

WHO'S IN CHARGE HERE

conditions. That can be a real ticklish question under certain

tion's not right. Real embarrassing (and dangerous) . . . if the situa

down so you don't have to guess about who's in charge. Here's what it says: there's no if, why or but. AR 750-5, para 9, pins PM When it comes to Preventive Maintenance, tho,

maintained in a serviceable or assigned to their command is sure that all equipment issued a. Command responsibility. with technical instructions. nel under their command comply condition and is properly cared Commanders are required to infor and used, and that person-

a commander . . . how about you? 'Course, that one hits your CO. But, everybody's not

The next paragraph pulls no punches:

as responsibility of individuals Direct responsibility is defined b. Direct responsibility. for equipment entrusted to them for their individual use or for by subordinates.

and use right, or a man like your sergeant who has to an individual soldier issued equipment to take care of see that his men take care of their equipment. That takes care of everybody . . . whether you're

So, it's all pinned down-You are in charge when it comes to Preventive

Maintenance.







PREVENTIVE INTENANCE MONTHLY

1959 Series

publication channels. Within limits of availability, older issues may be obtained direct from Preventive information of organizational maintenance and sup-ply personnel. Distribution is made through normal lew Jersey. Maintenance Agency, Raritan Arsenal, Metuchen Published by the Department of the Army for the

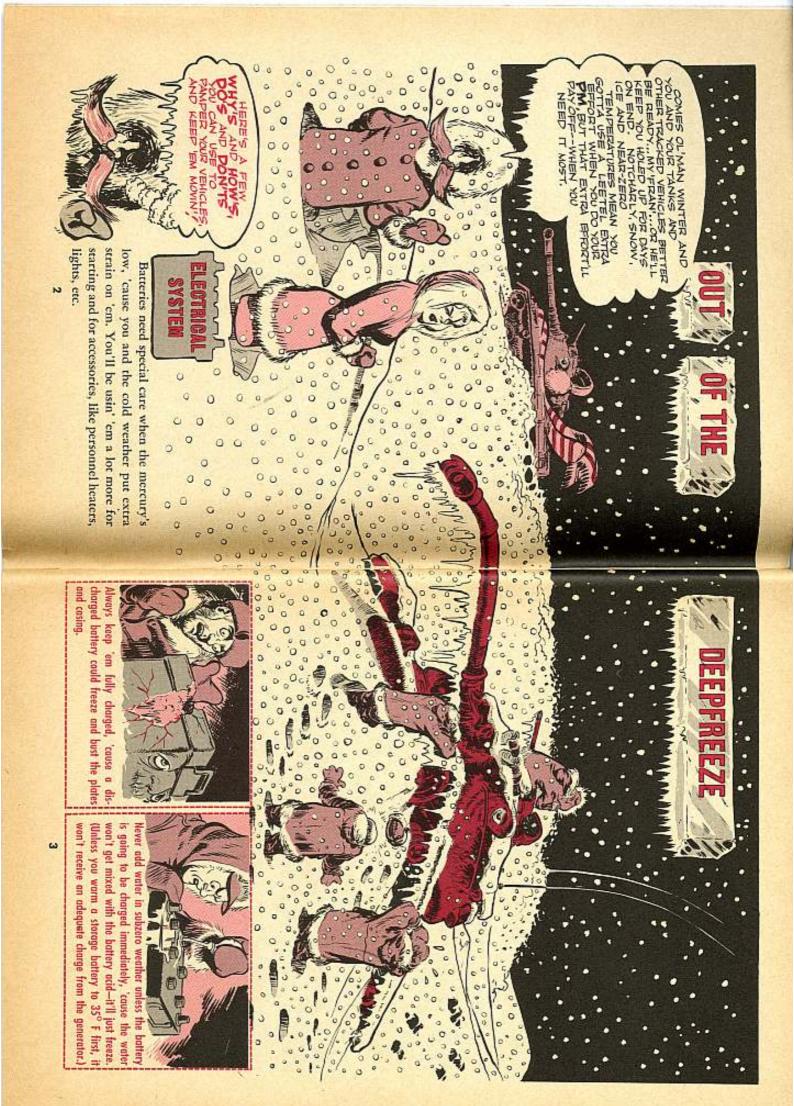
Z THIS ISSUE

ARTICLES

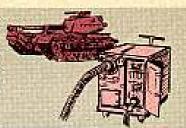
Contributions Connie Briefs	Question and Answer	PARTMENTS	Stopping On Ice	M3A2 Decons	Smoke Generators	How to Read Pubs	ENG Equipment Inventory	G744 Carburetors		Wheeled Vehicles 25-28	Tracked Vehicles	Spiral 4 Connectors	Radios, PRC 8, 9, 10	106-MM Rifle Tools	Nike-Ajax Tools	Cold Weather Operation	
88	37	,	56	55	2	51	40	26	62-64	25-28, 39, 56,	28, 38	24	20	16	13	2	

PS wants your ideas and contributions, and is glad to answer your questions. Just write to: Sgt Half-Mast, PS, Raritan Arsenal, Metuchen, New Jersey. Names and addresses are kept in confidence.

The passing of the desiration as few servered by the develop of the desiration of th



If you can avoid it, don't remove the battery from your tank to store it inside overnight, 'cause extra handling means more wear and tear on the terminals and leads. Best thing to do is leave the battery right in the vehicle, and use your standby heater to warm it up before operation.





IF YOUR BATTERY DOES GET FROZEN, YOU MAY BE ABLE TO RECLAIM IT IF THE FREEZING HASN'T GONE TOO FAR. THAW IT OUT IN A WARM ROOM BEFORE . TRYING TO RECHARGE IT.

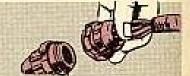
Remember, too, if you use your battery to run your radio, be sure to keep either your main engine or your auxiliary engine running. This'll keep you from running your battery down to a point where you won't be able to re-start your engine.



Keep all wire connections, terminals and ground straps clean and tight, and give the battery posts a thin coat of grease to keep 'em 4 from corroding.

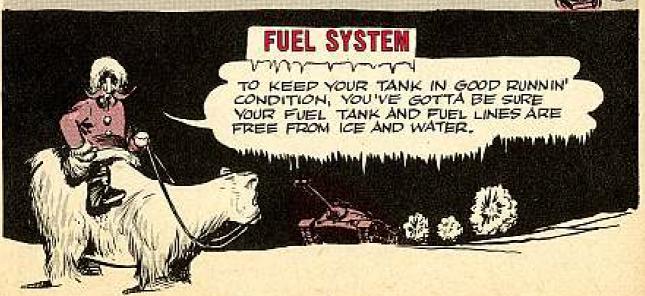


Check all electrical wiring to see that it's in good shape and firmly connected. Look for worn spots and loose or missing grommets.



Check spark plugs for any sign of ice or moisture, and handle 'em careful-like, 'cause it's easy to break the insulators in cold weather.

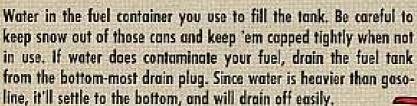




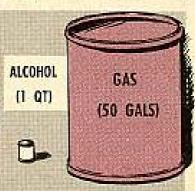


Condensation in the fuel tank. Avoid this by filling the tank right after you've operated the vehicle.

Snow in the fuel tank. Avoid this by carefully filling the tank and replacing the cap snugly.



Ice in fuel lines and tanks. Where possible, move your vehicle into a warmed shop to thaw the ice in the lines and tanks before trying to drain 'em. Then, drain the lines and tanks, and refill with fuel. Add one quart of denatured alcohol Grade III to every 50 gallons of gas. Don't forget to add a proportional amount of alcohol every time you refill the tank. FSN 6810-201-0905 gets you a five-gallon can of alcohol from the Chemical Corps.



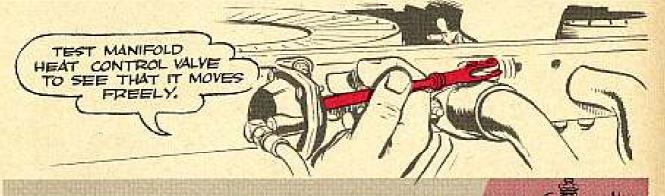
ICE COLLECTS IN THE CARBURETOR
WHILE YOU'RE RUNNING THE
ENGINE. WHEN THIS HAPPENS,
ONE THING YOU CAN DO IS SHUT
OFF YOUR ENGINE AND LET
THE ENGINE HEAT DE-ICE THE
CARB. OR, PARTLY COVER THE
ENGINE COMPARTMENT GRILLES
WITH GRILLE COVERS, IF YOU HAVE
'EM, WHILE THE ENGINE'S RUNNING
WITH THE ICE-CHOKED CARB,
BUT BE CAREFUL USING THIS
METHOD...YOU DON'T WANT TO
OVERHEAT THE ENGINE.



Dirty, clogged air cleaner. Drain and clean thoroughly with mineral spirits. As long as there's no snow, refill the air cleaner with the oil your LO calls for, but if you've got deep snow, just add about half the normal amount of oil to the air cleaner. This way, when water collects in the oil pan, the oil level won't rise to a point where it'll get sucked into the engine.

Check to see that the priming system is installed and works OK.

Remember, you'll need to prime a little more in cold weather but don't overdo it—could cause hydrostatic lock.



Check for fuel line leaks. You're likely to get more of 'em in cold weather,

After operation, drain the main engine hot-spot manifold of all condensation to keep ice from forming—could restrict the flow of hot exhaust gasses under carburetor.

Last—but most important—drain the fuel filter after every operation—especially when the tank is parked out in freezing weather.

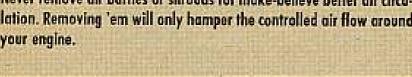




Raise the cooling system temperature to 140° F as soon as possible after starting and keep it above 140° F while operating.

Keep hood louvers and engine compartment grilles covered before starting with grille covers-you can use heavy cardboard, tarps, quilted covers or overcoats in a pinch, but don't forget the covers are there when you're ready to take off. In real cold weather, when it's difficult to keep the engine at operating temperature, keep part of the grilles covered while operatin'. Too much cover may overheat your engine, so don't overdo it.

Never remove air baffles or shrouds for make-believe better air circulation. Removing 'em will only hamper the controlled air flow around your engine.



ON LIQUID COOLED OBS, LIKE YOU'VE GOT N THE M-74, M-59, AND WEASEL, YOU'VE GOT TO MAKE A FEW ADDED CHECKS.

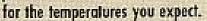
Inspect for leaks and clogged air or water passages, and check all rubber hoses for cracks and fraying.



WARM UP TANK I'M Test your thermostats to see that they open and close at the right operating temperatures. You can do this by removing them and dunking 'em in water heated to the right temperature.

Be sure you have the right kind and right amount of antifreeze in the cooling system. For temperatures from 0° F to -65° F, use the Arctic ethylene glycol antifreeze compound, FSN 6850-174-1806, which you DON'T DILUTE with anything.

For normal cold weather temperatures, like $\pm 32^{\circ}$ F to -20° F, use the ethylene glycol type antifreeze that you do dilute. FSN 6850-243-1992 gets you one gallon; FSN 6850-224-8730, five gallons; FSN 6850-243-1990, 55 gallons. Dilute it according to the instructions for your particular vehicle. Your TM'll tell you how much each vehicle takes





Keep close tabs on the weather temperature and oil pressure gages when you're operating to make sure they're in the normal range.



Old Man Winter plays havoc with everything, but he's 'specially hard on the various lubes, oils and greases on your track vehicles.

Petroleum-type lube oils get hard when cold, which means the oil pumps slower through the tiny oil passages and has a harder time getting to tight places. Lube films on bearings and cylinder regions get like jelly and cause that metal-to-metal scuffing that's so hard on moving parts.

Cold weather increases the fluid friction of the oil on the engine cylinder walls and bearings so the engine won't crank. Lubes get heavy and gum up the power train bearings and gear teeth, causing friction and excessive wear. If the oil in the crankcase is too thick, the oil pump can't circulate it to the bearings.

Also, for every gallon of gas burned in the engine, a gallon of water is formed, which normally passes off through the exhaust and ventilating system as a vapor. But, when the cylinder walls are cold, the vapor condenses and runs past the

piston rings and mixes in with the crankcase lubes forming a heavy sludge in the crankcase oil pans and oil screens. Valves, valve chambers and timing gear cases get so coated that lube can't reach the working parts.



When you have to do the job, drain the crankcase oil immediately after operation, while the engine oil is still warm.

Drain and clean the oil filters as often as conditions require. Remember 9, the LO is based on normal operation. Extremely cold weather is an unusual condition, so go by the small print in your LO and change the oil oftener.



LEAST IT'S WARM HERE.

If the engine has been running a long time, flush it with engine conditioning oil (OES) to reduce sludge ... like it says in TM 9-2855, par 30b (2),



Take out, by draining and cleaning, all warm weather lubes and oils, and # put in cold weather lubes. Go by your LO.



