
Issue 194
PS
1969 Series
THE PREVENTIVE MAINTENANCE MONTH
NOW REPEAT AFTER ME...
IN THE NEW YEAR I RESOLVE
I WILL NOT NEGLECT PM
I WILL LEARN AND IMPROVE MY KNOW-HOW
I WILL DO ALL THE REGULAR PM SERVICES AS CALLED FOR BY THE TM AND SOP
I WILL NOT SUBSTITUTE SPET AND POLISH FOR REAL PM
I WILL NOT REST MY FOOT ON THE CLUTCH
I WILL CHECK MY EQUIPMENT EVERY SPARE MOMENT I GET
I WILL COUNT MY TOOLS TO PREVENT FOD
Will Eisner

**P**roduces vital current to power his outfit's comma, refrigeration, lighting and shop equipment needed to maintain unit readiness.

**O**perates at peak know-how. Knows his TM's operating procedures, avoids overloads, adjusts ventilating panels for proper cooling and runs at the correct RPM.

**W**atches panel gages and controls to maintain governed output and correct frequency. On guard for dangers of dirt, overheating and generator tilt.

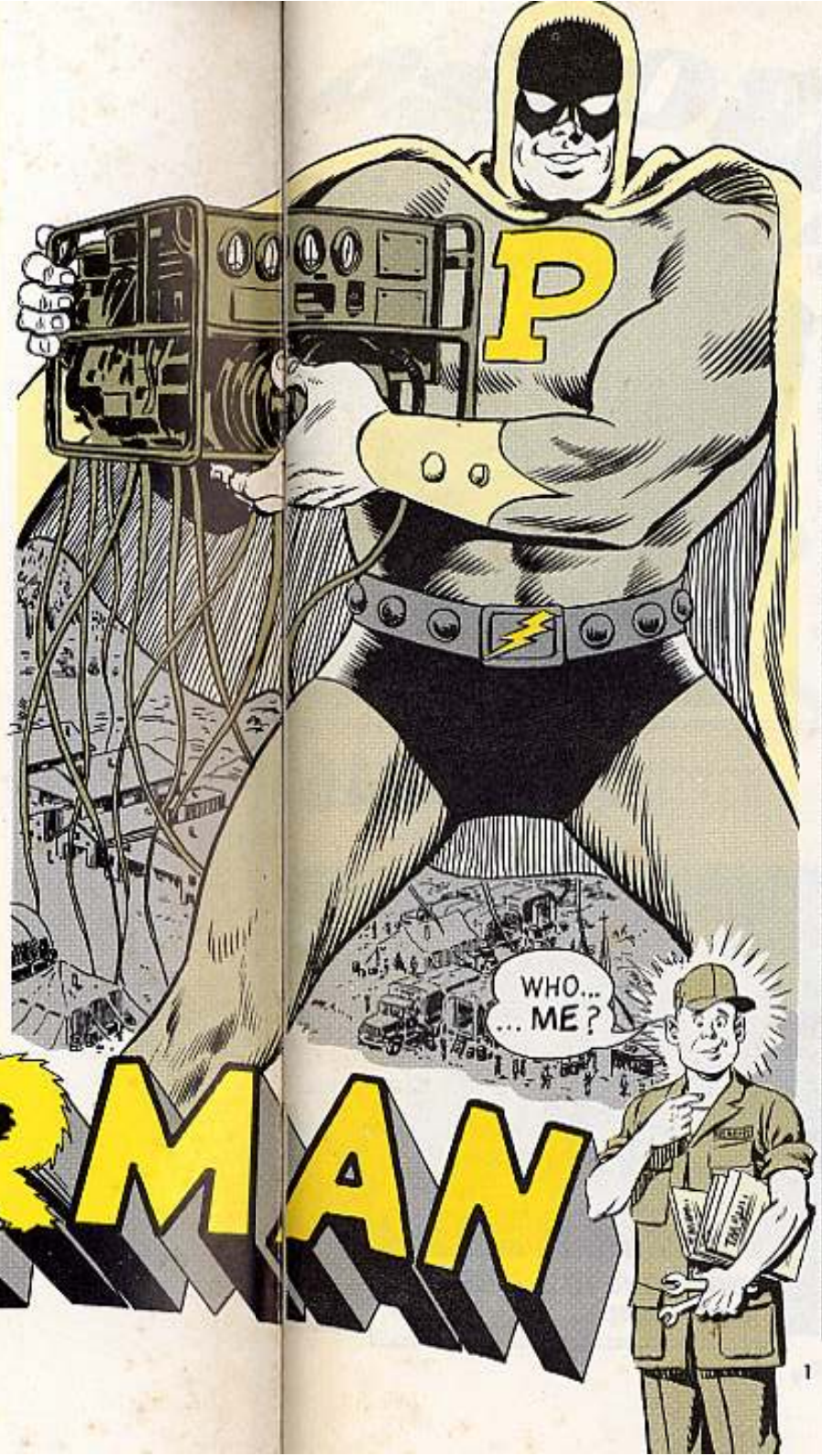
**E**fficient in hooking up parallel or auxiliary operations, assures matched voltages and frequencies. Heedful against shutdown through neglect.

**R**epairs quickly and with confidence. Uses TM's, stays within his MOS capability, coordinates major repairs with support to head off breakdowns.

**MAN**aintains his PLL, BIIL, tools and manuals; keeps abreast of supply procedures; keeps up fuel, water and oil levels; cleans filters; allows no leaks, loose connections, low batteries, crushed cables or bad fan belts.

**MAN**ttends to scheduled lube and maintenance services, alert to unusual conditions that need accelerated maintenance, constantly eyeballs the anticipated wear and trouble spots.

**MAN**o one is more indispensable than the POWER MAN. Alone, watchful, too proud to goof off . . . trust and confidence is his due. Self-satisfaction is his when he <u>knows</u> he's the MAN behind the POWER.




# POWER MAN


**P.S**

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THE PREVENTIVE MAINTENANCE MONTHLY

Issue No. 194 1969 Series


## IN THIS ISSUE




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PS wants your ideas and contributions, and is glad to answer your questions. Name and address are kept in confidence. Just write to:

Sgt. Half-Mast,
PS Magazine,
Fort Knox, Ky.
40121

COMMUNICATIONS

# GO GO WITH YOUR RIP RARIN' AN/VRC-12 SERIES RADIOS

**BE YOUR OWN INSPECTOR...**

How sweet it is!

That's the AN/VRC-12 series radio set . . . when you take care of it.

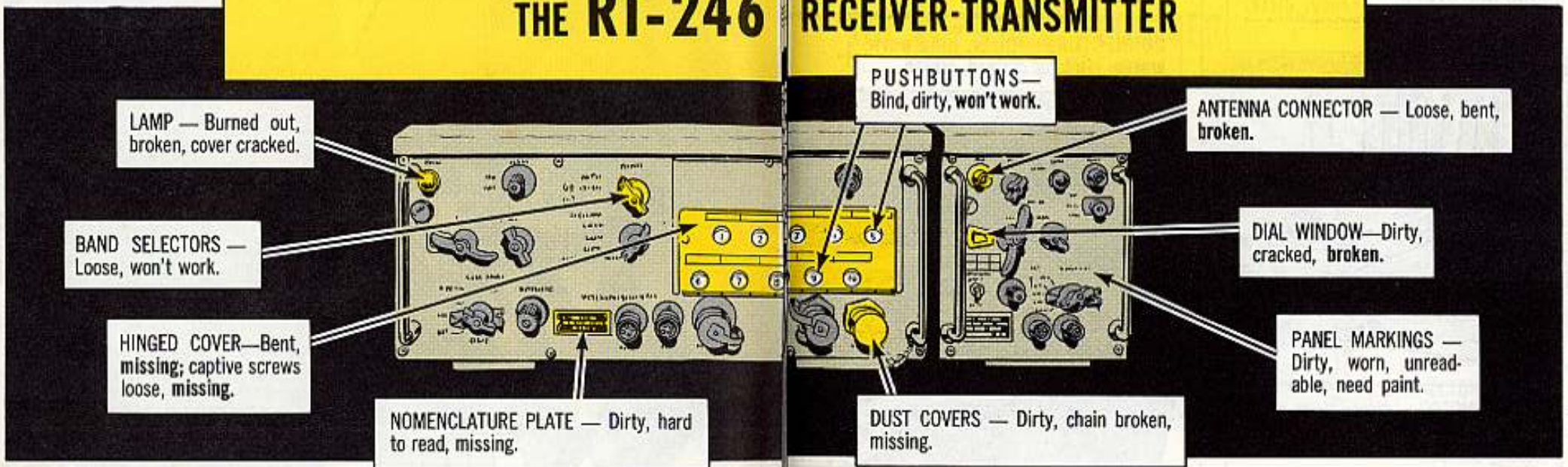
Whether it's in a wheeled vehicle or part of a package in a track, a good operator-type will keep things moving his way by watching for clues that tell him preventive maintenance is needed.

O' course, a real boost to a piece of radio gear is to turn it off when it's not in use, especially before starting the engine in a vehicle it's a partner with. This'll guard against sudden power surges that can send a radio set into old age or the junk heap real fast.

To give a hand in helping that radio set do its best for you, here are a couple or three pointers that'll tip you off to the need of better maintenance.

The **bold type** items are real serious and should be taken care of pronto.

## THE RT-246 RECEIVER-TRANSMITTER








PS MORE

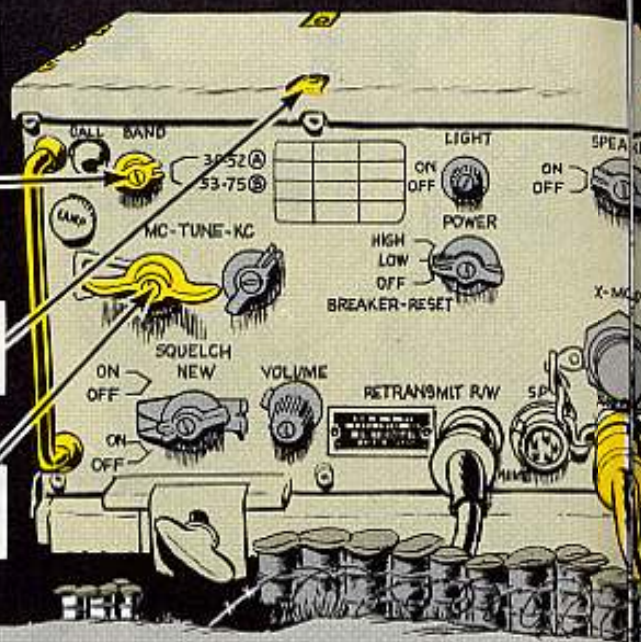
# THE RT-524 RECEIVER-TRANSMITTER

GASKETS — Hard, cracked, chipped.

KNOBS — Loose, bind, **missing.**

COVERS — Screws missing, dirty, scratched, need paint.

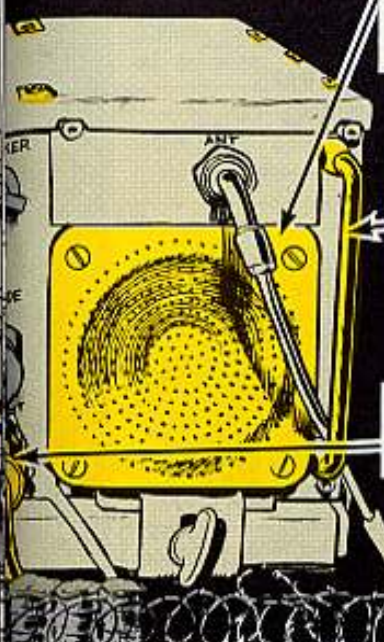
CONTROLS — Loose, bent, **broken, missing;** screws loose, **missing.**



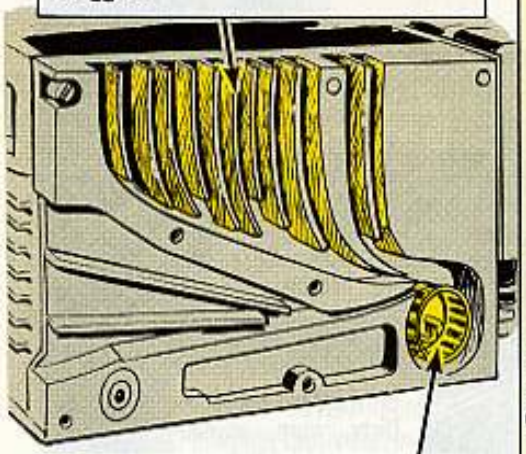

SPEAKER — Dirty, **clogged,** dented; screws loose, missing.

GUARDS — Bent, **broken, missing.**

PLUG — Dirty, **pins bent, broken.**

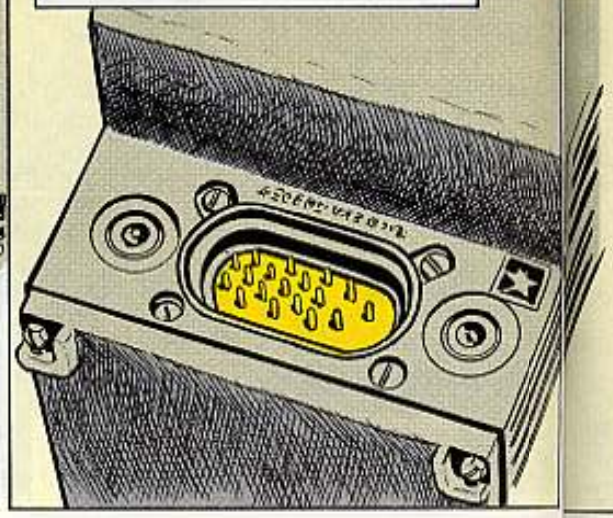



COOLING VANES — Greasy, dirty, **clogged.**



BLOWER MOTOR — Noisy, binds, **won't run;** squirrel cage dirty, fins bent, wobbly, **broken.**

CONNECTORS — Dirty, pins worn, **broken;** insulator cracked, **broken.**





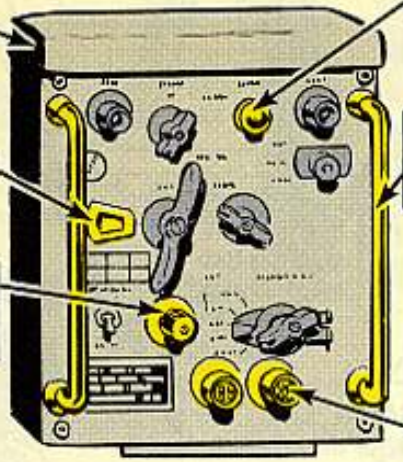
# THE R-442 RECEIVER

CASE — Dirty, **screws missing,** needs paint.

CHANNEL DIAL — Dirty, **glass cracked.**

KNOBS — Loose, **missing, broken.**

ANTENNA CONNECTOR — Bent, **dirty.**



LAMP — Broken, **missing.**

GUARDS — Loose, bent, **broken.**

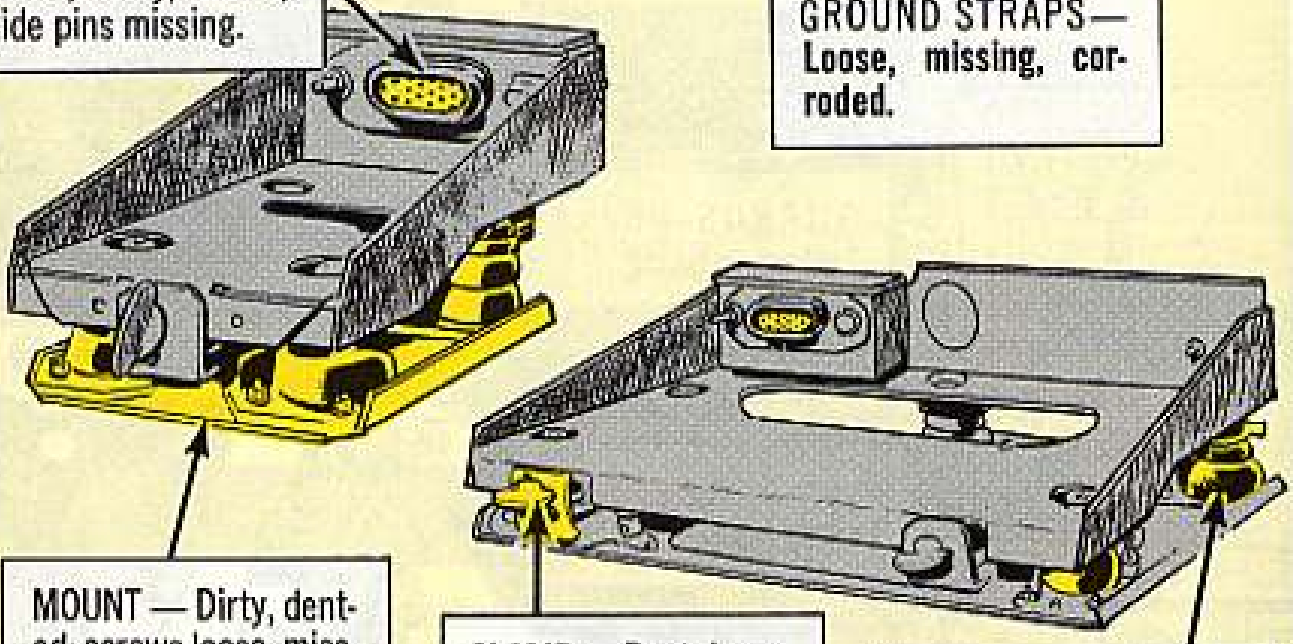
PLUG — Dirty, **pins bent, broken.**

CONNECTORS — Dirty, pins corroded, insulator cracked, **broken.**

## MT-1029, MT-1898 MOUNTINGS

RECEPTACLE— **Broken,** dirty, burnt, guide pins missing.

GROUND STRAPS— **Loose, missing, corroded.**



MOUNT — Dirty, dented; screws loose, missing.

CLAMP — Bent, loose, **threads stripped.**

SHOCK ISOLATORS — Dirty, mashed, loose.

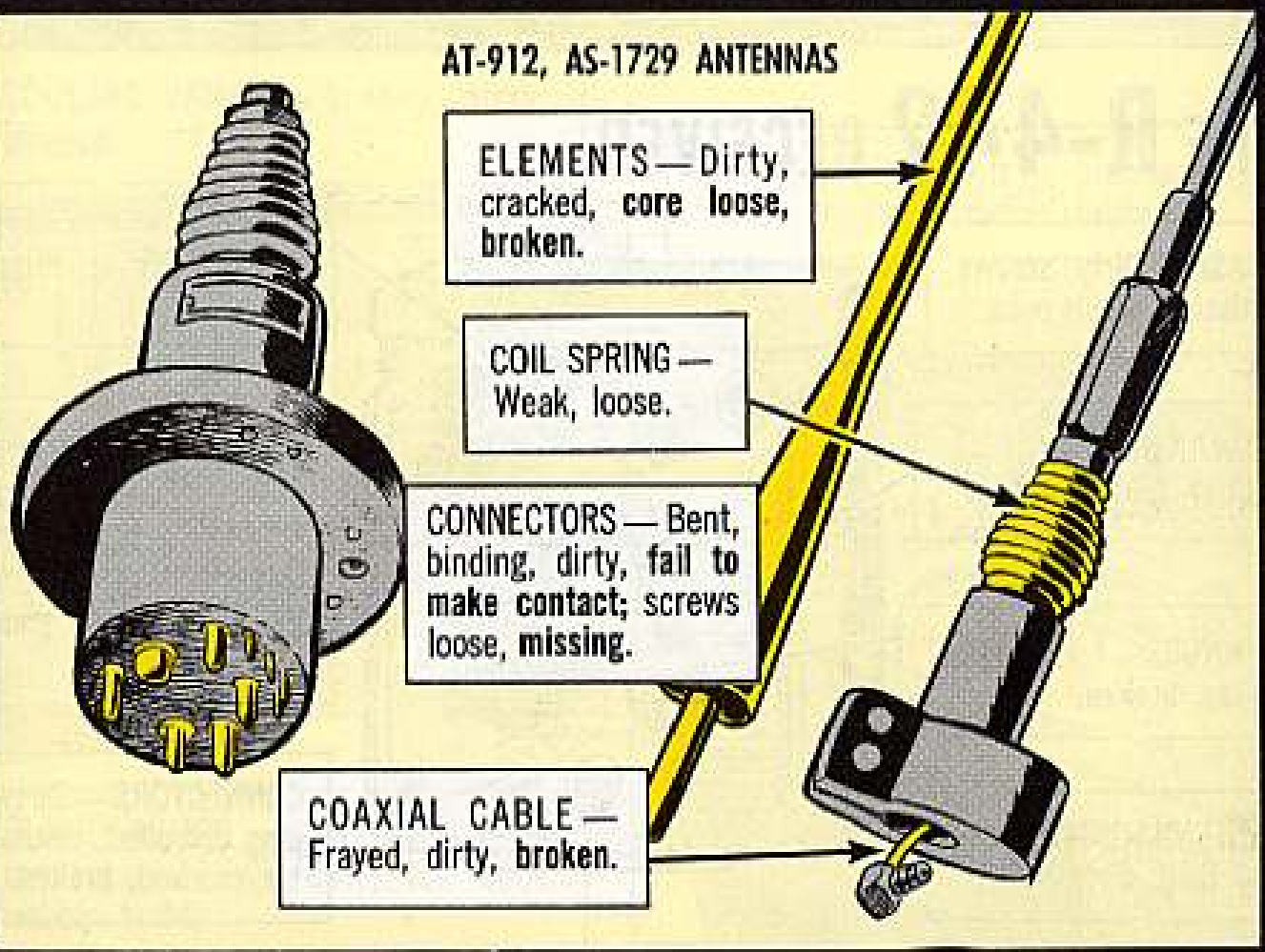
## AT-912, AS-1729 ANTENNAS

ELEMENTS — Dirty, cracked, **core loose, broken.**

COIL SPRING — Weak, loose.

CONNECTORS — Bent, binding, dirty, **fail to make contact;** screws loose, **missing.**

COAXIAL CABLE — Frayed, dirty, **broken.**



## AB-15/GR MAST BASE

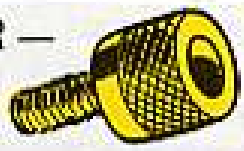
ELEMENTS — Dirty, **broken; fittings painted, corroded.**

BOWL — Cracked, loose, broken.

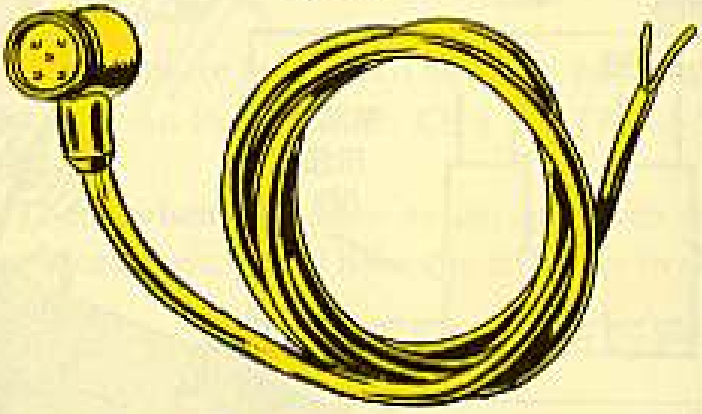
GASKETS — Hard, dirty, split, **missing.**

GROUND STRAP — **Loose, missing, corroded.**

ADAPTER — Loose, missing.



## CABLES



CABLES — Dirty, hard, **insulation cracked, pulled loose** from **connectors,** connectors bent, **pins broken.**

HERE ARE THE PUBLICATIONS THAT'LL GIVE YOU A BIG HAND IN CARING FOR YOUR **VICTORY-12** RADIO SETS!

TM 11-5820-401-20 (DEC '61)

CHANGE 2

CHANGE 3

CHANGE 4

CHANGE 5

TM 11-5820-401-10 (DEC '61)

CHANGE 1

CHANGE 4

END

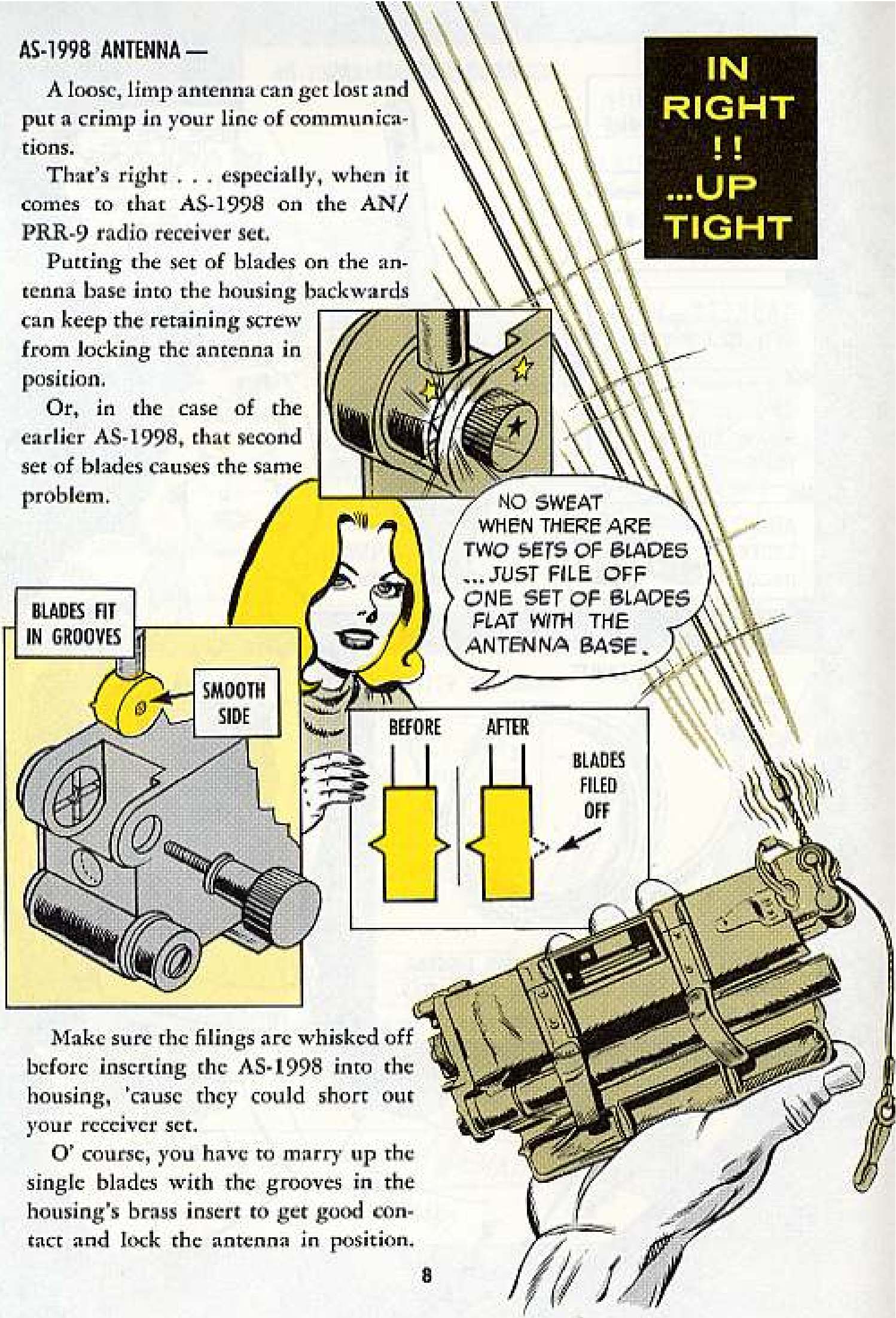
## AS-1998 ANTENNA —

A loose, limp antenna can get lost and put a crimp in your line of communications.

