Exception Data Dead?! See page 2.

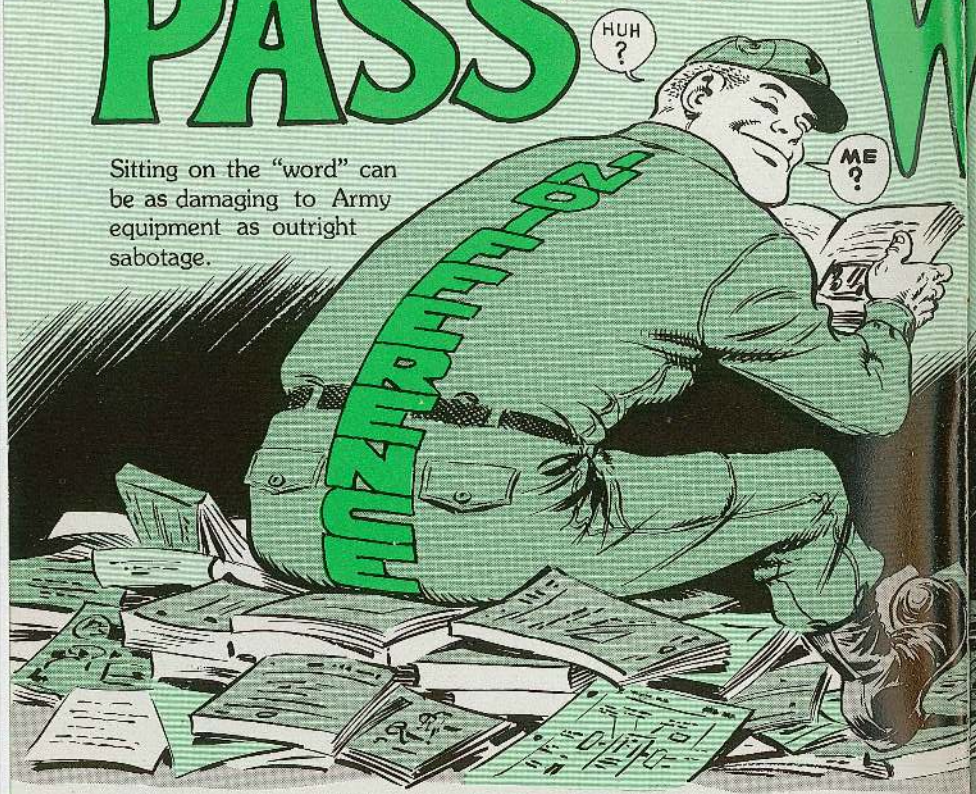
Issue 297

# P.S

THE PREVENTIVE MAINTENANCE MONTHLY

August 1977

# PASS the 'WORD'




Sitting on the "word" can be as damaging to Army equipment as outright sabotage.

The "word" is critical maintenance and supply poop put out in new publications and changes to older pubs, in DA messages, in letters and messages from National Maintenance Points, in EIR Digests, in local maintenance bulletins and, yes, in PS Magazine.

A case in point—and only too familiar—is the free-issue kit for beefing up the ¼-ton truck's rear differential mount.

The "word" went out in July 1975 in a Tank-Automotive Command message. Six months later, when an article on this subject appeared in PS, there was a flood of requests for copies of the message.

Only recently, a unit stumbled on a "rumor" that there is a kit available to solve their ¼-ton truck differential mount problem—and they were groping around for information on how to get the kit.

Someone didn't pass the "word".

New information is like improved fuel for an engine. It ups performance and may even prevent complete failure.

When good, solid information on maintenance and supply comes into your hands, move it! Pass it along—right now! It can make a big difference in the time and money spent on maintenance. And, most important, in the readiness of your Army equipment.

## Next Month In PS

**TK-101/G TOOL KIT**

★

**M167 VULCAN**

★

**LANCE MISSILE**

★

**TORQUE WRENCH TEST**


PS THE PREVENTIVE MAINTENANCE MONTHLY

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

Within limits of availability, older issues may be obtained direct from Editor, PS Magazine, c/o US Army Maintenance Management Center, Lexington, KY 40511.

ISSUE No. 297 AUGUST 1977




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

*MSG Half-Mast*
*PS Magazine*
*Lexington, KY*
*40511*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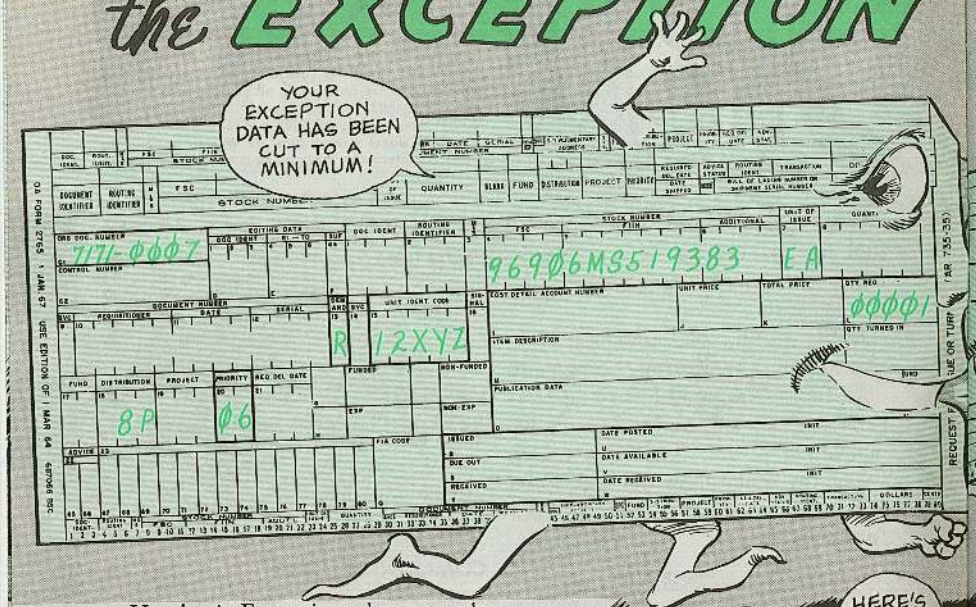
**DISTRIBUTION:** In accordance with requirements submitted on DA Form 12-5.

For Part-Numbered Items . . .

# the EXCEPTION PROVES the RULE





Hey-hey! Exception data supply procedures join the computer age!

Two DA messages, DALO-SMS 271743Z Dec 76 and DALO-SMS 181502Z Jan 77, put most exception data requests into regular supply channels.

Now, requests for items with only part numbers in your TM, FM, SC, SB, manufacturer's parts catalog or supply information letter go into the automated supply system just like regular NSN requests. And that means speedier, better service on status cards and deliveries.

When you need an item that has only a part number in the parts pub, you can forget a lot of that extra work you used to do.




That's it. No TM or page number or item description required for items with just a part number in your parts pubs.

If the item's part number has more than 15 letters and/or numbers, it won't fit on a DA Form 2765. Use a DD Form 1348-6 instead. That form won't make it into the automated system. So, those requests take a little longer to fill. However, you still just give the manufacturer's code, part number, WSDC and—maybe—the funding code or aircraft serial number.

If you want an item with no NSN or part number, you give the maximum amount of info: Pub and page number covering the item, the part's size, shape, use (purpose), color, manufacturer's name and end item identification. Those requests must be handled manually (off-line) and take the longest of all.

But, for part-numbered items in your regular pubs, their entry into the automated supply system means speedier deliveries!

**★ 5-part manufacturer's code—Federal Supply Code for Manufacturer's (FSCM);**

**★ Part number;**

**★ Weapons system designator code (WSDC) if one has been assigned to the end item;**

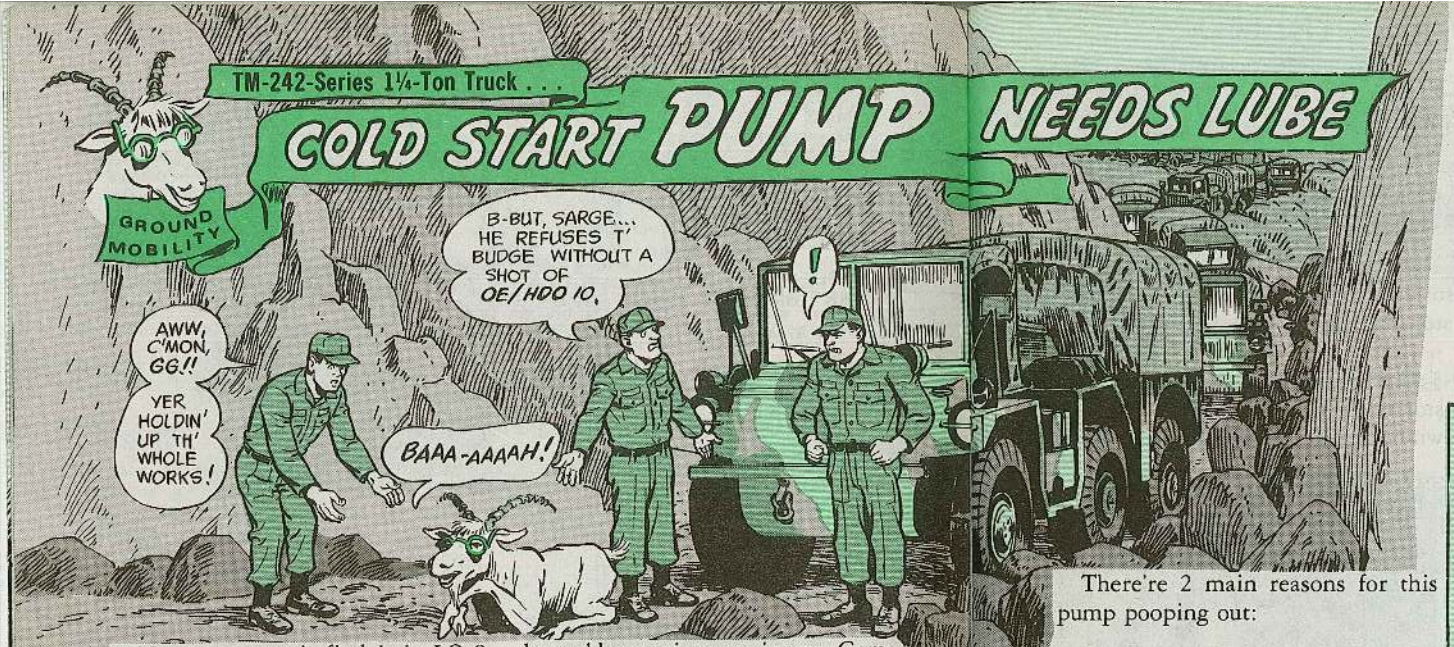
**★ Any special funding code;**

**★ Serial number of the end item (for aircraft parts only).**

'Course, sometimes you may need a little more: the type requirement code instead of the WSDC if you're ordering a complete major end item; the specific make and model of the end item if the model affects which part you order; and any special control item codes assigned.

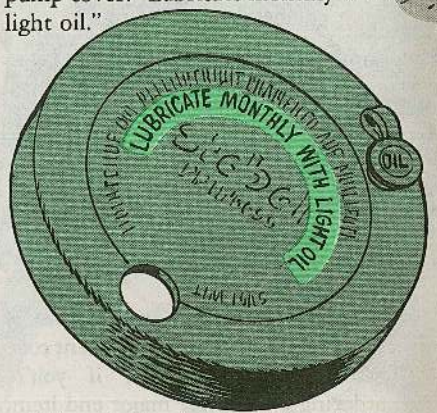
TM-242-Series 1¼-Ton Truck . . .

# COLD START PUMP NEEDS LUBE




Nope, you won't find it in LO 9-2320-242-12 (Apr 72)—but the fact is, that cold start air pump in your Gama Goat needs a shot of oil once in awhile.

That's what it says right on the pump cover: "Lubricate monthly with light oil."

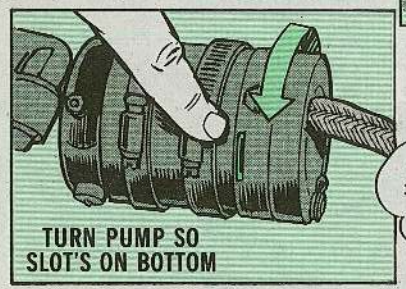




Take a look at that little hinged plug on the cover. It says OIL. That's where you squirt in a few drops of oil every month. Use OE/HDO 10.



There're 2 main reasons for this pump pooping out:

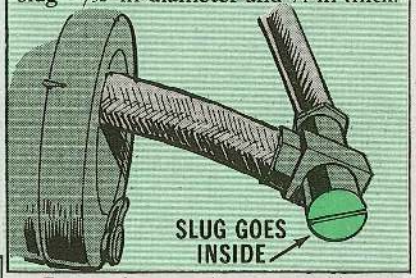
- Lack of lube. The rotor vanes "freeze" so that the pump can't put out air.
- Water gets in because the pump's positioned wrong. That slot on the pump body should be at the bottom.



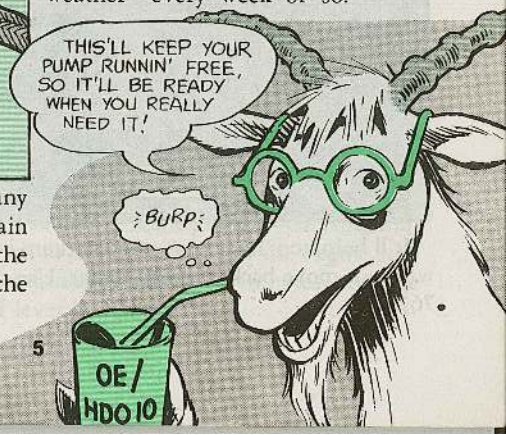

Then water can't get in. And any moisture that does get in can drain back out. Just loosen the clamps on the pump and turn it so the slot's at the bottom.

If your pump quits, replacement is a DS job. But pass the word to your support that they may be able to save your old pump. The pump's pretty simple—no big job to take it apart and put it back together. They may find that cleaning and lubing of the rotor vanes and shaft ends will put your pump back into business. They got the full story in TB 750-981-2 (Apr 73), pages 2-21 and 2-22.

Also, if you're in a high altitude area—over 5,000 feet—make sure you've got a slug between the screw and spring-and-ball in the air heater check valve. Your support has to lend a hand on this job—they'll fabricate a slug 11/32-in diameter and ¼-in thick.




Remember to give your cold start pump a workout even in warm weather—every week or so.

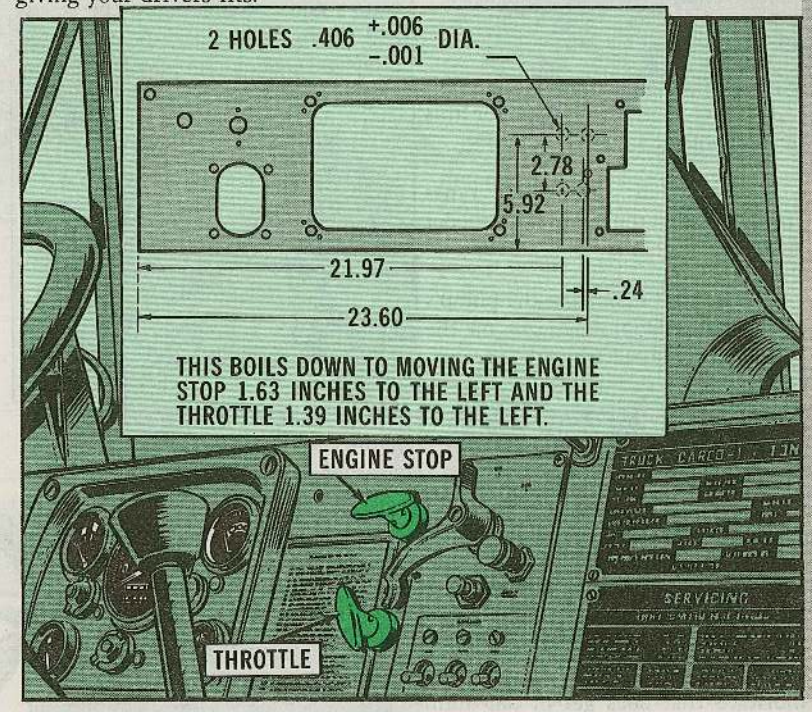



You and your Gama Goats may be sufferin' for no good reason.

Like the engine stop control won't stop the engine.

Or the throttle won't throttle.

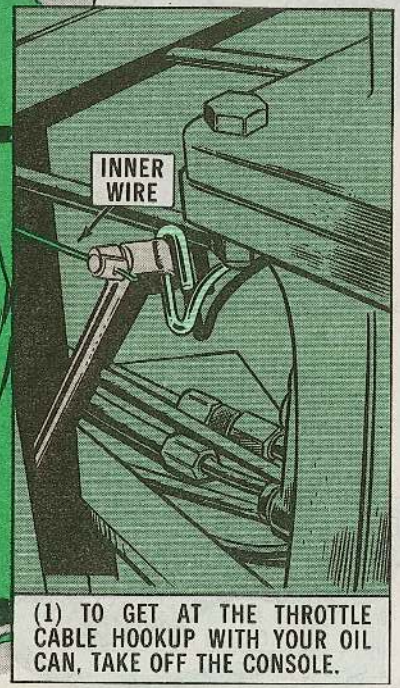
First off, get ahold of TB 43-0001-39-3 (Oct 76) and see the fix on pages 26-27. It calls for moving both the engine stop and throttle handles to the left a little on the dash panel. This'll cut down on the cable binding that may be giving your drivers fits.



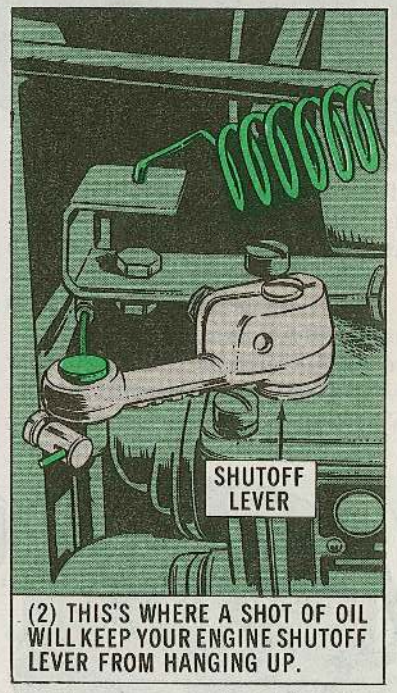

It'll help, too, if you put some slickum inside the cable housing so the inner wire can move back 'n' forth easier. Use silicone grease, NSN 6850-00-880-7616.



