Issue 545

PS

April 1998

THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-545

Tools . . .

Not Just Any Tool Will Do

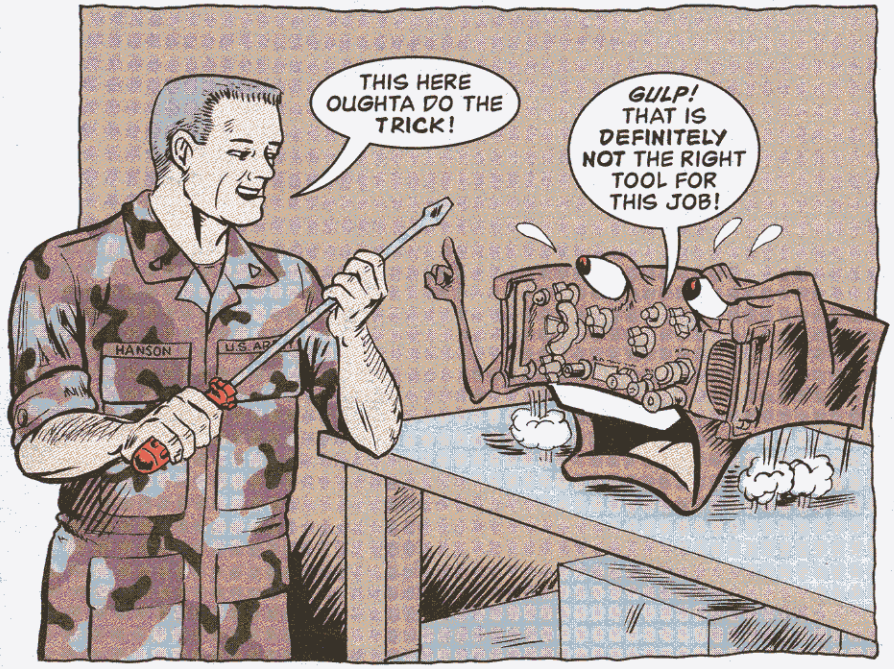
NCOs, it's your responsibility to make sure your mechanics use the right tool for each job.

Using the right tool gets the job done correctly. It also does it easier and safer. Using the wrong tool can damage equipment, damage the tool, injure somebody, or turn a simple repair into a major problem.

Teach each mechanic to be careful when selecting a tool. If the job calls for a particular tool, make sure that's the tool that's used, not a similar tool. For instance, if a 7/16-in wrench is needed, see that he uses it and not an adjustable wrench. If a crosstip screwdriver is called for, make sure he isn't trying to get by with a smaller flat-tip screwdriver. If a claw hammer can get the job done, don't let him swing away with a 4-lb sledge.

By the same token, never use a tool for a job it wasn't meant to do. Never use a screwdriver for a chisel, pry bar or punch. Never use a wrench as a hammer or pry bar.

Encourage good tool habits in your motor pool—especially among new mechanics. Teach them to use the right tool in the right way.



PS THE PREVENTIVE MAINTENANCE MONTHLY

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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:

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Or E-mail to:

psmag@logsa.army.mil

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DENNIS J. REIMER
General, United States Army Chief of Staff

Official:

JOEL B. HUDSON
Administrative Assistant to the Secretary of the Army
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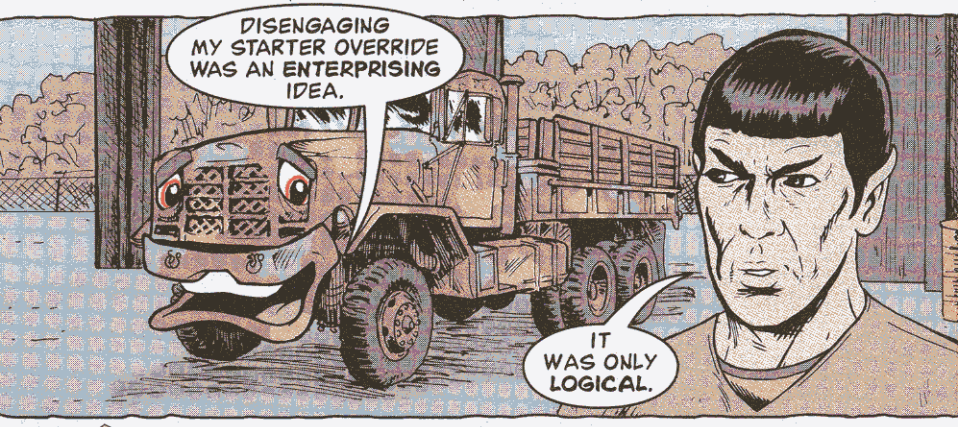
DISENGAGE STARTER OVERRIDE!

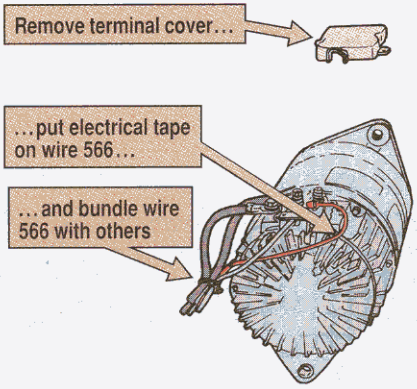


Sight out of Star Trek? No, it's what you mechanics need to do to the protective control box on M939-series 5-ton trucks.

Some fielded boxes have defective starter lockouts that allow the starter to re-engage while the engine is running.

To prevent damage to the starter and the engine flywheel, disengage the starter override using this procedure:

1. Disconnect the batteries (remove the negative connectors).
2. Remove the alternator terminal cover.
3. Disconnect wire 566 and bend it back from the terminal, then put electrical tape, NSN 5970-00-816-6056, on the wire end.
4. Remove the tie wrap on both the positive and negative cables, add the disconnected wire 566 to the bundle and then secure the bundle with a new tie wrap.
5. Replace the alternator terminal cover.
6. Re-connect the batteries.

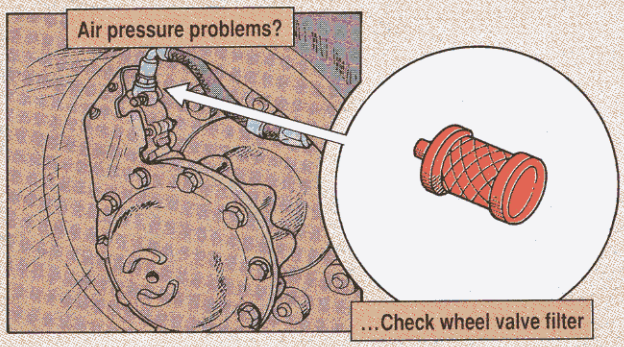


The protective control box will continue to perform all other functions except starter override.

Never Overlook Wheel Filter

Mechanics, if a tire on an M939A2-series truck deflates slower than usual or not at all using CTIS, or if the system can't maintain pressure at that tire, give the wheel valve filter a check.

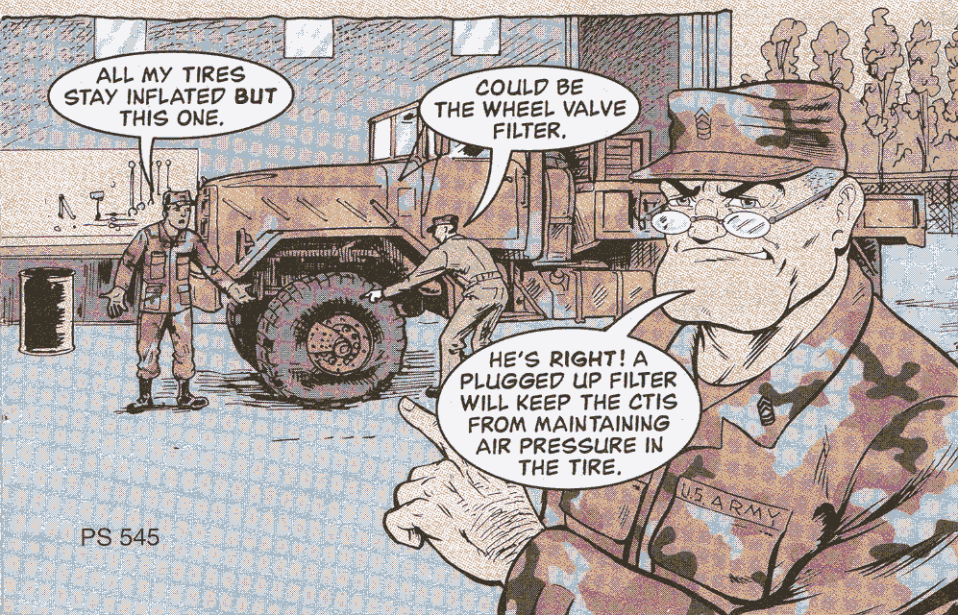
Each wheel valve has an air filter that can clog with water and debris. It's replaced once a year during annual service, but if it plugs up, the CTIS cannot maintain air pressure in the tire.



The "how to" is found in Para 4-11 of TM 9-2320-358-24&P.

Troubleshooting info for the wheel valve filter is found on Page 4-7 in the same TM under malfunction 6.

Understand, too, that if you find one wheel valve filter clogged, others on your truck need to be checked out. The air dryer may need to be serviced or you may have other air supply problems that are causing water or debris buildup.



M934/A1/A2 . . .

Cool Down Your Van

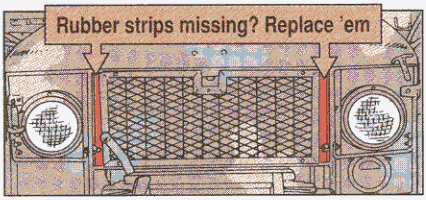
Getting hot under the collar waiting for support to air-condition your M934-series expansible van? Could be they need some good numbers.

The air-conditioning unit is NSN 4120-01-219-8759. The NSN shown as Item 1 in Fig 343 of TM 9-2320-272-34P-2 gets the wrong unit.

Support also needs installation kit, NSN 2540-01-325-1933, to put in the air-conditioner. That NSN is missing from the TM.

2 1/2-Ton Truck Bracket Strip

NSN 2930-00-752-1983 gets the rubber strip for the 2 1/2-ton truck's roadside headlight bracket. NSN 2930-00-752-1981 gets the rubber strip for the curbside bracket. The rubber strips are missing from Fig 133 of TM 9-2320-361-20P.



HEMTT Fuel Filter Element

No matter what you see in Fig 15 of TM 9-2320-279-20P, Item 3 as listed will not get you the correct secondary fuel filter element for your HEMTT.

Order NSN 2910-01-022-8183 instead. Its inside opening, where it spins onto the filter head, is 0.812 inch in diameter. The filter you'll get with the number out of the TM has an inside opening of one inch, which is too large for the filter head on the engine.

TPU Tiedown Kits

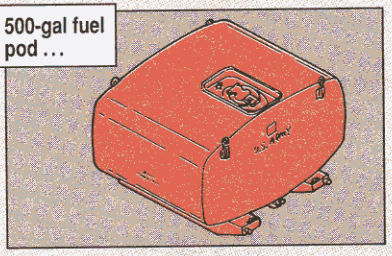
For M1083 and M1093 5-ton cargo trucks:

500-gal pod tiedown kit, NSN 3990-01-443-8916
TPU tiedown kit, NSN 3990-01-444-0356

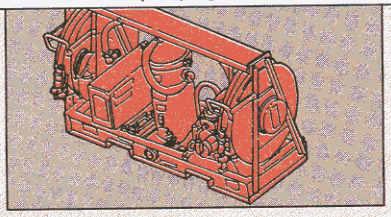
For M1085 long wheelbase 5-ton cargo trucks:

500-gal pod tiedown kit, NSN 3990-01-444-0355
TPU tiedown kit, NSN 3990-01-444-0357

500-gal fuel pod . . .



. . . and electric pumping unit need tiedowns



Troop Seats Are Glass

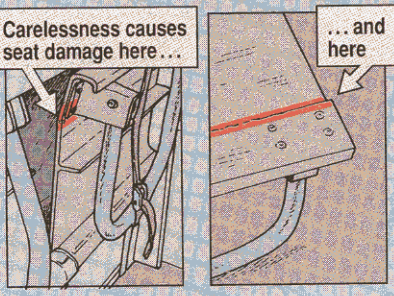
Rough treatment won't increase the lifespan of FMTV troop seats.

The seats are not steel, not aluminum, not even wood. They are fiberglass. Yes, they're light and relatively strong, but they're not going to stand up to slams, bams and whams.

Folding them away seems to provide the best chance for abuse. The one-piece leg just folds up and is strapped into place—really simple and neat.

Carelessness causes seat damage here . . .

. . . and here



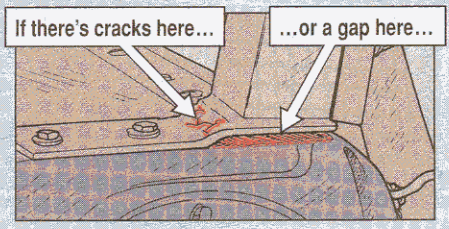
Except that corrosion can keep the one-piece leg from folding easily. And the extra force applied to the leg mounts just cracks and breaks the seat.

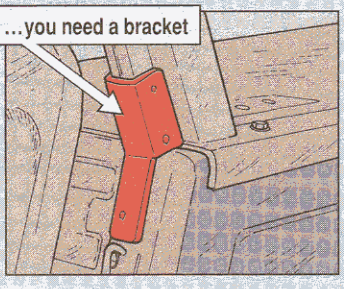
Protect your seat. Take a little time folding the leg. Fold at both mounts at the same time and oil the hinges every so often.

HMMWV . . .

"C" Pillar Need Reinforcement?

Mechanics, if the "C" pillar mount on any HMMWV shows signs of bending or cracking (metal fatigue), or if there's a gap between the pillar mount and the truck body, add a couple of reinforcement brackets.





Otherwise, the "C" pillar may break loose.

The details on securing the "C" pillar with brackets are found on Pages 10-177 and 10-178 of TM 9-2320-280-20-3.

You'll have to make the brackets from aluminum stock. Instructions are found in Appendix D, Fig D-89, of the -20-3. Installation hardware is listed in Appendix G.

Tires . . .

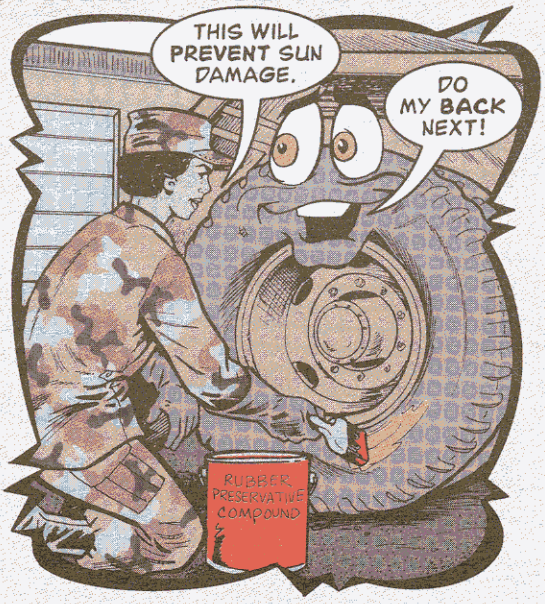
Save 'Face' with Preservative

Bright sunlight, ozone and desert heat work together to break down tires and other black rubber products.

What you see as a result of this breakdown are cracks, dry rot and chafing.

Protect rubber and prevent ozone cracking by using rubber preservative compound, NSN 8030-01-282-5626.

You can use the compound on natural or synthetic rubber in tires. It also works on track pads, road wheels, gaskets, hoses and anything else made of black rubber.



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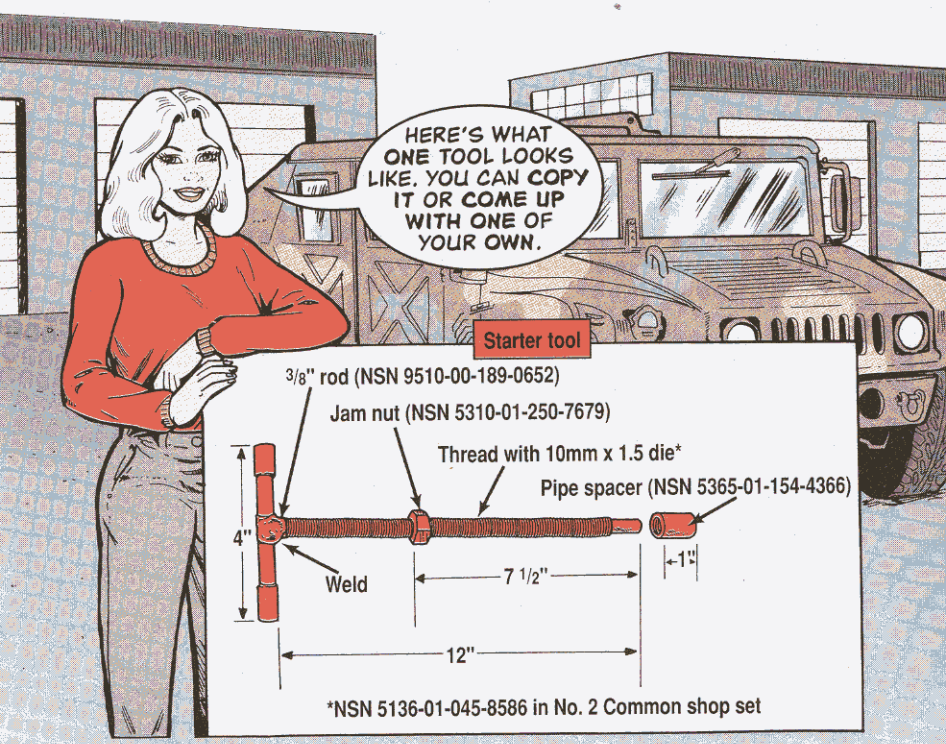
HOMEMADE STARTER TOOL

Anybody who's ever tried to install a starter on a HMMWV knows that the job is a real bear—unless he uses the right tool.

