



**THE
PREVENTIVE
MAINTENANCE
MONTHLY**

TB 43-PS-555, 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.

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

MSG Half-Mast
The Preventive Maintenance Monthly
LOGSA, Bldg. 5307
Redstone Arsenal, AL 35898-7466

Or E-mail to:

psmag@logsa.army.mil

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By Order of the Secretary of the Army:

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Administrative Assistant to the Secretary of the Army
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spread Your Ignorance Around



You just don't get it. It's puzzling. You think you might know, but you're not quite sure. You pride yourself on being able to reason things out, but the answer here escapes reason.

Of course, it's not covered in the TM. And nobody has ever shown you how. You could ask somebody, but you'd look stupid.

What would the other mechanics say? Would they think you were a rookie with a wrench? What if everybody knows the answer but you! Then you would really look dumb.

No way you're going to ask a question.

So you guess. And you guess wrong. The first few z-z-z-z's of a maintenance nightmare begin.

Ignorance is **not** bliss. It's **not** stupidity, either. It's just a lack of knowledge. If you're not sure, for Pete's sake, ask! There's no room in the Army for fly-by-the-seat-of-your-pants maintenance. Shade tree mechanics who guess, almost always guess wrong.

Don't worry about looking dumb. You might get a good-natured elbow to the ribs now, but it's better than hearing about a huge mistake later.

And once you start asking, others will ask too. It's contagious. So spread your ignorance around.



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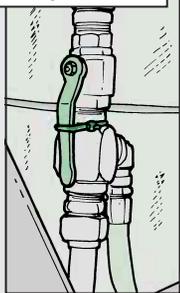
Administrative Assistant to the Secretary of the Army
05362

Better Extra Safe Than Sorry

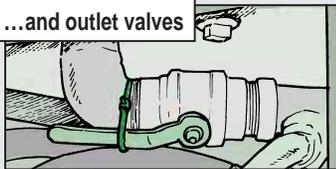
Operating a hydraulic pump without hydraulic fluid is a death sentence for the pump.

That's why it's so important that your FMTV wrecker's hydraulic reservoir inlet and outlet hoses be open during operation. If either or both hoses are closed, bye-bye pump.

Tie open inlet ...



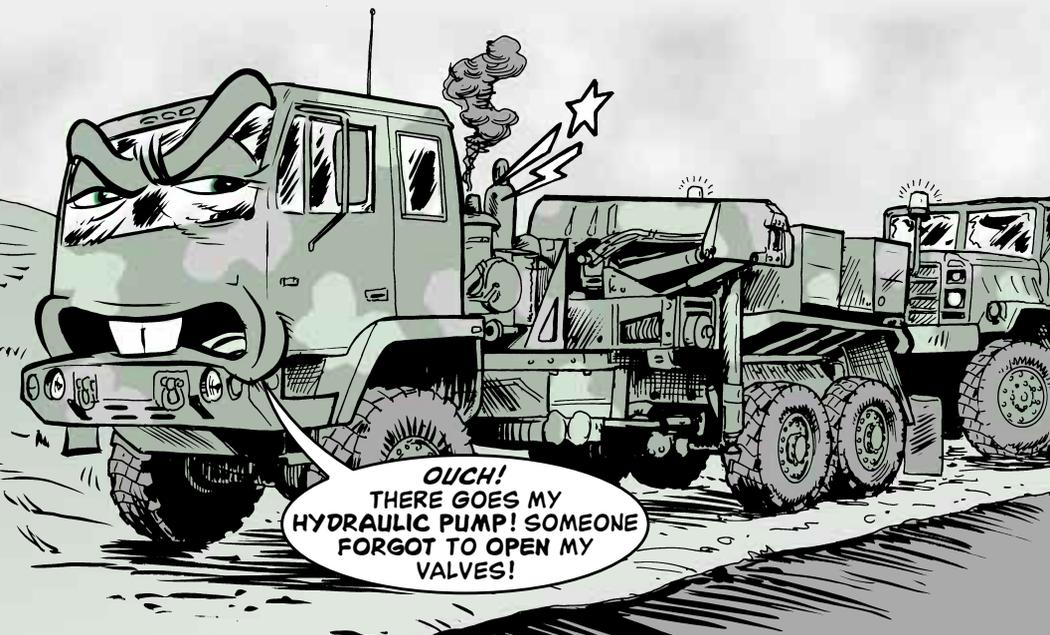
...and outlet valves



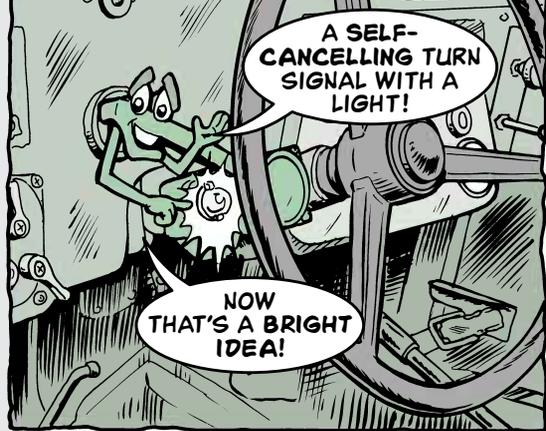
The lever that closes each hose to prevent the loss of oil during maintenance or repair can be accidentally knocked into the closed position.

You can prevent that by using an electrical tiedown strap to secure the levers in the open position. The lever is open when it's in line with the hose. Get a pack

of 6 1/2-in straps with NSN 5975-00-074-2072. Get a pack of 10 1/2-in straps with NSN 5975-00-570-9598. Both packs have 100 straps.



SEEING THE LIGHT



Drivers, there's a new type of turn signal control, NSN 6620-01-408-7785, in the system—one that is self-canceling. Like the one in your POV, it turns off when you complete a turn.

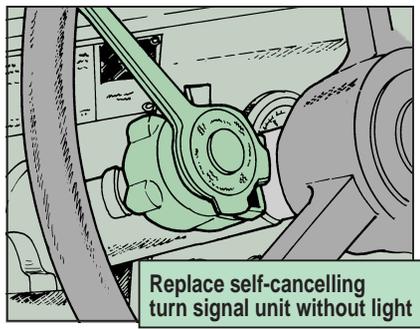
But, some of these new controls come without a light to let you know the turn signals are working.

If you get one of these self-canceling controls without a light, have your unit turn it in with a Report of Discrepancy, SF 364.

If there's a light on the control, but you can't see it, report it to your mechanic. He'll check out why the bulb's not working.

If the bulb covering is painted over so you can't see the light, have your unit file a Product Quality Deficiency Report, SF 368.

If you'd like to add this control to your truck, order kit, NSN 2540-01-431-1338.



Replacement Light Switch

The good news is that a completely new light switch is available for M915-series and M915A1 trucks. The hitch is that there is no stock available yet.

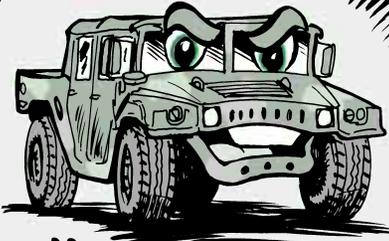
The only way to get the new switch, Blevco-ARI Inc. part number 990530, is to go directly to the manufacturer.

Call Charles Blevins at (703) 691-2483/2484 or fax him at (703) 691-2485. As long as each order is for five switches or less, shipping is immediate.

This new switch does not come with the knob or shaft. Either keep the knob and shaft from the old switch, or order part number 85685018 from Blevco to receive a new knob and shaft.

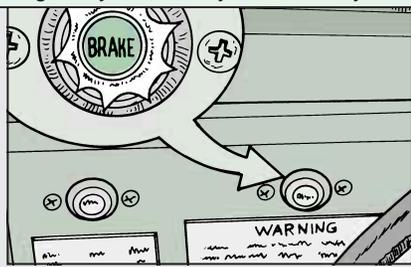
HMMWV ...

LIGHT ON? BLEED BRAKES!



Mechanics, when a HMMWV's brake warning light stays on after you release the parking brake, something's wrong. But, before you replace any parts, try bleeding the brake lines.

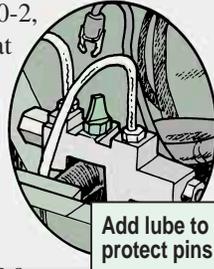
If light stays on, air may be in brake system



Since air in the brake lines will keep the light on, good parts and your valuable time can be wasted trying to turn out that light.

If the light stays on after bleeding, use the troubleshooting info starting on Page 2-319 of TM 9-2320-280-20-1. If the proportioning valve is the culprit, replace it.

When you replace the proportioning valve, follow the word in Para 7-18 of TM 9-2320-280-20-2, and add a light coat of lube, NSN 9150-00-273-2389, to the connector pins. That heads off corrosion.



Never try to save a bad valve by taking it apart and adjusting it. Any tampering ruins the calibration set at the factory.

M931/A1/A2-Series Trucks ...

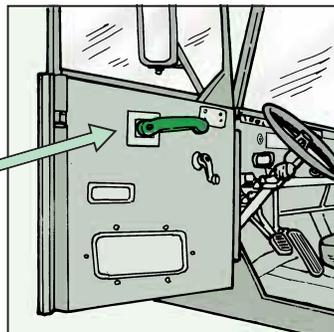
Door Handle Scandal

Mechanics, always make sure an M939/A1/A2-series truck's inside door handles point forward.

A door handle installed backwards will make a convenient armrest—until the door opens.

Play it safe. Install the door handles with the open end forward.

Handles should point forward

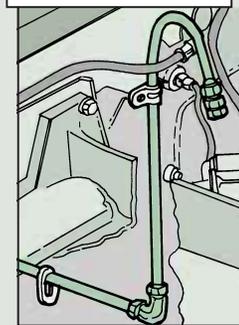


2 1/2-Ton Trucks ...

Check for Vent Line

Give your M44A2-series 2 1/2-ton truck a quick check for a separate brake hydraulic vent line in the engine compartment.

Look for this vent line



The line is attached to the firewall about four inches from the top edge. The line loops over another hose and ends with a bushing. If you must deep water ford, add breather, NSN 4820-00-726-4719, to the bushing.

Without this separate vent line, fuel vapors can contaminate brake fluid, leading to swelling of seals in the brake/air hydraulic cylinder, and brake failure.

Most 2 1/2-ton trucks have this modification, but there have been reports that some still don't. Get this information on how to add the vent line from Half-Mast. He'll send you copies of Pages 18-20, PS 364 (Mar 83).

All Vehicles ...

Keep Your Rear End Covered

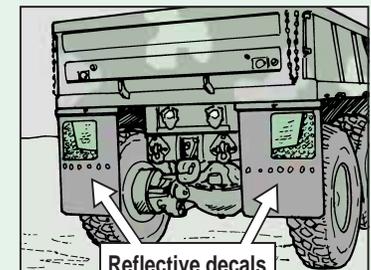
I DIDN'T SEE HIM UNTIL IT WAS TOO LATE.

Too often that's the response when an Army vehicle is rear-ended.

If your commander gives the nod, you can add reflective decals to your vehicles, and help cut down rear-end collisions.

The decals come in two sizes, 7 7/8 inches square and 15 3/4 inches square. They are peel-and-mount decals, so surfaces must be clean before the decals are applied. Make sure the yellow portion of the decal always points down and to the outside of the vehicle.

Order the smaller decal with NSN 9390-01-382-8308 and the bigger one with NSN 9390-01-382-8369.



Reflective decals

Wheel Weights

THE BUBBLE-TYPE WHEEL BALANCER IN THE NO. 1 COMMON SHOP SET WON'T DO YOU MUCH GOOD WITHOUT THE WHEEL WEIGHTS TO GO WITH IT.

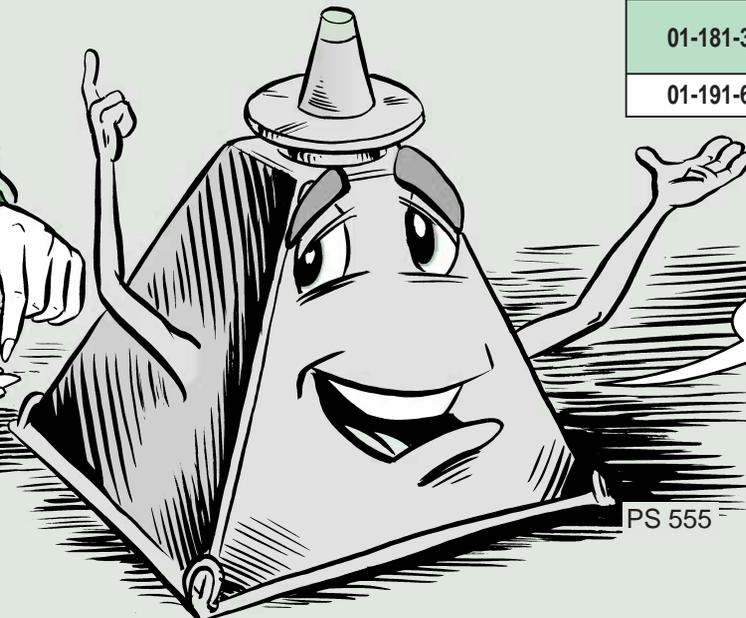
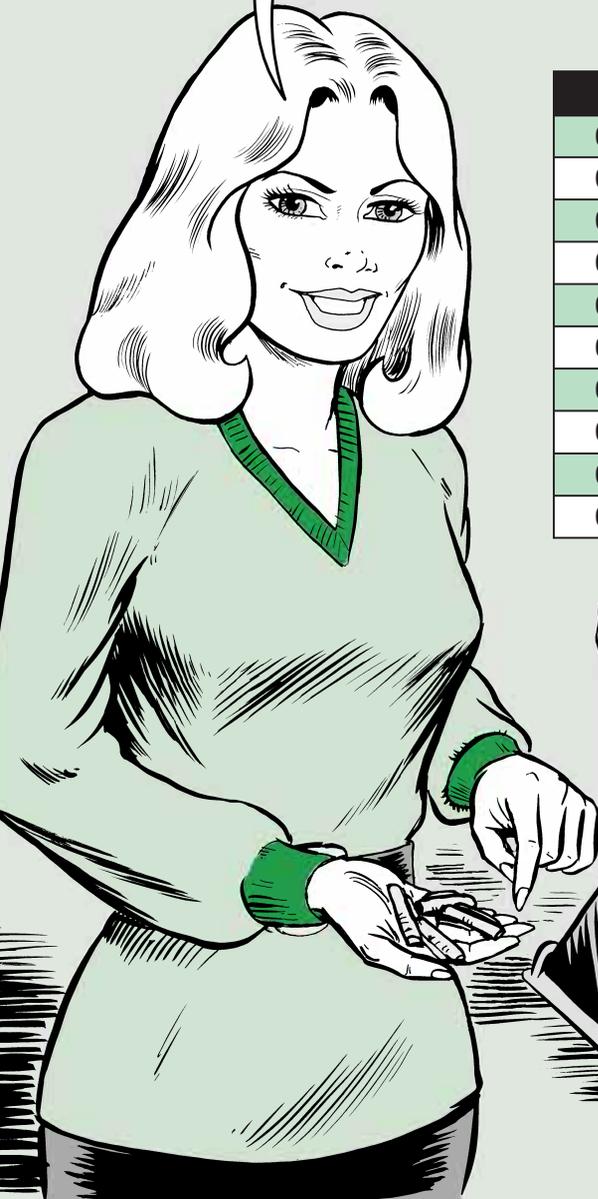
SINCE YOU WON'T FIND ANY WEIGHTS IN THE SUPPLY CATALOG, HERE'S A LIST OF WEIGHTS AND THE VEHICLES THEY'RE FOR.

