
Issue 226
PS
1971 Series
September
THE PREVENTIVE MAINTENANCE MONTHLY
GREAT... YOU LUBED EVERYTHING UNDER HERE BUT THE RIGHT PLACES!! ... NOW, LET'S DO IT BY THE LO.
Will Eisner

THE DOOR IS OPEN FOR—

MEN ON THEIR WAY UP

ARMY'S NCO LOGISTICS PROGRAM

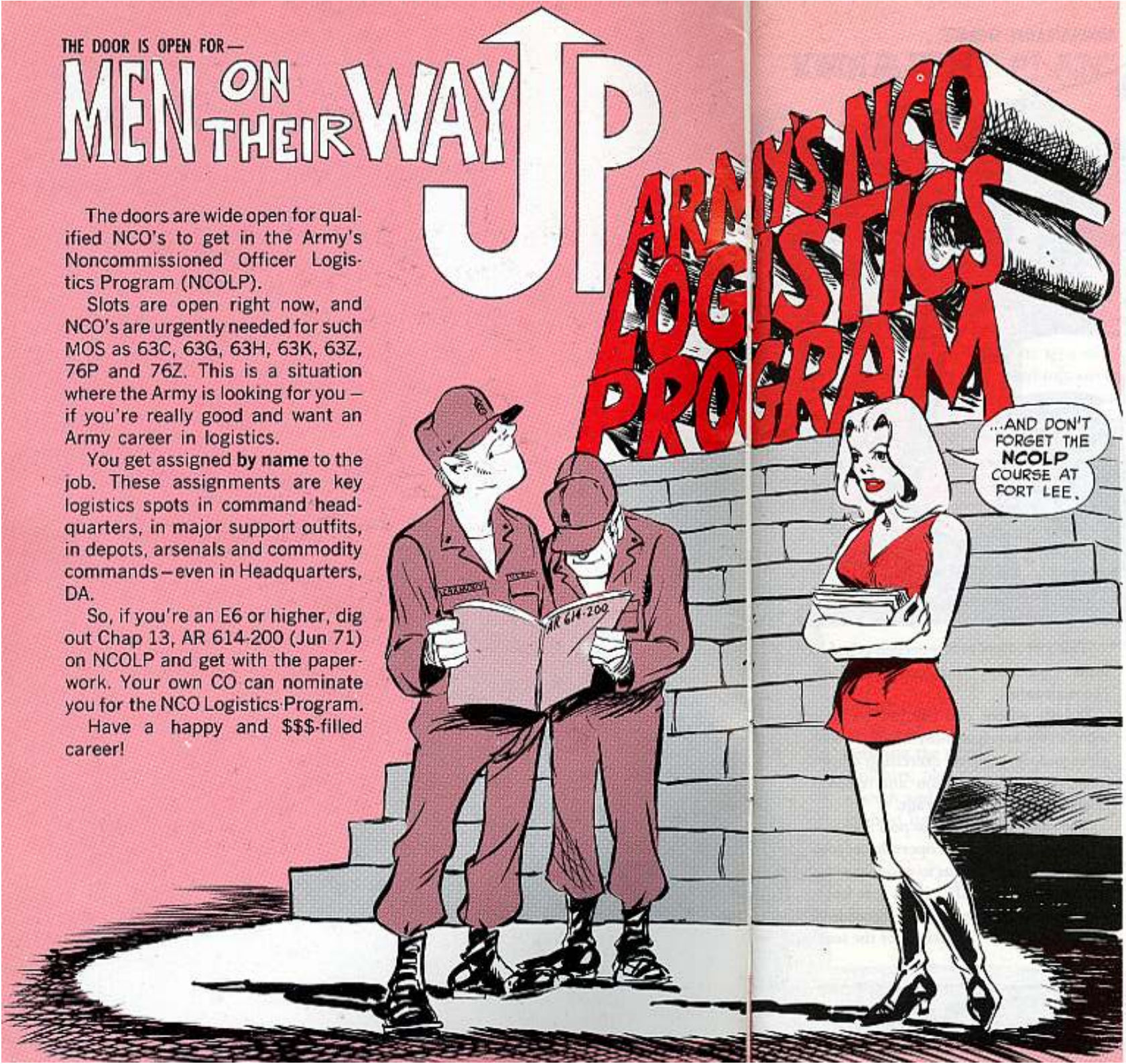
The doors are wide open for qualified NCO's to get in the Army's Noncommissioned Officer Logistics Program (NCOLP).

Slots are open right now, and NCO's are urgently needed for such MOS as 63C, 63G, 63H, 63K, 63Z, 76P and 76Z. This is a situation where the Army is looking for you—if you're really good and want an Army career in logistics.

You get assigned **by name** to the job. These assignments are key logistics spots in command headquarters, in major support outfits, in depots, arsenals and commodity commands—even in Headquarters, DA.

So, if you're an E6 or higher, dig out Chap 13, AR 614-200 (Jun 71) on NCOLP and get with the paperwork. Your own CO can nominate you for the NCO Logistics Program.

Have a happy and $$$-filled career!



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THE **PREVENTIVE MAINTENANCE** MONTHLY

Issue No. 226 1971 Series

September

IN THIS ISSUE

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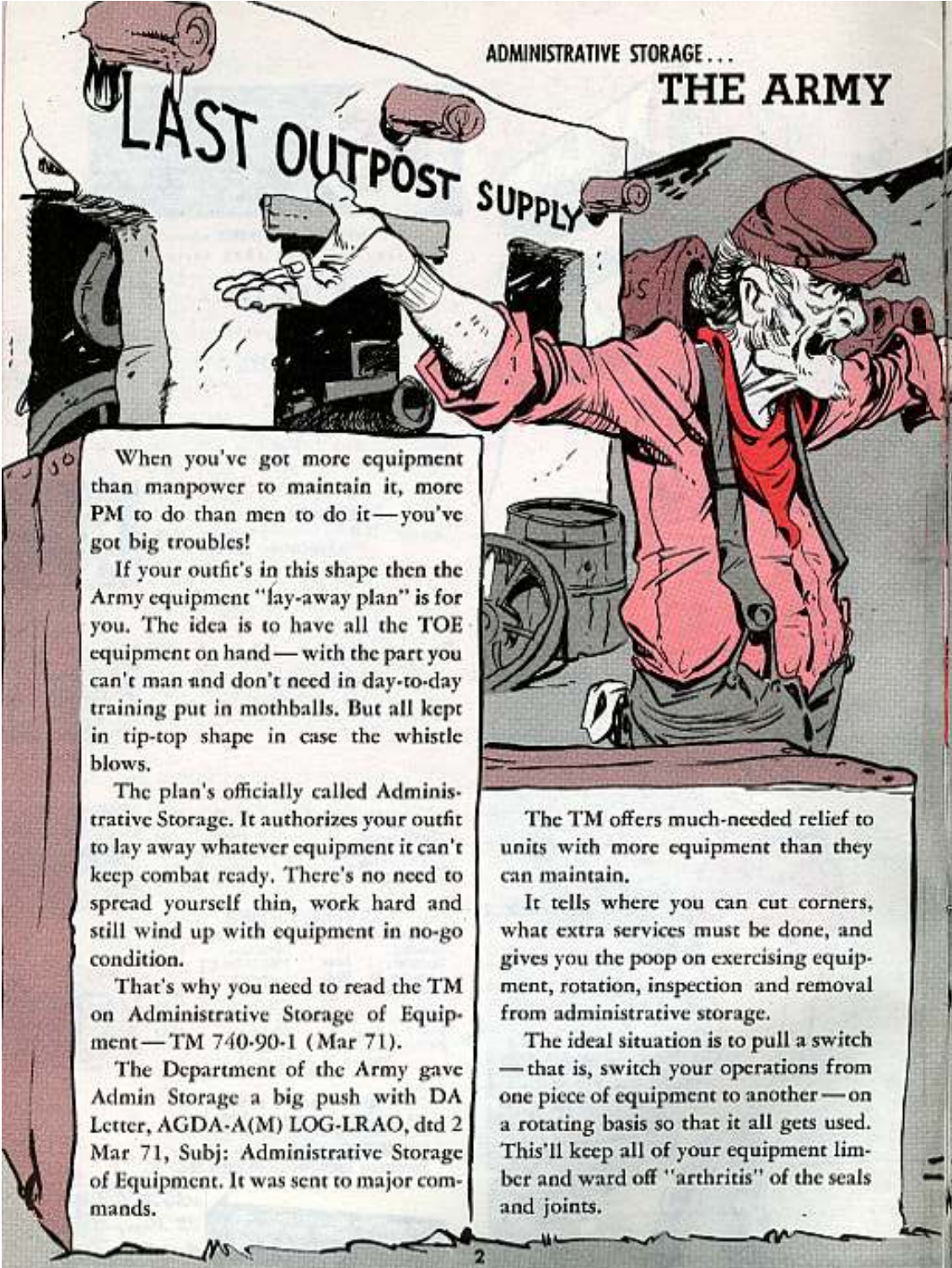
PS wants your ideas and contributions, and is glad to answer your questions. Name and address are kept in confidence. Just write to:

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

ADMINISTRATIVE STORAGE...

THE ARMY "LAY-AWAY PLAN"



When you've got more equipment than manpower to maintain it, more PM to do than men to do it—you've got big troubles!

If your outfit's in this shape then the Army equipment "lay-away plan" is for you. The idea is to have all the TOE equipment on hand—with the part you can't man and don't need in day-to-day training put in mothballs. But all kept in tip-top shape in case the whistle blows.

The plan's officially called Administrative Storage. It authorizes your outfit to lay away whatever equipment it can't keep combat ready. There's no need to spread yourself thin, work hard and still wind up with equipment in no-go condition.

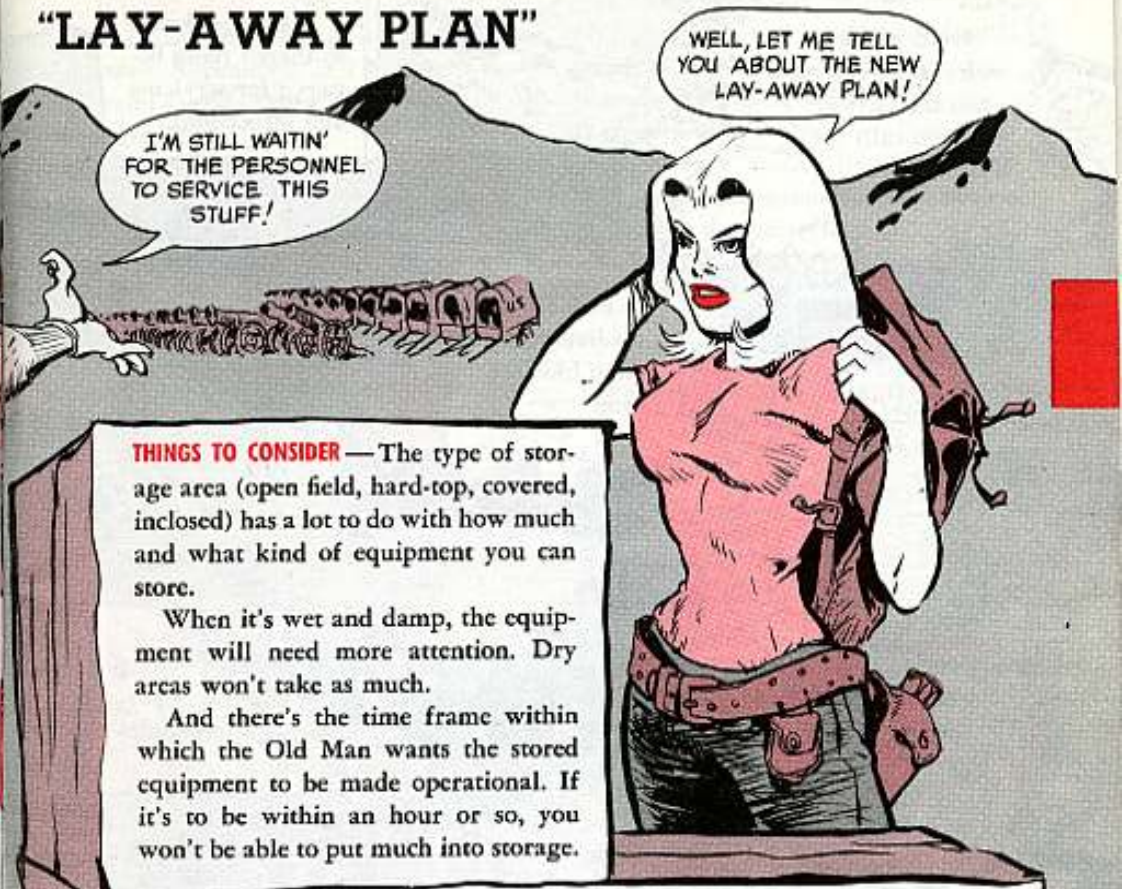
That's why you need to read the TM on Administrative Storage of Equipment—TM 740-90-1 (Mar 71).

The Department of the Army gave Admin Storage a big push with DA Letter, AGDA-A(M) LOG-LRAO, dtd 2 Mar 71, Subj: Administrative Storage of Equipment. It was sent to major commands.

The TM offers much-needed relief to units with more equipment than they can maintain.

It tells where you can cut corners, what extra services must be done, and gives you the poop on exercising equipment, rotation, inspection and removal from administrative storage.

The ideal situation is to pull a switch—that is, switch your operations from one piece of equipment to another—on a rotating basis so that it all gets used. This'll keep all of your equipment limber and ward off "arthritis" of the seals and joints.

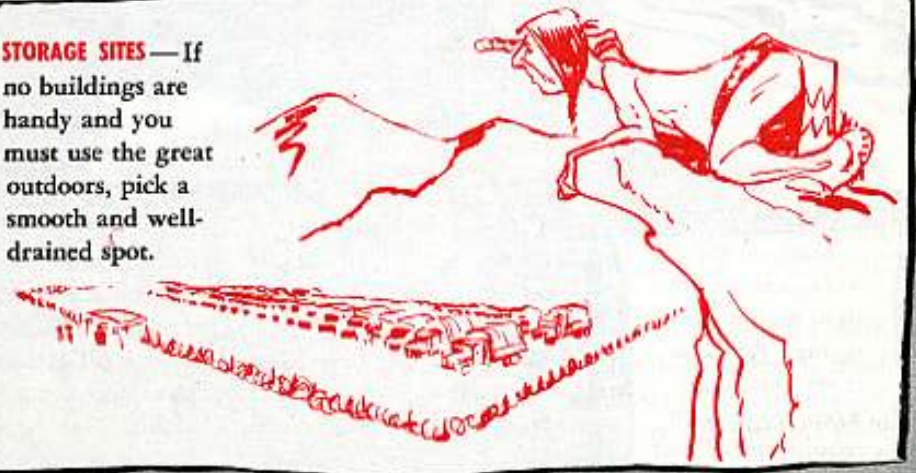


THINGS TO CONSIDER—The type of storage area (open field, hard-top, covered, inclosed) has a lot to do with how much and what kind of equipment you can store.

When it's wet and damp, the equipment will need more attention. Dry areas won't take as much.

And there's the time frame within which the Old Man wants the stored equipment to be made operational. If it's to be within an hour or so, you won't be able to put much into storage.

STORAGE SITES—If no buildings are handy and you must use the great outdoors, pick a smooth and well-drained spot.



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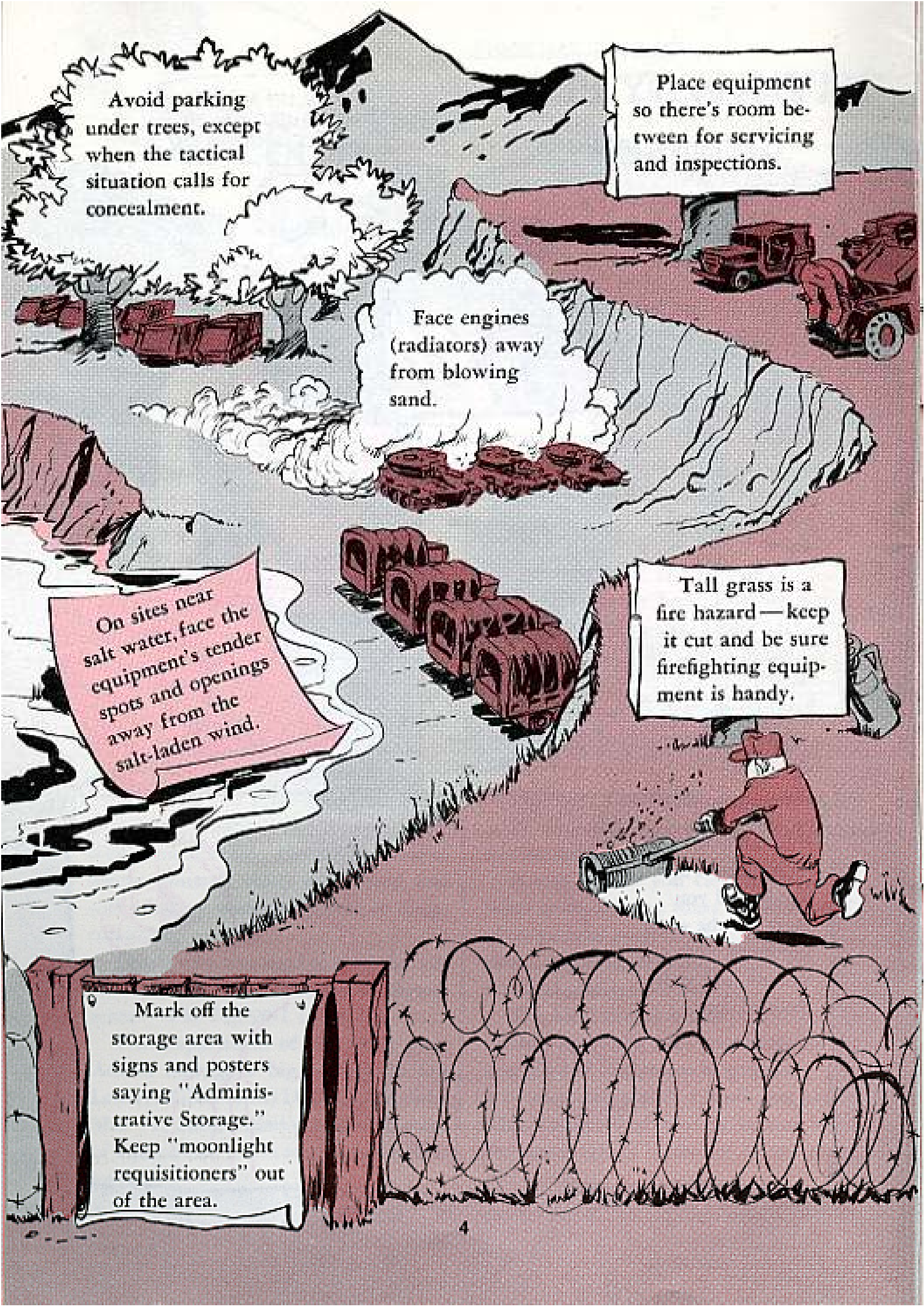
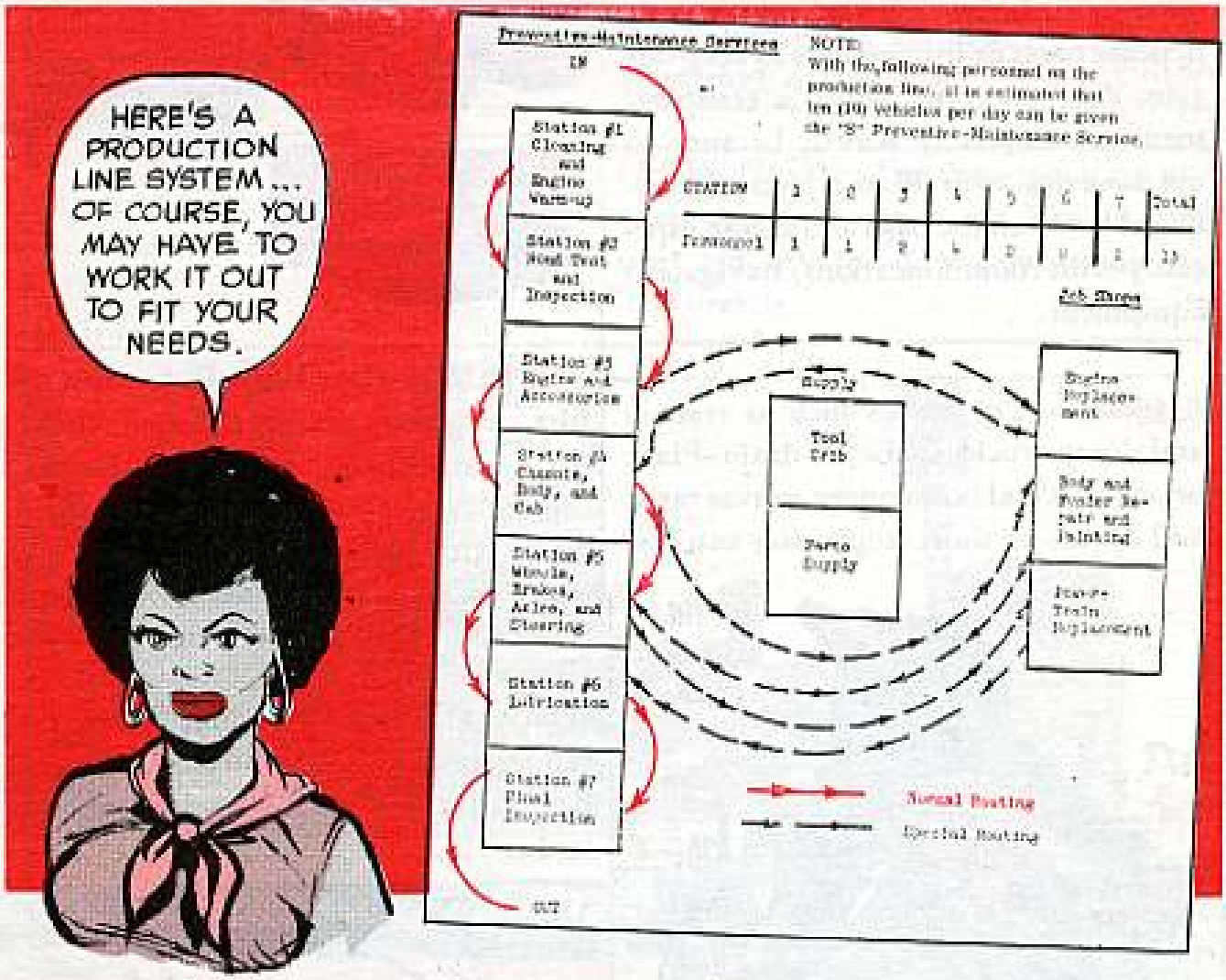

Avoid parking under trees, except when the tactical situation calls for concealment.
Place equipment so there's room between for servicing and inspections.
Face engines (radiators) away from blowing sand.
On sites near salt water, face the equipment's tender spots and openings away from the salt-laden wind.
Tall grass is a fire hazard — keep it cut and be sure firefighting equipment is handy.
Mark off the storage area with signs and posters saying "Administrative Storage." Keep "moonlight requisitioners" out of the area.

GETTING READY—Get the necessary preservative materials in stock before you start. Appendix A in TM 740-90-1 contains a good list of FSN's, and SB 38-100 gives lots more.

And Appendix C gives a batch of publications that should be within your reach for quick reference.

Scan through the 740-series TB's, SB's, pamphlets and regulations. They'll throw a lot of light on this "storage" business that can be useful in your SOP. If you want to mothball a whole batch of equipment at one time it's worth using the production line or station method to do the servicing.



BASIC STORAGE POINTERS

RECORDS—Maintain your records and reports on stored equipment as outlined in TM 38-750 for equipment in use.

SERVICES—Pull the S, Q or whatever periodic PM is called for by the equipment -20 TM. This includes complete lubing per the LO. And finish off with a current ESC rating.

MINOR FAULTS—Correct as many as you can. If they don't make the item RED or AMBER and won't cause deterioration, they can be done later while equipment's in storage.

