

EARS ... and TILL POLLING

Korea was the hot spot in 1951 when the first issue of PS Magazine rolled off the press.

General MacArthur and his troops were up against some tough problems. Preventive maintenance was one.

help soldiers keep their fighting equipment maintained. And PS has been rolling along ever since.

So, the Army cranked up PS to

PREVENTIVE MAINTENANCE MONTHLY

JUNE 1951 ** * * VOLUME 1 NUMBER

The pace was steady during periods of peace. But, when combat warmed up, the tempo in PS picked up.

Troops landed on the shores of Lebanon and PS featured an article on maintenance in the desert. Vietnam got hot and the intensity grew on articles about maintenance in warm, wet areas.

Thousands of soldiers have sent letters to PS Magazine for answers to puzzling problems. Thousands, too, have told PS what they want to read in the magazine.

PS Magazine's aim today is the same as it was the day the first issue rolled offthe press 25 years ago-

To help you, the combat soldier, keep your equipment ever ready for combat.

And, so it is-282 issues later.

Would You Stake Your Life the Condition of Your Equipment!





ublished by the Department of the Army for the information of all soldiers assigned to combat and combat support units, and all soldiers with organizational maintenance and supply duties.

Within limits of availability, older issues may be obtained direct from Editor, PS Magazine, c/o US Army Maintenance Management Center, Lexington,

ISSUE No. 283 JUNE 1976

GROUND MOBILITY

2-14 Radiator Cap Tips 16-17 10-Ton Truck Cooling System Pub 17 Trailer Adapter Kit 15 Cap and Chain NSN 15 Lead-Acid Battery

FIREPOWER

18-27

2-17

	Master Cylinder	
18	Switch	20
19	M113/M113A1	21
	M577A1	21
19	Field Range PM	22-27
	19	18 Switch 19 M113/M113A1 M577A1

AIR MOBILITY

37-45

CH-47 (Part II)	37-41	Cobra Rust Tip	43
T53 Engines	42	Huey Stabilizer Bar	44
Aircraft Security		Cobra Lockout Valve	

COMMO/ELECTRONICS 46-55

Computer. Care	46-51	AT-1095 Antenna	53
RT-246, -524	52	MX-7777B	
TD-660/G		Suppressor	54-55
Multiplexer	52		

SUPPLY

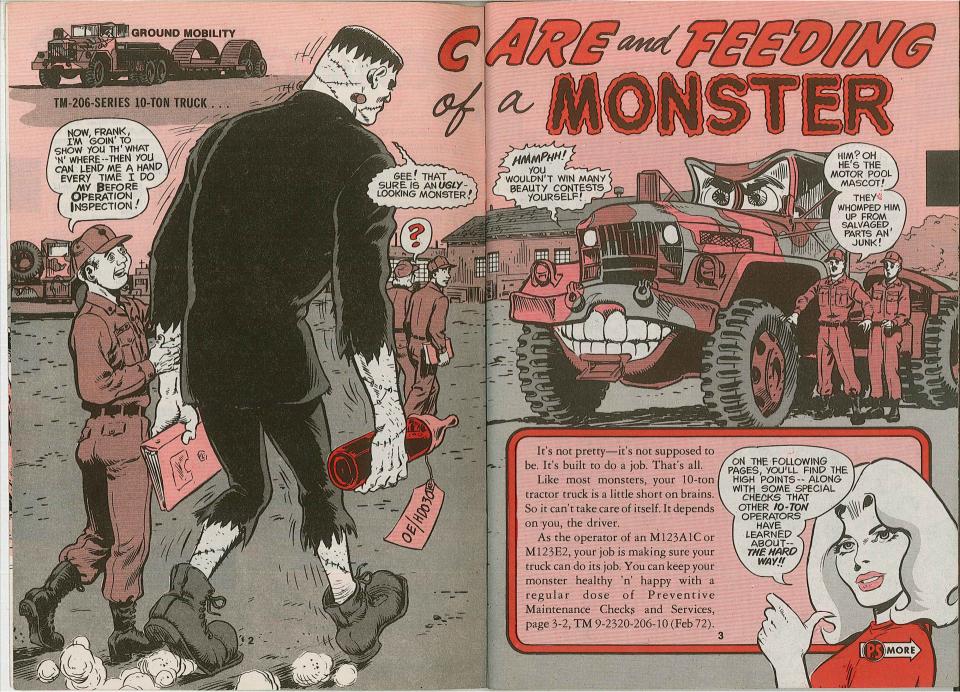
New Publications,		SF 46, DA Form 34	8 60
TEC Lessons	28	DA Form 2401	61
Turn-In Excess	56-57	DA Form 2408-9	62,63
Check-List For		D7F ROPS	64
Requests	58-59	FSC	64

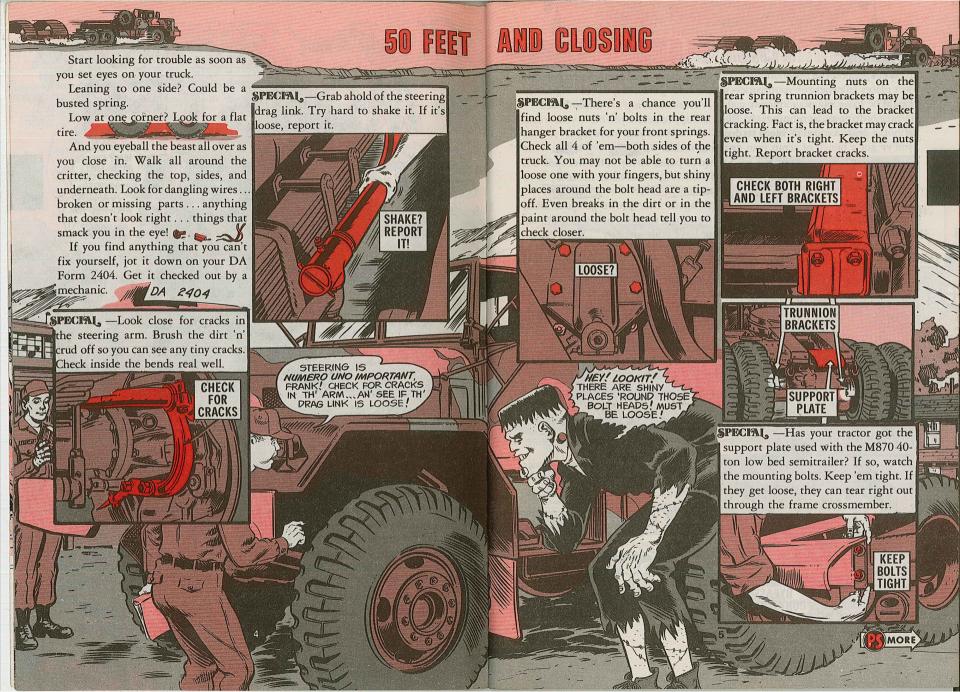
PS wants your ideas and contributions, and is glad to answer you questions Name and address are kept in confidence. Just write to Or call: AUTOVON 745-3503

M S G Half-Mast PS Magazine Lexington, KY

Use of funds for printing of this publication has been approved by Headquarters, Department of the Army, 23 December 1975 in accordance with AR 310-1.

DISTRIBUTION: In accordance with requirements submitted on DA Form 12-5.







BLACK BLOOD



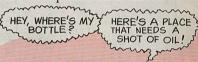
Wet spots on the ground under your truck may signal leaks. Same goes for wet places anywhere on your truck—where leaking fluid may be running down. Could be loose plugs . . . blown seals . . . cracked tubing . . . rotten hoses . . .

Steady dripping or running is bad! Get it stopped before you move your truck. If not, a gear case could "bleed to death" ... without your knowing it ... until you've got a bunch of scrap iron grinding inside.

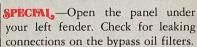
If you don't see any dripping, lay a board or paper on top of the wet spot. Or, if it's a wet place on the truck, wipe it off with a rag. Then watch to see if you've got a leak going.

No dripping or running? Then check again after you've got your truck operating—maybe even after you've driven for a couple o'miles. A leak may drip or run only when heat and pressure have built up.

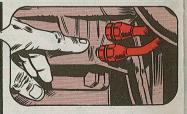
SPECIAL—A likely leaker is the temperature sending unit on the bottom of your transmission. If it's sloppy, get your mechanic on it.











MARRIED TO THE GROUND

Like you and your feet, your 10-tonner is no better than its tires and wheels. If the tires are flat or the wheels fall off, your monster is crippled!

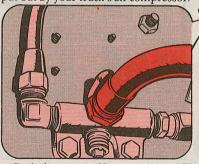
Just looking to see if tires are soft is not good enough. They may look good when your truck's sittin' there all by itself, but it can be a different story when you hook up to a loaded semitrailer. Soft tires make your truck work harder to pull its load—and soft tires go to pot fast.

So check 'em-with a gage!

Gaging tire pressure on inside duals can't be done with a plain tire gage. You've got to use a gage with a short hose on it.