Truck Weights

NSN 2530-	Size (ounces)
01-235-8688	0.5
01-188-1349	4
00-050-2067	4
01-027-8739	4
01-028-1307	6
00-050-2064	6
00-050-2060	6
00-050-2065	6
01-027-6943	8
00-709-5922	16

Passenger Car Weights

NSN 2530-	Size (ounces)
01-273-4780	0.25
00-272-7518	0.5
00-848-4581	1
01-249-5548	1.25
00-267-0312	1.5
00-272-7520	2
00-195-8088	2
00-251-5756	2.5
00-848-4579	2.5
00-848-4580	3
00-272-7524	3.5
00-272-7523	4
00-272-7525	5
00-848-4578	2 (Special passenger car)
01-181-3920	2 ('83 Chrysler cars, FWD trucks)
01-191-6756	3 ('80-'84 Fords)



THAT'S A REAL WEIGHT OFF OF ME!

PS 555

Get the Big One

When you have to inflate really big tires—meaning ones larger than HEMTT tires—you need a really big tire inflation cage to keep you out of harm's way.

NSN 4910-00-025-0623 gets a cage 76 inches long, 32 inches wide and 78 inches high. It weighs 1,600 lbs and is big enough for most construction and material handling equipment tires.



The best thing is, the cage is available to the Army through the supply system.

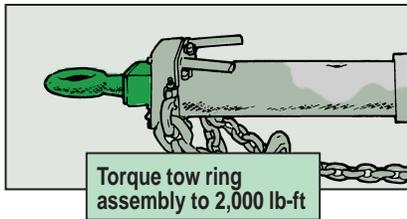
For those of you who inflate HEMTT, PLS and other smaller military tires, you can use cage, NSN 4910-01-373-0267. It's 40 3/4 inches long, 29 inches wide and 60 inches high. It weighs 375 lbs.

GOTTA GET TOW RING TIGHT

Any time you replace the tow ring assembly on the M1076 PLS trailer, you've got to torque it to 2,000 lb-ft.

You can't get that torque unless you use torque multiplier, NSN 5120-00-574-9318, which is part of the No. 2 Common shop set.

If you don't have the multiplier in your unit's No. 2 Common, get it. If your unit isn't authorized that shop set, get the multiplier by using TM 9-2330-385-14's Appendix J, Tool Identification List, as authorization.



Stowage Box Repair, Replacement

Plans are available to repair or replace the stowage boxes on M1077 flatracks used with the palletized loading system.

TM 9-3990-206-14&P shows only how to replace the box doors. Many flatracks already show box damage that prevents secure and waterproof storage of tiedown straps.

Your local support unit can make the repairs if they have the plans. Get them from Half-Mast by e-mail, phone or mail.



Checking for a Good Ground



Operators, static electricity can be your worst nightmare when loading or dispensing fuel from a fuel tanker.

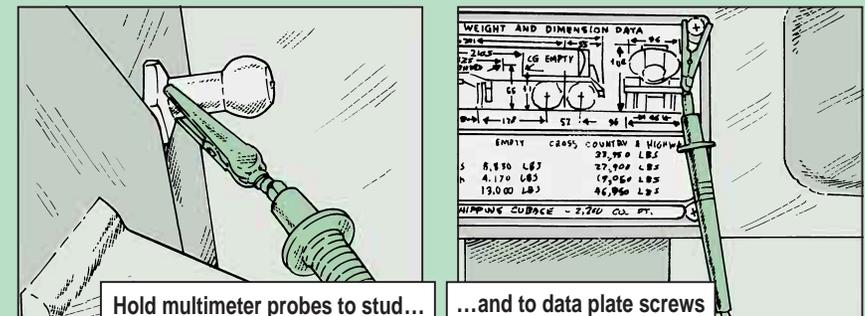
Just one spark at the wrong time can turn an ordinary day into a fiery disaster.

Proper grounding techniques are important, but they won't make you completely safe. Paint and corrosion can build up between ground studs and the tanker body to prevent a good ground.

So, have your mechanic use a multimeter to check each ground stud for continuity during annual services. Here's how:

1. Set the multimeter to read ohms.
2. Hold the red (+) probe to the ground stud being tested.
3. Press the black (-) probe to bare metal somewhere on the tanker. Data plate screws work well since they are screwed into the tanker body.
4. If the stud is grounded properly, you should get a reading of 0 ohms.

Any other reading means the stud is not completely grounded. So, remove the stud and clean away any paint or corrosion. Then, check continuity again.



Rules of the Load



Your 1½-ton trailer's maximum payload is not negotiable.

Some units add duals or turn wheels to widen the wheelbase so they can haul a bigger load. Bad idea. They're courting trailer suspension and bearing damage.

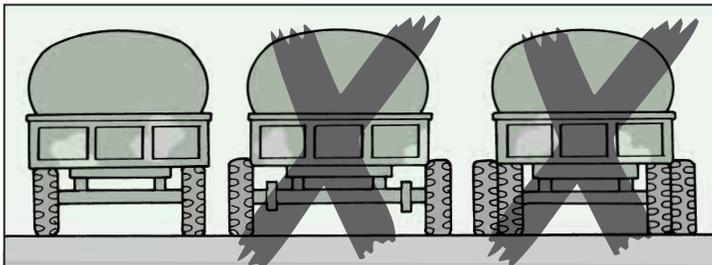
If you have to haul a 600-gal fuel pod, for instance, use the M1061A1 5-ton trailer. A full fuel pod can weigh more than two tons.

Play it safe. Make sure your load is no more than the 1½-ton limit. If you suspect the load might be too much, don't haul it. It's that simple.

Reversing the trailer's outside wheels to make the loads less top heavy makes your trailer wider than the 96 inches allowed for highway use.

Also, the leverage that comes with increased axle length overloads wheel bearings and suspension components. They won't last long.

Adding a wheel to each side to make duals doesn't beef up



your trailer to carry a heavier load, either.

Your trailer will suffer from some of the same problems that come from reversing the wheels. The trailer's axle spindles also take a beating and eventually wear out.

Drive Safely, Too

Once your trailer is loaded safely, it's up to you to drive safely.

- ➡ Never drive faster than weather and road conditions permit. A trailer and its prime mover can flip without warning—especially around corners.
- ➡ Slow down over rough terrain. Potholes, ditches and stumps can wreck your trailer if you're moving too fast.

DON'T MODIFY THE WHEELS. IT WON'T INCREASE THE PAYLOAD.



Only You Can Prevent Tank Fires

Tankers, it takes a lot of PM to keep you from getting burned on the job. Follow these tips and the only time you'll hear "Fire!" is before a round is shot off.

⚡ Keep the hull floor clean. Dust, dirt, sand and debris can build up and hide fuel spills and leaks. Then you've got a fire just waiting for a spark.

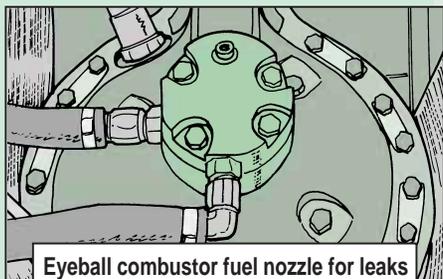
⚡ Clean the fire sensors daily. They can't detect a fire if they're dirty. Use lens cleaner, NSN 6850-00-227-1887, and lens tissue, NSN 6640-00-285-4694, to prevent scratching the lens.



Clean fire sensors daily

⚡ Report fuel leaks as soon as you spot them—all of them, no matter how small. Fuel filters, PTS actuator hoses, and smoke generator lines are good places to look for leaks.

Give the combustor fuel nozzle, line and fittings special attention when the pack is

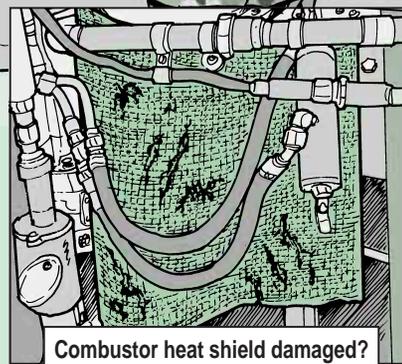


Eyeball combustor fuel nozzle for leaks



pulled. The nozzle should be securely mounted and torqued to 90–100 lb-in. Any less could allow a leak. Make sure you bend the tabs of key washers against the bolt heads, too.

⚡ Look for damage to the combustor heat shield if your vehicle has one. Make sure the shield is securely mounted to the engine.



Combustor heat shield damaged?

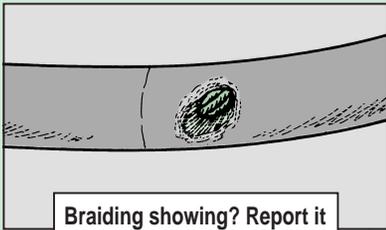
⚡ Eyeball all electrical cables for wear and damage from rubbing on sharp metal edges. Sparks from arcing or shorting starts most fires.

The most commonly damaged cables are:

- The cables routed through the opening between the battery box and the engine compartment.

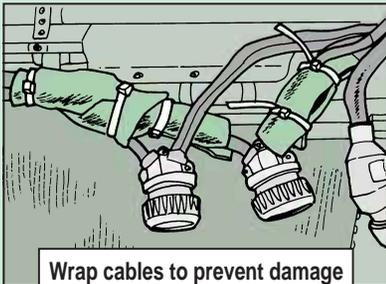
- The cables routed along the top edge of the powerpack.
- The cables that run along the outside edge of the generator.
- The generator's cable harnesses and terminals.

Report any cables that show wear, chafing, melting or other damage. Cables with visible braiding or shielding should be replaced right away.



Braiding showing? Report it

Prevent rubbing damage by wrapping cables, either individually or in



Wrap cables to prevent damage

a bundle, with a section of radiator hose, NSN 4720-00-150-5970. That NSN gets you a 12-ft section of 2-in ID hose.

Hold the hose in place with plastic ties. Use NSN 5975-00-074-2072 to get 6 1/2-in ties or NSN 5975-00-570-9598 for 11-in ties.

Get a copy of the training film, The Abrams Tank Fire Prevention. The PIN number is 710571.

Order the film from the Joint Visual Information Services Distribution Activity by fax at DSN 795-6106 or (717) 895-6106, or by e-mail at:

vibuddy@ptd.net

Or write to:

JVISDA
Warehouse 3/Bay 3
11 Hap Arnold Blvd.
Tobyhanna, PA 18466-5120

Include your name, full mailing address, the title and PIN number of the film, format (VHS, for example), and the quantity of tapes you need. APO addresses must include their unit/box number, CMR/box number, or PSC/box number.

You can also order over the Internet at: <http://dodimagery.afis.osd.mil/dvi/Top/davis>

Once there, type "The Abrams Tank Fire Prevention" in the search block and click on "Search". At the next screen, click on the film title. Click on "Select It!" at the bottom of the next screen and follow the instructions.

PS END

SMOKEY THE BEAR GOT IT RIGHT—
FIRE PREVENTION IS
EVERYONE'S
BUSINESS!



M1-Series Tanks ...

UNSTICK STUCK RETAINER



Mechanics, before you toss that tank's primary fuel filter element, make sure you've saved the retainer.

The retainer often sticks to the bottom of the old element and gets thrown away. If you install a new element without the retainer in place, fuel goes around the element instead of being funneled through it. Your tank is stuck burning dirty fuel.

To make things worse, you won't find the retainer in the parts TM. To get it, you have to buy a complete fuel filter housing assembly, NSN 2910-00-467-2580.

So save yourself trouble and money by retaining the retainer at service time.

OF BACKWARDS BOLTS AND EYEBROW LIPS

Mechanics, if you get a faulty gun elevation drive (GED) gearbox reading when troubleshooting a Bradley with the STE-M1/FVS, don't panic. The fault could be the result of a backward bolt.

While testing the GED, you have to raise the 25mm gun to full elevation. If either of the bolts, NSN 5305-00-781-3927, holding the rotor rain cover in place was installed backwards, the bolt shaft will jam against the gun stop. That stops the gun from reaching full elevation.

Check the bolts. If the heads are not facing the gun stop, reverse the hardware. That'll provide enough clearance to bring the gun all the way up.

Bolt head should face gun stop

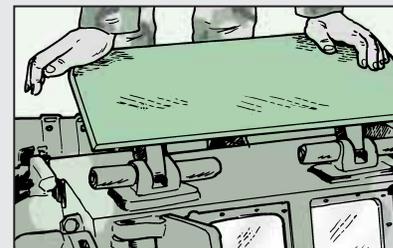
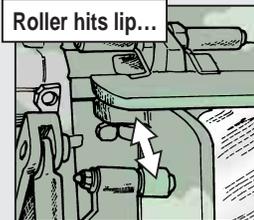


If you **still** get a GED fault reading, there's one other thing to check.

