



COMBAT VEHICLES

M1A2 SEP Tank IETM Available
M1-Series Tank Ammo Door PM
Recovery Vehicle Tow Bar Lifter
M2A3 Bradley Unserviceable LRU Turn-in
Stryker Mortar Carrier Tube Removal
Stryker Transmission Service Intervals Extended
M777A2 Howitzer Breech Ring Inspection



TACTICAL VEHICLES

M998-Series HMMWV Radiator Hose Installation
FMTV Intercom No Longer Supported
FMTV GRS Guidance
FMTV Jack Adapter NSNs
HEMTT Fuel System Priming
HEMTT, HET, and ASV MTT Training
M1112 Water Trailer Tank Plumbing Component



CONSTRUCTION

Idle 120M Road Grader before Using
D7R II CAT Tractor Fuel Injector Misfire Fix
VMR2 Minehound Mine Detector Tips

COLD WEATHER

120M Road Grader Cold Weather Starting
120M Road Grader Engine Oil Checks
D7R II CAT Tractor Idle Wheel Mud Removal
The Cold Weather Hermit
Winter Safety Warnings
Cold Weather Injury Prevention



SMALL ARMS

2 MK 19 Machine Gun PMCS Tips
M2A1 Machine Gun Flash Suppressor Storage
3 M240L Machine Gun Short Barrel Parts
4 M16-Series Rifle, M4/M4A1 Carbine Firing Solution
5 M230 Automatic Gun Lube Guidance



MISSILES

HIMARS Air Tank Draining



CBRN

M12A1 Decon Return Fuel Line Procedure
M26 Decon Lube Answers
M42A2 Protective Masks not Convertible



COMMO-ELECTRONICS

AN/PVS-4/4A, AN/TVS-5/5A Night Sight Turn-in
AN/PED-1, -1A, -1B LLDR Handling
MEP-831A 3-kW TQG Alternator Bolt Size



LOGISTICS MANAGEMENT

2015 Combined Logistics Excellence Awards
Reports Vital to Receive Maintenance Dollars
milWiki Needs Your Input
Rail Movement Tiedown Pub Updated
GCSS-Army Turn-In Credit Requests

TB 43-PS-755, 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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Just write to:

MSG Half-Mast

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PS

October
2015

THE PREVENTIVE MAINTENANCE MONTHLY

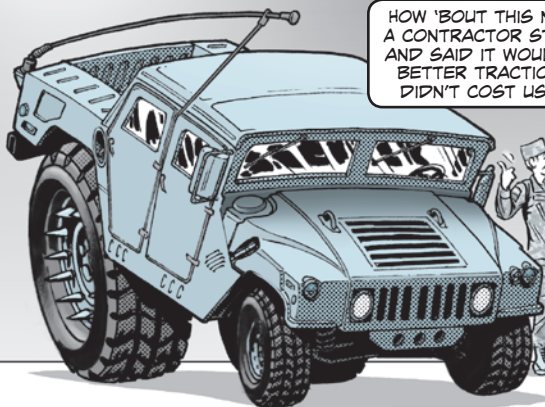
TB 43-PS-755

Approved for
Public Release;
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Unlimited



**Don't let the COLD get you down!
See Pages 22-38!**

Unauthorized Mods Are Just That... *Unauthorized!*



HOW 'BOUT THIS NEW MOD? A CONTRACTOR STOPPED BY AND SAID IT WOULD GIVE US BETTER TRACTION. AND IT DIDN'T COST US A THING!



IT'S GONNA COST A BUNDLE TO CHANGE IT BACK! DON'T YOU KNOW THAT'S AN **UNAUTHORIZED** MODIFICATION?

LISTEN UP! VENDORS AND CONTRACTORS HAVE BEEN SHOWING UP AT MOTOR POOLS TO FIX EQUIPMENT STILL UNDER WARRANTY.

WHILE THERE, THEY'VE ALSO BEEN PERFORMING UPGRADES AND MODIFICATIONS THAT JUST **AREN'T AUTHORIZED.**



UNAUTHORIZED MODS NOT ONLY **COMPROMISE** YOUR VEHICLE'S ABILITY TO CARRY OUT THE MISSION, BUT THEY CAN **ALSO AFFECT** SAFETY AND SURVIVABILITY.

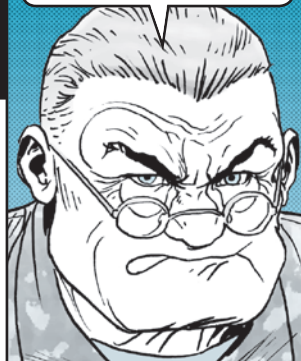
UNAUTHORIZED MODS THAT APPEAR OUT OF NOWHERE CHANGE A VEHICLE'S CONFIGURATION, BYPASS THE AUTHORIZED MEANS FOR VEHICLE MODEL UPGRADES, AND HURT TM ACCURACY.

SEE A SUSPECT MOD?

REPORT IT TO YOUR MECHANIC AND LOCAL TACOM LAR. THEY'LL GET YOU SQUARED AWAY!

PLAIN AND SIMPLE, THE **ONLY** TIME A VEHICLE CAN BE MODIFIED IS THROUGH AN **APPROVED** MODIFICATION WORK ORDER (MWO).

JUST LIKE IT SAYS IN PARA 3-1E OF AR 750-10, THE ARMY MODIFICATION PROGRAM: **COMMANDERS ARE NOT ALLOWED TO MODIFY EQUIPMENT UNLESS AN MWO AUTHORIZES IT.**





HERE'S
SOME ADVICE
YOU CAN TAKE
ON THE ROAD!

- M1A2 SEP-13&P IETM is out
- M1 Tank ammo door PM
- Homemade tow lifter bar
- M2A3 unservicable LRUs
- Stryker MCV tube removal
- Stryker trans Intervals extended
- M777A2 breech ring threads

GET EM' WHILE THEY'RE HOT!

YOU NEED SOME PM...
BUT I CAN'T FIND YOUR
TECHNICAL MANUAL!

DIDN'T YA
HEAR?

NOW
I'VE GOT
AN IETM!

Dear Editor,

Can you let your readers know that TM 9-2350-388-13&P (IETM EM O334, Jun 14) is now available for the M1A2 SEP tank? The IETM is available free through the Army Publishing Directorate (APD).

Tracie Dotson
M1A2 Abrams Publications Manager
TACOM LCMC

Editor's note: No problem! Units, set up an APD account by faxing a completed DA Form 12 to APD's Account Processing Team at DSN 693-9620 or (314) 592-0920.

Instructions for setting up an account are at:

<http://www.apd.army.mil/Orders/HowtoEstablishAcct.pdf>

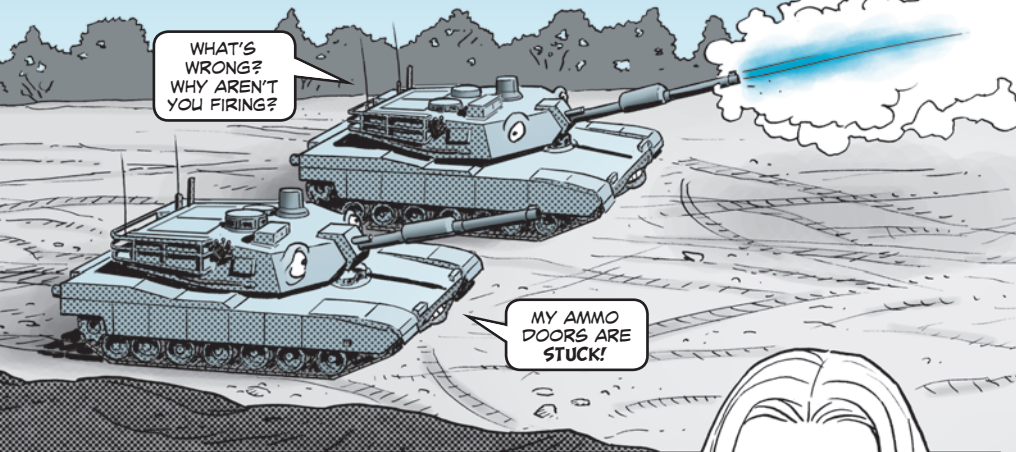
Once your account is set up, order the IETM through the Point & Click Ordering System at: <https://dol.hqda.pentagon.mil/ptclick/index.aspx>

To order, click search and fill out the form on the next webpage.

IETMs can also be downloaded on the Logistics Information Warehouse (LIW) website at: <https://liw.logsa.army.mil>

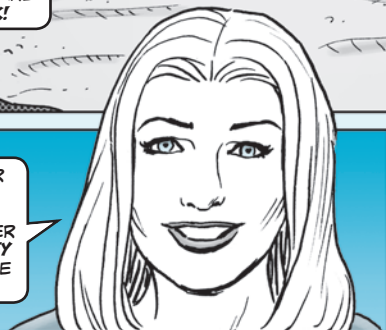
Pages 48-51 of PS 746 (Jan 15) have instructions for downloading IETMs:
<https://www.logsa.army.mil/psmag/archives/PS2015/746/746-48-51.pdf>

Open the Door To Ammo Door PM



WHAT GOOD IS A DOOR THAT WON'T OPEN? **NO GOOD AT ALL!** THAT'S **ESPECIALLY** TRUE FOR THE **AMMO DOOR** ON YOUR M1-SERIES TANK.

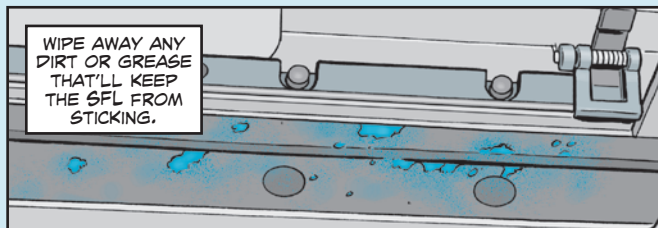
BUT SOONER OR LATER YOU'LL EXPERIENCE A STUCK AMMO DOOR IF YOU DON'T MAKE PROPER LUBRICATION A **PRIORITY** WHEN DOING PREVENTIVE MAINTENANCE (PM).



A SEMI-ANNUAL COAT OF SOLID FILM LUBRICANT (SFL), NSN 9150-01-260-2534, WILL GO A LONG WAY TOWARD MAKING SURE THOSE DOORS KEEP OPENING.



WIPE AWAY ANY DIRT OR GREASE THAT'LL KEEP THE SFL FROM STICKING.



THEN GIVE THE FOLLOWING AREAS A GOOD COATING...

- **Ammunition doors.** Spray the door seals, sliding surfaces and rails.
- **Ready ammunition door.** Spray the four seal retainer cams and the two rail cams.
- **Stowage ammunition door.** Spray the two door cams.
- **Hook latch.** Use a grease gun to lube the hook latch with WTR, NSN 9150-00-944-8953.
- **Hook latch and housing assembly.** Spray all moving and touching parts.
- **Latches.** Spray the sliding surfaces of all latches.

- **Ammunition tubes.** Spray the inside surfaces and all rubber stops inside the ammunition tubes with SFL. That allows ammo to slide in and seat properly so that it doesn't hit the ammo doors.

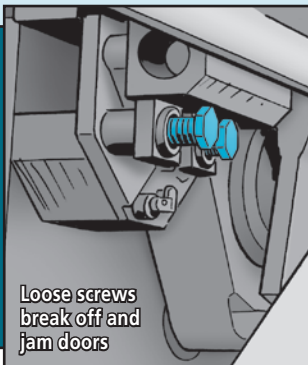


Hook Latch and Housing Assembly

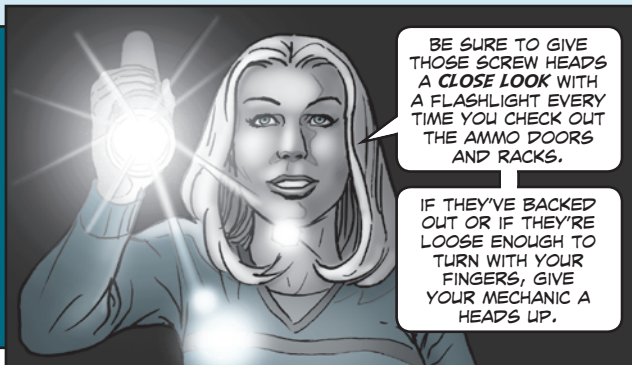


AFTER LUBING THIS ASSEMBLY, MAKE SURE THE MOUNTING SCREWS ARE NICE AND TIGHT.

VIBRATION OFTEN LOOSENS THE SCREWS. THEY CAN BREAK AND JAM THE AMMO DOOR AS YOU TRY TO OPEN OR CLOSE IT.



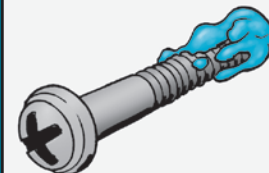
Loose screws break off and jam doors



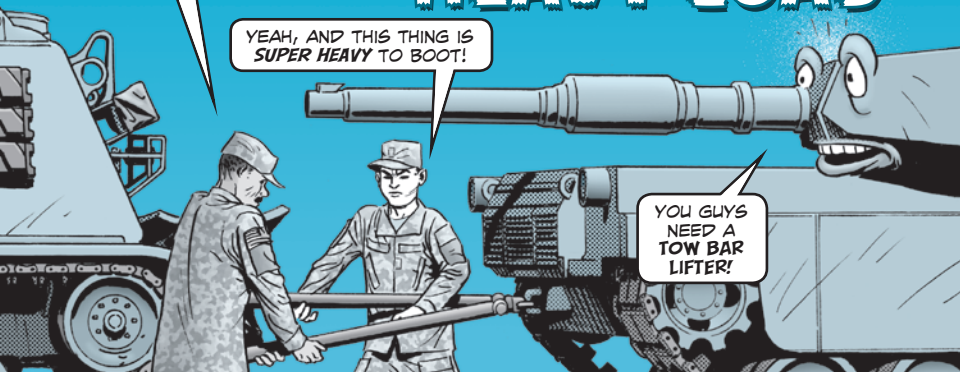
BE SURE TO GIVE THOSE SCREW HEADS A **CLOSE LOOK** WITH A FLASHLIGHT EVERY TIME YOU CHECK OUT THE AMMO DOORS AND RACKS.

IF THEY'VE BACKED OUT OR IF THEY'RE LOOSE ENOUGH TO TURN WITH YOUR FINGERS, GIVE YOUR MECHANIC A HEADS UP.

HE'LL ADD A DAB OF **LOCKING COMPOUND**, NSN 8030-01-025-1692, TO THE SCREWS BEFORE RE-TIGHTENING THEM.



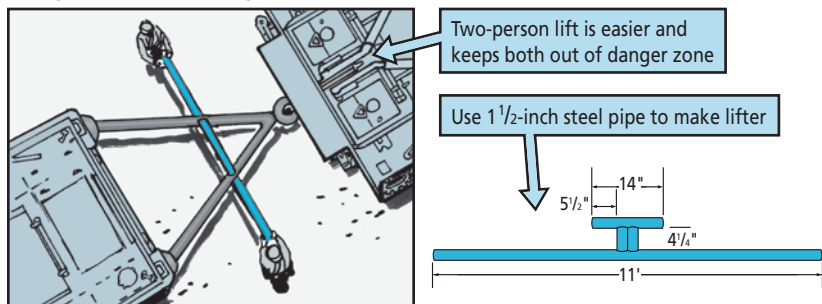
LIFTER LIGHTENS HEAVY LOAD



Everybody needs a little pick-me-up now and again. That's especially true when you're hooking up the tow bar while recovering a disabled combat vehicle.

That's one of the most difficult—and dangerous—jobs a mechanic has to do. Not only is the tow bar heavy, hooking it up requires you to stand between several tons of metal that might suddenly move!

The solution is a homemade tow bar lifter. It makes your job a lot easier and safer. You won't have to stand between vehicles to hook up the tow bar. And with two people lifting, the load is a lot lighter.



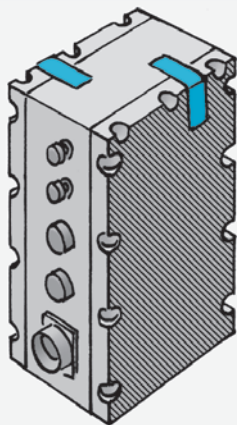
The 11-ft long lifter is made of 1 1/2-in diameter steel pipe that is 1/8-inch thick. It has a 14-in long tee made from the same pipe and fits in the V-shaped end of the tow bar.

After attaching the tow bar to the disabled vehicle, two people use the lifter to hold the tow bar up. The recovery vehicle driver makes the hookup with the help of the ground guides. The lifter is designed to work with all Army tow bars and recovery vehicles, including the 5-ton wrecker.

