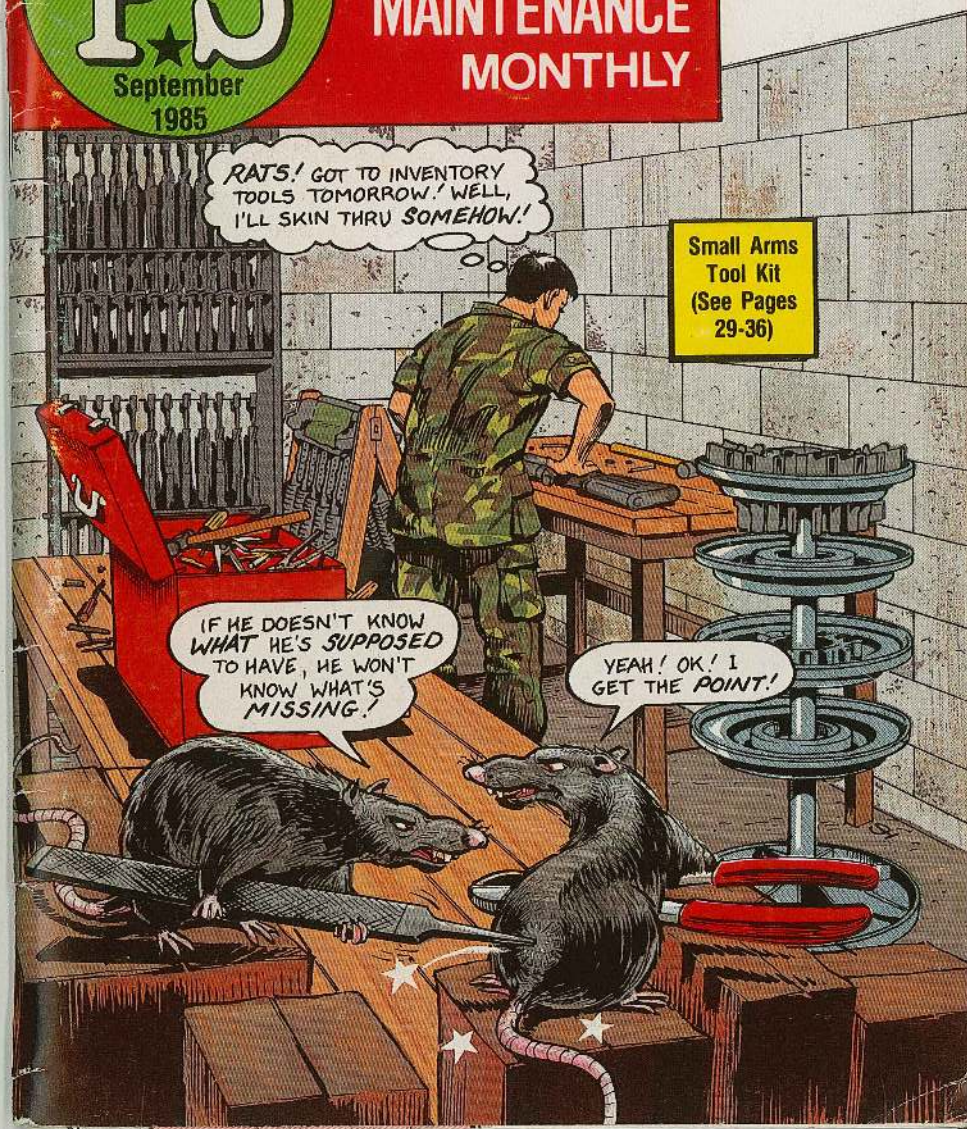
Issue 394

PS

September 1985

THE PREVENTIVE MAINTENANCE MONTHLY



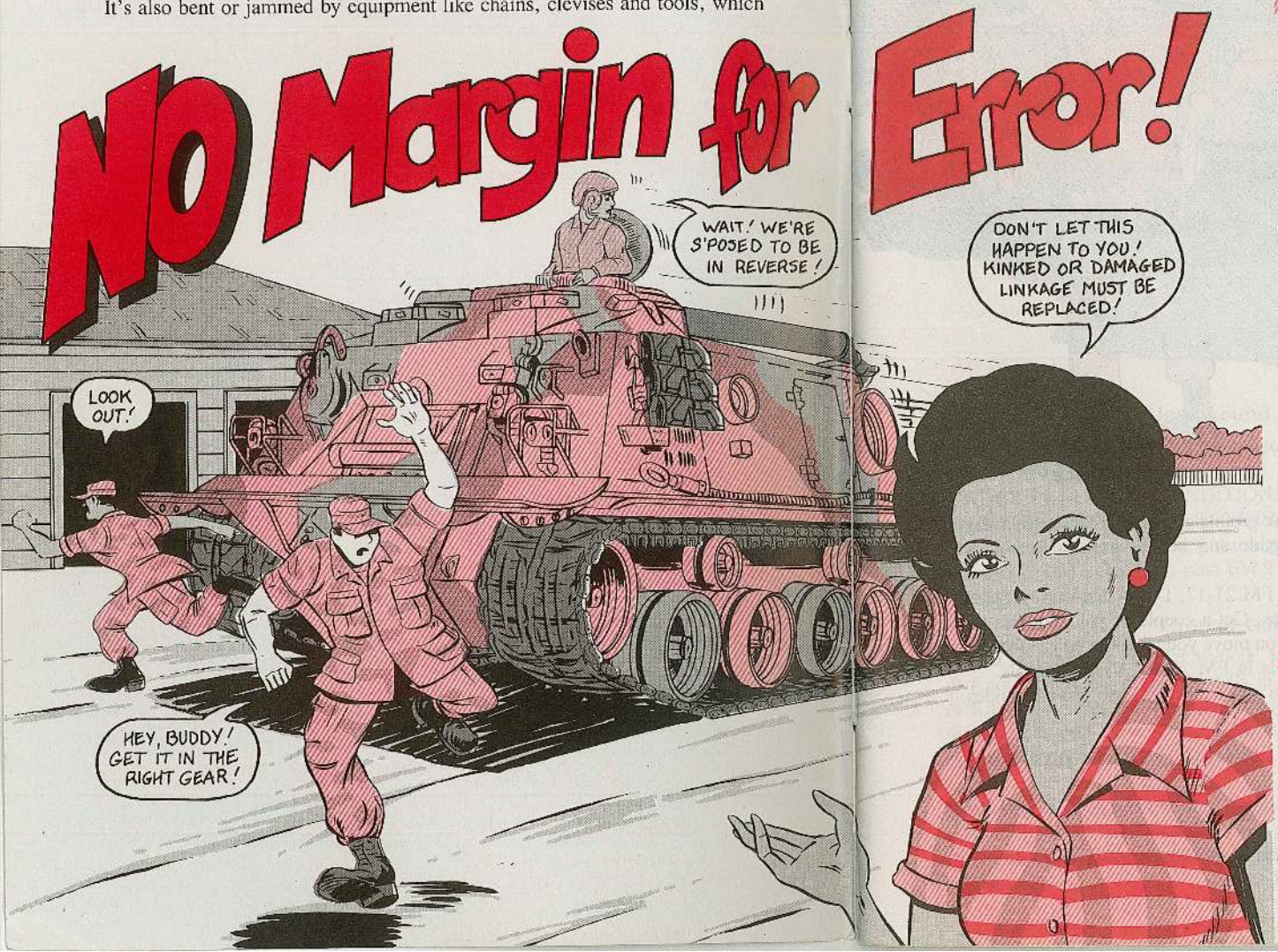
Small Arms Tool Kit (See Pages 29-36)

Bent or damaged shifting linkage on your 88 is an open invitation to accident or injury. A soldier was killed recently (COUNTERMEASURE—Feb 85) because an 88 moved forward when the gear selector was shifted to REVERSE but the transmission stayed in 1st gear.

The linkage gets bent or damaged by mechanics stepping on it when they climb out of the hull after the power pack is removed, and when they step on the linkage on top of the transmission while the pack's still in the vehicle.

It's also bent or jammed by equipment like chains, clevises and tools, which are thrown under the floor plates for storage.

Since there's no margin for error (the linkage either works right or it doesn't), scope out the inspection and alignment check in TB 43-0001-39-3 (Oct 84) on Pages 2-6 and 2-7.



PS THE PREVENTIVE MAINTENANCE MONTHLY

Published by the Department of the Army for the information of all soldiers assigned to combat and combat support units and all soldiers with organizational maintenance and supply duties.

Within limits of availability, older issues may be obtained direct from Editor, PS Magazine, c/o US Army Materiel Readiness Support Activity, Lexington, KY 40511-5101.

ISSUE 394 SEPTEMBER 85

FIRE POWER

Ground Guides	2	Towbar Tip	19
M1 Tanks	4	M113-Series	20,23
M60-Series, M1's	8,13	M247 (SGT York)	23
M48,M60,AVLB's, M728	13	Chaparral	24
M85 MG	14	.50 Cal BFA	26
Bradley, MLRS	15,16,17	TOW 2	27
M110A2 Howitzer	18	Small Arms Tools	29

GROUND MOBILITY

M151-Series	37	Socket Wrenches	44
Multifuel Engines	38	MT-250 Crane	45
Jack Stands	40	F1500M Grader	46
M915-Series	42	2380/2385 Cranes	46
STE/ICE	43	20-Ton Crane	47

AIR MOBILITY

OH-58	48	Safety Posters	51
UH-60	49	Aviation Messages	51
UH-1 Series	50		

COMMUNICATIONS

AS-1729	52	TA-312	53
TT-76	52	AN/PRC-68	53

TROOP SUPPORT

New Pubs	28	M11 Decon	60
Mil Std Engines	54	M258/M258A1 Decons	61
PU-406	55	Flammable Storage	61
Generators	55,56	Field Kitchen Fix	62
Camouflage Screen	57	Lyster Bag	63
M17-Series Mask	58	Protective Gloves	63
M10A1 Canister	60		

PS wants your ideas and contributions, and is glad to answer your questions. Name and address are kept in confidence. Just write to:

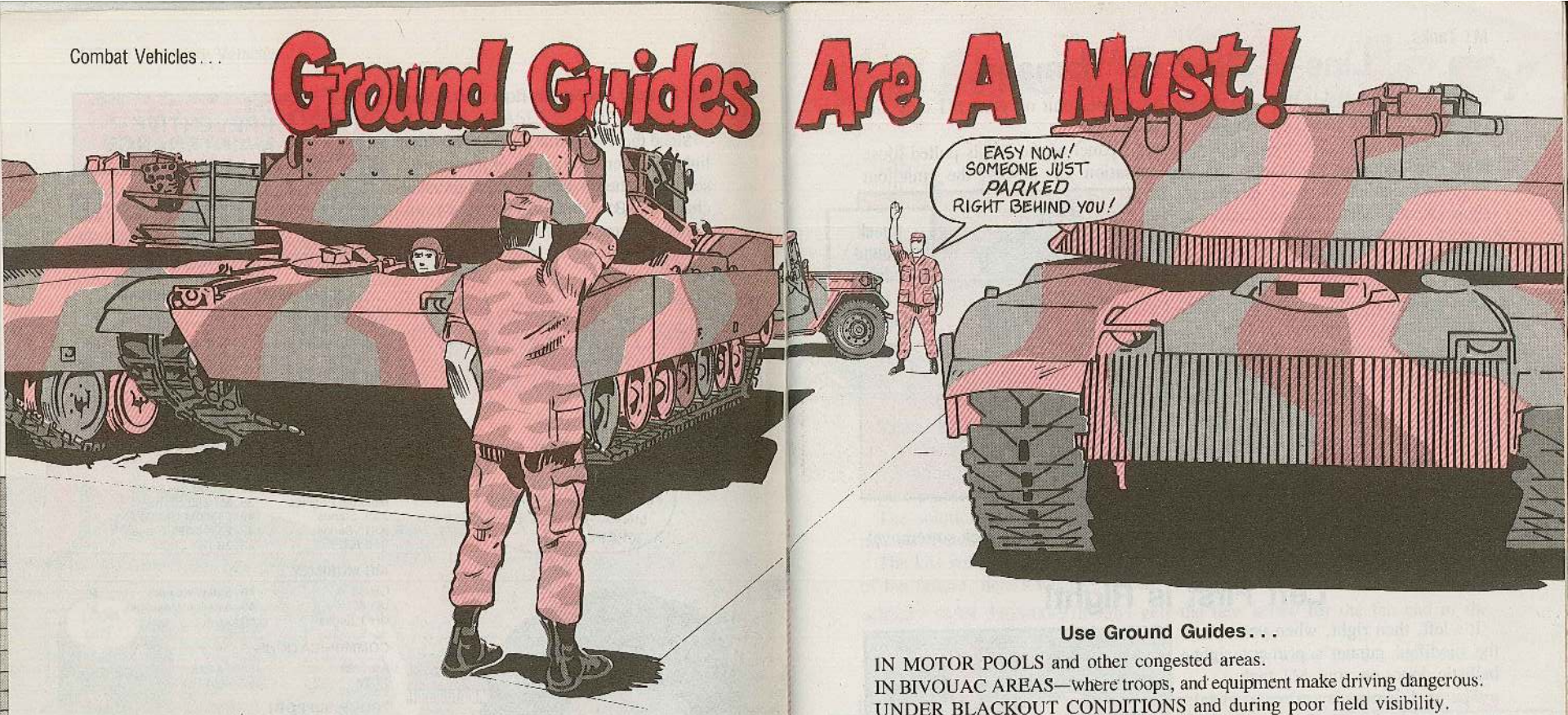
MSG Half-Mast
PS Magazine
Lexington, KY
40511-5101

Use of funds for printing of this publication was approved by the Secretary of the Army on 19 February 1985 in accordance with the provisions of AR 310-1.

DISTRIBUTION: In accordance with requirements submitted on DA Form 12-5-R. **Private subscriptions:** Order from US Govt Printing Office, Supt of Documents, Washington, DC 20402. **PS Magazine** ISSN 0475-2953 is published monthly by the Department of the Army, Washington, DC. Second Class Postage is paid at the Lexington, KY post office and at additional mailing offices.

Postmaster: Send address changes to Cdr, US Army Pubs Ctr, 2800 Eastern Blvd, Baltimore, MD 21220-2896.

Ground Guides Are A Must!



A combat vehicle driver who doesn't use ground guides only sees what's ahead. And it's a sure bet that what's alongside and behind you can cause BIG TROUBLES—if you don't see it.

Play it safe. Follow the guidelines in FM 21-17, Driver Selection, Training and Supervision, Track Combat Vehicles. Get a couple of your buddies to be your ground guides—eyes—every time you move your track in congested areas. Make sure they know the ground signals in FM 21-60, Visual Signals.

Even if you're moving your vehicle a short distance, use ground guides.

Basic Tips

- Position at least one guide in front and one behind the vehicle. Take directions from the front guide.
- Keep at least 10 yards between your vehicle and the front guide or you could run him down.
- Stop immediately if you don't understand your guide's signals.

Use Ground Guides...

IN MOTOR POOLS and other congested areas.

IN BIVOUAC AREAS—where troops, and equipment make driving dangerous.

UNDER BLACKOUT CONDITIONS and during poor field visibility.

WHEN BACKING YOUR HOWITZER into a firing position.

If you want to ride a winner, ground guides are your safe bet EVERY TIME. For more ground guide info, read FM 21-306, the Manual for the Track Combat Vehicle Driver.

Ground Guide Safety

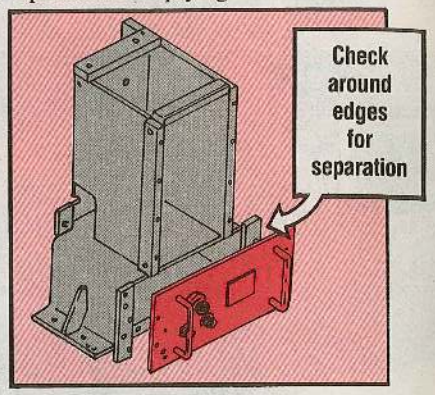
If you're guiding a combat vehicle, keep these safety tips in mind:

- Know the visual ground signals in Para 2-5 of FM 21-60.
- Know the vehicle's limitations and capabilities.
- Check around the vehicle before it moves.
- Never stand between two moving vehicles or a moving vehicle and another object.
- Stay at least 10 yards away from any moving track.
- Be sure you understand the other ground guide's signals.
- If you're the front ground guide, always stay in the driver's line of sight.

Line-of-Sight EU Damage

Water can get inside the line-of-sight electronics unit on your M1 tank and cause erratic operation or a runaway turret.

Water gets inside when the front connector panel of the EU is pulled loose from the housing. Vibration during operation or prying the unit out of its rack can let the water in. Water short circuits electronics and causes a loss of control.



There's some improvement on the way for new units, but the one in your tank needs your help. Eyeball the front panel for separation from the housing. If there's any separation, remove the unit and send it to DS for repair.

Once you get another unit, take care not to separate the panel from the housing when you install or remove it.

Changes to TM 9-2350-255-20-2-3-3 will require the other electronics units in the rack to be removed before the line-of-sight unit.

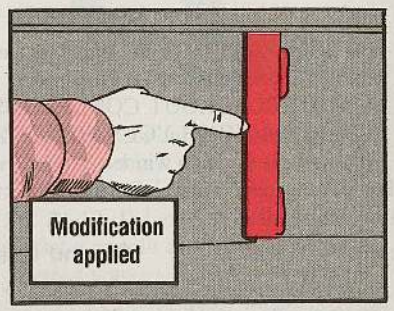
Also, two mechs will handle the work, one mostly to lift the rack so removal and installation will be easier.

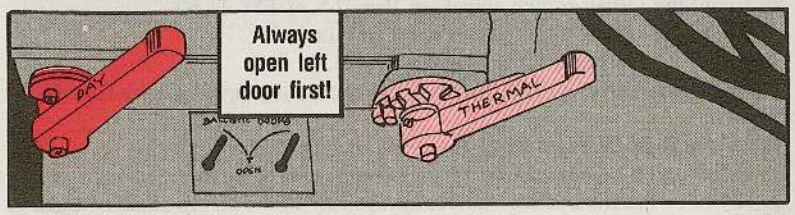
Left First is Right!

It's left, then right, when you open the modified gunner's primary sight ballistic doors on your M1 tank.

The modification is a piece of metal welded on the left-hand (day) door. It overlaps the right-hand (thermal) door and takes the place of a rubber strip.

ALWAYS open the left-hand door first and close it last. If you try to muscle open the right-hand door first, you'll bend and possibly break the linkage.





Fan Drive All Shook Up!

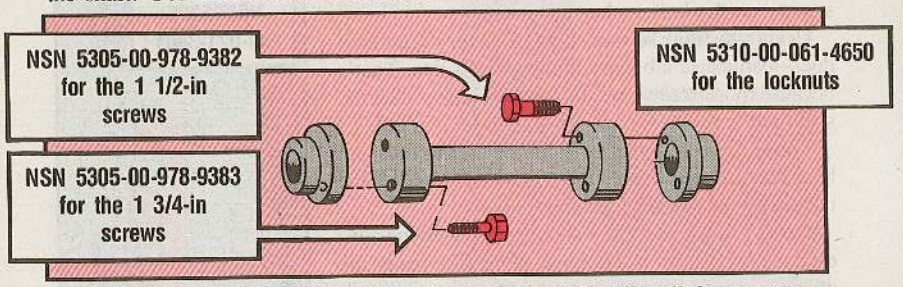
Shake, rattle and roll is taking a toll on the screws on the M1 tank's scavenger fan driveshaft.

Vibration is causing loose screws. This could lead to fan failure and possible engine performance loss because of a clogged precleaner or V-packs.

The solution is longer screws and locknuts—being distributed as a kit by materiel fielding teams.

The kits will get to you sooner or later, but if your tank is out now because of fan failure, here's what you need:

- NSN 5305-00-978-9383 gets the new screw for the fan end of the driveshaft. You need two of these 1 3/4-in screws.
- NSN 5305-00-978-9382 gets the 1 1/2-in screw for the other end of the shaft. You need two of these also.

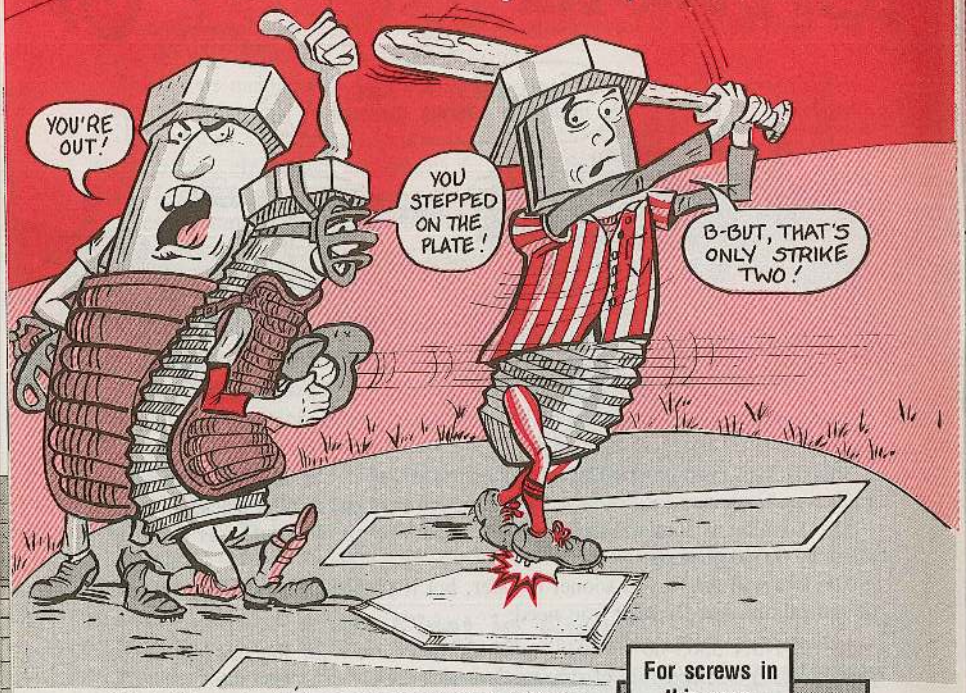


- NSN 5310-00-061-4650 gets the locknut that fits all four screws.