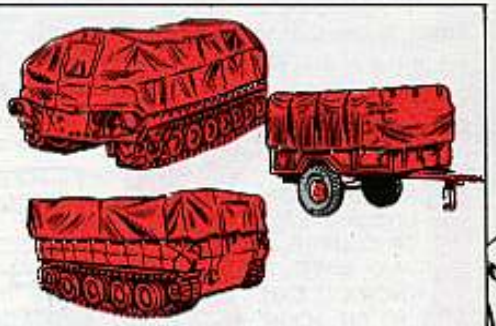
Be sure they're marked on the 2408-14 and a regular plan exists to fix them. For equipment that doesn't have a -14, list them on a piece of paper and place it where it'll be found.

PS MORE

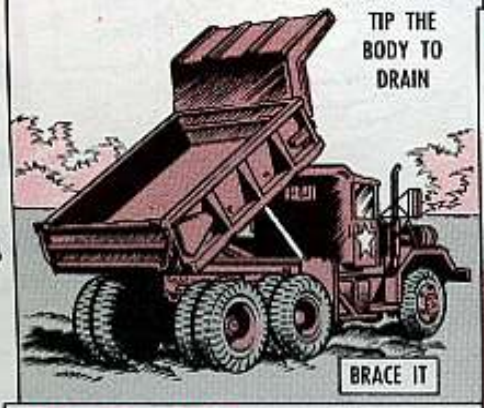
DEFICIENCIES—Unless your support has deferred maintenance on the deficiencies, correct 'em before going into storage.

BII—If the basic issue items are not stored along with the equipment, tag them with the equipment's registration or serial number and location. And put a notice in the equipment's records where the BII are stored.

PROTECTIVE CLOSURES—Install all canvas covers, close vents, roll-up windows, open drain holes, and seal openings to delicate parts or instruments to keep out rain, dust or snow. When a compartment is completely sealed, be sure to use some desiccant. Place a piece of cardboard between the bags and metal, especially with communications/navigation equipment.

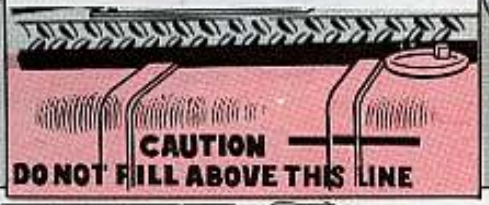


DRAINAGE—Tip bodies such as trailers and dump trucks so they'll drain. Place braces or wood bows under canvas tarps and covers to short-stop water catches.

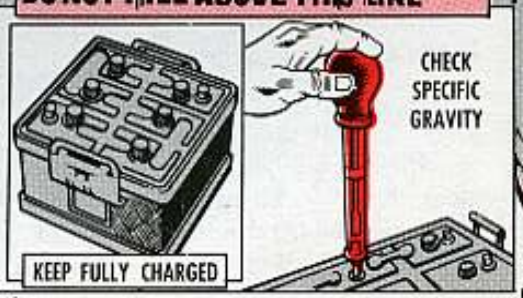


BARE METAL—Coat items like winch cables, exposed gears, polished slides, brass data plates, cylinder shafts, fire control scales and other unpainted metal with preservative lube.

FUEL TANK—Fill 'em to the maximum allowable level. All tanks must be vented. On unvented tanks, place the cap in the first lock position. After the equipment is run for exercise refill the tank.



LEAD-ACID BATTERIES—When left in vehicles have them fully charged (1.280 sp gr) and clean. Disconnect the ground cable. Check batteries with a hydrometer monthly; any battery found below 1.225 sp gr must be brought back to 1.225—but 1.280 is better. If you're where it gets real cold, it's a good idea to take the batteries out and keep them in a warm building. This'll prevent freezing if the regular run-up does not keep up the charge.

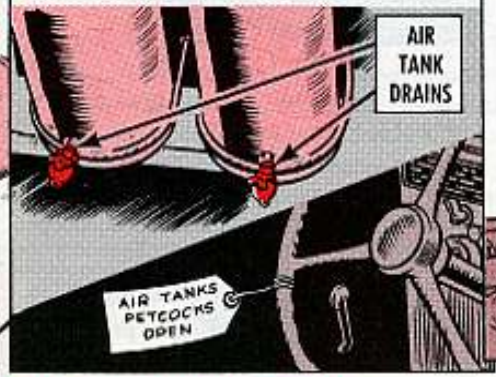


ALKALINE BATTERIES—Remove 'em and store in a cool dry place. And keep 'em up by constant float charge. Silver-zinc batteries have a wet standby life of only 12 months. If storage goes beyond this, get rid of 'em.

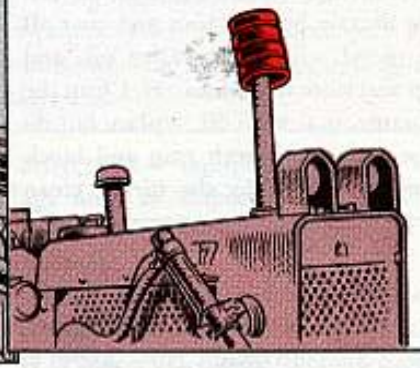
NOTE—Lead-acid batteries are harmful to their alkaline brothers, so don't store 'em together.

DRY CELL BATTERIES—Remove them from all equipment—even flashlights. Put them in a cool dry place, never in a place that's above +75° F and below +32° F (freezing) is best.

BRAKE SYSTEMS—Drain the air lines and air tanks. Leave the petcocks open but leave a tag on the steering wheel telling so. Do not apply brakes—chock the wheels instead.



EXHAUST STACKS—For those pointing up with no self cover, put a No. 10 can over 'em. It keeps out the water but lets 'em breathe.



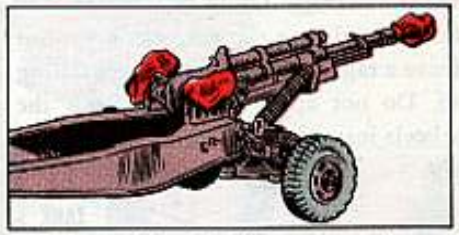
ENGINE LIQUID COOLING SYSTEMS—Keep it up like TB 750-651 says. If you're not in an area that requires anti-freeze, be sure the system has the right amount of inhibitor.

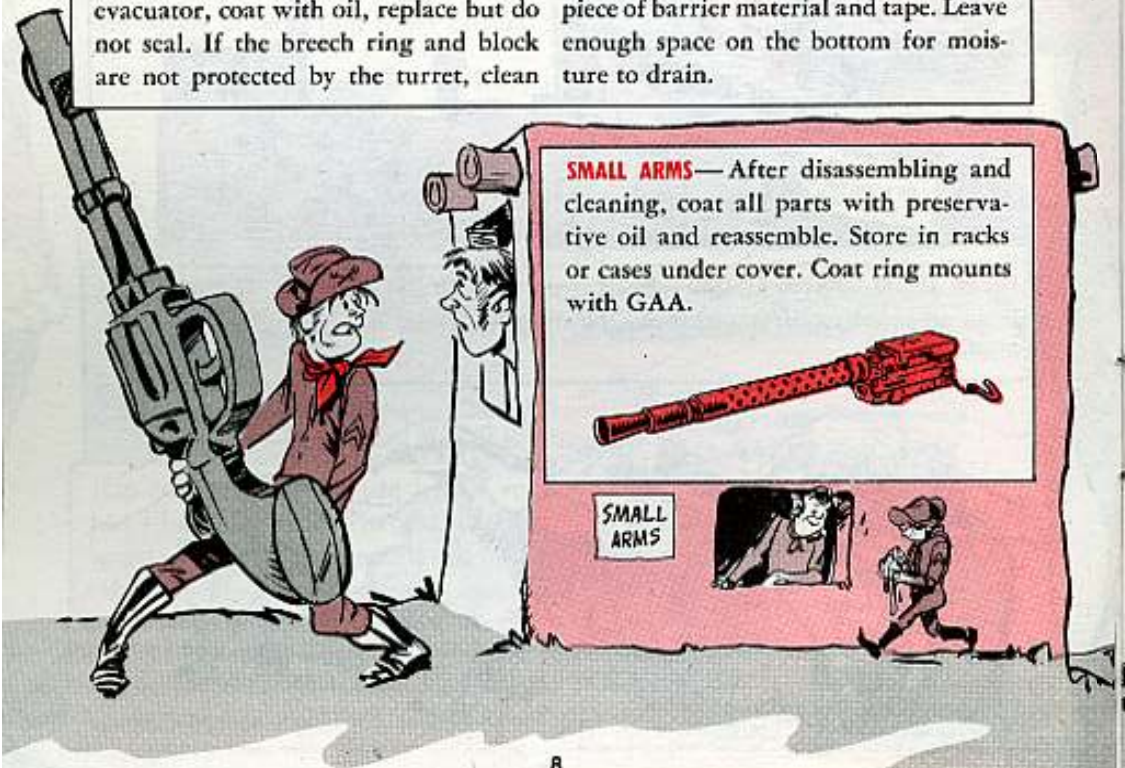
PS MORE

VEHICLE EXERCISE—Monthly, just start the engine (connect the battery), bring it to normal operating temperature (about 180°) then run it about another 15 minutes to dry up all the condensation in the crankcase.

QUARTERLY (or more often if needed)—Conduct an ESC. This requires inspection by operating the vehicle (Tracks—2 miles, Wheeled—5 miles), using all gears and ranges, making sharp turns and working all accessories and mounted equipment. This'll offset seal and power train "arthritis" and give you a chance to catch any faults that may have developed.

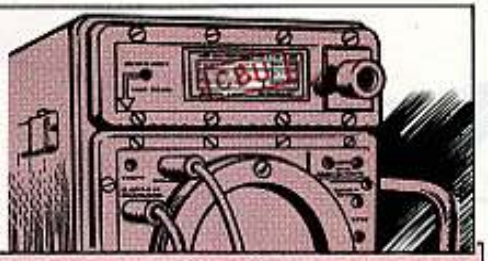
ARTILLERY—Coat inside the tube with preservative oil and insert a strip of Volatile Corrosion Inhibitor (FSN 8135-664-4010) into the full length of the tube. Seal the breech and muzzle. Remove muzzle brake, clean and coat all bare metal with preservative oil, and wrap and store in tank turret. Clean the evacuator, coat with oil, replace but do not seal. If the breech ring and block are not protected by the turret, clean and coat with oil. Wrap them in one piece of barrier material and tape. Leave enough space on the bottom for moisture to drain.





SMALL ARMS—After disassembling and cleaning, coat all parts with preservative oil and reassemble. Store in racks or cases under cover. Coat ring mounts with GAA.

TEST & MEASURING EQUIPMENT—The items in admin storage do not require periodic calibration. Just stamp their DA Label 80 with "CBU" (calibrate before use. If there's no label just mark a blank 80 label and attach it.



COMMO ELECTRONIC EQUIPMENT—Never store this type equipment in an open field. Look for a dry enclosure that's well ventilated and has shelves. When covered storage space is limited give small items like radio sets, optical equipment, test sets, photo equipment, etc., the benefit of that coverage. The large stuff that must be stored outdoors should be covered in such a way that'll permit it to be ventilated and still keep out rain and dust. Attach all waterproof connector covers and tape over the exposed connectors that have no individual cover—like antenna connectors and control boxes. When radar sets and components like magnetrons or similar equipment are to be stored pick out a radio frequency and electro-magnetic radiation-free area to prevent damage (burned out receiver crystals) and deterioration.

INSPECTIONS—Equipment in open storage must be inspected weekly. When under cover, monthly inspections are sufficient.

Make a walkaround "visual" type examination. Look for: Low or flat tires.

Leaks—fuel, oil, refrigerant, coolant.

Loss of preservatives and wraps.

Torn, split or open canvas.

Missing parts.

Corrosion or other deterioration.

Water in compartments.

Repairs should be done as soon as reasonable, and done on-site.

REMOVING EQUIPMENT—Before removing any piece of equipment, eyeball the records for any special note. It may need something done to it that you'd never suspect. Then check its manual and do the required services.

END

M151-SERIES ¼-TON TRUCKS . . .

RE-FOCUS ON WHEEL BEARINGS

Dear Half-Mast,

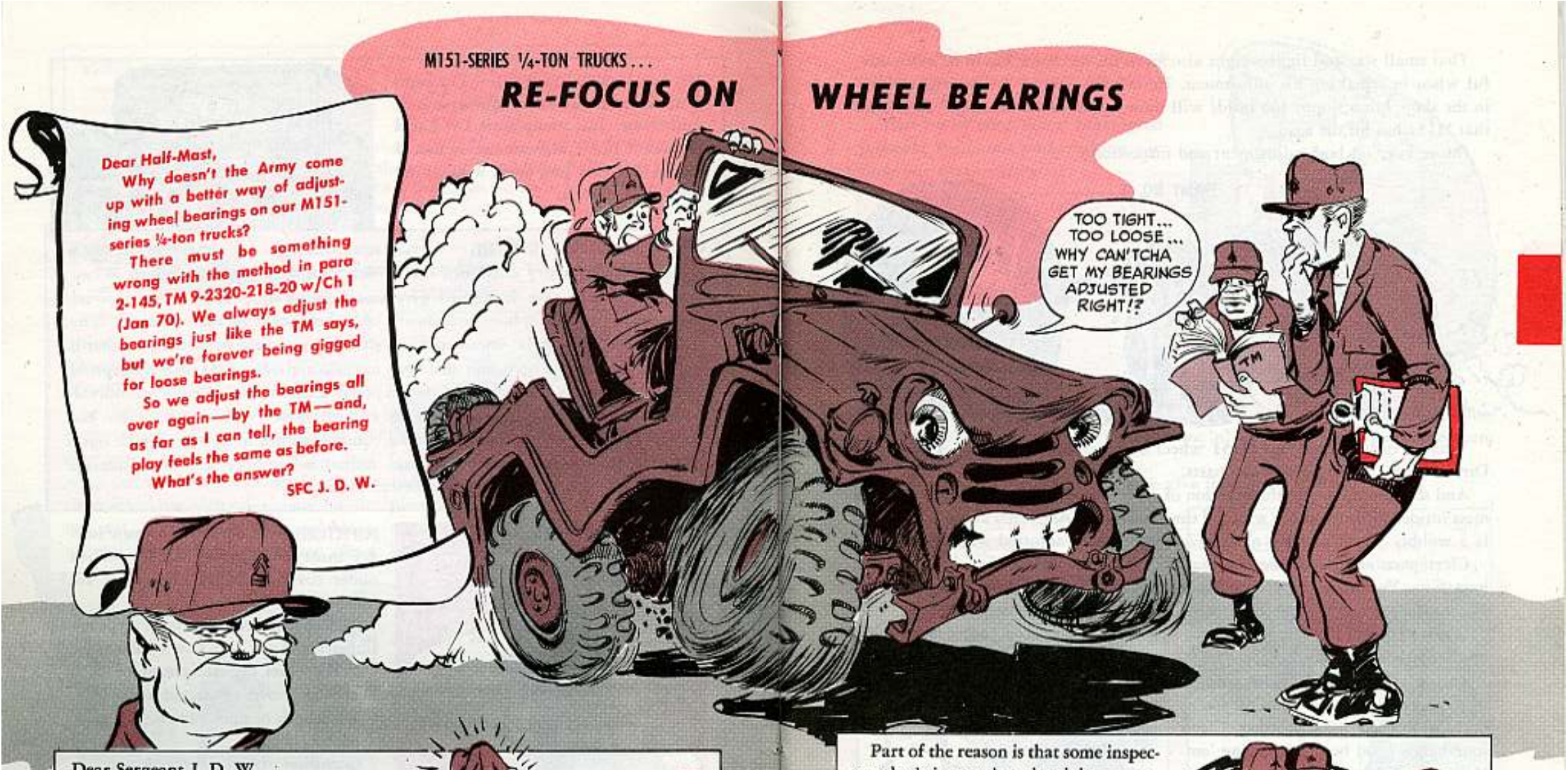
Why doesn't the Army come up with a better way of adjusting wheel bearings on our M151-series ¼-ton trucks?

There must be something wrong with the method in para 2-145, TM 9-2320-218-20 w/Ch 1 (Jan 70). We always adjust the bearings just like the TM says, but we're forever being gigged for loose bearings.

So we adjust the bearings all over again—by the TM—and, as far as I can tell, the bearing play feels the same as before.

What's the answer?

SFC J. D. W.



Dear Sergeant J. D. W.,

There's nothing wrong with that wheel bearing adjustment in the TM. There's no special difference between the wheel bearing setup on your M151's and any other vehicle—and bearings are adjusted on all wheeled vehicles in almost exactly the same way.

So why is the M151 the vehicle most often tagged with "loose wheel bearings"?

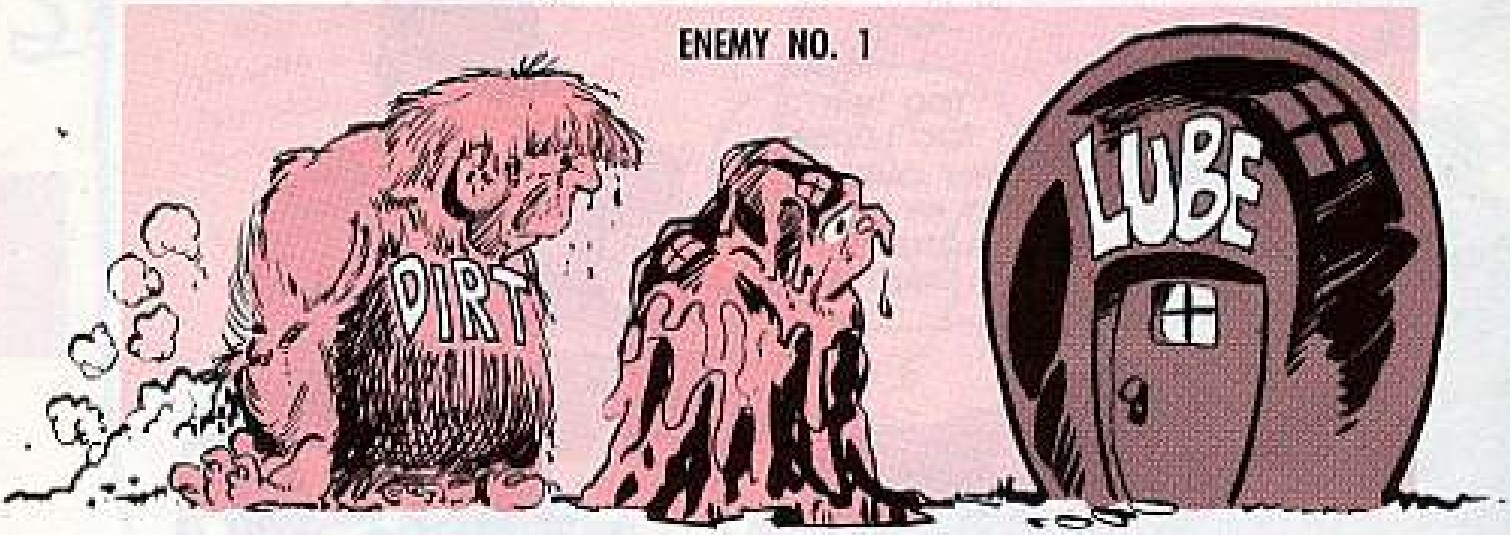
Part of the reason is that some inspectors don't inspect 'em the right way, so they confuse other movement in the suspension system with wheel bearing play.

And some inspectors don't realize there's got to be a little play in the bearings or they'll burn out from friction and lack o' lube. With such a small, light wheel, a little bearing play may seem like a lot to someone who doesn't pay close attention.

PS MORE

That small size and light weight also mean the mechanic has to be more careful when he's making his adjustment. He may be able to get the right "feel" in the shop, but a sloppy job inside will show up as "loose bearings" soon after that M151 has hit the road.

(More later on both adjustment and inspection.)



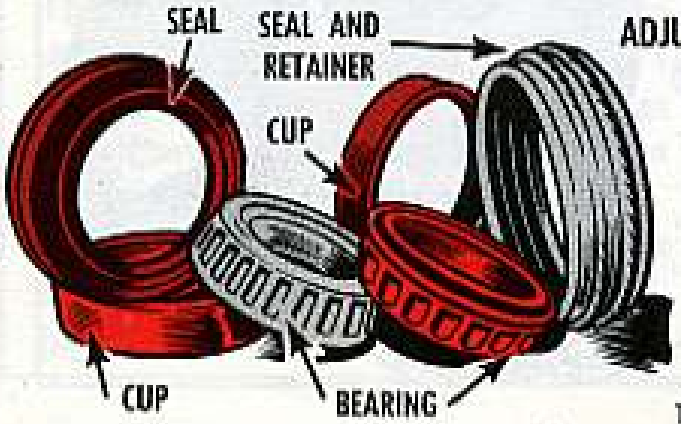
What's really chewin' up M151 wheel bearings by the carload is poor PM. Dirt 'n' water in the lube. Worn parts.

And this ties right into the question of wheel bearing adjustment. If there's a mess inside, adjustment is a waste of time and effort. And what about inspection? Is a wobbly wheel nothing more than "improperly adjusted wheel bearings?"

Clean parts and clean lube are what keep bearings runnin' free 'n' easy for a long time. You have to clean and lube more often in real dusty or wet country . . . maybe even every day if you're plowin' through hub-deep mud.

Worn parts are hard on good parts. Inspect real close after you've cleaned 'em up. Replace bad ones.

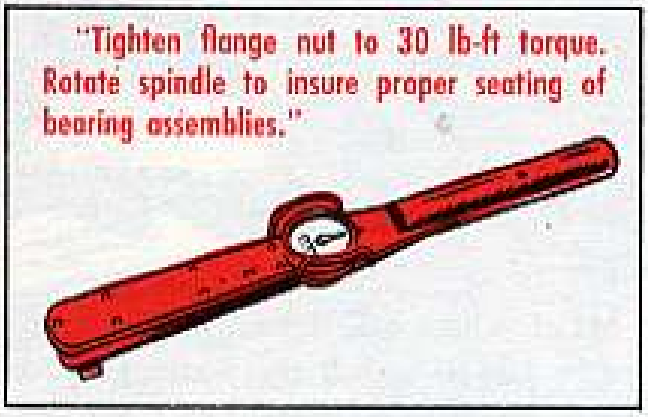
And, if there's dust blowin' around, keep those clean parts covered till you're ready to put 'em back together. Clean your hands good before handling 'em. Make sure tools are clean, too. And keep grease cans covered when you're not dippin' out of 'em.



