

Issue 792

PS

★
November
2018

THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-792

Approved for
Public Release;
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THANK YOU
FOR YOUR
SERVICE,
MA'AM.

YOU'RE WELCOME.
TAKING CARE OF
EQUIPMENT IS
IMPORTANT...

...SO **MAKE SURE** YOU
SHARE YOUR MAINTENANCE
KNOWLEDGE WITH OTHERS.
PS MAGAZINE CAN HELP!

Happy Veterans Day!



For details,
see Pages
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THE PREVENTIVE MAINTENANCE MONTHLY

ISSUE 792 NOVEMBER 2018



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TB 43-PS-792, 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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<https://www.logsa.army.mil/psmag/pshome.cfm>

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1822951

Don't Take Flying Visually Impaired Lightly

LOOKS LIKE WE'VE RUN INTO SOME DVE.

WE CAN **MANAGE** THIS! WE'VE TRAINED AND PLANNED FOR THESE SITUATIONS!

PILOTS, **FORE-
WARNED** IS **FORE-
ARMED!**

ESPECIALLY WHEN IT COMES TO FLYING AIRCRAFT IN AN ENVIRONMENT WITH **BAD VISIBILITY.**

THERE'S A FLYING CONDITION THAT EVERY PILOT SHOULD BE READY FOR. IT'S CALLED DEGRADED VISUAL ENVIRONMENT (DVE) AND IT'S AN AVIATION KILLER.

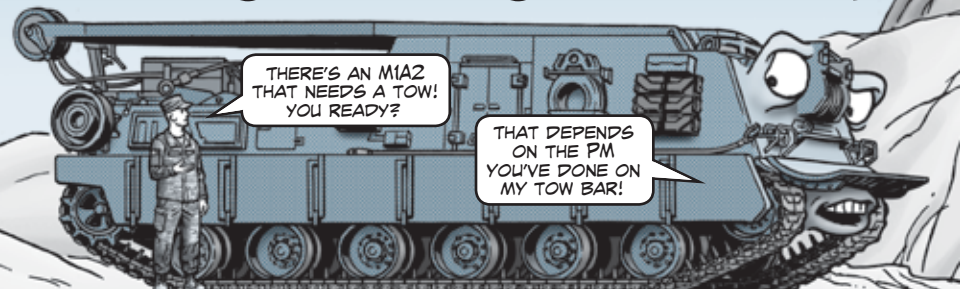
DVE CAN **TAKE OUT** AN AIRCRAFT AND ITS OCCUPANTS IF IT'S NOT TAKEN SERIOUSLY. NO DOUBT EVERY PILOT EITHER HAS OR WILL EXPERIENCE THIS CONDITION WHEN FLYING AIRCRAFT.

DVE **ISN'T** SOMETHING YOU WANT TO PLAY AROUND WITH. IT LURKS IN DUSTY AND SANDY CONDITIONS THAT CAUSE **DISORIENTATION, LOW LIGHT, POOR CONTRAST AND LIMITED VISIBILITY.** THAT MEANS YOU **CAN'T SEE** WHERE YOU'RE FLYING!

THE **BEST DEFENSE** AGAINST DVE IS **PREPARATION, THOROUGH PLANNING** AND **TOUGH, REALISTIC TRAINING** THAT'S DONE TO **STANDARD.**

THAT'S WHAT IT TAKES TO **MANAGE THE RISKS.**

TOW BAR PM KEEPS RECOVERY ON TRACK

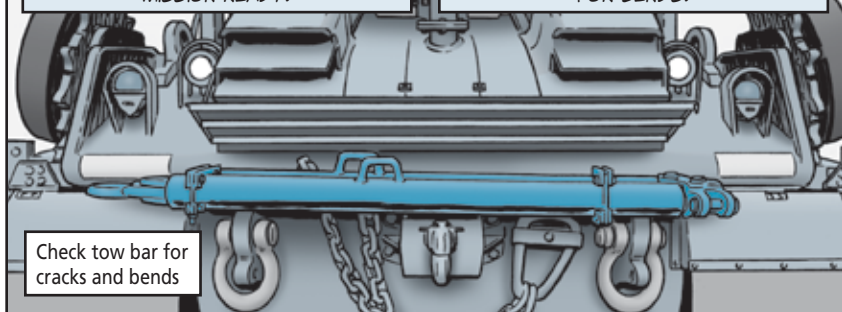


THERE'S AN M1A2 THAT NEEDS A TOW! YOU READY?

THAT DEPENDS ON THE PM YOU'VE DONE ON MY TOW BAR!

OPERATORS, BE SURE TO INSPECT YOUR M88A2'S TOW BAR, NSN 2540-01-434-8595, AS PART OF AFTER-OPERATIONS PMCS. THE INSPECTION IS **QUICK AND EASY**, BUT WILL GO A LONG WAY TOWARD KEEPING YOUR VEHICLE MISSION READY.

EYEBALL THE TOW BAR, INCLUDING THE WELDS, FOR CRACKS OR BENDS. IF YOU SEE ANY, DON'T USE THE TOW BAR AND ORDER A REPLACEMENT. THEN CHECK THE TOW PINTLE CLOSELY FOR SIGNS OF CRACKS AND TOW BAR LEGS FOR BENDS.

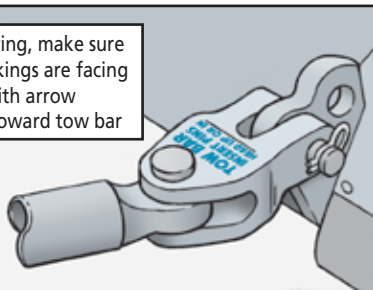


Check tow bar for cracks and bends

MAKE SURE THE PINTLE WORKS PROPERLY. IF IT **LOOKS** TOO WORN TO USE, ORDER A NEW PINTLE. **IF IN DOUBT, ORDER A NEW ONE. BETTER SAFE THAN SORRY!**

ALSO, WHEN ATTACHING THE M1-SERIES TANK TOW FOOT CLEVIS, BE SURE THE CLEVIS LETTERING IS **ON TOP** WITH THE ARROW (TOW ↑ BAR) POINTING **TOWARD** THE TOW BAR.

When towing, make sure clevis markings are facing upward with arrow pointing toward tow bar



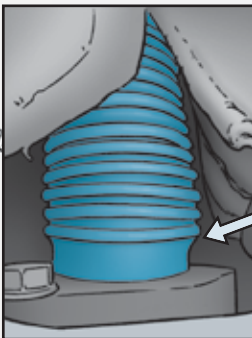
Don't Overlook Heater Exhaust Tube

PMCS IS
DONE FOR THE
DAY, PAL.

NOT IF YA
HAVEN'T CHECKED
MY PERSONNEL
HEATER EXHAUST
TUBE; IT'S NOT!

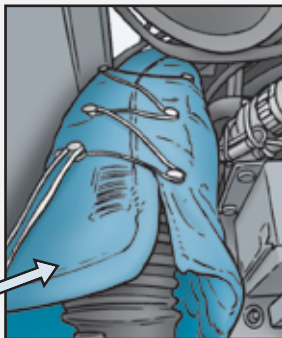
OPERATORS, MAKE SURE THE HEATER EXHAUST
TUBE RUNNING BY YOUR M88A2'S AUXILIARY
POWER UNIT (APU) IS PROPERLY CONNECTED.

IF IT *ISN'T*, A FIRE COULD BREAK
OUT EITHER DURING OR AFTER
USING THE PERSONNEL HEATER.



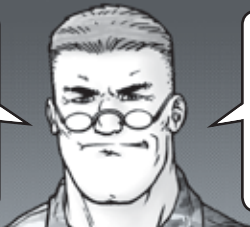
Make sure
personnel
heater
exhaust
tube is
connected...

...and cover
is installed



WHILE
YOU'RE AT IT,
MAKE SURE
THE HEATER
EXHAUST TUBE'S
THERMAL
INSULATION
COVER IS
SERVICEABLE
AND IN PLACE.

RUNNING THE
HEATER **WITHOUT**
THE COVER
INSTALLED
CREATES A FIRE
HAZARD. REPLACE
A MISSING OR
DAMAGED COVER
WITH NSN 2540-
01-533-3144.



ALSO, BE SURE
TO KEEP THE
BACK DECK
AREA WHERE
THE EXHAUST
COMES OUT
FREE OF TRASH
AND ANYTHING
ELSE THAT'S
FLAMMABLE.

ROLL BACK COVER BEFORE ENGINE START

LET'S GET YOU
STARTED UP SO
WE CAN START
THE MISSION!

JUST BE SURE
TO ROLL BACK
MY INTAKE AND
EXHAUST GRILLE
COVER **FIRST!**

SOME DRIVERS LEAVE THE **CANVAS COVER** FOR THE M113A2/A3 INTAKE AND EXHAUST GRILLES IN **PLACE** WHEN STARTING THE ENGINE BECAUSE THEY THINK THAT'LL **HELP** THE ENGINE WARM UP **FASTER** WHEN IT'S COLD OUTSIDE.

THAT'S
A BAD
IDEA.

**Canvas cover
keeps out
snow and
ice**

THE COVER IS MEANT TO KEEP ICE, SNOW AND OTHER DEBRIS **OUT** OF THE ENGINE COMPARTMENT WHEN THE VEHICLE IS **PARKED**.

LEAVING THE COVER IN PLACE **HEATS** THE ENGINE **TOO FAST**. IT CAN EVEN BURN THE ENGINE UP. THAT'LL LAND YOU IN HOT WATER WITH YOUR COMMANDER AND COST YOUR UNIT SOME SERIOUS BUCKS.

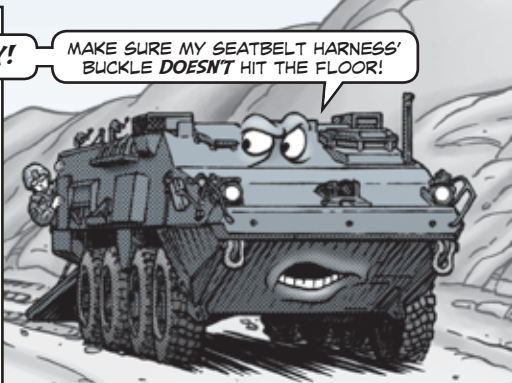
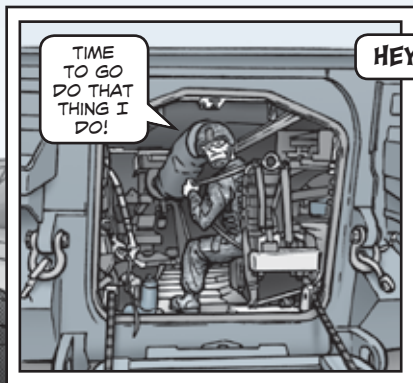
ALSO

FUMES FROM THE ENGINE COMPARTMENT THAT WOULD **NORMALLY** BE VENTED THROUGH THE EXHAUST GRILLE ARE **FORCED** INTO THE DRIVER AND CREW COMPARTMENTS. **THAT CAN BE DEADLY.**

ALWAYS ROLL THE COVER BACK FROM THE EXHAUST AND INTAKE GRILLES **BEFORE** STARTING YOUR VEHICLE.

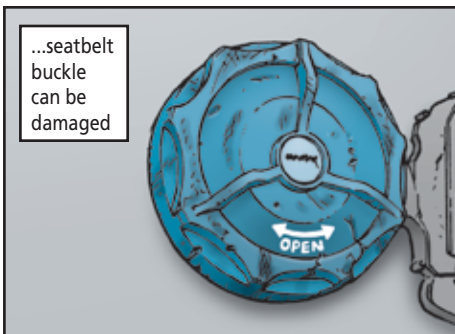
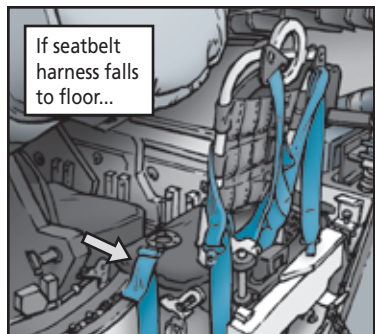
THEN
SECURE THE
COVER IN
PLACE WITH
THE STRAPS
PROVIDED.

Buckle Down on EA Seatbelt Damage



Crewmen, your Stryker's energy attenuating (EA) seats can save you from serious injury—or worse—during a blast from a mine or IED. But the EA seat, NSN 2540-01-633-6805, can't do its job if the four-point seatbelt, NSN 2540-01-671-1897, is damaged.

When exiting your vehicle through the lowered ramp door, be careful not to let the seatbelt harness fall to the floor. That can damage the seatbelt buckle.



The buckle can also fall into the crack between the ramp door and the vehicle hull. When the ramp closes...**CRUNCH!** Not only is the buckle damaged but maybe even the ramp door or hull.

So don't get in such a hurry that you neglect to keep those seatbelt buckles safe from damage. If you do, your Stryker could end up NMC!

Stryker...

TOW BY THE BOOK!

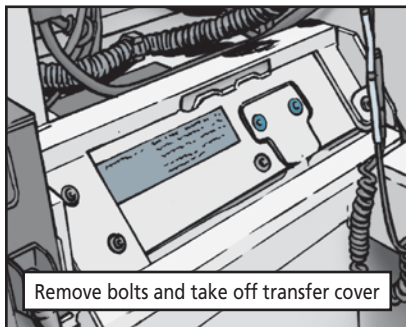
YA NEED A
TOW BACK TO
BASE?

OH YEAH! JUST
MAKE SURE YOU
FOLLOW OUR
-10 TM'S TOWING
PROCEDURE.

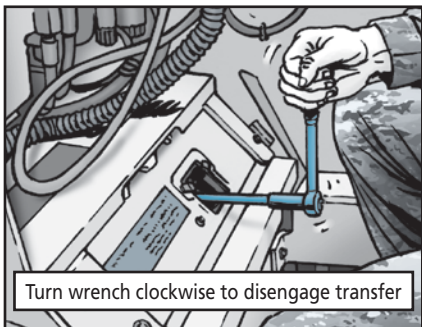
CREWMEN, IT'S VITAL THAT YOU CHECK
OUT YOUR STRYKER'S -10 TM **BEFORE**
TOWING TO ENSURE YOU DO IT THE
RIGHT WAY. DOING IT **WRONG** RESULTS
IN A **DAMAGED** VEHICLE.

**IT COULD
EVEN
CATCH
FIRE!**

JUST LIKE IT SAYS IN THE TM,
THE **BEST** WAY TO FLAT-TOW
A DISABLED STRYKER IS WITH
ANOTHER STRYKER USING A
TOW BAR.



Remove bolts and take off transfer cover



Turn wrench clockwise to disengage transfer

ALWAYS BE SURE
TO **DISCONNECT** THE
TRANSFER CASE
AND **RELEASE** THE
PARKING BRAKE
ON THE DISABLED
VEHICLE **BEFORE**
TOWING.



Make sure
parking brake
on disabled
vehicle is
disengaged

YOU CAN VERIFY THAT THE TRANSFER CASE IS
DISCONNECTED BY REMOVING THE #4 ENGINE ACCESS
PANEL. THEN USE YOUR HAND TO ROTATE THE DRIVE
SHAFT TO MAKE SURE IT SPINS FREELY WITHOUT BINDING.
IF THE SHAFT BINDS AND DOESN'T SPIN FREELY, TRY
AGAIN TO DISENGAGE THE TRANSFER CASE.

**YOU NEED TO FOLLOW
ALL OF THE TOWING
PROCEDURES EXACTLY
AS THEY'RE SHOWN IN
THE -10 TM. THAT WAY
YOU CAN'T GO WRONG!**

AND REMEMBER THAT IF A STRYKER IS **SO DAMAGED** IT **CAN'T** BE FLAT-TOWED, MECHANICS **SHOULDN'T** USE A HEMTT WRECKER TO TOW WITH THE STRYKER'S FRONT END SUSPENDED.

NOT ONLY WILL TOWING A STRYKER WITH THE FRONT END SUSPENDED DAMAGE THE REAR SUSPENSION AND HUBS ON THE STRYKER, BUT IT CAN ALSO BREAK THE HEMTT'S LIFT CYLINDERS. INSTEAD, CALL FOR AN M916 TRACTOR TRUCK WITH AN M870A1 SEMITRAILER.

FOR MORE INFORMATION ON STRYKER TOWING,
CHECK OUT TACOM MAINTENANCE ACTION MESSAGE #18-007 AT:

<https://tulsa.tacom.army.mil/Maintenance/message.cfm?id=MA18-007.html>

Stryker...

PUT BRAKES ON VALVE CORROSION

ALL YOUR AFTER OPERATIONS PM CHECKS ARE **DONE**.

