

Issue 342

PS

May
1981

THE PREVENTIVE MAINTENANCE MONTHLY

HEY--
WHAT'S
THIS?

**NO WAY CAN
YOU GET "SUPERBATS
COMICS" ON
PINPOINT!**

OH?...

HEH,
HEH--

... THEN
MAYBE
WE SHOULD
TRY
AUTODIN,
HUH?

Bn Pubs Clerk

See
Page 32

MURPHY
ANDERSON



Systems Mechanics

There's been a new feature added to the recently revised Career Management Field 63 that you might want to check out. It's the Systems Mechanic Program.

Under the program, at Skill Levels (SL) one and two, you will perform organizational maintenance on the armament or automotive portion of one specific major combat vehicle. When you reach SL 3 (E6), you will be trained to perform and supervise maintenance on both the turret and chassis of the vehicle.

HERE'S A BREAKDOWN OF THE VEHICLES AND THEIR MILITARY OCCUPATIONAL SPECIALTY (MOS) NUMBERS...

MOS	Specialty
45D, 63D	Self-Propelled Artillery
45E, 63E	XM1 Tank
45N, 63N	M60A1/A3 Tanks
45T, 63T	Infantry and Cavalry Fighting Vehicles

Program

If you're interested in becoming a Systems Mechanic and would like more information...

CALL THE ORDNANCE CENTER AND SCHOOL HOTLINE ON AUTOVON 283-5542!

Or write to:
Commander
US Army Ordnance School
ATTN: ATSL-DOES
Aberdeen Proving Ground,
MD 21005

PS THE PREVENTIVE MAINTENANCE MONTHLY

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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-Mast PS Magazine Lexington, KY 40511**

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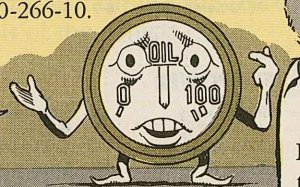
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GROUND MOBILITY

TM-266-
Series
1¼-Ton
Truck...

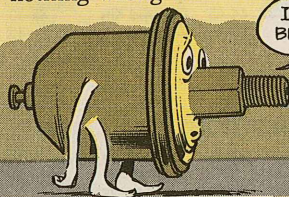


Too many M880-series vehicles are being deadlined—"not ready/available"—because the oil pressure gage is giving a "faulty reading", as spelled out in the PMCS, Page 3-10.2, TM 9-2320-266-10.



WHY ME?

Too many oil pressure sending units are being replaced when there's nothing wrong with 'em.



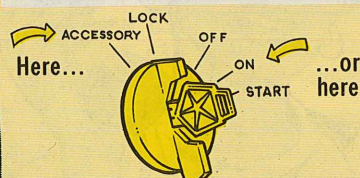
I GOT A BUM RAP!

Too many mechanics don't seem to realize that dirt 'n' grease in an electrical connection make for a mighty poor hookup.

Too many drivers are hose-happy when they're washing out the engine compartment.

SO LET'S START FROM SCRATCH... STOP A LOT O' HEARTBURN... SAVE UNCLE SOME MONEY... AND KEEP THOSE M880'S ROLLIN'...

Take Item 12, Instruments, in the PMCS. Before you start up the engine to check the gages, turn the ignition switch to the ACCESSORY position or the ON position. The oil gage



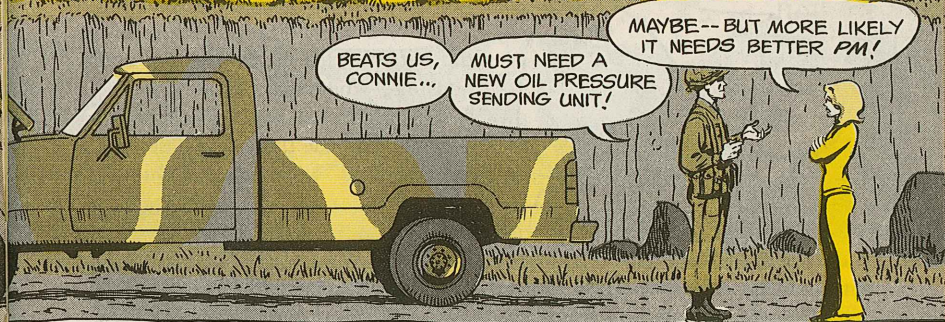
should show zero pressure. If the needle moves up past zero, something's wrong—so report it as a faulty reading.

Gage shows pressure long after shutdown? Report it!



Hold it! If you just shut down your engine, the gage may show slight pressure. That's OK, but the pressure should be gone within a few minutes.

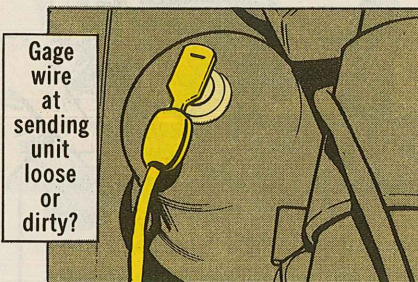
Oil Pressure Flap



Now you, Mr. or Ms Mechanic, tackle the troubleshooting—just like it says in TM 9-2320-266-20, Page 2-43, Para 2-44c. It's simple, easy and just about foolproof.

But you're wasting your time—and maybe repair parts—if you don't make sure electrical connections are clean and tight!

The oil pressure sending unit's tucked down between the rear of the engine and the fire wall—where it gets a heavy dose of greasy dirt. A dirty—or loose—gage wire hookup at



Gage wire at sending unit loose or dirty?

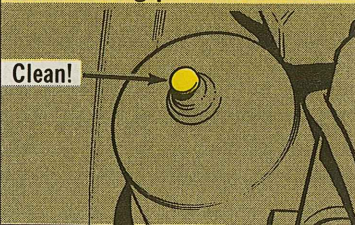
the sending unit is a sure bet for a "faulty" gage reading.

- Make sure the wire connector is clean.



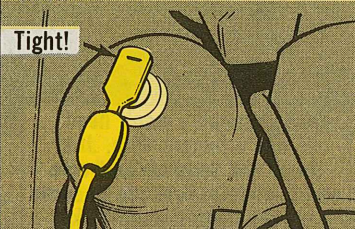
Clean!

- Make sure the sending unit connecting post is clean.



Clean!

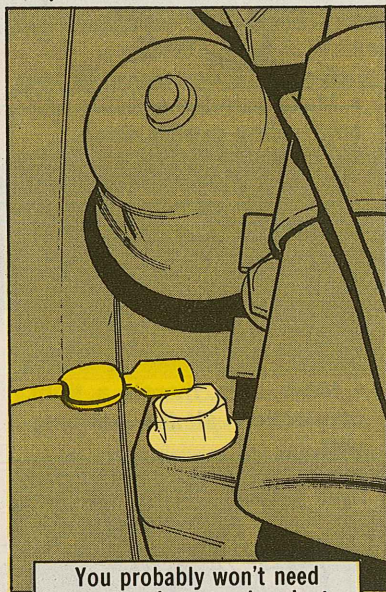
- Make sure there's a tight connection at the sending unit.



Tight!

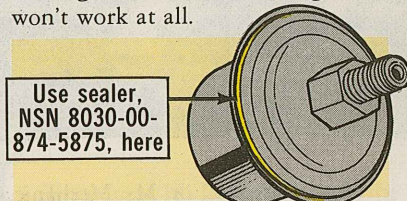


Same goes for testing the gage with a jumper wire. Make sure the jumper wire and gage wire connection is clean and tight. Make sure you touch the jumper wire to a good ground—scrape off dirt, grease and paint down to shiny metal.

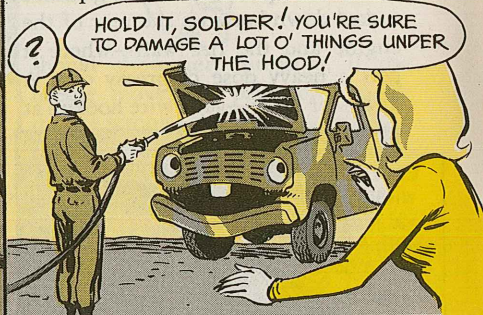


You probably won't need to use a jumper wire. Just touch the sending unit wire end connector (clean!) to some nearby metal (clean!) like this bolt head

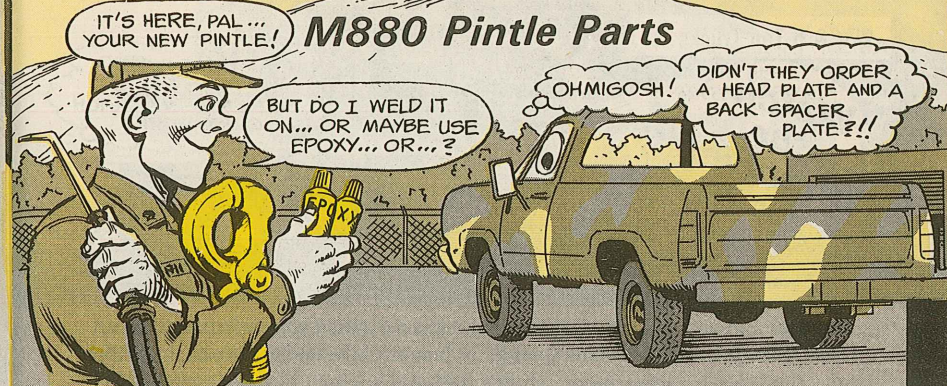
If you've got to replace the oil pressure sending unit, add some protection to keep moisture out. Put Sealer NSN 8030-00-874-5875 around the bottom edge of the sending unit housing—where it's crimped onto the base. Moisture can get by this crimped edge and corrode the inside. Then the sending unit won't read right—or won't work at all.



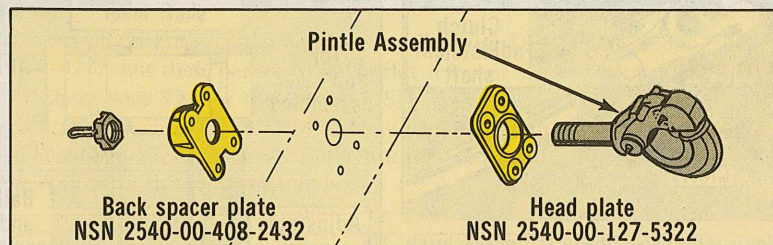
Finally, you drivers take it easy at the wash rack. There's no need to hit that engine compartment with a big—or high-pressure—stream of water. A hot oil pressure sending unit may suck in water around the bottom edge of the housing when it's cooled off fast by water—especially if there's no sealer to stop it.



Just as bad—or worse—is steam-cleaning by people who don't know how, like too much steam in some places and any steam at all in the wrong places.

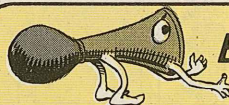
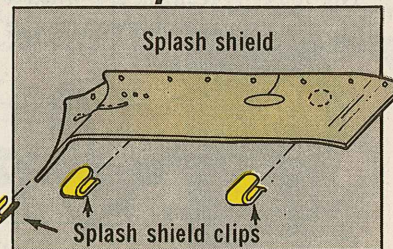


When you order the pintle assembly for your M880-series 1¼-ton truck, you don't get the head plate or the back spacer plate. Get them with these NSN's:

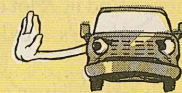


Splash Shield Clips

There's a new part number for clips that secure the splash shield on your M880-series 1¼-ton truck. Use FSCM 79146 and P/N 62F-1 on DD Form 1348-6. The clip is an organizational repair part and will be showing up in TM 9-2320-266-20P.



Bum M880 Horn



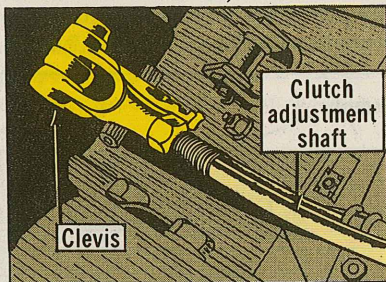
If you get a horn, NSN 2590-01-004-1905, made under contract DLA 700-80-M-B370, with just 1 electrical connector, return it to supply and prepare a SF 364 (ROD). It's a bum horn. The M880 takes a horn with 2 electrical hookups.

2½- & 5-Ton Trucks...

Watch the Bouncing Ball!

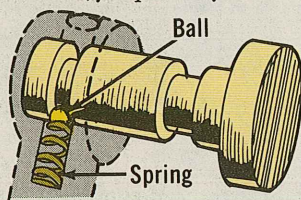
OH, NO! HE PULLED THE CLEVIS PIN TOO FAR... NOW MY CLUTCH CAN'T WORK!

Twang!
And there goes the ball-and-spring from the clutch adjustment shaft



clevis when you're adjusting the clutch in a 2½-ton or 5-ton truck.

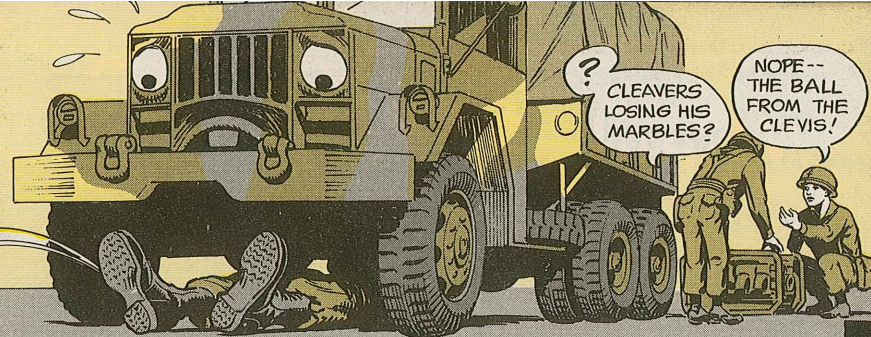
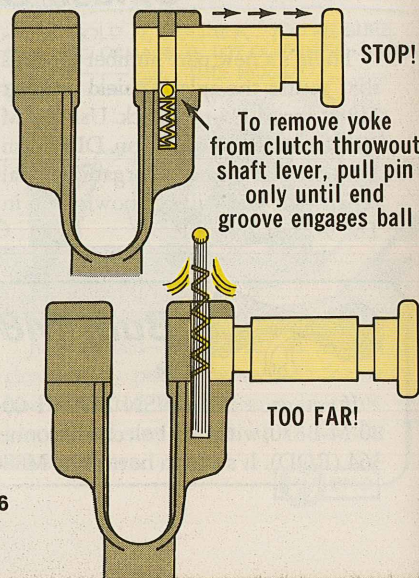
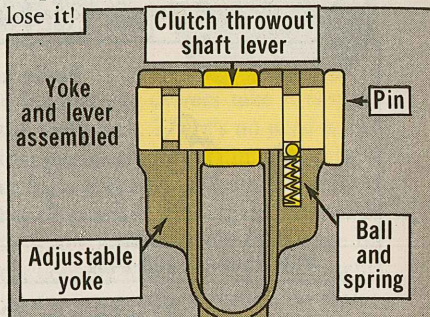
No, you can't really hear it when it goes. In fact, you probably won't notice



it going, it's so small...so small you'll never find it. A lot of mechs don't even know there's a ball-and-spring in the clevis!

But the driver of that vehicle is in for an unpleasant surprise. When the clevis pin falls out, the shaft drops and he can't disengage his clutch!

E-a-s-y when you pull that pin. Pull it just until the end groove engages the ball-and-spring. The ball-and-spring keep the pin in place—so you won't lose it!



