

*CWO Rogers*

Issue 106

**PS**

1961 Series

**THE  
PREVENTIVE  
MAINTENANCE  
MONTH**



*Will Eisner*



# PS

THE  
PREVENTIVE  
MAINTENANCE  
MONTHLY

Issue No. 106

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PS wants your ideas and contributions, and is glad to answer your questions. Names and addresses are kept in confidence. Just write to:  
*Sgt. Alfy Mast,  
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# PM Pays

Good PM doesn't cost—it pays. Pays in better operation . . . fewer gigs. In the showdown it can pay off in victory.

Makes sense, then, that you make PM a regular habit . . . second nature. Like, for instance, when you're running a vehicle, or firing a gun, or doing any one of the 1,000 things your MOS calls for.

Double-check while you're doing. PM starts with inspection and ends with performance. Make every operation a sort of perpetual Be-Your-Own Inspector deal.

If your equipment doesn't sound right, or gives off a funny smell (when it's not supposed to be funny) or feels

too stiff or too loose . . . or if the instruments tell you everything is not quite copasetic:

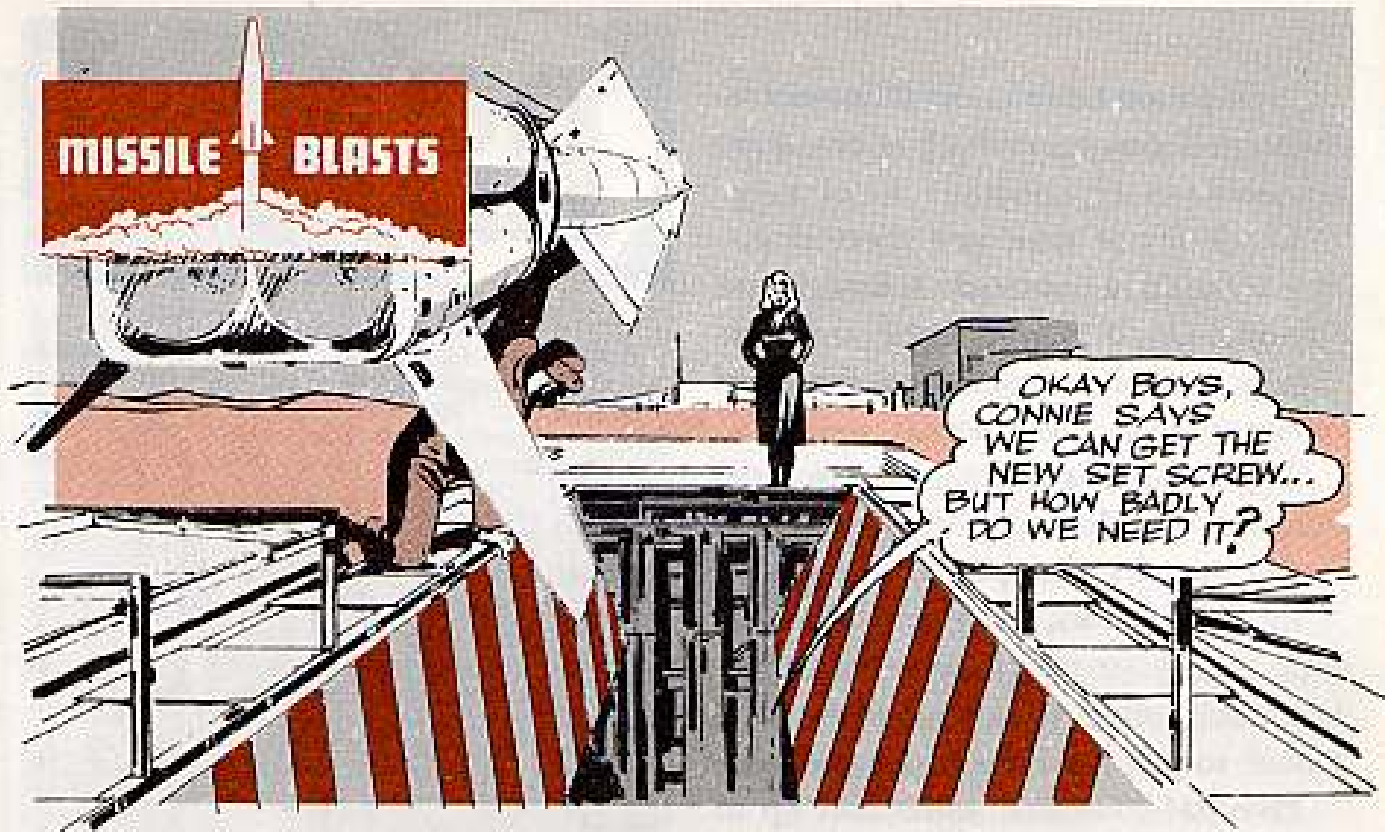
Check it out then and there if you can. Or make a note to do it first chance you get. Or, if you don't have the authority to fix it yourself, pass the word along to the guy who does.

The important thing is to catch the defect early. Most anything going bad can be cured if it's spotted in time.

In other words, keep your senses in tune with your equipment: Eyes, ears, nose and hands to detect and fix, and mouth to yell for help if you need it.

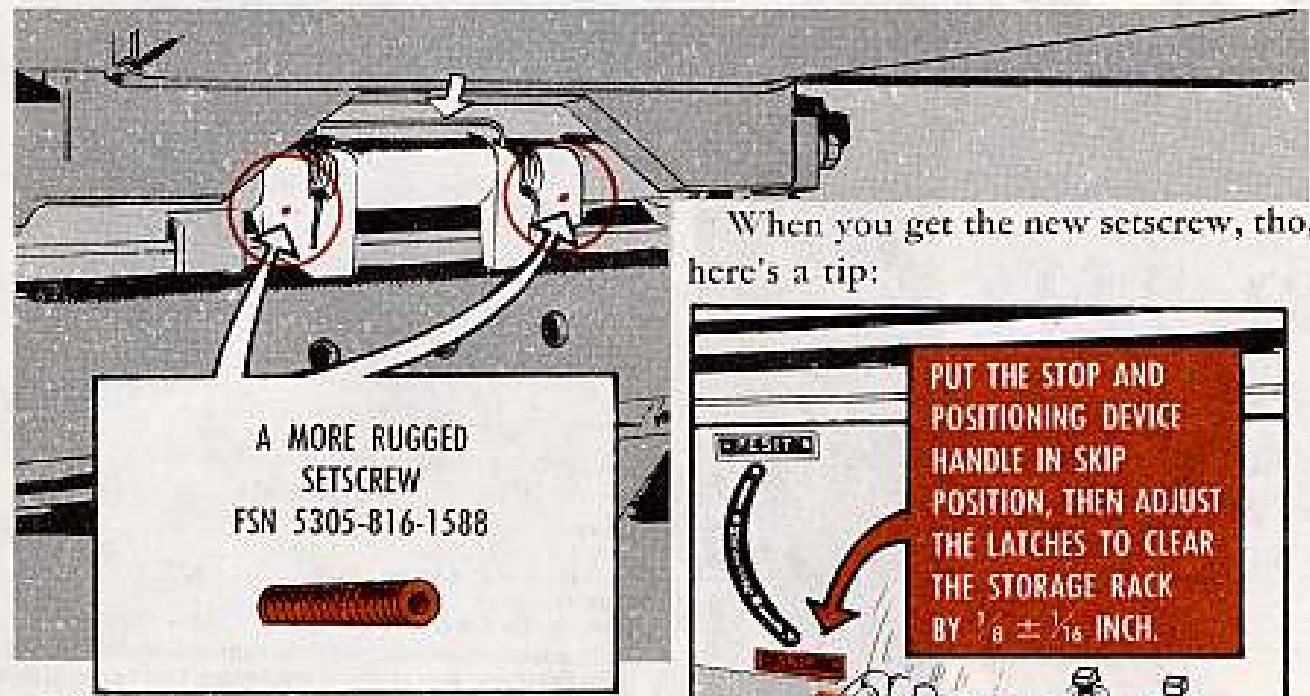
Five PM-conscious senses add up to the best kind of sixth sense—plain common sense.





## NEW SETSCREW OK'D

Setscrew, FSN 5305-655-9873, is gonna be released from duty as part of the Nike-Hercules launching and handling rail device's stop and positioning latch. The reason: A more rugged setscrew has been given the nod . . . it'll come under FSN 5305-816-1588.

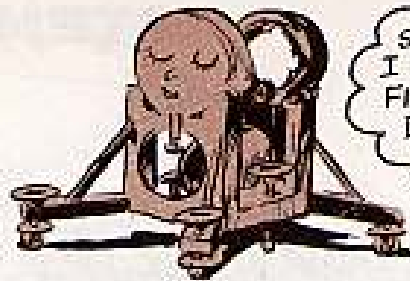


When you get the new setscrew, tho, here's a tip:

But don't rush for the newcomer right now 'cause the change'll be sorta easy-like. Replacement will be made on an as-needed basis . . . until a good supply is on hand.

A light coat of oil on moving mating surfaces will help.

# BE YOUR OWN INSPECTOR ON ... GUIDANCE AND CONTROL SECTION DOLLY



SIGH, WISH I WAS IN THE FIELD, THEM DONUT DOLLYS GOT IT MADE!

No doubt about it . . . the guidance and control section dolly at your Nike-Ajax site is like a 275-pound lineman, unsung, but mighty important.

Nothing can be done 'bout making you an All-American guard—but here's a quick guide reckoned to help you keep your dolly in top shape.

As ya' know, trouble spots that'll put your dolly out of commission, or make it unsafe, and scream for fixing toot-sweet, are in **bold type**.

OK? Let's go. Be your own inspector.

First, chug 'round your dolly . . . keeping your orbs peeled for things like cracked welds and split seams. On your first eyeballing tour, check for rust spots, corrosion and places where the paint is chipped or faded.

Make sure it's lubed. If it's dirty, use a little elbow grease.

## THE SECOND TIME AROUND LOOK FOR THESE TROUBLE SPOTS.

1. HANDLING RING BRAKE—**Clamp loose, busted**, arm pad worn, twisted, battered, missing, lock screw turns hard, threads stripped, handle loose, slips, bent.

6. HANDLING RING ASSEMBLY—**Rings twisted out of line**, don't revolve freely, rubber pads worn, **missing**, loose, flathead pivot pin loose, **missing**, locking assembly bent, **broken, missing**, cotter pin **missing**, ring rollers loose, axle bolts **missing**.

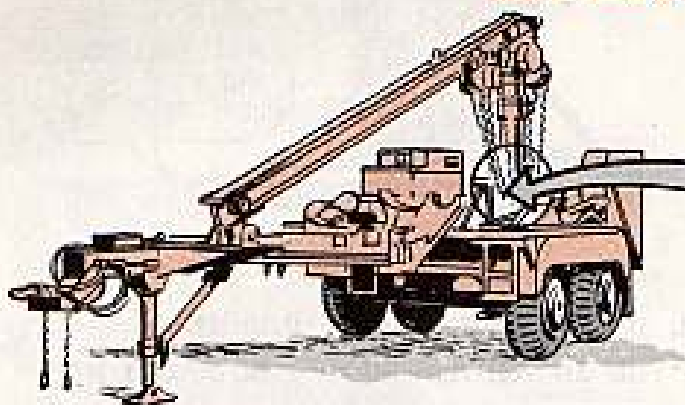
5. DUMMY MISSILE BODY—Bent, dented, locking bolts loose, **busted, missing**, flange holes split.

2. SWIVEL CASTERS—Worn, **chewed up**, fittings battered, axle bolt bent, nut loose, **missing**.

3. DOLLY BRAKES—Turn hard, pads loose, beatup, missing, threads stripped, dowel pin loose, split.

4. LEVELING HAND SCREWS—Loose, bind, threads stripped, dowel pin loose, split, leveling screw bolts loose, sheared, **missing**.

## STENCIL IT



Your support unit's been to your Honest John outfit and gone.

And... seeing's how they applied MWO 9-1055-208-30/3 to your M405 handling unit... you've now got yourself some boxes fastened to different parts of the handling unit.

You have them, that is, if your handling unit has a serial number from 73 through 130. Seeing as how the boxes

are for chain stowage, you don't need them on the other serial-numbered handling units. They already have places to put the chain.

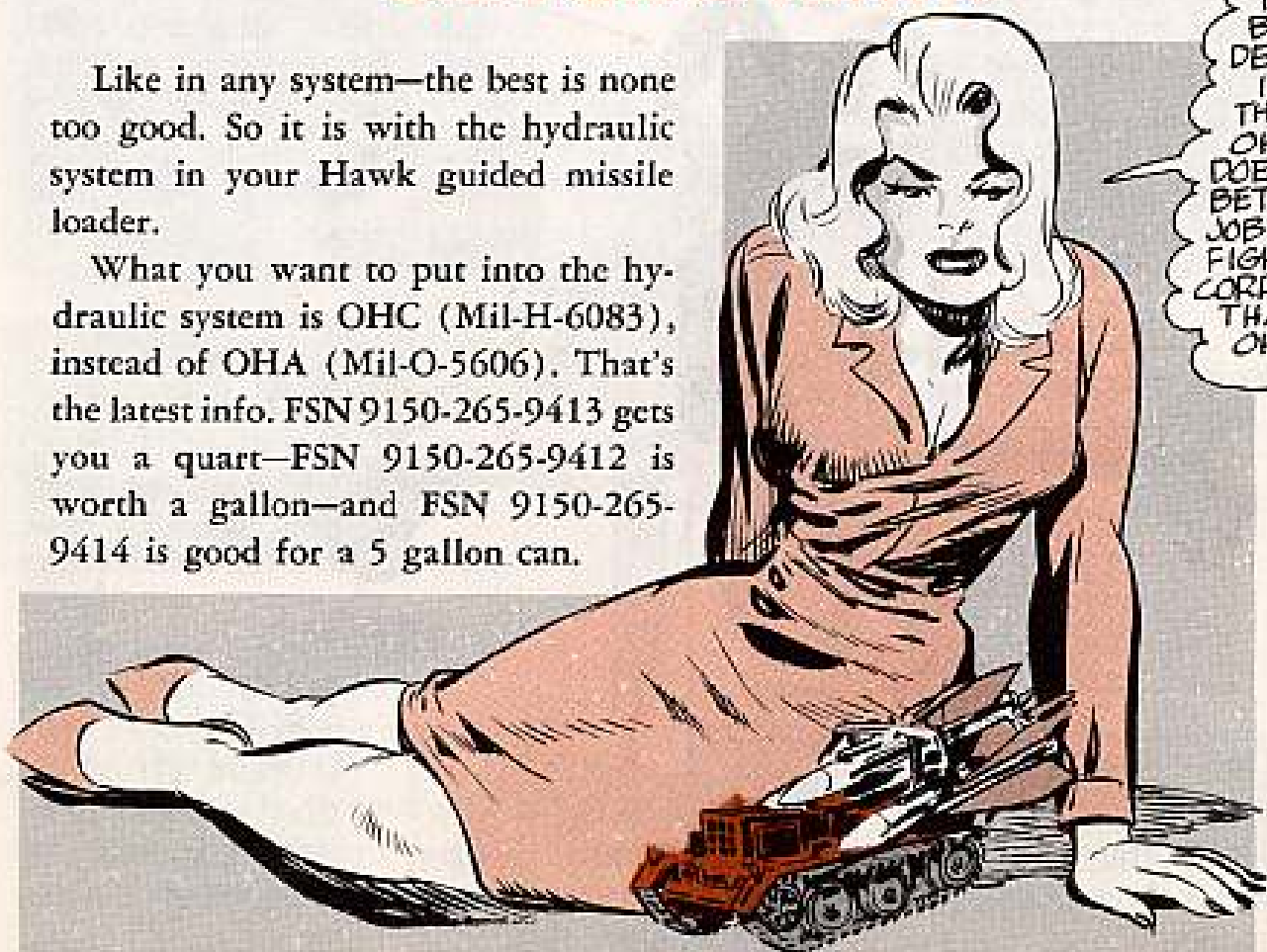
Anyway... there's one sure way to get your crew to use the MWO—installed boxes for the chains.

That's to stencil, in letters one-half inch high, the words "CHAIN STOWAGE" on the front of each box.

## OIL FOR A HAWK

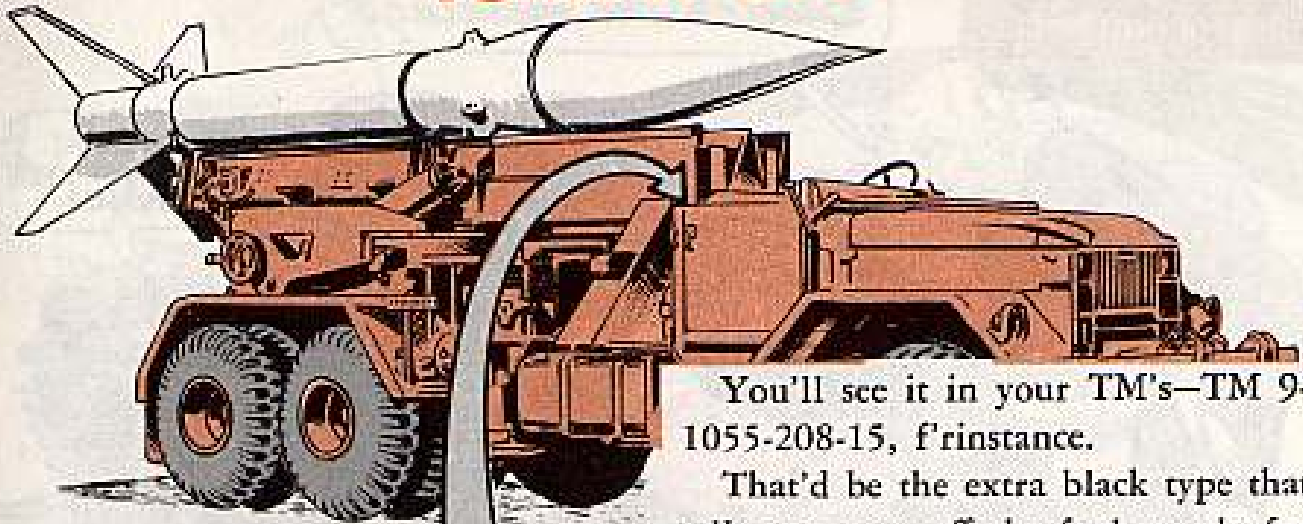
Like in any system—the best is none too good. So it is with the hydraulic system in your Hawk guided missile loader.

What you want to put into the hydraulic system is OHC (Mil-H-6083), instead of OHA (Mil-O-5606). That's the latest info. FSN 9150-265-9413 gets you a quart—FSN 9150-265-9412 is worth a gallon—and FSN 9150-265-9414 is good for a 5 gallon can.



THE BIG DEAL IS THAT OHC DOES A BETTER JOB OF FIGHTING CORROSION THAN OHA!

## TURN IT OFF



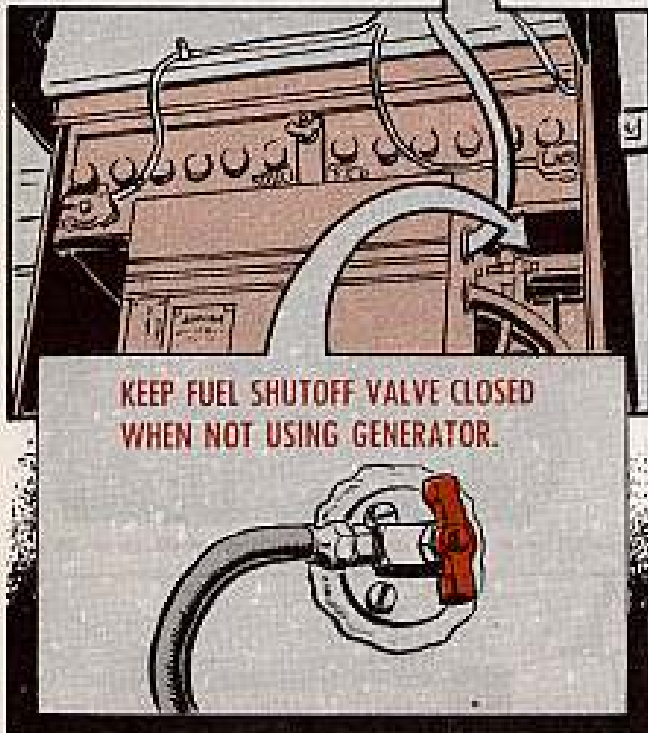
You'll see it in your TM's—TM 9-1055-208-15, f'rinstance.

That'd be the extra black type that tells you turn off the fuel supply for your Honest John M25 generator set whenever you move the equipment the generator is sitting on from one spot to another.

The fuel shutoff valve wants to be closed when the generator's not operating 'cause the bouncing the generator gets from moving around might shake enough of the fuel into the engine to cause flooding.

And flooding can lead to a coupla things . . . hydrostatic lock or — worse for the guy who's in the way—a fire or explosion.

'Nuff said?

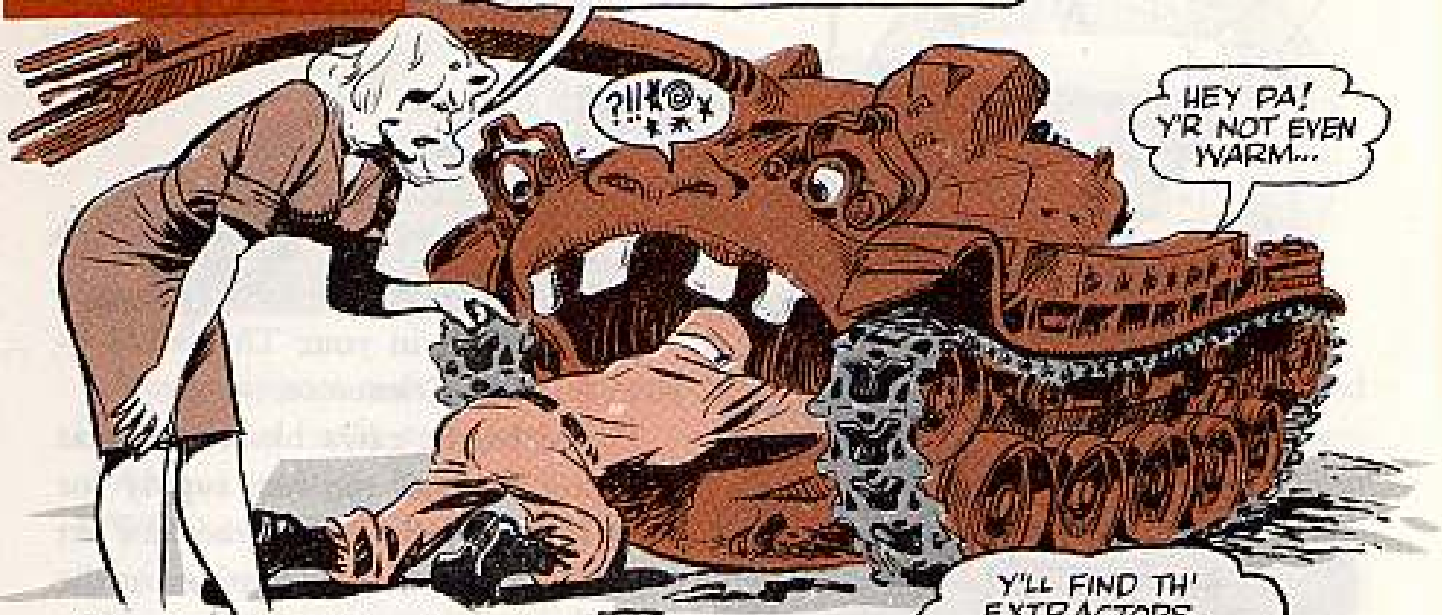


## WHO GETS PS MAGAZINE?



Your unit can. It can get as many copies of PS Magazine as it needs. And every month. How? Make sure your local Publications Section knows how many copies your unit needs. Then your Pubs Section can order enough copies for everybody on DA Form 12-4 from the pubs depot.

## Switch the bushings

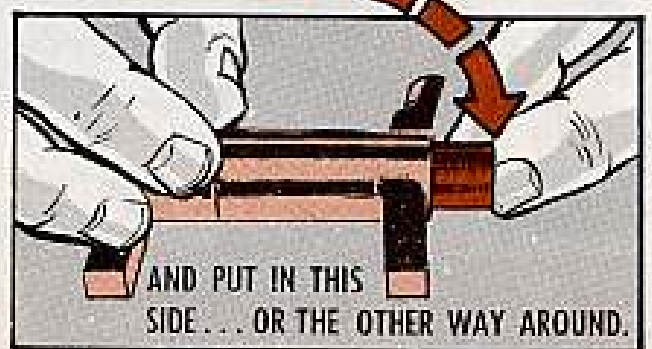
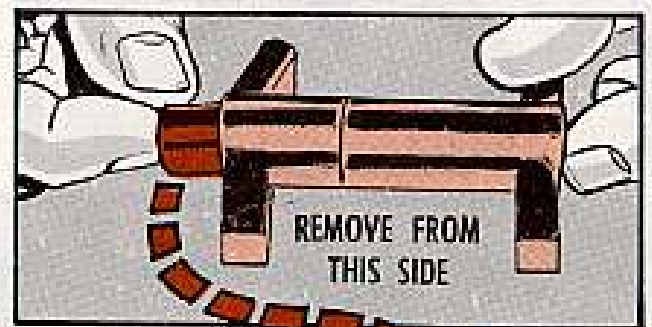


There's no arguing about it.

You look on page 108 of TM 9-2350-202-20P (May 1960) and you'll see mention of an extractor kit for your M42 or M42A1 SP twin 40-mm guns. The idea of the kit is to give you a right hand and a left hand extractor—with the bushing in the right extractor—for each gun.

The trouble is . . . there've been so many extractor assemblies in the supply system, they've never been put into the kit. So . . . when you requisition the kit under FSN 1010-566-3790, you'll get an assembly which includes a right hand and a left hand extractor, with the bushing in one side or the other of the extractor. There's no telling which side of the extractor the bushing'll be in. But there's a way out.

Say you need an extractor assembly for the gun on the left side, but you get an assembly that has the bushing rigged for using in the gun on the right. All you have to do is drive out the bushing and put it in the other side of the extractor.