There are several variations of the "right" tool, but they all have things in common. Best of all, they save you time and sweat.



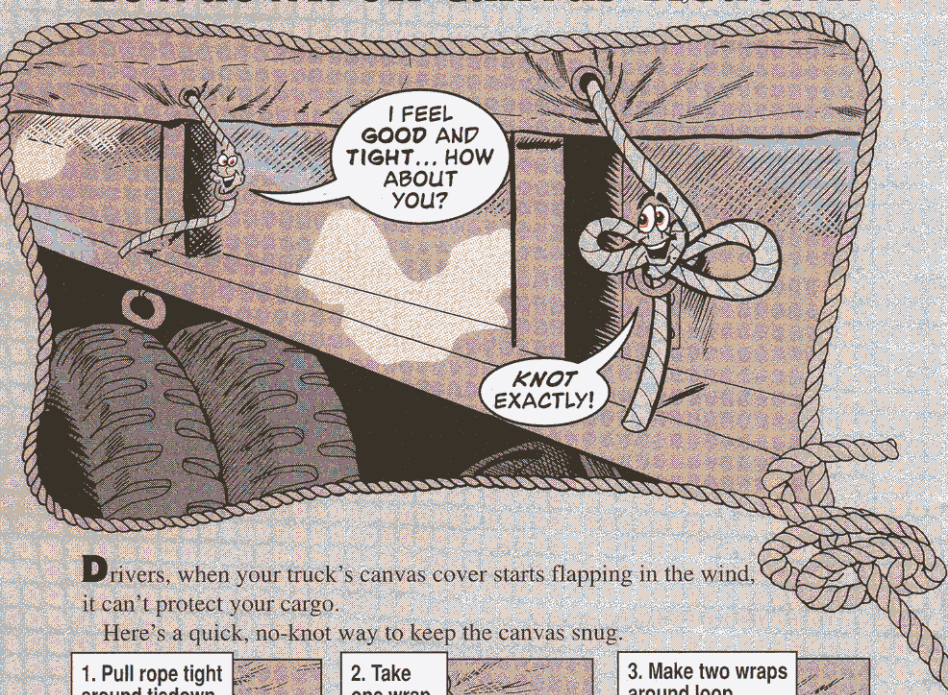
Here's how it works:

Run the tool through one of the starter's mounting bolt holes (some folks use a pipe spacer, too) and into the engine bell housing. Raise the starter by turning the jam nut. Raise it until you can seat the other mounting bolt.

That'll hold the starter in place while you remove the tool and install the second bolt. Then be sure to install the lock nut on the front starter stud where it mounts in the bracket.

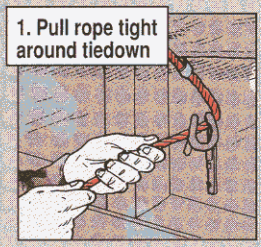
Canvas Covers . . .

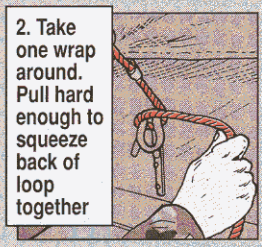
Lowdown on Canvas-Tiedown

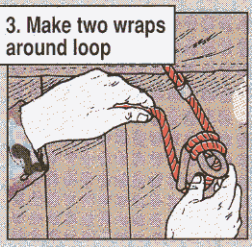


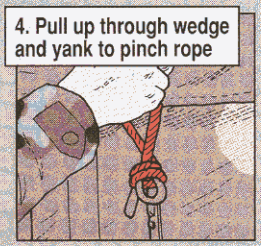
Drivers, when your truck's canvas cover starts flapping in the wind, it can't protect your cargo.

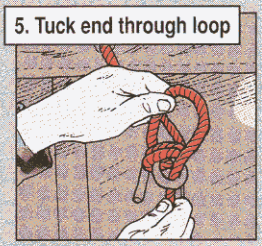
Here's a quick, no-knot way to keep the canvas snug.

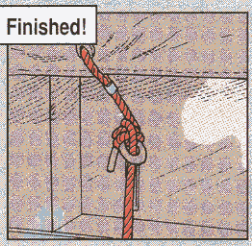










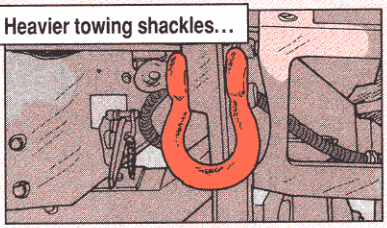


Lunette-type Trailers . . .

Having Fits over Shackles

When your tactical vehicles get heavier towing shackles to comply with new tiedown standards, your trailer safety chains will need larger hooks to fit over them.

Heavier towing shackles...

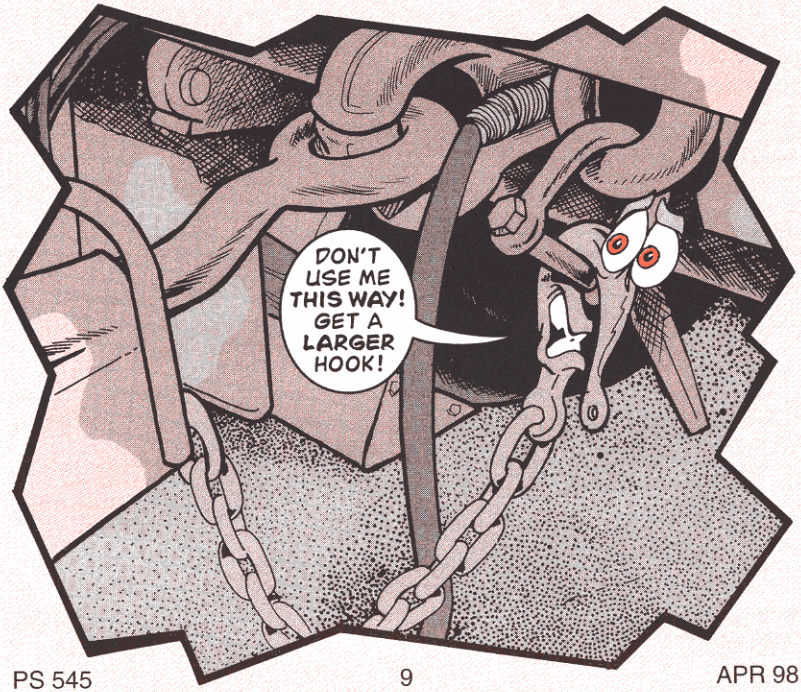


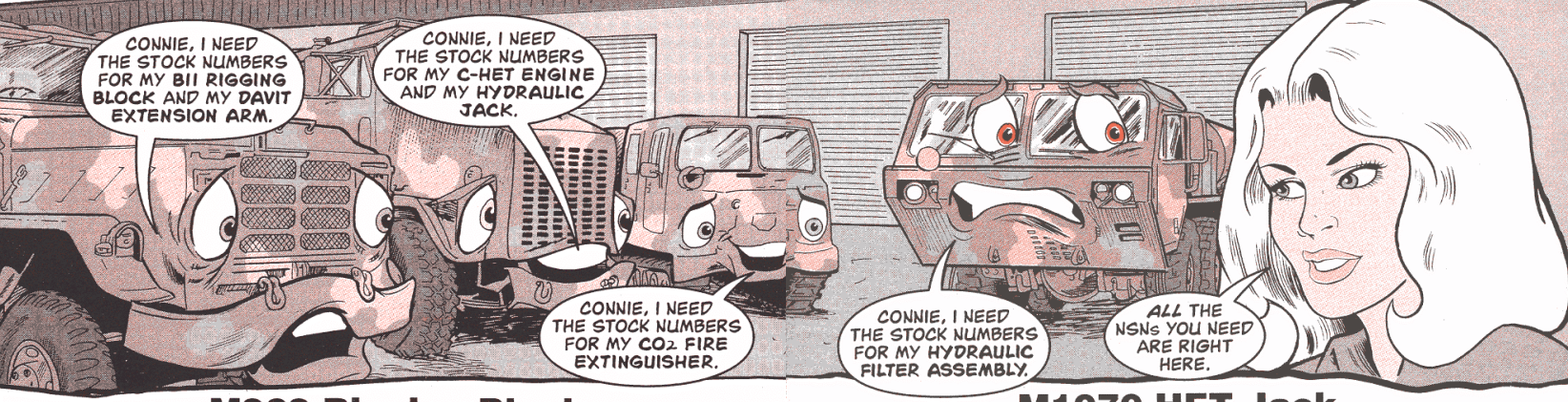
Forget the easy way out, like putting smaller shackles on the trucks so your old chain hooks will work. Replace the hooks instead.

Use NSN 4030-01-438-1803 to get a chain hook that will work on the larger shackles.

...need new slip hook

Cut the trailer chain's last link or remove its removable link. Discard the old hook. Install the new hook with its pin and cotter key.





M939 Rigging Block

NSN 3940-00-792-9881 gets the BII rigging block (25-ton capacity) for the M939-, A1-, and A2-series 5-tonners. The NSN shown for Item 2 on Page B-14 of TM 9-2320-272-10 is wrong.

M939A1 Davit Arm

Use NSN 2590-01-210-2168 to get the extension arm for your M939A1-series truck davit. The NSN shown for the A1-series, Item 8, Fig 188, TM 9-2320-272-20P, is wrong.

FMTV Trans Oil Change

Take note, FMTV owners: You now change transmission oil every 18,000 miles or two years, whichever comes first. Make a note in your lube order until it's changed.

M816 Chain Sling

Use NSN 3940-00-265-7125 to get the chain sling for the 5-ton wrecker. The NSN is missing from Item 42 on Page B-17 of TM 9-2320-260-10.

SUSV Fire Extinguisher

NSN 4210-01-388-7854 gets the hand-held CO2 fire extinguisher and bracket for the small unit support vehicle. They replace the halon extinguisher shown as Item 11 on Page B-4 of TM 9-2350-285-10. The new extinguisher alone is NSN 4210-01-391-0784.

M1070 HET Jack

NSN 5120-01-146-8096 gets the 12-ton hydraulic jack for the M1070 HET tractor truck. The NSN that's shown as Item 22 on Page B-8 of TM 9-2320-360-10 gets the wrong jack.

M1000 Air Brake Chamber

NSN 2530-01-387-8426 gets the air brake chamber for the M1000 HET semi-trailer. The NSN that's shown as Item 23 in Fig 22 of TM 9-2330-381-24P is no longer available.

M911 C-HET Engine

Engine blown on your M911? Save a wait by letting your DS know that NSN 2815-01-128-9544 gets the engine for the tractor truck. The NSN shown for Item 1 in Fig 1 of TM 9-2320-270-24P is wrong.

HEMTT Filter Assembly

NSN 4330-01-192-1726 gets the hydraulic filter assembly for the HEMTT's crane. The parts info for Item 7 in Fig 270 of TM 9-2320-279-20P is wrong. Make a note until the TM is updated.

50K RTCH TM Update

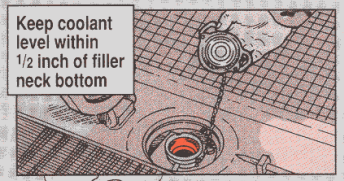
The NSNs for Items 1 and 5 on Page B-3 of the 50,000-lb rough terrain container handler's TM 10-3930-641-10 are missing. NSN 3990-01-107-5716 gets the 20-ft tophandler. NSN 2540-01-444-7987 gets the shipping link.

Take Out Some Engine Insurance

Overheating is the single largest cause of engine damage for M113 carriers. Follow these PM tips and you've got a great insurance policy against engine overheating:

Coolant Levels

If you operate with low coolant levels, the engine overheats and is ruined. Take a look at the coolant level daily before operation. Be sure coolant is within 1/2 inch of the bottom of the filler neck. Keep the level up at **all** times.



If you have to add more than two quarts of coolant at one time, have your mechanic give the system a complete inspection for leaks.

Engine Warmup

Your engine will last longer if you always warm it up before you move out. Oil drains out of bearings when the engine is at rest. You need to give the oil time to circulate before you move your carrier.

After you start the engine, check the ENGINE OIL HI TEMP LO PRESS warning light. Make sure it goes out within 10 seconds. Then, set the hand throttle between 1,200 and 1,500 rpm and let the engine run for approximately five minutes. That lets the coolant and engine oil warm up.

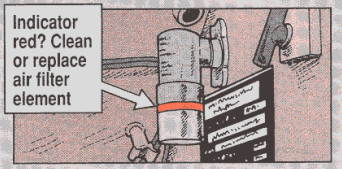
A normal idle of 650–700 rpm is too low. That lets carbon build up around the valves and in the cylinders. Low idling also contributes to diesel slobber.

Engine Shutdown

Before you shut off the engine, run it in neutral at 800 to 1,000 rpm until you get a normal idle temperature of 160–180°F on the TEMP gauge. Then, set the engine back to idle (650–700 rpm) for a few seconds. Finally, pull the fuel cut-off to shut down the engine.

Air Cleaner

Your engine will lose power and overheat if the air cleaner element is choked with dirt. If the air cleaner restriction indicator shows red in the window, clean or replace the element.



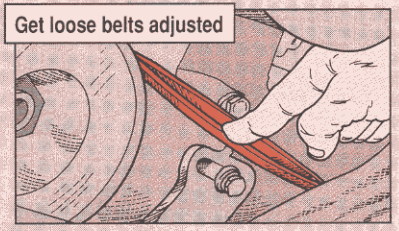
PS MORE

V-Belts

The V-belts for the fan drive and the coolant pump can contribute to engine overheating, too.

When the belts get too loose, the fan and the coolant pump won't operate fast enough to keep the engine from overheating.

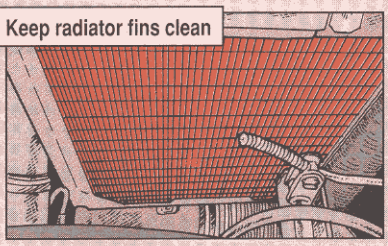
Check the coolant pump belt by pushing in on it halfway between the pulleys. If you can push it more than 1/2 to 5/8 inch, get your mechanic to adjust it.



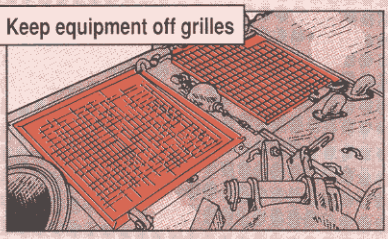
Check the fan drive belt at the idler. If the adjuster rod is not between the operating range marks, tell your mechanic.

Radiator Fins

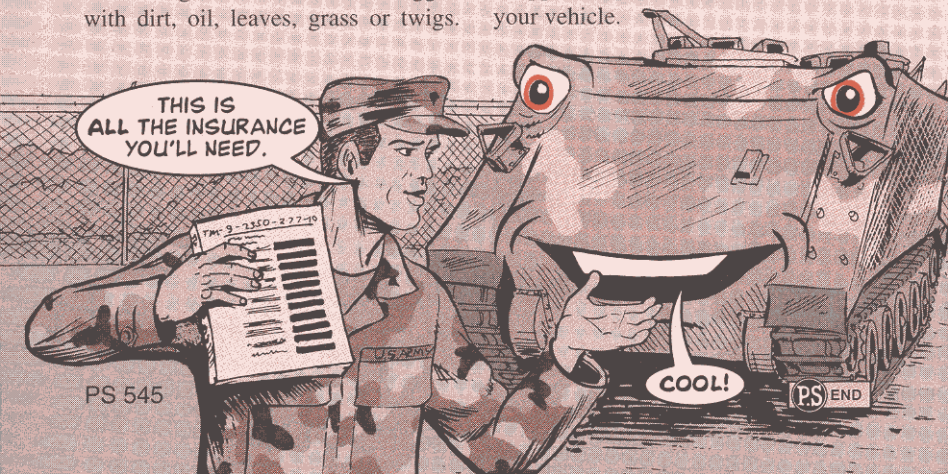
Your radiator can't do a good job of conducting heat if its fins are clogged with dirt, oil, leaves, grass or twigs. Anything that restricts airflow through the radiator keeps the coolant hot and overheats the engine.



Keep your equipment—packs, water cans, tents, camouflage screening, poles, etc—off the air intake and the air exhaust grilles. Make sure both are clean and free of dirt, twigs, leaves and other debris.

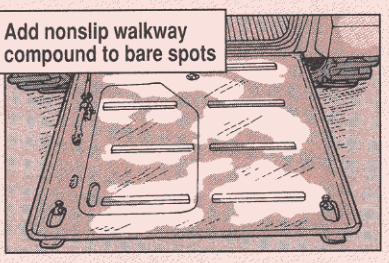


If you use protective covers over the grilles, make sure they're rolled up and strapped in place before you operate your vehicle.



Slippery When Wet

The ramp on your M113-series carrier is made to load and off-load troops quickly and safely. It does its job well—as long as the ramp's nonslip coating is in good shape.



Footing gets a little tricky if the surface is worn. In wet weather, it's downright dangerous.

If the ramp surface on your carrier is down to bare metal, fix it like this:

1. Wash the surface thoroughly with soap and hot water. Use a nylon scrub brush to remove dirt, grease and loose paint. Rinse with hot water to further cut grease and oil.

2. Let the ramp dry completely.

3. Use a paint brush—such as NSN 8020-00-245-4516—to apply nonslip walkway compound to all the bare patches. NSN 8010-00-141-7838 gets a gallon of the olive drab compound.

