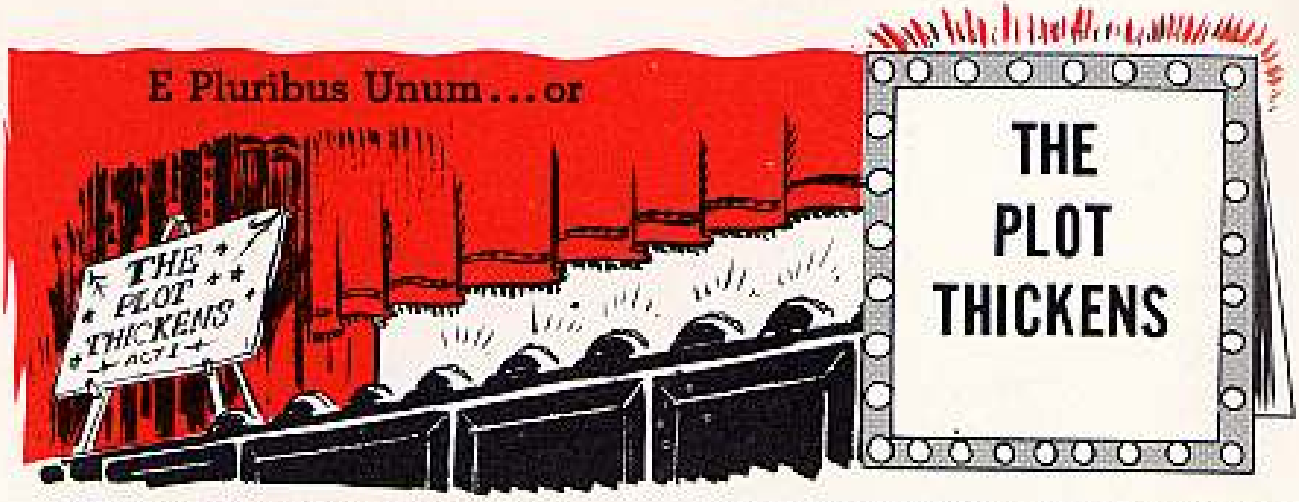

Issue 134
PS
1963 Series
THE PREVENTIVE MAINTENANCE MONTHLY
WOT NEW JET PROPELLED SLED...?
WE GO WITH WOT WE GOT!
S.Claus
Will Eisner

E Pluribus Unum... or



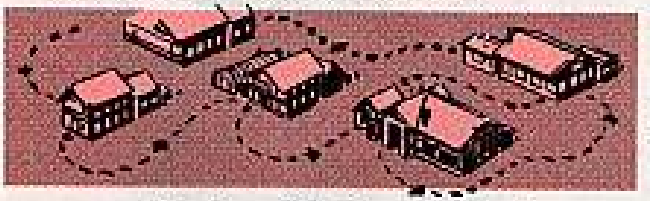
The people who put out the telephone directories for the posts, camps and stations have been doing some mighty peculiar things recently

as you can see by thumbing through the maintenance section of your post directory, where more than likely you'll find the post maintenance activities lumped together under a general term such as "Consolidated Field Maintenance" or "Combined Field Maintenance,"

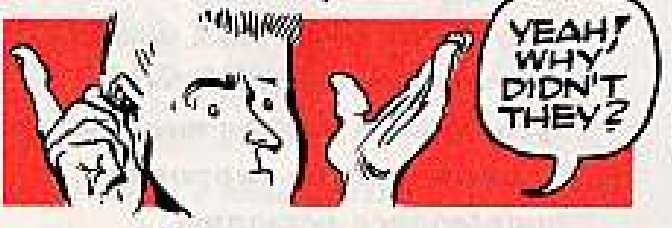
and further broken down under such functional sections as Armament, Tracked Vehicles, Wheel Vehicles, General Purpose, Avionics, Electronics, Aircraft and such, instead of being listed under the old technical service breakout;

and when you start looking real close you may discover that a number of these functional sections have the same building number or address,

which should send shivers of gladness through your heart since there's nothing more convenient than having a one-building or one-area service center where your tank, for example, can get its engine, guns, radio, searchlight and filter unit, gas particulate, up-snuffed pretty much in one fell swoop instead of having to be shuttled around from one specialty shop to another at a considerable waste of time and effort,



and why didn't somebody think of this before!

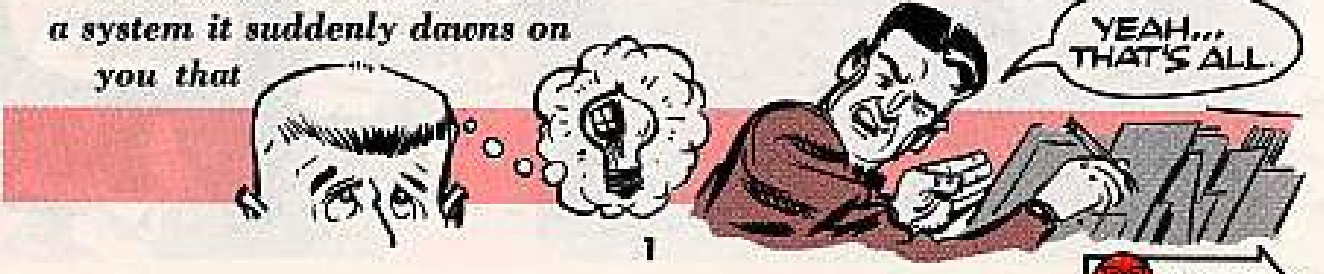


But as you continue to ponder the unearthly delights of such a system it suddenly dawns on you that

gee, the authority and responsibility for combining and consolidating these important maintenance functions doesn't generally rest on the shoulders of people who compile telephone directories

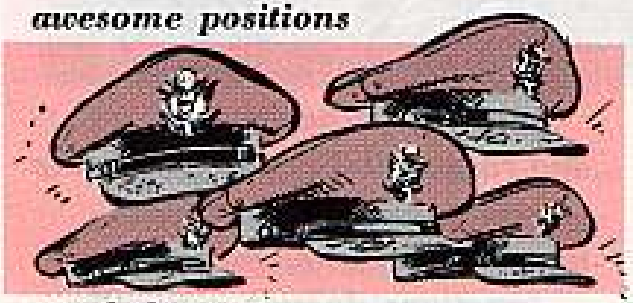
so there must be some really big stick behind this idea

and the directory people just carried it through in their neat and orderly fashion,



MORE

so you start looking further and sure enough, you start running across such titles as "Director of Field Maintenance," and "Superintendent of Field Maintenance," and other awesome positions



and there no longer seems to be any doubt as to "who's in charge here,"

which is sure going to make it easy for your "Old Man" to conduct his maintenance business since he always felt that under the old system he wasn't being "supported" so much by maintenance as he was "surrounded" by it,

and CO's for some strange reason take a mighty dim view of being "surrounded."

Well, any ol' how, the more you study the directory the more intriguing it becomes and

and you go on to think of all kinds of benefits that could develop from this consolidated system, both for the equipment users and the supporting maintenance personnel,

and you suddenly remember the old joke about the telephone directory being reviewed by a literary critic who said it has a marvelous list of characters but not much of a plot,

and you get to thinking that maybe there's a heap sight more plot and action involved here than the critic ever dreamed of

and it just could be that this on-post, off-Broadway drama may turn out to be one of the outstanding performances of the season.

At any rate, it's well worth waiting for the final curtain, wouldn't you say?

PS

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THE PREVENTIVE MAINTENANCE MONTHLY

Issue No. 134 1963 Series

IN THIS ISSUE

Use of funds for printing of this publication has been approved by Headquarters, Department of the Army, 4 April 1962. DISTRIBUTION: In accordance with requirements submitted on DA Form 12-4.

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

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

M113 PLUG POOP

Don't let the spark plugs in your M113 personnel carrier foul you up.

The M113 has a high horsepower, high compression engine, and the plugs are no more self-cleaning than a little boy's ears.

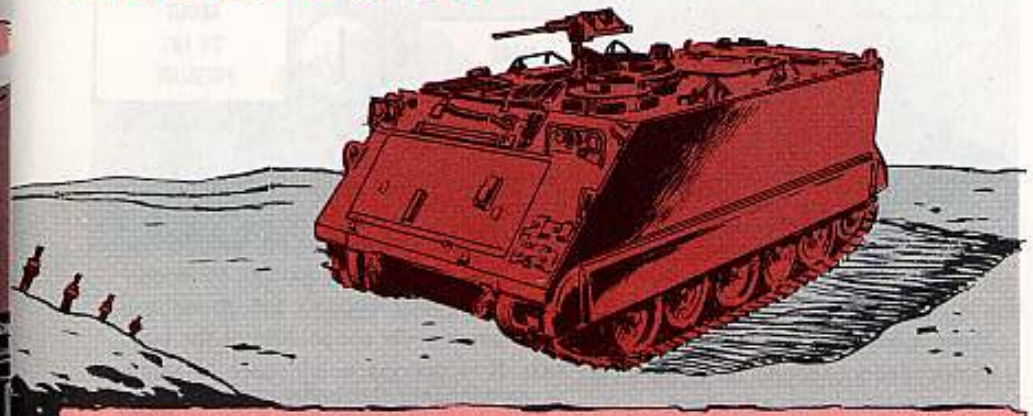
Like we said is PS 125, page 16-19, if you gotta idle or go at slow speed for long periods, give your plugs a break by revving up your engine to 2,500-3,000 RPM for 2-5 minutes after every 30 minutes of idle operation. Also, if you have to idle for a long time, pull out the hand throttle so your engine RPM climbs to 1,000-1,200 RPM.

But there's something else . . . lots of plugs get fouled up during engine deprocessing. You're not going to have a smooth-operating M113 if the plugs are full of gook that got there when you were burning out the preservative oil in the engine.

So here's what to do . . . and this is the official word . . .

1. When you get a brand new M113 (or any of its family such as the XM474E2 or the XM577) there will be eight new spark plugs FSN 2920-679-9728 in the driver's compartment. (In the case of a replacement engine the plugs will be in a bag tied on the engine.) YOU DO NOT USE THESE PLUGS.

2. Break in the engine with an old set of plugs, FSN 2920-679-9728, which you keep just for this purpose. You will remember that for each plug you also need a gasket, FSN 2920-314-1130, so you better order it at the same time.



3. When you put in the spark plugs, torque to 30-32 ft lbs. You should use a torque wrench and get this right on the money because under-or over-torque can cause engine damage by detonation. In fact, improper spark plug torque can even ruin an engine entirely.

4. Run the engine with these old plugs until you are absolutely sure that all preservative oil has been burned from the combustion chamber.

5. Now put in the new plugs and gaskets and torque the plugs to 30-32 ft lbs.

6. Clean and re-gap the old plugs (to 0.035 inch) and keep them until you have another M113 to break in. Support outfits that do a lot of de-processing of new or stored equipment usually keep enough extra sets of spark plugs to do the job.

There are a couple of other little points you should be sure about . . .

a. Engine timing must be at the 10 degrees BTDC mark.
b. Fuel must be the minimum 83 octane type.
c. Only spark plugs FSN 2920-679-9728 will be used. If you use any other kind you run the risk of burned pistons and valves.
d. Don't try to run the vehicle at slow speed in high gear range. Use a low gear range.

A world-wide teletype message (SMOTA-FM unclas TT01325 dated 12 Feb 63) and TB ORD (1 Apr 63) 392 are your authorities for this.

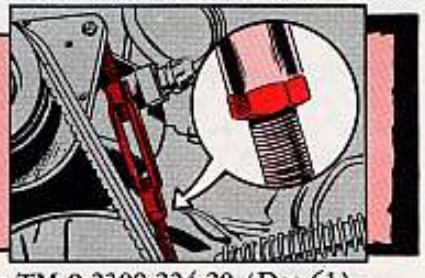
M113 ADJUSTMENT

You got the generator drive belt in your M113 personnel carrier tensioned like it oughtta be? It can make a big difference in your buggy's get-up-and-go.

Make a hard thumb press—about 25 lbs pressure—at the middle of the belt. It should deflect around ⅜ to ¾ of an inch. If it deflects much more or much less than this it needs adjusting.

To adjust it this is what you do:

1. Loosen turn buckle locknut.
2. Rotate turn buckle until you get it the way you want.
3. When you get it right, tighten the turn buckle locknut again.



You'll find this info in Change 8 to TM 9-2300-224-20 (Dec 61).

M60 DRAIN

Some M60 tanks are not getting all their engine oil drained right on account of the way LO 9-2350-215-10 (Aug 60) got looked at—but not read.

On page 2 there's a picture of the underside of the engine crankcase drain. The arrow points to only one plug, so people who just **look** at the LO are draining only one plug. The people who **read** are doing it right because on the same page it says, "To drain remove oil sump plugs and screen." Plugs means **both** plugs.

The latest edition of LO 9-2350-215-12 (May 63) shows it real clear.

Why the sweat about draining from both plugs? Won't all the oil drain out of one plug even if it takes a little longer?

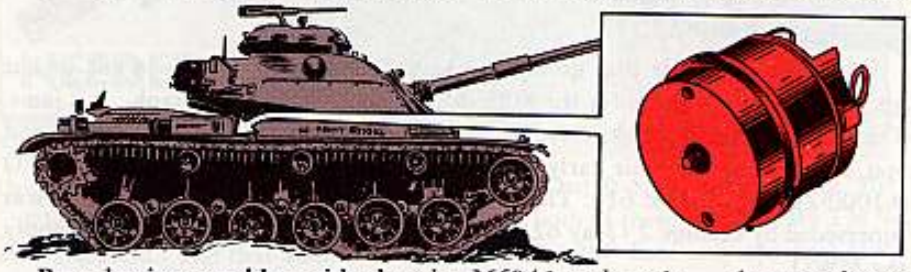
No, it won't.

The oil pan is divided into compartments inside. Take out one plug and you drain about 5 gallons from the pressure compartment. Take out the other one and you get about 7 gallons from the reserve oil compartment.

You should get a total of about 12 gallons of oil when you open up both drain plugs.

If you think one of them has been missed a couple times, you'd better take care of it right away.

NEW M60 TANK BLOWER MOTOR



Been having troubles with the air cleaner blower motors on your M60 tank?

Well, you're not the only one.

Cheer up! Better days are coming!

They got a new and improved blower motor in supply. It goes by FSN 6105-873-5379 and its Ord number is 10905006, 'stead of 8395503 which was the Ord number of the old motor. You'll find it listed as Item 2, page 55, of your TM 9-2350-215-20P (Nov 62).

The listing makes it out as an item for M60A1 tanks only . . . but pay that no mind. It's also for the M60 and the M48A3, and it's just what the maintenance medic would order to cure your air cleaner blower motor blues.

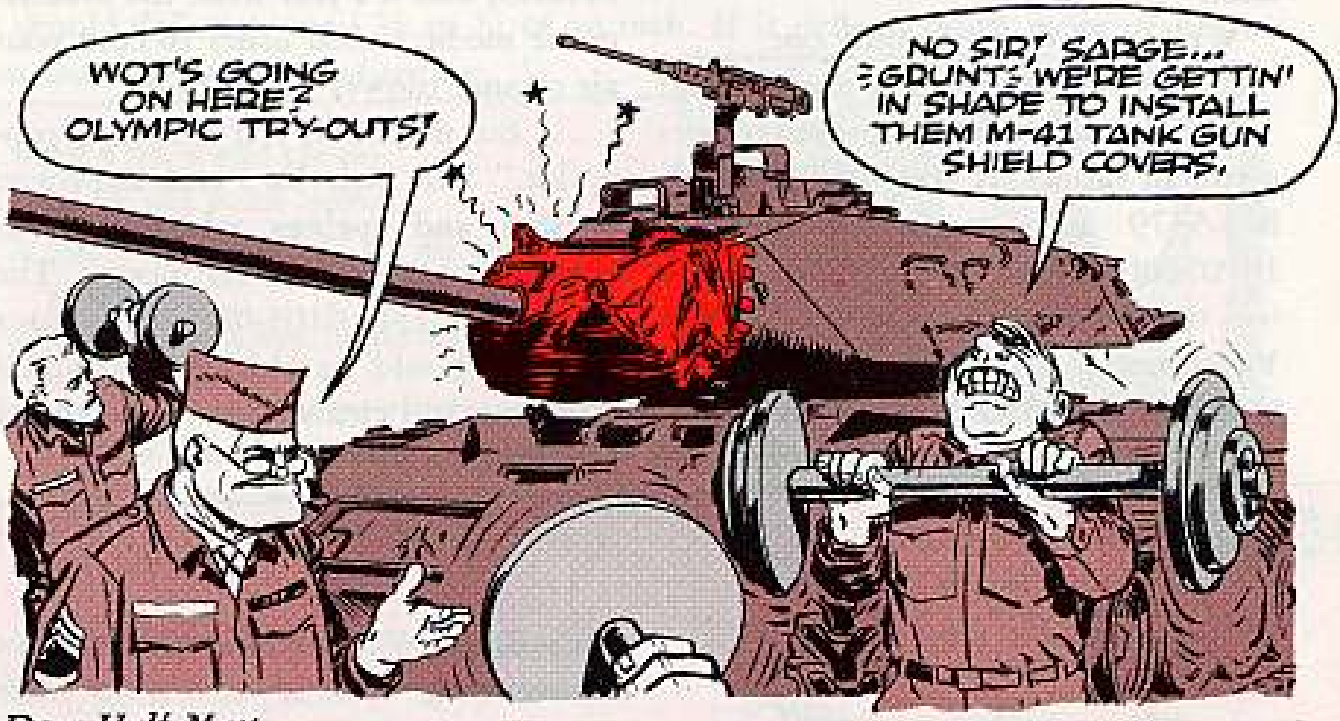
. . . But maybe all you need is a "pep-up kit." This includes 2 each improved brushes and springs which will fit either the old or the new motors. The kit goes by FSN 6105-084-7618. Your support should be able to get it and give your old cleaner blower motors a pep tonic.

DOPE

M60 TANK CHUTE

Go ahead and wear that greasy kid stuff on your hair if you want to but get rid of the solid chute for the M85 machine gun in your M60 tank . . . it jams. The late model M60 tanks have a flexible feed chute for the .50 caliber, and you can get one for your early model M60. Ask your support to apply MWO 9-1000-213-30/7 (Dec 61). There was a Change 1 to that MWO but it was superseded by Change 2 (May 62). Your support will need this change to apply the MWO.

NEW M41 TANK GUN SHIELD COVER



Dear Half-Mast,

We got trouble on our M41 tank gun shield covers. They're so small and miserable a man breaks his fingernails and his toenails trying to get one of them on.

SFC J. S.

Dear Sergeant J. S.,

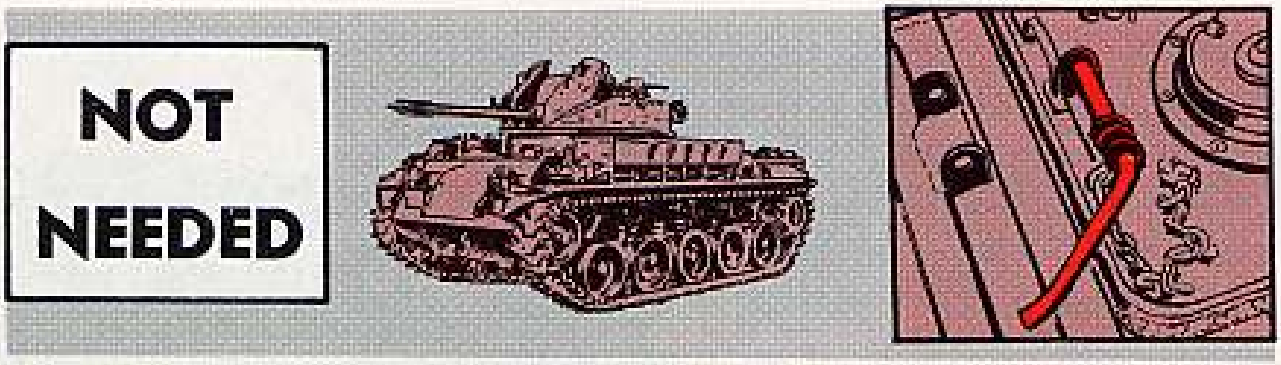
Help is on the way.

Tank gun shield cover FSN 2540-039-8688 (7984981) has been redesigned. The new cover will be FSN 2540-996-7253 (7334926).

O'course you'll have to go on using your present cover until it (or you) is exhausted, and your supply sergeant gives you the new cover he ordered for you.

In the meantime, wrestle with the old gun shield covers. If it helps any, you can tell yourself it's part of your PT.

Half-Mast



Dear Editor,

I have some M42-series SP guns on my hands and I find that many of them have grill handles (FSN 2510-796-3058) on 'em, but others don't.

To confuse me more, the handle used on the fuel tank filler cover FSN 2520-625-9073, looks just like these grill handles.

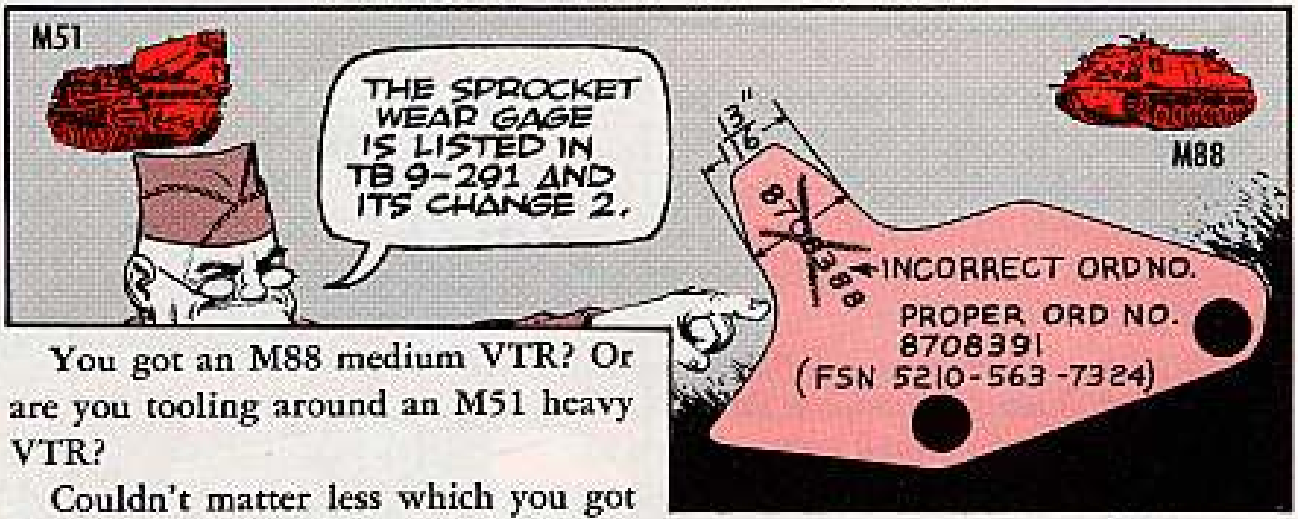
The Ord 9 SNL, G253, (Jun 56) shows both of these handles. My TM 9-2350-202-20P lists only the fuel tank fill cover handle.

I say they're the same and can be interchanged. What gives?

CWO R. Welch
Milford, Delaware

(Ed Note—The two handles you're looking at are one and the same breed of cat. For this reason the grill handle, FSN 2510-796-3058, has been an unauthorized item of issue for some time, and is being deleted from the supply system. Besides, the designers have since decided the grill handles are not necessary. But—your letter helped trigger the deletion by calling attention to the two FSN's on one identical item.)

GAGE THAT GAGE



You got an M88 medium VTR? Or are you tooling around an M51 heavy VTR?