Install the screws and torque to 95-105 lb-in. Then install the locknuts and torque them to 72 lb-in.

If you don't have a failure between now and the next scheduled annual service, leave well enough alone. At the annual, just check the driveshaft for locknuts. No locknuts? Change to the new parts.

No Subs in Battery Compartment



Pinch hitters don't always come through with the big hit. This is really true if you use "pinch-hit" screws on the battery bus conductor.

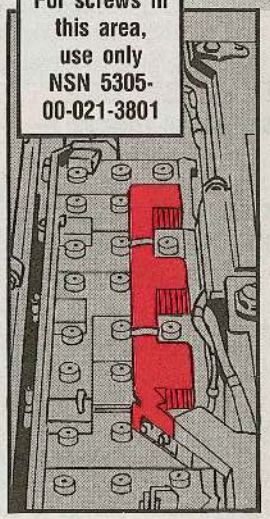
Using substitute screws—like those for the exhaust duct—can cause a battery compartment fire. That's because those screws are 3/4- to 1-in longer than the specified screws.

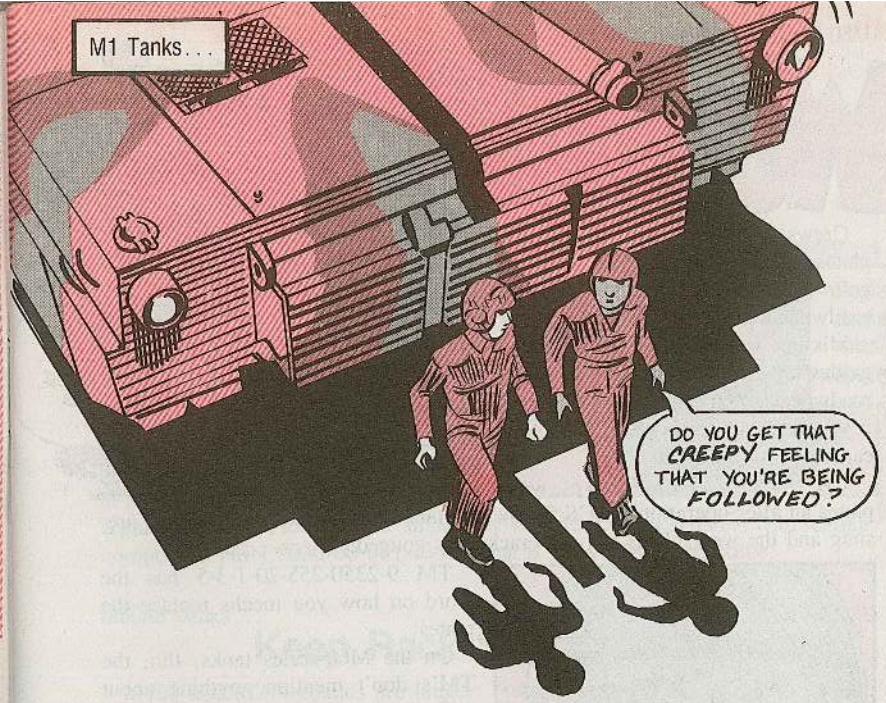
Those longer screws bottom out on the terminal board before they tighten the conductor. This lets the conductor loosen during operation.

A loose conductor causes arcing between the conductor and washers. The tank generator reads the arcing as a need for more output, increasing amperage and arcing.

It doesn't take long for the battery compartment contents to get hot enough to burn.

Use the right screws—NSN 5305-00-021-3801—for the job, so you won't have to hit "clean-up."





No Brakes to Park!

Drivers, don't shut down your M1 if you don't have at least 800 PSI in the parking brake system.

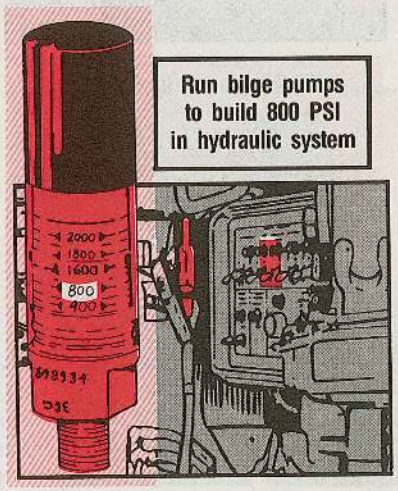
The parking brake may not hold ...your tank may roll off after you leave it.

The parking brake runs off the tank's hydraulic system, so you need to build up the pressure.

You can get the 800 PSI pressure you need by running the bilge pumps, which also turns on the auxiliary hydraulic pump.

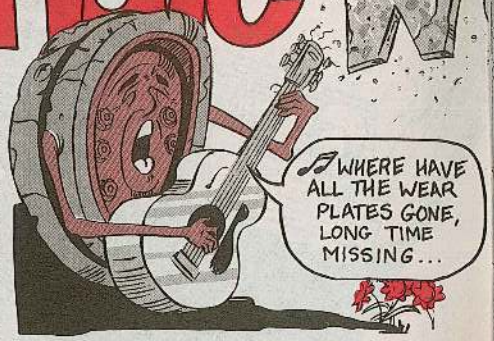
If you can't get 800 PSI, have someone chock both tracks, front and rear. Let your mech know about the problem pronto.

If you get 800 but less than 1,000 PSI, set the brake and call in your mech.



M60-Series, M1 Tanks...

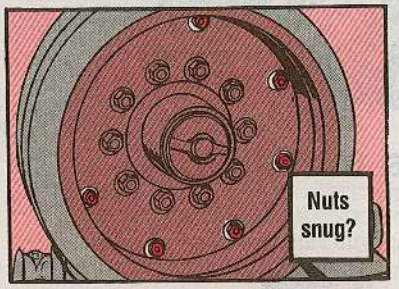
Wear Plate Wear, Replacement



Crews and mechs, are all the wear plates in place and in good shape on your tank? Or are you wearing out roadwheels instead?

Missing wear plates mean that center guides are rubbing miles of life from roadwheels. You can prevent that wear if you keep your eyes peeled for loose capscrews or stud nuts.

TM 9-2350-255-10-1 makes wear plates an after-operation PMCS for the M1 tank crew. Make sure the nuts are snug and the wear plates are not cracked or gouged.



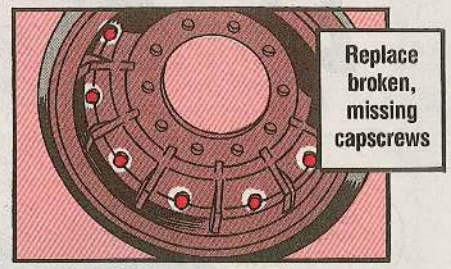
TM 9-2350-255-20-1-3-5 has the word on how you mechs replace the plates.

On the M60-series tanks, tho, the TM's don't mention anything about eyeballing the wear plates on aluminum roadwheels or replacing them (steel roadwheels don't have 'em).

A check is needed, so here's what to do:

CREWS—Take a quick look at the wear plates when you pull your after-operation PMCS on the roadwheels and hubs. Report any missing, broken or gouged wear plates to your mechs.

MECHS—During the semiannual service, look at all the wear plates for worn-off, curled edges. If the edge is gone, replace the plates.



If the only things missing or broken are capscrews, replace them. Make sure the threaded hole in the plate has at least 2 1/2 good threads, tho. If not, replace the plates, too. Torque all capscrews to 15-25 lb-ft and coat with sealing compound, NSN 8030-00-081-2340. That'll get you a 50-cc bottle.

M60A3 Tanks...

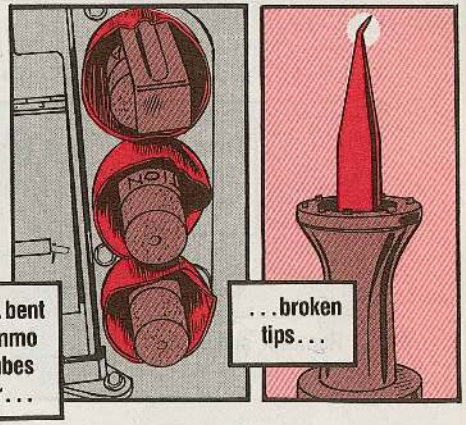
Keep Rack Space Clear!

M735 and M774 rounds are longer than the M60A3's three-round ammo rack. That makes the rounds extend past the ends of the storage tubes, leaving little space between the hull wall and the ammo storage rack.

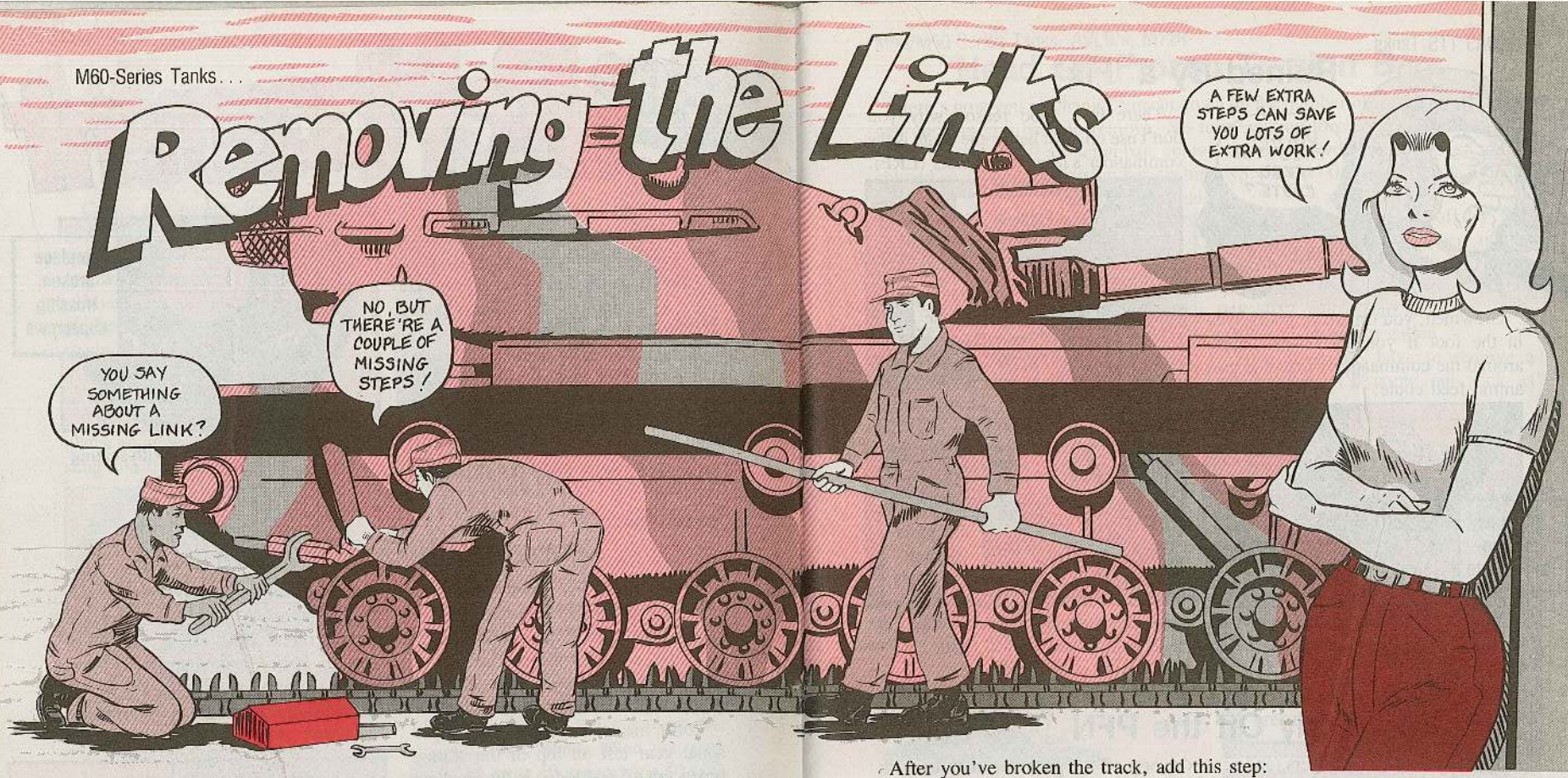
Tools, map cases, repair parts or personal gear left on top of the storage boxes fall off and lodge in the crack between the hull wall and the ammo rack.

When you traverse the turret, that gear is smashed between the ammo tubes and the hull wall. You're left with bent ammo tubes and bent or broken round tips. Since there's no way to repair the round's tip, the ammo is worthless.

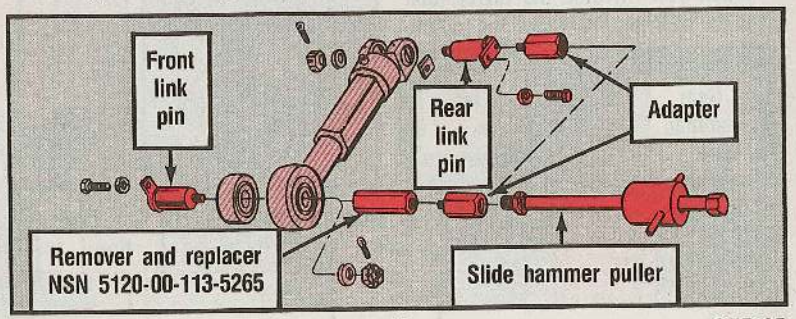
Always make sure the space between the rounds and the hull is clear.



Removing the Links



Adding just a couple of steps to the procedures in your -20 TM's will make removing the track adjusting links easier for you tank mechs.



After you've broken the track, add this step:

Remove the idler wheel. This will give you room to do the work. As another added step, push or pull the pins out, using remover/replacer tool, NSN 5120-00-113-5265.

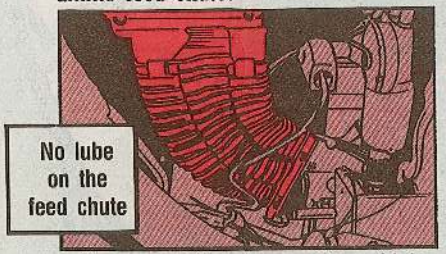
Here's why: If the rear link is installed with the threaded end of the pin toward the tank's outside, you have to push the pin out.

Adapter, NSN 5120-01-017-5328, and slide hammer puller, NSN 5120-00-557-3615, won't work by themselves. Adding the remover/replacer tool to the adapter does the trick. Use all three tools to push out the front link pin. Get a buddy to help hold the link when the last pin comes out. You'll get hurt if the link falls on you. Of course, installing the links will be easier with the tool, too. Just reverse the process.

M60A3 TTS Tanks...

Ruined By a 'Fix'

Crewmen, you can shoot yourselves in the foot if you get oil-can-happy around the commander's machine gun ammo feed chute.



You won't find any mention of lube in LO 9-2350-253-12, so don't lube the chute.

There **is** a good reason why you don't use oil. Just below the chute is the commander's laser rangefinder (LRF).

The oil you squirt on the ammo chute drips or runs onto the LRF and

ruins the seals and gaskets. When the seals and gaskets go bad, your LRF is out for the count.

M60A3 TTS Tanks...

Lay Off the PFN

Gunners, keep your fingers (and screwdrivers) off the pulse forming network (PFN) adjustment on your A3's electronics unit.

No matter what anybody tells you, you won't get a better downrange laser beam if you try to adjust the PFN with a screwdriver. All you'll do is screw up the works. The unit and the receiver/transmitter are adjusted to operate as a matched set.

DS has the tools and the know-how to make any necessary adjustments.

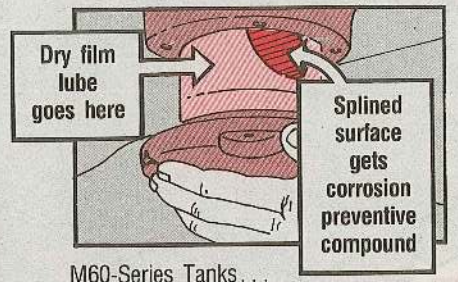
S-o-o-o-o, if you think your laser rangefinder is on the blink because of a lazy beam, get your support unit on the job. It is **their** job.

M48/M60-Series Tanks, AVLB's, M728...

Head Off Frozen Torsion Bars

Here's how you mechanics can cut down on the number of frozen torsion bars and anchors you have to remove. No more cutting torch and sledgehammer!

Before you install a torsion bar, apply corrosion preventive compound to the splined surface of the torsion bar anchor. NSN 8030-00-244-1293 gets a quart and NSN 8030-00-231-2345 gets a gallon.

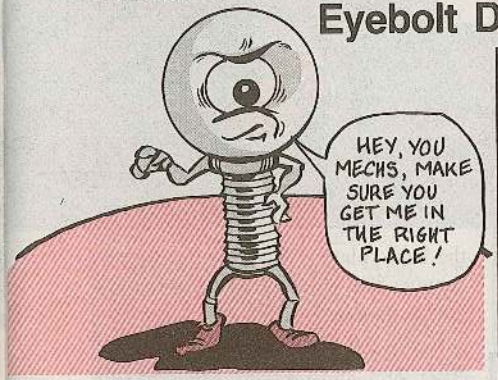


Then put a thin layer of dry film lube on the outside surface of the anchor just before you install it in the roadwheel housing. NSN 9150-00-948-6912 gets a quart and NSN 9150-00-948-7025 gets a gallon.

Next time you have to remove a torsion bar, it'll come out slick as a whistle.

M60-Series Tanks...

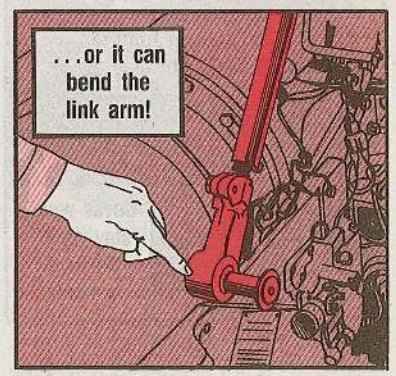
Eyebolt Damage



Keep the eyebolt used to pull the main gun breechblock in its place, crews and mechs. The eyebolt does not belong in the threaded hole in the gunner's guard assembly.

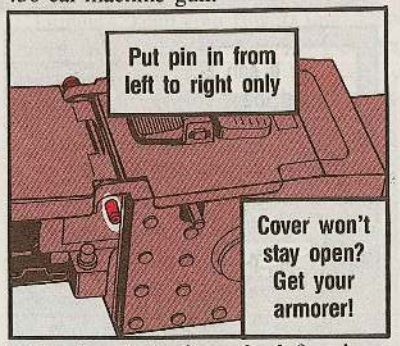
If it's put there, the bolt can bend or break the link between the ballistics drive and the commander's rangefinder when the main gun is depressed.

There are only two locations for the eyebolt—either screwed into the breechblock for its removal or installation, or in the gun tool roll.



Covers and Pins

There's a right way and a wrong way to install the cover assembly quick release pin on your tank-mounted .50-cal machine gun.



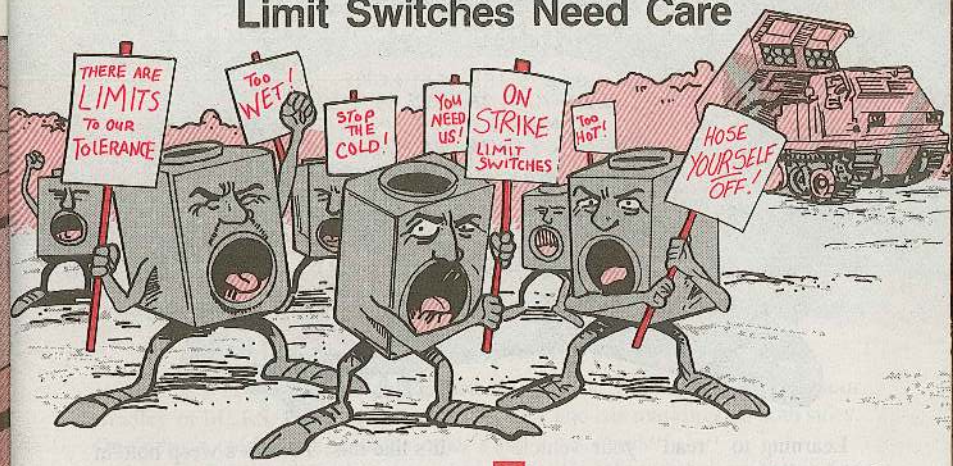
Put the pin in from the left only—that is, from the left side looking at the back plate. That way, you can remove the pin and cover when the gun is mounted.

If you put the pin in from the other way, you can't get it out once the gun's in the cupola.

