

Issue 346

PS

September  
1981

# THE PREVENTIVE MAINTENANCE MONTHLY

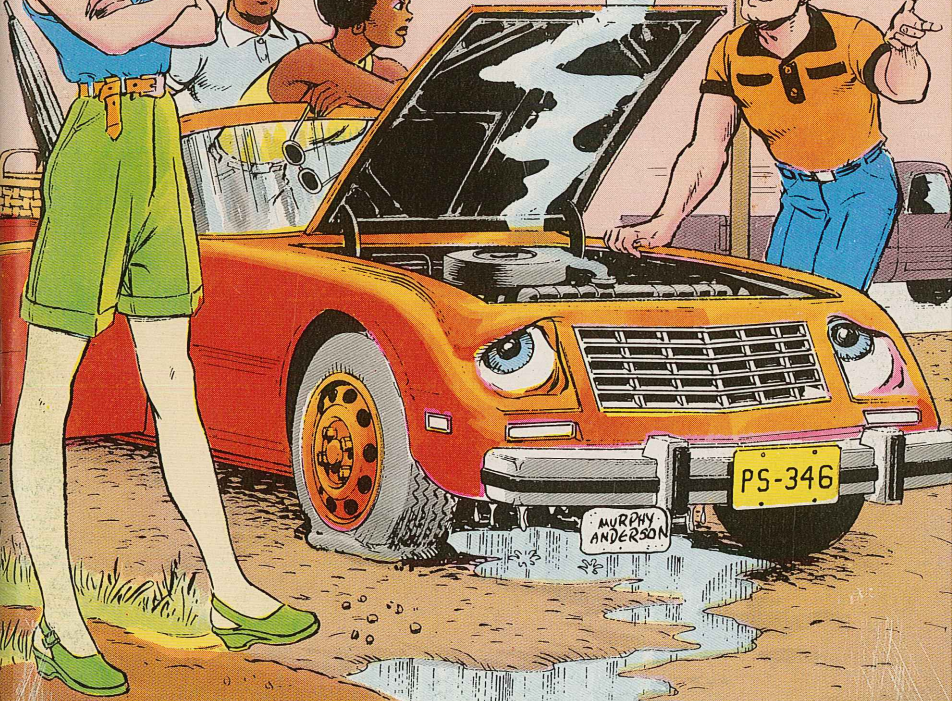
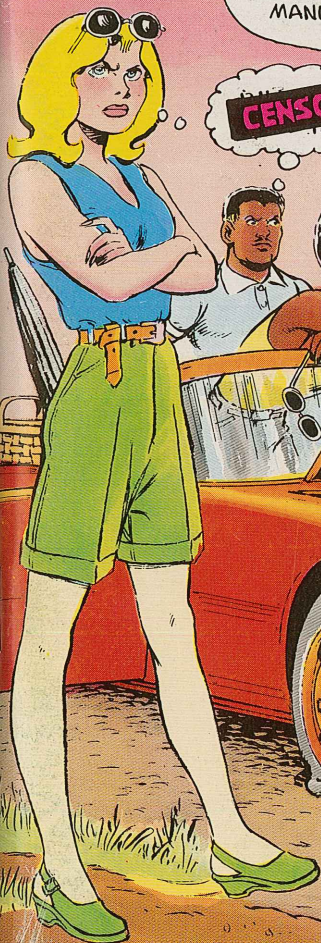
ER... WELL... YES... MY NEW  
WHEELS DO HAVE AN OPERATOR'S  
MANUAL... BUT THERE'S NO  
*PMCS...*

**CENSORED**  
PS 102111

HEH -  
HEH...

OCEAN BEACH  
6 MILES

DIVISION  
LABOR DAY  
PICNIC



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 Materiel Readiness Support Activity, Lexington, KY 40511.

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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:

MSG Half-Mask  
PS Magazine  
Lexington, KY  
40511

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Don't Beat Your Head Against a Wall,  
Hit Your LAO With a Call!

Got a maintenance or supply problem you can't solve?

LAO is your local Logistics Assistance Office of the US Army Materiel Development and Readiness Command (DARCOM), the outfit that

**CONUS**

- Ft Benning 545-4185/4115
- Ft Bliss 8-1832/1932
- Ft Bragg 5188/5509
- Ft Campbell 2098/4510
- Ft Carson 2291/4669
- Ft Dix 4865/6859
- Ft Gordon 5360/5305
- Ft Hood 5-6608/3103/4319
- Ft Huachuca 6328
- Ft Irwin 3900/7147
- Ft Jackson 4316/6078
- Ft Knox 42222/42235
- Ft Leonard Wood 8-7312/7314
- Ft Lewis 5593/3327/4219
- Ft Ord 3193/2304
- Ft Polk 4876/4888
- Ft Riley 239-3945
- Ft Ritchie 5133
- Ft Rucker 4694/3406/2009/3971
- Ft Sill 1-2778/5653/4961
- Ft Stewart 4390/4910
- FORSCOM 588-3423/2012 (AUTOVON)
- TRADOC 680-3637/3638 (AUTOVON)
- National Guard Bureau  
225-4478/4481 (AUTOVON)  
Comm (202) 695-4478/79/80/81
- Alaska**  
Ft Richardson 862-7183/8217/7119
- Korea**  
293-3873/3174 (AUTOVON)
- Pacific**  
Ft Shafter 438-2715/9751

# The Problem Solvers

supplies and helps maintain most equipment used by the Army.

The LAO is staffed by technicians and specialists who can help you solve just about any maintenance or supply problem.

They can help you with supply policies and procedures, arrange for assistance from DARCOM's equipment managers, and give you classroom and on-the-job training on operator and organizational maintenance, supply and TAMMS forms.



- Panama**  
285-5251/5517
- USAREUR**
- Chief
- Heidelberg Mil (2121) 8888/8950
- Operations
- Heidelberg Mil (2121) 8145/7068
- V Corps
- Frankfurt Mil (2311) 6306/8346
- VII Corps
- Nellingen Mil (2724) 6198/7152
- 32d AACOM
- Darmstadt Mil (2371) 8315/6567
- 1st Armored Div
- Nuernberg Mil (2624) 633/805
- 2d Armored Div (FWD)
- Garlstadt Mil (2443) 6218/6572
- 3d Armored Div
- Drake Kaserne Mil (2314) 8204/7302
- Fliegerhorst Kaserne Mil (2309) 7703/7452
- 7th CATC
- Vilseck Mil (2641) 876/865
- 56th FA
- Contact VII Corps (2724) 7152/6198
- 3d Inf Div
- Kitzingen Mil (2325) 715/785
- 8th Inf Div
- Bad Kreuznach Mil (2252) 7226/6161
- 5th Signal CMD
- Worms Mil (2421) 8337
- 21st SUPCOM
- Kaiserslautern Mil (2221) 8211/8123
- 200th TAMMC
- Zweibruecken Mil (2281) 6016/6246

# Oil Loss

# No Mystery

**URG:** I DON'T FEEL SO HOT--I THINK I'M GONNA THROW UP!

SEEMS TO ME YOU'VE ALREADY STARTED!

**Dear Half-Mast**

When we idle our diesel and multi-fuel engine equipment for a long time, engine oil drips from the exhaust system. Sometimes it's as much as a quart—or even more—over an hour's idling. We've had our support check these engines, and they say there's nothing wrong with 'em. What's up?

**SSG M. S.**

Dear Sergeant M. S.,

What's "down" is causing this oil loss. The engine temperature's too low at idle speed. Parts—like pistons and rings—don't expand enough.

Engine oil gets by the piston rings and into the combustion chambers. Then the oil's blown out with exhaust gases.

Diesel engines (including multifuel engines) operate by "compression ignition". (See Para 3-2, Page 3-1, FM 21-305, Manual for The Wheeled Vehicle Driver.) To create the high compression needed for fuel ignition, pistons and rings must fit tight in the cylinders. The high "normal" operating temperature of a diesel/ multifuel engine expands the pistons and rings. This allows very little engine oil to get into the combustion chambers.

That "oil" is usually a mix of engine oil and diesel fuel. It'll most likely drip from the lowest point in the exhaust system—especially from the flexible exhaust tube on some multifuels.

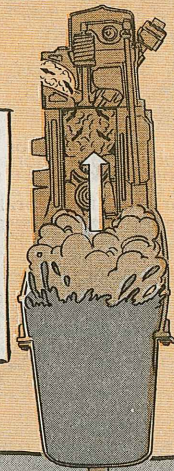
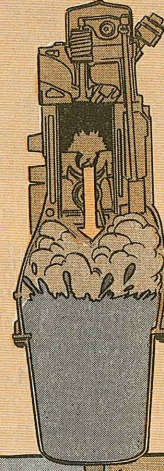


"BLOW-BY" IS BAD NEWS!!

KEEP YOUR ENGINE TEMPERATURE IN THE NORMAL OPERATING RANGE!

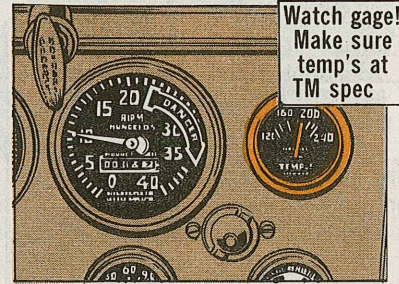
"Blow-by" is unburned fuel and exhaust gas. It blows by the pistons and into the crankcase!

Engine oil is carried up by the pistons. It's exhausted—along with unburned fuel that didn't blow by!



Your engine temperature doesn't get up to normal at low idle speed. Besides wasting engine oil, you're wasting fuel and adding to air pollution when you idle the engine for long periods. Also, exhaust "blow-by" is contaminating the oil in the crankcase. This leads to engine damage due to poor lubrication of moving engine parts.

If there's some reason you've got to run the engine for a long time while sittin' still, jack up the speed to about 1,000 RPM to raise the temperature. Keep an eye on the engine temperature gage. Make sure the temperature's up to the normal operating range specified in your equipment operator's TM.



Watch gage! Make sure temp's at TM spec

## Brake Hose Hazard!

WHY BOTHER? THE ORIGINAL SETUP'S GOOD ENOUGH FOR ME!

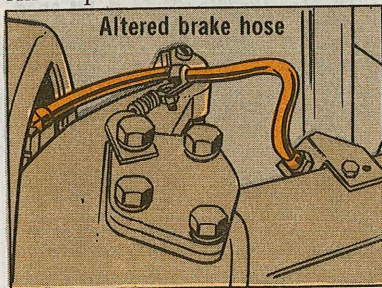
DIDJA INSPECT TH' BRAKE HOSE SETUP-- LIKE TB 9-2300-405-14 SAYS?

Danger may be lurking in your 2½-ton truck's brake system if it has the original front brake hose setup.



Original brake hose

Brake failure can happen if you don't keep a close eye on those hoses when you're inspecting them as spelled out in TB 9-2300-405-14, Mandatory Brake Hose Inspection And Replacement—Tactical Vehicles.



Altered brake hose

There's a better front brake hose setup, but you go that route only if your inspection shows hose replacement is needed. Instructions are in C 1, Page 4-31.1, TM 43-0143, and in your support's TM 9-2320-209-34, Page 12-16, Section IV, Replacing Front Brake Hose. The same poop will be showing up in your -20 TM.

Conversion calls for using the same hoses that are used on 5-ton trucks. Fact is, you can't get the original-type hoses for your 2½-ton truck. NSN 4720-00-737-3250, Page 248, TM 9-2320-209-20P, is "inactive/deleted" on the AMDF. Instead, you need NSN 4720-00-203-9515.

So you won't forget to check brake hose condition, it might be a good idea to pencil in a reminder in your -20 TM—TM 9-2320-209-20, Page 35, Table 3, PMCS, Sequence No. 7, and TM 9-2320-209-20-1, Page 2-11, Table 2-4, PMCS, Item 12.

## Dead Battery Blues?

HE SAYS HIS RADIO WON'T WORK 'CAUSE HIS BATTERIES ARE DEAD!

BET HE'S GOT MOISTURE IN THE RELAY THAT KICKS IN HIS 24-VOLT CHARGING SYSTEM!

READ YOU LOUD AN' CLEAR, FOXTROT 7! OVER ...

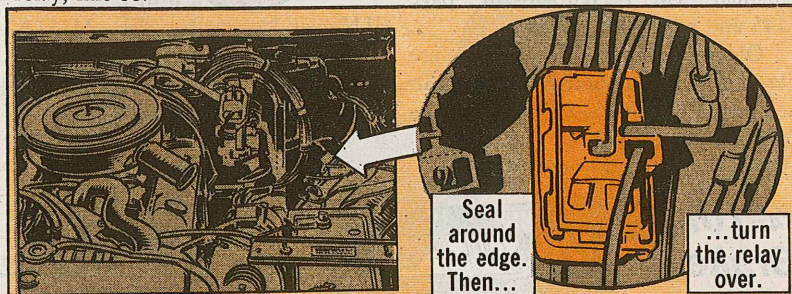
ROGER! OVER AN' OUT!



Just a little moisture can dampen your communications when you're operating or maintaining one of those M880-series trucks with the add-on 24-volt, 60/100-AMP electrical system.

Failure of the charging system that keeps up that pair of batteries often can be traced to moisture in the relay on the left fender well. Road splash, wash rack hosing and even condensation can knock out this relay—and then your charging system won't charge. That means you wind up with dead batteries in the 24-volt system that you need for operating certain commo equipment.

You can head off this trouble, tho, by making sure moisture can't get into the relay, like so:



Seal around the edge. Then...

...turn the relay over.

- Take off the relay and seal the edge—all the way around. NSN 8030-00-874-5875 brings an 8-oz tube of sealing compound.

This puts the wiring harness connector on the underside, so there's less chance of moisture sneaking in where the connector and the relay come together.

You'll find some more dope on this problem/solution in C 1, page 4-25.7, TM 43-0143.

## Focus on Brake Cylinders

WOTTA Y' MEAN TH' WHEEL CYLINDERS "LOOKED TH' SAME" ??

WELL, PRETTY NEAR TH' SAME!

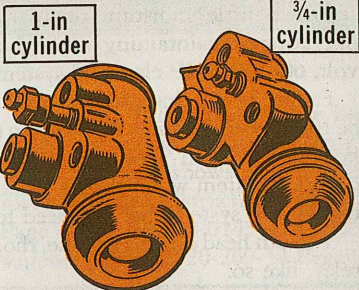
Brake trouble's not funny—not on the M151-series trucks or on any other vehicle.

You, the driver, will suffer most when your 1/4-tonner's brakes don't do their job like they're supposed to.

But you, the mechanic, may find things a little hot when it comes out that the brake trouble was traced to parts you installed wrong.

Like wheel brake cylinders. You can't go wrong if you eyeball the parts manual—TM 9-2320-218-20P, page 145 and page 149:

Older 1/4-tonners—M151, etc—use 3/4-in cylinders on both front and rear. (Note: PN 11669158 can now be ordered with NSN 2530-01-071-9851.)



Newer 1/4-ton vehicles—M151A2 etc.—get the 3/4-in cylinders only on the rear. Now get this—1-in cylinders must be installed on the front! (NSN 2530-01-071-9850 has been assigned to PN 11669159.)

## 1/4-Ton Brake Shoes

WHEW!



I STOPPED JUST IN TIME, NEWTON!

SAVED BY NSN 2530-01-061-7326!

You won't get brake shoes for your M151-series 1/4-ton vehicle if you order under NSN 2530-01-058-7420, Page 143, TM 9-2320-218-20P. Instead, use NSN 2530-01-061-7326. The word's in TB 43-0001-39-3 (Oct 80), Page 3-54.

## Drain Holes for Safety

HEY, LEM... WE JUST GOT A LETTER FROM HALF-MAST, WITH TH' ANSWER TO YER... RR... ?GULP?!

TOO LATE, SAM!

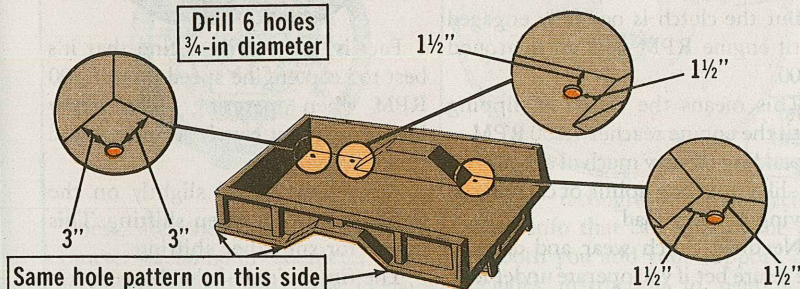


*Dear Half-Mast, We've got a problem that's not only messy but is a fire hazard. There's always a little fuel spillage in our POL trailers. We can't tip the trailers to drain 'em, so the fuel just collects in there. Got any ideas?*

CW4 E. B.

Dear Mr. E. B.,

Sure do! After thoroughly cleaning away all fuel and trash, drill drain holes in the trailer floor like you'll find in new production trailers—both 1 1/2-ton and 3/4-ton. Your safety officer should be able to help you get the CO's OK for putting holes in older trailers.



Make sure you paint the bare metal after drilling.

Also, if your trailer has a rear support leg, park the trailer so there's a slight slope to the rear. This'll help drain off both water and spilled fuel.

And, of course, all of this effort will be wasted if operators let leaves, paper and other trash collect in the trailers.

FUEL-SOAKED TRASH IS A FIRE WAITING TO START!

B'LEVE IT!

M915-Series Trucks...

## Stop Clutch Burnout!

WOTTA Y'MEAN IT WON'T GO?

I MEAN, LIKE TH' ENGINE GOES BUT TH' TRUCK DOESN'T GO!

UH-OH, HIS CLUTCH FINALLY WENT OUT!

I'M NOT SURPRISED! HE NEVER DID KEEP HIS ENGINE RPM HIGH ENOUGH!



Some drivers of M915-series trucks are having a hard time learning that these trucks are different from anything they've ever operated before—and they're tearing up clutches something fierce.

The transmission clutch is automatic. It's disengaged—disconnected—when the engine's operating at low speed—about 775 RPM.

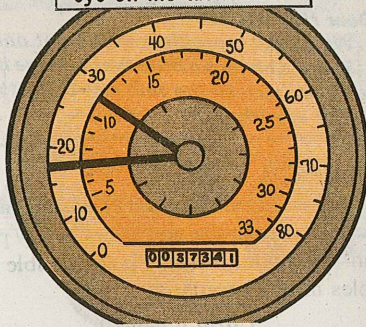
Then, as you increase engine RPM, the clutch starts to engage.

But the clutch is not fully engaged until engine RPM gets up to around 1200.

This means the clutch is slipping until the engine reaches 1,200 RPM—depending on how much of a load is on it—like traveling uphill, or carrying or towing a heavy load.

Needless clutch wear and damage are a sure bet if you operate under load between 775 and 1,200 RPM for longer than 12 seconds. Watch that RPM hand on your tachograph!

A real pro keeps a sharp eye on his tachometer



Fact is, some drivers find that it's best to keep engine speed up to 1,500 RPM when operating under heavy load to prevent clutch slippage—and clutch damage.

Also, they let up slightly on the accelerator pedal when shifting. This makes for smoother shifting.