This same gage hooks up to a long hose to pump up your tires—using air put out by your truck's air compressor.





TO GAGE THE

INSIDE DUAL TIRE.

WORK THE AIR

CHUCK AND HOSE THROUGH THE

OUTSIDE DUAL WHEEL

Both the gage and hose are in your TM 9-2320-206-10, Ch 2 (Aug 74), page 4, Section III, Items Troop Installed Or Authorized List.

While you're checking your tires, see if your wheel lug nuts are tight. You can bet a nut's loose if you see shiny metal around it—the nut's turning free on the stud and rubbing on the wheel.

Get a mechanic to tighten loose lug nuts with his torque wrench.



DRAIN OFF TROUBLE



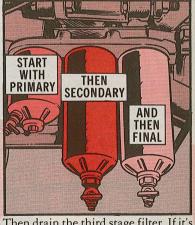
Now, while you're still close to the ground, hit those 3 fuel filters—drain 40-D

Never mind that "weekly" in LO 9-2320-206-12 (Jun 73), page 6. Stick to the "D" in the LO-D for Daily, every day before you take off.

You're after dirt 'n' water in your fuel. This stuff can make your engine snort and spit-and even quit. In cold weather, water in your fuel filters can



anything—to catch the fuel you drain off. Start with the short filter-the first stage filter. If you get water (blobs) or dirt (bits 'n' specks) from that filter, work across to the next filter (second stage). Junk there, too?



Then drain the third stage filter. If it's bad, report it on your 2404. Your shop people may want to check into it.

No drain cock on the filter is no excuse. Get one installed—NSN 4820 00-752-9040.

WHERE IT STARTS

all the way. "Full" is about 2 inches so it overflows. below your fuel tank filler neck. Too full wastes fuel-the sun beatin' on



.. BESIDES

BY TH' RUNNING BOARD!

And make sure you're fueled up— your fuel tank makes the fuel expand,

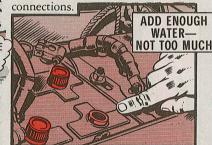
Keeping your tank up to the full mark cuts down on the water you get in your fuel filter. Empty space in your fuel tanks makes room for moist air. The moisture in the air condensesturns into water.

Keep snow, rain and dirt out of your fuel tank when you're refueling. Then there's less chance of fouling your fuel filters.

YOU GOT BATTERIES T'CHECK...

clamp? Is the clamp tight on the battery post?

If your starter won't turn over (and this goes for your own car, too), your first check is always for loose battery



Four batteries. That comes as a surprise to some 10-ton drivers. They know about the pair by the right running board. But there're 2 more under the co-driver's seat!

level over the tops of the plates? If not, pliers. add water to bring it up.

a little over the plates. If you overflow the electrolyte, you lose acid. Weak thumb and 2 fingers—twist. electrolyte means weak batteries.

tight. Is the cable terminal tight on the on.

No need to yank up 'n' down on the Most important: Is the electrolyte cables. Or to attack the clamps with

Check for loose cables with your Watch it! Not too much water! Just thumb and finger—lift and press.

Check for loose clamps with your

If the open side of the clamp is Make sure battery connections are mashed closed, get a new clamp put

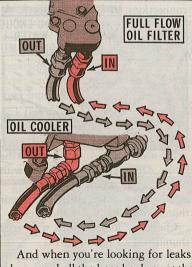


Take a minute or so and just look around in your engine compartment.

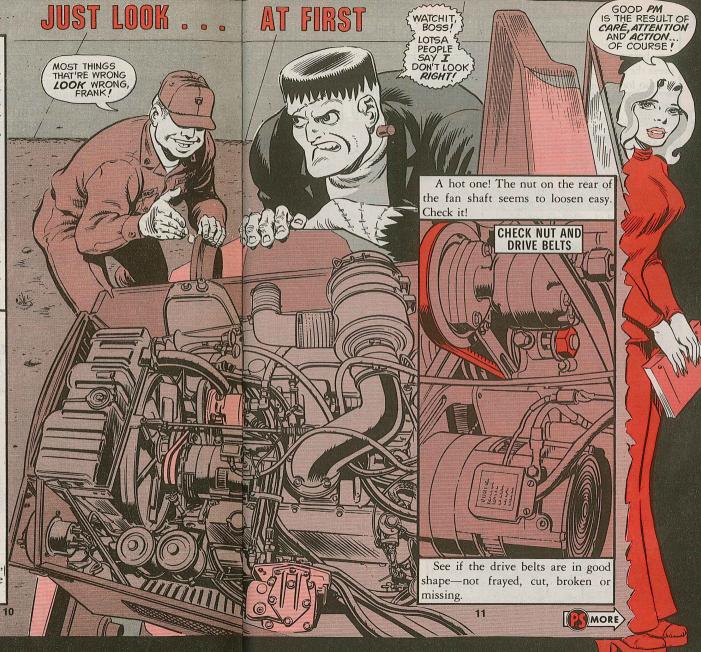
Hoses leaking or cracked . . . tube connections leaking . . . electrical wires bare, broken or burned . . . parts missing (The threaded end of a bolt or shaft probably should have a nut on it, right?)

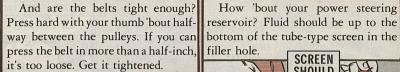
If your truck just came out of the repair shop, take a look at the repair—mechanics can slip, too. F'rinstance, if the alternator was replaced, was the nut put back on the pulley shaft?

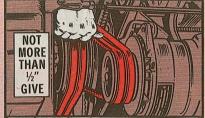
If the full-flow oil filter was serviced, were the hoses hooked back up right? "In" on the filter goes to "out" on the engine oil cooler. So, natch, "out" on the filter goes to "in" on the oil cooler.



And when you're looking for leaks, always eyeball the hose hookups at the full-flow filter and at the oil cooler.







Grab ahold of each fan blade-try to wiggle it. If it's loose, report it.



While you're right there, check the coolant level in your radiator. If you can't dip your finger into the coolant,



How 'bout your power steering filler hole.



There's no good reason for starting

out with your engine oil level below

the FULL mark. A big diesel engine

like this is bound to use some oil in a

day's hard work—serveral quarts,

maybe. If you start out below FULL,

you could wind up in DANGER before

HOW D'YA
LIKE THAT, CONNIE?
TH' BIG KLUNK 16
TAKING OVER...
ALREADY!

YOU'VE TAUGHT HIM WELL

BUT THERE'S MORE ON THE NEXT PAGE!



When you're out on the job, though, an oil level anywhere between the FULL and DANGER marks is safe for operation. You don't have to panic until it gets down to DANGER.

New 25 Magazine Index

The PS Magazine Index for July 1975 thru June 1976 will be distributed about the time next month's issue of PS is distributed—and to the same outfits. Let Connie know if yours does not arrive. You get 1 copy of the Index for each 3 copies of the magazine you get on pinpoint.



12

you're done.



right. It sounds a little weak. You're puttin' out a lot of black exhaust smoke. You wonder if your tractor will be able to hack it when you hook up to the loaded semitrailer.

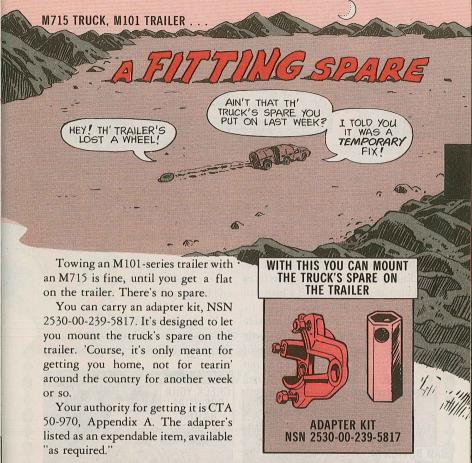
Did you miss it? That "flag" (red or green) in your dash-mounted air filter indicator?

It's locked up in the window! Your air cleaner element is plugged! Your engine's not getting enough air. It's getting too much fuel. It can't burn all of that fuel, so it's dumping it out the exhaust—as black smoke.

Shut down—right now. Clean your air cleaner element. Your -10 TM tells how—page 3-13, para 3-14, Servicing Dry-Type Air Cleaner—Diesel









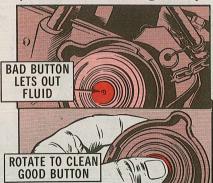
NSN 2530-00-564-2437 for the chain.



Next time you check your coolant level, take a good look at that radiator cap. It's more than just a cover for the radiator filler hole, and it needs some care to keep it working right.

Of course, you know that you've radiator. That chain gotta keep the seating surfaces clean, or the cap won't hold pressure. Dents, cracks and nicks in the seating surfaces will also cause a leak. And a leak will let your coolant boil away.

Some guys don't realize that there are 2 valves in the cap. See that little stamped or printed right on the cover button in the middle of the inside of of the cap. Make sure you get the right the cap? If that's bunged up, it'll let out one. your fluid, too. If it's in good shape,



rotate the button back and forth a any dirt in the seat.

