
Issue 200
PS
.1969 Series
THE PREVENTIVE MAINTENANCE MONTHLY
!
I DON'T KNOW... TRY MY TM LIBRARY OVER THERE!
Ye olde TM
Ye OLDE TM
OBSOLETE
FIRST VOL
RESCINDED
Will Eisner

ALL ARMY PUBS ARE VALUABLE... THIS ONE IS PRICELESS!

It tells you how to get the others! Get it! Read it! It's got the poop on pubs!

INDEXES

- DA PAM 310-1, AR's, DA PAM's, Circulars, GO's
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- DA PAM 310-3, FM's, TC's, ATP's, ASubjScd, ATT's, TOE's, TD's, TA's
- DA PAM 310-4, TM's, TB's, SB's, LO's
- DA PAM 310-6, SC's, SM's
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Use these to keep current

Issue 200
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THE PREVENTIVE MAINTENANCE MONTHLY

HELP

...WHEN YOU NEED IT !!

When it comes to maintenance and supply, every once in a while the problems can get you–and your outfit–down.

So, what do you do?

Yell "HELP!"

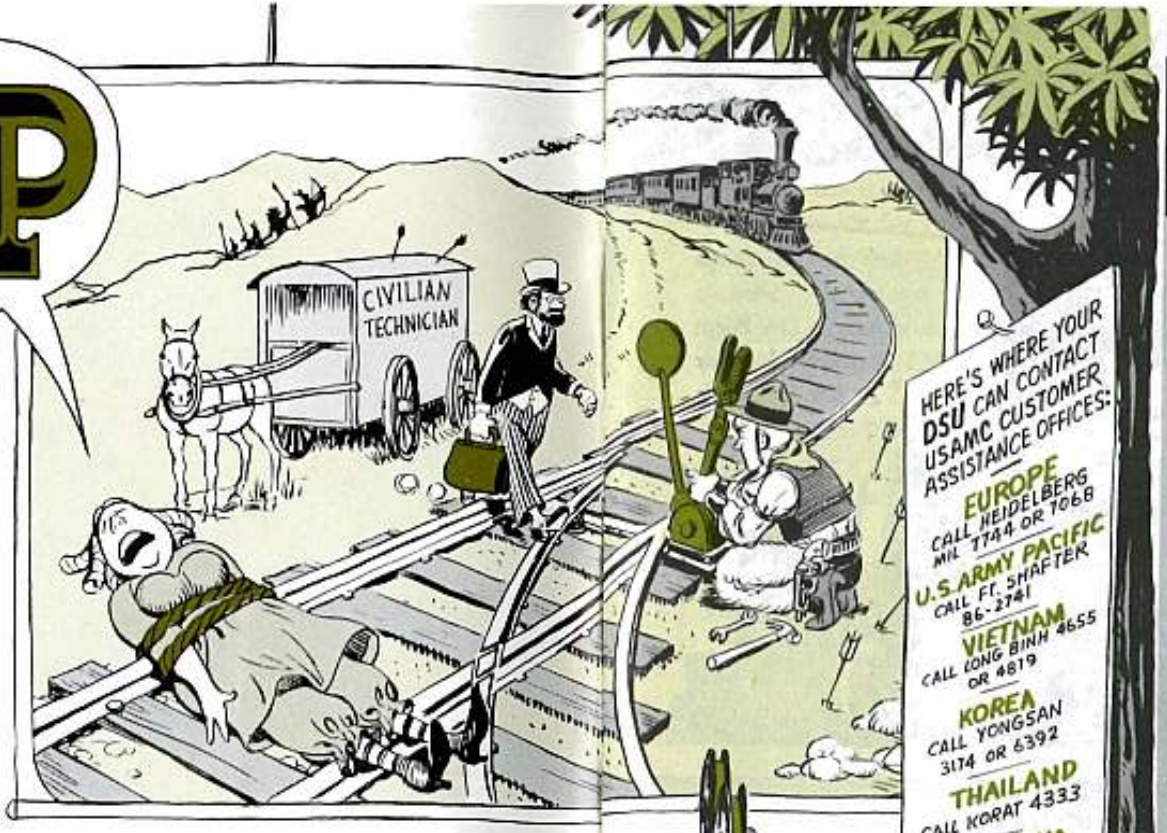
Real loud. Actually, get your CO or your maintenance officer to get the SOS off to your own direct support unit. A phone call will do it.

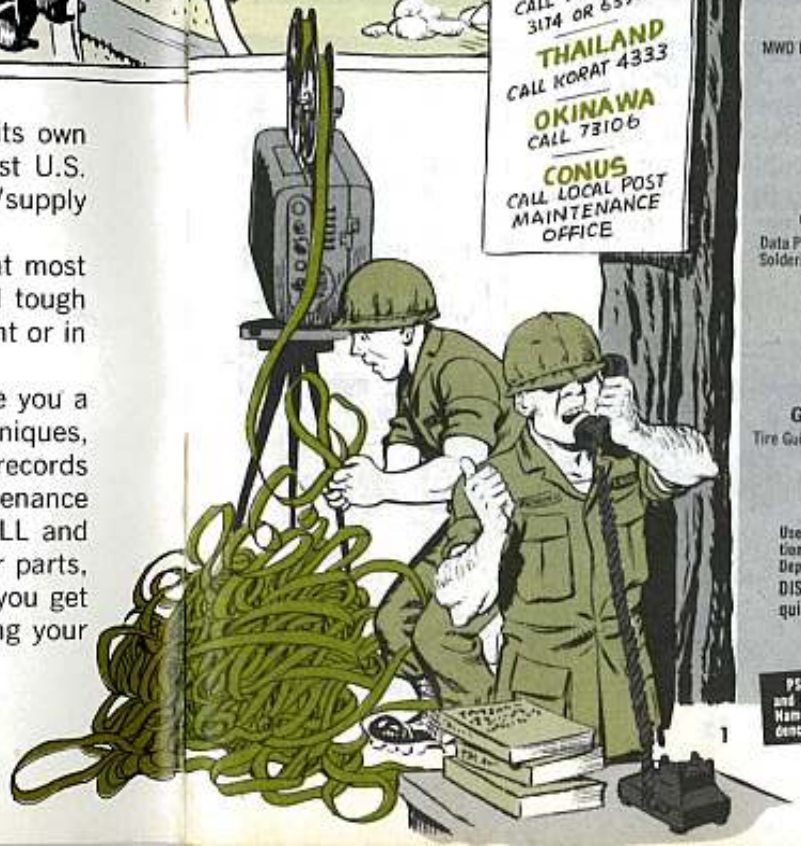
Either your DS will provide the help you need from among its own specialists, or they'll see to it that the word gets to the nearest U.S. Army Materiel Command equipment technicians or maintenance/supply management representatives.

These civilian technicians and representatives are located at most places around the Army and are available to help units in real tough situations. They are specialists on particular kinds of equipment or in maintenance or supply systems and procedures.

They won't fix your equipment for you, but they will provide you a "do-it-yourself kit" using "on-the-job" or classroom training techniques, covering such subjects as supply maintenance, ESC, equipment records and new equipment. They can help interpret and apply maintenance and supply policies and procedures, help set up and update PLL and show your unit how to get enough and the right kind of repair parts, equipment and trained maintenance men. They also can help you get enough of the right publications for operating and maintaining your equipment.

Now . . . yell for help. Give the word to your DSU.





PS

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THE PREVENTIVE MAINTENANCE MONTHLY

Issue No. 200 1969 Series

IN THIS ISSUE

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

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

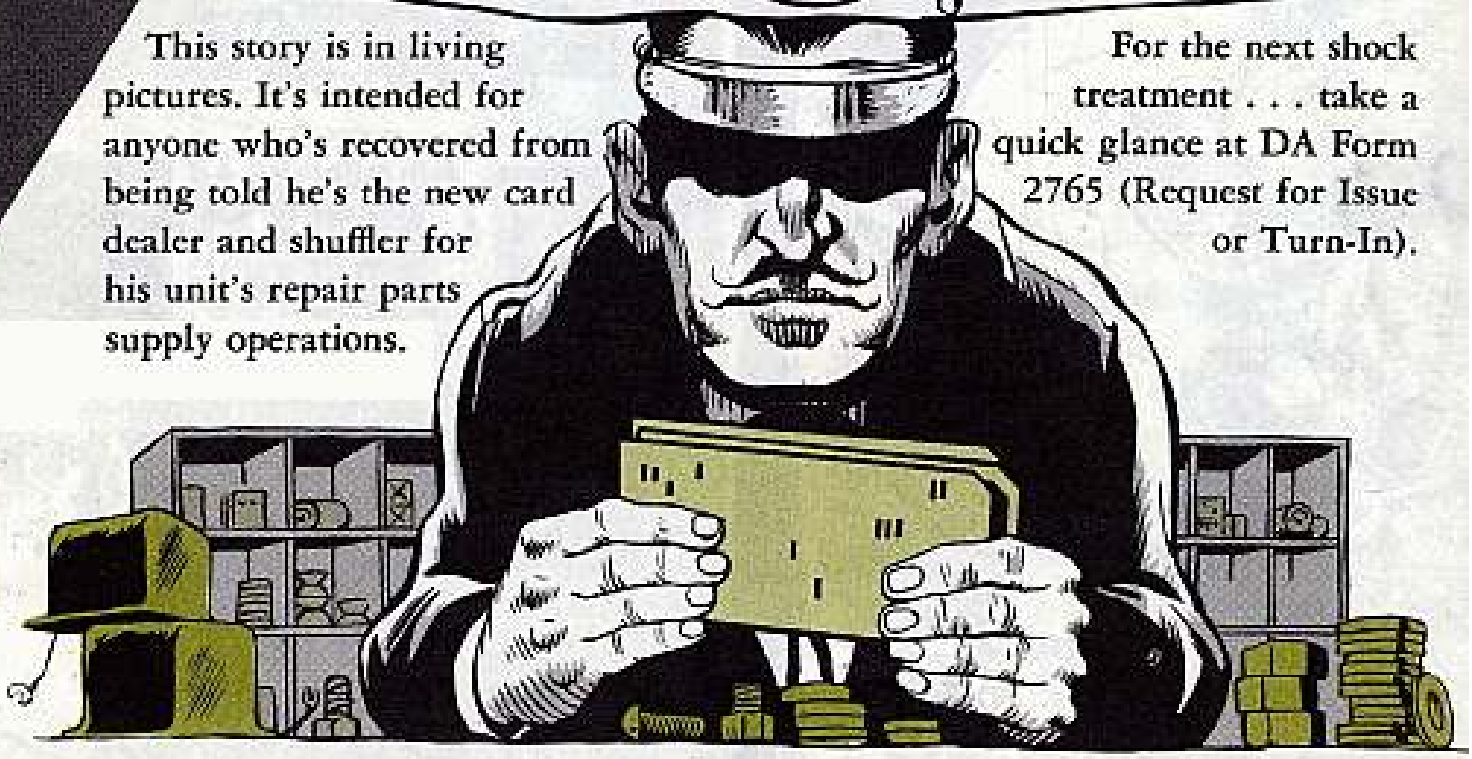
SUPPLY

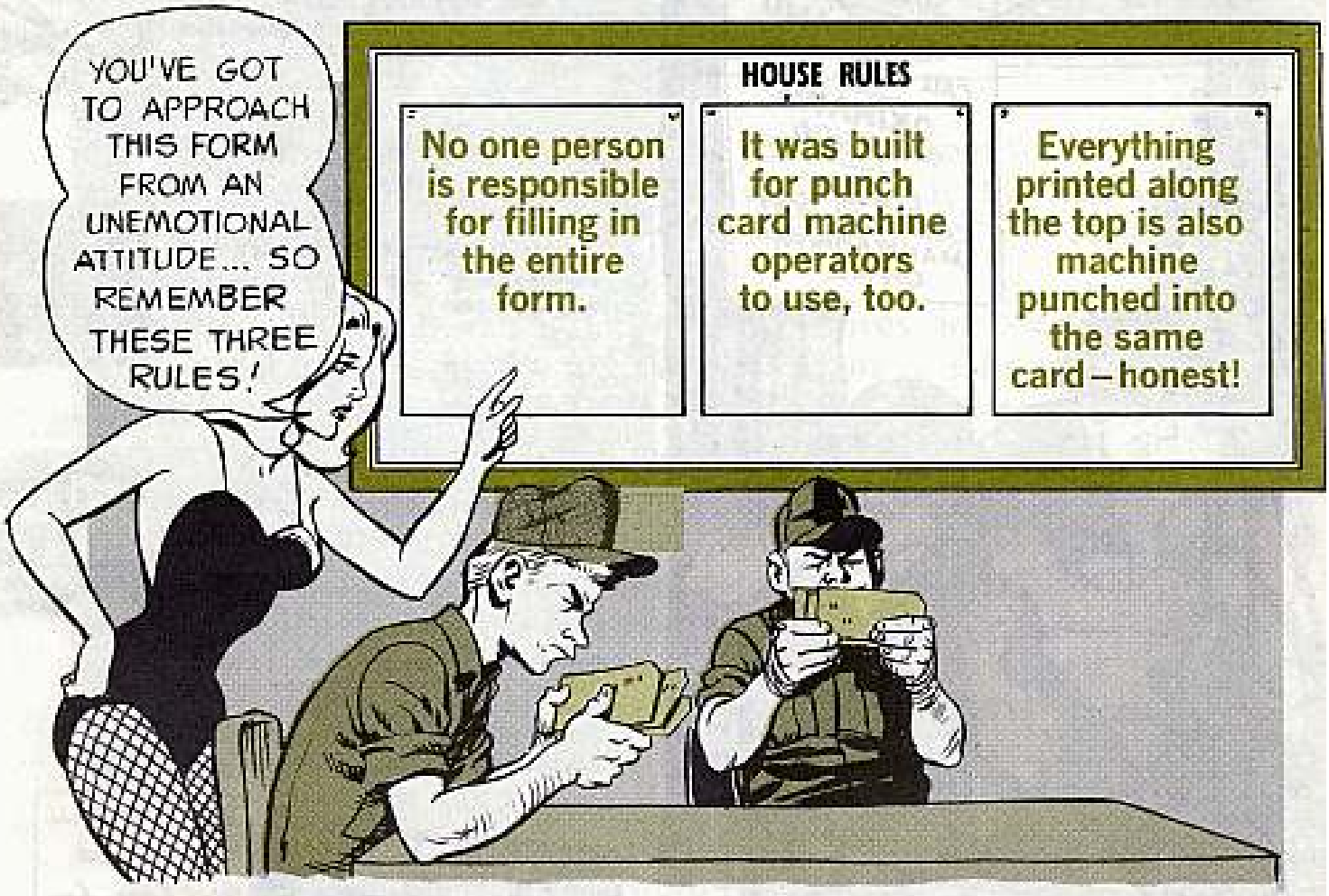
TO RAKE IN THE CHIPS...

YOU GOTTA BE CARD SHARP

This story is in living pictures. It's intended for anyone who's recovered from being told he's the new card dealer and shuffler for his unit's repair parts supply operations.

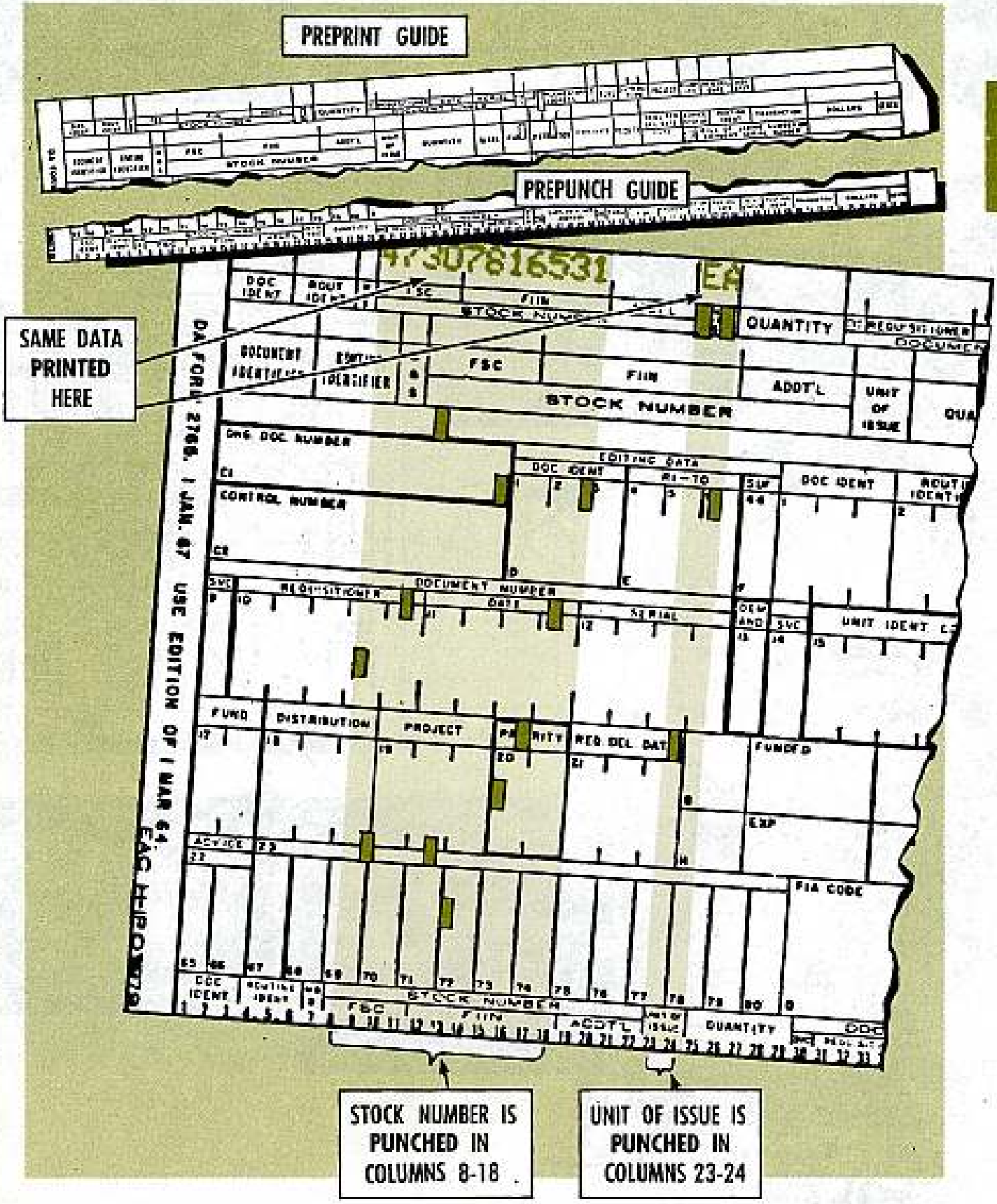
For the next shock treatment . . . take a quick glance at DA Form 2765 (Request for Issue or Turn-In).





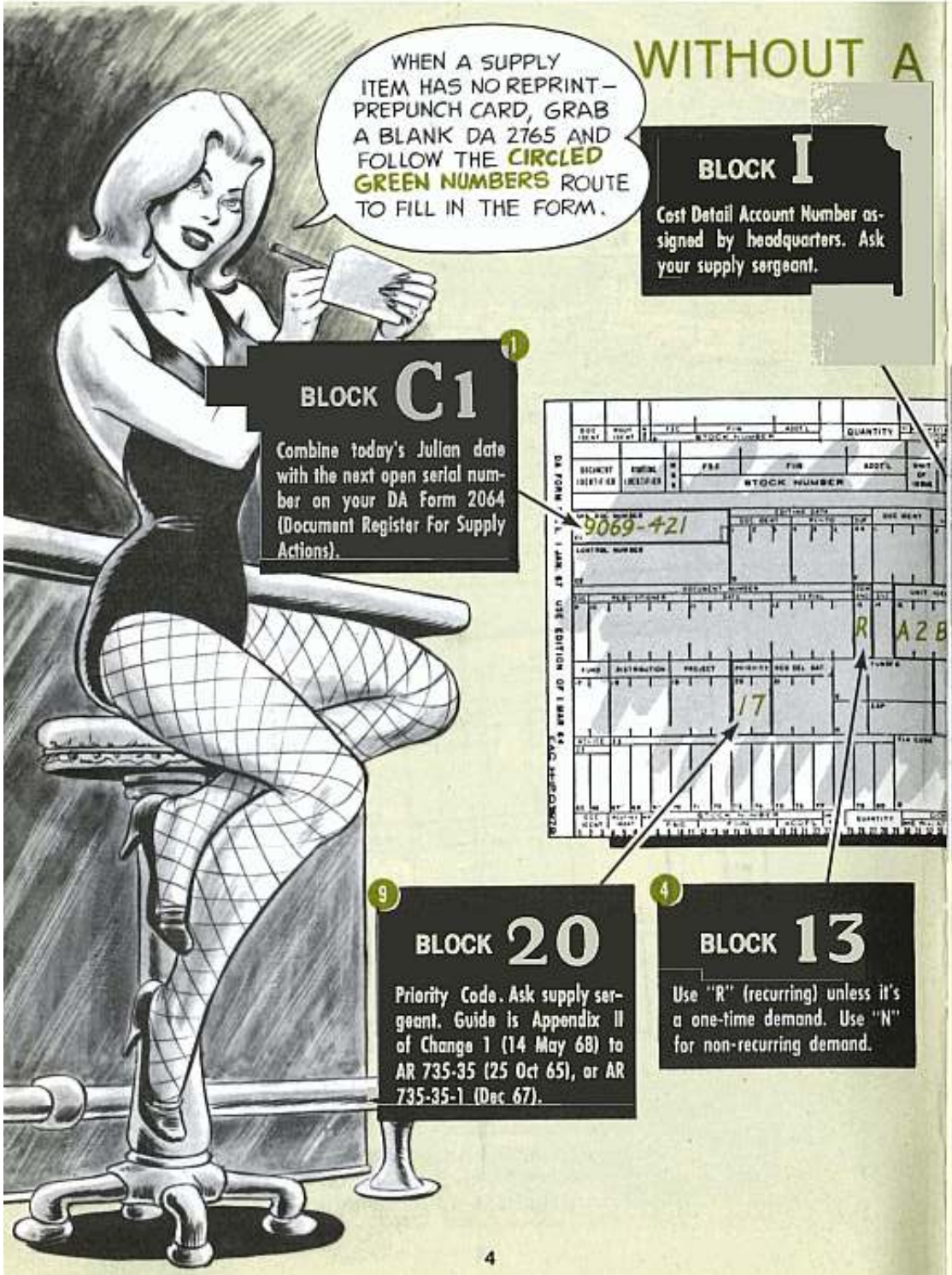
If you'll promise to hold your coffee cup steady and dry your eyes, you might try focusing along the bottom row of the DA Form 2765 card. Notice that the contents of the 80 punch columns is labeled right above the column numbers. This is the prepunch guide for the machine operator so it's no sweat for you.

Along the top are the print spaces and their identifying labels. This is the preprint guide for you—the supply type.



PS MORE

WITHOUT A PREPRINT (PREPUNCH)



BLOCK I

Cost Detail Account Number assigned by headquarters. Ask your supply sergeant.

1 BLOCK C1

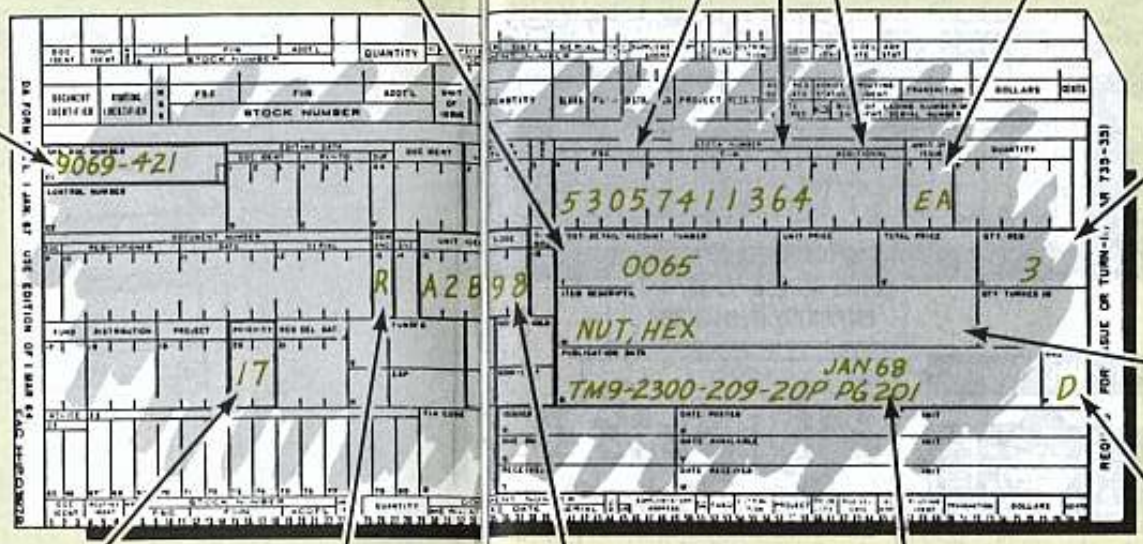
Combine today's Julian date with the next open serial number on your DA Form 2064 (Document Register For Supply Actions).

2 BLOCKS 4 - 6

Federal Stock Number (FSN) or Part Number (PN) mechanic gives you. Try to cross-reference each PN to an FSN when you check the source in Block O below.

3 BLOCK 7

Unit of Issue is usually each (ea) — except for fluids, bulk materials or small items.



7 BLOCK L

Quantity mechanic asked for. If prescribed load list (PLL) item, be sure this agrees with authorized quantity level.

8 BLOCK M

Name or short description mechanic took [illegible]YM. Check to see if it's [illegible]here.

