Issue 329

P.S

April 1980

THE PREVENTIVE MAINTENANCE MONTHLY

See page 29

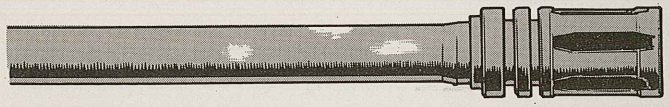
M16A1 Rifle...

PM's a Must for Rust

When the weather's wet or the humidity's humid, riflemen and armorers must give an extra edge to PM in order to hold down rust on their M16A1 rifles.

That goes double, even triple, in hot and humid areas or wherever there's salt air.

The rifle's finish can get worn off in lots of ways. So, check the rifle at least daily during use. If the finish is rubbed shiny, put lube on it like



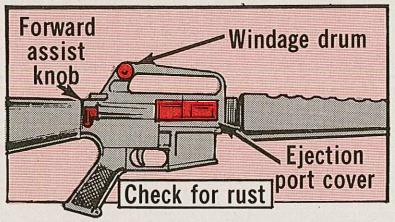
Check for shiny or rusted areas

right now. Then, armorers can use solid film lubricant and get it to support for spot touch-up or refinishing ASAP.

Salt air, hot, humid or rainy conditions speed up rust. Once the finish is gone, you can get pitting and major damage. Get it refinished now.

Other rifle killers are steel wool, crocus cloth and sandpaper. Removing rust on your small arms with that stuff removes the finish,too. The oil you put on gives the metal very little protection.

So, if you find a rust spot, rub in lube alone to remove it. If you can't get the rust off with the lube, or if it won't stay off, cover it with lube and get your rifle to your armorer for spot touch-up.

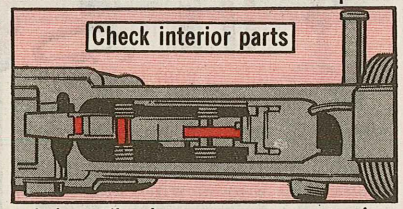


You'll have to give the ejection port cover, forward assist knob and rear sight windage drum an extra drop of oil in hot, wet areas. And, you'll have to lube them more often. They tend to rust much faster than other rifle parts.

Wipe the outside of your rifle completely dry when you clean it. Reapply just a light coat of LSA to prevent lube gum on surface parts.

Another somewhat sticky point: Salty sweat from your hands rusts gun metal. When possible, hold your rifle by the stock and hand guard. If you do hold it by the metal parts, check them often for rust.

Armorer's exclusive: Corrosion and mold start on the interior parts



of the rifle during storage. You've got to clean and lube them as often as necessary in order to prevent damage. If you're lucky enough to have an air conditioned storage room, the problem is small. If not, clean and lube.

PS THE PREVENTIVE MAINTENANCE MONTHLY

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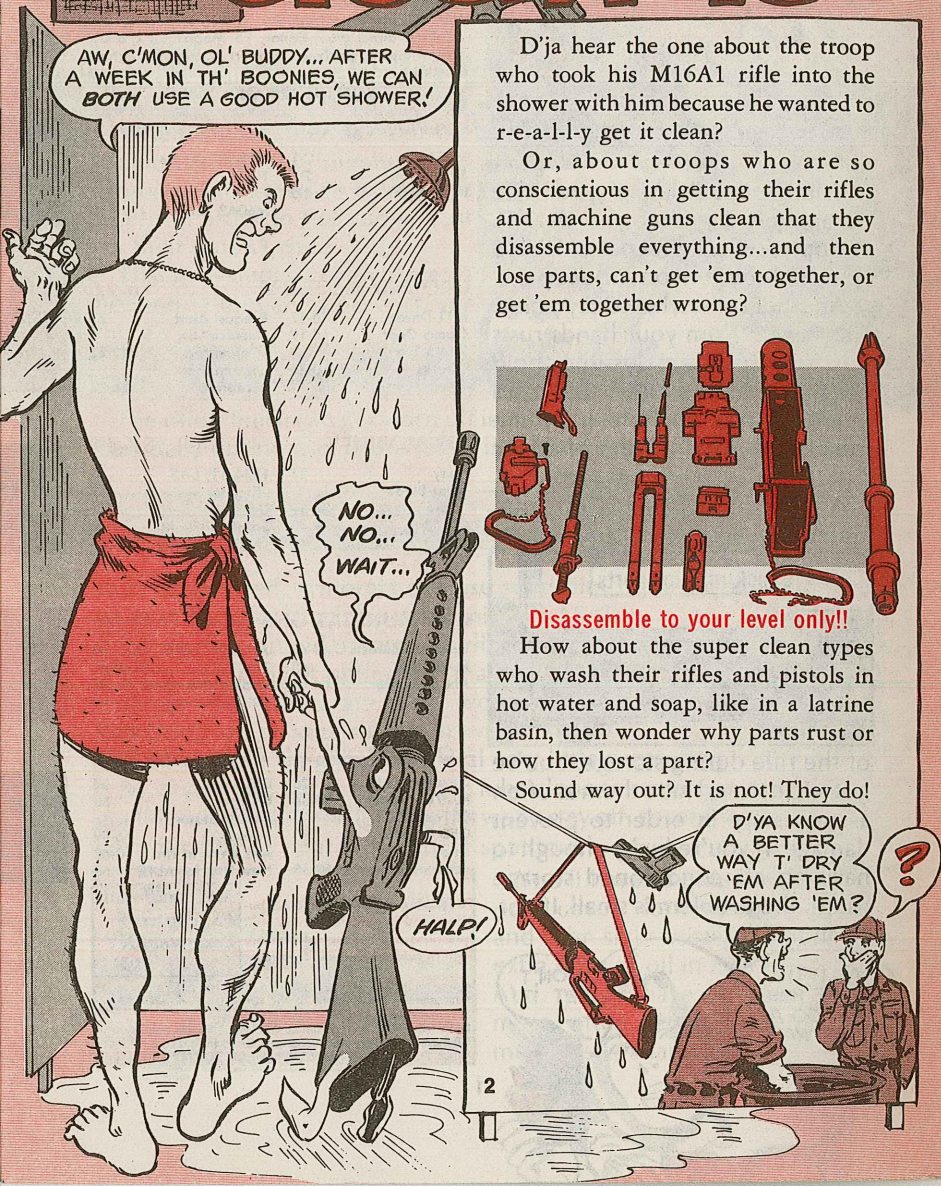
FIREPOWER

Small Arms...

Clean is



D'ja hear the one about the troop who took his M16A1 rifle into the shower with him because he wanted to r-e-a-l-l-y get it clean?

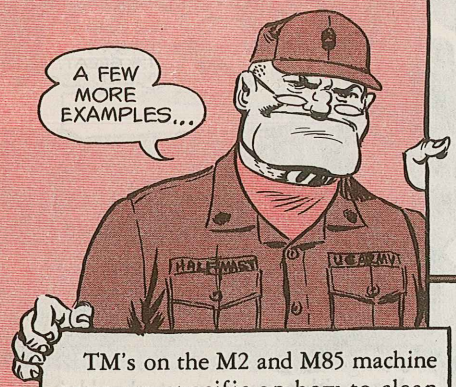
Or, about troops who are so conscientious in getting their rifles and machine guns clean that they disassemble everything...and then lose parts, can't get 'em together, or get 'em together wrong?

Disassemble to your level only!!

How about the super clean types who wash their rifles and pistols in hot water and soap, like in a latrine basin, then wonder why parts rust or how they lost a part?

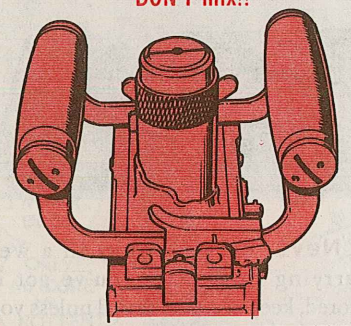
Sound way out? It is not! They do!

Clean, but...



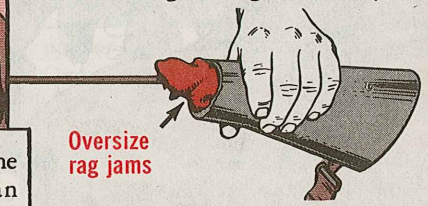
TM's on the M2 and M85 machine guns are specific on how to clean backplates. Yet, troops dip them in cleaning solvent or saturate them with it...and it's bye-bye backplate. The caution on not using cleaning solvent

Backplate and solvent DON'T mix!!



on backplates is in BIG, BOLD TYPE in the TM's (example, Table 3-2 of the -10 TM on the M2 machine gun. P. 18 of the -10 on the M85 says the same.) The message is obvious.

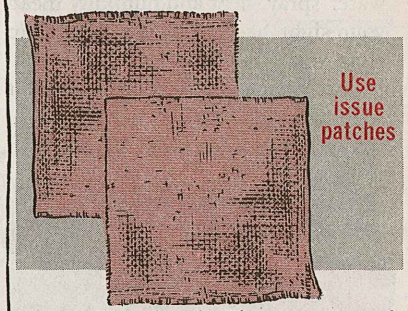
Another cleaning hazard is the over-sized rag...which jams in the barrels, chamber or receiver. Even the new M240 machine gun has been victim to that. Which makes you wonder where the troop's head is who's forcing the rag in...or why he



Oversize rag jams

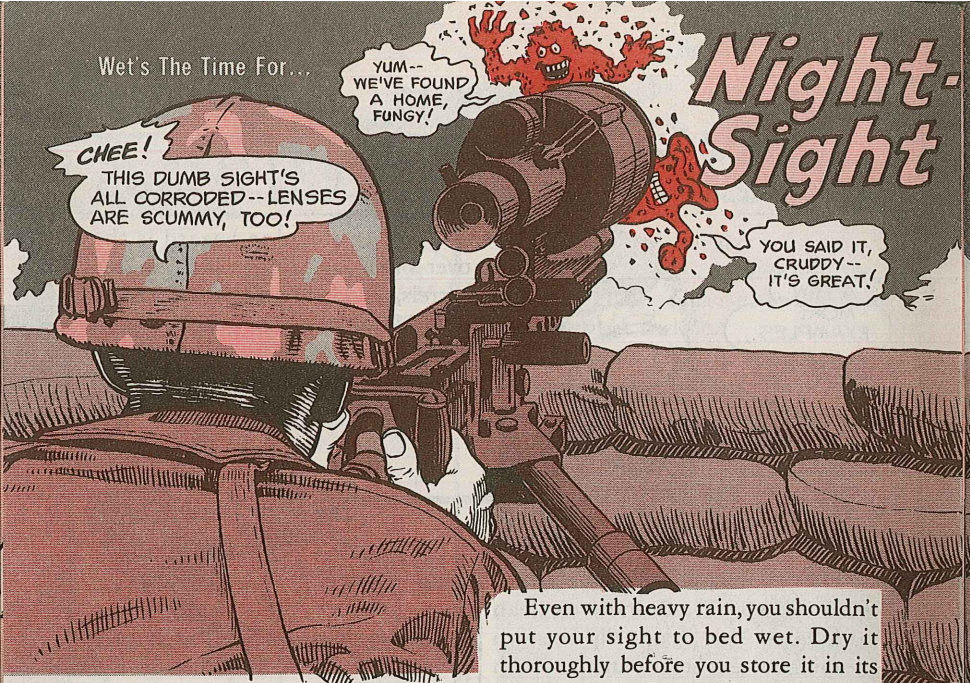
couldn't cut it to size if he had no issue patches on hand. At least, it makes the armorers and support people wonder when they've got to get the rag out.

The moral is obvious: Do it like the TM says! Do it right and only do what



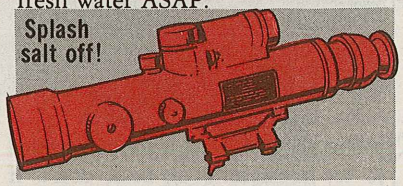
Use issue patches

you're allowed to do. If you're tempted to try something off-beat, don't. If you've got any doubts, at least talk it over with your local pro (armorer, support) before you try.



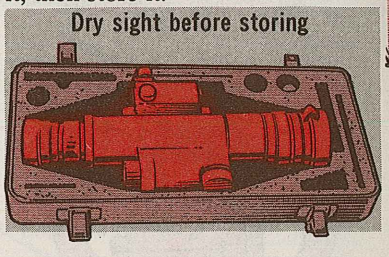
Night-vision sights like the AN/PVS-2 (), AN/PVS-4 and AN/TVS-2 were made to take some punishment from rain—but salt-water spray, heat and humidity mean your sight has got to get some help from you.

For instance, if your sight gets hit with salt spray or a salt-water bath, you've got to wash it thoroughly with fresh water ASAP.



You can splash on as much as you need. The idea is to do it. Otherwise, the price your sight pays is corrosion.

Even with heavy rain, you shouldn't put your sight to bed wet. Dry it thoroughly before you store it in its carrying case. Same thing goes if the sight's exposed to high humidity. Dry it, then store it.



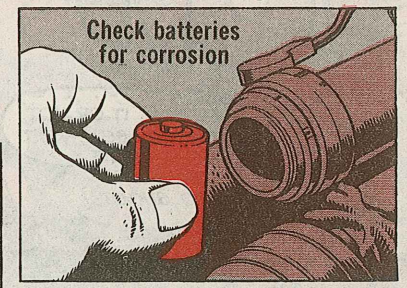
Never store a sight in a wet carrying case. Once you've got it stored, keep the case closed unless you absolutely have to get something out of it. When you open it, moisture creeps in. When you close it, that moist air you let in breeds corrosion in that hot, closed up case.

PM

Clean the outer surfaces of the lens assemblies with a soft brush and lens

tissue before you store the sight. That prevents fungus growth on the lenses.

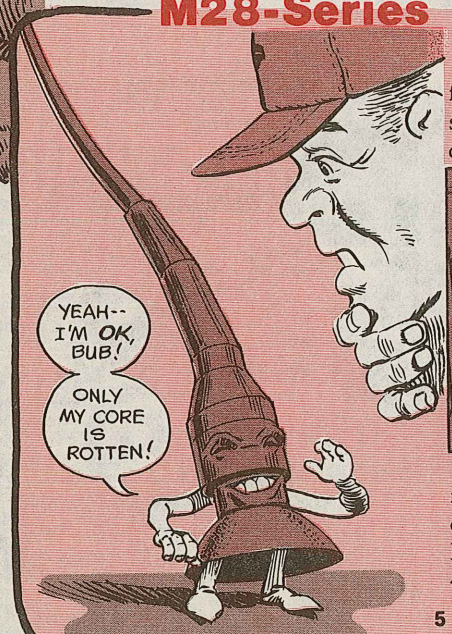
Check the batteries and battery wells for corrosion when you remove the batteries for storage. Clean 'em



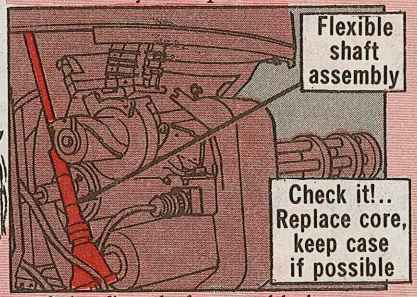
up—or get 'em cleaned if you can't. Once corrosion starts on batteries, it can put your sight out of sight.

And remember: Remove those batteries when you're not using the sight.

M28-Series Flex Shaft

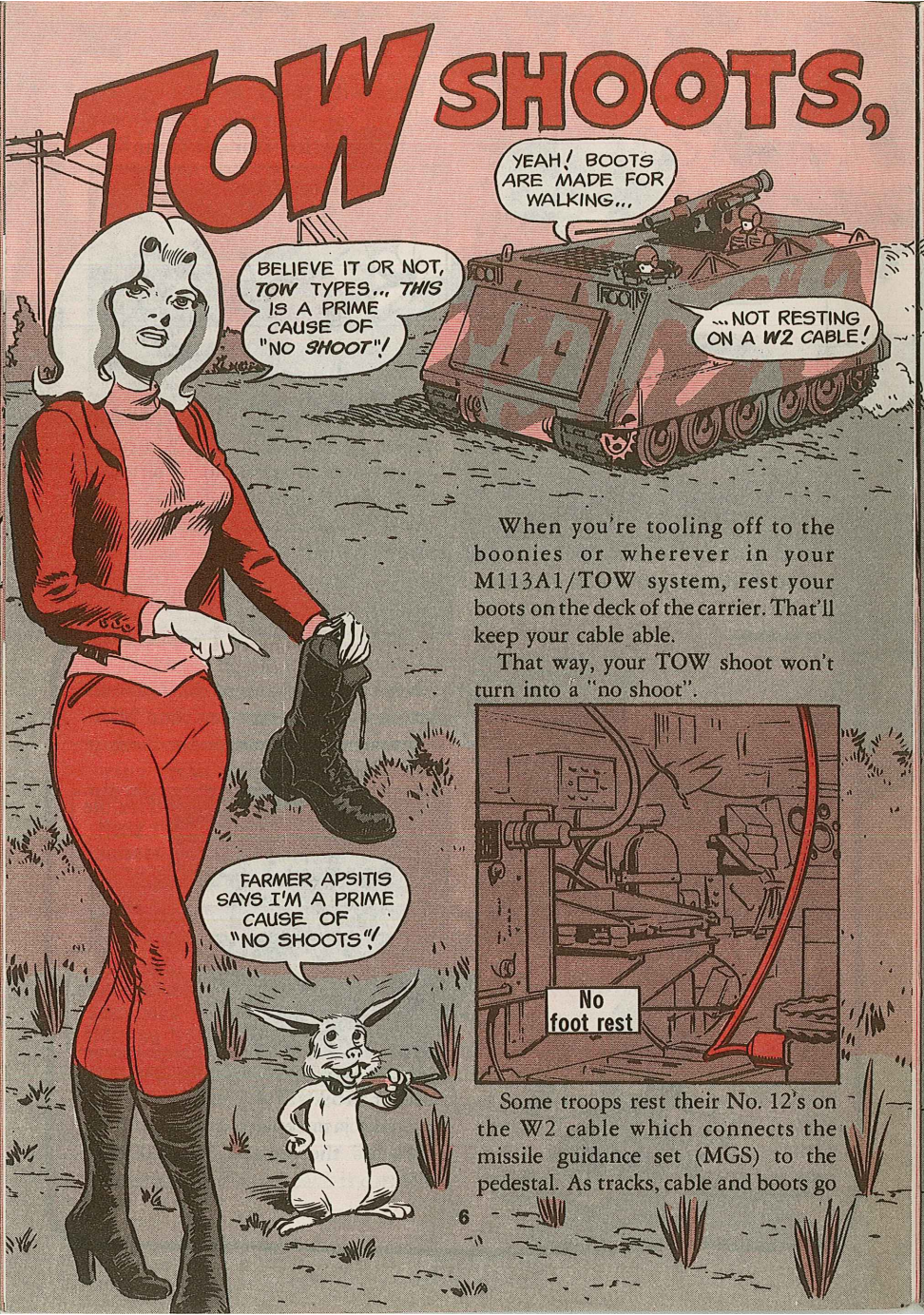


Next time the core of the 7 .62mm flexible shaft breaks on your M28-series armament subsystem, look it over before you dispose of it.



If the flex shaft assembly has part number 11690427-4, you can keep the case and just replace the core. The NSN for the core is 3040-01-038-4927.

TOW SHOOTS, NO BOOTS



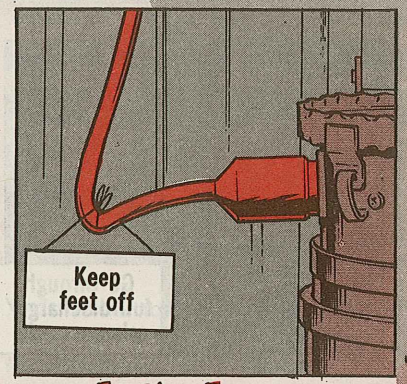
When you're tooling off to the boonies or wherever in your M113A1/TOW system, rest your boots on the deck of the carrier. That'll keep your cable able.

That way, your TOW shoot won't turn into a "no shoot".

