

### Potent - When Maintained Right

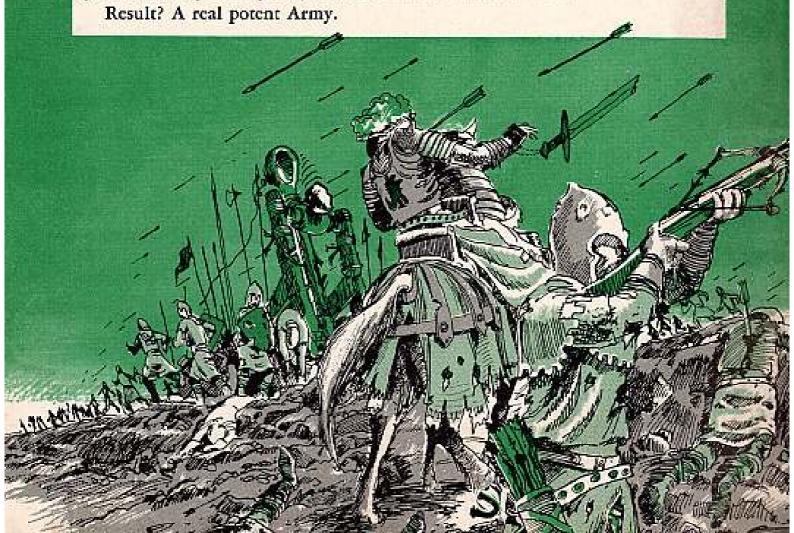
Uncle Sam's got two mighty important things that make his military forces potent: You and your equipment. Just how potent depends on the condition in which you keep yourself and your equipment.

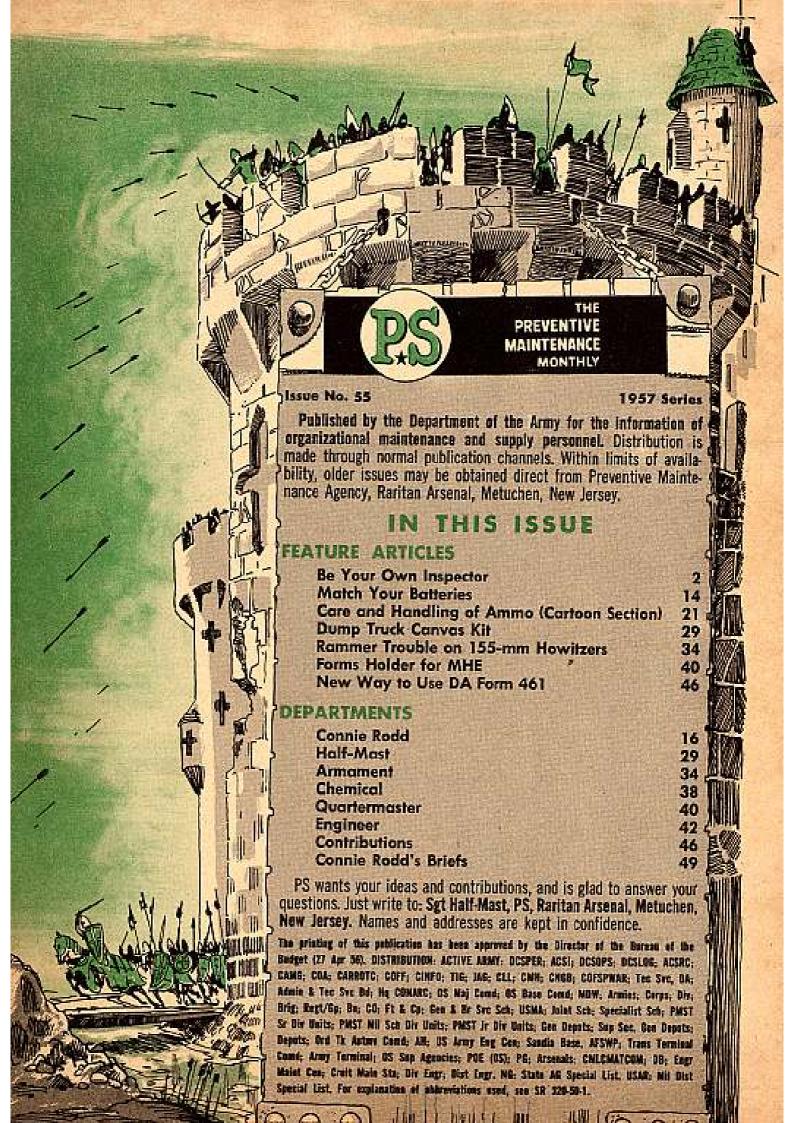
For you, there's training, exercise, rest, good food, and all the things you do to keep in tip-top shape.

For your equipment, there's one big thing that's the real key to how good your equipment is—and how well it'll fight—Preventive Maintenance. It's the right kind of care, cleaning, lubing, adjusting and handling you give your stuff.

It's knowing and following the in's and out's of your equipment's TM, LO and supply manual. It's knowing your equipment's tools and how to use them right. It's following all the details of the right kind of operation of your equipment.

That's right... Preventive Maintenance is how you keep the World's Best Equipment the best. So, with your equipment (and yourself) in top shape, you'll be ready to do your job... no matter where or when.





# Be Your

Here's a handy guide you can use when you're checking over your truck. You'll see that these are the things an inspector will probably hit when he goes over your vehicle.

The pictures show the G749series 2½-ton truck. You can also use them when checking over your G742 2½-tonners. They'll put you on the right track.

### For the Driver



The tools you'll need for this are a tape measure, a tire pressure gage, a hydrometer, a pair of pliers, a screwdriver, and a differential plug wrench with an openend adjustable wrench.

HOOD—Loose, squeaks when opened.
Hinges and fastenings missing, broken, bent.



BUMPER—Bent, losse, broken.

LIFTING IRONS—Missing,
bent, stuck.

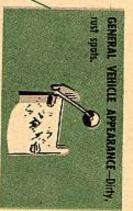
NATIONAL and UNIT MARKINGS—Missing, incorrect, not legible.

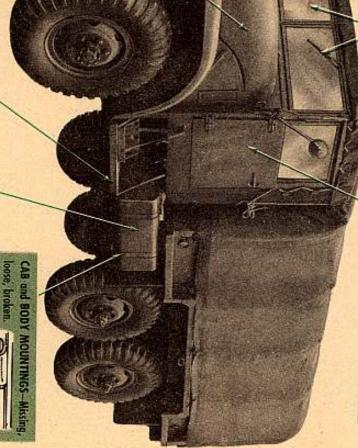
FRAME-Bent, Joseph loose, broken

N

# Own Inspector







AIR TANKS—Water in tranks. Petrock clogged, stuck, dirty.

GAS TANK—Leaking, loose. Shat-off valve bent or braken. Gas level too high (must be at least 2 inches below top of tank).





form, dirty. Broken top bows. CANVAS, BOWS and STRAPS-Missing.



and chains missing or rusted.

TAIL GATE-Bent, broken, loose, fusteners

broken, dirty. REFLECTORS-Missing, cracked,



araken, caps missing or sprung. TRAILER RECEPTACLE-Dirty, lugs





can't be open PINTLE-Missing, loose, not lubed,



REAR LIGHTS—Lanses dirty, broken,



SPLASH GUARDS-Missing, loose, worn rasteners,

Bent or broken. TIE DOWN HOOKS-

opposits one another). Incorrect tire pressure (correct

dual-points out away from vehicle and valves 180° resitioned (outside dual—points in toward vehicle; inside

pressure-single-tired trucks, 70 PSI when cold; dual

tired trucks, 45 PSI when cold).

from vehicle). On dual jobs, valve stems not properly VALVES-Not properly positioned (should point away

TIRES—Smooth worn tread, cut to fabric, uneven wear

clogged, leaking. Screen loose or missing. Cracked bellows. EXHAUST PIPE-Loose, broken,

stuck (don't move up or down). WINDOWS-Broken, loose, dirty, clouder

squeak when opened DOORS-Loose, broken,



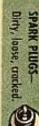
dirty. Trash or excess parts. MISSING TOOLS-(Check TOOL COMPARTMENT—Rusted



STUDS-Bent, broken. WHEELS-Lube or brake fluid leaking. RIM and AXLE FLANGE NUTS-Missing, loose. Dowels rusted.



SPARE TIRE CARRIER-Loose, rusted. Tire valve blocked.



Cracked, worn, dogged. BREATHER VENT HOSE-

Crocked, worn, Irayed. IGNITION WIRING



DISTRIBUTOR—Cracked

check dip stick CRANKCASE OILimmediately too high. (Don't Lavel too low or







Oil not at level mark Dirt more than 1/a" deep. Dirty, clogged, cop missing GRANKCASE BREATHER-



dogged, leaking, oil not at level mark AIR CLEANER and BREATHER-LOOSE,



Loosa, battered case, level not to BATTERIES and CONNECTIONS—

below 1.225 at 80 degree temperclots in yent wells, specific gravity

corroded terminols and posts. ature, vent caps missing or dogged.