When you take the cap off to check the coolant, set it down on the top of the is there to keep the cap from getting lost, not for letting it dangle and bang against the vehicle.

You'll find the pressure rating

HERE'S A

HANDY LIST

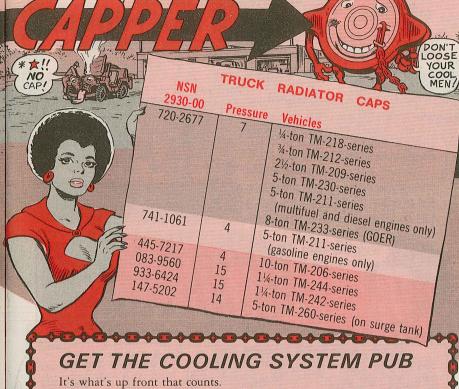
OF WHAT

WITH

WHICH VEHICLE ..



This is not a case of "If the cap fits, wear it." If the cap's pressure is too low your coolant will boil away before the engine gets up to operating temperature. If the pressure's too couple of times. That'll take care of high, the system could get too hot and damage the engine.



Keep your engine cooling system in good shape—latch onto TM 750-254 (Mar 72) with Ch 1 and 2. That pub mentions only tactical vehicles, but the info's good for liquid cooling systems on all engines.

GET YOUR MECH

TO CHECK OUT



HERE'S SOME OF THE

INFO YOU'LL

FIND IN THE

TM!

*How your radiator pressure cap works.

*Why you need a thermostat. *Cooling and lube systems help each

other. *Where—and when—to look for leaks.

FIREPOWER

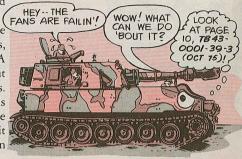
M108/M109/M109A1 HOWITZERS

COOLING FAN PROBLEM

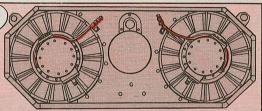
The vane axial cooling fans need more lube.

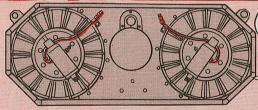
The fans, gear shaft and gears are failing because the fan gear cases, (packed only 90 per cent full of GIA grease at time of assembly), don't put enough lube on the fast-moving parts.

The only way to get enough lube is to have your direct support put in lube and pressure relief fittings the way it says in TB 43-0001-39-3 (Oct 75) on











At this time (if it hasn't already been done) they will modify the tool are covered in para 57 on the same radiator fan shroud so the new page. radiator cleaning tool, NSN 4910-00-494-8257, can be used.

Your mechanic can also make this modification. The dope is in para 56.1 on page 178 of Ch 10 (Aug 74) to TM 9-2350-217-20 (Jan 65).

Instructions for using the cleaning

NSN 4910-00-494-8257



NSN 1025-00-860-5443 IS GOOD

Listen, all you crewmen on 155-MM towed and self-propelled howitzers ... Check the part number on the cleaning and ramming tool you have. If it has the number 7309593 on it, smash it. Then hand the parts in to your supply and get a new one.

If you use one of these old rammers to unload a modern round you could damage the fuze and that might be dangerous. These were discontinued in 1968—but some are still around.

If your rammer has the number 8767210, it's good. It's NSN 1025-00-860-5443 and won't hurt any of the modern rounds.

EVERY PAY MEHTICOPT AFRODUTE THE

LL THEN HIS HT

KITHCHENC HTIMEN HTITICH

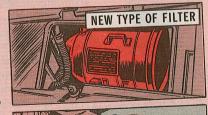
Air filter element NSN 2940-00-052-6033 is in short supply.

This is for the air filter you'll have on your M551/M551A1 after MWO 9-

2350-230-40/5 has been laid on. You can't use the early filter

element NSN 2940-00-782-1264 because it won't work in the late model filter bucket.

The only thing you can do is handle and clean your filter elements real carefully the way it says on pages 3-39 thru 3-41 of TM 9-2350-230-10-1 (Nov 74). Try to get a new replacement element only if there're holes or tears in the element you have.





LOOK ALIKE—WORK DIFFERENT

HEY! THE BRAKES YEAH? I THOUGHT ON THIS BUCKET O' THIS HEAP WASN'T BOLTS ARE, GONNA STOP! LOCKED! SOMEBODY OUGHTA TELL THE YO-YO'S THEY'VE SWITCHED OUR MASTER CYLINDERS!

There're 2 master brake cylinders that look alike but are different inside. NSN 2530-00-978-2068 (10916089) is used on M48 and M60-series tanks with

TRUCK 2530-00-741-1070 (7411070)

hydraulic brake systems, and on M728 combat engineer vehicles.

NSN 2530-00-741-1070 (7411070) is used for both M39 and M809-series 5-ton trucks.

Just unscrew the fill plug from the top of the reservoir. If it's the tank master cylinder (NSN 2530-00-978-2068), you'll see 3 return port holes at the bottom of the reservoir.

If you have the 5-ton truck master cylinder (NSN 2530-00-741-1070) there'll be only one return port hole at the bottom of the reservoir.

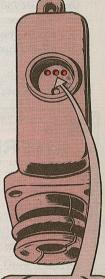
It's not a good idea to interchange the 2 kinds of master cylinders. In order to prevent mixing them up, you can stamp them with the metal stamping die set, NSN 5110-00-289-0007, in the No. 2 common tool kit.

In a conspicuous place on the cylinder, stamp either M60 TANK or 5T TRK, depending on which kind of cylinder you have.

You should mark all stock on hand. If they're not already marked, do it any time a master cylinder is removed from a vehicle.

Careful. Take it easy. Don't crack a cvlinder.

TANK 2530-00-978-2068 (10916089)





M113/M113A1 . . .

CARRIER LEAK INSURANCE

Getting your exhaust pipe lined up right is good insurance against leaks at the ball joints.

Before you tighten the clamp holding the last ball joint to the flange, rotate the upper sections to line up the other sections. If you have 'em lined up right all joints will be closed and they won't leak.

LINE UP ALL BALL JOINTS THEN TIGHTEN CLAMPS THIS WRONG LINE UP WILL LEAK LINED **UP RIGHT** WON'T LEAK



WHY DO THEY
USE ME TO POWER
THE COMMO? BEATS ME--THEY KNOW IT'S MY JOB!

Dear Half-Mast,

We have a problem with staff tracks-like the M577A1. They're idled day and night instead of being put on auxiliary generators to power radios and equipment. This extended idling causes loss of oil and lots of trouble with engines going bad.

Can you spread the word to lay off idling the main engine and to use the auxiliary generator instead?

SFC J.A.S.

Dear Sergeant J.A.S.,

Consider it done. Not only does prolonged idling destroy engines, it also builds up carbon monoxide around the vehicle, and wastes fuel,



too.

CHOP THE





HEY! YOU YOU KIDDIN'? COOKE! COOK!

A needle—or"flame"—valve cracked open in filling or pumping up

invites calamity. Pressure pushes raw, unvaporized gasoline into the mixing chamber. It collects under the burner

and drips onto the base.



certain than the explosion you'll get if out of all the hideaways you then try to light the burner.

If your pressure gage climbs past 20 PSI after you fire up, turn down the flame one half. If it goes on up, say to near 35 PSI, shut 'er down until she apart if it'll help. cools off. Never continue operating hand has reached the red area.



THINK YOU COULD GIVE ME A LITTLE PRIVATE INSTRUCTION,

CONNIF ?

DON'T LET PRESSURE **GET ABOVE 20 PSI**

Leaks can zap you, too. Your feed tube assembly has to be clean, threaded on straight, and seated tight.

So does your generator coupling. Crossed threads, rusty parts, burrs, or any obstruction that turns raw gasoline loose is a booby trap.

Get out of that bind fast-shut Few things in this world are more down, cool off, clean, and drain fuel

> And here's an exception to the rule—you do use your truck air hose here, to get fuel out of hard-to-reach spots. Even take your needle valve

One thing you do not do is to blow the burner unit after the pressure gage the parts clean by lung power—lead residue from gasoline is poisonous.



Dirty burner slots give low, uneven heat, hard-to-light burners, an oven not cooking right. Put your burner slot cleaner to work, for sure.

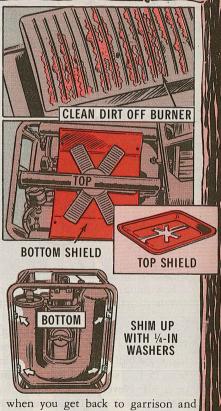
Always use your burner shields. Both shields reflect heat up away from the gas tank—but especially the top. Without it, heat warps the frame a little, more the next, and the next . . puts extra strain on the tank.

If the flame dies on you—no matter why-close your generator valve to stop vapor buildup—and the explosion.

And never use a burner that drags the ground or bumps the base bar. Shim under the tank brackets with 1/4in thick washers. That'll give you clearance between base bar and tank.

Your large baking-roasting pan does not go on the burner top frame. Put it aside when you go to graphitelube the rails (use Lubricant, petrolatum/graphite, NSN 8030-00-243-3285).