NO PEOPLE

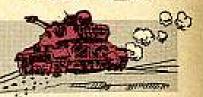
WACATION HERE

Keep your lube oils and greases stored in a warm place, if possible, so's they'll be easier to use when the time comes.

Take care to keep ice, snow, water and dirt out of the crankcase and hydraulic system when you're fillin' 'em. You can do this by wiping off all nozzles on lube containers and bein' real careful when you're pourin' or applyin'.



When you're ready to operate your vehicle, make sure you let the engine run at idle long enough to warm up the lubes and oils so's they can do their job.



When starting your vehicle, make sure, too, you don't overprime, or else you'll let a lot of fuel into the crankcase, which'll thin out your lubes and possibly cause a crankcase explosion.

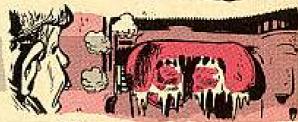


YOU GOTTA BE EXTRA CAREFUL OF YOUR WEAPONS IN COLD WEATHER, CAUSE IF THEY CLOS UP AT WRONG TIME YOU'LL BE OUT MAYBE FOR KEEPS. MIND:

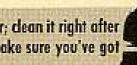
Strip and dean your weapons with mineral spirits to remove all lubes and rust preventive compound; then lube lightly with PL Special (above 0° F) or Lubricating Oil, weapons, LAW (below 0° F).



Be sure to keep snow and ice away from all working parts in the sights and gun barrel.



Use your muzzle and breech covers.



After firing, clean your gun real good with bore cleaner; clean it right after firing and for three consecutive days afterwards, to make sure you've got all the "potato salts" out of the gun pores.



If any parts get frozen, don't try to force 'em to work. Just warm the parts slightly and move 'em gradually till they work. You may have to use a little kerosene or gun oil. A little glycerin'll do the trick, too.

If you've got ice in your barrel, you can remove it with warm oil if you can't get it out by regular thawing.



Check the turret oil gears daily for condensation. If the oil level seems to rise, you've got condensation forming and collecting in the oil reservoir. If this happens, drain the reservoir and refill with clean OHA or OHC. They're interchangeable and can be mixed.

Check all rubber and plastic parts for cracks and breaks, 'specially the rubber gunner's handles, eye pieces and boots.

Here's one to watch carefully: On the .50-cal machine gun. LO 9-7010 says to use PL Med daily in the oil buffer, but if you do, you'll jam up the works. 'Stead, go by TM 9-2021, which says to take out all oil from the oil buffer. See LO 9-U7 for how to lube the gun.



If the chamber in the barrel gets frosted, the round won't be seated properly and your weapon'll jam. Avoid this by using a little gun oil to keep the frost out.



Try to keep snow from piling up around the sprocket. You can do this by avoiding sudden turns while driving, and by following in the tracks of the vehicle ahead of you; that way only the first vehicle'll run the chance of having the tracks slip off.

Make sure your tracks are adjusted right, too, and the best time to do the job is after a short run when they're limbered up a little.



Keep all tracks free from caked snow and ice, and keep 'em from freezing to the ground by parking your vehicle on wooden planking or brush. Clean out all the snow from behind the track support rollers (if your vehicle has 'em) to keep 'em from freezing.



Check to see that all doors, hatches, caps and other openings are secure to keep snow out.



inspect and tighten all nuts, screws, and bolts, 'cause extreme cold'il cause contraction of metal parts.



Check for leaks.



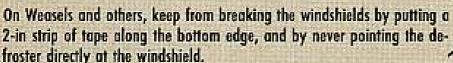
Check to see that all your OVM, particularly shovels and such, is right with the vehicle, where it should be.



Keep your optics from wind and weather by using the covers that go with 'em; never take 'em inside to a warm room, or condensation'll set in. And, too, when you take 'em out in the cold again, they may crack.



If possible, when you park your vehicle for any length of time, try to park on high ground, with the engine away from the wind. That way, you'll give your engine a better chance of starting.

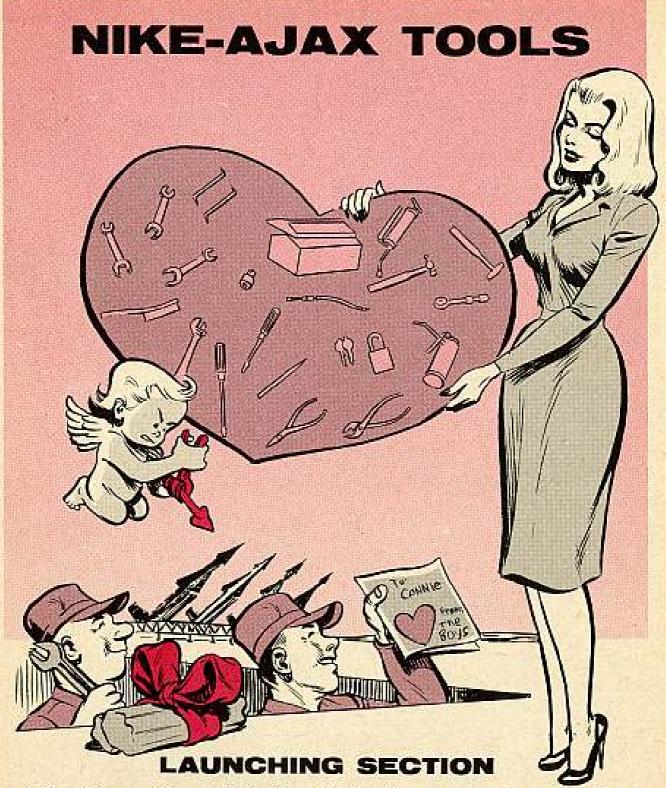




If your vehicle's got one, it's a good idea to start the auxiliary engine first, before starting the main engine. This'll be less strain on your batteries and will also let the heater on your auxiliary engine help warm up the main engine.



SEE TM 9-2855 (JAN 51) AND THE SECTION, "OPERATION UNDER UNUSUAL CONDITIONS," IN YOUR VEHICLE'S TM FOR OTHER COLD WEATHER INFO.



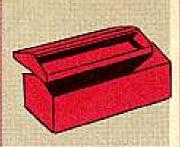
A launching section at a Nike-Ajax site is only as good as the tools it has to work with. And to be working on all cylinders, you need the right tool set.

To make a long story brief, you want

Tool Set, Organizational Maintenance, Launcher Loader, Guided Missile (Nike), FSN 5180-545-8641, SM 9-4-5180, J7-18.

Each launching section gets a tool set. All items are Ordnance unless otherwise marked.

BOX, TOOL: S. loose tray, approx 75% x 8½ x 21 in (Ord TAC dwg 07573-Y).



1 Auth FSN 5140-357-5483

GREASE GUN, HAND: lever operated, 15 oz cap, 7000 psi max pressure w/one 6 in lg rigid bent angle tu type extn; w/hyd type coupler (MIL Soec MIL-G-3859).



1 Auth FSN 4930-223-339

HAMMER, HAND: machinist's ballpeen, ½ Ib (Fed Spec GGG-H-86, Type L, Class I).



1 Auth FSN 5120-242-3913

HAMMER, HAND: blacksmith's dble face, 10 lb (Fed Spec GGG-H-86, Type SA, Class II).



1 Auth FSN 5120-243-295

WRENCH: rtc. geared hd, rvrs, % in sq-drive, 6 in Ig (Fed Spec GGG-W-641, Type VI, Class 1).



1 Auth FSN 5120-240-5364



HOSE ASSEMBLY, GREASE GUN: hyd type, % in ID, 12,000 psi burst pressure, 10,000 psi rated working pressure, 14 in approx Ig over-all, % in NPT male end connection (Alemite Div of Stewart-Warner Corp, No 6652-A, or equal).



1 Auth FSN 4930-204-229

OILER, HAND: 5 oz cap, force fed by int pump, body & spout tin pl, 1% in dia body, 5 in 1g spout, female thd bottom end, 1½ in dia of thd, w/removable tip (Fed Spec RR-0-376, Type II, Class B).



1 Auth FSN 4930-274-5713

PADLOCK: pin tumbler mech, br case, cd fin shackle, 134 in w, 136 in h, keyed individually, w/o clevis, w/2 keys (Fed Spec FF-P-101, Type EPB).



1 Auth FSN 5340-205-5517 (ENG)

PLIERS: side cutt, lg rd nose, w/cutter, 6 in lg (Fed Spec GGG-P-471, Type P).



1 Auth FSN 5120-247-5177

PLIERS, SLIP JOINT: stght nose, comb, w/cutter, 8 in lg (Fed Spec GGG-P-471, Type F, Class I, Style 1).

1 Auth



FSN 5120-223-7397



PUNCH, DRIVE PIN: taper type, 34 in dia pt (Fed Spec GGG-P-831, Type VIII, Class C).

1 Auth



FSN 5120-222-1906

SCREWDRIVER, FLAT TIP: plastic hdl, w/bolster & wrench grip, 4 in blade, ¼ in tip (Fed Spec GGG-S-121, Type I, Class 5, Style 1, Design B, Shape B):



1 Auth FSN 5120-278-1282

SCREWDRIVER, FLAT TIP: w/wrench grip, plastic hdl, flared tip, % in w, 12 in lg blade (Fed Spec GGG-S-121, Type I, Class 5, Style 1, Design B, Shape B).



1 Auth FSN 5120-227-7362

SCREWDRIVER SET, RECESSED SCREW: (Phillips type) 4 comm & 2 offset screwdrivers (Fed Spec GGG-S-121).



1 Auth FSN 5120-357-1174

SOCKET, SOCKET WRENCH: 36 in sqdrive, 12 pt, ½ in opng (Fed Spec GGG-W-641, Type I, Class 1).

1 Auth



FSN 5120-237-0977

WRENCH, OPEN END ADJUSTABLE: sgle-hd, 3% in jaw opng, 8 in lg (Fed Spec GGG-W-631, Type I).

1 Auth



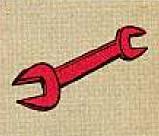
FSN 5120-240-5328

WRENCH, OPEN END, FIXED: 15 deg angle, dble-hd, spear-hd, alloy-S, ½ and % in openings, ¼ in thk hd, 5½ in Ig (Fed Spec GGG-W-636, Type IV).



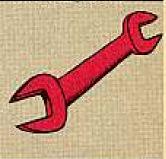
1 Auth FSN 5120-187-7124

WRENCH, OPEN END, FIXED: 15 deg angle, dble-hd, spear-hd, alloy-S, % and % in openings, % in thk hd, 6 in lg (Fed Spec GGG-W-636, Type IV).



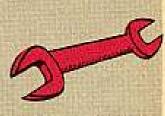
1 Auth FSN 5120-187-7126 WRENCH, OPEN END,

FIXED: 15 deg angle, dble-hd, spear hd, alloy-S, % and % in openings, 7 in over-all lg, % in thk of hd (Fed Spec GGG-W-636, Type IV).



1 Auth FSN 5120-277-8301

WRENCH, OPEN END, FIXED: 15 deg angle, dble-hd, spear-hd, alloy-S, 5% and 1% in openings (Fed Spec GGG-W-636, Type IV).

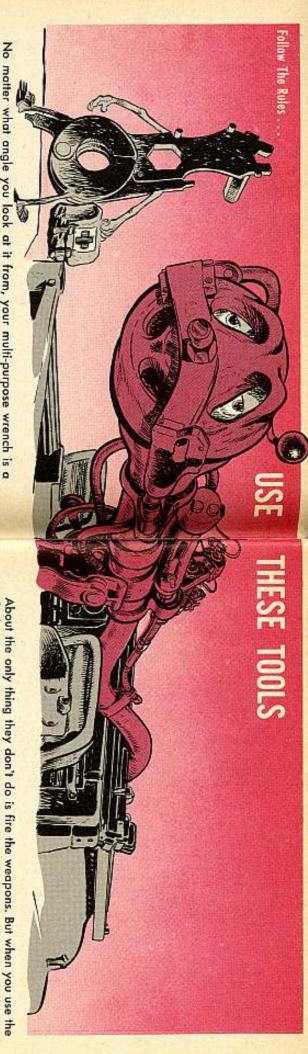


1 Auth FSN 5120-357-8464

BRUSH, WIRESCRATCH: curved hdl, rocker rect face, Style No. 7, 14 in lg (Fed Spec H-B-178, Type II).



2 Auth FSN 7920-223-7647



No matter what angle you look at it from, your multi-purpose wrench is a real piece of machinery when it comes to working around your M8 or M8C .50-cal spotting rifle and the M40A1 or M40A1C recoilless rifle. The same goes for the combination tool that's used with the spotting rifle only.





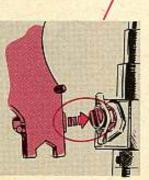
Adjust the elevation cam by slipping the wreath around the barrel like so and with the nib facing the cam.



When you compare the tools, you see that they have the same use in a couple

You use this part of the tool to adjust the gas cylinder.

