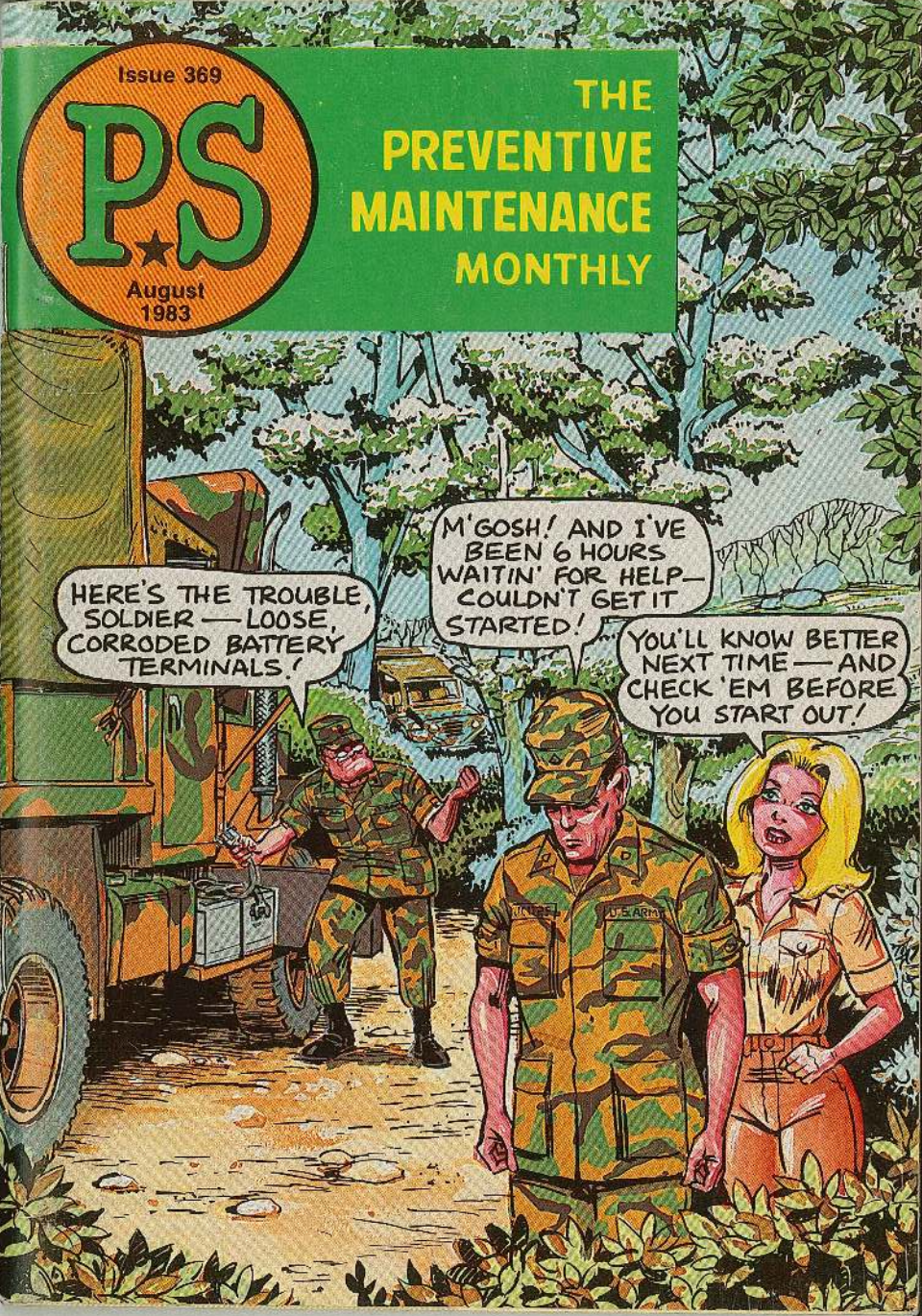
Issue 369

PS

August 1983

THE PREVENTIVE MAINTENANCE MONTHLY



PS THE PREVENTIVE MAINTENANCE MONTHLY

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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.

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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

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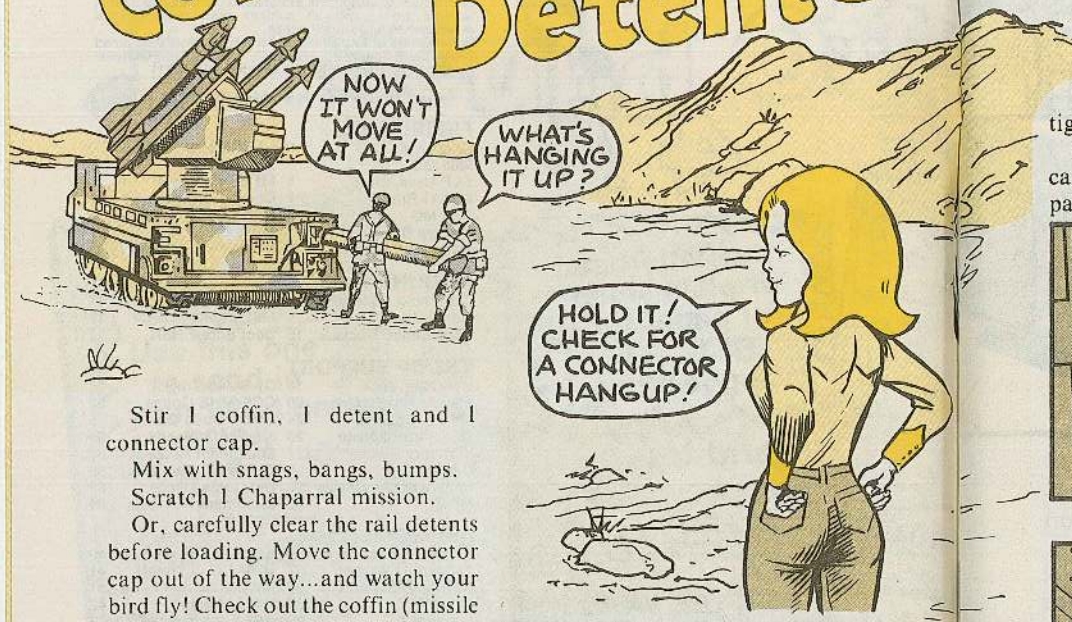
FIREPOWER

Chaparral...

Coffins and Detents



Stir 1 coffin, 1 detent and 1 connector cap.

Mix with snags, bangs, bumps.

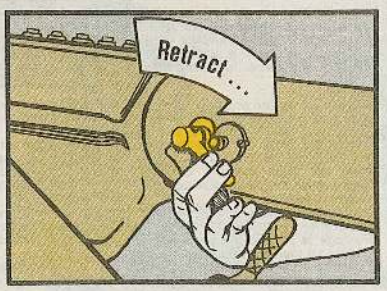
Scratch 1 Chaparral mission.

Or, carefully clear the rail detents before loading. Move the connector cap out of the way...and watch your bird fly! Check out the coffin (missile case) before you slide it home.

Here's how:

Rail Detents

Before you slide a missile home on

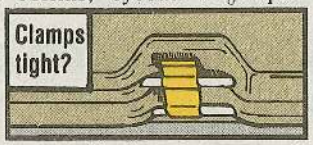


the rail, be sure the detent release handle is locked.

If it's not locked, the detent sticks out. The missile bangs into it, and the detent is ready for a coffin for sure.

Cases & Connectors

Before you load your full or empty missile coffins, eyeball a coupla' items.

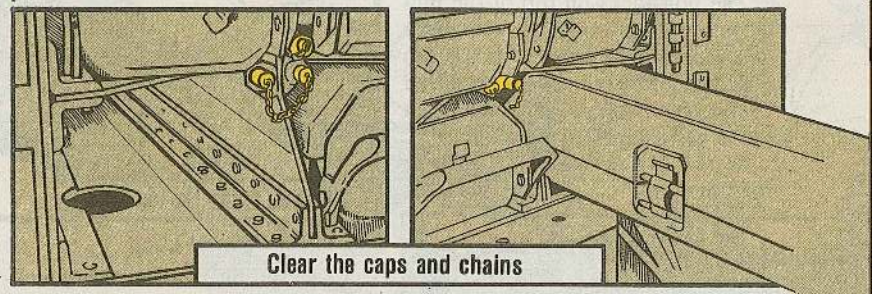


Be sure the coffin clamps are snapped tight.

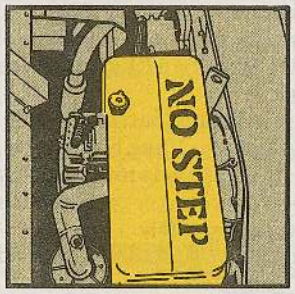
Clear the missile heater connector caps and chains from the coffin's path.

That way, the edge of the coffin, or the clamps, won't snag the chains and tear them up. The cap chains are not separate repair parts, so you've gotta replace assemblies.

Also, it wouldn't hurt a thing if the crewman in front eyeballed the connector cap, etc., as the coffin starts into the storage compartment to be sure the coffin clears. It takes a lot more time to repair than it does to look.



Clear the caps and chains



Checks and Services

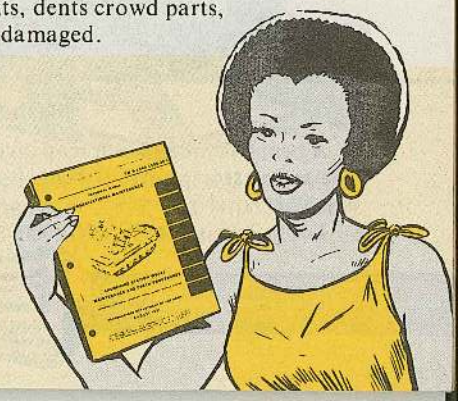
If you haven't received TM 9-1440-1585-20-1 (Aug 81), get with your pubs clerk. It has all the required services for your system. You'll miss some if you're still using TM 9-1440-585-20.

Odds 'n' Ends

Even though you may have recently installed a new MPU oil filler gasket, check it during PMCS.

The gasket wears, sometimes fast, and that means an MPU oil leak.

Another MPU reminder: The cover is not a step. Big letters say so. Steps make dents, dents crowd parts, parts get damaged.

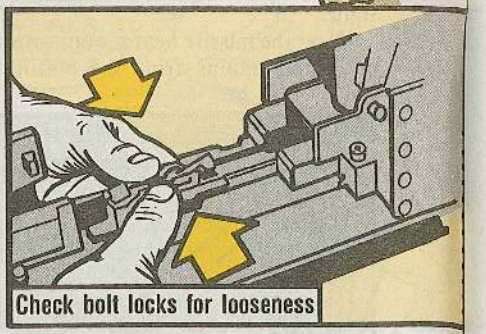


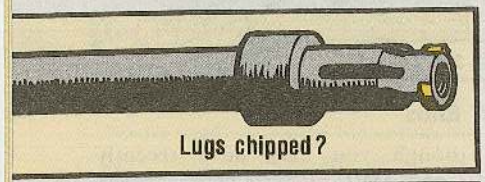
M85 Lock Looks

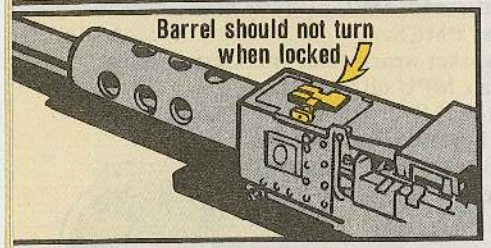
Take a hard look at the bolt locks next time your M85 machine guns are on the table for cleaning and lubing.

The bolt locks on top of the bolt assembly should be snug, with just a little sideways movement. If you can pull them up or out, you've got either broken cartridge retainers or a bolt that's not assembled right.

Worn locks cause firing malfunctions.







Barrel Lugs

Look 'em over. If the barrel locking lugs are chipped, have support check 'em out.

Crews can check the lugs like so: Insert the barrel and lock it in the receiver.

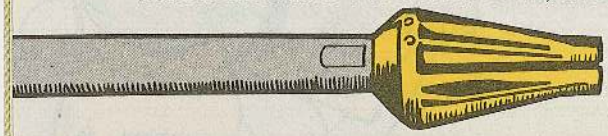
Try to turn the barrel by hand, with the lock on. If the barrel turns, check the accelerator housing assembly for broken or missing parts or improper assembly.

Your armorer and support should take it from there.

Flash Suppressor

A bent flash suppressor is an invitation for a bullet to go haywire. If any of the suppressor prongs is bent, it can deflect a round and send it almost anywhere.

Look them over. If 1 or more are bent, turn the gun in for repair.



CLP is the Way!

CLP is the preferred lube for most small arms and artillery.

If you have LSA, LAW or RBC on hand, use it up... then go CLP. When the new pubs all get out, it'll be the main way to go.

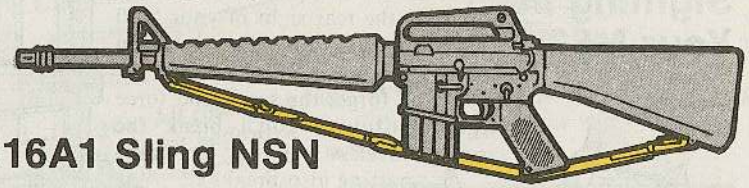
Only the M231 submachine gun gets LSA, LAW and RBC. It does **not** get CLP!

CLP replaces PL-S, PL-M, LSA, LAW (use CLP year-round), RBC, OE/HDO (on weapons only) and OEA. It is the alternate lube for rotary weapons such as Vulcan cannon, M134 minigun, M195 and M197.

CLP does not replace SD or PC-111 cleaning solvents. They have special applications. It also does not replace heavy weapon greases, such as GAA and GIA. Where your TM's say use 'em, use 'em.

CLP comes in 4 basic sizes:

- Gallon—NSN 9150-01-053-6688
- Pint (spray)—NSN 9150-01-054-6453
- 4 Ounces—9150-01-079-6124
- 1/2 Ounce (for rifle stocks)—NSN 9150-01-102-1473



M16A1 Sling NSN

To get slings for the M16A1 rifles, use NSN 1005-00-167-4336. It will get the latest configuration black nylon sling (Page 2, C3, TM 9-1005-249-20). Do not use NSN 1005-00-654-4058 or 1005-00-714-9749 listed in C5 or on Page 40 of the -20 TM.

MG Rack NSN's

INSTRUCTIONS FOR FABRICATION OF STORAGE/SECURITY RACK FOR THE M60 MACHINE GUN

A. Materiel Requirements:

(1)	1/8 x 1¼ x 1¼	Angle Iron	9520-00-277-5988
(2)	1/8 x 1 x 1	Angle Iron	9520-00-277-5986
(3)	¼ x 6	Steel Plate	
(4)	3/8 x 1	Stee	
(5)	1/8 x 3	St	
(6)	1/8 x 1		

B. Procedure:

Using plans you got from Armament Command or PS to make a rack for your M60 machine guns?

There are some changes. The informal plans, titled "INSTRUCTIONS FOR FABRICATION OF STORAGE/SECURITY RACK FOR THE M60 MACHINE GUN," require 2 new NSN's for angle iron under "A"...and a change in Step 9.

You need 540 inches of ⅛ by 1¼ by 1¼-in angle iron, NSN 9520-00-277-5988.

You need 160 inches of ⅛ by 1 by 1-in angle iron, NSN 9520-00-277-5986.

Add at the end of Step 9: After brackets are secured, center the locking bar and drill a ⅜-in hole **through** the locking bar plate.

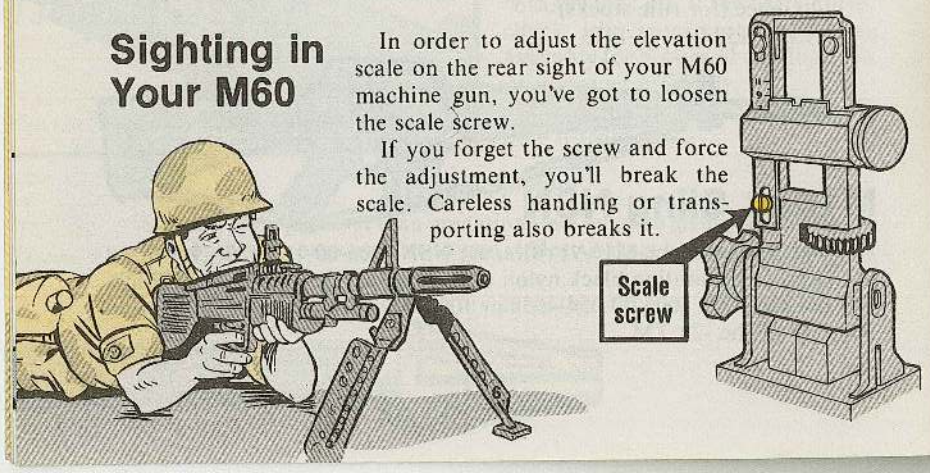
If you need the plans, you can get them from:

Commander
US Army Armament Materiel Readiness Command
ATTN: DRSAR-MAG-SS
Rock Island, IL 61299

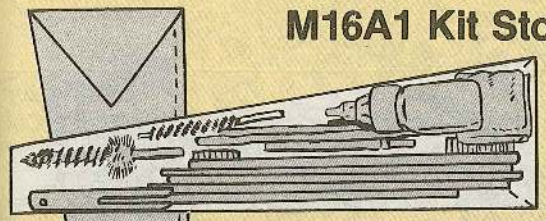
Sighting in Your M60

In order to adjust the elevation scale on the rear sight of your M60 machine gun, you've got to loosen the scale screw.

If you forget the screw and force the adjustment, you'll break the scale. Careless handling or transporting also breaks it.



M16A1 Kit Storage



Dear Editor,

Each rifleman has his own way of storing cleaning gear in the accessories case for his M16A1 rifle.