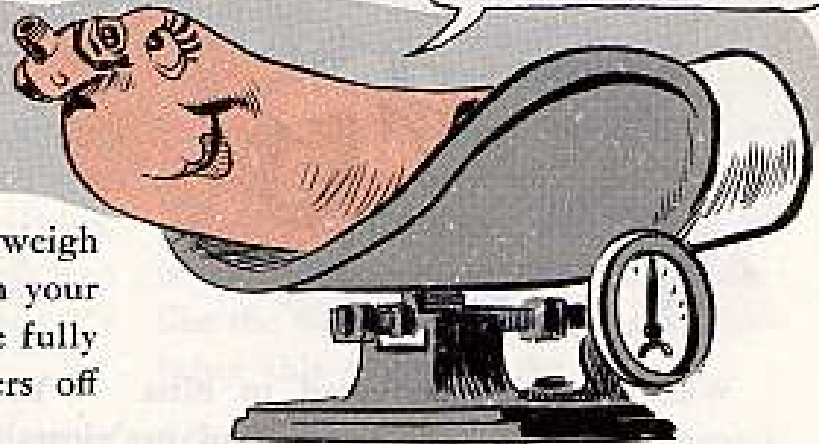


The same goes when you need an assembly for the gun on the right, but get one for the gun on the left side.

## Fire bottle strip

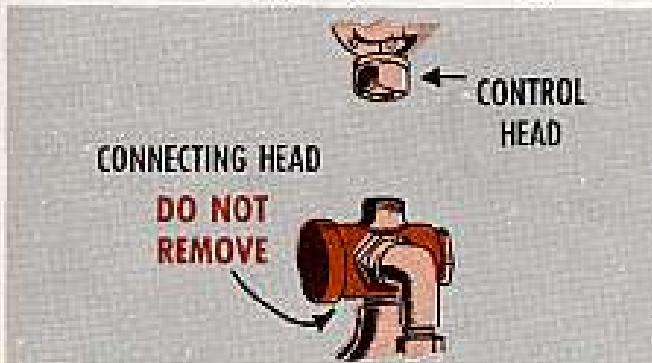


SING "A PRETTY GIRL IS LIKE A MELODY"... AND I'LL DO IT MYSELF ...



When you're getting set to weigh the fixed fire extinguishers from your tracked vehicles to see if they're fully charged, keep y'r cotton pickers off their connecting heads.

What you want to remove is the control head and the pressure lines. So . . . make like a stripper, but don't go too far.



Leave the connecting head on when you weigh the bottle like it tells you in words on page 17 of PS 101—not like the picture there shows you.

And make sure you get the word from your support before you lay a finger on this connecting gear.

## All one way

Point 'em the same way, no matter which one you get.

That's the word on front prop shafts on your G744-series 5-ton vehicles. Turn the slip yoke toward the transfer, input end . . . like it tells you in paras 211b(4) and 211d(5) of TM 9-8028 (13 Jun 55).

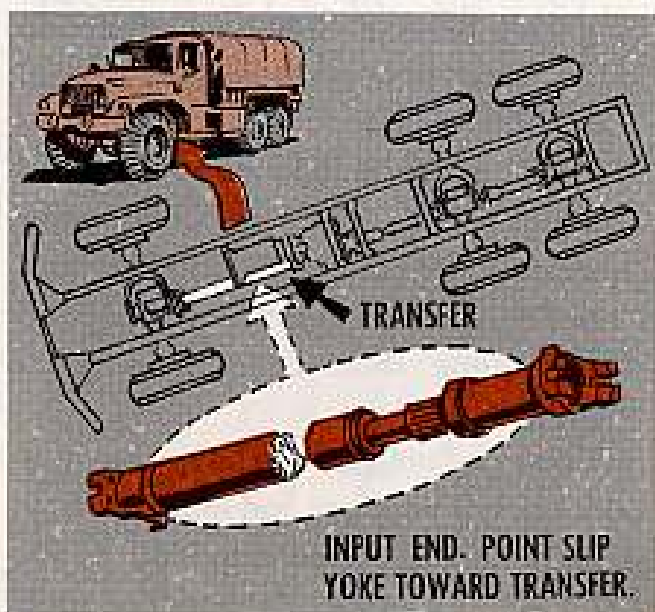
Change 5 (17 Nov 59) to the TM and PS 95, page 16, told you about two shafts by different manufacturers . . . one 3 inches in diameter, the other 3½ inches. Said one goes this way, t'other that.

Forget it. The test didn't pan out.

Whether you're installing FSN 2520-040-2340 or FSN 2520-734-8879, the

slip yoke goes to the transfer, input end.

And see that the front prop shafts are all one way on your other G744-series trucks.





## Flying snap rings



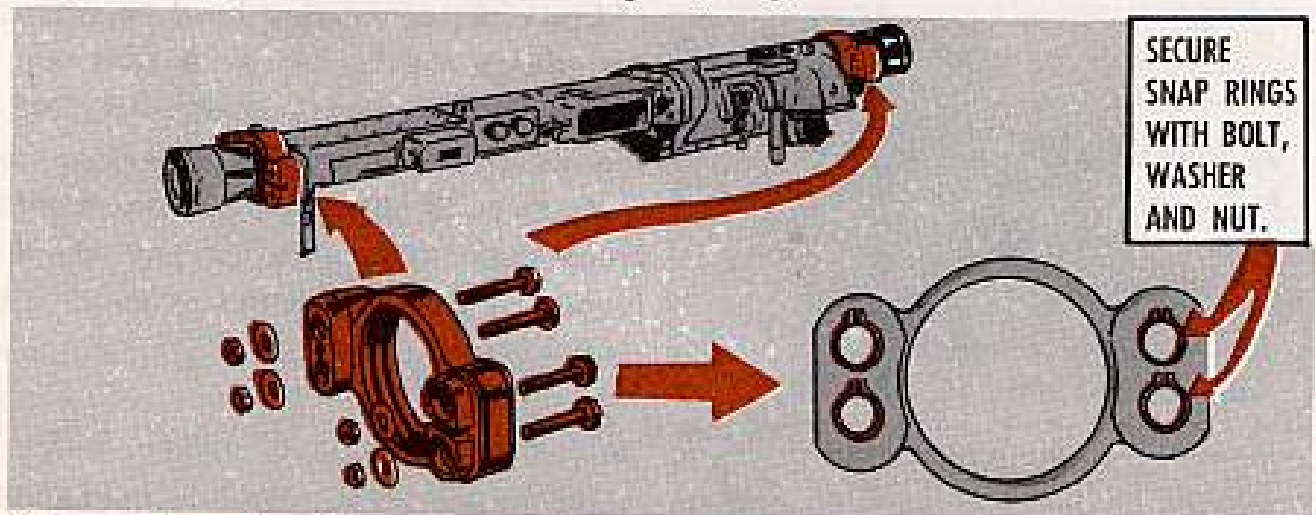
THERE  
MUST BE  
A WAY  
TO HANDLE  
'EM.



Wedding rings can lead to bliss (some say), and fight rings lead to action, but look out for flying snap rings . . . they hurt and lead to nothing

nasty habit of poppin' loose when you're installing, removing or working on the mounting brackets.

You've got no worries once the unit's installed in the M60 tank 'cause cap screws and washers stop the pins from going AWOL.



but trouble and a ride on the sick book.

Specially those snap rings that sometimes take off into orbit when the mounting bracket assemblies of certain M17C range finders are banged around a little too much.

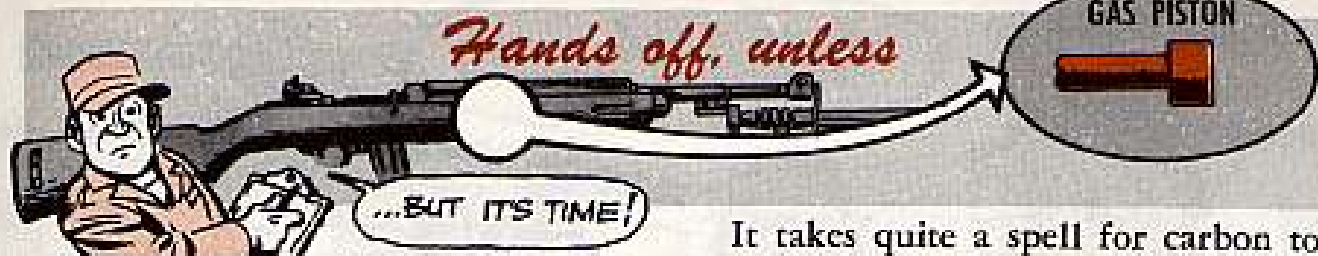
M17C range finders carrying serial numbers from 2790 to 4670 with mounting assemblies 8585469 and 8585470 are the babies for you M60 tank trouble shooters to treat with respect.

These assemblies are put together under heavy pressure and held together with snap ring retainers, FSN 5340-281-1525. The rings have picked up a

The safety caution shown will give you the same protection whenever the range finder's not installed in a vehicle or a shipping case.

The safe way? Yeah, you're way. Just insert a bolt through each of the sleeves the hex screws go into. Secure 'em tight with a washer and a nut—and you're in business.

Now you can tap the mounting bracket with a mallet to take it off the range finder, or work on a banged-up M17C without worrying about gettin' sliced up by a flying snap ring.



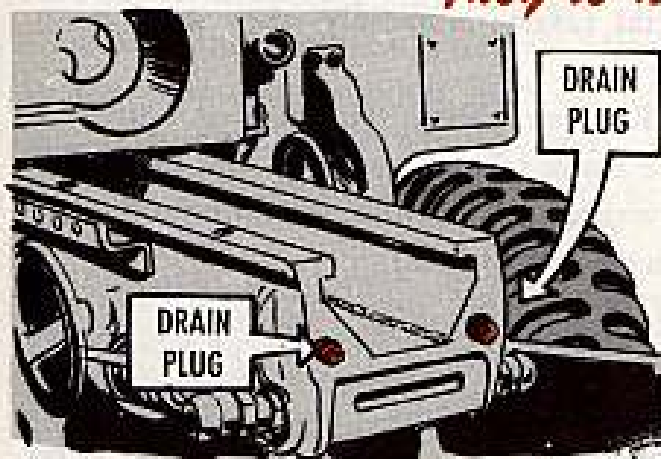
There's such a thing as the wrong kind of maintenance... and that sure goes for the gas piston in your carbine.

You don't want to remove and clean the piston just because you figure it's time for a cleaning session.

It takes quite a spell for carbon to build up on the piston. That's for true.

So... before you take out the piston... look for signs that the carbon is starting to get on the heavy side—like the weapon acting sluggish or not being able to extract the brass.

### *They're drain plugs*



There sure is a good reason for those two plugs being put at the back of the cradle on your 105-mm howitzer when it goes back to depot for an overhaul. The deal is that you remove the plugs once a month... elevate the weapon... and let any water that might be inside the cradle drain out. Do the draining more often in wet weather.

### *PM for water cans*

You just don't fuss around with 5-gal water cans. Too risky health-wise for your outfit.

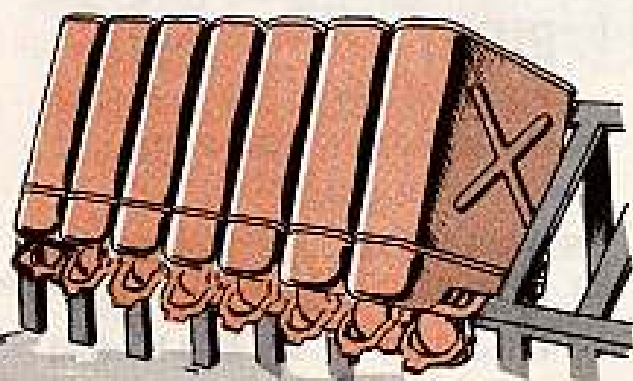
Sure, it's OK to use 'em if they have pinpoint rust spots on the inside, but any rust spots bigger'n a speck—NO! Turn the cans in pronto.

If you can't make up your mind whether the can's good or not, call in your unit surgeon and get his help.

Actually, these cans need little PM, but that little bit is mighty important. Like keeping the cans clean inside and out, checking that the parts are OK,

and storing 'em right. (TM 10-270, July 49, w/changes, has the whole scoop.)

You don't paint 'em inside (see Change 4, 9 July 59), but make sure you store 'em like Change 5 (12 Feb 60) says—with their caps off and standing upside down at an angle so no rust-making moisture can collect.



3.5" ROCKET SHOOTERS ...

*Anti-flash mask*

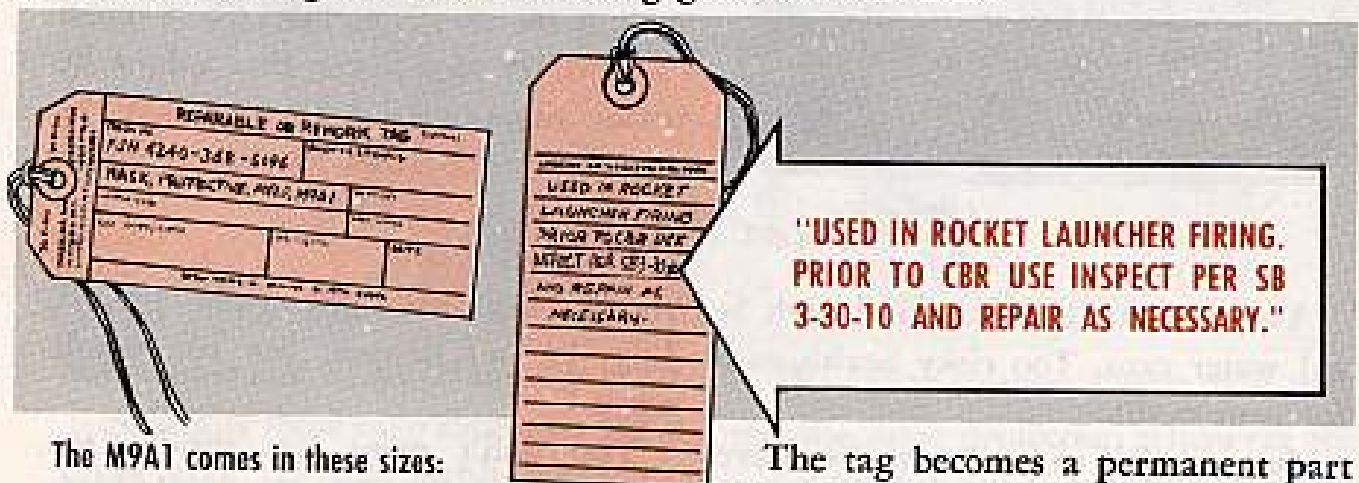


You can now use the M9A1 field mask as an anti-flash mask when you're launching 3.5-in rockets in below freezing weather.

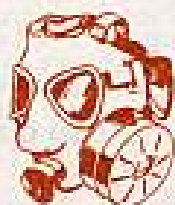
The M9A1, normally a CBR field mask, as you well know, will shield your eyes and face from the launcher's back-blast and unburned propellents.

M9A1's will be issued specially for this kind of cold-weather-firing protection ... and, you'll owe those masks a special favor ... namely—they must be tagged to show they've been on rocket-firing duty.

The tag, DA Form 10-197 "Reparable or Re-Work Tag," (or similar, sturdy blank tag), must be firmly attached to the mask's head harness. The mask's complete identification and FSN should be written in indelible ink or pencil on the front of the tag. The back of the tag gets this exact info:



The M9A1 comes in these sizes:



**RIGHT**



**LEFT**

Small

FSN 4240-368-6098

FSN 4240-368-6097

Medium

FSN 4240-368-6096

FSN 4240-368-6095

Large

FSN 4240-368-6094

FSN 4240-368-6093

The tag becomes a permanent part of an M9A1 until the mask is inspected and repaired.

You'll also owe these M9A1's the normal good care they require, but the strict inspection checks required for CBR use, won't apply when the mask's used for anti-flash protection. As long as it gives you good eye and face protection, and it's clean, an M9A1 will be OK as an anti-flash mask.

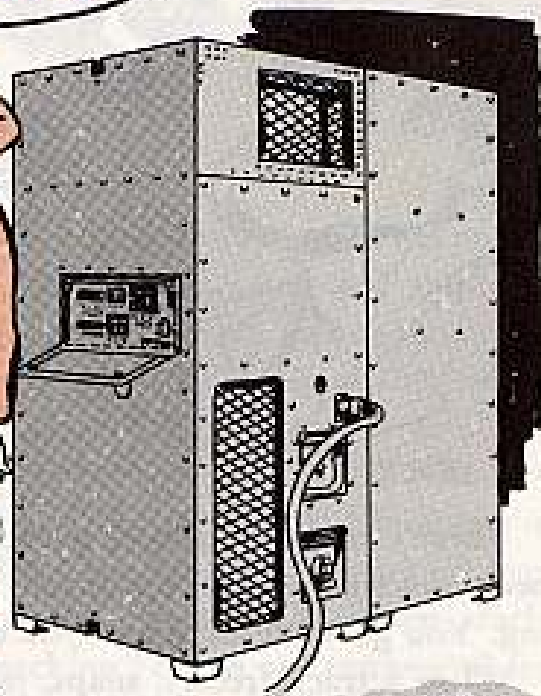
You can learn a lot about the M9A1 from TM 3-522-15 and SB 3-30-10. Its repair parts manual is TM 3-522-15P.

## OIL THE AIR FILTER

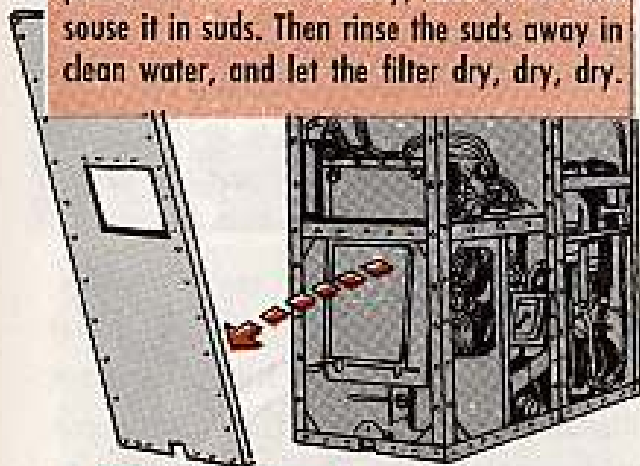


So you've got a Fairchild Stratos VEA4-3 air conditioner on your PM roster? And your customers growl because it doesn't put out cooled air like a 38,000 BTU beast should?

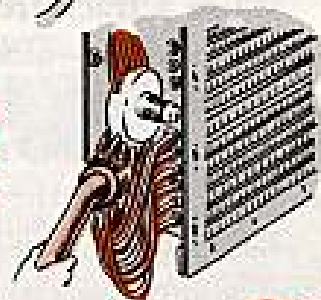
Your customers could be right—if they're running it with a dry air filter in the evaporator section. Fact of the matter is, those filters are supposed to be "wet"—which means you've got to oil 'em:



Take off the evaporator section right side panel. If the filter is dirty, take it off and souse it in suds. Then rinse the suds away in clean water, and let the filter dry, dry, dry.



If the evaporator coils are dirty, treat 'em to a vacuum cleaning while the filter's drying.

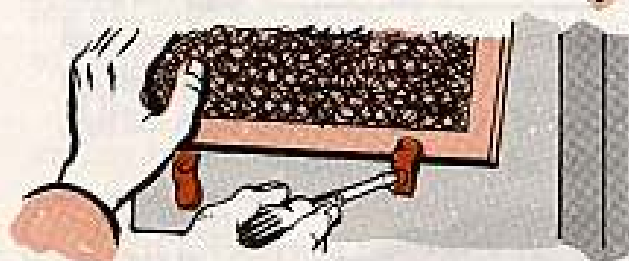
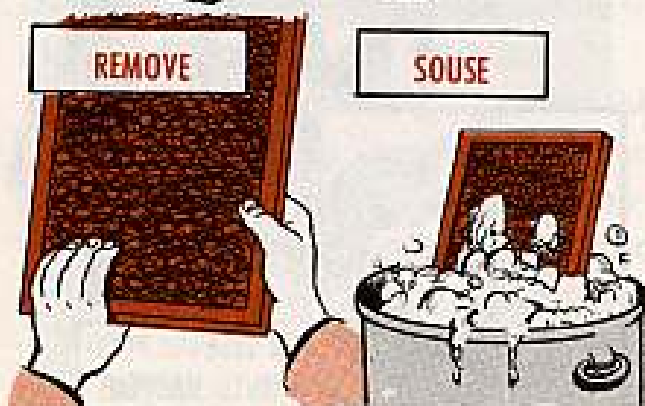


Spray a light coat of oil on the "AIR INLET SIDE" of the filter, holding the spray nozzle 12 to 14 inches away from the screen. You want to use Oil, Filter, stock number (66935) 26-7406P, requisitioned through supply channels from U. S. Army Engineer Maintenance Center, Columbus, Ohio. It costs \$1 a pint.



REMOVE

SOUSE



Put the filter back square in its frame, taking care not to whang the thermostat. Wipe off any smears or runs of oil, then fasten the clips.

INSPECT THE FILTER EVERY 24 OPERATING HOURS. CLEAN IT AND LUBE IT AGAIN EVERY 48 OPERATING HOURS—SOONER IF IT PICKS UP ENOUGH DIRT TO BLOCK THE FLOW OF CLEAN AIR TO THE EVAPORATOR.

# COVER YOUR



OKAY, TRACKMAN!  
I'VE GOT WITH WHAT  
YOU'VE GOT!



CAN DO!

There's one thing you've got to keep in mind when you're working with Engi-  
neer crawler-mounted equipment. There're no spare tracks to keep the rig roll-  
ing. You go with the tracks you've got.

When a track freezes, snaps, jams or jumps the sprockets your rig is smack  
out of business—along with all the other equipment that's depending on the oper-  
ation of the rig.

So you want to keep at least one jump ahead of trouble with the tracks, before  
they bog down the detail.

Best way to gain that jump on the job is by snooping around the running gear  
now and then during each operation.

On a chain-driven crawler, you'll save time  
and trouble by checkin' chain tension first.



CHECK  
CHAIN TENSION

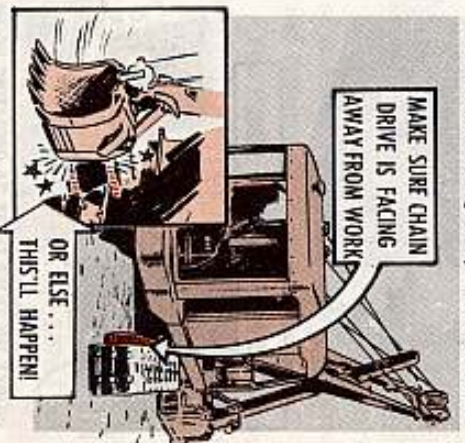
You know a too-tight chain will bind and strain  
the power train, meanwhile wearing itself out  
ahead of time. And a too-slack chain will jerk,  
whip and jump the sprocket.



CHAIN TOO  
SLACK

So you keep the chain adjusted like it  
tells you in the TM, so you get a smooth  
flow of power to the track.

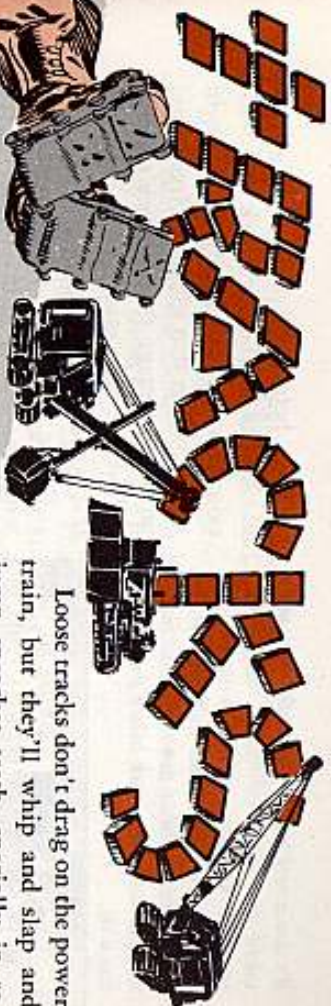
On chain-drive crawlers like cranes, you keep  
the chain end facing away from the work.



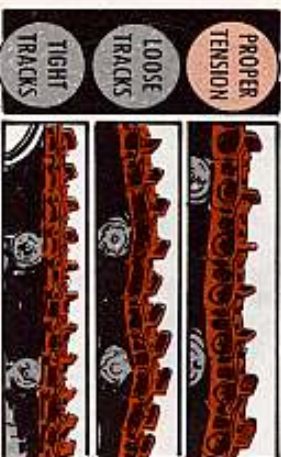
MAKE SURE CHAIN  
DRIVE IS FACING  
AWAY FROM WORK

OR ELSE...  
THIS'LL HAPPEN!

Your rig travels better that way, and the chain  
won't be dobbled by a bucket on the back  
swinging.



On direct-drive crawlers like tractors,  
your snoopin' would start with track  
tension—the life line of your running  
gear. This is one adjustment you just  
can't set and then forget.



PROPER  
TENSION

LOOSE  
TRACKS

TIGHT  
TRACKS

Conditions can change track tension  
from right to loose—or t'other way  
around—in the course of a working day.  
And since either extreme can deadline  
your rig, you check the tension before it  
swings too far in either direction.

Tight track can cut engine power 90  
per cent. It runs so hot it draws the  
hardness out of track pins and bush-  
ings. Binding track also overloads the  
final drive, hubs, bearings and gears.

Tight track can be caused by "pack-  
ings," when you work in materials like  
snow and clay. So you can't count on  
tension to stay on the safe side when the  
track tends to "pack."

Loose tracks don't drag on the power  
train, but they'll whip and slap and  
jump sprocket teeth, specially in re-  
verse. If they work too loose they'll spin  
off when the rig pivots, runs on a side  
slope, or backs up an incline.

So you tend the tension like it says in  
the TM, especially when working con-  
ditions—like break-in on a new track,  
or "packing" on an old track—call for  
a swich in adjustment.

Another way to keep  
ahead of trouble  
with tracks is to  
snoop for signs of  
trouble at the lube  
points.