The roller on the ballistic sight cover's connecting link, NSN 3040-01-319-9000, can catch on the lip of the supplemental armor cover (eyebrow) as the gun comes up. That causes just enough hesitation during elevation to cause a GED fault.

If that's the problem, get someone to lift up the eyebrow as the gun is raised.

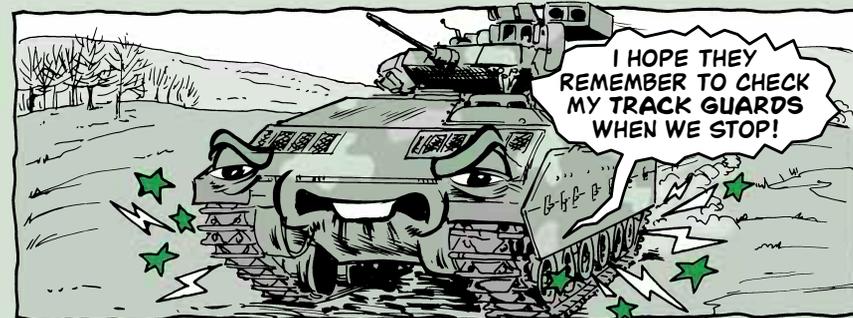
Roller hits lip...



...so hold eyebrow back when raising gun



Guard the Guards



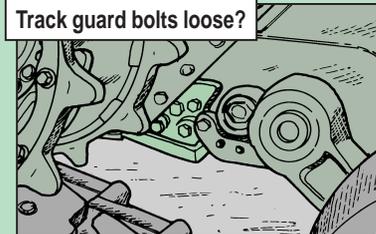
Drivers, when doing AFTER operation checks on your Bradley's suspension system, zero in on the track guards.

Vibration combined with the constant bumps and bangs of field operation will loosen the bolts that hold the guards in place. If the guards fall off, the track can bind or even break.

While you're looking for loose bolts, eyeball the guards for chipping or cracking. Either could make the guards fail.

Report loose or damaged guards to your mechanic. He'll tighten the bolts to 151-166 lb-ft or replace the guards if necessary.

Track guard bolts loose?



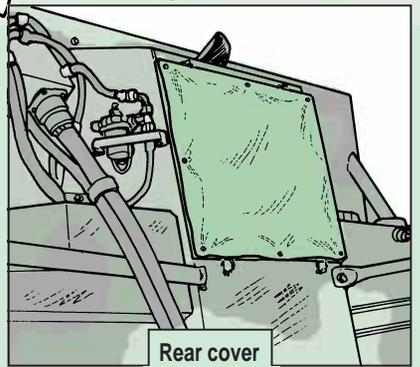


While your SUSVs are parked for the off-season (after the thaw and before the freeze), make sure you use grill covers.

Without the covers, mechanical and electrical components in the engine compartment can rust and corrode.

Here's what you need to do if you know your SUSV won't be used for more than a week:

- ◆ Turn the key to STOP.
- ◆ Do PMCS.
- ◆ Remove drain plugs and store them in the front door pocket.
- ◆ Install front and rear grill covers.



- ◆ Disconnect the battery.
 - ◆ Remove the front engine hood.
- If you're parking your SUSV for a week or less:
- ◆ Turn the key to STOP.
 - ◆ Install the front and rear grill covers.

To get the front grill cover, use NSN 2540-01-309-1078. NSN 2540-01-309-1079 gets the rear cover.

Never operate the vehicle with grill covers installed. Power train components will overheat, often causing fires.

Bleed Right, Stay Cool



If your SUSV runs hot when it's cold outside, it could be that its cooling system needs a complete bleeding.

That's **complete** as in both the **front** and **rear** heaters. Many times the rear heater bleed point is overlooked, which keeps you from getting the air out of the cooling system.

Air pockets in the system prevent circulation of coolant, increasing its temperature.

Take a look at Pages 3-71 through 3-73 of TM 9-2350-285-20. Note that the rear heater coolant valve must be open during the bleeding operation.

Follow the instructions carefully, get all the trapped air out of the cooling system and run cool in the cold.



MLRS ...

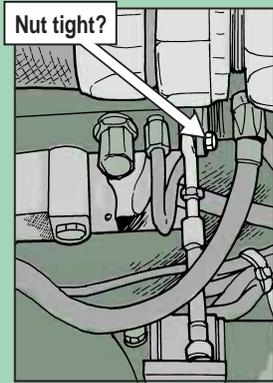
Keep Locknut in Its Place

Drivers, if your MLRS won't shut down when you pull the fuel shutoff lever, a missing locknut is the likely culprit.

The locknut, NSN 5310-00-088-1251, connects the fuel shutoff linkage to the fuel shutoff mechanism. Continuous use and vibration loosen the locknut. Once it falls off, you'll have to raise the cab and shut off the fuel flow manually.

Make that locknut part of your weekly PMCS. While the cab is raised, make sure the locknut is tight. If you can move it with your fingers, it's too loose.

Never try to re-tighten a loose locknut, though. The nylon gasket inside the locknut is no good after one use, so the locknut won't hold. Get your mechanic to replace the locknut.



ROLL OUT THE MATTING



Dear Editor,

During field exercises, there's a constant flow of traffic in and out of the command post carrier. Before long, the floor is covered with dirt, mud and oil. Footing on the metal floor plates becomes treacherous.

We've solved this slippery problem by putting down ribbed rubber matting. Even when it's wet and muddy, the matting provides better footing than the metal floor.

The matting is easy to remove and hose off, too. It makes cleaning the carrier a lot easier when the exercise is over.

Ribbed matting comes in rolls that are 36 inches wide by 1/8 inch thick. A 30-ft long roll comes with NSN 7220-00-753-2982. Use NSN 7220-00-254-4240 to get a 75-ft long roll. Just roll it out and cut it to fit.

SPC James Warner
6/32d FA
Ft Sill, OK

FROM THE DESK OF THE  Editor

You're really on a roll with that idea!

Playing the Numbers Game

Dear Half-Mast,

We just received a new vaneaxial fan, NSN 4140-01-284-5722, to replace the broken one in our M109A6 Paladin.

The new fan has only 12 blades, not 13 like the one it's supposed to replace. Is it OK to use?

SGT J.P.B.

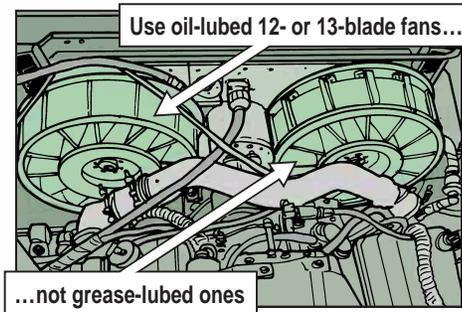


Dear Sergeant J.P.B.,

Good question! There were some 12-blade fans bought and mixed in with the 13-blade fans. As long as they are marked with PN 12268231, they work fine.

However, there are also some 12-blade fans out there that were used on the old M109. This fan, NSN 4140-00-756-3612, is stamped with PN 7768905 and is lubed with grease instead of oil. **Don't use it.**

It does not cool as well as the new 12- and 13-blade fans. You may not notice a problem in regions with moderate temperatures, but deploying to a desert area could result in overheating and engine damage.



Half-Mast

Compressed Air

Need a quick, simple way to clean dust off your optics while avoiding the risk of scratches? Compressed air does the job. A 10-oz can of compressed air comes with NSN 6850-01-368-4797. Order it on a DD Form 1348-6 from RIC GSA and put "NSN not on AMDF" in the Remarks block.

Shorts Shortcut

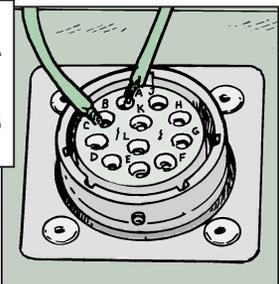
Dear Editor,

TM 9-1375-215-14&P says to check the MICLIC's continuity by connecting the electrical armament system control box to the safety box and the safety box to the charge box before testing with the M51 blasting cap test set. That will show a short, but not its location. Perfectly good components are sometimes replaced as a result.

We've found it more effective to test each component individually like this:

Make a shunt wire from a 2-in piece of commo wire. Hook the M51 to the control box. Connect the shunt to the box's A and B holes to test ROCKET and to the B and C holes for the CHARGE test. If the M51 light lights up for both tests, the box is good.

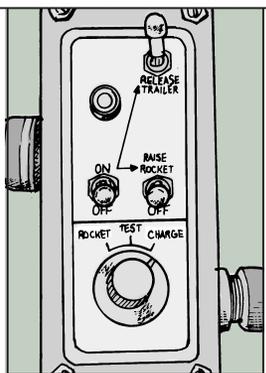
First test in A and B, then test in B and C



Next connect the W3 cable to the control box. Do the same test for the W3's A and B, and B and C

holes. Set the selector to ROCKET for the A-B check and to CHARGE for the B-C check.

Set to ROCKET for A and B, and CHARGE for B and C



If it's good, connect the W5 cable and do the same checks. If the W5's OK, plug it into the safety box. Lower

the launch rail and do the same A-B and B-C tests on the safety box cable. The M51 shouldn't light up on either test. Raise the rail and do the two tests again. Now the M51 should light up.

Lower the rail and plug the safety box cable into the tub's charge box. Do the normal continuity test.

If at any point a box or cable flunks the test, you know immediately what must be replaced.

SGT Delwin Ferguson
SGT David Wiley
C Co, 1st Engr Bde
Ft Riley, KS



FROM THE DESK OF THE Editor

TM 9-1375-215-13&P is replacing the -14&P and has an improved procedure, but both procedures will work fine for troubleshooting. If you don't have the new TM, get your pubs clerk to order it.

SEE/HMMH Video

A 17-minute video on operating and maintaining the small emplacement excavator and high mobility material handler details problem areas and shows how to avoid failures.

Order the free tape—production identification number (PIN) 710707—by calling DSN 795-7439 or (717) 895-7439, or faxing DSN 795-6106 or (717) 895-6106, or by writing to:

Joint Visual Information Services Distribution
Activity
Warehouse 3 / Bay 3
11 Hap Arnold Blvd.
Tobyhanna, PA 18466-5102

Or e-mail your request to:

vibuddy@ptd.net

Just tell them how many tapes you want and where to send them.

Include your name, a full mailing address and the title—Operating Tips for the Small Emplacement Excavator. APO addresses should include unit and box number, CMR and box number or PSC and box number.

You can also order directly over the Internet. Go to:

<http://dodimagery.afis.osd.mil/dvi/Top/davis/>

Then, click on PIN/ICN Search and enter the PIN. Click on the title. Go to the bottom of the screen and click on Order It. Then, follow directions.

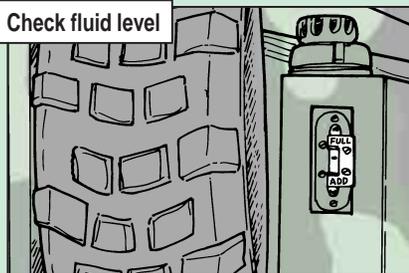
If you need help, call DSN 795-7827 or (717) 895-7827.

STOP Bucket Slowdown

Operators, when a SEE bucket moves slowly or erratically, it could be low hydraulic fluid or a clogged filter element on a hydraulic reservoir tank.

Eyeball the fluid level on both tanks. The tank for the front bucket is behind the spare tire. The rear bucket's tank is on the other side, behind the cab. Make sure the level is between the ADD and FULL marks on both tanks.

Check fluid level

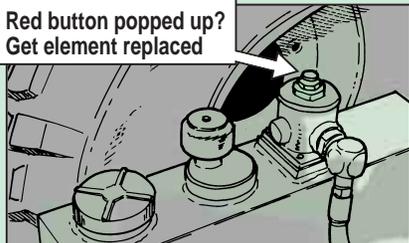


In dusty conditions, tank filter elements clog up, restricting oil flow to the bucket's hydraulic cylinders. That slows the bucket's movement.

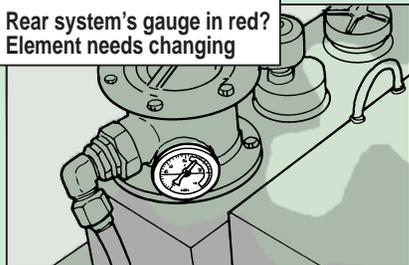
A quick way to tell if the filter element is clogged is to look for red. The front bucket's tank has a red indicator

button. If it has popped up, it's time to get the filter element changed. The rear bucket's tank has a gauge. If the needle's in the red, you need a new filter element.

Red button popped up? Get element replaced



Rear system's gauge in red? Element needs changing



Otherwise, make sure your mechanic replaces both elements during scheduled service and as needed during dusty conditions.



Leave Space in the Bowl



Dear Editor,

Hydraulic problems in the M9 ACE's valve bank and compensation pump are a nightmare to track down because of the ejector.

When the ejector is completely back, like TM5-2350-262-10 says, there's no room to track down a hydraulic leak. Even if you could track it to the source, repairing the leak means digging dirt out of the bowl and using a winch from another ACE to pull the ejector forward—a time-consuming effort.

During training, I tell my operators to leave the vehicle's ejector out about two feet when digging or extracting dirt.

With the ejector forward, there's enough room for the operator to look for a busted compensation pump or a leak in the valve bank and for the mechanic to make repairs.

SSG Michael Harrington
C Co, 91st Engr Bn
Ft Hood, TX

FROM THE DESK OF THE Editor

Thanks for the tip. Since you and the ACE's operator's manual don't agree on the ejector's position, be sure you have your commander's OK.

Exercise, Exercise, Exercise



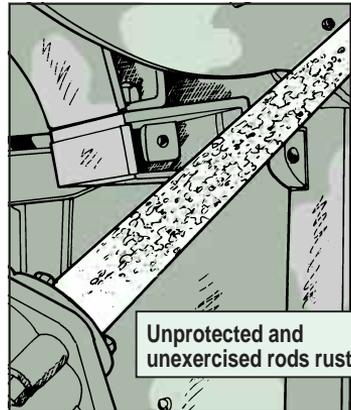
It just can't be said often enough. You must exercise hydraulic cylinders at least once a week to keep them lubed against rust.

Rust on cylinder rods scrapes and cuts seals, causing them to leak. Leaks can make your equipment NMC.