And put a couple o'drops of oil where the engine stop and throttle cables end up.




(1) TO GET AT THE THROTTLE CABLE HOOKUP WITH YOUR OIL CAN, TAKE OFF THE CONSOLE.

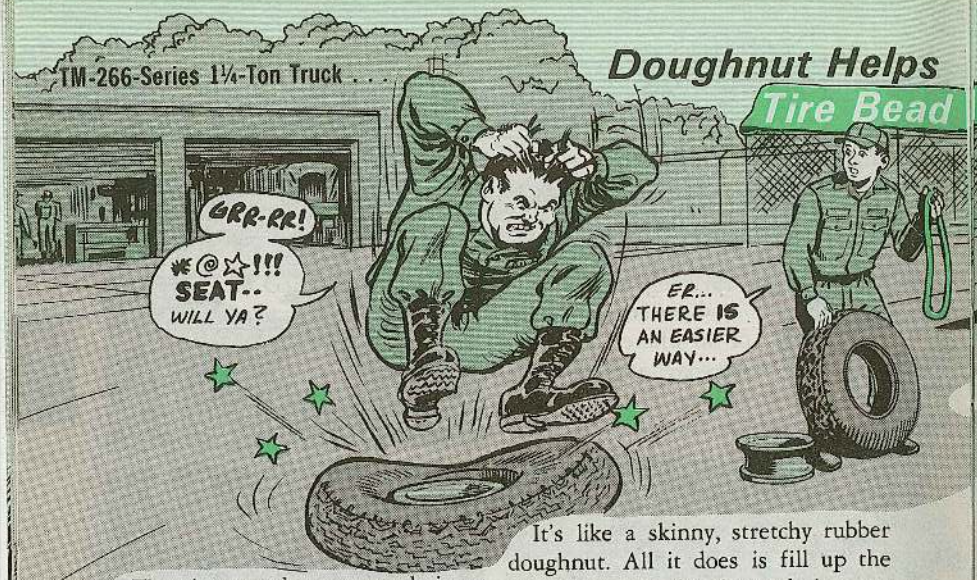



(2) THIS'S WHERE A SHOT OF OIL WILL KEEP YOUR ENGINE SHUTOFF LEVER FROM HANGING UP.

Never, f'rgoshsakes, shut down the Goat like some guys do—shifting into high gear and then popping the clutch to stall the engine. If the engine stop gives you trouble, just shift into neutral, idle for a couple o' minutes, raise the engine cover and move the shut-off lever by hand.

# Doughnut Helps Tire Bead

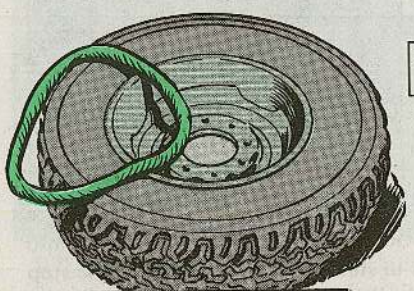
TM-266-Series 1¼-Ton Truck . . .




There's no need to tear your hair out when you're mounting your M880-series truck's tire on the rim.

Like you've got the tire on the rim. And you're trying to fill the tire with air. But the tire bead won't seat against the rim—so the air pours out as fast as you pump it in.

Cool it! Get the Tire Bead Seater that's part of the special tools for M880-series trucks. It's in Change 1, TM 9-2320-266-20P (Feb 76).

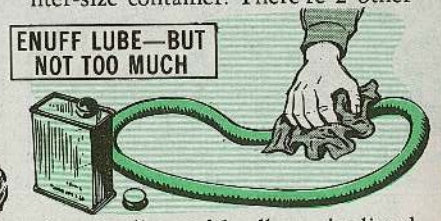


EXPANDER, TIRE BEAD, NSN 4910-01-022-9721

It's like a skinny, stretchy rubber doughnut. All it does is fill up the space between the tire and rim—on one side—so the air you pump into the tire will push the bead out against the rim. Then you can inflate the tire to the right pressure.

Here's how you use the bead seater:

First, lay the mounted tire 'n' rim with the air valve side down. Swab some slickum on the tire bead and rim edge that's facing up. Put some on the bead seater, too. Use Rubber Lubricant, NSN 2640-00-256-5526. This's a liter-size container. There're 2 other

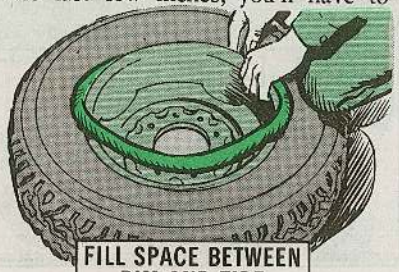



sizes, 1 gallon and 5 gallons, also listed on page 3-5, TM 9-2610-200-20 (Feb 77), your "bible" on tire care and maintenance.



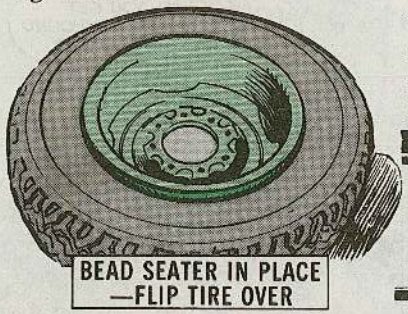
# Hair—and Tires Seater Special

Push one side of the doughnut between the tire and rim. Work around the rim, filling the space. For the last few inches, you'll have to



FILL SPACE BETWEEN RIM AND TIRE

stretch the doughnut to get it over the edge of the rim.



BEAD SEATER IN PLACE —FLIP TIRE OVER

Then flip the tire and rim over, so you can get at the air valve. Start puttin' the air to 'er. If air escapes, lift the tire around the edge to help the bead seat against the rim.

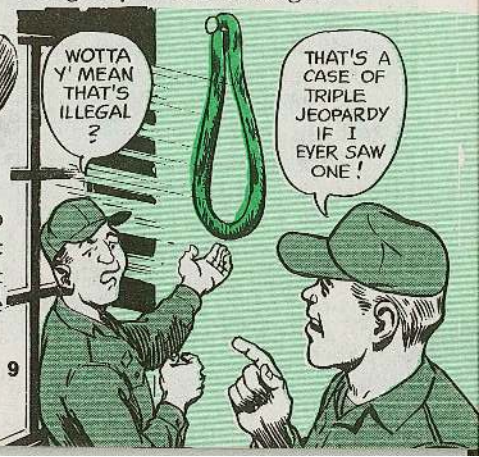
As the bead on the bottom side seats, the doughnut will be forced out—if you used enough rubber lube.

BEAD SEATER WILL SLIP OUT UNDERNEATH AS TIRE INFLATES

If you don't use enough lube, the doughnut won't slip out—so you'll have to let the air out and start all over again. If you use too much lube, your bead seater may slip out too soon.

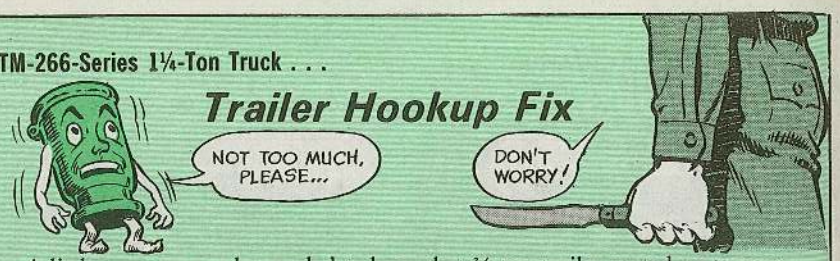
That's all there is to it.

Make sure you clean the doughnut well when you're done. And store it in a cool, dark, dry place. Lay it flat—never hang it on a nail. It'll rot if it's left greasy or out in sunlight.



TM-266-Series 1¼-Ton Truck . . .

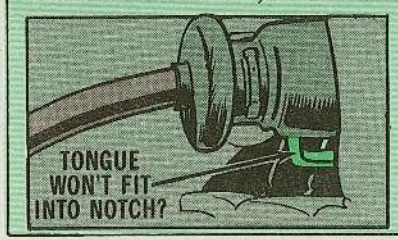
## Trailer Hookup Fix

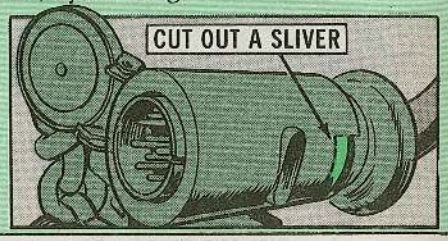



A little surgery may be needed to keep that ¾-ton trailer mated up to your M880-series 1¼-ton truck. You may find that the trailer's intervehicular cable won't stay plugged into the truck's receptacle.

Take a close look and see if that tongue on the receptacle cover fits into the notch on the cable connector.

The fix is simple. Cut the notch a little wider—until the tongue can be pressed into the notch. Use a sharp knife. But be careful so you don't cut out too much of the rubber—just a little sliver may be enough.




## M880 Windshield Wash

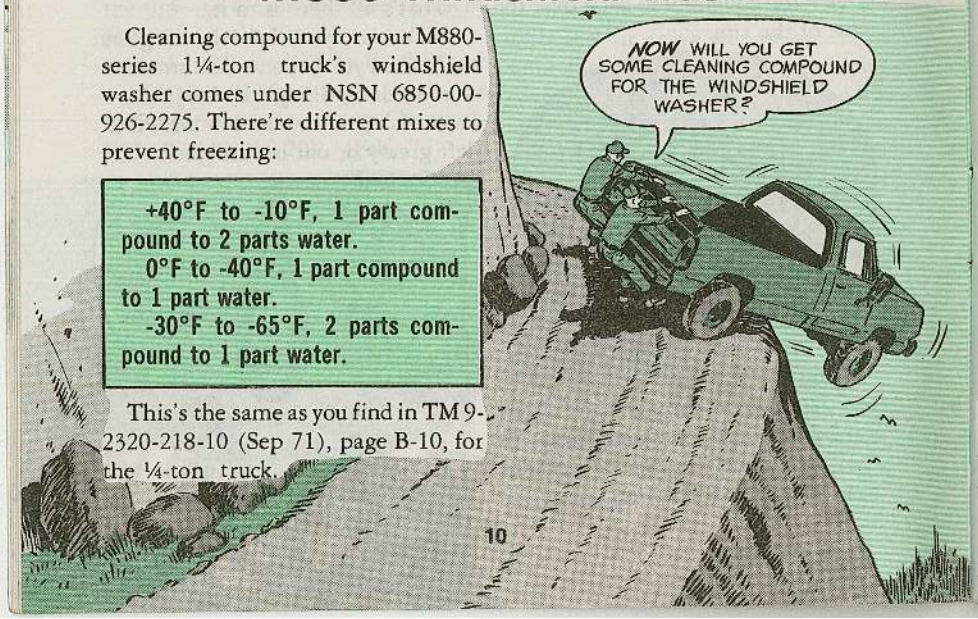
Cleaning compound for your M880-series 1¼-ton truck's windshield washer comes under NSN 6850-00-926-2275. There're different mixes to prevent freezing:

**+40°F to -10°F, 1 part compound to 2 parts water.**

**0°F to -40°F, 1 part compound to 1 part water.**

**-30°F to -65°F, 2 parts compound to 1 part water.**

This's the same as you find in TM 9-2320-218-10 (Sep 71), page B-10, for the ¼-ton truck.






## 5-Ton Steer Lever


Some steering lever assemblies for M39A2-series 5-ton trucks are no good.

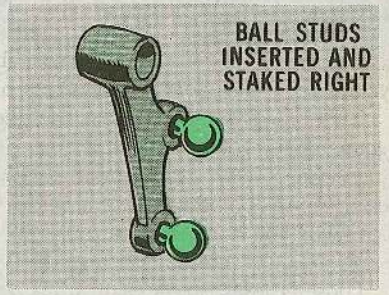
If you get a replacement lever under Contract number DSA-700-74-C-A258, turn it in to supply. If there's no way to tell what the contract number is, inspect the lever for these conditions:

**Ball stud not staked right, only slightly staked, or not staked at all.**

**Ball stud not fully inserted into tapered hole in lever.**

Turn in the lever if you find any of these.

A message from Tank-Automotive Materiel Readiness Command, DRSTA-MTB 211225Z Sep 76, tells commands how to handle defective levers.




TM-242-Series 1¼-Ton Truck . . .

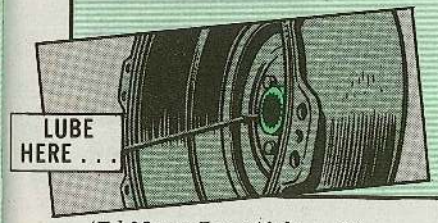
## Elbow Grease Cutter

*Dear Editor,*

*Here's a tip that takes some of the noise out of Goat brake work.*

*Rusted axle shaft and brake drum hub splines make for problems pulling drums. So when the drums are off—like when you're doing the 12,000-mi check listed on page 2-9, TM 9-2320-242-20 (Sep 76)—remove the rust and corrosion with a wire brush. Then put a coat of GAA on the splines. It'll keep the splines rust free till the next A service, and save some "drum beating."*

*WO1 Robert Adams*
*Ft. Campbell, KY*





*(Ed Note: Beautiful music)*

# SPEND TIME... SAVE MONEY


Lubrication of your Goer can cost about 40 bucks more'n you counted on if you're not careful with those access plate gaskets.

There are 3 access plates on the tractor and one on the tanker hull. You've got to take 'em off to pull the service. Usually, when the last bolt is removed, the plate drops down—and tears the gasket. New gaskets go for about $5 to $14 each. And you gotta have 'em or the Goer can't swim.

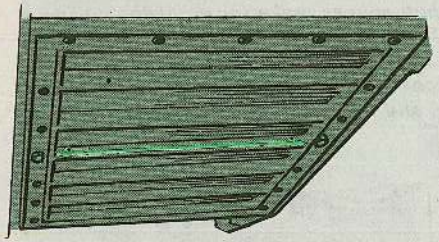
Maybe you can save 'em, tho.

Take out all the bolts except the 2 directly across from each other.

Loosen those 2 so the plate drops ⅛ to ¼ inch. Use a putty knife to scrape the gasket away from the hull. C-a-r-e-f-u-l! That gasket's cork, and it'll cut easily.

After you've got it loosened all around, take out the 2 remaining bolts and drop the plate.

**(1) Take out all bolts except 2 across from each other . . .**

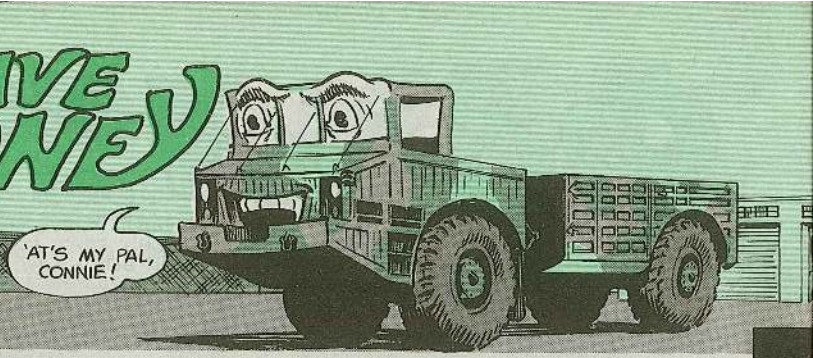


**(2) Loosen remaining bolts so plate drops ⅛ to ¼ inch.**

**(3) Loosen gasket with putty knife until it drops away from hull.**


**(4) Take out last two bolts and drop plate.**





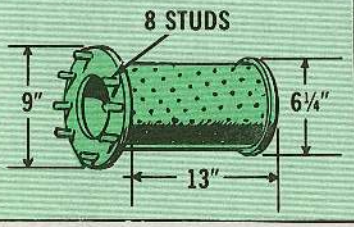

Check the gasket carefully. If it's cut or torn, get a new one. Never take a chance with a damaged one—and, for goodness'sakes, never put the plate back on without one. Someone's life may depend on it.


Give the gasket a good coating of GAA before putting the access plate back on. It'll give a tighter seal and make it a snap to get off next time you pull a service.

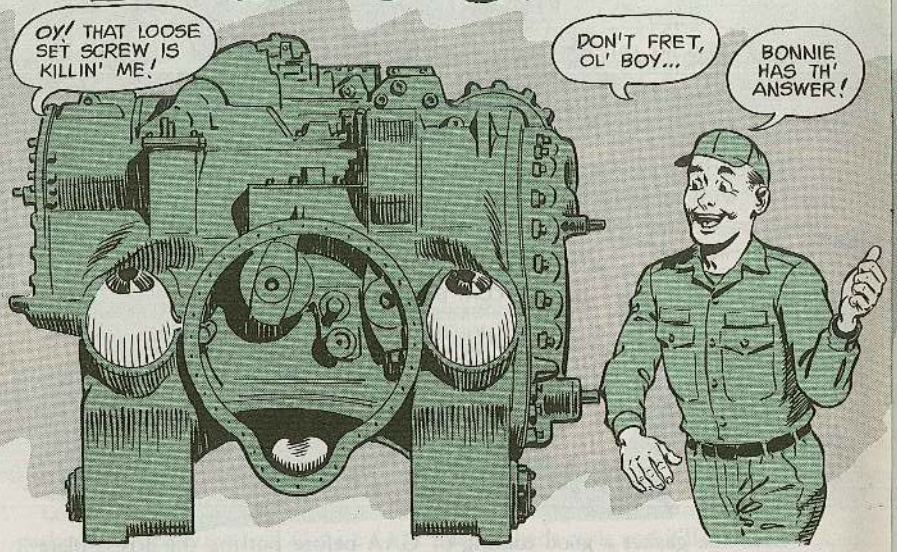
## Goer Filter Fooler


That secondary air filter, NSN 2940-00-756-8519, supplied on contract DSA 700-76-P-0603, is too small. You can't use it. Turn it in.

The right size filter is listed as NSN 2940-00-910-3066 in Ch 3 (Jan 77), TM 9-2320-233-20, page C-7, Figure 22, Item 13.



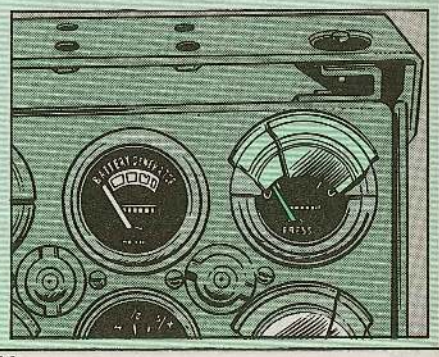
# CD 850-6A TRANSMISSIONS NEED TEST




Listen up, all drivers of M60 and M48A5-series tanks, M728 combat engineer vehicles and AVLB's. The Allison CD 850-6A transmission on your vehicle might be put together with a loose set screw inside the guts of the torque converter that'll let the transmission self-destruct. That's the Bad News. The Good News is that you can save your transmission.