Dirty or worn parts won't fit together like they're s'posed to. You've got 7 parts in your M151 wheel bearing setup —2 seals, 2 cups, 2 bearings and a retainer. If any one of 'em is left cocked off a little when you've finished adjust-

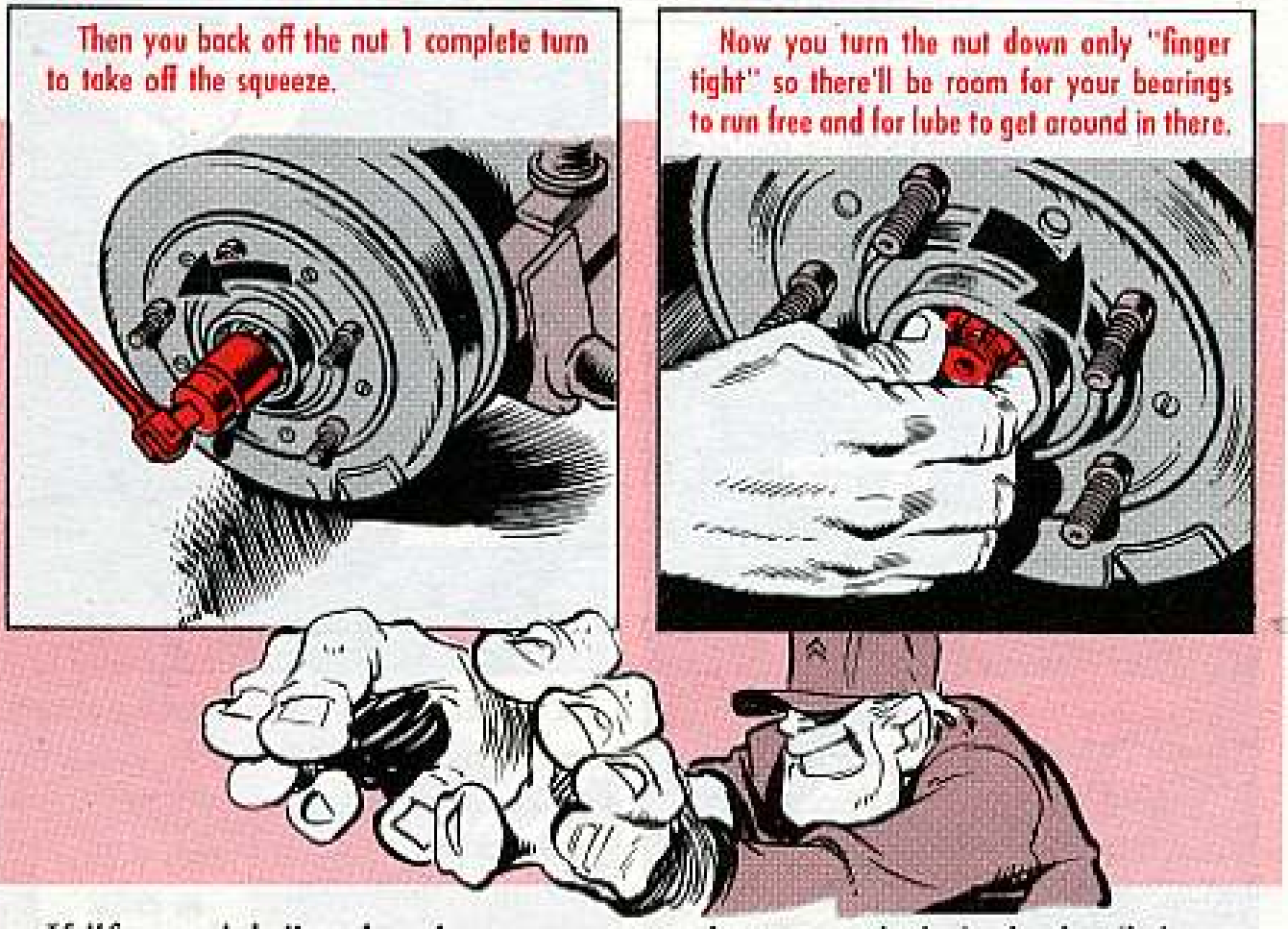
ing, the whole works will loosen up before you've driven down the road a half-mile.

That's why your wheel bearing adjustment starts out with making sure these parts are seated snug:



Best bet is to rotate the spindle while you're turning down the flange nut. This has to be done with the wheel — tire 'n' rim — off. Only the brake-drum mounted on the spindle.

Spin 'er at least 3 complete turns to give those parts a chance to seat.

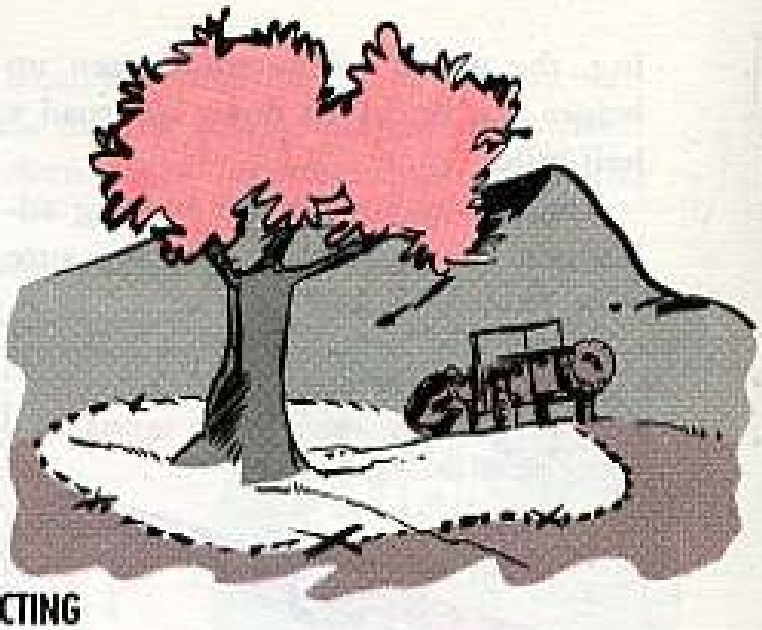


If "finger tight" makes the nut cover up the cotter pin hole, back off the nut just enough to uncover the hole. Install the cotter pin. And mount the wheel.

PS MORE

Some guys like to doublecheck. They run the vehicle a hundred yards or so and inspect for looseness. That li'l run will show up anything that didn't get seated good when you torqued 'er down. You may have to go through the adjustment again.

You don't have to strip back down to the brake drum to make your inspection. You do it just like the inspector's s'posed to do.



INSPECTING

You can't make a good inspection of M151 wheel bearing adjustment with the wheel sittin' on the ground. It's got to be jacked up off the ground so you know for sure whether you're feeling bearing play or movement in some part of the suspension.

To feel bearing play, you grab ahold at the top of the wheel and, firmly but gently, push in 'n' pull out — with a sharp ear cocked toward the hub.

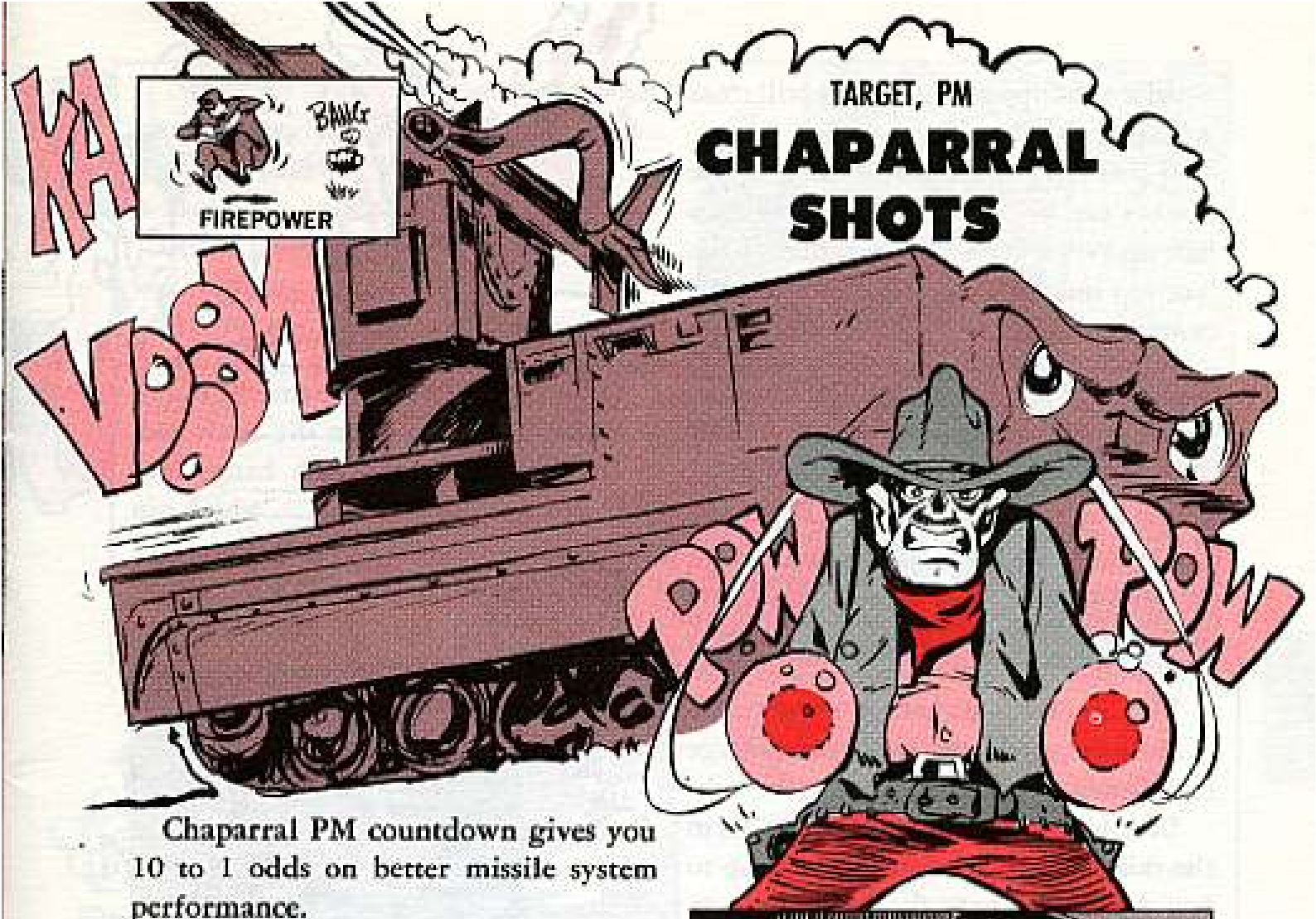
You should feel just a little play — very slight looseness — in the bearings. No play at all means they're too tight.

But if they feel downright sloppy — or if you hear a clicking, clacking sound — the bearings are too loose.

You can sharpen your feel by reaching around behind the wheel with your free hand and laying your finger across the space between the brake drum and backing plate.

Then when you joggle the wheel, you've really got your finger on it.

Half-Mast



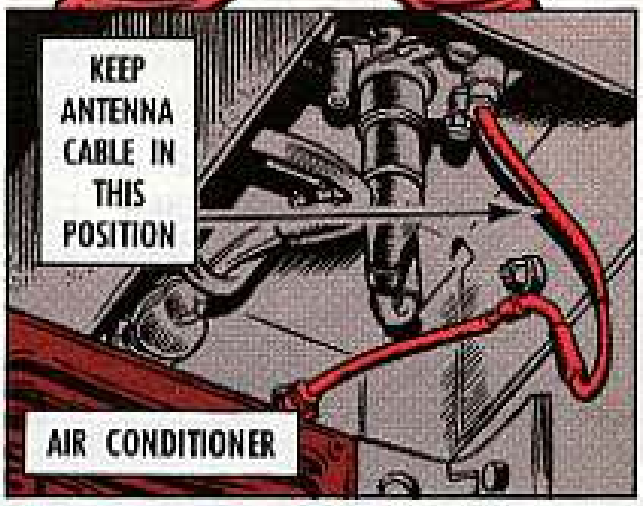
Chaparral PM countdown gives you 10 to 1 odds on better missile system performance.

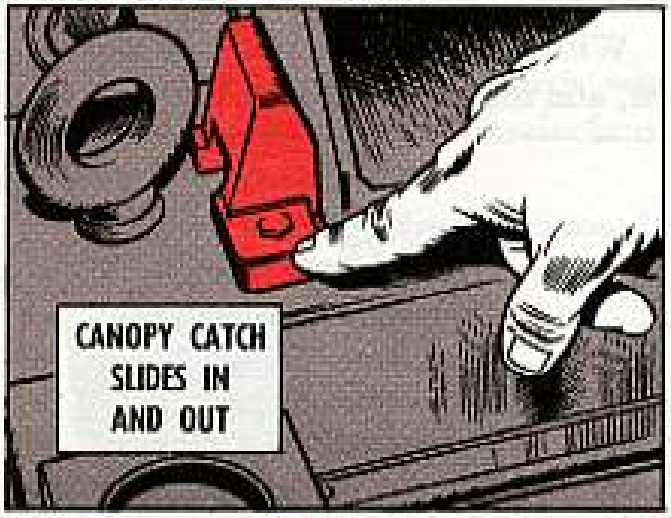
Observe:

TO KEEP YOUR ANTENNA COAX CABLE in action, keep it close to the chassis of the carrier . . . and well away from the air conditioner.

That way, when you swing the air conditioner out on its hinge you won't crimp, cut or snag the coax.

But, let it dangle away from the chassis and you'll lose it.





CANOPY LATCH adjustments can spell the difference between smooth operation and a damaged hood.

Like with the catches which hold the canopy closed. . . .

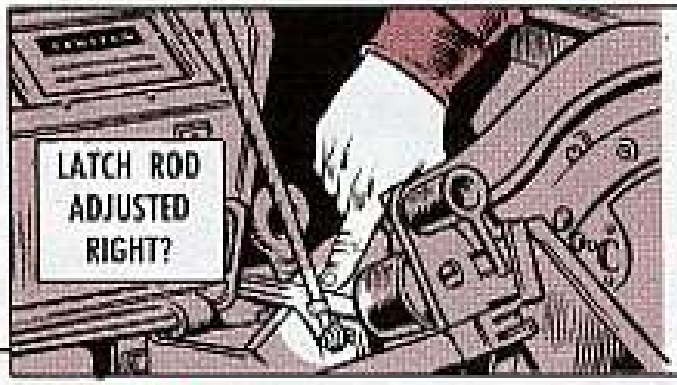
If the catches aren't adjusted right the canopy can fly up during transit and damage the hinge.

Best way to adjust the catches is with the canopy closed. Slide each catch to-

PS MORE

ward the canopy so the canopy will close with just a push.

If you have to slam it to close it, the catches are too close. So back 'em off a hair and re-tighten 'em. But, don't back 'em too much, because that allows the canopy to fly up.



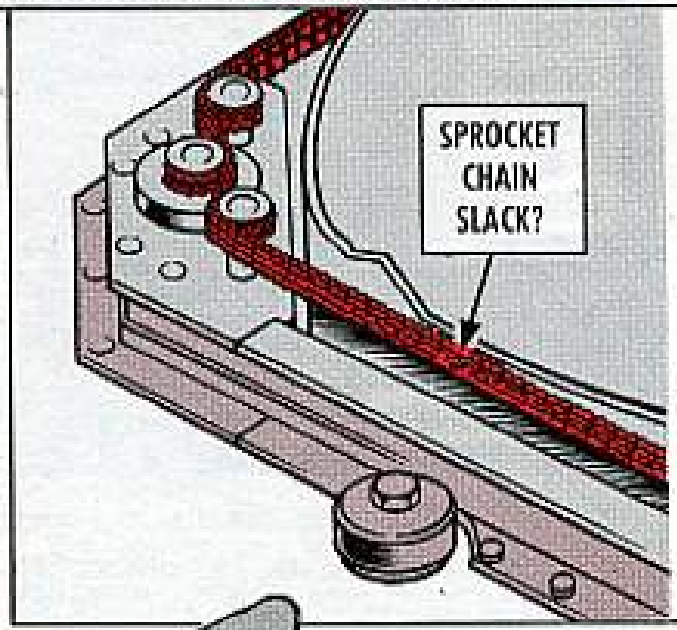
ANOTHER CANOPY adjustment that's gotta be just right is on the latch rod.

If t'ain't right, the dish bangs into the latch and pops it back . . . which can damage several items.

You've gotta feel your way on the adjustment to be sure the dish clears.

THE SEAT BELT jams behind the seat rail . . . and sets up the rail cover for damage or loss when you try to unsnag the belt.

Best deal is to pull the belt away from the rail . . . and be careful coming up so you don't hook onto the cover.

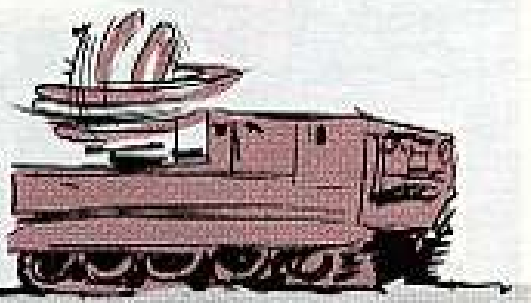


THE SPROCKET CHAIN on the turret gets slack with extended use, and there's a slight trick you can use for a good adjustment.

First, adjust the chain per TM specs with the turret up.

Then, run the turret down . . . and up again to be sure it's properly adjusted. Check it on the repeat run up for tension, etc.

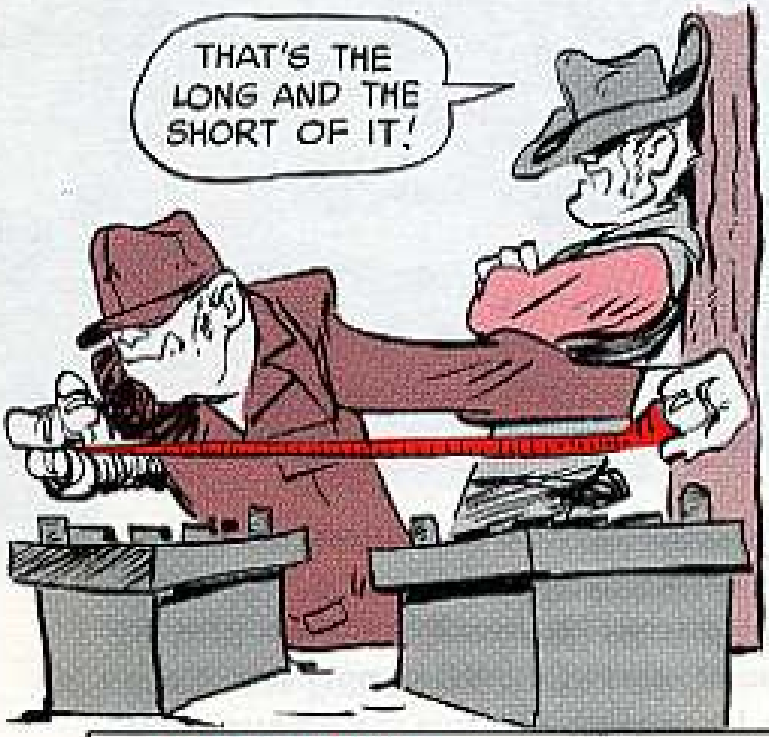
Without the turret run, you can be off, and the chain can slap.



TURRET AIR CONDITIONER vents may look tough enough to hold up if you use 'em as a step into the turret.

But they aren't, and using 'em as a footrest or any other kind of rest can bust 'em up.

There are other, more firm-footed ways to get in the turret, so use 'em, Shooter.



IF YOUR BATTERY LINE-UP is giving you fits trying to fit 'em in, give a listen:

Normally, you can mix-fix all 4 Sun or Ranger batteries, or any combination of them, but if you can't get the 4 in the brackets on the carrier, it may not be your fault.

If you've got the new Prestolites, they're just too wide for the brackets. The handles make 'em that way.

So, mix-fix again, but use only 1 or 2 Prestolites . . . which are about ½ inch wider than the old battery types. That way, you should be able to get all 4 in the brackets.

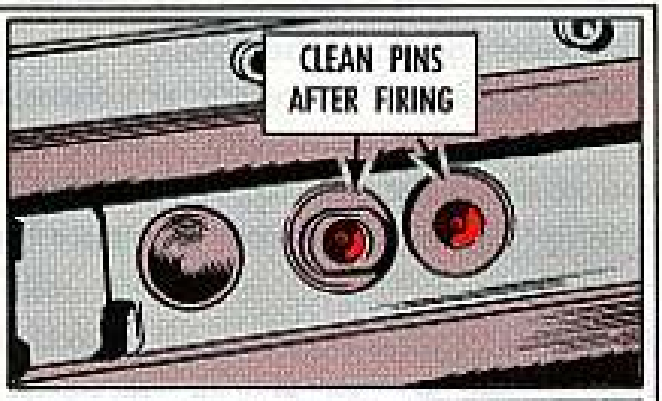
PERIODIC CLEANING of the firing and ground pins on the launch rails is desirable, but cleaning the pins after every firing is a **must!**

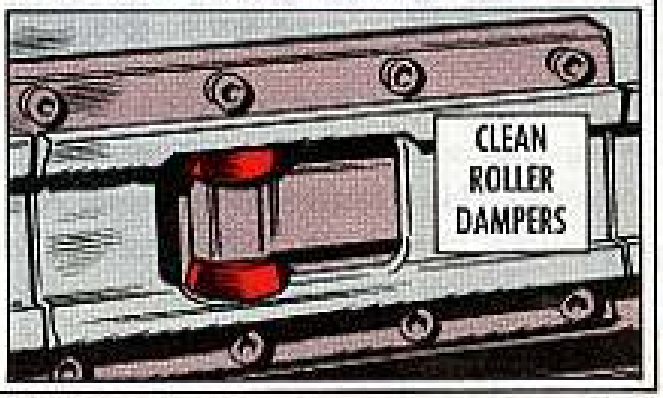
You've got to get the residue off the pins to prevent corrosion . . . and misfires.

Best way to clean the pins is with penetrating oil and a fiber or wire brush (fiber is gooder).

The back of the rail features a coupla' roller dampers (little wheels) that need occasional cleaning, too.

Otherwise, they make for rough loading when you slide the missile on the launch rail.





PS END

Too many good Shillelagh guidance and control system components are taking too many "bad" trips.

You, as turret mechanic in charge of good trips, can knock it at the source by not hanging unnecessary "DX" tags around otherwise good components.

Not only will you save your support a lot of work, but you can save yourself some time and headaches, too.

The big point: When you've substituted a number of components and cured the fault in the G&C system, remove the substitutes that didn't cure the problem and reinstall the original components.

Simple, huh! Like a cold beer on a hot day.

DA 2410 FOR SHILLELAGH

Shillelagh missilemen have a new guide on use of DA Form 2410 for reporting removal, repair, overhaul and installation of components. TB 9-1425-469-25 (Jan 71) lists components you report, required entries and form disposition guidelines. U.S. Army Missile Command wants initial inventory forms from units that didn't send in inventory reports per TB 9-1425-469-25 (Oct 70).

So grab a handful of Troubleshooting Table 8-4, starting on page 8-38 of TM 9-2350-230-12, and read on about how you're gonna save time:

First, limit the paperwork that unnecessary parts usage generates. Like, you've got to work up paper to turn in parts . . . which takes longer than some of the following time-savers.

The paper is limited to whatever was needed for you to get the good components from your PLL or supply float.

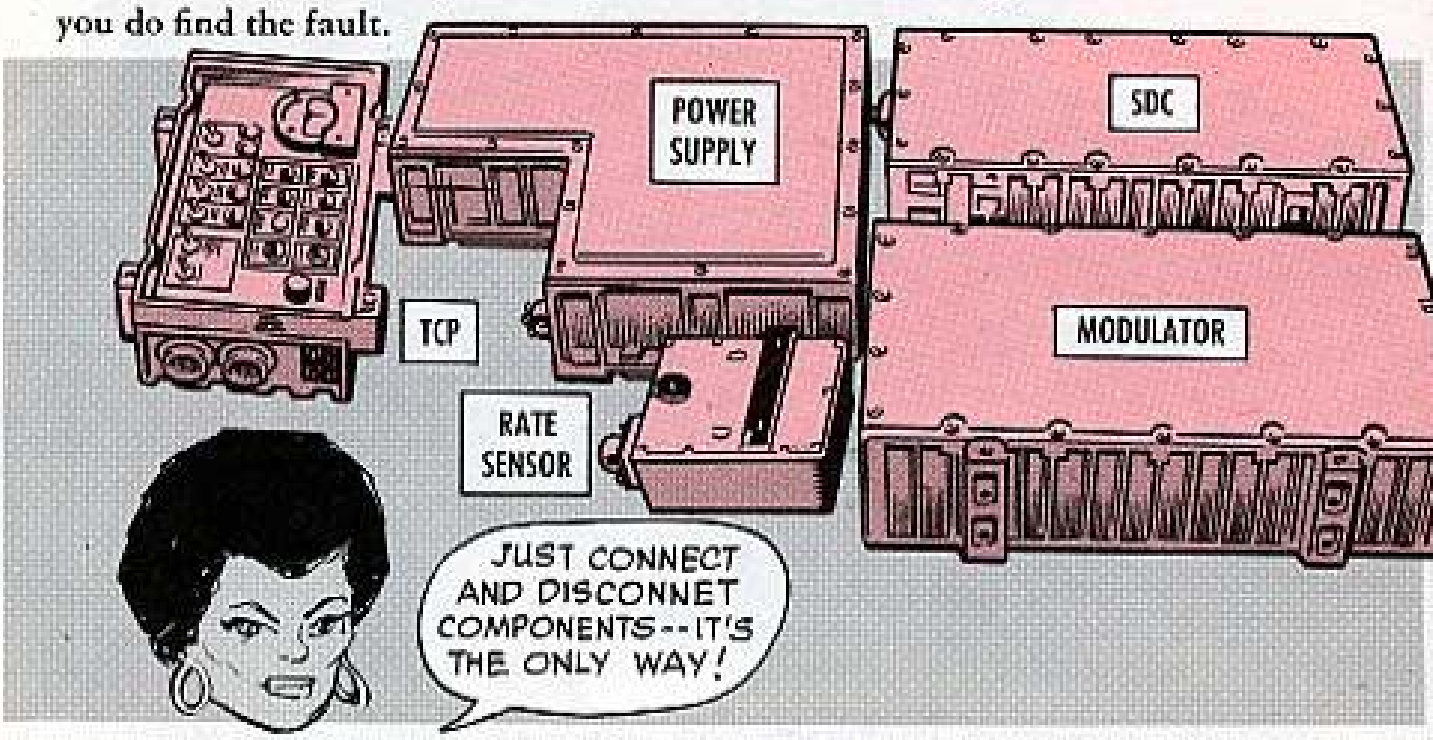
Good point here is to work out an arrangement with your supply support whereby you can sign out all the components you think you need for a check, rather than coming back for them one at a time.

