

Issue 231

PS

1972 Series
February

THE PREVENTIVE MAINTENANCE MONTHLY

THE HESSIANS
CAN WAIT!... A UNIT'S
MAINTENANCE IS ONLY AS
GOOD AS ITS PUBLICATIONS
DISTRIBUTION!

TRENTON

VALLEY FORGE

PUBS

CHUCK
KRAMER

PUBLICATIONS—HOW TO GET THEM
PAGES 29-36



EIR DIGESTS

YOU HAVE THE WORLD'S BEST EQUIPMENT. TAKE CARE OF IT BY GETTING AND USING YOUR EIR DIGESTS, THE 750-900-SERIES TB'S.

Unless you get every issue of the Equipment Improvement Report and Maintenance Digest you could miss some real important info that'll help keep your equipment on the go.

Most EIR Digests are printed every 3 months (each fiscal year quarter) and are distributed on a one-time basis ... no back issues. You order on your Pin-Point forms (12-series) for the types of equipment your outfit has.

EIR & MAINTENANCE

TB NUMBER	ORDER ON DA FORM
750-901 - COMSEC (classified)	12-43
750-911 - Electronics	12-34
750-921 - Nike-Hercules	12-32
750-922 - Chaparral	12-32
750-924 - Hawk	12-32
750-925 - AN/TSQ-51	12-32
750-927 - Redeye	12-32
750-928 - Calibration	12-32
750-929 - AN/GSA-77	12-32
750-931 - Land Combat Spt System	12-32
750-932 - Pershing	12-32

DIGESTS

TB NUMBER	ORDER ON DA FORM
750-933 - Shillelagh	12-32
750-934 - Sergeant	12-32
750-935 - TOW	12-32
750-942 - Chemical	12-34
750-946 - Nuclear weapons	12-35
750-951 - Weapons and tools	12-34
750-971 - Mobility Support	12-34
750-981 - Tank automotive	12-38
750-982 - Commercial automotive	12-38
750-991 - Fixed wing aircraft	12-31
750-992 - Rotor wing aircraft	12-31

You'll find other valuable info besides solutions to the EIR cases ... such as:

Current maintenance info.

Authorized changes to equipment.

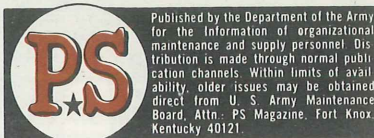
Publications info.

ESC manuals changes.

Parts lists changes.

New, rescinded and current MWO's.

Miss all these and you miss a lot of goodies.



Published by the Department of the Army for the Information of organizational maintenance and supply personnel. Distribution is made through normal publication channels. Within limits of availability older issues may be obtained direct from U. S. Army Maintenance Board, Attn: PS Magazine, Fort Knox, Kentucky 40121.

THE PREVENTIVE MAINTENANCE MONTHLY
Issue No. 231 1972 Series

February
IN THIS ISSUE

AIR MOBILITY 2-13

Hangar Care	2-3	T-41 Engine	9
UH-1	4, 5	OH-58A	10
ASOAP Samples	6-7	APH-5 Helmet	10
Replacement Parts	8	Ni-Cad Battery	11
T63 Engine	9	T53 Engine	12-13

GROUND MOBILITY 14-28

1 1/4-Ton Trucks	14-15	Van Air-Conditioner	20
M151	15	M428E1 Van Trailer	21
2 1/2-Ton Trucks	16	M416 Trailer	21
Rearview Mirrors	17	Multifuel Brass	
M55, M55A2	18	Fittings	22-23
Wheel Nuts	18	Grease Cartridge	24
Transmission PM	19	RT Forklift	25, 26-27
20-Ton RT Crane	28		

FIREPOWER 38-44

M2 MG	38-39	AN/VSS-3	41
Cleaning Rod Tip	40	M551	42-43
Grenade Safety Clip	40	3.5 Rocket Launcher	44
		4.2 Mortar	44

COMMUNICATIONS 45-58

SB-86/PT	45	AN/ARC-54	50-51
Battery Poop.	45	Antenna Antics	52-53
Chronograph	46	Squad Radio	
AN/PPS-4A	47	Crystals	54-56
AN/MPQ-4A	47	TA-227/U Modem	57
PRC-25	48-49	TA-312	58
Contact Cleaner	58		

COMBAT SUPPORT

New Publications	37	M440HA Grader	62-63
45-KW Generator	59	H161M Tractor	64
Fuel Dispensing	59	Supply 4, 5, 6, 9, 10,	
Boot PM	60-61	14, 16, 17, 18, 21, 23,	
		24, 25, 48, 49, 52, 55,	
		56, 58, 59 and 63.	

Use of funds for printing of this publication has been approved by Headquarters, Department of the Army, 22 January 1971.

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:

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



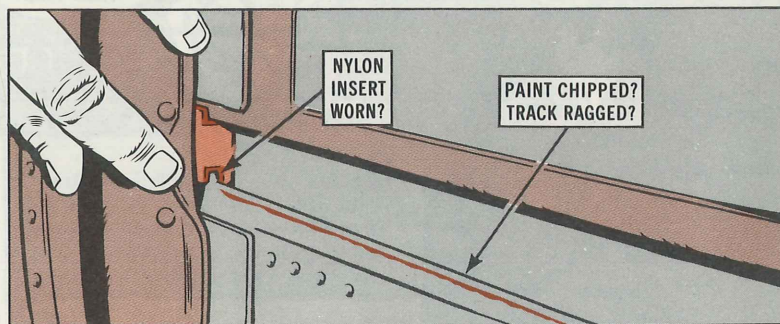
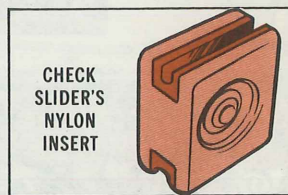
Want to boggle a chopper caballero's mind? Then have a cargo door mess up the main or tail rotor blades!

Did you check the door slides for damage, security and grease-easy operation on your PMD?

Like maybe the door does the stutter step when opening and closing. Could be your Hueybird needs a new track.

More'n likely, tho, you need to remove the aluminum alloy slider assembly P/N 204-030-220-1, turn it upside down, and re-install it.

That slider has a nylon insert that makes the back and forth door trip a lot easier'n a scag drag. But if the insert is worn out on the bottom side, just turn the slider upside down and get on with the mission.



A worn-out insert means metal-to-metal wear, a looser fit, paint freak out, and an invitation for the door to do the split bit.

It makes a heap o' sense to rotate the slider or use a new \$6.92 slide assembly rather than to lose a Huey cargo door—and maybe your rotor blades ... or even the bird itself.

ROPE IT... DON'T BRAND IT!



You can lasso yourself a herd of trouble if you fudge the fixin' of the weight bags on your Huey (UH-1) main rotor tie-down.

Some ghost riders round up anything heavy—like rocks, bolts and other solid pieces of metal. They then stuff these mavericks into the torn bag and wrap it with masking tape.

If this outlaw weight tangles with the blade during tie-down it can brand it with a big dent that'll send the main rotor blade to Boot Hill.

Buckshot is used in the bags so if the weight should hit the blade, the shot takes the blow, not the blade.

When your weights begin to go, put on your big white hat and gallop on down to your local canvas repair shop. Have them grab a handful of buckshot, sand or other shock-absorbing bag filler and sew it up.

'Course if the tie-down is worn to a frazzle, ask for a new one. FSN 1730-126-9108 will get you a tie-down for the D and H model, FSN 1730-051-3227 for the B and C's and 1560-898-1619 for the A. It's your bag, Podner.



MISSING T/R DATA PLATE

*Dear Windy,
If a tail rotor blade data plate is lost during a Hueybird flight, can we still use the blade if all historical records show normal maintenance?
What's the pitch here, Windy?*

SFC J. W. B.

Dear Sergeant J. W. B.,

A lost data plate is a no-sweat deal provided all bird log book poop shows that the blade is serviceable and within its maximum allowable operating time (MAOT).

'Course, Sarge, you should order a replacement data plate, FSN 1615-060-2034. Order a coupla extra plates. You never know when you'll need 'em

Your DS unit will imprint the data on the plate and stick it on your blade.

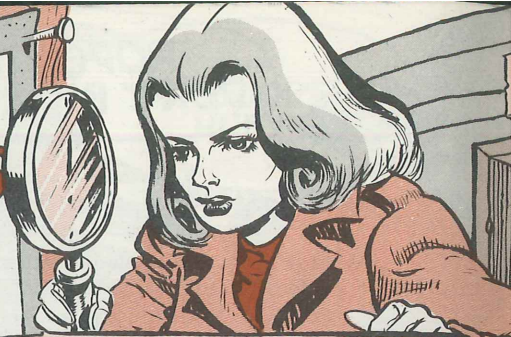
At the same time, buck an EIR to AVSCOM. Could be there's a better way to glue the plate to the blade.



Windy 5

WANTED CLEAN SAMPLES

REWARD FOR
RILD GCRWHI
RODEB17134



Think clean man, when you take oil samples from your aircraft.

Otherwise, the lab is not going to get you an accurate reading on an engine, transmission, gear box or hydraulic system. The lab will ask for another sample, and that means a lot of extra sweat and elbow grease for your unit.

Follow these steps, birdmechs, to guard against sending contaminated samples.

Store your sampling tubes, bottles and shipping sacks in a closed container. Use the supplies only when you're going to take a sample.

POLYETHYLENE SAMPLE TUBES:



SIZE: 15 - 3/8 OD	FSN 4721-933-4415
20 - 3/8 OD	FSN 4721-933-4416
20 - 1/4 OD	FSN 4721-933-4417
30 - 3/8 OD	FSN 4710-168-1961

SAMPLE BOTTLE



FSN 8125-933-4414

MAIL BAG



FSN 8105-290-0340

Use a new sampling tube to fill each bottle to within 1/2-in of the top and throw out the used tube.

Take the sample while the oil is still warm, within 15 minutes of operation. The reason for this is that you want a sampling of wear particles in suspension.

Particles settle to the bottom of a sump when the oil becomes cold.

Avoid contaminating your sample with dirt by keeping the cut sampling tube ends and bottle cap in an UP position.

Never use mouth suction because some oils are really toxic ... 'taint healthy.

Take the sample from the same depth each time, about midway in the reservoir.

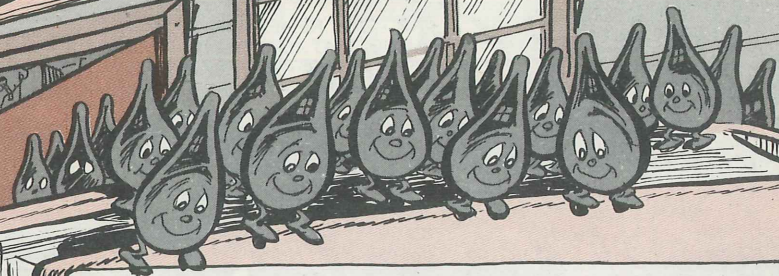
Never let the tube touch the sides or bottom of a reservoir. If you do you'll get sediment—maybe metal chips—which make it impossible for the lab to give you a true reading.



Keep track of your sampling supplies so none find their way into a reservoir. That would be asking for FOD.

When you take a sample by draining, run off about a pint of oil to get rid of any sediment. Then you'll be able to fill the sample bottle within 1/2-inch of the top with clean used oil.

OIL LAB



BY THE BOOK

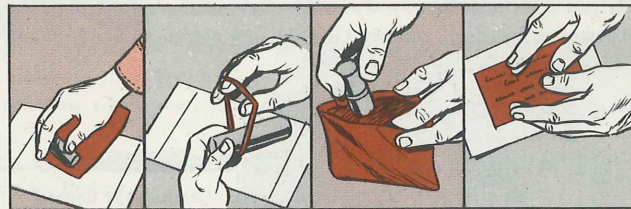
TB 55-6650-300-15 (Aug 70) on spectrometric oil analysis shows you how to make a suitable container for taking a drain sample. Eye the TB for other sampling pointers.

On a special sample, for example, check the Special box in block 6 of DA Form 3253 and band the sample bottle with red tape or some other obvious marking. If no box is applicable, record the reason you took the sample in the remarks section. Include unit identification code with your address. The lab can then process the sample on a priority basis.

Fact is, fill out all blocks on the form like the TB says.

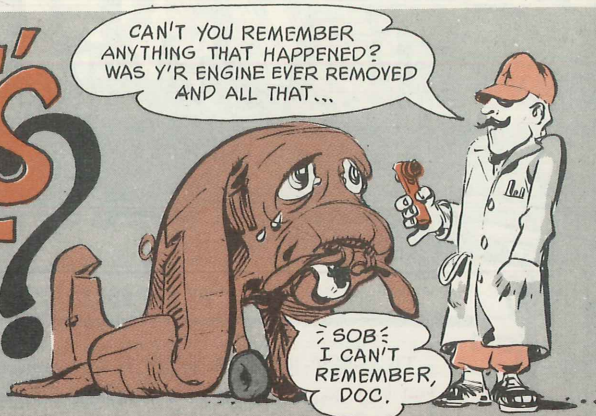
The ASOAP program does a numbah-one job in detecting high-wear rates of aluminum, iron, chromium, silver, copper, tin, magnesium, lead and nickel.

But sampling time is important. Send your sample, with the fully completed form, to your lab right away.



A quick response from the lab could allow you to pull preventive maintenance before an assembly folds up.

WHAT'S NEXT?



Dear Windy,

We received a time-change component for our aircraft without records—no DA Form 2410 or 2408-16.

Para 5f of TB 55-1500-307-25 (Oct 70) on components requiring historical data says we can reconstitute the info from materiel condition tags or labels.

But there is no tag or label.

Where do we go from here, Windy?

“THE RED (in face) BARON”

Dear Red,

Shucks, no need to get all flustered!

Contact the outfit that did the overhaul or removal for the missing info, if possible.

If you don't make out locally, write the head shed which maintains an office for reconstructing missing records. Give the part nomenclature, FSN and serial number.

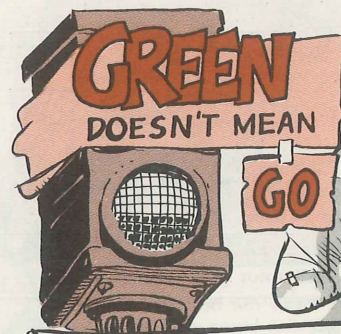
The address is:



Commanding General
U.S. Army Aviation Systems Command
ATTN: AMSAV-FPSL(NMP)
P.O. Box 209, Main Office
St. Louis, MO 63166

You'll find this poop in para 10 of TB 55-1500-300-25 (Oct 69) on component re-placement and re-use procedures.

Windy



GO

HEY, SARGE, LOOK AT THESE GREEN DATA SHEETS THAT CAME WITH THIS KIOWA!

FORGET THOSE GREEN SHEETS... THEY'RE N.G.!

Dear Specialist A. B. E.,

Dear Windy,

Recently we had a new T63 engine installed in our Kiowa by a contractor. When the bird came home to roost we found some engine performance sheets stashed in the coop...er, cockpit.

How do we use these sheets? Do we ask for duplicates if these get lost. What's the run-up here, Windy?

SP5 A. B. E.

Forget those green run sheets, Podner! Data on the sheets are part of the final inspection of uninstalled engines at the manufacturer or contractor to see if they will perform as advertised.

O-level types never use poop from the green sheets to compare engine performance of installed engines, so you never bug anyone for replacement copies.

Windy

TAB WASHER

Every time you mechs replace the push red seals or cylinders in your T-41's IO-360 engine, use a new tab washer, P/N 501867.

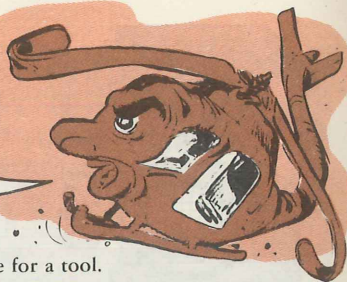
The tangs on used washers bend and break real easy-like, Podner.

This washer keeps the rocker arm retaining nut from backing off and the nut keeps the rocker shaft retainer from coming unglued.