The cover assembly is designed to stay open when it's raised for loading or unloading. If the cover assembly won't stay open, get your armorer on the job.

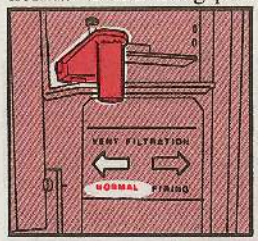
He'll check out the cover serrations and the cover detent in the accelerator assembly. The detent is spring loaded to fit into the serrations and hold the cover open. No spring tension? Serrations smoothed off or burred? Replace the springs or cover.

Limit Switches Need Care



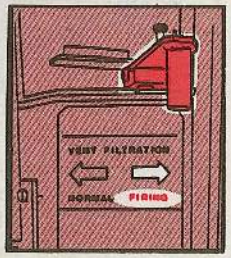
Your MLRS carrier and launcher have many limit switches. When they don't work right, you don't fire. Here're a couple of tips that'll keep you operating:

The cab ventilation switch gets damaged most often when the vent filtration handle is slammed from the normal to the firing positon.

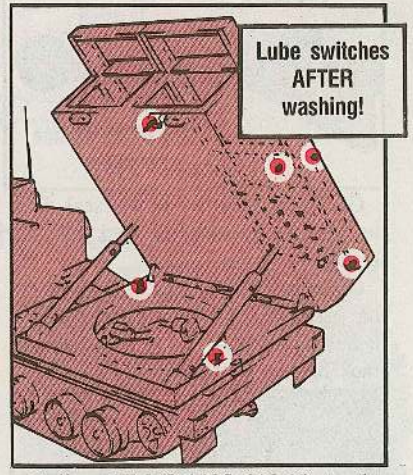


Also, TM 9-1450-646-10 doesn't tell you to put the handle back in the normal position after firing.

If the handle stays in the firing position, the switch is activated all the time. That means early wearout.



Launcher limit switches get hit by the elements—water, dirt, heat, cold, etc. Their biggest foes, tho, are water hoses.

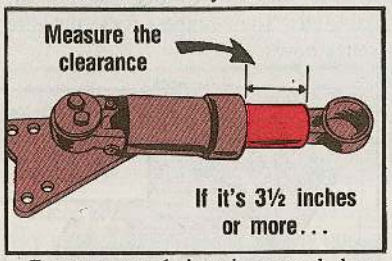


Follow TM 9-1425-646-10 to the letter. Wash first and then lube the switches. That way, the lube stays where it's needed and the switches stay on the job. The lubing needs to be done at least once a week.

M2/M3 Bradley, MLRS...

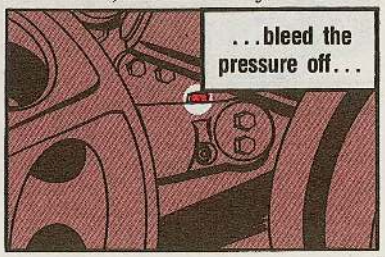
Track Adjuster Grease Leaks

Learning to "read" your vehicle's track adjuster can save you crewmen and mechs some dirty work.



Grease around the piston seal does not necessarily mean the track adjuster is shot.

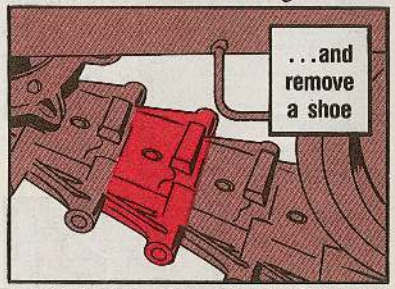
Get out a ruler and measure how far the piston is extended. If it's 3 1/2 inches or more, it's time to remove a track block, not fix an adjuster.



It's like this: There's a weep hole in the piston that's exposed when the piston travels to its maximum extension of 3 3/4 inches. Grease will weep out any time that hole is exposed.

Since the adjuster piston moves in and out during operation, the hole will be exposed often once the piston is out to 3 1/2 inches or more.

Your -10 TM tells you to remove a track block when the adjuster piston is out to 3 3/4 inches. Once it gets out to



3 1/2 inches, tho, start looking for grease around the piston. When you see grease, it's time to pull a block.

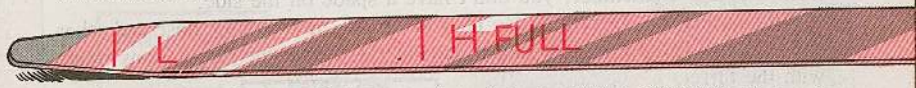
Of course, if grease shows up and the adjuster hasn't reached 3 1/2 inches or more, it's time to call in your mech.

Transmission Dipstick Reading

There's a new transmission dipstick that'll soon be showing up for your Bradley or MLRS. It has a gold-colored handle and has markings on both sides. One's for a cold check, and the other's for a hot check.

You use the "cold" side only to make sure it's safe to crank up the engine after an oil change or before troubleshooting for oil leaks.

The "hot" side is for the PMCS after-operation oil level check. It's done two minutes after shutdown.



The new procedures will show up in updates to TM 9-2350-252-10-1 and TM 9-1450-646-10. In the meantime, use the instructions that come with the new dipstick.

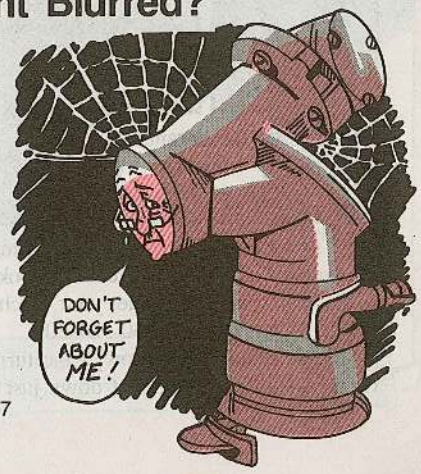
M2/M3 Bradley's...

Backup Sight Blurred?

Take a minute, Bradley gunners and commanders, to check out the backup sight on your vehicles. It may have bad lenses in the eyepiece.

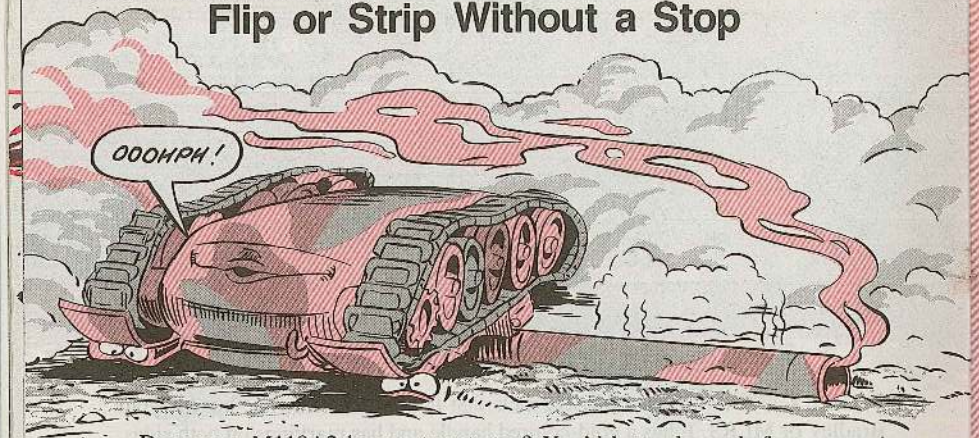
Sight at a distant object. If you have a clear field of view, no problem. If the view's blurred, let your mech know about it right now. He'll send it to DS for repair.

Even tho the backup sight is not used very often, it's vital if the integrated sight unit goes down or you lose turret power.



M110A2 SP Howitzer...

Flip or Strip Without a Stop

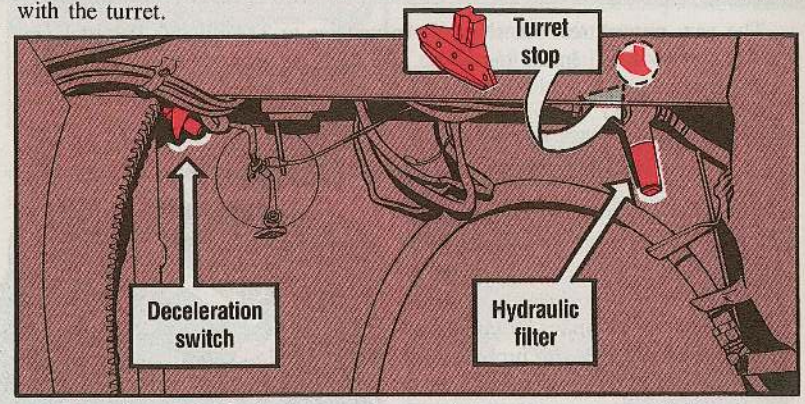


Does your M110A2 have a turret stop? You'd better know before you go!

The turret stop prevents the turret from being traversed more than 30 degrees to either side. That's good, because it saves you from two dangerous situations:

Without the stop, the gun could be traversed too far to one side for safe firing. Past 30 degrees, the firing platform is not stable enough to keep the vehicle from flipping. Remember, you don't have a spade on the side.

Without the stop, traversing too far will rip out the hydraulic hose and other connections. There's no slip ring in an M110A2 to let the connections rotate with the turret.



Be sure the stop's in place every time you prepare to traverse. It's just above the hydraulic filter in the turret well. Look for it during your before-operation PMCS.

If the stop is missing, let your mechanic know. The stop's listed as Item 18 in Fig 127 of TM 9-2350-304-20P.

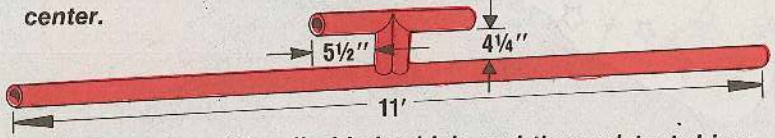
Also let your mech know if the turret deceleration switches aren't working right. They slow the turret down just before it hits the stop.

Aid to Recovery

Dear Editor,

Injuries to recovery personnel can be prevented if they don't have to stand between vehicles to hook up towbars.

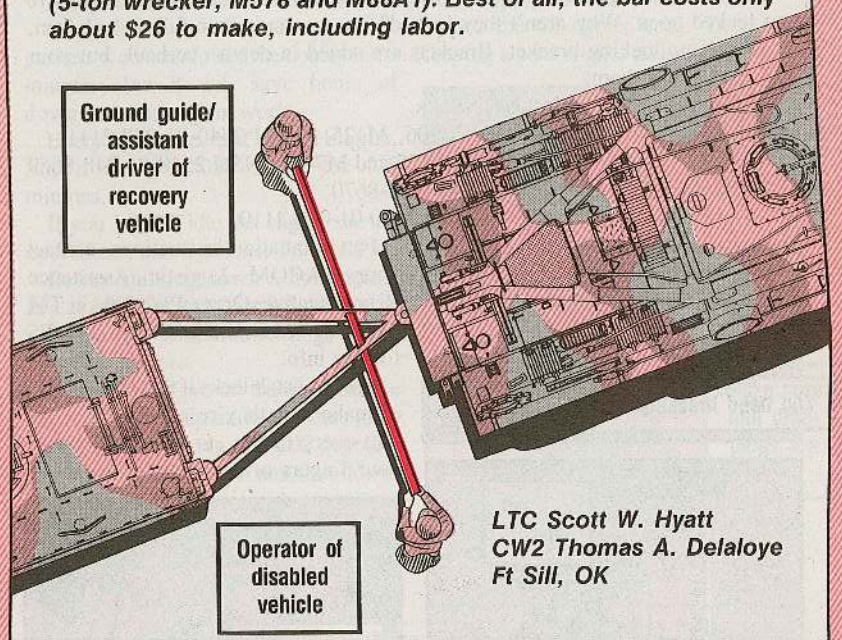
We came up with an 11-ft bar made of 1 1/2-in steel pipe. It has a 14-in tee made of the same 1/8-in thick pipe welded in the center.



The operator of the disabled vehicle and the assistant driver or ground guide for the recovery vehicle use the bar to hold the towbar while the recovery vehicle driver makes the hookup. The bar tee fits in the V-shaped end of the towbar.

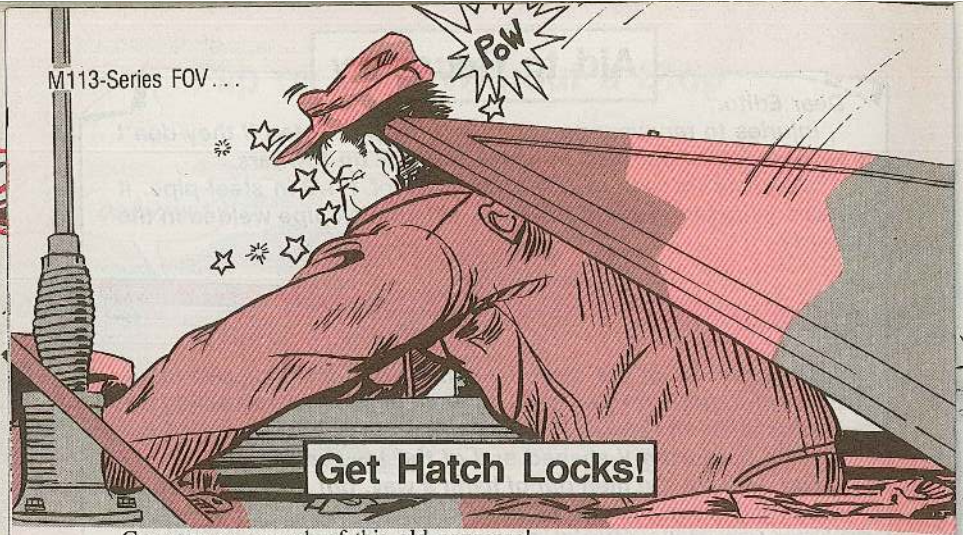
Not only are the men out of harm's way, but they get to share the lifting weight of the towbar.

The bar works with all Army towbars and recovery vehicles (5-ton wrecker, M578 and M88A1). Best of all, the bar costs only about $26 to make, including labor.



LTC Scott W. Hyatt
CW2 Thomas A. Delaloye
Ft Sill, OK

(Editor's note—A great way to reduce injuries and save lives.)



Get Hatch Locks!

Come now, enough of this old nonsense!

People are still getting banged up by hatches that slam shut—because they're not locked open. Why aren't they locked? Because crewmen fail to lock 'em, or there's no locking bracket. Brackets are added in depot overhaul, but your unit can install them.

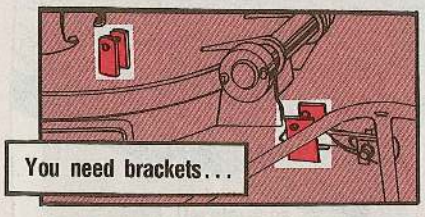
Kits are available with these NSN's:

Commander's hatch (M113, M106, M125)—NSN 2540-01-050-2111

Driver's hatch (M113, M106, M125 and M741)—NSN 2540-01-048-8669

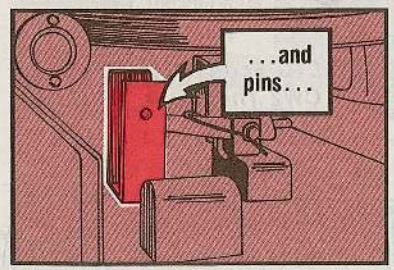
(M577's only)—NSN 2540-01-048-8670

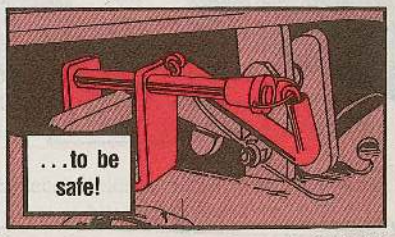
Cargo hatch (all vehicles)—NSN 2540-01-050-2110



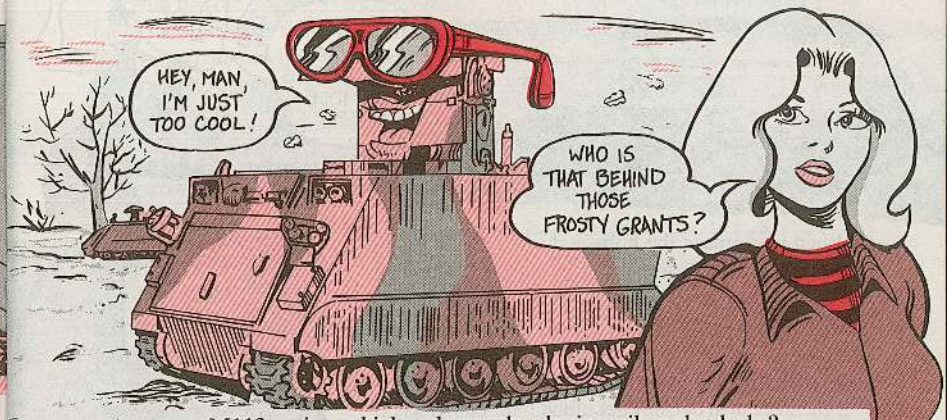
For installation instructions, contact your TACOM Logistic Assistance Representative. Or see Para 3-6g in TM 43-0143. TM not on hand? Write to PS for the info.

Use the hatch locks if they're installed or make sure they're added. Then use 'em every time...to save your head, your fingers or maybe your life.



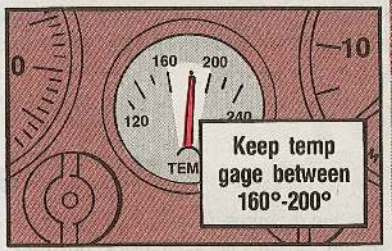


Keep a Cool Engine



Are your M113-series vehicles always developing oil cooler leaks?

Could be an overheated engine has warped the oil cooler core. Then the gaskets won't seal, and the cooler leaks. Keeping a cool engine takes a few extra minutes, but it will save hours of downtime and repair work.

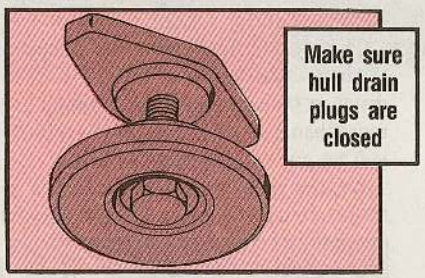


Every time you start a cold engine, run it at 800-1,000 RPM for 3-5 minutes.

If you MUST idle the engine during operations, run it at least 1,000 RPM.

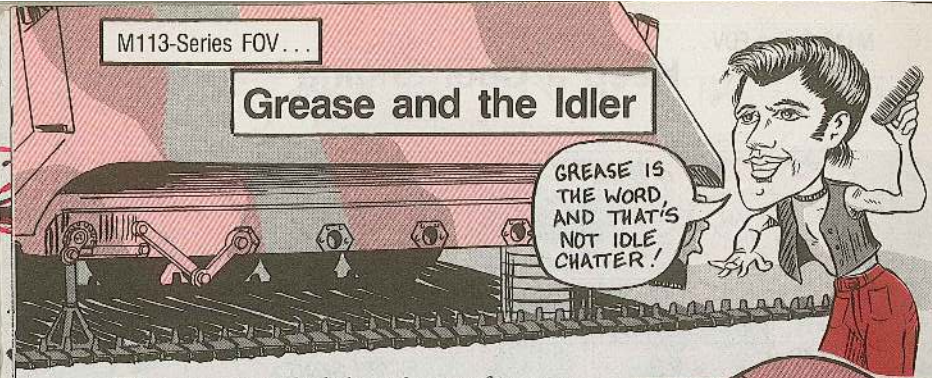
Before shutting down a hot engine, idle at 650-700 RPM for 3-5 minutes—or until the temperature gage reads 180-185 degrees.

Keep a sharp eye on the temperature gage. During operations, the gage should read between 160-200 degrees. If it's higher, idle down and shut down. Check the coolant level and remove any leaves, limbs or trash clogging the intake grille and deck screen's air flow. Never store camouflage netting and such over the radiator grille.



NEVER operate your vehicle with the hull drain plugs out. If you do, engine cooling air goes down the drain instead of thru the engine compartment. This causes the engine and transmission to run hot.

Grease and the Idler

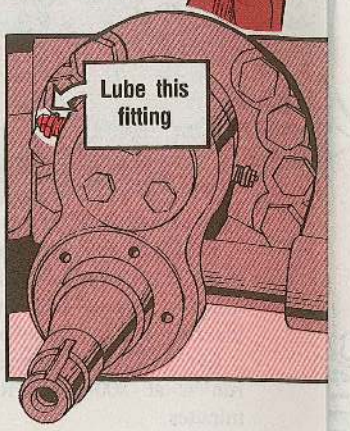


When you grease the hubs and arms of your carrier's roadwheels, don't overlook the fittings on the idler. They need lubing, too.

This is especially true for the grease fitting just above the end of the track adjuster. It's generally covered with mud and overlooked.

If the idler arm doesn't get lubed like the LO says, you may end up with a "frozen" arm.

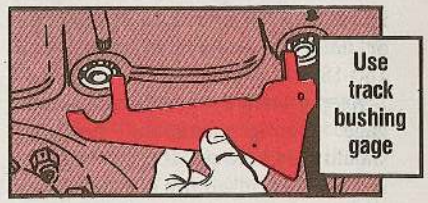
Since the track adjuster increases and decreases track tension by moving the idler back and forth, a frozen arm means you have a hard time adjusting track tension. And if you can't free it up, the carrier gets a trip to DS.