That's right . . . especially, when it comes to that AS-1998 on the AN/PRR-9 radio receiver set.

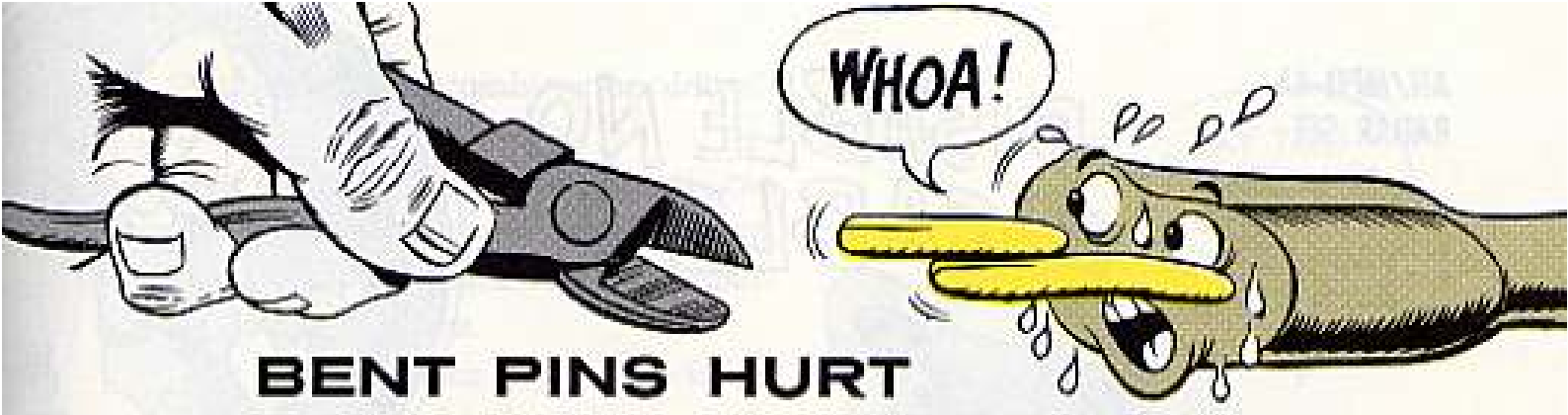
Putting the set of blades on the antenna base into the housing backwards can keep the retaining screw from locking the antenna in position.

Or, in the case of the earlier AS-1998, that second set of blades causes the same problem.




Make sure the filings are whisked off before inserting the AS-1998 into the housing, 'cause they could short out your receiver set.

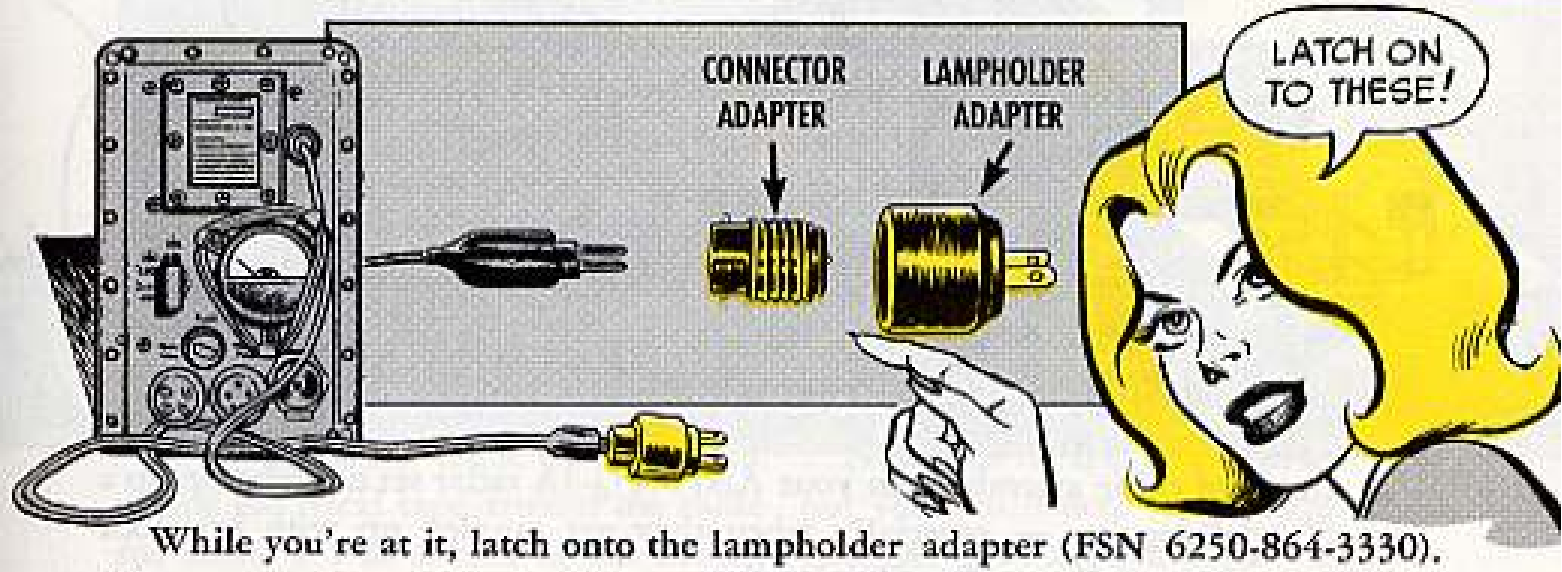
O' course, you have to marry up the single blades with the grooves in the housing's brass insert to get good contact and lock the antenna in position.




## BENT PINS HURT

Back off with the dikes for that AC input cable's power plug pins on the PP-2685/GRC-109 power supply.

Before you wind up cutting one side of each pin, make sure you have a connector adapter (FSN 5935-199-1787) on hand. It's listed on Page 136 in Fed Cat C5935-IL-A, (Mar 68)




While you're at it, latch onto the lampholder adapter (FSN 6250-864-3330). The one on Page 115 of Ch 4 to TM 11-5820-474-14 (May 62) should read "6250".

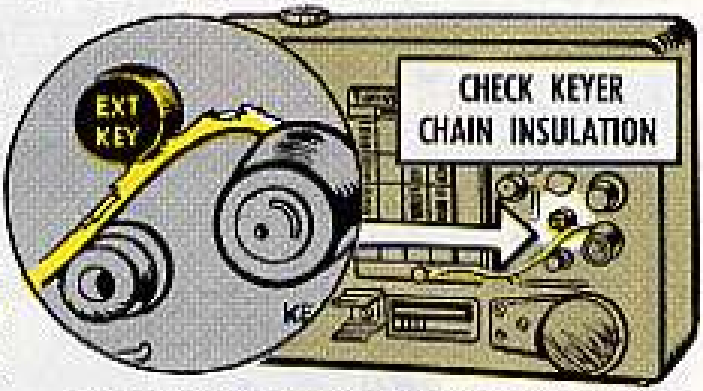
Then, when you have to change from the continental-type connectors to the American-type, you'll have the adapters to do it.

## KEYER KEEPS KEYING

You say your T-784 transmitter on that AN/GRC-109 radio set keeps keying when you key 'er on a keyer hook-up?

Your best bet's to eyeball that keyer cap and chain. 'Cause it could be the insulator on the chain is cracked or missin'.

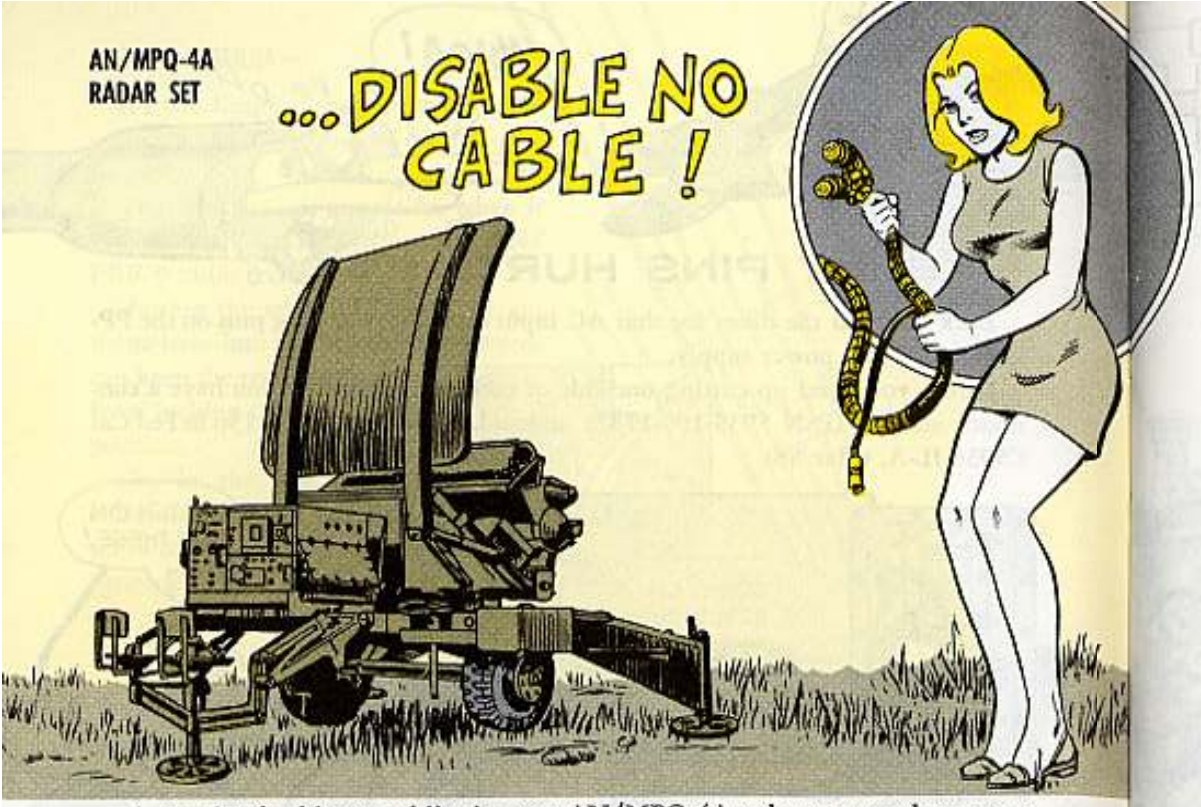
This'll let the chain touch the EXT KEY and short out the transmitter, keeping that keyer keying constantly.




If the flexible metal chain's insulation sleeve is damaged or missing, get 'er replaced — or tape it up tight to keep the T-784 from keying all by its lonesome.

AN/MPQ-4A
RADAR SET

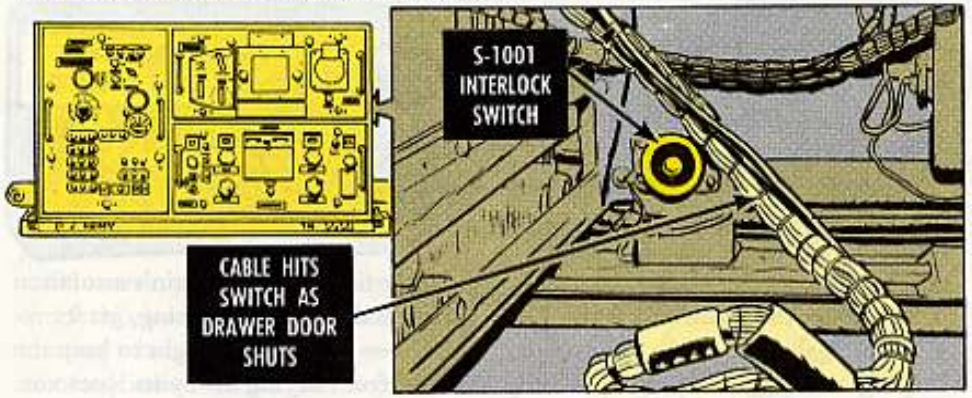
# ...DISABLE NO CABLE!



A couple of cable assemblies in your AN/MPQ-4A radar set can whomp up a heap o' grief for you — especially when they get tangled up with interlock switches and generally goof up the detail.

They're part of the C-2014/MPQ-4A power control power supply and the CP-319/MPQ-4A radar data computer.

The power supply cable can get involved with the S-1001 male-female interlock switch, and the data computer cable gets cozy with the S-1005 switch, in both cases as the drawer doors are shut.



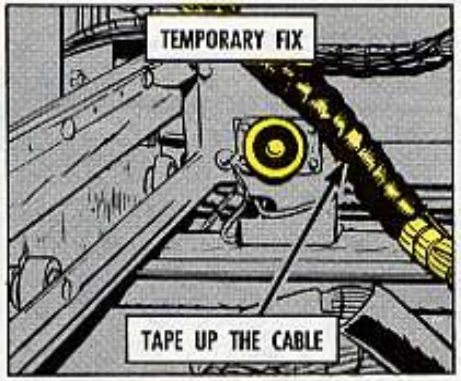



Naturally, this combination doesn't pan out.

The unscheduled togetherness can cause the cables to spread, become bare, and show up with mashed and otherwise damaged wires.

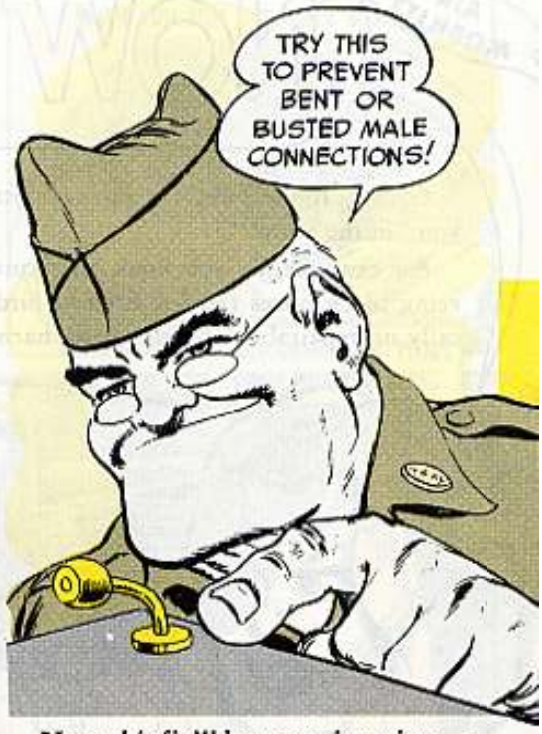
The male portions of the 2 switches can break off, or bend, and not work.

But there's a field-fix that'll keep you in operation:




Wrap double or triple thicknesses of plastic electrical tape around the cable for about a 5-in stretch of the cable's mid-center.

This'll strengthen the center area of your cable and help hold down wire and switch damage.

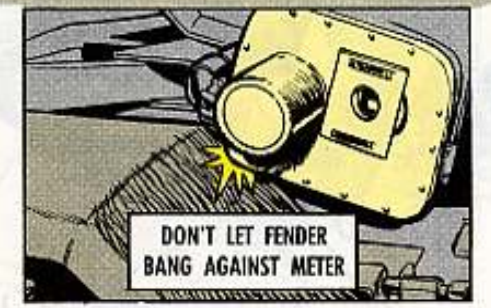



Now, this fix'll keep you in action — but you'll still need to get support on your MPQ-4A as soon as you can, for a permanent fix.

Incidentally, better not try regular friction tape. It can catch and fray and pull on the switch bracket.


Another thing: If you let your radar set's travel mud-guard (fender) bang against the elevation depression meter during the swing of the radar base . . . well, that can be trouble, too.

Make sure the guard is positioned all the way down for the base travel. Otherwise, there can be breakage of the mud-guard at the weld points.



AIR MOBILITY

HUEY (UH-1) CREWCHIEFS, MECHANICS...

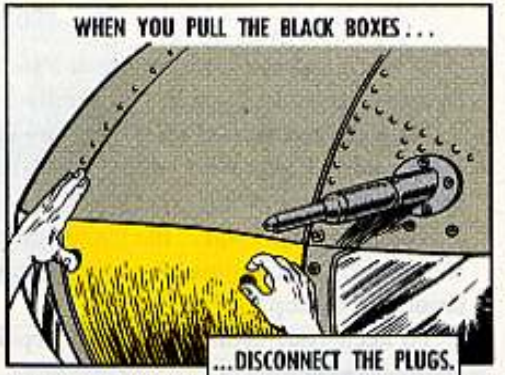
# NOW HEAR THIS!

Gather 'round lads, for an in-country skull session — the kind that'll keep you "in the know."

For example, do you know that cutting avionics wire bundles when recovering black boxes from a downed bird can make the whole airframe economically un-repairable? Those wiring harnesses don't come cheap!



So, never use dikes on wire bundles. You won't lose any time by disconnecting the cannon plugs before you yank the sets.





## SAVE THE INSTRUMENTS

The gyro instruments in your bird deserve tender lovin' care.

Yanking out on the caging knob will strip the plastic gears. You know what that leads to? Early failure, man!

Cage and un-cage those gyros gently, using constant pressure.




PS MORE

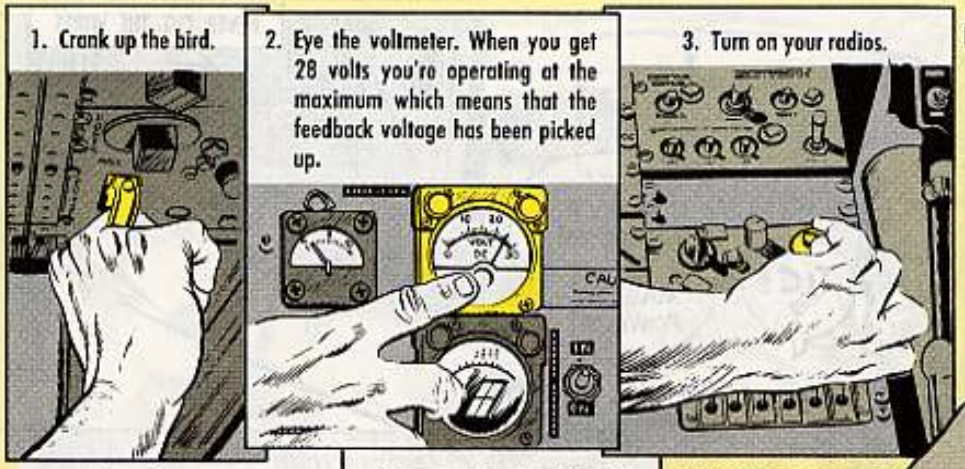
## PROTECT THE RADIOS

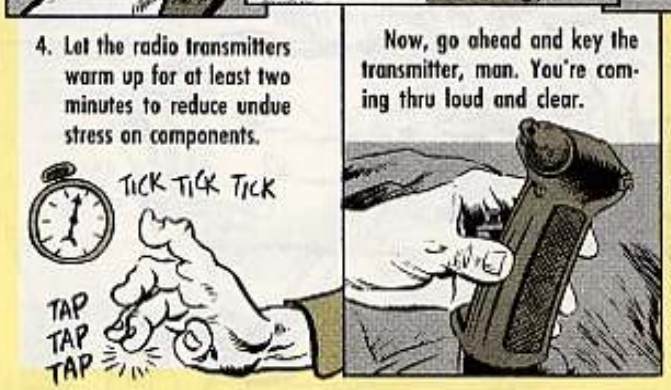
When it comes right down to it a lot of TLC is needed by crewmen to keep radios in numbah-one shape.

Keep the sets turned off before you crank up the bird. Here's why. Right after engine start the generator kicks in to supply operating voltage.

The excess voltage, tho momentarily, feeds thru the electrical system to the radios. If the radios are turned on this "spike" will knock the delicate transistors for a loop.

To keep your radios out of the repair van follow these simple steps.








## MAKE SAMPLING TOOL

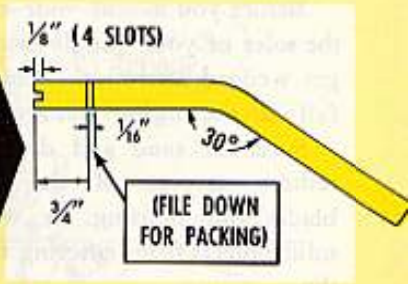
Taking the 25-hour oil samples from the 42-degree and 90-degree gear boxes can be a bit of a problem. Once the chip detector is out, mechanics use scribes, phillips screwdrivers, nails—you name it—to push in on the check valve and draw the sample.

The result is sometimes a broken valve . . . what a revoltin' development!!

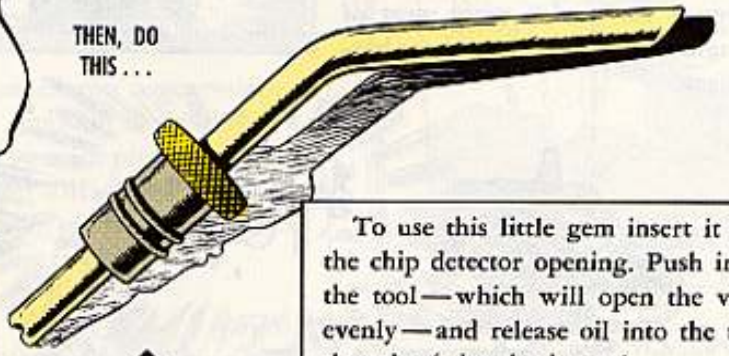


To save bird parts, latch onto a salvaged 1/4-in diameter piece of aluminum tubing, FSN 1560-923-4068, and cut off a piece 4 inches long.

File down a slot on the OD for packing ring, FSN 5330-542-1420. The packing will keep oil from dripping down the outside of the tube when you take the sample.

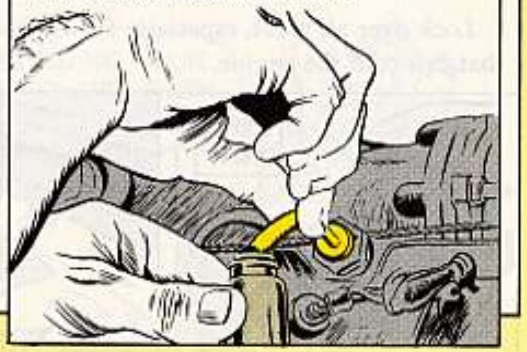



THEN, DO THIS . . .



Slip the packing ring and a salvaged chip detector plug over the tube and your tool is complete.

To use this little gem insert it into the chip detector opening. Push in on the tool—which will open the valve evenly—and release oil into the tube thru the 4 slots in the tool.



But enough of that cockamamie sampling tool. Step closer and let's consider that old bugaboo, foreign object damage, in a new light.

## CHECK FOR CAUSES OF FOD

The increased output of the new T53-L13 engine in the HueyCobra and "H" Model means an increased velocity air flow—thru the same diameter air inlet as on earlier engines.

So, you can see that FOD is even more critical on this baby. No matter what Huey you crew, tho, one of your most important maintenance checks is to eye the engine inlet area before and after every mission.



PS MORE

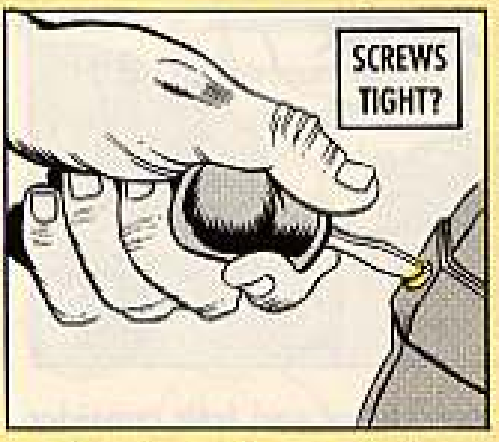
Before you mount your charge, eye the soles of your jungle boots. Stones get wedged between the cleats and can fall into the engine inlet area.

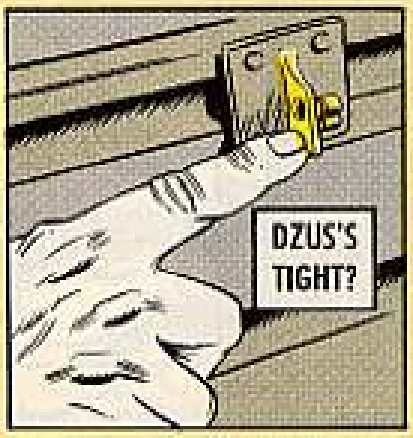
Sure, the sand and dust separator reduces erosion of the compressor blades and housing. It won't keep solid objects from entering the engine, tho.

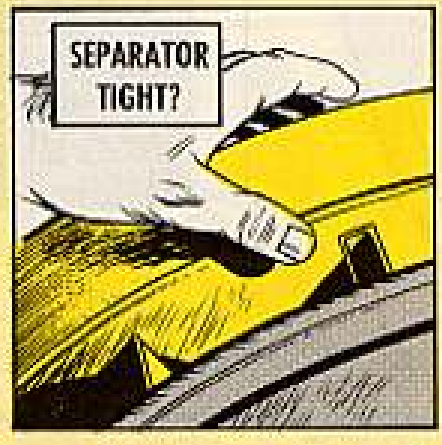
A stone sucked into a churning compressor can make mince meat of the engine for real!! Keep those brogans clean.



Look over all areas, especially forward and above the engine inlet for material that can ruin the engine.



