

Issue 345

PS

August
1981

THE PREVENTIVE MAINTENANCE MONTHLY



OH-NO!!

DID YOU GUYS
REPLACE THAT
DROOPER WE SPOTTED
LAST NIGHT?

WELL...
ER--

¿GULP?

MURPHY
ANDERSON

T142 Track PM...
DOUBLE YOUR TRACK LIFE!
See Page 2

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

Within limits of availability, older issues may be obtained direct from Editor, PS Magazine, c/o US Army Materiel Readiness Support Activity, Lexington, KY 40511.

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

MSG Half-Mast
PS Magazine
Lexington, KY
40511

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You've Got To Know...

To Be A PRO!

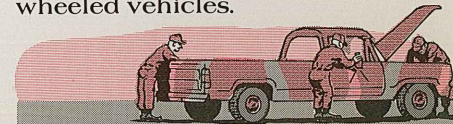
No matter how good a driver you are now, the Army has some pubs and films that can help make you even better.



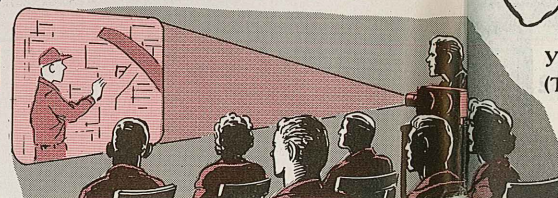
FM 21-305 is a good place to start. It's the manual for the wheeled vehicle driver, and it's full of good information.



GTA 9-1-182 gives an illustrated, step-by-step breakdown of preventive maintenance for wheeled vehicles.



Instructional films are available, too. Training Films (TF) and Miscellaneous Films (MF) are listed in DA Pam 108-1.



TRY THESE FOR STARTERS...









TF 55-4167 & TF 55-4168	The Safe Military Vehicle Operator, Parts I & II
TF 9-4187	Wheeled Vehicles—Scheduled Maintenance
TF 9-6099	Safe Operations of the Gama Goat
MF 20-5998	To Drive at Night
MF 20-9975	Wheels of Tragedy (Accidents)

If your commander requires that you take a defensive driving course, check out MF's 20-8948 through 20-8953. Another series you might be interested in is MF 20-5280, A through H.

The National Defensive Driver's Test, MF 20-5152, will let you find out how good you really are.

YOU CAN ALSO GET TRAINING AIDS FOR SPECIALIZED VEHICLES! FOR INSTANCE...

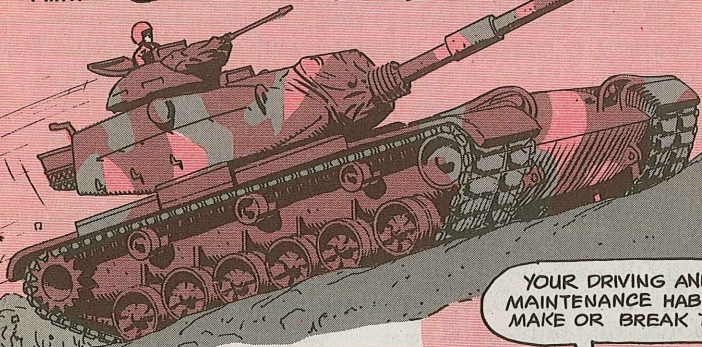


Truck, ¼-Ton 	TF 55-3707—Operation, M151-Series ¼-Ton. TF 55-4247—M151A2 Characteristics, Handling. TB 9-2320-218-10-1—Safe Operation.
GOER Vehicles—M520, M553, and M559 	OTC 55-1—GOER Operator Training Course (Extension). (Order from: US Army Transportation School, ATTN: ATSP-DS-LG-S, Ft Eustis, VA 24604). MF 17-5934—GOER.
Tracked Vehicles 	FM 21-60—Visual Signals.
Howitzer (SP) 	TF 9-3359—Howitzer, Self-Propelled M108, M109, Operation, Maintenance.
M88 Recovery Vehicle 	TF 9-3381 through 9-3384—Recovery Vehicle, M88.
M578 Recovery Vehicle	TF 9-3783—Recovery Vehicle, M578.
General 	FM 10-68—Aircraft Refueling. FM 10-69—Petroleum Supply Point Equipment and Operations. FM 10-71—Petroleum Tank Vehicle Operations. FM 20-22—Vehicle Recovery Operations.

You can find out more about these training aids and others at your battalion learning center or the Training Aids Support Center (TASC).

T142
Track
PM...

Double Your



YOUR DRIVING AND MAINTENANCE HABITS MAKE OR BREAK TRACK!