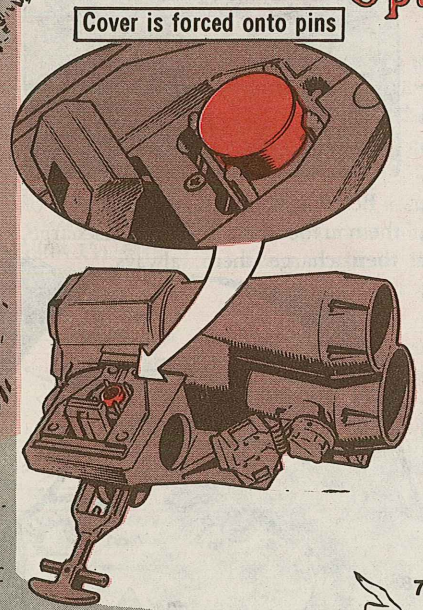
Some troops rest their No. 12's on the W2 cable which connects the missile guidance set (MGS) to the pedestal. As tracks, cable and boots go bouncing merrily along, things happen. The cable covering pulls loose, wiring breaks and connectors get damaged.

When training or firing time comes, the missile system has no power cable.

You may get lucky a time or two in using the W2 as a footrest. Your luck will run out...as it has time and again for others. Just imagine a foot high tag on the cable saying: "KEEP FEET OFF". Then do it.



Optical Sight



The protective cover on the index plate connector of your optical sight is red so you can see it and take it off when necessary...when you mount the sight on the traversing unit (TU), that is.

Some troops forget. When the sight's mated to the TU (which has a cover on the opposing connector), the locking handle forces the pins of the sight's connector thru the cover. It also may bend the pins.

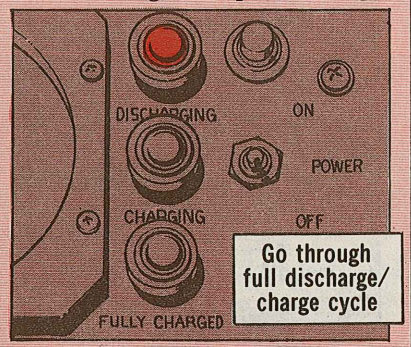
So, you get 2 problems. Either you can't get a good connection, or the perforated cover is forced deep into the connector. Getting it out without messing up the connector is a real job.

PS MORE

Battery Charging

You've heard it before, but somebody's not listening.

When you charge your BB-287 nickel cadmium batteries, let the charger discharge them **all** the way and **then** bring them up to full charge.

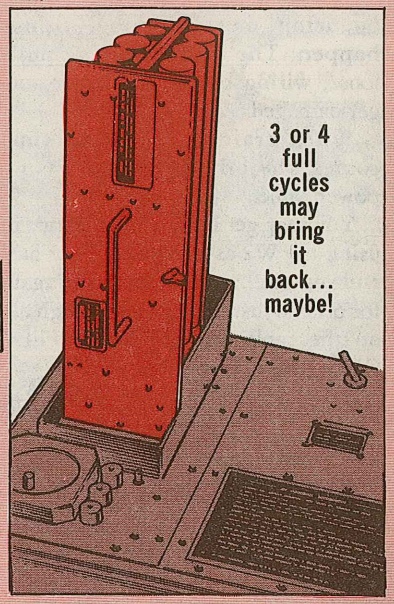


There are easy, clever ways to bypass the full discharge cycle and get a quicker "charge", but all they do is cheat. They cheat the battery by lowering its life, they cheat the user who can't get the power he needs, and they cheat every taxpayer who has to pay for a replacement...including you.

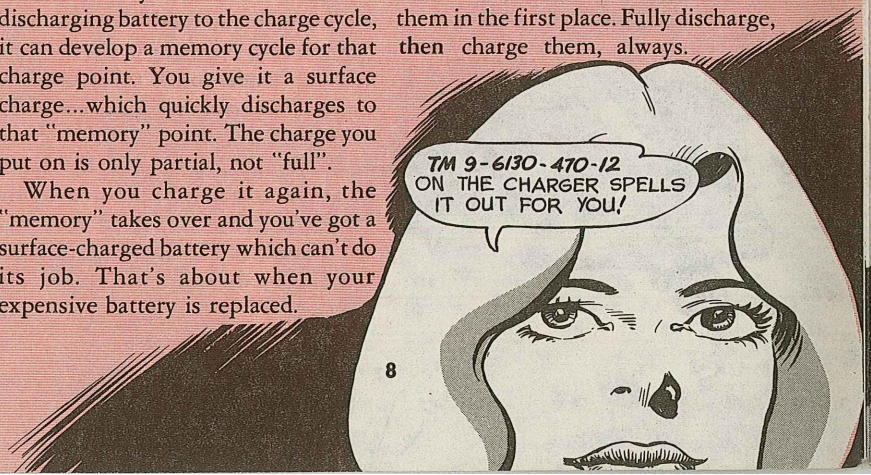
Like so: If you cheat and switch a discharging battery to the charge cycle, it can develop a memory cycle for that charge point. You give it a surface charge...which quickly discharges to that "memory" point. The charge you put on is only partial, not "full".

When you charge it again, the "memory" takes over and you've got a surface-charged battery which can't do its job. That's about when your expensive battery is replaced.

It's possible to bring those "fast charge" victims back to near normal by taking them through 3 or 4 full discharge/charge cycles. Then again, maybe not.



Best bet is not to make a victim of them in the first place. Fully discharge, **then** charge them, always.

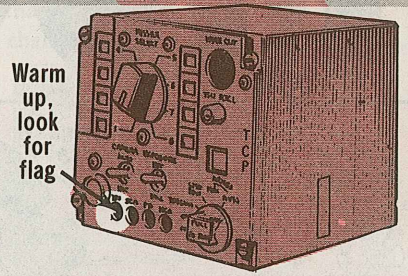


M65 TOW BIT Bit

When the weather's cold and you get a Built-In Test (BIT) failure on your M65 airborne TOW's telescopic sight unit (TSU), hang in there.

Operate your M65 system for 20 minutes or so. Warm it up, so to speak. Then, do the BIT bit. If you don't show a TSU flag on the control panel (TCP), your TSU's operational.

Naturally, if the flag shows after warm-up, do the BIT over till you're sure it's failing. Then, troubleshoot.



Information on the 20-minute warm-up will be added to TM 9-1425-473-20 and -34.

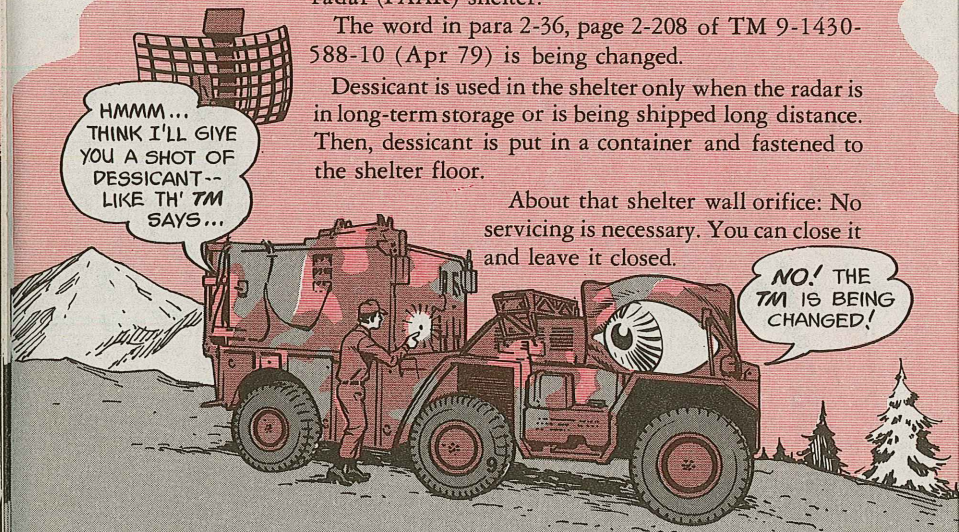
FAAR Dessicant

Forget the TM note on placing dessicant in the front wall orifice of your forward area alerting radar (FAAR) shelter.

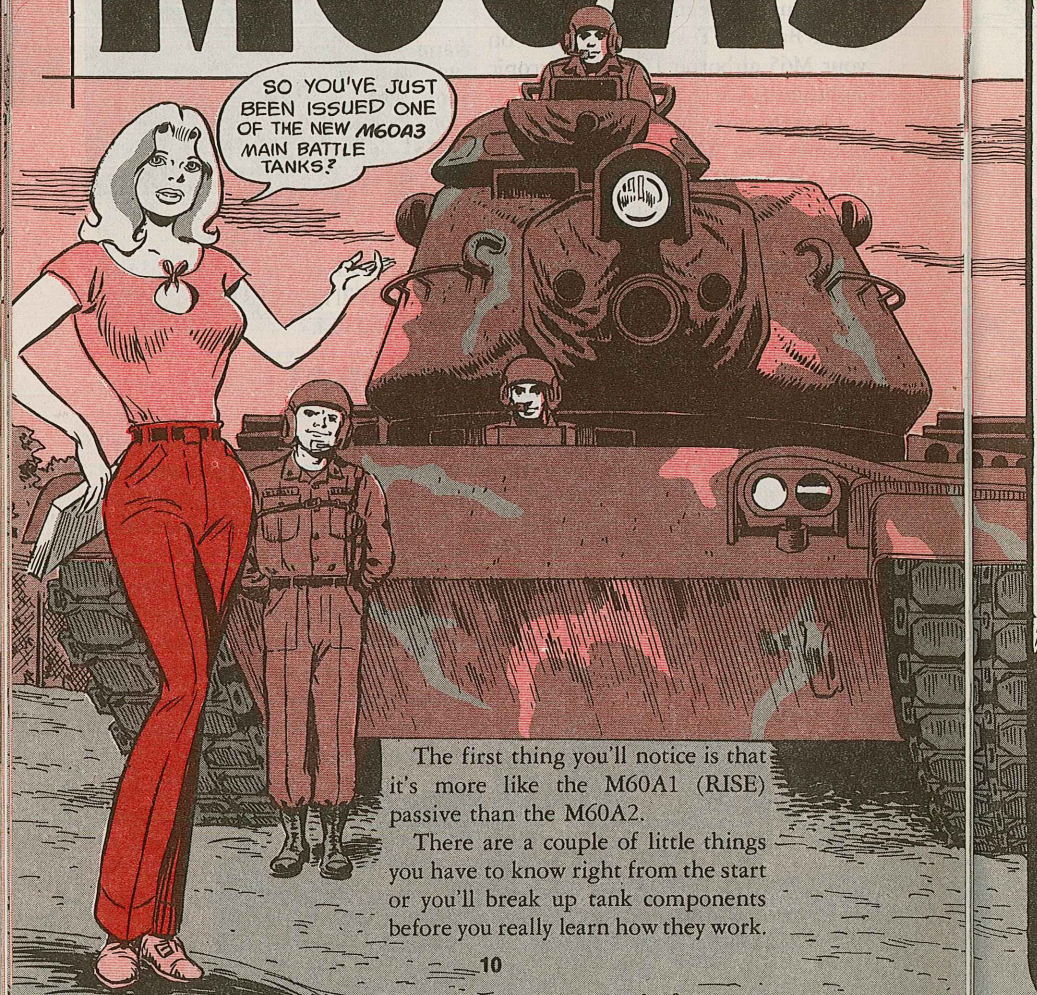
The word in para 2-36, page 2-208 of TM 9-1430-588-10 (Apr 79) is being changed.

Dessicant is used in the shelter only when the radar is in long-term storage or is being shipped long distance. Then, dessicant is put in a container and fastened to the shelter floor.

About that shelter wall orifice: No servicing is necessary. You can close it and leave it closed.



M60A3

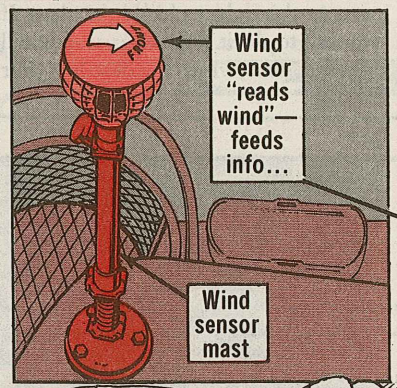


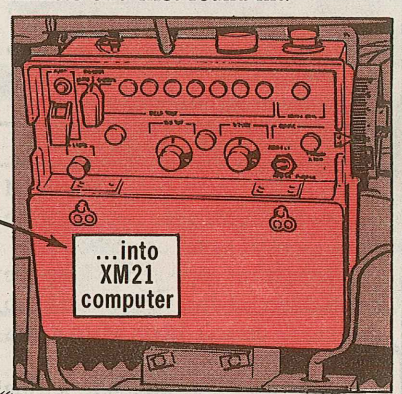
The first thing you'll notice is that it's more like the M60A1 (RISE) passive than the M60A2.

There are a couple of little things you have to know right from the start or you'll break up tank components before you really learn how they work.

TANK *tips*

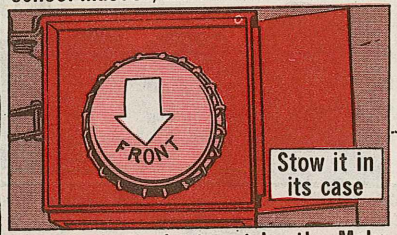
WIND SENSOR—This is a new item found in no other US tank. It actually "reads the wind" and feeds that knowledge into the XM21 computer system to increase your chances of a first-round hit.





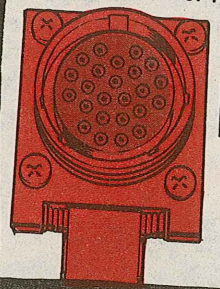
2. The sensor will "read" cross wind speed. So if you're zeroing your main gun on windy days, turn the wind sensor OFF to get a correct reading.

1. It's delicate and will get broken if it's not attached either to the wind sensor mast or, when not in use, stowed



in its case in the turret bustle. Make sure it's put into the case little-end first.

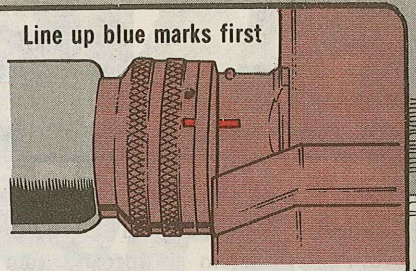
3. Remove or attach the wind sensor only when the power to the XM21 computer is OFF. If your computer is ON, you'll burn up your wind sensor when you attach or remove it.



PS MORE

CANNON PLUGS—The cannon plugs on the XM21 computer and on the AN/VVG-2 laser rangefinder components must be inserted and locked in a special way. They are ¼-turn plugs.

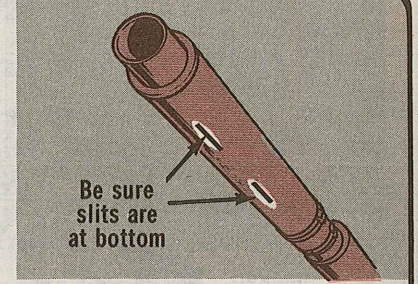
This means you must get the blue alinement marks in a straight line and then push the male plug straight into the female plug. After you get the male plug seated, you turn its collar ¼-turn to the right to lock it in place. If you try to do it any other way you'll bend the pins, which can deadline your vehicle.



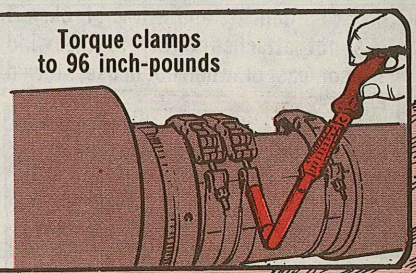
THERMAL JACKETS—Your TM 9-2350-253-10 tells you how to get the front thermal jacket on and off.

The jacket is supposed to keep the temperature of the tube constant so the muzzle doesn't droop when it gets hot.

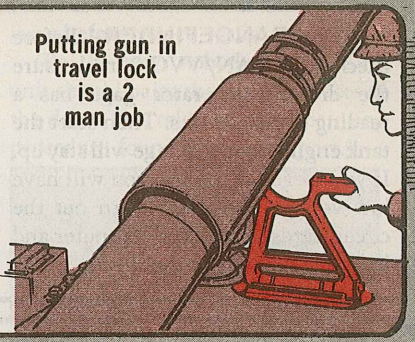
The long slits are for letting moisture condensed from the air drip out. Now that you know what they're for, you won't make the mistake of attaching the thermal jacket so the slits are at the side instead of having them face the bottom as they should.



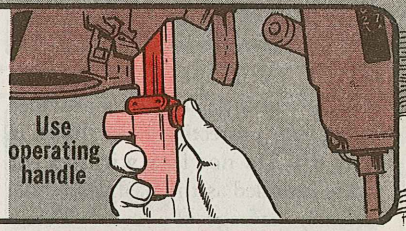
TORQUE CLAMPS—The clamps on both the front and rear thermal jackets must be torqued to 96 inch-pounds. This applies to all clamp bolts for both front and rear jackets. Unless these bolts are secured, the thermal jackets can be cracked and damaged when the main gun is fired.



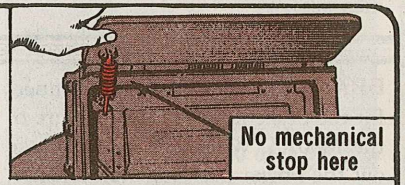
GUN TRAVEL LOCK—The right way to put the gun of any tank in travel lock is by using 2 crewmen. One operates the manual elevation/traverse controls in the turret while the other holds the travel lock. Crewmen on the M60A3 will have no problem getting the gun in and out of travel lock if they do it correctly, with 2 men. Avoid bumping the thermal jackets against hard/sharp objects.



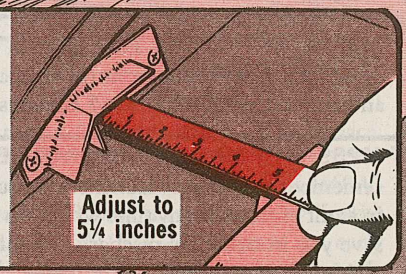
GUNNER'S PERISCOPE M118E1 MOUNT—Never open this mount cover by prying on it from outside the tank. Doing this can bend the operating shaft. Open and close only by using the operating handle.



M119 MOUNT BRUSH GUARD DOOR—This door has no mechanical stop so there is nothing to keep it from being opened too wide from the outside. Doing this will stretch (or even break) the spring that opens and closes the door. This door should be opened only with the operating handle from the inside. Never open it from the outside.

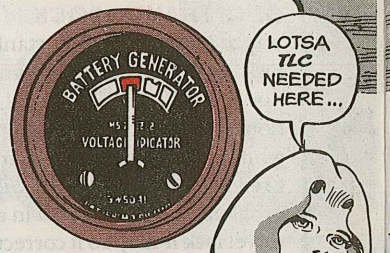


CUPOLA SWITCH ADJUSTMENT—The last round limit switch for the M85 machine gun must be adjusted to 5¼ inches between the switch and the outermost limits of the interior of the ammo box. If it is not adjusted to this distance, the firing circuit may not work right.

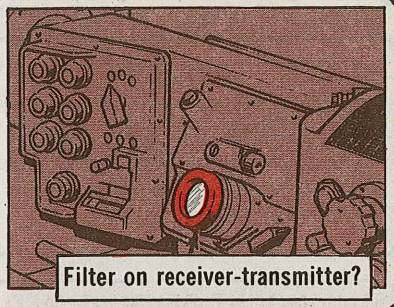


PS MORE

LASER RANGEFINDER—Before checking the AN/VVG-2, make sure the driver's generator gage has a reading of 22-30 volts. Then start the tank engine so the voltage will stay up. If you forget to do this, you will have low voltage that could burn out the circuit cards in both the computer and in the laser rangefinder.



LASER FILTERS—Your AN/VVG-2 receiver-transmitter, tank commander's M36E1 periscope, gunner's M35E1 periscope and gunner's M105D telescope should be provided with green protective laser filters in your BII. Do not lase without the filters installed as the flashback could seriously damage the eyes of crew members.



BRAKE LINES—A quick disconnect for the brake lines is a new feature of the M60A3. When you want to take out the power pack for maintenance, you no longer have to bleed the system.

XM21 COMPUTER—Four units in the computer require purging every 90 days. They are gunner's control unit, computer unit, and 2 ammo select units, and they all need 1 PSI for 5 minutes.