Turn In Unserviceable LRUs

IF YOU HAVE UNSERVICEABLE LINE REPLACEABLE UNITS (LRUs) FOR YOUR M2A3 BRADLEY, HERE'S YOUR CHANCE TO IMPROVE COMBAT READINESS **AND** EARN UNSERVICEABLE CREDIT.

TACOM HAS A **CRITICAL NEED** FOR THE FOLLOWING LRUs, SO TURN THEM IN THROUGH THE SUPPLY SYSTEM ASAP...



Unserviceable LRUs
are needed now!

LRU	NSN	Unserviceable Credit
Commander's interface	5895-01-535-3045	\$20,974
Sensor assembly, countermeasures	5865-01-535-3046	\$156,526
Display assembly	5895-01-535-3047	\$33,467
Control box, electrical	1005-01-537-6902	\$32,609

M1129A1 Stryker MCV, M1252 Stryker MCVV...

REMOVE TUBE OR YOU'LL BE STUCK!

Dear Editor,

I frequently run into crews for the Stryker mortar carrier vehicle (MCV) who don't remove the mortar tube except for borescoping and pullover.

As a result, the tube sits and sits in the Stryker until the tube and base cap become stuck. Then you've got a major job getting them unstuck. I've been with my present unit for 7 months and have already seen 6 tubes that were either stuck in the cradle or had to be condemned due to excessive external pitting. I contacted other MCV techs throughout the Army and they told me they'd seen the same problem.

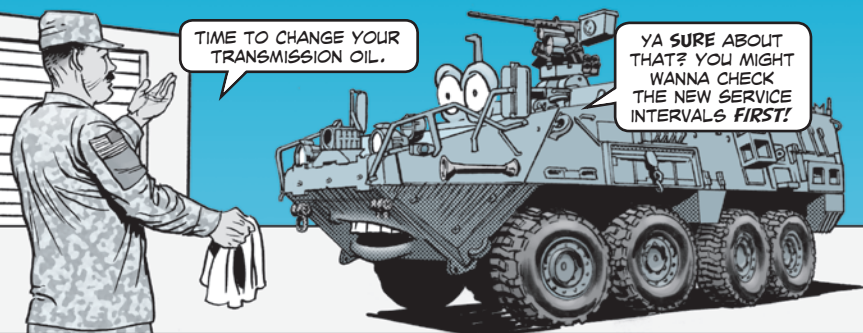
If crews remove the tubes at least quarterly, all this can be avoided.

CW2 Travis Gideon
B Troop RSS,
2nd Cav
Vilseck, Germany

Editor's note: Mortar crews, if you follow the procedures in Stryker TM 9-2355-311-10 (MCV) and TM 9-2355-364-10 (MCVV), you'll avoid stuck tubes. Pay particular attention to the AFTER PMCS and work packages on 120mm mortar RMS6-L breech assembly remove/install. You can also make it unit SOP to remove the tubes quarterly. The main thing is to not let the mortars sit neglected.

Stryker...

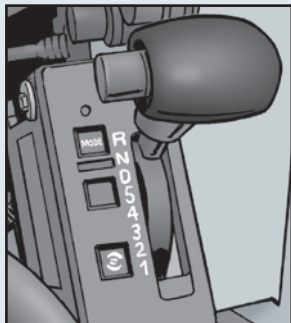
TRANSMISSION SERVICE INTERVALS EXTENDED



Listen up, crews and mechanics! The transmission fluid service and filter change intervals for Strykers have been extended. Because fluid and filters don't have to be changed as often, your unit will save lots of time and money. Here's the scoop:

Lever-Style Transmission Shifters

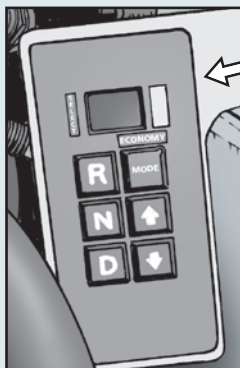
For Strykers with lever-style transmission shifters, found on vehicles with CAT 3126 and some CAT C7 engines, the fluid and filter interval has changed from annually to every three years.



Three-year service interval for transmissions with shift lever

Button-Style Transmission Shifters

For Strykers with button-style transmission shifters, found only on vehicles with CAT C7 engines, you should change the oil and filters every five years or when directed by the oil and filter life monitor, whichever comes first.



Transmissions with button shifters are serviced every five years...

...or when wrench icon illuminates



If the wrench icon illuminates and stays on—or flashes on and off—for 2 minutes after the drive range (D) is selected, notify field-level maintenance because the transmission is due for service.

MECHANICS, MAKE SURE YOU ONLY USE TES-295 AUTOMATIC TRANSMISSION FLUID AND HIGH-CAPACITY FILTERS IN BOTH TRANSMISSION TYPES. TES-295 COMES WITH THESE NSNs...

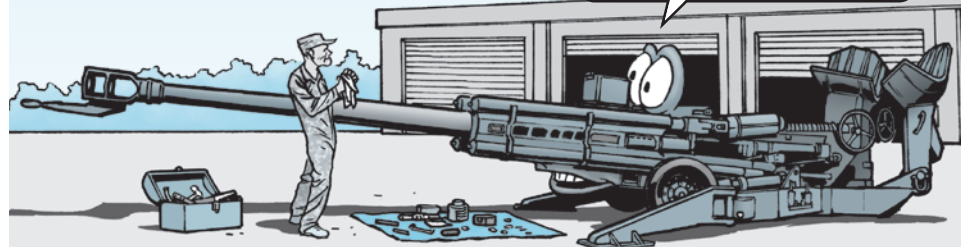
NSN 9150-	Qty
01-552-9119	1-qt bottle
01-565-0981	Six 1-gal containers
01-552-9157	5-gal container
01-551-2796	55-gal drum

NSN 4330-01-425-7701 BRINGS A KIT WITH TWO FILTERS, FOUR O-RINGS AND TWO GASKETS.

THE INTERVAL CHANGES WILL BE REFLECTED IN THE NEXT UPDATE TO THE STRYKER FOV IETM.

More Help for Your M777A2 Howitzer

WHILE YOU HAVE MY BREECH DISASSEMBLED, WHY DON'T YOU GIVE MY INTERRUPTED THREADS A LOOK-SEE? I THINK I FEEL A BURR DEVELOPING DOWN THERE!



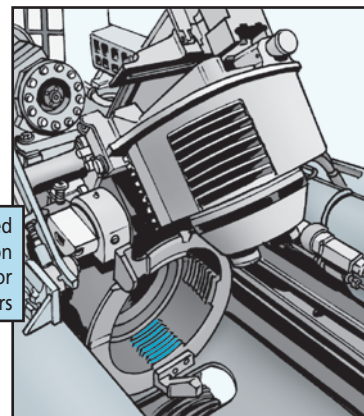
Dear Editor,

I agree with Ron Witt's tip in *PS* 751 (Jun 15) about the importance of at least weekly disassembling, cleaning and lubing the M777A2 breech, PFM body and tray. That is an excellent way to prevent firing problems.

One additional tip is to thoroughly inspect the interrupted sector threads on the breech ring for any burrs while you have the breech disassembled. Usually crews check the block threads because they are easy to see, but don't check the threads down in the breech ring. You can generally just file away burrs with the file in the M777A2's BII.

Andy Stewart
BAE Systems
Fayetteville, NC

Inspect interrupted sector threads on breech ring for burrs

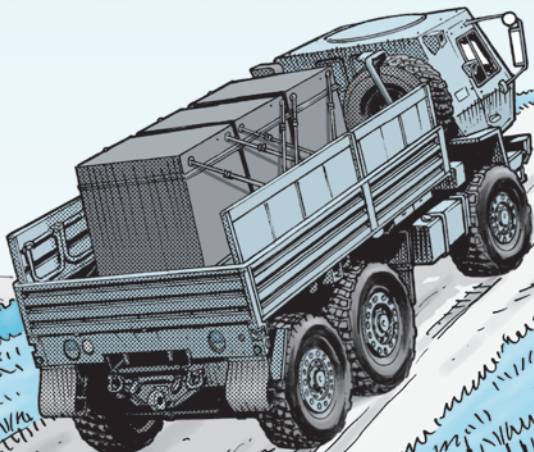


Editor's note: This tip definitely needs to be filed under TO DO. Thanks, Andy.

PS

TACTICAL VEHICLES

- M998 upper radiator hose covers
- FMTV intercom, leave it alone
- FMTV choose GRS wisely
- FMTV jack adapter changes
- HEMTTs, priming fuel systems
- MTTs are available
- Water trailer part number mix-up



PS

CONSTRUCTION

- 120M Grader; idle first, then work
- D7R II CAT fuel injection misfire
- Minehounding to find mines



I'VE LOOKED
EVERYWHERE
FOR THE METAL
COVER FOR THE
UPPER RADIATOR
HOSE, MASTER
SERGEANT HALF-
MAST. BUT I
CAN'T FIND IT!

THAT'S BECAUSE
IT'S **NOT**
AUTHORIZED FOR
THE HMMWV. BUT
I THINK I CAN
STILL HELP.

KINK BEATS COVER FOR BELT PROTECTION

Dear Half-Mast,

I'm trying to find an NSN for the metal cover designed to protect the upper radiator hose from damage by the generator belts. But I've had no luck finding it in the IETM, TM 9-2320-280-13&P. Can you help?

CW3 R.D.M.

Dear Chief,

The metal cover you're looking for was originally designed for the CUCV.

It isn't authorized for use on HMMWVs.

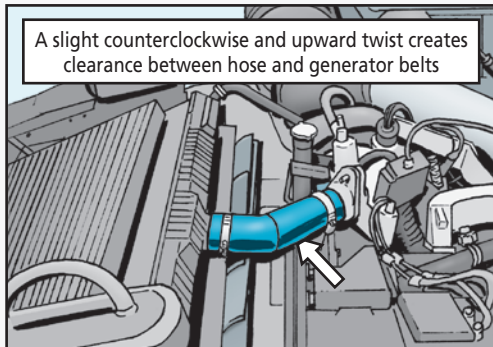
There's a note in the Inlet Hose (Radiator) Replacement section of TM 9-2320-280-13&P that will help. The note says vehicles with a 200-AMP alternator should have the inlet hose installed with the hose twisted counterclockwise and upward until a kink starts to form.

Twisting the hose slightly moves it enough to create some clearance. That keeps the hose safe from the generator belts.

Note that this only covers the following HMMWVs with the 200-AMP alternator installed:

M998/A1	M1121	M1044/A1
M1038/A1	M1045/A1/A2	M1037
M1097/A1/A2/R1	M1046/A1	M1042
M1123	M1025/A1/A2/R1	M996/A1
M966/A1	M1026/A1	M997/A1/A2
	M1043/A1/A2	M1035/A1/A2

A slight counterclockwise and upward twist creates clearance between hose and generator belts



Half-Mast

LEAVE TWO-WAY INTERCOM ALONE

WHATCHA
DOIN'?

JUST MAKING A NOTE TO ORDER
SOME REPLACEMENT PARTS FOR
YOUR INTERCOM SYSTEM.

HOLD ON!
THAT INTERCOM
IS **NO LONGER**
SUPPORTED!

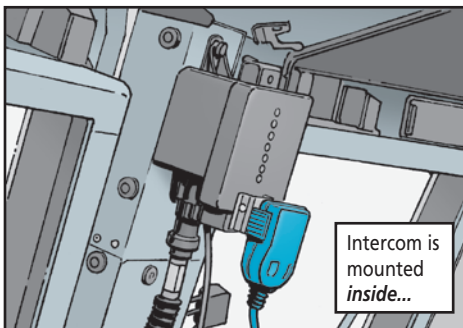
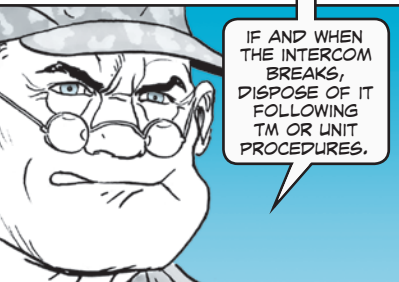


OPERATORS AND MECHANICS,
THE TWO-WAY TROOP INTERCOM
SYSTEM ON THE FMTV 2 1/2-
AND 5-TON CARGO TRUCKS HAS
GONE BY THE WAYSIDE.

THAT MEANS THE INTERCOM'S
KITS AND REPAIR PARTS ARE **NO
LONGER SUPPORTED** BY TACOM
LCMC. THE VEHICLE'S IETM WILL
BE UPDATED TO REFLECT THIS
CHANGE.

AS LONG AS IT'S WORKING,
YOU CAN CONTINUE USING THE
INTERCOM, WHICH IS MOUNTED ON
THE INSIDE AND OUTSIDE OF THE
VEHICLE'S CAB.

IF AND WHEN THE INTERCOM
BREAKS,
DISPOSE OF IT
FOLLOWING
TM OR UNIT
PROCEDURES.

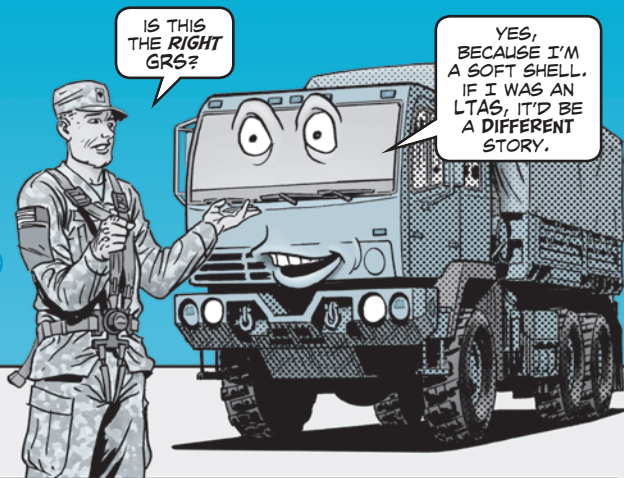


Intercom is
mounted
inside...



...and
outside
of vehicle

WHICH GRS DO WE ORDER?



Dear Half-Mast,

On Pages 10-13 in PS 737 (Apr 14), you said to order a gunner restraint system (GRS) based on which armor kit is installed on your FMTV. How do you tell which kit is installed?

SGT D.D.

GOOD QUESTION, SERGEANT! ALL BASIC AO AND A1 FMTV MODELS WITH THE **SOFT SHELL** (NON-ARMORED) CABS USE THE GRS KIT THAT COMES WITH NSN 2540-01-569-8599. THE KIT INCLUDES INSTALLATION INSTRUCTIONS.



THE **NEWEST** FMTV, AIP2 LONG TERM ARMOR STRATEGY (LTAS), USES THE GRS KIT THAT COMES WITH NSN 2540-01-571-8576.

INSTALLATION INSTRUCTIONS ARE INCLUDED.

THE LTAS GRS KIT CAN BE OBTAINED IN **STAND-ALONE KIT**, NSN 2540-01-571-8576, IF NECESSARY.

THE GRS KIT IS ALSO INCLUDED IN THE **WEAPON STATION KIT**, NSN 2510-01-567-8727, AND **TRANSFER MOUNTING KIT**, NSN 1005-01-577-2656.

THE AIP2 HAS DOORS OPENING BACKWARDS THAT ARE HINGED AT THE REAR OF THE DOOR.

THESE TWO GRS KITS ARE NOT INTERCHANGEABLE.

THE LOW SIGNATURE ARMOR CAB (LSAC) MODEL IS NO LONGER BEING USED.

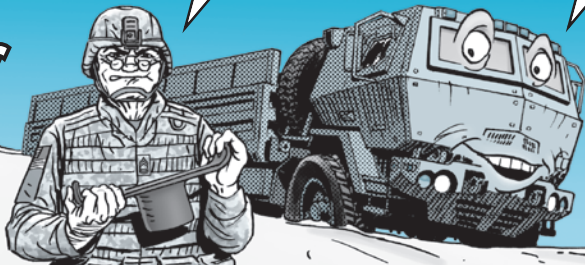
IF **YOU** HAVE ANY GRS QUESTIONS ON THE FMTV, CONTACT TACOM'S WILLIAM BAYES AT DSN 786-4735, (586) 282-4735, EMAIL: william.s.bayes.civ@mail.mil



Jack Adapter NSN Search

THE JACK ADAPTER ASSEMBLY YOU NEED WILL DEPEND ON YOUR TRUCK.

THAT'S RIGHT! AND YOU'LL NEED THE BIGGER VERSIONS FOR FMTV LTAS TRUCKS LIKE ME!



Dear Half-Mast,

I'm having a problem locating an NSN for my FMTV's jack adapter assembly. The adapter is listed as one of the required BII items, but it's missing from all of our unit's FMTVs.

Is the jack adapter something we can order or is it a fabricated item?

Mr. B.D.S.

Dear Sir,

Originally, the FMTV came with a 12-ton jack, NSN 5120-01-573-5935. There are two jack adapters available that can be used with this jack. The 12-ton straight jack adapter, NSN 4910-01-572-5688, is for the front and rear axles on all MTVs and LMTVs. The 12-ton angled jack adapter, NSN 5340-01-495-1298, is for the intermediate axle on MTVs.