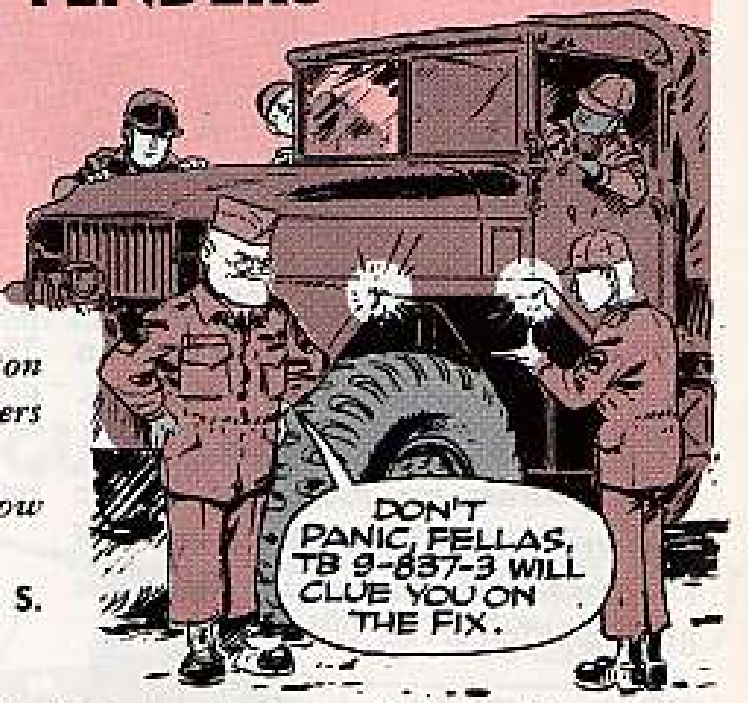
Couldn't matter less which you got because your problem is the same either way.

Your sprocket wear gage is marked with Ord No. 8708388, but this number is no more kosher than a Polish pickle.

This gage with its 1 13/16-in tooth width has the wrongo number placed as shown here.

The right number will be stamped, as shown, and the old number will be punched out.

CRACKED FENDERS



Dear Half-Mast,

We have several M-series 5-ton trucks in our battalion. The fenders are cracking on all of them.

What causes these cracks and how can we stop them?

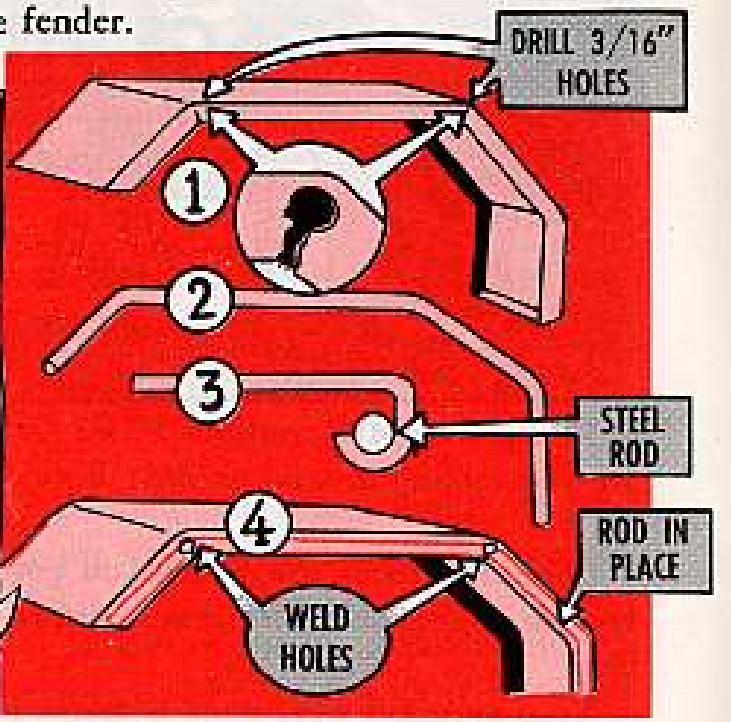
SFC W. K. S.

Dear Sergeant W. K. S.,

Cracked fenders on the G744-series 5-ton trucks is an old story. The cracks are caused by vibration, strain and distortion. As you probably know, the cracks start at the bottom corners and if not stopped in time, will creep across the top of the fender.

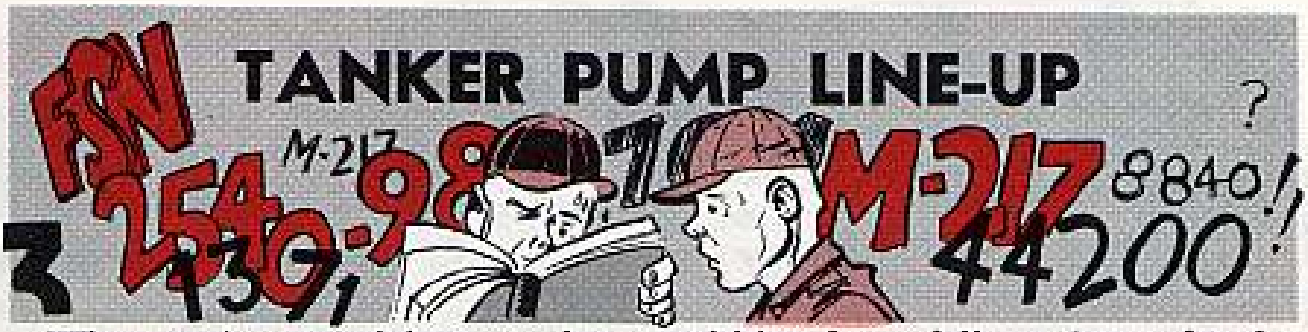
TB 9-837-3 came out way back in April 1953 and told how to drill a hole at the end of each crack to stop it from spreading and to weld a steel rod along the inner fender edge to strengthen the fender.

1. Drill 3/16-in hole at end of each crack to stop spreading.
2. Shape a 5/16-in cold rolled steel rod to fit fender.
3. Insert bent and shaped rod on inside roll of fender.
4. Weld rod along fender to a length of 3 inches on each side of each corner and from the ends. Weld rod along any additional cracks.
5. Weld cracks and drilled holes.
6. Clean, prime and paint all the welds.



The TB is still good and the fix is authorized whenever you see cracks starting; or better yet, weld the strengthening rod in place before the fenders get a chance to crack.

Half-Mast



When you're sweatin' over a hot requisition for a delivery pump for the G742 and G749-series tankers, here's some info that should take away part of the strain.

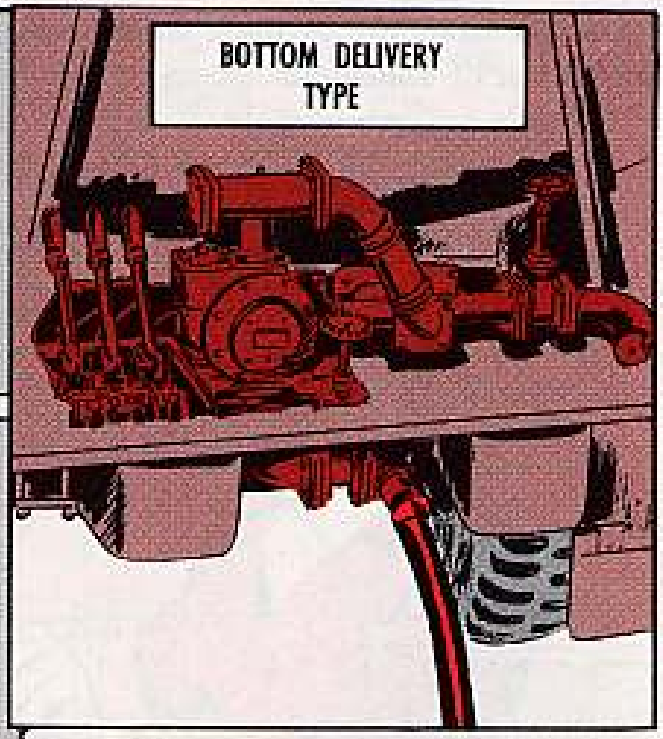
It's the FSN's for the latest pumps, along with the line-up of vehicles that use 'em.

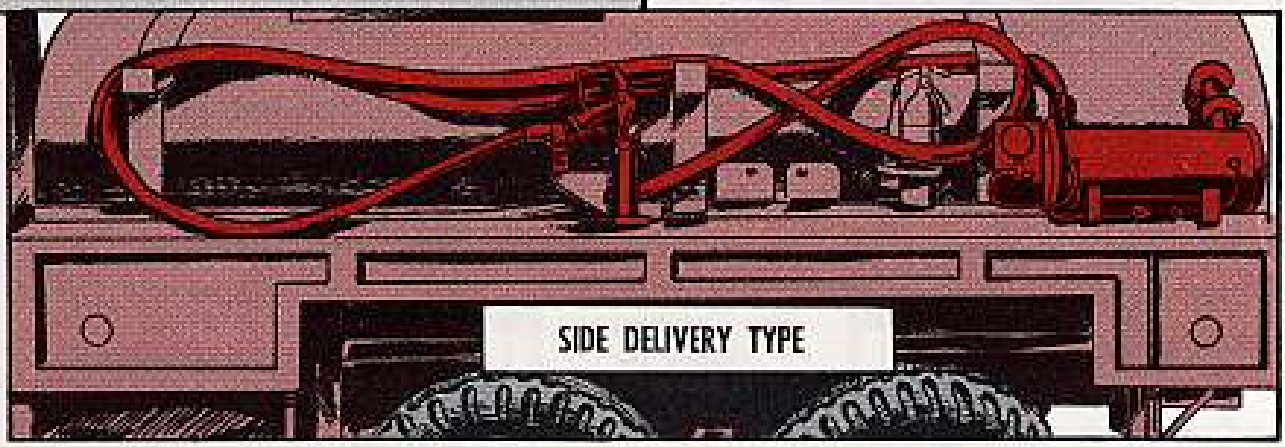
1. Pump, w/o Strainer (bottom discharge), FSN 2540-575-9876, Ord No. 7018840, is for:

M49, M49C, M50 (G742-series) tankers with vehicle serial numbers before M44200 (Studebaker-Curtiss-Wright) and before 140699 (Reo Motors) and M217, M217C, M222 (G749-series) tankers.

2. Pump, w/o Strainer (side discharge and plated interior), FSN 2590-857-1415, Ord No. 10906715 is for:

M49, M49C, M50 (G742-series) tankers with vehicle serial numbers after M44200 (Studebaker-Curtiss-Wright) and after 140699 (Reo Motors).





The pumps (bottom and side discharge) are listed in Change No. 3 (Nov 62) to TM 9-2320-209-20P. These pump FSN's also take the place of the ones in the G749 supply manuals.

If you ever need a new strainer you'll have to see your support unit. Both pumps use strainer FSN 2540-318-0944, a fourth echelon supply item.

ALINEMENT LINEUP

Do you operate an M151 ¼-ton truck?

If so, then ask yourself these questions:

1. Does your front end pull to the right or left?
2. Does it wander, shimmy or steer hard?
3. Are your front tires wearing on one edge, or the treads wearing to a feather edge?

If you have any of these tell-tale signs, the odds are that your M151's front end is out of alinement . . . and that's not good.

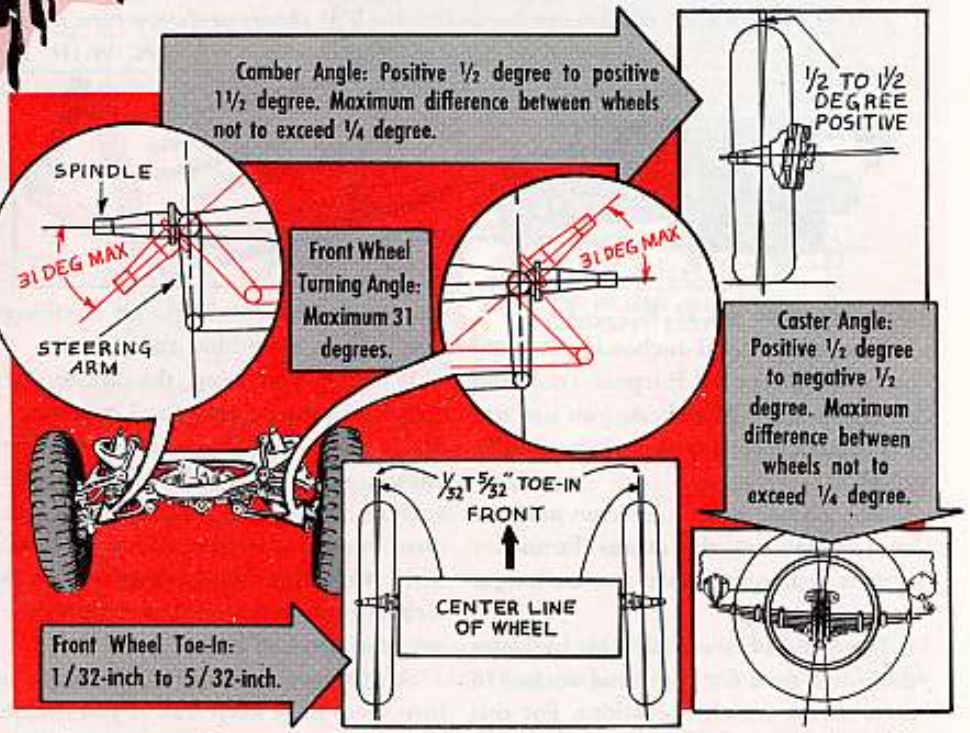
Keeping your front end in alinement is the core of good steering and good roadability. This is especially important with your M151 because of the vehicle's power-packed engine and its independent 4-wheel suspension system.

Like the man says—"Correct wheel alinement is the right position between all the interrelated parts of the front wheel and suspension system for proper steering."

Anytime a new part is installed or a major repair job is done on the front end, chances are that the position of the interrelated parts is changed. That throws the front end out of adjustment.

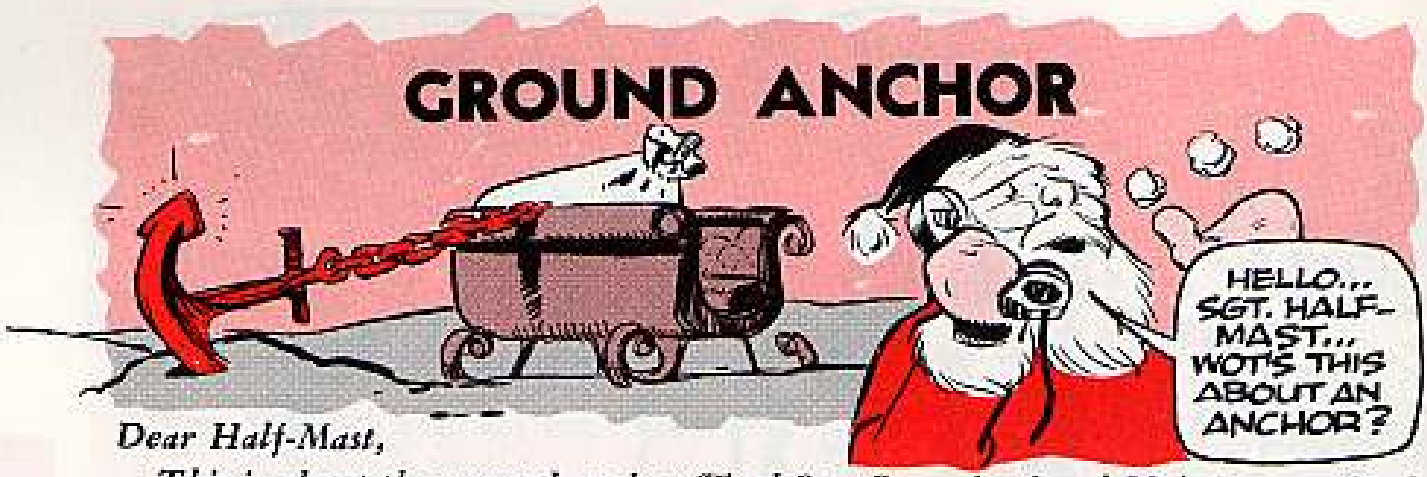
Look your front end over; look for any tell-tale sign that would tell you that your M151 needs a wheel alinement.

If ever your M151 needs a front wheel alinement job, here is the suspension and geometry alinement data that have got to be used.



The toe-in and turning angle are covered in TM 9-2320-218-20 (Apr 63) but setting the camber and caster is a support unit job. Your unit mechanic can work on the turning angle and toe-in, then check out the caster and camber job with his support people.

GROUND ANCHOR



Dear Half-Mast,

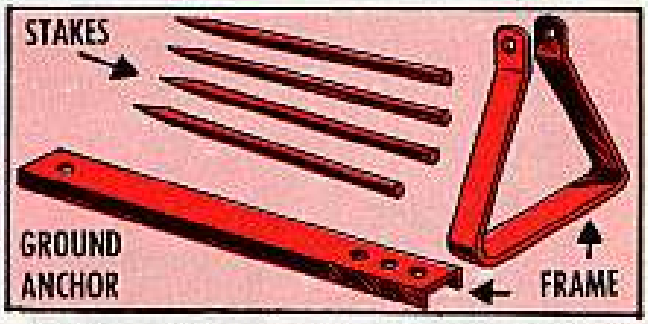
This is about the ground anchor (Tool Set, Organizational Maintenance (2nd echelon), Set No. 9, ground anchor) that has been part of our M62 5-ton wrecker's OEM.

The anchor is still on our wrecker; the big question is whether we keep it or get rid of it.

TM 9-2320-211-10 (Mar 63) doesn't list the anchor as an item of OEM anymore, but page 49 of the same TM shows the anchor being used.

Tell us, do we keep the anchor for use as the TM shows or do we turn it in?

SFC W. H. K.



Dear Sergeant W. H. K.,

Since the ground anchor is not listed in the list of Special Purpose Tools and Equipment for Wreckers, you are not required to keep it as part of your M62's OEM.

The anchor is no longer an adopted item of materiel; this means the anchor and its component parts are no longer items of supply.

Page 49 of the -10 TM indicates there is a need for a ground anchor in certain rear winch operations. For this job you don't particularly need the Set No. 9 ground anchor; any ground anchor will do. It could be a homemade job put together with scrap iron, wood planks, fence posts, etc., or anything that'll form a suitable anchorage.

Whether you keep the anchor or turn it in is up to your local command. Since there may be a need for the anchor, some outfits have removed the anchors from their wreckers and put them in dead storage at battalion level. This way they'd have them when a recovery job comes up that requires the use of a ground anchor.

So, it's up to your outfit whether you turn them in or keep 'em. If you decide to keep 'em, remember you won't be able to replace any part through the supply system. When the set's gone, that's it . . . it's kaput.

Half-Mast

A selected list of recent publications of interest to Organizational Maintenance Personnel. This is a list compiled from recent Adjutant General's Distribution Center Bulletins. For complete details see DA Pam 310-4 with latest changes.

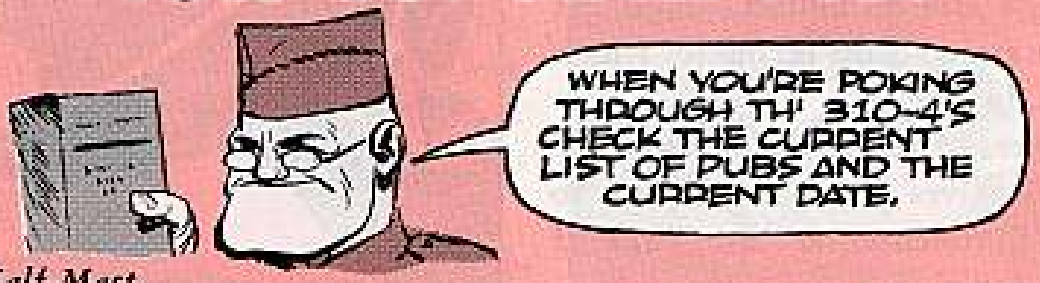
TECHNICAL MANUALS

TM 3-250, Aug Storage, Shipment and Handling of Chemical Agents and Hazardous Chemicals.
TM 3-1040-204-12, Aug Flame Thrower, M2A1-7.
TM 3-4230-204-15, Sep Decontaminating Apparatus, Portable, DS2.
TM 5-2805-203-14, Aug Engine, 6HP: Military Standard 4A032-1.
TM 5-3431-207-15, Aug Welding Machine, ARC 220V, 3 Phase, 60 Cycle.
TM 5-3805-209-20P, Sep Grader, Road, Caterpillar Model 12.
TM 5-3895-243-20, Aug Dust Machine, Paving Materials, Barber-Green Model 857.
TM 5-4310-202-20P, Jul Compressor, Air; Leral Model 315D2-C.
TM 5-4310-206-10, Aug Compressor, Ingersoll-Rand Model DR#315 Gyrolla.
TM 5-4440-203-15, Sep Nike-Hercules, TM, Radar.
TM 5-4610-203-20, Aug Water Purification Unit: 3,000 GPH.
TM 5-6115-238-10, Aug Generator Set, Diesel 60 KW, AC, International Fermont M60DTT-5H6.
TM 5-6115-275-20P, Aug Generator Set, 10 KW.
TM 5-6115-311-25P, Aug Corporal, Hawk, Honest John, LaCrosse, Little John, Nike-Ajax, Nike-Hercules, Pershing, TM, Power Generating Equip (Eng).
TM 5-6115-332-30P, Aug Generator Set, 5 KW, AC, Skid Mounted.
TM 5-6125-208-35, Aug Motor-Generator Power Supply, 60 KVA, AC, Hollingsworth Model JHMX60E.
TM 9-1005-223-20P, Mar M14 Rifle.
TM 9-1430-503-12/1, Sep Hawk, Ground Con Equip.
TM 9-1430-510-12P/2, Sep Hawk, Ground Con Equip.
TM 10-300-53, Oct Rigging Ammunition for Drop.
TM 10-501-1, Aug Parking Personnel Parachutes.
TM 10-1670-227-20, Sep Pilot Chute, Cargo-Type, 3 Foot.
TM 10-3530-202-24P, Aug Sewing Machines, Singer Models 111W116.
TM 10-3930-204-35P, Aug Truck, Lift, Fork, MHE 160.
TM 10-3930-230-10 & -20P, Aug Truck, Lift, Fork, MHE 181.
TM 10-8465-202-35, Aug Pasteboard, Plywood.
TM 10-8465-203-20, Aug Harness Assembly, Parachutist's Weapon.
TM 11-3895-209-20P, Aug Cable Layer, Underground LC-236/MT.
TM 11-5805-291-20P, Aug Telephone Set TA-264/PT and Telephone TP-9.
TM 11-5810-222-12P, Sep Communications Security Equipment TSEC/KG-13.
TM 11-5820-481-12P, Aug Panels, Power Distribution SB-1574/FRT and SB-1577/FRT.
TM 11-5830-236-12, Sep Public Address Set AN/UIH-4.
TM 11-6625-283-12, Jul Signal Generators TS-452B/U and TS-452C/U.
TM 11-6625-494-15, Jul Preamplifier AM-1341B/USM.
TM 11-6665-210-10, Jul Radiation Detection and Alarm System AN/PJW-1 (V) 1.
TM 11-7450-202-20P, Sep Reproducers, Sound AN/FNP-1 and AN/FNP-1A.

LUBRICATION ORDERS

LO 5-3895-243-20-1 & -2, Jun Dust Machine, Paving Materials, Barber-Greene Model 857.
LO 9-1015-203-10, Sep Howitzer, Light, Towed, 105MM, M101 and M101A1.
LO 9-2300-203-12, Jul Carrier, Personnel, M59 Mortar, M84.
LO 9-2320-204-12, Jul Recovery Vehicle, Heavy, M51.
LO 9-2320-205-12, Jul Carrier, Cargo, Amphibious, M76.
LO 9-2320-223-12, Jul Carrier, Cargo, M116.
LO 9-2350-209-12, Jul Howitzer, 105-MM, M52 and M52A1.
LO 9-2350-214-12, Aug Tank 120-MM Gun M103A1.
LO 9-2350-217-12, Jul Howitzer, SP: 105MM, T195E1 and 155MM, T196E1.
LO 9-2420-200-12, Jul Tractor, High Speed M8A1, M8A2.

TOSS OUT STALE PUBS



Dear Half-Mast,

When a TM, MWO, TB or what-have-you is not listed in DA Pamphlet 310-4 any longer, and is not in Section II under superseded or rescinded publications, can we assume the publication was either superseded or rescinded before the 310-4 came out?

Sp-5 T. L. E.

Dear Specialist T. L. E.,

Yes.

Even though you missed the supersession or rescission action in an earlier Pamphlet 310-4, or in one of the DA 310-series Circulars, the action still took place.

Anytime you find that an entire pub has been superseded or rescinded, toss it out. And, if there's a new pub that replaces the old one, order it on a DA Form 17 if you don't already have it.