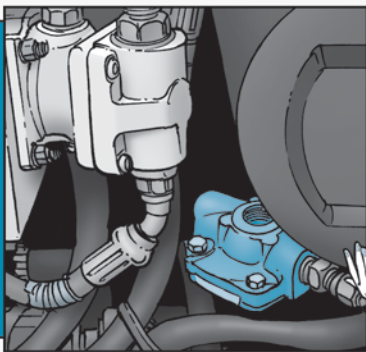
SEE YA TOMORROW, BUDDY!

HOLD ON!

YOU **FORGOT** TO **DRAIN** MY SERVICE BRAKE RESERVOIRS!

Crewmen, your Stryker's parking brake can fail if the front and rear service brake reservoirs aren't drained after every operation.

If you don't drain the reservoirs, moisture gets inside the parking brake valve and corrodes it. So make draining them a regular part of after-operations PMCS. The -10 TM shows you how to do it right.



THE PARKING BRAKE VALVE **CORRODES** WHEN **WET** OR IF SERVICE BRAKE RESERVOIRS **AREN'T** DRAINED AFTER OPERATIONS.

The valve can also corrode if it's exposed to water when you wash your vehicle. Be sure to avoid spraying water directly on the valve. Better yet, cover it before washing your Stryker.

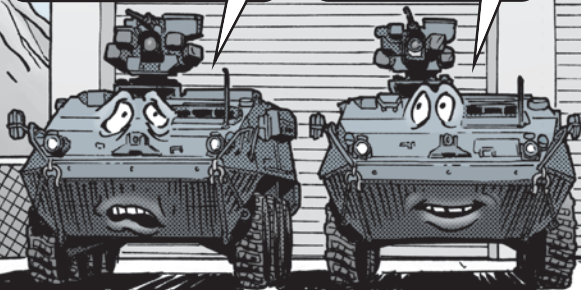


Stryker...

Too Much Copper in Your Engine Oil?

MY AOAP REPORTS SAY MY ENGINE OIL HAS ELEVATED COPPER LEVELS!

I WOULDN'T WORRY TOO MUCH ABOUT THAT JUST YET!

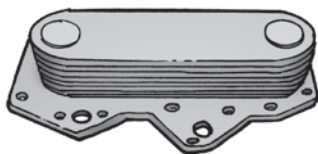


I GOT THE RESULTS BACK FROM MY STRYKER'S ARMY OIL ANALYSIS PROGRAM (AOAP) SAMPLE.

IT SHOWS THAT THE ENGINE OIL HAS ELEVATED LEVELS OF COPPER. SHOULD I BE WORRIED?



NOT NECESSARILY! AN AOAP ANALYSIS THAT SAYS ELEVATED COPPER LEVELS IN YOUR STRYKER'S ENGINE OIL 'EXCEEDS WEAR METAL LIMITS' **ISN'T** ALWAYS REASON FOR CONCERN. A NEW ENGINE OIL COOLER COULD BE TO BLAME.



DEPENDING ON THE CIRCUMSTANCES, THERE MIGHT ACTUALLY BE LITTLE DANGER OF EXCESSIVE WEAR AND/OR COMPONENT FAILURE.

BUT YOU NEED TO **UNDERSTAND** WHY ELEVATED COPPER LEVELS SOMETIMES HAPPEN **BEFORE** YOU SUBMIT **ANOTHER**—MAYBE UNNEEDED—AOAP SAMPLE.



BOTH THE STRYKER CAT C7 AND 312G ENGINES HAVE AN INTERNAL ENGINE OIL COOLER WITH COPPER TUBES.

WITH A **NEW** OIL COOLER, COPPER DISSOLVES FROM THE SURFACE OF THE OIL COOLER TUBES AND LEACHES INTO THE ENGINE OIL.

AS THE OIL COOLER BREAKS IN, A PROTECTIVE COATING EVENTUALLY FORMS ON THE COPPER TUBES AND THE LEACHING **STOPS**.

THE ENGINE **ISN'T** DAMAGED AND THE ELEVATED COPPER LEVELS GRADUALLY **DECREASE**.

COPPER LEACHING FROM THE OIL COOLER INTO THE ENGINE OIL TYPICALLY HAPPENS WITH **NEW ENGINES** WITHIN THE FIRST TWO OIL CHANGE INTERVALS.

LEACHING CAN ALSO HAPPEN IN USED ENGINES...

- if the engine is overdue for an oil change.
- that have had a new oil cooler installed.
- if a different type of oil is used.

SO **WHEN** SHOULD YOU BE CONCERNED ABOUT ELEVATED COPPER LEVELS IN YOUR STRYKER'S ENGINE OIL?

IF YOUR STRYKER IS **NEW OR HAS A NEW ENGINE** AND IT GETS AN AOAP REPORT INDICATING INCREASED COPPER LEVELS, COPPER LEACHING FROM THE OIL COOLER IS **LIKELY** TO BLAME.

YOUR STRYKER'S ENGINE IS PROBABLY OK AND YOU CAN CONTINUE SUBMITTING AOAP SAMPLES EVERY SIX MONTHS OR 3,000 MILES, WHICHEVER COMES FIRST.



HOWEVER, IF THE VEHICLE OR ENGINE IS **USED** AND HAS EVER **OVERHEATED**, THE INCREASED LEVELS OF COPPER COULD BE CAUSED BY WORN BRONZE BUSHINGS AND BEARINGS OR A COMBINATION OF BOTH.

THAT'S WHEN YOU NEED TO BE CONCERNED ABOUT ENGINE DAMAGE AND FURTHER AOAP SAMPLING.



CHECK OUT PS 772 FOR INFORMATION ABOUT STRYKERS AND THE AOAP PROGRAM:
<https://www.logsa.army.mil/web2/archive/PS2017/772/772-06-08.pdf>

AVLB... **TORQUE AWAY TRANSMISSION WOES**



Mechanics, it's **VERY IMPORTANT** TO APPLY **JUST THE RIGHT AMOUNT** OF TORQUE TO THE FILTER HOUSING AND DRAIN PLUG BOLTS ON THE AVLB'S TRANSMISSION.

TOO MUCH TORQUE CAN CAUSE **CRACKS** IN THE TRANSMISSION'S ALUMINUM FILTER HOUSING AND **STRIP** THE DRAIN PLUG BOLT HOLE THREADS.

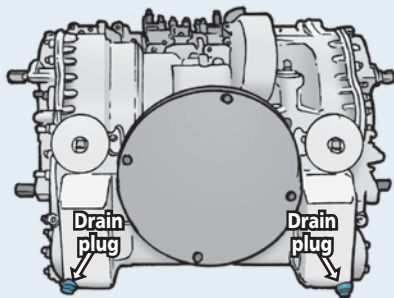
THAT CAN LEAD TO **CATASTROPHIC TRANSMISSION FAILURE**. A **NEW** TRANSMISSION WILL COST YOUR UNIT NEARLY \$75,000!

AVOID COSTLY DAMAGE AND **KEEP** COMBAT READINESS HIGH BY **KEEPING** THOSE BOLTS **TORQUED TO 26-32 LB-FT.**

WHILE YOU'RE AT IT, MAKE SURE THE HOLES ARE **FREE OF DEBRIS BEFORE** TIGHTENING THE BOLTS.

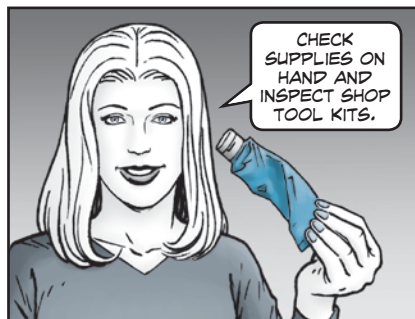
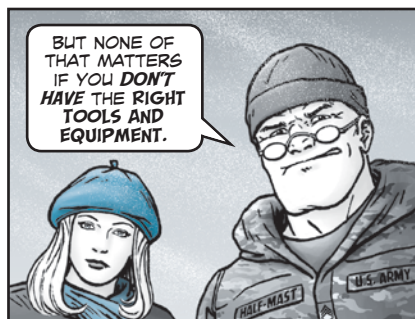
Over-tightening bolts can crack transmission filter housing and strip drain plug bolt holes

Filter housing



RUST BUSTERS

TIP OF THE MONTH



MAKE A LIST
OF ANY MISSING,
BROKEN OR
SOON-TO-BE
EMPTY ITEMS.

THEN ADD
THOSE
ITEMS TO
THIS HANDY
SHOPPING
LIST.



Corrosion Prevention Tools Shopping List

Surface Prep Tools

- Lube oil/grease
- Power grinder
- Scraping knife
- Shop vacuum
- Shop vacuum accessories
- Wire brush

Personal Protective Equipment

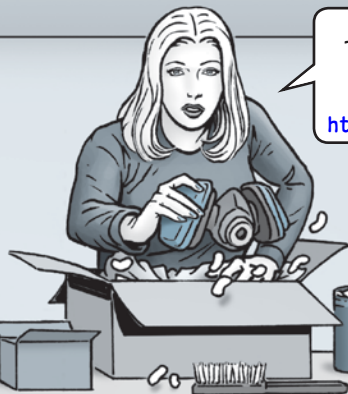
- Coveralls
- Ear plugs
- Face shield
- Gloves
- Goggles/eye protection
- Respirator & cartridge

CPC Application

- Applicator brush
- Corrosion inhibiting compounds (CIC)
- Petrolatum
- Pressurized spray applicator
- Rust inhibiting compound
- Sealant
- Solid film lubricant
- Thread compound

Touch-Up Painting

- Paint brush
- Wet film gauge



YOU'LL FIND NSNs FOR A VARIETY OF
THESE ITEMS IN TB 43-0213, *CORROSION
PREVENTION AND CONTROL (CPAC)* FOR
ARMY WHEELED VEHICLES (SEP 12),
AVAILABLE ON LOGSA'S ETM WEBSITE:
<https://liw.logsa.army.mil/etmapp/#/etm>

WHEN THE ITEMS ARRIVE,
STORE THEM RIGHT! THEN
YOU'LL HAVE THEM WHEN
YOU NEED 'EM.



QUESTIONS?

CONTACT TACOM'S *CORROSION PREVENTION AND CONTROL* OFFICE:
usarmy.detroit.tacom.mbx.ilsc-corrosion@mail.mil

Cold Weather...

WINTER STORMS: ARE YOU READY OR NOT?

BRRRRR!
WINTER IS
DEFINITELY
HERE.

GOT MY SNOW
TIRES AND
ANTIFREEZE. I'M
GOOD TO GO!

HOLD ON!
THERE'S **MORE**
TO WINTER PREP
THAN **SNOW TIRES**
AND **ANTIFREEZE!**

WINTER WEATHER REQUIRES
MORE PREPARATION AND
MAINTENANCE FOR VEHICLES.

PART OF THAT PREPARATION SHOULD
INCLUDE **WINTER SURVIVABILITY TIPS** IN
CASE OF **EMERGENCIES!**

OF COURSE, THE -10 TM IS YOUR **FIRST STOP**.
THE SECTION ON **OPERATION UNDER UNUSUAL CONDITIONS** HAS
INFO ABOUT **STARTING, OPERATING AND MAINTAINING VEHICLES**
IN **COLD WEATHER**.

A **VIDEO**, PRODUCED BY THE U.S. ARMY COMBAT READINESS
CENTER, IS A GREAT RESOURCE, TOO. IT SHOWS WHAT TO DO IF
YOU'RE **STRANDED IN A VEHICLE** DURING WINTER.

PRACTICAL TIPS LIKE THESE COULD **SAVE YOUR LIFE**:

- Raise the hood and display a trouble sign, like a bright cloth tied to the side mirror or fastened at the top of a door.
- Make sure snow drifts or debris don't block the tail pipe.
- Stay in the vehicle unless you can see help within 100 yards.
- Crank the vehicle once every hour and run the heater about 10 minutes.

WATCH THE VIDEO HERE:

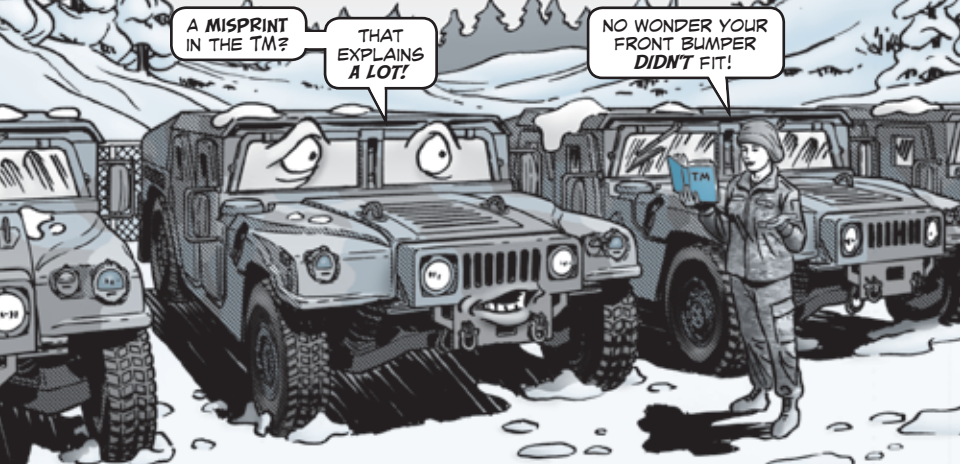
<https://www.dvidshub.net/video/413415/stranded-vehicle>

LEARN ABOUT ADDITIONAL WINTER DRIVING TIPS AT:

<https://safety.army.mil>

HMMWV...

PARTS LIST CORRECTION



A MISPRINT
IN THE TM?

THAT
EXPLAINS
A LOT!

NO WONDER YOUR
FRONT BUMPER
DIDN'T FIT!

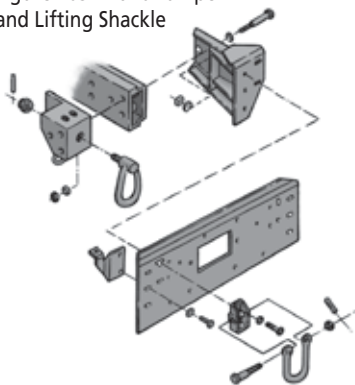
AN UPDATE TO THE HMMWV PARTS LIST IS ON THE WAY, THANKS TO AN ALERT *PS* MAGAZINE READER WHO NOTICED A **DISCREPANCY** BETWEEN PART NUMBERS AND FIGURES.

TACOM SAYS ITEMS 6 THROUGH 15 IN FIG 209 OF TM 9-2320-387-13&P IN IETM EM 0323 (MAR 14) **AREN'T** IN SYNCH WITH THE FIGURE CALL-OUTS.

THESE ITEMS WILL BE
RENUMBERED AS SHOWN HERE
TO CORRESPOND WITH THE
PROPER CALL-OUTS AT THE
NEXT TM UPDATE.

IN THE MEANTIME, HERE'S HOW
THE PARTS LIST **SHOULD** READ:

1501: Frame Assembly
Figure 209. Front Bumper
and Lifting Shackle



Item Number	Item	NSN
6	Frame section LH	2510-01-358-1178
6	Frame section RH	2510-01-357-8789
7	Self-locking nut	5310-01-548-1848
8	Flat washer	5310-01-121-1703
9	Bumper, front	2540-01-412-8610
10	Pin cotter	5315-00-012-0123
11	Plain nut	5310-01-569-6094
12	Shackle	4030-01-316-1551
13	Screw cap	5305-01-264-3602
14	Screw cap	5305-00-071-2071
15	Bracket mount	5340-01-106-2516

SIMPLE SOLUTION REVEALS AIR LEAKS



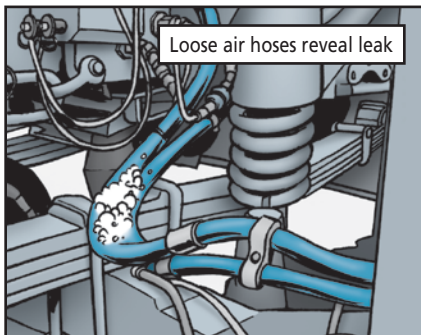
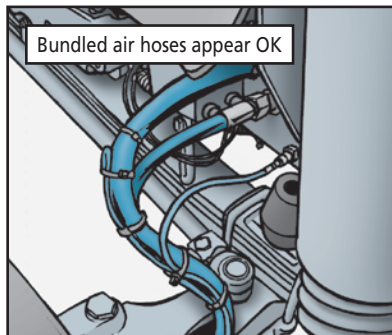
Dear Editor,

We recently had a tire deflation problem with the two front tires on an FMTV while the electronic control unit (ECU) showed five flashing lights. We swapped out both tires with spares, but the tires continued to deflate.

We followed the troubleshooting guide in the TM and replaced all the central tire inflation system (CTIS) components, including the quick release valve (QRV), wheel valve, pressure switch, pneumatic control unit (PCU), ECU, CTIS seals and wiring harness.