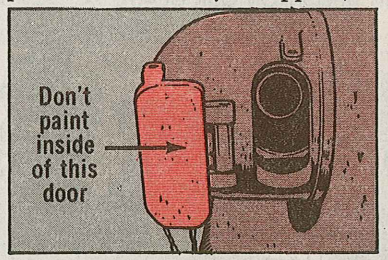
M239 GRENADE DISCHARGER—The most important thing to remember about these launchers is you never want to get any part of your body in front of them at any time when you are loading or unloading them. This will save you in case they discharge by mistake.

After-firing service is the same as for the cannon bore. The electrical contacts at the bottom of the tubes are not lubed.

SYSTEM TESTS—Before running system tests on your AN/VVG-2 laser rangefinder, make sure the right turret blister door is shut and locked.

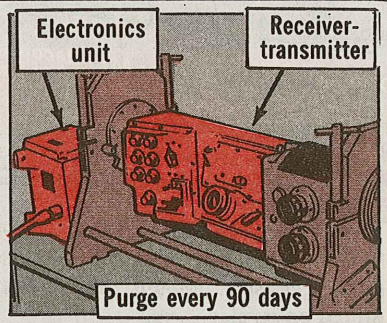
This will keep people outside the tank from getting hurt if the rangefinder lases before you're ready.

(By the way, nobody in the using unit should paint the inside surfaces of the door. This takes a special painting procedure found only at support.)



PURGING VALVES—Note that there are purging valves on both the receiver-transmitter and on the electronics unit. These systems must be purged with dry nitrogen every 90 days.

The laser receiver-transmitter unit has 3 compartments that are purged at 12 PSI for 30 minutes. The laser electronics unit is purged at 3 PSI for 10 minutes.



MARRIED COUPLE—Think of your receiver-transmitter and the electronics unit as an old married couple that can't be separated. If you have to send either one of them to direct support, they both have to go.

MOLDED CABLES—The M60A3 has many molded cables in the turret which normally cannot be repaired if a pin is broken. Be very, very careful because some of these cables no more than a foot long cost $150 to replace.

SHAPE OF THE FUTURE—Right now there is only one kind of M60A3 tank, the M60A3 Passive. Later the M60A3 TTS (tank thermal sight) will come out, the difference being its thermal sight (AN/VSG-2). In time the early M60A3 tanks will be retrofitted with the thermal sight and there will be only M60A3 TTS tanks.

PS END

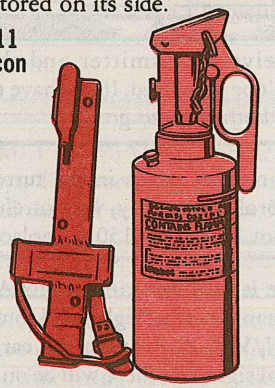
GROUND MOBILITY

MOUNTING An M11 DECON

Dear Half-Mast,
Where do we mount the M11 decon on the M880-series trucks and the M561 Gama Goat?
CPT R. W. W.

Dear Captain R. W. W.,

On the M880-series, the M11 is mounted on the cab wall, behind the passenger seat. Mount the decon straight up, since it tends to leak when stored on its side.

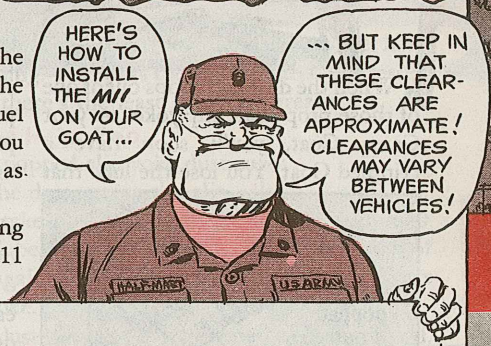


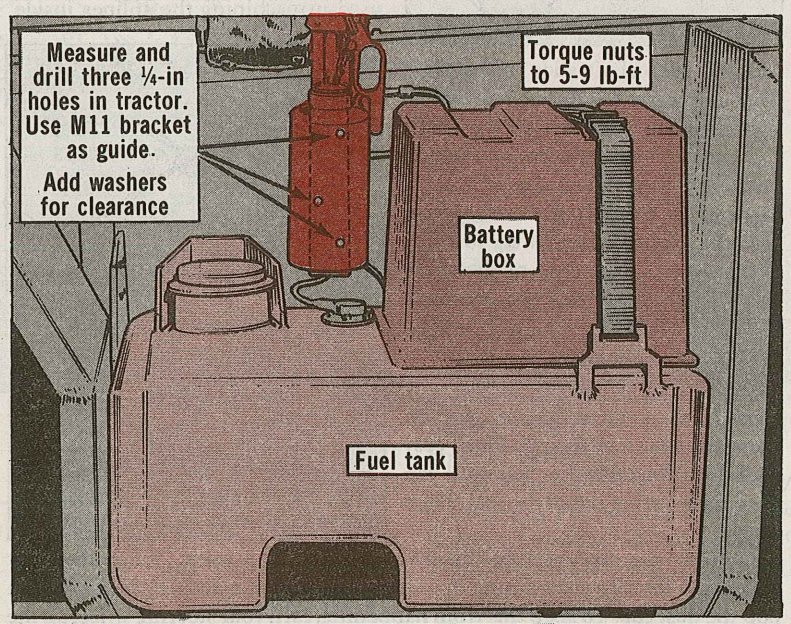
Screw, NSN 5305-00-225-3839
Washer, Lock, NSN 5310-00-682-5930
Nut, NSN 5310-00-761-6882

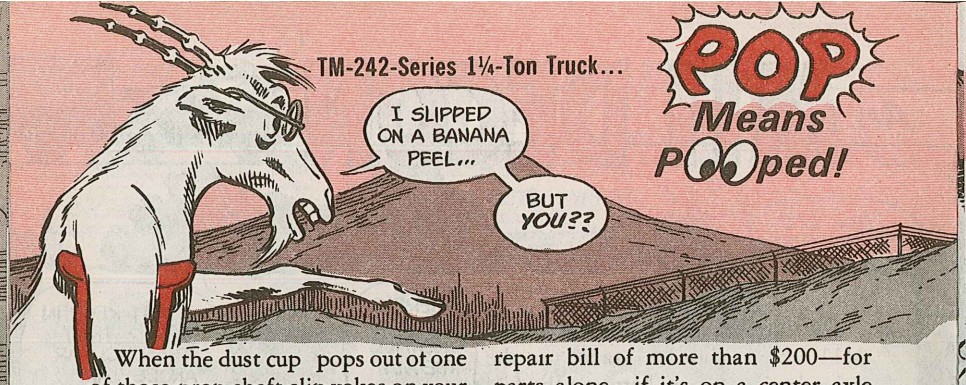
The hardware is listed on pages E-4 and E-5 of TM 3-4230-204-12&P (Feb78).

On the M561 Goat, you mount the M11 above the fuel tank on the driver's side. It goes between the fuel filler neck and the battery box. You need the same mounting hardware as for the M880.

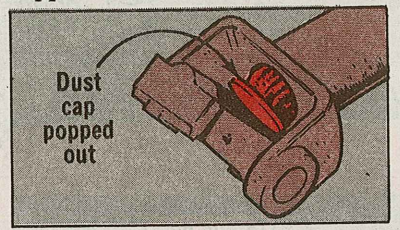
Match and mark the mounting holes from the holes in the M11 bracket.







When the dust cup pops out of one of those prop shaft slip yokes on your Gama Goat, you'll soon have a crippled Goat. You lose the lube that

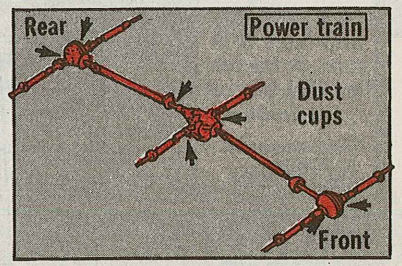


lets the prop shaft slide in the yoke. Dirt and water get in and tear up the splines in the yoke and on the shaft.

That's bad enough, but you'll have real big trouble when the prop shaft "freezes" in the yoke and can't slide—and the strain is passed on to those components at the ends of the shaft.

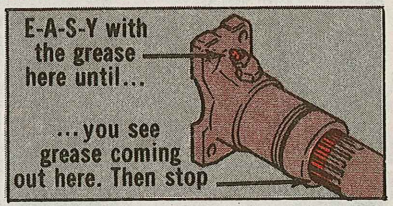
That 2-bit dust cup can lead to a repair bill of more than $200—for parts alone—if it's on a center axle prop shaft. The whole shaft assembly's got to be replaced.

Yep, there're 7 of these prop shaft slip yokes on your Goat—1 on the carrier prop shaft and 1 on each of the 6 axle prop shafts. The dust cup in each of the slip yokes was pressed in during manufacture to fill the hole used in machining the splines inside.

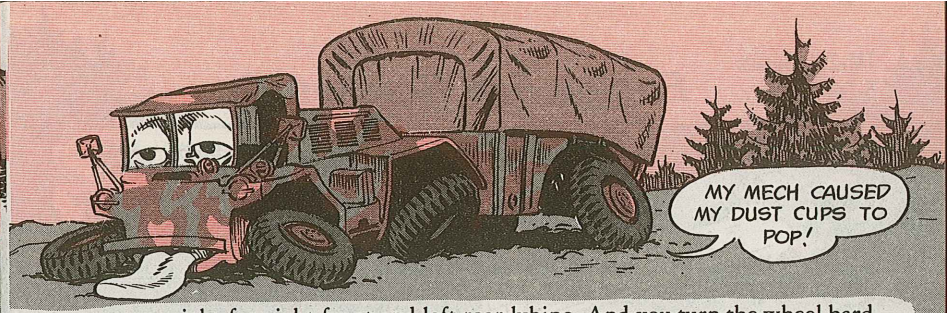


E-a-s-y With the Lube!

High-pressure lubing can pop a slip yoke dust cup. So be sure to use only your hand-operated grease gun on those slip yoke lube fittings. One easy shot may be enough—just until you see grease oozing out of the seal. Then stop!



Even so, you can overlube the axle prop shaft slip yokes. When the shaft slides into the slip yoke during operation, the pressure against the grease can pop the dust cup. To keep this from happening, turn your steering wheel all the way to right for right front and left rear lubing. And you turn the wheel hard left for left front and right rear lubing. This puts the shafts in the "depressed position" inside the slip yokes so there's the least space for grease.



Fixes Help, Too

Here's more insurance against popped slip yoke dust cups:

—Spot-braze the outer lip of the dust cup to the slip yoke.

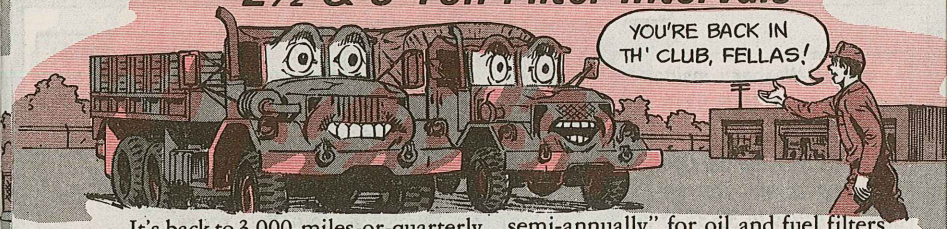
—Drill and tap the dust cup to take a relief valve, NSN 4820-01-070-7670.

With the relief valve installed, lube the slip yoke until grease comes out of the valve. Then press your finger against the valve and lube until grease shows up at the spline end of the slip yoke.

If your only problem is missing dust cups, you can have new ones fabricated.

Commander
US Army Tank-Automotive Materiel Readiness Command
ATTN: DRSTA-MTA
Warren, MI 48090

2½ & 5-Ton Filter Intervals



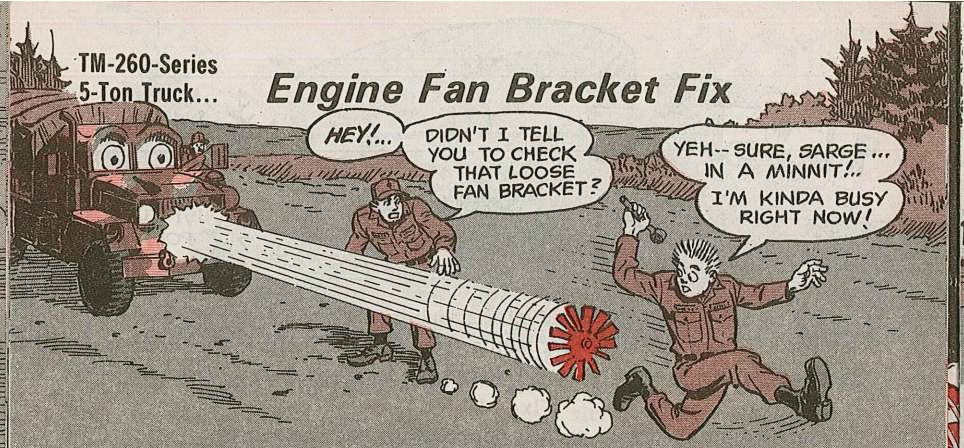
It's back to 3,000-miles-or-quarterly for engine oil filter and fuel filter services covered by LO 9-2320-211-12 (Jan 79) and LO 9-2320-209-12/1 (Sep 76).

The word on 5-ton trucks is in TARCOM Msg DRSTA-M(NMP) 031237Z Oct 79. The "6,000 miles or semi-annually" for oil and fuel filters in LO 9-2320-211-12 should be "3,000 miles or quarterly".

Just stick to LO 9-2320-209-12/1 the way it is. Pay no mind to the "new" poop that came out in TB 43-0001-39-2 (Jul 78), Article 2-11c, and in PS 312, page 16.

TM-260-Series
5-Ton Truck...

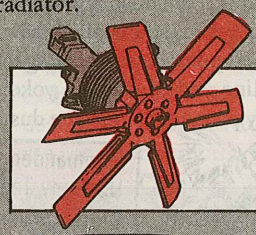
Engine Fan Bracket Fix



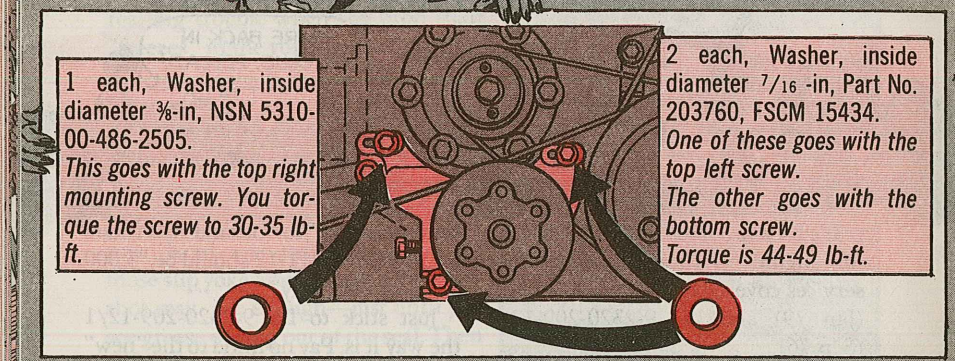
Maybe you've been lucky—no trouble with your fan bracket coming loose and letting the fan tear into your radiator.

But it can happen if you've got the old bracket mounting hardware on your Cummins engine 5-ton truck.

You should have a hardened flat washer—instead of the spacer and lock-washer—in each of the 3 mounting points.



Fan blade, bracket and hub assembly



1 each, Washer, inside diameter ⅜-in, NSN 5310-00-486-2505.
This goes with the top right mounting screw. You torque the screw to 30-35 lb-ft.

2 each, Washer, inside diameter 7/16 -in, Part No. 203760, FSCM 15434.
One of these goes with the top left screw.
The other goes with the bottom screw.
Torque is 44-49 lb-ft.

Hold it! Install these washers one at a time. If you loosen all 3 mounting screws at the same time, you'll upset drive belt tension. Then you'll have to readjust the belts as spelled out in para 2-68, TM 9-2320-260-20 (Jul 72).

5-Ton
Wrecker Trucks...

Load Testing?

Dear Half-Mast,
TB 43-0142 (Apr 79), para 4a, says periodic load testing of lifting devices is not required. Yet the PMCS in TM 9-2320-211-10 (Nov 77) and TM 9-2320-260-10 (Nov 77) say the wrecker's not ready if the load test date is over 1 year old.
What's the straight story?
SFC D. K.

Dear Sergeant D. K.,

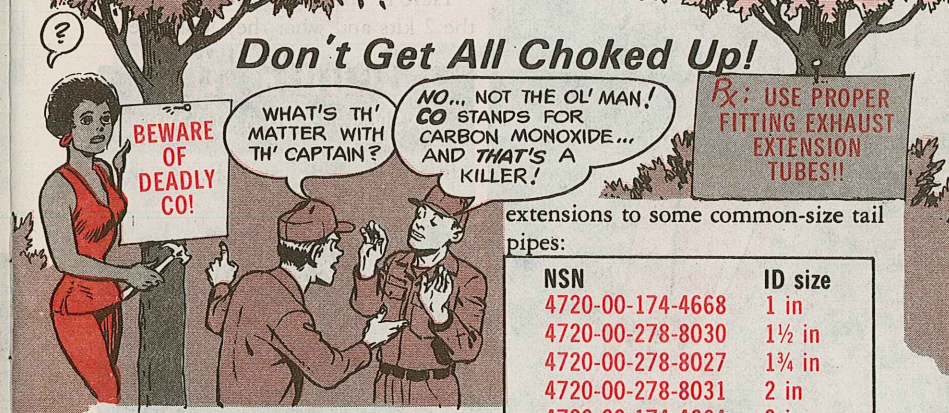
Yearly load testing of wreckers is required only on those used to handle missiles and rockets. TB 9-352 has the word on this.

However, all wreckers and lifting devices require an annual inspection, as outlined in TB 43-0142, paras 4 and 6.

The date of the next inspection due is to be stenciled on the equipment. If this date is exceeded, then the equipment would be rated not ready under the PMCS.

Half-Mast

Don't Get All Choked Up!



To get rid of deadly carbon monoxide fumes, fit flexible tube extensions to your vehicle's exhaust when it's run indoors.

A proper fit—snug over the tail pipe—is a must! Here are NSN's for extensions to some common-size tail pipes:

NSN	ID size
4720-00-174-4668	1 in
4720-00-278-8030	1½ in
4720-00-278-8027	1¾ in
4720-00-278-8031	2 in
4720-00-174-4664	3 in
4720-00-174-4671	4 in

If your tail pipe is not a match with one of these, eyeball your microfiche IL in the 4720 series...it lists flexible tubing in a number of other sizes.

ELECTRICAL CONNECTOR KITS

You don't get waterproof electrical connectors with the No. 1 and No. 2 Common Shop Sets.

It's up to you to order connectors for the Electrical Tool Kit NSN 5180-00-876-9336. Don't order a complete Douglas or Bendix kit, tho. That's supply overkill because you're not likely to use every part in either kit.

NSN 5180-00-876-9336 gets you only the items listed in the Hand Receipt Annex portions of the SCs.

Refill the case with the type of connectors you need from the Douglas or Bendix kits to keep your rolling stock mission-ready.

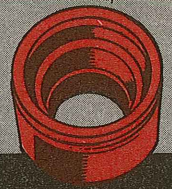
Your equipment's parts manuals tell you which connectors to use.