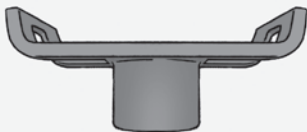
The 12-ton jack is still in the supply system and OK to use with the 12-ton jack adapters. Both of the adapters are still available, too, but once stock runs out, that's it.

Recently, a new 20-ton jack, NSN 5120-01-627-2079, was added to the inventory. It uses a straight jack adapter, NSN 4910-01-625-7273, for front and rear axles and an angled jack adapter, NSN 5120-01-609-8724, for MTV intermediate axles.

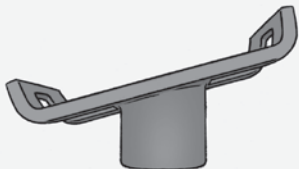
The great thing about the jack adapters for the 20-ton jack is that they can also be used with the 12-ton jack. And since both jacks work with AO, A1 and A1P2 model FMTVs, these jack adapters are a great investment for your truck.

Half-Mast

Get 20-ton straight jack adapter with NSN 4910-01-625-7273...



...and angled adapter with NSN 5120-01-609-8724



HEMTTs...

IT'S PRIME TIME FOR FUEL SYSTEM

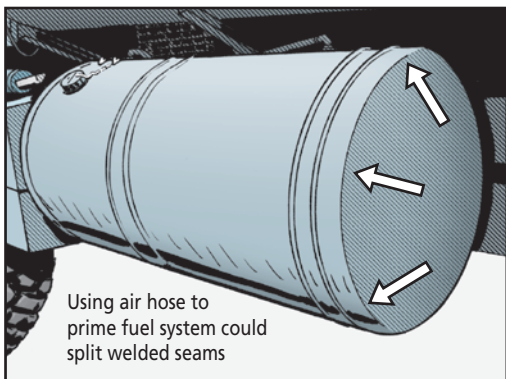
UHHHHH!!



Mechanics, you should never, ever, use a pressurized air hose to prime the HEMTT's fuel system.

That adds too much pressure too fast. You can jam the pressure relief valve shut, all while pressure continues to build.

The vehicle's fuel system is designed for suction from the pump side, not pressure from the tank. Not only will using an air hose cause leaks, but the added pressure can split the seams in the HEMTT's fuel tank!

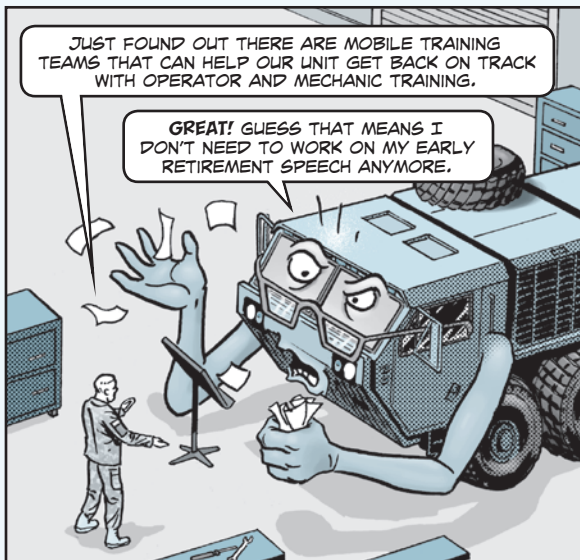
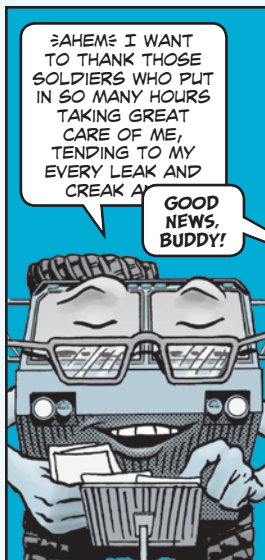


If you have a base or A2 HEMTT or an A1 wrecker that needs to be primed, use the priming (hand) pump, NSN 4910-00-402-9623. Make sure you follow the instructions in TM 9-2320-279-14&P (IETM EM 0290, Jun 09) for base HEMTTs and the A1 wrecker and TM 9-2320-325-14&P (IETM EM 0289, May 09) for A2 HEMTTs. You'll find the info under "Services Upon Receipt for an Engine Out of Fuel."

A4 HEMTTs have a built-in fuel pump. If your A4 HEMTT loses prime, follow the operator maintenance procedures in TM 9-2320-326-14&P (IETM EM 0288, Oct 08). You'll find them under the "Priming Fuel System" track.

These instructions are also listed in the operator's manuals for each of the A4 HEMTT models.

MTTs Available for HEMTTs, HETs, ASVs



Program managers (PMs) provide initial training during the equipment fielding process. However, PMs are not funded to offer sustainment training. That's the unit's responsibility.

When sustainment training doesn't happen at the unit level, problems pile up. Units with high personnel turnover can end up without enough licensed drivers, equipment operators or trained mechanics. That can lead to lower unit readiness ratings.

If that sounds like your unit, here's some good news. Mobile training teams (MTTs) are available to give units operator and mechanic training on HEMTTs, HETs and ASVs. Units that want this training must fund the MTT and provide adequate training facilities. In some cases, a unit may be allowed to use an established training facility.

For more information on MTTs, email TACOM LCMC's Transportation Division's PM HTV and PM ASV training coordinator Lee Kyle at:

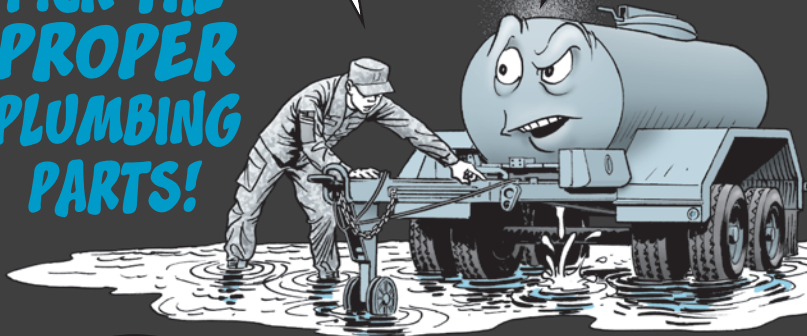
lee.k.kyle.civ@mail.mil



PICK THE PROPER PLUMBING PARTS!

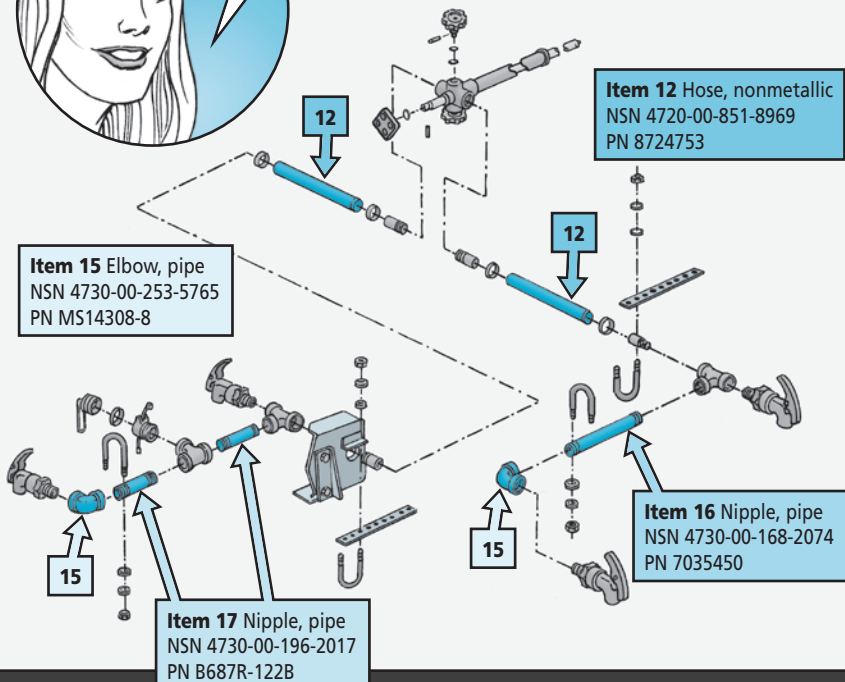
HEY! LOOKS LIKE YOU'VE GOT A WATER LEAK THERE.

NO KIDDIN'! HOW 'BOUT FIXIN' ME UP BY ORDERING THE RIGHT PLUMBING PARTS?

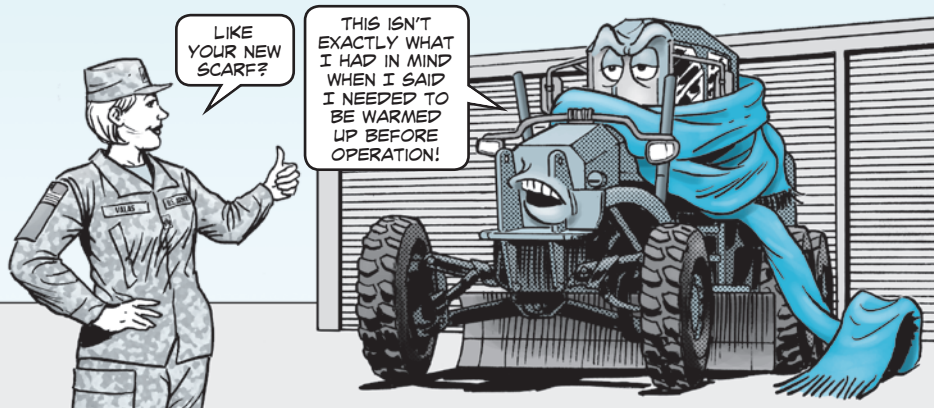


THERE WAS A BIT OF A MIX-UP ON THE NSNs AND PART NUMBERS FOR SOME OF THE M1112 WATER TRAILER'S TANK PLUMBING PARTS IN FIG 21 OF TM 9-2330-397-14&P (APR 00).

UNTIL THE TM IS UPDATED, MAKE A NOTE OF THESE CORRECTIONS...



IDLE FIRST, THEN *GO GRADING!*



Now that you've started your 120M road grader, you're ready to move out, right?

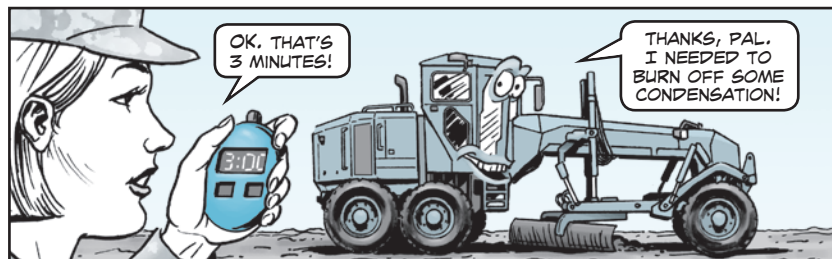
Not so fast, my road-grading friend!

Your vehicle needs to warm up a bit before the day's run. If not, moving parts break down. Then your grader is sitting on the side of the road instead of grading it.

Here's how to keep your grader on the job:

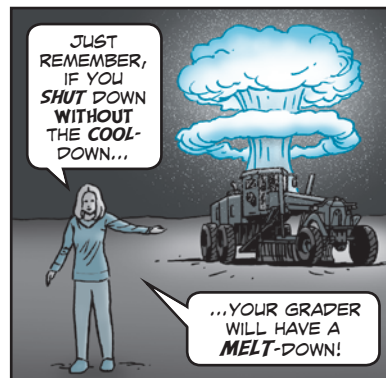
After start-up, run the engine for 3 minutes or so to allow the engine to reach operating temperature. That warm-up lets the engine burn off condensation from normal engine breathing. Unburned condensation will mix with oil to form a sludge that clogs the engine.

The 3-minute delay also gives the engine oil time enough to lubricate parts.



After warm-up, check the messenger display in the vehicle's cab. Pay special attention to the engine system and action light indicators. If either light up, shut down the engine and tell your mechanic.

You also must let the engine cool down for five minutes after operation. The engine needs to keep oil circulating to relieve excessive heat in the engine. Too much heat can crack the block, warp a head or valves, or bake the oil until it's not slick enough to lube the bearings.



Hydraulic Oil Reminder

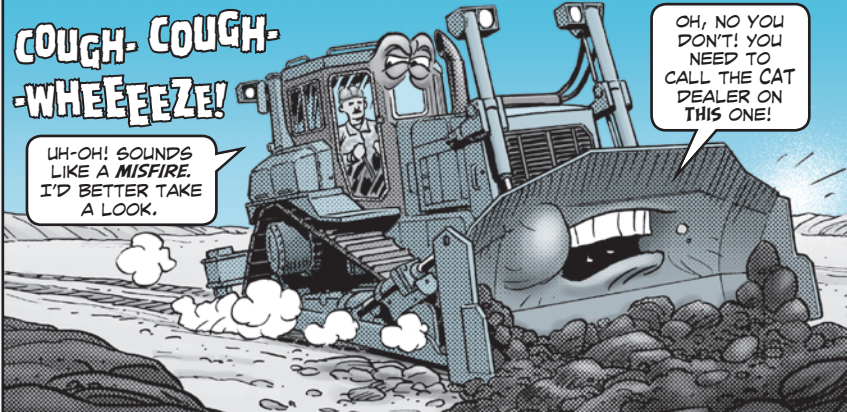
With the engine at idle, monitor the hydraulic oil's temperature by keeping an eye on the grader's messenger display.

Only operate the grader when the hydraulic oil temperature reaches or exceeds 41°F. If necessary, raise the hydraulic oil temperature by cycling each of the vehicle's implement and steering controls. This allows warm hydraulic oil to circulate through all the grader's hydraulic lines.

For more information, check out WP 0005 in TM 5-3805-293-10 (Dec 10).

D7R II CAT
Tractor...

HANDS OFF After Fuel Injector Misfire



Fuel injectors on the new D7R dozer have been known to misfire. That causes the vehicle's engine to run rough and, in some cases, stall out.

A misfire can also make the fuel injectors seize. That brings your construction operations to a screeching halt!

Operators and mechanics, before you try fixing the problem yourselves, eyeball the serial number on the dozer's data plate. If it falls between KNA00214-00217 and KNA00219-781, you'll need to contact your local Caterpillar dealer to schedule a repair. Tell them it's regarding CAT Service Letter #PS44681.

Find your closest dealer at: <http://www.cat.com/dealer-locator>

Travel and mileage for the repair are included, so there's no cost for the visit.

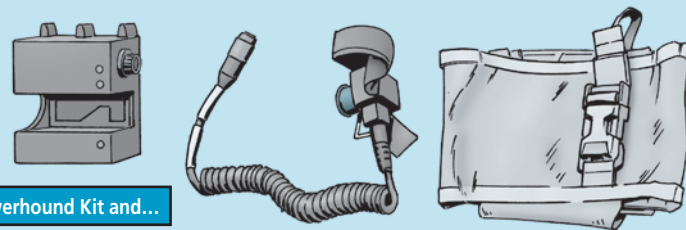
HELP MINEHOUND SNIFF OUT MINES!

KEEP
YOUR VMR2
MINEHOUND MINE
DETECTOR HOT
ON THE TRAIL
BY FOLLOWING
THESE TIPS
FROM THE FT
LEONARD WOOD
US ARMY
ENGINEER
SCHOOL...



Make sure you have the Powerhound Kit. It's an additional item and doesn't come with the Minehound kit. You can get it from your forward support. The Powerhound kit greatly increases operational time because it makes it possible to use military standard batteries, BB-2590 and BB-2557. The BB-2590 provides around 35 hours of operations and the BB-2557 11 hours. These are the only approved batteries for the Powerhound.

Get Powerhound Kit and...



Get extra strap. The Minehound comes with a shoulder sling, but you can also get an optional weight mitigation strap from your forward support.

...weight-mitigation strap



The extra strap better distributes the weight of the Minehound, which means less fatigue for you and better focus. Generally, operators should be rotated out every 20 minutes to avoid fatigue.

Keep the detector search head parallel to the ground. That's especially important on uneven ground. If the head is at an angle, it can give you false ground penetrating radar (GPR) readings, which could lead to a deadly mistake. Try to sweep 1 meter per second across a 1 1/2-meter lane with the head no more than 2 inches off the ground.

REMEMBER LOSS:
L = LANE COVERAGE
O = OPERATOR
S = STANCE
S = SWEEP SPEED
S = SEARCH HEAD
P = POSITION



Keep head parallel
to ground and...