4. Allow the compound to dry for 24 hours before stepping on it.

M548A3 Cargo Carriers . . .

Have A Seat!

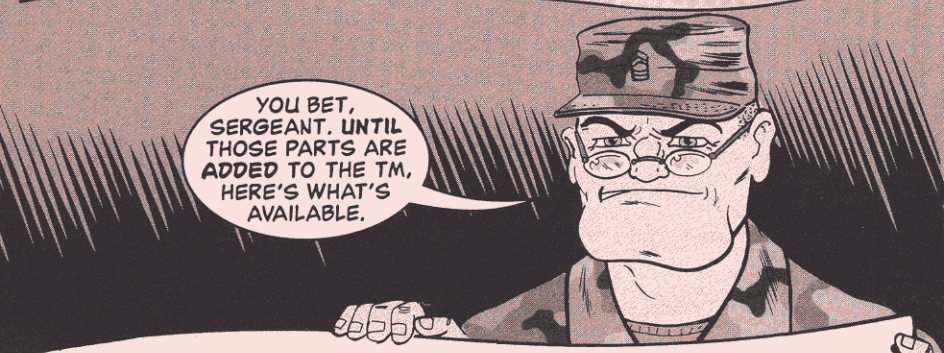
Dear Half-Mast,

My unit just received several M548A3 cargo carriers that were converted from old M730A2 guided missile carriers.

The converted carriers are identical to other M548A3s in every way except one—the passenger seat cushions and attachment hardware.

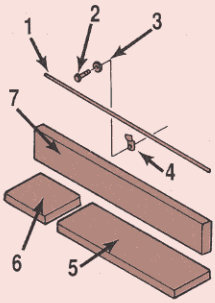
TM 9-2350-247-24P doesn't list the NSNs for these parts. Can you help?

SSG J.D.M.



Item	SMR	CAGE	NSN	Description
1	KFOZZ	19207	2540-00-264-8819	Retaining cover rod
2	PAOZZ	96906	5305-00-068-0515	Screw
3	PAOZZ	96906	5310-00-809-4058	Flat washer
4	KFOZZ	19207	2540-00-304-4304	Seat support
5	PAOZZ	19207	2540-00-089-9889	Seat cushion
6	PAOZZ	19207	2540-00-904-5680	Seat cushion
7	KFOZZ	19207	2540-00-888-0832	Seat parts kit*

**This kit includes a back cushion, retaining cover rod and seat support.*



M1A1/A2 Tank . . .

A Crushing Problem

Dear Editor,

After unloading ammo from the M1A1/A2 tank's M240 machine gun, tankers sometimes forget to close the gun's lid.

The next time the main gun is depressed, the lid gets crushed against the top of the turret. It costs almost $250 to replace the lid.

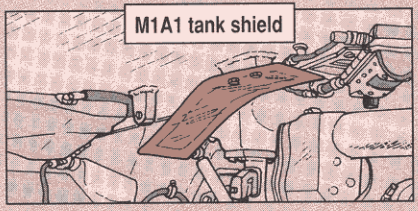
Here's how we prevent damage:

1. Cut out a thin piece of metal (we used tin) approximately 5x18 inches to make a shield.

2. Wrap the edges of the shield in duct tape to protect yourself from cuts.

3. Use the two existing bolts to bolt the shield to the turret ceiling.

4. Bend a curve in the forward portion of the shield. You'll have to experiment a bit to get the curve just right.

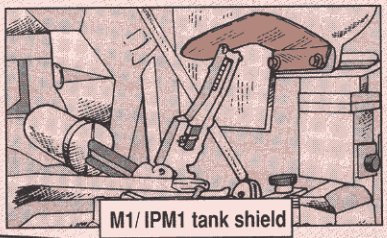


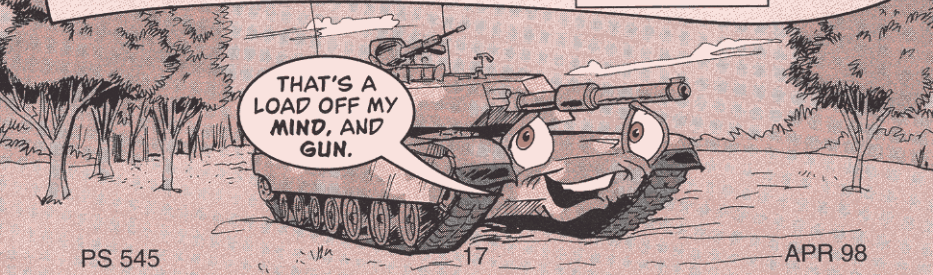
The next time the M240's lid is left open, it hits the shield and is guided harmlessly shut.

SGT Jason Vaninwegen
1/68th AR
Ft Carson, CO

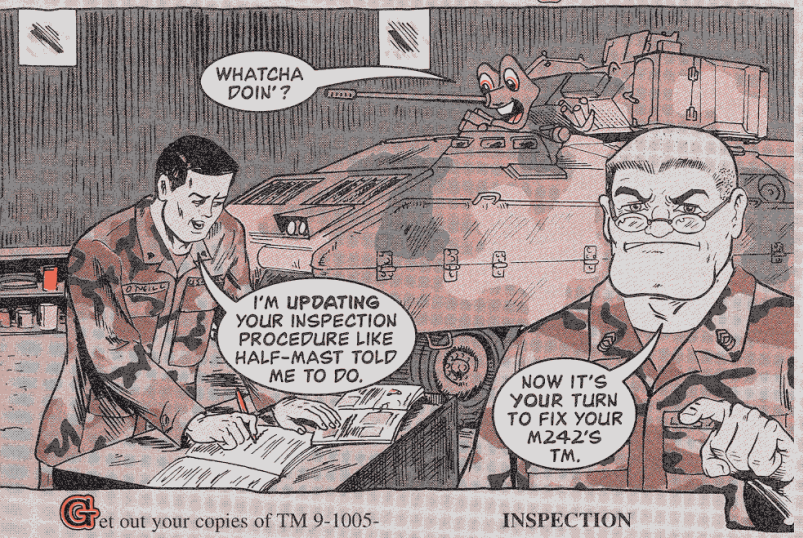
FROM THE DESK OF THE *Editor*

I guess we can shut the lid on that problem! A similar shield can be made for the M1/IPM1 tank. Using the same materials, shape and attach the shield like so:





M242 Inspection Revisited



Get out your copies of TM 9-1005-200-20&P, Bradley repairmen. The inspection of the M242 gun's breech assembly has changed. Make a note until the TM's next change hits the field.

On Page 2-5, change ITEM 3 to read: *Inspect breech assembly at 15,000 rounds fired, then inspect it every 1,000 rounds or semiannually, whichever comes first.*

The breech is not mission capable if you find any cracks any time.

On Page 2-183, change the inspection of the breech assembly to read:

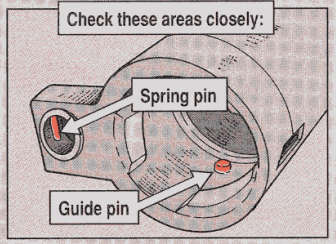
CLEANING

Use a rag dampened in dry cleaning solvent to wipe grease from the breech assembly.

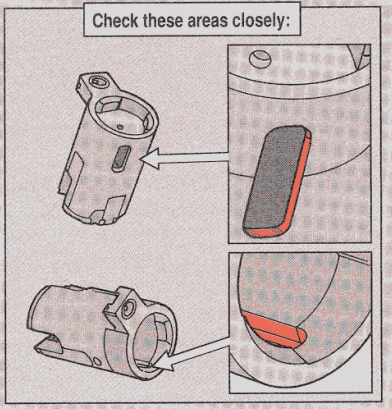
INSPECTION

1. *Check to see if the spring pin is loose, missing, or damaged. Replace it if necessary.*

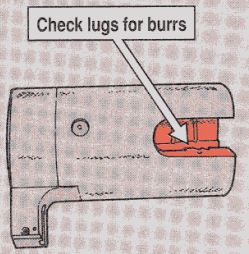
2. *Check that the guide pin is in place. The guide pin can be loose, but make sure it's still in place when the breech is installed in the receiver.*



3. *Use a magnifying glass to inspect the breech for cracks and breaks, particularly around these areas. Replace the breech if any cracks are found or 25,000 rounds have been fired.*



4. *Inspect the lugs for burrs. Use sandpaper to smooth out burrs and rough edges.*



5. *Enter the inspection date and round count on DA Form 2408-4 (Weapons Record Data Form).*

6. *Stamp the breech with an X for every 5,000 rounds fired. See Page 2-183 in Change 2 to TM 9-1005-200-20&P.*

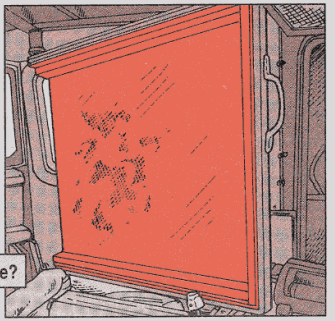
SUSV . . .

Insulation Blanket Can Go

SUSV mechanics, eyeball the insulation blanket mounted on the inside of the engine's access cover.

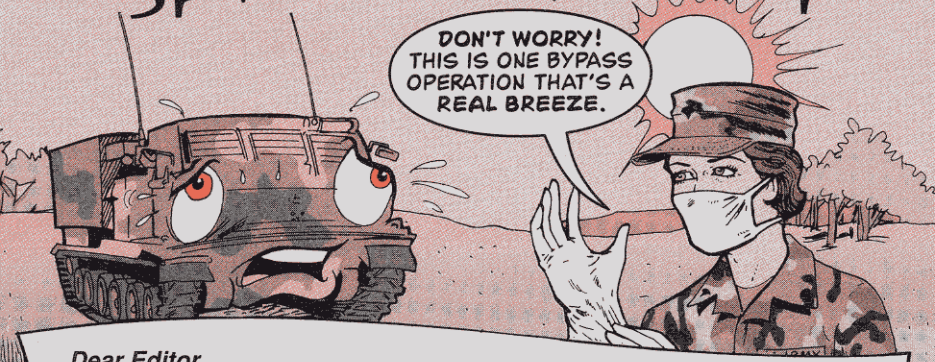
If the blanket is saturated or stained with diesel fuel, or coming loose from the access cover—get rid of it! It's a fire hazard.

Don't replace it with a new one, either. It doesn't reduce the noise level inside the SUSV, according to TACOM.



MLRS . . .

Bypass the Fuel Pump

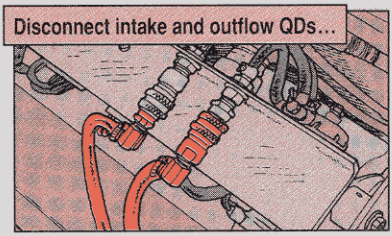


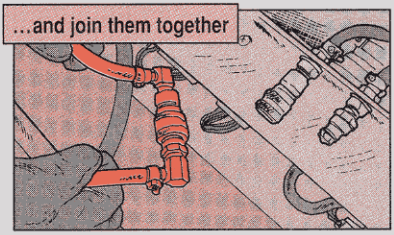
Dear Editor,

Even though the personnel heater in your MLRS isn't used during summer months, fuel continues to circulate through the heater's fuel pump.

This constant, year-round pressure wears out the pump seals. Before you know it, the pump starts leaking and you have to replace it.

We prevent this extra wear by disconnecting the intake and outflow quick-disconnects and connecting them to each other.





Fuel continues to flow, but it bypasses the pump. So, pump seals last a lot longer.

Just remember to reconnect the QDs when it's time to use the personnel heater again.

SSG Christopher Lenning
2/4th FA
Ft Sill, OK

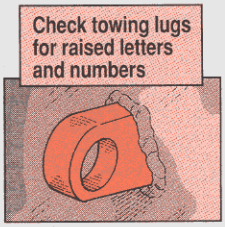
FROM THE DESK OF THE *Editor*

You've pumped out a great idea!

M992-Series Ammo Carrier, M109-Series SP Howitzer . . .

NO-GO TOW

A broken towing lug, NSN 2540-00-031-7707, is the last thing you expect when towing your M992 ammo carrier or M109 howitzer. But that's what'll happen if your vehicle has the wrong lugs attached.

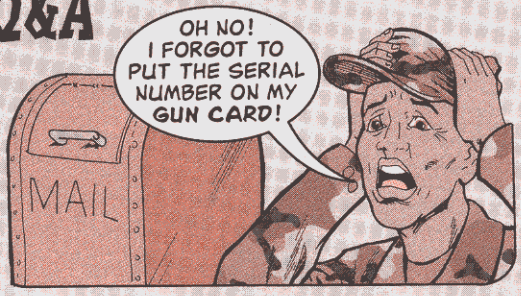


The wrong lugs are made of **cast** aluminum and will break under the stress of towing. They were accidentally mixed in with the **machined** aluminum lugs already in the supply system.

Right now, check the towing lugs on your vehicle. Cast aluminum lugs will have raised letters and numbers.

If you find any cast aluminum lugs, tell your support. They can replace them.

Gun Card Q&A



Q: What's the difference between a DA Form 2408-4 gun card that's filled out wrong and one that's not filled out at all?

A: Not much!

Watervliet Arsenal has been getting a lot of 2408-4 gun cards with missing or wrong information. Since the cards are used to keep track of the number and type of rounds fired from mortars and cannons, support has no choice but to play it safe and figure a much higher round count.

That usually means a perfectly good—and expensive—gun tube gets condemned early.

The most common mistakes are wrong or missing serial numbers in Block 1; the wrong firing data in Block 10c through 10h; and forgetting to carry over data from the old card before mailing it to Watervliet Arsenal.

Don't guess about what goes in each block. If you don't know, check out Para 5-3 of DA Pam 738-750. Or call Watervliet Arsenal at DSN 974-5127 or (518) 266-5127. Their fax number is DSN 974-5261.

WEAPON RECORD DATA

For use of this form, see DA PAMs 738-750 and 738-751; the proponent is DSCLOG.

1 TUBE SERIAL NO: XXXX
2 CANNON TYPE, MODEL OR SERIES: 120mm M256
3 ORGANIZATION (UIC): A Co. USA #1
4 SPECIAL LIFE DATA: BORESCOPE EVERY 18 DAYS OR EVERY 150 RDS OVER 300 RDS. CONDEMN TUBE AT 1500 EFC RDS. BREECH RING LIFE 4500 RDS.
5 END ITEM IDENTIFICATION: TANK, COMBAT M1A1 LXXXXXU
6 RDS/EFC COMPUTATION: FSDS-T EFC 1.0; HEAT-T 1.0
7 CANNON SERIAL NO: XXXX
8 RETUBINGS: 0
9 REBUSHINGS: 350

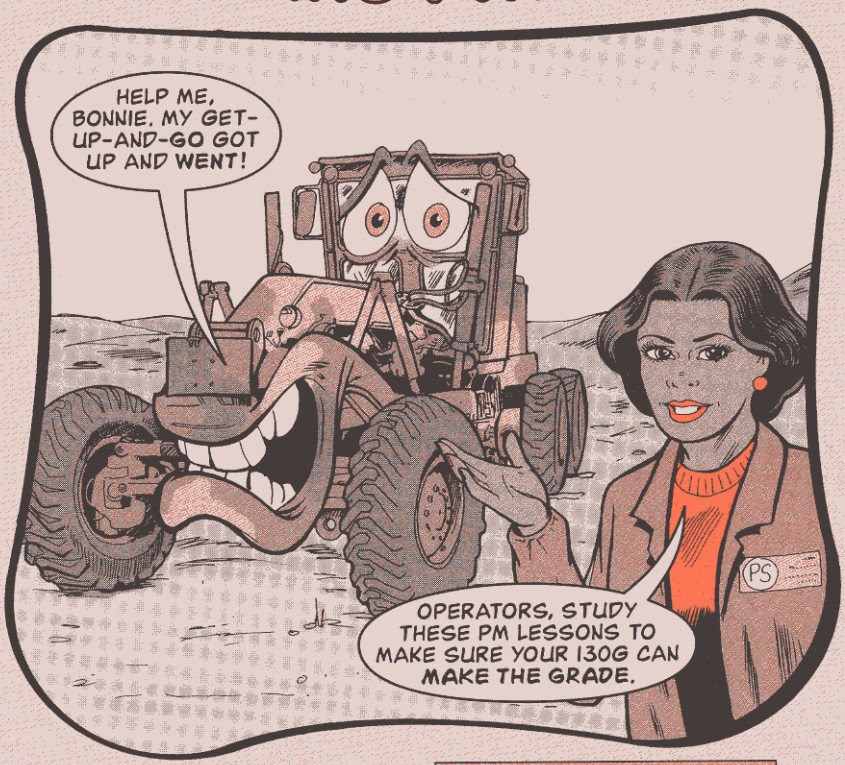
10 Date	Projectile Type	Zone or Charge	Rounds Fired	EFC RDS Fired	Cumulative RDS Fired	Cumulative EFC RDS	Remaining Life (EFC RDS)	Remarks: Recoil Exercise (REX), Gage or Velocity Reading, Safety Inspection (SI)	Signature
									XXXX
10 APR 97	(Previous RDS from DCSLOG final entries)				350		1150	BORESCOPED 16 DEC 94	XXXX
18 APR 97								BORESCOPED 18 APR 95	XXXX
									XXXX
11 MAY 97	HEAT		25		375		1125		XXXX
11 MAY 97	SABOT		50		425		1075		XXXX
10 OCT 97								10 OCT 97 REPORT NEW FORM INITIATED	XXXX

Fill out 2408-4 completely

CONTINUE ON REVERSE

DA FORM 1 JAN 79 2408-4 EDITION OF 1 DEC 77 WILL BE USED

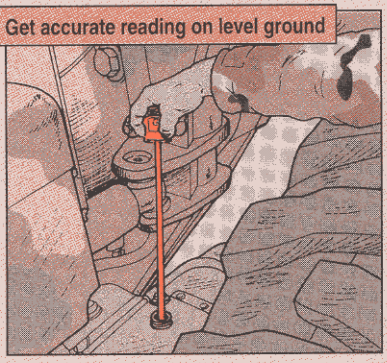
Make the PM Grade



Tandem Oil Level

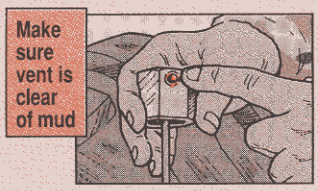
Make sure the grader is on level ground before you do the tandem drive's oil check shown on Page 2-27 of TM 5-3805-261-10. That way you get an accurate reading. Keep the level between the ADD and FULL marks on the dipstick.

