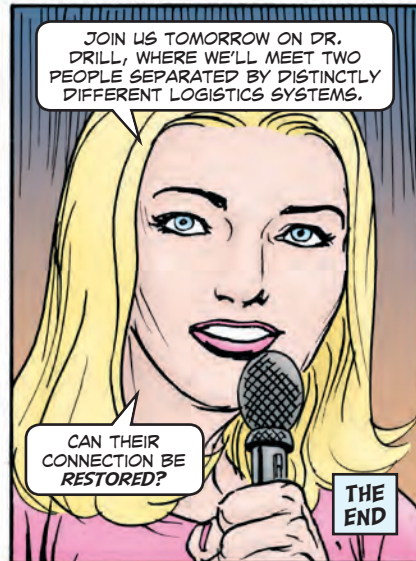
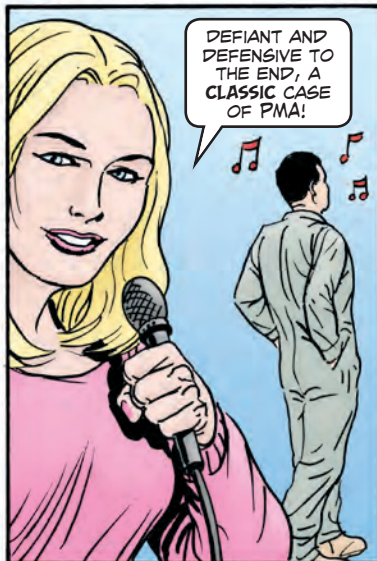
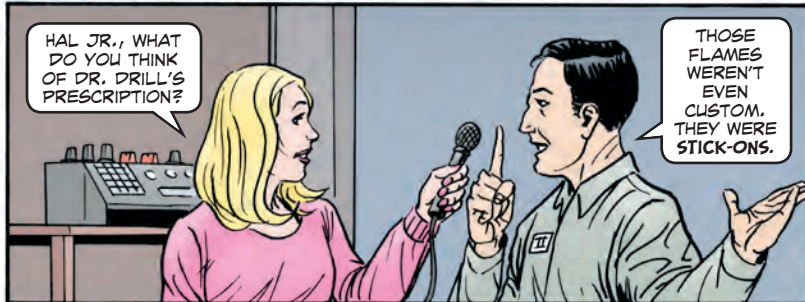
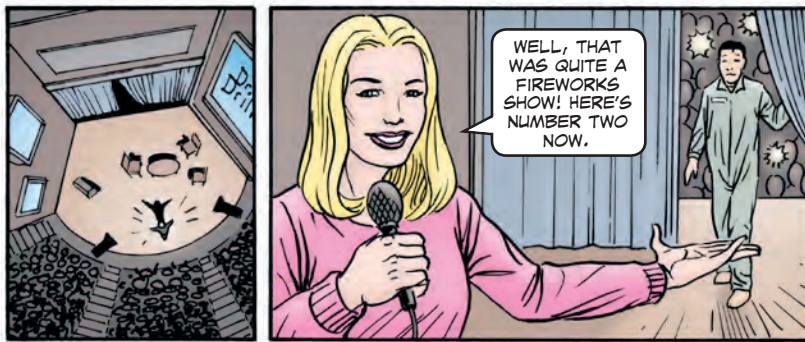
...AND GIVE A **BIG APOLOGY** TO YOUR DAD FOR THAT FLAMED-OUT TRUCK.



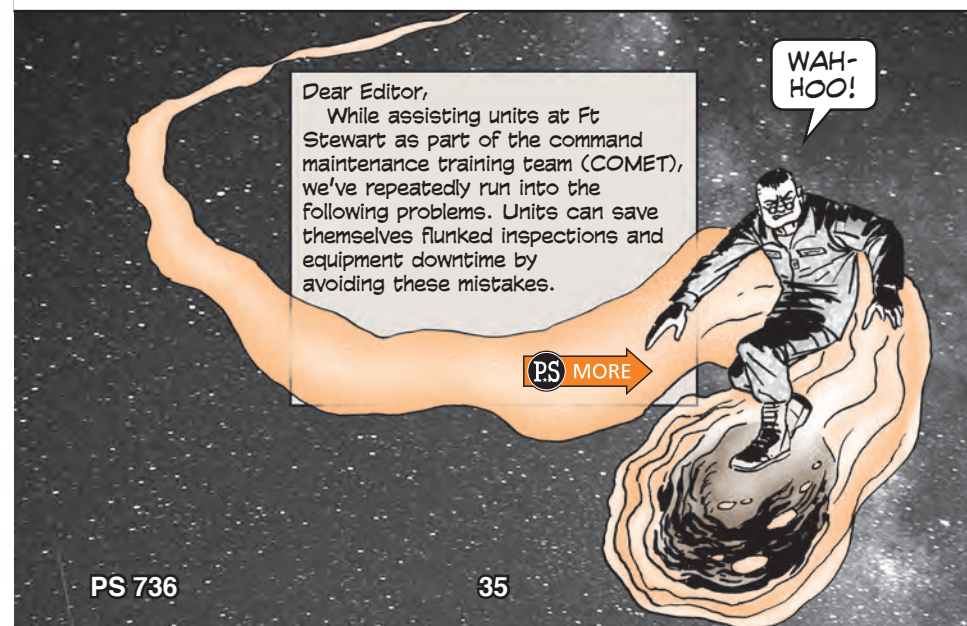
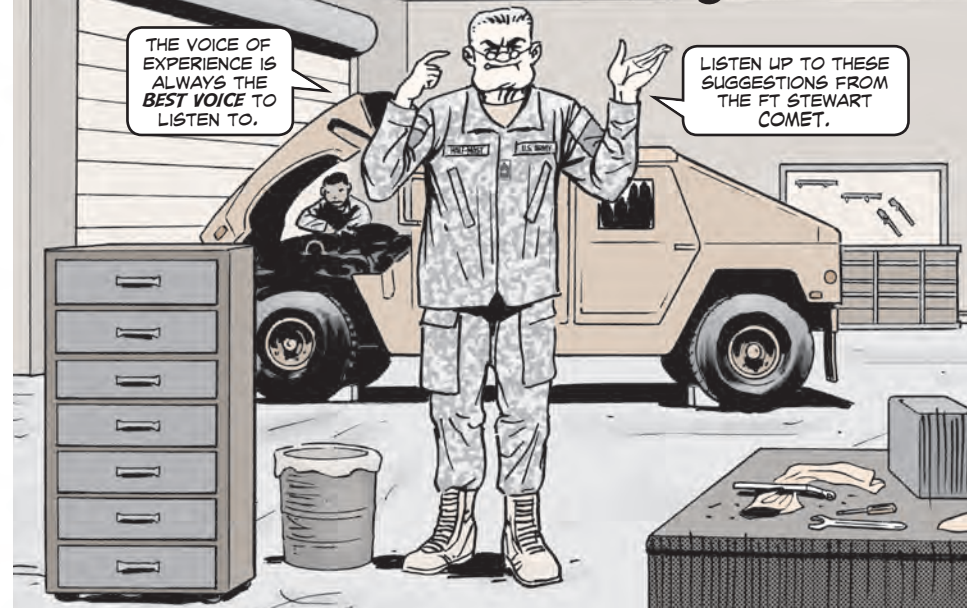
BOO-YAH!

YEAHH!

WHOOO!



COMET Advice for Avoiding Trouble



Shortage of -10 TMs

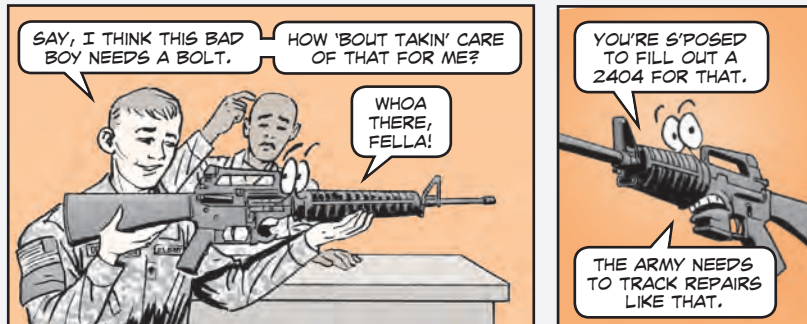
We see too many units that have either too few operator TMs or none at all. Over time, the -10s disappear and no one bothers to order more. Plus, the units' pubs accounts aren't current, so they don't receive the latest updates to the -10s. As a result, operators are trying to maintain equipment with either no TMs or outdated ones. Equipment suffers. Your unit will also flunk its next inspection because you're missing TMs.