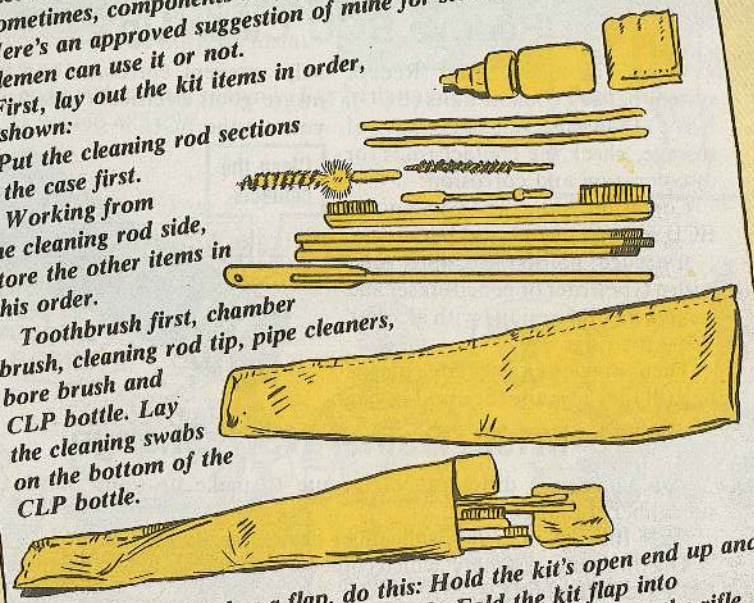
Sometimes, components are squashed or bent unnecessarily. Here's an approved suggestion of mine for storing kit items. Riflemen can use it or not.

First, lay out the kit items in order, as shown:

Put the cleaning rod sections in the case first.

Working from the cleaning rod side, store the other items in this order.

Toothbrush first, chamber brush, cleaning rod tip, pipe cleaners, bore brush and CLP bottle. Lay the cleaning swabs on the bottom of the CLP bottle.



If your kit case has a flap, do this: Hold the kit's open end up and insert the kit halfway in the rifle stock. Fold the kit flap into a triangle, close the flap, and push the kit all the way into the rifle stock.

SGT Michael R. Puig
APO New York 09068

(Ed Note: Thanks for passing along the packing tip, Sarge. It should prevent damage and frustration.)

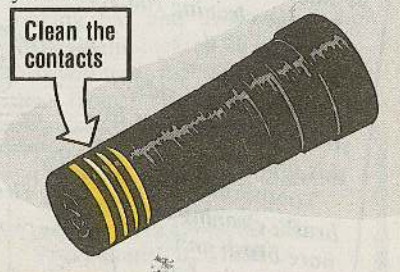
Redeye BCU Clean-Up

When you break your Redeye system battery coolant units (BCU), NSN 1440-00-837-8543, out of storage, check the contact rings for discoloration and corrosion.

Corrosion happens, even in the BCU's protective plastic bag.

If needed, polish the contact rings with a typewriter or pencil eraser and clean away the residue with alcohol. Wipe the rings dry.

Then, put 'em in a sealable plastic bag till they're ready for use. The bag helps prevent corrosion and you'll insure good electrical contact when you use the BCU.



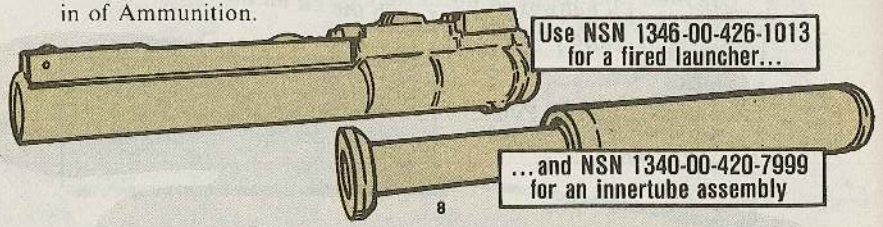
M190 Trainer NSN Change

You now go a different NSN route to make up your M190 LAW subcaliber training device.

NSN 1055-00-143-6903, subcaliber device, no longer is issued.

The innertube assembly, which comes separately, includes conversion kit, NSN 1055-01-011-8328.

Request the fired launcher on DA Form 581, Request for Issue and Turn-in of Ammunition.



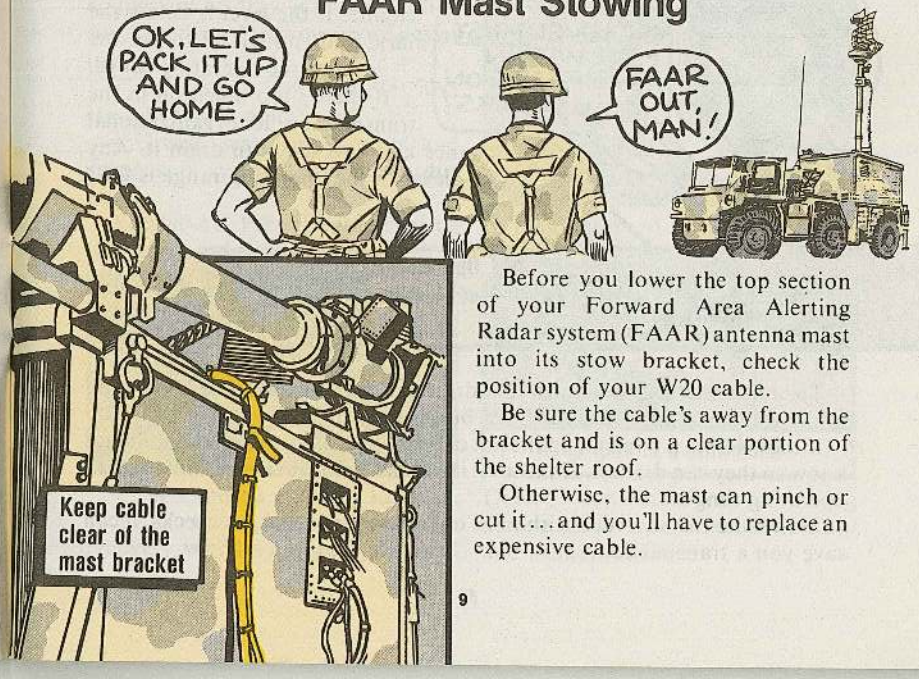
LANCE M-P Screw

Next time you get ready to attach the ground cable from the base frame of your LANCE launch fixture to the monitor-programmer, bring a ruler. M-P's have been damaged by cap screws that're too long. The screws damage the case when they're turned in.

Get the right 5/8-in screw with NSN 5305-00-269-3208. Use the screw with push nut, NSN 5310-00-942-5139, which goes against the M-P, on the underside of the ground cable connector. Be sure to install the push nut.

The screw and nut are shown in Fig 20, Items 111 and 116, TM 9-1440-485-20P.

FAAR Mast Stowing

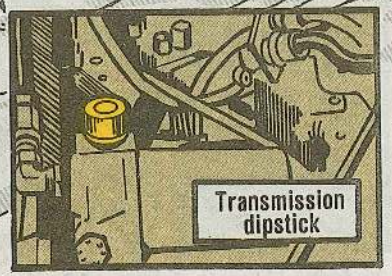


Before you lower the top section of your Forward Area Alerting Radar system (FAAR) antenna mast into its stow bracket, check the position of your W20 cable.

Be sure the cable's away from the bracket and is on a clear portion of the shelter roof.

Otherwise, the mast can pinch or cut it... and you'll have to replace an expensive cable.

Save Your Transmission



You're headed for transmission damage—or even complete failure—if you don't make both oil level checks just like your LO and TM tell you!

This 2-part job is a cold check before you start the engine and a hot check before you move out.

The key to the checks is how you read the gage rod. In the cold check, you're looking to see if there's either too much or too little oil in the transmission.

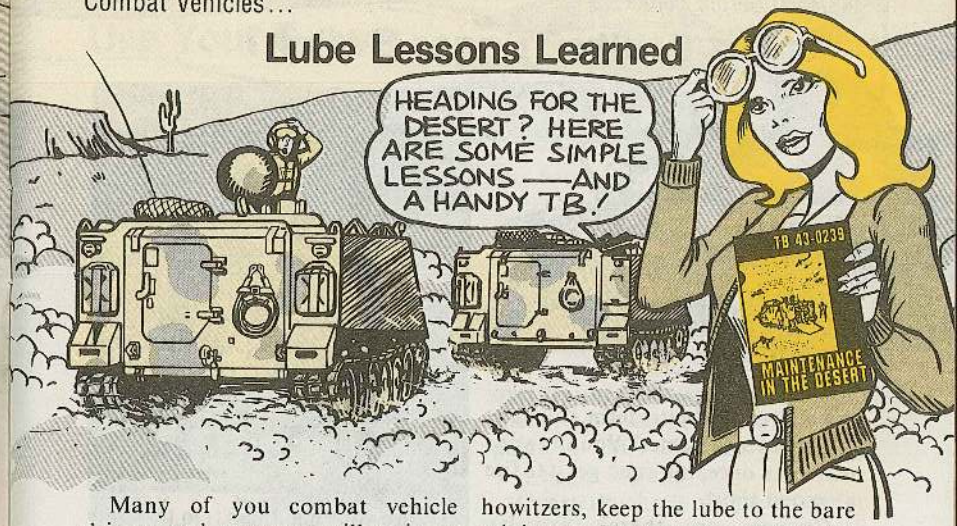
If the oil level is within the operating range marked on the gage rod, you're OK to start the engine. If the level is below the mark, add enough oil to put the level in the operating range. If there's too much oil in the transmission, let organizational maintenance know so they can drain it. Any level in the operating range is OK.

The hot check lets you know that during operation there'll be enough oil in the transmission to keep it from burning up or seizing.

If the oil level is overfull on the hot check, let organizational maintenance know so they can drain it. If the level is too low, you add enough oil to fill to operating range.

Make sure the oil level is within the operating range on both checks. It can save you a transmission.

Lube Lessons Learned



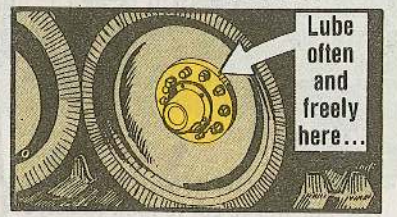
Many of you combat vehicle drivers and crewmen will train at Fort Irwin or at other dry, dusty, sandy places.

Whether you take your own equipment or draw it at the training site, you'll need to bone up on desert lubing.

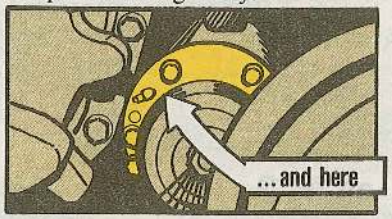
The lessons are simple and straight to the point:

- Grease seals on U-joints and suspension systems won't keep dirt out.

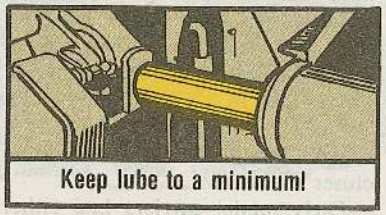
You have to keep the grease inside the seals as clean as possible.



- On exposed bearing surfaces, such as the spade cylinders on recovery vehicles and self-propelled howitzers, keep the lube to the bare minimum. Dust, sand and dirt will stick to lube and cause wear and damage. Lube just enough to keep the parts moving freely.

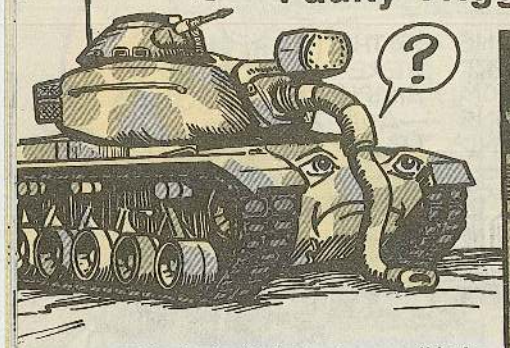


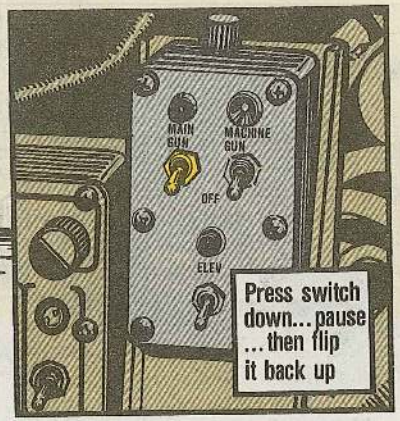
You may need to order copies of TB 43-0239, Maintenance in the Desert, for more about doing maintenance where it's dry, dusty and sandy.



M48/M60 Series Tanks...

Faulty Trigger Switch?





For lack of a better term, call it the "one-shot syndrome." You fire your main gun once, but can't get it to fire a second time.

Chances are there's a relay sticking in the turret firing relay box.

To get your main gun firing again, press down on the main gun switch to turn it OFF. Wait a second and then flip it up to ON again. Now you can fire your main gun. Do this only in an emergency. Have your turret mechanic check out the problem right away.

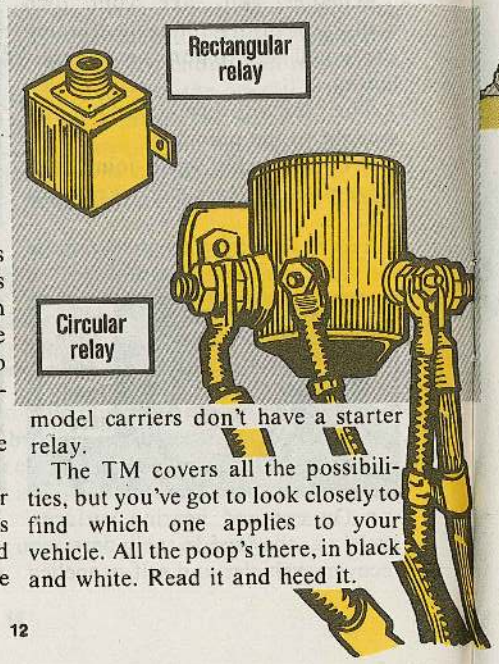
M548 Carriers...

Starters—Simple as 1, 2, 3

Some of you cargo carrier mechs have been scratching your heads trying to find the starter relay on your vehicles. Like when you're removing the starter according to Pages 12-1 to 12-5 in TM 9-2350-247-20.

Well, you just need to look a little closer at the TM.

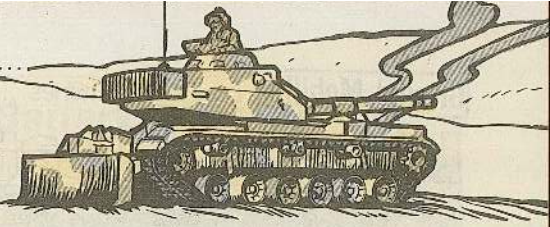
Early model carriers had either rectangular or circular starter relays on 'em. These have to be removed before the starter'll come off. Late model carriers don't have a starter relay.



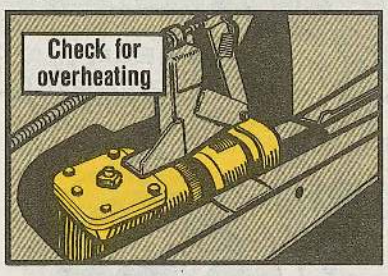
The TM covers all the possibilities, but you've got to look closely to find which one applies to your vehicle. All the poop's there, in black and white. Read it and heed it.

M9 Tank-Mounted Bulldozer...

Use Your Senses



One thing's for sure, blade tank operators! If there's not enough oil in the power takeoff right-angle drive assembly and magnetic clutch, they'll overheat. A lot of oil can be lost between quarterly services!



Let 'em overheat long enough and they'll burn up.

Look for leaks before operation and at halts. Carefully feel the assembly and clutch for too much heat at halts, too.

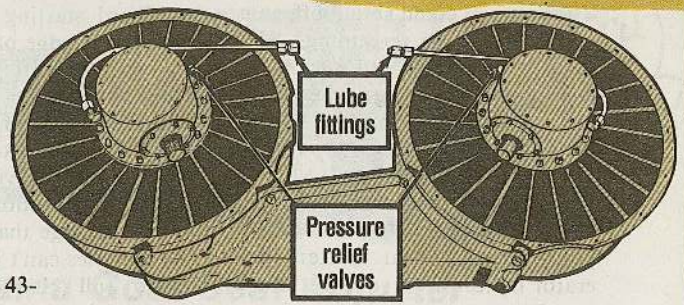
If you think your PTO or clutch is overheating, get your mechanic to check it out according to the lube guide in TM 9-2590-209-14&P, Fig 4-1, Pages 4-2 and 4-3.

Quarterly check of lube levels for the PTO and clutch are musts if you want to keep on pushin.

M109 Howitzers...

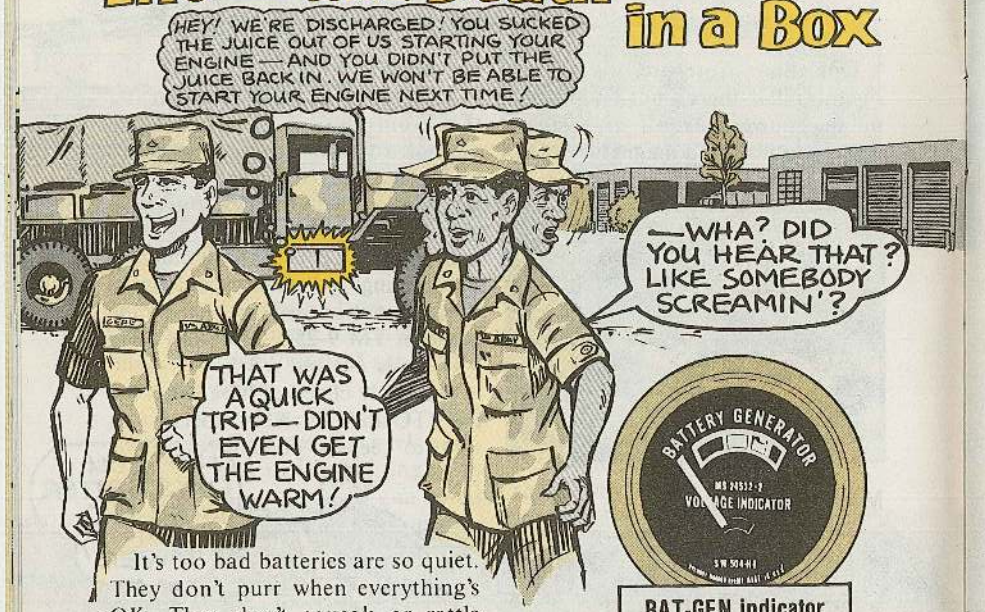
Fan Tower Needs Lubing

Some fan towers are failing from a lack o' lube — because they never got the lube fitting and pressure relief valve called for in TM 43-0143.