### Dirt more than 3/s" deep.

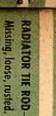
CARBURETOR and LINKAGE- Loose, bent.

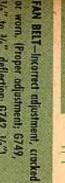


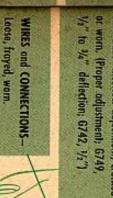


missing, bent or broken. CLAMPS-Clagged, worn or torn, leaking, RADIATOR, COOLING SYSTEM HOSES,









STARTER MOTOR-Loose dirty, loose connections.

GENERATOR-Loose, dirty, loose connections



ENGINE MOUNTINGofts missing, loose.



belt worn or cracked, air breather dirty or (proper adjustment-1/1" to 1/4" deflection) AIR COMPRESSOR—Incorrect belt adjustment



50

cracked, rusted. TAIL PIPE—Broken

off except for extreme cold). control setting (6749-60° and -Broken, loose, frazen, incorrect MANIFOLDS and HEAT CONTROL and lower temp, ON position; beabove temp, OFF positions; 30° tween 30° and 60° temp, INTER-MEDIATE position. 6742-down or



Dirty, loose, leaks. OIL FILTER and BRACKET-

RADIATOR MOUNTING BOLTS-

loose, missing.

### If Pou've Got A Winch



CHAIN-Rusted, dirty, hook hanging over bumper (must be fied down as shown here)

CABLE—Dirty, rusted, worn, shredding, not lubed, loose on drum, kinked.

WINCH END BEARING FRAME HOUSING— Incorrect lube level (must be filled to 6% inches from top).

WINCH DRIVE SHAFT—Not lubed, dirty.
(Must have aluminum shear pin.)

DRUM LOCK POPPET KNOB-Unlocked, inoperative, not lubed.

WINCH WORM HOUSING FILL— Lube level not at level plug.

DATA PLATES—Dirty, covered with paint, unreadable.

CLUTCH CONTROL LEVER—Doesn't operate freely, bent, broken, rusty,

DRAG BRAKE—Not working right (test: 1, Push clutch control lever to Disengaged, 2, Pull out drum lock poppet knob, rotate 1/4 turn to Disengaged, 3, Put PTO lever in Central Neutral, 4, Pull cable from drum, 5, Drum should stop revolving as soon as cable pull is stopped, 6, if drum overruns cable, drag brake needs adjusting).

WINDSHIELD VERTICAL POSITION LOCK— Missing, rusted, inoperative.

HANDLES—Missing, loose, inoperative, broken.

WINDSHIELD TILT ADJUSTER— Missing, rusted, inoperative.

HANDBRAKE—Inoperative (travels more than 3/4 travel on full application).

STEERING WHEEL-Bent. HORN-Inoperative, loose, broken.

WINDSHIELD INNER-FRAME LOCK— Missing, rusted, inoperative.

HYDRA-MATIC FLUID LEVEL—Leaking, improper level (check with handbrake set tight, transfer engaged, transmission gear selector in F-1 High Range and engine running at idle.)

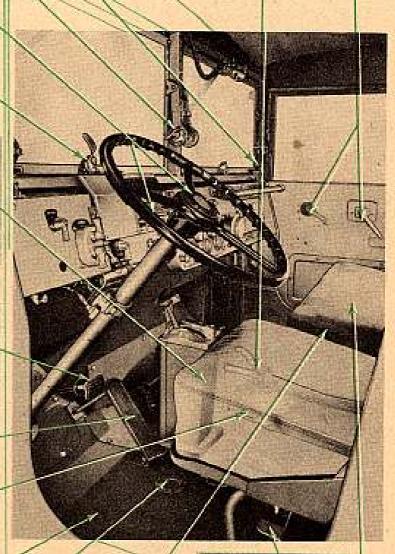
SERVICE BRAKES—Spangy, too hard, improper adjustment (travels to a point less than 2 inches from floor), fulls away under pressure.

ACCELERATOR PEDAL-Logse.

PTO LEVER-Stuck or bent. (Check with engine off.)

FLOORBOARDS—Missing screws, loose, rusted.

BRAKE MASTER CYLINDER—Leaking, not up to level (at least 3/4 full).

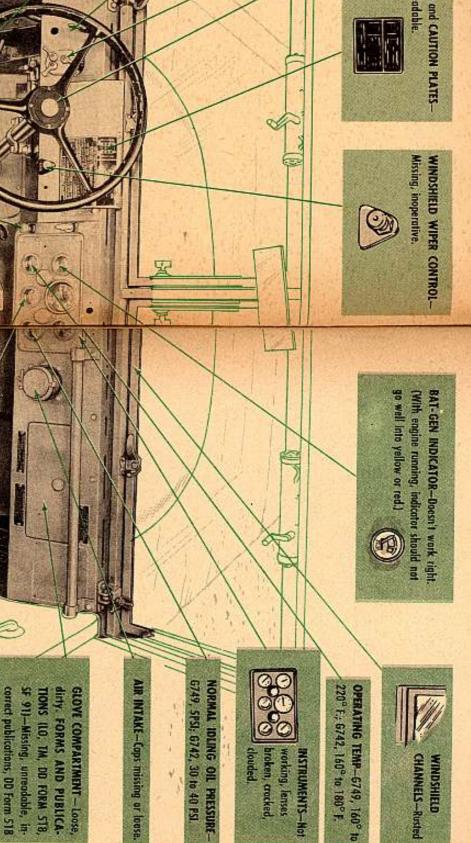


DRIVER'S SEAT ADJUSTER—Broken, stuck in one position.

PIONEER TOOLS— (Between seats.) Missing, rusted.

SEATS-Torn, worn, frayed.





Broken or crocked, inoperative.

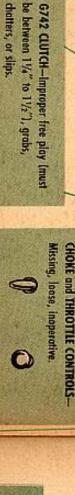
TIGHT SMITCH-

Loose, inoperative: IGNITION SWITCH-

COWL VENT CONTROL-

Broken, loose.

Not operating. AIR SUPPLY VALVE-



Loose, not lubricated.

Broken, doesn't work, DIMMER SWITCH-

not working. loose, light on dash



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go off at 60 PSI-6749; 65 PSI-6742). buzzer keeps sounding. (Buzzer should AIR PRESSURE—Doesn't rise after starting,

not filled out.

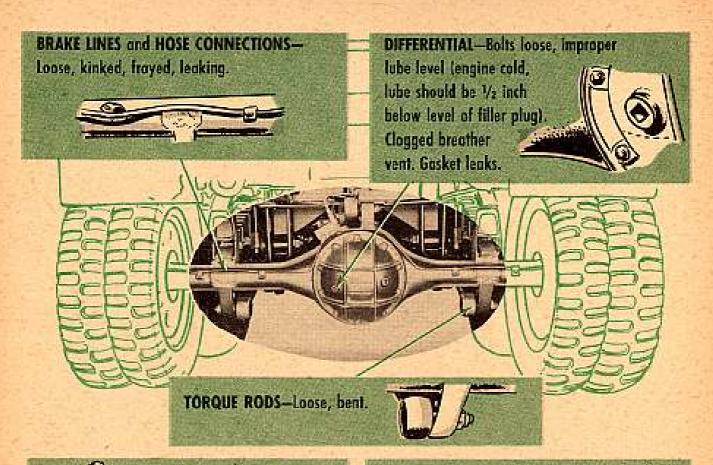
Broken, loose.

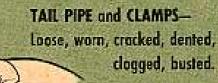
COWL YENT CONTROL-

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chatters, or slips.

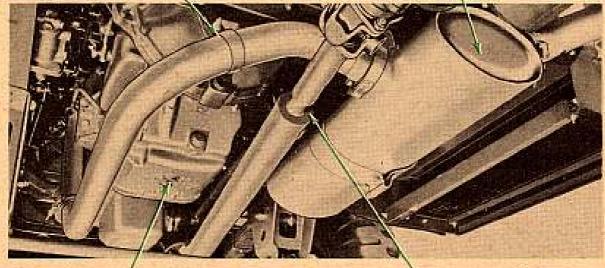
be between 11/4" to 11/2"), grabs,





MUFFLER and CLAMPS— Loose, worn, cracked, holes.