Then we sprayed soapy water on all the supply lines and tire hoses to look for an air leak. We found no signs of a leak, but the deflation problem continued.

Finally, I decided to cut the zip ties that secure the front air hoses together in a tight bundle. This allowed them to unwind and hang free. Then I sprayed soapy water on the hoses again.



That did the trick! The soapy water bubbled up and made the leaks easy to detect. We replaced the front air hoses, and that fixed the deflation problem.

The moral of the story: when CTIS air hoses are tightly banded together, you can't always see or detect air leaks. Before you start replacing CTIS components, separate the tightly banded air hoses and check for air leaks first. This could save a lot of time and costly replacements!

Ricardo S. Iriarte
Annville, PA

Editor's note: Many thanks, Ricardo. Soldiers, don't forget to re-secure the lines after the repair.

What's That Corrosion Code?

I **KNOW** THERE'S A SPECIAL CODE FOR CORROSION... IT'S GOTTA BE HERE **SOMEWHERE!**

**SEARCH
NO MORE!**

WHEN REPORTING CORROSION IN THE **GLOBAL COMBAT SUPPORT SYSTEM-ARMY (GCSS-A)**, USE THE CAUSE CODE **"170-CORRODED/RUSTED."**

USE THE CORROSION CODE **"170-CORRODED/RUSTED"** REGARDLESS OF WHETHER YOU'RE REPORTING MANUALLY WITH DA FORM 2404 OR ONLINE WITH DA FORM 5988-E.

ALL MAINTENANCE DEFICIENCIES, INCLUDING CORROSION, MUST BE REPORTED IN GCSS-A, FOLLOWING THE GUIDANCE IN DA PAM 750-8.

THAT WAY, YOUR CORROSION REPORT WILL GET RECORDED **CORRECTLY** AND PLAY A ROLE IN DEVELOPING FUTURE MAINTENANCE DECISIONS AND BUDGETS.

LMTV Hydraulic Tank NSN

Get a new hydraulic tank for the 2 1/2-ton LMTV with NSN 4320-01-645-5255. This is the correct NSN for *all* FMTVs, but Item 13 in Fig 125 of TM 9-2320-333-13&P (Jun 15) lists NSN 4320-01-504-5020 for the LMTV. That's wrong, so make a note until the TM is updated.

PM Tips for Tip-Top Performance

AHH! THIS IS **JUST** WHAT I NEEDED. A NICE WARM-UP FOR MY POWER STEERING BEFORE I START THE DAY!



BEFORE **AND** AFTER THE DAY'S RUN, KEEP THESE CHECKS IN MIND TO KEEP YOUR BUFFALO **MISSION-READY**:

Fluid Warm Up

IN COLD WEATHER, LET THE POWER STEERING FLUID WARM UP **BEFORE** MOVING THE STEERING WHEEL (ABOUT 30 MINUTES).

FOLLOW THE CAUTION PLACARD ON THE INSTRUMENT PANEL:

DO NOT FORCE THE STEERING WHEEL TO TURN WHILE VEHICLE IS STATIONARY.

THAT WAY YOU'LL **AVOID** POWER STEERING LEAKS.

Easy Pull on Cable

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

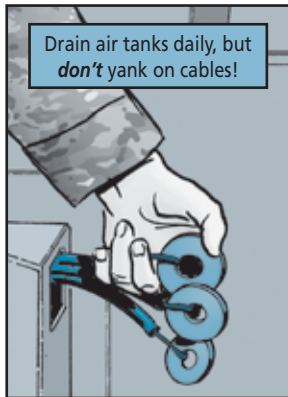
SO DRAIN WATER FROM THE PRIMARY AND SECONDARY AIR TANKS ON THE **DRIVER'S SIDE** OF THE VEHICLE.

THE TANK HAS THREE PULL CABLES. **JUST DON'T YANK ON THEM.** THE ADDED STRESS WILL EVENTUALLY **BREAK** A CABLE.

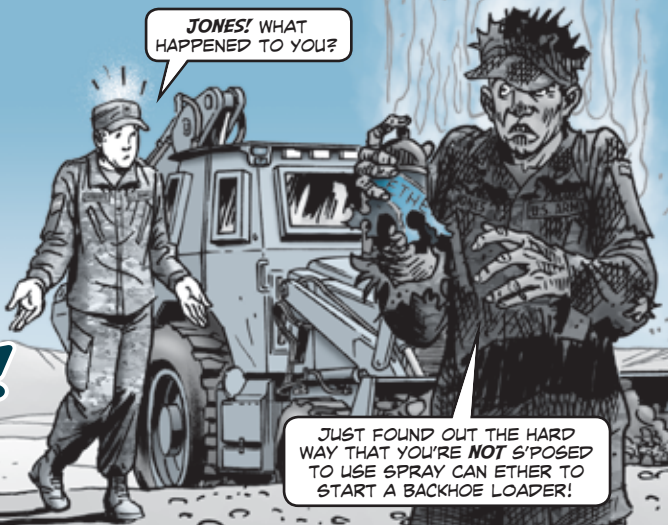
PULL ON THE CABLES JUST UNTIL YOU HEAR AIR COME OUT. THAT'S FAR ENOUGH. AND MAKE SURE YOU PULL **STRAIGHT OUT** ON THE CABLES. YANKING OR PULLING THE CABLES SIDEWAYS WEARS OUT THE PROTECTIVE SLEEVE AND EXPOSES THE METAL STRANDS.

EVENTUALLY, THE CABLE DETERIORATES AND BREAKS, ESPECIALLY IF IT'S YANKED ON EVERY DAY DURING CHECKS AND SERVICES!

Drain air tanks daily, but **don't yank** on cables!



STAY AWAY from Ether Spray!



TAKE A QUICK WALK THROUGH ANY ENGINEERING BATTALION AND YOU'LL SEE LOTS OF CONSTRUCTION EQUIPMENT WITH BUILT-IN STARTING AIDS. THESE AIDS HELP VEHICLE ENGINES TURN OVER IN COLD WEATHER.

BUT IF YOU'RE LOOKING FOR ONE OF THESE STARTING AIDS ON THE BACKHOE LOADER (BHL), YOU'RE OUTTA LUCK. THERE *ISN'T* ONE.

UNFORTUNATELY, SOME OPERATORS THINK IT'S OK TO GRAB A CAN OF ETHER SPRAY TO CREATE THEIR OWN.

NOW, SAY IT ONCE, THEN SAY IT **OVER AND OVER AGAIN:**

**HANDS
OFF THE
ETHER!**

DON'T EVEN THINK ABOUT HEADING BACK TO THE WORKBENCH, GRABBING A CAN OF ETHER SPRAY, AND GIVING IT A GO! SPRAYING ETHER IN YOUR BHL'S ENGINE WILL CRACK PISTONS, BEND RODS AND RUIN HEADS.

Personnel Risk

TO BRING THE POINT HOME, A **WARNING DECAL** IS MOUNTED ON THE STREET SIDE OF THE BHL:

**EXPLOSION HAZARD -
DO NOT USE ETHER**

THERE'S AN IMPORTANT REASON FOR THE DECAL. THE BHL'S ENGINE MANIFOLD INTAKE HEATER IS JUST ON THE OTHER SIDE. THAT HEATER GETS **OVEN HOT**, SO A SPRAY OF ETHER WILL **IGNITE** AND TRAVEL RIGHT BACK TO THE ETHER CAN. THAT CREATES AN **EXPLOSION** THAT CAN CAUSE **SEVERE BURNS, SCARS, BLINDNESS OR EVEN DEATH!**

SO IF YOU'RE HAVING PROBLEMS STARTING YOUR BHL, **KEEP YOUR HANDS OFF THE SPRAY CAN ETHER** AND GRAB A MECHANIC INSTEAD.

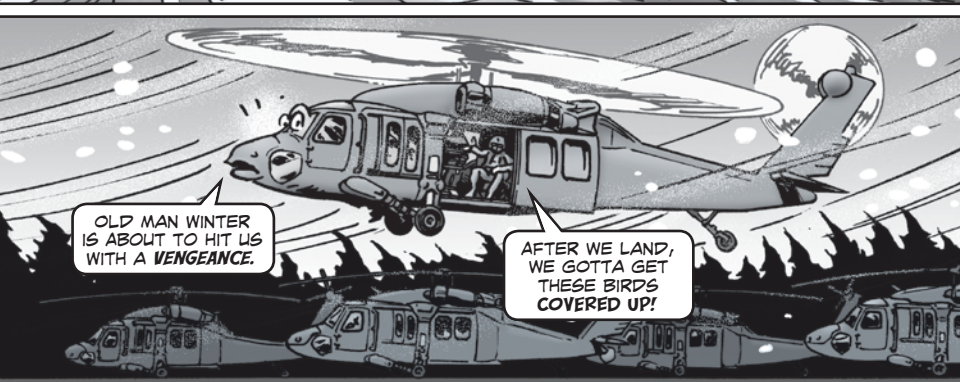


Pay close attention to warning decal

PROTECT AIRCRAFT FROM OLD MAN WINTER



OH, MAN!
WE GOTTA GET
BACK HOME!



OLD MAN WINTER
IS ABOUT TO HIT US
WITH A **VENGEANCE**.

AFTER WE LAND,
WE GOTTA GET
THESE BIRDS
COVERED UP!



WHEN OLD MAN WINTER
ARRIVES ON THE SCENE,
IT WON'T BE LONG
BEFORE SNOW, ICE AND
WIND START **BATTERING**
YOUR AIRCRAFT.

THAT'S WHY IT'S IMPORTANT
TO **PLAN, PREPARE AND
TRAIN** FOR COLD WEATHER
OPERATIONS BEFOREHAND
USING YOUR AIRCRAFT-
SPECIFIC TMS.

FOR GENERAL COLD WEATHER INFORMATION,
CHECK OUT CHAPTER 10 OF TM 1-1500-204-23-1,
GENERAL AIRCRAFT MAINTENANCE.

BECAUSE PREVENTIVE MAINTENANCE IN SUB-ZERO TEMPERATURES IS **CRITICAL** TO READINESS AND KEEPING AIRCRAFT FLYING...



...MAKE SURE YOUR UNIT'S SOP FOR COLD WEATHER OPERATIONS IS CURRENT.

AIRCRAFT, WEAPONS SYSTEMS, AVIATION GROUND SUPPORT EQUIPMENT (AGSE), AVIATION LIFE SUPPORT EQUIPMENT (ALSE), AND COLD WEATHER CLOTHING **ALL** NEED PREVENTIVE MAINTENANCE SERVICES **BEFORE** THE DEEP FREEZE HITS.



MOVING AIRCRAFT INSIDE THE HANGAR FOR MAINTENANCE IS **BEST**.

IF THAT **CAN'T** BE DONE, A **SHELTER** WILL WORK FOR EQUIPMENT FACED WITH EXTENDED TIME OUT IN THE COLD.

IN BITTER COLD, MAKE SURE YOU WORK IN SHIFTS AND USE THE BUDDY SYSTEM.



LONG PERIODS OUTSIDE CAN AFFECT YOUR BODY. FINGERS ARE ESPECIALLY **VULNERABLE** TO FROSTBITE.



BREAK THE MAINTENANCE UP INTO SMALL PERIODS WITH ONE PERSON WORKING WHILE ANOTHER WARMS UP IN A HANGAR OR SHELTER.

IF YOU USE A TEMPORARY SHELTER MADE OUT OF CANVAS OR A PARACHUTE, USE A HEATER TO WARM IT.

BUT MAKE SURE YOU FOLLOW **ALL** SAFETY REGULATIONS TO PREVENT A FIRE OR CARBON MONOXIDE POISONING.

IN WINTRY WEATHER, THE COLD WILL AFFECT FUEL, SEALS, TIRES, BATTERIES AND AIRCRAFT.

HERE ARE THE **COLD, HARD FACTS** YOU SHOULD KNOW TO HELP YOU **FIGHT AND WIN** THE COLD, ICY BATTLE...



PS MORE

Fact 1: Cold Fuel



ICE CAN FORM IN FUEL LINES FROM CONDENSATION. LIMIT THAT PROBLEM BY KEEPING YOUR AIRCRAFT TOPPED OFF.

EVEN AFTER TOPPING OFF, THERE WILL BE A **GAP** BETWEEN THE TOP OF THE TANK AND THE FUEL. **THAT'S** WHERE AIR CONDENSES AND WATER MIXES WITH YOUR FUEL. SO WHEN YOU TAKE A FUEL SAMPLE EACH DAY, DRAIN ENOUGH FUEL TO GET RID OF ALL THE WATER.

ALWAYS DRAIN FROM THE LOWEST POINT OF THE FUEL CELL. WATER IS **HEAVIER** THAN FUEL AND WILL ACCUMULATE ON THE BOTTOM.

IF REFUELING IS DONE **OUTSIDE** IN **FREEZING** TEMPERATURES, **ALWAYS** CHECK THE AIRCRAFT'S FUEL LEVEL **BEFORE** MOVING IT INSIDE.

FUEL **EXPANDS** IN **WARMER** TEMPERATURES, SO TAKING A FULL AIRCRAFT INSIDE COULD GIVE YOU A FUEL SPILL TO CLEAN UP.



WHEN SINGLE PORT REFUELING, MAKE SURE IT SHUTS OFF AT APPROPRIATE LEVELS.



BE EXTREMELY CAREFUL ABOUT STATIC ELECTRICITY DURING REFUELING.

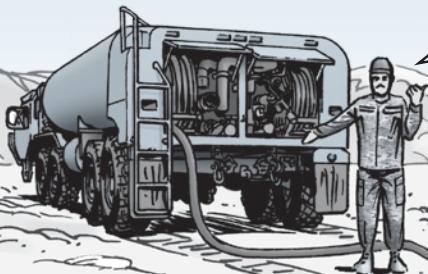
STATIC ELECTRICITY **INCREASES** WHEN THE TEMPERATURE AND HUMIDITY **DROP**.

COMBINED, THEY CAN **FIRE UP** YOUR WINTER **REAL FAST!**

WHEN DEALING WITH COLD FUEL AND AIRCRAFT, KEEP THESE GROUNDING POINTS IN MIND:

1. aircraft to ground
2. aircraft to fuel tanker
3. aircraft to fuel nozzle

BEFORE REMOVING THE CAP!



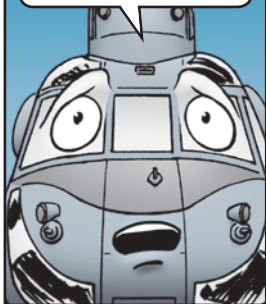
IF YOU'RE **NOT** USING A CLOSED CIRCUIT NOZZLE, PUT THE REGULAR NOZZLE IN ALL THE WAY.

THAT **LESSENS** THE DANGER OF STATIC AND **REDUCES** THE CHANCE FOR A FUEL SPILL.



IT'S **ALSO** IMPORTANT TO **REINSTALL** THE FUEL CAP **BEFORE** REMOVING THE GROUND WIRE FROM AN AIRCRAFT.

OTHERWISE, **SPARKS** CAN SHOOT BETWEEN THE GROUNDING CABLE AND THE AIRCRAFT.



BEEF UP YOUR GROUNDING KNOWLEDGE BY CHECKING OUT YOUR AIRCRAFT TMS FOR INFORMATION.



FUEL SPILLS CAN CREATE ENVIRONMENTAL HAZARDS, BUT SPILLING COLD FUEL ON BARE SKIN CAN LEAD TO **INSTANT FROSTBITE**.



Fact 2: Cold Oil and Grease



NOTHING IS IMMUNE TO COLD, **NOT EVEN** OIL AND GREASE.

AS THE MERCURY DIPS, OIL GETS **THICKER** AND GREASE **GELS**.

USING THE **RIGHT OIL**, LUBE AND GREASE **MINIMIZES** THOSE PROBLEMS.

FOR EXAMPLE, WHEN SERVICING A **STONE COLD** AIRCRAFT'S OIL SYSTEMS, **NEVER** FILL IT TO THE BRIM. THAT'S BECAUSE OIL **EXPANDS** AS IT HEATS UP AND YOU'LL BE CLEANING UP AN **OVERFLOW MESS**.

BECAUSE OIL LEAKS ARE A **BIGGER PROBLEM** IN THE WINTER, **REGULARLY** EYEBALL CONNECTIONS, JOINTS AND SEALS.

Fact 3: Cold Seals



OLD MAN WINTER DOES A NUMBER ON SEALS. WHEN COLD **CONTRACTS** A SEAL, IT OPENS THE DOOR FOR **LEAKS**.

EVEN **WORSE**, MOISTURE CAN SEEP IN AROUND SEALS AND **FREEZE**. COLD TURNS MOISTURE INTO ICE AND ICE **CUTS** THE SEALS. CHECK SEALS REGULARLY TO SEE IF THEY NEED REPLACING.