The pin, NSN 5315-00-737-3224, ball, NSN 3110-00-943-6113, and spring, NSN 5360-00-692-6059, are listed in TM 9-2320-209-20P and in TM 9-2320-211-20P but not in TM 9-2320-260-20P.

Semitrailer Spring Parts

Several different trailers and semitrailers use Leaf Spring, NSN 2510-00-797-9217, but their parts manuals offer few—or no—repair parts.

Check your TM for that spring NSN. Look, especially, at TM 9-2330-207-24P (Jul 73), TM 9-2330-220-24P (Aug 73), TM 9-2330-258-14 (May 72) and TM 9-2330-272-14 (Jun 72). Watch it—all of the models covered by the TM may not use the same spring.

GOT IT?
MAKE A NOTE
OF THESE
REPAIR PARTS...

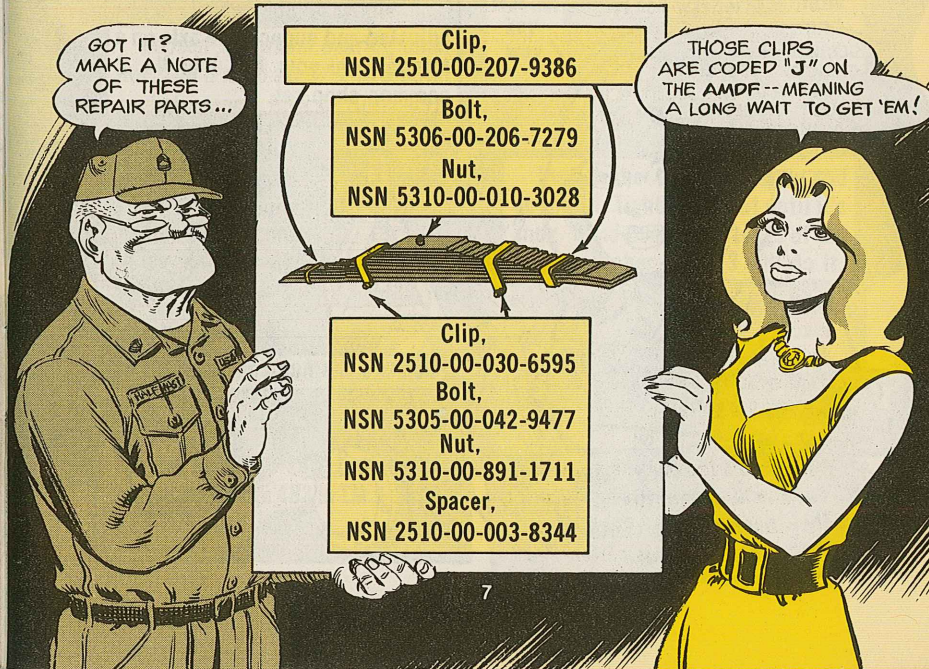
Clip,
NSN 2510-00-207-9386

Bolt,
NSN 5306-00-206-7279
Nut,
NSN 5310-00-010-3028



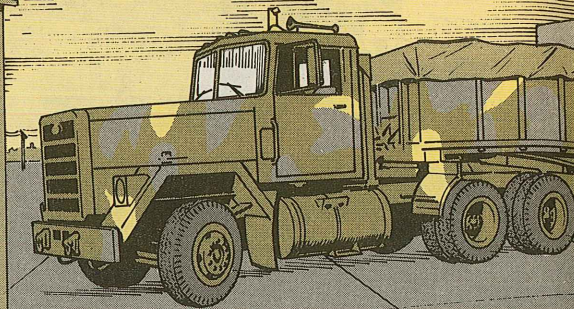
Clip,
NSN 2510-00-030-6595
Bolt,
NSN 5305-00-042-9477
Nut,
NSN 5310-00-891-1711
Spacer,
NSN 2510-00-003-8344

THOSE CLIPS
ARE CODED "J" ON
THE AMDF--MEANING
A LONG WAIT TO GET 'EM!



M872 34-Ton Semitrailer...

Wheel Bearing Burnout



That's the payoff when you try to adjust wheel bearings on your M872 semitrailer using the poop in TM 9-2330-359-14&P.

You could wind up with failed bearings.

Why?

Because the TM doesn't tell you a special socket wrench is needed for the wheel bearing inner nut.

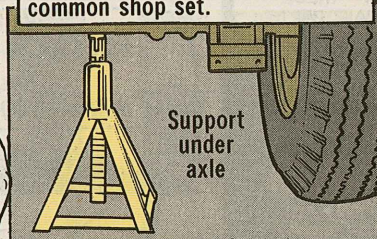
Also because the TM doesn't mention that the center axle has fail-safe brakes...that the brakes lock up when air pressure drops below 60 PSI...then the wheel won't rotate...and you can't tell when the bearings are seated.

SO, YOU HAVE 2 CHOICES BEFORE YOU START TO ADJUST WHEEL BEARINGS ON ALL 3 AXLES...

1 Keep the tractor hooked to the trailer for an air supply.

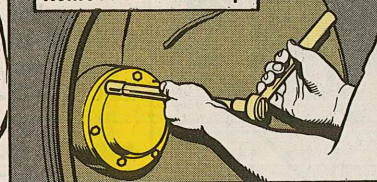
2 Or open the air reservoir drain valve and bleed the air system. Then back off the center axle air chamber spring brake.

Then, raise the wheel to be adjusted and support the axle on a trestle from your No. 1 or No. 2 common shop set.

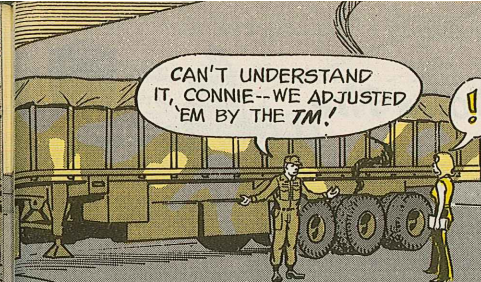
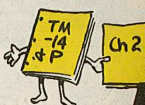


Support under axle

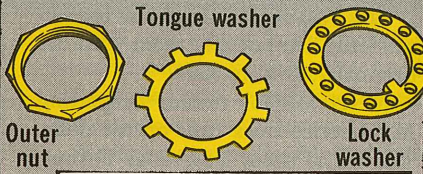
Remove the hub cap.



SEE Ch 2 FOR THE POOP ON FAIL-SAFE BRAKES!



Open the tangs on the tongue washer and remove the outer nut. You'll need the 8-point 3 1/4-in socket wrench from your common #1 shop set.



Outer nut

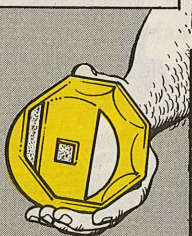
Tongue washer

Lock washer

Take off the tongue washer and the lock washer.

Loosen the wheel bearing inner nut. You'll need a 3 13/16-in 8-point socket wrench, NSN 4910-01-097-6949.

3 13/16-in 8-point socket wrench



The socket wrench is a special tool for the M915-series trucks and is listed on page 483 in TM 9-2320-273-20P. Use it.

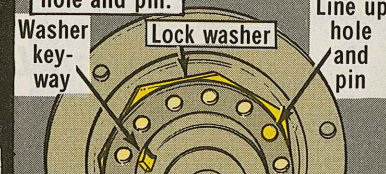
To adjust the bearings, tighten the inner nut while rotating the wheel. When you feel a distinct bind—or drag—stop tightening.



Tighten while rotating wheel

Back off the nut about 1/4 turn—2 flats.

The lock washer goes on next with 1 hole over the inner nut guide pin. If the hole won't line up with the guide pin, loosen the nut until it will. Always loosen the nut—never tighten it—to line up the hole and pin.

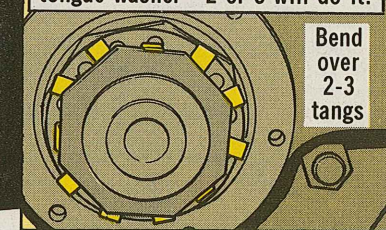


Washer key-way

Lock washer

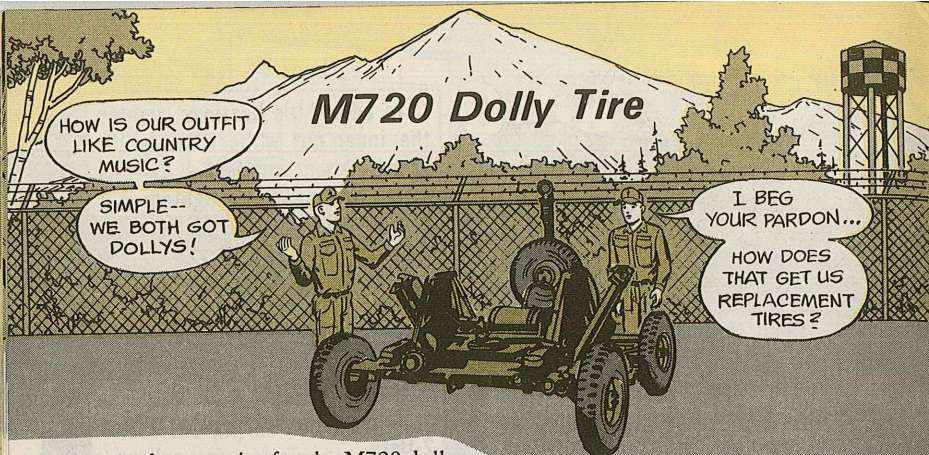
Line up hole and pin

Install the tongue washer and outer nut. Tighten the nut until it's snug. Bend over a few tangs of the tongue washer—2 or 3 will do it.



Bend over 2-3 tangs

Put on the hub cap and go to the next wheel.

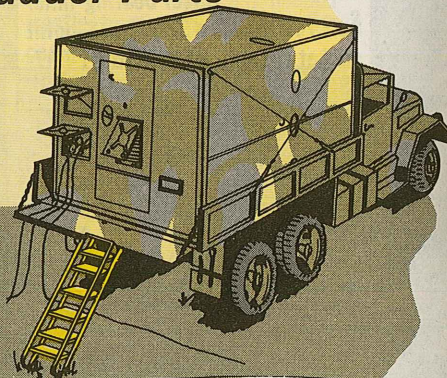


Need a new tire for the M720 dolly set? Forget the NSN listed in TM 9-2330-285-14.

You can get a replacement tire, size 7.50 x 16, with NSN 2610-00-204-4238. The replacement tire, tho, sports a regular highway tread design and has a slightly wider tread than the original equipment tire.

Boarding Ladder Parts

Dear Half-Mast,
Is there an NSN for the tie-down rope and guy fasteners for vehicle boarding ladder, MX-3391/G?
SFC C. D. H.



FOR STOWING THE BOARDING LADDER, NSN 4020-01-043-4214 WILL GET YOU THE ROPE ASSEMBLY WITH HOOKS INCLUDED! TO GET THE GUY FASTENERS, USE NSN 4030-01-040-9234!

Flexible Brake Hoses...

Never Paint Them, But...

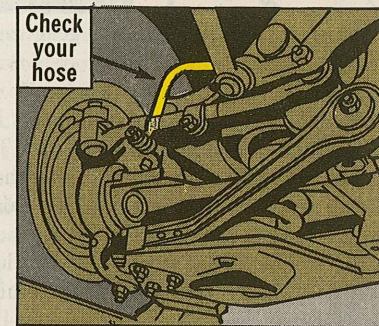


Paint on rubber brake hoses is harmful, but the remedy—the harsh solvents needed to remove the paint—can cause even more damage.

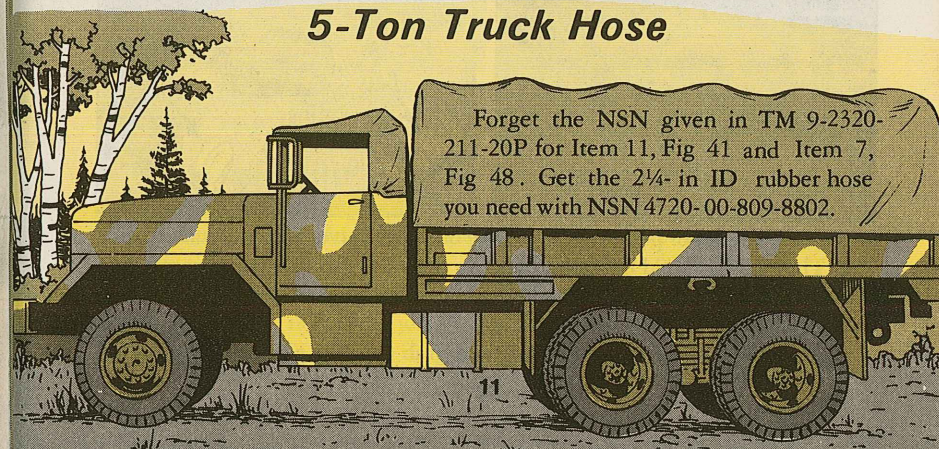
Never paint your flexible hydraulic brake hoses, but if there's paint on them...leave it alone.

The paint will crack, but surface cracking of brake hoses alone is not a good enough reason to replace the hoses. If you have cracks that go beyond the surface layer and expose the fabric, get a new hose. That's the word in TB 9-2300-405-14, Man-

datory Brake Hose Inspection and Replacement—Tactical Vehicles.



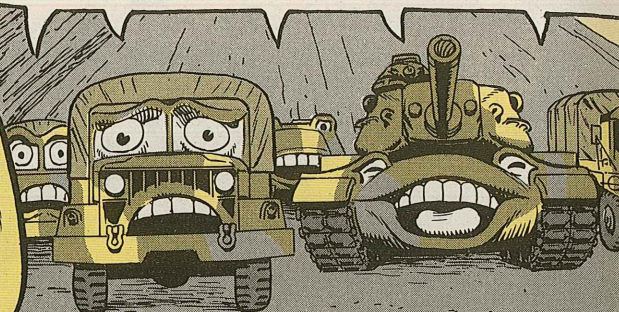
5-Ton Truck Hose



Forget the NSN given in TM 9-2320-211-20P for Item 11, Fig 41 and Item 7, Fig 48. Get the 2 1/4-in ID rubber hose you need with NSN 4720-00-809-8802.

How Do You Spell Relief?...

C·L·E·A·N B·R·E·A·T·H·E·R V·A·L·V·E·S



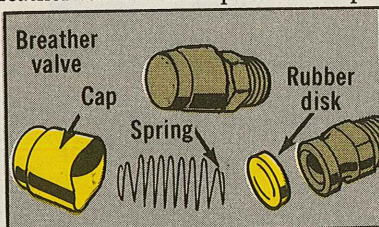
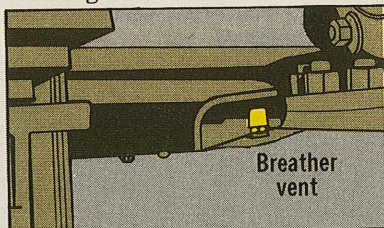
Air pressure buildup in a gear case can give you more than a case of heartburn.

It can be fatal to your equipment!

A gear case is a housing with gears inside—like a transmission, transfer or differential (also called axle housing). These gears turn in heavy oil. The gears turning on each other make heat. So the oil gets hot—real hot! It expands. Air in the gear case gets hot, too. The air expands and has to get out—or the pressure will blow seals. And then the gear case lube will leak out.

Big trouble! If there's not enough lube in the gear case, the gears will get hotter 'n' hotter—and friction will ruin 'em.

Most gear cases have relief valves—breather valves—to let pressure escape.