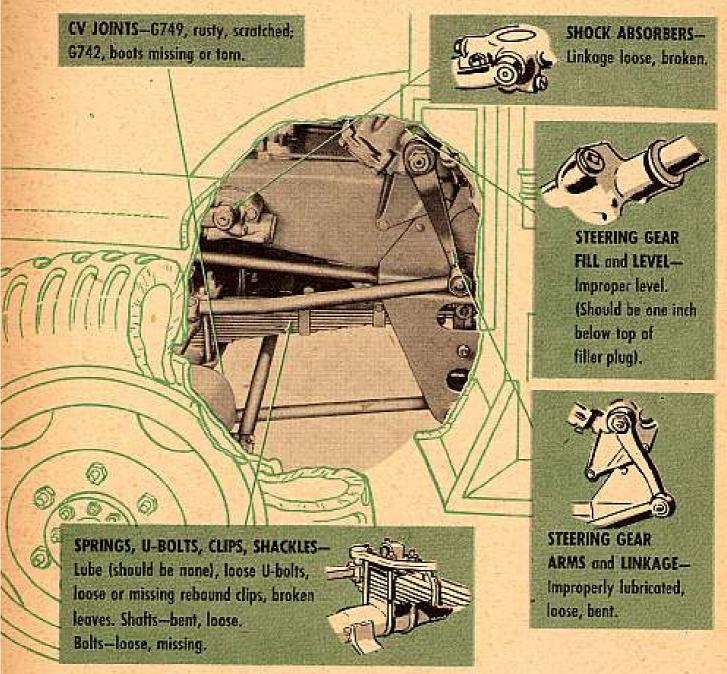








SHAFTS and UNIVERSAL JOINTS—Bolts or shaft loose. Universal joints loose.



### For the Mechanic

To sorta round out your inspection—and just to make sure your truck is really cooking with gas—have your second-echelon shop check these things out for you:

- 1. Wheel bearings-loose, defective, not properly lubed.
- 2. Brake linings and shoes—worn, not operating right, loase.
- 3. Spark plug gap-should be .030 inch.
- 4. Distributor breaker point gap and tension—point gap should be .022 inch. Lever spring tension should be 17-21 az.
- 5. Hydra-Matic shift linkage—loose, bent, not synchronized.
- 6. Carburetor-improper gas-idle adjustment.
- 7. Steering-improper adjustment, wander, shimmy.
- 8. Steering wheel adjustment-should be from 11/2 to 2 pounds pull.

Replace 'em in pairs;



as needed. This is done by your support unit. you get them checked over, charged fully, and matched up in pairs for re-issue both of 'cm. But this doesn't mean that you have to discard either or both. Instead As you know, whenever you have to replace a battery in a vehicle, you replace

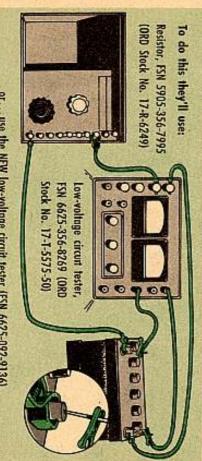
Let's see how they go about it.

that the handles on the 6TN's are tight. And, of course, they make sure that the level of electrolyte in the cells is OK. First, they go over the batteries to be sure they're clean, dry, not cracked, and

specific gravity at three readings taken an hour apart. ing to TM 9-2857, being sure that it stays on the charger until they get no rise in When the battery's ready to charge, they charge it fully and carefully accord-

won't be issued. of more than 25 gravity points between cells in any one battery, it's sick and Then they carefully check the specific gravity of each cell. If there's a difference

fully charged battery to make a team for installation in a vehicle Now the battery is inspected and fully charged. They'll match it with another



or...use the NEW low-voltage circuit tester (FSN 6625-092-9136)

hook up the low voltage circuit tester so that they can draw current from the draw half the rated capacity of the battery-50 amperes for the 6TN's, 221/2 battery through the load bank, and at the same time measure the voltage. They Or any more sensitive equipment they happen to have in their shop. They

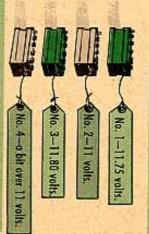
# tour Batteries

will be somewhat less than the no-load voltage. and let the battery output become constant. Then they note the voltage, which amperes for the 2HN's-for about 30 seconds, to allow for superficial differences

sible, within the number of batteries they have on hand. The closer the voltages are, the more evenly matched the batteries. They match the batteries in pairs which have as nearly equal voltages as pos-

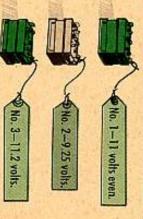
## Here's an example of actual tests on four 2HN's.

easily see that the best teams would be and No. 4 for the other pair. This second pairing No. 1 and 2 or No. 3 and 4 would like this will get you better service than but it's an odds-on bet that pairing them pair may not last as long as the first pair, No. 1 and No. 3 for one pair, and No. 2 There's no perfect match, but you can



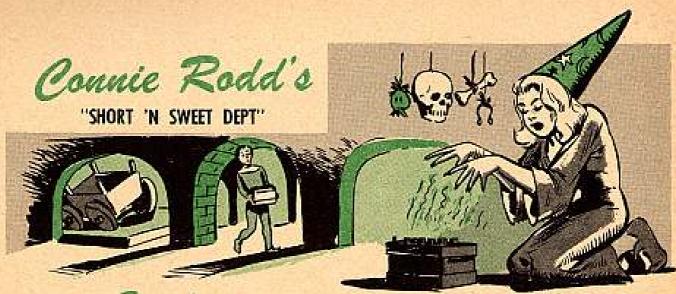
# Here's another actual test: Three 6TN's were checked at 50 amperes draw. They came out:

wise, better turn it in. won't be needed in cold weather-othernot subject to emergency call, and that 9-volt range, but only for a vehicle that's end of its useful life, this No. 2 might be paired up with another battery in the No. 2 is getting dangerously close to the would be No. 1 and No. 3. Even tho You can see that the proper team



tank batteries matched as closely as you can for the same reasons. This will make for lots of work, but it will save batteries. Now, what about tanks? Same thing applies. It is best to keep all four of your

the carbon pile resistor's cable clamps. connected directly to the battery posts, by prods, if they are at hand, and not to Careful-to be accurate, all these tests must be made with the voltmeter leads



Speak up

Every time one of your batteries dies young or it does something it shouldn't, why keep it to yourself?

The details of this flip can be put to real-good use by the design people—
the ones who make those batteries. By knowing these details, the design people will be able to make better batteries for you.

Your voice in better batteries is the UER (DA Form 468). It tells the people up there just what's happening to your batteries under the conditions you're operating.

Here's how to get this poop to the right place when your battery conks out too soon:

- Get a UER and fill it out like it says in AR 700-38 (Nov 55), telling what kind of area you're in — weather, terrain and so on.
- 2. Get the service date stamped on all batteries off the case. If you're using the old UER Form (dated 1952), put this dope in the "Total Time in Use" box. Got a new 468 (dated 1955)? Then, put this service date in the "Details" column.

 Send the whole kit-and-caboodle to the Chief of Ordnance, Department of the Army, Washington 25, D. C., ATTN: ORDFM.

### Rust holder



Rust can wreck equipment just as bad as armor-piercing ammo does. It may be slower, but the destruction will be just as complete.

But did you know that when you can't get to the rust for awhile, because of other important chores, you can coat the equipment with rust-arrester and this'll hold it until you can get around to it? FSN 8030-231-2349 will provide you with one gallon of Rust-Arresting Coating. FSN 8030-231-2344 will get you a five-gallon can.

Before applying the stuff, wire-brush or sand those loose flakes of rust. The coating will last about one year.

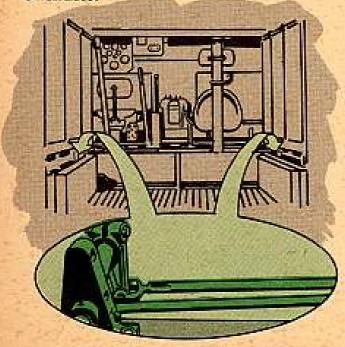
TM 9-1007 gives you all the dope on the rust-arresting coating.

Remember: The coating is only temporary. It covers the rust with a soft film that won't act as a base for paint. When you're ready to paint, you've got to clean the rusted area down to bare metal.

The thought of all that extra work makes you want to be sure you haven't time to paint the equipment right away.

### Keep off

An armored division took a long hard look at its M59 Armored Personnel Carriers recently and found that a third of them had bent transmission control rods, (G280-8341345 and G280-8341347). 'Cause why? 'Cause o' big feet. Yep, the boys had been stompin' around in there like a herd of mules.



Now you're no mule, likewise no jackass, so of course you're careful where you drop your boondockers when you're slippin' into the saddle of the M59. But maybe some of your gang aren't quite so sharp, so please to remind 'em about not stepping, standing or stomping on those control rods.

The situation is going to improve, however, because there's a new cover coming that'll protect these rods.

### Less light

Comes the light — but it isn't helping the gunner to get on target when he aims through the M20 series periscope in the M48 and M48A1 tanks.

The light comes from the gun-ready indicator and it's a pain in the eye.

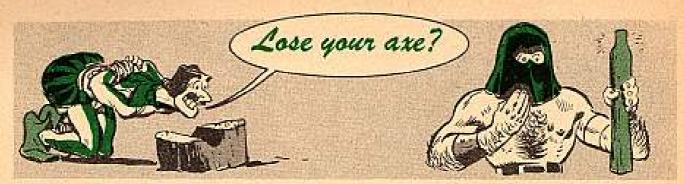
But, there's a way to cut down the light.