Instructions for DS-installation of the fitting and valve start on Page 3-78 of this TACOM Equipment EIR and Maintenance Summary TM. Lube requirements are already in LO 9-2350-217-12, Note 39.

Life — and Death — in a Box



BAT-GEN indicator tells what's going on

It's too bad batteries are so quiet. They don't purr when everything's OK. They don't squeak or rattle when something's wrong. They work—and die—in silence.

If batteries could sound off, some of 'em would be screaming, "Hey, we're discharged! You sucked the juice out of us starting your engine—and you didn't put the juice back in. We won't be able to start your engine next time!"

However, your batteries and your battery charging system can "talk" to you—through that battery/generator indicator on your instrument panel.

Too Soon, Too Little

Even easy engine starting sucks a lot of power out of your batteries. And hard starting may leave 'em right on the edge of being pooped!

If you shut off your engine too soon—like at the end of a short run—battery power has not yet built back up. Your batteries are weak!

Even worse, leaving batteries in a discharged condition causes damage inside—damage that can't be fixed. The batteries can't be brought back up to full charge! This's what happens when you shut down after a short run—and then you don't run your engine again for several days or weeks.

Stop Battery Rip-Off!

A lot of commercial-design batteries are being stolen—especially the maintenance free battery used in M880-series 1 1/4-ton trucks.

Your command can head-off this bummer by requiring that batteries be marked as property of the US Government.

Mount the battery and place the marking—US GOVT—on the best available area. The size of the letters will depend on how well the marking can be seen after the battery has been installed.

If you can't find a good marking place, mark the battery—before it's mounted—on the most noticeable area. Procedures for marking are in TM 9-6140-200-14, Para 4-9a(7). The marking may be hand-painted or stenciled, using lacquer, NSN 8010-00-166-1667.

Goat Stud Better

You don't have to suffer with stripped wheel-mounting studs or loose lug nuts on your Gama Goat. When you've got a bad stud, replace it with stud, NSN 5306-01-075-7876. This is better than the stud listed for Item 13, Fig 103, TM 9-2320-242-20P. Use a new nut — the same one listed for Item 4, Fig 102, in your -20P. Torque the nut to 70 lb-ft. Make a note of the improved stud NSN for your -20P.

Gama Goat Seat Adjuster

Get the ball on your Gama Goat driver's seat adjuster with NSN 5355-01-031-9492. The SMR code is changing — from XBOZZ to PAOZZ. Make note of this in Fig 140, Item 19, of TM 9-2320-242-20P.

SERV DRIVE for Normal Lights

Before you head out in your M880-series truck, make sure the blackout light switch is in the SERVICE DRIVE position. If it's not, your headlights, brake lights, taillights, turn signals and horn won't work.

Exhaust System PMCS Is Weekly

The exhaust system on M880-series trucks needs a weekly visual check. This was left out of the PMCS in C7 to TM 9-2320-266-10. Leaks make the truck Not Ready/Available.

Tell Your DS About Junction Box Breaker

Circuit breaker kaput in your M880-series truck's commo power junction box? Your DS replaces it with NSN 5925-01-138-4954.

Sharpen Your Lubing With Needle-Nose Adapter

Does your M880-series truck have a flush-type lube fitting in the centering ball in the front prop shaft? If so, you need a needle-nose adapter for your grease gun. Without it, you can't get to the fitting, and prop shaft failure is just around the corner. NSN 4930-00-200-1841 gets one for 65 cents.

Straighten Out Flex Tubing NSN

Get the flexible exhaust tube for the compartment heater on your M886/M893 ambulances with NSN 4720-00-278-8015. The pipe has an inside diameter of 1¼ inches. The NSN in the -20P is wrong.

Replace Spotlight Switch Only

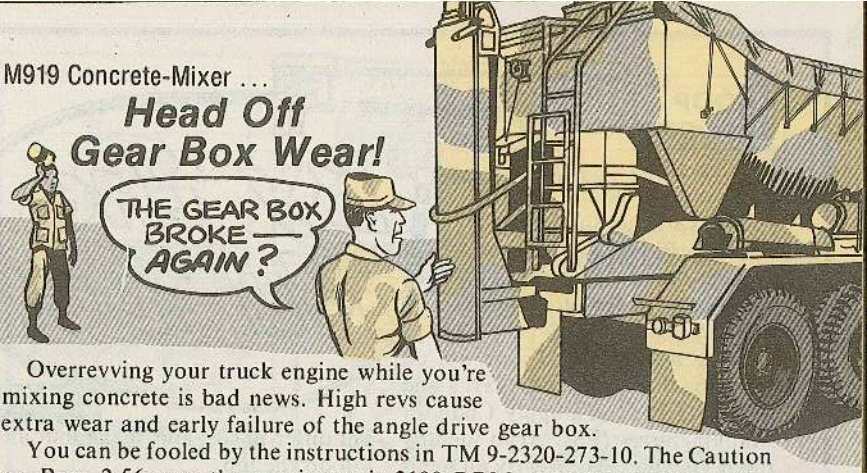
The spotlight switch on your M886 or M893 1¼-ton ambulance on the blink? Don't order the complete spotlight assembly. Use NSN 5930-00-392-5002 to get a new switch.

Thermostat Has NSN ... But ...

The part number for the thermostat in TM 9-2320-266-20P, Fig. 21, Item 2, is wrong, NSN 6620-00-448-1251 (FSCM 86403 P/N 3418459) gets the right one. The NSN's not on the AMDF, but it's coded "L"—for local purchase—on the ML-C. No local source? Order on a DD Form 1348-6. Put Advice Code 2A on the request. Tell support the source of supply is FHZ and the cost is $5.85.

M919 Concrete-Mixer ...

Head Off Gear Box Wear!



Overrevving your truck engine while you're mixing concrete is bad news. High revs cause extra wear and early failure of the angle drive gear box.

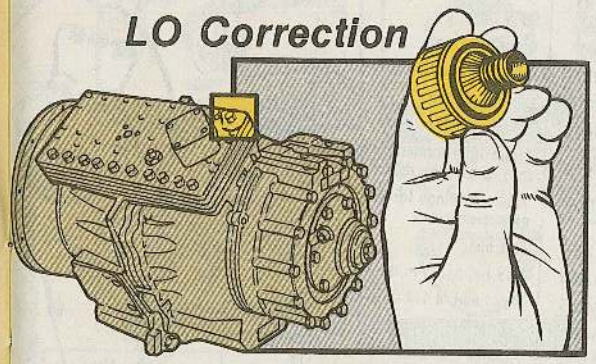
You can be fooled by the instructions in TM 9-2320-273-10. The Caution on Page 2-56 says the maximum is 2100 RPM. But that applies to the tachograph in the cab.

When you start making concrete, go with the word in TM 5-3895-372-10. Para 2-12d calls for 1620-1720 RPM's on the mixer tachometer during operation.

So, save the RPM's for the race track and save your gear box.

M915-Series Trucks ...

LO Correction

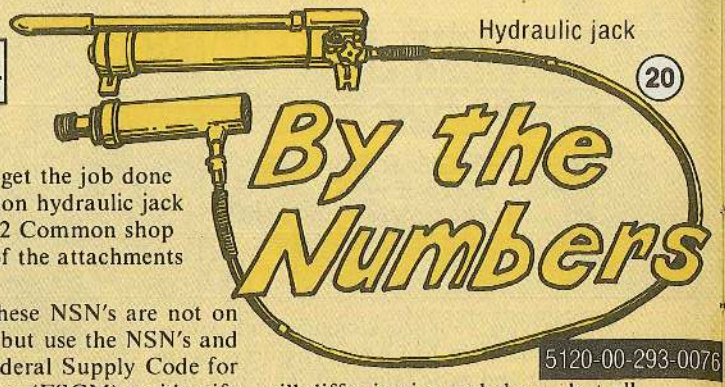


Note 7(b) of LO 9-2320-273-12 says to change the transmission case breather, NSN 2520-01-077-2803, every 50,000 miles or 12 months. That's wrong.

The straight scoop is in the same note — "change case breather if required." Which means you only replace it if it's cracked or broken.

Boot Screw NSN

Use NSN 5305-00-984-6200 to get a screw for the steering knuckle dust boot on your deuce-and-a-half or 5-tonner. You'll get a substitute when you order NSN 5305-00-752-1693 from the TM. The substitute is not threaded enough to tighten the clamp.



You can't get the job done with the 10-ton hydraulic jack in your No. 2 Common shop set if some of the attachments are missing.

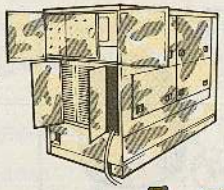
Most of these NSN's are not on the AMDF, but use the NSN's and PN's and Federal Supply Code for Manufacturers (FSCM) to identify the parts you need. Nearly all items are local purchase. Use DD Form 1348-6.

Different manufacturers get a piece of the supply action, so items will differ in size and shape, but all will do the job.

Here're the parts for the hydraulic jack kit, NSN 5120-00-595-8388, if you have a Porto-Power or a Hein-Werner model.

	NSN	Porto-Power FSCM 07505	Hein-Werner FSCM 28047	Item description/use	No. required in kit
①	5120-00-357-6157	PN Z16	PN A1035	90°V base	1
②	5120-00-496-6984	Z132	A1047	Chain pull plate	1
③		EK527	CH1061	Chain, 6-ft w/hook	2
④	3442-00-496-7001	Z-8	A1070	Clamp end toe	1
⑤	3442-00-496-6988	Z-192	A1045F	Clamp head	1
⑥	5120-00-357-5662	Z10	A1096	Short male connector. Screws into ram of the jack.	1
⑦		FZ1054	A1028	Tube couplings for the extension tubes.	2
⑧	5120-00-496-6985	Z14	A1058	Flat base	1
⑨	5120-00-357-6141	Z128	A1060	Flex head, 3-5-in dia	1
⑩	5120-00-357-6143	Z131	A1065	Flex head, 4 1/4 -5-in dia	1
⑪	5120-00-496-6989	Z21	A072	Clamp toe pin	2
⑫	3442-00-430-3590	Z9	A1064	Plunger toe	1
⑬	3442-00-430-3585	Z30	A1051F	Spreader ram toe	1
⑭	5120-00-357-7092	Z34	A1022	Serrated (grooved) saddle. Screws onto the plunger.	1
⑮	5120-00-357-7345	Z170	AA1033	Adjustable body spoon	1
⑯	4940-01-056-8131	FZ1002	A106	Extension, 5-in lg	1
⑰	4940-01-056-8130	FZ1003	A1012	Extension, 11-in lg	1
⑱	4940-01-056-8398	FZ1006	A1018	Extension, 18-in lg	1
⑲	5120-00-357-5848	Z285	AA1006	Slip lock extension	1
⑳	5120-00-293-0076			Hydraulic jack	1

60-KW Generator Sets...



Slave/Jump Starting PM Tips

Safety First

Working with batteries is always a dangerous part of your generator maintenance. Explosive gas (hydrogen) is present in and around batteries. You have to make sure there's no smoking, open flames or electrical sparks.

Otherwise, the gas can explode and damage your set, wiring harnesses, and yourself.

Sparks are a real problem. They occur when current flowing in a battery DC circuit is broken or completed.

Make sure all electrical switches in and around the control box are off, and the DC circuit breaker is pulled when you replace or service batteries, battery cables or connecting jumper cables.

Thoroughly ventilate the battery compartment area before you replace or service batteries, battery cables, or connecting jumper cables.

Open the vent caps and gently fan away the concentrated gas. You can do this with a piece of stiff cardboard. Replace vent caps.

Wear a face shield or safety goggles when you service or check batteries.

Any time the positive (+) battery cable's terminal is removed from the battery positive terminal post and the set is operated, thoroughly wrap the cable terminal with insulating tape. NSN 5970-00-664-3167 gets an 85-ft roll.

This eliminates possible arcing between the positive battery cable's terminal and the metal battery box.

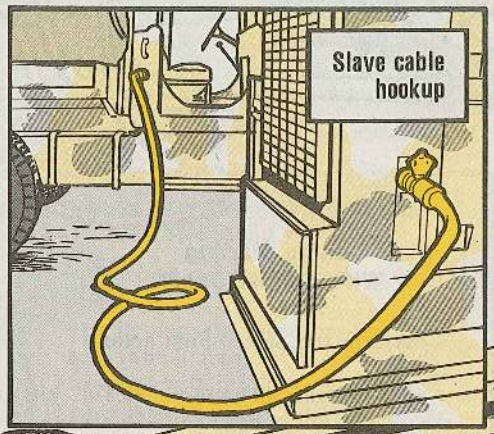
It's not necessary to wrap the negative (–) cable terminal when it's disconnected.

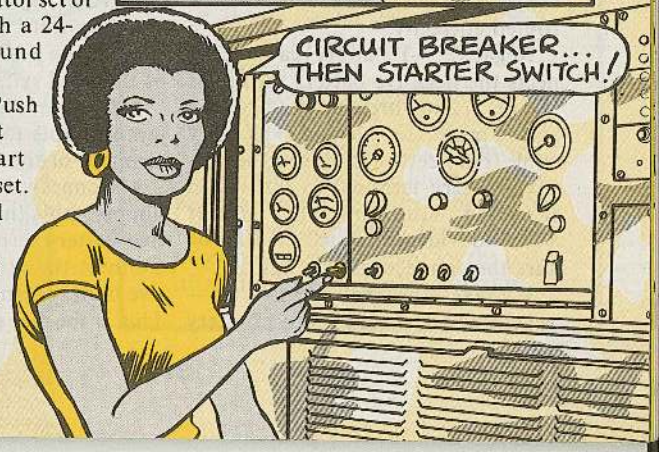
Here're 3 examples when extra PM care and correct slave or jump starting steps will stop maintenance downtime, parts replacement and personal injuries.

Starting With Slave Cable

Perform the Safety First actions above.

- Connect 1 end of the slave cable into the 2-prong receptacle on the set with the low or dead batteries. (Use either slave cable NSN 4910-00-474-9135, with 2-prong connectors at each end, or NSN 2590-00-148-7961 NATO type that has a 1-prong connector with 2-prong adapters at each end.)
- Connect other end of slave cable into slave receptacle on the live generator set or any live vehicle with a 24-volt negative ground system.
- Start the set. Push in the DC circuit breaker and then start the dead generator set. Let it reach normal operation mode.
- Disconnect the slave cable from the dead set first.





Jump Starting With Jumper Cables

Perform the Safety First actions above.

- Be sure that all battery cables of the set with low or dead batteries are routed correctly.

Negative (–) battery cable connects the negative battery terminals to the 1/2-in threaded stud on the starter motor; the positive (+) battery cable (red sleeving) connects the positive battery terminal to the 1/2-in threaded stud on the starter solenoid—identified as BATT. Be sure the connections are tight.

- Make sure that the live set—generator set, portable slave battery kit, or vehicle — has a 24-volt negative ground system.
- Connect 1 end of the red jumper cable to the positive battery terminal of the dead set.
- Connect the other end of the red jumper cable to the positive battery terminal of the live set.
- Connect 1 end of the black jumper cable (negative) to the negative battery terminal of the live set. Connect the other end to the negative battery terminal of the dead set. This is the last connection.

CAUTION: On the generator sets, this connection must be made to the negative battery terminal so that the starting current will go thru the negative battery cable. If you hook it anywhere else on the generator set, the starting current will burn up the wires in the branched engine accessories wiring harness and the special relay box wiring harness.

- Start the live set.
- Push in the DC circuit breaker and start the dead generator set. Let it reach normal operation mode.
- Disconnect jumper cables in reverse order.

Slave Starting When Batteries Are Removed From Set

Perform the Safety First actions above.

- Be sure the loose positive battery cable's terminal is thoroughly wrapped with insulating tape before you make any slave starting moves.
- If you have a slave cable, use it and follow the slave starting poop in that example.

You should not jump start your generator set with jumper cables when the batteries are removed. Here's why: Since the loose positive battery cable's terminal should be wrapped in insulating tape, there's no easy connection point for the positive jumper cable's alligator clip.

10- & 20-HP Mil Std Engines...

It's All in the Timing

When the timing is off, your military standard engine runs like a bucking bronco—if it runs at all!

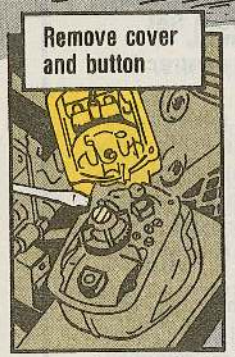
Adjusting the points and setting the timing will tame that bronco and keep it churning out those horses.

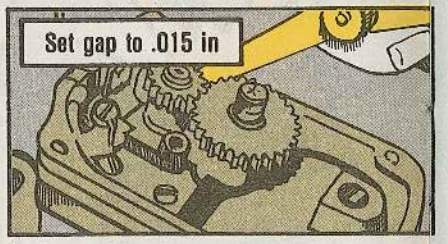
Remove the top cooling shroud, governor, spark plug cables and magneto.