If you run into a snag, explain your problem to your CO. He may be able to iron it out with minimum red tape.

PS MORE

Five of the 8 replaceable components in the G&C system don't have to be removed to be checked out.

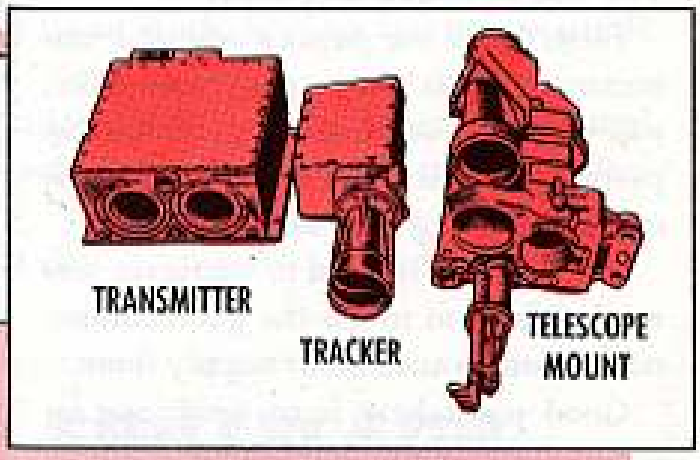
All you have to do with the modulator, signal data converter, power supply, turret rate sensor and test and checkout panel (TCP) is to disconnect the cables to each . . . as you test them. Hook the cable to the good component. If it doesn't cure the fault, leave the good component connected . . . and go on to the next until you do find the fault.



When you cure the problem, it's a simple matter of disconnecting the cables to the unnecessary components and re-connecting to those you've left installed.

All you've got to do, naturally, is replace the faulty component.

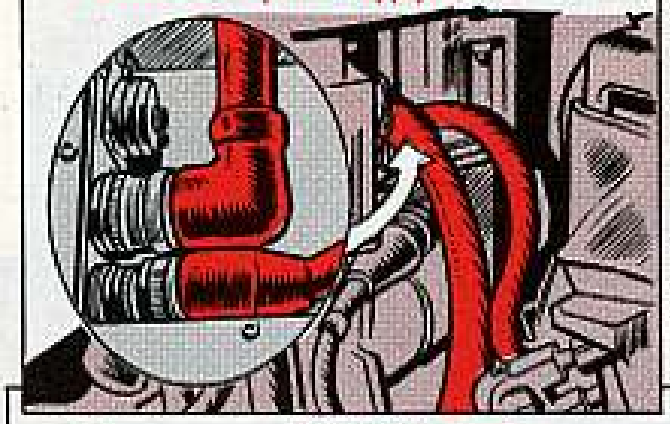
Unfortunately, you've got to replace the telescope mount, tracker and transmitter in order to check them out.



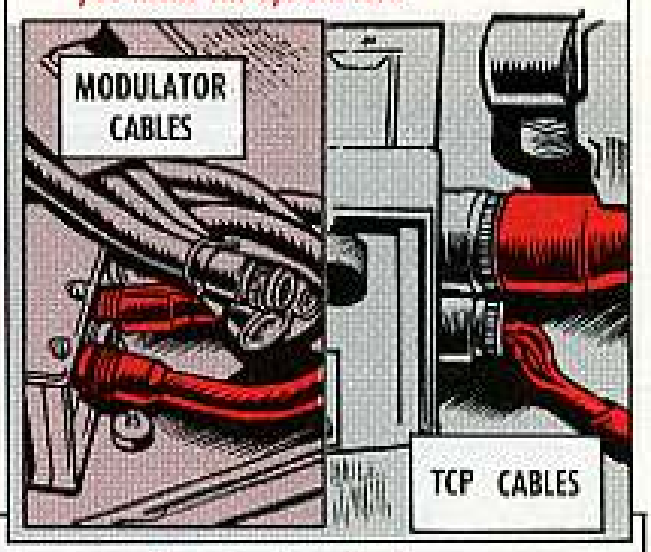
1. If the Tracker doesn't align, you can almost always cure the fault by replacing, a. the tracker; b. the telescope mount.

2. If the tracker does align and you've got a NO GO, the signal data converter probably is bad.

3. If no lights are visible on the TCP, check the cable connections, particularly the 2 power supply connections. A no-power indication almost certainly means a loose or disconnected power supply cable.



4. Check the cables to all components before you make the system test.



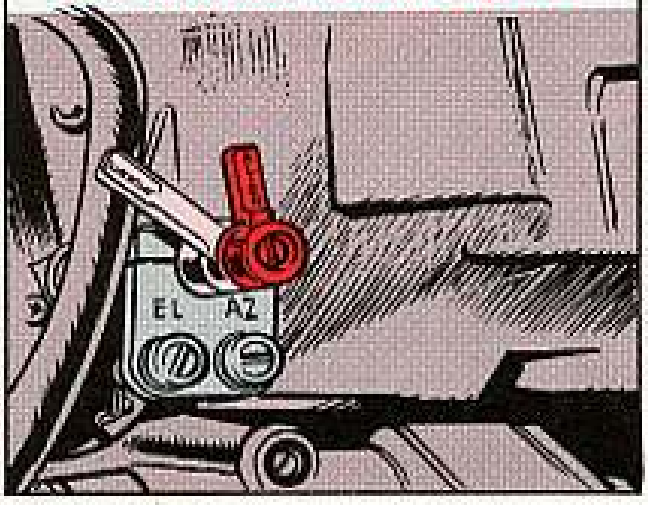
There are a couple' helpful tests for system operators, as well as turret mechanics. If you wanna be an operator with know-how, make these tests on the TCP in their numbered order. Mix 'em up and you might as well throw the test away.

G&C GO TEST

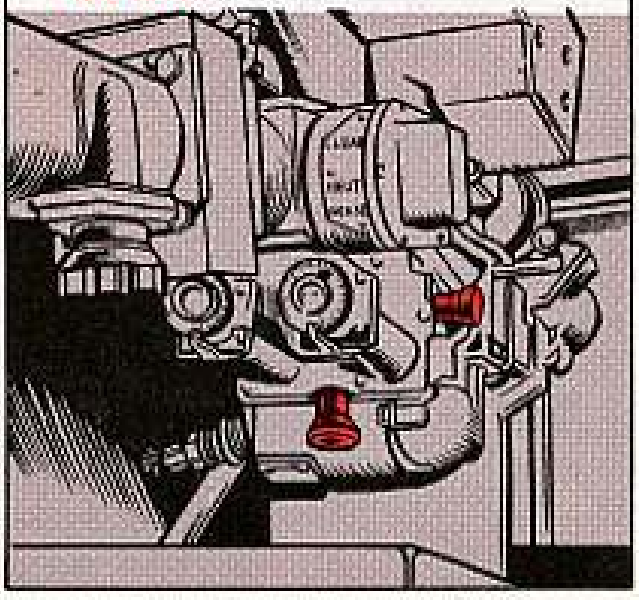
1. Make the lamp and meter test.

2. Ditto with the transmitter test.

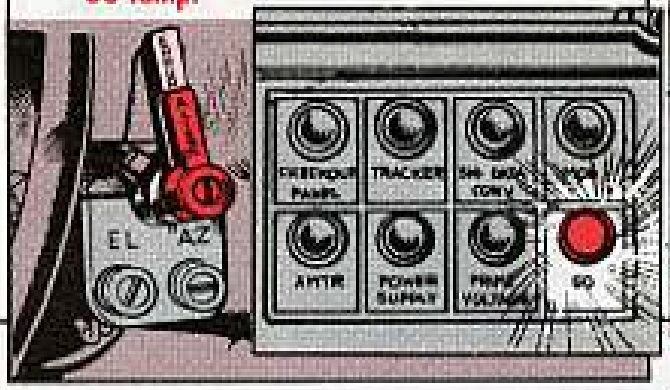
3. Turn the align lever clockwise and error lever counter-clockwise on the telescope mount, and make the tracker align test.



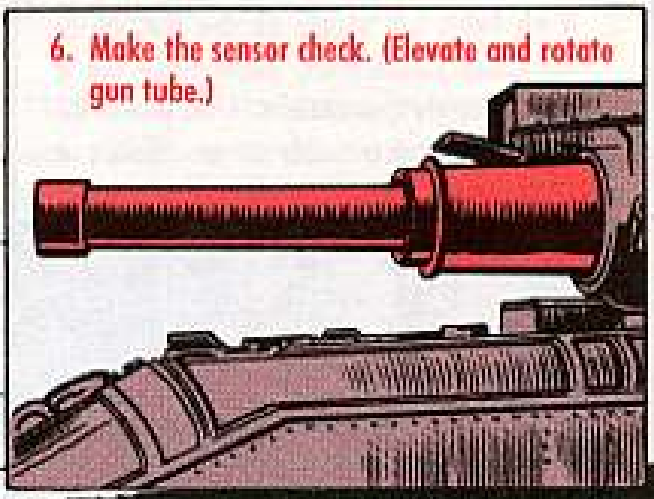
4. Check the horizontal vertical missile reticle cross hairs after tracker align to assure that the light beam is centered in the cross hair circle.



5. Turn the align lever and error levers on the mount clockwise and make the system test. Normal indication lights the green GO lamp.



6. Make the sensor check. (Elevate and rotate gun tube.)

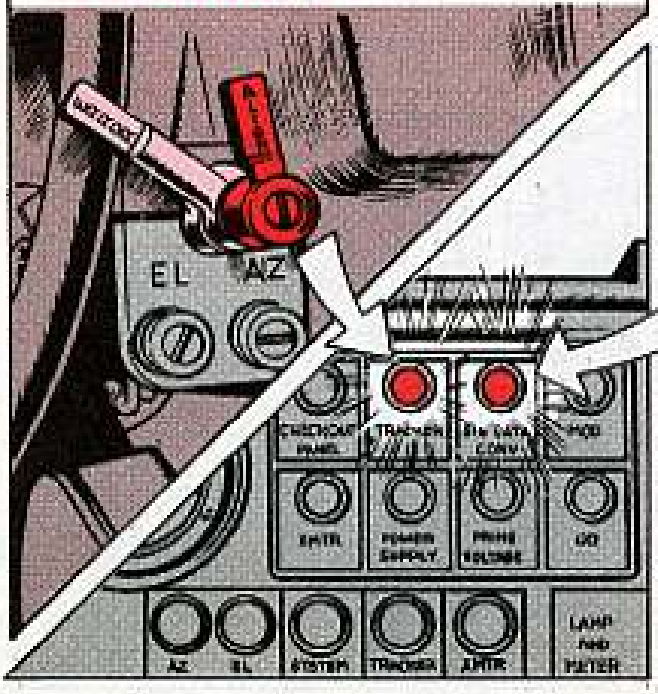


7. Reset.

If your system's OK, none of the NO GO lights should come on during the test.

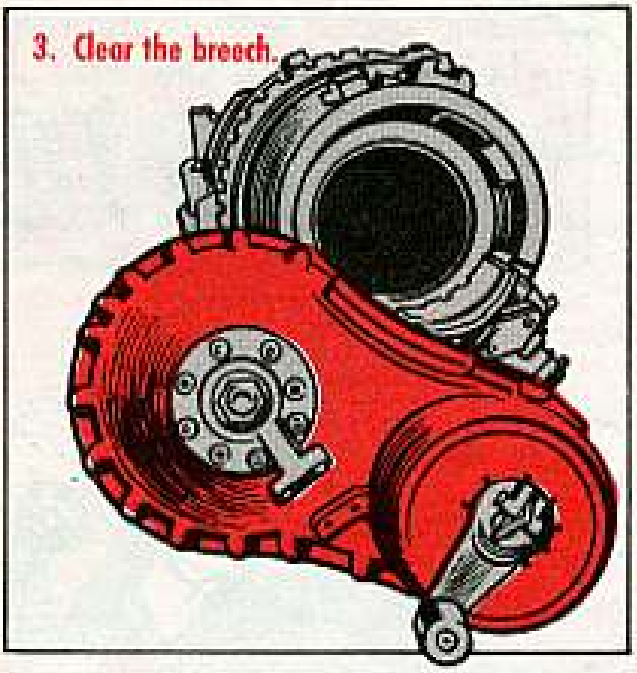
SELF-TEST VERIFICATION

1. Make the system test with the telescope mount align lever and error lever counter-clockwise. Normal indication should be tracker NO GO lighted.

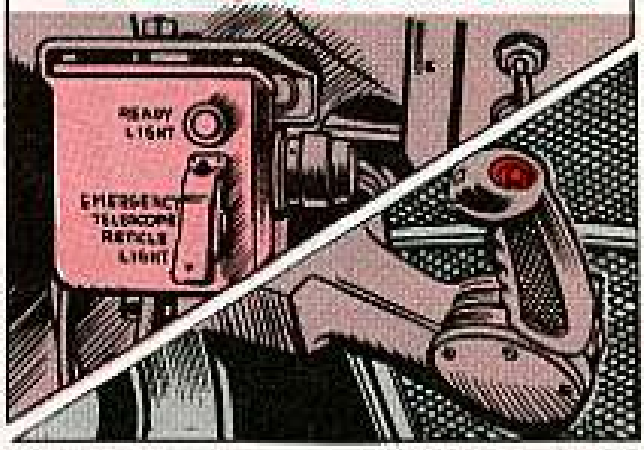


2. Make the system test with the mount align lever turned clockwise and the error lever turned counter-clockwise. You should get a NO GO on the SDC.

3. Clear the breech.



4. Make the system test with the mount align lever turned clockwise and the ready light on. Pull the fire trigger. Normal indication would be TCP reset, a mount align lever reset counter-clockwise, and the tracker motor running for at least several seconds.

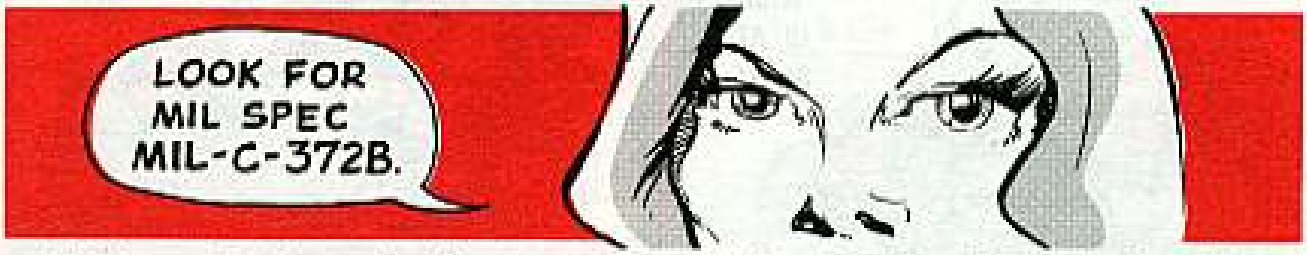


FOR BORE CLEANING . . .

MY NAME IS RBC

RBC, Rifle Bore Cleaner—MIL-C-372B—is the IN name. It replaces CR, Cleaner, Rifle Bore as the military symbol for solvent cleaning compound.

True, you'll still find cleaning compound, solvent in military warehouses around the world . . . and you can use it . . . as long as it carries the special military specification MIL-C-372B. This mil spec is the one thing that separates RBC from all other solvent cleaning compounds.



Hold one, Podner. Anytime your organizational TM or LO calls for CR, use RBC. Ditto when you re-order solvent, cleaning compound . . . ask for RBC—Rifle Bore Cleaner.

Here are the sizes. Paste up this handy list in the supply room:

Small Arms Sizes	FSN
2-oz bottle	6850-224-6656
8-oz can	6850-224-6657

Artillery Sizes	FSN
1-gal can	6850-224-6663
5-gal pail	6850-249-8029
55-gal drum	6850-753-4806

Select the size you want. Then look for both that FSN and MIL-C-372B on the container. This is the only genuine, guaranteed bore cleaner. Accept no substitutes.

TA-312, TA-43 TELEPHONE SETS . . .

Many Mess age Makers

When the talkin's over and the listen-in's through . . . you naturally want to hang up your H-60/PT handset, don't you?

With the right end of the H-60 in the right end of the TA-312/PT or TA-43/PT cradle, o'course.

Good. So slide the receiver against the 2 retaining springs in the receiver

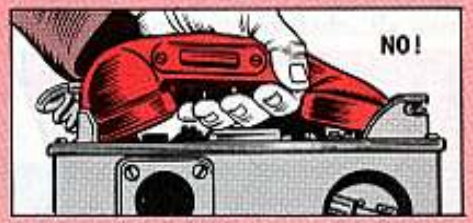
cradle, with the handset at a 45-degree angle.

After you give the receiver a slight push toward the springs, the transmitter end should drop into its bracket with no forcing. A small piece of tape on the receiver end and another piece on the receiver cradle will indicate what goes where.

Jamming the H-60 straight down in its cradle can spring the springs and cause tension loss between the handset and the telephone set.

When you take the handset from its cradle, push it toward the springs and lift up gently on the cord end.

Usin' the handset as a handle to lug your telephone can put plenty of strain



on the springs and bring on tension loss.

Ch 1 to TM 11-5805-201-12 has the FSN's for the springs.

Y'don't want to use the generator crank handle for a lifter, either. It can break and downtime your phone.

Instead, use the carrying strap.

When you crank that handle, you don't need to wear it out. Four or 5 cranks'll do the job. More than that could make for extra wear 'n' tear and maybe lead to a handle or wall fracture. That wall is made of aluminum, so too much pressure can cause a break.

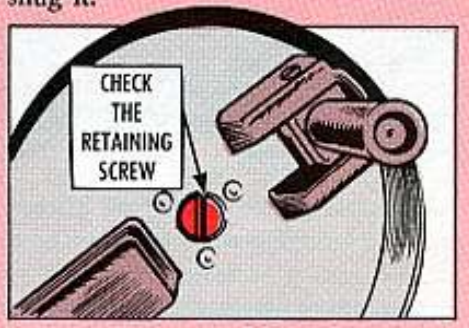
After you finish crankin', fold the handle back into the generator wheel so

it won't get knocked off.

If it should get whacked off, get your support to install a new one usin' FSN 5805-392-7726.

If you're shy the rubber cap for the binding posts, FSN 5940-254-2243 will get it for you.

Now and then, take a look at the retaining screw on the tank handle and snug it.



Even a small tear or break in the rubber PRESS-TO-TALK switch cover can let moisture seep in and give you telephone tribulations, ole bud.

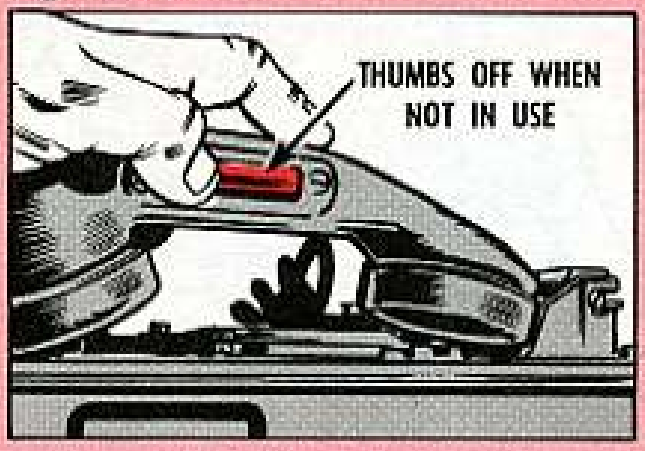
The wet gets to your telephone set, too . . . even when you zip it in its canvas sack.

So, when the rain falls, cover your TA-43 or TA-312 with a poncho, plastic, or anything else that sheds water.

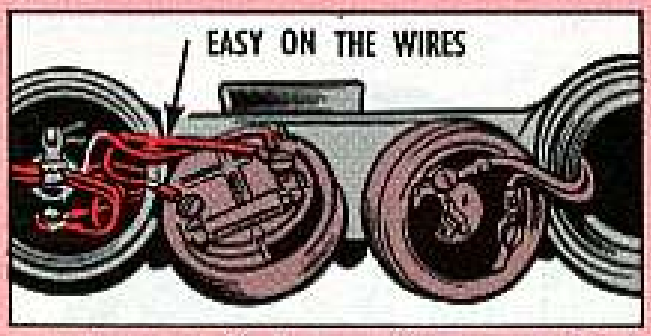
Saves moisture damage to the battery well and the inside parts . . . which do get wet even though they look snug.

PS MORE

When you're not transmitting, steer clear of that PRESS-TO-TALK switch; it needs no casual pushin', and you can weaken your BA-30 batteries by playing with it.

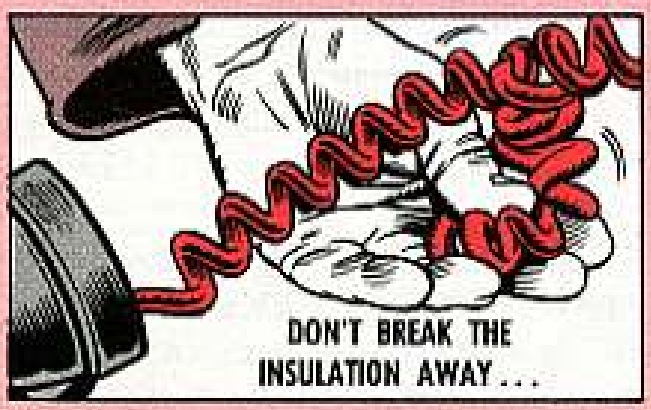


Nervous? Well, you're bound to end up a lot more so if you twist the element wires and break 'em. When you've got



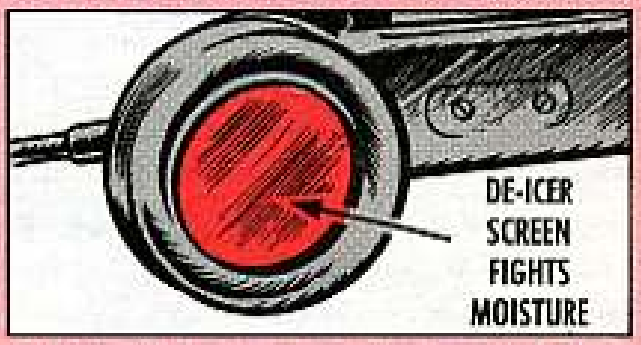
an element off, be careful not to chew up the connecting wires when screwing on the receiver or transmitter cap.

Nervous or careless fiddling with the CX-2151/U electrical cord assembly can peel off considerable insulation.



You can do it without thinking, without realizing . . . but the results are always the same: bad. So-o-o-o, be careful not to rub or twist or otherwise finger-doodle that curly-cord That could keep your telephone set outta the repair shop. Constant unnecessary stretching can also give this cord a tenseless time; let it be and it'll do its job.