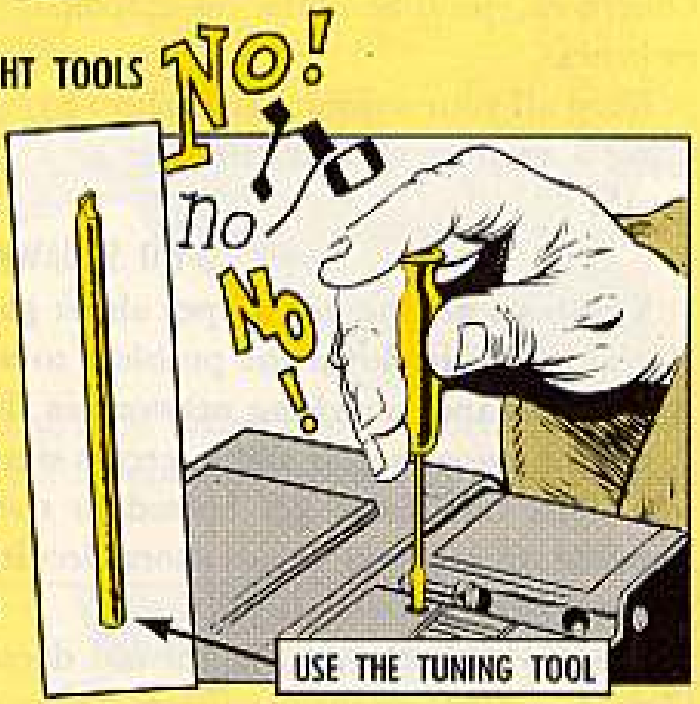

See that all nuts, bolts, screws, washers, dzus fasteners and latches on the sand and dust separator are tight.

After you pull maintenance remember that good housekeeping helps prevent FOD.

To stop safety wire, cotter pins and other hardware from going into the separator during rotor head and engine inlet maintenance, cover the separator. Canvas or even a large towel will do the trick.

Before you remove the covering, police-up the area. Remember that rags and tools left behind will also KO an engine.

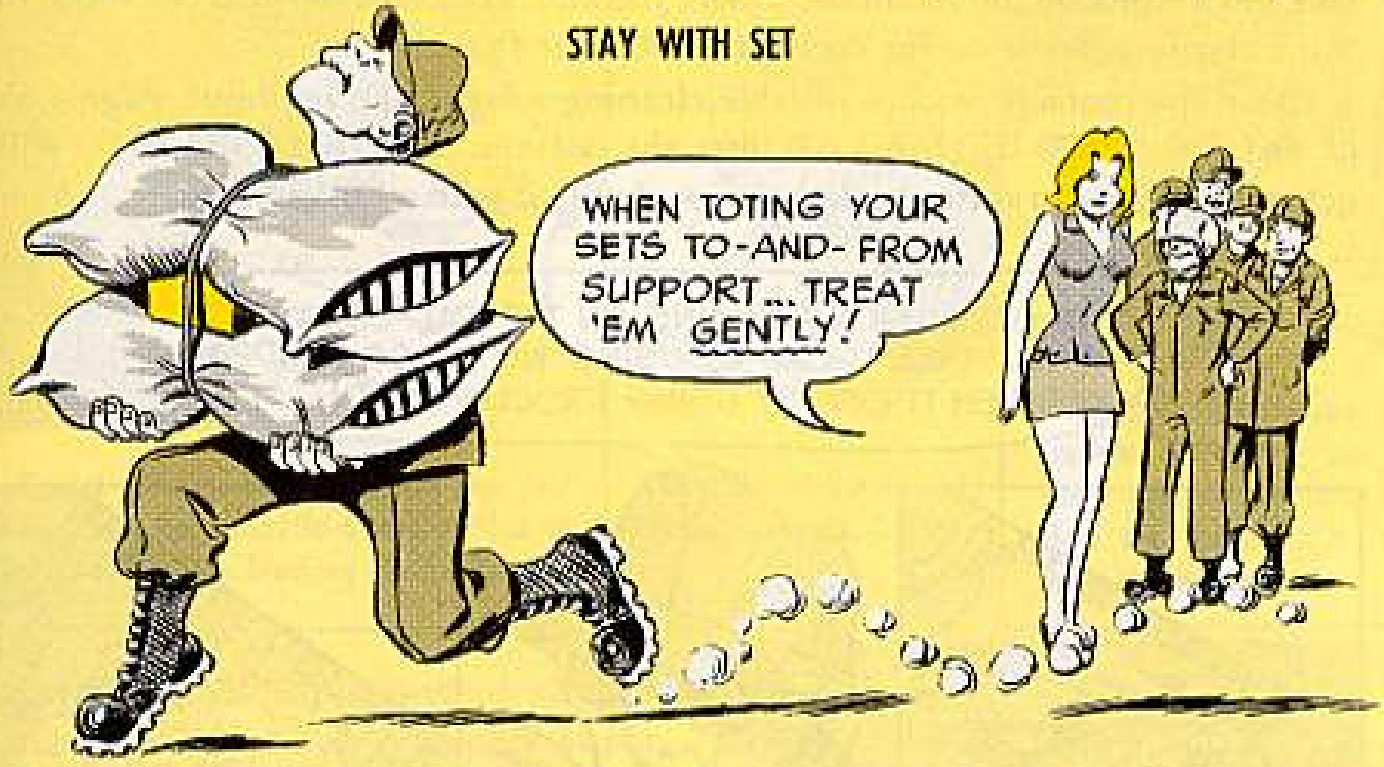

## USE RIGHT TOOLS




There're times when you 35K-types pull the sets for bench checks. If you're called upon to do some actual bench work, tho, be sure you use the proper tools.

For one, never use a screwdriver where you're supposed to make with a tuning tool. Too much pressure applied by a screwdriver will strip out the recess in the tuning slug of the RF and IF cans — give you radio failure.

## STAY WITH SET




Never let anyone who doesn't know the difference between a radio set and a tool box handle your avionics gear. He's liable to toss your radio in the back of his deuce-ana-half. After a bumpy ride to support the set will need more than just a bench check! !

## KEEP SETS CLEAN

With the cargo doors off the Huey, dust gets whipped right inside the bird. The console really takes it on the chin with gummed-up gear trains and shorted-out components.



PS MORE

Signal distribution panel, C-1611A/AIC, really catches dirt. Keep the panel clean by using a soft-bristle brush or compressed air (25-28-PSI maximum). Otherwise, you'll be replacing umpteen switches.

Keep all your avionics gear clean by using a vacuum cleaner, air hose or a brush.

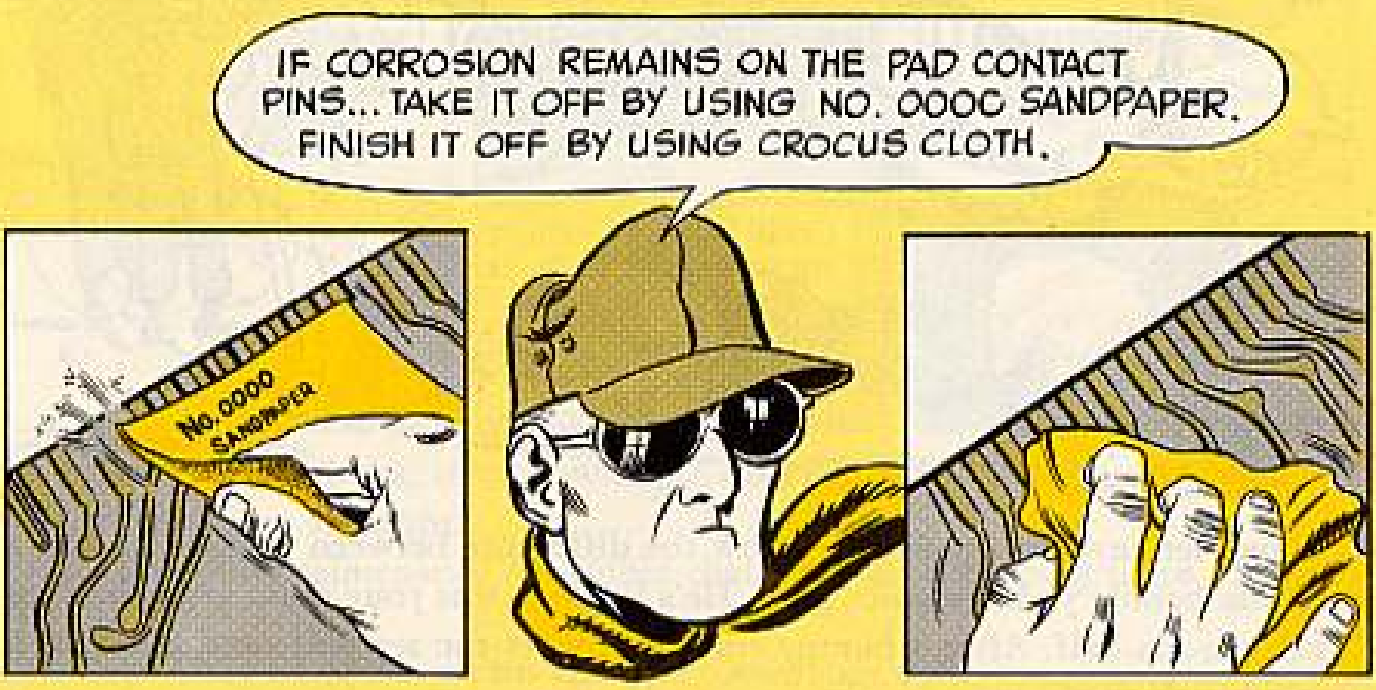

## NO SQUAWKS, PLEASE!

You been getting any gripes about garbled transmission or reception lately? If you can't pin down the problem to an individual set, have a look-see at the A-16 impedance matching network in the communication junction box.

All the avionics gear and intercom signals funnel thru these pads on the console. Dirt can really get booted in there. Add the corrosion that's always showing up and you've got short circuits—intermittent operation . . . complete failure.

TM 11-1520-210-20 (12 Jul 66) doesn't call for a pullout time for these babies. Depending on the conditions where you are, better take the pads out and give 'em a cleaning. Some outfits do it on a 100-hour Periodic.

Clean the contacts with a suitable cleaning solvent like Inhibisol. Page 4.65 of Fed Cat C6800-IL (1 Jul 67) lists the solvent. FSN 6850-582-1647 will get you a gallon can at two bucks a throw. Apply it with a lintless cloth.

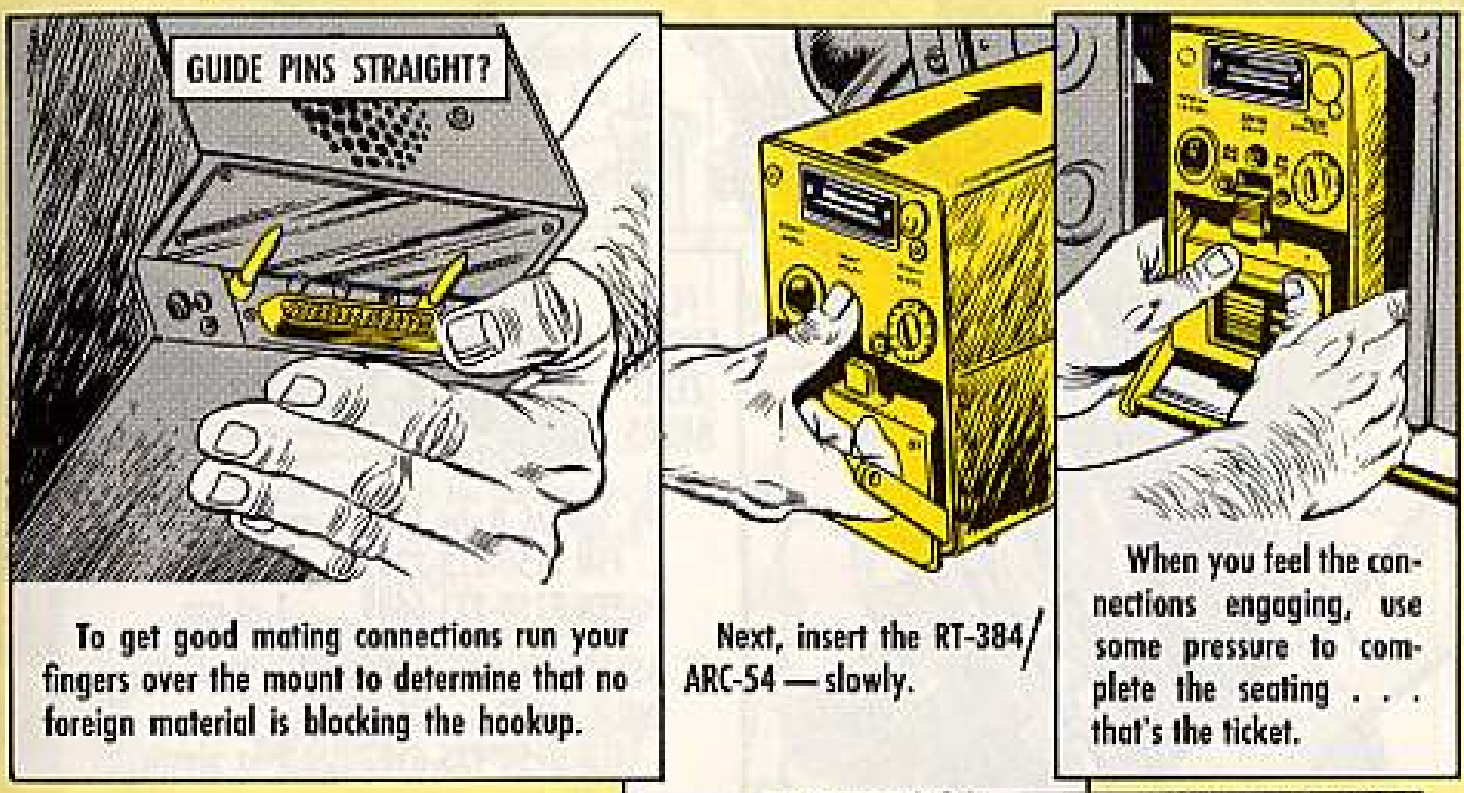



Be sure not to overlook the receptacle in the junction box. A burnishing tool, such as CT-265, will get rid of the corrosion. Compressed air (10 psi or less) and a soft-bristle brush will take care of dust and dirt in resistor and capacitor assemblies.

## PUT 'EM BACK GENTLY

Putting radio sets back in the mounts correctly is mighty important. You'll damage the RT-348/ARC-54 if you ram it home in the mount when all the mating connections are not lined up.

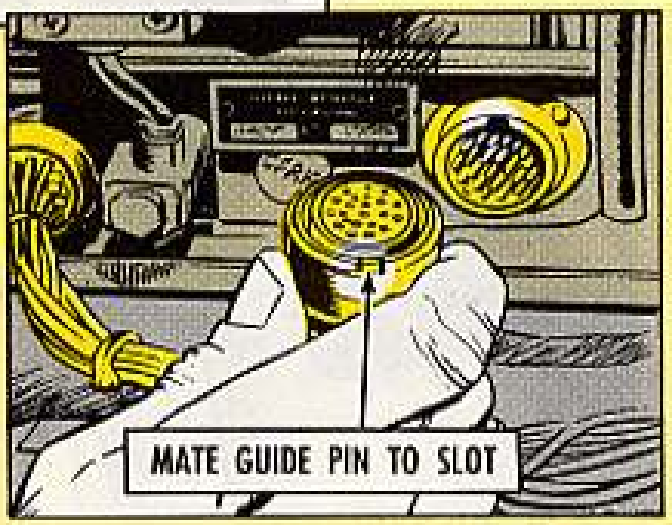

The metal guide pins are soft metal and bend rather easily. A bent pin means you'll probably push out one of the 3 co-ax antenna connectors in the mounting and put your set on the blink.




Fact is, proper mating of all your avionics connections is mighty important.

To prevent damage to cannon plug contact pins be sure to mate up the guide pin with the slot in the receptacle. No off-centers, please!

Yessir-e-e-e, remember that TLC, lads. It goes hand and glove with preventive maintenance.

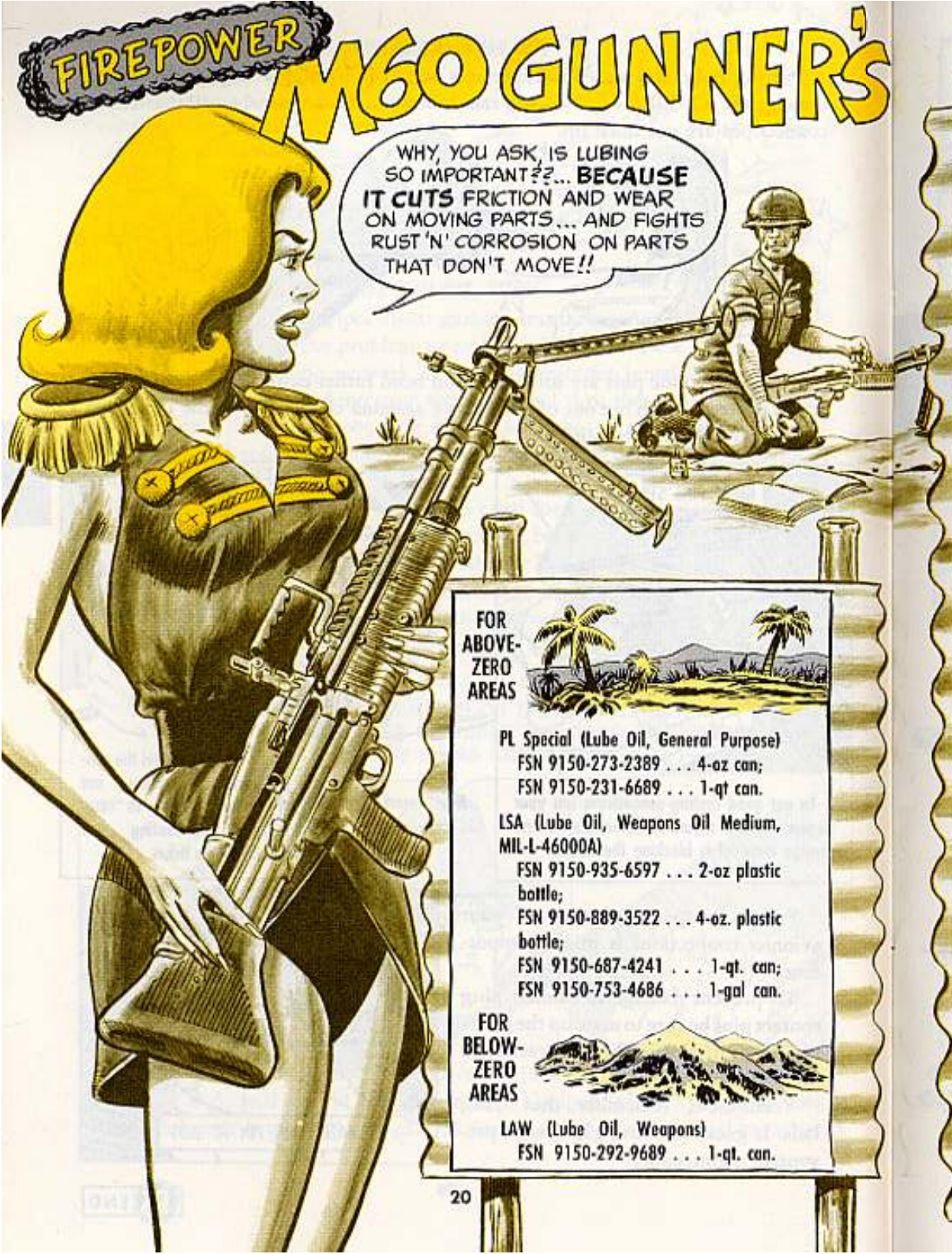





PS END

FIREPOWER

# M60 GUNNER'S LUBE GUIDE




**FOR ABOVE-ZERO AREAS**



PL Special (Lube Oil, General Purpose)
FSN 9150-273-2389 . . . 4-oz can;
FSN 9150-231-6689 . . . 1-qt can.

LSA (Lube Oil, Weapons Oil Medium, MIL-L-46000A)
FSN 9150-935-6597 . . . 2-oz plastic bottle;
FSN 9150-889-3522 . . . 4-oz. plastic bottle;
FSN 9150-687-4241 . . . 1-qt. can;
FSN 9150-753-4686 . . . 1-gal can.

**FOR BELOW-ZERO AREAS**



LAW (Lube Oil, Weapons)
FSN 9150-292-9689 . . . 1-qt. can.



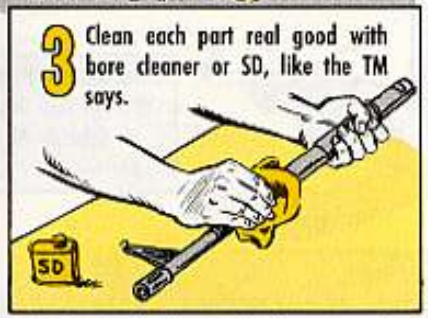
## HOW TO DO THE JOB

By the book, that's how—if you possibly can. In combat, natch, you do it when and how you can. Period.

**1** Work on a clean area. Your poncho or jacket or a tarp will do in the field.

**2** Break your gun and/or your tripod down to major groups and assemblies — as far as your TM allows.

**3** Clean each part real good with bore cleaner or SD, like the TM says.




**4** Wipe 'em good and dry with a clean rag or swab.

**5** Eyeball each part for damage and make sure all moving parts move. Don't force anything.

**6** Apply the lube, carefully. Don't miss any spots.

**PL Special and LAW** — Pour some on a clean swab, wring the swab out till it's just moist, then wipe all parts and surfaces with it, using your cleaning rod for inside areas.

**LSA** — Squeeze a couple drops from the bottle on the parts that require it. Let the oil run over these parts.

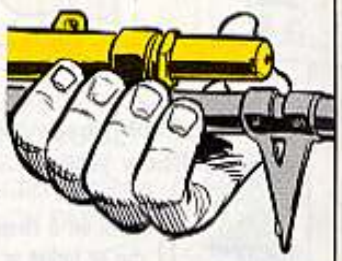
**Tip:** In areas where you use LSA it's smart to put the LSA on the parts that need it **before** you put PL Special on the other parts. This way the LSA's bound to be closest to the metal it's aiming to protect.

**7** Put your weapon and mount back together and function-check 'em to make sure everything works OK.



PS MORE


**KEEP** bore cleaner and oil out of the gas cylinder by holding the barrel with the cylinder topside when cleaning and lubing.

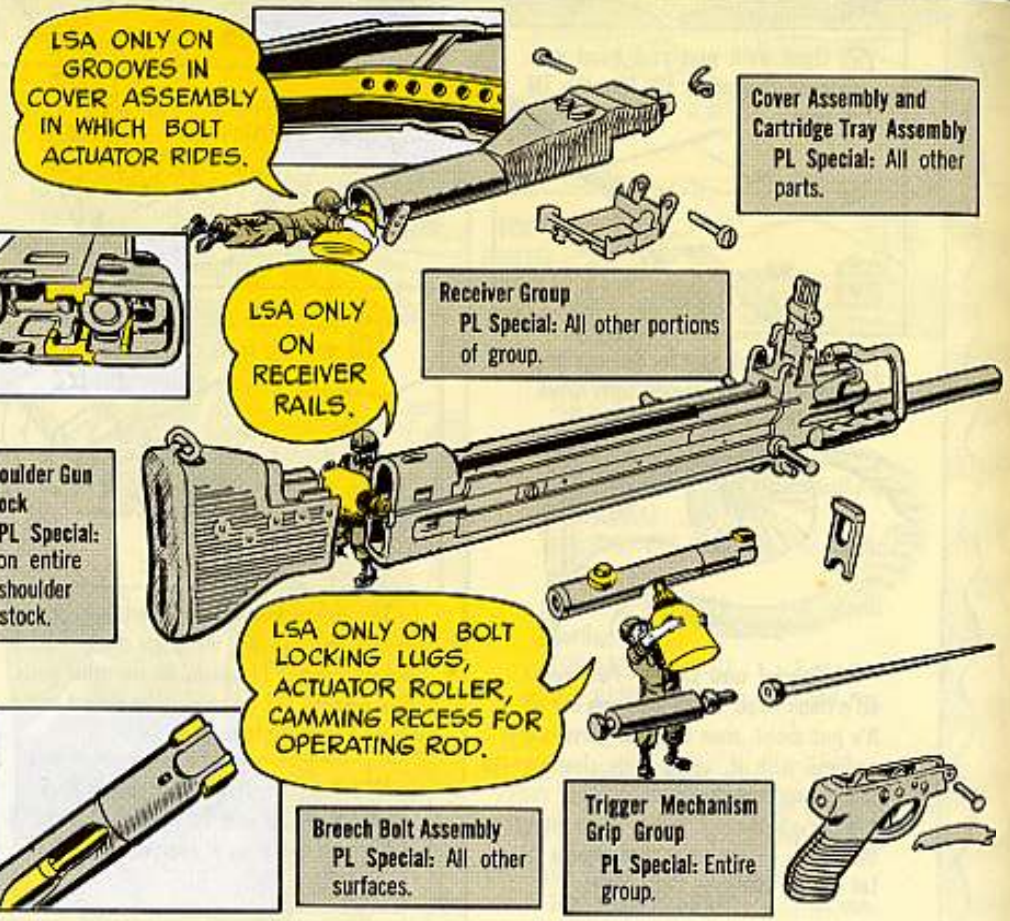


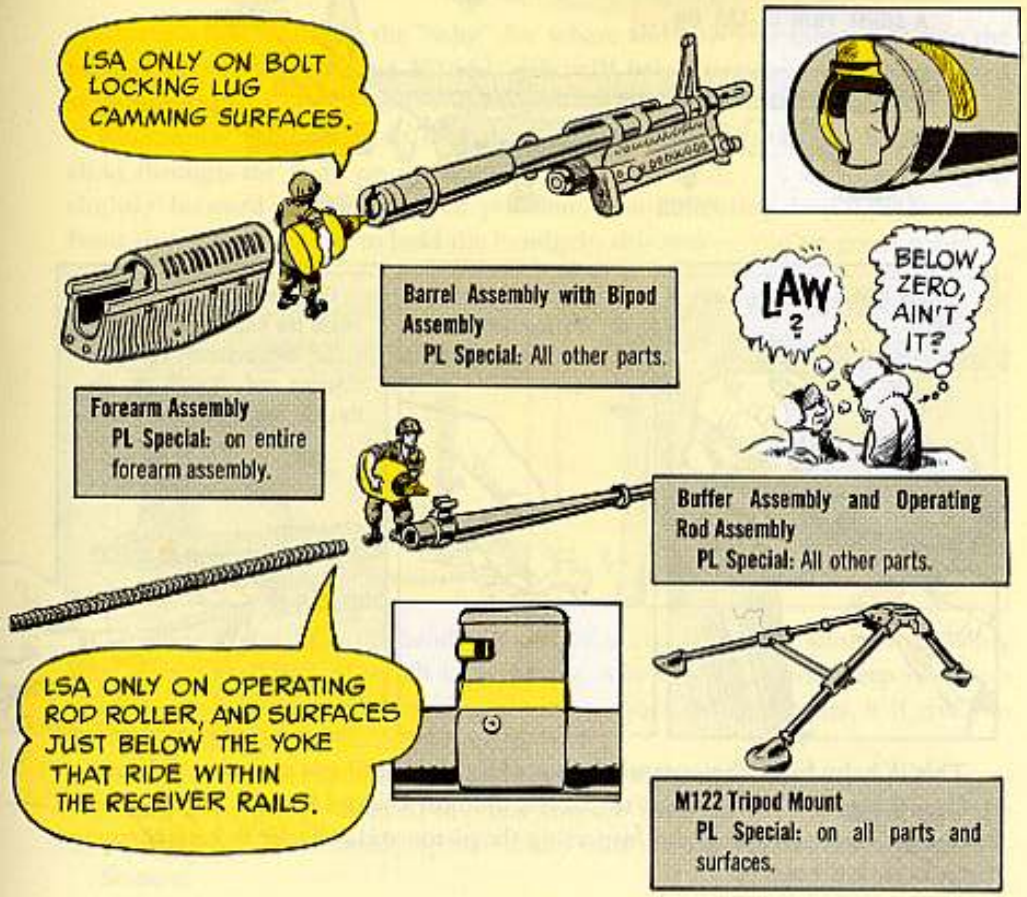
**NEVER** dunk the buffer assembly in solvents or other cleaning fluids


# M60 PINPOINT LUBE GUIDE

PARTS COLORED ▭ GET PL SPECIAL
ALL PARTS OF YOUR M60 GET LAW IN BELOW ZERO AREAS. THIS GOES ALONG WITH THE DISASSEMBLY AND LUBING DOPE IN TM 9-1005-224-10 (NOV 67).