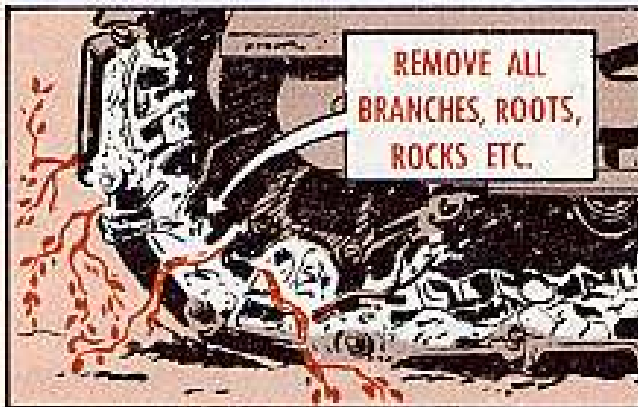
Some signs of trouble are easier to  
spot when your rig's warmed up to its  
work. You get so you can tell when a  
normal seep becomes a leak... when a  
bearing is heating up and about to seize  
... when a run of rough going is wash-  
ing out lube so fast the "T" service needs  
to be pulled ahead of schedule.

Those track rollers and track carrier  
rollers lead a rugged life, and it's a neat  
trick to keep 'em lubed without pushing  
so much grease you pop the seals.



AND TAKE  
IT EASY  
WITH THE  
GREASE GUN.

It's also a neat trick to keep rock, roots, and caked mud from fouling the rollers and sprockets. Crawlers are built to shake out, and kick out, most of that stuff. But there's no law against climbin' down and pryin' roots or rocks out of the track before they dead-line a rig.



And there's always room on your trip ticket to report track parts that need replacing before they break. Since you never stop a track twice in exactly the same position, it's easy to check all points while you're out on the job.

Then, before you park your rig, why not unload all the day's rock and mud-cake you can knock off? Specially in winter, when that gook can freeze and do more damage than a week's work.

Like the man said, you go with the tracks you've got.

By the same token, you'll come back with the same tracks if you give 'em the on-the-job care they need to stay healthy.



## KEEP 'EM WARM



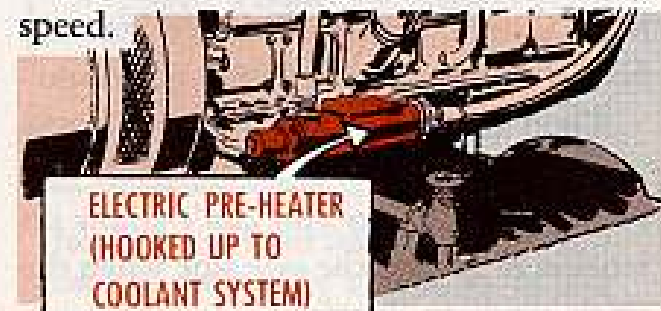
When your Nike status calls for tactical power, it's no time to be caught with your generator engines stone cold.

But how can you keep 'em hot, around the clock, without running up kingsize fuel bills? Specially when the shack is colder than a polar bear's snout?

Here's how you can keep 'em cookin'—for less cash than it takes to idle your engines by the hour.

All you do is local-purchase some electric pre-heaters, and have your support people hook 'em up to the coolant in your generator engines.

They'll bracket the heater units to the base of your diesels, then run connecting hoses to the cooling system. With the heaters plugged into your commercial current, heated coolant will circulate all through the system—so you lose practically no time starting your engines and revving up to generating speed.

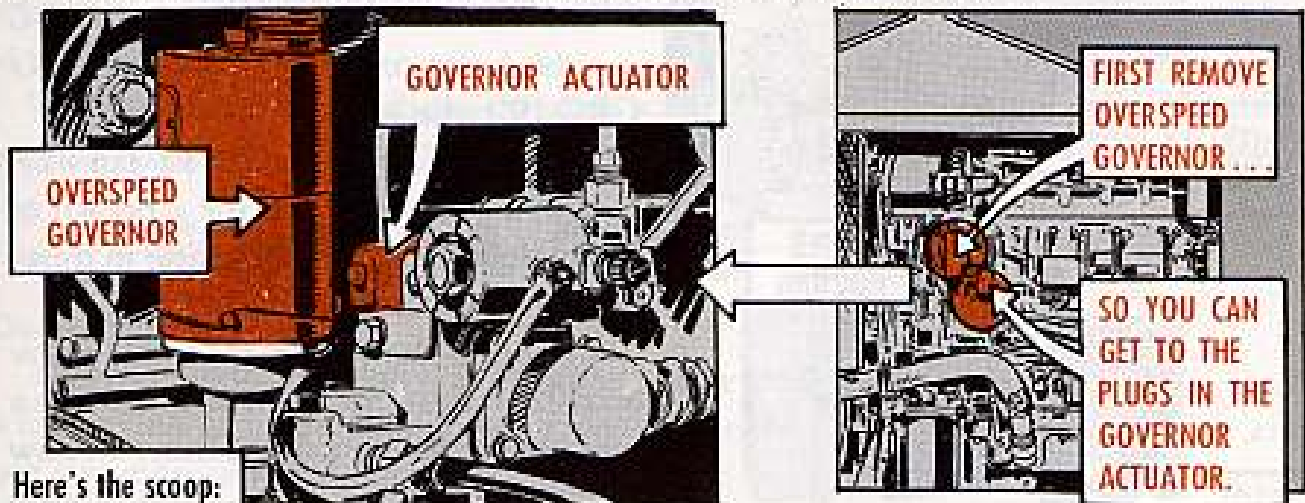


## PURGE THE SURGE

If the engine on your new Cummins or Lumen generator surges like a bronc with a burr under the saddle—it's most likely caused by air in the actuator.

Usually happens when new sets are first started—or when the sets are run till the fuel tanks run dry.

When this happens on a Lumen Model 2207, a Cummins Model JS-6-G-45KW-AC, or a Cummins Model NVH-12-G-150KW-AC, you never mess with the governor adjustment before you check out the actuator.



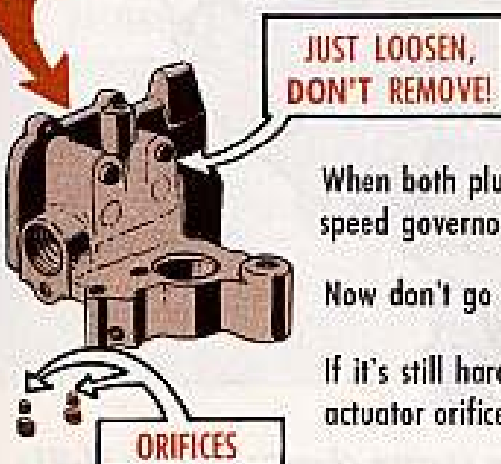
Here's the scoop:

1. First, you take the overspeed governor off the fuel pump. This'll let you get to the pipe plugs in the governor actuator.

2. Next, you rest the overspeed governor on a handy place on one of the engine components. Then you reconnect the leads and the connector to the overspeed governor receptacle, and lock it in place with the connector nut.

3. Now you start the engine like the manual for your rig says.

Get your engine running at idle speed—then you loosen one pipe plug **just enough** to let the air leak out. **DON'T REMOVE THE PLUG.**



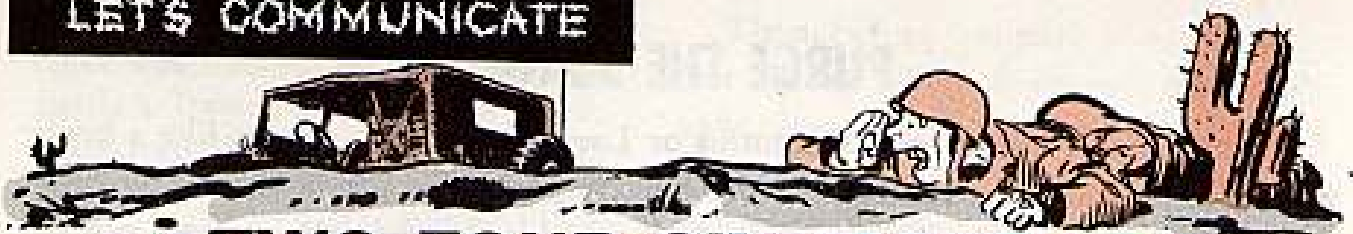
4. When fuel leaks out around the loosened plug, the air's out. Now you can tighten the plug back in place. Then go through the same motions with the other pipe plug.

When both plugs are purged of air, you can stop the engine and put the overspeed governor back onto the fuel pump.

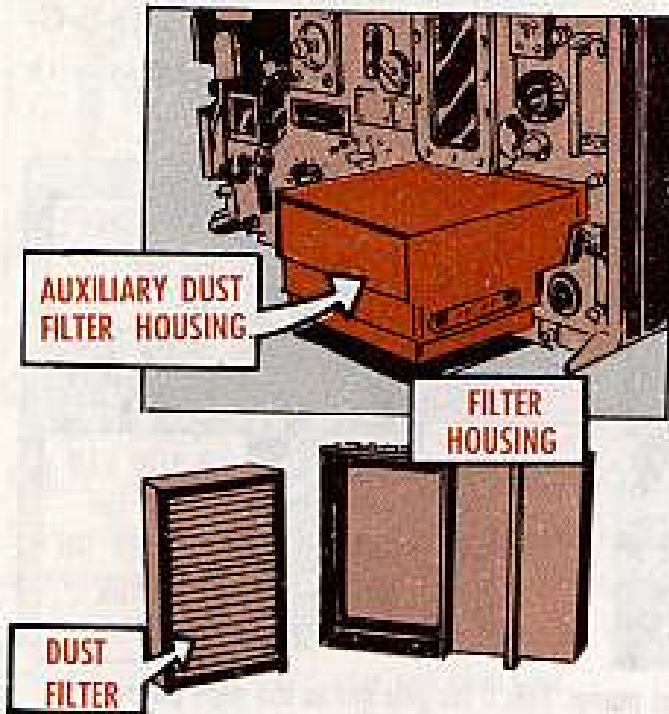
Now don't go away before you run the engine again.

If it's still hard to start, runs rough, or lacks power, better pull a check on the actuator orifices. Takes no more dirt than you can put in your eye to bug 'em up.

Crack the manual to the place where it tells about removing the actuator and inspecting the orifices. Once you get 'em bone clean, it's no sweat to keep 'em that way if your fuel supply is carefully filtered.



## TWO-FOUR-SIX-EIGHT...



They really add up.

Talking about Changes to TM 11-806 on Radio Transmitters T-195/GRC, T-195A/GRC and T-195B/GRC ... the basic component of your AN/GRC-19 radio set.

The latest is Change 8 (12 Jan 61). It provides instructions for a breath of fresh air for T-195's operating in dusty and desert locations.

Change 8 shows how to install a new auxiliary dust filter ... how to clean and service the new dust filter, and how to get the most out of it. Y'might keep an eye open for it.

## CANNIBALIZE

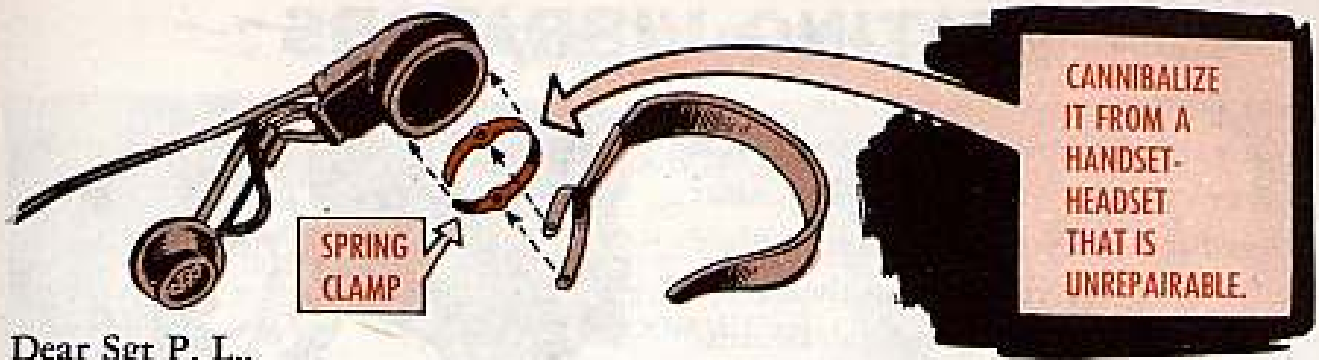


Dear Half-Mast,

We've looked everywhere for the FSN's for the spring clamps on our H-81-A/U Handset-Headsets. We need to get new clamps to replace lost and broken ones. Can you give me their stock number and nomenclature?

Sgt P. L.





Dear Sgt P. L.,

Those clamps have no FSN's and they can't be requisitioned. Because the failure and usage rate is so slight, they're not carried in the Signal supply system as a maintenance item.

What you do is get them through cannibalization from the unrepairable headset-headsets. AR 750-50, with changes, gives you the dope. *Half-Mast*

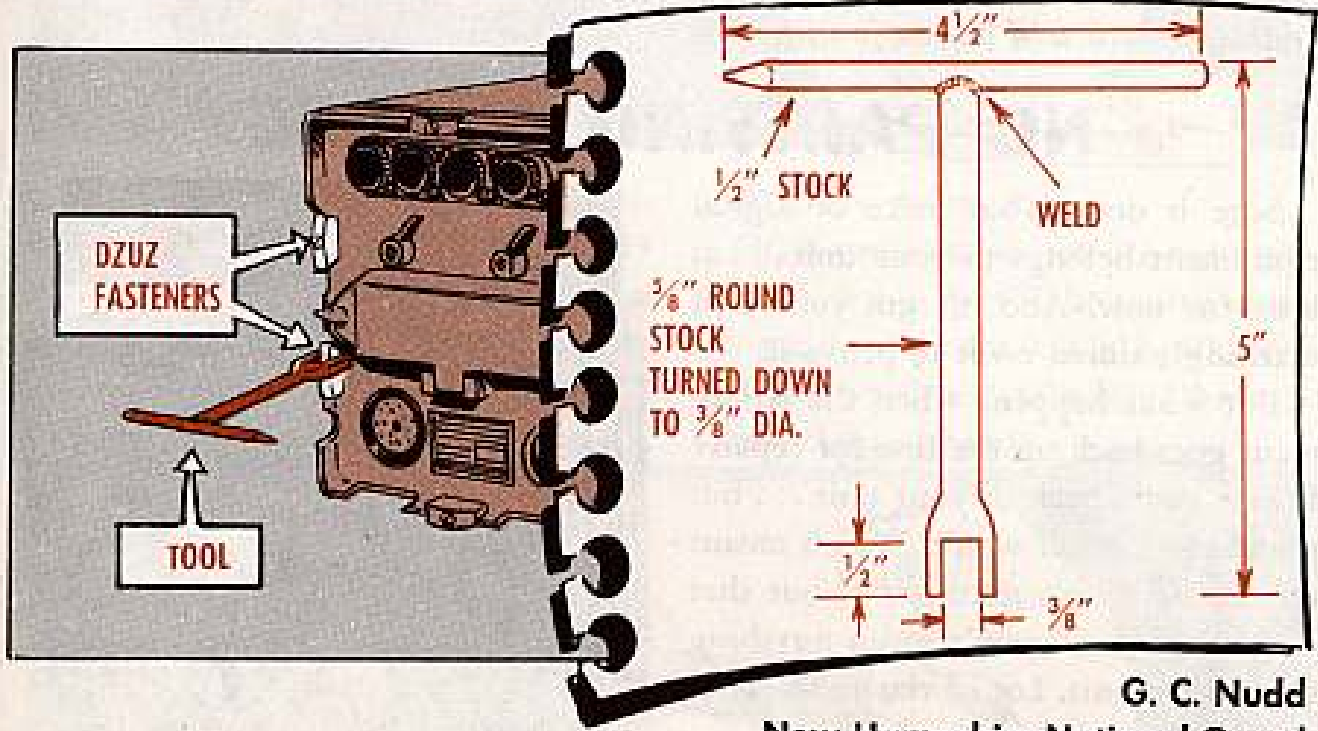
## ~~TO GET A DZUS LOOSE...~~

Dear Editor,

We have skinned many a knuckle while trying to turn a Dzus fastener on our communications equipment. So the boys here came up with this handy tool and it works fine. We use the screwdriver nib end to break the seals

after the fasteners are unlocked. Our knuckles are all healed and the air isn't quite so blue as it was.

Thought we'd pass it along as a tip to other commo maintenance guys.



G. C. Nudd  
New Hampshire National Guard  
Concord, N. H.

(Ed note—A real handy tool. Just be careful when prying so as not to damage the gaskets.)

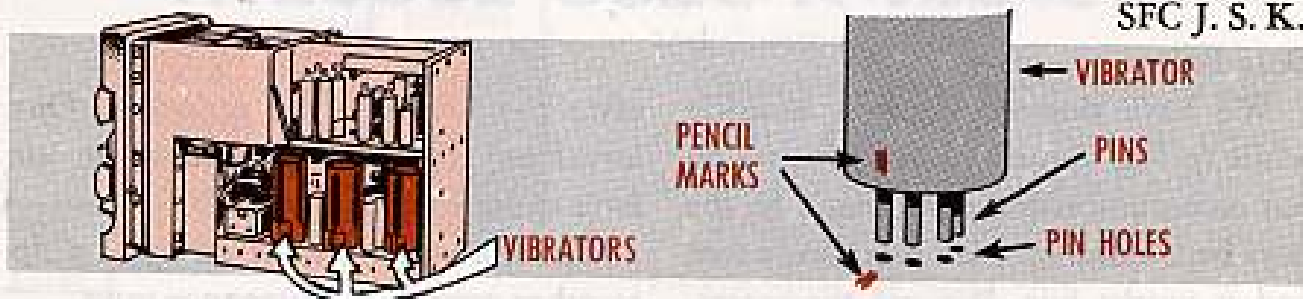
## SEATING VIBRATORS

Dear Editor,

Our medium tank company has power supply PP-112/GR's that bugged me every time I had to replace one of the three vibrators in them.

This was always a tough job because there is so little space between the power supply's top chassis and the vibrator-retaining spring clip. And once you get the new vibrator into position, it's hard to line it up with its socket.

So we just decided to put pencil marks on a matching pin and its pin socket in front. Matching the pencil marks makes aligning the vibrators an easy job. The red arrow painted on the back of the vibrator wasn't much help because of its location. You couldn't see the arrows when you needed to.



*(Ed Note—Some of those power supplies have more clearance than others, but your approach will do the job for all.)*

## NO PAINTING, PLEASE

Sure it does. That piece of Signal equipment belongs to your unit . . . at least for now. And it's got your unit marking painted on it to prove it.

But what happens when the equipment goes back up the line for repair? It may come back to your unit . . . but the chances are it won't. Which means the repair shop's gotta paint out that number since it won't mean anything to another unit. Lot of time and effort wasted.

So? So try using a tag, decal or some other easily removed marking system. Save lots of sweat all around.

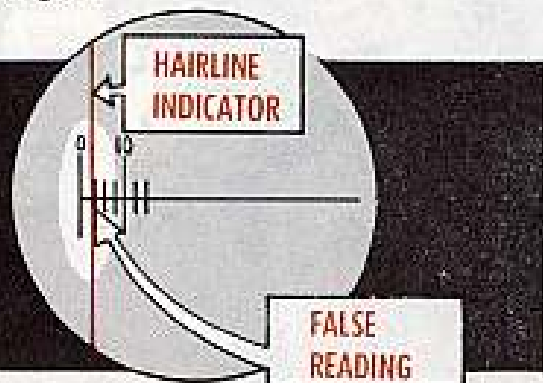


# IF AT FIRST...



What's been happening, it seems, is simply a matter of leakage. A small amount of the electric charge provided by the PP-1578/PD radiac charger slips away even while the dosimeter is still inside the charger.

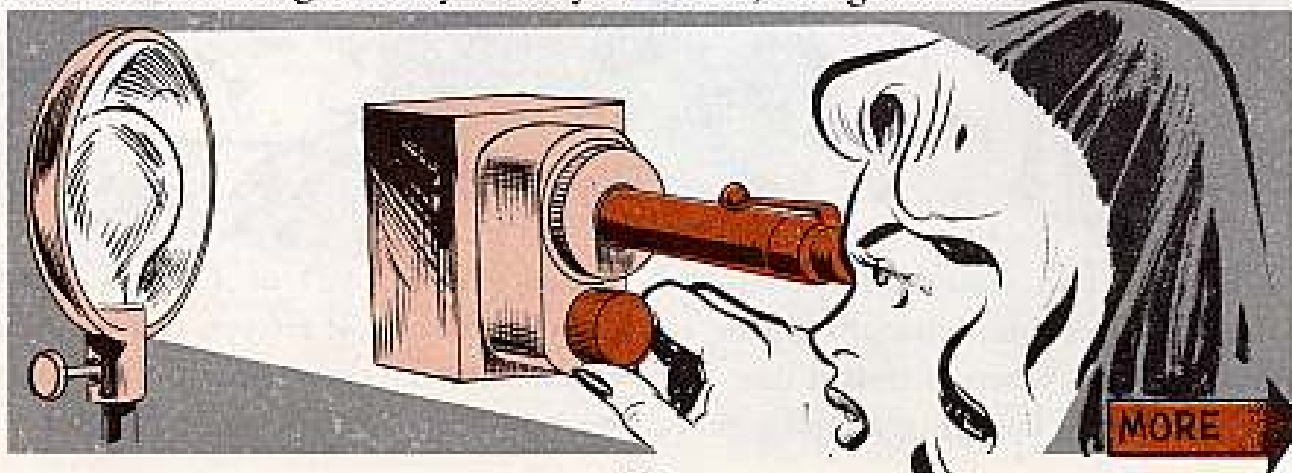
That means the hairline moves up-scale from ZERO a trifle (to the right) and gives a false reading.



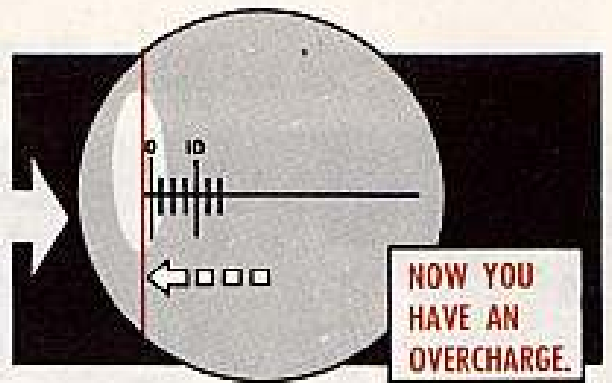
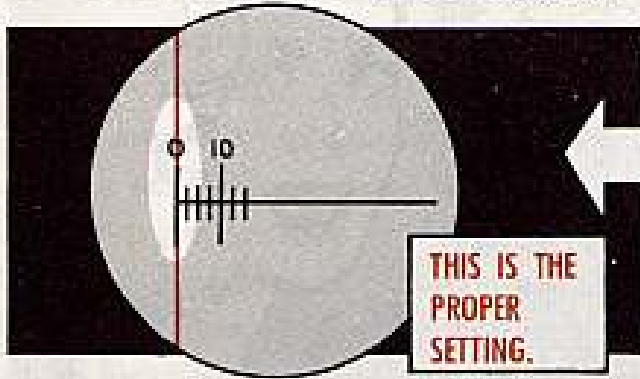
If that's the case, ask the guy standing over there (the one reading a TM) to help out for half a minute. All he has to do is hold the PP-1578 up to the light for you—to provide a source of light and also hold the charger steady while you

push in the dosimeter.

Or, if you want something more permanent, hook up a light source under any steady platform (table, bench, etc.) and drill a hole to let the light through. Then, charge ahead.



Leave the retaining chuck unscrewed so it doesn't grip the dosimeter. Then, with the dosimeter shoved in hard enough to depress the spring, turn the charging knob until the hairline passes to the left of ZERO (overcharged).



Judge the leakage rate—as the hairline moves back to the right toward ZERO—and yank the dosimeter out at the split second it reaches the ZERO line.



One or two sessions like this and you'll soon enough be an expert on knowing just when to pull it out.

This tip on charging explains more

about para 6G (2) of TB SIG 226-8 (9 June 60). It'll let you charge your dosimeter even though the charger may be faulty, as spelled out in the TB.

A selected list of recent publications of interest to Organizational Maintenance Personnel. This is a list compiled from recent Adjutant General's Distribution Center Bulletin.

#### TECHNICAL MANUALS

TM 1-1H-21-4-20P Apr.  
 TM 1-1H-23D-102B May Ungrounding of H-3D Helicopter.  
 TM 1-1H-34-4-20P Apr.  
 TM 1-1H-37-1007 May Insp and Rep In Eng Supporting Structure.  
 TM 1-1H-37A-4, -20P Apr.  
 TM 1-1H-37A-1072 May Relocation of VHF Antenna.  
 TM 1-1L-20A-1001 May Modif Elec Oibd Hinge Bearing.  
 TM 1-3M-1-1 Apr Instal Compens & Swinging Instruc A/C Compasses.  
 TM 1-2R-0335-1001 May Improved Con Bods.  
 TM 3-500 Apr Equip Data Sheets.  
 TM 3-1730-200-15 May Beam, Hoisting, Airplane Smoke Tank, M2.  
 TM 5-2805-209-20P Apr Engine, Gas (Wicamin Mod MYF4D).  
 TM 5-3805-211-20 Apr Grader, Road Motorized LaTourneau-Westinghouse Mod 220.  
 TM 5-3805-228-15P Apr Earth Moving, Towed; Southwest Welding Mod S-152.  
 TM 5-3825-208-12 May Sweeper, Rotary, GED, Spencer Mod MS-1.  
 TM 5-3895-219-20 Apr Mixer, Concrete, GED, (Construction Machinery Mod 265M).  
 TM 5-3895-247-15P Apr Rotor Road, LaTourneau Westinghouse Mod H-3.  
 TM 5-3895-248-15P Apr Roller, Towed, Sheepfoot LaTourneau Westinghouse Mod W-2, Mod W-3.  
 TM 5-4310-230-20 Apr Compressor, Gas; Air, Tk Mod; Gas Eng Driven; 210 CFM; 100PSI.  
 TM 5-4320-203-20P May Pump, Rotary, 50 GPM, Peerless Hi-Lift Mod 52.  
 TM 5-4320-215-20P May Pump, Cent Fresh Water; 500 GPM, Carter Mod K4005.  
 TM 5-6115-269-10 Apr Generator Set, HOLLGAR Mod CE 105AC/WK9.  
 TM 5-6115-270-20 Apr Generator Set, Gas Engine; 3-KW Hollingsworth Mod JHGW38.  
 TM 5-6115-293-12 Apr Generator Set, 100 KW Detroit Diesel Mod 6P10A.  
 TM 5-6675-203-25P Apr Tellurimeter, Master Unit MA1/CW/MY, RA1/CW/MY.  
 TM 5-6675-217-15P Apr Level, Surveying; Keuffel and Esser Models 5003, 5003F, N 5003F.  
 TM 5-6675-224-15P May Level, Surveying; Dumpy Telescopic, 32 Power; Brunton Mod 45.  
 TM 5-6675-225-15P May Transit; Keuffel and Esser Mod P5136, Y513FS, P5136 Elect Illumination; Y5136FS Elect Illumination.  
 TM 5-4520-203-15 Apr Heater-Ventilator, Elec Sperry Utah Engineering Laboratories Mod 10004179.  
 TM 5-8130-201-20P May Tank Storage, LOX Cambridge Mod. 217-3D.  
 TM 9-1430-250-20P/13 May Nike Herc.  
 TM 9-2320-222-20P Apr Recovery Vehicle, Medium, M8B.  
 TM 9-2330-210-14 Feb Chassis, Semi-trailer, 4 ton, M117, M117A1, M118, M118A1, M119, M119A1, M508 & M508C.  
 TM 10-3930-224-10, -20 May Truck, Lift, Fork, 4,000 Pound Yale Mod MHE 166.