**1. Right now, get your friendly track 63-series mechanic to make the transmission pressure checks listed in your vehicle automotive -20 TM. If these checks are not normal, call support maintenance. Do not drive the vehicle until it's fixed. If the vehicle checks out OK, drive it but also do this:**

**2. Pay particular attention to the low transmission oil pressure gage because low pressure means the transmission is about to fail.**





**3. During vehicle operation, if the transmission oil pressure needle stays in the red when your RPM's are above idle or if the pressure is considerably lower than it should be for the operating condition, something is wrong. Have your track vehicle mechanic check out the pressure. Turn the vehicle over to support maintenance if it does not check out OK.**


Your support will stake the set screw (NSN 5305-00-059-2490) which is item 61 of fig 11-5 in TM 9-2520-223-34 (Dec 71.)

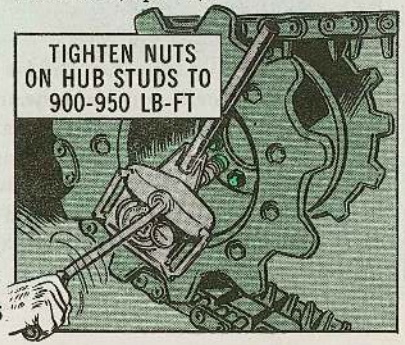
## M88/M88A1 Torque Change


You've probably noticed that the sprocket hub studs, NSN 5307-01-004-3064, P/N 8351875, on the left output reduction assembly are always coming loose.

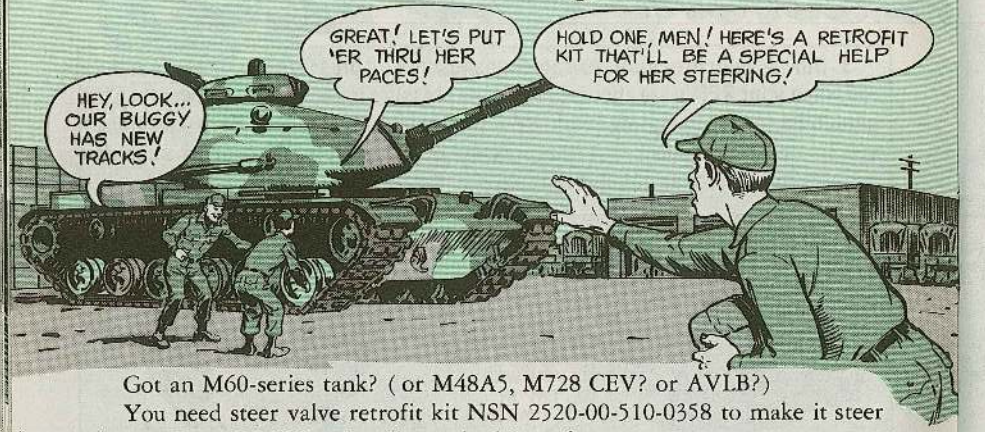
The present 350 lb-ft torque is really not enough. So tighten the nuts to 900-950 lb-ft using torque wrench (0-1200 lb-ft capacity) NSN 5120-00-169-2986 and reaction bar NSN 5120-01-008-3632 ( not on AMDF yet).

These 2 items have recently been added to the organizational maintenance full tracked tool set supplemental No. 2, NSN 4940-00-754-0743.

The change is authorized by TB 43-0001-39-1(Apr 77).



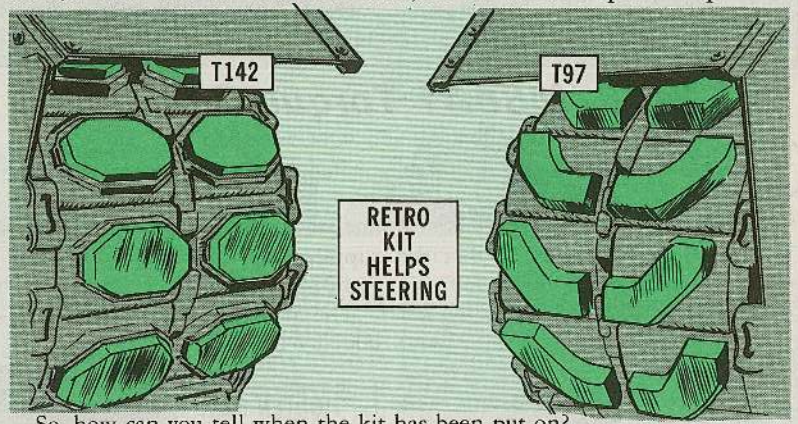
# Tank Steering Fix




Got an M60-series tank? ( or M48A5, M728 CEV? or AVLB?)

You need steer valve retrofit kit NSN 2520-00-510-0358 to make it steer better. Your DS/GS unit will put the kit on for you.

This kit should be installed in all M60 family tanks. If you've just replaced the old T97 track with the new T142 track, the kit will be a special help.




So, how can you tell when the kit has been put on?

Look at the serial number on your CD 850-6A transmission. If it has SN 43190 or higher, the fix is already on the transmission. Likewise, if the letter "T" has been stamped after the transmission serial number.

If the transmission number is lower than SN 43190 and there is no "T" stamped after the number, you need to tell your support to put the fix on.

The EIR Digest, TB 43-0001-39-4 (Jan 77) has the good word, in Article 4-h on page 56.



# Radiator Cap Rumble

Your Sheridan engine overheating?

This can happen when the surge tank radiator cap, NSN 2930-00-912-6687, is not holding the pressure.

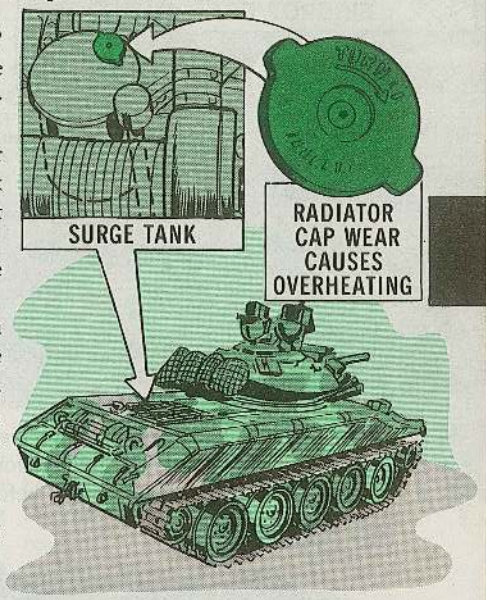
The cap is steel and its tangs wear the soft aluminum of the surge tank neck until it makes a sloppy fit that releases the pressure.

When this happens the engine overheats.

The head shed is coming up with a fix—either a brass filler neck in the surge tank or a soft plastic filler cap.

Either way, there is nothing you can do now except replace the surge tank when you get engine overheating.

True, the surge tank, NSN 2930-00-918-6218, costs $107—but that's cheaper than buying a new engine.




Steering Problem? . . .

# Road Test After Repair


Any time you work on the steering transmission system of an M578 recovery vehicle, or M107/M110/M110A1 SP artillery vehicle, give the vehicle a road test—Carefully!

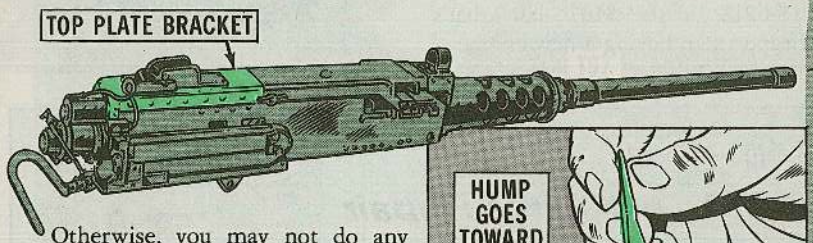
Test the steering for 5 to 7 miles. Idle or shut off the engine for 5 minutes, then drive an additional mile or more to make sure all adjustments are OK.

If there's any trouble at all, call direct support.

The road test is needed to see if the transmission and steering are OK—and it takes that many miles to be sure.

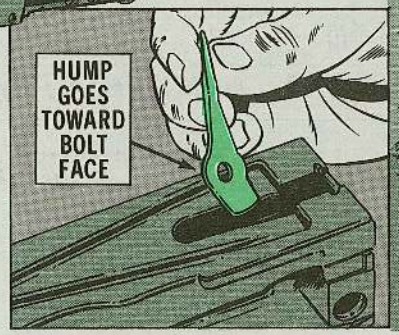
TM 9-2350-238-20 is being changed to include this requirement in para 2-144 and table 2-3, item 36. This will also be changed in TM 9-2300-216-20, para 2-138 and table 2-3, item 35.


If you want to avoid the cocking lever blues next time you've got the bolt group out of your M2 machine gun for cleaning, be extra careful how you reinstall and position the lever . . . before you put the bolt back in the gun.




Otherwise, you may not do any shooting for awhile.

For instance, if you install the cocking lever backwards and then put the bolt in the gun, the lever will hang up on the plate bracket. That means you're done shooting until your armorer bails you out.



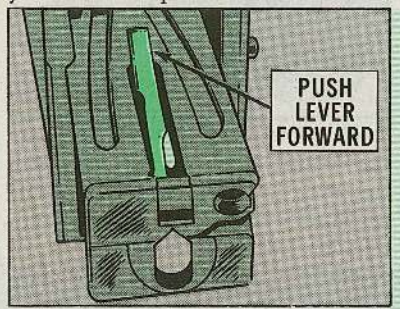

So, when you install the lever, be sure the hump part of the lever (around the pin hole) goes toward the face of the bolt. The less rounded part faces the rear.

If the firing pin's uncocked, it's hard to put the pin through the lever if you've got the lever in the wrong position. So, if it's tough to line up the pin, get suspicious.



Second, if the firing pin's cocked, you've got a problem . . . because it's fairly easy to slip the pin in even though the lever's facing the wrong way.

The big point: Eyeball the hump on the lever and face it frontwards before you insert the pin.

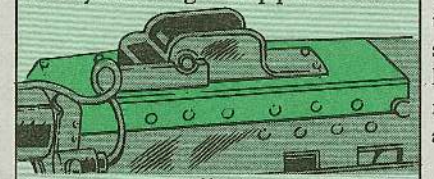



Another problem: You can install the lever right and still foul up. The way to avoid that, after you install the lever, is to push the lever all the way forward . . . toward the bolt face . . . before you install the bolt in the receiver.

If you leave the lever in the rear position, it'll snag the top plate bracket . . . just as it does when it's installed with the large hump to the rear.

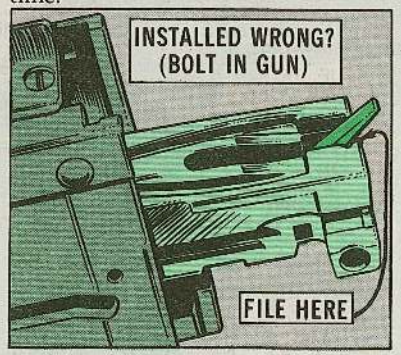
That's about all you can do. Install the lever right; position it right.


First off, **never** try to get the lever free by removing the top plate bracket.



You may get it off (rivets and all), but it's a depot repair job to get the gun together again.

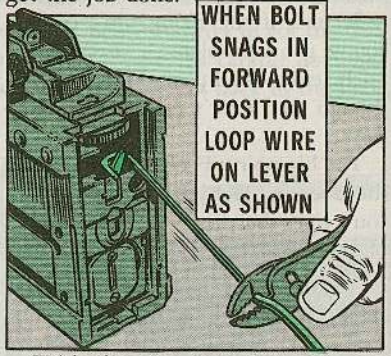
There're just 2 things an armorer can do if the cocking lever snags because it was installed wrong. You can file it off or use a hacksaw blade and very carefully saw it off. It'll take time.




If the lever was installed right but put in the gun in the wrong position, you can get it out without tearing up the lever.

First, since the bolt's not in battery position, you have to figure out which problem you have. So, eyeball the cocking lever. If the hump is toward the face of the bolt (which is where it should be), you can retrieve it. If the large hump is up, with the lever in the rear position, in other words, breathe a little easier.

In that case, you can use sturdy lacing wire or other make-shift tool to get the job done.




With the wire (or whatever) snag the cocking lever from the rear. Pull the lever down and back with steady pressure (it's not gonna be easy). With wire, use vice grips or pliers.

Have a buddy push on the bolt face with a brass or wood punch.

Both of you should keep up a steady pressure until the bolt is free.


PS END




Hold it one cotton-pickin' minute, M16A1 rifleman/armorer!

If you're about to bash those lugs on the upper receiver group with a hammer or makeshift hammer, forget it! All you'll do is make grief for yourself.


In the first place, bashing the lugs so the takedown and pivot pins will be more snug won't necessarily mean the upper receiver will be more snug.

In the second place, you're going to crack the lugs or mash 'em up so bad you won't be able to get the pin in . . . or maybe out. In short, scratch one upper receiver.

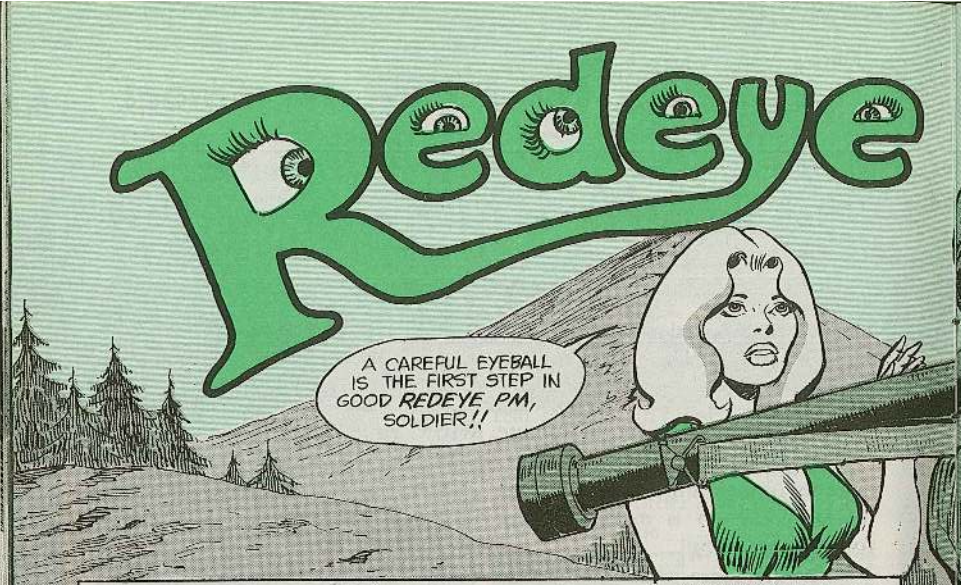

Third, it's OK if the upper receiver is a little loose. That's its nature. If you get too much play, or feel it's too loose, get your support to check it out.

Despite what you may have heard, there is no authority or recommended fix that suggests you bash those lugs "tighter" with a hammer.

## No .50-Cal BFA's

Blank firing attachments for the M2 and M85 machine guns are being developed. It'll be a good while before they're available to field units.

# Redeye CAUTIONS





Take a dab of caution, add it to some sensible care . . . and your Redeye weapon or trainers will stay in business a lot longer.

For instance:

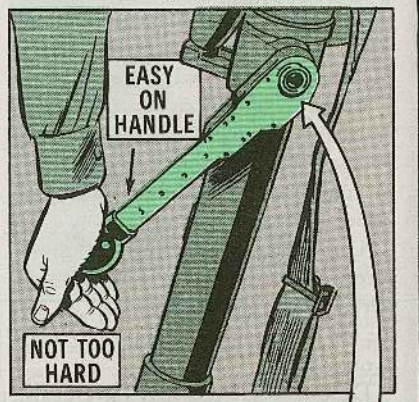
Too much enthusiasm when you use the compressor assembly pump handle can make for complicated repair.

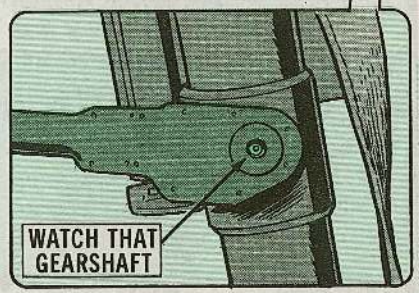
When the handle comes down, it hits a stop. If you come down too hard . . . or if you try to force it beyond the stop . . . you can shear off the pins in the gearshaft.

When that happens, you've set the system up for major disassembly and repair.

You've also set up the possibility of the gearshaft coming out under pressure and injuring you or someone nearby.

The idea is, when you feel the stop, quit . . . and swing the handle the other way.






## COVER

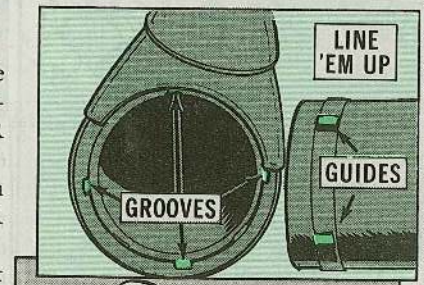
A few seconds' patience is the byword when you install the protective cover on the seeker end (IR window).

Take time to line up the grooves in the cover with the guides above the IR window.

An easy way is to line up the flat surface or edge on the top of the cover with the flat edge of the sight. The sight, naturally, has to be in stow position. Then, slide the cover easy-like over the guides (rubber indexes).

If you force the cover . . . or get it on crooked . . . you can crack the cover or bust up the guides. That could make for costly repairs if bright light gets to the IR window.

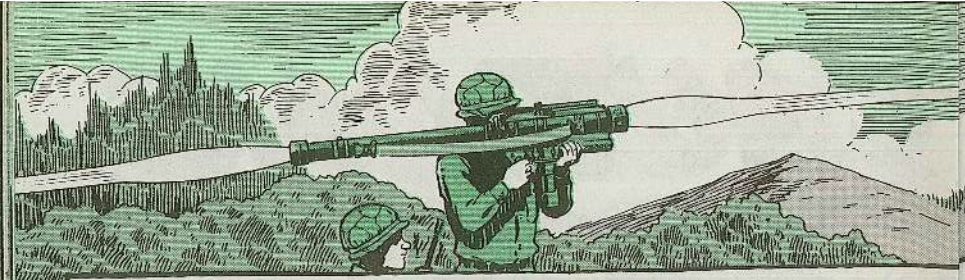
If your cover should get cracked, or if it slides off without any help from you (too loose, that is), get it replaced soonest.