Naturally, the graphite lube comes off and the preservative coat goes on



SLICKING AND WRAPPING 'EM RIGHT

BACK FROM THE BOONIES

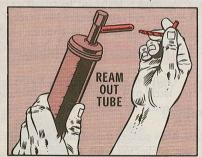
easy, but it takes time.



Wire-brush off the mixture of grease, caked carbon, and cooking oil from your burner, including flanges and threads.

Good hot soapsuds and a nylon cleaning pad rubdown will do the job for the rest of the assembly.

Ream out the hot vapor tube if you have an M37. On M2 units, take the



generator valve (flame valve) apart and clean carefully. Coat valve stem That causes more of a hazard than it threads and packing nut threads with solves.

Getting your burner in shape is anti-seize compound (NSN 8380-00-087-8630). Replace packing as needed, and reassemble valve.

NEVER STORE YOUR FIELD RANGE AND BURNER

AFTER AN EXERCISE WITHOUT

Coat the burner and unpainted parts with P-10 Grade 1 preservative oil, NSN 9150-00-111-3199 (that's a gallon).

If your M2 burner base needs paint, use just one kind-NSN 8010-00-598-5054 (1 gallon), aluminum color only.

You brush on this paint-never,





never spray. If you have any left over, hang a tag on the bail or paste a notice on the lid: "Not for spray gun useruins guns." And don't leave the lid off—it's quick-drying (10 minutes). Even with a brush, you have to hurry. Don't stop, once you start, or the brush will just cake up on you.

Drain the fuel tank and keep it dry. Forget any old stories you hear about léaving the cap off the burner fuel tank and putting in a wick to get rid of fuel.



store the range.

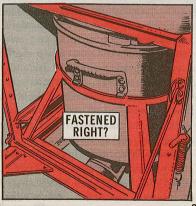


GOOD SHOW SPECIALIST!

If you have an M59 look sharp at it. See whether it shows any sign of peeling or corroding. The coating over the metal base may show spots ... if so. go after it with soap and water or an approved solvent (open air only!)

You don't want to get rough on this item-no abrasive cleansers or wire brushes. Like on other kitchen equipment, chrome-plated or aluminumfinished surfaces get only soapsuds and non-metallic rubdown. A commercial-type nylon cleaning pad is OK

Make sure braces, angle irons, and support parts are fastened right. They're there partly to give cabinet walls strength and keep down warping under heat. They can't do the job if they're not snug.





REMEMBER -- NO ABRASIVE CLEANSER OR WIRE BRUSHES

A wooden match or toothpick can help get crud out of places like bracket joints, spring and pin assemblies, and rivet seats.

Then, be sure everything works-" try latch pins, shutters, door latches and rests, lift handles, and inner rack

After you get the cabinet clean, if it's not to be used for several days or weeks, cover it with corrosion preventive compound P14-NSN 8030 -00-251-5048 gets a gallon.

HEY, GREAT! NEW DETER GENT

NOPE-SOAP 'N

RIGHT ON! AND FINISH UP BY RUBBING COOKING OIL OR LINSEED OIL

There's a marvelous compound out for cleaning these things-hot water and soap. Timely use of this wonderful solvent will prevent harder work later, like scouring off ugly corrosion or caked-on grease. When that black smear gets on utensil surfaces. nothing short of scouring will make it go away . . . which wrecks the finish every time.

Cooking oil or linseed oil makes a fine lotion for wood-handled knives. All other standard items get the same P14 preservative compound the cabinet did.



Next Month In 25

SUNSHINE FOR YOUR SUPPLY BLUES

A 12-FOOT GRADER PRIMER

GET YOUR TIRE CHAINS EARLY **ELECTRICAL CONNECTOR REPLACEMENTS**

STARRING:









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 (Nov 74), and Ch 3 (Oct 75), TM's, TB's, etc.; DA Pam 310-6 (Jul 75), and Ch 2 (Jan 76), SC's and SM's; and DA Pam (C) 310-9 (Aug 74),

TECHNICAL MANUALS

TM 3-6665-253-12 Feb Detector Kit. AN-M15A2A and AN-M15A2N

TM 3-6665-254-12 Feb Detector Kit, ABC-MIRAS TM 3-6665-308-10 Dec Water Testing Kit

AN-M2 Refill Kit ABC-M30A1 TM 5-2090-200-12 Mar Boat Cradle, 27 ft:

TM 5-2805-256-14 Jan Engine, Gas 11/2 HP. Mil Std Mdls 1A08-1, -2, and -3 TM 5-3805-253-20P Feb Grader, Huber

TM 5-5420-209-12 Feb Float Bridge (Bib-

TM 5-5420-209-20P Feb Float Bridge (Rib Ch 24. TM 55-1520-210-20 Feb UH-1D/H Ch 4, TM 55-1520-219-PMS Feb UH-1B TM 9-1090-203-12 Jan M28A1 Armament Ch 4. TM 55-1520-220-PMS Feb UH-1C/M Ch 13. TM 55-1520-220-20 Mar UH-1C/M TM 9-1340-418-20P Jan BATS Ch 18, TM 55-1520-227-20-1 Mar CH-47B and CH-47C Helicopters
Ch 8 TM 55-1520-228-CL Mar OH-58A TM 9-1425-470-ESC Mar TOW TM 9-1425-485-24D Feb | ance

MISCELLANEOUS

DA Cir 750-47 Feb Technical Assistance (Maintenance) DA Label 105 Feb Flammable

FM 29-30-1 Feb Division Maint Bn FM 38-24 Mar Classes of Supply LO.10-3930-634-12-1 Jan Fork Lift Truck,

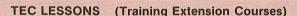
Diesel RT 6000-lb SB 11-636 Feb Watercraft Commo Flec-

SB 700-20 Jan Army Adopted Items SC 5180-95-CL-A65 Jan Tool Kit, Lance

TB 43-0117 Feb Marine Electronics Config Director

TB 750-263 Jan General Mechanic's Tune Up Specs Engine-Driven Equip





These are available at your local TASO.

TM 9-1430-535-24P Mar Improved HAWK

TM 9-4935-501-14P Mar Basic and SP

TM 11-1510-204-ESC Jan Electronic Equip

TM 11-1510-204-20P-2 Feb Electronic

Ch 1. TM 11-5815-359-14-1 Mar AN/FGC-

Ch 4. TM 11-5985-262-15 Jan AS-

TM 11-6130-384-14 & P Jan PP-2926B/U

TM 11-6625-409-12 Feb AN/ARM-45()

Radio Test Set
TM 55-1500-219-MTF Mar UH-1B, C, D, H,

Ch 5. TM 55-1520-210-PMS Feb UH-1D/H

OV-1B, OV-1C, OV-1D

140 Teletynewriter Se

1729/VRC Antenna

Equip OV-1D

020-171-1634-F M551 Searchlight 020-171-5351-F Boresighting Main Gun M60/M60A1 Tank Parti 020-171-5353-F Zeroing Main Gun, Machineguns, Setting Battlesight, M60/M60A1 Tank 020-171-5354-F Boresighting Xenon Searchlight, M60/M60A1 020-171-5355-F Boresighting

Main Gun.M60/M60A1Tank.Part II

020-171-5366-F) Before, During. After Operation 020-171-5370-F | M60A1 Tank 020-171-5375-E Manual and Power Turret Operation, M48A1 020-171-5376-E Ballistic Computer Operation, M48A1 Tank 020-171-5377-E Range Finder Operation, M48A1 Tank

020-171-5378-E Boresighting

020-171-5379-E Starting, Stopping Engine, M48A1 Tank 020-171-5380-E Loading, loading Main Gun, M48A1 Tank 020-171-5381-E Mistire Procedures MASA1 Tank 043-441-5958-E Vulcan Cannon Disassembly, Inspection. 043-441-5972-E Vulcan Radar 043-441-7804-F Chaparral

Energizing Checks, Part II

043-441-7806-F Daily Maint 043-441-7807-F Checks Parts 043-441-7808-F 1-9 043-441-7816-F Chaparral Week-Iv Maint Part III 043-441-7843-F Load/Unload Chaparral Missile, Part II

TF 6-4783 Maintenance of Barrel, Breech, Rammer, M109-M109A1

Goat Brake Bleeder

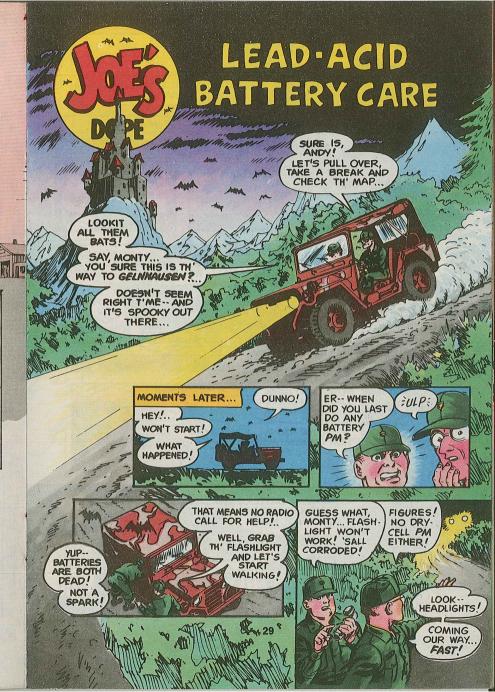
There's a new, improved brake bleeding tool for your M561 and M792 11/4-ton vehicles. It's a 2-piece kit—Part No. 5704837—containing a PS Magazine 281 (Page 13). It's not available. modified box wrench and a 25-in length of clear, soft plastic tubing. The kit can be ordered utilizing stock funds from: Commander, US Army Warren, MI 48090.

