Issue 341

PS

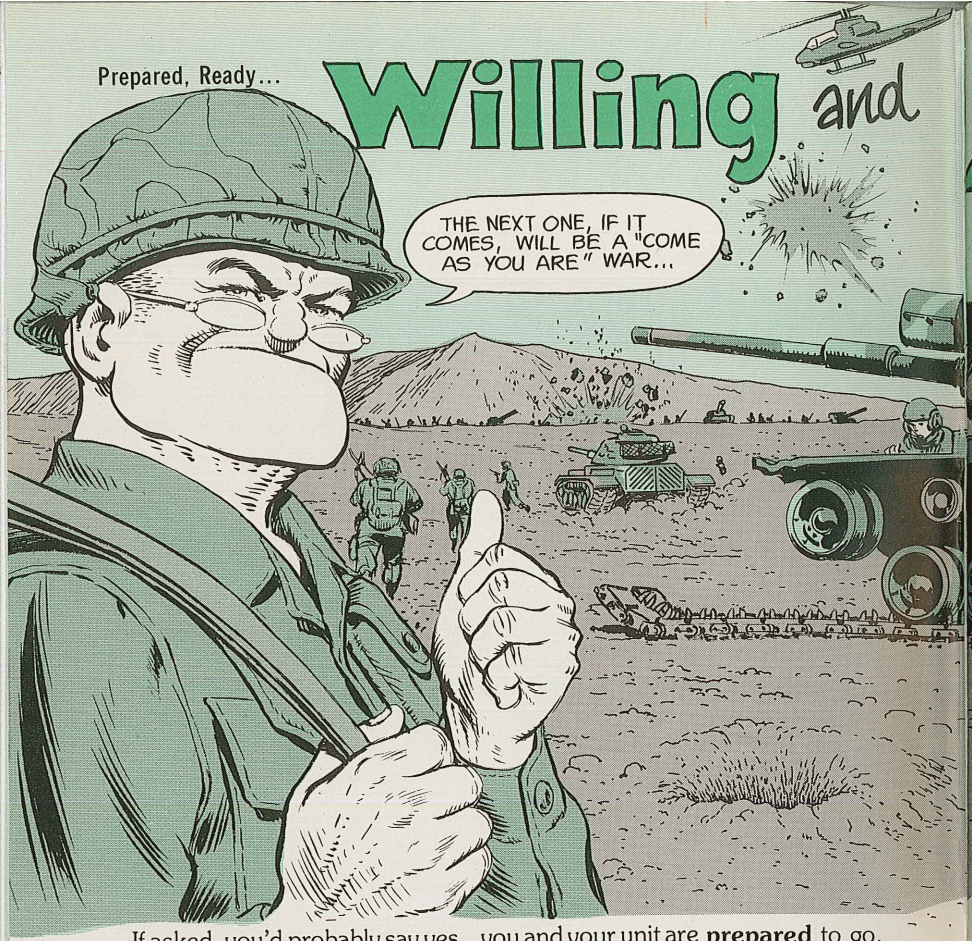
April 1981

THE PREVENTIVE MAINTENANCE MONTHLY

PM on Machine Guns
See Page 29

Prepared, Ready...

Willing and ABLE?



If asked, you'd probably say yes, you and your unit are **prepared** to go.

You'd even say yes, you and your unit are **ready** to go.

But the real question that must be answered day in and day out is whether you and your unit are **able** to go.

Preparedness and readiness reflect a state of mind—the way you, your sergeant, even your CO think things are.

Those terms don't mean much when it comes to equipment because equipment condition is strictly an objective, physical thing. Your equipment is either able to go at a particular time or it's not.

That's what makes your Preventive Maintenance Checks and Services so important. The ability of your equipment to perform its job at a moment's notice is crucial to the Army mission.

PS THE PREVENTIVE MAINTENANCE MONTHLY

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

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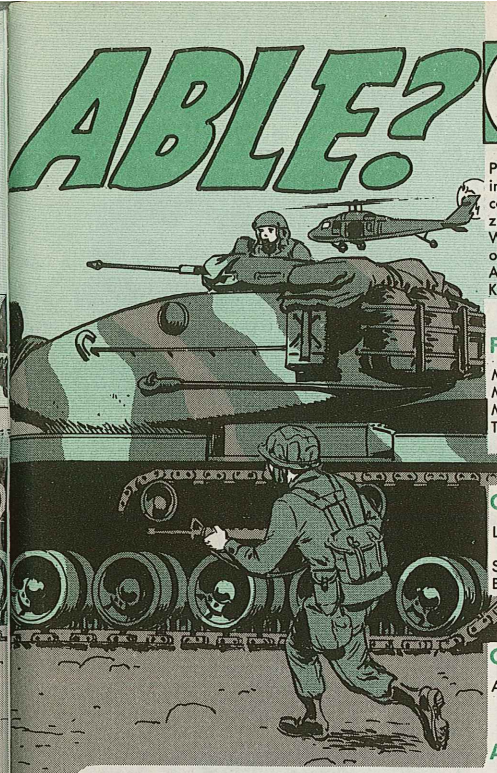
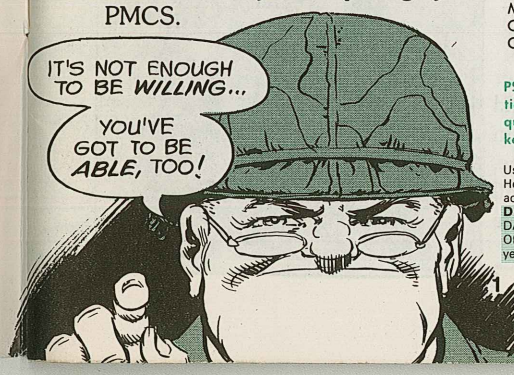
ISSUE No. 341 APRIL 1981



As the operator, you're the best person to know whether your equipment is able to perform now and in the forseeable future. You're the first person in a line of communication going right to the Commander-in-Chief. Keep that in mind when you're pulling your PMCS.



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

MSG Half-Mast
PS Magazine
Lexington, KY
40511

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FIREPOWER

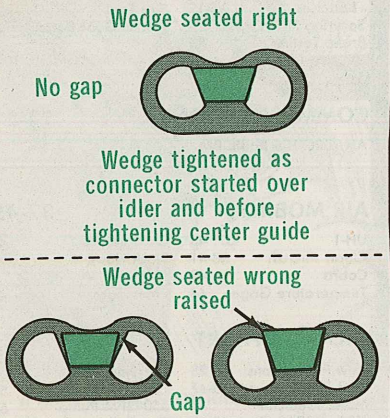
M60-Series Tanks...

End Connectors and Wedges

Some tankers are tightening the end connector wedge bolts anywhere along the track.

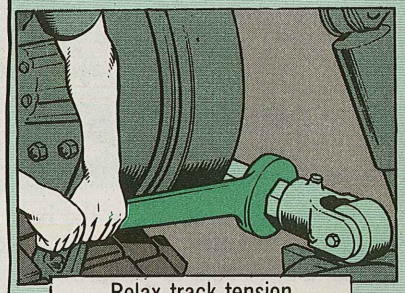
This is wrong! The wedges won't seat.

The track shoe has to be in exactly the right position when you tighten the bolt or the wedge will not fit into the notch cut in the pin.



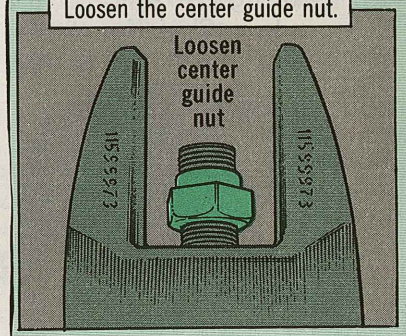
Also, you have to loosen the center guide nuts before tightening the end connectors. Otherwise the track pin notches will not aline with the wedge. The wedge will ride high. The bolt will loosen right away and track failure starts right now.

Move the tank so the end connector to be tightened is between the No. 1 roadwheel and the compensating idler.

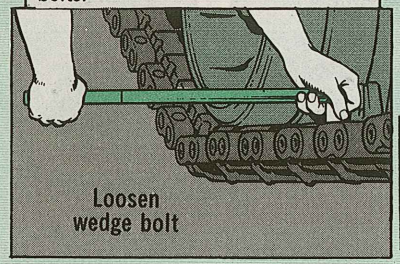


Relax track tension.

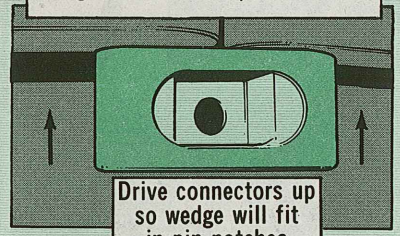
Loosen the center guide nut.

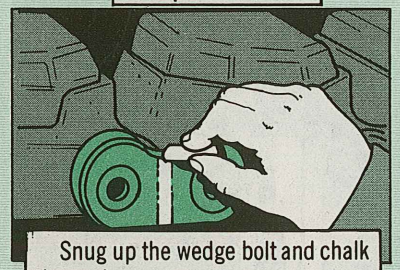


Loosen the end connector wedge bolts.



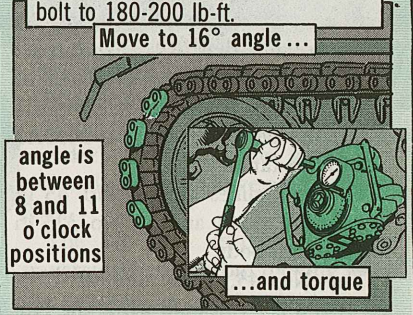
The end connector may have to be moved in or out on the pins for the wedge to fit into the pin notches.



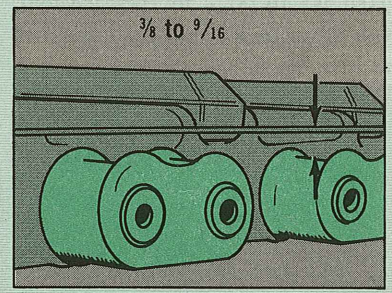


Snug up the wedge bolt and chalk the end connector.

Move the tank backward until the shoe with the end connector is on the compensating idler. This is where the shoes are at 16-degree angles. The wedge will seat right and you can get a torque wrench on the wedge bolt. Get the torque wrench from your mechanic and torque the bolt to 180-200 lb-ft.



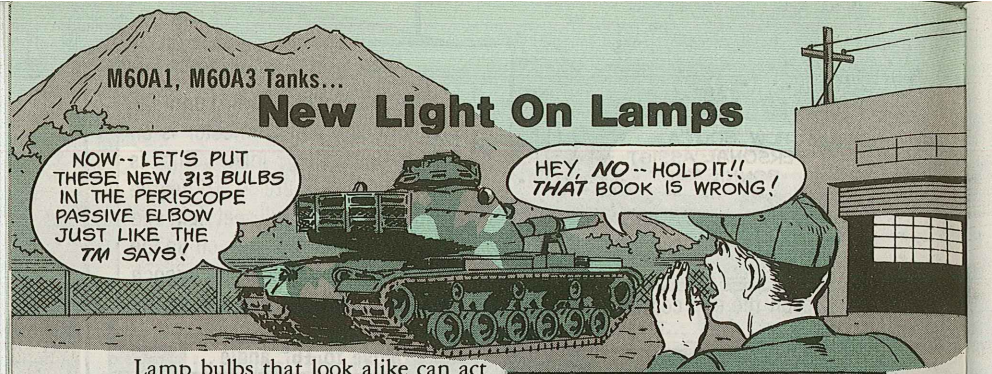
Move the tank forward until the loosened center guide is between the No. 1 roadwheel and the idler. Torque the center guide nut to 350-380 lb-ft.



Adjust track tension after all other track faults have been corrected. Track tension—using the string measurement—has been changed. It's now 3/8 to 9/16 inch.

M60A1, M60A3 Tanks...

New Light On Lamps



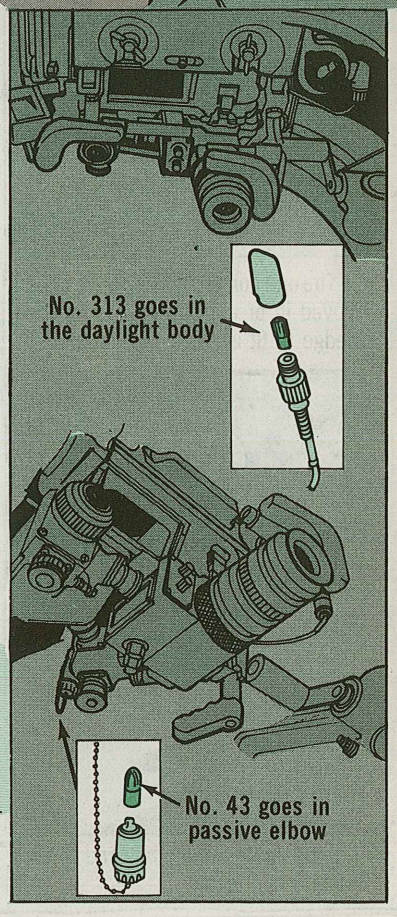
Lamp bulbs that look alike can act different. That's the way it is with 2 of the light bulbs in the M32E1, M35E1 or M36E1 periscope on your M60A1 or M60A3 tank.

The look-alikes are the No. 43 in the passive elbow and the No. 313 in the daylight body.

The No. 43, NSN 1240-01-016-2271, is a 2.5-volt bulb while the No. 313, NSN 6240-00-155-8714, is 28 volts.

If you put the 2.5-volt bulb in the 28-volt socket it'll blow.

If you have an M60A3, do your ordering from page D-4 of TM 9-2350-253-10 (Nov 79). It has the 28-volt 313 as Item 33 and the 2.5-volt 43 as Item 40.



M48/M60 Tank Oil Samples

Eyeball Para 3-6 in TB 43-0001-39-3 (Oct 80) for the details on a new oil sampling valve system for your tanks.

Tankers...

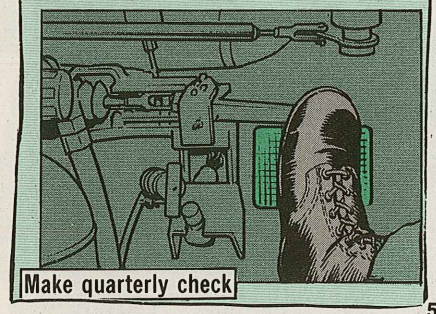
Bear Down on Parking Brakes

You tankers and mechanics spend a lot of sweat making sure every tank can move when you want it to.

Now's the time to see that it won't move when you want it to stay put.

TARCOM Msg DRSTA-MCA 161800Z Jul 80 calls for quarterly parking brake checks.

Put the tank on a steep slope and put on the parking brake. After the brake is on, take your foot off. The tank must hold its position for at least 2 minutes after you have stopped pressing on the brake. If it won't hold, it fails the test and must be adjusted.

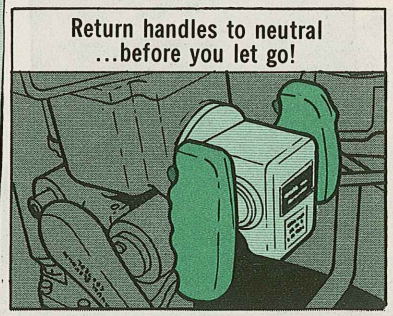


Control Your Controls

Keep your gunner's and commander's control handles under control and you won't have a broken No-Back.

The No-Back keeps the manual traversing handle from moving when the gunner's or commander's control handle is in motion.

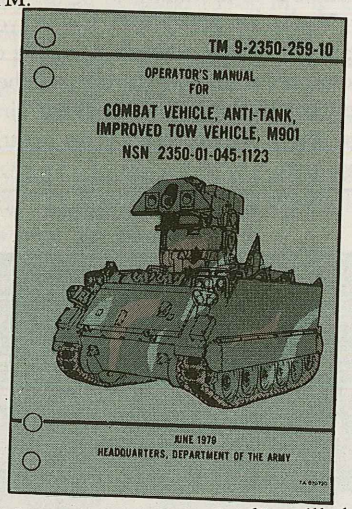
You strain your No-Back when you rapidly traverse with the gunner's or commander's control handle, and then let go of the handle without first getting it to the straight-up neutral position.



So move your power control handle to the neutral position before you let go of it. That'll help keep your No-Back healthy.

PUB and DECAL Update

You don't stow the M901 Improved TOW Vehicle's launcher as Page 2-165 in C 1 to TM 9-2350-259-10 tells you. Step 1 is wrong...and so is the decal mounted on the accumulator and the decal shown on page E-23 in your -10 TM.

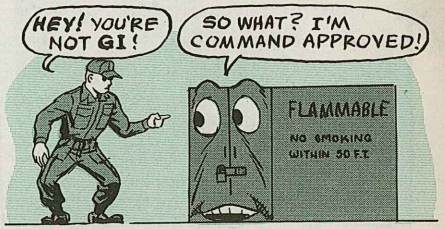


Step 1 on page 2-165 will be changed to read: Use hand controls to rotate turret in azimuth until AZ STOW lamp (1) lights. Elevate the launcher with the hand controls to the maximum elevation, then depress the launcher until the elevation stow light comes on.

Step 4B on the decal is wrong (ignore it).

The new step 4B will read—"Elevate the launcher with the hand controls to the maximum elevation, then depress the launcher until the elevation stow light illuminates."

Storage Cabinets



You have to get command approval before you can requisition non-standard storage cabinets for paints, solvents, or other flammables. Para 2-26, Change 6 to AR 710-2 has the right poop. You can't use Para 2-18j (1) as the authority the way Page 54 of PS 334 says.

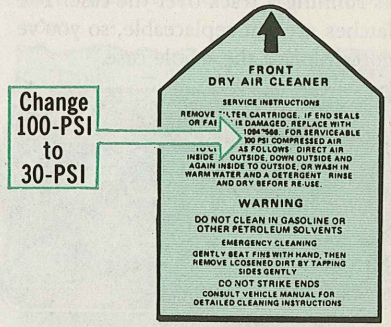
Air Cleaner Cleaning Hazard

Never use 100-PSI compressed air to clean your air cleaner element as shown on page 3-52 in TM 9-2350-259-10. That's wrong. You could get hurt.

Use 30-PSI to clean element

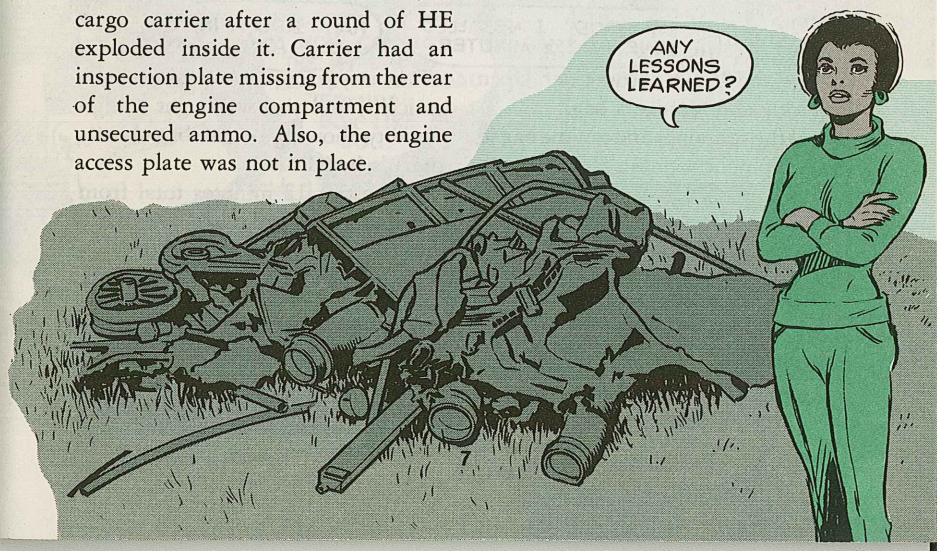
Instead, use air gun 4940-00-333-5541 to blow the element clean. This gun's regulated to pass no more than 30-PSI air. It's in your No. 1 and No. 2 Common Shop Sets. Blow air from the inside of the filter toward the outside...and wear goggles.

The decal on your air cleaner and the one shown as Item 1 on Page E-6 in your TM are wrong, too. Scratch out the 100-PSI on the decal on your air cleaner and make a note in your TM. Both the decal and the TM will be changed to 30-PSI.

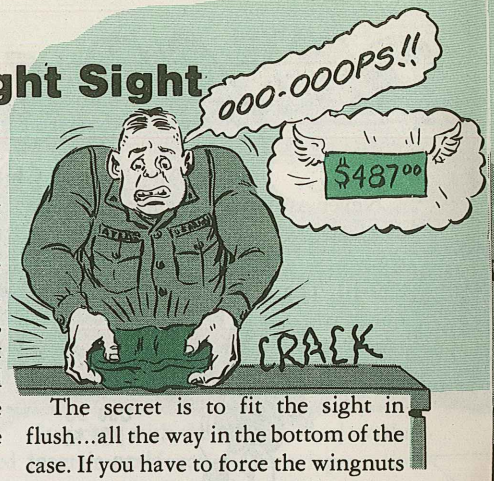


It Shouldn't Happen...