Take off the magneto cover (and rotor button on the 20-HP models).

Check the points.

Replace 'em if they're bad. Check the gap. If it's OK (.015 inch), leave the points alone. If the gap is off, loosen the lock screw, set the point gap to .015 inch and tighten the lock screw. Then, doublecheck the gap!



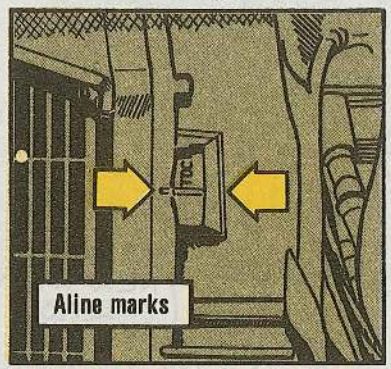


Replace the rotor button on the 20-HP models and the magneto cover on both models.

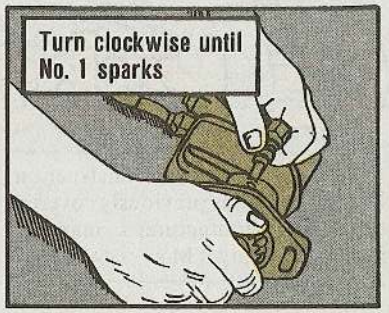
Engine Timing

Now you're ready to time the engine. Remove the No. 1 spark plug. Put your thumb over the No. 1 hole. Turn the starter pulley clockwise until air comes out of the hole.

Continue turning until the TDC mark on the flywheel lines up with the flywheel housing mark.

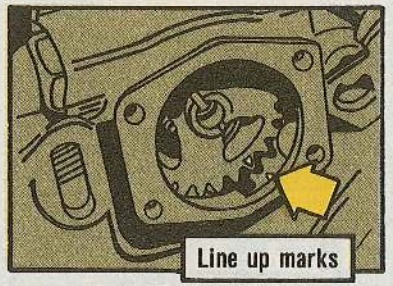


Connect the No. 1 spark plug wire to the magneto. Hold the other end close to the magneto. Turn the magneto gear clockwise. Stop when you get a spark.



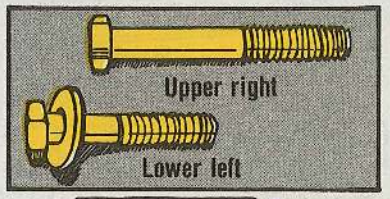
Reassemble

Install the magneto on the engine. Make sure the timing mark on the magneto gear lines up with the camshaft gear mark.



Install the mounting bolts. Be sure to put the shorter bolt in the lower left hole. If you mix them up, you can crack the magneto case.

Install the No. 1 spark plug, cables and governor.



Use Timing Light

Connect a magneto timing light—like the one in the No. 1 Common Shop set—to the No. 1 spark plug lead.

Start the engine and run it at operating speed. Loosen the magneto mounting bolts and adjust the magneto to get the timing marks lined up. Stop the engine, remove the timing light and replace the top cooling shroud.

CCE Pubs Update

A lot of Commercial Construction Equipment items previously covered only by manufacturer's manuals now have Army TM's.

Auger, Earth (Texoma Mod 254-9)	TM 5-3820-254-14&P
Compactor, High Speed	TM 5-3895-349-14&P
Compressor, 750 CFM (Sullair Mod 750DP)	TM-5-4310-451-14&P
Crane, 25-ton, Hyd (Grove Mod TMS-300-5)	TM 5-3810-300-10
Crane, 25-ton, Hyd (P & H Mod MT250)	TM 5-3810-293-14&P-1 TM 5-3810-293-14&P-2 TM 5-3810-293-14&P-3
Distributor, Bituminous (Etnyre Mod D-60)	TM 5-3895-356-14&P
Heater, Hot Oil (Volcanic Mod 200-STM-77)	TM 5-3895-354-14&P
Loader, Scoop Type (Clark Mod 175B)	TM 5-3805-257-14&P
Loader, Scoop Type (IHC Mod H100C)	TM 5-3805-255-14&P
Machine, Paving (Cedarapids Mod BSF-400)	TM 5-3895-355-14&P
Melter, Asphalt (Hi-Way Mod MT-12)	TM 5-3895-352-14&P
Melter, Asphalt (Chausse Mod STMD-3000)	TM 5-3895-358-14&P
Rockdrill-Paving Breaker (Boston Pneumatics BP-50)	TM 5-3820-244-14&P
Roller, Motorized (Hyster Mod C350B-D)	TM 5-3895-348-14&P-1 TM 5-3895-348-14&P-2
Roller, Pneumatic tired (Hyster Mod C530A)	TM 5-3895-347-14&P
Roller, Vibratory (Rex Mod SP-848)	TM 5-3895-353-14&P
Tamper, Backfill (Stone Mod VR-11)	TM 5-3895-345-14&P
Tester, Soil density	TB 385-103
Tractor, FT, DED (Caterpillar Mod D8K)	TM 5-2410-234-14&P-1 TM 5-2410-234-14&P-2
Tractor, DED, Loader-backhoe (John Deere Mod JD410)	TM 5-2420-222-14&P-1 (1974 model) TM 5-2420-222-14&P-2 (1978 model)
Trailer, 15-ton, flatbed	TM 5-2330-361-14&P
Truck, 20-ton Dump (IHC Mod F5070)	TM 5-3805-254-14&P-1 TM 5-3805-254-14&P-2

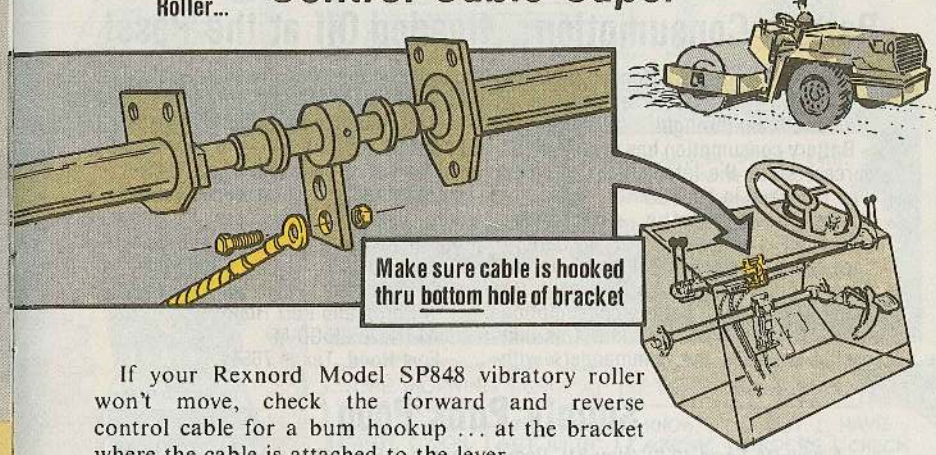
There are no Army TM's for the following equipment. Order the commercial manuals by Federal Supply Code for Manufacturer and part number of the manual. The RIC is S9C.

Roller, Vibratory, SP (Tampo Mod RS-28)	FSCM 88812	09-214-00 (operator and parts for roller)
	FSCM 72582	6SE337 (Engine)

You can get the latest word on service tips, PN's and NSN's from CCE Information Letters put out by the CCE Project Manager Office. To get on the mailing list, write:

Commander
US Army Tank-Automotive Command
ATTN: DRCPM-CEL
Warren, MI 48090

Vibratory Roller... Control Cable Caper



If your Rexnord Model SP848 vibratory roller won't move, check the forward and reverse control cable for a bum hookup ... at the bracket where the cable is attached to the lever.

The control cable should be hooked onto the lever thru the bottom hole of the lever control bracket.

If you have to re-rig the cable, be sure you allow enough threads on the cable end to make a good hookup.

AUDIO-VISUAL STUFF

Available at battalion or post Learning Center

TEC Lessons

020-171-5720-A— Perform operator's checks and services on M60A3 tank turret during and after firing.

020-171-5732-A— Operate the tank searchlight AN/VSS-3A on M60-series tank.

020-171-5735-A— Inspect/install/remove and stow the crosswind sensor probe.

030-051-6426-F— Launch bridge erection boat with crane or wrecker.

030-051-6427-F— Retrieve bridge erection boat with crane or wrecker.

030-051-6465-F— Assemble double story MGB up to 103 feet: Part IV.

030-051-6561-F— Launch the AVLB.

030-051-6562-F— Retrieve the AVLB.

101-113-7328-A— Troubleshooting and repairing radio control set, AN/GRA-39 () (DS)-performance checks (Part 2).

101-113-8202-A— Install radio set, AN/FRC-93 fixed station installation.

221-061-7153-A— Start/stop the MEP-021A generator.

221-061-7174-A— Operate the MEP-025A generator.

221-061-7177-A— Perform operator adjustments on radar set AN/TPS-58B following turn-on.

600-011-6665-F— Rigging the OH-58A tail rotor system.

610-091-6571-A— Troubleshoot engine malfunctions, ¼-ton truck (M151 series).

610-091-6666-A— Troubleshoot air system malfunctions, 5-ton truck (M809 series).

610-091-6681-A— Troubleshoot fuel system malfunctions, 5-ton truck (M809 series).

610-091-6706-A— Cut metal with oxyacetylene equipment.

644-093-7064-A— Verification/pre-issue/receipt inspection of MADM warhead, Part II.

644-093-7097-A— Periodic inspection of the LANCE warhead section, Part V.

644-093-7098-A— Perform command disablement and unlock procedures on the LANCE warhead section.

644-093-7129-A— Troubleshoot the Pershing warhead section, Part I.

644-093-7131-A— Troubleshoot the Pershing warhead section, Part II: Replace the M1103 inertial fuze.

662-091-7640-A— Troubleshoot cooling system malfunction, 5-KW GED generator.

662-091-7695-A— Replace DC loadmeter, 1.5-KW GED generator.

662-091-7760-A— Test engine-generator wiring harness, 60-KW DED generator.

Battery Consumption...Headed Off at the Pass!

In the War on Battery Consumption, III Corps and Fort Hood has made a dramatic breakthrough!

Battery consumption has decreased 52 percent since the intensified campaign was launched in May 82.

Spearheading the successful campaign is a detailed SOP on battery care covering all levels of maintenance. Among other things, the SOP calls for monthly reports of battery consumption for each major III Corps unit. This unit profile provides the commanders with the information they need to evaluate their battery maintenance program.

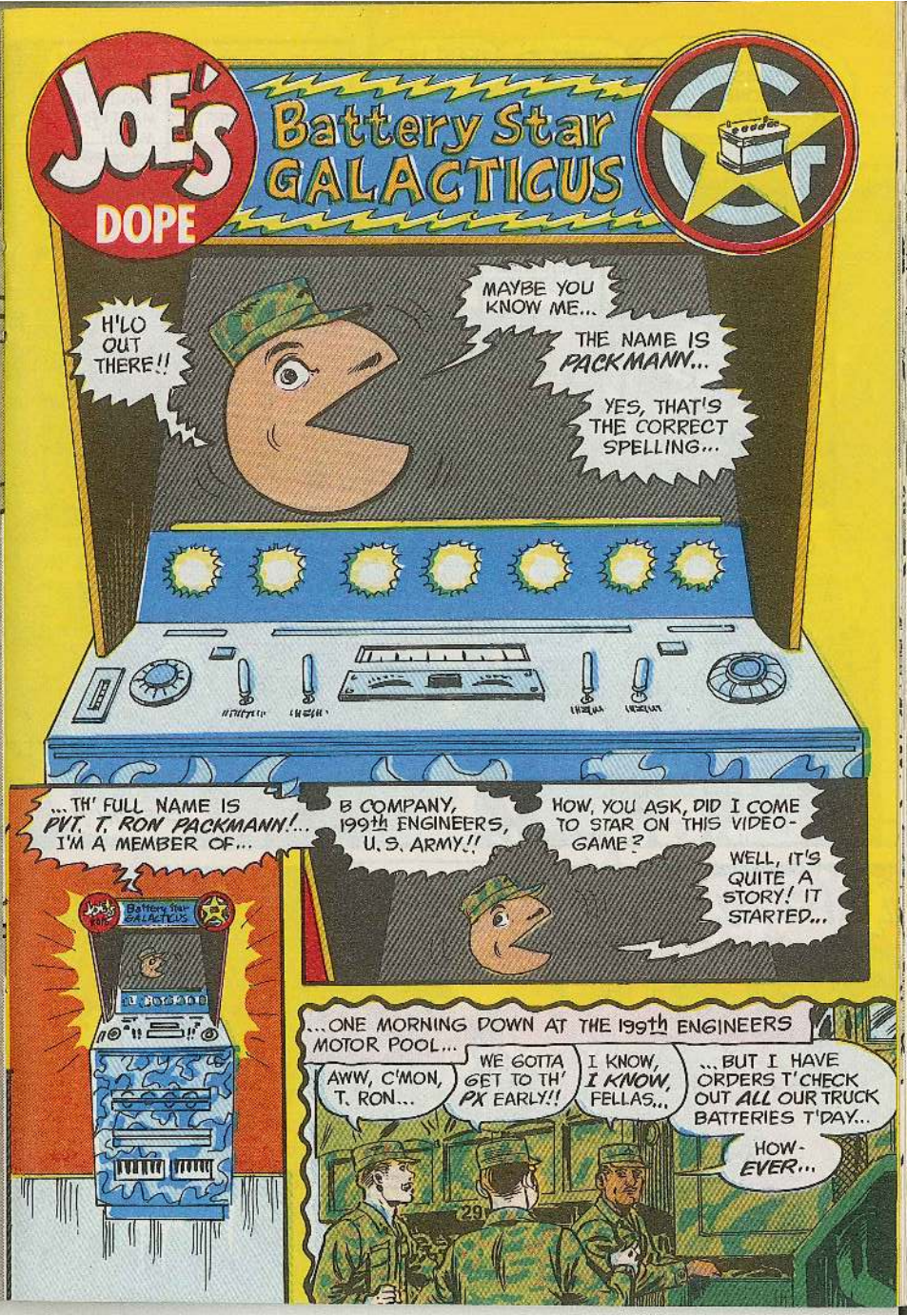
The real clout, of course, is provided by command emphasis—the personal involvement of the chain of command.

Installation and command G-4's who would like to review the III Corps program for ideas or implementation can get copies from:

Commander
III Corps and Fort Hood
ATTN: AFZF-GD-M
Fort Hood, Texas 76544

Supply Pubs Poop

A new DA Form 12-21 (Nov 81), Requirements for Federal and Department of the Army Supply Catalogs, has made the pubs scene. If you want to keep getting pubs like the Cross Reference List (MCRL-1, -2, -3) or Identification Lists (IL), you must send in the new form. Your old "order" no longer covers you. Check with your pubs clerk to make sure a new form has gone in.




...CHECKIN' THESE BATTERIES WON'T TAKE LONG... IF YOU GUYS HELP...
HAPPY TO, OL' BUDDY!
YEAH! LET US AT 'EM!
HEY, PACKMANN, THESE CABLES MOVE A LITTLE ON THE CLAMP...
S'ALRIGHT! A LITTLE SHOULDN'T MATTER MUCH...
?
HUH! THIS BATTERY'S ALL CORRODED...
THEN WIPE IT OFF...
?
T. RON, WHADDA I DO 'BOUT THESE LOOSE HOLD-DOWNS?
OH, N'MIND! I'LL TIGHTEN 'EM NEXT TIME!
THAT'S TH' LAST ONE!
LET'S GO!
?
LATER, IN THE PX VIDEO GAME ROOM...
WELL, THAT WAS MY LAST QUARTER!
I'M BROKE, TOO!
GEE! WOULD YA LOOKIT T. RON ON THAT GALACTICUS GAME!
SHHH! JUST 1000 MORE POINTS AN'...
...I'LL BE TH' NEW CHAMP ON THIS GAME!
PING PING K-LINK
HEY... WHAT TH'...
THIS IDIOT BOX IS... IS CHEATIN'!!
RAZZZ!
I'VE LOST!
WHY, YOU...
?
CHEAT ME OUT'A BEIN' CHAMP, WILLYA?...
TAKE THAT!!
...AN' THAT!!
KIK
KICK
SS-SSS-S
S-S-ZWZOOSH

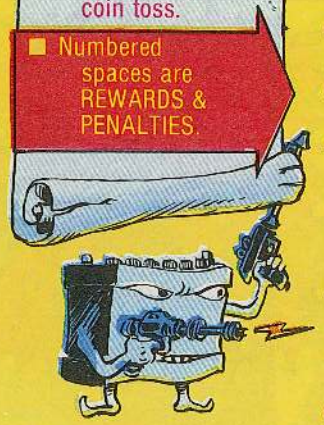

WHA' HOPPEN?
PACKMANN DISAPPEARED!
YEAH -- HE MUSTA GONE BACK T' WORK!
RIGHT... AN' SO SHOULD WE!!
C'MON!
HEY, WAIT, FELLAS!!
NO USE, T. RON!! THEY CAN'T HEAR YOU HERE IN MY WORLD!!
I'M BATTERY STAR GALACTICUS! YOU'RE GONNA GET BOUNCED AROUND IN A WHOLE NEW GAME!
YOU'LL LEARN THE GOOD AND BAD OF BATTERY MAINTENANCE... LIKE THIS...
1
Batteries clean. Advance 3 spaces.
ZONK
2
Battery clamps loose on posts. Retreat 4 spaces.
BONK
3
Bat-Gen indicator or ammeter shows over-charging. Retreat 2 spaces.
BATTERY GENERATOR
AMPERES
BONK
FLASH!
We interrupt this game to invite YOU, our readers, to play BATTERY STAR GALACTICUS, also! Just turn this page!

