

Issue 216

PS  
★

1971 Series  
September

THE  
PREVENTIVE  
MAINTENANCE  
MONTHLY

WELL ... YOU LUBED  
EVERYTHING UNDER HERE  
BUT THE RIGHT PLACES!  
... NOW, LET'S DO IT BY  
THE MO.

*Gene Egan*

THE ROAD IS OPEN FOR—

# MEN ON THEIR WAY UP

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

Slots are open right now, and MOOLP slots are specifically needed for such MOS as 93C, 93D, 93H, 93P, 93L, 76P and 76L. 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 units, in depots, arsenals and commodity commands — even in Headquarters, DA.

So, if you're an 85+ higher, dig out Chap 19, AR 614-200 (use 77) on MOOLP and get with the paperwork. Your own CO can nominate you for the MOOLP Logistics Program.

Have a happy and 545-Mood career!



## ARMY'S NCO LOGISTICS PROGRAM



AND DON'T FORGET THE MOOLP COMING AT YOU LATE!



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# THE ARMY

# "LAY-AWAY PLAN"

## LAST OUTPOST SUPPLY



When you've got more equipment than you've got room to store it, more TM on the chain than to do it—you've got big trouble!

If you could't do this thing then the Army equipment "lay-away plan" is for you. The idea is to have all the TCM equipment on hand—without you. You can't use what don't need to be ready today waiting for a need. But all kept in lay-away shops is not the whole story.

The plan's officially called Administrative Storage. It authorizes you to make lay-away shops wherever equipment it can't keep combat ready. There's no need to spend yourself' time, 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 118-286-1 (Mar 71).

The Department of the Army gave Administrative Storage a big push with DA Form, AE 04-4 (20) LOG-LSMAO, and 2 Mar 71, Subj. Administrative Storage of Equipment. It was written to be for commanders.

The TM often made needed called to order with more equipment than they can maintain.

It tells where you can use centers, what extra services must be done, and gives you the steps on existing equipment, inventory, inspection, and removal from administrative storage.

The ideal situation is to pull everything—this is, retain your operations from one piece of equipment to another—on a standing basis so that it all gets used. That's keep all of your equipment lean and avoid all "overhead" of the units and jobs.

WHY DON'T YOU TRY THE NEW LAY-AWAY PLAN?

WHY DON'T YOU TRY THE NEW LAY-AWAY PLAN?



**THINGS TO CONSIDER**—The type of storage area (open field, hardtop, covered, insulated) has a bearing on how much and what kind of equipment you can store.

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

And there's the time factor, which the Old Man wants for stored equipment to be made operational. If it's to be within an hour or so, you want the able to get much more storage.

### CRASH SITE

On buildings are handy and you must use the great numbers, pick a smooth and well-drained spot.





Avoid parking under trees, except when the natural situation calls for exceptions.

Place equipment in their own locations for servicing and inspection.

Place engine exhausters away from blowing wind.

On days with high winds, fasten the equipment's wheels away from the prevailing wind.

Tail gates in a low hazard — keep in use and be sure flashing equipment is handy.

Mark all the storage areas with signs and posts saying "Authorized worker storage." Keep "no-alcohol requirements" out of the area.

**GETTING READY**—Get the necessary preservative materials in stock before you start. Appendix A in TM 742-92-1 contains a good list of PBT's, and BR 38-1-10 gives lots more.

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

Run through the 742-series TM's, BR's, pamphlets and regulations. They'll show a lot of light on this "storage" business that can be useful in your SOP. If you want to stockpile a whole bunch of equipment at one time it's worth using the production line or stock method to do the servicing.

HERE'S A PRODUCTION LINE AND THE... OF COURSE, YOU MAY HAVE TO WORK IT OUT TO FIT YOUR NEEDS.



### BASE STORAGE PRINTING

**RECORDS**—Maintain your records and reports on stored equipment as outlined in TM 18-742 for equipment in use.

**REVISE**—Fill the 3, Q or whatever periodic PM is called for by the equipment in TM. This includes complete labeling per the LD. And finish off with a current ROC rating.

**RECORD PRINTS**—Carry on every as you can. If they don't make the form **RECORD ADDRESS** and you're using descriptive, they can be done later while equipment's in storage.

Be sure they're marked on the 2485-14 and a regular price index is for them. For equipment that doesn't have a -14, use them on a piece of paper and place it where it'll be found.

**MAINTENANCE**—Make your support line deliveries maintenance on the deliveries, never less before going into storage.

**W**—If the basic line items are not stored along with the equipment, tag them with the equipment's registration or serial number and location. And put a note in the equipment's records where the W is stored.

**PROTECTIVE COATING**—Brush all concrete areas, steel areas, roll-up windows, open drive belts, and seal openings in delicate part of instruments to keep-out rain, dust or snow. When a component is completely sealed, be sure to use some desiccant. Place a plastic seal board between the top and steel, especially with construction equipment.



**DRAINAGE**—Tip trailers such as trailers and dump trucks so they'll drain. Place drainage wood bars under rear or top and wires to drain-trap water under.



**LOADING BATTERIES**—When fully recharged, batteries from fully charged (2,200 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 1.275—has 1,200 in hours. If you're where it goes out cold, it's a good idea

**SAVE WAX**—Cover items like wheel axles, exposed gears, pistons, valves, hose, steel plates, cylinder shafts, hot exhaust pipes and other exposed metal with protective lube.

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



to take the battery out and keep them in a warm building. This'll prevent freezing of the regular run-up-line air. Keep up the charge.

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

**NOTE**—Lead acid batteries are heavy

Put in clean alkaline batteries, or don't store 'em together.

**BUY THE RIGHT**—Remove them from an equipment—over 100-amp. Put them in cool dry place, never in a place that's below +71° F and below +52° F (freezing) is best.

**WAX TREAT**—Clean the air lines and air tanks. Leave the pressure open but have a cap on the steering wheel rolling in. Do not apply lube—check the wheels instead.



**EMPTY TANKS**—For those pointing up with an oil cover, put a No. 30 cap over 'em. It keeps out the water but lets 'em breathe.



**WORK UNDER COOLING PIPES**—Keep it up like TB 700-000 says. If you're not in an area that requires anti-freeze, be sure the system has the right amount of antifreeze.



**FIELD SERVICE—Shortly**, just after the engine (around the battery), bring it to normal operating temperature (about 180°F) then run it about another 15 minutes to dry up all the condensation in the system.

**WARNING** Do never allow it to stall—Load it (2). This requires inspection by opening the valve (1) and (2) valve, (3) valve, closing all gears and rings, making sure valve and sealing all accessories and essential equipment. This'll affect and seal your valve "valves" and give you access to work any fluids that may have leaked.



**ADVICE**—Cover inside the valve with preservative oil and immerse a strip of Vaseline-Coconut Lubricant (303) (11-000-000) into the full length of the valve. Seal the handle and nozzle. Remove nozzle, break, close and run all heavy metal with preservative oil, and wrap and seal in each corner. Check the pressure, run with oil, replace the oil seal. If the handle ring and block are not protected by the valve, then



and seal with oil. Wrap them in one piece of bar for material and tape. Use enough space on the bottom for moisture to drain.

**FINAL INFO**—After disassembling and cleaning, coat all parts with preservative oil and sealants. Store in racks or cases under cover. One ring means with C.A.A.