Here're the replacement parts for the 2 kits and what they look like:

Bendix Kit

NSN 5935-00-570-1380

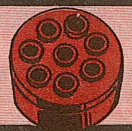
BUSHING, RUBBER: 30 Deg cham; syn-rub oil resistant, blk



NSN 5365-00	ID, in	Od, in	o/a lg, in
641-8645	0.495	0.715	0.481
514-4455	0.620	1.057	0.717
514-4457	0.682	1.057	0.697
514-4454	0.745	1.057	0.633
514-4456	0.932	1.370	0.684

BUSHING, RUBBER: flgd; syn-rub

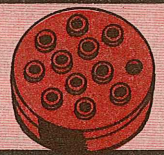
NSN 5365-00-772-2343



NSN 5365-00-772-2322 (8 holes)

NSN 5365-00-772-2323 (6 holes)

NSN 5365-00-559-0283 (3 holes)



NSN 5365-00-090-5426 (12 holes)

CONNECTOR, ELECTRICAL: solder, beryllium cop, sil-pltd

NSN 5999-00-771-6523 1.750" lg

NSN 5999-00-771-6525 1.438" lg

NSN 5999-00-771-6527 1.433" lg

CONNECTOR, ELECTRICAL: solder, tellurium cop; sil-pltd

NSN 5999-00-368-4852 1.750" lg

NSN 5999-00-771-6524 1.428" lg

NSN 5999-00-771-6526 1.428" lg

CONNECTOR, ELECTRICAL: solderless, beryllium cop; sil-pltd

NSN 5999-00-636-6876 1.438" lg

NSN 5999-00-752-7648 1.047" lg

NSN 5999-00-259-3143

CONNECTOR, ELECTRICAL: solderless, tellurium cop; sil-pltd

NSN 5999-00-752-7655 1.438" lg

NSN 5999-00-752-7649 1.047" lg

NSN 5999-00-752-7651 1.047" lg

NSN 5999-00-491-8194 1.200" lg

PS MORE

GASKET: Sq, elec conec, syn-ru; 1/32-in thk

NSN 5330-00-	ID, in	In. sq
593-6442	1/4	1 3/32
641-4338	7/8	1 3/16
543-6849	1	1 9/32
641-4336	1 1/8	1 5/8

RETAINER, PACKING: 30 deg-cham, al alloy, cd-pltd

NSN 5330-00-	ID, in	OD, in
514-4461	0.516	0.710
514-4460	0.641	1.052
514-4462	0.703	1.052
514-4459	0.766	1.052
514-4458	0.953	1.365

CONNECTOR, RUBBER: flgd, syn-ru 0.300-in ID; 0.703 OD lg end

NSN 5935-00-752-7630

NUT, BUSHING, RETAINER ELECTRICAL CONNECTOR: al cd-pltd;

5/8-24NEF-2 x 15/16
NSN 5935-00-333-3088

7/8-20NEF-2 x 15/16
NSN 5935-00-772-3307

1 1/4-18NEF-2 x 1
NSN 5935-00-333-9414

NUT, COUPLING, ELECTRICAL CONDUIT: hex, al cp-chromate fin; 0.703-in lg o/a;

3/4-in across flat
NSN 5975-00-697-6991

1.125-in across flats
NSN 5975-00-697-7769

NUT, COUPLING, ELECTRICAL CONDUIT: spanner coup; al, cd-pltd;

1 3/8-18NEF-2 x 45/64-in o/a thk
NSN 5975-00-697-7860

1 3/4-18NEF-2 x 0.781-in o/a thk
NSN 5975-00-771-6634

WASHER, SPRING TENSION: crvd, S, CD-pltd

1/4 screw sz; 4 leaves
NSN 5310-00-752-7639

1/2 screw sz; 2 leaves
NSN 5310-00-752-7640

WASHER, SPRING TENSION: waved, S, cd-pltd;

3/4 screw sz
NSN 5310-00-595-7486

Douglas Kit

NSN 5935-00-570-1060

SHIELD, CONNECTOR: fmle, S, glvd parts for fmle assy of wtrprf Y type 3 cond conec

NSN 5935-00-201-8143

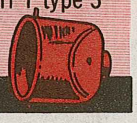
SHIELD, CONNECTOR: fmle, S, glvd, parts for male assy, wtrprf smgl cond conec

NSN 5935-00-768-7042

SHIELD, CONNECTOR: male, S, glvd parts for fmle assy wtrprf smgl cond conec

NSN 5935-00-300-9909

SHELL, CONNECTOR: male, S, glvd parts for male assy wtrprf Y type 3 cond conec



NSN 5935-00-030-1563

FERRULE, ELECTRICAL CONDUCTOR: sn type, br, sil-pltd, 15-amp

NSN 5940-00-057-2930 No. 12 AWG
NSN 5999-00-057-2929 No. 14 AWG
NSN 5999-00-926-3144 No. 16 AWG

SPLICE, CONNECTOR: Y type bz, sil-pltd

NSN 5940-00-665-9563

BUSHING, CABLE: rub; for 1 No. 12 AWG

NSN 5970-00-537-8780

BUSHING, CABLE: rub; for 2 No. 16 AWG

NSN 5975-00-614-9460

BUSHING, RUBBER: For 1 No. 14 AWG

NSN 5365-00-629-7273

For 2 No. 14 AWG
NSN 5975-00-614-9458

CUTTING OIL: 2-oz cn

NSN 9150-00-234-5198

HOW TO FILL AN ARMY OIL ANALYSIS PROGRAM FORM

Blanks and errors help no one when you fill out a DD Form 2026 to get your equipment's oil analyzed.

If you don't have the info for an entry, such as miles or serial number, get it...and do the best by your equipment. Fill in all the blanks. Double check for accuracy, especially on those entries called out by arrows in this article.

WATCH THESE:

- Keep only your current lab-sent DD Form 2026 on file.
- File the 2026 behind your DD 314's.
- Have your NCOIC re-check all entries.
- When in doubt, check TB 43-0210, 43-0211 or 43-0106.
- Know your installation oil analysis monitor. Jot it down.

Oil Analysis Monitor

NAME _____

UNIT _____

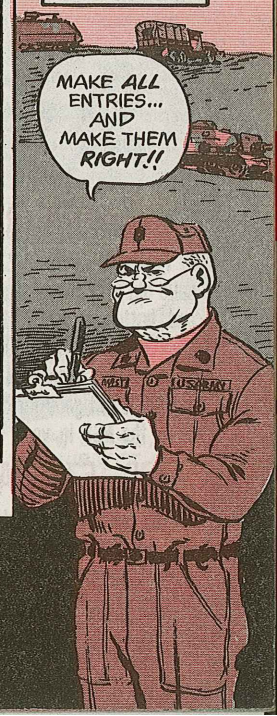
PHONE _____

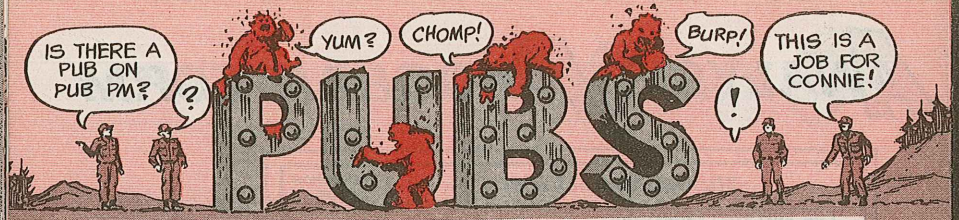
OIL ANALYSIS REQUEST

		KEYPUNCH CODE
TO	OIL ANALYSIS LABORATORY: AFZC-DI-MQ Ft. Carson, CO	1-3
FROM	MAJOR COMMAND: FORSCOM	4
FROM	OPERATING ACTIVITY (Include ZIP Code/APO/DODAAD): CO A, 1st Bn, 10th Inf. Ft. Carson, CO WANVAD	5-10
	EQUIPMENT MODEL/APL: AVDS 1790-2A	11-14
	EQUIPMENT SERIAL NUMBER: 10195	15-20
	END ITEM MODEL/HULL NUMBER: M60A1	
	END ITEM SERIAL NUMBER/END ITEM CODE: 6086	
	DATE SAMPLE TAKEN (Day, Mo., Yr): 22 JUN 79 / LOCAL TIME SAMPLE TAKEN: 0900 HRS.	21-24
	HOURS/MILES SINCE OVERHAUL: 440 HRS/3252 MILES	25-29
	HOURS/MILES SINCE OIL CHANGE: 25 HRS/250 MILES	30-33
	REASON FOR SAMPLE: [X] ROUTINE [ ] LAB REQUEST [ ] TEST [ ] OTHER (Specify)	34
	OIL ADDED SINCE LAST SAMPLE (Pts, Qts, Gals): 6 QTS.	35-36
	ACTION TAKEN: AIR FORCE	
	DISCREPANT ITEM	
	HOW MALFUNCTIONED: ONLY	
	HOW FOUND: [ ] LAB REQUEST [ ] AIR OR GROUND CREW	
	HOW TAKEN: [ ] DRAIN [X] TUBE / SAMPLE TEMPERATURE: [X] HOT [ ] COLD / TYPE OIL: HD 30	37-38
	REMARKS: ENGINE LOSING POWER, EXCESSIVE SMOKE	
	FOR LABORATORY USE ONLY	
	[illegible]	39-40
	47-49 CR 50-52 CU 53 [illegible]	[illegible]-61
	[illegible] 68-70 TI 71-73 MO 74-[illegible]	
	LAB RECOMMENDATION	
	SAMPLE NO. / SIGNATURE / FILE MAINT 79 / DATA SEQ 80	

DD FORM NOV 77 2026 PREVIOUS EDITION WILL BE USED.

- Fill in unit address, UIC
- Engine model you sampled
- Engine serial No.
- Vehicle/aircraft model No.
- Vehicle/aircraft serial No.
- Date of sample
- Enter whatever you feel will help lab
- Enter oil grade used





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, TM's, TB's, etc.; DA Pam 310-6, SC's and SM's and DA Pam (C) 310-9, COMSEC pubs.

TECHNICAL MANUALS

TM 5-1940-221-20P Sep Boat, bridge erection, 27-ft
TM 5-4310-354-24P Nov Compressor, air, DED 125-CFM
TM 9-1430-1532-24P Oct Improved HAWK
TM 9-2350-304-20 Nov Howitzer M110A2
Ch 8, TM 11-5815-334-12 Sep AN/GRC-142, -142A, -142B, -122, -122A, -122B RTT sets
TM 11-5840-348-12-HR Nov AN/TPS-58 and 58B radar sets
CH 3, TM 38-750 Sep TAMMS
TM 55-1510-204-23-1 Nov OV-1B/OV-1C
TM 55-1510-204-23-3 Nov OV-1B/OV-1C
TM 55-1520-227-CL-2 Nov CH-47C
TM 55-1520-237-23-1 Dec Wiring data, UH-60A
Ch 2,TM 55-1520-237-23-6 Sep Powerplant, fuel, related sys UH-60A
CH 3, TM 55-1520-237-23-8 Sep Hydraulics, flight controls UH-60A
Ch 3, TM 55-1520-237-23-9 Sep Electrical, instruments UH-60A
TM 55-2840-248-23P Dec engine T700-GE-700
TM 55-4920-401-13&P Nov Tester, EGT, Mod BH112JB-53

MISCELLANEOUS

AR 58-1 Dec Motor vehicles (Admin)
AR 750-40 Missile Materiel Readiness Report (Jan 80)
DA Form 2715 Feb Unit status report worksheet
FM 11-36C3/4 Jul Wire sys instal/op
FM 17-19E1/2 Aug Armor crewman (gunner/loader)
FM 30-26C1/2 Jul Combat area surveil radar repairer
LO 9-1025-211-13 Aug M198 towed howitzer
Pam 351-5 Jan US Army Formal Schools Catalog
SC 4910-95-CL-A72-HR Aug Organiz maint Common No. 2 tool kit
SC 4910-95-CL-A74 Sep No. 1 Common shop set
SC 4910-95-CL-A74/HR Sep No. 1 common shop set
TB 9-2300-302-10 Aug Ident, special precautions 155-MM foreign ammo
TC 17-19E1/2(JB) Oct Armor crewman
TC 17-19J1/2(JB) Oct M60A2 crewman

AUDIO-VISUAL STUFF

Available at battalion or post Learning Center

TV Tape, Films
TVT 6-106 TACFIRE
TF 3-6123 Decontamination (M258, M13, M11)
TF 30-6106 Eye in Sky—OV-1D Mohawk
TF 32-6150 Electronic Security, Part I Operators
TF 38-6101 Shipping containers
TF 38-6140 Military packaging

TEC LESSONS
010-071-6650-F M-2 compass serviceability
020-171-1007-A Remov instal thermal jacket M60A3 tank
020-171-5227-F Clean, lube M85 Machine gun
030-051-6333-F M4T6 float/raft bridge
030-051-6413-F Ribbon bridge/raft
030-051-6419-F Ribbon bridge/raft: Assembly, Part 2
030-051-6489-F Bridge anchoring
041-061-6021-F Intro M109/M109A1 howitzer
041-061-6028-F Install track, M109/M109A1 howitzer
041-061-6041-J Crew maint 8-in how, M110/M110A1, 175-MM gun M107
041-061-6061-J Crew maint 155-MM howitzer M114A1
043-441-5524-F Mech alinement of stabilizer on imp pulse acq radar
102-906-1031-A TV-7/U electron tube tester, Part II
102-906-1120-A Intro, basic op KY-463/FGC keyer
102-906-2018-A Troubleshoot KY-463/FGC keyer
202-113-5110-A Sys line-upof cable term AN/TRC-145
202-113-5152-A Sys line-up (Part I) AN/TCC-65
231-906-3005-A R-1444/UR radio
231-906-3007-A AN/TRQ-32 radio
231-906-3008-A R-744 receiver
612-051-9653-E Troubleshoot, bleed MAB brakes
821-101-8111-A 50-GPM fuel sys, during -and-after-op maint
830-191-6052-F Hand and arm signals, Part II (vehicle)
931-171-0302-F Prep M60 tank, M551 AR/AAV for NBC attack, Part II
948-071-0030-A TOW cap for M113A1/TOW

M60A1 (RISE) Tank

Page 246 of TM 9-2350-257-20P-1 (Dec 75) calls out 2 different size bolts to retain the top and bottom portion of the rear grill doors. They're items 25 and 29 on page 247. The good news is that with NSN 5305-00-922-7994 you can get a bolt good for both top and bottom. Jot down the NSN in your Tm.

PP-1578 NATO Adapter

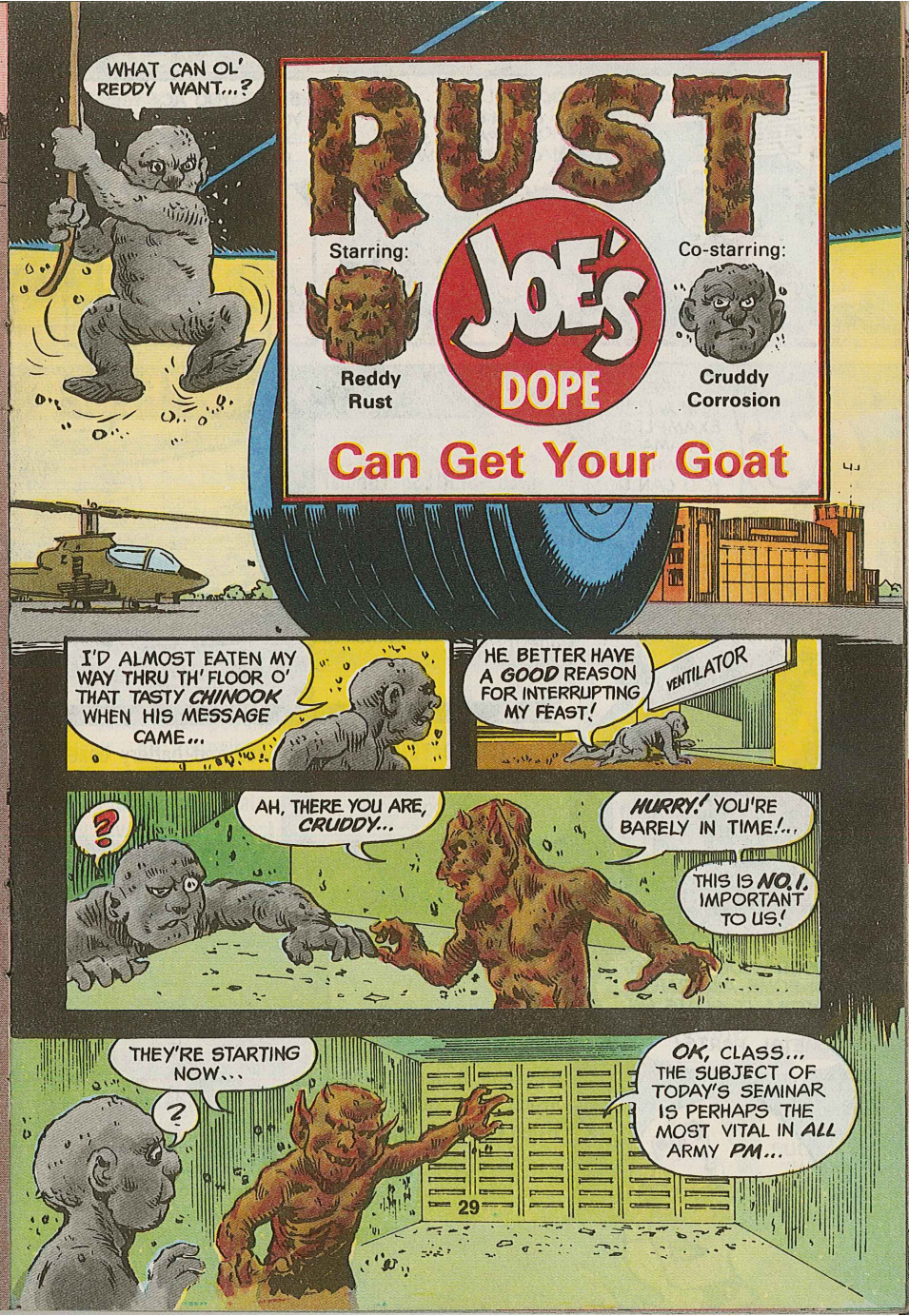
You can now get replacement NATO adapters for your PP-1578 Radiac Detector Charger through supply. Use NSN 6665-01-077-2986.

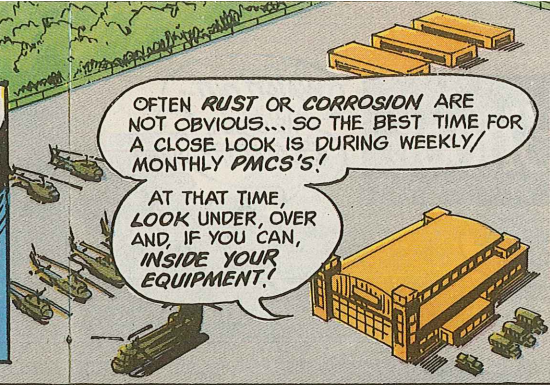
2½-Ton Truck Panels

Your M36-series truck's drop-side panels come under NSN 2510-01-025-5881 for the front and NSN 2510-01-041-0681 for the rear. They'll be showing up in your TM 9-2320-209-20P one of these days.

Fire Extinguisher OK?

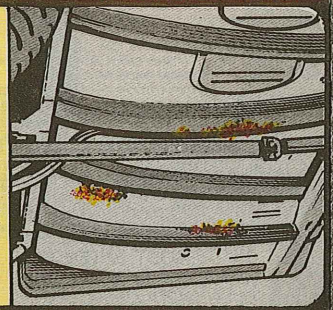
Never order just any fire extinguisher! If your MTOE, TDA or equipment TM doesn't give a specific type, check out TB 5-4200-200-10 (Apr 77) on approved extinguishers. Those listed there meet all safety requirements.





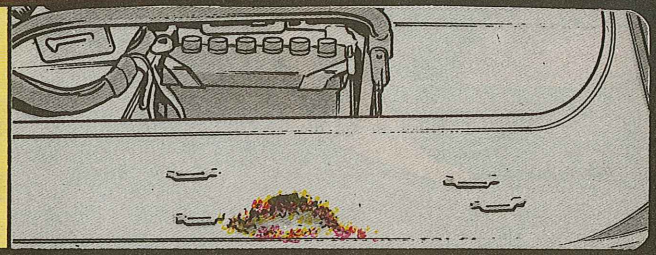
WHEELED VEHICLES

M151-SERIES: Tubular frame rails on the underside usually go first. Everywhere else goes second. Spot paint, wash...call support if it doesn't work.

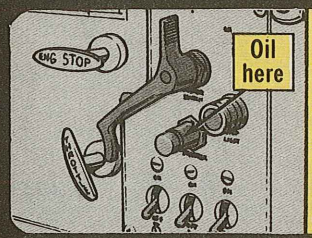


CARGO TRUCKS: Truck beds and battery boxes. Drain or dry the beds. Keep battery boxes clean (or it's bye, bye box).

ALL BATTERY BOXES: Clean 'em. Read DA Pam 750-34 (May 78) on battery PM.