Here is what is left of an M548 cargo carrier after a round of HE exploded inside it. Carrier had an inspection plate missing from the rear of the engine compartment and unsecured ammo. Also, the engine access plate was not in place.



TOW Night Sight



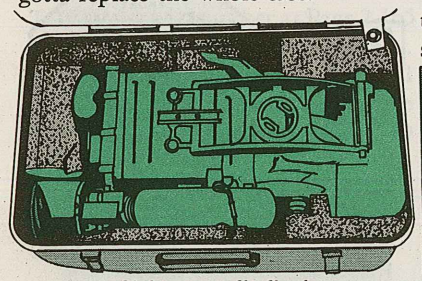
A little muscle can cost a lot when you're stuffing the TOW AN/TAS-4 night sight into its case.

Like, $487 for a replacement carrying case.

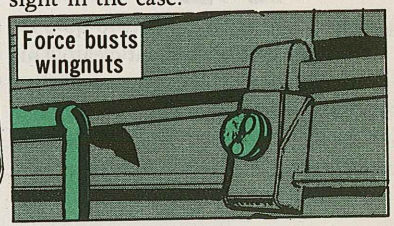
Some troops don't quite get the sight flush on the bottom of the case.

Then, when they close the cover, they've got to force the wingnuts. That busts the latches...and that's as good as running a track over the case. The latches are not replaceable, so you've gotta replace the whole case.

The secret is to fit the sight in flush...all the way in the bottom of the case. If you have to force the wingnuts to close the cover, stop. Reseat the sight in the case.



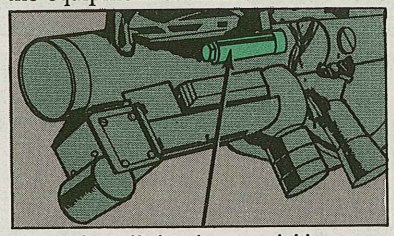
Sight must fit flush



System Dessicant

Take one dessicant container. Open it quickly and remove a bag.

Seal the container and put the bag in the equipment soonest.



Install dessicant quickly

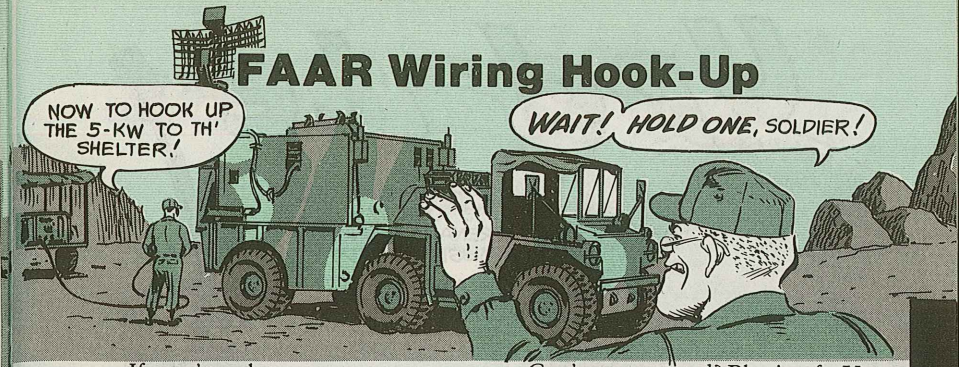
That way you avoid exposing all the dessicant, and you won't get a high humidity showing on the bag shortly after it's installed.

You've got 12 minutes total from container to installation. The more time you can cut off the better. Try sticking this notice up in your work areas:

CAUTION

Maximum safe exposure of dessicant to open air is 12 minutes, from container to installation.

FAAR Wiring Hook-Up



If you're about to connect your FAAR system W1 cable from your 5-KW generator set to the shelter, hold one.

The hookup cited in TM 9-1430-588-20-2 is wrong and will be changed.

Be sure the output selector switch in the 5-KW's control box is in position 4. You must be in 4 for the FAAR. Eyeball Fig 2-4 of TM 5-6115-332-14 for reference.

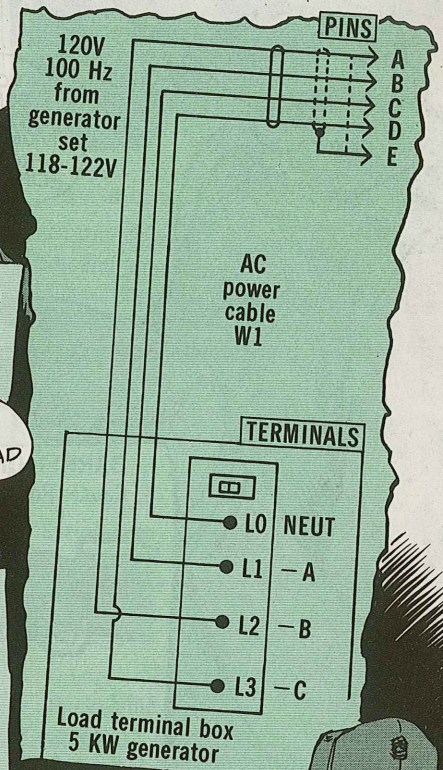
Pin D of the W1 (green wire) goes to terminal LO-Neutral.

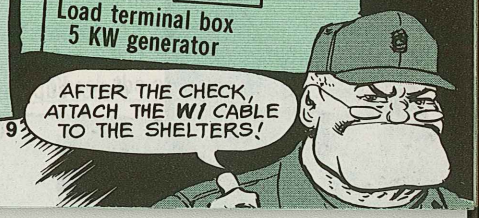
Pin C of W1 (red) goes to L1-Phase A.

Pin A of W1 (black) goes to L2-Phase B.

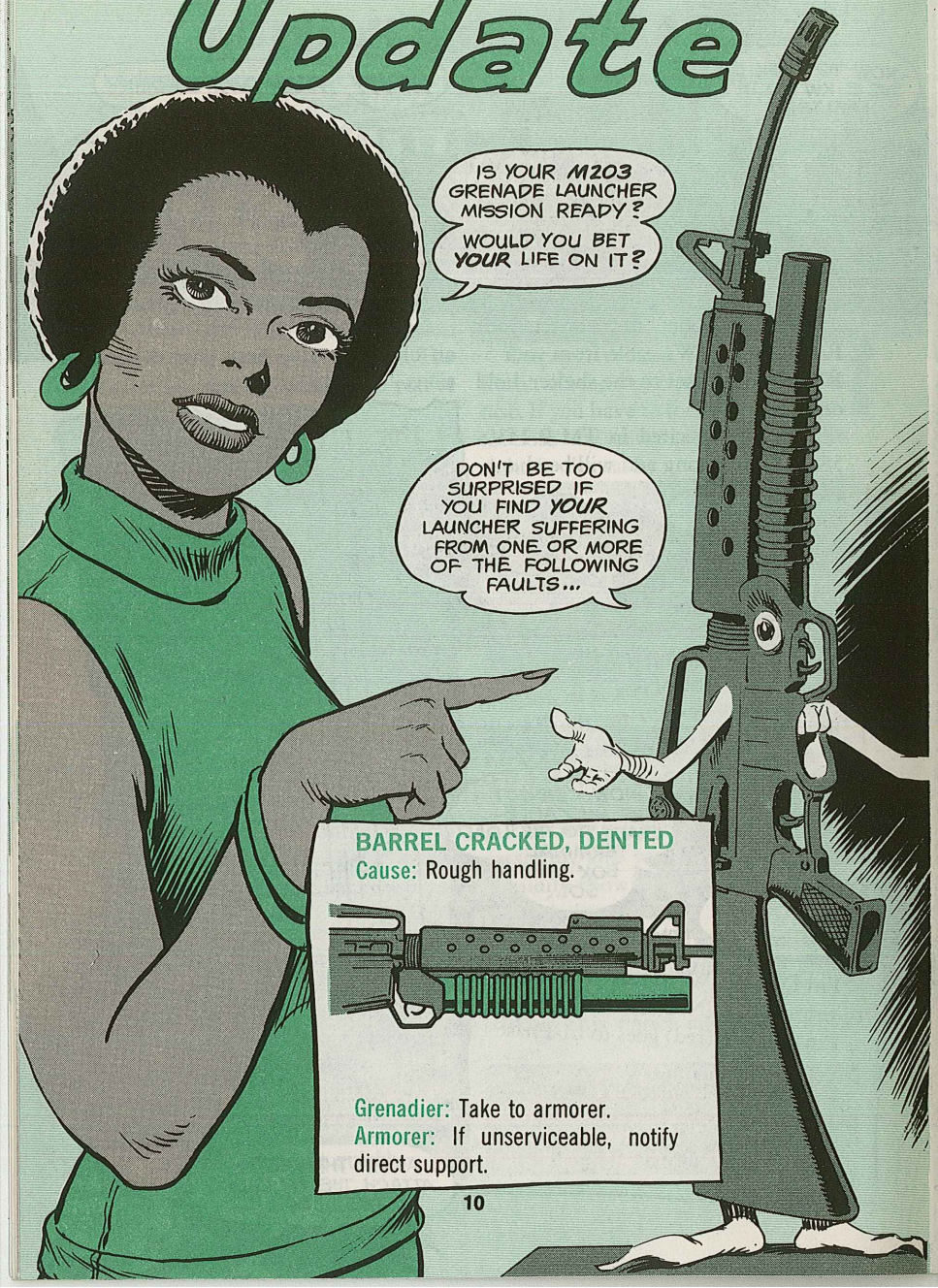
Pin B of W1 (white) goes to L3-Phase C.

Got 'em connected? Play it safe. Use an ohmmeter to check your connections.





Update on the M203



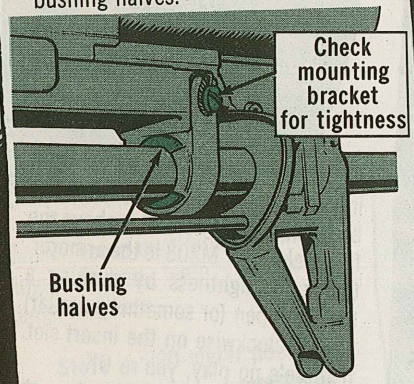
BARREL CRACKED, DENTED

Cause: Rough handling.

Grenadier: Take to armorer.
Armorer: If unserviceable, notify direct support.

LAUNCHER—ATTACHES LOOSELY TO RIFLE

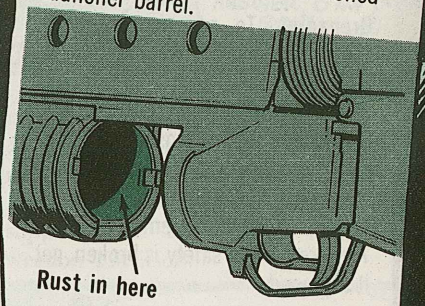
Cause: Bad mounting bracket or bushing halves.



Grenadier: Have armorer check it.

AMMO WON'T GO IN BARREL

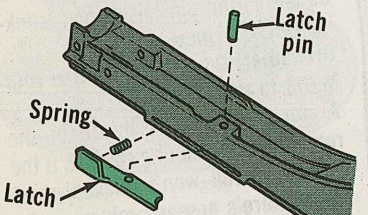
Cause: Rusty, pitted or carboned launcher barrel.



Grenadier: Remove rust and carbon. Clean and lube lightly.
Armorer: Check for dented ammo.

BARREL HARD TO MOVE

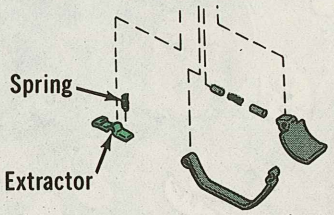
Cause: Broken spring or latch pin.



Grenadier: Clean and lube with LSA/CLP. Take your weapon to the armorer.
Armorer: If unserviceable, notify direct support

CASING STUCK IN BARREL

Cause: Broken extractor or spring.

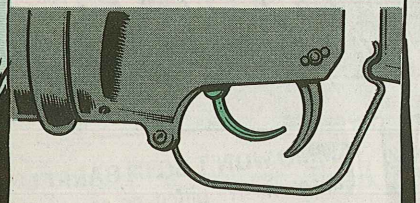


Grenadier: First, push a cleaning rod through the muzzle end of the barrel to remove stuck casing.
Armorer: Check the barrel for dents. Check the extractor.

PS MORE

JAMMED SAFETY

Cause: Cruddy, rusted safety.

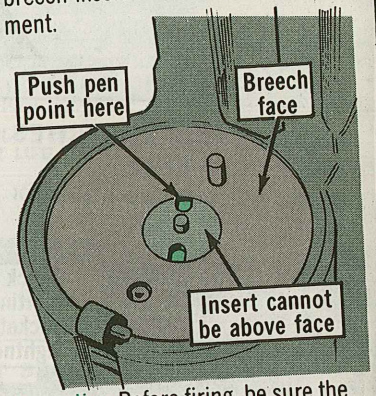


Grenadier: To prevent, lube the safety detent with LSA/CLP every day of operation. Turn the launcher upside down. Put the safety on SAFE. Squeeze 1 or 2 drops of LSA/CLP into the receiver opening in front of the safety. Flick the safety a few times to lube the detent.

Armorer: If the safety is broken, get it replaced.

WON'T FIRE

Cause: Too much oil in back of the breech insert or insert out of adjustment.



Grenadier: Before firing, be sure the insert is flush with or just below the breech face. If the insert is above the face, take your M203 to the armorer. Check for tightness by pushing a ballpoint pen (or something similar) counterclockwise on the insert slot. If there's no play, you're OK.

Armorer: Make sure the breech insert is lubed right, not loose, and adjusted properly.

WON'T FIRE

Cause: Firing pin misshaped, sticking out, broken.

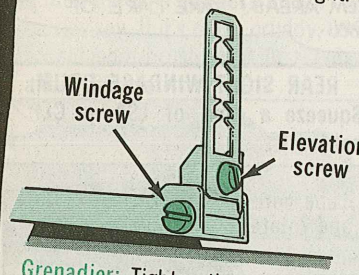
Grenadier: Don't force it. Take your M203 to the armorer.

Armorer: Clean the inside of the receiver with cleaning solvent. If the firing pin still won't release, most likely there's a sear problem, a DS job.

Your launcher should have the new firing pin, NSN 1010-00-348-8433. (It's round, with no indents). Support puts it in your weapon.

OFF-TARGET FIRINGS

Cause: Loose elevation and windage adjustment screws on leaf sight.

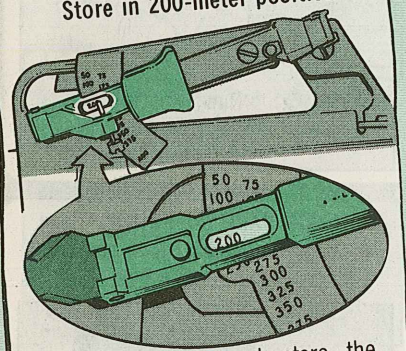


Grenadier: Tighten the screws.

Armorer: Repair or replace as necessary.

Cause: Loose quadrant sight mountings; broken teeth; unreadable range numbers.

Store in 200-meter position

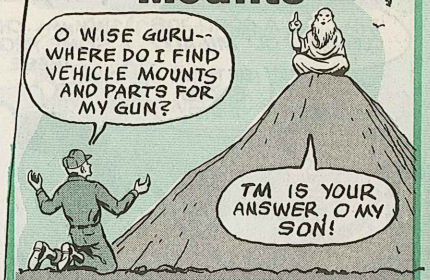


Grenadier: Carry and store the quadrant range sight in the 200-meter position to help prevent breaking off quadrant teeth.

Armorer: Replace quadrant sight.

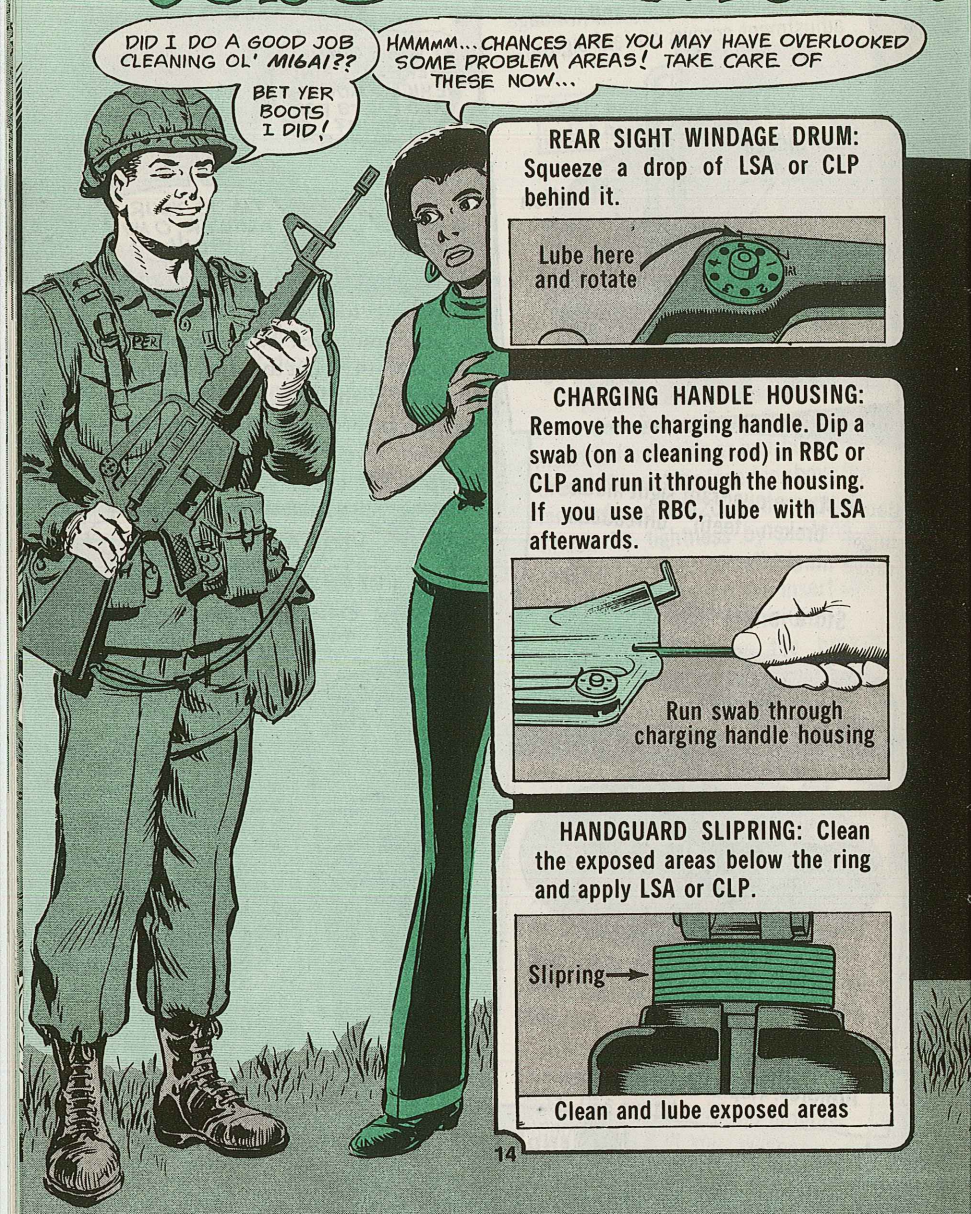
PS END

Vehicle Gun Mounts



Looking for vehicle machine gun mounts and parts? Start with TM 9-1005-245-14. If not there, try the parts manuals of the vehicles on which the mounts are attached. They might be in support level TM's. Next, try the weapon TM itself.

The Job's Not Done Until...



REAR SIGHT WINDAGE DRUM: Squeeze a drop of LSA or CLP behind it.

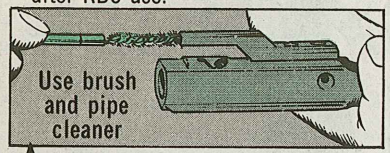
CHARGING HANDLE HOUSING: Remove the charging handle. Dip a swab (on a cleaning rod) in RBC or CLP and run it through the housing. If you use RBC, lube with LSA afterwards.

HANDGUARD SLIPRING: Clean the exposed areas below the ring and apply LSA or CLP.

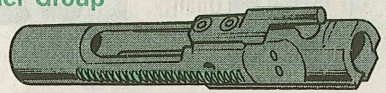
Bolt Carrier Group

★ Clean the exhaust ports with a pipe cleaner, NSN 9920-00-292-9946, dipped in RBC or CLP.

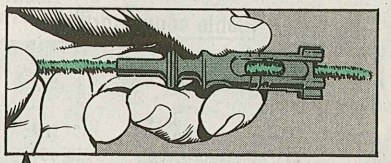
★ Run the pipe cleaner through the carrier key. If it's really cruddy, use an old bore brush on it first. Lube after RBC use.



★ Use a swab with RBC or CLP on the ribbed shoulders on top of the carrier.


Use RBC/CLP on ribbed shoulders

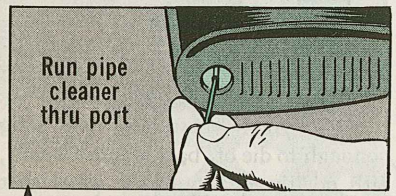
★ Clean the firing pin hole with a pipe cleaner and RBC or CLP.