You know that red enamel used on lubrication fittings and oil cups? Requisition Eng Stock No. 52-3473.700.003 and you'll get a pint of the stuff.

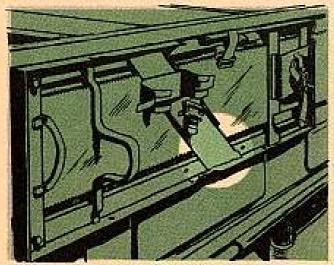
When the paint arrives, clean the end of the indicator tube with some dry cleaning solvent or paint thinner to get rid of dirt and grease. Then . . . with a soft brush in hand . . . apply a thin, even coat of paint to the end of the tube.



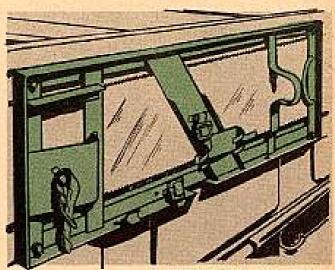
You can see what kind of job you're doing by painting with the light on. You may need two coats to get the dimness you want.



Bottoms up. 'Tain't so good if it happens to be the pioneer tool rack on your truck. 'Fore you end up with a bent rack, and 'fore you lose your axe, better cast an eye on that rack to make sure yours is not one of those that've been installed upside down.



RACK INSTALLED UPSIDE DOWN
WILL BEND



SHOULD LOOK LIKE THIS

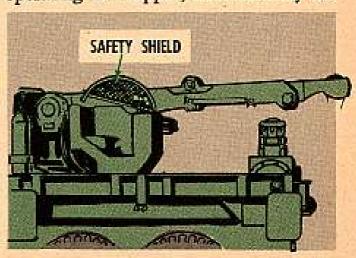
### Arm yourself

The latest on your different kinds of wreckers — the M62 5-ton, the M60 2½-ton and the M108 2½-ton—is that you'll get a safety shield put on 'em to keep the crane operator from looking like a left-hand profile shot of Venus de Milo.

When the crane operator's in the cab operating his shipper, unconsciously he

can rest his arm on the armchair-like shipper cradle when the shipper's up. If it slips his mind to take his arm away when the shipper's lowered, he'll find himself a candidate for a medical discharge. This safety shield will keep him from putting his hand where it doesn't belong.

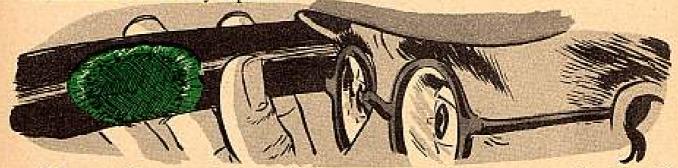
MWO Ord G1-W86 (3 Aug 56) tells your Ordnance outfit to go ahead with the job; it's marked urgent.



### Hydraulic hose wear

Take a look at any hydraulic hose lines . . . if the outside layer is worn or frayed, chances are you'll soon be in for trouble.

The reinforcing wire under the worn part is open to rusting, and under field conditions the hose may rupture.



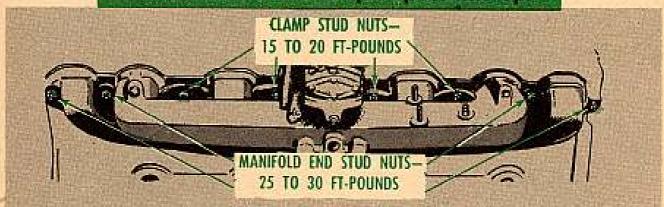
Take a squint at your hose and fittings every week for any wear and leakage. If your hose is worn or fittings leak, replace 'em pronto.

### Need the creeps?

The main reason G749 21/2-ton truck manifolds crack is because the studs and nuts get torqued too tight.

When your engine heats up, too much torque causes the manifold clamp to collapse, causing little or no clearance between the manifold and its clamps. No clearance and your manifold won't be able to creep as it heats up and cools off. The outcome, of course, can be a crack in the manifold.





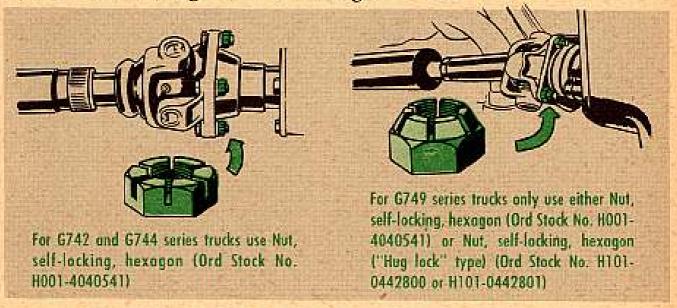
- Manifold end stud nuts 25 to 30 foot-pounds. When tightening up on these, make sure the manifold is held right close and firm against its gaskets.
- Clamp stud nuts 15 to 20 footpounds. And NEVER more than 20 footpounds or you could collapse those clamps.

Also, that manifold heat-control-valve should always be set like TM 9-8024 says.

### Sloppy shaft

Tighten 'em up, man, before you find 'em dragging along behind you. Talking about the prop shafts on your G742 and G749 21/2-ton trucks and your G744 5-tonners.

The nuts used on these shafts are self-locking. Once they're removed, they won't give the tight fit the shaft needs, so if you've been working on those shafts and removed the nuts, get rid of them and get new ones.

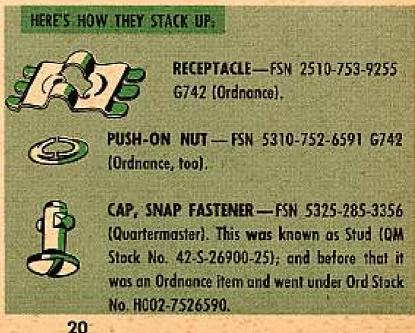


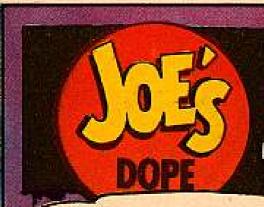
Now, if you can't get self-locking nuts for one reason or another, bolt your prop shafts up with a regular nut, but please make sure you use lockwashers. These'll do till you can get your hands on the nuts of the self-locking variety.

### Won't flap now

Been quite a lot of talk lately about whether you can or can't get those receptacles, push-on nuts and snap-fastener caps that hold the instrument cluster mounting plates on the dashes of your G740, G758, G741, G742 and G744 trucks. The word now is that you can get the whole shebang.

Gotta watch it, tho, 'cause you get those parts from different services.





### The Saga of Ammo Mike

OR DON'T SHOOT DIRTY AMMO IN A CLEAN PIECE



LOADING ROUNDS WAS SIMPLE STUFF FOR AN ACE CALLED AMMO MIKE; HE SHOVED THEM IN REAL SLICK AND FAST, YOU NEVER SAW THE LIKE. HE GRABBED THE ROUNDS

UP LIKE A FLASH,

AND SLAPPED EM INTO PLACE;

THE OTHER CREWS MADE

SAFETY CHECKS,

BUT NOT THIS STUPID ACE!



BURRS AND DENTS AND GREASE AND DIRT WERE CHECKS HE DID NOT MAKE; WHILE OTHER CREWS INSPECTED ROUNDS MIKE TOOK A COFFEE BREAK.



A LETTER EDGED IN BLACK TELLS OF ...
THE UNFORTUNATE A POW:
HIS SLOPPY SPEED AT LAST
PAYS OFF —
MIKE'S WORTH TEN THOUSAND NOW.