Half-Mast

TIME FOR A STRUT

Dear Half-Mast,

This ain't "eggs-ackly" like the chicken and the henfruit hex, Sarge, but when you get the march order for your towed 105-mm howitzer, which should you do first—put the cradle lock strut in place like FM 6-75 says or should you first close the locking trails, traveling lock piece and traveling lock loop like TM 9-325 spells out? We got a hassle going on this.

Sgt. J. J. D.

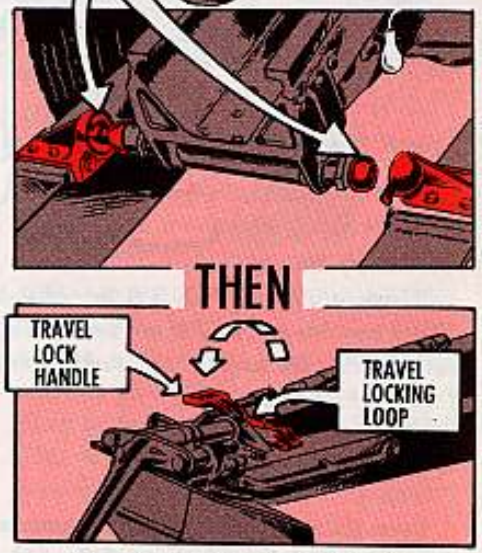
Dear Sergeant J. J. D.,

Mox nix, actually.

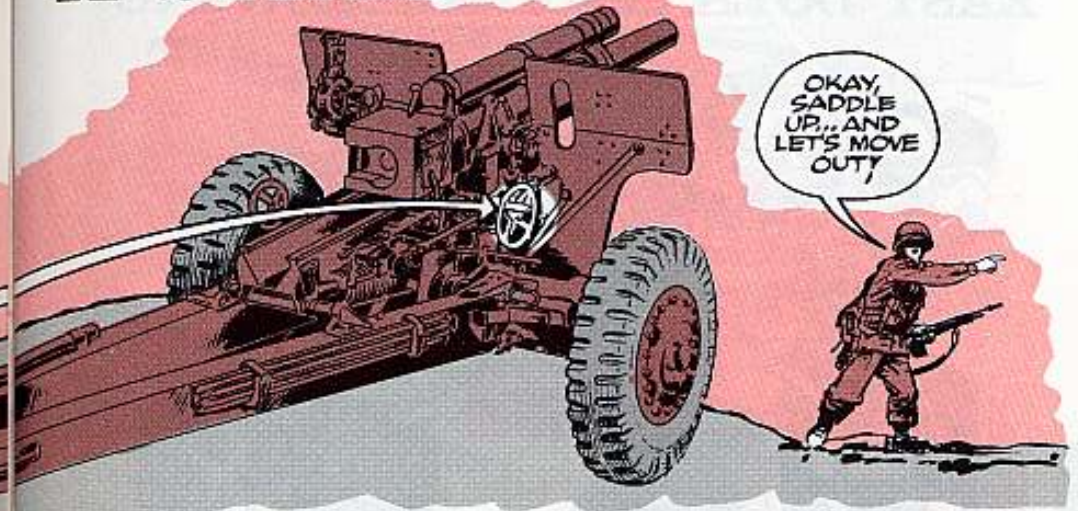
Although the apparent contradiction in the two pubs makes it look like somebody's laid an omelet, you'll get about the same results no matter which way you do it.

However, I like the TM's way better because it gives you more chance to make adjustments on the strut if they're needed.

Look at it this way—if you do it the FM's way and lock the cradle locking strut first you may save time for a hot date but only if everything's adjusted right. If even one lock's out of line, though, and some hefty cannoneer should try to force a fit, your howitzer's gonna howl.

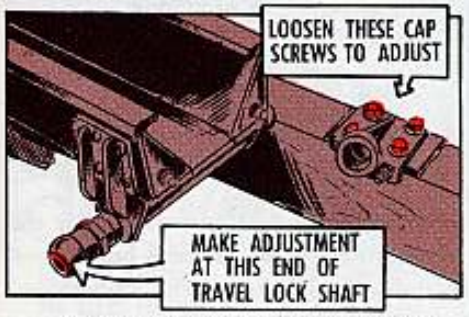


After you bring the trails almost together, work the elevating handwheels to line up the cradle locking shaft piece with the cradle traveling lock brackets. Then close and lock the trails, the travel locking piece and travel locking loop.

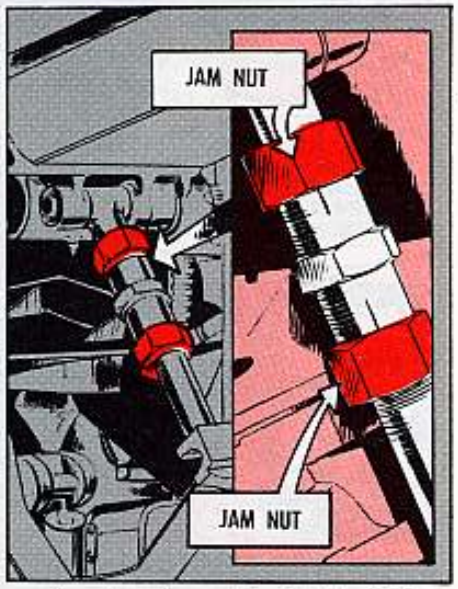


And—last—push the cradle strut down. But do it easy. If it slides in place with no sweat, fine, great. This means all's well with the world. But if it won't slide easy, now's the time to take an extra minute to double check and fix.

If it's off in traverse, the travel lock brackets need adjusting . . . If it's off in elevation, the cradle strut needs attention.



To adjust the traveling lock brackets, first loosen the capscrews holding the brackets to the rails. Next, tighten or loosen the adjusting nut till the socket and the ball-shaped end pieces line up even. Then re-tighten the setscrews.

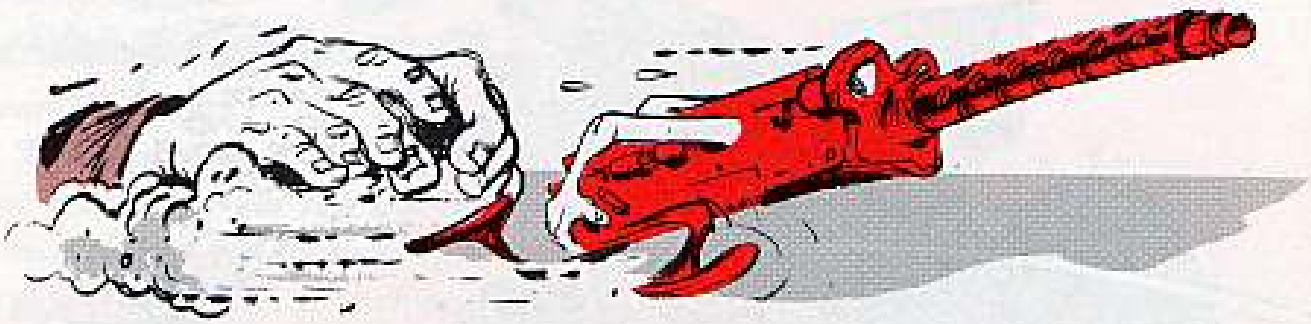


To work on the cradle lock strut—whether it's too long or too short—loosen the jam nuts on the strut and turn the turnbuckle till you get the exact length you need. Then re-tighten the jam nuts.

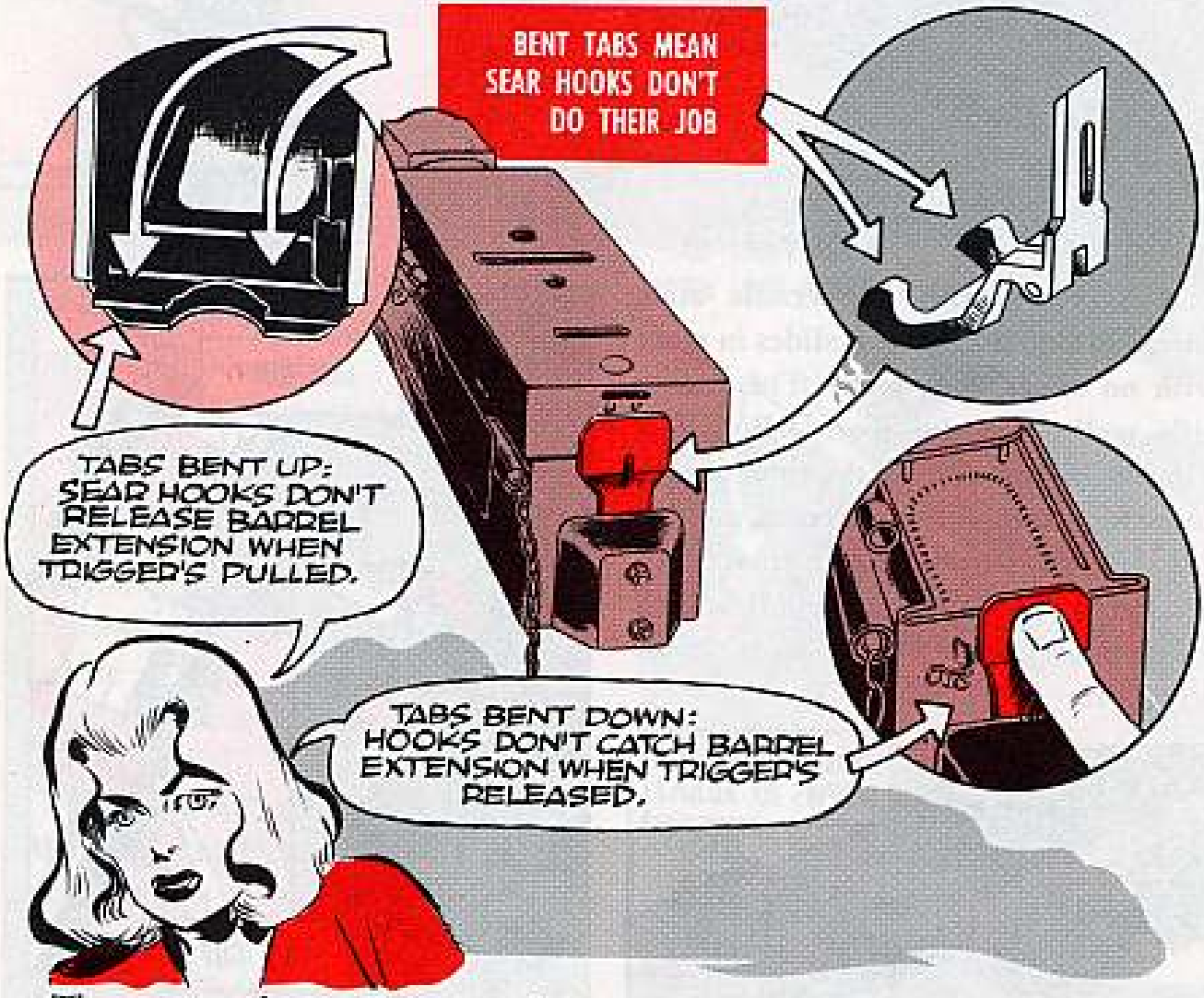
There, now you're ready to hit the road.

Half-Mast

EASY DOES IT - LIKE ALWAYS



Easy does it if you want to keep tabs on your M73 machine gun.



These two tabs on the rear of the receiver are the seating surfaces for the backplate assembly. And these control the adjustment of the sear hooks.

Now, if you get careless and bend these tabs, you'll change the adjustment. Bending the tabs upward, for instance, could cause failure to fire—if the sear hooks don't release the barrel extension when the trigger's pulled.

On t'other hand, if you bend 'em downward by slamming the backplate in place, or any other way, you'll cause a "runaway" gun by letting the sear hooks go so far down that they won't catch the barrel extension when the trigger's released.

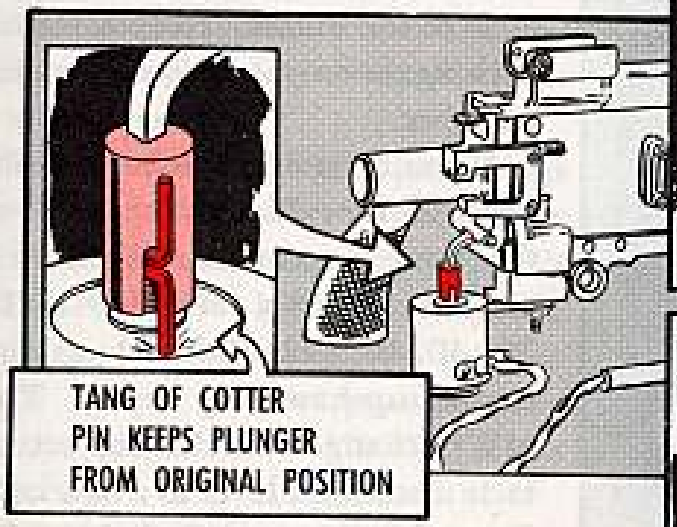
SNIP THE TIP

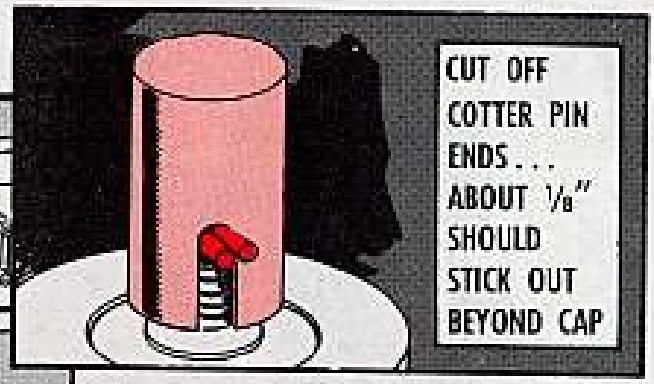
Your whirlybirdman just landed with this gripe: His M37C machine gun refused to accept a cease-fire order. It kept blazing away. What gives?

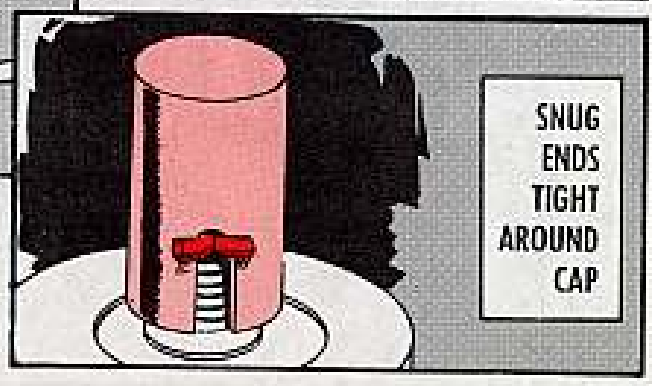
Could be one or both of the cotter pins (MS-24665 . . . FSN 5315-815-1405) that secure the solenoid cap assemblies (8427806 . . . FSN 1005-804-1679) caused the ruckus.

When the guns fired and the solenoids were energized, the tangs on the cotter pins likely vibrated into a vertical position and lodged against the top of the solenoid. This'd keep the solenoid plunger from returning to its original position after the solenoid was de-energized—and the gun kept chattering.

The way to prevent this in the future is this: Clip off enough of the cotter pin so's only at most ⅛ inch sticks out beyond the cap when it's installed. And snug the ends of the pin tight around the cap.







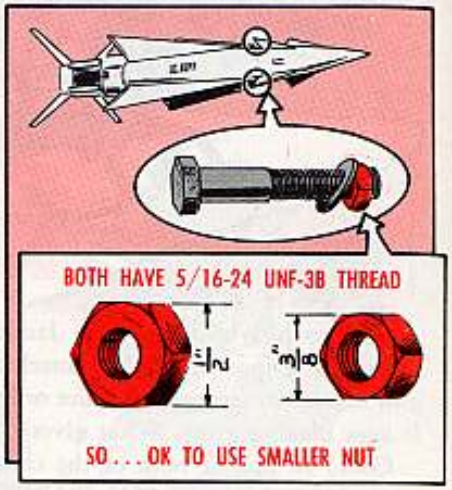
MAKES NO DIFFERENCE

That's right.

The nut that's used with a bolt to attach the center fin to the warhead section on your Nike-Hercules missile is supposed to be ½ inch across the flats.

But there was a slipup somewhere along the line, and nuts that're ⅜ inch across the flats were packaged under the FSN (5310-535-8668) that goes with the nuts with the ½-in flats.

Go ahead and use the smaller nut. Both have a 5/16-24 UNF-3B thread . . . and that's the important thing.



DOING THE TWIST?

BEFORE MWO 9-1440-252-30/10

You might be doing the twist when you go to move the electrical cables on the power receptacle to the dummy receptacle and back again on your Nike-Hercules launcher.

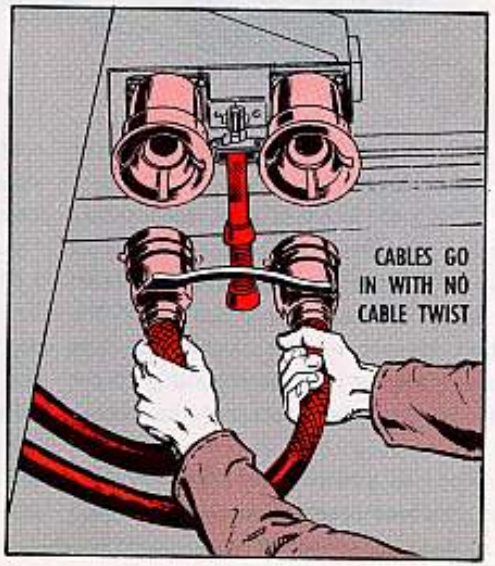
If you're having a twisting problem with the cables, the chances are that your support unit hasn't been around to apply MWO 9-1440-252-30/10 (22 Mar 62) to the launching-handling rail. The MWO changes the dummy receptacle disconnect lever to a new configuration to cut down on the chances of the lever getting damaged.

Dummy receptacles had been in a position where you didn't have to twist the cables to get them in the shells. But MWO Ord Y86-W12 (2 Nov 59) came along and turned 'em around 180 degrees to keep the lever assembly from getting battered.

MWO 9-1440-252-30/10 puts things right back where they were before MWO Y86-W12 came out 'cause there's a note in the latest MWO that says the receptacles should be reversed, in other words, be put in the position they were in before MWO Y86-W12 was applied.

Once this is done, you won't have to sweat out the twisting causing the insulation on the cables to split away . . . and make things ripe for a short.

AFTER MWO 9-1440-252-30/10



LUBE OR NOT?

Dear Half-Mast,

Tell me . . . do the waveguide shutters in our Nike-Hercules track radars get lubed?

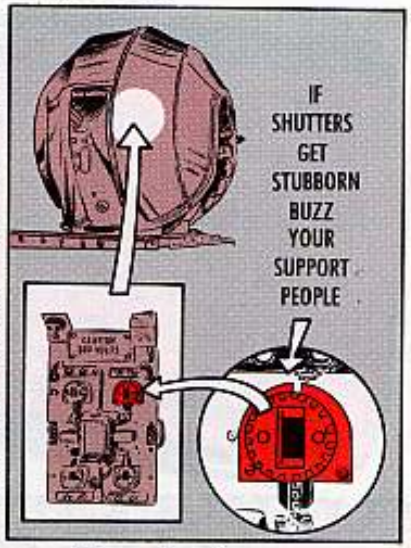
I've heard arguments that they do and just as strong arguments that they don't.

Sgt D. T.

Dear Sergeant D. T.,

No—that's spelled N-O—the shutters don't get lubed.

That is, firing batteries don't lube them. And your support unit has a publication on maintenance of the waveguide shutter assemblies (TB Ord 1430-34/1) that says the shutters are hit with molybdenum disulphide by the manufacturer and shouldn't need any more of the stuff for the life of the assembly.



Of course, if the shutters in your radars act stubborn when it comes to opening and closing, it's time to buzz your support people for a helping hand.

Half-Mast

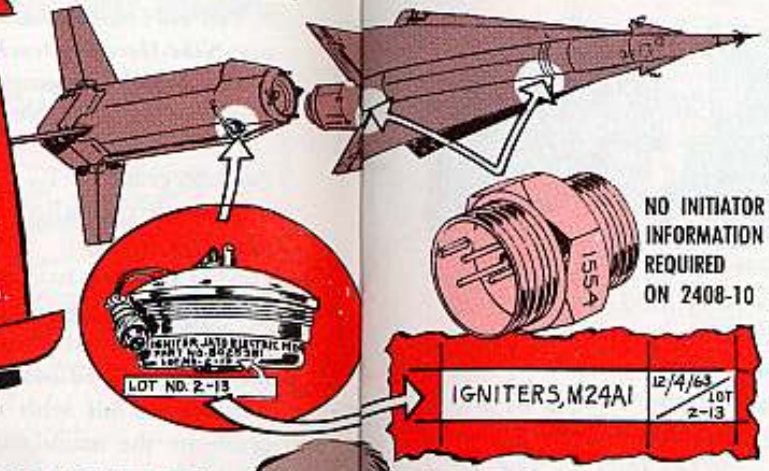
BY THE NUMBERS

Dear Half-Mast,

We're supposed to list the serial numbers for our Nike-Hercules initiators and M24-series igniters in our log book. See for yourself . . . the place for the numbers is on DA Form 2408-10.

Just what number do we use for the serial number on the igniter? And that four-digit number on the initiator sure can't be a serial number.

CWO W. G.



Dear Mister W. G.,

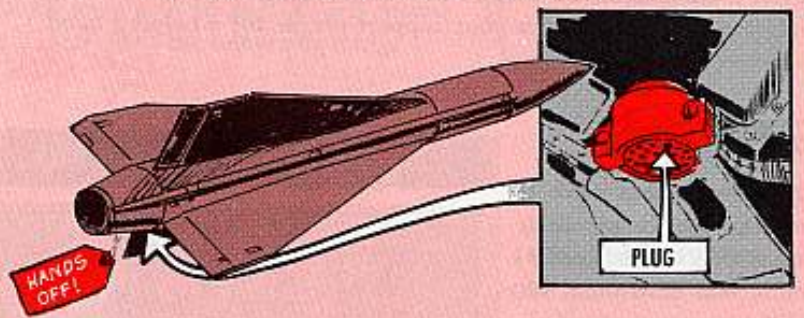
You use the lot number on the igniter in the serial number column on the 2408-10. That's right—the lot number.

With the igniter, and many other ammo items, one lot number includes different serial numbers. So . . . if you have to suspend a certain lot of igniters for any reason, the lot number identification turns out to be the best way of doing it.

As for the initiator . . . you're right about it not having a serial number. Those four digits are the manufacturer's number and are the same on all initiators. And there's no requirement for putting initiator information on the 2408-10.

Half-Mast

LEAVE CAP ALONE



"Hands Off." And in letters maybe one foot high.

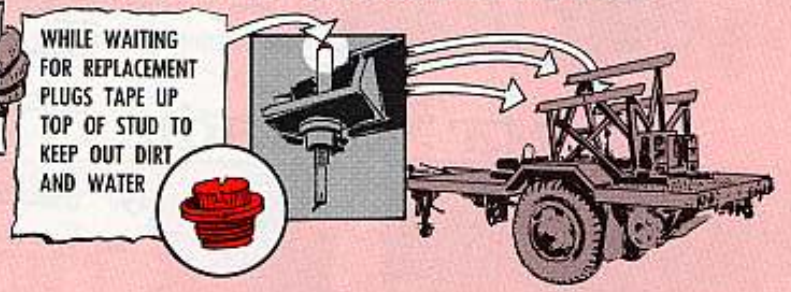
That's the kind of sign that oughta be hanging from the bracket that holds the umbilical plug on the Hawk missile.

It can be done, tho, so you and all the other people in your outfit have to remember not to mess around with the cap part of the bracket—like taking it off.

The cap and the rest of the bracket are machine-matched around the plug and should stay where they are—unless some guy in a higher echelon has to take them off.

And it wouldn't hurt any to pass along a hint to the guys up the maintenance line—one they can use to make sure the cap and the rest of the bracket stay with the same missile whenever the cap is taken off. Sort of suggest that they tie the cap and bracket together with a piece of wire. Then when they reassemble things, the plug will be sure to fit.

PLUG IS AVAILABLE



So your support unit came along and applied MWO 9-1440-500-30/6 to your Hawk pallet. And now you don't have to sweat out whether the missiles are held in place when you tow the pallet with the birds on it. You know they are.