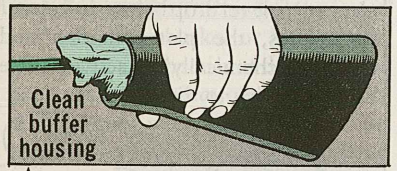
★ Remove the extractor and pin from the bolt and clean with RBC or CLP (lube after RBC).

Lower Receiver

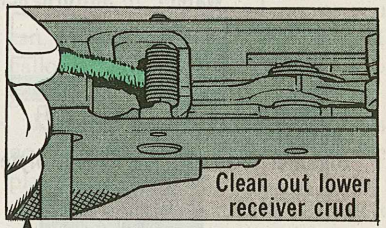
★ Insert a pipe cleaner in the butt cap screw port to be sure it's clear.



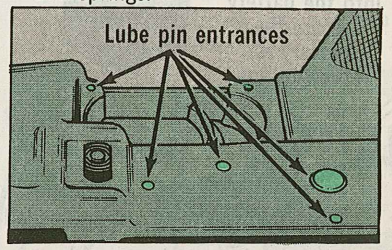
★ Clean the buffer housing in the stock with a cleaning rod, swab and RBC or CLP.



★ Do not disassemble the lower receiver, but...with an applicator and RBC or CLP, clean as much of the crud out as you can get to.



★ Use a drop each of LSA or CLP on the areas where the pins enter the housing. Same goes for the detents and springs.



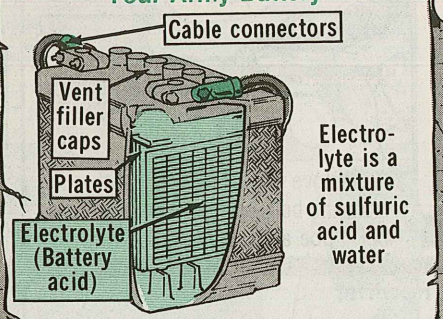
Those steps, plus normal cleaning/lubing, should make for top performance and long wear for your M16A1. Crud hides, you seek and find.

GROUND MOBILITY

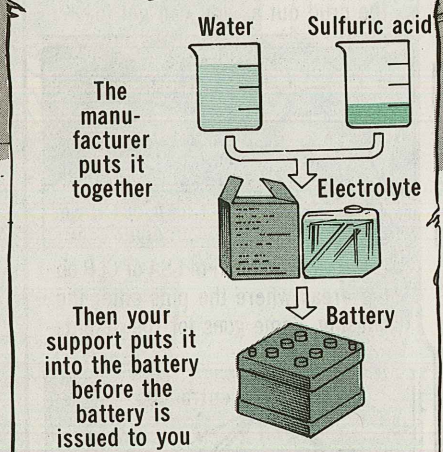
Water Quality Counts, But... It's HOW You Use It!

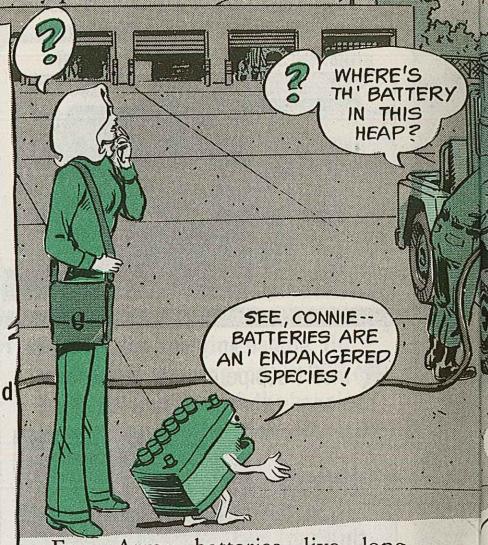
The quality of the water you add to your lead-acid batteries makes a big difference in how long and how well they perform.

Your Army Battery



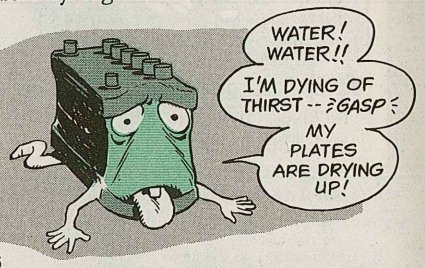
Electrolyte is a mixture of sulfuric acid and water

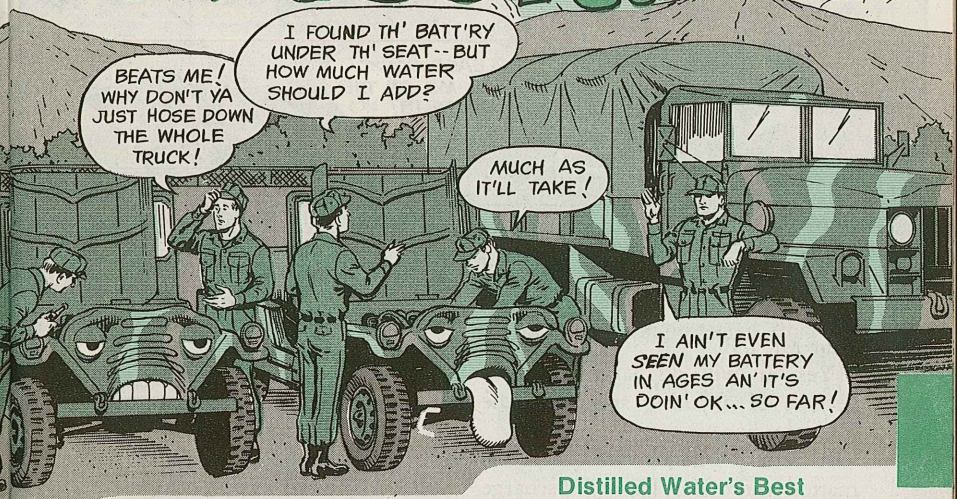




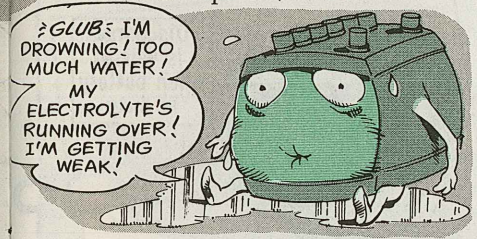
Few Army batteries live long enough to die of "bad" water. Usually, it's not the quality of the water that shortens their life; it's the quantity—too little or too much.

TOO LITTLE—If you let the electrolyte level drop below the tops of the plates, the plates harden and become chemically inactive. The battery begins to die.





TOO MUCH—The electrolyte level should be only about ⅜ of an inch over the tops of the plates. This leaves room for expansion due to heat.



If you use a bucket or hose to add water, you put the kiss of death on the batteries. The electrolyte overflows and becomes weak thru dilution. The battery can't do its job and can't be recharged to full capacity. In its weakened condition, it can freeze in cold weather.

Always use a syringe to get just the amount of water your battery needs—no more, no less.

Distilled Water's Best

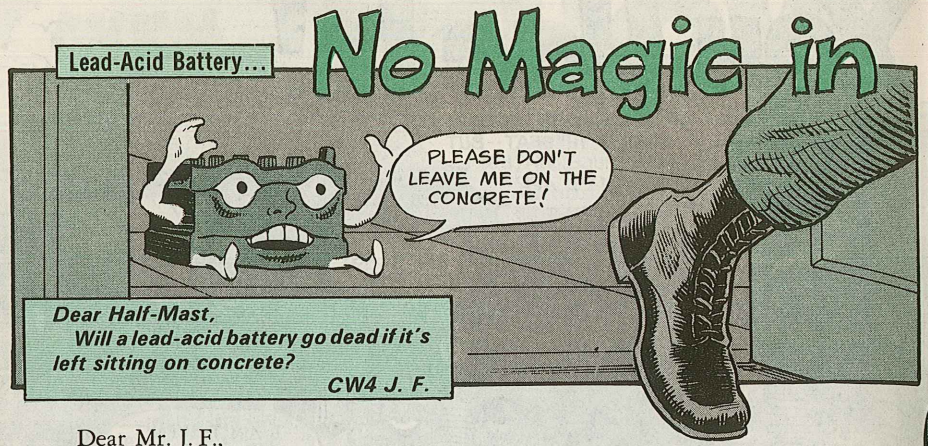
Use distilled water whenever you can. NSN 6810-00-682-6867—1 gallon, NSN 6810-00-356-4936—5 gallons.

Distilled water is best because it has no impurities that can foul up the plates and electrolyte.

Drinking water is usually OK, but it may have a high mineral content that will shorten battery life. Some chemicals used in water purification may have the same bad effect.

Rainwater collected in a clean container may also be good.

No Magic in Concrete



Dear Half-Mast,
Will a lead-acid battery go dead if it's left sitting on concrete?
CW4 J. F.

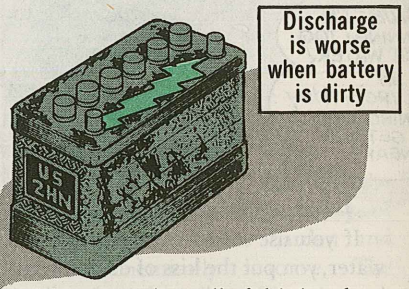
Dear Mr. J. F.,

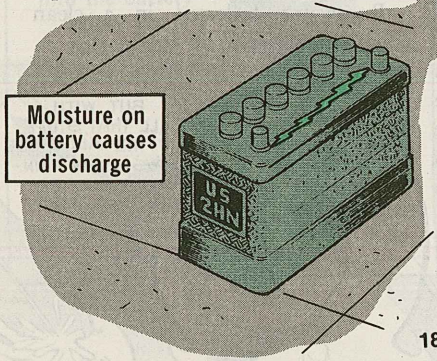
Yes, it will discharge—but not because of anything special in the concrete.

A battery will lose its charge no matter where it is, but it'll discharge faster if it's wet. This's because electricity travels through water, and moisture on a battery is just like a wire connecting the battery terminals.

A battery sitting on concrete is cooled by the concrete. Then, since the air around the battery is generally warmer than the battery, moisture in the air condenses on the battery. This moisture serves as a connector between the battery terminals and speeds up battery discharge.

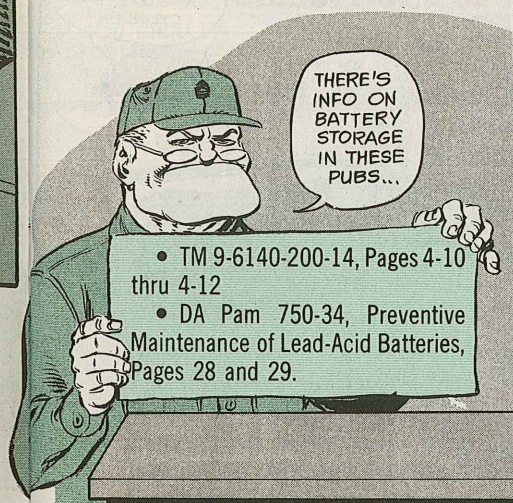
Discharge is even faster if the battery is dirty and corroded, since dirt and corrosion hold moisture. The same thing happens to dirty and corroded batteries in your equipment. A battery discharges faster, too, when it's warm. So a dirty battery in a warm, damp climate hasn't got a chance!





The way to beat all of this is to keep batteries clean and dry—both in storage and in equipment.

Batteries should be cleaned thoroughly on the outside and wiped dry before they're stored. Batteries should be stored on a wooden platform in a dry, cool, well ventilated place.



- TM 9-6140-200-14, Pages 4-10 thru 4-12
- DA Pam 750-34, Preventive Maintenance of Lead-Acid Batteries, Pages 28 and 29.

TIPS TO THE BATTERY KEEPER:

- Keep 'em dry—up off the floor or ground.
- Keep 'em cool— but not where it's freezing.
- Keep 'em protected from being crushed or damaged in any other way.
- Keep 'em charged up!

The "Right" Way To Security

Dear Half-Mast,
In PS 330 and earlier issues you showed a number of ways to fabricate locking devices for vehicle fuel caps. Is there an Army-wide right way to secure fuel caps?
SGT E. R. O.

Dear Sergeant E. R. O.,

There's no uniform method prescribed by the Army to secure fuel caps.

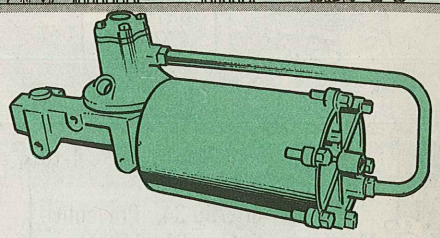
The standard security measures for vehicles are spelled out in AR 190-51, Para 3-5; FM 19-30; and TB 9-2300-422-20.

However, local environment may call for added security measures. The CO decides if added security measures are needed and what they will be.

As for securing the fuel caps, as long as the fix is cost effective, safe and has your CO's OK, most any method will do. But remember...most gas cap locks will not stop a determined gas thief, and keeping track of those gas cap lock keys can be an added headache.

Half-Mast

DS Can Save Brake Hassle



Do you keep changing brake air-hydraulic cylinders on your 2½-ton or 5-ton trucks, trying to get a cylinder that works right?

Do you wish your support had some sure-fire way of testing cylinders after rebuild so you'd get a good one every time?

There is a test procedure! Maybe your support doesn't know about it, so you can save yourself—and them—a lot of trouble by passing the word along to them.

TB 43-0001-39-1 (Apr 80), Page 2-61, gives a rundown on the equipment needed and the test procedure for checking out rebuilt air-hydraulic cylinders for TM-209-series 2½-ton trucks. This same test can also be used on air-hydraulic cylinders for TM-211-series and TM-260-series 5-ton trucks.

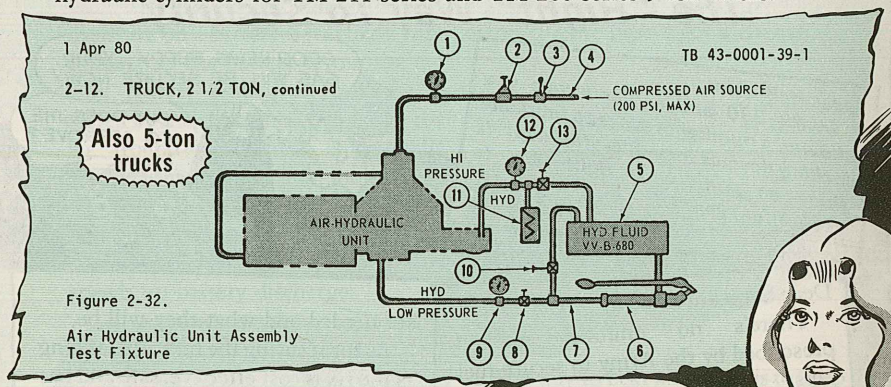
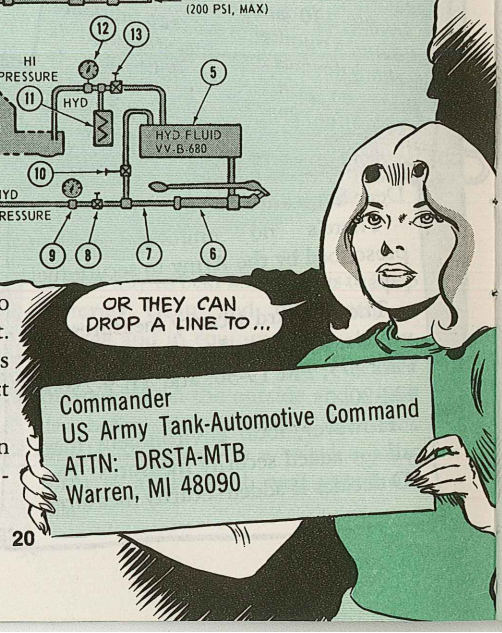


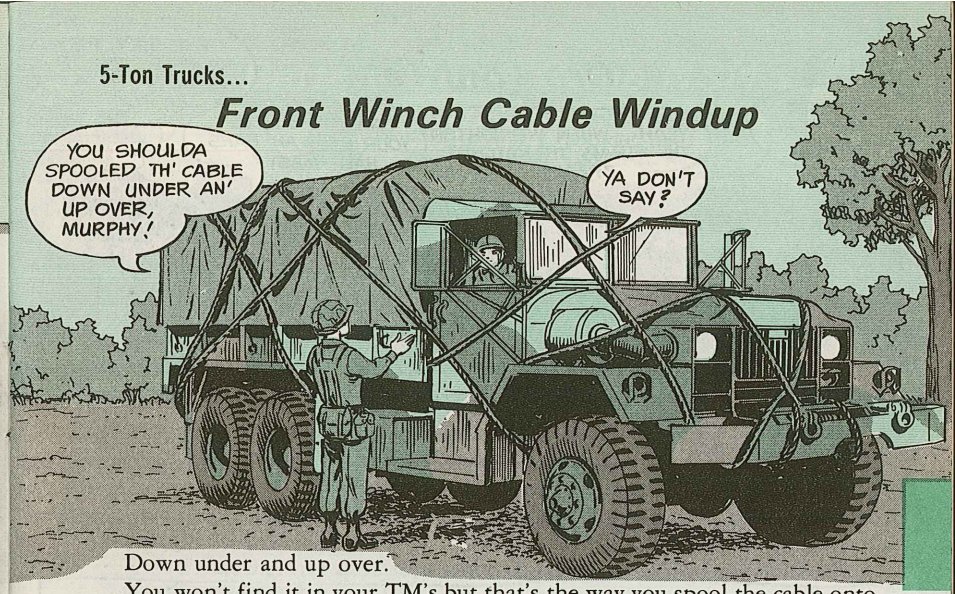
Figure 2-32.
Air Hydraulic Unit Assembly Test Fixture

The TB says the job is allocated to General Support, but that's not right. The correct maintenance level for this air-hydraulic cylinder testing is Direct Support.

If your DSU needs more info on this, tell 'em to call AUTOVON 273-3398 or 273-3342.



Front Winch Cable Windup



Down under and up over.

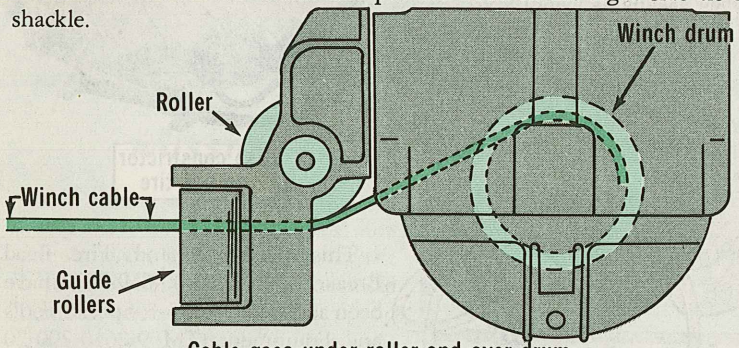
You won't find it in your TM's but that's the way you spool the cable onto those front winch drums that have no level wind.

It goes under the roller and over the drum.

This'll keep tension on the cable so it will go onto the drum in tight coils close together.

Stow the chain so the cable'll stay tight.

Bring it under and over the left side frame extension, over the bumper, across the front of the winch and put the hook in the right side tie-down shackle.

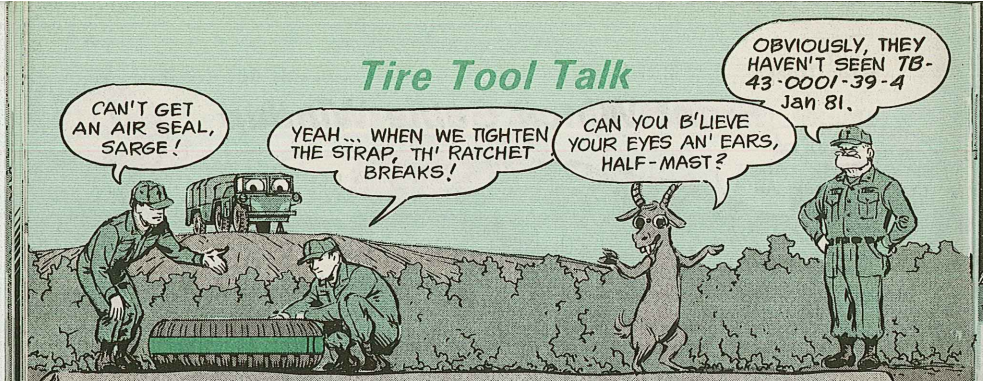


Cable goes under roller and over drum

Take off the left shackle, thread the chain thru it and put it back.

You'll find this word on the chain in TM 9-2320-211-10-1 (Sep 80), page 4-86 and TM 9-2320-260-10-1 (Aug 80), page 4-99.

Tire Tool Talk



Dear Half-Mast,

Para 2-161d (7) in the Gama Goat -20TM says to use a ratchet tiedown strap around a tire to force the tire beads on the rim seating edge.

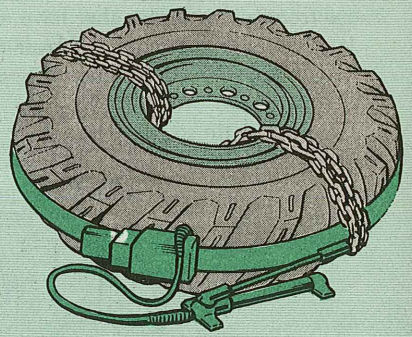
Trouble is, the strap—NSN 3540-00-980-9277—won't seat the tire well enough to get an air seal. If we tighten the strap for a better seal, the ratchet breaks.