The fine points of clutch operation are spelled out in the operator's manual—TM 9-2320-273-10, Page 2-18.

O'OURSE I KNOW ENOUGH TO KEEP MY ENGINE RPM UP SO THE TRANSMISSION CLUTCH WON'T SLIP!

OH, YEAH?

WELL, YOUR TACHOGRAPH CHART SEZ DIFFERENT!!

AND YOUR OPERATOR'S TM LOOKS LIKE IT'S NEVER BEEN OPENED!



## Get Tachograph Info

I CAN GET THIS RUBIC'S CUBE STRAIGHT IN 17 MINUTES...

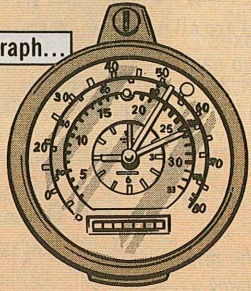


... BUT THESE TACHOGRAPH CHARTS HAVE GOT ME STUMPED!

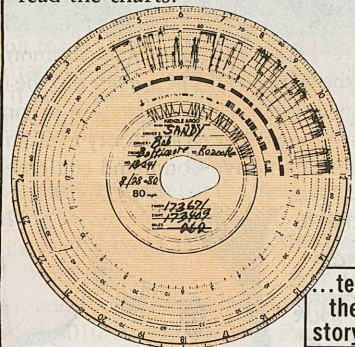
Help's available for you supervisory-types who're responsible for the "care and feeding" of tachographs.

Need a hand in figuring out how to read the charts?

Tachograph...



These are the combination speedometer-tachometer-odometer-clock recording instruments now in many Army trucks—such as the M915-series trucks.



...tells the story!!

The tachograph manufacturer offers info that can smooth the road for both you and your support. This includes instruction in reading the charts and also a listing of factory service stations.

JUST DROP A LINE TO...

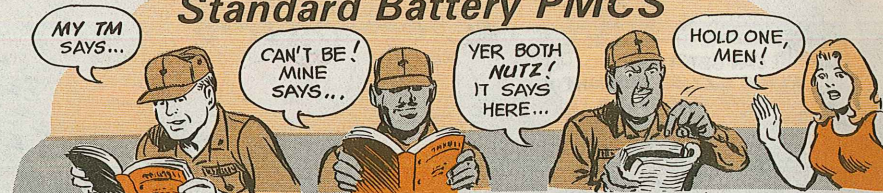


VDO-ARGO Instruments, Inc.  
980 Brooke Rd.  
Winchester, VA 22601

OR CALL (COMMERCIAL)  
(703) 662-1700,  
MR. DELLHEIM OR MR. BASS!

Lead-Acid Batteries...

## Standard Battery PMCS



MY TM SAYS...

CAN'T BE! MINE SAYS...

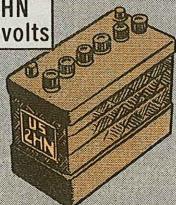
YER BOTH NUTZ! IT SAYS HERE...

HOLD ONE, MEN!

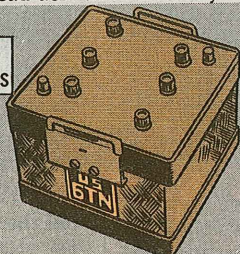
WHO?

Are you confused about pulling operator/crew preventive maintenance checks and services on the lead-acid batteries in your equipment?

2HN  
12 volts



6TN  
12 volts



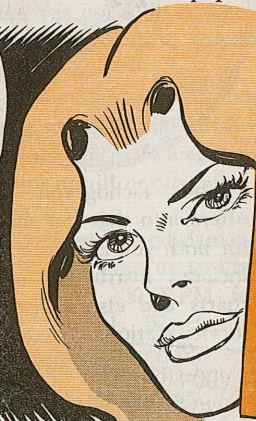
4HN  
24 volts



True, the PMCS for some common batteries—4HN, 2HN and 6TN—are not the same in all TM's, even tho the batteries are all pretty much the same as far as operator/crew inspection is concerned.

A standard lead-acid battery PMCS for 4HN, 2HN and 6TN batteries in all Tank-Automotive Command equipment is in TB 43-0001-39-5 (Apr 81).

HERE'RE  
THE BATTERY  
PMCS  
THAT'LL TIDE  
YOU OVER  
UNTIL YOUR  
-107M  
PICKS UP  
THE RUN-  
DOWN...



- Operator PMCS for  
2HN, 4HN & 6TN Batteries**
- Inspect battery for cracks, leaks, swelling, broken terminals, cables, etc.
  - Check electrolyte level once a week.
  - Check for corrosion.
  - Check for loose connections and hold-downs.
  - Make sure rubber grommets are in place to keep the cable from being cut on the edge of holes.
  - Inspect battery box for obvious damage.

Report any of these faults on your DA Form 2404.

Watch it! Before you tackle those PMCS, find out if your command has different requirements under a written local SOP.

## Beat Battery Box Rust

HE DIDN'T EVEN NOTICE US FALL OUT!

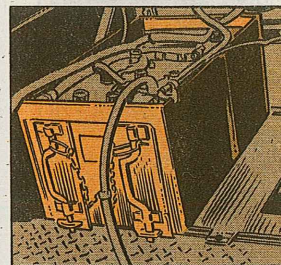
'COURSE NOT! HE NEVER NOTICED I WAS CRACKED AN' LEAKIN' ... OR ALL TH' RUST AN' CORROSION IN OUR BOX!

HEY! SOMEONE STOLE MY BATTERIES!

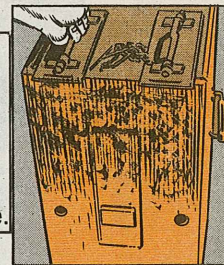


That metal battery box in your vehicle will last as long as the vehicle—if you keep it protected from rust and corrosion.

That means a close eyeballing during your PMCS for plugged drain holes and cracked batteries. Keep drain holes open. Get cracked batteries replaced.



A good time for this clean-up/fix-up is during semiannual servicing—especially in the Spring where salt's used on roads. Take out the batteries—and boxes, too, if you can—for close eye-balling of all hardware.

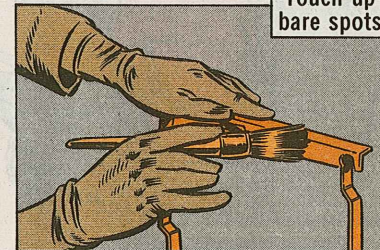


Plain water in your battery box is bad enough. It'll rust out the metal for sure. But electrolyte (battery acid) from a leaking battery eats up metal fast! Battery boxes get it bad, too, when batteries are overfilled with water. The overflow's got acid in it.

Battery boxes and other metal parts around your batteries must be protected by a coating—like the epoxy coating, NSN 8010-00-959-4661, on Page 8, DA Pam 750-34.



Clean parts with wire brush



Touch up bare spots

See the poop on cleaning and coating those metal parts in DA Pam 750-34, Pages 10 and 11.

# M60A1 Tank Identification

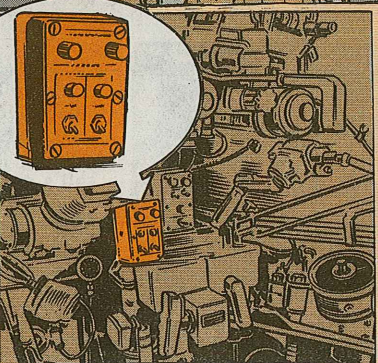
You can't tell a book by its cover, and you can't tell an M60A1 tank by its data plate.

Lots of M60A1 tanks, NSN 2350-00-756-8497, were changed into M60A1 AOS tanks, NSN 2350-01-058-9487, but the new number was not put on their data plates.

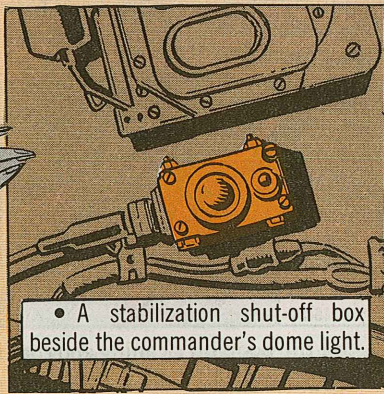
YOUR M60A1 TANK HAS BEEN CONVERTED INTO AN M60A1 AOS IF IT HAS THESE 2 ITEMS...

YOU SURE THAT'S NOT AN M60A1 AOS TANK?

'COURSE! I CHECKED HIS DATA PLATE!

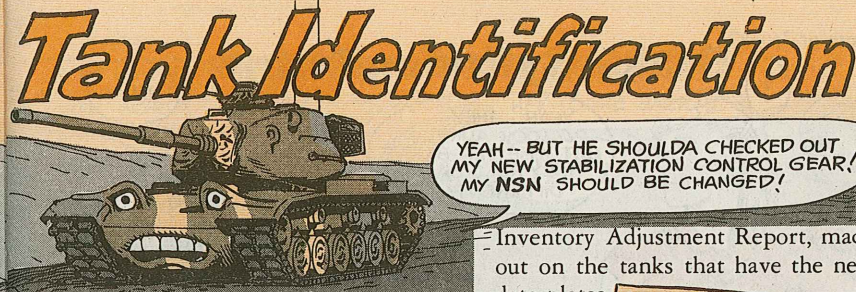


• A stabilization control selector above the gunner's control handle.



• A stabilization shut-off box beside the commander's dome light.

**Tank "Hotline"**  
Call **AUTOVON 694-6582**  
Any time, day or night



YEAH-- BUT HE SHOULD'VE CHECKED OUT MY NEW STABILIZATION CONTROL GEAR! MY NSN SHOULD BE CHANGED!

Inventory Adjustment Report, made out on the tanks that have the new data plates.

SEND THE REPORT TO...



Commander  
US Army Depot System  
Command  
ATTN: DRSDS-LA  
Chambersburg, PA 17201

The DA 444 will correct your asset records for the Continuing Balance System.

Now for each tank, make out a new DA Form 2408-9 Acceptance Report. Since this is a Corrected Copy, you write CORRECTED COPY in big letters on the face of the form.

Mark out the preprinted control number and write the control number of the original form above it.

In the REMARKS section, put the NSN for the M60A1, tank, NSN 2350-00-756-8497, and draw a red circle around it.

You put this in your files but not before you pull Copy 1—the NMP copy—

AND MAIL IT DIRECTLY TO...



Commander  
Materiel Readiness Support  
Activity  
ATTN: DRXMD-MS  
Lexington, KY 40511

If the data plate says your tank is an M60A1, NSN 2350-00-756-8497, and it has these 2 items, the data plate must be changed to identify it correctly as an M60A1 AOS, NSN 2350-01-058-9487.

Do this by making a list of the serial numbers on all the M60A1 AOS tanks you have that are wrongly identified on their data plates and DA Form 2408-9 Acceptance Reports as M60A1 tanks without AOS.

SEND THIS LIST TO...

Project Manager  
US Army Tank-Automotive  
Command  
ATTN: DRCPM-M60-L  
Warren, MI 48090



The project manager will send you new data plates free for each of the tanks you have listed. You'll find most of the info already printed on the new data plates. You just transfer the manufacturing date, serial number and inspector's initial from the old data plate onto the new AOS plate and make sure you put it in the right tank.

The next thing you have to do is straighten out your records.

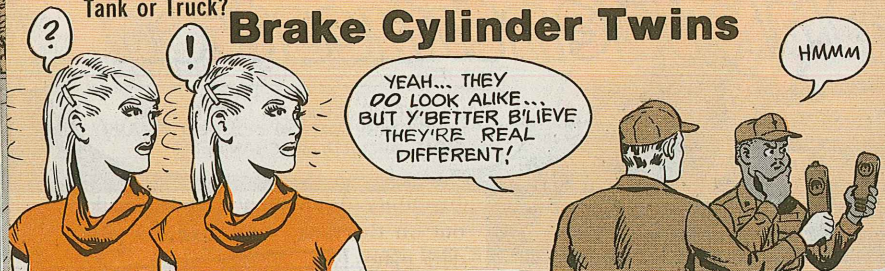
Work with your property book officer and get a DA Form 444,

The logbook copy of the form goes in your DA Form 2408-9 Acceptance Reports Binder.



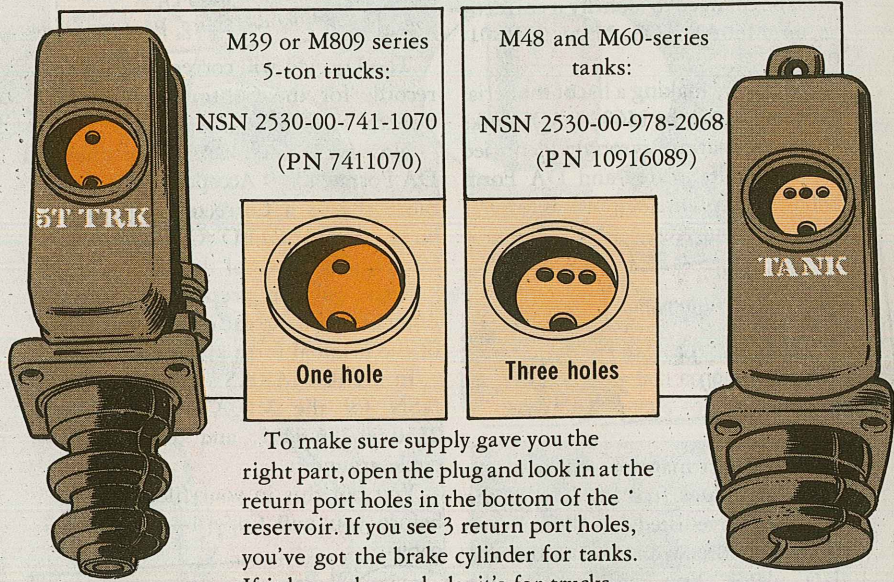
Tank or Truck?

# Brake Cylinder Twins



YEAH... THEY DO LOOK ALIKE... BUT Y'BETTER B'LIEVE THEY'RE REAL DIFFERENT!

There are 2 brake master cylinders in the system that look enough alike to be twins. They act real different, though, so if you put in the wrong one you're in deep trouble.



M39 or M809 series  
5-ton trucks:  
NSN 2530-00-741-1070  
(PN 7411070)

M48 and M60-series  
tanks:  
NSN 2530-00-978-2068  
(PN 10916089)

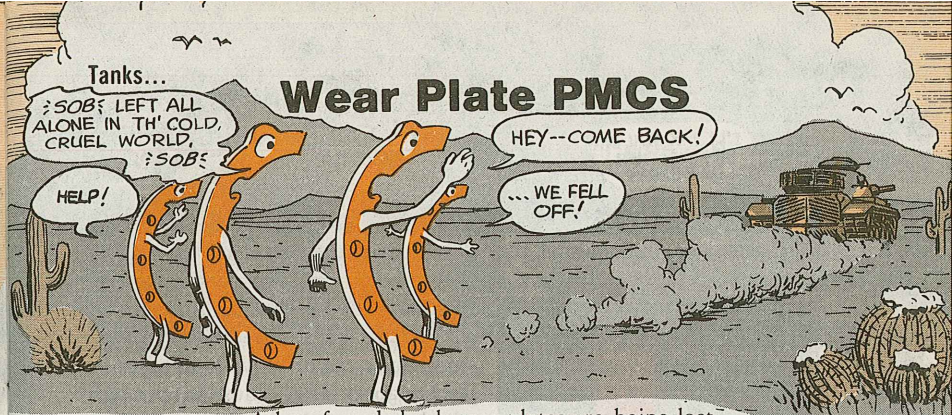
To make sure supply gave you the right part, open the plug and look in at the return port holes in the bottom of the reservoir. If you see 3 return port holes, you've got the brake cylinder for tanks. If it has only one hole, it's for trucks.

Once you know what you've got, you can mark it TANK or 5T TRK with the metal stamping die set, NSN 5110-00-289-0007, in your No. 2 Common tool set. Careful, not too hard or you'll break the cylinders. Some people would sooner put the identification on in paint, although that is not as permanent. Just make sure you get the right cylinder in the right vehicle.

This is necessary because if you use the truck master cylinder in a tank, it won't give you enough pressure. On 'tuther hand, if you have a tank master cylinder in a truck, the brakes will lock when you press down on the brake pedal.

Tanks...

# Wear Plate PMCS



A lot of roadwheel wear plates are being lost because mounting bolts are working loose.



- 1 See if the roadwheel wear plate's outer curled edge is worn off.
- 2 If the edge is worn off, replace both plate sections.
- 3 See if the roadwheel wear plate cap screws are damaged or missing and replace as necessary.
- 4 If fewer than 2½ threads remain at the wear plate threaded hole, replace both wear plate sections.
- 5 Torque all cap screws to 20±5 lb-ft and coat with sealing compound, NSN 8030-00-081-2340. That'll get you a 50-cc bottle.

M109-Series  
Howitzers...

## Drain Holes Needed

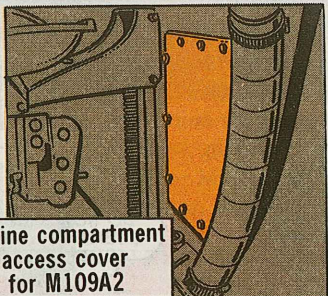
I'LL FIX YOU IN  
DRY WEATHER,  
OK BUDDY!

I HOPE SO!

Water gets into the channel frame welded to the inside of the engine compartment access cover. It says there, rusts the channel and access cover and damages the heat insulation.

To stop this water damage, you mechanics can drill two 1/4-in holes 10 inches apart (after centering) through the bottom of the insulation retainer to drain off moisture. Paint the holes!

When you put the engine compartment access cover back on, make sure all screws are securely tightened to prevent carbon monoxide leakage.

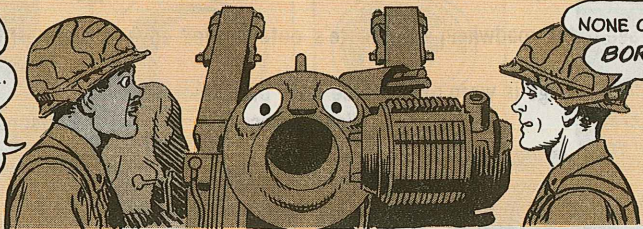


Engine compartment  
access cover  
for M109A2

## New M110A2 Howitzer 'Scope

HE NEEDS  
SCOPE?

WHAT KIND...  
TELE  
PERI,  
OR  
MOUTH-  
WASH?



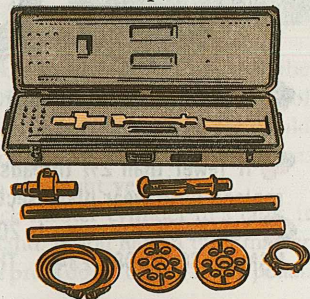
NONE OF 'EM!  
BORE!

Track vehicle mechanics in M110A2 howitzer outfits will soon be getting a new special tool.

It's an inspection device, NSN 6650-01-102-7847, that will be distributed free on a one-time-only basis, one per M110A2 battalion.

You'll use it to borescope the chamber and the beginning of the rifling on the cannon tubes of M110A2's. It'll help you detect projectile fallback problems on this weapon.