Trouble is, a lot of people ignore these breather valves and don't take care of 'em. They let dirt build up around and on the valves so the pressure can't get out. So it goes out around the seals. Seals start leaking, the gears aren't lubed and damage results.

Breather valves seem to reach out and grab any dirt going by. Because oil



ER, CONNIE...YA THINK ONE O' THEM WOULD HELP MY HEART-BURN?

Weak spring keeps valve closed when there's no pressure in gear case



Air pressure in the gear case lifts the rubber disk, allowing pressure to escape

Gear Case Housing



Even tho the gears are well lubricated, they rub against each other during operation. This friction produces heat. Heat expands the gear oil, so there's less space for air. Heat also expands the air. This pressure inside the gear case must be allowed to escape.

fumes come out with the air, the breather valve gets oily and greasy. Dirt sticks—and gets thicker 'n' heavier. Pretty soon, the breather valve's covered with dirt. The gear case can't breathe. Trouble!

Axle housing breathers get it worst. They get plastered with road dirt and mud piles up. Your axle housing gets no relief from pressure when there's thick, caked mud blocking the breather valve. Axle seals are bound to leak!

You've got to help those breather valves. Keep 'em clean. Make sure they're working right. Twist the cap to loosen any dirt stuck up inside. Tap the cap to



Give cap a twist...



Tap...make sure it bounces

knock the dirt out. (There's a spring inside the cap, so the cap should bounce when you tap it.) If the cap won't turn or won't bounce, get a new breather valve.

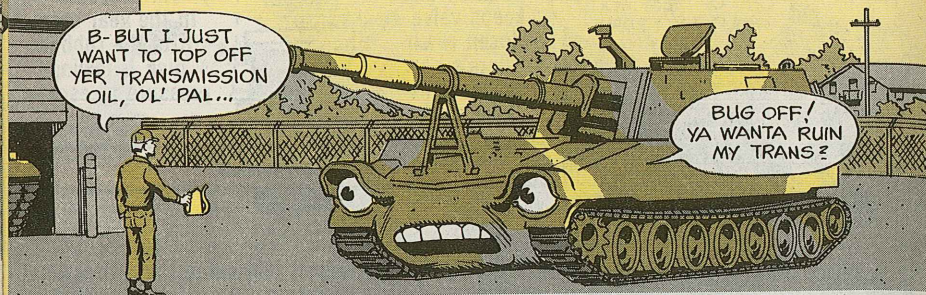
No, you won't find much about these breather valves in your operator's TM—but it's mighty important for you to check all of your equipment's gear case breather valves often. Especially, check 'em out after operation in dust or mud.

If your equipment's got a gear case, that gear case probably has a breather valve. Make sure it does its job. A case that can't breathe is a sad, sick case indeed.



SP Howitzers...

Transmission



Some troops are confused about when and how to check the transmission oil level for the M107/M108/M109/M110 SP howitzers and M578 recovery vehicles. And about when or how much oil to add.

Transmissions are being overfilled and ruined.



COLD CHECK

CHECK OIL LEVEL WITH
ENGINE STOPPED

OPERATING
RANGE

ADD

Overfill is too much—
you'll damage the transmission

Level must be in the operating range to
operate the vehicle safely. Add oil when level
is at or near the ADD mark

Level must be to ADD mark before starting engine.

Oil Level

ADDING OIL

Oil expands about 15 percent for a 100-degree rise within its operating range. So you make final oil level adjustments when the transmission is at its normal operating temperature...there is less chance of overfilling.

MAKE A HOT OIL CHECK LIKE SO...

HOT CHECK

- Heat the transmission oil by running the engine at 1600-1900 RPM with the brakes applied and the transmission in 4th gear.
- When the oil is at 180°-220°F, shift to NEUTRAL. Run the engine at 1200-1600 RPM for 1-3 minutes.



- Stop the engine. Wait 3-5 minutes for the oil to drain back into the reservoir.

OPERATING
RANGE

ADD

Add oil to get a full reading.
It takes about 4 gallons
between the ADD and FULL marks.

Don't put it all in at once, tho. It's better to add
oil several times than to overfill.

Pages 2-41 to 2-43 of TB 43-0001-39-4 (Jan 80) also has some good info on getting and keeping the right oil levels.



M109A2 Radiator Cap

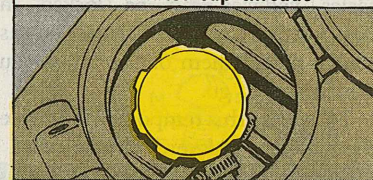


The radiator Caps NSN 2930-01-090-4932 on the M109A2 howitzer have a tendency to stick, so you do this:

Clean the threads of both the radiator and cap and put a coat of Anti-Seize compound NSN 8030-00-180-6315 on the radiator cap threads. (It's not on AMDF. Use exception data supply request to get it.)

If you ruin the NSN 2930-01-090-4932 caps in getting them off, order

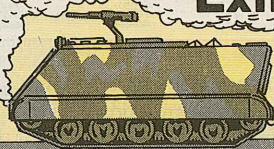
Clean and use anti-seize
on radiator cap threads



NSN 2930-00-737-6626 caps to take their place. They're the ones used on the M109A1 and A3.

M113A1/A2...

Exhaust Pipe Connections



WOW!
WHAT'S
CAUSING
THAT?

OBVIOUS! THE
EXHAUST PIPE'S NOT
LINED UP RIGHT!

Get your exhaust pipe lined up right and you're less likely to have leaks at the ball joints.

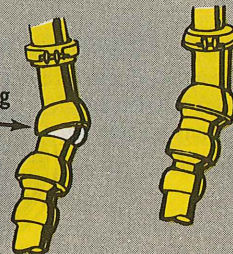
Para 2-85c on page 2-154.3 of C7 to TM 9-2300-257-20 tells you how to do it.

Before you tighten the clamp holding the last ball joint to the flange, rotate the upper section to line up the other sections.

This will give you a good seal when the exhaust system heats up.

Line up all ball joints,
then tighten clamps

This wrong
line-up
will leak



Lined up will reduce leaks

Controls Half Locked?

YOUR
CONTROLS
ARE STIFF!

B-BUT I
DON'T DRINK!



The pull controls on your M113-series vehicles can be locked in position by a clockwise turn as soon as you've pulled them out as far as you want them to go.

To release this temporary lock, give the handle a counterclockwise twist.

Some drivers think their controls are stiff to operate when the real problem is that they are partly locked or cable clamps are loose.



Fuel
cutoff



Hand
throttle

Turn left
and adjust
to desired
setting

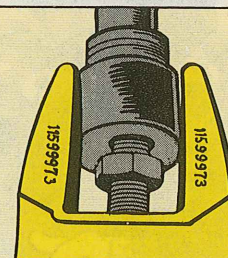
Oof!

Thin-Wall Socket Needed

OUT!
YOU'RE TOO
FAT FOR THIS JOB!



Socket NSN 5130-00-227-6684 won't fit...



...you need socket NSN
5120-00-232-5681

The Basic Issue Items for your M60A1 (RISE) and M60A3 tanks include a 1 5/16-in socket wrench, 3/4-in sq dr, 6-pt, NSN 5130-00-227-6684 that you're supposed to use for the center guide nut.

It's too thick-walled to do the job.

What you need is NSN 5120-00-232-5681, a 12-pt thin-wall of the same size.

Hauling M728 CEV Is OK

Yes, it's OK to transport the M728 combat engineer vehicle with the M911 HET tractor truck and M747 semitrailer. The M728 weighs 115,000 pounds without the combat load and 117,400 pounds combat loaded. That's well under the 60-ton load limit for the M911/M747 transporter. M728 weight info in TM 55-46-1 and TM 9-2350-222-10 is wrong. Those TM's and TM 43-0001-31 will be updated to give the straight poop.

M60A1 Screws News

THE DAILY SCREWS

Beware of imposters--
NSN - 5305-00-939-9267



HE
DRESSES
FUNNY!

YEH-- I
DON'T LIKE
HIS THREADS,
EITHER!

LOOK! THEY
CAUGHT UP WITH
OL' HEX-HEAD!



Take a look at Page 200 of TM 9-2350-257-20P-1. Item 4 is the hex-head cap screw identified as NSN 5305-00-939-9267. This screw has the wrong kind of thread. You need screw NSN 5305-01-042-4436.

Cleaning *the* M



Rust and carbon will put your M85 machine gun down if you clean it wrong.

Some troops gun down their M85's with unauthorized cleaners and lubes.

Use only SD, RBC or the new CLP for cleaning.

Use only authorized cleaners...



RBC

Use clean, dry patches or swabs.

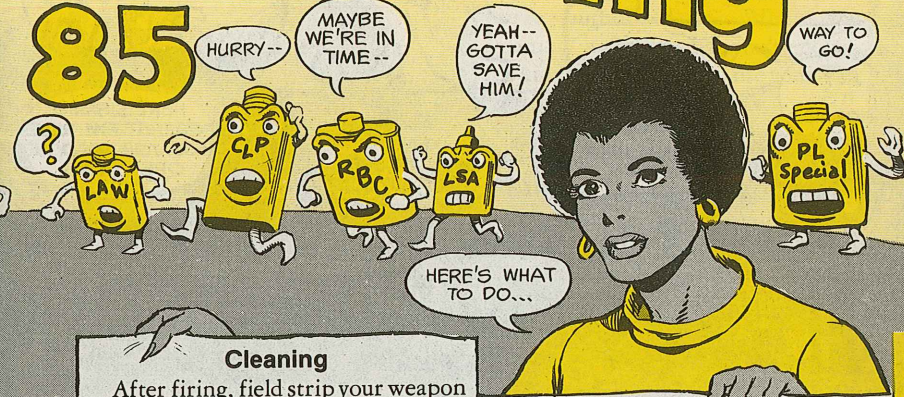
Use only CLP, PL Special or LSA for lubing. Use LAW or CLP when it's



...and lubricants

below 0°F. Go by your TM. Never clean and lube with Scrubbing Bubbles, oven cleaner, vegetable oil, motor oil or maple syrup.

and Lubing 85



Cleaning

After firing, field strip your weapon as on pages 16 and 17 of TM 9-1005-231-10. Clean powder-fouled parts



with RBC or CLP. Use SD where your TM tells you to. Never use it on the back plate group, bolt, sear, charger and actuator. Use clean, dry swabs on them.

Make sure you wipe off SD and carbon solvents before you lube. If you don't, you're putting out the welcome mat for rust and carbon build-up. That can put your weapon down.

Note: When the gun's stored, it needs a complete clean and lube job at least every 90 days.

Lubing

Lightly lube all parts of your weapon with LSA, CLP or, where your TM says, PL Special. Put just a trace on the back plate, sear and bolt. If you're going to fire your M85 within the next couple of days, lube the moving parts (barrel extension, feed and ejector assembly, cover and receiver) with CLP or LSA. Before putting on LSA or CLP take off the PL Special.

Unusual Conditions

Your gun needs more PM in extremely hot weather, humid, salt-air conditions and in sandy or dusty areas. If your M85 gets wet, take it apart, dry it out, and lube it again.

Audio Visual Aids

TF 9-3334 M85 Operation
TF 9-3335 M85 Functioning
TEC Lesson 020-171-5227-F M85 Cleaning, lubing

CAUTIONS PM a W

HEY--
IT'S
BONNIE!

OVER HERE,
BONNIE!

YEAH--
WE CAN USE
YOUR ADVICE!

HERE'S AN
IMPORTANT PM RULE
FOR YOU M60
OPERATORS.



Heeding cautions while pulling PM on your M60 machine gun is a great way to make PM work right.

The following cautions are simple, easy and quick to follow, but too many troops just don't bother to read or heed. The result is minor-to-serious damage to equipment and, at times, to people.

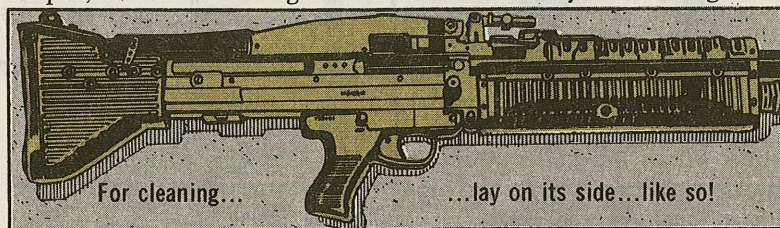
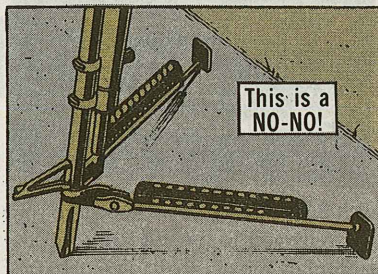
Bipod

Do not stand the gun on the bipod legs and flash suppressor.

If you do and you disassemble the weapon...especially if you put pressure on the buttstock to remove the yoke...you'll bend the bipod legs.

Bent legs won't extend, and that means a repair job.

When you clean the gun, lay it on its side. If you use the bipod to rest the weapon, then extend the legs and let the buttstock be your "third leg".



MAKE HIZ

Assembly

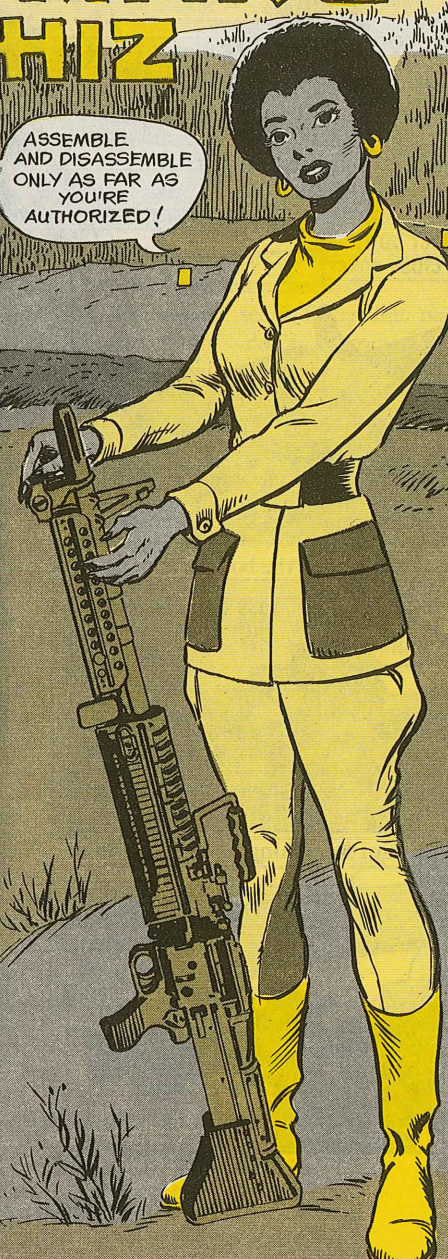
Never disassemble any further than you're authorized to. When you assemble it, know what you're doing. It's kinda helpful here to use your TM, especially if you're not sure.

M-a-n-y M60's have been assembled wrong, and the problem surfaces with a bang when the weapon is next fired.

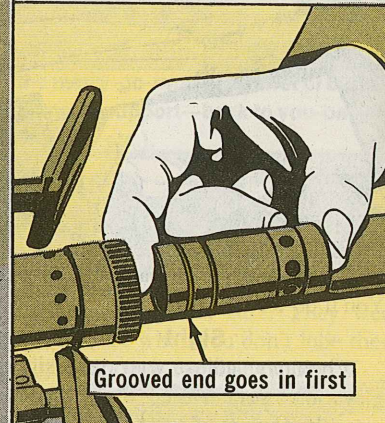
One oft-repeated example is the gas piston in the gas cylinder. The piston's grooved end goes into the gas cylinder first.