ENGL  
1971



**THE 4-MANUAL EQUIPMENT**—The intent is to provide emergency equipment for portable collection. But many of the DA label do with "CPU" collection before use. If there's no label (you mark a blank 90 label and insert it).



**FIELD SERVICE EQUIPMENT**—Never store this type equipment in an open field. Look for a dry container that's well-ventilated and has drains. When several storage space is limited give small items like valve sets, optical equipment, test sets, photo equipment, etc. the benefit of their coverage. The large stuff that may be stored outdoors should be covered in such a way that it won't be ventilated and will keep you covered from. Don't allow waterproof containers to be used and tape over the exposed connectors that have an individual cover—the antenna connectors and control boxes. When solar and components the requirements of similar equipment are to be stored put out a radio frequency and electromagnetic radiation-free area to prevent damage caused by receiver crystals and deterioration.

**WARNING**—Equipment in open storage areas for important work. When under cover, assembly instructions are sufficient.

Make a well-known "closed" type arrangement. Look for: Low or flat area. Look for: flat, all, refrigeration, cooling, loss of preservative and wraps. Turn, split or open covers. Allow parts. Connection or other deterioration. When in components. Repair should be done as soon as possible, and done so.

**ADVICE**—Before removing any piece of equipment, verify the records for any special cases. In any case something done so it that you'd never require. Then check the manual and do the required service.

WHEEL BEARING ADJUSTMENTS

## RE-FOCUS ON WHEEL BEARINGS

Dear reader, don't you agree that there's a better way of adjusting wheel bearings on our M271-ing trucks than usual?

There sure is something wrong with the method in place at GM. (760) 442-2222-442-2222 is a PO BOX. You know the always adjust the bearings just like the TM says, but we're having being asked for better bearings.

So we adjust the bearings of your rig—by the TM—and we're in for it. (760) 442-2222, the bearing play from the outside before. What's the answer? (760) 442-2222

By A. B. B.



Dear Sergeant J. B. W.,

There's nothing wrong with the wheel bearing adjustment in the TM. There's no special difference between the wheel bearing setup on your M271's and any other vehicle—and bearings are adjusted on all wheeled vehicles in almost exactly the same way.

So why is it the M271 the vehicle most often tagged with "loose wheel bearings"?



That's the reason it's the most important don't inspect 'em the right way, or they couldn't other adjustment 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'd loose 'em from the axle and back o' axle. With such a small, light wheel, a little bearing play may seem like a lot to someone who doesn't pay close attention.





That small size and light weight also means the mechanic has to be more careful when he's making his adjustments. He may be able to get the right "feel" in the shop, but a sloppy job usually will show up as "loose bearings" soon after that M111 hits the road.

(Most time on both adjustment and inspection.)

### PART NO. 1



What's really checked up M111 wheel bearings by the curtain in your PM. Dry 'ol water in the lube. Worn parts.

And this ties right into the question of wheel bearing adjustment. If there's a new 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 running free 'ol easy for a long time. You have to clean and lube more often in real dirty or wet country ... maybe even every day if you're plowing through hub-deep mud.

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

And, if there's dust blowing around, keep those clean parts covered till you're ready to put 'em back together. Clean your hands good before handling 'em. Make sure maintenance lines, too. And keep grease caps covered when you're not dipping 'em out 'em.

I BELIEVE YOU... YOU CLEANED IT! THAT MEANS YOU LET IT GET ALL DIRTY AGAIN!



Dirty or worn parts won't fit together like they've spaced to. You've got 3 parts in your M111 wheel-bearing shop — 2 nuts, 2 caps, 2 bearings and a seal. If any one of 'em is left coated off a little when you've finished adjust-



ing, the whole truck will bounce 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 correct setup.

**"Tighten flange nut to 42 foot-pounds. Be sure spindle is from proper setting of bearing assembly."**



Now let us make the spindle while you're working down the flange nut. This has to be done with the wheel — the 'ol rim — off. Only the brake drum mounted on the spindle.

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

**"Now you look off the nut 1 complete turn to take off the square."**



**"Now you turn the nut down only. 'Taper tight' is there'll be room for your bearing to compress further."**



All "taper-tight" makes the nut compress up the cones pin hole, back off the nut just enough to uncover the hole. Install the cones pin, and remove the wheel.

Some guys like to double-check. They run the vehicle a hundred yards or so and inspect the bearings. That'll run will show up anything that didn't get noted good when you inspected 'er down. You may have to go through the adjustment again.

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



### ROTTING

You can't make a good inspection of HII wheel bearing adjustment with the wheel stuck on the ground. It's got to be jacked up off the ground so you have free run whether you're feeling bearing play or movement in some part of the suspension.

**To find bearing play, you grab wheels at the top of the wheel nut, flex it just gently, you're 'er pull out — with a sharp arc toward the hub.**

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

But if they feel downright stoppy — 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 bearing plate.

When when you juggle the wheel, you've really got your finger on it.

*Half-Shell  
Tug*

## LEARN THE CHAPARRAL SHOTS



Chaparral PM roadsters give you 10 to 1 odds on better mileage system performance.

**Observe:**

**TO KEEP YOUR AIRFLOW OVER EARS** in action, keep it close to the chassis of the carter . . . and well away from the air conditioner.

That way, when you swing the air conditioner out on its hinges you won't crank out on your ears.

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



**KEEP AIRFLOW  
CLOSE TO THE  
CHASSIS**

**SEE CONTROLS**



**CONTROL ARMS  
SIDE IN  
AND OUT**

**CONTROL ARMS** adjustments can spell the difference between smooth operation and a damaged board.

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

If the crutches aren't adjusted right the canopy won't fly during transit and damage the flaps.

Best way to adjust the crutches is with the canopy closed. Slide each crutch in

ward the canopy or the canopy will chafe with just a push.

If you have no chain in or close to, the catches are too often, so back 'em off a hair and re-tighten 'em. Don't do's back 'em too much, because that allows the canopy to fly up.



**ADJUSTING CANOPY** adjustment that's gonna be just right is in the back end. If chain's right, the disk hangs over the handle and pops it back ... which can damage several times. You've gotta find your way on the adjustment so he runs the disk clean.

**THE BAIL HOLE** jams behind the seat rail ... and runs up the rail covers the damage or less when you try to remove the hole. Be careful to pull the hole away from the rail ... and be careful coming up so you don't back over the wires.



**THE SPRING CHAIN** on the turret gun stick with extended use, and there's a slight tick you can use for a good adjustment. First, adjust the chain per TDS spec with the turret up. Then, run the turret down ... and up again so he sure it's properly adjusted. Check it on the turret run up for the same, etc. Without the turret run, you can be off, and the chain can slip.



**TRIM THE SCOFFERS** - even may look enough to hold up if you use 'em as a step into the storm.

But they aren't, and using 'em as a barrier or any other kind of roof can tear 'em up.

There are other, more functional ways to get in the storm, so use 'em, *Manly*.



**IF YOUR BATTERY LIFE'S UP** is giving you too long to be 'em in, give a listen:

Normally, you can make 'em all 4 feet or longer (series), or any combination of them, but if you can't get the 4 in the breaks on the cables, it may not be your best.

If you've got the new Pro-Series, they're just one wide for the breaks. The breaks make 'em that way.

So, make 'em again, but use only 1 or 2 Pro-Series . . . which are about 16 inch wide than the old battery type. That way, you should be able to get all 4 in the breaks.



**PERIODIC CLEANING** of the lamp and ground pins on the bench will be desirable, but cleaning the pins after every filing 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 either or wire brush after is good.