Trouble is, tho, the MWO brought a slight problem with it—getting hold of an extra plug or two. You know the one . . . it screws into the stud for the missile anchoring assembly—one of the things put on the pallet by the MWO. Now and again, a plug turns up missing . . . and you haven't been able to get any replacements.

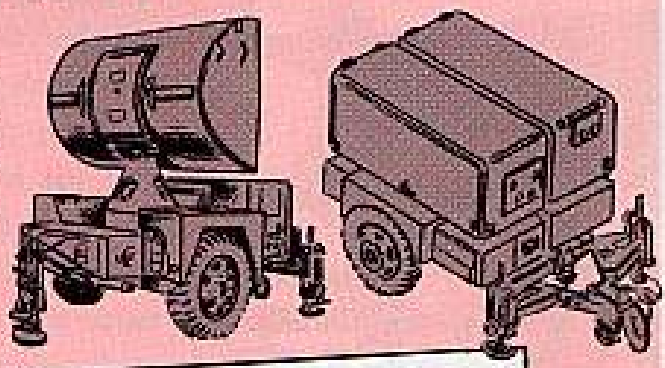
But that was before your support unit was issued TM 9-1440-500-35P/2 (Mar 63). The plug is listed on page 241 . . . and under OPN 10065570. When you ask your support people to requisition some of the plugs, you might tell 'em the FSN for the plug is 5340-530-5542.

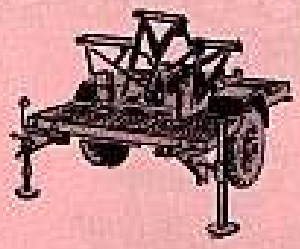
If you want to keep dirt and water out of the stud while you're waiting for some replacement plugs, try putting some tape over the top of the stud.

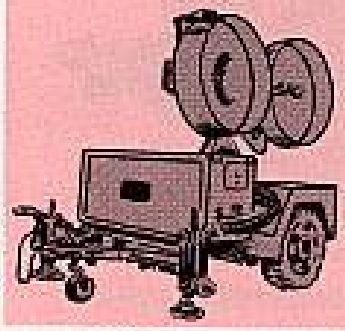
NO FITTING, NO LUBE

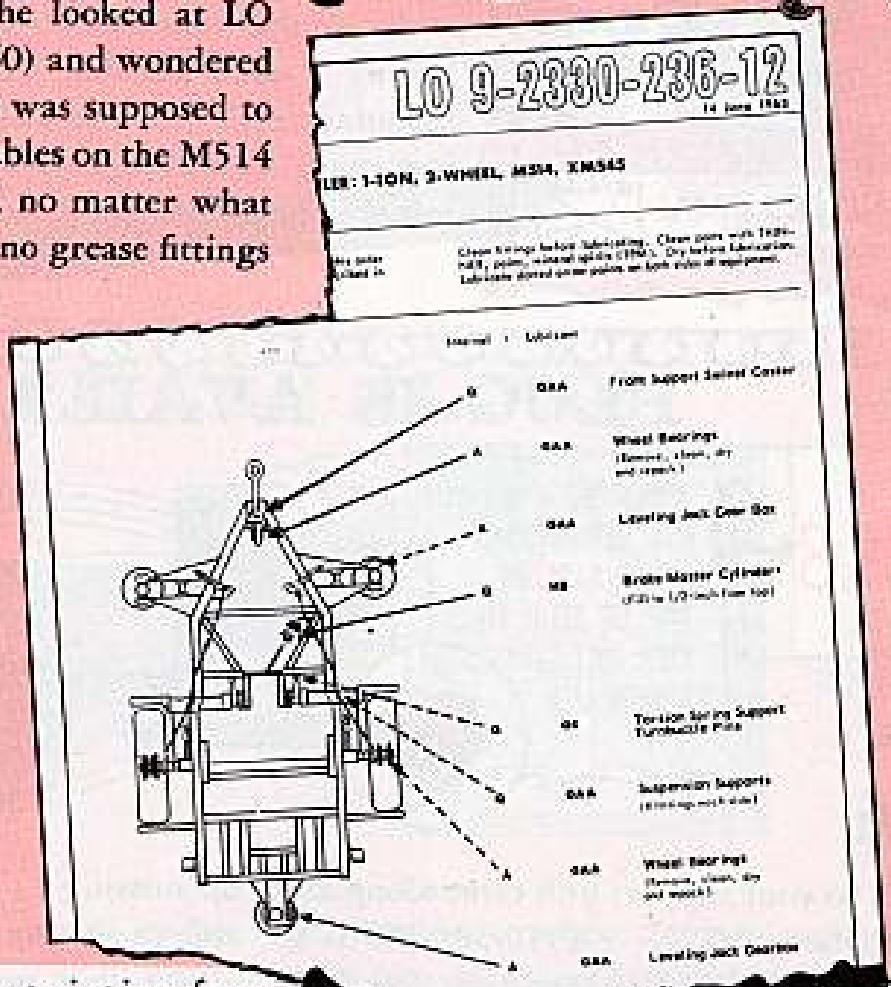
Those M514, M545 and M390 trailers that're used as chassis for various pieces of Hawk equipment—like the pallet, radar sets and missile test shop—sure do look alike.

So it was no wonder that a guy use to flip his lid when he looked at LO 9-2330-236-10 (Apr 60) and wondered how in blue blazes he was supposed to lube the hand brake cables on the M514 and M545 . . . when, no matter what the LO said, there are no grease fittings to lube on the cables.







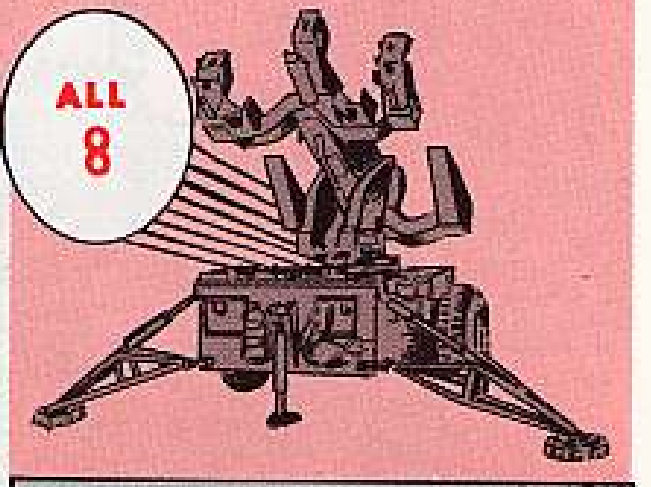


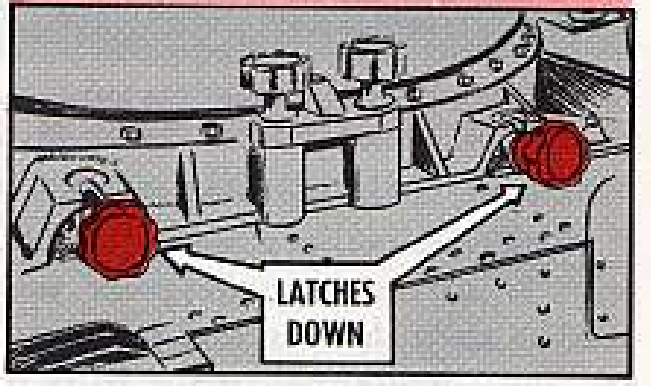
Well, you can stop swinging from branch to branch because the brake cables for both of these trailers have grease prepacked in their assemblies and get no lubing.

LO 9-2330-236-12 (14 Jun 63) corrects the booboo and eliminates the requirement for greasing the M514 and M545 brake cables.

You want to keep lubing the M390 brake cables, tho—with GAA and quarterly.

DOWN – ALL AROUND





If you're looking for the man to come around to make a report of survey, here's one way to get him to your Hawk outfit . . . and doing double-time.

Before you go to raise the boom support, forget to release one or two of the turret latches on your Hawk launcher. You'll wind up with a nice batch of damage—like a busted ring assembly. You might also bend the chassis that the ring assembly sits on.

Of course, if you don't want to see dollar signs in your sleep, you'll make sure the latches—all eight of 'em—are down before you start raising the boom support.

SIDE-STEP 'EM

Real handy.

But using the power and data cables on your Hawk CW acq and illuminator radars as steps also adds up to a bad situation.

Why? You can bust the cable connector and snap the wiring inside the cables. And broken wires lead to shorts. That's why.

So side-step those "steps" whenever you have to climb up on the radars. It might take an extra grunt to make the short climb, but look at what you get as a bonus—P. T.

YOU'RE COVERED . . . BUT—

Stow the alibis, sad tales, excuses.

A legit due-out, or a request on-the-way, is all the inspection-proof you need to show the man that your load of "must-be-stocked" repair parts is what it should be.

Yep, D/O's and current requests for those items are just like items in the bin—when you're counting noses, like at inspection time. If you need a quick-like reference you can check para 7, AR 735-35. Ditto para 9b(2).

But, remember—don't ever let this supply truth go to your head. You'd best do everything possible to keep your stock of repair parts what it should be . . . 'cause it takes repair parts O/H to keep you moving, shooting and communicating. Due-outs won't get a deadlined vehicle or weapon or radio to the fight.

THAT'LL COST YA...

To your list of need-to-know supply pubs you can add TB 9-30 (29 Mar 63) "Standard CONUS Maintenance Costs for Ordnance Type End Items."

It sets up standard maintenance and repair costs for selected items of equipment ranging from small arms to wreckers.

It's useful for figuring an item's worth for reports of survey and estimating equipment upkeep for other kinds of records and reports.

TIRE SCOREBOARD

Dear Half-Mast,

Will you please clarify the confusion that has sprung up from the use of DA Form 2408-3 and -3-1 (Equipment Organizational Maintenance Record).

Do we post tire and tube replacements (new or used), flats, flaps, valve caps, valve cores and hot patches?

SFC C. A. F.

1. NOMENCLATURE: TRUCK, CARGO, 2½ TON 6X6 M35

2. REGISTRATION OR SERIAL NUMBER: 2320-835-8463

DATE	READING (Hours, Miles or Rds Fired)	REPAIRS AND SERVICES ACCOMPLISHED	MAN HOURS	PARTS USED: FSN OR PART NUMBER	PARTS USED: QTY	REMARKS	SIGNATURE
5-1-63	1610	Replaced Water Pump	3	2930-091-9766	1	E.I.R Submitted	H.S. Bell
26-1-63	5TAB	Quarterly Service				None	John Adkins
26-1-63	"	Tire, 9:00x20 (NSN)	2	2610-262-8677	2	Front tires read recap	John Adkins

YOU DO POST TIRES AND TUBES

DA FORM 2408-2 1 APR 62

EQUIPMENT MAINTENANCE RECORD (ORGANIZATIONAL) TM 38-750

Dear Sergeant C. A. F.,

The answer to this is in paragraph 43b(12), page 71 of Change 1 (Mar 63) to TM 38-750; it specifies that common hardware items such as nuts, bolts, screws, cotter pins, tubing, etc., are not to be entered on the 2408-3 or -3-1.

Fixing flats with hot patches, replacements of flaps, valve caps and valve cores comes under the heading of common hardware and are not entered on the 2408-3 and -3-1.

Tires and tubes are a different subject. These items have a direct bearing on the over-all cost and maintenance history of the vehicle, so you want to make sure they get posted on the Equipment Organizational Maintenance Record (DA Form 2408-3 or -3-1).

Half-Mast

H/R ANNEX

Dear Half-Mast,

I keep getting static (from a neighbor) on my interpretation of para 13b(3), AR 735-35, and of the hand receipt annex info on page 9, PS 118. So please correct me if I'm off the beam. I say that:

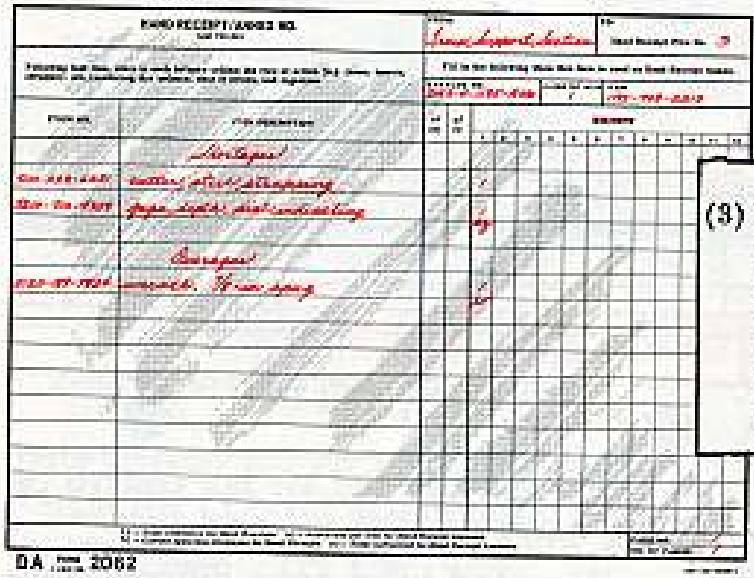
1. We no longer keep a hand receipt annex (DA Form 2062) itemizing all components of sets, kits, chests and outfits.

2. The annex is prepared only when components (of sets, kits, etc.) are short or over.

3. The supply manual covering the end item is noted on the hand receipt and used for inventory info.

Well, Sarge?

CWO F. E. P.


DA ... 2062

(3) Hand receipt annexes * * * on the hand receipt. The word "balance" will be lined out in the balance column, and numerical columns will reflect the quantity(ies) of the item(s) over and/or short. Overages and/or * * * purposes (fig. 2).

AR 735-35,
CHANGE 1, PARA 13b(3)

Dear Mister F. E. P.,

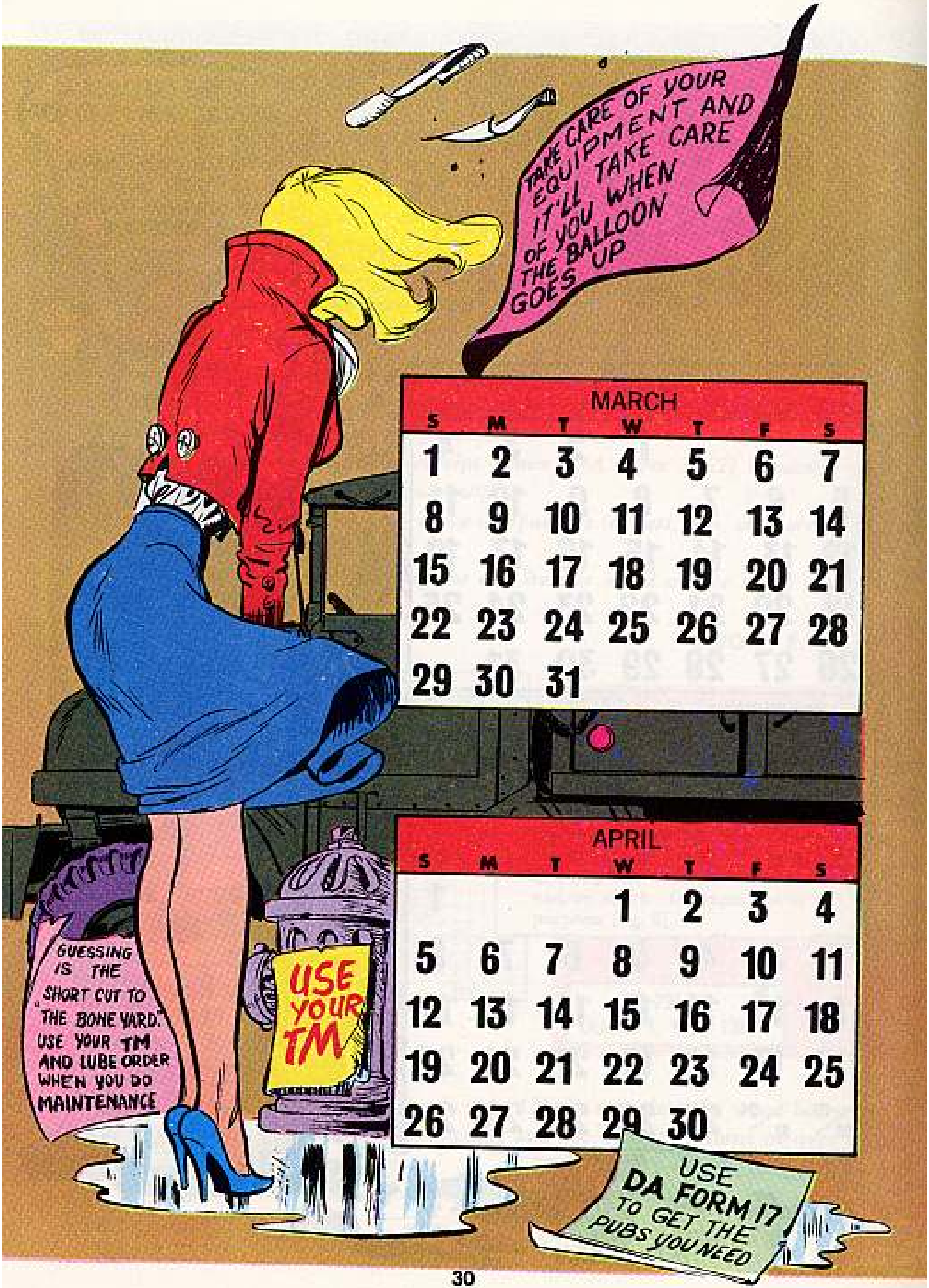
Drown the static. You're right.

Note also that the AR's Change 1, para 13b(3) says that the word balance will be lined out on a hand receipt annex, and the quantities short or over recorded in the numbered columns.

Fig 3, page 6, of Change 1, shows a sample H/R annex.

Half-Mast


JOE'S DOPE
PREVENTIVE MAINTENANCE IS ALL-YEAR 'ROUND
THIS 1964 CALENDER AS A PRESENT FROM ME TO YOU-- TO REMIND YOU THAT PREVENTIVE MAINTENANCE IS A DAY-TO-DAY, WEEK-TO-WEEK, MONTH-TO-MONTH PROPOSITION.
JANUARY
S M T W T F S
1 2 3 4
5 6 7 8 9 10 11
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28 29 30 31
MAINTENANCE IS A COMMAND RESPONSIBILITY AND IT STARTS WITH YOU THE OPERATOR AND USER YOU COMAND YOUR OWN EQUIPMENT
FEBRUARY
S M T W T F S
1
2 3 4 5 6 7 8
9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24
30 31 25 26 27 28 29
PREVENTING TROUBLE IS EASIER THAN FIXING IT
"AN OUNCE OF PM IS WORTH A TON OF CURE"
CONNIE ROOD, AD 1964


TAKE CARE OF YOUR EQUIPMENT AND IT'LL TAKE CARE OF YOU WHEN THE BALLOON GOES UP
MARCH
S M T W T F S
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31
APRIL
S M T W T F S
1 2 3 4
5 6 7 8 9 10 11
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28 29 30
GUESSING IS THE SHORT CUT TO "THE BONE YARD." USE YOUR TM AND LUBE ORDER WHEN YOU DO MAINTENANCE
USE YOUR TM
USE DA FORM 17 TO GET THE PUBS YOU NEED


MAY
S M T W T F S
1 2
3 4 5 6 7 8 9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24
31 25 26 27 28 29 30
JUNE
S M T W T F S
1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30
KEEP YOUR LOG BOOK RECORDS ACCURATE AND UP TO DATE (WHEN IN DOUBT, USE TM 38-750... IT'S THE BIBLE)
EQUIPMENT LOG
PMIS LIKE A JUNE BRIDE IT NEEDS YOU TO GET THINGS DONE

JOE'S Dope Sheet

Combat-ready equipment's the stuff:
It will keep your outfit up to snuff.
For fighting be ready,
Trim, willing and steady.
An' the aggressor will always find you tough.

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

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


HYDRAULIC FLUID VV-H-910A NON-PETROLEUM BASE IS THE ONLY BRAKE FLUID YOU USE IN TRUCK BRAKE SYSTEM
YOUR TH'S
YOUR KNOW HOW
YOUR TOOLS AND PARTS
GOOD -PM
JULY
S M T W T F S
1 2 3 4
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19 20 21 22 23 24 25
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AUGUST
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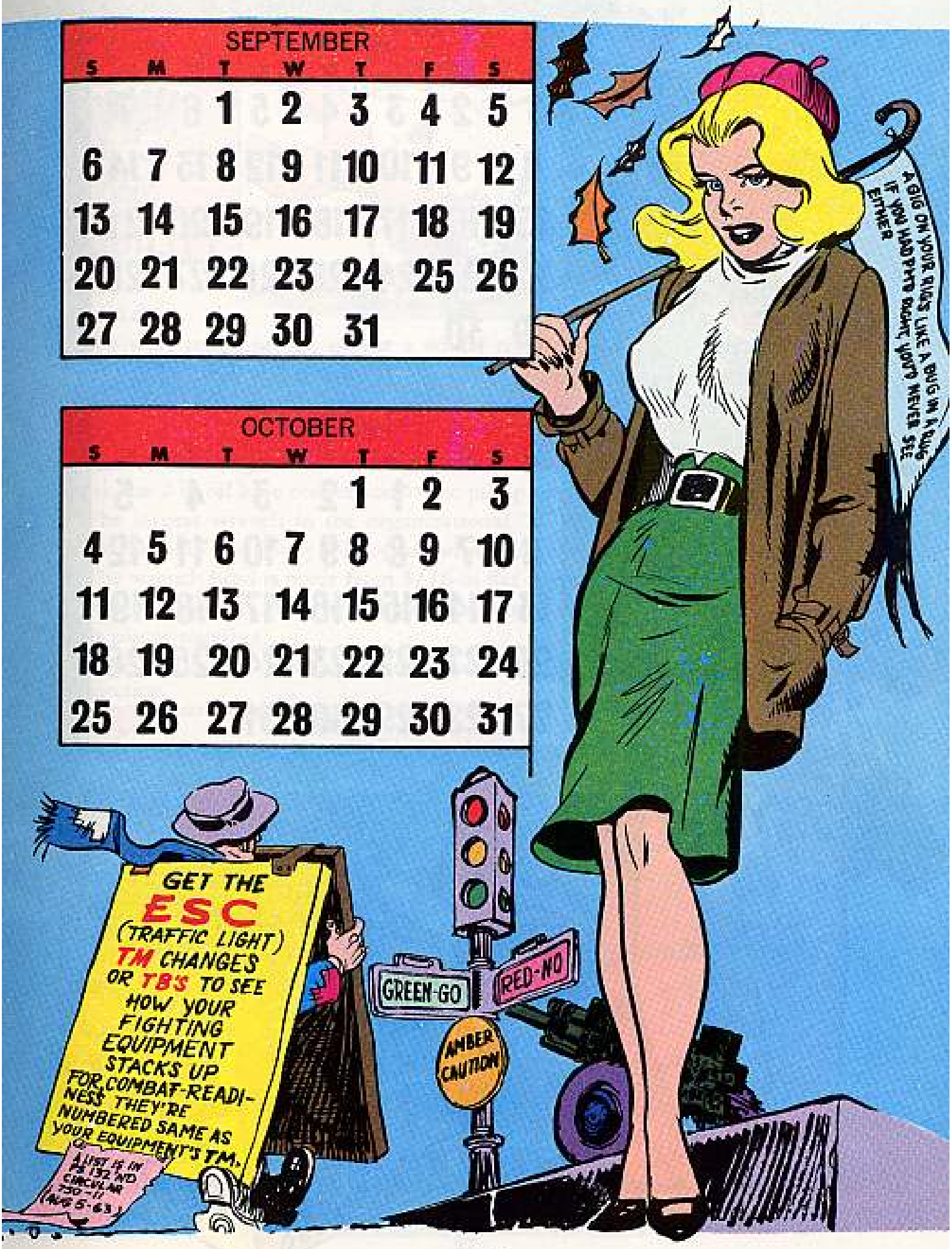
SEPTEMBER
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OCTOBER
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A GIG ON YOUR RECORD LIKE A BUG IN A RUG IF YOU HAD PUTS RIGHT, YOU'D NEVER SEE EITHER
GET THE ESC (TRAFFIC LIGHT) TM CHANGES OR TB'S TO SEE HOW YOUR FIGHTING EQUIPMENT STACKS UP FOR COMBAT-READINESS THEY'RE NUMBERED SAME AS YOUR EQUIPMENT'S TM.
A LIST IS IN AR 132 ND CIRCULAR 750-11 (AUG 5-63)
GREEN-GO
RED-NO
AMBER CAUTION


NEVER GIVE YOUR EQUIPMENT A BEATING
NOVEMBER
S M T W T F S
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30
DECEMBER
S M T W T F S
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6 7 8 9 10 11 12
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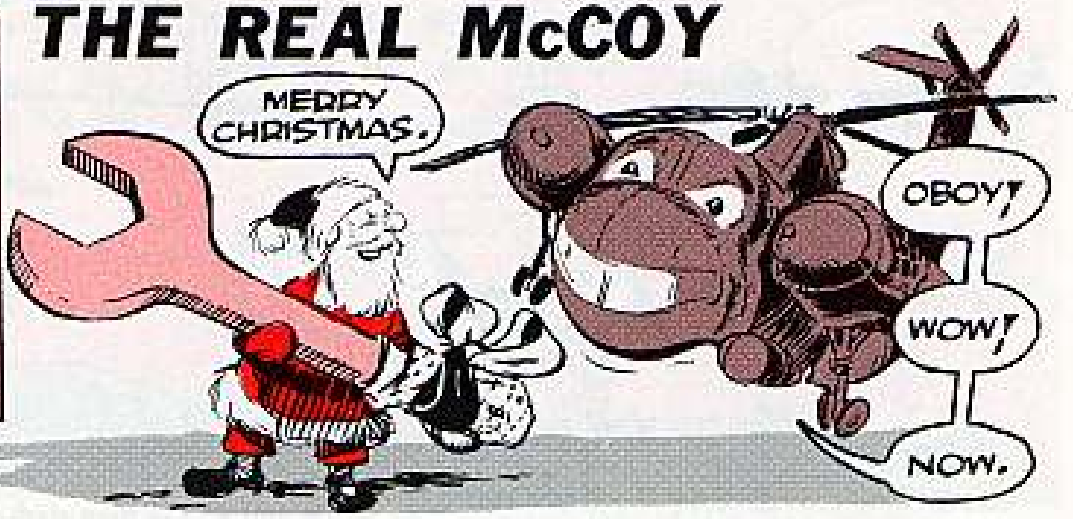
THE BEST GIFT YOU CAN GIVE YOUR EQUIPMENT AND YOUR BUDDIES IS "READINESS"
GET AND STAY COMBAT READY

THE REAL McCOY



Dear Editor,

We were really on the go for a while, trying to take the hydromechanical clutch screen out of our Mojave (CH-37) on an intermediate inspection, as called out on page 841 of Change 1 (21 Mar 62) to the basic TM 55-1520-203-20.