PS MORE



## BATTERY

Batteries stored in the battery charger can beat up the charger quick-like if you don't keep an eye on them. They leak and corrode.

Best bet is to remove the batteries if they're going to go unused for weeks or months.

The next best bet is to check them at least weekly while they're stored in the charger . . . and make sure the battery contact shield is covering the contact rings.


Otherwise, leakage corrodes the thermal switch and the battery well contacts in the charger.


Other ways in which you can protect the charger include:

Hold onto the batteries and slide them into the wells easy-like. Don't drop them in, because if you do they hit the thermal switch and cause it to short out.

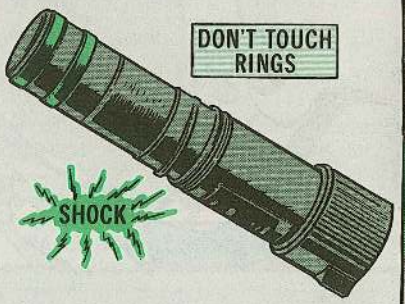



## CHARGER

Wipe all sand and dirt from the battery before you put it in the charger.

That way it's easy to remove the battery after it's charged. And, sand and dirt won't get in the thermal switch. Crud in the switch could prevent it from making contact.

Remember—when you clean the battery—never touch both contact rings at the same time. If you do you'll get shocked.

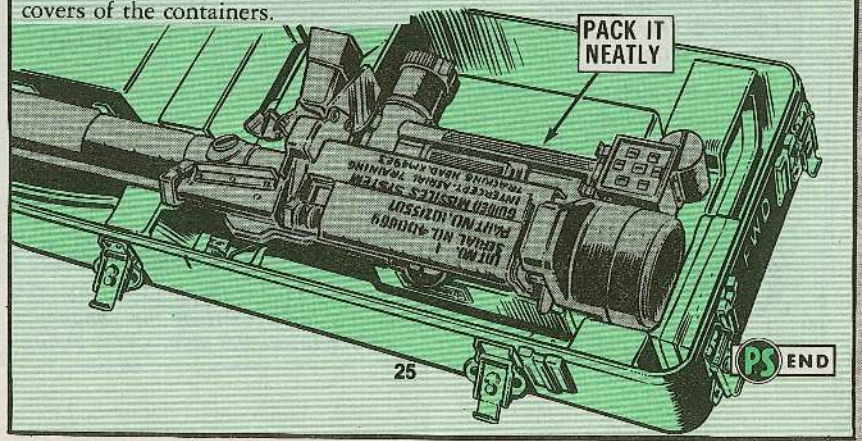



## CONTAINERS

Packing your equipment in the shipping and storage containers takes a little care, but that care pays dividends.

If you pack the gear quick and not so neat, you can tear up the cushions, damage the latches and spring the covers of the containers.

So-o-o-o, carefully lay the components in the recesses made for them. Seat the covers flush all around, and then snap the latches into place. If you've got to force the latches, then the components aren't in right or the cover is not flush.



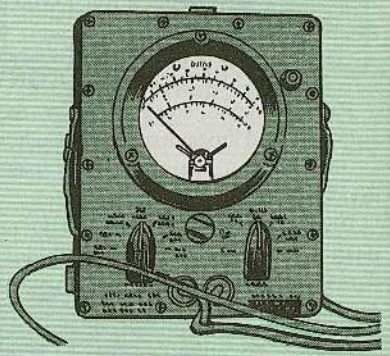
# A Dowel For Your AN/PSM-6B


*Dear Editor,*

*The AN/PSM-6B multimeter, used to test components of the Hawk missile system, is deadlined at times while awaiting a replacement battery holder.*

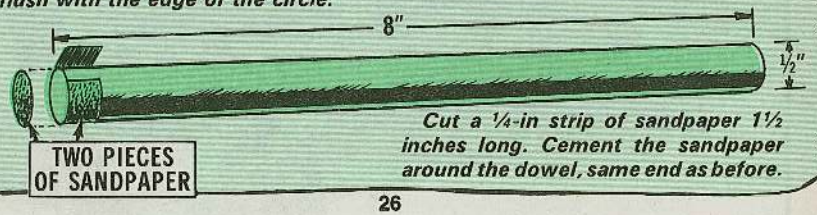
*The electrical contacts at the base of the holder are damaged as the BA-1328/U battery deteriorates and corrodes. When that happens the holder usually has to be replaced, and the battery is discarded.*

*Here's a way to keep the battery holders in action:*



*The holder is 5 inches deep by 11/16 inches in diameter. Make an 8 inch long by ½-in diameter piece of doweling.*

*Cement a round piece of fine sandpaper to the bottom of the dowel. Trim it flush with the edge of the circle.*




*Cut a ¼-in strip of sandpaper 1½ inches long. Cement the sandpaper around the dowel, same end as before.*



## How to do it on the M501

If maintenance procedures on the M501-series Hawk loader-transporter have been bugging you, or if you'd just like to know more about taking care of the vehicle, lots of good help is available.

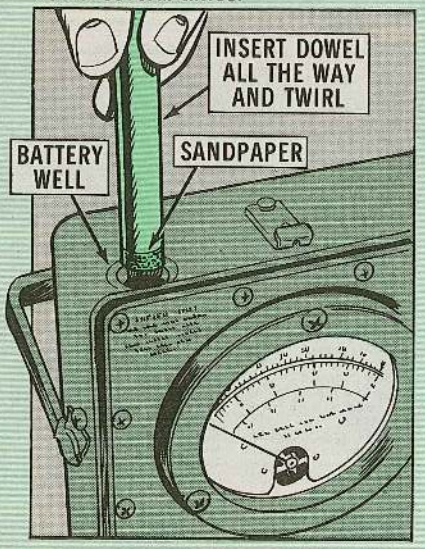
The U.S. Army Ordnance and Chemical Center and School has an 8-lesson organizational maintenance course on the M501 which thoroughly covers it, component by component. Its title is Ordnance Subcourse 63C211.

To enroll in the correspondence course, just write:

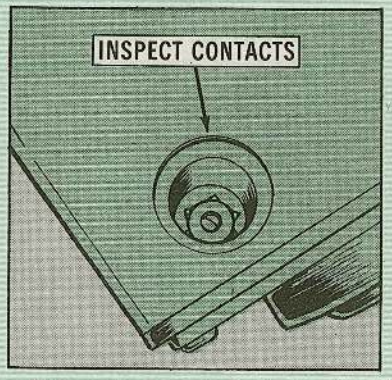
Commander
US Army Ordnance and Chemical Center and School
ATTN: ATSL-DD-AP
Aberdeen Proving Ground, MD 21005

Commanders who'd like Subcourse 63C211 for OJT or other instruction of their troops can get it by calling Autovon 283-4606 or 283-3388. Or, commanders can write to the above address, ATTN: ATSL-DT-ET.

*Put the dowel in the battery holder (sandpaper end down). Twirl the dowel several times.*




*Check the electrical contacts to be sure they're clean.*




*The method works both at unit and support level maintenance, and we've been able to get a number of multimeters off deadline with it.*

*Robert L. Bly*
*Fort Eustis, VA*

*(Ed Note: Sounds like a winner to me. I'm sure other troops will make good use of your idea).*

# PUBS

This is a selected list of recent pubs of interest to organizational maintenance personnel. This list is compiled from recent AG Distribution Centers Bulletins. For complete details see DA Pam 310-4 (Nov 74), and Ch 3 (Oct 75), TM's, TB's, etc.; DA Pam 310-6 (Jul 76) and Ch 2 (Dec 76), SC's and SM's and DA Pam (O) 310-9 (Aug 74), COMSEC pubs.

### TECHNICAL MANUALS

**Ch 2, TM 3-1040-202-12** Mar M3A3 Smoke Generator
**Ch 4, TM 3-1040-209-12** Mar M10-8 Flamethrower
**TM 3-1040-220-12 & P** Mar M5 Riot Control Agent Disperser
**Ch 5, TM 3-1040-256-12** Mar XM45E1 Flamethrower
**Ch 3, TM 5-1080-200-10 & P** Feb Camouflage Screen System Woodland Lightweight
**Ch 1, TM 5-5420-202-10** Mar AVLB M60A1
**Ch 1, TM 5-5420-203-14** Mar 60-Ft Bridge Used with M48 or M60 Launcher
**TM 9-1000-202-14** Nov Evaluation of Cannon Tubes
**TM 9-1425-470-L** Mar TOW
**TM 9-1425-500-L** Mar Basic and SP HAWK
**TM 9-1430-534-24P** Feb Improved HAWK
**Ch 5, TM 9-2320-206-20P** Feb 10-Ton Truck M123, M123C, M123A1C, M123E2, M125
**TM 9-2350-256-10** Mar M88A1 Recovery Veh
**TM 9-4935-481-14-2** Apr Dragon
**TM 9-6920-364-12 & P** Jan M132 Training Rocket
**Ch 1, TM 10-8110-201-14** Feb 500-Gal Drums, Fabric, Collapsible
**TM 11-1520-236-20** Apr Electronic Equip AH-1S
**TM 11-5820-549-20P** Apr AN/PRR-9 Radio Receiving Set and AN/PRT-4 () Radio Transmitting Sets
**TM 11-6130-238-24P** Apr Charger, Battery PP-1659/G and PP-1659A/G
**TM 11-6130-247-24P** May Power Supply PP-3940/G
**TM 11-6130-247-24P-1** Apr Power Supply PP-3940A/G
**TM 11-6625-403-20P** Feb AN/UPM-98 Radar Test Set
**TM 11-6625-555-24P** Apr AN/USM-182A Oscilloscope
**TM 11-6625-561-24P** Mar AN/GPM-46A Radar Test Set
**TM 11-6625-602-20P** Apr AN/USM-181 () Telephone Test Sets
**TM 11-6625-636-24P** Apr AN/ARM-69 Electronic Frequency Converter
**TM 11-6625-1610-24P** Mar MK-1035/ARC-131 Maintenance Kit
**TM 11-6660-232-20P** Apr AN/PMQ-3A Wind Measuring Set
**TM 55-1500-322-24** Aug Aeronautical Antifriction Bearings
**Ch 30, TM 55-1520-210-20** Mar UH-1D/H
**TM 55-1520-210-23P** Mar UH-1 Series
**TM 55-1520-217-23-2-1** Apr CH-54B
**TM 55-1520-217-23-2-2** Apr CH-54B
**Ch 1, TM 55-1520-228-PMS** Mar OH-58A

### MISCELLANEOUS

**AR 190-11** Mar Physical Security of Weapons, Ammo, Explosives
**Ch 4, AR 710-2** Apr Supply
**Ch 5, AR 710-3** Asset and Transaction Reporting System
**DA Cir 750-37-36** Apr Sample Data Collection 2½- and 5-Ton Trucks
**DA Form 3056** Mar Report of Missing/Recovered Firearms, Ammo Explosives
**DA Pam 750-33** Dec Charging System Trouble Shooting
**Ch 1, FM 6-36** Apr Lance
**FM 11-34H 2/3** Apr Automatic Digital Message Switch Equipment (ADMSE) Repairman MOS 34H Skill Levels 2/3
**FM 21-15** Feb Individual Clothing and Equipment
**LO 5-2805-256-12** Feb Gasoline Engine 1½ HP Mil Std
**LO 5-5420-202-12-1** Mar M60A1 AVLB
**LO 9-2320-269-12** Mar Truck, Maint Telephone
**SB 9-16** Apr Personnel Heater and Winterization Kit Policy for Tank-Automotive, Construction and Material Handling Equip
**SB 11-30** Apr Dry Battery Management Data
**SC 7360-90-CL-N03** Feb Gasoline Field Range
**TB 9-380-101-10** Mar Redeye
**TB 43-0212** Apr Purging, Cleaning, Coating Interior Vehicle Fuel Tanks

## AUDIO-VISUAL STUFF —Available at Your Local TASC

(Training and Audiovisual Support Center)

### FILMS, TRAINING AIDS

**AFIF 308** Meters, Liters and Kilograms
**GTA 5-4-31** Mine Detector-AN/PRS-7 and AN/PSS-11
**GTA 10-1-2** Field Kitchen Equipment-Part I-M1948 Kitchen Tent
**TG 10-2-17** 500-Gal Non-vented Collapsible Drum

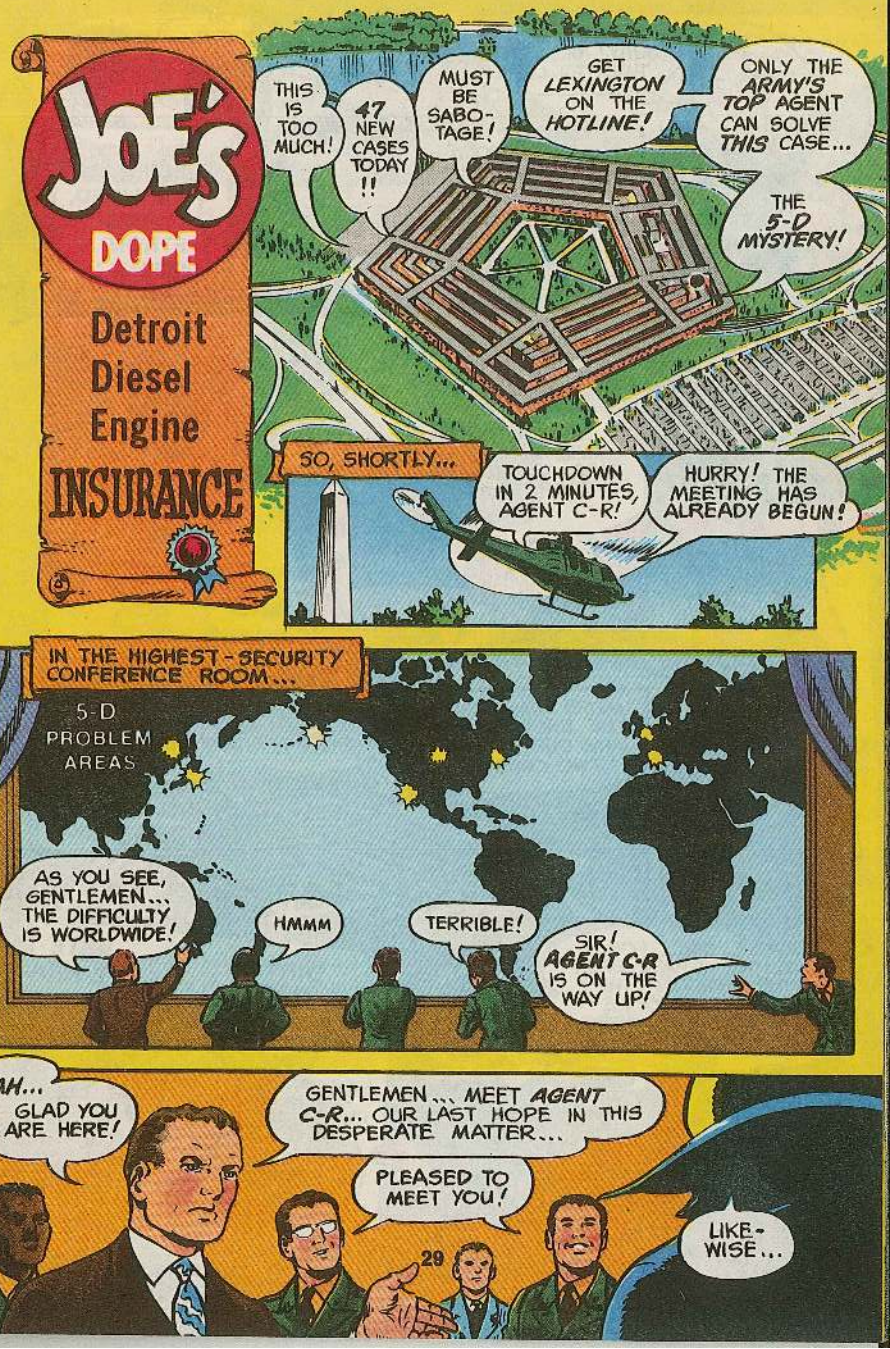
### TEC LESSONS

**020-171-1635-F** Checkouts, Tests of the Missle Subsystem, M551
**020-171-1662-F** During-Operation Checks, Services, M551
**020-171-5228-F** Troubleshooting the M-85 Machinegun
**041-061-6170-E** Fire Control Alinement Tests (Preparation) Hands-on Practice M109/M109A1 Howitzer
**041-061-6171-E** Fire Control Alinement Tests (Preparation) Hands-on Practice M102 Howitzer
**041-061-6172-E** Fire Control Alinement Tests (Preparation) Hands-on Practice M107 Gun, M110 Howitzer
**041-061-6173-E** Fire Control Alinement Tests: Hands-on Practice M102, M109/M109A1, M110 Howitzers, M107 Gun
**043-441-1032-F** FAAR Maintenance, Pretactical, Tactical Operation
**043-441-1033-F** FAAR Maintenance, Pretactical, Tactical Operation
**043-441-7872-F** Introduction/Inspection of Redeye: Part 2
**043-441-7873-F** Introduction/Inspection of Redeye
**662-051-7509-A** Technical Tables for Servicing GED Generator
**662-051-7612-A** Computing the Load and Selecting the Appropriate Generator
**662-051-7613-A** Balancing the Loads and Drawing the Distribution System
**662-051-7614-A** Selecting the Proper Line Cable
**941-071-0117-F** Cal. .50 Machinegun: Headspace, Timing

## *Dragon Spots*

Revised TM 9-1425-480-10 (Jun 77) on the Dragon permits operator/organizational maintenance types to spot paint the tracker and round. The TM tells you what to use and how to use it. Spot painting used to be a support job.





...BUT LET'S GET BUSY! WE'VE NO TIME TO LOSE!

RIGHT ON, AGENT C-R...

...WE MUST SOLVE THIS 5-D* PROBLEM IMMEDIATELY...

*5-D . . .
D EBILITATED,
D EADLINED,
D OOMED
D ETROIT
D IESELS

ENGINES ARE POOPING OUT IN ALMOST EVERY UNIT USING DETROIT DIESELS...

...WHICH POWER THEIR M113A1 CARRIERS, M551 SHERIDANS, AND SP ARTILLERY, ETC.

6V53 6V53T 8V71T

HMMM...

MORE THAN HALF THE ENGINE FAILURES ARE DUE TO JUST TWO CAUSES...

...DIRT GETTING INTO THE ENGINE AND ENGINE OVERHEATING, RIGHT?

WHY... HOW DID YOU KNOW?