Your unit pubs clerk can order the TMs you need. However, due to budget constraints fewer TMs are being printed—another reason to take care of the TMs you have.

Not Documenting Maintenance

Particularly in the area of small arms, units aren't documenting maintenance. Soldiers don't fill out DA Forms 2404 or 5988E when they do PMCS. They just tell the armorer what's wrong and the information is never entered into SAMS. Without that repair info, the Army can't track what parts will be needed. And when armorers don't document the quarterly services in SAMS, it leads to flunked inspections. All services and repairs **must** be entered into SAMS.

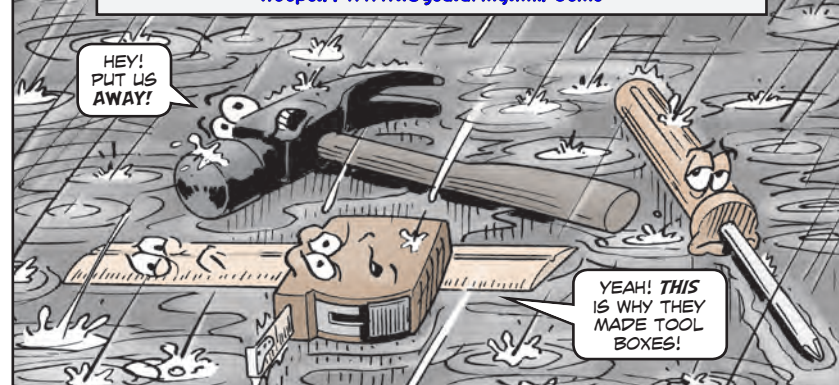


Many new Soldiers don't know how to fill out a 2404. That's a good subject for Sergeant's Time.

Not Protecting Tools

If your tools are in bad shape, your equipment soon will be, too. Keep tools out of the elements. Regularly inspect them for corrosion, broken tips and rough edges. TM 9-243, *Use and Care of Hand Tools and Measuring Tools*, has lots of good advice on tool care. It's on the ETM website:

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



Taking Jack Stands for Granted

Considering how catastrophic it could be if a jack stand collapsed, it's critical you do jack stand PMCS. TB 43-0156, *Safety Inspection and Operation of Vehicle Support Stand*, gives a good rundown on how to check out a jack stand. It's on the ETM website. Jack stands also need to be entered into SAMS.

Remember, a certificate of conformance is required for a commercial jack stand. And it must be tested at 150 percent of its capacity. A commercial jack stand rated for 1,000 pounds, for example, must be tested at 1,500 pounds. See your local COMET or TACOM LAR if you need help.



Rafael Miranda
Ricky Sammons
Bobby Hawes
Ft Stewart, GA

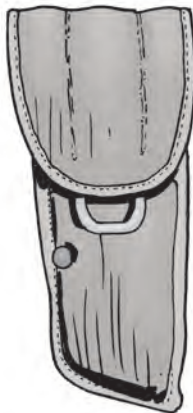
Editor's note: Experience is the best teacher. Thanks for all the good advice.



NEED A HOLSTER? NO PROBLEM!

UNDECIDED ON
THE BEST WAY
TO WEAR YOUR
M9 PISTOL?
YOU HAVE
FOUR HOLSTER
CHOICES...

M12 holster,
NSN 1095-01-194-3343



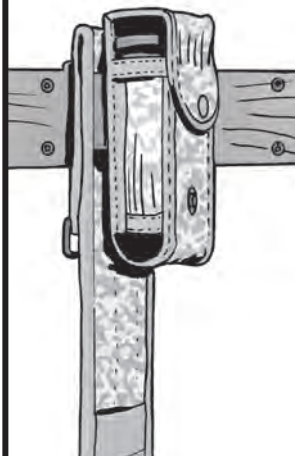
M7 holster,
NSN 1095-00-973-2353



Holster shoulder harness,
NSN 1095-01-247-3917



Hip holster extender,
NSN 1095-01-339-2213

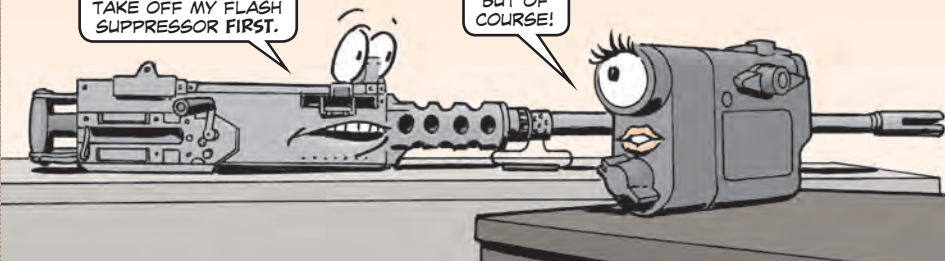


At press time
PS became aware
that the new Serpa
holster is also authorized
for use with the M9 pistol
and is being fielded as
part of a rapid fielding
initiative. It cannot
be ordered.

LBS Needed to Boresight M2A1 Machine Gun

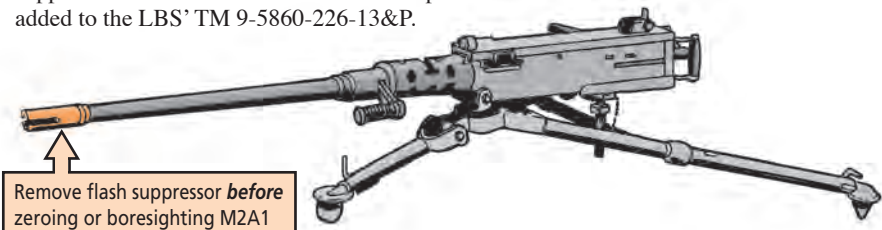
OK, YOU CAN
BORESIGHT ME, BUT
TAKE OFF MY FLASH
SUPPRESSOR FIRST.

BUT OF
COURSE!



When you use the AN/PEM-1 laser borelight system (LBS) to zero and boresight your new M2A1 machine gun, you have to do things differently than with the M2.

For the M2A1, you must first remove the flash suppressor before using the LBS. And when you're finished, you must reinstall the flash suppressor. The flash suppressor won't affect the zero of the weapon. Make a note until this information is added to the LBS' TM 9-5860-226-13&P.



To boresight and zero the M2A1 when it's mounted on the M153 CROWS, use the CROWS boresight alignment kit following the procedures in TM 9-1090-219-10. If you can't use the CROWS kit to boresight and zero because the mandrel adapter or M2 mandrel have disappeared, use the LBS. But again you must first remove the flash suppressor and reinstall it when you're finished.

If you have any questions about the AN/PEM-1 LBS, contact Dennis Timmons at (586) 282-1371, DSN 786-1371, or email: dennis.c.timmons.civ@mail.mil or Anthony Smith, (586) 282-1233, DSN 786-1233, or email:

anthony.g.smith30.civ@mail.mil

If you have questions about the M2A1, contact Wayne Waroway at (586) 282-1254, DSN 786-1254, or email: wayne.d.waroway.civ@mail.mil

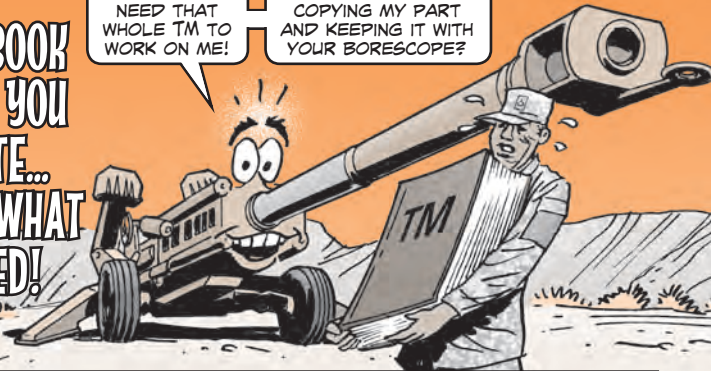
If you have questions about CROWS, contact Fred Torres at (586) 282-1355, DSN 786-1355, or email: wilfredo.f.torresestevez.civ@mail.mil

Howitzer, Mortars...