PS MORE

Fact 4: Cold Batteries

COLD CAN AFFECT BATTERIES, BUT UNLESS THE TEMPERATURES DROP TO SUB-FREEZING LEVELS, SEALED LEAD-ACID BATTERIES (SLAB) OR NI-CAD BATTERIES SHOULD CONTINUE TO DO THEIR JOB.

HOWEVER, FREQUENT COLD STARTS WILL SHORTEN BATTERY LIFE.

THE H-60M HAS TWO SLAB BATTERIES IN THE NOSE.

THE HH-60L HAS THE SLAB BATTERY IN THE QUAD BAY.

AND THE UH-60A/L HAS THE BATTERY IN THE CABIN BEHIND THE PILOT SEAT. IT COULD BE *EITHER* A NI-CAD OR SLAB BATTERY.

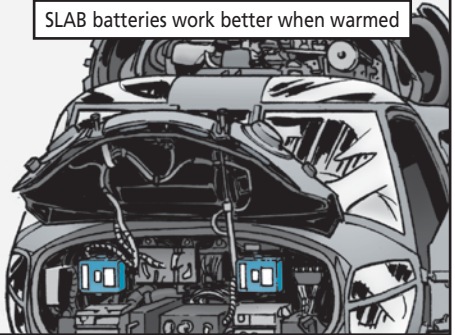


KEEP SLABS WARM. THE COLD CAN DRAIN THEIR CHARGE MUCH *FASTER* THAN IT DOES A NICKEL CADMIUM BATTERY.

WHEN BRINGING EITHER SLAB OR NICKEL-CADMIUM BATTERIES INSIDE, STORE THEM IN *SEPARATE* AREAS. FUMES FROM A SLAB BATTERY CAN CAUSE A NICKEL-CADMIUM BATTERY TO DISCHARGE.

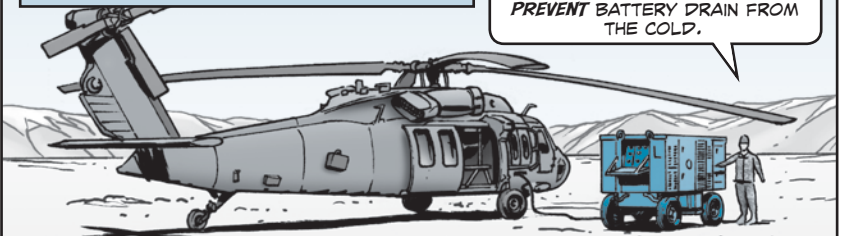
ALWAYS STORE BATTERIES ON A SHELF OR ON TOP OF DUNNAGE BECAUSE BARE FLOORS WILL *DRAIN* THEM.

SLAB batteries work better when warmed



IF YOU'RE USING AN AVIATION GROUND POWER UNIT (AGPU), THE LOAD WILL WARM UP THE BATTERY BEFORE ENGINE STARTING.

IT'S ALWAYS BEST TO USE AN AGPU FOR AN AIRCRAFT'S FIRST START OF THE DAY. THAT HELPS *PREVENT* BATTERY DRAIN FROM THE COLD.

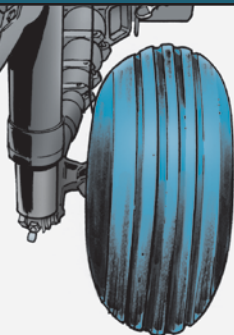


Fact 5: Cold Tires

COLD CAN REDUCE TIRE AIR PRESSURE, SO CHECK YOUR HELICOPTER'S TIRE PRESSURE OFTEN LIKE IT SAYS IN EACH AIRFRAME'S TM.

WHEN TIRES FREEZE TO THE GROUND, YOU CAN USE LIQUID DEICER TO BREAK THEM LOOSE. AVOID PARKING AIRCRAFT IN WET OR SLUSHY AREAS AND IF POSSIBLE USE A PLATFORM SURFACE OF SOME KIND UNDER THE TIRES TO KEEP THEM OFF SNOW AND ICE.

IF YOU PARK YOUR AIRCRAFT ON MUD, THE NEXT DAY YOU MAY FIND THE TIRES HAVE SUNK INTO IT AND FROZEN IN PLACE.



Keep aircraft tires off wet ground

Fact 6: Cold Aircraft

USE AIRCRAFT COVERS TO PROTECT *EVERY* PART OF YOUR AIRCRAFT.

KEEPING TRACK OF YOUR AIRCRAFT COVERS AND FLYAWAY GEAR COMES IN HANDY IN THE WINTER.



Remove snow from aircraft...



...and make sure covers are used



IF YOU **CAN'T** COVER THE ENTIRE AIRCRAFT, AT LEAST COVER:

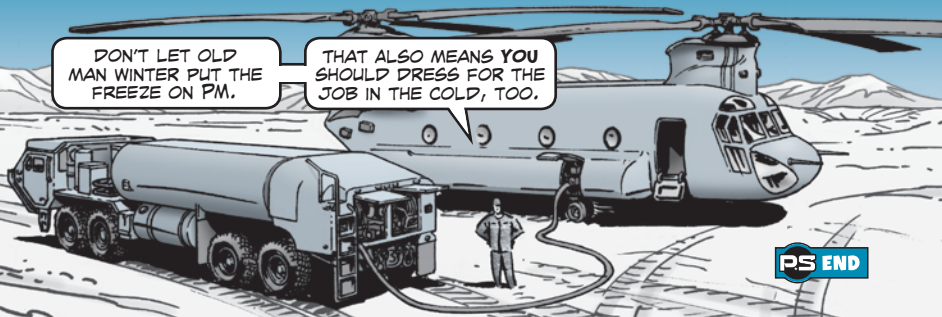
- the engine inlets
- exhaust openings
- pitot tubes
- the main rotor head and tail rotor

NEVER TAKE COLD WEATHER FOR GRANTED!

PREPARE TO DO MAINTENANCE WITH THE PROPER CLOTHING TO KEEP WARM SO THE JOB GETS DONE RIGHT.

DON'T LET OLD MAN WINTER PUT THE FREEZE ON PM.

THAT ALSO MEANS YOU SHOULD DRESS FOR THE JOB IN THE COLD, TOO.



New Inspection for SATS Leaf Spring Wear



Mechanics, the leaf spring assemblies on the standard aircraft towing system (SATS), NSN 1740-01-575-5662, are experiencing excessive wear that can put the SATS in a non-mission capable status.

While not a safety issue, the distance between the vehicle frame and leaf spring assembly can exceed the design constraints over time. If that happens, the leaf spring assembly can rub against the drive train.

New leaf spring inspection criteria will be added to the SATS' TM 1-1740-221-13&P at the next update. In the meantime, here are the new criteria:

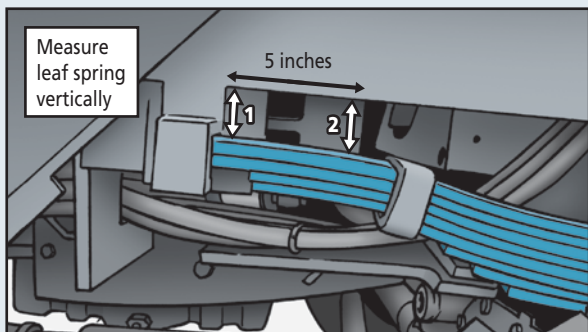
Inspection Conditions



- With the engine shut down, make sure the transmission is in park.
- Chock the vehicle tires.
- Only use standard measurements such as $\frac{1}{2}$ inch, $\frac{3}{8}$ inch, $\frac{9}{16}$ inch ($\pm \frac{1}{16}$ inch).
- Take measurements at the rear, outboard edge of the front leaf spring assembly on the driver and passenger sides where the springs enter the housing block shackle.

Leaf Spring Measuring

1. Measure vertically from the vehicle's frame to the point where the leaf spring assembly enters the rear housing block shackle.
2. Move the ruler forward five inches and measure vertically from the top of the leaf spring to the frame.
3. Subtract the lesser measurement from the greater one. If the result is less than one inch, no further action is necessary. If the difference is one inch or greater or the leaf spring assembly touches the vehicle frame, go to Step 4.
4. On the DA Form 2404 (manual) or 5988-E (electronic), enter a / status symbol with the following: "Left/right leaf spring assembly sag measures ____." Enter your measurement in the blank.



In the future, units should order and replace both the front left and front right leaf spring assemblies at the next 500-hour/semiannual service. Make sure you replace both assemblies at the same time.

Got Aviation Corrosion Questions?

Fighting corrosion is a daily battle. And in that fight, sometimes questions come up about how best to fight corrosion. To get answers, contact the aviation corrosion team by email: usarmy.redstone.rdecom-amrdec.mbx.amcom-corrosion@mail.mil

CREPS Reports Improve Readiness

Readiness is important to the warfighter. That's why TACOM provides a way for you to voice your concerns or comments about equipment or TMs. Just submit a Collaborative Readiness Problem Solving (CREPS) report. The website is:

<https://gfis.tacom.army.mil/hd/default.cfm?p=nt&cz=128>

Stay Connected with PEO Soldier

Got questions about PEO Soldier items? Check out their website at:

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

Also check them out
on social media:

<https://twitter.com/PEOSoldier>

<https://facebook.com/PEOSoldier>

<https://flickr.com/peosoldier>

<https://youtube.com/user/USArmyPEOSoldier>

SHADOW NEEDS PROTECTION!

I REALLY AM **NOT** MADE FOR THIS KIND OF WEATHER.

YOU NEED TO **PROTECT** ME FROM THE ELEMENTS.

THE RQ-7B SHADOW UAV NEEDS ALL THE **PROTECTION** YOU CAN GIVE IT FROM RAIN, WIND AND DIRT. ITS **DELICATE PARTS** CAN BE DAMAGED BY **TOO MUCH EXPOSURE** TO THE ELEMENTS.

THE **BEST PROTECTION** FOR ALL UAVS IS TO KEEP THEM **PARKED INSIDE** WHEN THEY'RE **NOT** FLYING.

BUT IN THE FIELD THAT'S **NOT POSSIBLE**.

THAT'S WHY IT'S A GOOD IDEA TO TAKE ALONG A **TENT BIG ENOUGH FOR AT LEAST THREE SHADOWS**.

THE TENT NOT ONLY PROVIDES A GOOD PLACE TO **PARK SHADOWS**, BUT ALSO GIVES YOU A **PROTECTED AREA** FOR MAINTENANCE AND PMCS.

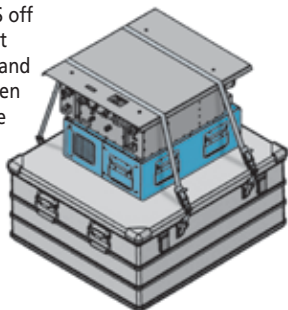
IF YOU **DON'T** HAVE A TENT, AT THE VERY LEAST KEEP SHADOWS **COVERED WITH A TARP**. IF WINDS ARE STRONG OR STORMS ARE RAGING, FIND SOMEPLACE ENCLOSED TO **PARK SHADOWS** TO PREVENT DAMAGE.

ONE SHADOW COMPONENT THAT SHOULD BE LEFT OUTSIDE **AS LITTLE AS POSSIBLE** IS THE UNINTERRUPTABLE POWER SUPPLY (UPS) FOR THE UNIVERSAL AND PORTABLE GROUND DATA TERMINALS (UGDT AND PGDT).

THE UPS IS **ESPECIALLY SENSITIVE** TO WATER AND DIRT.

MAKE SURE THE UPS IS **OFF THE GROUND** ON A PLATFORM TO PREVENT STANDING WATER FROM GETTING IN THE UPS.

Keep UPS off ground at all times and cover when not in use



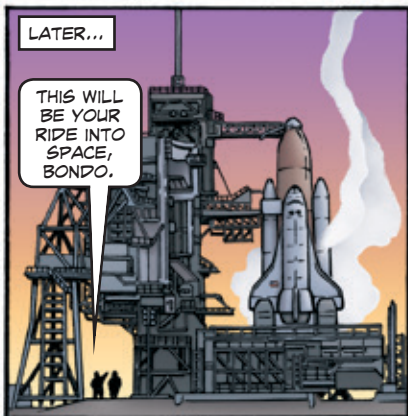
IF A UGDT OR PGDT IS GOING TO BE SITTING OUTSIDE VERY LONG, COVER THE UPS TO **PROTECT** IT FROM THE ELEMENTS.

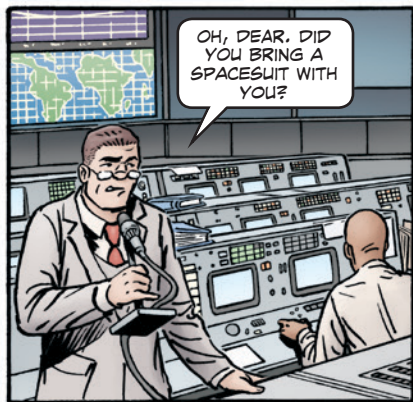
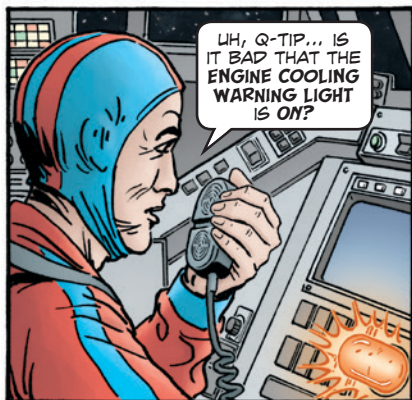
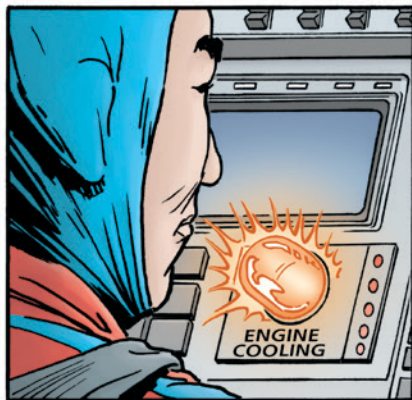
FOR MORE INFO ON PROTECTING YOUR SHADOW, SEE TM 1-1550-1689-23&P AND TM 1-1550-689-23&P.

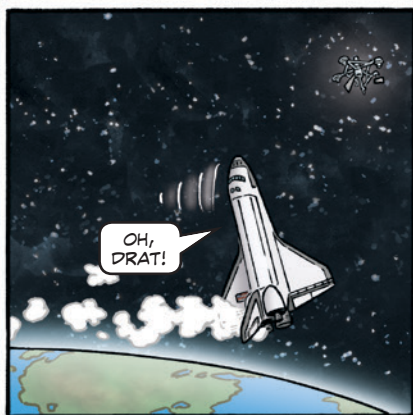
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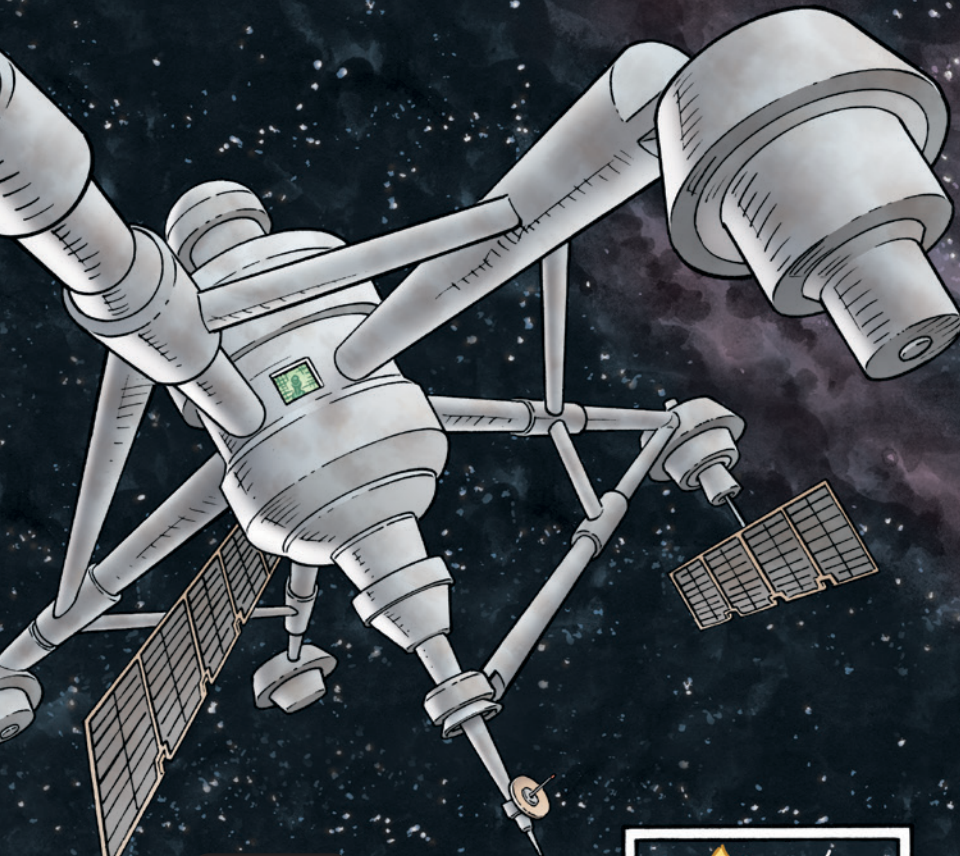
JAMES BONDO in MOONBREAKER