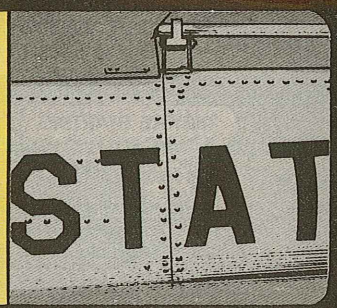
PAINTING: As soon as you sand metal, put the primer on unpainted surfaces. An overnight stand starts rust. Painting over it is almost wasted effort.



STARTER BUTTONS: Gama Goat and other spring-type buttons corrode. A weekly drop of oil keeps 'em from jamming and saves starters.

AIR CRAFT

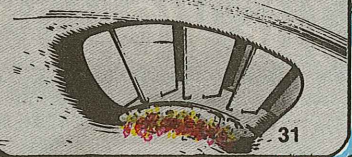
HUEYS: Seams of tail booms and sync elevators. It starts on the inside and works out. When you see it, report it.



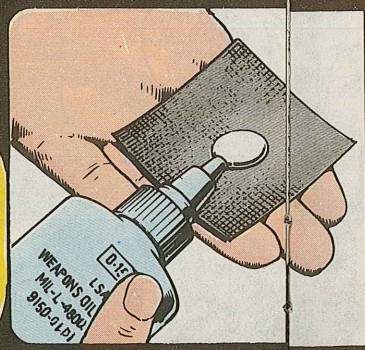
CHINOOKS: Under the floor.

KIOWAS: Tail boom attaching rings.

OVERALL: High mag components in engine inlet housings; under antenna brackets, covers and rivets.



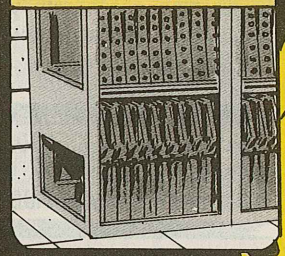

JOE'S Dope Sheet
WATCH OUT-- HE'S GOT CLOUT!
GOTTA GIVE HIM CREDIT, HUH?
I'M GETTIN' OUTTA HERE...
...MY VISA'S RUN OUT!
ARRGH!
HEY-- WHADDAYA DOIN' TO MY TRUCK?
I'LL FIX YOU LOUTS!
Those villains -- CORROSION and RUST-- Can turn your equipment to DUST! To head off this foe, Keep gear on the GO-- Good PM's an absolute MUST!
ELBOW GREASE
CAMOUFLAGE PAINT
WE HAVE THE WORLD'S BEST EQUIPMENT ...Take care of it
IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

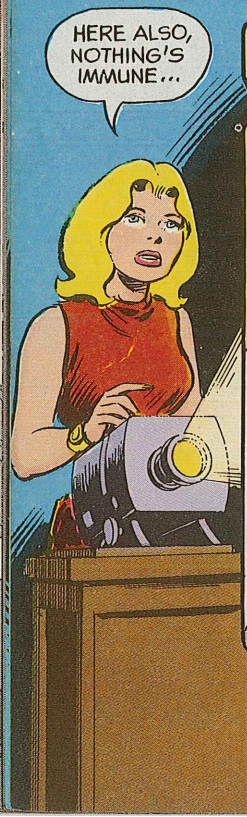


WEAPONS

THE RUST ROUTE FOR ANY WEAPON IS: LSA first. Armorer second, for coatings of solid film lube NSN 9150-00-142-9309. Support third (and the wait may be long) for refinishing.

INNER PARTS: Even in storage, humidity clobbers inner parts.

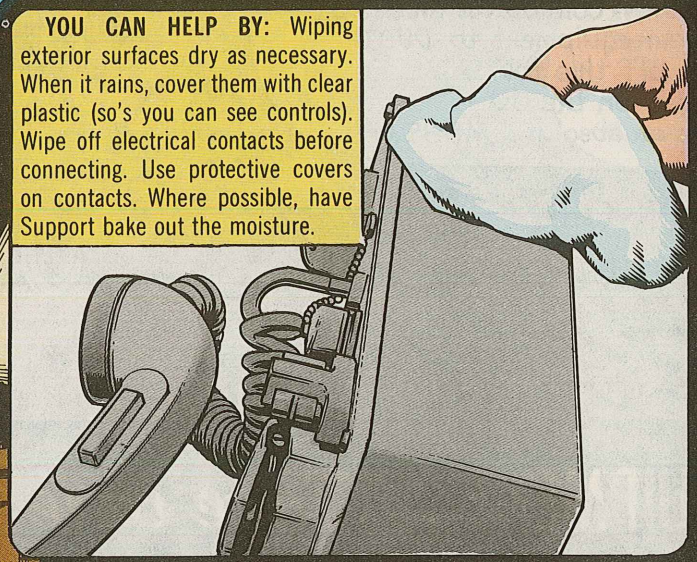




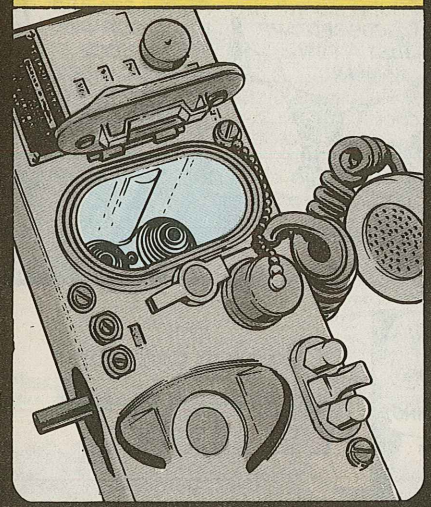
COMMO GEAR

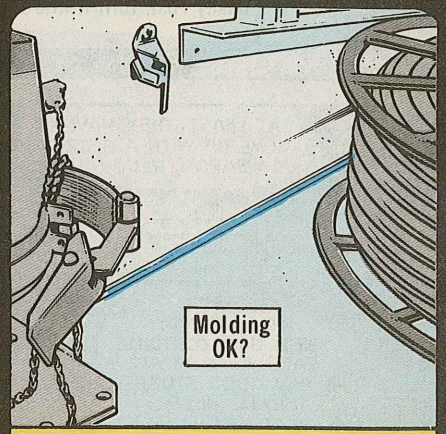
RADIOS, TELEPHONES, OTHER COMMO USED OUTDOORS: Moisture from humidity gets trapped inside.

YOU CAN HELP BY: Wiping exterior surfaces dry as necessary. When it rains, cover them with clear plastic (so's you can see controls). Wipe off electrical contacts before connecting. Use protective covers on contacts. Where possible, have Support bake out the moisture.



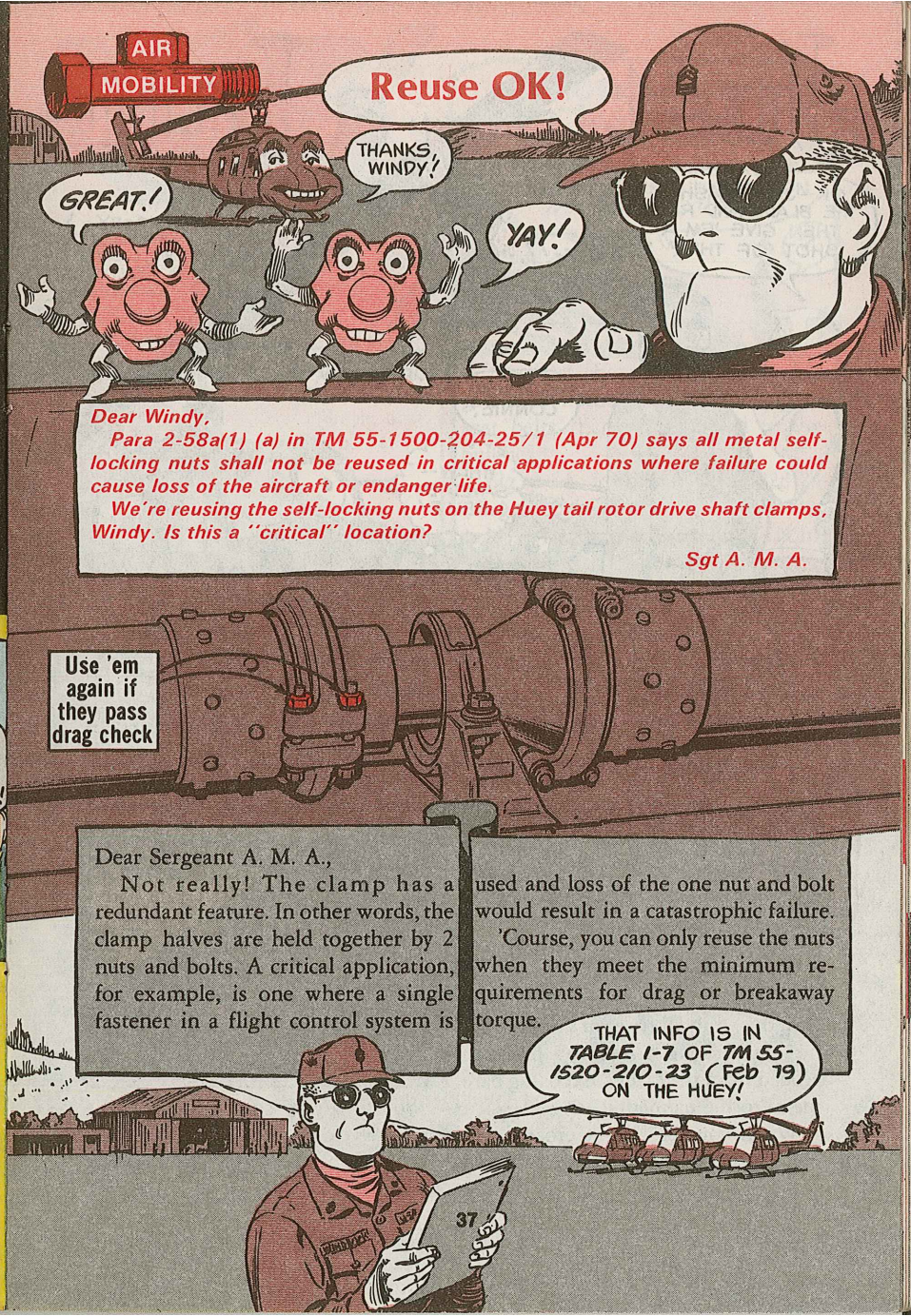
REMOVE DRY CELL BATTERIES WHEN NOT IN USE!!! Batteries corrode anywhere. In humid areas they're killers.



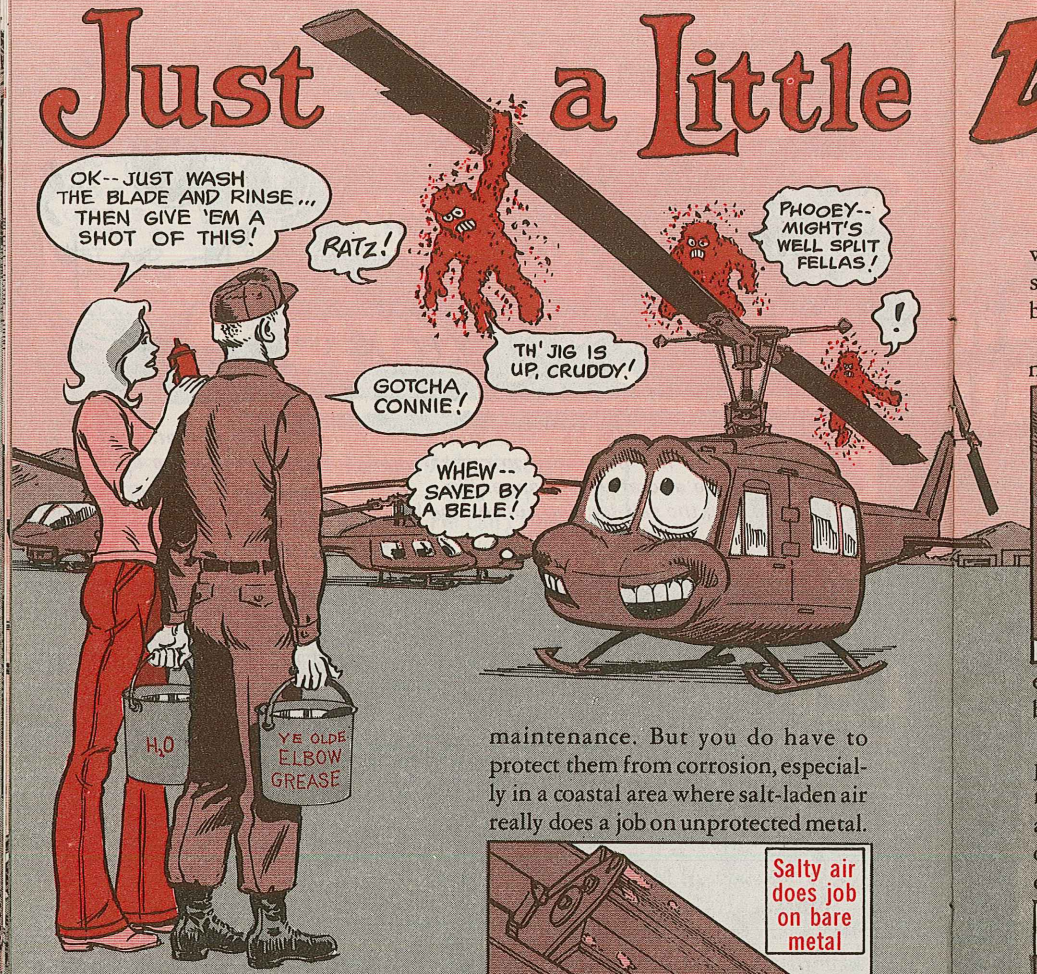


SHELTERS: Rubber mats and floor/wall molding faults let moisture rot floors. Remove the mats during the rainy season. At least, roll 'em up once a day and let the moisture under them dry. Reseal any loose molding.


*!!@★!! SHE'S MAKING LIFE TOUGH FOR US, CRUDDY!
NBC GEAR
PROTECTIVE MASKS: Dry rot gets to them faster. Check yours, then check with your NBC NCO if you spot hairline cracks.
YOUR NBC GEAR IS A TARGET OF RUST AND CORROSION, TOO...
MASK VALVE DISKS AND MUSHY FILTERS: If disks are brittle or discolored, replace them. If filters are mushy when you squeeze them, check with your NBC NCO on serviceability.
DECON TANKS (M11): Rust gets 'em anywhere. It has a field day in high humidity. If normal PM can't hold down flakey rust, turn it into Support.
AT LEAST THEY HAVEN'T COME UP WITH A SECRET WEAPON, REDDY!
RIGHT, CRUDDY! WE'LL JUST CONTINUE EATIN' AWAY AT ALL THAT GOOD STUFF-- THEY'LL NEVER BEAT US! HA-HA-HA!
TO WRAP IT UP, TROOPS... THE PROBLEMS WE'VE DISCUSSED ARE JUST A FEW SAMPLES...
YOU MUST READ YOUR TM'S, TB'S, PAMPHLETS AND LOCAL SOP FOR PM ON YOUR GEAR...
COOL.
WAY TO GO, CONNIE!
IF NORMAL PM FAILS TO STOP RUST, BRING IN THE BIG GUNS... SUPPORT MAINTENANCE!
C'MON, REDDY!
RIGHT! TIME'S A-WASTING, CRUDDY!
WE GOTCHA, CONNIE!
REMEMBER: RUST WON'T STOP ATTACKING, SO YOU CAN'T STOP DEFENDING!
Will
Rust and Corrosion
WIN?
That, soldier,
is up to
YOU!

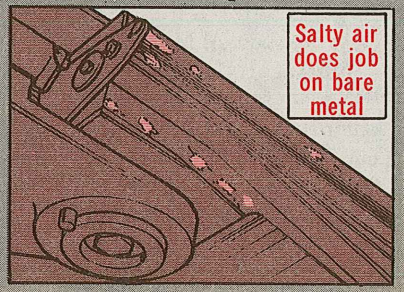

AIR MOBILITY
Reuse OK!
THANKS, WINDY!
GREAT!
YAY!
Dear Windy,
Para 2-58a(1) (a) in TM 55-1500-204-25/1 (Apr 70) says all metal self-locking nuts shall not be reused in critical applications where failure could cause loss of the aircraft or endanger life.
We're reusing the self-locking nuts on the Huey tail rotor drive shaft clamps, Windy. Is this a "critical" location?
Sgt A. M. A.
Use 'em again if they pass drag check
Dear Sergeant A. M. A.,
Not really! The clamp has a redundant feature. In other words, the clamp halves are held together by 2 nuts and bolts. A critical application, for example, is one where a single fastener in a flight control system is used and loss of the one nut and bolt would result in a catastrophic failure.
'Course, you can only reuse the nuts when they meet the minimum requirements for drag or breakaway torque.
THAT INFO IS IN TABLE 1-7 OF TM 55-1520-210-23 (Feb 79) ON THE HUEY!

Just a Little DAB!



The main and tail rotor blades on your Huey, Cobra, and Kiowa slice thru the air in all types of weather. It's not surprising when the paint is eroded from the blades, exposing bare metal to the elements.

When you see paint erosion, it's not necessary to ground the bird and remove the blades for extended maintenance. But you do have to protect them from corrosion, especially in a coastal area where salt-laden air really does a job on unprotected metal.



So, apply a coat of corrosion preventive compound MIL-C-23411A to the wear area—usually the leading edge of both blades.

Although the compound will shed water and protect the blades, it's no substitute for routine cleaning of the blades.

For the Huey, for example, that means making with the elbow grease

every 50 hours or 30 days. Wash the blades and rinse 'em thoroughly.

The best time to apply the compound is right after a wash job. The manufacturer recommends weekly applications during rainy spells—or as often as necessary—to maintain a coating on the blades.

NSN 8030-00-838-7789 will get you an aerosol spray can of the compound.

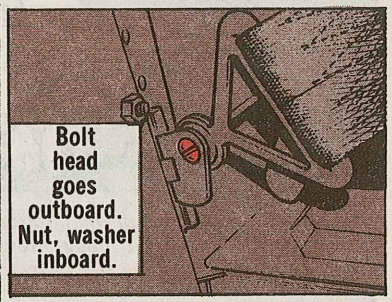
How's Your Clearance?

The first chance you Kiowa-types get, eyeball the pilot's and copilot's seat belts that are anchored to the bulkhead.

Fig 2-7A in TM 55-1520-228-23 (Aug 78) doesn't clearly orient the reader which way the attachment bolts are installed.

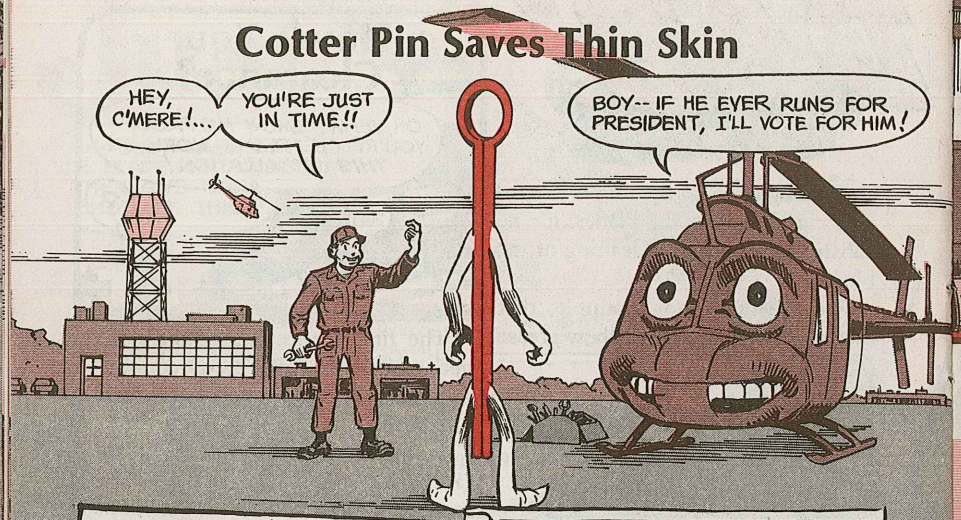
Some birds have the bolt nut and washer outboard. The armor panel then binds on the nut, loosening the panel hinge. That's a no-no!