An instruction sheet for operation and maintenance is packed with each scope.



Inspection device  
NSN 6650-01-102-7847

16

## M110A1 / M578 Steer Danger

HELP! TH' NUTS CAME LOOSE!

TOLE YA THERE  
WUZ A NUT LOOSE  
AROUND HERE, ELSIE!

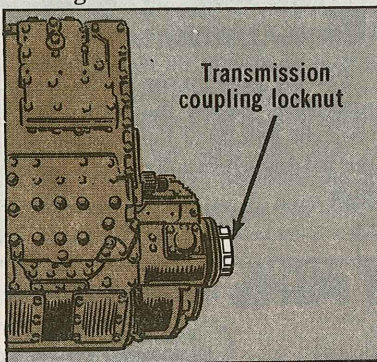
?

The final - drive - to - transmission coupling-nuts on some vehicles have worked loose, causing a loss of steering!

says in TM 9-2300-216-20 w/C 1 on Page 2-120, Para 15b. Instead of using "suitable pliers" like it says, use a spanner wrench.

For the M110A2, use TM 9-2350-304-20, Page 4-17; and for the M578, use TM 9-2350-238-20, Page 4-18.

Tighten the coupling nut, then punch a dent in the edge of the locknut



Transmission  
coupling locknut

Punch 2  
dents in edge  
of locknut

(about 1/32 inch deep) in 2 of the 4 notches. Use a small punch to secure the nut and keep it from backing off.

To keep this from happening, you mechanics need to secure the nuts.

If you have the M110A1, you loosen the coupling nut with a drift and light hammer or spanner wrench the way it

If you can't punch the dents in an undented surface, replace the nut and then punch the new nut.

## Power-Dyne Wrench

Reminder...users of the Power-Dyne torque wrench have to get it calibrated every 120 days.

TB 43-180  
HAS THE WORD!



17

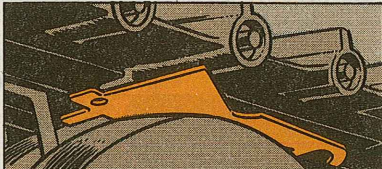
## M113A1 / M113A2

You adjust the track tension of the M113A1 family of carriers (except the M548 and the M730) by one method. You adjust the track tension of the M113A2 family (plus the M548 and the M730) by a different method.

There's nothing in TM 9-2300-257-10, with C 1, to clue you in on this. When TM 9-2350-261-10 (for the M113A2 family) comes out, it'll have the dope.

NO MATTER WHICH VEHICLE YOU HAVE, YOU NEED THE TRACK AND SPROCKET GAGE, NSN 5120-01-041-9920, IN THE BASIC ISSUE ITEMS TO CHECK THE TRACK TENSION!

### Check For M113A1, M577A1, M106A1, M125A1, M741



Gage fits between track and roadwheel

Put the gage on top of the second roadwheel. Adjust the track tension until the bottom of the track rests on the 3rd roadwheel and also touches the gage.

## M113A1 / M113A2 Parts Confusion

... BUT THEY SURE LOOK ALIKE, SARGE!

YES... BUT THERE'RE IMPORTANT DIFFERENCES, SOLDIER!

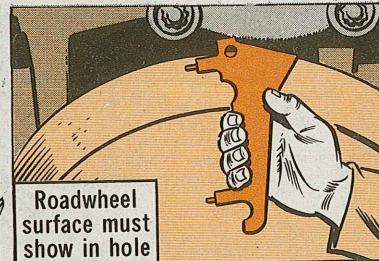
Some suspension and cooling system parts are interchangeable between the M113A1 and M113A2 carrier families. However, only parts with the same part number and NSN are interchangeable.

Changes are coming to the TM 9-2300-257-20P and -34P manuals to show these parts separately for the M113A1 family and TM 9-2350-261-20P and -34P for the M113A2 family.

In future TM's, only the M113A1 vehicles will be covered in the TM 9-2300-257-20P and -34P manuals. Parts for the M113A2 series will be in TM 9-2350-261-20P due out this year.

## Track Tension

### Check For M113A2, M577A2, M106A2, M125A2 and M548 and M730

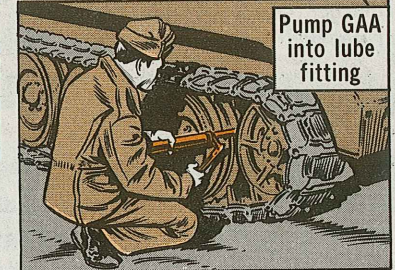


Roadwheel surface must show in hole

Position the gage so that the lug with the hole through it is resting lightly against the bottom of the track at the centerline of the second roadwheel. Adjust the track tension so that the track rests on the 3rd roadwheel and the surface of the 2nd roadwheel can be seen through the 1/4-

in hole in the gage.

If your track is too loose, pump GAA into the lubrication fitting on



Pump GAA into lube fitting

the track tension adjuster to tighten up the track. If your track is too tight, bleed grease through the pressure relief valve.

## M113A1 FOV Transfer Troubles

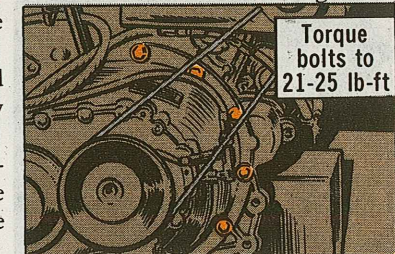
? WHAT WAS THAT?

WOULD YA B' LIEVE TH' TRANSFER GEARCASE?

The bolts that hold the transfer gearcase to the transmission and engine on a lot of vehicles are vibrating loose because they're not torqued right.

Torque them to 21-25 lb-ft now and check and retorque them at every quarterly service.

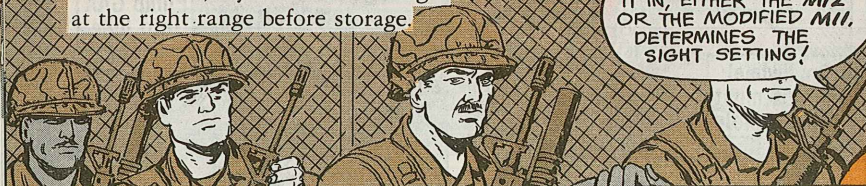
This includes the 10 bolts connecting the transfer gearcase to the engine and the 8 bolts connecting the transmission to the transfer.



Torque bolts to 21-25 lb-ft

# M203

You can damage the quadrant sight quick-like on your M203 grenade launcher (GL) if you don't set the sight at the right range before storage.



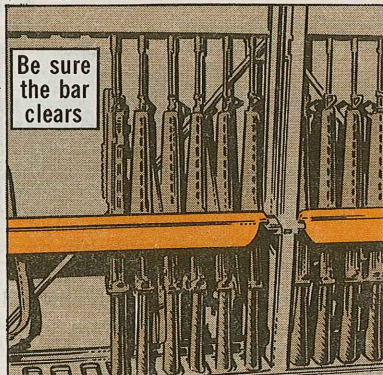
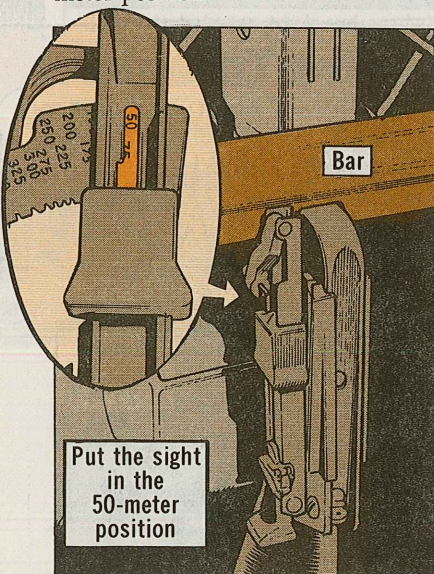
THE RACK YOU STORE IT IN, EITHER THE M12 OR THE MODIFIED M11, DETERMINES THE SIGHT SETTING!

## In the M12 Rack

The M12 rack was built for the M16A1 rifle and the M203 GL. When you store the M203 in the M12 rack, you must first put the sight in the 50-meter position.

That way, when you close the locking bar of the rack, the bar misses the sight. If the sight's raised to more than the 50-meter position, you can wipe it out with the bar.

Good point to remember on any rack: Close the locking bar easy-like. If you get resistance before it's fully



seated, check to see what it's hung up on...like the sight, maybe. If it's the sight, set it in the right position.

# Rack Storage

HEY— WHAT DO WE DO?

THIS M11'S LOCKING BAR WON'T CLEAR TH' QUADRANT SIGHT ON MY M203-- EVEN THO I SET IT RIGHT.

ASK BONNIE!



## In the Modified M11 Rack

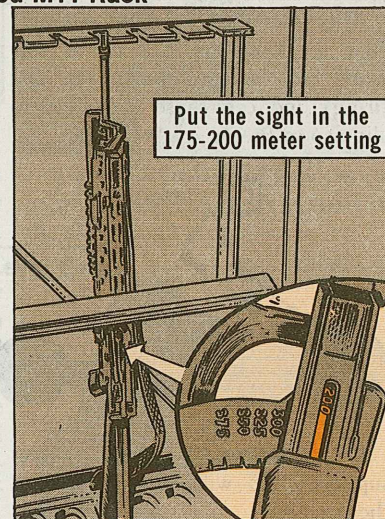
If you've got a modified M11 rack, you've got problems. The locking bar may be in different positions.

Normally, you can store most M203's in the M11's in the 175-200 meter setting.

You have to check your rack to see which setting will clear the bar. Like, 175-meters will do it for some; up to 200-meters will do it for others.

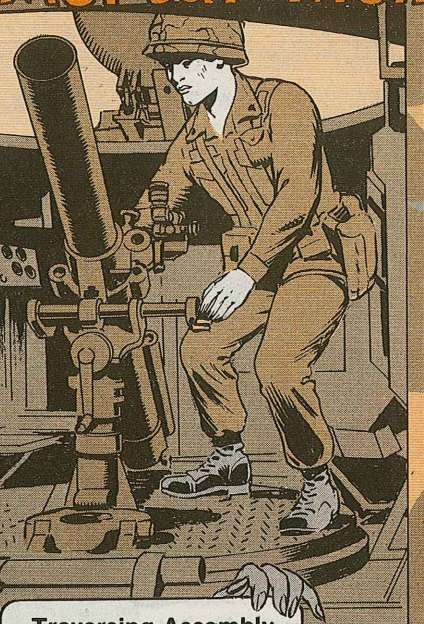
Because of the different positions of the bars, your sight may not be able to clear the bar at all.

In that case, you'll have to remove the sight and store it separately in the arms room. Keep objects off stored sights and cushion them between layers.



# 4.2-In Mortar Memos

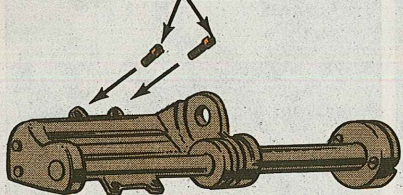
A QUICK EYEBALL TRIP AROUND YOUR M30 MORTAR CAN HELP PUT YOUR ROUNDS WHERE YOU WANT THEM TO GO!



## Traversing Assembly

Check out the traversing assembly slide for looseness. The cap screws work out (maybe during the last firing) and can cause the slide to slip...so to speak.

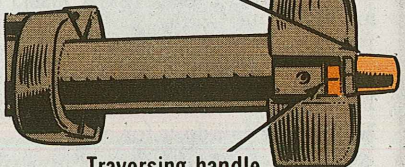
Cap screws



If the screws are loose, direct support (DS) will have to tighten them.

Got a problem with the traversing handle retaining nut working loose on your 4.2-in mortar?

Traversing handle



Traversing handle retaining nut

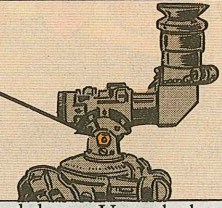
Tighten the handle retaining nut, and then stake the nut well.

When you stake it, make sure the metal of the nut threads and the shaft are mashed together. A pin punch mark on the shaft won't hack it.

## Sight Mount Screws

Sight mount screws come loose from firing vibrations if the screws are

Sight mount screw



not fastened down. Use a lock washer or retaining compound like Loctite to

help keep your sight on tight and your mortar rounds on target. Either way works.

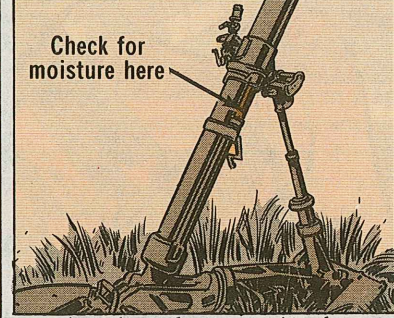
Remember, metal components have to be dry and grease-free for the retaining compound to set and bond right.

NSN 8030-00-181-7603 brings a 50-cc bottle of retaining compound. NSN 8030-00-066-9428 gets a 250-cc tube.

## Shock Absorbers

Check the shocks on the cannon during periodic maintenance and before firing. Wear or water seepage

Check for moisture here



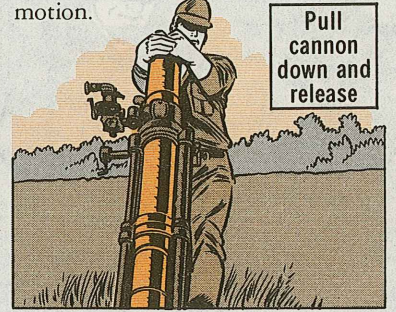
can slow them down, causing damage to several parts.

Water can seep into worn packings at the base of the shocks. So, if weather demands, cover the mortar with a

poncho during lulls in field exercises. Be sure the poncho covers the shocks.

To check shocks out, pull the cannon down and then release it. The shocks should come up in a smooth motion.

Pull cannon down and release



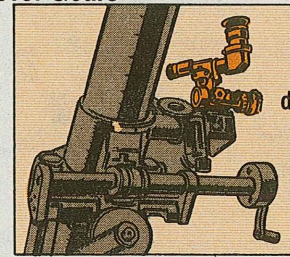
If the mortar kind of bounces back in spurts, your DS needs to check out the shocks and bushings.

## Cross-Level Gears

Cross-level gear wear can cause the sight unit to droop or flop...which isn't too swift when you want a level mortar.

You may even be able to wobble the sight unit. So, follow the procedures starting on page 2-34 of TM 9-1015-215-12. If the sight unit droops, your DS needs to check out the gears.

Sight unit drooping? Contact DS!



# M60 MG

# Reminders

"Out of sight, out of mind" is as true today as it was when the first cave man wrote it on a wall umpteen thousand years ago (well, it could have happened that way).

Case in point, the spare barrels for your M60 machine guns.

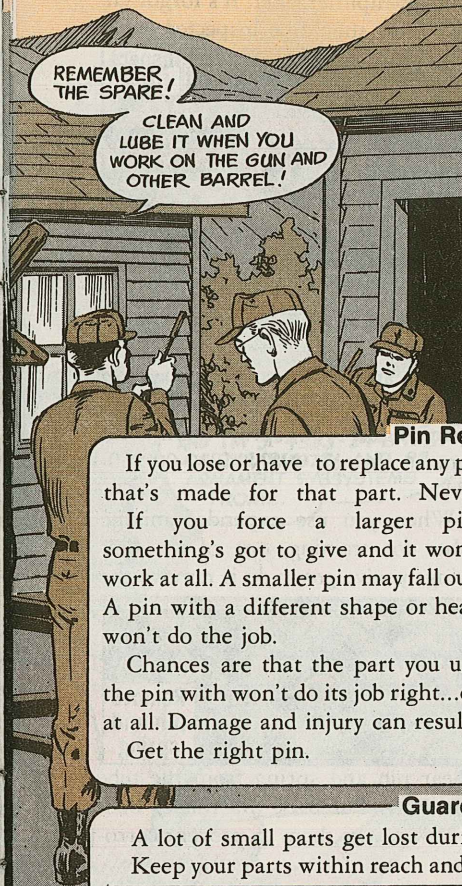
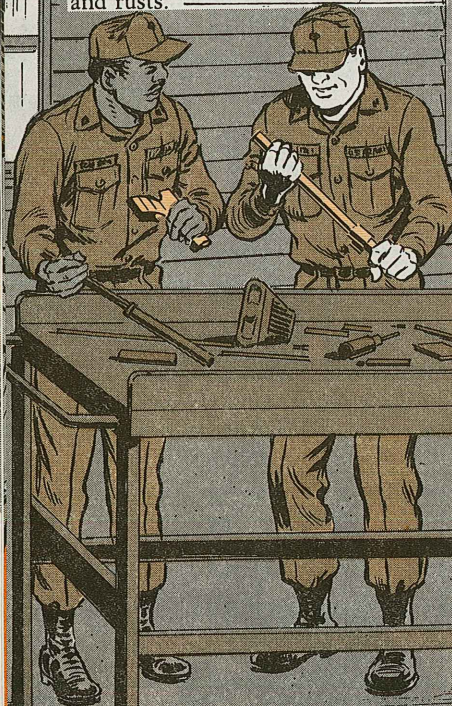
The barrel last used with the gun is the one that gets the attention...cleaning, lube and such.

The spare gets ignored. If it's left in an arms room, the barrel that's used most likely will get the preventive maintenance. The unused barrel pits and rusts.

KICK THE HABIT!

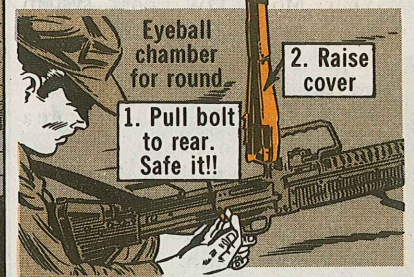
REMEMBER THE SPARE!

CLEAN AND LUBE IT WHEN YOU WORK ON THE GUN AND OTHER BARREL!



## Loading

Another "out of sight" place is the chamber. It could have a round in it, jammed or otherwise.



- 1. Pull bolt to rear. Safe it!!
- 2. Raise cover

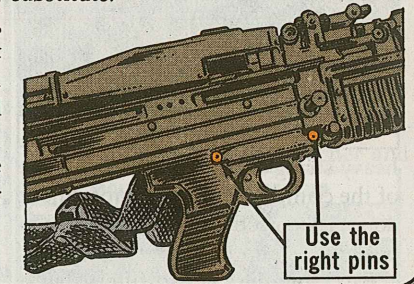
Remember to clear the weapon before you load. Otherwise, you could be chambering a sharp-nosed round right into a chambered round.

## Pin Replacement

If you lose or have to replace any pin on any part of the M60, use the pin that's made for that part. Never substitute.

If you force a larger pin, something's got to give and it won't work at all. A smaller pin may fall out. A pin with a different shape or head won't do the job.

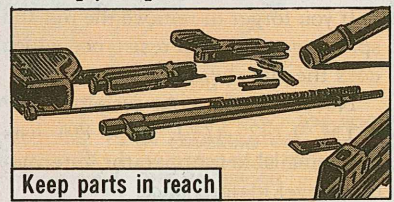
Chances are that the part you use the pin with won't do its job right...or at all. Damage and injury can result. Get the right pin.