TM 10-3930-229-20P, Apr Repair Parts and Special Tool Lib—15,000 Lbs Capacity Clark Model Yardlift 150-33FS.  
 TM 10-3930-407-20P Apr Repair Parts and Special Tool Lib for Tractor, Warehouse, Gasoline 4,000 lbs MHE 172.  
 TM 10-7360-201-20 Mar Bakery Floor, Mobile M-1945.  
 TM 11-4940-202-15 May Electronic Shop, Shelter Mounted AN/M5M-16.  
 TM 11-5810-217-15P May Cooler Unit, Air HD-427/FT.  
 TM 11-5805-284-15 Apr Central Office Telephone Manual AN/MTC-1.  
 TM 11-5805-304-20P May Switchboard, Telephone, Manual S-36/F.  
 TM 11-5820-417-14 Apr LF/ME Monitor Alarm Receiver Type RM-4.  
 TM 11-5820-444-15P May Control, Receiver C-1112/ARC and Control, Antenna C-1113/ARC.  
 TM 11-5820-451-15P May Radio Set C-1112/ARC.  
 TM 11-5825-203-20 Apr Organizational Maintenance Manual for Receiver Group OA-1451/PR.  
 TM 11-5825-214-15P May Control Transmitters C-1115/ARC and C-1116/ARC.  
 TM 11-5840-232-20P May Receiver Transmitter, Radio RT-264/UPX-6, RT-264B/UPX-6.  
 TM 11-5840-247-20P May Generator, Nijis TD-169/TFS-1D and TD-169A/TFS-1D.  
 TM 11-5895-220-20P May AN/TPX-22.  
 TM 11-5895-225-25P Apr Communications, Patching Panel 3B-675/MSC.  
 TM 11-5895-287-12P Apr Fire Unit Integration Facilities AN/PSA-25 and AN/PSA-35A.  
 TM 11-5895-391-10 May Operations Central AN/TSQ-38 and Coder-Decoder Group OA-2787/TEQ-38.  
 TM 11-6625-261-12 Apr Audio Oscillators TS-382A/U, TS-382B/U, TS-382D/U, TS-382E/U, and TS-382F/U.  
 TM 11-5895-227-15 Apr Operations Center, Communications AN/MSC-25.  
 TM 11-6625-316-12 Mar Test Sets, Electron Tube TV-2/U, TV-2A/U and TV-2B/U.  
 TM 11-6625-408-25P May Radio (MK-15)/GRC.  
 TM 11-6625-412-10 -24 Mar Radio Test Set AN/ORM-41.  
 TM 11-6625-418-20P May Test Set, Radio AN/ARM-51.  
 TM 11-6625-201-20 Apr Solar Radiation Measuring Set AN/GVH-1A.  
 TM 11-6720-207-10, -20 Apr Camera, Still Picture KA-39A.  
 TM 11-6740-209-20 Apr Drier FH-75-B and Drier, Photographic Print EL-511.  
 TM 11-6760-213-10-20 Apr, May Flash Unit, Photographic Repeating LM-33(1).  
 TM 55-1510-202-20P Apr L-19.  
 TM 55-513 Feb Military Stevedoring.

#### LUBRICATION ORDERS

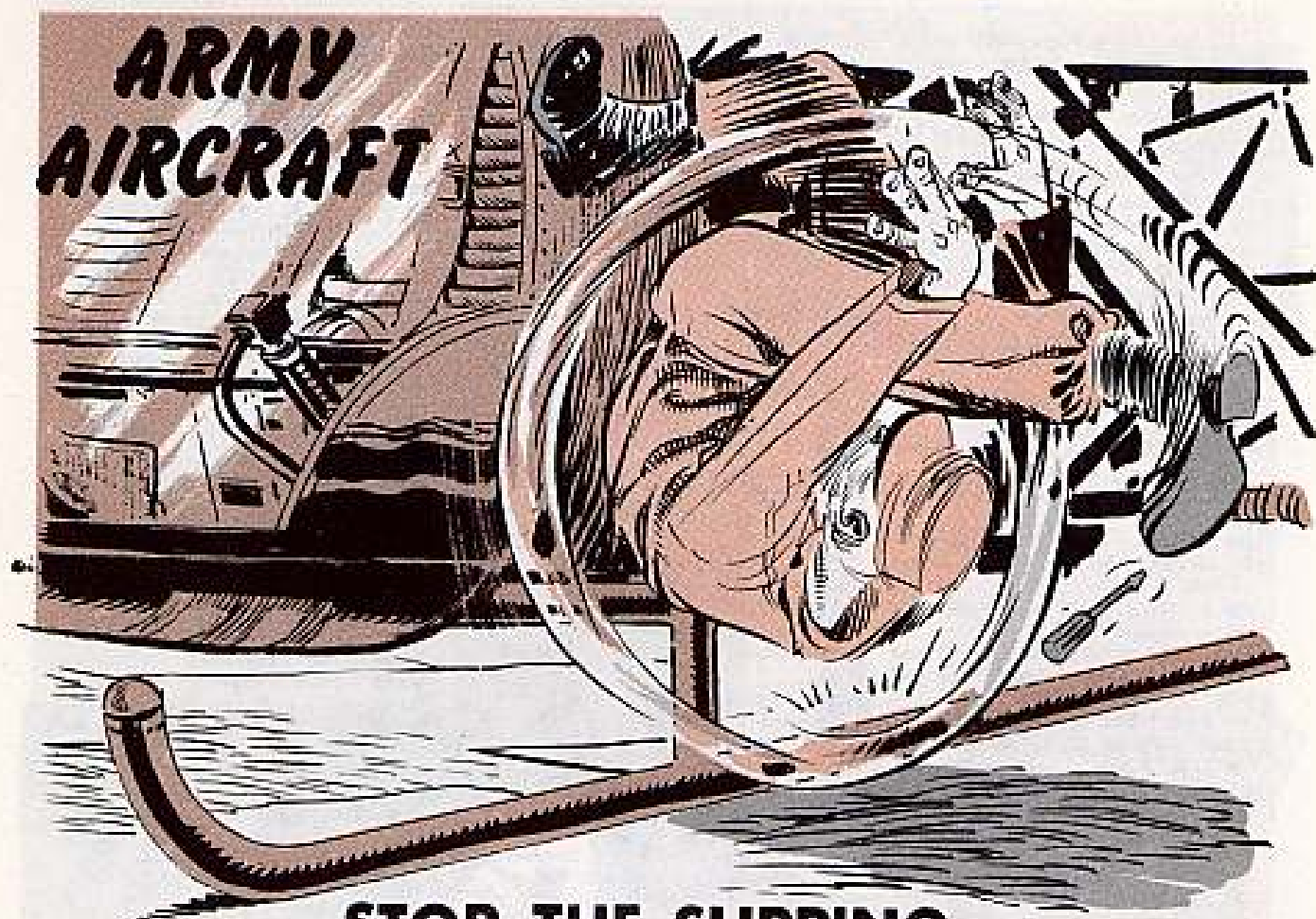
LO 5-4610-202-12 Apr Water Purification Unit, Tractor Mod, Elec Driven, AC DC, 115 Volt, MET-PRO Mod 6002500, 600A-2500.  
 LO 5-6115-201-20 Apr Generator Set, Diesel 45 KW, AC, Hollingsworth Mod JHGX45A w/Cont Engine Mod TD-437.  
 LO 9-1055-208-12 Apr Handling Unit, 762-MM Rocket M406 & M405A1.  
 LO 9-1430-253-20/38 Apr Hipar Building Equip.  
 LO 9-1430-253-20/3C Apr Guy Derrick and Fl For Crane.

#### FORMS

DA Form 9-122 Mar Herc Check Sheet -Fuel Service.  
 DA Form 9-123 Mar Check Sheet.  
 DA Form 9-124 Mar Herc Check Sheet -Incl Workload Body Section.  
 DA Form 9-125 Mar (Herc) Check Sheet.  
 DA Form 9-126 Mar Check List.  
 DA Form 9-127 Mar Herc Check Sheet -Missile Body and Rocket Motor Cluster.  
 DA Form 9-193 May (Hawk) Check Sheet.  
 DA Form 9-200 Apr Daily Check Sheet.  
 DA Form 9-201 Apr Weekly Check Sheet.  
 DA Form 9-202 Apr Monthly Check Sheet.  
 DA Form 2391 Mar Aircraft Flight Report and Maintenance Record, Replaces DD Form 781 and 781-7.  
 DA Form 2391-5 Mar Accessories Data, Replaces DD Form 781-5.  
 DA Form 2391-6 Mar Replaces DD Form 781-6.  
 DA Pamphlet 310-2 Apr Index of Blank Forms.

#### MWO's

MWO 9-1000-221-30 Jun 762-MM Rocket Handling Unit M 405.  
 MWO 9-1400-270-20 May Rotating Connectors (Ajax and Merc).  
 MWO 9-1430-200-20/1 May Loader-Transmitter, (Hawk) Link Shims.  
 MWO 9-2300-224-20/1 May Carrier, M113, Repl of Accel Pedal Shift Guide.  
 MWO 9-2350-215-20/6 Jun Tank, 106-MM Gun, M40 Removal Instruction Plate.  
 MWO 9-2350-215-20/5 Apr Tank, M40 Removal of Neutral Steer Switch.  
 MWO 10-3930-210-20/1 May Crane Attachment, Rough Terrain, 10,000 lb Capacity-Boom Leveling Indicator and Lift Hook Safety Latch.  
 MWO 10-3930-223-20/2 May Rough Terrain, 10,000 lb Capacity Mod MR 100, Check Valve on Hydraulic Tilt Cylinder.  
 MWO 11-5826-207-35/1 Jun Radio Receiving Sets AN/ARN-30B, AN/ARN-30C, and AN/ARN-30D to Reduce Rotor Modulation.  
 MWO 11-5830-218-35/1 Jun Intercommunication Set Control C-1632/VIA-4, Part of Intercommunication Station AN/VIA-4, to Replace Handset H-40/PT with Handset H-16/5/U.  
 MWO 11-5895-262-30/4 Jun Operations Central AN/M5Q-18 and Coder-Decoder Group OA-1593/M5Q-18 to Increase the Range Capability of the System and to Provide Dual Read-Out Capabilities in Miles/Meters.  
 MWO 11-5895-296-30/2 Jun Aircraft Defense System AN/F5C-1 to Authorize the Martin Company Modification Instruction Letters (MIL-S) Numbers 071, 072, 073 and 074.  
 MWO 11-6740-201-35/1 Jun Processing Machine, Photographic Paper EH-5(2) to Prevent Damage to Paper Record Caused by Distortion of the Lower Roller Assembly.  
 MWO 55-1510-204-20/2 Jun Rev Op Press AO-1 Oxygen Sys.  
 MWO 55-1520-207-20/19 May Rotor Over-speed Damage Insp HU-1A.  
 MWO 55-1520-207-20/20 May Insp Repl Tail Riv Slider HU-1A.  
 MWO 55-1520-207-20/25 May One Time Insp 3 & 4 Bearing Oil Nozzle (1-150-D40-01) T-53-L-1/1A Eng.  
 MWO 55-1520-207-20/27 May Replace TR Blades HU-1A.  
 MWO ORD Y61-W7 May Erector M2 Repl Sigh Ind Cent Aiming Gages (Corporal II).



## STOP THE SLIPPING

Dear Windy Windsock,

At one time or other a member of our air crew has had to become an acrobat when he slipped off the skids of our skid-mounted aircraft.

We made it lots safer to crawl around on 'em or into the cockpit by putting non-slip paint on their tops.

Actually, it not only makes for safer treading, but the stuff lasts longer than the original paint—which can't take the scrapes.

We used:

Walkway Coating and Matting, Non-slip, Aircraft, Mil-C-5044, FSN 5610-641-0427 (1 gal).  
Cite No. 3725 for color "black."

Doing this sure made us feel lots safer when mounting our choppers. Hope other units find it helpful too.



Crew  
28th Arty Gp  
Selfridge AFB, Mich.

## "HOT" EXTINGUISHERS!



KEEP 'EM CLEAR OF HIGH HEAT AND SHOCK.

GRRRRR



That's the ever-warnin' word on those new long-winded CF<sub>3</sub>Br fire extinguishers, FSN 4210-555-8837, with the shatterable cylinders.

No foolin'—one of those CF<sub>3</sub>Br extinguishers exploded in a plane, while the plane was being preheated for flight.

So if you drew any of these new extinguishers to replace your Type A-20's, or any other type authorized for replacement by Circular 700-9 (27 Dec 60), you want to shield 'em from high heat and shock.

Aim the blast from your preheater, or other heater, away from the CF<sub>3</sub>Br extinguisher. And until the scoop comes through saying just how much heat those shatterable cylinders can take, you don't want to run the overall cabin heat any higher than it has to be for operating comfort.

## REPORT THAT HOLE—BUT QUICK!



OK—I'LL MOVE. BUT DON'T FORGET TO REPORT **ALL** THOSE RUNWAY HOLES.

Next time your pilot taxis to a stop and says the holes in the field are jarring the fillings out of his teeth—give his remark a second thought.

Normal duties can take a ground crewman all over the area in a day. You'll see much more of the strip—closer and at slower speeds—than the pilot usually does. Keep your eyes open and holler quick. It'll help stop awkward little situations like this one:

A pilot was taxiing his Beaver (L-20A) down a sod runway when the left wheel dropped into a 16-inch hole

—major damage to the plane but no injuries.

Holes are hard enough to see but this one was filled with fresh-cut grass. It would have helped a lot if the grass cutting crew had either filled or reported the hole . . . that's for sure.

Whether you get a word or two from the pilot, or you're just strolling across the field and stumble into a hole yourself—report it . . . but quick.

## IN A BIND ON BINDERS?



OK, OK! You made your point!

Your -20P's in the future will authorize the 7-ring loose leaf binders you need to keep your DD Form 781-series—or the new DA Form 2391-series—aircraft forms in. Those DA Form 2028's you submitted requesting this action have really done their job . . . so don't send any more.

Until those binders show up in your -20P's, here's the dope you need to get one to replace any that's been lost, destroyed or worn out:

Binder, Loose-Leaf, transparent vinyl, plastic, 7-ring . . . FSN 7510-300-



3033 (QM). You can find this listed in SM 10-1-7500 (July 60).

If you can't get one of these, then try FSN 7510-664-5106 (GSA), which is listed in the General Services Administration Catalog for the period 1 Dec 60 through 30 Nov 61. It'll get you Binder, Ring-Type, transparent, flexible . . . for use with the same forms.

## NUT AGAIN?

Dear Windy Windsock,

Thought I'd pass this info along in the hope it might help show that you just can't take anything for granted in this aircraft business. You've got to check it yourself.

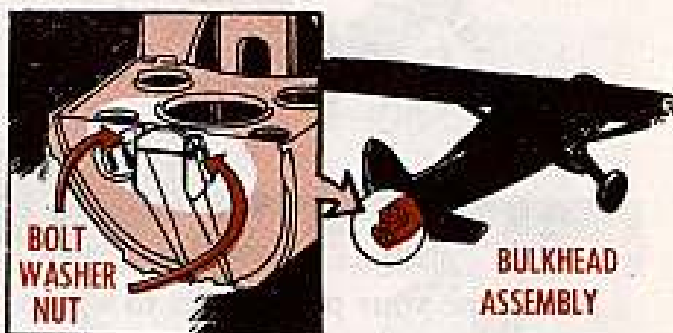
One of our Beavers (L-20A) had just been returned from a private company following compliance with an MWO. You'd expect it to be in first-class shape.

But when we inspected it, we found one nut missing and one only finger tight on the tail plane pick-up block of the bulkhead assembly, at station 244.90.



Dear Gang,

*Thanks for passing your thought on to PS. It wouldn't be the first time a missing nut cost a bird in this never-ending maintenance battle.*



There're only two bolts, nuts and washers at this spot and it isn't hard to see what could happen in the air without them.

We put a new nut on and torqued both nuts. We also made out a UR for better quality control during a MWO . . . seemed like the natural thing to do.

Aviation Maint Section  
Fort Monmouth, N J

*Windy Windsock*



# LEFT IS RIGHT—OR



Dear Windy Windsock,

Our air section ran into a problem with the left-hand pitch change link bearings for our Ravens' (H-23D) tail rotors.

To start with, we couldn't get the left-hand threaded roller bearing rod end, P/N ST-3-ARL (FSN 3110-516-5545) from outta supply . . . always got back the right-handers, P/N ST-3-AR (FSN 3110-516-5544).

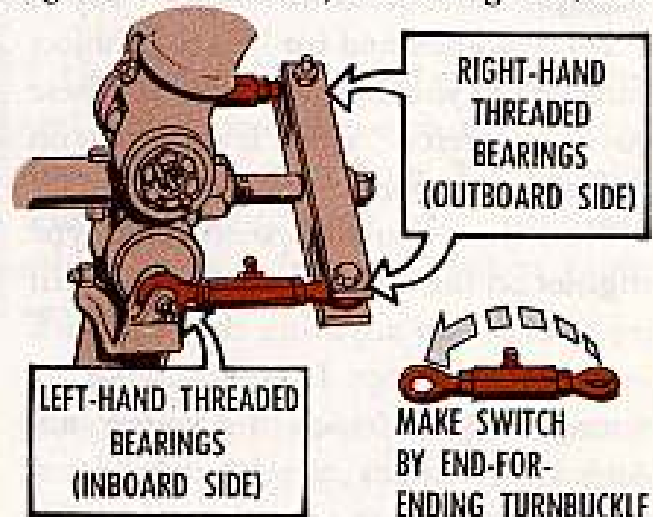
To take up the loss of time and to keep 'em flyin', we tried an experiment that worked.

We knew that it was always the left-hand threaded bearings on the inboard side that went to pot right quick. So this gave us an idea of switching 'em, so's to use the right-hand bearings inboard and the lefties . . . outboard. It worked.

Now, when we run short of the lefties (gotta stick with the TM's), we do the switch job until we once more have a good supply on hand.

The switch is made by end-for-ending the turnbuckle body (P/N 25115), FSN 1560-609-7719.

Crew  
28th Arty Gp  
Selfridge AFB, Mich.



Dear Gang,

You're taking the easy way out . . . which isn't always the best. You may be "keeping 'em flying" with this fix, but you're helping to foul up the supply and maintenance picture.

What you should do is ground the aircraft and submit an EDP requisition for the left-hand threaded bearings.

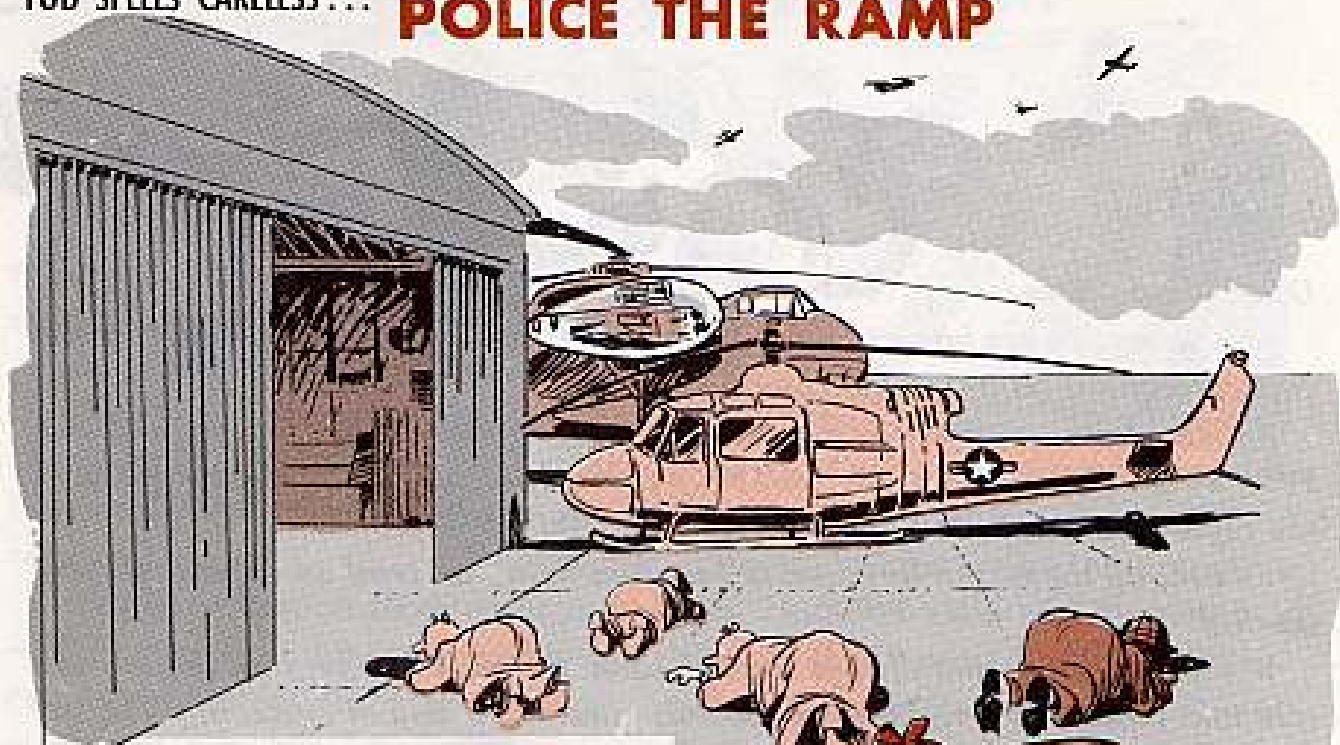
This will help establish a requirement for the part.

Then submit a UR on the bearings, pointing out that they fail much faster than the right-hand ones.

While the aircraft engineers figure your fix won't do any damage or be a safety-of-flight hazard, it will sorta flub up the system.



## FOD SPELLS CARELESS... **POLICE THE RAMP**



FOD might stand for "foreign object damage" to you, but it also reads "these guys are careless" when it shows up on an accident report.

Now you know these turbine-type engines on the latest Army aircraft will try to chew up anything they can suck into their air scoops. It's like leaving the wrong things in reach of a young 'un. And any chopper can be just like a spoiled brat having a tantrum when you leave loose stuff around their taxi and hover areas.

Even items as big as unattached access and cowling panels are like toys when a downwash hits them—and maybe make you a victim of FOD, too.

Prevention of FOD takes good police work, and not the badge wearing type, either. Your immediate responsibility is to police up your own work area after each job... and please keep track of all the tools you just finished using. Your full-time responsibility is to pick up any loose hardware, tools, paper,

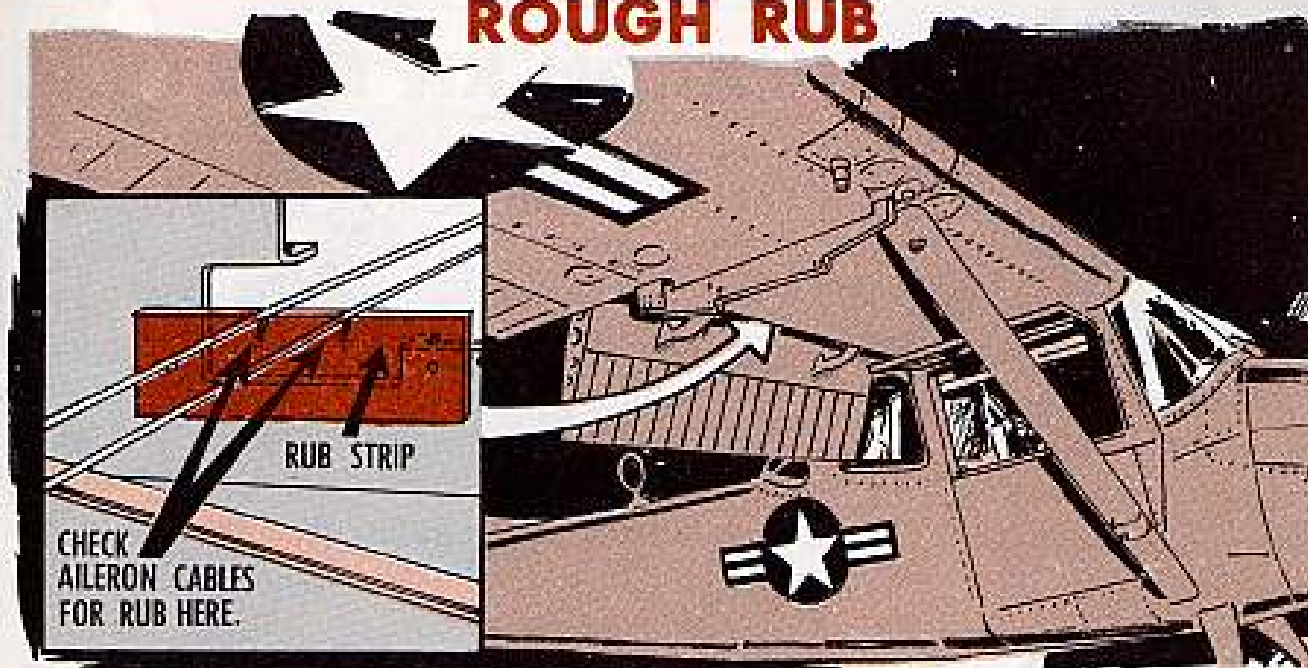


wood, metal or garbage of any type you spot in your ramp wanderings.