SIMPLE, SIR... FOR SOME TIME I HAVE BEEN ON THE TRAIL OF THE DASTARDLY DUO RESPONSIBLE FOR THESE TWO DESPICABLE DEEDS!

DIRTY DAN

PETE THE HEAT

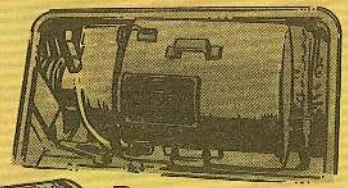


WE'VE BEEN TRYING TO CLOSE IN ON THESE TWO SLIPPERY SABOTEURS OF ARMY GEAR...

HERE IS SOME USEFUL INFO FOR OPERATORS THAT CAN HELP TO CUT DOWN THE 5-D PROBLEM...

## HOW TO PLAY IT CLEAN

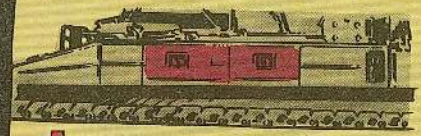
KEEP DIRT OUT OF ENGINE BY STOPPING IT AT THE AIR CLEANER FILTER... CHECK FOR THESE DEFECTS...



**A** Filter unserviceable, oil soaked, element fabric full of rips and holes. (Get new filter element.)

**B** Filter full of dirt or water. (Clean and dry filter according to your TM.)

**C** Air cleaner doors do not seal properly. (Get your mechanic to work on the doors.)



**D** Holes or tears in the air induction tubes between air cleaner and engine. (Get new tubes.)

**E** Hose clamps loose. (Tighten.)

**F** Filter elements neglected. If your vehicle has an air restriction indicator, keep an eye on it. Clean the filter when the indicator gets into the top "red" position. If there is no indicator, check air cleaners daily and clean as necessary.

**G** Extreme conditions. When it is very dusty you have to clean the filter elements more often; sometimes as ofter as twice a day . . .

HERE'S A PIN-UP POSTER THAT SPELLS OUT THE BEST ANSWER TO ANY MAINTENANCE PROBLEM!


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

AHEM! AS TOP RANKING MEMBER OF THIS CONFERENCE, I'LL TAKE CHARGE OF THIS DOCUMENT, AGENT C-R!

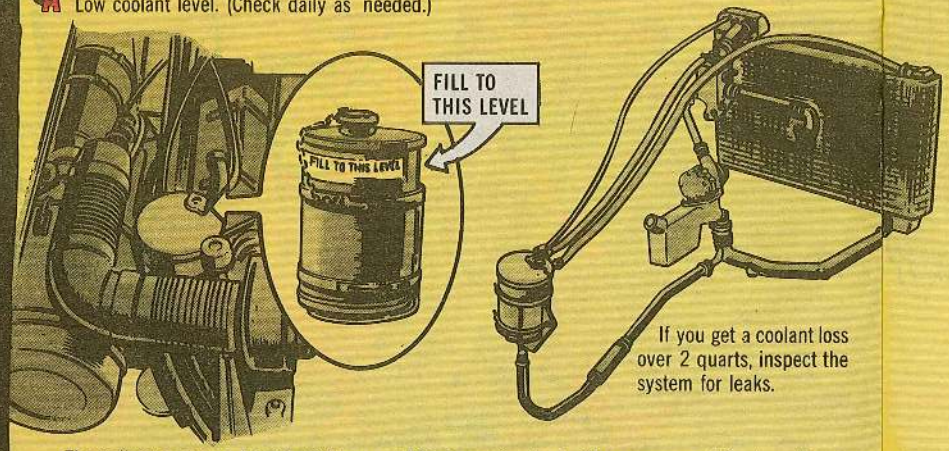
ER... OF COURSE, SIR!

NOW HERE IS SOME MORE POOP TO ASSIST *DETROIT DIESEL* OPERATORS!

# HOW TO PLAY

THERE ARE DOZENS OF DIFFERENT REASONS FOR ENGINES TO OVERHEAT, BUT CHECK ON THESE COMMON ONES. THEN, IF *YOU* CAN'T CURE THE PROBLEM, GET HELP FROM YOUR MECHANIC.

**A** Low coolant level. (Check daily as needed.)




If you get a coolant loss over 2 quarts, inspect the system for leaks.

The radiator cap may be at fault if you can't find any other leaks. The pressure relief valve—if the cap has one—may not work right, or you may have the wrong PSI cap for the vehicle. You need these caps for these vehicles . . .

| VEHICLES | PRESSURE | STOCK NUMBER |
|---|---|---|
| M113A1, M557A1, M106A, M125A1, M132A1, M548, M727, M730, XM806E1, M741 | 13-18 | NSN 2930-00-933-6424 (P/N 11589341) |
| M107, M110, M598 | 19-23 (2 caps) | NSN 2930-00-950-0740 (P/N 10925255) |
| M109/M109A1 | Threaded Cap | NSN 2930-00-737-6626 (P/N 7376626) |
| M551/M551A1 | 14-17 | NSN 2930-00-912-6687 (P/N 10946982) |

GREAT INFO, AGENT C-R!

RIGHT ON! WE'LL SEE THAT IT GETS TO ALL *DETROIT DIESEL* TYPES... *PRONTO!*

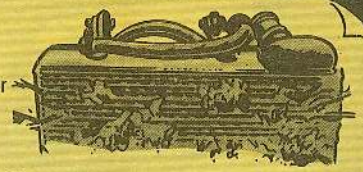


HMMMPH! RANK *DOES* HAVE ITS PRIVILEGES!

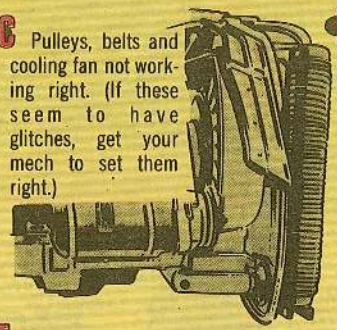
NO QUESTION -- HE'S *RANKER* THAN THE REST OF US!

# IT COOL . . .

**B** Radiator clogged from the outside. (Clean radiator to remove leaves, mud, oil, etc.)



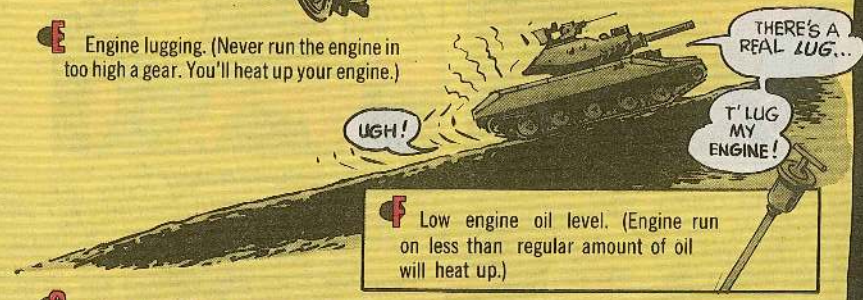
**C** Pulleys, belts and cooling fan not working right. (If these seem to have glitches, get your mech to set them right.)



**D** Panels, plates or shrouds missing or not in place.


(These vehicles were made to be operated with everything in place. If you run the vehicle with out 'em—a hotter engine.)

**E** Engine lugging. (Never run the engine in too high a gear. You'll heat up your engine.)




**F** Low engine oil level. (Engine run on less than regular amount of oil will heat up.)

**G** Other things that cause engine overheating are . . .

a bad coolant pump . . .

a bad or missing thermostat . . .

or transmission trouble.


Have your Mechanic check 'em **ALL** out!

GOOD! *DD* OPERATORS MUST PLAY IT CLEAN AND COOL... THAT'S THE RULE!

WHAT TH...

DIRT AN' HEAT...

HEH-HEH!

HO-HO!

... BLOWING FROM OUR VENTILATOR!


COMMUNICATIONS

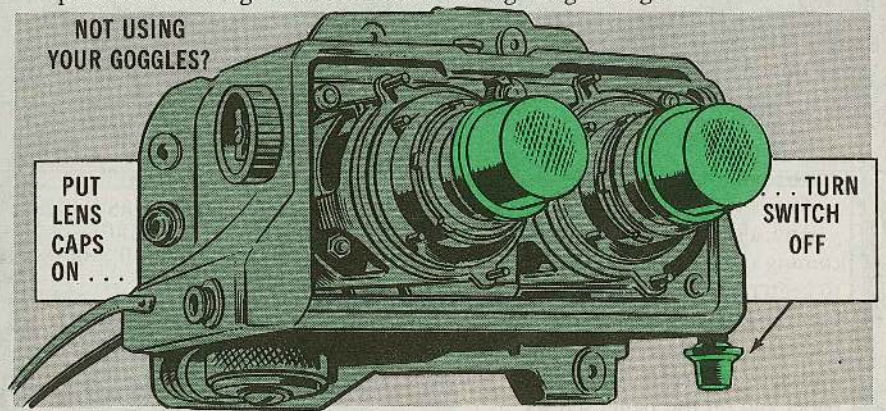
For AN/PVS-5 . . .

# Give PM Look at Goggles


The AN/PVS-5 night vision goggles can shed a little light on what you're looking at if you let 'em. And, to keep 'em that way you need to focus in on some PM points.

Whenever you're through using your goggles, make sure the lens caps are in place. The caps will protect your goggles from bright light damage as well as saving those lenses from dirt and dust scrapes and scratches.

If you're not using your goggles for a while, turn the OFF-ON-IR rotary switch to the off position. This 'll keep your BA-1567/U battery NSN 6135-00-485-7402 from going dead before its time. Turning that switch off will also protect those image intensifier tubes from getting damaged.




Use the IR (infrared) only when necessary 'cause it drains the battery and can easily be detected by the enemy using night vision devices at long range.

Always keep your carrying case assembly closed to keep dampness out.

TA-43, -312 . . .

# TELEPHONE SET PM KEEPS 'EM TALKING

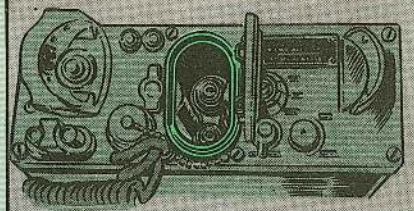

That's right!

And, a good way to keep the talking coming and going on your telephone is to keep moisture out. The best way to beat the wet worries is to make sure all gaskets are in place and in good shape, especially between the housing and panel and on the panel screws.





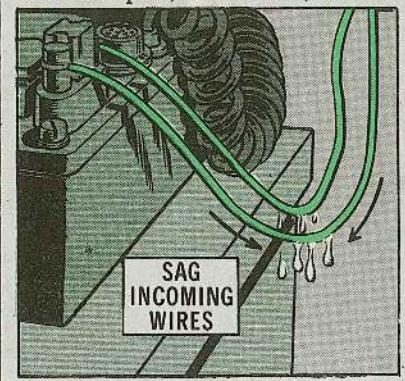

It's also a good idea to eye the gasket in the battery compartment.



A cracked or missing gasket is an open invitation for damaging dampness inside the telephone case.

You might rub a light coat of silicone compound NSN 6850-00-880-7616 around the panel and housing assembly gasket. This'll go a long way in warding off water. It'll snuggle up the panel and housing case.

When you have the telephone tied to a tent pole, or the like, be sure




there's a sag in the WD-1/TT field wire coming into the binding posts. Otherwise, wiring angled down to the telephone set makes for a rain-dripping track that will lead to trouble.

PS MORE

When it rains, cover your set with a poncho, plastic sheet or anything else that sheds water.

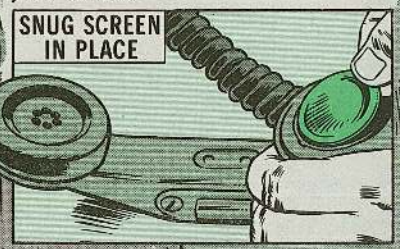
Same goes for that CY-1277 carrying case. It'll ward off water. But take it off to dry when the fabric gets wet.


A little foam rubber disc in the U-79 electrical connector cover does not amount to much until it's missing.


Then, moisture seeps in and messes up the connector's contacts.

To keep the disc NSN 5935-00-566-3859 snug in the cover, use a good adhesive or sealant on the back of the disc. NSN 8040-00-270-8150 is for a 1-oz tube of sealant that'll do a good sticking job for you.

One other way to keep moisture out of your set is make sure the moisture shield or de-icing screen is in the transmitter element of your H-60 handset and it is put in right. Just line up the dot on the shield with the notch on the transmitter element cover. Then, snug the shield in place with your thumb.






# ROUGH STUFF IS OUT

Never pick up your telephone set by the crank handle. It'll break.


A good habit to get into is to fold the handle back into its slot as soon as you have finished using it.

Left sticking out, the handle can snag on any of a thousand things and break off.

And, back off the H-60 handset. It's not a handle either. Sure, it fits in your telephone set snug, but it does not hug. When you lift by the handset it puts a lot of strain on the retaining springs in the receiver cradle.

To avoid springing the springs, take the handset out of the cradle by pushing it toward the spring and then lifting up on the cord end. Replace handset by first holding the cord end up while pushing the other end in toward the spring.

If you need to test the handset hold, hold or stand the set vertically. If the handset stays in the cradle, the springs are OK. If the H-60 falls out, the springs need to be adjusted, reset or replaced.

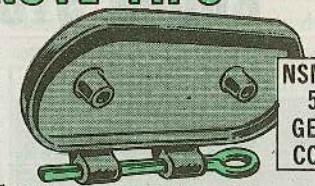
When you're not transmitting, steer clear of that PRESS-TO-TALK switch. Casual pushing or strapping the switch can weaken your BA-30 batteries needlessly.


That retractile cord has a lot of snap, but when it's overstretched it gets snapless. Too much stretching makes the cord fray and break at the connection points.

PS MORE

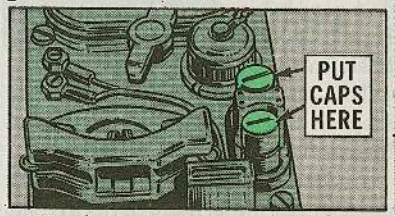
# LAST MINUTE TIPS

If the battery box cotter pin wears out or gets lost get yourself a cotter pin NSN 5315-00-524-0243 about 3½ inches long and 5/64 inch thick . . . and slip it in.




If you're looking for screws to hold down your telephone set's identification plate, your search has ended. Use NSN 5305-00-054-5635 for the screws that'll do the ID plate hold down job for you. Nameplates on some of the later model telephone sets are riveted and do not need screws.

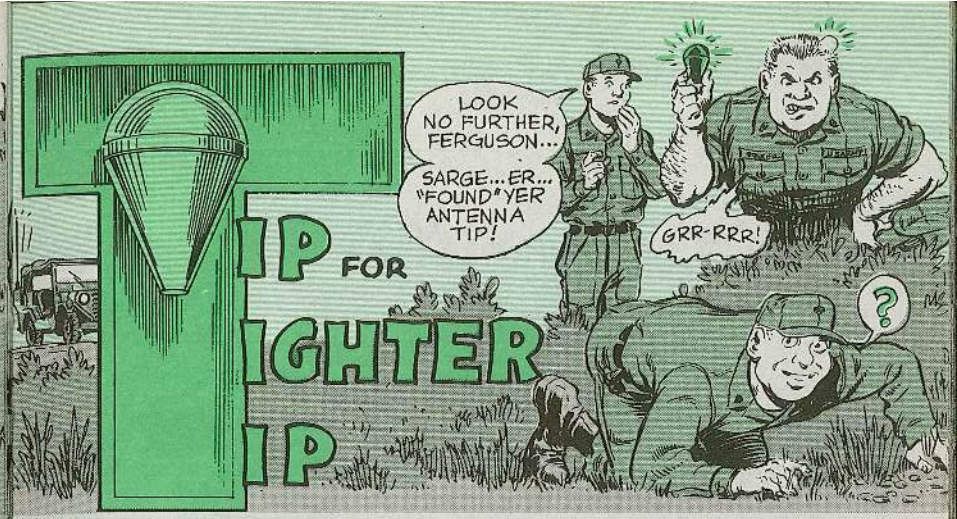

And, for screws to hold the telephone chassis in its case, use NSN 5305-00-879-5446. NSN 5310-00-965-1806 is for the washer and NSN 5330-00-448-1018 is for the rubber gasket.




Cover the binding post with rubber cap NSN 5940-00-254-2243.

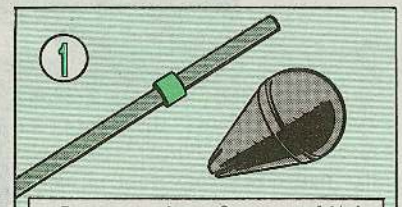
Appendix A of CTA 50-970 (Jul 74) is the authority for requesting these items.


# TIP FOR LIGHTER TIP

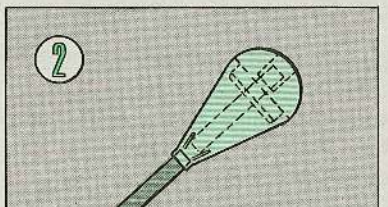



Any sharp snap of your AS-1729 antenna's AT-1095 section can fling the tip assembly to parts unknown.

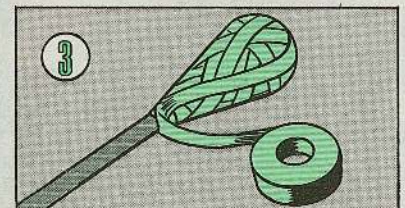
To keep this tip tight on the tip of your AT-1095, add a few wraps of tape. Here's how:



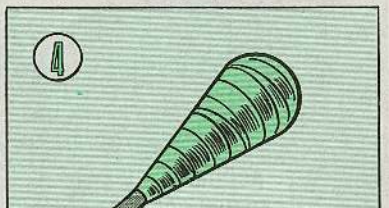

Put a couple or 3 wraps of ½-in tape NSN 7510-00-290-8034 around the antenna element 2 inches from the tip.




Then, force the tip assembly onto the AT-1095.




After you've snugged the tip in place, wrap the tip with ¾-in tape NSN 5970-00-419-4291...