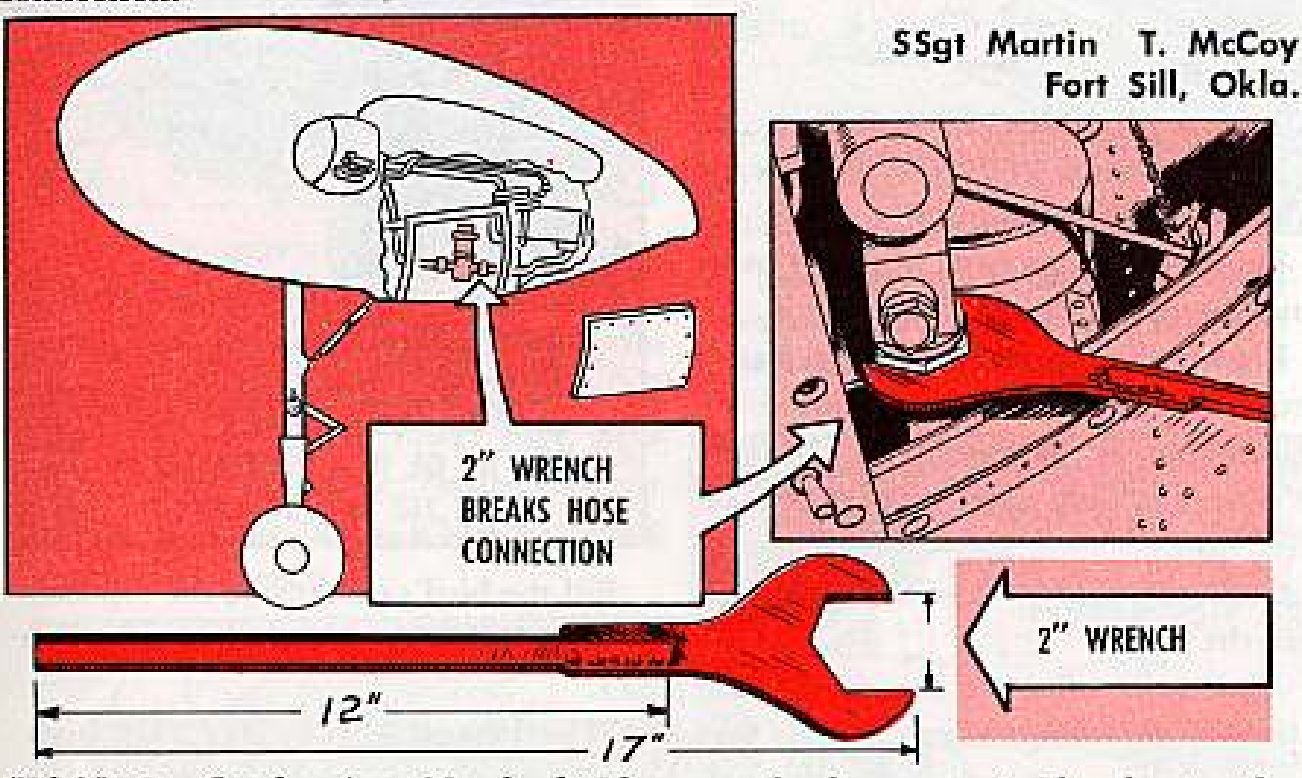
We searched high and low (without any luck) for a wrench big enough to break the 2-in oil hose connection at the pump, in order to get the screen out.

The largest wrench in the organizational "C" tool set only goes to 1¾-in, so we made up this handy 2-in open-end wrench to do the job.

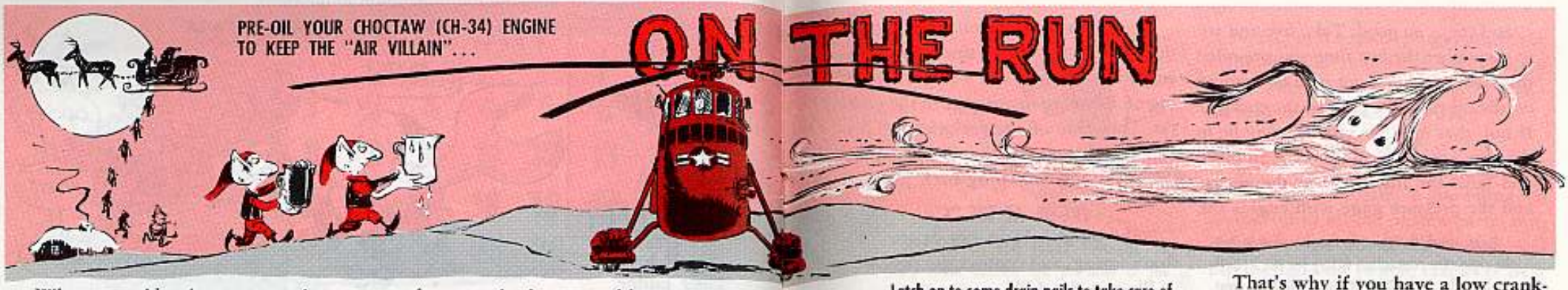
The wrench head is made from 3/16-in flat steel, SAE 4130, and the hex handle from ½-in steel. We cut a slot in the handle to hold the head, and welded both pieces together.

Now we have a genuine wrench that works real fine in breaking the hose connection.

SSgt Martin T. McCoy
Fort Sill, Okla.



(Ed Note—Good going. No doubt the wrench also comes in handy at other places on your bird!)



Whoever said what you can't see won't hurt you never spent any time around a bird engine, that's for sure! Otherwise he would have realized that an engine may be accidentally cranked up on a dry master rod bearing.

So how does a bearing get dry in the first place? Well, the forces of gravity being what they are, oil just naturally drains off bearings and other vital engine parts. And there's just about nothing that'll cause an engine to fold up faster'n running it without oil.

That's why pre-oiling is mighty important.

Take the R-1820-84A or 84C engine in your Choctaw (CH-34). You want to make with the pre-oiler:

Before starting a new, or newly overhauled engine for the first time;

Before starting an engine that hasn't been run for 72 hours;

After an oil change;

Whenever oil drains from the oil inlet line;

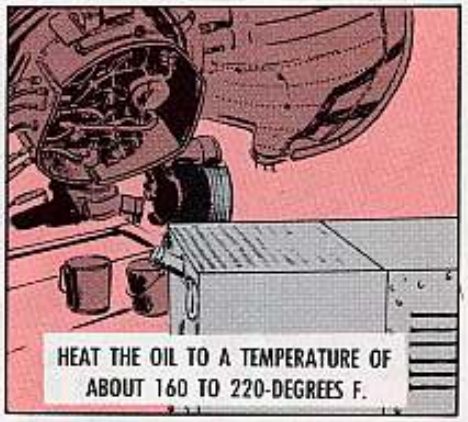
Or if you suspect that air has gotten into the line.

Air in the oil inlet line is the real villain of this story. It can find its way into the oil pump and block the passages. Even after cranking an engine over for several minutes—without pre-oiling—it'll refuse to move. The result is no oil pressure (and no oil) to the bearing.

The best way to get rid of the "air villain" is to flood him out of the oil passages. This pre-oiling change to the TM 55-1520-202-20 maintenance pub is in the works to do just that.

HEAT THE OIL

Move the pre-oiler to the bird and start 'er up.



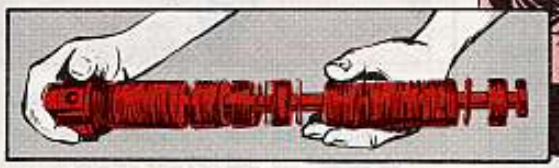
Fill the bird's oil tank to the capacity given in TM 55-1520-202-20 (20 Feb 62).

Wheel up an APU to give you a high engine cranking speed and reduce the strain on the starter.

Latch on to some drain pails to take care of the oil flow and you're 'bout ready for action.

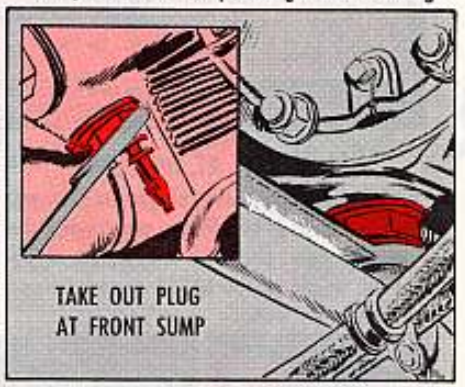
Disconnect the spark plug lead and take out a plug from each cylinder to get rid of the compression. 'Tis a mighty important step because you want a high cranking speed. This will give you the pressure needed to push the oil to those dry bearings.

Keep in mind that a low cranking speed and a delayed start after pre-oiling can overflow the front sump with oil, giving you a partial or full hydraulic lock in the lower jugs. This is caused by the smaller return capacity of the scavenge pump when operating at too low a speed.

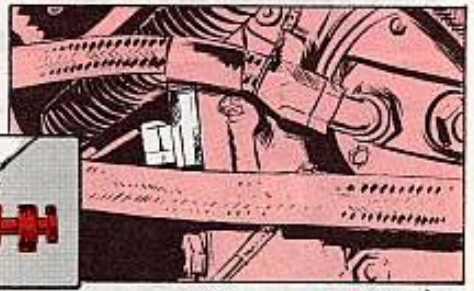


That's why if you have a low cranking speed, or even if the engine doesn't start in a reasonable time, you want to eye the front sump for a possible overflow and drain off any excess oil.

Next, place the pails under the magnetic drain plugs—and take out the plug at the front sump and at the supercharger rear housing.



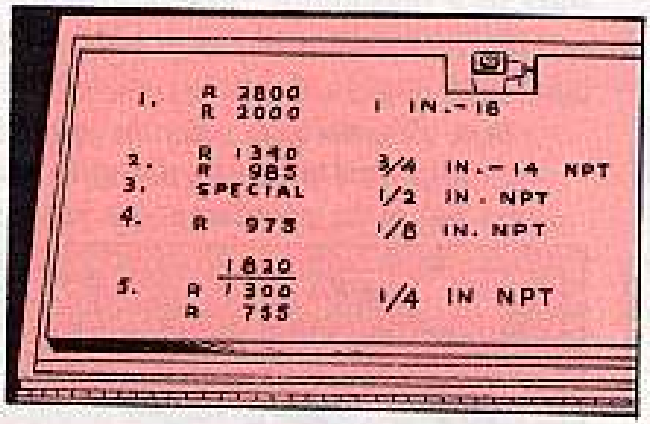
If you're pre-oiling a new engine, or a newly overhauled engine, you also want to take out the oil inlet strainer, clean it, and put it back in before you go any further.



MORE

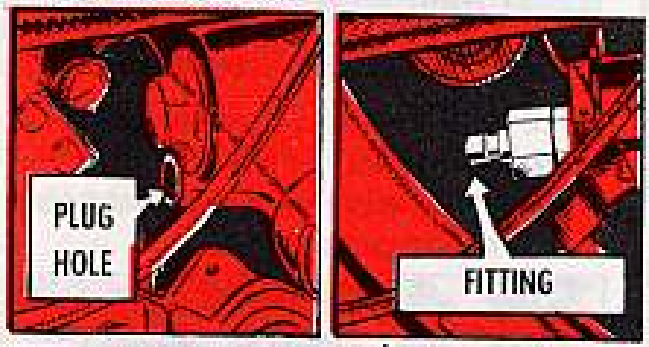
So far . . . so good. Take five and try to remember the last time you pre-oiled this baby! Did you get a quick reading on the oil pressure gage in the cockpit? If not, that old "air villain" may be in the line again. So you'll want to bleed and refill the line between the engine and the pressure gage with engine oil.

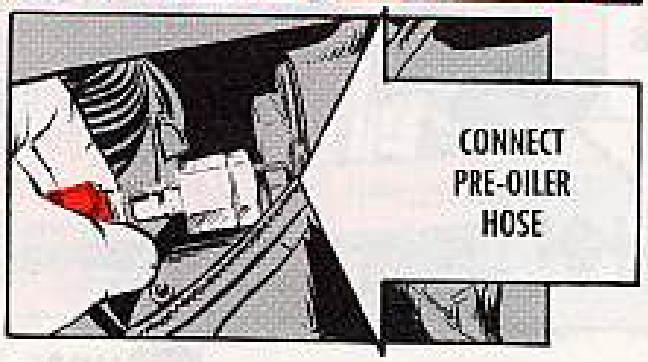
Next, check the chart in the pre-oiler to get the right size connection fitting for the R1820 engine. The ¼-in NPT fitting is the baby you want.



PRE-OIL AT THE PUMP

Take out the pre-oiling plug at the oil pump, put in the ¼-in NPT fitting, and connect the pre-oiler hose. Check the temperature of the oil—it should be 160 to 220-degrees F—and . . . shoot the works!

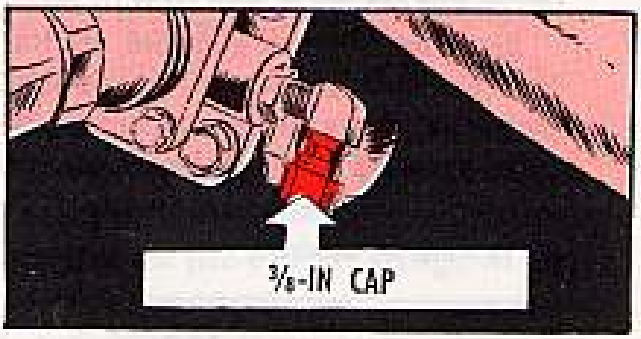




Keep pumping the oil until two to three gallons have drained from the engine front sump and you get a reading on the oil pressure gage in the cockpit. Then shut off the pre-oiler and disconnect the pre-oiler line. But don't put the pre-oiling hole plug back just yet.

PRE-OIL AT THE "Y"

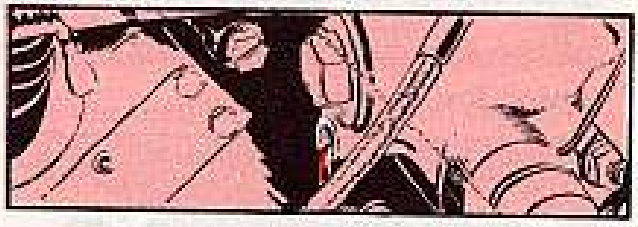
Take off the ⅜-in cap at the "Y" drain fitting, and connect the pre-oiler. Plug in the APU.



Start the pre-oiler and pump oil into the engine, at a temperature of 160 to 220 degrees F, while at the same time cranking the engine over with the starter. (Of course you made sure that the ignition switch was off and the mixture control was in idle cut-off before you hit the starter button . . . that's SOP.)

Crank 'er over no longer than 20 or 30 seconds at a time, so the starter has a chance to cool off.

When at least a pint of air-free oil has flowed from the pre-oil connection hole, stop



the pre-oiler. Take the pre-oiler hose off, put the cap back on soon as possible to keep the "air villain" out, and lockwire the cap.

PRE-OIL AT THE PUMP—AGAIN

Once more connect the pre-oiler at the pump. Start the pre-oiler and look for an oil pressure change on the pressure gage in the cockpit. When you see the increase in pressure, crank the engine with the starter until about four more gallons of oil are pumped through the engine and drains from the front sump.

Then, stop the pre-oiler. Disconnect the hose, take the ¼-in NPT fitting out, and put the engine plug back in right away . . . that'll stop the "air villain" in his tracks!

Meanwhile, the overflow oil from the plug hole in the sump and supercharger rear housing should have completed draining. So put the plugs back in the engine. Remember to follow the reassembly poop in your maintenance manual on all the parts you took off, including torque values and lockwiring instructions.

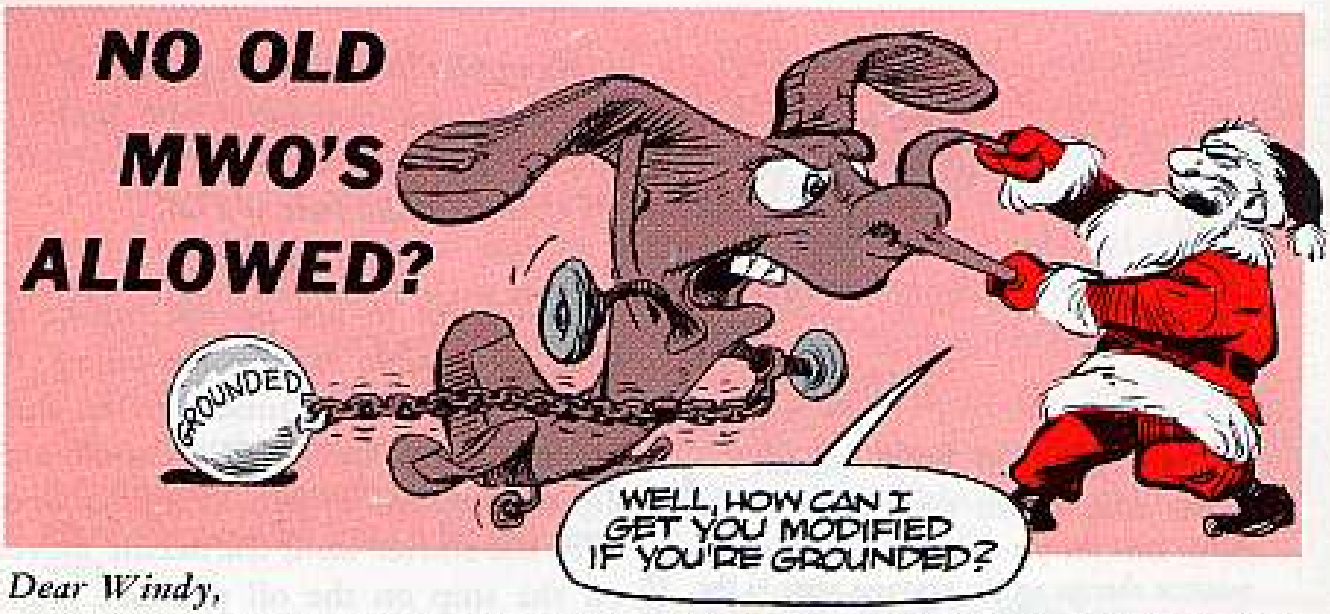
Next, put the spark plugs back in the cylinders and re-connect the ignition leads. Then check the level of the bird's oil tank to make sure it's OK.

RUN 'ER UP

You want to fire up the engine as soon as possible after a pre-oiling, to spread oil to all the unseen parts. But, before you go out of idle cut-off and flip the ignition switch, crank 'er over with the starter until the needle moves off the stop on the oil pressure gage. Then you know you have oil pressure —and oil at the main bearing. Then she's ready to go.

There's no doubt about it. You've chased the old "air villian" out of the engine again.

END



Dear Windy,

We have an aircraft in our outfit which has not had TM 1-1L-20A-1030 complied with. The modification reads as follows:

When to accomplish:

As scheduled by fourth echelon maintenance activities or upon failure of the valve presently installed in the aircraft but in no event later than 30 March 1963.

The statement I underlined means to me that the modification will be complied with by that date or the aircraft is grounded. Am I right or wrong?

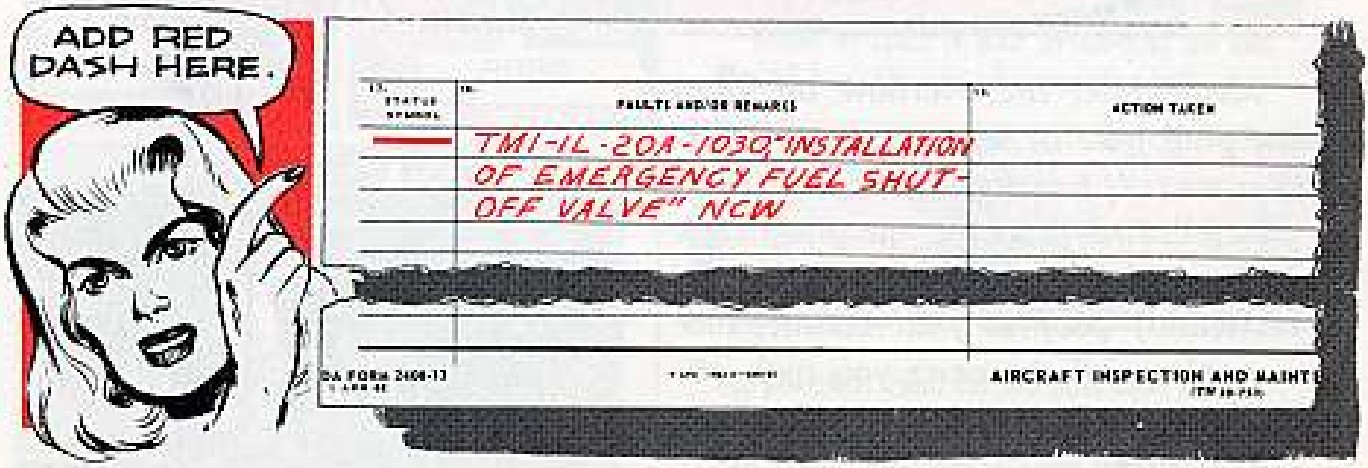
Sp-5 W. P. W.