Moisture is a natural enemy of your telephone set. To fight it, see that you have a de-icer screen in the transmitter.



It'll help keep out moisture and dust. You can request it with FSN 5805-392-7628, as listed in TM 11-5965-224-15P (Aug 63).

In your daily PM, a clean cloth can work wonders by ridding the TA of intruders such as moisture and fungus collected on the case, battery compartment, cord, handset housing, and connectors.

When you're crankin' that hand-ringin' generator, you don't want anybody pushin' in the PRESS-TO-TALK switch on the H-60 . . . or all you're gonna get is a good dose of zero instead of a ring. Sometimes a caller might de-

press the switch — and y'don't know it, and maybe you route your TA straight

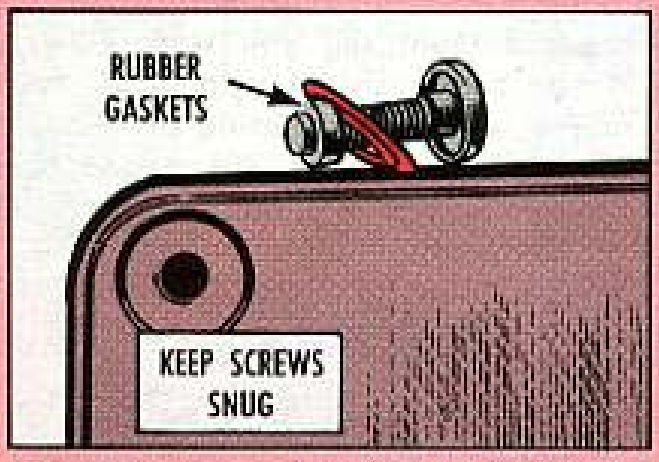
to support because you figure it's outta whack.

The best slogan is "Hands off the switch," unless you're usin' it to talk. Don't strap or tape the switch, either.

Comes a time when you're gettin' no cooperation from your H-60, go kinda slow about sendin' your telephone set to support. Y'may have a faulty microphone or receiver element, and that's an organizational replacement.

Stock numbers for the elements are listed in TM 11-5965-224-15P.

You'll want to keep the top-panel screws and buzzer diaphragm screws snugged in to protect the rubber gaskets, which can shrink and allow moisture to seep into the innards of your TA.



If you find any of the top-panel screws loose, tighten 'em, and the same goes for the 4 buzzer diaphragm screws. This will correct the situation, but don't over-tighten.

If you need a security lamp to let you know when you're doin' some unintentional off-hook transmission, go after it with FSN 5805-782-9210. This'll give you the assembly you need to install the lamp, which is for sensitive areas.

You need a cover for your battery compartment — to protect those 2 BA-30's. If something should happen to the cover retaining pin, use a cotter pin about 3-1/2-in long and 5/64th-in thick. This oughta hold you (and your battery box cover) until you get the regular retaining pin (FSN 5315-524-0243) from supply.

Support has been gettin' in quite a bunch of TA-312's and TA-43's for repair . . . and all that's wrong is conked-out batteries. Makes lotsa extra work for 'em, checkin' out the sets.

If you've got any telephone sets that showed up without a nameplate, they'll still do fine in communicatin' — but things can get sticky when it comes up repair time.

If you need the data plate for your TA-312/PT telephone set, use FSN 5805-226-1742. Page 39, TB 750-911-1 (Nov 70), has the word.

END

PUBS

This is a selected list of recent pubs of interest to organizational maintenance personnel. This list is compiled from recent AG Distribution Centers Bulletins. For complete details see DA Pam 310-4 (Jun 70), and Ch 4 (Feb 71), TM's, TB's, etc.; DA Pam 310-6 (Jul 70), and Ch 3 (Apr 71), SC's and SM's; DA Pam 310-7 (Feb 71), MWO's; and DA Pam 310-9 (May 69), COMSEC Pubs.

TECHNICAL MANUALS

TM 1-CH47-5 C8, May, CH-47A, B, C.
TM 3-1040-204-14 C4, May, M2A1-7 Port Flame Thrower.
TM 5-2010-202-15, Mar, 165 HP Diesel Outboard.
TM 5-2410-233-10, Mar, Model D7F Tractor.
TM 5-3895-275-20P, Apr, Bituminous Pavers.
TM 5-4310-217-25P C2, May, 15 CFM Air Comp.
TM 5-4330-231-13, Apr, Filter/Separator Liq Fuel 350 GPM, Skid Mtd.
TM 5-4930-220-12 C2, May, Storage Tanks.
TM 5-6115-323-15 C2, May, 1.5 KW, 60 Hz Gen.
TM 5-6115-440-24P, Apr, 7.5 KW, 28 V Gen Set.
TM 9-1005-303-14 C1, May, Shotgun: 12 Gage Winchester Mdl 1200, Riot Type 20-Inch Barrel.
TM 9-1340-202-ESC, Apr, Honest John.
TM 9-1410-302-20P, Apr, Sergeant.
TM 9-1410-302-24P/1/2, Apr, Sergeant (S/S: TM 9-1410-302-15P/1/2, 28 Feb 69, incl all changes).
TM 9-1425-250-L, Apr, Nike-Herc List of Applicable Pubs.
TM 9-1427-380-20P, Apr, Pershing.
TM 9-1430-250-14P/2/1, Apr, Nike-Herc (S/S: TM 9-1430-250-15P/2/1, 12 Jun 69, incl all changes).
TM 9-1440-380-20P, Apr, Pershing.
TM 9-1450-250-24P/3/1, Apr, Nike-Herc.
TM 9-2320-223-10 C1, May, M116 Cargo Carrier.
TM 9-2350-247-20 C2, Apr, M548 Cargo Carrier.
TM 9-4935-306-24P/2/2, May, Sergeant (S/S: TM 9-4935-306-15P/2/2, 2 Jun 66, incl all changes).
TM 9-8140-375-20P, Apr, Pershing.
TM 10-1670-213-23 C3, May, Aerial Del Equip, Parachute, Personnel.
TM 10-1670-221-23 C2, Jun, Aerial Del Equip Gen Lit & Parachute Cargo.
TM 10-3930-611-20P, Apr, 6,000 Lb Cap Forklift Truck.
TM 10-3930-618-20P, Apr, GED 6,000 Lb Cap Forklift Truck.
TM 10-3930-623-20P, Apr, GED 4,000 Lb Cap Forklift Truck.
TM 10-3930-624-20P, Apr, GED 6,000 Lb Cap Forklift Truck.
TM 11-5820-214-20P, May, CV-157/URR Equip.
TM 55-1520-210-20P-3, Apr, UH-1A, B, C, D, H.
TM 55-1520-221-20P C6, May, AH-1G.
TM 55-1520-228-20P C3, May, OH-58.
TM 55-1940-201-20P, Apr, All Marine Equip.
TM 55-1940-201-35P, Apr, All Marine Equip: Design 4003 46-Ft Picket Boat.
TM 55-2840-229-24, Apr, Engine, Shaft Turbine Uit-1B, C, D, H, AH-1G.
TM 55-6115-499-14, Apr, Fixed, Rotor Wing Gen Set Model C-26C.

MODIFICATION WORK ORDERS

9-2300-216-40/5, May, M107 175-MM SP Fld Arty Gun and M110 8-Inch Heavy Howitzer.
9-2300-316-40/6, May, M107 175-MM SP Gun and M110 8-Inch Howitzer.
9-2300-395-20/1, Mar, Application of Radiation Hazard Decal to Azimuth Indicators on M551.
9-2350-230-20/6, May, Armd Recon/Airborne Assault Veh: 152MM, M551 Instal of Eng Exhaust Flame Diffuser.
9-6650-200-30/1, May, M47 and M48 Tank Periscopes.
55-1510-201-40/17, Apr, Instal of Auth Std Avionics Config U-8 (U-8D Acft).
55-1520-227-20/3, May, CH-47B, C.

MISCELLANEOUS

LO 5-2410-233-12-1 and -2, Apr, Full Trkd Tractor Mdl D7F.
LO 5-3825-223-12, Apr, Water Distr.
LO 5-4210-213-12, Apr, Fire Fighting Equip.
LO 9-2350-300-10, Dec, XM163 20-MM SP Arty AAG.
LO 10-3950-206-12-1 and -2, Apr, Crane, White: 10,000 Lb Cap.
SC 6545-8-CL-M02, Apr, Med Equip Set, Med Field Treatment Facility Surgical.
SC 6545-8-CL-M03, Apr, Med Equip Set, Med Fld Treatment Facility Sterile Preparation.
SC 6545-8-CL-M07, Apr, Med Equip Set, Med Field Treat Facility Pharmacy.
SC 6545-8-CL-M08, Apr, Med Equip Set, Med Fld Treat Facility Ward.
SC 6545-8-CL-M09, Apr, Med Equip Set, Med Fld Treatment Facility Patient Receiving & Dispensary.
TB 55-1520-210-20/11, Jun, Main Drive Shaft and Tail Rotor Driveshaft UH-1D/H.
TB 55-1520-217-30/6, May, CH-54B.
TB 55-2800-205-20/1, May, Power Turbine Rotors AH-1G, UH-1C, D, H, OV-1A, B, C.

Be Choosey

If you get an air cleaner filter element for the D7E tractor marked with PN TF17565, don't use it. This one doesn't seal and allows dirty air to get into the engine. Instead use any other filter element like PN 4S5348. They all come under FSN 2940-849-3293.

Can Save Your Mitts

Aircrewmen—to go with your fire resistant flight suit you want Gloves, Flyers, heat resistant nylon knit. Your supply will find 'em listed in Fed Cat C8405/25-IL-A (Jan 70) under FSN 8415-935-6328 thru 6332 (sizes 7-11) . . . a winner!

MWO of the MONTH

Believe it or not — some Huey's (UH-1's) have **not** been modified with kit, FSN 1560-809-0358, to limit elevator travel in the event of linkage loss. Without urgent MWO 55-1500-206-20/2 (Dec 68), control about the pitching axis can be lost . . . maybe the aircraft, too!


JOE'S DOPE
THINGS YOU SHOULD KNOW ABOUT *
Explained by Connie Rod
* BUT NEVER DARED ASK
PST - CONNIE! NOW!
I'M SO EMBARRASSED!
I NEVER - UH - YOU KNOW ASKED ANYONE BEFORE!
WELL IT'S A BIT EARLY... I STILL HAVE CREAM ON MY FACE, BUT...
I DON'T HAVE EXPERIENCE LIKE, YOU KNOW, SOME GUYS.
ALL RIGHT, WHERE SHALL WE START?
SO HOW DO I GET TO BE, LIKE, A GREAT - YOU - KNOW - LUBRICATOR?


THE GREAT ONES NEVER GET EQUIPMENT IN TROUBLE BY USING GUESSWORK!
I NEED CONFIDENCE Y'KNOW...
LUBE CHARTS TELL IT LIKE IT IS! GO WITH THE LO--AND THINK CONFIDENT-- AND YOU'LL BE RIGHT UP THERE WITH THE GREAT ONES! CAN'T YOU JUST SEE IT... BUT TO DO THE JOB RIGHT YOU SHOULD KNOW THE TRICKS-OF-THE-TRADE, LIKE...
WATER PUMPS
INSTEAD OF GAA YOU USE MIL-G-23827A AIRCRAFT AND INSTRUMENT GREASE!
HYDRAULIC BRAKE SYSTEMS
USE ONLY NON-PETROLEUM HB FLUID.
9150-251-9071 NON-PETROLEUM HB FLUID 1-GAL
MIL-G-23827A 5 LBS 9150-985-7247
THESE ARE HEAVY DUTY DETERGENT OILS...
OE 10
OE 30
OE 50
10-W30 AVAILABLE FOR COMMERCIAL VEHICLES:
FSN 9150-068-9471 (1 QT.)
FSN 9150-246-7923 (5 GAL.)
WIRE ROPE
USE GOOD OE THEN COAT WITH CW LUBE.
USED CRANK-CASE OIL. NO!
CW 9150-246-2916 5 LBS
GAA CARTRIDGE
LOAD UP FOR CLEAN LUBING -- IT SHORT-STOPS PICKING UP DIRT.
CARTRIDGE
GREASE GUN
9150-935-1017
4930-253-2478


OVERFILLING...
...ENGINES, GEAR-CASES AND RESERVOIRS CLOGS BREATHERS, VENT LINES, AND BLOWS SEALS.
DISTRIBUTORS AND GOVERNOR
OIL
A DAB OF GAA ON THE BREAKER CAM
OIL
OIL THE WICK OR RESERVOIR... ONLY A FEW DROPS
GAA
GEAR CASES — LIKE DIFFERENTIAL, TRANSFER, TRANSMISSION —
DRAIN AND CHANGE WHEN HOT... ADD WHEN COOL.
SEARCH OUT BREATHERS NOT SHOWN IN LO—AND MAKE SURE THEY'RE NOT PLUGGED!
COFF
GASP
CHOKE
LEVEL AT PLUG WHEN HOT
LEVEL ½-INCH BELOW WHEN COLD
OIL LOSS BETWEEN LUBE SERVICES?
LESS THAN 20% IS A SEEP...
MORE THAN 20% IS A LEAK!


MIXING
AND OF COURSE YOU NEVER MIX GREASES OR OILS, UNLESS YOU'RE CERTAIN THEY'LL WORK TOGETHER...IN OTHER WORDS, ARE THEY COMPATIBLE? WHEN IN DOUBT--CLEAN OUT THE OLD BEFORE PUTTING IN THE NEW.
YOU WANT THESE PS PIN-UPS POSTED AROUND CONNIE?

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


CHASSIS LUBE POINTS
HOW ABOUT THOSE HIDDEN POINTS?
FOLLOW THE LO AND SEARCH 'EM OUT... SO YOU WON'T OVERLOOK A SINGLE ONE!
IT TAKES ONLY ONE DRY PART TO DEADLINE THE ITEM!
IF THE POINTS HAVE NO SEALS, PURGE OUT THE OLD GREASE AND CRUD... AND WIPE OFF THE EXCESS.
ALL OIL-CAN POINTS ARE NOT CALLED OUT ON SOME LO'S
SO GIVE A SHOT OF OE TO ALL HINGES, LATCHES, SHIFT LINKAGES, CLUTCH AND BRAKE LINKAGE, HAND BRAKE CONTROLS.
WIPE OFF ALL FITTINGS! PUMPING IN DIRT ALONG WITH GREASE IS MURDER!
LO OR LUBE CHART
THE TM LUBE CHART IS ONLY A GUIDE, TO USE WHEN NO LO PUB EXISTS.
TM
LO

PROP SHAFT U-JOINTS...

HAS PLUG BUT NO FITTING? REMOVE AND INSERT ONE.

GIVE ONE EASY PUMP WITH HAND GUN — EXCESS PRESSURE'LL BLOW ITS SEAL.

SPRING SEAT BEARING

FIRST, CLEAN AROUND THE CAP, LOOSEN CAP-SCREWS. IF THERE IS A PLUG, REMOVE IT AND PUT IN A FITTING. PUMP IN GAA UNTIL IT COMES AROUND THE PLATE. THEN RE-TIGHTEN CAP SCREWS.

ENGINE OIL FILTERS

MEMORIZE THE WAY YOU TAKE IT APART SO YOU CAN PUT THE PARTS BACK IN THE RIGHT ORDER.

SCREW GREASE CUP FITTINGS AS ON WATER PUMPS AND DRIVE SHAFTS

TURN IT DOWN UNTIL YOU FEEL FIRM PRESSURE AGAINST THE GREASE. IF THE CUP HITS BOTTOM -- REFILL!

RELIEF VALVES ON TRACK - ROAD WHEELHUBS

PULL OUT THE CENTER PLUG TO MAKE SURE IT'S NOT STUCK, WHICH'D BLOW THE SEAL!

WHEEL BEARINGS

ALWAYS USE A BEARING LUBRICATOR

NEVER PACK HUB...

USE THIN SMEAR...

SOME ITEMS ARE NEVER LUBED (UNLESS THE LO SPECIFICALLY SAYS TO)

LIKE STARTERS AND GENERATORS

SHOCK ABSORBERS AND SPRING LEAVES

ALSO NYLON BEARINGS AND CLUTCH RELEASE BEARINGS

COMMERCIAL EQUIPMENT . . . IF THERE'S NO DA-TYPE LO THEN GO BY THE MANUFACTURER'S LUBE CHART. TB ORD 2300-10/3 (JUN 58) GIVES COMMERCIAL AND DA LUBE EQUIVALENTS.

THANKS, CONNIE! I CAME AS A KID... I LEAVE AS A MAN!

SOMEDAY WHEN YOU'RE ONE OF THE GREATS, I HOPE YOU SPEAK KINDLY OF ME...

SO THAT'S HOW YOU GOT TO BE THE FASTEST GUN IN THE OUTFIT!

AND THE MOST DEPENDABLE, KID!

GEE, HOW LONG AGO WAS IT?

AHH, A LONG TIME AGO, KID.. LESSEE...

...A WEEK AGO LAST TUESDAY! BUT ENOUGH ABOUT ME! WATTAYA SAY WE GET THIS SHOW ON THE ROAD, KID?

LO

THE PAUSE THAT REFRESHES

A couple of minutes spent eyeing the troubleshooting chart in the bird organizational maintenance pub can jog your problem-solving memory. Could save you grief from changing the wrong part!!

Say you have no voltage output on a Kiowa T63 engine, for example. Some types rush to change the starter-generator, right off the bat.

8.	No starter-generator voltage output	No residual magnetism (Faulty voltage regulator)	Check and replace regulator
		Open circuit in voltage regulator	Check continuity between terminals of regulator; if circuit is open, replace regulator
		Open generator field circuit	Check continuity of wiring and of field winding; repair wiring or replace starter-generator
		Armature burned out or shaft sheared	Replace starter-generator

USE YOUR TROUBLESHOOTING CHART

'Course, a look at the troubleshooting table on page 12-8 of TM 55-1520-228-20 (Oct 70) will clue you that the problem could be a faulty voltage regulator. Ever notice how those babies draw moisture during the wet season?

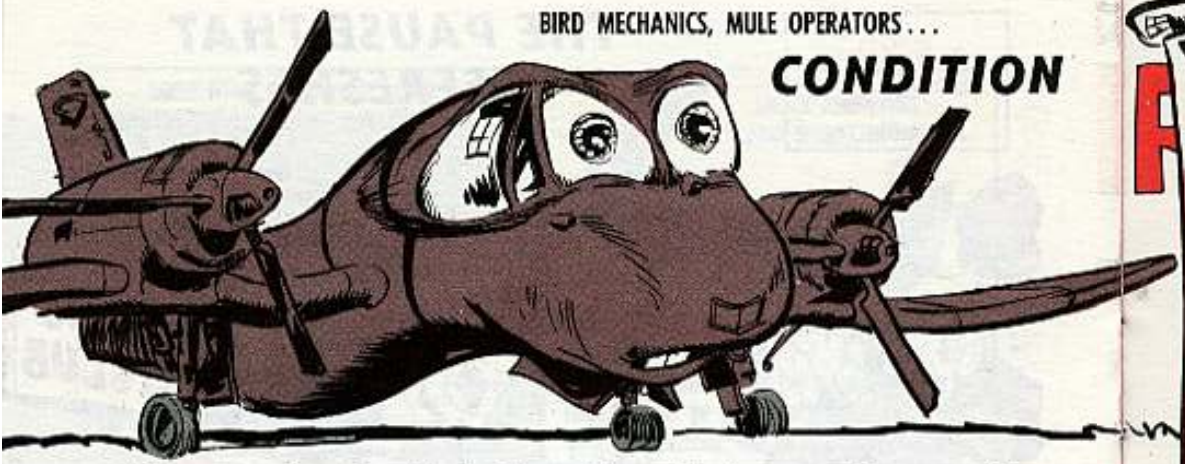
Remember that problem "causes" are usually listed with the most frequent first, followed by the less frequent.

Save time and elbow grease, Birdmen.

Be a troubleshooter first—a correct parts changer, second.

BIRD MECHANICS, MULE OPERATORS...

CONDITION



All is not rosy when the red hydraulic fluid in your bird turns pink or brown.

Fact is, the fluid's contaminated. The source has to be found, corrected and the system flushed with hydraulic fluid.

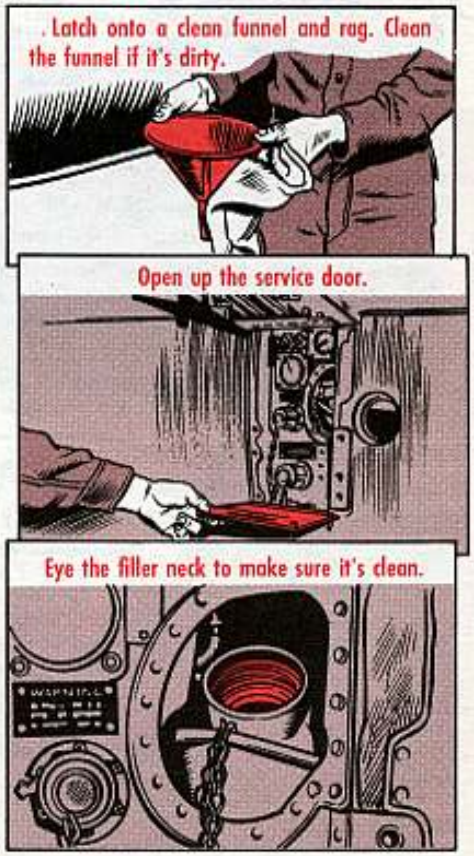
TAKES 2 TO TANGO

A hydraulic system gets contaminated when dirt enters it. Filling a tank from an open can of fluid that's been "saved" can do it — so can contaminated fluid in a hydraulic test stand when it's pumped into a bird.

Which means you bird mechs and Mule operators ought to be reading from the same sheet of music when servicing aircraft.

Step closer, lads, for some pointers on keeping the fluid clean in a Mohawk (OV-1).

First off, air types, when you add MIL-H-5606 hydraulic fluid to the bird go about it scientifically.



PS MORE

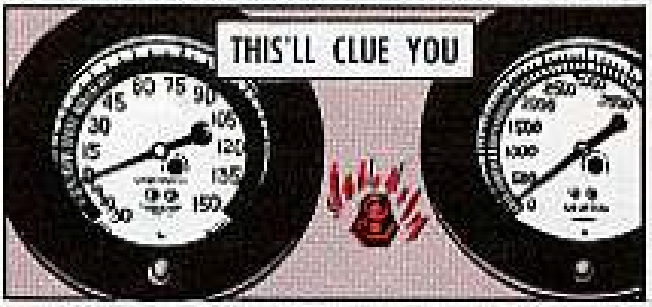
Engineer types put filters in hydraulic systems to help keep clean fluid flowing. Close tolerances of moving parts plus high fluid pressures means that any amount of dirt can foul up the hydraulic pump, selector valve—you name it.

Change hydraulic filter elements on the Mohawk every 3rd Periodic, as called for on the checksheets.

Play it safe if you're located in a dust bowl during the dry season, tho. Change 'em as often as necessary.

The same goes for Mule operators or MOS 62B types. Change the filters as called for in the TM in order to keep from contaminating the whole fleet.

If you have the D5A type test stand, FSN 4920-141-8801, the 10-micron low-pressure filter gets replaced when you have a pressure drop of 20 PSI, or greater across the filter. On some stands



change the filter when the differential pressure indicator lights come on.

Take the filter apart and clean the permanent parts, including the inside of

the case, with drycleaning solvent, Fed Spec P-D-680, Type 1. Use a stiff fiber brush.

After the parts dry put the filter pack together, using a new element.

Replace the high-pressure filter element if it's clogged or dirty.

If you service a Chinook (CH-47) with a D-5A or D-6 test stand it must be equipped with a 3-micron filter kit, FSN 4330-076-6021. It's listed in TM 55-1520-209-20P and -34P.

Hydraulic stands are made by several manufacturers and a commercial pub comes with each outfit. No specific TM's are available. TM 55-4920-226-15 (Sep 64) has general poop on the D-5A stand, however.