The best of the self-cleaning 'rough' roller dampers (like wheels) that need occasional cleaning, too.

Otherwise, they make for rough handling when you slide the wheels on the bench rail.



SHILLELAGH FOR SAFETY



PUT 'EM

BACK, MAC!

FOLLOW YOUR TROUBLESHOOTING TRAIL.



The many good Shillelagh guidelines and control system components are making our many "bad" trips.

You, as nerve mechanic in charge of good trips, can locate it at the source by our hanging necessary "DS" 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 Control system, remove the substitutes that didn't cure the problem and reinstall the original components.

Simple, huh? Like a cold cure on a hot day.

## DA 3410 FOR SHILLELAGH

Shillelagh instructions have a new publication of DA Form 2410 for reporting removal, repair, overhaul and installation of components. TS 9-421-448-21 (Use 7-D) low-component you report, required status and from disposition problems. U.S. Army Wash. Command wants initial inventory forms from units that didn't need to inventory report per TS 9-1425-466-29 (Jan 76).

To grab a handful of Troubleshooting Table 9-4, starting on page 9-41 of TM 9-1150-218-12, and read us about how you've gotten into this:

First, limit the paperwork that unnecessary parts usage generates. Like, you've got to write up paper to save to parts . . . which takes longer than some of the following alternatives.

The paper is limited to whatever was needed for you to get the good components from your P/L or supply line.

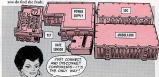
Good guidelines is to work out an arrangement with your supply support whereby you can sign out all the components you think you need for a check, rather than coming back for them one by one.

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



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

All you have to do with the modulator, signal data converter, power supply, main run motor and run and check-out panel (TCP) is to disconnect the cables in each . . . as you test them. Hook the cables to the good component. If it doesn't cure the fault, leave the good component connected . . . and go onto 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 carriage mount, motor and transmitter in order to check them out.



1. If the transmitter doesn't slip, you can check it out by replacing it. The motor, & the carriage mount.

2. If the transmitter does slip and you've got a 100-50, the signal data converter panel may be faulty.





1. If no lights are visible on the TSP, check the cable connections, particularly the 12 power supply connections. If no power is shown, almost certainly across a fuse 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 local mechanics. If you're working on a quarter with known-how, make these tests on the TSP in their scheduled order. This one up and you might as well throw the book away.

### END OF TEST



1. Make the lamp and motor test.

2. Shine with the transmitter test.

3. Turn the slide lever clockwise and cover lower counter-indicator on the message screen, and make the tracker slide out.



4. Check the horizontal window outside while cover doors after tracker slide to assure that the light beam is centered in the view from inside.



1. Turn the edge lever and nose levers on the master checklist and make the system test. Normal indication lights the green LED lamp.



2. Make the master check, identify and correct per table 2



### 7. Reset

- If your system's OK, none of the LED OK lights should come on during the test.



## SELF-TEST VERIFICATION

1. Make the system test with the telescopic master edge lever and nose lever master checklist. Normal indication should be: master OK LED lighted.



2. Make the system test with the master edge lever master checklist and the nose lever master checklist. You should get a OK LED on the OK.



**3. Clean the barrel.**



**4. Make the system hot with the mount align laser normal elevation and the ready light on. Pull the fire trigger. Normal indication would be 50' read, a mount align laser read counter-clockwise, and the reader info reading for effect-normal-zeroed.**



**FOR MORE CLEANING...**

## **MY NAME IS RBC**

**RBC, Rifle Bore Cleaner—MIL-C-3726—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-3726. This will give it the one thing that separates RBC from all other solvent-cleaning compounds.

**LOOK FOR  
MIL SPEC  
MIL-C-3726**



Hold on, Partner. Anytime your organizational TM or DD calls for CR, use RBC. Also when you require solvent-cleaning compound... ask for RBC—Rifle Bore Cleaner.

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

<b>Small Arms Size</b>	<b>FIN</b>
1-in bottle	689-294-654
5-in can	689-294-663

<b>Artillery Size</b>	<b>FIN</b>
1-gal can	689-294-661
2-gal pail	689-294-657
55-gal drum	689-294-666

Take the size you want. Then look for both the FIN and MIL-C-3726 on the container. This is the only genuine, guaranteed bore cleaner. Accept no substitutes.



14-001 (THIS MESSAGE IS)

# Merry Mess age Makers

WHY NOT TRY THIS NEW GIFT?



When the silver screen and the beam is through . . . you naturally want to hang up your 14-001/00T handset, don't you?

With the right end of the 14-001 on the right end of the TA-012/00T or TA-007T cradle, of course.

Good, to slide the receiver against the 2 retaining springs in the receiver

cradle, the 14-001 hangs down in its cradle, can spring the springs and even create less 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.

Lower the handset to a handle to keep your telephone set just plenty of trouble



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

After you give the receiver a slight push toward the springs, the transmitter and 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.



on the springs and being no trouble too.

Oh, if the TA-012-000-001-4-2 has the 14-001 for the springs.

When you want to use the generator crank handle for a 14-001, either, it can break and downtime your phone.

Instead, use the carrying strap.



If you're shy the rubber cap for the handset, PSM 5845, 5846, 5847 will get it for you.

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



When you create that handle, you don't need to wear it out. Fear no 14-001's like the job. More than that could create for extra wear "it" wear and may be hard to handle or wall brackets. This work is made of aluminum, so no much pressure can create a break.

After you finish creation, bend the handle back into the generator what is



it won't get knocked off. If it should get knocked off, get your support to install a new one only! PSM 5845-582-7712.

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

This will give to your telephone set, too . . . even when you rip it in its own way.

So, when the rain falls, cover your TA-012 or TA-013 with a plastic, plastic or anything else that sheds water.

As an extra measure damage to the battery will and the inside parts . . . which do get you even though they look snug.



When you're not communicating, most close of this **PRESS-TO-TALK** switch. It seals air-circuit paths<sup>1</sup>, and you can wake your 84-00 handset by playing with it.



Normal! Well, you've found to end up a bit more so if you rub the element wires and break 'em. When you're get-



ting elements off, be careful not to short up the connecting wires when screwing on the rubber or transmitter cap.

Normal or careless fiddling with the CC-1111/11 electrical cord assembly can peel off considerable insulation.



You can do it without thinking, without realizing . . . but the probes are always

the same. And, in-crow, be careful not to rub or press or otherwise finger-doodle the ear-piece! This could keep your telephone out during the regular shop. Constant unnecessary screwing can also give this tired a headache; don't let it be and it'll do its job.



Minimum is a normal string of your telephone use. To fight it, see that you have a definite screen in the transmitter.



It'll help keep our molecules and dust. You can require it with **NEW 1001-102-7038**, as listed in **TM 11-5901-204-11P** (Aug 67).

In your daily PM, a clean check can work wonders by adding the TA of inhibitors such as moisture and fungus collected on the case, heavy components, cord, handset housing, and connectors.

When you're creating that hand-ringing<sup>2</sup> groove, you don't want anybody pushing<sup>3</sup> in the **PRESS-TO-TALK** switch on the H40 . . . or all you're gonna get is a good dose of wire burned off a ring. Sometimes a roller might do

press the switch—and y'know it, and maybe you press your TA receipt



to support because you figure it's your switch.

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

Give a time when you're going to cooperate from your H-OO, go back slow about reading your telephone or to support. They have a handy microphone or receiver attached, and that's an organizational replacement.