9 BLOCK 20

Priority Code. Ask supply sergeant. Guide is Appendix II of Change 1 (14 May 68) to AR 735-35 (25 Oct 65), or AR 735-35-1 (Dec 67).

4 BLOCK 13

Use "R" (recurring) unless it's a one-time demand. Use "N" for non-recurring demand.

5 BLOCK 15

Unit Identification Code (UIC) assigned by headquarters. Ask your supply sergeant. His guide is AR 18-50 (Jun 67 AR18-50-10[Apr 68] Classified.

10 BLOCK O

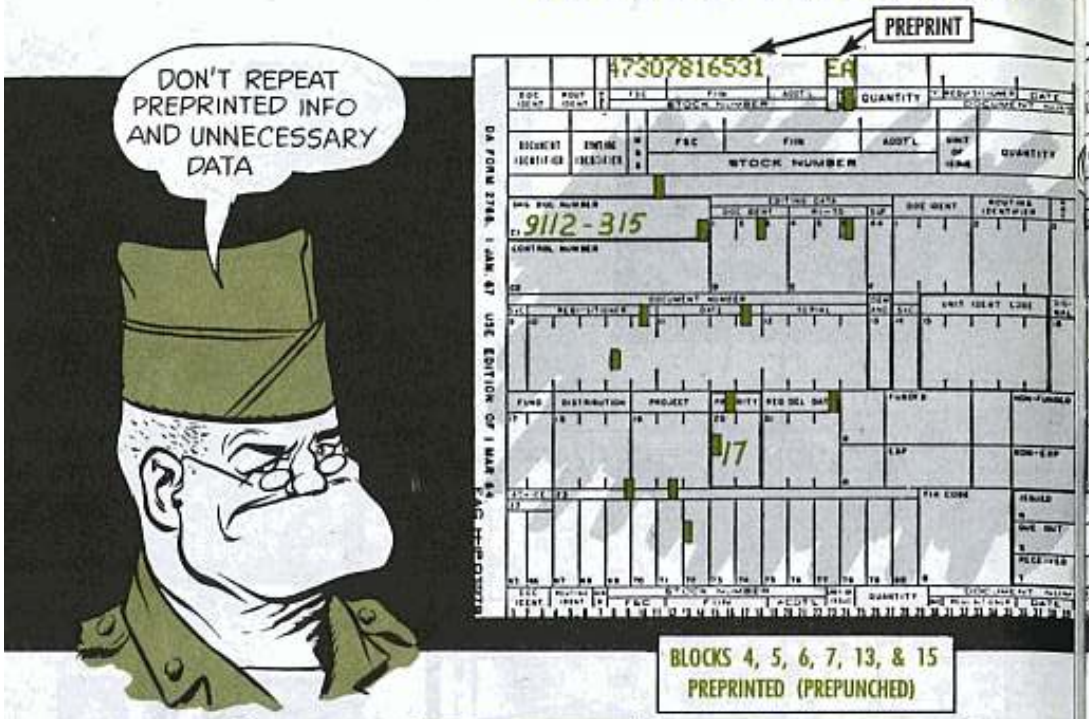
Mechanic supplies type, number, date and page number. Check pub yourself when possible.

BLOCK P

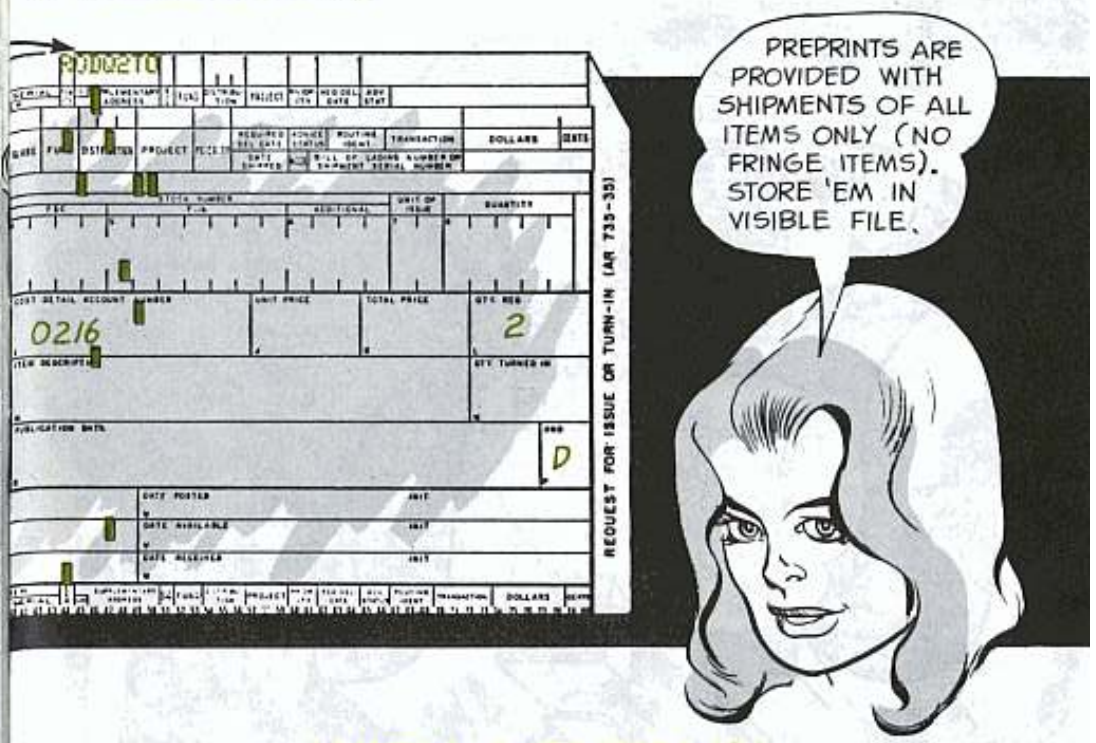
Urgency-of-Need Designator (UND) determines which Priority (Block 20) you can use . . . limited by your unit's assigned Force Activity Designator (FAD). Also found in Appendix II to AR 735-35.

PS MORE

WITH A PREPRINT (PREPUNCH)



BLOCKS 4, 5, 6, 7, 13, & 15 PREPRINTED (PREPUNCHED)



THE THREE SOURCES

1 — **Mechanic** starts you off with a request including the info for Blocks **4-6 . . . 7 . . . L . . . M . . . O.**

2 — **Supply sergeant** tells you codes for Blocks **13 . . . 15 . . . I . . . 20 . . . P.**

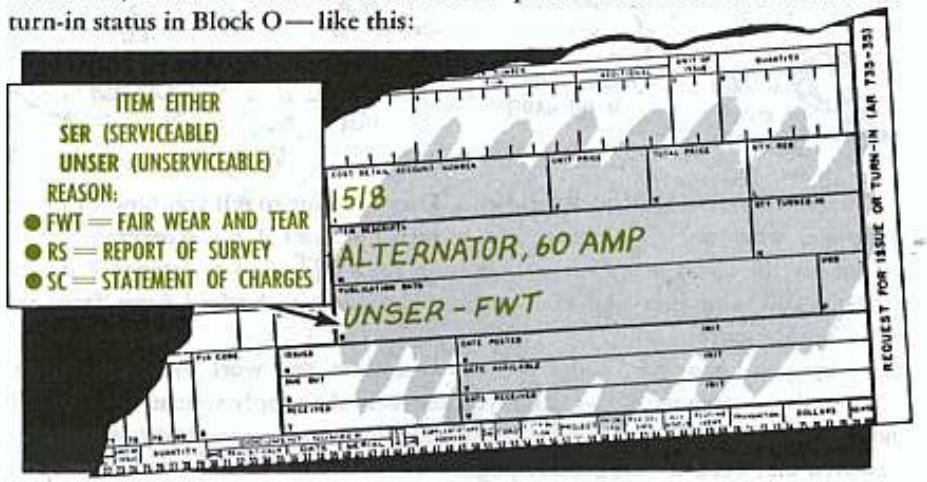
3 — **Document Register** supplies Block **C1** number.

NORS NOTE

A NORS (not operationally ready/supply) demand means two extra actions: place a "G" in the first space of Block 12 and the correct weapons system code in Block 18. This code is selected from **Appendix V** of Change 1 to AR 735-35. PS: By now it should be obvious that you can't operate your end of the supply system without a copy of AR 735-35.

WITH A TURN-IN

The quantity, naturally, goes into Block N instead of L and none of the Blocks 13, 20 or P codes are needed. But please remember to include the turn-in status in Block O — like this:



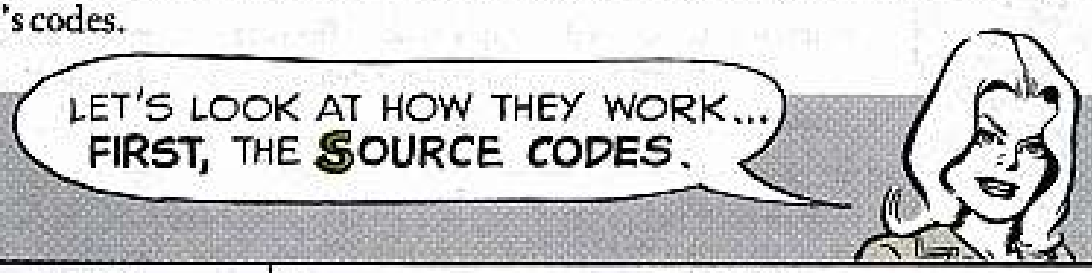
PS END

That's where the SMR codes come in. They combine to tell you how an item's supplied, who can install, assemble or repair it, and if it's recoverable. You might say the codes peg an item's status in the supply and maintenance system to help you, and everyone else concerned, request authorized items from the right supply source.

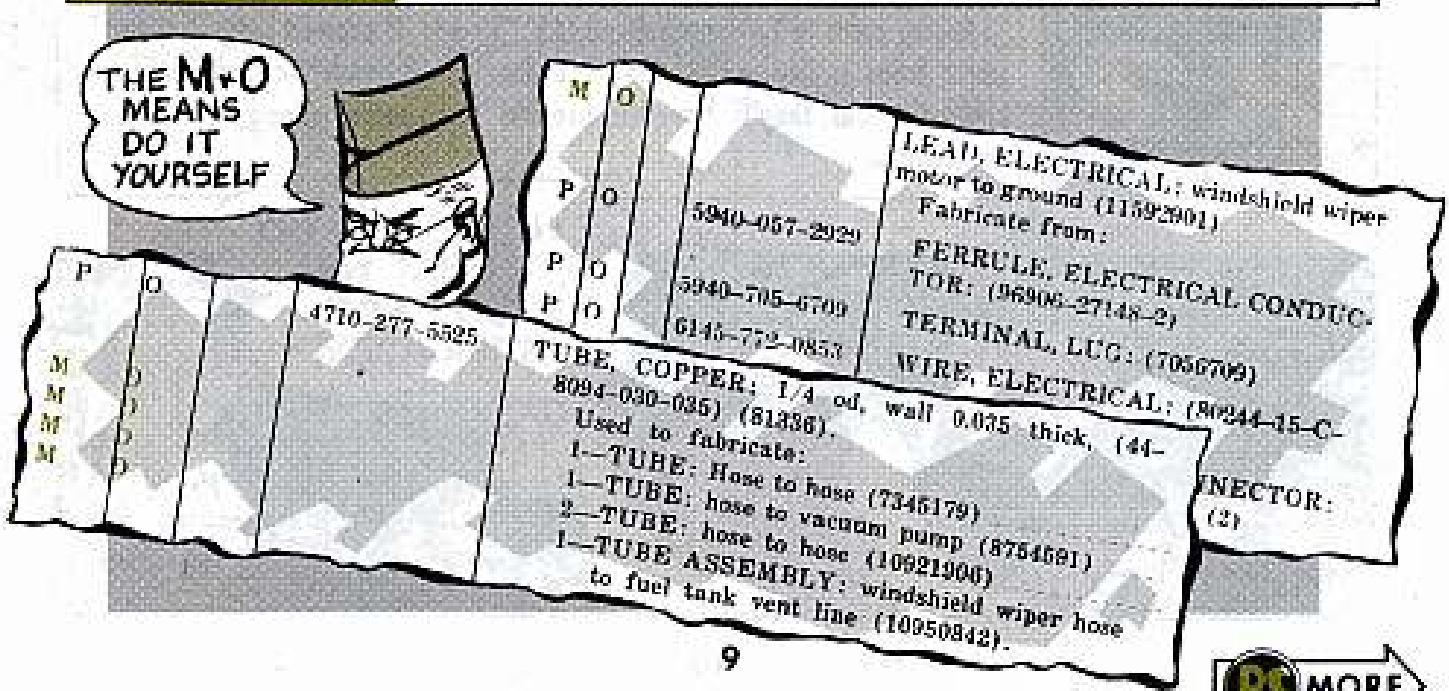
When you know your codes you can save time, and work and avoid repair parts and maintenance delays. And, you also help the supply system, 'cause you'll not be over-loading it with stray requests, which create unnecessary paperwork, research and back-tracking correspondence.

You'll find the codes listed ahead of just about everything else in a manual. In fact, in the new RP&STL's (Repair Parts and Special Tool Lists), the SMR codes occupy the first column in the listings. The key to the codes is given in a manual's introduction section.

If you ever have any problems with the codes, check with support . . . their supply records are updated regularly, and they've got the latest word on any item's codes.



CODE	IDENTIFIES
A	Assemblies which are not stocked as such. They're made up of 2 or more separate FSN'd units in the supply system. The separate units are assembled by the maintenance level authorized by the maintenance code listed alongside the A.
C	Repair parts OK'd for local purchase (AR 715-30 and local procurement SOP). If the items are not available locally, support requisitions them through normal supply channels.
G	Major assemblies procured for initial issue only by DX activities. The assemblies are not stocked above GS level.
M	**Repair parts that are to be manufactured at the maintenance level called out by the maintenance code shown for the item.**



PS MORE

P

Items that are stocked in the supply system. And, they're available from supply support through routine supply channels.

If you find the P Source code coupled with a number (P2, P9 or P10, for example) in the source column, don't puzzle about the number, it's for support's info. All that's of interest to you is that it's a P item — so it takes a routine request.

X

Items that are not in the supply system. The code calls out items that are supposed to last the life of the major item. When an X item goes . . . it's time to retire the major end item.

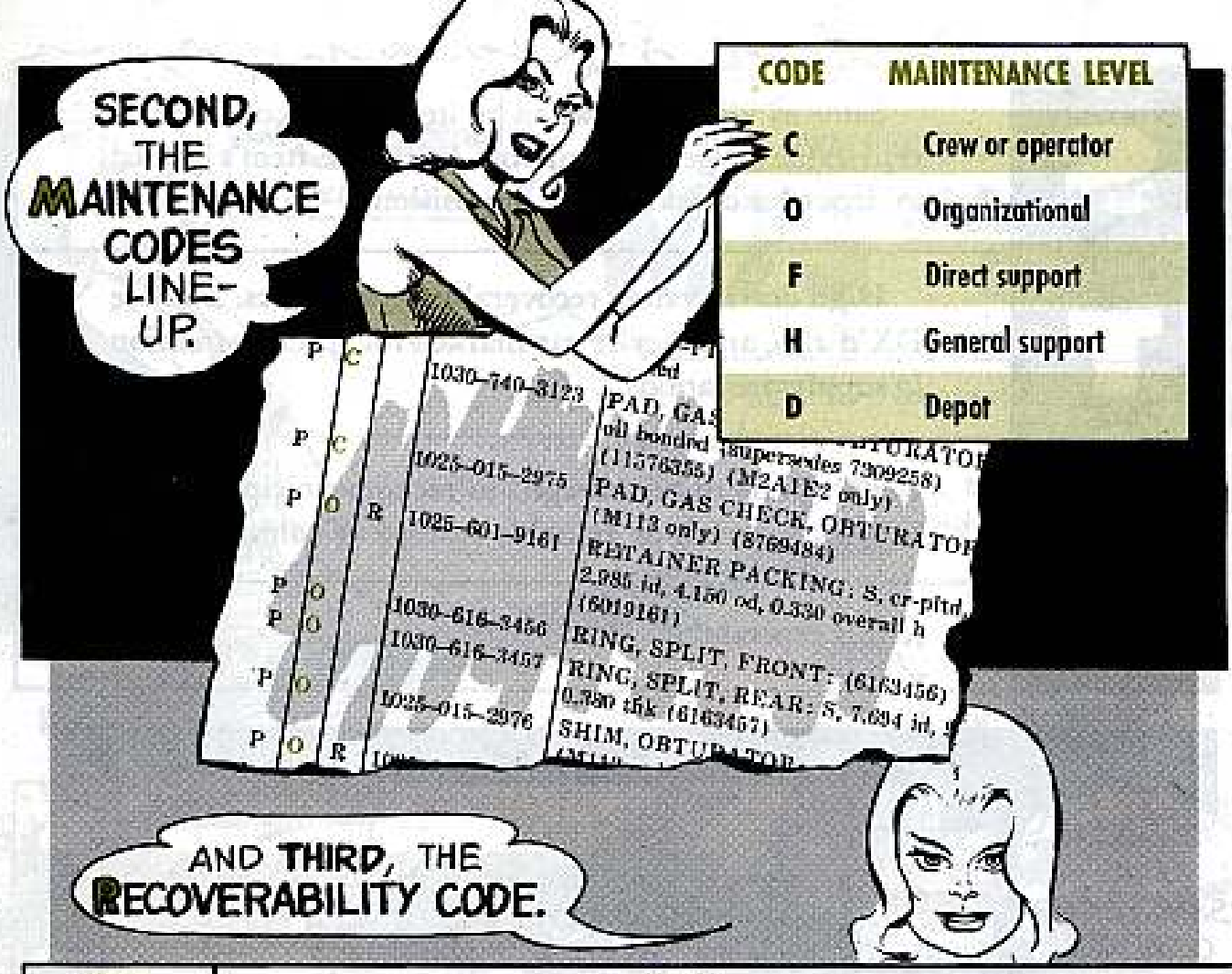
X1

Repair parts that are not available by themselves. You need the next higher assembly. The assembly is installed by the level of maintenance listed with the source code.

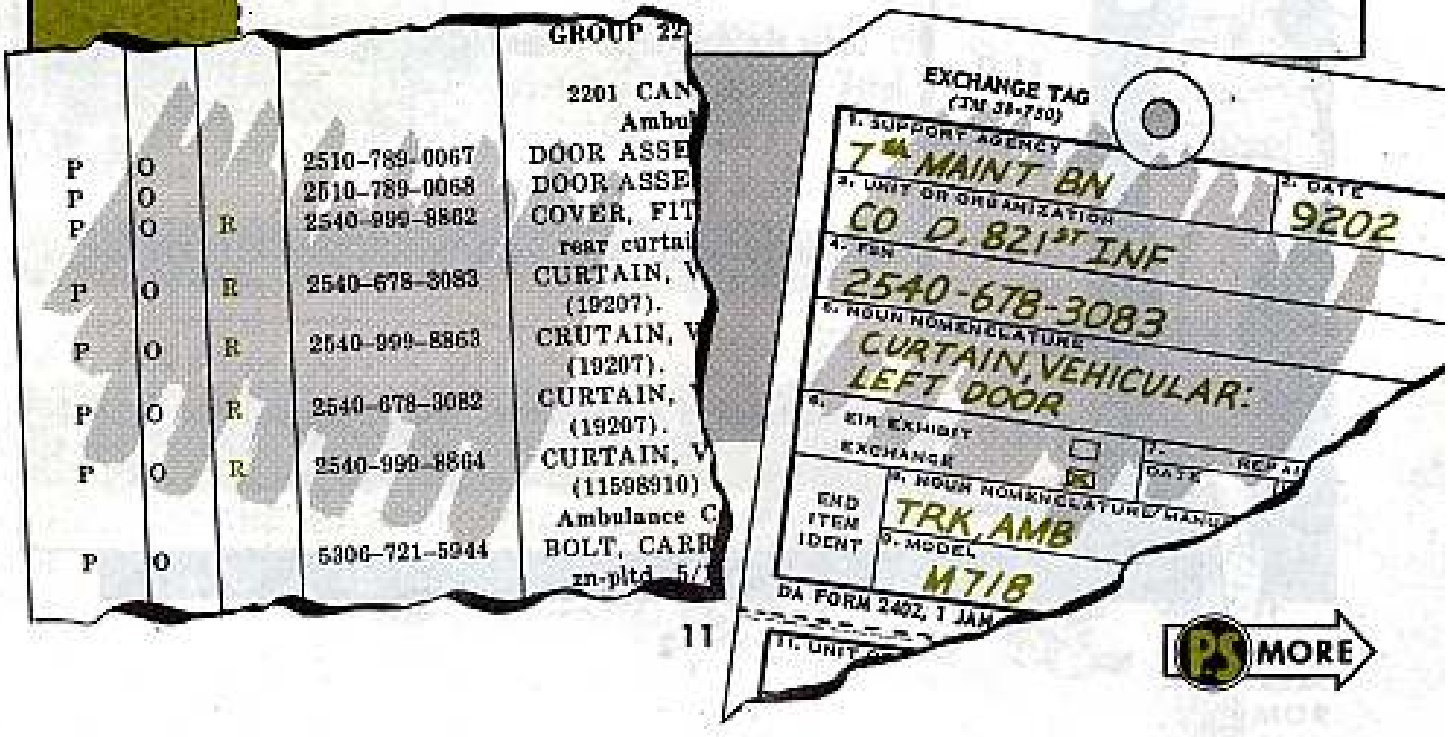
XI	O		STARTER-GENE
P	O	5306–042–5837	HOUSING: start
XI	O		(19207–8745470
P	O	5305–042–5301	SCREW, ASSE
P	O	2920–953–9334	(21450–42583
			COVER: starter-
			(19207–8745464
			SCREW, ASSE
			(21450–42530
			COVER, ELECT
			BRUSH ASSY

X2

Repair parts to be cannibalized (AR 750-50). If support can't get the parts from a Can point, they'll order 'em through normal supply channels, but they'll have to provide justification along with the requisition.



CODE	MEANS
R	Repair parts and assemblies that are economically repairable at direct support or general support shops. You normally get them through DX (Direct Exchange). You simply swap support an unserviceable item for a like serviceable item. All you do is fill out a DA Form 2402, attach it to the unserviceable item and take it to the DX section that supports your outfit. Most of these items are carried in the DX list you get from the DX section.



PS MORE

S	Same as "R". But, when an item's not economically repairable at general support level, the item's passed to depot for checking and disposition.
T	High dollar value, recoverable repair parts. They're DX'd also, and they're car-marked for special attention in supply operations.
U	Repair parts to be salvaged to reclaim precious metal, critical materials or reusable casings or containers.
NONE	Item's expendable.

P-O-R	Says the item is from normal stockage. It's for organizational maintenance, and it's recoverable (normally thru DX).
P-O-T	The item is in the supply system, installed by organizational maintenance and recoverable because it's got valuable or reusable stuff.
M-O	Make it at organizational level.
X1-O	Order the next higher assembly and install it at organizational level.
P-F-R	Item is in the supply system. Support installs it and it's recoverable.
X2-O	Items installed at organizational level are supplied thru cannibalization.

FIREPOWER

BE YOUR OWN INSPECTOR ON THE...

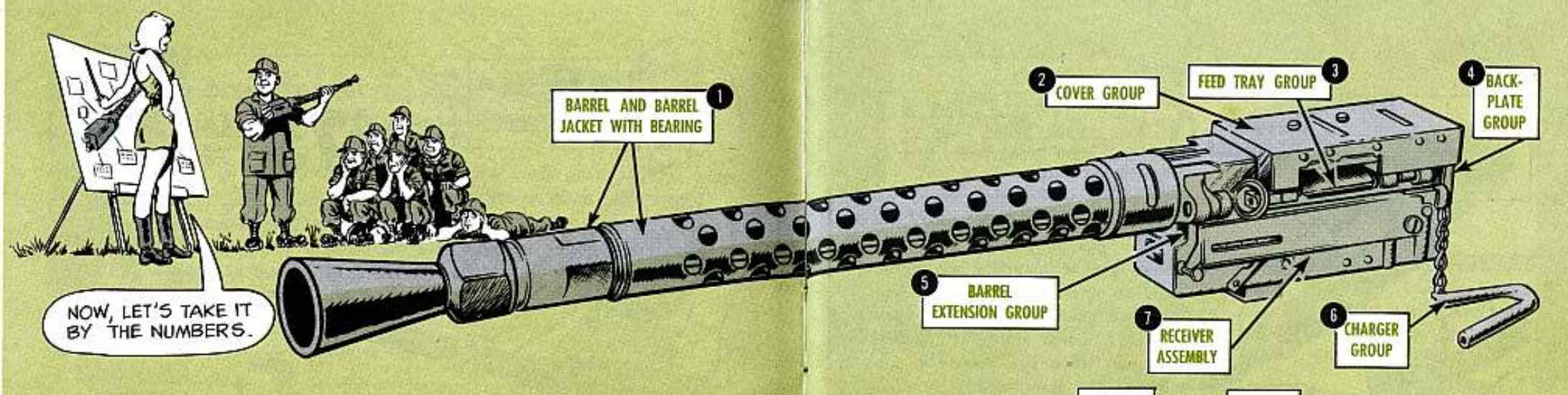
M73 MACHINE GUN

Yessir, your 7.62-MM M73 co-axial machine gun's long since won its battle spurs aboard M48A3 and M60-series tanks, M728 combat engineer vehicles and M551 Sheridans.

But it's had a lot of changes and improvements since the first model barked "Scram!" orders. This inspection guide's geared to the M73 you've got in your hot little hands right now.

The **bold type** defects rate your on-the-double attention. But get on 'em all and, if there're any you can't handle yourself, get the message to your armorer.