If possible, try to get the local engineer outfit to make periodic magnetic sweeps of your ramps and taxiways. But, most of all, just keep thinking about FOD and the damage it can do.



## ROUGH RUB



On some L-19's the aileron cables come off second-best at the spot where they ride on the rub strip.

The rub strip (Part No. 0621241-1, called for by TM 1-1L-19A-247) is needed in each wing to keep the aileron cables away from the flap jack . . . a job the strip does real well. In some cases, however, by the time the 100-hour check rolls around, the strips have already made their mark on the cables.

That innocent-looking rub strip actually wears the  $\frac{1}{8}$ -in stainless steel cables a bit flat. And, of course, once you spot that condition you can expect the cables to start fraying.

Your safest guard against this damage is to give the aileron cables an

extra close check at this point (Station 71.375).

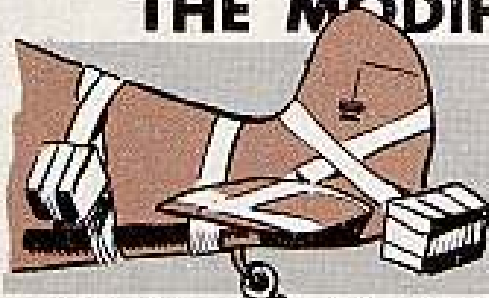
Use a strong light, and eye the cables real close when you aim that mirror into the inspection hole. Then run a sensitive, rag-covered hand over the cables as you feel for broken cable strands.

The more often you check and clean the cables, rub strip and the area all around the rub strip, the less the chance of frayed cables.

The corrosion problem in real dusty or humid locations means you better ask the maintenance officer to cut down the cleaning and checking period well below that 100-hour interval.



## THE MODIFICATION KIT STORY



IT'D BE EASIER TO MARK IT DOWN ON DD FORM 780-1.



Aircraft modification kits have a great deal in common with moose heads. They're great if you have a place to hang 'em—but a blinking nuisance if you don't.

That's why the new SB 1-15-9 (28 Feb 61) gets into the particulars on "Army Aircraft Modification Kits."

Happens you don't get a chance to read the new SB for yourself, keeping in mind these couple-three things will make loose kits less of a nuisance for you.



First of all, get those kits installed! No point spending money on improving Army aircraft if you're gonna ignore modifications which you might have asked for yourself. If you don't get around to installing a kit right away, carry it as loose equipment on that aircraft's DD Form 780-1 (Aircraft Inventory Record Equipment List), just as it says in AR 700-1500-2. You don't drop this kit from the 780-1 unless the kit's installed or turned in to your supply support outfit as excess.

Actually, you're better off turning that kit right back to supply as soon as you get it if the aircraft it's meant for has been transferred or sent off to the depot. No sense having a useless kit hanging around.

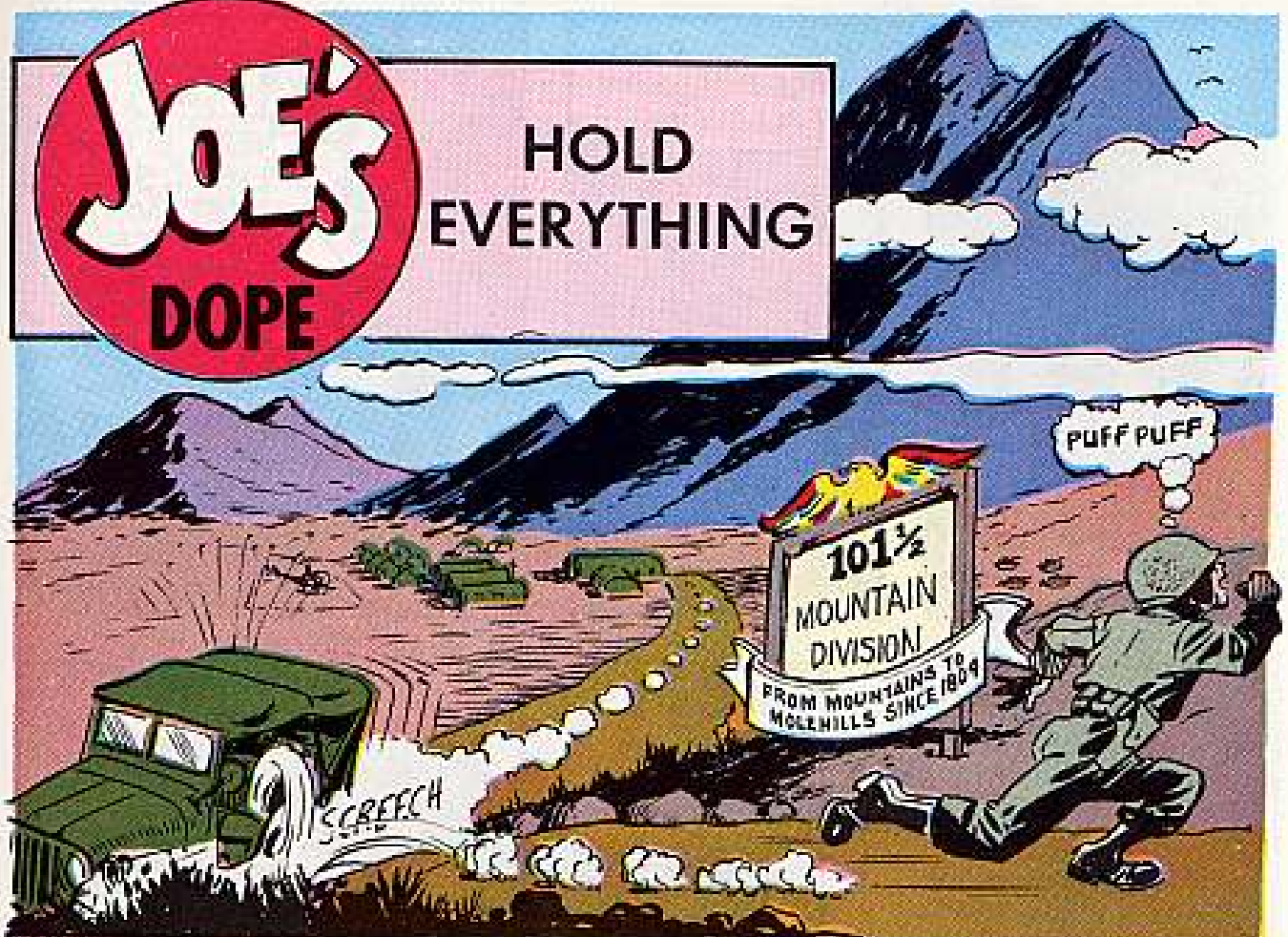
Another thing—no tearing apart any excess kits for spare stock. If you want replacement parts authorized by a kit after a first-time installation, you ask for them as separate items by using your aircraft repair parts list as the new authority.

Lots of times it takes a while before the new parts are listed in your parts list, so you just reference the modification number on your supply requests until the new parts show up in the list. That way the supply people will know where you got your stock numbers.



# JOE'S DOPE

## HOLD EVERYTHING



PUFF PUFF... GOT A RED HOT  
FROM 2<sup>ND</sup> PLATOON UP ON  
RUSSELL #2... NEED A QUART  
OF OE 10 OIL AND A PINT OF  
MINERAL WATER UP THERE!



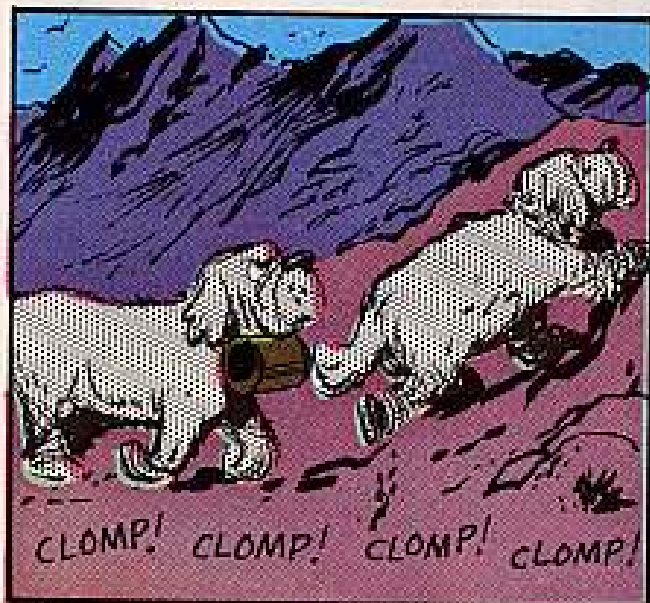
I DIG THE OIL, AND I CAN SEE  
BY THE WAY OL' RUSSELL'S  
SOCKED IN Y' CAN'T FLY  
THESE ITEMS UP... BUT  
WHA'FO THE MINERAL  
WATER?

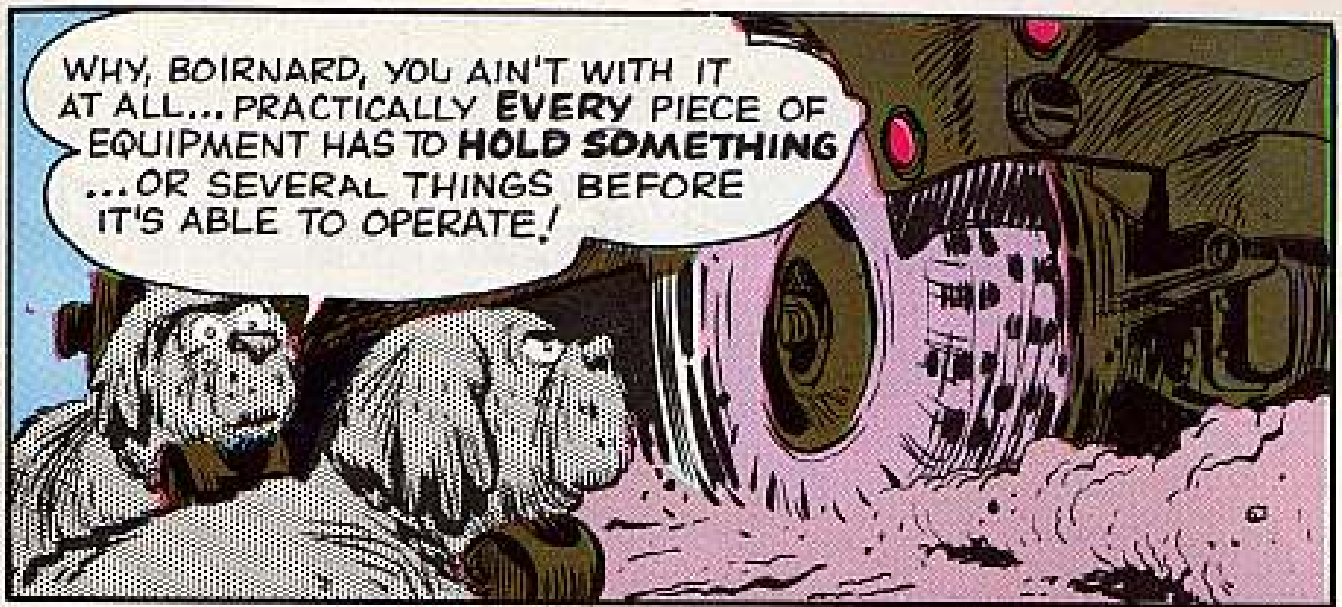
SGT. HALF-MAST  
IS HONCHO'N THE  
DETAIL UP THERE.  
THEY BEEN ON  
EXPERIMENTAL  
RATIONS A  
WHOLE  
MONTH!



O.K.... AH WANT TWO  
VOLUNTEERS!!







WHY, BOIRNARD, YOU AIN'T WITH IT AT ALL... PRACTICALLY **EVERY** PIECE OF EQUIPMENT HAS TO **HOLD SOMETHING** ...OR SEVERAL THINGS BEFORE IT'S ABLE TO OPERATE!



...IN VEHICLES THERE'RE MANY CONTAINERS OF ALL KINDS.



...FROM AIR HELD IN TIRES AND COMPRESSORS TO THE FITTINGS THAT HOLD LUBE...OR THE SHELLS THAT **CONTAIN POWDER!**



SO, THE WAY I LOOK AT IT...MOST OF OUR EQUIPMENT IS LIKE A CONTAINER...

SLURP!

**Joe's**

Dope Sheet

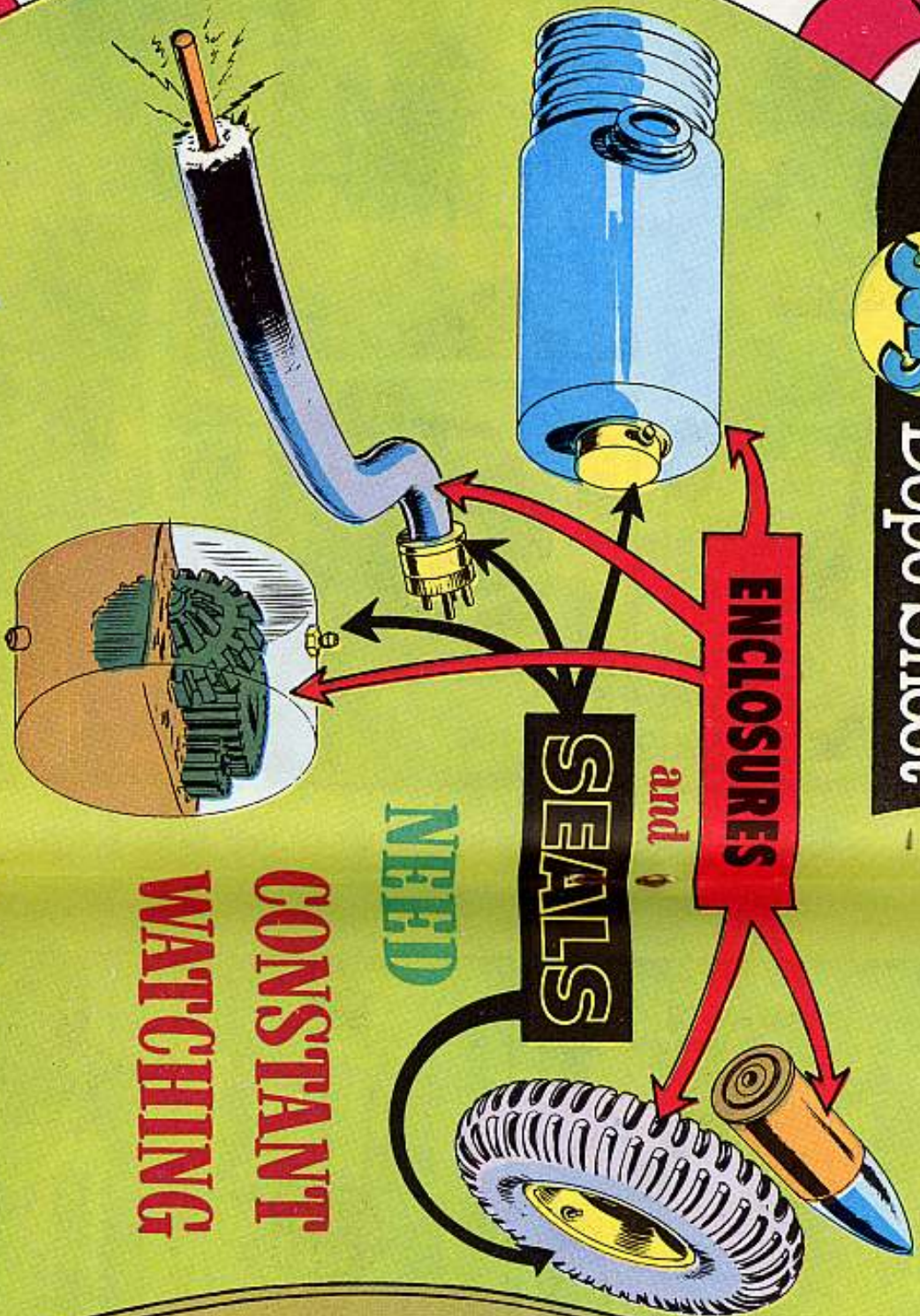
**ENCLOSURES**

and

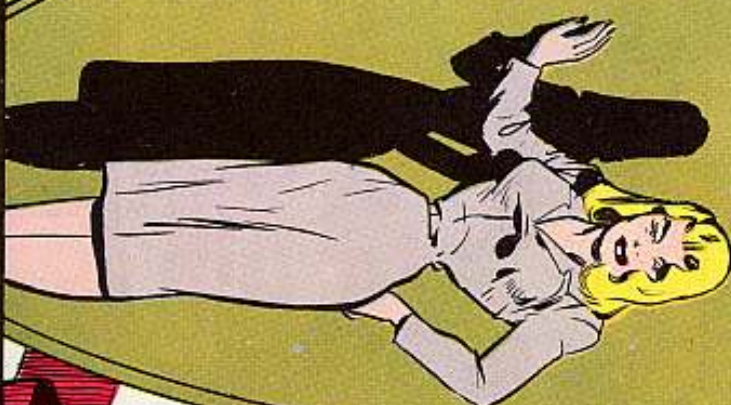
**SEALS**

**NEED**

**CONSTANT  
WATCHING**



To keep combat gear  
in the fight,  
Each enclosure and seal  
must be tight.  
If it doesn't contain,  
Your gear ends up lame,  
And your combat report  
won't be right!

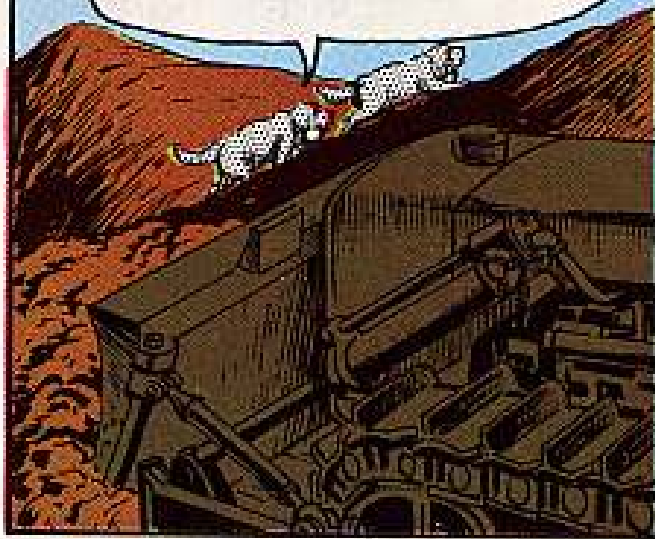


**WE HAVE THE WORLD'S BEST EQUIPMENT ... Take care of it**

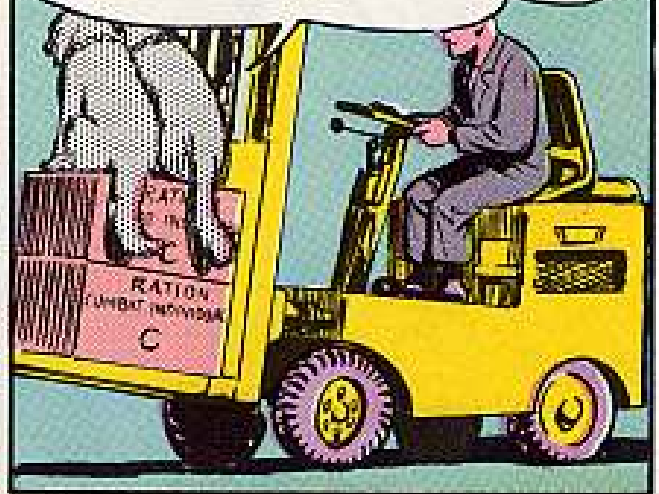
IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.



NOW, BOIRNARD, CONTAINERS DO TWO THINGS... THEY HOLD **IN**... OR HOLD **OUT** AND MOST IMPORTANT THEY GOTTA HOLD **UP**!!



WHATEVER THEY'RE DOIN...THERE'S A SEAL, OR PACKING, OR GASKET OR SOME SORT OF INSULATION OR FILTER AT EVERY POINT WHERE THE EQUIPMENT HAS TO HOLD THE LINE!

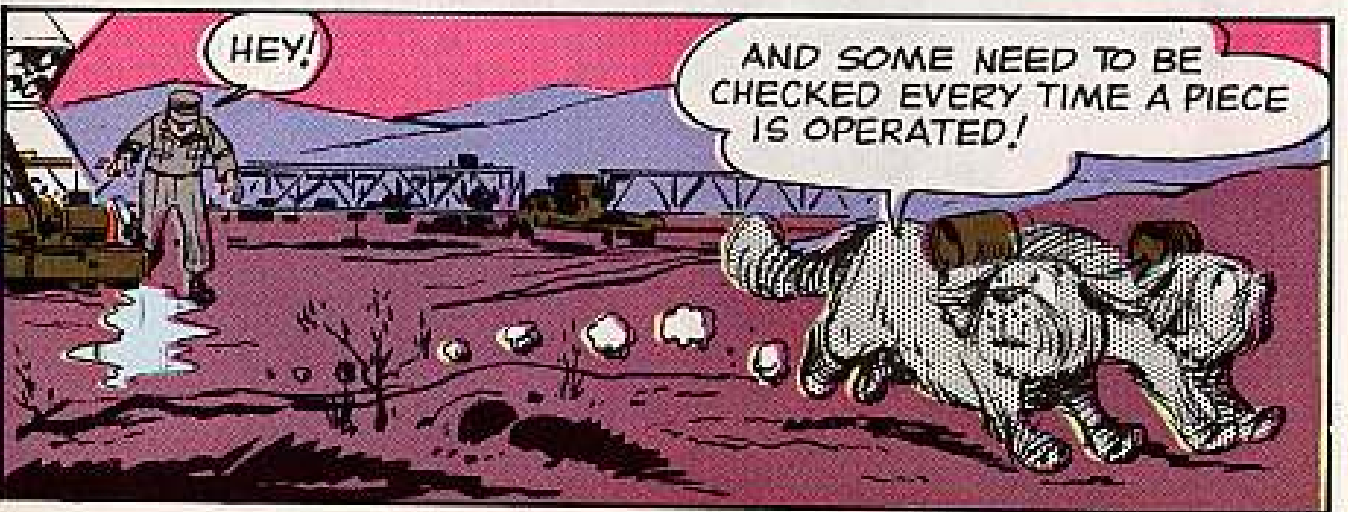
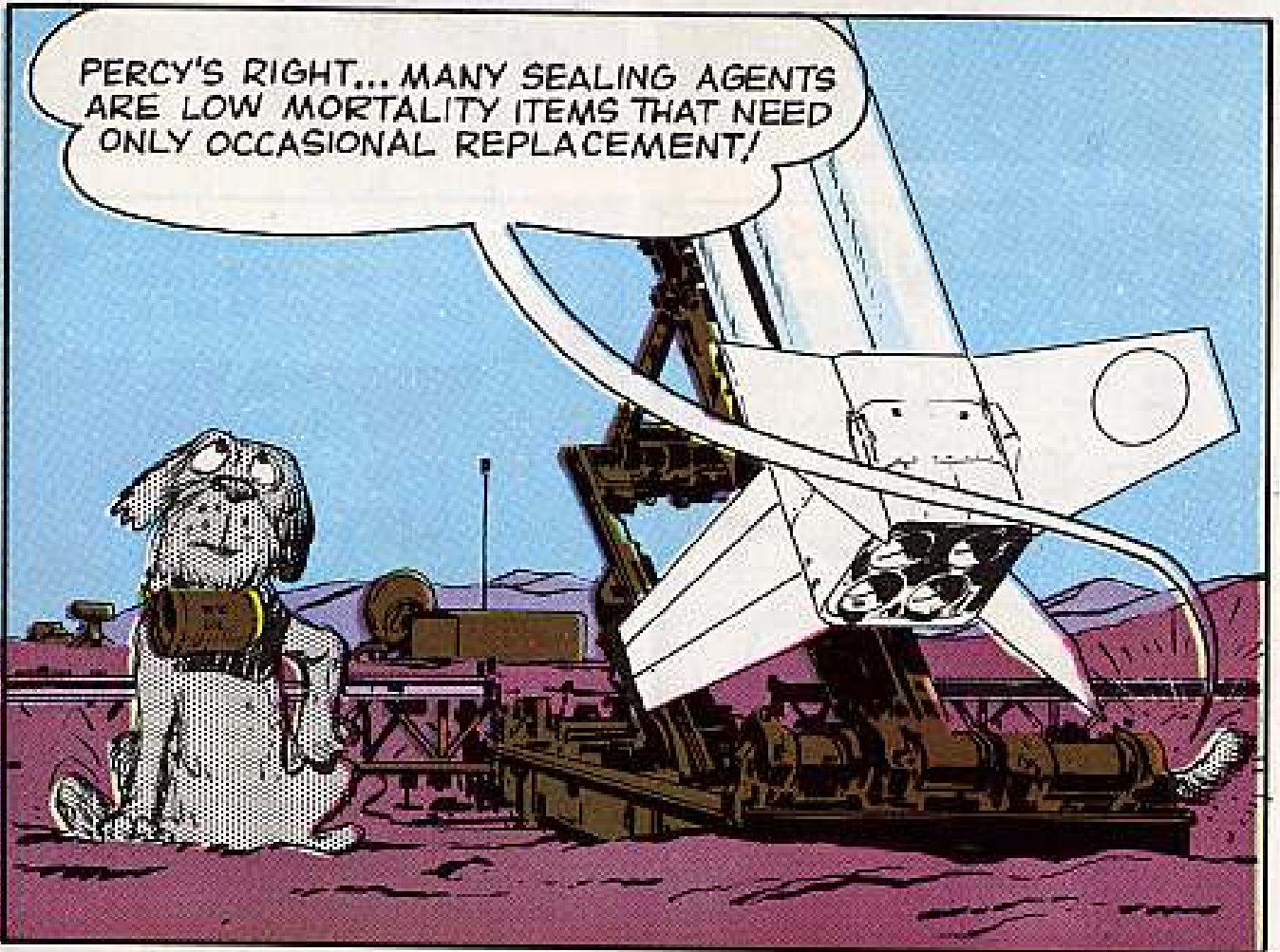


THIS IS TRUE WHETHER IT'S HOLDING LUBE, FUEL, CURRENT AIR... OR **SOUP. "SLURP."**



NATURALLY, BEING SHARP ON MAINTENANCE IS TO KNOW WHERE AND WHEN AGE, DAMAGE, AND USE KILL A SEAL--THUS MAKING A PIECE OF EQUIPMENT VULNERABLE TO BREAKDOWN!