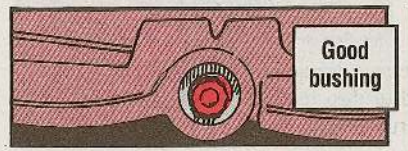
The Eyes Have It

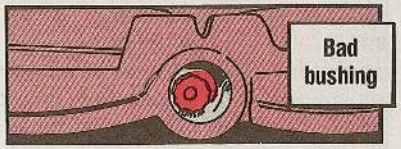
When it comes down to it, your eyes are an aid in checking track bushing wear.

The wear gage in your BII is best. With it, you can tell quickly if the distance between the shoe bushing is more than 4 15/16 inches. If it's more, you've got worn bushings.



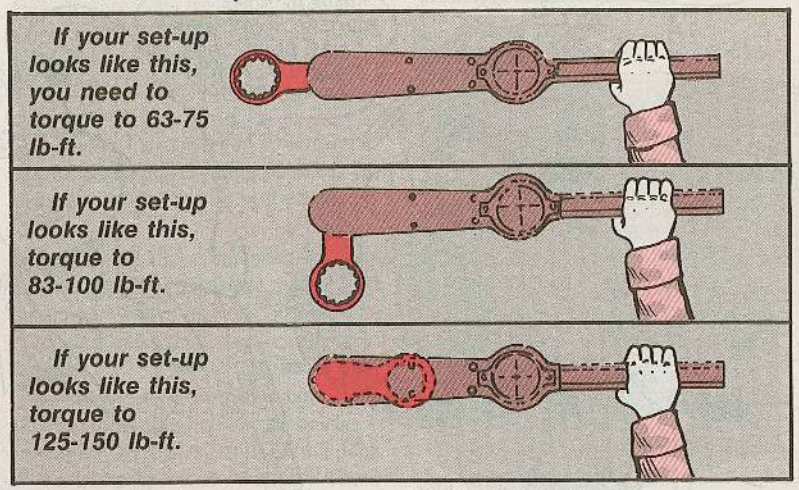
Anything less than 4 15/16 inches is OK—maybe. That's where you've got to use your eyes. Keep an eye on your track.





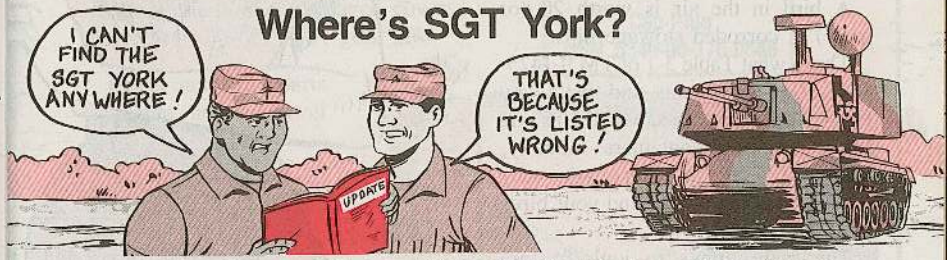
Torque Adapter Use

If you use the torque wrench adapter when torquing the bolts on the 7C U-joint on M113-series carriers, remember one thing: You may get more or less torque on the bolt than what you read on the wrench.



In all three situations, you'll be putting 83-100 lb-ft on the bolt.

Where's SGT York?



Don't fret if you can't find the M247 (SGT York) in Appendix E of DA Pam 738-750 in Maintenance Management UPDATE 6 (May 85). It's there—on Page 130, Section 1, under Equipment Category Code (ECC) GD, Gun AAA SP 20 MM. The ECC's right, but the 20 MM is wrong. The headshed says the SGT York will appear under 40 MM guns in UPDATE 7, scheduled for Nov 85.

Repair, Don't Toss

The next time you replace a track tensioner assembly on your M113-series vehicle, don't toss the old one. It's repairable. Turn it in to your DS unit and save Uncle $83.74.

Chaparral...

Corrosion Can Clip Their Wings!

A bird in the air is worth 20 (or more) in corroded stowage bins.

That's what Table 3-1 of TM 9-1425-1586-10 is telling you, and that's why you must inspect the stowage bins and missile storage containers monthly. Moisture gets in, corrodes your Chaparral components, and your birds are land-bound.

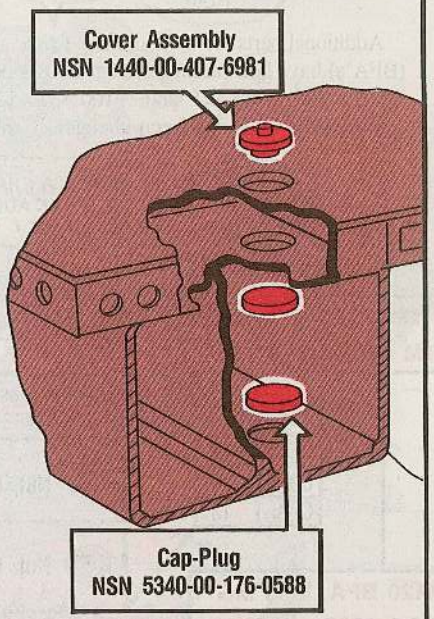
The main things to look for are missing cap-plugs and cover assemblies. If they're gone, water will get in.

1. Remove the missile storage containers and see that the four cap-plugs are in place on each bin. Replace missing cap-plugs. Use NSN 5340-00-176-0588.

2. Look for cracks or punctures in cap-plugs. Replace damaged ones. Be sure all are fully seated in their access holes.

3. Inspect the containers and the stowage bins for moisture, water and corrosion. Wipe up any water, and have your repairman repair corrosion damage.

4. There should be four covers on the base mounting bolt access holes... just above the stowage bin on the deck of the launcher base assembly. There are four holes, two each front and back. Replace missing or damaged covers. NSN 1440-00-407-6981 gets 'em.



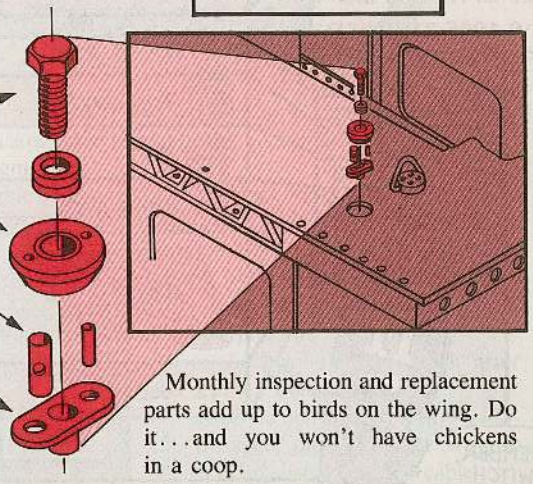
Cover assembly parts available at unit level include:

Machine bolt
NSN 5306-00-405-4395

Cover
PN 11072774
FSCM 18876

Pin
NSN 5315-01-115-8275

Bar assembly
PN 11070405
FSCM 18876



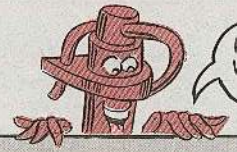
RIC for both PN's is B64.

Monthly inspection and replacement parts add up to birds on the wing. Do it...and you won't have chickens in a coop.

NSN's for .50 Cal BFA's

Additional parts for .50-cal blank firing attachments (BFA's) have been authorized for BFA's covered by TM 9-1005-314-12&P and 9-1005-315-12&P.

One SMR Code has been changed. Cover, Item 11, Page C-10, TM 9-1005-315-12&P, has been switched from XAOZZ to PAOZZ.



M19 BFA, M2 MG
TM 9-1005-314-12&P

Page	Item	Part	NSN
C-8	1	Quick-release pin	5340-01-112-9302
C-8	6	Nut, hexagon	5310-01-111-2785
C-10	13	Nut, hexagon	5310-00-059-9264

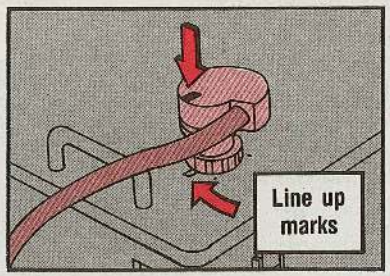
M20 BFA, M85 MG
TM 9-1005-315-12&P

Page	Item	Part	NSN
C-8	1	Nut, hexagon	5310-01-111-2785
C-8	6	Nut	5310-00-051-8627
C-8	8	Pin, grooved	5315-01-121-9522
C-10	11	Cover	1005-01-158-8377
C-10	16	Setscrew	5305-00-715-1214

TOW 2 Cable Protection

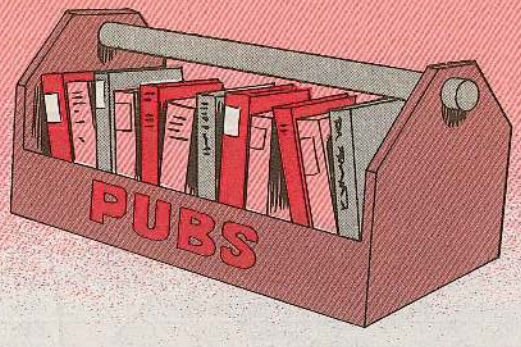
Save time and cables on your TOW 2 missile system with a quick look at the alignment marks. Haste makes waste when you force connectors into place. Bent pins put your whole system down.

To connect the 2W1 cable to your missile guidance set (MGS) J1 jack, first line up the yellow mark on the cable connector head with the mark on the left—9 o'clock—side of the J1 jack. Then push the connector into place. No bent pins, no time lost.



Turn the locking nut down tight **after** you seat the connector.

Pages 2-58 and 2-59 of TM 9-1425-450-12 spell out the right way to connect and disconnect the cable.



This is a selected list of recent pubs of interest to organizational maintenance personnel. This list was made from a computer printout provided by The Adjutant General.

TM 3-6665-329-13&P Mar M140 Chemical agent test set
TM 5-2420-213-20P Jul 630 MB wheeled tractor
TM 5-3805-251-20P May MW-24B scoop loader
TM 5-3810-287-20P May L36M crane/shovel
TM 5-3820-245-14&P May Texoma 270-9 earth auger
TM 5-3895-275-20P May Barber-Greene SA-35 paving machine
TM 5-6675-308-12 Apr AN/USQ-70 Pads
TM 9-1410-485-20P May LANCE
TM 9-1410-530-24P Jul HAWK
TM 9-1425-470-L Mar TOW LOAP
TM 9-1425-485-24P Jul LANCE
TM 9-1450-486-20P Jul LANCE
TM 9-1450-646-20-1 May Multiple Launch Rocket System, M993
TM 9-1450-646-20-2 May Multiple Launch Rocket System, M993
TM 9-1450-646-20-3 May Multiple Launch Rocket System, M993
TM 9-1450-646-20-4 May Multiple Launch Rocket System, M993
TM 9-1450-646-20-5 May Multiple Launch Rocket System, M993
TM 9-2320-242-20P Mar M561/M792 Gama Goat
TM 9-2320-269-20-1 Jun M876 telephone maintenance truck
TM 9-2320-285-10 Jun M878A1 yard tractor truck
TM 9-2320-258-20P May M746 tractor truck
TM 9-2320-260-10 Jun M809-series 5-ton trucks
TM 11-1520-210-20P May Electronic equipment configuration, Model UH-1D, UH-1H, UH-1V and EH-1X
TM 55-2840-251-23P Apr Engine, aircraft, turboprop, T74-CP-700
TM 55-4920-438-13&P Apr Operator's and aviation intermediate maintenance (AVIM) manual including repair parts and special tools list for power train shop, P/N SC 4920-97-CL-A65
TM 55-4920-439-13&P May Electric/Instrument shop, P/N SC 4920-97-CL-A62
TM 55-4920-441-13&P Apr Tool crib shop, P/N SC 4920-97-CL-A69
TM 11-1520-237-23P May UH-60A helicopter system
TM 11-5820-667-20P May AN/PRC-77 radio set
TM 11-5820-670-12 May AN/ARC-131 radio set
TM 11-5821-320-20P May Control unit, communications, C-10414(V)3/ARC
TM 55-1520-217-MTF-1 Jun Maintenance test flight manual for CH-54A
TM 55-1905-219-14-11 May Operator's, organizational, direct support and general support maintenance manual for landing craft utility, LCU 1667-1670
TB 9-2300-295-15/26 May AVCO Agt 1500 engine warranty
TB 55-1510-209-20-23 Jun Inspection and marking of the elevator trim tab system, U-21/RU-21
TB 55-1520-217-20-26 May One-time inspection for defective main rotor blades, CH-54B
TB 55-1520-217-20-27 May One-time inspection for correct installation of main gearbox chip detector assembly, CH-54B
TB 55-1520-228-20-34 May Recurring inspection and replacement of main rotor pitch link assemblies, Part No. 206-010-342-1 and -3 on OH-58A and C helicopters
TB 55-1520-237-20-65 May One-time inspection of main rotor spindles, UH-60A

AUDIO-VISUAL STUFF

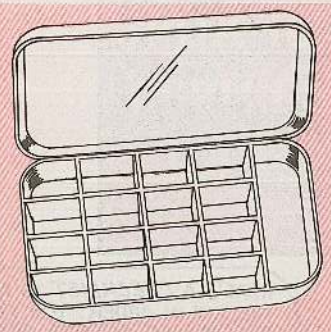
Available at battalion or post Learning Center

TEC Lessons

011-331-4310-F Disassembly and Reassembly of M16A1 rifle
043-441-7821-F Monthly PMCS on the M54A1 Launching Station, Part II
221-441-5705-F FAAR: Orient Radar
221-441-5706-F Energize the FAAR
221-441-5713-F FAAR: Remove antenna reflectors and Aerodynamic Fin
221-441-5714-F FAAR: Remove Antenna Horn and Position Mast for Travel
221-441-5717-F FAAR: Prepare for Airlift, Part II
221-441-5718-F FAAR: Unload After Airlift
221-441-5721-F FAAR: Daily Electrical Checks, Part II
221-441-5723-F FAAR: Daily Electrical Checks, Part IV
221-441-5734-F FAAR: Initial Control Setting on the Electronic Search Central
221-441-5735-F FAAR: Interrogator Set Turn-on Procedures
481-091-1182-F Automotive Electrical System, Principles and Operation, Part II

Small Arms Repairman Tool Kit

Black and white photostats of this material are available from PS Magazine for reprinting



BOX, SMALL PARTS: 17 compartments
NSN 8115-00-663-0212

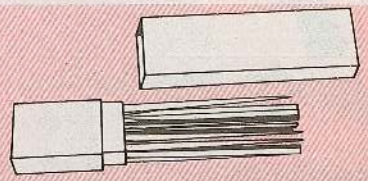
BRUSH, FILE CLEANER:
7920-00-224-7987

CAPS, VISE JAW: for 2 1/2-in jaw
5120-00-246-4746

CHISEL, HAND COLD: 3/8-in cut
5110-00-242-3457

DRIFTPIN: 1/2-in diameter
5120-00-239-0036

DRIFTPIN: 1/4-in diameter
5120-00-239-0035



FILE SET: Swiss pattern, needle type
5110-00-204-2685
consisting of:

barrette -242-0127

crossing -242-0146

equalling -156-0062

flat -156-0063

half-round -239-3269

joint -239-3281

knife -156-0065

marking -245-4165

round -245-4177

slitting -239-7614

square -239-7602

three-square -239-7590

FILE, HAND: flat, double cut,
6-in long 5110-00-234-6532

FILE, HAND: half round, double cut,
6-in long 5110-00-241-9149

FILE, HAND: round, 15/64-in diameter
6-in long 5110-00-234-6550

FILE, HAND: slim taper, 6-in long
5110-00-234-6528

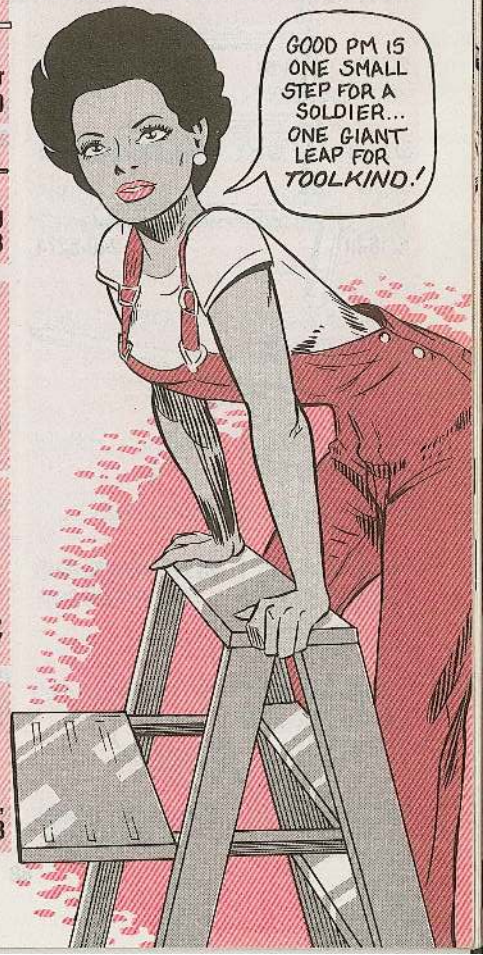
HAMMER, HAND: machinist's
ball peen, 8-oz 5120-00-061-8541

HAMMER, HAND: hard plastic head,
8-oz 5120-01-072-7987

HAMMER, HAND: soft brass head,
4-oz 5120-00-242-3908

HANDLE, FILE: adjustable jaws
5110-00-595-8325

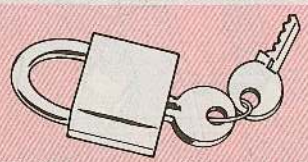
HANDLE, SOCKET WRENCH: 3/8-in
drive, palm grip 5120-00-786-3782



KEY, SOCKET HEAD SCREW:

1/16-in	NSN 5120-00-198-5398
5/64-in	-224-2504
3/32-in	-242-7410
7/64-in	-889-2162
1/8-in	-240-5292
5/32-in	-198-5392
3/16-in	-240-5300
5/16-in	-240-5274

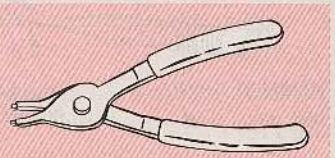
OILER, HAND: 6-oz
4930-00-985-2604



PADLOCK: 9-in chain, 2 keys
5340-00-682-1508

PLIERS: long round nose, cutter, 6-in long
5120-00-247-5177

PLIERS, DIAGONAL CUTTING: 6-in long.
5110-00-239-8253



PLIERS, RETAINING RING:
5120-00-088-9393

PLIERS: parallel action jaws, 6 1/2-in long
5120-00-224-1541

PUNCH, DRIVE PIN: 0.055-in diameter
5120-00-840-7289

PUNCH SET, DRIVE PIN: 9 punches, with case
5120-00-883-3003

Point diameter (inches)	NSN 5120-00
1/16	-240-6082
3/32	-242-3435
1/8	-242-5966
5/32	-240-6104
3/16	-293-0791
7/32	-293-0792
1/4	-240-6083
5/16	-293-0793
3/8	-273-0001

PUNCH CENTER: 5/64-in diameter
5120-00-293-3510

PUNCH CENTER: 5/32-in diameter
5120-00-293-3509

PUNCH, DRIVE PIN: starting, 1/16-in diameter
5120-00-240-6092

PUNCH, DRIVE PIN: starting, 1/8-in diameter
5120-00-242-3433

PUNCH, DRIVE PIN: 0.055-in diameter
5120-00-840-7289

PUNCH, DRIVE PIN: 0.070-in diameter
5120-00-840-7288

PUNCH, DRIVE PIN: 1/16-in diameter
5120-00-752-9030

PUNCH, DRIVE PIN: 1/8-in diameter
5120-00-223-1014

PUNCH, DRIVE PIN: 5/32-in diameter
5120-00-752-9031

SCREWDRIVER, CROSS TIP: No. 1 tip, 3-in long, with 3/8-in square drive
5120-00-764-8080

SCREWDRIVER, CROSS TIP: No. 2 tip, 4 1/2-in long with 3/8-in square drive
5120-00-764-8097

SCREWDRIVER, FLAT TIP: 3/8-in wide, 8-in long 5120-00-237-6985

SCREWDRIVER, FLAT TIP: 1/8-in wide, 2-in long, with pocket clip
5120-00-236-2140

SCREWDRIVER, FLAT TIP: 1/4-in wide, 1 1/2-in long 5120-00-832-6223

SCREWDRIVER, FLAT TIP: 0.141-in wide, 5-in long, with 3/8-in square drive
5120-00-010-7913

SCREWDRIVER, FLAT TIP: 1/4-in wide, 4-in long, with 3/8-in square drive
5120-00-764-8058

SCREWDRIVER, FLAT TIP: 3/16-in wide, 5-in long, with 3/8-in square drive
5120-00-042-6837

SCREWDRIVER, JEWELER'S: 0.070-in wide 5120-00-180-0728

STONE, SHARPENING: half-round, grade fine, 4 x 3/8 x 3/16-in
5345-00-224-6595

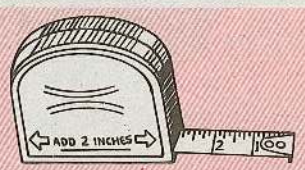
STONE, SHARPENING: grade extra fine, 6 x 1/2 x 1/2-in 5345-00-584-4607

STONE, SHARPENING: tapered, hard grit, 4 x 1 3/4 x 1/2-in 5345-00-243-6086

STONE, SHARPENING: hard grit, round, 5/16-in dia, 3 1/2-in long
5345-00-198-8060

STONE, SHARPENING: hard grit, 3 x 1/4 x 1/4-in 5345-00-243-6087

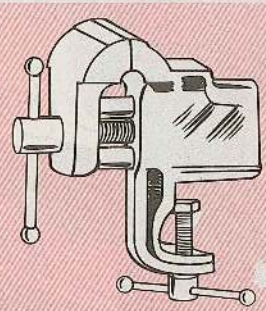
STONE, SHARPENING: hard grit, 3 1/2 x 1/2 x 1/2-in 5345-00-584-4483



TAPE, MEASURING: 72 inches long
5210-00-287-3335

TOOLBOX, PORTABLE: 7 drawers, 20 x 8 1/2 x 13-in 5140-00-319-5079

TWEEZERS, CRAFTSMAN: 4 1/2-in long
5120-00-252-7720



VISE, BENCH: clamp base, anvil back, 2 1/2-in jaw, 2 1/4-in jaw opening
5120-00-243-1372

WIRE TWISTER PLIERS: with cutter, 12-in long 5120-00-542-4171

WRENCH, ADJUSTABLE: 0 to 1.135-in opening, 10-in long 5120-00-449-8083

WRENCH, COMBINATION BOX AND OPEN END: 23-mm 5120-01-054-7140

WRENCH, OPEN END: 3/4-in
5120-00-293-1828

M151-Series 1/4-Ton Truck...