Too much oil in the tandem is just plain wasteful. Not enough oil means the drive wheel components inside the tandem don't get lubricated.



Dipstick Vent Hole

Once you've checked the oil level in the tandem, make sure the vent hole in the dipstick cap is clear. When it's clean, the cap acts as a breather valve for the tandem. Use a paper clip to clean any crud out of the vent hole.

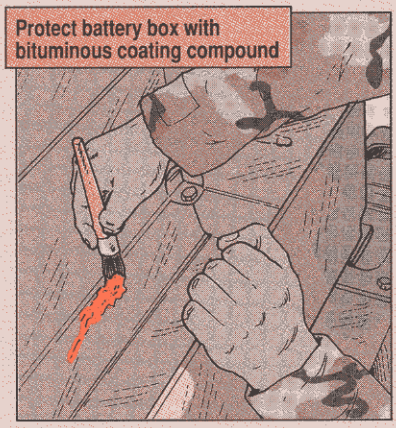


Battery Box Cleanup

Always keep the batteries clean. They collect sand and dirt which turns to mud in wet weather. Mud holds moisture that can close the circuit between the positive and negative terminals and discharge your batteries.

Any time the batteries are removed, eyeball the condition of the battery box. Any water that's in the bottom of the box causes the box to rust and deteriorate.

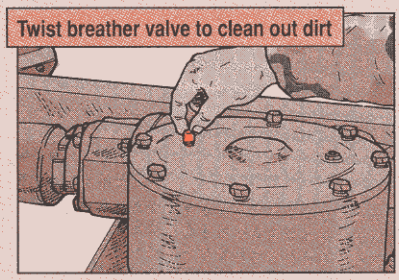
Use a wire brush to scrape off rust and old paint. After cleaning, protect the bare metal inside the box with bituminous coating compound, NSN 8030- 00-290-5141.



Circle Drive Breather Valve

The breather valve on the grader's circle drive gear case gets caked with mud during operations. A clogged valve causes pressure to build up in the gear case. Eventually, something has to give—usually the gear case's seal. And when the seal goes, the lube is bound to follow. End result: component failure, namely the circle drive.

Use a clean rag to clean the breather valve. Then twist the valve's cap to loosen any dirt stuck up inside. Tap the cap to knock dirt out. (Inside the cap is a spring, so the cap should bounce when you tap it). If the cap won't turn or bounce, get a new breather valve.



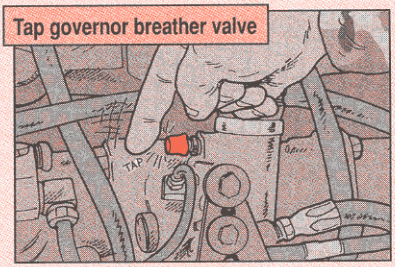
Governor Breather Valve

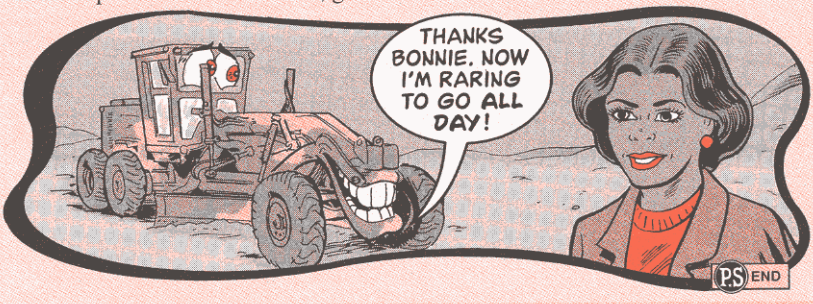
Another breather valve you have to keep an eye on is the one that mounts into the engine's air governor.

Engine vibration causes the cap to vibrate loose and wear out. Some caps vibrate completely out of the governor. When that happens, dirt gets into the air governor—causing it to stick open. That causes air pressure to build

up and blow out the seals in the air relief valves on the brake system's air tanks. Then, your grader can't build up air pressure for the air brake system.

During your PMCS checks with the engine access door (roadside) open, eyeball the breather valve. Grab it to make sure it's not loose. Then tap it a few times to make sure it bounces back. If the cap won't turn or bounce, get a new breather valve.





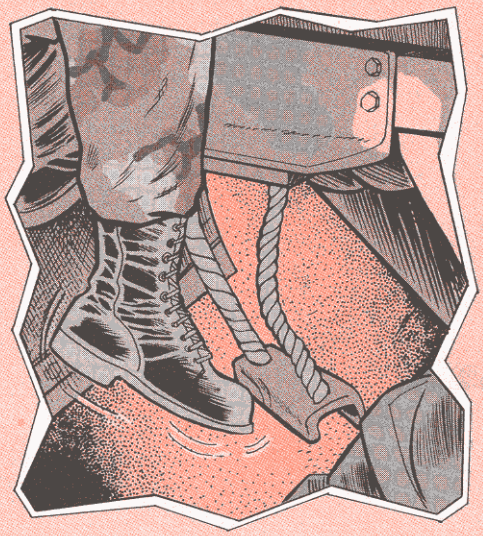
130G Grader . . .

Cab Step Fix

Pick out any grader in any motor pool and you'll probably find a cab step that's in bad shape. The step gets banged up when the blade is raised and turned to the travel position.

Unit mechanics can replace the old step with a rubber step assembly that bends forward and backward without getting banged up or ripped off.

Eyeball Para 3-19 of TB 43-0001-39-8 (Mar 96) for a parts list and info on how to install the new step assembly. If you don't have a copy of the TB, see your TACOM LAR or write to MSG Half-Mast.



Roadwheel Replacement Tool

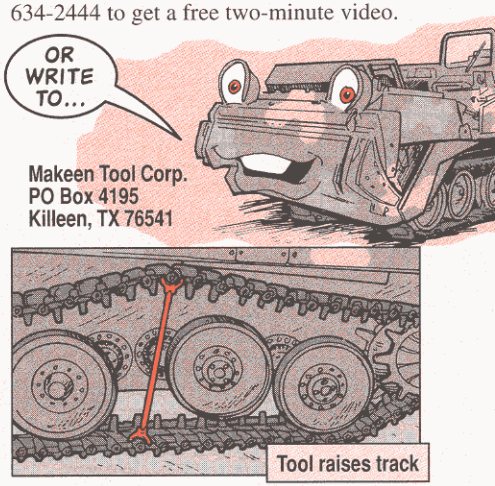
Every M9 ACE mechanic knows that replacing a roadwheel is a time-consuming and dirty job—whether it's knee-deep in mud or using a chain hoist to raise the track.

Well, TACOM has OK'd a "track jack" that cuts the mess and the time in half. The tool fits between the vehicle's track pins and connectors.

With the tool in place, move the vehicle slightly to raise the track. Once the track is raised, there's enough clearance to easily remove a broken roadwheel.

The new tool costs about $600. Order it with NSN 2590-01-443-9888. Write the size "49.5-in" in the Remarks block.

Want to see how it works? Call (817) 634-2444 to get a free two-minute video.

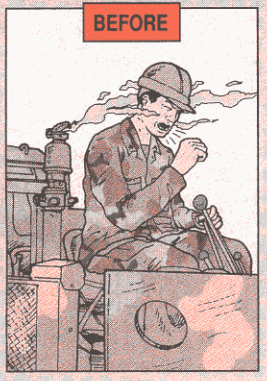


SEE . . .

Exhaust Stack Solution

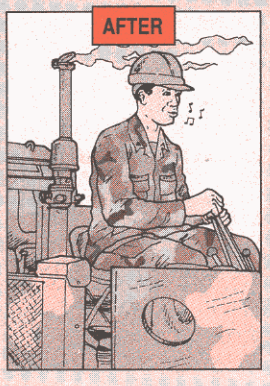
When you're operating with the SEE's backhoe, you want to keep the vehicle's exhaust out of your face.

Since you can't control which way the wind blows, get your mechanic to raise the exhaust pipe.

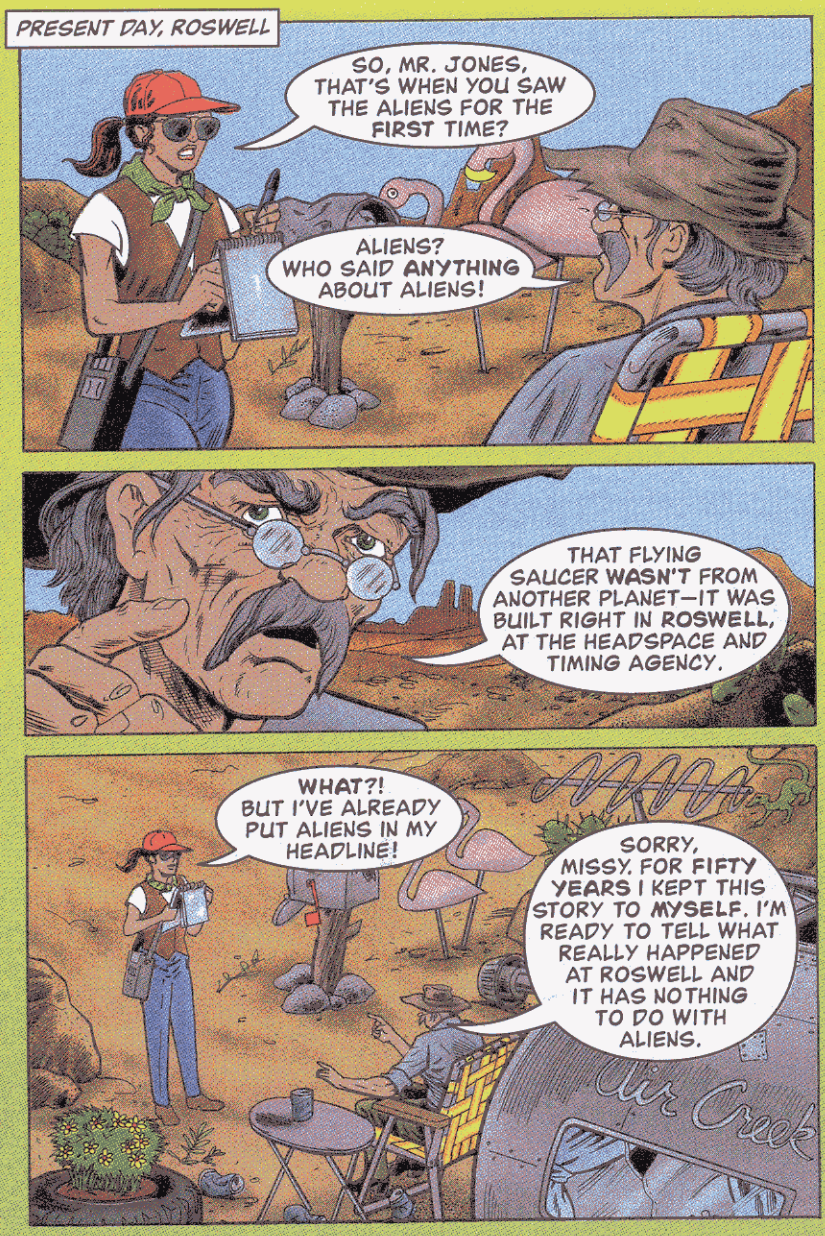


He'll remove the spark arrestor's rain cap and add an 18-in exhaust extension to the pipe. The extension is CAGE 18265 and PN J024731. Exhaust clamp, NSN 5340-01-244-4707, holds the extension in place.

Then, make sure the rain cap is put back in place.



What Really Happened at Roswell

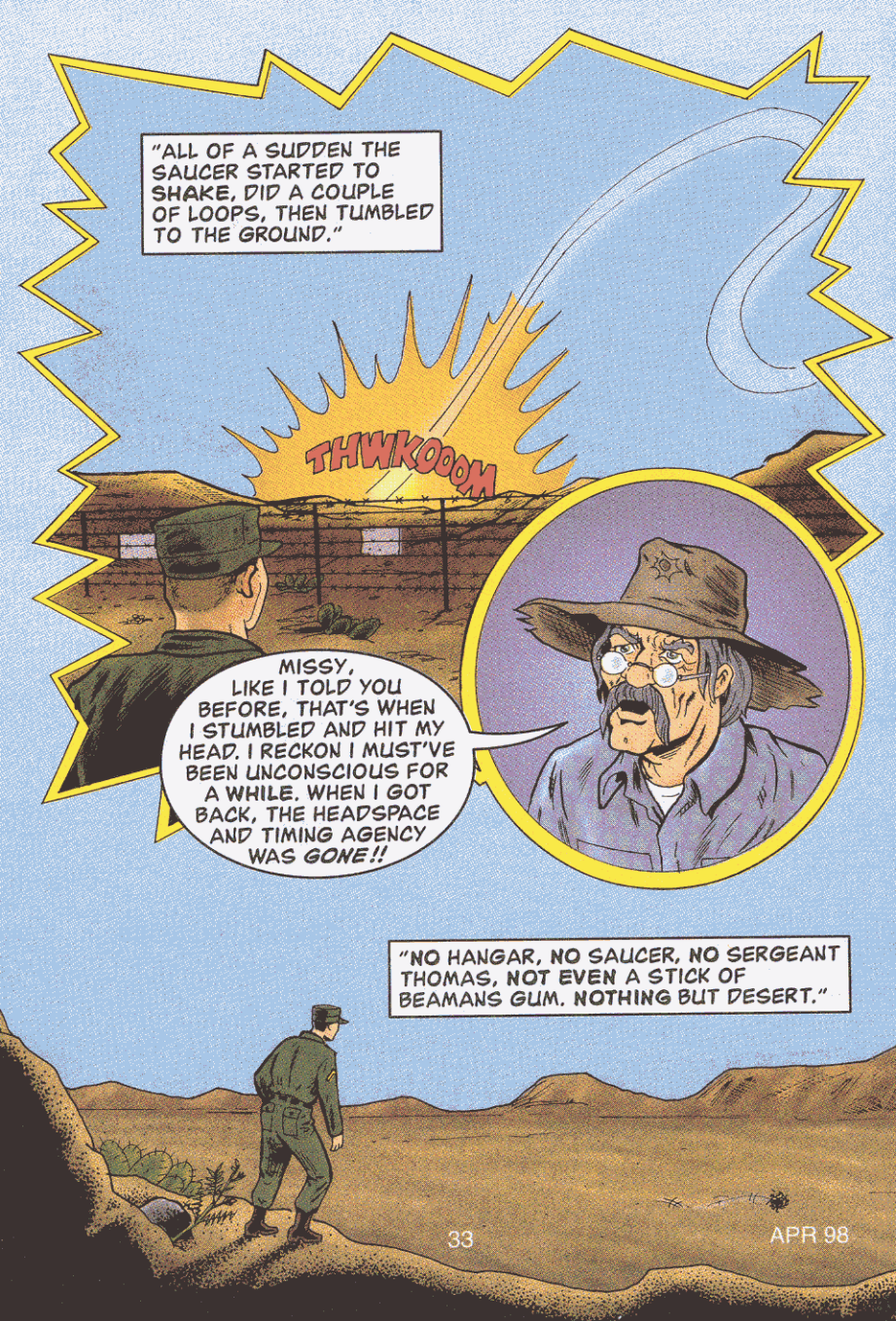

PRESENT DAY, ROSWELL
SO, MR. JONES, THAT'S WHEN YOU SAW THE ALIENS FOR THE FIRST TIME?
ALIENS? WHO SAID ANYTHING ABOUT ALIENS!
THAT FLYING SAUCER WASN'T FROM ANOTHER PLANET—IT WAS BUILT RIGHT IN ROSWELL, AT THE HEADSPACE AND TIMING AGENCY.
WHAT?! BUT I'VE ALREADY PUT ALIENS IN MY HEADLINE!
SORRY, MISSY. FOR FIFTY YEARS I KEPT THIS STORY TO MYSELF. I'M READY TO TELL WHAT REALLY HAPPENED AT ROSWELL AND IT HAS NOTHING TO DO WITH ALIENS.