If you reverse the gas piston, the first shot is all you'll get. The bolt won't work.

One big point on assembly: If you're not sure, ask your armorer. That way you gain some useful facts and your M60 gets to do its job.



ASSEMBLE
AND DISASSEMBLE
ONLY AS FAR AS
YOU'RE
AUTHORIZED!

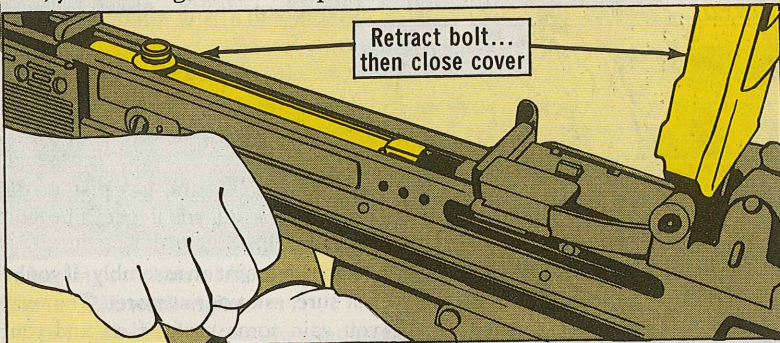


You've gotta learn somehow, and good questions never did put a man down. It could even get you more respect...a lot more than damaging your weapon will get you.

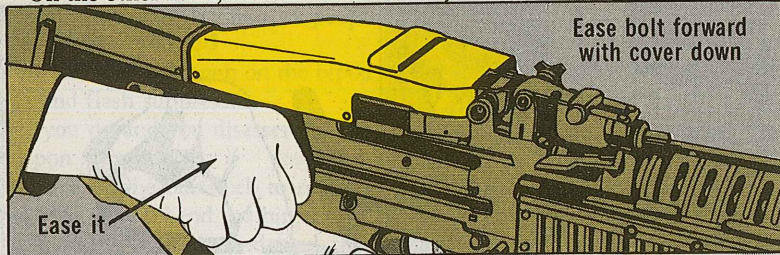


Cover

Never close the cover with the bolt forward. If you don't retract the bolt first, you'll damage feed cover parts.



On the other hand, with the cover down you e-a-s-e the bolt forward. That

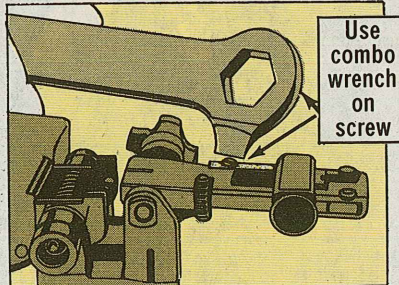


prevents feed tray damage. If you want to slam something home, try a door. You'll do less damage.

Sight

When you adjust your rear sight elevation scale, use your combo wrench. If you use off-sized screwdrivers or such on the elevation range plate screw, you'll burr it. That means a repair job or working with a less-than-serviceable sight.

In a pinch, a dime works fine.



Bolts & Barrels

When you replace bolts or barrels, get the headspace checked!

It may not seem likely, but new replacements don't automatically match up with older parts. They can batter each other up and they can be a hazard to you. "Headspace." Sink it in yours.

When you clean and lube the barrel, keep the gas cylinder up...or lay the barrel and cylinder flat.



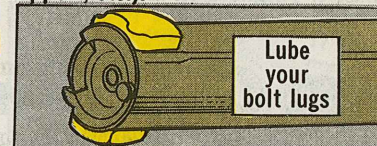
That way you keep lube from seeping into the gas piston and gas ports. That screws up the operation of the gas cylinder and, of course, the weapon.

Another barrel bit: To remove the barrel, first uncock the weapon. That saves sweat and damage. To the pros who say "everybody knows that," experience asks: "How come so many don't do it, then?"

(Aside to armorers: When you send your barrels to support for gauging, send both for each gun. That'll save you

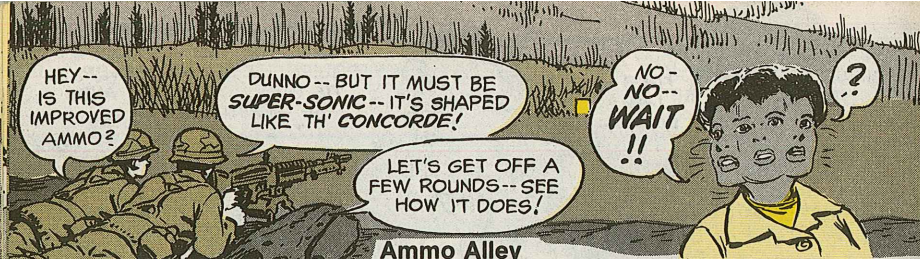


the merry-go-round of barrel or barrels going to support—back to you-back to support, etc.).



Bolt lugs wear, sure. They wear even more when you don't lube them right. Enough for that caution.





Ammo Alley

If you spot damaged ammunition during firing (bent, kinked, ruptured), stop firing and have support check out your weapon.

The point of this whole bit is: Cautions, whether spelled out in pubs or just plain common sense, aren't there just to make noise.



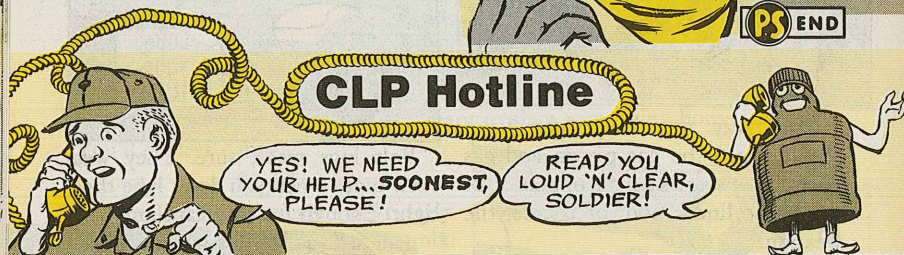
Bent ammo? Call in your DSU

Never be tempted to feed in new ammo and continue firing. That could be a hazard to you, your buddies and the gun.

If your weapon jams, follow TM/FM procedures, including a strong pull on the cocking handle. If you have to yank so hard that you fear the cocking handle will bend (as it does sometimes), you don't need more muscle. You need an armorer.



CLP Hotline



CLP, the all-purpose lube for weapons, is a hot item which has bogged down the supply system with huge orders. So, make sure you get yours by asking your support to call the CLP "hotline" when you need a big supply. They phone Defense General Supply Center, Richmond, VA, AUTOVON 695-4173, at least a month before placing an order for 1,000 or more gallon, pint or 4-oz size containers. There're plenty 1/2-oz bottles.



It's No Hammer!

What is not a handy hammer, sledge-hammer or club?

You got it! The M16A1 rifle stock...or, to get right to the end of it, the buttstock.

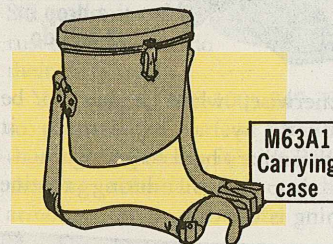
Troops have been seen using the buttstock as a hammer or club for various purposes. The stock cracks, and the rifle is out of business. It shouldn't happen.

If you need a hammer, get one.

M16 Binoc Case NSN



NSN 1240-00-769-4281 gets you the M63A1 carrying case for the M16 binoculars.



Weapons MAL

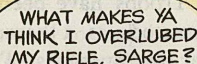


Keep this in mind when you read the weapons roster article on Page 39 of PS 338: Para 2-9f (5)b of AR 710-2 requires armorers to keep a Master Authorization List (MAL), against which soldier Weapons Cards must be matched. The AR has the details.

HERE ARE
SOME EXAMPLES...

Or, a lube is a lube is a...etc.

Too much lube, or too little lube, or lubing with the wrong lube just makes problems, wear and damage.



Your rifle needs an "A-1", by-the-
TM lube for the best protection and
performance.

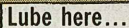
An old saying, "too much oil can't hurt," won't work on your rifle.

Too much lube traps dirt, carbon and crud, and that stuff in turn slows down and wears parts. Also, handguards and butt stocks need no oil, although some troops give them liberal doses. That just sets up another dirt trap.



Lube the way your TM tells you. Some parts need a lot; some need a little or none at all.

One part that needs more than it gets is the forward assist knob where it enters the receiver.



...a drop or
2 will do

Otherwise, when it has to be removed by a repairman, it sticks...and it's hard to get out.

A drop of oil during routine cleaning is the cure.

Disassemble

Cleaning and lubing lead to other problems, like disassembly of the trigger and housing. Some riflemen tear it down and then lose or put parts

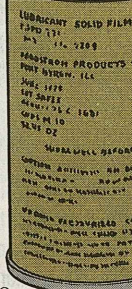


back wrong. That makes big problems.

That's not the only case of "unauthorized disassembly." Other parts of the rifle suffer, too, and it all boils down to not having the right tools or training to do the job.

What you're authorized to do is spelled out loud and clear in your TM. If it's not in the TM and you're not authorized, never do it.

Some armorers only half-way clean surfaces before they apply solid film lubricant (SFL) to the exterior of the rifle. Fact is, some don't clean the surface at all before applying SFL.

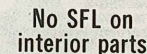


So, instead of doing its job in protecting what's left of the finish, SFL peels off and rust and corrosion do their dirty work.

Your rifle's TM 9-1005-249-20 says to prepare the surface for SFL by thoroughly cleaning it with RBC and cleaning solvent. In a pinch, an armorer could even use a paint

thinner.

Whatever, if you're gonna do an A-1 job with SFL, you've gotta do an A-1 cleaning job first.



SFL fits into the "too much" category, too. Basically, it's a short term refinisher which protects the weapon till it can be permanently refinished. It's for the exterior parts only. Never apply it to working, interior parts. It gums them up and kills your weapon.

CAN YOU SHOW US SOME EXAMPLES OF YOUR WORK, MR. RUST?

SURE! LOOK HOW BEAUTIFULLY I'VE EATEN THROUGH THIS VEHICLE'S BODY...

OVER THERE--CHECK OUT THOSE TRACK PINS I'VE RUSTED SO SOLID THEY CAN'T BE REMOVED...

WHEN A VEHICLE SITS IDLE FOR DAYS OR WEEKS, I CAN STICK CLUTCHES, JAM STARTER BUTTONS... RUST BARE METAL BEFORE PRIMER IS ADDED!

DON'T THE SOLDIERS IN THIS OUTFIT CHECK THEIR PUBS? **TM 43-0213** HAS GREAT INFO ON RUSTPROOFING!

S-SSSH-H! NOT SO LOUD! YA WANTA PUT ME AN' MY PAL **CORROSION** OUTTA BUSINESS?

YEAH, HALF-RATHER, THESE SOLDIERS MIGHT STOP THE CORROSION ON THESE AIRCRAFT HIGH MAGNESIUM COMPONENTS.

I WORK FROM WITHIN...SEEPING THROUGH SEAMS AND POPPING RIVETS... HEH-HEH!

THAT'S BAD STUFF, MR. **CORROSION**... CAREFUL INSPECTIONS, FREQUENT WASHING, **TM** PROCEDURES AND PUBS LIKE **TM 43-0105** WOULD HELP STOP YOUR ATTACKS!

HEY, QUIET, HALF-RATHER! YOU REPORTERS AREN'T SUPPOSED TO TAKE SIDES!

LET'S TALK ABOUT WEAPONS!

STORED IN AREAS LIKE THIS WHERE IT'S WET AND HUMID, WEAPONS RUST ALL OVER... 'SPECIALLY WHEN SOLDIERS FAIL TO CLEAN 'EM OFTEN!

RIGHT, **RUST!** THE FINISH GETS DAMAGED IN USE, LETTING US GO TO WORK!

DON'T THESE TROOPS RUB **LSA/CLP** ON THEIR WEAPONS?

NOT TOO OFTEN, HALF-RATHER... THEY'RE TOO BUSY... TO BOTHER WITH **PM!**

NOW TAKE A LOOK-SEE AT THIS UNIT'S COMMO GEAR...

WITH A LITTLE HELP FROM OUR PALS **FUNGUS** AND **MOLD**, WE REALLY PUT DOWN STUFF IN VANS AND SHELTERS-- LIKE MOLDING AND CIRCUIT CARDS! I 'SPECIALLY LIKE CONNECTOR CONTACTS-- THEY TASTE LIKE CANDY!

HAVEN'T THESE GRUNTS HEARD OF USIN PENCIL ERASER?

BATTERIES ARE MY FAVORITE! I HAVE A FIELD DAY WITH ANYTHING THEY TOUCH!

YOU WOULDN'T IF OPERATORS REMOVED DRY CELL BATTERIES AFTER USE!

SSSHHHSS! SOMEONE MAY BE LISTENING!

Remove Batteries

WATERCRAFT HAVE MORE PROBLEMS THAN THERE ARE IN A DOZEN SOAP OPERAS! I HIDE UNDER PAINT BUBBLES ON THE DECK OR HULL, IN COMPARTMENTS AND IN VENT HOLES!

Rust hits all over on watercraft

HEH-HEH!

OUR BUDDY, **DRY ROT**, CLOBBERS ALL RUBBER WHEN HEAT IS ADDED TO HUMIDITY!

LOOK AT HIS WORK! HE'S A REAL **PRO!**

Stretch for dry rot test

ARRGH! DON'T THIS UNIT'S TROOPS CHECK FOR **DRY ROT?**

THE **TM** TELLS HOW!

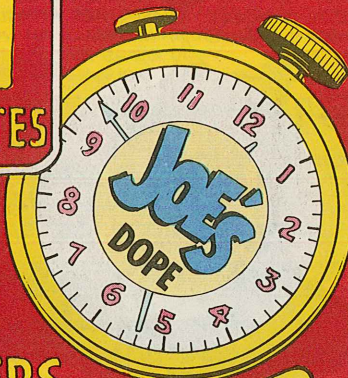
SOLDIERS OUT THERE-- WE'VE SHOWN YOU SOME OF THE PROBLEMS WITH RUST, ROT, CORROSION, FUNGUS AND MOLD! YOUR ARMY HAS A PROGRAM, WHICH IS BEING BEEFED UP TO FIGHT THE PROBLEM! BUT THE SOLUTION LIES IN **YOU** AND YOUR **PM** EFFORTS!

TAKE IT AWAY, CONNIE!

**61
MINUTES**

Those
Manuals
Are...

**ORDERS
from the TOP**



THANK YOU, SERGEANT
HALF-RATHER!

NOW, ON TO OUR NEXT
SUBJECT... **ORDERS!**...

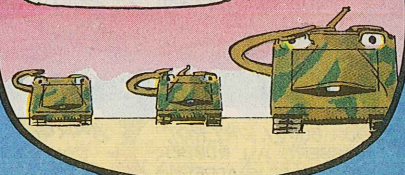
ORDERS... FROM DIVISION,
BRIGADE, BATTALION, COMPANY,
PLATOON, SQUAD... ORDERS--
THEY MAKE IT ALL WORK!



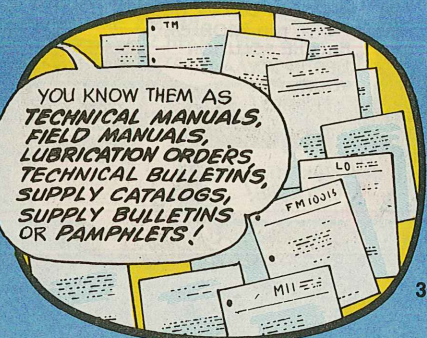
YOUR UNIT WOULDN'T BE WORTH
MUCH WITHOUT DIRECTION FROM
TOPSIDE!