Look numbers for the elements are listed in TB 11-5864-224-11F.

You'll want to keep the top-panel screws and bezel disengagement screws mugged in to protect the rubber gas-

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

If you need a security lamp to let you

SEE A SECURITY LAMP?  
SEE FOR 300-30-470



know when you're doing some unintentional off-task maintenance, go after it with PIN 100-110-0110. That'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 cover pin about #1/2 to long and 1/8th-to-thick. This might hold you until your battery box arrives until you get the regular retaining pin (PIN 511-104-0111) from supply.

Support has been given to quite a bunch of TA 41's and TA-41's for repair . . . and all that's wrong is cracked-out batteries. Makes some sense with the 'em, checkin' out the rest.

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

If you need the data plates for your TA-5131FE telephone set, use PIN 5861-206-1162, Page 29, TB 700-01-1 (Nov 78), for the word.



less, which can check out of line maintenance to keep into the hands of your TA

They are offered by a number of airlines, but the most comprehensive is the one offered by Delta. The list of airlines that offer this service is on the back cover of the magazine. For more information, call Delta at 1-800-451-3000.

# PUBS



## BEVERLY HILLS

BEVERLY HILLS PUBS: A list of 100 of the best pubs in Beverly Hills, California. Includes names, addresses, phone numbers, and descriptions of each pub.

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## Be Cheery

If you get on air cleaner than almost any other aircraft, don't be surprised if you don't see it. This one doesn't need wind screens sticky air to get into the engine. Instead, see any other clear aircraft like the 737-4000. They all come under FAA 2900-2900-2900.

## Can Save Your Wife

Remember—to get with your first resistant flight suit you want Cheery, Flyers, best resistant nylon suit. Your supply will find you listed in Red Cat 2840/2840-A (see 70) under 704 8410-210-0000 Box 0000 (page 7-11) ... a choice!

# MWO of the MONTH

Believe it or not ... some Flyer's (28-11) have met basic modification with 28, FOM 1200-800-0000, to find alternative better in the event of linkage loss. Without regard MWO 28-1200-200-2000 (see 28), control about the parking suit can be lost ... maybe the aircraft, too!

# JOE'S DOPE

## THINGS YOU SHOULD KNOW ABOUT \*

Explained by Connie Rodd

\* BUT NEVER DARED ASK



I'M SO  
EMBARRASSED!

I WISH  
YOU WERE  
SOME  
KIND OF  
ARMED  
SERVING  
PERSON!

WELL,  
IT'S A BIT  
BABY...  
I CAN'T  
CHECK ON  
MY BACK,  
BUT...



I DON'T HAVE EXPERIENCE  
LIKE YOU FROM HOME  
DAYS!



ALL RIGHT,  
WHEN YOU  
ARE READY!

SO WHEN DO I GET  
TO GO, LOVE, A  
MOMENT - HOW ABOUT  
LATER ON?





THE GREAT CHEF NEVER  
 WILL SPEAK OF US  
 THOUGH! BY STAYING  
 ANONYMOUS!

I NEED  
 COGNAC  
 PLEASE!

WELL, WOULD YOU, IT'S ALL  
 IT IS! GO WITH THE LO—AND  
 DON'T FORGET! — AND  
 DON'T LET ANYONE UP THERE  
 WITH THE GREAT CHEF!  
 CAN'T YOU JUST  
 SEE IT... GET TO  
 ME, AND YOU KNOW  
 YOU'LL BE ABLE TO  
 TAKE THE TRICKS-OF-  
 THE-TOWN,  
 AND...

**WATER PUMP**

INSTEAD OF BOTTLED  
 WATER, WE'VE  
 GOT A GREAT  
 SYSTEM AND  
 WATER-HEAT  
 SYSTEM!

**WATER  
 BRASS SYSTEM**

USE ONLY  
 NON-TOXIC  
 BRASS!

WATER PUMP

THIS IS  
 BEST BUT  
 EXTENSIVE  
 USE...

WATER  
 BRASS

WATER  
 BRASS

IS THIS  
 AVAILABLE  
 IN  
 YOUR  
 AREA?  
 FOR MORE  
 INFORMATION  
 CALL  
 1-800-555-1234

**WATER PUMP**

USE ONLY THE  
 BEST WATER  
 PUMP!

WATER  
 BRASS  
 SYSTEM!

**WATER  
 BRASS SYSTEM**

USE ONLY THE  
 BEST WATER  
 BRASS SYSTEM!

WATER PUMP

WATER  
 BRASS  
 SYSTEM

**OVERBLIND**

...STRAIGHT, STRAIGHT-  
CASED AND  
STRAIGHT-UP  
CLOSE, STRAIGHT-UP,  
VERY CLOSE  
AND BLIND.



**DISTRIBUTORS AND CONSUMERS**

IT'S ONE OF THE  
ON THE ROAD CAR

ALL THE WAY  
ON WHEELS ...  
ONLY A FEW SHIPS



**THE CASE -- THE STRAIGHT, STRAIGHT, STRAIGHT --**

STRAIGHT AND  
STRAIGHT-UP  
WELL... AND  
STRAIGHT-UP.



IT'S AT THE  
WELL NOT

IT'S A CASE  
BLIND FROM THE

STRAIGHT AND STRAIGHT-UP  
WELL... AND STRAIGHT-UP  
WELL... AND STRAIGHT-UP

IT'S ONE STRAIGHT AND STRAIGHT-UP  
WELL... AND STRAIGHT-UP ...  
WELL... AND STRAIGHT-UP



**STRAIGHT**



AND THE STRAIGHT-UP, STRAIGHT-UP  
WELL... AND STRAIGHT-UP, STRAIGHT-UP  
WELL... AND STRAIGHT-UP, STRAIGHT-UP

STRAIGHT, AND STRAIGHT-UP  
WELL... AND STRAIGHT-UP  
WELL... AND STRAIGHT-UP

YOU WANT  
THESE IN  
THE STRAIGHT-UP  
WELL... AND STRAIGHT-UP



# Joe's Dope Sheet

These mechanized rigs groan and bleed,  
When friction cuts down on their speed;  
The action's so rough,  
They can't do their stuff...  
So pay heed to the Grease Gunner's Creed!



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

**DRIVE THE POINTS**

HOW ABOUT SOME  
TWO-WAY  
REPEATER?

FOCUS THE DEPART BRANCH  
THE CASE... (WHY) REPEAT  
OVERLOOK A SHIELD DAY!

IF THERE ONLY ONE  
KEY THAT TO MANAGE  
THE TEAM!

IF THE POINTS HAVE  
NO IDEAS, PULL OUT  
THE KEY OF SUPPORT AND  
CHECK... AND HAVE  
OFF THE BROWN.

ALL DE-CAN POINTS  
DO NOT SAID  
WIT IN ONE DAY

IN ONE A DAY IN  
ONE TO ALL POINT,  
SUPPORT ONLY  
UNION CLASH  
AND HAVE UNRAIL,  
AND HAVE  
CONTROL.

WITHE ONLY ALL  
FITTING POINTS  
IN ONE POINT  
WITH UNRAIL  
TO UNRAIL!

**DO IN ONE DAY**

THEY THE LINE CLASH  
IN ONE A DAY TO USE  
WITH HOLD FOR TRAINS.



**PROP SHAVE  
B-BAND...**

USE PUMP BY AN OTHER  
SOURCE AND NOT ON.