Any solution to our problem?

SP4 T.S.

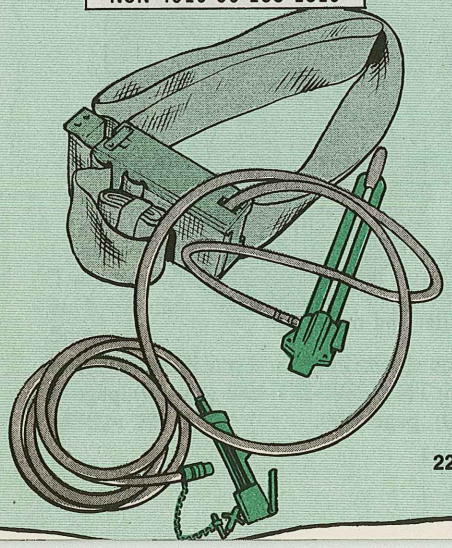
Dear Specialist T. S.,

You bet! Use Bead Expanding Constrictor NSN 4910-00-138-1819. You can use it for safe tire inflation on any size tires 12-ply and over...including the big ones on CCE.



Use constrictor on any tire

Bead expanding constrictor NSN 4910-00-138-1819

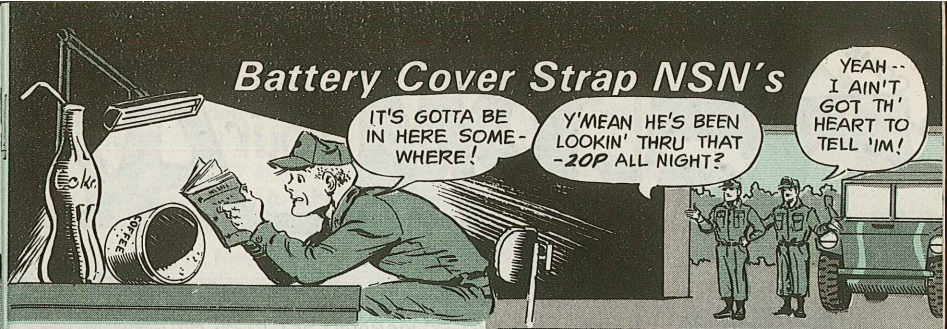


This tire tool, and Tire Bead Breaker NSN 4910-00-659-7777, have been added to Table 3-3, Special Tools and Equipment, TM 9-2610-200-20 on tires and tubes.

TB 43-0001-39-4 Jan 81 has the word.

Half-Mast

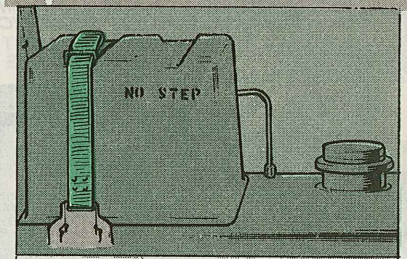
Battery Cover Strap NSN's



Are you wearing out your TM 9-2320-242-20P trying to find the NSN's for the Gama Goat's battery cover tiedown straps? Forget it, they're not listed in your TM's.

NSN 5340-00-506-1514 gets the 31-in strap. To get the 14½-in strap, use NSN 5340-00-706-4507.

Get the washers for the straps with NSN 5310-00-983-8483 and the rivets with NSN 5320-00-781-9498.



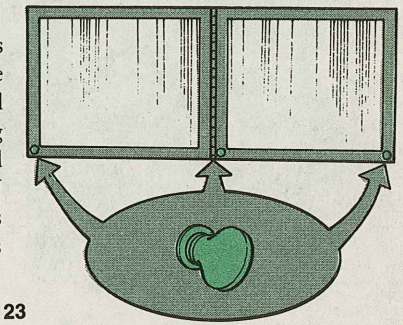
Tiedown straps not in -20P TM

Goat Steering U-Joint

You can't repair your Gama Goat's steering column with the U-joint parts kit, NSN 2520-00-080-6628, Page 166, TM 9-2320-242-20P. The journal's too small. To get the right journal assembly, use Part No. 11602043 and FSCM 19207. The NSN kit is OK, tho, for other applications listed in the -20P.

Missing Goat Thumbscrews

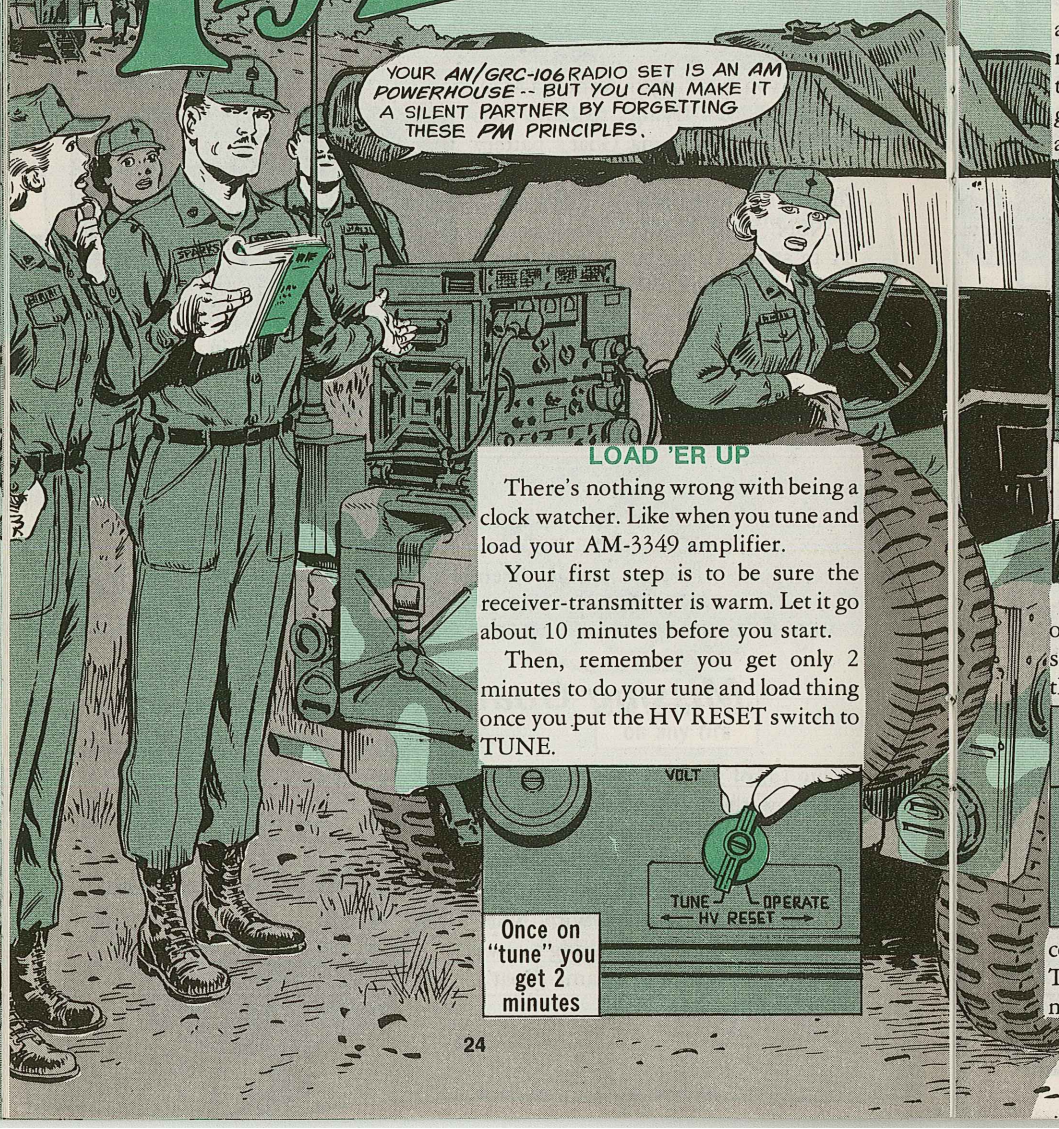
Fig 137 of TM 9-2320-242-20P does not show the 3 thumbscrews for the bottom of the Goat's windshield frame. Get the 1¼-in long thumbscrews that hold the windshield to the support channel with NSN 5305-01-047-0358. The wrong screws here may crack your Gama Goat's windshield.



COMMO

Need AM in the PM..?

Try PM on your AM



LOAD 'ER UP

There's nothing wrong with being a clock watcher. Like when you tune and load your AM-3349 amplifier.

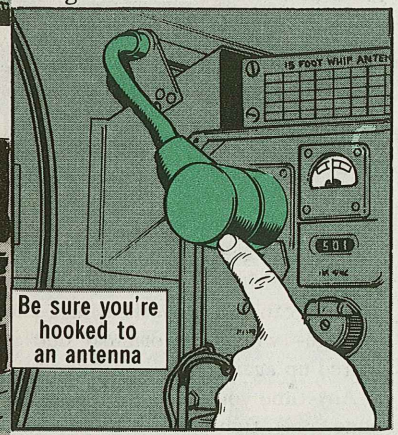
Your first step is to be sure the receiver-transmitter is warm. Let it go about 10 minutes before you start.

Then, remember you get only 2 minutes to do your tune and load thing once you put the HV RESET switch to TUNE.

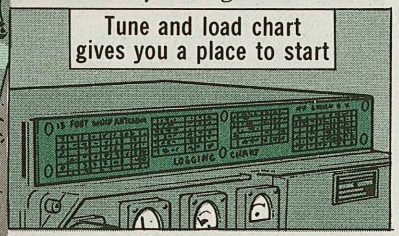
Once on "tune" you get 2 minutes

If you don't make it—and never fudge—cool your amp for 5 minutes before you try again. While you wait, put HV RESET to OPERATE and the SERVICE SELECTOR to STANDBY.

'Course, you want that work to be as accurate as possible. All that power needs the right outlet. If it's not going to the antenna, chances are you're getting it right back in the amp. That's asking for trouble.



Remember, too, that those numbers on your tune and load chart are starting points. You fine tune from there. Once you've got the needles centered, log in your final readings. That might save you a couple of minutes next time.



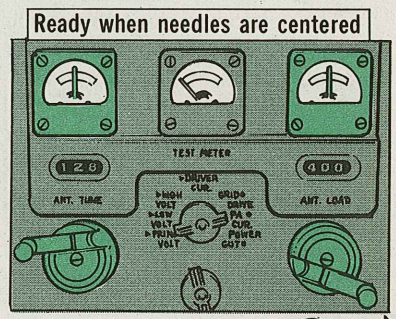
If you need the chart and can't find a stock number, no sweat. There isn't one. Use a part number request. Ask for SMD508586 FSCM 80063.

That same -106 won't have the same readings day after day, natch. The atmosphere can change your readings. That means you should tune and load each day. Or you may have to change frequencies. Any time you do, you repeat the tune and load procedure.

Finally, experts say you get only about a 75 percent accurate reading while the HV RESET is on TUNE. That's good enough, of course. But, if you want 100 percent accuracy, finish up in OPERATE with the set keyed.

If your set is tuned, but not loading or operating properly when you switch to OPERATE, wait one before turning the set in for repair. Switch back to TUNE and again to OPERATE. This might clear it up.

If you have trouble getting the meter pointers to center at the same time, try turning both knobs at the same time in the opposite direction of indicator error. Go slow. They should center.

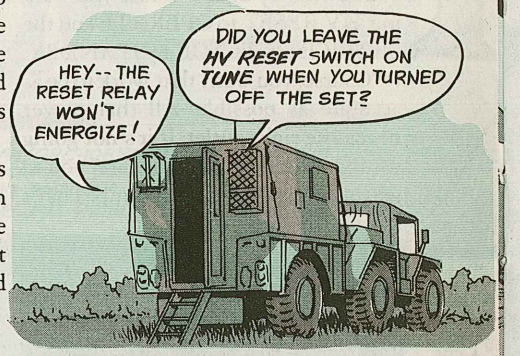


PS MORE

One final check. Once the meters TEST METER. If you get a reading the set is ready. Switch back to OPERATE...and make sure you give the set a minute to warm up before transmitting. The short wait gets rid of heat in the final amp and prevents transistor damage.

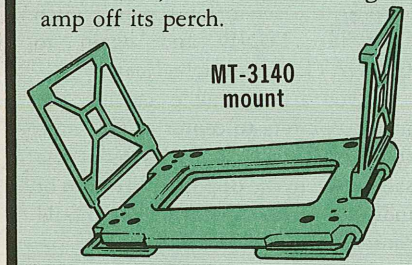
Make sure the HV RESET switch is always on OPERATE before you turn the set off. If you leave it in TUNE, the high-voltage reset relay won't energize and will leave you with a dead set.

center, check POWER OUT with the just to the left of the scale's gray area,



MOUNT UP

Don't make a move...at least until you've secured your -106 in its MT-3140 mount. If it's not fastened down, you risk breaking the CX-10099 "dog bone" cable, or worse—throwing the amp off its perch.



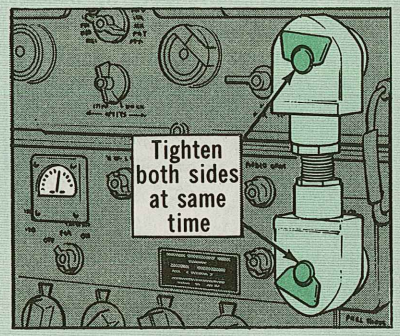
The operators manual shows you how to adjust the mount. But remember, when you change a component, you have to readjust.

That job's a little tougher when your set's in a shelter, but no less important. To do it right, get someone to help you take the set down and do your work on the floor.

No need to wait for a component change, tho. Check your match now. Many shelter-mounted sets are mismatched.

Try to keep your set together. If one component goes bad, turn both in. Alining either with a substitute partner can cause overheating—and damage—when the original duo is paired up again.

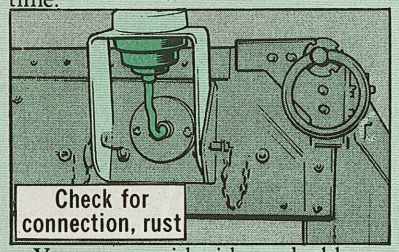
Any time you're fastening the dog bone cable, tighten both sides at the same time. Going one at a time puts the flexible metal piece in a bind and can snap it.



IT'S GOTTA GO

Saving your set means sending a signal. That means before transmitting, be sure you have a hooked-up antenna. If you don't, all that energy backs up and zaps your transmitter.

You can think you've got an antenna and not have one. F'rinstance, if rust has insulated your AB-652 mast base. Check the bowl and base at PM time.



You can go with either a doublet or whip, but be sure one or the other is attached to the amp. Make sure the connection is snug, too. Poor contact can do you in.

If you use the 50-ohm AN/GRA-50 doublet, see that it's cut to the proper frequency. If the doublet won't tune right—even when cut to the right length—try increasing the length by a foot or so.

In the field, keep antennas more than 15 feet apart, too. Even with a set turned off, the receiver can be damaged because the antenna stays connected.

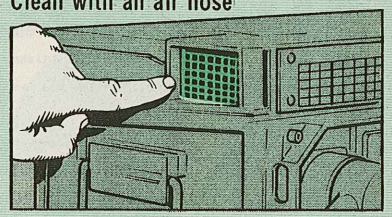
Be sure the RT is off the transmitting frequency of nearby sets by at least 1 MHz. If you're transmitting above 10 MHz, stay off your neighbor's airwaves by a 10 percent margin.

CLEAN IS COOL

Keeping your set clean and cool will keep it on the job, too. Use a cloth to wipe off dust. Even that thin layer of dirt can act as an insulator and raise the temperature of your radio.

Clean the heat exchanger with an air hose through the vent. Keeping coats off the vent will also keep things cool.

Clean with an air hose



Another way to insure cool is to turn the RT to STANDBY when not operating for an hour or less; and OFF when you're shutting down for an hour or more.

PS END

PUBS

This is a selected list of recent pubs of interest to organizational maintenance personnel. This list is compiled from recent AG Distribution Centers Bulletins. For complete details see DA Pam 310-4, DA Pam 310-6 and DA Pam (C) 310-9.

TECHNICAL MANUALS

C 3, TM 3-3810-288-12 Dec Crane, shovel, truck mtd 20-ton (Harnischfeger M320T)
C 3, TM 5-2410-233-10 Nov Tractor, FT, D7F
C 4, TM 5-3810-232-12 Oct Crane, 20T 2380, 2385
C 3, TM 5-3810-233-12 Dec Crane, wheel mounted; 5-ton, 3/8-cu yd (Hanson H446)
TM 5-4120-363-14 Nov Air conditioner, vertical 36,000-BTU Keco Mod F36T4-2
TM 5-4930-207-20P Sep Lube/service unit 23-CFM Henry Spen Mod 901765-1
TM 5-5420-205-24P Oct Superstructure interior bay, MOFAB
TM 9-1095-204-13&P Oct Antitank mine dispensing system M57
TM 9-1425-429-24P Sep Stinger
TM 9-1430-382-20P Aug Pershing 1A
TM 9-1430-1528-12-4-4 Sep Improved HAWK
TM 9-2320-273-20P Dec Trucks M915-series
TM 9-2350-247-20 Dec M548 carrier
TM 9-2350-303-10 Sep M109A1 Howitzer
TM 9-4910-595-14&P Nov Bead Breaker, Pneu Tire (Standard Wheel and Rim Co.) (NSN 4910-00-773-9341)
TM 9-5855-267-24 Dec Sight, tank thermal AN/VSG-2
TM 10-3990-200-12&P Aug Ramp, mobile loading
C 2, TM 11-1520-210-20 Jan UH-1D, UH-1H and EH-1H
TM 11-5450-200-24P Oct AB-216A/V Tower
TM 11-5820-847-12-HR Nov MD-1002/G digital data modem
C 11, TM 11-5840-217-10, 011 Dec AN/TPS-25, -25A and -25 (XE-2) radar sets
TM 11-5855-249-10-HR Oct AN/VVS-2 (V) 1, 2 driver's night vision viewer
TM 11-6140-203-14-1 Oct Aircraft and nonaircraft nickel-cadmium batteries
C 31, TM 55-1500-204-25/1 Oct Gen aircraft maint manual
TM 55-1500-220-PMD Oct AH-1G/S and TH-1G
C 6, TM 55-1510-209-23-1 Mar U-21A, RU-21A and RU-21D
C 6, TM 55-1520-210-10 Oct UH-1D/H, EH-1H
C 15, TM 55-1520-210-23-1 Nov UH-1D/H/EH-1H
C 17, TM 55-1520-210-23-1 Dec UH-1D/H/V/EH-1H
C 9, TM 55-1520-210-23-2 Nov UH-1D/H/EH-1H
C 1, TM 55-1520-221-23-2 Oct AH-1G, AH-1Q
C 3, TM 55-1520-228-23-2 Oct OH-58A, OH-58C
C 11, TM 55-1520-234-23-1 Nov AH-1S (MOD)
C 6, TM 55-1520-234-23-2 Oct AH-1S (MOD)
C 8, TM 55-1520-237-23-4 Oct Gen maint task manual UH-60A
C 10, TM 55-1520-237-23-4 Dec General maint UH-60A
C 6, TM 55-1520-237-23-5 Oct Airframe, landing gear UH-60A
C 5, TM 55-1520-237-23-6 Sep Powerplant, Fuel, Related Sys UH-60A
C 6, TM 55-1520-237-23-7 Oct Powertrain UH-60A
C 6, TM 55-1520-237-23-8 Oct Hydraulics, flight controls UH-60A
C 6, TM 55-1520-237-23-9 Oct Electrical, instruments UH-60A
C 4, TM 55-1520-237-23-10 Oct Structural Repair UH-60A
TM 55-1520-237-23P-2 Dec UH-60A
C 6, TM 55-1520-237-PMS-1 Aug 10-hr/5-day inspect checklist UH-60A
C 4, TM 55-1520-237-PMS-2 Oct Checklist UH-60A
C 2, TM 55-1520-239-23-2 Nov AH-1S (Modernized Cobra)
TM 55-1730-225-23P Aug Tow bar, aircraft P/N AA1730-1251 NSN 4920-00-967-9556
TM 55-4920-402-13&P Aug Vibrex balancing kit part No. B4591 NSN 4920-01-040-7816
C 6, TM 55-4920-243-15 Nov Vibration Monitoring Kit

MISCELLANEOUS

DA Form 12-50 Nov Pinpoint form for radiac and fixed radio pubs
FSC 5140/5180 Dec Tool & hardware boxes, sets, kits, outfits of hand tools (fiche)
MCRL-3 Jan Master cross-ref list Part 3 (fiche)
MWO 11-5855-246-20 Dec AN/PAS-7 Infrared Viewer
PAM 310-4 Oct (fiche) Technical pubs index
SB 11-641 Nov Reliability improvement warranty (RIW) for radio receiving sets AN/ARN-123 (V), R-1963/ARN
(FOUO) SB 11-700 Oct Install kits for COMSEC
SC 4610-97-CL-E07-HR Jun WPU set 3,000 GPH
SC 5420-97-CL-E40 Jun Bridge erect set, fixed, highway; pony truss; portable panel; widened roadway; Bailey type
SC 5420-97-CL-E40-HR Jun Hand receipt bridge erection set
TB 9-2300-295-15/16 Oct Warranty for semitrailer, 34-ton, Mod M872
TB 10-2300-295-15/18 Sep Warranty for truck, RT forklift, 4,000-lb MHE-237
TB 55-46-1 Dec Transportability of mil vehicles