17



For loosening and tightening gas regulator needle.

of the front mounting bracket.

except, of course, you move to the other side

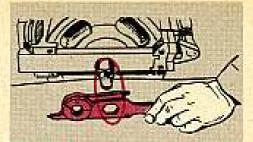
left adjustment.

the notch. When you squeeze, the spring will be pushed down, letting you make a right or

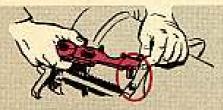
can get it over the springs and the nib into

Keep the wrench open fur enough so's you

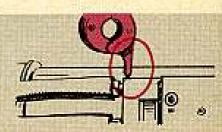




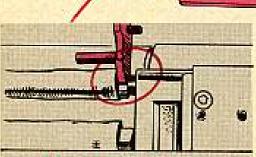
This part of the tool is used to work on the firing pin housing cap.



Use this part to remove the hex socket bolts from the carrying handles.

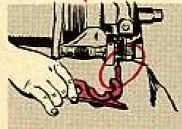


This part is for Ordnance to work on the adjusting cable locking screws.



Ordnance uses this end to work on the firing cables.

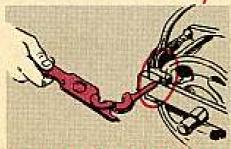




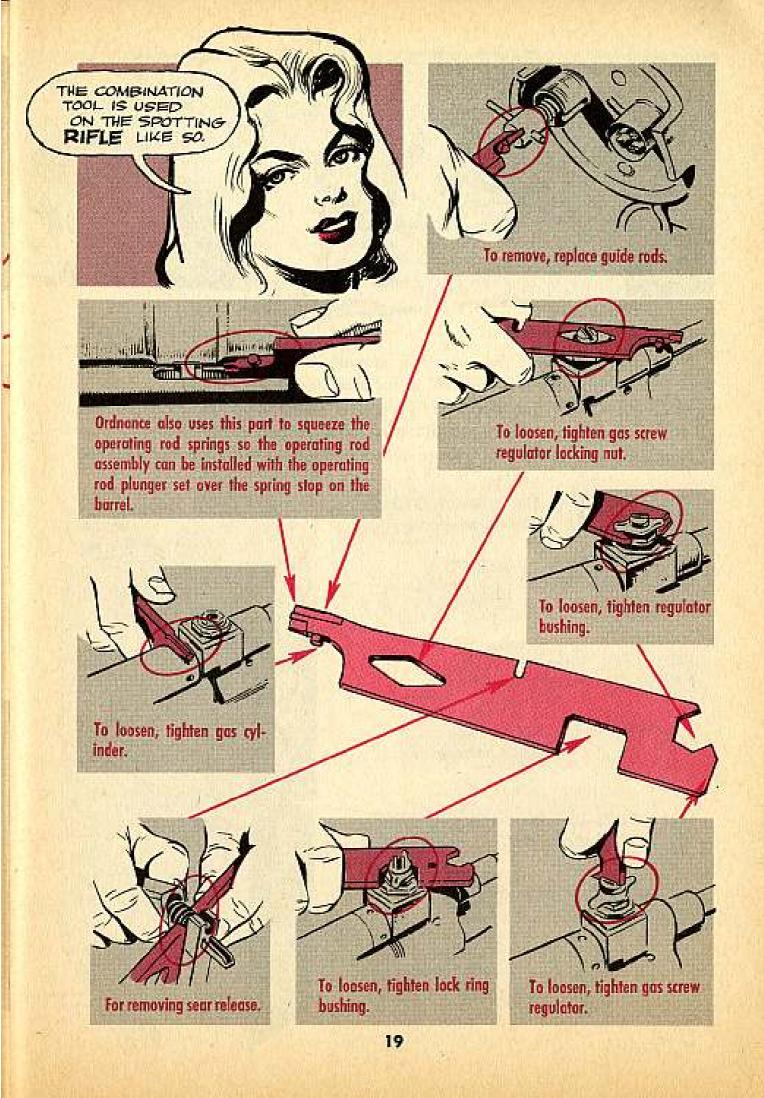
These hex socket bolts are worked over with the same end of the tool....



And so is this bolt.



You tighten these hex socket bolts with this end of the tool.





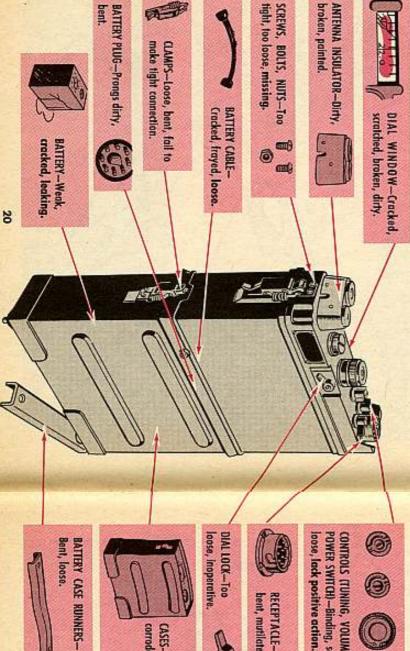
In or out.

No matter which way the message is moving, it's mighty nice to know that your portable squawk box is netted in for loud and clear operation.

And since it's built for quick, easy preventive maintenance, your PRC 8, 9 or

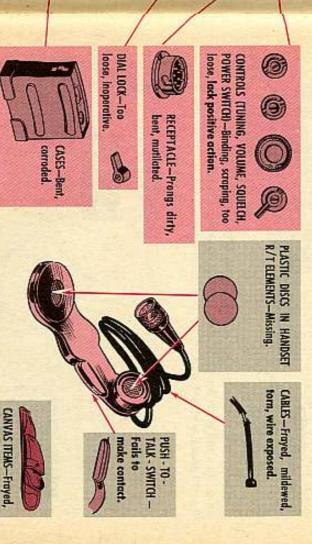
10 will go for many, many hours in return for a few minutes of care.

Here's a handy guide that'll keep you on frequency every time—whether the



inspector is coming around for a look-see, or you're up forward somewhere, where a man can't afford to miss a word.

As y'know, major deficiencies are the ones that call for immediate action. If your radio has a major deficiency, turn it in for repair soonest. On this guide, these major deficiencies are shown in Bold Type.



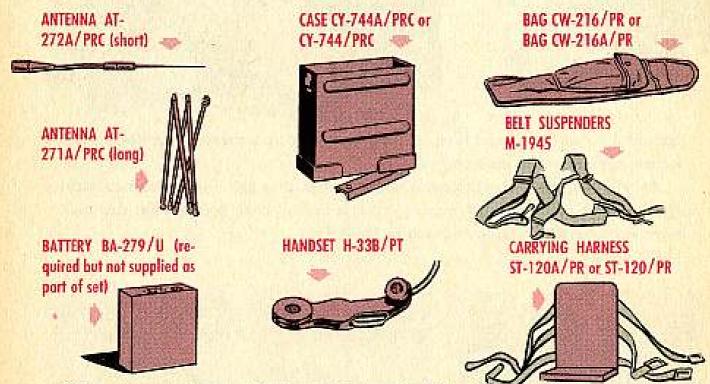
paint peeling.

Cracked, rusted, corroded, kinked,

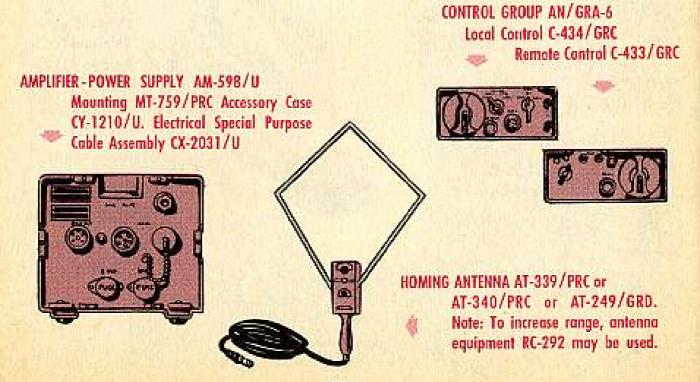
mildewed, torn.

All well and good. But you have to have more'n the receiver-transmitter and battery to make with the talk. You might check your gear to be sure everything is present and accounted for.

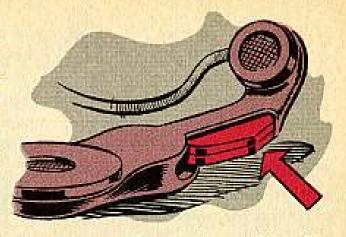
These are the so-called Operating Components—the basic items needed to go on the air with a pack-mounted PRC-8 through 10:



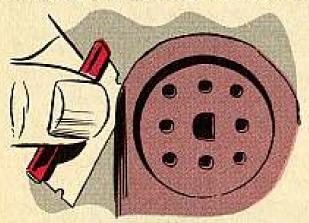
When it comes time to hit the road, a batch of Auxiliary Equipment has to be on the line and ready for use. These are what you should have when your PRC-8, 9 or 10 is mounted in a vehicle:



If your finger gets itchy, try to scratch it on something besides the Push-To-Talk switch on the handset. Hit that switch only when you're actually ready to make with the talk. 'Cause transmitting takes king-sized bites out of the life of your battery. The ratio is about 10 to 1. One minute of transmitting drains as much life as ten minutes of receiving.



And any time your PRC-8, 9 or 10 is going to be out of action for a while, slip the battery out. Leaving it plugged in will bring on old age soonest. Put it on



the shelf until the set is needed again.

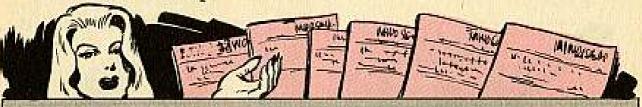
Incidentally, there've been stories around that the connection 'twixt battery plug P1 and the socket of the battery isn't as snug as you'd like. Leads to what the experts call "intermittent operation." In other words, sometimes you get juice and sometimes you don't.

It usually happens because the cardboard jacket gets in the way-by not

giving the plug enough clearance to slip into the socket. The cure? Just cut away a small circular slice of the cardboard so the opening is 13/8 inches in diameter.

That way, you can slip your plug in with no sweat.

Been some changes made since the first PRC-8, 9 and 10's hit the field. Here's how the MWO's stack up:



MWO SIG 11-612-2 1 July 58 — Replaces antenna jacks J1 and J2.

MWO SIG 11-612-3 19 Nov 56 — Prevents damage to dial pointer adjusting mechanism.

MWO SIG 11-612-4 10 Jan 57 — Eliminates sources of frequency drift.

MWO SIG 11-612-6 27 June 58 — Installs a temperature compensating capacitor in the transmitter oscillator stage and maintenance spare transmitter oscillator subassemblies.

MWO SIG 11-612-7 16 Nov 54 — (with Changes 1)

MWO SIG 11-4065-1 17 Feb 58 -

16 Nov 54 — Prevents battery drain during retransmission operation in early production AN/PRC-9's and 10's.

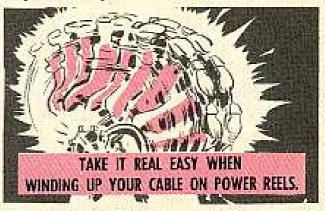
17 Feb 58 — To prevent the runners from becoming disengaged from the battery case.

GOOD CONNECTIONS

A lot of communications and wire men can tell you that traffic is mighty heavy in the Spiral 4 cable and connector cemetery these days.

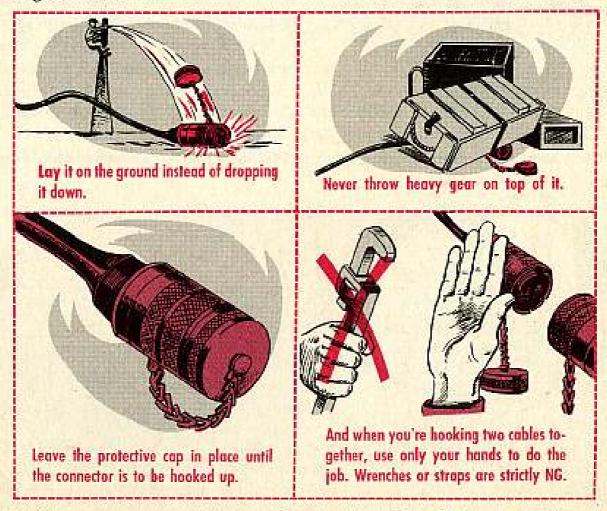
It's the old story—with a simple plot.

Those brass connectors are getting knocked out of action almost every day. Real short life, sometimes. A little drop of three or four feet can be fatal. Or a sharp bang against any hard surface. Anything that changes their shape enough to prevent a watertight connection.