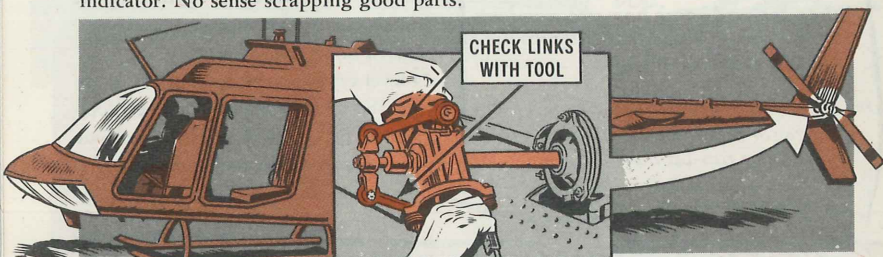
A loose rocker arm sure beats a loud tattoo against the cylinder head! Broken bits 'n' pieces can chew up an engine's insides, too.



HANDS OFF!



Hands are used for feeling but they're no substitute for a tool. Like—if you Kiowamechs plant your mitts on the tail rotor pitch change links. Sure, the links will move on you but that doesn't mean the bearings are worn beyond limits and the links need replacement ... no, sir! Chances are, if you don't have a tail rotor high freq the bearings are OK. When you're in doubt, tho, take the links off the bird and check 'em on a dial indicator. No sense scrapping good parts.



If the bearing radial play (up and down) or the axial play (in and out) is over 0.010 inch, replace both links.

APH-5 LOOSE SCREWS



Been havin' trouble with loose screws on the chin strap and nape strap of your APH-5 flying helmet? Vibration can cause them to work loose.

The cure is to dab a little sealing compound on the screw threads. FSN 8030-891-8358 will get you an 8 oz plastic bottle. You find it listed in Fed Cat C8000-IL-A (Oct 71).

LET'S ADD SOME H₂O. THEY LOOK LOW...



LET GEORGE DO IT!



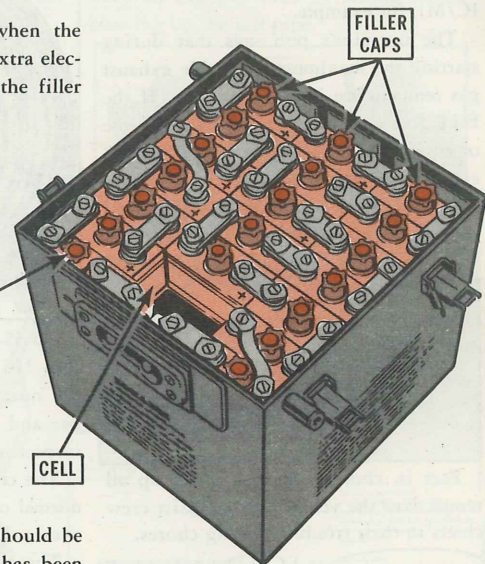
Never adjust the electrolyte in your nickel-cadmium battery while it's in the aircraft, birdmechs. You could ruin the battery and damage the bird.

So, you can't see any fluid in the cells? No sweat! That's because in a low or discharged condition the electrolyte is absorbed within the plates and separators.

When the battery is charged during flight the electrolyte rises to a maximum level at full charge.

If you add distilled water when the state of charge is **unknown** the extra electrolyte may boil or spew thru the filler caps.

Then, if the vent valve in a filler cap becomes clogged with solution, the cell can rupture due to gas expansion.

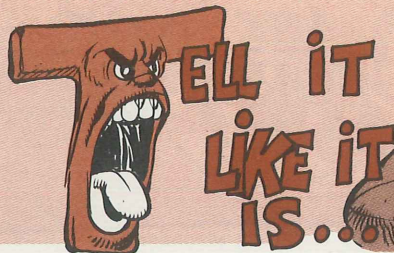


Electrolyte will flow over the top of the cell and into the case, corroding other cells something fierce ... scrap one mighty expensive battery!!

'Course the electrolyte level should be adjusted only after the battery has been completely charged and allowed to rest for 30 to 60 minutes, knucklebusters.

Weekly or every 25 flight hours, whichever comes first, eye the electrolyte. If your bird's flying regularly and the level is less than 1/4-inch above the top of the cell plates, take the battery to the shop for adjustment.

That's the word in TM 11-6140-203-15-2 (Dec 69) on aircraft nickel-cadmium batteries ... para 4-5.

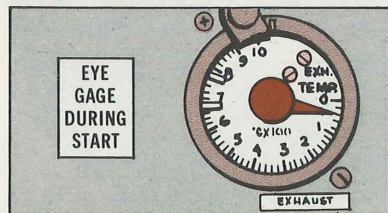


Too much pride can cost you your hide, not pilots.

Like—when hot starts are not written up . . . and the engine folds up!!

Focus in on the T-53 in a Huey (UH-1C/M), for example.

The operator's pub says that during starting the maximum allowable exhaust gas temperature is 760-degrees C. If the EGT goes over 760 for any period of time or over 650 (L-11 engine) or 675 (L-13 engine) for more than 5 seconds, record it on the DA Form 2408-13. Give the temp reached and the duration in seconds.

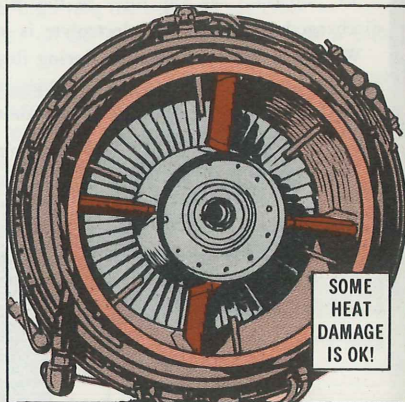


Fact is, chopper drivers, write up all temps over the yellow line to assist crew chiefs in their troubleshooting chores.



Here's why. Not all parts damaged by heat in the combustor turbine assembly

are replaced during a routine hot end inspection.



TB 55-2800-200-30/1 (Jan 69) paras 56 thru 115 give acceptable crack limits on the nozzle assembly, combustion chamber and turbine wheel. Parts that pass inspection stay put.

The crack limits apply throughout the normal operating life of the engine until overhaul.

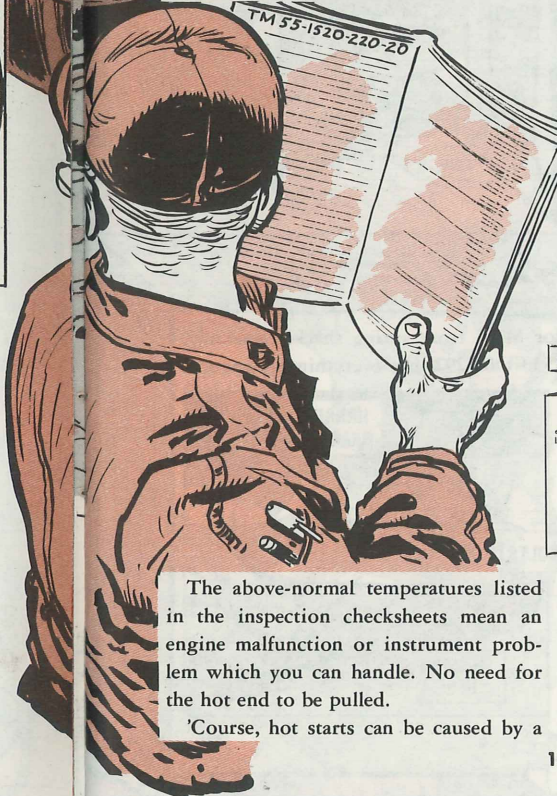
There is nothing "normal" about a hot start. You don't have a gradual heating and expansion of metal.

Instead, rapid heating distorts metal. Cracks open up and expand beyond limits which, of course, can lead to engine failure during flight. Which can give you a hairy situation, to say the least.

CREW CHIEF TO THE RESCUE

A hot start write-up in the log book calls for a look-see at the special inspection section of TM 55-1520-220-20 (Nov 68) by crew chiefs and mechanics.

weak battery, faulty fuel control, starting fuel solenoid valve that fails to shut off, dirty air inlet, or even by strong winds blowing up the tail pipe.



Just take the corrective action given in the troubleshooting table, page 5-24, of the organizational maintenance pub, birdmechs.

INDICATION OF TROUBLE	PROBABLE CAUSE	CORRECTIVE ACTION
6. Hot start; exhaust gas temperature limits exceeded.	Internal engine binding.	Refer to item 2.
	Weak battery.	Replace battery.
Wrong starting procedure. Starting fuel solenoid valve fails to shut off.	Use correct procedure. Check operation! Disconnect starting fuel line from manifold. Motor engine with main fuel switch on, starting fuel switch off. If fuel flows, replace valve.	
	Air inlet obstructed.	Clear air inlet.
Faulty fuel control.	Replace fuel control.	

The above-normal temperatures listed in the inspection checksheets mean an engine malfunction or instrument problem which you can handle. No need for the hot end to be pulled.

'Course, hot starts can be caused by a

When the write-up shows that the temp went over 760-degrees C any time and over 650 or 675 on the Charlie or Mike models for more than 5 seconds, tho, the hot end has to be inspected by Support for internal damage.



GROUND MOBILITY

RIGHT MASTER CYLINDER.

If you have to switch master brake cylinders on your M715/725-type truck, make sure you have the right kind. Some of 'em under Contract DAAG-31-69-C-0661 got in the system with outlet holes on the side (wrong!) instead of on the bottom (c'rect).



If you get such, send it back to depot so they can make a 1-for-1 exchange with:

Jeep Corporation Division
Dock 33
940 North Cove Blvd
Toledo, OH 43610

In other words, the factory will make good on a goof.

1 1/4-TON TRUCK



NOW LET'S CHECK OUT THIS 1/4-TON TIP.

EASY ON THE TAIL

Yeah, take it easy on the tailgate of your M715 1/4-ton truck—especially the hook on the tailgate chain. It's not built to hold a heavy load stacked on the tailgate.



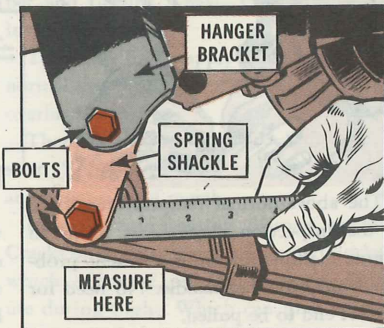
So, when you're loading or unloading cargo, just drop the tailgate all the way down. If you're hauling stuff that sticks out the back of the cargo bed, leave the tailgate down—but hook the chain back up on itself so the hook won't catch on something.

M715 SHACKLE KIT

You don't need to order parts separately for M715 front spring shackle assembly repairs any more. A new Repair Kit, FSN 2530-150-7292, has everything—hangers, bolts, bushings, and instructions.

So grab the steel rule from your Auto Mech's tool kit and measure. If your spring hanger bracket is down to 3/16-in thickness any place, use the kit. If the spring shackle (FSN 2510-917-0882) is worn to 1/4-in thickness at any point, replace it. On bolts and bushings 1/16-in wear is all that's allowed. If you insist on a fine-hair job, use a micrometer. Replace single parts as you can.

Just remember to make the switch when needed ... saves wrecks.



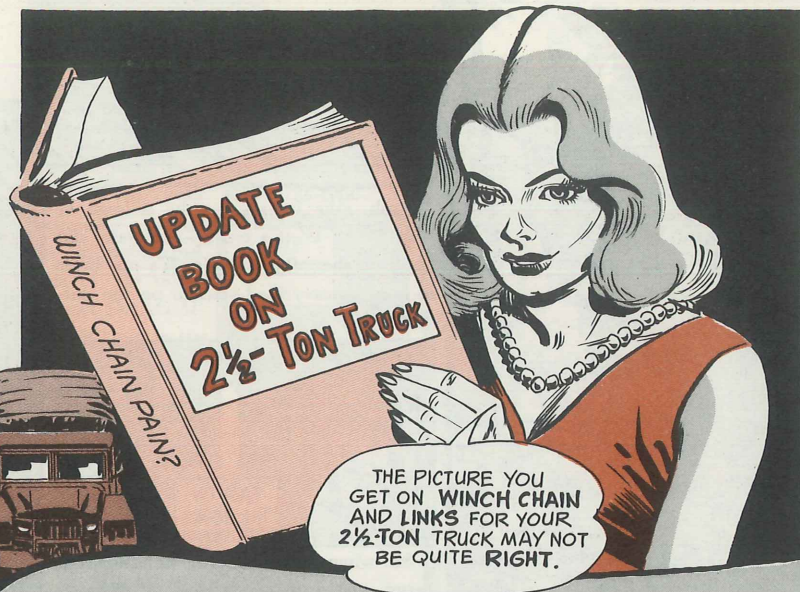
1/4-TON TROUBLE SPOT

Hold it!

Is your M151-series 1/4-ton truck (or ambulance) stuck in 4-wheel drive?

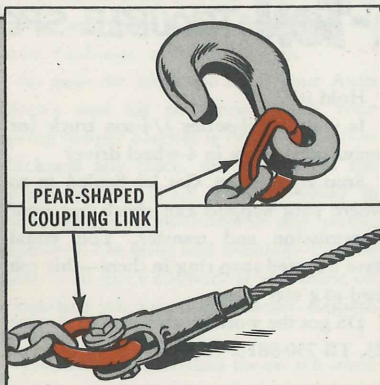
Stop right there. Get 'er hauled in to where your support can check out your transmission and transfer. You could have a busted snap ring in there—this can lead to a real mess.

DS got the word on this deal in Article 23, TB 750-981-2 (Apr 71).



Good old TM 9-2320-209-20P, Fig 183, page 229, needs updating to show:

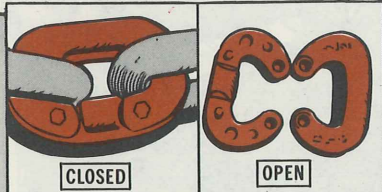
1. Item 5 is a pear-shaped coupling link, FSN 4010-089-4212, between the hook and the chain; item 3 is the same part exactly, between chain and cable thimble.



2. Item 6, hook, is bigger than shown.



3. A repair link, erroneously shown as item 3, is FSN 5120-168-2341, optional S or oval shape, 7/16" size ... normally one comes with a new chain.



5-TON TRUCK MIRRORS



Mirror, left side
(complete with mounting
hardware),
FSN 2540-242-5418*

Mirror, right side
(also complete),
FSN 2540-242-5417

Well, practically the same setup is standard equipment on the new TM 260-series (Cummins diesel) 5-tonners. The only difference is in one piece of the right side mount. All the other parts are exactly the same.

You won't find FSN's for complete mirror setups in either TM 9-2320-211-20P (M39-series) or TM 9-2320-260-20P (M809-series).

But you will find FSN's for some replacement parts in TM 9-2320-260-20P (Jun 70). For instance, if just the mirror's broke, you can get a new one (for either side) with FSN 2540-788-5637.

So, even if you don't have any of those M809-series jobs yet, latch onto a copy of TM 9-2320-260-20P to tide you over until TM 9-2320-211-20P picks up those replacement parts.





MAKE A NOTE FOR YOURSELF... YOU MIGHT WANT TO REPLACE THE RACKS 'N' TROOP SEATS ON YOUR M55 OR M55A2 5-TON CARGO TRUCK.

- ✓ Side rack, forward, front, left, FSN 2510-408-2439
 - ✓ Side rack, rear, left, FSN 2510-409-4020
 - ✓ Side rack, forward, front, right, FSN 2510-408-2452
 - ✓ Side rack, rear, right, FSN 2510-408-2453
 - ✓ Side rack, front, FSN 2510-408-2448
- Seats come with the racks.