If you're singin' the blues because of a missing pub send all the name plate data to AVSCOM and ask for another.

Send the pub request to—

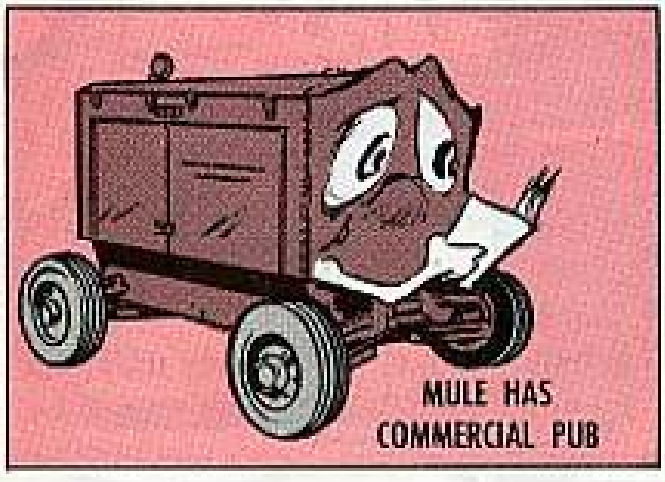
Commanding General
U.S. Army Aviation Systems Command
ATTN: AMSAV-R-MC
P.O. Box 209, Main Station
St. Louis, MO 63166

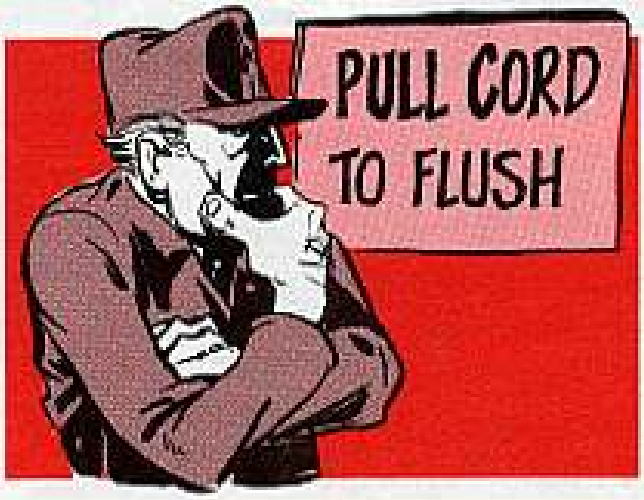
Meanwhile, for an excellent trouble-shooting operation and PM rundown on hydraulic test stands, eye para 8-107 in TM 55-1500-204-25/1 (Apr 70) on general maintenance.

A CLEAN HOOK UP

Your Mule comes in mighty handy when the bird's down for an inspection and you can't run the engines in a confined area to pressurize the hydraulic systems.

Use the Mule to fill or flush an aircraft system. Pressurize the system to test the landing gear, flaps and other components.





PS MORE

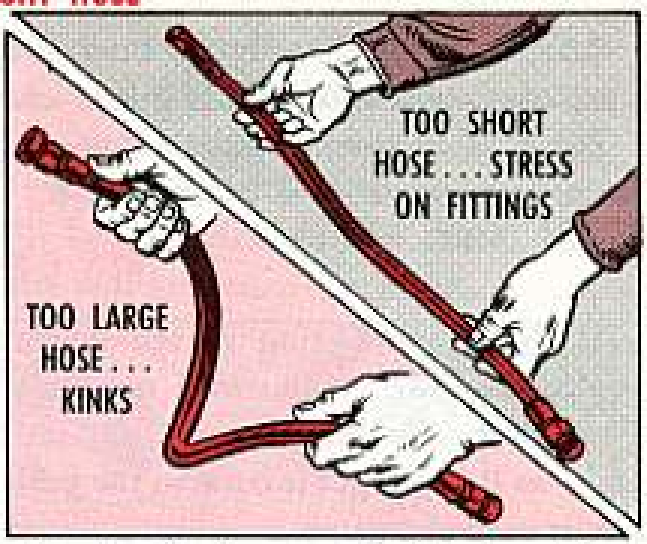
HYDRAULIC LINE PM

Hydraulic rigid and flexible lines keep the high-pressure fluid flowing to the vitals of your bird. They all have to be Number 1 . . . that's harmony, man!

In some cases a line may vibrate and fail due to too much stress.

Take the hydraulic servicing line, P/N 205-076-213-1, on a Huey (UH-1). That baby has been known to fail due to high-frequency vibrations caused by the hydraulic pump. Keep a close watch on the hose to make sure it's serviceable.

USE THE RIGHT HOSE



Every time you disconnect any hose from your baby protect the system from dirt by using dust plugs, caps or heavy aluminum foil on the hose and at the connection points.

When a flexible hose is worn beyond the limits given in para 7 of TB 750-125 (Sep 66) on medium pressure hoses, get the right one from supply.

Eye the parts catalog for the hose part number you want. If supply is "fresh out" of the right size hose take the old one to support. They'll make one up for you.

Never put in a smaller hose because you'll be putting too much stress at the attaching point—it'll crack the flare when hooked up to a rigid tube. A hose that's too long also may crack the flare or kink the hose and hamper the flow of fluid.

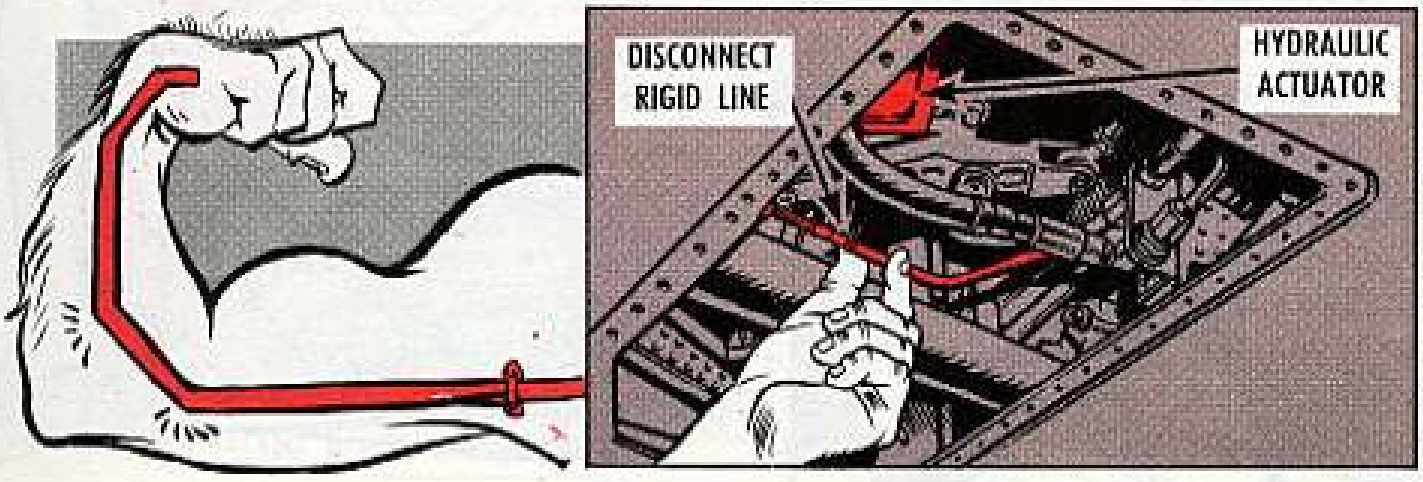
Either way, you're in for some hydraulic leaks, or worse.

NO BENDING, PLEASE!

The super-snooper Mohawk has mostly light-weight, heat-treated aluminum tubing, 6061-T6. These runs are brittle and will break if you bend 'em to get at a bird component.

When you open 'er up to take out a hydraulic actuator, for example, disconnect the rigid line. Never use muscle on rigid lines.

The "no bending" deal also goes for rigid lines on all birds.



PS MORE

STOPS CHAFING

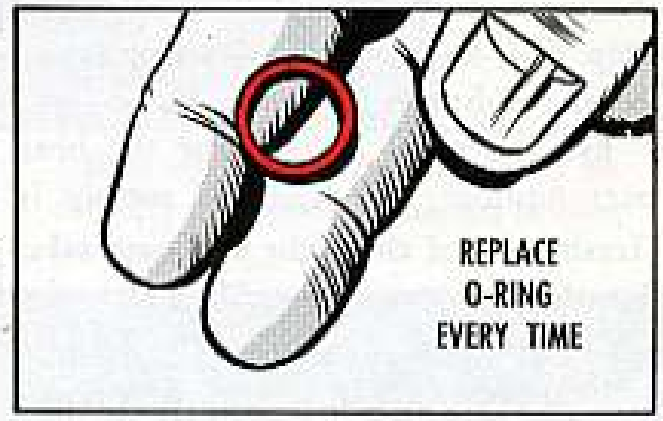
Any of the rigid hydraulic lines in the wings of your Mohawk chafing? Then latch onto some spiral chafe guard and insulate one line from another.

For a ⅝-in line, or smaller, you want FSN 9330-027-3345. For ½-in thru ¾-in lines use FSN 4720-688-7856.

NEW O-RINGS NEEDED

If there's an O-ring in the system you're working on put in a new one, every time. The old packing has "set" and you'll never get it back in the position it used to occupy.

Wet the new O-ring in hydraulic fluid and carefully work it over fitting threads so it doesn't get cut or twisted. A damaged packing will leak.



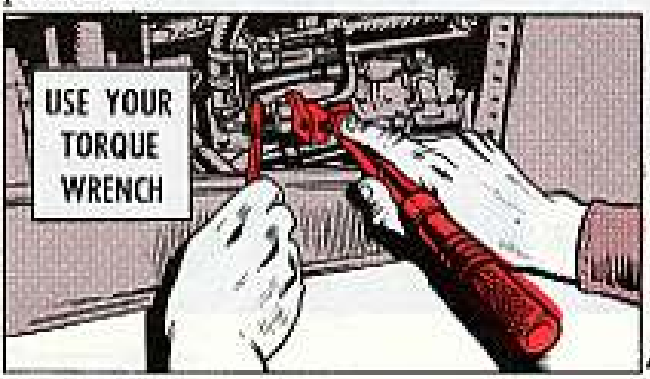
ALINE LINES

When you connect a flexible line never twist it with a wrench or you'll pre-load the hose — leads to untwisting of the hose and loosening of the B-nut over a period of time.

Keep hose alinement by putting one wrench on the nipple and a torque wrench on the B-nut. Never use the thin nipple jam nut or you'll break the hose fitting seal.

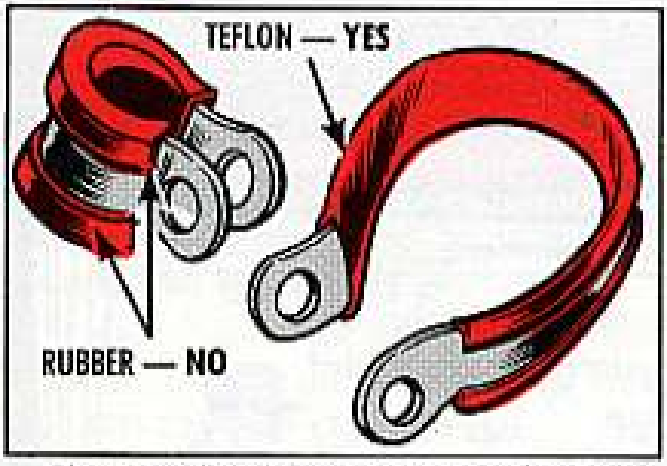
Overtorque of the B-nut may crack the flare on a rigid line. Undertorque may give you a loose line.

So, torque the B-nuts on your hoses to the figures given in Table 7-2 of TM 55-1500-204-25/1 (Apr 70) on general practices.



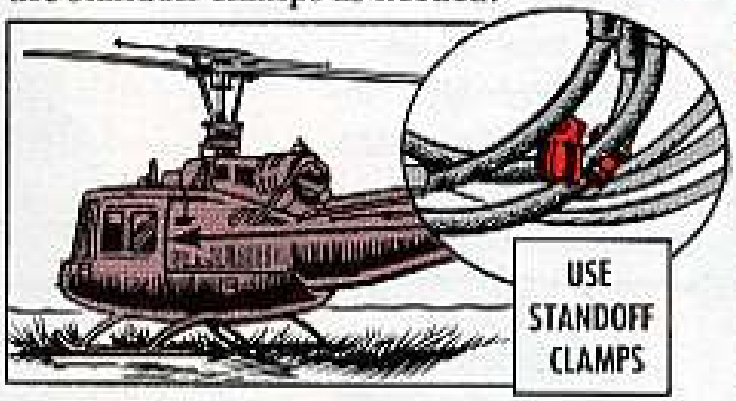
CLAMP HOSES

When you go for your line clamps ask for EAB700-series loop clamps. These babies have a teflon cushion and won't go to pot on you like the rubber ones do.

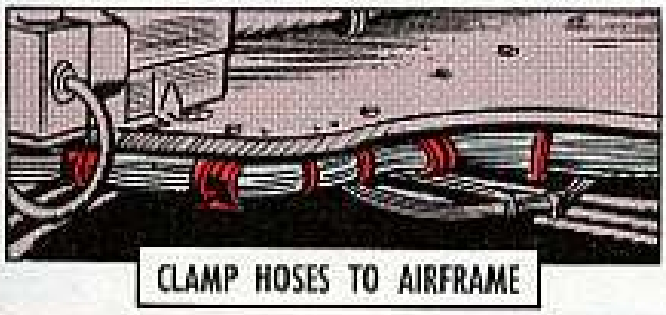


Sing out for the size clamp that won't restrict fluid travel or put tension, torsion, compression or stress on the line during flexing cycles. You want a snug fit.

To prevent hoses from chafing other hoses, like in the Huey (UH-1) hell hole, use standoff clamps as needed.

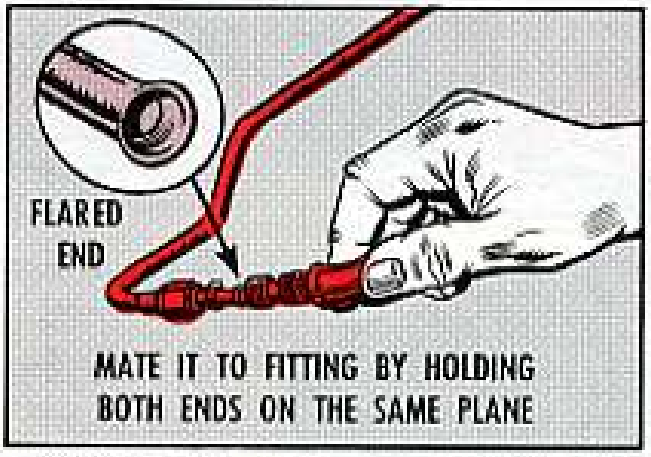


Support other hoses by clamping them to the airframe or components. The Super Hook (CH-54) has umpteen hose clamps. They're all needed. Support the hoses at least every 24 inches.



Clamp flexible hoses so that they don't deflect rigid lines.

Otherwise, the flare on the rigid tube will be over-stressed and crack. Your baby will be singin' the blues.

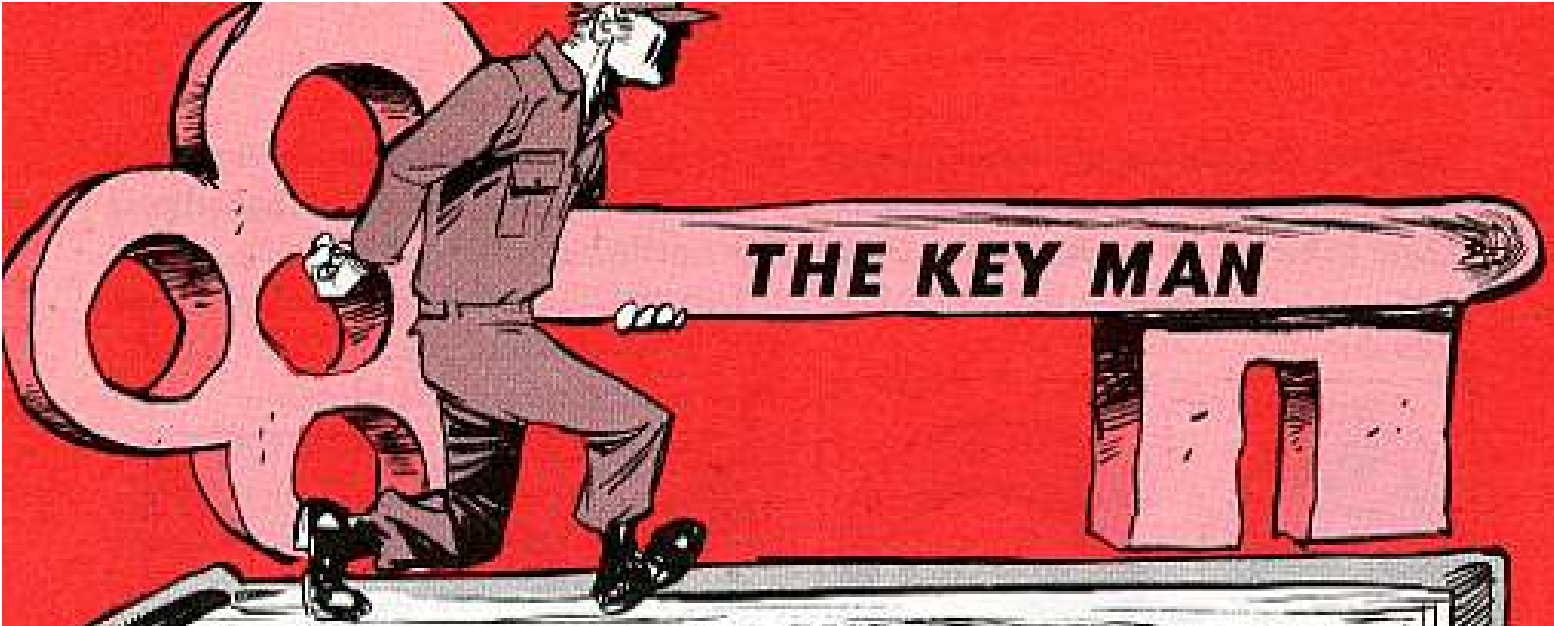


When you close up your bird, be sure you use the right screwdriver — Phillips or Reed & Prince — depending on the type of screws. A Reed & Prince used on a Phillips screw will strip out the recess, for real.

Yessir-e-e-e, there's real harmony when mechs and Mule operators get together to service a hydraulic system.

You can hear 'em sing out for that clean, red juice.

PS END



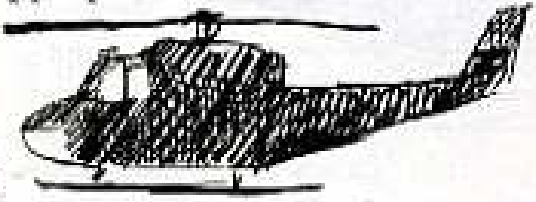
THE KEY MAN

HISTORICAL "WORD" ON AIRCRAFT PARTS

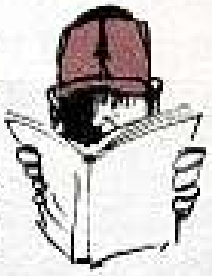
When it comes to passing the historical "word" on aircraft parts a bird mech is the key man.

He fills out a new DA Form 2410 from the component DA Form 2408-16 info, on a removal.

Vice-versa, when he puts an overhauled part back on his bird. He completes Section IV, copy 6 of the DA Form 2410 and makes the required entries on the appropriate DA Form 2408-16.



Either way, he helps save Uncle a bundle because fewer parts have to be scrapped due to the loss of info.



TB 55-1500-307-25 (Oct 70) tells him what forms to fill out — by the part numbers . . . no sweat!

Are you a key man?

"ALL SYSTEMS GO?"

When your favorite Kiowa (OH-58A) throttle jock uses the push-to-test switch on the instrument panel he wants to see that battery of caution lights glow, meaning all systems are go.

If they don't come on, that switch has to be changed, pronto.

No need to strain your eyeballs looking for the replacement in Fig 73 of TM 55-1520-228-20P (Jan 71) tho . . . 'taint listed.

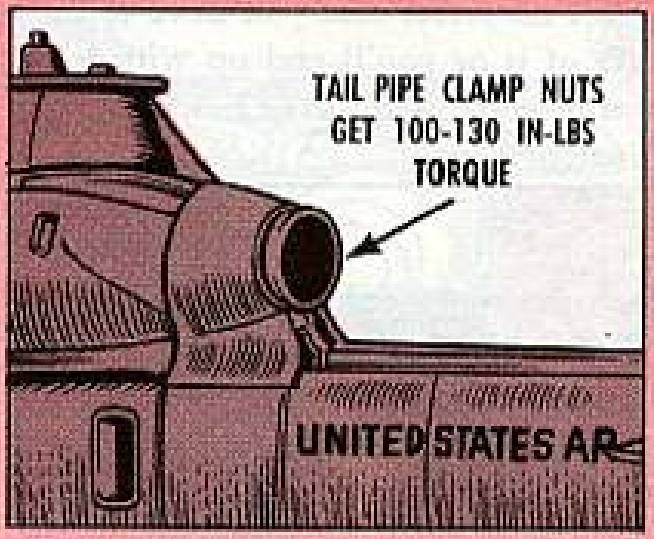
You want switch, FSN 5930-955-0569. You'll find it in Fig 73, item 4 of your support's TM 55-1520-228-34P (Jan 71).

That'll keep the blinkin' lights winkin'.

CORRECT COUPLING CLAMP TORQUE

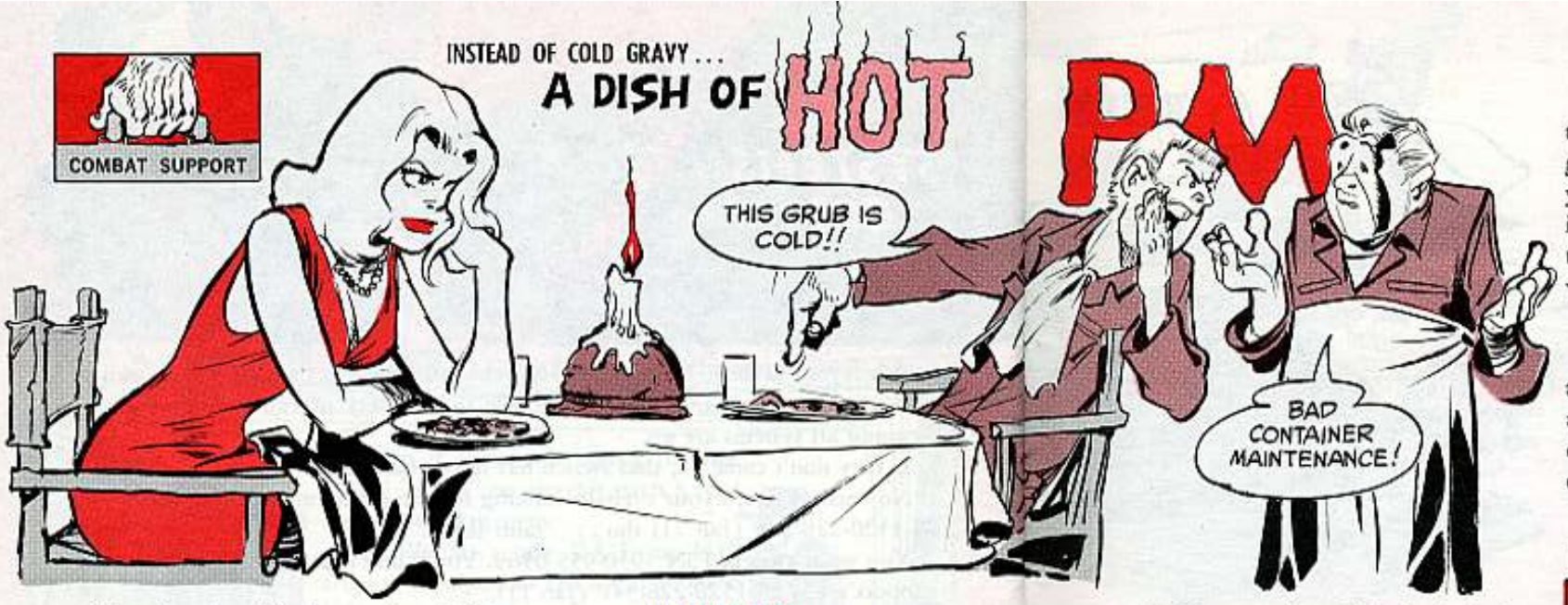
USAAVSCOM message AMSAV-R-EU 111630Z Feb 71 says to use 100-130 in-lbs torque on all Huey and Huey-Cobra tail pipe coupling clamp nuts to keep the tail pipe from doing the split bit.

