



THE
PREVENTIVE
MAINTENANCE
MONTHLY

TB 43-PS-628, 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.

ISSUE 628 MARCH 2005



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

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USAMC LOGSA (AMXLS-AM)
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Redstone Arsenal, AL 35898-5000

Or e-mail to:

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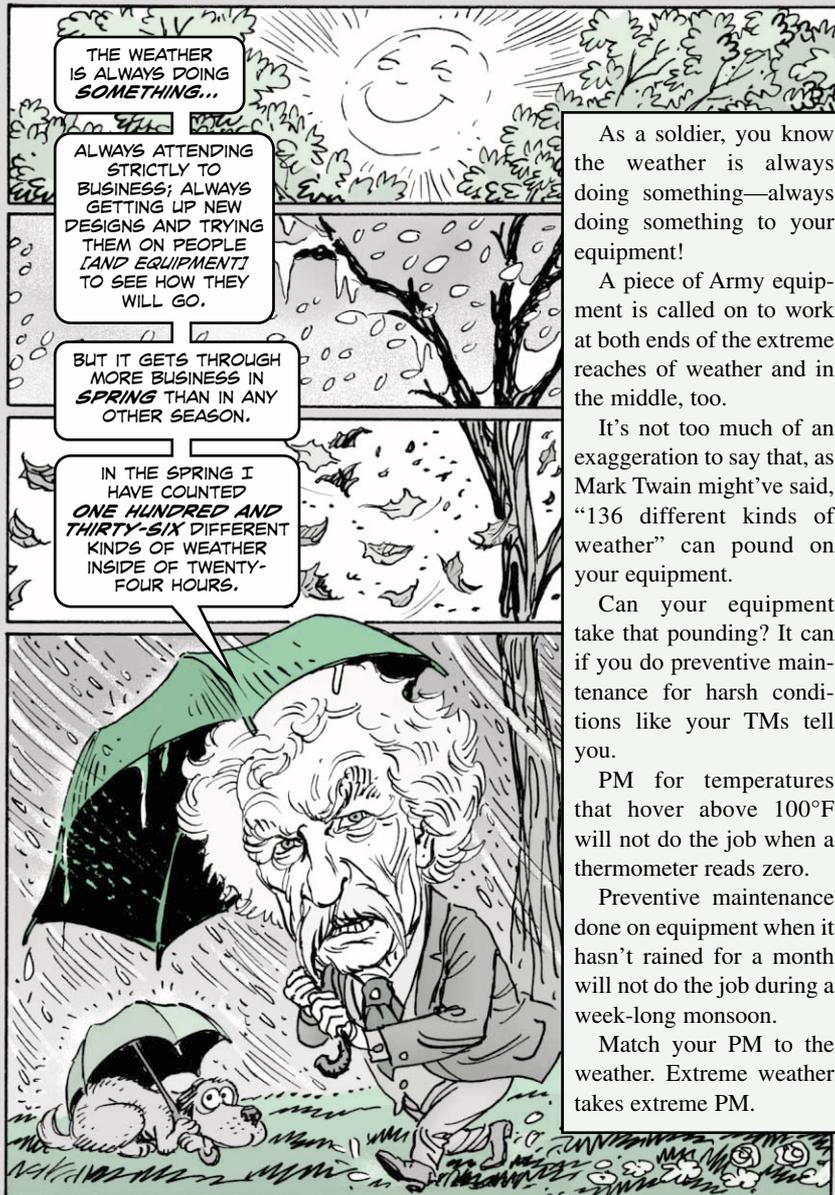
THE
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TB 43-PS-628

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IT'S A STORMY LIFE



THE WEATHER IS ALWAYS DOING SOMETHING...

ALWAYS ATTENDING STRICTLY TO BUSINESS; ALWAYS GETTING UP NEW DESIGNS AND TRYING THEM ON PEOPLE (AND EQUIPMENT) TO SEE HOW THEY WILL GO.

BUT IT GETS THROUGH MORE BUSINESS IN SPRING THAN IN ANY OTHER SEASON.

IN THE SPRING I HAVE COUNTED ONE HUNDRED AND THIRTY-SIX DIFFERENT KINDS OF WEATHER INSIDE OF TWENTY-FOUR HOURS.

As a soldier, you know the weather is always doing something—always doing something to your equipment!

A piece of Army equipment is called on to work at both ends of the extreme reaches of weather and in the middle, too.

It's not too much of an exaggeration to say that, as Mark Twain might've said, "136 different kinds of weather" can pound on your equipment.

Can your equipment take that pounding? It can if you do preventive maintenance for harsh conditions like your TMs tell you.

PM for temperatures that hover above 100°F will not do the job when a thermometer reads zero.

Preventive maintenance done on equipment when it hasn't rained for a month will not do the job during a week-long monsoon.

Match your PM to the weather. Extreme weather takes extreme PM.



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BUSTLE RACK CARGO NET



One of the last things a crewman wants to see is his vehicle's load scattered out-and-about on the trail.

So use NSN 3940-01-503-8210 to get an adjustable cargo net for the bustle rack on the M1-series tank. The black-nylon net hooks into place over the bustle rack, and easily adjusts for a snug fit.

A three-position molded nylon clamp locks a clinching rope, which goes around the entire net.

Each net comes with a storage bag and attachment instructions.



Tarp Tiedown Kit

A snug fit is what you need when it comes to securing a tarp on the tank's turret.

To help keep the tarp snug, use NSN 3990-01-512-9476 to get a universal quick tie-down kit. The kit includes a black 12-foot nylon rope with adjustable locking device. At one end of the rope is a powder-coated snap hook. A 2-in open hook attaches to the locking device with its push release button.

GIVE MINE BLADE BELTS A LIFT



YOU'D THINK IT WOULD TAKE A LOT TO BRING DOWN SOMETHING AS BIG AS YOUR TANK'S MINE CLEARING BLADE.

YOU'D BE WRONG, THOUGH.

A LITTLE SAND OR A PIECE OF GRAVEL THAT GETS CAUGHT UNDER THE LOWER EDGE OF THE LIFTING BELT IS ALL IT TAKES.

WITHOUT THE BELTS, THE BLADE WON'T RAISE OR LOWER. SO CHECK UNDER THE LIFTING BELTS AFTER EVERY OPERATION AND CLEAN OUT ANY ROCKS AND SAND YOU FIND.

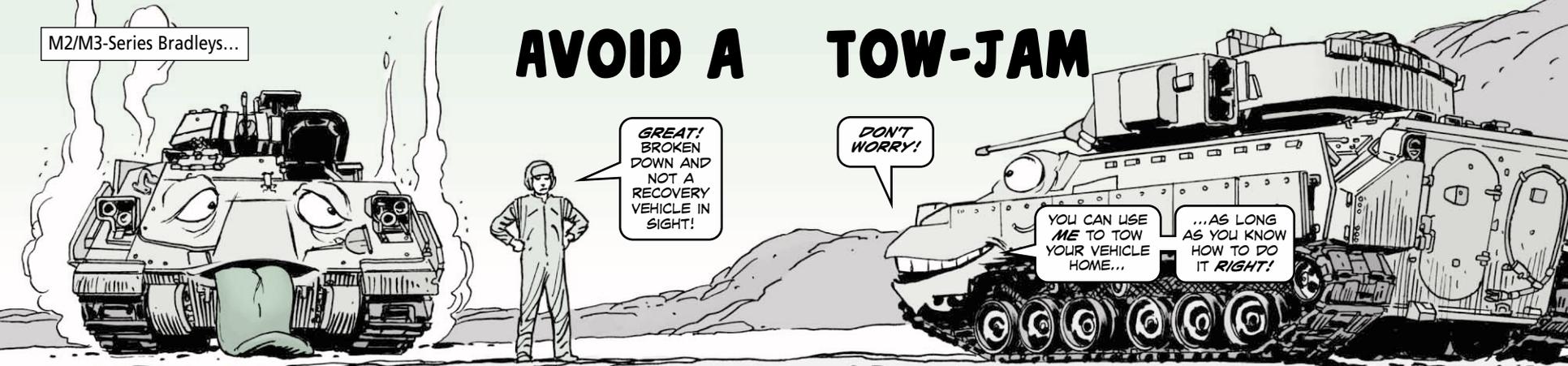
Clean out rocks, sand and other debris



THE SAND AND GRAVEL GRIND AWAY AT THE LIFTING BELT, CUTTING AND TEARING IT.

THEN REPLACE DAMAGED BELTS USING NSN 4020-01-289-8249.

AVOID A TOW-JAM



If your Bradley breaks down and there's no recovery vehicle available, you can still tow it home—as long as you have another Bradley.

Course there are a few things you need to know before you tow. First, you'll have to decide whether to use a tow bar or tow cables. Then you'll have to know how to use 'em. Follow this info to keep yourself out of a tow-jam:

Using a Tow Bar

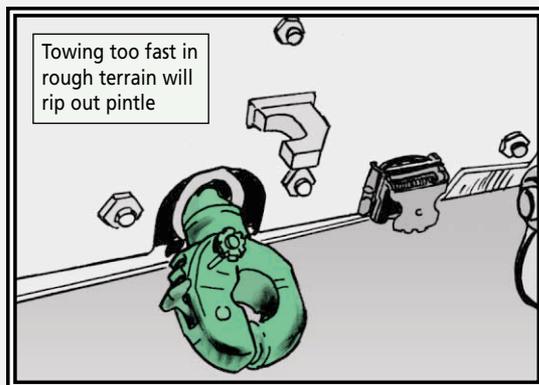
Towing a Bradley with a damaged transmission will completely ruin the final drives—and vice versa.

Your unit mechanic prevents that by removing the propeller shafts before towing. Unfortunately, that leaves the vehicle with no steering or braking control.

The tow bar gives you back some of that control. Since the bar is rigid, the vehicles won't collide every time you go down a slight hill. In fact, as long as you tow at slow, steady speeds, you should have no problems at all.

Faster speeds, especially over rough terrain, are another matter. That kind of treatment will bend and ruin the tow bar. It can even rip the tow pintle loose from the towing vehicle.

The maximum speed limit for smooth, even conditions is 15 mph. Never exceed 5 mph over rough terrain.



Using Tow Cables

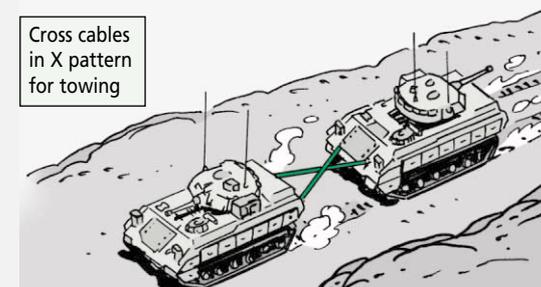
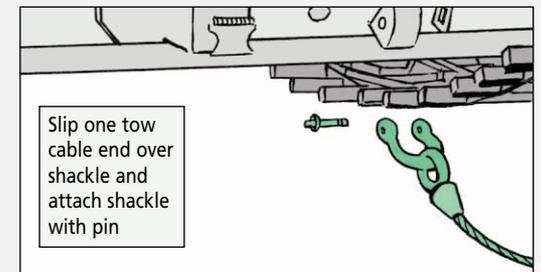
Unless the propeller shafts have been removed, the tow cables are the first choice for towing your Bradley.

Again, you need to take it slow and easy. The maximum speed limit for tow cables is 5 mph no matter what the terrain.

Also, because of the weight of what you're towing, it's possible for a tow cable to snap. It's a good idea to keep all hatches closed and make sure all soldiers are out of the immediate area before you start towing.

Make sure you hook the cables up right, too. Here's how:

1. Remove the four pins and shackles from the front of the disabled vehicle and the rear of the towing vehicle.
2. Loop one end of each tow cable through a shackle. Use the pins to connect the shackle to the towing vehicle.
3. Loop the opposite ends of each tow cable through the remaining two shackles. Before you hook the shackles to the front of the disabled Bradley, cross the cables into an X pattern.

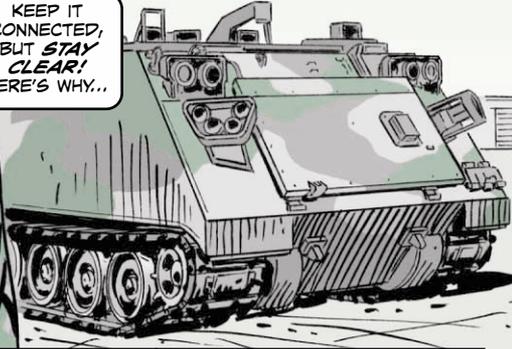


That improves steering control and allows you to make turns without dragging the disabled Bradley.

PIVOT STEERING REMINDER

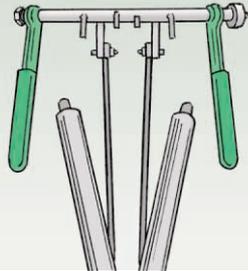
HANDS OFF WHEN IT COMES TO THE PIVOT STEERING ON YOUR CARRIERS.

KEEP IT CONNECTED, BUT STAY CLEAR! HERE'S WHY...



- Since the carriers no longer have swim capability, you don't need pivot steering for moving around in the water. That's always been the main use of pivot steering.
- U-joints and the transmission case break when pivot steering is used at more than 15 MPH or in any drive range other than 1-2. Even at speeds under 15 MPH, using pivot steering tears up U-joints, the transmission and differential.
- To prevent damage and injuries, some mechanics disconnect the pivot steering con-trols. That's no good! A loose horizontal rod can jam the steering laterals. Jammed laterals mean no control over the vehicle.

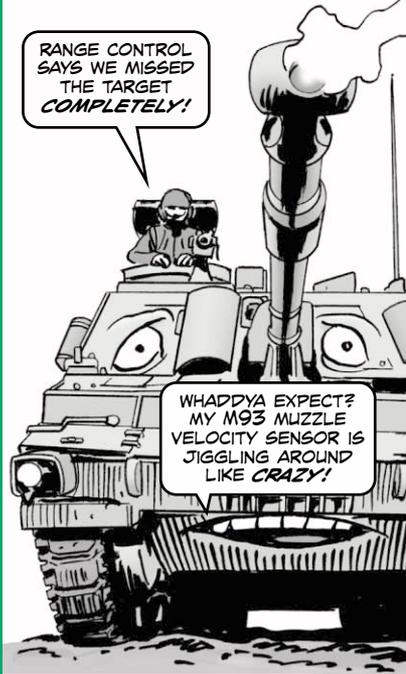
Leave pivot steering connected, but keep hands off!