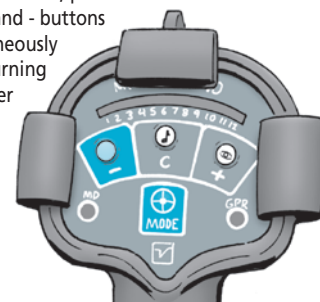
...no more than 2
inches from ground

Remember, the Minehound has a SURF mode that allows you to detect in water if you use the LOSS principles. The Minehound won't be, however, as sensitive as on land. This is not mentioned in the Minehound's manual.

To put the Minehound in SURF mode, press the MODE and the - buttons at the same time. While holding down the buttons, turn on the power. But don't forget to switch out of the SURF mode when you're through. Otherwise, it will stay on SURF when it's used again. If you're operating on ground instead of water that could cause problems.

To turn off SURF mode, turn off the power. Then press the MODE and + buttons at the same time while turning the power on.

For SURF mode, press
MODE and - buttons
simultaneously
while turning
on power



Use the plastic tag attached to the non-metallic test piece to adjust the search head brake screw. Operators often reach for their multi-purpose tool instead and that damages the screw. Then you can't adjust the screw and the Minehound has to go to forward support for repair.

Use plastic tag to adjust search head



PS

COLD WEATHER

- 120M Grader cold starts
- 120M Grader oil checks
- D7R II and frozen mud
- Cold weather and antifreeze
- Cold weather safety
- Dressing for the cold

ANOTHER
SNOWY DAY AT
RICHARDSON.
GOTTA LOVE IT!

COLD WEATHER STARTING THAT MAKES THE GRADE

OPERATORS, CHECK OUT
THE 120M ROAD GRADER'S
TM 5-3805-293-10 BEFORE
THE SNOW FLIES.

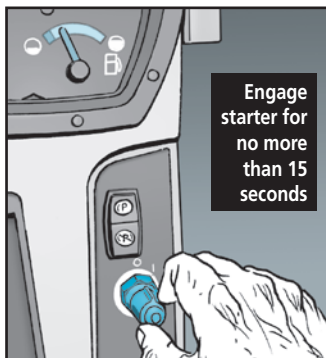
THEN FOLLOW THESE
TIPS TO GET AN A+
IN COLD WEATHER
STARTING.



Starter Reminder

All it takes is one heavy finger stuck on the grader's starter switch to burn out a good starter motor, plain and simple.

So when you try to start your grader's engine, engage the starter, but after 15 seconds...STOP!



Rough Start?



Your grader can be a little harder to start when temperatures drop below freezing. That's why these vehicles have a canister that automatically injects ether into the engine for cold weather starting.

If your grader is hard to start, chances are the ether canister is empty. Have your mechanic check it out.

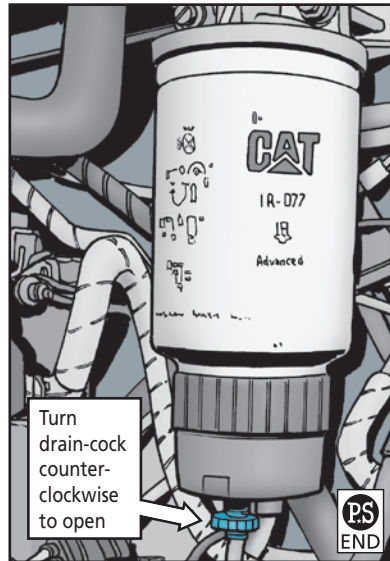
Drain Out Water

As the temperature goes up and down, condensation forms in the grader's fuel tank. The fuel/water separator is designed to get rid of that excess water.

If you don't drain the separator before the day's run, water and other crud are left behind in the fuel system. Then the engine runs rough, or not at all.

Open the access door behind the cab on the left-hand side of the vehicle. Turn the separator's drain-cock counterclockwise and use a clear container to catch the water/fuel mixture. Once the fuel runs clear, close the valve and go to work. If it stays cloudy, close the valve and have your mechanic check things out.

Clean up any mess and dispose of rags properly. Then dispose of drained fuel in an approved hazardous waste container. Never dump it down a drain or on the ground.



120M Road Grader...

GET DOWN AND DIRTY ON OIL CHECKS



IN COLD WEATHER, YOU MAY NEED TO CHANGE OIL MORE OFTEN THAN TM 5-3805-293-10 SAYS.

SLUDGE FROM CONDENSATION AND DILUTION WITH FUEL ARE THE MAIN REASONS.



Look for sludge every time you check the oil level. It'll appear as small clumps on the dipstick.

Water contamination, on the other hand, is hard to find until it has really gotten bad. If you suspect contamination, draw an oil sample and let it stand in a glass jar. Water will separate from the oil. Let your mechanic know. He'll need to change the oil and filters.

Need An Accurate Reading?

You'll get the most accurate oil-level reading while the engine is cold, like it says in WP 0013-5 of TM 5-3805-293-10.

Remove the dipstick and wipe it with a clean rag, then reinsert it. Remove the dipstick again to eyeball the oil level. It should fall in the cross-hatched area of the dipstick.

Oil level should fall in cross-hatched area of dipstick



It's a good idea to check the oil level during long operations. After shutting down the engine, wait 10 minutes to let the oil drain back into the oil pan. Then recheck. It's not as accurate as a cold check, but it'll let you know if there are any problems.

The grader's engine oil is also monitored in the service menu on the messenger display inside the vehicle's cab. Low pressure indicates the oil level is low.

Never overfill just to skip an oil check. That just causes other problems, like blowby.

Check oil pressure on messenger display's service menu



D7R II Tractor...

HEY! YOU'D BETTER BRING A HAMMER AND CHISEL TOMORROW.

THAT'S THE **ONLY** WAY YOU'LL GET ME OUT OF THIS MUD ONCE IT FREEZES!

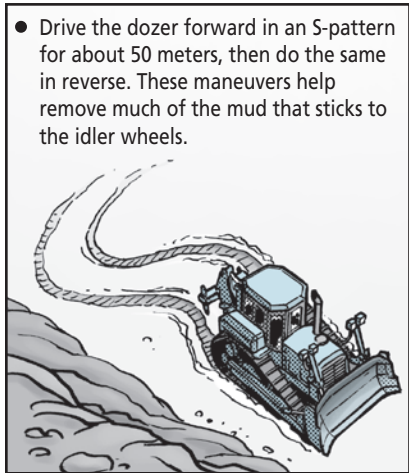
IDLER WHEEL MUD REMOVAL MADE EASY



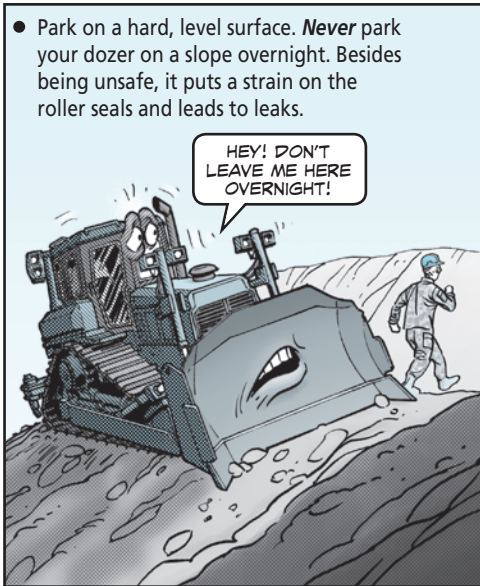
Leaving mud caked around the idler wheels of your D7R II dozer during cold weather, especially overnight, is just asking for trouble. Those bitter temperatures freeze the mud to the inner and outer seals on the idler wheels, causing leaks.

But there are a few things you can do to prevent that:

- Use clean water to wash out the dozer's undercarriage. Pay special attention to the idler wheels.
- Drive the dozer forward in an S-pattern for about 50 meters, then do the same in reverse. These maneuvers help remove much of the mud that sticks to the idler wheels.
- Park on a hard, level surface. **Never** park your dozer on a slope overnight. Besides being unsafe, it puts a strain on the roller seals and leads to leaks.

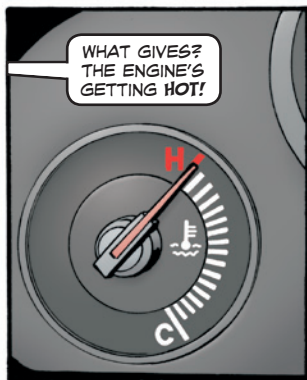
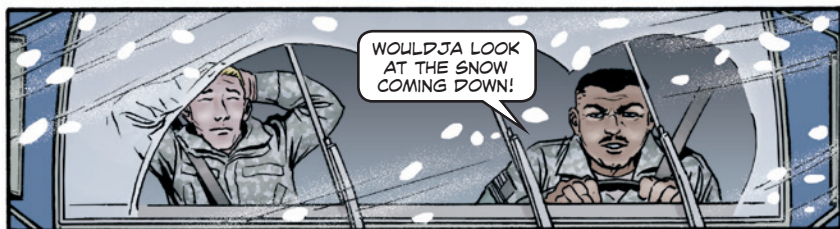


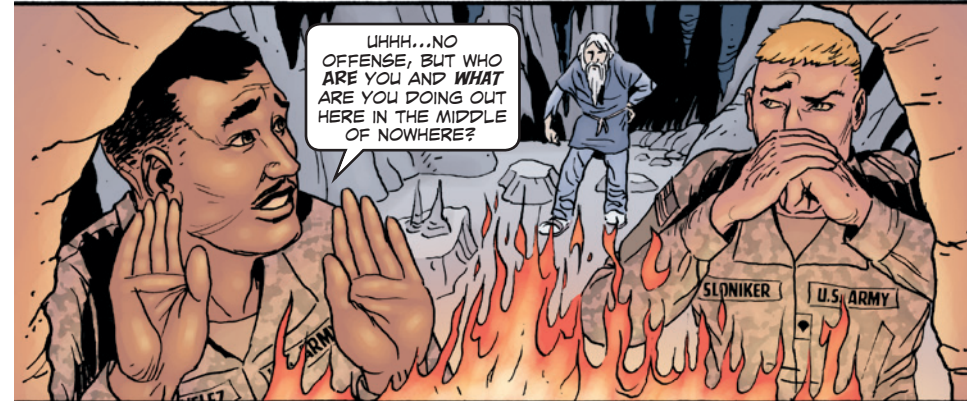
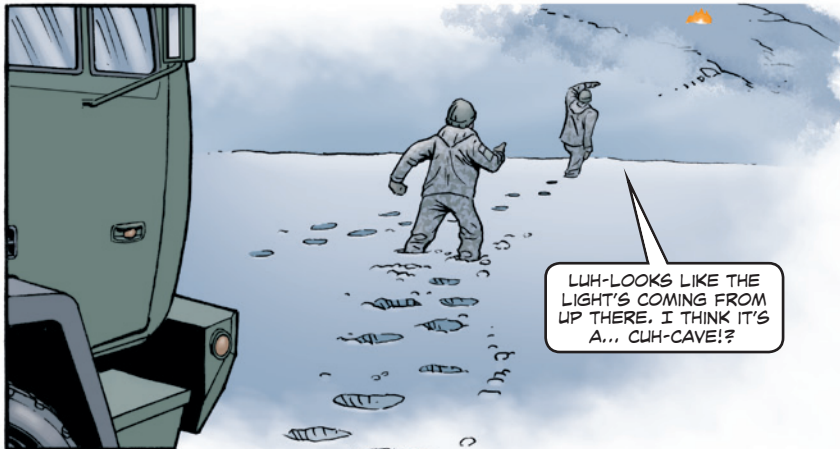
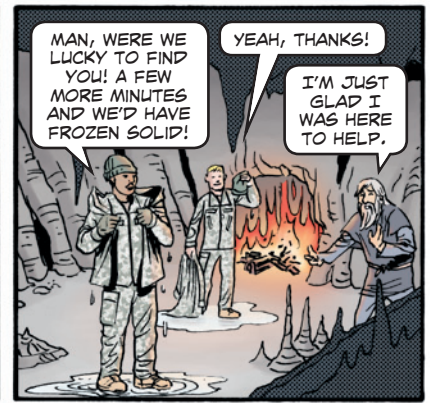
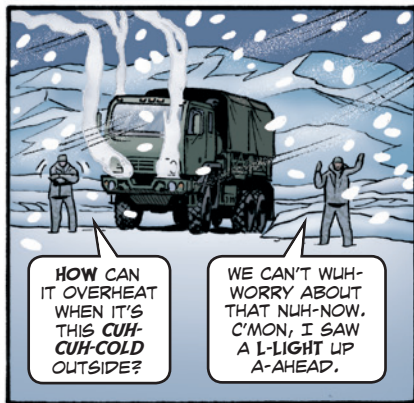
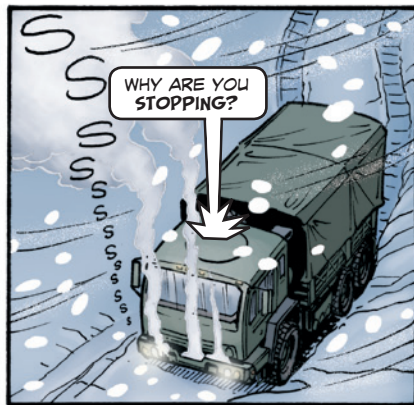
- The next day, keep the dozer moving once it starts to move. That allows the idler wheel seals to warm up and redistributes the seal face load pressure.

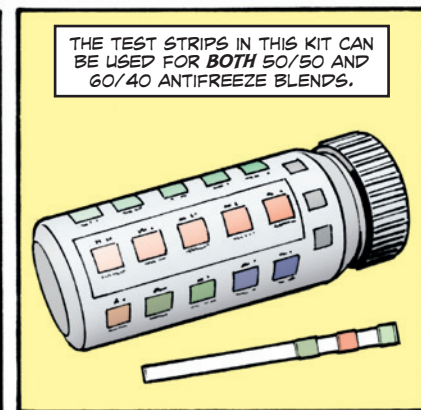
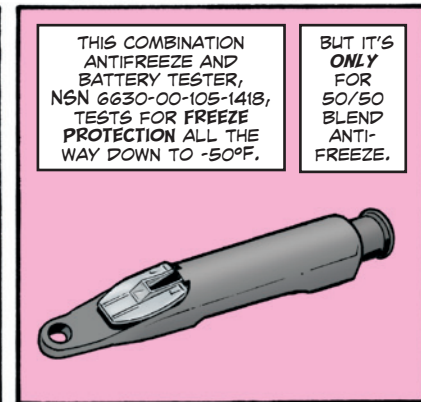
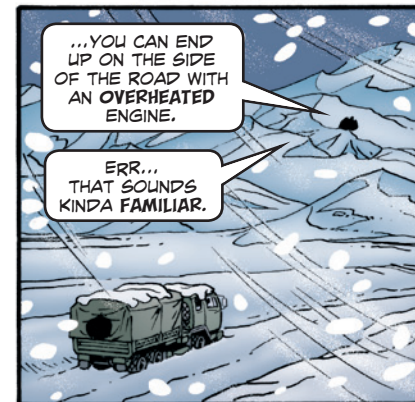
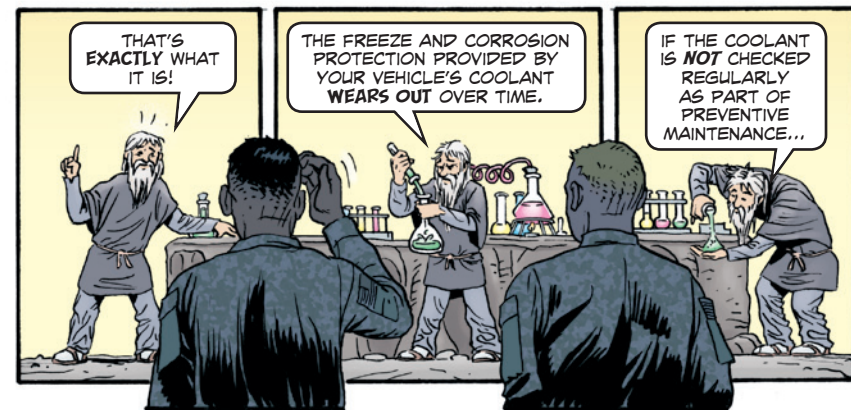
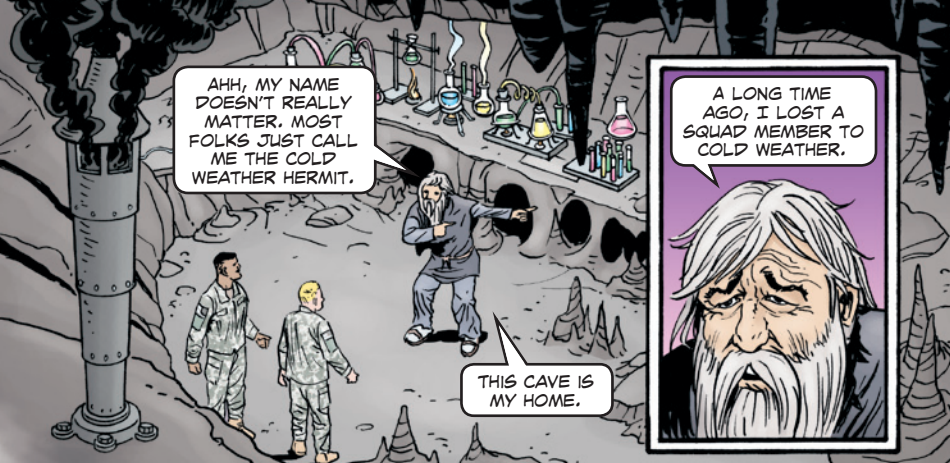