PARTS COLORED ▭ GET LSA TREATMENT IN ABOVE ZERO AREAS.








PS MORE

## FIRE AWAY WITH LSA

Y'know that note at the top of page 20 in your M60's -10 TM . . . the one that says to put a light film of MIL-L-46000A lube—LSA—inside the gas cylinder and piston of your weapon after cleaning or inspection only if your gun's seldom used or is stored in the arms room?

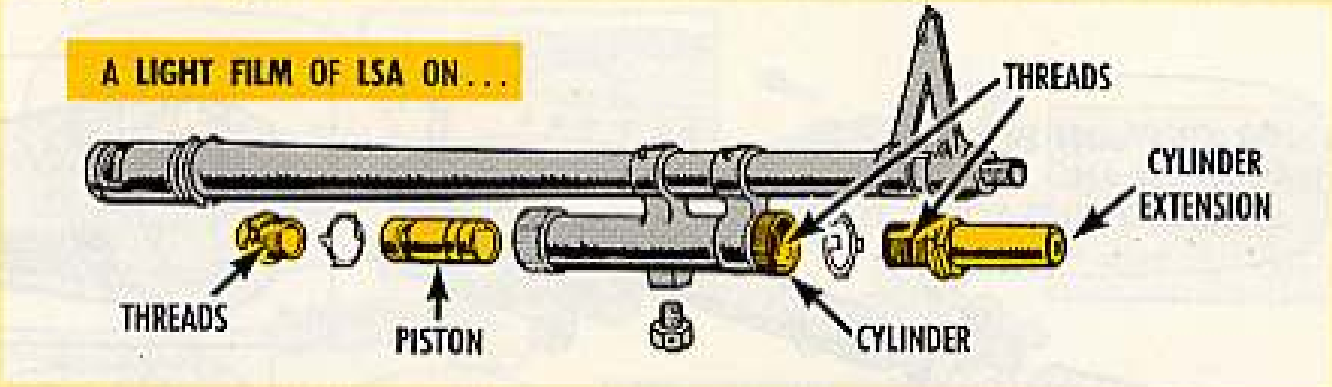
Well, forget it.

From now on put that light film of LSA inside the gas cylinder and gas piston of all M60's in hot, humid areas—whether you're fighting with it every day or resting it in the arms room.

And don't worry about firing off with the LSA in there. The first round or two you fire will burn it away . . . safely.

The big thing is to get a light film of LSA on these parts.

When you've got the gas system apart and cleaned and inspected according to the good book, do this:





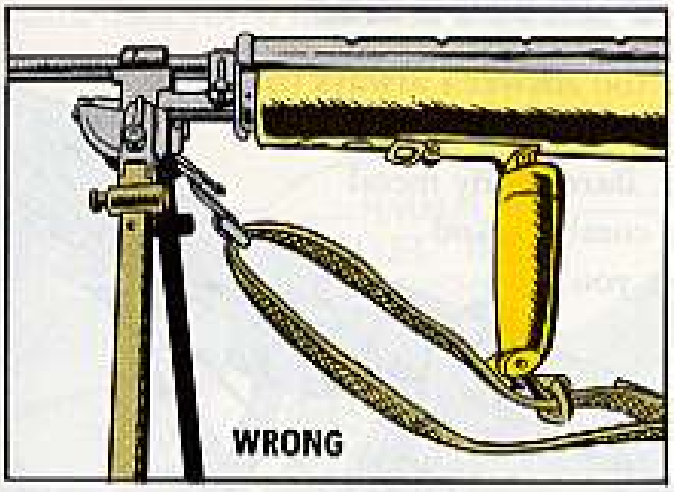


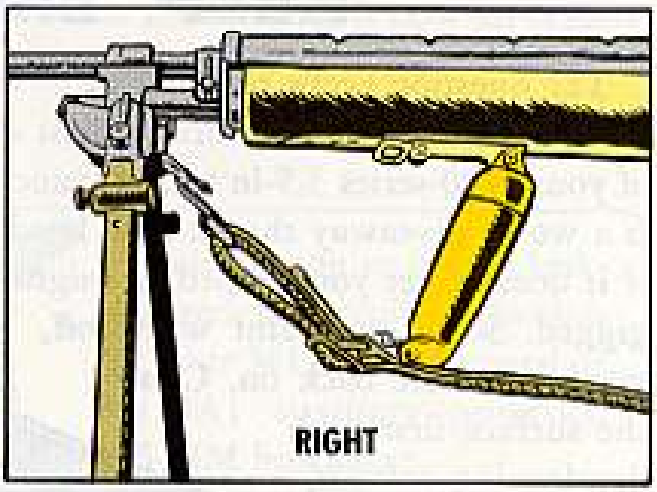
This'll help fight the corrosion that's bugging M60 gas systems in 'Nam.

One thing you never want to forget, though: Using LSA like this won't ever excuse you from cleaning and inspecting the piston and cylinder to keep corrosion from taking a hold.


Maybe a few words on the "why" for where and how you should position the handgrip assembly on your M14A1 rifle will help prevent some of the busted stocks and hinges that've been haunting some outfits . . .

F'rinstance, when you do it the right way—with the second hook on the sling through the rung on the bottom of the handgrip . . . and the handgrip slightly forward in the unlocked position . . . and the sling dead tight from the front (bipod) swivel end to hold the handgrip this way—you've got it made.




This way any blow at the handgrip will be deflected by the sling or the sling will absorb the shock through its webbing. Also this set-up will keep you from yanking back too hard and busting the hinge when firing. Besides, it'll give you better muzzle control during automatic firing.

On t'other hand, if you have the handgrip straight down and locked and leave the sling loose or allow metal-to-metal contact between the handgrip and the base, any blow to the handgrip will likely bust the stock above the handgrip.

So-oo-o!

# TELESCOPE COVER READY





. . . a canvas protective cover is authorized as a BIIL item for the M114 elbow telescope. Its stock number is FSN 1240-084-0280, and you can request it now.

# KEEP 'EM PAINTED

The question keeps popping up—and the answer's always the same. Yes, keep paint on the muzzle blast deflector and breech guard of your M20-series 3.5-in rocket launcher. Bare, shiny metal is a worse giveaway than a bald head in combat. And if it doesn't get you zapped, it might get you gigged. So, if the paint wears off, put some more back on. Clean the surface first with drycleaning solvent, dry it good and

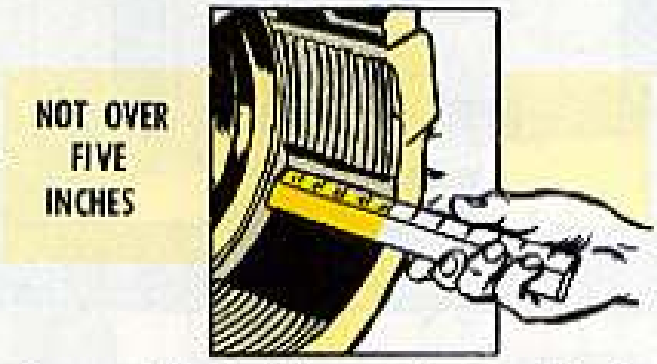

then apply an even coat of OD (Enamel, semigloss . . . FSN 8010-297-2105—1 gal can). Let the paint dry over night, if you can.


# WHAT YOU DON'T KNOW CAN HURT YOU!

Yep! The old saying is all wrong. If you don't know how your M126E1 howitzer tube is assembled to the breechring you can get hurt and the weapon is sure to be permanently damaged.

Every time the tube or cannon assembly is removed or replaced, check on the distance from the rear face of the howitzer tube to the outside face of the breechring.

If this distance is over 5 inches, call your direct support and don't fire your weapon until it's fixed.



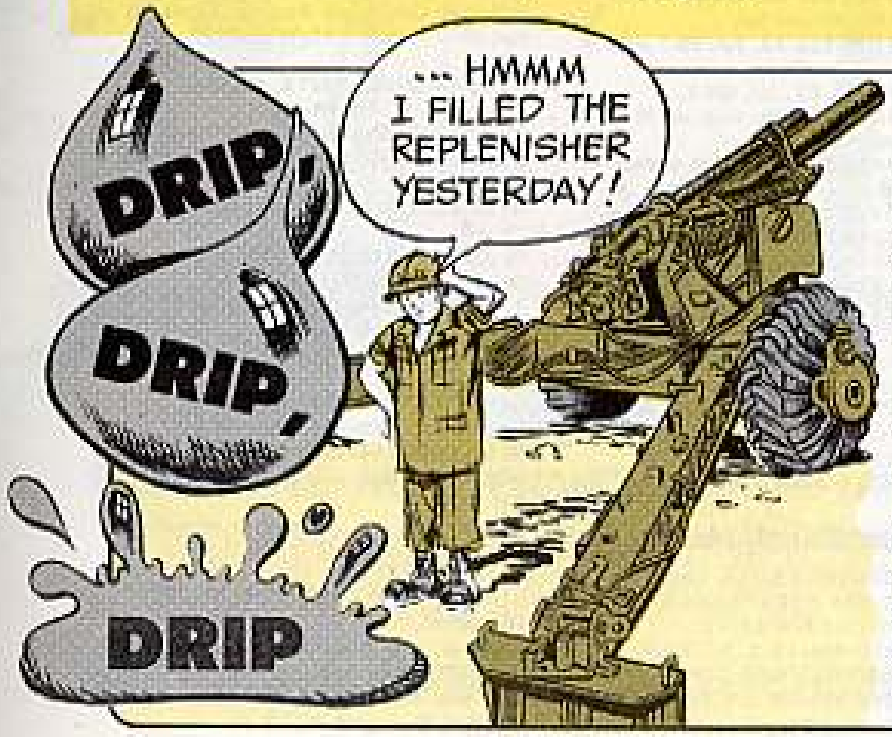

Because if the distance is over 5 inches it means the tube could be 1 or more threads from being properly seated in the breechring.

So what?

So if the weapon is fired with the tube not seated, the obturator will not make a perfect seal and there'll be blow-by which is sure to ruin the equipment and might ruin you.

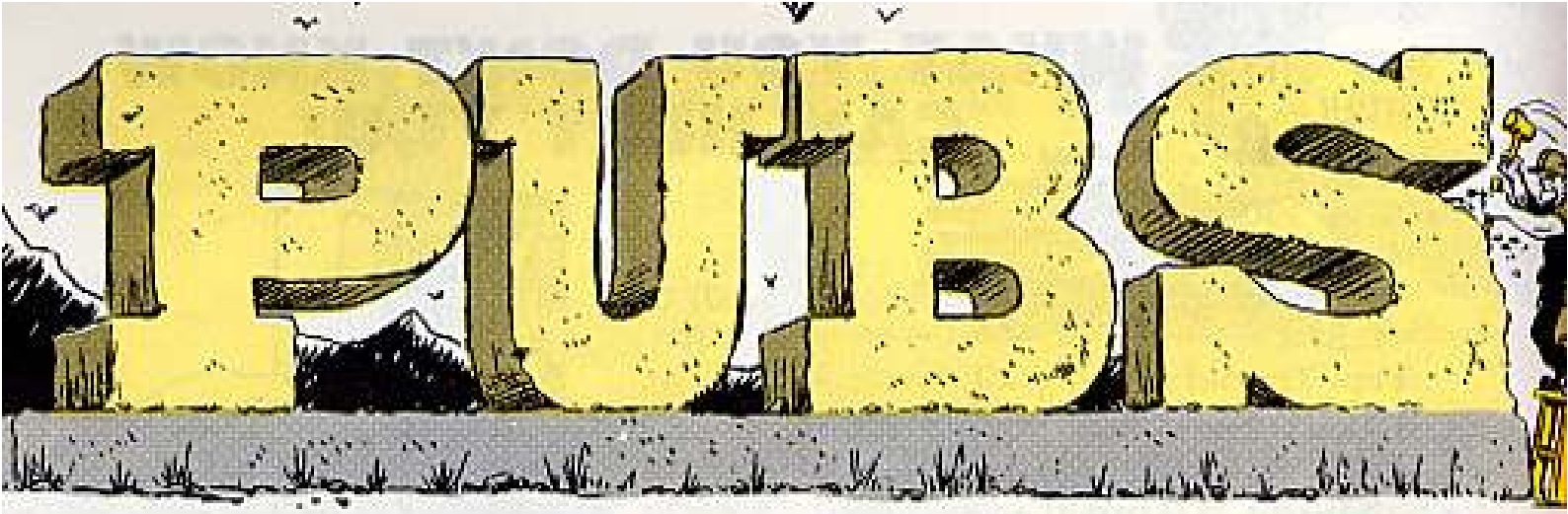
# HAPPY LIGHTING

You're right . . . the lamp housing for your M1 collimator goes on the fritz more than you'd like it to. The latest word is that the housing is now an organizational repair part. It goes under FSN 1240-066-7095. You'll find it listed in the newest -20P TM on your weapon.




You say you've got oil leaking from the recoil mechanism for your M114-series towed or M123A1 auxiliary propelled 155-MM howitzer?

If you fill the replenisher one day and the oil level is down halfway 24 hours later, you've really got a leak. It's time for your support unit to inspect the mechanism and possibly repair or replace it.




*This is a selected list of recent pubs of interest to organizational maintenance personnel. The list is compiled from recent AG Distribution Centers Bulletins. For complete details see DA Pam 310-4, Ch 5 (Feb 68), TM's, TB's, etc.; DA Pam 310-6 (Jul 68), and Ch 1 (Oct 68), SC's and SM's; DA Pam 310-7 (Jul 68), MWO's.*

### TECHNICAL MANUALS

TM 1-OH23-5, Aug, OH-23.
TM 1-10H-23C-24P C1, Sep, OH-23.
TM 3-1040-257-20P, Sep, M9E1-7 Port Flamethrower.
TM 3-4230-209-12 C1, Sep, M12A1 500 Gal Decon App.
TM 3-4240-258-14 C1 Sep, M17A1 CBR Field Mask.
TM 3-6665-268-10, Sep, Sampling Kit CBR Agent M34.
TM 5-2410-214-12, Jun, Tracked Medium Tractors.
TM 5-3610-235-13, Sep, Hydraulic Clamp Paper Cutter.
TM 5-3610-237-13, Sep, Printing and Repro.
TM 5-3610-283-13, Sep, Wire Stitching Mach.
TM 5-3740-206-15, Aug, Insecticide Sprayer Skid Mtd GED 40 Gal/Hr Fog.
TM 5-3805-219-20P C4, Sep, Earth Moving Equip Loaders.
TM 5-3805-219-35P C4, Sep, Dir/Gen Spt Earth Moving Equip Loaders.
TM 5-3805-239-12, Jul, DED Loader Scoop Type.
TM 5-3810-289-15, Jul, DED ¾ Cu Yd 12½-Ton Crawler Mtd Crane-Shovel.
TM 5-3825-221-15, C1, Sep, Water Distrib.
TM 5-3895-210-12P, C2, Sep, Batching Plants.
TM 5-3895-210-35P, C2, Sep, Dir/Gen Spt Batching Plats.
TM 9-1005-213-10, Jul, M2 .50 Cal Browning Machine Gun and Mounts
TM 9-1005-249-12, Aug, M16 and M16A1 5.56-MM Rifle.
TM 9-1005-303-14, Jul, 12-gage Winchester Shotgun Mdl 1200 Riot Type 20-in Barrel.
TM 9-1425-500-20, Jul, Hawk.
TM 9-1430-516-12, Aug, Hawk.
TM 9-2320-244-10, Aug, M715 1¼-Ton Cargo Truck and M725 1¼-Ton Ambulance Truck.
TM 9-2350-300-ESC, Jul, XM163 20-MM SP Antiaircraft Artillery Gun.
TM 9-6920-425-14, C2, Sep, Redeye.
TM 10-275, Jul, Cold Weather Clothing and Sleeping Equip.
TM 10-500-27, May, Airdrop Rigging the AN/TPS-33 Radar Set.
TM 10-1670-206-23, C2, Oct, Aerial Deliv Equip.
TM 10-1670-213-23, C2, Sep, Aerial Deliv Equip Pers Parachute.
TM 10-1670-213-23P, C2, Sep, Pers Parachute.
TM 10-1670-219-23P, C2, Sep, Pers Parachute.
TM 10-1670-224-23, C2, Oct, Pers Parachute Aerial Deliv Equip.
TM 10-1670-225-23, C2, Oct, Pers Parachute Aerial Deliv Equip.
TM 10-3930-215-25P, C1, Sep, Gas Forklift Truck.
TM 10-4930-203-23P, C1, Sep, Petroleum.
TM 10-8340-205-23P, C1, Sep, Tents.
TM 10-8415-202-13, C2, Sep, Flying Helmets.
TM 11-1520-217-20P, Sep, CH-54A.
TM 11-2300-369-15-1, Sep, Instal of Telephone Sets TA-312/PT and TA-1/PT with Reel Equip CE-11 in XM167 20-MM AAA Gun.
TM 11-5820-535-25P, Sep, AN/TRC-110 Radio Set.
TM 11-5820-767-12, Aug, AN/URC-68 Radio Set.
TM 11-5821-259-20, Jul, AN/ARC-114 Radio Set.
TM 11-5826-227-20, Aug, AN/ARN-89 Direction Finder Set.
TM 11-6730-233-15, Jul, PS-1 and PS-1-K Still Pic Viewer.
TM 55-450-3, C1, Jul, UH-1.
TM 55-1500-323-25, Aug, All Fixed and Rotor Wing.
TM 55-1510-203-20PMD & 20PMI, Aug, U-6.
TM 55-1510-203-20PMP, Aug, U-6.
TM 55-1510-204-10, C10, Sep, OV-1.
TM 55-1510-204-20, C4, Oct, OV-1.
TM 55-1510-204-20P, C1, Sep, OV-1.
TM 55-1510-205-20PMI & -20MPM, Aug, U-1.
TM 750-199, Aug, Procedures for Redeployment and Retrogradation of Acft Components Spare Parts and Spt Equip (Class II(A) and Class IV(A) Supplies).
TM 750-209, Jul, All Rotor Wing.

### LUBRICATION ORDERS

LO 3-1040-241-12, Sep, Compressor Recip 50 CFM 3,000 PSI M6-18 Ingersoll-Rand Mdl 6R5T8.
LO 5-2420-206-12-2, Jul, Tractor Whld Indus DED, MED, DBP.
LO 5-3895-215-12, Jul, 165 Gal GED Kettle Heating Bituminous.
LO 5-4310-276-12, Sep, 5 CFM Air Compressors.
LO 5-4310-334-12, Jun, 175 PSI, 25 CFM Elec Recip Air Compres Receiver Mtd.
LO 5-4320-252-12, Aug, 100 GPM Diaphragm Recip Pump Less Mil Std Eng.
LO 5-5274, Aug, 150 KW and Up Eng Driven Gen Sets.
LO 5-6115-440-12, Jul, GED Gen Set 7.5 KW, DC, 28V.
LO 5-6115-456-12, Aug, 150 KW and Up Eng Driven Gen Set.
LO 9-2320-246-12, Jun, M274/274A1 Light Weapons Carrier.
LO 10-4930-206-12, Aug, Lubricating and Servicing.

### MODIFICATION WORK ORDERS

9-1000-218-30/5, Sep, M107 Gun and M110 Howitzer.
55-1500-206-30/2, Oct, Instal of Stainless Steel Cable in Lieu of Tie Rod in Stabilizer Bar Extension Tubes UH-1B-1C-1D-1H-1M.
55-1500-210-30/11, Oct, Deletion of Audio Padding from the Interphone Junction Box CH-47.
55-1510-201-30/1, C1, Oct, U-8.

### TECHNICAL BULLETINS

TB 55-1500-206-20/12, Oct, Insp of Tailrotor Crosshead Bearing Retaining Nut UH-1A-1B-1C-1D/H and UH-1D/M.
TB 55-1500-206-20/12, C1, Oct, UH-1A-1B-1C-1D AH-1G.
TB 55-1500-206-20/13, Oct, Insp of Hydraulic Flight Control Assy UH-1A-1B, UH-1D/H.
TB 55-1500-210-20/3, C1, Sep, CH-47.
TB 55-1500-210-20/4, Oct, One Time Insp of Forward Transmissions 114D1001 Series CH-47A/CH-47B.
TB 55-1510-209-20/6, Oct, Insp of the Lower Front Wing Attaching Bolts U-21 Acft.
TB 55-1510-209-20/6, C1, Oct, U-21.
TB 55-1510-209-30/1, Sep, U-21.
TB 55-1520-214-20/22 Sep, Insp of Main Rotor Hub and Strap Pack Assy OH-6A.
TB 750-237, Jul, Ident and Handling of Radioactive Items.

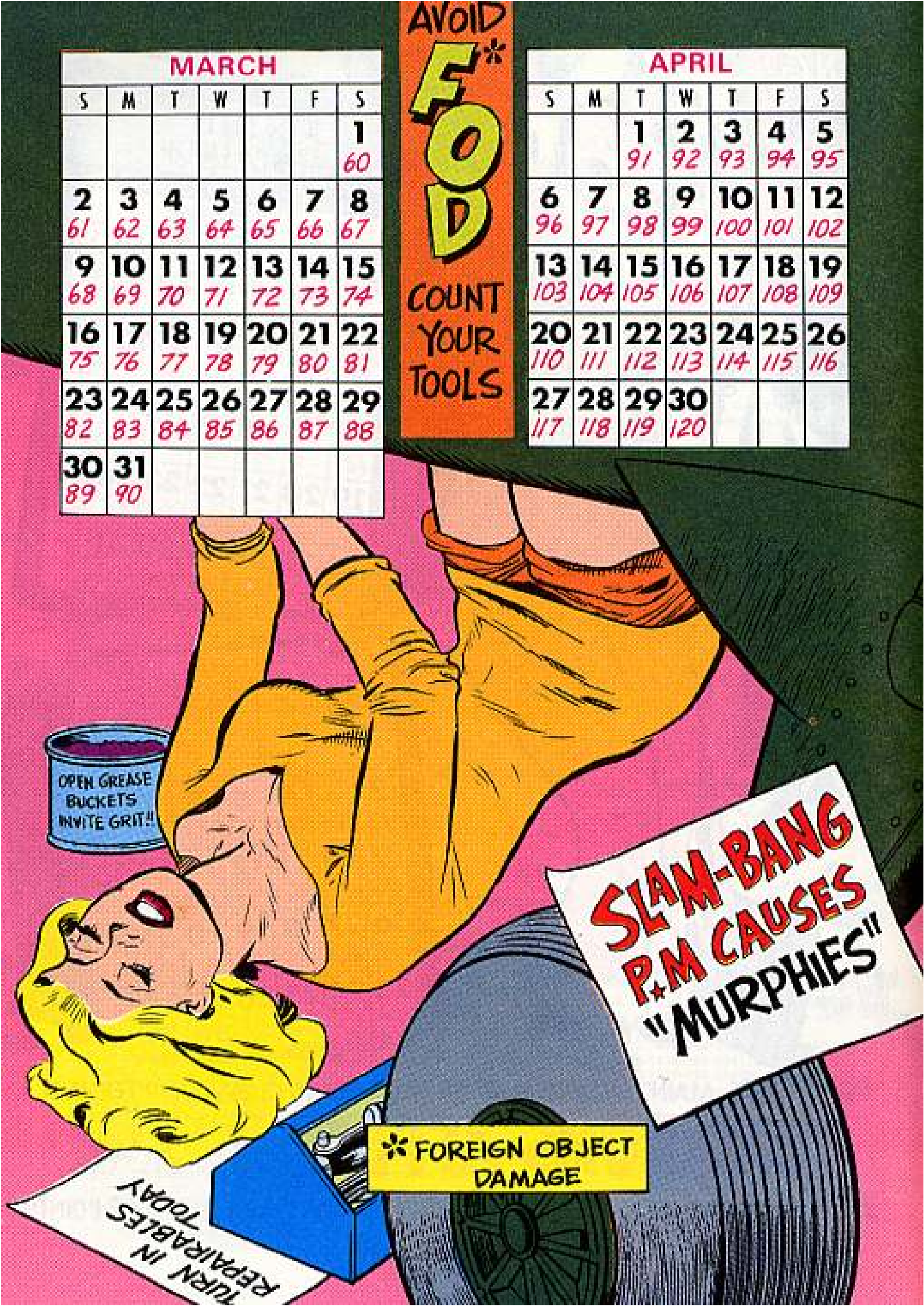
### MISCELLANEOUS

SB 700-20, Oct, Adopted Items of Materiel and Army Reportable Items.
TC 23-21, Aug, M2, 50 Cal Machine Gun and Mounts and M60, 7.62-MM Machine Gun and M122 Mount.


