

## MONTHLY

ssue No. 52

1957 Series

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### N THIS ISSUE

### FEATURE ARTICLES

Tips for Shovel Operators	Forklift Care and Operation	How to Mount Smoke Generators	Power Steering (Cartoon Section)	DA Form 478 (Cartoon Section)	Carbon Monoxide	Carbon Tetrachloride	Artillery Care in Cold Weather
42	46	38	26	21	10	8	2

### DEPARTMENTS

Contributions	Engineer	Quartermaster	Chemical	Small Arms	Artillery	Half-Mast	Connie Rodd	
46	42	6	38	36	34	29	17	

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

Connie Rodd's Briefs

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Dear Half-Mast,

answer this question for us, they're going to stay deadlined deadlined. And, unless you can two vehicles sitting here downright stubborn, we have Because some people are

people who turned them that can be fixed up by the over to us. both vehicles have deficiencies being signed for. Bingowere not inspected before these two vehicles. They A while back we received Here's the problem:

signed for them. we got them, before we The place where the vehicles where the vehicles came from. responsibility of the place inspected these vehicles when as we signed for the vehicles came our responsibility as soon came from says that it befix the deficiencies-it's the it's not their responsibility to -that we should have Now, our shop says that

I hope you have the answer SP2 T. R.

Dear Specialist T. R.,

sign for a piece of equipment, and that proper disposition." In other words, According to AR 735-5 (20 Dec 54), or issued and are to be returned or responsibility for terms of property those vehicles, the responsibility is all documents produced showing other "A hand receipt is a signed document responsibility is transferred by the you accept responsibility when you As long as your .C. O. signed for listed thereon which are loaned acknowledging acceptance of yours-inspection or not. receipt you sign.

make that responsibility more binding. virtue of his assignment responsible for This little statement, it appears, makes whether he signed for the property or responsibility for equipment by virtue not, a signed receipt certainly would to work on those vehicles and get of his command alone, regardless of regardless of whether or not he has commanding officer of a company, a signed receipt even more binding. signed receipts for such property." So, all you can do is get your boys detachment or similar unit is by If a commanding officer assumes There's one other point-"The all the property of such unit them off deadline,



# for **HOT** Shots in Cold Spots



These winter months are important ones for a lotta artillerymen.

and there. And that's cold. thermometer sprang a leak. The red stuff reaches the 20-below mark here in some places . . . the temperature drops so fast and far you think the

pieces? Do you treat 'em right in cold and snowy weather? of yourselves . . . the right clothes and so on. But what about your artillery Most of you guys in the outdoor refrigerators know how to take care

in good condition. Snow can load a breech covers are a must. The barrel has little or no protection. covers are kept tight and should be shelter if possible. Muzzle and barrel with a heap of flakes if the should be kept protected—in a If you do, then you know they

But keep it out of a warm shelter. It's all right to treat your weapon like a brother-up to a certain point.

74



piece will look like it's come down densation. When that happens, your a warm place. That's right . . . contake a weapon from the cold into with a fever in the middle of July, what with all the beads of water You know what'll happen if you



lower than its new surroundings. It happens when the temperature of an object-like an artillery piece-is The condensation is caused by different temperatures banging heads

Rain and melted snow'll give you on the weapon may get jammed. sation turns to ice . . . moving parts coupla things. They can cause rust the same headaches. for one thing. Or . . . if the conden-Those drops of water can do a





wipe away the "old" oil. oil every day, but remember to first that have been wiped dry. Use the PL Special on the unpainted parts ice and then wipe dry. Spread some treeze-up, use hot oil to melt the wet area dry. If you run into a Get rid of the stuff by wiping the

from doing more of tomorrow. That brings us around to cleaning ... the thing you do today to keep

Keep the containers full and tightly closed.

anti-freeze with the bore cleaner. use PL Special every day. Don't mix From the fourth day on, after firing, this for the next two days, using warmed-up cleaner if it'll help. Use rifle bore cleaner . . . wipe dry and swab in some PL Special. Do Clean the bore and chamber while they're still warm from firing.

First off ... store the cleaning materials in a warm spot if possible



at your fingertips. you make sure you have a copy of FM 70-15 side to the cleaning business. That's when weather-like the Arctic-there's another When you're operating in real cold



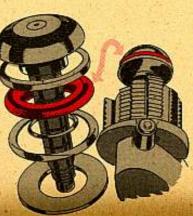
### A WORD OF CAUTION:

brittle in cold weather. If the asbesering on some pads becomes very shows through . . . get a new pad Another thing . . . the asbestos covwith a clean cloth and leave it dry. piece is equipped with the pad trom gas check pads—that is if your tos cracks...and the wire mesh What you do is wipe the pad dry Keep cleaning materials away



on the cradle and gun slides. An your weapon may say to use GAA LO for another piece may say to As a f'rinstance...the LO for

> a light coat of PL Special anism daily with dry cleaning sol vent or mineral spirits. Follow with Clean the breech and firing mech-



a header. And you sure do use oil to use when the mercury takes handy. It tells you what grease and where your LO comes in mighty different lubes in cold weather. What about lubrication? That's

shape if they're gonna do their job.

covered when you're not using it.

you've gotta keep the equipment radar and fire control systems, in weapons using power controls, needs special care in cold weather.

Cover panels should be in good



respirator free of snow and ice. ... open 'er all the way. Keep the If the weapon has a respirator



weapon is something else that

The electrical system on your

electrical cables protected—like and computer consoles wanna wrapping or covering them with know how to use the heaters. Keep make sure the heaters work. And you should check your TM so you You guys who work around radar











mechanism before firing.

touch with the oil.

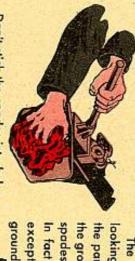
recoit cams every day. Use a light counter-recoil rods and variable



### on 'em. Get rid of the ice by rubbing like lenses. You'll get condensation check for ice-coated optical parts into a warm spot or by breathing by taking the parts from the cold fire control and sighting equipment, While you're working around the

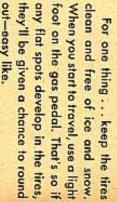
cold when you're not operating the piece. Using wet or dry cell batteries with your weapon? Keep them out of the that's been wet down with alcohol.

the trosted area with a lens paper



ground is used as their only cushion. are liable to snap if hard frozen shock absorber for the recoil—like until you've provided some kind of tree boughs or straw. The spades Don't stick the spades into holes

addition to your regular maintenance.

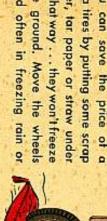


except rubber, that touch the spades freezing fast to the ground. the ground to prevent the trails and looking after. Wipe waste lube on In fact . . . use lube on any parts, the parts that come in contact with The trails and spades also need



Your weapon's transport wagon, limber or bagies also need care in





wagon, limber or bogies in some kind of shelter. Course . . . your best bet, if possible, is to put your weapon's transport

Make use of valve caps. They keep moisture out of the valve stems. And

in place. Another thing about those brakes . . . drain water from air filters brakes won't freeze in a set posistopovers. Then you're sure the Non. Use chocks to hold the wheels if anything'll break the stems. it's ice. weapon is parked—even for short Release all brakes when the

lect on the firing jacks or their lockget jammed up with ice. Keep the ing lugs. And don't let ice or frozen mud colvent 'em from getting a coat of ice. equilibrators well lubricated to prekeep an eye on so's things won' There are two other spots to





### ONE FINAL WARNING

pedestals clear of snow and ice ers. So keep platforms, mounts and needs a crew—not figure skaters or ski-If the weapon is gonna do its job,





power of carbon tetrachloride. They both woman and never, never underestimate the look harmless, but listen-Never underestimate the power of a

can do to you. Carbon tet is very toxic (that know what you can do with it and what it means poisonous.) Carbon tet is potent stuff, so it's time you

which is not as toxic when you're doing any Whenever possible use another solvent

remember these things. would play havoc with rubber, fiber, etc.) have a fire hazard and where other solvent stance, cleaning electrical devices where you only solvent that'll do the job (take, for in-Where carbon tet has got to be used as the

00

## HERE'S WHAT THE STUFF'S LIKE

AND WHAT IT'LL DO TO YOU.



an inclosed work space. It's heavier than air. You've got to have a down-draft exhaust system if it's used in



ting it on your skin or by swallowing it. soned by it-by breathing vapors, by get-There's more than one way of getting poi-



systems. heart, skin, lungs, digestive and nervous It affects the liver, kidneys, adrenal glands,

beats, fever, etc. It can conk you out-for nausea, vomiting, rapid or irregular pulse sion, depression, fatigue, loss of appetite, Symptoms are headaches, mental confu-

TO USE IT SAFELY, DON'T BE AFRAID OF IT-JUST RESPECT IT



Wear rubber gloves.



Don't inhale the vapors



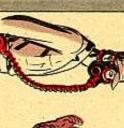
ing on upwind side of object being cleaned. Work in an uninclosed space outdoors stand-

Work with it for very short periods of time.