(part 2)



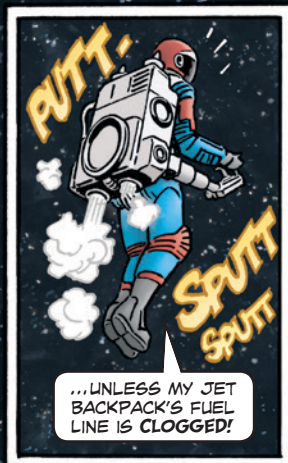


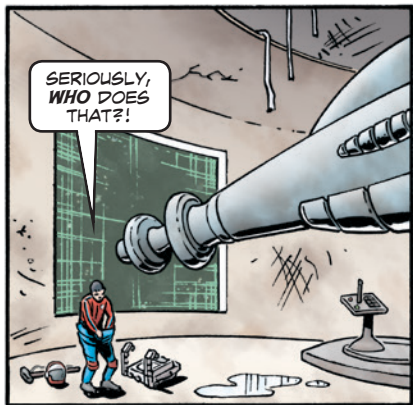
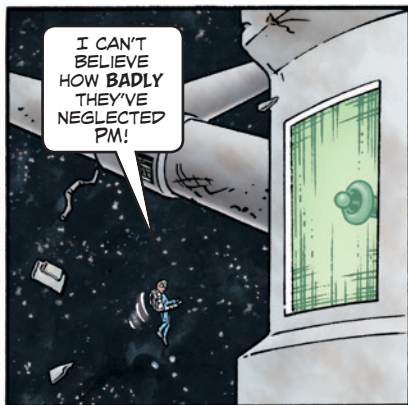
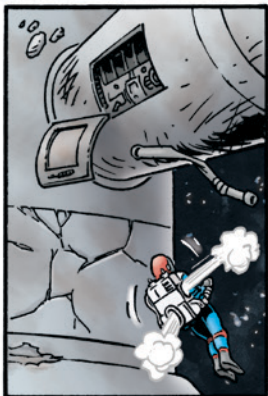
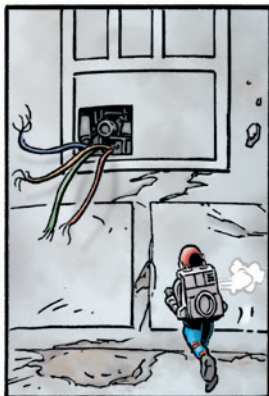
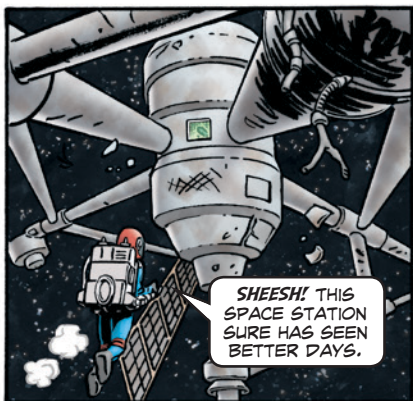


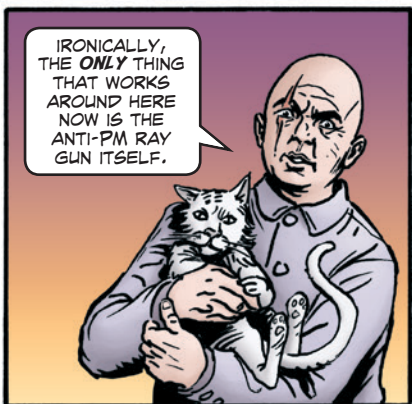
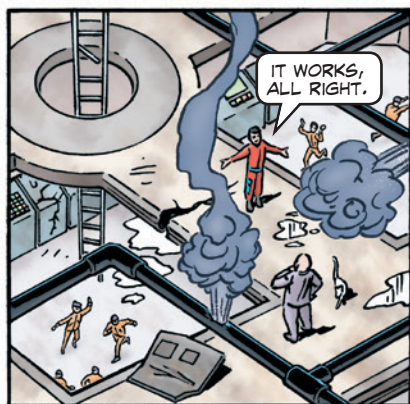
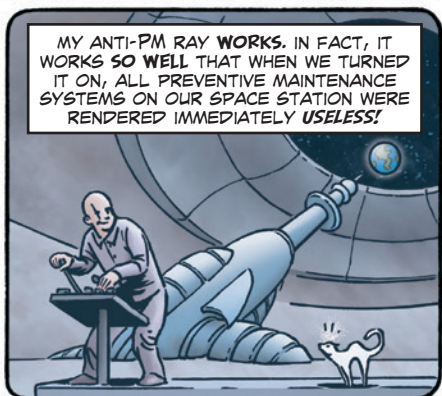
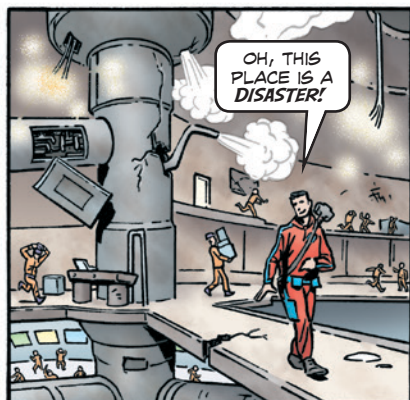


WOW, THE
GANG AT SHIM
HAVE REALLY
OUTDONE
THEMSELVES!

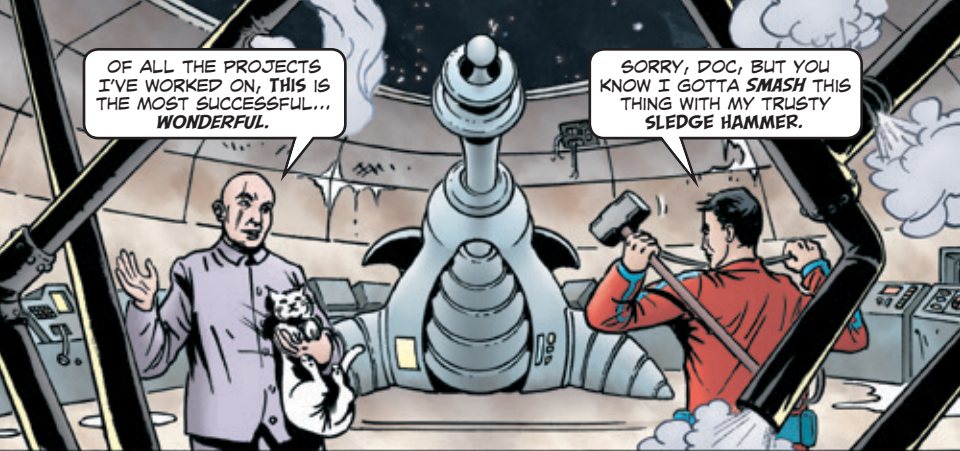
LUCKILY IT
ISN'T TOO FAR
AWAY. SHOULD
BE THERE IN 30
SECONDS...



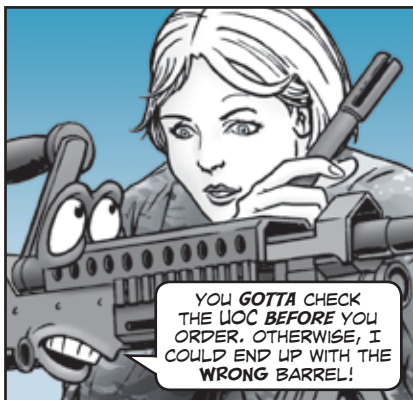






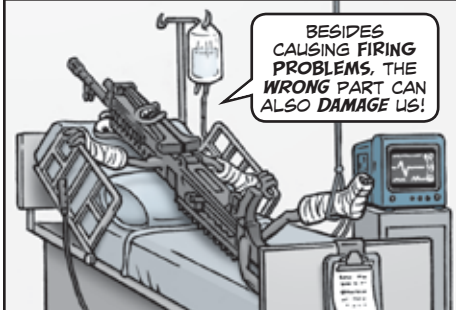


UOC Makes All the Difference



SMALL ARMS REPAIRMEN, THE UOC (USABLE ON CODE) MAKES **ALL THE DIFFERENCE** WHEN YOU ORDER PARTS FOR YOUR M240 MACHINE GUN, M16 RIFLE OR M4/M4A1 CARBINE.

IF YOU **IGNORE** THE UOC, YOU CAN END UP ORDERING A PART FOR YOUR M240H, FOR EXAMPLE, THAT WORKS **ONLY** ON THE M240B.



SO WHEN YOU'RE LOOKING UP **REPLACEMENT PARTS** IN THE WEAPON'S -23&P, CHECK THE PART'S UOC TO MAKE SURE IT'S THE **RIGHT ONE** FOR YOUR WEAPON.

THE UOC IS A **SERIES OF NUMBERS AND/OR LETTERS** NEXT TO THE PART'S DESCRIPTION. THE UOC TELLS YOU WHAT **MODELS** THE LETTERS AND NUMBERS REPRESENT.

IF **NO** UOC IS LISTED, THE PART **FITS ALL** MODELS.



Here are the M240 UOCs:

M240: G69
M240B: BB2
M240C: L04
M240D: BC2
M240E1: AG8
M240G: BC6
M240H: BN4
M240N: BJ8

Here are the M16 and M4 UOCs:

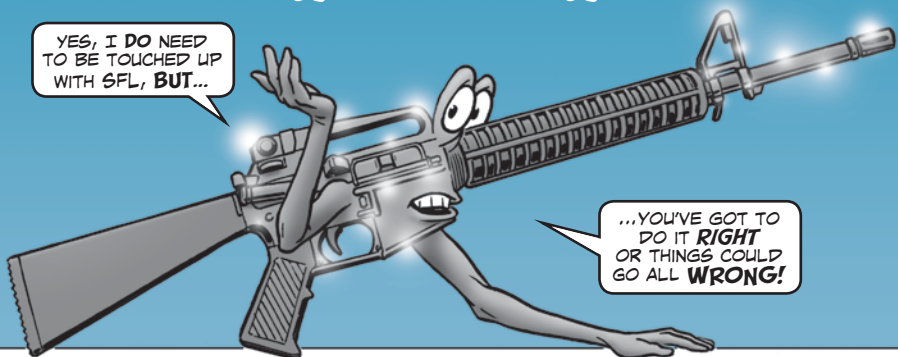
M16A2: AR8
M16A3: AW4
M16A4: AZ1
M4: AS1
M4A1: AY6

Small Arms...

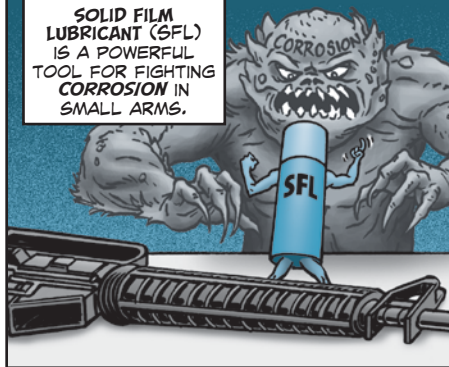
DEGREASING AND SFL GO HAND-IN-HAND

YES, I **DO** NEED TO BE TOUCHED UP WITH SFL, **BUT...**

...YOU'VE GOT TO DO IT **RIGHT** OR THINGS COULD GO ALL **WRONG!**



SOLID FILM LUBRICANT (SFL) IS A POWERFUL TOOL FOR FIGHTING **CORROSION** IN SMALL ARMS.



WHEN A WEAPON'S PROTECTIVE COATING WEARS OFF, SFL COMES TO THE **RESCUE**.



BUT YOU **MUST** FOLLOW THIS SFL PROCEDURE OR YOU MAY BE HURTING MORE THAN HELPING YOUR WEAPON!



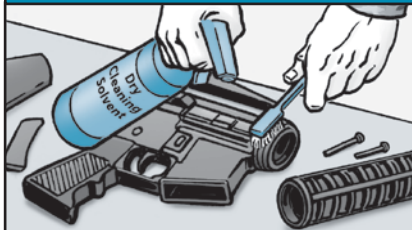
A WEAPON MUST BE THOROUGHLY DEGREASED AND INSPECTED FOR CORROSION AND DAMAGE **BEFORE** USING SFL.

A WEAPON SHOULD ALSO BE THOROUGHLY DEGREASED EVERY TIME YOU **CHANGE LUBES**.

IF THE WEAPON IS CORRODED OR DAMAGED, IT MUST BE REPAIRED **BEFORE** USING SFL.

TO DEGREASE, USE **MIL-PRF-680 TYPE II DRY CLEANING SOLVENT**,
NSN 6850-01-474-2317.

UNFORTUNATELY, IT'S **NOT ENOUGH** TO SOAK A WEAPON'S PARTS IN THE SOLVENT. YOU MUST **ALSO SCRUB** THE PARTS WITH THE SOLVENT AND A NON-METALLIC BRUSH TO CLEAN OUT ALL DIRT AND GREASE.



LET THE WEAPON THOROUGHLY DRY.

HOLD UP! I THINK I NEED ANOTHER HOUR BEFORE I'M ALL DRIED OUT!



THEN APPLY AN EVEN COATING OF SFL TO THE AREAS THAT NEED TOUCHUP.



LET THE SFL FULLY CURE FOR 24 HOURS BEFORE RELUBING THE WEAPON AND RETURNING IT TO SERVICE.

SEE THE WEAPON'S -23&P FOR THE LIMITS ON HOW MUCH OF THE WEAPON CAN BE TOUCHED UP WITH SFL.

NSN 9150-01-260-2534 WILL BRING YOU A 16-OZ AEROSOL CAN OF SFL.



YOU CAN ALSO GET A 1-GAL CAN WITH NSN 9150-00-142-9361.



AND THERE'S NOW A **PAINT PEN DISPENSER**, NSN 9150-01-646-0099, AVAILABLE THAT MAKES IT MUCH **EASIER** TO TOUCH UP NICKS, SCRATCHES AND SHINY SPOTS.

THESE ARE **NON-AEROSOL** AND **MUST** BE APPLIED WITH A BRUSH, WHICH WILL PRODUCE A MORE EVEN APPLICATION THAN SPRAYING SFL.



REGARDLESS OF WHICH KIND YOU USE, **CAREFULLY FOLLOW THE INSTRUCTIONS** ON THE CAN FOR BEST RESULTS.



Small Arms...

Check Weapons *GOING* and *COMING*



Dear Editor,

Please emphasize to your readers the critical importance of inspecting weapons before transferring them to other units. And the receiving units also need to do their own inspections before letting weapons out of the arms room.

We've received several weapons that weren't up to 10/20 standards. In one case, a cleaning rod was stuck in the barrel. The weapon would've blown apart if fired!

WO1 Robert Mitchell
ALARNG

Editor's note: *Yes, weapons should be inspected going and coming. Every weapon's -23&P TM lists the PMCS that should be done when a unit receives a weapon, new or old.*

M16-Series Rifle, M4/M4A Carbine...

NEED A FRONT SIGHT TOOL? YOU HAVE CHOICES!

Dear Half-Mast,

How do you get the tool to adjust and remove the M16 rifle and M4 carbine's front sight post?

SSG D.R.

Dear Sergeant,

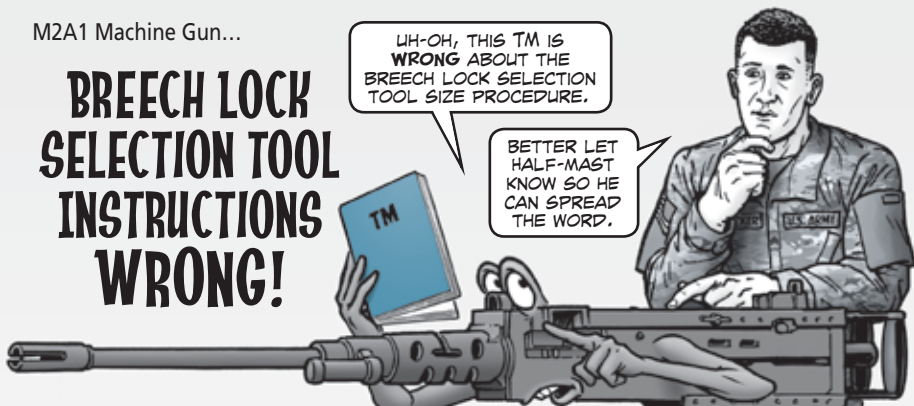
Now you have two choices. In the past your support had to fabricate the tool following the instructions in WP 0030-2 in TM 9-1005-319-23&P. You can still go that route. Or you can order the tool with NSN 1005-01-660-5283 for \$35.