SO YOURSELF AND OTHERS A BIG FAVOR... LEAVE THE PIVOT STEERING CONNECTED. THEN LEAVE IT ALONE.



TAKE JIGGLE OUT OF M93

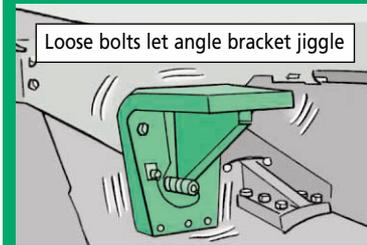


Mechanics, when you replace the Paladin's weather curtain, make sure you reconnect the curtain support, NSN 5340-01-371-3595, to the gun shield angle bracket, NSN 5340-01-369-4657, right.

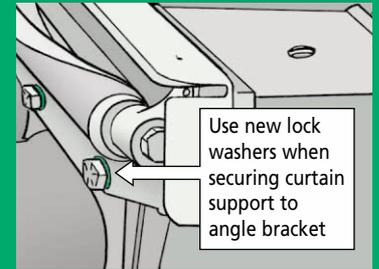
If you don't, the top of the angle bracket jiggles around. When the M93 muzzle velocity sensor is attached, the bracket won't provide a steady platform. That leads to inaccurate projectile velocity readings by the fire control system and missed targets.

Keep the support and bracket tight by always using new lock washers, NSN 5310-00-584-5272. Then snug down the bolts, NSN 5305-01-396-0996, nice and tight. That keeps the top of the angle bracket secure and the rounds on target.

Loose bolts let angle bracket jiggle



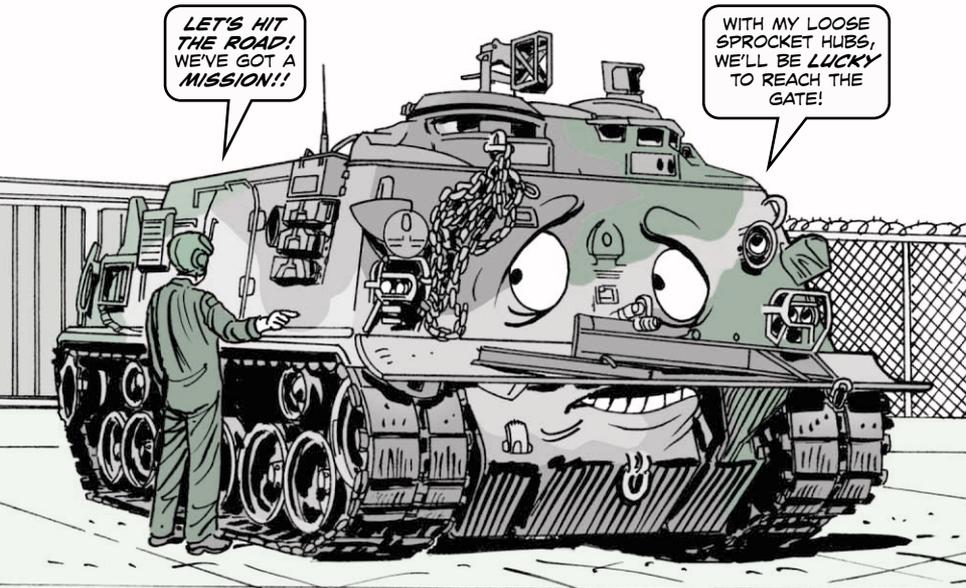
Use new lock washers when securing curtain support to angle bracket



Nice and Tight Is Right

LET'S HIT THE ROAD! WE'VE GOT A MISSION!!

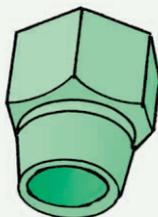
WITH MY LOOSE SPROCKET HUBS, WE'LL BE LUCKY TO REACH THE GATE!



Sprocket hubs work much better when they're **attached** to your M88A1 recovery vehicle, AVLB or armored vehicle-launched MICLIC. Keeping those hubs in place means making sure the mounting hardware stays nice and tight.

One way to keep the hubs tight is to replace the two-piece nut and bushing setup with dowels, NSN 5310-01-123-6782. Since the dowels are one-piece instead of two, there's less chance of their loosening.

One-piece dowels keep sprockets in place



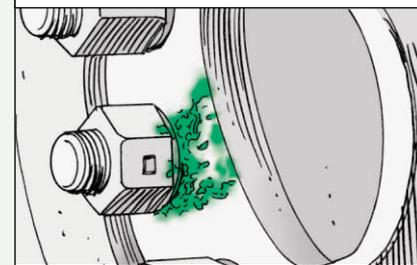
It's OK to use bushings on one sprocket and two-piece hardware on the other, but **never** mix the two on the same sprocket. The nuts will loosen and you'll lose the sprocket.

Switching over to the one-piece dowel eliminates another problem, too. You'll never have to worry about how to get a stuck bushing out of the sprocket again.

Right now, most mechanics remove all the hardware and let the weight of the sprocket pull the stuck bushings out. That's dangerous and hard on the sprocket.

Regardless of which type mounting hardware you use, be on the lookout for shiny spots or rust around the nuts. That signals loose fasteners. If you find any, tell your mechanic.

Look for shiny spots or rust around nuts



Combat Vehicles...

CAP OFF GREASE FITTINGS

WHAT A MESS! I'LL NEVER BE ABLE TO GET CLEAN LUBE INTO YOUR ROADWHEEL ARMS!

YEAH, IF ONLY YOU'D USED GREASE FITTING CAPS!



Getting all the dirt, mud, and sand off your combat vehicle's grease fittings before lubing is important, crewmen. Lubing a dirty grease fitting just forces dirt and sand in along with the grease.

Contaminated lube not only won't do its job, but the sand and grit can actually damage bearings and other components.

One way to keep dirt out of fittings is to keep 'em covered. Protective caps, NSN 4730-00-289-8148, do a great job of keeping grease fittings unclogged and dirt-free. So keep plenty on hand and use 'em when doing PMCS.

Even capped fittings should be wiped off before lubing, though. That provides extra insurance against contaminated grease.

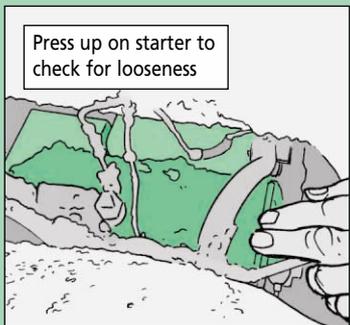
Stop Starter Fallout



A loose starter on your HMMWV is the start of a big problem. Eventually it's going to end up on the ground.

It's tough to tell if the starter's loose just by looking at it, though. Loose bolts may look tight. And it's hard to tell with a visual inspection if the mounting bracket's cracked.

Your best bet is to crawl under the vehicle and push up on the starter. If it moves, call in your mechanic to fix the problem.



Press up on starter to check for looseness



CAUTION! BE CAREFUL OF WIRING WHEN CHECKING THE STARTER SO YOU **DON'T** GET SHOCKED.

WEARING A RING OR WATCH IS A **BAD IDEA, TOO.**

HOW DRY'S THE AIR DRYER?



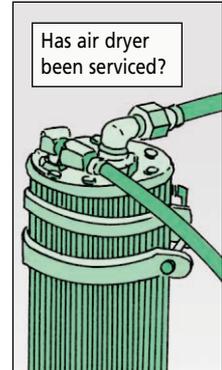
If you can't remember the last time you serviced the FMTV's air dryer, it's probably been way too long, mechanics.

If the paint hasn't been disturbed on the line fittings and canister hardware, chances are the air dryer isn't doing much drying anymore. That means water is in the air lines and tanks. Rust—and ice in winter—won't be far behind.

THE AIR DRYER SHOULD BE SERVICED EVERY 12 MONTHS OR 12,000 MILES, WHICHEVER COMES FIRST.

YOU'LL FIND THE SERVICE REQUIREMENT IN THE LUBRICATION ORDER, APPENDIX H, OF TMS 9-2320-365-20-5 AND 9-2320-366-20-5.

IT'S ALSO LISTED IN THE PMCS SECTION OF IETMS 9-2320-391-20 AND 9-2320-392-20.



Has air dryer been serviced?



Service air dryer annually and replace desiccant



Cover Your FMTV Cargo



WORD FROM THE DESERT IS THAT COMPONENTS FOR THE FMTV'S CARGO COVER KITS ARE HARD TO COME BY.

KEEP THIS LIST OF NSNs HANDY IN THE MOTORPOOL. YOU'LL NEED THEM TO ORDER COATED-POLYESTER CAB AND CARGO COVERS AND ACCESSORIES.



FIRST, HERE ARE THE COMPLETE COVER KITS...
HERE ARE THE PARTS FOR THE 2 1/2- AND 5-TON TRUCK'S SOFT-TOP CARGO COVER KITS...

Parts for the Soft-top Cargo Cover Kits

Item	NSN
Bow, front and rear	2540-01-466-1937
Strap tie-down, bow	5340-01-460-6627
Horizontal tube	4710-01-461-9274
Bow, soft-top center	2540-01-466-1938
Strap tie-down, bow	5340-01-460-6627
Strap support	5340-01-461-1429
Buckle spring	5340-00-297-6637
Socket, snap	5325-00-285-6250
Cap, snap	5325-00-359-6844
Stud, cap	5325-00-842-1879
Post, snap	5325-01-005-0600
Brace bow support	2540-01-461-0106
Tube, horizontal	4710-01-461-9189
Strap webbing (aluminum bows)	5340-01-451-8966
Strap webbing (tan)	5340-01-436-7619
Strap webbing (green)	5340-01-436-7620
Tube, metallic	4710-01-391-3192
Extension snap	5325-01-460-7431



Cargo Cover Kits

Vehicle	NSN 2540-01-	Color
2 1/2-Ton	459-0365	Arctic
	437-1463	Tan
	385-9462	Woodland
Vehicle	NSN 2540-01-	Color
5-Ton	459-6479	Arctic
	436-9658	Tan
	386-2952	Woodland

THESE ARE THE INDIVIDUAL CARGO COVERS...



...AND HERE ARE THE PARTS FOR THE 2 1/2- AND 5-TON TRUCK'S CARGO COVERS...

Parts for the Cargo Covers

Item	NSN
Ring dee	5365-01-438-2640
Socket, snap fastener	5320-00-285-6250
Cap, snap fastener	5325-00-359-6844
Stud, snap fastener	5325-00-842-1879
Post, snap fastener	5325-01-005-0600
Cord, fibrous	4020-01-475-9242
Cord assembly, elastic	4020-01-444-9193
Cord assembly, elastic	4020-01-386-8148
Cord assembly, elastic	4020-01-444-9254
Strap, tie-down	5340-01-460-6616

Cargo Covers		
Vehicle	NSN 2540-01-	Color
2 1/2-Ton	460-3487	Arctic
	460-2337	Tan
	387-3987	Woodland
Vehicle	NSN 2540-01-	Color
5-Ton	460-0898	Arctic
	460-1075	Tan
	472-5091	Green

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Tires, CV Joints & Seals



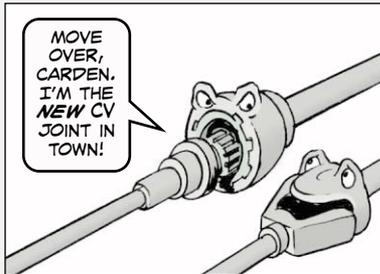
Unnecessary tire wear on M939-series 5-tonners in the “sandbox” has more than a few mechanics scratching their heads.

They’ve checked the CTIS and tire pressure, and it’s on the money. The front wheels disengage when the Front Wheel Drive Selector lever is moved to the OUT position.

And even after taking the truck in for a front end alignment, excessive tire wear is still a problem. What gives?

It could be the truck’s Carden-style CV joints are worn. They can cause premature tire wear, especially on older trucks.

To prevent that tire wear, you mechanics can put in more durable CV joints on both front drive shafts. NSN 2520-00-734-6985 gets the left side CV joint. NSN 2520-00-734-6984 gets the right side joint. The replacement CV joint is rubber-encased.



Axle Seals

There are two different seal assemblies for the M939A2-series truck’s front axle. Which seal is used depends on the CV joint.

The shaft diameter on the CV joints is different. That’s why different seals are found on the same model trucks.

By the way, you don’t need the thrust washer, item 9 shown on Page 3-426 of TM 9-2320-272-24-1 with the new CV joint.



- Seal assembly, NSN 4320-00-734-6951, is used on M939A2-series trucks with the newer rubber-encased CV joint. This same seal is also used on M939 and M939A1 trucks.
- Seal assembly, NSN 5330-01-271-9490, is used on all M939-series trucks with the original Carden-style CV joints.
- Seal, NSN 5330-01-271-9362, is used on M939A2-series trucks with the original Carden-style CV joint.
- Use the NSNs shown in Fig 236 of TM 9-2320-272-24P-1 for all other M939-series trucks.

Fuel Tankers...

USE REPLACEMENT CLAMP



The old-style ground wire clamps used on fuel tankers are known to fall apart from rust and broken springs.

If you have an old clamp that’s seen its last days, replace it with a more durable clamp that comes with NSN 5999-00-134-5844.

The new clamp is a snap to install. Remove the old clamp, snip off the wire eyelet if there is one, and fit the wire into the new clamp. Use a 3/32-in hex wrench from the No. 1 or No. 2 Common shop set to tighten the clamp’s handle screws to ground wire.

HEMTT...



BECAUSE THE HEMTT'S BATTERY BOX SITS DIRECTLY OVER THE VEHICLE'S AIR TANKS, IT'S A GOOD IDEA TO REIN IN BATTERY CORROSION BEFORE IT SPREADS.



Corrosion that drips out of the battery box splatters all over the air tanks. It eats away at the mounting hardware and corrodes fittings. You could lose air pressure for the brakes!

The best way to prevent battery corrosion from spreading is to use a battery mat, NSN 6160-01-389-1966, under the batteries **and** under the hold-down straps.

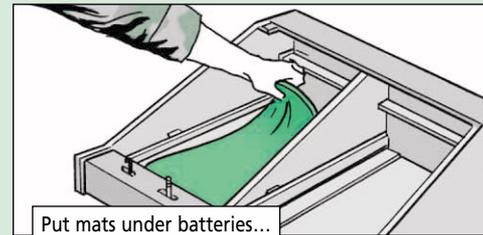
The mat comes in a 1x100-ft roll, so you can cut whatever size piece will do the job.