For the right installation, insert the bolt from the outboard side of your bird—locating the washer and nut inboard.



That'll keep those panels in A-1 condition! Also, in the event of a hard landing, the support hinge will take the "G" forces.

Cotter Pin Saves Thin Skin

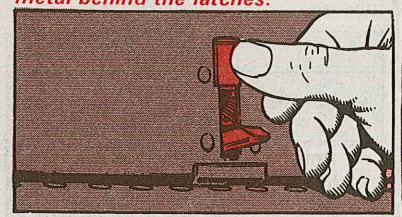


Dear Editor,

For want of a cotter pin the aircraft wasn't lost—but the sheet metal sure took a beating!!

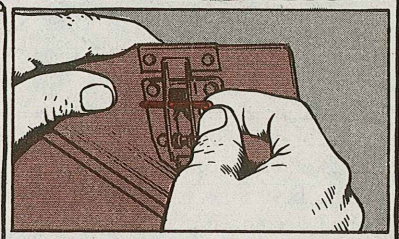
Talkin' about the OH-58 engine cowl side panel and the transmission oil level access door.

When you flip the latches the spring action is strong enough to tear the thin metal behind the latches.



Sure, it's SOP to catch the latches with your fingers. But busy crew chiefs don't always have the time to spare.

Now, it just so happens, there's a set of holes in the back of the spring-loaded latches. The holes are large enough to take a 1/16-in diameter cotter pin, NSN 5315-00-828-8190.



Open the panels and close the latches, before inserting the cotter pin. If the cotter pin is put in the latch when it's in the unlatched position, the spring will be damaged when you attempt to close the latch.

The cotter pin now takes the blow...no more torn metal.

WO1 David R. Brown
Ft. Knox, KY

(Ed Note—Good show! The head hangar recommends the fix to cut down on sheet-metal repair.)

Baby Need New Shoes?

Due to the constant mis-match of holes in replacement skid shoes with the holes in skid tubes, UH-1D/H shoes now come thru without drilled ears.

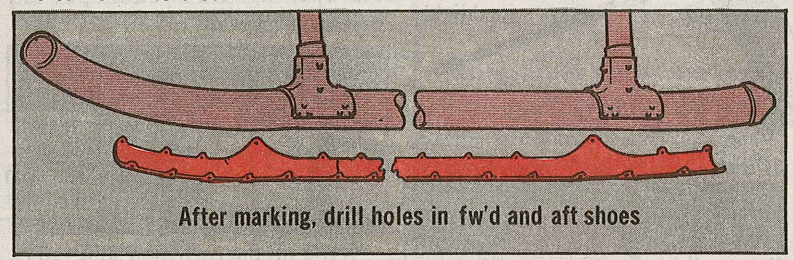
Fwd, left	NSN 1620-00-969-9210
Aft, left	NSN 1620-00-967-1806
Fwd, right	NSN 1620-00-967-1803
Aft, right	NSN 1620-00-967-1804

First-off, remove the skid tube and take off the faulty shoe.

Mark extended vertical and horizontal center lines at each attaching tube hole.

Next, place the new shoe on the tube so that each ear is above a mounting hole. Mark each ear by extending the horizontal and vertical center lines you made on the tube.

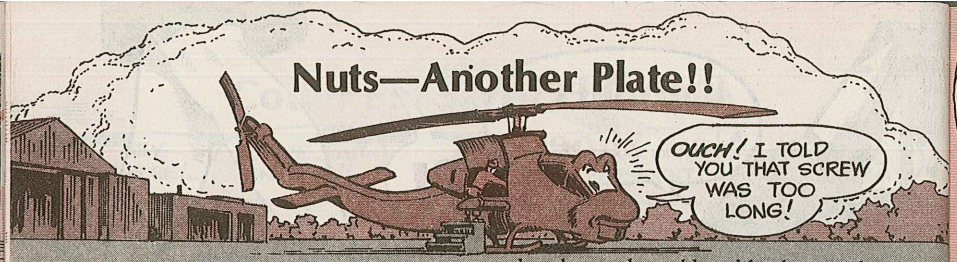
Remove the shoe, center punch, and then drill ¼-in attaching holes where the center lines cross.



After marking, drill holes in fw'd and aft shoes

Install the shoe with the removed hardware, put the skid tube back on your bird and you've got it made in the shade...with a perfect fit!

Nuts—Another Plate!!

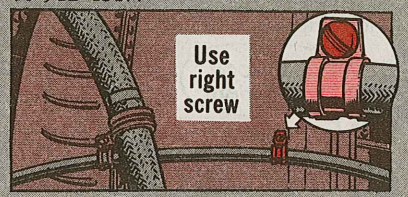


Those little screws that hold the external oil and ignition lines to the nut plates on the T53-L-11 and L-13 engines are easy to lose. They're only 5/16-in long.

Never substitute a longer screw, tho. The extra length will make the screw bottom out on the combustion chamber housing and pop off the nut plate.

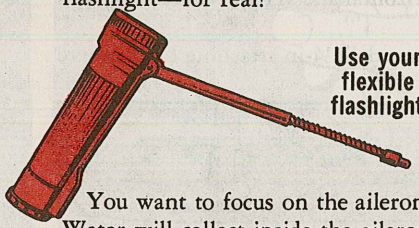
'Course, you can't have those lines flopping around in that area. The nut plate has to be soldered back onto the housing.

So, to avoid some unscheduled maintenance, stick with the screw listed in Figs 11 and 12 of TM 55-2840-229-23P (Feb 79)...NSN 5305-00-912-4817.

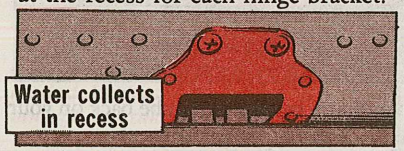


What's the Inside Story?

When you tech inspectors pull an acceptance check on a U-8 or U-21 fixed-wing bird, whip out your flexible flashlight—for real!

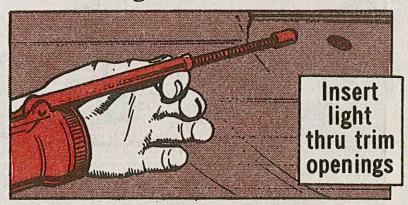


You want to focus on the ailerons. Water will collect inside the ailerons at the recess for each hinge bracket.



Then, when the paint deteriorates and water hits the unprotected magnesium, you know what follows...corrosion!

Insert your flashlight thru the trim tab openings and you'll spot any corrosion right off.



Write up the corrosion so it can be treated now before extensive sheet-metal work is required.

The Price is Right!

When you hot pilots stop at commercial airports on cross-country CONUS hops, flash a current DD Form 1896 (white for jet fuel) or DD Form 1879 (purple for Avgas). It'll give Uncle a break on the price. If your credit card needs updating, it should be returned to:

US Army General Materiel and Petroleum Activity
New Cumberland Army Depot
New Cumberland, PA 17070

Aluminum Number

Need the stock number for aluminum to make replacements for the steel ID tags on your aircraft? NSN 9535-00-232-7600 will get you a 3X8 ft sheet of .020-in thick aluminum alloy for all those flexible lines.

Safety-of-Flight Messages

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

UH-1-79-26 also AH-1-79-24 Inspect driveshaft (short shaft) assy (Change TB 55-1520-243-20-2) DRSTS-MEA 302100Z Nov 79
UH-1-79-27 Maint advis msg extend retirement life for stabilizer bar tube assys DRSTS-MEA 071830Z Dec 79
UH-1-79-28 Change to maint advis msg UH-1-79-25 assy screws bottoming on roll-over vent valve assy DRSTS-MEA 071840Z Dec 79
CH-47-79-17 Inspect forward transmissions (TB 55-1520-241-20-6) DRSTS-MEA 302130Z Nov 79
CH-47-79-18 Inspect forward transmissions (TB 55-1520-241-20-6, Ch 1) DRSTS-MEA 212210Z Dec 79
OH-58-79-14 Maint advis msg OH-58C HIT check DRSTS-MEA 202100Z Dec 79
U-8-79-6 also U-21-79-8 Maint advis msg inspect bulkhead and horiz stabilizers aft spars DRSTS-MEA 031630Z Dec 79
OV-1-79-12 Maint info msg mount provisions for XM-130 control unit DRSTS-MEA 201600Z Dec 79
OV-1-79-13 Maint advis msg decreasing engine oil sample interval DRSTS-MEA 212215Z Dec 79
GEN-79-11 Safety Of Personnel and Equipment(SOPE)First aid kit, eye dressing DRSTS-MAPL 202000Z Dec 79

Mohawk on Phase

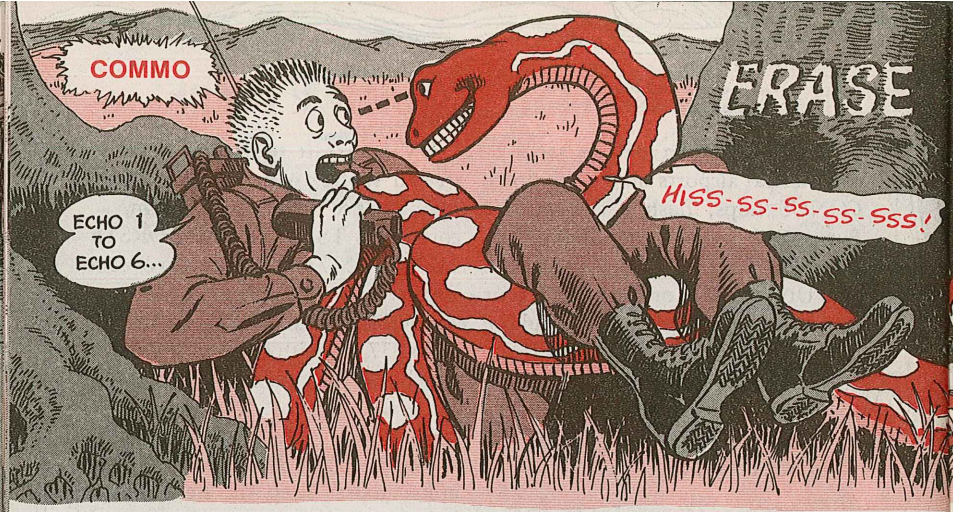
OV-1 aircraft types now have the green light to go to the Phase Maintenance inspection system, according to TSARCOM Msg DRSTS-MEN(2) 051715Z Sep 79. Go over to PM when you receive all the applicable pubs, including TB 55-1500-337-24, with Change 2 (Oct 78), which has the conversion details.

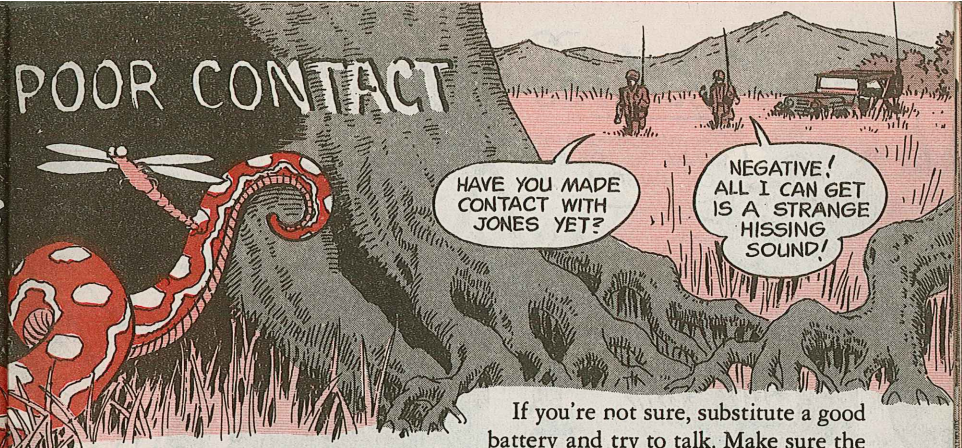
Keep In Touch!

Para 8 of AR 95-18 (May 73) says units "must" keep the head hangar informed about compliance with aircraft safety-of-flight messages. Give the completion date of the inspection. If you can't complete the check within the time compliance period, give an estimated date and follow up when you do complete it. Send your report to TSARCOM, using the attention line given in the message.

Static Inverter's Missing!

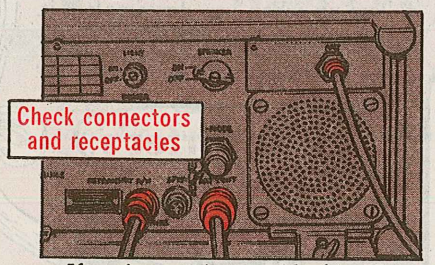
Sorry, Kiowa mechs, the headshed left out a piece. Not on the bird, 'course, in the pubs. Your PP-6376A/A static inverter, NSN 6130-00-168-8544, should have been Item 3 in both Fig 13 of TM 11-1520-228-20P (Sep 78) and Fig 16 of the -34P (Sep 78). It'll be added in the next TM changes.



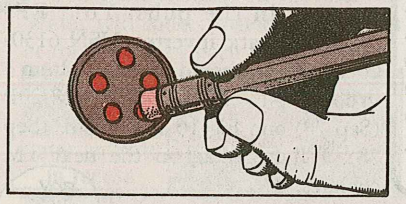


If "say it again, Sam" is topping your radio's play list,it's time to change the tune.

First, scope out audio receptacle and cable connector contacts. Carbon build-up kills commo.

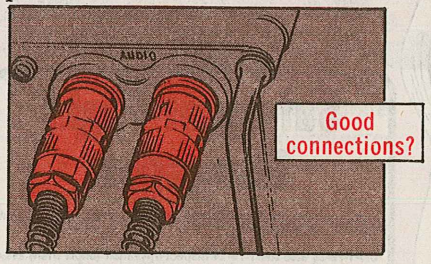


If you've got it, get rid of it. Use a rubber eraser. Go lightly over the pins. Be sure you blow away the eraser bits, of course.

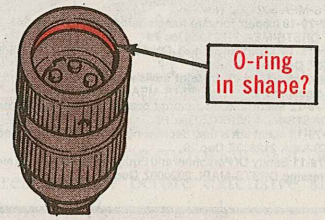


Communicating now? No? Well then...

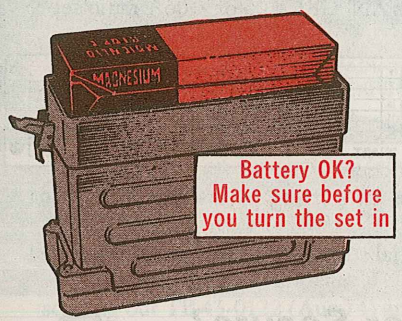
Eyeball cable connections. They should be snug. Make sure they're coupled right and not just mashed into place.



Cable connector O-rings on the job? They snug up connections. Watch antenna hookups, too.

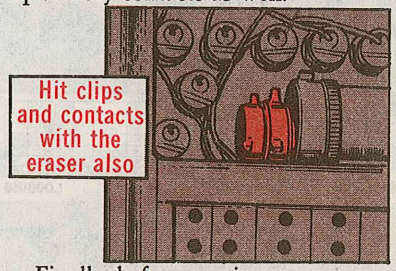


If you're powered by dry cell, make sure batteries are good. Turning a radio in for repair when all that's wrong is a bad battery wastes time.



If you're not sure, substitute a good battery and try to talk. Make sure the batteries are seated snugly, too.

Use the old erasing trick to brighten up battery contacts as well.



Finally, before turning any component into support, troubleshoot it by the TM. Saves time, money and repair shop tempers.

MX-155 Bearings

Forget Fig 3 of TM 11-2546 (Sep 44), Redlegs. You can't get new bearings for your MX-155 connecting and switching kit without ordering the RL-39 reel.

TM 11-3895-203-24P (Apr 76) dropped the bearings as a separate item. Order the reel with NSN 3895-00-498-8343

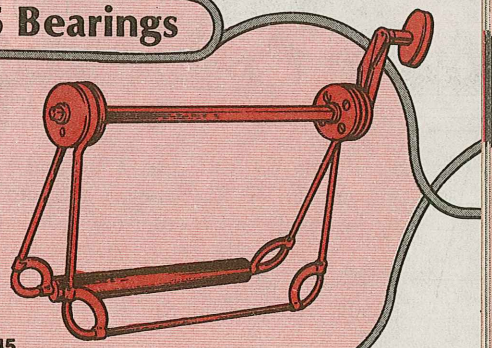
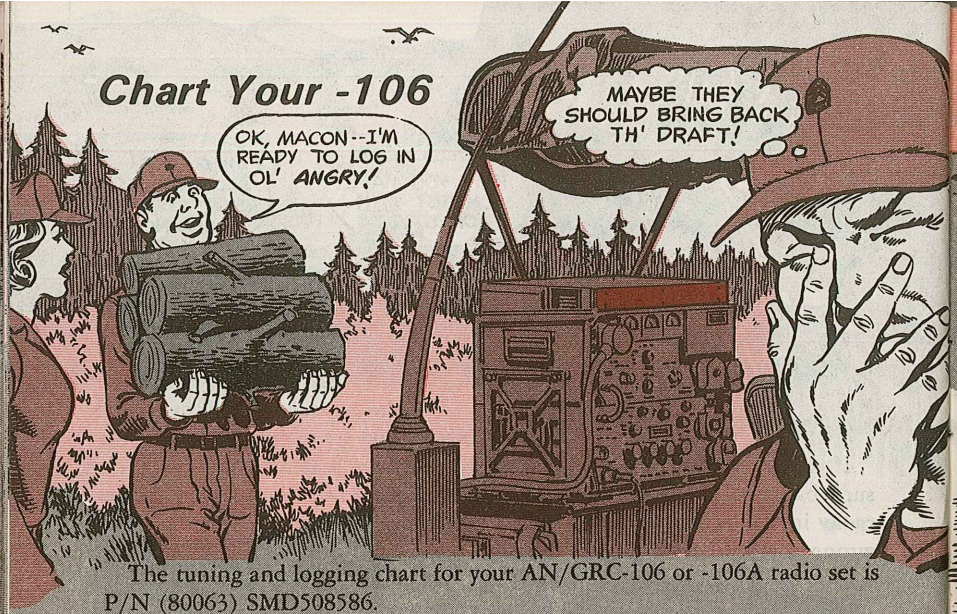


Chart Your -106



The tuning and logging chart for your AN/GRC-106 or -106A radio set is P/N (80063) SMD508586.

15 FOOT WHIP ANTENNA

FREQ	TUNE	LOAD	FREQ	TUNE	LOAD	FREQ	TUNE	LOAD
2.000	500	200	6.000	450	700	15.000	550	850
2.500	500	300	8.000	450	800	18.000	400	900
2.750	500	400	10.000	500	850	20.000	400	950
5.000	450	600	13.000	600	850	29.999	400	950

CH	FREQ	TUNE	LOAD	ANT
1				
2				
3				
4				
5				
6				

LOGGING CHART

CH	FREQ	TUNE	LOAD	ANT
7				
8				
9				
10				
11				
12				

50 OHM DOUBLET ANTENNA

FREQ	TUNE	LOAD	FREQ	TUNE	LOAD	FREQ	TUNE	LOAD
2.000	600	500	5.000	600	800	16.000	400	950
2.500	600	600	7.000	900	850	29.999	400	950
3.000	600	700	15.000	500	900			

The chart gives you a quick reference for starting points in your antenna tuning and loading sequence.

It also gives you a space to record initial settings for other commonly-used frequencies.

Secure Gear Secure?

If your AN/GRC-142, -122 A and B model RATT Rig is short a crypto gear holddown kit, order one.

You get web straps, hardware, a wrench and instructions with P/N 1001, FSCM 30790. RIC is B16.

Canceled Checks

Dear Macon,
Change 3 (Sep 78) to TM 11-5805-201-12 (Jun 67) on our TA-312 telephone dropped organizational PMCS. Does that mean no more DD Form 314's on the sets?
SSG S.M.H.

Dear Sergeant S.M.H.,

Exactly. Since your organizational shop doesn't do the work or oversee it, and your set is not DA 2406-reportable, you can forget the 314's.

Don't forget any operator checks and services, tho.

Macon

Getting A Glow On?