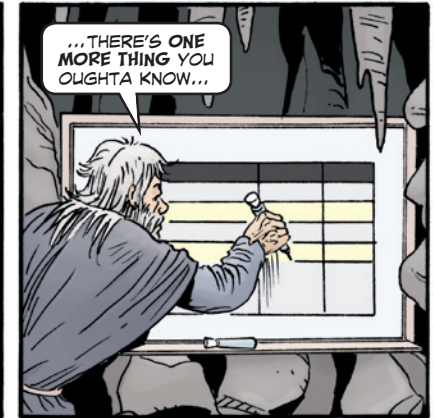
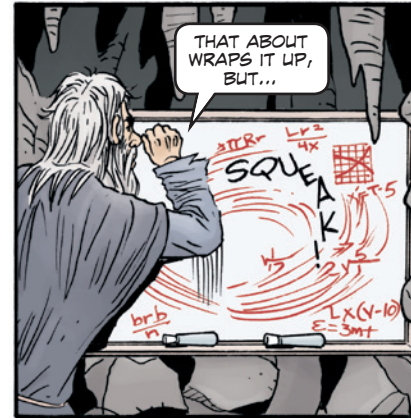
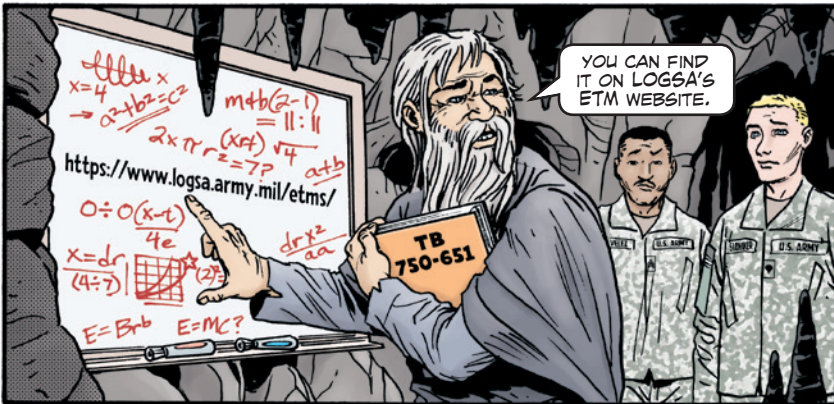
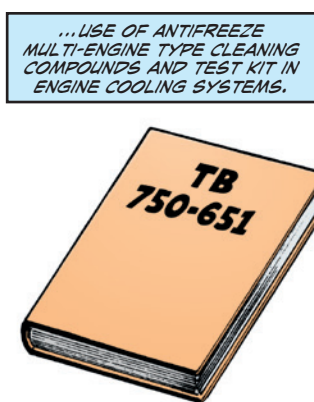
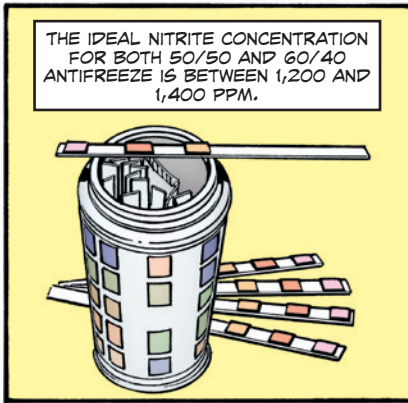
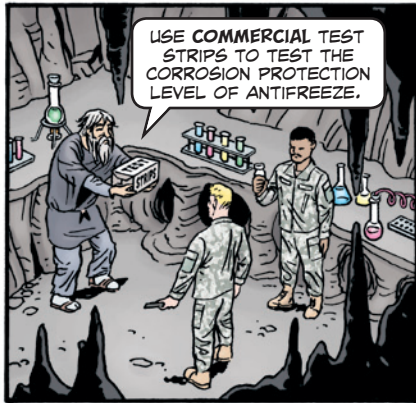
THE COLD WEATHER HERMIT

THE ALASKAN TUNDRA
IS A COLD AND
UNFORGIVING PLACE...





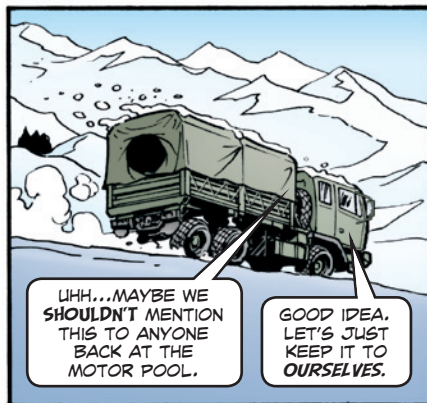
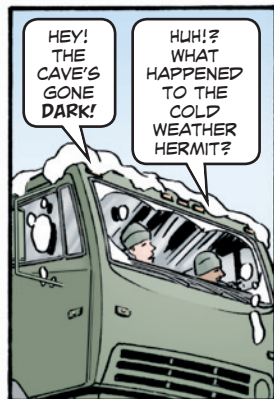




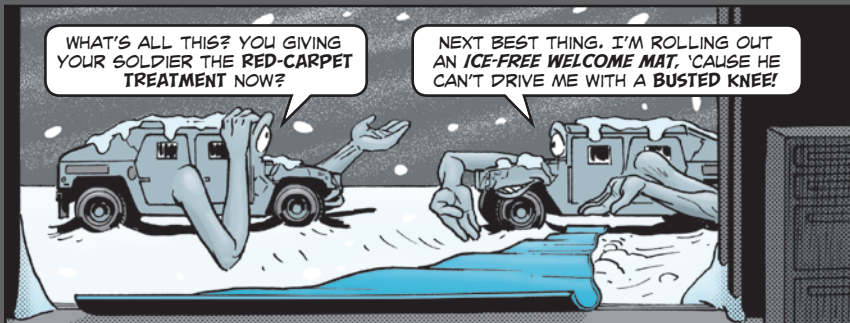
...TO KEEP YOUR FMTV UP-TO-SNUFF IN COLD WEATHER, YOU'LL NEED THIS LIST OF NSNs FOR ETHYLENE GLYCOL-BASED ANTIFREEZE.

Item	Size	NSN 6850-
Concentrated antifreeze A-A-52624	1-qt can	00-664-1399
Concentrated antifreeze A-A-52624	1-gal bottle	01-464-9125
Concentrated antifreeze A-A-52624	5-gal container	01-464-9137
Concentrated antifreeze A-A-52624	55-gal drum	01-464-9152
Pre-diluted antifreeze A-A-52624	1-gal bottle	01-464-9266
Pre-diluted antifreeze A-A-52624	5-gal container	01-464-9263
Pre-diluted antifreeze A-A-52624	55-gal drum	01-464-9096





WINTRY WARNINGS



WHAT'S ALL THIS? YOU GIVING YOUR SOLDIER THE RED-CARPET TREATMENT NOW?

NEXT BEST THING, I'M ROLLING OUT AN ICE-FREE WELCOME MAT, 'CAUSE HE CAN'T DRIVE ME WITH A BUSTED KNEE!

Dear Editor,

I wanted to share some tips with your readers as winter bears down on us again. Slips and falls are a year-round hazard, but cold weather adds an extra challenge. Remember to:

- Keep outdoor walkways and steps free of ice, snow, water, mud and wet leaves.
- Keep entrances and interior traffic areas dry and clean. Put down doormats at entry points to help remove snow, water and mud from footwear.
- Take extra precautions on sloped floors, ramps or scaffolds. Use handrails, non-slip treads or coatings when possible.
- Be especially careful getting in or out of vehicles in cold weather.

For more safety tips, visit the US Army Combat Readiness Center website:

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

CW4 David Ware
US Army Combat
Readiness Center
Ft Rucker, AL

Editor's note: Prime pointers, Chief. Thanks for warming us up for the winter trials ahead.

CONSIDER THE COLD



OK, YOU GUYS,
LET'S DO THIS...

AND, REMEMBER,
THERE'S **NO SUCH**
THING AS BAD
WEATHER...

...THERE'S JUST
BAD PREPARATION!

YOU PROBABLY
KNOW THE
IMPORTANCE
OF DOING
COLD-WEATHER
PMCS ON YOUR
EQUIPMENT.

BUT HAVE YOU
CONSIDERED
COLD-WEATHER
PMCS FOR
YOUR **BODY?**



COLD WEATHER-
RELATED INJURIES
(CWIS) POSE
A **REAL THREAT**
TO PERSONAL
HEALTH AND UNIT
PERFORMANCE.

LAST WINTER,
SOLDIERS
REPORTED
111 CWIS.
THESE INCLUDED
12 HYPOTHERMIA
CASES, A
POTENTIALLY
LIFE-THREATENING
CONDITION, AND 95
FROSTBITE CASES,
WHICH CAN LEAD TO
AMPUTATIONS.



THAT'S WHY **EDUCATION** IN PREVENTING, RECOGNIZING AND
TREATING CWIS IS SO IMPORTANT. CWIS INCLUDE...



HERE ARE SOME TIPS TO
KEEP CWIS AT BAY...

- injuries due to decreased temperature (hypothermia, frostbite, nonfreezing cold injury).



- injuries due to heaters (like burns, etc.).
- carbon monoxide poisoning.
- accidents due to impaired physical and mental function, caused by cold stress.

- Make sure your cold-weather clothing is clean, dry and in serviceable condition (no holes or broken fasteners). Wear clothing in loose layers.



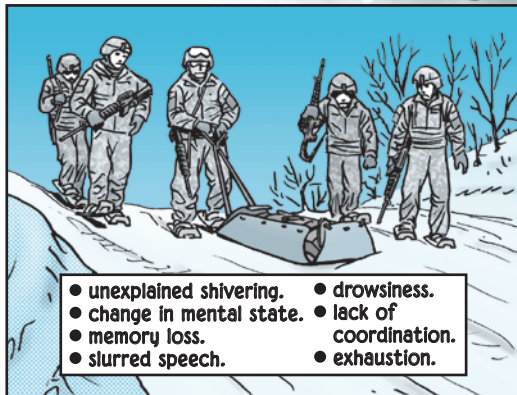
- Eat enough calories and stay hydrated. Avoid alcohol. It can accelerate heat loss.
- For missions, pack sufficient quantities of protective clothing and equipment like socks, proper headgear, sunglasses, sunscreen, lip balm and skin-care items.

- Use only Army-approved heaters and be sure you know how to use them properly. You can download a fact sheet, *Guidance on the Use of Heaters Inside Tents and Other Enclosed Shelters*, from the United States Army Public Health Command (USAPHC). Click the Resource Materials tab at the top of the main page, then search for "heaters" at: <https://phc.amedd.army.mil/>



PS MORE

FOLLOW THE BUDDY SYSTEM. EVACUATE YOUR BUDDY TO THE CLOSEST MEDICAL TREATMENT FACILITY IF YOU OBSERVE CWI SYMPTOMS SUCH AS...



- unexplained shivering.
- drowsiness.
- change in mental state.
- lack of coordination.
- memory loss.
- exhaustion.
- slurred speech.

NOTE: IF MEDICAL CARE IS **NOT** READILY AVAILABLE, GET THE SOLDIER INTO A WARM ENVIRONMENT, REMOVE ANY WET CLOTHING, AND KEEP HIM WARM AND DRY UNTIL MEDICAL PERSONNEL ARRIVE.



- Report all CWIs to the US Army Combat Readiness Center, as mandated by AR 385-10, Army Safety Program (Nov 13).



UNIT LEADERS, MAKE SURE **ALL** YOUR SOLDIERS AND CIVILIANS ARE **TRAINED** ON PROPER WEAR, USE, CARE AND MAINTENANCE OF COLD WEATHER CLOTHING AND EQUIPMENT.

Here are more helpful resources:

Cold Injury Prevention (USAPHC):

<http://phc.amedd.army.mil/TOPICS/DISCOND/CIP/PAGES/DEFAULT.ASPX>

TRADOC Regulation 350-29,

Prevention of Heat and Cold Casualties (Jul 2012):

<http://www.tradoc.army.mil/TPUBS/REGS/TR350-29.PDF>

PS Magazine Articles

"Water: It's Not Just for Summer Anymore":

<https://www.logsa.army.mil/psmag/archives/PS2014/734/734-56-57.pdf>

"Don't Be a Casualty of the Cold":

<https://www.logsa.army.mil/psmag/archives/PS2013/733/733-50-52.pdf>

"A Harsh Winter Tests Your Mettle":

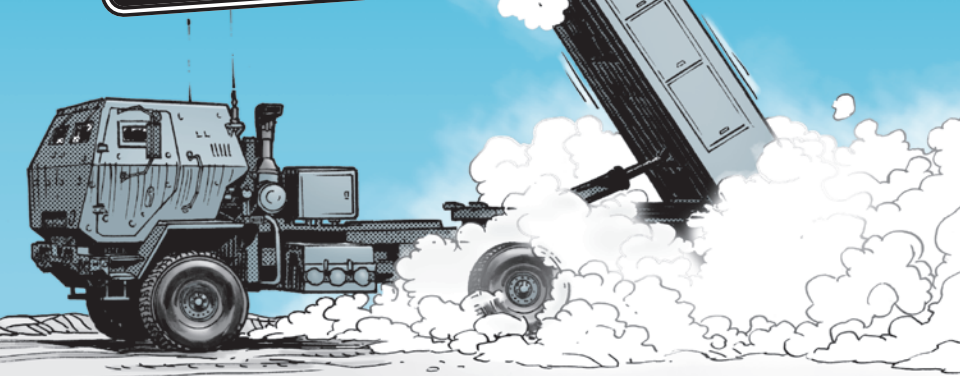
<https://www.logsa.army.mil/psmag/archives/PS2011/708/708-52-55.pdf>



MISSILES **PS**

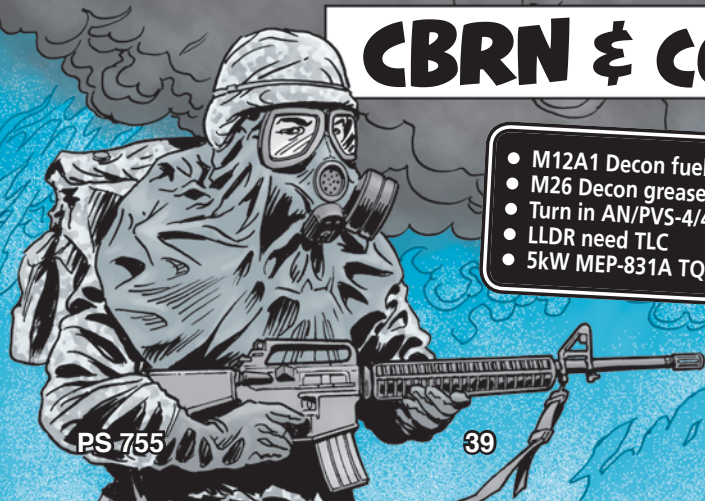
- MK 19 - two issues
- M2A1 flash suppressor
- 240L short barrel parts
- M16/M4 stoppages
- M230 - GMD is best
- HIMARS launcher hydraulics

ALSO
FEATURING
**SMALL
ARMS**

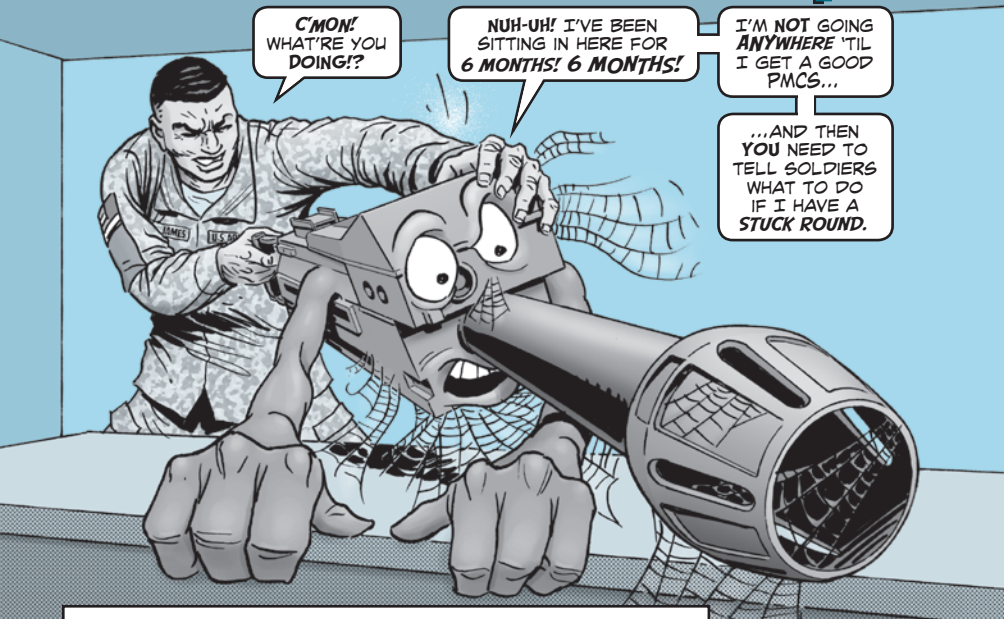


CBRN & COMMO

- M12A1 Decon fuel lines
- M26 Decon grease less \$
- Turn in AN/PVS-4/4A, AN/TVS-5/5A
- LLDR need TLC
- 5kW MEP-831A TQG alternator bolts



Mark Down These MK 19 Tips



Dear Editor,

As part of Ft Campbell's command maintenance evaluation and training team (COMET), I've run into two issues with the MK 19 machine gun that need attention.