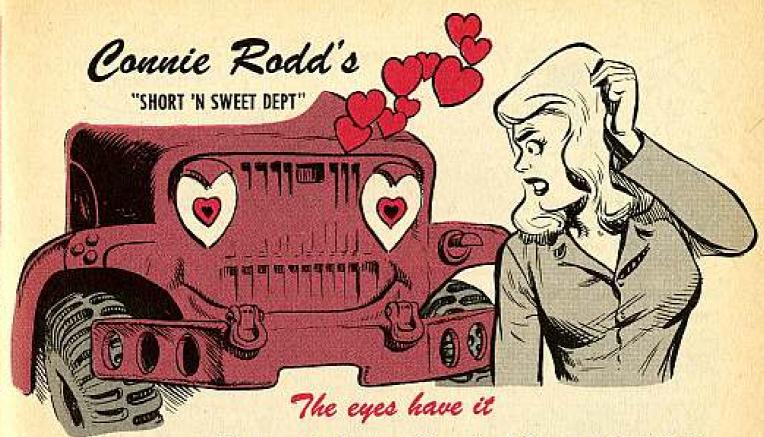


And a dead connector adds up to a twin-killing—since the attached 1/4-mile reel of cable goes to the graveyard along with it. Reel buddies to the end.

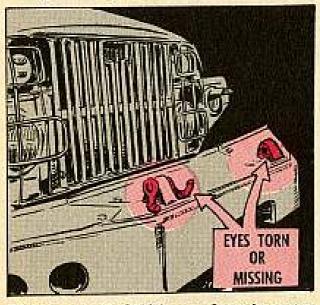
To guarantee a good connection when you need it the most, handle the connector gentle-like.



Handling a connector with these few tips in mind will give you a live-wire operation, and get the message through every time.



Those two metal loops on the front bumpers of your M-series wheeled ve-



hicles are called lifting and towing eyes. Like the name says, they're needed when a truck has to be lifted for towing or recovery by a wrecker.

Seems to be a lot of trucks running around without their eyes or with just one. They've been ripped off, probably because they weren't used with the right tool. To use 'em right, you wrecker drivers have to use a bar hoisting assembly. Up to now, it's been pretty rough getting. But, they're coming into supply, and you should be able to requisition yours under FSN 3940-347-9703.



If you don't have one, tell your supply people. If they haven't received them yet, park yourself on their doorsteps until they squawk to higher echelon, who in turn will take the problem up with the people at the depot.



The old double-check goes double when you're putting carburetors on the 5-ton G744-series vehicles. Remember that the carbs you can get are not interchangeable in all G744 5-ton vehicles. Here's the run-down on what carbs go where:

CARBURETORS	FSN	USE ON				
Ordnance Stock No. G744-8327282	2910-832-7282	M62 and M246 wreckers				
G744-7375469	2910-737-5469	All G744 5-ton trucks except the M62 and M246 wreckers				
G744-8331877 with the governor spring (FSN 2990-696-0283) that came with it	2910-562-0441	All G744 5-ton trucks except the M62 and M246 wreckers				
6744-8331877 with the governor spring 8327323 (FSN 5340- 200-5415) only	2910-562-0441	M62 and M246 wreckers				

When you use these carbs, there are three important things to keep in mind: You requisition the carbs by FSN, but identify them by the Ordnance Stock No. on the carburetor. FSN's aren't on the carbs.

Carbs G744-8327282 and G744-7375469 are not interchangeable.

After the supply of carbs G744-8327282 and G744-7375469 is exhausted, you'll get carb G744-8331877 (FSN 2910-562-0441). That's when you have to be careful about which spring is in the governor. When you get carb G744-8331877 and you're in doubt which governor spring it has, just ask your support unit. They'll open the governor and inspect the spring. They'll be able to recognize the 5340-200-5415 governor spring 'cause it's painted yellow.

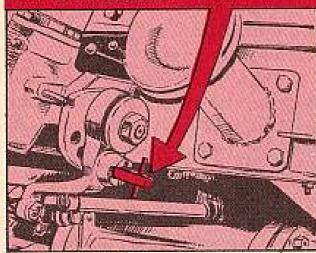
You have to have the right governor spring for your carb to get the right RPM from your engine. If you don't have the correct spring, then it's up to your support unit to install it.

Mule towing

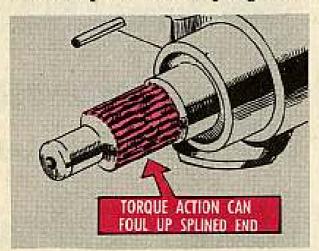
Seems some M274 Mechanical Mule jockeys are forgetting an important step spelled out in TM 9-8034-10, para 34b(1). This dope covers the towing of a Mule—disabled or otherwise—without a driver at the wheel.

The step overlooked is disconnecting the steering gear.

To do this, you just pull out the locking pin, turn it 90 degrees, and lock the key in the keyway with the pin handle vertical.



Towing the beast without doing this can cause beaucoup damage. The wheels'll produce a torquing action



through the steering mechanism that can foul up the splined end of the steering gear lever shaft.

So watch it, hey?

Drippy hole?



On your knees, pal, and look for drops of engine oil coming from the flywheel housing drain hole of your G742series 2½-ton trucks. If so, you may



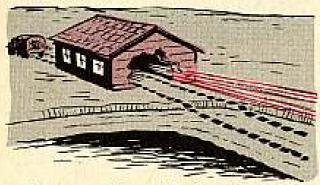


have rear main-bearing oil-seal leaks, probably caused by a worn or wrong seal that shouldn't be there.

No sweat, though. Ordnance is set to fix it. What they'll do is replace that worn or improper seal with a good, right one. The right one is: Retainer, rear oil seal, w/seal, assy, FSN 2540-040-2179.

Keep 'em tight

So you drive a five-tonner (M-series truck), and she handles real sweet—steers like a T-bird (almost). OK, but how do you think she'll treat you if that power steering goes out? Not so pleasant, huh?

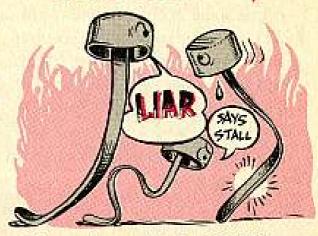


One way to keep this from happening is to give a little extra attention to those wing nuts on the hydraulic line connections—pump-to-steering gear and pump-to-reservoir. They have a way of working loose, y'know.



Every so often, lay a hand on those nuts and make sure they're tight. Finger tight does it. Don't go banging 'em with anything or you'll bust 'em for sure.

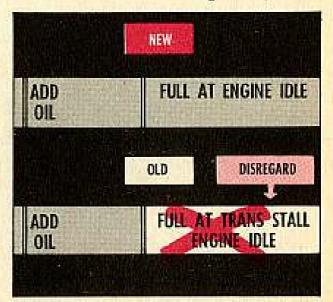
'Tain't necessarily so



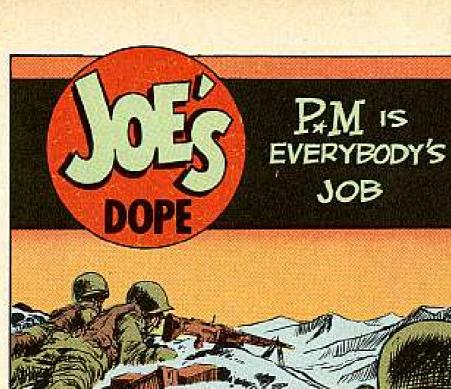
You tankers with the CD-850 transmissions—there may be a few transmission dipsticks floating around with the wrong info on 'em.

Way back, you used to check the oil level with your transmission in a "stall," and the dipstick was marked with that info. Could be some of the old dipsticks are still floating around—so don't be misled.

When one of those off-beat dipsticks turns up, forget the words TRANS STALL. And use the dipstick just as



you do any other CD-850 dipstick. That is—with the transmission in neutral, engine at idle (1000-RPM) and the oil at operating temperature.



THE DIARY OF SET SPITTEN J. POLLISH

ENTRY#5

We've been here five days now. I don't know when we'll get out, but it better be soon. The strain of waiting is getting to the men.

ABOUT SOME HOT COFFEE SOLDIER ... COFF

SORRY,
SARGE... THE
SQUAD STOVE
IS ON THE BLINK.

I LOST THE GENERATOR OFF'N IT EARLY THIS MORNIN'...

Y'WHAT?







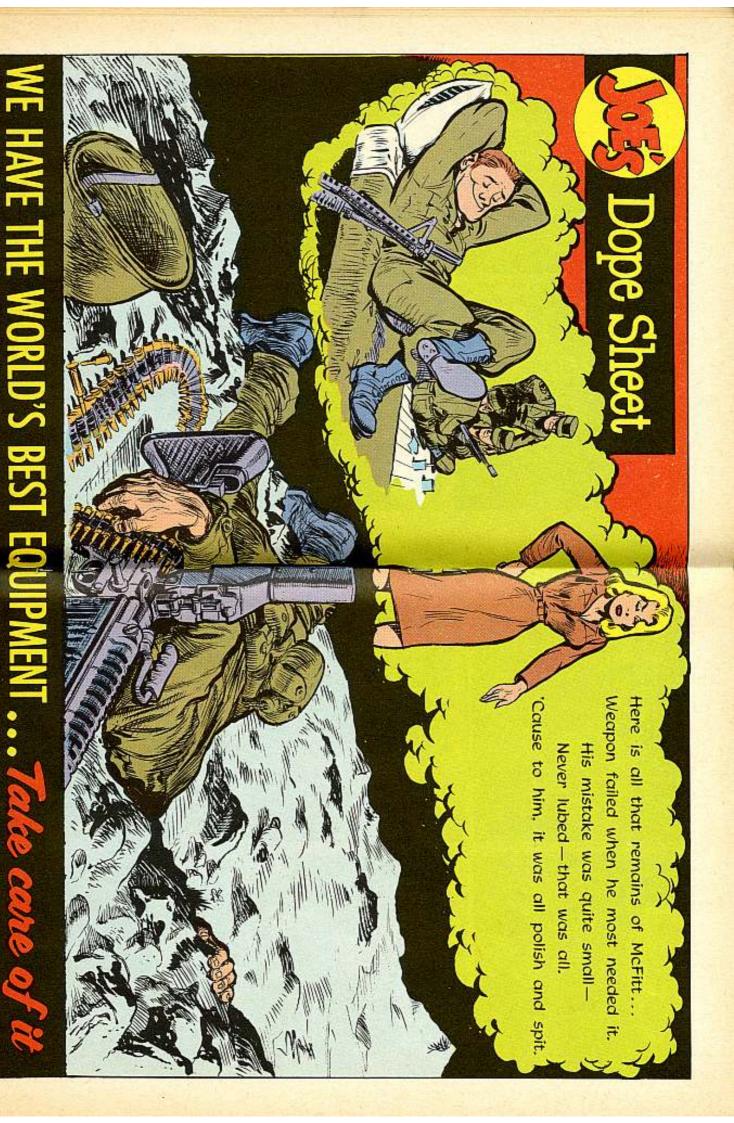




















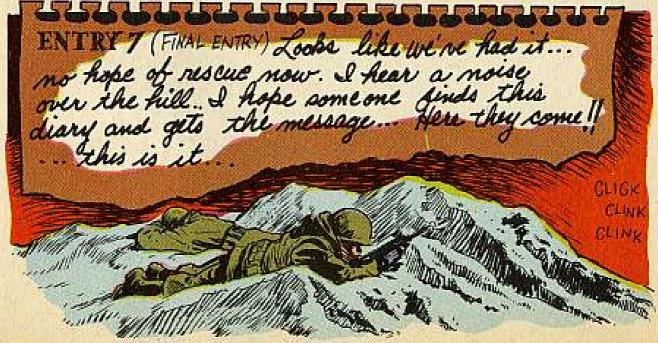






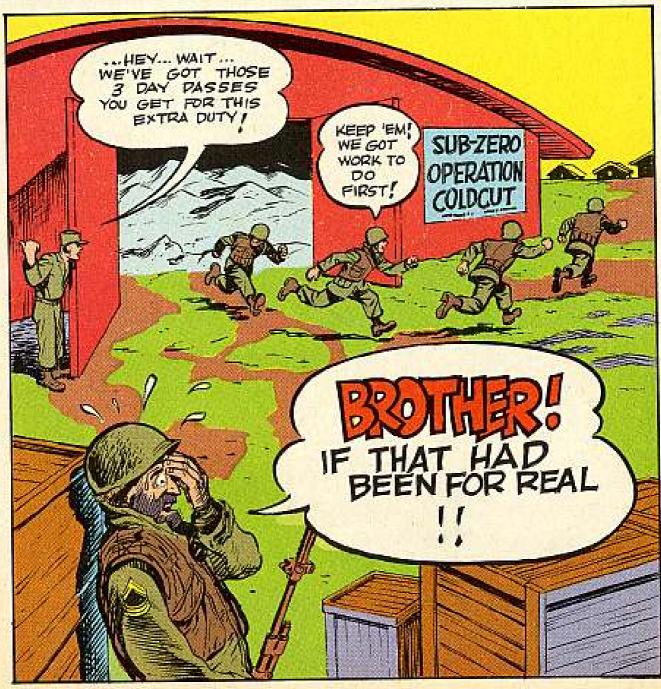


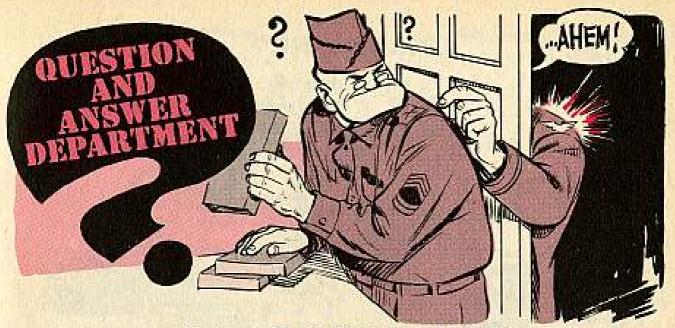












ON TOP OF YOUR PM

Dear Half-Mast,

I'm the maintenance officer of my unit, and the other day the CO was talking with me about how we can keep the unit's equipment in top shape for combat.