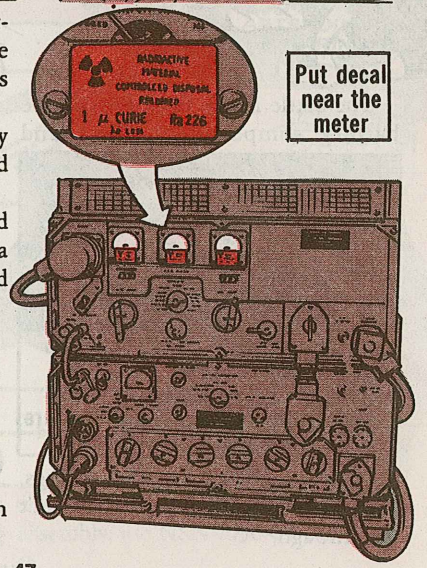
If the meters on your commo/electronic gear contain radioactive material, slap a decal on 'em that says so.

You can find out if yours qualify by scoping out TB 43-0122 (Aug 74) and your TM.

The TB lists gear by end item and tells which part uses the stuff. To get a decal, put the meter's NSN and nomenclature in a request to:

Commander
US Army Communications and Electronics Materiel Readiness Command
ATTN: DRSEL-SF-H
Ft Monmouth, NJ 07703

Once you've got your decal, put it on or near the meter.

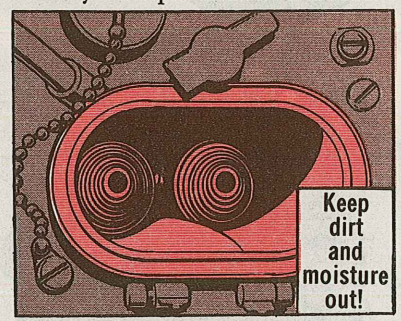


Clean Compartments Keep...

Batter ies Up!

The best defense is a good offense when you're trying to keep dirt and corrosion from silencing your TA-312 telephone set.

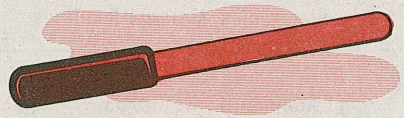
The battle line is drawn inside the battery compartment. Dirt and



moisture zap contacts and springs. Pretty soon, your ringy-dingy won't get through.

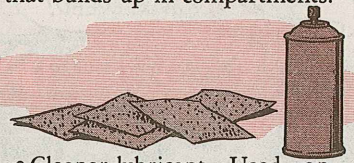
When choosing weapons for the fight, pick these:

- A clean, dry cloth—To wipe away dust and dirt.
- Cleaning compound—For extra tough spots, dampen the cloth with compound, NSN 6850-00-597-9765.
- Burnisher—To clean electrical contacts. The tool, NSN 5120-00-255-4458, is OK'd by Appendix A, CTA



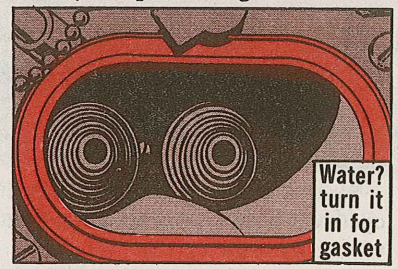
50-970 (Jun79). Some tool kits, like the TE-50B, have burnishers, too.

- Sandpaper—To clean corrosion that builds up in compartments.



- Cleaner-lubricant—Used on the compression springs. It heads off corrosion and helps clean up what's already there. Ask for NSN 6850-00-003-5295.

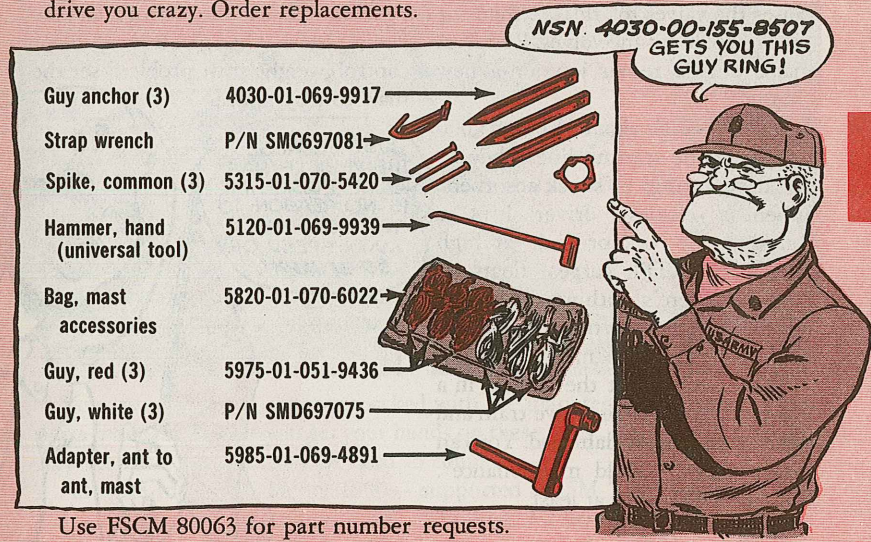
Finally, if it looks like water's getting in, turn your set in for a new battery compartment gasket.



MK-1069 Mast Accessory Kit...

Parts Make It Whole

Just 'cause your MK-1069 mast accessory kit is only half there, don't let it drive you crazy. Order replacements.



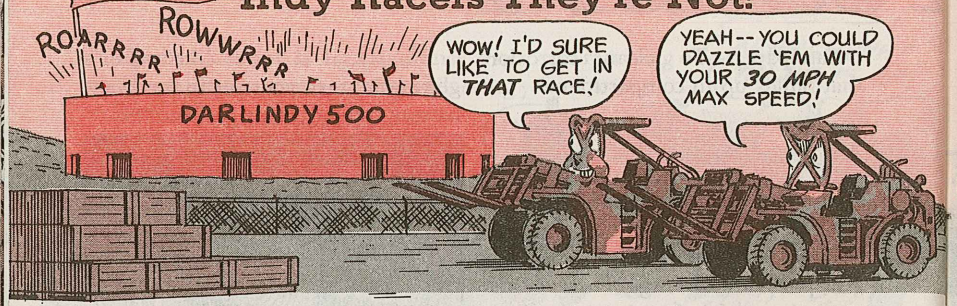
Use FSCM 80063 for part number requests.

To get the guy attachment ring assembly, use NSN 4030-00-155-8507.

COMBAT SUPPORT

RTFL Trucks...

Indy Racers They're Not!



Some rough terrain forklift operators have a pedal-to-metal foot when they crank up their vehicles.

Operating these trucks at high speed causes downtime and expensive parts replacement.

F'rinstance, when you top a hill, or downshift at max speed, here's what happens: The engine overspeed causes the valves to "float"...then the pistons could hit the valves. Result: A major engine repair job...or a new engine!

RTFL's weigh about 25,000-35,000 pounds at the starting line. They do not have springs or shock absorbers. When a careless driver hits a chuckhole or rock or such at high speed, the RTFL surges, floats or bounces. There's nothing to cushion the shock except the tires. Talk about rebounding! Bam! Slam!

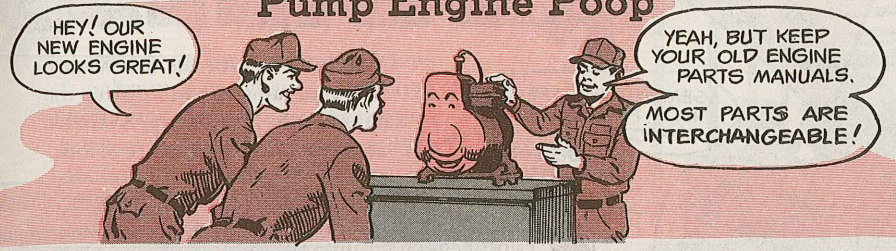
These actions put the vehicle in a PM-bind. The chassis, drive train and steering system are damaged. You can forget about "infield maintenance". It'll take DSU work at least.

Crank this info into your RTFL SOP:

"Drive no vehicle at a speed greater than is reasonable and proper, with due regard for weather, traffic, intersections, width and character of the roadway, type of truck and any other existing conditions."

When you're in convoy, let the vehicle with the greatest operator control/weight shift problem set the max convoy speed.

Pump Engine Poop



Nonrepairable GED pump engines on tank and pump units supported by TM 5-4930-227-14 (Jun 69) and TM 10-4930-204-15 (Sep 67) are replaced by engine NSN 2805-00-722-3922, PN BKND 401356 FSCM 66289.

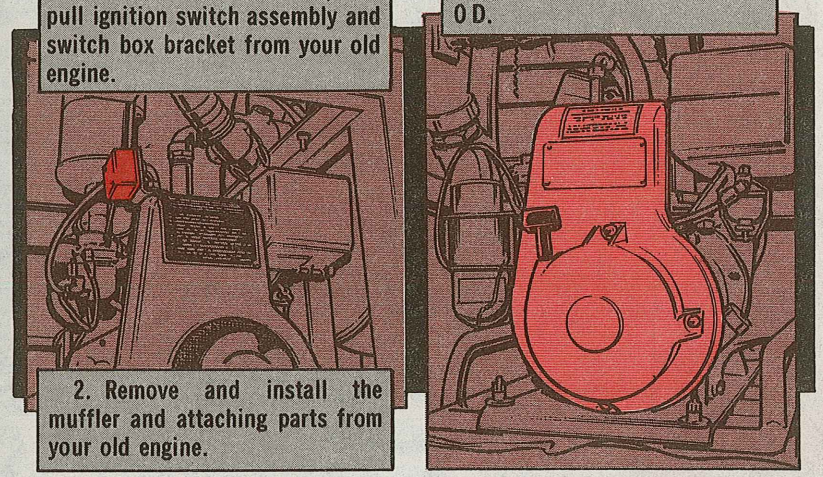
But this new commercial off-the-shelf engine does not have a push-pull safety ignition switch, or a spark-proof muffler, and it wears a coat of light blue or green paint.

So, before you mount it to the pump, you'll have to:

1. Remove and install the push-pull ignition switch assembly and switch box bracket from your old engine.

2. Remove and install the muffler and attaching parts from your old engine.

3. Paint the new pump engine O D.



Your new engine comes overpacked with the manufacturer's operator and parts manuals. Be sure you get your hands on these pubs...and take care of 'em. Replacement manuals may be hard to come by.

Advance Industries Model 1800— supported by TM 5-4930-228-14 (Aug 72) —is powered by engine NSN 2805-00-472-2389. This engine can be replaced only by cannibalization. Engine parts are still available, tho.

Small Generators...

READINESS REPORTING

Operator TM's for the 5-KW thru 10-KW generator sets will pick up the "Equipment Is Not Ready/Available If" checklist with the next revisions.

Meanwhile, here're some guidelines to help you know when your set is not ready. Add to these any other defects you find that would keep your set from performing its assigned job.

GENERATOR TYPES--CHECK FOR THESE DEFECTS--IF YOU FIND 'EM--REPORT 'EM!

GOTCHA, CONNIE!

BATTERIES: Cracked, missing or won't turn over the engine.

ENGINE OPERATION: Excessive noise or vibration during engine operation.

OIL CAP: Missing.

GROUND WIRES/ROD: Missing, loose.

FUEL CAP: Missing.

BREATHER TUBES: Missing, disconnected.

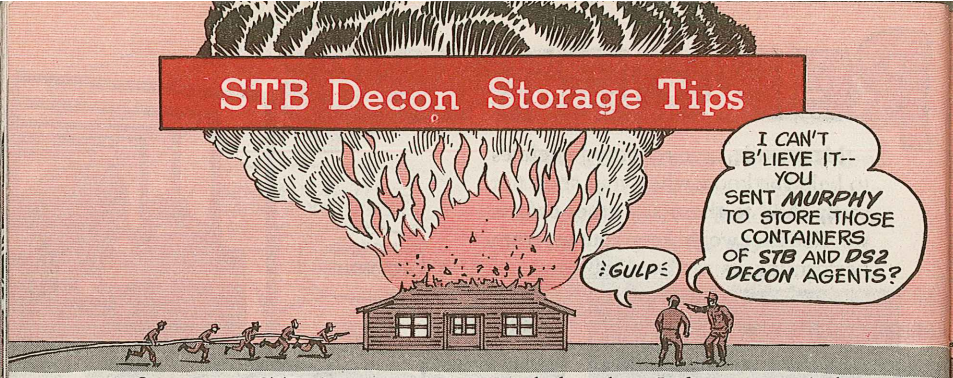
INSTRUMENTS: Missing, inoperable

OIL, FUEL AREAS: Any excessive leaks—3 drops per minute —or visible cracks in systems.

FRAME/MOUNTS: A crack in the frame or mounts that creates excessive vibrations. (If the crack doesn't cause excessive vibrations the set would be available for operations.)

FIRE EXTINGUISHER: Missing, not charged.

STB Decon Storage Tips



Store your STB decon agent in a cool, dry place. It decomposes in heat and moisture.

It could also explode where the temperature goes over 302° F.

STB loses some of its chlorine content when stored, so mark the storage date on each container.

Use them in the order marked or go by the date of manufacture.

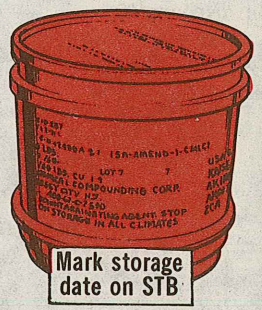
Store STB and DS2 separately. You can store small quantities in the same area, but be careful.

Keep them off the ground or floor with pallets.

Never store one on top of the other. Inside, keep them at least 5 feet apart, with a fireproof barrier and liquid tight seal at the floor.

Outside, store DS2 in an earthen dike, with drainage away from STB.

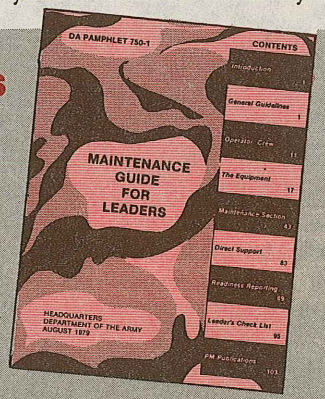
Never mix STB or DS2 solutions in areas where the other is stored.



Always store DS2 where it can drain away from STB and check the containers once every 12 months for corrosion or leaks. Minor rust may be cleaned and touched up with paint. They'll cause a fire if accidentally mixed.

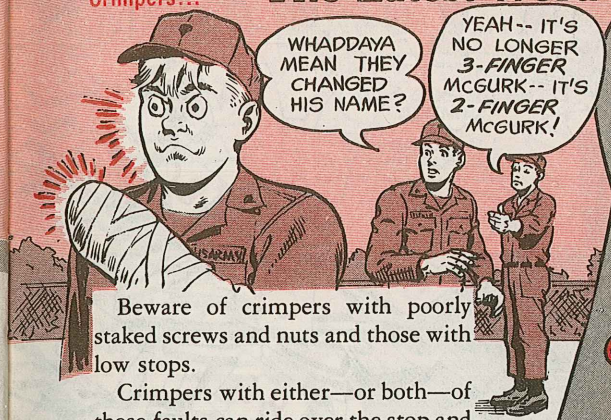
Pamphlet for Leaders

You can get copies of DA Pamphlet 750-1, Maintenance Guide for Leaders, by sending your Autodin order on DA Form 4569 to the Baltimore Army AG Publications Center.



Blasting Cap Crimpers...

The Latest Word



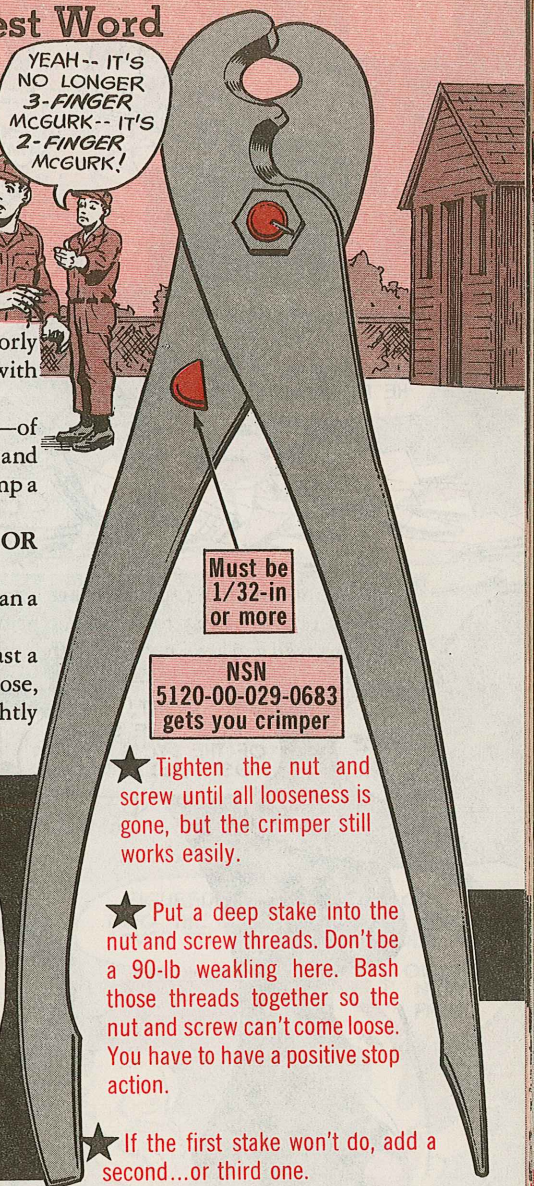
Beware of crimpers with poorly staked screws and nuts and those with low stops.

Crimpers with either—or both—of these faults can ride over the stop and pinch or cut the fuse when you crimp a cap on it...

...AND CAUSE A MISFIRE OR WORSE!

Never use a crimper with less than a 1/32-in stop. Replace it. Period.

If you have a crimper with at least a 1/32-in stop and its jaws are not loose, and the nut and screw are tightly staked together, it's OK to use.

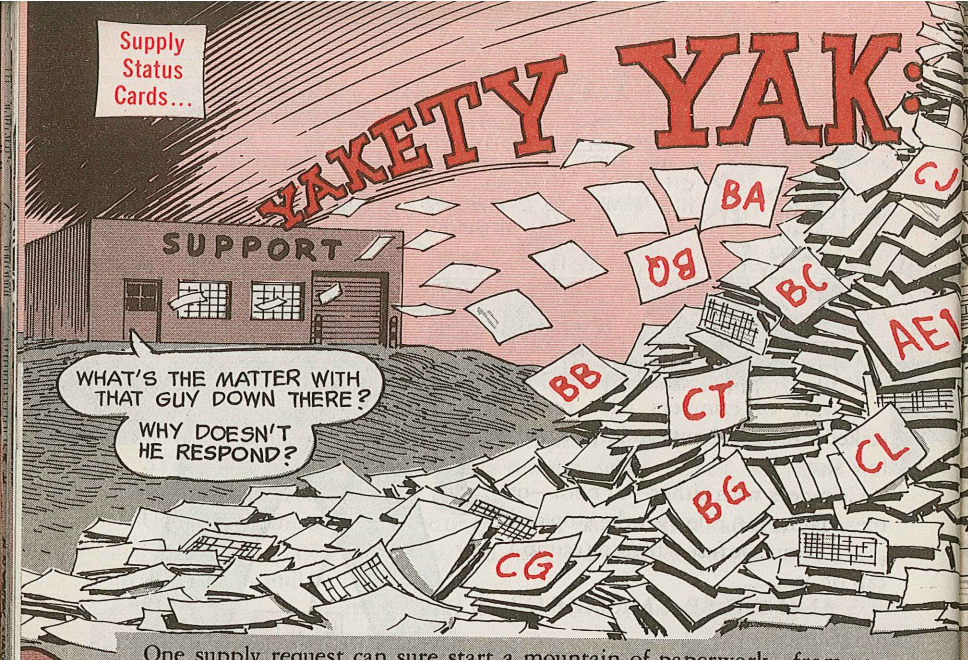


★ Tighten the nut and screw until all looseness is gone, but the crimper still works easily.

★ Put a deep stake into the nut and screw threads. Don't be a 90-lb weakling here. Bash those threads together so the nut and screw can't come loose. You have to have a positive stop action.

★ If the first stake won't do, add a second...or third one.