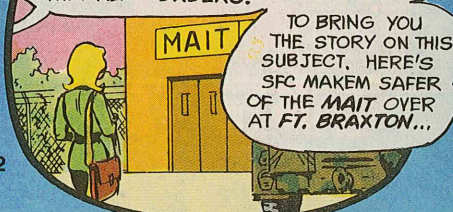
EQUIPMENT ALSO DEPENDS
ON ORDERS!
THAT'S RIGHT!
PERMANENT WRITTEN
ORDERS BACK UP
YOUR EQUIPMENT!



YOU KNOW THEM AS
**TECHNICAL MANUALS,
FIELD MANUALS,
LUBRICATION ORDERS,
TECHNICAL BULLETINS,
SUPPLY CATALOGS,
SUPPLY BULLETINS
OR PAMPHLETS!**

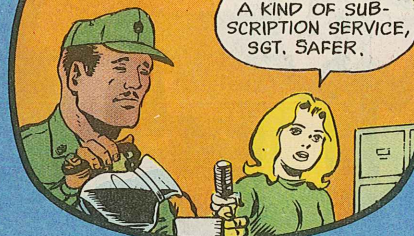


THESE PUBS GIVE THE INFORMATION,
INSTRUCTIONS AND GUIDANCE YOU
NEED TO KEEP YOUR GEAR HEALTHY...
THEY'RE -- **ORDERS!**



TO BRING YOU
THE STORY ON THIS
SUBJECT, HERE'S
SFC MAKEM SAFER
OF THE **MAIL** OVER
AT **FT. BRAXTON...**

YES, CONNIE... YOU CAN GET COPIES
OF EQUIPMENT **ORDERS** (MAINTENANCE
PUBS) BY PIN-POINT DISTRIBUTION!



SOUNDS LIKE
A KIND OF SUB-
SCRIPTION SERVICE,
SGT. SAFER.

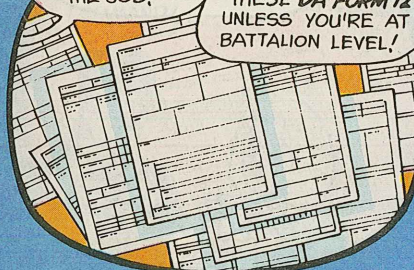
EXACTLY
AND...

...HERE'S WHAT YOUR
VIEWERS MUST DO TO GET
EQUIPMENT PUBLICATIONS
AS THEY ARE PRINTED...



INITIAL DISTRIBUTION

THE **DA FORM
12 SERIES** DOES
THE JOB!



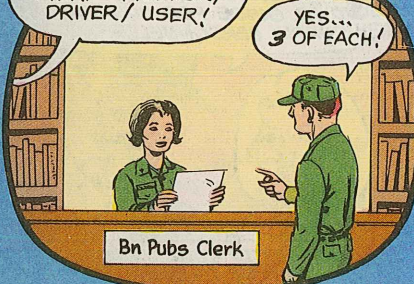
YOU WON'T USUALLY
FILL OUT ANY OF
THESE **DA FORM 12'S**
UNLESS YOU'RE AT
BATTALION LEVEL!

THAT'S WHERE
MOST COMPANY OR
BATTERY PAPER
WORK IS DONE!



ALL YOU DO
AT YOUR LEVEL IS
LIST THE ITEMS OF
EQUIPMENT YOU
NEED PUBS
FOR!

YOU NEED A -10
TECH MANUAL FOR
EVERY OPERATOR/
DRIVER / USER!



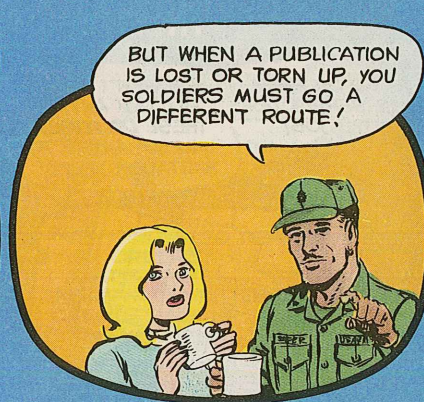
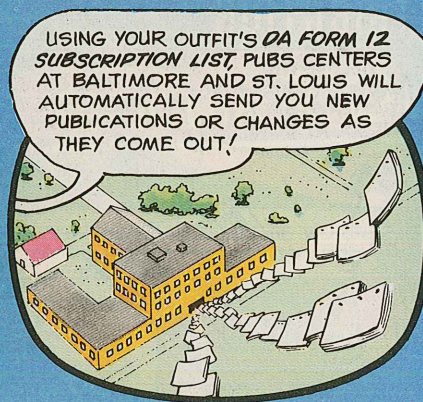
YES...
3 OF EACH!

EVERY SHOP **NCO** AND
MECHANIC NEEDS A COPY
OF THE -10 **TM** AND THE
-20 **TM** FOR EVERY EQUIP-
MENT ITEM YOUR
COMPANY HAS!

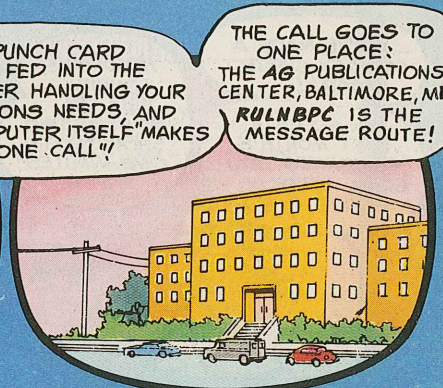
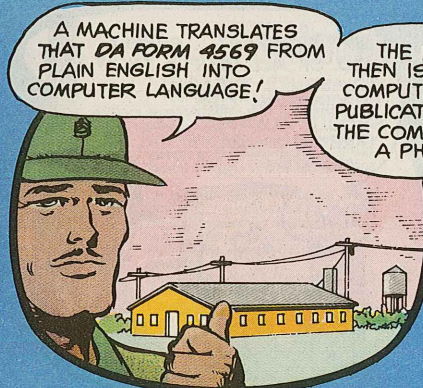
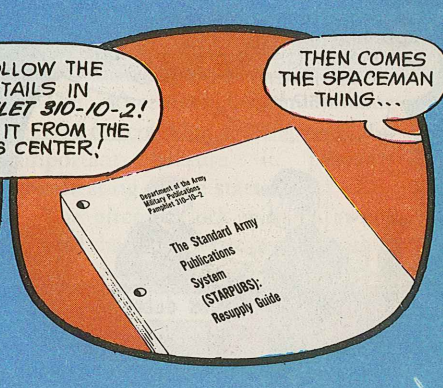
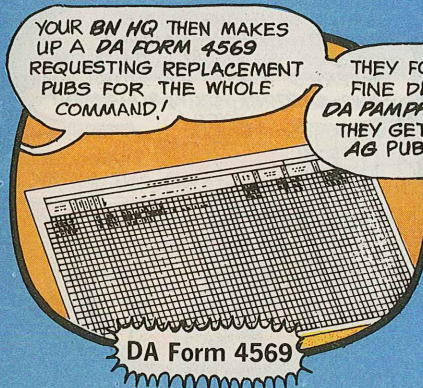
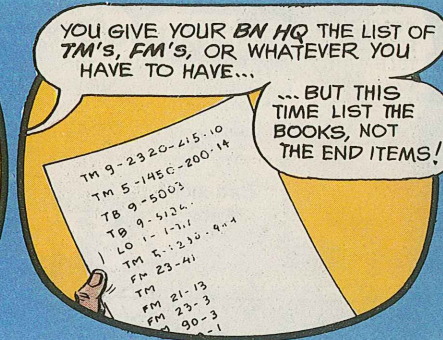
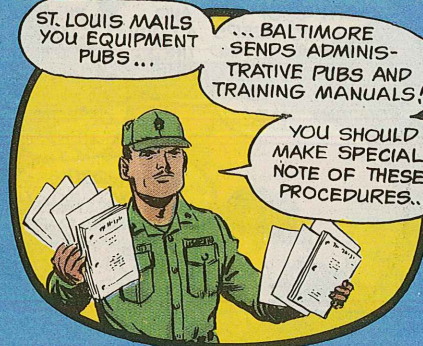


THE **PLL**
CLERK
NEEDS A
-20P FOR
EACH KIND OF
EQUIP-
MENT!

THREE -20P's
AND TWO -20's!



REPLACEMENT PUBS



BUT THE
SPACEMEN-
STYLE OF
TELEPHONE
CALL GETS
RESULTS!

PRESTO,
A SHIPMENT
OF PUBLICATIONS
COMES IN
BY MAIL!

YOUR
BATTALION
DISTRIBUTES
THEM TO YOU
AND OTHER
UNITS!

IF YOU GET
A CHANGE OF
EQUIPMENT...

...THEN YOU GET
MANUALS FOR THE
EQUIPMENT BY
AUTODIN ALSO!

Battalion
Pubs

ALSO, REMIND YOUR PUBS CLERK TO
ADD THE NEW EQUIPMENT TO YOUR
PINPOINT LIST AND DELETE THE
OLD EQUIPMENT THAT WAS
TURNED IN!

IT'S THE SAME THE WORLD
AROUND-- **CONUS, PACIFIC,**
USAREUR, WHEREVER... DA FORM
12-SERIES FORMS FOR INITIAL ISSUE
AND **AUTODIN** FOR REPLACEMENT
COPIES!

THANK YOU,
SGT. SAFER...

PUBS CLERK

...YOU'VE MADE A
COMPLEX SUBJECT
CLEAR!!!

...SO UNTIL
NEXT MONTH'S
"61 MINUTES" PRO-
GRAM, WE'LL BE
SIGNING O...

HOLD ONE,
CONNIE...
WHY DO
YOU CALL THIS
SHOW "SIXTY-
ONE MINUTES"
???

WHY, SERGEANT... SURELY
YOU OF **ALL** PEOPLE KNOW THAT
TO ASSURE THE BEST
POSSIBLE **PM**, ONE
SHOULD ALWAYS
TAKE AN **EXTRA**
MINUTE!

'BYE!

?

AIR
MOBILITY

When Seconds Count...

OK... NOW
READY...
**GET SET...
GO!**

When you hot pilots time a Huey engine start, accuracy counts. Guessing won't hack it!

TM 55-1520-210-10 says you should not go beyond the maximum exhaust gas temperature shown in Fig 5-1 for more than 5 seconds. If you do, a "hot start" can damage internal engine parts.

The 40-second maximum time period for cranking the engine is also important because it prevents overheating of the starter.

The aircraft clock with its sweep second hand; a wrist watch with a second hand; a watch with a continuous digital second reading—all will give you the right time.

Aviation Messages

If your unit has not received these messages, check with your next higher headquarters.

CH-47-81-01 SOF, Maint Notice on changes to op procedures for CH-47 with T55-L-11 engines DRSTS-MEA 051330Z Jan 81

CH-47-81-02 Maint Notice to maint personnel of revision to DA TB 55-1520-241-30-1 inspect and repair rotary wing head protective covers (rainshields) CH-47A, CH-47B and CH-47C DRSTS-MEA 071430Z Jan 81

CH-47-81-03 SOF, Technical, RCS CSGLD-1860, CH-47C one-time inspect T55-L-11ASA engine variable inlet guide vanes TB 55-1520-227-20-22 DRSTS-MEA 131400Z Jan 81

CH-47-81-04 Maint Notice to maint

personnel of CH-47 overhaul and retirement sched changes (CH-47-81-04) DRSTS-MEA 221820Z Jan 81

CH-47-81-05 Maint Notice to CH-47 users of change to MWOC 55-1520-241-30-4 DRSTS-MEA 302100Z Jan 81

CH-54-81-01 Maint Notice to maint personnel on CH-54 tail rotor balancing procedures DRSTS-MEA 192000Z Jan 81

OH-58-81-08 Maint Notice OH-58A jet assy bleed valve removal DRSTS-MEA 090900Z Jan 81

OH-58-81-02 Maint Notice on OH-58A and C tail rotor rigging instructions DRSTS-MEA 221840Z Jan 81

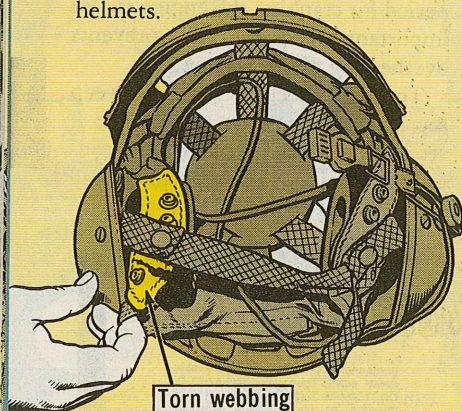
AH-1-81-02 Maint Notice: Info on AH-1 ground handling wheels DRSTS-MEA 031500Z Feb 81

On Your SPH-4
Flight Helmet...

Wearer's Care

YOUR SPH-4
IS NOT A
STOOL...

The brain bucket you tote to the flight line is taking a beating, bird types. Support is busy, replacing broken parts and even complete helmets.



Like—a mike boom was loose. Tightening up on the thumb screw did no good. It was too late to get a tight mike because the attachment screw was never tightened up.

As a result, rotating the adjustment knob merely enlarged the boom attachment hole in the shell. So support had to scrap the helmet.

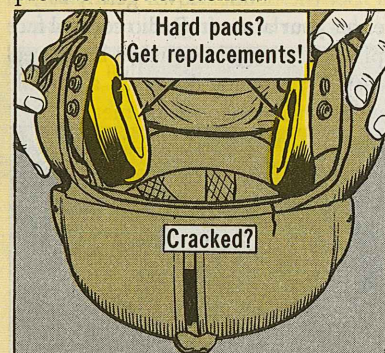
38

Heads Off Wear AND Tear

CRACKS KEEP
SUPPORT BUSY--
AND COSTS UNCLE
MANY BUCKS!

The ear pads leave something to be desired. They harden up in short order because of sweat. The button projection on the pads then digs into your ears and that's mighty uncomfortable...even distracting!

So, when you feel pads NSN 8415-00-143-8577 and find 'em hard, ask for new ones. An improved, non-hardening ear pad is in the works to provide a better cushion.



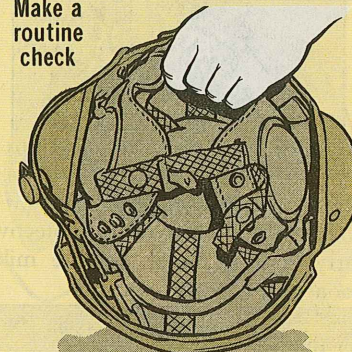
Then there was the case of a cracked helmet, caused when it was used as a seat. Only football helmets can take that kind of treatment.

It's up to You!

It only takes a couple of minutes to pull the before-operation checks spelled out in Table 3-1 of TM 10-8415-206-13 with C4 (Jun 79).

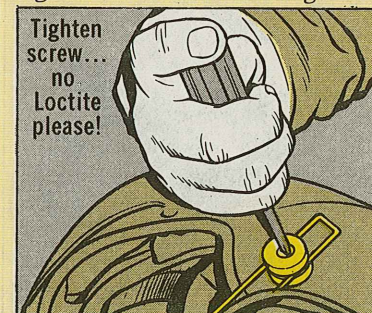
It's a routine matter of checking the condition of the chin strap, retention assembly, ear pads, headband,

Make a
routine
check



beading, liner and shell.