AUDIO-VISUAL STUFF

Available at battalion or post Learning Center

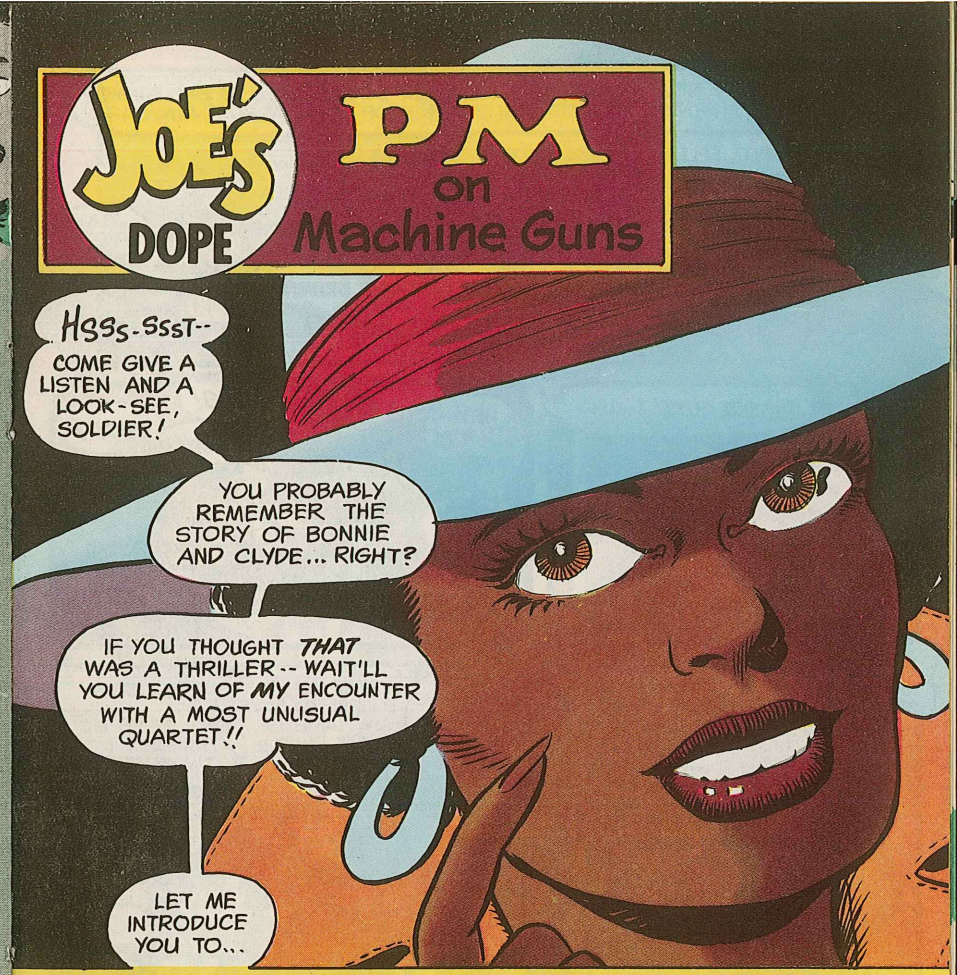
Film, TV Tapes

GS 21 The Green Scene—Multiple launch rocket system
TF 46-6206 Inspect hot climate survival kit
TVT 44-123 Vulcan (SP) water operations

TEC LESSONS

043-441-5561-F IROR maintenance, Part I
043-441-6018 Vulcan maint
043-441-7902-F Chaparral missile inspect
043-441-7904-F Chaparral missile inspect
043-441-7924-F Chaparral launch sta M-54, Quarterly PM
101-113-7120-A Troubleshoot AN/GRC-160, AN/PRC-77
101-113-7156-A Quarterly PM, and troubleshoot switchboard SB-22/PT
101-113-7166-A Quarterly PM on AN/GRA-39
102-906-1081-A TV-7/U electron tube tester, Part I
202-113-5143-A Op and troubleshoot TSEC/KG-27 in AN/TRC-145 (FOUO)
231-906-3051-A Turn-on, turn-off procedures AN/GLQ-3B
231-906-6501-A AN/MLQ-24 Shelter PM
231-906-6502-A AN/MLQ-24 Shelter pre-op check
250-171-5151-F M-176 grenade launcher
551-101-8203-A Hand receipts at company level
551-101-8234-A Updating hand receipts
600-011-6618-J Remove, install stabilizer bar, main rotor hub and blade assy
600-011-6633-A Remove, inspect, assemble main drive shaft, UH-1H
600-011-6634-A Install main drive shaft, UH-1H
600-011-6635-A Aline main drive shaft, UH-1H
610-091-6160-J PM checks and services, M816 truck/wrecker
610-091-6163-J PM checks and services, M578 recovery vehicle
811-551-7857-F Operating vehicle off road
811-551-7859-F Vehicle self-recovery using winch
945-171-1620-F Classification of bridge—use armor bridge classif wheel
953-071-0271-J AN/PVS-4 night vision sight (M14)
953-071-0272-J AN/PVS-4 night vision sight (M16A1)
953-071-0273-J AN/PVS-4 night vision sight (M72A2)
953-071-0274-J AN/PVS-4 night vision sight (M67)
953-071-0275-J AN/PVS-4 night vision sight (M79)
953-071-0277-J AN/TVS-5 night vision sight (M40 recoilless rifle)

JOE'S DOPE — PM on Machine Guns



THE CLOD SQUAD

Pvt Clyde Alfa — Pvt Clyde Bravo — Pvt Clyde Charlie — Pvt Clyde Delta

YOU'VE NEVER HEARD OF THE *CLOD SQUAD?* WELL, IT WAS FORMED ONE MORNING AT A CERTAIN SNACK SHOP DOWN AT FORT DUNNING...

H'LO, FELLAS...

CROWDED HERE THIS *AM*... MIND IF I JOIN YOU?

CAN'T STOP YA...

GRUMP!

'SA FREE COUNTRY!

THANKS, GUYS! I--UH--

HEY-- *WATCH IT!*

OOPS!

CLUMSY!

CLOD!

SORRY, GENTS...

... BUT DON'T CALL ME *CLOD!* ...TH' MONIKER IS *CLYDE* ALFA!

...AND I'M TIRED OF BEIN' CALLED *CLOD!*

IT'S AN INSULT--AND A LOUSY PUN, B'SIDES!

SIMMER DOWN, PAL! I KNOW WHAT YA MEAN-- Y'SEE, I'M NAMED *CLYDE* BRAVO!

WOW! I CAN'T B'LIEVE MY EARS! MY NAME IS *CLYDE* CHARLIE!

? SIT DOWN! WE'VE GOT THINGS T' DISCUSS! I'M *CLYDE* DELTA!

"AND DISCUSS THINGS THEY DID! THE FOUR *CLYDES* FOUND THAT THEY EACH WORKED WITH A MACHINE GUN AND EACH WAS HAVING *PM* PROBLEMS WITH HIS WEAPON..."

--AN' BECAUSE O' MY *MG* PROBLEMS, THEY CALL ME *"CLOD"!*

... SAME HERE!

DITTO!

WE GOTTA DO SOMETHING ABOUT IT!

SNAXX

WHAT DID THEY DO?? ... THEY SENT FOR ME!

...AND THAT'S WHY WE ASKED YOU TO COME, BONNIE...

...IF PEOPLE INSIST ON CALLING US *"CLOD"*...

...WE'RE GOING T'MAKE *"CLOD"* A TERM OF RESPECT!

...SO YOU TROOPS WANT TO BECOME EXPERTS IN *PM* ON YOUR *MG's*?

YOU GOT IT, BONNIE!

"WITH THAT, I PROCEEDED TO REALLY LAY *PM* POINTERS ON EACH CLYDE."

PVT. ALFA-- WE'LL GO OVER *YOUR* WEAPON FIRST...

FINE -- IT'S ON TH' BENCH THERE, BONNIE!

M240

CARELESS HANDLING CAN PUT M240 OUT OF ACTION!

NEVER LET THE CHARGING CABLE GET WRAPPED AROUND THE MAIN TANK GUN BREECH HANDLE! THE RECOIL WILL RIP IT RIGHT OUT OF THE MACHINE GUN!

IT'S SIMPLE TO PREVENT! ALWAYS KEEP THE CHARGING CABLE CLEAR OF SNAGS!

THE ARMORER MUST CLEAN THE GAS REGULATOR PLUG AFTER EACH DAY'S FIRING.

THE COMBINATION REGULATOR SCRAPER AND THE CLEANING REAMER SET ARE THE THINGS TO USE!

CHECK THE BARREL LOCKING LUGS AND THREADS FOR CARBON, DIRT, BURRS AND NICKS!

EITHER DIRT OR DAMAGE CAN KEEP THE BARREL FROM FITTING SECURELY INTO THE RECEIVER AND LOCKING IN PLACE!

HERE'S A POSTER THAT SPELLS OUT THE IMPORTANCE OF *MG* MAINTENANCE!

JOE'S Dope Sheet

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.

NOW, PVT BRAVO... PVT. CHARLIE... LET'S DISCUSS *YOUR* WEAPONS...

M85 and M2

LUBE IS GREAT TO PREVENT RUST CORROSION AND FRICTION. HOWEVER, GO EASY AROUND THE BACK PLATES OF THE *M2* AND *M85* ...

...TOO MUCH LUBE WILL SEEP IN AND SHORT OUT THE SOLENOID!

DO LIKE THE *TM* SAYS—CLEAN THE BACKPLATE WITH A DRY, LINT-FREE CLOTH...

THEN LUBE IT *VERY LIGHTLY*-- LIKE WITH A CLEANING PATCH THAT'S JUST BARELY DAMP!

CARRYING YOUR *M2* BY THE BACKPLATE WILL DAMAGE IT, ESPECIALLY IF THE BACKPLATE WORKS LOOSE.

OWW!

CARRY THE GUNS THE RIGHT WAY. WITH ONE HAND UNDER THE BARREL SUPPORT AND THE OTHER UNDER THE RECEIVER JUST BEHIND THE MOUNTING PIN BRACKET!

THE GUN SHOULD BE RIGHT SIDE UP!

OK-- LET'S MOVE ON TO YOUR WEAPON, PVT DELTA! FREQUENT CHECKS ARE MOST IMPORTANT ON THE *M60*!

M60

CARBON BUILD-UP IN THE GASPORT, THE GAS CYLINDER TUBE AND THE HOLES IN THE PISTON CAN CAUSE SOME REAL HEADACHES, ESPECIALLY WHEN IT GETS SO BAD THAT THE RATE OF FIRE BECOMES SLUGGISH!

JUST TILT THE BARREL END-FOR-END! IF YOU HEAR THE PISTON CLICKING UP AND DOWN IN THE CYLINDER, IT'S *OK*!

IF NOT, YOU'LL NEED TO CLEAN IT!

USE RBC AND YOUR REAMER FOR PORT AND PISTON HOLES.

REMEMBER TO LINE UP THE HOLES IN THE GAS PISTON WITH THOSE IN THE CYLINDER TUBE WHEN YOU PUT IT BACK TOGETHER

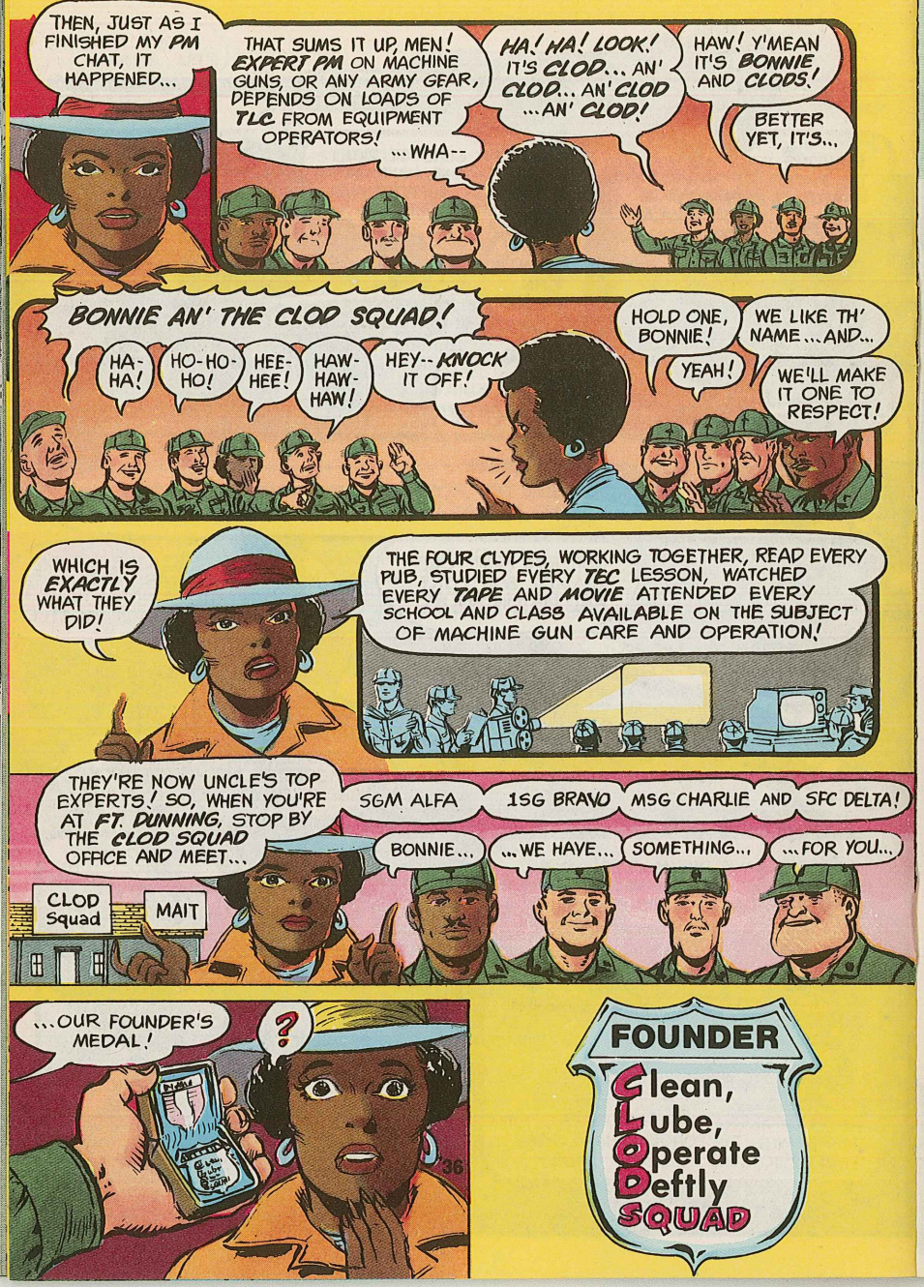
YOU'LL NEED YOUR UNIT ARMORER TO INSTALL THE LOCK WIRE WHEN YOU GET THROUGH!

WHEN YOU HAVE THE *M60* BOLT APART FOR CLEANING, MAKE SURE YOU PUT THE FIRING PIN BACK IN RIGHT!

THE END WITH THE LONGER SHAFT GOES IN FIRST (TOWARD THE BOLT FACE)!

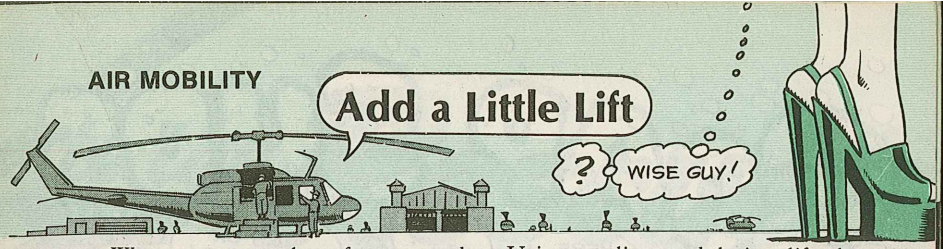
TAKE IT EASY ON YOUR *M60* FEED TRAY! IT'LL BREAK WHERE IT CONTACTS THE BOLT AND ACTUATOR ROLLER IF YOU SLAM THE BOLT HOME...

...JUST EASE THE BOLT FORWARD WITH THE COCKING HANDLE IF THE BARREL'S OUT OR THERE'S NO AMMO IN THE GUN!

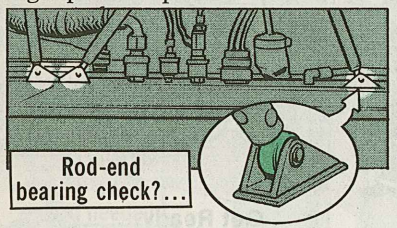


AIR MOBILITY

Add a Little Lift

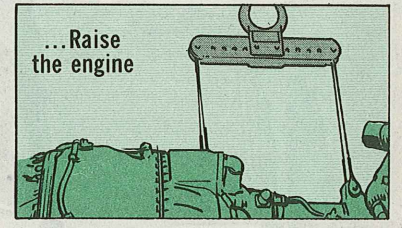


Want to save a lot of sweat and elbow grease when checking the Huey engine mount rod-end bearings during a phase inspection?



It's easy! You don't have to remove all the rods for a bench check of the bearings.

Using a sling and hoist, lift the engine just enough to take the load off the bearings.



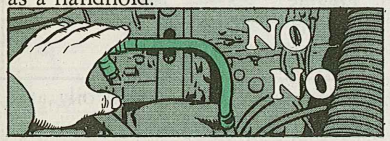
Then, with a dial indicator, inspect the bearings for the radial and axial play limits given in Para 2-270b of TM 55-1520-210-23.

No Handhold, Please!

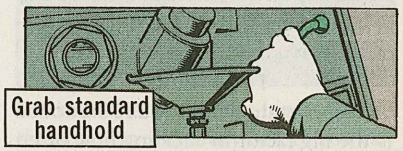
The trouble with using the P-3 line on a Huey engine as a handhold is that you can get leakage—where the line is swaged into the sleeve—leading to deicing valve failure.

With a rise in exhaust gas temperature and oil temperature during flight there's only one place to go—down for a precautionary landing.

So when you mount the engine deck, never use any part of the engine as a handhold.



Instead, grab the standard handhold with your right hand.

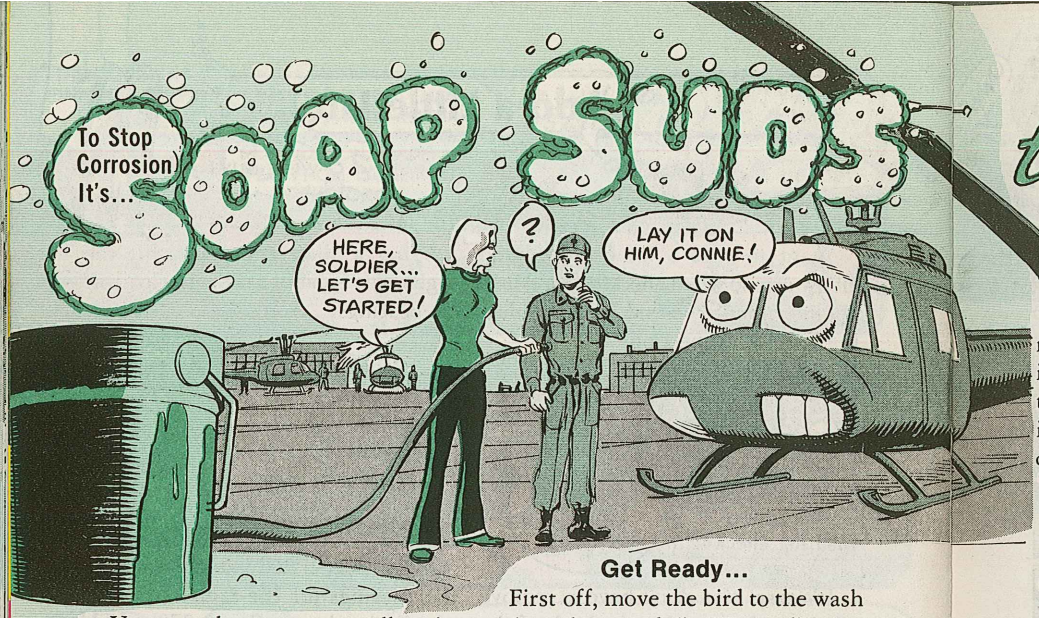


Latch onto the engine cowling hinge with your left hand.

That's the way to keep 'em flying!

To Stop Corrosion It's...

SOAP SUDS to the Rescue!



You can always spot a well maintained aircraft because it's the cleanest one of the flight line. A top-notch crew chief knows the importance of keeping an aircraft clean.

Dirt is a natural breeding place where moisture, salt and other airborne deposits combine to attack the paint on your thin-skinned birds. Bare metal corrodes, fast!