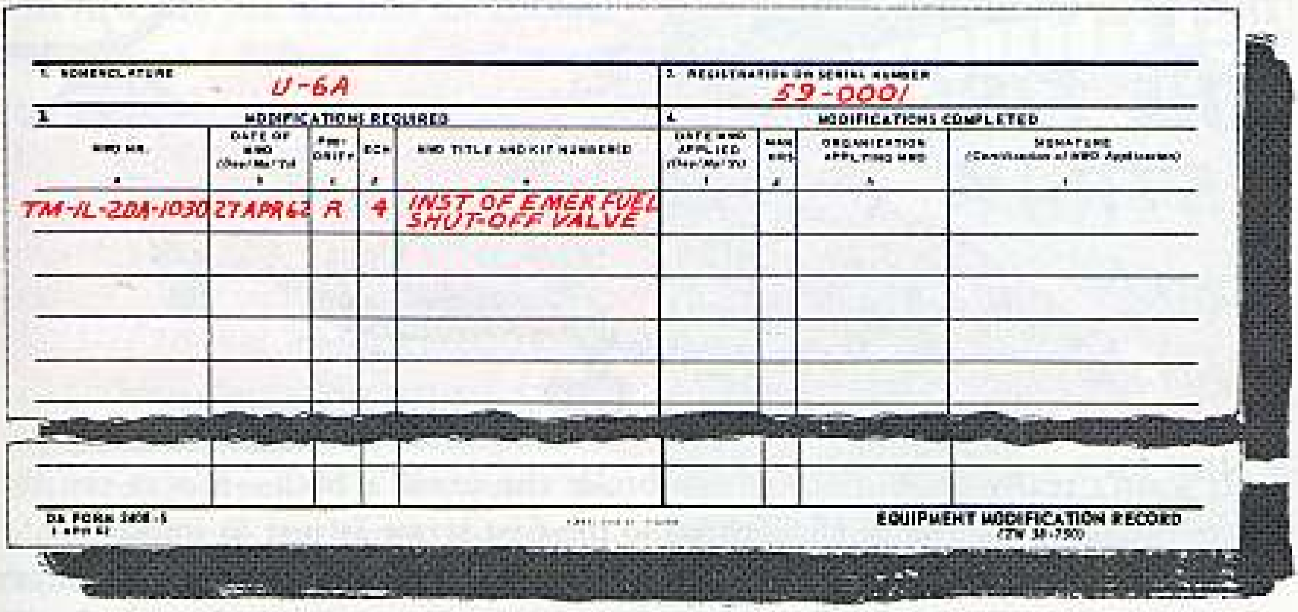
Dear Specialist W. P. W.,

You're wrong! The aircraft goes on a red dash status as of 31 Mar 63 if the modification has not been applied.

According to Para 57c (e) (3) on page 104 of TM 38-750 (May 62) you've got a "component replacement" due on that aircraft, which calls for a red horizontal dash on the DA Form 2408-13. You won't accomplish the purpose of the MWO by grounding that bird, because this makes it impossible to fly the aircraft over to 4th echelon for MWO compliance.

Between the continuing red dash on the aircraft's DA Form 2408-13 and the MWO entry in the left hand portion of the aircraft's DA Form 2408-5, an incompleted MWO will stick out like a sore thumb the very next CMI.





1. NOMENCLATURE: U-6A

2. REGISTRATION OR SERIAL NUMBER: 59-0001

3. MODIFICATIONS REQUIRED / 4. MODIFICATIONS COMPLETED

MWO NO.	DATE OF MWO	PRIORITY	ECH	MWO TITLE AND KIT NUMBER	DATE MWO APPLIED		ORGANIZATION APPLYING MWO	SIGNATURE
TM-1L-20A-1030	27 APR 62	R	4	INST OF EMER FUEL SHUT-OFF VALVE				

DA FORM 2408-5

EQUIPMENT MODIFICATION RECORD

That's right! Thy maintenance will be done. This is the only way the Army can be sure all MWO's are applied within a reasonable period of time. **Configuration control, they call it.**

Windy

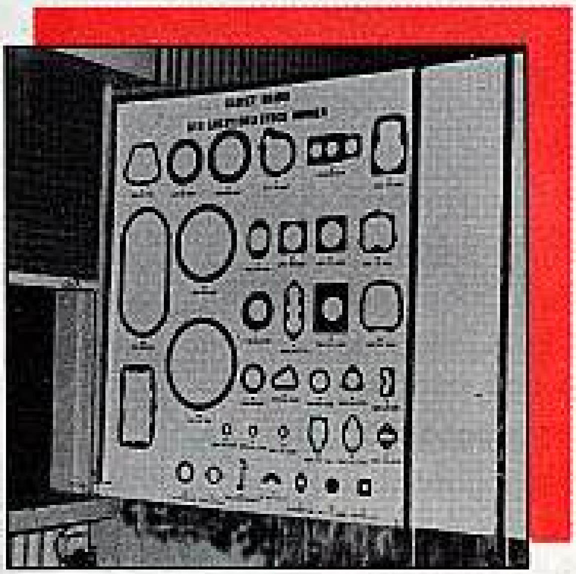
PICTURE YOUR GASKETS

Dear Editor,

Can't see ruining perfectly good gaskets by hanging 'em up like a tanned hide stuck on a peg in the woodshed. It dries 'em out and makes 'em hard to reshape after being exposed to the air.

Here's part of a gasket board we made up for the mechanics to eyeball, with black outlines of the gaskets on a white background. Since each FSN and bin location is lettered underneath the drawing, anybody on duty in the tool room can hit the right drawer without any sweat. That way all our gaskets stay in the original packages until they're used.

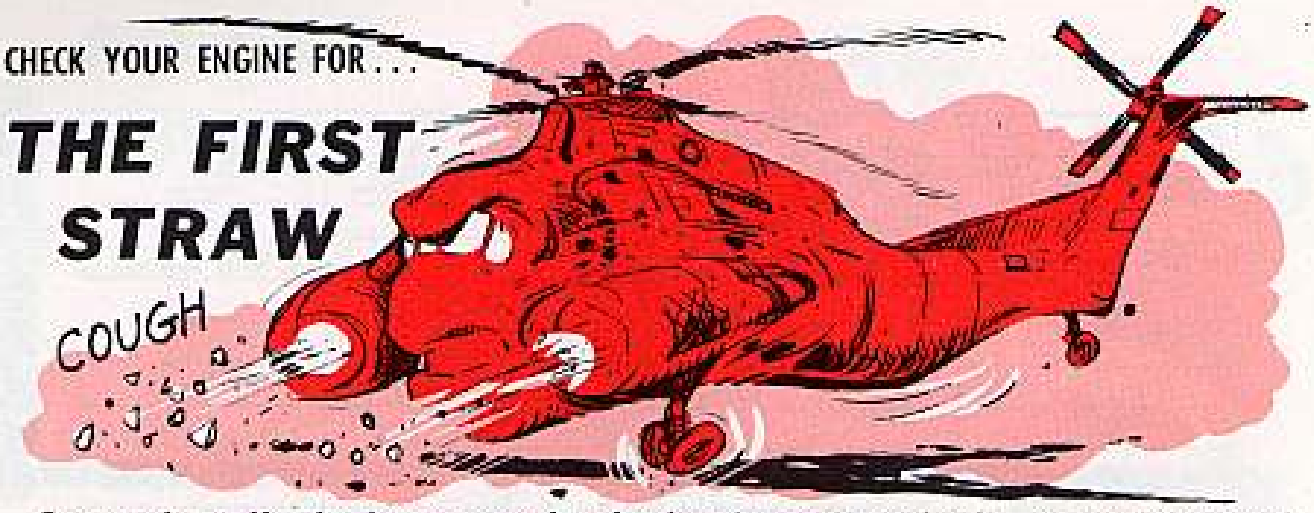
SSgt Edgar L. Lee
Lawson AAC
Fort Benning, Ga.



(Ed Note—That sure is a sharp looking board. But the one thing paint won't show is the material used in manufacturing the gasket. With the cost of gaskets being pretty reasonable, might pay to put up the real thing in addition to the paint job, Sarge.)

CHECK YOUR ENGINE FOR...

THE FIRST STRAW

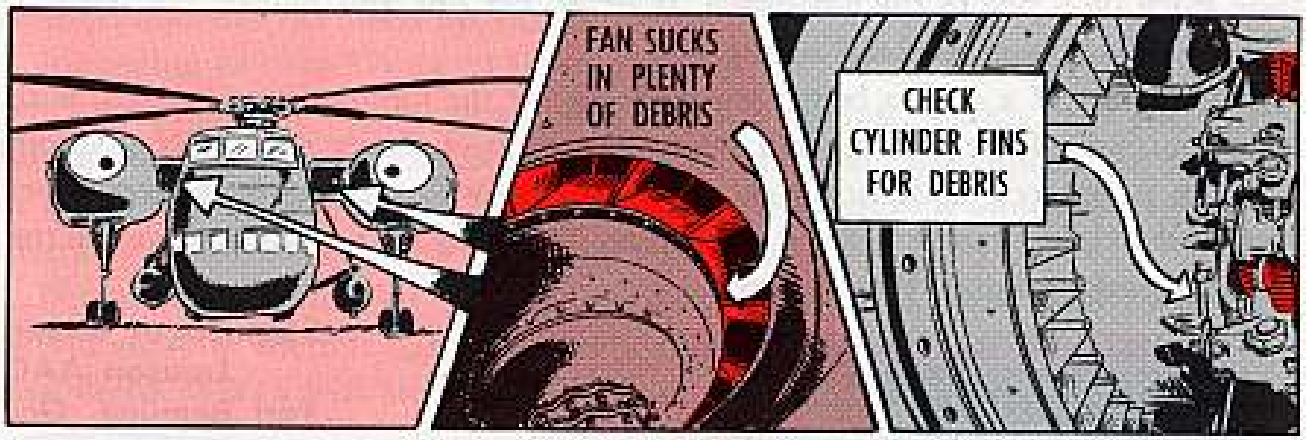


It wasn't really the last straw that broke the camel's back—it was the total effect of all the straws put together. So the first straw is just as important.

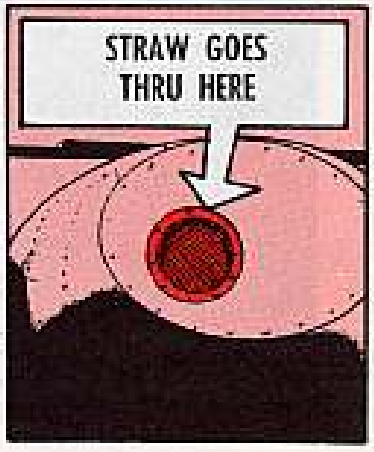
The same can be said of cylinder cooling fins that get packed with straw, grass, leaves, and other debris when you're operating out in the boondocks. The total effect can give you a cracked jug!

Take a Mojave (CH-37), for example. The engine cooling fan takes hefty bites of air all the time. And if she's roostin' on a fresh cut field you can bet that some straw, as well as air, is going to be sucked in by the fan and get packed into the cylinder cooling fins.

'Course nothing will boost cylinder head temperatures like garbage-filled cooling fins. And if the cylinder heat isn't passed into the air stream—well, something's got to give!



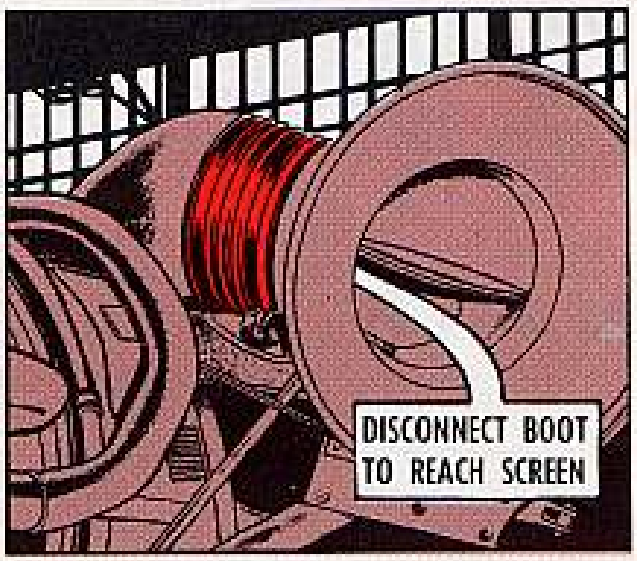
That's why when you eye any recip engine on a daily or intermediate, it's a good idea to focus on the cylinder fins. When you find debris, you may be able to take it out of the fins by using your fingers. But if it's really packed in, compressed air should do the trick.



Another air intake on your Mojave that can swallow debris, even though there's a protecting screen up front, is the carburetor air intake. Under field conditions a certain amount of grass can be drawn into the ducting and find its way to the screen on top of the carburetor.

So how can you see into the ducting to find out whether the carburetor screen is clean? You can't. But if there's a lot of loose material in the air during engine runup or low altitude hover and the pilot gets a drop in manifold pressure after take off from a grassy area, you have a mighty good reason for checking the carburetor air screen.

To check for debris on this particular aircraft, all you do is disconnect the rubber boot and reach in to the screen. You can easily clean it with your fingers. 'Course if you want a real good look at this screen, follow the disconnect poop in Chapter 2, Section III, paragraph 3-201 of TM 55-1520-203-20 (11 Sep 61) for the Mojave.



Yessir, there's just one way to keep any recip engine cool and healthy, man, and that's by eyeing the cooling fins and the carburetor screen from time to time.

SAFETY BELT CHECK

Dear Windy,

The organizational maintenance manual for my bird says that safety belts should be weight tested every third periodic inspection.

But Table XXIX in TM 55-405-3 (10 May 62), "Maintenance of Aircraft Systems," says to test them every 12 months. What gives?

Sgt W. O. D.

Dear Sergeant W. O. D.,

Normally, when there is a conflict in instructions, you follow the organizational maintenance manual. But there can be an exception to this rule, especially when newer info comes out.

So the latest poop on safety belt testing in TM 55-405-3 will be picked up in your maintenance pub with the next change. The 12-month setup is correct.

Windy

VALVE-CYLINDER MATCH

Dear Windy,

TB 55-2810-207-20/1 (25 Jun 63) gives us different TBO's for our Bird Dog (0-1) engine.

Using 115/145 Avgas we can go to 800 hours if we have exhaust valve 40651 in the cylinders, and 1000 hours if we have exhaust valve 626540 installed. Good deal.

But we don't know which exhaust valve is in the cylinders! Can you give us a hand?

SFC R. O. R.

Dear Sergeant R. O. R.,

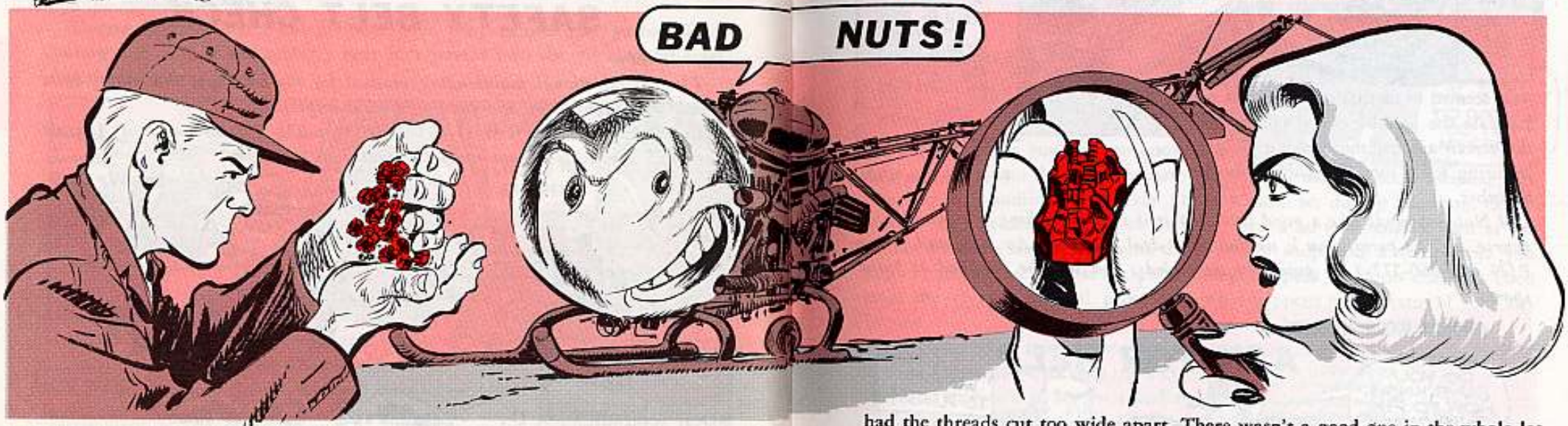
Can do.

Here's a list of all the cylinders, and what's in 'em, on the 0-470-11, 0-470-11A, 0-470-15 series engines.

Windy

ENGINE MODEL	CYLINDER HEAD NUMBER
0-470-11	532452
0-470-11	532452
0-470-11	532452
0-470-11	532452
0-470-11A	532452
0-470-11A	532452
0-470-11	536727
0-470-11	536727
0-470-11	536727
0-470-11A	536727
0-470-11A	536727
0-470-15	536727
0-470-15	536727

ROCKER SHAFT MODIFICATION	EXHAUST VALVE	SPRING RETAINER	STD SIZE	.015-OVERSIZE	CYLINDER AND PISTON PART NUMBER	CYLINDER AND PISTON FSN
No	40651	35971	X		532150-A1	2810-086-7746
No	40651	35971		X	532150-A1-P015	2810-659-5764
Yes	40651	35971	X		532150-A2	2810-731-7931
Yes	40651	35971		X	532150-A2-P015	2810-799-7904
Yes	626540	FRRA43A	X		532150-A3	2810-086-7745
Yes	626540	FRRA43A		X	532150-A3-P015	2810-973-3010
No	40651	35971	X	None	539395-A1	2810-086-7746
Yes	40651	35971	X		628423-A1	2810-086-7746
Yes	40651	35971		X	628423-A1-P015	2810-799-7902
Yes	626540	FRRA43A	X		628423-A2	2810-086-7746
Yes	626540	FRRA43A		X	628423-A2-P015	2810-973-3009
Yes	626540	FRRA43A	X		625841-A1	2810-624-6705
Yes	626540	FRRA43A		X	625841-A1-P015	2810-799-7903



Dear Editor,

There's one point any mechanic will admit about putting a new part on a bird—it's not going to do a job if it's not made right in the first place!

Take the recent case of a couple of boxes of castellated nuts, AN 310-4, FSN 5310-167-1285, used on just about any bird you'd care to mention.

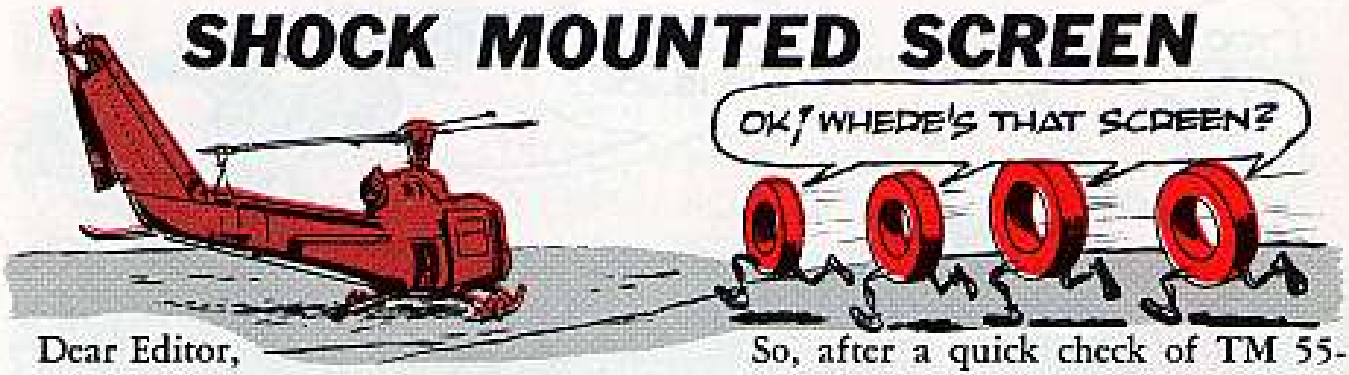
We found that some of the nuts had little or no threads at all, while others had the threads cut too wide apart. There wasn't a good one in the whole lot.

That's why we eye and try a new part before installing it. Then we can tell right-off whether or not the new part will do the job it's supposed to do.

Sgt J. R. Snyder
Fort Knox, Ky.

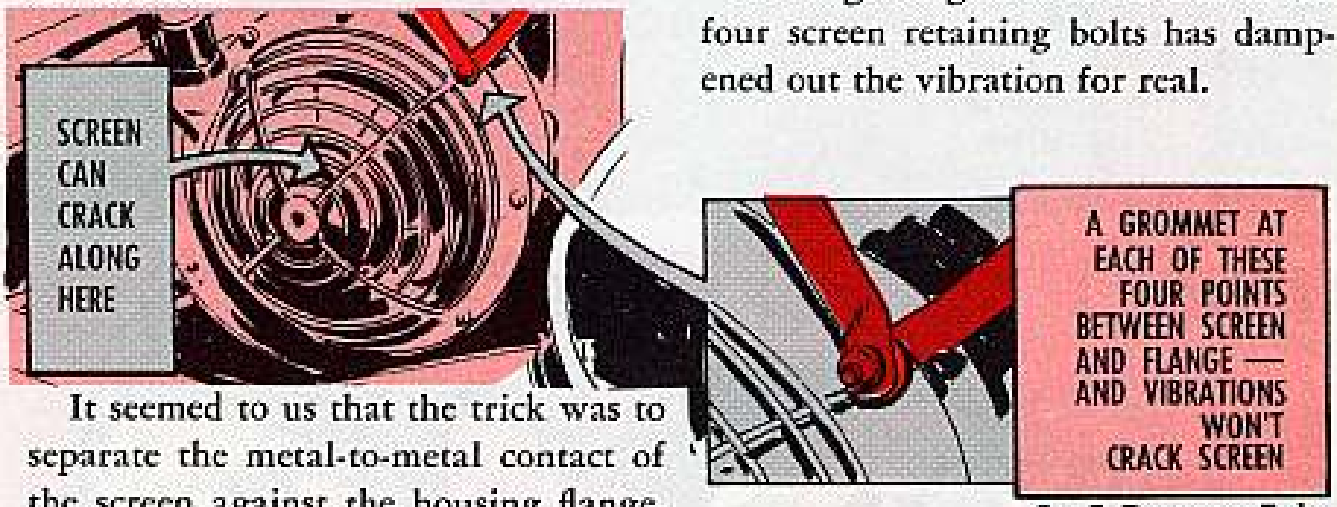
(Ed Note—A good general rule to follow. No doubt an EIR is in the works on the nut!)

SHOCK MOUNTED SCREEN



Dear Editor,

We had a problem with oil cooler screen, P/N 204-060-577-1, which was put in our Huey's (UH-1A) by MWO 55-1520-207-34/40 (29 May 62). They were breaking left and right, due to vibration.



It seemed to us that the trick was to separate the metal-to-metal contact of the screen against the housing flange, by using some sort of a rubber shock absorber.

So, after a quick check of TM 55-1520-207-20P (19 Mar 62), we came up with grommet, AN 931-5-9, FSN 5325-249-6340. It fit neatly over the screen retaining bolt, between the screen and the housing flange.

Putting one grommet on each of the four screen retaining bolts has dampened out the vibration for real.

Sp-5 Devone Felty
Fort Carson, Colo.

(Ed Note—Sounds like a good little repair if screen cracking is a problem. Of course, a CO's permission is needed on a deal like this. An improved screen, P/N 204-060-577-3, is going on new birds, and will be supplied as future spares.)

Nobody expects air type mechanics to know the book on those odd shaped components of radio sets scattered around your fuselage's innards.

But, as a crew chief or airframe mechanic, you're still responsible for the handling of those radio components as long as they're attached to some part of your favorite airframe. So-o-o . . . the solution is simple.

Whenever the aircraft driver writes up any one of those sets as being unreliable, inoperative or having a weak signal, check with avionics support as usual . . . only this time leave the radio behind.