The colonel was real concerned because he has been on staff duty for several years and is not as up-to-date as he'd like to be on some of the new equipment we've got. He says his inspections won't really be any good until he gets better informed on the new equipment. To do that right takes time, and he's not got a lot of that.

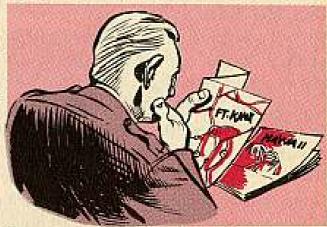
Got any suggestions?

CWOR.S.L.

Dear Mr. R. S. L.,

Sure have. There are a couple of ways he can get on top of things real fast.

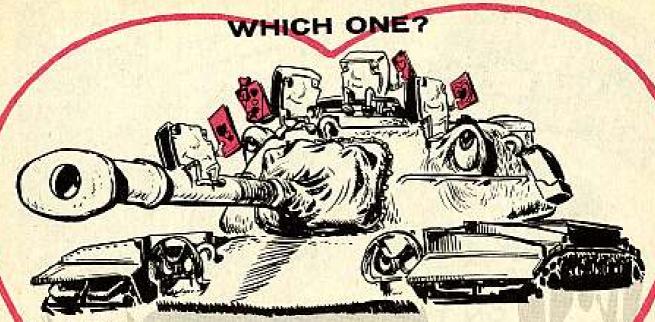
The first is to take one major piece of equipment at a time and learn as much about it as he can—maintenance-wise. You and your top maintenance noncoms could give the colonel a good briefing on each one. This could be done in



a couple of hours or so on a self-propelled gun, for example. Hit a different piece of equipment each week for several weeks—and he'll soon be right with it.

There's another real gone deal your CO can take advantage of. He can get on the quota for the Senior Officers' Preventive Maintenance Course which the Army gives at Fort Knox. It's a concentrated one-week shot of PM that'll do your Old Man more good than a month at Waikiki.

Try it.



Dear Half-Mast,

Recently we ordered some General Electric main control boxes for our M48 tanks I know that Eclipse, Delco and GE boxes are good for M48's and that Mechanical Products control boxes are used with M48A2's.

We didn't get what we ordered, though, Instead, we got boxes from Rett Products Co., Detroit, Mich., marked Ord Part No. 872-3894, 400 amp, 24-28 DC volts, Mfg's No. R-700, DA 20-113-Ord-2113. We don't even have an instruction booklet for this control box.

Can we use the Rett boxes in place of the GE's we ordered, or are they for some other vehicle?

F. D.

Dear Mr. F. D.,

That generator control assembly 872-3894 is OK and will eventually be the standard box to use for the M48 and M48A1 tanks. Don't be confused, tho, if you see another name on it, because Rett isn't the only manufacturer.

You have to order the box by asking for Generator Control Box Kit 8724327, FSN 2950-568-8680 (G251). The kit includes the generator control assembly and the necessary mounting brackets. If you order just the generator control assembly, you won't get the brackets or instructions on how to mount the assembly. Dope on installing this kit is in TB ORD 2300-30/1 (5 Jun 58).

Don't be confused, either, by trying to find the kit number in your SNL's, 'cause it's not there.

You might be interested to know there are four generator control boxes used for the M48's:

GE 735-5925, FSN 5940-735-5925.

Eclipse 752-8304, FSN 2920-752-8304 (G251)

Delco-Remy 796-8600, FSN 2920-796-8600 (G251).

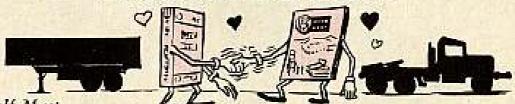
Control Assembly 872-3894, FSN 2920-335-4264 (G254).

The 872-3894 is a completely detailed unit not restricted to any manufacturer.

The GE assembly and Control assembly 872-3894 are the only regulators that'll give you full output from the 300-amp generator. The other two limit current to 150 amps.

You use only the 872-3894 assembly on late model M48A1's and all M48A2's because of the changes in mounting. Hall-Mast

EVERYONE'S RIGHT



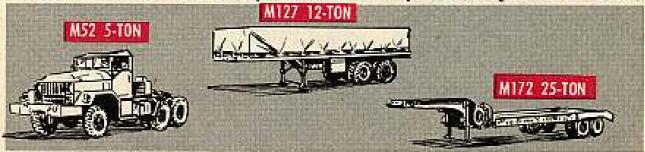
Dear Half-Mast.

What's the scoop on a tractor for the M172 25-ton low bed semi-trailer? TM 9-8222, para 4, says it is to be used with a 5-ton 6x6 tractor truck M52 or similar vehicle. On page 33, PS 64, you state the M52 is built to take the M127 12-ton trailer only.

MSgt S, C. N.

Dear MSgt S. C. N.,

Everybody's right, Sarge. You are right-PS is right-the TM is right . . . and everything is quite all right. Since PS 64 was printed, the situation's been ironed out a little further . . . the M52 can handle both the M127 12-ton semi and the M172 25-ton low bed semi. Only be careful when you hook up with the M172,



because you don't want to overload the M52's towing capacity. TM 9-8028, page 45, says highway maximum load is 55,000 lb and off highway maximum is 30,000 lb for the M52.



By the way, the M52 will also pull the G802-series-that's the M269, M270 Half-Mast and M270A1 12-ton wrecker semi's.

Grab these forms . . . you'll need 'em for your....









CLAMP YOUR PEEPERS ON IEM. NICE ...HUH? THERE'RE PLENTY OF IEM TO GO AROUND, HAPPEN TO HAVE IEM HERE YOU WANT I SHOULD



BEFORE YOU'LL BE GETTING THESE FIGURES DOWN ACQUAINTED WITH 'EM REA SCON, THEY'RE THE DA FORMS 5-77,5-75 AND 5-13A,7,5-75 YOU'VE NEVER SEEN IN



WHAT DO THEY DO?

A likely question. Here's a rundown.

"Equipment Data Worksheet for Engineer Supplies & Equipment." This is the latest version of DA Form 5-77 (1 Oct 58), It goes by the handle of

equipment. But, you're more interested in it now because you use it as a worksheet when you fill out a DA Form 5-73. things it was used to put down info for making up ID plates for your Engineer The old form's been around for awhile. You might have seen it. Among other

destroy it. But, hold onto it until it has served its purpose. 5-77's a one-time affair. When all the info you need has been taken off-you unit's been issued. Remember, this is a worksheet-not a permanent record. The Right now you want to prepare a 5-77 for each Engineer end item that your

5-73. (1 Sep 58.) IT'S A FOUR-PART THE NEXT ONE'S DA FORM SMAP-OUT FORM



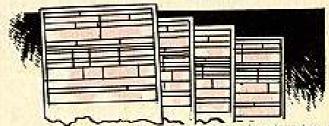
8

Its long name is "Record of Engineer Equipment Requiring Spare Parts Support". Some of the guys have seen forms like 'er before, dated 1 March 56. But, this one's made up a little bit different than any of the others.

Copying the info from the DA Form 5-77, you make up a form 5-73 for every Engineer end item that your outfit's responsible for.

When you complete it, you send all four copies to your support unit. They'll send copy number one back to you for file. We'll talk more about that later.

NOW THE SMALLEST OF THE THREE FORMS IS THE DA FORM 5-730 (1 Sep 58)



In spite of its size, it's just as important as the other two. Its name is almost as big as the form itself. It's called "Change to Record of Engineer Equipment Requiring Spare Parts Support." The 5-73a also has four parts and is distributed the same as the 5-73. Like its name says, the 5-73a is used to report any changes to your equipment once you've reported it on a 5-73.

Sure, the three forms are in the same family. You can get to know them one at a time or all together. It won't make any mind . . . they're not hard to get along with, and it won't be long before you get to know them real well.

You can requisition 'em through your regular publication channels. Just in case other forms have previously been introduced in your area, remember—DA Forms 5-73 and 5-73a will replace all other equipment inventory forms or changes of forms in use.

If you've already inventoried your Engineer equipment and prepared the DA Form 5-73 (1 March 56), you don't have to send the same info through again on the new DA Form 5-73. Just prepare a DA Form 5-73a to show any changes or additional data on the rigs.

WHY FILL 'EM OUT?

Man, without them, you're nowhere.

These are the forms that're being used in setting up a world-wide reporting system that will give the brass a complete inventory of Engineer equipment. They'll take the info you give 'em on the 5-73 and 5-73a, put it on EAM (electrical accounting machine) cards, and feed it to an electronic brain.

This way they'll be able to keep tabs on all Engineer equipment. It'll help them to standardize items... to rotate 'em... and to work out maintenance repair parts support programs. It's a real important deal—so it's up to you and the DA Form 5-77, 5-73, and 5-73a to put it over.

The full scoop on the inventory and reporting procedures is in AR 711-541 (25 Aug 58). The dope on preparing the new DA Form 5-77 is found in AR 742-512 (17 Oct 58).

WHO FILLS THESE FORMS OUT?

The reporting system goes for every unit that has Engineer items that need repair parts support, or end items which are components of sets, kits, or outfits . . . from the procurement activities right on down to the smallest using unit.

And, that means you, Joe.

Army National Guard units will be guided by the instructions of the National Guard Bureau.

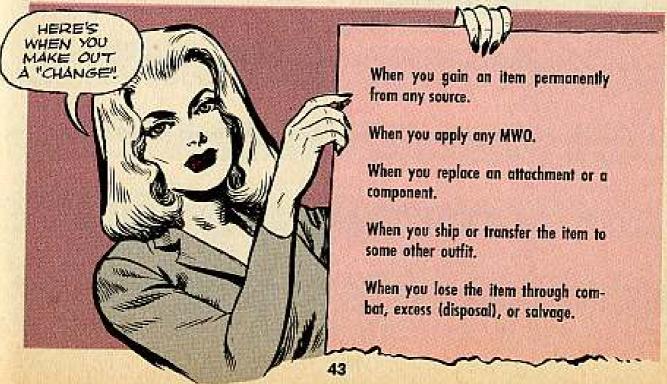
WHEN DO YOU FILL 'EM OUT?

You're sure full of questions, Joe. But, here's the answer to that, too.

To start with, you fill out a Form 5-73 for every Engineer item listed in SB 5-70 (25 Aug 58) that your unit's been issued. That means using a Form 5-77 as a worksheet, you take a physical inventory of every one of these items that you have and copy that info on to a 5-73. You don't complete it by copying from records that you have on hand.

Now, whenever a change occurs—like applying an MWO—you prepare a DA Form 5-73a.

From now on, when you get a new piece of equipment, it should have a 5-73 attached to it. So you fill out a "change", 5-73a, and send it through to let the wheels know who has it. If the rig doesn't have a 5-73, then you have to prepare one.



SECTION II

get this from the ID plates or stencil on equipment. Don't guess... you don't want to put it down if you can't read it.
ITEMS J*-K*-L*-M*-N*-O*-P* smudged or faded so you have to guess what it is. ITEM (-Record the day, month, and year-If available. Your manu-ITEM A-Check this off if your equipment's in depot stock. ITEM B-You don't put this dope down if the lettering is facturer's plates'll bave this info, Ioo. ITEM D-For end item procurement—when available. ITEM E* ITEM F.G.H.-You

SECTION III

List the alphabetical prefixes and suffixes with the numbers. ITEM D-Show by X. ITEM A-Give the manufacturer's name and the Federal Supply Code. ITEM B-Manufacturer's model number. ITEM C-

SECTION IV

Give the info for this engine the same as you did for Section III.

SECTION V

Most of the information here can be found on the manufacturer's and Engineer ID plates on the rig. You can find the dope on the pabs in DA Pamphlet 310-4.