You Decide

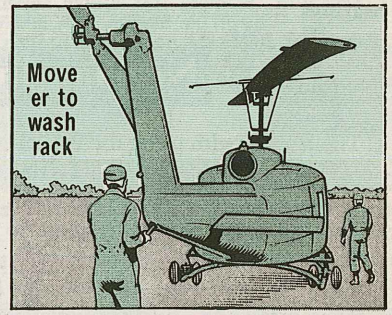
The climate where you're stationed is the big factor in deciding how often your baby needs a bath.

In coastal areas, you keep the corrosion villain at bay with a weekly wash. That's the word in Para 2-9 of TM 43-0105 (Apr 76) on corrosion control.

In other areas, an ideal cleaning time is during a Phase inspection, when the aircraft is down for extended maintenance.

Get Ready...

First off, move the bird to the wash rack and ground it. Water flowing



over Plexiglas actually creates static electricity. Then, if you use flammable

drycleaning solvent on an oily area, you won't be exposed to a big "bang".

Get Set...

Next, gather the right cleaning materials. If the aircraft has an infrared (IR) paint job, you can't use the regular alkaline waterbase cleaning compound. It's too strong and can damage the paint.

Use mild detergent on IR paint. NSN 7930-00-880-4454 will get you a gallon of dish washing detergent, while NSN 7930-00-281-4731 will bring you 50 pounds. Mix the detergent with water in the ratio listed on the container.

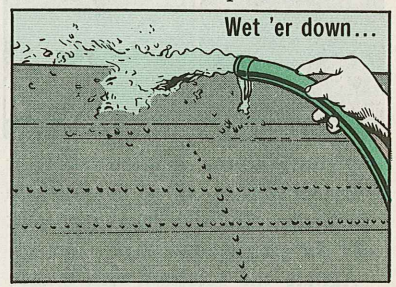
All of the other cleaning materials, listed in Table 2-1 of TM 55-1500-333-24 (Oct 74) on cleaning aircraft, are used on standard and IR paint. Several additions to the Table are a must, tho. You need:

Cloth, Flannel	NSN 8305-00-656-1259
Chamois	NSN 8330-00-965-1725
Towel, Paper	NSN 7920-00-823-9772
Glass Polish	NSN 7930-00-184-9423, or
Polish Kit, Glass	NSN 1560-00-450-3622

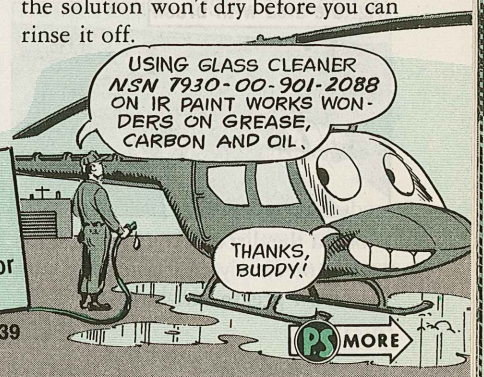
Go...

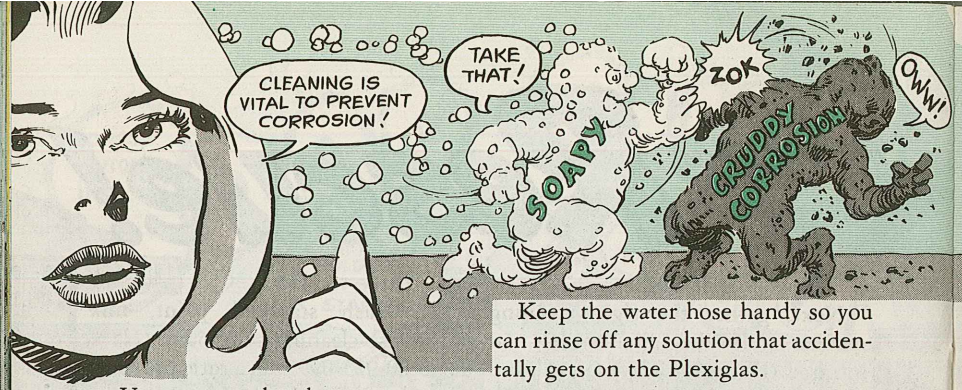
To wash standard paint, mix waterbase cleaning compound (NSN 6850-00-935-0995) in a ratio of 1-part compound to 7 parts water. It's not a good idea to increase the mixture because it can be hard to remove and will leave white streaks on the paint. You can go to a 1-part compound to 3 parts water in an engine exhaust area, tho, where the crud can really build up.

Your wash rack should be in an area where there is some protection from



the sun. If not, wet the bird's skin so the solution won't dry before you can rinse it off.

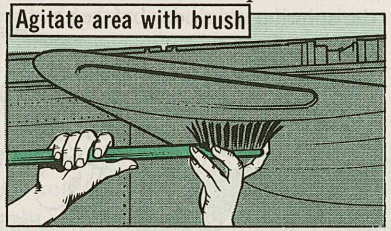




Use a mop, brush or sponge to apply the soap. Cover a limited area—just like you wash your auto—so you

can rinse off the solution before it dries. Otherwise, all of the solution won't rinse off. You'll have to go back over the area again.

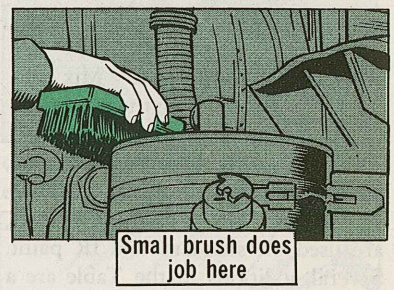
Agitate the solution with a non-metallic brush. The compound will do



a job on the dirt and you can rinse the area immediately after you make with the elbow grease...no streaks!

Keep the water hose handy so you can rinse off any solution that accidentally gets on the Plexiglas.

Use a small brush in close quarters, like the engine area, so you can remove all the oil and dirt. The little dude also



comes in handy when working topside.

The UH-1 hellhole requires special attention. Dirt, combined with leaking hydraulic fluid, produces a real mess. So use drycleaning solvent in that area.

Most units use a salvaged fire extinguisher to shoot the works.

It's the Plexiglas windshields and windows, tho, that take a real beating. Dirty rags used to wipe dew off an OH-58A windshield will scratch it—for real!

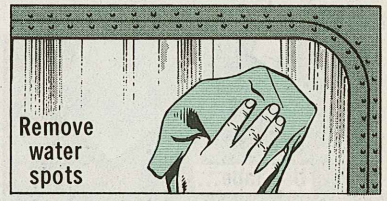
Failure to mask off a Plexiglas windshield with protective paper during a spot painting chore can lead to an immediate replacement. Any methyl-ethyl-ketone or lacquer thinner accidentally dropped on the plastic will eat it up and you can't polish out those hazy, crazy cracks.

Since the OH-58 A/C doesn't have a windshield wiper, flying in rain can present some visual problems for the pilot and observer. To help it shed rain better, apply Rain Repellent NSN 6850-00-139-5297. Para 2-37 in TM 55-1500-333-24 has "the word" on how to apply the conditioner.

To prevent scratches in a windshield, never take a dry rag to plastic. Run some water over the area and, with your bare hands, remove dirt and grit before you polish it.

You can also wash the plastic with a mixture of 1 or 2 ounces of detergent in a gallon of water. Use a sponge or chamois to carry the mixture and, again, spread it around with your bare hands.

After a water rinse, use a damp chamois or paper towel to dry the



plastic...removes water spots. To prevent scratches, never rub the plastic after it's dry.

For a sparkling windshield, use Plastic Polish NSN 7930-00-634-5340.

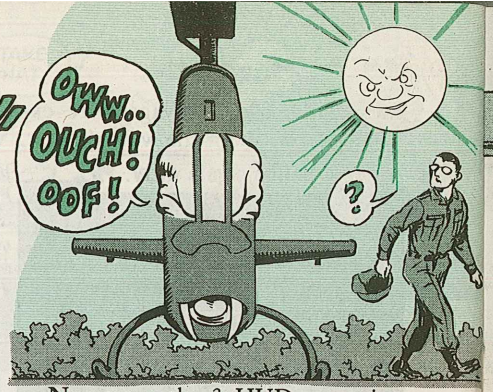
Never use the bubble polish on a glass windshield, tho. It's not only tough to remove, it also leaves you with an oil-streaked windshield. Use glass polish on those babies.

Yessir-e-e-e, there's no doubt about it—the most effective way of combating the corrosion villain is to keep your aircraft clean.

P.S. END

Cobra Pilots, 68J's...

"Heads Up!"



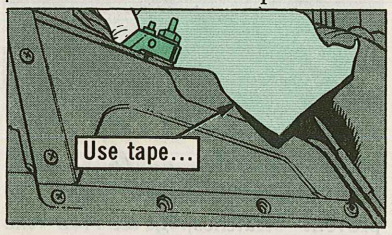
When you pilots use the Heads Up Display (HUD) system during a night mission, be sure you put the night filter back in the DAY position before exiting the bird.

Otherwise, sunlight will burn out the night filter and that's bad news—the unit has to go to support for repair.

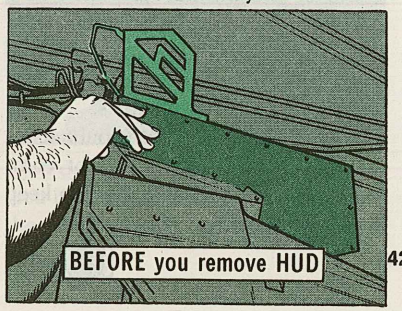
'Course, you fire control types do your thing according to the info in TM 9-1270-220-13 on the HUD.

In addition, keep these pointers in mind:

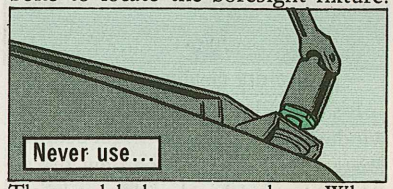
Before you remove the unit for a boresighting chore, put a piece of masking tape on the instrument panel. The idea is to keep the shims



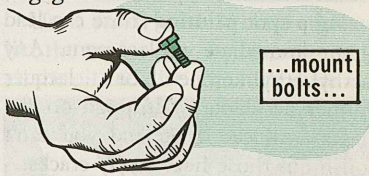
between the airframe and the mount from sliding forward and getting lost between the gunner's seat and instrument panel. Shim NSN 5365-01-091-4254 is hard to come by.



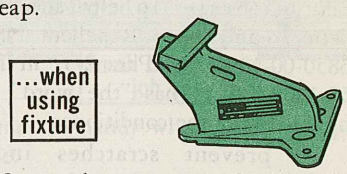
Never use the 3 HUD mounting bolts to locate the boresight fixture.



The steel bolts are too short. When you thread 'em into the aluminum mount, only a couple of threads will be engaged.



In an attempt to hold the fixture secure, you'll strip the mount threads—and that baby doesn't come cheap.



Save the mount! Secure the boresight fixture with bolts about ¼ inch longer than those used on the HUD.

Tough Nut To Crack

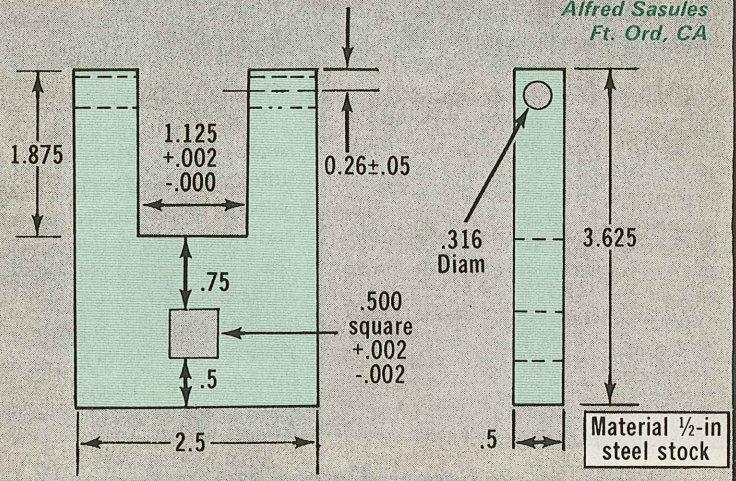
Dear Editor,

Any time we had to remove the stabilizer bar jam nut (inboard of the weight) on a Huey, it took 2 men and a C-clamp to do the job. Even then, the clamp would slip off the nut because of its shape.

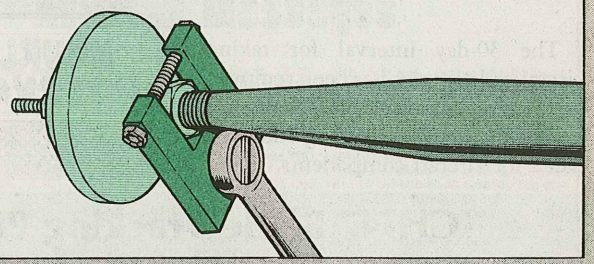
No more! We made up this handy crowfoot wrench that allows one mech to do the job—with no slips.

Just slip the tool on the nut. Use Bolt, AN5-30A, NSN 5306-00-151-2615, with a suitable nut to hold the tool in place...works like a charm!

Alfred Sasules
Ft. Ord, CA



Do it this easy way



(Ed Note—Good show! The head hangar recommends use of this locally-made tool.)

All Together, Now

Dear Windy,

The outside air temperature gage in the AH-1, UH-1 and OH-58 is identical.

The gage on the OH-58 gets checked every 6 months. The test interval for the AH-1 is every 100 hours, while it's 100 hours or every Phase inspection on the UH-1.

For uniformity in log book entries, and a more even work flow, can we check all of them at the same time, Windy?

SSG G. L. R.

Dear Sergeant G. L. R.,

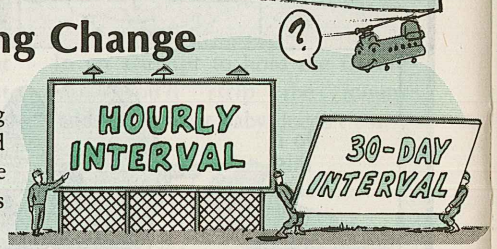
Yes. Get the OK from your maintenance officer to go with the info in TM 55-1500-204-25/1 on general maintenance practices. The individual bird manuals will come in line with the 100-hr test figure given in Para 3-301k.

The only gage check that is compatible with a phase inspection, tho, is the one on the Huey.

Windy

Sampling Change

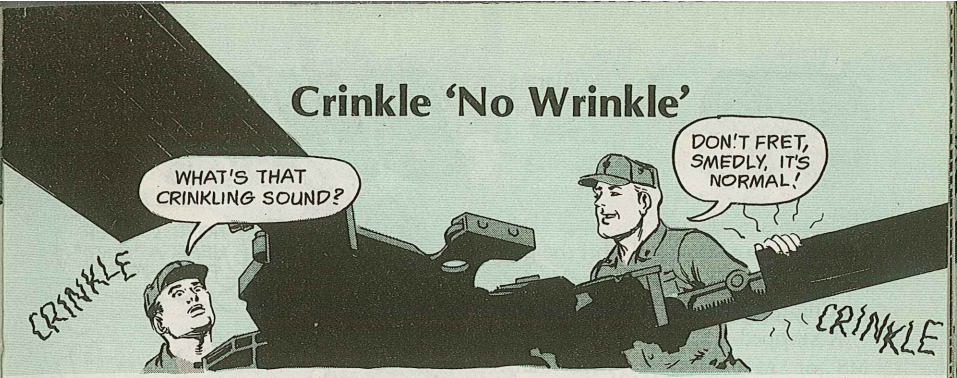
The 30-day interval for taking aircraft oil samples has been removed by Change 1 to TB 43-0106. Continue to use the hourly sampling intervals listed for aircraft components.



CH-47 Blade Tracking Pub

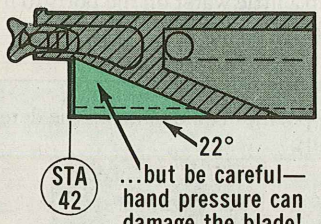
If you're looking for the manual on Vibrex Balancing Kit NSN 4920-01-040-7816, you want TM 55-4920-402-13&P. Included is the DC adapter cable, NSN 4920-00-003-8527, which has been hard to come by.

Crinkle 'No Wrinkle'



Never rush to change a main rotor blade on your Black Hawk because of a crinkling sound made when hand pressure is used on the inboard trailing edge pocket. The blade may still be OK!

Some compression is normal...



...but be careful—hand pressure can damage the blade!

The honeycomb core is lightweight and flexible, so some compression from Station 42 to the 22-degree callout in Fig 28-2 of TM 55-1520-237-10 is normal.

Careful—hand pressure can damage the blade.

Stick with the pub when checking for disbonding between the blade skin and core. Use a 1½ to 2-in copper disk, or equivalent soft metal, and tap the pocket.

A sharp, solid sound is an indication of a good bond. A dull, dead sound means you have bond separation.

TSARCOM Msg DRSTS-M 031505Z Oct 80 has the word.

Aviation Messages

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

AH-1-80-27 Maint Notice Remove TBO from T53-L-701, T53-L-701A and T53-L-703 engines DRSTS-MEA 091605Z Dec 80

OH-6-80-08 SOF Technical One-time Inspect tail rotor assy, OH-6A TB 55-1520-214-20-43 DRSTS-MEA 052230Z Dec 80

OH-58-80-12 Maint Notice OH-58C primary directional control sys DRSTS-MEA 222100Z Dec 80

CH-47-80-15 SOF Technical RCS CSGLD-1860, One-time Inspect CH-47A/B/C chip detector circuits, TB 55-1520-241-20-13 DRSTS-MEA 172340Z Dec 80

CH-54-80-03 Maint Notice Inspect horiz pins on all CH-54A DRSTS-MEA 102100Z Dec 80

OV-1-80-14 Maint Notice Remove TBO from T53-L-701, T53-L-701A and T53-L-703 engines DRSTS-MEA 091605Z Dec 80

UH-60A-80-41 SOF Maint Notice RCS CSGLD-1860, UH-60A Black Hawk troop/cargo door stops, P/N 70217-02700-104 DRDAV-EEB 032150Z Dec 80

UH-60A-80-42 SOF Maint Notice RCS CSGLD-1860 UH-60A Black Hawk, Main rotor hub assy, damper install special inspects DRDAV-EEB 091605Z Dec 80

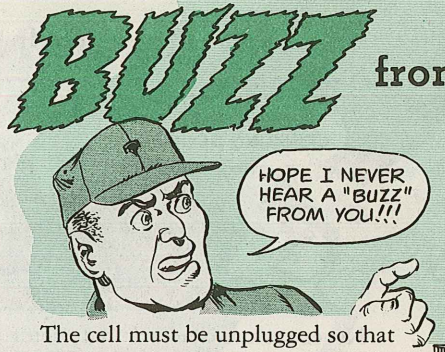
UH-60A-80-43 SOF Maint Notice RCS CSGLD-1860 UH-60A Black Hawk life limited components DRDAV-EEB 081610Z Dec 80

UH-60A-80-43 Correction UH-60A Black Hawk life limited components (Correction to UH-60A-80-43 081610Z Dec 80) DRDAV-EEB 101400Z Dec 80

UH-60A-80-44 SOF Maint Notice RCS CSGLD-1860, UH-60A Black Hawk pivot assy, tail rotor P/N SB7301-103, NSN 1640-01-H62-0922 DRDAV-EEB 232010Z Dec 80

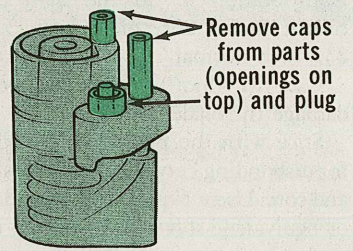
TROOP SUPPORT

Chemical Alarms... Get a BUZZ from



To make sure your chemical alarm works loud and clear, take off the plug and 2 caps of the detector cell before putting it in your M43 detector unit.

A stopped-up detector cell in your M8 or M10 through M18 alarm system can get you killed because you have no alarm.



The cell must be unplugged so that it can detect chemical agents in the air.

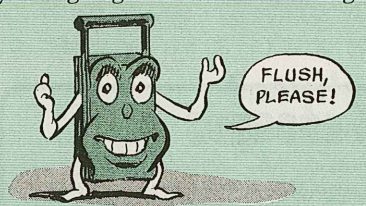
Caps must be removed so that the air and reservoir solution can flow in and out of the cell.

Besides, the caps keep the detector cell from sitting in the chassis assembly right.

After you take off the caps and plug, dab a little water on the ports to make a better seal.

72-hour Shutdown

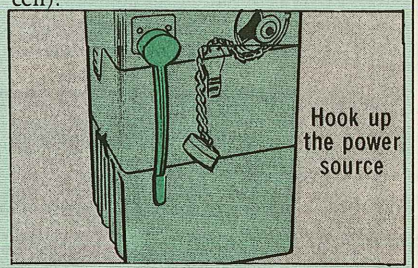
You've got to flush the detector if you're going to turn it off for longer



than 72 hours. If you don't, the solution can harden and clog and corrode the works.