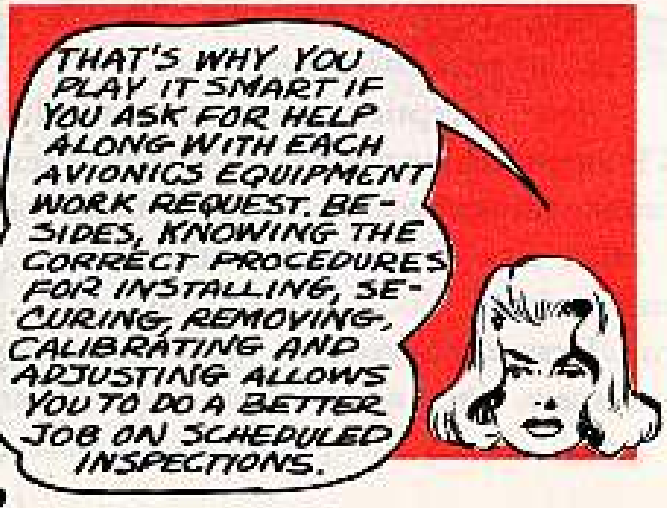
When you get over to the avionics shop, tell them you've never removed that set before and you'd like to know if there're any special connections or removal operations you need to know about—so as not to damage the hardware during handling. Somebody at avionics will usually be able to find another set of the same type around the shop . . . and he can use that to demonstrate the correct removal procedure for you.

It becomes even more important to do this when you're picking up a repaired or replacement set for installation, since some components have to be adjusted or recalibrated in order to be of any use to anyone flying your machine.

Just to repeat the obvious, installation procedure includes knowing the right way to lockwire that component back into its mount and the aircraft. And chances are that the avionics mechanic can point out how to do it on a spare mount lying around the shop.

In some cases, you'll just hand in a work request and let the avionics expert take care of removing and installing that radio set in the aircraft. You can leave that to his judgment, though. If he thinks you can handle the operation without damaging the equipment, he'll say so and tell you how. And if you've had any experience with avionics equipment, he'll take that into consideration.

You don't gain any time if you unknowingly mess up some internal part of a radio set during handling. Could be there's no maintenance float at the avionics shop and a component you need happens to be on due-out. Then what happens to the status of your aircraft while you're waiting?



Didja ever get on the horn of an AN/VRC-34 or AN/GRC-87 'n get the feelin' quick-like that nobody was listenin' to a word you said?

Well, relax. You've had company on that silent waveband. It's usually due to poor or no reception of the RT-77 or -77A receiver part on the other end of the line. Fact is, you might've had the same trouble with your own receiver.

Like, you can't hear a thing when a message comes your way. There's a cure, so stick around.

Poor reception sometimes results from switching the RT-77,-77A receiver and transmitter parts with those of other sets. You feel it in the receiver, of course.

Here are a coupla' three things to suspect right off when it happens to you.

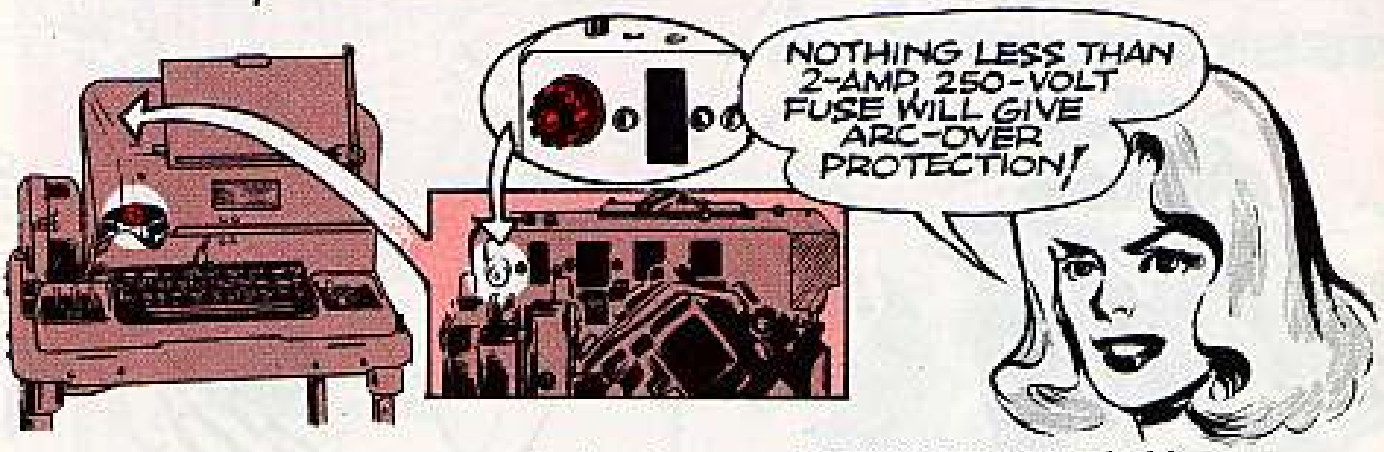
A prime No. 2 suspect is the T-114 receiver antenna transformer in the transmitter section. When components are swapped or switched, it's possible that the windings on either the transformer in the receiver (T1) or the T-114 are wound the reverse of the original matched component. This affects the receiver power socket.

This is another job for your direct support, which can reverse the leads on pins 1 and 5 of the T-114. A quick switch here banishes poor reception.

That MWO, plus para 29, page 27 of TM 11-263 should take care of the problem with the AT-101 and -102.

If those cures don't work, then you've really got somethin' to talk to yourself about. So share the conversation with your support people.

AN/GGC-3 TELETYPE TALK



The power supply and terminal unit of the reperforator-transmitter TT-76( ) for your AN/GGC-3 teletypewriter set needs 2-amp, 250-volt fuses.

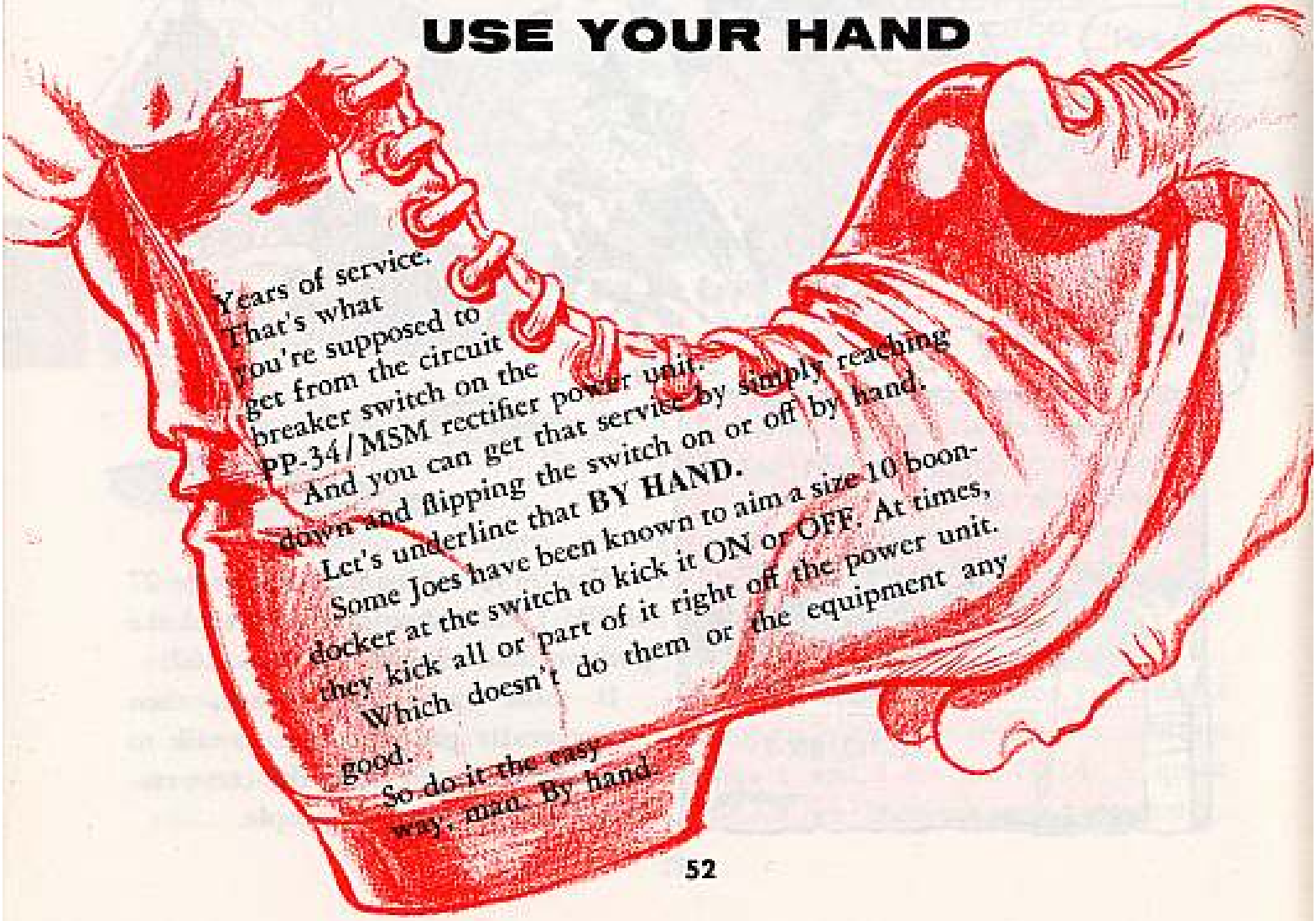
Not 1.6-amp, as may be marked on the unit itself. Not even 2-amp, 30-volt —or any other voltage rating below 250.

Just 2-amp, 250-volt fuses like you get with FSN 5920-581-4144.

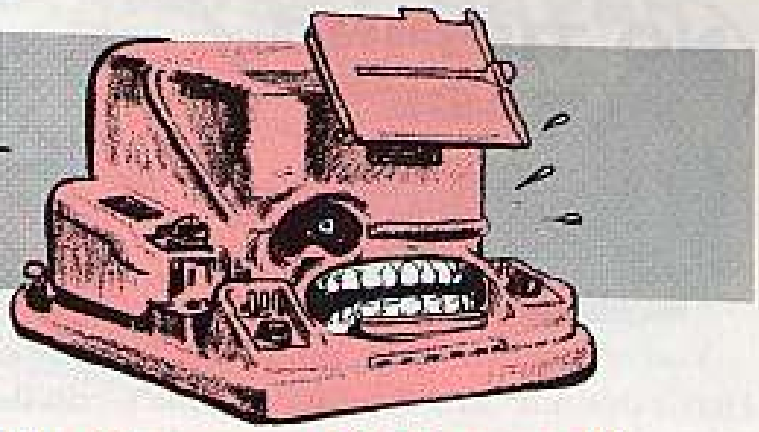
The 1.6-amp spec was changed because it was a little too light for the job, especially overseas where voltage tends to run a bit higher than Stateside.

Anything less than a 250-volt rating will not give you the arc-over protection the circuit needs.

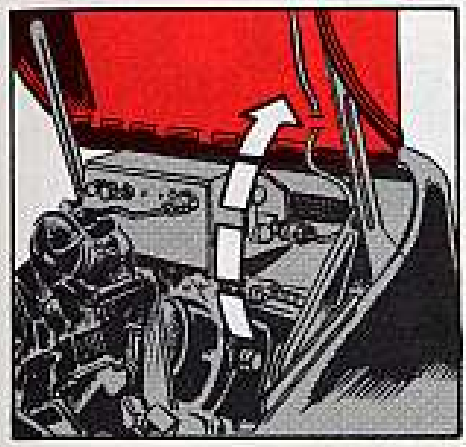
USE YOUR HAND

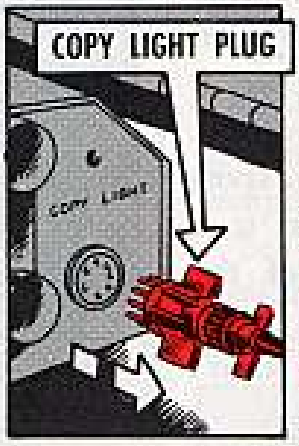


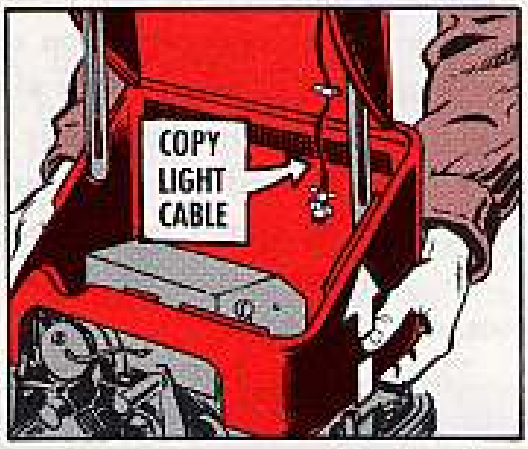
PULL THE PLUG!



Raise the lid . . . **Pull the plug . . .** **Lift the cover off.**







Three easy steps. Follow them in that order, and your TT-76/GGC reperforator-transmitter teletypewriters will take fewer repair trips to your support.

The trouble with Harry is that he forgets the first step, ignores the second and carts the TT-76 off to the shop for some tricky repair work.

The lug forgot the copy light cable plug, which is what you don't want to do.

So-o-o, lend an ear if you will, Will, and let's explore the situation.

The cable is fixed to the underside of the cover lid. You can't see it, so you gotta remember it. Its plug (P12) hooks to the J12 jack on the right-hand side of the power supply and terminal unit . . . which, of course, doesn't come out with the cover.

If you lift the cover with the plug still hooked, somethin's gotta give.

Most of the time, the "something" is the insulator in the J12 jack. Sometimes it's the plug itself. Either way, you've got a job for your support.

Since the TT-76 doesn't do you or the Army one bit of good in the shop, the simplest remedy is to reach in, disconnect the plug, and avoid damage.

You with me, Will? Good. So how's about filling Harry in, huh?

You're familiar with the situation. Here's this cute little waitress, see. She's busy, but you want her to remember you—so's maybe you can make some time with her next time you drop in.

So you get obvious about slippin' a big tip under your plate. Only you get too obvious, and the manager spots you, too. He comes over, points to a "No Tipping" sign in back of the counter, and says:

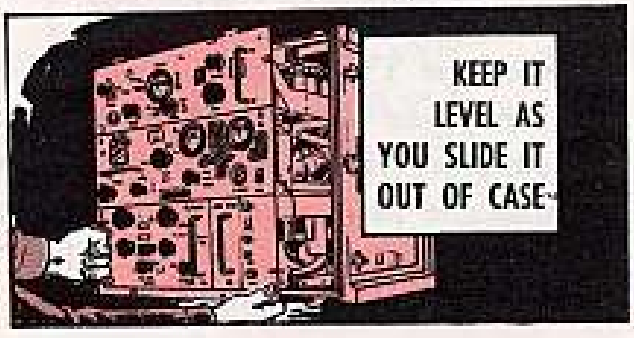
"Sorry, Sir, but our girls aren't allowed to accept tips."

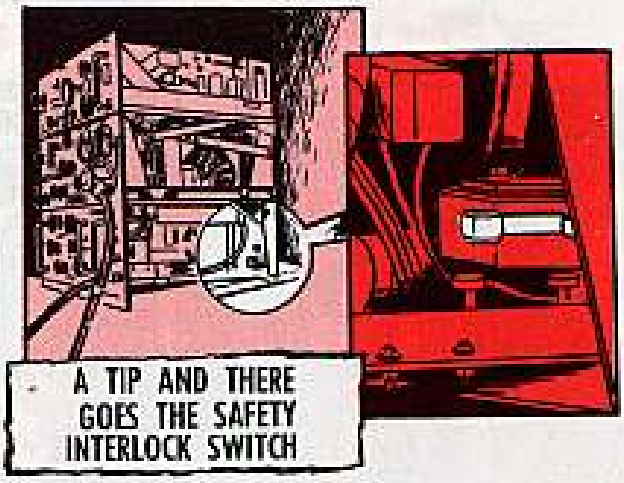
You're foiled, and the impression's shot. You coulda' got the little package fired.

Now, apply the same logic to the T-302 transmitter of the AN/TRC-24 radio set, with a slight switch. Underline switch.

Even a little tip could take that number right off the job. So if you wanna make conversation with this baby, you'll do better by not even thinking about tipping her.

Like, when you're slidin' the T-302 in or out of its case, keep it as level as possible . . . front and rear. A wrong tip'll catch the S110 safety interlock





switch (at lower, right rear of the T-302) on the narrow ramp. Kabong! The switch either bends or breaks.

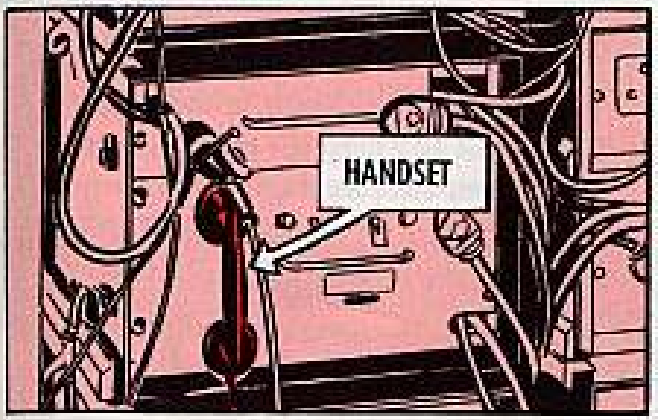
Since the T-302's a broadcaster and not a broad, you might get one of your buddies to take the weight off her rear when you're slidin' her in or out of the case. The transmitter's a pretty heavy package, and a little help getting her in or out can save the switch.

'Nother point here. Be sure the T-302's flush on its ramps before you shove it in the case. That, too, can save the switch (which you'll wanna do, of course, since the S110 helps keep you from getting shocked).

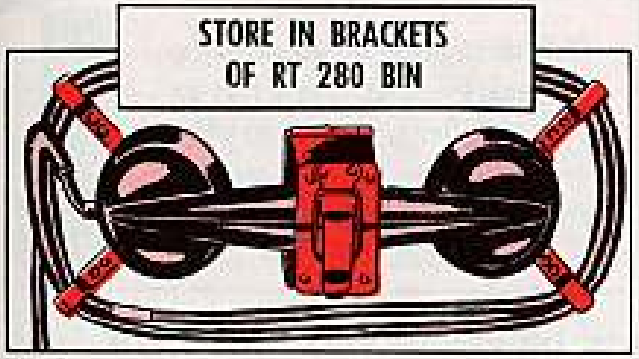
That could get a little ticklish in a one-man operation, but it's worth the extra effort to stay in business. Besides, later models of the T-302 are featuring wider ramps—which should help considerable.

ANTIQUE-7 HANDSET SAVER

Didja just get the word to go for a ride with the van housing your AN/TCC-7 telephone terminal?



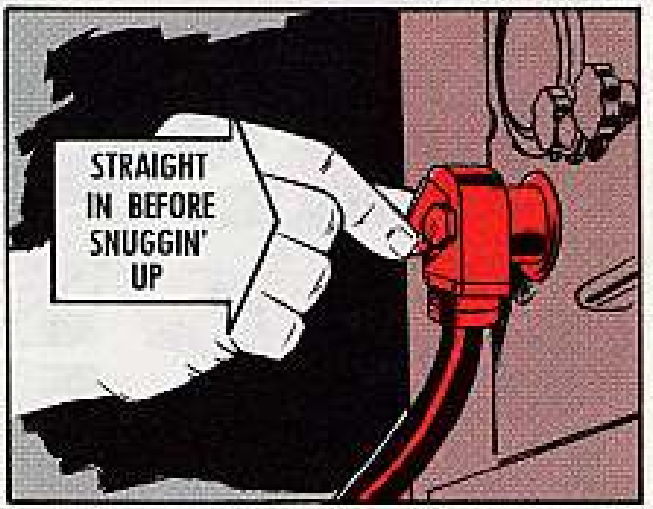
Well, reach down to the AM-707 amplifier-pilot regulator. Lift the handset from its cradle there, and store it in the brackets inside the bin of the RT-280.



Snugged up in its traveling case, the handset has no chance to bounce off its cradle when the van's rolling. Cradled rather than stored, the handset could bounce onto the floor or against other components of the Antique-7. That'd spell d-a-m-a-g-e.

With that tucked away in your memory box, how's about taking a look at the connectors on the Antique-7 components.

See how they're all built to go straight in, no matter whether the connector has a male or female end?



Straight in with 'em it is, then. Best bet here is to make sure the connector's squared up with the receptacle or plug on the component before snuggin' it up. That way you avoid bending the bronze pins of the plug and possible damage to the receptacle.

Ever try straightening one of those pins? They break easy, don't they?

So go easy with that connector screw till you've got the works squared up.

KEEP A FOOT AWAY

One thing the power cable on the RL-172/G cable reeling machine is not like is the brass footrail in the local bistro.

That's a big reason why the cable won't hold up when you clump a size 10 boondocker on it.

Fact is, one foot too many can snap off cable, connector and plug where they hook to the electric motor. Sure, the cable looks rugged, but it's that big only so's it can carry DC juice to the motor. The feet you rest on the cable can be the same ones that'll take the whole machine to the repair shop.

The motor control switch is a problem area, too. Meaning it sticks out inviting-like, just waiting for something to snag. 'Bout the only thing you can do is watch you don't bend or break it.

The lower hook adjusting screws do their job when snugged up right, but don't be tempted to overtighten 'em. Coupla' extra turns against that aluminum can make the hook supports look like a pretzel.

Another thing to watch is the fuse box. It juts out like a frog on a lily pad. One wrong thump when you're handlin' the reel can put the box—and the machine—out of business fast.

The fuses, too, can try a man's patience, because they blow regularly.

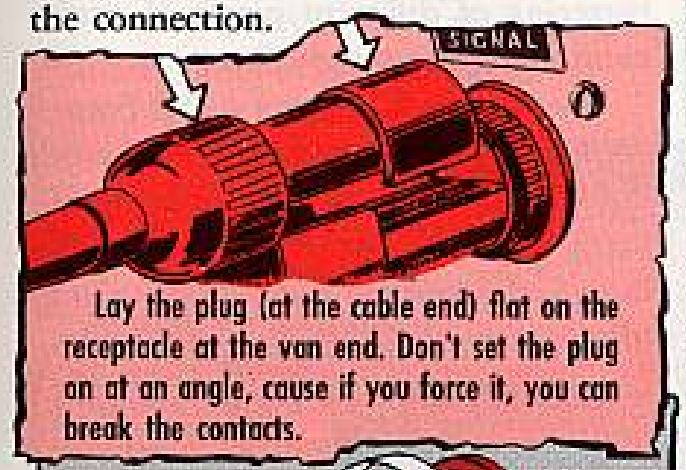
Most times the fuses go when you start the motor, but when you figure it for a minute, it's still better to have the machine than to do the job by hand. Saves lotsa' sweat.

The TM says you gotta use a 15-amp slow-blow fuse. It's tough, but a bigger fuse could allow the motor to overload and keep running long enough to do major damage.

Keeping your 26-pair cable (CX-4566) in one piece and on the job is a mighty important project.

A bunged up cable can make the equipment in your shelter useless. But, a few seconds extra care can keep your van goin' full blast, cable-wise.

You gotta be extra easy with the plug and receptacle when you're makin' the connection.



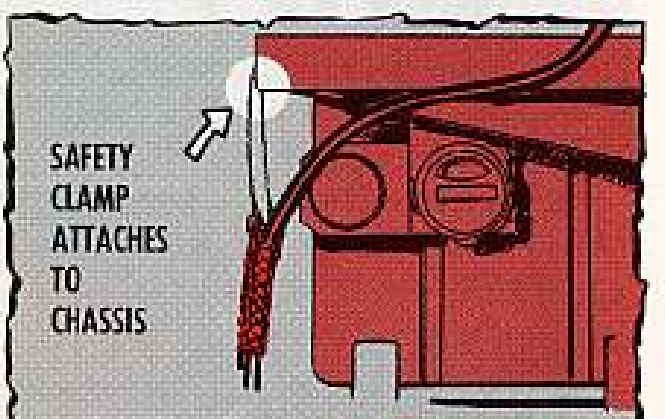
Lay the plug (at the cable end) flat on the receptacle at the van end. Don't set the plug on at an angle, cause if you force it, you can break the contacts.

With the plug in position, press it into the receptacle in one motion. Then, twist the rear lock AND the front of the plug clockwise—AT THE SAME TIME. Stop when the works lock in place.

Twisting the lock or the plug separately can break the contacts or give you a bad connection.

To release the plug, grip both the connector and locking ring and twist back—again in one motion. When the plug unlocks, lift it straight up.

Don't lift the plug at an angle, and DON'T lift it by the cable when you're taking it off. That way you avoid damage.



When the cable's hooked to the van, keep the safety clamp on. The clamp helps protect the plug and connector if a vehicle accidentally runs over the cable or someone trips over it.