CATCH THE TROUBLE...NO SWEAT, MISS IT, SKIP IT, OR FAIL TO FIX IT... AND BOVVAVOOM!!

LOOKS LIKE WE MADE IT!



HERE THEY COME, SARGE, AT LAST!



HERE'S THE OIL OKAY.

HOLY SMOKE



THE MINERAL WATER'S ALL LEAKED OUTTA THIS DAWG'S CONTAINER!



NO, I'M NOT KIDDING! THE SARGE SAYS THAT SOMEWHERE THERE MUST BE A REGULATION TO AUTHORIZE COMPANY PUNISHMENT FOR A DOG INVOLVED IN A **CRITICAL** MAINTENANCE PERFORMANCE FAILURE.

## NO GO TOW

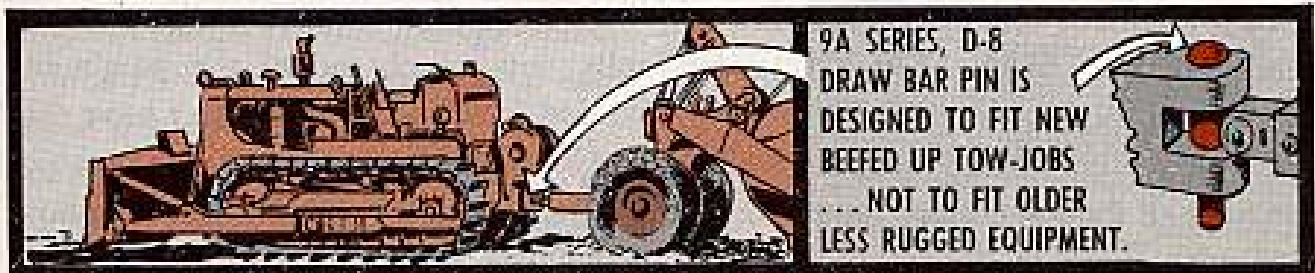


Dear Sgt Dozer,

We sure were glad to get these new 9A Series D-8 tractors for our heavy equipment section. We've got troubles, though. The drawbar pin is too big to fit the tongue hole in some of our towed equipment.

What can we do?

CWO K. E. K.



Dear Mr. K. E. K.,

Nothing.

That drawbar pin is different for a reason. Your 9A Series D-8 is strong enough to jerk the guts right out of some of your older towed equipment. Its drawbar pin is designed so it will fit right—with tow-jobs that are beefed to take the gaff. On others, it won't.

If you go modifying the drawbar pin to pull anything else, you're asking for

trouble. Of course, if you're in a spot where you only have the old-type scrapers and stuff, with only 9A D-8's to pull it, you're really in a bind.

In that case, talk with support people. If they can't rig a swap for you, the only answer is to take it easy. Watch your drawbar pull, and use a pusher to ease the strain.

*Sgt Dozer*

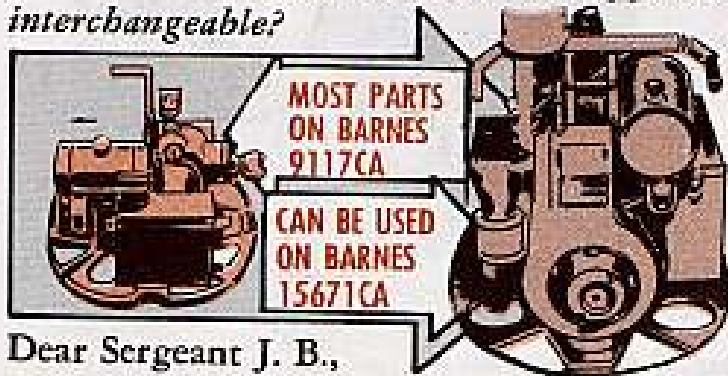
## DISPENSER PARTS



Dear Half-Mast,

Here's the hex: We have a Gorman-Rupp model (FSN 4320-608-1915) 50-GPM gasoline dispensing unit, but no publication on it whatever. However, we do have the SM's for the Barnes 9117CA and 15671CA models.

We figure that if the parts for the Barnes models are interchangeable with each other and with the Gorman-Rupp model, we've got it made. But, are they interchangeable?



NO PARTS FROM BARNES MODELS CAN BE USED ON THE GORMAN-RUPP

Sgt J. B.



Dear Sergeant J. B.,

Not quite that easy, Sarge.

In a nutshell, most parts for Barnes model 9117CA (FSN 4320-271-1858) can be used on Barnes model 15671CA (FSN 4320-658-2888) and vice versa, but none of these parts are interchangeable with those on the Gorman-Rupp.

The main difference between the two Barnes models is the power unit. Model 9117CA (SPE 16) takes the Wisconsin AKND engine, while Model 15671CA (SPE 16A) takes the newer Wisconsin BKND engine.

The way you find out what parts'll go on both Barnes models when you go through SM 10-4320-202-20P and support goes through the -35P (both July 59) is to look for the items with "u/o"

behind the part's nomenclature. This "u/o" symbol, meaning "used on", tells you which model the part's intended for. If the part doesn't have this "u/o", you know it's interchangeable.

The Gorman-Rupp is a non-standard model not supported with spare parts. And so there's no TM or SM on it. However, when the cost of repair does not exceed 20 percent of the standard price, you can get authorization to buy needed parts locally.

Incidentally, Gorman-Rupp is strictly a State-side item. If your unit should happen to get the word to cross the big pond, you're authorized to turn it in for a Barnes model.

*Half-Mast*

## NO BOWS

Dear Half-Mast,

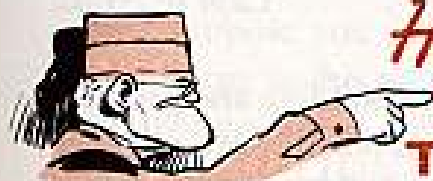
Some time ago you told us how to get the canvas (in PS #97) for our truck, cargo-prime mover, 10-ton, M125.

But we still have a problem. How do we get the bows to support the canvas? What's the FSN and nomenclature?

Dear SFC R. C.,

If your bows are missing and you need new ones, you do have a problem. You see, the bows have no FSN, are not stocked and are not authorized for issue.

To replace those bows you'll have to have your support unit make 'em on a job order form (811). They can be made from white oak by using any available bows as a sample.



*Half-Mast*

## TRAILER TROUBLES

Dear Half-Mast,

Some of our 1½-ton trailers come supplied with a U-bolt stowage bracket to hold the inter-vehicle electrical cable when it's not hooked up. Other 1½-ton trailers don't have this bracket, and the plugs fall or drag on the ground.

Nothing good happens to these cable plugs. They get run over by other vehicles, fill with water and freeze or get clogged with mud.

Where can we get the U-bolt brackets for the trailers that don't have them?

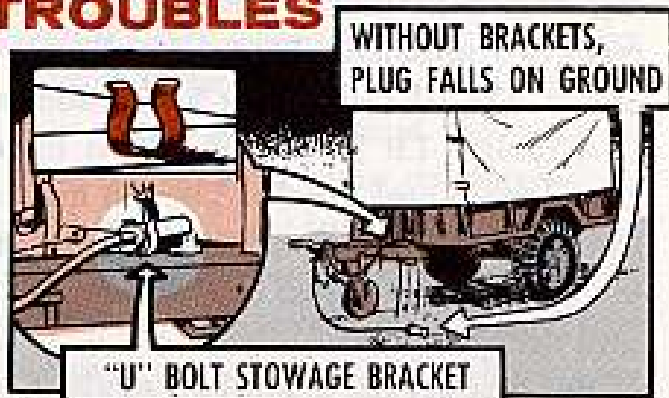
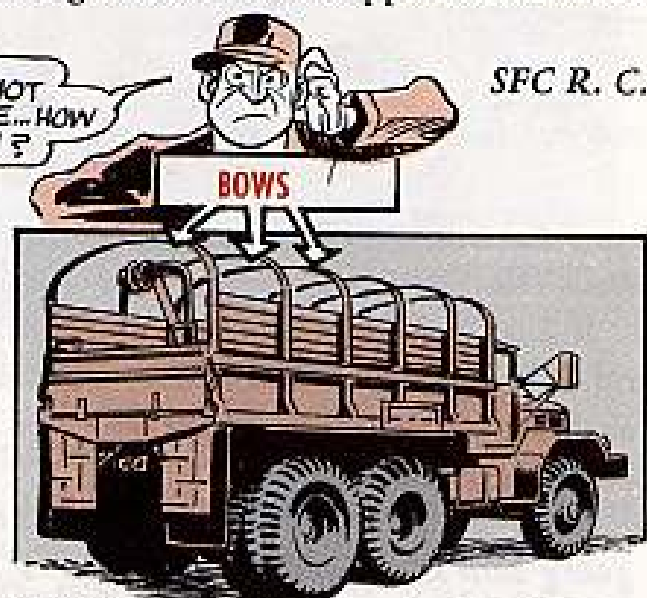
MSgt J. B. N.

Dear MSgt J. B. N.,

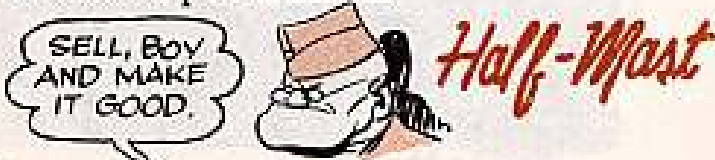
Early production models of the M104 trailers didn't get the U-bolts. You find them only on the M104A1 trailers.

Howsomever, these U-bolts are not an item of issue, so you can't get them from the army supply system.

The only way out is to sell your com-



manding officer on how necessary the stowage bolts are... then he can establish a local SOP to make or buy them and put them on.



# BONDS and GROUNDS



Dear Half-Mast,

What's the latest scoop on using grounding stakes and bonding wires when refueling? TB 9-2300-212-20 (21 Jan 59) implies that ground stakes are not needed; that bonding wires'll take care of all static electricity generated between the pieces of equipment.

But I say if you just hook up the bonding wires and neglect to have a stake going into the ground (earth) you're headed for trouble.

Capt W. G. L.

Dear Captain W. G. L.,

Old hands at the fueling game'll tell you: Always use both bonding and grounding when refueling... especially aircraft and whenever you possibly can on other types of equipment. That's the way QM sees it in Para 101e of Change 1 (22 Jan 58) to TM 10-1101 (Sept 55)... and in Para 30 of TM 10-1107 (Feb 60).

Actually, TB 9-2300-212-20 is mainly concerned with removal of the drag chains from tank trucks. The TB makes a good case for using bonding wires, but instead of going into detail on grounding it refers you to Para 101c where the whole system's spelled out. So, the TB's fine as far as it goes; it just doesn't go into details.

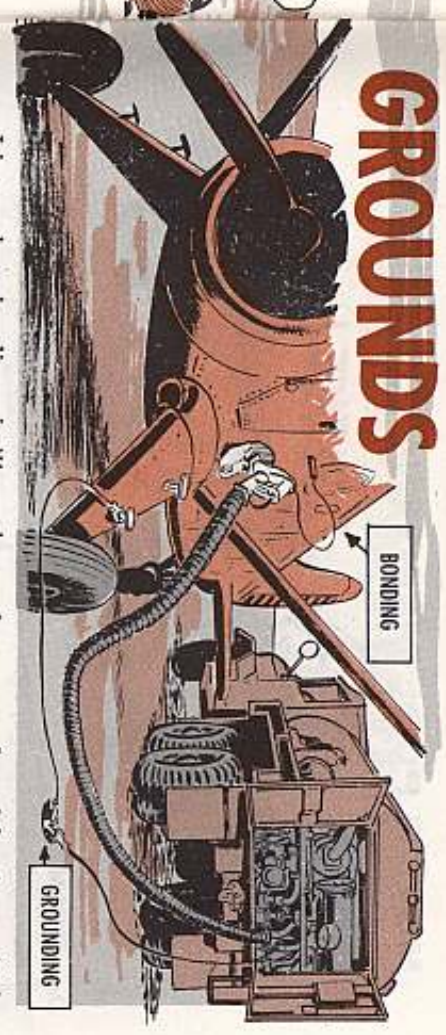
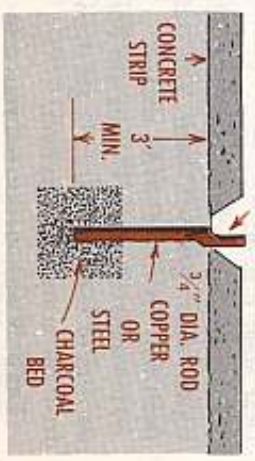
But first get the definitions straight.

**Bonding** is an electrical connection between metal containers (like fuel trucks, planes, drums, tanks, etc.) through the hose sections from coupling to coupling, or between hose nozzle or pipe or container.



**Grounding**, on the other hand, is an electrical connection between one or both of the bonded units and earth.

1" x 3" METAL STRAP WELDED TO ROD



It's true that a bonding wire'll equalize the electrostatic charges present in the two pieces of equipment. But this'll leave you with two equally potent kegs of dynamic. Which is OK if nobody disturbs 'em.

But suppose you introduce another static charge at this point—say, by accidentally bumping it with a metal object that's grounded (like a metal ladder or crowbar, etc.). You quick as a flash could get a spark that might set things off.

But the best chance for this spark to go boom is when you remove the filler-cap, letting the vapors pour out, and then touch the filler neck with the nozzle. It's right at this moment that you need bonding and grounding most.

And it's right here that the grounding stake's so important. Once you've got the stake installed with the bonding and grounding completed, the static electricity'll drain from one piece of equipment to the other and finally into the earth where it can't do any harm.

There're a couple stakes in the supply system, or you can make one yourself. For example, any piece of pipe or rod of

steel or copper 3 or 4 feet long will do.

Using the supply system, FSN 5975-642-8937 (ENG) will get you a 3/8-in diameter ground stake of copper plated steel in three sections totaling nine feet. Or FSN 5975-577-8825 (QM) will get you a 30-in ground stake with a 1/2-in diameter.

Depending on the type of soil, you should drive the stake in about 3 feet at least. If the soil's not naturally damp, pour some water around the stake to make the ground more conductive.

However, if the soil's too rocky or for some other reason you can't use a stake, make darned sure you have perfect bonding connections, and make doubly sure the hoses you use are made of conductive rubber. If you have any doubt about the hoses, get your surveillance outfit (or safety officer) to test them.

Needless to say, the use of bonding and grounding is only part of the story. You've got to stick to all the safety rules spelled out in your pubs... beginning with the one about connecting your bonds and grounds BEFORE beginning operations. You just can't be too safe around fuel.

Half-Mast

## MOTOR POOL MAINTENANCE SHOPS



Dear Half-Mast,

*I need FSN's for items of equipment listed in Transportation Motor Pool Maintenance Shops as listed in TA 55-34 (23 Feb 60). How can I get them?*

Sgt E. M. L.

Dear Sgt E. M. L.,

The items of equipment included in TA 55-34, which are in the Department of the Army supply system, are identified by a line item number or a federal stock number.

Now if you want to get the FSN's for those items that're identified by line item numbers, you go to the SB's that give the Adopted Items of Materiel. And where you have a line item number but can't find the FSN, send that line item to the tech service and ask for the FSN.

Each tech service has its own SB of adopted items so here's a rundown on them:

Chemical Corps—SB 3-33.  
Engineers—SB 5-86.  
Ordnance—SB 9-122.  
Quartermaster—SB 10-509.  
Signal—SB 11-253.  
Transportation—SB 55-31.

The items listed in TA 55-34 which're not identified with a line item or an FSN are not in the Army supply system. They are identified by manufacturer's model number (or equal) or by an asterisk beside the quantity in the allowance column.

You can identify these items by manufacturer's model number (or equal) and this lets you purchase the most modern piece of equipment that's on the commercial market.

Items of equipment listed with an asterisk aren't needed by all transportation motor pool maintenance shops. For this reason, the item's only authorized on a special issue basis. In a case like this, the manufacturer's model (or equal) is the item recommended for your consideration.






# OLD FORM - NEW ADDRESSES

Got a UER (DA Form 468) ready to fire off to the Chief of Ordnance?

Hold it, one minute. You'll be using a new address. You now shoot direct at the guys who're at the Ordnance National Maintenance Points, not to the Chief of Ordnance in Washington.

You still fill out the UER like you've done before, then go down this list to see where to send it—



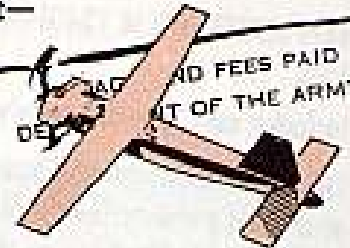
**GUIDED MISSILE MATERIEL (FSC 1400)**—Nike-Ajax, Nike-Hercules, Hawk, La Crosse, and SS-10/11 systems

Includes the missiles, ground handling equipment, launching equipment, guidance and control equipment, peculiar parts, special tools and test equipment, and training devices for those guided missile systems.

Does not include vehicles and vehicle chassis used with those guided missile systems, and optical sighting equipment.

**RADIO CONTROLLED AERIAL TARGET (RCAT) MATERIEL (FSC 6920)**

Includes targets, launching equipment, recovery equipment, peculiar parts, and special tools and training devices.



DEPARTMENT OF THE ARMY  
AND FEES PAID

TO: Commander  
Army Rocket and Guided Missile  
Agency  
Attn: ORDXR-F  
Redstone Arsenal, Alabama



**GUIDED MISSILE MATERIEL (FSC 1400)**—Redstone and Corporal systems

Includes the missiles, ground handling equipment, launching equipment, guidance and control equipment, peculiar parts, special tools and test equipment, and training devices for those guided missile systems.

Does not include vehicles and vehicle chassis used with those guided missile systems and optical sighting equipment.

**ROCKET MATERIEL (FSC 1340)**—Honest John and Little John rockets

Includes only general supply items for the rockets.

Does not include ground handling and launching equipment and training devices for those systems and vehicle chassis used with those systems.

POSTAGE AND FEES PAID  
DEPARTMENT OF THE ARMY

TO: Commander  
Army Ballistic Missile  
Agency  
Attn: ORDAB-S  
Redstone Arsenal,  
Alabama



**WEAPONS MATERIEL (FSC 1000)**

Includes artillery, artillery carriages, small arms, rocket launchers, vehicular armament and mounts, ground handling and launching equipment for Honest John and Little John heavy rockets, peculiar parts, special tools and training devices for weapons materiel.

Does not include fire control equipment for weapons materiel and vehicle chassis used with weapons materiel.

**FIRE CONTROL MATERIEL (FSC 1200 and 6600)**

Includes fire control systems, directors, computing devices, sighting devices, optical instruments, watches, connecting cables for fire control systems, peculiar parts, special tools and training devices for fire control materiel.

Does not include vehicles and vehicle chassis used with fire control.

**CALIBRATION STANDARDS (FSC 6600)**



POSTAGE AND FEES PAID  
DEPARTMENT OF THE ARMY

TO: Commanding General  
Ordnance Weapons Command  
Attn: ORDOW-FM  
Rock Island, Illinois

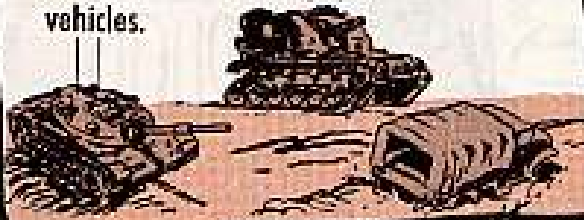
POSTAGE AND FEES PAID  
DEPARTMENT OF THE ARMY

TO: Commanding Officer  
Frankford Arsenal  
Attn: ORDBA-3100  
Bridge and Tacony Streets  
Philadelphia, Pennsylvania

**TANK-AUTOMOTIVE MATERIEL (FSC 2300, 2400, 2500, 2600, 2800, and 2900)**

Includes combat vehicles, military design transport vehicles, Ordnance special purpose vehicles, vehicle chassis, Ordnance general purpose and special purpose vehicle bodies, vehicle hulls and turrets, peculiar parts, special tools and training devices.

Does not include armament, gun mounts, and cupolas for vehicles, fire control equipment and instrument mounts on vehicles, and guided missile equipment mounted on vehicles.

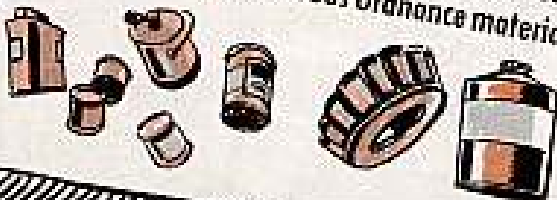


POSTAGE AND FEES PAID  
DEPARTMENT OF THE ARMY

TO: Commanding General  
Ordnance Tank-Automotive  
Command  
Attn: ORDMC-FM  
1501 Beard Street  
Detroit 9, Michigan

**ANTIFRICTION BEARINGS, HARDWARE, ABRASIVES, AND MATERIALS (FSC 3110, 5300, 6800, 8000, and 9100)**

Includes common hardware, adhesives, antifreeze, cleaners, preservatives, sealants, and miscellaneous Ordnance materials.



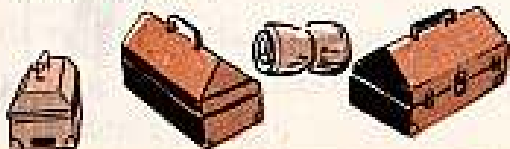
POSTAGE AND FEES PAID  
DEPARTMENT OF THE ARMY

TO: Commanding Officer  
Raritan Arsenal  
Attn: ORDJR-NICP(46)  
Metuchen, New Jersey

**COMMON TOOLS AND SHOP AND TEST EQUIPMENT (FSC 3400, 4900, 5100, and 5200)**

Includes hand tools, measuring tools, tool sets and kits, shop sets, metalworking machinery, maintenance and repair shop equipment, and conventional test equipment.

Does not include special tools and special test equipment.



Raritan and Rossford are not responsible for all items in the FSC groups listed here. Make sure you get your UER off to the right Tech Service.

POSTAGE AND FEES PAID  
DEPARTMENT OF THE ARMY

TO: Commanding Officer  
Rossford Ordnance Depot  
Attn: ORDWD-TEM  
Toledo 1, Ohio

Change 6 (13 Apr 61) to AR 700-38 gives you the go-ahead on the above addresses.



# YOUR

Your new M60 tank shouldn't be too tough to maintain because the Army has invented a new maintenance method 'specially' for this tank. It's "KYCPHOI maintenance."

KYCPHOI (pronounced (Kip-Hi)) type maintenance switches over to the company mechanics some things that used to be done by the tank crews. On 'tuther hand, some maintenance operations that, on other tanks, are done at company level, are now the job of Ordnance support.

The whole idea of KYCPHOI is to give you (the tank crews) more time to do your main job—riding your tank from here to there and fighting the tank when you get there.

KYCPHOI, like you've probably already guessed, is short for "Keep Your Cotton Picking Hands Off It"... and that's the best rule you can learn for some of the complicated parts of this tank.

Get hold of a TM 9-2350-215-10 (June 60) if you can. It'll clue you in on what you're supposed to maintain. Naturally, you also give the company mechanic a hand when he's working on your tank.

Starting from the ground up, this is what you should do so your M60'll stay healthy:



# M

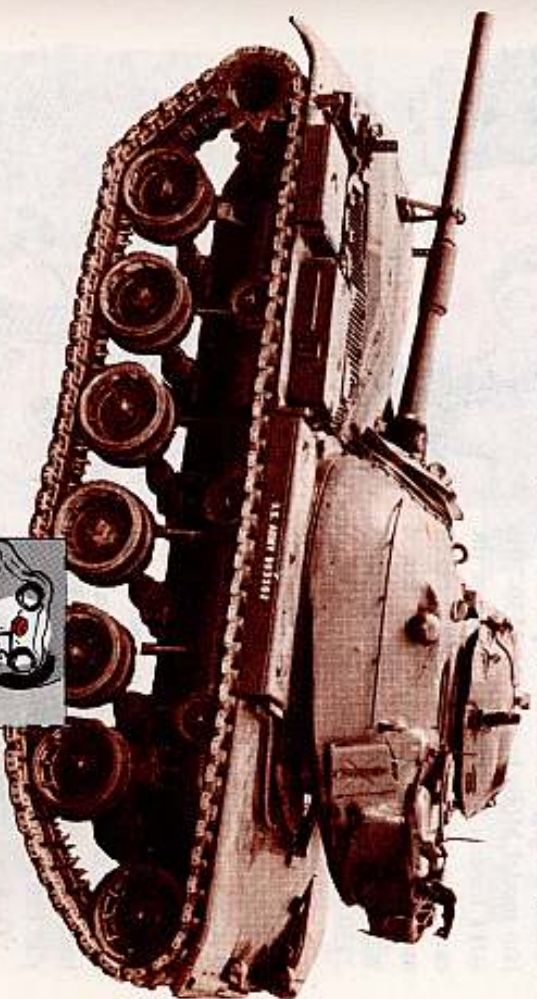
## PART III

# GO



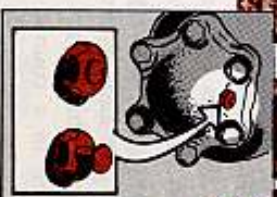
### **Wheels:**

Look over your road wheels, compensating idler wheels, and support rollers for lube leaks from bearing seals. The flanged nuts on the road wheels should be torqued between 380 and 420 lb-ft. After the M60 has been driven, hand feel the bearing hubs of road wheels, idlers and support rollers. Overheated wheels, idlers or support roller hubs mean a badly adjusted, dry or damaged bearing.