**USE THE SIZE  
PUMP WITH  
THIS SIZE—  
CHECK  
PUMP'S  
MANUAL FOR  
SIZE OF VAL.**



**SPRING OUT BEARING**



FIRST, CLEAR AROUND THE  
VALVE. REMOVE THE BEARING.  
IF THERE IS A PLUG,  
REMOVE IT AND PUT  
IN A PITCHER. PUMP IN  
OIL. LIGHT IT DOWN  
AROUND THE PLUG.  
THEN, REMOVE THE  
OIL SCREWS.

**REMOVE THE PUMP**



REMOVE THE  
PUMP FROM THE  
APART BY THE  
VALVE. PUT THE  
PUMP IN THE  
RIGHT ORDER.

**REMOVE THE  
OIL FROM THE  
PUMP. USE THE  
PUMP TO  
REMOVE THE  
OIL.**



USE THE PUMP TO  
REMOVE THE  
OIL FROM THE  
PUMP. USE THE  
PUMP TO  
REMOVE THE  
OIL FROM THE  
PUMP.

**REMOVE THE  
OIL FROM THE  
PUMP. USE THE  
PUMP TO  
REMOVE THE  
OIL.**

USE THE PUMP TO  
REMOVE THE  
OIL FROM THE  
PUMP. USE THE  
PUMP TO  
REMOVE THE  
OIL FROM THE  
PUMP.



**REMOVE THE  
OIL FROM THE  
PUMP. USE THE  
PUMP TO  
REMOVE THE  
OIL.**



REMOVE THE  
OIL FROM THE  
PUMP. USE THE  
PUMP TO  
REMOVE THE  
OIL FROM THE  
PUMP.



REMOVE THE OIL FROM THE PUMP.



REMOVE THE OIL FROM THE PUMP.

THEY USE AN IRON LINE  
WHICH IS SO SPECIALLY TAILOR

THE TRAINING  
AND CONDUCT

THAT'S RIGHT  
AND USING LIGHT



AND WITH TRAINING  
AND CONDUCT TRAINING

CONDUCT TRAINING . . . IF THERE'S NO  
SUPPORT TO TRAIN BY THE MANUFACTURER,  
THEY CAN'T BE THE BEST TRAINING CAN BE  
SPECIFICALLY AND IN CONDUCT.

"I'M NOT SURE  
I CAN BE A  
MAN... I LOVE  
AS A MAN!"

"DON'T WORRY  
YOURSELF  
THE GREAT, I  
HOPE YOU SPEAK  
WELL OF ME..."



"SO THAT'S HOW  
YOU WANT TO BE  
THE PERFECT MAN  
IN THE COUNTRY"

"AND THE  
BEST PERSONAL  
MAN"



"OH, NOW  
YOU WANT  
TO BE IT?"

"AND, I LOVE  
YOU AND YOUR  
GREAT..."



"... I WANT YOU  
LAST TRAINING  
BUT BECAUSE ABOUT  
ME, WITHOUT YOU  
WE CAN'T TRAIN  
ANYONE ON THE  
ROAD, NOT?"



## THE PAUSE THAT REFRESHES



A couple of minutes spent cycling the troubleshooting chart in the bird region's technical maintenance pub can jog your problem-solving memory. Could your grief from changing the wrong part?

Hey, you have an engine magnet on a Kiteco Tilt engine, for example. Some types can't change the water-generator, right off the bat.

1. Troubleshooting  
wings wiper

By reading responses  
if water magnet replaced

Check and adjust magnet

Adjust water magnet  
float

Check assembly between generator  
engine's 4 magnets with right  
engine

Generator float set  
low

Float probably at wrong end of tilt  
rod; check water level in upper  
water generator

Generator float set at high  
level

Reduce water generator

USE THE  
TROUBLESHOOTING  
CHART

... Course, a look at the troubleshooting table on page 12-8 of TM 15-1120-106-20 (Oct '76) will clue you that the problem could be a faulty voltage regulator. Every minute those habits draw moisture during the wet season!

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

low time and other gases, Berkeley.

Be a troubleshooter first—a correct part change, second.

**CONDITION**



All it has to say when the red hydraulic fluid in your bird starts pink or brown.

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

**TAKE 2 TO BINGO**

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

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

Stop-down, kids, for some pointers on keeping the fluid clean is a Hibonak 624-11.

Close off, air eyes, when you add MIL-H-5606 hydraulic fluid to the bird go about it as follows:



**RED?**



"HYDRAULIC FLUIDS AREN'T 'GARY' (GARY'S) RED!"

Get a new, unopened can of fluid each time you bring the fluid level up to mark.

Wipe the can with a clean rag to prevent any dirt or grit from entering the can before you make up the system.

Your body will have a pretty low with clean joints.



Add the amount of oil joints you need and pour the oil in to come level to the mark on the can. Don't try to mix the fluid for another day because it'll probably get water mixed.





### Clean up any spills.



### Be sure cleanliness is also good for your Mole operator.



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



Change hydraulic filter elements on the Mohawk every 500 Periods, as called for on the checklists.

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



The same goes for Mole operators on M30 A18 types. Change the filters as called for in the TM in order to keep from contaminating the whole line.



If you have the DPA app on hand, P/N 400-140-000, the 10-micron low-pressure filter gets replaced when you have a pressure drop of 20 PSI, or ground across the filter. Use same method



change the filter when the differential pressure indicates lighter colors.

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

REPLACE THE  
10 AMPERE FUSE  
WITH FUSEKIT  
CROPS 20 Pg.



the case, with dehydrating solvent, Del-Spec F-DABK, Type 1. Use a soft fiber brush.

After the parts dry join the fiber parts together, using a new solvent.

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

If you service Chisole (CFL-47) with a D-14 or D-14-100 model it must be equipped with a 3-ampere slow-blow FUSE 115047M0001. It's listed in TM 91-1108-209-20P and -30P.

Hydraulic units are made by several manufacturers and a commercial part comes with each model. No specific TM's

are available. TM 91-1108-206-21 (Page 64) lists general pump on the D-14 model, however.

If you're single' the lines because of a missing part send all the same parts data to AVICOM and ask for number.

Send the part request to —

Continental Control  
611 Army Aviation Systems Command  
ATTN: AVICOM  
P.O. Box 209, Fort Belvoir  
St. Louis, MO 63114

Meanwhile, for an excellent troubleshooting operation and PM manual on hydraulic systems, see para 5-111 in TM 91-1108-206-21 (Page 78) on general maintenance.

#### A CLEAN WORK UP

Your little engine is mighty handy when the bird's down for an inspection and you can't see the engine in a confined area or penetrate the hydraulic systems.

Use the little White Hawk as already shown. Penetrate the system to see the landing gear, flaps and other components.



WILEY  
(Illustration: PM)



PULL CORD  
TO FLUSH

Wipe a dry connection with a clean rag.



When you make your leak up, the fluid flows.



Make sure that the connecting lines are clean. For each connection, wiping is made sure it's clean.



### HYDRAULIC LINE FN

Hydraulic rigid and flexible lines keep the high-pressure fluid flowing on the inside of your bird. They all have to be Number 1... don't bargain, man!

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

Take the hydraulic working line, P/N 200-075-111-1, on a Hazy 434-11. This baby has been known to fall due to high-frequency vibrations caused by the hydraulic pump. Keep a close watch on the line to make sure it's reasonable.

## USE THE RIGHT HOSE

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

When a flexible hose is worn beyond the limits given in para. 7 of TR 7904.121 (Step 6) fill in another pressure hose, get the right one from supply.