PREVENTIVE MAINTENANCE MUST BE TAILORED TO CLIMATE AND TERRAIN

# CONDITIONS AFFECT P★M

BATTERIES, COOLING SYSTEMS, ELECTRONICS EQUIPMENT AND LUBE POINTS


MARCH
S M T W T F S
1 60
2 61 3 62 4 63 5 64 6 65 7 66 8 67
9 68 10 69 11 70 12 71 13 72 14 73 15 74
16 75 17 76 18 77 19 78 20 79 21 80 22 81
23 82 24 83 25 84 26 85 27 86 28 87 29 88
30 89 31 90
AVOID FOD
COUNT YOUR TOOLS
APRIL
S M T W T F S
1 91 2 92 3 93 4 94 5 95
6 96 7 97 8 98 9 99 10 100 11 101 12 102
13 103 14 104 15 105 16 106 17 107 18 108 19 109
20 110 21 111 22 112 23 113 24 114 25 115 26 116
27 117 28 118 29 119 30 120
OPEN GREASE BUCKETS INVITE GRIT!!
SLAM-BANG P.M CAUSES "MURPHIES"
* FOREIGN OBJECT DAMAGE
TURN IN REPAIRABLES TODAY

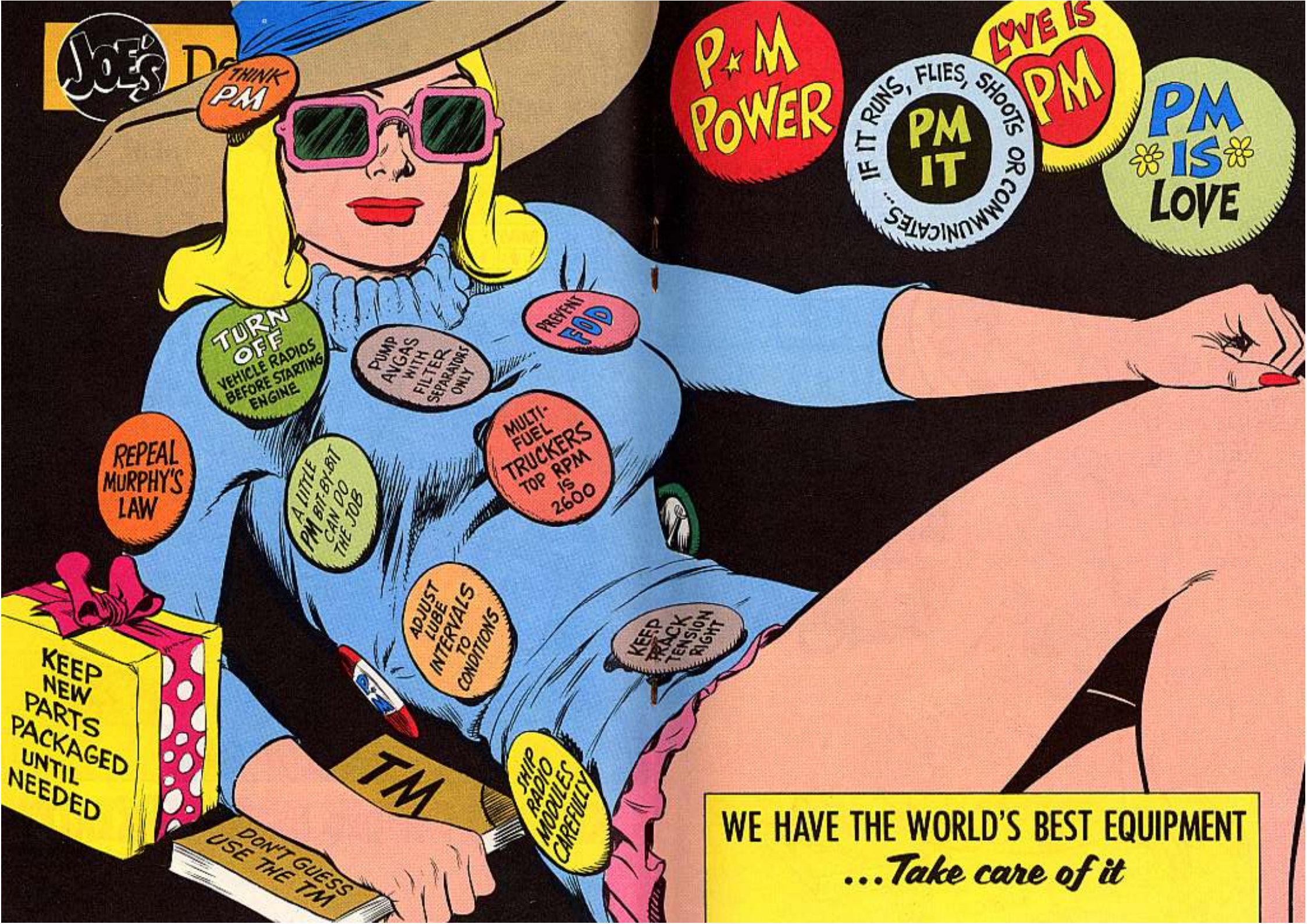
REPAIRABLE ITEMS— PACK, HANDLE AND HAUL WITH CARE.

KEEP REPAIR PARTS STORED IN THEIR PACKAGES TILL USED!

| MAY | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | 1 121 | 2 122 | 3 123 |
| 4 124 | 5 125 | 6 126 | 7 127 | 8 128 | 9 129 | 10 130 |
| 11 131 | 12 132 | 13 133 | 14 134 | 15 135 | 16 136 | 17 137 |
| 18 138 | 19 139 | 20 140 | 21 141 | 22 142 | 23 143 | 24 144 |
| 25 145 | 26 146 | 27 147 | 28 148 | 29 149 | 30 150 | 31 151 |

| JUNE | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| 1 152 | 2 153 | 3 154 | 4 155 | 5 156 | 6 157 | 7 158 |
| 8 159 | 9 160 | 10 161 | 11 162 | 12 163 | 13 164 | 14 165 |
| 15 166 | 16 167 | 17 168 | 18 169 | 19 170 | 20 171 | 21 172 |
| 22 173 | 23 174 | 24 175 | 25 176 | 26 177 | 27 178 | 28 179 |
| 29 180 | 30 181 | | | | | |


# KEEP YOUR FIGHTING EQUIPMENT READY


JOE'S
THINK PM
P★M POWER
IF IT RUNS, FLIES, SHOOTS OR COMMUNICATES... PM IT
LOVE IS PM
PM IS LOVE
TURN OFF VEHICLE RADIOS BEFORE STARTING ENGINE
PUMP AVGAS WITH FILTER SEPARATORS ONLY
PREVENT FOD
REPEAL MURPHY'S LAW
A LITTLE PM BIT-BY-BIT CAN DO THE JOB
MULTI-FUEL TRUCKERS TOP RPM IS 2600
ADJUST LUBE INTERVALS TO CONDITIONS
KEEP TRACK TENSION RIGHT
KEEP NEW PARTS PACKAGED UNTIL NEEDED
TM
DON'T GUESS USE THE TM
SHIP RADIO MODULES CAREFULLY
WE HAVE THE WORLD'S BEST EQUIPMENT
...Take care of it

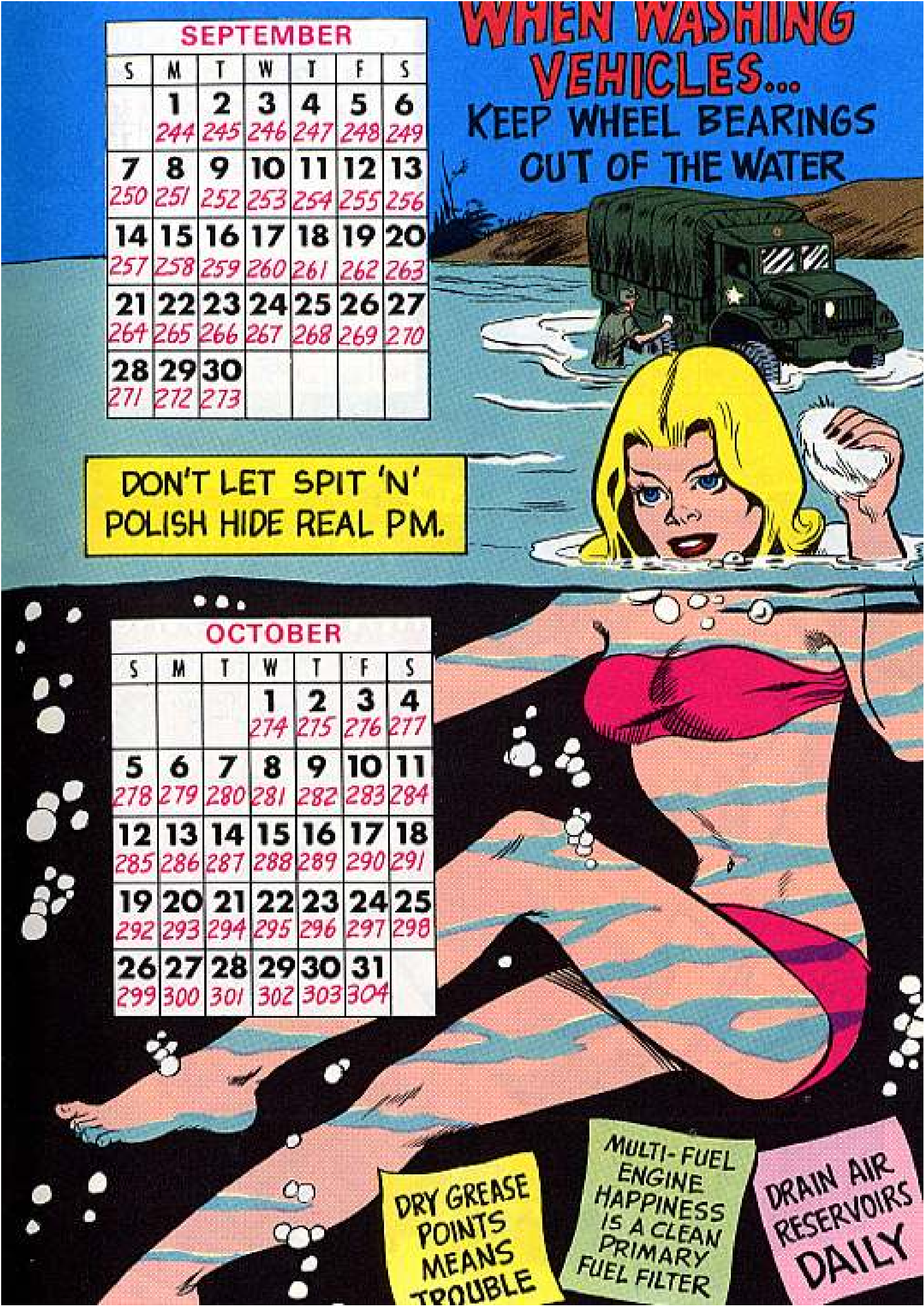
| JULY | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | 1 182 | 2 183 | 3 184 | 4 185 | 5 186 |
| 6 187 | 7 188 | 8 189 | 9 190 | 10 191 | 11 192 | 12 193 |
| 13 194 | 14 195 | 15 196 | 16 197 | 17 198 | 18 199 | 19 200 |
| 20 201 | 21 202 | 22 203 | 23 204 | 24 205 | 25 206 | 26 207 |
| 27 208 | 28 209 | 29 210 | 30 211 | 31 212 | | |

| AUGUST | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |
| | | | | | 1 213 | 2 214 |
| 3 215 | 4 216 | 5 217 | 6 218 | 7 219 | 8 220 | 9 221 |
| 10 222 | 11 223 | 12 224 | 13 225 | 14 226 | 15 227 | 16 228 |
| 17 229 | 18 230 | 19 231 | 20 232 | 21 233 | 22 234 | 23 235 |
| 24 236 | 25 237 | 26 238 | 27 239 | 28 240 | 29 241 | 30 242 |
| 31 243 | | | | | | |

# COMMO EQUIPMENT NEEDS TO BREATHE

CLEAN AIR FILTERS OFTEN

DONT USE HOSES AND WATER ON ELECTRONIC EQUIPMENT


SEPTEMBER
S M T W T F S
1 244 2 245 3 246 4 247 5 248 6 249
7 250 8 251 9 252 10 253 11 254 12 255 13 256
14 257 15 258 16 259 17 260 18 261 19 262 20 263
21 264 22 265 23 266 24 267 25 268 26 269 27 270
28 271 29 272 30 273
WHEN WASHING VEHICLES...
KEEP WHEEL BEARINGS OUT OF THE WATER
DON'T LET SPIT 'N' POLISH HIDE REAL P.M.
OCTOBER
S M T W T F S
1 274 2 275 3 276 4 277
5 278 6 279 7 280 8 281 9 282 10 283 11 284
12 285 13 286 14 287 15 288 16 289 17 290 18 291
19 292 20 293 21 294 22 295 23 296 24 297 25 298
26 299 27 300 28 301 29 302 30 303 31 304
DRY GREASE POINTS MEANS TROUBLE
MULTI-FUEL ENGINE HAPPINESS IS A CLEAN PRIMARY FUEL FILTER
DRAIN AIR RESERVOIRS DAILY


NOVEMBER
S M T W T F S
1 305
2 306 3 307 4 308 5 309 6 310 7 311 8 312
9 313 10 314 11 315 12 316 13 317 14 318 15 319
16 320 17 321 18 322 19 323 20 324 21 325 22 326
23 327 24 328 25 329 26 330 27 331 28 332 29 333
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DECEMBER
S M T W T F S
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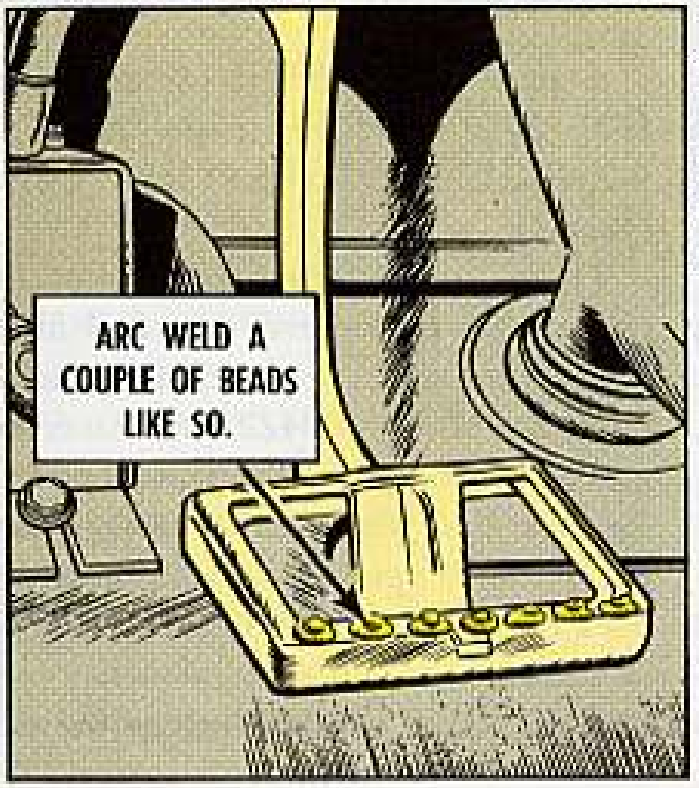
7 341 8 342 9 343 10 344 11 345 12 346 13 347
14 348 15 349 16 350 17 351 18 352 19 353 20 354
21 355 22 356 23 357 24 358 25 359 26 360 27 361
28 362 29 363 30 364 31 365
PM IS THE RIGHT MIX OF PEOPLE, PARTS, TM'S, TOOLS, TRAINING AND PRIDE
MHE'S ARE FOR THE SHORT HAUL
PREVENTIVE MAINTENANCE IS A YEAR-ROUND DEAL!!
LO
TIRE
36

BEADS O' SAFETY . . .

# SLIP-PROOF PEDALS


A banana peel on a slick floor is no slipperier than the brake and clutch pedals on some vehicles — especially when the pedal surface is all metal, when the metal's worn down smooth and when you've got mud or snow on your boots.

When you're operatin' a vehicle like a G838-series 1/4-ton or G741-series 3/4-ton truck, take care to clean the mud or snow off your boots before hoppin' in. And keep this stuff cleaned off the pedals, too.

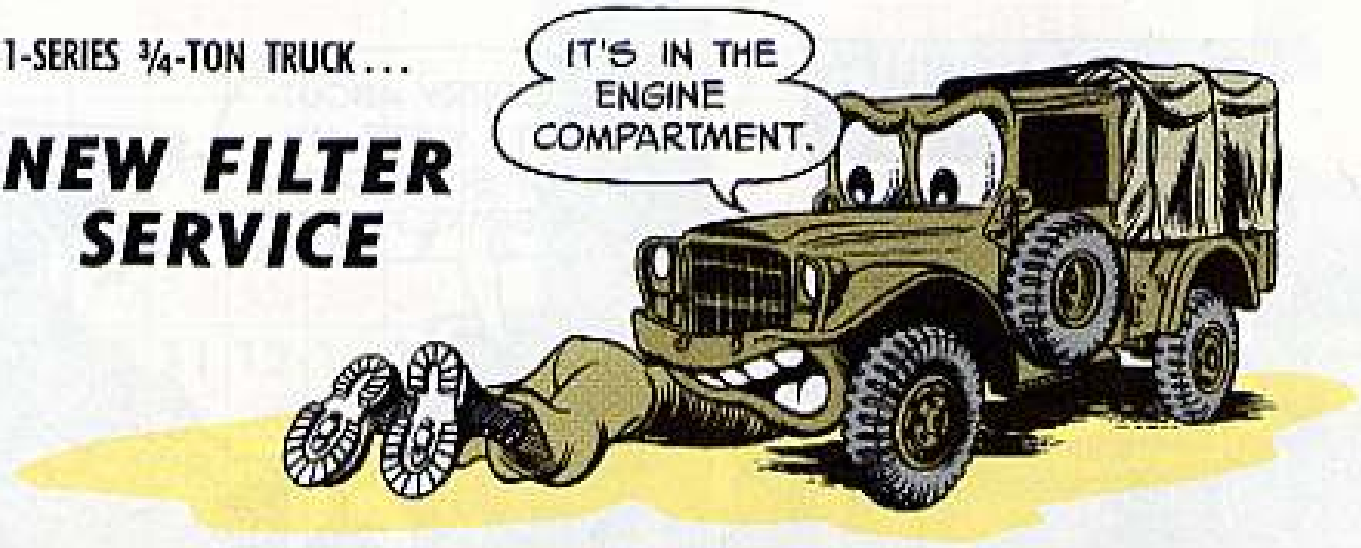



If your CO gives the OK, you can get extra insurance against slippery pedals by having little bumps arc welded onto the pedal. Just across the leading edge of the pedal may be enough. This'll give your boots something to grab ahold of.

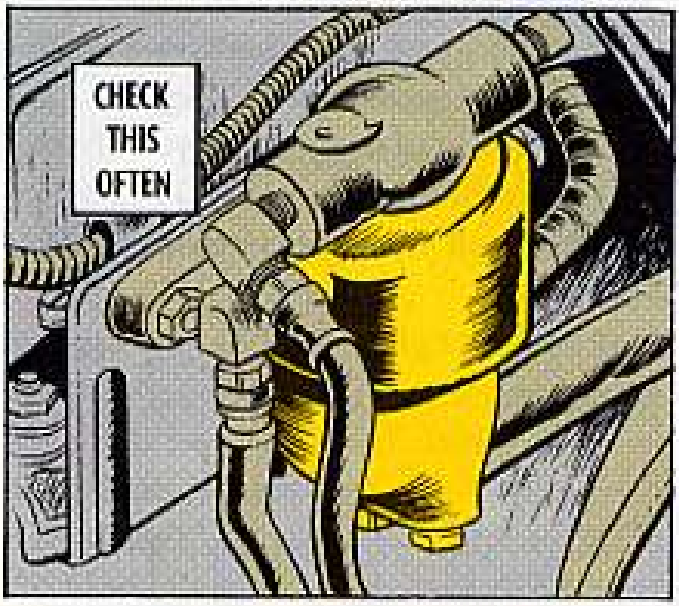

AR 385-55 (Sep 65), para 25, allows commanders to authorize "additional devices" for prevention of motor vehicle accidents — and you can sure have a dilly if your foot slips off the brake or clutch pedal at the wrong time.

G741-SERIES ¾-TON TRUCK . . .

# NEW FILTER SERVICE

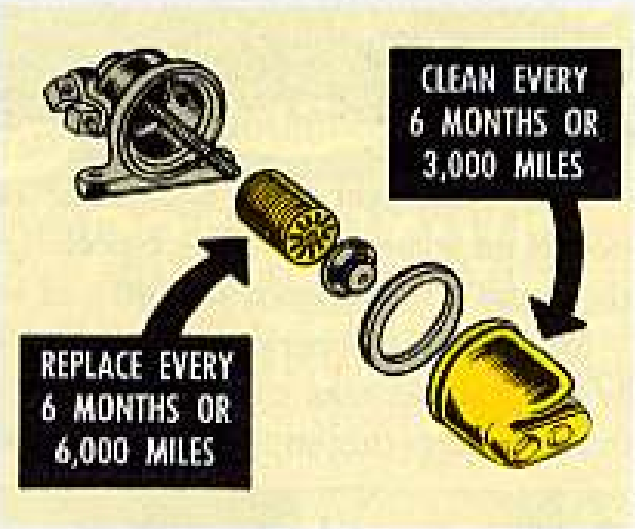



You've got a new semiannual service on your M37B1 3/4-ton truck — or other G741-series vehicle. You do if you've got the fuel filter in the engine compartment.




Ch 9 (Jun 68) to TM 9-8030 tells you to replace that fuel filter element every 6,000 miles or every 6 months, whichever rolls around first. This new info goes in the how-to-do-it section of the TM (para 139), not in Table III where you find your other semiannual PM services. Fact is, those other semiannual services are pulled at 3,000 miles or 6 months, a shorter mileage factor than you've got for the fuel filter element.

But Table III still calls for cleaning the sediment bowl of the fuel filter every 3,000 miles or 6 months.




A new filter element comes under FSN 2910-455-4033, page 21, TM 9-2320-212-20P w/Ch 1 and Ch 2 (Jul 64).

There's no reg'lar replacement of the element for the in-tank type fuel filter found in later production vehicles (after Serial No. 80042292). This filter gets service only if it happens to be out for fuel tank servicing or if you suspect the filter's giving you trouble. Then para 139c in TM 9-8030 tells you how to clean it.

If you need a new element for the in-tank fuel filter, it comes under FSN 2910-735-1316, page 24 in the -20P TM. This FSN has been exhausted to 2910-955-2010.

# TRUCK RING MOUNTS

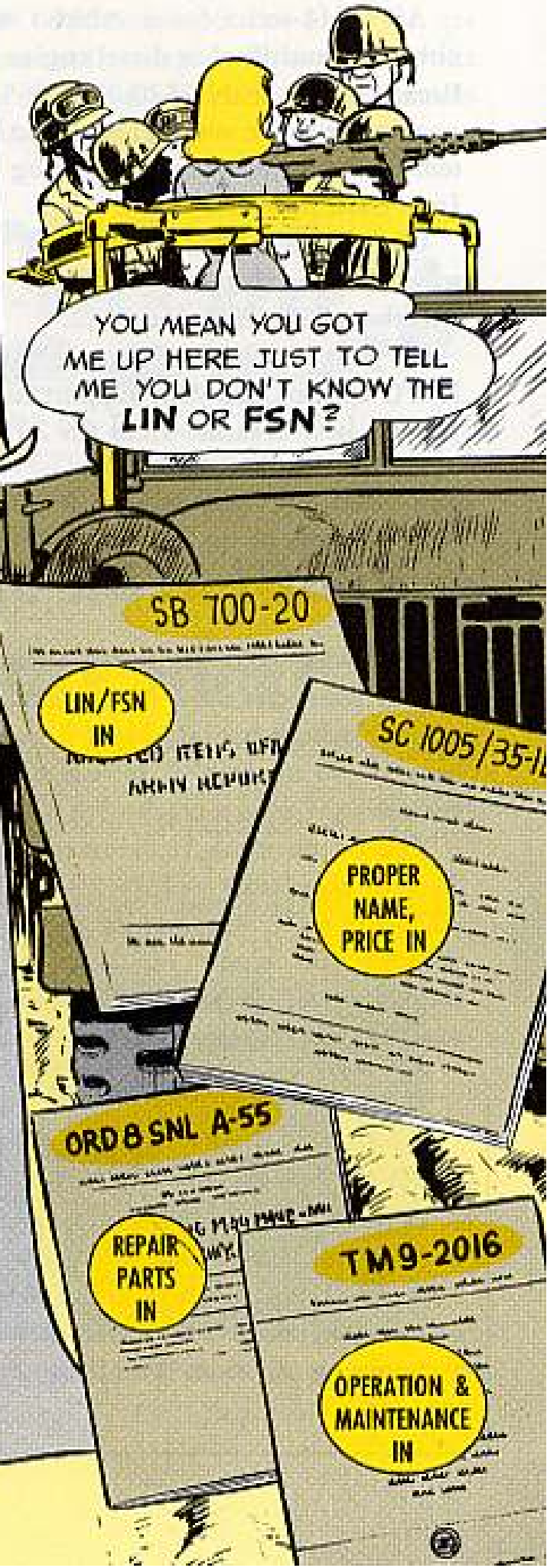
Dear Half-Mast,

Our TO&E calls for machinegun ring mounts on some of our 2½-ton and 5-ton trucks. In the "remarks" section of the TO&E, it just says "eqp w/ring mount."

There's no LIN or FSN or anything else to identify these ring mounts or to tell which ring mount goes on the 2½-ton trucks and which one on the 5-tonners.

Where do we find this? Also, where's the info on maintenance and repair parts?