MK 19s are not being fired. As a result, MK 19s sit too long in arms room with no attention. Armorers or small arms repairmen should at least be doing the quarterly services. And when the MK 19s go to the range, units need to do a very thorough PMCS first. After months of storage, the weapons may have developed problems.

If MK 19 gunners haven't fired for months, they need refresher training, especially on the misfire procedures. There should be no doubt what needs to be done if they get a stuck round.

Units don't have the adjusting tool for the secondary drive lever and they don't know how to use it. This can make the MK 19 dangerous to fire. PS should repeat the procedure for using the tool.

And units should immediately make sure they get the tool.

David Barger
COMET
Ft Campbell, KY

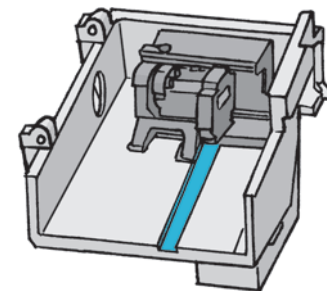
NO PROBLEM, DAVID. UNITS CAN ORDER THE TOOL WITH NSN 1005-01-467-9435. HERE'S HOW TO USE IT...



1. Make sure the MK 19 is cleared and the bolt is forward.
2. Open the top cover assembly.
3. Remove the alignment guide and ogive plunger assembly.

4. Place the feed slide adjustment tool into the feeder base between the round positioning block and primary pawl with the rear of the tool aligned with the ammo link slot.

Align rear of tool with ammo link slot



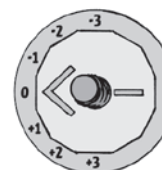
5. Make sure the secondary drive lever is positioned all the way to the right. Close the top cover.
6. Going through the ammunition entrance, push the tool with your finger against the round positioning block. You'll hear the tool click into position.
7. Pull the bolt fully to the rear without stopping. Move the handles forward and up.

8. Look at the tool through the ogive plunger hole. If the lever is adjusted correctly, the left edge of the indicator should be within the width of the white painted line. If the adjustment is correct, remove the tool and you're done. If the alignment is **not** correct, continue with Step 9.

Left edge of indicator within width of white line?



9. Open the cover and remove the secondary drive lever. Remove the screw and the locating washer on top of the secondary drive lever. Move the selector bushing so the next higher number aligns with the arrow on top of the secondary drive lever.



Go through range of adjustments until you get correct alignment

10. Assemble the secondary drive lever and do the alignment check again. If the left side of the indicator is still not within the width of the white line, remove the lever again and move the selector bushing so the next higher number aligns with the arrow on top of the secondary drive lever.

Keep doing Step 10 at each setting from +3 to -3 until the left edge of the indicator is within the width of the white line.

If you adjust the selector bushing from +3 to -3 and still can't get the correct alignment, the MK 19 needs to go to support.

Install Flash Suppressor for FIRING ONLY



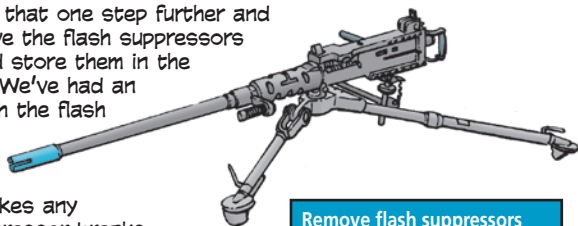
Dear Editor,

We saw on Page 42 of PS 741 (Aug 14) the suggestion that units remove the flash suppressor for the M2A1 machine gun's spare barrel so the barrel will fit in its cover.

We'd like to take that one step further and suggest units remove the flash suppressors for both barrels and store them in the spare barrel cover. We've had an ongoing problem with the flash suppressors being broken during transport. If that end of the barrel takes any kind of hit, the suppressor breaks and it costs roughly \$80 to replace it. Once you're ready to fire, the suppressor can be installed in 3 minutes.

With the suppressor off, protect the barrel threads with either the protective cap, NSN 5340-01-552-0082, or a piece of PVC pipe cut to fit.

CW2 John Blanton
SSG John Doolittle
CSMS-W
Ft Polk, LA



Remove flash suppressors
for both barrels and store in
spare barrel bag

Editor's note: We can't suppress a good idea like that. Thanks to both of you.

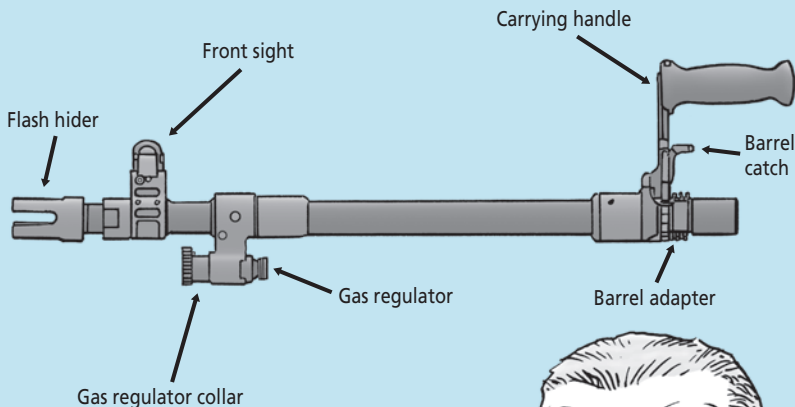
NEW SHORT BARREL PARTS AVAILABLE

MWO 9-1005-313-23-4 REPLACES THE M240L LONG BARREL WITH A SHORT BARREL.

ONCE YOUR M240L HAS THE SHORT BARREL, YOU'LL NEED THESE NSNs FOR REPLACEMENT PARTS...



Item	NSN 1005-
Barrel assembly	01-564-6769
Flash hider	01-661-3292
Carrying handle	01-550-1628
Barrel catch	01-408-5419
Barrel adapter	01-033-3900
Front sight assembly	01-575-6605
Heat shield	01-551-1563
Gas regulator	01-564-6020
Erosion tool for M240L short barrel gas plug	01-564-6768
Collar, gas regulator	01-036-7160



REMEMBER THE SHORT BARREL TAKES THE M26 BFA, NSN 1005-01-565-6693. IT'S **YELLOW**.

THE INSPECTION CRITERIA FOR THE M240L WITH A SHORT BARREL IS THE SAME AS WHAT'S ALREADY IN TM 9-1005-313-23&P.



M16-Series Rifle,
M4/M4A1 Carbine...

QUICKLY SOLVE FIRING PROBLEM

click
click

click
click

OK, I'VE
GOT A
STUCK
ROUND.
WHAT'RE
YOU
GONNA
DO?

Dear Editor,

In the heat of battle, fixing a firing stoppage in your M16 or M4 can mean the difference between life and death for you and your unit.

The ejection port is the key to quickly deciding whether you need to take immediate or remedial action. If your weapon stops firing, look in the ejection port.

If the bolt is closed, take immediate action:

1. Tap the bottom of the magazine.



2. Pull the charging handle to the rear.



3. Look to see if a round came out.

4. Check the chamber for a round.

5. Let the charging handle go forward.

6. Tap the forward assist.

7. Try to fire.

If the bolt is open or doesn't look completely closed, take remedial action:

1. Clear the weapon.

2. Inspect the chamber for a round.

3. Remove any brass and do an open bolt load. When doing an open load, the weapon does not need to be charged to fire the next round.

Scott Wayne Taylor
Small Arms Repairman
Ft Benning, GA

Editor's note: Great reminder, Scott! The complete procedures for both immediate and remedial action are in WP 0006 in TM 9-1005-319-10.

M230
Automatic Gun...

GMD vs TW-25B



HEY, WE'RE
NOT IN THE
DESERT!

THAT'S THE **ONLY**
TIME YOU USE THAT
STUFF ON ME.

THE REST
OF THE TIME,
I NEED GMD!

Grease, molybdenum disulfide (GMD) is far superior to TW-25B as a lubricant for the M230. It holds up better to the heat the M230 produces with its heavy-duty action.

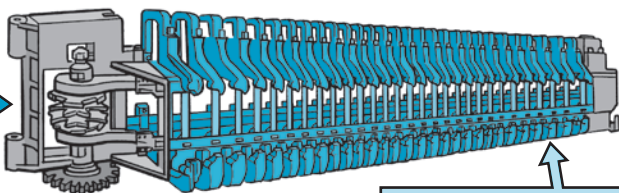
But TW-25B is better to use in the desert because it attracts much less sand than GMD. However, you can't decide on your own to use TW-25B. TACOM must approve. Your local TACOM LAR can help get authorization.

Make sure all levels of maintenance know which lube you're using on the M230. You don't want the unit repairmen using GMD while support is lubing with TW-25B. Mixed lubes will damage your M230.

If you change lubes, remember to first clean off the old lube with isopropyl alcohol. The roller chain, drive gear/bearing and the bearing surfaces where the rotor mates get a heavy coat of lube. Use a brush or a caulk or grease gun to apply the lube. When you're finished, grease should be visible and plentiful.

Give a **light**
coat to rail
and chutes...

...and heavy
coat to roller
chain

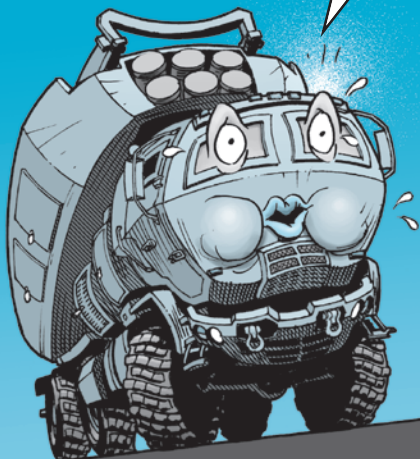


Use a brush, cloth or syringe to apply a light to moderate coat to the forward and aft track, bolt and cam area, bolt locking lugs, receiver walls, breech barrel support, gun support bearings, rails and chutes. The grease should be slightly visible.

DRAIN, DRAIN, DRAIN

OOOH... I WISH
SOMEONE WOULD
DRAIN MY TANKS.

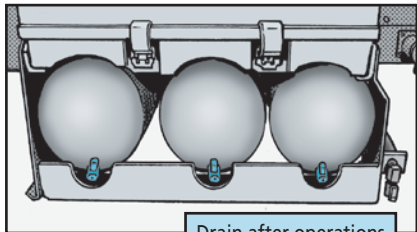
I FEEL LIKE
I'M GONNA
BURST!



Dear Editor,

One of the simplest ways HIMARS crews can prevent problems is to drain air from the launcher module hydraulic fluid reservoir and the three air tanks after operations.

If the tanks aren't drained, moisture builds up in the air tanks. That can lead to equipment damage.

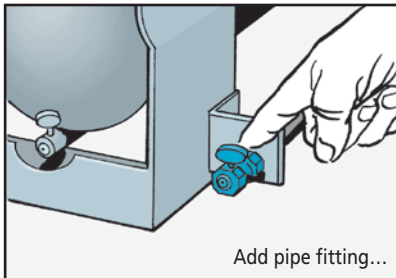


Drain after operations

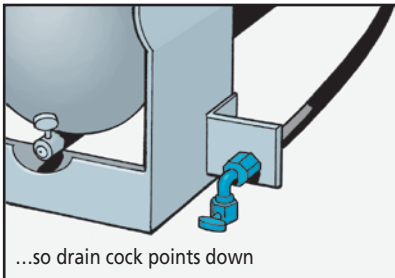
Brian Stewart
TACOM FMX Track Shop
Ft Sill, OK

Editor's note: Excellent point, Brian.

HIMARS units need to make sure they've got the 90-degree elbow pipe fitting installed on the hydraulic relief valve. Without the fitting, the drain cock points straight out and sprays you with hydraulic fluid when it's opened. With the fitting, you can easily drain the excess fluid into a container.



Add pipe fitting...

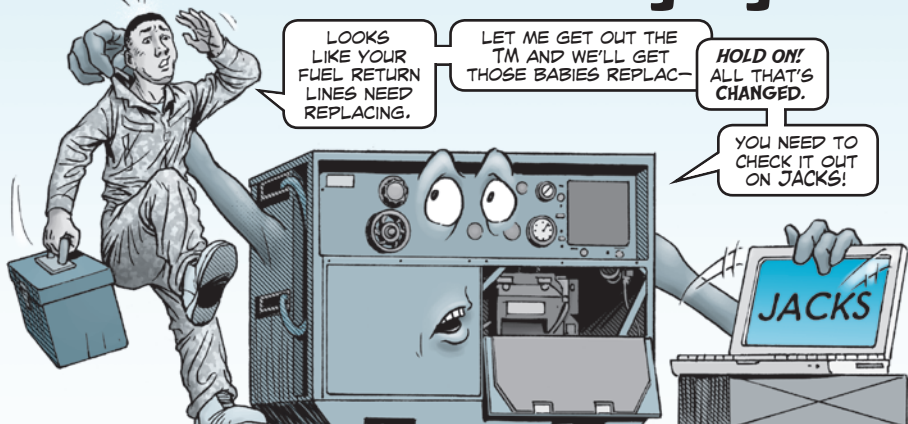


...so drain cock points down

Order the fitting with NSN 4730-00-720-3170.

To install the fitting, your support needs to follow the procedures in TM 9-1055-1646-13&P in IETM EM 0259 (Jan 13) for removing the old air bleed valve and installing the pipe fitting.

Fuel Lines Changing

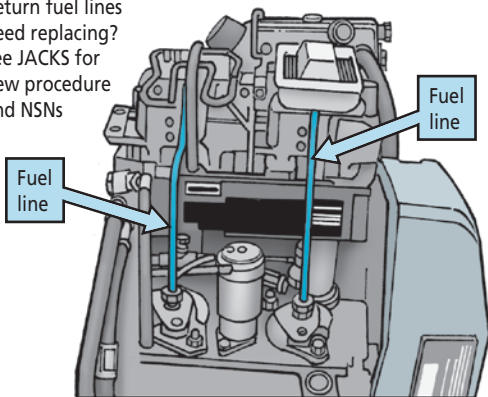


The next time your M12A1 decon needs new return fuel lines, don't go by the procedure in WP 0047 of TM 3-4230-237-23&P. The procedure for installing the fuel lines and the fuel line NSNs have changed.

Here's what you need:

- **Fuel return line-injector,**
NSN 4720-01-628-0099
- **Fuel return line-pump,**
NSN 4720-01-628-0092
- **Banjo bolt,**
NSN 4730-01-630-1621
- **Valve cover gasket,**
NSN 5330-15-001-8495
- **Machine screw,**
NSN 5305-01-593-7762
- **Flat washer,**
NSN 5310-01-508-3313
- **Flat washer,**
NSN 5330-01-593-7760

Return fuel lines
need replacing?
See JACKS for
new procedure
and NSNs



To see the new fuel return line removal and installation instructions, go to:

<https://pki.jacks.jpeocbd.army.mil/Jacks/Secure/Training/NET/Default.aspx>

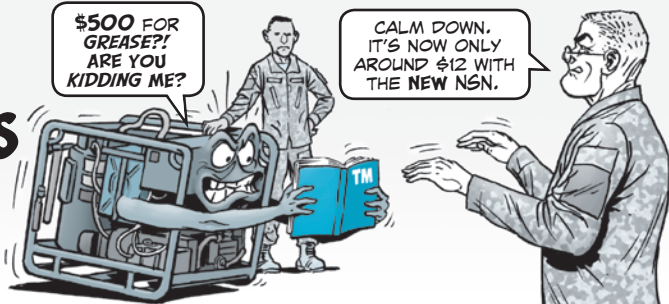
Under Protection in the left-hand column, click on M12A1 Power Driven Decontamination Apparatus. Then click on M12 FUEL RETURN LINE TRAINING.ppt.