But what if you just can't fully raise and lower every dozer blade or grader blade, or exercise every back hoe, front end loader, roller, compactor, forklift, earthmover, wrecker lift cylinder or spade cylinder once a week?

Smear a 1/16-in to 1/8-in thick coating of GAA grease on the cylinder rods.

If you know that your equipment will sit for a month or more, coat the polished part of the cylinder rod with GAA, then wrap it with waterproof paper, NSN 8135-00-753-4662. Use preservative sealing tape, NSN 7510-00-852-8180, to hold the paper in place.





YEAH, AND WE'LL NAME THE SHOW AFTER THE SOLDIER.

I, OF COURSE, WILL DIRECT AND SUPPLY THE DIALOGUE.

BUT YOU WON'T GET CARRIED AWAY WITH THIS, RIGHT?

WE'RE READY TO BROADCAST OVER THE ARMY NETWORK TO POSTS ALL OVER THE WORLD. THE SOLDIER WE'VE SELECTED WILL HELP US SHOW OTHER SOLDIERS HOW TO TAKE CARE OF THEIR M16s AND M4s.

LET'S ROLL "THE PRIVATE TRUMAN SHOW"!



THIS RIFLE IS YOUR BEST FRIEND, PRIVATE TRUMAN.

Y-YES, SERGEANT.

HEY, TAKE A LOOK AT THIS.

COOL, LEAVE IT ON.

TAKE CARE OF IT LIKE YOUR LIFE DEPENDED ON IT...



BECAUSE IT DOES!

IS THAT CLEAR, PRIVATE TRUMAN?

V-VERY, SERGEANT.



THIS OVEN CLEANER IS THE BEST FOR CLEANING. IT STRIPS THE CARBON RIGHT OFF. ISN'T THAT RIGHT, WRIGHT?

YOU'RE WRONG, RONG! I'VE NEVER SEEN THAT IN THE M16 TM.



WE ARE SUPPOSED...

...TO USE ONLY THE STUFF THE TM CALLS FOR, LIKE CLP.



THIS STUFF IS BETTER, TRUMAN. TAKE MY WORD FOR IT. I KNOW A LOT ABOUT GUNS.

STRINGFELLOW IN B COMPANY USED OVEN CLEANER ONCE.

WHAT HAPPENED?

GOSH, RONG. IT'S GOOD TO MEET AN EXPERT.

IT ENDED UP TAKING THE FINISH OFF HIS M16. THEY MADE HIM PAY FOR IT.



I'VE FOUND THE BEST WAY TO CLEAN THE CHAMBER...

...IS TO FIRST LOOSEN THE CRUD WITH A LITTLE CLP AND THEN WORK THE CHAMBER BRUSH IN AND OUT.

SOUNDS GOOD, WRIGHT. I'LL TRY IT.



OH, BROTHER, WRIGHT. WHO TOLD YOU THAT, YOUR GRANDMOTHER? WHAT YOU NEED FOR THE CHAMBER...

...IS A NIFTY LITTLE TOOL I MADE FROM AN OLD COAT HANGER.



HEY, I BET YOU COULD CLEAN THE HECK OUT OF THE BARREL WITH A TOOL LIKE THAT.

YEAH, YOU COULD AND YOU COULD ALSO PRETTY MUCH RUIN THE GROOVES INSIDE THE BARREL.

THERE'S A GUY IN EVERY UNIT WHO THINKS HE KNOWS BETTER THAN THE TM. WHEN WILL THESE GUYS LEARN?



THE HARDEST PART IS TRYING TO CLEAN AROUND THE TRIGGER ASSEMBLY.



I JUST CAN'T GET ALL THE DIRT OUT.

SCRITCH



IF YOU BEND A PIPE CLEANER LIKE THIS—AND PUT A COUPLE OF DROPS OF CLP ON IT...

...YOU CAN WORK OUT MOST OF THE DIRT. YOU CAN ALSO JUST BLOW OUT A LOT OF THE DIRT.



GET WITH THE PROGRAM, WRIGHT. IF YOU TAKE APART THE RECEIVER, YOU CAN REALLY CLEAN AROUND THE TRIGGER ASSEMBLY.

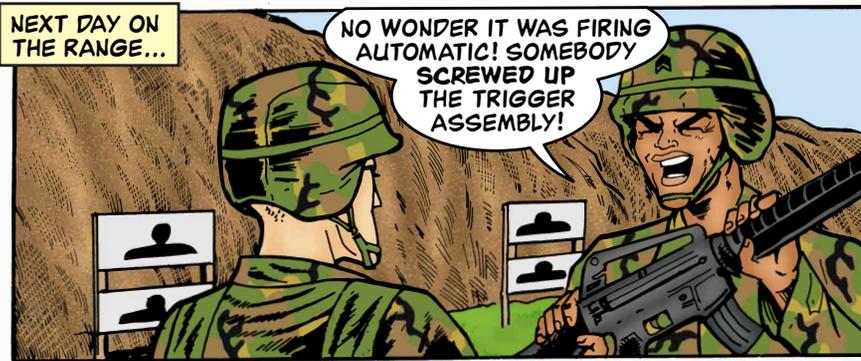


HERE, LET ME SHOW YOU.



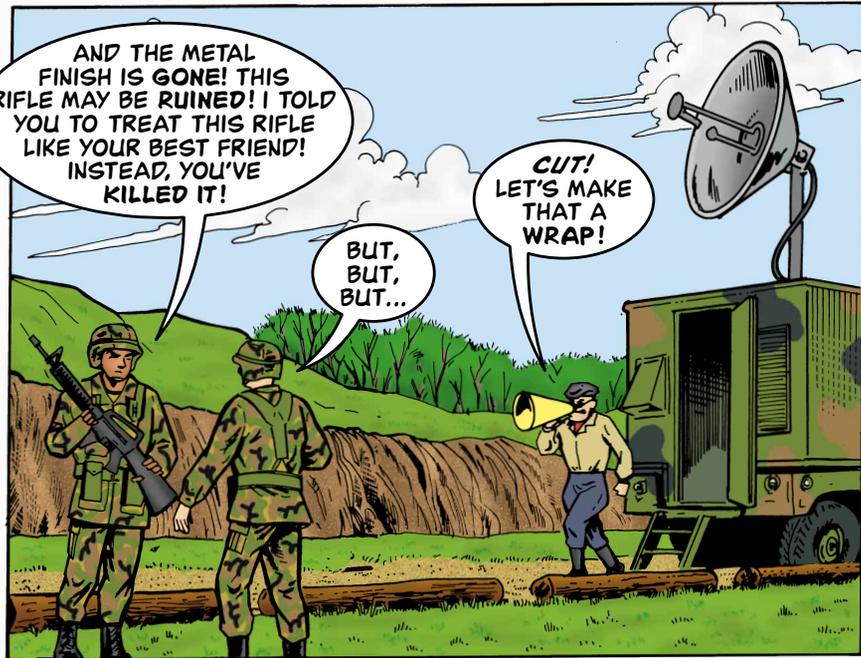
CAN WE DO THAT?

TAKING APART THE RECEIVER WITH THE WRONG TOOLS CAN RUIN IT. AND PUTTING THE TRIGGER ASSEMBLY BACK TOGETHER WRONG CAN CAUSE THE M16 TO FIRE AUTOMATIC WHEN IT'S NOT SUPPOSED TO. GUYS LIKE RONG ARE DANGEROUS.



NEXT DAY ON THE RANGE...

NO WONDER IT WAS FIRING AUTOMATIC! SOMEBODY SCREWED UP THE TRIGGER ASSEMBLY!



AND THE METAL FINISH IS GONE! THIS RIFLE MAY BE RUINED! I TOLD YOU TO TREAT THIS RIFLE LIKE YOUR BEST FRIEND! INSTEAD, YOU'VE KILLED IT!

BUT, BUT, BUT...

CUT! LET'S MAKE THAT A WRAP!



PRIVATE TRUMAN, WE'VE MADE YOU THE STAR OF YOUR OWN TELEVISION SHOW—WITHOUT YOU KNOWING IT. EVERYONE AROUND YOU IS AN ACTOR.

WOW!



WE HOPE YOU'VE LEARNED—AS WELL AS THE THOUSANDS OF OTHER SOLDIERS WHO'VE BEEN WATCHING YOU—THE IMPORTANCE OF TAKING CARE OF YOUR M16 AND M4 BY THE BOOK—TM 9-1005-319-10. DOING STUFF THAT YOU'RE NOT TRAINED TO DO, OR USING UNAUTHORIZED TOOLS OR CLEANERS, CAN TRASH A RIFLE OR CARBINE. I HOPE YOU'VE LEARNED YOUR LESSON.

MY OWN TELEVISION SHOW?



I NEED AN AGENT! DO I GET ROYALTIES? WHO'S MY LEADING LADY? I WANT A RAISE!

OH, NO! WE'VE CREATED A MONSTER!

GIVE GUN CABLE SOME SLACK



The Kiowa Warrior's .50-cal gun cable doesn't have enough slack. When the universal weapon pylon is folded up, the gun's umbilical cable is pulled too tight. Eventually cable wiring is damaged.

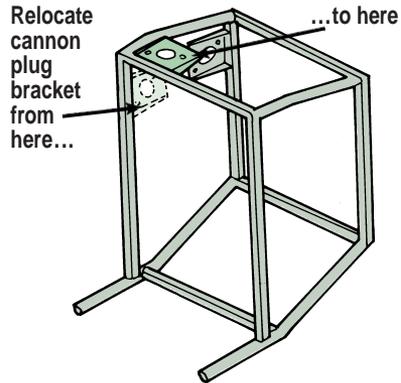
To give the cable some slack, move the cannon plug bracket from the side of the aft cage assembly to the top of the cage. Here's how:

Separate the aft cage from the pod by following Steps 1-6 on Page 4-196 in TM 9-1090-214-23&P. You don't need to take the pod from the helicopter or the gun from the pod to do this.

Take off the cannon plug bracket from the aft cage by grinding through the weld bead. Do as little damage as

possible to the bracket and cage. Straighten the bracket if it was bent or have a new bracket fabricated from 4130N low-carbon alloy steel, NSN 9515-00-267-1441.

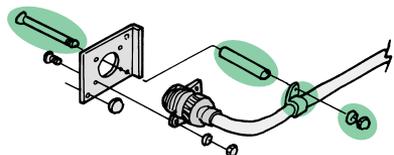
Have your welding shop weld the bracket like this:



Touch up the bracket and cage with primer, NSN 8010-00-142-9279, and paint, NSN 8010-00-935-7079.

Install the aft cage to the gun pod following Steps 13 through 15 on Page 4-199 of the TM. When reassembling the gun pod, leave out Items 6 through 10 in Fig C-18. They are no longer needed to support the harness assembly.

Leave these items out!



ON-TARGET AVENGER

For your Avenger's M3P machine gun to fire smoothly, you need to keep its parts moving smoothly with proper lubing.

Rule No. 1 when lubing the M3P is to use only TW-25B lubricant, NSN 9150-01-439-0859. The usual gun lubes—CLP or LSA—won't do the job. The only exception is the elastic cradle, which is lubed with LSA.

If any other lubricants or solvents have gotten on the M3P during maintenance of the rest of the Avenger, wipe

them off before you apply TW-25B. They hurt the TW-25B's effectiveness.

Use this guide for how much to lube and what to apply it with:

★ **Light**—white grease is slightly visible. Use a small brush or cleaning patch. They're part of the Avenger BII.

★ **Moderate**—grease is visible. Use a brush or patch.

★ **Heavy**—grease is plentiful. Use a large brush.

For firing, lube all parts as shown. When the M3P is going to the arms

MACHINE GUN LUBING

room, give all the parts a light lube only.

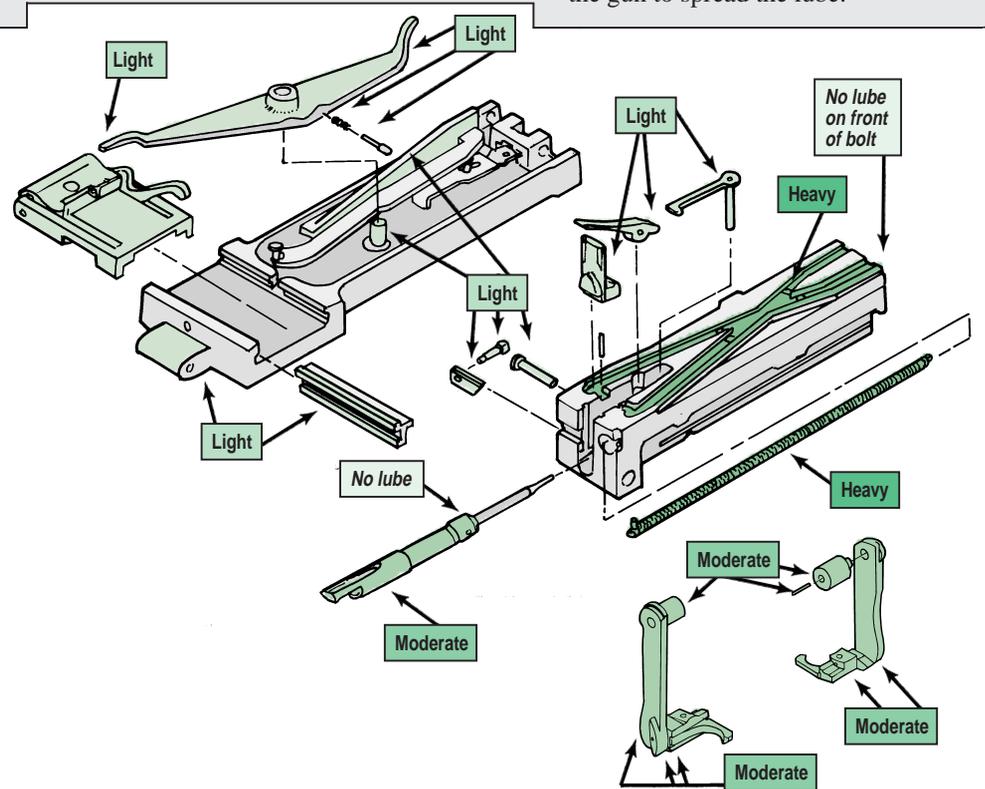
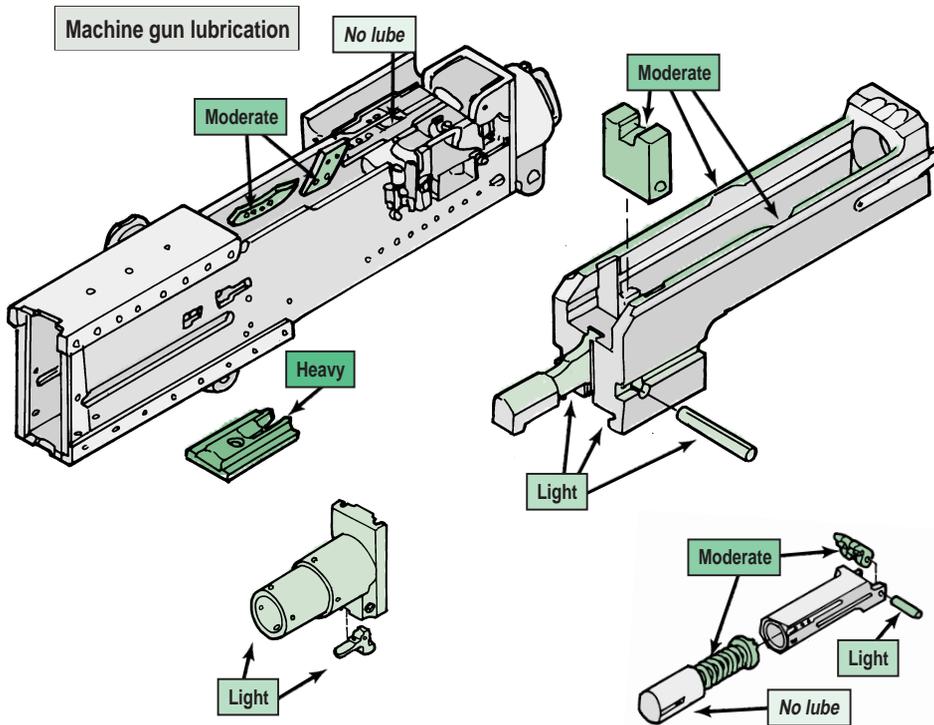
During firing, the barrel extension often becomes sticky and gritty. That makes it difficult for the bolt to move and the M3P to fire. But you can clean the extension while the gun is mounted.