Play BATTERY STAR GALACTICUS

SPACE SHIP RACE TO UTOPIA

RULES OF GAME

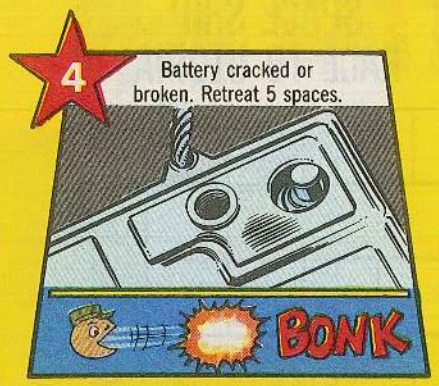
- Any number may play.
- For space ships, use pebbles, nuts, washers, coins or any other small objects.
- Toss a coin to make your move: HEADS = 1 space TAILS = 3 spaces
- More than 1 player on the same space is OK.
- Final move to Planet Utopia must be made in exact number of spaces allowed by coin toss.
- Numbered spaces are REWARDS & PENALTIES.

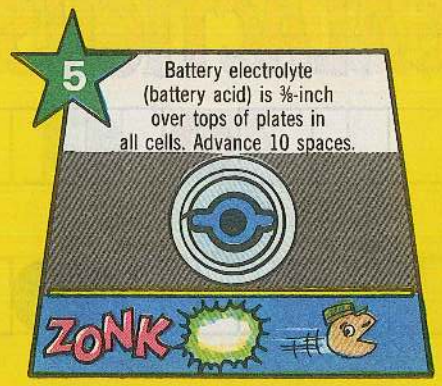


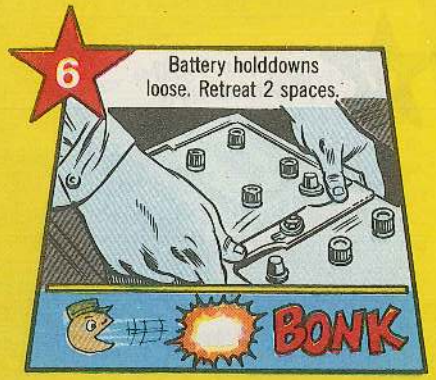
PLANET UTOPIA

If you land on...

1. Batteries clean. Advance 3 spaces.
2. Battery clamps loose on posts. Retreat 4 spaces.
3. Bat-Gen indicator or ammeter shows overcharging. Retreat 2 spaces.
4. Battery cracked or broken. Retreat 5 spaces.
5. Battery electrolyte (battery acid) is ⅜-inch over tops of plates in all cells. Advance 10 spaces.
6. Battery holddowns loose. Retreat 2 spaces.
7. Battery not cracked or broken. Advance 2 spaces.
8. Battery post damaged. Retreat 2 spaces.
9. Bat-Gen indicator needle in GREEN during engine operation. Advance 3 spaces.
10. Battery leaking. Retreat 4 spaces.
11. Battery clamps snug on posts. Advance 4 spaces.
12. Batteries corroded or dirty. Retreat 5 spaces.
13. Bat-Gen indicator needle in YELLOW with switch ON before engine is started. Advance 2 spaces.
14. Cable clamp too high on battery post. Retreat 2 spaces.
15. Bat-Gen indicator needle in left RED with switch ON before engine is started. Retreat 4 spaces.
16. Bat-Gen indicator or ammeter shows undercharging during engine operation. Retreat 2 spaces.
17. Battery not leaking. Advance 2 spaces.
18. Battery electrolyte (battery acid) is below tops of plates in any cell. Retreat 10 spaces.


4
Battery cracked or broken. Retreat 5 spaces.
BONK


5
Battery electrolyte (battery acid) is ⅜-inch over tops of plates in all cells. Advance 10 spaces.
ZONK

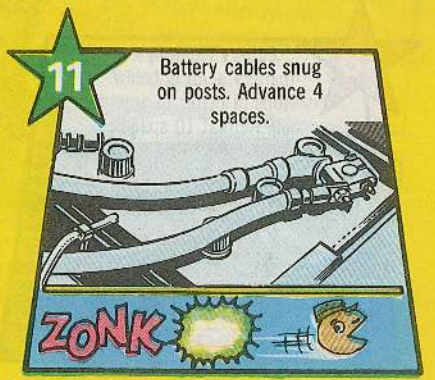

6
Battery holddowns loose. Retreat 2 spaces.
BONK

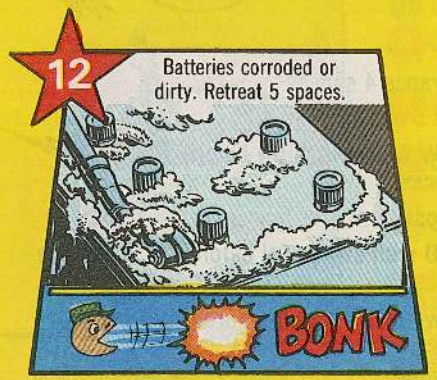

7
Battery not cracked or broken. Advance 2 spaces.
ZONK


8
Battery post damaged. Retreat 2 spaces.
BONK

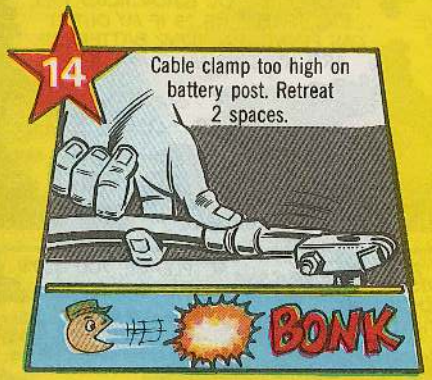

9
Bat-Gen indicator needle in GREEN during engine operation. Advance 3 spaces.
BATTERY GENERATOR
ZONK

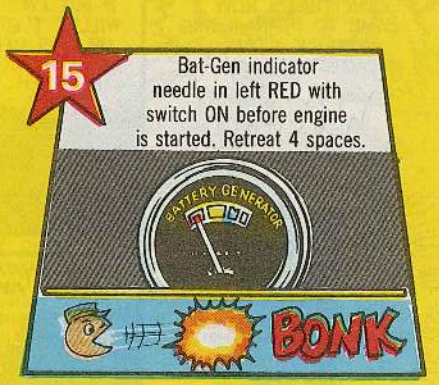

10
Battery leaking. Retreat 4 spaces.
BONK


11
Battery cables snug on posts. Advance 4 spaces.
ZONK


12
Batteries corroded or dirty. Retreat 5 spaces.
BONK


13
Bat-Gen indicator needle in YELLOW with switch ON before engine is started. Advance 2 spaces.
BATTERY GENERATOR
ZONK


14
Cable clamp too high on battery post. Retreat 2 spaces.
BONK


15
Bat-Gen indicator needle in left RED with switch ON before engine is started. Retreat 4 spaces.
BATTERY GENERATOR
BONK

SPH-4 Chin Strap PM

Dear Windy,

Several grommets have pulled through the SPH-4's cloth retention assembly that the chin strap snaps onto. Is there a better chin strap design in the system, or how do we stop this grommet pull-thru biz?

SP4 A. V. N.

Dear Specialist A. V. N.,

A better chin strap is under development. Until it gets into the supply system, tho, here's a field fix to stop the pull-thru:

Add a steel washer—NSN 5310-00-167-0765—under the slotted head post. This'll keep the grommet from pulling thru the cloth.

Before you put the black brass screw into the post, add some sealing compound to the screw threads—to stop the screw from coming loose. NSN 8030-00-247-2524 gets a 2-oz. tube.

Add a steel washer-NSN 5310-00-167-0765

Aviation Messages

Cat 1 EIR Phone: AUTOVON 693-2066 (24 hours)

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

UH-60A-83-04—SOF One-time inspection for inlet duct assy, and alinement pin bracket 081600Z Apr 83.

CH-47-83-02—SOF Fifth and final update status of actions to restore operational readiness capability of CH-47 fleet 041900Z Apr 83.

CH-54-83-01—SOF Insp of intermediate gearbox support fitting assy 081545Z Apr 83.

MIM-T62-MEA-01—Rescission of TB 55-1520-237-20-39, One time inspection for auxiliary power unit compressor blades 151900Z Apr 83.

MIM-UH-60-83-MEA-06— Right hand stabilator attachment fitting 082030Z Apr 83.

MIM-UM-60A-MEA-83-08— Expanded aft center of gravity limits 261530Z Apr 83.

True and False

It's true that TSARCOM Msg DRSTS-MAPL(I) 021950Z Jun 80 removed the 5-year replacement of aircraft restraint equipment. It's a condition item.

But it's false to "figure" you no longer have to mark the equipment.

Fact is, any time you install a safety belt or shoulder harness, you have to put the installation date on it. That's the word in Para 3-313 of TM 55-1500-204-25/1 on general maintenance practices. The idea is to establish a reference point for possible extension of the 5-year deal.

Never use paint on the webbing because it will fade and become unreadable.

Mark the installation date with an ink marker such as NSN 7520-00-973-1059.

HIT: 1st Flight Only

Dear Windy,

We need a reading on how often the engine Health Indicator Test (HIT) is required on our OH-58A.

Is a HIT needed for each flight or just for the first flight of the day?

SSG J. D. L.

Dear Sergeant J. D. L.,

The HIT is done before the first flight of the day.

The crew chief enters a Preventive Maintenance Daily (PMD) due on the DA Form 2408-13. At the same time, a HIT-check-due entry is also made.

Both checks take a red dash symbol.

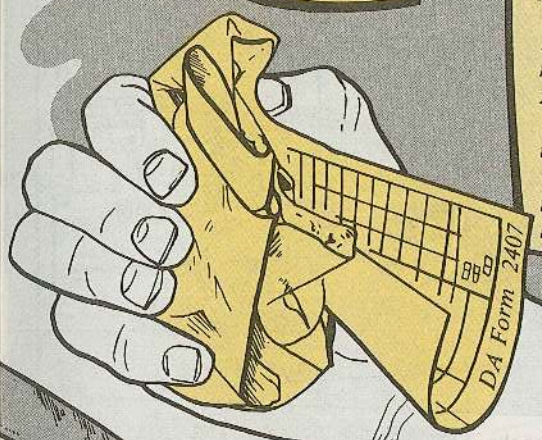
Windy

DA Form 2407 Holdover

Dear Windy,

Para 4a(1)(d)4 of AR 750-31, Technical Publications for Aircraft Files, says the current DA Form 2407, copy 4, will be placed in the aircraft logbook. Why?

SSG C. L. C.



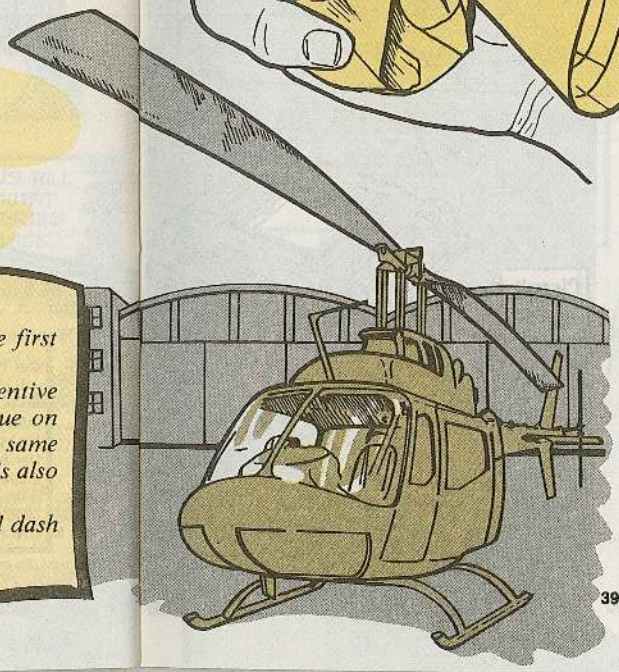
Dear Sergeant C. L. C.,

That DA Form 2407 is a holdover from when TM 38-750 required Monthly Maintenance Reports on aircraft. Units sent in DA Forms 2407 reporting the organizational maintenance pulled on their birds.

The Monthly Maintenance Report hit the skids in 1979. You no longer send in a DA Form 2407 for that purpose.

But AR 750-31 hasn't been updated since the report died. While the words are still there, the need for that form in the logbook no longer exists.

Windy



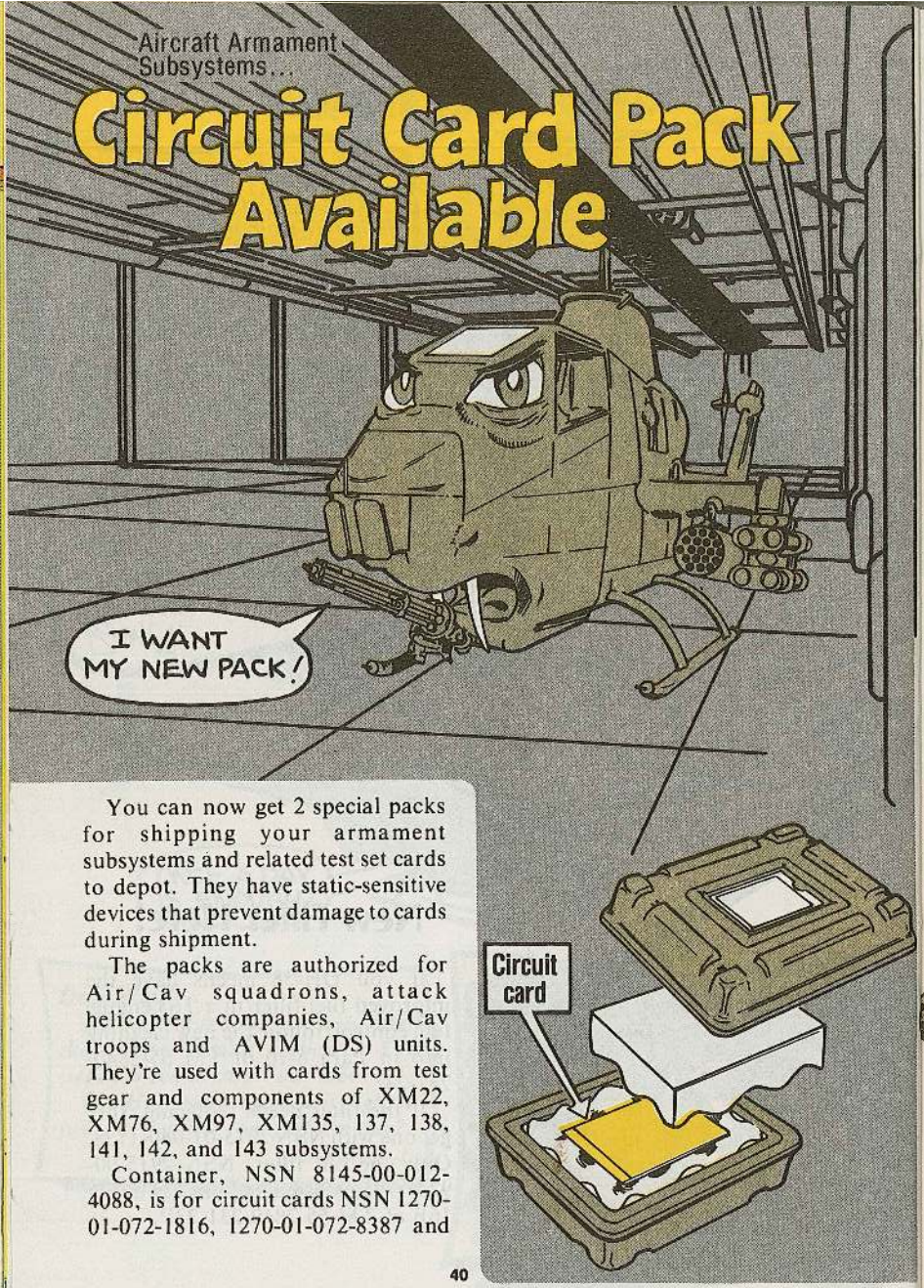
New Filter Here!

If you OH-58 mechs have the improved fuel filter in a T63 engine fuel control, follow the new cleaning info in Para 6-10 of TM 55-2840-231-23.

If the filter needs replacing, tho, get one with NSN 2915-01-040-1138. Only the old filter, NSN 2915-00-924-7795, is listed as Item 129 in Fig 16B of TM 55-2840-231-23P.

Aircraft Armament Subsystems...

Circuit Card Pack Available



You can now get 2 special packs for shipping your armament subsystems and related test set cards to depot. They have static-sensitive devices that prevent damage to cards during shipment.

The packs are authorized for Air/Cav squadrons, attack helicopter companies, Air/Cav troops and AVIM (DS) units. They're used with cards from test gear and components of XM22, XM76, XM97, XM135, 137, 138, 141, 142, and 143 subsystems.

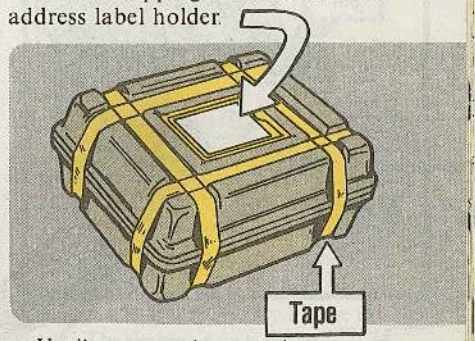
Container, NSN 8145-00-012-4088, is for circuit cards NSN 1270-01-072-1816, 1270-01-072-8387 and 4933-01-120-0836. It measures 4x12x18 inches.

Container, NSN 8145-00-260-9559, is for all other cards used with the systems. It's 1 3/5 x 9 x 11 1/2 inches.

Units need to keep on hand 10 of the larger and 25 of the smaller containers.

Here's how to pack the cards or modules:

- Wrap the card in an electronic static discharge (ESD) bag. They come in 3 sizes: 4x6-in, NSN 8105-01-120-3380; 8x8-in, NSN 8105-01-120-3377, and 12x18-in, NSN 8105-01-096-9528.
- Place the card or module in the right-sized pack and close the pouch.
- Tape the pouch along the edges as shown below.
- Put shipping documents in the address label holder.