Half-Mast

BREECH LOCK SELECTION TOOL INSTRUCTIONS WRONG!

UH-OH, THIS TM IS
WRONG ABOUT THE
BREECH LOCK SELECTION
TOOL SIZE PROCEDURE.

BETTER LET
HALF-MAST
KNOW SO HE
CAN SPREAD
THE WORD.



Dear Editor,

The M2A1 machine gun's TM 9-1005-347-23&P (Jul 11) gives the wrong info on using the breech lock selection tool.

The WP 0033 00-4 says to retract the bolt until the barrel extension has separated no more than $\frac{1}{16}$ inch from the trunnion block. This lets you use the breech lock selection tool to get the correct breech lock size.

The problem comes when the TM says to slowly release the retracting slide. That's wrong. You'll need to hold the retracting slide handle in place to maintain the $\frac{1}{16}$ -in separation until the right breech lock selection tool size has been determined.

If you do it the way the TM says, you could get the wrong reading.

SGT Nick Rucker
NEARNG

Editor's note: *You're absolutely right, Sergeant.
This will be corrected in the next revision to the TM.*

M2A1

Machine Gun...

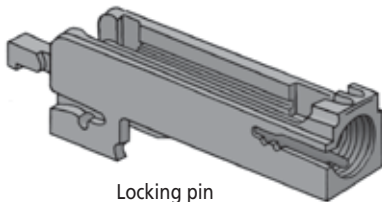
MISSING BARREL LOCKING SPRING NSN

Dear Editor,

The M2A1 machine gun's TM 9-1005-347-23&P *doesn't* list the NSN for the barrel locking spring or show its picture in the repair parts and special tools list (RPSTL).

Repairmen need to make a note in WP 0016 00-10 that they can order the spring with NSN 1005-00-726-6134. That way they won't have to order the entire barrel extension assembly.

Follow the procedure in WP 0016 00-10 to install the spring into the barrel extension assembly.



Locking pin

James Wood
JBLM, WA

Editor's note: *Great tip, James.
The M2 and M2A1 -23&Ps are
being merged and this mistake will
be corrected in the new TM.*

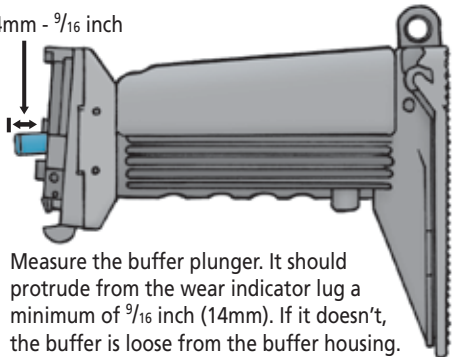
DON'T LET BUFFER SUFFER!

PLEASE **DON'T**
LET MY BUFFER
GET IN BAD
SHAPE!

CHECK IT
OUT WITH
THESE
CHECKS.

If the buffer on your M240B or M240L machine gun suffers, so will your entire weapon. These checks spot buffer problems early:

14mm - $\frac{9}{16}$ inch



- Measure the buffer plunger. It should protrude from the wear indicator lug a minimum of $\frac{9}{16}$ inch (14mm). If it doesn't, the buffer is loose from the buffer housing. Your weapon is NMC until the buffer is replaced.

- Check the buffer housing for peening, cracking or other damage, including missing finish from the stop above the buffer.



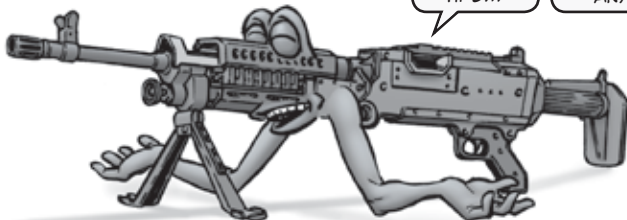
- Check the buffer shaft for bends, mushrooming, peening and cracks on the shaft's face.

- Check the shaft for oil residue. Work the buffer to check for fluid leakage. The buffer shaft should depress smoothly without chatter and return promptly when released.

Problems? Tell your small arms repairman.

AHH! WITH
THESE PM
TIPS...

... MY BUFFER
DOESN'T SUFFER
ANYMORE!



FOLLOWING THESE
TIPS WILL KEEP
ME READY FOR
ACTION AND...

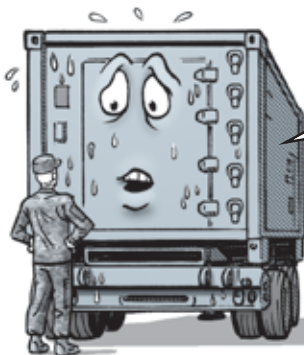
...That's the SATS Fact!



Dear Editor,

We've found these tips keep our Standard Automotive Tool Set (SATS) ready for action:

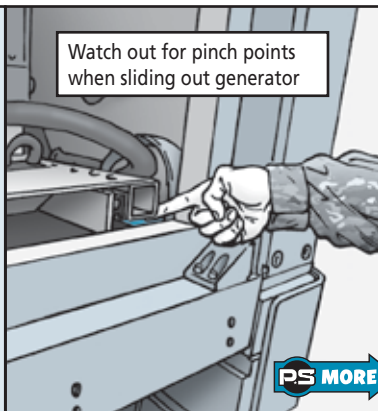
- **Fight corrosion by running A/C.** We know PS has talked about how desiccants can help prevent corrosion doing a number on tools and other equipment stored inside SATS. But we've found the best way to beat corrosion is simply opening up SATS every week and running the A/C for 45 minutes. That does a good job drying up any moisture inside.



- **Use two people to slide out the generator.** The generator is very heavy. If the stops on the slide rails fail, the generator could slide out right on top of you! That's bad for you and the generator. Wear gloves, too. Your hands need protection from the pinch points between the door frame and the front of the rails.

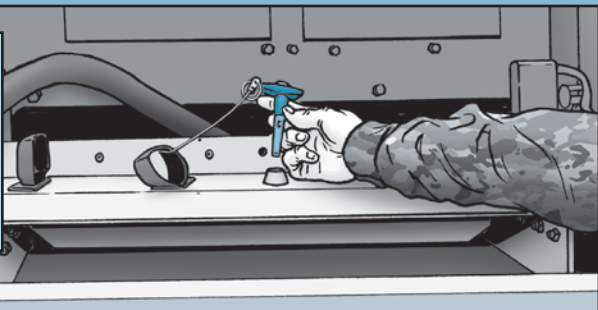
It's best to have one person pushing from the rear while the other pulls from the front. Do it slowly so the generator has no momentum. Don't depend on the rail stops to stop the generator.

Try to park the SATS on level ground. That makes it easier to slide the generator in and out safely.



PS MORE

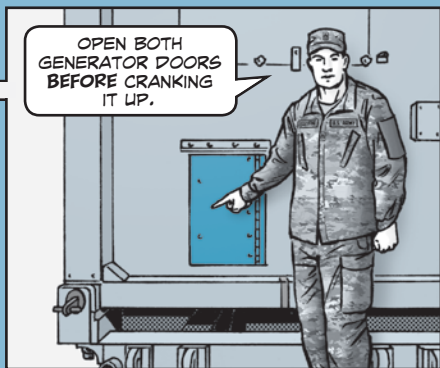
When you store the generator for travel, make sure to install the two locking pins. Missing pins mean the generator slides out on the first turn.



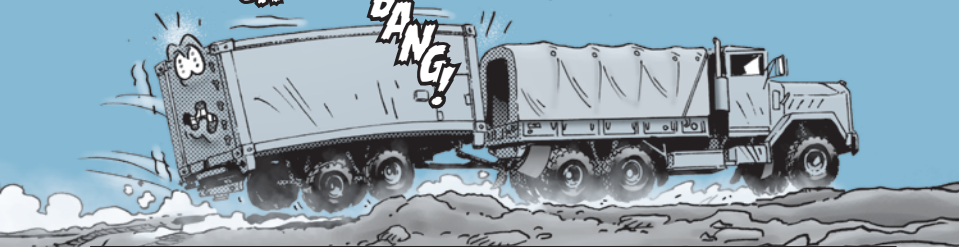
- **Give the generator air.** Open the generator's two doors whenever it's running. That lets exhaust go outside instead of inside the trailer.

- **Make sure everything is securely strapped down before hitting the road.** You don't want large objects flying around inside the trailer. Every single item in the trailer should have its own ratchet strap with that strap tightly locked in place before you travel.

OPEN BOTH
GENERATOR DOORS
BEFORE CRANKING
IT UP.

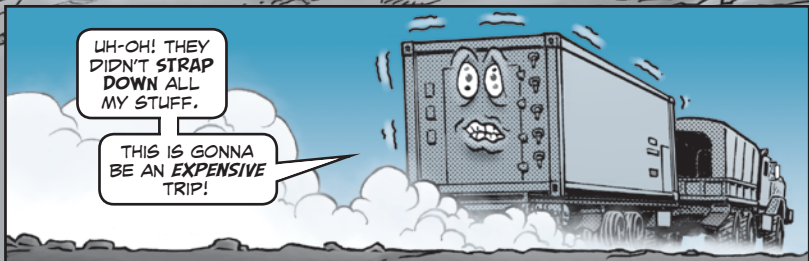


CRASH! **BANG!** **SHATTER!**



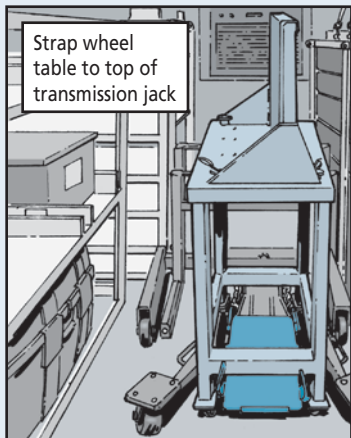
UH-OH! THEY
DIDN'T STRAP
DOWN ALL
MY STUFF.

THIS IS GONNA
BE AN *EXPENSIVE*
TRIP!



Pay special attention to the air compressor, tire jack and transmission jack. You sure don't want those heavy items bouncing around. It's easier if you strap the wheel table to the top of the transmission jack. They make a good fit.

Strap wheel table to top of transmission jack



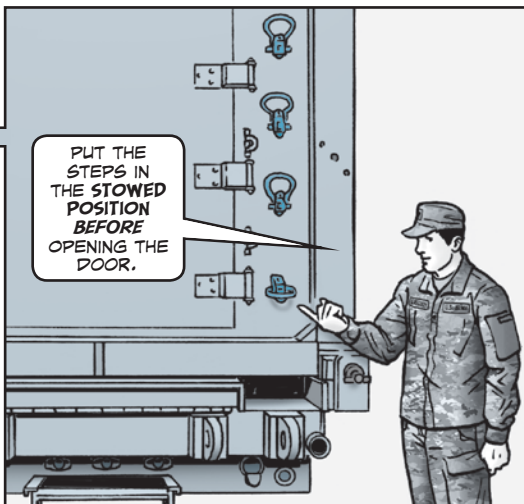
Check that all the cabinet drawers are locked, too.



Make sure all cabinet drawers are locked

- Before opening the door, make sure the steps are in the stow position. Otherwise, you can damage the door when you open it.

PUT THE STEPS IN THE STOWED POSITION BEFORE OPENING THE DOOR.

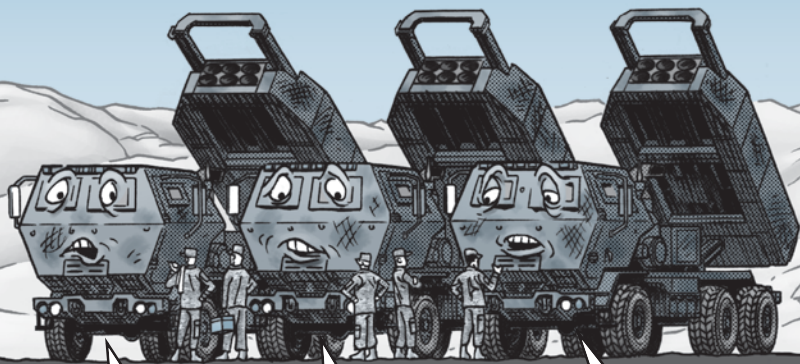


SSG Jason Firestine
SPC Detreu Gregory
Ft Bragg, NC

Editor's note: Those are, in fact, good SATS tips. Thanks.

PS END

Connect to Cable Connector PM



I'M EXHAUSTED FROM ALL THIS ROCKET EXHAUST!

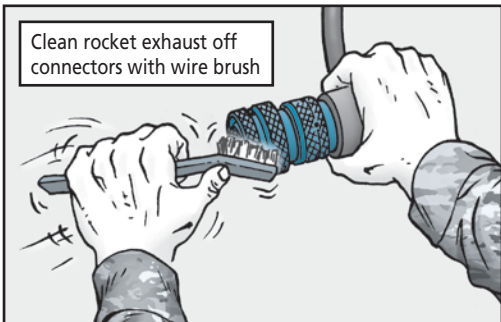
YOU GUYS NEED TO CLEAN OFF THE EXHAUST **BEFORE** IT DOES A CORROSION NUMBER ON US.

YEAH, AND **DON'T FORGET** OUR CABLE CONNECTORS!

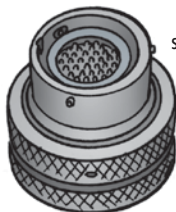
HIMARS and M270A1 MLRS rocket exhaust can do a real number on the cable connectors. The exhaust is extremely corrosive. If it's allowed to do its worst, you'll soon get system faults and it becomes harder and harder to connect and disconnect cables.

A little PM after firing can make short work of corrosion. Use a wire brush to rub off any corrosion from the outside of connectors. Then use a soft brush and isopropyl alcohol to clean inside the connectors. Pay special attention to the HIMARS' W519 and W520 and the MLRS' W19 and W420 cables. They usually have the most problems with corrosion.

Clean rocket exhaust off connectors with wire brush



Use the **cable second-chance (SAV-CONS) adapters**. The adapters are fairly cheap—cables are not. If you bend the pins on an adapter, you can just put on another adapter and you're back in business. That's why it's a good idea for HIMARS and MLRS units to keep a stock of second-chance adapters. You don't want to take a chance damaging the cable connector because you have no adapter.



Always use second-chance adapters

HIMARS units can get more adapters free from the contractor with pseudo NSNs 0000-H0-000-0028 and 0000-H0-000-0029. MLRS units order the adapters with NSN 5935-01-155-9847 and NSN 5935-01-238-5896.

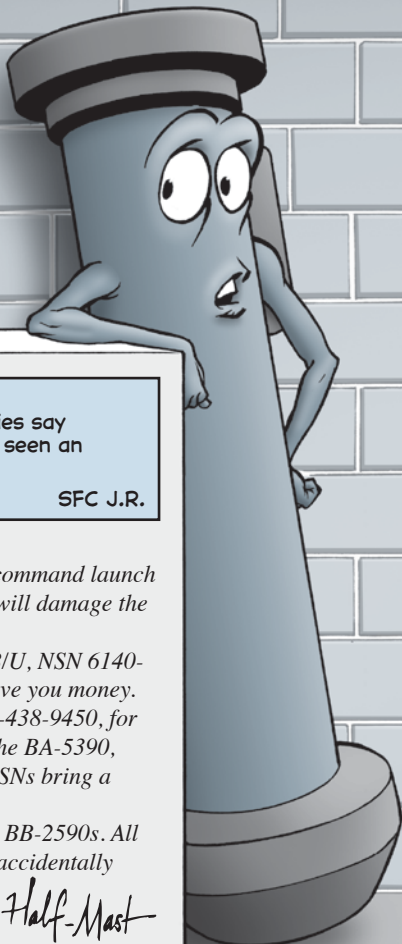
When cables become difficult to take off or you get system faults, first try changing the second-chance adapter. That often fixes the problem.

Javelin Missile System...

WHY CAN'T YOU USE BB-2590?

DON'T USE THIS GUY! HE'LL MESS UP YOUR CLU.

I'M THE BATTERY TO USE.



Dear Half-Mast,

Why does the sticker on BB-2590 batteries say NOT FOR USE WITH JAVELIN CLU? I've never seen an explanation for that.

SFC J.R.

Dear Sergeant,

The BB-2590 is **not approved** for use in the command launch unit (CLU). The higher voltage of the BB-2590 will damage the CLU electronics.

What should you use? Primarily the BB-390B/U, NSN 6140-01-490-4317, since it's rechargeable and will save you money.