If you spill some, take time out to clean it up

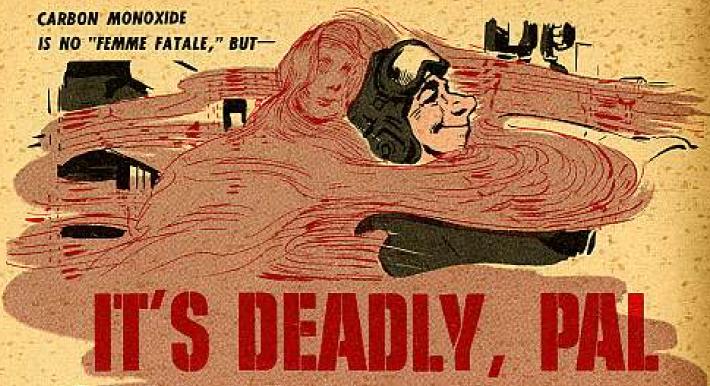
off your skin. Wear protective clothing; keep carbon tel



air-line mask should be used. self-contained air or oxygen supply or an If it's going to be used indoors, a mask with



at the end of your work day. Use soap. Wash thoroughly before you eat lunch and



People who live with tanks and other motor vehicles come to realize sooner or later that you can't be too wary of carbon monoxide. Too bad—but sometimes it takes a tragedy to drive the fact home.

Like what happened a while back.



One chilly morning Andy was sitting in his tank. Li'l Joe was putting away to build up the low batteries. Personnel heater was running, hatches were closed to keep out the chill.



The farthest thing from Andy's mind was carbon monoxide gas. How nice it'd be to have his best girl there, alone with him in that cozy compartment.



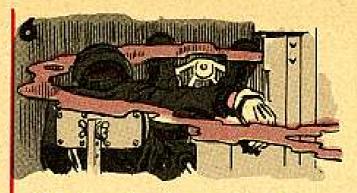
Trouble was, though, that Andy was not alone. Not the "femme fatale" he was dreaming of, but a visitor even more deadly was keeping him company.



All the time Li'l Joe was puffing away, he was giving off carbon monoxide. Andy knew that burning gasoline gives off carbon monoxide. But he didn't think what might be happening.



Leaky bellows? Poor exhaust connections? Loose mantlet cover? There was no breeze blowing to whisk the stuff away. It hovered around the rear deck—and soon was creeping inside—seeping in around the gun, which was in travel lock—and into the driver's compartment, where Andy sat.



Didn't take much. With no ventilation there, the stuff went to work fast. Andy never knew what hit him.



That's the way carbon monoxide gets you. It's sneaky. Colorless, odorless, it gives you no warning. First thing you know you feel drawsy; then, before you know it, you feel nothing ever.

Main thing to do to cope with a killer like this is to keep well in mind that it's always lurking about when gasoline burns. Then you'll act accordingly.



Keep your mufflers, stacks, bellows and tubes in good shape. And all those connections tight. This'll keep the fumes and gases far away as possible.



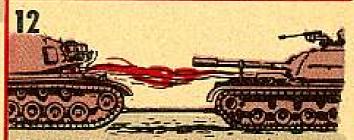
Keep those canvas mantlets on your turret in place and tight. Keep the killer outside where it is less likely to harm you.



Avoid sacking out in a buttoned-up vehicle—when gasoline's burning. Especially if you're alone.



Bout the only thing that's fool-proof is to make sure you've got some cross ventilation. Either keep those hatches open, or make sure the turret ventilator's blowing.



But even in the open, carbon monoxide can get you— like on a tow job —if you keep your face poked in the towing tank's exhaust too long.

# Rocal

Are you drilling your way to the shock of your life? You are if you kick electricity in the face by not grounding equipment.

When you're using something like a drill, some of the electricity may find its way to the housing instead of where it should go. The juice is point to look for a way that

go. The juice is going to look for a way that gives it the least trouble...what they call the path of least resistance. Without

a standard ground, your body takes over as the way for the current to get to mother earth. That can be awful reVOLTING.

prongs...when you go to plug in your tool, pick out a three-hole receptacle—one which has a special slot for the safety ground. It's bad business (and dangerous) to break off or bend that ground prong so's the plug'll fit a standard two-hole receptacle. This leaves your tool's frame ungrounded.

If you run into a two-hole receptacle, get yourself an adapter—like the Engineers have under FSN 5935-243-6764. The adapter has two prongs, but also has three holes for the three-prong plug. You fasten the safety ground wire on the adapter to the screw in the receptacle cover.



TWO

If the cord plug on your electric tool has only two prongs, there ought to

TWO-PRONG PLUE the plug's side. It ought to have either a WITH SAFETY clamp, prong or a "U"-shaped terminal. When plugging that type into a receptacle, put the safety ground wire into the safety ground slot if the receptacle has one, or clamp it to or put it under the screw in the receptacle cover.

# Shocker



# GROUND THAT EQUIPMENT PRONTO

All electrical equipment, like drills and motors, call for a safety ground. If yours doesn't have one, make one by running a length of wire from the equipment to the receptacle, metal conduit, water pipe or an iron rod driven at least four feet into the ground.

TANKERS TAKE HEED-

## Gummy Oil-Seal

One of these days you may unwrap a new roadwheel oil-seal (G254-7364672) for your M48 tank and find it covered with a cosmoline-type preservative instead of the usual coat of light grease, Hold it—that seal won't be fittin' for use till it's well cleaned and properly lubed.

This delicate de-greasing job takes lots of time, patience and hand-work. It goes like this:

Soak seal in dry cleaning solvent (FSN 6850-281-1985, 1 gal) until preservative is completely removed. You can also use mineral spirits or naphtha (aliphatic, Specification TT-N-95A) to soak it in. Wipe seal off with clean rags. Rinse off in clean solvent or whatever degreaser you're using. Dry seal by shaking it carefully. Wrap it in clean doth and let it sit in fresh air for awhile to finish drying. NO AIR PRESSURE DRYING, PLEASE, TO REMOVE ALL SOLVENT. Cover the seal thoroughly with OE-10, and she's ready

gall
use
USA)
lean
loksh air for
TO REMOVE
I she's ready.

Steam cleaning's not healthy for this cleaning chore. Stick to the above prescription and you've got yourself a good oil-seal.

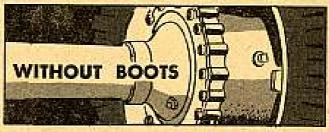
### A Rusty Joints

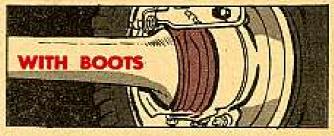
The CV joint bell housings on your M-series vehicles fall into two classes—those that have boots and those that don't.

The boots on your G742 2½-ton trucks and those on your G744 5-ton trucks are there for one reason—to protect those bell housings against rust, dirt, mud, water and grease. These highly-machined parts, you see, are exposed to everything bad roads and bad weather can dish out.

Those boots aren't going to be much good unless they're kept clean. When grease, dirt and mud get on 'em and cake, the boots can start cracking and cause all sorts of trouble to those bell housings. They've got to be clean, which means a check and a wiping once every so often. So, get on it, huh?







Now, those other trucks which don't have boots covering those bell housings—your G740 and G758 Jeeps, the G741 ¾-ton trucks and the G749 2½-ton trucks—can really blow their joints. These have felt wipers protecting them. You're OK when your vehicle's running, because the felt wiper moves back and forth over the highly-machined surface. The bell housings have a coating of GAA on them which the wiper spreads over the surface, helping to stop rust. The housing may get discolored, but you can get this stuff off with a rag.

The trouble usually comes when the vehicle stands idle for a time. The felt wiper can't move and distribute the grease film so moisture gets a chance to attack the metal through any opening in the grease film.

When you check out your bell housings and find very light surface rust on them, you can get it off by using some steel wool, a crocus cloth or a buffing wheel.

Never—but never—use an air hose to remove dust from those housings. The force of the air can throw foreign stuff under the felt, which could score the machined surface.

And, after you're all done, make sure that bell housing is protected by a light coat of GAA.

Remember: A nip in the bud is worth two when she rusts.

7

Get Hep to The Joint.

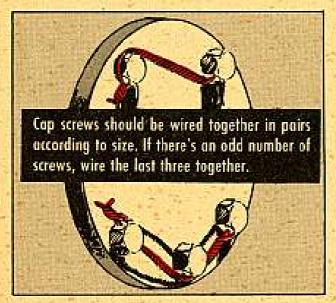
Heard a fella talking the other day about his vehicle actin' like it was doin' the rock'n roll on a beat-up road. What he didn't know was that some of the locking wire keeping important bolts in place was not doing its job. They were the little causers of his unexpected rock—which could throw him into a roll.

Step right up and listen to what can happen when locking wires are missing or aren't wired right.

First off, those assemblies that need that wire may swing and sway. This may lead to binding, which, in turn, may cause failure or give you performance that's not up to par.

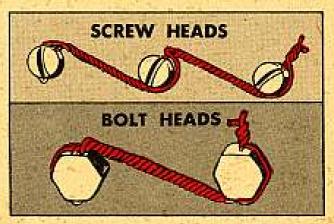
And that's not all—in a tank a failed universal joint incorrectly safety-wired may work loose and damage fuel tanks, transmission or batteries.

What's the answer? Take a look at these pictures; they'll show you how locking wires should be put thru attaching bolts. When it's done this way, if one bolt works loose it'll be stopped by the tightening action on another bolt.





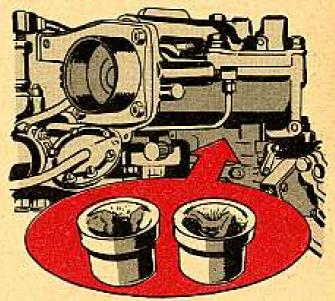
In the two cases above the safety wire goes over the head while in the two cases below the safety wire goes around the head. Safety methods shown are for right hand threads—left hand opposite.



### MELTING POTS

Some higher echelon shops are finding the secondary venturis in the carburetors of the G744 5-ton trucks melted—just as if they had been hit by red hot lava. The trouble may be with the way some drivers are handling that baby.