Covering the bottom of the box is a good start, but putting some pieces under the hold-down straps will soak up any boil-over from the battery caps before it has a chance to run down to the bottom of the box.

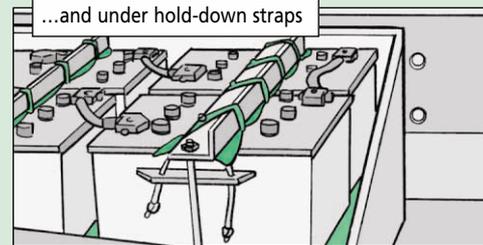
Use 6 1/2-in electrical ties to hold the mat on the straps. Get a bundle of 100 ties with NSN 5975-00-074-2072.



Corrosion from battery box eats away hardware and fittings



Put mats under batteries...



...and under hold-down straps

HEMTT, PLS...

CAB NET FOR SAFETY



OH, MAN! WHY HASN'T HE GOT HIMSELF A CAB NET!?



NSN 2590-01-522-8060 GETS AN ADJUSTABLE CARGO NET FOR THE HEMTT AND PLS CABS!



One of the last things a HEMTT or PLS driver wants to see is his vehicle's load scattered on the side of the road.

To keep cargo in place, use the adjustable cargo net, NSN 2590-01-522-8060, that fits above the vehicle's cab.

A three-position molded nylon clamp locks a clinching rope, which goes around the entire net. Each net comes with a storage bag and attachment instructions.

By the way, these nets will not fit on HEMTTs or PLSs that have up-armor kits installed on the vehicle.

ARE YOU AN ADAPTER?



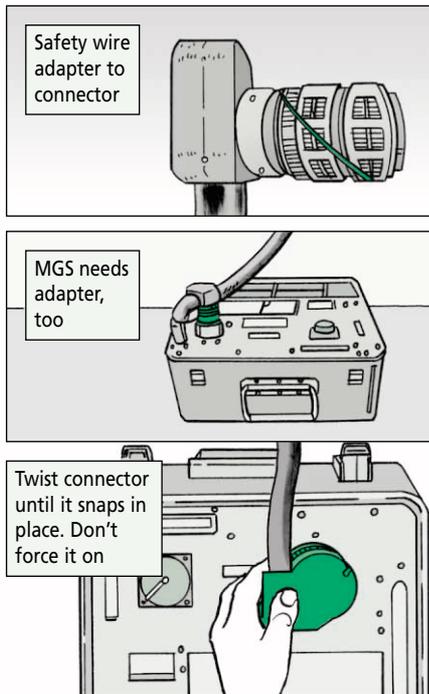
TOW and Bradley TOW units that don't use the 2W1 cable adapter are guaranteed to be making large withdrawals from their bank account.

The adapter, NSN 5935-01-117-3304, fits on both the 2W1 cable that goes to the MGS and on the MGS connector itself. When adapters are installed on both the 2W1 cable and the MGS connectors, neither connector can be damaged by a TOWster jamming the 2W1 on the MGS. What does that save a TOW unit? A 2W1 cable costs around \$1,400. An MGS interface board goes for about \$2,000. The adapter costs \$103.

If you're not that worried about money, then think mission. If the 2W1 or MGS is knocked out, so is TOW firing.

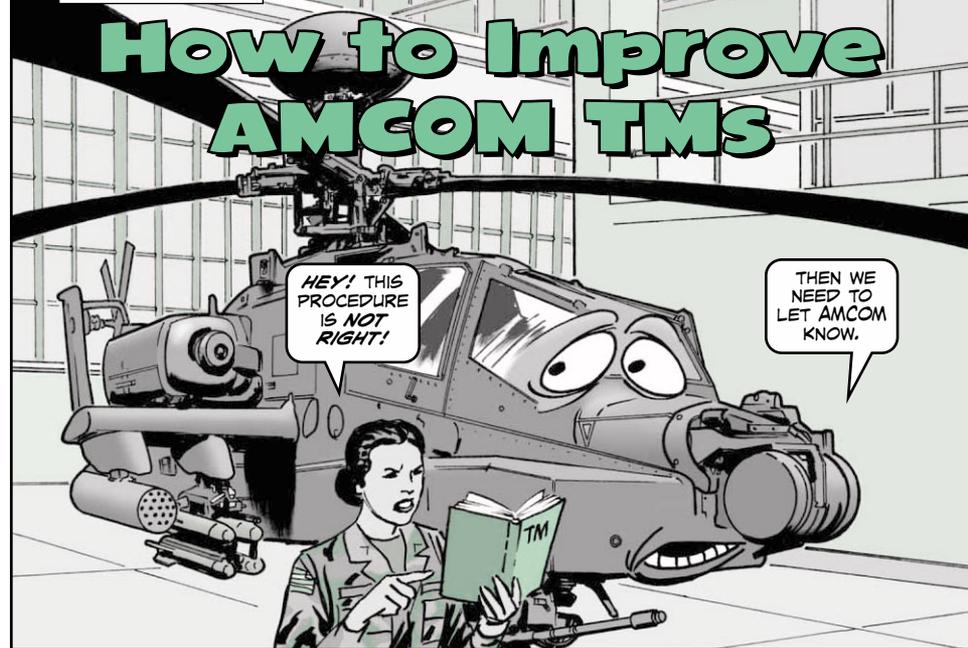
So before you leave the motor-pool, make sure all your unit's 2W1 cables have the adapter lockwired on. And make sure adapters are installed on the MGSs too. Since the adapters will disappear over time, it's a good idea to order backups.

Help the adapters last by remembering that when the 2W1 connector is aligned correctly with the MGS connector it slides into place easily. The yellow guide lines on both connectors are only rough guides. After you match up the guide lines, you must twist the cable connector until you feel it snap in place. Then push the connector down to lock it on. If you have to force the cable connector down, you don't have it aligned.



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How to Improve AMCOM TMS

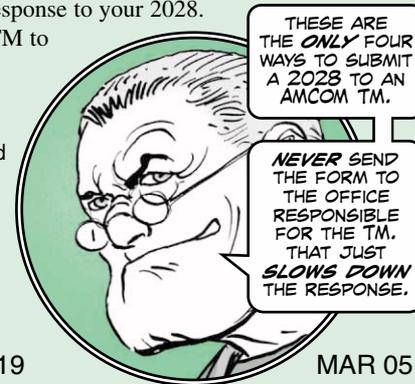


If you think you've found a mistake in a missile or aviation TM or you have a suggestion for improving a TM procedure, the U.S. Army Aviation and Missile Command (AMCOM) would like to hear from you. Feedback from equipment operators and maintainers helps AMCOM put out clear, accurate TM information.

A DA Form 2028 is how AMCOM wants to hear from you. The easiest way to submit a 2028 is via the Internet at <https://amcom2028.redstone.army.mil>. The website lets you track AMCOM's response to your 2028.

Or you can look in the back of your TM to find a blank 2028. Then either...

- mail it to
Commander
U.S. Army Aviation and Missile Command
ATTN: AMSAM-MMC-MA-NP
Redstone Arsenal, AL 35898-5000
- fax it to DSN 788-6546/
(256) 842-6546
- or email it to
2028@redstone.army.mil



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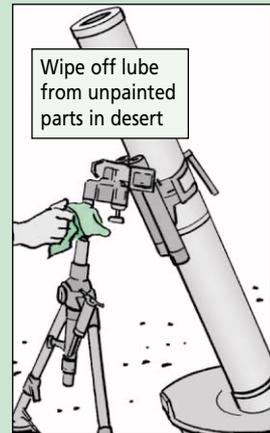
WHAT'S THE MATTER WITH MY MORTAR?

YOU MAY SOON BE ASKING "WHAT'S THE MATTER WITH MY MORTAR" IF YOU FORGET M120/M121 MORTAR PM THAT MATTERS. FOR INSTANCE...

Lubrication—Of course, you need to follow the lubrication chart on Page 3-4 in TM 9-1015-250-10. But remember when you squirt grease in the crank handles for the traversing, elevation, and cross leveling assemblies, more is not better. If you squirt and squirt grease in the handles, they can become difficult to turn. Give the handles a couple of squirts each and work the handles all the way in and out to spread the grease. Do that weekly.



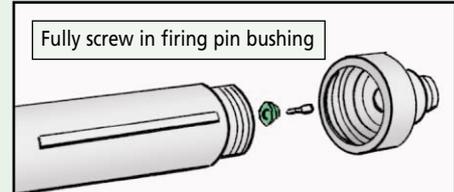
In the desert, don't lube all the unpainted surfaces of the bipod though Page 3-2 says so. Corrosion is not the problem in the desert, it's sand. Lube will attract sand, which will chew up the bipod's moving parts and seals. Wipe off all lube from the outside of the bipod in the desert.



Test the buffer—If the buffer binds, the mortar jumps more and that can hurt accuracy. Pull down the buffer as far as possible using the two housing tubes as hand-holds. Let it go. If the buffer doesn't smoothly return to its original position, something is wrong. Tell your armorer.



Fully screw in the firing pin bushing—After you take apart the breech to clean it with dry cleaning solvent, remember to screw in the firing pin like it says on Page 3-27 when you put the breech back together:



Tighten the bushing hand tight. Then put on the mortar's socket wrench and give the wrench handle one hand tap to fully tighten the bushing. If the bushing is loose, it can ride up above the firing pin. Then the round won't ignite.



Mounting the 120mm Mortar

Dear MSG Half-Mast,
I need info on mounting the M121 120mm mortar to the side of the M1064 mortar carrier. I can't find anything in TM 9-2350-277-24P on the mounting bracket.

SSG M. P.



Dear Sergeant M.P.,

The TM does come up short on mounting brack info. Here's what you need for mounting the M121:

Order the lever release bracket with NSN 5340-01-285-0619. To mount the lever release bracket, you'll need a lock washer, NSN 5310-00-584-5272, and hex head screw, NSN 5305-00-071-2071.

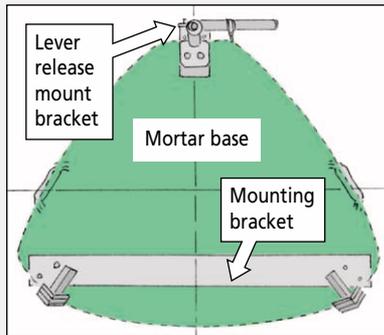
Order the lower mounting bracket with NSN 5340-01-286-0470. To mount it, you'll need a lock washer, NSN 5310-00-584-5272; flat washer, NSN 5310-00-184-8992; and hex head screw, NSN 5305-01-325-8388.

There are no repair parts for the lower mounting bracket, but there are for the lever release bracket:

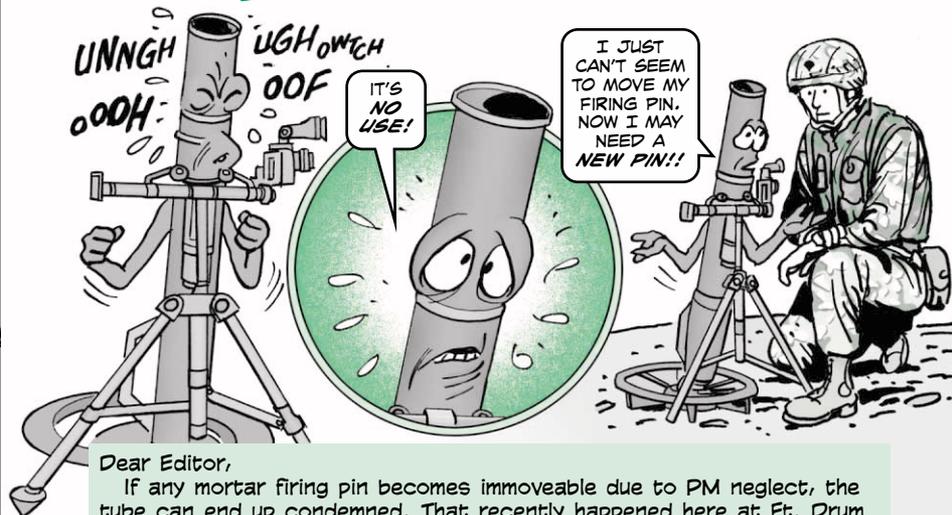
- locking pin assembly, NSN 5315-01-386-3977
- manual lever, NSN 5340-01-285-0135, which includes a flat washer, NSN 5310-01-292-7760; locking washer, NSN 5310-01-285-0128; and locking nut, NSN 5310-01-285-0130
- non-metallic bumper, NSN 5340-01-285-7512, which includes spacer plate, NSN 5365-01-292-7763; flat washer, NSN 5310-01-285-0123; and hex socket screw, NSN 5305-01-285-0116

The angle bracket for the lever release bracket is not available. You will need to order the next higher assembly, the rim latch, NSN 5340-01-285-0619.

Half-Mast



Firing Pin Needs to Move

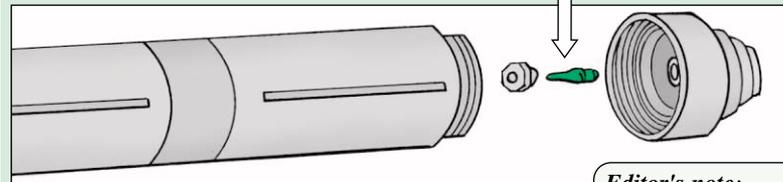


Dear Editor,

If any mortar firing pin becomes immovable due to PM neglect, the tube can end up condemned. That recently happened here at Ft. Drum when we had to condemn a 60mm tube because its firing pin had gone so long without cleaning that it had frozen with corrosion and carbon. A new tube isn't cheap.

Just doing the quarterly PMCS called for in each mortar's -23 TM will keep firing pins moving. PMCS directs that the firing pin, firing pin guide, and firing pin hole be inspected and then cleaned with RBC quarterly. If you fire your mortars frequently, then you should be servicing the firing pin more often than quarterly.

At least quarterly, take tube apart and clean firing pin with RBC



Don't let your mortars sit neglected for months in the arms room. They deserve better.

Robert Foley
TACOM Logistics Assistance Representative
Ft. Drum, NY

Editor's note:
Good advice, Robert. Let's keep those mortar firing pins moving, armorers.



Dozers are racking up more hours of operation as they continue to move sand and dirt around the worksite. Follow the word in TM 5-2410-237-10 and ponder these transmission tips to keep your dozer mission-ready.

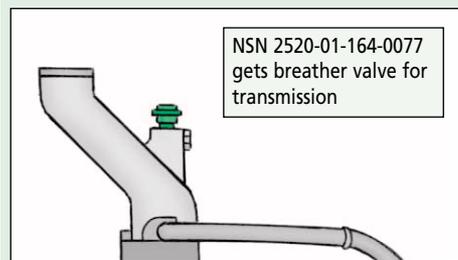
Breather Valve Reminder

One breather valve that's overlooked is the one for the dozer's transmission—it's under the operator's seat.