**GET THE BOOK
BEFORE YOU
EVALUATE...
AND COPY WHAT
YOU NEED!**

YOU DON'T
NEED THAT
WHOLE TM TO
WORK ON ME!

HOW 'BOUT JUST
COPYING MY PART
AND KEEPING IT WITH
YOUR BORESCOPE?



Dear Editor,

In PS 731 (Oct 13), Terry Blount suggested that repairmen for howitzers and mortars keep a personal copy of TM 9-1000-202-14, *Evaluation of Cannon Tubes*. That way repairmen will never have to guess whether a cannon tube is still usable or should be condemned.

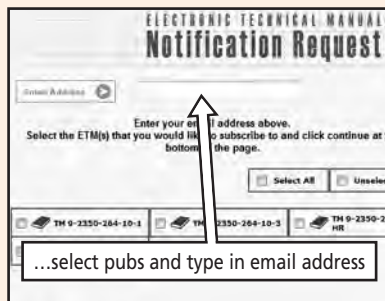
Let me offer one further suggestion. Most shops support only a few of the many mortars or howitzers listed in the TM. Instead of lugging around the entire TM, just print out the sections that cover the cannons you support. Staple them together, put them in a folder and store them with your borescope.

Karl Hayhurst
Ft Hood, TX

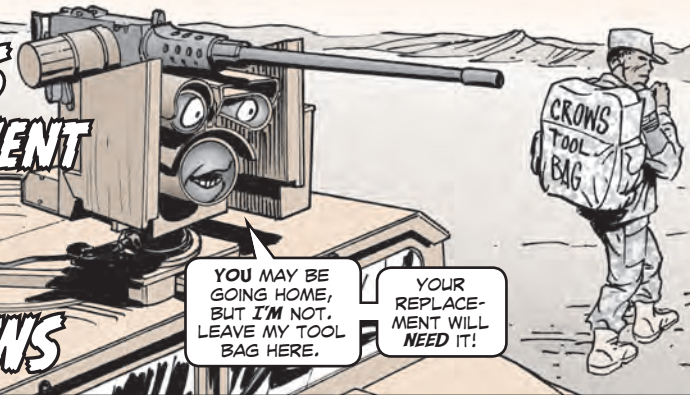
Editor's note: Excellent idea, Karl. EM 0065, which covers most small arms, has the TM, as does LOGSA's ETM website:
<https://www.logsa.army.mil/etms>

It's also a good idea to sign up for automatic email notifications. That way, you'll be notified if the TM changes so you can reprint the section you need.

Enter your pub number in the Pub Number field. On the next screen, click the Update Notification button near the bottom of the screen. On the next screen, select your pub(s) and fill in your email address. Click Continue. Your subscription will be confirmed and you will be notified when there is a change to your pub in ETMs Online.



**CROWS
EQUIPMENT
STAYS
WITH
CROWS**



YOU MAY BE
GOING HOME,
BUT I'M NOT.
LEAVE MY TOOL
BAG HERE.

YOUR REPLACEMENT
WILL
NEED IT!

"**CROWS** equipment stays with CROWS" seems like a pretty obvious statement. But unfortunately that hasn't been the case.

Units deploying back from theater are taking the CROWS tool bag, the weapons adapter kit and the boresight kit with them. Without those items, the new unit can't operate CROWS. And it costs \$23K to replace the tool bag and two kits. That's a pretty hefty bill to leave your replacements.

When it's time to go home, leave your CROWS equipment with CROWS. That's where it belongs and it saves the Army maintenance dollars.

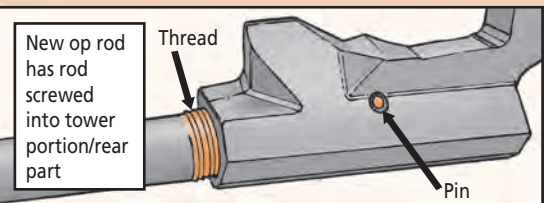
M249 Machine Gun...

**CHECK FOR
NEW OP ROD**



THERE ARE STILL SOME
M249 MACHINE GUN
OPERATING RODS IN THE
FIELD THAT HAVE THE
TOWER PORTION/REAR PART
WELDED TO THE TUBE.

THESE OP
RODS NEED TO
BE INSPECTED
FOR BENDS,
BREAKS, BURRS
OR CRACKS.



If you find any problems, replace them with the newer op rod. It has the op rod screwed into the tower portion/rear part and locked in place with a pin. Order new op rods with NSN 1005-01-134-6737.

For more info, see TACOM LCMC maintenance action message 14-005:

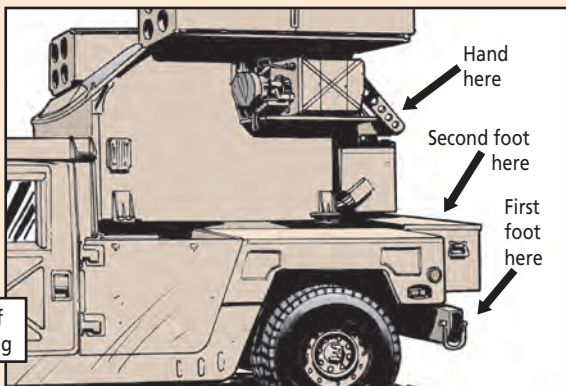
<https://tulsa.tacom.army.mil/SAFETY/message.cfm?id=MA14-005.html>



Always Use Three Points of Contact

There's not much room for climbing around on the Avenger, which means not much room for error. A slip can lead to a long fall. That's why it's important to maintain those three points of contact at all times.

Use three points of contact for climbing

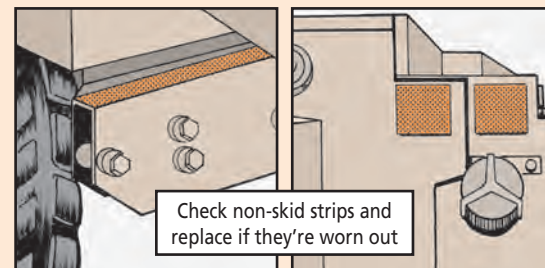


Put your foot or rear end in the wrong place and both you and your Avenger can suffer real damage. Here are few rules to remember while stepping or sitting on your Avenger:

WATCH WHERE YOU STEP... AND SIT!

Inspect Non-skid Strips

The strips are located all around the Avenger to keep your boots from slipping. Unfortunately, those strips wear out and then the slipping begins. If strips need replacing, order more with NSN 7220-00-823-7419. That gets you a 60-ft roll.



NO STEP Means No Step

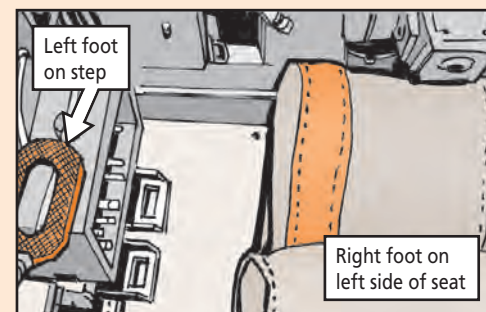
There are NO STEP areas all over the Avenger and HMWWV. If you don't pay attention to where you put your feet, you can easily crack something like the vehicle hood.



Be Careful Climbing into the Turret

Take off all your gear before you enter the turret. There's definitely **no room** for backpacks and weapons. Keep your feet away from the optical display unit, too. It doesn't take much to break it.

Climb into the turret by putting your left foot on the step on the left side of the turret and then your right foot on the left side of the seat. Climb out by reversing that. Don't do it any other way. If you step in the seat's center, you can crack it. And don't use the antenna as a hand-hold. If it's keyed, you'll get a nasty shock!



Don't Sit on the Missile Pods

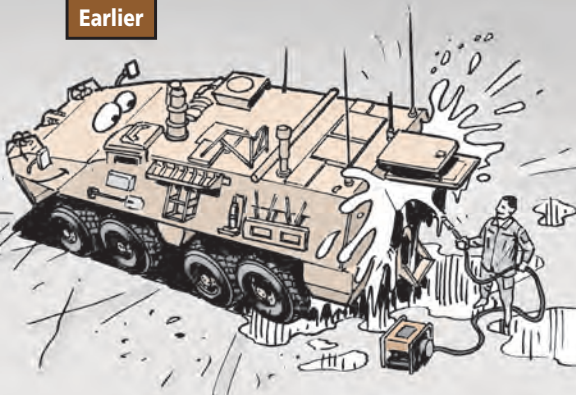


IF THE POD'S BRAKE IS NOT SET, THE POD DROPS WHEN YOU SIT AND YOU TAKE A TUMBLE.