SFC H. N. K.




Dear Sergeant H. N. K.,

Ord 8 SNL A-55, Section 50 w/Ch 1 (Oct 66), para 9, clues you in on the fact that both your G742-series 2 1/2-ton and G744-series 5-ton trucks get the M36A1 machinegun mount.

This item is listed in SB 700-20 (Jul 68) under LIN M74364 and FSN 1005-317-2427.

Its proper name in SC 1005/35-IL-1 (Jul 67) is Mount, Gun, truck, cal .50, M36A1 w/e. Price, in Fed Cat C-ML-A (Aug 68), is $611.

TM 9-2016 w/Ch 1 (Jan 64), the TM for operation and organizational maintenance, tells you that a component of the M36A1 gun mount is the M49 ring mount.

Your support's guide on repair parts is Ord 8 SNL A-55, Section 50. If you get a new M36A1 mount, make sure your support gets the packing list, because it lists some new repair parts that don't show up in the SNL.

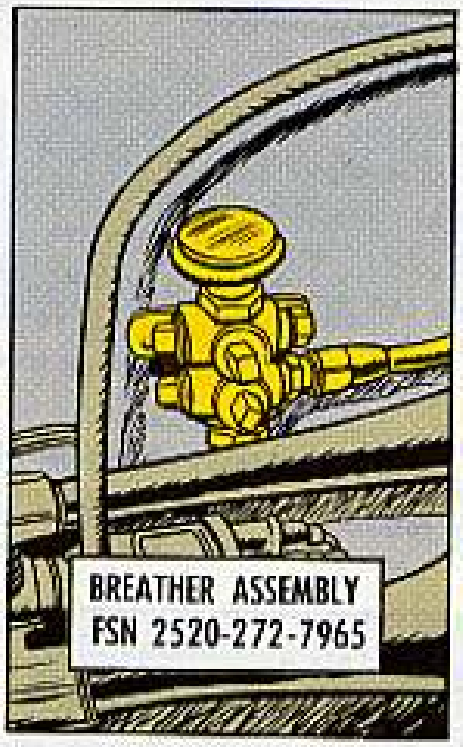
*Half-Mast*

# BREATHER FOR 5-TONNERS

All G744-series 5-ton vehicles with either the multifuel or diesel engine get Breather Assy, FSN 2520-272-7965. It goes in the brake and fuel line vent system and prevents lines blowing up from back pressure.

Under MWO 9-2320-211-20/8 (rescinded) this breather replaced old Breather, FSN 2520-466-7518.

If your 5-tonner didn't get that MWO applied, ask your support to get you the new breather from Ch 2 (Mar 67) to TM 9-2320-211-35P.





# REGULATOR SHOT?

Easy with your truck's generator regulator — even if your tests show it's no good. Your DS wants to doublecheck it to decide if it goes on the salvage heap — so no firin' it to 'em out of a cannon or even slingin' it in a truck with a lot of junk.

There's no more replacement of parts in those 25-amp regulators — FSN 2920-953-9784 or FSN 2920-335-4677 — used in most tactical wheeled vehicles. DS repair of those regulators is now limited to cleaning and adjustment. If that doesn't make it perk again, it's tossed.

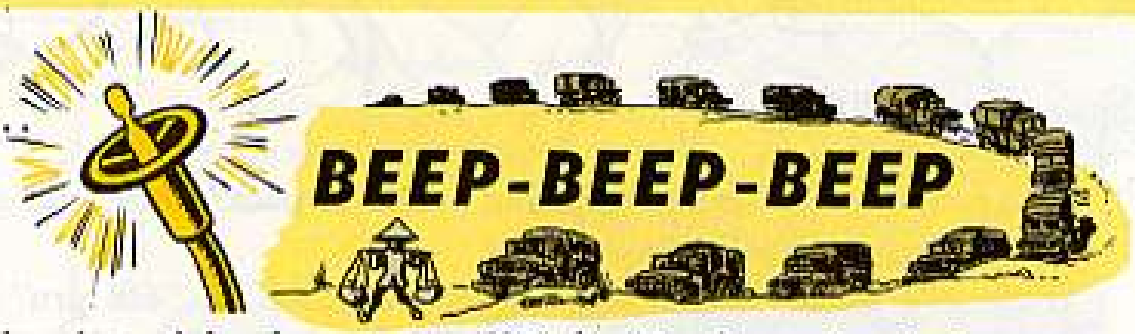

# NEW FOR M151

That's right — now it's 6,000 miles or 6 months for semi-annual PM services on your M151 or other G838-series 1/4-ton vehicle. The new word's in para 3-19, TM 9-2320-218-10 (Mar 68). This's a switch from the 3,000 miles or 6 months you see in TM 9-2320-218-20, but the -20 TM will be pickin' it up in a change or revision. You'll be seein' this 6,000 miles factor for some other vehicles, too.

# DRIVER TESTER

If your outfit has a big job of training and testing drivers, you may need Driver Testing and Training Device, Portable, FSN 6930-526-3639. For $172 you get from the U.S. Army Mobility Equipment Command a complete kit to turn recruits into wheeled-vehicle pilots: Books, reaction time and eye-testing gear, controls and all are included. You need 110V 60-cy AC to run it.

G741-SERIES ¾-TON TRUCK . . .




That's the signal to right that wrong FSN for Retainer, electrical contact: horn button cable contact. It's in Ch 1 (Nov 62) to TM 9-2320-212-20P under FSN 2920-626-0236, but it should be FSN 2590-626-0236. The right FSN shows up in Fed Cat C2590-IL-A (Apr 68) and will be picked up in the next -20P change or revision.

# MULTIFUEL PUMP HUMP

If the in-tank fuel pump on your 2 1/2-ton or 5-ton multifuel truck is on the fritz, don't expect support to fix it. There's no kit to be had. Just get a replacement . . . but only after you've checked connections and made sure it's not just a loose wire.

Though some TM's say the pump is recoverable, forget it. Here's the late info on which of 3 new pumps goes with what vehicle:

| PUMP | FITS |
|---|---|
| FSN 2910-920-7545, P/N 10947358-2, Fuel Pump & Mount Assy | All 2½-ton multifuels except M275A1 and M275A2 |
| FSN 2910-920-7546, P/N 10947358-1, Fuel Pump Electrical & Hanger Assy | 2½-ton Models M275A1 and M275A2 |
| FSN 2910-937-5076, P/N 10947358-3, Electrical Fuel Pump & Hanger Assy | All 5-ton multifuel models. |

The three listed here replace old standby FSN 2910-765-9594. See page 10, Ch 2 (Apr 67), to TM 9-2320-211-20P and page 27, Ch 3 (Sep 66), TM 9-2320-209-35P.

# NO KNACK—JUST FULLY PACKED

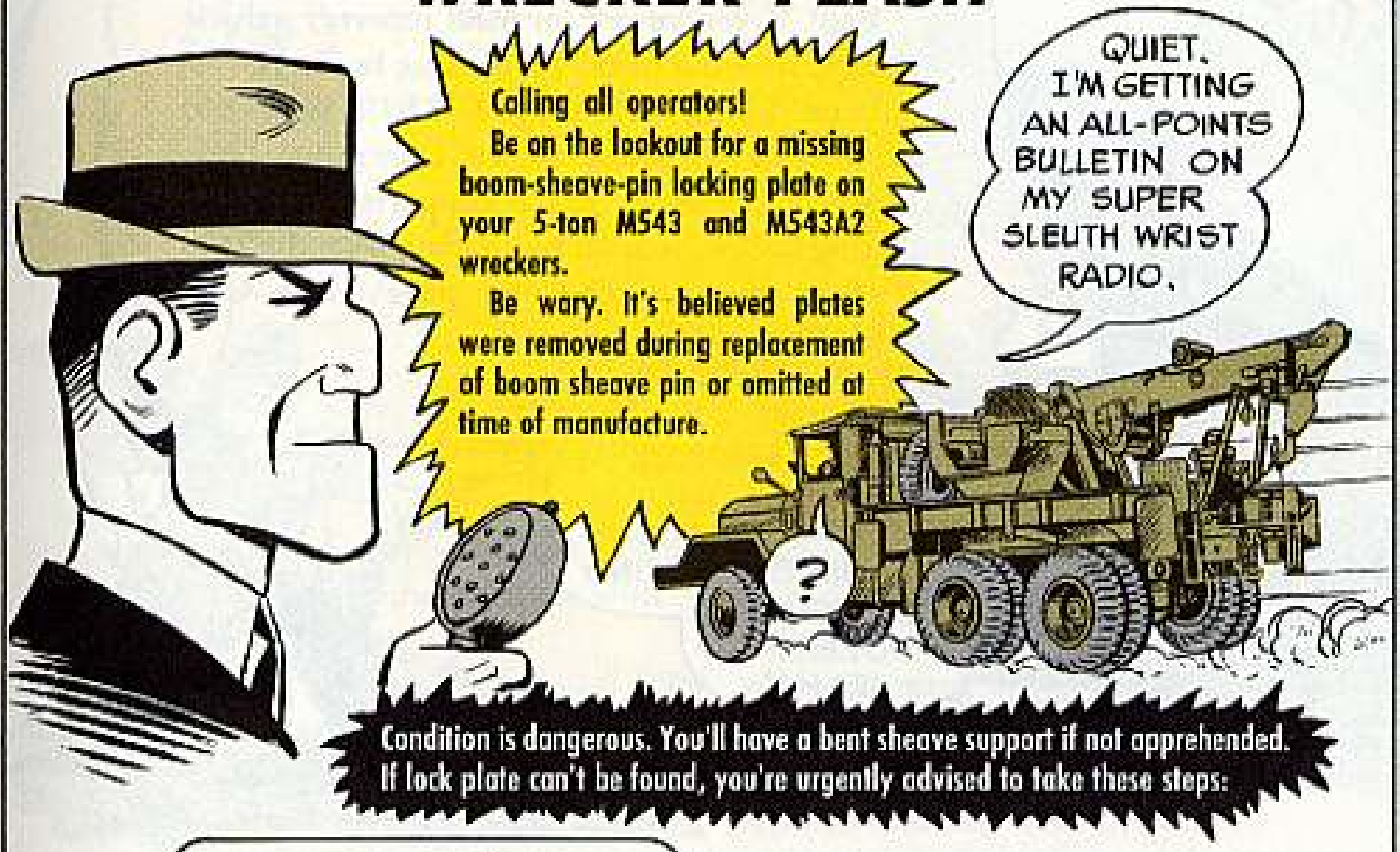

You have to develop a lot of hand action to pack grease into a bearing. This takes experience—and elbow grease.

It doesn't really matter whether you develop an "old pro" knack for the wheel bearings in your vehicle, tho. There's a bearing lubricator, FSN 4930-704-1852, in the lubricating kit of your No. 1 and No. 2 Common Tool Kits.

This little gem does a good job of getting grease into every nook and cranny. That's because you're purging out the old and putting in the new with the pressure of a grease gun.

PROBLEM CASE #100001

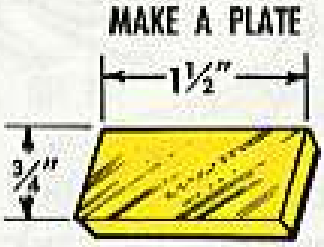
# WRECKER FLASH




Condition is dangerous. You'll have a bent sheave support if not apprehended. If lock plate can't be found, you're urgently advised to take these steps:

SOLUTION CASE #100001

1. Fabricate a new plate from ¼-in, 1015 or 1020 steel, 1½ by ¾ inches and weld to the sheave support pin boss.



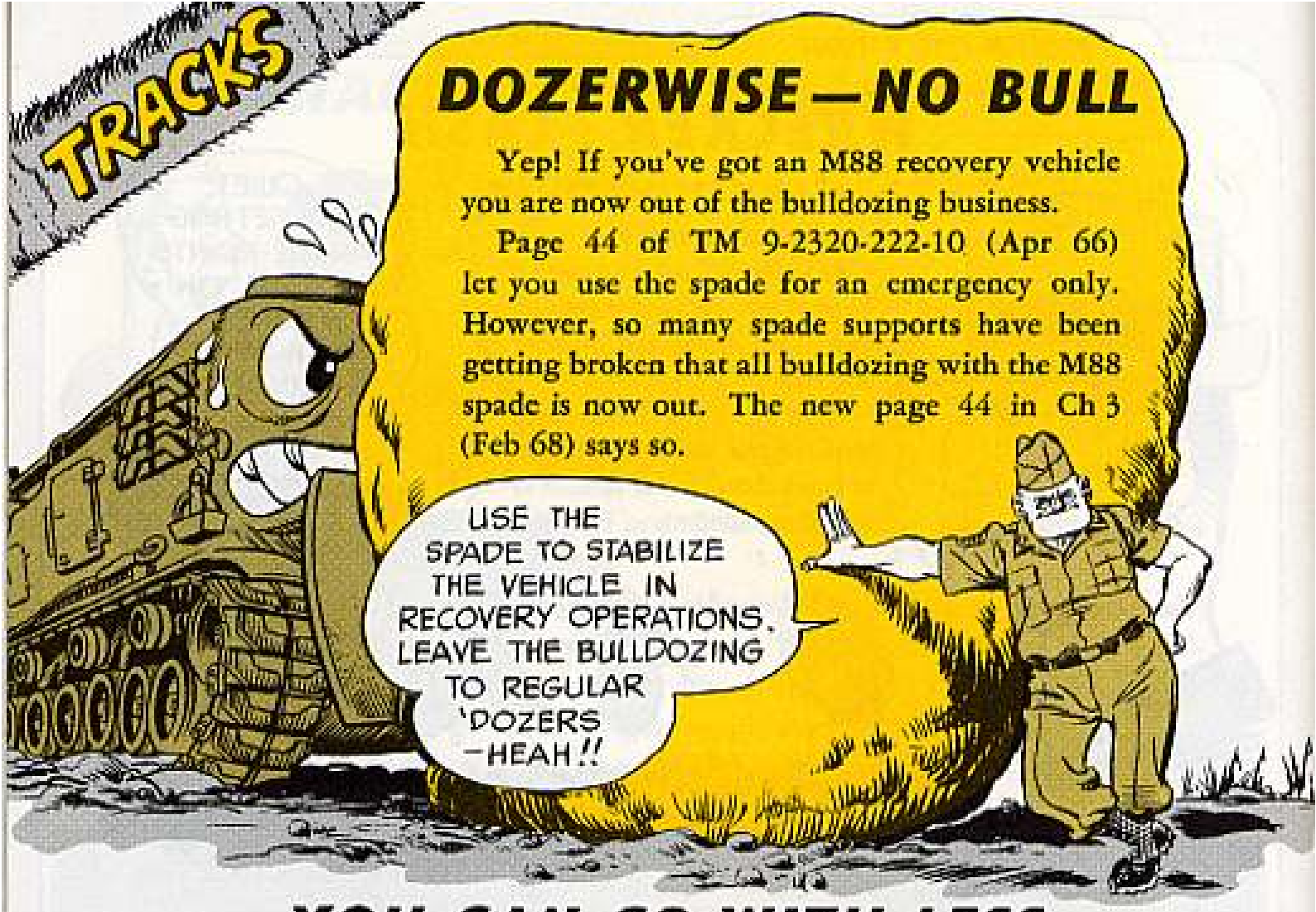

2. Locate the plate 9/16 inch above the center line of the pin hole so the flat on the sheave pin will engage against the locking plate.
That's all, except see TB 750-981-1 (Jan 68), page 68.

# TRACKS

## DOZERWISE—NO BULL

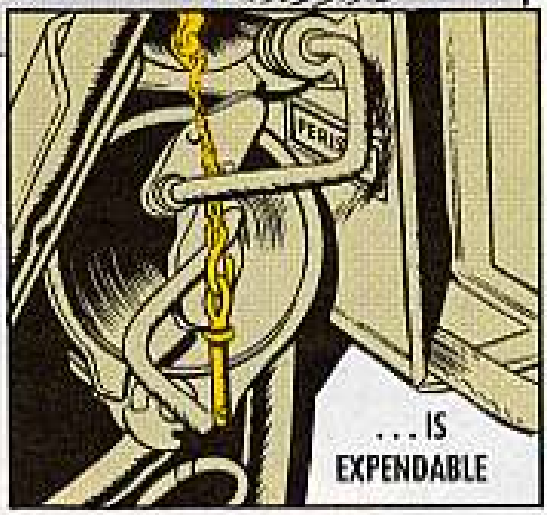
Yep! If you've got an M88 recovery vehicle you are now out of the bulldozing business.

Page 44 of TM 9-2320-222-10 (Apr 66) let you use the spade for an emergency only. However, so many spade supports have been getting broken that all bulldozing with the M88 spade is now out. The new page 44 in Ch 3 (Feb 68) says so.




## YOU CAN GO WITH LESS

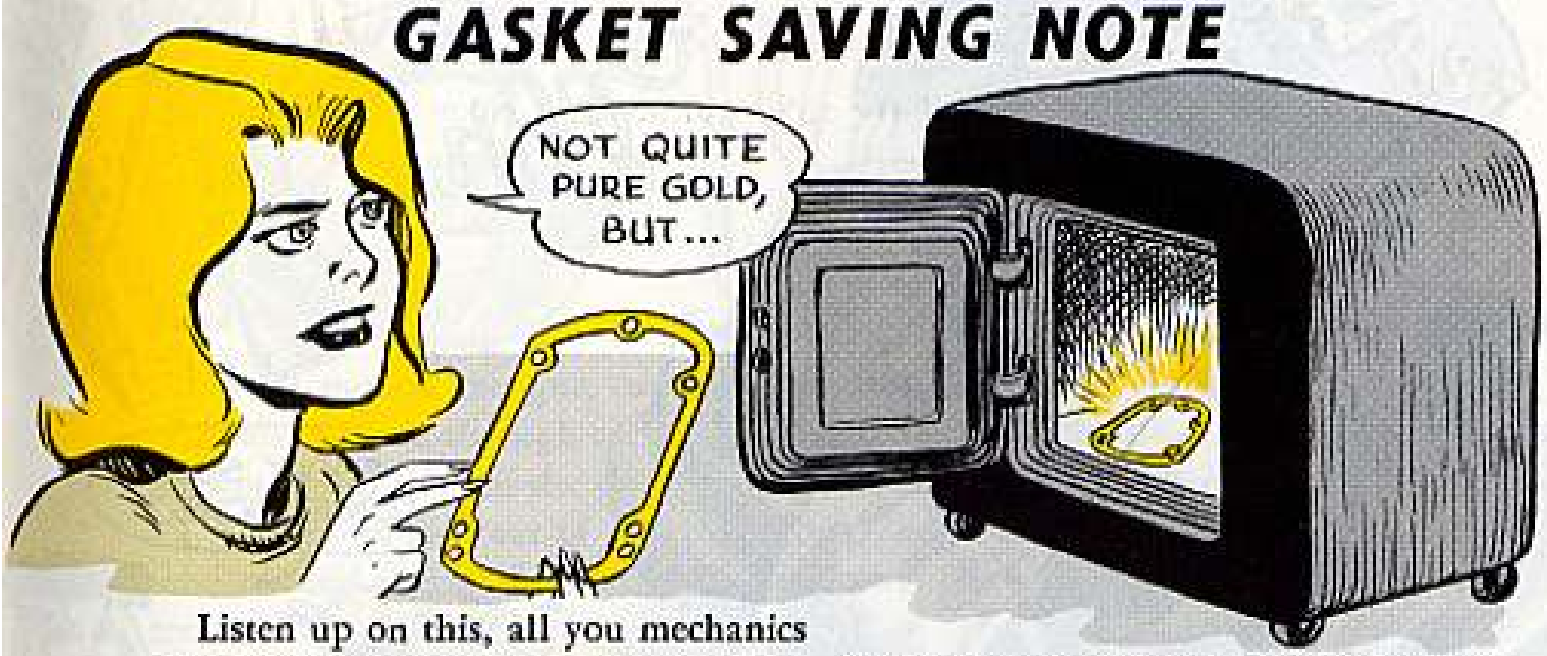





Your M48 or M60-series tanks might have a problem with the shell stop fastener pin assembly. You're likely to shear it off at the right or left hull ammo racks when you traverse the turret.

Should this happen, don't bother getting a new one. This pin and chain are not needed and you can remove 'em whenever you want. That way they won't cause you any trouble.

# GASKET SAVING NOTE




Listen up on this, all you mechanics who might remove the magneto on an M48A2 tank or other vehicle with a similar engine.

When the magneto (scintella) FSN 2920-593-6456 (7974215) comes off, there's a gasket with it, Gasket, magneto cover, FSN 5330-774-4849, (7744849).

Now this l'il gasket don't look like much so some mechanics throw it away.

Well, it turns out the homely lookin' l'il silver gasket costs your U.S. Uncle $2.37 per which is just too much green to be throwing away.

So cut it out, hey! Include the gasket when you turn in the magneto to your support for repair on a DX deal. Result: Everybody happy and nobody will have to come up with the $2.37.

This applies to M41A3, M48, M48A1 and M48A2C tanks; M42A1, M53 and M56 self-propelled guns; M44A1 and M55 SP howitzers and the M8A2 tractor.

# M113A1 PIVOT BRAKE KITS


Having a rough time getting the brake assembly parts kit shown on page 185 of Ch 4 to TM 9-2300-224-20P/3 (Nov 64)? Try FSN 2530-873-6912.

If the repair kit is temporarily out of stock your best bet is to order brake assembly FSN 2530-999-1998. Although this brake assembly is now listed as a non-supply item in TM 9-2300-224-20P/3, it will be shown as an authorized repair part in the new TM 9-2300-257-20P.

# Mr. MIG Welder


You needn't shy away from your Linde MIG welding set just because you've found the gun's control cable is not connected to the control box. The set comes that way, and it's a simple job to wire in the gun.

The Linde MIG welding set comes in 3 models, but the gun hooks up the same way on all models. You may have either—

1. One of the 2 older sets, FSN 3431-837-5574 (Model Sigmette), or FSN 3431-972-7672 (Model SWM-9-A), which have the welding contactor and the control assembly in 2 separate boxes.

2. Or, the later model, FSN 3431-965-0088 (Model SWM-9-A1), which has the control assembly and the welding contactor in 1 box.



On all models the gun control cable (it's called gun switch cable in some manuals) goes in through a cable connector on the right side of the control box. All you do to wire in the gun is remove the terminal screws from terminal strip T1 (located on the floor of the control box), hook up the right lead to the right terminal and anchor the leads with the screws. The leads are color coded and the terminal strip connections are numbered.

## GUN CABLE CHECK


Two or 3 cables, depending on which set you have, are permanently attached to the gun. But the only gun cable you have to wire to a terminal strip is the gun control cable. For example:

The larger, black cable is the gun's welding power cable and it simply plugs into the control assembly.

On the older models the gun's ground cable also hangs from the gun. But, all you do with that cable is attach it to a terminal on the side of the control box.

## OTHER WIRE-IN CONNECTIONS

On all models you also have to wire in the set's work pick-up cable.
On the 1-box model you also hook up the 115-volt cable.
And, on the 2-box models you also wire in the contactor cable.
We'll work those loose cables in as we come to 'em, so you'll have a good hook-up picture.

## SAFE/TIGHT CONNECTIONS

All lead, hose and cable connections must be good and tight. So check connections for tightness as you make 'em. Also, the waterproof cable connectors and bushings — which hold and protect the cables and hoses passing into the boxes — must be tight to help keep the boxes clean and dry.

And, first and foremost before you make any connections be sure the voltage-control switch on the control box and the generator power switch are on OFF.

OK — now that the prelims are out of the way . . . here's the $$$$ word on wiring the gun —

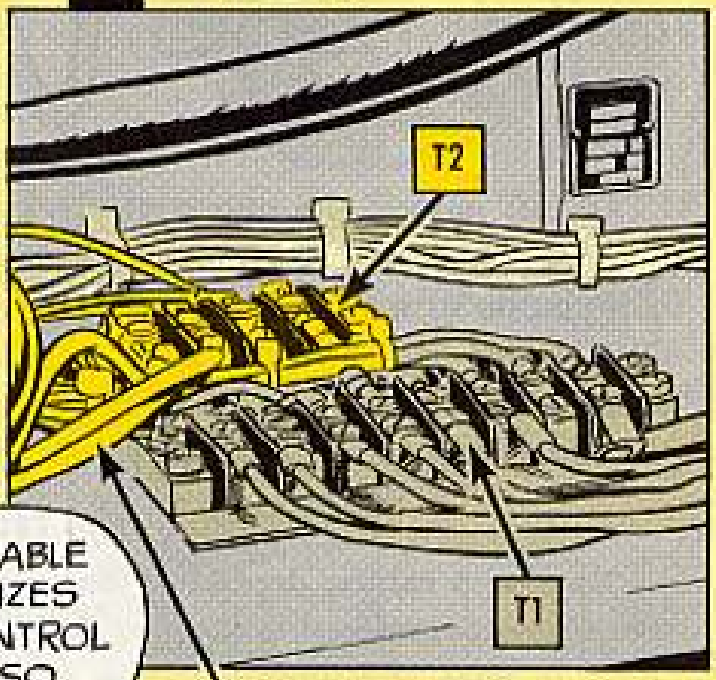
## SINGLE BOX SET GUN CONNECTIONS

### GUN CONTROL CABLE

Insert the cable through the cable connector nearest you on the lower right side of the control box. Connect the cable's 6 color coded leads to T1, like this —

| Terminal | Lead |
|---|---|
| 1 | Black |
| 2 | White |
| 3 | Red |
| 4 | Blue |
| 5 | Orange |
| 6 | Green |

you don't use 7





### 115-VOLT CABLE

This is the other wiring job you have on this set. The cable energizes the control panel — so always make it the last connection.

Wire the 115-volt cable to terminal strip T2, located on the floor of the control box,. Bring the cable into the control box through the cable connector nearest you and hook its 3-color-coded leads to T2 —

| Lead | Terminal |
|---|---|
| Black | 1 |
| White | 2 |
| Green | Ground screw |

### WORK PICK-UP CABLE

While you're on T1 you can hook up this single lead cable. Put it into the control box through the center cable connector and connect it to terminal 8 on T1. The other end of the cable clamps on to the workpiece.

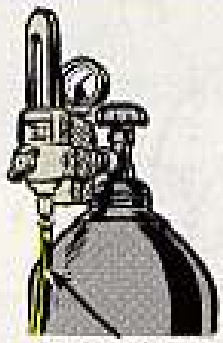
### GUN'S POWER CABLE

Push the cable through the larger cable connector on the side of the control box. Inside the box you pass the cable through the weld-current-relay and screw the cable to its adapter (right under the welding contactor).