Two things happen when the transmission's breather valve is clogged:

- Pressure builds in the transmission, causing the seals to blow. And when the seals go, the lube goes too. No lube means no gears.
- Pressure buildup also creates a vacuum in the transmission. When that happens, the transmission stalls or locks up. You can't move!

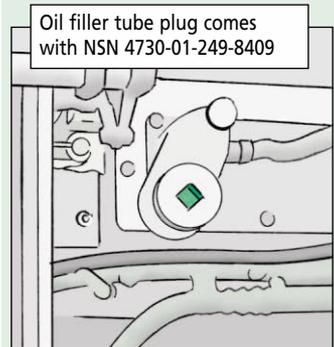
So keep the breather valve clean. It's simple. Just tap down on the valve to loosen any dirt stuck inside. If the valve won't tap or pull up, have your mechanic replace the valve with NSN 2520-01-164-0077. It's shown as Item 9, Fig 83 of TM 5-2410-237-24P.



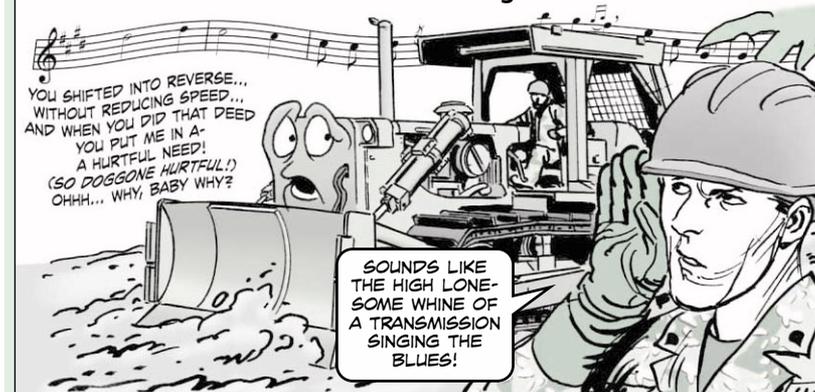
Snug Filler Plug

Vehicle vibration causes the plug (cap) in the transmission's oil filler tube to come loose. A missing plug means dirt, dust and water can get into the dozer's transmission—not good.

Before the day's run, make sure the plug is snug. Do not stuff a rag or anything else in the filler tube if the plug is missing. Instead, have your mechanic replace the plug with NSN 4730-01-249-8409. It's shown as Item 7, Fig 82 of TM 5-2410-237-24P.



Before Shifting

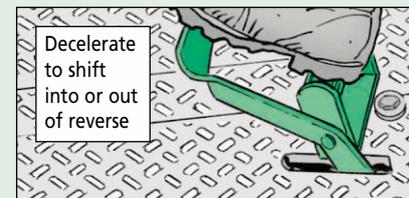


You pushed a load of sand out of the way and you're heading back for more. But when you slammed those gears into reverse and moved out, you heard a mournful whine. That's your dozer's transmission singing the blues.

Every time you shift in or out of reverse without reducing engine speed you put unnecessary strain on your dozer's transmission. That's bound to shorten its life.

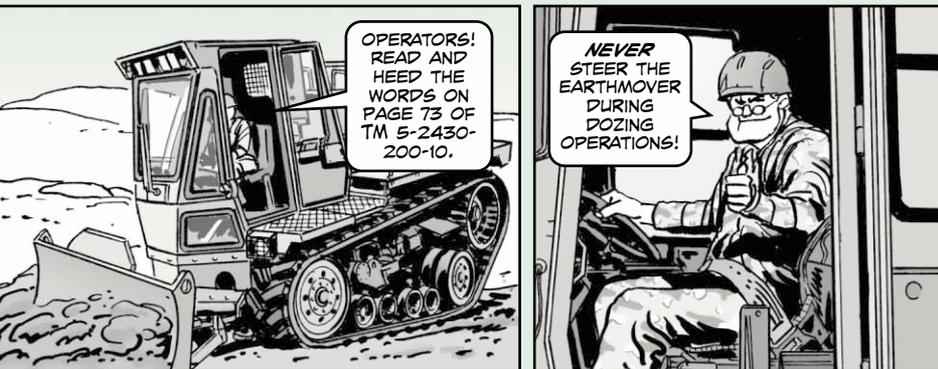
Here's how to change that tune:

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



DEUCE...

NO STEERING WHILE DOZING!



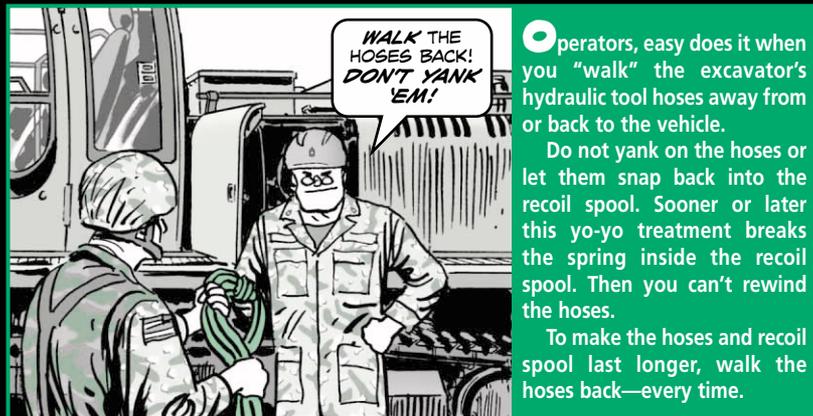
Turning the wheel while dozing puts so much stress on the track that it can be thrown. Thrown track can crack road wheels, bend road arms and rip actuators from the hull.

And forget about sharp turns during other operations. You can throw a track that way, too.

If you have to make a turn while pushing a load, use the excavator's tilt cylinders, but not the steering wheel. That's hands off!

HYEX...

Walk the Hoses



Operators, easy does it when you "walk" the excavator's hydraulic tool hoses away from or back to the vehicle.

Do not yank on the hoses or let them snap back into the recoil spool. Sooner or later this yo-yo treatment breaks the spring inside the recoil spool. Then you can't rewind the hoses.

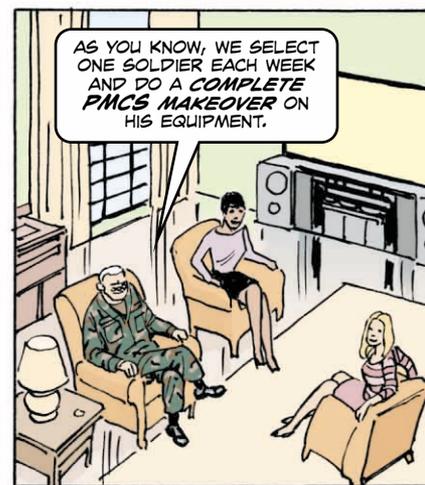
To make the hoses and recoil spool last longer, walk the hoses back—every time.

PS 628

26

MAR 05

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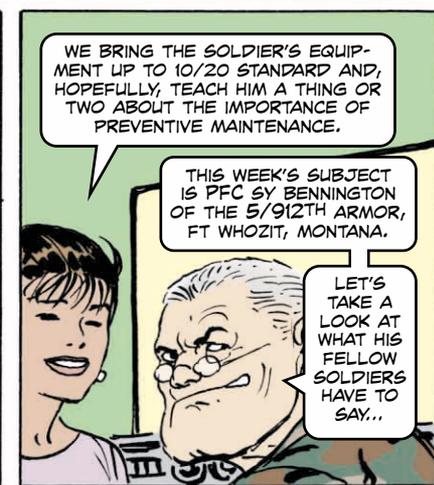


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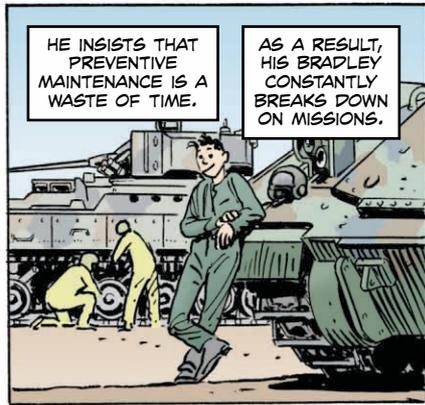
MAR 05

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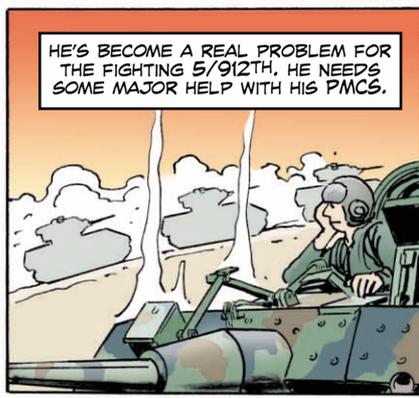


AROUND HERE, PRIVATE SY BENNINGTON IS KNOWN AS *SLIDE-BY SY*.

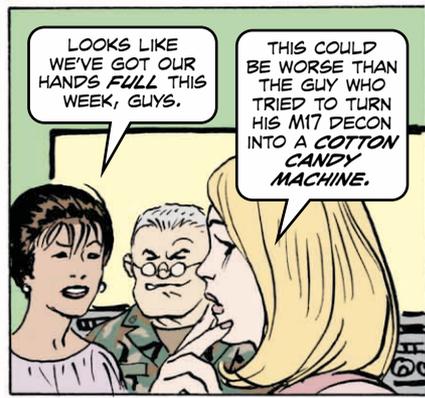


HE INSISTS THAT PREVENTIVE MAINTENANCE IS A WASTE OF TIME.

AS A RESULT, HIS BRADLEY CONSTANTLY BREAKS DOWN ON MISSIONS.



HE'S BECOME A REAL PROBLEM FOR THE FIGHTING 5/912TH, HE NEEDS SOME MAJOR HELP WITH HIS PMCS.



LOOKS LIKE WE'VE GOT OUR HANDS *FULL* THIS WEEK, GUYS.

THIS COULD BE WORSE THAN THE GUY WHO TRIED TO TURN HIS M17 DECON INTO A *COTTON CANDY MACHINE*.



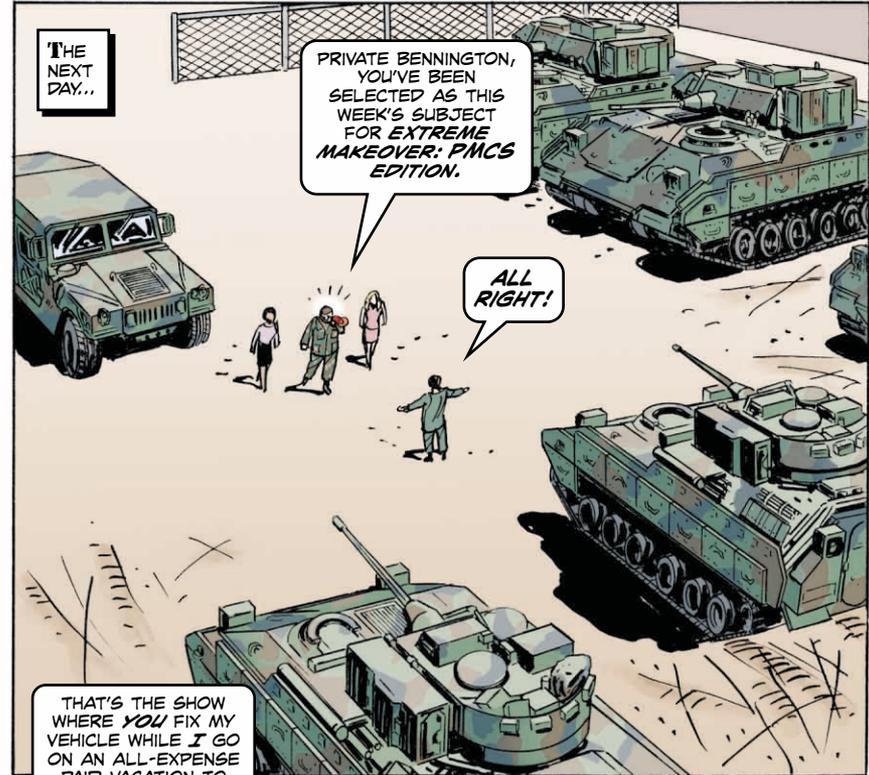
IT SOUNDS *TOUGH*, ALL RIGHT.

WE *GOTTA* TRY TO STRAIGHTEN HIM OUT. *RIGHT?*

RIGHT!



STAY TUNED TO SEE IF PRIVATE BENNINGTON CAN *SLIDE BY* THIS TIME.



THE NEXT DAY...

PRIVATE BENNINGTON, YOU'VE BEEN SELECTED AS THIS WEEK'S SUBJECT FOR *EXTREME MAKEOVER: PMCS EDITION*.

ALL RIGHT!

THAT'S THE SHOW WHERE *YOU* FIX MY VEHICLE WHILE *I* GO ON AN ALL-EXPENSE PAID VACATION TO SOME EXOTIC LOCATION, ISN'T IT?

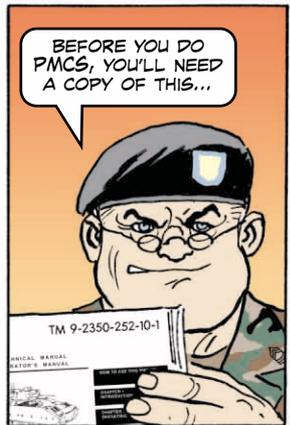


WHERE AM I GOING? HAWAII? VEGAS? I HEAR TAHITI'S NICE THIS TIME OF YEAR.



SORRY, PRIVATE. *OUR* SHOW'S A LITTLE MORE *LOW BUDGET* THAN THAT. BESIDES, YOU WOULDN'T LEARN MUCH ABOUT PMCS IF YOU WEREN'T HERE, WOULD YOU?

LET'S GET STARTED.

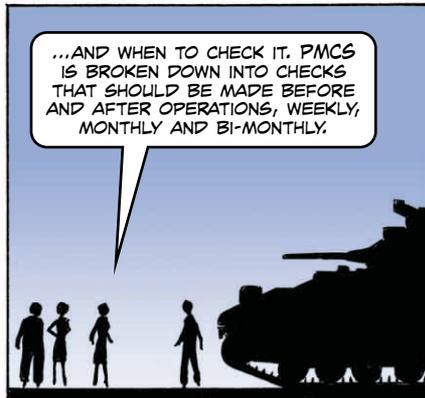


BEFORE YOU DO PMCS, YOU'LL NEED A COPY OF THIS...