Use the right pins

## Guard Your Parts

A lot of small parts get lost during cleaning, especially in the field. Keep your parts within reach and view, preferably on something where they are easily visible.



Keep parts in reach

If you do lose a part, just don't put the weapon together and hope the problem will go away. You've just made a problem for somebody else. Tell your armorer. He'll make sure the gun gets in working order again.

# M65 TOW/Cobra

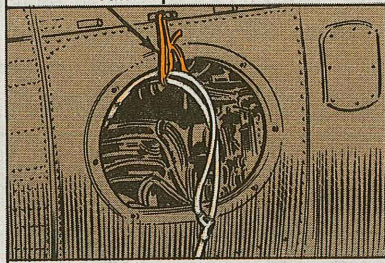
Your M65 TOW/Cobra system packs a big punch from the sky...providing you give it a PM boost from the ground.

PM along the way will help assure a successful mission, like so:

The W6 cable to the GMS test set hangs heavy in the aft battery compartment. The weight can damage connectors and wiring.

So, when you use the W6, and after you make your connections, run a

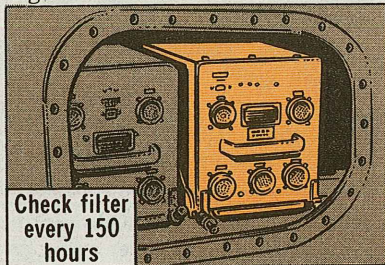
## Take up the strain...



...and stay in business

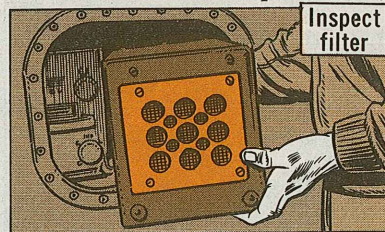
heavy string or whatever through one of the clamps above the compartment door. Take up the strain...and stay in business.

Sand and dust get to filters, but a regular victim is the stabilization



Check filter every 150 hours

control amplifier filter. It's forgotten. The filter should be inspected every



Inspect filter

150 hours and cleaned or replaced as necessary (see para 2-21, TM 9-1425-473-20).

Sand and dust also get to system switches. You can help keep 'em operating if you spray them with contact cleaner, NSN 6810-00-930-6311.

When you use expended missile tubes for training, one of the first things you've got to do is remove the



Remove pin and spring

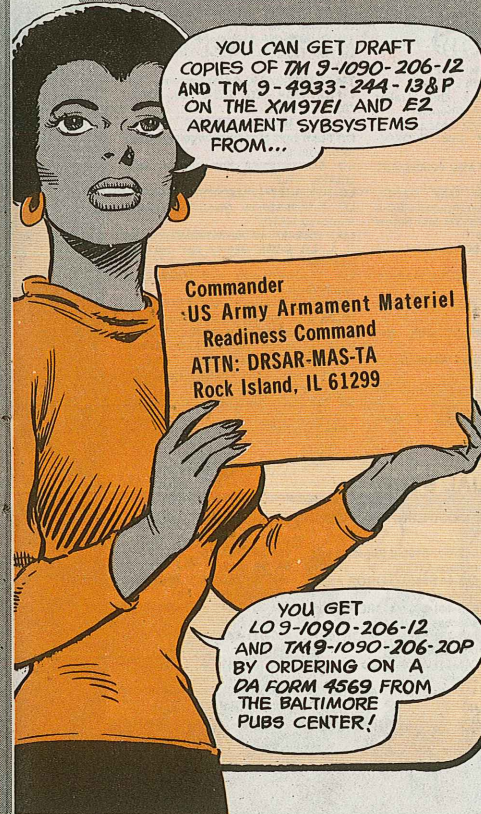
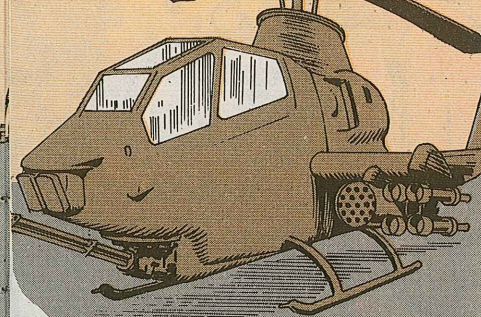
shear pin and spring from the tube assembly. Put back the rubber boot which covers them to prevent corrosion.

If you forget to remove the pin and spring, you'll set up resistance which does the launcher no good.

Need TM's for your system?

TM 9-1425-473-L (Apr 80) lists those available for operator/intermediate level maintenance.

# Update

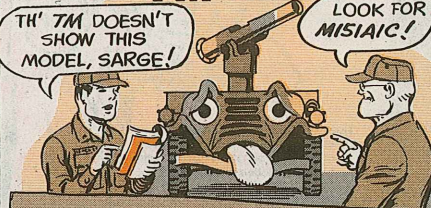


YOU CAN GET DRAFT COPIES OF TM 9-1090-206-12 AND TM 9-4933-244-13&P ON THE XM97E1 AND E2 ARMAMENT SUBSYSTEMS FROM...

Commander  
US Army Armament Materiel  
Readiness Command  
ATTN: DR SAR-MAS-TA  
Rock Island, IL 61299

YOU GET LO 9-1090-206-12 AND TM 9-1090-206-20P BY ORDERING ON A DA FORM 4569 FROM THE BALTIMORE PUBS CENTER!

# TOW Vehicle TM



TH' TM DOESN'T SHOW THIS MODEL, SERGE!

LOOK FOR MISTAKE!

Dear Half-Mast,  
We recently received 12 each of our first 1/4-ton TOW missile system launchers and missile carriers. We can't find a TM which shows where to mount our dry chemical fire extinguishers. Also, where do we find tire pressure information for them? TM 9-2320-218-10 (Aug 78) does not show our models.  
1SG R. J. S.

Dear Sergeant R. J. S.,  
You're in the right TM. Use the information for the M151A1C, which is the closest thing to your TOW launcher and ammo carrier 1/4-tons.  
Page 2-36, Para 2-18 of the -10 TM gives you the fire extinguisher mounting locations for both launcher and

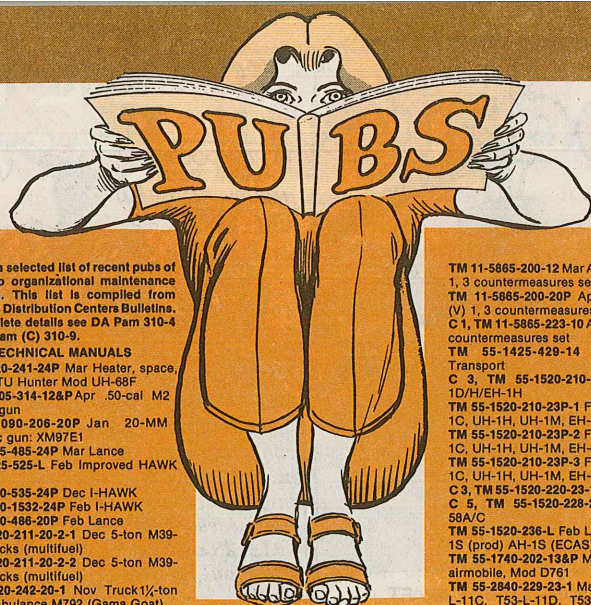


Mount extinguisher here

carrier (left front fender). Pages 1-5 and 1-6 of Table 1-1 give tire pressure and other data on the M151A1C.



TM 9-1425-470-24 P LISTS GUIDED MISSILE MOUNTING KIT PARTS!



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 and DA Pam (C) 310-9.

#### TECHNICAL MANUALS

TM 5-4520-241-24P Mar Heater, space, 60,000-BTU Hunter Mod UH-68F  
 TM 9-1005-314-12&P Apr 50-cal M2 machine gun  
 TM 9-1090-206-20P Jan 20-MM automatic gun: XM97E1  
 TM 9-1425-485-24P Mar Lance  
 TM 9-1425-525-L Feb Improved HAWK pub's list  
 TM 9-1430-535-24P Dec I-HAWK  
 TM 9-1430-1532-24P Feb I-HAWK  
 TM 9-1450-486-20P Feb Lance  
 TM 9-2320-211-20-2-1 Dec 5-ton M39-series trucks (multifuel)  
 TM 9-2320-211-20-2-2 Dec 5-ton M39-series trucks (multifuel)  
 TM 9-2320-242-20-1 Nov Truck 1½-ton M561, ambulance M792 (Gama Goat)  
 TM 9-2320-242-20-2-1 Nov Truck, 1½-ton M561, ambulance M792  
 TM 9-2320-242-20-2-2 Nov Truck 1½-ton M561, ambulance M792 (Gama Goat)  
 TM 9-2320-242-20-3-1 Nov Truck 1½-ton M561, M792  
 TM 9-2320-242-20-3-2 Nov Truck 1½-ton M561, ambulance M792  
 TM 9-2320-260-20-1 Jan 5-ton M809-series trucks (diesel)  
 TM 9-2320-260-20-2 Jan 5-ton M809-series trucks (diesel)  
 TM 9-2320-260-20-3-2 Jan 5-ton M809-series trucks (diesel)  
 TM 9-2320-267-14&P Jan Trailer, potable water tank, 400-gal 1½ ton, M149, M149A1, M625  
 TM 9-2350-215-10-3 Feb M60A1/M60A1 AOS tanks  
 C 1, TM 9-2350-217-10N Apr M109, M109A1, M109A3 howitzers  
 TM 9-2350-222-10-2 Jan M728 CEV  
 TM 9-2350-222-10-3 Jan M728 CEV  
 TM 9-2350-222-20-1-1 Feb M728 CEV  
 TM 2350-253-20P-2 Apr M60A3 tank and TTS turret  
 TM 9-2350-260-10-1 Feb M60 tank

TM 9-2350-260-10-2 Feb M60 tank  
 TM 9-2350-260-10-3 Feb M60 tank  
 TM 9-4935-273-24P-1-2 Dec Tractor, wheel, whose GED 4,000-lb Mod GC 340-4 C 2, TM 11-1510-204-20-1/2 Mar Signal electronic eqpt OV-1C  
 C 4, TM 11-1520-236-20 Apr Electronic eqpt AH-1S  
 TM 11-5805-384-20P Apr TA-341B/TT telephone set  
 C 1, TM 11-5805-650-12&P Apr TA-838 telephone  
 (FOUO) TM 11-5810-281-24P Apr TSEC/KY-75  
 TM 11-5820-401-10-1 Feb AN/VRC-12-series radio sets  
 TM 11-5841-281-20P Apr AN/ASN-128 doppler navigation set  
 TM 11-5855-217-12-1HR Mar AN/VSS-3A searchlight

TM 11-5865-200-12 Mar AN/ALQ-144 (V) 1, 3 countermeasures sets  
 TM 11-5865-200-20P Apr AN/ALQ-144 (V) 1, 3 countermeasures set  
 C 1, TM 11-5885-223-10 Apr AN/GLQ-3B countermeasures set  
 TM 55-1425-429-14 Feb Stinger, Transport  
 C 3, TM 55-1520-210-23-3 Mar UH-1D/H/EH-1H  
 TM 55-1520-210-23P-1 Feb UH-1B, UH-1C, UH-1H, UH-1M, EH-1H  
 TM 55-1520-210-23P-2 Feb UH-1B, UH-1C, UH-1H, UH-1M, EH-1H, UH-1V  
 TM 55-1520-210-23P-3 Feb UH-1B, UH-1C, UH-1H, UH-1M, EH-1H  
 C 3, TM 55-1520-220-23-1 May UH-1C/M  
 C 5, TM 55-1520-228-23-2 May OH-58A/C  
 TM 55-1520-236-L Feb List of pubs AH-1S (prod) AH-1S (ECAS), AH-1S (mod)  
 TM 55-1740-202-13&P Mar Transporter, armobile, Mod D761  
 TM 55-2840-229-23-1 Mar Engines T53-L-11C, T53-L-11D, T53-L-13B, T53-L-703  
 TM 55-2840-229-23-2 Mar Engines, T53-L-11C, T53-L-11D, T53-L-13B, T53-L-703

**MISCELLANEOUS**  
 DA Form 2402 May Exchange tag (older form obsolete)  
 LO 5-5420-228-12 Feb M48A5 tank chassis, AVLB  
 LO 9-1430-527-12 Mar AN/MSQ-95  
 LO 9-1430-534-12 Mar AN/MPQ-50, Improved HAWK  
 LO 9-2350-303-12 Jan M109A2 howitzer  
 C 1, LO 9-2350-304-12 Apr M110A2 howitzer  
 LO 11-5840-354-20 Apr Radar set AN/TPQ-36  
 MCRL-2 Jul Master cross-ref list Part I  
 MCRL-2 Jul Master cross-ref list Part II  
 PAM 310-30 May Publications resupply  
 PAM 310-99 Apr Obsolete pubs (fiche)  
 PAM 750-10 Apr AWO index (fiche)  
 SB 708-6 Jan Fed item name directory for supply cataloging (fiche)  
 SB 708-8/2 Apr Name-to-code and code-to-name (fiche)  
 TB 9-1200-209-10 Feb MILES

#### AUDIO-VISUAL STUFF

Available at battalion or post Learning Center

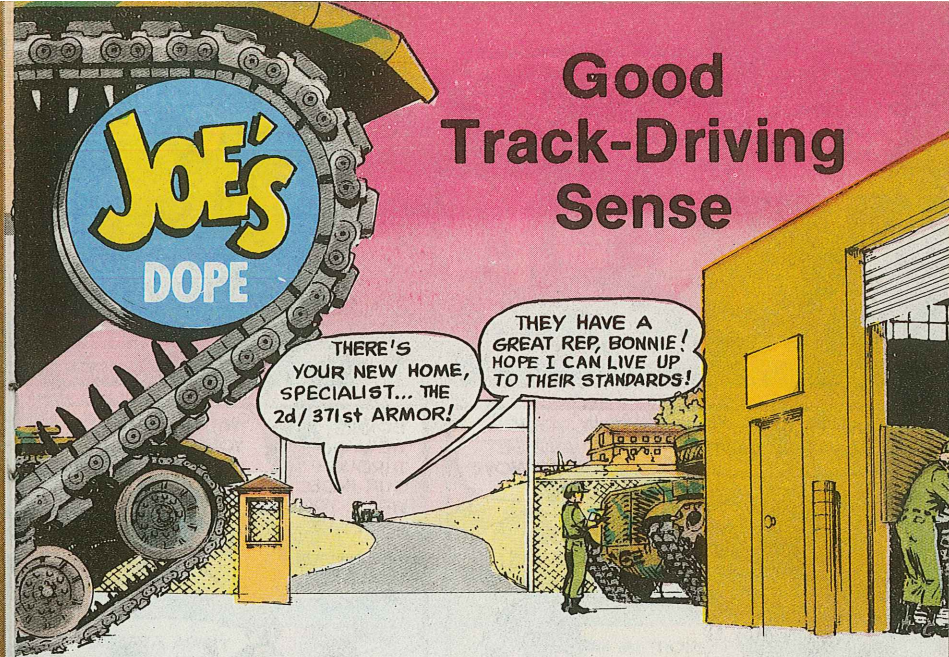
**TV Tapes**  
 TVT 44-115 Chaparral battery  
 TVT 44-121 Chaparral water ops, Pt I  
 TVT 44-122 Chaparral water ops, Pt II  
**TEC LESSONS**  
 043-441-5457-F Main hydraulic I-HAWK  
 043-441-5458-F Azimuth system filter, elevation transducer (air defense)  
 043-441-5461-F Base dis-

tribution box I-HAWK  
 043-441-5462-F I-HAWK  
 043-441-5479-F IHPIPR  
 043-441-5487-F IHPIPR  
 043-441-5492-F High-volt power supply test set, Part I  
 043-441-5533-J IPAR transmitter power check  
 043-441-5554-J IBCC-TCC & CWDC synchro alignment  
 043-441-5555-J IBCC synchro alignment

043-441-5560-J Removal and replace CRT's  
 043-441-5561-J IROR maint services, Pt I  
 043-441-5563-J IROR maint services, Pt III  
 043-441-5571-J IROR synchro alignment  
 043-441-5978-F Op Vulcan carrier, Pt III  
 101-113-7124-A AN/VRC-49 radio

104-301-7511-A AN/PPS-5, 5A, 5B radar  
 104-301-7512-A AN/PPS-5 troubleshooting, Pt I  
 104-301-7515-A AN/PPS-5 testing, Pt II  
 600-011-6610-J UH-1H rotor systems  
 821-101-8114-A 350-GPM pump, filter/separator  
 918-101-0011-A Identification list (IL)

# Good Track-Driving Sense



THERE'S YOUR NEW HOME, SPECIALIST... THE 2d/371st ARMOR!

THEY HAVE A GREAT REP, BONNIE! HOPE I CAN LIVE UP TO THEIR STANDARDS!



THAT SHOULDN'T BE TOO DIFFICULT... WHAT WITH YOUR AIT AT FT. GOLD!

HEY, LOOK, IT'S...



... BONNIE!

GLAD YOU COULD MAKE IT... WHO'S THE NEW GUY?

HI, SGT. MANN...



OH, THE FIRST SERGEANT ASKED ME TO GIVE THIS SOLDIER A LIFT OVER HERE!...



... MEET YOUR NEWEST TANK DRIVER!

HIM?

HE'S JOININ' TH' 371st?

SPEC 4 LUIS VELEZ, SERGEANT...





GUESS THEY TOLD YOU WE'RE A TOUGH OUTFIT?

THEY GIVE US TH' BIG ASSIGNMENTS...

YEAH-- JOBS THAT TAKE GUTS!

THEY DID, SERGEANT!

?



... FOUR OF YOU DRIVERS BELONG ON TV AS STUNT MEN ... NOT DRIVING TRACKS FOR THE ARMY!

IF ALL TANK DRIVERS "SHOWED OFF" LIKE YOU GUYS, THE US ARMY WOULD GO BROKE REPAIRING TANK TRACKS.

YOU'D BE WALKING-- IF I COULD LIFT YOUR SF 46'S!!

!GULP! B-BUT...

AWWWW--



OK, VELEZ, YOU'RE MY TANK DRIVER,

STOW YOUR GEAR AND GET READY TO MOVE OUT!

RIGHT, SERGEANT!



BONNIE, WE'LL GO THROUGH OUR PACES WHILE YOU OBSERVE...

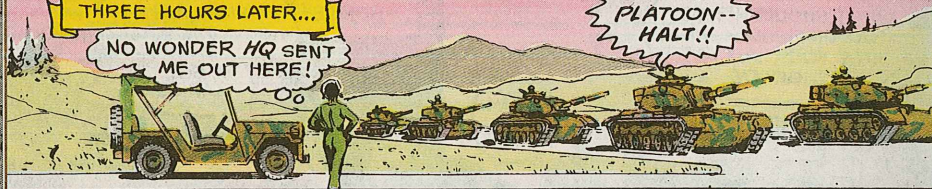
WHEN WE HALT, YOU SPELL OUT WHAT, IF ANYTHING, CAN IMPROVE OUR TRACK DRIVING AND PM!