Focus on the mike boom. If you can't tighten the boom with the thumbscrew, get a screwdriver. Tighten the boom attaching screw.



You don't have to turn the helmet in for repair.

39

Handle With

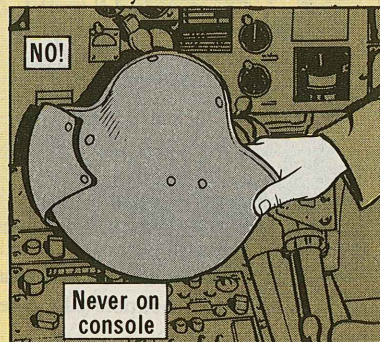
As a personal issue item, the SPH-4 deserves special handling.



Tote the helmet in its protective carrying bag. Never use the mike boom as a handle.



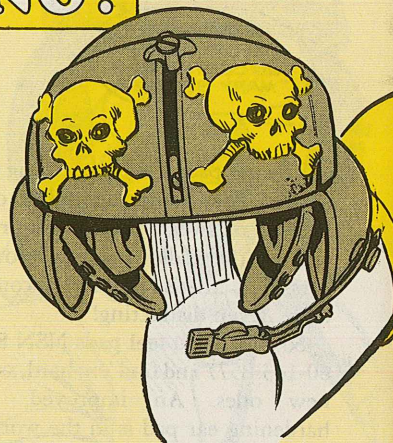
Set the helmet down gently as you enter your aircraft. Radio control face plates and toggle switches break real easy if you come down on a console with a heavy-handed helmet.



Never on console

NO!

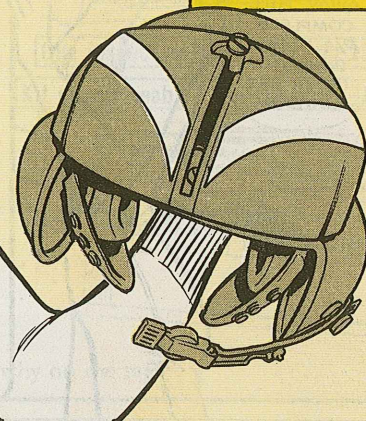
MAJOR COMMANDERS MAY AUTHORIZE THE USE OF ORANGE AND WHITE REFLECTIVE TAPE ON THE HELMET...



Care

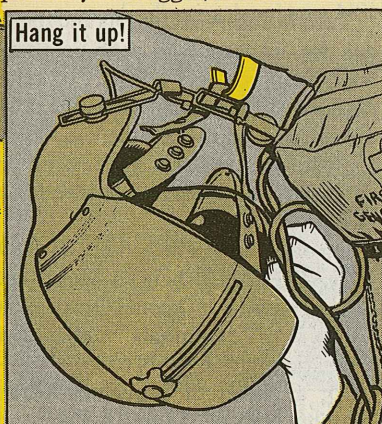
...AS INDICATED IN Para 3-21 OF THE TECH MANUAL!

YES!



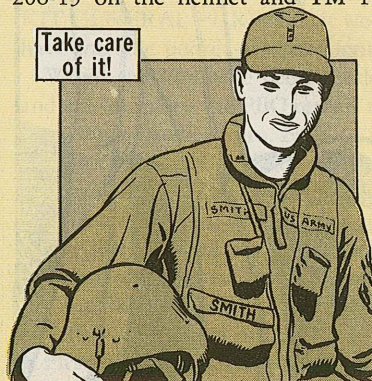
Take care of your helmet and it'll protect your noggin, as advertised.

Hang it up!



Need more info? See TM 10-8415-206-13 on the helmet and TM 11-

Take care of it!

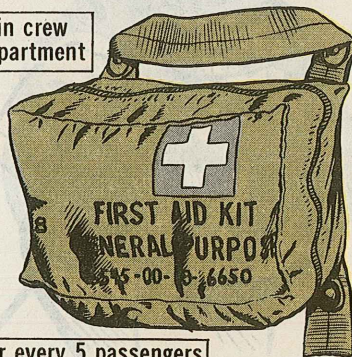


5965-279-13P on the mike and headset.

First Aid Kits... **KEEP THE 'RED' OUT!**

TO KEEP THE
RED INK
AWAY, PULL
COMPLETE
PM INSPEC-
TIONS ON
THOSE LIFE
SAVERS!

1 in crew compartment



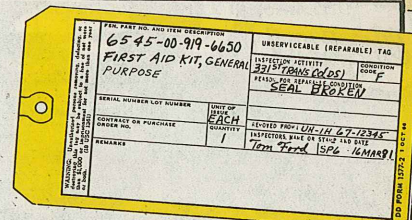
1 for every 5 passengers

On older kits, stencilled FIRST AID KIT AIRPLANE, there's a side pocket compartment. It should contain a packet of ammonia inhalation aromatic solution, NSN 6505-00-106-0875; a packet of providone-iodine solution, NSN 6505-00-914-3593; and

If the kit's due inspection, pull the tag and replace it with the DD Form 1576, Test/Modification Tag. If it's unserviceable because the seal's broken, or something else is wrong, retag it with the DD Form 1577-2, Unserviceable-Reparable Tag, and tell

1. NAME OF THE 2. ADDRESS 3. CITY 4. STATE 5. ZIP CODE 6. PHONE NO.	7. PART, PART NO. AND YEAR OF PRODUCTION 6545-00-019-0650	8. TEST IDENTIFICATION 9. Q. MATERIAL 10. DATE	11. LOT NO. 12. DATE
	13. FIRST AID KIT, GENERAL PURPOSE	14. AUTHORITY 12 MONTH INSP DUE PER TM 55- 1520-227-20-1	15.
17. SERIAL NUMBER AND NUMBER OF THIS UNIT	18. UNIT OF ISSUE EACH	19. QUANTITY 1	20.
21. CONTRACT OR PURCHASE ORDER NO.	22.	23.	24.
25. INSPECTION OFFICER 331 ST TRANS CO (DS)	26.	27. INSPECTOR'S NAME OR STAMP AND DATE Sgt. Hale - SP/5 24-MAR-81	28.

Kit unserviceable? Use DD Form 1577-2



Check side pocket on older kits

FIRST AID KIT
AIRPLANE
8546 010-6450

Handwritten on card:
1. 1st Aid Kit
2. 1st Aid Kit
3. 1st Aid Kit
4. 1st Aid Kit
5. 1st Aid Kit
6. 1st Aid Kit
7. 1st Aid Kit
8. 1st Aid Kit
9. 1st Aid Kit
10. 1st Aid Kit

First aid kits can save lives and reduce suffering. Make sure yours are ready when you need them.

Lock Wire Choice

I'M GONNA FIX YOU GOOD, OL' PAL... I GOT SOME HEAVY LOCK WIRE FOR YOU!

HOLD ONE, BIRD MAN!! FOLLOW THE PUBS!

URGH!

Dear Windy,
TM 55-1520-210-23 calls for using 0.032-in lock wire on the Huey pitch horn and stabilizer mounting bolts, which have large diameter holes. The rule-of-thumb principle calls for using wire that will fill 75 percent of the hole. Shouldn't we be using a heavier wire, Windy?

SSG E. R.

Dear Sergeant E. R.,
Negative! Design specifications in the Huey pub call for the 0.032-in wire, which does the job. You can forget any "rule of thumb." When wire size is not given in a bird manual, follow the backup info in the general aircraft maintenance manual. Para 3-170 in TM 55-1500-204-25/1 says to use 0.020-in wire when the hole diameter is less than 0.045 inch; 0.032-in wire when the hole is larger than 0.045 inch.

Windy

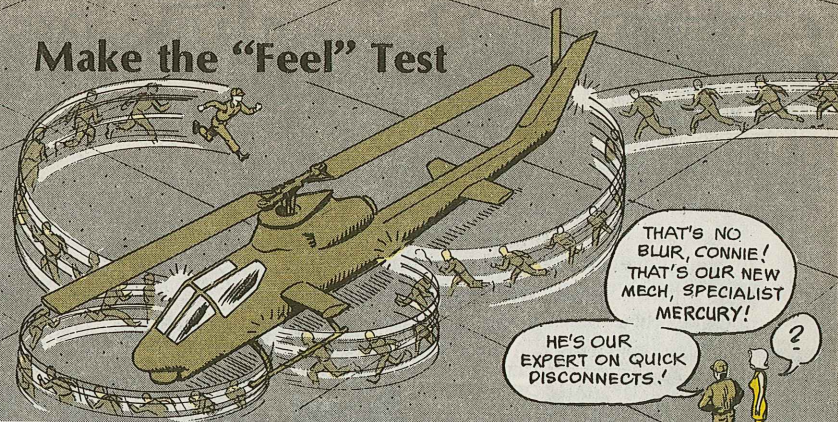
Lifesaving Help

To keep your aviation life support equipment in tip-top shape, check out Training Circular 1-62 (Apr 80). It has the word on maintenance and inspection of your ALSE. Order copies on DA Form 4569 from the AG Publications Center, Baltimore.

No Pint Cans

Nope, there're no pint cans of fire resistant hydraulic fluid Mil-H-83282 in the Army supply system. The smaller cans weren't cost efficient. So, when you need to top off the reservoirs in your bird, the quart's the smallest can you can get.

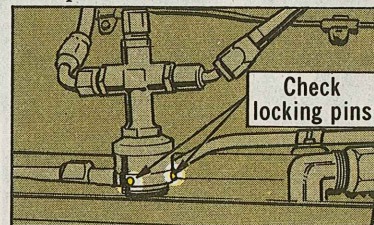
Make the "Feel" Test



The quick disconnect fittings on aircraft fuel, oil and hydraulic lines are real handy when changing a part. If you don't reconnect the line securely, tho, you'll have problems.

For example, during a Cobra flight, transmission oil temperature indicated 105° C and rising, and the transmission "hot" oil light came on. Postflight inspection showed the line was loose, slowing oil flow to the oil cooler.

So never be too quick in connecting the quick disconnects. Observe and



feel for the locking pins sticking out—indicating the line is tight.

HA-HA! THAT TICKLES!

Loose Bumpers?

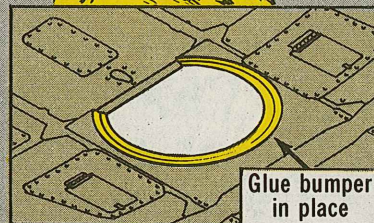
DARN! HOW DO I KEEP THIS HELL HOLE BUMPER IN PLACE WHILE THE GLUE DRIES!

I'M THE TOP EXPERT ON HELL HOLES AND I ADVISE YOU TO USE C-CLAMPS!

Having trouble keeping the hell hole bumper in place on your Huey?

If so, you can get a pint can of adhesive, NSN 8040-00-664-4318 that'll hold it. The instructions packed with the glue tell you how to use it.

Use C-clamps to hold the bumper in place while the glue dries.





With Tele-
typewriter
PM...

Avoid Traffic JAMS

Traffic stoppers? How 'bout Redford, Tiegs, Reynolds, Derek and you?

Yep, you. Maybe you don't belong in the above company, but you can stop traffic, too. The type that comes and goes thru your TT-76, TT-98 and TT-4 teletypewriters.

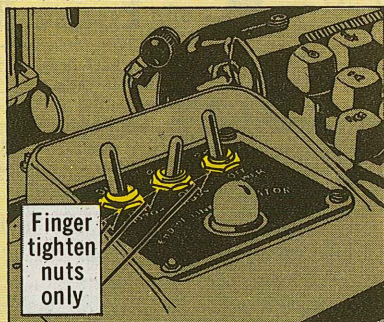
LIBERAL DOSES OF PM,
CAN KEEP THINGS
FLOWING SMOOTHLY!

HERE
ARE SOME
TYPICAL
TROUBLERS
AND WHAT YOU
CAN DO TO
STOP THEM!

?

TWIST 'N TURN—Keeping things moving means adjusting and snugging up parts of the set.

Like the toggle switches on either side of your keyboard. Finger tight only, please. The extra pressure of a wrench can break 'em.



Finger
tighten
nuts
only

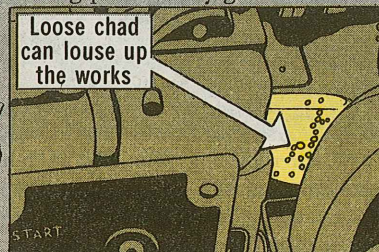
Motor speed adjustment is another "fingers only" job. No pliers are needed. Push the knob in for more speed and pull it out to slow it down.

46

DOWN 'N DIRTY—The first stopper is dirt. It gets inside your set and grinds gears to a halt. Your first line of defense is a dust cover. Use it.

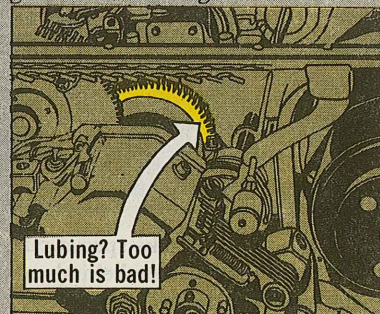
Keep the chad bin on the job. Empty it when it's full, too. Those little bits can put a big hurt on the moving parts if they get a chance.

Loose chad
can louse up
the works



Careful with lubing. Too much is as

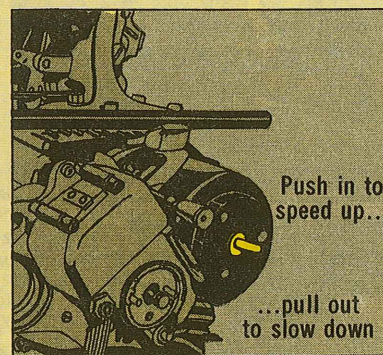
bad as too little. Especially where dirt is concerned. Grit sticks to those generous blobs of grease.



Lubing? Too
much is bad!

Taking a break? Don't use your set for a shelf for sodas, cigarettes or snacks. They'll wind up inside (the set, not you) for sure.

Too much muscle can lock up the governor worm spring and off your set goes to support.



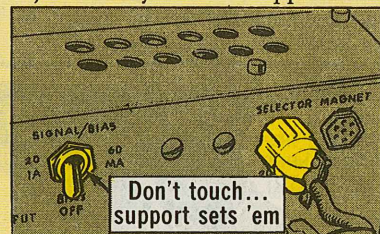
Push in to
speed up...

...pull out
to slow down

To check motor speed, use the tuning fork that comes (and stays) with the set. Tap the fork on the palm of your hand and look through it at the white dots on the governor. If they stand still, no adjustment is needed.

If they move left, increase motor speed. Movement to the right calls for slowing down. 'Course, always give the motor a couple of minutes warmup before making your check.

Never let all your good work go down the drain by making some adjustments you're not supposed to.



Don't touch...
support sets 'em

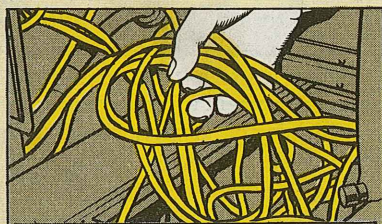
Some folks will do anything to get better traffic. Like mess with selector magnets or bias potentiometer settings. These have been preset by support. If you think they need work, turn the set in.

47

HARD 'N FAST—To keep traffic moving, go easy on the equipment. That means fasten it down before you travel. Lock down what you can—platen, carriage, key board, blocking plates.