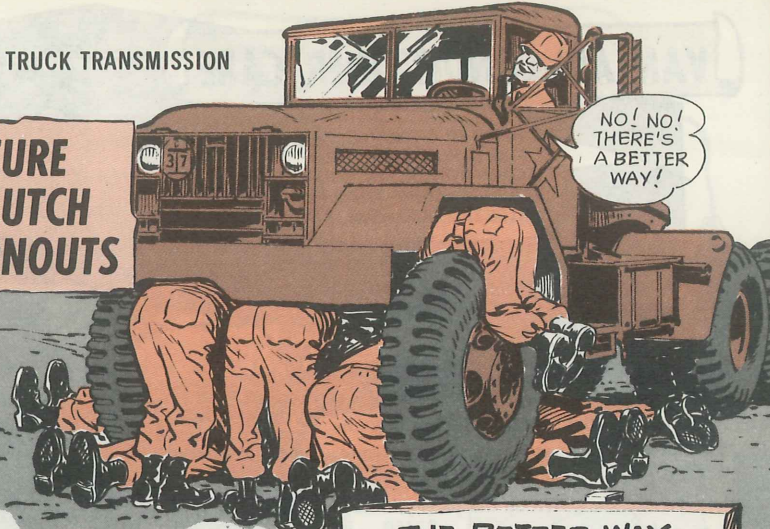
5-TON WHEEL NUTS

For the cap nuts on your 5-ton truck wheels, covered in TM 9-2320-211-20P (Mar 63), you order Nut, cap, LH thread, FSN 2530-693-1029, and Nut, cap, RH thread, FSN 2530-359-1162, which replaces FSN 2530-693-1028. RIC is S9C.

10-TON TRUCK TRANSMISSION

CURE CLUTCH BURNOUTS

NO! NO! THERE'S A BETTER WAY!

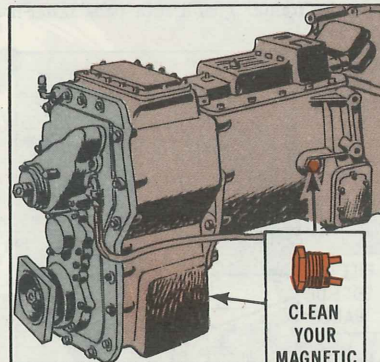


Cheer up, 10-ton truck driver, there's a new way around a main pain—clutch burnup from transmission lube leaks.

And killing off such costly downtime depends on you.

There's a pair of magnetic plugs in the transmission and transfer that grab metal particles before they can grind out the seals and let lube gush through.

But they have to be checked—and cleaned off—every now and then. One'll hold only so much.



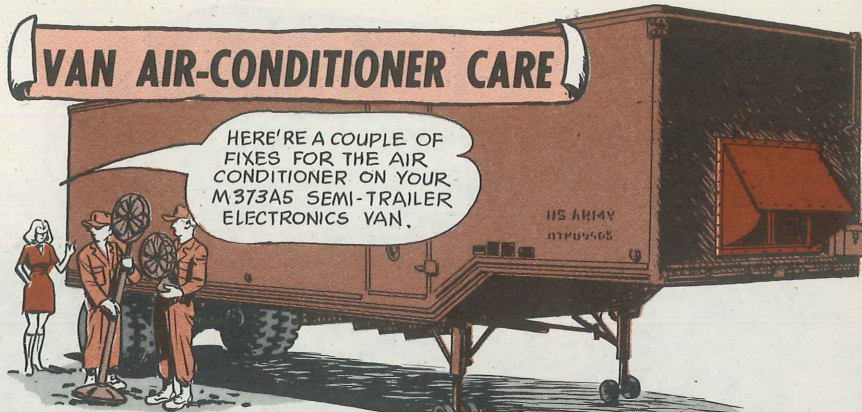
CLEAN YOUR MAGNETIC PLUGS

THE BETTER WAY

1. The day you get your new truck, reach up on the right side of the transmission and take out that plug. Wipe it with a clean rag. You may be surprised how much oily fuzz you find. Do likewise with the transfer case plug and screen.
2. When you finish the break-in periods of 500 and 1000 miles (Para 2-2a (2) of the -10 TM), clean 'em carefully each time.
3. Every time you change crankcase oil or check transmission lube, clean plugs again.

Don't feel hurt if you don't get a lot of metal chips every time. It takes only one or two of 'em banging a seal to open a hole for oil to seep out on that clutch plate. That's \$500 in downtime over one little old leaky seal.

VAN AIR-CONDITIONER CARE



For one—the spring clips holding the condenser pads are a mite too strong. They can collapse the filter pad frames.

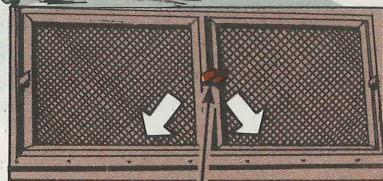
To ease the pinch on the pads you have to re-locate the 2 clips from the center of the holding frame to the bottom edge of the frame.

To make the switch:

Carefully drill out the pop rivets holding the 2 clips. On the bottom edge of the holding frame drill a hole on each side of the center upright—spot each hole about 6 inches from the upright.

Fasten the clips in the new holes with pop rivets or self-tapping screws. And, you're done.

Then, whenever you remove or replace the condenser pads always open the spring clips. Never pull the pads out or force 'em into the frame. That'll ruin pads faster'n tight clips.

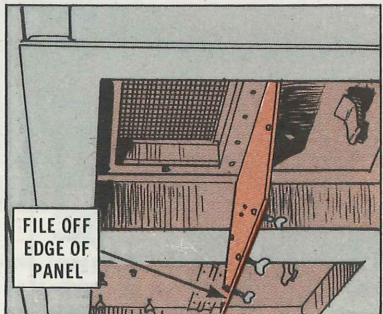


EXHAUST PORTS

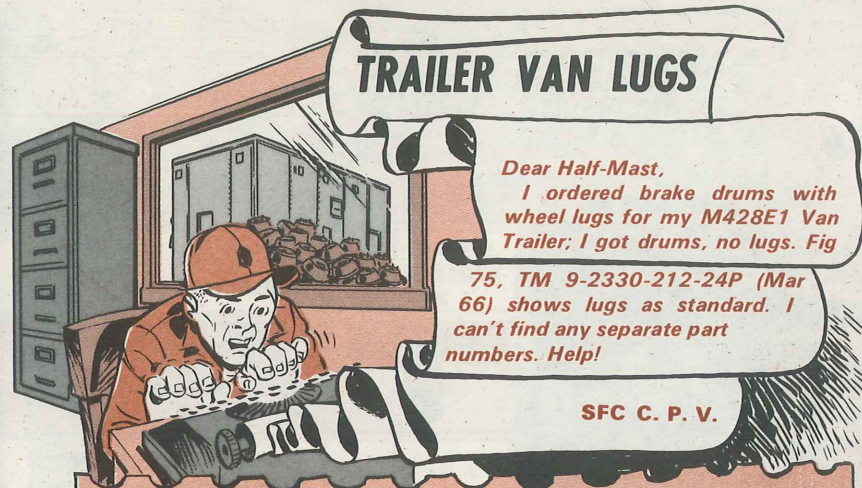
Also, on some M373A5's you can't open the air conditioner's exhaust-port mud-panels under the van. The panels are blocked by the edge of the kingpin pick-up plate.

To lick that problem all you have to do is grind or file off the edge of each panel.

Take off just enough so the panels will clear the plate. And, that's it.



TRAILER VAN LUGS

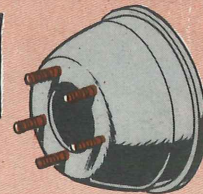


SFC C. P. V.

Dear SFC C. P. V.,

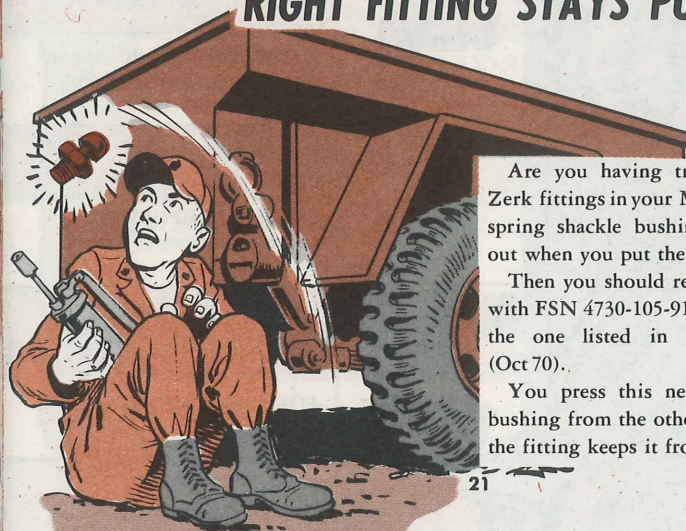
Until the TM is updated, order lugs by exception-type request like this: for right-hand, or curb side lugs, it's P/N 7339238; for driver's, or street side, P/N 7339239. Five are needed for each brake drum.

ORDER THESE LUGS SEPARATELY



Half-Mast






RIGHT FITTING STAYS PUT



MULTIFUEL ENGINE BRASS FITTINGS

HERE'S A HANDY CHART THAT SHOULD DO THE JOB.

HERE ARE THE BRASS FITTINGS YOU NEED FOR YOUR
LDS-465-2,
LDS-465-1A,
LDS-465-1
AND LD-465-1C
MULTIFUEL ENGINES.

		NOMENCLATURE	ENGINE ASSY	FSN	ARMY P/N	IMPERIAL-EASTMAN P/N
		TEE, TUBE: flame heater nozzle fuel return to injector nozzle return tube at cylinders Nos. 3 and 4	ABCD	4730-889-6886	10951190	84-LB ¼
		ADAPTER, STRAIGHT, PIPE TO TUBE: flame heater nozzle fuel inlet	ABCD	4730-289-1243	10914557	88-LB ⅝x⅝
		ADAPTER, STRAIGHT, PIPE TO TUBE: flame heater nozzle fuel return	ABCD	4730-289-1242	10914558	88-LB ¼x⅝
		ELBOW, PIPE TO TUBE: injector nozzle fuel return cylinder No. 6	ABCD	4730-882-8621	10914559	89-LB ¼x⅝
		ELBOW, PIPE TO TUBE: flame heater fuel pump outlet	ABCD	4730-078-9773	10914552	89-LB ⅝x⅝
		ELBOW, PIPE TO TUBE: primary fuel filter inlet and outlet (2), final filter outlet (1)	A	4730-900-5573	10951184	89-LB ⅝x⅝
		ELBOW, PIPE TO TUBE: fuel filter inlet and outlet	BCD	4730-900-5573	10951184	89-LB ⅝x⅝
		TEE: injector nozzle fuel return, cylinder Nos. 1, 2, 3, 4, and 5	ABCD	4730-289-5420	10914555	92-LB ¼x⅝
		ELBOW, PIPE TO TUBE: flame fuel pump inlet	ABD	4730-484-0558	10914556	94-LB ¼x⅝

CODES USED ON

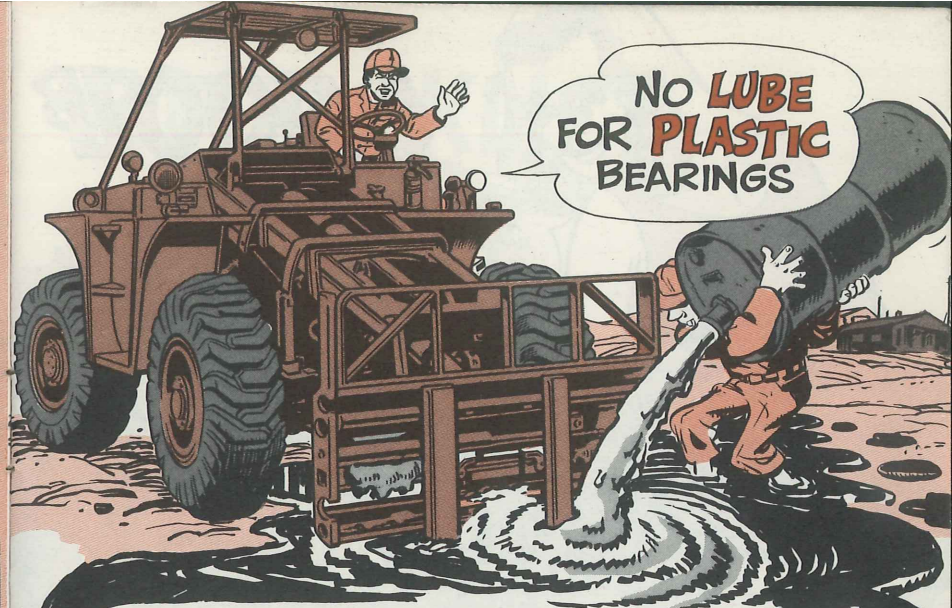
- A LDS-465-2
- B LDS-465-1A
- C LD-465-1
- D LD-465-1C

NO GREASY MESS

JUST POP 'EM
IN THE GUN YOU'VE
ALWAYS USED,
FSN 4930-253-2478.
NO FUSS, NO
MUSS AND NO
CONTAMINATION !!

Conditions out in the boonies don't do a thing for hand packing a grease gun. Dirt and moisture are always around. Add this to the gunk on your hands, and you have a real mess. You can rise above all that by gettin' grease in cartridge form. Here are the winning numbers for 14-oz. cartridges:

FSN	SPECIFICATION	NOMENCLATURE
9150-478-0055	MIL-G-25537	Grease, Aircraft, Helicopter, Oscillating Bearing
9150-484-4009	MIL-G-81322	Grease, Aircraft, General Purpose, Wide Temperature Range
9150-935-4017	MIL-G-23827	Grease, Aircraft and Instrument, Gear and Actuator Screw
9150-935-1017	MIL-G-10924	Grease, Automotive and Artillery
9150-935-4018	MIL-G-21164	Grease, Molybdenum Disulfide (For Low and High Temperatures)



The word is "No Lube" on plastic bearings in such equipment as rough terrain fork-lifts, personnel carriers and wheeled vehicles.

This goes for all the non-metal bearings regardless if they're made with Teflon, Nylon, fabric laminated plastic, phenolic plastic—or whatever.

Unless the LO specifically says to lube 'em, you don't.

Lube itself won't hurt the new family of bearings. In fact, some come with factory-installed lube. You don't replace this lube. All you need to do is keep the bearings clean if they are where you can get at them.

Never use dry cleaning solvent or mineral spirits (like paint thinner). They're bad for some of the new bearings.



Cleaning is done with aliphatic naptha type II, TT-N-95, FSN 6810-238-8119 for a 1-gal can in Fed Cat C6800 (Apr 71).

If your cupola rolls on non-metal ball bearings (the commander's station cupola on the M114A1, for instance, or the TC's cupola on the M60/M60A1 tank) the cupola bearings also need a little exercise to keep 'em trued-up. So spin the cupola a few times every day or so.

6,000 LB

RT FORKLIFT

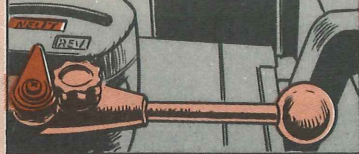


CALL YOURSELF ANYTHING... EVEN NAPOLEON... BUT DON'T CLAIM TO BE AN OPERATOR OF THE 6,000 POUND RT FORKLIFT UNTIL YOU KNOW HOW TO CHECK...

...THE OIL LEVEL IN THE TRANSFER CASE. YOU DO IT BY THE NUMBERS, TOO, OR YOU'LL GET PINNED BY THE RIGHT REAR WHEEL.

Here's how:

1. Place the directional control lever into NEUTRAL.



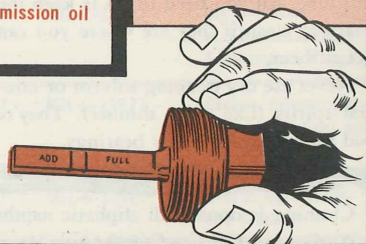
2. Put the parking brake ON.



3. Start the engine.

4. Run engine to bring transmission oil to operating temperature.

5. With engine running at fast idle (1,000 RPM), check the transfer case oil level. (If engine's not running, oil will overflow when the dipstick is removed.)



This one reading will tell you how the torque converter, the transmission and the transfer case stand since they're all lubed from the transfer case oil supply.

The scoop on how and when to drain and fill the transfer case is in Note 3 of LO 10-3930-242-12-1 (Jun 71).



SECURE THAT DOG

Watch it, man.

The adjusting screw locknut on the lower steering-gear side cover of your 6,000-lb RT forklift can be a real dog.

If the locknut gets loose, the adjusting screw works out and then the entire steering gear can go on the fritz.