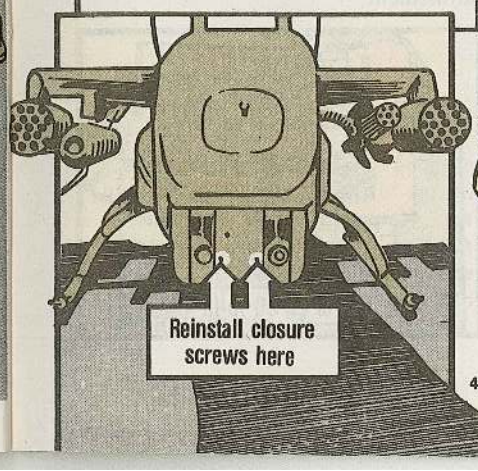


Until you get the containers, you can wrap the cards in aluminum foil for shipment. That reduces static damage.

M28A1 Fairing Screw

When you reinstall the fairing over the M28A1-series turrets, remember the gun slot closure screws.

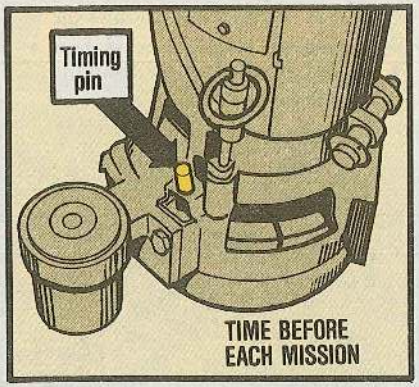
If you forget the screws, the fairing could fall off in flight.



Kits Gathering Dust?

Give aircraft tech supply the once-over, AVUM types, for any MWO kits you may have received by mistake. Turn 'em in to your support so they, or a contractor field team, can upgrade your aircraft.

M134 Minigun Timing



You can't take timing for granted when your M134 minigun's scheduled for a mission.

The timing between your M134 and the feeder delinker has to be exact, and you've got to time it before each mission. If the timing's off, the gun will jam.

So, you can't assume that just because it worked fine last time out it'll do the same next time with no timing adjustment. Always recheck M134 timing before you load and arm the M28A1 subsystem.

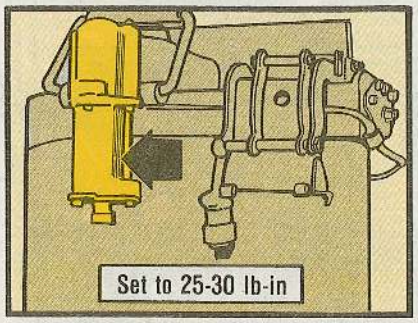
Torque Limiter

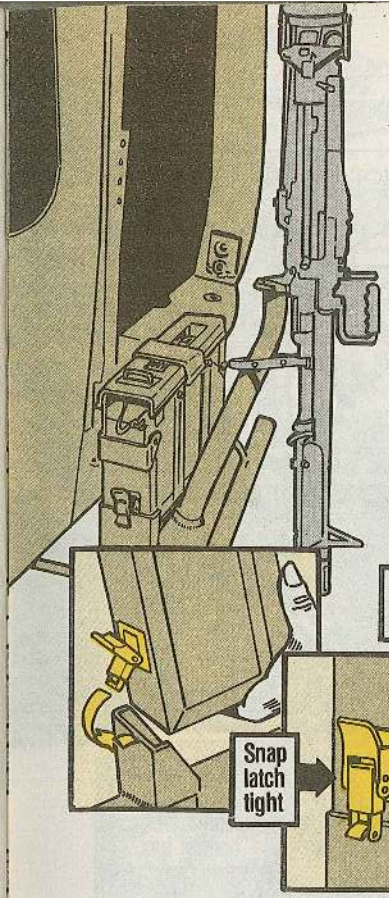
Another "no guess" area is the torque limiter on the magazine assembly.

The correct torque limiter setting is 25 to 30 lb-in. In other words, when adjusted right, the limiter should break free or slip only when 25 to 30 lb-in of pressure is applied. If it doesn't, readjust the limiter.

If you adjust it too high, the belt may snap or jam in the feeder. If it's too low, the belt will tend to loop or bunch up and jam the feeder or separate.

Sect V, Chap 3 of TM 9-1090-203-12 gives you the word on minigun timing and torque limiter adjustment.





M23 Ammo Box Security

When you install the ammo box on the tube assembly of your door-mounted M23 armament sub systems, take a second look at the latches and the safety cable.

Latches must be snapped tight over the catches on the tube assembly. And, the safety cable must be secured to the bracket on the ammo box and to the cover.

If the box comes loose while your Huey's airborne, there's no telling what it'll hit. If the cover comes off because the cable's damaged or missing, it'll almost surely hit the tail rotor. That's bad news.

Play it safe. If the safety cable's damaged or missing, get it replaced.

Flyer's Suit Thread

NSN 8310-00-405-2252 gets the high temperature resistant green nylon thread to repair your Nomex flight suit. Use Appendix A, CTA 50-970, as your authority. The number will show up in a revision to TM 10-8400-201-23.

COMMO AN/VIC-1 Intercom Set...

PM Pulls Parts Together!

The parts of your intercom system are scattered in, on, around and through your tracked vehicles. Your good PM is the glue that holds 'em all together.

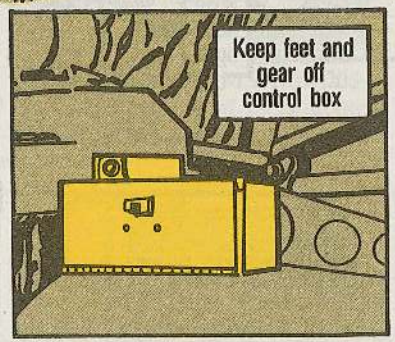
Here're a few tips and reminders to help you get the job done.

On the Outside

Control boxes mounted on the outside of your track aren't steps. Keep your feet or extra gear off.

Hands off the cable that feeds the boxes, too. It's not a handhold. You'll tear up insulation or connectors by hoisting yourself up at its expense.

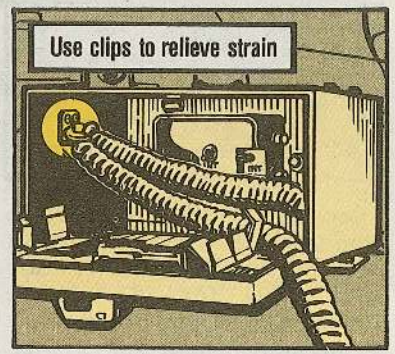
That same cable goes through the engine compartment on many



vehicles. Warn your mechs to keep an eye on it when they remove or install the power pack.

Control box handsets need your attention. Always replace 'em in their holders when you're through with 'em. Use cord clips to relieve strain at the box.

When you stow the handset, be sure the cord is safely tucked away



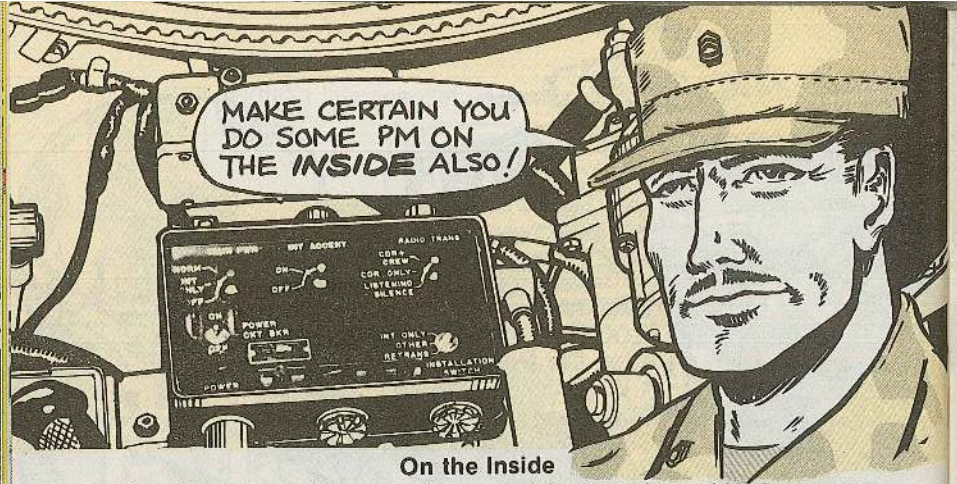
before slamming the cover. The metal is sharp enough to cut insulation and KO your commo.

Keep dirt and moisture from control box innards by watching the condition of the preformed packing. It may tear or come loose. It can also be pinched and flattened. Then it will

no longer do its moisture-proofing thing.

Your org maintenance replaces bad gaskets with these:

Control Box	Gasket NSN
C-2296, -2298, -2299	5330-00-095-2256
C-2297	5330-00-884-2491
C-2742	5330-00-892-4111



On the Inside

Any time you start your vehicle, be sure your commo is OFF. A flick of the AM-1780 audio frequency amplifier's main power switch will do the trick if the MT-1029 mount's power control is set correctly. The link, in the power junction box, goes to terminal E22 to put on-off control in the -1780. If the link's on E23, you'll have to turn the RT off, too.

If your link needs changing, tell your org shop. They do it the way it says in Para 2-10b of TM 11-5820-401-12.

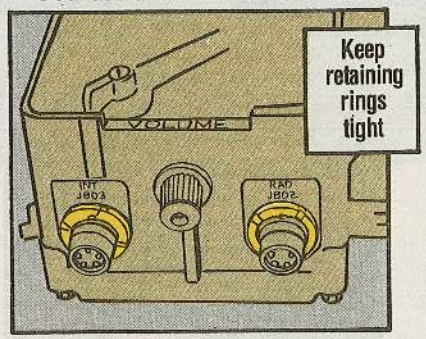
To double your protection, be sure your tracks have transient suppressors installed. MX-7778's are OK'd by SB 11-131.

Do long commo sessions drain your vehicle batteries? Head off dead batteries by running your vehicle whenever possible.

Make sure all cable connections are OK. Eyeball retaining rings on audio receptacles. If they're loose, tighten 'em. Remove cables first, of course. If you don't, you can bend audio pins.

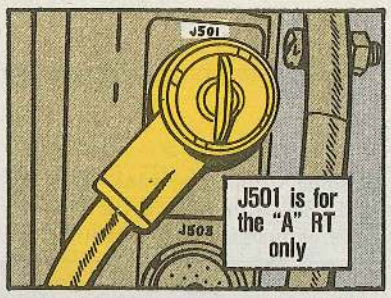
Look over cable insulation, too. And be sure that cable clamps are present and securely fastened to vehicle walls.

You use a lot of CX-4723 cable



assemblies with your intercom. Be sure they're connected to the right receptacles on the AM-1780. Leave plug J504 for the vehicle commander. He must be able to talk to anyone, any time.

Watch out for plug J501. It's for your "A" receiver-transmitter only. The plug is built for the vehicle 24-volt system. The other plugs aren't. Wrong connections can mean a burned-up amplifier.

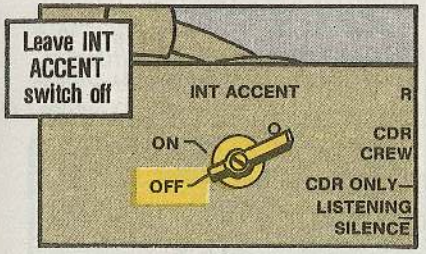


Finally, remember to keep high-pressure water out of the commo gear at cleanup time. It'll put you off the air.

On the Air

Get the good service your VIC-1 can give by using your gear correctly. F'rinstance, vehicle noise shouldn't make you have to stop to receive traffic.

To head off the need for frequent stops and starts, leave the AM-1780 INT ACCENT switch OFF.



Some manuals may still say to turn it ON. No more, says the headshed.

The switch doesn't make the intercom louder. It just drops radio volume, making the intercom seem louder.

Keeping the accent switch OFF helps make sure you'll pick up faint radio messages.

Maybe the problem is too much traffic through your CVC. You handle that with the control box switch.

If you don't need the radio traffic, set it to INT ONLY.

Maybe your CVC helmet is the roadblock to traffic. Wear it properly.

First, be sure you have the right size. Liners come in small, medium and large sizes. A snug fit helps keep out distracting vehicle noise.

Use the chin strap to snug the CVC helmet even more and hold it in position. Put the mike as close to your lips as you can. Move it slightly

off-center to prevent overloading and "popping" noises.

Filter out more distracting noise by leaving the CVC switch in the middle position. That gives you all the intercom and radio traffic but leaves the mike unkeyed. An open mike magnifies the noise around you.

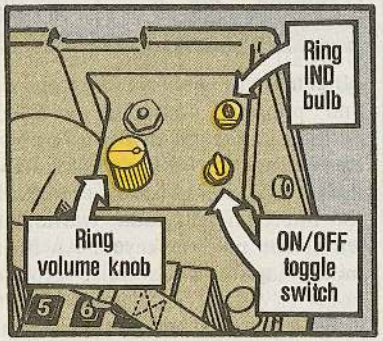
Finally, of course, keep contacts clean and dry. Clean a dirty or tarnished contact with a rubber pencil eraser.

Keep TA-838 High, Dry

Rough stuff and water damage add up to trouble for your new field phone.

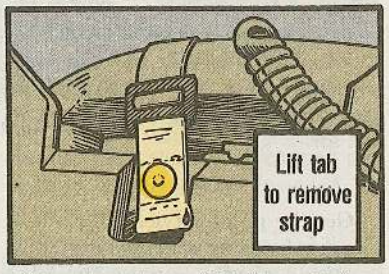
The TA-838 is a tough cookie, but if you toss it or stack heavy gear on top of it, you can stop commo right now.

Victims of rough treatment are the fragile ON/OFF toggle switch, the RING IND bulb and the RING VOLUME knob.



Rough stuff will also KO the handset tiedown strap or its lug fastener.

Some troops just yank the strap when they want to get at the handset. Save yourself some downtime by

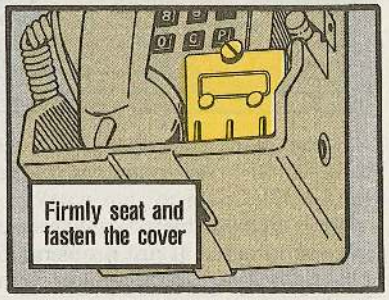


lifting the tab carefully from the lug.

A careless toss might crack the case. Cleaning with a corrosive cleanser like trichloroethane can dissolve it. Your best bet is a once-over with a sponge and soapy water.

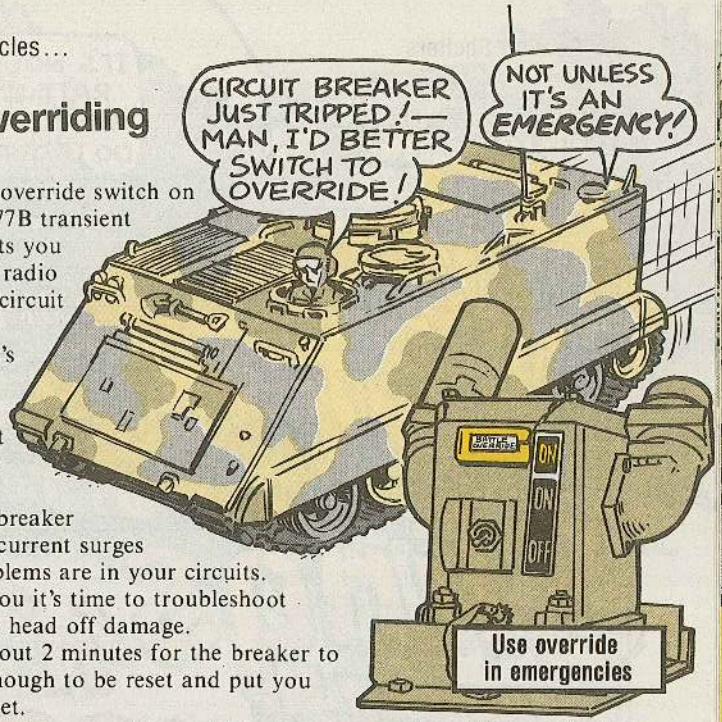
Water corrodes, too, if it gets inside the set. One way it gets in is through the battery compartment.

Firmly seat and fasten the cover when the set is in use—especially if it's outside.



And, remember, hosing down the set is a big no-no.

Over Overriding



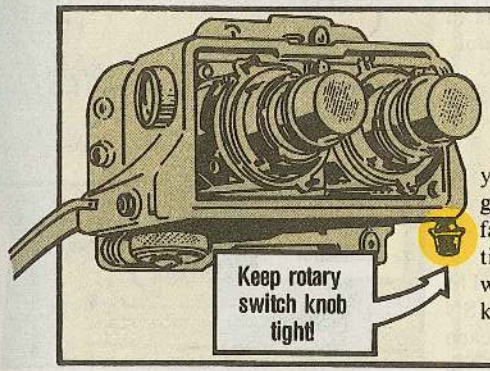
The battle override switch on your MX-7777B transient suppressor lets you operate your radio even tho the circuit breaker has tripped. That's good for emergency situations but it can be bad for your set.

A tripped breaker means killer current surges or other problems are in your circuits. It also tells you it's time to troubleshoot the system to head off damage.

It takes about 2 minutes for the breaker to cool down enough to be reset and put you back in the net.

Sure, use the override switch in emergencies—life or death, f'instance, or battlefield necessity. Talk first, troubleshoot later.

Any other time the breaker trips, tho, troubleshoot first, talk later. By hitting the override you could cause more damage.