Stryker...

Earlier



Dry Up ACADA Water Threat

WATER AND THE M22 ACADA'S M88 DETECTOR **DON'T** MIX, AS SEVERAL UNITS WITH STRYKERS HAVE DISCOVERED.

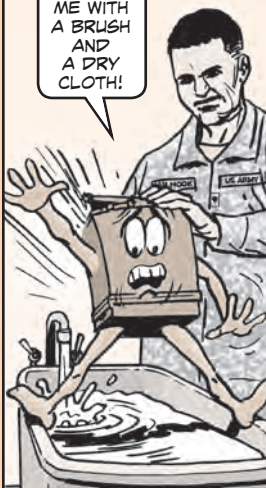
WATER DAMAGES THE M88'S HARDWARE, WHICH CAN **DEADLINE** IT.

HERE ARE **TWO** WAYS TO DRY UP THE WATER THREAT...

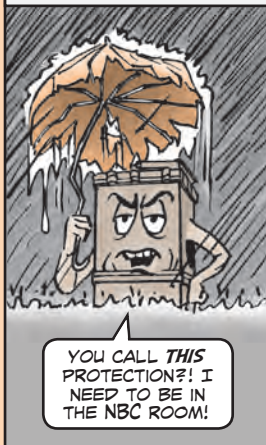
Never power wash or submerge the M88. If it's dirty, brush off dirt and then wipe it clean with a dry cloth.

HEY! I **DON'T** TAKE BATHS!

CLEAN ME WITH A BRUSH AND A DRY CLOTH!



Never store the M88 outside where rain and dirt can get at it. Store the detector either in the NBC room or a locked shelter. Make sure the dust caps are installed on both the exhaust and inlet. If you need more caps, order them with NSN 5340-01-454-6322.



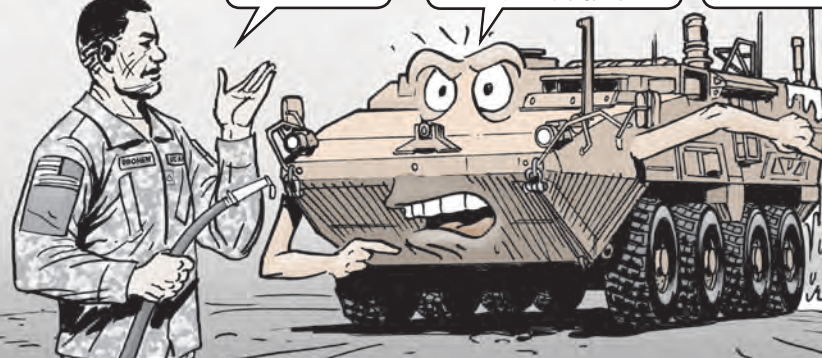
YOU CALL **THIS** PROTECTION?! I NEED TO BE IN THE NBC ROOM!

Now

WELL, LET'S MOUNT UP AND GET ON THAT MISSION!

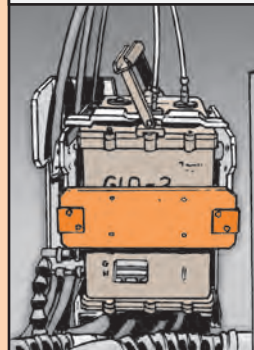
NOT SO FAST! THAT HIGH-PRESSURE CLEANING YOU GAVE ME **RUINED** MY ACADA.

YOU'RE S'POSED TO KEEP WATER AWAY FROM MY ACADA!

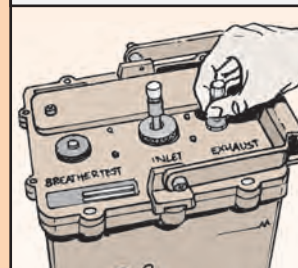


HELP YOUR M88 DETECTOR KEEP DETECTING WITH THESE TIPS...

Make sure the M88 is securely installed in the Stryker's mount and the mount brackets—**both front and top**—are securely mounted. If the M88 takes a tumble, it could be damaged.



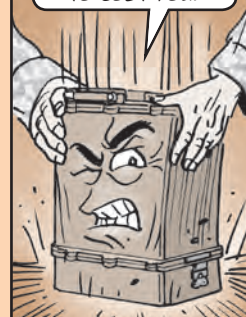
Check the M88 for **loose** fasteners, fittings, sieve pack cover, exhaust port, the display and elapse time counter, EMP box seals, selector switch and side case screws, as well as **broken** displays and **bent** connectors. These problems mean water can seep past seals into the M88. Report any problems.



Handle the M88 gently. Rough handling can send the M88 straight to the shop.

WHOA! I'M **SENSITIVE!**

ALL THIS ROUGH HANDLING IS GOING TO COST YOU.



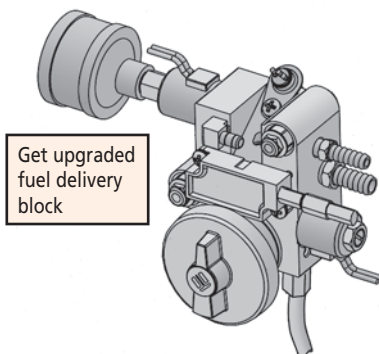
UPGRADE KEEPS FOOD FROM BURNING



Are you using the modern burner unit (MBU) to heat the griddles, ranges or cooking racks in your field kitchen? If so, take a look at the MBU's data plate. If the NSN is 7310-01-452-8137 and the model number is MBU100, you're cooking with an outdated V1 model.

Don't turn in your outdated MBU, though. Instead, upgrade it to a V3 model by removing the current fuel delivery block and replacing it with an upgraded block, NSN 7310-01-462-4905. The upgraded block has the same NSN as the current block. When you order using this NSN, you'll get the upgraded block.

To remove and replace the fuel delivery block, follow the procedures in WP 0019 of TM 10-7310-281-13&P (May 10).

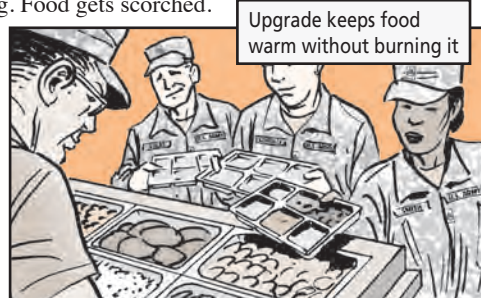


Why the Upgrade?

The MBU needs the upgrade because the current block in the MBU100 model supports an adjustable heat output ranging from 22,000 to 47,000 BTUs per hour. That means when you use the MBU100 on a serving line to keep food warm, it burns too hot—even at its lowest setting. Food gets scorched.

The upgraded fuel delivery block supports a heat output with a wider range, from 11,000 to 53,500 BTUs per hour. That means you can adjust the MBU for lower heat and not burn your food.

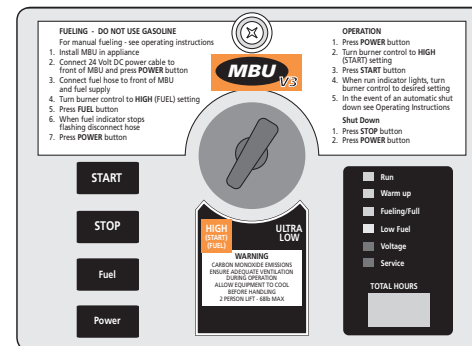
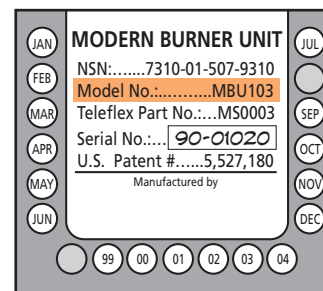
The block includes an upgraded flame sensor that can operate at higher temperatures.



Three Decals

WHEN YOU ORDER THE UPGRADED FUEL DELIVERY BLOCK, YOU ALSO GET THREE DECALS. ATTACH THE DECALS TO THE MBU AFTER YOU'VE INSTALLED THE UPGRADED BLOCK.