For live fires, use the BA-5590, NSN 6135-01-438-9450, for both the M98A1 and M98A2. You can also use the BA-5390, NSN 6135-01-517-6060, for both CLUs. Both NSNs bring a package of four batteries.

It's important not to store these batteries with BB-2590s. All the batteries look basically alike, so it's easy to accidentally grab a 2590 instead of a correct battery.

Half-Mast

LADS...

Plumb Common Sense

W-WHY D-DID
Y-YOU D-DO THIS
T-TO M-ME?

HEY, I GOT
NO BEEF WITH
YOU! I'M
JUST DOING
WHAT COMES
NATURAL!



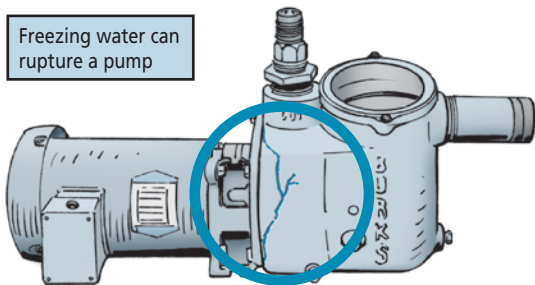
AS WINTER APPROACHES
AND TEMPERATURES
PLUNGE, YOU NEED TO
THOROUGHLY DRAIN
THE LAUNDRY ADVANCED
SYSTEM (LADS) AT THE
END OF EACH DAY.

DRAINING PREVENTS
OVERNIGHT FREEZE
DAMAGE TO THE LADS
PLUMBING.

IF WATER FREEZES
INSIDE THE LADS, IT CAN
RUPTURE A SUBCOOLER
OR WATER PUMP. IT CAN
ALSO BURST PIPES AND
VALVES.

THAT'S AN EXPENSIVE
AND MESSY PROBLEM.
SO YOU **MUST** RUN THE
DRAIN CYCLE.

Freezing water can
rupture a pump



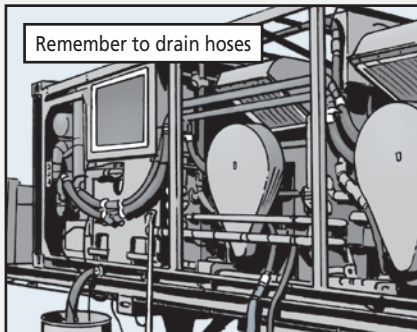
FOLLOW THE INSTRUCTIONS IN TM 10-3510-221-10 (JUL 08). WP 0016 TELLS YOU HOW TO DRAIN THE LADS MODEL C. WP 0017 COVERS THE LADS MODEL D.

MAKE SURE TO COMPLETE THE ENTIRE WORK PACKAGE FOR EACH MODEL. USE THESE GUIDELINES ALONG WITH THE TM...

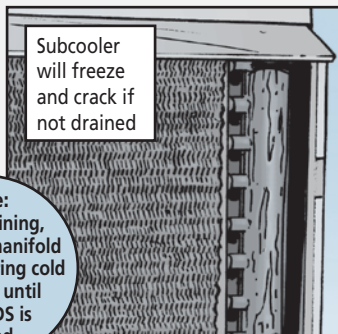


- Flush water from the anti-foam and detergent hand pumps.
- Drain the water tanks. Disconnect the bright green utility hose and open the faucet.
- Even after you run the DRAIN CYCLE, a little water stays in the LADS. Drain leftover water in the water pumps, distillate pump and still by opening their ball valves (drain cocks). Make sure the valves are left open. That way freezing water has room to expand and won't crack pipes and valves. **Note:** Drain cycle *can't* be done manually.

- Also drain the 10-ft and 50-ft water supply hoses, the 5-ft and 50-ft drain hoses, the utility hose and the water supply pump.



- A common mistake is forgetting to drain the recycle system's distillate pump assembly particulate filter housings and subcooler. Check that all eight of its valves are opened.



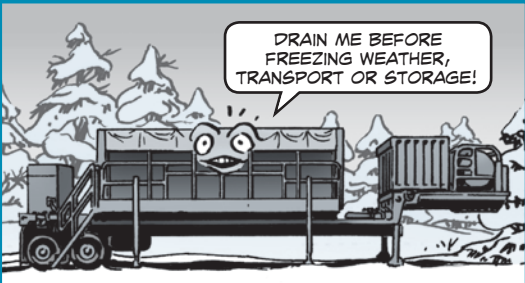
Note:
After draining, leave the manifold caps off during cold weather, until the LADS is needed.

IMPORTANT!

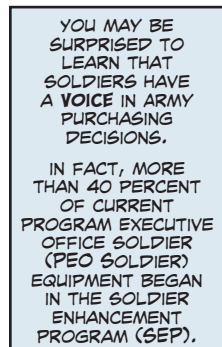
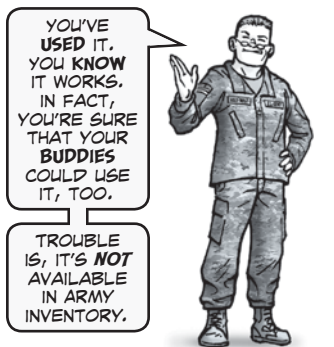
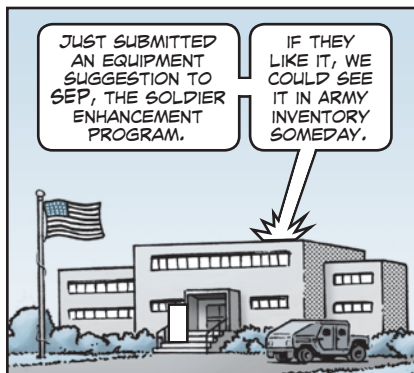
DRAIN THE LADS NOT ONLY BEFORE TEMPERATURES DROP TO FREEZING, BUT ALSO BEFORE YOU TRANSPORT OR STORE IT.

HAULING THE LADS WITH FULL WATER TANKS CAN CAUSE THE TANKS TO CRACK.

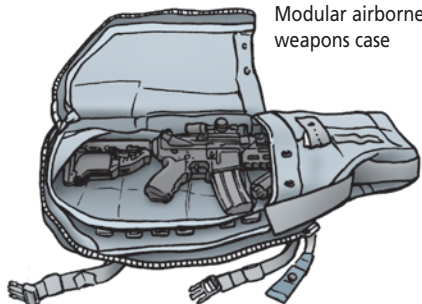
STORING THE LADS WITH WATER IN IT ALSO SETS UP A BREEDING GROUND FOR BACTERIA.



SEP: By Soldiers, for Soldiers



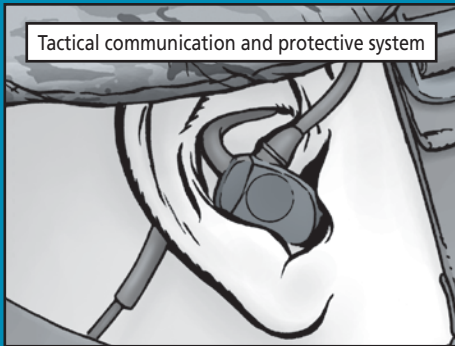
SEP suggestions have led to Army equipment additions



Modular airborne weapons case



Clip-on sniper night sight



Tactical communication and protective system

SEP HAS BEEN AROUND FOR 28 YEARS, TAKING A "BUY, TRY, AND DECIDE" APPROACH TO RECOMMENDED PRODUCTS.

FOR EXAMPLE, THE **MODULAR AIRBORNE WEAPONS CASE**, **CLIP-ON SNIPER NIGHT SIGHT**, AND **TACTICAL COMMUNICATION AND PROTECTIVE SYSTEM** ALL STARTED AS SEP RECOMMENDATIONS FROM THE FIELD.

COMMERCIAL OFF-THE-SHELF (COTS), GOVERNMENT OFF-THE-SHELF (GOTS), OR NON-DEVELOPMENTAL ITEMS (NDIs) ARE ALL CANDIDATES FOR SEP EVALUATION AND IMPLEMENTATION.

THE RECOMMENDED ITEM OR EQUIPMENT SHOULD DO ONE OR MORE OF THE FOLLOWING:

- Improve ability to execute a combat mission
- Improve the current program of record of COTS/GOTS/NDI products
- Assist in the refinement and/or generation of requirements. SEP identifies COTS/GOTS/NDIs capabilities. These can be evaluated during low-cost, low-risk evaluations. The data can help developers validate and approve an item.
- Bridge a capability gap
- Improve a combat platform interface.

SINCE PRODUCTS UNDER SEP CONSIDERATION ARE **ALREADY** COMMERCIALY AVAILABLE, SAVINGS COME FROM A STREAMLINED ACQUISITION PROCESS AND REDUCED RESEARCH AND DEVELOPMENT COSTS.

NOW'S YOUR CHANCE TO MAKE A REAL DIFFERENCE NOT ONLY IN UNCLE SAM'S POCKETBOOK, BUT IN YOUR FELLOW SOLDIERS' LIVES.

IF YOU THINK THERE'S A TECHNOLOGY OR EQUIPMENT ITEM THAT THE ARMY SHOULD CONSIDER, VISIT:

<http://www.peosoldier.army.mil/sep/>

READY TO TAKE THE PLUNGE?

PRESS THE SUBMIT AN ITEM BUTTON AND FILL OUT THE FORM.

QUESTIONS?

EMAIL:

usarmy.belvoir.peo-soldier.mbx.peo-soldier-g7-sep@mail.mil

DATA PLATES: BUMP UP READINESS

I DON'T HAVE
ANY RECORD OF
YOU GUYS! WHAT'S
GOING ON?!

I DON'T KNOW
ABOUT EVERYBODY
HERE, BUT MY DATA
PLATE IS **MISSING**.

AND MY PLATE
IS **UNREADABLE!**

MINE HAS THE
WRONG DATA!

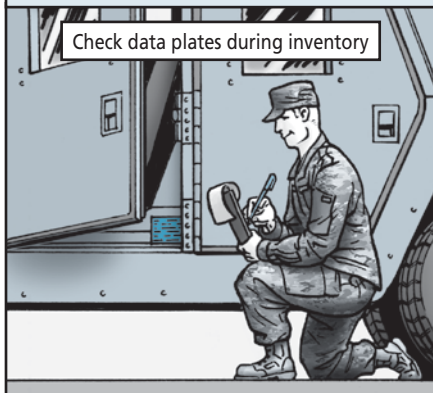
A RECENT ARMY AUDIT FOUND THAT **NOT** ALL EQUIPMENT IS BEING PROPERLY
RECORDED AND REPORTED IN GCSS-ARMY.

ONE REASON FOR THIS IS THAT SOME
EQUIPMENT DATA PLATES ARE **MISSING**,
UNREADABLE OR INCLUDE **WRONG DATA**.

UNITS SHOULD FOLLOW THESE STEPS
TO **RESOLVE DATA PLATE ISSUES** AND
IMPROVE EQUIPMENT READINESS:

1. During inventory, identify any equipment with missing, illegible or incorrect data plates.

Check data plates during inventory



2. Check the equipment TM to see if the data plate is a field-level replacement item that can be ordered through the normal supply process.

Review TM for
guidance



3. If it's ground equipment and data plates are not addressed in the TM, check with your nearest TACOM LAR, who will contact the equipment program manager to coordinate data plate replacement, if possible. To find your TACOM LAR, see Pages 14-15 in PS 759: <https://www.logsa.army.mil/web2/archive/PS2016/759/759-14-15.pdf>
TACOM's Logistics Assistance Directorate is another resource at: <https://www.tacom.army.mil/ilsc/lad/>
4. To request night vision goggle data plates (AN/PVS-14, AN/PVS-7 and AN/AVS-6), email: usarmy.apg.cecom.mbx.lrc-night-vision-support@mail.mil
5. Alternatively, new data plates can often be made at depots at unit cost. For more info, see Letterkenny Army Depot's website at: <http://www.letterkenny.army.mil/UIDworks/howto.html>
Or email AMC at: usarmy.redstone.usamc.mbx.uiuid@mail.mil

OE-254 Antenna...

HUNTING DOWN ANTENNA MAST PARTS

DID YA EVER
FIND THAT PART
WE NEED?

YEP. MASTER
SERGEANT HALF-MAST
CAME THROUGH AGAIN!

Dear Half-Mast,

I need to order OE-254 parts for our unit. The antenna mast group is NSN 5985-01-063-1574. I'm trying to find the mast section part that connects to the feed cone. It's the AB-24/GRC antenna element listed as Item 1 of TM 11-5985-357-23P (Jun 88). I've hunted high and low and gone over the TM with a fine-toothed comb, but I can't find an NSN for this part. Any tips?

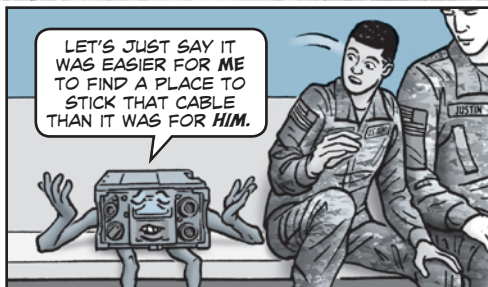
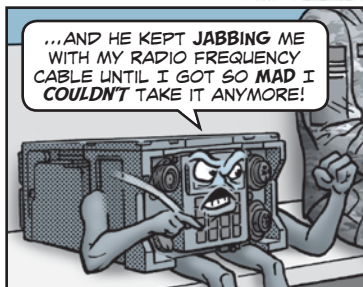
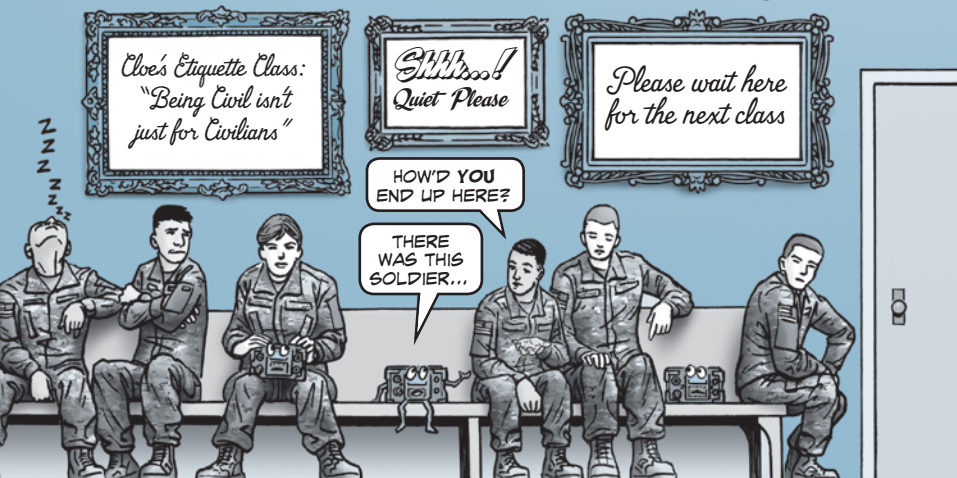
SGT G.J.

Dear Sergeant,

Yup. I'm all about raising pointed antenna tips! Here's a couple: the TM misidentified some parts. The mast section part that connects to the feed cone assembly is the MS-116A antenna element, NSN 5985-00-199-8831. The AB-24/GRC antenna element, NSN 5985-00-240-3720, is the antenna tip mast section part. For reference, see Pages 1-0 and B-2 of TM 11-5985-357-13 (Feb 91). Antennas up!

Half-Mast

Aim for a Tender Touch



A TENDER TOUCH IS NEEDED WHEN YOU CONNECT AND DISCONNECT THE RADIO FREQUENCY CABLE (W2), NSN 5995-01-304-2026, ON YOUR SINGGARS VEHICULAR RADIO.

ROUGH HANDLING OR BLINDLY RAMMING N' JAMMING THE CABLE CAN BREAK OFF THE CONNECTOR PIN.

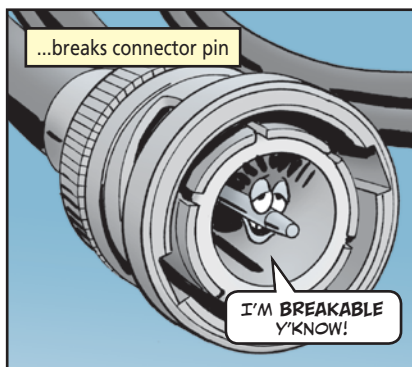
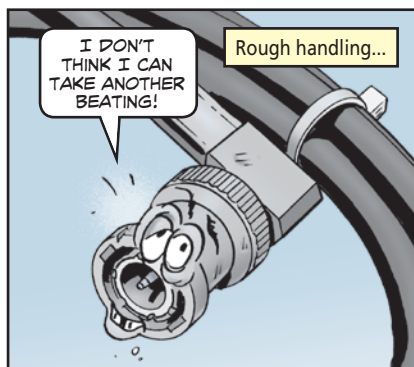
IF A PIN GETS STUCK AND BREAKS OFF INSIDE THE RT'S ANTENNA CONNECTOR OR THE POWER AMPLIFIER'S J2 CONNECTOR, YOU'LL BE SINGING THE BUSTED BLUES.