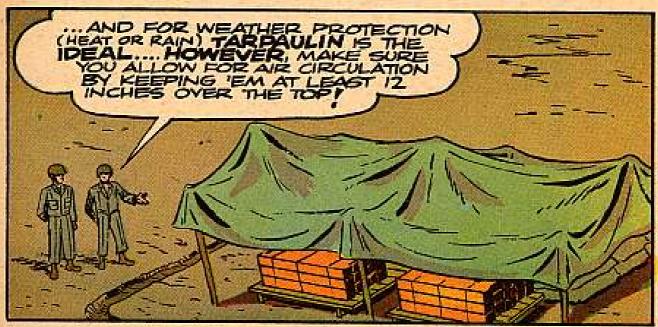










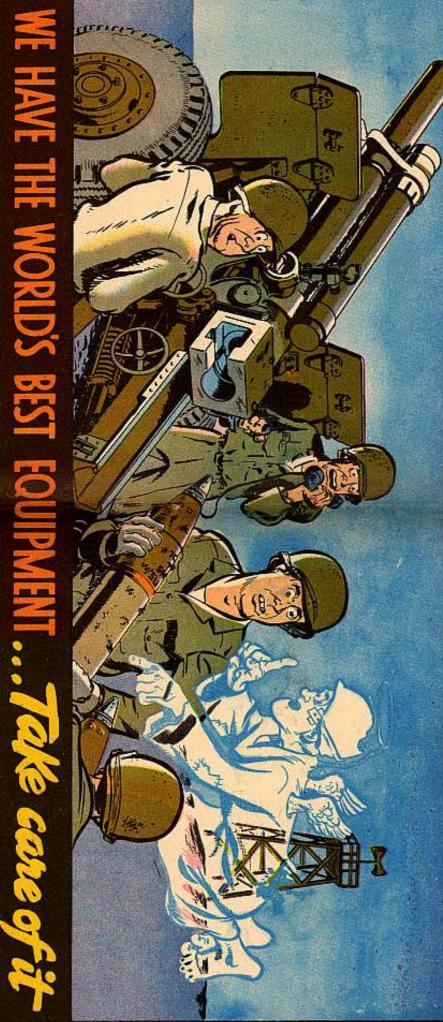






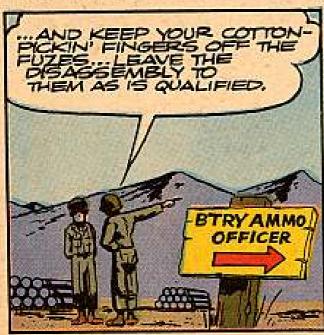


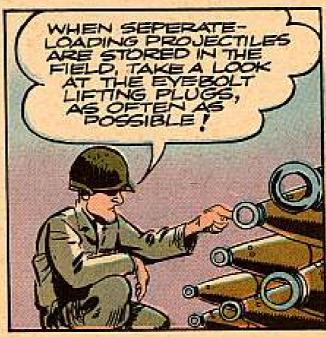
What good's the care of your gun, "When the ammo you use is "bum?? Heed the late" Ammo Mike, Check for "burns" and the like, And be sure what you check is well done





































### **TARPSICHORE**

Dear Half-Mast,

Because we don't have the stock number or nomenclature for our M215 21/2ton dump truck canvas, we haven't been able to log them into our property and inventory books the right way.

The stuff isn't in the SNL's and no one seems to know the proper nomenclature and stock numbers. Can you help us?

Lt L. P. P.

### Dear Lt L. P. P.,

You can now get that canvas as part of a kit. If you have to order it, the kit's FSN is 2520-834-5215. This kit also has some other gadgets, such as canvas-attaching gismos and racks you can use in your dumpers as troop seats.

### Here's how the kit breaks down:

Body paulin (tarpaulin, body assembly)—FSN 2540-521-6182 (G749).
Front end curtain (cover, dump body cab protector, assembly)

-FSN 2540-521-6181 (G749).

Rear end curtain (curtain, body end, assembly)

Strap, bow-roll-Ord Stock No. H003-0545558.

-FSN 2540-521-6180 (G749).

Top bow (bow, top piece)—FSN 2510-293-4730 (G749). Side bow (bow, side, piece)—FSN 2510-521-6183 (G749). Rack and seat, assembly—FSN 2510-521-6184 (G749). Hinge, troop seat—FSN 2540-521-6179 (G749). Pin, hinge—FSN 5315-737-0134 (G749). Bow, corner assembly—Ord Stock No. H017-0540404.

THU S

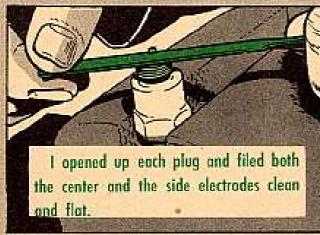
### CLEAN AND FLAT

Dear Half-Mast,

Some time ago you were talking about cleaning spark-plugs. Remember, you told us to open up the electrodes and file the end of the center wire clean and flat before we set the gap?

Well, I gotta admit it—I thought that was so much bunk. You know, theoretical perfection, but not for busy men. By golly, here yesterday I was cleaning and checking a set of plugs that I didn't think had anywhere near enough miles on 'em. After sandblasting, they were cutting out at about 80 pounds on the tester.

So, just for kicks and to save the cost of a new set of plugs, I tried your trick.





You were right—there wasn't one that didn't go over 100 pounds, and most of 'em went to 120. What's more, the engine isn't dogging any more.

SFC D. J. C.

Dear Sgt D. J. C.,

Tell you what, you try a couple more of those li'l tricks you find in PS. You'll find lots of 'em work pretty good. You see, the next grease on Connie's and my hands won't be the first grease on 'em by many, many years.

Half-Mast

### CLEANING DAY BLUES

Dear Half-Mast,

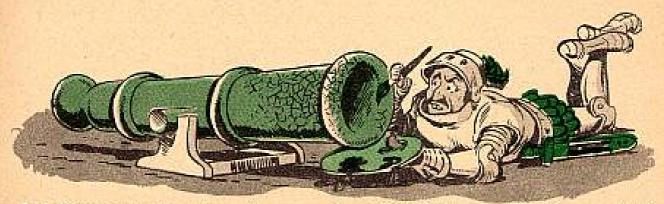
Things have been happening to the painted surfaces of our artillery pieces.

After we use paint thinner to get rid of the grime, the paint becomes discolored and looks like it's cracking. Are we using the right cleaner?

Lt V. A.

Dear Lt V. A.,

There's nothing wrong with using paint thinner as long as you space the cleanings about a week apart. I've got a hunch your trouble may be with the paint itself. It may not be in good shape to begin with.



Try Detergent, painted surface, powdered (P-C-431, type 1) 5-lb entr, FSN 7930-249-8036. Use a cloth, sponge or brush to apply the stuff. The can'll tell you how much water you should use.

If you still get a discoloration, you can make a coupla moves. If it's a new weapon, file a UER report. Otherwise, a new paint job is in order.

Half-Mast

### TANK TIMING LIGHT

Dear Half-Mast,

We have our new timing light, FSN 6625-378-2073 (Ord Stock No. 17-L-12936-300), and it works fine on wheeled vehicles. But we can't time the AV-1790 engines in our tanks. Is there any way we can get back one of the old-fashioned magneto timing lights, Ord Stock No. 41-L-1439?



You're right. The Light, timing, power, blue white light, comb 6, 12, and 24-volt, Ord Stock No. 17-L-12936-300 is not meant to time twin ignitions.

The old Light, timing, magneto, Ord Stock No. 41-L-1439 is going back into the tool set, Organizational Maintenance, No. 1 and No. 2 Common. That, as you know, is the light to use on your tanks . . . so requisition yours pronto.

Half-Mast

### UNDER CONTROL

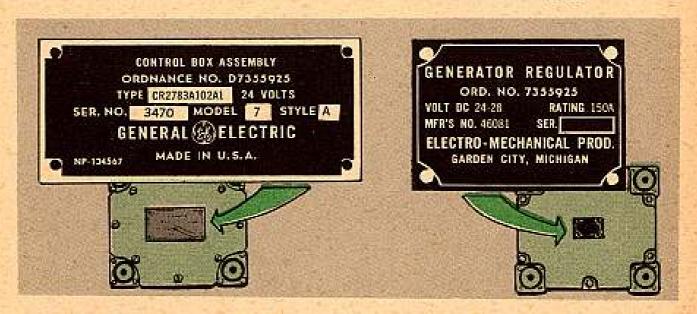
Dear Half-Mast,

We are changing our main engine generators from 150 amps to 300 amps on our M48 tanks. What control box do we use for these?

CWO R. H.

### Dear Mr. R. H.,

The only generator control box which will handle the 300-ampere generator in your M48 tanks is the General Electric or Electro-mechanical box, Ord Stock No. G260-7355925. This box is listed in Ord 7 SNL G254 on page 44.



Since this box is listed for issue only after the Eclipse-Pioneer box, G251-7528304 and the Delco-Remy box, G251-7968600 are exhausted, it will be necessary for you to contact your Ordnance support and tell them that you need GE boxes to work with 300-ampere generators.

There are internal differences in the boxes which will not allow the Eclipse and Delco models to handle the larger output generators. The General Electric box uses a different method of current limiting, and will work with the 300-ampere job just as well as it does with the 150-ampere model. No change in the box is necessary.

Any of these boxes will theoretically control either the 150-ampere generator or the 300-ampere generator to a limit of 150 amperes. This is supposed to be sufficient power output for the M48 tank's electrical requirements, so it was planned to use up the existing stocks of control boxes, G251-7528304 and G251-7968600 as they were required.

However, field experience has shown that in tanks equipped with the 300ampere generators, sudden surges of the electrical loads can cause failure of the earlier boxes. Consequently, if you have a tank equipped with a 300-ampere generator which requires a control box replacement, and it has either the G2517528304 or the G251-7968600 control box, you should have the G260-7355925 (FSN 5940-735-5925) box to control it. Explain this to your Ordnance support unit, and they'll get you the proper box. If your tank engine is still equipped with the 150-ampere generator, any one of the three boxes listed above will control it OK.