- The first decal goes on the MBU's data plate. It lists a new NSN, model number and part number for the MBU. The new numbers show the upgraded fuel delivery block has been installed.
- The second decal goes on the control panel and identifies the equipment as the MBU V3.
- The third decal goes underneath the control knob and shows an ULTRA LOW fuel setting.



MBUs now in production will include the upgraded fuel delivery block and flame sensor. They'll also feature the new decals and the new NSN, model number and part number:

NSN 7310-01-507-9310

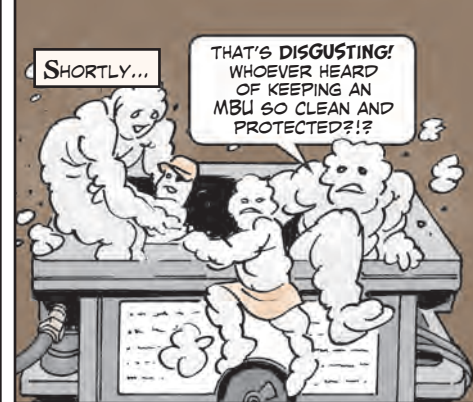
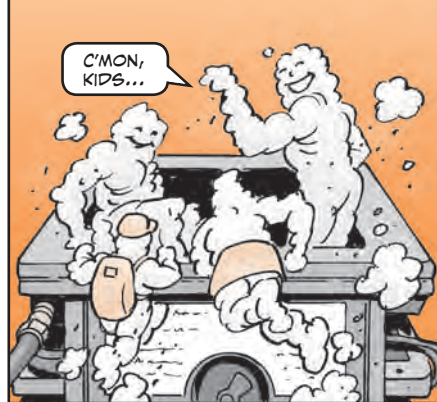
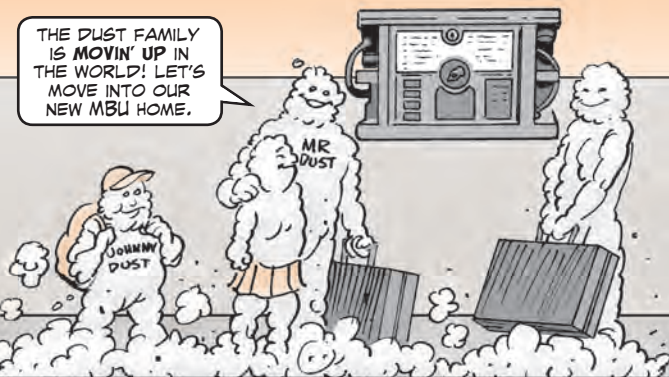
Model MBU-V3

Part number MS0003

Questions? Contact PM Force Sustaining Systems' Benjamin Campbell at DSN 256-4388 or (508) 233-4388. Or email: benjamin.j.campbell26.civ@mail.mil

Left in the Dust

THE DUST FAMILY IS MOVIN' UP IN THE WORLD! LET'S MOVE INTO OUR NEW MBU HOME.



FINE WIND-BLOWN DUST IS THE CURSE OF EVERY SOLDIER SERVING IN THE FIELD.

DUST BLANKETS EQUIPMENT AND SETTLES INTO OPENINGS BIG AND SMALL.

ALLOWED TO DO ITS DIRTY WORK...

...DUST WILL JAM YOUR WEAPON, CHOKE YOUR VEHICLE'S AIR FILTER AND OVERHEAT YOUR COMMO.

SO IF DUST GETS INTO YOUR MODERN BURNER UNIT (MBU), IT COULD EXTINGUISH THE FLAME AND...

...THAT SPELLS THE END OF HOT CHOW.

FOR THE SAKE OF FINE DINING, TAKE A STAND AGAINST DUST. HEED THESE TIPS FOR KEEPING YOUR MBU CLEAN...

- Place the MBU with the control panel facing into the wind. The panel helps to block wind-blown dust from getting inside.

To block dust, face control panel into wind



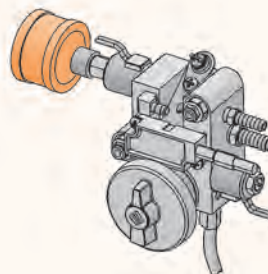
- Make sure fuel cans are tightly capped. That keeps dust from contaminating the fuel.



Tight fuel caps keep out dust

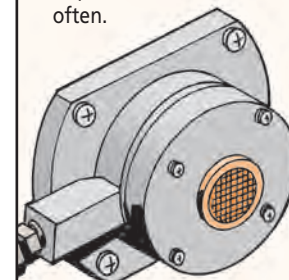
- After using the MBU, inspect the air filter, NSN 7310-01-462-4913, on the fuel delivery block. Replace the air filter if it's dirty. Keep spare filters on hand. Clean the fuel nozzle whenever you change the air filter.

Keep spare filters on hand

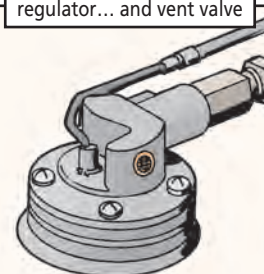


- Keep the MBU under cover or indoors when not in use.

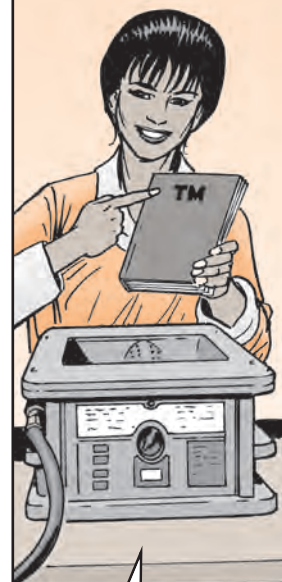
- Wipe down the MBU more often.



Clean air vents on fuel regulator... and vent valve

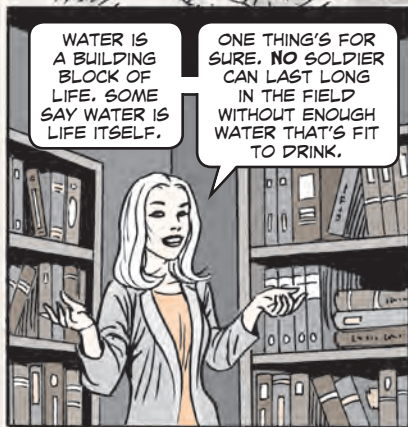


- Check the air vents on the fuel regulator and vent valve assembly. Make sure the vents are not clogged. Clean them if needed.

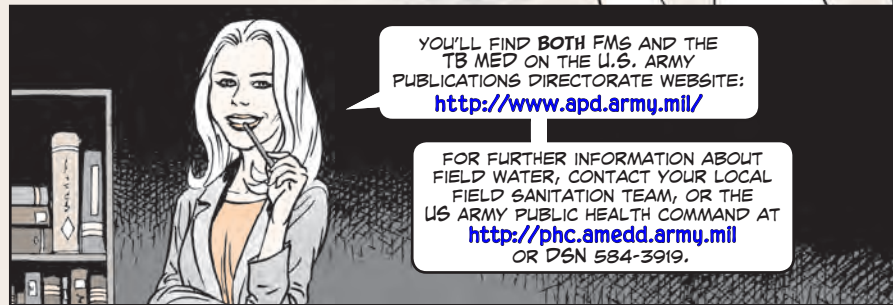


FOR MORE ON CLEANING AND MAINTAINING YOUR MBU, READ TM 10-7310-281-13&P (MAY 2010).

GET TO KNOW YOUR H₂O



- FM 4-25.12, *Unit Field Sanitation Team* (Jan 02).
The FM discusses sources of water, producing potable water (water fit for humans to drink), and water treatment and disinfection. It also includes a 3-hour training course entitled Water Supply in the Field.
- FM 21-10, *Field Hygiene and Sanitation* (Jun 00).
The FM discusses avoiding waterborne illness, using chlorine to disinfect water, and inspecting water cans, trailers and collapsible tanks.
- TB MED 577, *Sanitary Control and Surveillance of Field Water Supplies* (May 10).
The TB MED discusses field water operations, roles and responsibilities; water treatment and disinfection; field water standards; sampling and testing; storage systems; waste water management; inspections; test equipment and much more.



REVIEWING 10 PERCENT VARIANCE

OKAAAAAYYYY... I THINK MAYBE YOU MISCALCULATED YOUR 10 PERCENT VARIANCE JUUUUST A TEENY-WEENIE BIT!