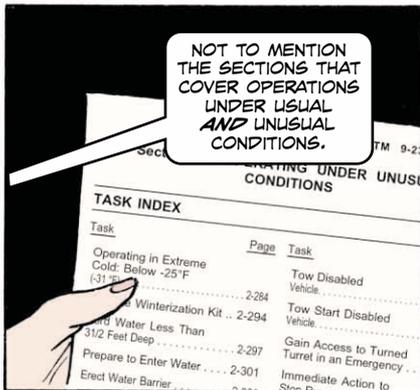
TM 9-2350-252-10-1



...THE OPERATOR'S MANUAL. IN IT YOU'LL FIND STEP-BY-STEP INSTRUCTIONS ON WHAT TO CHECK...



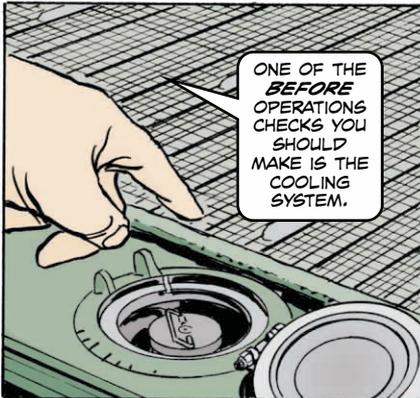
...AND WHEN TO CHECK IT. PMCS IS BROKEN DOWN INTO CHECKS THAT SHOULD BE MADE BEFORE AND AFTER OPERATIONS, WEEKLY, MONTHLY AND BI-MONTHLY.



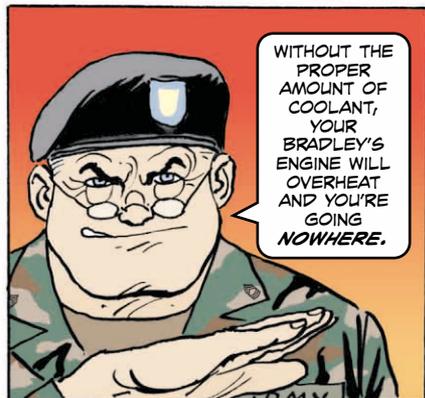
NOT TO MENTION THE SECTIONS THAT COVER OPERATIONS UNDER USUAL AND UNUSUAL CONDITIONS.



THERE'S JUST TOO MUCH THERE TO MEMORIZE IT ALL. TRY AND YOU'LL WIND UP FORGETTING SOMETHING.



ONE OF THE **BEFORE** OPERATIONS CHECKS YOU SHOULD MAKE IS THE COOLING SYSTEM.



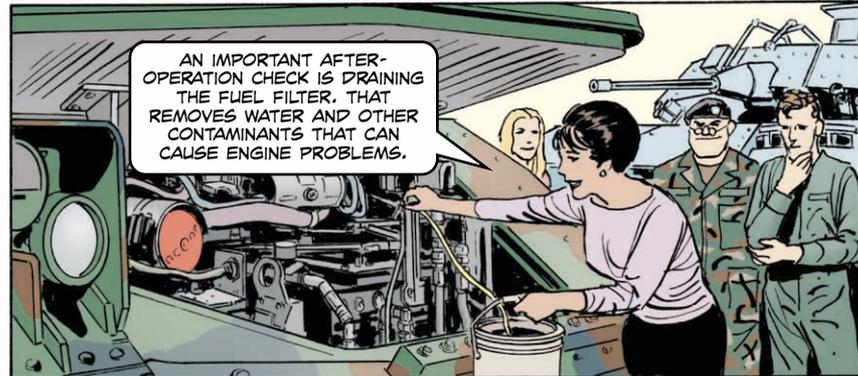
WITHOUT THE PROPER AMOUNT OF COOLANT, YOUR BRADLEY'S ENGINE WILL OVERHEAT AND YOU'RE GOING **NOWHERE.**



WHILE YOU'RE CHECKING THE COOLANT LEVEL, DON'T FORGET TO GIVE THE RADIATOR CAP A GOOD LOOK, TOO.



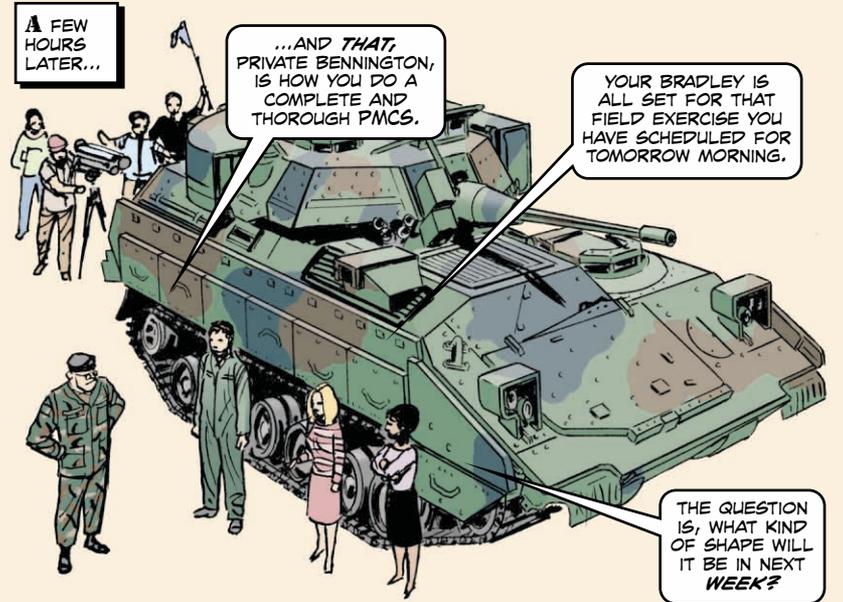
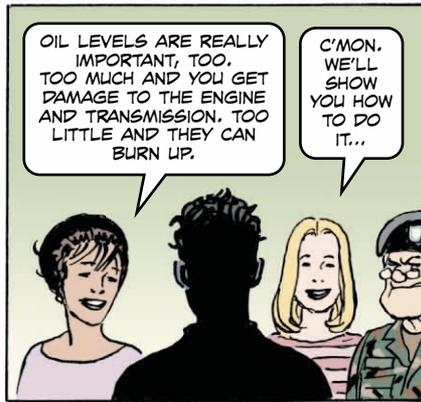
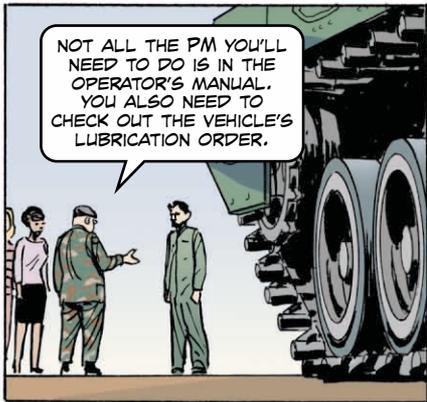
THE GASKET SHOULD BE FREE OF NICKS AND CUTS THAT ALLOW COOLANT TO ESCAPE. AND MAKE SURE THE CHAIN IS FIRMLY ATTACHED TO THE CAP SO IT DOESN'T GO WANDERING.

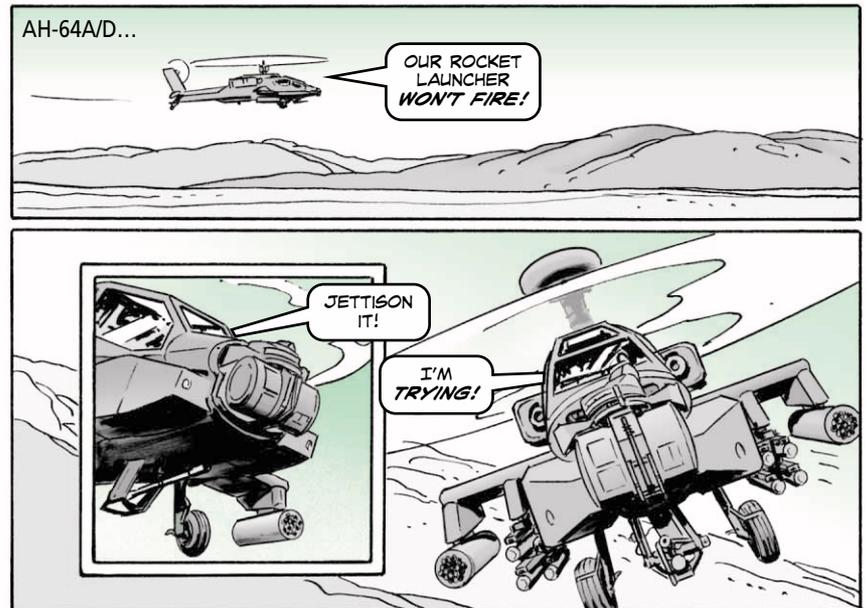
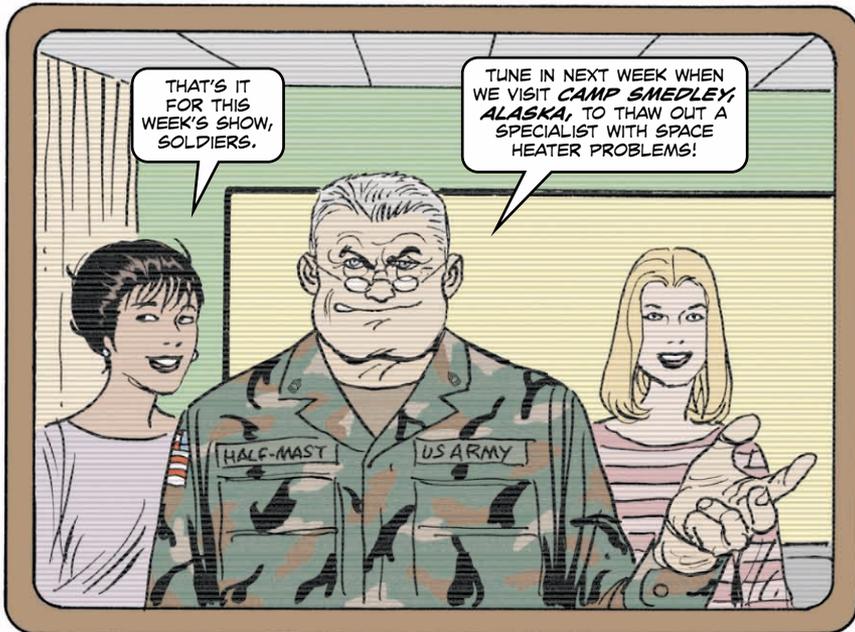


AN IMPORTANT AFTER-OPERATION CHECK IS DRAINING THE FUEL FILTER. THAT REMOVES WATER AND OTHER CONTAMINANTS THAT CAN CAUSE ENGINE PROBLEMS.

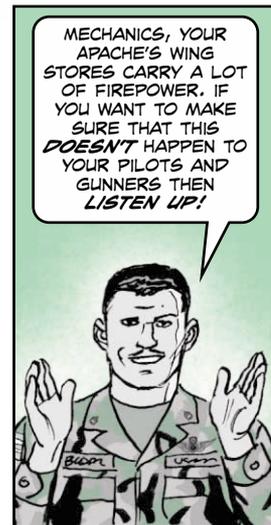


HEY, THIS DOESN'T SEEM SO HARD. LEMME TRY ONE.





WING STORES COVER UP



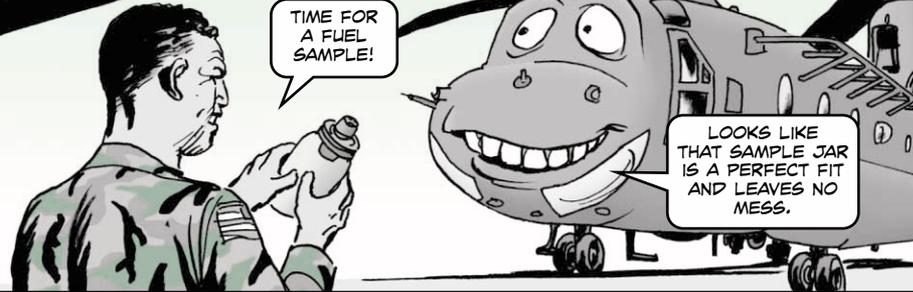
IF YOU WANT THE HELLFIRE MISSILES AND THE 2.75-IN ROCKET LAUNCHERS TO WORK FOR YOU, KEEP THE CONNECTORS COVERED WHEN THE ARMAMENT CANNON PLUGS ARE DISCONNECTED. USE PLASTIC COVERS OR PLASTIC BAGS.

OTHERWISE, SAND, DIRT AND CRUD GET INSIDE THE CONNECTOR HOLES AND SHORT OUT THE WEAPON SYSTEMS. IT MAY EVEN PREVENT THE CREW FROM BEING ABLE TO JETTISON A MALFUNCTIONING WEAPON IF NECESSARY.



IF THE COVERS HAVE BEEN OFF, CLEAN THE CONNECTORS WITH **DENATURED ALCOHOL**, NSN 6810-01-220-9907 AND A **SWABBING BRUSH**, NSN 7920-00-514-2417.

SLOPPY SAMPLING SLASHED



Taking a fuel sample on a Chinook can be a messy job, mechanics.

But before you start grabbing things from bench stock to use to get a sample, here's a simple tool that lets you open the drain, direct the fuel into your sample jar and close the drain using one hand.