GOOD!

THREE HOURS LATER...

NO WONDER HQ SENT ME OUT HERE!

PLATOON-- HALT!!



ONLY ONE DRIVER IN YOUR PLATOON SHOWED TRUE PROFESSIONAL TRACKED VEHICLE DRIVING!

YOU MEAN OUR POKY NEW DRIVER?

HE'S SO SLOW, HE'S A MENACE... RIGHT, SARGE?

WELL...

YEAH...



... I HAFTA ADMIT AT FIRST I THOUGHT HE WAS A LOSER, BUT...

... WHILE HIS METHODS MAY NOT HAVE PIZZAZ, VELEZ COMPLETED EVERY MANEUVER EFFICIENTLY AND OUTPERFORMED YOU BIRDS!



JUST WHAT KINDA VOODOO ARE THEY TEACHIN' AT FT. GOLD THESE DAYS, SPECIALIST?

NO MAGIC, SARGE... BUT I DID LEARN MY S'S THERE!

S'S?



WELL, BONNIE-- HOW'D YOU LIKE TH' SHOW?

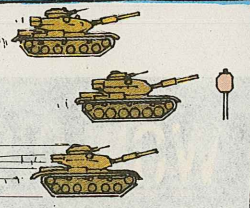
HAFTA ADMIT WE'RE TOPS, HUH?

WE'RE NUMBAH ONE-- KEEREECT?

I'M IMPRESSED! YOUR TACTICS WERE COOL... YOUR MACHO IS UNQUESTIONABLE... BUT...



YES...  
S MOOTH TARTS  
S MOOTH TOPS  
S TEADY PEED



31



SPECIALIST VELEZ-- I SUSPECT HE UNDERESTIMATE YOU.

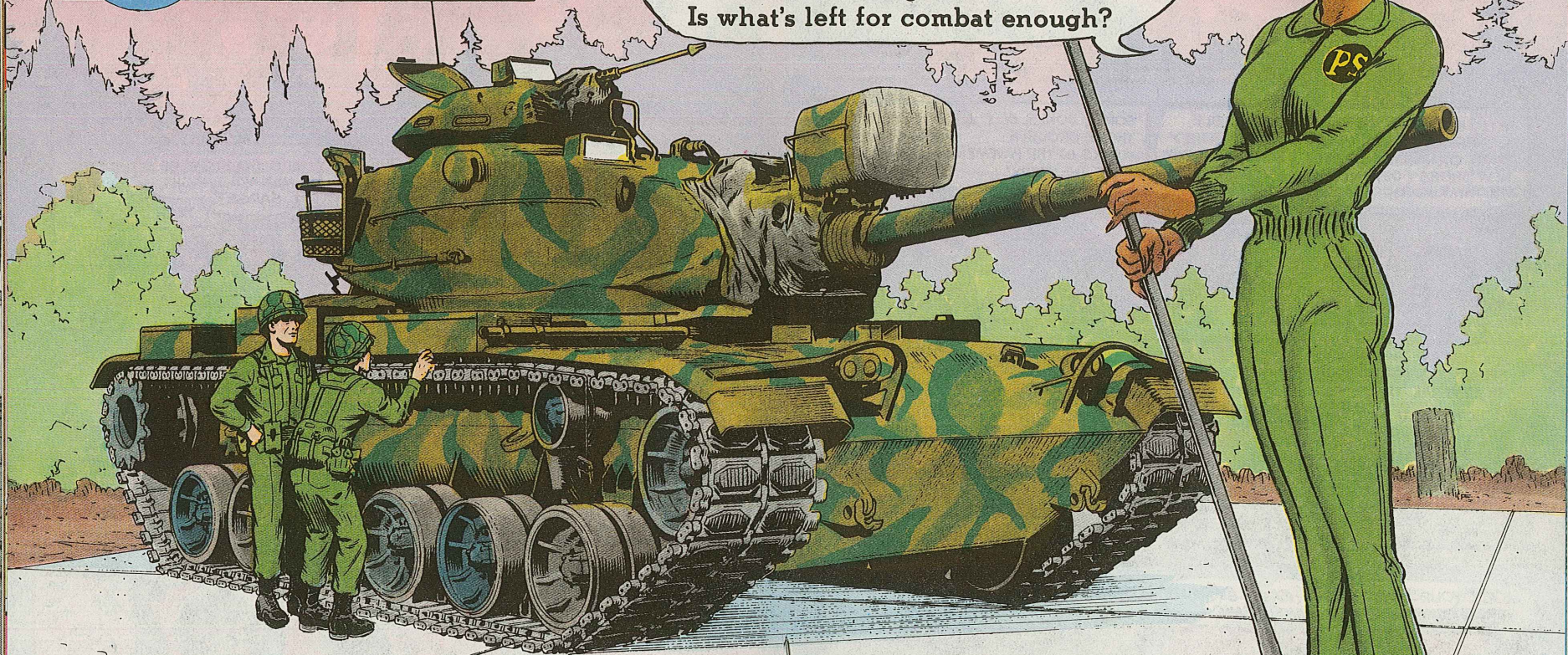
I THINK SPEC. VELEZ SHOULD TELL US ALL HE LEARNED IN AIT... BUT FIRST, GIVE AN EYEBALL TO THIS POSTER ...



PS

# JOE'S Dope Sheet

You don't have to handle it rough  
To show the world tankers are tough!  
If it loses clout  
In each training bout  
Is what's left for combat enough?



WE HAVE THE WORLD'S BEST EQUIPMENT ... *Take*

IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT

ATTENTION TO TRACK TENSION IS VITAL! GET THE TENSION YOUR -10 TM CALLS FOR!

GOTCHA, BONNIE -- BUT LET'S FIND OUT WHAT THIS GUY CAN TELL ME THAT I DON'T ALREADY KNOW ABOUT MY TRACKS...

GOOD IDEA, JONES! THAT'S HIS TANK, SPECIALIST...

...WHAT DO YOU THINK?



WELL, HE EITHER NEEDS TO REPLACE SOME TRACK PADS OR PUT ON SOME NEW SHOES (DEPENDING ON THE KIND OF TRACK)...

IMPOSSIBLE, SHORTY... THEY WERE PERFECT DURING PMCS YESTERDAY!

SORRY, JONES, BUT THOSE GROUSER MARKS IN THE PAVEMENT TELL THE STORY!

GIVE YOUR TRACK AN EYEBALL, SOLDIER!



I'LL BE...!! TH' RUBBER'S WORN BELOW THE LEVEL OF THE STEEL IN SEVERAL TRACK SHOES! B-BUT...

SIMPLE, SOLDIER...

I WATCHED YOU DURING YOUR EXERCISE... AND, JUST LIKE YOUR COWBOY BUDDIES, WHILE DOING YOUR MACHO BIT...

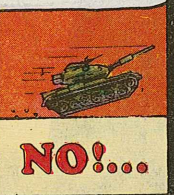
HOW COULD THAT HAVE HAPPENED SO QUICK?



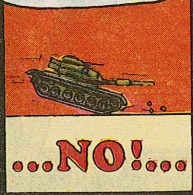
... ALL YOUR STARTS WERE JACKRABBIT...

... EACH STOP WAS PANIC...

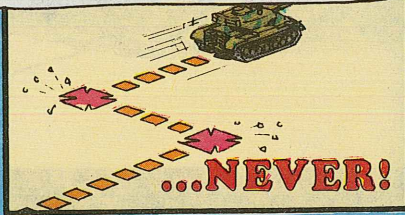
... YOUR TURNS WERE MOSTLY PIVOT...



NO!...



...NO!...



...NEVER!

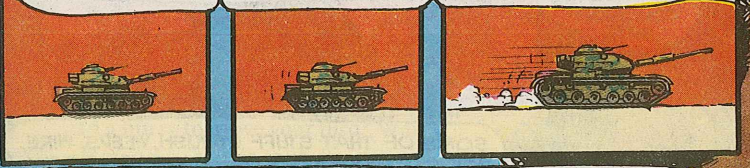
... AND YOU KEPT THE THROTTLE WIDE OPEN PRACTICALLY THE WHOLE TIME!



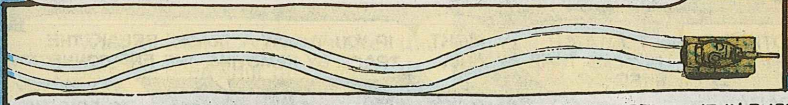
RRR RRRR RR

BAD NEWS!

REMEMBER THE ESSENCE OF SPEC VELEZ'S "S" MESSAGE... A GOOD TRACKED VEHICLE DRIVER SHOWS HE IS GOOD BY SMOOTH STARTS... SMOOTH STOPS... AND BY STEADY SPEED!!



WHEN HE HAS TO TURN, HE DOES IT IN A SMOOTH CURVE...



HE USES PIVOT STEER FOR SMALL ADJUSTMENTS AT SLOW SPEED AND IN EMERGENCIES!

OK, SPECIALIST... LET'S LOOK OVER THE OTHER TANKS... SHOW OUR OTHER DRIVERS SOME AIT POOP ON GOOD PM PRACTICE...

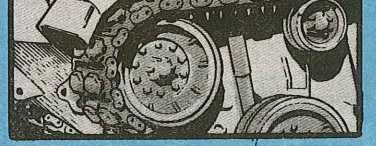
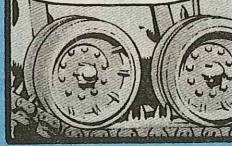
HAPPY TO, SGT. MANN! A HALT LIKE THIS IS AN IDEAL TIME TO...



... CHECK ROAD WHEELS...

... WEAR PLATES ...

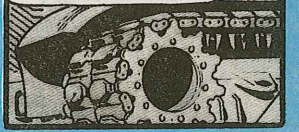
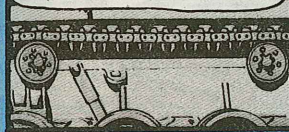
... COMPENSATING IDLERS...



... SUPPORT ROLLERS...

CENTER GUIDES...

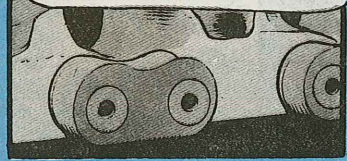
... SPROCKETS...



... AND END CONNECTORS ...

FOR WEAR AND DAMAGE!

USE YOUR TANKER'S BAR TO CHECK THE TORSION BARS!



COULDN'T PUT IT ANY BETTER, SPECIALIST!

ON THE MOVE, TRACKS ARE THE DRIVER'S CONCERN - BUT...

...AFTER OPERATIONS, THE WHOLE CREW HELPS GET THE JUNK OUT OF YOUR TRACKS!

SOME OF THAT STUFF (BRUSH, WEEDS, WIRE, ROCKS -- WHATEVER) CAN MAKE YOU THROW A TRACK! GET IT OUT!

ANOTHER THING TO WATCH FOR IS TRACK BLOCKS THAT ARE BADLY CHUNKED OR DEAD!

REPLACE 'EM SOONEST!

RIGHT, AND... IF YOU THROW A TRACK, BREAK THE TRACK BY REMOVING THE END CONNECTORS!

NEVER TRY TO PRY THE TRACK BACK ON!

THE FINAL WORD ON BEING A GOOD TRACK DRIVER IS TM 21-306, MANUAL FOR THE TRACKED COMBAT VEHICLE DRIVER!

EVERY TRACK DRIVER SHOULD REVIEW IT REGULARLY!

OK, YOU'RE GOOD ON THEORY -- BUT IT TAKES NERVE, TOO!

YEAH... GUTS!

AND... AGILITY!

LOOK!! RATTLER!

BONNIE... FREEZE!

KA-CHUNK

WOW! DIDJA SEE THAT?

TOOK TH' SNAKE'S HEAD RIGHT OFF!

... WITH A TANKER'S BAR!

WELCOME TO OUR PLATOON, VELEZ!

HE'S TH' BIGGEST MAN IN TH' 2d/371st!

NO DOUBT OF IT!

THANK, SARGE!

AIR MOBILITY **Haste Makes Waste!**

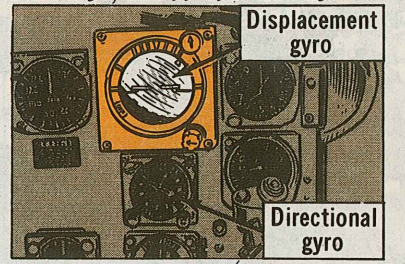
OK, OL' PAL... ... IT'S HANGAR TIME! OH, NO!

HOLD IT, SOLDIER... HIS GYROS NEED MORE WIND-DOWN TIME!

In a hurry to move your bird? Wait! Moving a 'copter with its gyros at other than full speed or at a standstill will damage the instruments.

You'll find the word, for example, in Para 1-36, TM 55-1520-228-23 and Para 1-34, TM 55-1520-210-23.

Wait at least 25 minutes after the power has been shut off. It takes the displacement and directional gyros that long to wind down to a stop.



If you're not sure about the elapsed time, power the gyros for 5 minutes before moving your aircraft.



## 2 Status Symbols?

What do you do when you end up with 2 status symbols on the same writeup on your DA Form 2408-13?

IT SHOULDN'T HAPPEN, BUT...



IF BOTH SYMBOLS ARE CORRECT, INITIAL BOTH WHEN YOU CORRECT THE FAULT!

DATE	FAULTS AND/OR REMARKS	ACTION TAKEN	
		INITIALS	SIGNATURE
15 July '91	Two first aid kits removed for annual inspection. Helicopter restricted to a total of 10 on based of 2 bundles	Two symbols entered in error	J. Day
15 July '91	These inspection #2 due to bundles	Re-entered below	
15 July '91	UNEP's radio will not transmit to bundles		
15 July '91	Two first aid kits removed for annual inspection. Helicopter restricted to a total of 10 on based of 2 bundles		

DA FORM 2408-13

If you enter 2 symbols and one or both are in error, enter a description of the error and "Re-entered below" in Block 18. Initial both symbols, sign the action taken and re-enter the fault and the correct symbol on the next available line. Remember, tho, you need the TI to initial red-X's or circled-red-X's.

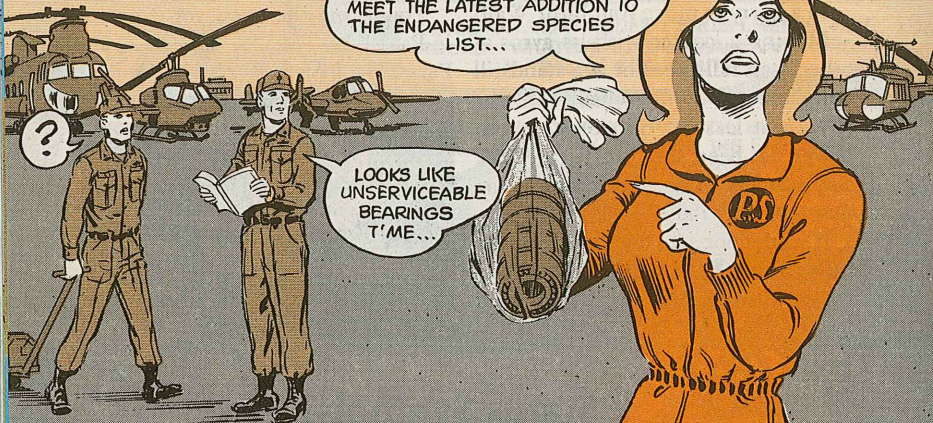
You Can Help...

# \$ave the

# Bearing\$!

GATHER ROUND,  
ALL YOU BIRD-MECH TYPES...  
MEET THE LATEST ADDITION TO  
THE ENDANGERED SPECIES  
LIST...

LOOKS LIKE  
UNSERVICABLE  
BEARINGS  
T'ME...

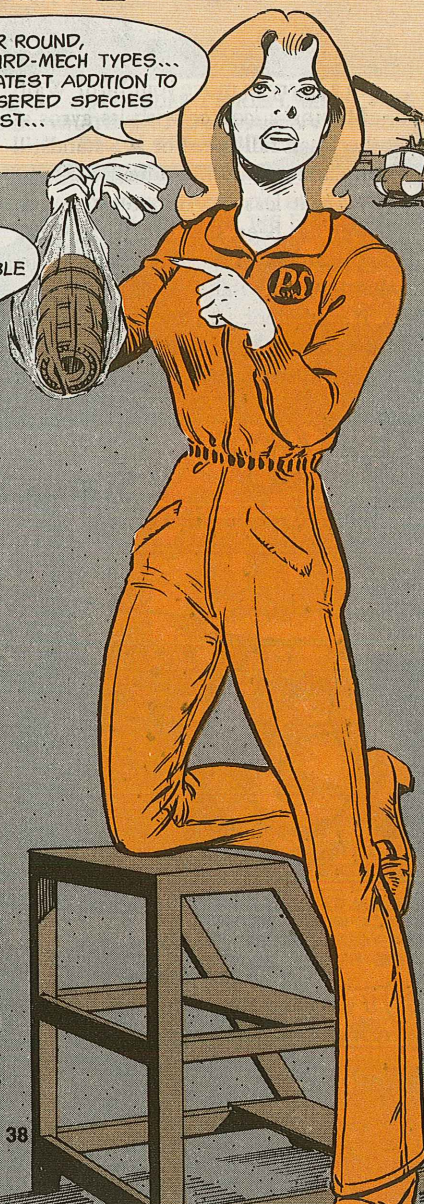


If you've ever had to scrounge up a tail rotor drive shaft bearing to keep your Huey flying (and who hasn't?), you realize those babies are in short supply.

Fact is, all aircraft bearings listed in TSARCOM Supply Letter 34-80 are in short supply. There's a long lead time on the manufacture of all new bearings. So the head hangar wants to reclaim "unserviceables" in the field.

Take bearing, NSN 3110-00-911-8384, P/N 204-040-623-1, in the Huey and Cobra, for example. Even tho the SMR code in the parts manuals shows the bearing is not repairable, now it is repairable.

Another example is a bearing in the Chinook and Mohawk flight control systems. Bearing, NSN 3110-00-011-9145, P/N B542DD, is on the endangered species list.

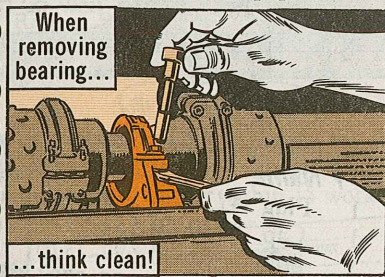


## Little Effort-Big Savings

When you remove a bearing, think "clean." Place it on clean paper. Never

bearing—good! NSN 8105-00-027-8485 will get you a 12x12-in plastic bag for shipping the bearing.

Otherwise, just put the oil-soaked bearing in the plastic bag. Add a

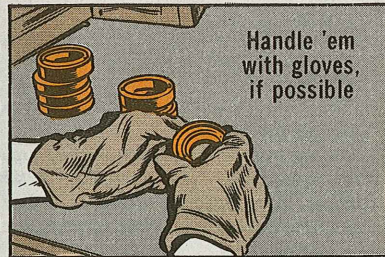


attempt to clean the bearing with drycleaning solvent, tho, or you'll remove the existing lube...it'll start corrodng right away. The depot has to scrap a lot of unprotected bearings.



completed unserviceable/repairable tag. Your unit gets credit for this stock-funded item.