When a guy starts a cold engine and suddenly stamps his clodknocker down on the accelerator, a backfire through the carburetor will often set fire to the fuel in the carburetor venturi and the intake manifold. If he tries to start his engine right after this happens, more oxygen and fuel is fed to the burning mixture in the carb, sending a hot flame



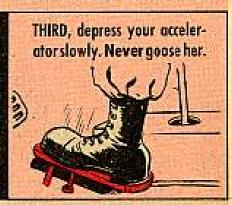
DIESELING, COLD STARTS AND BACKFIRES CAUSE SECONDARY VENTURI TO MELT.

through the venturi. One venturi plus a bunch of hot stuff could equal one melted venturi.

### YOU CAN HELP STOP COLD ENGINE BACKFIRING BY DOING THESE THINGS ...



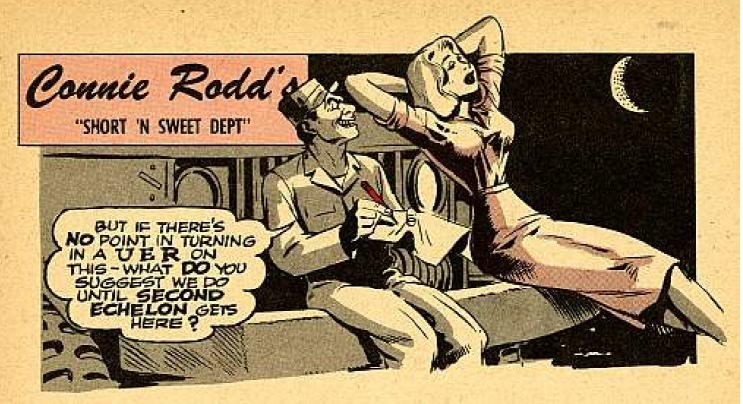
SECOND, let your truck warm up before moving her. This way you'll be sure that she won't stall and you won't have to start her again.



NOW, if your engine does happen to backfire, turn your ignition OFF and let her sit for at least 30 seconds. This'll give that burning mixture inside your carburetor plenty of time to burn itself out without adding more fuel to the fire.



Dieseling is another thing that could be hurting those carburetors. Your truck may come equipped with an antidieseling device. If not, MWO Ord G744-W23 (28 Sept 55) tells Ordnance to put one on for you immedjiately. Until you get this gimmick put on your truck, tho, let that engine idle for a time before shutting her down.

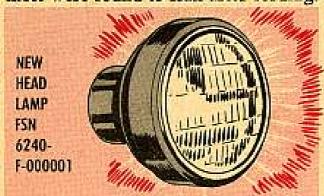


### Limp Lights

Those incandescent head lamps (FSN 6240-299-6930, Ord Stock No. H104-0451988) you'll find on most of your M-series trucks are supposed to be scaled, but reports flowing in tell of strange things happening inside them.

Five things seem to be going wrong with these babies—

First, they have a moisture leak and a gray fog of condensation forms on the lenses. Second, some have weak gasket seals, which lets water leak into the reflectors. Next, a few have cracked lenses, which also lets water in. Fourth and fifth, some have blistered lenses and most were found to leak after fording.



A new lamp is being put into the supply system—a lamp that will stay sealed. But the older lamps will be issued until they're exhausted and then you'll be getting the new ones.

Now, here's what to do. If you come across any of these bad head lights, just throw them away—never mind turning 'em back in with a UER. The design people already know about the trouble. Then, make yourself out a requisition using the stock number for the new head lamp, which is FSN 6240-F-000001. No doubt you'll be issued the old lamp, because there are so many of them. But use them and as they keep going bad, you just keep throwing them away and keep sending in requisitions.

The vehicles these lamps go for are your G740 and G758 Jeeps, your G741 <sup>3</sup>/<sub>4</sub>-ton trucks, your G749 2½-ton trucks, your G744 5-ton trucks and your G792 10-tonners.

# N's oil right AAAH GO ON... DO IT I)

Some guys have been keeping their fingers crossed every time they add a quart of oil to their vehicles, especially those commercial jobs.

They take a look in the manufacturer's manual and find that their crankcases call for SAE 20 oil. But the Army doesn't have SAE 20 oil—just OE 10, OE 30 and OE 50. So, these questions crop up. Am I authorized to use something besides the recommended oil and, if so, will the manufacturer stand good on his warranty if something goes wrong?

The answer to these questions are right in TB Ord 378 (17 Oct 51). Para 3 of this TB says, "In all instances wherein the manufacturer's instruction manual for the vehicle specifies the use of SAE 20 or SAE 20W engine oil, SAE 10 will be used." It's been established that you can go ahead and substitute OE 10 for SAE 20, and there'll be no sweat.

So, in a nutshell, when you find that SAE 20 is called for, substitute OE 10. If something goes wrong, you're safe—TB Ord 378 is your authority.

### 40-40

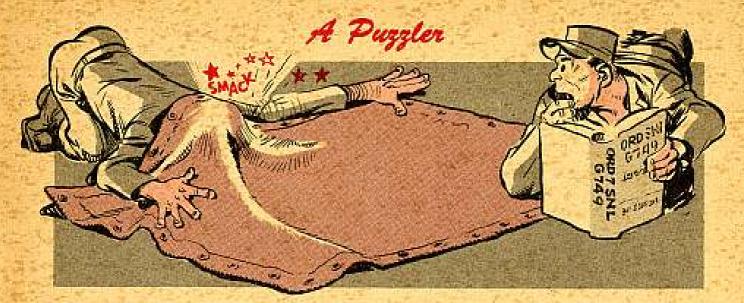
If your G749 2½-ton Hydra-Matic transmission oil level starts acting like a bouncing ball, best check that truck's idling RPM.

Been some strange tales of that level showing up too full although the driver knew the oil was at the correct level and he was checking it right with the Hydra-Matic in F-1 High Range and the transfer engaged.

Story is that when you go to check your level and your truck's revving faster than normal, that oil will splash up against the dipstick and give you a false reading.



So, why not save yourself some perplexes. Make sure your truck's idling at 375 RPM's like TM 9-8024 (Oct 55) says when making that lube level check.



Which goes where, and when it's there is it where it should be? Puzzling, huh? Well, that's what you're going to run up against if you don't know all the facts on the body canvas for your M34, M35 and M135 21/2-ton trucks.

If you'll look in your Ord 7 SNL G749 (July 55), you'll see under Group 2201 that Cover, body, assembly H017-0547801 for the M135 truck is replacing Cover, body, assembly G7497411556. Hold it! It's a misprint; you'd better make a special note.

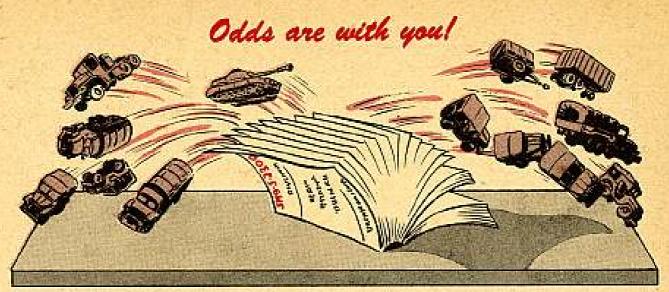
First off, Cover H017-0547801 and Cover G749-7411556 are not interchangeable. And, for that matter, Cover G749-7411556 is not in exhaust status like the Ord 7 says.

So get the correct number down when you go to order the canvas and put on your requisition the type truck the tarp must fit.

### THE WAY IT STACKS UP IS LIKE THIS:



The M35 has a body that's 8 inches wider than the M34 and M135. This is why the tarps are not interchangeable.



Six will get you 820! Sounds like a good deal! It is! Where can you get in on a deal like this?

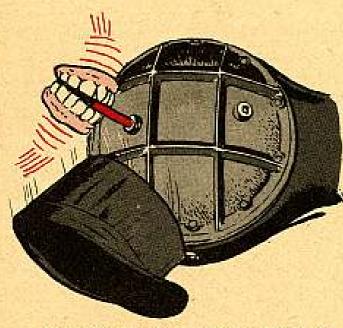
It's mighty easy. Take, for instance, your Supply Manual 9-5-2300. It only has six numbers, but if you'll take a gander thru this manual you'll find your motor vehicles, trailers, and cycles are listed by number, also alphabetically. That means you can find 820 Fed-

eral stock numbers in this one volume.

That's not all! There are 355 pictures of autos, trucks, tractors, trailers and tanks.

If you've learned to depend upon your Ord 3 SNL G-1 for the stock numbers and pictures of your vehicles, then you'd better get a copy of SM 9-5-2300 (Dec 55), because it supersedes your Ord 3 SNL G-1.