Buy the parts catalog for the hose part number you want, if supply is "break out" of the right size hose take the old one to suppliers. They'll make one up for you.

Never put in a smaller hose because you'll be putting six much stress on the matching parts—it'll crack the lines



when hooked up to a rigid tube. A hose that's too long also may crack the flow or kink the hose and hamper the flow of fluid.

Either way, you're in for some big trouble holes, or worse.

## NO BENDING, PLEASE!



The super-strong Melbank has nearly light-weight, low-stress aluminum tubing, 884.121. These runs are brittle and will break if you bend 'em or get a hard component.

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

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



## STOP OILING

Any of the right hydraulic lines in the wings of your Mikovik chisel? Then look over some special shade guard and insulate our line from weather.

For a Nylon line, or similar, you want IBM 0558427-3311. For 1/4-in. dia. 1/2-in. line use IBM 4730488-1852.

## 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.

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



## AIR LINE

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

Keep hose alignment by putting one wrench on the nipple and a torque wrench on the flange. Move on the thin nipple just out or you'll break the hose fitting end.

Over-torque of the flange may crack the flange or a right line. Under-torque may give you a loose line.

So, torque the flange on your hose to the figures given in Table 7-1 of T18 15, 1500-284-2571 (4 Apr 78) on general practice.



## CAMP HOOKS

When you go for your line clamps, ask for 3/16"-wide loop clamps. These babies have a nylon cushion and won't go to pin on you like the rubber ones do.



Stay out for the size clamp that won't stretch itself tired or get twisted, scolded, compressed or strung on the line during flexing cycles. You want a snug fit.

To prevent hoses from chafing other hoses, like in the Hoop 200-D ball hole, use standard clamps as needed.



Support other hoses by clamping them to the skidbars or components. The Super Hook (SH-14) has compound hose clamps. They're all needed, sup-



CLAMP HOOKS TO SKIDBAR!

port the hoses at least every 24 inches. Clamp flexible hoses so that they don't deliver rigid lines.

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



When you clamp up your ball, be sure you use the right screwdriver—Phillips or Slotted in France—depending on the type of screw. A Slotted in France screw on a Phillips screw will strip out the screws, for real.



Yourselves, there's real harmony when machinists and field operators get together to service a hydraulic system.

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

## THE KEY MAN

When it comes to getting the historical "word" on aircraft parts a field man is the key man.

He fills out a new DA Form 2410 from the component DA Form 2088-10 info, on a request.



Meanwhile, when he gets an over-hauled part back on his bid, he completes Section IV, copy it off the DA Form 2088 and makes the required entries on the appropriate DA Form 2088-10.



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

TR 15-1300-205-25 RUC 780 tells him what forms to fill out — by the part number . . . on request.

Are you a key man?

HISTORICAL

"WORD"

ON

AIRCRAFT

PARTS

# "ALL SYSTEMS GO!"



When your favorite Garmin (GARMIN) standby jack uses the push-to-test switch on the instrument panel to warn us we that battery of essential lights glow, ensuring all systems are go.

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

No need to waste your eyeballs looking for the replacement in Fig 15 of TM 10-1120-338-20P (Jan 71) also . . . 'twice fixed.

You want switch, P/N 1090195-0005. You'll find it in Fig 73, Item 4 of your supplier's TM 10-1120-338-20P (Jan 71).

That'll keep the standby lights switch!

## CORRECT COUPLING CLAMP TORQUE

USAERFUSE message AEWAY 8-80 111400Z Feb 71 says to use 200-150 in-lb torque on all Huey and Huey-Och's tail pipe coupling clamp nuts to keep the tail pipe from doing the split bit.

Before working with the torque wrench, check the clamp for damage, proper marking, and correct alignment. Correct torque will be added to existing torque plate ADAP.



## AIRCRAFT MECHANIC'S TOOL KIT

You aircraft mechanic will want to get hold of AC 1140-00-01-AR1 (May 71) so you'll have the latest listing for your Aircraft Mechanic's Tool Kit, P/N 1100-101-0002.



INSTEAD OF YOUR HAPPY

# A DISH OF HOT

# P.M.



Your insulated food warmer, FOOLER T5400-2485-0-011, holds the secret of keeping your hot food hot or your cold food cold.

It's so smart that you have to take care of it or you'll end up with lukewarm food regardless of how it felt the instant.



### SEALING

It's a must to keep your food warmer clean. Remove the lenses and gaskets. Wash them separately with soapy-hot water. Rinse well. Replace the gaskets immediately after cleaning to keep 'em from warping and losing their shape. Put 'em back with the lid side down and let 'em dry in place.

### HEAT UP

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

Warm the container by pouring hot water into the 1/2 hours. 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 inner before you put 'em back into the con-



tainer. If there's sand on the bottom of the inner it could scratch the bottom of the container.

Never use tin poles, screwdrivers, or other sharp objects to dip or break in to the container. One slip-and that's the

end of the container. Only do it by before you put it in the container.

If you have a container with a inner milk, or holes punched in the inner wall, cover them or milk, 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 inner latch and one outer latch being exactly opposite at the same time. Then lock the other 1/2 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. Let 'em down.

### DOOR HINGING

Be careful with the label or door on the outside of the container cover. If it gets painted over or sandblasted and you can't get the label, 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 lenses and gaskets. Leave all of the lenses unlatched. Store in a dry location. Do not put any big weight on any of the containers.

### REPLACEMENT PARTS

Order: Fooler, Inc. PO Box 7000, Dallas, TX 75207



Inner  
FOOLER T5400-2485-0-011

Outer  
FOOLER T5400-2485-0-011

Order: Fooler, Inc. PO Box 7000, Dallas, TX 75207

You'll find them in Fooler Co. C7000, P.O. Box 7000.

**LET YOUR MACHINE  
KEEP CLEANING  
AND BE PROTECTED  
NEEDS PROTECTIVE  
OIL.**

Typewriter parts don't get any dirtier and no one should be so foolish as to neglect them. Your typewriter will run best if you don't let the dirt accumulate on your typewriter.

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

Here's what you should do:

Use a long-handle brush, P/N 7115-110-010, to clean between the keys.



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

Then dampen a clean cloth with cleaning and reconditioning compound and clean the type. P/N 7115-200-0000



#### NEVER STOP

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



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



Never push 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, cover 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 charred. If you have a manual typewriter and won't get a ribbon that has a speed like the one on your typewriter, save the old spool and wind the new ribbon on it. Most of the manual ribbons are 14 inch wide.



Never lift the typewriter by the carriage or 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, notify 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 top of your machine. If your typewriter's folded down, use a clean cloth as a table to get under it.

Keep a copy of TM 10-7400-200-10 (Apr 64), and CI, Office Machines, handy.

## PUBS SWITCHEROO

NO BROW'S  
IN THIS PUB, BUT  
WHEELS SHOW A  
SHOT OF BROW



Looking for a pub for your freezing Model 9000, make your own diagnosis machine replacement via **PN 148-715-1207**. Then order **TM 9-448-241-04** (Jan 71). It includes repair parts and special tools too. You're right, that's the same machine that had a floor support and roller guard strips added on it by **RPD 10-98 10-218-58's** (Feb 70).

## WATER CAN CAP

*Dear Hellcats,*

Is there an **PN** for the screw-on cap for the five gallon plastic water can, **PN 44 14-000-0007**?