Let the gun cool enough so it's safe to touch. Follow the steps for reloading until reaching the point where the feed cover's up. Make sure the ARM switch is set to SAFE so the bolt is locked to the rear by the remote charger.

Use a clean rag wrapped around a stick to check inside the barrel extension, especially along the inner walls. Be careful—the barrel grooves can be razor sharp. If the extension is sticky or gritty, clean it with the rag. Use a small brush to apply a moderate coat of TW-25B. If the inside of the extension is dry, just lube it.

Check the extension after every 1,250 rounds fired.

After lubing the M3P, always cycle the gun to spread the lube.

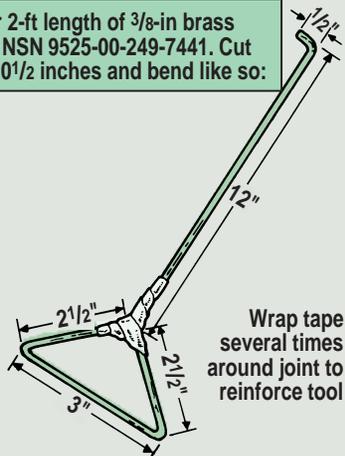


Stuck with a Stuck Bolt?

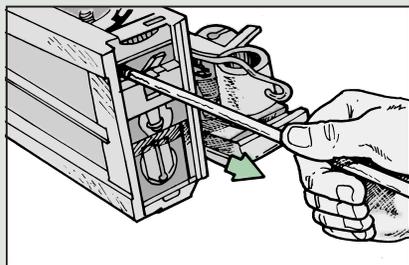
If you're an armorer with M2 machine guns, you can count on running into stuck bolts. It's too easy for gunners to forget to push the cocking lever forward before installing the bolt.

THE EASIEST WAY TO DEAL WITH A STUCK BOLT IS WITH A SPECIAL TOOL YOU CAN MAKE YOURSELF...

Order 2-ft length of 3/8-in brass alloy, NSN 9525-00-249-7441. Cut it to 20 1/2 inches and bend like so:



To use the tool, remove the backplate, driving rod spring, and bolt pin. Hook the tool over the cocking lever, half-

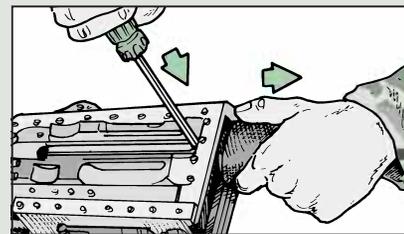


way up the lever. If you get it higher, the lever jams.

Press down hard on the lever as you yank back with the tool several times. The bolt should come unstuck.

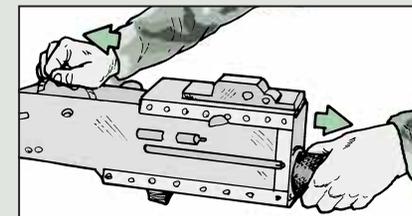
If the tool is not available when you need it, try this:

1. After you remove the backplate, driving rod spring, and bolt pin, retract the bolt as far as you can.
2. Press in on the buffer detent spring with a screwdriver as you slide out the buffer assembly about two inches.

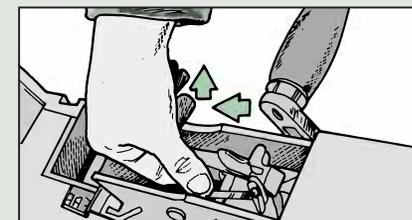


3. Slide the bolt forward as you pull the buffer to the rear. The bolt should force the accelerator down and let you remove the buffer. You may need to

slide the bolt back and forth several times before you can pull out the buffer.



4. Push down on the front of the barrel extension. Slide the bolt out of the receiver. If the bolt hangs up, pull the extension forward and up until the bolt slides out.



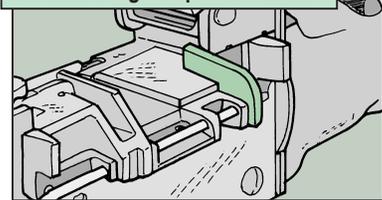
These tools and procedures have been added to Pages 249 and 250 of TM 9-1005-213-23.

Armorers, it's up to you to fill in the blanks on taking care of the blank firing attachment (BFA) for the M2 machine gun.

The cartridge stop must be removed to use the BFA. Unfortunately, if the stop's removed in the field it usually disappears in the field. Without the stop, the M2 won't feed real ammo.

Solution: If your M2s are going to be firing only blanks, take off the stops before the guns leave the arms room. That's a sure way to stop disappearing stops.

Store cartridge stop in arms room

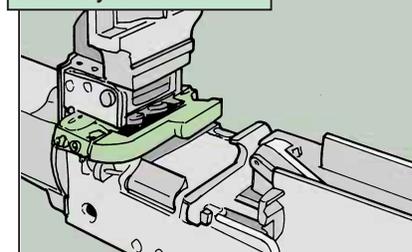


BFA Blanks

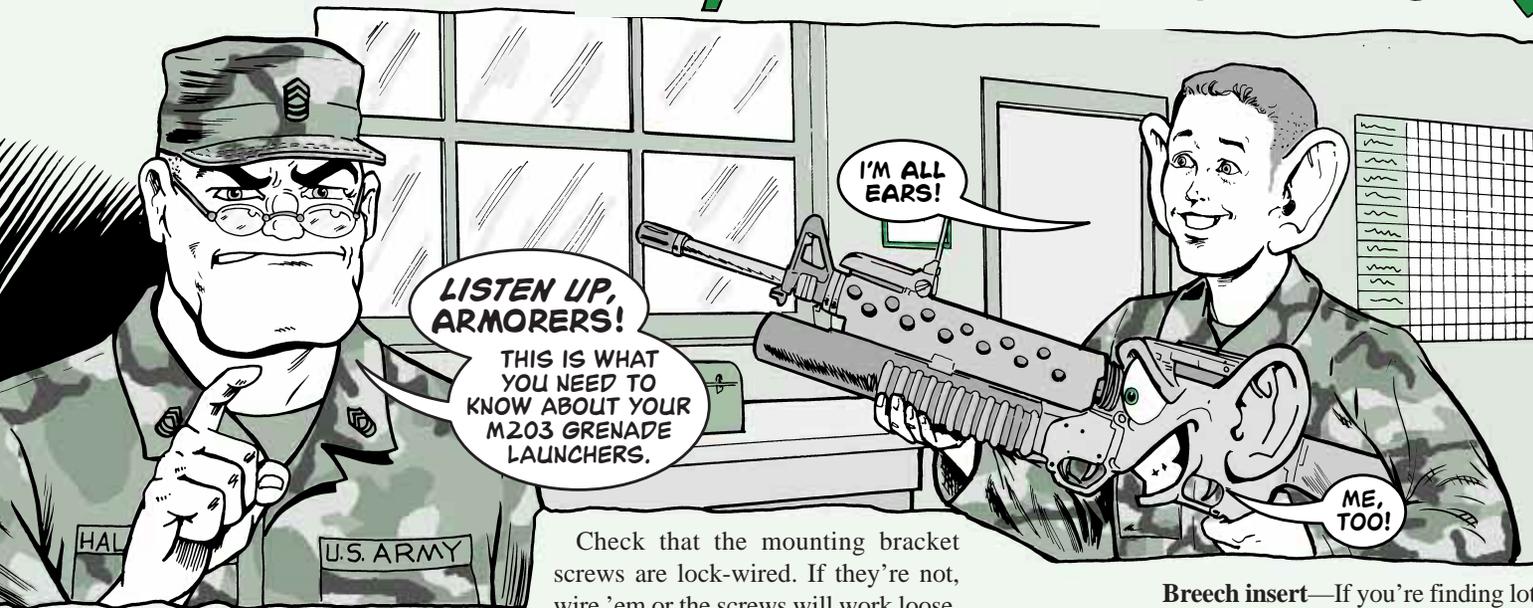
You must install all of the BFA, particularly the cartridge guide assembly. The guide, which goes in the feed tracer, compensates for the shorter blank round. Without it, the M2 jams. If the guide is missing, order one with NSN 1005-01-092-9537.

Remember, the BFA is not covered by the M2's TMs. It has its own, TM 9-1005-314-12&P.

Make sure cartridge guide assembly is installed

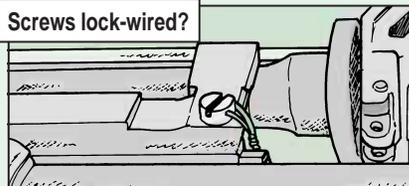


What You Need to Know



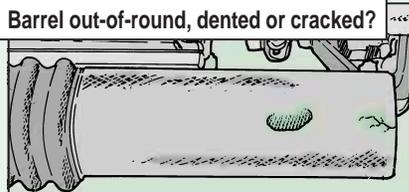
Check that the mounting bracket screws are lock-wired. If they're not, wire 'em or the screws will work loose.

Screws lock-wired?



Barrel—If you're part of a hard-charging unit, count on damaged barrels. The aluminum barrel can't take hard knocks. If a barrel is out-of-round, dented, or cracked, get it replaced to avoid dangerous short fires.

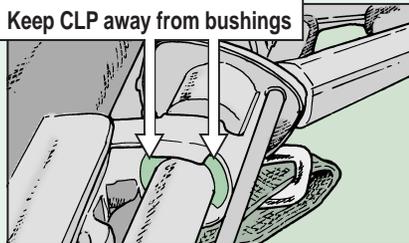
Barrel out-of-round, dented or cracked?



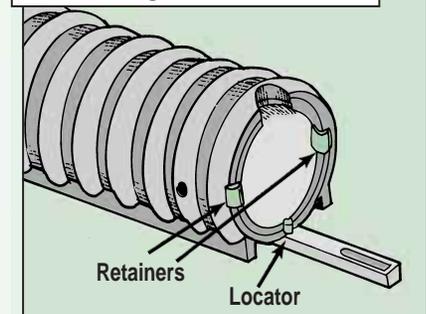
Movement—There should be no movement of the M203 up and down the barrel. But it's OK to have up to 1/8 inch side-to-side movement from each side of center if the total movement is no more than 1/4 inch.

Bushings that don't do their job are the usual cause of a loose M203. And bushings can't hold if they're slick with CLP. Tell your unit to keep CLP away from the bushings.

Keep CLP away from bushings

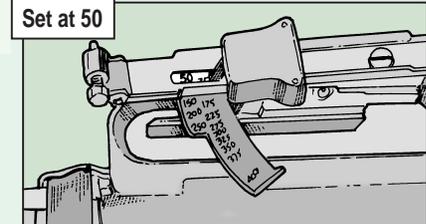


Check cartridge locator and retainers



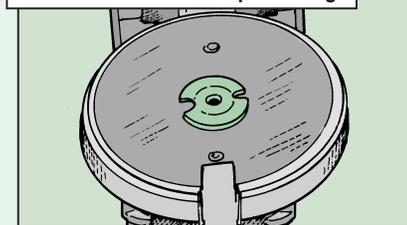
Storage—Store M203s mounted on the M16 or M4 in the M12 rack with the quadrant sights set at 50. At any other setting, the rack locking bar will damage the sight.

Set at 50



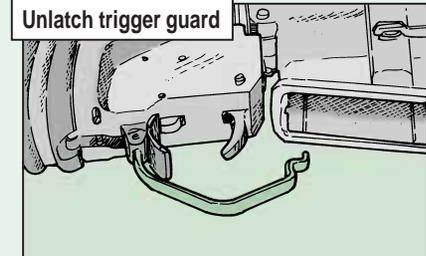
Breech insert—If you're finding lots of loose or protruding breech inserts, it's time for a talk with your unit. They're dry firing their M203s, which chews up the inserts. M203s should be dry fired only during the function check.

Breech inserts loose or protruding?



Cartridge locator and retainers—They're easily overlooked, but if they're damaged or missing they cause poor extracting and make it difficult to close the barrel.