PS MORE



1. Barrel and Barrel Jacket with Bearing

BARREL JACKET — **Bent, cracked, dented, loose in mounting block.**

If the bend or dent is big enough, it can cause faulty recoil by keeping the barrel from moving freely. You want to make sure the barrel jacket won't bind against the mantlet tube. You can check this easy while you're boresighting.

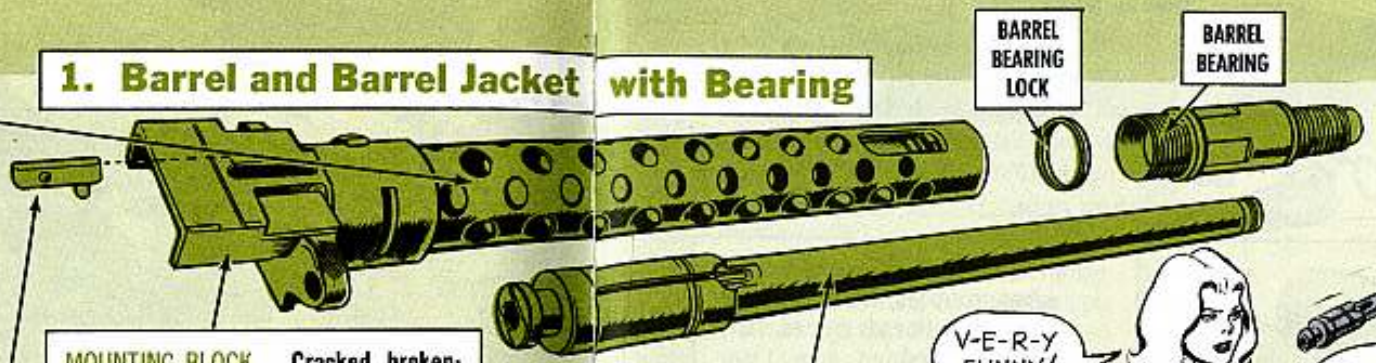
BARREL LOCATOR — **Missing,** busted, **won't keep barrel from rotating;** spring pin damaged, missing, won't hold.

First production models of the M73 have a spring-activated locator that'll let the barrel assembly be installed upside down and not engaged with the barrel locator.

You can't mistake this on the new locators. The new ones fit in one way only and you slip in a spring pin to hold it in place.

MOUNTING BLOCK — **Cracked, broken;** retaining lugs damaged. (The bottom lip of the block that engages the recessed groove of the receiver must be free of burrs.)

'Nother thing: Don't let this throw you. The barrel jacket answering to FSN 1005-924-1773 (11013400) has a downward angle on its mounting block, but none of the other barrel jackets have this feature. This angle aids in returning the receiver to the installed position without pulling the disconnector ring. But go with what you've got. You can't swap off. You can use either of them.



BARREL ASSEMBLY — **Barrel bulged, cracked;** bore badly pitted, loaded with carbon (remember, the outside finish must be dark and have no shine); chamber dirty, rusty, powder-fouled; locator slot rusty, dirty.

Catch this tip: When you glue your eyeballs to the bore, don't mistake the expansion ring at the end of the stellite liner for a defect. This ring's about 8 inches from the chamber end. Look for pits, scratches and such-like throughout the bore.

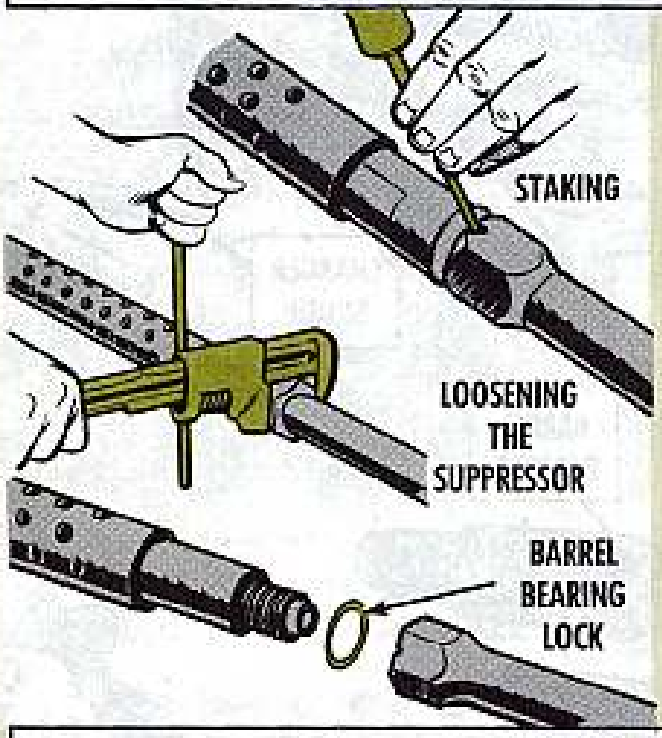
BARREL BEARING — **Cracked,** threads at either end damaged, burred, rusty.

All M73 machine guns should now have the new barrel bearing (FSN 1005-689-9939) and new barrel bearing lock (FSN 1005-689-9941). With these new parts installed the M73's stock number changes from FSN 1005-679-6763 to **FSN 1005-869-8816.**

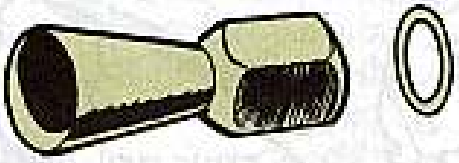
BARREL BEARING LOCK — Damaged, **missing,** not staked.

PS MORE

FLASH SUPPRESSOR — Forks or body cracked, busted, badly carboned; inside threads burred, dirty; lock not staked.



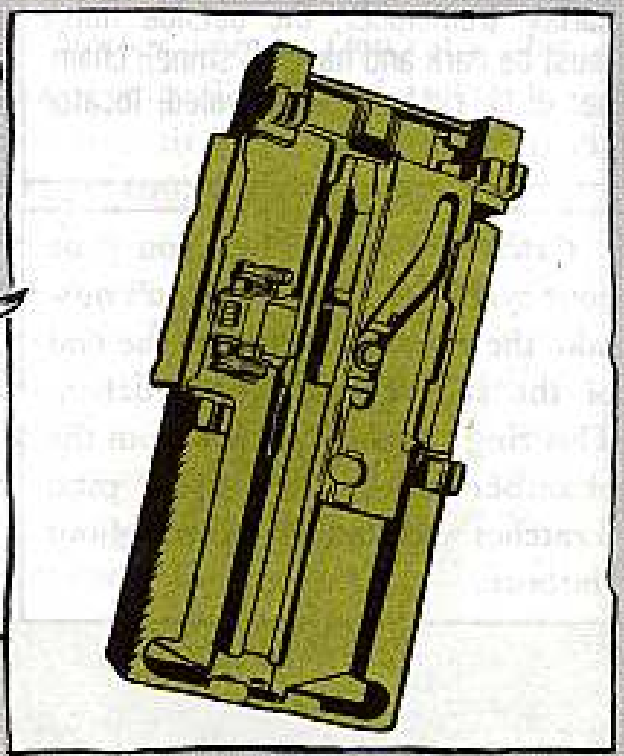
The flash hider (FSN 1005-922-9777) and flash suppressor (FSN 1005-869-8817) come under the heading of "tools" to go along with your vehicle BII. It's a good idea to eyeball each while it's mounted on the barrel jacket and again when you remove it for cleaning. The flash hider's installed with a barrel bearing lock, same as the suppressor and they're staked to hold 'em in place. Both flash attachments are installed by using your adjusting wrench (FSN 5120-264-3793) to get them tight.



FLASH HIDER — Cracked, sharp edges, corroded, loaded with carbon; inside threads burred, dirty; lock not staked.

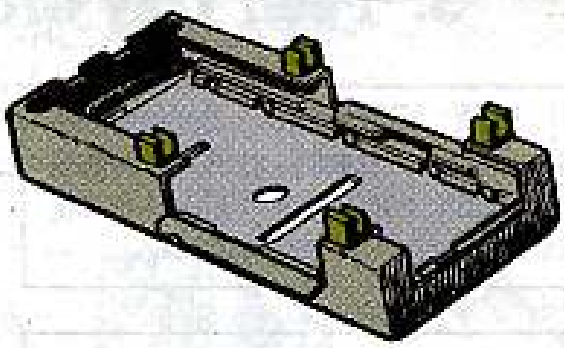
The carbon scraper's been deleted from the tool list and not replaced.

2. Cover Group

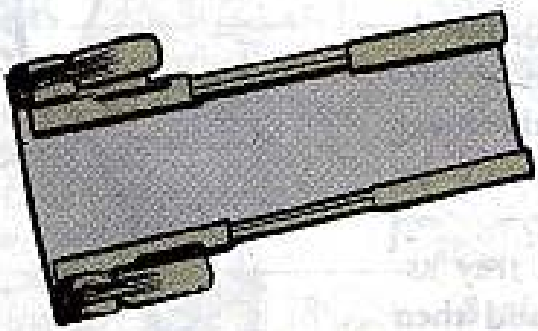


COVER ASSEMBLY — **Retainer bracket welds busted;** cover loose, **rivets loose; cover latches bent,** broken; feed cam locator spring busted, deformed.

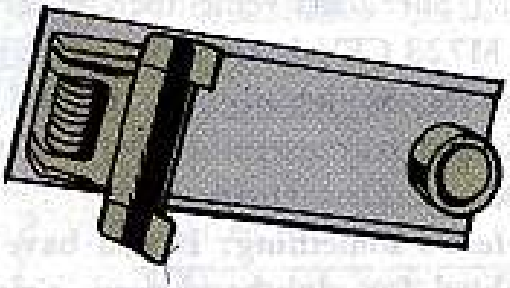
Keep an eye peeled for cracks in the 4 retainer bracket welds. If any crack's over ⅛ inch long, get yourself a new cover.



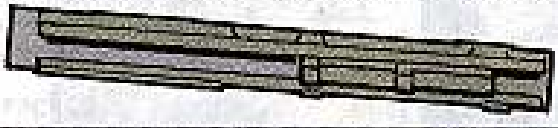
FEED TRACK ASSEMBLY — Pitted, cracked, edges rough; retaining pawls and track worn, broken; springs weak, kinked, **busted.**



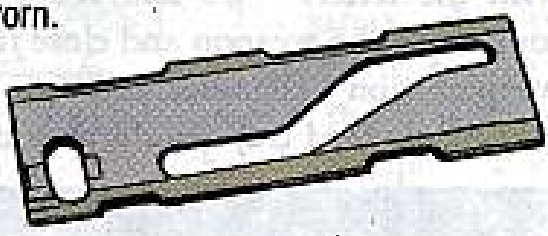
FEED SLIDE ASSEMBLY — Spring weak, worn, **broken, lacks tension; feed pawl broken,** worn; roller cracked, busted; retaining ring split, **missing.**



FEED SUPPORT ASSEMBLY — Bent, deformed, won't fit in cover group; edges burred, worn; cartridge stripper and cartridge depressor worn, cracked, won't work right; pins worn, bent, busted, interfere with feed cam during operation; retainer tab broken, missing.



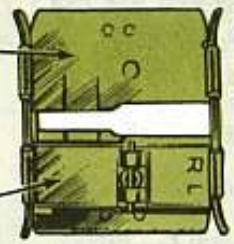
FEED CAM — Nicked, burred, **cracked,** worn.



3. Feed Tray Group

FEED TRAY ASSEMBLY — Spot welds broken, loose; **tracks split, cracked;** latches split open, **too tight,** burred; rivets worn, bent, loose, **missing.**

CARTRIDGE STOP ASSEMBLY — Bent out of line, worn, **cracked, broken.**



WATCH YOUR L'S AND R'S

The M73 in the M60-series and M48A3 tanks and M551 Sheridans remember, is lefthand fed, but in the M728 CEV it could be either righthand or lefthand fed. So doublecheck that all parts of the cover and feed tray assembly are put together with the same letters lined up right.

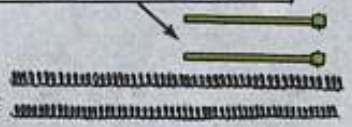
Here's something: If you have the feed tray assembled for righthand feed, f'rinstance, and then happen to put the feed tray in backwards (meaning with the letters — L's and R's — to the rear), you could load the weapon and close the cover, BUT the weapon won't chamber and fire 'cause the w-i-d-e part of the feed tray would then be to the rear.

So brand this on your brain: The wide part of the feed tray slot — just like the letters — must always be toward the muzzle end of the machine gun.

DRIVING SPRING GUIDE RODS — **Rods bent; retaining pins missing,** loose, bent, burred.

SPRINGS — Kinked, **weak, broken.** (Both springs should be about the same length — and at least 8 inches long.)

The guide grooves shouldn't be bent 'cause they have to fit snugly.



4. Back Plate Assembly

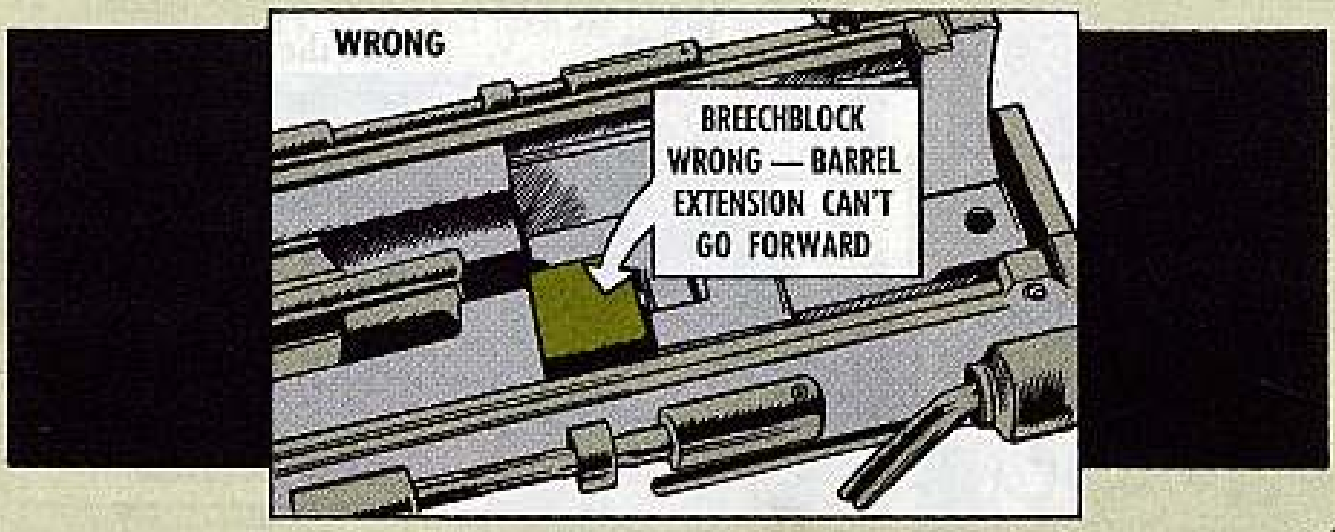
P.S. MORE

5. Barrel Extension Group

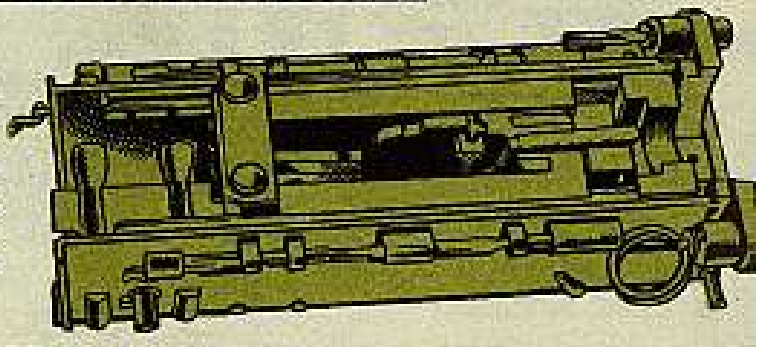
Now hear this: All M73's should now have the barrel extension assembly that comes under FSN 1005-937-8256 (11013360). If you have one with a different stock number, get it switched.

Keep a sharp eye on the little things in this area—little springs and pins, especially. Make sure they're all present and shaped-up.

A couple of other thoughts: The groove of the breechblock must engage the bottom rail on the right side of the receiver. If the breechblock's not engaged to the receiver rail, the barrel extension won't go all the way forward like it should. So, watch for this common error in installing. When installing the barrel extension group into the receiver, the breechblock must be flush with the right side of the barrel extension. The mistake's so easy to make . . . and so hard to correct later on.



Keep this in mind: The barrel extension *must be forward* when you install the jacket assembly with the barrel to the receiver. If it's not forward, the barrel just won't engage the barrel extension!



HAMMER ASSEMBLY — **Parts worn, cracked, broken, missing.** (The retaining pin screw could vibrate right out of there, so watch it!)

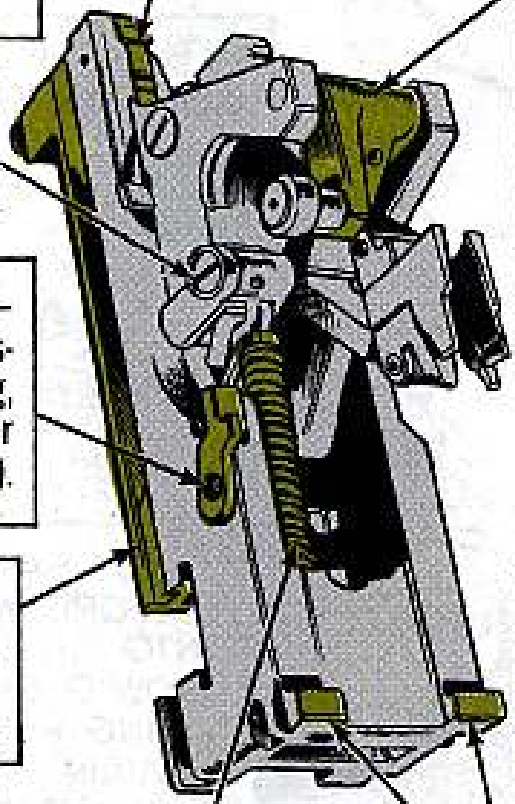
TRIGGER SEAR NOTCHES ON BARREL EXTENSION — Worn, rounded off.

LEVER ASSEMBLY — Pins missing, loose; worn, **cracked, busted;** rollers tight, binding.

HAMMER LINK ASSEMBLY—**Pins loose.**

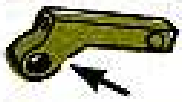
SEAR SPRING — Won't work (should return sear to forward position).

RATE CONTROL PAWL — Worn; **spring broken,** missing (if the spring's missing, you can't depend on your weapon firing all the time).

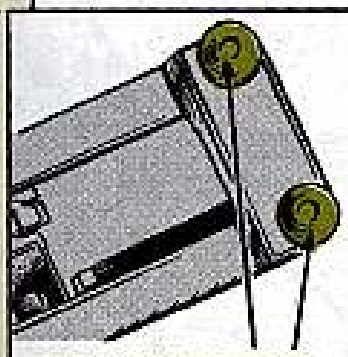


HAMMER SEAR — **Broken, worn.**

BARREL EXTENSION — **Broken,** deformed, cracked, badly worn.



HAMMER SEAR SCREW — **Not staked, loose** (this must be staked!)



DRIVING STUDS — **Broken,** cracked, won't work; spring missing, broken.

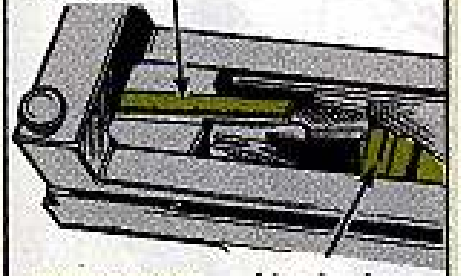
HAMMER SPRING AND PLUNGER — **Spring missing, plunger broken, split.**

BUFFER NOTCHES — **Broken,** cracked, **won't work.**

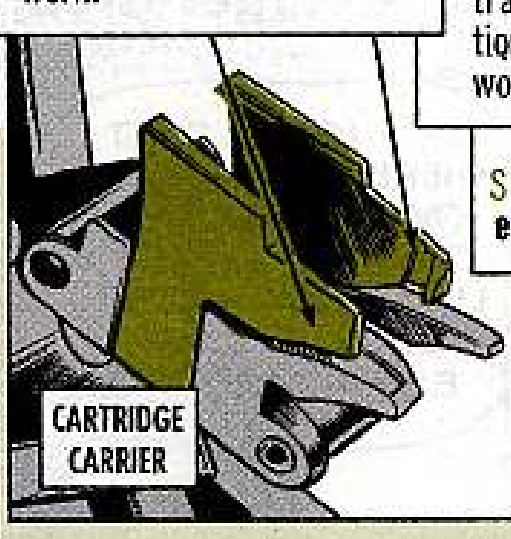
GRIPS — **Broken, cracked,** worn.

CARTRIDGE CARRIER — **Excessive binding;** extractor camming projections broken, burred, badly worn.

RAMMER — **Broken, bent,** burred.



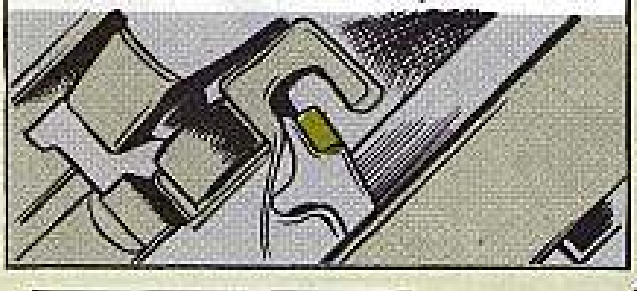
EXTRACTOR — **Lip broken, worn,** burred; spring weak.



SPRINGS — **Don't give enough tension to grips.**

P.S. MORE

FIRING PIN EXTENSION — **Broken, deformed, assembled wrong, spring missing.** (If the spring's missing, the firing pin extension'll stick out of the front end of the rammer assembly or fall out.)



FIRING PIN — **Broken, badly worn.**

BREECHBLOCK — Burred, cracked, broken.

FIRING PIN SPRING — **Broken, weak** (won't pull firing pin from face of breechblock).

BREECHBLOCK ROLLER — **Missing,** stuck (won't rotate).

HEY, SARGE...? ER? BEFORE WE GO DOWN INTO THEM PADDIES... HOW'D THAT CO-AX FIRING PIN LOOK TO YA DURIN' YESTERDAY'S INSPECTION?!

6. Charger Group

THIS IS THE PART WHERE IT'S EASY TO OVERLOOK A BENT OR WARPED ITEM LIKE A CHAIN LINK... LOOK IT OVER EXTRA CAREFUL!!

RETAINING LUG — **Broken, bent out of shape.**

CONNECTOR — Broken, bent, badly burred.

CHARGER ASSEMBLY — Doesn't fit right to receiver assembly; chain twisted (could hold recoiling parts out of battery); chain spring action weak.

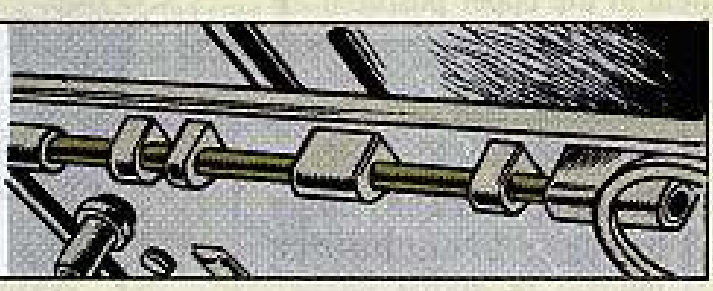
HOUSING ASSEMBLY — **Cracked, dented,** distorted, threads stripped (check for smooth operation).

RETAINING RING — **Missing, cracked,** bent, spread. (If it's not OK, you could lose the charger assembly.)

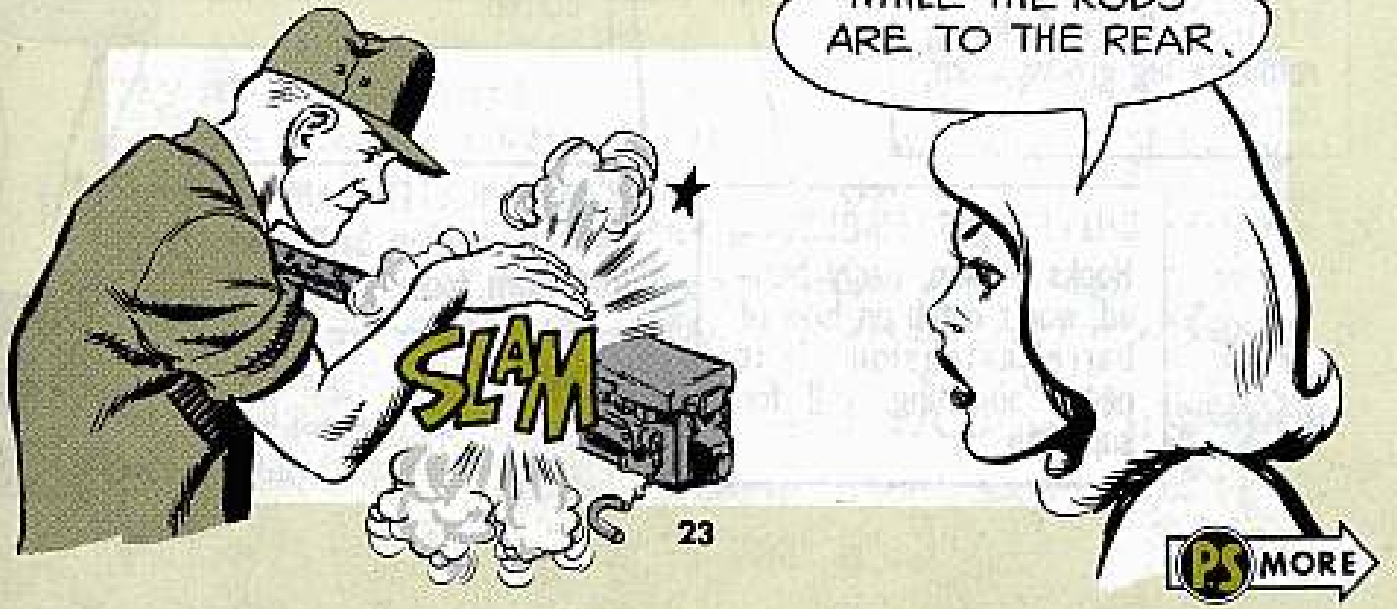
HANDLE — **Busted,** cracked, bent.