Forget That Course

You can forget about that "Organizational Motor Sergeant's Course" at Fort Knox listed in

1/4-Jon Battery Box Cover

Need a battery box cover for your M151-series Tank-Automotive Command, ATTN: DRSTA-WK, 1/4-ton? Order it by exception data with part number 8754753 (19207).







THE COMPLETE STORY ON CARE OF THESE BATTERIES IS IN 7M 9-6/40-200-12 (Sep. 73) HERE ARE COPIES...

THANKS, BG!

THIS CHART SHOWS IMPORTANT PM ACTIONS YOU MUST TAKE ON CABLES AND CLAMPS.

Connections should be tight (snug, plus ¼ to ½ turn).



Use ONLY the two small box wrenches or open-end wrenches in your No. 1 common tool kit.

Protect clamps and posts from corrosion with a coat of GAA.





Replace clamps if they're mashed together at open end. Check for tightness of the clamp-topost by trying to twist it with your hand—not with pliers.



Use only your thumb and finger to lift and press the cable-to-clamp connection. That's enough to see if it's tight. No pumping with a fist-grip on the cable.

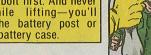


Report any corroded parts, frayed cable or bare wire.

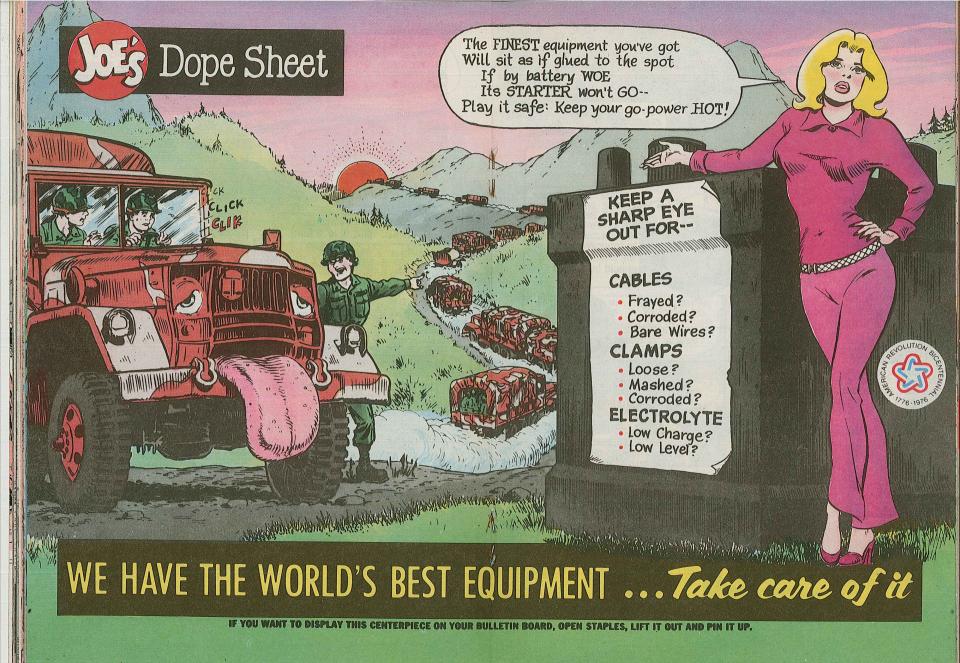


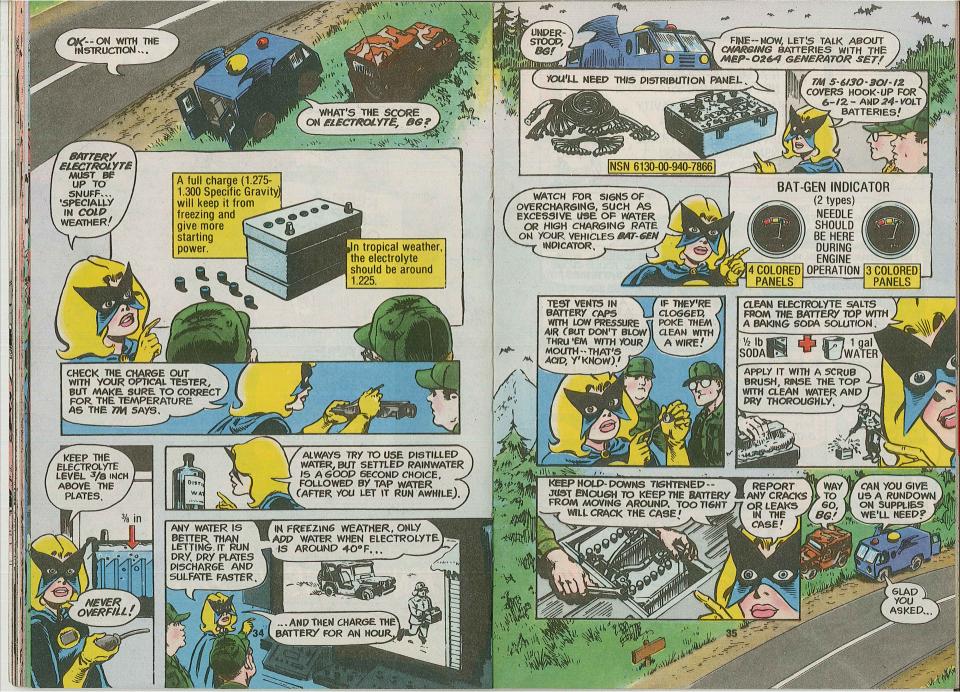
If you have to remove the clamps, use your battery terminal lifter-scraper, NSN 5120-00-293-1039. Be sure to loosen the clamp bolt first. And never twist while lifting—you'll damage the battery post or break the battery case.

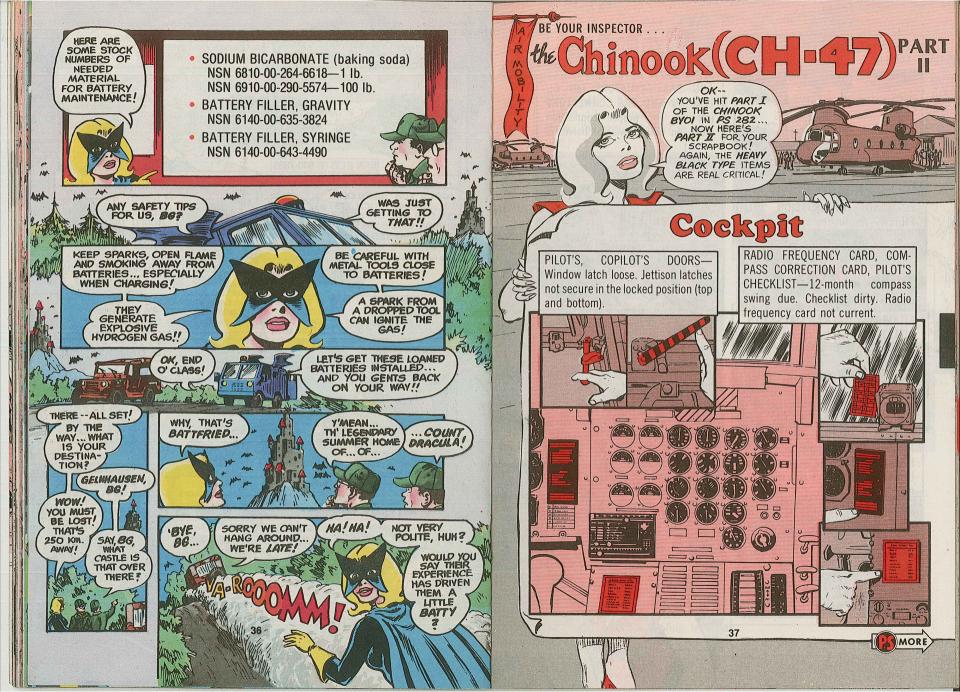
AND
WHEN YOU
GET BACK
TO YOUR
MOTOR
POOL,
POST
THIS
PIN-UP...