If your M12A1 return fuel lines are working, leave them alone. These NSNs and this procedure are only for fuel lines that need to be replaced.

Questions? Contact Emily Santiago at DSN 786-1680, (586) 282-1680, or email:

emily.e.santiago2.civ@mail.mil

LUBE ANSWERS RIGHT HERE



Dear Half-Mast,

TM 3-4230-238-10 (July 09) lists NSN 9150-12-374-7676 as the grease for the M26 decon. But when you check out that NSN on FED LOG it lists the price as \$500. Isn't there anything cheaper? Also the TM shows the oil for the water pump as PN AOA-114-3440, but that doesn't cross to an NSN. Does it have an NSN?

MSG R.C.

Dear Master Sergeant,

We have very good news. The 2013 revision to the TM changed the grease to NSN 9150-01-563-3416. That grease costs around \$12.

The correct part number for the oil for the water pump is A01-114-3440. That crosses to NSN 1040-01-612-3498 on FED LOG. Make a note until the TM is updated.

Half-
Mast

Protective
Masks...

M42A2 Must Stay M42A2

Dear Editor,

Here at JBLM, we've run into several cases of Soldiers trying to convert their M42A2 masks into M40A1s, mostly for comfort and convenience. That is a no-go.

The M42A2 has a different carrier, microphone, hose assembly and canister carrier than the M40A1. Soldiers are issued an M42A2 because they are supposed to be wearing an M42A2. And the M42A2's TM 3-4240-346-10 (Aug 10) makes it clear that all the parts peculiar to the M42A2 must be installed at all times. If they're left in the carrier, they'll soon disappear.

Please tell your readers M42A2s need to stay M42A2s.

David Whitmire, COMET
CPT Michael Padden, 7th Inf
CW4 Bryon Newby, 7th Inf
JBLM, WA

*Editor's note:
Consider it done.*

Turn
in

AN/PVS-4/4A, AN/TVS-5/5A

THANK YOU FOR
ALL YOUR YEARS
OF SERVICE! YOU
REALLY HELPED!

YEP. TIME
FOR US TO
MOVE ON.

BUS STOP DESTINATION:
DEMIL

Grazie!

Safe
Travels!

IF YOU STILL HAVE THE
AN/PVS-4/4A INDIVIDUAL
NIGHT SIGHT OR THE AN/
TVS-5/5A CREW SERVED
NIGHT SIGHT, YOU NEED
TO GET IT **REPLACED**.

The AN/PVS-4/4A is being replaced by the AN/PAS-13(V)1 light weapon thermal sight (LWTS) (LIN S60356) and the AN/PAS-13(V)2 medium weapon thermal sight (MWTS) (LIN S90535).

The AN/TVS-5/5A is being replaced by the AN/PAS-13(V)3 heavy weapon thermal sight (HWTS) (LIN S90603).

Units are not authorized to keep the AN/PVS-4/4A or AN/TVS-5/5A.

Once you receive the replacement sights, demil the AN/PVS-4/4A or AN/TVS-5/5A. For demil instructions, contact Jordan Good at DSN 648-1378, (443) 395-1378, or email:

jordan.s.good.civ@mail.mil

Once the sights are demilled, turn them in to your local DLA Disposition Services.

PM Soldier Sensor Laser is coordinating replacement sights.

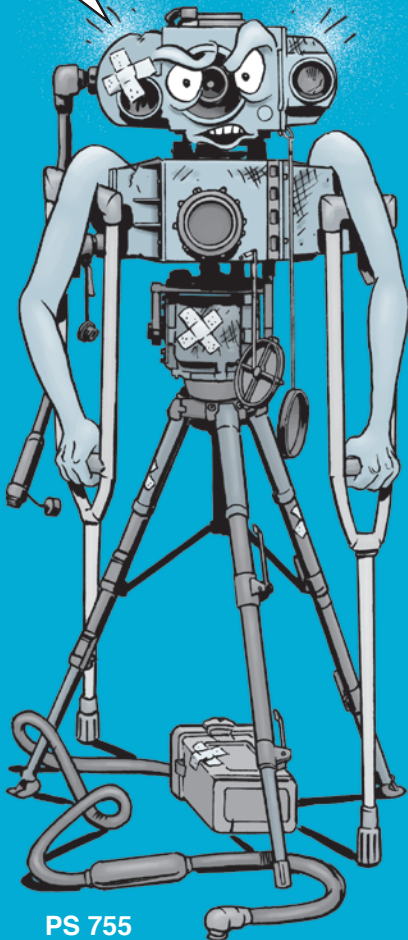
Questions? Contact Hilda Thomas at DSN 648-1408, (443) 395-1408, or email:

hilda.v.thomas.civ@mail.mil

HANDLE WITH CARE

THANKS TO YOUR
ROUGH TREATMENT, I
HAVE TO GO ALL THE
WAY TO THE DEPOT
TO BE **FIXED!**

ALL YOU
HAD TO
DO WAS
BE **GENTLE**
WITH ME!

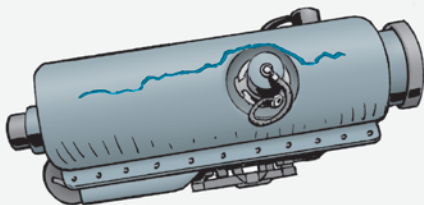


Too many AN/PED-1, -1A and -1B lightweight laser designator rangefinders (LLDR) are taking long trips to the depot for repair because Soldiers forget they need to be handled with care.

The most common reason for LLDR damage is they're dropped on their side. Even if an LLDR is in its soft case, the impact can crack it. Always lay an LLDR down gently.

LLDRs are also damaged when Soldiers aren't careful loading or unloading them from vehicles. Never toss an LLDR in a truck or let it bang against anything when you take it out of a vehicle. Never let an LLDR roll around in a vehicle during travel, either. Secure it before you hit the road.

Rough handling damages LLDR!



To help Soldiers remember to treat their LLDRs with care, stencil **HANDLE WITH CARE** on the cases.

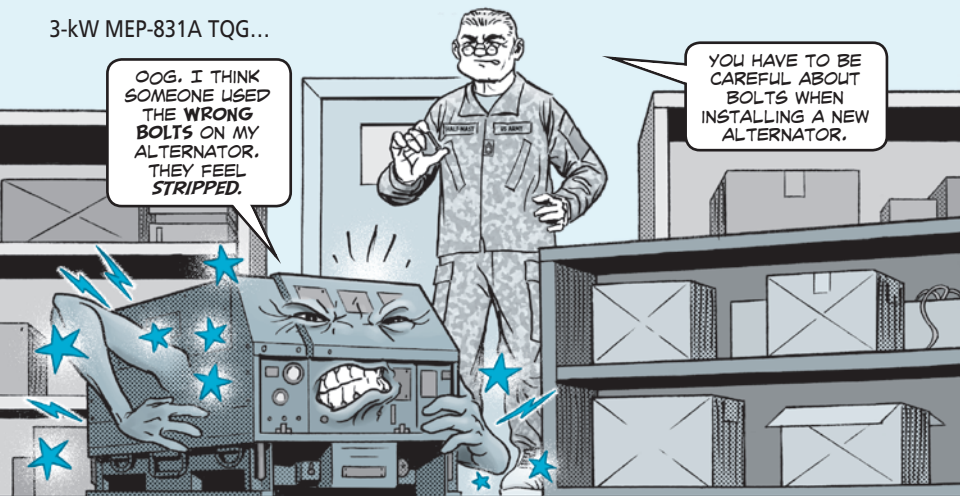
For info on taking care of your LLDR, see TM 11-5955-315-13&P.

If your LLDR or any target locator module (TLM) or laser designator module (LDM) needs repair, contact CECOM's Richard Gendreau at (443) 395-1366 or email: richard.j.gendreau.civ@mail.mil

Questions about your LLDR? Contact PEO Soldier's Mary Ellen Robel at (703) 704-1541 or email:

maryellen.l.robel.civ@mail.mil

3-KW MEP-831A TQG...

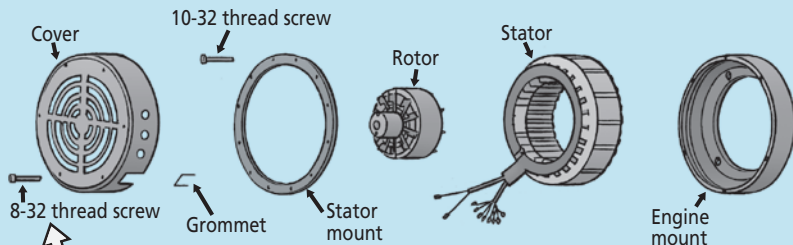


WRONG BOLTS STRIP SCREW WELLS!

WHEN INSTALLING THE CE NIEHOFF K1201 ALTERNATOR ON THE 3-KW MEP-831A TACTICAL QUIET GENERATOR, YOU MUST BE **VERY CAREFUL** TO USE THE **CORRECT** BOLTS.

THE **WRONG** BOLTS STRIP THE SCREW WELLS.

ATTACH THE ALTERNATOR TO THE ENGINE MOUNT WITH **1.98-IN 10-32** THREAD BOLTS.

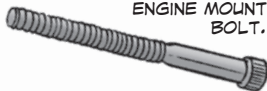


REPAIRERS SOMETIMES MISTAKENLY USE THE **2-IN 8-32** THREAD BOLT, WHICH IS USED TO ATTACH THE ALTERNATOR **COVER**.

THE **8-32** BOLT CATCHES THE ENGINE MOUNT SCREW WELLS, BUT AS SOON AS YOU APPLY PRESSURE, THE THREADS **STRIP**.



THESE **1.98-IN 10-32** THREAD ENGINE MOUNT BOLTS **WON'T** WORK WITH THE DRS FERMONT/MARATHON ALTERNATORS.



IT USES A **2.5-IN** ENGINE MOUNT BOLT.

QUESTIONS? CONTACT PAUL PERIA AT (443) 395-6262 OR EMAIL: paul.peria.civ@mail.mil

PS

LOGISTICS



- CLEA awardees list
- Maintenance \$ depend on maintenance reports
- milWiki needs your input for doctrine development
- GCSS-A and turn-in credit

Combined Logistics Excellence Awards 2015



"Best of the Best" Crowned

THIS YEAR'S
TOP THREE
WINNERS IN THE
MAINTENANCE,
DEPLOYMENT
AND SUPPLY
CATEGORIES
ARE...

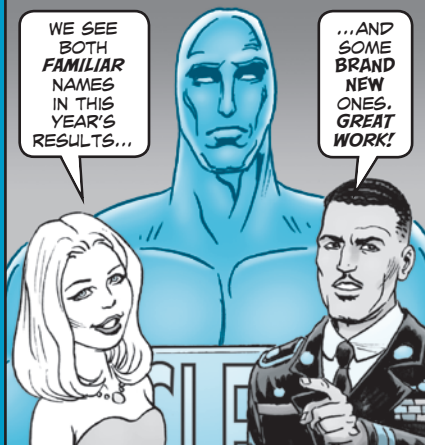


MAINTENANCE:
7th Army Joint
Multinational Trng Cmd,
Grafenwoehr, Germany

DEPLOYMENT:
3d BN, 4th ADA Regt, Ft Bragg, NC

SUPPLY:
C CO, 834th ASB, Hastings, MN

WE SEE
BOTH
FAMILIAR
NAMES
IN THIS
YEAR'S
RESULTS...



...AND
SOME
BRAND
NEW
ONES.
GREAT
WORK!

ARMY AWARDS FOR MAINTENANCE EXCELLENCE

ACTIVE ARMY

Depot Level

Winner: Red River Army Depot, Texarkana, TX (TACOM LCMC)
 Runner-up: Anniston Army Depot, Anniston, AL (TACOM LCMC)

ACTIVE ARMY MTOE

Small Category

Winner: 2d MI BN, Wiesbaden, Germany
 Runner-up: E CO, 2d BN, 2d Avn Regt, Seoul, Korea

Medium Category

Winner: Grp Svc Spt CO, Grp Spt BN, 10th SFG, Ft Carson, CO
 Runner-up: 15th Trans CO, Ft Sill, OK

Large Category

Winner: 24th MI BN, Wiesbaden, Germany
 Runner-up: 2d BN, 9th Inf Regt, Camp Casey, Korea

ACTIVE ARMY TDA

Winner: 7th Army Joint Multinational Trng Cmd, Grafenwoehr, Germany
 Runner-up: 403d AFSB—NE Asia, Korea

AVIATION

Winner: 1st MI BN (Aerial Exploitation), Wiesbaden, Germany
 Runner-up: 3d MI BN (Aerial Exploitation), Camp Humphreys, Korea

ARMY RESERVE MTOE

Medium Category

Winner: 301st MI BN, Phoenix, AZ
 Runner-up: 420th Eng CO (Clearance), Indiana, PA

ARMY RESERVE TDA

Winner: Equip Concentration Site #125 (G), Ft Bragg, NC
 Runner-up: Area Maint Spt Acty #57 (G), New Century, KS

ARMY NATIONAL GUARD MTOE

Small Category

Winner: FSC, 527th Eng BN, Ruston, LA
 Runner-up: B CO, 217th BSB, Bentonville, AR

Medium Category

Winner: 1075th Medium Truck CO, Columbus, NE
 Runner-up: 108th Sus BDE, Chicago, IL

ARMY NATIONAL GUARD TDA

Winner: Combined Spt Maint Site, Pineville, LA
 Runner-up: Maneuver and Trng Equip Site, Boise, ID

ALL OTHERS

Winner: TACOM FMX, Ft Leonard Wood, MO
 Runner-up: Busan Storage Ctr, Busan, Korea

DEPLOYMENT EXCELLENCE AWARDS

ACTIVE ARMY

Small Deploying Unit Category

Winner: 688th RPOE, Ft Eustis, VA
 Runner-up: Svc CO, 5th BN, 7th ADA Regt, Kaiserslautern, Germany

Large Deploying Unit Category

Winner: 3d BN, 4th ADA Regt, Ft Bragg, NC
 Runner-up: 3-159th ARB, Illesheim, Germany

Supporting Unit Category

Winner: 635th MCT, Kaiserslautern, Germany
 Runner-up: 624th MCT, Kaiserslautern, Germany

ARMY RESERVE

Small Deploying Unit Category

Winner: 948th MCT, Las Vegas, NV
 Runner-up: 1177th MCT, Kaiserslautern, Germany

Large Deploying Unit Category

Winner: 419th CSSB, Irvine, CA

Supporting Unit Category

Winner: HQ USA CA and PsyOps Cmd (Abn), Ft Bragg, NC

ARMY NATIONAL GUARD

Small Deploying Unit Category

Winner: 114th Trans CO, Duluth, MN
 Runner-up: 211th MP CO, Clyde, NC

Large Deploying Unit Category

Winner: 1-135th ARB, Whiteman AFB, MO
 Runner-up: 528th Eng BN, Monroe, LA

ALL ARMY INSTALLATION CONUS

Winner: Log Readiness Ctr, Ft Riley, KS
 Runner-up: Log Readiness Ctr, Ft Dix, NJ

OCONUS

Winner: USAG-Vicenza, Vicenza, Italy
 OPERATIONAL DEPLOYMENT
 Winner: 3d Sus BDE, 3d ID, Ft Stewart, GA

NOTE: There are no runners-up in some categories.