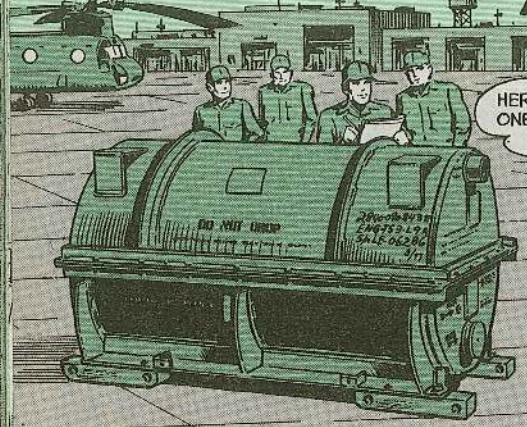


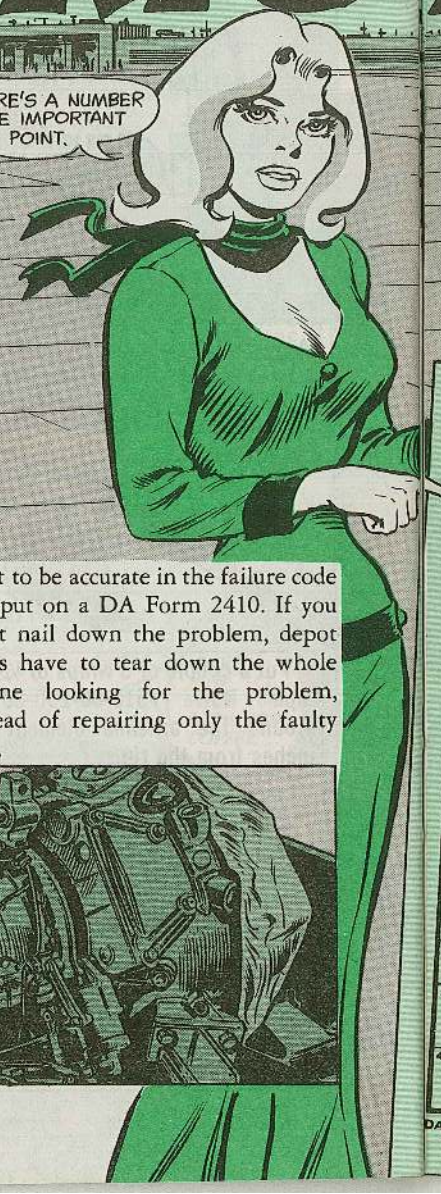

...until the entire tip is taped.

AIR MOBILITY

Pass The Word With . . .

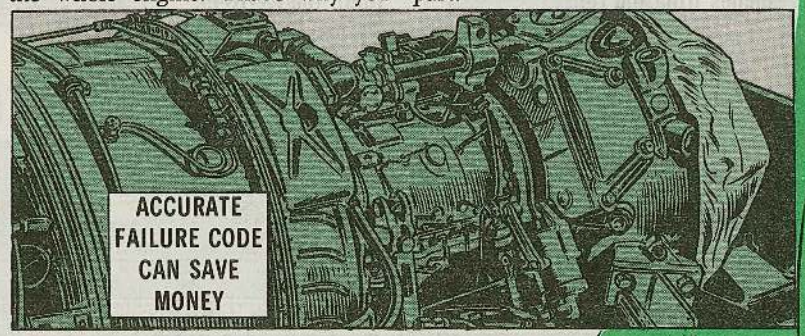
# The RIGHT Code



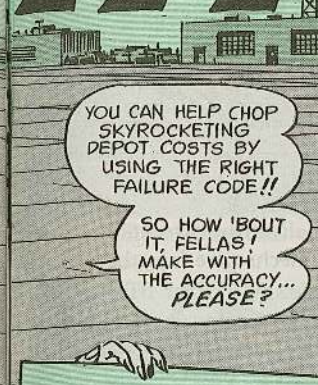



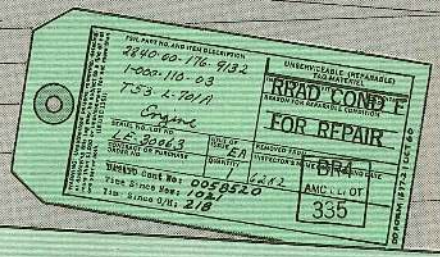

Hold one, mechs! Be real careful with the failure code you use on a turbine engine going to overhaul. You could save Uncle a bundle.

A new look at depot costs has resulted in a program for partial engine repair, rather than overhauling the whole engine. That's why you want to be accurate in the failure code you put on a DA Form 2410. If you don't nail down the problem, depot types have to tear down the whole engine looking for the problem, instead of repairing only the faulty part.






513

**COMPONENT REMOVAL AND REPAIR/OVERHAUL RECORD**

For use of this form, see TM 38-750; the proponent agency is Office of the Deputy Chief of Staff for Logistics.

REPORTS CONTROL SYMBOL CSGLD 1052(R 1)

SECTION I — IDENTIFICATION

| CONTROL NO. | 1. NOUN NOMENCLATURE (Comp) | 2. MODEL | 3. NATIONAL STOCK NO. |
|---|---|---|---|
| 0058520 | Engine Turboprop | T53-L-701A | 2840-00-176-9132 |

| 4. SERIAL NO. | 5. MANUFACTURER'S CODE | 6. PART NO. | 7. USAGE SINCE LAST INSTALLATION HOURS | MILES |
|---|---|---|---|---|
| LE-30063 | 26512 | 1-000-110-03 | 218 | |

| 8. FOR AIRCRAFT COMPONENTS ONLY | a. PRIOR OVERHAULS (No.) | b. ESTABLISHED T.B.O. (Hrs) | c. USAGE SINCE NEW (Hrs) | d. USAGE SINCE OVERHAUL (Hrs) |
|---|---|---|---|---|
| | 1 | 1800 | 1021 | 218 |

9. REMOVED FROM [illegible]

SECTION III — REPAIR/OVERHAUL [illegible]

Some codes, for example, that do not give a clue to the problem are:

020 "worn excessively"

190 "cracked"

381 "leaking"

Your support needs to know what part's worn excessively? Where's the crack? What's leaking?

When you can't find a specific code in Appendix A of TM 38-750 to match the problem, go ahead and use a general code. Enter the failure code in block 18 and in the left hand corner above the control number of the DA Form 2410. Then, print or type in title blocks 19 and 20, a brief description of the problem—if known.

Minor depot repair on a T-53, T-55 and T-63 means a faster engine turnaround time—so you can "keep 'em flying!"

DA FORM 2410-1 AUG 75

(Julian) 45

43. SIGNATURE

SALES EDITION OF 1 OCT 74, WHICH IS OBSOLETE.

Inverters Failing?

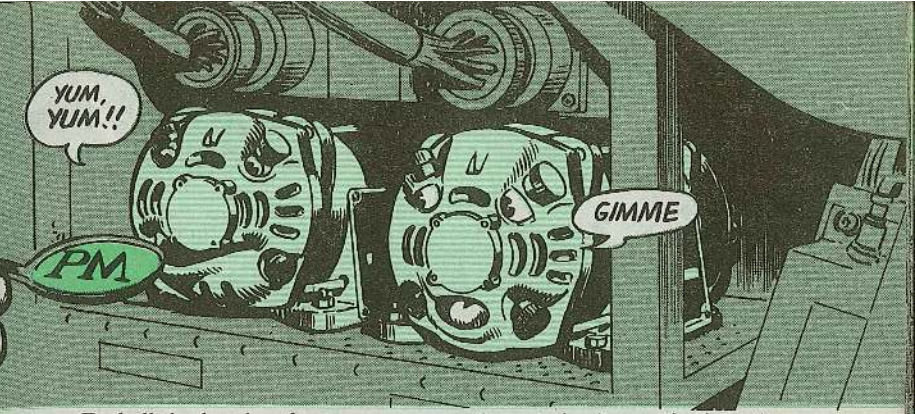
# GIVE 'EM PM!


The motor generators (inverters) in your aircraft will deliver the current to keep your baby belting thru the blue—but only if you mechs give 'em the attention they deserve.


All rotary inverters are now a condition item. So, look for a change to TB 55-1500-307-24 removing them from the historical info requirement list. Data won't be collected so there is no time-between-overhaul or retirement interval. The idea is to keep the inverters humming until they no longer pass inspection.

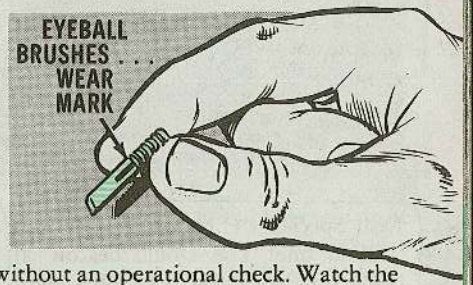
About every 200 flight hours (when your bird is down for maintenance) give the inverter the Big Look. Individual bird pubs are being updated. Clean and inspect the inverter for cracked or damaged cases, proper bonding, security of mounting, and broken connector pins or cracked connector inserts.



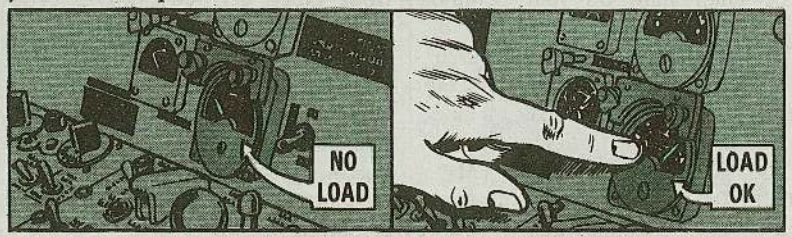

Eyeball the brushes for wear, one at a time so they're put back in the same place.

To indicate maximum wear, the brushes have a 1/32-in wide wear mark (groove) at about half the original brush length. In some brushes the mark is a diagonal groove in the bottom width of the brush. In others, the mark is a parallel groove in the top edge of the brush. Wear to the end of the mark will give you at least 500 operational hours at full load. But when the brushes are worn down to any part of the wear mark, take the inverter out of the bird and turn it in to support for new brushes.




Focus-in on the brush contact area of the commutator and slip rings and look for serious grooving or pitting. Also, check for excessive vibration, noise and overheating.

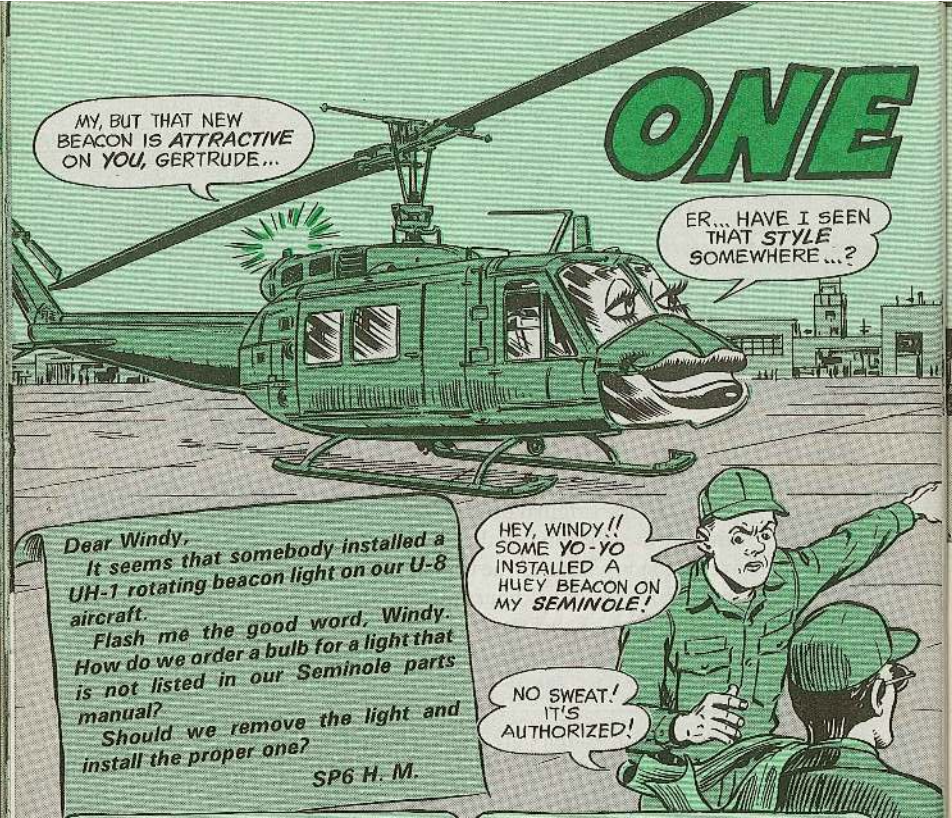
Inspection is not complete, mechs, without an operational check. Watch the output voltage and frequency under "no load" and "full load," as explained in your aircraft's pub.




If the inverter won't put out, turn it in to your support for repair.

You make the decision to turn in that inverter for repair. It's your judgement call.

# ONE for ALL




*Dear Windy,*

*It seems that somebody installed a UH-1 rotating beacon light on our U-8 aircraft.*

*Flash me the good word, Windy. How do we order a bulb for a light that is not listed in our Seminole parts manual?*

*Should we remove the light and install the proper one?*

*SP6 H. M.*

Dear Specialist H.M.,

Hold one! The 2-bulb beacon is being standardized to a 1-bulb design that can be used on many birds. Leave the Huey light on your Seminole because it's authorized.

Eyeball Fig 187 in TM 55-1510-201-20P (Dec 76). You'll notice that Light P/N 50-364224-19 has to be manufactured at the organizational level.

So, go to Appendix E of TM 55-1510-201-20 (Jan 69). You'll see the light part number, along with a reference to Fig E-20, which shows how to make the U-8 light.

Forget the stock numbers listed, tho, because they're not right. Make it from NSN 6220-00-159-1762, and other assemblies, listed in the UH-1 TM 55-1520-210-23P (Mar 77).

As for replacing a shot bulb—stick with the Huey parts pub. For example, Bulb NSN 6240-00-225-5128, goes in Beacon light NSN 6220-00-159-1762.

'Course, all the tech manuals are being updated.

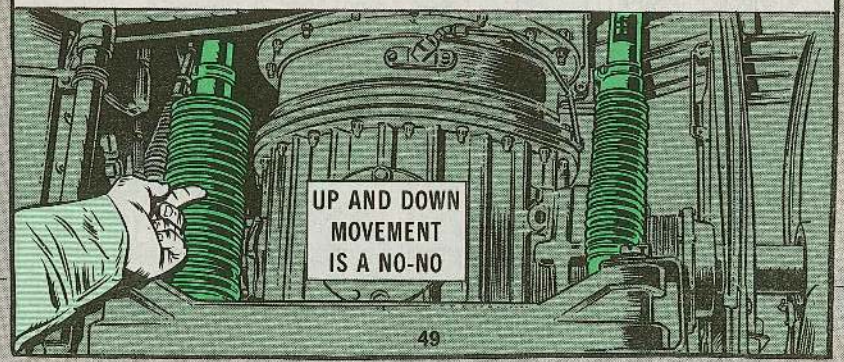
*Windy*



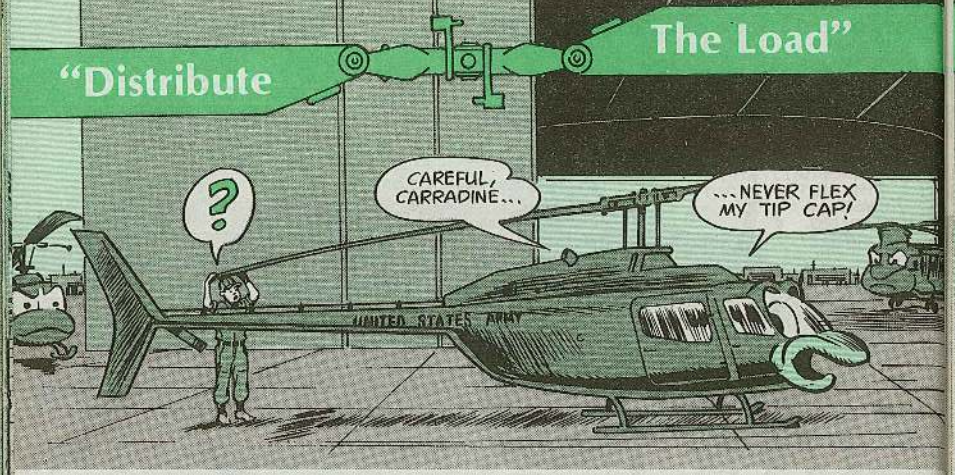


When you Cobra hotshots make with a "hands on" check of the main rotor dual hydraulic servo cylinders during inspections, it's no sweat if the cylinder barrels turn. If there is no vertical movement, the servos are serviceable.

You'll find all the servo inspection info in TM 55-1520-221-20 (Dec 75) . . . Chap 6.



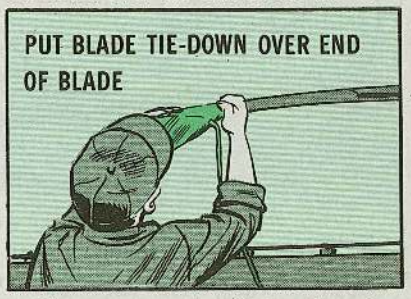
# "Distribute The Load"




Never flex the OH-58A main rotor blade by grabbing the tip cap, Kiowa mechs. That kind of treatment will crack the facing compound.

A surface crack in the compound—beginning about 4 inches aft of the spar and extending toward the trailing edge—is no cause for condemning the blade. There is no structural damage. Only the compound is affected so your buddies at support can make repairs in the prop and rotor shop.

You won't be faced with a grounded bird, tho, if you simply insert the blade tie-down over the end of the blade.

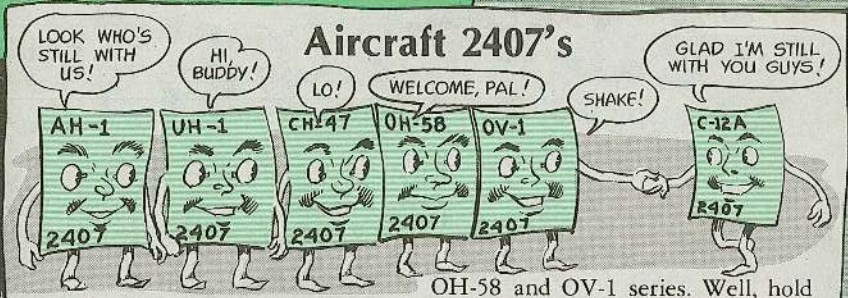



Then, secure the blade. The tie-down will distribute the downward forces so you won't put excess pressure on the cap.