### A new turn

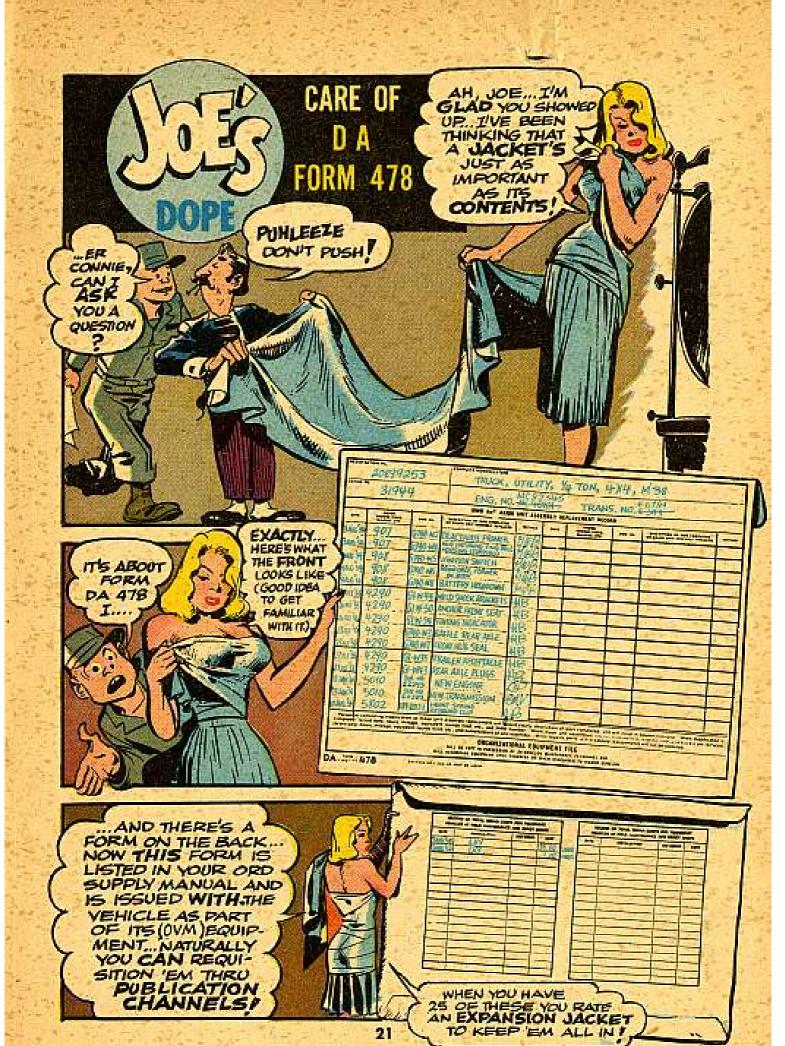


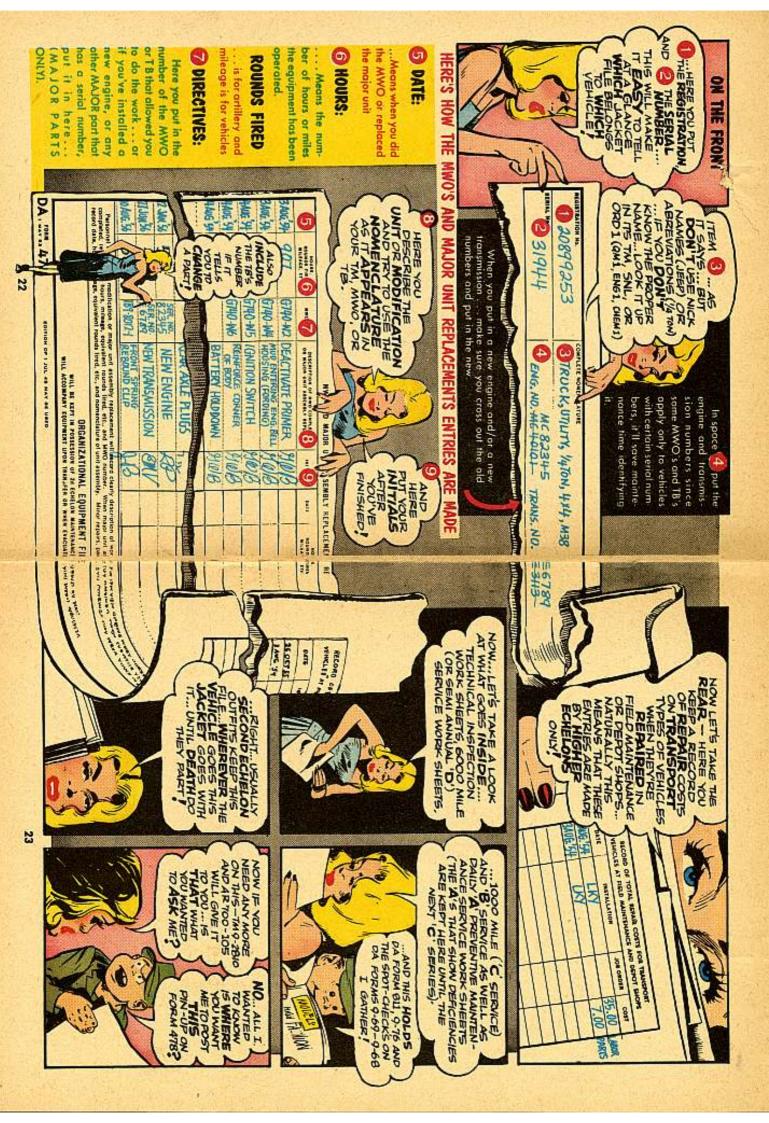
So you've been fussin' and fumin' because you don't know what to use to turn that differential plug wrench (Ord Stock No. 41-W-1962-100, FSN 5120-708-3302) when working on your G749-series 2½-ton trucks.

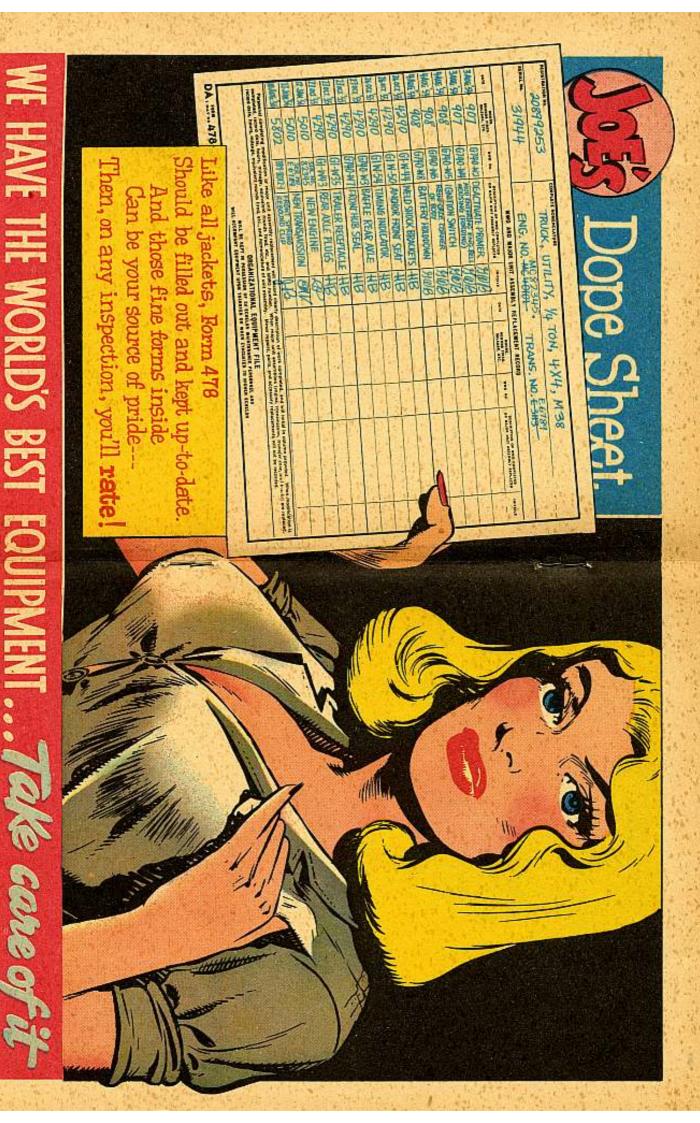
Make a note of these facts and figures so you can lay your hands on the equipment you'll need to turn that plug wrench:

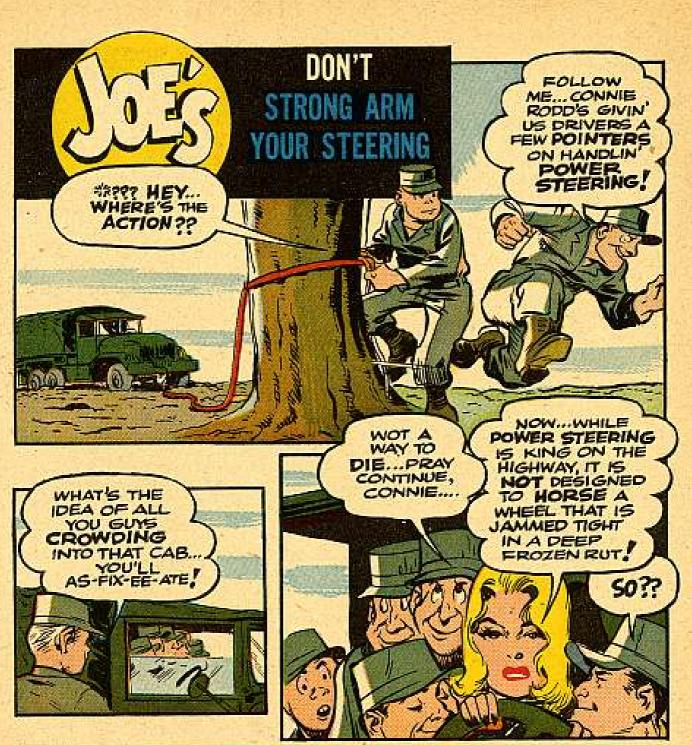
Wrench, open end adjustable: 11/8-in jaw opng, 10 in lg., Ord Stock No. 41-W-487 (FSN 5120-449-8083). The gadget wasn't mentioned in your Ord 7 SNL G749 but is going to be added.