Even the moisture on your fingers will start corrosion. So handle 'em as little as possible.



PACK THE BEARING WITH PLENTY OF CUSHIONING AND SEND IT TO...

Corpus Christi Army Depot  
Depot Operations Division  
TSARCOM Account B17  
Corpus Christi, TX 78419

Like the Supply Letter says, dip bearings in lubricating oil MIL-L-23699B, NSN 9150-00-180-6266.

If your outfit can put on a hot application of corrosion preventive compound, MIL-C-11796B, Class 3, NSN 8030-00-231-2353, to the

This reclamation program has a direct bearing on your aircraft readiness, so send in those bearings.

## Sampling Made Easier



Dear Editor,

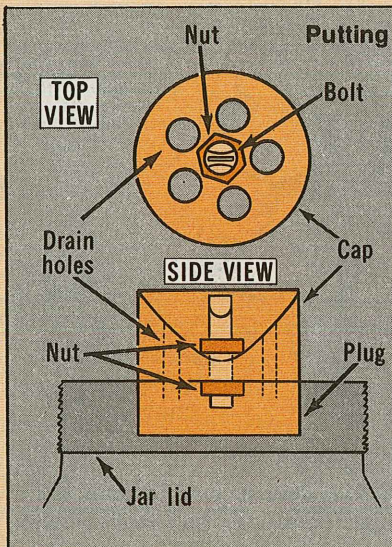
The current way to take a CH-47 fuel sample is drain with a screwdriver and catch the fuel in the sample jar. Trouble is, you also end up with fuel running down the screwdriver and your arm...messy and dangerous!

Well, here's a gadget that'll let you get your sample without any spilling. It'll let you open the drain, direct the fuel into the sample bottle, and close the drain.

YOU NEED THESE PARTS...

QTY	Name	NSN
1	Plug	4730-00-540-2232
1	Cap	4730-00-554-8917
1	Bolt	5306-00-687-7570
2	Nut	5310-00-877-5796

YOU'LL NEED A FUEL SAMPLING JAR LID, TOO!



### Putting It Together

Start off by filing or grinding a screwdriver tip on the end of the bolt to fit the fuel drain.

Then, drill a 1/4-in hole in the center of the cap, the plug, and the sampling bottle lid.

Thread a nut on the bolt, and run it down all the way.

Put the bolt thru the hole in the plug, then thru the jar lid—from the bottom—and then thru the cap. Put the other nut on the bolt, and run it down tight.

Drill 5 drainage holes thru the cap, lid and the plug around the bolt.

Put the tool on a sampling jar, and you've got it made in the shade.

SSG Dale W. Parker  
Hunter Army Airfield, GA



## Fill It With Facts!

When an aircraft component goes on the blink, you want to know what happened, and so does the head hangar (TSARCOM).

You'll get a complete answer when you send in all the facts—good info in, good info back.

Para 10-28 in TM 38-750 has the word on how to do your Quality Deficiency Report, SF 368.

The real meat of your report is in Block 22. That's where you want to list the details.

Then, the engineers can go to work and come up with a first-rate answer to your problem. They may even ask you to hold the part as an exhibit.

Research takes time. An answer to an intensively managed component may not get back to you within 15 working days.

QUALITY DEFICIENCY REPORT  
(Category II)

SECTION I (Screening point)

1a. From (Originating point)  
COMMANDER  
C Troop, 1/17 Cav ATTN: QC  
Ft. Bragg, N.C. 28307

1b. Typed Name, Duty Phone and Signature  
Irvin D. Thompson AUTO: 236-3789  
COMM: 919-396-3789

1c. To (Screening point)  
COMMANDER TSARCOM  
ATTN: DRSTS-MED Mr. Ed Branhof  
4300 Goodfellow Blvd  
Ft. Bragg, N.C. 28307

1d. Typed Name, Duty Phone and Signature

22. Details (Describe, to best ability, when it occurred, how and why, circumstances prior to difficulty, description of difficulty, cause, action taken including disposition, recommendations, etc.) Identify with related item number. Include and list supporting documents. Continue on separate sheet if necessary.

a. UTILIZATION CODE: On

b. FAILURE DETECTED DURING: Normal Operation

c. FAILURE INDICATION OF DIFFICULTY: Abnormal rise & level of metal in oil

d. TM NUMBER: TM 55-1520-236-23

e. DESCRIPTION OF DIFFICULTY: CCAD oil analysis lab contacted the Ft. Bragg oil lab that a rise in the metal content of the oil sample was found. When the chip detector was removed for inspection and re-sample, small metal particles and chips were found. The metal found is the same as we have found on five (5) other Xmsns in this unit. The CCAD Oil Lab has determined that the metal is from the pre-mature failure of the mast support bearing assy.

f. CAUSE: Suspect pre-mature failure of the Mast Support Bearing Assy.

g. ACTION TAKEN: Replaced XMSN & Mast Assy's.

25b. Typed Name, Duty Phone and Signature  
C. BRAGG, N.C. 28307

26b. Typed Name, Duty Phone and Signature

25a. Typed Name, Duty Phone and Signature

STANDARD FORM SF 368 (Rev. 10-1-67)

HOLD THE PART UNTIL YOU GET THE WORD...



## Check for Cracks!

Eyeball the pitch link tubes on your Cobra extra close. Some tubes, NSN 4710-00-454-8814, have developed stress corrosion cracks at the ends. TSARCOM Msg DRSTS-MEA 261545Z Nov 80 is a reminder to replace any cracked tubes you find.

## "Oh, Nuts!"

If you need a new nut for an AH-1S (Mod) 5th mount pylon installation—Item 8, Fig 85 in TM 55-1520-234-23P—NSN 5310-00-181-6798 won't hack it. It's too thick. Use NSN 5310-00-368-4656 to get the right nut.

## Is Your Cable Able?

YOU READY  
IN AN  
EMERGENCY?

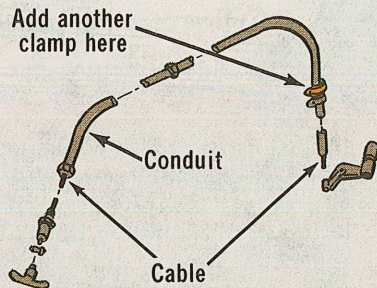
NO SWEAT...  
WITH 2 CLAMPS!

During the next Phase Maintenance on your Mohawk, focus on the escape hatch jettison cable—Area 2 cockpit, segment 35.

The conduit housing the cable has a habit of slipping down on the cable, bottoming out on the actuating bellcrank. You no longer have enough cable travel to activate the pressure bottle and the hatch won't blow.

To solve the problem, just add another conduit retaining clamp, washer and screw just above the existing clamp. You'll find the part numbers in

Fig 82 of TM 55-1510-204-23P, Items 27, 28, 29.



## Aviation Messages

If your unit has not received a message in which you have an interest check with your next higher headquarters.

OH-58-81-04 SOF Maint Notice OH-58C T63-A-720 engine, S/N 1404377 DRSTS-MEA 281640Z May 81

AH-1-81-13 Tech Info No. AH-1-31-13 for all AH-1S having short bolts installed on T53-L-703 engine which connect fuel control temp compensating bellows, T1, to the inlet housing DRSTS-MEA 071545Z May 81

AH-1-81-14 Inspect installation bolts in modernized AH-1S (FM-AM) Cobra gunner's cyclic stick DRSTS-MEA 071820Z May 81

AH-1-81-15 SOF Maint Notice Trim adjustments for new fuel control, P/N 100770A4 for UH-1H/M, EH-1H, AH-1G, TH-1G DRSTS-MEA 121905Z May 81

UH-1-81-6 SOF Maint Notice Trim adjustments for new fuel control, P/N 100770A4 for UH-1H/M, EH-1H, AH-1G, TH-1G DRSTS-MEA 121905Z May 81

OH-6-81-01 SOF No. OH-6-81-01, Technical, Inspect all OH-6A aircraft controls support bracket assy P/N 369A7304, NSN 1615-00-050-4318, TB 55-1520-214-30-9 DRSTS-MEA 282230Z May 81

UH-60A-81-12 SOF Technical, One-time inspect shaft assy, engine output DRDAV-EEB 141915Z May 81

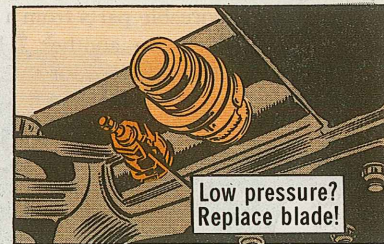
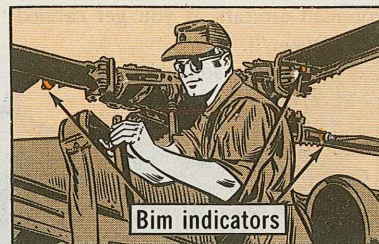
UH-60A-81-13 SOF Technical, One-time inspect fan, axial and shaft assy DRDAV-EEB 151945Z May 81

Cat 1 EIR Phone: AUTOVON 693-2066 (24-hr)

## Stop at 'Red'

I ALWAYS  
DO!

A red Bim indicator on a Black Hawk main rotor blade means the spar has lost pressure and it's not safe, knucklebusters.



In other words, never pressurize an installed blade if the pressure is below the allowable minimum shown in Task 3, Table 3-1 of TM 55-1520-237-23-7. Remove the blade and find the cause of the problem.

If the Bim indicator gives a false reading, but the spar pressure is OK, just replace the indicator.

See TSARCOM Msg DRSTS-M 161615Z Mar 81 (SOF UH-60A-81-3).

## Installing Compressor?

Easy, Now!

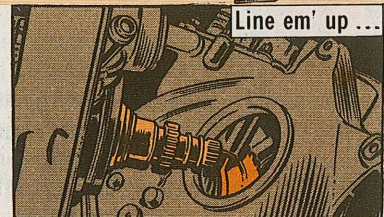
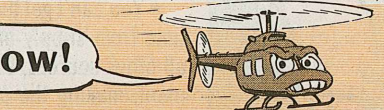
Any time you engine types install the T-63 compressor on an OH-58A, easy does it.

Focus on the CAUTION on Page 9-1 of TM 55-2840-231-24.

Never use force to engage the spur gear shaft with the fuel control/oil pump gear in the gear box. If you do, you'll chip the gear or bend the gear shaft.

The result can be anything from a hard battery start—due to a bent gear shaft putting an additional load on the starter—to engine failure.

So when you line up that baby, rotate the compressor with your fingers until you feel the gears mesh. No sweat!



Cannibalization...

# Robbing PETER

Cannibalization can be a quick way to get one bird flying again by "borrowing" serviceable parts from a grounded aircraft. If you get carried away, tho, you'll crown another "Hangar Queen"!

Before you attack that bird for the parts you need, read and heed the word in AR 750-1, Para 4-32, and Page 6-5 in FM 55-42.

MAKE SURE YOU SATISFY THESE CONDITIONS BEFORE YOU START!

- You can't get the part in a reasonable time from supply and you've exhausted all other sources, such as local procurement, making the part or getting it from another unit.
- The bird you're going to take the part from is undergoing lengthy maintenance, or waiting for a replacement part.
- Your unit is authorized to perform the level of maintenance involved.
- Your commander, or his designated representative, has approved the action.

After you've got the green light to remove the part, go to it. Remove the part carefully. You don't want to damage it or the aircraft it's coming from.

Be sure all the affected logbook forms for the part on both aircraft are completed as required by TM 38-750.

Transfer the parts request to the losing bird.

RIGHT, CONNIE -- THESE DAYS WE CAN'T AFFORD A "CROWN"-- LET ALONE A "QUEEN"!

# to Pay PAUL

## Some No-No's

Never cannibalize a bird to the point that it loses its identity and becomes primarily a source of parts.

Never remove parts from a wrecked bird until the investigation is complete and the parts are released by the accident board. Then, the part must be inspected and found to meet the serviceability standards in the appropriate TM before it can be used.

Never exceed any local limits on cannibalization periods or the number of parts removed from one aircraft.

Controlled cannibalization can solve a temporary delay in getting parts. But never use it as your major source of supply or you'll create a hangar full of queens!

## Repair New-Type Blades

Hold one before you scrap a damaged fiberglass rotor blade, PN K747-0034, on your AH-1S.

Para 5-30a of TM 55-1520-236-23 gives damage limits so you can repair 'em.

If the field limits are exceeded, tho, the blades go to the depot for repair. When you ship the blade, include an SF 368 with your paperwork.



COMMO

# Scratching Matching Units

KEEP AN EYE ON YOUR ANTENNAS...

IF YOU SEE RED... IT MEANS TROUBLE!

WOW!

REALLY, MACON?



Scratching the contacts and insulator of your MX-6707 matching unit can scratch your commo.

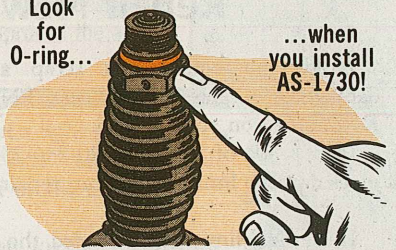
The scratch comes from the screws that hold the horseshoe contact in your AS-1730 antenna element. The culprit, tho, is the threaded ring the screws go into.

Normal vibration loosens the ring. That lets the screws rub on the matching unit's insulator. When the metal coating's gone, scratch one MX-6707.

That rubbed-off metal allows high reflected RF power. That can KO a receiver-transmitter, too.

Look for O-ring...

...when you install AS-1730!



You can stop the scratching. First, watch for red at the base of your AS-1730. That's the matching unit's O-

MX-6707 insulator...

AS-1730 screws...



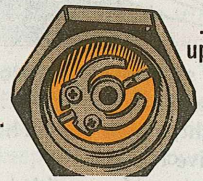
...the victim!

...the culprit!

# Units

ring. It means the threaded ring has come loose and is keeping the antenna from seating properly.

Loose contact?...



...tighten up threaded ring!

If you see red, remove the element and tighten the threaded ring. A screwdriver or pocket knife will do the trick.

Never overtighten the AS-1730 when assembling your AS-1729 antenna. Too much force can scratch things, even if the threaded ring is snug.

If the horseshoe contact's bad, order a new one with NSN 5985-00-921-0630. Screws are NSN 5305-00-054-5635.

But, if the matching unit's insulator is damaged, turn it in before you scratch something else—like an RT.

## PU-618M Pin

Your PU-618M trailer-mounted generator set missing some of its bow pins? NSN 5340-00-878-5269 gets the quick release replacements.

## CW-206 Bag

Need to replace the CW-206 accessory bag that came with your radio installation kit? Use NSN 5820-00-200-2329.

## Antenna Angle

NOW ALL I NEED ARE RACING STRIPES!

AND NEW ANTENNAS!



Knowing all the angles can save your whip antenna.

Some folks are after the sleek look and pull it down until it's parallel with their vehicle.

Looks sharp. But that KO's antenna sections, matching unit springs, mounting bolts and antenna wires.

Others say the tip should be 10 feet from the ground. That's great for a 1/4-ton, but a little tough for an antenna on a tracked vehicle.

So, what's the angle? Roughly 45° to 60°. That's between the antenna and the ground or the vehicle, depending on the installation.

A final tiedown tip. Slip the antenna into the clamp, not under it.

Slip antenna into clip...

THAT'LL LET IT POP FREE IF IT HITS SOMETHING!

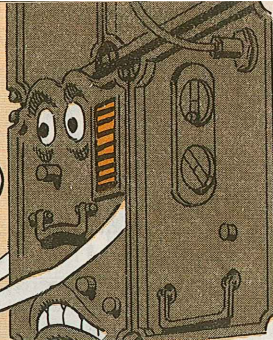


## AN/GRC-103 Radio Set...

### Give It Air

?

?GASPS I CAN'T BREATHE!! ?WHEEZES GIMME A PM BREAK, WILLYA?



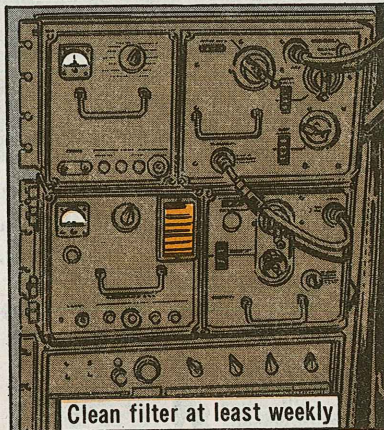
What do both you and your radio set need to do your job?

Air, of course. And lots of it.

Once you've got yours, make sure your radio gets its cooling share by keeping a clean filter in your T-983 transmitter.

Change the filter frequently, too. The TM says weekly, but more often is better when temps and dust are high. You get those filters with NSN 4130-00-879-2280.

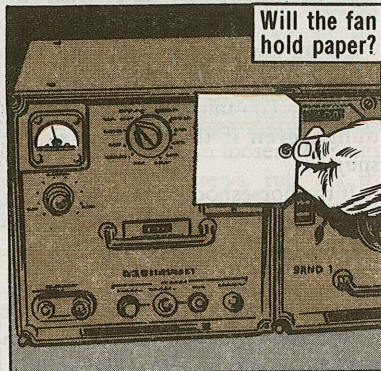
Clean the removed filter ASAP. Do



it by the book. That means a blast from an air hose (no more than 30 PSI) or a cool dip in cleaning compound, NSN 6850-00-597-9765.

If your set's not staying cool, at least according to a flickering OVERHEAT alarm light, maybe the fan has let you down. Give it a test.

Get a piece of paper big enough to cover the air filter. Hold it over the frame.

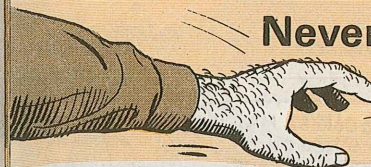


If it sticks, you're probably getting enough air to keep the set cool. If it falls, it's time to turn your radio in for repair.

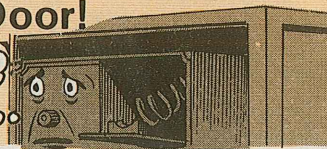
If the paper does stick, remove it right away. Cutting off the air supply too long could do damage.

If you turn the set in, your support will install a new centrifugal fan if that's the problem. If the light alarm is faulty, they'll apply MWO 11-5820-540-40-1 (May 74).

### Never Slam the Door!



OH-NO--OL' BRUTO BASHEM IS GOING TO MAKE A CALL-- ?SHUDDER?

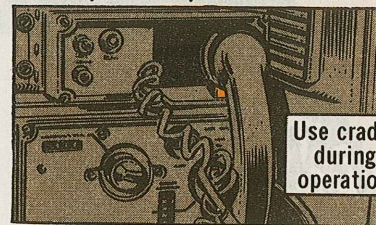


Roughing up the door on your RT-773/GRC-103(V) receiver-transmitter order wire is double trouble.