Unlatch trigger guard

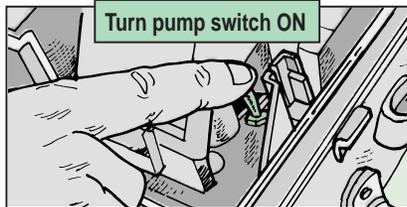


Unlatch the trigger guard. That lets the M203 relax in the rack. If the guard is left engaged, it puts pressure on the M203's mounting hardware and the M203 will work loose more quickly.

Sometimes normal purging just isn't enough.

Sand or engine exhaust can contaminate the M8A1 chemical alarm's detector cell so badly that the M43A1 detector can't be reset. But there's hope, thanks to industrial strength purging. Here's how to do it:

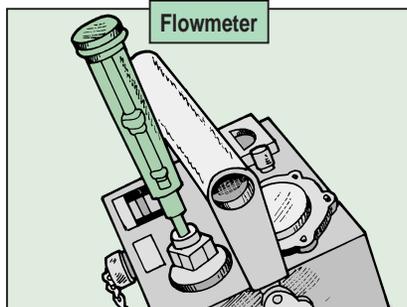
1. Open the case. Flip the pump switch to ON (switch points in) and close the case.



2. Check air filter. Change it if it's dirty.



3. Install the flowmeter. If you're operating indoors, also install the outlet filter.

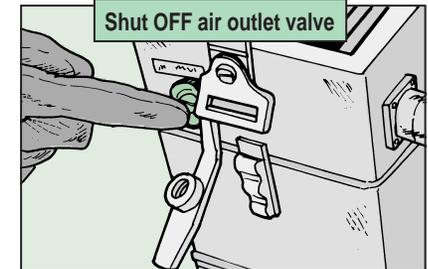


4. Turn on the M43A1 and turn down the horn's volume.

Industrial Strength Purging



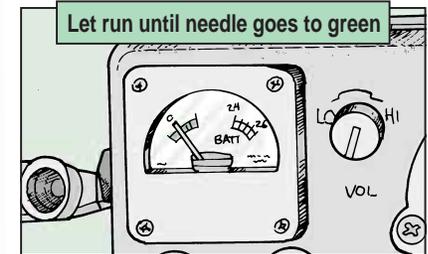
5. Run the M43A1 for a few minutes. If the needle does not go toward the green area of the detector meter, put on your gloves and shut off the air outlet valve with your finger.



Keep your finger on the valve until the needle goes toward green, but no more than 30 seconds at a time. Push the battery test and reset button (BTRB) to reset the detector. Keep doing this until the alarm stops.

6. Open the case and flip the pump switch to OFF.

7. Close the case, turn on the detector, press the BTRB, and let your M43A1 run until the needle goes to green.



8. Repeat this procedure if it doesn't go to green. Still NO GO? The alarm needs to go to support. They can use the gas particulate filter in the M140 test set to purge the alarm.

Begin and End with PM

Just a few minutes of PM before and after a mission can make smoking easier for your M157 smoke generator.

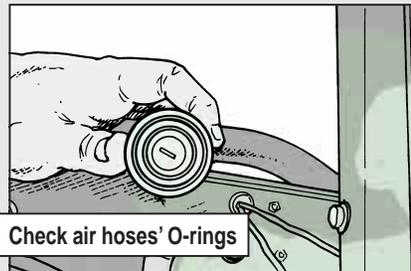
Before

Unscrew both fog oil strainers from the fog oil lines and check them for gunk. If they're clogged, the generators will strain for enough fog oil to smoke. Clean the strainers with dry cleaning solvent and a rag.



Clean strainers

Check the O-rings in the quick-disconnects for the air compressor hoses. If the O-rings are cracked, the hoses will have a bad seal and the generators will have trouble getting enough air, which causes poor starting.



Check air hoses' O-rings

If your mechanic doesn't have replacement O-rings, NSN 5330-00-702-7217, remove the bad O-rings and smoke without them. The hoses seal

better with no O-ring than with a bad one. They seal **best** with a good O-ring, of course. Get a new one as soon as possible.

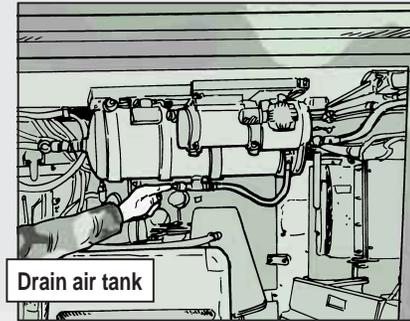
Clean off the breather vent to the fog oil tank with a rag. If the vent is stopped up, the generators won't get enough fog oil.



Wipe off breather vent

After

Push the button underneath the air tank and hold it for 30 seconds. That

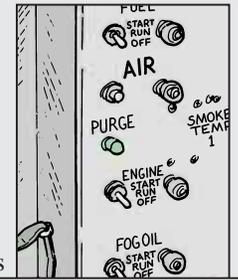


Drain air tank

drains all the condensation in the tank that otherwise causes corrosion and poor smoking.

Press both PURGE buttons for five seconds. That gets rid of the hot gases that have built up inside the generators during smoking.

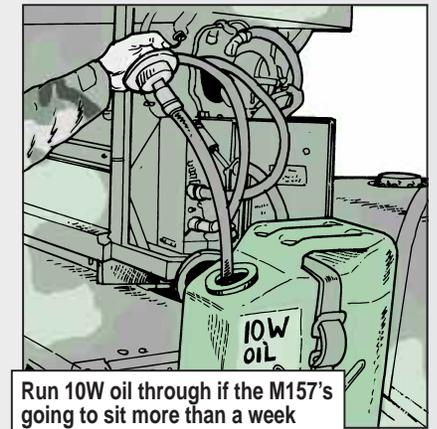
If the gases remain in the smoke chamber, they can ignite and send fire out through the baffles.



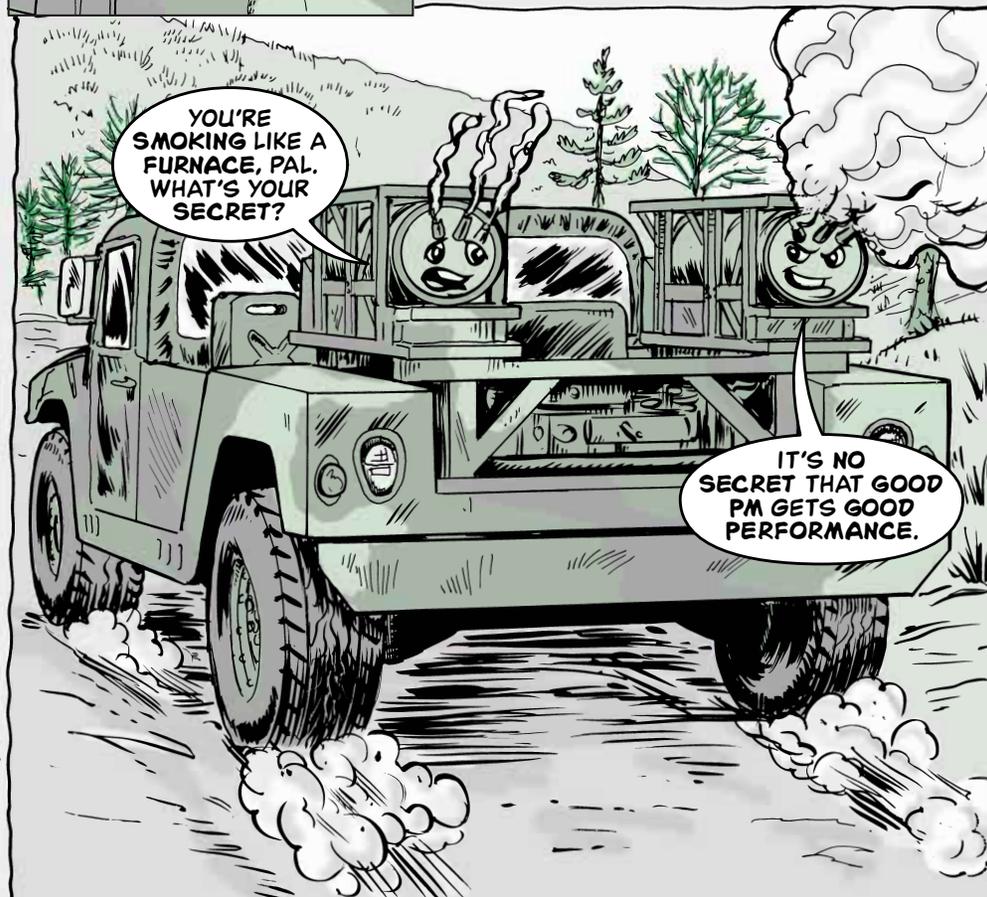
Purge smoke chambers

If your M157's going to sit for more than a

week, hook up the fuel pump to a can filled with SAE 10-weight oil. Let the fuel pump run five minutes. Do the same with the fog oil pump. That coats the insides of both pumps and keeps them from corroding and locking up.



Run 10W oil through if the M157's going to sit more than a week



YOU'VE GOT TO GET 'EM THERE

Your generator can run like a Swiss watch, but if you can't move it to where it's needed, you might as well put a fence around it and call it a work of art.

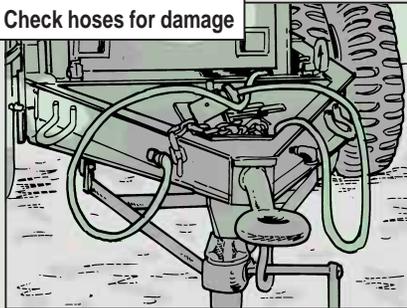
So, unless your name is Rembrandt, get your clipboard, go outside and do a walk-around inspection on each of your trailers.

A good starting point is to look for rust. Not only is rust a problem to deal with, but it's also an indication that your storage and preservation job is not what it should be.

If you find rust, follow your TM for treatment and make sure your corrosion plan is improved.

Next, eyeball the interconnecting hoses (those hoses that connect your generator trailer to the vehicle hauling it)—air or hydraulic and electrical. Look for gouges, worn spots and corroded connectors. If you find damaged hoses, get them replaced.

Check hoses for damage



If you have air hoses, make sure the hoses and connectors are color coded—red for emergency and yellow for ser-



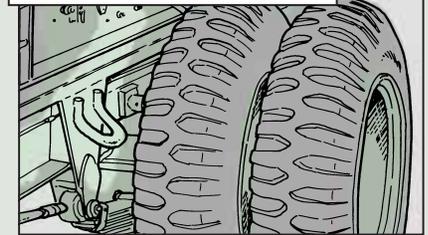
vice. If the color has faded so it's hard to tell which is which, repaint the connectors.

Make sure the hoses are tied in place to the frame and lunette with nylon ties, NSN 5975-00-156-3253. Tied hoses don't drag the ground or get cut by a turning trailer.

If you need to tie your hoses down, use the two-tie method. Use one tie to hold the hose to the trailer. Then put a second tie around the first between the hose and the frame. This keeps the hose from rubbing against the frame.

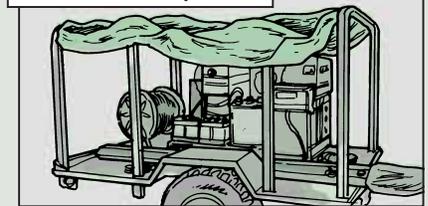
and the TM. Make sure your tires are inflated to the right pressure.

Check tires for wear and damage



If you store your canvas in the trailer, it needs a once-over, too. Stored canvas is a water magnet. Water puddles up and stays trapped in your canvas. Try to store it clean, dry and flat.

Folded canvas traps water



Is the canvas free of holes and tears? Small pinholes and leaks around seams can be handled with sealant—NSN 8040-00-262-9028 brings a pint; NSN 8040-00-262-9031 brings a quart; and NSN 8040-00-281-1972 brings a gallon.

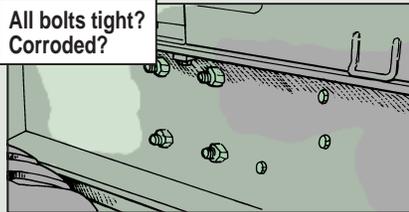
Your canvas shouldn't be alone—tiedown ropes should be at hand. Check them for rot and fraying. Ropes that are rotten should be replaced. Frayed ropes can usually be repaired.

While you're looking at hoses in the lunette area, take a good look at the trailer's tongue. Is the side bar guard bent? Is the lunette bent? Unusual bends in these two areas could mean your trailer has jackknifed in the past. That means there may be hidden trouble. Report the bends.

Next, check the tires. Of course, take care of any flat ones, but also determine which ones may go flat next. Look for excessive wear and missing chunks of tread. Get out your tire gage

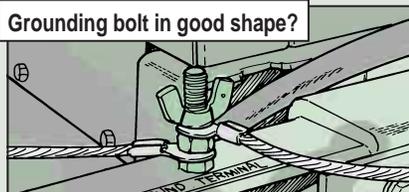
Your walk-around should include a hand check of all bolts for tightness. Eyeball them for corrosion, too. If the corrosion hasn't got a foothold yet, brush it away with a stiff-bristled brush. Corrosion that has pitted the bolt, means the bolt needs to be replaced.

All bolts tight?
Corroded?



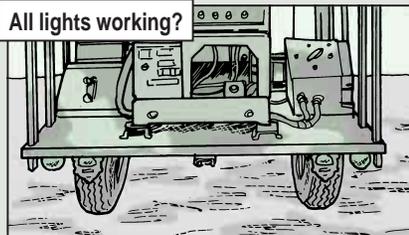
Don't forget about the grounding bolt. Vibration loosens this bolt and water corrodes the ground connection. Coat the bolt and terminal with RTV sealant, NSN 8040-00-118-2695. RTV seals out moisture and helps keep the bolt tight.

Grounding bolt in good shape?



Look at the lights. Are any broken? Do they all work?

All lights working?

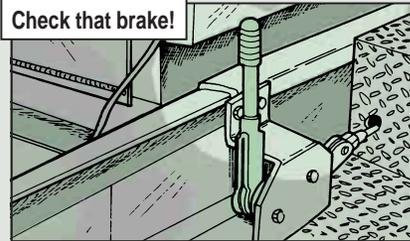


Finally, check the brakes. If you have hydraulic brakes, check the master cylinder to make sure there's enough fluid

PS 555

in it. If there is not enough, check for leaks.