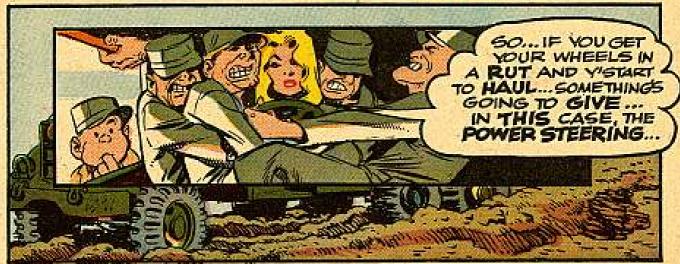
It'll pay to get it as soon as possible —you'll find it's handy for a lotta other jobs.





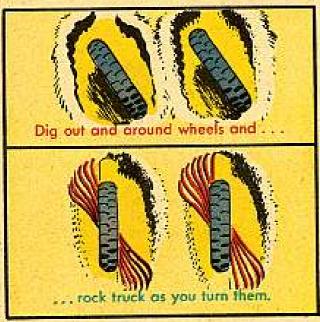


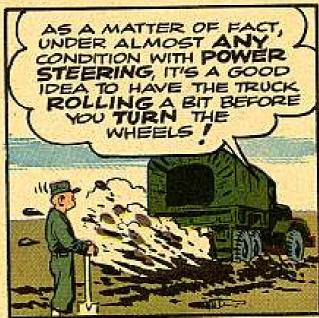


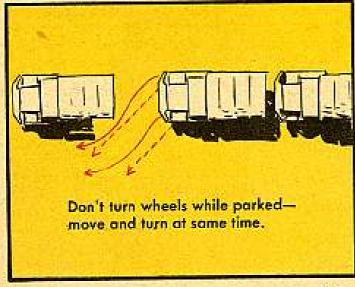
















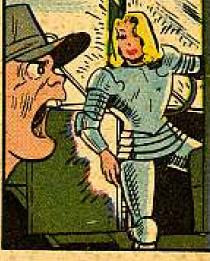


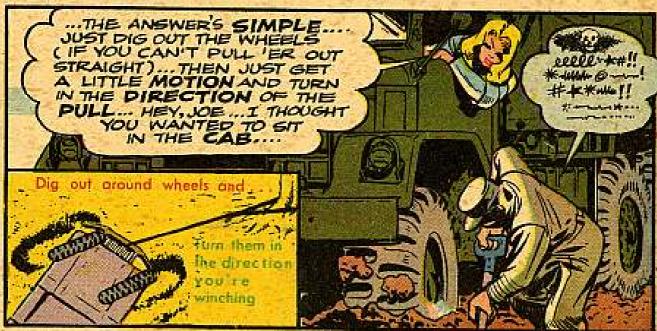


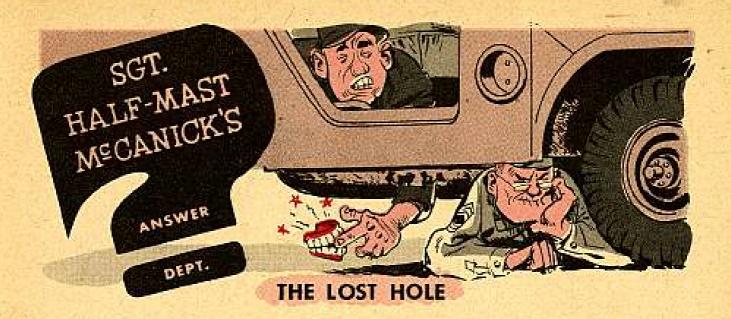
AHA...THE CAB'S A LITTLE CROWDED WITH SOME BOXES, BUT (TEE HEE) WE CAN CHORTLE ? SIT C-L-O-5-E



I PON'T MIND







Dear Half-Mast,

Maybe we're a bit behind the times, but we've just received a few of those "new" M38A1 Jeeps. We found that they don't have 24-volt receptacles for powering our Jeep-mounted radios like the older M38's.

What happened to the hole?

CWO L. K. L.

Dear CWO L. K. L.,

The M38's under serial number 47772 had the radio power cable and receptacle built right in. But the M38's after serial number 47772 and the M38A1's didn't have them installed.

Now, if your Jeeps are assigned to carry radios, but they don't have the built-in cables and receptacles, you can get them in the form of a kit and-install them yourself. You get these kits by ordering Kit, installation radio power feed, Ord Stock No. G758-5701808.

Half-Mast

### WHUFFOR RECKTEEFIER?

Dear Half-Mast

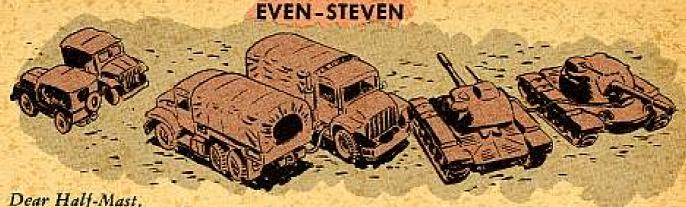
What's the rectifier in the Auto-Lite VBC-4002 UT generator regulator for? It's got our electrical classes all confused.

SP2 W.C.T.

Dear Specialist W. C. T.,

It is confusing, isn't it? What that rectifier does is provide a one-way path to ground for the induced voltage that occurs when you reduce the generator field current. Without the rectifier this voltage would tend to push across the regulator contact points and burn them. As it is, it can pass off harmlessly to ground and prolong life of points.





Dear Half-Mast,

What's the word on using a Jeep to slave start a tank? I'm sure it shouldn't be done, but can't find anything in the manuals about it.

OCMT J. W. M.

Dear Mr. J. W. M.,

There's a TB in the mill right now that'll require the use of a vehicle with like battery capacity for slave starting.

It's a darn shame that you have any trouble selling this deal anyhow. Anybody can see that if the little 45 ampere-hour batteries in the Jeep were enough to crank a cold tank engine, they wouldn't have put four 100 ampere-hour batteries in the tanks. The trouble is, you can generally get away with using the Jeep. The overloading of your batteries doesn't show up right away-it may be a month or more later before you find yourself afoot. Half-Mast

### TUBELESS FACTS

Dear Half-Mast,

In this outfit, we've been getting some commercial cars and trucks that have tubeless tires.

Can you give us the right tire inflation pressures for these tires?

Sgt F. H.

Dear Sgt F. H.,

Sure can.

First, the recommended inflation for passenger car tires, sizes 5.90x15 through 8.90x15, is 24 PSI for 4-ply tires and 30 PSI for six plies.

When it comes to tubeless truck or bus tires, the inflation pressure depends on the tire load. The table on the next page gives you these recommended pressures, taking into consideration tire size, ply rating and tire load. Let's see how this table works.

Say you have a truck with 10-ply 9.00x22.5 tires on it. Your vehicle's gross weight is about 3000 pounds per tire. What you do is go down the column marked tire size until you come to your tire. Then you go across until you find the gross weight figure nearest to the one of your vehicle. In this case, the figure closest to the one is 3040 pounds. Look up the column till you come to the recommended inflation pressure for your tires—in this case, it would be 60 PSI. So, you'd inflate to about 60 PSI.

The last figure in any one of the columns going across—the figure that is shown in red—is the maximum gross load that's recommended for that particular tire.

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EXECUTE OF	TRUCKS,	Bn22F2	a distance of the	Control of the Control	rucks	A CONTRACTOR	GHWAY	SERVIC		
TIRE	PLY	The second	TIR		ONLY DESCRIPTION		FLATION	PRESSU		000
SIZE	RATING	40	45	50	55	60	65	70	75	80
TUBELESS TRUCK-BUS TIRES USING DROP CENTER RIMS										
7x22.5	6	1640	1760	1870		23/8	MARK	7		TS III
7x22.5	8	1640	1760	1870	1980	2080	2180	DE SINE		1
8x19.5	6	1830	1960	2090	450			NO.	14.84	
8x19.5	8	1830	1960	2090	2220	2330	2440	* 10	15	
8x22.5	8	2060	2210	2350	2490	2620	2740			ATTICE.
8x22.5	10	2060	2210	2350	2490	2620	2740	2860	2980	No.
9x22.5	10	2400	2570	2730	2890	3040	3180	3330		54.2
9x22.5	12	2400	2570	2730	2890	3040	3180	3330	3460	3600
10x22.5	10	特别原宁	3040	3240	3440	3620	3790	3960		954
10x22.5	12		1	3240	3440	3620	3790	3960	4120	4280
11x22.5	12	1 2 17	-	3600	3820	4020	4220	4410	4580	
11x24.5	12			3860	4080	4290	4500	4700	4880	
12x22.5	12	9-4	HEY!	4060	4300	4520	4740	4950	5150	
12x24.5	12			4320	4580	4810	5050	5270	5480	
TUBELESS TRUCK-BUS TIRES USING FULL TAPERED BEAD SEAT RIMS										
12.00x21	14	No.		100		5090	5330	5580	5800	6020
12.00x23	14		100	Grand St.		5410	5670	5930	6150	6400
12.00x25	14	1	100			5730	6000	6280	6550	6780
TUBELESS LIGHT TRUCK TIRES USING DROP CENTER RIMS										
7x17.5	6	1420	1520	1000		15 5	7 / - + 3 fm	505		<b>作</b> 及 "
8x17.5	6	1620	1735	A CHA		idea.	7.05			1-4-1
8x17.5	8	1620	1735	1850	1965	2060		THE L		
Now Street Land	Company of the last of the las	And the last of the last of	Water Street	would be offered to	The Part of the Part of	and the same of the same	A STATE OF	The second second		A STREET

### **BOTTOMS UP**

Dear Half-Mast,

How do you load ammo from the ground thru the tank turret and into the ready racks? Does the base or the nose of the shell go into the turret first? Which way is easier and safer?