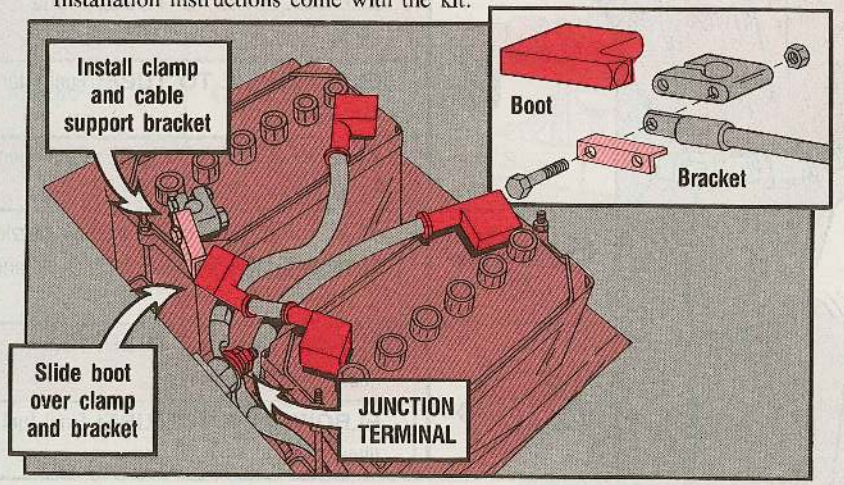
Battery Terminal Kit Helps

If your 1/4-tonner's equipped with a radio or other electrical accessory, get a battery junction terminal kit, NSN 5940-01-146-7133.

You won't need to disturb battery cables when connecting or disconnecting your radio or other accessory. They hook up to a separate terminal.

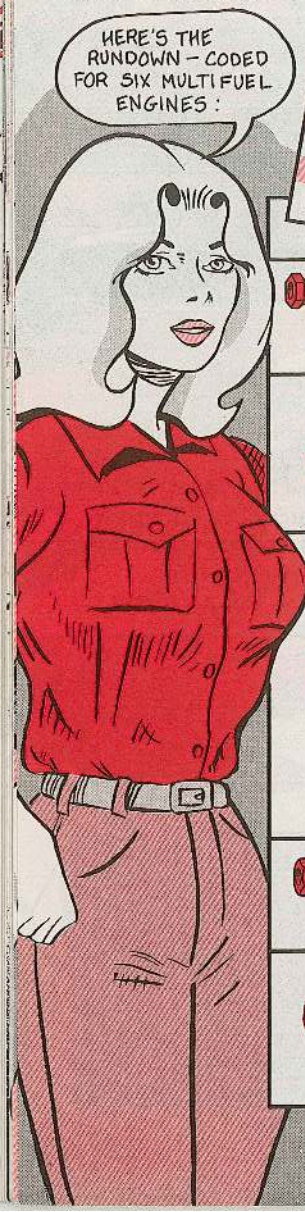
The kit also includes four rubber terminal boots and four cable support brackets. Boots work better than flaps by fitting snugly around battery connectors and posts, preventing contact between terminals and the metal battery box cover. Boots can be ordered separately with NSN 2590-00-999-9867.

Support brackets keep cables from bouncing and loosening at the clamps. Installation instructions come with the kit.



Multifuel Engine...

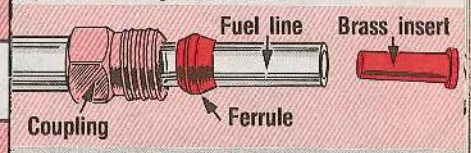
Are you looking for brass fittings used on your 2 1/2-ton or 5-ton truck's engine fuel system?

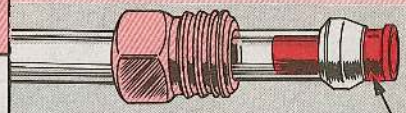


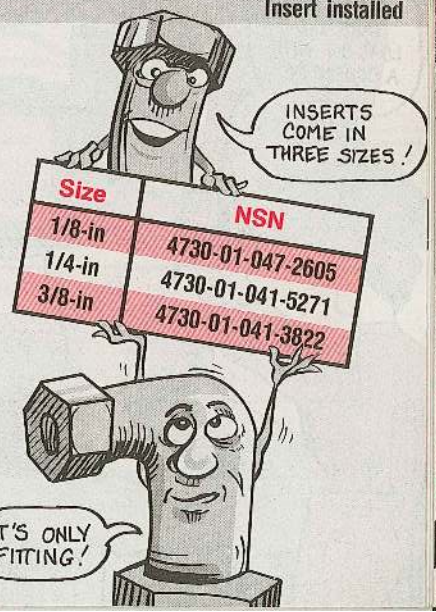
Brass Fittings

	NOMENCLATURE	ENGINE CODE	NSN
	**TEE, TUBE:** Flame heater nozzle fuel return to injector nozzle return tube at cylinder Nos. 3 and 4.	ABCDEF	4730-00-889-6886
	**ADAPTER, STRAIGHT, PIPE TO TUBE:** Flame heater nozzle fuel inlet.	AB	4730-00-289-1243
	ADAPTER, STRAIGHT, PIPE TO TUBE: Flame heater nozzle fuel return.	BCDEF	4730-00-289-1242
	**ELBOW, PIPE TO TUBE:** Injector nozzle fuel return cylinder No. 6.	ABCDEF	4730-00-882-8621
	ELBOW, PIPE TO TUBE: Flame heater, fuel pump outlet.	BCDEF	4730-00-078-9773
	ELBOW, PIPE TO TUBE: Fuel filter inlet and outlet.	ABCDEF	4730-00-289-4124
	ELBOW, PIPE TO TUBE: Fuel injector pump overflow return to filter tee.	BCDEF	4730-00-203-2866
	**TEE, PIPE TO TUBE:** Injector nozzle fuel return, cylinder Nos. 1, 2, 3, 4, and 6.	F	4730-00-289-5420
	**ELBOW, PIPE TO TUBE:** Flame heater fuel pump inlet.	ABDEF	4730-00-484-0558
	ELBOW, PIPE TO TUBE: Final fuel filter inlet.	A	4730-00-124-5626

Use brass inserts to prevent cutting plastic lines when you're tightening the nut on the tee, elbow or adapter. This takes pressure off the plastic tube and ups chances against leaks.



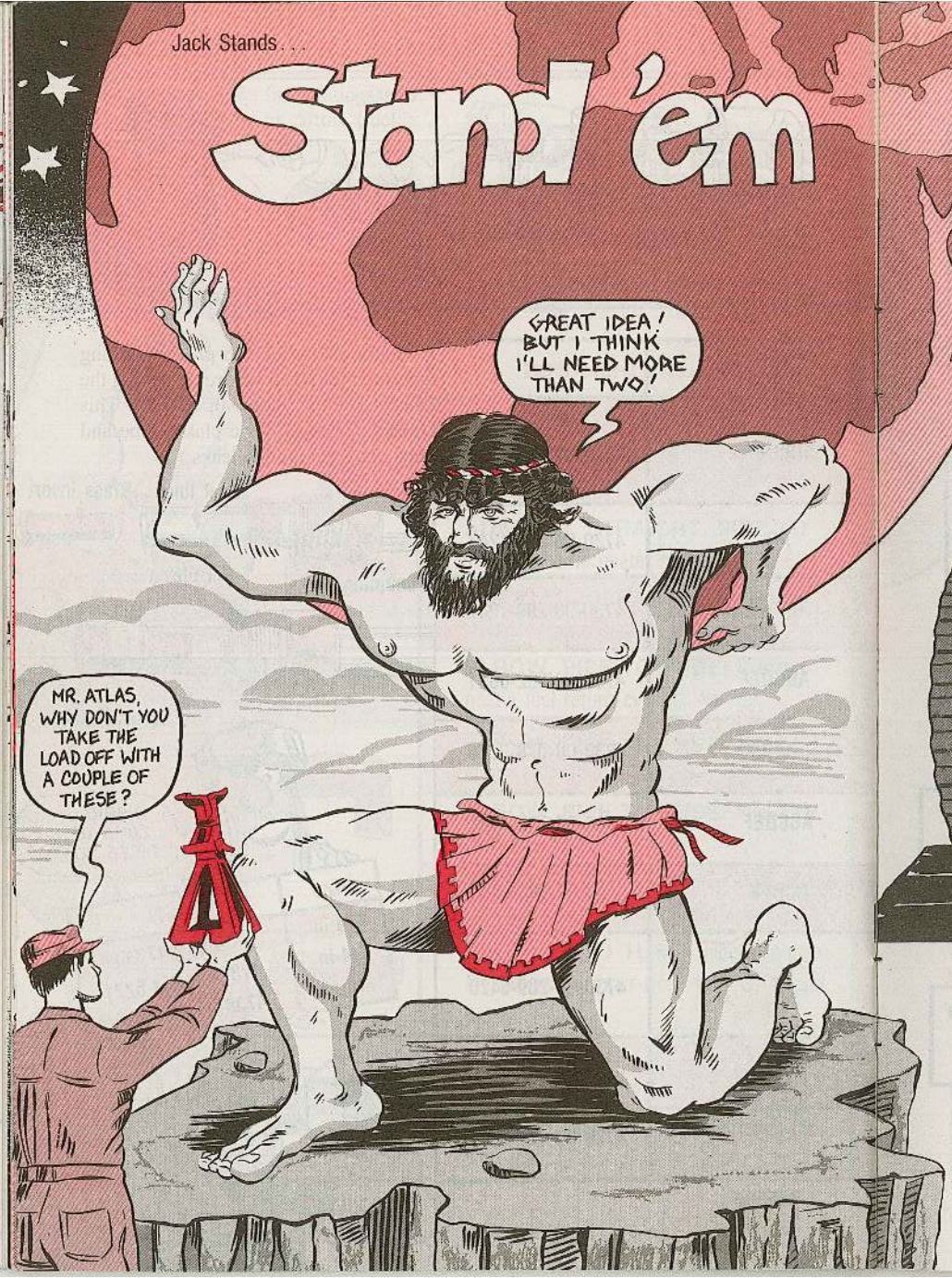




Size	NSN
1/8-in	4730-01-047-2605
1/4-in	4730-01-041-5271
3/8-in	4730-01-041-3822

Jack Stands . . .

Stand 'em Safely!



△Park the vehicle on a level, hard surface.
△Shut off the engine.
△Set the handbrake.
△Chock the wheels not being raised.
△Raise the entire axle. Never one end and then the other. This places an uneven strain on the jack stand. It might break or fall.

△Always use jack stands in pairs.

△Keep 'em straight—no more than 5° from vertical.
△Use jack stands under a loaded vehicle only in an emergency.
△Lower the vehicle slowly onto the stands.
△Center the load on the jack saddle and be sure the rack and pawl is engaged.

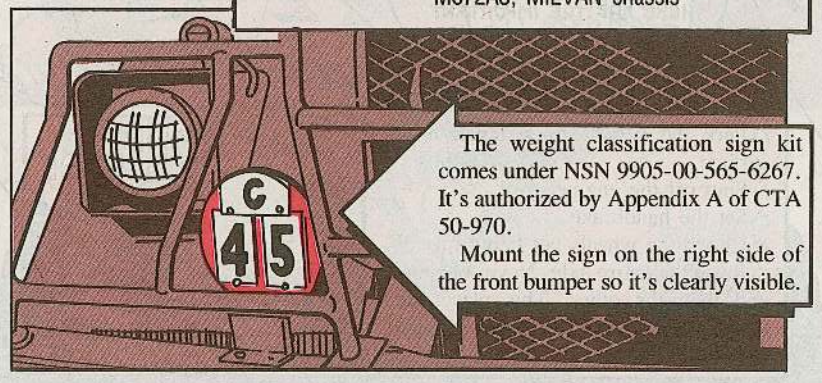
If your jack stand suffers the slightest damage, it's not safe. Don't use it!

For shop-type lifting operations, use a 10-ton capacity floor jack, NSN 4910-00-289-7233, and a 7-ton capacity jack stand, NSN 4910-00-251-8013.

Bridge Weight Numbers

Here're the bridge weight classification numbers for your M915-series tractor trucks:

Model	Truck alone	Semitrailer	Truck & Semi-trailer Loaded
M915	8	M872, M127	46
M916	12	M172A1, M870	45
M920	14	M870, M172A1, M872A1	58
M915A1	8	M872, M872A1, M872A2, M872A3, MILVAN chassis	46



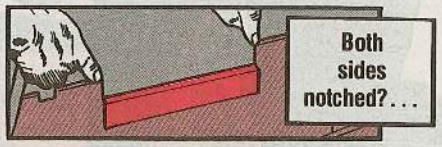
The weight classification sign kit comes under NSN 9905-00-565-6267. It's authorized by Appendix A of CTA 50-970.

Mount the sign on the right side of the front bumper so it's clearly visible.

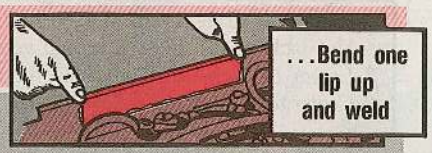
5-ton Battery Box Fix

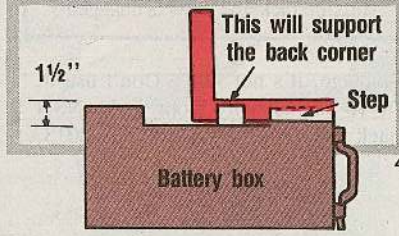
Battery boxes for M809-series 5-ton trucks are notched on each side so the battery cables won't get pinched.

The inside edges need to be notched to clear the cables. The step cover rests on the outside edges... and the outside notches leave the cover unsupported. When you step on the cover, it presses down on the battery terminals and shorts the batteries.



Prevent that by heating the outside notch on each box and straightening the lip. Then weld both ends.

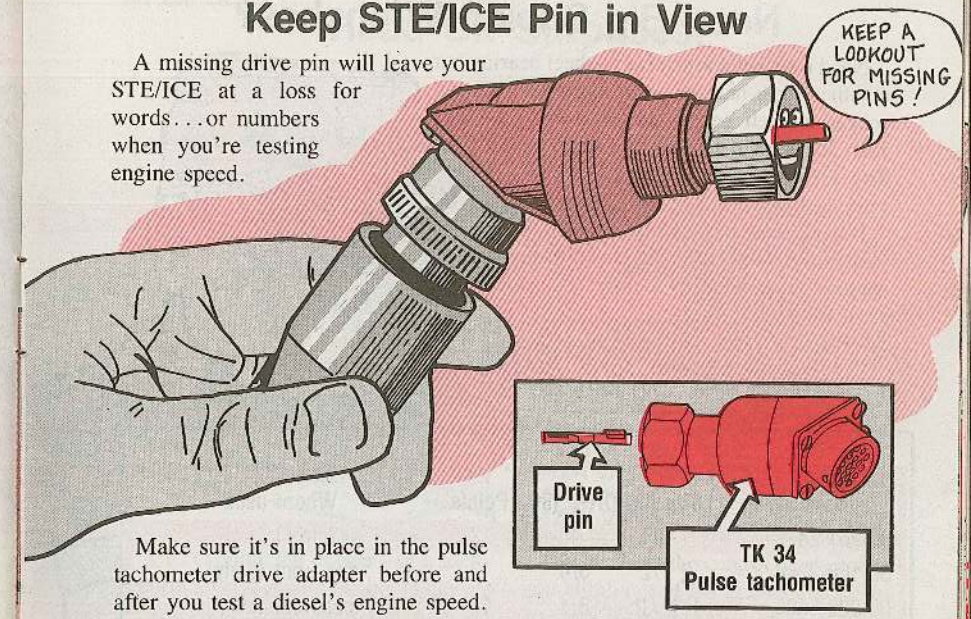




Another way is to weld 1 1/2x1/2-in steel barstock to the bottom of the step cover.

Keep STE/ICE Pin in View

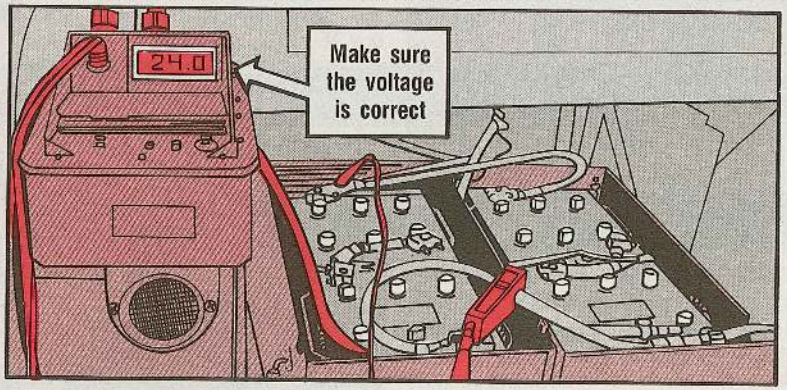
A missing drive pin will leave your STE/ICE at a loss for words...or numbers when you're testing engine speed.



Make sure it's in place in the pulse tachometer drive adapter before and after you test a diesel's engine speed.

STE/ICE TM Voltage Wrong

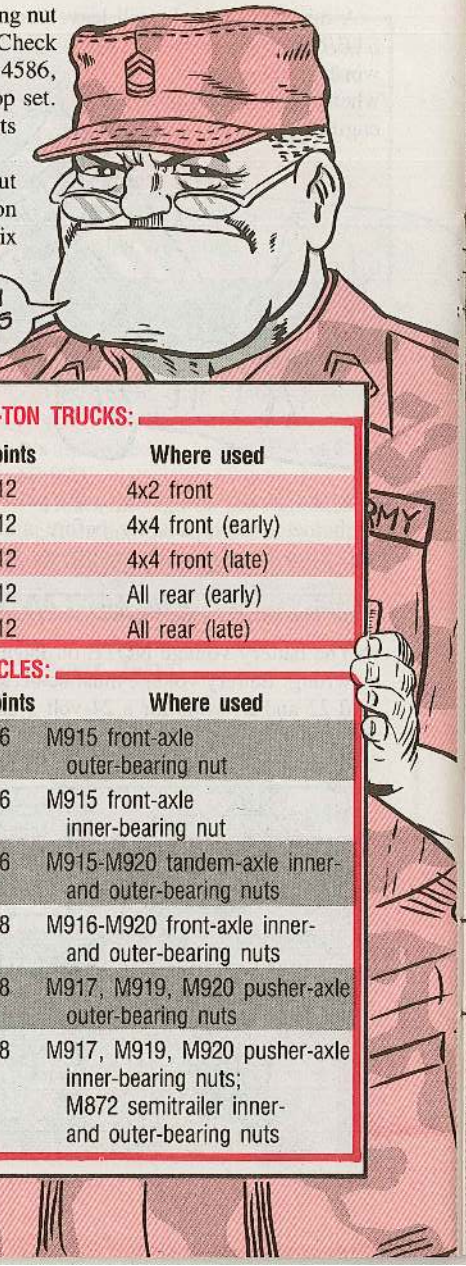
The battery voltage NOTE on Page 2-24 of TM 9-4910-571-12&P (Oct 84) is wrong. Battery voltage must be between 11 and 12 volts for a 12-volt system, and 22 and 24 volts for a 24-volt system. If voltage is not within these limits, do Step 6, like the TM says. The 9 to 32 volts listed in the TM are the minimum and maximum voltage in which STE/ICE operates.



Need Big Socket Wrenches?

Need a socket wrench for a wheel bearing nut or other large nuts on your equipment? Check socket wrench set, NSN 5120-00-169-4586, first. It's part of the No. 1 Common shop set. The set contains 19 sockets that fit nuts ranging from 2 3/32 to 4 7/8 inches.

If you need the socket wrench set but you're not authorized the No. 1 Common shop set, your authority to order is Appendix A of CTA 50-970.