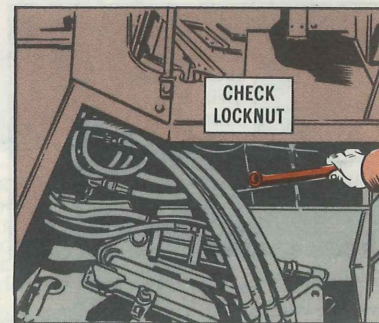
First, it'll cause too much play.

Then, the shaft strikes against the cover.

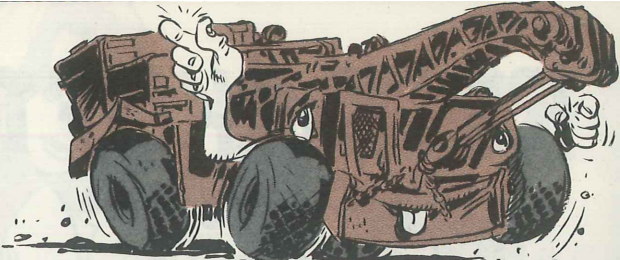
Result is the steering side cover cracks or breaks.

Get the upper hand on the locknut by checking it often and keeping it tight.

If you find one already loose, better get your support to check out the steering gear adjustment and reset the screw before tightening the locknut.



ROLL WITH NO ROCK



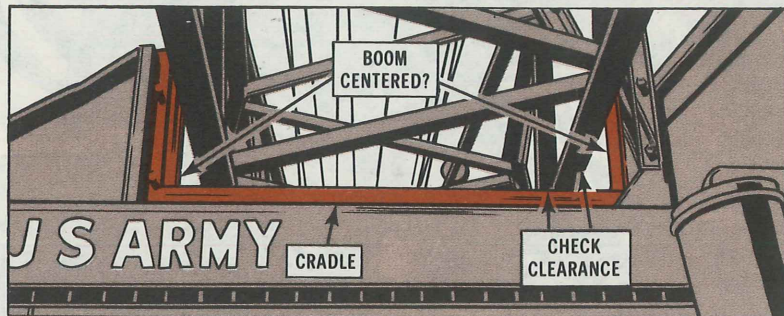
Never rock your baby!

The boom assembly, that is—while you're traveling with the 20-ton truck mounted RT crane.

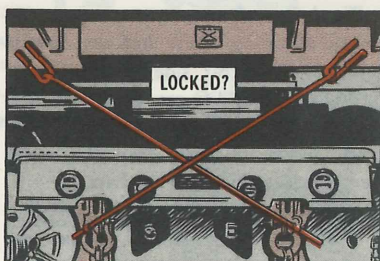
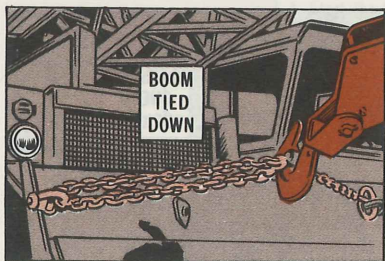
If you do, you'll crush its wooden pad in the cradle ... and bend the boom too.

Before you travel, remove the crane load (bucket, etc.).

Center the boom between the cradle's upright posts and be sure there's plenty of clearance between the bottom of the boom and the cradle's crossmember.



With the M2380 and the M2385 RT cranes, the clearance should be at least 8 inches. For the M320T it's 6 inches. That's after the boom is tied down tightly and the cab is braced or locked to the carrier frame.

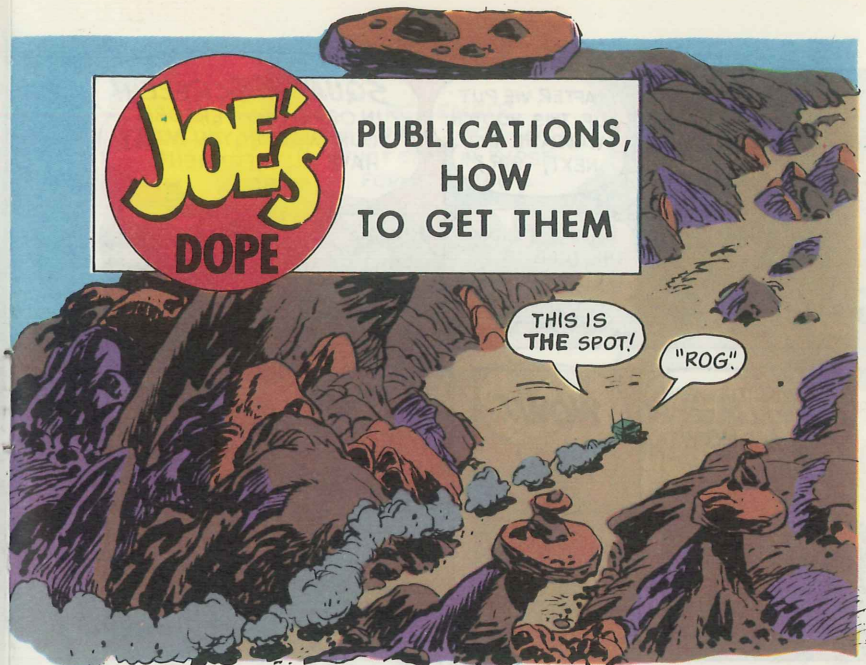


Always check your operator's manual for the step-by-step preparation for the over-the-road travel.

Take off only when you're sure and secure.

Then, move along at a slow speed, puhleeze. Especially when crossing railroad tracks.

JOE'S DOPE PUBLICATIONS, HOW TO GET THEM



THE PREHISTORIC DUST SWIRLS AS A LONE VEHICLE SNAKES ITS WAY THROUGH THE TOWERING ROCK FORMATIONS OF THE "WAY-OUT-BACK-HIGH-LONESOME WILDERNESS PLATEAU!"



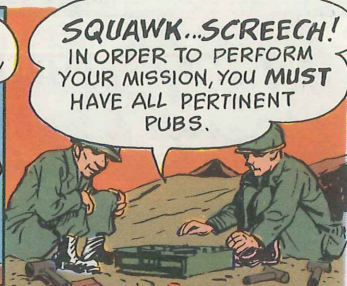
"UNDER SPECIAL ORDER, 67-24C-001 THE THREE AFOREMENTIONED PERSONNEL WILL RE-ACTIVATE THE 3976TH CARRIER PIGEON COMPANY".





AFTER WE PUT UP THIS HOOTCH, WADDAWE DO NEXT, SIR?

HMMM...I THINK THE TAPE IS STILL RAPPIN'!



SQUAWK...SCREECH!
IN ORDER TO PERFORM YOUR MISSION, YOU **MUST** HAVE ALL PERTINENT PUBS.



THEY WILL TELL YOU WHAT YOU HAVE TO DO AND **HOW**..



WOW!



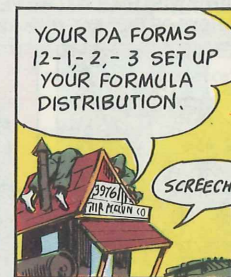
COOL...REAL COOL... BUT WHERE ARE THEY ???

NEVER - MORE... SQUAWK!

SHADDUP, BIRD!



ALL YOUR **PUBS** ARE BROUGHT TO YOU BY **TWO** SYSTEMS... ***FORMULA** AND **PINPOINT**.

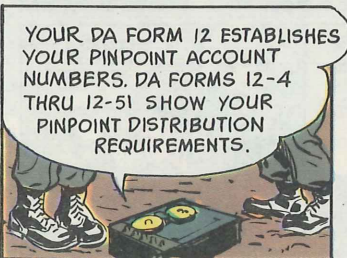


YOUR DA FORMS 12-1, 2, - 3 SET UP YOUR FORMULA DISTRIBUTION.



IN CONUS, FORMULA-TYPE PUBS ARE SENT TO POST PUBS STOCKROOMS. OVERSEAS THEY'RE SENT TO THE PUBS CENTER - THEN TO PUBS STOCKROOMS.

SCREECH!



YOUR DA FORM 12 ESTABLISHES YOUR PINPOINT ACCOUNT NUMBERS. DA FORMS 12-4 THRU 12-51 SHOW YOUR PINPOINT DISTRIBUTION REQUIREMENTS.



IF IT'S SO EASY, WHY DON'T WE HAVE OUR PUBS?



HEY! YOU CAN'T TALK TO A TAPE!



??!
SURE YOU CAN! NOW, HAVE YOU SENT IN YOUR FORMS?



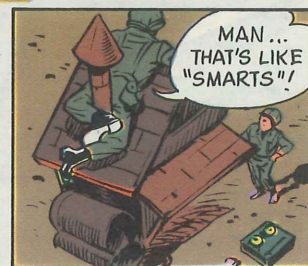
REMEMBER ONE THING-- YOU CAN'T JUST SEND IN THOSE FORMS DIRECT.



THEY HAVE TO BE APPROVED BY BATTALION OR...



... BY YOUR NEXT LEVEL OF COMMAND.



MAN... THAT'S LIKE "SMARTS"!



NEVER MORE...

SHADDUP, BIRD!



PSST.. HEY, ASK THAT TAPE ABOUT LUNCH.



YOU ASK IT...



FORGET LUNCH! LET'S GET BACK TO PINPOINT!



WHAT DOES PINPOINT DO?

DON'T POKE ME!



LET'S LOOK AT THE SLIDES.

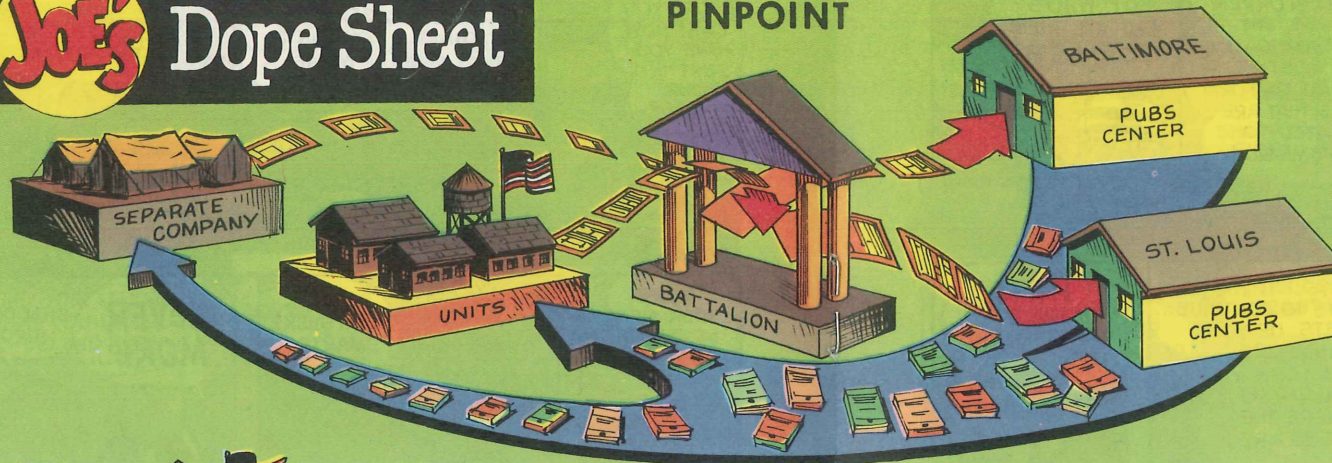


BOY...THAT'S A SMART TAPE!

*ALSO KNOWN AS COMMAND DISTRIBUTION

Joe's Dope Sheet

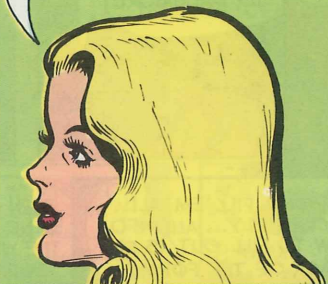
PINPOINT



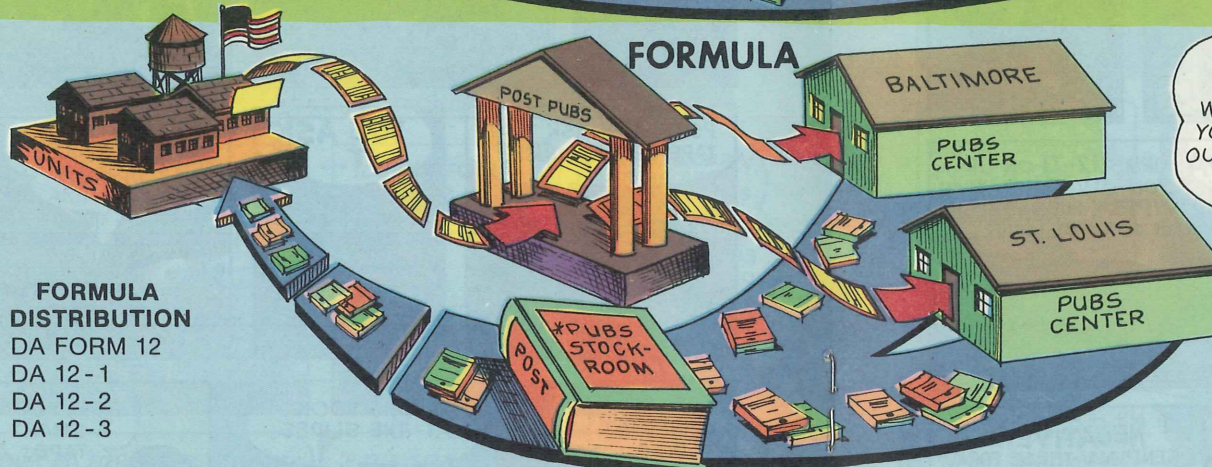
- PINPOINT DISTRIBUTION**
- DA FORM 12
 - DA 12-4
 - DA 12-8
 - DA 12-9
 - DA 12-11
 - DA 12-12
 - DA 12-21
 - DA 12-25, A, B, C, D
 - DA 12-28
 - DA 12-31
 - DA 12-32
 - DA 12-34
 - DA 12-35
 - DA 12-36, -36A
 - DA 12-37
 - DA 12-38
 - DA 12-39
 - DA 12-40
 - DA 12-41
 - DA 12-43
 - DA 12-50
 - DA 12-51

BALT
ST. LOUIS

THE ENTIRE SYSTEM IS WORTHLESS IF YOU DON'T FILL OUT THE FORMS CORRECTLY.