The Army knows that mission demands may not always allow maintenance services to be done on the exact days that they are scheduled. For this reason, DA Pam 750-8, *The Army Maintenance Management System (TAMMS) Users Manual*, allows units a 10 percent variance with scheduled service dates. The variance is an exception to normal unit maintenance. The term “variance” means this policy is for situations beyond usual practice.

The Army doesn’t want scheduled services done too early. That would result in waste because parts and lubricants would be disposed of before they have to be. But scheduled services shouldn’t be delayed too long, either. That increases wear on equipment, exposes systems to costly, preventable breakdowns and puts Soldiers at risk for possible injuries.



Ideally, a service should be done as close to the scheduled service date as possible.

Exceptions Apply

SOME EQUIPMENT IS NOT AUTHORIZED A VARIANCE BECAUSE THE SERVICE IS CONSIDERED TOO CRITICAL. CHECK YOUR TM'S PMCS TABLES FOR ANY RESTRICTIONS.



Calculating the Variance

SCHEDULED SERVICES MAY BE BASED UPON DAYS, ROUNDS, MILES OR HOURS. THE TMS SPECIFY WHICH INTERVAL TO USE. THE METHOD OF FIGURING THE VARIANCE IS THE SAME.

IT'S IMPORTANT TO NOTE THAT THE VARIANCE CAN BE AS MUCH AS 10 PERCENT AHEAD OF SCHEDULE TO AS LATE AS 10 PERCENT AFTER SCHEDULE.

FOR EXAMPLE, FOR A SEMIANNUAL SERVICE, MULTIPLY 180 DAYS BY 10 PERCENT. THE RESULT ALLOWS 18 DAYS VARIANCE FROM THE SCHEDULED DATE.

Scheduled Service		(times)	10% Variance multiplier	Authorized Variance (in days)
Frequency	In days			
Quarterly	90	X	.10	9
Semiannual	180	X	.10	18
Annual	360	X	.10	36

Applying the Variance

USING THE SEMIANNUAL SERVICE EXAMPLE, MARK THE SEMIANNUAL SCHEDULED SERVICE DATE ON A CALENDAR. LET'S SAY THE SCHEDULED SERVICE DATE IS 18 APR 14.

1. COUNT OFF 18 CALENDAR DAYS BEFORE 18 APR, THE SCHEDULED SEMIANNUAL DATE. THE VARIANCE BEGINS ON 31 MAR 14.

2. COUNT OFF 18 CALENDAR DAYS AFTER 18 APR. THE VARIANCE ENDS ON 6 MAY 14.

DA PAM 750-8 ALLOWS THE 10 PERCENT VARIANCE BEFORE OR AFTER THE SCHEDULED SERVICE DATE. SERVICES DONE WITHIN THIS VARIANCE WINDOW ARE CONSIDERED DONE ON TIME.



2014

MARCH

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23/30	24/31	25	26	27	28	

APRIL

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

MAY

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Posting Scheduled Services

WHEN SCHEDULED SERVICES ARE COMPLETED WITHIN THE VARIANCE WINDOW, THE SCHEDULED SERVICE DATE IS ENTERED AS THE DATE OF COMPLETION.

IF THE SERVICE IS COMPLETED BEFORE THE ACTUAL SCHEDULED DATE, MAKE A NOTE AND INPUT THE INFORMATION ON THE ACTUAL SCHEDULED SERVICE DATE.

IF THE SERVICE IS PERFORMED AFTER THE VARIANCE DEADLINE, ENTER THE ACTUAL SERVICE DATE AND RECOMPUTE FUTURE SERVICES BASED ON THAT DATE.



Combining Scheduled Services

ME FIRST!
I'M QUARTERLY!

I'M NEXT...
BECAUSE I'M SEMIANNUAL!

AND I'M
LAST... 'CAUSE
I'M ANNUAL!



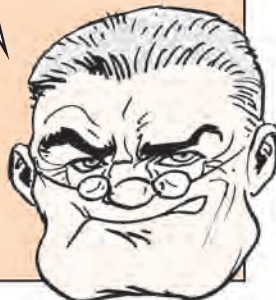
SOMETIMES QUARTERLY, SEMIANNUAL AND ANNUAL SERVICES COME DUE AT NEARLY THE SAME TIME. TO SAVE TIME AND MANPOWER, SOME UNITS DECIDE TO DO THESE SERVICES AT THE SAME TIME.

HOWEVER, COMBINING SERVICES DOES NOT AFFECT THE ACTUAL SERVICE DUE DATE FOR ANY OF THE SCHEDULED SERVICES.

QUARTERLY SERVICES HAVE SHORTER VARIANCES THAN SEMIANNUALS, AND SEMIANNUALS HAVE SHORTER VARIANCES THAN ANNUALS.

SO WHEN COMBINING SERVICES, DO THE SHORTER VARIANCE FIRST: QUARTERLY FOLLOWED BY SEMIANNUAL AND THEN ANNUAL.

THAT WAY IF YOUR MECHANIC IS INTERRUPTED IN DOING THE SERVICES, MORE OF THE MOST PRESSING SERVICE WILL BE COMPLETED.



Deadlining Unserved Equipment

WHEN YOU MISS SERVING VEHICLES OR EQUIPMENT WITHIN THE VARIANCE WINDOW, THEY MUST BE ADMINISTRATIVELY DEADLINED. THE DEADLINE IS REPORTED IN SAMS-E WITH FAULT STATUS SYMBOL "E".

ADMINISTRATIVELY DEADLINED VEHICLES AND EQUIPMENT CANNOT BE OPERATED UNTIL THE SCHEDULED SERVICES ARE COMPLETED.



VEHICLES ON EXTENDED DISPATCH WHEN THE VARIANCE WINDOW CLOSES MUST BE "CIRCLE XD" BY THE COMMANDER FOR TRANSFER TO MECHANICS WHO CAN PERFORM THE SCHEDULED SERVICE.



Publications...

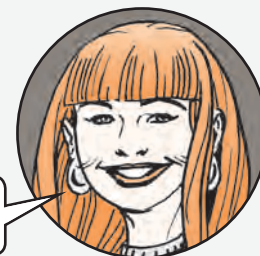
AR 750-10 Revised

A MAJOR REVISION TO AR 750-10, ARMY MODIFICATION PROGRAM (MAINTENANCE OF SUPPLIES AND EQUIPMENT), WENT INTO EFFECT IN AUGUST 2013. CHANGES INCLUDE...



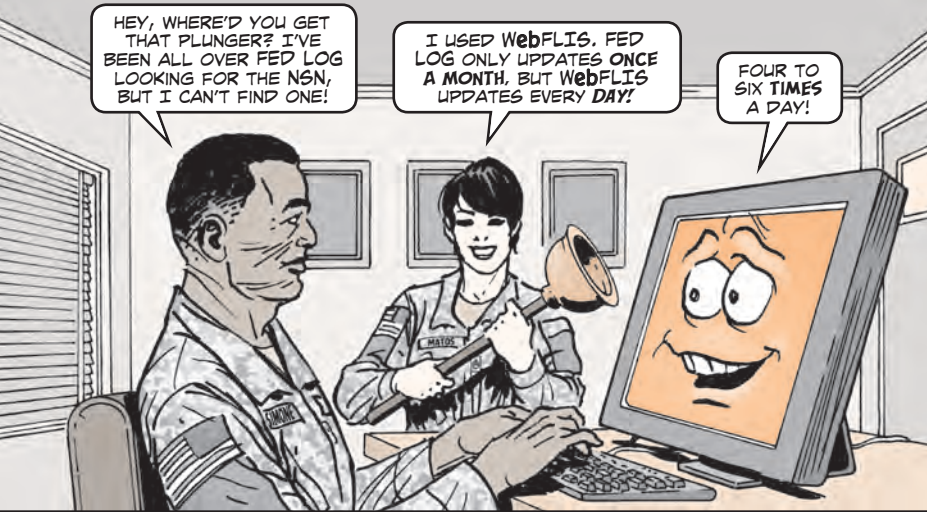
- instructions for adding item unique identification (IUID) labels or data plates to items.
- updated roles and responsibilities for Army commands and service components.
- assigned responsibilities to unit commanders.
- additional policy guidance on:
 - routine modification work orders that are published but not applied.
 - modification work orders that have exceeded their date range.
 - appropriation types used to fund modification work orders.
 - final approval for the modification work order fielding review board and release of modification work orders.
- an updated definition of materiel developer and an explanation of materiel change numbers.
- an updated Modification Management Information System (MMIS) process.