SECTION VI

give the FSN or the Engineer stock number for the prime mover carrier. ITEM C-Manufacturer's serial number on equipment. ITEM D-Brief description—only noun and modifier. ITEM E-You ITEM A-Name of the manufacturer and the five-digit Federal Supply Code. ITEM B-Manufacturer's model number

SECTION VII

items in Section VI. Okay now, let's flip the form over. This is far info on the attachments that were on the end item when you inspected it. ITEMS A through E are similar to

SECTION IX

self-explanatory This applies to Ordnance engines powering Ordnance equipment on which Engineer equipment is mounted. Hems are

SECTION X

are self-explanatory. This applies to Ordnance twin-engine equipment or auxiliary engines on which Engineer equipment is mounted. Items

SECTION XI

ITEMS A through G cover the applicable DA publications or manufacturer's manuals for your rig. List only those shown in DA Pamphiet 310-4, DA Pamphiet 310-25, and SB 5-100.

SECTION XII

symbol N/A in the appropriate block.) Info required on a need-to-know basis goes here. (When dope's not available to put on the DA Form 5-77, show the

*You can forget about these items if you're not in a Depot. They're the only ones that would be interested in them.

'EM OUT?

THAT'S A GOOD POINT, SORTA EXPECTING IT, SO LET'S
TAKE A LOOK-SEE AT THESE FORMS ON THE GARWOD
MIZOA CRANE-SHOVE. FIRST, HERE'S YOUR LATEST DA
LIKE FRANKS WITH BEANS, LET'S GO ALONG AND TAKE
EACH SECTION, ONE TEM ATA TIME... SKIMMING OVER THE
ONES THAT ARE SELF-EXPLANATORY.

200

9				
3615-647-6805	SOUTH CRANE	N/a	MJOA	ינימים מסטידפעים
3816-641-8990	PART CERD	1/4	Map &	SONCE GOODING
4 prop =0	* ITTE RECORDED **	THE SECTION OF	1986	* ment 1 ment cons
1, 1700 at	KANAS (KANA-Soor) 75 (25% Section 1866)	96 900f	489 AND	TOTAL CONTRACTOR OF
T. POST PROPERTY		COLUMN A LINE A	1	a. cetta
A. magne	Complication is	E Maria	1,000	THE P 1991 1998 1
Denni	C59.76 M M M M M M M M M M M M M M M M M M M	100	CHION THE CAME	HOUNT BELIEF
a. Aut. Decor.	1018 TX	1010	PEWS PER	HOTELS WITH THE
endertenden	Description No.		Character of the Control of the Cont	The Comment of the
A to the state of	-		101	
The Common or	1956	-	Society was	THE PART AND A
TRUCK MTO	CRAME - SHOVER	Alox	8	Page 200 Sept 1212
19292	STANTES AND EDITIONS	CONTRACT ONLY ADMINISTRATION OF LIBERTAL WAS ARRESTED.	Ca TAYO LATEAGRA	M 401 318 w1736

	Salphid	1 100 1 100	State of Little	HATTER THE PROPERTY AND ADDRESS OF THE PARTY A	THE PERSON NAMED IN
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SEPPHIC TOWNER IS 70.5 TONS,	A. S.	PARTY AND DESCRIPTION OF PARTY AND PERSONS ASSESSED.	or believe to	Marriage and Committee of the Street
100 miles	440 CHMBK5	200.3	-		
The state of the s	SEPPHIC TOURDER IS TO S TOUS.	100 mm	a mana	S. Williams	in man.
	OU WINDU	0-01-0-7 0-01-0-7 0-01-1-7 0-01-1-7 0-01-1-7	18. 256 to Jos Tean of	10 100 to let 100	Stationers of
t plan a	CHALC Boo	AND COMPANY OF THE	1.700	1. 100	, limit
	ğ	i			

SECTION VIII

mounted—like a truck, Engineer equipment is chassis, trailer, Info This is for Ordnance vehicles on which required is selfexplanatory.

SECTION XIII

these blocks. froms, buckets, angledozers, winches, and power units. Info on the end item on which the attachment is used goes in You use this section when the form is prepared for an attachment—like boom extensions, crane booms, back hoes, shovel

SUPPORT." DA FORM 5-73,
THAT WE SAID HELLO TO
A FEW PAGES BACK. SEE WHAT
A FEW PAGES BACK. SEE WHAT
A FEW PAGES BACK. SEE WHAT NOVE OVER TO THE RECORD

section (Ifem 19). make a note in the remarks if no FSN, leave it blank and ITEM 1-Put the FSN here-

> ITEM 2-This is the info from the manufacturer's or the Engineer ID plates.

THE DA FORM 5-73 (AR 711-541)

Appendix I to AR 711-541. digit code and is listed in TEM 3-This is a three-

MAILING ADDRESS. NOW YOU'RE READY TO COPY THE OTHER RIGHT AT THE TOP YOU FILL IN YOUR UNIT, TECH SERVICE, AND ITEMS FROM THE INFO ON YOUR DA FORM 5-77 FOR THE RIG

blank the remarks section that the model number is not available if left available, use the Engineer name, or leave blank. Make a note in TEM 5—You use the manufacturer's designation for the item. If not

AND THE RESIDENCE OF THE PARTY PROGRAMMENT SANCTON CRANE SHOVEL, YAKKY-MOUNTER MGR BN (CONS), PT-

世界 中間、 (36-92)

> state in the remarks section that the item description plete description that will help to identify it. Then you

was not available in DA manuals

ITEM 6-If this info is not available, you give a com-

The special series

10/833 64/9 10/833

A STATE

VZW

SALES SECTION AND ADDRESS.

Mar 200, pers une min. 200, 200 ile. のではないというないのできない。

BOOM, GRANE EMELEAD \$15-641-6808 3815-641-8440

DIEMO 24676

Agger 18 and hand han beam Breen

ME .. A. W.

- 100 to 10

HEMOTE SHOWER

MECA MZOA

> of this in the remarks leave blank. Make a note section. TEM 9-If not available,

assigned by major com Appendix II, AR 711-541, Command code, outlined in TEM 10-ZI Army, Overseos

engine on the rig. Fill in items 12 a-b-c-d the same as Engineer prime-movers, or crane-carriers, or auxiliary you did in Item 11. ITEM 12-Now, this info is for the engine powering the

vehicles here. chassis, large dump trucks. Do not list other tech service crane-carriers, generator, compressor chassis, fire truck ITEM 14-This applies to special-purpose vehicles like

FSN isn't available, leave blank. Make note in remarks ITEMS 14a-b-c-d speak for themselves. ITEM 14e-it

FOR A LOOK



47

facturer and the five-digi ITEM 7—for stocking purposes only.

—as a Frinslance, a generator set, trader, crane-shovel engine. ITEM 11—This applies to the engine powering Engineer equipment

(Saged) annual (Pepting)

ITEM 8-If not available, leave blank.

a-Name of manufacturer and code, d-Check applicable block b-Manufacturer's model, Engineer designation, or leave blank c-You use the manufacturer or Engineer ID plates for this dope

starters, magnetos, and battery charging generators. The items 13a through 13e are selfplants, battery chargers, compressors, pumps. It does not apply to engine accessories like ITEM 13-This applies to Engineer accessory power or powered equipment-like light explanatory here.

FSN of the basic equipment-like boom crane, PCU, angledozer, buildozer, etc. You handle items 15a through 15e the same as 14a to 14e. ITEM 15-You list only attachments for equipment as identified by item description and

Engineer equipment is mounted—as a truck, chassis, trailer. Into required in items 16a through 16e is self-explanatory. ITEM 16-This is for Ordnance vehicles on which

through 17e are self-explanatory. equipment on which Engineer equipment is mounted. Items 17a nance engines powering Ordnance ITEM 17-This applies to Ord-

and a least special least a section of the least se THE SALES - SERVE NE OF FRIENDS & BOOM, GRAND AN I.D. BASTES. THE R. LEWIS CO. P. LEWIS CO. P * \$1000 House からから あるとの

for your rig can be found in SB 5-100. repair parts channels listed in DA Pamphlet 310-4 and DA Pamphlet 310-25. Manufacturer's pubs ITEM 20—You list all applicable DA pubsor manufacturer's manuals available through Engineer

Free 188 y Sand Cipaco Mantenance to. At

your field maintenance unit will handle this. ities responsible for field maintenance support-

ITEM 21-Technical edit will be made by all activ-

will also handle this completed goes here. Your support unit ITEM 22-The date technical edit was

> leave blank. part of, or for depot stock-otherwise ITEM 8-Check only if the equipment is

> > AR GRANINE 'Z

BANG TH

14 MICHAED BY

IL DATE

HARE MENS, COURS IL MODEL C. MENAL NO.

D. ITEM ORICHIPTION

PROPERTY AND A

A Baset Code C/4/A/C

CAN.

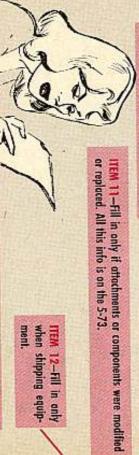
CRANG-SHOVEL, TRUCK

810-189-9694

ENGR BY (CONS)

7 212/2 TH THINK T SHARE FYE

24076



when shipping equip-ITEM 12-Fill in only

> DA FORM S-33. IREVISED (#-Part) 17. YECHMON, CAPIND MANNET

57 -98288 27 Andry REQUISING METAIR PARTS SUPPORT

MIMOS 3-9517-4 AND 5-9517-3 APPLIED

replaced, etc., and any other information on a need-to-know basis ITEM 16—This is where you tell the story of the change. Note the MWO applied, component

> which Engineer equipment is mounted. 18a through 18d are self-explanatory ITEM 18.—This applies to Ordinance twin-engine equipment or auxiliary engines on

the number of the set); when FSN or serial number is not known and additional into is included to assist in identification of item. FSN, serial number, year of manufacture; equipment reported as a component of set (you give ITEM 19—All into required on a need-to-know basis goes here. This includes non-availability of

THE ITEM BLOCKS ON THE DA FORMS 5-73 AND 5-73A-DO NOT USE SYMBOLS. JUST LEAVE THE SPACE BLANK, USING NA HERE TO SHOW WHEN AN ITEM IS NOT AVAILABLE" OR "NOT APPLICABLE"

YOUR EQUIPMENT

CHANGES TO FET THE WHEELS

HERE'S HOW YOU

applicable equipment. on the DA Form 5-73 for the same information that's listed ITEMS I to 6-You show the

DA FORM 5-73a

Otherwise you leave blank. EM 7-Check if applicable.

Leve of Least
Consider

Co SOUTH STATES POSSESSON CODE none assigned, leave blank ITEM 10-Give number. If ITEM 9-This number assigned by major com-

when applicable. Otherwise leave blank, ITEM 13-Give date,

when applicable. ITEM 15-Give date, Otherwise leave blank.

when receiving equip-ITEM 14-Fill in only

applicable—goes here. the technical edit was completed—as ITEM 18-The date of the action or when

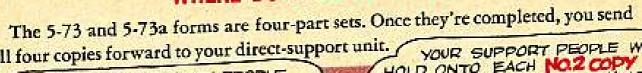
installation or depot code of the organization

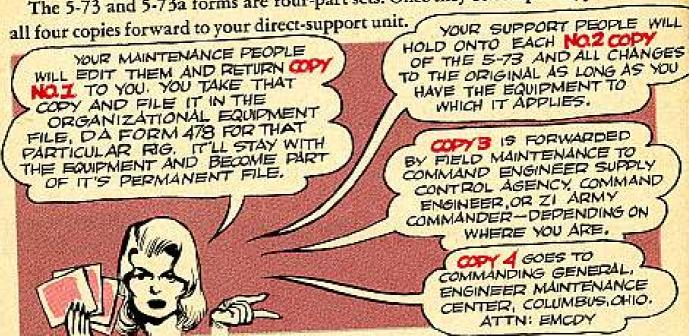
ITEM 17—The unit designation, location, the

which applied the MWO or performed the

technical edit goes here.

WHERE DO THE FORMS GO?





ANY SPECIAL INSTRUCTION?

There're a few items to get squared away on. But, there's no sweat, once you get your paws on these forms you'll know what to do.

When you send equipment to field maintenance activities, you send along the 5-73 and 5-73a's with the jacket folder, record of MWO's, and major assembly replacement record.

If your rig is powered by more than two engines, you report it by using addi-

tional 5-73's. All authorized MWO's on the equipment at the time you make the initial survey will be noted in the remarks section of the 5-73.

You report Engineer items which are components of Engineer or other tech service sets, kits, or outfits with the applicable set, kit, or outfit separately and note the FSN and the item description of the kit in the remarks section.

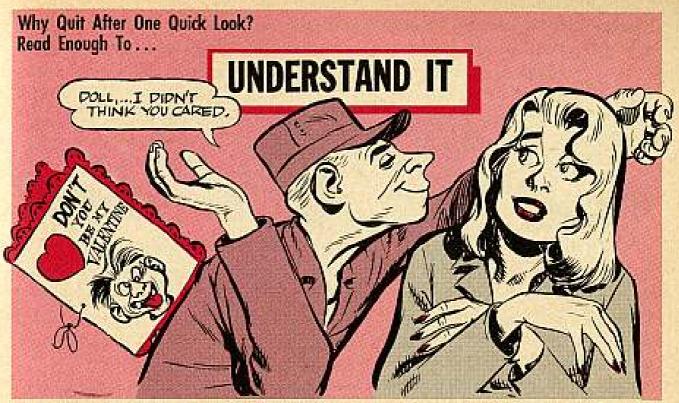
DA Form 5-73a will not be prepared until a 5-73 is sent in.