SUPPLY EXCELLENCE AWARDS

ACTIVE ARMY

Level I (A) Company Supply MTOE
 Winner: HHC, 65th Med BDE, Yongsan, South Korea

Level I (B) Company Supply MTOE

Winner: C BTRY, 1st BN, 19th FA, Ft Sill, OK
 Runner-up: Maint Acty Vilseck Theater Log Spt Ctr, Vilseck, Germany

Level II (A) Property Book MTOE

Winner: 21st STB, Kaiserslautern, Germany

Level II (B) Property Book TDA

Winner: Allied Forces Cmd North BN, USA NATO, Shape, Belgium

Level III (A) Brigade/Battalion MTOE

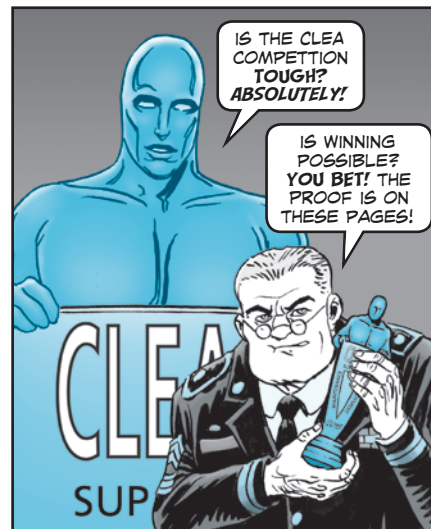
Winner: 509th Sig BN, Vicenza, Italy

Level III (B) Brigade/Battalion TDA

Winner: 1st BN, 40th FA, Ft Sill, OK
 Runner-up: 39th Sig BN, Chievres, Belgium

Level IV (A) SSA MTOE

Winner: E BTRY, 1st BN 43d ADA, Ft Bliss, TX



GCSS-Army Best Performing Award

Winner: E BTRY, 1st BN 43d ADA, Ft Bliss, TX



ARMY NATIONAL GUARD

Level I (A) Company Supply MTOE

Winner: C CO, 834th ASB, Hastings, MN

Level I (B) Company Supply TDA

Winner: 209th Regt, RTI, Ashland, NE
 Runner-up: 175th Regt, RTI, Little Falls, MN

Level II (A) Property Book MTOE

Winner: 82d BDE Trp Cmd, Clackamas, OR
 Runner-up: HQ, 1st ABCT, Bloomington, NE

Level II (B) Property Book TDA

Winner: 771st Trp Cmd, Dunbar, WV

Level III (A) Brigade MTOE

Winner: 1249th Eng BN, Salem, OR

Level IV (B) SSA TDA

Winner: USP&FO, Lincoln, NE

ARMY RESERVE

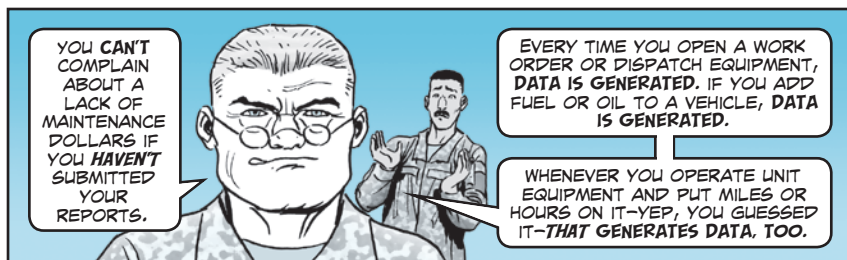
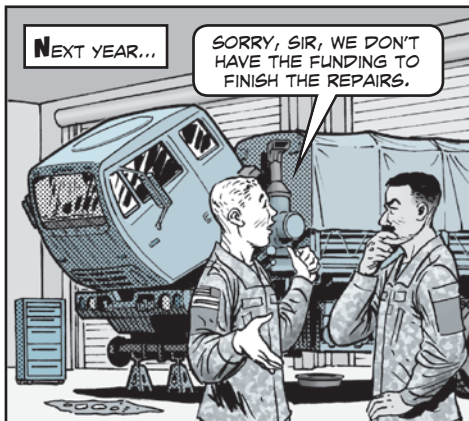
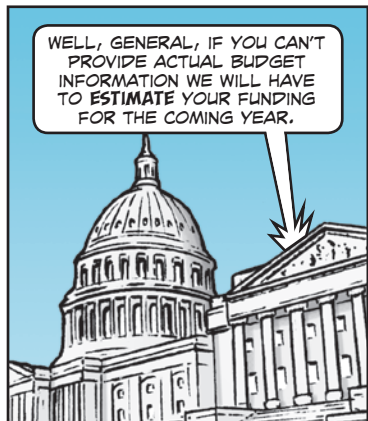
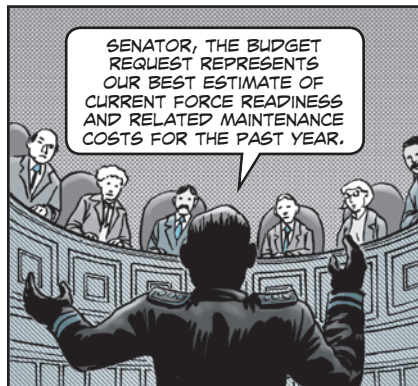
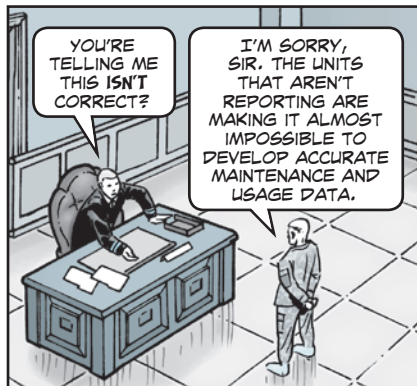
Level I (A) Company Supply MTOE

Winner: Army Maint Spt Acty 38, Wichita, KS

Level III (B) Brigade/Battalion TDA

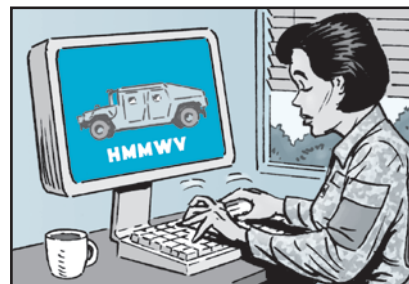
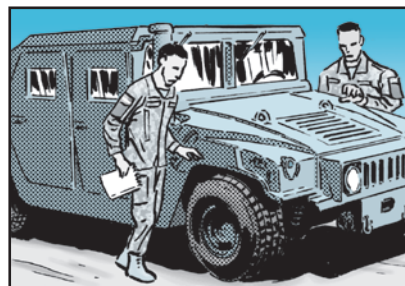
Winner: 2d BN, 381st Regt, Grand Prairie, TX

MAINTENANCE REPORTS EQUAL MAINTENANCE DOLLARS!



Day-to-day unit operations and maintenance generates usage, work order and readiness data. That data is currently produced by legacy maintenance systems such as the Standard Army Maintenance System-Enhanced (SAMS-E), Unit Level Logistics System-Aviation Enhanced (ULLS-AE), Standard Army Maintenance System-Installation Enhanced (SAMS-IE), Standard Army Maintenance System-Fleet Management (SAMS-FM) and the Army War Reserves Deployment System (AWRDS). Data is also created by the newer Enterprise Resource Planning (ERP) system: the Global Combat Support System-Army (GCSS-Army).

Why is this data important and how is it used? Congress evaluates consolidated maintenance and usage data to decide if budget requests are reasonable. With increasing budget constraints, it's more important than ever to report accurate and complete maintenance data (including miles and man-hours) so the Army can make sound fiscal decisions.



If data isn't entered at all, done incorrectly or not reported in a timely fashion, the end result can be reduced dollars in a unit's operating budget.

That's because maintenance data is used to identify resource shortfalls and assess the ability to maintain authorized equipment. When units don't report maintenance data, or it's incomplete or inaccurate, higher headquarters might assume they have all the resources needed to complete their missions.

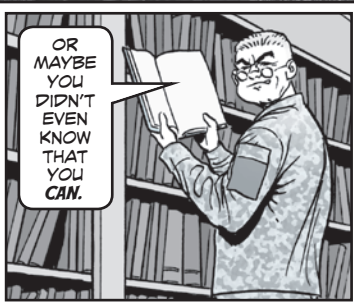
The Army bases its decisions on unit-submitted data to determine each unit's training resource model and OPTEMPO funding. Missing reports make it difficult for the Army to determine how much money units should receive for equipment maintenance and operation.

To help ensure that your unit is funded for future missions, be sure you submit timely, accurate maintenance data.

milWiki Needs **YOUR** Expertise

EVER WISH
YOU COULD
WEIGH IN
ON ARMY
DOCTRINE?

OR
MAYBE
YOU
DIDN'T
EVEN
KNOW
THAT
YOU
CAN.



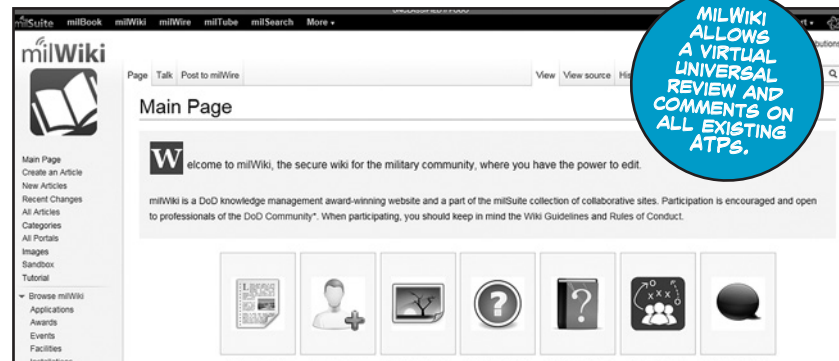
ARMY TECHNIQUE
PUBLICATIONS (ATPs) COVER
TECHNIQUES FOR SUPPORT
OPERATIONS THAT CHANGE
RAPIDLY AND REQUIRE
FREQUENT UPDATES.

BUT TO MAXIMIZE THE
EFFECTIVENESS OF
ATPs, FEEDBACK AND
RECOMMENDATIONS FROM THE
FIELD ARE CRITICAL.

milWiki! EVERYONE WELCOME!



TO PROVIDE THIS CRUCIAL COMPONENT OF DOCTRINE DEVELOPMENT,
SOLDIERS AND ARMY CIVILIANS ARE INVITED TO CONTRIBUTE TO ATPs
THROUGH MILWiki, A WEB-BASED DOCTRINE DEVELOPMENT TOOL.



MILWiki
ALLOWS
A VIRTUAL
UNIVERSAL
REVIEW AND
COMMENTS ON
ALL EXISTING
ATPs.

ANYONE WITH CHANGE
RECOMMENDATIONS CAN HAVE HIS
VOICE HEARD IN MILWiki.

RECOMMENDED CHANGES THAT ARE
DEEMED VALID BY THE PROPONENT
CAN BE QUICKLY INCORPORATED AS
PART OF A SCHEDULED REVISION OR
EVEN THROUGH AN UNSCHEDULED
CHANGE.

NOTE THAT ALL ATP
MODIFICATIONS POSTED ON
MILWiki ARE DRAFTS AND
NOT CONSIDERED OFFICIAL
DOCTRINE UNTIL THEY ARE
VALIDATED AND APPROVED
BY THE APPROPRIATE
PROPONENT, AND ALSO
AUTHENTICATED BY THE ARMY
PUBLISHING DIRECTORATE.

DO YOUR
PART TO
KEEP ARMY
DOCTRINE
UPDATED
AND
RELEVANT
FOR THOSE
IN THE FIELD
TODAY!

ACCESS MILWiki DIRECTLY (YOU'LL NEED A CAC) AT:
https://www.milsuite.mil/wiki/Portal:Army_Doctrine
TAKE THE MILWiki TUTORIAL TO GET YOUR FEET WET:
<https://www.milsuite.mil/wiki/milWiki:Tutorial>

TEA MI 55-19 Updated

A
hard copy
version will be
available later
in 2015.

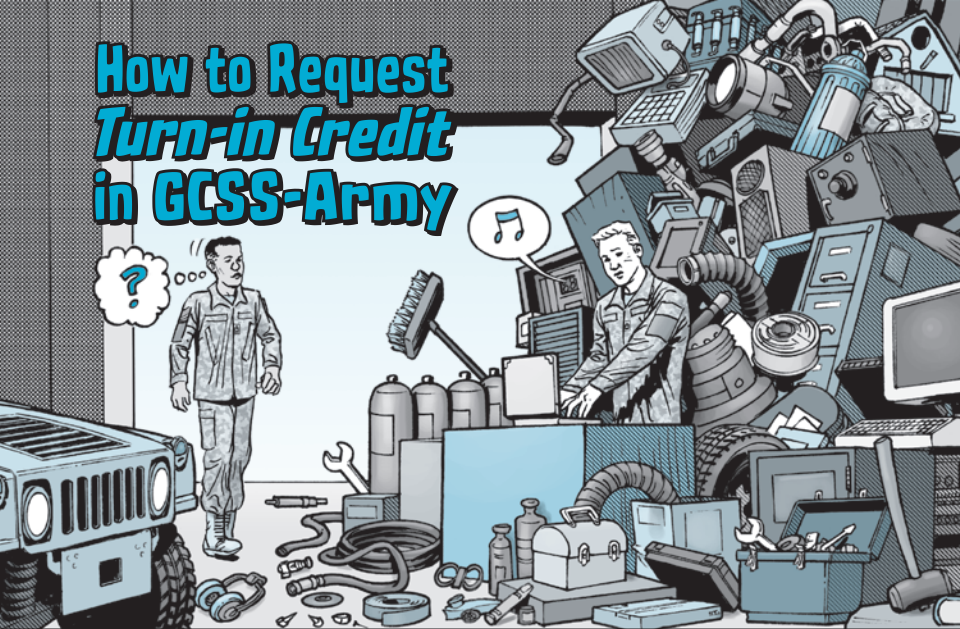


THE MILITARY SURFACE DEPLOYMENT AND
DISTRIBUTION COMMAND TRANSPORTATION
ENGINEERING AGENCY (SDCTEA) UPDATED
TEA MI 55-19, **TIEDOWN INSTRUCTIONS FOR
RAIL MOVEMENTS (APR 15)**.

THE 7TH EDITION COVERS ADDITIONAL VEHICLES,
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How to Request Turn-in Credit in GCSS-Army



HEY, JUST POPPED
IN TO BORROW A RIG.

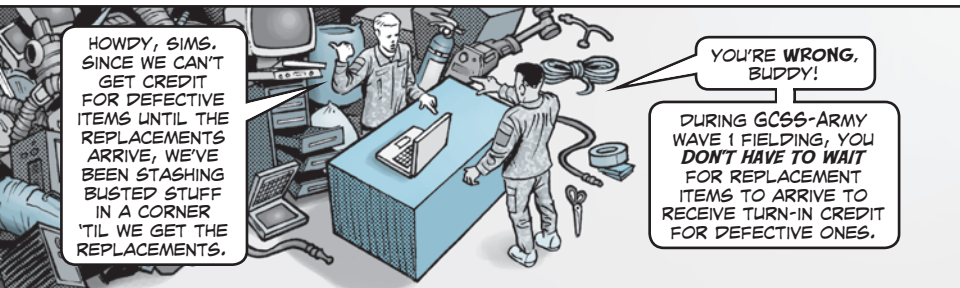
THAT'S QUITE A
STACK OF STUFF
GATHERING DUST
Y'GOT THERE! WHAT'S
THE DEAL, SAWYER?



HOWDY, SIMS.
SINCE WE CAN'T
GET CREDIT FOR
DEFECTIVE
ITEMS UNTIL THE
REPLACEMENTS
ARRIVE, WE'VE
BEEN STASHING
BUSTED STUFF
IN A CORNER
TIL WE GET THE
REPLACEMENTS.

YOU'RE **WRONG**,
BUDDY!

DURING GCSS-ARMY
WAVE 1 FIELDING, YOU
DON'T HAVE TO WAIT
FOR REPLACEMENT
ITEMS TO ARRIVE TO
RECEIVE TURN-IN CREDIT
FOR DEFECTIVE ONES.



REALLY?

YEP, YOU
SHOULDN'T
KEEP
DEFECTIVE
ITEMS
ANYWAY.

TURN 'EM IN
ASAP TO YOUR
SUPPLY SUPPORT
ACTIVITY, SO AMC
CAN REPAIR AND
RETURN 'EM ALL
TO INVENTORY.



HERE'S
WHAT YOU
NEED TO
DO TO GET
CREDIT IN
GCSS-ARMY.
AT THE
BOTTOM OF
YOUR D6Z/
TURN-IN
PAPERWORK,
WRITE
"REMOVE IW"
IN BOLD
BLACK
LETTERS.



WHAT'S
IW MEAN?

THAT'S THE
DEFAULT RETURN
ADVICE CODE FOR
NON-CREDITABLE
MATERIAL.
YOUR NOTE TELLS
THE SSA CLERK
TO **REMOVE** THAT
DEFAULT **IW** CODE
IN THE SYSTEM, SO THAT YOUR
UNIT GETS CREDIT FOR TURNING IN
DEFECTIVE ITEMS.



OH, AND REMEMBER
THAT REPLACEMENT ITEMS
NOT RECEIVED WITHIN
180 DAYS ARE SUBJECT
TO CREDIT REVERSAL,
WITH THE EXCEPTION OF
BACKORDERED, LONG-
LEAD TIME REPLACEMENT
ITEMS.

**KEEP A COPY OF YOUR
TURN-IN PAPERWORK!**



THANKS!
THIS WILL
REALLY
HELP US
CLEAN
UP THIS
PLACE!

AND BULK UP ARMY
INVENTORY, TOO.

IF YOU'VE GOT
QUESTIONS, THE GCSS-
ARMY WEBSITE OFFERS
A TON OF SUPPORT AT
<http://gcss.army.mil/>

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

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

DID YOU REMEMBER?

HEY!
DID YOU
READ MY
SIGN?

OOPS! KNEW
I FORGOT
SOMETHING!

Is the Master
Battery Disconnect
Turned OFF?

**TURN OFF
VEHICLE'S
BATTERY
DISCONNECT
SWITCH
AFTER
OPERATION!**