YOU CAN FIND MMIS IN LOGSA'S LOGISTICS INFORMATION WAREHOUSE AT: <https://liw.logsa.army.mil/>



Download the full pub at: http://www.apd.army.mil/pdf/files/r750_10.pdf

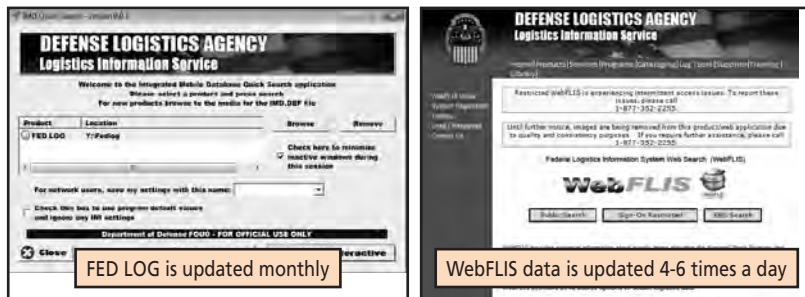
New NSN? Check WebFLIS



Have you searched for a new equipment NSN on FED LOG only to get “no match” in the results? Keep in mind that with new equipment, a new NSN sometimes takes a while to show up in FED LOG. Try WebFLIS as an alternative.

Sometimes new NSNs appear faster in WebFLIS than in FED LOG. The reason is that FED LOG is a monthly product, so information is only captured monthly. WebFLIS is updated four to six times daily, so the data is closer to real-time. Check WebFLIS out at:

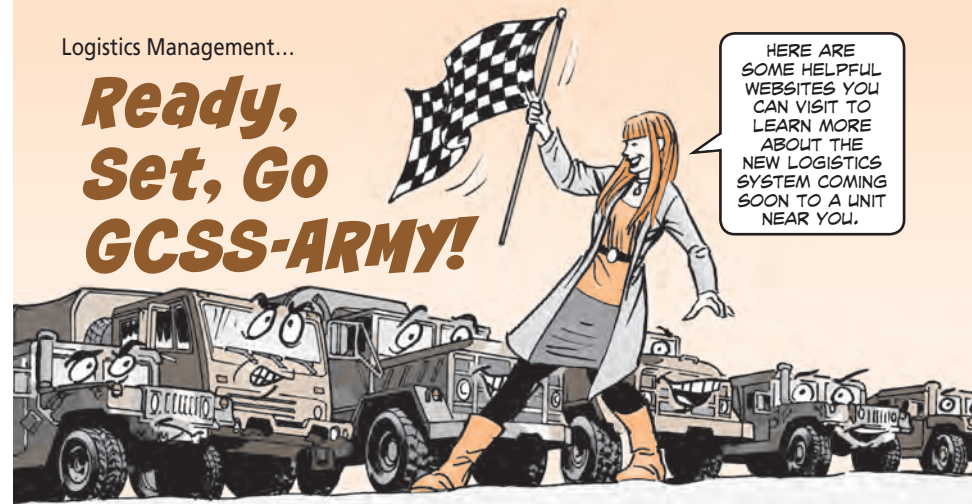
<https://www.logisticsinformationservice.dla.mil/WebFlis/default.asp>



If you still don't hit paydirt, contact DLA for help. DLA customer support is available 24/7 toll-free at (877) 352-2255, DSN 661-7766, or email:

dlacustomercenter@dlamail

Ready, Set, Go GCSS-ARMY!



Training

Find links to official training at: <http://gcss.army.mil/Training/>

The Army Learning Management System (ALMS) also hosts web-based modules. Access ALMS through the AKO portal: <https://www.us.army.mil>

In AKO, select the “Self Service” tab at the top of the page and choose “My Training.” Select the ALMS tab and once in the system, pick “Course Search,” and type in “GCSS” for a list of training modules.

Army Reserve and National Guard members can access training through Guard U at: <https://guardu.ng.mil/>

Check out the *GCSS-Army End User Manual (EUM) Plus* (CAC required and access from .mil domains only):

https://www.gcass-army.army.mil/GCSS-ARMY/Garmy_jump.HTM

The EUM includes lessons, support materials, new equipment, training bulletins and simulations.

See the GCSS-Army fielding schedule and plan, smart book, related ALARACTS and articles at: <http://gcss.army.mil/Library/>

Get up-to-date info, early education information and materials, and more:

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

milSuite Forums

GCSS-Army Lead Users:

<https://www.milsuite.mil/book/groups/gcss-army-lead-users>

GCSS-Army in the ARNG:

<https://www.milsuite.mil/book/groups/gcss-army-in-the-arng>

Need Help?

To submit GCSS-Army trouble tickets or check out the help forums, visit:

<https://s4if.lee.army.mil/>

TRANSPORTATION COURSES RETURN

THE US ARMY TRANSPORTATION SCHOOL HAS RESTARTED THE RESIDENT BASIC FREIGHT TRAFFIC COURSE (BFTC) AND THE DEFENSE TRANSPORTATION REGULATION (DTR) COURSE AT FT LEE, VA.

BOTH COURSES ARE USEFUL FOR ANYONE WHO WORKS WITH THE DEFENSE TRANSPORTATION SYSTEM.

THE BFTC COURSE COVERS...

- transportation officer functions.
- motor, rail, water and air carriers.
- routing.
- tariffs and tenders.
- transportation security.
- hazardous cargo.
- loss and damage.
- freight documentation.
- detention and demurrage.
- the carrier performance program.
- Cargo Movement Operations Systems (CMOS)
- the role of transportation component commands.

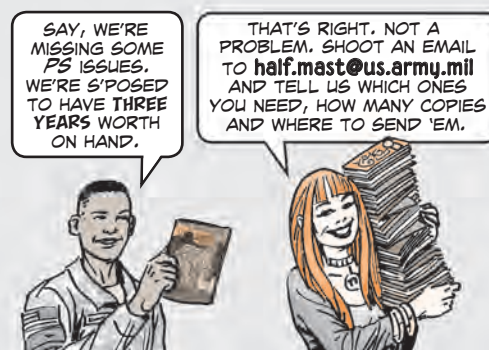
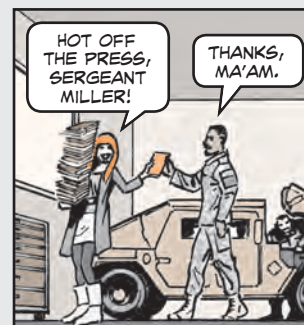
THE DTR COURSE GIVES STUDENTS AN OVERVIEW OF THE DTR APPLICATION AND HOW IT WORKS WITH OTHER MILITARY STANDARD TRANSPORTATION SYSTEMS. SUBJECTS COVERED INCLUDE...

- activity address directories.
- Transportation Account Codes (TACs).
- Transportation Control and Movement Document (TCMD) preparation.
- shipment planning.
- clearance procedures.
- address marking.
- ocean cargo.
- air terminal documentation.
- shipment tracing.
- in-transit data reporting.

BFTC IS TWO WEEKS AND THE DTR COURSE IS ONE WEEK. SEARCH THE ARMY TRAINING REQUIREMENTS AND RESOURCES SYSTEM (ATRRS) CATALOG UNDER SCHOOL 551L FOR COURSE DATES:
<https://www.atrrs.army.mil/>

SEND COURSE-SPECIFIC QUESTIONS TO THE POC LISTED IN THE CLASS DESCRIPTION, AND ARRANGE ATTENDANCE THROUGH YOUR TRAINING COORDINATOR.

PS MAGAZINE BACK ISSUES



The newly updated DA Pam 750-3, *Soldiers' Guide for Field Maintenance Operations* (Sep 13), covers *PS Magazine* in Section 3-7 and advises units to keep three years of *PS* on hand.