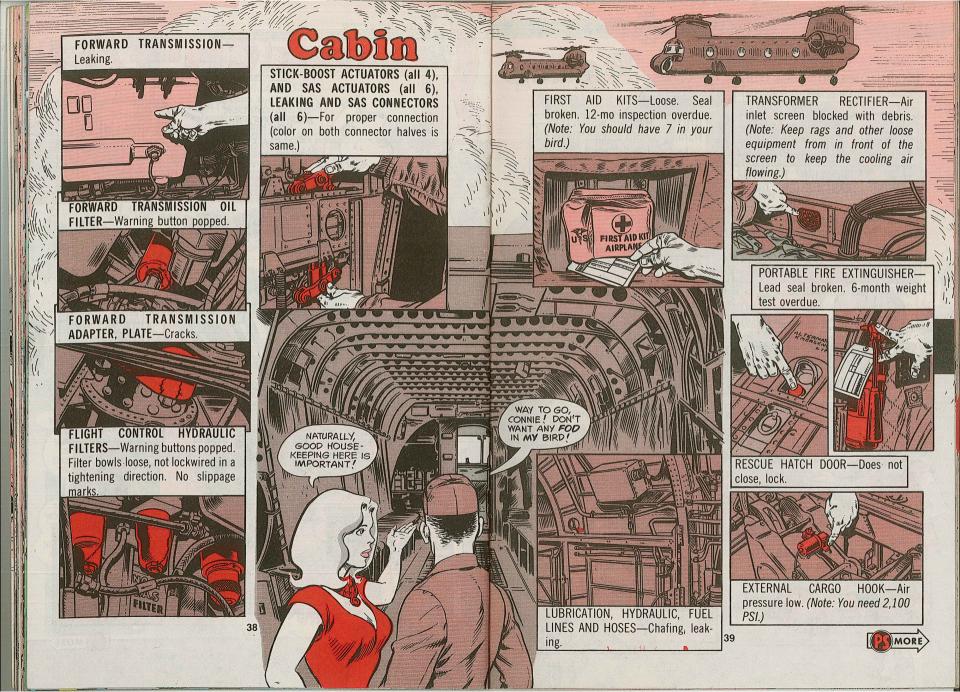


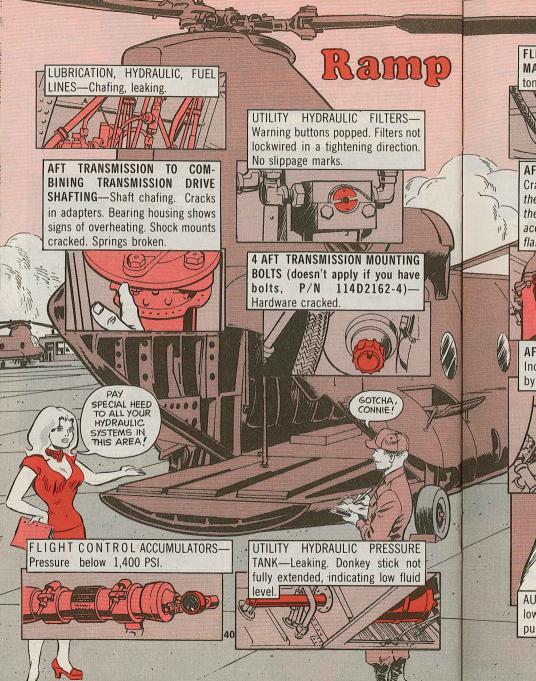
31



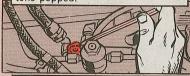








FLIGHT CONTROL HYDRAULIC MANIFOLD FILTERS—Warning buttons popped.



AFT TRANSMISSION—Oil level low. Cracks and leakage. (Note: Eyeball the aft transmission housing below the pressure port and forward of the accessory gear box mounting flange.)



AFT TRANSMISSION OIL FILTER—Indicator popped . . . filter being bypassed.





AUXILIARY POWER UNIT—Oil level low. Accessory section and hydraulic pump leaking.

Power Checks

EXTERNAL CARGO HOOK— Hydraulic release doesn't work. Manual release jammed.





CABIN EMERGENCY LIGHTS—Lens cracked.



RAMP EMERGENCY LIGHT—Lens broken. Bulb missing, burned out; batteries run down.

ENGINE, TRANSMISSION CHIP DETECTOR CAUTION LIGHTS ARE NOT ILLUMINATED—(Flip caution panel test switch to see that panel lights operate.)



BATTERY EMERGENCY BUS RELAY—Not working. Eyeball the log book and sign off the Daily on the DA Form 2408-13, knucklebusters. Your baby is ready for the wild blue.







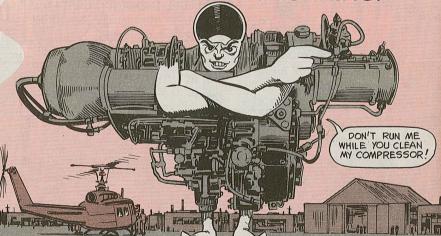
TURN 'EM IN!

There is a critical shortage of Huey, keep moving out. Keep the supply, Cobra and Mohawk engines at the pipeline filled with: overhaul shops, air types. So, scout T53-L13 around your area for unserviceable T53-L13A engines. If you do not keep the T53-L13B unserviceables moving into the depot, T53-L701

NSN 2840-00-911-7685 NSN 2840-00-102-3969 NSN 2840-00-134-4803 2840-00-116-7134

NOT WHILE ENGINE'S RUNNING!

you cannot expect the serviceables to T53-L701A NSN 2840-00-176-9132

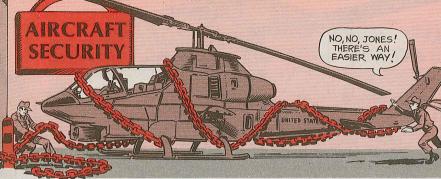


Avoid, avoid, AVOID . . . running your T53, T55, or T63 engine while cleaning the compressor.

Water or cleaning solution sprayed into the engine inlet will cause highfrequency compressor blade oscillation. This leads to metal fatigue damage and possible blade failure.

Plug in an auxiliary power unit and hit the starter to rotate the compressor during cleaning.

After a wash job, your favorite throttle jockey can run the engine to dry it out.



If you've been postponing dawdling a bit . . . in complying with aircraft MWO's covering a standard padlock fixture and an ignition lockout OH-58A MW0 55-1520-228-30-27 switch . . . don't.

There's a big push on to get all AH-1 MWO's on security devices applied.

Taking care of the door lock is MWO 55-1500-204-30-1 (Dec 74) with Ch 1 (Jan 75), Ch 2 (Mar 75), and Ch 3 (Aug 75).

The MWO's covering the ignition locks are:

IIH-1 MW0 55-1500-219-30-5 and Ch 1

MW0 55-1520-221-30-51 and Ch1

CH-47 MW0 55-1500-210-30-50 and Ch 1.

Ch 2, Ch 3

CH-54 MW0 55-1520-217-30-64

0V-1 MWO 55-1510-204-30-46 and Ch 1

OH-6A MWO 55-1520-214-30-44 and Ch 1

STOPS RUST IN ITS TRACKS

Any time you come across bare metal on your Cobra, rust is going to foul up the works.

Take those steel screws that hold the weapons sub-systems on your baby. Rust can jam the threads.

So, latch on to some corrosion preventive compound from your Quick Supply Store and stop the villain. NSN 8030-00-838-7789 will get you a 16-oz spray can for only 49 cents. It's authorized on page 663, maintenance supplies, of TM 55-1520-221-20P (Aug 74).

Just a little blast will do ya.





Yes, indeed!

The word now is that no historical data is required on the bar assembly. Fact is—some of the sub-assemblies, like the lever and support, are not finite life items. You can use 'em as long as they pass inspection.

Continue to keep records on the frame and tubes.





Your AH-1G/Q/R/S or TH-1G helicopter uses the P/N 209-076-136-1 lockout valve in its hydraulic system.

So, be sure to get the right valve for your Snake. Avoid P/N 204-076-012-3, which has a spring cover. If you use the wrong lockout valve, you can end up with hydraulic servo cylinder lockup.

HERE'S THE

WRONG RIGHT LOCKOUT VALVE LOCKOUT VALVE SPRING COVER

P/N 204-076-012-3 P/N 209-076-136-1

A TISKET, A GASKET

There's no installation gasket used on the UH-1D/H helicopters the way it says on page 12-12, para 12-12d(1), TM 55-1520-210-20 (Sep 71). The pub's wrong. The only gasket used with the main generator is for shipping.

TWICE A YEAR

The idea behind testing aircraft outside air temperature gages is to do it around 100 hours. So, it's done on the Periodic inspection for most first-line birds. The Kiowa and Cayuse, with 300-hour Periodics, are the exceptions. Based on a monthly flying hour average, test the gage in those babies every 6 months. That's the word in AVSCOM message AMSAV-FEP 121920Z Dec 75.





may need reversing to distribute grease evenly.

and let the grease settle along the bottom edge of the wick. To get the grease spread around, loosen the lubricant. wick—holding screws and reverse the

Those grease wicks in the RO-313 wicks. This will evenly distribute the grease.

If you need to add grease, use MIL-Sometimes the grease wicks get lazy G-3545C-type high temperature aircraft grease on the wicks. NSN 9150-00-223-4003 is for a 1-lb can of the

> DICHS WHEN THEY WEAR DOWN!