You might get away with just locking down the carriage for a short trip on good road. But a long haul over a tank trail or worse calls for all-out security.

Cords and cables take special care, too. Some are hidden behind and under components. What you don't see can sure get hurt. So take special notice when replacing or removing your TT.

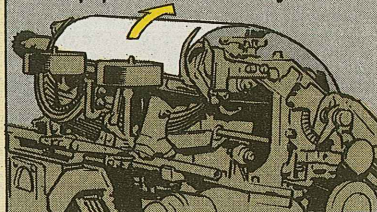


Watch for cables when sliding gear

Likewise when sliding your KW-7 secure equipment into its mount. In-the-way cables get pinched.

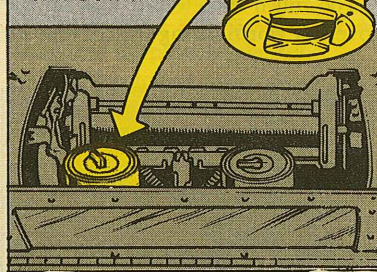
Save your line-feed pawl by pulling paper out from the front only. You'll bend it if you try to remove it from the back of the platen.

Pull paper FORWARD only



When replacing your ribbon, put the indented side down. That's the only way it feeds properly. Put in backwards, it drags on the roller.

Indented side DOWN



IN FACT, THE ROUGHER YOU TREAT 'EM, THE HARDER THEY'LL BE TO OPERATE NEXT TIME!

RIGHT ON, BONNIE!

EASY ON KEYBOARDS! THESE KEYS DON'T NEED A MASHING TO PRINT THEIR MESSAGE!



DRAT... WE JUST BLEW A FUSE, MACON!

CAN I PUT IN A BIGGER AMP FUSE?

NO! YOU RISK DAMAGE TO THE CIRCUITS IT PROTECTS!

OPEN 'N SHUT—If your teletypewriter is running open or not at all, there are some things to check before you turn it in for repair.

Fuses are always a possibility. Remember, tho, that a blown fuse may be trying to tell you something. If you blow the replacement, too, go ahead and turn the set in.

'Course, if you overfuse you won't have that problem. But, you'll get others—like damage to circuits because the fuse couldn't blow.

If traffic is garbling, there are a couple of checks you should make before turning the teletypewriter in for repair.

Another is the switch box. If you're mounted in an AN/GRC-122, -142 or AN/VSC-3 radio teletypewriter set and using secure gear, the switch goes in red. If not, messages will garble.

IF IT'S NONSECURE, USE BLACK OR YOU'LL RUN OPEN!

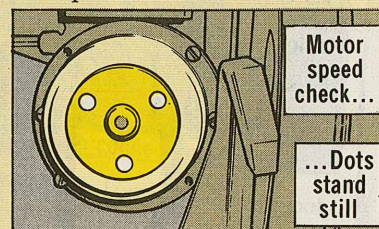


For your AN/VSC-2, see TM 11-5815-331-14 for cabling info.

In the AN/VSC-2, if your TT-4C/TG is not working, maybe it's missing something. A-4 in that setup needs a 27K resistor and plate. Without 'em, it acts like it needs maintenance.

On the other hand, if you're using the TT-523 or -524 low-level signaling device and get increased local copy off-line error rates, tell your support.

The culprit is likely dirty or out-of-adjustment send contacts in your teletypewriter. The low-keying voltage and current won't let the self-cleaning function clean the contacts.



Motor speed check...

...Dots stand still

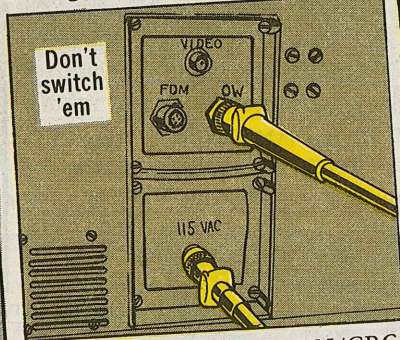
The first is motor speed. Dig out your trusty tuning fork and eyeball the white dots again.

Mixed or
Matched..?

Color Code Cables

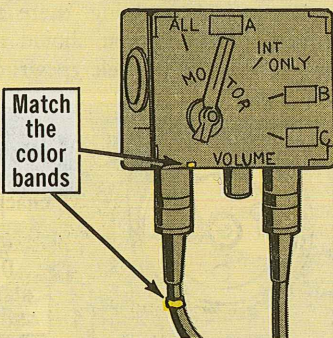
PUTTING THE
RIGHT CABLE ON THE
RIGHT CONNECTOR IS
NOT SUPPOSED TO
BE A GUESSING
GAME!

Putting the CX-10762 power cable to



the order wire jack of your AN/GRC-103 radio set's T-983 transmitter, f'rinstance. That ruins the 5TR1A5 amplifier-monitor. Strike one!

A crewmember flip-flops his CVC helmet's hookup cables. That "hot mike" lets him override all other



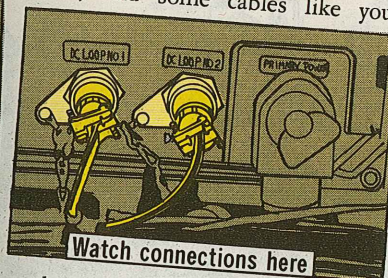
commo on your tracked vehicle's intercom. Strike 2!

IF IT IS, YOU'D
BETTER CHANGE
THE RULES...

THE PENALTIES
IN THIS GAME ARE
STIFF!

And, it can be an easy Strike 3, you're out, when it comes to setups like your AN/GRC-142, -122 radio teletypewriter set.

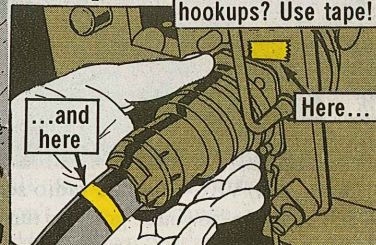
There's a lot of hooking up to do there, and some cables like your



modem's DC Loop 1 and 2 are look-alikes.

One way to beat the odds is to color code both the cable and its connector with tape. Just a little will do—one strip around the cable, another near the receptacle.

Worried about
hookups? Use tape!



IF YOU NEED THE TAPE TO DO
THE MARKING, TRY THESE NSN'S...

Yellow	7510-00-634-2788
Red	7510-00-634-2790
White	7510-00-634-2791
Orange	7510-00-634-2789
Green	7510-00-634-1341

These pressure-sensitive tapes are 1/4 inch wide.

Be careful, tho. You can overdo marking and make things more confusing than before you started.

A TOUCH IN
THE RIGHT SPOT
CAN KEEP YOU IN
THE BALL GAME!

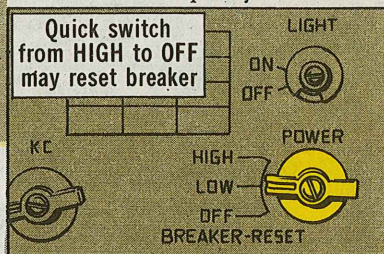


YOU WON'T
COME ON, EH?
WELL, IT'S
SUPPORT FOR
YOU!

Hit the Switch

NOT SO FAST,
SPECIALIST!
WHY DON'T YOU
TROUBLESHOOT
FIRST... LIKE MY
TM SAYS?

If it's still no go, try turning the
POWER switch quickly from HIGH



Your AN/VRC-12-series radio set
won't come on, so you're going to turn
it in?

Wait one. Maybe the circuit breaker
is tripped. Go through your TM
troubleshooting instructions.

to OFF. That may reset the breaker.
Don't overdo the muscle, tho, and
break the knob.

It Shouldn't Happen...

WELL... HELLO
THERE! I-YI-YI!

FREDDIE
WON'T BE ANY
HELP IN THE BIG
GAME, NOW!

Ol' Fast Freddie always had the hot hand—on the basketball court, in the
poker game, on the rifle range.

The other day, Ol' Freddie used the antenna on his CO's jeep for a leaning
post just as a transmission started.

Hot hands? They were burning up!

52



Rescue Radio Repair

When your AN/PRC-90 radio set
needs support repair, it goes to depot.

Any repair above "O" level requires
packing up a complete radio set and
sending it (or having it sent, depend-
ing on your command's SOP) to:

Commander
Sacramento Army Depot
ATTN: Transportation Officer
Sacramento, CA 95801

Mark the package for: Depot Stock
Condition Code F.

That's the word in interim change
I01 to TM 11-5820-800-12. If you
don't have the change, jot the above
address down on Page B-3. The work
is no longer done in Lexington.

Who's In Control?

THIS SHOULD
HELP YOU, OLD
BUDDY!

THANKS,
BUT MY
REPAIRS
REQUIRE
DEPOT LEVEL
...NOT "O"!

HA!
HERE'S
HOW WE
HOOK UP
YOUR
REMOTE!

NO!
NO!

HOLD ONE, JONES!
WE BLEW IT!

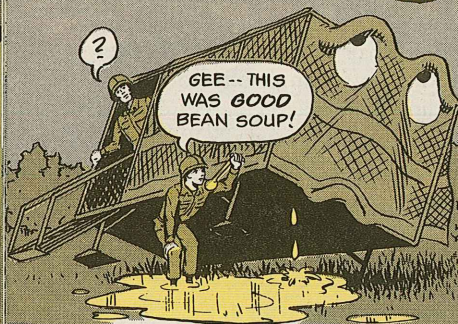
SORRY
'BOUT
THAT!

Remoting an RT with the
AN/GRA-39 control group is easy
enough—unless you believe
everything you read on Page 54 of PS
327. You hook the local unit's radio
cable to RETRANSMIT R/W as TM
11-5820-477-12 says. You don't hook
it to the SPKR connector, as PS did.



53

Cranky Crank PM



During the MKT-75 set up—or when pulling the weekly PMCS check in Table 1-4, TM 10-7360-206-13—be sure each leveling jack crank works nice 'n' easy.

If a crank is cranky, chances are the Spirol pin on the crankshaft gear or the one on the lower shaft leg gear is broken.



You need:

PN/FSCM

Nomenclature

- 5000-22 (55732) Pin, Spirol, crankshaft gear
- 5000-23 (55732) Pin, Spirol, lower shaft leg gear



- Tapered drive pin punch, ball peen hammer and screwdriver.

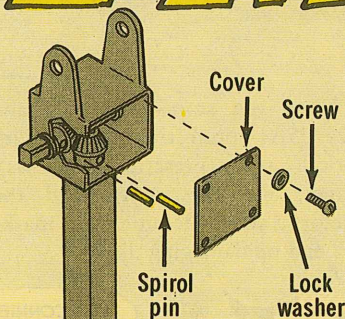


1. Block up and level the trailer. Remove the bum leveling jack assembly from the trailer chassis and put it on a trailer platform or workbench.

2. Remove cover plate from jack.

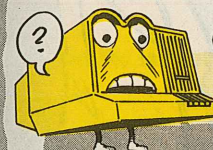
3. Use the tapered punch and ball-peen hammer to knock out the broken pin.

4. Insert a new pin ...replace the cover.



Be extra careful to keep the lower shaft leg in the main jack tube assembly when removing/replacing a broken pin. If you let the leg slip out of the tube, the thrust washer and bearing separate...and that brings on another whole new bunch of repair work...by your support unit.

Making sure your 4 leveling jacks work "as advertised" can save you a lot of downtime and dollars.



Cue See Bulb

FAKE! IMPOSTER!

HEARD YOU NEED A NEW BULB, SUB!



PHONY!

The right bulb for your Cue See projector is NSN 6730-01-081-6555. Watch for imposters.

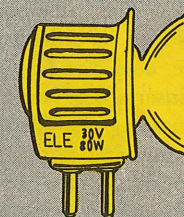
draw too much current and burn out windings in the motor transformer. That's a \$45 repair job.

You need a 30-volt, 80-watt, Type ELE bulb. Anything more is too much.



Cue See projector

Some troops try look-alike bulbs. Many are too big for the job. They



Get this lamp, or equivalent

Reform

the Faceform

When you store your M24 and M25/25A1 protective masks with optical inserts (prescription glasses), chances are the inserts and the faceforms you use to protect the masks will end up damaging them.

HEY, CONNIE--I DON'T BELIEVE THIS MASK'LL FIT ME!

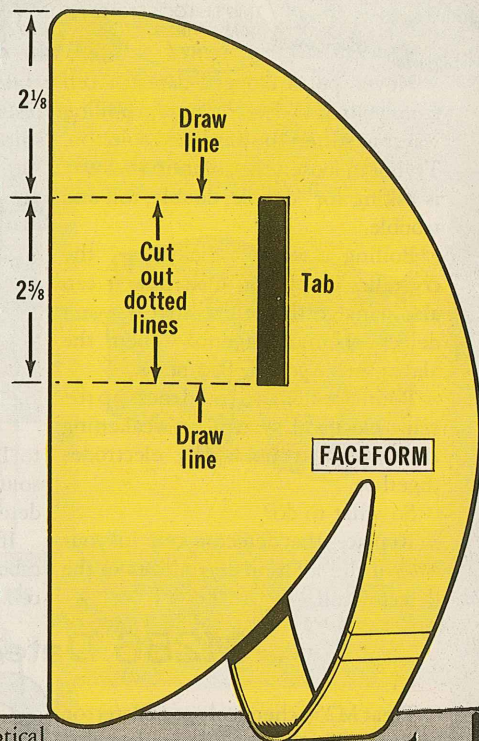
SO WHAT TO DO?
SIMPLE...

The problem: The fiberboard M6A1 faceform, used to protect the masks in storage, does not fit right with the optical inserts. The faceform and inserts can make a permanent set in the rubber during long storage.

Also, the faceform forces the optical inserts against the mask lens and damages the lens.

DO THIS

1. On the faceform, draw a line $2\frac{1}{8}$ inches down from the high point of the faceform.
2. Draw a line $2\frac{1}{8}$ inches down from that.
3. Draw a line to each side of tab.
4. With scissors or a sharp knife, cut along each line to the tab.
5. Cut the tab out completely.
6. Do Steps 1 thru 5 on each side of the faceform.



You've got it made. The optical inserts will fit the faceform slot, and the faceform will fit the mask without causing damage.

With replacement faceforms, which come flat, it's easier if you cut out the optical inserts slots before you assemble the faceform.

The headshed has approved this fix and it'll be in an upcoming EIR Digest.

WATCH FOR IT!



M43 Detector Cell Caution

YOU SURE THAT'LL LOOSEN THE SOLUTION ON MY DETECTOR CELL?

HEE-HEE! THIS'LL LOOSEN ANYTHING, SONNY!

NO-NO! HELP!!

DOES SHE DO LAUNDRY, SIMMONS?

Never put a clogged detector cell from your M43 detector unit in boiling water to soften the hardened solution. Trying to loosen the solution that way is asking for "double, double, toil and trouble."

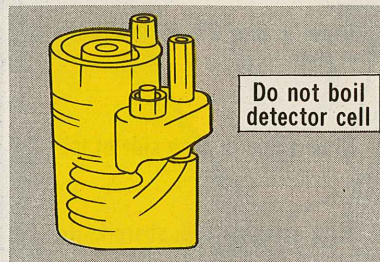
Boiling water dislodges the crystallized solution OK. But, it can also damage the cell so that it won't detect chemical agents. Then the alarm won't go off. Bad news.

Boiling water also could mess up the cell's electrical system by weakening the glue that holds the electrodes together.

So what to do?

Replace the detector cell in your M43 if the solution crystallizes in the detector cell.