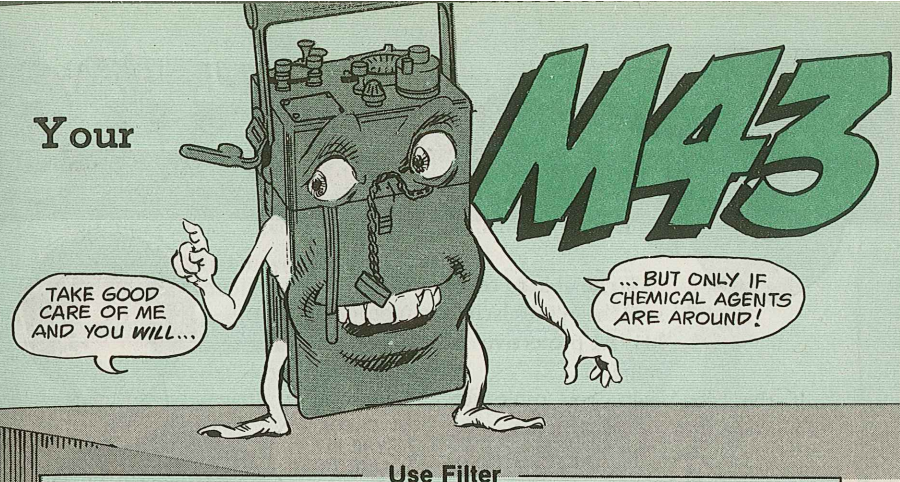
Discard the solution in the reservoir according to local SOP and TM 3-6665-225-12.

Rinse the reservoir with distilled water, then fill it $^{2}/_{3}$ full with distilled water. (Don't use tap water—the impurities could damage the detector cell).



Hook up the power source connector to the 24-VDC-input connector. Press in and turn the handcrank 50 times. Release the handcrank, but don't pull it up. Let the detector run 4 minutes. Cut off the juice. Empty the reservoir.

Your M43

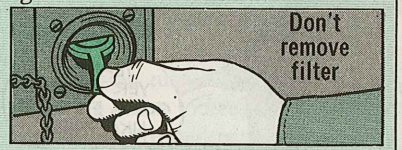


Use Filter

Would you cut off your nose if you had a breathing problem? Of course not!

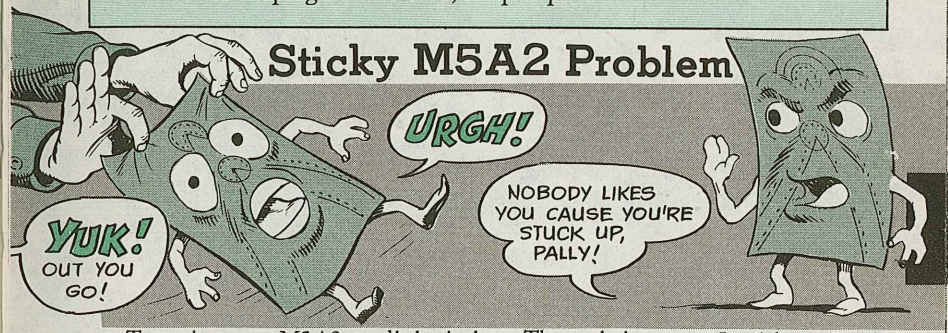
But it's common practice in some units for troops to remove the filters from the M43 detector unit because they don't think enough air is getting in to set off the chemical alarms.

It's as plain as the nose on your face: The filter must stay in the detector unit. Besides keeping out the crud, it helps detect the dangerous nerve agent VX.



If you don't think that the air is moving enough in the M43, you could have a pump problem. Try a new pump.

Sticky M5A2 Problem



Turn in your M5A2 radiological fallout area predictors with contract numbers DAAA09-78-C-4368 and DAAA09-79-C-4326...and get rid of a sticky problem.

The scale is wrong. It sticks to itself and everything else.

So, if your M5A2 is clear and slick instead of milk-colored, turn it in and get a replacement.

M17, M17A1...

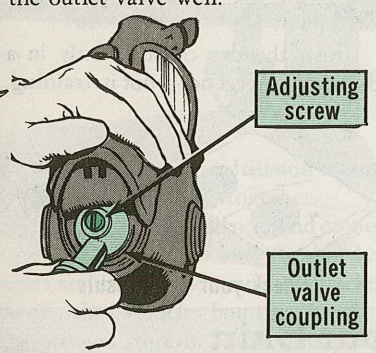
Unmasking Mask Problems

To be able to revive a buddy, make sure the M1 resuscitation tube for your M17A1 protective mask is screwed on right.

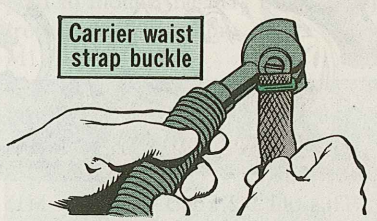
If the tube leaks, you can't get enough air into an NBC victim.

Lift back the bottom part of the voicemitter-outlet valve cover.

Place the outlet valve coupling into the outlet valve well.



If it's loose, take off the resuscitation (breathing) tube and tighten the adjusting screw with your carrier waist-strap buckle or a flat-tip screwdriver.



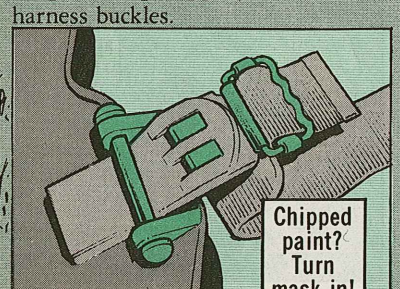
If the outlet valve coupling is too big to fit the well, loosen the adjusting screw to draw in the pre-formed packing. Now try it.

(Note: Be sure to take off the resuscitation tube before turning the adjusting screw to keep from damaging the pre-formed packing).

The tube needs to fit snug, like a trunk on an elephant. So, stretch it to its full 20 inches at least once a month to see if it fits the mask right.

Chipped Paint

You can damage the mask if you let the paint keep chipping off the copper harness buckles.



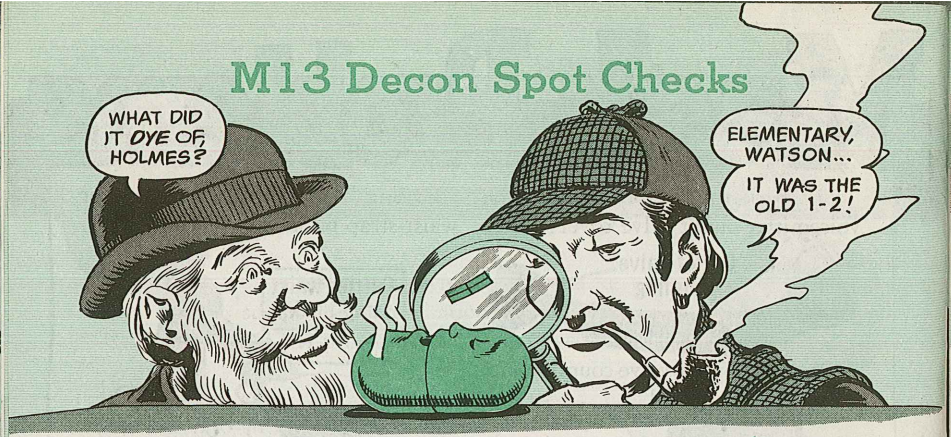
When the paint chips, the copper does a number on the butyl rubber, breaking it down.

The reaction knocks out the clip and buckle assembly tabs first. If it's not stopped, it spreads into the facepiece. Result? The mask is ruined and Uncle Sam is out big bucks for a new one.

The paint chipping affects both the M17 and the M17A1. The problem is worse with the older M17's.

If you see chipped paint, turn your mask in.

M13 Decon Spot Checks



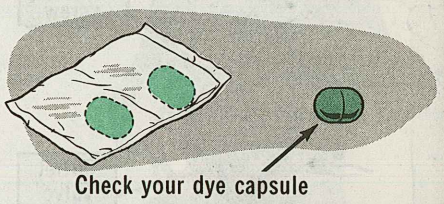
This old 1-2 knocks out your M13 decon kit:

1. A crack in the case.
2. Crushed dye capsules.

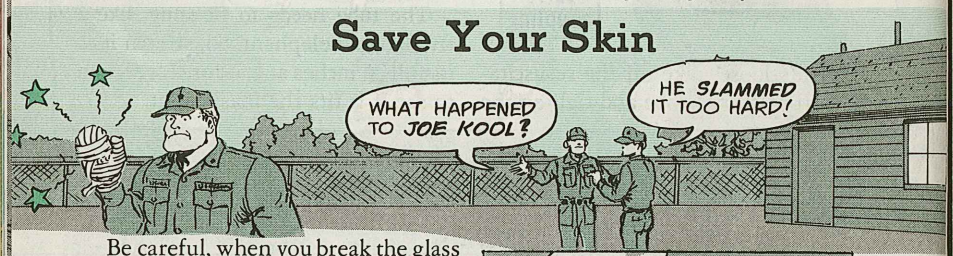
Either way, turn in the M13.

If the 2 capsules feel cracked or crushed when you gently squeeze them through their bags, they're unserviceable. They could be a hazard.

Crush the dye capsules only in a chemical emergency—not in training.



Save Your Skin



Be careful, when you break the glass bulb in capsule II of your M258 skin decon kit.

Slamming too hard can shatter the bulb through the capsule—and cut you.

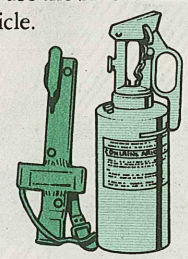
Best bet: Brace the capsule against your boot heel or rifle butt...and hit just enough to break the bulb.

Do the same with the capsule in your M58 training kit.

See TM 3-4230-213-10 for the right way to do it.

M11 Decon Drilling

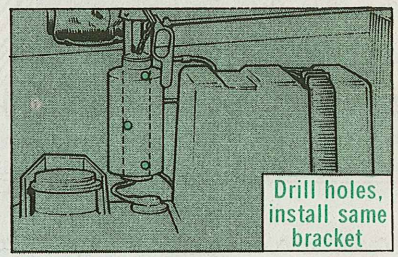
When you drill holes in your vehicle to mount your M11 decontaminating apparatus bracket, use the bracket that stays on your vehicle.



Your best bet is to drill and mount the bracket and M11 together.

If you've got to drill now and mount the bracket later, install the bracket nuts and bolts...and mark the bracket with the vehicle bumper number before you store it. Some units paint the vehicle number on the bracket.

The process applies whether you plan to mount the M11 on anything from an M548 ammo carrier to an M151A1 ¼-ton.



Reason:

Location of the mounting holes on the bracket differ from bracket to bracket. The difference may be by a hair or by a lot. Whatever, some won't match up...and that'll make an extra job for you.

Get Wired!

You don't need bulk like the Incredible Hulk to break the safety seal wire on your M11 decon.

You need the right wire, NSN 5340-00-835-9815.

Some troops mess up by using 5-strand safety wire instead of the 2-strand copper wire required in TM 3-4230-204-12 & P. The thicker wire is hard to break, so it slows down your decontamination mission.

Save muscle, time and Uncle's money. Get the right wire for your M11.

You Light Up My LIFE

"Gimme a light!" your buddy says, and so you do—with gasoline lantern NSN 6260-00-170-0430.

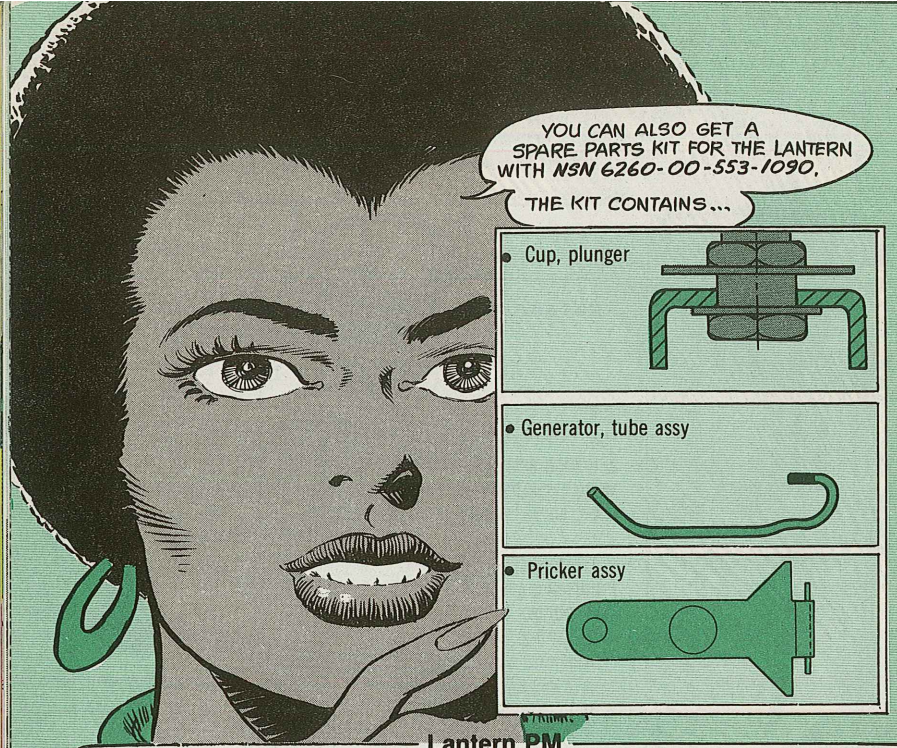
HERE'RE THE PARTS...

...YOU NEED TO KEEP IT WORKING!

Item	NSN
Channel, globe	6260-00-174-3873
Quadrant, globe	6260-00-174-3874
Generator, burner assy c/o generator tube assy, burner tip, air supply tube, air tube bracket, manifold tube, mantle holder, manifold block, yoke, adapter nut, screw	6260-00-284-0554
Nut, generator locking	6260-00-161-1859
Mantle (6)	6260-00-270-4060

Item	NSN
Frame assy	6260-00-284-0551
Fuel valve assy c/o knob assy, fuel valve body, valve stem, packing, fuel feed tube, air valve tube	6260-00-284-0549
Pump plunger assy c/o pump, tube, handle, cap, spring, spacer, 2 washers, cup and 2 locking nuts	6260-00-284-0555
Filler cap assy c/o filler cap, screw, retaining ring, chain, swivel chain link, gasket, disc	6260-00-270-4061
Funnel assy w/retaining ring, chain	6260-00-578-7162
Air check valve tool	5120-00-646-7576
Wrench assy	5120-00-288-9687

PS MORE



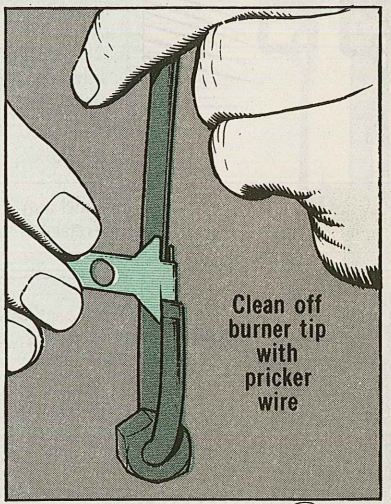
Lantern PM

Course, you can do a heap of PM on the lantern that'll save you spare parts cash. F'rinstance, keep the tiny hole in the burner tip clean. Use the pricker wire to keep grit, dirt, chips and such stuff from the burner tip.

If you've cleaned off the burner tip and used the pricker wire to clear the burner tip hole and the lantern still won't light, replace the generator.

Handle the lantern carefully while lighting it. A bump or jar can shatter the mantle.

Keep the plunger cup leather soft with a few drops of lightweight oil such as Neat's foot oil NSN 8030-00-597-6105.



END

Cage 'Em!

Dear Editor,

Keeping oxygen and acetylene cylinders protected from combustible materials and the weather was a problem in our motor pools.

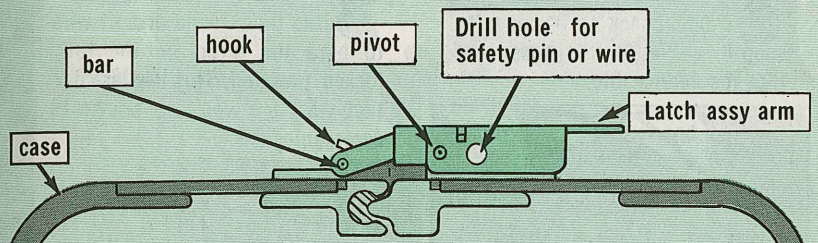
We made cages for each type of cylinder, using scrap wire mesh, strap material, sheet metal and hinges.

The solid top gives additional weather protection and makes for better security. Separate cages for empty and full cylinders help keep our inventory up to snuff.

39th Engr Bn
Ft Devens, MA

(Ed Note—Good idea. The cages will help stop damage to cylinders by careless equipment operators, too!)

Carrying Case Catches



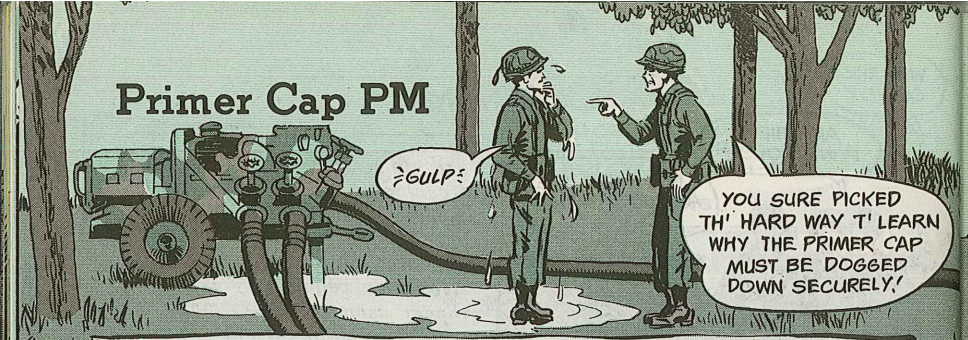
If a carrying case's clamping catch fails, you can have a lot of shock impact damage to the equipment inside—torque wrench, test equipment, etc—and maybe to yourself.

Some cases have holes drilled in the clamping catches for lock wire or pin. If yours does, add the wire or pin for safety's sake.

If there's no hole, drill one for the safety device.

Look at the catches on your cases. Some may be loose from use. Some were defective when made. Whatever the reason, never carry high-cost equipment around in a case with unsecured catches.

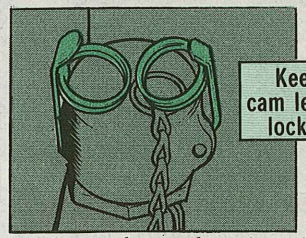
Primer Cap PM



Hand check—not just eyeball—the primer cap on the pump casing on your 350-GPM fuel-handling pumps.

Those cam levers on the cap must be in the fully raised—vertical—position to be locked.

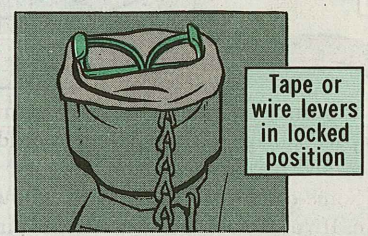
A loose cap can vibrate off or be left loose by an operator when he primes the pump. You could get a fuel bath and a heap of extra duty time cleaning up the equipment.



1 Doublecheck to be sure the snap-in gasket is in the cap and that it's serviceable.

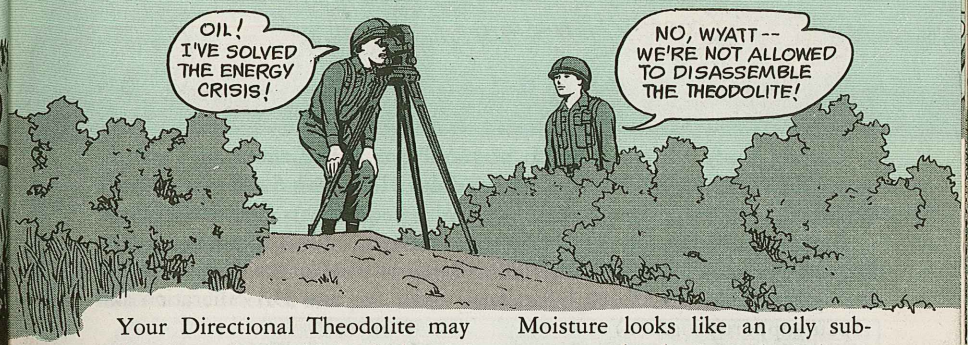
2 Make sure the cam levers are raised to their fully locked position so the cams will grab the beveled adapter and hold the primer cap on the pump casing real good.

3 Use tape, twine or soft wire to bind the levers in the fully locked position. This'll guarantee that vibration won't cause 'em to come unlocked.



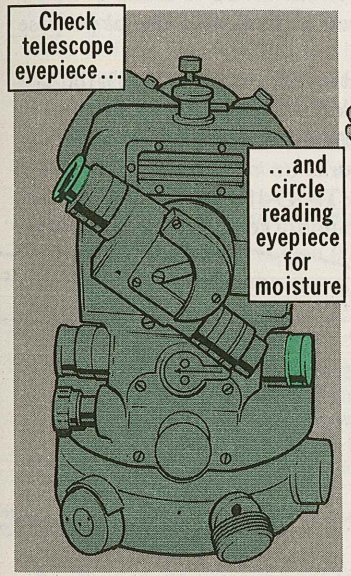
TSARCOM Msg DRSTS-MFE 052000Z Aug 80 has the word about this safety hazard.