Some later-production tanks are equipped with the newest control box, FSN 2920-335-4264. This box will control either the 150-ampere generator or the 300-ampere generator just fine.

Since the newest box is not interchangeable on the mounts with the earlier boxes, be sure that you get a similar box if you need a replacement.

Hall-Mast

### LEAK PROOF

Dear Half-Mast,

Oil leaking up around the transmission shift lever on our M38 and M38A1 Jeeps has become a problem. Most of our Jeeps are just oozing with the stuff.

What can we do to stop this?

WOR.P.

Dear Mr. R. P.,

First off, make sure you never overfill that transmission. It should be checked at every B service—and make sure the lube only goes up to plug level when cold.

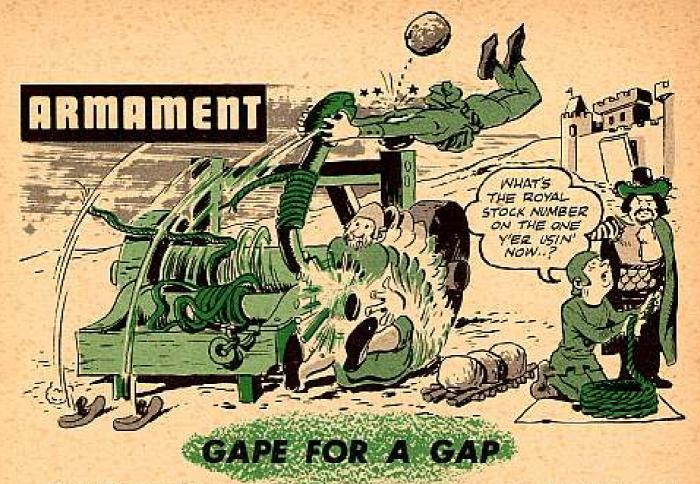


Next, take a check on those transmission vent lines, and make sure they're clear and not clogged. Be a good idea to clean 'em out once in a while, just to make sare there's nothing in there stuffing 'em op and causing a pressure build-up.

Finally, after you've done all this and lube is still showing up, you'd be helping yourself and a lot of other people if you got those UER's (DA Form 468) off. Just jot down the trouble and your ideas about it, and send it along to the Chief of Ordnance, Department of the Army, Washington 25, D. C., ATTN: ORDFM.

Half-Mast

OIL LEAKING

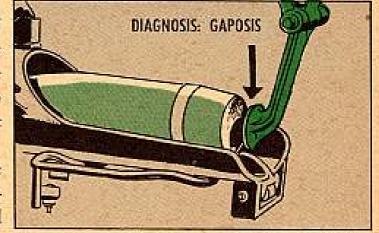


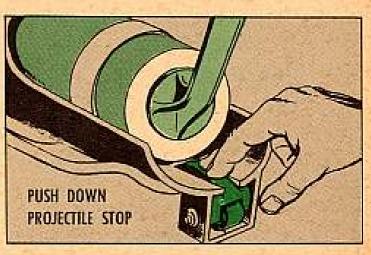
Hear tell some 155-mm M44 self-propelled howitzers have developed a case of "gaposis."

The gap is between the base of the projectile and the rammer throwing arm. It happens when the projectile stop doesn't let the ammo go far enough back to lean against the throwing arm pad.

When things are in this shape and you release the rammer mechanism, the ammo bounces forward —away from the pad. And, when the pad hits the projectile again, the ammo doesn't seat right.

Ordnance is burning the midnight oil as it looks for a fix. Meanwhile, you best check to see if you have an extra gap. If so...each time you fire, push down on the projectile stop so's the ammo will rest against the pad like it's supposed to. Use dummy ammo in your checking.





Also . . . never release the rammer mechanism without using either live or dummy ammo. Otherwise, you're liable to throw the rammer works out a kilter.

### ELBOW GREASE COMES FIRST

When the Ordnance people send you a 155-mm howitzer, you wanna trot over to the exposed part of the tube. You'll have some cleaning to do.

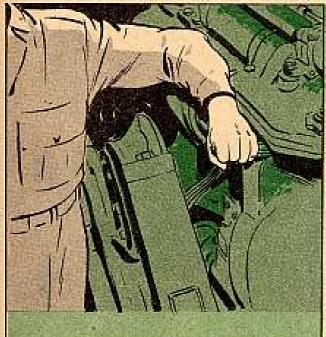
Before the piece gets shipped to you, Ordnance coats the tube with rust preventive compound. The compound—Cosmoline—gets wiped off with a rag that has been dipped in dry cleaning solvent or volatile mineral spirits. Then once a week you smear a light coat of GAA on the tube.

In case you find there's paint or primer under the compound, tell Ordnance about it. They'll get it off and make sure no paint particles foul up the wiper and bearing surface of the recoil mechanism. So give Ordnance the word if you find paint or primer.

### NO MORE SLING

You may claim there are always three ways to do things—but there are only two ways to operate the rammer-lever on the M44 155-mm self-propelled howitzer. It's either right-handed or left-handed—and it depends on you.

Operate the rammer-lever according to the arm you use to toss horseshoes and you won't wind up with your wing in a sling.



Say you're a southpaw. You stand on the left side of the howitzer, face to the rear and stand apposite the breech-ring. Then use your left hand to turn the handle bar counter-clackwise and to push toward the breech-end of the howitzer.

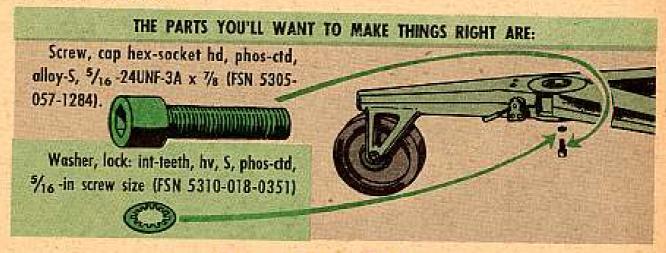


If you're right-handed, stand on the right side of the piece—facing the hind end of the vehicle and standing opposite the breech-ring. Then trip the release mechanism with your right hand by turning the handle bar clackwise and pulling forward—toward the muzzle end, that is.

### IT'D BETTER BE THERE

Say! Have you been elevating and traversing your 106-mm recoilless rifle with ease on your M79 mount? Want to be sure things stay that way?

Then take a look at that screw in the base assembly trunnion of the mount. Has it got a lockwasher? While you're at it—is the screw the right size? If it hasn't—and it isn't—one fine day you may find yourself with a jammed elevating and traversing group.



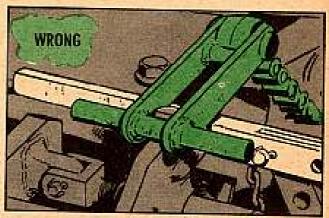
### LIFT THE LEVER

There's nothing wrong with trying to beat your own time record for emplacing the 75-mm Skysweeper. But . . . not when you bang up the emplacing hook on the front bogic in the process.

Some guys are leaving the locking lever handle in a locked position and then attaching the lifting chain to the hook—by passing the chain over the lever. So . . . when the weapon is being lifted, all the strain is on the tip of the hook.

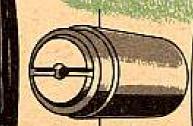
Do what TM 9-361 tells you—lift the lever and then attach the chain, and the strain will be where it should—in the middle of the hook.

To be on the safe side . . . stencil on some kind of warning next to the emplacing hook—like "Raise locking lever handle before attaching lifting chain."



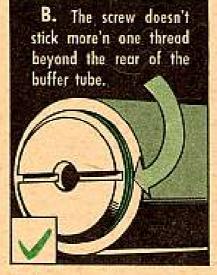


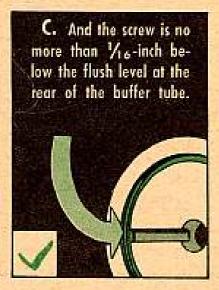
### WATCH THE THREADS



You'd do well to meander around the back plate on your .50-cal machine gun for a look at the adjustment screw. Then make an A, B, C check.

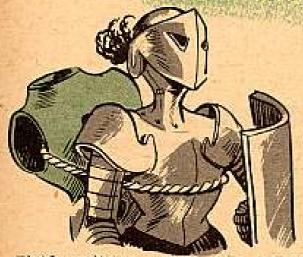






If you said "Yes" to all three checks, you're OK. If not, send the gun back to Ordnance.

### GOT YOUR SPARE?



Field artillery crews, take notice. Some batteries are authorized a spare gunner's quadrant M1A1 to keep the piece active when their quadrant is sent to Ordnance for adjustment.