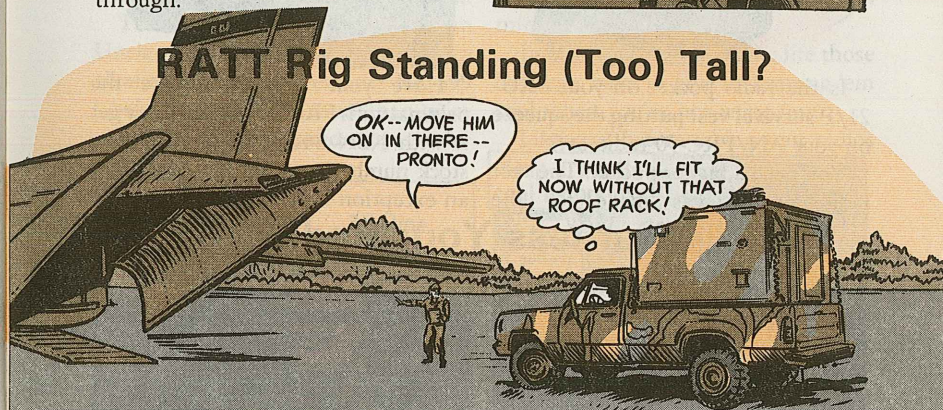
One, you break the door. Two, it goes to support for repair. Your door is not stocked, so the front panel, NSN 5820-01-069-4874, has to be replaced.

You keep the door in business with careful handling. Never yank the handset out when you need it, and never slam it back in when you're through.

The best bet is to keep it handy when you're working. Hang the handset on the door's cradle. Pack it away—carefully—when you're done.



### RATT Rig Standing (Too) Tall?



Sure, you want your AN/GRC-122B or -142B radio teletypewriter set to stand tall. Not so tall it won't fit through a C-130 or C-141's doors during loadouts, tho.

If your M884-mounted shelter has a roof rack for storing the AB-155 mast assembly, it's too tall. You'll have to take the rack off before you can get the rig inside the airplane.

No sweat. Just remember to take out the corner bolts first. Then, remove the rack. Tape over the Rivnut holes to keep water from damaging your gear.

When you've off-loaded, replace the rack by reversing the operation. Don't tighten the roof bolts until the corner bolts are snug, tho.

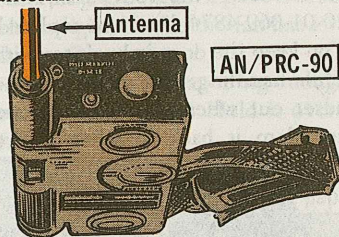
SRU-21/P Survival Vest...

## Radio Pocket Problem



TSARCOM Msg 061616Z MAY 81  
TELLS HOW TO STITCH ON  
THE POCKET!

AN/URC-10 radio. If you park the PRC-90 in that pocket, the tight fit can damage it, especially the folding antenna.



Have your support replace the original with PRC-90 pocket. They get it with NSN 8415-00-442-3616. The stock number's not on the AMDF, so an exception-type request is needed.

Is the radio pocket on your SRU-21/P survival vest putting the squeeze on your AN/PRC-90 radio set?

You need a bigger pocket! The vest radio pocket was made for the

## Harness Your Radio

Need to replace the ST-138 harness that carries your AN/PRC-77 and -25 radios?

You have to do it in pieces. The harness in your manuals, NSN 5820-00-892-8094, is out of stock.



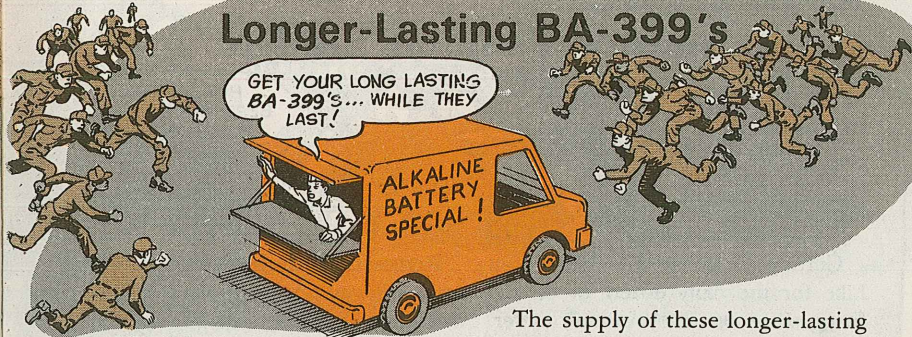
TO PACK YOUR  
RADIO NOW, YOU  
NEED THIS  
GEAR!...

LC-2 Pack Frame	8465-01-073-8326
Cargo support shelf	8465-00-001-6476
Cargo tie-down strap (2)	8465-00-001-6477

## CX-7474 Cable

If your AN/GSA-7 radio set control needs a CX-7474 cable, order one with NSN 5995-00-985-7561.

## Longer-Lasting BA-399's



The "new" BA-399 battery has a lot to give, and the price shows it.

The battery that powers your AN/PRT-4 and -4A radio transmitting set is not new, of course, just its price tag is. They go for \$12 each now.

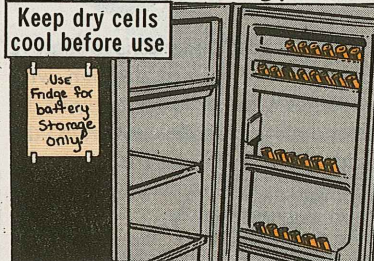
That higher cost resulted from Uncle Sam's one-shot buy of an alkaline battery to wear the BA-399 label. These cells last more than twice as long as the zinc-carbon type you're used to.

The supply of these longer-lasting dudes is small, tho. The price will tell you when it's gone. The price will drop when Uncle Sam is issuing the zinc-carbon battery again.

Remember that battery life will drop, too. Plan your needs with that in mind.

In either case, you get the life those batteries have to give by keeping 'em cool when you're not using 'em.

Likewise, before taking your radios



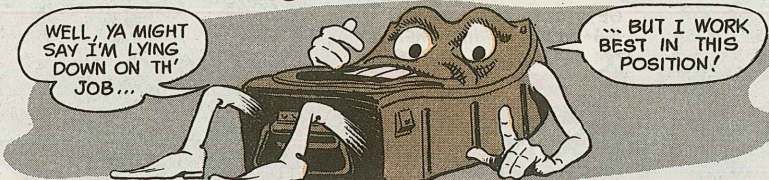
to the field, test the batteries. Some batteries spend a lot of time in storage before they get to you.

Nothing's more embarrassing than to have a supply of dead batteries when your squad needs the word.

## AN/GRA-39 Cushion

If the battery box cushion in your AN/GRA-39 radio set control group needs replacing, let support do it. Tell 'em the right pad is NSN 9320-00-626-8972.

# Starting Position... Move!



Getting in position is important. Like for the daily dozen, or on the firing range, or with your multimeter.

Yep, it's good practice to adjust your set in the same position you'll be using it. And, the best position is lying down. That way it can't get knocked down and maybe out.

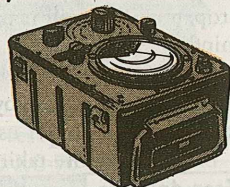
Removing batteries is vital if your set is still equipped with the BA-1312 mercury cells. They corrode quicker than the alkaline cells your support replaces 'em with.

Likewise, if you still have the merc cells, they must be turned in when no longer good. Let support dispose of 'em properly.

Support is changing your set over to the alkaline cell when it's in for repair or calibration.

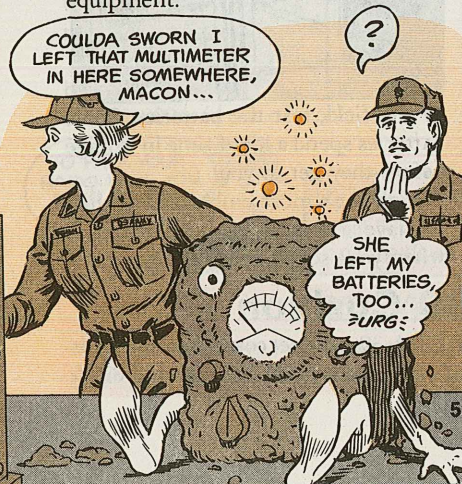
Many sets go in for repair because of broken cases or latches. It's usually unnecessary.

Storing extra accessories in the lid can make it close hard. A little too much force, and presto, it's support time.



Best position for use

Another good practice is to remove batteries when you're through with the set for a day or longer. Left in the meter, they corrode and ruin the equipment.



Fasten catty cornered to relieve strain

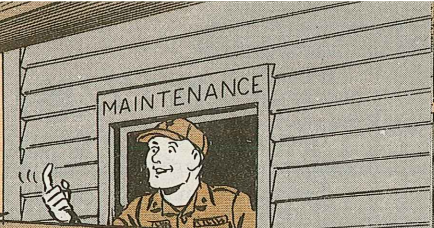


Force is not needed. The best bet is to fasten diagonally opposite latches at the same time. For instance, the front right and back left. That distributes pressure evenly.

# Overpowered Multimeter?



PSSST--HAVE I GOT A DEAL FOR YOU, BUDDY!



Dear Macon,  
In PS 337 you list a replacement for our AN/USM-223 multimeter's BA-1312 batteries.

We're to use one 4.5-volt Mallory PX-21 battery instead of three 1.3-volt mercury cells as before.

Trouble is, the extra juice pegs the meter and my zeroing efforts have no effect.

What's the scoop, Macon?  
SP5 G.A.

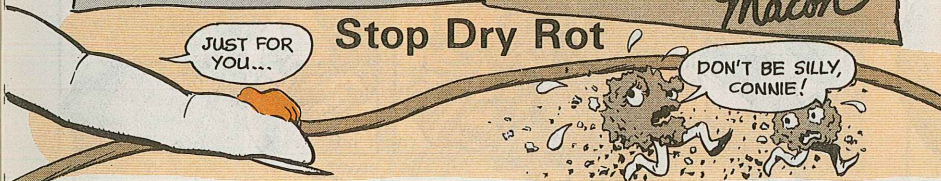
Dear Specialist G.A.,  
It's all a matter of adjustment. Before those meters will work with the more powerful dry cells, an internal change is needed.

Support makes the change as spelled out in TB 43-0001-9-1 (Apr 80).

The job is usually done while your set's in for calibration.

The new cells not only give more dependable power, they won't corrode as easily as the mercury cells.

Macon



# Stop Dry Rot

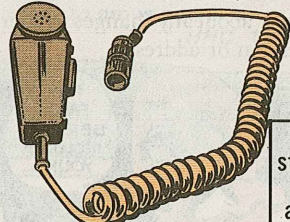
If dry rot is KO'ing your commo cords and cables, try a little silicone, NSN 6850-00-880-7616.

Don't zap your good PM job with too much muscle. A coiled cord—like the one on your TA-312 telephone's handset—needs to stay coiled. Don't



Dry rot?...

...Apply silicone!



Overstretching coil is a no-no!

A light coat over the entire surface will protect the rubber from rotting. Keep the coat light, tho, 'cause extra grease makes for a messy cable and adds no protection.

stretch it tight just to cover every possible inch. Too much straightening leaves you a limp, and unserviceable, cord.

# M17/M17A1 Mask Task



Folding your M17/M17A1 protective mask and M6A2 hood right prevents equipment damage and speeds up masking.

You have to mask fast (within 9 seconds without the hood and 15 seconds with the hood) after an alarm, so there's no time to unwad a mask that's stuffed in the carrier.

1 Smooth down the hood.



2 Fold the hood longwise to one side of the mask facepiece.



3 Fold the hood up from the bottom, making sure you don't block the chin opening. Let the harness hang straight.



4 Put the mask in the carrier, face out.



## Keep TEC Accounts Current

Keep your Training Extension Course (TEC) account up to date. Let the TEC Distribution Office at Fort Eustis know about any changes in your unit's mission or address.

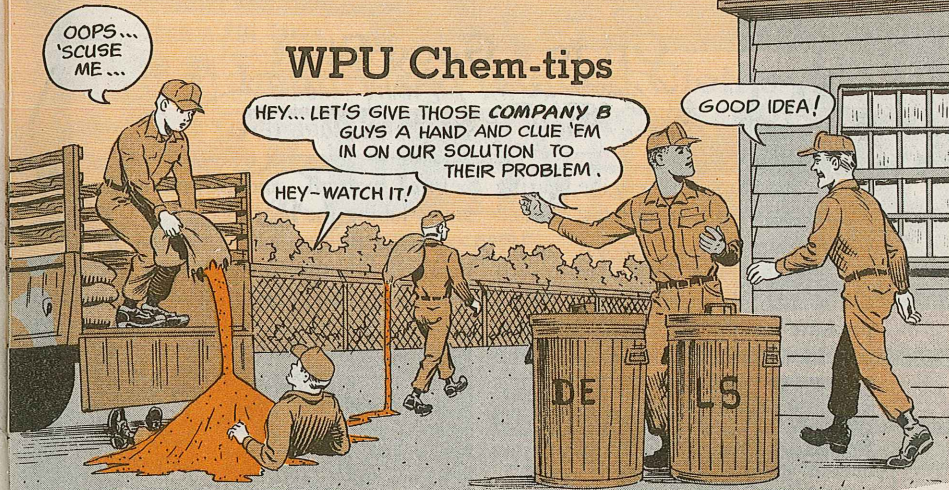
- Unit designation and mailing address.
- Unit Identification Code (UIC).
- MTOE or TDA number.
- A list of enlisted MOS's (first 3 digits only) to be serviced by the account and the number of personnel authorized in each MOS.
- Other units who use the account (include their UIC, MTOE number and MOS's).
- A point of contact (include telephone number) in case TEC distribution needs more information.

CALL AUTOVON 927-2141/3728, OR WRITE TO...

FOR FAST SERVICE, INCLUDE YOUR...

Commander  
US Army Training Support Center  
ATTN: ATIC-AET-TP  
Ft Eustis, VA 23604.

## WPU Chem-tips



Dear Editor,

We found a good way to handle our dry-mixture water purification unit chemicals.

For instance, the 25-lb bags of diatomaceous earth and 80-lb bags of limestone can't stand a lot of rough handling.

On a round trip mission from storage-to-trailer-to WPU, some bags get busted no matter how carefully they're handled. A waste of chemicals and a messy operation, for sure.

Our solution: Fill a corrugated can with diatomaceous earth and one with limestone. Mark the cans and their covers—DE for diatomaceous earth,

Save time... keep cans filled



LS for limestone—to be sure troops use the right chemical during operations.

Keeping the cans filled with the chemicals saves us time when we get ready to move out, too.

HHC, 19th Engr Bn  
Ft. Knox

(Ed Note—A great idea. Saves money on chemical replacement. Keeps a neater operation from start to finish. Handle your calcium hypochlorite carefully. It's caustic and will damage any metal it contacts.)

## Safety First

The latest Army requirements for protective clothing and equipment use are in AR 385-32 (Jan 81). DA Pam 385-3 describes individual items of equipment and gives details on their NSN's, care and use.

## Caterpillar Dozers... Off to a Good Start



HURRY! QUICK!  
WE GOTTA GET  
MOVIN'!!

WAIT! WHAT'S  
THE ENGINE OIL  
PRESSURE LEVEL?

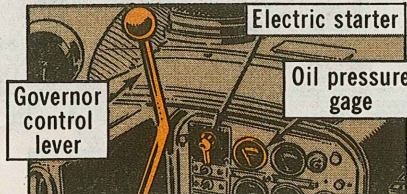


You can stop costly engine bearing replacement on your full-tracked Caterpillar dozer.

First, use the starter to turn the crankshaft until you get an oil pressure reading before you move the governor control lever to start the

before the oil—under pressure starts lubing the bearings.

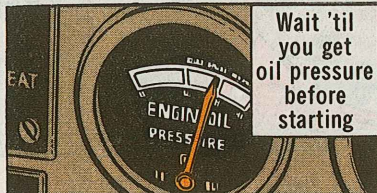
During this no-lube time, the dry bearings can be damaged. Repeated starts without waiting until you get oil pressure will cause bearing failure.



Governor control lever

Electric starter

Oil pressure gage



Wait 'til you get oil pressure before starting

engine. (You may have to use the manual override on F models if the engine doesn't turn over.)

Here's why: When you first start the engine, it runs for a period of time

A word of caution: Never engage the electric starter for more than 30 seconds at a time. And be sure you let the starter cool off for 2 minutes before you turn the starter switch again.

## M2380, M2385 RT Cranes...

### Battery Cable Fix

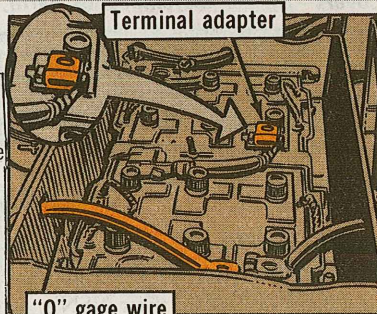


COULDN'T AFFORD  
NEW CABLES... MADE  
THESE MYSELF!

You can make replacement battery cables for 20-ton rough terrain cranes a lot cheaper than you can buy them.



GREAT!



Terminal adapter

"0" gage wire

HERE'S A  
LIST OF  
THE PARTS  
YOU'LL  
NEED...

Battery Terminal Adapter—Positive  
NSN 5940-00-549-6581

Battery Terminal Adapter—Negative  
NSN 5940-00-549-6583

Terminal Lug  
NSN 5940-00-705-6732

"0" Gage Wire  
NSN 6145-00-705-6674

## Collapsible POL Tanks...

### Improved Ground Cloths



WE NEED GROUND  
CLOTHS FOR NEW POL  
TANKS, CONNIE... AND  
THEY'RE NOT IN TH'  
SYSTEM! WHAT  
CAN WE DO?

THIS UNSERVICEABLE  
TANK IS YOUR ANSWER,  
SOLDIER...

Ground cloths under your 3,000-, 5,000- and 10,000-gal collapsible POL tanks save a bunch of bucks for tank repairs, replacements.

Ground cloths are not in the supply system but you can make them from unserviceable tanks.

When your maintenance officer says one of the collapsibles is unserviceable, flush it with water and drain it—like it says in Para 2-15, TM 5-5430-210-12.

When you turn in the tank to your support unit, ask 'em to process the paperwork soonest. Tell 'em why you need the carcass back ASAP.

Carefully remove all accessory items...repair clamps, plugs, pipe, elbows, etc...everything useable. Keep these items for future use.

When you get it, lay it flat on the ground. Cut out the bonded closure plate ring, vent assembly ring, and the drain assembly ring. Turn them in to your PDO. Insert a knife between the top and bottom halves and run it around the edge of the tank.

PRESTO!  
YOU HAVE  
2 GROUND  
CLOTHS!

USE 'EM  
UNDER POL  
TANKS TO  
PROTECT THEM  
AGAINST  
PUNCTURES,  
RIPS, TEARS!


Driver Training Program...

# Everything You Wanted to Know

WE GET A LOT OF QUESTIONS ON TESTING AND LICENSING ARMY DRIVERS! HERE ARE THE LAST FREQUENTLY ASKED...

**Q:** When you fill up one SF 46 and issue another, do you assign it a new number?

**A:** Yes. Since a second SF 46 is normally issued at a separate time and location, it's a separate license rather than a continuation of the previous one. However, if you're issuing more than one SF 46 at the same time and location, you can use the same number.