## HOOK-UP ROUND-UP

Now on to the other wiring jobs and connections needed to get your single box MIG welding set working. All connections coming up (like the 115-volt cable) are on the left side of the control box.

## CONTROL BOX/ARGON/GENERATOR



### ARGON HOSE

Connect from outlet connector on argon regulator to the solenoid-valve-inlet connector on the lower side of the control box.

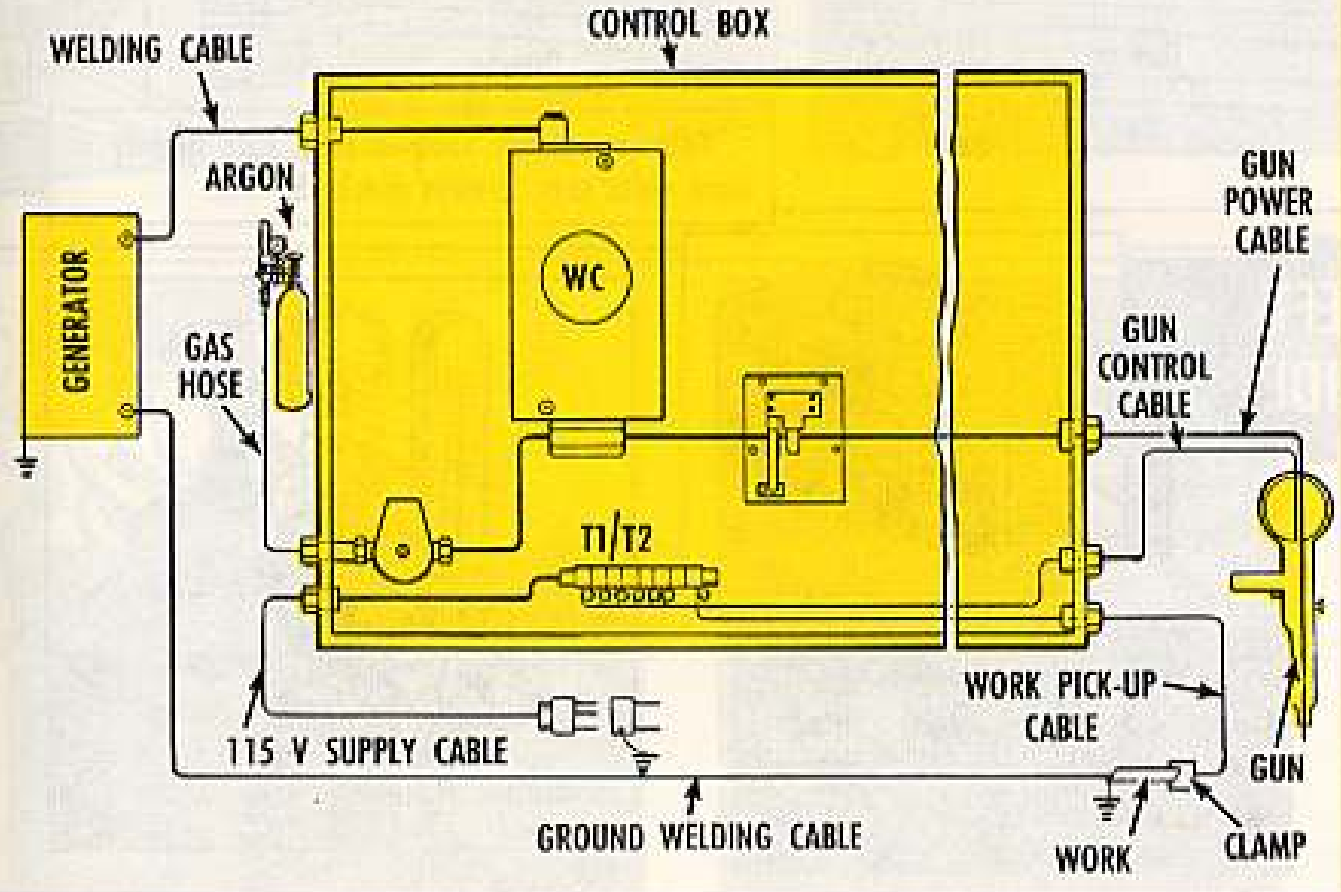
### 12½-FOOT WELDING POWER CABLE

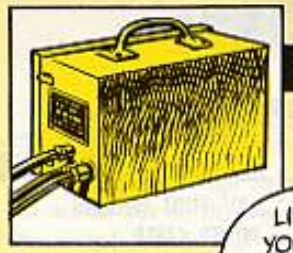
Push one end of the cable through the cable connector on the upper side of the control box, and attach the cable to the positive lug on the welding contactor. Connect the other end of the cable to the positive terminal on the generator.

### GROUND WELDING CABLE

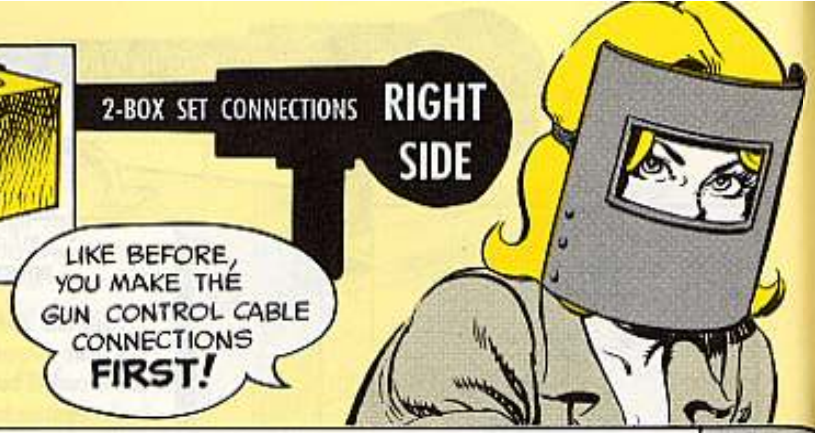
Connect from the negative terminal on the generator to a good ground on the workpiece.

### SINGLE BOX HOOK-UP





## 2-BOX SET CONNECTIONS — RIGHT SIDE




### GUN CONTROL CABLE

Push the cable through the cable connector on the lower right side of the control box, and connect its leads to T1, like this —

**On the Sigmette model (FSN 3431-837-5574)**

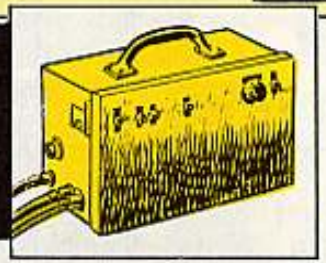
| Lead | Terminal |
|---|---|
| Black | 1 |
| White | 2 |
| Red | 3 |
| Green | 4 |
| Orange | 5 |
| Blue | 6 |

**On the SWM-9-A model (FSN 3431-972-7672)**

| Lead | Terminal |
|---|---|
| Black | 1 |
| White | 2 |
| Red | 3 |
| Blue | 4 |
| Orange | 5 |

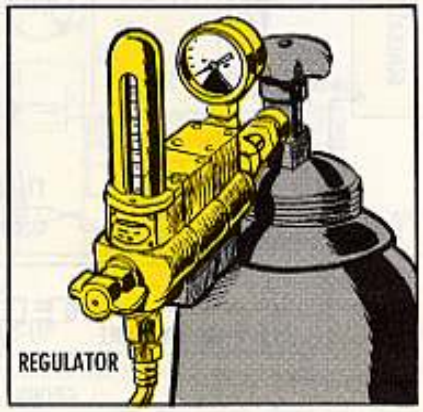
Cable entry and hook-up may vary slightly in some older sets. Always check the TM.

## LEFT SIDE



### ARGON HOSE

Connect from the outlet connector on the argon regulator to the solenoid-valve-inlet connector on the lower side of the control box.





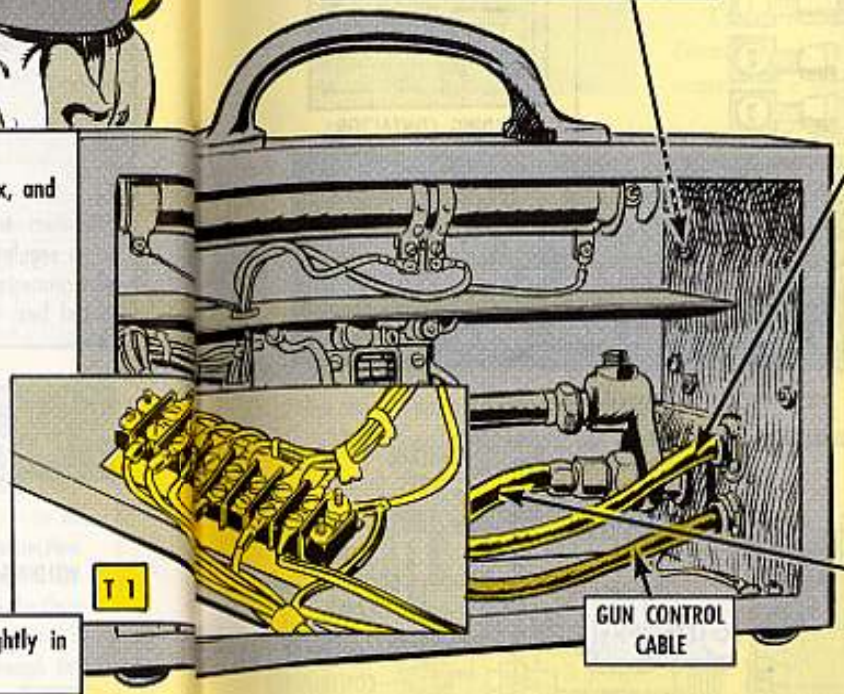

## CONTROL BOX/ARGON/ CONTACTOR/GENERATOR

### GUN'S GROUND CABLE

Attach to the ground terminal on the outside of the control box. The terminal is equipped with a wing nut to hold the cable.

### WORK PICK-UP CABLE

Pass the single lead cable through the other cable connector on the lower end of the control box and connect it to terminal 8 on T1. The other end clamps to the workpiece.




### GROUND WELDING CABLE

Connect from the negative terminal on generator to a good ground on the workpiece.

### GUN'S WELDING POWER CABLE

Plug the gun power cable into the receptacle on the outside of the box.

### 6-FOOT WELDING CABLE

Pass one end of the cable through the connector on the left, upper side of the welding contactor, and attach the cable to the contactor's positive terminal. Attach the other end of the cable to the positive terminal on the generator.

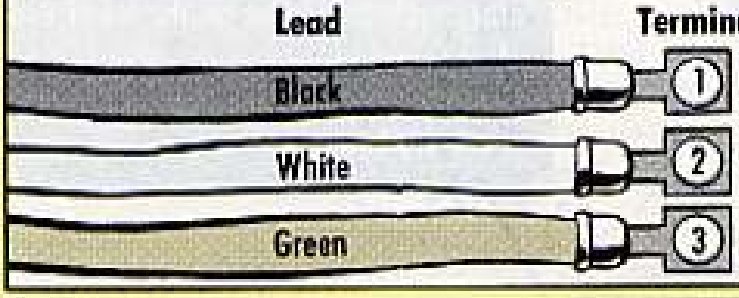
### 12½-FOOT WELDING CABLE

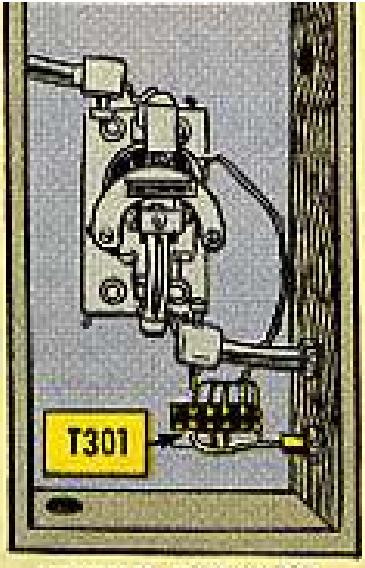
Pass one end of the cable through the uppermost cable connector on the side of the control box. Inside the box you pass the cable through the weld-current-relay and attach the cable to the gun power-cable terminal just inside the right side wall of the control box.

Pass the other end of the cable through the center cable connector on the right side of the welding contactor and connect it to the contactor's negative terminal.

### CONTACTOR CABLE

The cable comes attached to the center cable connector on the lower end of the control box. Push its free end through the cable connector on the lower, right side of the welding contactor and connect the cable's 3-color-coded leads to terminal strip T301 (located on the back wall of the welding contactor), like this —




WELDING CONTACTOR

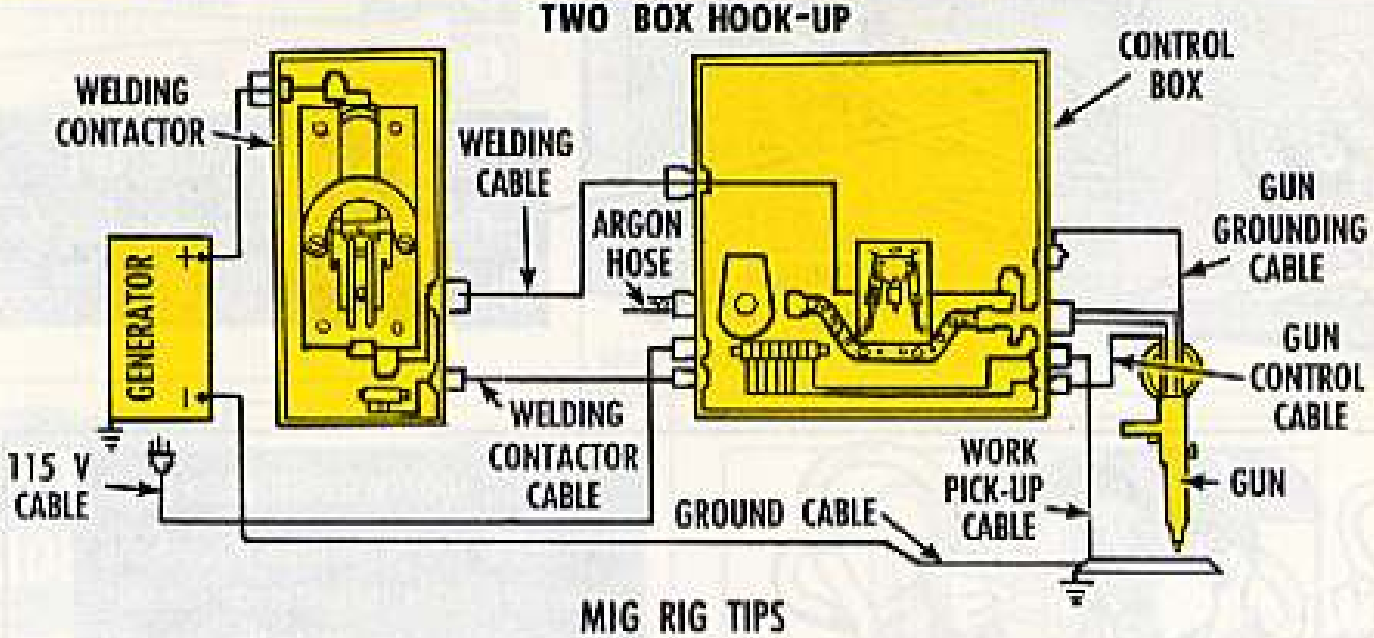
### 115-VOLT CABLE

On the 2-box sets you don't have to wire in this cable to the control box. It comes attached to the left side of the box, right next to the contactor cable. All you do is attach its 3-pronged plug to a 115-volt receptacle on the generator. Remember, this cable energizes the control box panel, so make it the last hook-up.

If you find the 115-volt cable isn't wired into the control box, you let support wire in the cable.

And, that's the last cable you have on this control box.

### TWO BOX HOOK-UP



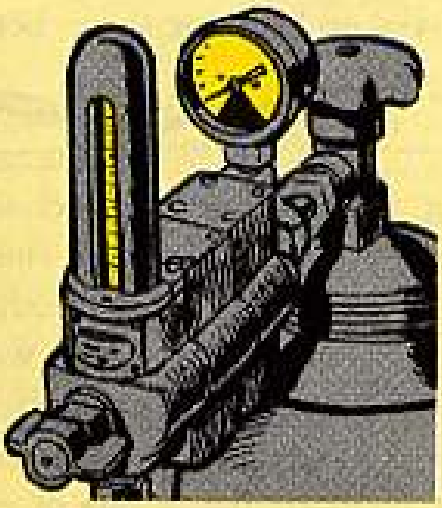

## MIG RIG TIPS

Remember, you need reverse polarity with MIG welding to get deeper penetration on the base plate, and to avoid burn back in the guide tube.

Check your generator's operating instructions for the reverse polarity setting.

The sets operate on 115-volt AC or DC power. When a generator isn't equipped with a 115-volt receptacle the cable can be hooked-up to standard 115-volt shop current.

On the Sigmette model (FSN 3431-837-5574, DA Contract 11-199-Ord-534), however, the 115-volt supply source must not be earth grounded or hooked up to either side (power or ground) of the welding power supply source.



Make sure the 115-volt power receptacle, or power cord adapter for the 115-volt cable, has a good electrical ground.

The flowmeter on the argon regulator tells you how much argon gas is going to the gun. And, the regulator's pressure gage tells how much pressure you have in the argon cylinder.

Treat the argon regulator c-a-r-e-f-u-l-l-y. Never yank or grab the regulator by the flowmeter tube guard.

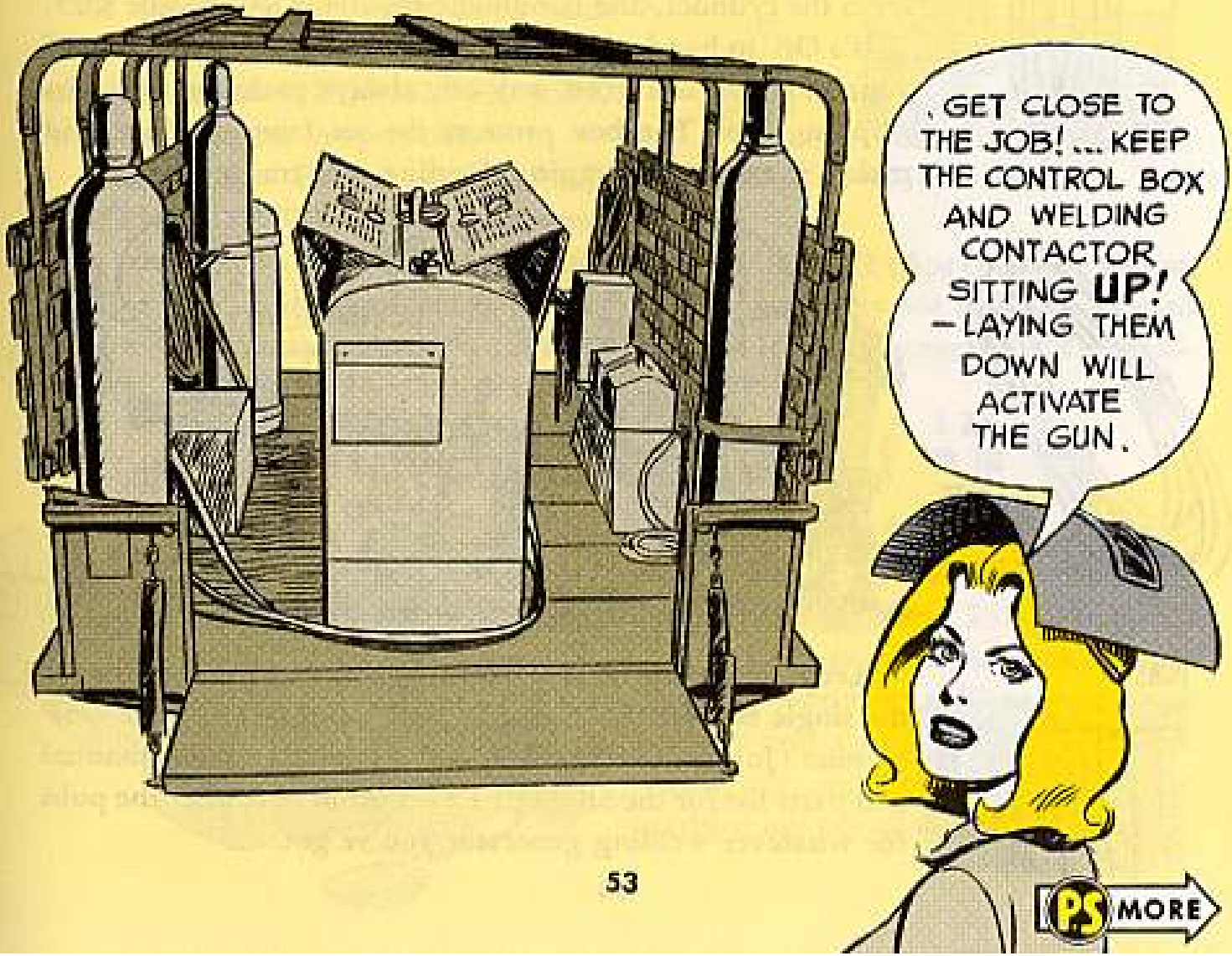
Before installing the regulator, open the argon cylinder just a crack to blow off any dirt.

And, never stand in front of the regulator when you're cracking the cylinder valve.

Just before installing the regulator be sure the flow-adjust valve is turned (clockwise) off all the way.

When you're installing the regulator, cradle it in one hand and screw the inlet connector nut to the argon cylinder valve with the other hand. Tighten the nut carefully with a wrench.

The regulator must be installed with the flowmeter standing upright.



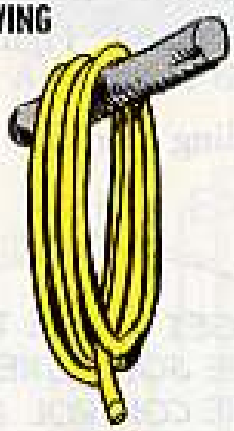
**CABLES** Take care you have no kinks or sharp bends.

**SAFETY**


Set up your rig in a well ventilated area. Keep it away from toxic or flammable fumes.

Always wear your protective gear. And, on long jobs check yourself frequently. MIG welding means heavy ozone fumes — and, the stuff's dangerous health-wise. Welding experts recommend a 10-minute fresh-air break out of each welding hour. For important scoop on ozone gas poisoning and first aid on ozone problems see TB Med 256 (Jan 66).

**MOVING**



When you're switching job locations disconnect the power and ground cables from the generator. And, coil all the cables for easy handling, cable protection . . . and your safety.

Disconnect the argon regulator from the argon hose and from the cylinder, and handle the regulator like fragile stuff.

It's OK to hand-carry the MIG set for a short way, but if your next job is a good way off, always pack the set in its shipping box. The box protects the set from damage, and makes it easier for lugging, loading and transporting.

USE A BIT OF TAPE TO KEEP 'EM COILED


**PUBS**

Keep your pubs handy. TM 5-3431-219-15 (Aug 65) for the single box set. TM 5-3431-208-15 (Jul 63) and the -25P manual (Jul 63) for the SWM-9-A set, and the Linde manual and parts list for the SIGMETTE set. And, of course, the pubs for whatever welding generator you've got.

# NUT RESTORER

Dear Editor,

I've made a tool that will restore slotted type self-locking nuts to their original condition.

I used a bolt on which the nut fits and drilled the head of the bolt so it would fit over the self-locking end of nut to be restored. (You can also use a steel bar and drill it with all sizes.)

If there's a rubber washer or "O"-ring around the top inside of the nut, be sure to check for deep cuts or breaks before restoring it. If it's bad, toss out the nut.

Then you slip the tool over the self-locking nut to be restored and tap it a time or two with a hammer.

You'll find these self-locking nuts on your vehicles. They're used especially where safety is a factor, such as on drive shaft bolts.

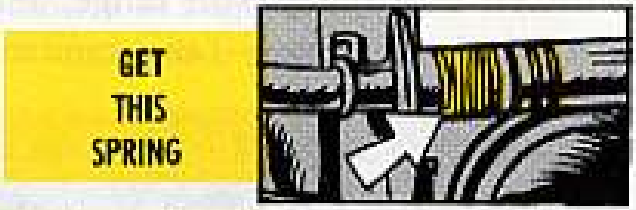
Richard H. Western
Aberdeen Proving Ground, Md.


# NEW HEATER SPRING

A switch in time may keep your Model BT 400-40 FSN 4520-792-8257, and BT 400-40-1, FSN 4520-930-9474, duct-type heaters in operation.

The spring, FSN 5340-940-7917, that's now on the engine exhaust rusts and you have to replace it often.

You can lick this problem by replacing it with a new corrosion resistant spring, FSN 5340-824-5267, manufacture's code — 90598 Part No. TM 3955A.




TB 750-971-2 (Apr 68), EIR Digest, is your authority for ordering it until you see it in a change to TM 5-4520-208-25P.

# NO BOLOGNA


Your Model S-4 Sanitary Scale Company meat slicing machine, FSN 7320-222-4176 and FSN 7320-222-4177, may be about to go on the blink because of a bad worm gear. Take it to your support and they'll replace the gear with a new one free of charge if your machine has one of the bad gears.

CHARGER NEW?
WHOA-HOLD —

# METER-TEST EACH OUTPUT POLE

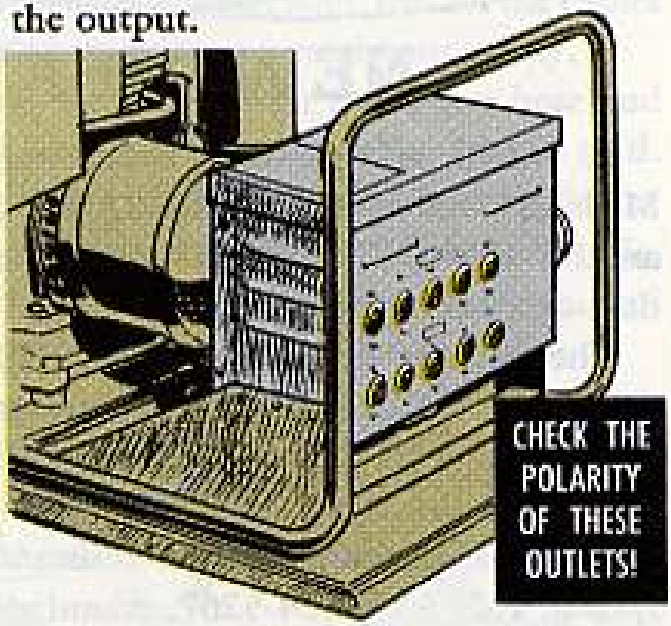

You with that new battery charger — got a 2KW GE or Eagle, FSN 6115-075-9123, 12-volt?