**S. E. T.**

Dear Mr. S. E. T.,

You'll cap assembly, **PN 12-0-000-1312**. You find it listed in Fed Cat **CT120700-E-4** (Jan 70).

Beats change the group and class of your water can to **T246**. That takes the place of the **910**.

*Edgar Allan*



**SEE FOR  
CAP ASSEMBLY  
PN 12-0-000-1312**

## 60-Hz FREQUENCY METER

To get a replacement 60-Hz frequency meter for your **M5P-0174 GP-5-MC0** Military Design 1-KW generator set **PN 6621-004-2008**, it's the same one listed in the 1-K, 1 and 10-KW MD generator manuals along with part number **13211899010 07-6081**.

## LITTLE LEEWAY

Knowing how far you can tilt the backhoe's telescoping air compressor, Model G-311-PC, is vital in the market.

The compressor works A-OK in a level position and up to a 37° 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 1-602-174-11 (Dop 60) is being changed to match. Should be operated as level as possible.

YOUR  
AIR COMPRESSOR  
OVER-  
TILTED!



Play it safe with any 1 1/2-HP M8 502 engine, no matter where it's mounted, and don't go over a 17° tilt.



## IT'S A TRAP YOUR TRAP

Drop everything, you H-300M loader operator, and . . . *wait!* . . . here first!

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 ball is cracked back or missing, the plastic coating underneath has probably broken to pieces — and flakes, metal chips, gel-like sediment have been washed into the working system, hoses, 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 HR 10A Form 24071 to:

HR Any Quality Equipment Company  
1776 JAMES RD.  
4001 Louisville Rd.  
St. Louis, MO 63122

If the sediment trap's in good condition, relax, keep checking it according to LG 1-2007-201-12-1 (Feb 71).



## DECON FIXERS



Wrestly fighting is a must for the driver's clutch assembly on your M21 work-mounted decon... otherwise, the clutch'll be dead in no time.

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



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

Ask your DE shop to cut a door on the splinter-plate of bars covering the lower clutch assembly. That way you'll not have to remove the big bar on top; the yellow Mink bearings and the clutch linkage, as called for in LCI 11078-305-12 (Feb 56).

The shop'll cut out the solid panel on the driver's side of the box and replace it with a removable panel. If needed, they'll also see the yellow Mink bearings in the tube linkage will last the decon.



panel, and wash-lub the box with your grease gun.

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

### THE OLD MOUNTED DECON

And here's a fix they'll make it a lot easier to use your M21A1 old-mounted decon. Just have your DE shop put a quick disconnect coupling on the pump suction line.

TM 110-941.2 (Jan 70), Para 34, gives the procedure on these improvements.

## DECON CARE



Remember — once the M21 work-mounted decon is OK'd for decontam it's no longer safe for water, water for drinking or showering.

To make sure there's no mistake, tag the decon with a warning plate, and add a warning sign to the decon's logbook. Like it says in para 10, L, Ch 4, TM 110-941.2 (Feb 71).

To make the equipment for longer, your maintenance shop can weld a warning plate to the rear section of the right handrail. A piece of 1/4-gage sheet metal (POM 9617-145-0490), about 20-inches wide and 17 1/2-inches high should do the job.

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

**WARNING!**  
DO NOT OPERATE THIS DECON FOR DRINKING OR SHOWERING WATER.



Also, the decon's splinter bars on the side handrails must be welded clean.

### M21A1 AND M21A1 DECONS

The M21A1 work-mounted decon and the M21A1 old-mounted decon are not authorized for decontam work. Plus, if your either of 'em suddenly get decontam, the warning sign and the logbook must use a cover for decon, too.

The M21A1 takes a warning plate, and its splinter system is plugged up. (See like on the M21.)

The olive drab warning plate uses yellow lettering. TM 9-201 (Jul 62), and its Ch 1, guides the camp on stenciling, lettering, and painting.

On the M21A1 the warning sign must be located on the upper right side panel of the pump unit, and also on the back side of the tank unit.

Start in the M21A1 decon's assembly according to head 308.

TM 110-941.2 (Jan 71) gives the word on this change for decons.

YOUR WHEEL 2000 20-500 HP...  
**MINI-POINTS FOR**

**MAXI-MUSCLE**



Now you see 'em... now you don't. This disappearing act happens when you rent Model 2000 20-hp rough-ter-



race tractors when it comes to small hard-to-find under spurs.

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.

**FRONT-LOADER UNDER-SPUR** could be painted over. Repaint 'em in 'em. They must be free and working all the time.



Otherwise, a big buildup of pressure can blow the nuts loose. Loosie nuts come rattle up with any sharp object such as a screwdriver. Clean 'em with solvent if necessary.



**WHEEL NUT TIGHTENING** goes easy to forget when you're heading 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 5-5810-211-13 (Sep 79). The important thing is to remember to install the lock.

You have no help in mind, so, all these hidden items need to be checked once often, when you're operating under unusual conditions. Make sure they get the same attention at the more visible points.

**4-WHEEL AND STEERING** can slip away from you. Most of the time they're hidden. You can get a good idea of their location, so all it's usually looking at LO 1-38 05-152-11.1 (May 79).



To get it hot (lit) up the wheels with the overgears. Then run the wheels fully left or right and make sure you can reach the lining with your grease gun. Guess, you have to see the steering column control in 4-wheel over-position to manipulate the wheels.



**FRONT-LOADER TENSIONER** (EYE) 2000 can be a slippery deal, too. Thing to remember at the engine room: be sure



ring 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. Back up to see if it's full when oil is hot (200°-250° F). LO 1-38 05-152-1.1 and 1 (May 79) has the details.

**BE-AM POINTS** can get painted up easily. You got to hit 'em regularly, every 10 hours, just like the LO's say. They're on both the cross and the Carrier linkage systems, plus, chocks, exposed adjusting threads, bushy and hinges.

## BACK TO THE WORLD



Some users know where they're going, where they are or where they've been so that they get back.

That means one or two critical use models: equipment going back into depots and back to The World.

It happens because equipment vendors are not equipped to get lost or left behind when the equipment moves out.

Old is out, if equipment's location shifts or capabilities, its records go along where it goes—and properly updated.

When your unit returns from field or otherwise with its equipment, make sure that all equipment log records go along. You also want to make along with them's DD Form 214 and the DE unit's copy of each host's DA Form 2488-7.

You deliver this 7 copy to your new DE unit. One must be a new copy of DA 2488-7 as long as the host's will be your property book.

## EQUIPMENT REPAIR

The rules are different if your equipment's going to a depot, or another unit for use as a destination unit's use to you.

When your unit's moving to the equipment, you must make out a new DA 2488-7 for each host indicated in Appendix E of TM 31-750. Normally there will be the hosts that you have a log copy of DA 2488-7. Distribute copies of the new form as specified in TM 31-750, making sure the new log copy replaces the old 7 in the log.



The order equipment log goes in DD 214 goes with the equipment if it's shipped or transferred.

distributed as specified in TM 31-750. Copy 3 goes to your data center, copy 2 in your receipt, copies 3, 4, 5 and 6 are packaged with the component. One



## EQUIPMENT REPAIR

When components of a major host or system are removed for separate shipment or transfer, you've got extra work to do.

Designated directly component (DE) DA 2488-7 (21, 22, 23) must be removed from transfer vehicles must have new DA Form 2488-7 completed with copies

DA 2488 is needed for any subassembly until it's removed from the major or ready.)