7. Receiver Assembly

COVER LATCH RODS — **Cracks in bracket weld over ⅛ inch long; rods broken,** bent; cover latch rod springs weak (they're coiled and you can't see 'em); flat, leaf-type spring bent, busted.



You gotta be real careful not to damage the cover latches. Keep the rods forward when opening or removing the cover from the gun. These rods should automatically latch the cover when it's closed.



P.S. MORE

RECEIVER BODY — **Body cracked,** bent, twisted, **dented, busted; cracks in rail weld more than 1/8 inch long.**

RATE CONTROL GUIDE — **Missing, loose.**

RATE CONTROL SLIDE — **Broken, binds; spring weak, broken; retaining screws not staked.**

DISCONNECTOR PULL RINGS — **Broken, bent, missing,** weak.

BUFFER SUPPORT LEVER — Bent, no spring action (if there's no spring action, the buffer support won't be held in the upper position).

BREECHBLOCK CAM — **Broken, cracked,** badly burred; breechblock plunger or spring busted, **missing.**

EJECTOR — Loose.

BUFFER PIVOT PIN — Broken, bent, worn, badly burred.

CHARGER MOUNTING STUDS — **Busted, bent;** retaining lug groove worn, burred.

BUFFER ASSEMBLY — Hooks broken, badly burred, won't catch on lugs of barrel extension. (If it needs adjusting, yell for support!)

BREECH ROLLER CAM — **Broken,** cracked, **badly burred,** worn, loose.

PUBLICATIONS—Gathering dust. Depending on what vehicle you're riding these are the pubs you should have:

TM 9-1005-233-25 (May 67).

M60-series tanks—TM 9-2350-215-10 (Feb 65) w/Changes, TM 9-2350-215-20 (Feb 65) w/Changes, TM 9-2350-215-20P (Jan 65).

M48A3 tank—TM 9-2350-224-10 (Jan 66) w/Changes, TM 9-2350-224-20 (Jan 66) w/Changes, TM 9-2350-224-25P (Jan 66) w/1 Change.

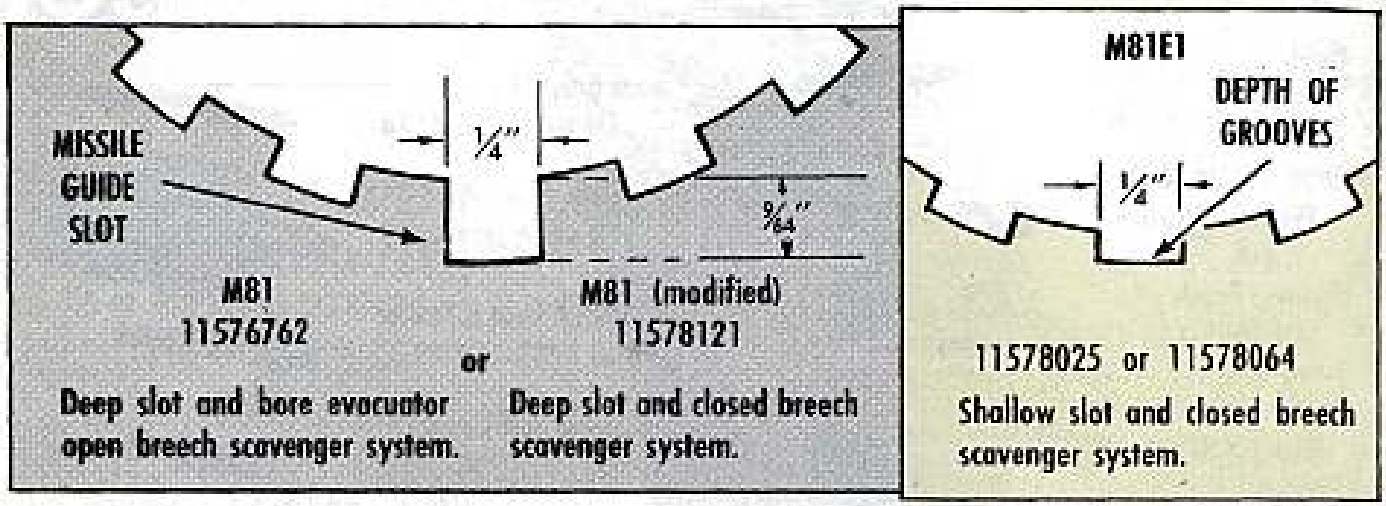
M728 CEV—TM 9-2350-222-10 (Aug 65) w/Changes, TM 9-2350-222-20 (Sep 65) w/Changes, TM 9-2350-222-25P (Oct 65) w/1 Change.

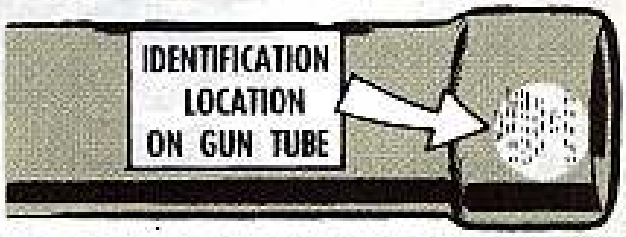
M551 Sheridan—TM 9-2350-230-12 (Jun 66) w/Changes, TM 9-2350-230-25P/2 (Jun 66).

PS END

M551 SHERIDAN TUBE LIFE

First off you have to find out what kind of tube you have, like so . . .





No problem telling the difference between a deep and a shallow key slot. They are both 1/4-in cuts running straight through from breech to muzzle at the 6 o'clock position. The shallow one is the same depth as the grooves but the deep one is 9/64 inch deep which is about twice as deep as the rifling.

With an M81 or M81 (modified) tube you can run 200 EFC (equivalent full charge) rounds through before you need a new tube. With an M81E1 tube you can go 600 rounds.

All conventional rounds count 1 EFC each no matter what the model number of the round or whether or not it has an E after the model number.

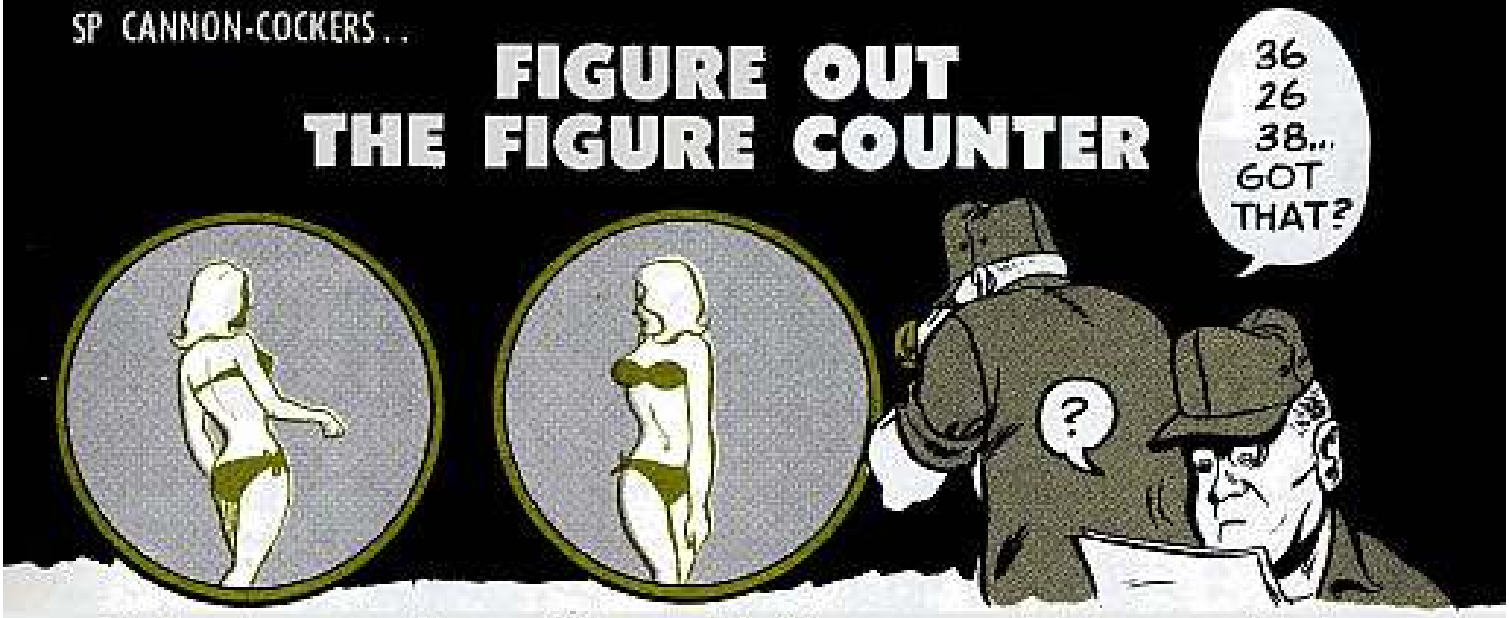
Missile rounds are not counted at all because they don't wear out the tube enough to matter.

EFC tube life and breech life is based on the number of conventional rounds fired, which is 600 rounds, and not on tube wear. When using the M81 or M81 modified gun launcher tube, the retube date equals the original plus 2 retubing, and when using the M81E1 gun launcher tube, no retubing.

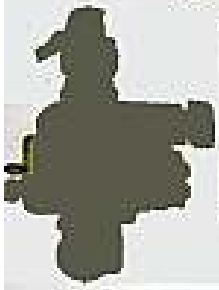
By the way, when the breech is changed, that includes the breech coupling, the breech chamber and the obturator seal.

SP CANNON-COCKERS . .

FIGURE OUT THE FIGURE COUNTER



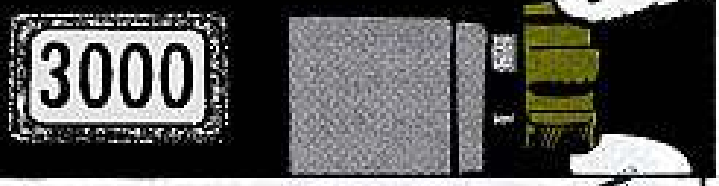
Pull out your ear plugs and listen to this. Your panoramic telescope might have a rotating 3200 mil reset (lower) counter that could jam or give you a wrong reading. If you have one of these telescopes you could have trouble.



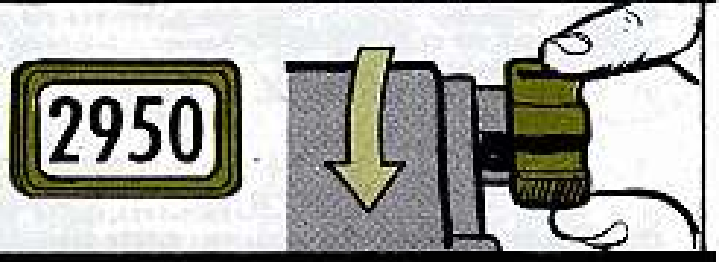
THIS TELESCOPE	THESE SERIAL NUMBERS	IN THIS VEHICLE
M115	1337 to 1589	M107 or M110
M117	3487 to 3738	M108 or M109

If you have one of the "maybe" bad ones, make this simple check every day . . .

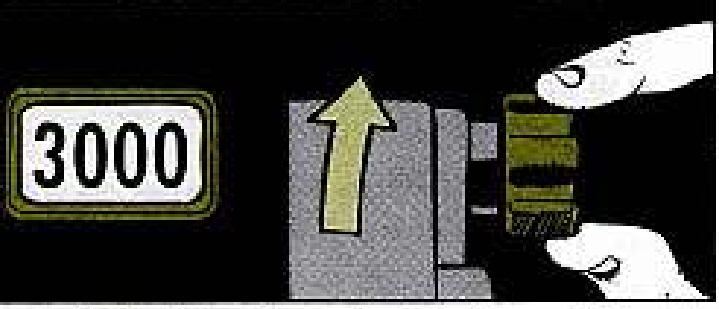
1. Turn your deflection azimuth knob until you get the 3200 mil reset azimuth counter to any even 1000 reading — 1000, 2000, 3000 or whatever



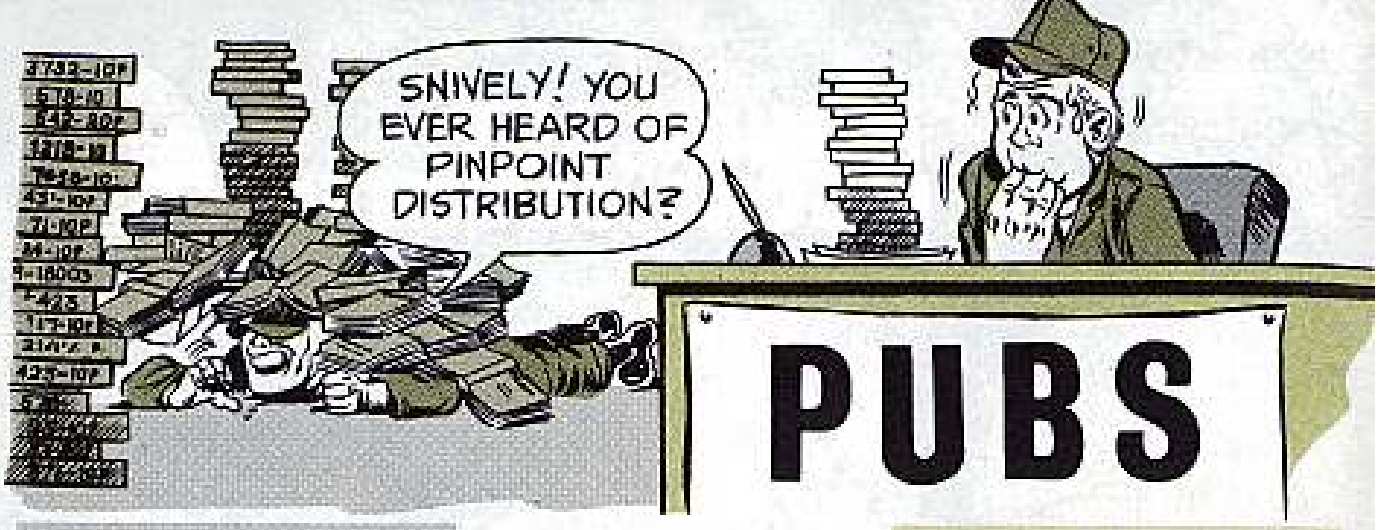
2. From this even 1000 position turn the deflection knob one half turn counterclockwise. All 4 numbers in the 3200 mil reset counter window will change if the counter is working right.



3. Now turn it back and all 4 numbers in the 3200 mil counter window should change again, leaving you with the even 1000 number you started with when you have turned the deflection knob back a half turn.



The counter should operate smoothly and all 4 numbers should change in both counterclockwise and clockwise operation. If not, you've got a bad counter . . . call support.



PUBS

This is a selected list of recent pubs of interest to organizational maintenance personnel. The list is compiled from recent AG Distribution Centers Bulletins. For complete details see DA Pam 310-4 (May 68), and Ch 3 (Nov 68), TM's, TB's, etc.; DA Pam 310-6 (Jul 68), and Ch 3 (Apr 69), SC's and SM's; DA Pam 310-7 (Dec 68), MWO's.

TECHNICAL MANUALS

TM-DPSC-6520-257, Apr, Med Materiel Repair Parts Pamph No. 257.
TM 5-1940-201-15, Jan, 27 Ft Alum Hull Inboard Eng Bridge Erection Boat.
TM 5-2805-200-20P, Feb, Gasoline Outboard Motor 25 BHP.
TM 5-2805-258-24P, Jan, 10 HP Mil Std Mdls Gas Eng.
TM 5-2330-220-14, Feb, 32,000 Lb Rated Payload Cap Transporter.
TM 5-3431-200-20P, Feb, Inert Gas Shielded ARC Welding Set for 3/64-In Wire.
TM 5-3431-207-20P, Dec, Welding Equip.
TM 5-3431-225-15, Mar, Arc Welding Machine Gen and Inert Gas Shielded, Miller Mdl 330A/B/SP.
TM 5-3740-201-20P, Feb, 25 PSI 30 GPH GED Pushcart Mtd Insecticide Sprayer.
TM 5-3805-200-15 C3, Feb, Earth Moving Equip Loaders.
TM 5-3805-201-20P C1, Mar, Earth Moving Equip Loaders.
TM 5-3810-222-23P, Feb, 20 Ton Tractor Towed Crane Letourneau-Westinghouse Mdl M20.
TM 5-3820-238-15, Feb, Gas Eng Powered Well Percussion Drilling Machine.
TM 5-3825-214-20P, Feb, Water Distributors.
TM 5-3895-333-25P, Feb, DED SP Pile-Driver Hammer.
TM 5-4120-220-20P, Mar, 18,000 BTU Floor Mtd Air Conditioners.
TM 5-5420-200-20P, Feb, Bridge Launchers AVL.
TM 5-6115-229-10 C2, Mar, 5 KW 60 Cyc Eng Drvn Gen Sets.
TM 5-6115-247-15 C1, Mar, 45 KW 60 Cyc Eng Drvn Gen Sets.
TM 5-6115-247-15 C1, Mar, 45 KW 60 Cyc Drvn Gen Sets.
TM 5-6115-248-10 C3, Mar, 30 KW 60 Cyc Drvn Gen Sets.
TM 5-6115-257-15 C3, Mar, 1.5 KW 60 Cyc Drvn Gen Sets.
TM 5-6115-261-10 C3, Feb, 15 KW 60 Cyc Drvn Gen Sets.
TM 5-6115-270-10 C3, Mar, 3 KW 60 Cyc Drvn Gen Sets.
TM 5-6115-272-25P, Feb, .5 KW 60 Cyc Eng Drvn Gen Sets.
TM 5-6115-273-15 C3, Mar, 60 KW 60 Cyc Eng Drvn Gen Set.
TM 5-6115-291-15 C4, Mar, 60 KW 60 Cyc Eng Drvn Gen Sets.
TM 5-6115-449-15, Jan, DED SP Gen Set 30 KW AC Mil Design Mdl SF-30-MD/CIED.
TM 5-6115-453-12, Mar, 0-30 KW AC Skid Mtd Port Mdl Load Bank.
TM 5-6665-202-15 C4, Land Mine Detecting Equip.
TM 5-6675-270-25P, Feb, Surveying Equip.
TM 9-1005-213-25 C1, Feb, M2 .50 Cal MG and Mounts.
TM 9-1090-201-20P, Jan, XM16 Armament Subsystem.
TM 9-1090-203-20P, Dec, XM28 Armament Subsystem.
TM 9-1290-225-12/1 C2, Feb, Radar Chrono Set.
TM 9-1400-465-15P, Jan, XM551 Shillelagh.
TM 9-1410-302-15P/1/2, Feb, Sergeant.
TM 9-1425-585-14, Feb, Chaparral.
TM 9-1430-250-15P/6/1, -15P/12, -15P/21/1 and -15P/4, Feb, Nike-Herc.
TM 9-1440-381-20P, Mar, Pershing.
TM 9-2300-257-20, Feb, M113A1 Carrier Family.
TM 9-2350-300-20 C1, Feb, XM163 20-MM AA Gun.
TM 9-4935-585-14/1, Feb, Chaparral.
TM 9-4935-587-12, Feb, Chaparral.
TM 9-6675-231-20P, Mar, Theodolite.
TM 9-6920-378-20P, Mar, Pershing.
TM 10-4930-204-15 C1, Mar, Petroleum Distr.
TM 10-7310-228-14, Feb, Gas Deep Fat Fryer.
TM 10-7310-230-14, Feb, Gas Baking and Roasting Oven.
TM 10-8340-210-23P C1, Mar, Tents.

MODIFICATION WORK ORDERS

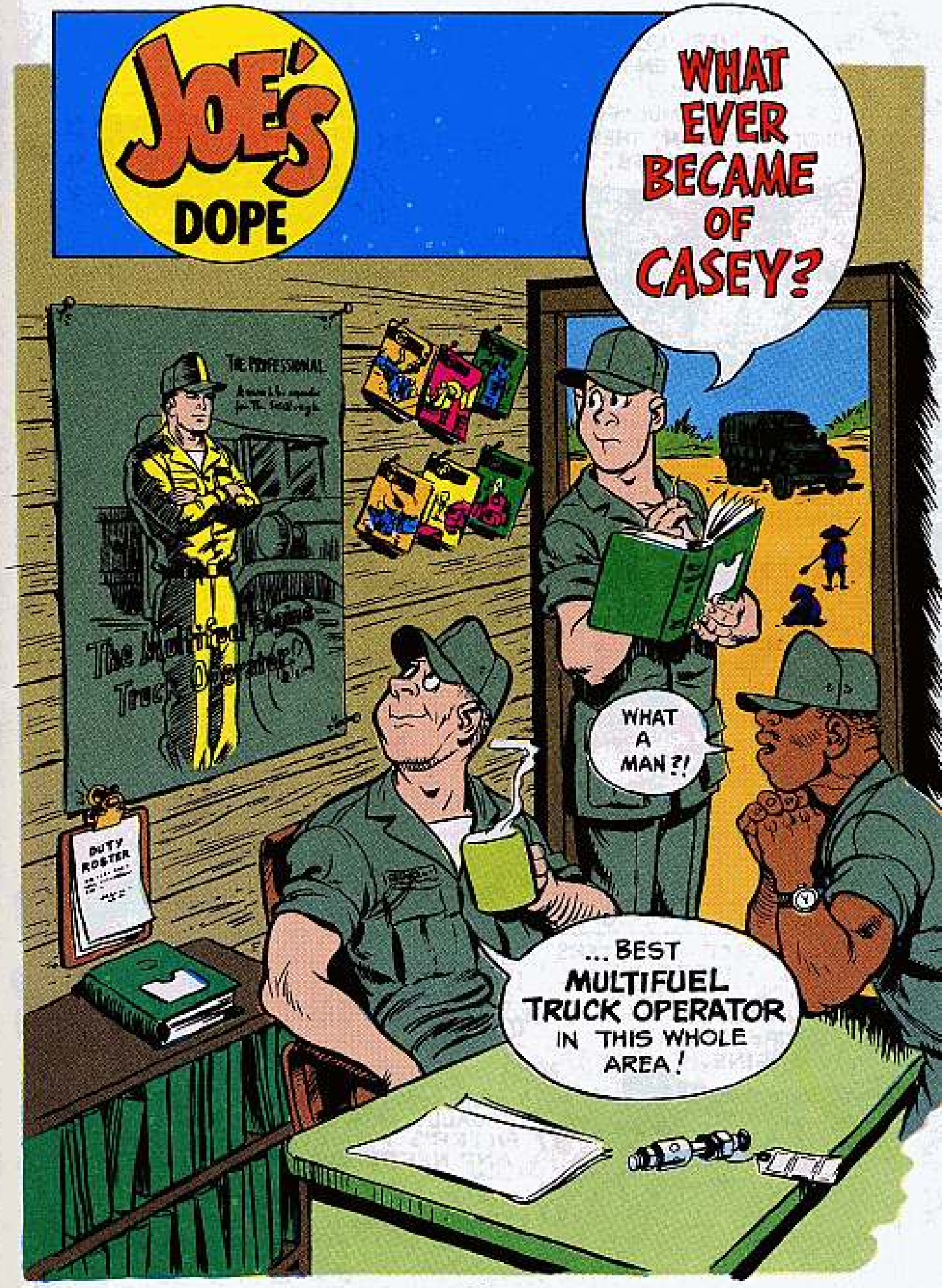
9-1430-501-30/64, Feb, Hawk.
9-2350-217-30/15, Feb, M109 Howitzer.
9-4900-500-30/55, Feb, Hawk.
55-1500-210-30/3 and 30/27, Mar, CH-47.
55-1510-201-40/2, Feb, U-8.
55-1510-201-40/8, Jan, U-8.
55-1510-203-30/5 C3, Mar, U-6.
55-1520-209-30/59 C2, Mar, CH-47.
55-1520-209-30/76, Mar, CH-47.
55-1520-211-30/36 C1, Mar, UH-1A-1B.
55-1520-217-20/3, Mar, CH-54.
55-1520-221-20/4, Mar, AH-1G.
55-1520-221-30/10 and 30/14, Mar, AH-1G.
55-1520-227-30/12, Mar, CH-47.

MISCELLANEOUS

AR 735-35 C3, Mar, Property Accountability.
DA Pam 310-6 C3, Apr, Index to SC's and SM's.
DA Pam 700-3, Feb, Use of DD Form 6 Packaging and Handling Deficiencies.
LO 5-3655-211-12-1 and -2, Mar, Semitrailer Mtd Oxygen-Nitrogen Gen and Charging Plant.
LO 5-3805-219-12-1 and -2, Jan, Scoop Type Loader Dsl Drvn 4 Wheels 2½ Cu Yd W/Engine.
LO 5-3805-232-12-2, Jan, Earth Moving Equip Loaders.
LO 5-3805-240-12-1, -2 and -3, Mar, DED Ditching Machine.