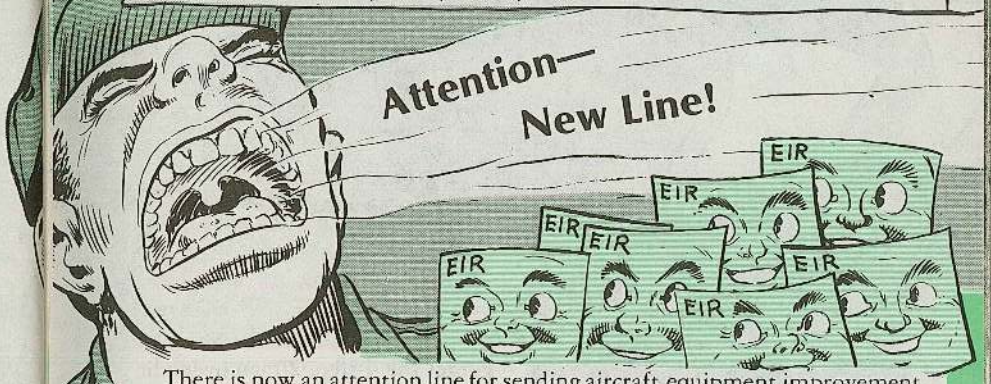


# Aircraft 2407's




DA message DALO-SMM-F 272137Z Feb 76 squashed national-level DA Form 2407 reports on organizational and support maintenance for aircraft except for all models of the AH-1, UH-1, CH-47, OH-58 and OV-1 series. Well, hold one! DA message DALO-SMM-F 152030Z Oct 76 added the C-12A to that list. You send DA Form 2407 and 2407-1 info on organizational and support maintenance for C-12A's to the national level.

# Attention— New Line!




There is now an attention line for sending aircraft equipment improvement recommendations to the head shed, birdmen. Add the info to your copy of TM 38-750 . . . Appendix B. Send the AVSCOM copy of the DA Form 2407 (EIR) to:

Commander
US Army Aviation Systems Command
ATTN: DRSAV-FEM
PO Box 209, Main Office
St. Louis, MO 63166

Model 175B Scoop Loader . . .

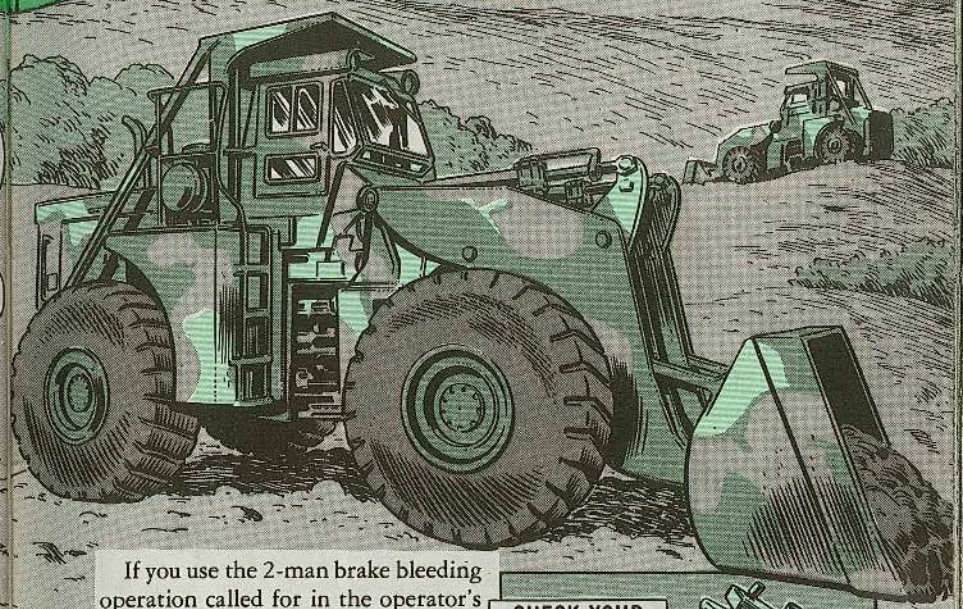
# BRAKE BLEEDING POOP


Forget the 4-step, 2-man hydraulic brake bleeding poop on page 45-04.2 in your Clark Model 175B Operator's Manual No. 3005.

Here's why:

Your scoop loader has 2 separate brake systems. One for the front wheels, one for the rear set. Each brake system has a master cylinder and a compensating cylinder. The compensating cylinder is a backup system to strengthen the master brake cylinder. Each system has to be purged of air every 250 hours.

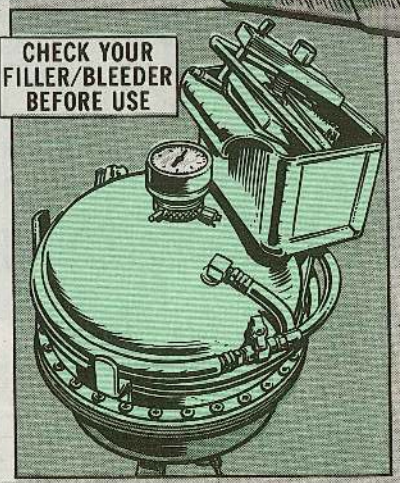




If you use the 2-man brake bleeding operation called for in the operator's manual, air will get into the compensating cylinder. You won't be able to get it out when you purge the system.

So, get your hydraulic system filler/bleeder—NSN 4910-00-273-3658—from the No. 2 Common or No. 1 Supplemental Shop Set and pull a first-class, 1-man purge job.

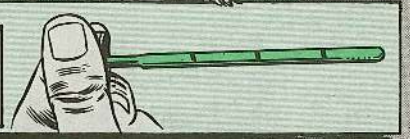
First, tho, check your filler/bleeder. Be sure it's full of the right kind of hydraulic fluid. Use only SAE J1703(7OR-3) . . . Clark PN 850487, (40152) or VV-B 680, NSN 9150-00-231-9071. Air pressure in the filler/bleeder should be 20-30 PSI.



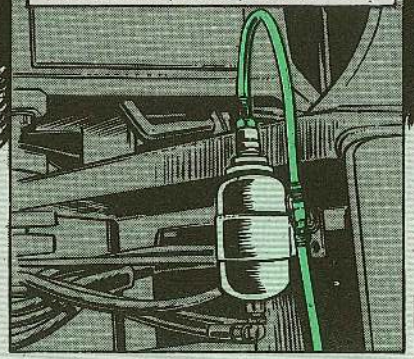



PS MORE

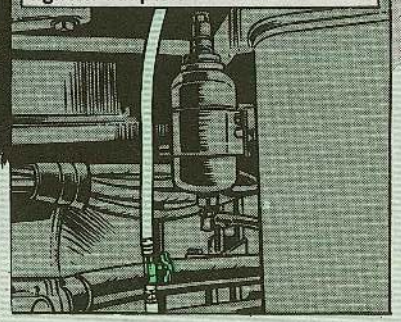

**1** Use a crescent wrench to remove the dip stick from the brake fluid reservoir.

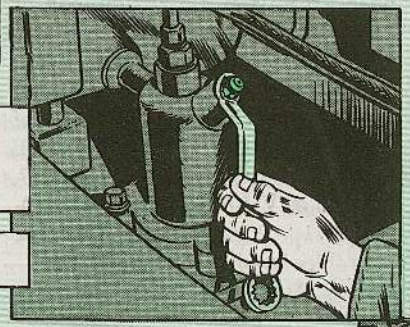


**2** Attach the filler/bleeder's hose to the small end of the adapter. Connect the adapter to reservoir. Make sure the hose is free of kinks, binds, twists.



**3** Open the valve on the hose. Back off adapter to let air out from filler/bleeder to reservoir . . . tighten adapter.

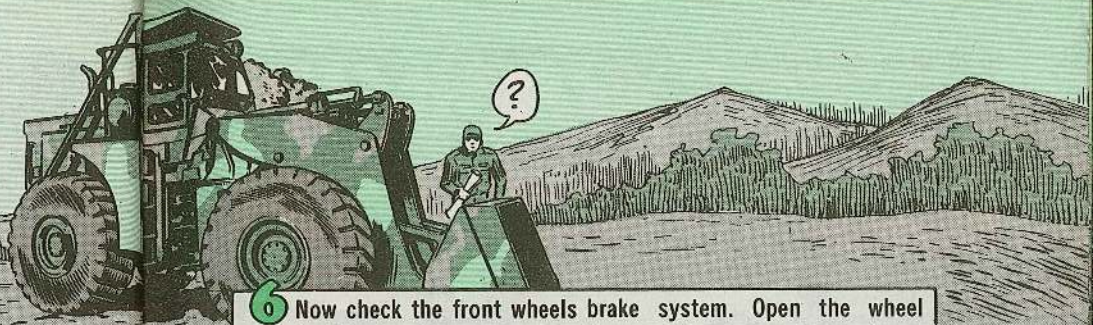




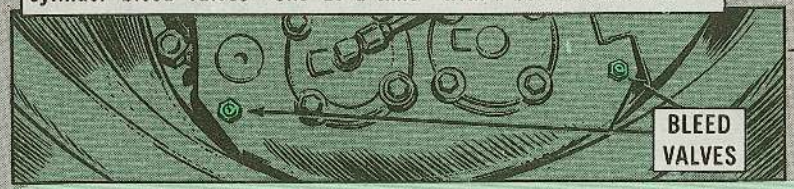
**4** Open the scoop loader bleeder valve. Check hydraulic fluid stream for air bubbles.

**5** Close bleeder valve.






**6** Now check the front wheels brake system. Open the wheel cylinder bleed valves—one at a time—with a box end wrench.

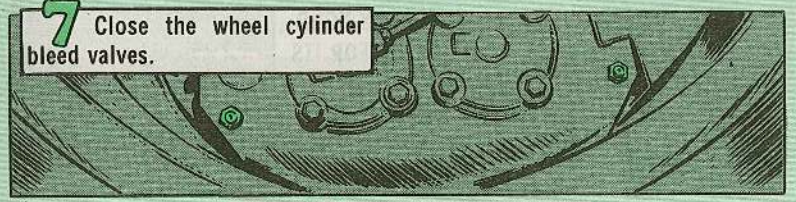



Watch that fluid. It'll come out in a 2 to 3-ft stream under pressure. A hydraulic oil eyewash you don't need.

If the brake fluid is milky-colored, or comes out in spurts, you have air in the system.

If there's no air in the system, you'll get a steady stream of dark fluid. Don't waste the oil. It only takes 3-4 seconds to find out if the system's got a belch condition.

**7** Close the wheel cylinder bleed valves.

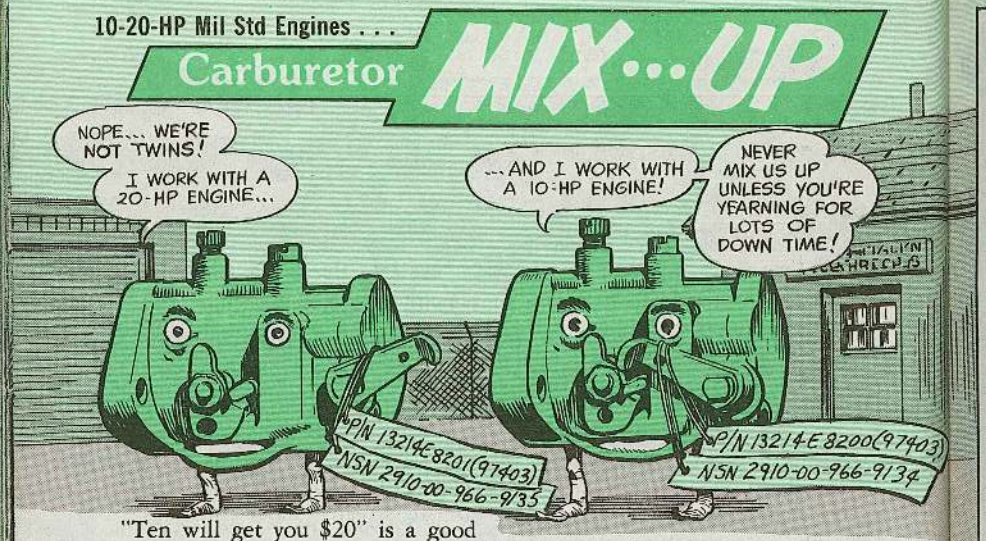





**8** Hold it. Be sure to shut off the valve on the hose before unhooking the bleeder system.

10-20-HP Mil Std Engines . . .

# Carburetor MIX...UP




"Ten will get you $20" is a good bet—at Vegas—but not on carburetor replacement kits—carburetor, gasket—for your 10 and 20-HP MIL STD engines.


If you stick a 10-HP engine's carburetor on a 20-HP engine—or vice versa—you'll have a hard time making the engines reach—or hold—their rated loads.

Both carbs will fit either engine, but you could spend a heap of downtime and money trying to figure out what's happening if you mix carbs 'n' engines.

So before you replace the carb on your 10-HP engine, eyeball the replacement kit. Make sure it's P/N 13214E8200(97403). If the kit's still boxed, doublecheck the NSN. It should be 2910-00-966-9134.

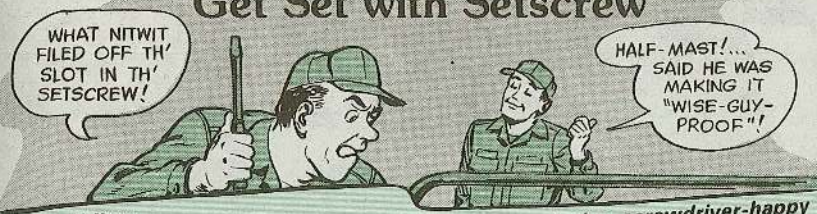
For your 20-HP engine be sure you have carburetor replacement kit P/N 13214E8201(97403), NSN 2910-00-966-9135.

How 'bout checking all your 10-20-HP engines right now? Some engines received on DX have carbs mixed up!

You can help in another way, too. If you receive the wrong carburetor kit, turn it back in to your DSU. They'll make out an SF 364—Report of Item Discrepancy.

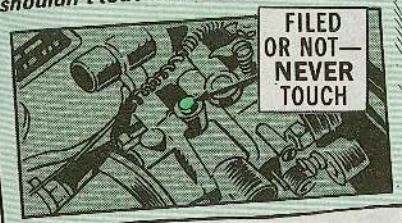


# Get Set with Setscrew




*Dear Editor,*

*Some of our generator operators were losing or damaging the carburetor setscrews on our Tillotson carburetors when they primed the engine. 'Course, we know they shouldn't touch the setscrew, but . . . !*



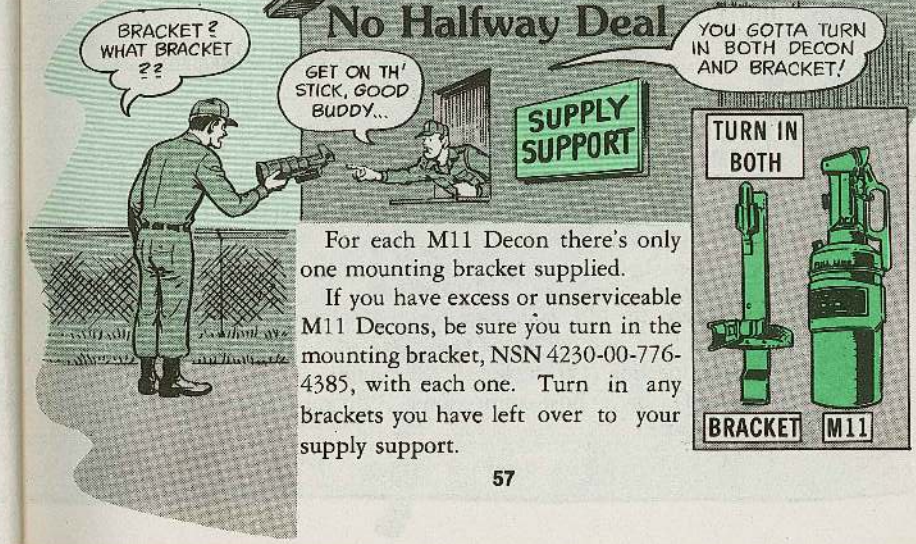

*We cured the screwdriver-happy guys by filing the setscrew head flush. No slot, no screwdriver damage. Metal-set in the slot does the same job. We also use a dab of locktite on the threads.*

*There's no NSN for the carburetor setscrew, but we found a 6-cent hex head screw—NSN 5305-00-267-8950—that fits flush and keeps the carb clean. Saves us from buying a $20 carburetor replacement kit.*

*CPT J. L. H.*
*Ft. Bragg, NC*

*(Ed Note: You're right! Mechanics should never touch that setscrew for any reason. It's a sealed plug for the high-speed jet. Looks like you've found a low-cost fix to stop damage and downtime.)*

# No Halfway Deal




For each M11 Decon there's only one mounting bracket supplied.

If you have excess or unserviceable M11 Decons, be sure you turn in the mounting bracket, NSN 4230-00-776-4385, with each one. Turn in any brackets you have left over to your supply support.

50-GPM Filter Separator . . .

# FILTER CHANGE Facts

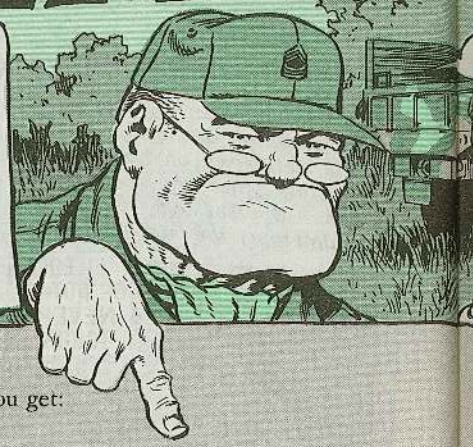
***Dear Half-Mast,***

***When do we replace the filter elements in our 50-GPM Bendix ground mounted filter separator?***

***TM 5-4330-215-12 (Nov 68) is a little fuzzy on the subject.***

***What's the right time to change the elements?***

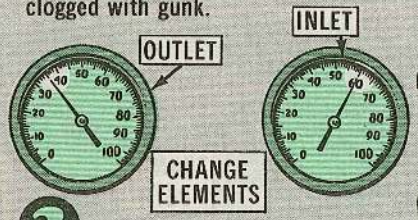
***SP4 J.C.***




Dear Specialist J. C.,

You change the elements any time you get:

**1** More than a 20-PSI reading between the outlet and inlet pressure gages. This means the elements are clogged with gunk.