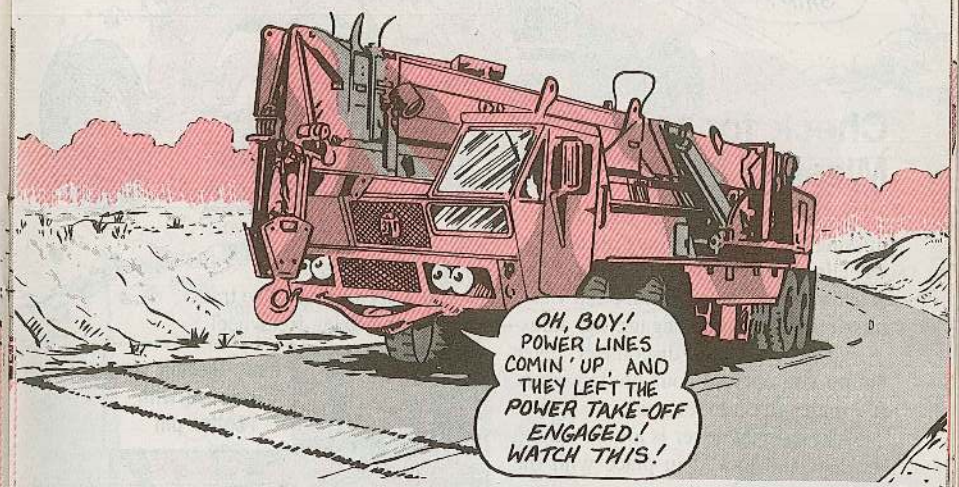
M880-SERIES 1 1/4-TON TRUCKS:

NSN 5120-	Size (in)	Drive (in)	Points	Where used
00-261-2837	1 3/4	1	12	4x2 front
00-168-2286	2 1/2	3/4	12	4x4 front (early)
00-232-5685	1 11/16	3/4	12	4x4 front (late)
01-011-8892	2 3/8	3/4	12	All rear (early)
00-261-2846	2 9/16	1	12	All rear (late)

OTHER VEHICLES:

NSN	Size (in)	Drive (in)	Points	Where used
5120-01-089-9068	2 1/4	3/4	6	M915 front-axle outer-bearing nut
5120-01-112-0593	2 5/8	3/4	6	M915 front-axle inner-bearing nut
5120-01-090-9319	4	3/4	6	M915-M920 tandem-axle inner- and outer-bearing nuts
5120-01-145-7459 (in No. 1 Common)	4 7/8	3/4	8	M916-M920 front-axle inner- and outer-bearing nuts
5120-01-144-5321 (in No. 1 Common)	3 1/4	3/4	8	M917, M919, M920 pusher-axle outer-bearing nuts
4910-01-097-6949	3 13/16	3/4	8	M917, M919, M920 pusher-axle inner-bearing nuts; M872 semitrailer inner- and outer-bearing nuts

Head Off Surprises!

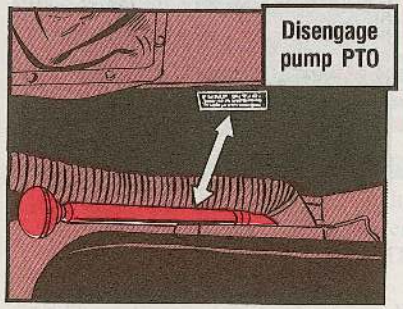


A PTO pump left in gear—or a sticky control lever—can let the boom elevate as you drive down the road.

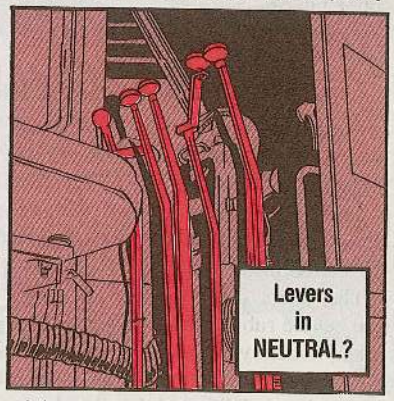
You could end up with phone wires—or worse, power lines—wrapped around the boom. It has happened!

Shift the pump PTO lever in the carrier out of gear before you start the engine to drive off. That will prevent surprises and reduce wear on the pump.

Shut down the engine before you engage or disengage the PTO. If you don't, you can damage the pump drive.



Doublecheck the control levers before you climb out of the crane. The levers are spring-loaded to return to center—the NEUTRAL position—but they may



stick. And anything left on the floor may keep the levers out of the center position, so keep the floor clean.

If you find a lever that doesn't snap back to neutral freely, report it to your mechanic.

F1500M Graders...

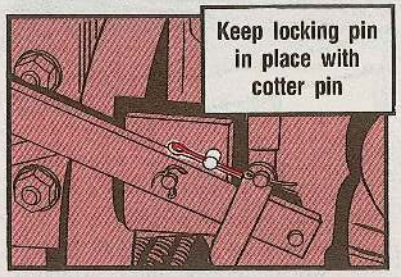
Check for Missing Pins

Operators, beware! If your grader is missing a critical locking pin, you can have a free-wheeling monster on your hands! The locking pin that holds the axle disconnect lever in place can vibrate out, if it's not secured. The transmission can then disengage the axles—letting your grader freewheel.

Eyeball the axle disconnect lever before you operate your grader again. It's under the left rear side.

Make sure the lever is all the way to the rear and locked in place with the locking pin and cotter pin.

If either pin is missing, replace it. The locking pin is NSN 5315-00-291-2098. NSN 5315-00-005-0442 gets the cotter pin.



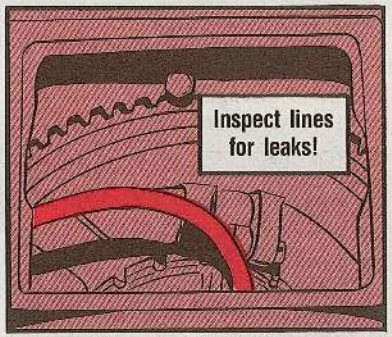
2380/2385 Cranes...

Leaky Lube Line Louses Up Crane

A damaged or missing clutch lube line on your 2380/2385 RT crane can mean a "shiftless" crane.

The line carries grease from a fitting on the outside of the housing to the clutch throwout bearing collar.

The line's close to moving parts, and can be rubbed thru or yanked out. Then, when you pump lube in, the grease goes into the housing instead of the sleeve. Without lube, the sleeve is damaged.



Before you lube the clutch bearing, remove the cover plate on the housing. Run your hand along the line to check for leaks or worn spots. If the line's bad, replace it. If it's been pulled loose, reconnect it.

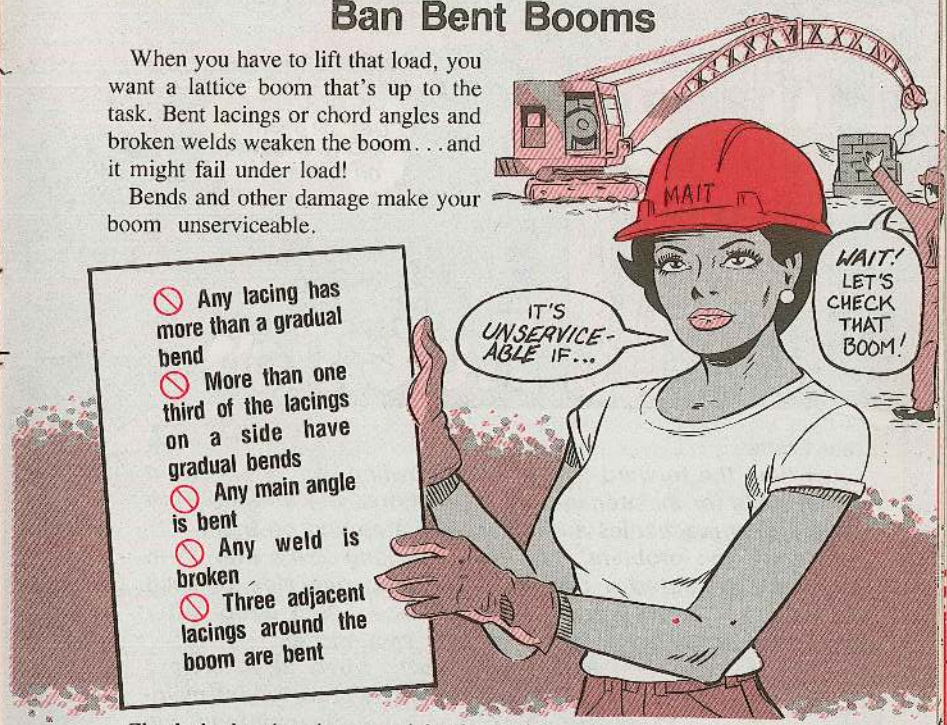
Make sure the line is clear so it won't rub when you engage the clutch.

20-Ton Lattice Crane Boom...

Ban Bent Booms

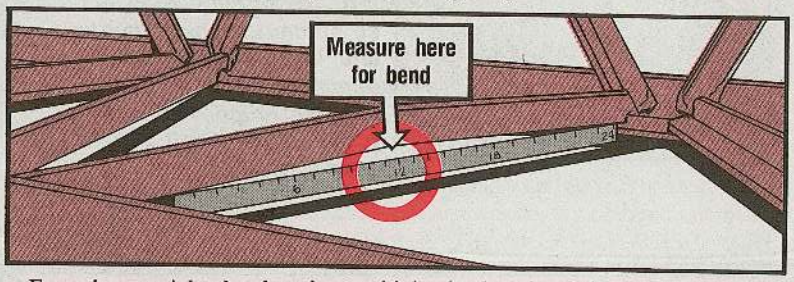
When you have to lift that load, you want a lattice boom that's up to the task. Bent lacings or chord angles and broken welds weaken the boom...and it might fail under load!

Bends and other damage make your boom unserviceable.



Check the bends using a straightedge and a steel machinist's rule, like NSN 5210-00-362-5100 from the General Mechanic's tool kit.

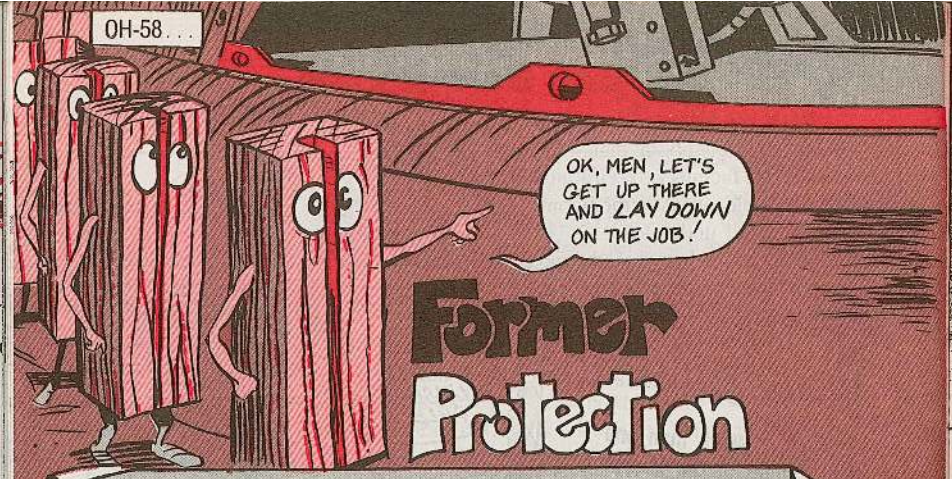
Lay a 24-in straightedge across the bend. The bend is gradual if there's 19/32 inch or less between the lacing and the straightedge.



For other straightedge lengths, multiply the length of the straightedge by 0.025. Convert to inches. If the gap is less than that amount, the bend is gradual.

This is spelled out in Para 2-5b of TB 43-0001-41-7 (Oct 83) and TACOM Msg AMSTA-MVB 030730Z Dec 84.

OH-58...

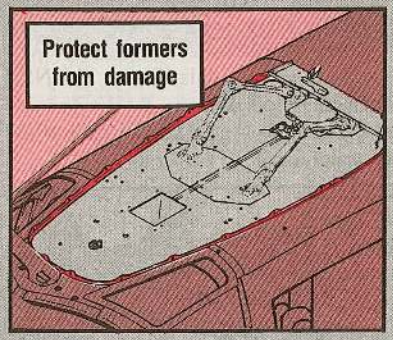


Former Protection

Dear Editor,

Any time the forward transmission cowling was removed on our OH-58's for maintenance or inspections, the formers were damaged by mechanics and inspectors stepping on them.

To solve the problem, I cut two 6-ft long 2x4's into 12-in sections and routed a narrow groove into one side of each section. The grooves are 1/4-in wide and 1/2-in deep. After smoothing the corners, I painted each section red.



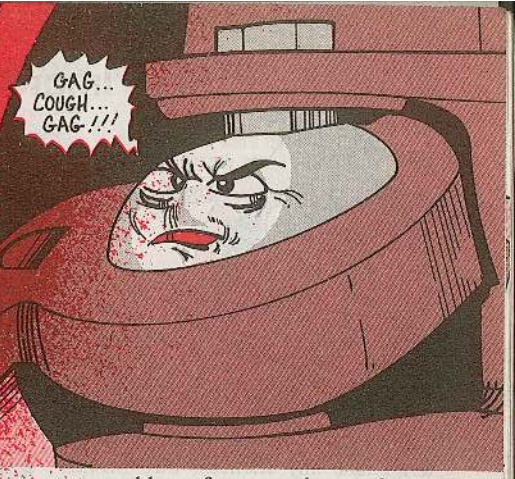
Now, when the forward cowling is removed for maintenance or inspections, we slip these red, grooved sections over the formers on the cabin roof before climbing up top. We've eliminated about 90 percent of the repair time and maintenance cost for damaged formers. Our maintenance officer has included the fix in our unit's maintenance SOP.

SFC Jerry D. Lay
Ft Hood, TX

(Editor's note: Now that's really grooving! Suggest you join those sections together with nylon webbing, NSN 8305-00-499-6561, to prevent the possibility of leaving one loose under the cowling. Order on DD Form 1348-6. RIC is JDC.)

Black Hawk...

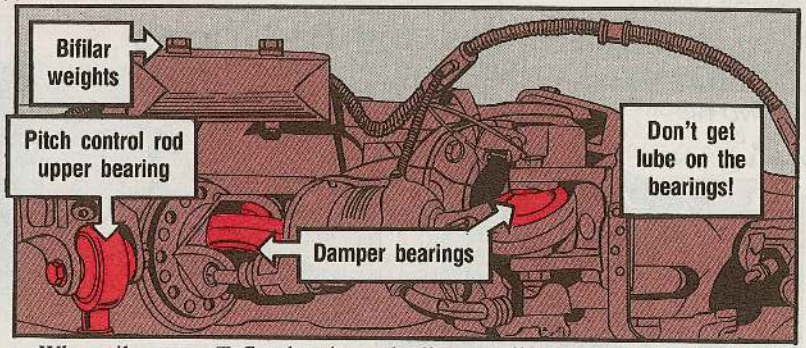
Give Bearings A Break



Hey, Black Hawk mechs: you can create problems for yourselves and cost your unit big maintenance bucks if you lube pitch control rod bearings and other Teflon-coated bearings.

Some bearings get "lubed" when a mech spray-cleans the bifilar weights on the main rotor head. The petroleum-based solvent drifts down on the damper bearings right under the weights.

Other Teflon bearings are being lubed when the normal red-brown residue on the bearing surface is mistaken for rust.

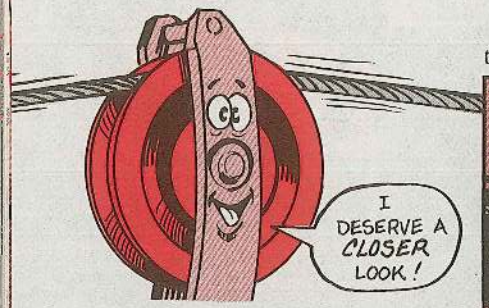


When oil gets on Teflon bearings, the liner swells up and collects dirt. The grit starts chipping the Teflon surface, and the bearing soon becomes unserviceable.

So next time you clean those bifilar weights, use a clean, dry cloth and Lubriplate 630-AA, like it says in Sequence 6.8 of TM 55-1520-237-PMS-1. NSN 9150-01-109-8726 gets a 14-oz can of Lubriplate. It's not on the AMDF, so use a DD Form 1348-6 to order it.

And if you see a powdery residue on a bearing surface, **hold** the lube! Either leave it be or wipe it off with a clean, dry cloth. You'll save yourself and the Army a heap o' trouble.

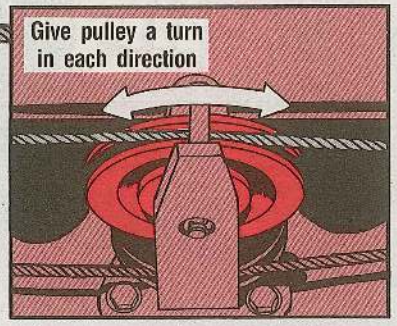
First Impressions



Looks are sometimes deceiving, so don't take any chances, bird mechs, when inspecting your Huey's tail rotor control pulleys.

Eyeball the pulleys for flat spots and damage like it says in Para 11-133 of TM 55-1520-210-23-2. If the control cable has cut into the pulley's groove, replace the pulley.

Now grab the pulley and give it a turn in each direction. See if the cable



twists, rotates or jumps up and down as the pulley is rotated. Also inspect pulley bearings for roughness, binding, noise, rust, lube leakage and excessive looseness. If you find any of these, replace the pulley.

Aircraft Clocks...

Good Times and Bad Times

When it comes to winding an aircraft clock, too little is a heap sight better than too much!

Overwinding is one of the reasons clocks need repair—at about $116 per. Use a very light touch when you wind—and stop when there's the slightest resistance!

Aircraft clocks will run eight days when fully wound—so there's no need to max it every time you climb into the cockpit. When you do wind it, take it easy! One good turn doesn't necessarily deserve another!

FOD Safety Posters

Knock Out FOD

Pick Up FOD

Inventory Your 'Toolbox'

FOD Is a Downer

AVIATION MESSAGES

If your unit has not received a message you have an interest in, check with your next higher headquarters.

CH-54-85-02, SOF, Technical, One-time inspection of CH-54B, main rotor blade, TB 55-1520-217-20-26, 142030Z May 85.

CH-54-85-03, SOF, Technical, One-time inspection of the sump chip detector assembly, NSN 1615-00-894-1537, for correct installation, 212330Z May 85.

CH-47-85-02, SOF, Emergency, Immediate grounding of CH-47D, 040100Z May 85.

CH-47-85-03, SOF, Maintenance Mandatory, Change in allowable rotor head operating time on CH-47D/C with fiberglass rotor blades, 231835Z May 85.

CH-47-85-04, SOF, Maintenance Mandatory, CH-47D flyable storage procedures (modified), 231835Z May 85.

CH-47-85-05, SOF, Technical, One-time inspection of flare dispersing switches in CH-47C with XM-130 Installation (TB 55-1520-241-20-32), 302300Z May 85.

AH-64A-85-01, SOF, Maintenance Mandatory, One-time and repetitive inspections on T700-GE-700/701 engines, 040445Z

UH-60A-85-12, SOF, Maintenance Mandatory, One-time inspection and repetitive inspections on the T700-GE-700 engine, 040430Z May 85.

UH-60A-85-13, SOF, Maintenance Mandatory, UH-60A flyable storage procedures (modified), 160100Z May 85.

Maintenance Info Messages

MIM-UH-1-85-MEM-03, UH-1H/V/EH swashplate and support assembly, 161700Z May 85.

MIM-UH-1-85-02, UH-1/EH-1, reduction of retirement life on tail rotor grips, 012030Z May 85.

Cat 1 EIR Phone: AUTOVON 693-2065 (24 hours)

New Tool Rings Up PM

A loose contact ring in your AS-1730 antenna element is double trouble.

If it unscrews too far, it lets the horseshoe contact screws bite into the MX-6707 matching unit's insulator. Once the insulator coating's gone, the unit's no good. You then get high reflected power which can KO your receiver-transmitter.

Even if it's only a little loose, the ring can keep the button contact from mating with the MX-6707. Besides poor commo, you're risking high reflected power again.

The answer is to order—and use—the new load-tightening tool being added to your TK-101 tool kit's SC 5180-91-CL-R13.

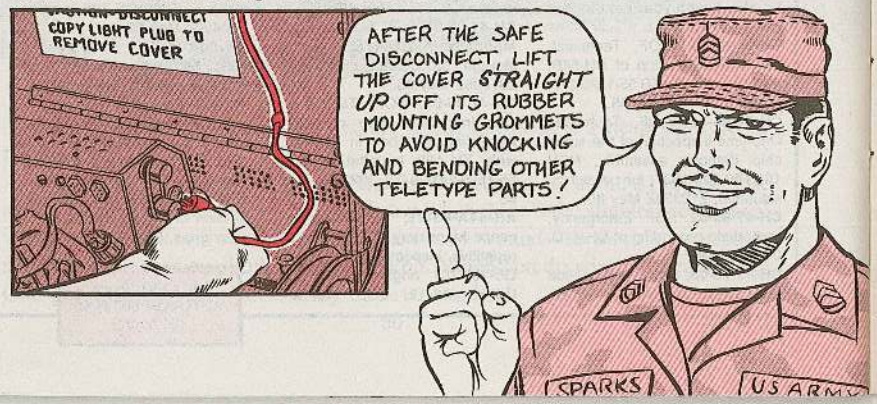
The tool, NSN 5120-01-172-8079, replaces the knife or screwdriver or whatever you use now. It has a notch that tells you when the ring is properly tightened. It is also used to remove the ring.