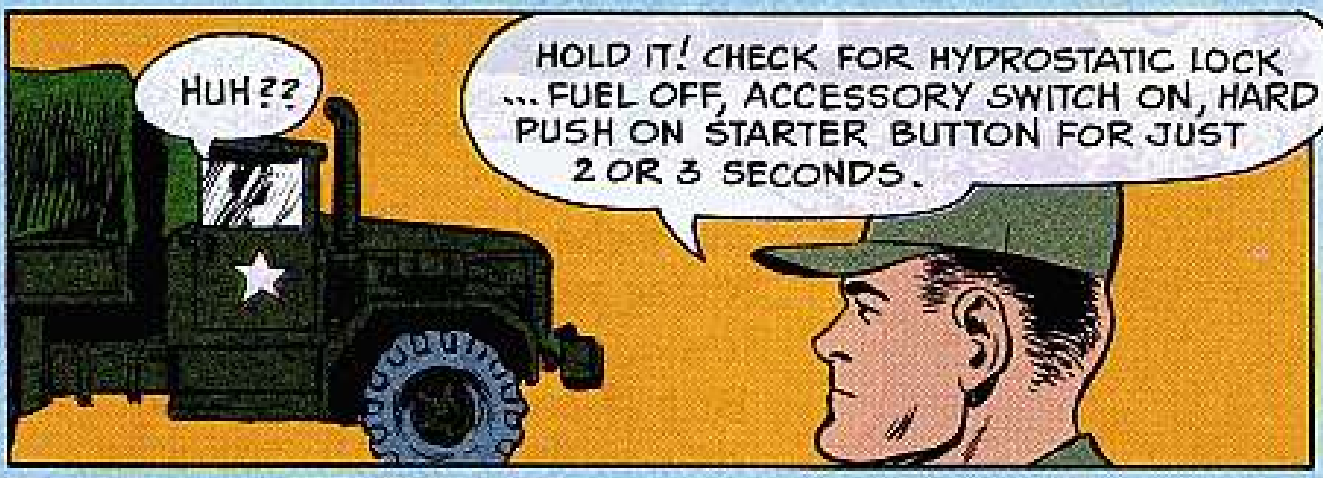
SUPERQUICK ZAP

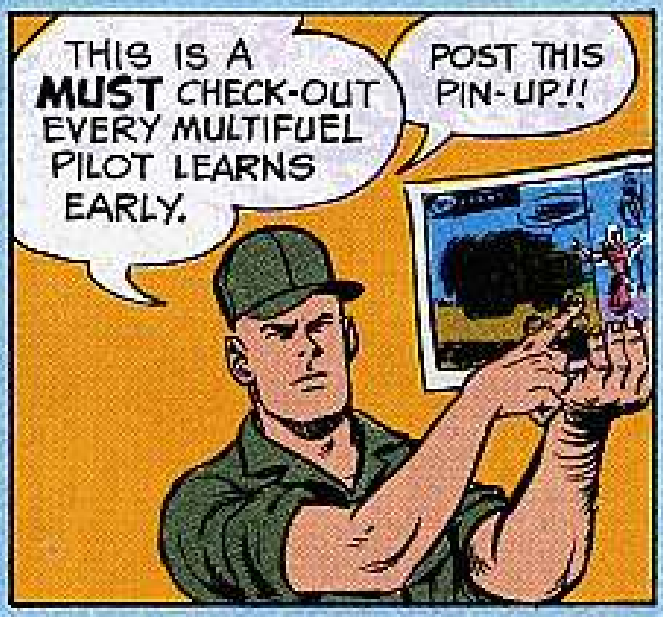
All together now . . . if it's superquick action you want with the M564 MTSQ fuze, set the fuze for 90 seconds — like it says in para 5-58E(1) of Ch 7 (Sep 68) to TM 9-1300-203. This up-dates the superquick setting info for the M564 fuze on page 46, PS 197.

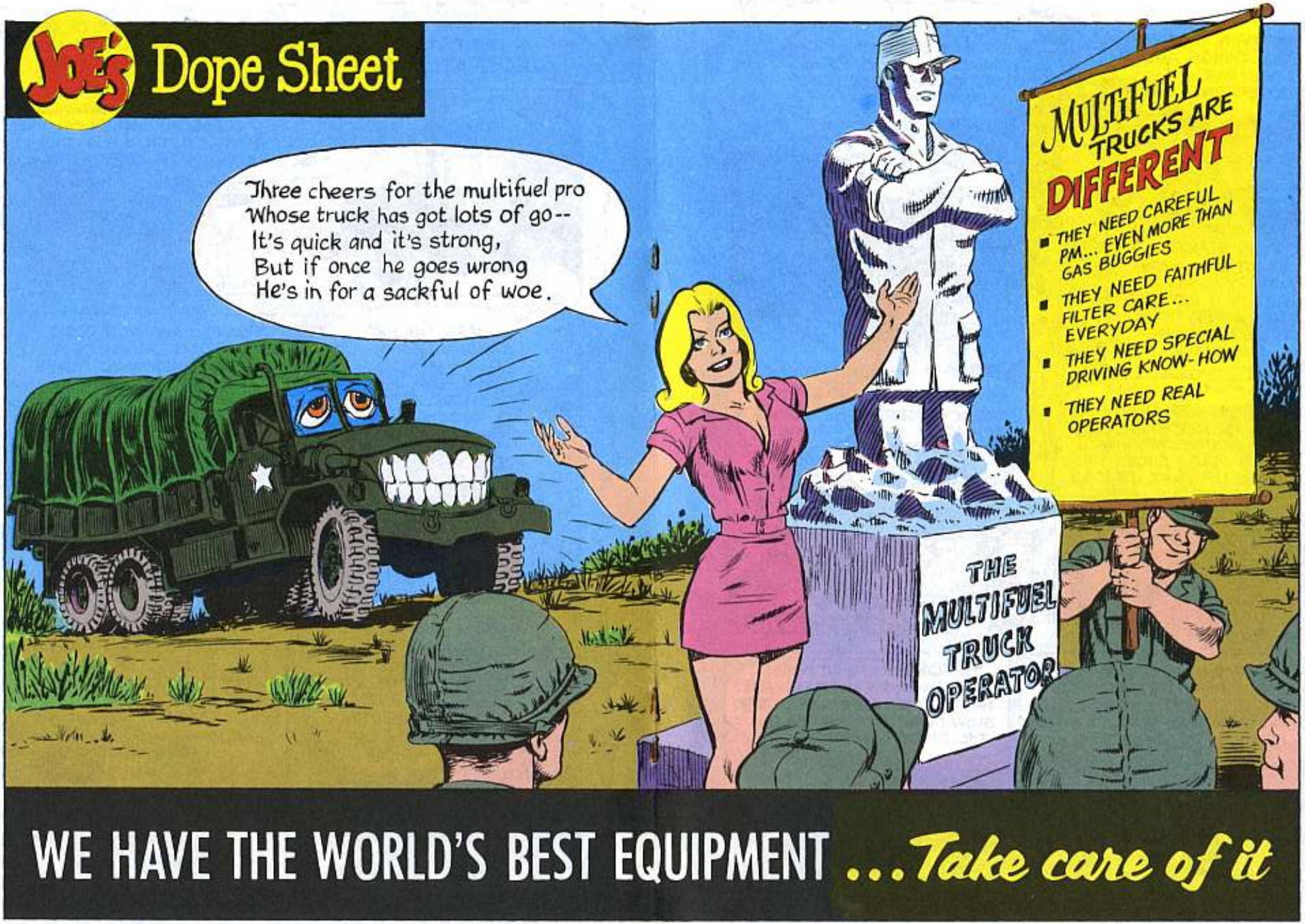

JOE'S DOPE
WHAT EVER BECAME OF CASEY?
THE PROFESSIONAL
DUTY ROSTER
WHAT A MAN?!
... BEST MULTIFUEL TRUCK OPERATOR IN THIS WHOLE AREA!


YEAH, LIKE THERE'RE LOTSA GOOD GASOLINE ENGINE OPERATORS COMIN' DOWN THE PIKE... BUT MULTIFUEL PILOTS??... MAN, THEY'RE SOMETHIN' ELSE!
YUP... CASEY USED TO SAY... "LIKE SOME SISTERS, MULTIFUEL AND GASOLINE TRUCKS LOOK A LOT ALIKE, BUT YOU HANDLE THEM DIFFERENT."
I REMEMBER HOW HE HANDLED HIS TRUCK... REAL PRO LIKE...
...NEVER TAKE OFF WITHOUT DRAINING THE FUEL FILTERS!
WHY SO URGENT, CASEY??
ONE SPECK OF DIRT OR A LI'L WATER GETS THRU— AND YOUR FUEL INJECTION PUMP GOES DEAD!
DIRT-CHOKED AIR FILTERS AND OIL FILTERS WILL STOP YOU COLD, TOO. AND DIRT-LOADED ENGINE OIL IS SURE DEATH FOR ANY ENGINE.
THE MORE DUST YOU'RE OPERATING IN, THE MORE OFTEN YOU'VE GOT TO CLEAN OR CHANGE AIR FILTER ELEMENTS.
BLACK EXHAUST SMOKE AND LOSS OF ENGINE POWER USUALLY MEANS YOUR AIR FILTER'S PLUGGED WITH DIRT AND NEEDS CLEANING.
CHANGE ENGINE OIL AND OIL FILTER ELEMENTS MORE OFTEN THAN YOUR LO CALLS FOR WHEN NEEDED.

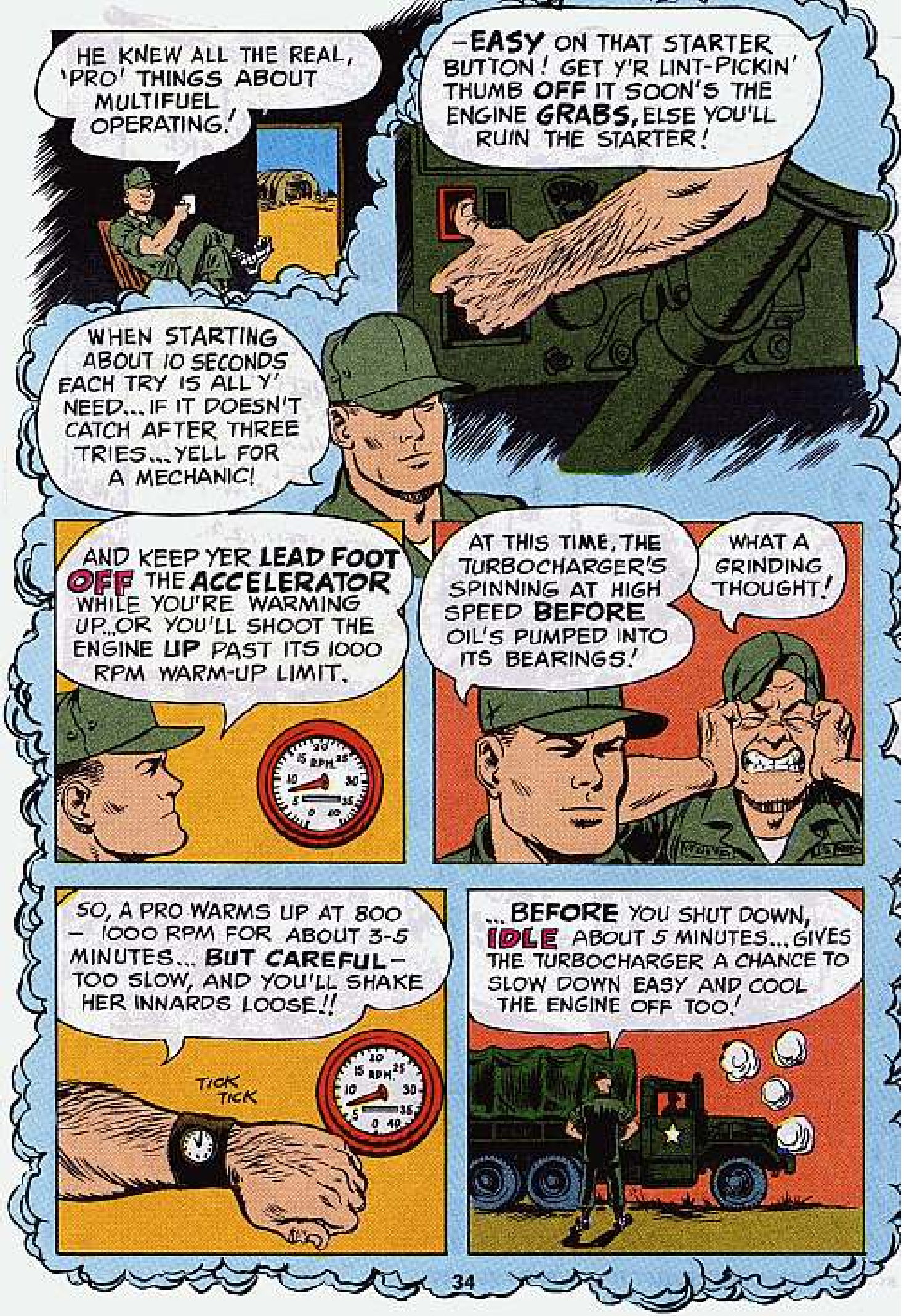
NOT ONLY WAS HE SHARP ON ALL HIS BEFORE-OPERATION OIL, COOLANT AND BATTERY DUTIES... BUT HE WAS A TIGER WHEN IT CAME TO **HYDROSTATIC LOCK...**



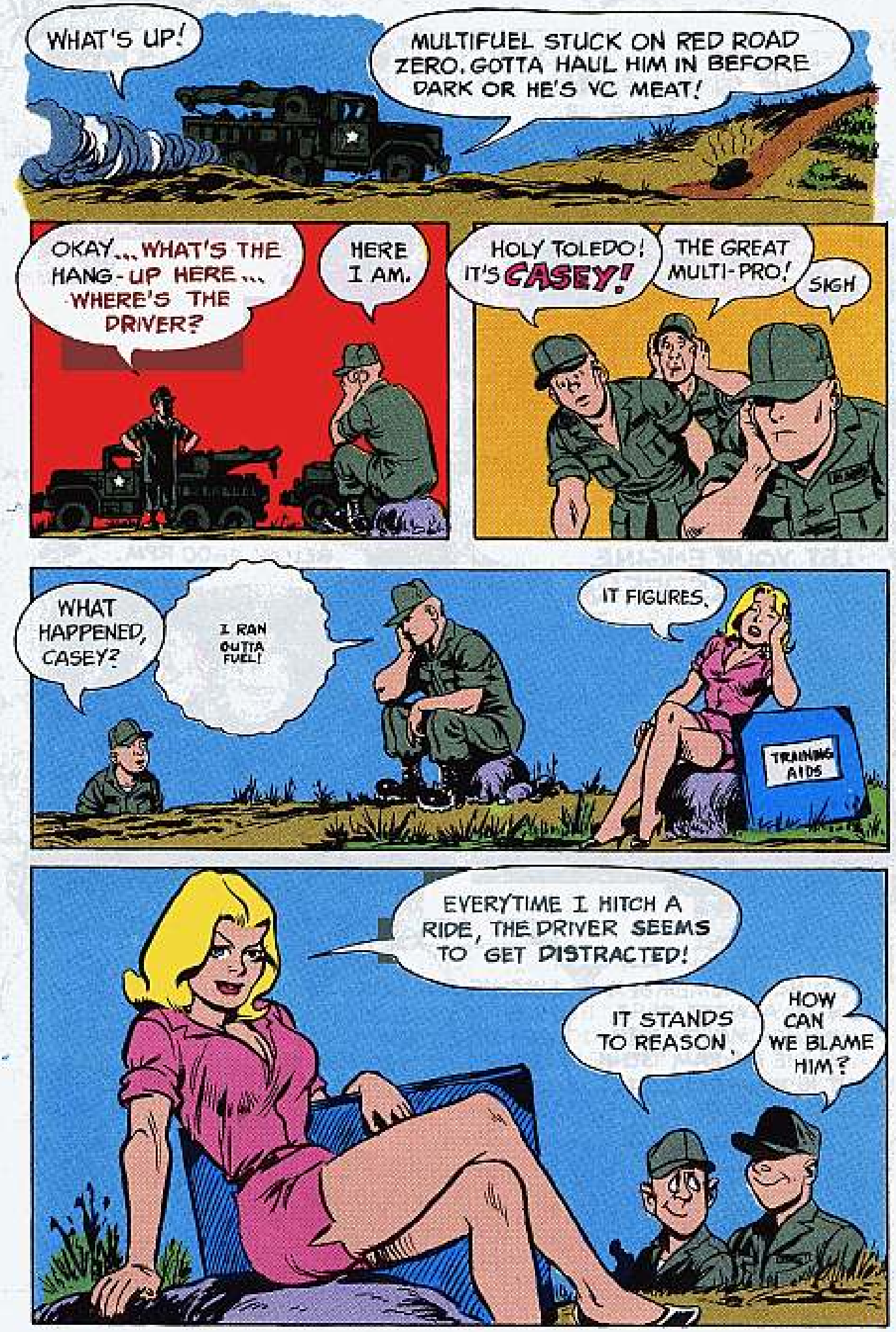




IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.


HE KNEW ALL THE REAL, 'PRO' THINGS ABOUT MULTIFUEL OPERATING!
-EASY ON THAT STARTER BUTTON! GET Y'R LINT-PICKIN' THUMB OFF IT SOON'S THE ENGINE GRABS, ELSE YOU'LL RUIN THE STARTER!
WHEN STARTING ABOUT 10 SECONDS EACH TRY IS ALL Y' NEED... IF IT DOESN'T CATCH AFTER THREE TRIES... YELL FOR A MECHANIC!
AND KEEP YER LEAD FOOT OFF THE ACCELERATOR WHILE YOU'RE WARMING UP...OR YOU'LL SHOOT THE ENGINE UP PAST ITS 1000 RPM WARM-UP LIMIT.
AT THIS TIME, THE TURBOCHARGER'S SPINNING AT HIGH SPEED BEFORE OIL'S PUMPED INTO ITS BEARINGS!
WHAT A GRINDING THOUGHT!
SO, A PRO WARMS UP AT 800 - 1000 RPM FOR ABOUT 3-5 MINUTES... BUT CAREFUL - TOO SLOW, AND YOU'LL SHAKE HER INNARDS LOOSE!!
TICK TICK
...BEFORE YOU SHUT DOWN, IDLE ABOUT 5 MINUTES... GIVES THE TURBOCHARGER A CHANCE TO SLOW DOWN EASY AND COOL THE ENGINE OFF TOO!


WHEN SHIFTING UP OR DOWN NEVER SKIP GEARS... IF Y' LUG THE ENGINE THE VIBRATION CAN BUST PARTS ALL OVER THE TRUCK!
RIDING THE CLUTCH IS MURDER!! IT'S A SURE WAY TO GRIND DOWN THE CLUTCH FACING AND FLYWHEEL!
COMIN' DOWN HILL DON'T LET YOUR ENGINE OVERSPEED!
KEEP THE TACHOMETER BELOW 2600 RPM.
YEAHH... I REMEMBER HOW HE ALWAYS KEPT A WELL-THUMBED—10TM ...AND THE DA PAM 750-11 RIGHT IN HIS POCKET TILL HE HAD IT ALL DOWN PAT.
LIKE HE GOT OUR PUBS PEOPLE TO GET US EXTRA COPIES BY WRITING TO BALTIMORE AG PUB CENTER ON A DA FORM 17!
HEY, ROLL OUT A WRECKER... WE GOT AN EMERGENCY.


WHAT'S UP!
MULTIFUEL STUCK ON RED ROAD ZERO. GOTTA HAUL HIM IN BEFORE DARK OR HE'S VC MEAT!
OKAY... WHAT'S THE HANG-UP HERE... WHERE'S THE DRIVER?
HERE I AM.
HOLY TOLEDO! IT'S CASEY!
THE GREAT MULTI-PRO!
SIGH
WHAT HAPPENED, CASEY?
I RAN OUTTA FUEL!
IT FIGURES.
TRAINING AIDS
EVERYTIME I HITCH A RIDE, THE DRIVER SEEMS TO GET DISTRACTED!
IT STANDS TO REASON.
HOW CAN WE BLAME HIM?

AIR MOBILITY

KEEP 'EM SEALED

Keep an eye peeled for PVT Strange Scrounge. He may be headed your way.

How come?

Well, in his last outfit he found out that a certain MWO kit had just the part he was looking for. A little "cannibalizing" never hurt, was the way he put it.

But it hurt plenty when the time came to apply the MWO. The missing part had to be manufactured again because the kit was a limited purchase, one-time deal . . . held up the mod 6 months.

'Course Private Scrounge is on the move again . . . figures!!

So, if he shows set him straight, will ya?

Tell him to keep his cottonpickin' hands off MWO kits.

Any job worth doin' is worth doin' right, the first time. Taking bird engine, transmission and gear-box oil samples is no exception.

Why are accurate samples so important? Well, as long as you have moving parts you have friction. With friction you get heat and wear.

The oil system reduces the heat level to a point where an engine or transmission experiences normal wear.

Since all metals wear, the lab keeps track of the weight of metal particles suspended in the oil in parts per million. The assembly actually has a health record.

What happens when a contaminated sample goes to the spectrometric oil lab? Plenty!

The lab technician does a double-take on a high iron, aluminum, copper, silver, chromium, magnesium or silicone count.

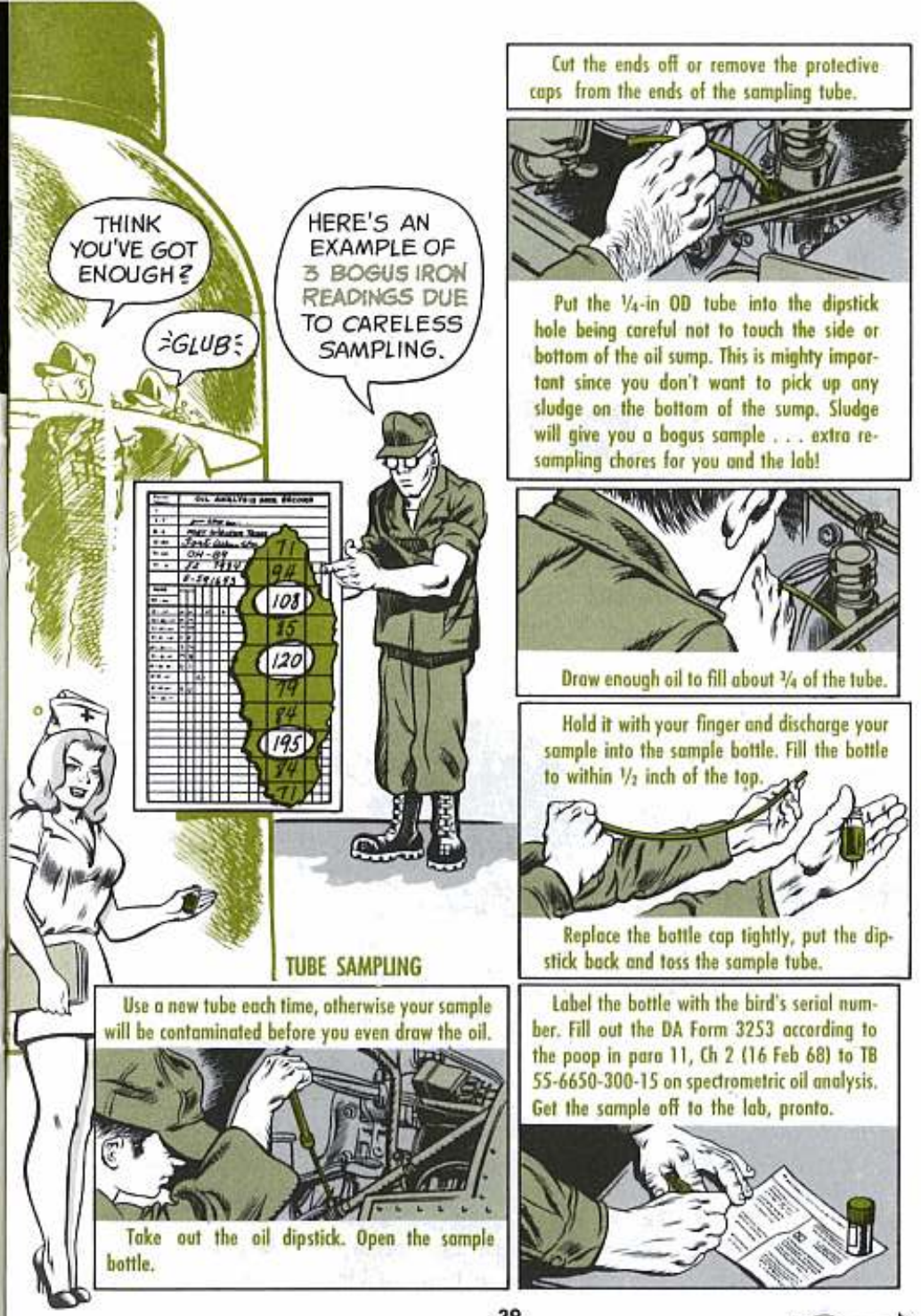
So, he fires back a message asking for a special resample to confirm the high wear pattern found on the first go 'round.

If the lab technician gets a normal reading on the resample—somebody goofed by taking a contaminated sample.

'Course nobody expects crewchiefs or mechanics to put on a white hat and coat. But you can come up with accurate samples by taking 'em thisaway.

First off, take the sample within 15 minutes of engine shut-down. If you've done any gold pannin' you'll know why. Metal particles settle mighty quick and iron particles in oil are no exception.

If you drain a sample from a cold engine you're likely to wind up with a bogus high metal wear reading. So you want to take samples with all particles in suspension. Like in warm oil, man!



TUBE SAMPLING

Use a new tube each time, otherwise your sample will be contaminated before you even draw the oil.

Take out the oil dipstick. Open the sample bottle.