Best bet: Always clear and rinse the reservoir assembly for shutdown or shipment like it says on Page 5-1 of C1

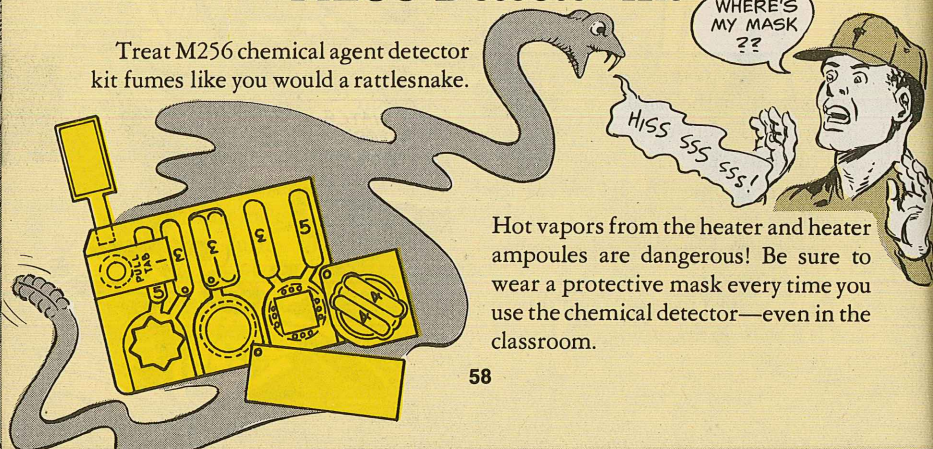


to TM 3-6665-225-12. That keeps the solution from crystallizing in the detector cell and pump assembly.

If you want to boil something, try cabbage. Lay off the M43's detector cell.

M256 Detector Kit

Treat M256 chemical agent detector kit fumes like you would a rattlesnake.



Hot vapors from the heater and heater ampoules are dangerous! Be sure to wear a protective mask every time you use the chemical detector—even in the classroom.

Your M256 Kit Fit?

BOY- HAVE WE GOT TROUBLE!

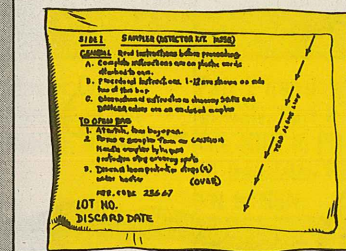
YER TELLIN' ME! OUR M256 HAS TORN, OUT-OF-DATE AND MISSING SAMPLER-DETECTORS!



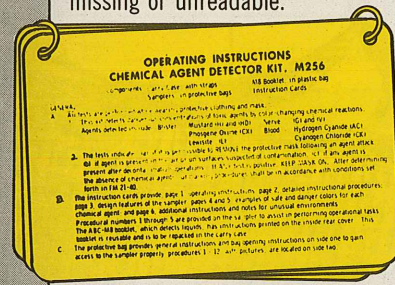
You can put your leftover sampler-detectors with a buddy's to make a complete kit. Remember, tho, that the discard date is the date on the bag—not on the case.

Your M256 chemical agent detector kit is a lifesaver—but only when it's in A1 shape. Replace the kit if it has any of these problems:

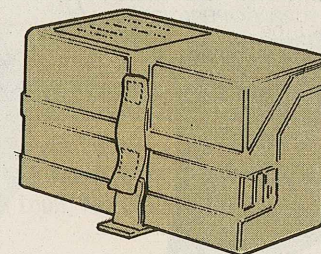
★ Out-of-date sampler-detectors.



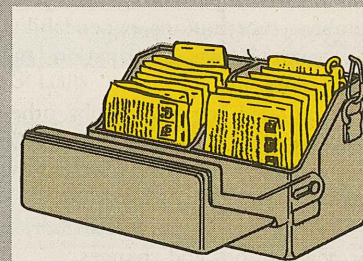
★ Any of the 3 instruction cards missing or unreadable.



★ Fewer than 5 sampler-detectors.



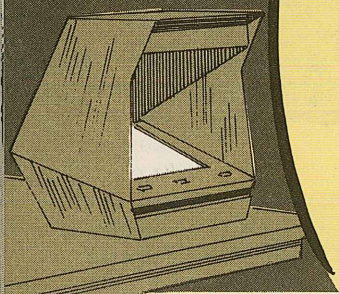
Running low on M8 detector paper? NSN 6665-00-050-8529 gets a booklet of M8 paper to detect liquid nerve and blister agents.



The M256 kit is NSN 6665-01-016-8399.

Supply Pubs on Microfiche

HERE'RE SOME
PUBS YOU CAN GET TO
HELP YOU RUN YOUR
SUPPLY OPERATIONS...



A quick glance at one of these 4-in x 6-in microfiche pubs can get you parts numbers, substitutions, expendability data, supply class information and much more.

If you need any of the pubs, other than the AMDF, have your pubs people put in a DA Form 4569 for the current ones.

Then get on pinpoint distribution for new editions and changes.

It'll make your job easier and save you a lot of time, too.

FICHE	USE	SOURCE	HOW TO ORDER
The ARMS Monthly Army Master Data File (AMDF).	Gives current NSN, price, unit of issue, expendability and recoverability code.	DARCOM Catalog Data Activity ATTN: DRXCA-BT New Cumberland Army Depot, New Cumberland, PA 17070	Letter to source. Telephone orders will be accepted Autovon 977-6741/6608
Quarterly ARMS Interchangeable and Substitute (I&S) index and I & S group files. (Ordering the AMDF automatically gets you the I&S fiche.	I&S index lists interchangeable and substitute items by NSN and MCN. I&S group identifies NSN/MCN groups and gives order of use.;	New Cumberland, PA	See above
Master Cross-Reference List Parts I, II & III	Part I translates PN to NSN. Part II translate NIIN to PN. Part III translates FSCM to PN to NSN.	AG Pubs Center 1655 Woodson Rd., St Louis, MO.63114	DA Form 12-21
Identification List by FSC (Replaces some SC's)	Description of items.	St. Louis	DA Form 12-21
SB 700-20	List of reportable items	St Louis	DA Form 12-34
SB 708-3	Ammo codes	St Louis	DA Form 12-34
SB 708-21	Groups & classes of supply	St Louis	DA Form 12-34
SB 708-22	Numeric index to supply classes and items covered by each class	St Louis	DA Form 12-34
SB 708-23	Alphabetic index to supply classes	St Louis	DA Form 12-34



NMCS/ANMCS Supply Requests

When you get the call to move out, will you be ready? You won't be if your equipment is not mission capable, or you anticipate that it will not be mission capable.

If a badly needed part is your problem, you may be closer than you think to a solution.

To get the part, send in an NMCS/ANMCS (Not Mission Capable Supply/Anticipated Not Mission Capable Supply) high priority request.

Your request goes the NMCS route whenever an item with a Weapons/Equipment System Designator Code (W/ESDC) is deadlined because of an unserviceable part, component, assembly or subassembly.

Your request goes the ANMCS route whenever a deadline condition is anticipated for an item with a W/ESDC.

You can submit an NMCS/ANMCS request only when the equipment or weapon system is listed in Appendix H of AR 710-2 or Appendix P of AR 725-50. If the two disagree, go with AR 725-50.

That's not your cue to get "request happy," tho. Submit your NMCS/ANMCS request only when it's absolutely necessary. Ask for the exact number of parts you need to put one piece of equipment back in operation.

CHECK OUT AR 710-2, PARA 2-18, FOR MORE INFO ON NMCS/ANMCS REQUESTS AND ON FILLING OUT YOUR REQUEST FORMS!

Some of the blocks for CONUS and OCONUS have different info. So make sure you follow AR 710-2 when you fill out your request.

The image shows a US Customs Form 100 (Export Declaration) with handwritten entries and red arrows pointing to specific fields. The form is divided into several sections:

- SHIPMENT INFORMATION:** Includes fields for 'SHIPMENT NUMBER' (N26AJ611456001R), 'SHIPMENT DATE' (03E), and 'SHIPMENT TYPE' (2B).
- COMMODITY INFORMATION:** Includes fields for 'COMMODITY CODE' (2530010575717), 'COMMODITY DESCRIPTION' (ITEM DESCRIPTION), and 'COMMODITY VALUE' (2530010575717).
- TAX INFORMATION:** Includes fields for 'TAX CODE' (2B), 'TAX RATE' (03E), and 'TAX AMOUNT' (2530010575717).

Red arrows point from the '2B' entry in the 'TAX INFORMATION' section to the 'TAX CODE' field and from the '03E' entry in the 'COMMODITY INFORMATION' section to the 'COMMODITY CODE' field.

W/ESDC

**E for ANMCS, N for NMCS
requests in block 21**

PLL Set-Up and DA 2064 Goofs

FORGET THE BIT ON PAGE
62 OF PS 336 ON SETTING UP
YOUR PLL! HERE'S THE WAY
IT SHOULD GO!



For initial stockage of PLL items that are issued as each but used in sets, the stockage will be in a set—enough to make a one-time repair of one piece of equipment. This is a minimum stockage.

Because of demands during the next 2 review periods, this stockage may be increased but not reduced. Use the stockage table in AR 710-2, Fig 2-28.

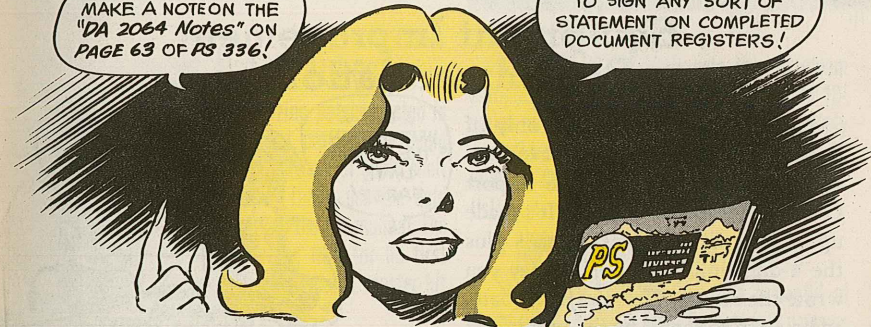
After the first 4 review periods, the initial stockage may be reduced based upon demands, or else deleted from the PLL because there were no

demands in the most recent 2 review periods.

Remember, a review period is 90 days for Active Army and 180 days for ARNG and USAR.

WHILE YOU'RE AT IT,
MAKE A NOTE ON THE
"DA 2064 Notes" ON
PAGE 63 OF PS 336!

YOUR CO IS NOT
REQUIRED BY AR 710-2
TO SIGN ANY SORT OF
STATEMENT ON COMPLETED
DOCUMENT REGISTERS!



DA Form 2406 NOR Time

A lot of maintenance allocation charts (MAC) show 24-30 hours as the repair time for equipment, but that doesn't get you off the hook for counting downtime on your DA Form 2406 Materiel Readiness Report. If your equipment isn't operable within 12 hours, report it Not Operationally Ready (NOR) on your 2406. That's the word in TM 38-750, Para 1-4n (2).

New Senior Supply Course



If you're a supply specialist in grades E7, E8 or E9, the Quartermaster School has a new correspondence course you should be interested in.

It's the Senior Supply Sergeant (76Z50) (S21) Nonresident Course. The course consists of 46 subcourses in areas such as maintenance operations, materiel management and staff procedures.

To enroll in the 226-credit hour course, complete DA Form 145 and send it to The Army Institute for Professional Development, US Army Training Support Center, Newport News, VA 23628.

Equipment Improvement Recommendation

Send in the original copy only of your SF 368 Equipment Improvement Recommendation. Write the Report Control Number in Block 3. It's made up of your first and last initials plus the 4-digit Julian date of the day you wrote the report. After the Julian date, add a slash followed by the number of the report for the day.



1a. From (Originating point) A Btry, 2d Bn 142d Arty Ft Bliss, TX 79931 WYOU98		UIC goes here
1b. Typed Name, Duty Phone and Signature Samuel Jones A/V 912-3465		
3. Report Control No. SJ121/2	4. Date Deficiency Discovered	5. National S
7. Manufacturer/Mfg. Code/Shipper		8. Mfg. P

Connie's Mini Minis



M60 MG Cracks

US Army Armament Command Letter (DRSAR-MAG) dated 29 Dec 80 has the latest word on M60 machine gun receiver cracks and loose rivets. A crack in the weld of the receiver is OK. The movement in any direction in the juncture between the receiver and receiver rails must be less than $\frac{3}{32}$ -in. No crack can be in receiver base metal. Bridge rivets must be tight. Rear mounting plate weld cracks are OK if plate rivets are tight. Armorers should turn in weapons with loose rivets. General support determines serviceability.

Cold-Patch Tubes

Forget the self-vulcanizing patches listed in TM 9-2610-200-20. The hot patches are being removed from inventory because of short shelf life. To repair your inner tubes, use the cold patches listed in Table 4-9 of the tire manual. The table, tho, shows the wrong NSN for its first item. Get the 4-size chemical patch master kit with NSN 6240-00-052-6724.

Tanker Coupling Gasket

Get the 3-in transfer hose coupling gasket for your M131-series fuel servicing tanker with NSN 5330-00-088-9166. Jot this number down. It's not in TM 9-2330-272-14.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1981-757-003/7

Crane Wiper NSN

Use NSN 2540-00-287-2317 to get the windshield wiper blade for your Model H 446 5-ton crane. Jot it down until your TM's updated.

Check Other Fuse

If your AN/URM-103 signal generator is "on the fritz," and the 4 fuses on the front panel are OK, have a look inside that dude. There's a 50-milli-amp fuse in the righthand corner, behind the low RF output...could be the culprit! Ask for Fuse 5920-00-760-6345.

Fuel Testing Kit

NSN 6680-00-151-5310 gets the petroleum sampling and gaging kit called for in FM 10-series pubs relating to fuel handling and supply operations. It's authorized by MTOE/MTDA. SC 6680-90-CL-N01 microfiche has the component listing.

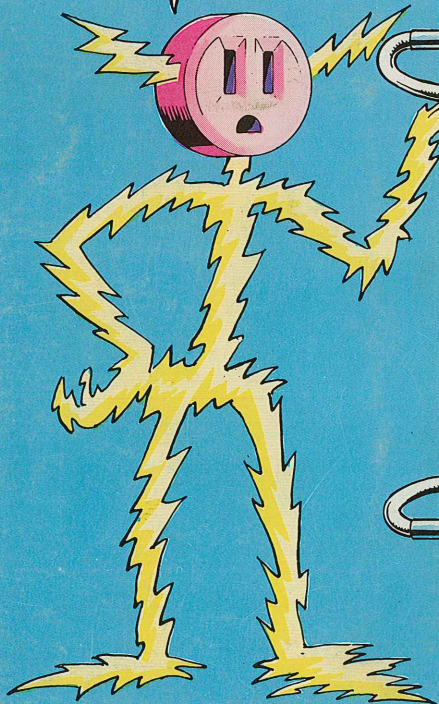
M880 Non-NSN Items

Your TM 9-2320-266-20P lists a bagful of items without NSN's. Order the non-NSN parts on DD Form 1348-6, using the PN, FSCM and Routing Identifier Code (RIC). The RIC for M880 items with FSCM 19207 is AKZ, while all others get RIC S9C. Check the item's SMR code first, tho. The code tells you if you can order the item. It's explained in Sect I of the -20P manual.

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

Electrical connections must be **CLEAN & TIGHT!**

WE CAN'T DO OUR JOB
IF YOU DON'T DO *YOURS!*



Remove

- paint

- dirt

- grease

- rust

- corrosion

**Keep 'em
tight!!**