CWO H. G.

Dear Mr. H. G.,

There's one thing you've got to remember—the primer end of your round is easier to set off accidentally than the nose end. The primer end should always be kept covered and in the UP position. And you should take care that neither end is dropped or punched against other objects. The easiest way is not always the safest way to handle ammo.

The correct ammo loading routine



If you're the Ground Man place the cover end of the fiber container on the ground between your feet. After you've lifted off the larger part of the container, inspect the round to make sure it's clean, no dents in the cartridge case, and closing cup or plug is not loose or broken. When you pick up the round you immediately put your hand over the primer and turn the round base up. Keeping the base up, you pass the round to the man on the deck. You slip your hand off the base when the tank man slips his over the base.



If you're the Tank Man—you grab the ammo with both hands as the ground man hands it to you. Slip one hand over the up-turned base. Now lower the ammo into the turret—fuze first.

If you're the Turret Man—také the ammo from the tank man by grabbing the fuze end with your left hand. You put your right hand over the base when the tank man slips his off. You place the round in the ready racks by keeping your right hand over the primer and turning the base of the round down so you can place the round in the rack.



The primer must always be up while handling the ammo until you finally place it into the racks so it'll be protected against accidental discharge.

Half-Mast

### FLAPPIN' FIFTHS

Dear Half-Mast,

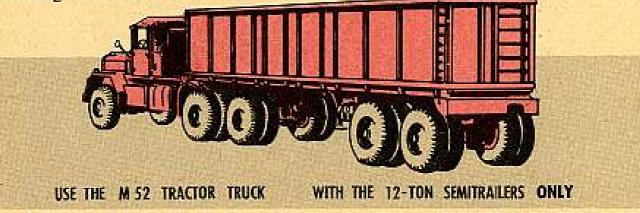
Lately we've been noticing that the fifth wheels on many of our M52 G744 5-ton truck-tractors have been breaking for some unknown reason.

We use these trucks a lot over rough terrain and are just wondering if the bobbing of the fifth wheel against the chassis is causing our trouble.

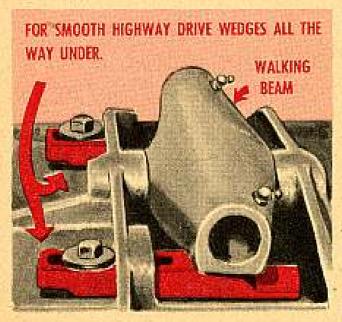
MSgt T. D. Y.

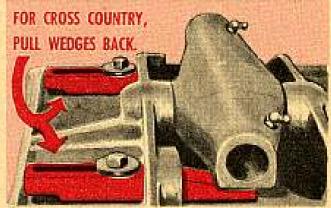
Dear MSgt T. D. Y.,

We don't think so. From the way you describe it, we'd say you're using that M52 tractor to pull all kinds of semi-trailers. That tractor is built to take only one kind of semi—the 12-ton van flat or low bed, like the M127 cargo trailer or the M131 gasoline tank.



Use any other kind and the angle of the dangle will be off between the fifth wheel and the upper fifth wheel plate on your trailer. Because of the difference in angles, most of the semi's weight is put on the base of the fifth wheel of your tractor, and it could crack. Those fifth wheels are strong things, and bobtailing won't crack 'em.





The M52 fifth wheel is built for sideto-side movement when going crosscountry.

Half-Mast

### RTILLERY

# BURIAL RIGHTS for FIRE CONTROL CABLES

Fire control cables should be kept like old pirate Captain Kidd hoarded his gold if the terrain calls for keeping 'em underground.

They've got to be buried so they're out of the way, are protected and can be removed easily and without damage.

An outfit who has a Sergeant Bilko around could solve the problem with real style. Just by getting drainage tile, burying it and running the cables through. That's real protection, and removal couldn't be any easier.

Course, drainage tile is hard to come by. Next best thing is to bury the cable like it says in para 11 of TM 9-649 dated May 1952. Bury 'em in a trench about 8 inches wide and at least 10 inches deep. Grade the bottom of the trench to a low point for water drainage and put in a 6-in layer of sand or cinders.



## HOLD THAT MUSCLE



Forget the strong arm stuff when it comes to tightening the two extractor plunger locking screws into the breechblock on the M2 series 90-mm AA gun.

Too much muscle with the wrench causes the end of the screw to mushroom in the breech ring. Once this happens, it's darn tough to remove the screw. Could mean the Ordnance people will have to drill the thing out.

## KEEP IT GALLOPING

Five horses are better'n none. And if you're not kind to the five-horsepower motor on your 120-min M1 gun, you may be out a motor.

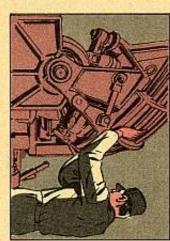
Some guys are running the five horses into the ground because they're not handling the rammer tray the right way.

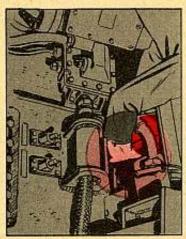
They lower the tray by hand and then try to raise it with power. That causes the motor to burn out because too heavy an initial load is put on it.

The motor already has a heavy load to start off with because of the flywheel it turns. So when you set the rammer tray in operation without letting the motor first hit top speed, you're asking too much of the five horses.

What you should do after lowering the tray by hand is to raise it the same way—by hand.

And remember: Always have the motor revving at top peak before you give it a load to carry.





## FOR THE RECORD

Whenever you send your gun back to Ordnance for anything, make sure that gun book (Weapon Record Book) goes along. That book is the gun's record—its bible—and should go wherever that gun goes.



### NEVER MIX 'EM

You may be good at mixing fire, water and soda for the boys. But be careful what you do with parts of the .30-cal M37 machine gun.

Mix certain frame locks and triggers and you're liable to make somebody look like a sieve, what with the chances of a runaway weapon developing.

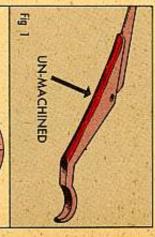
The machine guns which may turn your hair gray are some of those which have serial numbers below 20344.

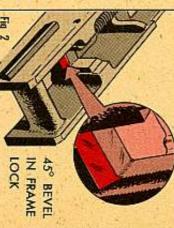
DA MWO A89-W1 (3 Feb 56) requires that the triggers with rough undersurfaces (Fig 1) getreplaced with triggers having a machined undersurface.

In case the trigger in your gun hasn't been fully machined, your best bet is to see about getting the trigger replaced by one of the triggers in MWO Ord A89-W1. You'll want to see the MWO change, too; it provides for still more improvement on that trigger.

The frame lock in the same guns has a 45-degree bevel at the spot shown in Fig 2. This bevel doesn't affect performance.

You may be in good shape even though your gun has a serial number below 20344. See that star-like mark next to the model number in Fig 3? The mark means the faulty trigger has been replaced.







## PETERED-OUT PARTS?

Been talking in your sleep 'cause you can't keep the right headspace adjustment when you fire your .30-cal M1919A6 machine gun?

Chances are a new barrel or barrel locking spring may mean getting back some of that lost sleep.

When you fire the gun long and often, and take it apart and reassemble it a lot, the spring and barrel locking notches take a beating. The spring loses its oomph and the notches wear down. Either trouble, or both together, will cause the headspace to go out of whack during firing be-

You can get a new barrel by asking for Ord Stock No. A006-7148400 (FSN 1005-714-8400). Getting a new barrel locking spring is a job for your armorer-artificer. He gets it by requisitioning (FSN 5340-614-7230).

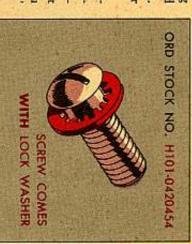
cause there's no tension on the barrel.



### USELESS TWIST

No sense in your always tightening the screws on the solenoid support used with the .30-cal machine guns on tanks. Not when your trouble is a missing or worn out lock washer.

Your fix is to requisition Screw, assembled washer (Ord Stock No H101-0420454). Take a gander to the right-in case you've lost both screws and don't know what you're looking for. As you can see, the screw comes "equipped" with the lock washer.



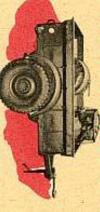
# You Can Saddle Up And Hit the Road With...

# CHEMICAL FOUR FO

Mounting your smoke generator (M3-series) and fog oil drum to a Jeep or 1/4ton trailer is a lead-pipe cinch with these two new saddles that're waiting for you.

One of the mounts, the M2 (FSN 1040-347-2434) is for holding your generator in a Jeep or trailer. And the other, the M3 (FSN 1040-049-5462) is for cradling a 55-gal fog oil drum in a trailer. They'll come to you knocked down, but they're easy to put together and all the hardware's provided in the wooden box they come in. Here's a run-down on attaching the mounts to your transportation:

## IF YOU'RE USING A TRAILER





Place the assembled mounts in the trailer as above. The M2 is positioned 4 inches from the front end of the trailer and the M3 10 inches from the generator mount. This gives the trailer a balanced load.



L. Drill  $\chi_6$  -in holes in the sides of the trailer to match the holes in the end pieces of the mounts. Note: Drill only two holes at each end for the M2. The M3 takes four holes at each end.



Secure the mounts to the trailer with the capscrews.



Load the generator so that its frame seats inside the mount's spacers. Hook the wire ropes to the top frame of the generator and tighten the turnbuckles to hold it in place.

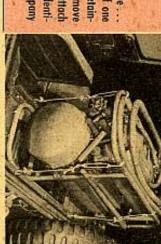


Anchor the fag oil drum to its mount with the chair-and-load binder attached. Just hitch up your horsepower and you're ready to roll.