Cut the ends off or remove the protective caps from the ends of the sampling tube.

Put the ¼-in OD tube into the dipstick hole being careful not to touch the side or bottom of the oil sump. This is mighty important since you don't want to pick up any sludge on the bottom of the sump. Sludge will give you a bogus sample . . . extra resampling chores for you and the lab!

Draw enough oil to fill about ¾ of the tube.

Hold it with your finger and discharge your sample into the sample bottle. Fill the bottle to within ½ inch of the top.

Replace the bottle cap tightly, put the dipstick back and toss the sample tube.

Label the bottle with the bird's serial number. Fill out the DA Form 3253 according to the poop in para 11, Ch 2 (16 Feb 68) to TB 55-6650-300-15 on spectrometric oil analysis. Get the sample off to the lab, pronto.

PS MORE

If you sample a gear box with a locally made tool, such as the one shown on page 15 of PS 194, remember the cleanliness bit. Clean the tool before and after use to prevent contamination of the sample.

When you have to take the sample from the bottom of a crankcase or oil reservoir, be sure to drain off at least a pint of the oil before you catch the sample. Like this:

Open the drain plug, magnetic plug hole, engine drain, oil tank drain or what-have-you. Drain about 1 pint into a quart or larger container to make sure no sludge or dirt goes into the sample.

After you get the pint, continue the oil flow into the sample bottle and recap the bottle. Be sure you never dip into the pint you drew off first because the sludge in it will throw the lab types off the track with a high reading.

Of course, the oil sampling deal is a two-way street. You send the sample —the lab notifies you when they get a high wear-metal reading.

For example, say you have a broken piston ring on a recip. There is no noticeable effect in the performance of the engine—no knocks, good compression, no power loss and the like.

Actually, the sharp edge of the broken ring begins to scrape the cylinder wall ever so slightly. The ring begins to roll, wobble and chafe the piston.

The result is a vast increase in the number of aluminum, iron and chromium particles in the engine oil sample.

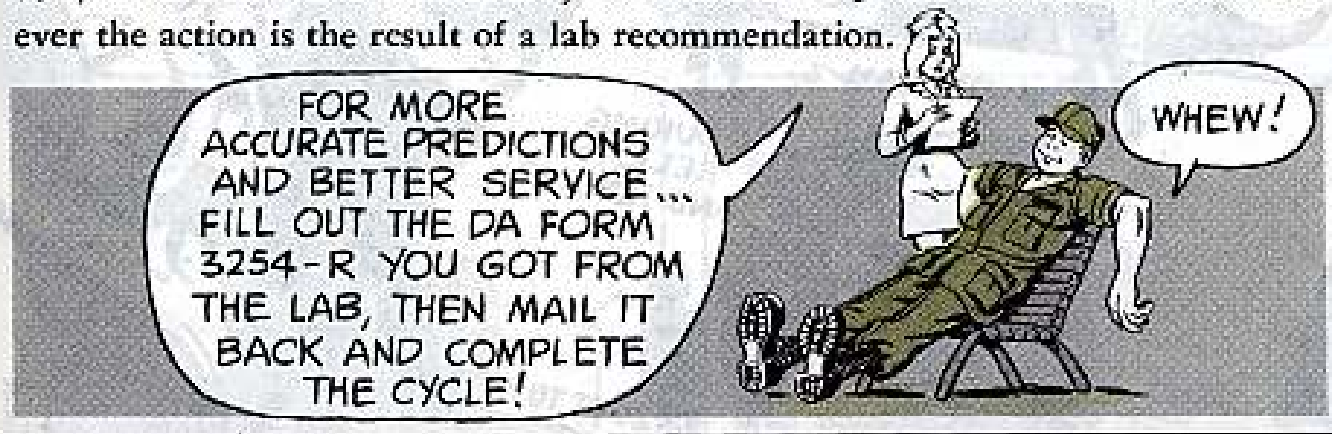
You may not know it, but you've got a cylinder and piston problem. Based on a test of the sample the lab will recommend an engine evaluation.

Never rest on your laurels after a cylinder boroscope shows a broken ring, scored cylinder or valve head separation, no sir-e-e-e!

The lab has to know the results of your corrective action. Remember that every engine, transmission and gear box has an individual wear pattern. Sometimes it takes several special samples to track down a faulty part.

If, per chance, a faulty component has to be sent to your support for repairs be sure you include the name and address where it was sent. Add the date the component was sent and the control number of any EIR's or other special reports on the part.

Remember that the failure code for spectrometric oil analysis, 916 (TM 38-750) is used on a DA Form 2407, DA Form 2408-3 and DA Form 2410 whenever the action is the result of a lab recommendation.



DON'T RUSH TO FLUSH!

When you send a dirty oil sample to the oil lab and they can't make head nor tail out of it they'll ask for another one. No sweat.

The lab may also recommend draining and flushing of the component before taking the next sample.

Careful, now. Flushing is a thorough cleaning of the inside of a component with strong solvents. Most of the lubricating oil will be washed away in the process.

A recip engine, for one, should not get the flushing treatment unless it's really necessary. Then, SOP will call for a pre-oiling job so all the bone-dry parts get lubed.

Without pre-oiling after flushing internal parts will suffer friction damage when the engine is cranked up (ugh!).

Your best bet is to drain the component and skip the flushing. If the oil is still too dirty for the lab to get a reading, drain it again . . . and again.

END

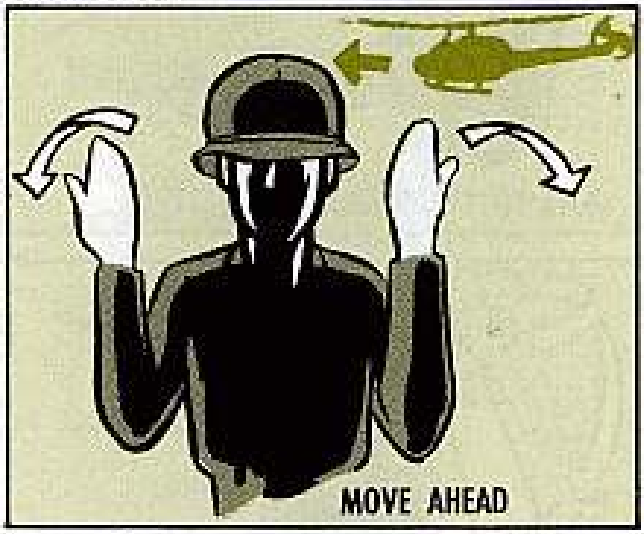
BE A QUARTERBACK

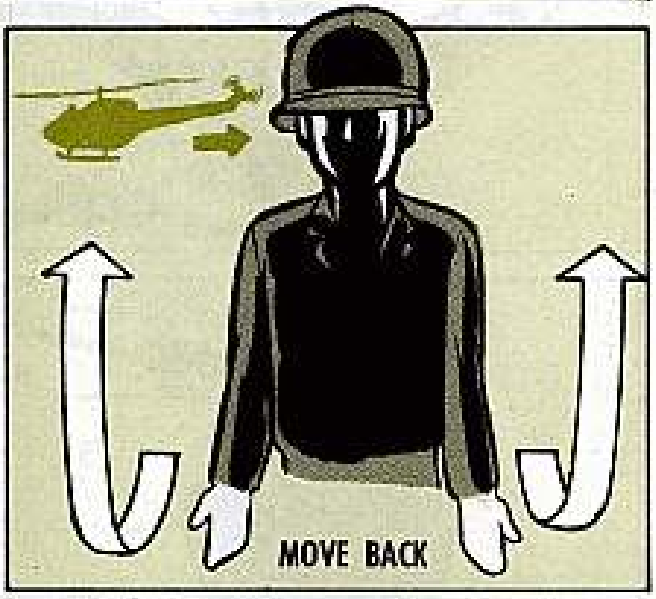
You never get your signals crossed when hailing a ride, or getting the attention of a shapely blonde, right?

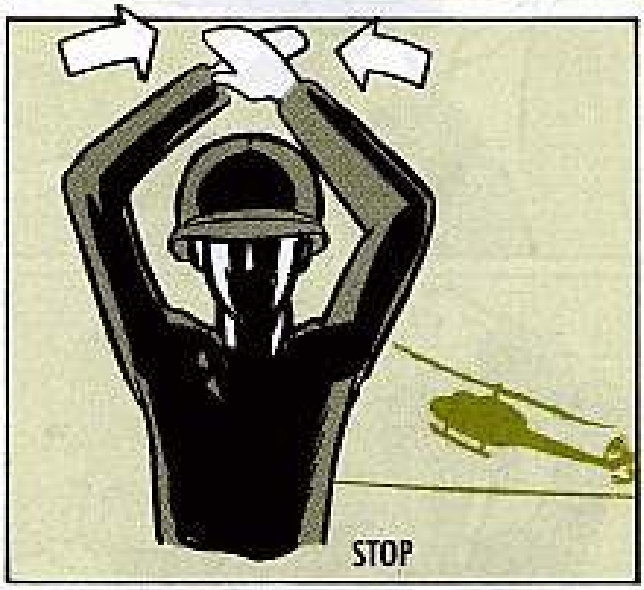
The signals needed to bring a chopper down safely in the boonies, tho, calls for a little quarterbacking.

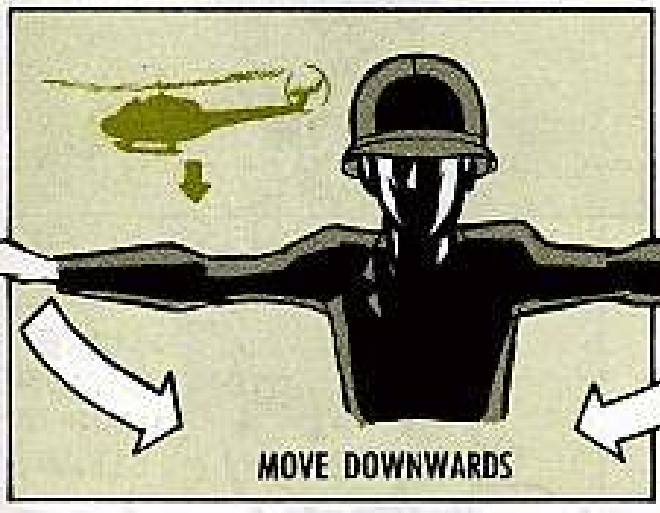
PLAYBOOK


MARSHALLER


MOVE AHEAD

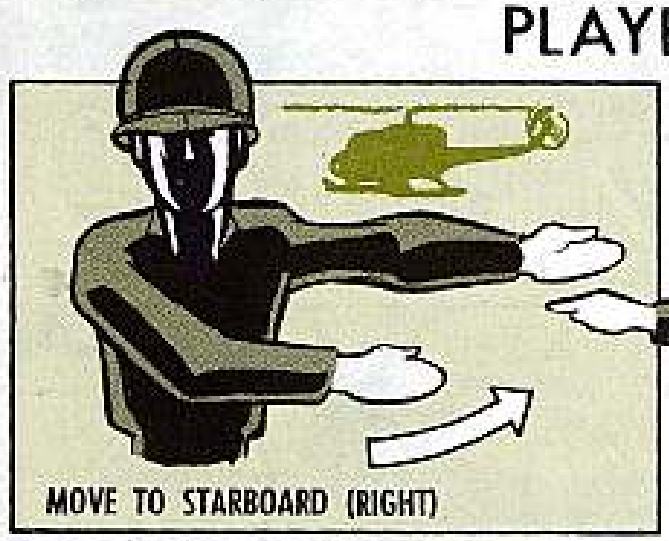

MOVE BACK

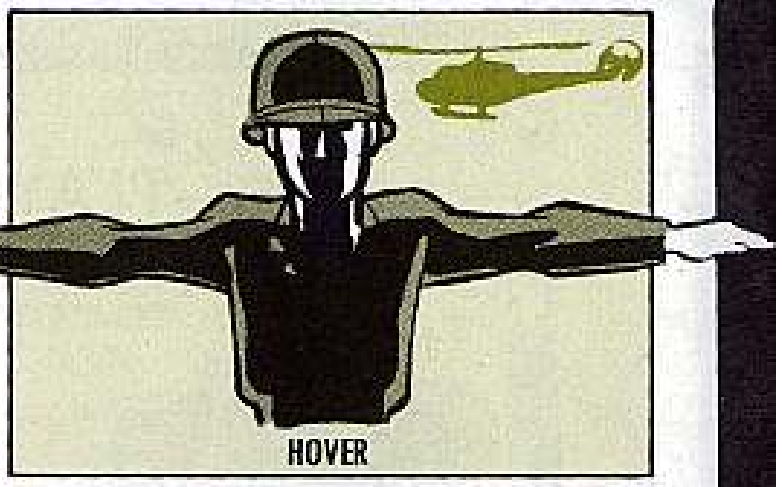

STOP


MOVE DOWNWARDS


RELEASE LOAD

PLAYBOOK


MOVE TO STARBOARD (RIGHT)

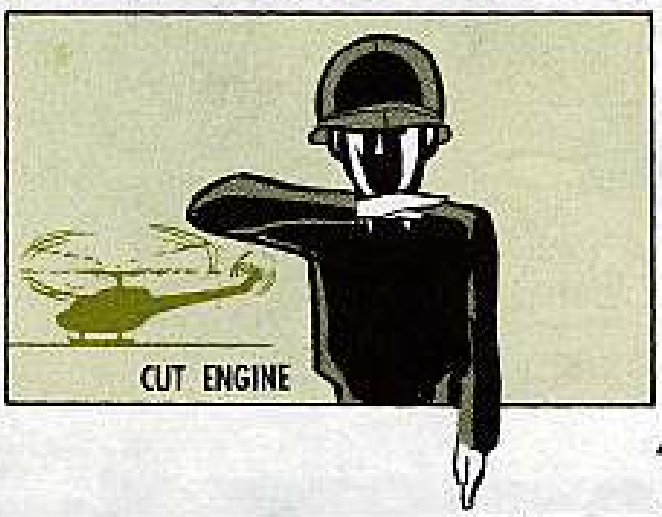

HOVER


TAKEOFF


WAVE OFF (Go Around)

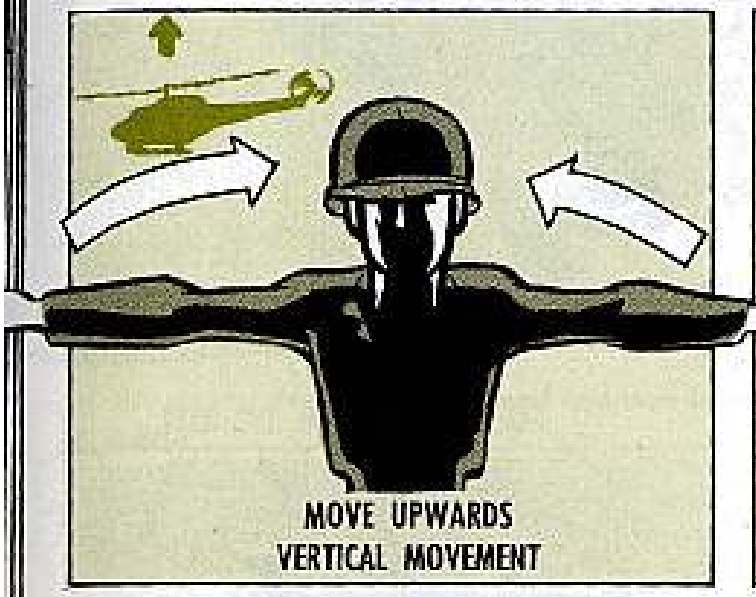

MOVE HOOK DOWN OR UP


LAND

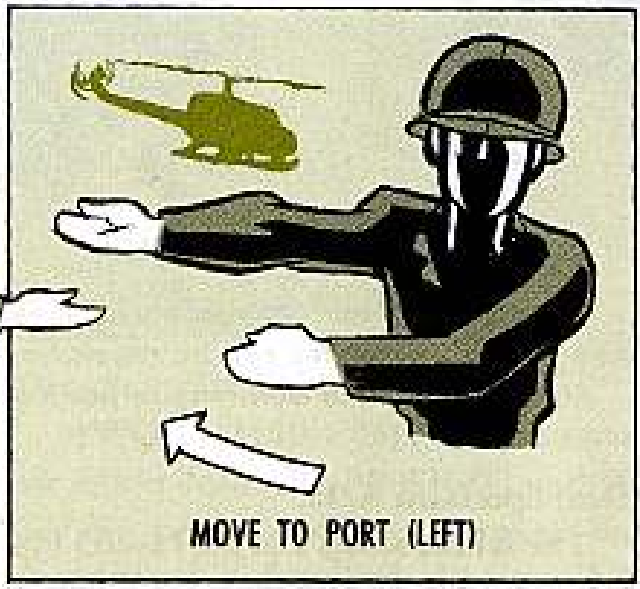

CUT ENGINE


MAKE YOUR MOTIONS SHARP AND CLEAR!

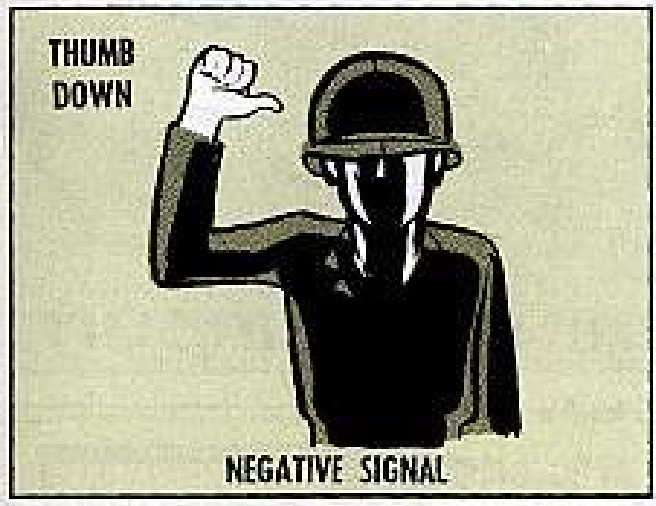
PLAYBOOK



MOVE UPWARDS
VERTICAL MOVEMENT

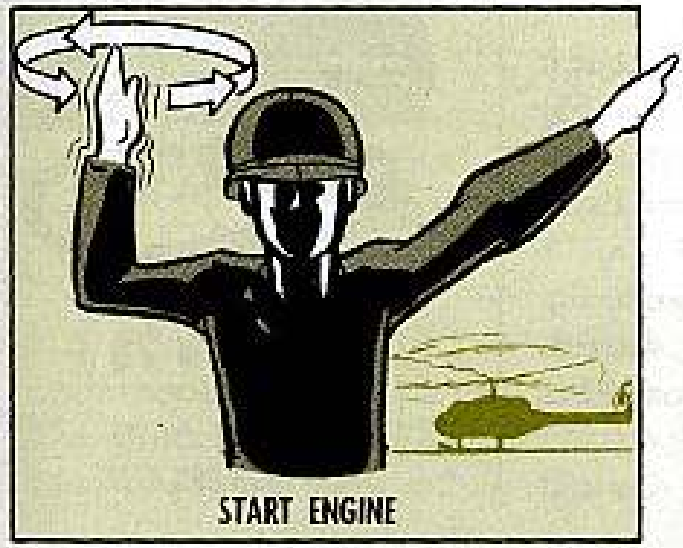


MOVE TO PORT (LEFT)



NEGATIVE SIGNAL

AFFIRMATIVE SIGNAL



START ENGINE

MARSHALLING FINISHED

END

COMMUNICATIONS

PROBLEM WITH PLATES

Dear Half-Mast,

A problem:

The serial number data plates are missing on some of our radio sets. Can you tell me how these data plates can be requisitioned?

Also, who has the authority to put a serial number back on the radio?

SP5 A. L.

Dear Specialist A. L.,

The whole scoop's in SB 11-263 (Jun 57). This handy pub tells you about replacement of data plates, where to get 'em, who installs 'em, and under what conditions you request 'em.

Half-Mast

TL—705/U . . .

SOLDER FOR A PRINTED CIRCUIT

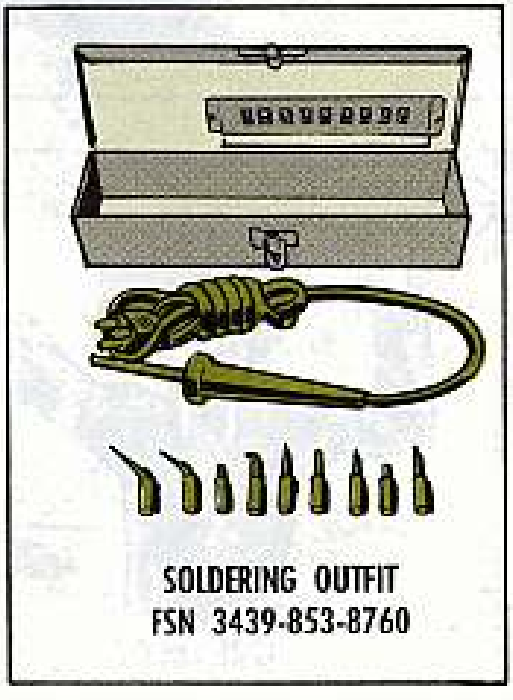
Been wonderin' how great it'd be if you had a soldering outfit for printed circuits?

Wonder no more. Somebody just didn't get the word thru to you on the TL-705/U.

Not only is it No. 1 for printed circuits, but it has many other uses. Eyeball Ch 1 (30 Dec 63) to TB SIG 222 for the good word. One caution: There's been a switch in the components listed on page 51 of the change.

Cord Set FSN 3439-897-9881 and Soldering Iron FSN 3439-853-6653 have been deleted. They've been replaced by Soldering Iron, Electric, FSN 3439- 866-6258.

You get the whole soldering outfit, tips and all, with FSN 3439-853-8760.



SOLDERING OUTFIT
FSN 3439-853-8760

BYE, BYE FILTERS

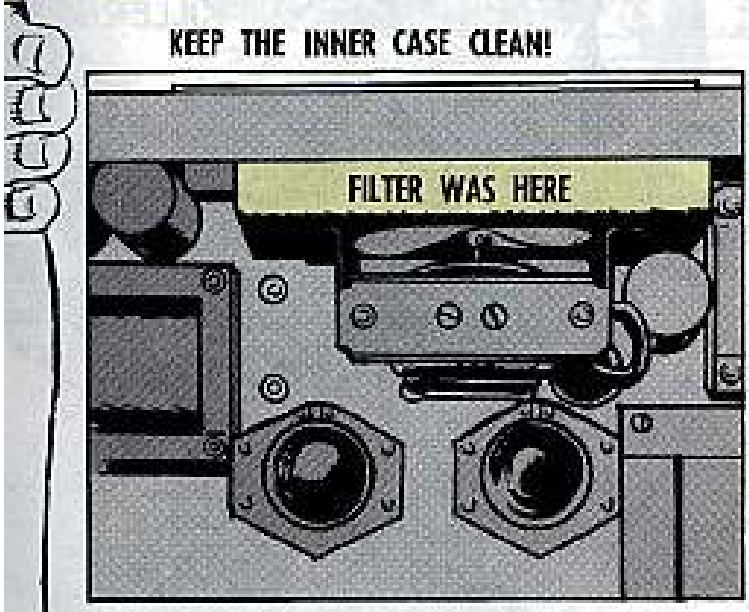
Dear Half-Mast,

Power supplies PP-826/U and PP-827/U, used with the AN/TCC-7 telephone terminal, have a place for an air filter at the blower.

However, there is no air filter listed in either TM 11-5805-245-20P or TM 11-5805-248-20P.

Question is: Should there be?

SSG C. M.



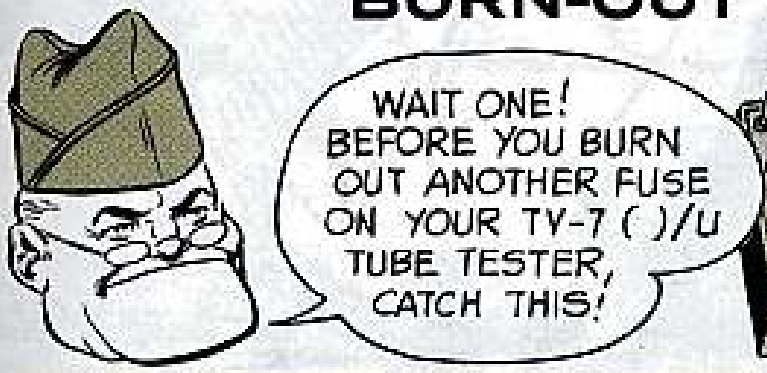
Dear Sergeant C. M.,

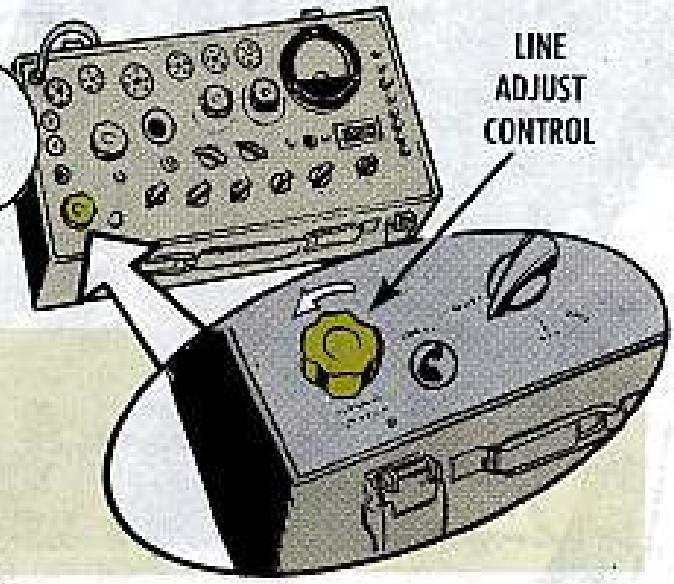
MWO 11-2150-1 (Mar 55) removed air filters from the PP-826/U and PP-827/U power supplies because they dust-locked and caused circuitry damage from high temperatures.