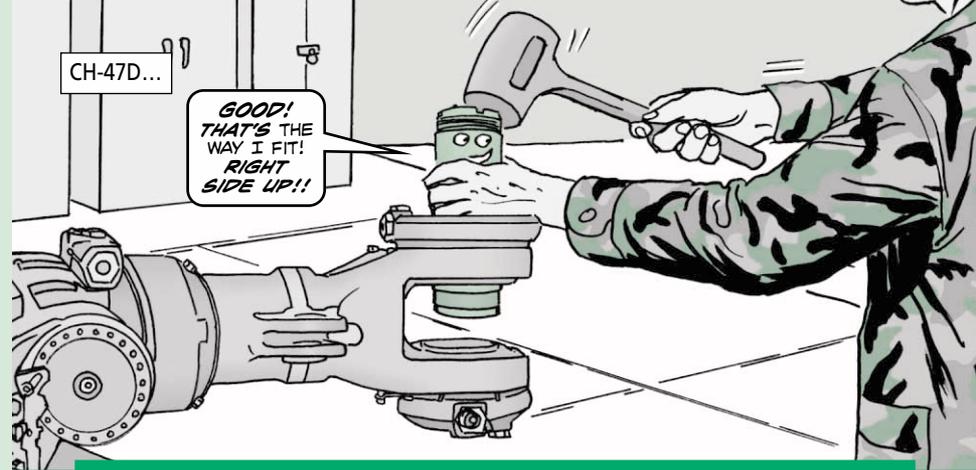
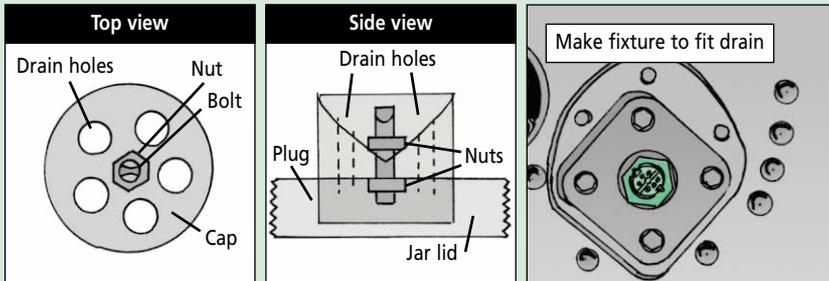
You'll need to locally purchase a sample jar, then order these parts:

Item	NSN
Plug	4730-00-540-2232
Cap	4730-00-554-8917
Bolt	5306-00-687-7570
Nuts (2)	5310-00-877-5796

Here are the plans to make it:

1. Thread a nut on the bolt and run it down all the way.
2. Cut a screwdriver tip slot on the end of the bolt.
3. Remove the nut to clean the bolt threads, then run the nut down all the way again.
4. Drill a 1/4-in hole in the center of cap, plug and jar lid.
5. Put the bolt through the hole in the plug, then through the jar lid (from bottom), and then through the cap. Put the other nut on the bolt and run it down tight.
6. Drill five drain holes through the cap, plug and bolt around the bolt.

Put the device on the sampling jar and you're done and ready to take a sample.

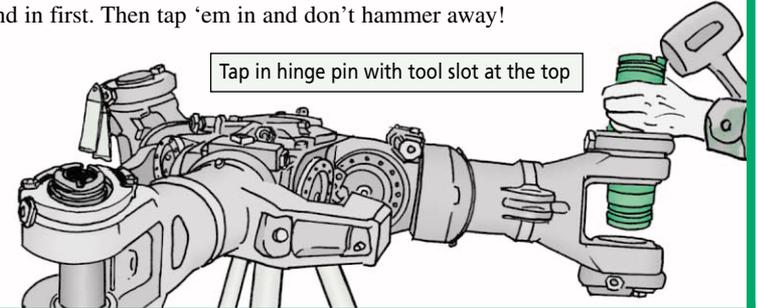


Bangin' in the Hinge Pins

New Chinook mechanics, in case you haven't noticed, vertical hinge pins on Chinook rotor heads have a top and a bottom. Putting them in upside down and tapping away can ruin a good hinge pin.

It doesn't take much to get a hinge pin stuck, crush the seals or damage the hinge.

When working on Chinook rotor heads, remember that the tool slots in the pin are at the top and that the bottom has a slight taper. Eyeball it to make sure you put the right end in first. Then tap 'em in and don't hammer away!



AS A NEW MECHANIC, YOU'LL FIND THERE'S A LOT TO LEARN ABOUT HELICOPTER PM!



I'M TEACHING HIM THE ROPES, SERGEANT BLADE.

ESPECIALLY ABOUT THOSE ROTOR HEAD HINGE PINS!

BACK AGPU UP RIGHT



Almost every crew chief or mechanic has used an aviation ground power unit (AGPU). So think back. Did the AGPU have a bent or damaged drawbar, tongue assembly and axle, or even a broken pivot bolt?

Some believe that sharp vehicle turns made at less than the prescribed radius is the problem. Others believe that the pintle of the tow vehicle is too tall and it holds the drawbar up at too sharp an angle or that careless backing is the cause.

There seem to be all kinds of causes, but the best solution to this problem is simple—**Never back the AGPU with any vehicle!**

The AGPU is self-propelled, but it's quicker to pull it with a tug to those distant aircraft on the flight line. When you get to the bird, always maneuver and position the AGPU using onboard power. When the AGPU must be backed up, the operator should do it using AGPU power—not a vehicle.

As a reminder, stencil a **CAUTION-DO NOT BACK WITH VEHICLE** on the front, upper-left side of the AGPU on the opposite side from the fire extinguisher. This will remind tug drivers not to back up!

Black Hawk T700 Engines Needed!

Mechanics, T700 engines are in short supply! But you can help. Turn in all unserviceable engines right away. And then the supply system can get them repaired and have serviceable engines on hand to keep your aircraft mission ready. Please expedite unserviceable engines through normal retrograde channels.



TOO HOT TO HANDLE

A Mechanic, a day in the desert is really hot, sometimes limiting maintenance that can be done. Aircraft parts, tools and the airframe exposed to the sun can get hot enough to fry you.

So when you're doing split maintenance operations around the clock, use as much protective clothing as possible.

If you don't, you could suffer burns to your skin when grabbing a tool or touching a hot airframe or aircraft part.

And make sure you take plenty of breaks in extreme heat and drink plenty of water.

IHADSS HELMET TEST SET?

Dear Sergeant Blade,

I'm an ALSE tech on the Apache IHADSS helmets. Are there any approved AVUM test sets for the IHADSS helmet?

SGT J. B. MAARNG

Dear SGT J. B.

There is no unit test set for the IHADSS helmet. The only testing that's done is to boresight the helmet to the aircraft and to the 30mm gun with the helmet display unit (HDU) attached, like TM 9-1270-223-23&P says. Unit maintenance and PMCS for your IHADSS helmet is just what's listed in the TM.

Rotor Blade



Check TM 9-1270-223-23&P for info on helmet care



Say 'Goodbye' To COMSEC Publication Index

DA Pam 25-35, *Index of Communications Security (COMSEC) Publications*, has been rescinded. It is no more!

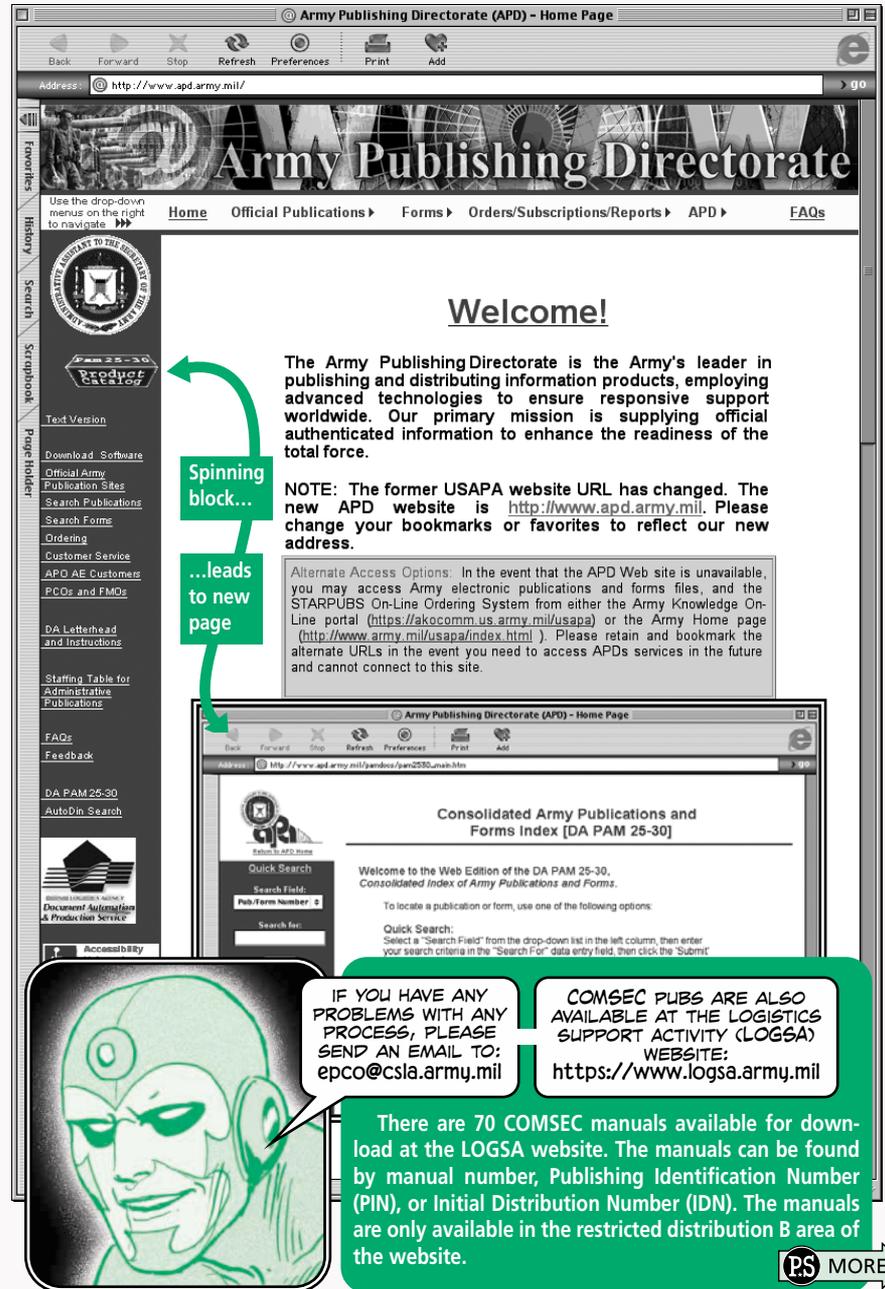
All of the Army's Communications Security Logistics Activity (CSLA) COMSEC-equipment TMs have been transferred to DA Pam 25-30, *Consolidated Index of Army Publications and Forms*. You can find DA Pam 25-30 at the Army Publishing Directorate (APD) website:

<http://www.apd.army.mil>



HERE'S WHAT YOU MUST NOW DO TO ORDER COMSEC EQUIPMENT PUBLICATIONS IF YOU DO NOT KNOW THE TM NUMBER...

1. At the APD website, go to the spinning block that says, "Pam 25-30" and click on it.
2. Under **Quick Search**, press the Search Field down-arrow and scroll down and pick title.
3. In the **Search for** block enter the equipment name and hit the **Submit** block.
4. A results screen will appear. On the left side of the screen, click the TM that contains the operator or maintenance TM you need.
5. If you click on the TM number you desire, another screen, **Details**, will appear with all of the data pertaining to the TM. This screen contains all the info a pubs clerk needs for ordering any COMSEC-equipment TM.



Welcome!

The Army Publishing Directorate is the Army's leader in publishing and distributing information products, employing advanced technologies to ensure responsive support worldwide. Our primary mission is supplying official authenticated information to enhance the readiness of the total force.

NOTE: The former USAPA website URL has changed. The new APD website is <http://www.apd.army.mil>. Please change your bookmarks or favorites to reflect our new address.

Alternate Access Options: In the event that the APD Web site is unavailable, you may access Army electronic publications and forms files, and the STARPUBS On-Line Ordering System from either the Army Knowledge On-Line portal (<https://akocomm.us.army.mil/usapa>) or the Army Home page (<http://www.army.mil/usapa/index.html>). Please retain and bookmark the alternate URLs in the event you need to access APDs services in the future and cannot connect to this site.

Spinning block...

...leads to new page

HERE'S WHAT YOU MUST NOW DO TO ORDER COMSEC EQUIPMENT PUBLICATIONS IF YOU DO NOT KNOW THE TM NUMBER...

IF YOU HAVE ANY PROBLEMS WITH ANY PROCESS, PLEASE SEND AN EMAIL TO: epco@csla.army.mil

COMSEC PUBS ARE ALSO AVAILABLE AT THE LOGSA SUPPORT ACTIVITY (LOGSA) WEBSITE: <https://www.logsa.army.mil>

There are 70 COMSEC manuals available for download at the LOGSA website. The manuals can be found by manual number, Publishing Identification Number (PIN), or Initial Distribution Number (IDN). The manuals are only available in the restricted distribution B area of the website.



TO ACCESS THE MANUALS, YOU MUST REGISTER WITH AND RECEIVE A LOGON ID AND PASSWORD FROM LOGSA.

TO OBTAIN ACCESS, GO TO <https://www.logsa.army.mil> AND DO THIS...

1. When you enter the LOGSA website, click on the menu item labeled **Publications and Forms** (on the right side of the page).
2. At the next screen, scroll down to **Electronic Technical Manuals (ETMs) Online** and click on **Go to Electronic Technical Manuals Online** <https://www.logsa.army.mil/etms/online.htm>
3. At the **Authorized Access Only** page, click on the **I accept** box.
4. On the "Electronic Technical Manuals ONLINE" page, click on **Request ETM Access**.
5. COMSEC-equipment publications are sensitive, so to gain permission for access to them, click on the **lock** icon at the lower right.
6. Click **yes** on all of the "pop ups" that appear.
7. Read the text on the "System Access Request" page and click on the **Individual Account** box.
8. Fill out the "Personal Information" page.
9. Follow the rest of the access request directions and you'll receive permission from LOGSA as they state in the final portion of the access request.

If you have any problems with any process, please send an email to: Helpdesk@logsa.redstone.army.mil

If you need help finding a CSLA pub, contact: epco@csla.army.mil

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MILITARY OR CIVILIAN PERSONNEL WHO DISCLOSE TO UNAUTHORIZED PERSONS INFORMATION MARKED FOUO MAY BE SUBJECT TO ADMINISTRATIVE SANCTIONS BROUGHT UNDER UCMJ ARTICLE 92, OR IN ACCORDANCE WITH AR 690-700, CHAPTER 751, TABLE 1-1.



PS END

15- and 30-KW DED Generators...

A LITTLE OIL WILL DO YA'



Forgetting to oil the adjustment rod on the electric actuator on your 15-KW MEP-113A or 30-KW MEP-114A generator could shut down an entire communications system.

Here's how: The rod is part of a governor that controls engine speed. Without enough oil, the bearings inside the rod ends wear out. Once that happens, the rod can't move the way it should to trigger the fuel injector pump. The pump can't deliver the precise amount of fuel to the engine. And when the amount of fuel to the engine varies, the electricity produced by the generator varies as well.