YOU'LL HAVE TO SEND YOUR SINGGARS TO SUSTAINMENT-LEVEL MAINTENANCE TO EXTRACT THE PIN.

IN OTHER WORDS, ONE MOMENT OF ROUGH HANDLING CAN TRANSLATE INTO A LOT OF REPAIR TIME, BIG BUCKS AND MAJOR HASSLES.

THE SAME CAUTION APPLIES TO THE CG-3855/VRC RADIO FREQUENCY CABLE, WHICH CONNECTS THE POWER AMPLIFIER TO THE VEHICULAR ANTENNA.

IF YOU'RE **TOO ROUGH**, THE CONNECTOR PIN COULD **BREAK OFF** AND GET STUCK INSIDE THE POWER AMPLIFIER'S J1 CONNECTOR.



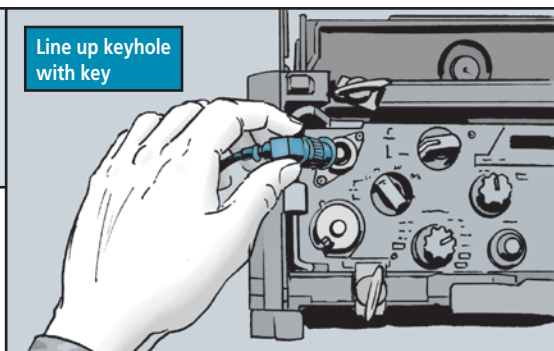
A GENTLE AND STEADY HAND IS THE KEY TO PRESERVING THOSE CONNECTIONS.



1. Line up the keyhole on the cable connector with the key on the RT's antenna connector (or the power amplifier's J1 or J2 connector).

Line up keyhole with key

2. Push the cable connector straight in.
3. Turn the cable connector clockwise until it doesn't move any more.



AND HERE'S THE CORRECT WAY TO DISCONNECT THE CABLES...

1. Turn the cable connector counter-clockwise until the keyhole on the cable connector lines up with the key.
2. Pull the cable connector straight out and off.

SHARE YOUR WISDOM WITH PS!

YOUR ARTICLE ACTUALLY MADE PS, SPECIALIST HILL? THAT'S CRAZY!

HOW DID YOU COME UP WITH IT? HOW DID YOU **SUBMIT** IT?

WHAT DID YOU HAVE TO DO?

OK, OK... GUYS... IT ALL STARTED A FEW MONTHS AGO...

SPECIALIST HILL

...WHEN SERGEANT SCHELL TOLD ME TO PCMS THE HMMWV BEFORE WE TOOK IT OUT INTO THE FIELD, I REALIZED HOW TO IMPROVE THE PROCESS...

THAT WOULD MAKE THINGS EASIER. I'VE GOTTA TELL THE FOLKS AT PS ABOUT THIS IDEA!

IF YOU FIND OUT THAT A TM IS **INCORRECT** OR FIGURE OUT A **SAFER** WAY TO PERFORM A MAINTENANCE PROCEDURE OR A WAY TO SAVE THE ARMY MONEY, SHARE YOUR WISDOM WITH PS MAGAZINE.

PS MAGAZINE CAN SHARE YOUR SOLUTIONS WITH SOLDIERS WORLDWIDE AND IT'S PRETTY EASY TO **SUBMIT** AN ARTICLE.

HERE ARE A FEW QUESTIONS TO HELP YOU GET STARTED:



- What is the problem with your equipment or error in your TM?
- What caused the problem?
- What is the solution to the problem or needed correction to the TM?
- What is the potential cost to the Army if the problem isn't corrected?
- What is the solution to the problem or the correction for the procedure in the TM?

ONCE YOU'VE **OUTLINED** THE PROBLEMS AND SOLUTIONS, IT'S TIME TO **SUBMIT** YOUR INFORMATION. DON'T WORRY ABOUT THE FORMAT. ONE OF OUR WRITERS WILL TAKE THE INFORMATION YOU PROVIDE AND WRITE THE ARTICLE IN THE **PS** STYLE.

WE'LL ALSO HAVE A SUBJECT MATTER EXPERT FROM THE RESPONSIBLE LCMC REVIEW THE INFORMATION. ALL **PS** ARTICLES ARE **APPROVED** BY AN ARMY AUTHORIZED PROPONENT **BEFORE** THEY ARE PUBLISHED.



MAKE SURE TO INCLUDE ANY HELPFUL PHOTOGRAPHS AS JPG ATTACHMENTS IN YOUR EMAIL. **DON'T** EMBED THE PICS IN A WORD OR POWERPOINT DOCUMENT, THOUGH. THAT **DEGRADES** THEIR QUALITY AND MAKES THEM **UNUSABLE**.

PS ARTISTS USE THOSE PICTURES AS TECHNICAL REFERENCES WHEN THEY ILLUSTRATE THE ARTICLE.

IF YOU CATCH A **MISTAKE** IN A TM, IT'S ALSO A GOOD IDEA TO SUBMIT A DA FORM 2028, **RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS**.

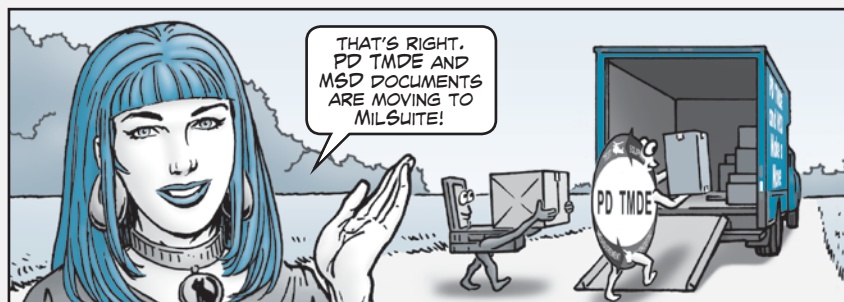
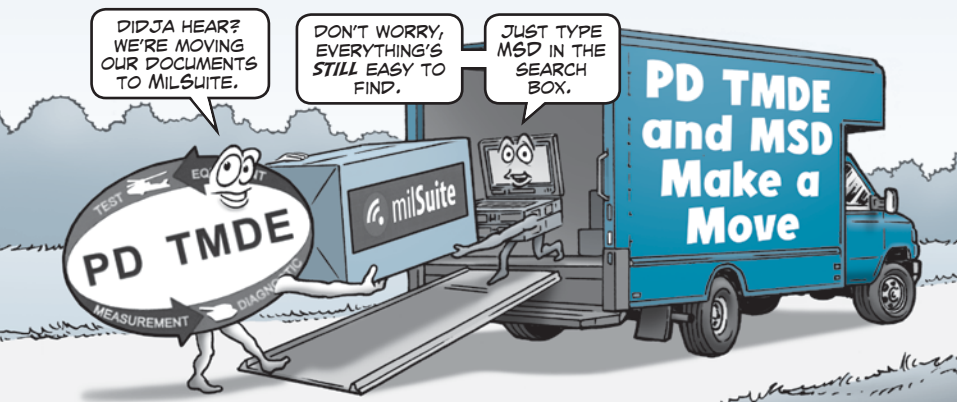
WE SHOWED YOU HOW TO DO THAT ON PAGES 58-59 OF **PS** 779 (OCT 17).

ONCE YOUR ARTICLE AND DIGITAL PICTURES ARE READY, SEND THEM TO THIS ADDRESS:
usarmy.redstone.logsa.mbx.psmag@mail.mil



WE CAN'T WAIT TO HEAR FROM YOU...

...AND HELP YOU HELP YOUR FELLOW SOLDIERS ALL OVER THE WORLD!



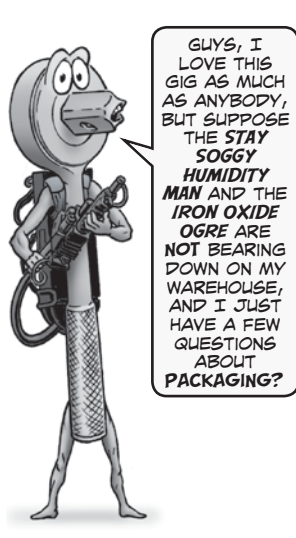
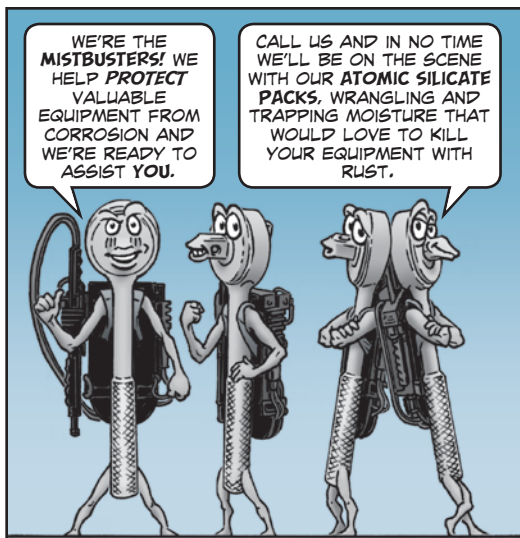
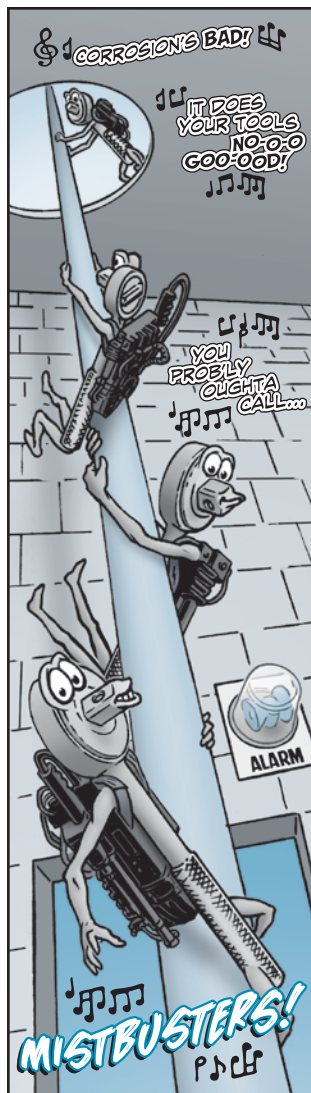
ONCE YOU
LOG IN, DO A
SEARCH FOR
MSD.

THEN CHECK OUT THE APATS MILSUITE LIBRARY FOR THE
PD TMDE AND MSD DOCUMENTS AS WELL AS COURSES ON
MILUNIVERSITY. YOU'LL NEED YOUR CAC TO GAIN ACCESS:
<https://www.milsuite.mil/>

IF YOU NEED HELP, EMAIL THE MSD/ICE HELP DESK:
apats@redstone.army.mil

OR GIVE THEM A CALL:
877-564-1137

CALL THE MISTBUSTERS!



MIL-STD-2073-1, DoD Standard Practice for Military Packaging (Jan 11)

Here, you'll find information about the standard processes for developing and documenting military packaging, which is different from commercial packaging. It covers preservation methods to protect materiel against corrosion caused by the environment, physical or mechanical damage and other dangers during storage, handling or shipment.

SB 746-1, Publications for Packaging Army General Supplies (Apr 79)

This document lists publications that relate to packaging and processing Army general supplies, except for maintenance and ammo pubs. It provides guidance on procuring, storing, handling, shipping, issuing, caring and preserving general supplies.

MIL-HDBK-773, Electrostatic Discharge (ESD)-Protective Packaging (Jun 05)

Look here for detailed guidance on handling, packaging or storing items that can be damaged by electrostatic discharge.

TM 38-700, Packaging of Materiel, Preservation (Dec 99)

In this document you'll find instructions for cleaning, drying, preserving, packing, blocking and bracing, cushioning, reinforcing, weatherproofing and marking to prepare materiel for shipment or storage.

TM 38-701, Packaging of Materiel, Packing (Dec 99)

Contains detailed information about the requirements for packing operations, including:

- use of exterior shipping containers; assembling items or packs in the container.
- anchoring, blocking, bracing and cushioning items or packages in containers.
- weatherproofing.
- strapping of containers.
- testing exterior packs palletization and unitization of loads.
- parcel post.

The TM also covers general exterior marking in accordance with MIL-STD-129.

DA PAM 700-32, Packaging of Army Materiel (Jan 08)

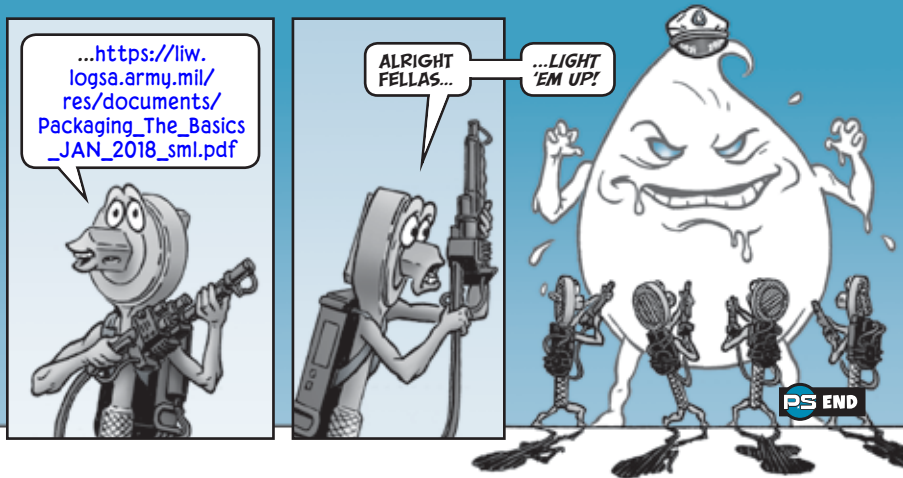
This pub gives uniform Army packaging guidelines.

MIL-STD-129, Military Marking For Shipment and Storage (Feb 14)

Provides the minimum requirements for uniform military marking and procedures for their application. Use it for the application of military specific markings for items transported and stored within the military distribution system. Markings for commercial packaging are discussed in ASTM D 3951.

MIL-STD-147, *Palletized Unit Load* (May 08)

This standard explains the methods, materials and techniques used in the formation of bonded palletized unit loads of military supplies on 40 x 48-in pallets. These instructions can be modified for use with different sized pallets.



NO COMMERCIAL REFRIGERANTS

On Page 51 of PS 787 in Step #5 under "Unit Instructions," the article stated that local purchase is authorized through LARs. That's **wrong**. Commercial purchase of all refrigerants is prohibited. They must be sole-sourced through DLA.

HEMTT A4, PLS A1 Distribution Manifold NSNs

Need a new distribution manifold for your HEMTT A4 or PLS A1 vehicle? Look no further. Each of the distribution manifolds below also come with installed solenoids:

Vehicle	Item	Fig	TM	UOC	NSN 4730-
PLS A1	1	768	9-2320-319-13&P	741, 751	01-670-7782
HEMTT A4 CBT	1	423	9-2320-326-13&P	L13	01-669-8492
HEMTT A4 (M977A4, M983A4, M985A4, M984A4 GMT)	1	423	9-2320-326-13&P	LH2, LH5, LH9, L10	01-667-3000
HEMTT A4 (M978A4, M983A4 LET, M984A4, M1120A4 LHS)	1	423	9-2320-326-13&P	LH4, LH7, L11, L14	01-564-7505

HEMTT Fuel Tank Repair Kits Get Makeover

The field repair kit for the HEMTT fuel tank sealant system, NSN 2540-01-577-2372, has changed. That kit contained a sealant with a shelf life that, when expired, required disposal of the entire kit. To avoid this waste, the kit now comes in two parts. Order the repair tools from the old kit with NSN 4940-01-661-4758. Order the sealant with NSN 8030-01-661-4763.

LTAS Cab Lift Cylinder NSN

Order a new front cab lift cylinder assembly for your M1078A1P2 LTAS with NSN 3040-01-665-1836 (PN 12505544-001). The old NSN 3040-01-567-2729 no longer appears on FED LOG, and the old part number crosses to a terminal NSN.

Now Showing: ESAPI Test Videos

Like any equipment, body armor needs to be inspected before use. For step-by-step videos showing the right way to do tap and torque tests on your enhanced small arms protective inserts (ESAPI), visit: <https://www.dvidshub.net/video/473427/peo-soldier-armored-plate-tap-test-training>

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

THE ***BEST*** SOLDIERS SOAK UP MAINTENANCE INFO LIKE A ***SPONGE...***



... THEN ***SHARE*** WHAT
THEY'VE LEARNED!