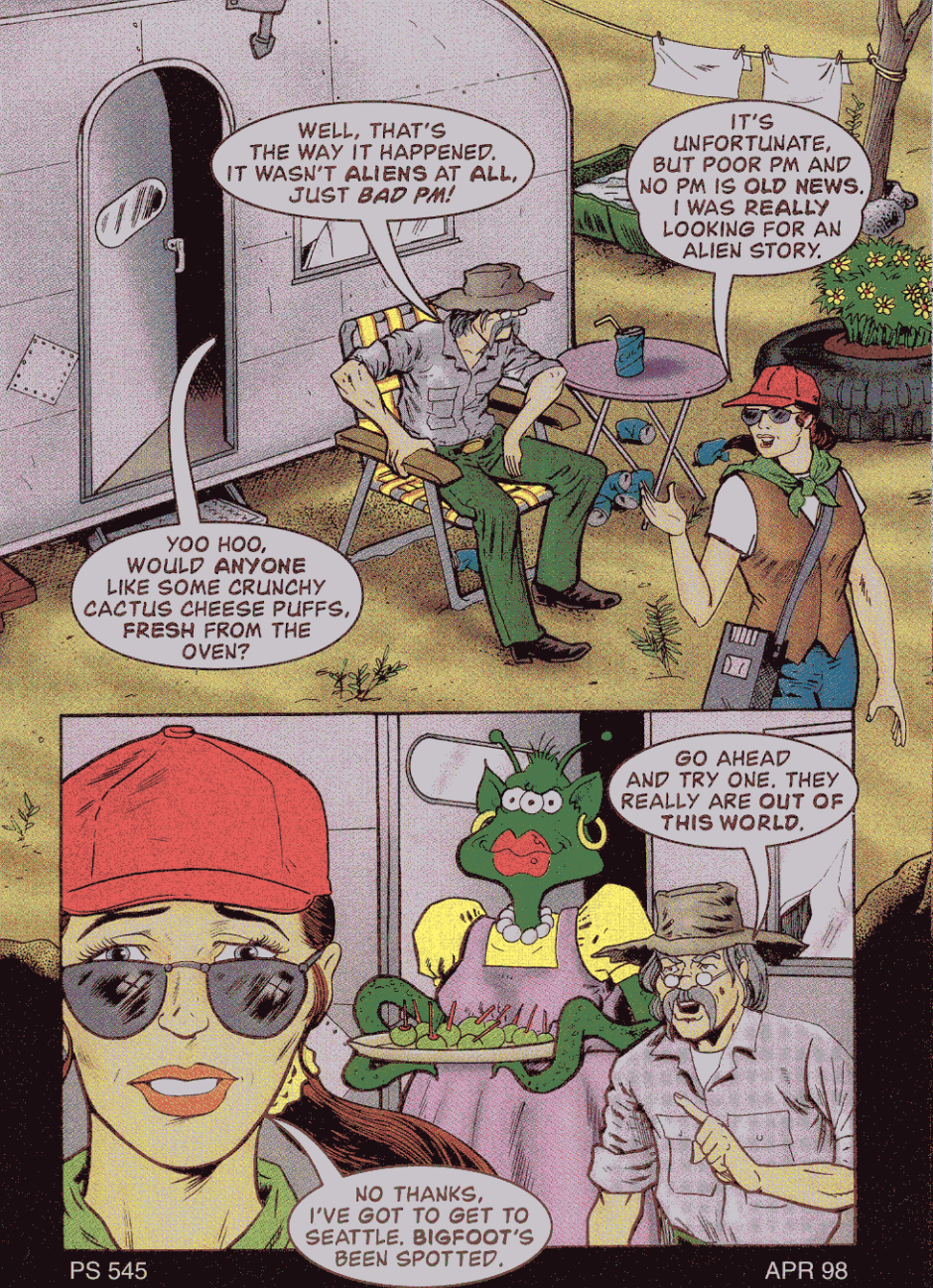

"...IT ALL STARTED WHEN I WAS A YOUNG SOLDIER REPORTING IN TO MY FIRST DUTY STATION."
HTA
KEEP OUT!
WELCOME ABOARD, KID. I'M SERGEANT THOMAS, I'LL BE YOUR MAINTENANCE SERGEANT.
THANKS SERGEANT.
WHAT DO WE DO HERE AT HTA?
SOME REAL HUSH-HUSH STUFF!
HANGAR 18?
SINCE YOU'LL BE DOING MAINTENANCE, I'LL HAVE TO TELL YOU ABOUT HANGAR 18.


WOW! A FLYING SAUCER! JUST LIKE BUCK ROGERS!
NOT EXACTLY. THIS IS A HIGH-ALTITUDE SURVEILLANCE HOVERCRAFT.
I AGREE. POWDER DOES MAKE THE BEST HOT COCOA.
BUT SERGEANT, I'M JUST A MECHANIC. I DON'T KNOW ANYTHING ABOUT FLYING SAUCERS.
DON'T WORRY, THAT'S WHAT THE EGGHEADS ARE FOR. WE JUST CHANGE THE OIL AND WASH THE WINDOWS.


HOW MANY OF THE EGGHEADS WERE ALIENS?
THERE WERE NO ALIENS! ALL I FOUND WAS A TOTAL DISREGARD OF PREVENTIVE MAINTENANCE. NOW LET ME FINISH MY STORY!
HEY! YOU CAN'T MIX OILS! WHAT TYPE DOES THE TM SAY TO USE?
TM? THERE IS NO TM.
WE JUST SORT OF WING IT, YA KNOW?
SORRY, PAL. I CAN'T FIND THAT TOOL. IT MUST BE OUT THERE SOMEWHERE.
WHAP
NEVER MIND. I'LL USE A BIG HAMMER.
ARE THESE GUYS FROM ANOTHER PLANET?
AREN'T YOU GOING TO INVENTORY AND CHECK-IN YOUR TOOLS?
NAH, I'LL JUST LEAVE 'EM SO THEY'LL BE RIGHT HERE WHEN I COME BACK.


"THEN ONE DAY SERGEANT THOMAS CALLED A MEETING."
WE JUST GOT WORD A COUPLE OF HIGH-RANKING MUCKETY-MUCKS FROM WASHINGTON ARE PAYING A VISIT TO CHECK ON OUR PROGRESS.
THE PROJECT HEADS WANT TO TEST FLY THIS BABY TONIGHT. THAT MEANS WE'VE GOT TO CLOSE IT UP—PRONTO!
BUT SERGEANT, WHAT ABOUT PM?
WE'VE STILL GOT FLUID LEVELS TO CHECK, FILTERS TO CLEAN, LINES TO RETIGHTEN...
THERE'S NO TIME FOR THAT!
WE'VE GOT TO GET THIS CRATE IN THE AIR UNDERSTAND, PRIVATE?!
S-SURE, SERGEANT.
"AFTER WORKING LIKE MAD ALL DAY, IT WAS READY...SORT OF."
HEY, GUYS, HERE'S THE GYROSCOPE ADJUSTER WE WERE LOOKING FOR!
"THAT SOUNDED LIKE TROUBLE TO ME."


"ALL OF A SUDDEN THE SAUCER STARTED TO SHAKE, DID A COUPLE OF LOOPS, THEN TUMBLED TO THE GROUND."
THWKOOOM
MISSY, LIKE I TOLD YOU BEFORE, THAT'S WHEN I STUMBLED AND HIT MY HEAD. I RECKON I MUST'VE BEEN UNCONSCIOUS FOR A WHILE. WHEN I GOT BACK, THE HEADSPACE AND TIMING AGENCY WAS *GONE!!*
"NO HANGAR, NO SAUCER, NO SERGEANT THOMAS, NOT EVEN A STICK OF BEAMANS GUM. NOTHING BUT DESERT."


WELL, THAT'S THE WAY IT HAPPENED. IT WASN'T ALIENS AT ALL, JUST BAD PM!
IT'S UNFORTUNATE, BUT POOR PM AND NO PM IS OLD NEWS. I WAS REALLY LOOKING FOR AN ALIEN STORY.
YOO HOO, WOULD ANYONE LIKE SOME CRUNCHY CACTUS CHEESE PUFFS, FRESH FROM THE OVEN?
GO AHEAD AND TRY ONE. THEY REALLY ARE OUT OF THIS WORLD.
NO THANKS, I'VE GOT TO GET TO SEATTLE. BIGFOOT'S BEEN SPOTTED.

MK 19 Machine Gun . . .

Subs for LSAT

Dear Half-Mast,

We have found it impossible in Korea to get LSAT for lubing our MK 19s. We've pretty much given up firing them as a result. Is there anything we can use in place of LSAT?

SGT A.D.

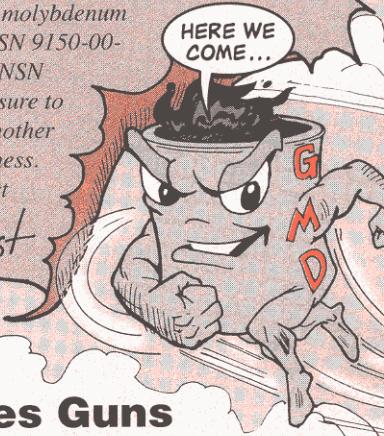
Dear Sergeant A.D.,

You are not the only one having trouble getting LSAT. Suppliers have fallen far behind in filling LSAT orders, so it won't be available for some time.

TM 9-1010-230-10 authorizes GMD (grease, molybdenum disulfate), NSN 9150-00-935-4018, and LSA, NSN 9150-00-889-3522, and, for extreme cold weather, LAW, NSN 9150-00-292-9689, as substitutes for LSAT. Be sure to clean off all of one lubricant before applying another lube. Mixing lubricants weakens their effectiveness.

Never use CLP on the MK 19. *It can't protect the MK 19 because it's too runny.*

Half-Mast



Small Arms . . .

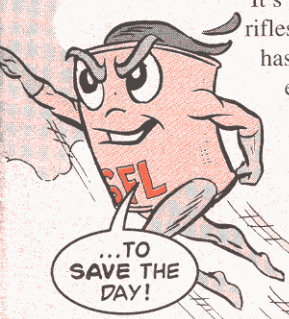
SFL Saves Guns

There's a can of stuff in the arms room that will save your weapons from the ravages of corrosion, armorers.

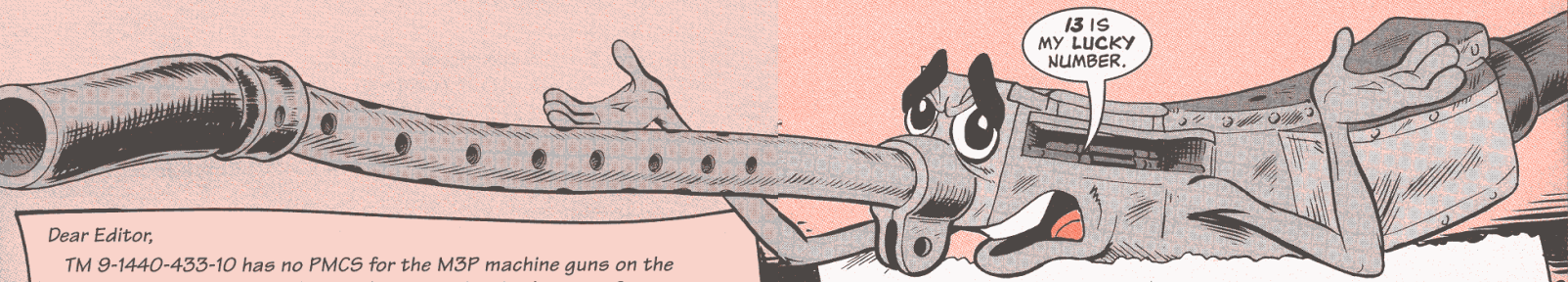
It's solid film lubricant (SFL) and it puts the finish back on rifles, machine guns, and pistols. Without that finish, the weapon has no protection against corrosion. If corrosion gets a strong enough grip, a weapon is finished—it can't be repaired.

Quarterly, check out all weapons in the arms room for shiny spots where the finish has worn off. If there is no corrosion or damage, clean the spot and touch it up with SFL, NSN 9150-01-260-2534.

Check the weapon's -20 TM for how much of the receiver and barrel can be touched up with SFL.



PMCS FOR M3P MACHINE GUN



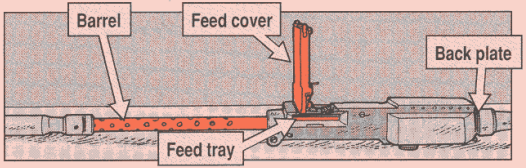
Dear Editor,

TM 9-1440-433-10 has no PMCS for the M3P machine guns on the Avenger, which leaves crews lost on how to maintain the guns. So we came up with our own 13-step PMCS to be done BEFORE and AFTER operations, and also MONTHLY.

1. Initial inspection: Inspect gun, cradle, feedchute, and ammo can for serviceability and missing or broken parts.

2. Back plate assembly: Inspect for corrosion, cracks, missing or broken parts.

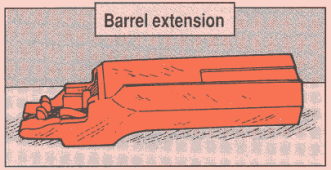
3. Receiver/feed tray: Inspect for cracks, missing or broken parts, and damage. Ensure parts move freely.



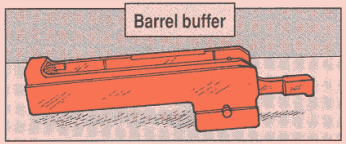
4. Feed cover assembly: Inspect for cracks and missing or broken parts. Ensure parts move freely.

5. Barrel: Inspect for corrosion and carbon buildup. Clean bore with RBC and bore brush.

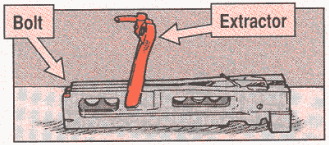
6. Barrel extension: Inspect for corrosion, cracks, damage, and missing or broken parts. Test barrel locking spring for tension and wear.



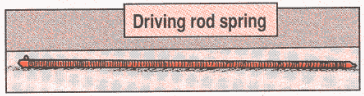
7. Barrel buffer: Inspect for corrosion, cracks, and broken or missing parts.



8. Bolt: Inspect bolt for cracks, corrosion, broken or missing parts, and damage. Ensure firing pin is not damaged and bolt face is clean.



9. Driving rod spring: Ensure spring is not broken and is well lubed with TW25B.



10. Extractor assembly: Inspect for cracks, corrosion, and missing or broken parts.

11. Bolt stud: Ensure bolt stud is not cracked or heavily worn.

12. Lube gun: Before firing, apply a generous coat of TW25B to surfaces and moving parts, except for the bolt face.

Before storage, apply a light coat of TW25B to all surfaces, except the bolt face.

13. Perform functions check.

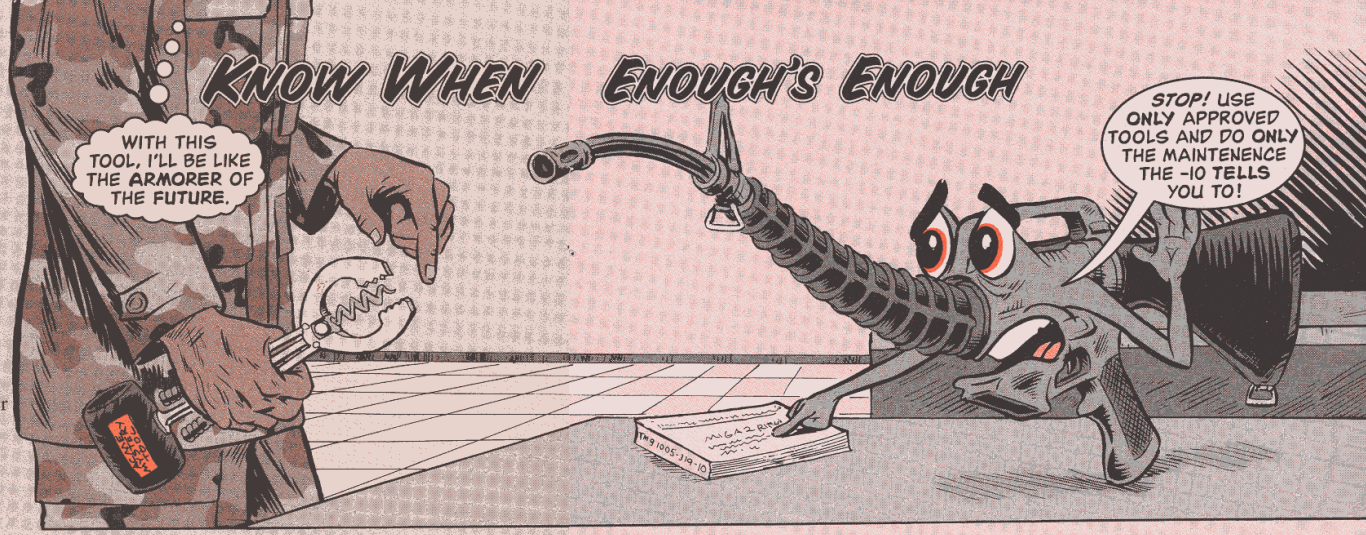
If you spot any problems, report them to your repairman.

SGT Julius Rawlings
SPC Anthony Harding
2/44th ADA
Ft Campbell, KY

FROM THE DESK OF THE *Editor*

A future change to TM 9-1440-433-10 will include PMCS for the M3P machine gun. Until then, Avenger crews will be doing their guns a favor by faithfully doing this PMCS.

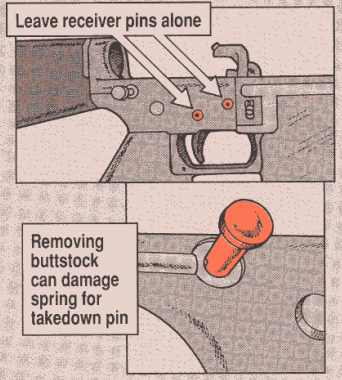
KNOW WHEN ENOUGH'S ENOUGH



When you step over that line between what **you're** supposed to do and what your **armorer or support** is supposed to do for your M16 rifle, you've stopped helping and started hurting it.

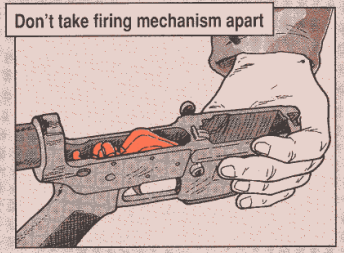
Without the proper training and tools, you can easily destroy your rifle when you do too much. For example:

⃠ **Disassembling the lower receiver and the firing mechanism for better cleaning.** Pushing out the receiver pins with the wrong tool enlarges the holes. The pins won't stay in. The receiver's ruined.