You can see this in Ord 7's, so you might want to requisition a spare quad-

rant if you work with any weapons listed below. The SNL's are listed here for handy reference—

4.2-in M2 mortar	A70
4.2-in M30 mortar	A85
75-mm M1A1 howitzer	.C20
105-mm M2A1 and	
M2A2 howitzers	_C21
75-mm M20 and T21E12 rifle	.C74
105-mm M27 and M27A1 rifle	.C77
76-mm M48 gun	_C84
4.5-in M21 rocket launcher	_C90
155-mm M2 and M2A1 gun	D24
240-mm M1 howitzer	D31
762-mm truck-mounted	
rocket launcher	.D65



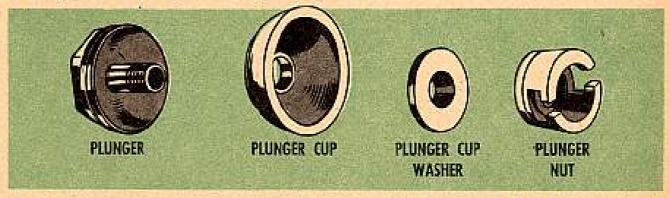
Come spring, you get out the moth balls to pack away those old OD's. But you wouldn't think of wearing the OD's in the fall without taking the moth balls out of the pockets and airing the uniform.

Maybe you've just got a decon that's been in "moth balls". It, too, requires a "little special attention to get it into good shape.

No matter which decon you have — the M3A1, M3A2, M3A3 or M4 — it has to have the preservatives cleaned out if you want a spray instead of a sputter.

### Here's a very important point to look after...

Check the processing tag (on the truck's steering wheel) for special note about the packaging of the pump's plunger cup assemblies. When these assemblies are packed separately, the note'll say so, and you'll find them in a small box fastened to the platform along side the pump's hood.



Remove the plunger assemblies from the box and clean off any preservative with dry-cleaning solvent. Now, take the cylinder heads off the pump, and . . .

Clean the cylinders with a dry-deaning solvent, but be careful you don't scratch the porcelain walls. Wipe dry with a soft, clean dath.

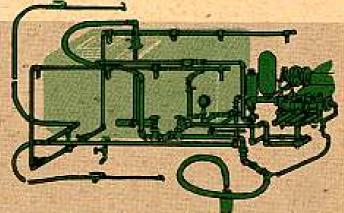


Smear the cylinder walls with a light film of grease (GAA), so the plunger cups will go into place easy-like. Then put the plungers back in and put on the cylinder heads. (Your decon's TM gives you a run-down on taking out and putting in the plunger assemblies.)



Now, the chances are there's a lot of preservative grease on the inside of the pipes that needs to be flushed out. To get at this, pull a before-operations check on the decon and get set to operate.

Fill the tank with water (make it hot water, if possible). Then pump the water out, part of it through the spray hoses and the rest of it through the auxiliary shower. This'll take care of any preservatives in the pipes and hoses.



Then you're all set to finish processing your decon like your TM says under the section called "Service Upon Receipt of Equipment." And don't forget that after-operations check, too.

### Decons, swap mounts!

All truck-mounted decons (M4's, M3A1's, M3A2's) were ordered off their old World War II 2½-ton chassis sometime ago. But, the MWO giving the decons new chassis must've missed some units, since requests continue to come in for repair parts to support decons on the old chassis.

Supply's no longer stocking parts for the old decon set-up. If your decon hasn't been converted, please listen close—

Here's the only way you can keep it rolling:

MWO CML 18 (Jan 55) puts the M3A1 decon on an M45 chassis.

MWO CML 19 (Jan 55) mounts the M3A2 decon on an M45 chassis.

MWO 20 (July 54) mounts the M4 on either an M45 or an M207 chassis . . . depending on where you're located.

The chassis swap is a job for your Chemical maintenance support outfit. Better give them a buzz right away.

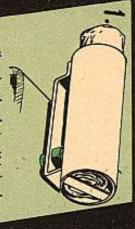
### MUARTERMASTER

## Forms Holder For

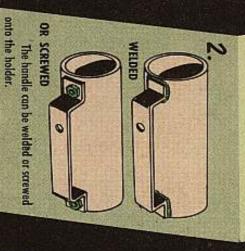
Some people sit on 'em. Some hold 'em in their teeth. Others carry 'em in canvas pouches strapped to their vehicles. And still others keep required forms in their pockets when operating Materials Handling Equipment—since there's no special place provided on the equipment.

At Aberdeen Proving Ground, Md., they solved the forms-carrying problem for all their MHE with this simple fix:



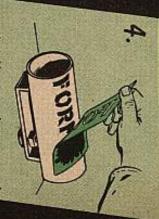


Short lengths of pipe (6-inches long and 2-inches in diameter) fixed up with a beer-mug type handle. A hole or two drilled in the 11/4-inch strap metal handle provides for attaching the holder to a convenient bolt or screw on the MHE.



3.

The top of the holder is open, but a narrow strip of metal goes across its bottom to keep forms from slipping thru. The bottom strip can be welded on or screwed on.



The holder's painted yellow to match
the MHE. And the word "Forms" is stenciled in black on one side. Each holder also
gets a home-made envelope of waterproof paper.

8



The forms (SF 91 "Operator's Report of Mator Accident," DD 518 "Accident-Identification Card" and DD 110 "Vehicle and Equipment Operational Record") are placed inside the envelope and the whole business rolled up neatly to fit inside the holder. (NOTE: The DD110 doesn't need to go inside the envelope unless you're working outside on a wet day.)

Whether you use this or make a pouch out of canvas (depending on operating conditions or kinds of documents you carry) you'll find they come in mighty handy for keeping your papers. Be sure to get the OK of your CO first, of course.

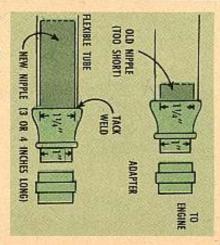
## For A Stronger Tube

Dear Connie,

We had a little trouble with the flame and spark arrester muffler on our 50-GPM gas dispensers until we came up with this fix. The flexible tube kept breaking loose from the reducer because there wasn't much surface there to hold it. A real fire bazard.

So we replaced the short piece of 11/4-inch pipe with a longer section (3 to 4 inches long) and then tack-welded the tube back on. Makes for a stronger connection and safer operation.

Petroleum Department QM School, Fort Lee, Va.



Dear Gang,

That's really cooking with that gas dispenser. But get an Unsatisfactory Equipment Report (DA Form 468) in on it right away—like you do on any deficiency you discover.

france



a paper these days without reading gings. An old-timer can hardly pick up with pigeons, flintlock rifles, and legfiled away under obsolete items, along to use as a recruit has faded away. where a piece of equipment he learned

will be for a long time-meaning picks moving equipment are still here and and shovels and such stuff. But tools the old-timers used as earth

of a ditch, the shovel seems tougher than boy couldn't deadline it or wear it out. King Kong. Seems like six men and a handled shovel heaving soggy dirt out When you're on the end of a long-

a bulldozer or generator. Those wooden Doesn't give enough "slip" for good handles-need maintenance the same as makes a wooden handle bind too much But hand tools-especially the wooden

The good old Army mule has been handles catch it from rot, insects, and unfair wear and tear.

or no danger of bugs chewing up the handles, maintenance is simple. Just use linsced oil and rub it in good, like on a rifle stock. In most climates, where there's little



from it on tools that're used a lot. Paint TM 5-632 (1 Feb 56), but stay away Painting is authorized, according to

> spots where a tool's handled most (like shovel). on the end and middle of a long-handled handling. It also wears off first in the

stuff like fire axes and other tools that all the time. That also goes for tools carare seldom used and have to look good ried full time on vehicles out in the weather. On the other hand, paint is good for



clbow grease...and gives less blisters. seed oil-applied as needed-keeps the that little "slip" that makes the most of handles in good shape. It also gives you But in most cases, a good dose of lin-

8

bugs cating up the handles or bug eggs being laid in the wood, you need insect killer. A five-gallon can of the stuff's In climates where there's danger of



DDT, liquid, 5% DDT. Dunk wooden The official name-calling is Insecticide handles in it for bug protection. ready made under FSN 6840-253-3892



the dunking before the painting. If the handles are to be painted, do

now and then and apply linseed oil tools that sm-o-o-oth finish you love to touch. paint, or insecticide as needed. Gives em up generally. Look your tools over That cuts 'em, scrapes 'em, and bangs instructor's assistant in a judo class Some tools get tossed around like the



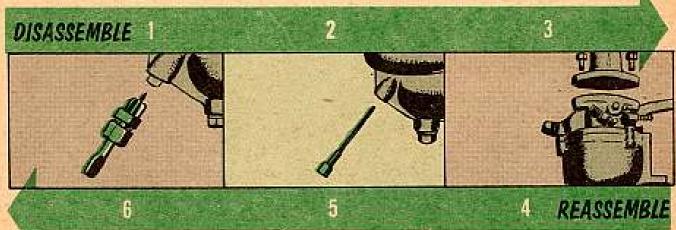


Easy does it with the main jets on Model BP Briggs and Stratton engine carburetors. One of those jets is easy to break when you're taking apart a carburetor.

The jet runs from the adjusting-needle valve right through the venturi and into the casting on the other side. When you try taking the carburctor apart without removing that jet—the jet breaks.