Before making with the torque wrench, tho, eye the clamps for damage, proper seating, and dowel alinement. Correct torque will be added to maintenance pubs ASAP.



AIRCRAFT MECHANIC'S TOOL KIT

You aircraft mechanics will want to get hold of SC 5180-99-CL-A01 (Mar 71) so you'll have the latest listing for your Aircraft Mechanic's Tool Kit, FSN 5180-323-4692.



Your insulated food container, FSN 7330-238-2411, holds the secret of keeping your hot food hot or your cold food cold.

It's no secret that you have to take care of it or you'll end up with lukewarm food regardless of how it left the kitchen.

CLEANING

It's a must to keep your food container clean. Remove the inserts and gaskets. Wash them separately with soap and water. Rinse well. **Replace the gaskets immediately after cleaning to keep 'em from warping and losing their shape.** Put 'em back with the flat side down and let 'em dry in place.

HELPFUL HINTS

Never put hot and cold food in the same food container. Put in all hot food or all cold.

Warm the container by pouring hot water into the 3 inserts. Then empty the water and fill with your hot food. The food stays hot longer when you warm the container first.

Wipe off the bottom of the inserts before you put 'em back into the container. If there's sand on the bottom of the inserts it could scratch the inside of the container.

Never use ice picks, screwdrivers, or other sharp objects to chip or break ice in the container. One slip and that's the end of the container. Chip the ice before you put it in the container.

If you have a container with a loose collar, or holes punched in the inner well, outer shell or collar, get rid of it.

Food can get into those openings, and bacteria will grow in the insulated space.

Always seal the container by locking one front latch and one rear latch (diagonally opposite) at the same time. Then lock the other 2 the same way.

Never sit on containers. They're made of aluminum and are not as strong as they look.

Never drop 'em off the end of your truck. Lift 'em down.

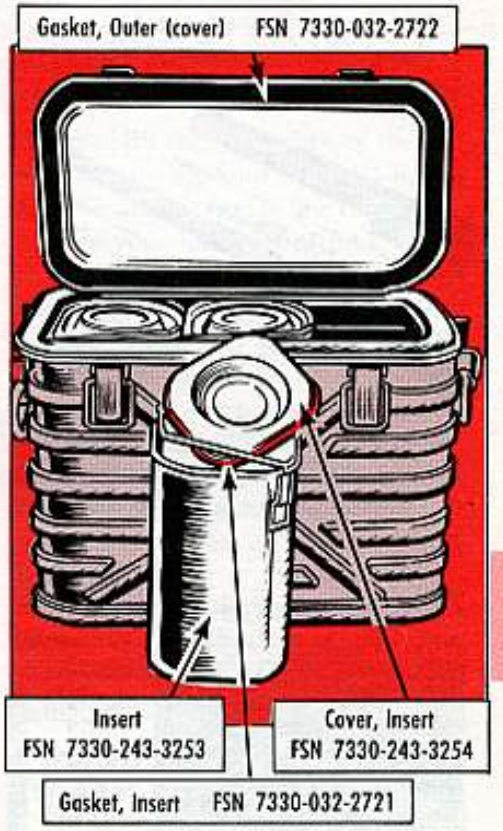
DECAL MISSING?

Be careful with the label or decal on the outside of the container cover. If it gets painted over or needs replacing and you can't get the labels, then type the info in capital letters and glue it on the outside of the cover. After it dries, waterproof it with clear shellac.

STORAGE

Before you store the container, clean and dry the inserts and gaskets. Leave all of the latches unlatched. Store in a dry location. Do not put any big weight on top of the container.

REPLACEMENT PARTS



You'll find these in Fed Cat C7300-IL (Jun 70).

Typewriters need care and maintenance just as much as any other machine. Your copy could end up looking like this if you don't do maintenance on your typewriter.

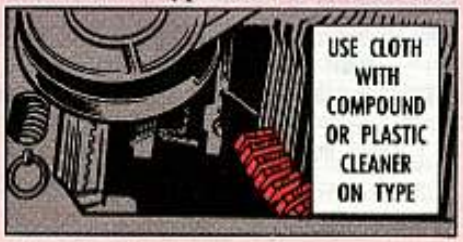
It only takes a few minutes a day to do it. Once you get the hang of it you'll do it automatically.

Here's what you should do:

Use a long-handle brush, FSN 7510-550-8448, to clean between the keys.

Move the carriage to right and left as far as possible and brush the parts you can reach. Dust the keyboard and space bar.

Then dampen a clean cloth with cleaning and reconditioning compound and clean the type. FSN 7510-286-6993 will get you a 2½ oz bottle. Do not use the compound with a brush or you'll slop it down into the typewriter and ruin the works.



You can also use plastic rubber cleaner, FSN 7510-285-1745, for cleaning the type.

Be sure that you clean the type good before and after cutting stencils. You should also wipe the platen (large black roller) often with a clean cloth dampened with the cleaning and reconditioning compound, FSN 7510-286-6993. The oil and wax from the stencils cause the rubber to swell and decompose. You'll have paper feed problems and you may have to replace the platen.

If you don't have the compound or plastic rubber cleaner, you can use a type-cleaner brush, FSN 7510-550-8446, to clean the type. Use it dry unless you have an electric typewriter that you can remove the ball. In that case, you can use some soapy water.

HELPFUL HINTS

When you type, always use 2 sheets of paper. If you're not making a carbon, then use an extra sheet of plain paper for backing. It saves the platen.

If you have to erase, be sure to move the carriage to one side so the erasing shreds won't fall into the machine. The shreds not only will gum up the works, but they'll cause wear on the typewriter innards.

Never yank the paper out of your typewriter. Pull the paper release lever toward you before you remove the paper.

When you're not going to be using your machine for a couple of hours or more, center the carriage and put the cover on the typewriter.

If you have an electric machine, always be sure it's turned OFF when you're not using it.

When it's time to change the ribbon, take a look at the old ribbon and see how it's threaded. If you have a manual typewriter and can't get a ribbon that has a spool like the one on your typewriter, save the old spool and wind the new ribbon on it. Most of the manual ribbons are ½ inch wide.

Never lift the typewriter by the carriage always slip your hands under the machine and carry it by the frame.

Keep your food, soft drinks, coffee, etc. away from your typewriter and other office machines. Some of it spilled into the works may put your machine out of commission.

If you find a screw or spring near your machine, save it for the repairman. Don't take your machine apart trying to find where it goes. The only "tool" that you should use on your typewriter is a brush.

Do not keep things under your typewriter. Always clean under it when you're cleaning the rest of your machine. If your typewriter's bolted down, use a clean cloth on a ruler to get under it.

Keep a copy of TM 10-7400-201-10 (Apr 64), and C1, Office Machines, handy.

PUBS SWITCHEROO

Looking for a pub for your Bruning Model 300MS, moist process diazotype machine reproduction set, FSN 3610-753-2263? Then order TM 5-3610-241-14 (Jan 71). It includes repair parts and special tools too. You're right, that's the same machine that had a base support and roller guard clips added to it by MWO 10-3610-215-30/1 (Feb 70).

WATER CAN CAP

Dear Half-Mast,

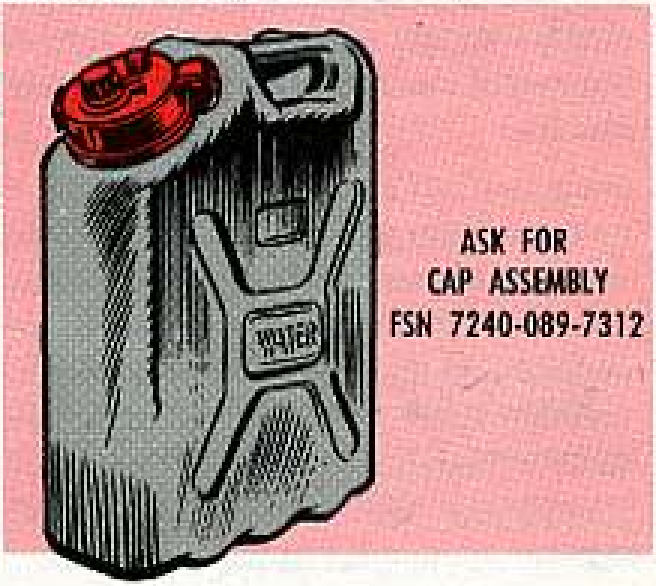
Is there an FSN for the screw-on cap for the five gallon plastic water can, FSN 8110-089-3827?

R. R. Y.

Dear Mr. R. R. Y.,

Yes. It's cap assembly, FSN 7240-089-7312. You find it listed in Fed Cat C7220/90-IL-A (Jun 70).

Better change the group and class of your water can to 7240. That takes the place of the 8110. *Half-Mast*



ASK FOR CAP ASSEMBLY FSN 7240-089-7312

60-Hz FREQUENCY METER

To get a replacement 60-Hz frequency meter for your MEP-017A (SF-5-MD) Military Design 5-KW generator use FSN 6625-054-2038. It's the same one listed in the 1.5, 3 and 10 KW MD generator manuals along with part number 13211E6992-1 (97403).

LITTLE LEEWAY

Knowing how far you can tilt the hand-truck reciprocating air compressor, Model G-311-PC, is cash in the satchel.

The compressor works A-OK in a level position and up to a 15° inclination. If it's tilted more than that you're asking for trouble.

The end result is a compressor on the sidelines because of damage, repair or replacement of parts.

Your TM 5-4310-276-15 (Sep 68) is being changed to read: Should be operated as level as possible.

Play it safe with any 1½-HP Mil Std engine, no matter where it's mounted, and don't go over a 15° tilt.

OUTSMART YOUR TRAP

Drop everything, you H-90CM loader operators, and . . . ouch! . . . hear this!

Run a fast check on the hydraulic oil tank's sediment trap.

The trap's plastic coating might be flaking off and being drawn into the oil lines.

Fish the trap out of the reservoir and look it over closely.

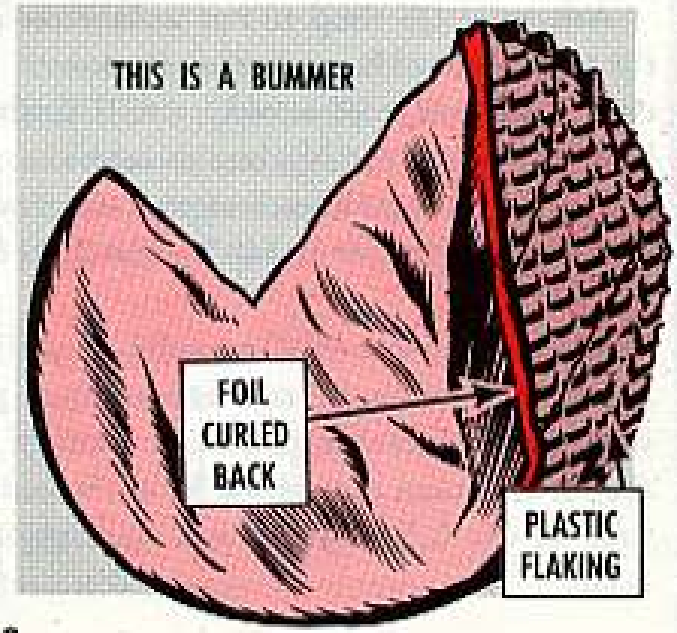
If the foil is curled back or missing, the plastic coating underneath has probably broken in spots — and flakes, metal chips, grit or sediment have been sucked into the steering system, boom cylinders, etc.

You'll have to drain all the hydraulic oil and clean the lines — a mighty costly job.

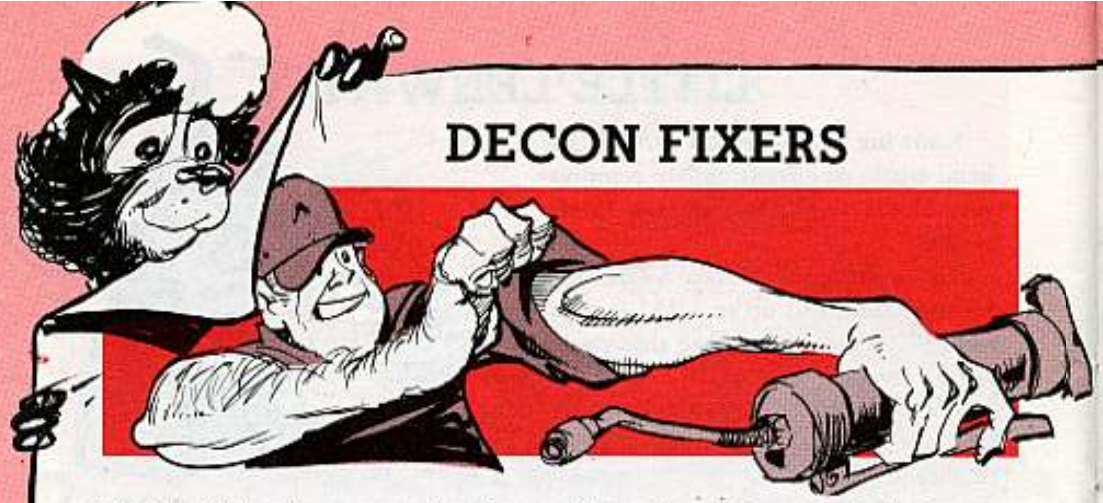
And send the faulty filter along with an EIR (DA Form 2407) to:

US Army Mobility Equipment Command
ATTN: AMSME-MAO
4300 Goodfellow Blvd.
St. Louis, MO 63120

If the sediment trap's in good condition, relax, keep checking it according to LO 5-3805-201-12-1 (Feb 71).



DECON FIXERS



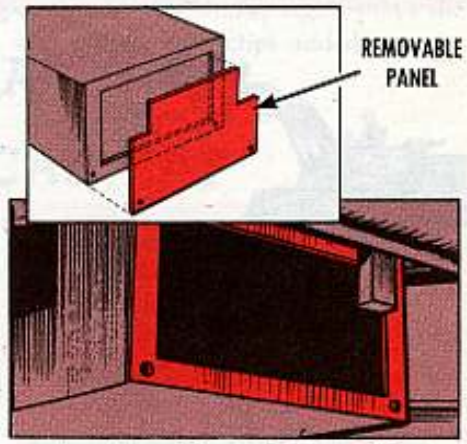
Weekly lubing is a must for the lower clutch assembly on your M9 truck-mounted decon . . . otherwise, the clutch'll be shot in no time.

To make the weekly job easier and faster, here's what you can do right now:

Ask your DS shop to cut a door on the splash-guard box covering the lower clutch assembly. That way you'll not have to remove the big box to lube the pillow block bearings and the clutch fittings, as called for in LO 3-4230-203-12 (Feb 65).

The shop'll cut out the solid panel on the driver side of the box and replace it with a removable panel. If needed, they'll also turn the pillow block bearings so the lube fittings will face the door.

Then all you have to do is turn a couple of lock fasteners, lift out the



panel, and reach into the box with your grease gun.

Replace the panel when you're done and that's it — until next week.

THE SKID MOUNTED DECON

And here's a fix that'll make it a lot easier to use your M12A1 skid-mounted decon. Just have your DS shop put a quick disconnect coupling on the pump suction hose.

TB 750-942-2 (Jan 71), Para 38, gives the go-ahead on these improvements.

DECON CARE

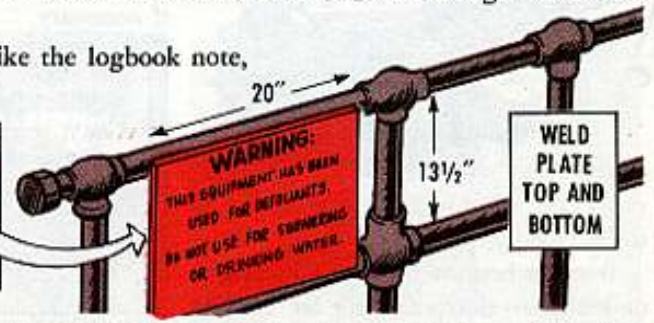
Remember — once the M9 truck-mounted decon is OK'd for defoliants it's no longer safe for totin' water for drinking or showering.

To make sure there's no mistake, tag the decon with a warning plate, and add a warning note in the decon's logbook, like it says in para 19.1, Ch 4, TM 3-4230-203-12 (Feb 71).

To mark the equipment for keeps, your maintenance shop can weld a warning plate to the rear section of the right handrail. A piece of 16 gage sheet metal (FSN 9515-236-4489), some 20-inches wide and 13½-inches high should do the job.

The warning plate, like the logbook note, must read:

WARNING:
THIS EQUIPMENT HAS BEEN USED FOR DEFOLIANTS.
DO NOT USE FOR SHOWERING OR DRINKING WATER.



Also, the decon's sprinkler holes on the side handrails must be welded shut.

M3A3 AND M12A1 DECONS

The M3A3 truck-mounted decon and the M12A1 skid-mounted decon are not authorized for defoliant work. But, if ever either of 'em accidentally get defoliants, the warning sign and the logbook note are a must for them, too.

The M3A3 takes a warning plate, and its sprinkler system is plugged up, just like on the M9.

The olive drab warning plate takes yellow lettering. TM 9-213 (Jul 62), and its Ch 1, provide the scoop on stenciling, lettering, and painting.

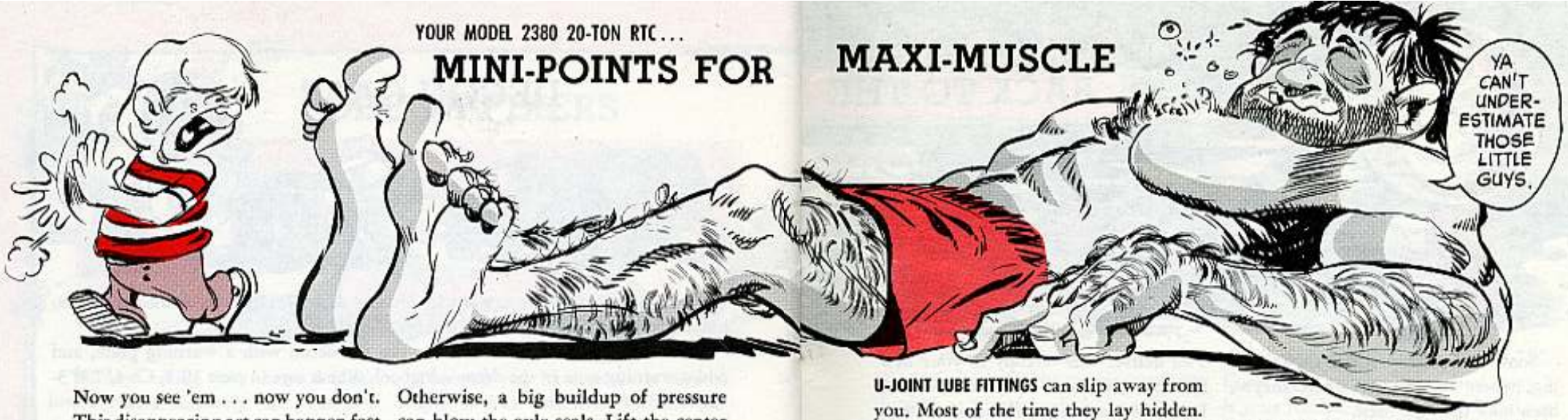
On the M12A1 the warning note must be lettered on the upper right side panel of the pump unit, and also on the back side of the tank unit.

Turn-in the M12A1 shower assembly according to local SOP.

TB 750-942-2 (Jan 71) gives the word on this change for decons.

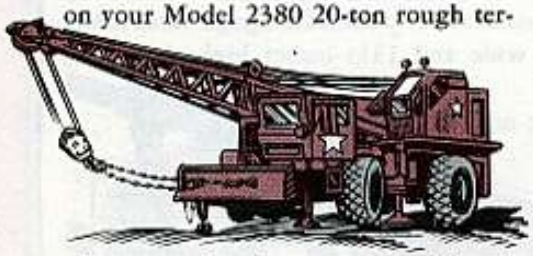
YOUR MODEL 2380 20-TON RTC...

MINI-POINTS FOR MAXI-MUSCLE



Now you see 'em . . . now you don't.

This disappearing act can happen fast on your Model 2380 20-ton rough ter-



rain crane when it comes to small hard-to-find tender spots.

But just because they're out of sight or easily overlooked, don't let 'em get out of mind. They spell the difference between equipment readiness and breakdown.

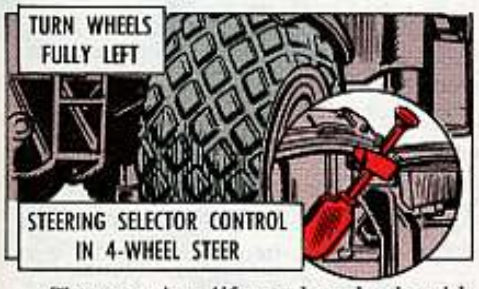
PLANETARY GEAR PRESSURE VALVES could be painted over. Keep an eye on 'em. They must be free and working all the time.

Otherwise, a big buildup of pressure can blow the axle seals. Lift the center valve up with any sharp object such as a screwdriver. Clean 'em with solvent if necessary.

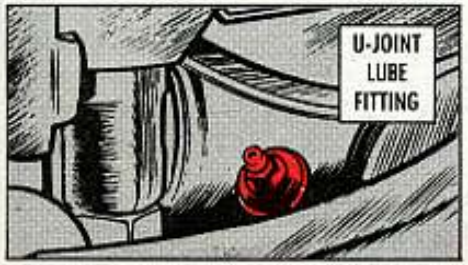
MANUAL REAR STEERING LOCK is easy to forget when you're headin' for over-the-road travel. Put in the manual rear steering lock and pin before you take off. Don't forget to remove this lock when you want 4-wheel or crab steering. All the info is in TM 5-3810-232-12 (Sep 70). The important thing is to remember to install the lock.

You have to keep in mind, too, all these hidden items need to be checked more often when you're operating under unusual conditions. Make sure they get the same attention as the more visible points.

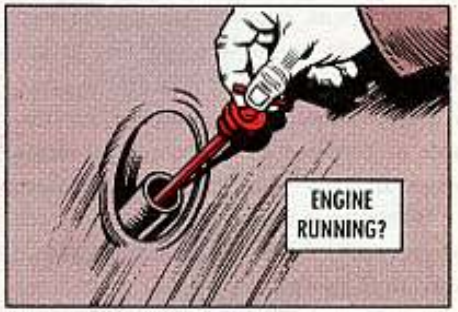
U-JOINT LUBE FITTINGS can slip away from you. Most of the time they lay hidden. You can get a good idea of their location on all 4 wheels by looking at LO 5-3810-232-12-1 (May 70).



To get at 'em lift up the wheels with the outriggers. Then turn the wheels fully left or right and rotate till you can reach the fitting with your grease gun. 'Course, you have to set the steering selector control in 4-wheel steer position to manipulate the wheels.