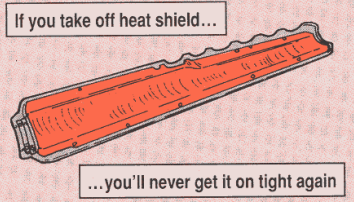
If the firing mechanism is assembled wrong, your rifle fires automatic when it's not supposed to.

That could kill somebody.



⃠ **Removing the buttstock to clean the lower receiver better.** It doesn't take much to damage the spring for the takedown pin. If the spring and detent are not put back right, the takedown pin can't lock in. Your rifle comes apart during firing.

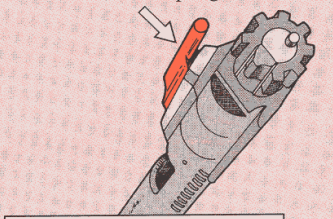
⃠ **Taking off the heat shields for cleaning.** You can't get them back on tight. They rattle and must be replaced.



⃠ **Removing the flash suppressor to clean the barrel.** The suppressor must be torqued just right when it's put back on. If it's screwed in too tight, the barrel threads are ruined. Time for a new barrel. If it's too loose, it comes off during firing.

⃠ **Using stuff like oven or toilet bowl cleaners or homemade cleaning tools.** They get your M16 so clean it loses its protective coating. Corrosion has an open door.

⃠ **Giving your rifle a bath.** You can't get all the water out of your rifle. Corrosion ruins stuff like the carrier key and forward assist spring.



Do the cleaning and lubing that TM 9-1005-319-10 (M16A2) and TM 9-1005-249-10 (M16A1) tell you to. And that's all.

Know when enough's enough.

Four in the Pit

OK, hook drivers, listen up.

Chinook crews are bugged about a little carelessness that's causing them a lot of work and giving them more than a few headaches.

There are four things you're doing that they sure wish you wouldn't. Four things that, with just a little effort on your part, will go away.

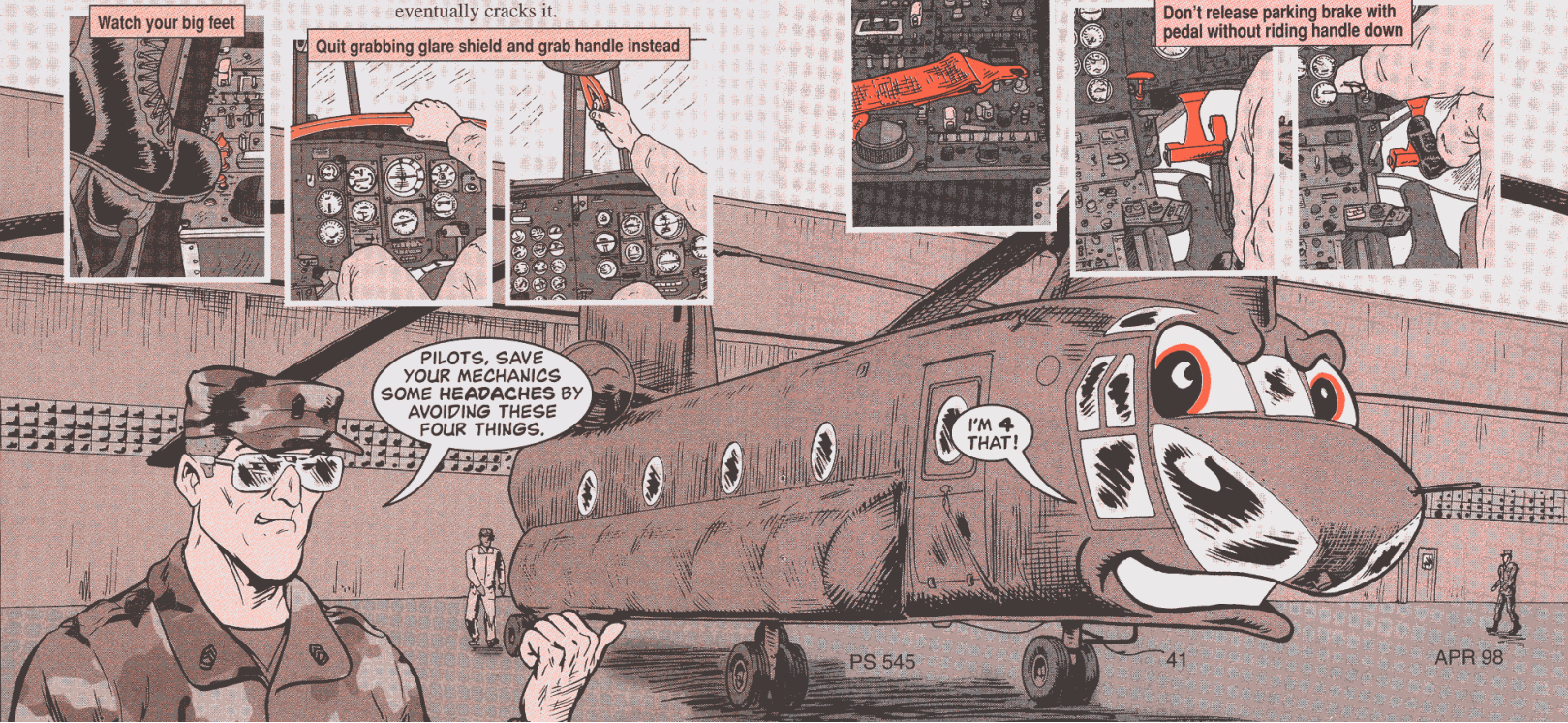
Thing 1: Watch your big feet when you climb out of the left seat. Seems like you drivers have a knack of nailing the swivel switch on the steering control panel with that size 12 boot. Some of you have even snapped the sucker off, which takes some doing.

Thing 2: Quit grabbing the glare shield and using it as a handle to hoist yourself out of the seat. You've got a real handle to grab, right above the shield. Climbing out by grabbing the glare shield fatigues, loosens, and eventually cracks it.

Thing 3: Don't do the seatbelt flop. You know the maneuver. You unhook your belt after a long mission and flip it onto the center console. Those belts have heavy hooks and buckles. Each time a seatbelt free falls onto the console a knob gets a little looser and a switch gets a little more nicked.

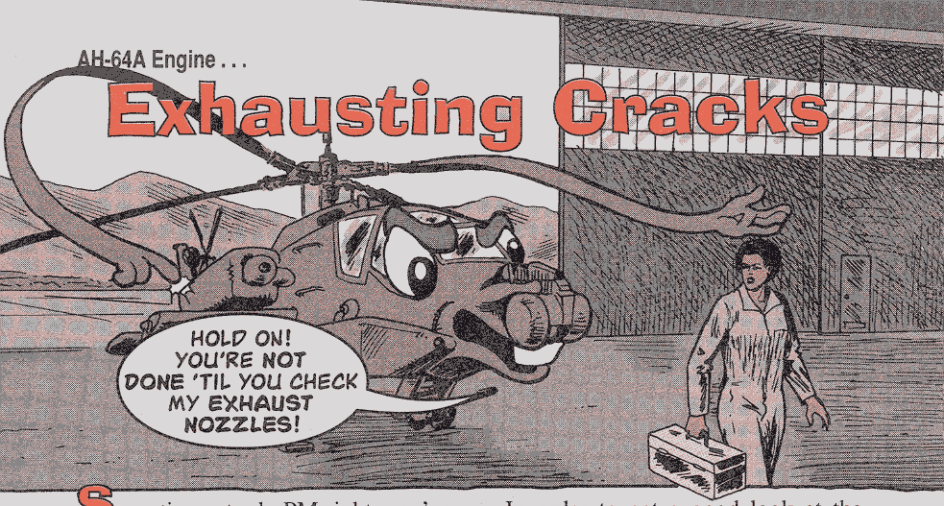
Thing 4: Quit releasing the parking brake using the brake pedal without gently riding the parking brake handle down. Too many of you release the brake and allow the handle to smack into the instrument panel. The handle will take that abuse for a while, but not forever.

With just a little effort on your part, drivers, these four things will be just bad memories and crews can keep the aspirin in the bottle.



AH-64A Engine . . .

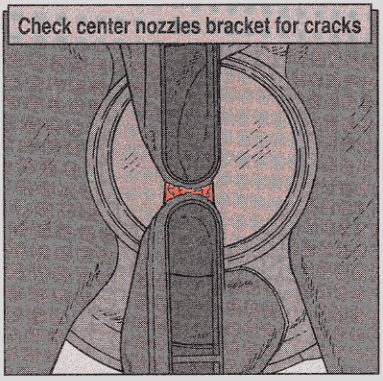
Exhausting Cracks



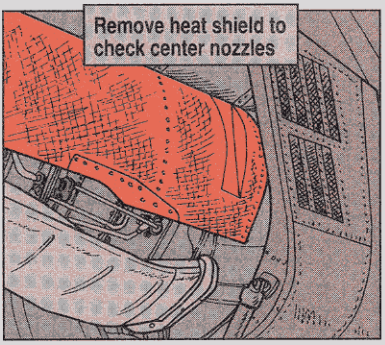
Sometimes, to do PM right, you've got to walk that extra mile. Take for instance, the 10-hour/14-day check on the engine primary exhaust nozzles.

The check is to help you spot cracks in the nozzle. Most folks give the nozzle a once-over and move on. But there's one area that often cracks that you just can't see with a quick look.

It's the bracket that joins the two inside nozzle pieces. Heat makes the bracket brittle—vibration makes it crack!



In order to get a good look at the bracket you must remove the engine heat shield. Sure, your TM doesn't tell you that, but it's the extra PM mile you must walk.



In this case, the extra effort could save an aircraft or a life. If the bracket breaks off, it hops the air express for a ride straight into the tail rotor.

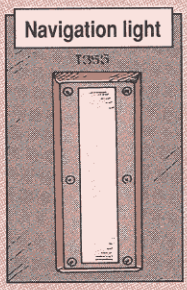
So, when you check the engine exhaust nozzle for cracks, remove the engine heat shield and pay extra attention to the attaching bracket between the two nozzle pieces.

Of Turtle-backs and Drive Shafts

Did you know that something as small as a piece of wire can cut an Apache drive shaft in half?

Impossible, you say.

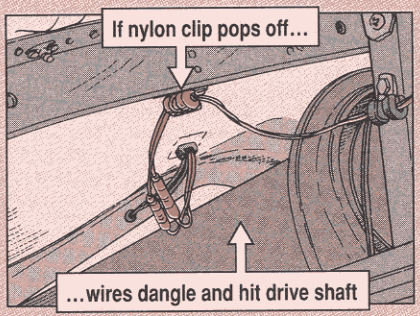
It's happened!



That wire runs to the navigational light mounted on the turtle-back fuselage fairing.

Here's what happens.

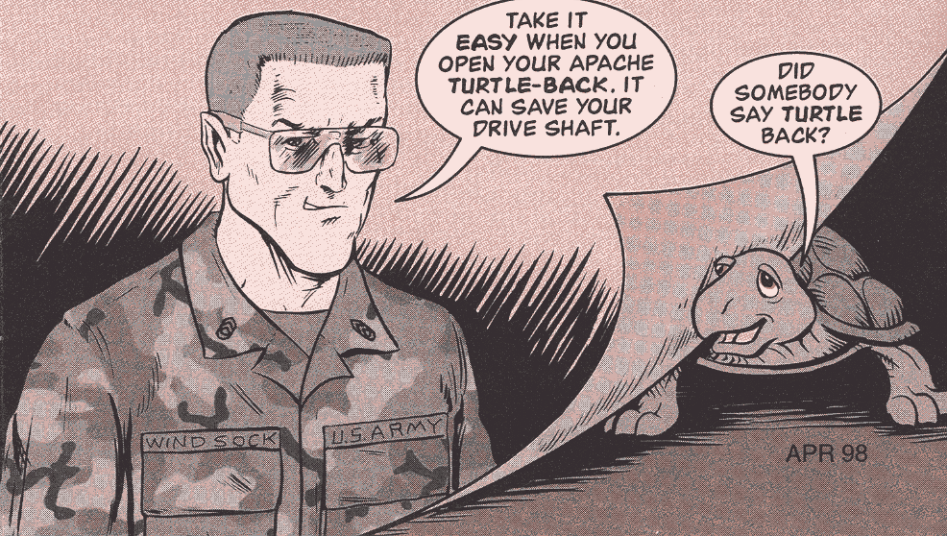
When you open the turtle-back wide, like you do most fairings, the wire stretches taut. This stretched wire pops the nylon clip that holds the wire from the fairing. The wire dangles to the drive shaft. The high-speed rotation of the drive shaft turns the wire into a deadly saw.



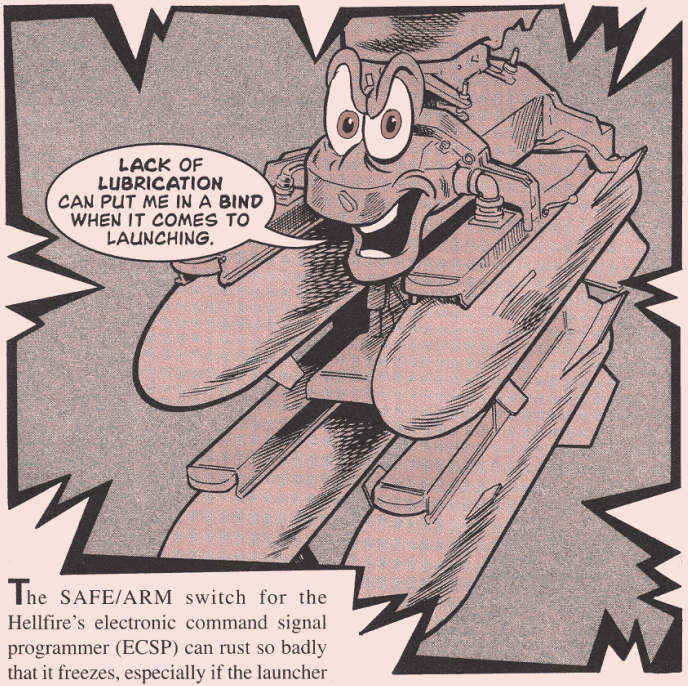
There are two things you crew chiefs can do to prevent this from happening.

First, train your new mechanics to open the turtle-back fairing only about four inches and then disconnect the light. It's something they won't learn at school—you've got to tell them.

Second, when the fairing is off, check the condition of the clip. If there is any indication that it is working loose, tighten it.

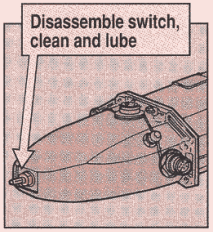


Lowdown on Launcher Lubing



The SAFE/ARM switch for the Hellfire's electronic command signal programmer (ECSP) can rust so badly that it freezes, especially if the launcher is stored outside. That makes the ECSP unusable.

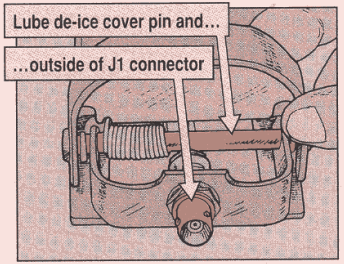
Keep the switch switching by taking off the knob at least monthly and coating the switch's metal parts with solid film lubricant. If the switch is frozen, turn in the ECSP. It will have to be fixed at depot.



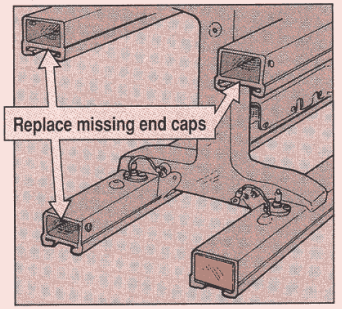
If corrosion has already formed, wipe it off with a rag soaked in Stoddard solvent. Then use fine scouring powder to take off the corrosion residue and Type II cleaner to clean off the powder. All of these are listed as expendable supplies in Appendix C of TM 9-1425-475-20.

After the switch dries, lube it with solid film lubricant, also in Appendix C.

Other launcher parts that need a monthly coat of solid film lubricant are the de-ice cover pin and the outside of the J1 connector.



Corrosion will eat up the launcher rails unless you keep their end caps on. The caps seal out moisture. If the caps disappear or break, order more with NSN 1055-01-262-1775.



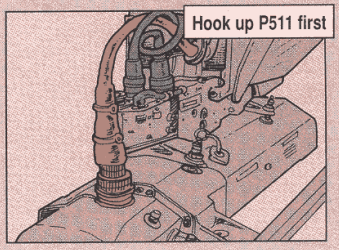
Of course, the best way to protect the launcher is to keep it inside as much as possible. Storing it uncovered in rain and snow is what really does it in.