FORMULA

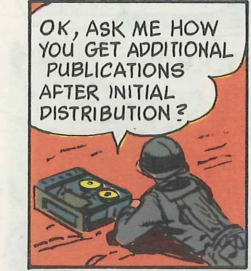
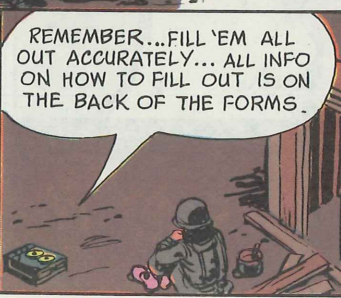
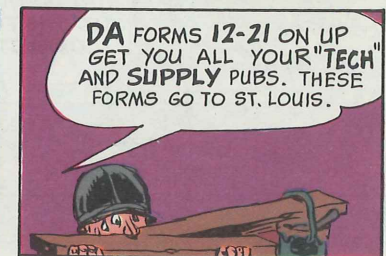
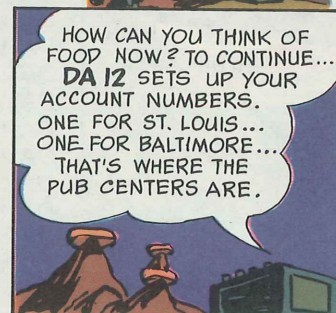
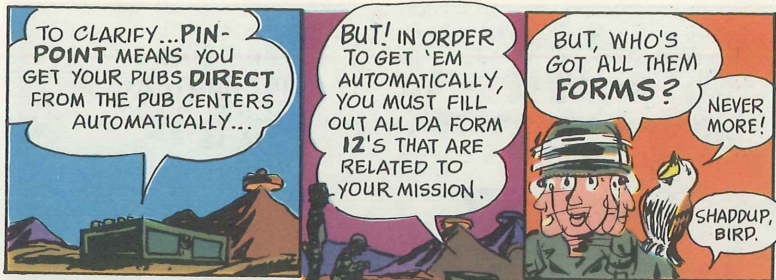


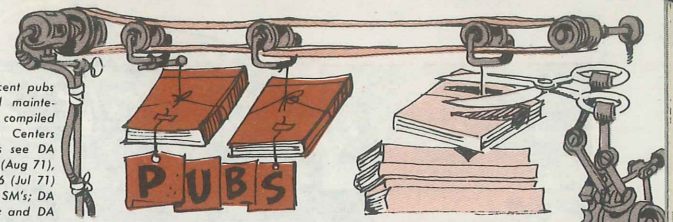
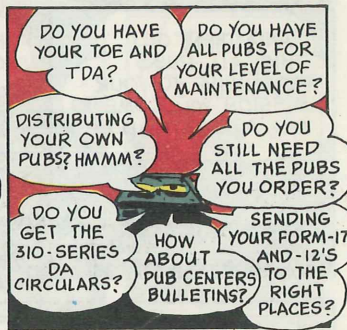
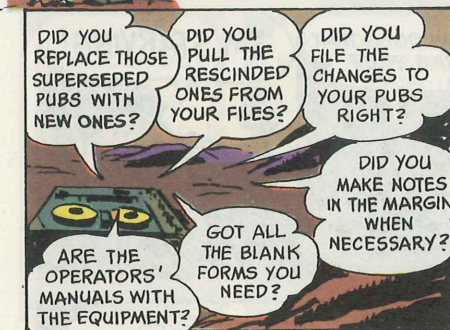
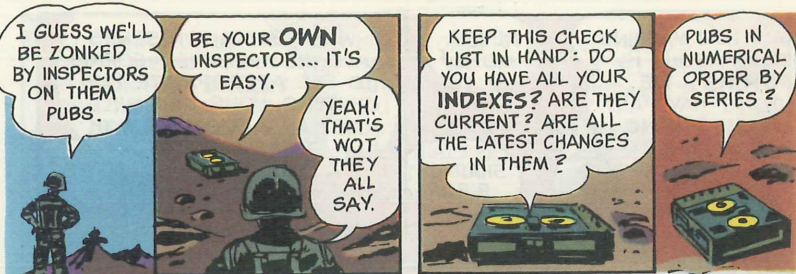
- FORMULA DISTRIBUTION**
- DA FORM 12
 - DA 12-1
 - DA 12-2
 - DA 12-3

*OVERSEAS PUBS ARE SENT TO PUBS CENTER, THEN TO PUBS STOCKROOMS

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.





This is a selected list of recent pubs of interest to organizational maintenance personnel. This list is compiled from recent AG Distribution Centers Bulletins. For complete details see DA Pam 310-4 (Jun 71), and Ch 1 (Aug 71), TM's, TB's, etc.; DA Pam 310-6 (Jul 71) and Ch 1 (Sep 71), SC's and SM's; DA Pam 310-7 (Aug 71), MWO's; and DA Pam 310-9 (Jul 70), COMSEC Pubs.

TECHNICAL MANUALS

- TM 3-4240-202-14 Jul CBR Mask: field, ABC-M17
- TM 5-2410-233-20 Jun Med Tracked D7F Tractor
- TM 5-3810-232-20P Sep 20-Ton Whl Mid Crane Shovels
- TM 5-3820-241-12 Sep Drill, Pneum, drifter
- TM 5-4120-239-14 Sep 9,000 BTU Air Conditioners
- TM 5-4310-338-20P Sep 600 CFM Air Compressors
- TM 5-4320-259-12 Sep Petroleum Centrif Pumps
- TM 5-6115-339-12 Oct 60 KW Gas Turbine Engine Gen Set
- TM 9-1010-221-14 C3 Nov M203 Grenade Launcher
- TM 9-1425-585-1 Oct List of Applicable Pubs for Chaparral Air Defense Guided Missile Sys
- TM 9-1440-517-25P C1 Sep Hawk
- TM 9-2300-216-10 C3 Nov M107 & M110 SF Arty
- TM 9-2320-244-20 Aug M715 1 1/4-Ton Truck and M725 Ambulance
- TM 9-2320-224-20 C5 Nov M114 Series
- TM 9-2350-300-20/1 Apr SM163 20 MM SP AAG
- TM 9-6140-200-14 Aug Lead-Acid Type Storage Batteries

- TM 10-3930-243-20P C1 Sep RT Forklift Truck
- TM 11-4940-238-24P Aug Electronics Shop, Shelter Mtd, Avionics AN/ASM-146A and -147A
- TM 11-4940-238-25P-1 Aug Electronic Shop, Shelter Mtd Avionics AN/ASM-146B and AN/ASM-147B
- TM 11-5820-549-12-1 C1 Nov AN/PRR-9 Receiving Set
- TM 11-5820-790-25P Sep AN/USQ-46A, Power Supply Group OP-63/USQ-46, and Mtg Base, Elec Equip MT-4261/USQ-46
- TM 11-5840-208-10 C12 Oct Radar Set AN/MPQ-4A
- TM 11-5985-334-15 Oct Mast AB-621/G
- TM 11-6125-253-20 Aug UH-1 Motor Gen PU-733/A
- TM 11-6625-303-25P Oct Elec Power Test Sets: AN/UPM-93A, AN/UPM-93B, AN/UPM-93C and AN/UPM-100
- TM 55-1510-201-10/4 C3 Oct U-8D, RU-8D and U-8G
- TM 55-1510-201-20 C3 Feb U-8D, U-8C, RU-8D and U-8F
- TM 55-1510-204-CL/5 C3 Sep OV-ID, STOL
- TM 55-1510-209-CL/1 Jul U-21
- TM 55-1520-209-10 C12 Dec CH-47A
- TM 55-1520-217-CL/2 C2 Jul CH-54B

- TM 55-1520-217-20/2 C7 Oct CH-54B
- TM 55-1520-227-10 C10 Dec CH-47B and -47C
- TM 55-8465-214-10 Aug AF & RW
- TM 750-244-1-1 Oct Aerial Delivery Equip
- TM 750-244-1-2 Oct AF & RW

MISCELLANEOUS

- DA Form 88 Sep Combat Pistol Qual Course Scorecard
- DA Form 2715 Sep Unit Readiness Report worksheet
- DA Pam 310-4 Jun AG Dist Ctrs Bulletins
- DA Pam 310-4 C1 Aug AG Dist Ctrs Bulletins
- MWO 9-2350-230-20/8 Nov Attaching Hardware for Telescope Mount and Guidance and Control System M551 Sheridan
- MWO 9-2350-244-30/13 Oct Carrier, Command & Recon: Armd M114, M114A1 and M114A1E1
- SC 8465-90-CL-PO2 Aug Hot Climate Survival Kit, Individual
- TB 9-2300-405-14 Oct Mandatory Brake Hose Insp and Replacement-Tactical Vehicles
- TB 55-1500-212-20/1 Nov CH-54A, -54B
- TB 746-95-1 Oct Towed Arty Wpns

Sensitive Talk

You may still have a 3500-lb capacity eye anchored on your vehicle. It came in the first nuclear tie-down kit package put on under FSN 2590-053-3628. That 3500-lb eye is too weak for carrying nuclear and other sensitive cargo. You need the stronger 5000-lb eye, FSN 2510-489-8295, that was issued in Kit, FSN 2540-782-1467. If you're not sure which one you've got on your vehicle, have your DSU take a look. They can see the difference in Ch 3 to TB 9-2300-280-30.

MWO of the MONTH

A Cobra pilot can enter the world of hurt if his flying machine is not ready for puckeritis emergencies. MWO 55-1520-221-30/24 (26 Jan 70) puts an improved hydraulic lock-out valve on the emergency collective hydraulic system. No AH-1G should be without it! Get that MWO on . . . now.



SOLENOID DERIV



HARKEN
HOTSHOT...
DESTROYETH NOT
MY SOLENOID BY
CHARGING POORLY,
OR I'LL BREAK
YER NECK!
(AHEM)

A lot of solenoids have been getting busted on M2 machine guns.

At over \$15 per each this can mean a mountain of money—or at least a small green hill.

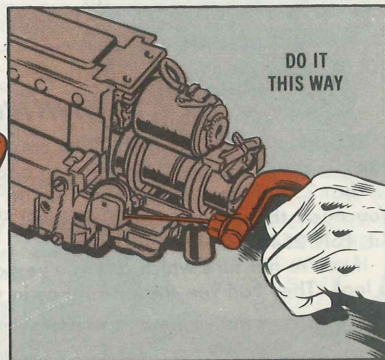
So send the broken solenoids back. Your support can fix 'em.

Better yet, don't break 'em in the first place.

The insulated wire gets cut and the solenoid shorts out when the charging handle and charging cable of the M10 charger are pulled across the wire.

This happens when you use the charging handle in setting headspace and timing.

The simple way to keep your solenoid wire OK is to brace the charging handle against the buffer. Then the charging handle cable won't even touch the solenoid wire.

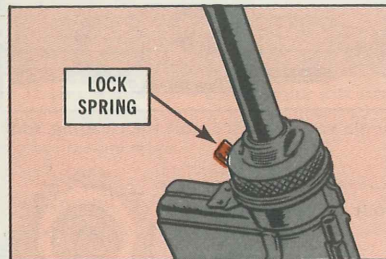


If your solenoid is already beat up, turn it in instead of throwing it away. When you get your new solenoid it will stay in shape if you don't cut it with your charging handle cable.

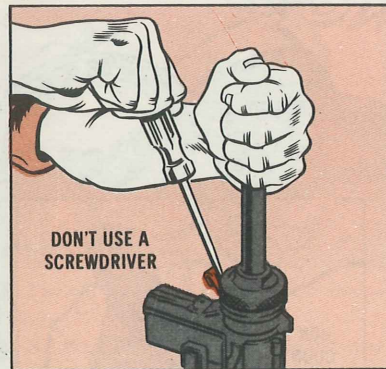
THIS IS THE
WRONG WAY



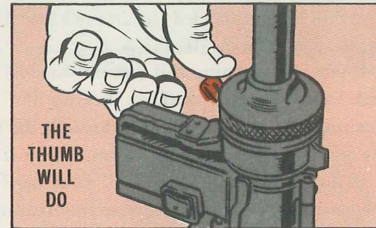
The barrel lock spring is made to be of shape and has to be replaced, which worked by weaklings. makes work and costs money.



No need to use your full muscle-power, let alone jamming it back with a screwdriver.



Just pull it back gently with your thumb, and you can unscrew the barrel. If you bend it all the way back it gets out



Like you already know, the shoulder stock is right handy for unscrewing the barrel assembly. Just be sure you use the closed end of the shoulder stock for this.



If you use the center part of the stock it'll bulge out and then you can't get it to slip in and out of the gun real easy. Also, if you get a bulge in your stock it won't work as well as a cleaning rod.

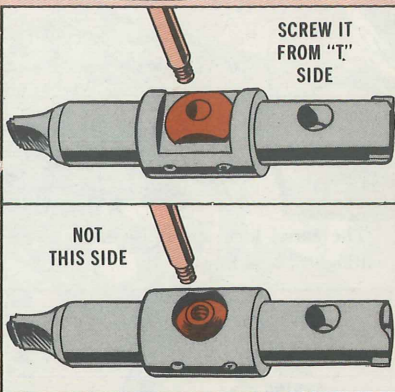


Insurance Policy

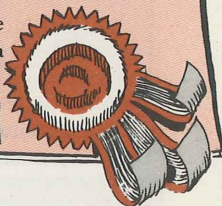
ITEM: CLEANING ROD

Wanna free insurance policy against breaking cleaning rod sections? All you gotta do is stick the threaded section thru the unthreaded side of the handle before you mate up the threads. If you join cleaning rod section threads and handle threads without having the cleaning rod section running through the handle you could snap off the cleaning rod the first time you put much pressure on it. If this has already happened, your hardworking armorer can save the handle by putting it in a vise and drilling out the broken tip with a small (7/64 inch or less) drill.

Course, it's better to use your "insurance policy."



NOT THIS SIDE



Always use the correct side of the handle when assembling the cleaning rod. This is the only way to ensure the rod is properly seated and will not break under pressure.

KEEP SAFETY PIN IN

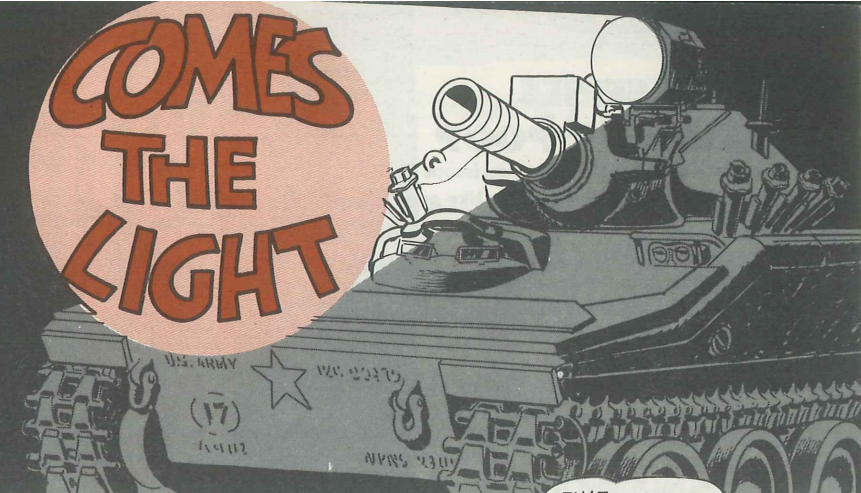
Never use the safety clip as a stand-in for the safety pin and ring assembly on your fragmentation grenade. The clip is only a secondary safety to protect you if the pin accidentally comes out.

If the clip comes off and you have no pin in, you have an explosive and deadly situation on your hands. So never pull the safety pin until you're ready to throw the grenade.



DON'T COUNT ON THE CLIP

COMES THE LIGHT



If you want to curb control-box circuitry damage on your AN/VSS-3 infra-red searchlight, here's something to remember:

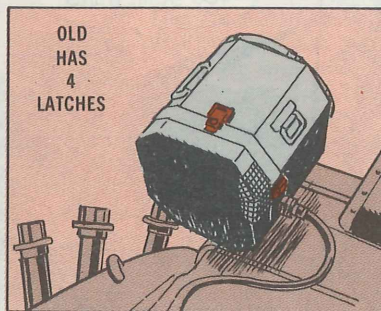
Do not—do not—connect an old-type VSS-3 to a new-type control box. Or the other way around. Such connections will pay off only in a control-box circuitry crunch.

About the only way to tell an old-type searchlight from a new type is by the heat-exchanger retaining latches.

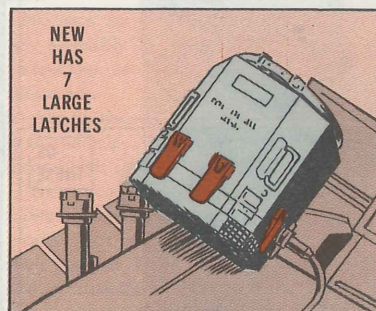
THAT OLD TYPE VSS-3 BLEW MY COOL.



OLD HAS 4 LATCHES



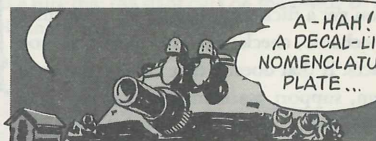
NEW HAS 7 LARGE LATCHES



The old type has 4 small latches; the new type has 7 latches approximately 3 inches long.

An extra bit of guidance: The old-type control box has a decal-like nomenclature plate. The new type has a rivet-attached nomenclature plate.

A-HA! A DECAL-LIKE NOMENCLATURE PLATE...



XM44 SERIES PERISCOPE POOP

So you like the XM44 type periscope that shows you what things look like at night?

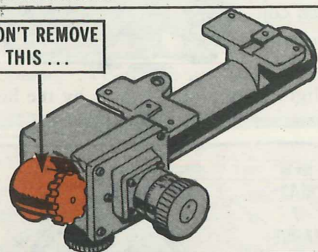
If you want it to stay working just keep your screwdriver out of the slotted insulators on the periscope body mounting plates and reticle projector.