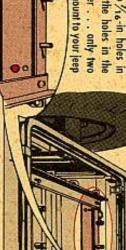


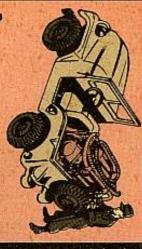
### TO USE THE JEEP...

Toke out the Joep's back seat. Take care here .... fold up the seat and take the retaining dip off one retaining brucket to ease out the seat. Put the retaining dip back so it wan't get misplaced. Then remove the frame spring retainer from each side and attach them to the seat for safe keeping. Put a tough identification tag on the seat and turn it in to company supply for storage.



2. Place the assembled M2 on your Jeep. Mark exactly where to drill the two ½,6-in holes in each fender to match two of the holes in the mount's end pieces. (Remember . . . only two holes for each end). Secure the mount to your jeep with the capscrews.





3. Mount the generator to the frame and secure it with the wire ropes. That's all there is to it.



NOTE: A minor cutting job's needed on the M2 mount when it's anchored on the Jeep. Here's all it is. Before assembling the mount, have the slots in the mount's side pieces lengthened one inch. This'll let you squeeze the M2's frame to fit just right between the Jeep's fenders.

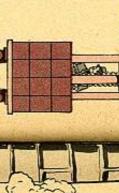


N-E-V-E-R ... | N-I-X ... | | N-E-V-E-R ... | | | | | | | | |

a forklift truck. You'll damage the carry and stack ... it's not for a shove. A fork's made to hoist, be even the friend who asked for the hydraulic mechanism and mayforks and possibly the mast frame, NEVER push another vehicle with shovin' stalled neighbors.



your load on the forks, assembly. Then center spaced from the center of the mast Make sure your forks are equally distort the fork assembly or break it. fork. Unbalanced hoisting will likely NEVER lift a load with only one







t Care and O.

cap safety-strainer when refuelingthe strainer, but should you accidentally provoke a spark the unguarded fuel You can refuel a fork faster without restraining protection of the safety tank will blow up in your face. The remove the fuel-fillwhich won't be near dry sometimes draulic system may turn up the daily and weekly checks a hystitute for dipstick checks. Without ates ... but guess work isn't a substands from the way the fork operable to tell exactly how the oil level leakage to the shop. You may be NEVER neglect to report excess system leaks daily, oil level weekly. IEVER fail to check for hydraulic



healthy for

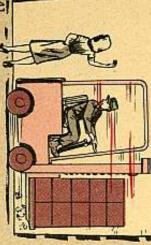


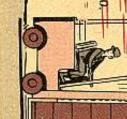






backwards. over it, drive When your load is too high to see pallet and not the material on it, pen to bump a stack, you'll hit the NEVER travel with the forks them low enough that if you hapraised more than a few inches. Keep







forming the operator's prepark a fork without per-

not sate.

you stop or park the truck. It's just

for. Slipping the clutch in high gear

movements is sudden

fork. NEVER start off or only authority for using the

vehicle, the DD 110's your ord.) Like with any other Equipment Operational Recwithout a DD 110 (Vehicle and NEVER operate a forklift truck







SHOVEL OPERATORS'LL

Trying to make a mole-hill out of a mountain when shoveling, loading, hauling and dumping?
Then here are some things to keep in mind

that'll make your job easier and help you take better care of your equipment.

Most people think it's a simple job to use a shovel on a pile of dirt and load

up a steady stream of trucks. Not so.
Just like everything else, there's
a best way of doing things.

a best way of doing things.
One important part of

any leveling job is the positioning of the shovel.
You want to keep the swing as short as

The shorter your carry to the dump truck, the more efficient your operation'll be. First of all, keep in mind that you should load over the back of the truck. Take a look at Fig. 1 and see how your shovel's tracks are parallel to the bank of dirtit's moving. With the shovel located in this position, the trucks can wheel right in, take on the load, and move out without having to back

and your shovel's tracks are not parallel to the bank. In this operation, the trucks have to back in to take on a load, but there's room for two trucks to be in position at the same time. So, while one's being loaded, the other's moving into position. All the shovel operator has to do when he finishes filling one truck is swing his shovel to the opposite side and load the other one.

By using these two methods, you'll not only be doing

move into position with little

or no lost time.

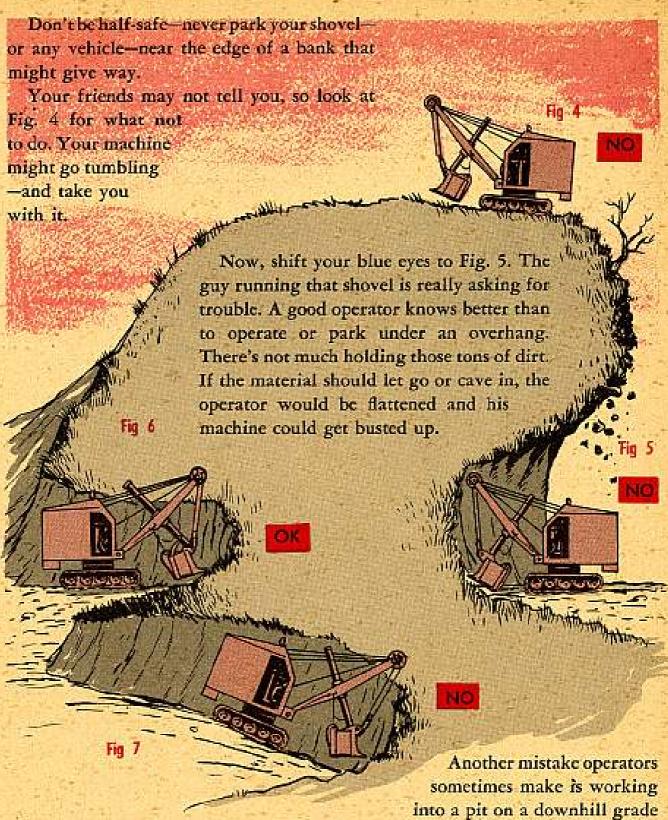
up. Then another truck can

on a dump truck, too. Yep, if you dump the dipper's too high above the truck, axles or damage the truck beds. Fig. 3 As a shovel operator, you have a lot a dipper full of dirt into a truck when able to keep the area clean and reduce an efficient job and making the most to do with preventive maintenance shows the right way and the wrong you're liable to break springs or of your time, but you'll also be the need for graders and dozers. And another thing ... never swing a loaded shovel over way of loading a truck. a truck cab-bring it in trom the rear.

43

Fig 3





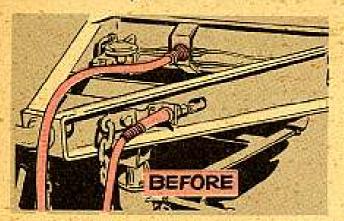
like in Fig 7. You might not have too much trouble in dry weather, but should the rains come, that pit'll soon look like a lake.

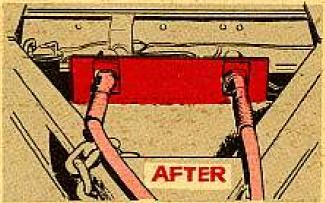
Besides building your own swimming pool as you go along, you're using the shovel wrong. It's not made to work downhill—and it's not designed to work uphill. Be on the level all the time, like in Fig 6.

So, plan your job and you'll get it done faster and easier, and you and your equipment'll come through with less wear and tear.

### WHOLE, NOT HOLEY HOSE

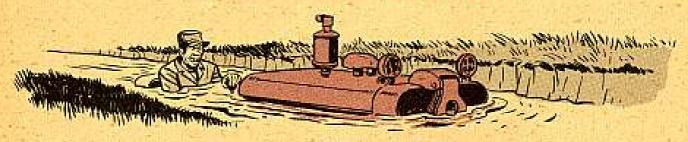
Sure shouldn't be any more trouble with those rubber air hoses on the M200 trailer—not if you've done what MWO Eng 9057-1 tells you to do.





The MWO (it came out many reveilles ago) raises the hoses so they don't get wedged between the trailer draw bar and the bumperettes of the prime mover when you back up.

### TAKE THE HIGH GROUND



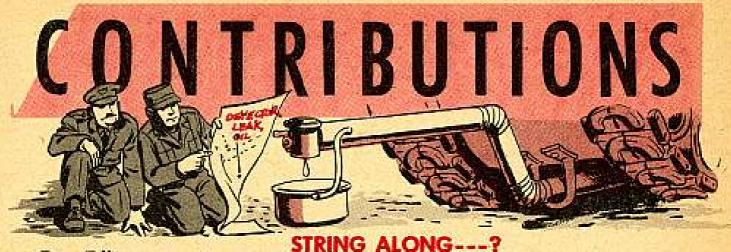
When you're leaving your piece of heavy equipment for the day, make sure you've parked it in a high, dry spot where the rain can't form a pool around it. The reason this comes to mind is because of what happened to one unit located thown along the southern coast.

One of the operators took a D8 tractor down into a pit where a shovel was working to get fuel. (The fuel drums were down in the pit handy to the shovel.) After fueling the tractor, he left it there for the night.

That'd probably been all right in most cases, but that was the night a hurricane came swooping along the coast. When all was said and done, all you could see of the D8 was its exhaust stack stickin' above the water that had filled the pit.

This same unit loaned another outfit a tractor only a few weeks ago to doze out a trench. They got the trench dug all right, but they left the tractor in it the evening they finished. Along came three days of rain, but this time the water was only up to the seat cushions.

So, you see, smart operators park their equipment on high ground. Keep this in mind and you'll be classified as a smart operator, too.