When your unit receives equipment direct from depot or from procurement and two copies of DA Form 5-73 are attached, you send one copy (No. 2) to your supporting field maintenance activity.

If you receive equipment without the DA Form 5-73 attached, you make out the form and send it through the same as you did for the initial inventory.

One more thing, Joe, before I quit beating my gums and shove off. This I've said before, but it's worth chewing twice . . .

The DA Forms 5-73 and 5-73a take the place of all other equipment inventory record forms or change forms in use.



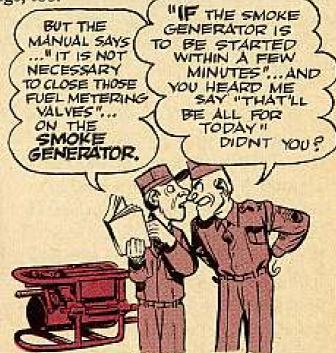
Ever catch yourself grabbing hold of a new regulation or manual, reading one or two paragraphs, and then coming up with an interpretation nobody else agrees with?

If you haven't, you're not normal—it's just plain old human nature to read things your own way. But there're a few good-to-remember things on how to read a directive the right way—so you can cut down on the number of those misunder-standings. Could help to cut down on gigs, too.

First, be sure you have a real good go at the Purpose and Scope paragraphs. You'll always find them at the beginning of Army regulations and most manuals. They were purposely put in front so you wouldn't miss the point that a directive:

- HAS A REASON FOR BEING PUT OUT, AND . . .
- 2. COVERS A SPECIFIC AREA ONLY.

Most publication conflicts start from somebody trying to force one publication to overlap another by misreading it—or when somebody tries to stretch



the meaning of a publication past the point it was intended to be used. Reading things into regulations or manuals is a tricky business... interpretation needs to be blended with a goodly mixture of common sense.

Always try to make use of an index, if the publication has one, so you get an idea of how that particular publication is laid out. Then, check carefully to see that you notice every paragraph or page number that might refer to the subject



Here's an example . . . if you're looking for the gap setting on your equipment's distributor points, maybe you'll spot it right off the bat under distributor. Then again, sometimes you might have to check under ignition . . . or even electrical system. There's always the possibility-like in looking through the military index system-that the Army has changed the nomenclature . . . then your old wrench might be listed as a socket or that old handle might now be a bar.

Take the subject of supply, for example. Sure, you might find the word supply printed in bold letters right at the head of a section. But, you're just as likely to see it mentioned under forms, accountability, requisitioning-even mainte-

nance procedures.

This is a good example of what usually seems to be the trickiest part of working your way through an Army publication . . . to find every reference to the subject you're interested in. That means using your noggin to figure out what other procedures have something to do with what you're looking up. For instance, maintenance procedures usually refer to supply operations somewhere along the line . . . because maintenance depends on a good flow of repair parts. This is the type of thinking that helps you find your way around a publication.

By putting together all the paragraphs that mention your subject, you begin to get the whole picture. One of the best ways to attack a new regulation or manual, of course, is to read a whole section at a time instead of just one paragraph. Sometimes, a paragraph won't make any sense without reading the paragraphs that go before and after it. That's like coming in on the tail end of a joke and not understanding the punch line ... real frustratin'.



A favorite policy of the Army is not to repeat the same info in two different publications. Instead, you get referred to the other publications that already mention things that tie in with the subject . . . like when the Army tells you to go to a special TM for more info on cleaning and preserving materials.

AIN'T THAT DUMB?

IT JUST SAYS "PAINT IT,

When it comes down to it, though, nothing beats cutting yourself a slice of time that's big enough to allow you to go over a regulation or manual a couple-three times—so as not to miss a point.

Sometimes, that point doesn't smack you in the face until you've read another paragraph, which can come about 10—even 20—pages later.



If it so happens that need-to-have type publications never seem to get down to your level, check with your officer in charge of publications at battalion, regiment or group. After three months go by—counting from the date of publication—you've gor a right to gripe... and keep griping until you get them.

NOT SO DUMB

REI APPENDIX I

SAYS TM92853 GIVES PAINTING

INSTRUCTIONS

FOR FIELD



FOR A ...

QUICK COVER UP

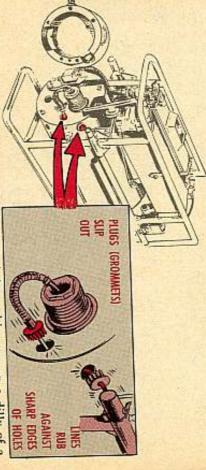
'TM's, FM's, PS's . . . anything you name. They're all publications that (should) get plenty of thumbing night and day.

But they don't have the ruggedest covers in the world, so a little extra protection can make 'em last longer and easier to read. The secret weapon is a plastic, transparent cover that's washable, scuff-proof and which resists grease, water and alcohol.

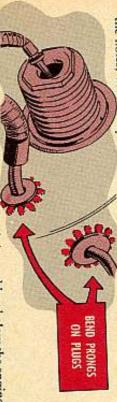
Pick	YOUR COVER:	
BINDER, MAGAZINE, plastic	LENGTH (in)	WIDTH (in)
7510-292-9338 (QM)	71/2	51/2
7510-292-9339 (QM)	111/2	81/2
7510-292-9340 (QM)	131/2	101/2



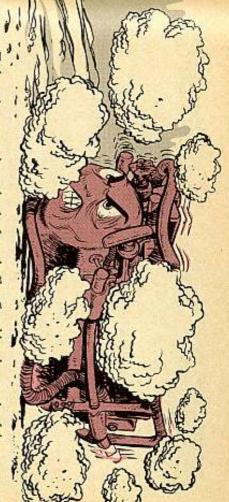
The button-type plugs or grommets in the holes that the air lines pass through on your M3A1 or M3A2 smoke generator, that is. Seems that more than a few operators have been havin' trouble with the button plugs slippin' out of the holes.



The explosions from your smoker when she's working set up a dilly of a vibration. If your plugs aren't tight, the lines can rub against the sharp edges of the holes, which may cut the lines.



You've got two of these plugs. One is located just below the engine head assembly on the front baffle where it receives the air line. The other is found where the line enters the outer shell of the engine group.



To keep 'em snug, just take the front baffle off and bend a couple of the prongs on the plugs over and back against the metal they're hooked to. Put the baffle back and you're rid of your rattle.

Beauty Aid For Decons



How's your M3A2 decon look these days? Is she a little worn, nicked, aging in spots? Does her wooden tank have that dried-out skin look with a little rot, maybe?

Then send her back to your support outfit for first aid treatment. They'll give her a new face-and-leg job, replacing her wooden tank and platform with steel ones, just like MWO 3-223-1 (4 Feb 58) says. She'll not only look and act like new but she'll get a new number—M3A3.



1. What is the correct procedure for stopping on glare ice? I've read TM 21-305, para 59 c, and I disagree with the word "intermittently."

2. On a dry, hard surface road, can you stop faster by slamming on the brakes and skidding the tires than applying the brakes hard enough to not skid the tires?

Dear Lt R. S.,

Nope, sorry. "Intermittent" is right when applying brakes on ice, but, Sir, the important word in para 59c of TM 21-305 is "lightly."



The whole point, and this answers your second question, too, is that a tire has greater traction when it is turning than when it is sliding. So on ice, as the manual tells you, you use engine compression all you can as your retarding force. And when the engine starts to rev up too fast, you use light intermittent applications of the brakes to slow down, but to slow down without causing the tires to slide.

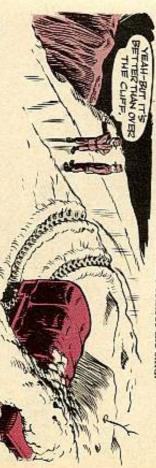
Now about that second question. Again, as I said, a tire has the ability to transfer more force to the ground when it is turning than when it is sliding. Wherefore you'll stop in a shorter distance if you do not lock your wheels, if you can correctly judge the forces you're playing with, and use all the brakes you can without sliding the wheels.



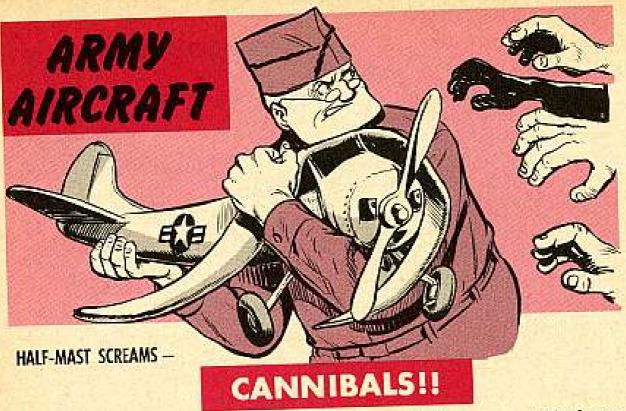
Naturally, if you're so determined to keep from locking your wheels that you only use half the possible braking effort, you'll roll right on into trouble. This is so tricky that our flying friends have a real elever device on their aircraft that releases the brake a little whenever the wheel slides.

And of course you know, Sir, that even if the stopping distance were the same, or perhaps just a little longer, you'd still be safer making a panic stop with your wheels turning because you still have steering control, and can frequently dodge the trouble even if you can't completely stop. But it works out that when you lock all wheels, you not only skid out of control, you also skid farther than a rolling wheel needs to stop you.

So it comes out don't skid your tires at any time. And that ties back to your first question, too. Because if you do start a slide on the ice, releasing your brakes will again give you a better chance to steer and control the skid.



Fact is, I always recommend intermittent application of brakes, smoothly, on any road surface. They'll get a chance to cool, and will actually stop you in a shorter distance than you can get with one steady application that heats the drums and expands them away from the brake shoes. (Called "brake-fade," and that's why the new aircraft and race cars are using the spot brakes.)

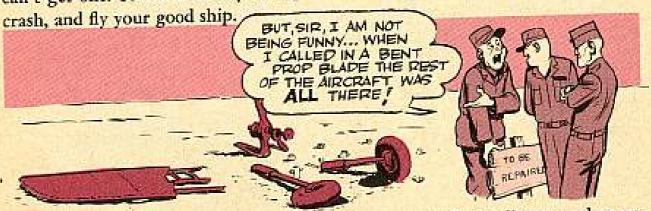


Look out! The man is getting set to lower the boom on anybody caught swiping parts from unserviceable aircraft.

Most aircraft outfits got an instruction sheet what recounts the provisions of AR 750-1500-8 (10 Apr 58), and makes reference to "Legalized Cannibalization" -and TCSMC-FAD put out an interpretation of AR 750-1500-4 (23 May 1958) for the benefit of everybody.

But look once at the problems:

Happens you've got a ship crippled up and waiting for TSMC to decide to fix it or to salvage it. Meantime you've got another ship AOCP for a generator, and can't get one. So it's real easy to slip over and swipe the good generator off the



Next guy along gets a carburetor. Another man needs an ailcron, and so on. So what? All these parts are going onto government aircraft, yes? Nobody's taking 'em home for personal use so what's the harm?

We-c-e-l-l-the harm comes in when the TSMC goes by the reports submitted right after the crash, and decides that the hangar-queen is economically repairable. Maybe the reports only described a bent fuselage, or perhaps just a smashed wing. So they send the ship to be fixed. And all of a sudden it turns out that half the engine accessories and a couple of control surfaces are gone. Wug! The cost of replacing 'em goes up over the limit, and an otherwise repairable aircraft has to be salvaged. So Uncle comes up shy one sky buggy, and much money.

Cease-and-desist is the word for it.

Now, here's another thing. Cannibalizing parts now, in peace time, will louse up the parts requirement records from here to breakfast. And it's these records that are used to determine stockages and supply coverage. So you're really hurting your chances of finding what you need waiting for you when you need it.

Of course, comes shooting and you go to a forward area, all bets are off and you'll use anything you can get your hands on. But in peacetime, "Keep your grimy meathooks offa them now crashed aircraft."

COMING 'ROUND THE BEND

Gentlemen, we gotta problem: There's been a new type of flexible hose put into the supply system which should give unlimited service life. It's a stainless steel braided outfit which contains a flexible liner going by the trade name of "Teflon." It's being used to make up fuel and oil hoses and they are being carried in stock as a replacement for the old synthetic rubber hoses.

About the only way you can tell if the metal braided new hose you get from Supply is Teflon-lined or synthetic rubber is to slightly bend them both. The Teflon-lined hoses are stiffer than the synthetic rubber line hoses.