Printed back issues of *PS* are limited and orders are filled on a first-come, first-served basis. Email back issue requests from a .mil or .gov account. Be sure to include your name and mailing address. And specify the months or years and how many copies you need. Email back issues requests to:

half.mast@us.army.mil or usarmy.redstone.logsa.mbx.psmag@mail.mil

To set up a monthly subscription to *PS*, follow the instructions at:

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

DA Pam 385-11 Released

A new publication, DA Pam 385-11, *Army Guidelines for Safety Color Codes, Signs, Tags, and Markings*, went into effect June 2013. It gives the Army guidelines and standards for safety color code markings, signs and tags to warn staff and Army facility visitors about potential hazards. It's available on the Army Publishing Directorate's website:

http://www.apd.army.mil/pdf/files/p385_11.pdf

DA Pam 385-1 Revised

A major revision to DA Pam 385-1, *Small Unit Safety Officer/Noncommissioned Officer Guide*, went into effect in May 2013. The revision updates Army accident investigation and reporting procedures, hazards and risk mitigation for ground operational activities, protective measures for off-duty activities, privately owned vehicle accident prevention policy and risk management terminology. It also gives links to risk management programs and tools at the U.S. Army Combat Readiness/Safety Center. You can find it at the Army Publishing Directorate's website:

http://www.apd.army.mil/pdf/files/p385_1.pdf

Connie's POST SCRIPTS

New Heated LED Headlight for PLS, HEMTT, HET

Get a new LED headlight for your PLS-, HEMTT- and HET-series vehicles with NSN 6220-01-616-1079. This newly redesigned headlight installs on 24V systems, but also works on legacy trucks with 12V lighting systems without a conversion kit. It has an internal heating element that melts ice and snow on the vehicle's headlight during cold weather. This new headlight replaces NSN 6220-01-547-9043, which is a terminal item.

MRAP MEL TB Available

Need to know limits for what you can spend on repairs for your MRAP? Then TB 43-0002-92 (Nov 13) is the pub you need. The TB contains all the maintenance expenditure limits (MEL) for your MRAP. It's now available on the LOGSA ETM website:
<https://www.logsa.army.mil/etms>

M-ATV MRAP Cushion Set

Get a headrest, bottom and back cushion for the seat on your M-ATV MRAP with NSN 2540-01-607-2817. At \$857, that beats paying more than \$6,600 for a whole new seat assembly. TM 9-2355-335-24P doesn't yet list the cushion set, so make a note until it can be updated.

GCSS-Army Reminder

Remember to check the GCSS-Army website for alerts, updated fielding and training schedules and other important info. Visit:

<https://gcss.army.mil/>

Or sign up to get automatic notifications at:
<https://gcss.army.mil/Support/register.aspx>

FMTV Bogie O-Ring NSN

Order a new O-ring for your FMTV's bogie (trunnion bearing) with NSN 5331-00-599-2180. It replaces NSN 5331-01-078-5132, which is shown in the following TMs:

Item	Fig	TM	IETM
19	6	9-2300-310-14&P (Sep 10)	EM 0258
1	1153	9-2300-310-14&P (Sep 10)	EM 0258
1	1064	9-2320-333-14&P (Jun 12)	EM 0294
1	160	9-2320-366-24P-1 (Oct 05)	N/A
1	1150, 2150, and 3150	9-2320-391-14&P (Mar 09)	EM 0195
19	6	9-2330-394-13&P (Jan 05, w/Ch 1, Dec 10)	N/A

That NSN is a terminal item.

SEALANT SOLUTION TO STOP SEEPAGE

Need to stop water from seeping into your unit's equipment? Using sealant, NSN 8040-01-587-2620, around joints, panels and other areas can help you seal out moisture and protect electrical equipment. Keep in mind that the sealant shouldn't be used in place of gaskets or seals. If a seal or gasket goes bad, replace it.

Find SAMS-E Info on AKO

Are you looking for SAMS-E manuals, info on upcoming software releases, or emergency patches for your unit's SAMS-E system? Check out the SAMS-E page on AKO:

<https://www.us.army.mil/suite/page/143642>

Need Sewing Machine Parts?

Got a Conscrew or Seiko sewing machine, NSN 3530-01-507-4081, in the shop that needs parts? Here's a short list that might be of help.

- Large bobbin, NSN 3530-01-423-4452 or NSN 3530-01-352-1600
- Bobbin case, NSN 3530-01-214-4614

You'll need to order these parts on a DD Form 1348-6 and put "NSN not on AMDF" in the REMARKS block. For more maintenance information on the sewing machines, check out the Air Warrior Extranet: <https://airwarrior.redstone.army.mil/WebLogin.aspx>

After logging in with your CAC, click on Library. Then click on All Documents from the drop down menu and select ID number 0699 Air Warrior Sewing to view the powerpoint information.

Build Demand for AH-64 Main Rotor Blade Wedges

If you need an AH-64 main rotor blade wedge, NSN 1615-01-585-8514, get those requisitions in now! DLA is the manager of the main rotor blade wedge kits and those supply requests are needed to build demand. When using the wedges on the upper and lower leading edge surfaces of the blades, an MSPU software update is necessary for rotor blade track and balance. Check out TB 1-1520-251-20-20 for detailed installation instructions.

O-Rings for HEMTT -A4 Temp Sensors

The three HEMTT -A4 engine temperature sensors, NSN 2990-01-555-5134, for the coolant, fuel, and intake air manifold need two different O-rings. Order the air intake O-ring with NSN 5331-01-413-2754. The fuel and coolant O-ring comes with NSN 5331-01-578-6961. You'll see this info in the next revision to IETM EM 0288.

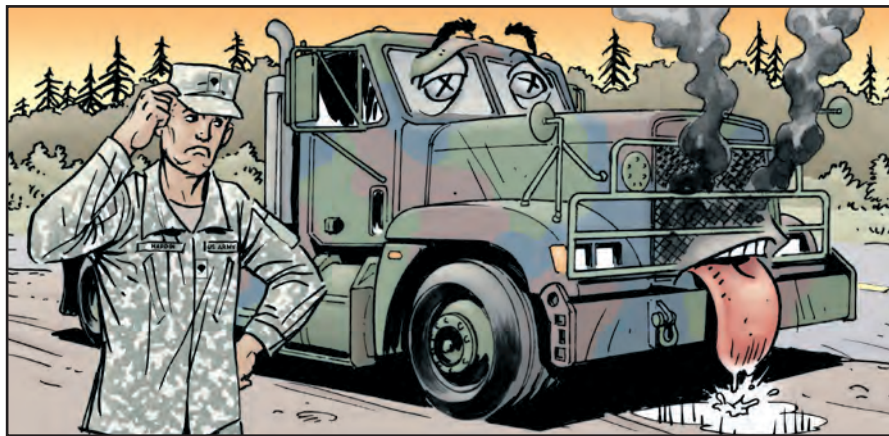
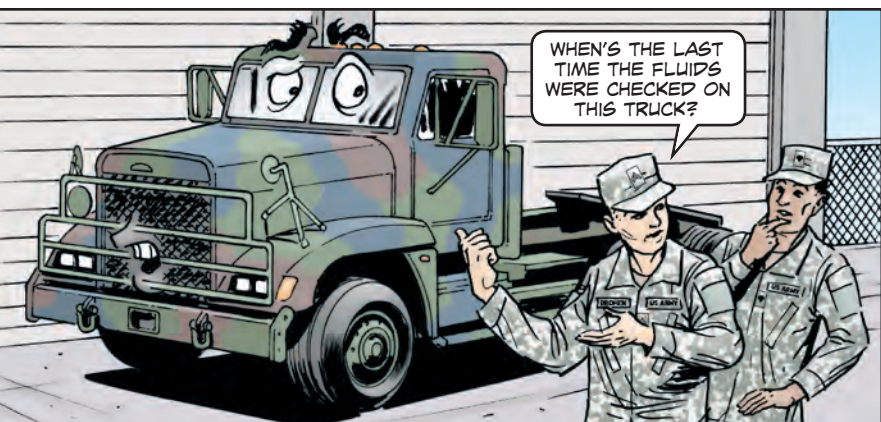
HEMTT Spin-on Oil Filter Conversion

Want to convert your older HEMTT's canister-style oil filter to the spin-on style oil filter? Use conversion kit, NSN 2940-01-569-2169, on base, -A1 and -A2 model HEMTTs with the Detroit Diesel engine. The kit comes with installation instructions. The spin-on filter, NSN 2940-01-314-1345, is included in the kit.

DISTRIBUTION: To be distributed in accordance with the initial distribution number (IDN) 345239, requirements for the TB 43-PS-Series.

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

***You can make **PM** a
priority now...***



***...or **repairs**
will become a
priority later!***