With the filter gone, it pays for operator personnel to eyeball the inner case and remove dust and dirt accumulations as necessary. This goes double where there's a lot of dust or high humidity.

Half-Mast

BURN-OUT BUSTER





Turn the LINE ADJUST CONTROL counterclockwise as far as it'll go. Then, turn the POWER switch on. That cuts down input voltage. Paste a reminder on your tube tester.


GROUND MOBILITY
TIRE KILLERS
MOST WHEELED EQUIPMENT ROLLS ON RUBBER... SO KEEP YOUR TIRES FROM GOING KAPUT EARLY IN LIFE. BE PM-PRONE.
HERE'RE SOME COMMON KILLERS.

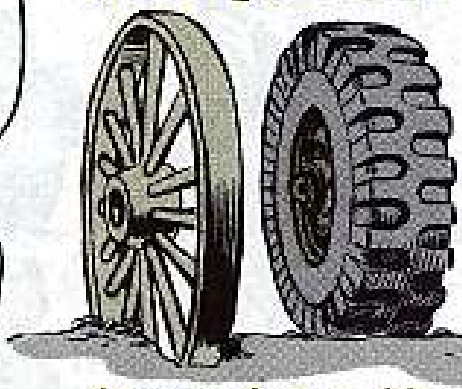

LOAD-JUMPING!
...AND
THIS
UNDER INFLATION
OVER INFLATION
OVERLOAD
SHOULDERING
DRIVING FAST OVER HOLES.
NO!
SCREECH!!
OIL, GAS 'N' GREASE
STONES IN THE TREAD!
SPINNING WHEELS.

PS MORE

THE WHY'S AND WHEREFORE'S

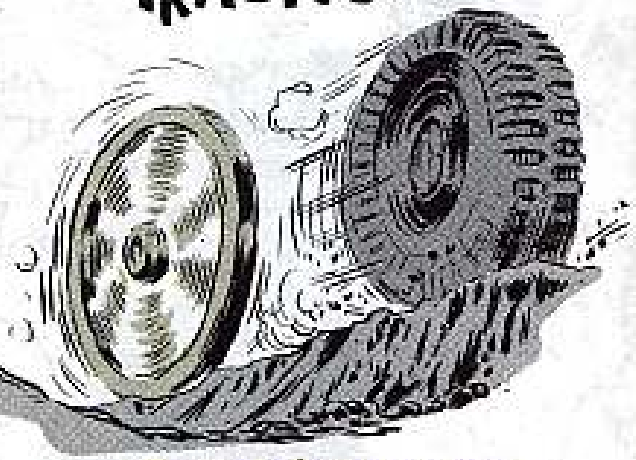
A TIRE IS DESIGNED FOR **FLOTATION** AND **TRACTION.**

FLOTATION



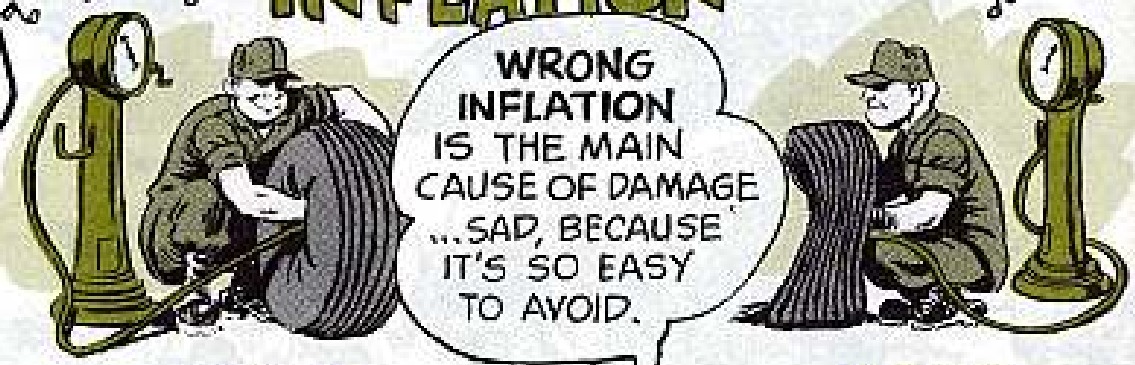
Flotation is the tire's ability to stay on top of dirt, sand and the like.

TRACTION



Traction is the tire's grip on the ground.

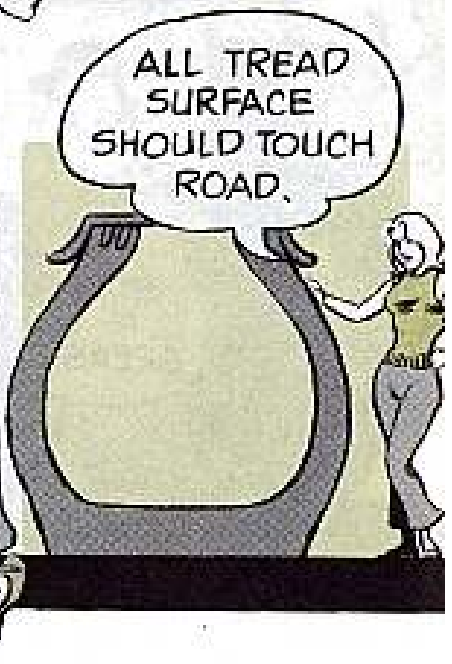
INFLATION



EVERY TIRE HAS A SPECIFIC REQUIREMENT OF AIR...

YOUR JOB IS SIMPLE... KEEP THE RIGHT AMOUNT IN IT AT ALL TIMES.

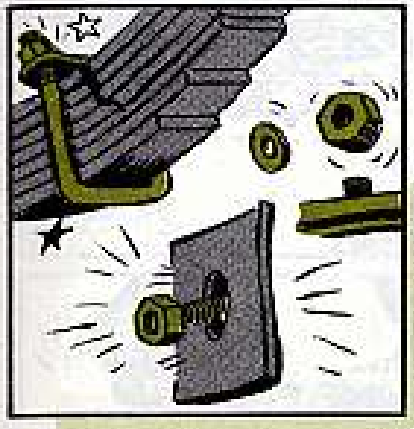
YOUR TOOLS ARE THE TM OF YOUR VEHICLE AND THE TIRE GAGE. KEEP 'EM HANDY.



OVERINFLATION

AN OVER INFLATED TIRE PUTS ONLY THE CENTER OF THE TIRE IN CONTACT WITH THE ROAD!

YOU GET FAST WEAR IN THE CENTER . . . WHILE THE EDGES WEAR ONLY SLOWLY!



OVER INFLATED TIRES CAUSE HARD RIDING... WHICH CREATES VIBRATION... WHICH LOOSEN BOLTS – SNAPS SPRINGS... ETC.

YOU WASTE ENGINE POWER TOO!

YOU GET POOR **TRACTION** BECAUSE LESS OF THE TIRE IS GRIPPING THE ROAD!!

IMPACT DAMAGE IS GREATER... BREAKS WALLS, SPLITS RUBBER.

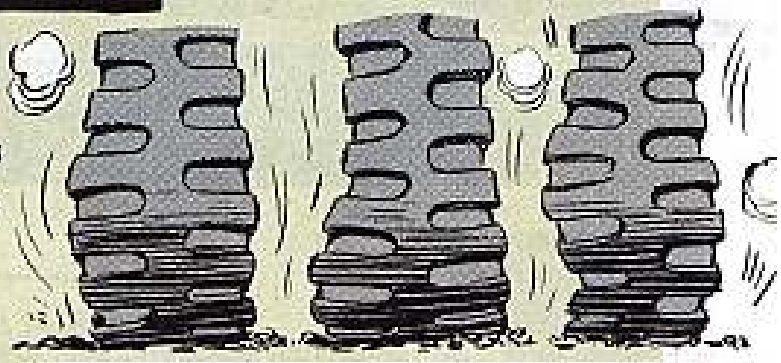
LOOKS LOW TO ME!

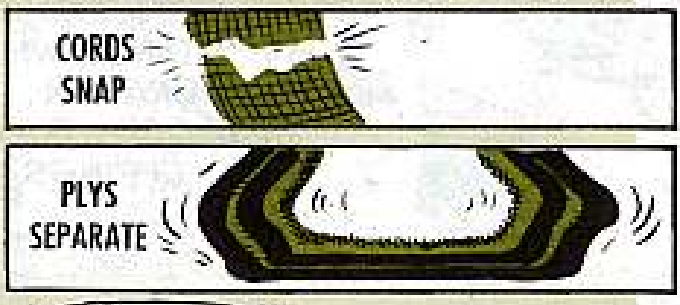
DON'T GO BY LOOKS ALONE ...CHECK YOUR **TM**... IT'S RIGHT FOR THE VEHICLE!

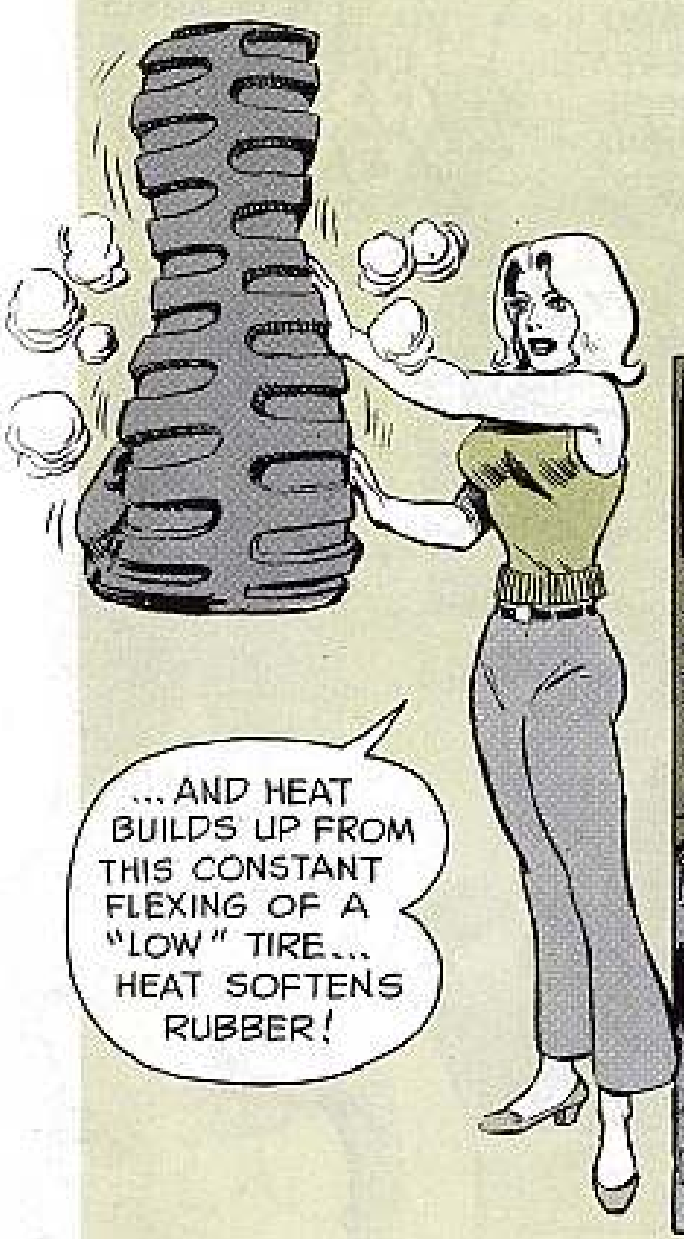
UNDERINFLATION

THE WORST OF THIS IS... THE DAMAGE USUALLY DOESN'T SHOW UP UNTIL TOO LATE... LIKE A BLOW OUT!!

Overflexing of the walls causes the fabric of the walls to break.







...AND HEAT BUILDS UP FROM THIS CONSTANT FLEXING OF A "LOW" TIRE... HEAT SOFTENS RUBBER!

PRESSURE'S GONE UP SINCE I CHECKED 'EM THIS MORNING... HOW 'BOUT I BLEED 'EM TO OFFSET THE BUILD-UP.

NO! NEVER BLEED A HOT TIRE. IT'LL ONLY RAISE THE TEMPERATURE STILL HIGHER... AS YOU CONTINUE TO RUN!! WAIT TILL THE TIRE COOLS... THEN CHECK AND ADJUST THE PRESSURE.

THE DRIVER

Even with the best possible maintenance of truck tires, the service they deliver is mostly up to the driver. Poor driving habits can cause serious tire damage. Proper driving can do much to save rubber. Good drivers follow these tire-saving practices:

Check for flats or soft tires on duals.

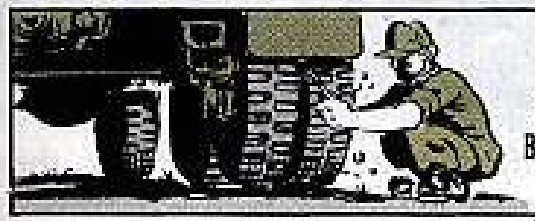
Start slowly and do not spin wheels.

Drive at moderate speeds.

No speeding over rough roads that are full of large sharp-edged chuck holes.

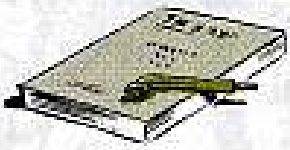
Keep oil, grease or gasoline off tires.

Don't allow vehicle equipment to rub the tires.



REMOVE STONES FROM BETWEEN DUALS

KNOW THE PROPER INFLATION



AVOID SUDDEN STOPS

Report evidences of misalined wheels or other abnormal conditions you notice when driving.

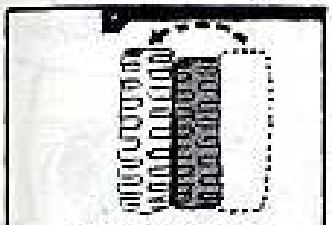
MORE

If any of these conditions exist, they should be corrected before returning the vehicle to service. They are all detrimental to good tire service, and in some cases, downright dangerous. Defective lock rings, for instance, can fly off with enough force to kill or injure.

A slow leak may be caused by a faulty valve core and can therefore be corrected without removing the tire. Even a slow leak in one of a dual set will throw extra load on its mate. It's important to keep out foreign matter and to make sure that every valve has a good valve cap and that the cap is screwed finger tight.

MISMATCHED DUALS

When dual tires are of unequal circumference, the larger tire carries the greater load. It's subjected to undue wear and punishment. This may result in the failure of both tires, because the sudden failure of the larger tire from the undue strain will automatically shift the burden to the smaller tire. You measure tires for matching duals by measuring the circumference with a flexible steel tape.

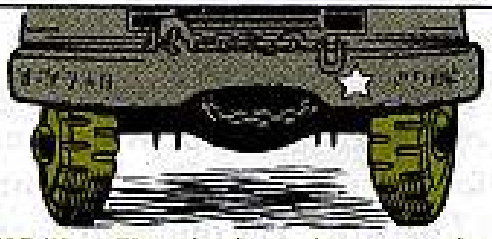


WHEN ONE IS PERMISSIBLY DIFFERENT, MOUNT THE LARGER ONE ON THE OUTSIDE.

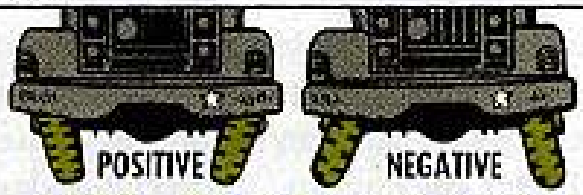
Tolerances In Matching Dual Tires

Outside diameter of tires	Permissible difference	
	In diameter	In circumference
Under 30 inches	1/4 inch	3/4 inch
From 30 to 40 inches	3/8 inch	1-1/8 inches
Over 40 inches	1/2 inch	1-1/2 inches

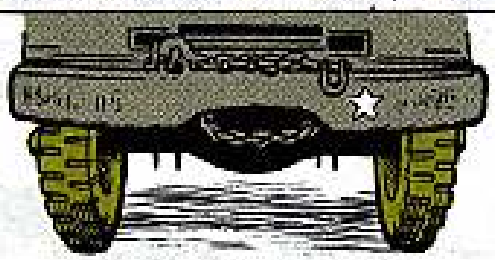
VEHICLE FAULTS



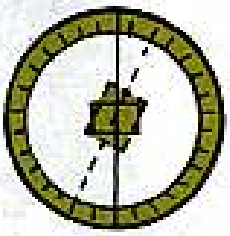
TOE-IN — The wheels on the same axle are closer together in the front than they are in the rear. Excessive toe-in shows feathered edges on inside edge of the skid design, usually more pronounced on right wheel tire.



CAMBER — This is the tilt of the wheel. Positive camber — wheels are closer together at point of road contact. Negative camber — wheels are closer together at top. Too much camber results in uneven wear on one side of tire.



TOE-OUT — The wheels on the same axle are closer together in the rear than they are in the front. Tire wear shows feathered edges on outside edge of the skid design. Usually it is more pronounced on left wheel tire.

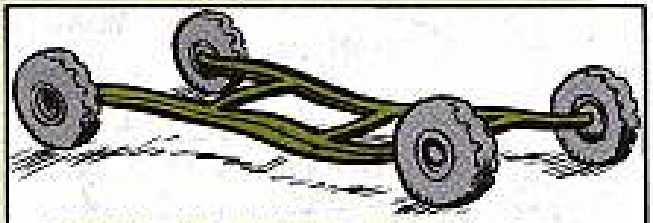


CASTER — This is the backward tilt of the axle. Too little caster causes wheel to wander or weave, resulting in spotty wear. Unequal caster causes wheel to pull to one side, resulting in excessive and uneven wear.

MORE

SPRUNG OR SAGGING AXLE — Either of these conditions causes uneven distribution of the load. A sprung or sagging axle will cause the inside dual tire to carry the greater load.

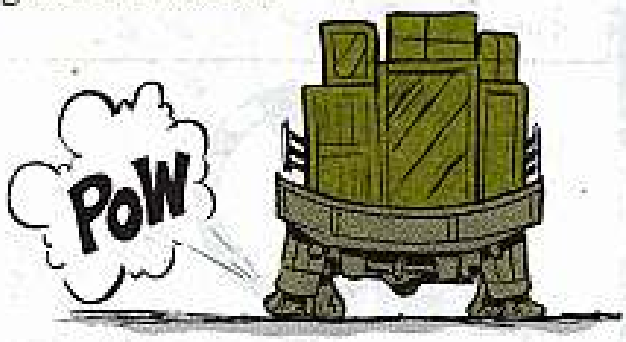
GRABBING BRAKES — Brakes out of adjustment and out-of-round brake drums cause tire treads to wear rapidly in spots. Out-of-round brake drums usually wear out tires in a single spot. Improperly adjusted brakes produce several worn places. Out of balance tires can cause worn spots.



SPRUNG OR TWISTED FRAME — Causes rapid or uneven tread wear.

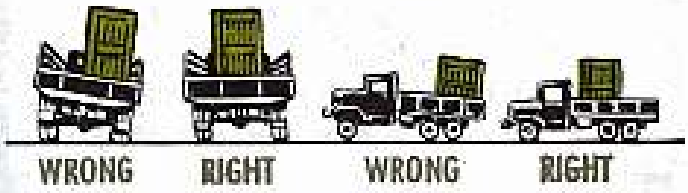
CARGO LOADS

Overloading is the cause of many kinds of cord body breaks. It's the most costly of all tire abuses. Such breaks are due to abnormal flexing or overworking of the cord body of the tire. Normal flexing of a tire can go on indefinitely without causing any appreciable damage to the cords. But if the tire is overworked or overflexed, abnormal heat is generated and the cords become fatigued and break.

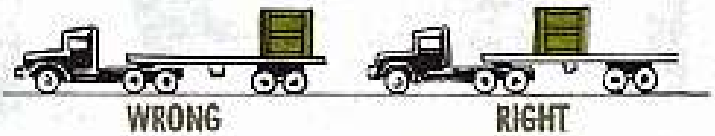


Improper load distribution also shortens tire life. It overloads the tires on one side of the truck or trailer when that side is required to carry more than its share of the load. This may affect starting, may make wheels slip on light side and cause tires to wear faster.

Remember, too, that the gross load may not be too great, yet one axle or one side of the truck, or one wheel, may be overloaded due to improper distribution of the load. The things to do are . . .



1. Balance the loads according to weight across the width of the body.

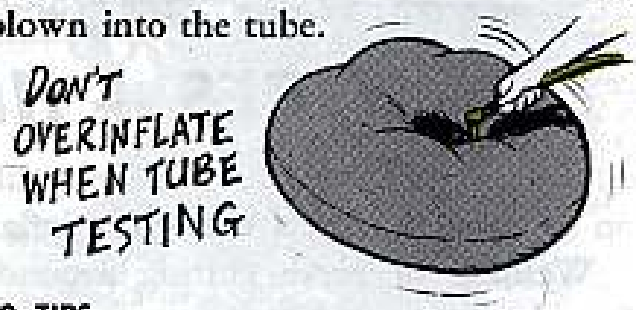


2. On semi-trailer units, distribute load so each axle and the fifth wheel carries its share according to carrying capacities of tires.

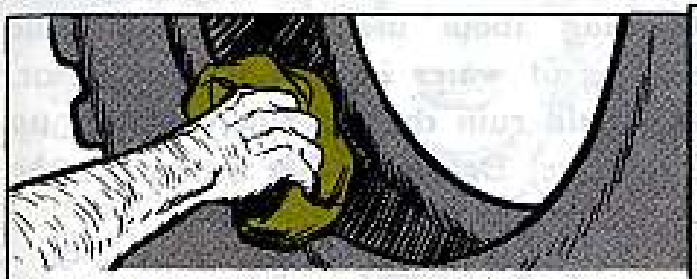
TUBES

Never use a tube in a casing larger than that for which the tube was designed. The use of an undersize tube results in trouble.

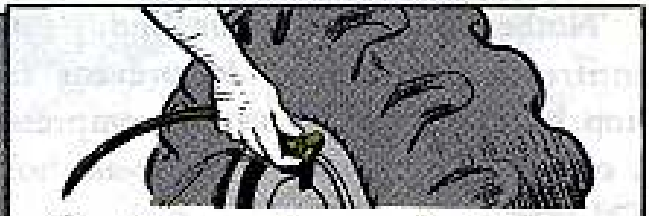
Make certain that both tire and tube are clean before mounting, and clean end of valve before applying air hose to prevent dust and dirt from being blown into the tube.



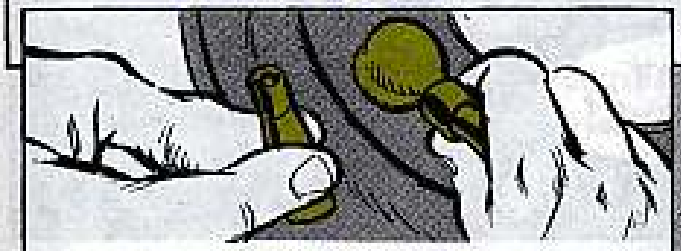
MOUNTING TIPS



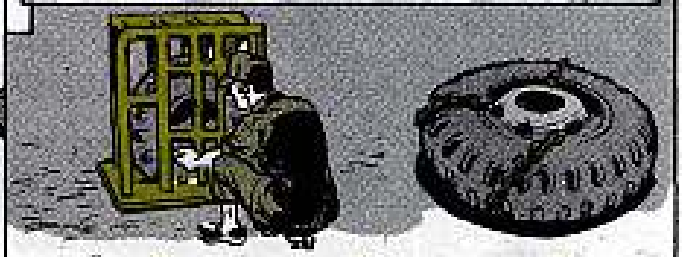
1. Make sure the tire bead and inside of tire are clean. Same goes for the tube and the rim gutter.



2. After mounting your tire 'n' tube on the rim, inflate the tube to about 12 pounds. Then check to see that the tire's seated right on the rim — all around and both sides.



3. Center the valve and pull it firmly against the rim. Hold it in this position and inflate to pressure listed in your vehicle's TM.



4. Always use a safety cage or safety chain when inflating a tire that has a rim locking ring.

5. When mounting tires, angle valves always point toward the removable flanges of rims. Valves that are offset in tubes are placed to match the offset valve hole of rims.

6. Rotate tires every 6,000 miles. (See TM 9-1870-1, page 36.)

TIRE BIBLE

You'll be right up to snuff with "the wheels" if you've placed this info solidly in your noggin. But, you'll be even a better all-around PM man if you're checking your TM 9-1870-1 w/Ch 3(Feb 67) when a question comes up. This TM, "Care and Maintenance Of Pneumatic Tires" plus its changes —is a great friend indeed when you're in PM need or when a tire failure occurs.

PS END

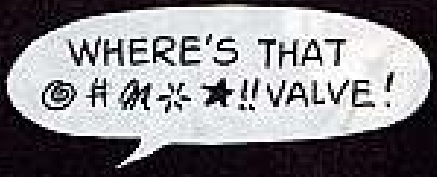
TIRES + HEAT = POW!

Never—like never ever—let your welder do any welding or torch cutting on or around wheels that have inflated tires on 'em.

Welding or torch cutting around tires can produce a deadly explosion. So—beware!

'Nother thing—if your buddy's thinking about using some flammable antifreeze like alcohol to prevent freezing of water in the air compressor, stop him. Alcohol in an air compressor could ruin the machine, plus set up a real dangerous explosive air-alcohol mixture! Drain out that water, like the TM says.

TIRE VALVE POSITION



Dear Half-Mast,

When you mount a tire on a wheel with a split locking ring, are you required to position the tire valve 180 degrees (directly across) from the split?

1SG G. C. B.