So what? So, while the Teflon hoses are more durable than the rubber ones, you gotta be critical about how much you bend them—both before they're completely installed and after you got them connected. There is a minimum bend radius for each inside diameter measurement. If you should bend them—on purpose (to install) or by accident—more than the allowable minimum bend radii you may crimp the liner and partially block the hose. You know what this can do to you if it happens to be a fuel hose or an oil hose to the transmission that is restricted, you being airborne at the time.

19500	HOSE SIZE (ID)	RADIUS, (MINIMUM)	A March
2	-3	1 1/2 inches	NV "III
3	_4	2 inches	
-	-5	3 inches	
7		4 inches	
1	-8	4% inches	1 4 T
	-10	5⅓ inches	
	-16	7% inches	
	20	9 inches	
and a		and experience white and the	
		59	

So, here's the pitch. Whenever you replace a hose, regardless of who the manufacturer is, see if the new one has a Teflon-liner. If it has, you gotta be careful—careful when you install it and careful to check it after it's in place—to be sure, very very sure that none of the bends are any shorter than the table on page 59, or you may find yourself in serious trouble.

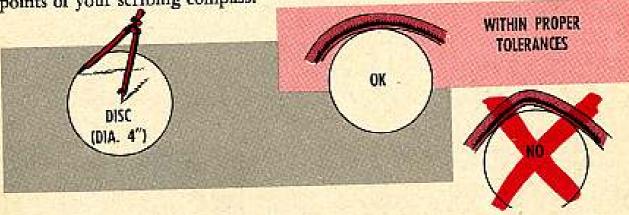
So-o-o-o, if you do find a shorter bend (more acute) has been put on the hose either during installation or after hook-up, examine it carefully to see if you

crimped it. How? Check the braid for visible damage.

If your Aircraft Maintenance Officer goes along with the idea, you may be able to put the old hose back for awhile, but if not, you'll have to ground the aircraft.

And naturally you'll report the problem at once by TWX UER, followed by DA Form 468, to the U. S. Army Transportation Supply and Maintenance Command, 12th and Spruce Streets, St. Louis 3, Missouri, to the attention of the applicable aircraft project officer 'cause this problem will be handled on an individual hose and aircraft basis.

To help you check and make sure that you haven't exceeded the minimum bend radii for each dash hose, make yourself a flat stiff disc which can be shoved up to the bend. Here's how! Say you want to check the dash 4 hose after you got it installed. Take a piece of flat rigid material about 4½ inches square and about .025-.035 thick; lay it on a flat surface; take a pair of dividers (both ends pointed), and measure 2 inches between points, then keep one point stationary and scribe a circle, which when finished will measure 4 inches across. You can do the same for each dash hose size if you want to, so, you'll have a gadget to use for each size you might need. Only remember, the distance which corresponds to the radius of each disc will have to be measured with a ruler between the two points of your scribing compass.



Now you have the dash 4 hose all installed in your machine.

Find the bend.

Push the disc into the bend.

If you see daylight on either side of the bend you are within proper tolerances. If you see daylight between the disc and the point which has the greatest bend, it's incorrect.



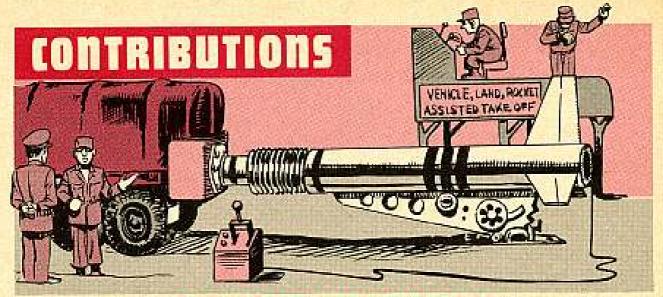
Been wondering just when you're supposed to get the engine of your aircraft yanked for a replacement?

Little wonder, 'cause pages 11 and 12 got left outta Table VII in AFTO 00-25-4 when it was revised 16 Dec 1957. So, you've got problems.

Now, until you get your revised -6 handbooks for your aircraft, you can go by this table for engine change, or maximum operating times.

ENGINE	MAX. HOURS
O-470-11	1200
O-470-15	1000
R-755-A2, R-755-11	1200
R-985-AN-1, R-985-AN-3,	
R-985-AN-39, R-985-AN-39A	1400
O-435-17	1000
O-480-1	600
GO-480-C2C6, GO-480-C2D6	1000
R-1340-59, R-1340-61	1200
GO-435-C2B, -C2B1	1000
	1000
	600
	600
	600
	600
	600
	600
	600
	500
	600
	600
	600
	600
R-1820-84A R-2800-54	600
	O-470-11 O-470-15 R-755-A2, R-755-11 R-985-AN-1, R-985-AN-3, R-985-AN-39, R-985-AN-39A O-435-17 O-480-1 GO-480-C2C6, GO-480-C2D6 R-1340-59, R-1340-61 GO-435-C2B, -C2B1 GO-480-G1B6 GSO-480-A1A6, -B1A6 GSO-480-A1A6, -B1A6 O-335-5, -5A, -5B O-335-5, -5A, -5B O-335-5, -5A, -5B O-335-5, -5A, -5B O-435-23, -23A, -23B R-1340-57 R-1300-3, -3A, -3B, -3C, -3D R-1820-103 O-335-6, -6B O-435-23B R-1820-84A

And there you are: As you can see, six hundred hours is the end of the line for the greatest number of engines. It's not too hard to remember if you have one of the aircraft that goes longer between changes.

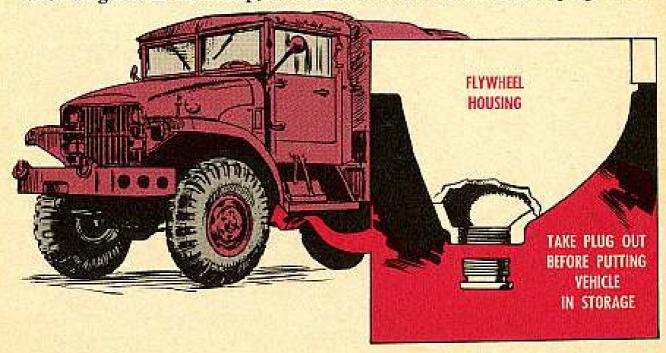


END YOUR STARTER TROUBLES

Dear Editor,

Last year, when we got our vehicles ready for National Guard summer field training, we found that many of the starters on our G749-series 2½-ton trucks were corroded and rusted inside. Yet, on those G749's that were used and maintained by pulling the flywheel housing drain plug every 1,000 miles, like para 12 of MWO ORD G749-W23 (24 Mar 55) says, the starters were fine.

We got the notion that when a vehicle lies in storage with the drain plug left in, it can cause all sorts of woes to the starter, because moisture can't evaporate. When we got back from camp, the order went out to take the drain plugs out of



the flywheel housings of those vehicles we put in storage—we put the plug in the vehicle's glove compartment. This year—no rusted starters.

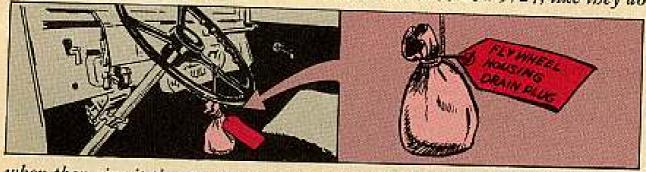
The proof of the pudding's in the eating, as the saying goes. So, to keep a starter in good shape during storage, pull that drain plug when you store a G749-series

truck—and leave it out, so any moisture that builds up can evaporate. Much the same as is done for other M-series vehicles.

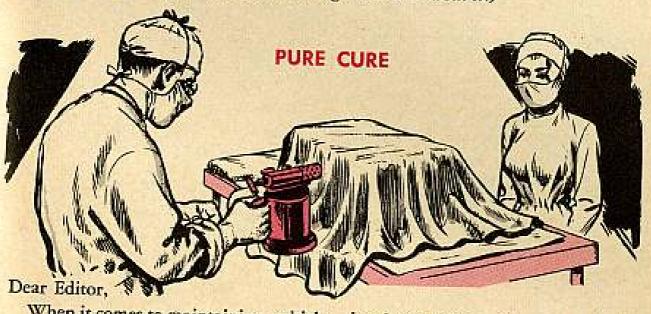
As a matter of fact, TB ORD 554 (7 Sep 56) says to keep the plug out of the flywheel at all times, except when fording. TB ORD 554, however, doesn't apply to the G749-series 2½-ton trucks.

Sgt J. Phillips New Jersey National Guard

(Ed Note—OK. But when you remove the plug, clean and coat it and the plug opening in the flywheel housing with corrosion preventive compound, FSN 8030-231-2347. Then, wrap the plug in barrier material, FSN 8135-292-9724, like they do



when they give it the storage treatment under SB 9-4. Then, put it in a bag, and identify what it is. Also, put a warning tag on the bag saying that the plug is out of the flywheel housing. Attach the bag to the steering wheel. This'll keep someone from losing the plug or running a truck without it.)



When it comes to maintaining vehicles, the closest thing we have to an incurable disease is battery box corrosion. It's almost like cancer the way it keeps coming back when you think you've managed to cut it out.

Well, one of the outfits I was in before decided to treat it like cancer. When they found that there always seemed to be some little touch or trace of it left to start up again, they decided to give it the old cancer burnout treatment. Of course, we didn't try radium on it. What we did do, as part of the preparation for re-painting, was to take the carrier out of the vehicle and burn off all the last traces of paint or corrosion—not enough to damage the temper of the metal, but enough to get it out of the smallest crack and corner.

It worked, too. Of course, it isn't a sure cure, but it has helped us cut costs and

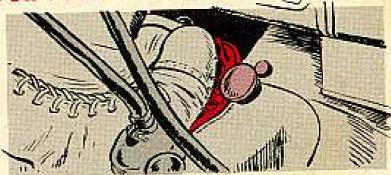
time in fighting battery box cancer.

SFC E. N. Nance 250th Rocket Bn Ft. Bragg, N. C.

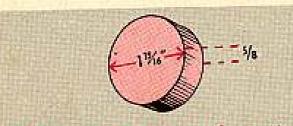
CURE FOR FOOT TROUBLE

Dear Editor,

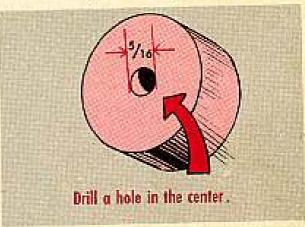
Ever get the sole of your combat boot caught under that infernal footrest just to the right of the gas pedal on the Jeeps? It can be mightly unnerving.



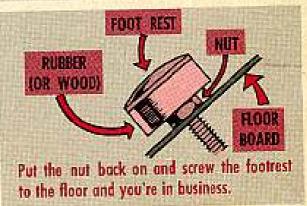
I've got a fix that'll keep you out of this fix. It's simple and anyone can make it.



Take a piece of hard rubber, or if you can't find rubber, use a piece of wood. Cut it so it'll be round like the footrest (it'll be about 115/16-in across and about 5/8-in thick).







CWO C. M. Ignacio Hilo, Hawaii



Bolt books

Some of you tank crewmen can cause yourselves extra headaches by not yanking the locking bolt all-the-way back each time you're about to close the loader's hatch. If you don't, the bolt end'll hang out too far, catching the inner lip of the hatch as you close her. Result: Bent bolt!

Tool talk

Been wondering how to handle those pioneer tools on your M-series trucks and tractors? You can get the dope on mounting and stowing in a new technical bulletin, It's TB Ord 2300-20/4 (18 Aug 58).

Radio active?

Got a radio on your vehicle? Then take a gander at TB Ord 2300-20/3 (31 Jul 58). It tells you to stencil yourself a reminder next to the ignition switch about shutting off all electric gear before you start the engine.

.50 cal. chamber brush

It's quite a job cleaning the chambers of your .50 cal. machine gun barrels but now supply's willing to lend a hand. No, they don't have extra men around to do the job—they have a Brush, chamber cleaning, FSN 1005-508-2589 (A039).

One and only

One too many service headlights have turned up in the G259 Ord 7 and 8 SNL's. Next time you order lights for your M55 SPH or M53 Gun, SP, don't ask for FSN 6220-776-5212. This baby was never meant for these vehicles. The one to get is Light, Head, Service, Assembly FSN 6220-741-9686. It's the one, and only one to be used here.

Poked pads

Some of you tank jockeys might have your feet cause a hole in your head if you're not careful. Seems some men going in and out of the driver's hatch are coming down hard and careless with their boon-dockers, ripping the crash pad covers. Out comes the padding material and your insurance against a cracked noggin.

Track sprockets worn?

In case you've not yet seen TB Ord 1018 (24 Jul 58), it tells you about a handy gizmo—the profile gage—that'll help you keep tabs on when to ask for new track sprockets on your combat vehicles. The TB also tosses in stock numbers for the gage you'll need for your particular tracked vehicle.