WITH FREON SOLVENT

AD-312/G CAAD PUNCH

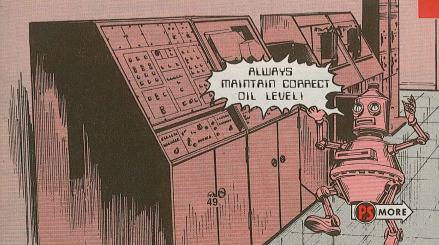


minute just before refilling each reservoir. If you don't do this, important additives stay in the bottom of the can. This'll lead to a punchy punch head.

You know you've put in enough oil when you've measured out 93/4 ounces of oil or the oil level has reached the two-thirds level on the indicator window.

Wait until you have replaced the punch head in the RO-312 before eyeing that oil level, though. Because of the head's angle of installation, the oil level can change.





AD-315/G PAPER TAPE PUNCH

When it comes to replacing the oil in the RO-315's perforator oil can, fill 'er to the halfway mark on the oil gage. But wait . . . eye the oil level again after it's been in the can for awhile 'cause a strange thing can happen . . . the oil may rise by itself.

If this happens, drain it to the level of the halfway mark and the perforator's ready to go.

And, you put only a drop or two of oil weekly on the gears in the capstan drive mechanism.

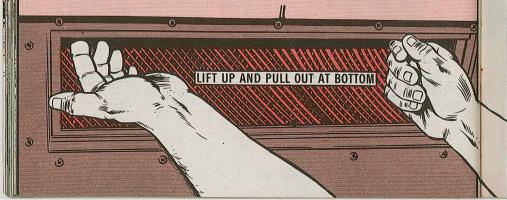
Keep paper tape from dragging on the floor. It'll pick up dirt and pass it along to your reader, making a mess of its innards.



AIR FILTERS

Cleaning the air filter in the RO-312, -313, -314, -315, RP-152, -154(P) and C-8120 control unit will keep your gear clear-headed and cool. So clean 'em like it says in the respective equipment TM.

To remove a filter, lift it upward at the top and outward at the bottom. Wash the filter in warm, soapy water, rinse in fresh water, and air dry. After drying, apply filter coater NSN 4130-00-860-0042 to both sides of the filter 3 times.





CODE WHEELS



LINE UP

GUIDE PIN

WITH DISC . . .

BEFORE

YOU TIGHTEN THUMB **SCREW**

The real key to the successful operation of your digital gear is the code wheel. Keeping it clean and straight will help keep your communications traffic moving.

Always clean the code wheel with a

Hold the disc by the rim when you're cleaning it or installing it in the

Careless handling of the code wheel can leave it with messy fingerprints or scratches that give you false readings and bad vibes.

Before you tighten the thumb screw holding the code wheel on the equipment, make sure the guide pin is lined up with the disc. Mismatching the guide pin can leave your disc wobbly.

RIGHT ON, DISTY!)
A WARPED CODE
WHEEL CAN CAUSE WHEEL WARPED? ERRORS! REPLACE !



BLOWER BLOWS GOOD BREEZE

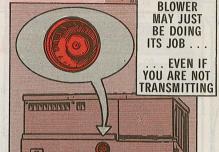
FIGURED WHY WASTE ALL THAT HOT AIR!

Does the blower sometimes come on in your RT-246() or -524() receiver-transmitter when you're not transmitting?

Wait one with the repairs ... Your RT may just be doing its thing.

A thermostat turns the blower on when the temperature inside reaches 140° F—even when you're not transmitting.

So, if the blower blows while your transmitter rests, the set is just trying to regain its cool—so you do the same.



PANEL PULLING IS-

BAD DEAL FOR CARDS

Taking the front panel off your TD-660()/G multiplexer makes it handier to get at the channel setting

True enough-

But, sacrifice the convenience and leave the panel put.

Use the panel door like you're channel changes.

IT'LL ALSO OPEN UP YOUR GEAR TO DUST AN' DIRT WHICH CAN SHORT IT OUT!

LONG AND SHORT OF IT

ABOUT YOUR AT-1095 ANTENNAS.

NOT IMPORTANT FOR FREQUENCY MATCHING ... ONLY THE METAL CON-DUCTORS MUST BE THE SAME LENGTH!

TM 11-5820-498-12 (May 67) says Dear Half-Mast, to replace the AT-1095 antenna element when it's less than 63-in long. This info is not in other TM's or FM radios. What's the story here? SFC W.D.R. Jr.

Dear Sergeant W.D.R., I'm glad you asked. The length of the element itself is no longer important since different manufacturers supply AT-1095 elements of different lengths. However, all AT-1095 elements have the same length metal conductor to insure proper frequency matching.

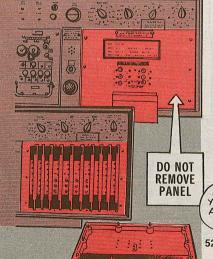
The AT-1095 is good as long as the metal conductor inside hasn't been exposed at the tip due to wear or breakage.

BONNIE HAS 'EM . . .



That's right . . . many of the back issues of PS Magazine. Jot a note to Bonnie, c/o PS Magazine, Lexington, KY 40507. Many issues from No. 247 (June 1973) to date are on the shelf.

53



supposed to do when you're making Without the panel in place those cards can jiggle loose. This'll make for poor card contact or no contact at all.



HEY --

WHAT HAPPENED? RADIO'S OUT--

NO DON'T!! THAT'S EMERGENCY ONLY PROCEDURE -- MIGHT DAMAGE TH' SET! Will the without the tree was

Whoa, Mac!

switches on your tracked vehicle's flicks to OFF, stay off the panic button. MX-7777B electrical transient suppressor.

the ON position and battle override switch in the OFF position.

This'll give your FM radio set protection against electrical spikes that can damage your set.

O'course, if your suppressor is hit Back off finger-flipping those with a hot one and the circuit breaker

Wait 2 minutes.

It takes that long for the zener diode Leave the circuit breaker switch in and thermostatic switch to cool.

Then, reset the circuit breaker switch to ON.

So you're in a real big hurry and you can't wait 2 minutes to get communications going again? Throw the battle override switch to ON, like it says in para 2-3c of TM 11-5915-224-14 (Jan 73).

After a couple of minutes, turn the battle override switch to OFF and reset the circuit breaker switch to ON. BREAKER When the battle override switch is on, SWITCH your radio has no protection against electrical spikes.

MX-7777B SUPPRESSOR BATTLE OVERRIDE SWITCH CIRCUIT

URN-IN URN-ON

If some is good, more is better, right?

Wrong! Especially when it comes to repair parts stockage.

Picture this. You're in desperate need of track pads for your tank, but DS is out of 'em. And to top it all off, the darn things are on back-order. But over on the other side of the post, Company X is hoarding a pile of pads they won't use up before the Tricentennial. So you're being squeezed by their vice, so to speak.

But it's not time to get feeling holier than thou. Check your own stockroom, and see if maybe you've got something that's been sitting there since Year 1. If you've got extra of something, chances are somebody else is hurtin' for em.

The solution? Turn in excess parts. Check your DSU's SOP on free turnin. You're not even asked how you got those extra parts. Be sure to identify the part with a tag or DA Form 2765,

WHAT ARE THESE THINGS? DUNNO! SOMEBODY OUGHTA TELL A COMPANY ABOUT USING A DA 2765 ON TURN-INS!

so Support won't have to waste time _

trying to figure out what they are.

Turning in excess not only helps others; it helps you, too. You know what happens when you get caught in an inspection with extra stuff you're not supposed to have.

Some excess items have been showing up at PDO. That's not the way to go. It's just as easy to turn something back in as it is to throw it away-and a lot cheaper! The cost of throwing away a good repair part shows up in that block on your pay statement labeled "Federal Tax." In other words, you're wasting your own

COMPANY A PLL SECTION TURN IN WHAT EXCESS, CONNIE? ALL WE GOT IS A LITTLE "RAINY DAY" SUPPLY!

So what do you turn in? That's easy—everything that's not authorized. If you need a repair part often, order it as needed. Then you'll build up enough demands to put it on your PLL—legally!

When you're gathering excess for turn-in, some things to look for especially are items that will deteriorate in storage. Things like batteries, seals, tires and other things with a short to medium shelf life. Also watch for repair parts for equipment you no longer have. And send back those DX items that should have gone back to DS long ago.

There're some items that're in especially short supply right now. In fact, they're on back order from the manufacturer. If you have even one extra of any of these, turn it in right now—somebody else needs it bad.



2590-00-148-7961.

2940-00-804-7898.

6620-00-938-8212.

2920-00-116-8399.

2540-00-176-9464.

4140-00-016-2615.

WANTED!

THESE ITEMS IN SHORT SUPPLY!