Unplug Copy Light First

Pull the plug... the copy light plug, that is... before taking the cover off your TT-76 teletypewriter.

If you don't pull the plug, you'll break the cable, the P12 plug, the J12 connector on the power supply and terminal unit or a combination of the three.

Instead of putting a string around your finger, paint or print on long-life tape, NSN 7510-00-582-4772: **Caution—Disconnect Copy Light Plug To Remove Cover**. Stick the warning to the underside of the cover.



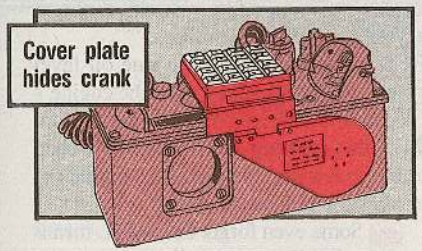
Thoroughly Modern TA-312

Short of dual-tone-signalling telephone sets in your automatic switching system?

Use a TA-312. Just add the new TA-955 tone-signalling adapter, NSN 5805-01-153-9158, and you're in business.

That gives you a push-button, tone-dial, 2-wire, common-battery set to replace the hard-to-get TA-838 telephone in modern switchboard systems.

No tools or modifications are needed. The adapter clamps to the TA-312. Both the handset and canvas cover can still be used as usual. The TA-955 even supplies its own power with a 6-volt alkaline battery, NSN 6135-01-166-5042.



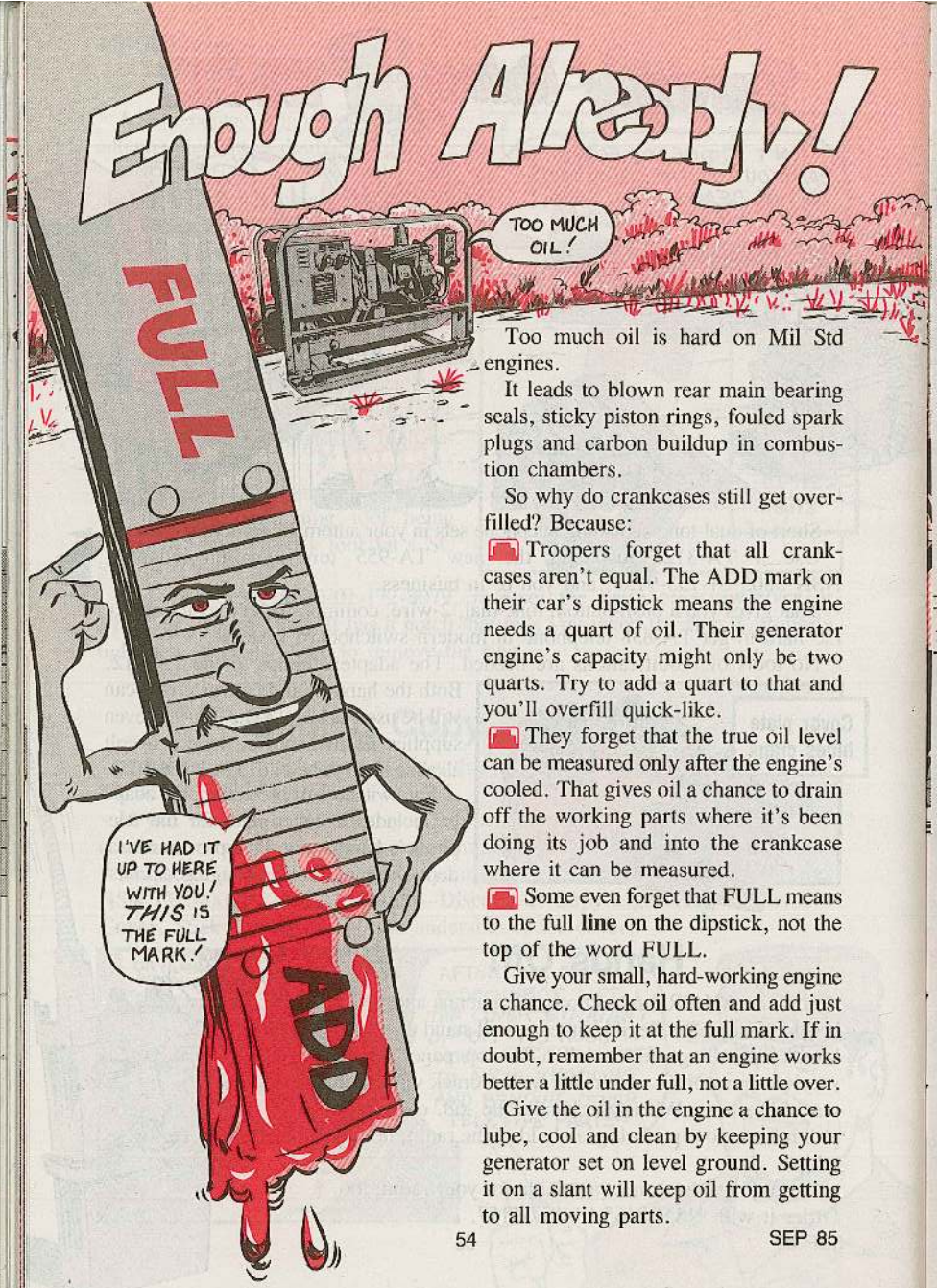
For switchboard protection, the adapter includes a cover-plate for the telephone's handcrank. That prevents accidental ringing from damaging circuits.

Hands Off!

Grab an AN/PRC-68 radio by its antenna and you'll break its face. The flexible antenna will stand up to that kind of handling—for awhile. The top panel on the receiver-transmitter won't, tho, and a crack will put it out of business. When you handle the -68, carry it or pull it from your pocket, grab hold of the radio, not the whip.

A carrying case is now available for your radio, too. Order it with NSN 8465-01-157-1157.

Enough Already!



Too much oil is hard on Mil Std engines.

It leads to blown rear main bearing seals, sticky piston rings, fouled spark plugs and carbon buildup in combustion chambers.

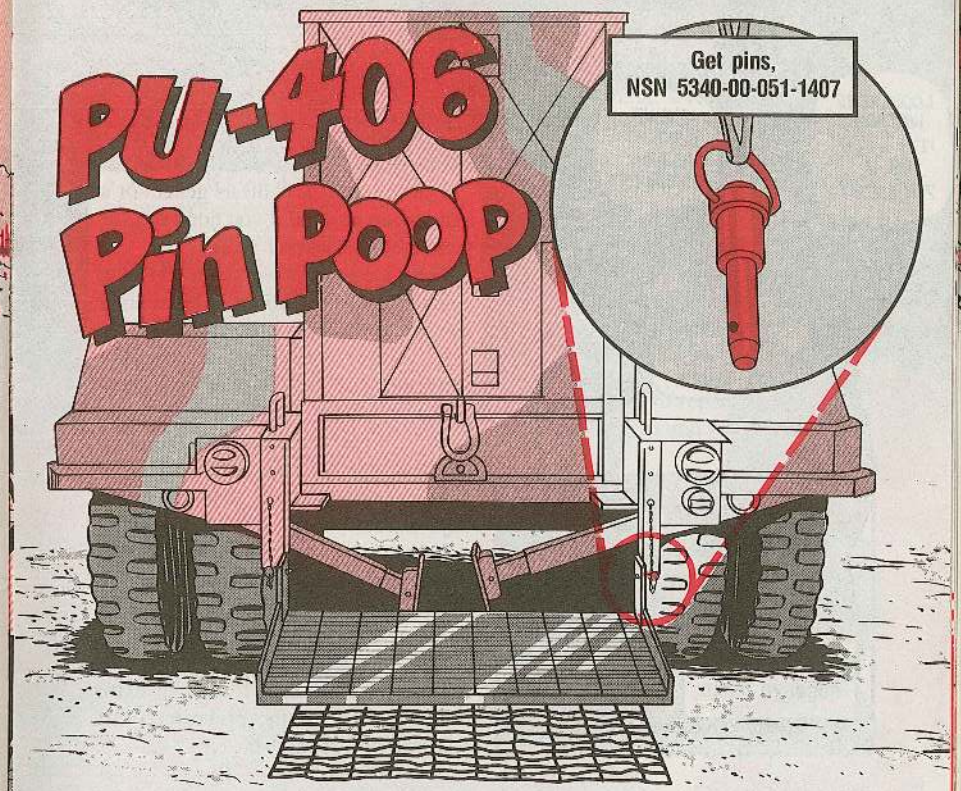
So why do crankcases still get overfilled? Because:

- Troopers forget that all crankcases aren't equal. The ADD mark on their car's dipstick means the engine needs a quart of oil. Their generator engine's capacity might only be two quarts. Try to add a quart to that and you'll overfill quick-like.
- They forget that the true oil level can be measured only after the engine's cooled. That gives oil a chance to drain off the working parts where it's been doing its job and into the crankcase where it can be measured.
- Some even forget that FULL means to the full **line** on the dipstick, not the top of the word FULL.

Give your small, hard-working engine a chance. Check oil often and add just enough to keep it at the full mark. If in doubt, remember that an engine works better a little under full, not a little over.

Give the oil in the engine a chance to lube, cool and clean by keeping your generator set on level ground. Setting it on a slant will keep oil from getting to all moving parts.

PU-406 Pin Poop



The NSN for the quick-release, self-retaining spring pin that holds your 30-KW generator set's platform assembly in place is 5340-00-051-1407.

The pin is shown on either side of the platform in Fig 5-2 on Page 5-3 of TM 5-6115-365-15.

Battery Terminal Covers

Use NSN 6140-00-179-8418 to get the battery terminal covers for your 5- and 10-KW DED and 3-, 5- and 10-KW GED generator sets.

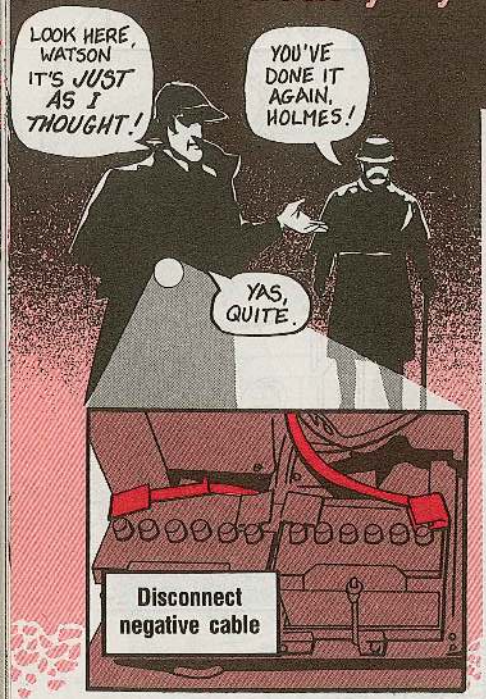
That's the cover that will be added to your set's TM. It replaces the cover listed on Page 51 of PS 383.

3-KW Elbow NSN

The elbow that connects your 3-KW generator engine's fuel selector valve and valve cap is NSN 4730-00-207-9260. It's Item 6 in Fig 2 of TM 5-6115-271-24P.

5-, 10-KW DED Generators...

Battery Mystery Solved



Your 5- or 10-KW diesel generator's battery can go dead if you don't use the generator for several weeks.

There's a small power drain while the generator is shut down. The drain's enough to discharge the battery.

If you're not going to run the generator for two weeks or more, disconnect the negative cable from the battery. When you reconnect the cable, the generator will be ready to go.

You say you start the generator every day and the battery still runs down?

If you let the generator run for only a couple of minutes and shut down, the battery doesn't have time to be recharged.

Run the generator for at least 30 minutes at rated speed. Give it extra time if you used the preheater or if starting took several tries.

Generator Fuel...

Turnabout's Foul Play

Match, don't mix, fuel to your generator set.

Diesel fuel in a gasoline engine will stop it cold. Spark plugs won't ignite the fuel.

Gasoline in your diesel-powered generator will ruin the engine... or blow it up.

Know the fuel you're using.

SMELL IT. If it has a sharp odor, it's gas. If it smells oily, it's diesel fuel.

FEEL IT. Dip the tip of your finger in it. Gasoline will evaporate quicker than diesel fuel.

EYE IT. Gasoline is light or white. Diesel is brownish.

Know you generator, too. Generators above 10-KW are diesel. Those below 5-KW are gas. Five and 10-KW sets can be either, so be careful.

If your commander OK's it, label all fuel cans DIESEL or GASOLINE in lusterless black paint. Get a gallon of paint with NSN 8010-00-111-8005.

Still not sure what kind of engine you have? Eyeball the set's data plate.

Camouflage Screening...

$ave $ome Bucks!

Hold one before you dump unserviceable camouflage screen.

A lot of repairable screen systems are ending up at PDO. Replacement screens are costing Uncle big bucks!

The SMR code for the screens in TM 5-1080-200-10 tells the unit to dispose of unserviceable screens.

TROSCOM Msg AMSTR-MCFT 071530Z Feb 85 has changed the code to "PAOOF", tho.

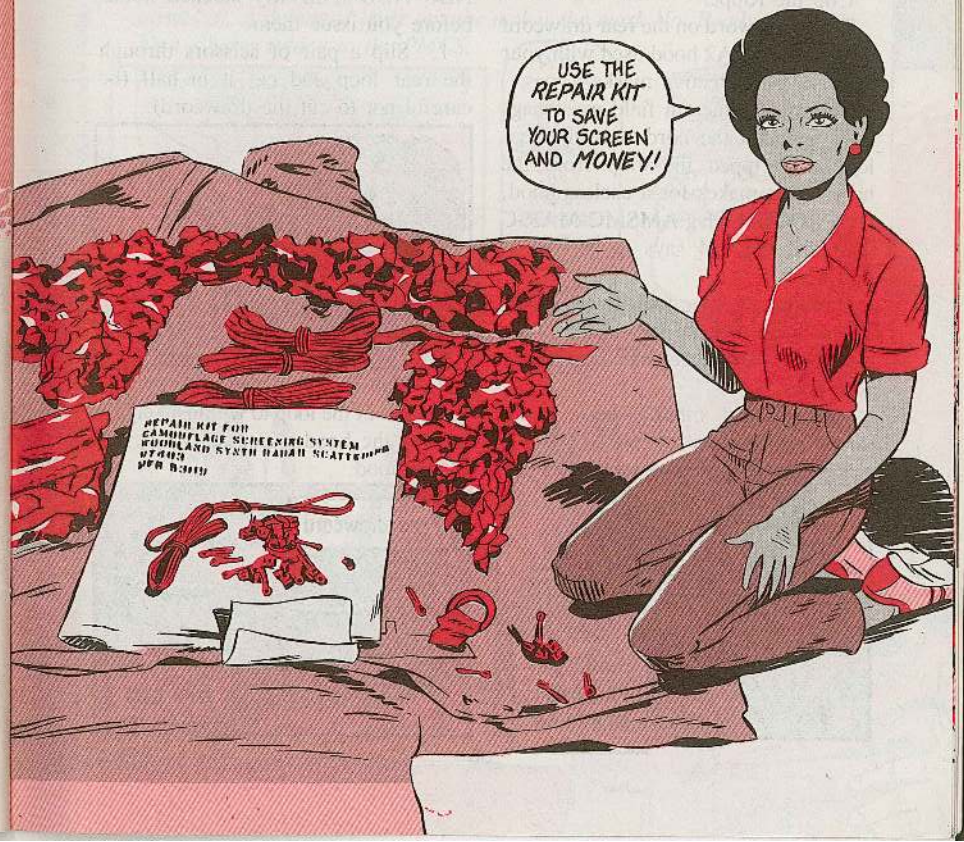
That means units now turn in unserviceable screens to DS. Support will decide whether the screen can be repaired.

If it can be repaired, you get it back and do all the repair work.

If it can't be repaired, DS scraps the screen.

Use the screen repair kits listed in TM 5-1080-200-10 to repair your screens. Use radar scattering repair kits on radar scattering screens and radar transparent kits on radar transparent screens.

Instructions for using the repair kits are in the TM.



Clip the M6A2 Loop

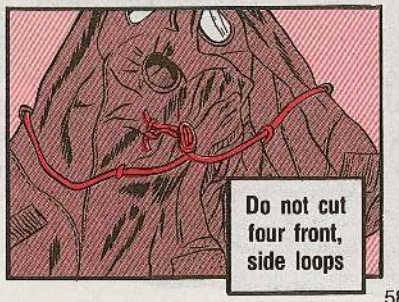
Clip the Ripper.

That's the word on the rear drawcord loop of the M6A2 hood used with your M17-series protective masks.

Too many times in field use, snags have grabbed the cord near the rear loop and ripped the loop from the hood. That makes for a useless hood, so AMCCOM Msg AMSMC-MAR-C 011605Z Nov 84 says to get rid of the loop!

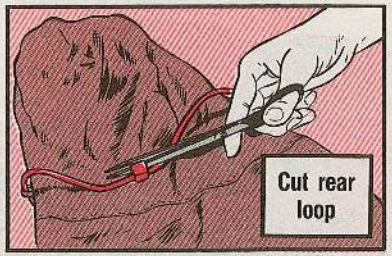
Caution: The two loops on the front of the hood and the two on the sides must stay. Only the one loop in the rear goes.

Mask users, modify your hoods under supervision of NBC NCO's.

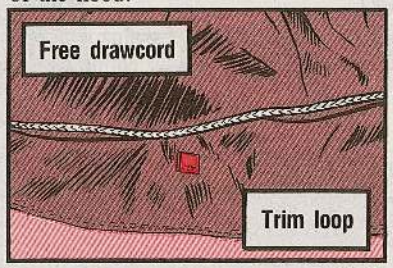


NBC NCO's, modify stocked hoods before you issue them.

1. Slip a pair of scissors through the rear loop and cut it in half (be careful not to cut the drawcord).



2. Pull the drawcord free and cut both ends of the loop to within an eighth inch of the hood. Keep scissors clear of the hood.



M17-Series Mask Lever Checks

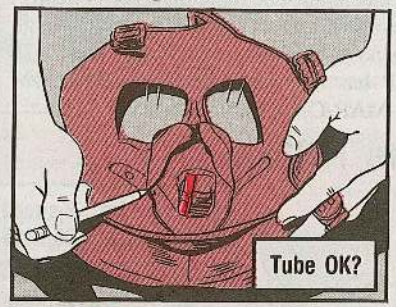
Dear Half-Mast,

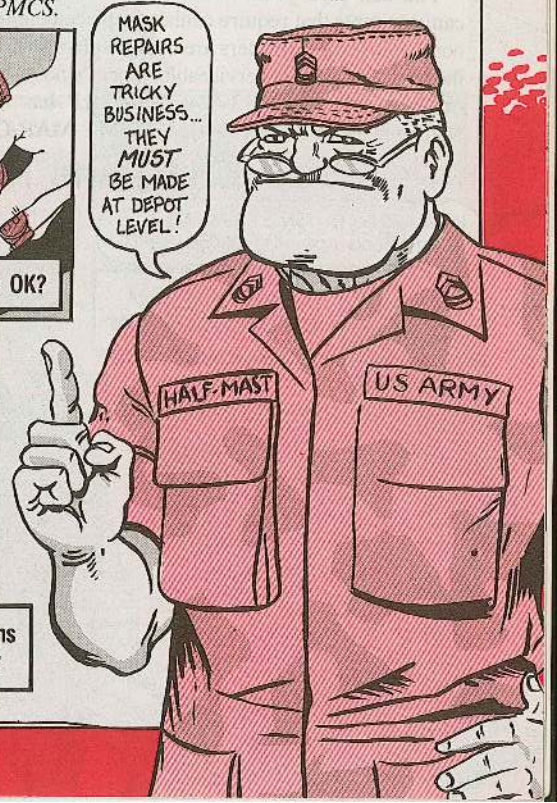
The PMCS table in TM 3-4240-279-10 does not include the drinking control lever and tube of the M17A1 and M17A2 masks. Can the lever be repaired if it is damaged or missing? Who repairs the drinking tube if it is torn? Does the damage deadline the mask?

SGT T.L.T.

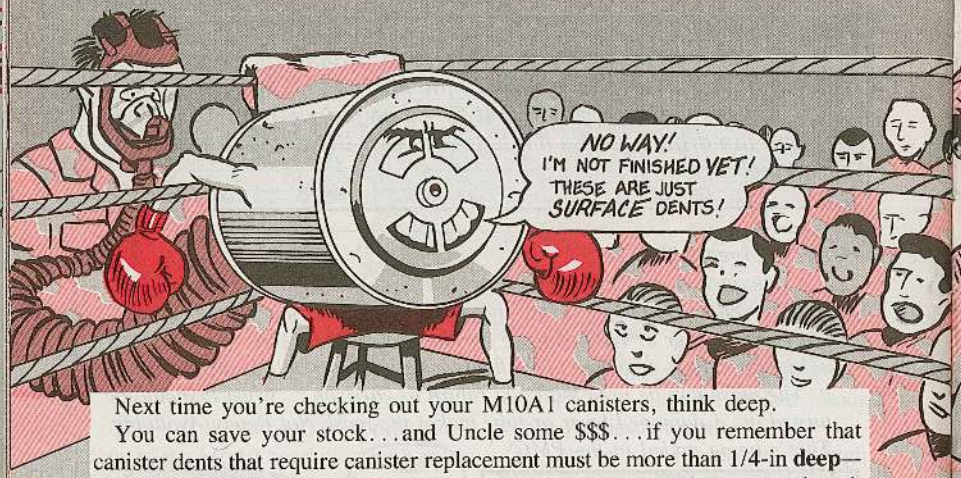
Dear Sergeant T.L.T.,

A damaged or missing lever, or a tube torn inside the mask facepiece, must be repaired at depot level. That damage requires facepiece leak tests. Masks with lever or tube damage should be turned in ASAP for repair. If a drinking tube is damaged in the field, users won't be able to drink through it. The mask can be used until you return to garrison. . . when it should be turned in. A damaged lever or tube makes the mask Not Ready/Available. That's being added to the PMCS.