Before you hook up a bunch of batteries and ruin 'em, better check those outlet plugs for reverse polarity.

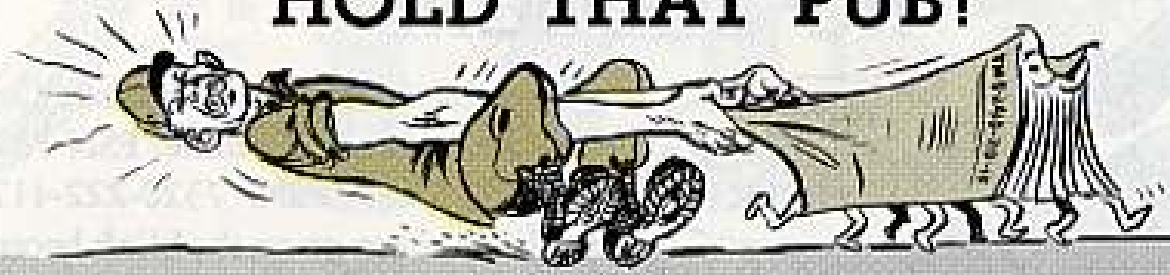
The trick is, have your radio genius or kilowatt custodian take a TS-352 meter, set it in the 50-volt range, and get a polarity reading — (any standard multimeter'll do).

If the outlets marked (+) turn out to really be (−) and (−) ones (+), you need a wire-switching job between the generator output and the distribution panel. But be sure you get to points A-1 and A-2 right where the juice comes out of the generator itself — otherwise you'll make a direct short and burn up your rig.

Don't get rushed and start up the set before you've had somebody else double-check the job — like testing the polarity to make sure the labels match the output.

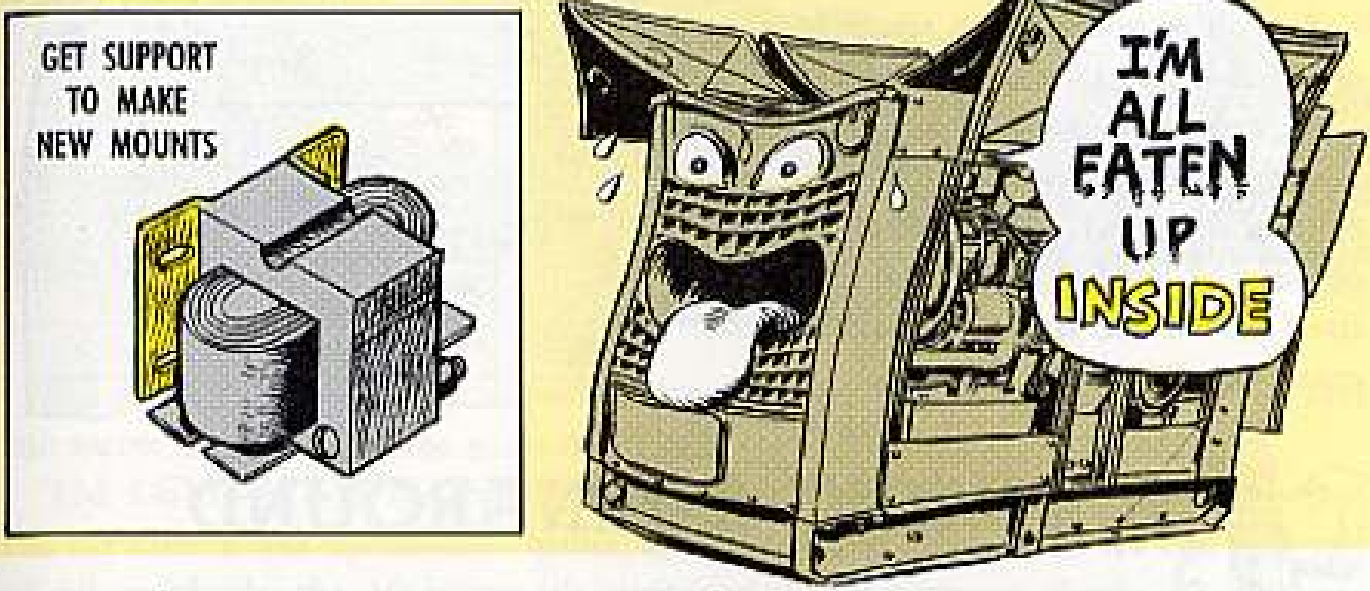



# HOLD THAT PUB!



WHO-OO-O-o-o-ah!! Like it says in DA Cir 310-39 (Jul 67), don't heave out that TM 5-2410-210-15 (Aug 60), on IHC TD-6 Full-Tracked Tractor. It's still good — the DA Cir 310-30 (Apr 67) notice to ashcan it was all a mistake. So save it — along with Changes 1, 2, and 3. Like gold.

# URGENT 45-KW FIX




Your 45-KW Stewart & Stevenson Model 52300 generator may look healthy, but if it's wearing a serial above -1881, it could have a real bug gnawing inside . . . so stop the chewing.

The bug is that the noise-filter-choke brackets break after 800 hours or so, shorting out the set. Support can put the blocks to that.

The fix is to take out the noise-filter-choke and make new mounts out of 1/8-in thick angle iron. Either 7/8-in width (FSN 9520-277-5984) or 1-in width (FSN 9520-288-1106) works great. Aluminum 1-in angle (FSN 9540-145-5752) is good. Tell your support to requisition 20 inches for each generator.

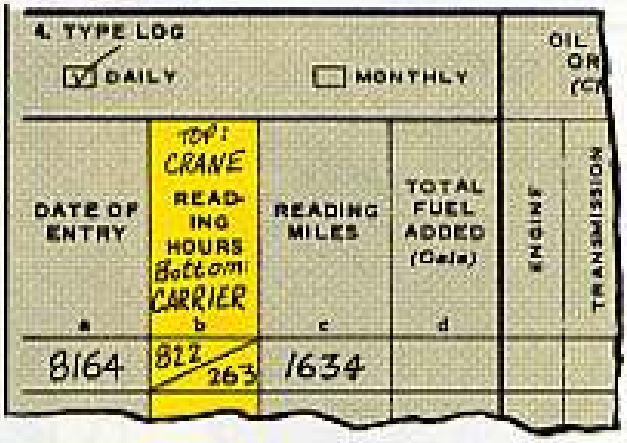

You can do something about the screws (FSN 5305-273-7372 or 5305-050-9229), working loose from the retaining plate of the compressor diaphragm of your Model CDR 70,000 Curtis Automotive Devices, Inc., delousing outfit, FSN 4230-078-5455.

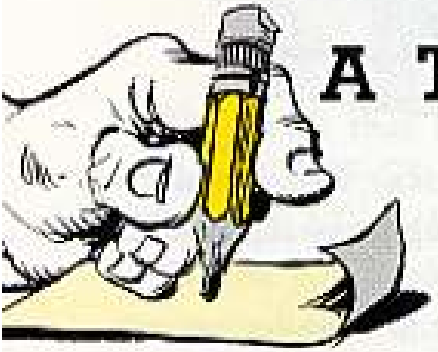
You remove all of the screws from the diaphragm retaining plate. Then coat the threads of each screw with an activator-primer, FSN 8030-980-3976. It comes in a 6-oz spray can. Be sure to follow the directions on the can.

After the primer dries, apply sealing compound, FSN 8030-823-7917, to the screws. Put them back in the plate and tighten 'em. That should do the trick.

# DOUBLE DUTY

So you're operating a rough terrain crane that has two hourmeters — but only one DA 2408-1 for recording hours of operation? No sweat. Just draw a diagonal line across the box in column b. Record hours for the crane itself above the line — hours for the crane carrier below. Like so:



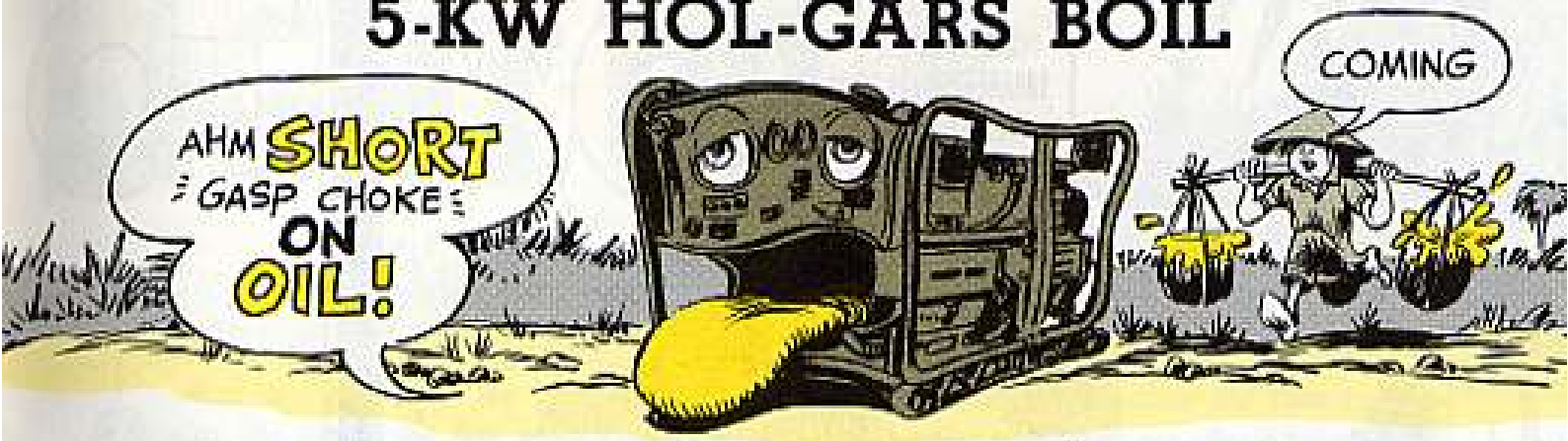
# A TIMING TURNAROUND

Make a note about what TM 5-2805-204-14 (Jul 65) says on page 32, Fig 25, about firing order for 2A042 10-HP Engine. The order is 1-2, not t'other.

# SCALE REMOVER

Been tryin' to figure an easy way to get the hard-water scale out of your kitchen equipment? Latch on to TB 10-7300-201-20 (Oct 67). It gives the dope on how to use a scale-removing compound to clean your coffee urns, steam tables and dishwashers.

# 5-KW HOL-GARS BOIL

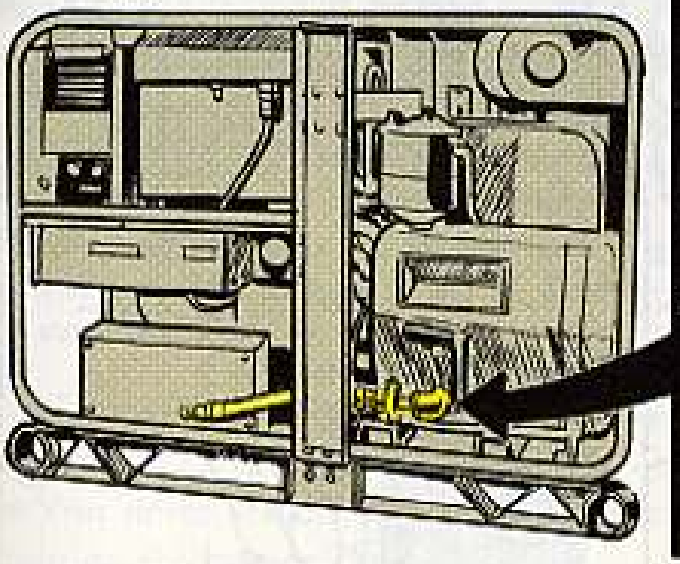


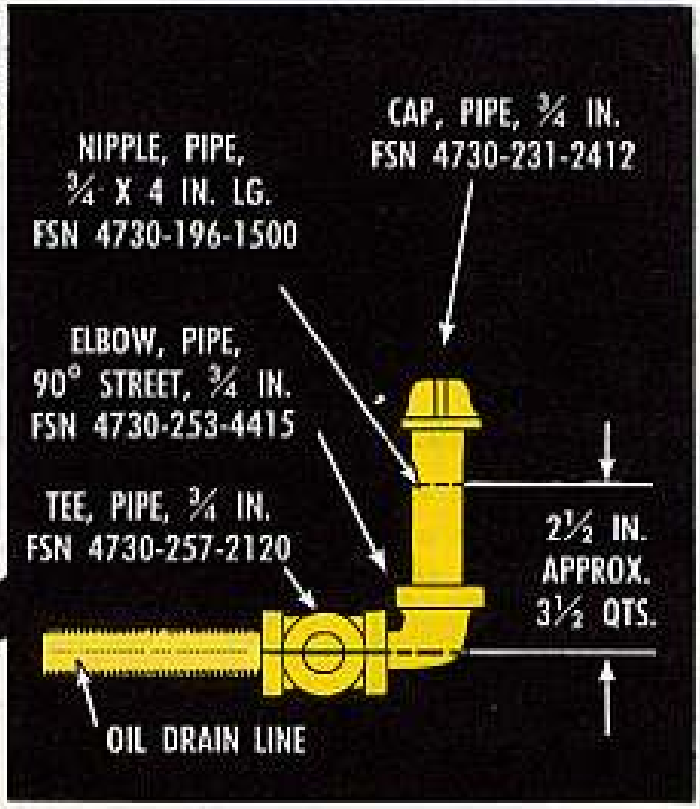

Oil starvation messes up a good many Hol-Gar CE-56-AC generators — and the secret is something the pubs don't tell.

TM 5-6115-312-15 on this set says the crankcase takes 3-1/2 quarts . . . but the oil filter soaks up another quart, and that's the catch. The set can run out of oil quicker'n the 10 hours it's supposed to last between checks, or overheat and plain burn.

One cure is to run the engine 20 minutes to a half hour after an oil change, then add another quart, making 4-1/2 quarts in all.

It helps to have a visual check on oil level, too, for a run all night or 'round the clock. To do that, you take off the drain-line elbow of the oil-drain line and apply this fix:






Cap the opening finger-tight with a pipe cap. Then when you check the oil level, you ought to see it about 2/3 of the way up in that nipple; if not, add.

When you make a dipstick check on oil like the LO says, have the letters on the stick facing the engine front . . . and no screwing the cap down on the filler neck.

And out of the tail of your eye, if the weather's above freezing, look to see the flywheel shutters are open good 'n' wide. But let nobody take 'em off.

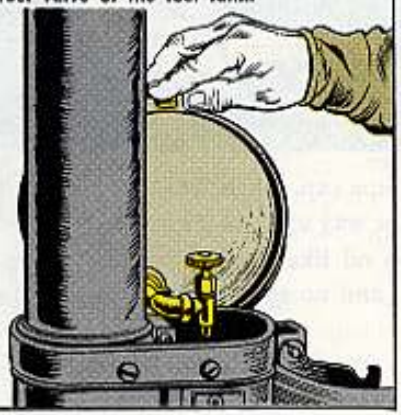
NEW-TYPE IMMERSION HEATER?

# HOW TO LIGHT UP

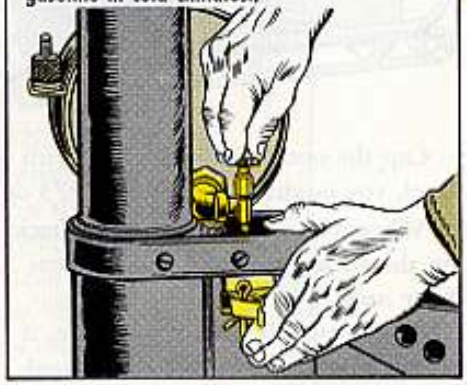
You don't need a magic wand or any other tricks to fire up your later-model immersion heaters. But just be careful that your igniter cup doesn't runneth over.

Before you use the cup, make sure it has the wick and the wick retainer spring.

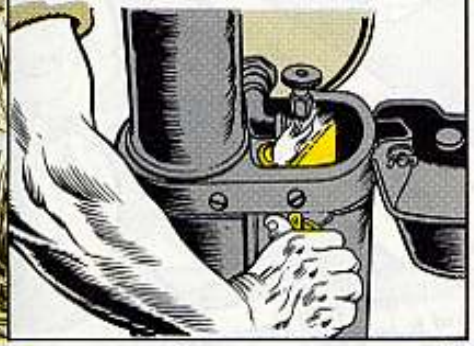
Unscrew the vent plug at the top of the fuel tank and swing the igniter cup below the fuel valve of the fuel tank.



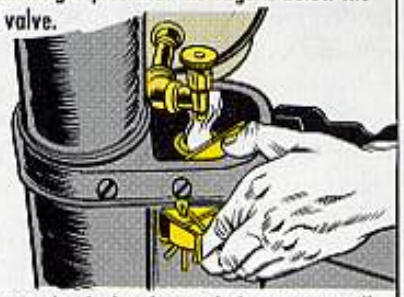
Now open the fuel valve until the igniter cup is ¼ full of gasoline. (This may vary with the temperature — you'll need more gasoline in cold climates.)



Next light the fuel in the igniter cup and swing the cup to the flue compartment so it'll preheat the flue.



Let it burn for 1 minute and then swing the burning cup so that the edge is below the fuel valve.



Open the fuel valve and the stream will ignite from the burning cup.

Do not put your face over burner chamber or there may be a flash in the pan.


## SAFETY FIRST

The same safety tips goes for this type of heater as for the type that uses the lighter.

- You never let the fuel drip into the heater before preheating the stack or lighting the burner.
- You make sure the fumes are piped outside if heater is used in a building or tent.
- Look for leaks or spilled fuel. Wipe off the fuel from the outside of the heater.
- Check to see that the corrugated can is filled at least 3 inches above the top of the combustion chamber and about 6 inches below the collar assembly. You can heat approximately 20 gallons.
- Always wait until heater cools before you do any maintenance.

## ONCE AGAIN ON RECORDS RULES IT'S . . .

# PRESTO CHANGE-O

The wintry winds are restless, and the changes blowing your way include Change 1 (15 Aug 68) to TM 38-750 — effective 1 Jan 69.

This updates your guide on equipment maintenance and historical records. It's the latest Army Equipment Record Procedures — streamlined, modernized and refined (except for the few designated units using the CS3 test edition that's more streamlined yet).

When your copy comes 'round the bend, watch especially for these major face-lifts:

1. New rules on log records for "composite" items (2 or more end items combined) detailed in para 4-22a.

2. Revised list (para 4-22) of equipment required to have log records, which includes items added by DA Cir 700-15 and provides a major overhaul of items in category 400000 (electronics and communication).

3. Equipment model listing changes for data collection (on DA 2406, 2407, 2410, 2408-3, 2408-7 and 2408-8) in both Appendixes III and V.

4. Code changes in Appendix I include major revisions in utilization (Table 7), reason for transfer (Table 16) and equipment loss (Table 17) codes.

5. Revision of Chapter 5 on ammo records coordinates these rules with general equipment uses of forms.

6. Mailing addresses and equipment responsibility designations by categories are updated (Appendix II) along with update of mailing addresses which appear elsewhere in the TM text.

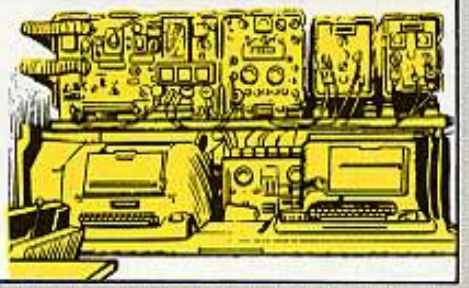


## COMPOSITE ITEM CHECK

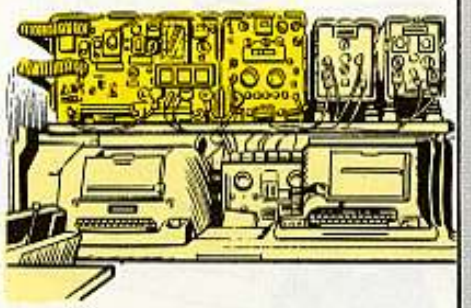
The new rule on logs for composite items calls for a checkout on the log for any end item that has other end items as components. Here's a (large) thumbnail version of the rule:

**a.** For electronics and communication end items (400000 category):

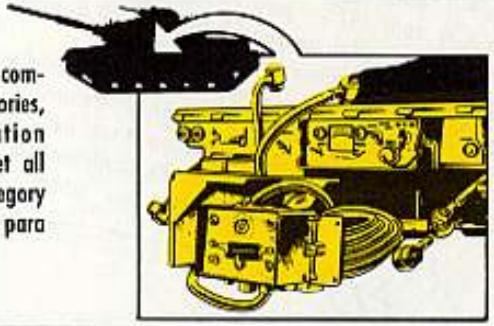
**1.** Composite end item is required to have a complete log as spelled out in Appendixes III and V and para 4-22.



**2.** Electronics and communication end items that are components of a composite end item in **this same category** need only **MWO** inserts in the composite item log (DA 2409 or DA 2408-5 as required in para 4-22). (The log would need an index, DA 2408-10, but DA 2408-3, 2408-7, 2408-8 and non-feedback forms like DA 2408-10 for components and DA 2408-14 would not be initiated or maintained for the component end item.)



**3.** When they are components of composite end items of other categories, electronics and communication (400000) category end items get all records required on their own category lines. (Appendixes III and V and para 4-22).





PS MORE

**b.** For everything but electronics and communication end items, all forms listed on category lines (Appendixes III and V and para 4-22) are required even when the item is included as a component in a composite end item. (Logs for all end items included in the composite item would be kept in one log binder with a DA 2408-10 index.)

***NOTE: The only exception to these rules is an end item that qualifies under para 4-6b(4)(b) or 4-22i as equipment used by a U.S. Army service school or center in an approved POI, normally not in system configuration and routinely disassembled or bugged. This waiver on setting up records does not apply to DA 2410 and -1, nor to other forms when the equipment is returned to normal use.***


DA 2405 — New rules require recording of DA 2410 actions, as well as DA 2407 requests, on DA 2405, Maintenance Request Register.

DA 2406 — Change requires entries in columns 11k through 11t for items reported on DA 2406 (App III) even if no ESC has been published.

DA 2408-3 — Appendix IV drops this as ammunition data collection form.

DA 2408-7 — Submission by depots required.

DA 2409 — Current status entries on MWO's (as required for DA 2408-5) also required for DA 2409 section D — para 4-20c(4)(c).

DA 2407 — Reporting of previously complied with MWO's is required, using failure code 797 — para 3-7.2a(7) — and listing estimated manhours from the MWO if actual time is unknown — para 3-7.2a(9).

NMP copy is required to be retained for 90 days when data is electrically transmitted.

Rules are revised on support use, including required reporting of on-site maintenance and depot "repair and return to user" actions.

DA 2410-1 — Requirement to use this for combat vehicle engines deleted.

Other general changes include provisions for use of equipment records for special one-time inventory, operational or maintenance studies and a general updating of references, corrections of cross references and clarifications in the text.

It's the latest. You'll need it to keep an accurate score on your equipment.


## H|R Files

As you were, Mr. Handreceipt holder. Paragraph 3-4b Ch 1 (May 68) to AR 735-35 dropped a couple of lines at the printing shop. The original handreceipt file (or copy) still belongs to the property book officer. And, the H/R holder gets the duplicate copies.

## Supply TWX

Property-book types keep an eye out for the latest scoop on Change 1 (May 68) to AR 735-35. The info went out by DA TWX 884511 (21 Oct 68), and should be reaching you soon by way of your local supply SOP.

## 40-mm CS & Smoke Ammo

The 40-MM CS cartridge for the M79 grenade launcher is: Cartridge, CS XM651E1. Handling, firing and safety scoop on the round is covered in TM 3-1310-243-10 (Sep 68). Cartridge, CS XM674, and Cartridge, Red Smoke, XM675, can be fired by the M79, by the AN-M8 pyrotechnic pistol, or fired by hand. These 2 cartridges are covered in TM 3-1310-244-10 (Sep 68).

## H|R Dating

Remember, the initial handreceipt date on the back of the property book page (DA Form 3328) must be up-dated when there's turn-in or issue business between the H/R holder and the property book officer, or when a new man signs for the H/R items. That is, the H/R date on DA Form 3328 must jibe with the date of the latest transaction shown in the H/R balance column.

## A Date For You

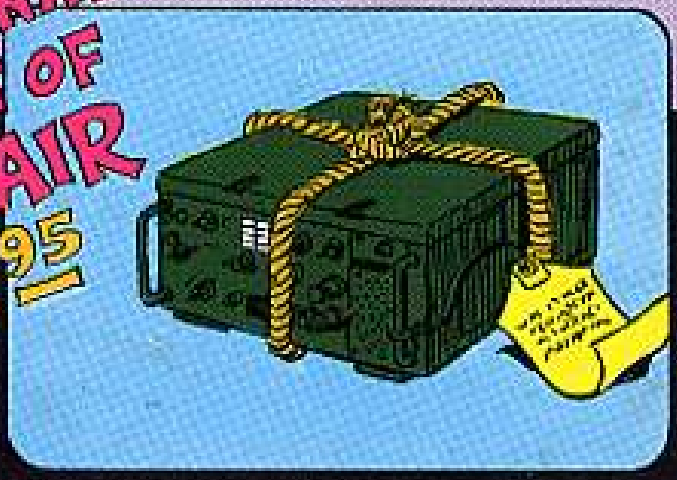
You'll not need a pencil and paper to figure what the Julian date is if you have the combination Perpetual and Leap-year Julian Calendar. FSN 7510-226-5401 will get you a package of 50. You find it listed in the GSA Stock Catalog IL/Part II (Oct 68).

## M109 Framed Glass In One Pass

Search no more for a frame to replace that busted window on your 2½-ton truck's M109 van body. The whole works comes together as Glass, Assembly w/ Weather Seal FSN 2510-040-2087. The nomenclature's been updated. Quote Fed Cat C2510-IL-A.

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

ORIGINAL COST OF REPAIR $5.95



PACK AND HAUL REPAIRABLE ITEMS CAREFULLY, PLEA$E.

FINAL COST OF REPAIR $595.00