YAKETY YAK: SUPPORT TALKS BACK

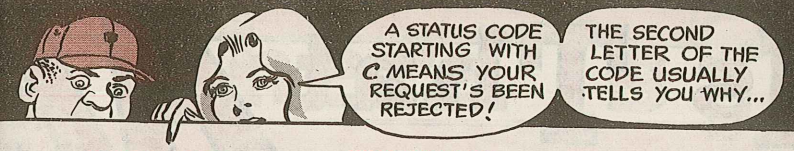


One supply request can sure start a mountain of paperwork—from your document register entry to computer printouts and status and receipt cards. But how well you keep up with all the action on your request depends on your reading—translating—supply status cards.

The 3-place Document Identifier Code (DIC) on a status card clues you in to what the card's telling you.

Appendix I of AR 710-2 describes other document identifier codes. FM 38-725-10, Logistic Codes, Unit/Organization, also gives you a lot of code info.

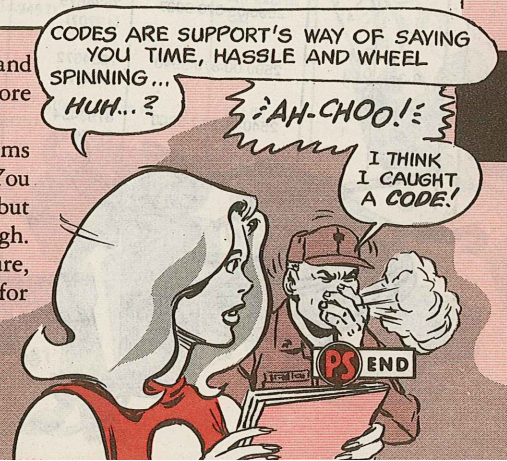
STATUS CODE	WHAT YOU DO
BA— Item being processed for release and shipment to you.	Write the estimated shipment date (if the card tells you that) and status code on your document register, and slip the status card in your due-in status file.
BB— Item is on back-order. The estimated date of release of the item should be on the card.	Put the status code and new date on your document register. File the status card. Follow up on the request if the new date passes with no new status.
BC— Item back ordered. Long delay. If you can, cancel the item and order a substitute instead. (The substitute NSN should be on the card.)	Cancel the request. Close-out the entry on your document register and re-order the substitute. If the substitute won't do, file the card and sit back for a long wait.
BG— Stock number changed or assigned. Unit of issue and quantity may also have changed.	Change your document register, DA Form 3318 or computer printout, preprinted forms and PLL. File card.
BJ— Unit of issue and/or quantity changed.	Same action as for BG.
BK— Addressed to wrong activity. Your request has been rerouted. Send any follow-ups or cancellations to the activity shown in card columns 67-69.	File the card. Send follow-ups and cancellation requests to new Routing Identifier Code (RIC) on the card.
BO— Cancelled. OK's your request to cancel. This card also OK's a cancellation request sent in by your support.	Close out your document register entry and change demand info. If the cancelled item is durable or expendable, toss all your status cards on that request. If the cancelled item is nonexpendable—or listed on your property book—put the status card in your document file.



STATUS CODE	WHAT YOU DO
CG— Unable to identify. Send in new request with good NSN or part number, and end item application and pub reference.	Close out the old request on your document register and change demand info. Toss all your status cards on the original request. Reorder using new info.
CJ— Item coded obsolete in latest pub. Not for issue. If still needed, reorder with advice code 2F and give more info: end item use, FSCM and part number, drawing or pub reference.	Close out the old request on your document register and change the demand info. Toss all your status cards on the original request. Reorder on a DD Form 1348-6 adding Advice Code 2F and technical info: end item, pub reference, etc.
CL— Item not available. Order component part if practical.	Close out document register entry and change demand info. Toss all original request status cards. If you're authorized to order the components, put in new request.
CS— Quantity rejected as being wrong or too much. Partial amount supplied.	Change your demand info and update the entry on your document register. When the items arrive, close out the entry and toss the status cards. If you still need the remainder, make out a new request and use advice code 2L.
CT— Send in new request with more info: end item use, FSCM and part number, and/or pub reference.	Close out entries and change demand info. Toss all the request's status cards. Reorder on a DD Form 1348-6 or DA Form 2765.

Appendix F of AR 710-2 and Appendix R of AR 725-50 list more status codes.

Some special computer systems have their own status codes. You should never see those codes, but sometimes one may slip through. When you find a code you can't figure, get on the horn to support soonest for a translation.



Is That AAL There Is?

You flummoxed over how to order and handle Additional Authorization List (AAL) items in your operator's manual? Read on.

First off, AAL items are not part of or the same as your Basic Issue Items (BII). Those 2 lists cover different categories of equipment.

BII come to you as part of the end item. Whatever's in the BII must be on hand or on order always! And, since the BII is part of the end item, you use the end item TM as your authority to order that gear.

TM 9-2320-260-10

BASIC ISSUE ITEMS LIST (Cont.)

ILLUSTRATION FIGURE	ILLUSTRATION ITEM	NATIONAL STOCK NUMBER	PART NO.	DESCRIPTION
B-7	1,2	4210-00-775-0127	7015266 (19207)	EXTINGUISHER: 5 lb purple K, dry chemical, w/bracket
B-3	2	2590-00-870-9940	7534675 (19207)	HANDLE: Leveling jack
		5120-00-566-0617	7534672 (19207)	JACK: screw hand
		2590-00-772-8814	7728814 (19207)	HARNESS: Wiring, intervehicular assy
		4720-00-740-9662	7409662 (19207)	HOSE: Air connecti
B-3	4	2590-00-870-9937	7534675 (19207)	JACK: Plate, foot leveling
B-3	3	2590-00-870-9940	7534672 (19207)	JACK: ...g, vehicle, ...able
B-3	1	2540-00-957-5008	8759434 (19...)	LA...

BII stays with the equipment, too. When you turn in the end item, the BII is turned in with it.

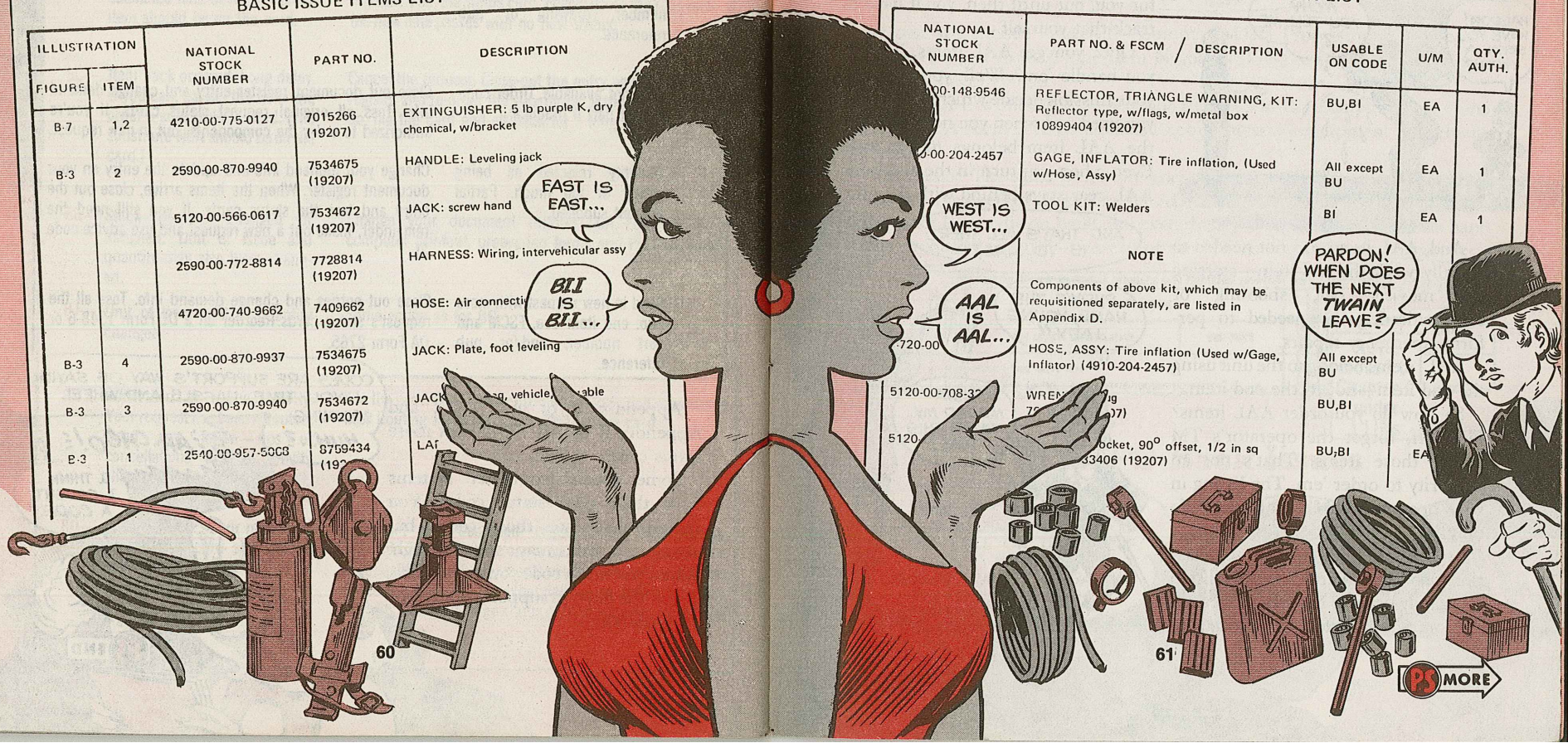
OK, AAL is **not** BII. But what is it?

AAL items are things like extra rifle magazines, accessory cases and equipment, gas cans and (sometimes) fire extinguishers, tools or equipment for a special mission of the end item—like welding sets on wreckers, for example.

TM 9-2320-260-10

ADDITIONAL AUTHORIZATION LIST

NATIONAL STOCK NUMBER	PART NO. & FSCM / DESCRIPTION	USABLE ON CODE	U/M	QTY. AUTH.
...00-148-9546	REFLECTOR, TRIANGLE WARNING, KIT: Reflector type, w/flags, w/metal box 10899404 (19207)	BU,BI	EA	1
...-00-204-2457	GAGE, INFLATOR: Tire inflation, (Used w/Hose, Assy)	All except BU	EA	1
	TOOL KIT: Welders	BI	EA	1
	NOTE			
	Components of above kit, which may be requisitioned separately, are listed in Appendix D.			
...720-00	HOSE, ASSY: Tire inflation (Used w/Gage, Inflator) (4910-204-2457)	All except BU		
5120-00-708-3...	WREN... ...g 7... ...07)	BU,BI		
5120...	...ocket, 90° offset, 1/2 in sq ...33406 (19207)	BU,BI	EA	



Operators and crews use AAL items to support the end item during operation. They are not part of the end item.

You can leave AAL items behind or take 'em with you. That's up to your CO and your mission. You do not have to carry AAL items with the end item.

And, AAL items are not needed to actually work the end item—starting up, moving out, shooting or communicating—or needed to perform emergency repairs.

AAL items belong to the unit using the end item—not to the end item.

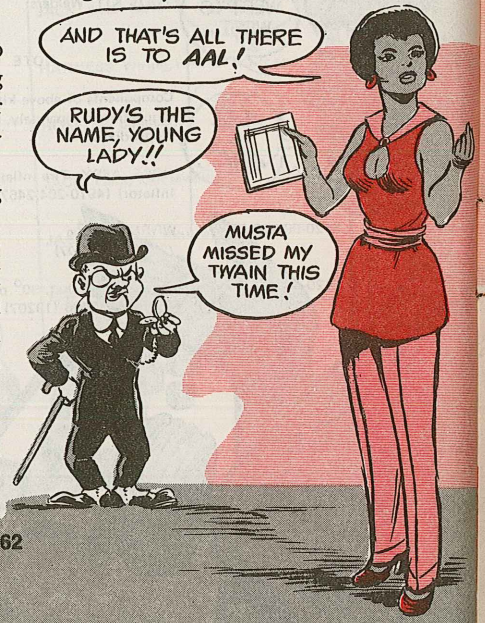
So how do you order AAL items? First off, forget the operator's TM listing those items. That's not an authority to order 'em. The listing in your operator's TM is for your info only.

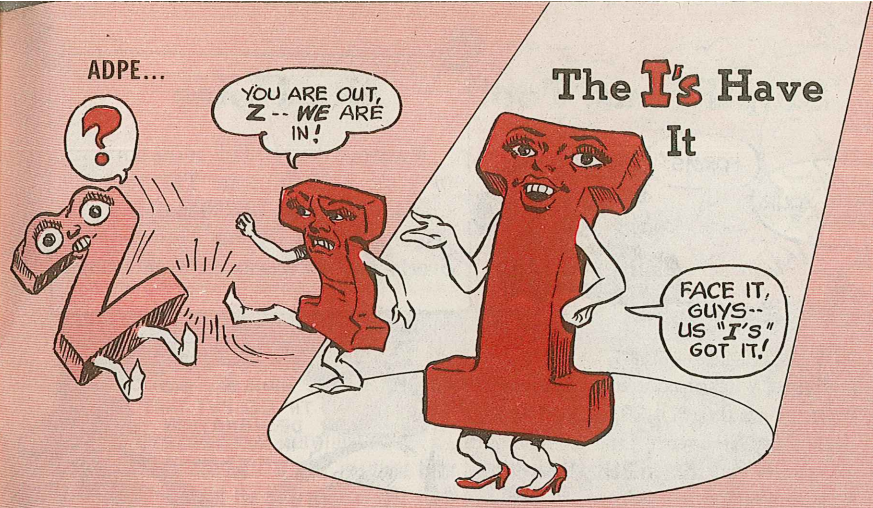
Look for another type of authorization pub. AAL items must be listed separately on your MTOE/TDA or in a Common Table of Allowances (CTA) pub. 'Course, the CTA must be listed on your MTOE/TDA.

Most MTOE/TDA's list at least these CTA's: CTA 50-900 Clothing and Individual Equipment, CTA 50-913 Office Type Furniture and Equipment, CTA 50-915 Allowances for Miscellaneous Field and Garrison Equipment, and CTA 50-970 Expendable Items (Except Medical, Class V (Ammo), Repair Parts and Heraldic Items).

Plans are to list AAL items in your TM under the pub that authorizes 'em for you, but until then, you'll have to track that yourself.

Once you get AAL items, how do you handle 'em? Well, your CO and your mission decide which AAL items you need and when you need 'em. But the AAL item belongs to the unit. Even when you turn in the end item, AAL gear stays behind with the unit.





In case you missed it, ADPE—Automatic Data Processing Equipment—recently changed from Z Line Item Numbers (LIN) to I LINs and moved to Chapter 2 of SB 700-20.

Your ADPE with a Z LIN was not reported in the Equipment on Hand section of DA Form 2715 Unit Status Report unless the equipment was actually on hand.

Well, relax. The same procedure goes for your ADPE with a new I LIN.

Forget about reporting that I LIN ADPE on your DA Form 2715 until the equipment is actually on hand. But even then, you report the number on hand as your required quantity—instead of the MTOE required column number.

ROW C COLUMN 10 ARMY ADOPTED ITEMS OF MATERIEL & AUTOMATIC DATA PROCESSING EQUIPMENT (ADPE)

CHAPTER 2 SB 700-20

LIN			GENERIC NOMENCLATURE				TYPE CLASS	REFERENCE DATA
NSN OR ACVC	SC		NSN OR ACVC NOMENCLATURE	UNIT PRICE	UI			
* 140575	C	O	MAGNETIC TAPE UNIT: ADPE		A	BB		
145656	C	O	MULTIPLEXOR CONTROL: ADPE DISTRIBUTOR/BUFFER/ADAPTER		A	BB		

ADPE moved to Chapter 2 under I LINs

FREE: PS Back Issues

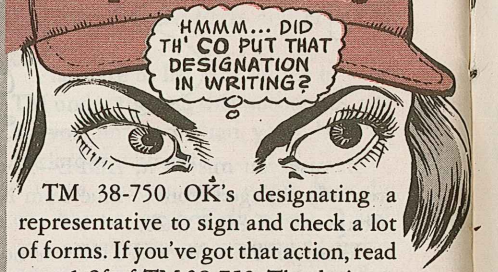
Ship Forms, Too!

Before you ship out equipment on a transfer, read para 4-20a(2) of TM 38-750 (May 78) with Change 3. That para tells you to send the DD Form 314 and all the equipment records required on that item by Appendix E with the equipment. If you have the new equipment records folders, NSN 7530-01-065-0166, tuck the forms in the folder. If you're short the new folders, send those forms in an old logbook binder.

Nix Notes

Mark out the NOTES at the bottom of page E-55 in your TM 38-750. Change 2 to TM 38-750 dropped all references for those notes—but overlooked the words on page E-55.

Reps in Writing

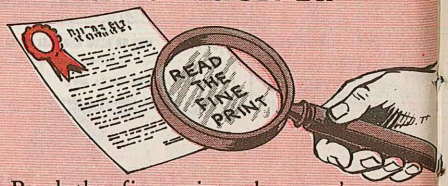


TM 38-750 OK's designating a representative to sign and check a lot of forms. If you've got that action, read para 1-2f of TM 38-750. The designation of a representative must be in writing. You can use a DF or a DA Form 1687—that's up to you and your CO. But get it in writing.

PLL Help

Units wanting an initial PLL can get a PLL computer printout tailored to fit their equipment. Just check para 2-37e of AR 710-2. But make sure you give them all the information required. A copy of your MTOE just won't make it. Hold off on asking for the Failure Factor info in para 2-37e(2) (e), though. The people at Lexington cannot give you a PLL to fit Failure Factors yet.

Glance Won't Hack It!



Read the fine print when you're filling out the DA Form 2408-1 equipment log. Although the Remarks block in Fig 4-5 of TM 38-750 doesn't show an installation date for antifreeze, you need one. That's the word in Change 2 (Oct 78)...the last paragraph on page 4-10.

Connie's Mini Minis

2½-Ton Fuel Filter

The primary fuel filter element for your 2½-ton multifuel truck is out of stock until late 1980.

Use the M60 tank's primary filter element kit, NSN 2815-00-808-2407. It's for the same filter assembly. You get the filter element and all of the gaskets in the kit.

M113-Series Oil Line NSN

Change 3 (Sep 79) to TM 9-2300-257-20P goofed on the NSN for the engine oil outlet hose assembly. The correct number for Item 10 in Fig 3 and 3.1 on page 6 is NSN 4720-00-905-9076, PN 10948643-1.

D7F Filter Elements

To get the filter element for your Caterpillar model D7F dozer's fuel filter or accessory drive, use NSN 2910-00-287-1912. This is item 26, Fig 50, and item 9, Fig 55, TM 5-2410-233-20P (Mar 72).

LCSS Packaging

When you ship your LCSS signal generator's power amplifier back to depot, use the packing material the PA came in. In other words, save it now, use it later. The original stuff protects the solder terminals on the bottom of the PA. If you don't have the original packing, rig up a way to protect the terminals. The idea is, get the weight off the terminals.

M102 Spindle Saver

There's a shortage of wheel spindles for M102 towed howitzers, so do these things to keep your spindles from cracking: Keep within maximum towing speeds (super highway, 45-MPH; improved roads, 35-MPH; cross country, 10-MPH.) Slow down in terrain with chuck holes, big rocks, stumps, etc. When you tow an M102, never do any show-off "cowboy" drving.

Oil Pressure Gage

Use NSN 6620-00-115-9042 to get the engine oil pressure indicator—gage—for your M60-series tanks. Jot down the NSN until TM 9-2300-378-20P/1 (Aug 69) and TM 9-2350-257-20P/1 (Dec 75) are changed.

Missile Readiness

If you have missiles in your unit, including TOW/Dragon and Chaparral/FAAR, you need AR 750-40 Missile Materiel Readiness Report (Jan 80). Draft copies were sent out in December, but the real thing is now out. Smaller missile systems follow the bigger ones in reporting under this reg on 15 April for the 16 Mar to 15 Apr report. The new AR 750-40 is unclassified, with new procedures and new forms, DA Form 3266-series. But this reg only covers your missile systems. Your other gear still goes on the DA Form 2406.

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


RUST
PUTS YOUR GEAR DOWN
CORROSION
BURIES IT!!
HAR! HAR! HAR!
YUK! YUK! YUK!
STOP THEM WITH PM!
PM