Check that brake!



If you have air brakes, the air tanks should have been drained after the last operation. If they weren't, you might have frozen or corroded lines.

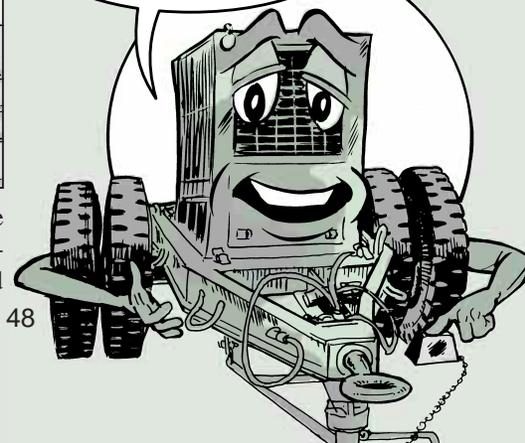
Check the petcock. After your air tanks were drained, the petcock should have been closed. Many aren't, though, and an open petcock lets condensation form in the tank.

Don't forget the emergency hand brake. Check it. Never set it if your trailer is being stored for a long time or if you're expecting freezing weather.

The cable and handle can freeze and break when you try to use them. Then you can't release the brake. Use chocks when you can't use the handbrake.

IF YOU FIND
A HANDBRAKE SET IN
LONG STORAGE, RELEASE
IT AND CHOCK THE
WHEELS.

PS END



Mobile Subscriber Equipment . . .

Are You Affiliated?

I TURNED
AROUND TO SEE IF I WAS
AFFILIATED AND...



If you're in the front seat of a vehicle with the AN/VRC-97 mobile subscriber equipment receiver-transmitter (MSRT), you can't see the affiliation indicating light. It's mounted on the RT in the back of the vehicle.

If you can't see the light, you can't tell if you're affiliated. If you're not affiliated, you can't receive calls.

Now you can get a remote affiliation indicator that solves the problem. It mounts in the front of the vehicles on the MSRT remote power switch

box in all vehicles except the M1065 and M1067 SUSVs and the M1025. On these vehicles it is mounted where it can easily be seen, according to directions in the TB. When the affiliation indicating light on your RT in the back of the vehicle lights up, the one on the remote indicator lights up, too.

There are three remote affiliation indicator kits available:

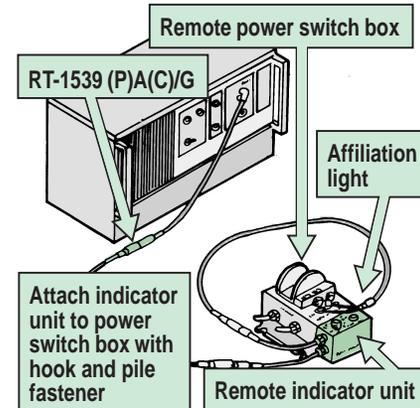
- ID-2533(V)1, NSN 6220-01-421-4394, is used on the M1008 and M1009 CUCVs, and M998 two- and four-door and M1025 HMMWVs.
- ID-2533(V)2, NSN 6220-01-421-4412, is used on the M1065 SUSV.
- ID-2533(V)3, NSN 6220-01-421-4413, is used on the M1067 SUSV.

The kits are covered in TB 11-5800-216-13-8. For technical information on the kits, write, call or e-mail CECOM at:

US Army CECOM
ATTN: AMSEL-RD-ST-WH-NM
Ft Monmouth, NJ 07703-5203

DSN 987-4432 or (732)427-4432

romanos@mail1.monmouth.army.mil



The Right BA-5800 for the Job

There are seven different BA-5800 batteries in the Army supply system and some may not be safe to use in your equipment. Some are OK for one piece of equipment and not for others. You have to know which are which.

Here are two charts that will help. The first chart lists the seven different batteries. The second chart list end items and which batteries are OK for each end item. A “NO” means that the battery cannot be used with that end item.

Manufacturer	Contract Number	Battery ID	NSN
Ballard	DAAB07-90-C-C024	C024	6665-99-760-9742
Ballard	Unknown	7728	6135-21-906-7728
Crompton Eternacell	DAAB07-91-C-R014	R014	6665-99-760-9742
Power Conversions	DAAB07-94-D-E002	E002	6665-99-760-9742
Power Conversions	DAAB07-90-C-C025	C025	6665-99-760-9742
Saft America	DAAB07-94-D-E004	E004	6665-99-760-9742
Blue Star	DAAB07-96-0-G017	G017	6135-01-440-7774

End Item	Battery ID						
	C024	C025	E002	E004	R014	7728	G017
AN/ASN-169 (SAGR)	NO	YES	YES	YES	NO	NO	YES
AN/PSG-7(V)1 (FED)	NO	YES	YES	YES	NO	NO	YES
AN/PSG-7(V)2 (FED)	NO	YES	YES	YES	NO	NO	YES
AN/PSN-10 (SLGR)	NO	YES	YES	YES	NO	NO	YES
AN/PSN-11 (PLGR)	NO	YES	YES	YES	NO	NO	YES
AN/PSN-11(V)1 (PLGR)	NO	YES	YES	YES	NO	NO	YES
Chem Agent Monitor (CAM)	NO	YES	YES	YES	NO	YES	YES
CP-1995/U (SHTU)	NO	YES	YES	YES	NO	NO	YES

Here are some more things you need to know about these batteries and the equipment they work in:

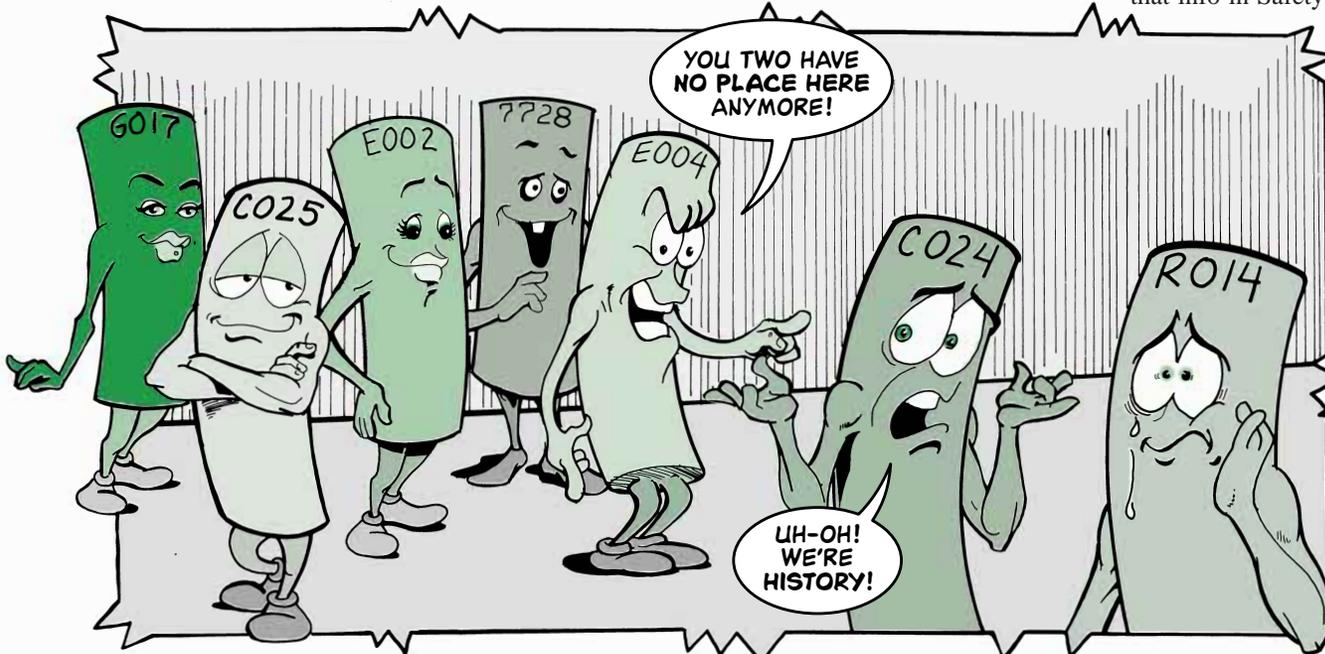
C024 and **R014** have been deadlined and can no longer be used. You'll find that info in Safety-of-Use Message 98-001. Turn them in for replacement. Follow the turn-in instructions in CECOM Ground Precautionary Message 96-012, or contact your local CECOM LAR for help.

If you're turning in battery **E002** or **E004**, the battery's voltage must be checked five days after the complete discharge device (CDD) has been activated. The meter should show less than one volt. If you get one volt or greater, read CECOM GPM 96-012 for battery disposal instructions.

When ordering batteries for the **AN/ASN-169 Stand Alone Aviation GPS Receiver** or the **AN/PSN-10 Small Lightweight Global Position System Receiver**, add project code "EKL" in the Card Columns 57-59 of the requisition to ensure that you get the right batteries for this equipment.

Before you install a battery in the **AN/PSN-11 and 11(V)1, Precision Lightweight Global Positioning System Receiver**, disconnect the external power cable. Otherwise, the battery could explode and cause equipment damage and injury.

Otherwise, the battery could explode and cause equipment damage and injury.



Tents ...

Sheltering Your Shelter

DID YOU GET SOAKED IN THE STORM?

NO, I GOT SOAKED BY POOR TENT PM!

Without tent PM, your home in the field can't shelter you. So, shelter it with this PM.

Clean and Dry

Use a soft-bristled brush and mild soap and water to clean off dirt from your tent. Rinse it with clean water and wipe it as dry as possible.

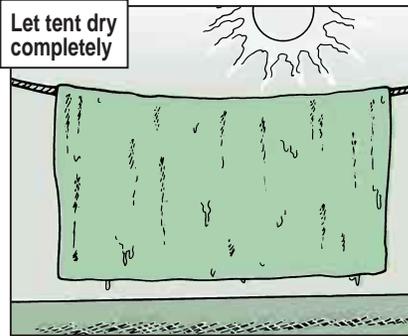
Clean with brush, soap and water



Hang up the tent or set it up to let it air dry thoroughly. Never leave wet

canvas on the ground to dry. Trapped moisture quickly leads to mildew.

Let tent dry completely



Unless it's an emergency, never fold a wet tent, even if it's only wet from dew. If you can't avoid storing a wet tent, clean and dry it as soon as you can.

Never drag a tent. That can tear or puncture the fabric. Get help and carry the tent.

If your tent is set up under a tree, check it for stuff like sap that can lead to mildew. Clean sap off with soap and water.

Patching Holes

Holes in cotton duck and polyester tents can be patched if they're no larger than 4³/₄ inches long. Not sure which tent you have? Cotton duck feels rough, polyester feels smooth.

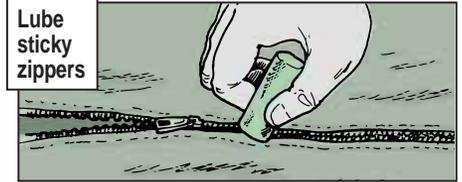
Clean and dry the area around the hole. Cut a patch from the cotton duck or polyester material in the repair kit, NSN 8340-00-262-5767.

Use adhesive, NSN 8040-00-264-3848, to glue the patch.

Zipper Help

If a tent's zipper sticks, put zipper lube, NSN 9150-00-999-7548, on each side of the zipper track and run the zipper up and down a few times until the zipper slides easily. If you don't have any lube, use bar soap or candle wax on the zipper.

Lube sticky zippers



Locking Pins

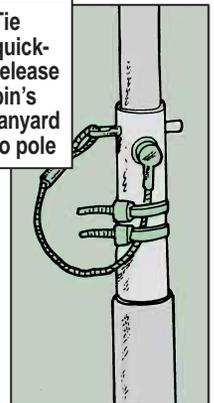
If you lose the locking pins for the GP small tent's poles, use these NSNs to order more:

Item	Size (inches)	NSN 8340-01-036-
Center pole	3/8 x 2	3782
Center pole	3/8 x 2 1/2	3783
Eave pole	1/4 x 1	3779
Eave pole	1/4 x 1 1/2	3780

Order the quick-release pin for the header and arches of the TEMPER tent with NSN 5315-01-260-6624.

To keep pins from disappearing, wrap electrical straps or twist ties over the pin's lanyard and around the pole.

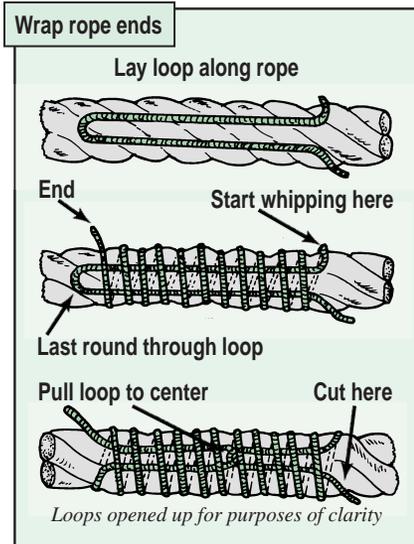
Tie quick-release pin's lanyard to pole



Rope Hope

If the ends of your tent's ropes are unravelling, fix them like this:

Natural fiber rope (hemp, cotton, manila)—Wrap the rope end with cord like this:



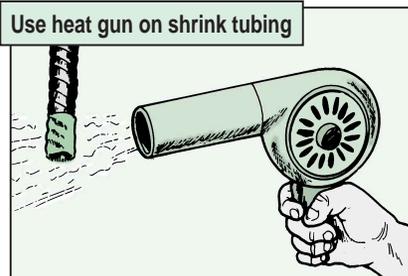
Or wrap the ends with reinforced nylon tape, NSN 7510-00-582-4772.

Synthetic rope—Melt the rope ends and mash the ends together.

For a more durable fix for either kind of rope, use shrink tubing. Tubing shrinks to half its size, so order a size from this list that slips easily over the rope end. The tubing comes by the foot.

Diameter (inches)	NSN 5970-
1/4	00-815-1295
3/8	00-954-1624
1/2	00-812-2967
3/4	00-914-3118
1	00-815-1300

To apply the tubing, cut off a 3/4-to 1-in piece. Slip the tubing over the rope, leaving a little bit over the rope's end. Shrink the tubing with a heat gun or a lighter until it's tight.