Communications systems are especially vulnerable to changes in power. Without a steady supply, they can shut down.

So oil the bearings in each end rod regularly with 30-weight oil, NSN 9150-01-178-4726. Wiggle the rod a little to work the oil in around the bearings.



THEY NEED CLEAN FUEL!



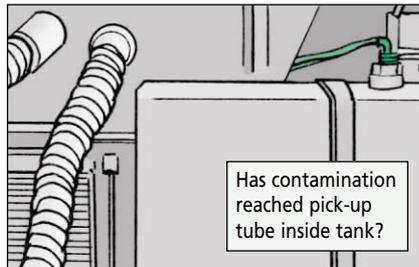
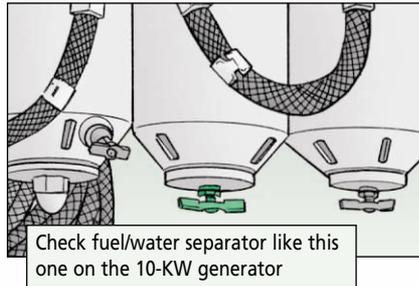
The engine in your generator will run poorly—or not at all—with dirty fuel. To prevent dirty fuel, the PMCS in your TMs call for checking the fuel-water separator for water and other contaminants and to drain them.

Too often, this is not being done!

A small amount of contamination is normal, but it needs to be removed just the same. If contaminants are not removed, they'll accumulate in the bottom of your fuel tank. You won't know it right away because the fuel pick-up tube for your fuel system is a few inches above the tank bottom and the fuel will float on top of most contaminants.

The problem becomes noticeable when the contaminant level rises to the level of the pick-up tube. By then you have severely contaminated fuel!

In a diesel system, fuel transfer pumps, injection pumps and fuel injectors have parts that rely upon lubrication. Water and other contaminants can permanently damage these parts.

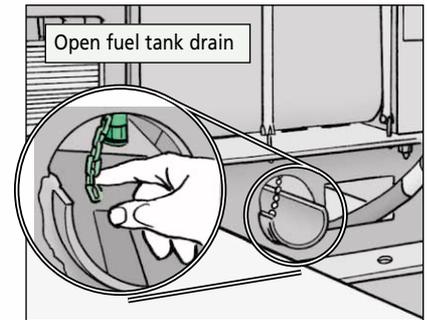


Most TMs don't tell you to check generator fuel tank contaminant levels. But anytime you find water or other contaminants in the fuel-water separator or fuel system filter sump, here's what to do:

- Open the fuel tank drain cock and drain a small amount of fuel into a container that will let you see the fuel.
- If the fuel is free of contaminants and water—water will appear as various-sized beads in the container bottom—close the drain cock. Your system is not contaminated. If contaminants and water appear, continue to drain the fuel until samples are not contaminated. Then, close the drain cock.
- In cases of severe contamination it will be necessary to de-fuel the system, replace all filters and clean all strainers. Follow the TM instructions for this job. Fuel filters may have to be replaced two or three times after severe contamination.

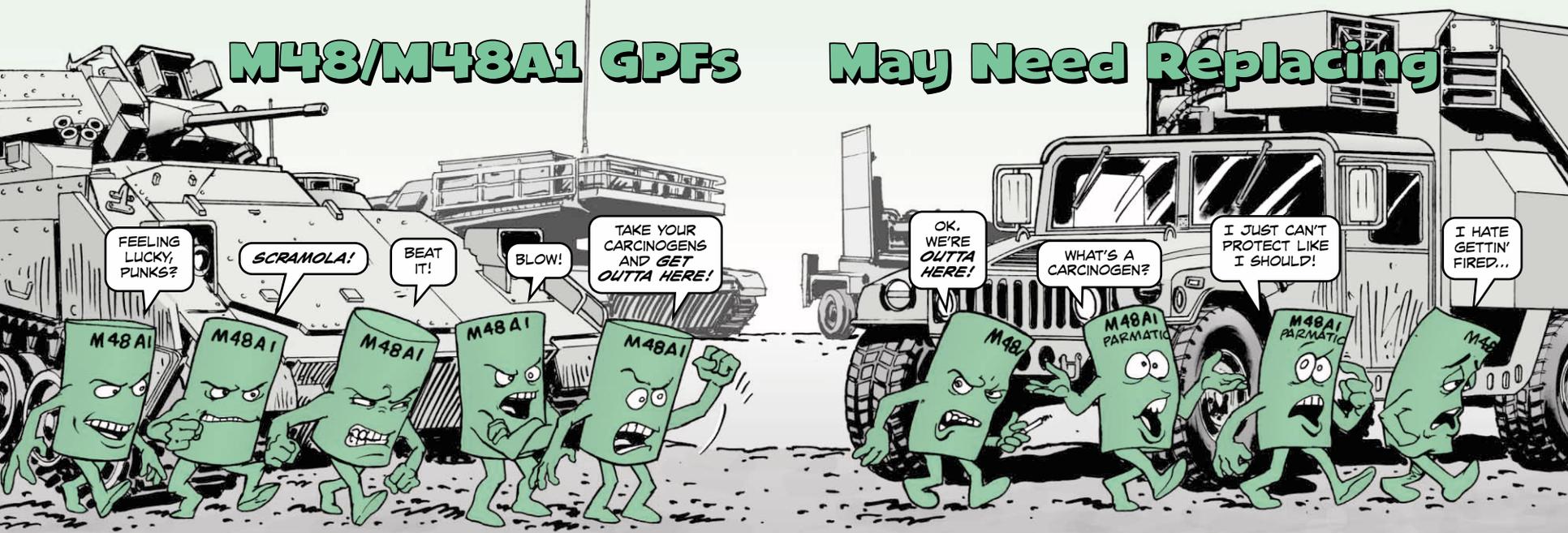
If you found contaminants in the fuel-water separator or fuel tank and you get rid of them, you're done, right?

Wrong! That contamination had to come from somewhere and you need to find out where. It could be a fuel truck or an external fuel tank or anything else in your fuel pumping chain. Get other users to help you. It's in their interest to find the source of the contamination, too.



M48/M48A1 GPFs

May Need Replacing



If your equipment uses the M48A1 GPF, NSN 4240-01-363-1311, it needs to be replaced immediately if it was manufactured by Parmatic. Parmatic filters may not provide chemical protection. Parmatic filters have lot numbers beginning with P, PFC or PARMATIC. All other M48A1 filters are OK and do not need to be replaced.

To request M48 or M48A1 replacement filters, email

M48-M48A1GPF@ria.army.mil

List the systems you have, the number of M48 and Parmatic M48A1 filters needing replacement, your UIC, your DODAAC and shipping address.

Dispose of M48 filters as hazardous waste. Parmatic M48A1 filters should be shipped to Blue Grass Army Depot. Contact the email address above for a transportation fund cite and shipping instructions.

For more info, see MWO 3-4240-325-12-1. Questions? Contact TACOM's Deb DiCaprio at DSN 793-6405/(309) 782-6405 or Kortnei Foulks, DSN 793-5796/(309) 782-5796, or email the address above.

- M93 gas-particulate filter unit
- M1A1/A2 tank
- M109A6 Paladin
- M2A3 Bradley
- M31A1 biological integrated detection system
- AN/TPQ-36 (V) radar set
- AN/TSM-191 transportable electronic shop
- AN/TRC-179 communications terminal
- remote control guided missile shop equipment
- AN/MYQ-6 data analysis central
- LP/PD1-90 integrated nonexpandable shelter
- AN/TSQ-158 net control station
- full-tracked combat tank
- AN/TSQ-182, -183A, -184A communications control set
- net control station
- bridge launching carrier
- S-832/G multi-expandable lightweight shelter
- AN/TSQ-179 target acquisition subsystem
- AN/TPN-31 radar set
- AN/T5C-124 tactical terminal

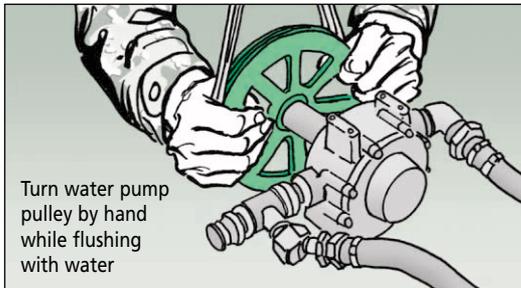
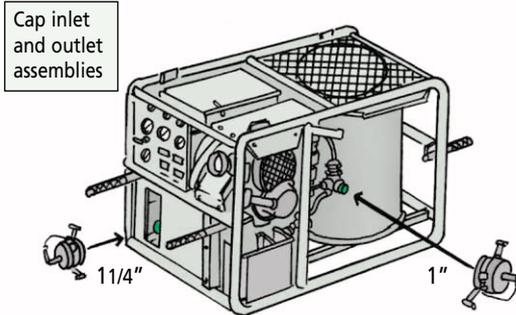
CAP INLET and OUTLET



If the M17-series decon's inlet and outlet assemblies are left open when the hoses are removed, dirt and sand get in the water pump and eventually destroy it.

Save the water pump by keeping the inlet and outlet capped when the hoses aren't connected. Order a 1 1/4-in quick-disconnect cap for the inlet with NSN 4730-00-485-5055. Order a 1-in quick-disconnect cap for the outlet with NSN 4730-00-929-0791. Keep the caps in the hose storage case when they're not installed.

If sand or dirt does freeze the water pump, run water from a hose through the outlet while you try to turn the water pump pulley back and forth by hand. That often will free the pump.



Keeping Fox on the Run

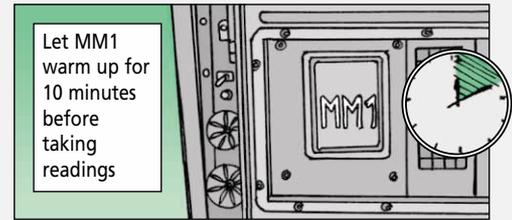


Lack of PM attention can stop your Fox NBC vehicle dead in its tracks. Here are two easy ways to keep your Fox on the run.

Warm Up MM1

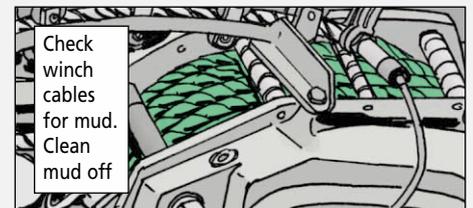
When you turn on the MM1 spectrometer, let it warm up and finish self-testing before you start taking readings. Otherwise, those readings will be false. It usually takes 10 minutes for the MM1 to warm up.

Don't hold the confidence check bottle sampler on the MM1 probe or push in the calibration gas reservoir button for more than 5 seconds. If you do, you could saturate the spectrometer and then you have to spend 15 minutes clearing it.



Clean the Winch

When you do your weekly PMCS, eyeball the winch cable for mud. If you spot any, clean it off with a rag. Mud makes the winch sensors think something's wrong with the cable. And then you can't unwind the winch cable.



Bumper Numbers...

MARKINGS ID VEHICLES

PFC MIYAKI,
THE **GOOD
NEWS** IS WE
GOT FIVE NEW
HUMVEES IN
YESTERDAY.

THE **BAD NEWS**
IS YOU GET TO
PAINT THE VEHICLE
ID NUMBERS. LET
ME KNOW WHEN
YOU'RE DONE.

**CAN DO,
SARGE!**



BUT **HOW DO I**
KNOW WHAT BUMPER
NUMBERS EACH
HUMVEE GETS?



HERE'S THE
STRAIGHT SCOOP ON
HOW TO APPLY VEHICLE
ID MARKINGS.



WHAT'S STAN-
DARD ABOUT
VEHICLE BUMPER
NUMBERS AND
WHAT'S LEFT UP
TO UNIT SOP?

THE ANSWERS
ARE FOUND IN
TB 43-0209,
TM 43-0139,
AND AR 750-1.
HERE ARE THE
BASICS...



TB 43-0209

TB 43-0209, *Color, Marking and Camouflage Painting of Military Vehicles, Construction Equipment and Materials Handling Equipment*, standardizes how vehicle bumper numbers are applied.

The markings are divided into four positions in Para 9g-k. Positions 1 and 2 are applied on the left, while positions 3 and 4 are applied on the right. The positions identify:

1. the major command, organization, or activity the equipment is associated with
2. the intermediate organization or activity
3. the unit that operates and maintains the vehicle
4. the specific vehicle number (often associated with the order of march)

Anything beyond this policy, such as assigning a specific number against a specific unit position, is a matter of unit SOP.



TM 43-0139

TM 43-0139, *Painting Instructions for Army Materiel*, gives information about applying ID markings over camouflage CARC colors. Para 4-9 and Fig 4-2 tell you to use black lettering over brown or green CARC, green lettering over black CARC, and brown lettering over white or tan CARC. The lettering paint must be CARC if used on a CARC background.

AR 750-1

Para 7-8c(16), AR 750-1, *Army Materiel Maintenance Policy*, allows MACOM commanders to conceal bumper numbers in tactical conditions. Para 7-8c(17) allows overseas commanders to comply with international agreements regarding vehicle bumper numbers. That's why some overseas commands paint solid light color rectangular boxes as the background for vehicle bumper numbers.



The TB and TM can be found online at LOGSA's ETM website:
https://www.logsa.army.mil/etms/find_etm.cfm
AR 750-1 is available on the USAPD website at:
<http://www.army.mil/usapa/epubs/index.html>

TWO-ENDED EARPLUG MUFFLES TWO KINDS OF NOISE



As a soldier, you face two kinds of noise that can damage your hearing over time: One is steady-state noise, the kind you're exposed to when you run a jackhammer, operate a power generator or ride in an armored vehicle. The other is high-frequency impulse noise from weapons fire.

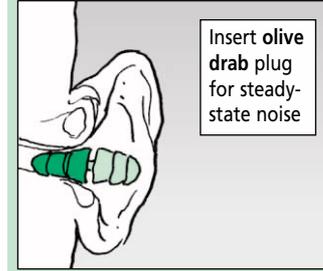
Wearing standard earplugs protects your hearing against the steady-state noise of machinery operating from 85 to 104 decibels. But these same earplugs have serious drawbacks when you get away from noisy machinery and go out on foot patrol.

Standard earplugs protect your hearing against the noise of weapons fire. And, in relative quiet, they also make it harder to hear speech and detect the sounds of combat—sounds such as an approaching vehicle, the closing of a rifle bolt or a footfall on leaves and twigs.