Why?

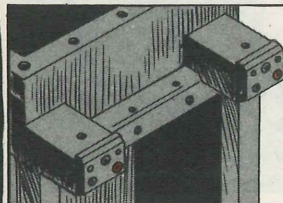
Because there's nothing for you to adjust at these points and if you try to adjust the insulator anyway you'll likely ruin the electrical contacts.

This is a clear case of unauthorized tinkering because vehicle crewmen never remove the body from its installed position, which must be done before getting at the insulators.

DON'T REMOVE THIS ...



... OR THESE



If your 'scope's not working right and you get a flickering image, let your turret mechanic check out the electrical contacts. If that doesn't take care of the problem, support maintenance must be called in.

42

M551 SHERIDAN

HEY, TRACK! I THINK THEY'RE TRYING TO TELL YOU SOMETHING!

AFFIRMATIVE! I KINDA GET THAT FEELING!

M119/M127 TELESCOPE "TILT!"

Hold one. Don't blow your mind when you look thru the M551's primary fire control instrument and see z-i-l-c-h!

A whole batch of these telescopes—with serial numbers 1 to 791—have prisms that're coming unglued from their mountings and falling out of alignment.

So when you look thru the eyepieces—nothing. That's because the missile reticle or the horizontal lead lines of the conventional reticle are out of plumb, tilted, or maybe partially obscured.

There's nothing you can do about it—'cept yell for support and have 'em send the 'scope to depot for overhaul.



M119 TELESCOPE HANGER HANG-UP

If you want the hanger assembly on your M119 telescope to keep on hanging around, don't let it hang over the recoil guard when you see-saw the main armament.

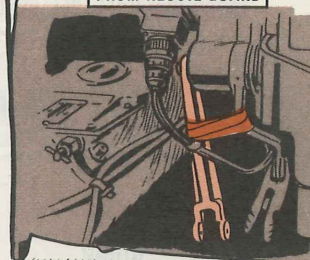
Like TM 9-2350-230-12 (Jun 66) says on page 11-39, unhook the hanger assembly at the same time the telescope is taken out for maintenance.

To keep it safe detach the hanger assembly at the telescope end only and tape it away from the recoil guard.

And for goodness sake don't use a hammer to knock the hanger pin loose. It's sure death for the hanger. 'Course, when you put the scope back in, recheck the M-119's hanger installation. It can be put in bassackwards!

If it is, your telescope will soon be in a bind. Just make sure that the slant cuts on the inside of the fork angle UP.

TAPE HANGER AWAY FROM RECOIL GUARD

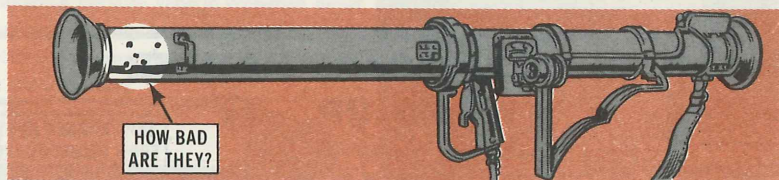


43

3.5 PIT POOP



Here's the lowdown on any pits you might have in the barrel of your M20A1 or M20A1B1 rocket launcher. Unless the pit goes all the way through, your barrel is still serviceable.



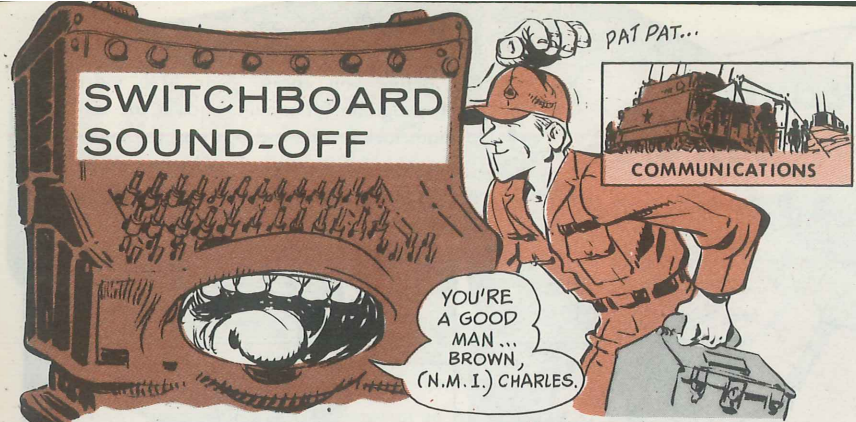
You order a new barrel only if you can see daylight through it—sidewise.

4.2-IN MORTAR CANNONEER



Want better performance from your shell lobber? Watch for a change to LO 9-1015-215-12 (May 71), it tells support to disassemble the shock absorber assembly and lube it semi-annually. Same poop will get into TM 9-2009. Why not jot down this info in para 3-2, TM 9-1015-215-12 (Jul 66).

SWITCHBOARD SOUND-OFF



A good, conscientious SB-86/PT switchboard repairman knows what to fix on his -86 and what to keep his module-pluckin' fingers out of.

He knows he shouldn't be fooling with the vibrator inverter, frinstance, or a magnetic line signal, or any other complicated component on which he's limited by lack of tools, test equipment, or know-how.

He replaces the cord pack, operator's pack, power pack, fuses, and jackfield section, etc.—and he's doing a job.

He smilingly routes to his DSU anything that's definitely outta his bailiwick. Sound like you? Fine. As was mentioned above... "A good, conscientious SB-86/PT switchboard repairman...."

COOL IT, BATTERY MAN

*Dear Half-Mast,
Is there anything we can do to prolong the life of dry-cell batteries that're used for a short time and then may sit idle for a week, a month or more? This part-time use is real common in our Guard units.*

SFC J.W.B.

Dear Sergeant J.W.B.,

The cooler you can keep the batteries during storage the longer they'll last—so put 'em in a refrigerator.

A constant cold, as close to zero as possible, will give you the longest life.

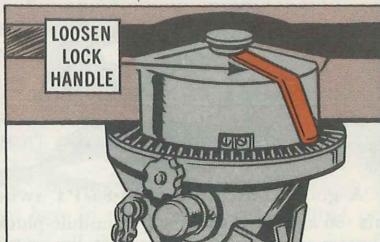
One big caution, though. Let the batteries warm up at room temperature for a couple hours before you use them. You'll also find some good battery poop in SB 11-30 (Jul 64) and TM 11-415 (Aug 56).

Half-Mast

MOVIN' YOUR M36

Before you encase your M36 radar chronograph for movin', loosen the azimuth lock-handle and position the lower assembly for stowage. This lets the cover drop in place in the channelled weather-seal before the clamps are tightened.

LOOSEN
LOCK
HANDLE

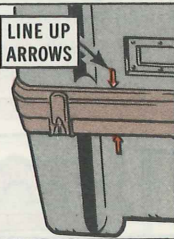


When you encase it make sure the lid of the case fits into the groove just right and the 2 arrows are lined up.

MATCH GROOVE



LINE UP
ARROWS



Otherwise, there'll be extra force pushin' against the locking fasteners, and you could come up with a broken latch or worse.

LATCHES BROKEN?



What's more, the metal of the case—where case and cover join—can pooch out in the 10 locking areas, which means that some of the latches will probably end up sprung or ineffective.

46

YOUR AN/PPS-4A LIKE PANDORA'S BOX



Can't blame an uptight operator of an AN/PPS-4A radar set for takin' plenty of pride in his work, but—

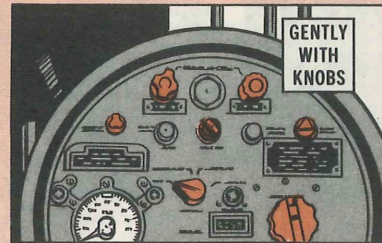
No matter how gung-ho he is, he oughta keep his panel-pluckin' fingers outta the innards of the -4A.

That way, there'd be no truth to the rumor that sometimes operators go into the -4A and try to fix something they're not supposed to.

It's also rumored that some operators open up the -4A from curiosity, and that's not a smart idea at all. No tellin' how much damage can be generated when it's open and defenseless.

It never hurts to be extra careful workin' the knobs on the control panel. This is one place where hardy hand-work isn't so good.

GENTLY
WITH
KNOBS



LEAKY REFLECTORS

Water leaking from the AT-634 antenna reflector of your AN/MPQ-4A radar set?

A little moisture oozing down won't hurt your -4A, but if it's any sizeable amount, eyeball the reflector for cracks, breaks, small holes, and the like.

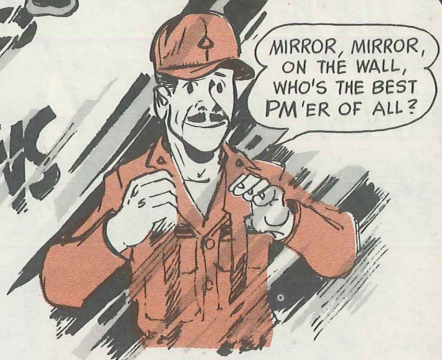
If you spot any damage, make a fast date with Support for an inspection, and repair, if needed.

HEY
PELLAS...
I'M LEAKING
A BIT.



47

PRC-25 DEFLECTIONS



MIRROR, MIRROR,
ON THE WALL,
WHO'S THE BEST
PM'ER OF ALL?



IT'S NOT
YOU, BABY,
AND THAT'S
THE TRUTH
AND NOTHIN'
BUT.



WHADDAYA MEAN,
BIRD? JUST EYEBALL
THIS PRC-25.



DIRTY, MAN,
DIRTY...

USE
CLEANING
COMPOUND FSN
6810-292-9625
DO... IT...

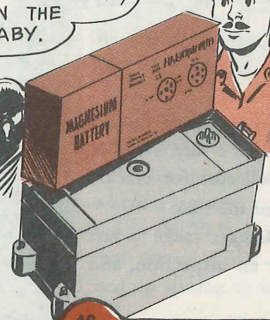
HUH? LET'S
CHECK THE BATTERY
COMPARTMENT.
YOU'LL SEE...

YEAH, BIRD,
YOU'RE RIGHT...
BUT I...

... I KNOW... YOU
DID **SOMETHING**
RIGHT... LIKE TAKIN'
OUT YOUR BATTERY.



I SEE LEAKY BATTERIES...
ISSAT DIRT AND CORROSION,
TOO? BAD ON THE
INNARDS, BABY.

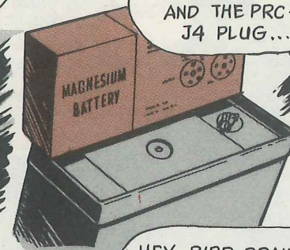


YEP. WHEN I DON'T
USE MY SET FOR A
COUPLE OF DAYS
OR MORE.



BIRD, I CAREFULLY
LOWER THE BATTERY
INTO THE COMPARTMENT,
SO THE PRC'S PLUG FITS
GENTLE-LIKE INTO THE
BA CONNECTOR, YEAH.

WATCH OUT FOR
THE BA CONNECTOR
AND THE PRC-S
J4 PLUG...

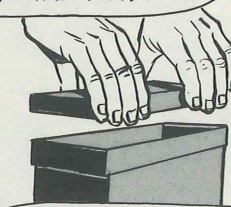


...SLAMMIN'
CAN CRUSH
'EM, BABY.

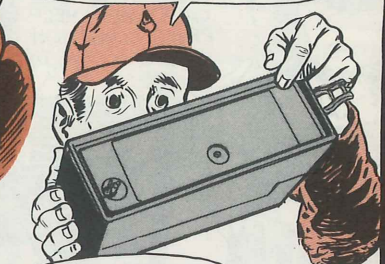


MMMM-M-
M-M-M...
FAIR
DINKUM,
MATEY.

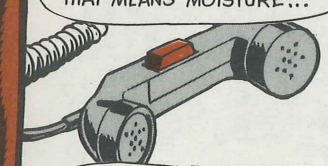
HEY, BIRD-BRAIN, YOU DON'T HAVE
TO WORRY ABOUT ME KEEPING MY
RIG DRY. I'VE GOT RUBBER CASE
GASKET, FSN 5820-973-3960,
TO KEEP MOISTURE OUT.



CHECK THE PUSH-TO-TALK
SWITCH COVER ON YOUR H-189
TO SEE IF THE COVER'S SPLIT.
THAT MEANS MOISTURE...



... AND YOUR
CONNECTORS??



YEAH, I'LL MAKE SURE
THE AUDIO CONNECTORS ARE PROTECTED
WITH A DOUBLE AUDIO CAP, FSN 5820-
973-1732. I CAN EVEN USE WATERPROOF
TAPE UNTIL I GET MY CAPS.

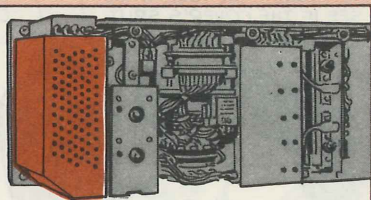
AND NOW, A... SOB?...
MOMENT OF SILENCE FOR
MY COUSIN WHO GAVE HIS
ALL IN VALIANT SERVICE
WITH THE 3976TH CARRIER
PIGEON CO... SOB?...



KEEP
SPARK IN
YOUR **ARC**

YOUR PILOT RATES
PRIME RESULTS FROM
THE **AN/ARC-54** RADIO SET,
RIGHT? AND YOU, AS THE **ARC'S**
CARETAKER, HELP KEEP IT IN
PRIME CONDITION, TRUE? SO
HERE'S A FEW TIPS TO HELP:

Dirt is Deductible. Sling it.



It builds up on the 3 tubes and the tube connecting pins, on the power amplifier mechanical linkage, and between the coil cores and their sleeves.
Use a soft brush to remove dirt build-ups.

DID HE SAY
WOT I THINK
HE SAID?

YUP!

CAREFUL,
NOW...
E-A-S-Y

Fingers offa anything ya got no business trying to fix!
Man, you could be sporting all the good, rosy intentions in this world—and then botch the module connector pins, the connector cables, or even manage to yank a cable or so right out of the R-T assembly.

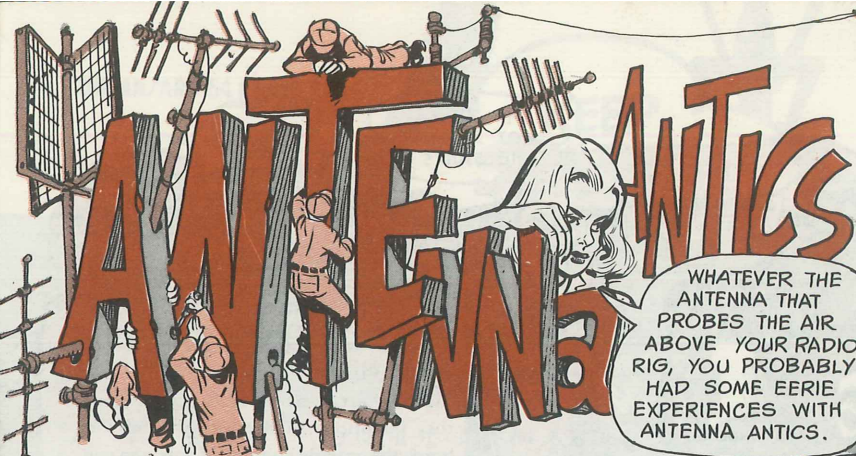
So, take those good intentions, route 'em to a higher level of support, and include the ailing equipment.
You'll get the job done by the guys with the know-how.

Any time you've got the RT-348 out of its cover, eyeball the 4 air filters. If the top filters are dirt-clogged, get ridda 'em.



The 2 bottom filters can be reversed for extra use, so don't toss these just because one-half the filter pads show crud. The other half can also do a good, clean job.

Twisting the AS-1703/AR antenna coupler the wrong direction can damage the connector and pins. Turn the coupler clockwise to put it on, counter-clockwise to remove it.



WHATEVER THE ANTENNA THAT PROBES THE AIR ABOVE YOUR RADIO RIG, YOU PROBABLY HAD SOME EERIE EXPERIENCES WITH ANTENNA ANTICS.