Cable Kit (slave cable) Air Filter Element, 21/2-ton truck Oil Pressure Gage, M151 series trucks Voltage Regulator, many trucks and tracks Windshield Wiper Motor, M151 series trucks Blower, Engine Air Filter, M60 series tanks



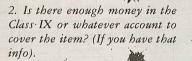
IF YOU GET TURNED ON TO THIS TURN-IN IDEA, YOU CAN TURN OFF A LOT OF PROBLEMS AND DO YOURSEL A GOOD TURN!





BE SURE YOU CHECK THESE 4 THINGS BEFORE YOU SUBMIT IT FOR REVIEW...

1. Is the request OK for your level maintenance?



3. What about quantity? Do you really need 4 left-handed wheelpinchers or will 1 do?

4. Does your request really need a high priority?

> LAST POINT IS THE

THIS

Have you got gear deadlined for lack of that item?

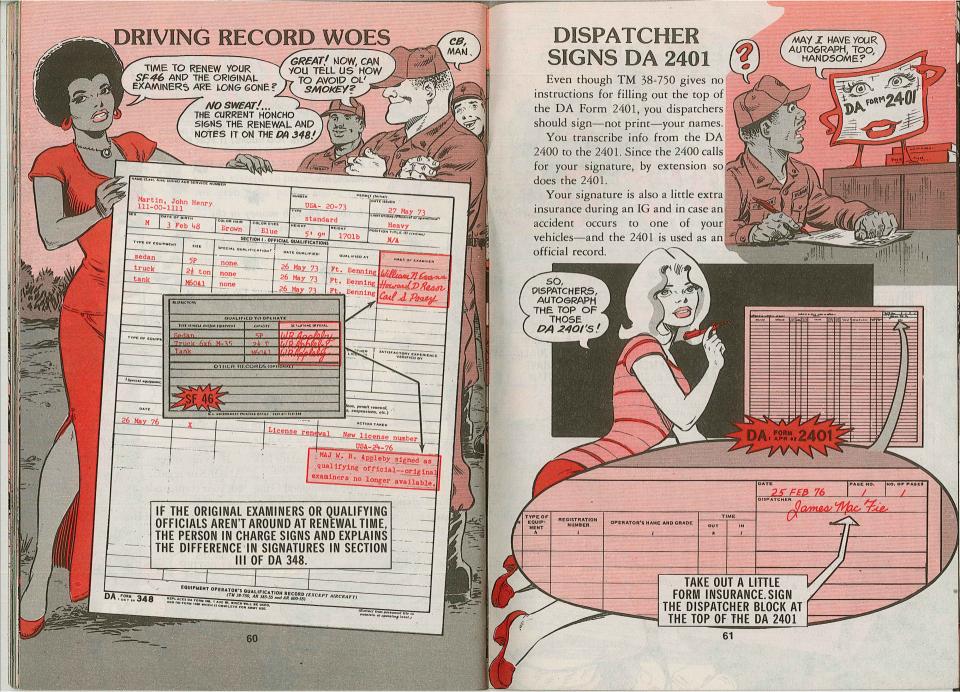
at high noon or will you be limping up too little and too late because you need at least ask for a reason. that item?

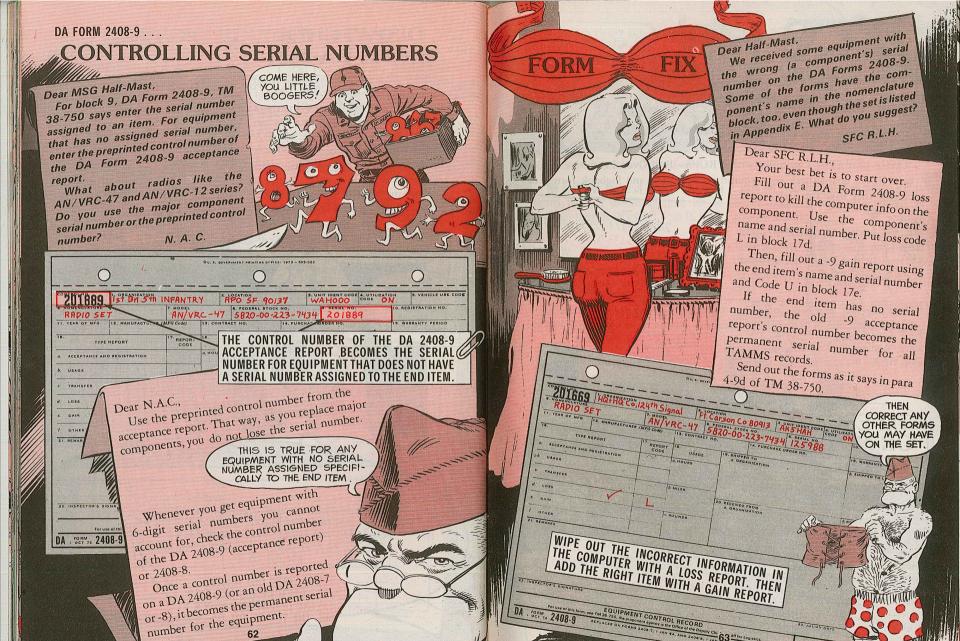
If your request isn't NORS or ANORS or regular gear's not deadlin-Can you meet the Deadwood Gang ed, your commander's probably going to call a halt to that high priority—or

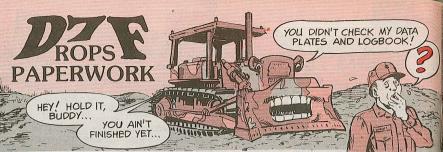
So, keep these points in mind.

WELL-AIMED SHOTS HIT ON-TARGET BETTER THAN A WILD BURST OF









Do you have a D7F Caterpillar with a ROPS—Roll-Over Protective Structure? If so, doublecheck your equipment data plate and logbook forms to be sure they have the correct NSN.



EQUIPMENT NSN LIN D7F w/ripper 2410-00-177-7283 W83529 D7F w/ripper and ROPS 2410-00-185-9794 W83529 D7F w/winch 2410-00-177-7284 W76816 D7F w/winch and ROPS 2410-00-185-9792 *W76816 *BEING ADDED TO SB 700-20

Mis-matched numbers mean you fire off a DA Form 2408-9— Equipment Control Record—to straighten out the records per TM 38-750.



Commander
US Army Maintenance
Management Center
ATTN: DRXMD-MT
Lexington, KY 40507

TO ESC THAT IS THE OR NOT TO ESC

Dear Half-Mast.
Para D-3b and c of AR 220-1 Unit
Readiness Reporting (Mar 75) seem to
Para D-3b and c of AR 220-1
Para D-3b and

Dear SFC D.M.,
Only if your command says so.
Even tho there is no DA require.
reportable items, your command may
equipment with a published ESC.

POOR SHAKE-SPEARE Counie's
Mini Mini's

HEY, BATTERY GIRL! I GOT BATTERY TROUBLES!

Dosimeter Serial Numbers

RIGHT ON,

BRUCE !

TREE,

The AR 710-2 headshed has called a halt to writing radiac dosimeter serial numbers on property book pages.

Since these items are replaced from float stock on a direct exchange basis, you've had to change the serial number entry nearly every time the dosimeters went in for a check-up. But no more!

Change 4 to AR 710-2 will strike radiac dosimeters from this requirement.

Until then, DA message DALO-LES 121545Z (Jan 76) is your authority to leave radiac dosimeter serial numbers off property book pages.

We goofed on page 9 of PS 281. You keep a second DA 3318 non-stocked items file for minimum stockage (MS) items—not DS items.

Non-Stocked 9tem Goof

5-Jon Chain Gang

To get the tailgate chain for the M813A1 dropside cargo truck, order Pin, NSN 5315-00-740-9017; Hook, NSN 4030-00-948-7315; and Chain, NSN 4010-00-165-6063. They got left out of the parts manual.

5-Jon Truck Brake Pin

You have to use NSN 5305-00-206-0932 to get that brake shoe pin (Item 23, Fig 104) listed on page 2-101, TM 9-2320-211-20P (May 73). You'll get a slotted washer if you order by NSN 5310-00-333-7519 now in the TM.

Interim Change to AR 220-1

Start tracking down a DA message change to AR 220-1 Unit Readiness Reporting (Mar 75). The message, DAMO-ODR 271650Z Jan 76, came out with lots of new instructions on filling out your unit readiness report. It went into effect 20 Mar 76

Better Brake Clamp

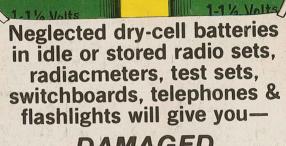


Brake hoses on your 5-ton truck can be cut by the loop clamps holding them in place—unless you've got the new cushioned clamp, NSN 5340-00-854-6729. It's replacing the old noncushioned clamp, NSN 5340-00-597-0182 now in TM 9-2320-211-20P (May 73) and TM 9-2320-260-20P (Nov 72).

\$U.S. GOVERNMENT PRINTING OFFICE: 1976 - 657-631/12

Would You Stake Your Life non the Condition of Your Equipment?

CCAN IDLE STOREDS



DAMAGED EQUIPMENT!!!

REMOVE DRY-CELL BATTERIES!