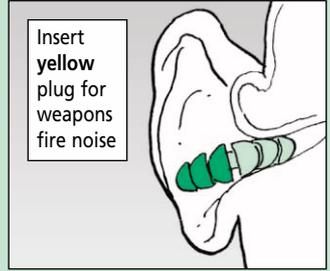
That's why you need a pair of **combat arms earplugs**, NSN 6515-01-466-2710. They're two-ended plugs that protect against both the steady-state noise of machinery and the impulse noise of weapons fire. They also let a soldier on foot patrol hear most speech and detect combat sounds.



When you're around noisy machinery, put the **olive drab** end of the plugs in your ears to protect your hearing against steady-state noise.



When you're away from operating machinery and on foot, put the **yellow** ends in your ears to protect against the impulse noise of weapons fire.

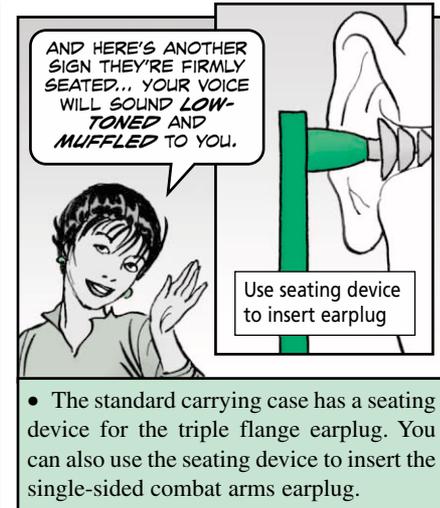
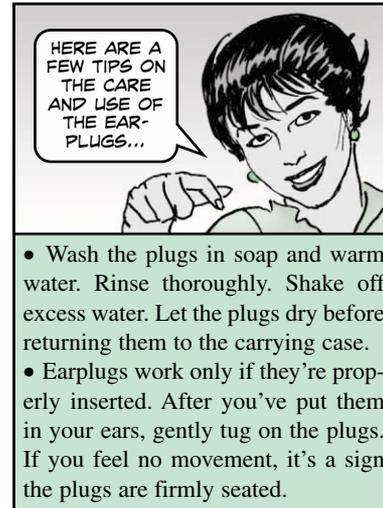


With the combat arms earplugs you don't have to carry two types of plugs to guard against two types of noise. The plugs come in one size, which should fit most wearers. You can wear them with most headgear.

You can also get a single-sided version of the plug, NSN 6515-01-512-6072, that guards against only the noise of weapons fire.

The earplugs are available in the Army supply system and through their distributor:

Brock Sales Co.
1155 Providence Road
Suite C
Brandon, FL 33511
(813) 662-2251

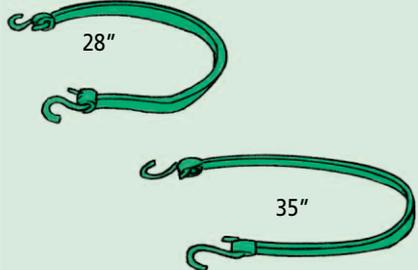
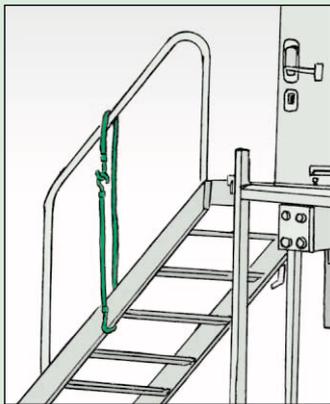


Loose Handrail Needs Strap



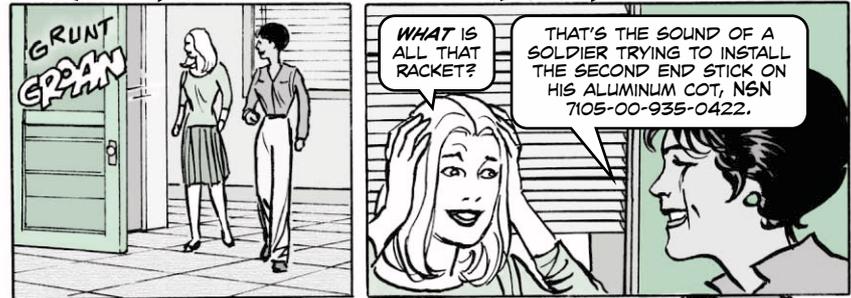
Cooks, take care when you mount the stairs to the cook's entrance on the containerized kitchen (CK). The handrail is not securely anchored. It fits into the holes at the base and at the top of the steps—but it doesn't lock in place. So, while climbing the steps, a soldier could yank the handrail free and take a tumble.

Secure the handrail with the 28-in rubber tie-down strap, NSN 2030-01-168-9371, and the 35-in strap, NSN 5340-01-492-4109, that come with the containerized kitchen. They're Items 37 and 38 of the Basic Issue Items List in TM 10-7360-226-13&P.



The tie-down straps have S-hooks on each end. Hook the two straps together and hang them over the handrail. Then hitch the hooks under the side of the stairs. That should anchor the handrail.

A STUBBORN STICK

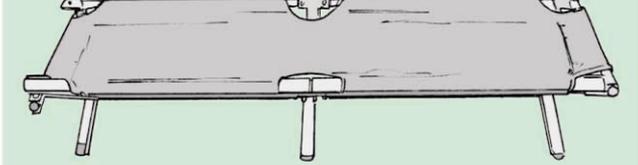


INSTALLING THE **FIRST** END STICK IS **SIMPLE**. YOU JUST SLIP IT THROUGH THE COT COVER AND ATTACH IT TO THE FRAME.

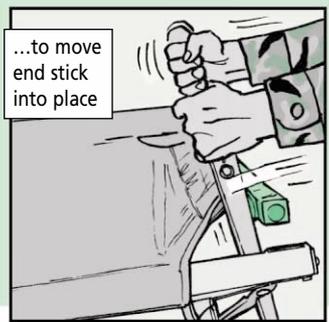
IT'S THE **SECOND** STICK THAT POSES THE PROBLEM. WITH THE COT COVER STRETCHED TIGHT, IT'S A CHORE TO ATTACH THE STICK.

HERE ARE **TWO THINGS** YOU CAN DO TO EASE THE STRAIN...

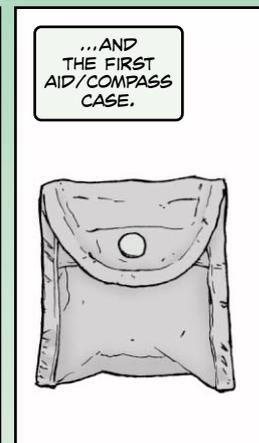
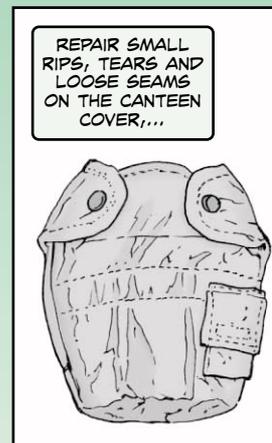
1 SPREAD THE COVER IN THE SUN FOR A WHILE. THE HEAT RELAXES THE MATERIAL AND MAKES IT MORE FLEXIBLE AND EASIER TO STRETCH.



2 WHEN YOU INSTALL THE **SECOND** END STICK, ATTACH ONE SIDE OF THE STICK TO THE FRAME. THEN USE A PRY BAR FOR LEVERAGE TO MOVE THE OTHER SIDE INTO PLACE. JUST MAKE SURE SOMEONE'S HOLDING THE OTHER END OF THE COT. AN END STICK FROM ANOTHER COT MAKES A GOOD PRY BAR.



ALICE PM Short and Sweet



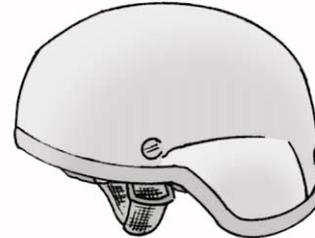
New Hat, Same PM



Inspect

HERE'S WHAT YOU CAN DO TO CARE FOR THE ACH...

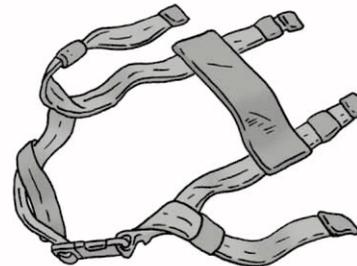
- Look over the helmet for gouges, cracks or scrapes that go below the paint surface. See if the edging is loose, split or cut.



- Look at the chin strap. Is the hardware worn, cracked, loose or missing?



- Inspect the chin strap webbing for cuts, tears or ripped stitching.



- Look for damage to the pads. If the outer fabric is torn and the inner foam exposed, replace the pad.

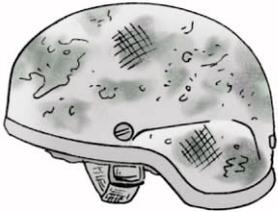


- If you find anything you can't fix, take it to unit maintenance for repair. They can replace the chin strap webbing, hardware and pads. They can also repair minor cracks, scrapes, pitting and chipped areas.

- For a more thorough look at PM for your ACH, see the preventive maintenance checks and services in TM 10-8470-204-10, 31 May 2004. The TM also lists repair part NSNs.

Clean

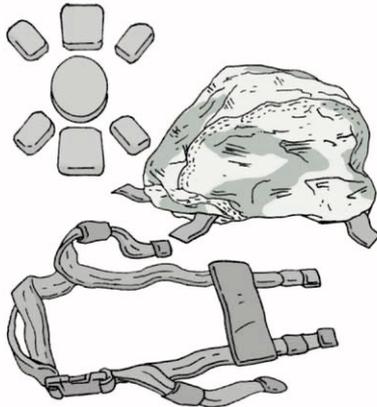
DIRTY, DUSTY, GREASY AND GRIMY. THAT'S YOUR **HELMET** INSIDE AND OUT AFTER A FEW WEEKS IN THE FIELD.



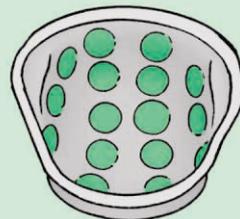
TO CLEAN IT, ALL YOU NEED IS **COLD WATER, A CLOTH OR SOFT BRISTLE BRUSH AND SOME MILD LAUNDRY DETERGENT.**

- Unthread the chin strap webbing from the ladder locks. Remove the suspension pads from the inside of the helmet shell. Take off the helmet cover.
- Machine wash the chin strap, pads and cover in the gentle cycle with cold water and detergent.
- You can also scrub them by hand with cold water and detergent. If you like, let them soak for 10 or 15 minutes before washing. Frequent washing helps prevent pad odor. It also makes the chin strap more comfortable to wear and easier to adjust.
- Rinse them thoroughly with clean water and let them air dry. Do not machine dry. You could shrink the fabric or damage the pads.
- Wash the ACH shell the same way, with cold water and detergent. Then rinse it with clean water and let it air dry.
- Use a small nail brush or toothbrush to clean dirt and debris from the hook disks on the inside of the shell. Keeping the hooks and loops clean helps the pads stick.

Machine or handwash chin strap, cover and pads

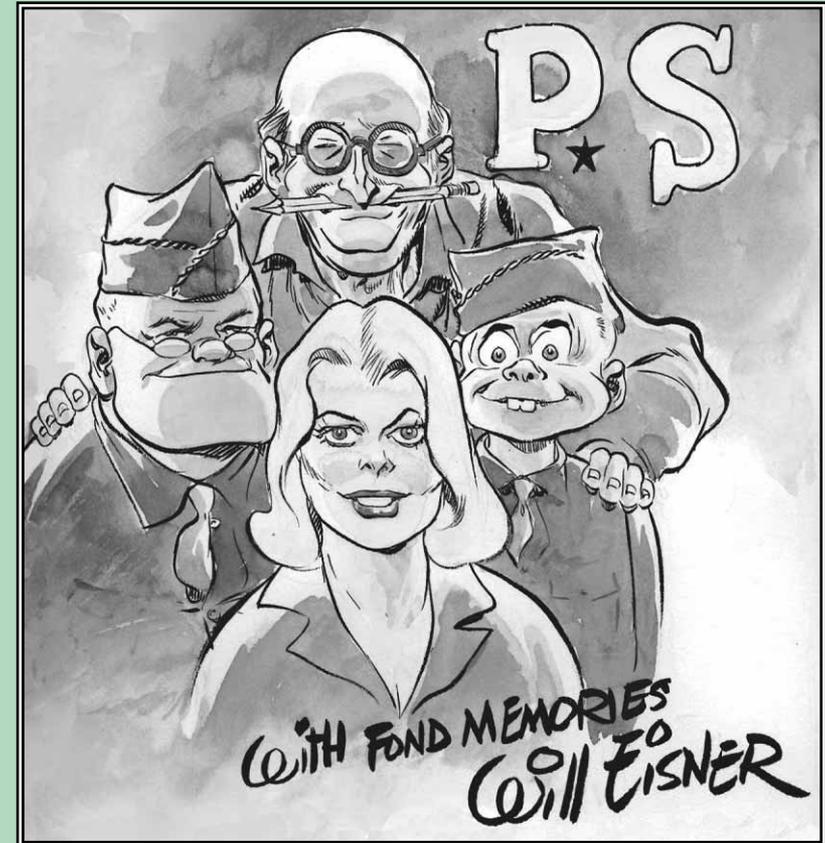


Clean hook disks to keep pads sticking



FOR THE FIRST 21 YEARS OF OUR EXISTENCE, 1951-1971, MOST OF THE CREATIVE IMAGES THAT OUR READERS SAW WERE DRAWN BY **WILL EISNER.**

ALTHOUGH OTHER ARTISTS WORKED FOR HIM, IT WAS HIS STYLE, HIS CREATIVITY AND HIS SHEER ARTISTIC GENIUS THAT DEFINED THE LOOK OF P.S. MAGAZINE AND THE CHARACTERS THAT THE SOLDIERS CAME TO KNOW AND LOVE... GRANITE-JAWED SERGEANT HALF-MAST, VIVACIOUS CONNIE RODD, GOOFY PVT. JOE DOPE AND MANY OTHERS. EVERY PERSON THAT HAS EVER WORKED AT P.S. HAS BEEN AFFECTED BY HIS LEGACY AND THE STANDARDS THAT HE SET.



IN MEMORY OF WILL EISNER, 1917-2005...
THE FOND MEMORIES ARE ALL OURS! THE STAFF OF P.S. MAGAZINE

TALK IS **CHEAP...**



IT'S **ACTION** THAT GETS THE JOB DONE!



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