If an aircraft has filed in TB 31-1580, 507 (2) is now identified on an aircraft, include only DA Form 2488-1



WE'RE HERE!  
OUR EQUIPMENT  
SO IT'S NOT  
LEFT BEHIND  
IN THE  
SUPPORT UNIT

D.S.



been placed there when it's shipped or transferred.

When you remove items and equipment or components that has its own DA Form 2400 or a separate DA Form 2400-5, DA 2400-6, DA 2400-10 or DA 2400-13, that form (or forms) must be removed from the major form bag and packed with the component.

If a component has a separate DA Form 2400-7, it must be replaced with a new DA 2400-7 made and distributed according to TM 38-750. Destroy the old -7 and pack the log copy of the new -7 with the component.

### BRUSH AND TUBE

DA 2400-1 is for serviceable gun tubes and brush rings get special handling. When ring and tube are removed from a weapon, mark "Removed from Weapon" in column 6 and submit to U.S. Army Weapons Command box TM 38-750 for address.



First, change transfer unaccounted EPC marks, barcodes and serial excise tags, brush ring-serial number and re-shipings, and any other needed data to a new DA 2400-4. Pack the new form with the serviceable tube that's removed.



### UPDATE OTHER FORMS

Any component you removed for shipment or transfer may call for certain no log forms that remain with the major form.

For most equipment, DA Form 2400-10 is the form most likely to need



changes. DA 2400-14 also may need updating. For aircraft, changes may be made on DA Form 2400-15, DA 2400-16, DA 2400-17 and perhaps others.

When equipment and component are on the move, accurate identification and tags take more a lot of time and money. Providing all this is the job for equipment tags and travel forms like DA 2400.

These forms don't fill themselves. You've started to do it and we hope they go with items on the move.



## COOL, MAN, COOL

Needs Consultants: your 11-48P or 20-48P Military Standard Engineer Order You from U.S. Army Military Equipment Command, AFPM, ADDRESS: MMG-5, 4200 Goodfellow Blvd., Ft. Lee, VA 22049. They're fast!



## LOSING YOUR COMPONENTS ... ?

You say your work must have the components, generators, battery chargers, etc., that are being pulled from your shops by AR 721-1 Day 70?

Don't get with it, dead!

Grab a copy of AR 721-1 (Mar 70) and tie up an MTOE listing the components you must hang on to.

Crash, friend . . . the supply catalog listing the items is not your authority for you. And, AR 721-1 gives you only a temporary OK to keep or request the components. In OK, is good only if you can crank up your MTOE. The AR says so in para 12-3c.

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



IT'S FOR CHEAPER —  
MAYBE EARLY SUPPLY  
AND USE IT TOO ...

IF IT'S COULD, OFFER —  
OR COULDN'T. PEOPLE SAY  
YOU CAN GET THE STUFF  
YOU WANT (SELECTED  
PERMANENT  
OFFERS)

SIMS

That's the Army's new interim con-  
tract system for more 7,000 selected  
items ranging from engines to flashlight  
batteries.

See?

These selected items are:  
1. Usually something like 2 1/2 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. Flexible (essential items,  
your own, or your own  
particular without limit ...)

**SIMS SUPPLY**

The selected items are (naturally) con-  
trolled from the time they're brought  
into the supply system until they're used  
up, or washed out of the system.

"Think SIMS, for example, the supply  
people.

Keep in-track 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 items (often by computer-  
means faster and better).

Keep a close eye-check on what's on  
hand and where, and make emergency  
lines (your direct supply support) you  
call in most clothing).

Of course, the people up the supply  
line can get so confused in all that, but  
for the system to do its main job ...

when you better, faster, and more ex-  
tensively, etc., you have to do your  
job, otherwise you're what the sys-  
tem's all about.

First off, you have to keep an eye out  
for SIMS tagged or labeled items, goods,  
ages, conditions, equipment, etc. And,  
always keep in mind—the SIMS mark  
tells you the item's status—used, critical,  
excess reserved ... or even all 3. And,  
for you and everyone else to maintain  
getting these goodies as needed, you  
have to treat 'em with respect. Life  
always.

Use 'em right.

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

**SWITCH**

Ask only that when you need, naturally  
when you need it.

That's in essence why SIMS does you  
no longer need.

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

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

Just your own best attention ...  
your special help as needed and as  
SIMS items right ... wherever you find  
'em.

## RECONCILIATION/VALIDATION



The big words tell you the simple (but most important) action which updates your check-in response file. The updating covers loads of time and work, and covers supply issues—manufacturing, buying, stocking, shipping, etc.

During updating works like this:

Your DSI's office supports sends/writes you a file, on a disk or cards, showing things they've sent you for 30 days or longer. You match their info with your check-in response file, and validate your check-in's status. You check to make sure the items are still needed by your market.

On items no longer needed, send an

item that say on DSI's records but not on your check-in records, you send the DSI a cancellation request.

On valid check-ins in your response file—but not on DSI's records—you send your DSI a follow-up request.

The basic information concerning validation is covered in pages 4-54, 48-110-11, and the details on the operation are spelled out by your local DSI SOP.

Your country's consolidated P&L is also done a reconciliation/validation check-up. It's done every 6 months or so, and the details are also spelled out by local SOP.

SEND IT ALL OFF

When you fill out a DA Form 1407 (DSI) on your equipment or a DA Form 2645 on your manual be sure to give all the facts, Man. The center that receives these forms often have to send them back to get more info. So, give all . . . everything, clear, complete. You're on your hobby if it's all clear to him, then it should be clear to the people who receive it.

## Cowles' *MFR Mini's*



### *Aircraft Subsystem Reports*

All maintenance actions (log, DA, 2 or drop) 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, repair removal and installation 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 control and position measurement items and on electrical and weapon subsystems. For non-aircraft items, you may include the reports on the monthly DA 2407 on the aircraft or submit 'em on separate DA 2407's. DA Cir 750121 (14 July 77) spells out details.

### *Antenna Cap*

The FM for the AN-271A/PBC-21 antenna tip cap is 5829-250-0009.

### *Roll In!*

The high-pressure take assembly, P/N 2540-084-7428, is DA 2-1020-270-207 (Lot 40) for your M1 repair dispenser is not for you. Info on replacing it is in the dispenser's DA 18. Since it's a job for support, your -207 is being updated. Obsolescence use is 750-740-1 (Jan 77). The updating includes an FM change. The take's new P/N is 4710-084-7428.

### *WHD-SPD Code*

Lookout for changes in your Organizational Priority Designator (OPD), and Issue Priority Designator (IPD) for use in your maintenance and supply reports. Your supply OPD's are now A, B and C. Your IPD's run from 01 through 15. The new codes on the codes card are in DA Letter, LOG-SP-PPH (3 May 77), Supply/Support Material Movement and Issue Priority System (SMMPS), and are effective on 1 July 1977.

### *Be In The Know*

Do you read the original technical manual on your equipment? Right and Red, you're changed — maybe your equipment FM too, too. How do you stay on the top today?

### *DA New Look*

Maintenance by direct exchange (DX) of applicable for serviceable components, using DA 2402 for work 1-10-1 items, will soon get an overhaul and expanded use. Current lots of DX items have run out, but starting 1 January 1977 a standardized DX system is planned. DA Cir 750 20 (July 77) lays the groundwork with details to follow in an implementation plan.

Would You Stake Your Life <sup>on</sup> on the Condition of Your Equipment?



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!**