TORQUE CONVERTER TRANSMISSION LEVEL CHECK can be a slippery deal, too. Thing to remember is the engine must be run-

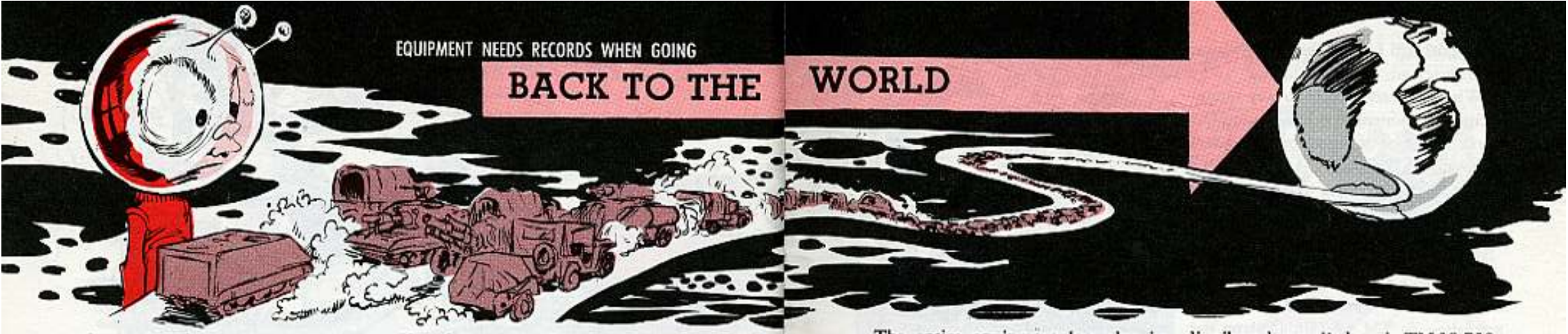


ning to make an accurate check. Then the directional control lever has to be in neutral with the engine at an idle speed of 500-600 RPM. Oil level should be on the full (high) mark. Recheck to see if it's full when oil is hot (180°-200°F). LO 5-3810-232-12-1 and 2 (May 70) has the details.

OIL CAN POINTS can get passed up easily. You got to hit 'em regularly, every 50 hours, just like the LO's say. They're on both the crane and the carrier: Linkage systems, pins, clevises, exposed adjusting threads, latches and hinges.

EQUIPMENT NEEDS RECORDS WHEN GOING

BACK TO THE WORLD



Some never know where they're going, where they are or where they've been once they get back.

That turns out to be true of too much equipment going back into depots and back to The World.

It happens because equipment records are not updated or get lost or left behind when the equipment moves out.

Old or new, if equipment's serviceable or repairable, its records go along when it goes — and properly updated.

When your unit transfers (out, back or sidewise) with its equipment, make sure that all equipment log records go along. You also want to take along each item's DD Form 314 and the DS unit's copy of each item's DA Form 2408-7.

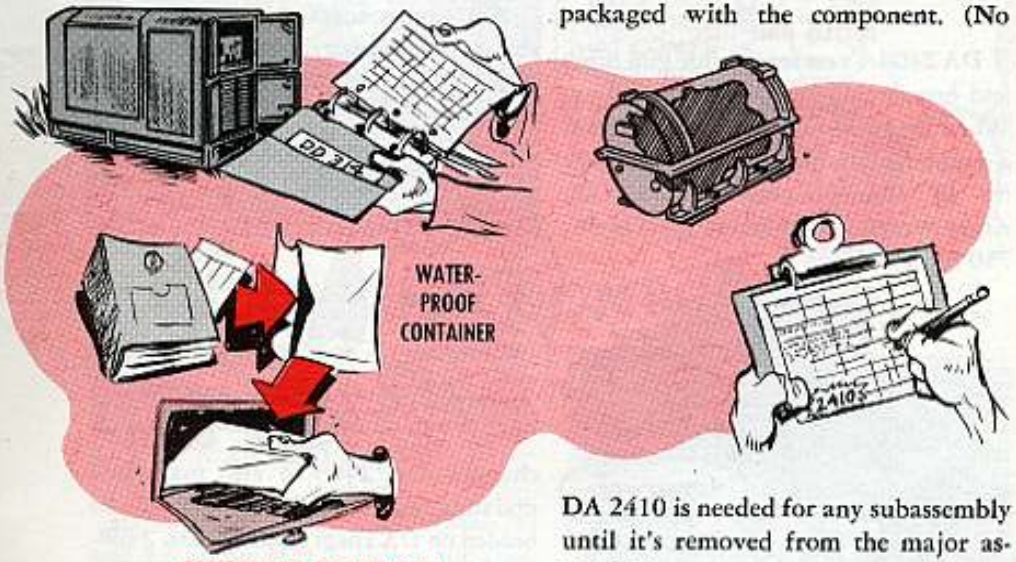
You deliver this -7 copy to your new DS unit. (No need for a new copy of DA 2408-7 as long as the item's still on your property book.)

DESTINATION UNKNOWN

The rules are different if your equipment's going to a depot, to another outfit or to a destination unknown to you.

When your unit's turning in the equipment, you must make out a new DA 2408-7 for each item indicated in Appendix E of TM 38-750. Normally these will be the items that now have a log copy of DA 2408-7. Distribute copies of the new form as spelled out in TM 38-750, making sure the new log copy replaces the old -7 in the log.

The entire equipment log plus its DD 314 goes with the equipment if it's shipped or transferred.



COMPONENT BREAKDOWN

When components of a major item or system are removed for separate shipment or transfer, you've got extra actions to take.

Designated aircraft components (TB 55-1500-307-25), code T nuclear weapon components, and engines removed from combat vehicles must have new DA Form 2410's completed with copies distributed as spelled out in TM 38-750. Copy 1 goes to your data center, copy 2 is your receipt, copies 3, 4, 5 and 6 are packaged with the component. (No DA 2410 is needed for any subassembly until it's removed from the major assembly.)

If an aircraft item listed in TB 55-1500-307-25 is not installed on an aircraft, submit only DA Form 2410-1

PS MORE

(new postcard form) when it's shipped or transferred.

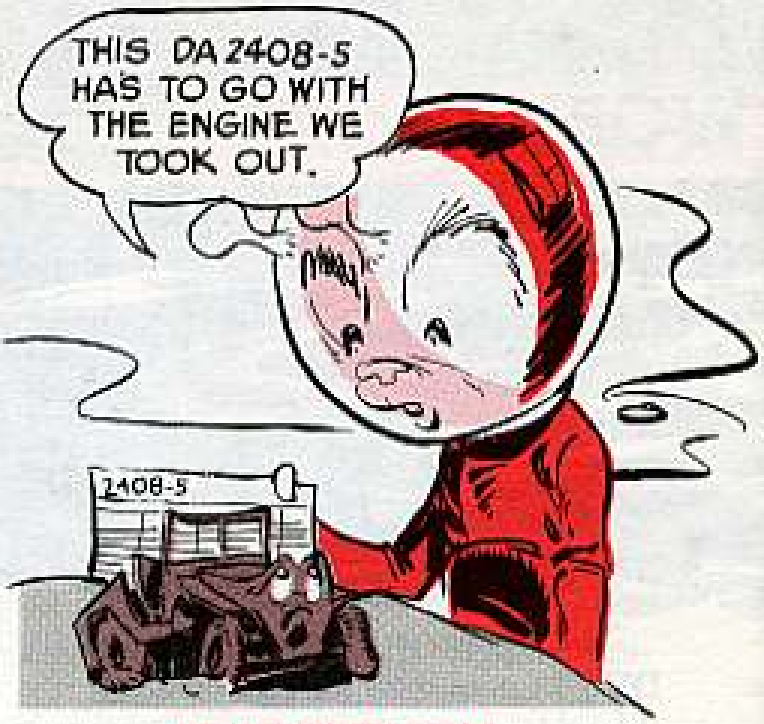
When you remove from any equipment a component that has its own DA Form 2409 or a separate DA Form 2408-5, DA 2408-8, DA 2408-16 or DA 2408-19, that form (or forms) must be removed from the major item log and packed with the component.

If a component has a separate DA Form 2408-7, it must be replaced with a new DA 2408-7 made and distributed according to TM 38-750. Destroy the old -7 and pack the log copy of the new -7 with the component.

BREECH AND TUBE

DA 2408-4's on serviceable gun tubes and breech rings get special handling. When ring and tube are removed from a weapon, mark "Removed from Weapon" in column h and submit to U.S. Army Weapons Command (see TM 38-750 for address).

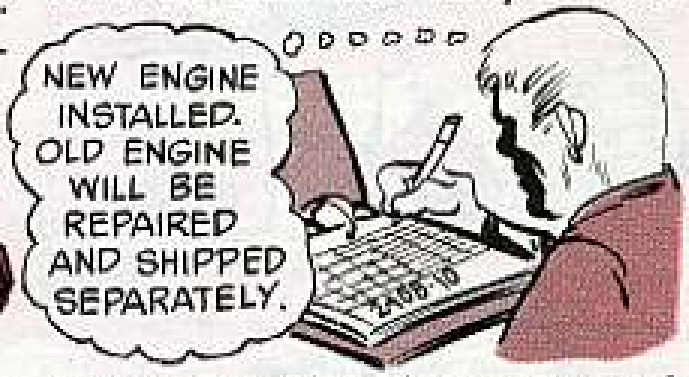
First, though, transfer accumulated EFC rounds, borescope and recoil exercise info, breech ring serial number and re-tubings, and any other needed data to a new DA 2408-4. Pack the new form with the serviceable tube that's removed.



UPDATE OTHER FORMS

Any components you removed for shipment or transfer may call for entries on log forms that remain with the major item.

For most equipment, DA Form 2408-10 is the form most likely to need



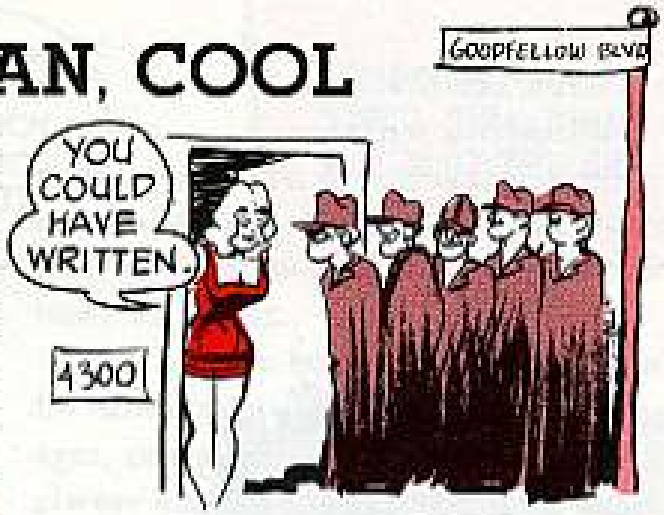
changes. DA 2408-14 also may need updating. For aircraft, changes may be needed on DA Form 2408-13, DA 2408-16, DA 2408-17 and perhaps others.

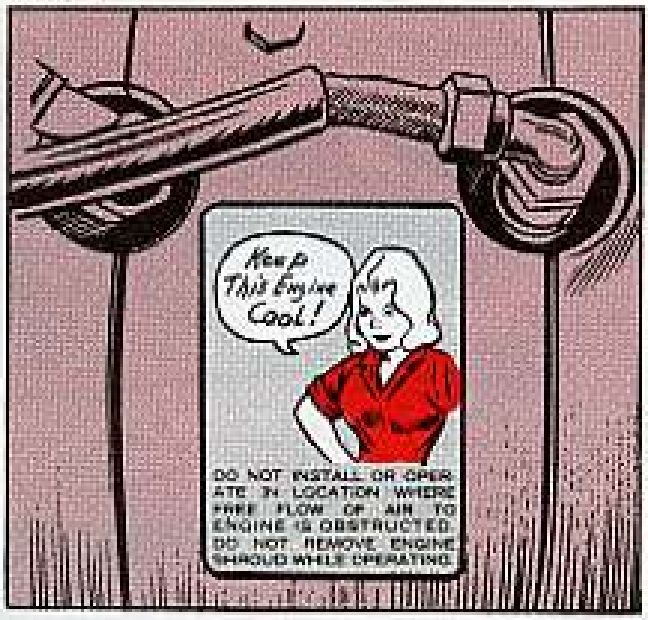
When equipment and components are on the move, accurate identification and usage info saves a lot of time and moola. Providing all this is the job for equipment logs and travel forms like DA 2410.

These forms don't fill themselves. You're elected to do it and see that they go with items on the move.

COOL, MAN, COOL

Need a Connie decal for your 1½-HP to 20-HP Military Standard Engines? Order 'em from U.S. Army Mobility Equipment Command, ATTN: AMSME-MMG-S, 4300 Goodfellow Blvd., St. Louis, MO. 63120. They're free!





LOSING YOUR COMPONENTS . . . ?

You say your outfit must have the compressors, generators, battery chargers, etc., that are being pulled from your shop set by AR 725-1 (Sep 70)?

Better get with it, then!

Grab a copy of AR 310-49 (Mar 70) and fix up an MTOE listing the components you must hang on to.

Cause, friend . . . the supply catalog listing the items is not your authority for 'em. And, AR 725-1 gives you only a temporary OK to keep or request the components. Its OK is good only till you can crank up your MTOE. The AR says so in para 12-2e.

In other words, if the gear's not on your MTOE, it's not yours.

That's the Army's new **intense control** system for some 7,000 selected items ranging from engines to flashlight batteries.

These selected items are:

1. **Costly** (something like 2½ **billion** bucks a year)

2. **Critical** (they're hard to come by, or usage is extra heavy, or they're for critical gear, etc.)

3. **Combat essential** (you, your unit, or your gear can't cut it without 'em)...

The selected items are intensely controlled from the time they're brought into the supply system until they're used up, or washed out of the system.

With SIMS, for example, the supply people:

Keep in-transit control of items (they know how much of what is going where and why).

Eliminate excess and duplication (they can shift items easy-like to where the need is greatest).

Keep track of losses (plan for replacements better and faster).

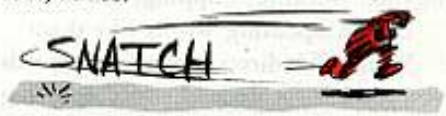
Keep a close eye-check on what's on hand and where, and meet emergencies faster (your direct supply support types call it **asset visibility**).

Of course, the people up the supply line can get as intense as all heck, but for the system to do its main job . . . serve you better, faster, and more economically, etc., **you have to do your bit,** too—since you're what the system's all about.

First off, you have to keep an eye out for SIMS tagged or labeled boxes, packages, containers, equipment, etc. And, always keep in mind—the SIMS mark tells you the item's either costly, critical, combat essential . . . or even all 3. And, for you and everyone else to continue getting those goodies as needed, you have to treat 'em with respect. Like always:

Use 'em right.

Protect 'em from damage, pilferage, loss, abuse.



Ask only for what you need, and only when you need it.

Turn-in soonest any SIMS item you no longer need.

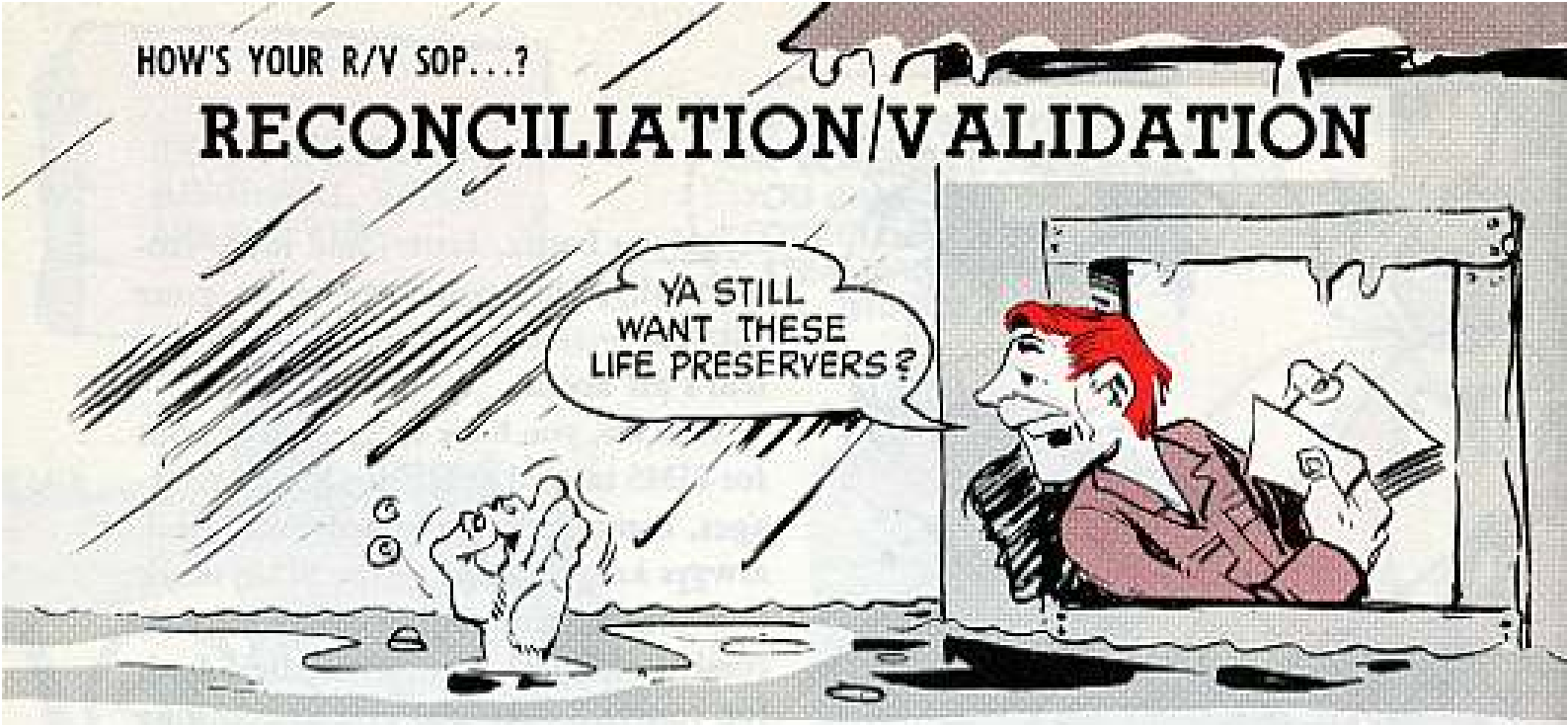
SIMS items, of course, are shipped by top priority transportation when urgently needed . . . all the way to where they'll do you the most good.

So—what else does the system need . . . ?

Just your ever-lovin' dedication . . . your special help to control and use SIMS items right . . . wherever you find 'em.

HOW'S YOUR R/V SOP...?

RECONCILIATION/VALIDATION



The big words call out the simple (but real important) action which updates your due-in suspense files. The updating saves loads of time and work, and saves supply $$$$—unnecessary buying, stocking, shipping, etc.

Due-in updating works like this:

Your DSU (direct support unit) sends you a list, or a deck of cards, showing things they've owed you for 30 days or longer. You match their info with your due-in suspense files, and validate your due-in's (that is, you check to make sure the items are still needed by your outfit).

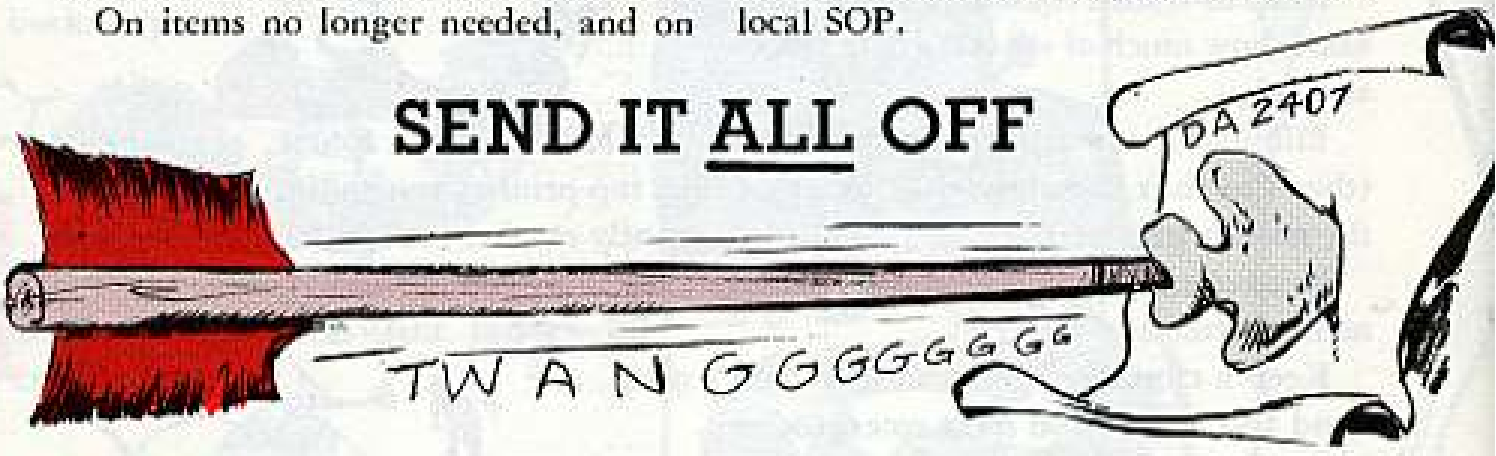
On items no longer needed, and on items that are on DSU's records but not on your due-in records, you send the DSU a cancellation request.

On valid due-in's in your suspense files—but not on DSU's records—you send your DSU a follow-up request.

The basic info on reconciliation/validation is covered in para 4-8d, AR 735-35, and the details on the operation are spelled out by your local DSU SOP.

Your outfit's consolidated PLL is also due a reconciliation/validation check-up. It's done every 6 months or sooner, and the details are also spelled out by local SOP.

SEND IT ALL OFF



When you fill out a DA Form 2407 (EIR) on your equipment or a DA Form 2028 on your manual be sure to give all the facts, Man. The outfits that receive these forms often have to send them back to get more info. So, give all . . . accurate, clear, complete. Test it on your buddy; if it's all clear to him, then it should be clear to the people who receive it.

Aircraft Subsystem Reports

All maintenance actions (Org, DS, S or depot) on aircraft and **all components** must be reported on DA Form 2407 — except the repair and installation actions on components that are reported on DA 2410. Even on DA 2410 items, report **removal** and **on-board-maintenance** actions on DA 2407. In addition to components, aircraft maintenance reports include required reporting of all maintenance actions (whether on the aircraft or in the shop) on installed survival and precision measurement items and on avionics and weapon subsystems. For non-aircraft items, units may include the reports on the monthly DA 2407 **on the aircraft** or submit 'em on separate DA 2407's. DA Cir 750-35 (14 July 71) spells out details.

Antenna Cap

The FSN for the AT-271A/PRC-25 antenna tip cap is 5820-259-5009.

Hold It!

The high-pressure tube assembly, FSN 1040-084-7428, in TM 3-1040-220-20P (Jul 63) for your M5 agent disperser is not for you. Info on replacing it is in the disperser's -35 TM, 'cause it's a job for support. Your -20P is being updated. Meanwhile see TB 750-942-1 (Jun 71). The updating includes an FSN change. The tube's new FSN is 4710-084-7428.

UND–IPD Codes

Lookout for changes in your Urgency of Need Designator (UND), and Issue Priority Designator (IPD) for use in your maintenance and supply requests. Your supply UND's are now A, B and C. Your IPD's run from 01 through 15. The new scoop on the codes went out in DA Letter, LOG-SP-PPB (5 May 71), Subj: Uniform Material Movement and Issue Priority Systems (UMMIPS), and was effective on 1 July 1971.

Be In The Know

So you read the original technical manual on your equipment? Right on! But, you've changed — maybe your equipment PM has, too. Have you eyed the TM lately?

DX New Look

Maintenance by direct exchange (DX) of repairable for serviceable components, using DA 2402 for each 1-for-1 swap, will soon get an overhaul and expanded use. Command lists of DX items have varied, but starting 2 January 1972 a standardized DX system is planned. DA Cir 700-21 (May 71) lays the groundwork with details to follow in an implementation plan.

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

☆U.S. Government Printing Office: 1971-769-008/2


PST, HEY BUDDY... NOT USING YOUR GEAR FOR A SPELL? REMEMBER TO TAKE OUT THE BATTERIES.
TAKE 'EM OUT...
TAKE 'EM ALL THE WAY OUT!
1½ VOLTS
BATTERY, DRY
BATTERY, DRY BA-414/U
BA 30