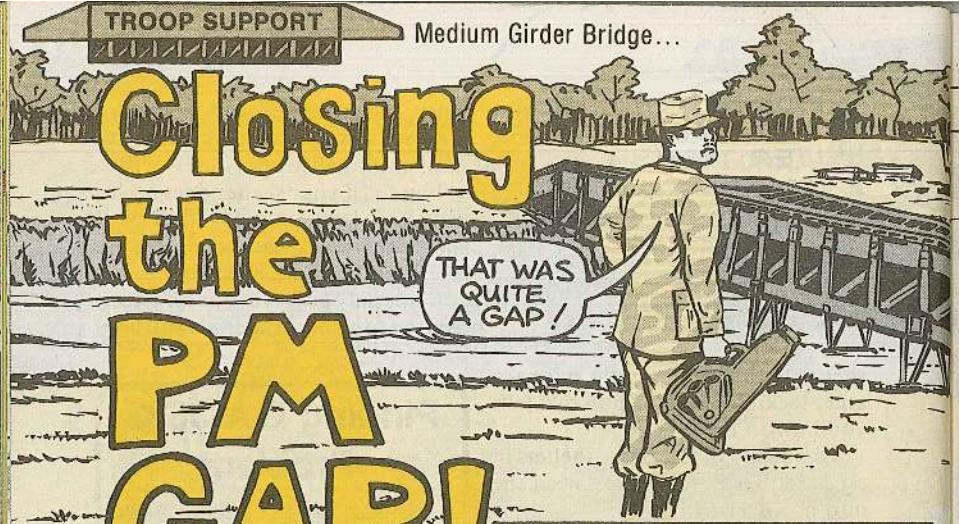


Keep It Tight!

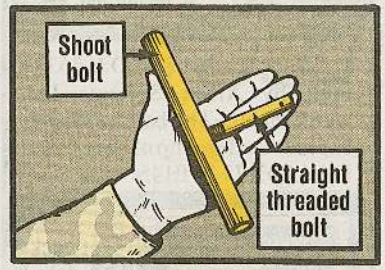
The rotary switch knob for your AN/PVS-5 night vision goggles can work loose and fall off if you don't keep it tight. Snug it up now and then with the socket-head screw key stored in the goggles' case.

Medium Girder Bridge...

Closing the PM GAP!



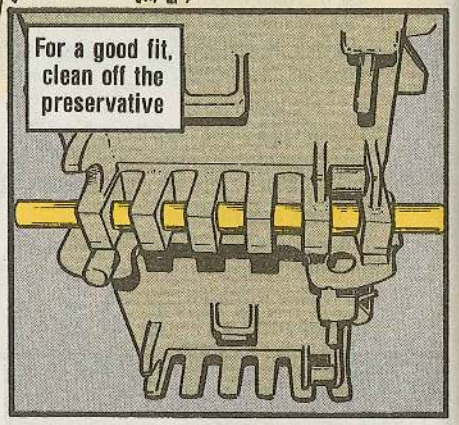
Your bridge-building job will be a lot easier if you put your PM-savvy to work. Focus on the panel shoot bolts and panel pins, push bar and adapter, and the hydraulic jack.



Shoot Bolts and Pins

The panel shoot bolts and panel pins are shipped with a coat of preservative to keep 'em from rusting while in transit and storage.

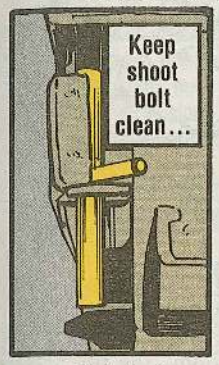
Clean off the preservative before you use these bolts and pins. If you

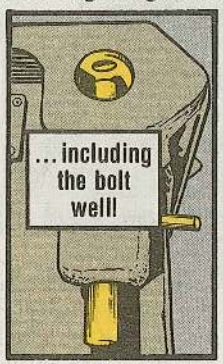


don't, you'll have a hard time getting them to fit and work right.

'Course, you keep them c-l-e-a-n after you start using them on the bridge. NSN 7930-00-282-9699 gets a gallon of general purpose detergent. Or use trichloroethane cleaning solvent. NSN 6810-00-664-0387 gets a gallon. Be extra careful using the solvent...it's highly toxic. You need plenty ventilation.

After cleaning off the preservative, add a light coat of general purpose lubricating oil to the components. NSN 9150-00-273-2397 gets a gallon.





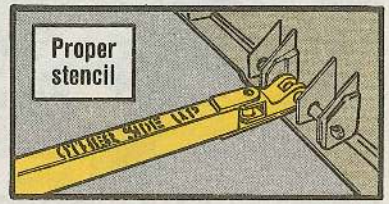
This is the same oil you use in the bridge hydraulic jack.

Hard and dried mud on dowels and panel shoot bolts... as well as in the dowel sockets, shoot bolt wells and the panel pin holes... will turn your "easy" bridge erection job into a muscle-straining flop.

Push Bar Adapter

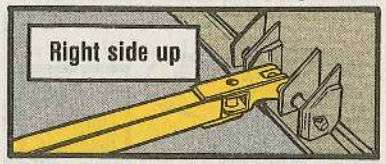
Push bars should have the legend OTHER SIDE UP stenciled on the bottom. Sequence 17, PMCS Table 3.1—TM 5-5420-212-12—for the operator/crew—has the legend poop.

Doublecheck your push bar. Some legends have been stenciled on



the wrong side. The bar will bend if you try to mount it with the curved part of the lugs turned up.

The right mounting is bottom down—like it shows in Fig 2-221.

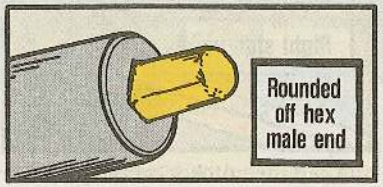


Keep the notches on the push bar adapter lugs pointing down—toward the vehicle's bumper—when you mount the adapter to the 5-ton dump truck.

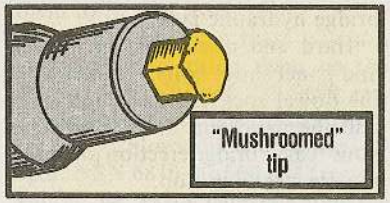
Hydraulic Jack

Take a good look at the release valve screw, the release valve identification plate and the operating lever (handle). The release valve screw is held in place by the RAISE-LOWER ID plate. Make sure the valve plate is held in place by both screws. If one screw is missing or the plate is upside down, you can back the hex screw all the way out. No screw, no working jack!

Never use the handle—operating lever—as a pry bar or as a punch bar. You'll bend the handle, break off the hex drive or "mushroom" the tip.



Too much muscle when you turn the operating lever will round off the hex male end. Your support will have to rebuild the end.



Use only MIL-L-7870A oil in the jack. NSN 9150-00-263-3490 gets a quart.

D7-Series Full-tracked Tractors...

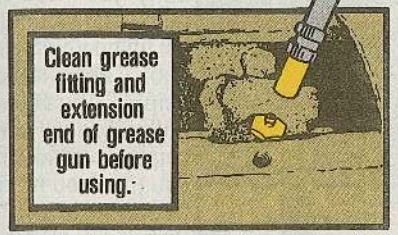
Track Adjuster Cylinder PM

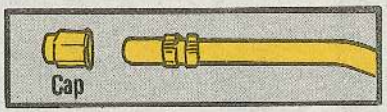
Stop damage to the track adjuster cylinders on your D7-series tractors by keeping sand and dirt out of 'em.

Be sure you wipe gunk off the grease fitting before you start the lube job. And don't forget to wipe off the dirty end of the grease gun. Dirt and sand stick to the end of the greasy extension tube. When you slap the dirty extension on the grease fitting, you pump the abrasive sandpaper-like stuff right into the cylinder. The contaminated grease will score the cylinder every time.

Your tractor gets a trip to DSU for cylinder repair or replacement.

You can keep the extension tube clean and ready for use with protective cap, NSN 5340-00-904-6633.



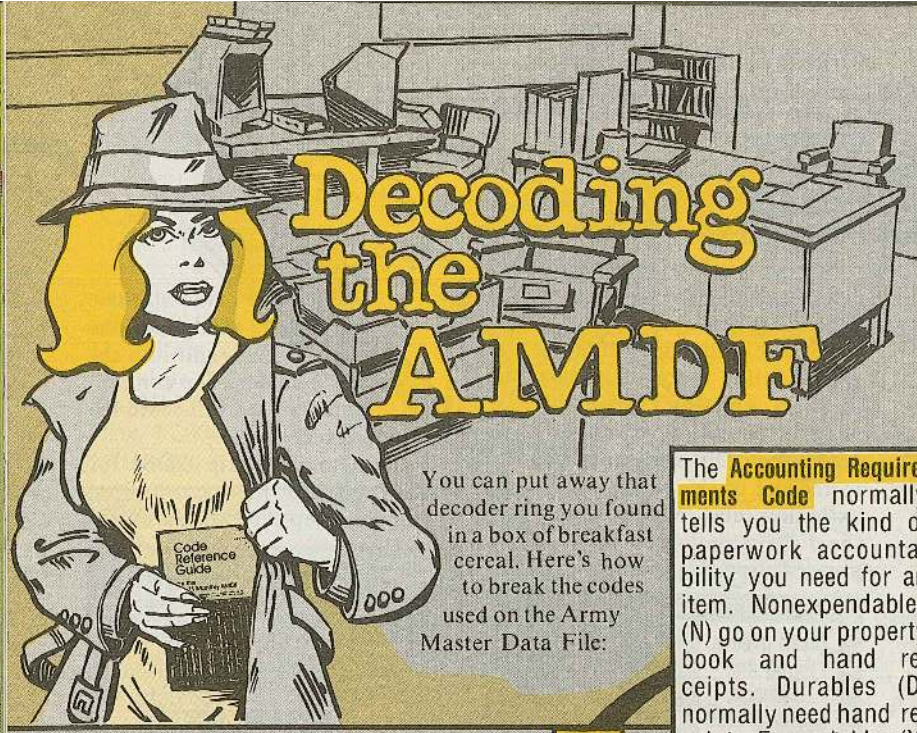


Get a bunch of the caps from your QSS... enough for all the grease guns in your No. 1 and No. 2 Common shop sets.

CCE/MHE Project Codes

Requesting parts for commercial construction equipment (CCE) and materiel handling equipment (MHE) takes time and work! But you can put "zip" into requests for those items. Always put the project code—JZC for CCE and JZM for MHE—on each OCONUS request. Use BGW for CCE and BGX for MHE in CONUS. Those project codes point your request directly to the item manager!

Decoding the AMDF



You can put away that decoder ring you found in a box of breakfast cereal. Here's how to break the codes used on the Army Master Data File:

Accounting Requirements Code normally tells you the kind of paperwork accountability you need for an item. Nonexpendables (N) go on your property book and hand receipts. Durables (D) normally need hand receipts. Expendables (X) usually need no formal accountability. (See Para 2-5a of AR 710-2 for exceptions to these.)

ARC

ROW 0 COLUMN 05

ACT	PRIME NSN/MCN FSC	NIIN	SOS	AAC	U	PRICE	SLC	SEC	ARCC	RR	MAT CAT	DML
	5120-00-2	277	GOG	EA	E	3.75	0	M	D		E2200	A
	5120	-2279	GOL	EA			0	M	D		2200	A
	5133	-2299	GOL	EA	E		0	M	D		2200	A
	5133	-2300	GOG	EA	E		0	M	D		2200	A
	5120-293	-2311	GO	EA		635	0	M	D		2200	A
	01	-2313					0	M	D			A

SOS

AAC

RC

Source of Supply tells you who really supplies you with the item—unless it's filled locally. The SOS is the same as the Routing Identifier Code (RIC) on your request.

The **Acquisition Advice Code** tells you how and under what restrictions you request an item—regular requisition, fabricate, local purchase, etc.

Recoverability Codes tell you what disposition action to take when an item is unserviceable. Z items are nonrepairable. When they become unserviceable, the maintenance level that replaces them disposes of them. O means it's a repairable item that organizational level either repairs or disposes of.

Materiel Category Structure Code gives you budget, inventory segment and category information. The first-place code tells you who's the Army's manager for the item. Watch it! The last 2-places, the weapon system/end item code, are not the weapons/equipment system designator code (W/ESDC).

Supply Category of Materiel Code lists the supply class (number) and subclass (letter).

Phrase Code tells you if there's been a change in the NSN's status and any information on substitute, deleted or consolidated items. Watch for letters in this column!

MATCAT

SCMC

PC

ARM AMDF EFFECTIVE DATE 83001

AAC	UI	UNIT PRICE	MAT CAT	DML	FIC	SCMC	AEC	ARI	UM	MEASMT QTY	P C	NOMENCLATURE	LIN
			00	A	00	2B	G	3				CUTTER,COUNTERSINK	
			00	A	00	2B	G	3				CUTTER,COUNTERSINK	
			00	A	00	2B	G	3				CUTTER,COUNTERSINK	
			00	A	00	2B	G	3				CUTTER,COUNTERSINK	
			00	A	00	2B	G	3				CUTTER,COUNTERSINK	

C PHRASE STATEMENT/RELATED NSN/MC

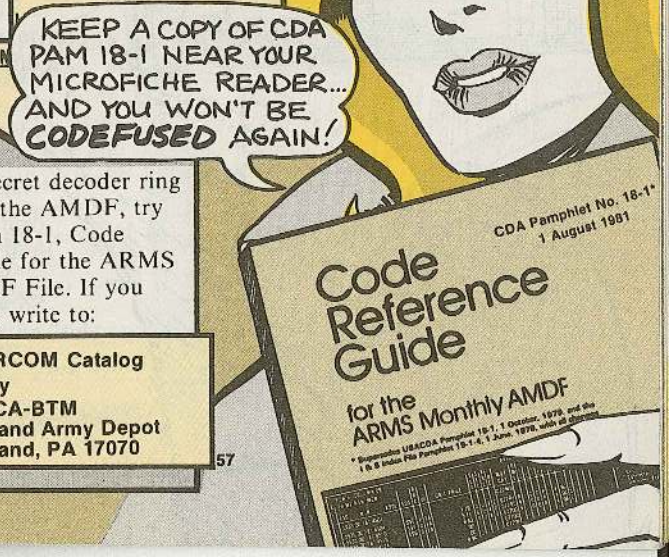
WRENCH,SPANNER
WRENCH,SPANNER
CUTTER,COUNTERSINK
CUTTER,COUNTERSINK
CRIMPING TERM

Unit of Measure and Measurement Quantity tell you how much and what measure—length, volume, weight or count—you'll get when your unit of issue (UI) is not clear. RO tells you the item comes in a roll. How big a roll? Look at these columns to see how many feet or whatever on the roll. When these columns are blank, the UI is all you need.

UM and MEASMT QTY

NOMENCLATURE

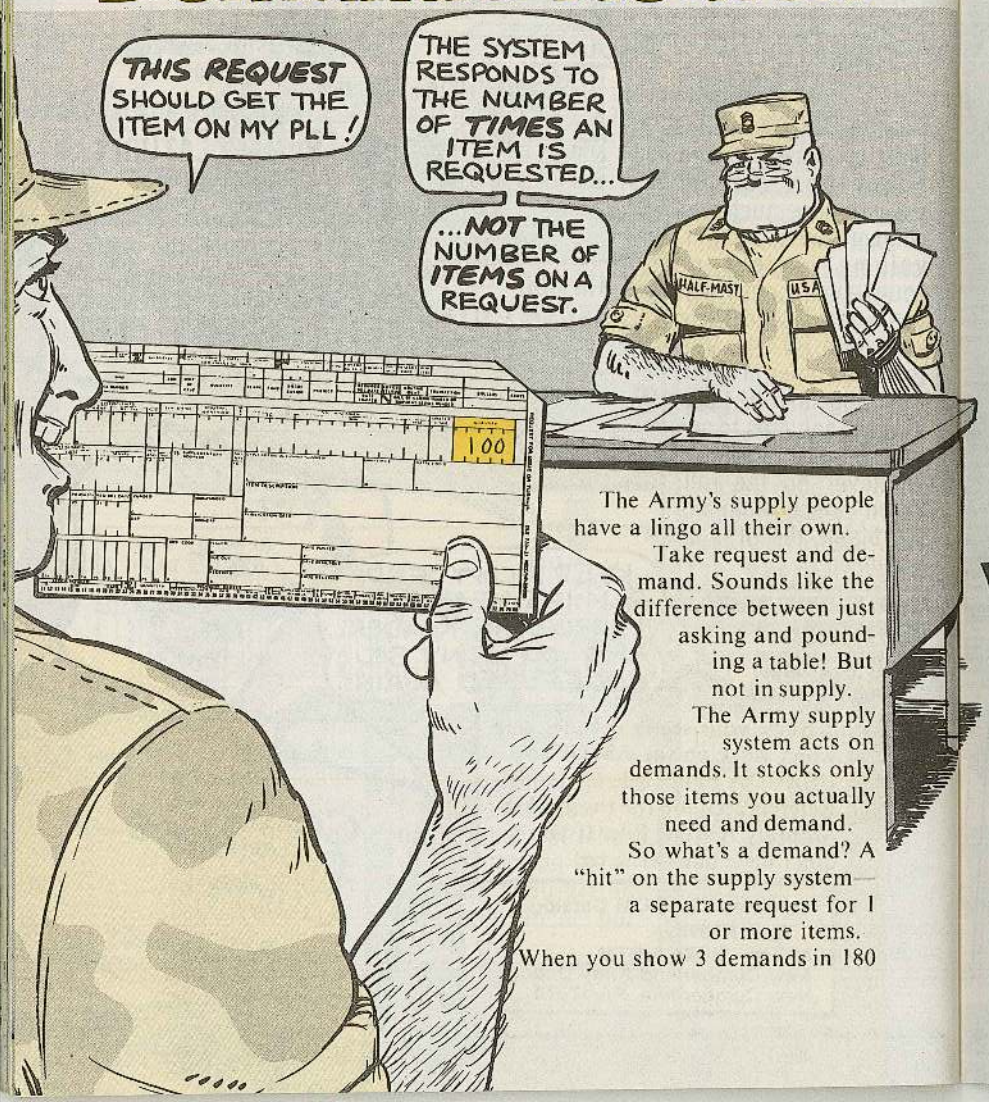
Gives you the name of the item, related NSNs and a Line Item Number (LIN) from SB 700-20, if one's been assigned.