The antics are many and varied, like: Binding between the threaded areas of the sections ... connector freeze ... broken joints ... moisture problems ... wobbly fits ... ground-outs from metal contacts.

Then, before you match 'em up again, coat the threads with a thin coating of silicone grease, FSN 9150-257-5358. Don't shovel it on, though.

In folding your whips for safekeeping or storage, be careful you don't fold 'em backwards. That'll break 'em, plain and simple.



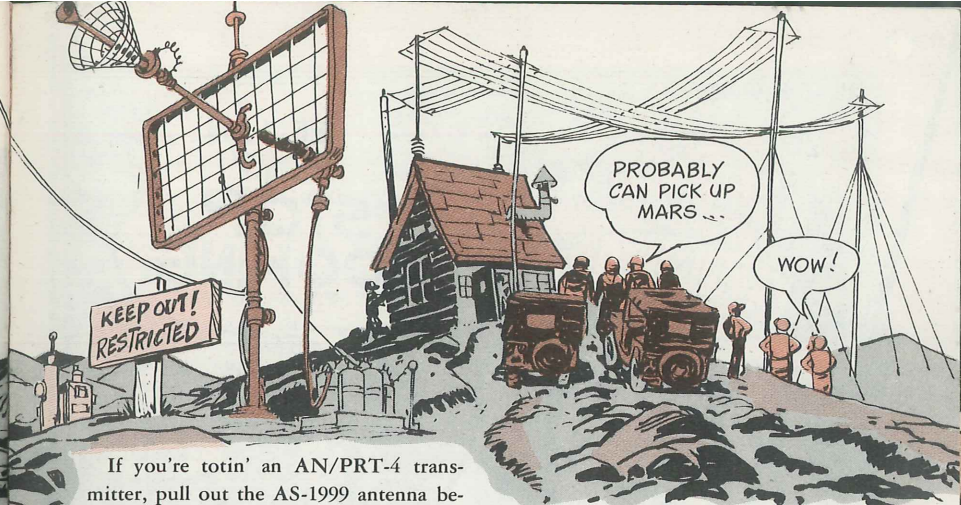
There are mighty few cures, natch ... and they're not always absolute cures ... but they either fix it or help it.

To keep your whip antennas from binding like hard rock, disconnect the sections every once in a while.



If you're dealing with the AT-803 for the AN/TRC-24, remember to remove and empty the drain plug every other day.

Silicone on the mating ends of the AB-35 mast sections will keep this important segment of the RC-292 antenna equipment on the free-'n'-easy side.



If you're totin' an AN/PRT-4 transmitter, pull out the AS-1999 antenna before you transmit. This'll cut chances of loused-up transmission caused by the antenna base connecting with the battery-box clamp.

Keep the AS-1999 away from your helmet, too, since that kind of contact can

A loose, sagging fit could mean no load and all sorts of misunderstandings with your T-195 transmitter.

The AT-892/PRC-25 can break at the threaded portion if it's left to wobble in its mount. A sliver of rubber on the threads (from an eraser or rubber band) can help stabilize the fit.



ground out your antenna.

Screw the whip antenna section of the AN/GRA-4 antenna group snugly into the MX-857 adapter, if this's your baby.



Remember when it comes to antennas, some tricky little action you take to keep one type perkin' peppily could also work on another type.

So-o-o-o, be guided by your antenna's needs and you'll have no antic panic.



SQUAD RADIO CRYSTALS

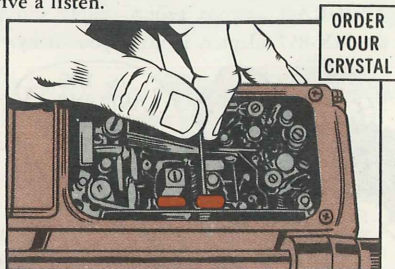


Now you have it: a list of just about every frequency control crystal that you'll ever need for your AN/PRT-4 or AN/PRR-9 Squad radio transmitter and receiver ... and it matters not where you are!

You may never see it anywhere else, so give a listen.

Since it's up to you, the organizational repairman, to get and change the crystals when necessary, remember this:

You cannot ask for every crystal on this list. Your area commander decides what crystal frequencies will be used where you are ... and just how many of a particular crystal you need on hand. Know your area requirements.



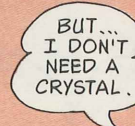
54

PUNCH OUT
AND HANG IN
CONVENIENT PLACE

SQUAD RADIO CRYSTALS

Each FSN will get you one crystal. And, the crystal and channel frequencies are listed beside their stock number, in numerical order.

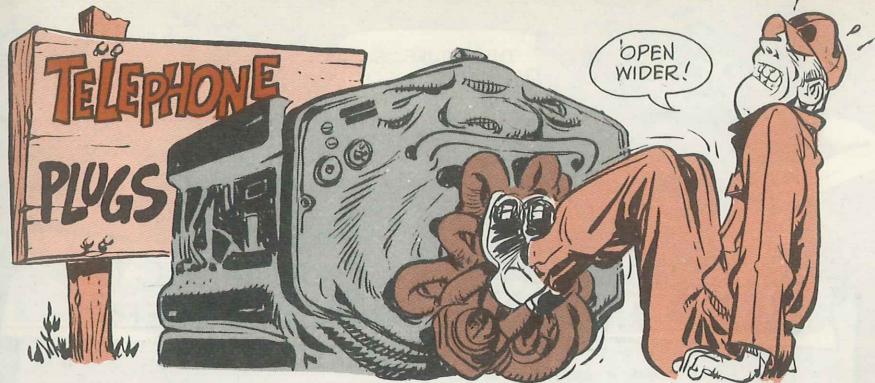
FSN 5955	CRYSTAL FREQ	CHANNEL FREQ	FSN 5955	CRYSTAL FREQ	CHANNEL FREQ
926-2641	36.3	47.0	926-2657	39.5	50.2
926-7321	36.4	47.1	926-7265	39.6	50.3
926-2642	36.5	47.2	926-2658	39.7	50.4
926-7322	36.6	47.3	926-7266	39.8	50.5
926-2643	36.7	47.4	926-2659	39.9	50.6
926-7323	36.8	47.5	926-2660	40.0	50.7
926-2644	36.9	47.6	926-2661	40.1	50.8
926-7324	37.0	47.7	926-2662	40.2	50.9
926-2645	37.1	47.8	926-2663	40.3	51.0
926-7325	37.2	47.9	926-7337	40.4	51.1
926-2646	37.3	48.0	926-2664	40.5	51.2
926-7326	37.4	48.1	926-7338	40.6	51.3
926-2647	37.5	48.2	926-2665	40.7	51.4
926-7327	37.6	48.3	926-7339	40.8	51.5
926-2648	37.7	48.4	926-2666	40.9	51.6
926-7328	37.8	48.5	926-7340	41.0	51.7
926-2649	37.9	48.6	926-2667	41.1	51.8
926-7329	38.0	48.7	926-7341	41.2	51.9
926-2650	38.1	48.8	926-2668	41.3	52.0
926-7330	38.2	48.9			
926-2651	38.3	49.0			
926-7331	38.4	49.1			
926-2652	38.5	49.2			
926-7332	38.6	49.3			
926-2653	38.7	49.4			
926-7333	38.8	49.5			
926-2654	38.9	49.6			
926-7334	39.0	49.7			
926-2655	39.1	49.8			
926-7335	39.2	49.9			
926-2656	39.3	50.0			
926-7336	39.4	50.1			



CUT ALONG
DOTTED
LINE

55

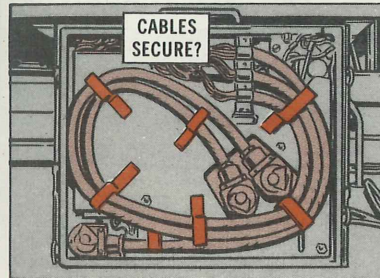
FSN 5955	CRYSTAL FREQ	CHANNEL FREQ	FSN 5955	CRYSTAL FREQ	CHANNEL FREQ
926-2669	41.5	52.2	926-7269	44.0	54.7
926-7267	41.6	52.3	926-2685	44.1	54.8
926-2670	41.7	52.4	926-2686	44.2	54.9
926-2671	41.8	52.5	926-2687	44.3	55.0
926-2672	41.9	52.6	926-2688	44.4	55.1
926-2673	42.0	52.7	926-2689	44.5	55.2
926-2674	42.1	52.8	926-2690	44.6	55.3
926-2675	42.2	52.9	926-2691	44.7	55.4
926-2676	42.3	53.0	926-2692	44.8	55.5
926-2677	42.5	53.2	926-2693	44.9	55.6
926-2678	42.7	53.4	926-2694	45.0	55.7
926-2679	42.9	53.6	926-2695	45.1	55.8
926-2680	43.1	53.8	926-7204	45.2	55.9
926-2681	43.3	54.0	926-2696	45.3	56.0
926-2682	43.5	54.2	926-2697	45.4	56.1
926-2683	43.7	54.4	926-2698	45.5	56.2
926-7268	43.8	54.5	926-2699	45.6	56.3
926-2684	43.9	54.6	926-2700	45.7	56.4
			926-2701	45.8	56.5
			926-2702	45.9	56.6
			926-2703	46.0	56.7
			926-2704	46.1	56.8
			926-7201	46.2	56.9
			926-7202	46.3	57.0



Busted cables and broken cableholders plaguing your TA-227/U telephone modem?

That bodes no good for your AN/TCC-7 or -50 telephone terminals.

Those 3 cables on the modem should be wound and secured in the 3 cableholders on the metal bottom of the modem.



If they're jammed in helter-skelter, the loose cables can snag upon edges and corners and get chewed up when the TA-227 fits in the liner.

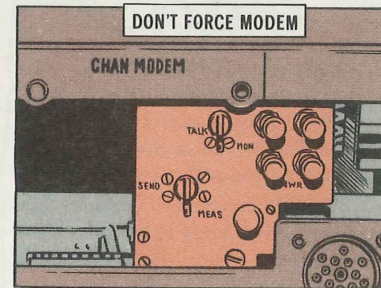
The cable plugs can be damaged, and the metal cable hooks break off.



It's the same deal on the TA-228/TCC-7 carrier supply with 3 cables, and the AM-707/TCC-7 amplifier-pilot regulator with 2. The junction box of the AM-707 also has 5 similar cables.

These cable assemblies don't have stock numbers, which means they've gotta be fabricated at GS or depot. You could be minus your equipment awhile.

When you place a channel modem on the TA-219/ chassis, be sure the modem's well seated, without forcing.



If it's seated badly, you could come up with a fractured chassis block.

Remember, each channel modem number for each modem is lettered on the modem control panel. These modems won't fit into the wrong tracks unless they're forced in—and you can imagine what kind of damage that can do.

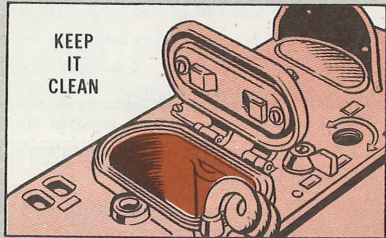
THIS STUFF IS
PM ON ME, SO
EYEBALL IT GOOD...

KEEP TALKING

Your TA-312 has a hang-up. Dirt'll hang it up every time, especially when it collects in the battery compartment.

Dirt, grease, fungus and corrosion can hold up a connection between your TA's contact assembly and its batteries.

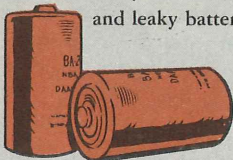
KEEP
IT
CLEAN



A daily clean-up will keep your telephone talking a lot longer. Use a clean, dry cloth to remove dust and dirt. For extra tough spots, use a cloth dampened with Cleaning Compound FSN 7930-395-9542. Wipe the compartment dry.

Use burnisher TL-557 to clean the electrical contacts. Avoid getting cleaning compound on the contacts. Remove corrosion from the battery compartment with No. 0000 sandpaper.

Your daily clean-up should also include a battery check. Get rid of worn and leaky batteries.

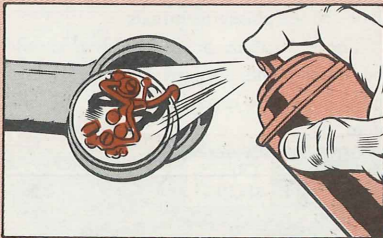


58

CONTACT CLEANER

Look for the word in upcoming changes to commo equipment TM's.

Trichloroethane (so who knows what that means?) is the official cleaner for electrical contacts on electronics gear.



You can get it like so:

FSN	QUANTITY
6810-930-6311	12-oz. Can
6810-292-9625	Quart Can
6810-664-0387	Gallon Can
6810-664-0388	5-Gal Pail
6810-551-1487	55-Gal Drum

You'll find 'em on page 3.38 of Fed Cat C6800-IL (Apr 71).

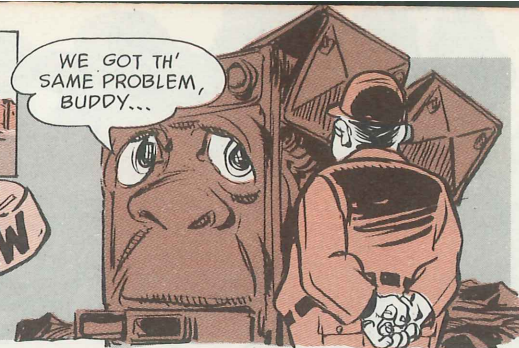
Like with all solvents, you want to be real careful about inhaling the fumes of this stuff. Make sure you've got good ventilation when you're using it. TB MED 35 (Jan 61) has some good health info on using solvents.



COMBAT SUPPORT



WE GOT TH'
SAME PROBLEM,
BUDDY...



Sure you have the fan belt that fits your Stewart and Stevenson Model 52300, 45-KW, 400-Hz generator set?

Check your shelf stock.

A 45-in belt is off one inch—no good to you.

You need a 46-in belt that's 11/16 inch wide.

Both sizes have had the same stock number, FSN 3030-633-5089.

Be sure you've got the long one. Stocks are being purified. Turn-in and reorder should you receive the short one.

To measure a fan belt, lay it down on a flat surface and put a tape or a string around the outer edge.



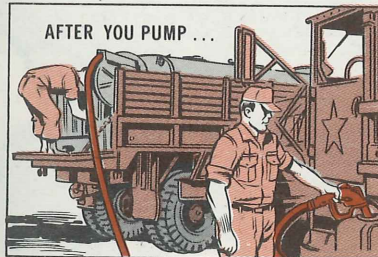
On guard, fuel pumpers!

Never trust a fuel dispensing system once it's been pressurized. It can blast you with a shower of fuel when you least expect it.

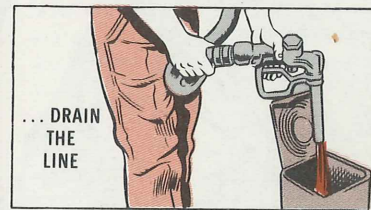
release all the internal hydrostatic pressure.

To be sure, shut off the motor and depressurize the pump by draining the fuel through the hose nozzle into a container.

AFTER YOU PUMP ...