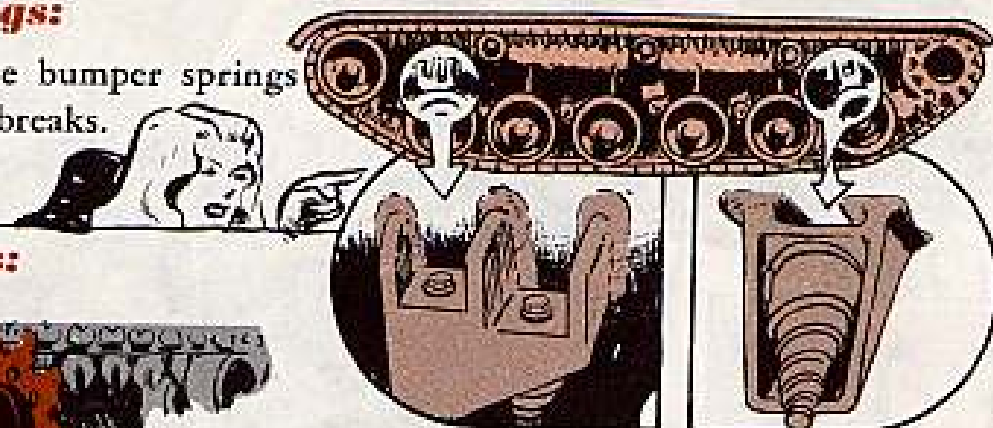
### **Relief Valves:**

Be sure the relief valves on the compensating idler wheels and all road wheels don't bind.

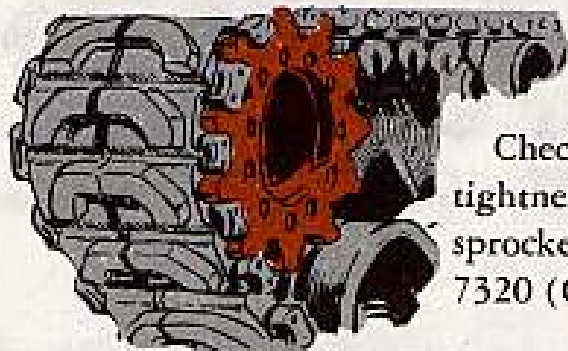


### **Bumper Springs:**

See if your volute bumper springs show any cracks or breaks.



### **Sprockets:**



Check sprocket mounting bolts for tightness. Check wear on final drive sprocket with the gage FSN 5210-563-7320 (Ord).

### **Torsion Bar Anchors:**

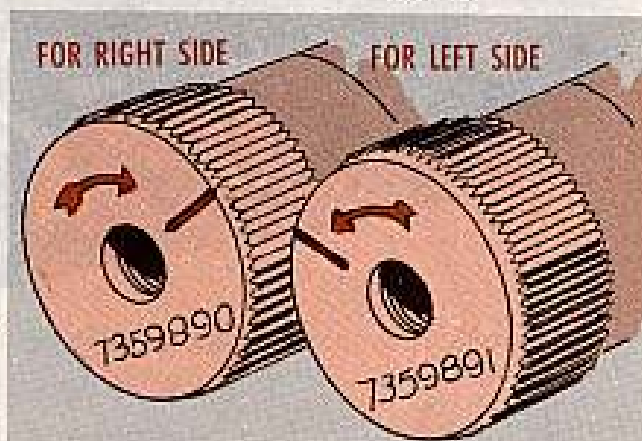
On the M60 you can get at the torsion bar anchors from outside the vehicle through bolted access plates. All late model M60s have FSN 2530-701-4011 torsion bar anchors. Some of the early ones (serial number 364 or below) may have different anchors but if and when you have to replace 'em, use FSN 2530-701-4011 anchors.



### **Torsion Bars:**

The torsion bars are the same as used on the VTR M51. There are two kinds, bars for the left side of the tank and bars for the right side of the tank, and you can't use one in place of the other.

To replace any of the bars on the left side of the vehicle, use FSN 2530-040-0859. They have the number 7359891 stamped on the end of the bar that you push in last. This end also has an arrow pointing in a counter-clockwise direction.



The torsion bar for the right side is FSN 2530-040-0858, and has 7359890 and an arrow going clockwise stamped on the outboard face.

## Shock Absorbers:

In time, all the M60's will get shock absorbers, but friction snubbers will be used until shock absorbers are ready for issue.

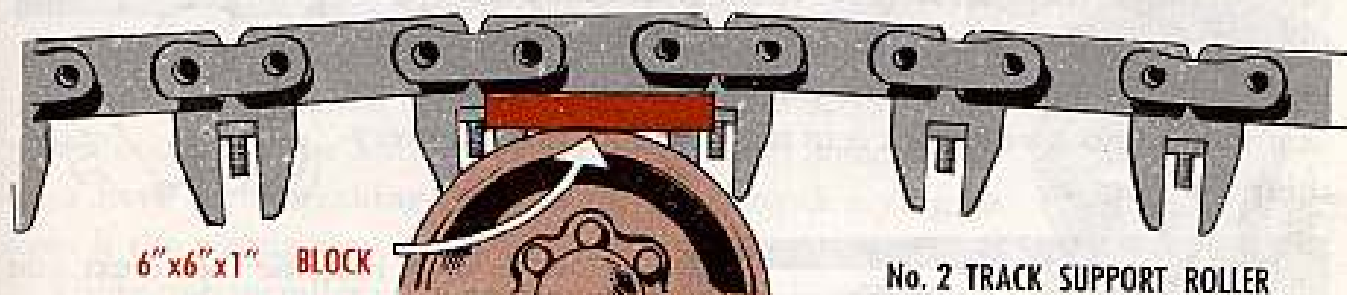
I'M A WAITIN'



## Track Tension:

Check track sag with straight-edge or tight string halfway between 2nd and 3rd rollers. Coast tank to a stop on flat, level ground with a track shoe centered on the No. 2 track support roller. Don't apply brakes because that takes up track tension.

1. Shove a wooden block about 6x6x1 inch between the No. 2 track support roller and the track.



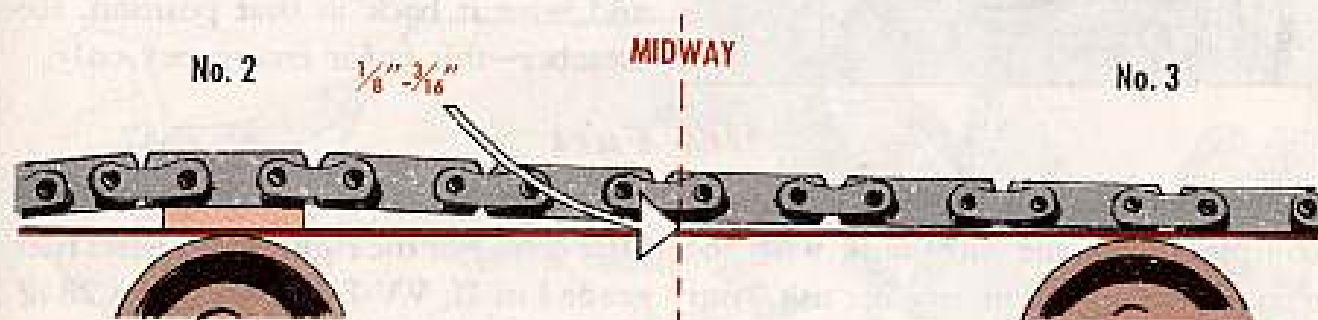
2. Stretch your string or straight edge between the No. 2 and No. 3 track support rollers.

No. 2 TRACK SUPPORT ROLLER

No. 3 TRACK SUPPORT ROLLER



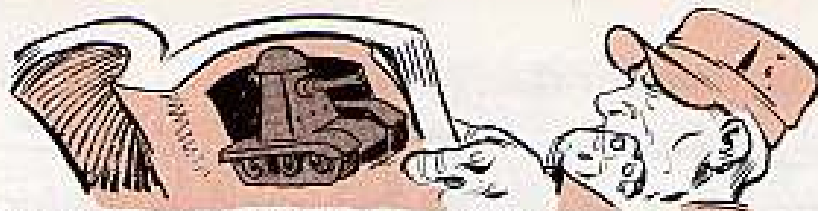
3. At the point midway between the two rollers, measure the clearance between the bottom of the track and the straight edge or taut string. It must be between  $\frac{1}{8}$  and  $\frac{3}{16}$  inch.



If it is over or under, adjust at the compensating idler wheel adjusting link. Raise your wrench to loosen the adjusting link and lower your wrench to tighten it. Don't forget to retighten the locking bolt after an adjustment.



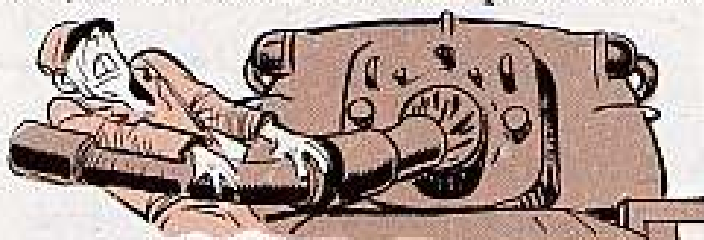
### **Idler Wheel:**



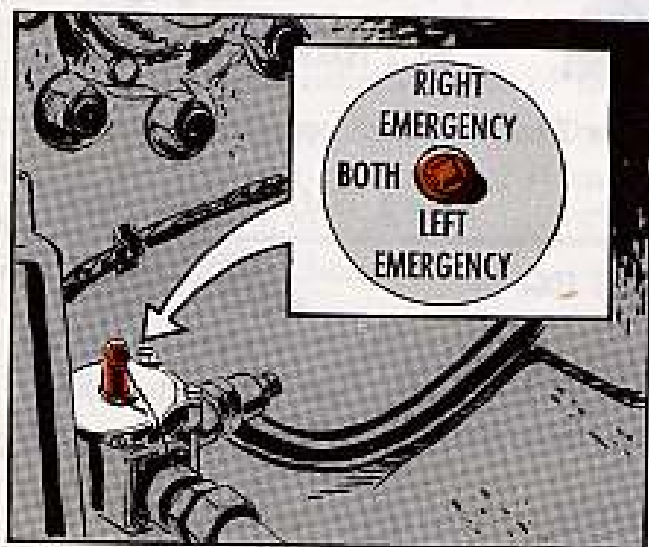
You may see a track tension idler wheel pictured in some of the early TM's. Don't worry because your M60 has none. The picture was from a development model.

### **Fuel Feed:**

H-U-R-R-Y!



Normal feed is from both tanks at once, but you can cut off either the left or right tank in an emergency. Like this . . . put the gun tube over the left front fender. Lift the battery access plate in the turret floor. Remove the countersunk screws from the isolation valve cover. Cut the locking wires on the inter-tank isolation valve and turn the valve control shaft as far as it will go clockwise. Lock it in that position, and put everything back again.



This is only half the job. Next you have to open the rear doors and take off the transmission shroud cover.

Under the left transmission mount is the selector and isolation valve wired to the BOTH position. Cut the locking wire and turn the valve to either the LEFT or RIGHT position depending on which tank you want to feed from, and wire it back in that position. Remember—this is for emergency only.

### **M60 Fuel**

Habits are hard to break. So, if you're equipped with the M60 tank with the compression-ignition engine, ask your outfit support if it's A-OK to stencil

"Diesel Fuel Only" near the tank's fuel filler caps. For the right fuel—diesel fuel grade I or II, VV-F-800—see para 28 of TM 9-2350-215-20 (12 Sept 60).

### **Make a Mark:**

The cam screws that hold the transmission shroud in place are tricky because there's no mark to tell you when they're in the locked position. You

might think you've got 'em buttoned down tight when the cam lip is just starting to engage.

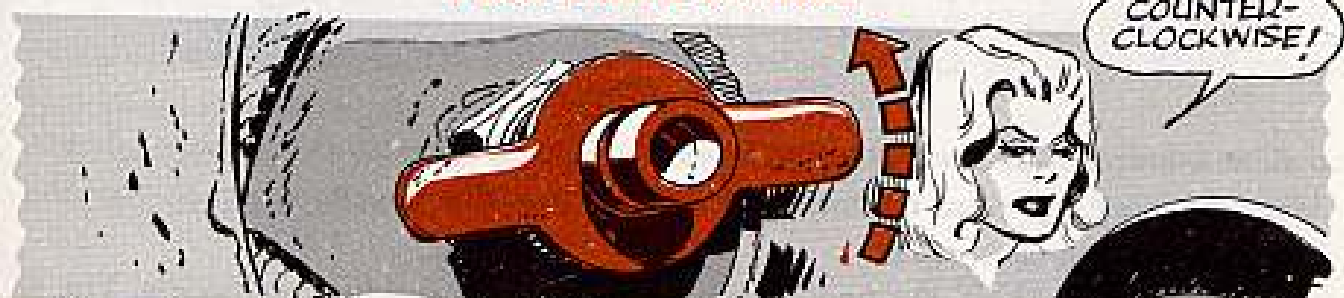
Future production models will have

the cam screw heads marked with a V pointing in the direction of the cam lip. That way you'll know when they're locked tight.

You can get the same results with a hammer and chisel. Get your CO to OK the deal and then put on your own V marks.



### Fuel Tank Drain:



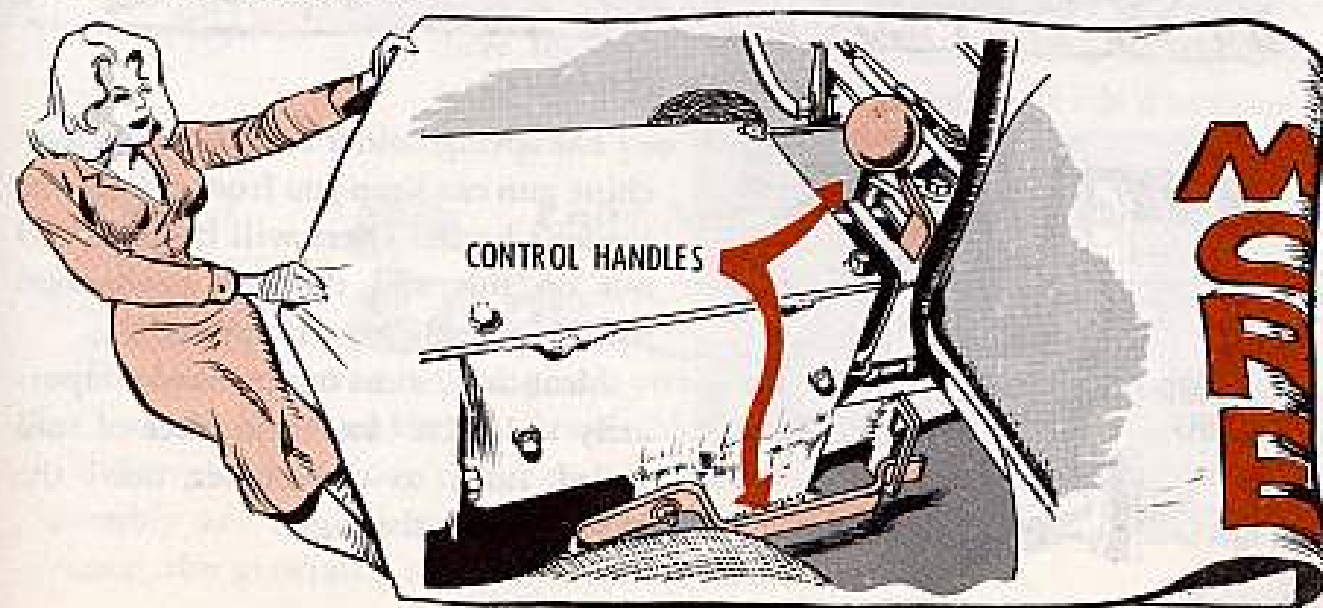
If you have to drain the fuel tanks, open the access cover at the bottom of the hull, and turn the petcock. Some of the guys have been breaking the ears off the petcock trying to turn it the wrong way.

Thing to remember is . . . to open it, you turn in a counter-clockwise direction.



### Hull Drain Valves:

Both crew and engine compartment valves are recessed for better drainage, but you've still got to get your tank level for best results. The control handles are near the driver's seat.





### Shell Case Deflector:

When you take the driver's shell case deflector out of its regular position, you'll find you can't stow it real handy in the turret. It's supposed to be stowed between the left hanger arms, but the ammunition racks foul this up. MWO 9-2350-215-30/5 (23 June 61) will give your Ordnance support the dope on modifying the shell deflector so it'll fit.

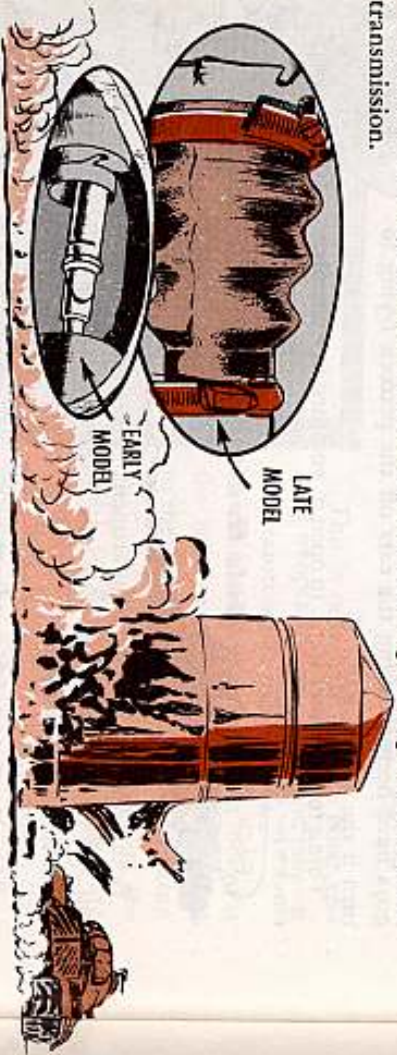


### Brake Rods:

The bonding has been coming loose on some brake control housing boots. After the boot separates from the housing, water, dirt and gunk get in, making it hard to put on the brakes.

Hose clamps to hold the boots are being put on late production models. You'll be able to get them later through your regular supply channels.

To service and inspect these boots, take off the two inspection plates under the transmission.



### Spring Holder:

The spring holder for the cupola machine gun can keep you from closing the loader's hatch. There will be an MWO out on this and the late production models already have it applied.

Meantime, some outfits have temporarily welded a 1/4x1 1/2-in piece of cold rolled stock to the holder until the MWO comes through.



### Manifold Heater:



The manifold heater coil puts out 35,000 volts which could really stand your hair up straight. So, when you change a manifold heater igniter, be sure there's nobody around to accidentally flip on the master switch and press down on the manifold heater switch.

The igniter, by the way, is a Champion E49 and there's nothing critical about the gapping—anywhere around .060 will do fine.

### Blidge Pump:

MUST BE A PLACE TO INSTALL A BIDGE PUMP!

There are no switches below the jetison fuel tanks and bilge pump signs on the driver's control panel. The bilge pump is optional equipment, and it'll be installed as a kit if it looks like you're going to need it. That triangular plate near the personnel heater outlet is for the bilge pump pipe.

The bilge pump relay will be installed to the right rear of the driver's compartment in the space marked off for it. Like you've already noticed, there are spaces marked there for an oil pan heater relay and a battery heater relay. They are parts of the arctic kit which'll be installed if or when you need it.

### Lube News:

The LO says there are three points you don't lube—the starter solenoid, the turret traverse lock and the air cleaner blower motor.

Other places you don't have to lube because it was taken care of at the time of assembly are the azimuth indicator, brake linkage and shifting linkage, the starter, the generator and transmission mount.

Incidentally, some of the M60's are in the field with the wrong dipstick.



Get one with nothing but blank space between the FULL and the ADD. It's FSN 2815-679-4962 (Ord).

To get an accurate reading on your daily oil check, the engine must be running and you should let it idle for 3 to 5 minutes before you make the check.

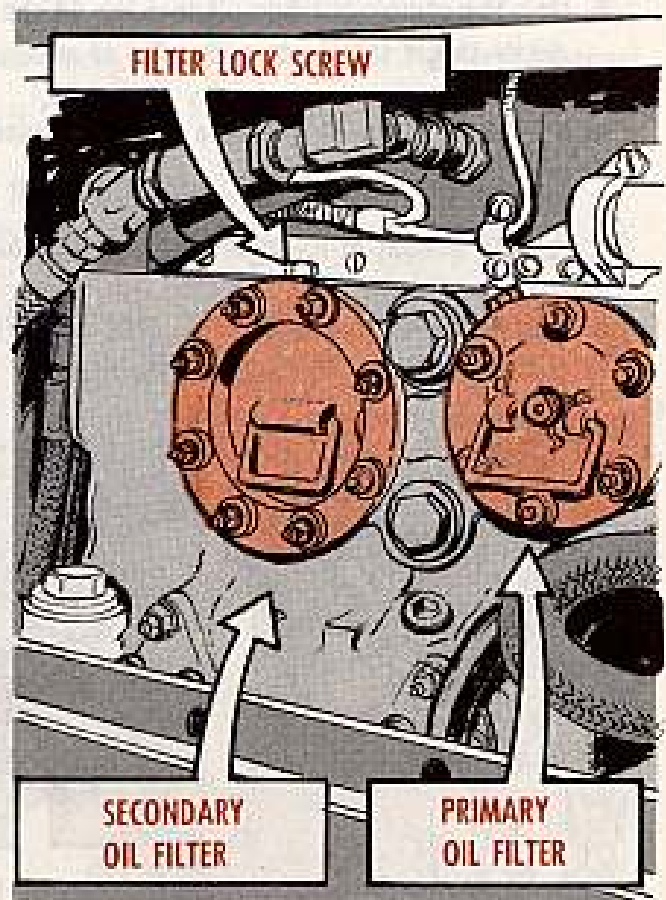
'Course you want to make a cold check before you even start the engine to make sure there's oil in it so you don't burn it up. The hot check really tells the story. Incidentally, it takes about two gallons to move the oil level from the ADD to the FULL mark.



### **Engine Oil Filters:**

A primary (cleanable) and a secondary (replaceable) oil filter can be reached through the engine access plates in the crew compartment. Both are serviced and replaced by the company mechanic.

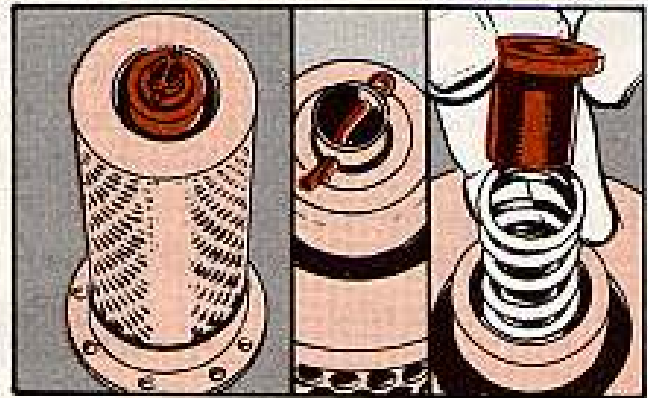
**PRIMARY FILTER** — It's behind a circular housing held by 6 self-locking nuts. To get at it, take off the nuts and use the handle to pull the filter out as far as it'll come. Wait a few minutes for the oil to drain and then loosen the filter lock screw at the top of the filter housing. Now it'll come out. Dry cleaning solvent or mineral spirits paint thinner is used to clean the filter. If it's badly clogged it should be taken apart for cleaning.



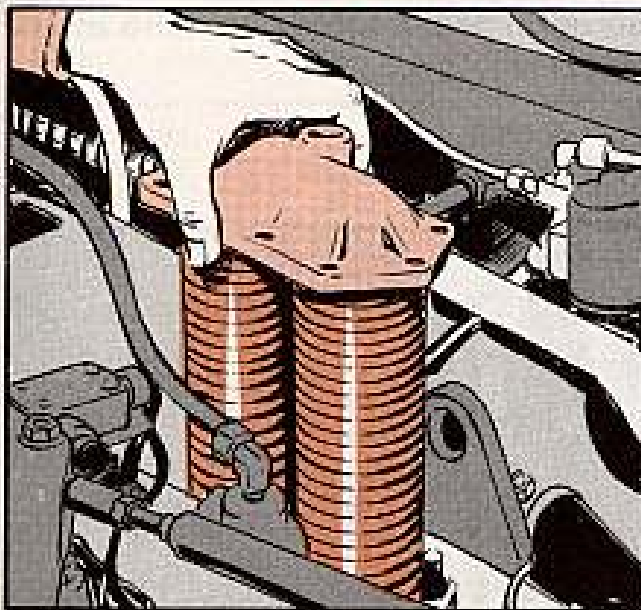
**SECONDARY FILTER** — This one is the one behind the circular plate with 8 self-locking nuts. It's removed and cleaned the same way as the primary filter. There is just one difference . . . DANGER! GUARDIA! ACHTUNG! EN GARDE! . . . want to be sure and talk your language on this. . . .

The difference is that the company mechanic cleans the filter but nobody at company level takes it apart. A powerful spring back of the cotter pin shoots out a heavy bushing if the cotter pin is pulled.

Let the 3rd echelon support boys take it apart. It's their job and they've got the tools to do the job safely.



**Transmission Main Oil Filter:**



...DOUBLE AIR MAZE TYPE THIS IS ALSO SERVICED BY THE COMPANY MECHANIC BUT IT CAN BE TAKEN APART FOR CLEANING. THE RELIEF VALVE SHOULD BE CLEANED AT THE SAME TIME!



**Armament:**



The M60 primary armament is a 105-mm gun with an electric firing mechanism.



## **Firing Mechanism:**

Grease, oil or moisture can short out the electric parts of the firing mechanism. Don't clean the firing pin, firing contact or firing plunger in solvent because this can damage the insulation.

Clean with dry rags and check insulation for cracks after each mission. Don't try to steam clean the inside of the turret or use a high pressure water hose inside the tank or you'll louse things up—but good.

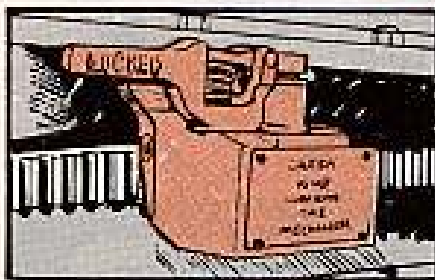
Some outfits have been making their own protective covers for the breech ring.



## **Breech Operating Handle:**

In the M60 the breech operating handle is on the left side of the gun so the loader can get at it real easy.