U.S. GOVERNMENT MOTOR VEHICLE OPERATOR'S IDENTIFICATION CARD		CARD NO. USA-13081
NAME OF OPERATOR Sample, John Q		DATE ISSUED 22 Apr 81
SEX M BIRTH DATE 8 Jul 52 COLOR OF HAIR Black COLOR OF EYES Brown HEIGHT 5'8" WEIGHT 150		DATE EXPIRES 22 Apr 84
RESIDENCE Lexington, Ky SOCIAL SECURITY NO. 100-00-1001		
The holder of this card is qualified to operate U.S. Government vehicles and/or equipment specified, subject to the restrictions set forth on the reverse of this card.		
SIGNATURE OF ISSUING OFFICIAL <i>J. M. Stewart</i>	TITLE COMPANY CO	
NAME AND LOCATION OF ISSUING UNIT 125th Maint Co, Ft. Benning, GA		
NOT TRANSFERABLE Card must be marked at all times when operating Government vehicle.		
SIGNATURE OF OPERATOR (Not valid until signed) <i>John Q Sample</i>		

**Q:** Who authenticates the SF 46?

**A:** The commanding officer, a commissioned officer or an authorized supervising civilian. Some installations have their own standing operating procedures that delegate authentication of the SF 46 to chief warrant officers.

**Q:** Who is the qualifying official who signs the backside of the SF 46?

**A:** That's the person who actually administers the road test or a supervisor assigned to driver testing. When no driver testing facility is available, the unit commander designates who signs the back of the SF 46.

**Q:** Where are permit numbers entered on DA Form 348?

**A:** The number of the original permit goes at the top of the 348. When you assign a new number, a line is drawn through the original number and the new one is entered in Section III.

**Q:** What else goes in Section III?

**A:** Renewals, retests, training, awards and everything else of note which happens to the driver.

**Q:** Do I need a new control number when I have to continue sections of the 348 on a new form?

**A:** No, all you need is the driver's name and social security number. The continuation sheet—another DA 348—is attached to the original form. Mark the additional 348 with the word "continuation" in the upper left-hand corner above block 1. Sections not used will be marked "VOID".

Continuation  
NAME (Last, First, Initial) AND SERVICE NUMBER  
Sample, John Q  
100-00-1001

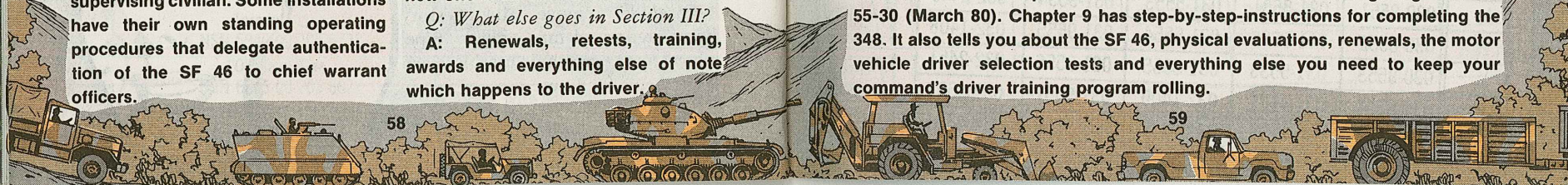
Driver's name and SSN are all you need to start a continuation sheet

DATE OF BIRTH	COLOR HAIR	COLOR EYES	HEIGHT	WEIGHT	POSITION TITLE (If civilian)
Special operations or conditions			2 City, rural, long haul, etc.		
SECTION III - PERFORMANCE RECORD (List chronologically as "credits" - awards, training, retaining, testing, retesting, roadtest, permit renewal, relicensing, etc; and as "debits" - accidents, arrests, violations, warnings, revocations, suspensions, etc.)					
DATE	CREDITS	DEBITS	TYPE OR NATURE	ACTION TAKEN	
23 JUN 81		X	Violation	Speeding, Ft Benning, fined in Mag. Court 15 July 81	
1 AUG 81	X		Def Drg Crse	Completed week-long safety office course, Ft. Benning, GA	

EQUIPMENT OPERATOR'S QUALIFICATION RECORD (EXCEPT AIRCRAFT)  
DA FORM 348  
REPLACES DA FORM 348, 1 AUG 60, WHICH WILL BE USED, AND DD FORM 130 WHICH IS OBSOLETE FOR ARMY USE.

**Q:** Do I need a new control number when I have to continue sections of the 348 on a new form?

**A:** The most recent pub to hit the field on the Driver's Training Program is FM 55-30 (March 80). Chapter 9 has step-by-step-instructions for completing the 348. It also tells you about the SF 46, physical evaluations, renewals, the motor vehicle driver selection tests and everything else you need to keep your command's driver training program rolling.



Camouflage...

Don't

FORGET

the

DECALS

NEED DECALS TO TOP OFF A NEW CAMOUFLAGE PAINT JOB?

THESE LISTS OF NSN'S FOR LUSTERLESS BLACK, PRESSURE-SENSITIVE DECALS WILL GET YOU THE ONES YOU NEED...

LUSTERLESS BLACK PRESSURE-SENSITIVE DECALS NSN 7690-01-

LETTER	1-IN	1½-IN	2-IN	3-IN	4-IN
A	030-7126	031-4660	031-9543	032-0732	032-0741
B	030-5778	031-4661	031-5535	032-0733	032-0742
C	030-5779	031-5521	031-5536	032-2428	032-0743
D	030-5780	031-5522	031-6394	032-2430	032-2434
E	030-5781	031-5523	031-9544	032-2432	032-2436
F	030-5782	031-5524	031-5537	032-0734	032-2437
G	030-5783	031-4662	031-5538	032-0735	032-0744
H	030-5784	031-4663	031-5539	032-0736	032-0745
I	030-8542	031-4664	031-5540	032-0737	032-1402
J	030-5785	031-4665	031-5541	032-0738	032-1403
K	030-5786	031-4666	031-5542	032-0739	032-1404
L	030-8543	031-4667	031-5543	032-0740	032-1405
M	030-7816	031-4668	031-5544	031-9545	032-2438
N	030-8544	031-4669	031-5545	031-9546	032-1406
O	030-8545	031-4670	031-5546	031-9547	032-3712
P	031-6395	031-5525	031-5547	031-9548	032-2439
Q	030-8546	031-5526	031-5548	031-9549	032-2441
R	030-8547	031-5527	031-5549	031-9550	032-1407
S	030-8548	031-5528	031-5550	031-9551	032-2443
T	030-8549	031-5529	031-5551	031-9552	032-2445
U	030-8550	031-5530	031-5552	031-9553	032-2447
V	030-8551	031-5531	031-5553	031-9554	032-2449
W	030-8552	031-5532	031-5554	031-9555	032-1408
X	030-8553	031-5533	031-5555	031-9556	032-2451
Y	030-8554	031-4671	032-1400	031-9557	032-4593
Z	030-8555	031-4672	032-0727	031-9558	032-4594

LUSTERLESS NUMERALS—NSN 7690-01-

NUMBER	1-IN	1½-IN	2-IN	3-IN	4-IN
1	030-8556	031-4673	032-0728	031-9559	032-4595
2	030-8557	031-4674	032-0729	031-9560	032-4596
3	030-8558	031-4675	032-2421	031-9561	032-4597
4	030-8559	031-4676	032-2422	031-9562	032-4598
5	030-8560	031-4677	032-1401	031-9563	032-4599
6	030-8561	031-5534	032-2423	031-9564	032-4600
7	030-8562	031-4678	032-2424	031-9565	032-4601
8	030-8563	031-4679	032-2425	031-9566	032-2452
9	030-8564	031-4680	032-0730	031-9567	032-2453
0	030-8565	031-4681	032-0731	031-9568	032-2454

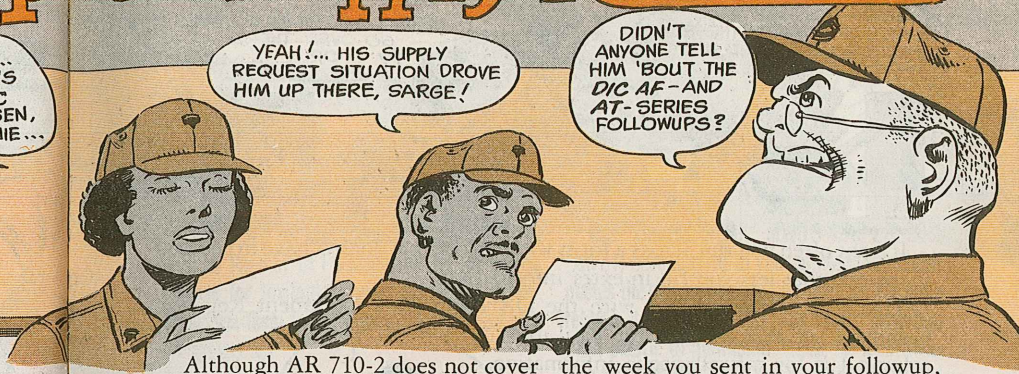
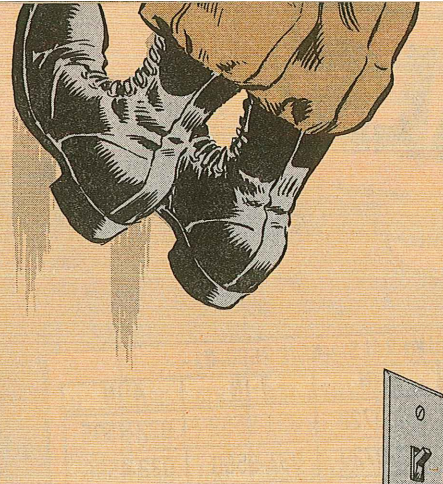
MISCELLANEOUS DECALS—NSN 7690-01-

	1-IN	1½-IN	2-IN	3-IN	4-IN	6-IN
★				042-0671		
MAX SPEED	032-3713	032-3715				
NO SMOKING	032-3714	032-4602	032-4604	036-4777		
US ARMY		032-4603	032-4605	032-4607	032-4609	
MIL POLICE			032-4606	032-4608		
FLAM-MABLE						047-6457*

\*With white background



# Follow Up on Supply Requests



You just got your reconciliation list from your support and compared it to your document register. Some of the parts you requested don't show up on the list.

That's your cue to follow up on your request. But first, check the cutoff date of the list against the request date. Also check your prior listing to see if the request had been cancelled, readied for issue, etc.

There are 2 DIC (Document Identifier Code) series you can use for your followups.

Use DIC AF-series for your followups if you have received any kind of status before or the request has shown up on a prior reconciliation list.

AF-series followups tell support to start looking for your request. If there's no record of your original request, your AF-series DIC earns a status card telling you to resubmit your request using a new document number.

You use the AT-series only to follow up requests for which you have no answer at all.

The AT-series card goes through the system just as your original request did. If it reaches an action point with no record of your original request, the AT card becomes a request with no more paperwork from you.

To keep you from getting duplicate shipments, support checks for any trace of your original request before using the AT-series card as a request.

Although AR 710-2 does not cover the AT document series, there's no rule against it. DIC AT-series followups are discussed in AR 725-50, DSU's supply guide. Your DSU can include the AT-series followup in your local SOP. Check it out with them.

Never expect a reply to your followup right away. Several factors can affect support's response time—distance between your shop and support, the time of day and the day of

the week you sent in your followup, delivery method, etc.

Give support enough time to send you a response. Give them 5 days to respond to your PD 01-08 requests and until the next listing for your PD 09-15 requests. If you still do not get a reply, follow up again.

Whatever the case, try the DIC series that fits your followup situation. You'll find the codes listed in Appendix B of AR 725-50. They could save you and support a lot of time and trouble.



- You request an item and haven't heard from support on it within a reasonable amount of time.
- The due date has passed but you haven't received the part.
- You have an open due-in that is not on the list.

**DA FORM 2765**

DOCUMENT DEVELOPER IDENTIFIER	ROUTING #	FIC	MRK	ADD	UNIT OF ISSUE	QUANTITY	BLANK	FUND	DISTRIB	PROJECT	PROJCT	REQUIRED AVANCE	ISSUE DATE	ISSUE	TRANSACTION	DOLLARS	CENTS
<p><b>ENTER THE APPROPRIATE AF- OR AT-SERIES DOCUMENT IDENTIFIER CODE IN BLOCK D FOR YOUR FOLLOWUP REQUEST!</b></p>																	

# Use Columns C and J

NOW -- IT'S TIME TO CATCH UP... MATCH THESE PARTS TO THEIR END ITEMS...

HMMM -- THIS GOES OVER HERE... OR... HMMM... DOES IT GO OVER THERE...? OR...



It's not often you run across a form with a block that doesn't have to be filled in, or one that lets you fill in extra information.

That's just what you get with the DA Form 2064 Document Register. Column C of that form is for local use and column J is for miscellaneous information.

INSTEAD OF LETTING THOSE COLUMNS GO TO WASTE, HERE'S HOW YOU CAN USE THEM TO HELP YOU KEEP UP WITH THE REPAIR PARTS YOU ORDER...



DOCUMENT REGISTER FOR SUPPLY ACTIONS			ORGANIZATION/ACTIVITY	UNIT IDENTIFICATION CODE	DATES (Day, Month, Year)		PAGE NO.
PRIORITY AND DATE	DOCUMENT SERIAL NO.	CONTROL NUMBER	REMARKS	SUP PRT ACTIVITY	QTY REQ	REC OR TURNED IN	DATE COMPL
			67th Trans Co.	WABCAA W62BJ6	1124 TO 12		12
13/1124	0001	PLL	2920-01-075-5666 Oil Filter	CBA	3	3	1126
13/1126	0001	BPR #348	6270-00-489-6020 Mirror	CBA	2	1	1128
03/1126	0002	BPR #765	John Mills, Corp Gear Box	CBA	1	1	1128
13/1127	0001	PLL	2590-06-178-0010 Gear Box	CBA	3	3	1128
			2910-00-699-7901 Pump	CBA			

**DA FORM 2064**  
1 SEP 05

When you order a part to support a major piece of equipment, put the bumper number, serial number or other identifying number of the equipment in column J of the register. This column is also used for posting status and recording followup and cancellation requests. So if you need more space to record where the part goes, use column C, instead.

When the parts come in, you can then tag or label them with the document number from the register and the bumper/serial number so they can get to the right end item.

Those columns are also good for keeping up with items ordered for your PLL stockage. When you order a part for stockage, write "PLL" in columns J or C.

The blanks are there to help you. Fill them in. It'll cut down on the time you spend searching through your records and help get your unit's equipment back in operation sooner.



**Connie's Mini Minis**

CONNIE, WE GOT A MAINTENANCE PROBLEM...

SHORT CUTS LEAD TO EXTRA PM, HUH?

## CP Glove Correction

The NSN's for the chemical protective glove sets on Page 57 of PS Magazine 344 are wrong. They're for toxicological agent protective gloves. Never use them for CP gloves. The right NSN's for CP gloves are:

- Small 8415-01-033-3517
- Medium 8415-01-033-3518
- Large 8415-01-033-3519
- X-large 8415-01-033-3520

## GPFU Modified?

Has "Limited Urgent" MWO 3-4240-276-30-1 (Jan 81) been applied to your armored vehicle? It makes the gas particulate filter unit (GPFU) more reliable by changing the fan blade (impeller) from plastic to aluminum. Check the identification plate of your GPFU for a stamped or scribed "AL". If it's not there, have your support modify the GPFU.

## Supply Index Gone

Before you waste a lot of time looking, DA Pam 310-6, Index of Supply Catalogs and Supply Manuals (Excluding Types 7, 8 and 9) is no more! You'll find your SC's and all your SM's now in DA Pam 310-4, Index of Technical Publications. Active MWO's are in DA Pam 310-4 now, too.

## AN/URM-182 Case NSN

If you need a new plastic case for your AN/URM-182 radio frequency power test set, use NSN 6625-01-024-0432. The NSN shown in Fig 1 of TM 11-6625-2718-24P (Oct 77) is wrong.

## Silicone Brake Fluid Is Here!

Get ahold of TB 43-0002-87, Brake Fluid, Silicone (BFS) Conversion Procedures for Tank-Automotive Equipment. It gives you dope on changing from polyglycol brake fluid to silicone brake fluid.

Also, watch for C 1 to the TB. It'll add conversion procedures for M48/M60 tanks.

Mighty important! Follow TB instructions right to the letter—or you can wind up with air bubbles in your brake system.

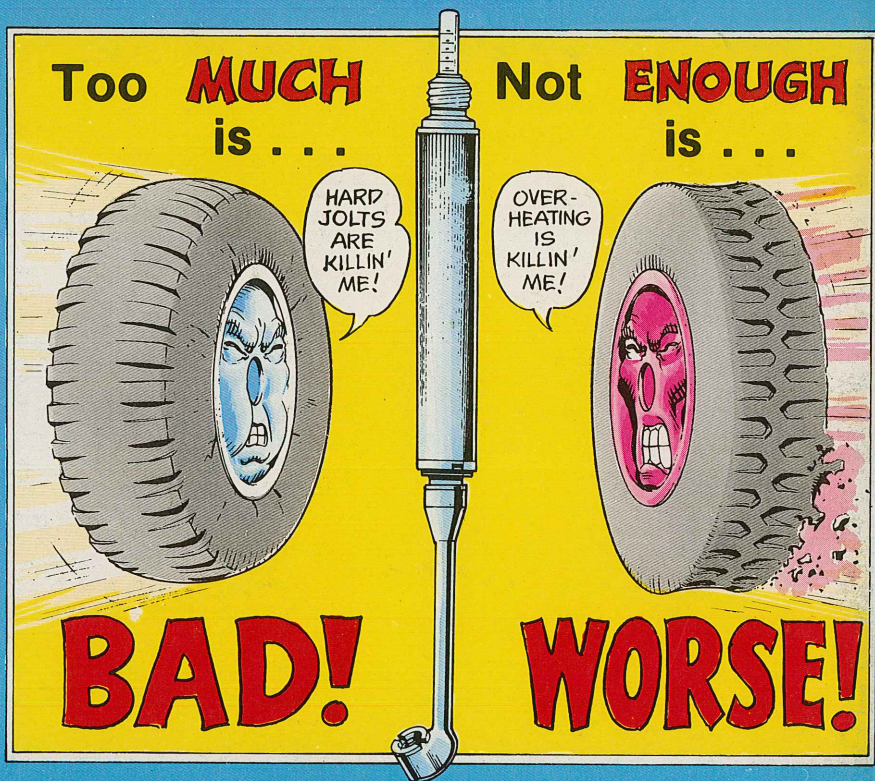
Make a note: The identification decal mentioned in Para 9 comes under NSN 7690-01-111-2265. If it's not on the AMDF yet, use exception data.

Important! Before you get into changing over to silicone brake fluid, make sure you get the new poop in TACOM Msg DRSTA-M 011400Z Jul 81. It changes several details in TB 43-0002-87.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1981-757-003/11

**Would You Stake Your Life <sup>right now</sup> on the Condition of Your Equipment?**

# WRONG AIR PRESSURE IS FATAL TO TIRES!!



Inflate your tires to the correct PSI when they're cool!