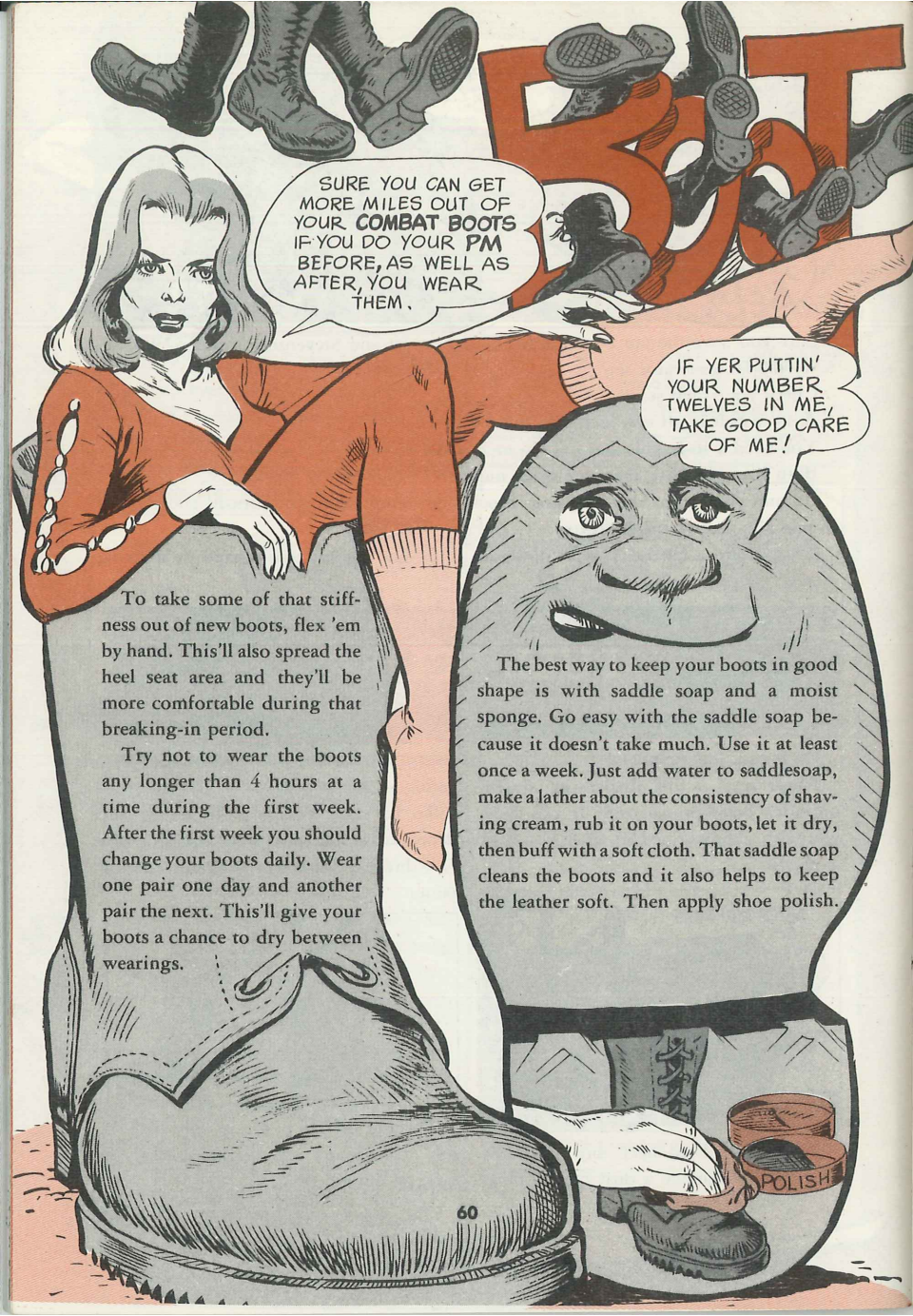
Before you disconnect any hose, line or nozzle or remove a dust cap or plug,



... DRAIN
THE
LINE

Turning off the pump is only half the job ... it won't relieve the system. Be safe, go the full route.

59



SURE YOU CAN GET MORE MILES OUT OF YOUR **COMBAT BOOTS** IF YOU DO YOUR **PM** BEFORE, AS WELL AS AFTER, YOU WEAR THEM.

IF YER PUTTIN' YOUR NUMBER TWELVES IN ME, TAKE GOOD CARE OF ME!

To take some of that stiffness out of new boots, flex 'em by hand. This'll also spread the heel seat area and they'll be more comfortable during that breaking-in period.

Try not to wear the boots any longer than 4 hours at a time during the first week. After the first week you should change your boots daily. Wear one pair one day and another pair the next. This'll give your boots a chance to dry between wearings.

The best way to keep your boots in good shape is with saddle soap and a moist sponge. Go easy with the saddle soap because it doesn't take much. Use it at least once a week. Just add water to saddle soap, make a lather about the consistency of shaving cream, rub it on your boots, let it dry, then buff with a soft cloth. That saddle soap cleans the boots and it also helps to keep the leather soft. Then apply shoe polish.

THIS AROUND

I GOTTA DRY!

SALT STAIN

SO DO I!

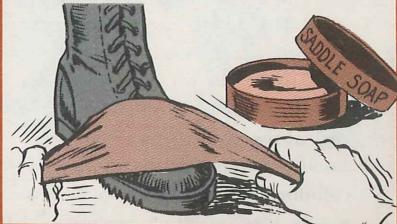
About the best thing to do once you get salt stain is to clean your boots with saddle soap and then let them dry. Next apply dye and let it dry. Follow that with a wax shoe polish.

After you wear your boots, wipe them on the inside and outside with a cloth to remove the moisture.

Then let them dry slowly in a warm area, but away from a direct heat source such as a radiator or stove.

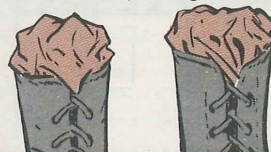


After your boots are dry, treat them with saddle soap and then repolish.



Sometimes you get cracks in your leather boots, especially if your feet perspire a lot. You can help keep the leather from cracking if you'll use saddle soap to take the old wax off before you repolish your boots.

Never leave your wet socks in your boots. Try stuffing your boots with newspaper while you're drying them. It'll help absorb the moisture and they'll keep their shape.



NEVER HEAT THE SHOE POLISH BEFORE YOU USE IT.

THIS IS LUNCH.

THE MAOH GRADER

KARATE-CHOPS

Dear Half-Mast,

We're being karate-chopped on our 440HA Grader. Here're the 5 blows that hack us:

1. Circle reverse control shaft bends.
2. Leaning wheel control shaft bends.
3. Front drive shaft breaks.
4. Circle reverse gear bearing fails.
5. Tandem wheel breaks.

Do you know how we can avoid those killer swipes?

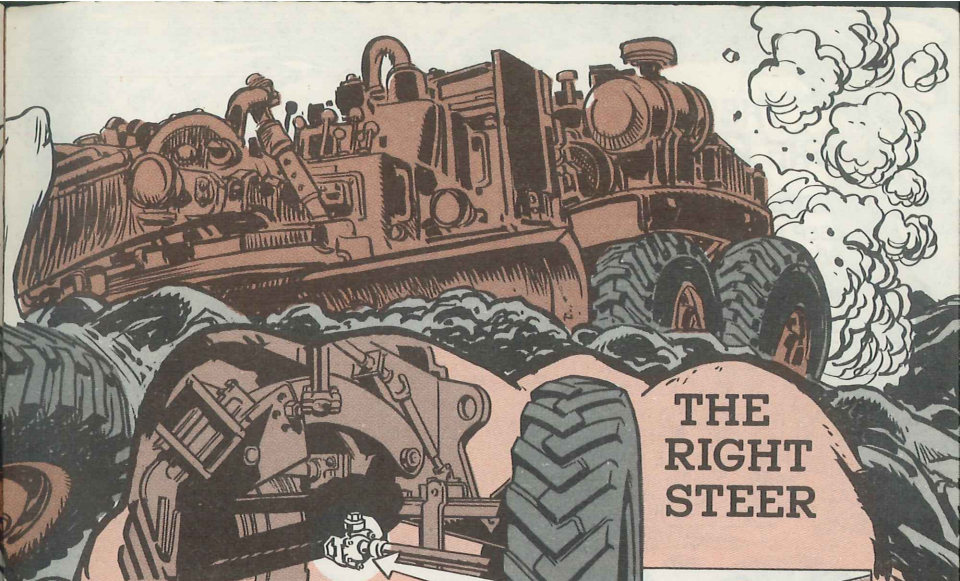
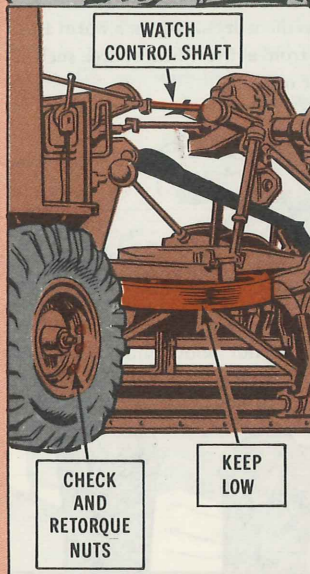
MSG G.D.M.

Dear MSG G.D.M.,

Try these maneuvers...

1. Train operators not to raise blades so high as to bend circle reverse shafts against the main frame.
2. Leaning wheel shaft bends come from colliding with blade lift arms. Make it a rule that operators keep blade lift arms outboard of top center.
3. Front axle oscillation stop blocks will keep the drive shaft from separating (it telescopes) if left in place. They're not shipping blocks.
4. Make gear thrust bearing check a part of your PM list, and call on support to help check the whole circle adjustment every 90 days.
5. Retorque wheel nuts after the first 10 service hours, then again after the next 10, and every 30 days thereafter.

Half-Mast



THE RIGHT STEER

Steering-ball pin shearing on your 440HA road grader?

Might be you need the new, reinforced steering-arm and ball assembly.

Then, again, you could be turning the grader too sharply under load.

The assembly comes under FSN 2530-190-8754 (PN VR 2727).

Even with the latest and the best, though, a breakdown can happen, if you don't watch out.

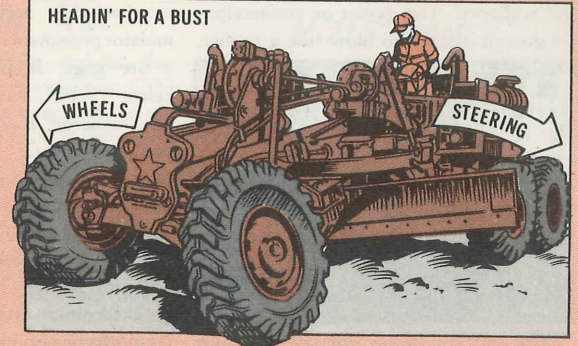
Never turn the front wheels sharply against their leaning position. And backing out, turn the wheels the same direction they are leaning till you straighten out.

Don't forget, too, it's the scarifier first to soften hard, rough surfaces... and move slowly when you're bulldozing with the road grader.

In short put motorized horsensense into operation.

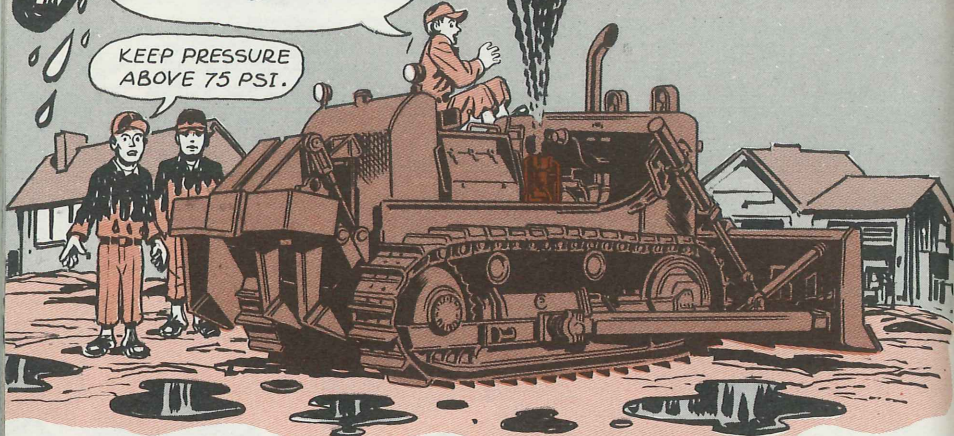


HEADIN' FOR A BUST

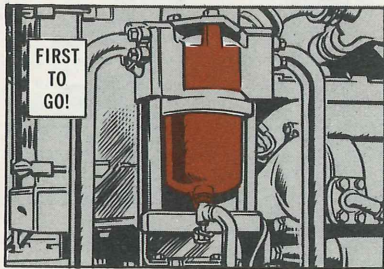


THERE SHE BLOWS!

KEEP PRESSURE ABOVE 75 PSI.



Did you ever see an HD16M tractor blow its hydraulic system's cool? The lift and tilt cylinders on that dozer take many a hard knock during a rugged workday, and if there's nothing to absorb the shock pressures within the hydraulic system the filter is the first to get walloped. The gasket or connections let go and it starts to blow like a gusher.



The shock absorber for the hydraulic system is the nitrogen accumulator. Its main job is to buffer the shock pressures that can damage the hydraulic system

parts—especially the filter.

But to do its job the accumulator must have a charge of 75 PSI. So anytime you notice your hydraulic system filter spouting a leak, don't blame the filter—the accumulator is the bummer.

Get your support to check the accumulator pressure with a tire gage. If it's below 75 PSI, have 'em recharge it or you can replace it with a factory pre-charged accumulator.

The accumulator pressure should be checked about every 6 months or else you may spout an oil gusher that doesn't pay off.



Connie's
Mini Mini's



Wrong Number on M151 TM

That's a printer's goof on the new -20 manual for M151-series ¼-ton trucks. It's a TM 9 all right, but cross out the "3430-318-30" and write "2320-218-20" instead. There's no change planned for the family number of the old faithfuls.

About Your Vulcan...

Forget some of the illustrations on page 24, PS 227, on the Vulcan "elevation/azimuth" dials. There is no "elevation" window, and the illustration used was for a different AD system. Remember, too, that the screws mentioned on the D-box are not those on the access door.

Shades for Flyboys

If a lens is cracked or broken in the aviator sunglasses authorized by CTA 50-901, toss 'em away. Vision damage could result from a repair mismatch. You can get a new pair with FSN 8465-753-6261.

SB-22 Nameplate

That "data plate" FSN on page 43 of PS 228 will get you a designation strip for the TA-222 line pack. Sorry about that. If you need the data or nameplate pictured in the article, your support has to go through your mission depot to get it fabricated.

Watch the Nut

Every once in a while, tighten the microphone boom nut on your CVC helmet. If that mounting nut works loose and loses itself, it'll definitely lower the boom.

M715 Boot

Now you can get the accelerator cable boot for your TM-244-series ¼-ton truck (M715 etc.). Order FSN 2530-443-8017.


One Per Plane, Please

If you need the 14-ring binder for your bird's -10 check list, whip out a DA Form 17, ask for TM 1500-1 and send it to the St. Louis pubs center. But remember—only one binder for each Army aircraft in your unit.

The Guiding Light

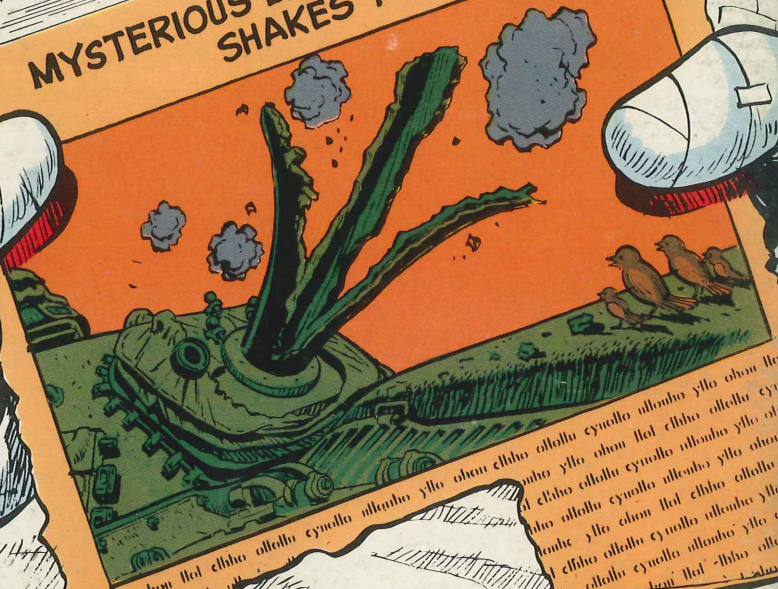
Your SDU-5 distress marker light needs regular checking. Put in new batteries if the flash is weak or zilch, or if the batteries have an odor. Ya can't mistake the smell, just like vomit. Get new batteries with FSN 6135-073-8939.

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



SURE, SARGE, I KNEW
A BIRD HAD BUILT A
NEST IN THE BARREL BUT
I THOUGHT FIRING A
ROUND WOULD **CLEAN**
IT OUT...

MYSTERIOUS EXPLOSION IN TANK SHAKES POST



P.S...

KEEP GUN TUBES CLEAN!