SMART/TIPS Program ...

THE BOTTOM LINE

You've come up with a better way to reduce the burden on the Army's logistics community. Maybe it's in maintenance, supply, transportation, or even tools—anything that involves a better or safer way.

How do you sell the Army on your idea? Think SMART.

The Supply and Maintenance Assessment Review Team (SMART), and the Tool Improvement Program Suggestions (TIPS) are looking for better ways of doing business—and there's a bottom line in it for you. If your idea is accepted, it could mean big bucks. Recently, a soldier at Fort Bragg received \$8,433.

Since the program started it has handled 14,000 ideas and recommended 2,100 for adoption. These ideas earned suggesters \$885,000.

Put your idea down on a DA Form 5533, or any piece of paper. Be sure to include your name, address and phone number. Mail it to:

Project SMART/TIPS
 Director of Combat Development for
 Combat Service Support
 3901 A Avenue, Suite 220
 Ft. Lee, VA 23801-1809

For more info on the SMART program, check out Chap 10 of DA Pam 738-750 in the Maintenance Management Update.

You can also call the SMART folks at DSN 687-0363/2406/2399, (804) 734-0363/2406/2399, or e-mail:

SMART@lee-dns1.army.mil



AMSS Reports Report



GOOD MORNING, AMERICA. I'M TED POPPEL AND THIS IS DAYLINE. TODAY WE'RE TAKING A CLOSER LOOK AT THE EIGHT ARMY MATERIEL STATUS SYSTEM (AMSS) REPORTS—WHAT THEY ARE, WHAT THEY DO, AND HOW THEY'RE GENERATED.

OUR FIRST GUEST IS IMA KNOWITALL. MS. KNOWITALL, GIVE US AN OVERVIEW ON AMSS REPORTS.



THANK YOU, FRED. I'D BE HAPPY TO. ULLS-G GENERATES EIGHT KEY AMSS REPORTS THAT UNITS SHOULD USE TO MONITOR READINESS. THEY PROVIDE NON-MISSION CAPABLE (NMC) INFORMATION FOR REPORTABLE EQUIPMENT, BOTH SYSTEMS AND SUBSYSTEMS.



"Anyone can run these reports any time during the report period. All the reports, except the PROJECTION REPORT, are cumulative from the start of the report period to the day you run the data. Reports can provide current readiness status or project the readiness status to the end of the report period.

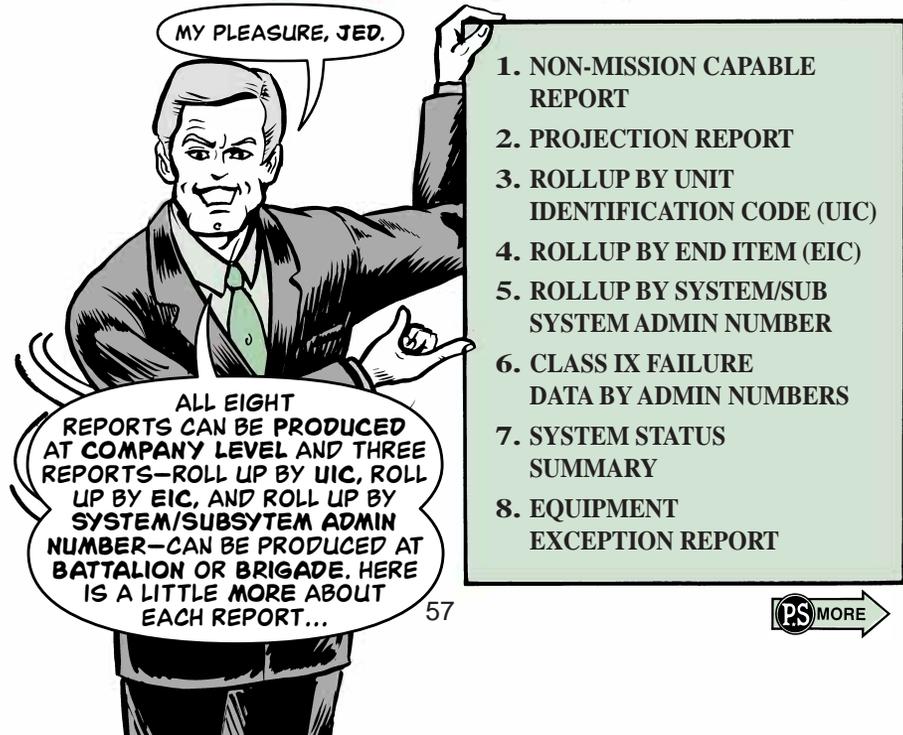
"The NMC time and percentages are recalculated each time a report option is run. This provides real-time information.

"Unit commanders should determine which reports to run and how often to run them and make that a part of the unit's SOP."



THANK YOU, MS. KNOWITALL. OUR SECOND GUEST IS WILLY GETTIT.

MR. GETTIT, GIVE US A BREAKDOWN OF THE EIGHT REPORTS.



MY PLEASURE, JED.

ALL EIGHT REPORTS CAN BE PRODUCED AT COMPANY LEVEL AND THREE REPORTS—ROLL UP BY UIC, ROLL UP BY EIC, AND ROLL UP BY SYSTEM/SUBSYSTEM ADMIN NUMBER—CAN BE PRODUCED AT BATTALION OR BRIGADE. HERE IS A LITTLE MORE ABOUT EACH REPORT...

1. NON-MISSION CAPABLE REPORT
2. PROJECTION REPORT
3. ROLLUP BY UNIT IDENTIFICATION CODE (UIC)
4. ROLLUP BY END ITEM (EIC)
5. ROLLUP BY SYSTEM/SUBSYSTEM ADMIN NUMBER
6. CLASS IX FAILURE DATA BY ADMIN NUMBERS
7. SYSTEM STATUS SUMMARY
8. EQUIPMENT EXCEPTION REPORT

1. NON-MISSION CAPABLE REPORT. Use this report to monitor deadlined equipment. The NMC report shows the overall percentage of Fully Mission Capable (FMC) and NMC time by Admin Number for any reportable equipment accumulating inop time in the current report period. Additionally, the overall percentage of NMC time is broken out by percentage of Non Mission Capable Supply (NMCS) and Non Mission Capable Maintenance (NMCM) for organizational and support level and Non Mission Capable Depot (NMCD) time.

2. PROJECTION REPORT. This report projects fully mission capable (FMC) and NMC rates for all reportable equipment in order to identify equipment that may not meet the DA goal for the period.

It gives the NMC days to DA goal by EIC/WPN EIC. These projections are based on the current NMC/FMC status of equipment and the concept that if nothing changes between now and the end of the report period, this is what the result will be.

3. ROLL UP BY UNIT IDENTIFICATION CODE (UIC). This report provides a single line of readiness information for each prime system and end item by end item code (EIC). Subsystem readiness information is combined and reported as part of the prime system.

This option consolidates by unit identification code (UIC) all reportable systems and their accumulated NMC time during the report period.

The report shows the unit and support NMCS and NMCM time and the percentages for FMC and NMC.

4. ROLL UP BY END ITEM CODE (EIC). This report provides a single line of readiness information for each reportable EIC or EIC/weapons code combination. Subsystem readiness information is reported separately and is not consolidated as part of the weapon system.

5. ROLL UP BY SYSTEM/SUBSYSTEM ADMIN NUMBER. This report provides a single line of readiness information for each reportable admin number. Possible, available, NMCS and NMCM for organizational and support level, and NMCD time are provided, as well as whether the item is currently FMC. Additionally, it gives the cumulative usage of the admin number and whether it is tracked in miles, kilometers, or hours.

6. THE CLASS IX FAILURE DATA BY ADMIN NUMBERS. This report lists by admin number all reportable systems and subsystems with accumulated NMC time and the parts on requisition causing the downtime.

7. THE SYSTEM STATUS SUMMARY. This report consolidates by EIC the total NMC time accumulated for reportable systems/end items. Percentages of FMC, NMCS, NMCM and NMCD time are provided.

8. THE EQUIPMENT EXCEPTION REPORT. This report displays all reportable systems that do not meet DA FMC goals. It includes the percentages for FMC time, organizational and support NMCS and NMCM time, and NMCD time. This report also includes the Class IX parts that are causing the NMC status.



TO WRAP IT UP, THE AMSS REPORTING PROCESS PROVIDES UNITS WITH READINESS DATA ON THEIR REPORTABLE SYSTEMS AND SUBSYSTEMS. IT GIVES THEM THE CURRENT READINESS STATUS AND THE PROJECTED STATUS.

THANK YOU, MR. GETTIT. OUR FINAL GUEST, WHO IS GOING TO TELL US HOW TO USE ULLS TO MAKE THESE REPORTS, IS C. P. EWE.



THANK YOU, ED. TO PRODUCE THESE REPORTS...



THEN CHOOSE THE REPORT YOU WANT.

...start at the ULLS main menu. Highlight and enter MATERIAL STATUS PROCESSES. This will let you choose READINESS (AMSS) OPTIONS. Choose the option DISPLAY/PRINT AMSS REPORT.

THANKS, MR. EWE.

AMSS REPORTS ARE EXCELLENT READINESS TOOLS. USE THEM.

NEXT WEEK ON DAYLINE, DO CARROTS REALLY GIVE YOU BETTER EYESIGHT? TUNE IN TO HEAR PETER COTTON'S TALE.

PS END



Tracking Repair Parts in Transit



So your CO grabs you and wants to know when a broken aircraft will be flying or when a busted tank will be rolling. You hem and haw because you don't have a clue when the repair parts will arrive.

Get a clue.

The transportation command (USTRANSCOM) has set up the Global Transportation Network (GTN) on the Internet.

GTN will let you track cargo as it moves through the transportation system.

Suppose that helicopter you need is waiting for an engine. Log on to GTN and type in the engine stock number. You'll see a list of all the engines with that stock number in the transportation system—where they are and where they are going.

By using your unit's Department of Defense Address Code (DODAAC), you can find items being shipped to your unit. Or by using a document number, you can track single repair parts.

Of course, the item has to be en route. If it hasn't been shipped, it's not in GTN.

To access GTN on the web, use this address:

<http://www.gtn.transcom.mil>

Before you do, though, contact USTRANSCOM for a password. Call them at DSN 576-8015. Or write them at:

USTRANSCOM/TCJ4-LPD
508 Scott Drive
Scott AFB, IL 62225-5357

Once you have a password, get an overview of what GTN can do for you by reading the USTRANSCOM business page at:

<https://ustcweb.safb.af.mil:801>



Soak Up Oil Spills

To help stop injuries caused by slipping on oil spills, get a compound to soak them up. NSN 7930-00-269-1272 gets a 50-lb bag of absorbent compound. It's authorized by Table 1 of CTA 50-970.

15-KW and 30-KW ASK Parts

Need numbers for the parts of the acoustic suppression kit on your 15-KW or 30-KW generator? CECOM has them. Here's where to write or call for a list:

Commander
US Army Communications-
Electronics Command
ATTN: AMSEL-LC-CCS-P-GN
Ft Monmouth, NJ 07703-5000

DSN 992-0822/0881
(732) 532-0822/0881

BMOC Enrollment Correction

Correct the Internet address in the Battalion Maintenance Officer Course (BMOC) on Page 60 of PS 553 to read:

<http://155.217.35.238/accp/aipd.htm>

You can use this address to enroll in any Army correspondence course. The BMOC Course number is 171 Q11. You can no longer enroll in the BMOC course using DA Form 145.

Protect Your Hands

Need protection for your hands when handling hot equipment? Get some heat protective gloves, NSN 8415-01-092-3910, or heat protective mittens, NSN 8415-01-092-0039. One size fits all. They're authorized by CTA 50-900.

M40/M42 Mask MWO

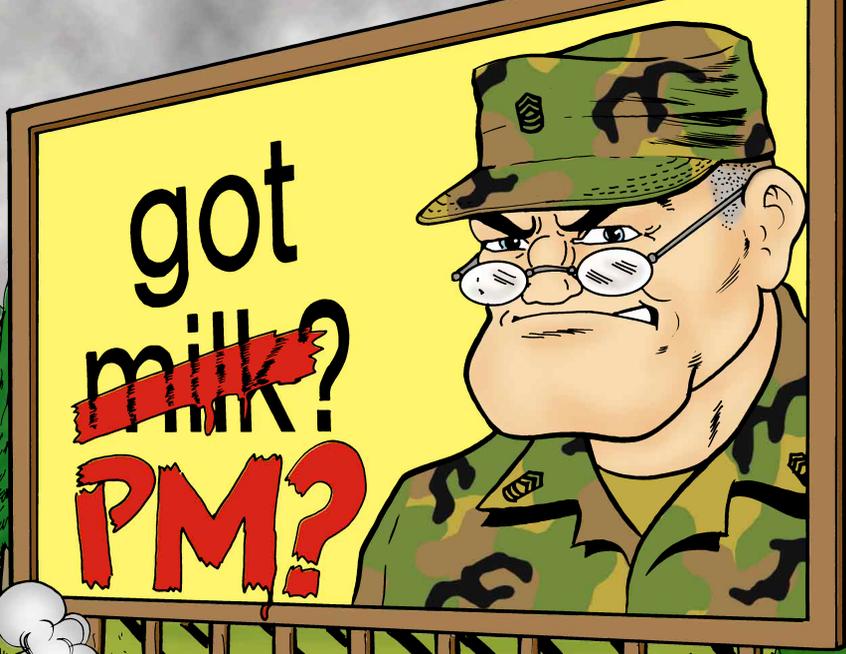
If you're having trouble keeping your M40/M42-series masks in top condition, help is on the way. MWO 3-4240-347-20-1 installs a retaining clamp on the facepiece to stop separation at the outlet valve housing. The MWO will be done on-site by your direct support with materials provided by Soldier Support Biological and Chemical Command (SBCCOM). The best time is during the annual fit verification. To find out when your post's masks will be modified, contact your local MWO coordinator or SBCCOM logistics assistance representative.

Ring Mount Cover

On Page 3 of PS 550 we told you to use NSN 2540-00-909-3745 to order a cover for the M66 ring mount. Don't do that. That cover is too small. Instead, use NSN 1005-00-707-0725.

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

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



Issue 555

PS

February 1999

THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-555

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Preventive Maintenance

The Private Truman Show
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