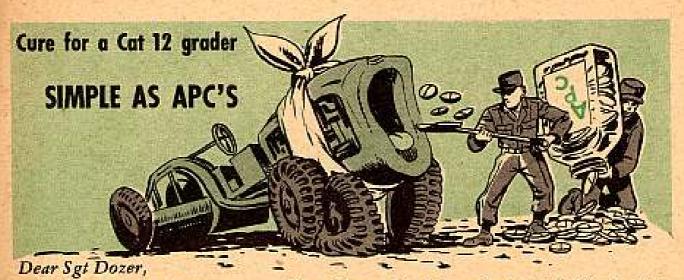
To disassemble, remove the needle-valve and take the jet out before taking the float-bowl off the parting surface.

Same thing with taking the float-bowl down while the carburetor is still on the engine. First, the needle-valve comes off and the jet comes out. The bottom half of the carb, with all the narrow passages, can be cleaned without removing the throttle and upper half of the float-bowl assembly.



To reassemble, put the float-bowl on the throttle assembly. Next put in the jet and then the needle-valve.

Careful when putting the needle-valve assembly on the carburetor float-bowl. Loosen the valve a couple turns before screwing the holder into the float-bowl. Prevents forcing the needle up into the jet and damaging the needle-valve and seat.



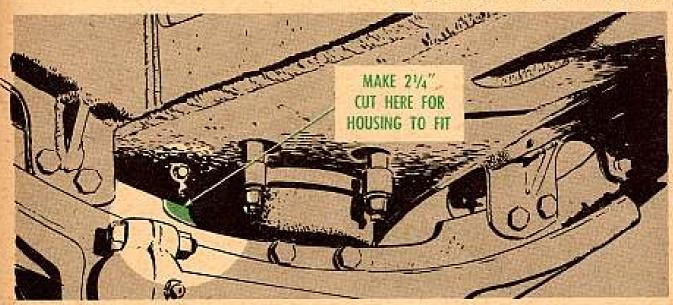
The cure for a worn center-shift rail on a Cat 12 grader isn't APC's-but it's almost that easy.

A worn-down rail means wobbling because there's too much play between the rail and the center-shift pinion. That play could make a grader chew up teeth when her blade's working on the side of a bank.

To make the rail last longer—just turn it around. That puts the smoother side of the rail next to the rack's teeth.

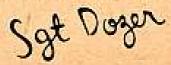
When you turn her, make a 21/4-inch cut on the left side of the rail's throat so the center-shift housing can fit. The rest is real easy. The frame's anchoring brackets fit the same backwards and forwards.

Post Engineers Heavy Equip. Maint. Shop Aberdeen Proving Grounds, Md.



Dear Gang,

Nice work. Nothing like an idea that saves money and is also casy to do.





Dear Editor,

This second echelon shop was pretty mixed up when we found our operation being hampered by the DA Form 461, "Preventive Maintenance Service and Inspection for Wheel and Half-Track Vehicles."

Being humans swayed by temptation in addition to being short timers in the Army, most of my men were looking for the easy way to do maintenance. Instead of using the 461 for its only job—recording—they were using it to do their maintenance. Not using the Or-



ganizational Mechanic or Maintenance Crew C and D Preventive Maintenance Service table given in every TM led to plenty of problems, because complete maintenance was not being done.

Chief among the many reasons why the TM maintenance table was not being used was because the type is too small to see, especially when you have your head

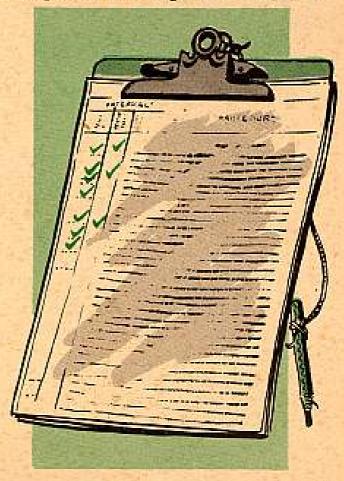


under a hood or you're underneath a truck. Not only that, but pages blow in the breeze, so you lay a wrench or screwdriver on them...soon the pages get black from grease and you can't read them. If you want a new TM, you have to wait a month or so before you get it. So, the men just took the easy way and used a nice, clean DA Form 461, which is easily read and followed. The result was that the trucks didn't receive their proper maintenance.

We decided to do a little so-called "human engineering" to relieve a tough situation. We had the table from the TM reproduced in larger size. Then, we

put the individual sheets into their own pieces of acetate, clipped the sheets together and had the complete table laid out nice, big and neat. Each mechanic was given a table for each truck plus red and blue grease pencils.

When a truck rolls in, the mechanic takes his guide and two grease pencils, leaving his 461 on the work bench. Right down the table he goes, without any sweat about blowing pages and eyestraining type, checking out each item from the enlarged acetate-covered TM table. If the item's OK, it's checked with the blue grease pencil. If there's a deficiency, it's noted in red pencil. Then, the mechanic goes back to his work bench and puts his findings on the 461. With a rag, he wipes the acetate clean and it's ready for the next truck.















This system has also solved another problem. Our inexperienced mechanics now find it pretty hard to overlook or miss any of the TM paragraph numbers



the table calls their attention to for checking individual parts of a truck. The paragraphs referred to are now brought out big and clear. So, more and more, these men are using their 'TM's to make a more careful check.

> The Shop Gang Camp Hanford, Wash.

### SHAVED HEADS

Dear Editor.

Ever try adjusting track tension on your M47 tank using just the OVM tools? You'll find that open end wrench (41-W-1436-25) listed for loosening the adjuster lock nut is pretty fat to squeeze into such a tight place. The reinforcements around the jaws of this hefty persuader are just too beefy to let it fully seat on the nut.

We found the only way to make it work is to trim off some of the beef. With a cutting torch we shaved the head by half an inch. This doesn't seem to weaken the wrench enough to hurt anything. And it lets us use it to get the job done.

Mr. S. C. E.



(Ed Note - That M47 track adjustment's been a tough nut. Looks like you've bit upon one way to belp crack it. Take care though, shave only where it's needed.)

### SWITCH-ER-OOOOOC



Dear Editor.

For those guys having trouble getting a tachometer cable and housing (Ord Stock No. G744-7389881) for their 5-ton M62 wrecker, here's a tip:

A speedometer cable assembly (Ord Stock No. G740-7527480) off an M38 Jeep will fit in place of the M62 tach cable assembly. By the same token, an M62 tach cable assembly will replace the M38 speedometer cable assembly.

Although the cable assemblies can be switched, the individual parts can't be. For example, the housing of the M38 speedometer cable won't fit together with the core of the M62 tach. The housing and core of the M62 are both about three inches longer than the Jeep's housing and core. So, whichever assembly you use, just make sure you don't separate the parts - keep 'em together.

> Mr. Roger Gervais Camp Lucas, Mich.

(Ed Note - Many thanks for a good idea. Shouldn't have much trouble getting that tach cable or, for that matter, the speedometer cable. But if you do, go ahead and play switch.)



### Also

Anyone looking to reinforce the door check brackets on their G741 series ¾-ton trucks take heed. MWO Ord G741-W9 (1 Mar 56) fells Ordnance to make this fix on the M37 and M43 ¾-tonners. Now, the MWO has been extended so the M42's and M201's come under it.

### 9749 compression

The latest on that compression business for your G749 2½-ton truck engine is that the minimum compression which you should have is 90-PSI. As far as the maximum pressure variation from high to low cylinder, you should only buy a difference of 10-PSI—no more.

### See your etchings?

When the etched markings on your tank engine's oil level dip stick get hazy from wear, try using a center punch and a couple of light taps to re-impress them.

### Off base

Gotcher pencil handy? So you won't be off base when it comes to ordering blackout lights for your Nike and M33 FCS vans 244, 258, and 259, best jot these numbers where they'll be handy—Bayonet base type lamp (Ord Stock No. G789-8328090), candelabra type (Ord Stock No. Y010-8019877).

### Watch that shaft

You medium tankers wanna take it easy when handling and operating the T31 ballistics computer. If you run into trouble—like any one of the shafts sticking—give Ordnance the word.

### Hand saver

It's a good idea to keep this thought running through your head—always wear leather gloves when handling those winch lines on your vehicle. And never let that line slide through your hands. Gives crevices in the palms.

### Watch that stuff

Don't rupture your oil pan when lifting the engine out of the G744 series 5-tonners. Lifting that engine without jacking up the truck's frame could lead to a hole in that pan. Without a boost, the oil pan hits the top of the differential as the engine is coming out—and there you are.

### Exercise it

Most anything'll get rusty if you don't use it. Right? Well, same's true for the hand-starter cable on your tank's auxiliary engine. About once a month you should exercise that cable—pull it out (easy-like) to its full length a time or two. This'll keep it from freezing to the reel. And it'll be ready to do the job when you need it.