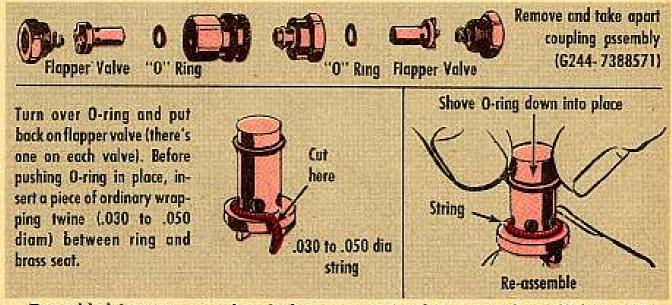
Dear Editor,

After the power pack on a medium tank has been pulled a few times, you may find leakage starting in the main engine fuel line quick-disconnect coupling. When it's disconnected, that is.

The leakage comes from deterioration of the flapper valve O-ring gasket.

This O-ring isn't listed in the SNL's and can be mighty hard to get your hands on—in some field situations, at least.

When no replacement's available, we find the following fix takes care of the problem.



For added insurance against leakage, a couple of extra touches will help: (1) before replacing the ring on the valve, smooth up the deteriorated side with an emery; and (2) while you've got the coupler apart, stretch the pressure spring a little—to give it more force for scaling.

OCMT Boyde C. McClintock Fort Stewart, Ga.

(Ed Note-Your expedient's OK in a pinch, but only in a real pinch. Can't string along with it unless you just can't get the repair kit that's designed for that coupler job. It's Ord Stock No G244-8720219.)

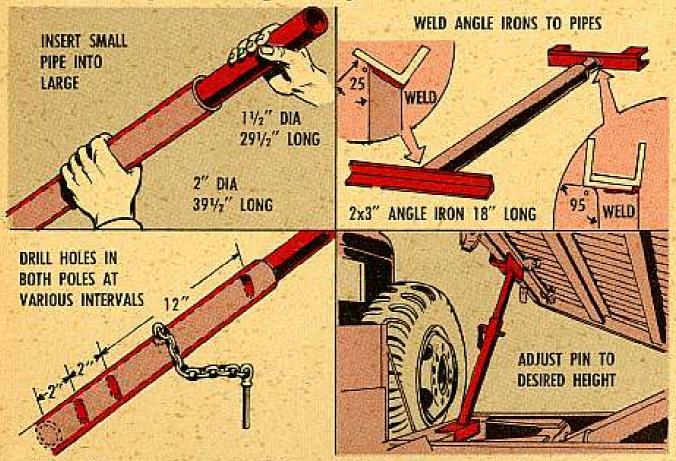
### DUMP BRACER

### Dear Editor,

Working under the dump body of your dump truck can get mighty dangerous, especially if the safety braces can't be raised into position to hold that body. There is always the chance that the body'll decide to come down—and you can see what would happen to a guy working under there if he had no safety braces in place to hold it.

Now, the question is—when is it that you can't use the safety braces? The answer—when you can't raise the body high enough to pull those braces into place... like when you're working inside a shop with a low ceiling that limits the dump body height.

We've made up the following fix to stop those accidents:



Now, when a guy runs up his dump body, he can put this safety gadget under the body so the base is resting on the subframe cross member and the other end is resting against the underside cross sill of the body. Raise or lower the dump bed to provide a snug fit for the safety gadget, so it won't slip and maybe crown a guy.

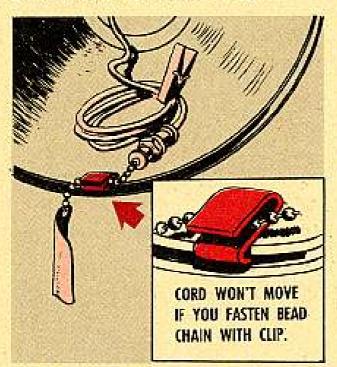
> Mr. Arlo P. James Fort Ord, Calif.

(Ed Note-When you've got special local conditions like you describe, this Safety-First extra should do the trick.)

### CLIP FOR YOUR PLUG

Dear Editor,

You had a good idea in Issue No. 46 of PS Magazine—the one about clipping a clothes-pin on the Nike booster igniter cord so's the cord won't hang across the nozzle. We took the idea a step further.



First . . . we got a sheet of aluminum (Ord Stock No H011-0802250 gets you 3-sq ft worth), then we cut out some strips — ½-in by 3-in — and formed S-shape clips. We were all set once we fastened the bead chain by slipping the clip between the shroud and the nozzle. We made enough clips for every missile in the battery, naturally.

Now the cord won't move when the rail is raised and the red flag is always in plain sight.

MSgt L. J. G.

(Ed Note-Looks good to us, but don't forget to file the rough edges of the aluminum strips to save wear and tear on your fingers.)

### TARP HOOKS

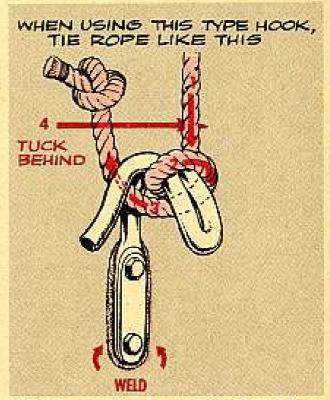
Dear Editor,

I've had lots of failures on the GMC M135's and M211's, where the hook, tarpaulin lashing, G749-7064246 breaks at the upper rivet hole.

We find that running an inch of electric weld bead on each side of the hook above the hole will prevent this.

Or, if the hook has already broken, we replace it with the Dodge hook, G741-7032641, which is made of stamped metal and is much stronger. These hooks are still holding for us.

WO Robert B. Phillips Jefferson Barracks, Mo.



(Ed Note—That Jemmy hook is in herently weak at the rivet hole, but have you tried to get the "new" hook (Ord Stock No H017-0587499) listed in Group 1810 of Ord 7 and 8, dated July 55? The new hook is much stronger than the ol' one.)

### Connie Rodd's BRIEFS

### A dose

You men who've been looking all over for a stock number for shock absorber fluid had better jot this where you'll find it. It's now called Castor Oil, technical: heavy, shock absorber. FSN 9150-261-7456 will get you a gallon of the stuff.

### Paint, right, the

The right paint for interiors of combat vehicles is Enamel, synthetic, gloss, white. FSN 8010-298-2286 gets you a quart; FSN 8010-286-9087, a gallon. Note the change in nomenclature and stock numbers in the "OD'S OUT" article, PS 47, page 32.

### Got a signal?

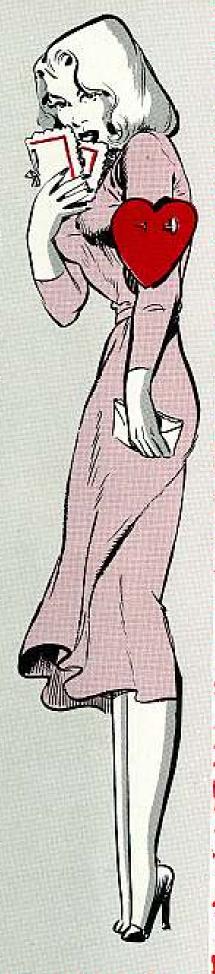
You, who've been in a dither tryin' to figure out what the M185 and M238 trucks are, can relax. They're Signal Corps Repair Shop Trucks. The M185 is the 2½ ton, 6x6, M109 with load applied, and the M238 is the M220 with load applied. TB Ord 444-11 and C1 gives you the dope on this.

### For M41 tankers

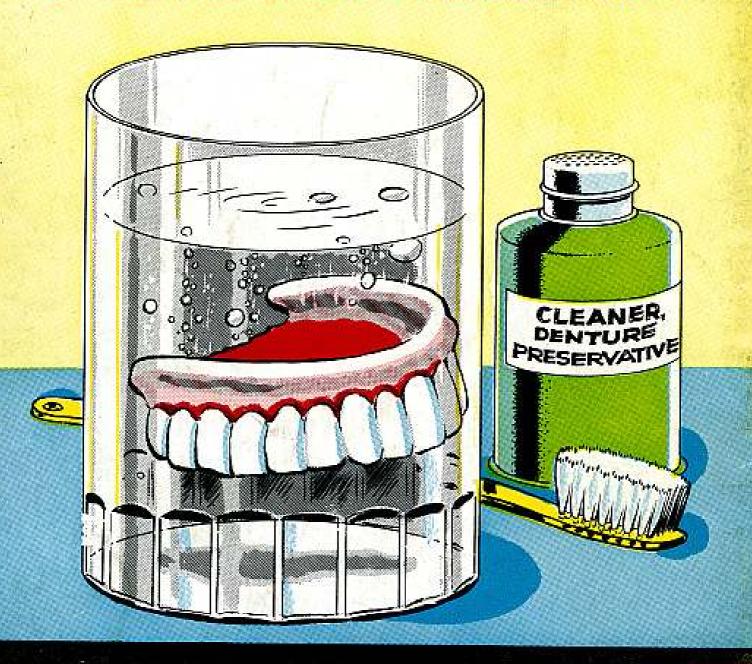
You light-tank crewmen (M41 and M41A1) can still get copies of that special light-tank edition of PS. It's PS Issue No. 14. Just send Sgt Half-Mast a card telling him how many copies you need.

### M96 fex

Bearings 700015 and 700026 are probably to blame if the M96 telescope mount on your M44 self-propelled howitzer is on the blink. Some of 'em may not have been lubed during manufacture. For good operation, have Ordnance lube those bearings. If they're shot, Ordnance will replace 'em.



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