The Straight Hookup

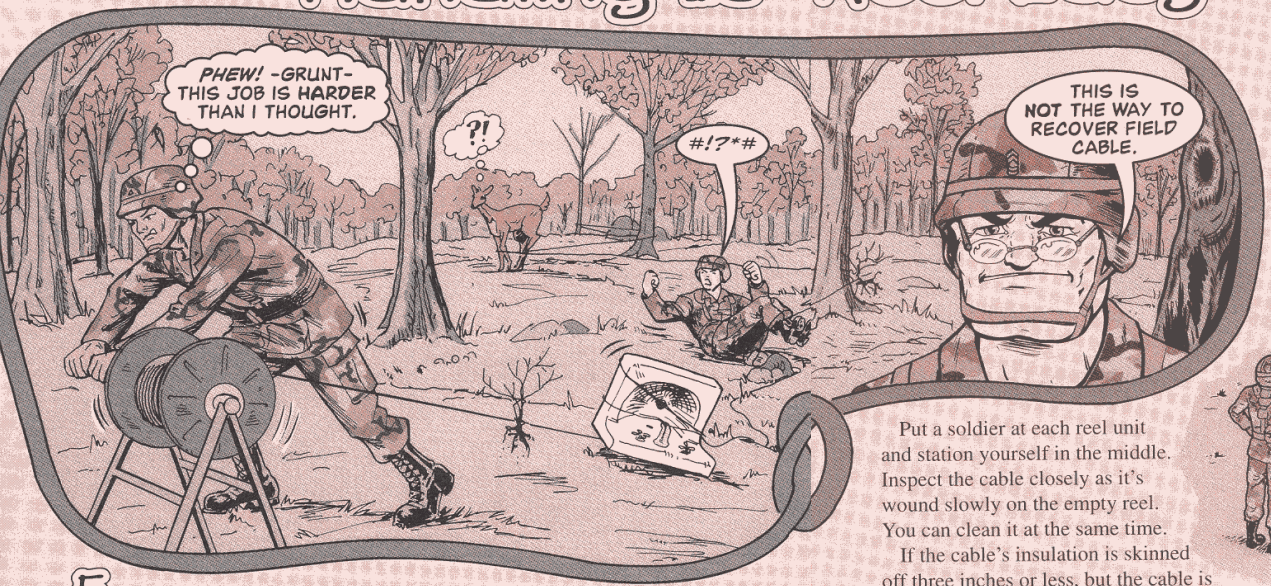
Installing the Hellfire launcher is not a snap-it-in-place operation. Rushing or forcing things can easily damage parts like the J511 connector.

The first thing to remember is that installing the launcher is a job for repairmen, not Apache crews. That's **repairmen**, as in four people. Fewer than four cannot do the job safely because of the size and weight of the launcher.

Next, remember to follow Para 2-82 in TM 9-1427-475-20. Most problems result from repairmen forgetting Step 2C: Hook up the P511 cable to the J511 connector **before** locking the launcher on the ejector rack. If you wait until the launcher is on the rack, you won't have enough clearance to maneuver the cable and you'll probably strip the J511.



Handling Is Reel Easy



Field cable must be handled right when it's deployed and when it's recovered. That means using reels.

You don't need the kinks and knots caused by laying the cable on the ground and pulling it into place, or trying to recover it the same way.

Reeling it out is simple enough most times, but reeling it in requires a little more effort.

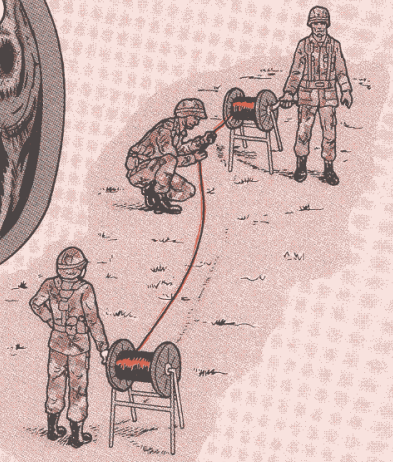
Wear leather gloves or use pads to protect **your** skin, and lift the cable off the ground as much as possible to protect **its** skin.

Remove all tags, untie the cable lines and line the cable up so the recovery equipment has as straight a shot at it as possible.

Once you've recovered the cable, you need to check it for cuts, excessive splices, worn spots, jacket deterioration and other damage.

You'll need some help, a couple of reel units, tape and splicing equipment.

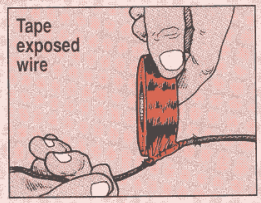
Put an empty reel on one reel unit and the reel with the used cable on the other reel unit. Make sure the units are far enough apart to easily wind the cable on the empty reel.



Put a soldier at each reel unit and station yourself in the middle. Inspect the cable closely as it's wound slowly on the empty reel. You can clean it at the same time.

If the cable's insulation is skinned off three inches or less, but the cable is not broken, cover the exposed part with TL-636 electrical tape, NSN 5970-00-685-9059. Use TL-600 electrical tape, NSN 5970-00-240-0620, for cold weather.

If the insulation or cable damage is more than three inches, cut out the damaged part and splice the cable.



If the cable is broken, splice it. Then wrap it with TL-83 insulation tape, NSN 5970-00-644-3167.

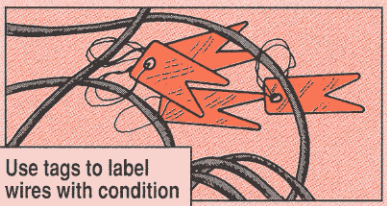
The number of splices and the resistance of the cable tell you the cable's condition.

Four or fewer splices in 1/2 mile is OK for mission use as long as the electrical resistance checks out. WD-1 or WD-1A should show no more than 230-260 ohms per mile at 70°F.

More than four splices in any 1/2 mile means it can be used for training only. It's ready for disposal if you don't need it for training.

Put wire tags on the spool or reel to give you a quick condition check. NSNs for a bundle of 50 tags with tie-on wires are:

Tags	NSN 9905-00-537-
Red	8954
Yellow	8955
Green	8956
White	8957



Use tags to label wires with condition

If the cable fails the splice or resistance tests, turn it in. Check with your Supply Support Activity/Defense Reutilization and Management Office (DRMO) for requirements. Usually, DRMO accepts cable by the bundle, bag or roll.

Instead of measuring the cable, weigh it. One mile weighs 48 pounds.

To reorder cable and reels, use these NSNs:

Item	Length	NSN
RL-159 (reel only)	N/A	8130-00-174-0812
RL-159 WD-1A	2km (6,562 ft)	6145-01-155-4256
MX-306 WD-1A	1km (3,281 ft)	6145-01-155-4257
DR-8 (reel only)	N/A	8130-00-407-7859
DR-8 WD-1A	1/2km (1,640 ft)	6145-01-155-4258
WD-1	5,280 ft	6145-00-220-9933

Check out TC 24-20 (Oct 88), Tactical Wire and Cable Techniques, for more tips on how to lay, recover and splice field cable.

The Grounding Fax

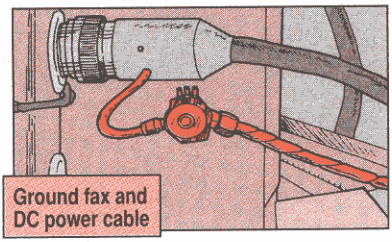
Before you plug the AN/UXC-7's DC power cable into the power receptacle, make sure the facsimile is grounded right.

No ground or a poor ground could get you or your equipment zapped!

To ground it right, run a ground strap from the ground stud on the fax to the vehicle chassis or a ground rod.

Then connect the DC power cable's ground strap to the same ground stud on the fax.

A good ground not only prevents shock damage to you and your equipment, it also eliminates some of the electrical noise that interferes with fax transmissions.


Ground fax and DC power cable

Be Receptive to Safety

Accidents around antennas are still blinding, maiming and killing soldiers.

Which means that safety must be your first consideration in raising, lowering or working on an antenna.

TM 11-5985-357-13 tells you how to safely raise and lower the OE-254 antenna group. TM 11-5820-348-15 covers the RC-292 antenna.

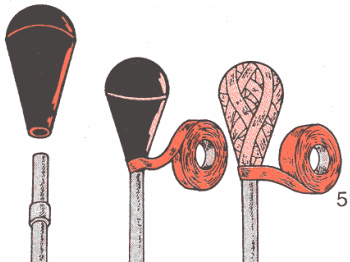
Always follow the good words in your TMs, but emphasize these safety tips, too:

➤ Always wear safety goggles, NSN 4240-00-052-3776, helmet and gloves when raising or lowering antennas.

Always wear safety goggles

➤ Put tip caps, NSN 5985-00-930-7223, on all elements. Then, wrap the tips with electrical tape, NSN 5970-00-816-6056.

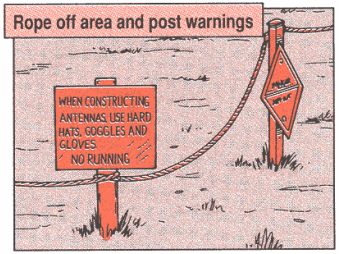
Put tip caps on elements and wrap them



If you don't have tip caps, blunt the elements by taping tennis balls or rubber tubing to them.

If you cannot cover the antenna elements, warn unsuspecting personnel. Rope off the area around the antenna and post warning signs.

Rope off area and post warnings



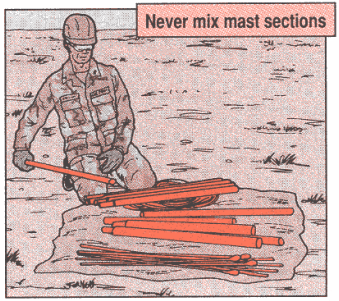
➤ Never erect an antenna beyond its maximum height listed in the TM.

➤ Never use substitute items, like camouflage poles, for antenna parts.

➤ Never erect antennas too close to power lines.

➤ Never mix OE-254 and RC-292 antenna mast sections.

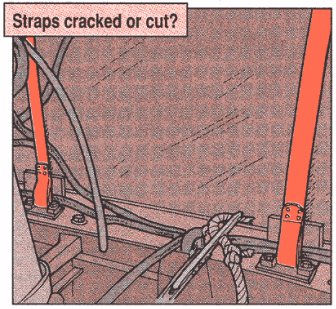
Never mix mast sections



SAFE SMOKING

Many smoke units store equipment for the M157 smoke generator on the HMMWV between the fog oil tank and the tank's retaining straps. Over time that weakens the straps and some have snapped, letting the 120- or 80-gal tank bounce around inside the crew compartment, or the bed of the HMMWV.

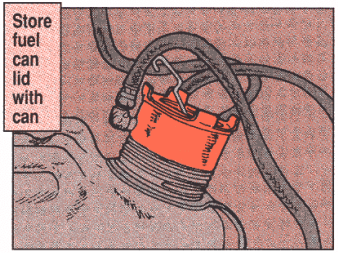
Before your unit does any more smoking, NBC NCOs, disconnect the anchor and retaining straps and eyeball their welded loops for cracks or cuts. If you have any doubt about their strength, replace the anchor straps for either tank with NSN 5340-00-435-7714, and retaining straps for the 120-gal tank with NSN 5340-01-443-8977 and NSN 5340-01-450-1130. Replace the 80-gal tank retaining straps with PN 31-15-2904 and PN 31-15-2905 (CAGE 81361, RIC S9I). The straps are now stocked items.



Then, tell your unit not to store items under the straps.

Fuel Can Storage

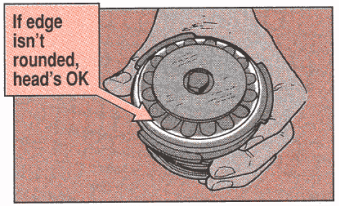
If you have the new fuel can lid, NSN 5340-01-440-7566, you no longer need to change fuel cans during operation. The new lid lets you refill the can while it's on the vehicle. But if you need to store the fuel can in the motor pool, keep the lid with the can.

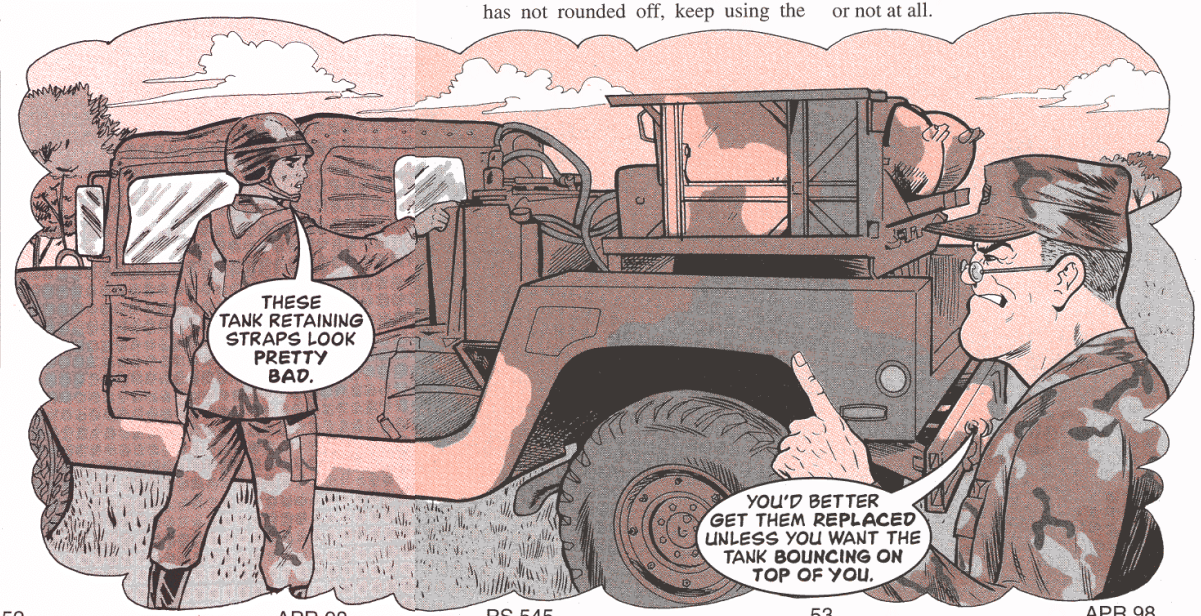


Don't leave it dangling from the vehicle. Disconnect the lid hoses at the flare fittings and tape the hose ends for storage.

Old Engine Heads

Don't pitch an engine head because the face's aluminum coating has worn off. As long as the head's outside edge has not rounded off, keep using the head. It will still work. Sometimes a head that won't work on one generator will work on another. Experiment before you trash the head. If the head is shot, the M157 engine will run poorly or not at all.

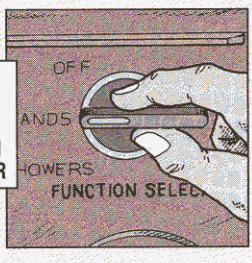




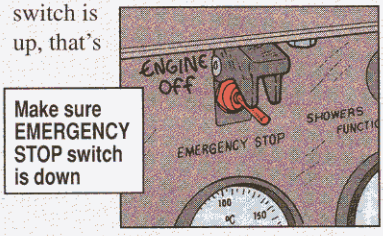
Starting and Stopping Right

TM 3-4230-228-10 says to hit the RESET button no more than three times if the burner won't start. After that, the TM says to stop and troubleshoot.

Instead, try turning off the M17 for five minutes and then resetting the FUNCTION SELECTOR switch. Often that fires up the burner. If it doesn't, try it two more times with five-minute intervals. Still no luck? **Now** troubleshoot.

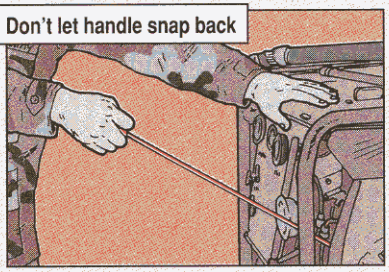


If the M17 itself won't start, check the EMERGENCY STOP switch. If the switch is up, that's the problem. Flip it down.

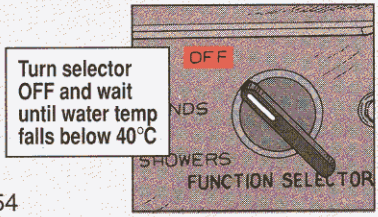


The EMERGENCY STOP positions aren't marked and it's easy to forget what's what. Save confusion by writing ENGINE OFF with a laundry marker next to the switch's up position.

When you pull the starting handle, do not let the handle snap back. The force eventually snaps the handle's crosspiece. Then you have nothing to pull with. Guide the handle down.



When it's time to stop, turn the FUNCTION SELECTOR to OFF, and with the engine running full throttle and water flowing through the system, wait until the WATER TEMPERATURE gauge indicates less than 40°C. Otherwise, the water temperature doesn't have a chance to drop, and black smoke pours out the exhaust. Fire is a possibility.



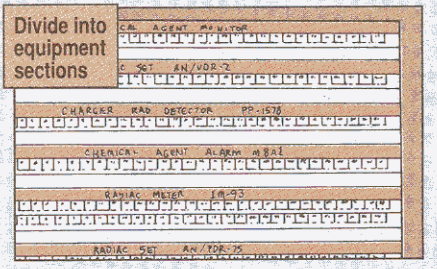
A Stand That Delivers

Dear Editor,

Keeping track of when a CAM was last run, or when an M8A1 chemical alarm was last wipe tested, or when a radiac set was last calibrated is important for NBC NCOs. If you fall behind, the equipment you're responsible for doesn't work or isn't safe or reliable.

I made tracking easier with a visible file stand, NSN 7460-00-281-3195, for our equipment's DD Form 314s. I group our 314s in sections—masks, decon, alarms, radiac—for easy reference. Every time I run CAMs or have required maintenance or calibration done, I note it on the item's 314.

Divide into equipment sections



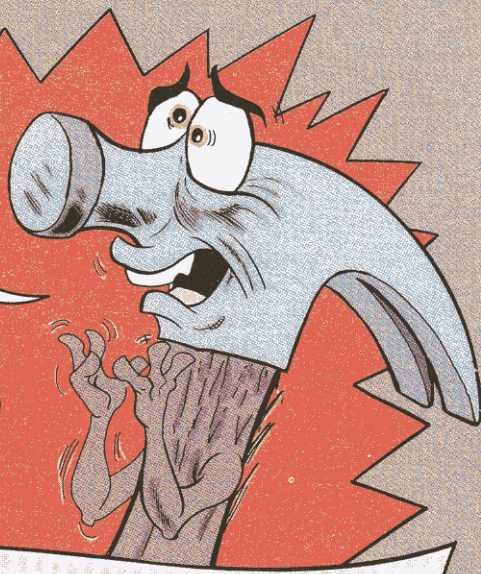
Each week, I flip through the equipment sections and see what needs to be done that week.