## **Turret Traversing Lock:**

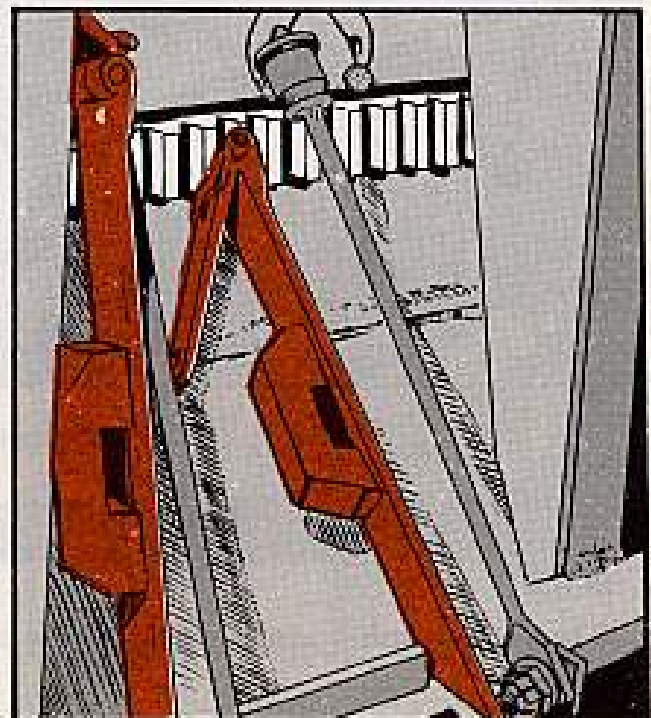


This is on the loader's side. There's something else different about this lock—you don't lubricate it. The handle is plenty strong for locking but is likely to snap off if you use it as a foothold to climb in and out of the tank.

## **Ammo Racks:**

This is something you've got to watch. The fourth and the last ammunition clamps in the ready racks—counting from the loader's seat—can catch in the turret ring gear and get broken when you traverse the turret. The same thing can happen to the clamps on the hull stowage racks. So keep an eye on them so they don't get caught.

Watch your feet around the stowage racks under the breech ring. These racks are for ammo and are not made to be used as a foot rest, 'cause they bend.





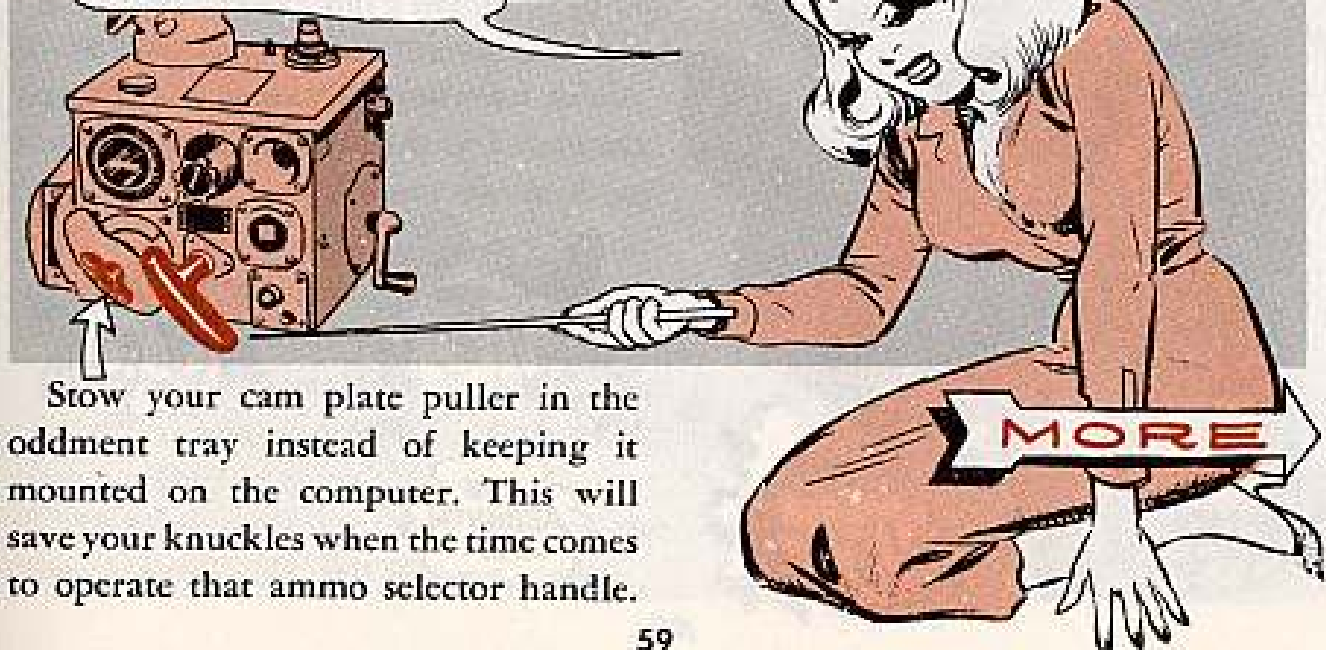
**Range Finder:**

The M17C Range Finder has two external knob covers painted red. These two knobs have been preset at the factory so you don't have to turn them. In fact, if you monkey with them it will screw up your calibration reticle. KYCPHOI (pronounced Kip-Hi... meaning "Keep Your Cotton Picking Hands Off It") is the only kind of maintenance for these knobs.



**Ballistics Computer:**

DON'T PULL ON THE AMMUNITION SELECTOR HANDLE **BECAUSE** IT HAS BEEN (TEMPORARILY) BLOCKED OFF. SINCE ONLY **ONE** CAM HAS BEEN STANDARDIZED AS OF NOW YOU DON'T NEED TO WORK THE SELECTOR HANDLE AT ALL.

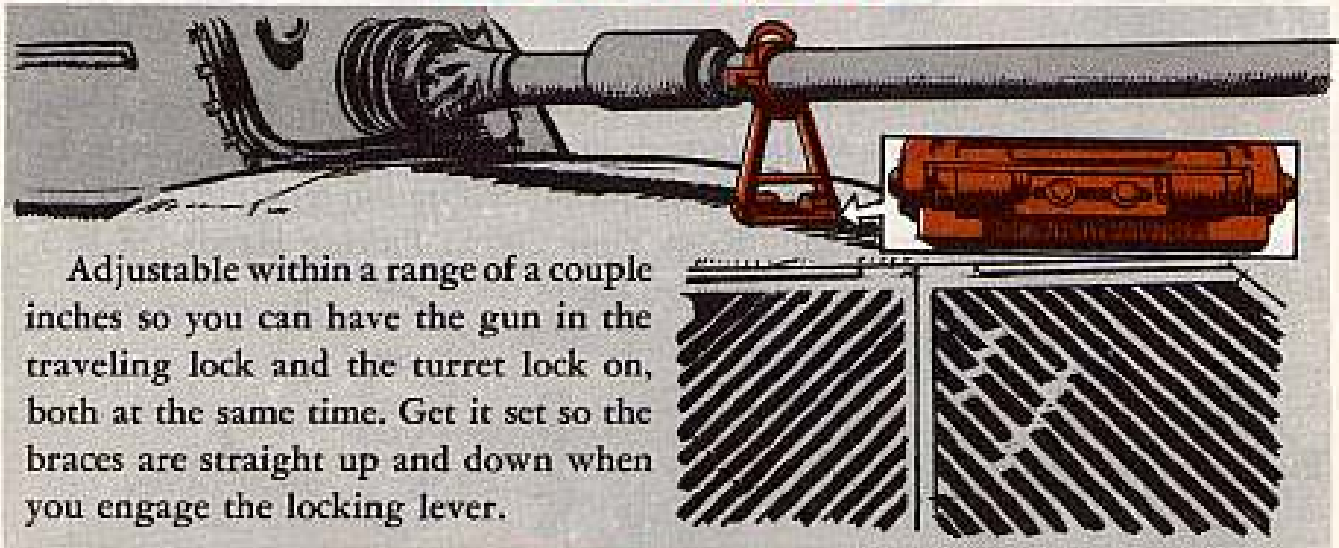


Stow your cam plate puller in the oddment tray instead of keeping it mounted on the computer. This will save your knuckles when the time comes to operate that ammo selector handle.

### **Evacuator Lock Nut Threads:**

They get beat up very easy when removing and replacing the bore evacuator, so watch it, hey!

### **Gun Traveling Lock:**



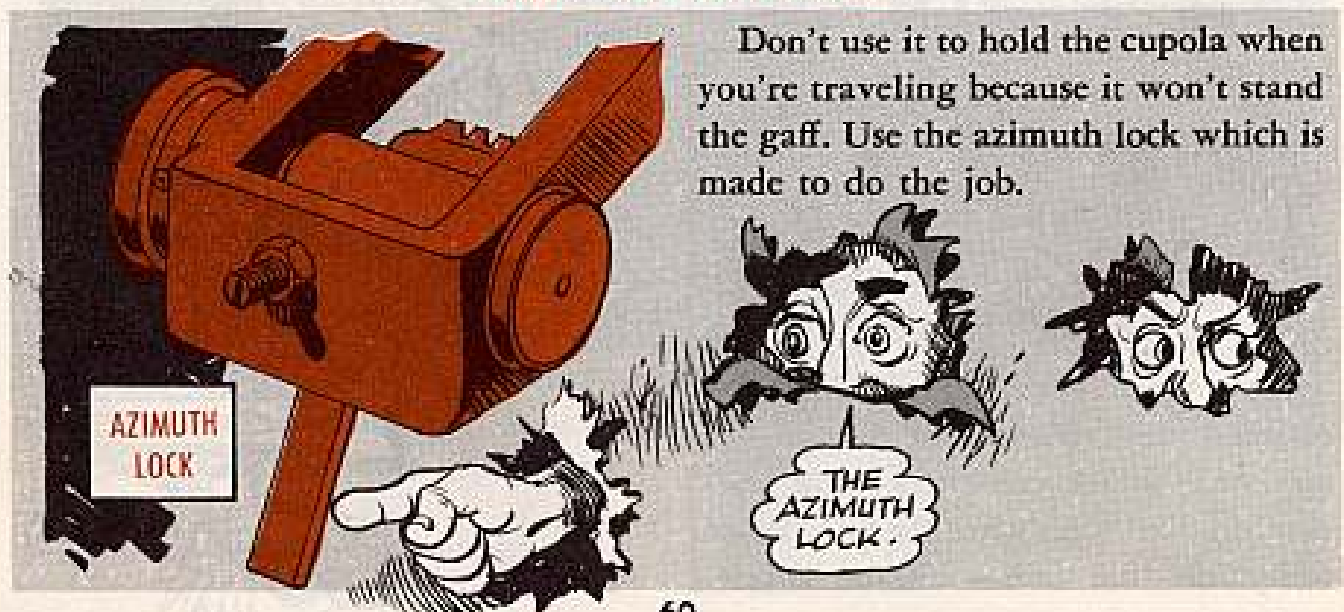
Adjustable within a range of a couple inches so you can have the gun in the traveling lock and the turret lock on, both at the same time. Get it set so the braces are straight up and down when you engage the locking lever.

### **M19 Cupola:**



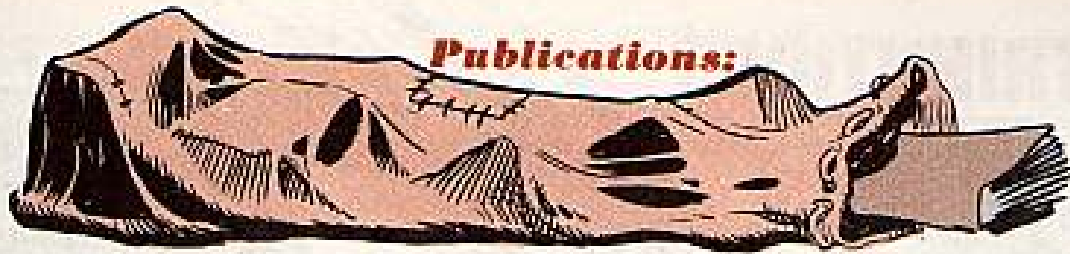
The new M19 cupola is bigger and has more vision blocks so there are no more blind spots for the tank commander. It also has a built-in slip ring so the electric cables won't get in the way.

### **Cupola Interlock:**



Don't use it to hold the cupola when you're traveling because it won't stand the gaff. Use the azimuth lock which is made to do the job.

## Publications:



According to TM 9-2350-215-10, these pubs should be in the pamphlet bag that comes with the tank—LO 9-2350-215-10 (Apr 60), TM 9-2350-215-10 (June 60), jacket file DA Form 478, and a diagram for storage of OEM.



On the M60 tank the manifold heater switch connectors gotta be connected. If'n the cables are disconnected at that point, you'll get no action when you mash your thumb on the manifold heater switch in the end of the purge pump handle.

This'll get you no spark from the manifold heaters and a manifold full of cold diesel fuel, which makes for awful hard starting.

The connectors at that particular point have a nasty habit of coming apart when you work the purge pump handle.

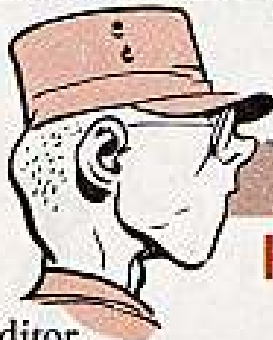
If you've been having that trouble, take a look at the electrical clamp. It might be positioned too low on the lever or the cables above the clamp might have a loop in them.

If you can't see and correct the trouble yourself, call in your support.



# CONTRIBUTIONS

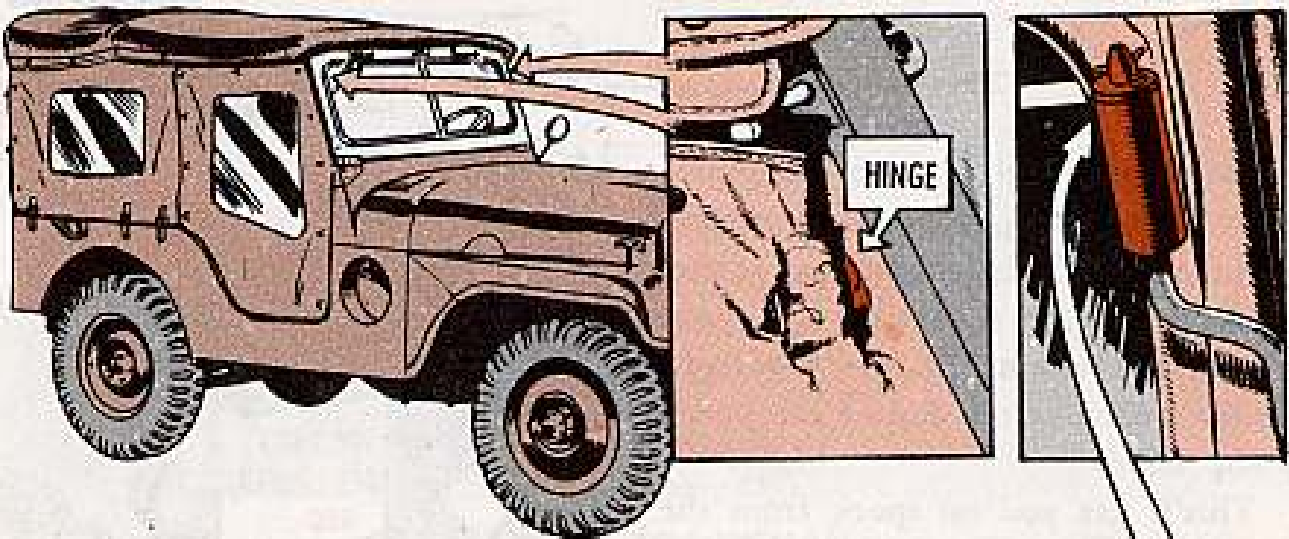
VERY CLEVER TO INSTALL A HYDRAULIC-OPERATED CANVAS TOP ... BUT I THINK WE'D BETTER DISCUSS IT A BIT MORE.



## HANG IT IN THERE

Dear Editor,

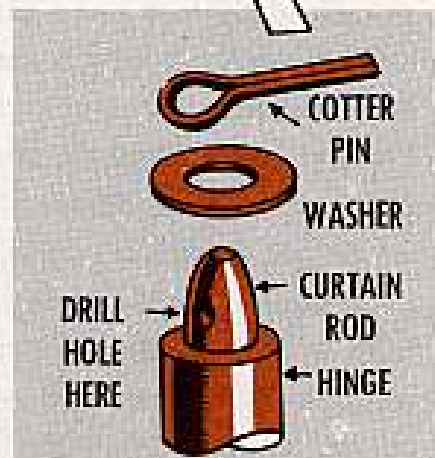
Because the M38A1 jeep side door curtain rods won't stay in the top hinge, the weight of the door tears up the door canvas and also lets a lotta daylight through the top.



This was taken care of by drilling a small hole (large enough to take a cotter pin) in the top of the support rod.

Slip a  $\frac{3}{8}$ -in (ID) washer over the rod above the hinge. Then insert the pin thru the rod and the rod'll stay put. We made sure the door got hung just right before we drilled the hole.

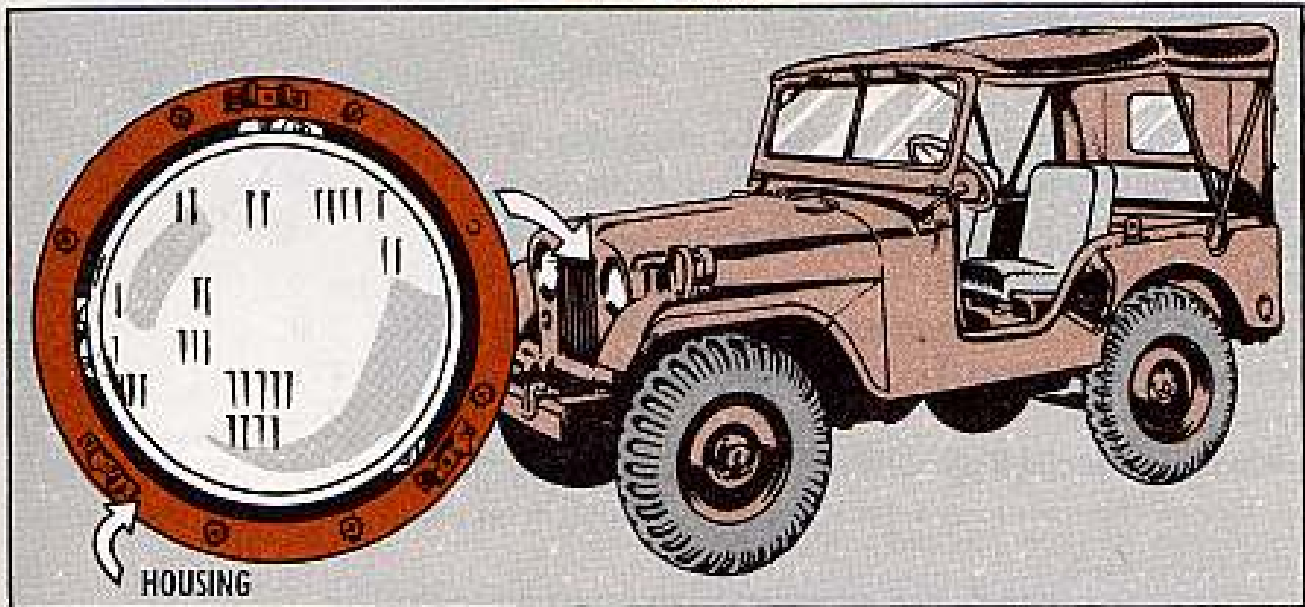
SP4 Wm. H. Huehls  
Ft. Rucker, Alabama



*(Ed Note—Hang it in there, boy!! You sure hit upon a good simple answer, and with your CO's blessings, go to it. Some of the later M38A1's have an improved hinge and don't need this fix.)*



## BRACKET THREADS



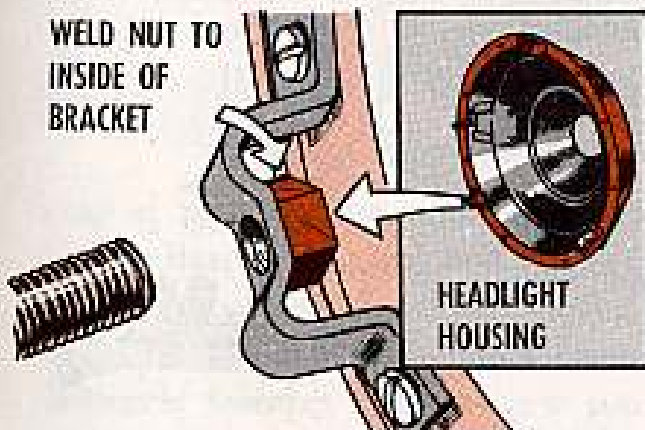
Dear Editor,

We've got an answer to a problem that pops up often on jeep headlights.

There's not much thread on the three brackets found on the headlight housing where screws hold the door on.

Remove the screws a few times, and the threads're worn off.

WELD NUT TO  
INSIDE OF  
BRACKET



When the threads are shot, we take a #10 x 24NC x  $\frac{3}{8}$ -in W, x  $\frac{1}{8}$ -in thick machine nut, and tack weld it to the inside of the bracket. Nut, FSN 5310-011-0633 meets the description OK.

Now, there're some threads to grab hold of.

CWO Wm. A. Lawrence  
Fort Knox, Ky.

*(Ed Note—Good idea—saves the cost of a new assembly on any truck with this headlight, but be sure and get your CO's OK first. Using your fingers to start the screw into the bracket'll slow down the stripping of the threads, and it'll help to use graphite grease on the screws. Incidentally, TM 9-2320-208-20P gives a different number for the door. When you need it, ask for Door, headlight, FSN 6220-752-5936.)*



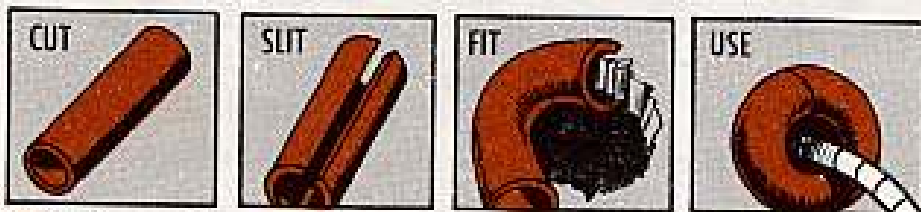
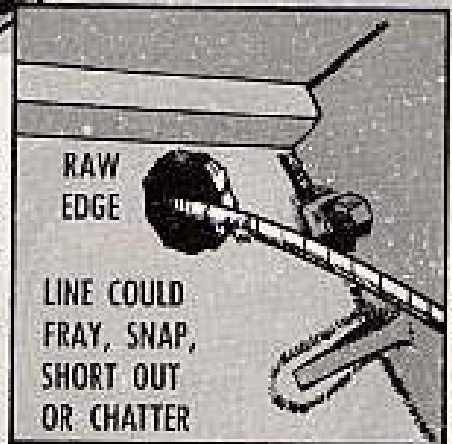
## CUT OUT THE CHATTER

Dear Editor,

I ran across a neat jackknife fix the other day. It's a good item to remember when you have to run hose, wire or tubing through a raw hole in a firewall, housing, floor pan or partition.

It's a hand-cut rubber grommet that edges the raw opening so your lines don't fray, snap, short out or chatter.

All you do is slit a piece of stock—like a windshield wiper hose—to fit around the edge of the opening. To make a press fit that won't fall out, you cut the grommet a mite long.



George H. Ehlers  
Anniston, Alabama

(Ed Note—A good fix until you get a standard grommet from supply.)



## CHEAP HELP

Dear Editor,

A common, ordinary spring clamp is one of the handiest, and cheapest, helpers a man can have around Army equipment. You can find 'em at your self-service store or any dime store.

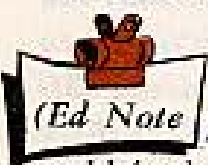
In close quarters, spring clamps are like extra hands.

You can use 'em to clip wiring out of your way—to hold exposed precision parts from dragging in dirt—to pin an extension light right where you need it.

In other words, in a pinch, nothing grabs hold like a spring clamp.



A. M. Paladino  
Tappan, N. Y.



(Ed Note) Right you are. But you've got to be sure you remove them or they could foul up the works.)

# Connie Rodd's BRIEFS



## *You'll be real gone*

You M40-series 106mm recoilless rifle gunners... puhleeze drop that idea you've been toying with about trying a 90-mm blank cartridge in your rifle because it looks like it might work. Forget about it, and forget about it fast. It's strictly taboo, unauthorized and plumb deadly. In addition to worrying about breaking in wings or horns, you'll also wreck your 106.

## *Watch the digit*

One little digit may be keeping you from getting your parts TM for your M131, M131A1, and M131A2, 5000-gal 12-ton 4-wheel gasoline tank semi-trailers. It's not TM 9-2330-208-25P, the way you saw it listed on page 3 of TM 9-2330-208-15. It's TM 8-2330-208-24P (Feb 61) and has been distributed.

## *Guide right*

It's a sharp Honest John crew that uses the H-4167 guide pin for lining up the XM-72 warhead with the rocket. It goes under Ord P/N 8826442... and FSN 5315-827-5305.

## *When mating...*

You want to use the right mating bolt for the rosan inserts in your Honest John XM-72 warhead. And the right one goes by these numbers: FSN 5305-805-2896 (MS-35458-66). When you fool around with bolts that're not the right length, or make your own out of softer metal, you're setting up things for future troubles.

## *Get quick service*

Want info on processing Engineer Blue Streak requisitions for missile support items? Latch onto a copy of SB 5-84 (2 Mar 61). It has all the scoop you'll need to get those rush items when you have to have them.

## *Hot delivery - air pubs*

Just in case you aircraft guys didn't hear, latch onto a copy of DA Circular 310-52 (12 Jul 61). It tells you how the new "pin-point distribution" system for aircraft publications works. Your unit fills out the DA Form 12-5; the St. Louis pubs center mails direct to your unit. Fast...easy.

## *Got a No. 2 common?*

You're supposed to have three (3) generator sets (FSN 6115-240-0393) and one (1) generator set, gasoline engine, ptbl, skid mtd, air cooled, 1.5 kw, 120 v, 60 c, 1 hp (FSN 6115-245-2522) in your No. 2 common tool kit. If there's some doubt, take a look at Change No. 1 (29 Aug 60) to your SM 9-4-5180-A20.

***Would You Stake Your Life on  
the Condition of Your Equipment?***

NEVER SWAP PARTS BETWEEN RIFLES

**NEVER!**