Check Theodolites For Rust



Your Directional Theodolite may look great on the outside but be hurtin' on the inside from condensation and rust.

Take a good look inside. Peek through the circle reading eyepiece or the main telescope eyepiece for any signs of rust or corrosion-causing moisture.



Moisture looks like an oily substance on the horizontal circle or prisms. It spells trouble for your theodolite.

You fill out the QDR the same as an EIR. Para 3-16 of TM 38-750 tells you how.

Then, hold on to your theodolite until the headshed tells you what to do with it. And don't try any anti-rust PM. You're not allowed to disassemble the theodolite.

REVIEW CALIBRATION CODES

Getting ready to send a batch of DA Form 2416 Calibration Cards to support? Well, pull out the ones you've coded N in Block 6 and take another look.

Block 6 shows the code for the level of calibration that item needs. You get those codes from TB 43-180, Calibration Requirements for the Maintenance of Army Materiel. (TB 43-180-1 for those under the new DA calibration and repair support program.)

Support—DS/GS/AVIM—pulls calibration and repair on items coded C in TB 43-180.

Calibration on general purpose Test, Measurement and Diagnostic Equipment (TMDE-GP) is done by calibration teams or labs. (General purpose TMDE is common TMDE—used for support operations on more than one item or system.)

Calibration teams or labs also support some special purpose TMDE (TMDE-SP). (Special purpose TMDE only works on one system or item.) If the special purpose TMDE is coded F in TB 43-180-1, though, your regular support outfit does the calibration.

A special column in TB 43-180-1 tells you if the item is special purpose TMDE.

If you have an item of TMDE—not listed in TB 43-180 or TB 43-180-1—that requires calibration, you put N in Block 6.

WATCH THE SPEC

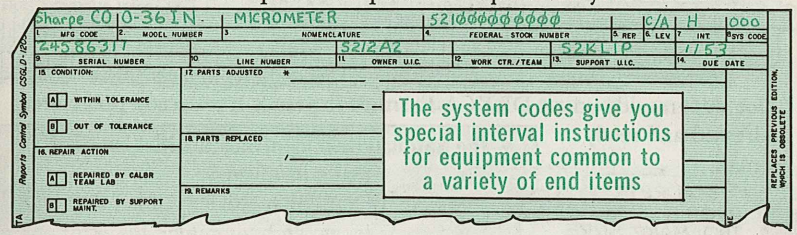
Hold off on those N's. TMDE that works on many different types of equipment may show up in TB 43-180 or TB 43-180-1 under the military specification (Mil Spec) or federal specification (Fed Spec) number rather than the manufacturer or stock number.

ACT CODE	NOMENCLATURE MFG MODEL /REMARKS	ITEM NAME /REMARKS	MFG CODE	NSN /ORD PART	CAL RESP	PROCEDURE PUBLICATI CALIB PROCEDURE	MAIT MANU
C	F370A *TS421C	OSCILATR AUD	29085 DATA ROYAL	6625-00-435-2588	C	TB9-6625-862-35	*
	F51A	GEN FUNC	07 INT			NUAL	
	F515BMI	TS BIOMEDICA	80 TEK			502,FG501 ,DC503,PS503A	
	F55A	GEN FUNC	07 INT			NUAL	
	F900/G	FILTR VAR ELECT				25-357-50	
	G	SAMPLER AIR	40 MINE			NUAL	
C	G	PREAMPLIFIER	80008	6625-00-600-9164	A	TB9-6625-1070-35	*TM11-6

Some common items like micrometers, calipers and torque wrenches may be listed by military or federal specification number

Most torque wrenches, for example, come under Fed Spec GGG-W686. You won't find them listed separately by NSN, model or manufacturer—just by the Fed Spec number in the nomenclature MFG Model/Remarks column.

Match the range of your torque wrench with the ranges listed to see which calibration interval and procedure pubs are required on your model.



Compare any DA 2416's you have on torque wrenches, calipers or micrometers with the instructions in paragraphs 8f and g of TB 43-180, or paras 7g and h of TB 43-180-1.

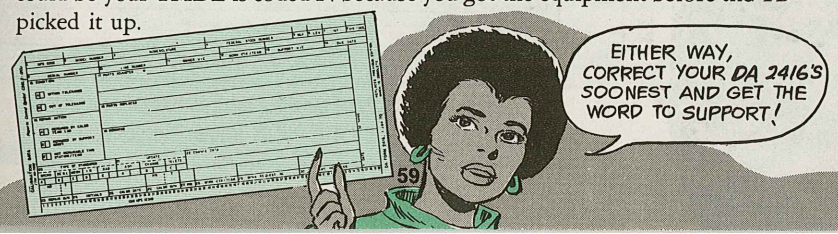
The manufacturer goes in Block 1 and the model number of your item in Block 2 of the DA 2416. Do not list the military or federal specification number on the form. If your item does not have a model number, put the range in Block 2.

Other common use TMDE may also be listed by military or federal specification number. If you think some of your gear falls in that category, call your Calibration Coordinator—post or unit. The Calibration Coordinator can track the Mil or Fed Spec's for you.

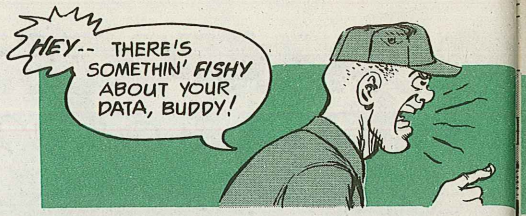
NEW INTERVAL CODE NEEDED

Once you find the item, you'll need a new calibration interval code on your DA 2416. Either write the new code on the card so support can make you a new preprint or make up a completely new card.

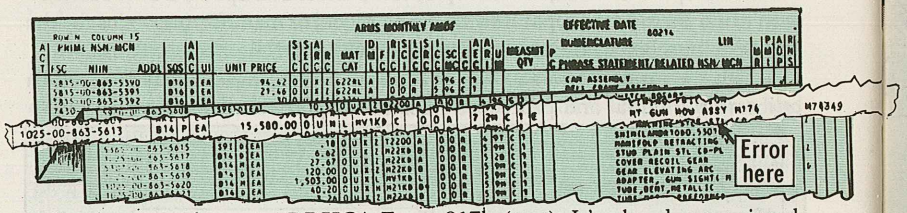
Even if your TMDE is not listed by Mil or Fed Spec number, go through each new version of TB 43-180, or TB 43-180-1. If you have preprinted DA 2416's, could be your TMDE is coded N because you got the equipment before the TB picked it up.



Reporting AMDF Errors



Found an error on the Army Master Data File (AMDF)? Don't keep it to yourself. Let the Catalog Data Activity know about it.



Jot the error down on DRXCA Form 917b (test). It's already preprinted, addressed and ready to mail.

- The National Item Identification Number (NIIN) that's involved.
- The field (Acquisition Advice Code, Unit of Issue, etc) containing the error.
- The specific entry that's wrong.
- What the correct entry should be (if you know it).

Questions:

Please type or print clearly

Reference NIIN 00-863-5613, Nomenclature Field. Phrase Statement reads MT GUN HOW ASSY M174. Should read MT GUN HOW ASSY M158.

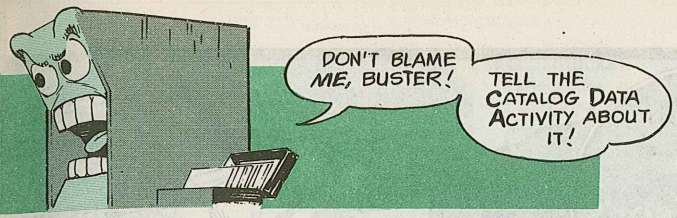
PFC Sherwin O. Johnson
8th Bn, 109th Inf
Ft Nowhere, US 10010

AVN 222-5533

MIRAC

Management Information Research Assistance Center (MIRAC)

- Your complete mailing address and commercial or AUTOVON phone number.



CDA will report your problem to the item's manager and keep you posted on what's being done to correct it.

DRXCA Form 917b (test) comes with your AMDF microfiche each month, but if you run out of forms, send a letter instead.

Chief
US Army Catalog Data Activity
ATTN: DRXCA-MS
New Cumberland Army Depot
New Cumberland, PA 17070

'Course, if you have a hot problem that can't wait, call on the CDA Hotline, AUTOVON 977-7431.

Privacy Act Statement

If the Privacy Act statement for the form you're filling out (like for operator's license) is a tear-off addition or a separate sheet, you can throw it away after you read it. 'Course, if the statement is printed in the body or on back of the form, it's a permanent part of the form.

Visible File Pockets

Here're the NSN's you need to get visible index file pockets for your maintenance and supply forms:

NSN 7460-00-	Holds Form—
369-5087	5-in x 8-in (¼-in Exposure)
621-1840	5-in x 8-in (½-in Exposure)
491-4790	8-in x 8-in
491-4791	10-in x 10-in

You won't find the last 2 on the AMDF, request them on DD Form 1348-6.

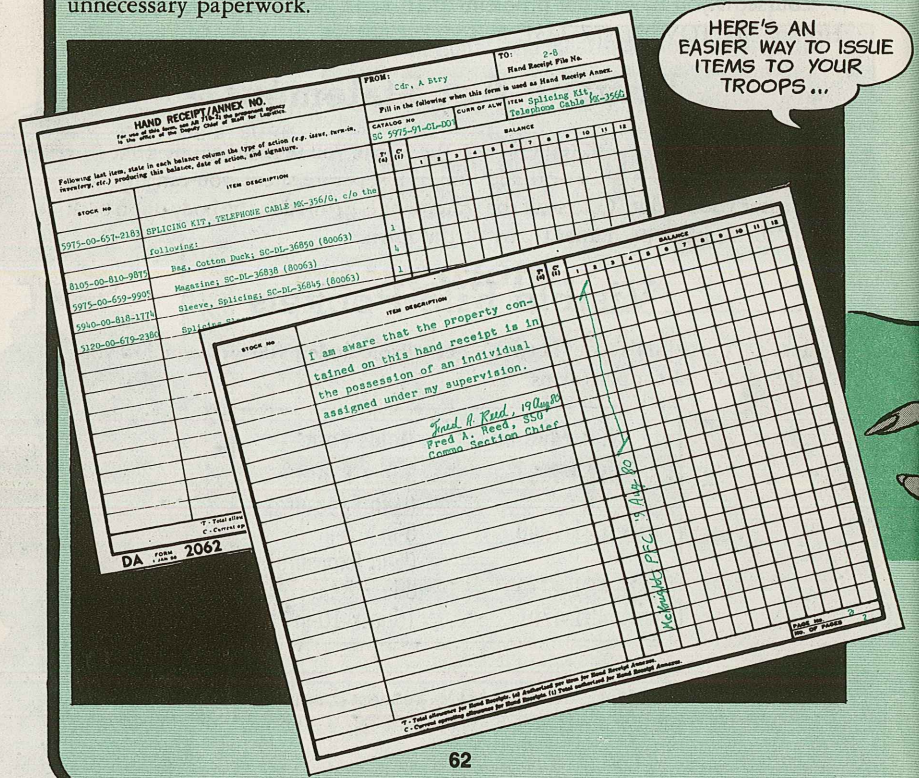
Hand Receipts...

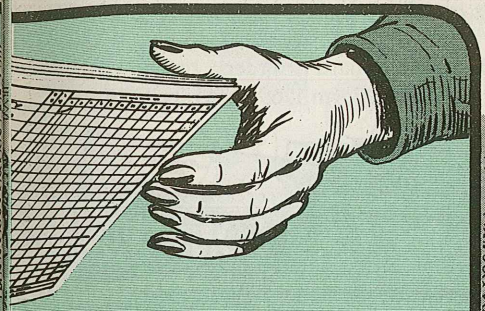
Use Supervisor's Statement

Your commander issues property to the platoon sergeant, who issues it to the squad leader, who issues it to the using soldier.

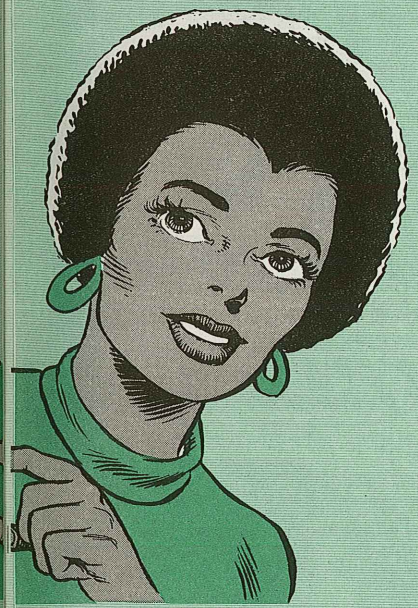
No, that's not supply's version of ring-around-the-roses. That's normal SOP and it means command structure is being followed.

But it also means 3 layers of hand receipts for the same item—a lot of unnecessary paperwork.





When your CO OK's the use of the Supervisor's Statement in AR 710-2, para 2-9b (3) (a), use it.



This way items can be issued directly to the using soldiers on hand/subhand receipts. The command structure is not by-passed. Not only does it save time, but it helps you to keep up with the property.

PLL Stocks...

Co-Locate, Yes! Consolidate, No!

Your unit has just been given a special mission or assigned to another command. How long will it take you to move out?

If your Prescribed Load List (PLL) stocks and records are consolidated—combined with those of other units—it could take longer than you think. You have to sort out your stock and records before you can go.

That just won't hack it when you get the order to go—and go fast!

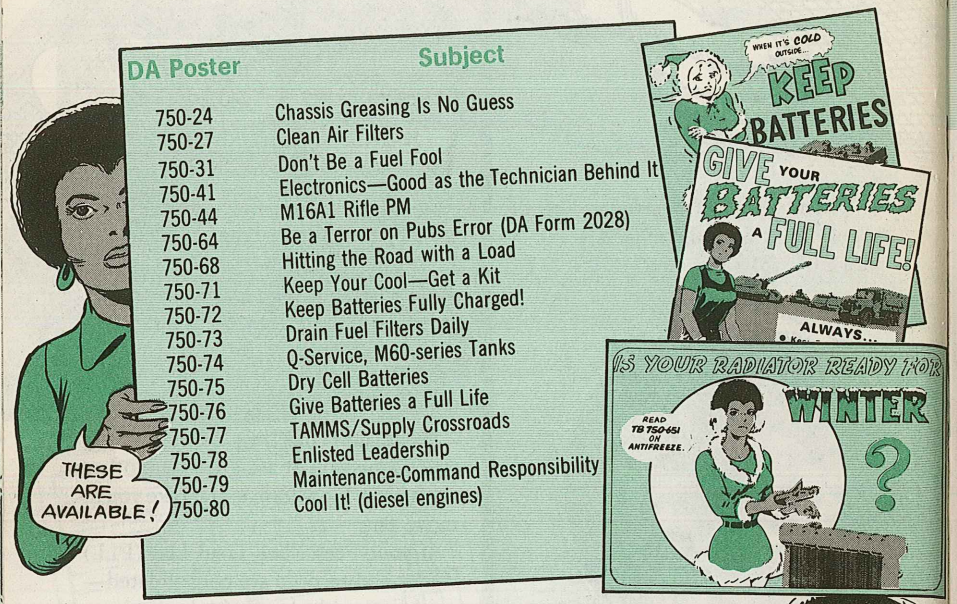
So, to do things right, keep your PLL stocks and records separate from other units. That's the word in para 2-38 of AR 710-2.

Remember, it's OK to co-locate stocks and records if your maintenance and supply operations are centralized with those of several other units. Just keep individual unit stocks and records separated. Don't let co-location turn into consolidation.

Need a PM Poster?

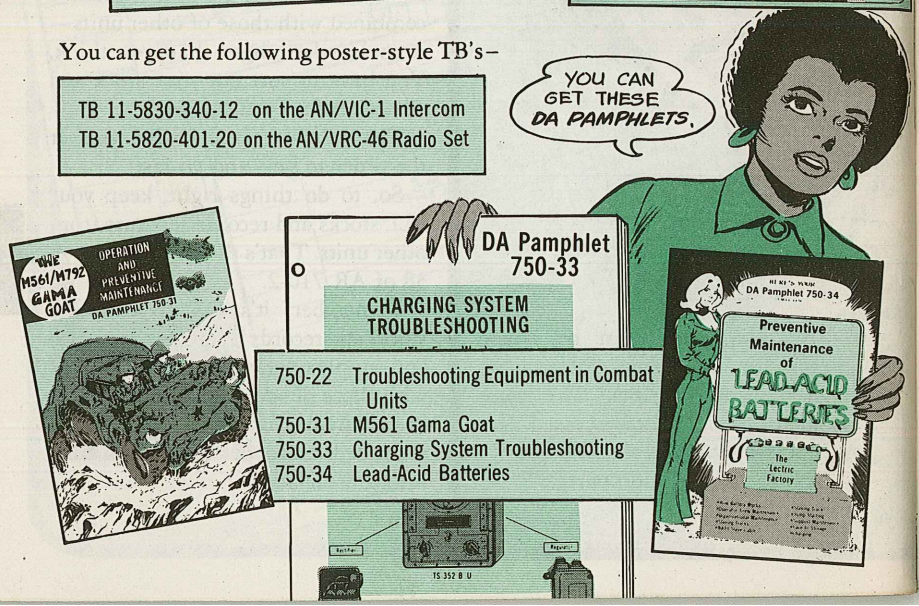
Need PM posters for your shop wall, bulletin board or orderly room? Your pubs clerk can get them by sending in a DA Form 4569 for AUTODIN.

DA Poster	Subject
750-24	Chassis Greasing Is No Guess
750-27	Clean Air Filters
750-31	Don't Be a Fuel Fool
750-41	Electronics—Good as the Technician Behind It
750-44	M16A1 Rifle PM
750-64	Be a Terror on Pubs Error (DA Form 2028)
750-68	Hitting the Road with a Load
750-71	Keep Your Cool—Get a Kit
750-72	Keep Batteries Fully Charged!
750-73	Drain Fuel Filters Daily
750-74	Q-Service, M60-series Tanks
750-75	Dry Cell Batteries
750-76	Give Batteries a Full Life
750-77	TAMMS/Supply Crossroads
750-78	Enlisted Leadership
750-79	Maintenance-Command Responsibility
750-80	Cool It! (diesel engines)



You can get the following poster-style TB's–

TB 11-5830-340-12 on the AN/VIC-1 Intercom
TB 11-5820-401-20 on the AN/VRC-46 Radio Set



750-22	Troubleshooting Equipment in Combat Units
750-31	M561 Gama Goat
750-33	Charging System Troubleshooting
750-34	Lead-Acid Batteries

AH-1S Turret Cable

So many W2 fire volts cables (NSN 1090-056-2904) for the M97 mount of the AH-1S Cobra have been wounded in action that the cable is out of stock. Remember, when you remove the M197 20-MM gun from the mount, first disconnect the W2P3 cable from the gun. That way, stock'll build up again, and your gun won't be down.

No Wrenching Here

Let your fingers do the tightening when replacing the master cylinder plug on your M151-series truck. No wrench is needed for this job. Too much torque here can damage the plug or even the whole master cylinder.

Trailer Hub Sealant

Use Sealing Compound NSN 8030-00-081-2339 when servicing the wheel hub on your ¼-ton M416-series trailer. The NSN shown in Note 5, Fig 3-2, C 3 (Oct 77), TM 9-2330-251-14 is wrong.

Fuel Transfer Pump

The electrical fuel transfer pump for your 5-ton truck comes with NSN 2910-00-930-9367 and its filter element with NSN 2910-00-203-3322. NSN 5930-00-296-6318 will get you the pump's switch.

The filter element is the same as listed on Page 2-179, TM 9-2320-211-20P, while on page 2-69 the switch is incorrectly identified as "solenoid override" switch.

New Oil Analysis Bottle

NSN 8125-01-082-9697 will get you Kit, bottle, oil sample. It brings you 120 3-oz bottles for sampling ground equipment's oil.

Tire Rotation

If your vehicle's TM's don't cover tire rotation, check out Chap 2, TM 9-2610-200-20. It covers tire rotation. Rotation of steel belted radial tires is limited to the switching of tires on the same side of the vehicle.

¼-Ton Wiper Motor

Your unit may not have to shell out 50 bucks for a new electric windshield wiper motor for your M151A2 or other late model ¼-ton vehicle. The motor, NSN 2540-00-176-9464, is coded in TM 9-2320-218-20P as repairable by your support—but they may not know about the repair kit, NSN 2540-01-060-8529, that costs only about 3 bucks. The kit includes a gear that's the most likely replacement part. Tell your DS about it.

5-Ton MAC Update

The Maintenance Allocation Chart (MAC) on page B-9, C2, TM 9-2320-211-20, says DS replaces the multifuel truck's air compressor. This is wrong. Organizational maintenance replaces the compressor. Make a note until your TM is updated.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1980—757-003/6

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


SPARE THOSE TRACK PADS...
Don't be a
PIVOT EER!!!
Turn in LONG SMOOTH CURVES