Since your secret decoder ring won't work on the AMDF, try USACDA Pam 18-1, Code Reference Guide for the ARMS Monthly AMDF File. If you don't have one, write to:

US Army DARCOM Catalog Data Activity
ATTN: DRXCA-BTM
New Cumberland Army Depot
New Cumberland, PA 17070

Make Your Demands Heard!



The Army's supply people have a lingo all their own.

Take request and demand. Sounds like the difference between just asking and pounding a table! But not in supply.

The Army supply system acts on demands. It stocks only those items you actually need and demand.

So what's a demand? A "hit" on the supply system—a separate request for 1 or more items.

When you show 3 demands in 180 days (360 for reserves), you can add that repair part to your Prescribed Load List (PLL). 'Course, parts on a Mandatory Parts List (MPL) go on PLL independent of demands. But that's another story.

Some people think the quantity of items you request counts as demands. No way.

When you send in a single request for 1 part or 100, that's 1 demand. Three demands mean 3 separate requests, no matter how many you ask for each time.

So stocking an item—and keeping it in the supply system—depends a lot on *how* you make requests.

When you order parts as soon as you need them, you're helping the system. When you wait 'til you need several, you're hurting the system.

Large, one-time requests save work—at the time! But they can cost you. Demand-supported parts on your PLL drop off if you show no demands in 2 review periods. And you sure can't *add* items ordered that way!

Other "time-savers"—like cannibalizing, scrounging parts or making moonlight requisitions—can also cost you!

When you borrow a part or scrounge up one from salvage or the "can" point, let the supply system know it. Write up those actions the same as you do normal supply requests.

Mark 'em on your DA 3318, too! Some automated supply systems use a printout in place of the DA Form 3318. Check your system manual for info on telling the computer about those demands.

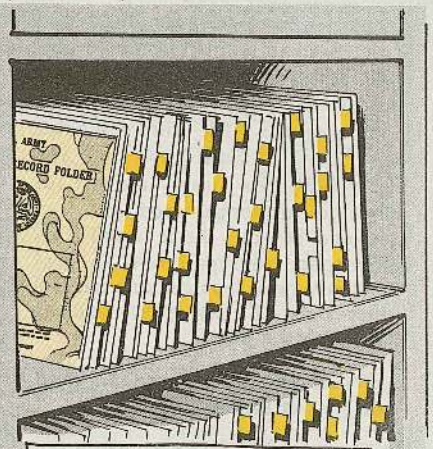
Make sure your demands are heard!

Folder "Pull" Tabs

Dear Editor,

Now that Equipment Records Folders are identified with a particular end item, here's an idea for organizing them. Just take any color index cards and cut into small squares to make tabs. Write the vehicle number on the tab, cover with clear tape and tape it to the folders. Then file them by number in arm's reach!

SP4 Jim D. Wheeler
APO New York 09353



(Ed Note: Good idea!)

Supply Money $aver

Would you blow your hard-earned dollars on something you don't need or want? Of course not! But some people spend Uncle's money that way.

You take a little out of Uncle's (and your!) pocket every time you fail to cancel a supply request for items you no longer need.

Could be your mech found a fix other than your repair part. The gear may have been replaced or a heap of other reasons may mean you no longer need a part.

When you don't need an item, cancel your request!

That saves the cost of handling, processing, shipping and storing the item. Canceling also leaves that part in the system for another unit that does need it.

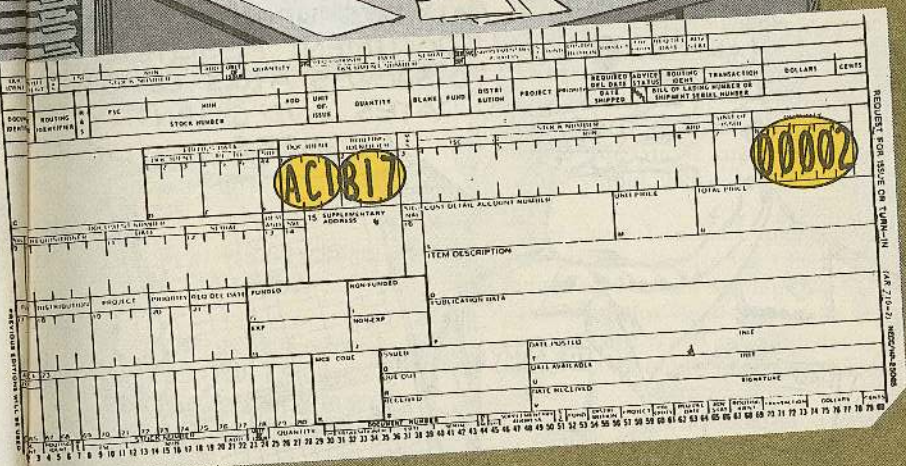
Always read the latest reconciliation listing or due-out printout from support. Find something you don't need? Cancel it!

Here's How

Take the latest status card you got from support and write "AC1" in Block 1. Put the info—from card columns 67-69—in Block 2. If zeros are in columns 67-69, leave Block 2 blank. Put the quantity you're canceling in Block 8.

Circle your entries with a colored pencil or pen.

If you don't have a status card, make up a DA Form 2765 request for



cancellation using the information from your document register and supply pubs.

Put "AC1" in Block 1 and the quantity you're canceling in Block 8. Circle those 2 entries with a colored pencil or pen.

Write AC1 and the current Julian date in pencil in column n of the item's document register entry.

Send the request for cancellation to support.

Your request is not canceled, though, until you get a supply status card with a BQ status code on it from support.

The type of cancellation you receive—total or partial—decides which columns to post on the document register.

If the entire quantity is canceled, write BQ and the Julian date of the status card in column m. Erase the entries in columns k, l and n.

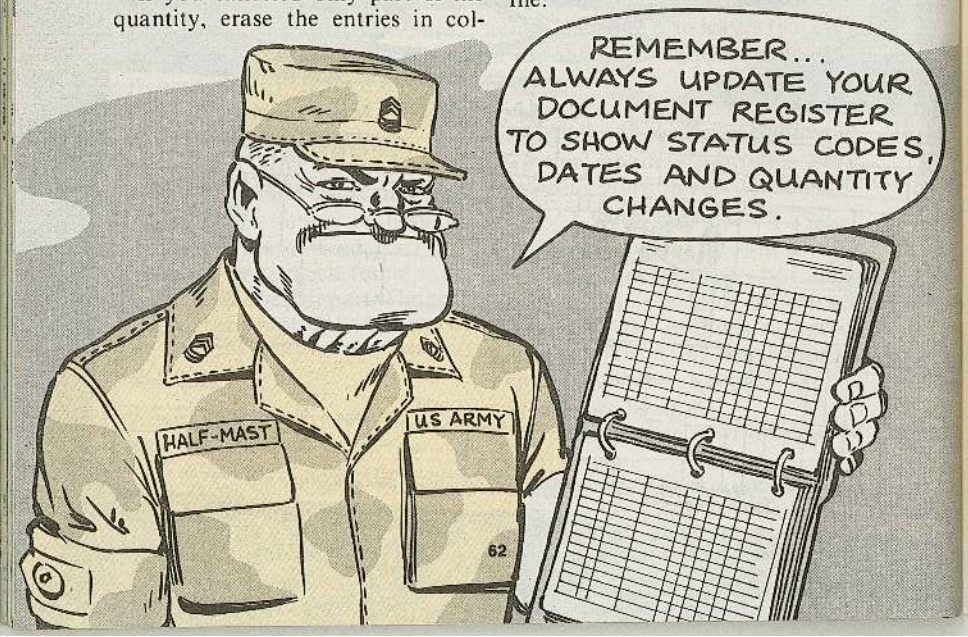
If you canceled only part of the quantity, erase the entries in columns l and n. Put BQ, the quantity canceled and the Julian date of the status card in column n. Change the due-in quantity in column k.

Make the entry in column j in ink when you've received or otherwise completed action on the request.

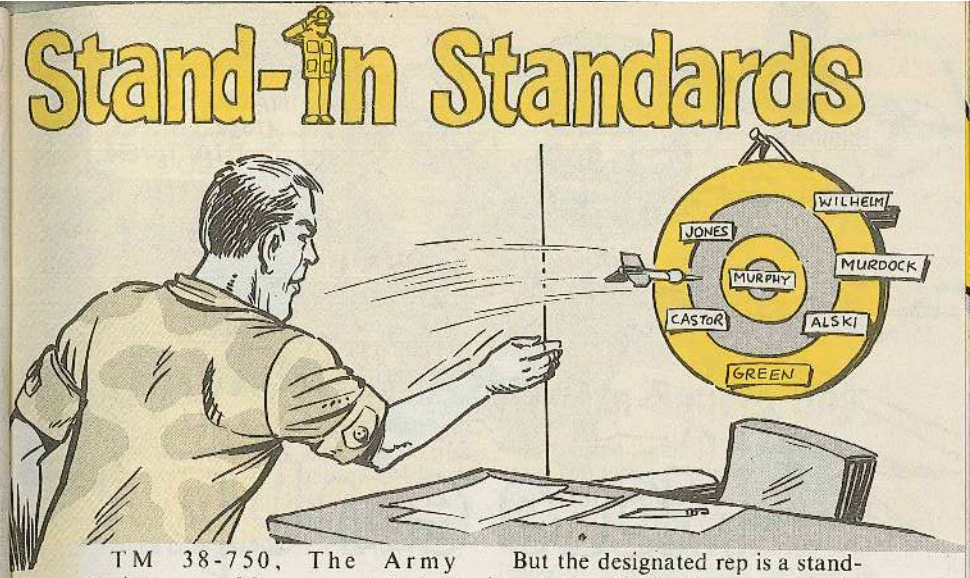
Be sure you change the information on the DA Form 3318 to match your changes in quantity or cancellations. (Some automated systems replace DA 3318's with printouts. If yours does, just doublecheck the next printout.)

You throw away all the status cards on a request you've asked support to cancel—once you receive a card confirming the cancellation.

Hold it! That applies to expendable and durable items only. When you get the OK from support on canceling a nonexpendable or property book item, stash the status card in your supporting document file.



Stand-in Standards



TM 38-750, The Army Maintenance Management System (TAMMS), gives CO's the OK on assigning designated representatives.

So what's a designated rep? Really a stand-in to sign forms and represent the CO.

The CO or the CO's rep signs:

- **To defer maintenance on the DA Form 2404.**
- **High priority work on the DA Form 2407.**
- **High priority exchanges on the DA Form 2402.**
- **Special actions – like a status symbol change or a downgrade of an X to a (X) status symbol for limited operations.**

But the designated rep is a stand-in only. The CO's still responsible for everything that happens. A designated rep is appointed in writing on DA Form 2496 Disposition Form, orders or a DA Form 1687 Notice of Delegation of Authority.

The person to be designated rep must have know-how, experience—and be close to the people needing the signature and help.

Normally, anybody meeting those standards can be a rep. But downgrading an X status symbol for limited operations and making a status symbol change are hard-rock cases.

For those 2 special—and maybe dangerous—situations, the CO's limited on who can be a rep. The CO either signs for those personally or appoints one rep: The maintenance officer—and only the maintenance officer.

Make sure your stand-in stands up.

Move 'em Up

Do it now—or later? That's the question on moving open document numbers to a new register at the end of a year.

But AR 340-2, Maintenance and Disposition of Records, and AR 340-18-14, Maintenance and Disposition of Logistics Functional Files, cleared up the confusion!

At the end of the year—fiscal or calendar, whichever you use—your document register becomes inactive. Start a new document register.

Put your old document register in the current files area for the next 2 years. But keep it close at hand! You need that inactive register nearby because you probably still have some open document numbers on it. The register's inactive, not the requests!

If a part comes in or status cards arrive, you still note all that—on the inactive register.

After a register's been inactive for 2 years, move any still open document numbers to the new year's document register.

Each new year's register will start with any open 2-year-old requests in their original document number order.

Sure-Fire Training

Did you know you can get apprenticeship training in a bunch of fields? You can even get certification for that training! A couple of new programs — Fire Control Instrument Repairer (MOS 41C) and Fire Control Systems Repairer (MOS 45G) — just joined up. Interested? See your training NCO or talk to the people in your local Army Education Center. They can tell you about other programs, too! Check AR 621-5, Army Continuing Education System (ACES), too.

Regulator Change

The generator regulator, NSN 2920-00-900-7993, for M113 FOV, M109-series howitzers and some tactical vehicles, is now repairable at direct support. Turn 'em in. The SMR code in your -P manuals will be changed from PAOZZ to PAOFF.

Huey PM Change

Cross out the 2nd, 4th, and 6th Phase Maintenance inspection and cleaning of the fuel control driveshaft and drivegear splines, and the oil port check. That's the word in TSARCOM Msg DRSTS-MEA 281930Z Feb 83. Page 2-29 of the new TM 55-1520-210-PM will be updated.

'Course, you pull an inspection anytime you remove the fuel control for maintenance or replacement, and when an engine is getting a hot end inspection.

Intercom Ready?

Some important words were dropped from the TM 11-5820-401-10-2 PMCS. Jot this down in the "For Readiness Reporting, Equipment Is Not Ready/Available If:" column on Page 2-65: "Communication is not possible using the outside vehicle control box **(If mission requires this type of hookup)**."

Back to Square One

The butane lighter in aircraft survival vests and kits seemed like the way to go—instead of matches. TSARCOM Msg DRSTS-MCAPL 282030Z Feb 83 says the lighter is not reliable, tho, and has to be removed from your gear. Go back to match box, NSN 8465-00-265-4925. Match refills come under NSN 9920-00-985-6891 or NSN 9920-00-889-3367. Or you can refill with any other matches.

MW-24 Scoop Loader

Use FSCM 10988, PN A41745 to get a fuel filter kit for your scoop loader.

Get a parts and service manual to support the engine with FSCM 10988, PN 8-1220. Use DD Form 1348-6 and RIC S9C for both of these items.

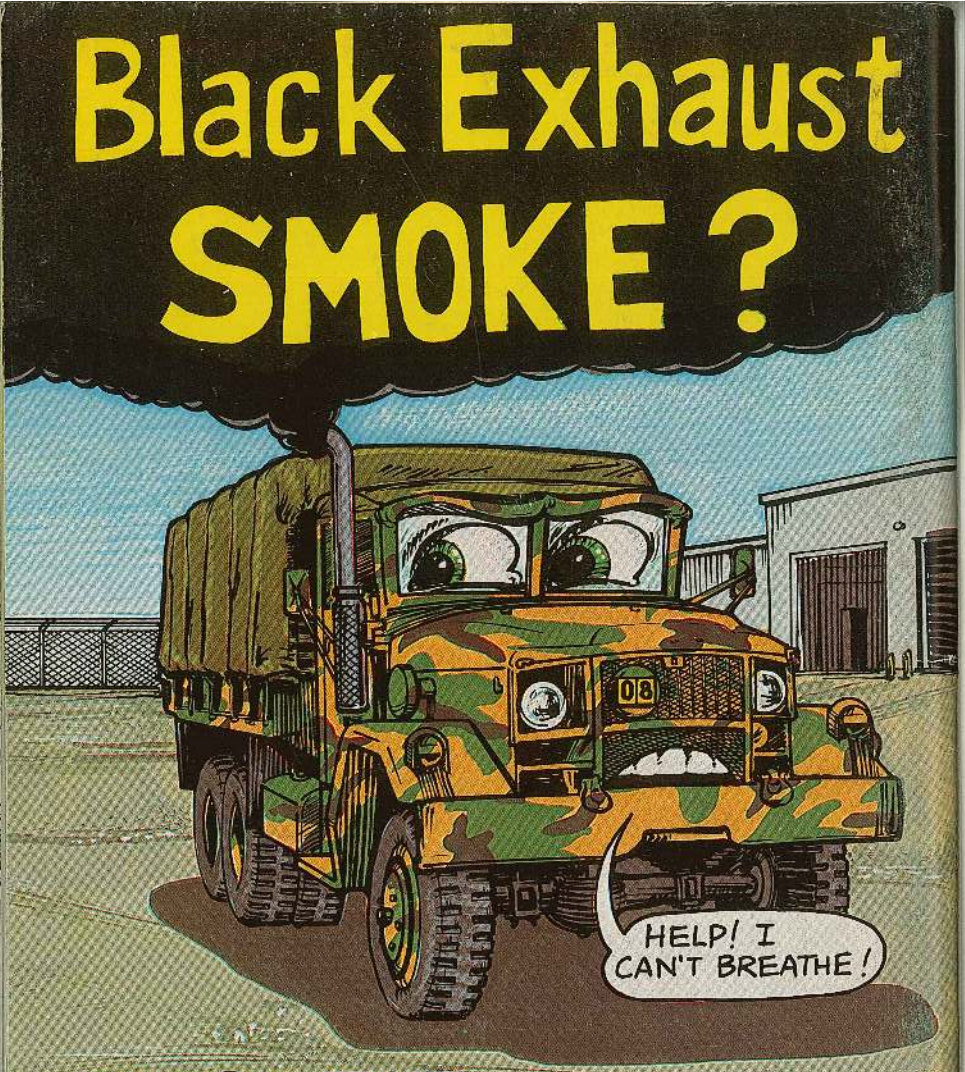
M880 Inside Mirror

The inside rear-view mirror on your M880-series truck is no longer required. That's the word in SMART Message No. 28, DALO-PLO 251538Z Apr 83. When the inside mirror is unserviceable, there's no need to replace it. Make sure both outside mirrors are OK.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1983—659-007/9

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

Black Exhaust SMOKE ?



CHECK THE AIR FILTER!