Dear Sergeant G. C. B.,

There's no such requirement that I know of.

You may be thinking of para 25 in TM 9-1870-1 w/Ch 3 (Feb 67), which tells you to position the outer wheel tire valve 180 degrees from the inner wheel valve on dual wheels.

The TM explains that this makes it easier to locate the inner valve in the dark.

Half-Mast

CONTROL THAT SPEED . . .

STOP CLOBBERING DIESELS

Uncontrolled power can clobber a diesel or multifuel engine real quick . . . and you better believe it!

Forcing a compression ignition engine past its rated and governed maximum RPM limit is a game of Russian roulette. It's a matter of chance when she blows.

Nobody intentionally overspeeds an engine enough to cause its destruction —but many a diesel and multifuel has turned up with bent push rods, busted crankshaft, cracked pistons and popped connecting rods.

One of the biggest causes of this engine busting is using the engine for hold-back braking power on a down-grade—forcing the RPM beyond its limit. POW!

Many bull-sessions have been held about the advantages and wonders of engine braking power on a down-grade with a loaded vehicle, particularly by operators who were weaned on gasoline engine powered equipment.

They swear by it.

But operating a diesel-or multifuel-powered rig is another thing!

It's not that a compression ignition engine doesn't give some resistance for hold-back power like a gas job—it's the principle of operation that's involved. It restricts the effectiveness of the engine's braking capabilities.

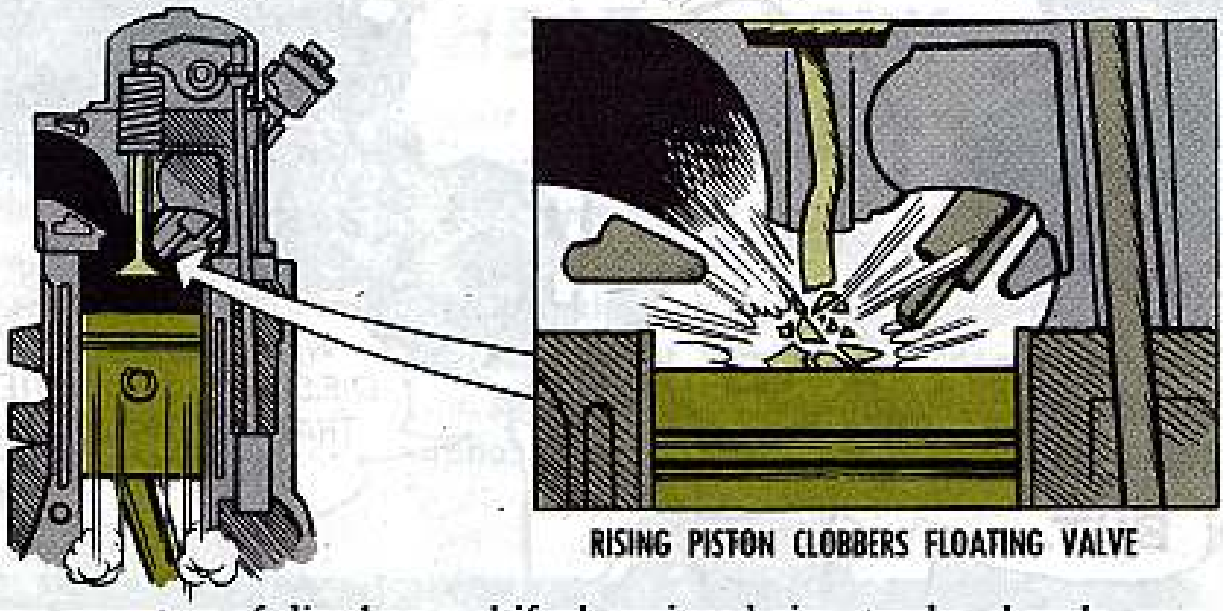
Mechanically both are similar as far as moving parts are concerned but the similarity stops there.

Unlike gasoline powered jobs, the diesel or multifuel creates no vacuum type drag during its air intake cycle. And it produces power throughout the power

PS MORE

stroke cycle. This makes it a lot easier for the weight-pushing and gravity-pulling of a loaded vehicle during a down-grade run to force the engine beyond its maximum rated RPM limit.

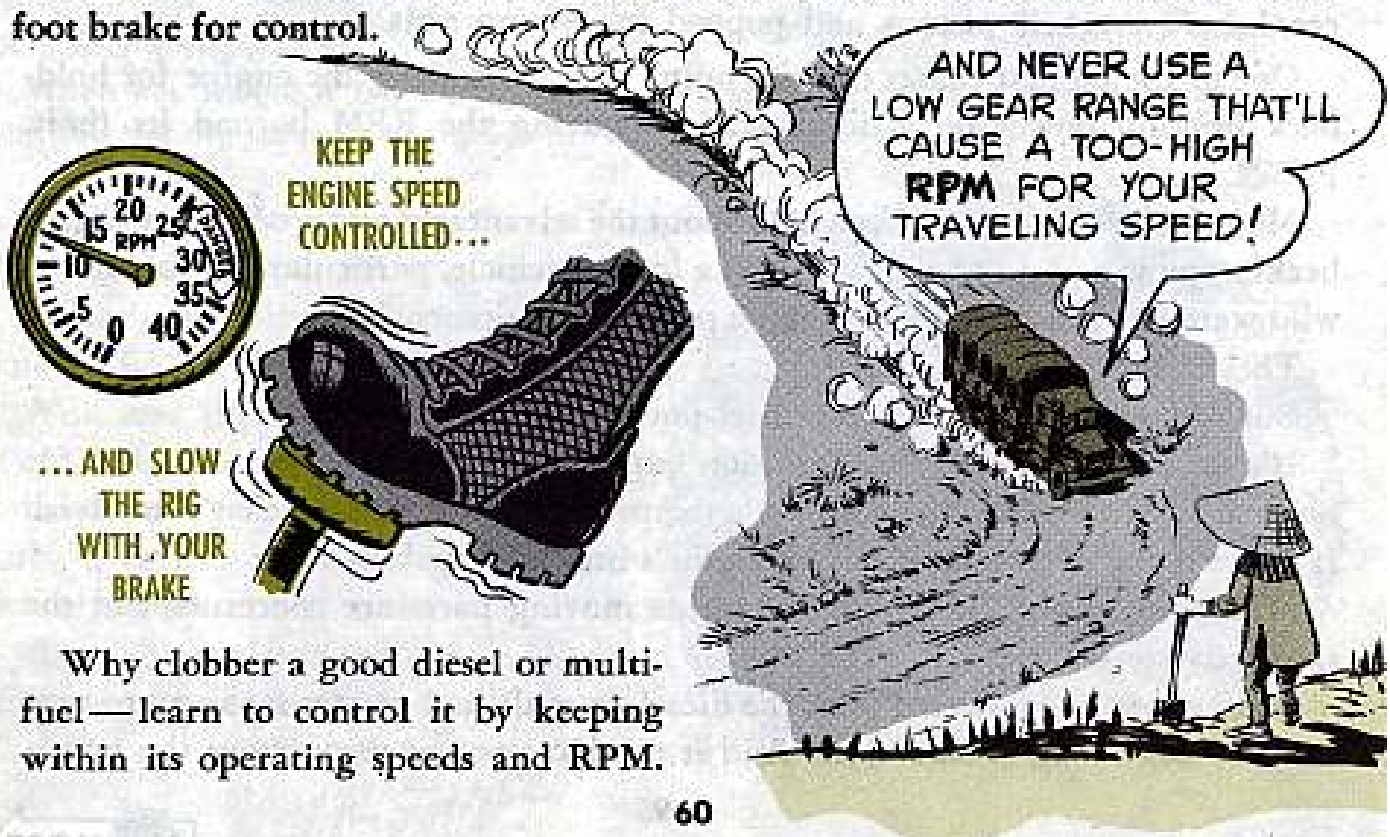
When a compression engine overspeeds, the valves can go into a float condition and remain open—then get smashed by an upcoming piston. Or the uncontrolled speed generated can over-stress metal parts and snap 'em.



RISING PISTON CLOBBERS FLOATING VALVE

So you operators of diesel or multifuel equipped rigs, trucks, shovels, scoop loaders or what-not, please take note. Avoid using the engine for braking power—or over-rev it under no-load conditions just to check the smoke or noise conditions. You old hands on gasoline rigs have got to up-date your operating technique when advancing to a diesel or multifuel.

On down-grades with a diesel or multifuel equipped rig, the traveling speed and gear range have to be coordinated with the engine RPM while using the foot brake for control.



Why clobber a good diesel or multifuel—learn to control it by keeping within its operating speeds and RPM.

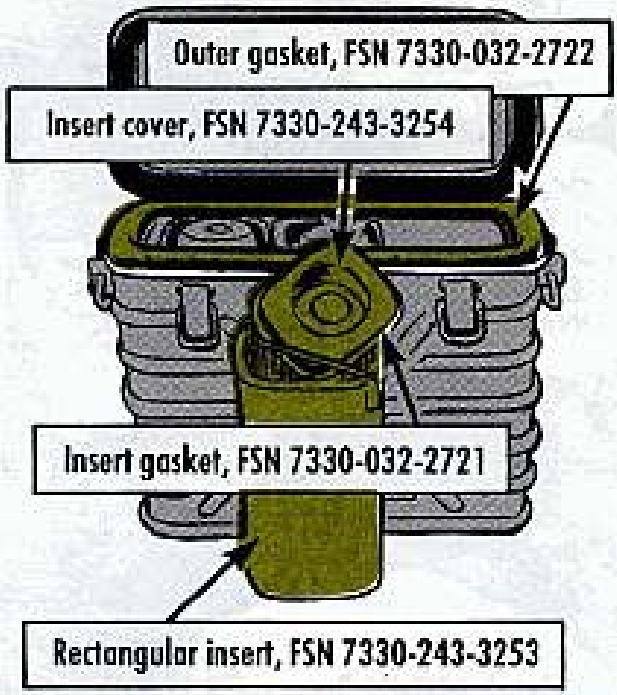
GENERAL & SUPPLY

SOME LIKE IT HOT

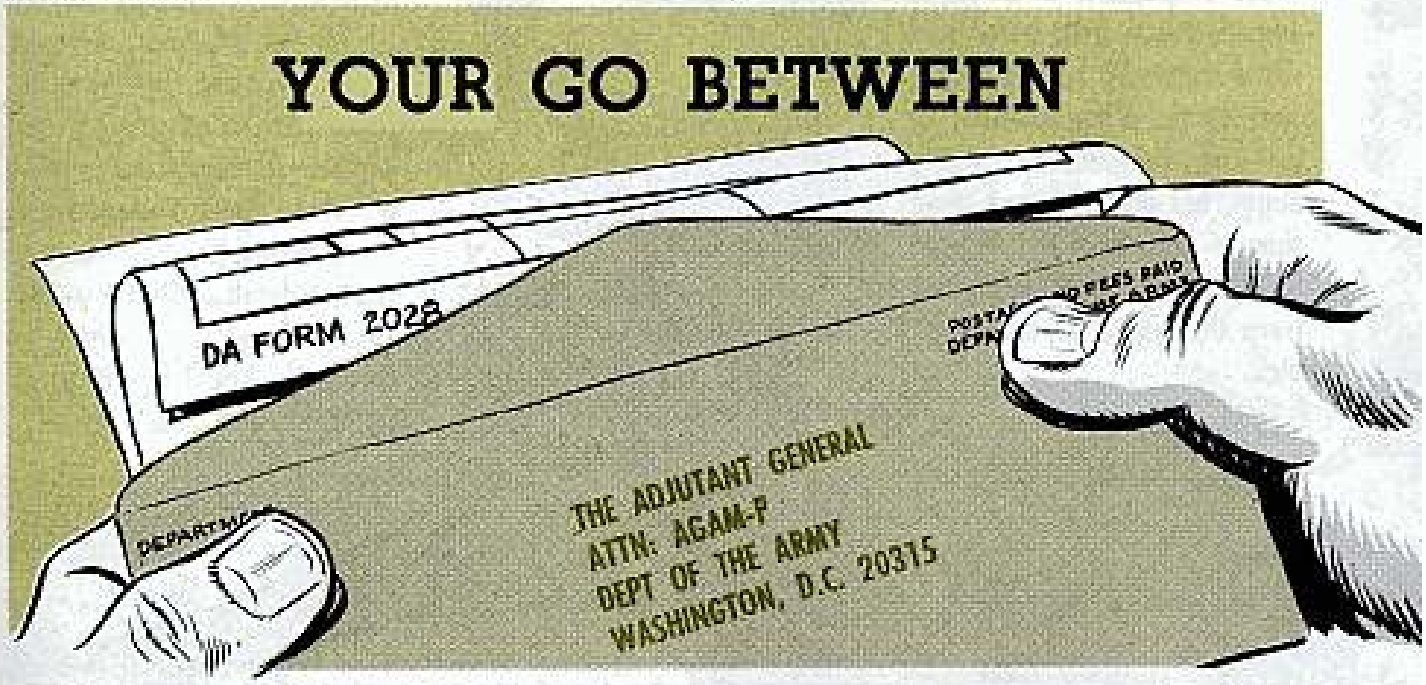
A simple thing like a gasket can make a difference between hot food and cold food. So if you want your food to be hot instead of cold, better replace those gaskets on your 5-gal insulated food containers (FSN 7330-238-2411) when they start losing their life.

Those gaskets will last longer if you keep 'em clean. When you clean your container and inserts, take the gaskets out and wash them good with soap and water. Put 'em back with the flat side down, and let them dry in place, to keep 'em from warping and losing their shape.

Here are the replacements items:



YOUR GO BETWEEN



You use a DA Form 2028 to report an apparent error, recommend a change, or suggest an improvement in your publication. When you've tracked down all clues, and still can't be sure where to send it, mail it to The Adjutant General, Attn: AGAM-P, Department of the Army, Washington, D. C. 20315. Ch 12 (Dec 68) to AR 310-1 gives you this word.

PAINTING

Dear Half-Mast,
It seems there're at least 10 different versions of how intrenching tools should be painted, and how much can be filed off of the cutting edge. We have searched TM 5-461 and TM 9-243 and these don't seem to have the answer. Can you help us?
MSG J. L. S.

LOCAL SOP APPROVED BY YOUR CO IS ABOUT THE ONLY WAY.

HERE'S A GUIDE TO GO BY.

Metal parts — Remove or smooth minor rust, burrs and metal slivers by buffing with a wire brush, filing, sanding or grinding. Sharpen the striking edges, but don't remove more than ½ inch from the original length of the shovel, or ¼ inch from the length of the ax or pick.

Wooden parts — Clean off dirt and grease and look for cracks, splinters, slivers and looseness. Sand to a smooth finish all the splintered, slivered and rough areas. Tighten or replace loose or missing wedges. Replace damaged ax handles and those that are infected with wood-boring, or channeling insects, or larvae. FSN 5110-294-9503 will get you a single bit ax handle. You'll find it in Fed Cat C5110-IL-A (Oct 68).

Touch up the places where the original finish has worn with rust-inhibiting olive-drab enamel, TT-E-485, FSN 8010-297-2124 (1 gal). Use the paint for both wood and metal parts.

INTRENCHING TOOLS

TAKE A LOOK AT THOSE CARRIERS WHILE YOU'RE DOING THAT MAINTENANCE.

BRUSH OFF MUD, DIRT, DUST SPOTS AND MILDEW.

TEST MILDEWED AREAS FOR WEAKNESS BY APPLYING THUMB PRESSURE

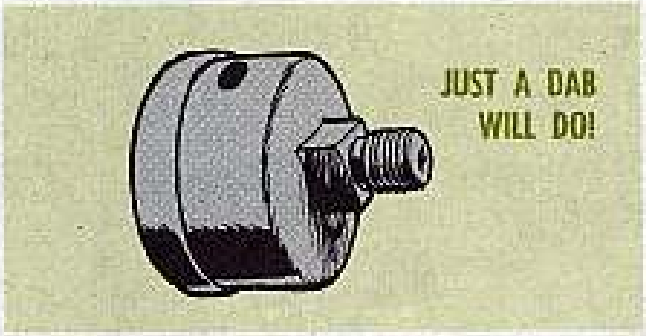
TEST FOR ROT BY GRASPING MATERIAL ON EACH SIDE OF SEAM AND PULLING AT RIGHT ANGLES FIRMLY. PULL STRONG ENOUGH TO TEST — NOT TEAR.

REPLACE IN HASTE

Playing it safe means you replace the pressure gage assembly on some of the earlier models of the M2 burner units, that were made under Contract DSA 4-072546TP523, dated 20 Sep 65.

Gages on the two-tank type and those "U" tanks under the 1965 contract have soft solder and could melt when you turn the flame too high.

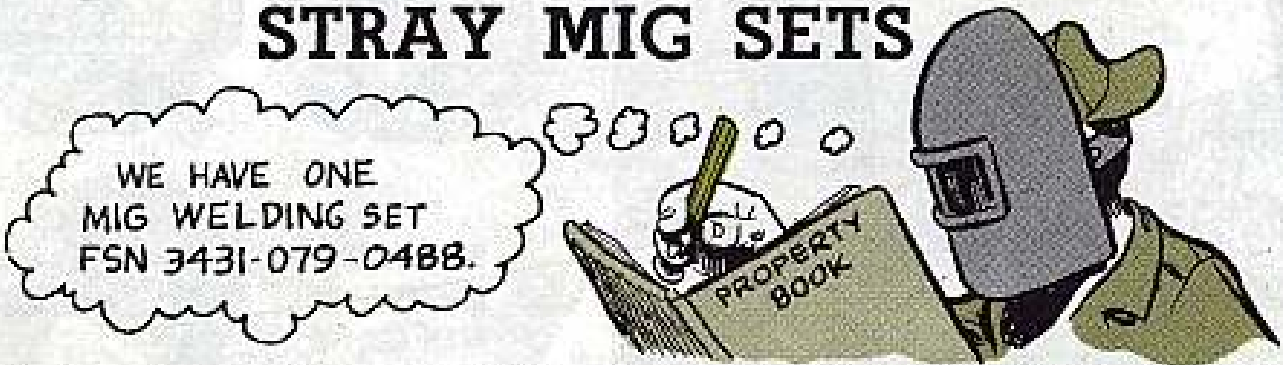
If you're not sure whether the gage has been replaced by a new one or still has the old one, don't take a chance. Replace it with a new type gage. Order Gage, Air Pressure, FSN 7310-999-2503, from TM 10-7360-204-12 (Feb 68).



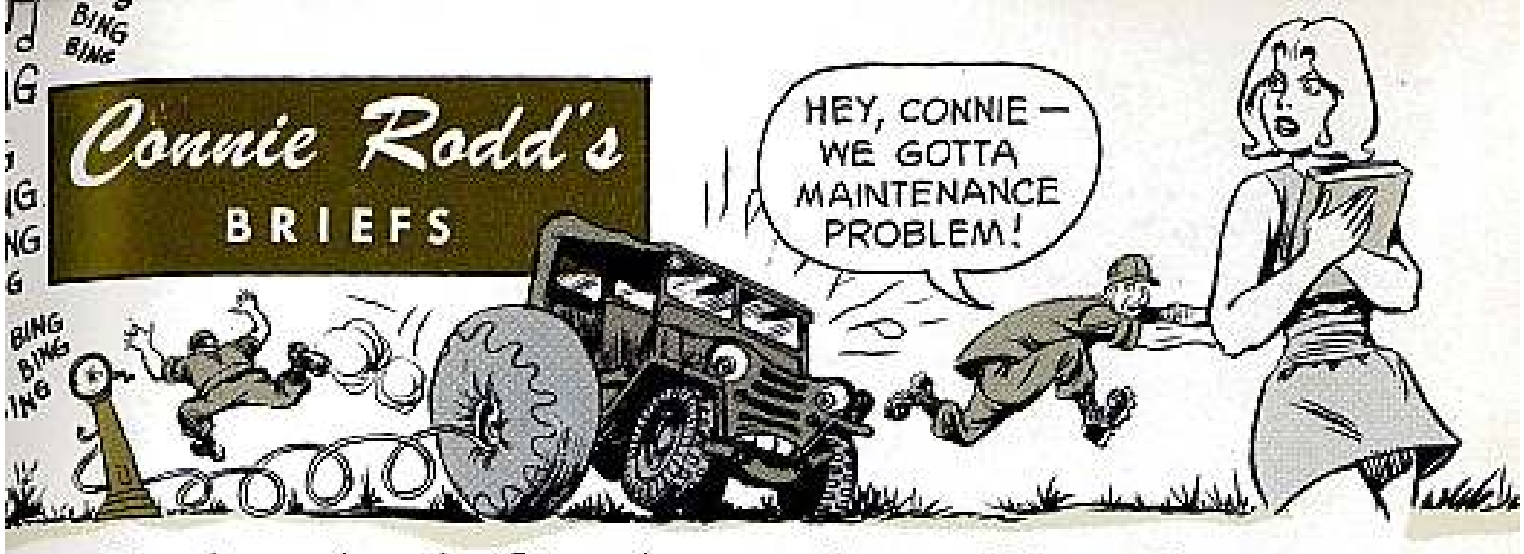
Put a dot of red paint on the top of the new gage so you'll know it's a good gage.

TB 750-971-2 (Apr 69), EIR Digest, gives the word for this replacement.

STRAY MIG SETS



Property-book makers note: MIG welding sets under FSN's 3431-079-0488, 3431-121-5878, 3431-837-5573, 3431-837-5574, and 3431-965-0088 are reportable. All sets take LIN Y48118, like the other MIG sets in SB 700-20. The unlisted sets are being lassoed by the SB. Meantime, you know.



Bushing by the Numbers

Short a panel bushing for the TA-222 line pack of your SB-22/PT switchboard? What you need is FSN 5325-985-6725. It gets you the bushing for the retractable cord opening. This'll cut down fraying in newer line packs, which don't have a beveled opening.

Hot Stuff on M151!

You're 'way out of step if you don't have Ch 1 (Feb 69) to TM 9-2320-218-20P for your M151 and other G838-series ¼-ton vehicles. There're some big changes on Prescribed Load Allowance, source codes and tool kits. And now you'll find FSN's for lots of the ¼-ton's common hardware items and for some special parts that used to be "non-stock."

Right Belts for M151

Belt, generator, FSN 3030-756-8390, is what you want when replacing 25-amp generator belts on your M151 or other G838-series ¼-ton vehicle. You get a set of 2 belts under this FSN. It's listed in Ch 5 (Nov 67) to SC 3000-ML. You'll have trouble if you try installing Belt, generator, FSN 3030-833-1297, listed in TM 9-2320-218-20P w/ Ch 1 (Feb 69) — they're too short.

Lamp Unit Lowdown

You can't go astray if you mark 2B on your DA Form 2765 when ordering the amber warning lamp unit, FSN 6240-999-7806, for your 5-ton wreckers. Like it says in AR 735-35 (May 68), this 2B Advice Code tells the supplier: "Requested item only . . . Do not substitute." Some units have been getting red lamps as substitutes — and red just won't fill the bill.

M35A2 Flapper

Here's what you need to replace or repair mud flaps on your M35A2 2½-ton cargo truck:

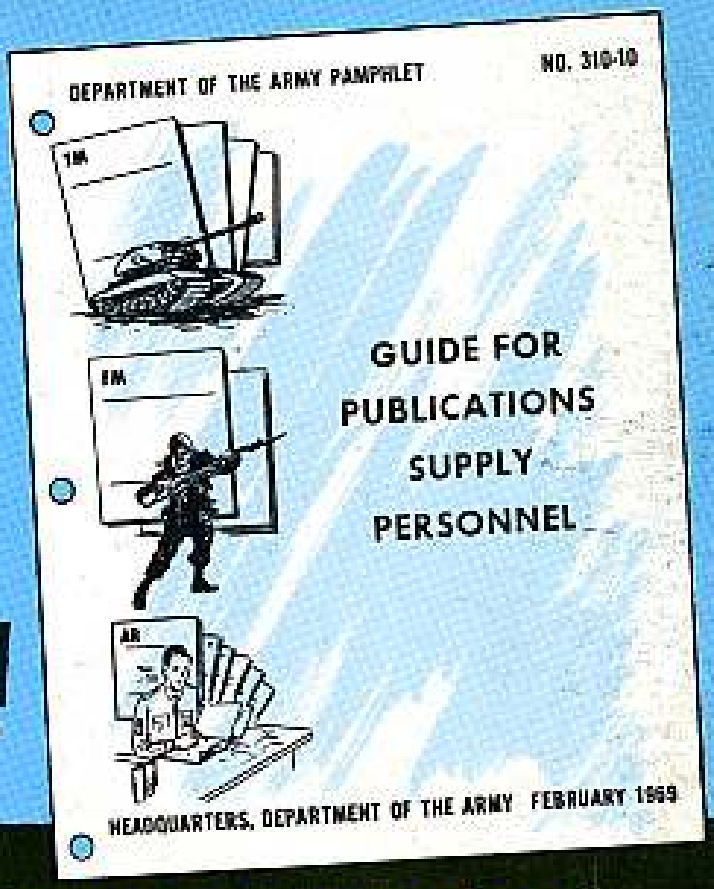
Complete assembly (flap, strip and shield) is Guard, splash wheel, FSN 2540-993-4787; rubber flap with strip, FSN 2540-993-4786; shield only, FSN 2540-993-4788; screw, FSN 5305-269-2803; nut, FSN 5310-959-1488.

Trailer Yes, Chassis No

Even though category line 320010 in TM 38-750 calls for records on "Trailers All Types," it's not meant to cover chassis types used only to put wheels under compressors, generators and the like.

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

ALL ARMY PUBS ARE VALUABLE... THIS ONE IS PRICELESS!



It tells you how to get the others! Get it! Read it! It's got the poop on pubs!

INDEXES

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Use these to keep current