SPC Anthony Hicks
UN Security Bn
Panmunjom, Korea

FROM THE DESK OF THE Editor

Good idea. The file stand would also work for arms rooms or any shop where it's important to track gauging and calibration.

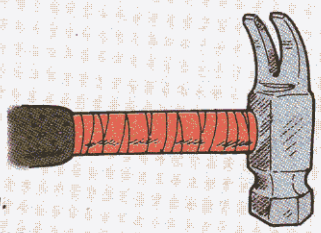
It's a Wrap



Dear Editor,

Our hammers with fiberglass handles crack and begin to splinter after one poorly-aimed whack. It's not long before the splintering becomes so bad you have to junk the hammer.

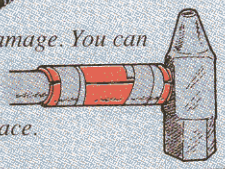
You can prevent cracks by wrapping the handle with two layers of friction tape. The tape gives the handle enough cushion so that it can handle blows without cracking. Even if the handle is already cracked, the tape will often prevent further cracking and splintering.



Pete Williams
USA Field Artillery School
Ft Sill, OK

FROM THE DESK OF THE Editor

I think you have a handle on cracking down on tool damage. You can protect the handles on your sledge hammers, too. Just wrap an old piece of radiator or heater hose around the handle below the head. Use duct tape to hold it in place.



Getting a TMDE Education

Dear Editor,

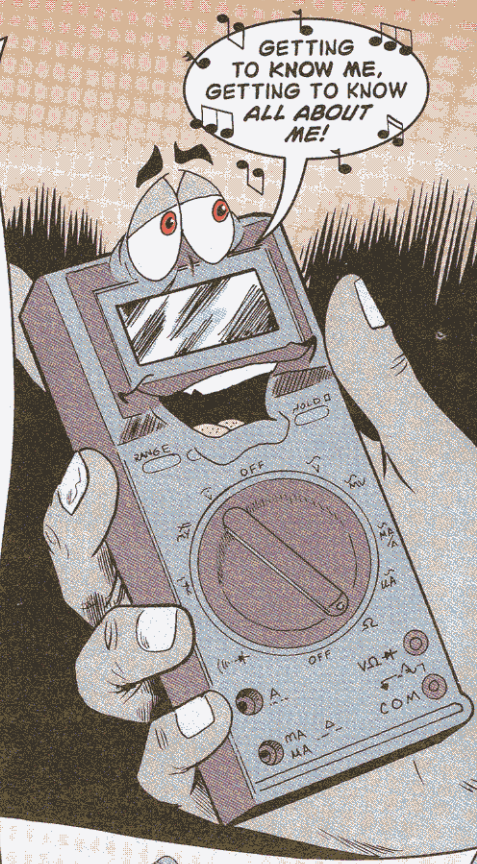
Every unit should have a test, measurement, and diagnostic equipment (TMDE) coordinator. Often, unfortunately, the person assigned that job knows little about TMDE and less about where to go for help.

Help is usually close by. Almost every installation has a TMDE support center that offers short classes on TMDE labels, the instrument master record file, and the projected items and delinquent items lists.

As a TMDE officer, I can assure TMDE coordinators that we are glad to educate them about TMDE. Dealing with soldiers who understand TMDE requirements makes our jobs much easier.

Look under "TMDE" in your base directory for the number of your local TMDE support center.

CW2 Ricardo A. Gelpi
18th Airborne Corps and
1st COSCOM
Ft Bragg, NC



FROM THE DESK OF THE Editor

Good suggestion. TMDE coordinators might also want to check out:

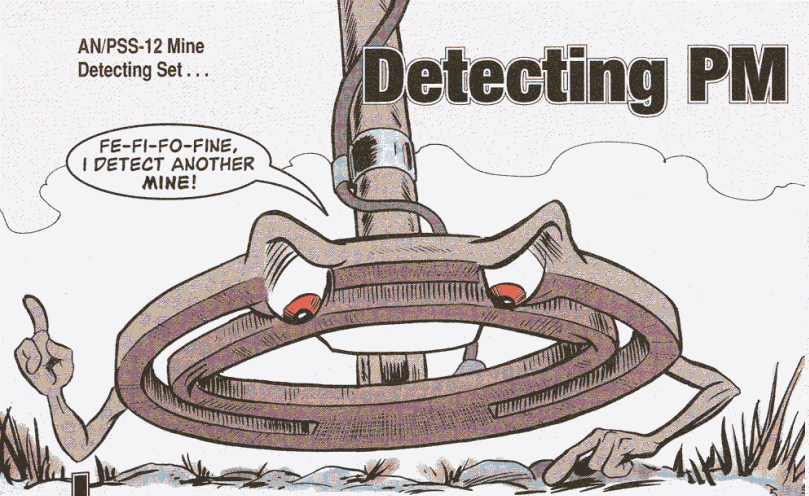
✔ *TB 750-25,* ***TMDE Calibration and Repair Support Program****. Appendix F spells out a coordinator's responsibilities.*

✔ *AR 750-43,* ***Army TMDE Program****, which spells out the TMDE regulations.*

✔ *TB 43-180,* ***Calibration and Repair Requirements for the Maintenance of Army Materiel****. It identifies when items need calibration. It is part of TM 43-TMDE, which is only on CD-ROM.*

AN/PSS-12 Mine Detecting Set . . .

Detecting PM Leads the Way

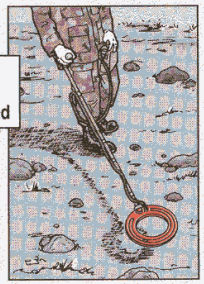


If the AN/PSS-12 mine detecting set isn't up to the job, you could be walking blind through a minefield. It doesn't get much worse than that. Do these simple things to keep your AN/PSS-12 in top detecting form.

Protect the Head

The search head is very sensitive. If you're banging it against rocks, the head soon becomes as sensitive as one of those rocks. If you're working uneven ground, raise the head to six inches off the ground, instead of the normal two.

The extra height makes it less likely you'll bump rocks.

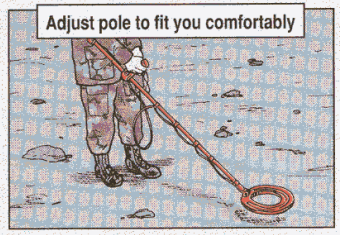


More importantly, keep the head parallel to the ground as you sweep slowly.

When you collapse the telescopic pole, don't brace the head on the ground. That damages the head. Instead, collapse the pole by pushing its sections together with both hands.

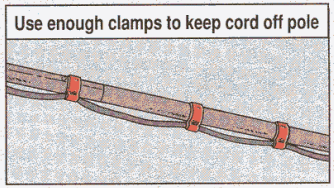
Pole to Pole

The pole is adjustable, so lengthen or shorten it 'til it's comfortable to you.



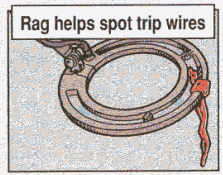
A good test is to hold the detector with your arm straight and the head is parallel with the ground. If the head is about six inches from the ground, that's a good length.

The longer the pole, the more clamps are needed to keep the head cable off the pole. If the cable touches the pole, you get false signals and needless digging. The detector has seven clamps—use them all if necessary. NSN 5340-21-905-5919 brings more clamps.



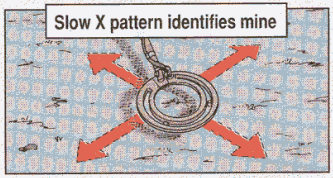
Night Ops

When the light's bad, you can't see mine probes or trip wires. Give yourself an edge by tieing a 6-in rag to the front of the head. The rag will hang up if you're brushing up against something.



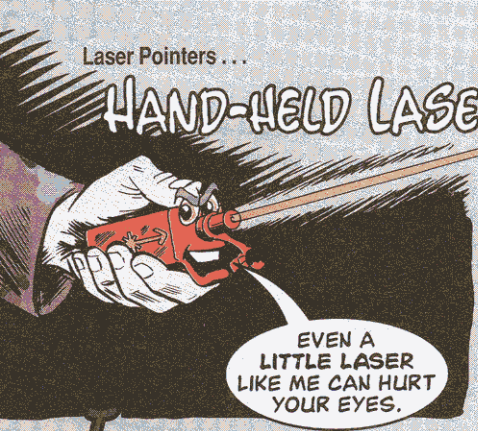
X Marks the Spot

When you think you've found something, do a slow X-pattern over the spot. If you have found a mine, you should get beeps in all parts of the X.



Laser Pointers . . .

HAND-HELD LASERS CAN INJURE



Tactical laser pointers are being used by many units during night training to aim, illuminate targets and mark areas.

If you accidentally look into the beam of a laser pointer, you can suffer serious eye injury, even if the pointer is advertised as "eye-safe."

The only laser pointers Army units are authorized to use in force-on-force exercises are Class 1 pointers—unless units have received special permission from the US Army Center for Health Promotion and Preventive Medicine (USACHPPM).

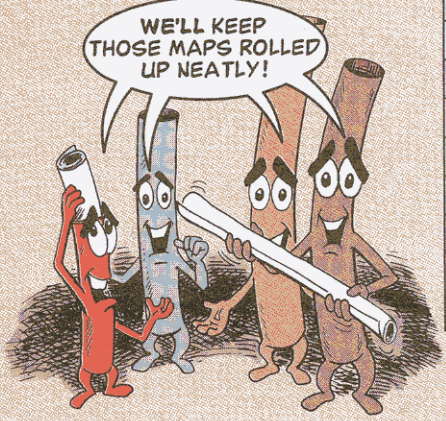
Even with Class 1 pointers, do not shine them into someone's eyes, nor aim them at unprotected personnel. Remove the pointer's batteries when it's not being used to prevent accidental lasing.

If you're unsure if a pointer you're using is Class 1, contact your local radiation protection officer (RPO) or:

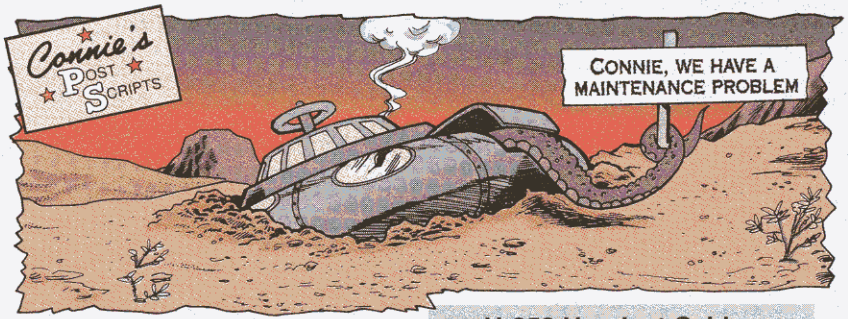
USACHPPM
ATTN: MCHB-DC-OLO
5158 Blackhawk Rd
Aberdeen Proving Ground, MD 21010-5422
Phone: **(410) 671-3932, DSN 584-3932**

Map Holder Tubes

Need a way to keep the maps in your command post carrier or command center neat and orderly? Use a map holder tube:



Tube NSN 8110-00-	ID (inches)	Length (inches)	Qty
160-9220	1 3/4	16	1
244-7435	2	24	1
291-0345	2	36	10
291-0346	2	42	10
291-0347	3	42	1
271-1508	4	39	1
271-1509	4	43	1
291-0348	4 1/2	42	1
271-1510	5	24	1
725-1471	6	40	1



LOGSA Hotline

If you've got a question for the Logistics Support Activity (LOGSA), but don't know who to ask, try the hotline. Get answers on FED LOG, AOAP, TAV, LOGTAADS, LIF, TPF, PLL/ASL, and more. Call DSN 645-0499, (205) 955-0499 or (800) 878-2869. The e-mail is: Hotline@logsa.army.mil

Check the Oil

When you get a replacement engine or transmission or a new or overhauled vehicle, remember one thing: It may not have oil in it! Make sure you bring the oil level up to snuff before you start it. Follow the TM and lube order.

HEMTT Shock Mix-up

There's a bogus shock absorber in the supply system under NSN 2510-01-132-4983. It's supposed to be used on the HEMTT, but the shock is yellow instead of green and its attachment ends are too small for the HEMTT. If you have any, send in an SF 368, Quality Deficiency Report to Tank-automotive and Armaments Command, and contact Will Kern at DLA, DSN 850-2806 or (614) 692-2806 or e-mail C003934@dscc.dla.mil. You'll be told how to exchange bad shocks for good ones.

H-350 Handset Cables

Get a 15-ft extension cable for the 6-pin, H-350 handset with NSN 5995-01-386-5152. A 25-ft cable comes with NSN 5995-01-386-5153.

MLRS Cab Distribution Box

Before you send the MLRS cab distribution box to depot for repair, remove and keep the air inlet screen, NSN 2510-01-264-0153. The screen is part of the personnel heater system, not the distribution box. That means you won't get a screen back when you receive a new or repaired box.

Landing Light Marker Set

You must order emergency landing light marker set, NSN 6230-00-542-6680, by component. Order: 8-light markers, NSN 6230-00-115-9996; 8-batteries, NSN 6135-00-050-3280; and the bag, NSN 8105-00-592-0515. The accessories—ballast bag, holddown lines, anchor pins and lenses—come with the light markers.

M129A3 ID Plate

NSN 9905-01-311-8399 gets the identification plate for the 12-ton semitrailer. The NSN shown for Item 1 in Fig 38 of TM 9-2330-374-14&P brings the wrong plate.

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?

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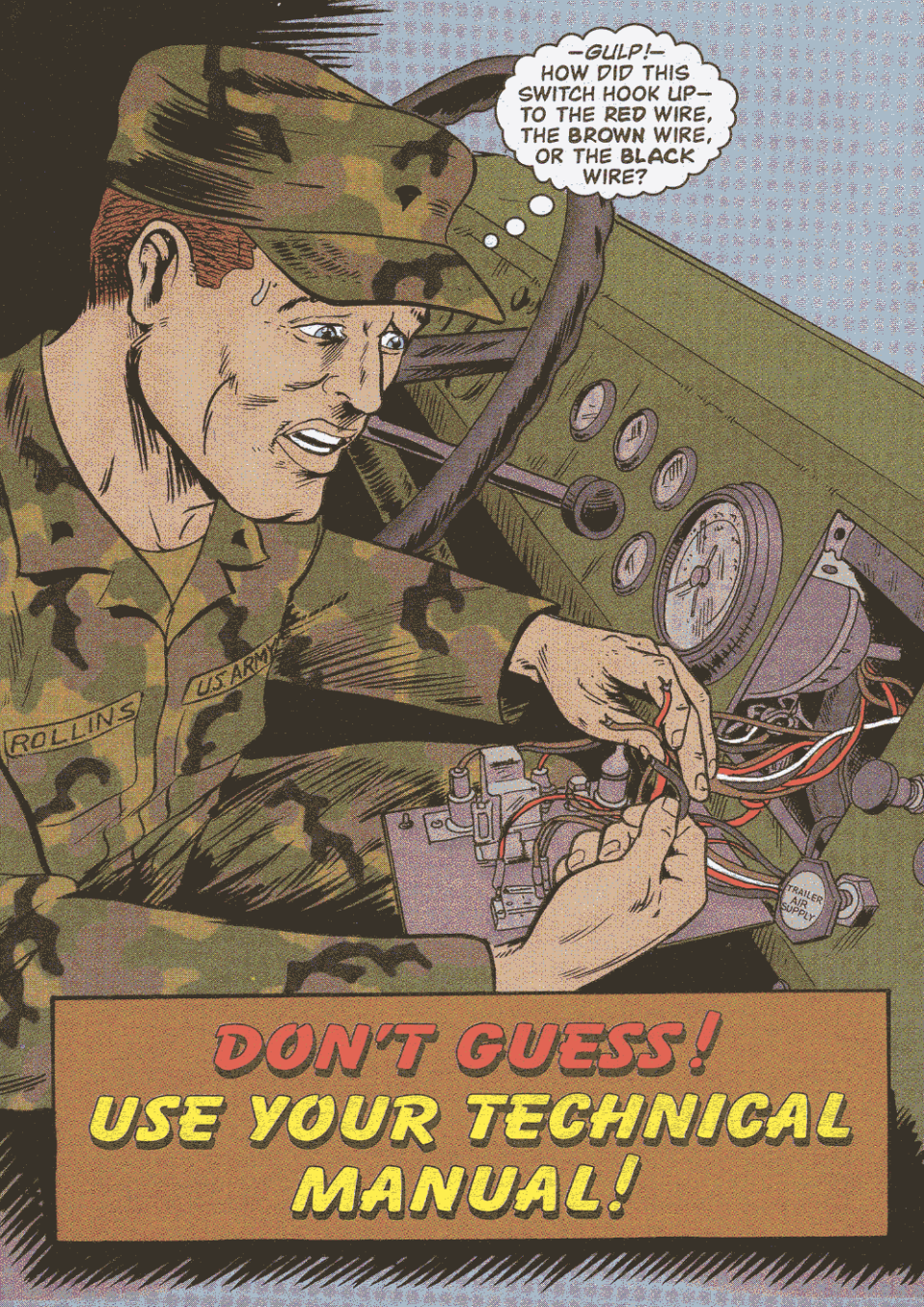
For Sale By The Superintendent of Documents, U.S. Government Printing Office Washington, DC


—GULP!— HOW DID THIS SWITCH HOOK UP— TO THE RED WIRE, THE BROWN WIRE, OR THE BLACK WIRE?
ROLLINS
U.S. ARMY
TRAILER AIR SUPPLY
DON'T GUESS!
USE YOUR TECHNICAL MANUAL!