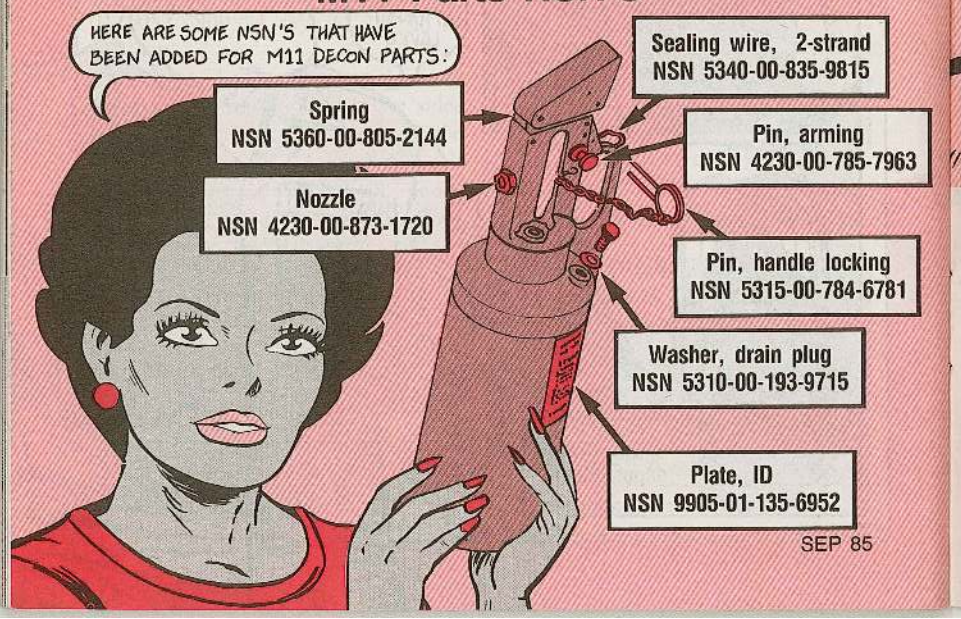
M10A1 Canister Criteria



Next time you're checking out your M10A1 canisters, think deep.

You can save your stock...and Uncle some $$$...if you remember that canister dents that require canister replacement must be more than 1/4-in **deep**—not 1/4-in **long**. Canisters are being replaced with dents 1/4-in **long**, even though the canisters are still serviceable. There's no restriction on dent length. Para 1-7b on Page 1-2 of TM 3-4240-280-23&P has the word. So does AMCCOM Maintenance Advisory 85-1, AMSMC-MAR-C, 111630Z Jan 85.

M11 Parts NSN's

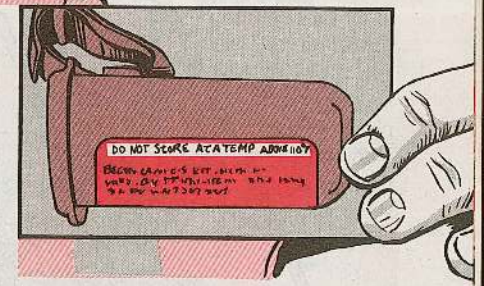


SEP 85

Decon Storage

Heed the storage temperature cautions printed on the containers of your M258 and M258A1 decon kits. Storage temperatures shouldn't exceed 110° F.

The kits do not show a low temperature limit, but they freeze below 32° F. In storage or in use, try to keep them in usable shape...somewhere between 32° F and 110° F. Guard against excessive direct sunlight in storage.



Safe Storage for Flammables

Need a cabinet to hold the paint, solvents and other flammable liquids you use in your shop? These NSN's are authorized by Chap 18 of CTA 50-909:

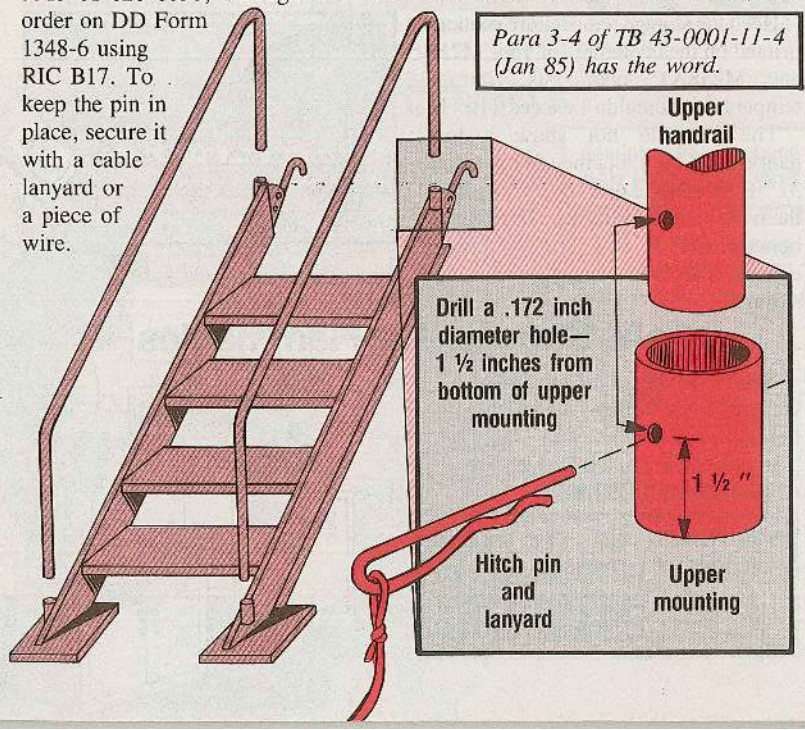
NSN 7125-01-	LIN	Size (inches)
084-6954	C51299	44Hx43Wx18D
084-6955	C52121	65Hx43Wx18D
072-2541	C75990	39Hx48Wx24D

Field Kitchen Handrail Hazard

The ladder handrails in your MKT-75 & -75A trailer-mounted field kitchen can come out of their mountings if you pull on them when going up the ladder.

Here's a fix. All you need is some wire or six cable lanyards, and six hitch pins. Set up the ladders and handrails like it says on Page 2-22 of TM 10-7360-206-13. Drill a .172-in diameter hole through each upper mounting and handrail, 1 1/2 inches from the bottom of the mounting. Then insert a hitch pin, NSN 5315-01-020-6038, through the hole. The NSN isn't on the AMDF, so order on DD Form 1348-6 using RIC B17. To keep the pin in place, secure it with a cable lanyard or a piece of wire.

Para 3-4 of TB 43-0001-11-4 (Jan 85) has the word.



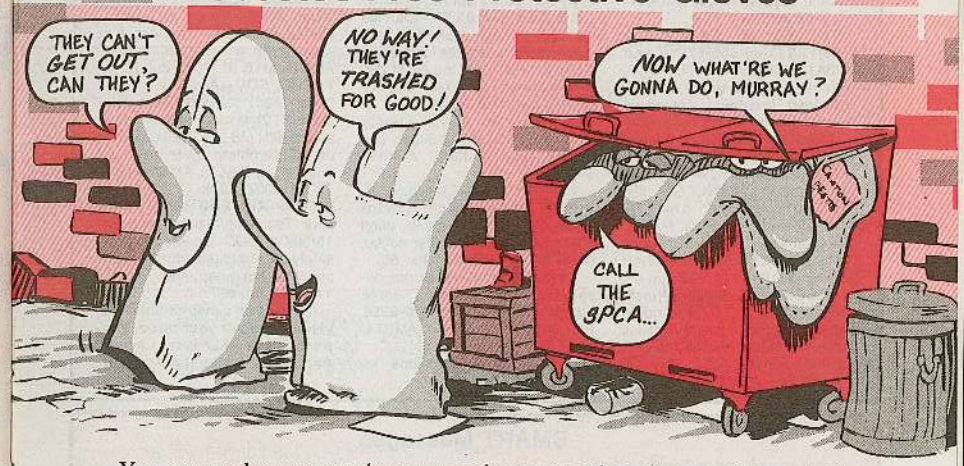
Lyster Bag Luster

So how do you store your 36-gallon water (lyster) bag?

The first step is to clean it. Scrub the insides with chlorine solution. You make it using a 6-oz jar of calcium hypochlorite, NSN 6810-00-255-0471, and one gallon of water. Rinse the bag out several times with potable water to get rid of all the cleaning solution. Hang the bag until it's completely dry.

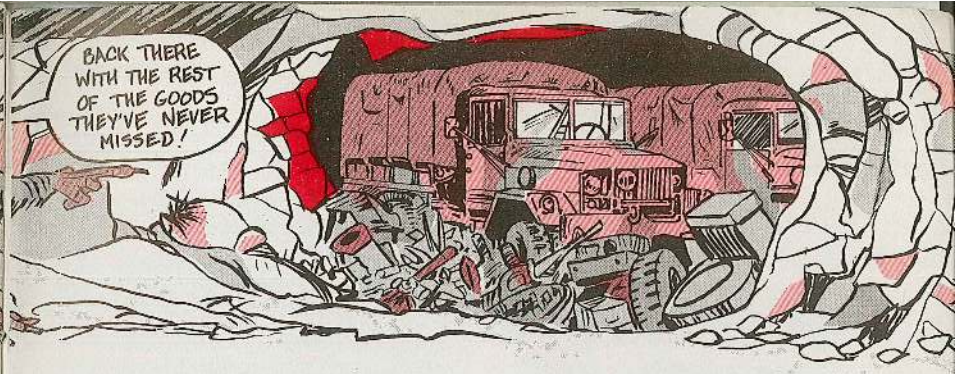
Next, fold the bag compactly and wrap it in kraft paper. NSN 8135-00-160-7752 gets a 1,636-ft roll. Store the bundle in a clean box—the one the bag came in, if you still have it. Or, get a new one with NSN 8115-00-290-3379. Keep the bag in a clean, dry place until you need it again. FM 21-10, Field Hygiene and Sanitation, has more info on the lyster bag.

Asbestos-Free Protective Gloves



You can replace your asbestos-type heat-protective gloves with a pair that contains no asbestos. Use NSN 8415-01-092-3910. There's also an asbestos-free machine gunner's mitten. Get it with NSN 8415-01-092-0039. CTA 50-900 is your authority to order.

The new NSN's replace asbestos gloves, NSN 8415-00-261-7015, and asbestos mitten, NSN 8415-00-266-8843. Both are terminal items on the AMDF.



Maintenance Advisories

AMCCOM MA 85-19—Changes TM 3-4240-279-20&P, Organizational Maintenance Manual, including Repair Parts & Special Tool List for Mask, Chemical-Biological, Field, ABC-M17, M17A1 and M17A2—Use flat bar stock aluminum to fabricate thumbsaver, AMSMC-MAR-C 220800Z May 85.

AMCCOM MA 85-20—Mask, Chemical-Biological, ABC-M17, M17A1 and M17A2, Marking of individual masks, AMSMC-MAR-C 271320Z Jun 85.

AMCCOM MA 85-21—M23 (NSN 4240-00-880-1728) and M23A1 (NSN 4240-01-095-0892) Scott Air-Pack 4.5 and/or 2.2 self-contained breathing apparatus automatic shut-offs will trip resulting in loss of air supply, AMSMC-MAR-C 301305Z May 85.

AMCCOM MA 85-22—Changes TM number of AMCCOM MA 85-18, 091610Z May 85 to read TM 3-4240-279-10, Operator Manual for Chemical, Biological Mask, ABC-M17, M17A1 and M17A2, AMSMC-MAR-C 111736Z Jun 85.

AMCCOM MA 85-23—Protective mask donning procedures (M6A2 protective hood) M17-series protective mask, AMSMC-MAR-C 171758Z Jun 85.

AMCCOM MA 85-24—Protective mask sanitizing interval (M17-series), AMSMC-MAR-C 171330Z Jun 85.

AMCCOM MA 85-25—Rescinds Paragraph 2 of MA 85-18, 171758Z Jun 85, protective mask donning procedures, AMSMC-MAR-C 261609Z Jun 85.

AMCCOM MA 85-26—Repair of M8 Chemical Agent Alarm (CAA), NSN 6665-00-935-6955, Changes MOS from 31E to 35E, AMSMC-MAR-C 031810Z Jul 85.

AMCCOM MA 85-27—Clarifies the term "clean water" in the emergency procedures for flushing the M43 detector in the event distilled water isn't available, AMSMC-MAR-C 031710Z Jul 85.

MICOM SIL 2-85—Supply Information-Materiel of Supply and Maintenance Matters, AMSMI-SMPA Jun 85.

TACOM SOU—Operational, HEMTT M983 Truck, tractor w/HIAB Model 8001 crane, don't operate crane until further notice, AMSTA-MTC 062000Z Jun 85.

TACOM SOU—One-time inspection, NATO slave cable adapter, NSN 5935-00-322-8959, Part Number 11677570, AMSTA-MTB 141300Z Jun 85.

TACOM SOU—One-time inspection, M113-series FOV's including M901A1 ITV and M981 FISTV—Personnel being injured by premature hatch closings, AMSTA-MCB 141700Z Jun 85.

TACOM SOU—Advisory, Technical/Maintenance, M88A1 MRV Hoisting Boom—Never stand on top of vehicle while boom is being raised or lowered and other safety procedures, AMSTA-MCB 171400Z May 85.

TACOM SOU—Slave Receptacles M939-series, 5-ton trucks, wrap positive cable connection in spiral wrap as a temporary fix, AMSTA-MTB 011900Z Jul 85.

TACOM SOU—Advisory, Operational, M981 Support Team Vehicle (FISTV), failure of system drive switch (P/N MS 21537-281) located on the Targeting System Control and Display (TSCD), AMCPM-LCV-TS 021900Z Jul 85.

TROSCOM SOU 85-06—Advisory Technical/Maintenance, all 15/30KW DOD Generator Sets, safety hazard to maintenance personnel at fan guard, AMSTR-MES 111745Z Jun 85.

If you need a maintenance advisory, contact your direct support unit or your local Logistic Assistance Office (LAO).

SMART Messages

SMART Msg #56—Provides info on UH-60A aircraft formation light sub-assembly, DALO-PLR 291809Z May 85.

SMART Msg #57—Provides info on revision to TM 3-4240-279-10 on how to insure the inlet valve on the M17A1 protective mask is properly installed, DALO-PLR 111548Z Jun 85.

SMART Msg #58—Provides info on slide hammer, NSN 5120-01-013-1676, DALO-PLR 111550Z Jun 85.

SMART Msg #59—Provides info on replacement combustion drain valve bolts on OV-1D, OV-1B/C and RV-1D aircraft, DALO-PLR 111552Z Jun 85.

SMART Msg #60—Provides info on change to the maintenance level on power steering pumps for M809 series vehicles, DALO-PLR 081540Z Jun 85.

SMART Msg #61—Provides info on additional stowage space for OVM on the M929 5-ton dump truck, DALO-PLR 081544Z Jul 85.

DA Form 2408-14 is Back

The Army is bringing back DA Form 2408-14 (Uncorrected Fault Record) to replace the DA Form 2404's function as a Deferred Maintenance Record.

The change will appear in DA Pam 738-750 when Maintenance Management UPDATE 7 comes out in Nov 85. SMART Message 55 has the word.

You can get advance information and copies of the revised instructions for DA Form 2408-14 by contacting:

Commander
USALOGC
ATTN: ATCL-SSM
Ft Lee, VA 23801-6000
AUTOVON 687-1559/4413
or
Commander
USAMRSA
ATTN: AMXMD-MS
Lexington, KY 40511-5101
AUTOVON 745-3690

Call 99-CECOM for Help

The Communications-Electronics Command has opened a new hotline to answer your questions on equipment maintenance and operation, supply, pubs and training.

Call the experts at Ft Monmouth, NJ on AUTOVON 992-3266 (99-CECOM) or COMM (201) 532-3266 (53-CECOM).

AMCCOM Adds a Hotline

Got a logistics problem with an AMCCOM-managed item and can't locate your local AMCCOM Logistic Assistance Representative? Need to get in touch with the AMCCOM National Maintenance Point (NMP) or National Inventory Control Point (NICP)? Go for the AMCCOM Hotline. Call AUTOVON 793-6440, FTS 367-6440 or Commercial (309) 782-6440.

Field Water Supply

Don't get all wet by using the wrong Field Water Supply pub. Remember—FM 10-52 (Feb 85) is in—TM 5-700 is out! Your pubs clerk can order FM 10-52 on DA Form 4569 via AUTODIN from the US Army AG Publications Center, 2800 Eastern Blvd, Baltimore, MD 21220.

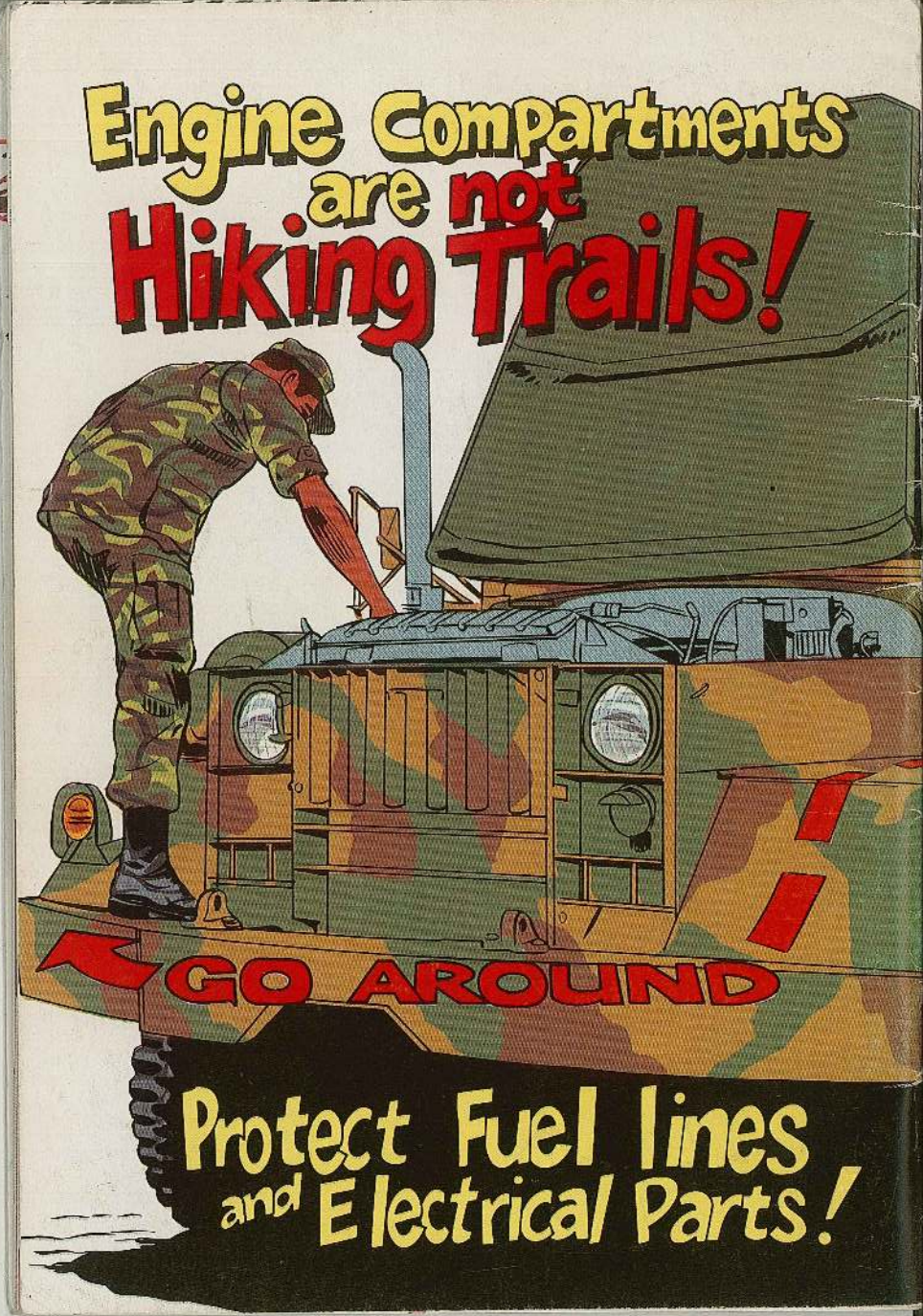
Handy Hand Cleaner

Get a pound of hand cleaner paste with NSN 8520-00-082-2146. NSN 8520-00-782-3509 gets 7 pounds. Appendix A of CTA 50-970 gives the OK to order.

Spill Soaker Upper

Grease and oil spills on motor pool and hangar floors are a safety hazard. Soak 'em up with absorbent/anti-slip compound. NSN 7930-01-145-5797 gets a 25-lb bag.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1985—559-008 / 20009


Engine Compartments
are not
Hiking Trails!
GO AROUND
Protect Fuel lines
and Electrical Parts!