The clamp also helps if you forget and drive off with the cable attached to the power source. It won't help much, but it might prevent pulling the receptacle box out of the van.

Which means, of course, that the best way to avoid that mess is to disconnect the cable as soon as you get the word to roll.

REPORT THE DAMAGE

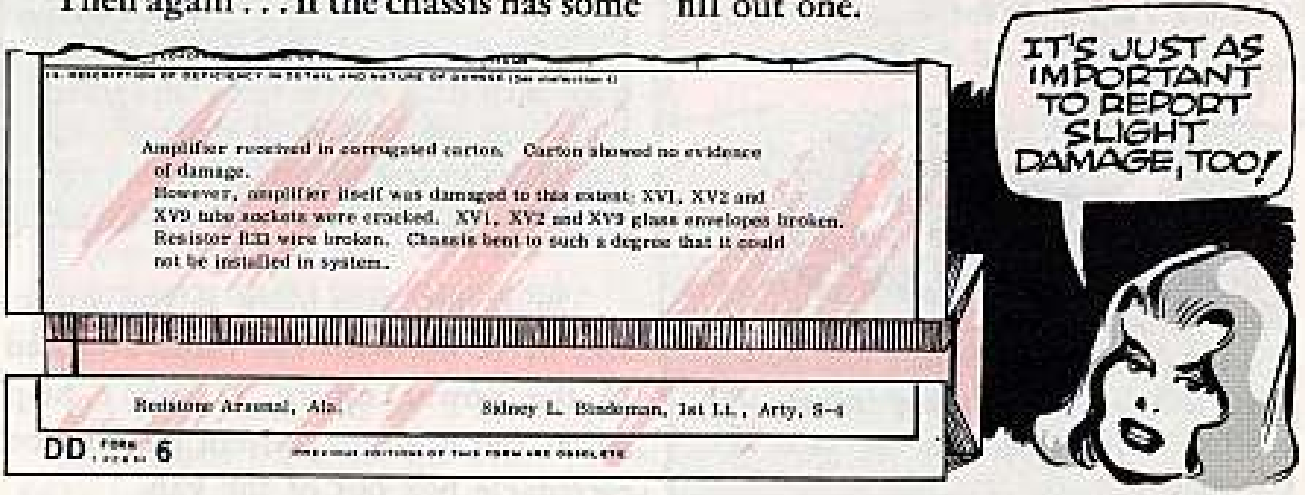
What do you do when say, a rebuilt or new electronic chassis, reaches your outfit from supply in bad shape? You know . . . bent and maybe a tube or two busted.

Could be it T's you off enough to where you want to throw the chassis against the wall and stomp all over it to finish the job. Could be.

Then again . . . if the chassis has some bent parts that you can straighten yourself with no sweat, maybe you go ahead and do it.

There sure is nothing wrong with taking care of things yourself, especially when it takes pressure off somebody who's got enough to keep him busy as it is. But you want to look to the future at the same time. In other words, you ought to do what you can about seeing that a halt is called to the battering of different pieces of equipment along the supply line.

That means filling out a DD Form 6 —"Report of Damaged or Improper Equipment." The scoop on using the form is in AR 700-58—in case you've been lucky enough not to have had to fill out one.



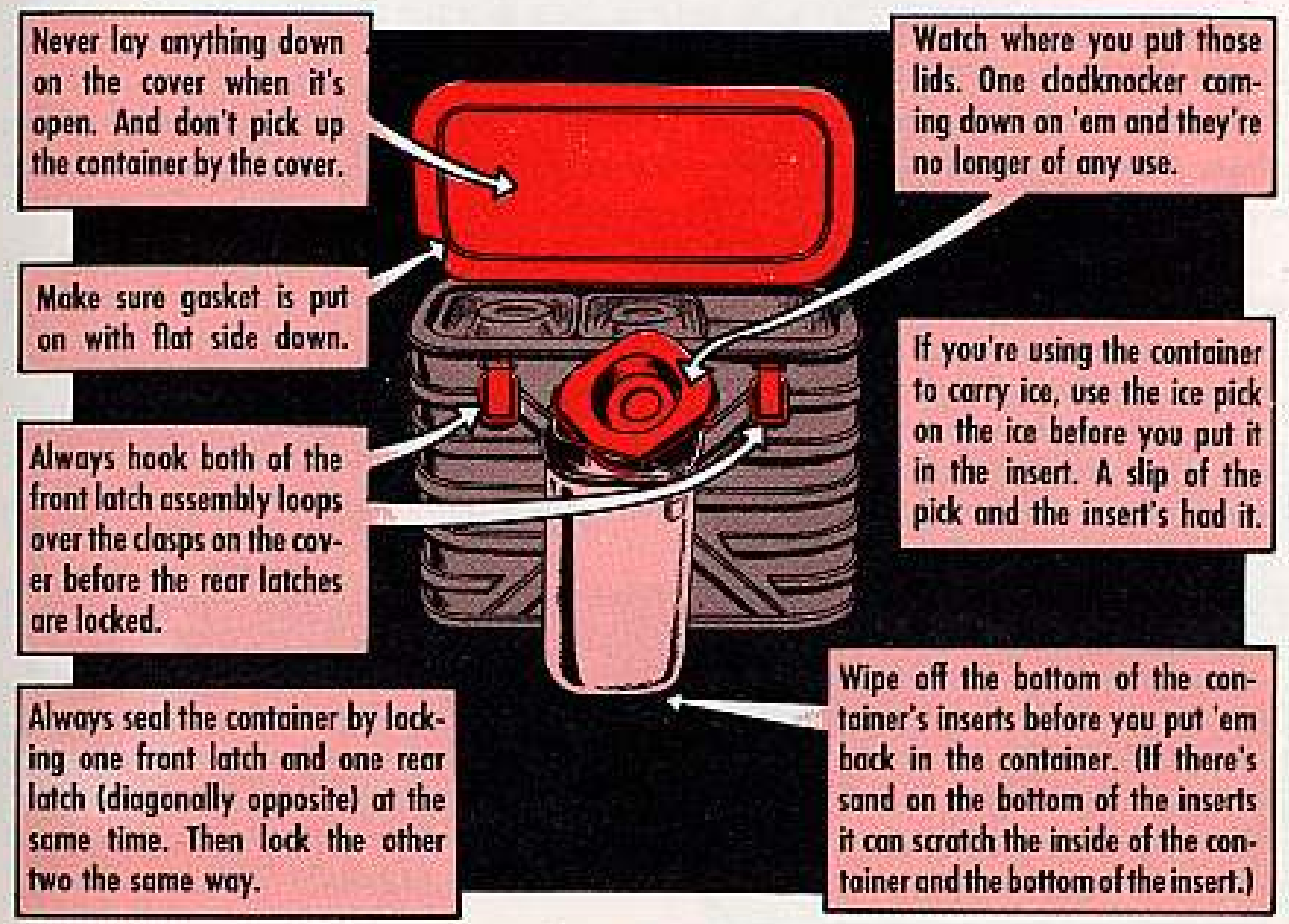
Sure . . . you use the form when you get a piece of equipment from the supply system that looks like some guys had taken bets on whether it would hold up under the wheels of a 5-ton truck. But it's just as important to report stuff that has reached you only slightly damaged—something that you can repair yourself.

Chow time! That's a familiar sound and a mighty good one, especially after a rough day in the boondocks.

Those insulated food containers (FSN 7330-238-2411) make the difference between hot food that's supposed to be hot, and cold food that's—ugh!

They look tough enough to take just about any kind of handling, but don't let their looks fool you. They can get banged up; then you have to get rid of 'em.

To make sure you have those insulated containers when you need 'em, here are some points to keep in mind.



WHEN YOU DUNK THE DONUT

An immersion heater's a mighty handy thing to have in the field. To have hot water when you need it is sure a big help. But, like every other piece of equipment, you can have trouble with it.

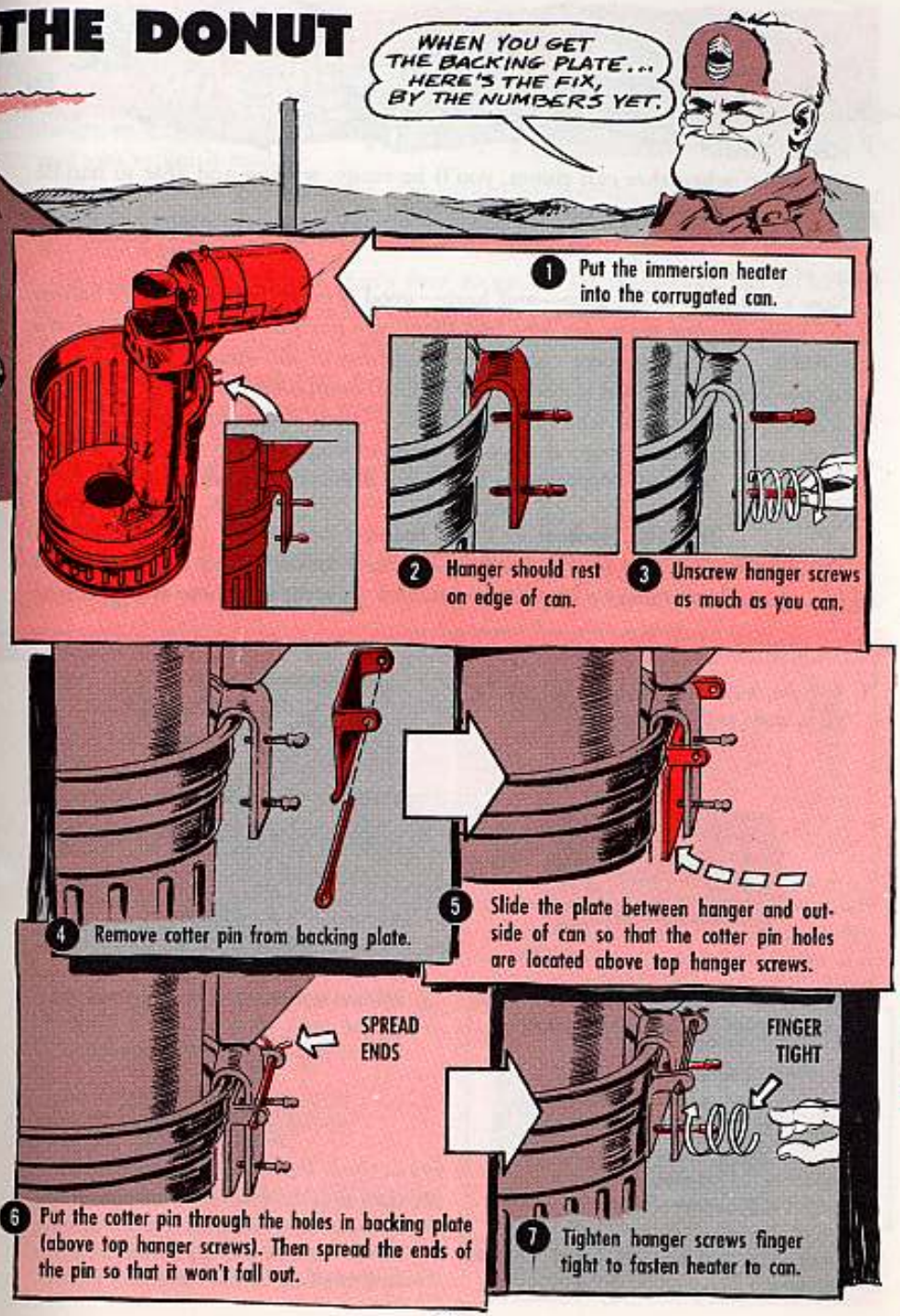
Sometimes the donut (combustion chamber) of your heater (FSN 4540-266-6835) will tilt and that causes strain on the corrugated can where the hanger screws clamp on the can.

In fact, some of these cans look like they've had the smallpox because of the marks left by the screws.

There's a simple solution to this problem. You can get a hanger backing plate, FSN 4540-021-2063. It takes the strain off the hanger screws and it won't damage the can.

One thing about this backing plate, it fits all immersion heaters, even those with a single hanger screw.

So, if you're having trouble with those hanger screws biting into the can, your support unit can order those backing plates from Commanding Officer, U. S. Army Mobility Support Center, P.O. Box 119, Columbus, Ohio 42316. They ask for Plate, backing, with cotter pin, FSN 4540-021-2063. They cost 29 cents each.



Rx: PM

Medic! Medic!

No doubt, when that call comes, you'll be ready, willing and able to handle your job . . . that's what you've been trained to do.

But how about your equipment? Does it measure up to you? Is it as ready to go as you are?

Now's the time to develop—and keep—good preventive maintenance habits. If the tools of your trade get into bad shape, it's not just a hunk of steel that's deadlined . . . it's that most complicated machine of all—man.

So, you just can't afford to leave your medical equipment in storage and bank on it being ready for use when the time comes—your PM must be tops.

Here are a couple of pubs that you'll want to keep handy:

TM 8-605, "Organizational Maintenance of Medical Equipment"
and
TM 8-610, "Handbook for Medical Equipment Repairmen".

There're two big things to remember—medical service items must be stored right . . . and they must be inspected regularly. Accomplish these two missions and you've got it made.

The right storage means the spot picked to store the supplies must provide protection against freezing and hot temperatures, is not in direct sunlight and has good ventilation.

It's got to be in an area that's easy to get to for inspection, but so located that you've got a tight security set up for drugs and precious metals—just in case they decide to grow legs and walk away.

Keeping your equipment combat-ready with scheduled inspections gives you a chance to check and weed out items that need repair or are out-dated —like some of your drugs.

It also gives you the opportunity to keep a running inventory and to make sure your kits are complete and up to date with the latest medical supply catalogs.

But, above all, proper storage and regular checks give your equipment a fighting chance to measure up to you . . . if somebody hits the button.

TO GET YOU STARTED ON THE RIGHT PM ROAD HERE'S A PRESCRIPTION

1. Give the container a careful going over for dents, cracks or signs of itchy fingers.

2. Be sure all items are cushioned and tightly packed—when your inspection's completed.

3. Paper wrap should not be broken, torn or punctured.

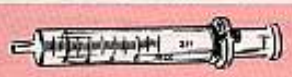
4. Bandages should be free of stains and mildew.

5. Adhesive tape should be clean, dry and sticky.

6. Check all rubber products carefully. Make sure the gloves don't have holes or cracks and they haven't lost their elasticity (direct sunlight or dry heat will wreck rubber products in a hurry).

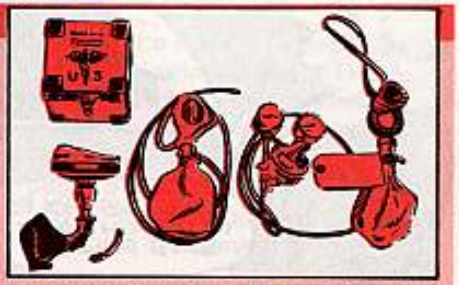
TO GUIDE YOU ON YOUR INSPECTION TOURS.

7. Surgical instruments—be sure serrated jaws and lock action are in working condition and not out of line. Check to see if hinge action works smoothly. Cutting edges want to be protected when you're handling the instruments.

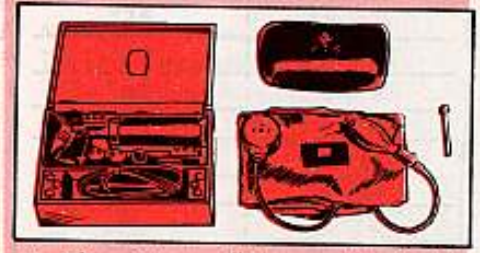


8. Watch those glass parts. Make sure they're cushioned and protected at all times.

9. On the litter—the cotton duck should be free of holes, tears, and mildew. Look over litter handles for smoothness and make sure they're firmly attached to the poles. Check spreader bars for corrosion and failure to work right.

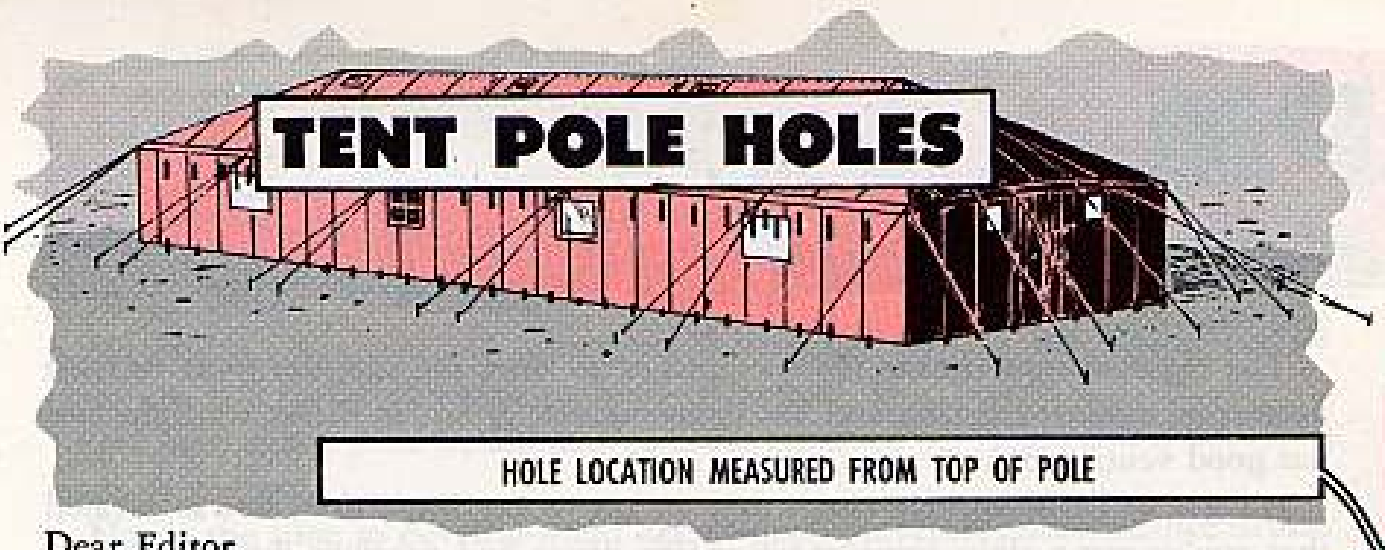


10. Emergency-type items like respirators should be exercised, as well as inspected, monthly, and if the item uses compressed oxygen, make sure a warning tag (DD Form 1191) is attached.



11. When not in use, all items must be placed in their carrying cases.

TENT POLE HOLES

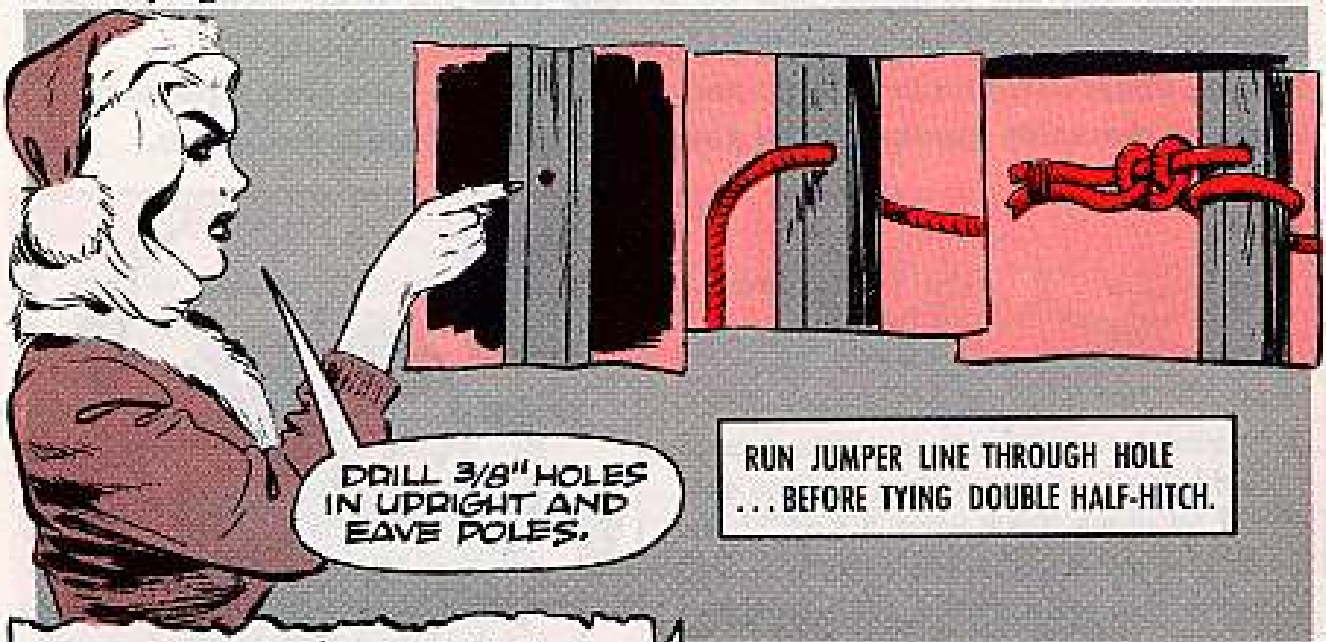


HOLE LOCATION MEASURED FROM TOP OF POLE

Dear Editor,

We used to have trouble with the jumper ropes pulling loose and letting the tent top pull up over the spindle on our large general purpose and command type shelters when the wind played rough.

But no more. We saved sweat and canvas by getting permission to drill ⅜-in holes in the upright and eave poles and running the jumper lines through 'em before tying the double half-hitches.



POLE LENGTH (UPRIGHT)	POLE LOCATION
10' 3"	36"
12' 3"	36"
8' 3"	30"
9'	30"
10' 3"	36"
12' 3"	36"
5' 8"	6"
6' 2"	6"
7'	6"

TO LOCATE THE HOLES, WE MEASURED DOWN THE WOODEN PART FROM THE TOP OF THE POLE (NOT INCLUDING THE SPINDLE) LIKE SO:

Sp–4 J. S. A
Fort Eustis, Va.

(Ed Note—Good show for the old-type tent poles. The MIL Specs on the new poles call for holes in 'em, which is even better.)

Connie Rodd's BRIEFS

KEEP POSTED

Do you have any M151 ¼-ton utility trucks in your outfit? If so, then get yourself a copy of MWO 9-2320-218-20/5 Change No. 1, (9 Oct 62) and look over paragraphs 10 h and i before making a wheel bearing adjustment. Here you'll find that the new torque spec for the wheel spindle flange nut is now 30 lb-ft, and you back it off one complete castellation to aline the nearest cotter pin hole and relieve the torque. The old torque of 100-120 lb-ft is no more. Until a revised TM 9-2320-218-20 comes out, keep this MWO info posted on page 162 of the TM so other mechanics will be in the know.

GET PS BY PIN-POINT

Now you can get PS—PDQ. Yup, PS is delivered to your outfit's door via "pin-point" distribution. All your CO has to do to get aboard the express delivery is to fill in the number of copies the unit needs on a DA Form 12-4 and send it down the pike—thru channels—to:

U.S. Army Publications Center
2800 Eastern Blvd.
Middle River
Baltimore, Md. 21220

NEW SHELTER DOPE

TB SIG 354 (Jul 63) is the book for you if one of the S-141/G or S-144/G lightweight shelters is your baby. It gives you new maintenance and repair dope that you won't find anywhere else. Get one or you'll be out in the cold, shelterwise.

NEW PUMP FSN

You got a M107 175-mm SP gun? Or are you partial to the M110 8-in SP howitzer? Either way, you have the same electric motor driven hydraulic pump. TM 9-2300-216-20P (Jul 62) lists it on page 15 under FSN 2520-860-0057. The way it should read is FSN 2520-860-0557. Jot it on your brain.

METASCOPE LIGHT

Some games are fun in the dark, but when you need that Metascope, Polan Model P-141, you need a light source. The Lamp, Incandescent, FSN 6240-155-7786, listed in Change 3 (Sep 62) to TM 5-5850-201-15, is a local purchase item (General Electric PR2). But if you need the entire Light source assembly, FSN 1090-475-5260, you get that thru regular supply channels (Eng) at a cost of $23.37.

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


ΣUNTHPHΣIΣ!
ENTRETIEN!
Wartung!
保存する
THEY ALL SAY
THE SAME THING-
MAINTENANCE...
and it MAKES SENSE
in any language!