**2** More than 15-PSI differential between inlet pressure and internal pressure.

**3** More than 2.0 mg/l solids in the fuel sample you take from the downstream side of the filter separator.

**4** When one or more elements are ruptured.

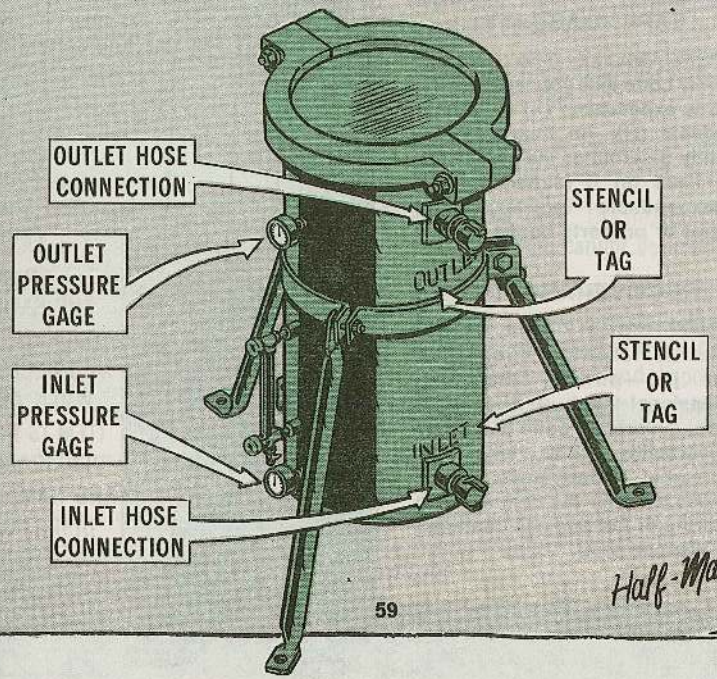
**5** At least every 24 months even if the filter separator is working perfectly.

By the way, to be sure the filter separator works "as advertised" the inlet and outlet hoses have to be connected at the right places.

The inlet hose connection is at the bottom of the unit . . . right close to the inlet pressure gage. The outlet hose connection is at the top of the unit . . . near the outlet pressure gage.



You can help stop a hose connection mix-up if you'll stencil INLET just above the bottom connection, and OUTLET just below the upper connection. Or tag the connections with the right legend.




Half-Mast

On Recoverable Items—

# FOLLOW THROUGH

A golfer doesn't stop when the club hits the ball. A pilot can't quit as the plane touches down. A supply clerk isn't finished when the mechanic gets an item.

In each case—it's the follow-through that counts!

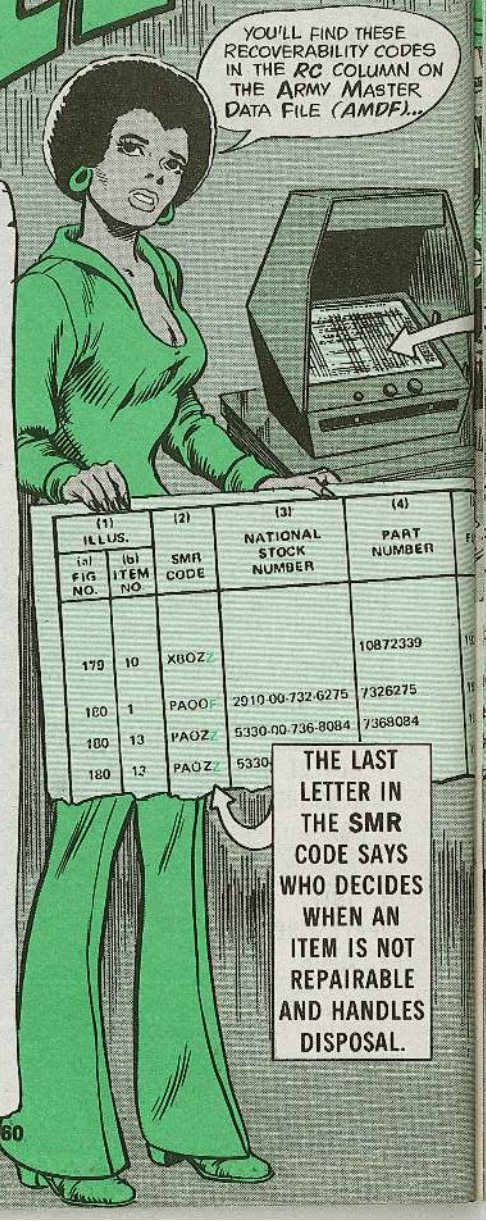
For the supply specialist, every item in the Army supply system carries a slew of codes. But, two very important codes often get overlooked or misused.

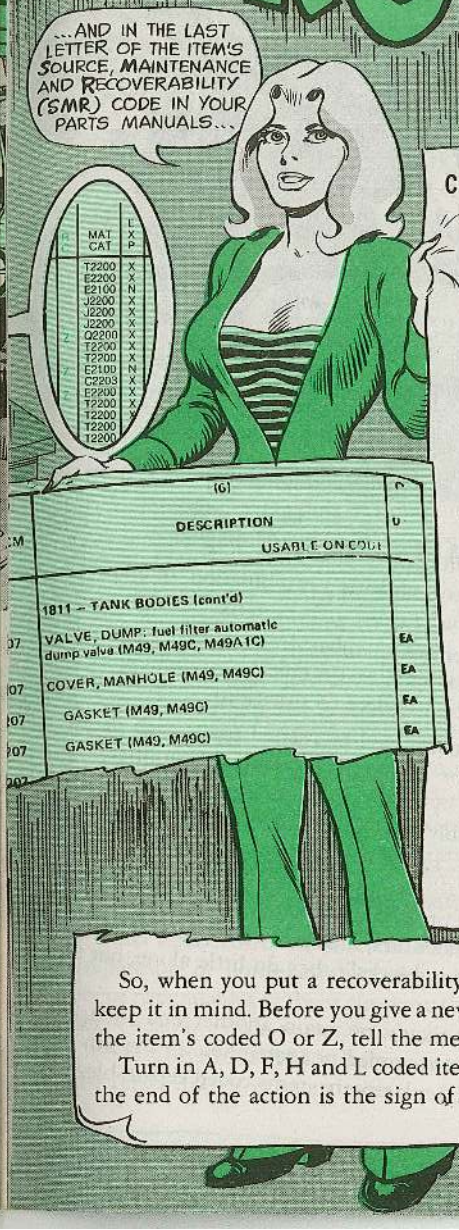
## EXPENDABILITY

**EXPENDABILITY—The expendability code tells you whether the item is expendable (X) or nonexpendable (N). An item's expendability determines the paperwork you keep on it (expendable or nonexpendable register, hand receipt or property book).**

## RECOVERABILITY

**RECOVERABILITY—But, when it comes to following through on your job—putting the final professional touch on it—go with the recoverability code (RC.) The recoverability code tells you who—what maintenance level—decides whether the item is worth repairing or not and can condemn and dispose of it.**




| CODE | MEANING |
|---|---|
| A | **Special handling** needed to dispose of this item. "A" coded items usually have precious metal in them, cost a great deal or include special or dangerous materials. Check the manual or the referenced directive for details. |
| D | **Repairable item.** Turn it in to your support. This item must go through repair channels to depot before disposal. |
| F | **Repairable item.** DSU disposes of item if it cannot be fixed. |
| H | **Repairable item.** GSU disposes of item if it cannot be fixed. |
| L | **Repairable item.** Depot or specialized repair activity level handles disposal. |
| O | **Repairable item.** Organization handles disposal if item cannot be fixed. |
| Z | **Nonrepairable item.** When the item becomes unserviceable, the level authorized to replace it (3rd place code in the SMR) condemns and disposes of it. |

So, when you put a recoverability code on the DA Form 3318 for an item, keep it in mind. Before you give a new part to a mechanic, check the RC. Unless the item's coded O or Z, tell the mechanic you want the old part he replaces.

Turn in A, D, F, H and L coded items to your support. Following through to the end of the action is the sign of a PRO!

# REPAIR PARTS LINGO


## IF AN ITEM IS—

END ITEM: Complete item of equipment which is a combination of end items, components, parts, etc. such as a truck, radio, rifle or tank.

COMPONENT: Combination of assemblies, subassemblies, or parts mounted together in manufacture, assembly, maintenance or rebuild. Generally able to operate independently in a variety of situations.

ASSEMBLY: Two or more physically connected or related parts, each of which can be taken apart, like a carburetor, power pack, circuit or amplifier. Each item in the assembly is identifiable by name and separate function.

SUBASSEMBLY: Portion of an assembly with a specific function; can be broken down into parts or components. Examples include oil pumps and starters.

PART: Item which can't be taken apart or is impractical or uneconomical to take apart. Spark plugs, crankshafts, condensers, brackets, resistors and fan belts are examples. Parts are the "building blocks"; they do little alone, but nothing works without them.

REPAIR PART: Any item used to fix or maintain another end item. Technically, repair parts are Support items coded not repairable in the 4th place of the items SMR code. Spares are replacement items coded repairable.



## DESCRIBE ITEM'S CONDITION—

SERVICEABLE: Item works the way it should; ready for use.

UNSERVICEABLE: Item's not working, can't be used; needs repair, maintenance or new parts to work.


RECOVERABLE: Item is worth repair because it costs less to fix than to buy a new one or because it's too useful just to throw away. Maintenance expenditure limits pubs (TB's in the 43 and 750 series) are the guides to follow here. Item may need special handling.

NONRECOVERABLE: An end item or repair part normally consumed in use. Can't be repaired or reused.

REPAIRABLE: Item can be made serviceable and put back to use. Check the MAC to see who fixes it. If it's not your job, turn it in.

NONREPAIRABLE: Can't be used again (not worth turning in for repair), but check scrap value in the basic materials (some metals, lubricants or other raw materials are worth saving to recycle.)

UNECONOMICALLY REPAIRABLE: Not worth fixing; costs of previous repairs and needed repairs go beyond maintenance expenditure limits. Generally, tho, you can salvage, cannibalize or scrap parts or components.

## DESCRIBE ACCOUNTABILITY—

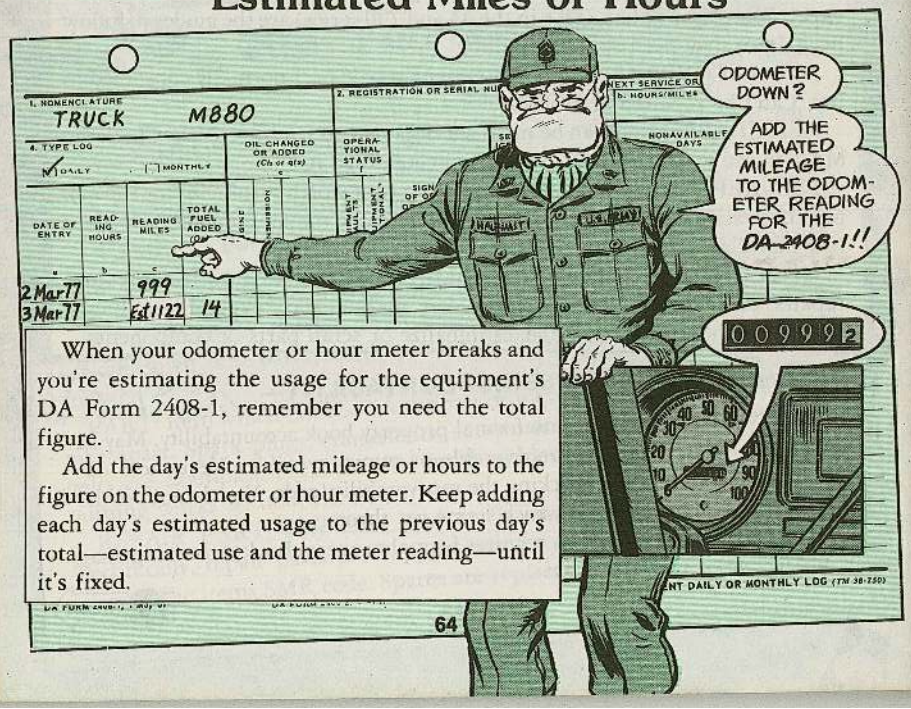
EXPENDABLE: Requires no formal property book accountability. May be repairable or nonrepairable, recoverable or nonrecoverable. Never toss out bum expendables without checking the recoverability code. You do not use the expendability code to decide which items get thrown out.

NONEXPENDABLE: Item requires formal property book accounting, may be repairable or nonrepairable.



PS MORE


## Estimated Miles or Hours




When your odometer or hour meter breaks and you're estimating the usage for the equipment's DA Form 2408-1, remember you need the total figure.

Add the day's estimated mileage or hours to the figure on the odometer or hour meter. Keep adding each day's estimated usage to the previous day's total—estimated use and the meter reading—until it's fixed.




### Report AMDF Goofs

Find a mistake on the AMDF? Report any goofs to that item's manager— identified by the first letter in the Materiel Category Structure Code (MAT CAT)—for the entry carrying the mistake. Send your comments to the address for that agency listed in the Materiel Category Structure Code (MAT CAT) portion of USACDA Pam 18-1 Code Reference Guide for the ARMS Monthly AMDF. If you have trouble tracking down the item's manager—or want to report problems with the microfiche rather than an entry—write to the Chief, U.S. Army DARCOM Catalog Data Activity (CDA), ATTN: DRXCA-D, New Cumberland Army Depot, New Cumberland, PA 17070. If your problem's urgent, call the CDA hotline, AUTOVON 977-7431.

### From the Beginning . . .

Corrosion starts when the manufacturing process ends. Which is why you want to treat your thin-skinned birds when you discover the first scratch. TM 43-0105 (Apr 76) has the latest word on corrosion control.

### M790 EL Brakes

There's a new pub out that can help you prevent brake failure and tire fires (from brakes) on your Pershing M790 erector-launcher. The pub, TB 9-1440-380-14-3 (Mar 77), calls for monthly brake checks and spells out adjustment details that should head off a lot of your problems.

### Starters Now Recoverable

Hold one . . . and hold up trash canning engine starter motors for your 10-and 20-HP military standard engines. The motors—NSN 2920-00-882-3401—have been classified as repairable and recoverable. DS now can get the parts to fix 'em. The recoverability code on the AMDF will be changed.

### Semi Brake Break

Lined brake shoes, NSN 2530-00-318-1225, listed in TM 9-2330-207-24P (Jul 73), are no longer available. Your support will fix up your old shoes with lining set, NSN 2530-00-693-0996, and rivet, NSN 5320-00-753-3946.

### Floating Equipment Records

Now hear this! Now hear this!

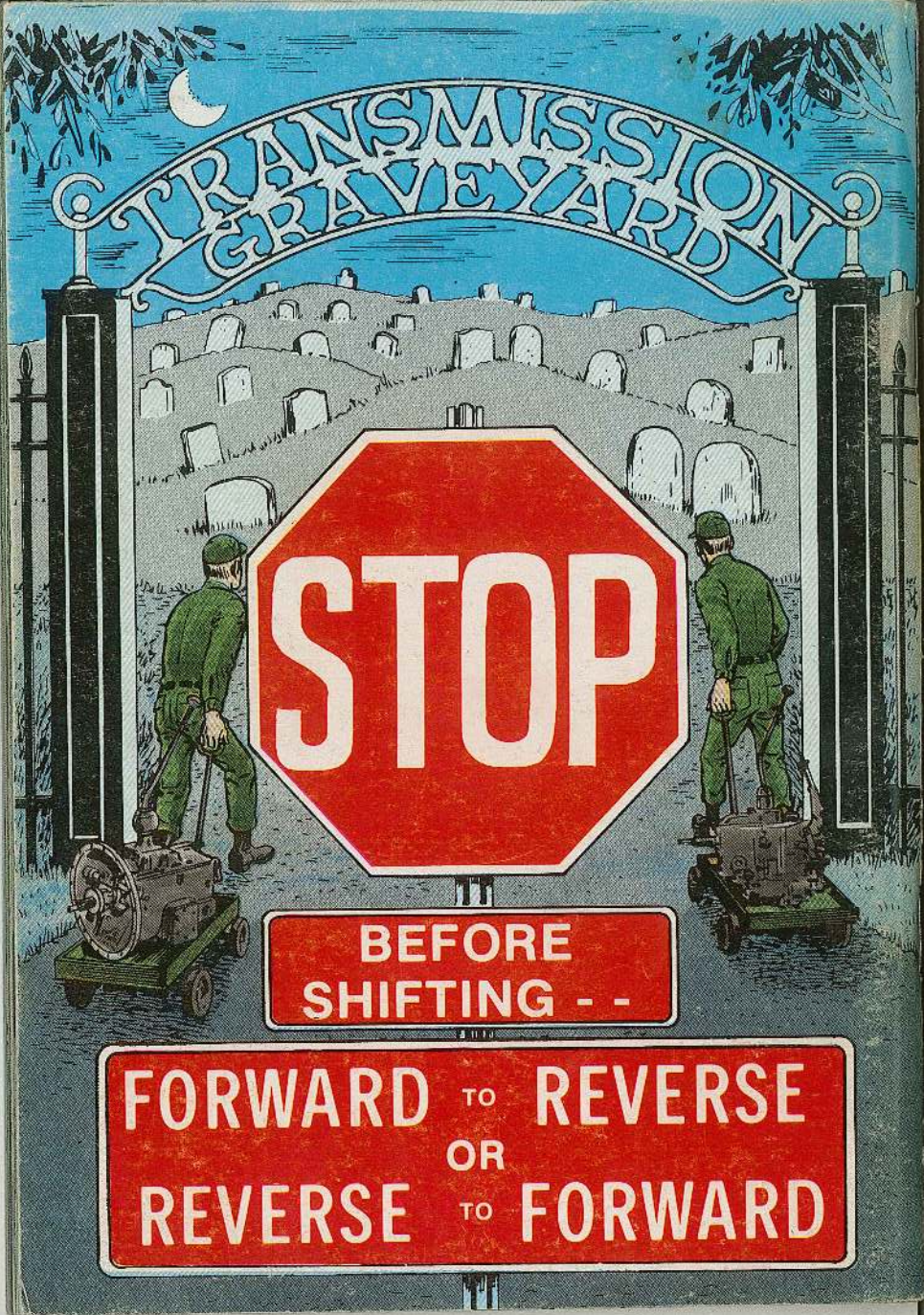
The Army's navy has joined TAMMS. The complete story of floating equipment records—and reporting—is in 2 DA messages: DALO-SMM-F 012137Z Nov 76 and DALO-SMM-F 161835Z May 77.

They cover materiel readiness, transfer, gain, loss, usage and logbook records.

The May message changes the first message and its usage report instructions. Make sure you have both messages. Get straight with the May message soonest. Floating equipment usage reports call for special information. You send them in on 1 August and 1 February to the U.S. Army Troop Support Command, St. Louis. They don't go to Lexington.

☆U.S. GOVERNMENT PRINTING OFFICE: 1977 - 757-002/10

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


TRANSMISSION GRAVEYARD
STOP
BEFORE SHIFTING - -
FORWARD TO REVERSE
OR
REVERSE TO FORWARD