Millions of dollars worth of track bites the dust each year long before its expected lifetime.

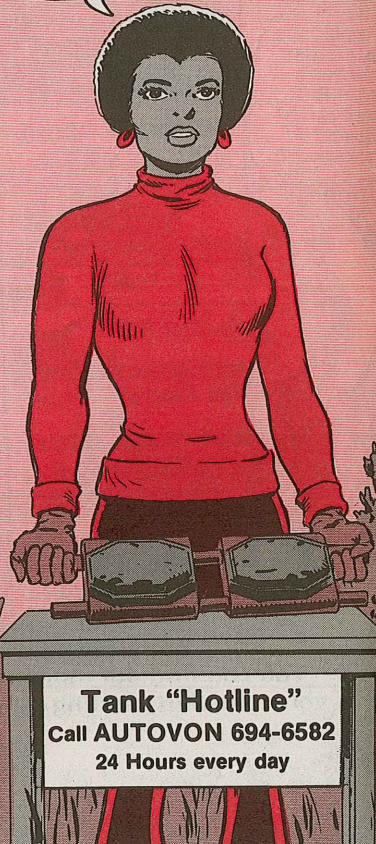
Track pad rubber is chewed up because hotrod drivers show off making fancy pivot steer turns.

Crew members and mechanics replace good track shoes when only the connecting hardware—end connectors, center guides, etc—is bad. That's like tossin' out good money.

Here's how you tankers can make sure the track and track components last their expected lifetimes and save Uncle a bundle.

There's nothing real complicated about keeping your track in tip-top shape—just a lot of little details.

If you drive your tank sensibly, keep your track up to snuff and tightened right, your maintenance time will be cut way down. You can be enjoying a night on the town while all your tanker buddies are still "maintaining" their track.



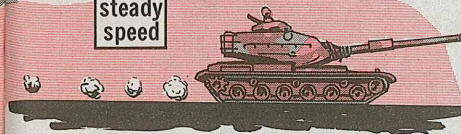
Tank "Hotline"
Call AUTOVON 694-6582
24 Hours every day

Track Life!

Driving Tips

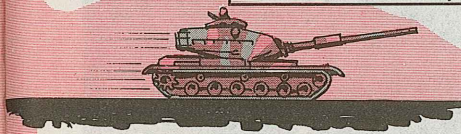
Keep speed slow and steady. High speeds build up heat that weakens pad resistance to tearing and chunking.

Slow, steady speed



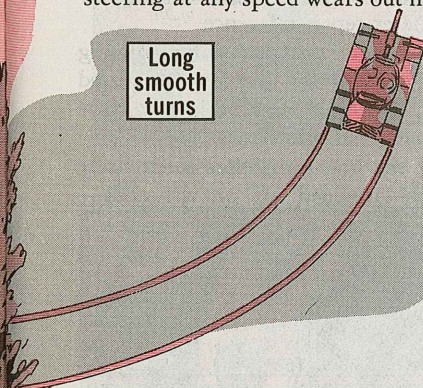
Start and stop smoothly. Jack rabbit starts and panic stops increase wear on the pads.

Smooth start and stop



Turn in smooth, long curves. Pivot steering at any speed wears out more

Long smooth turns



track rubber than a whole day's road march. Keep it to a minimum.

Track Inspections at Halts

When you stop during a road march, give your track a quick check. Just a walk-around will do.

Look for broken, missing or loose end connectors, bolts and wedges. Shiny metal where the bolt touches the end connector means a loose wedge bolt.

Check for missing, bent, cracked, broken or loose center guides. Look for shiny metal at the nut.

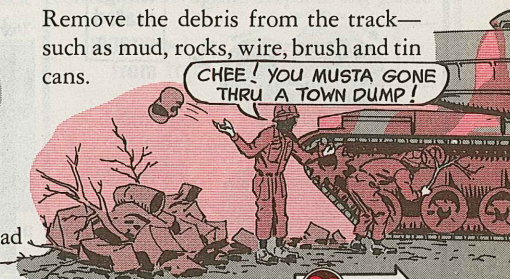
Give your track the onceover for dead shoes. If you see a drooper—a sagging shoe—replace it now. It could cause a thrown track.

After Operations Inspections

At the end of the day, give your track a good going over. A 4-man crew can make a series of 3 checks and do the job in about 10 minutes. If you find the bummers and fix 'em tonight, you can run all day tomorrow without trouble.

Move the tank to a hard surface. Remove the debris from the track—such as mud, rocks, wire, brush and tin cans.

CHEE! YOU MUSTA GONE THRU A TOWN DUMP!



Check 1

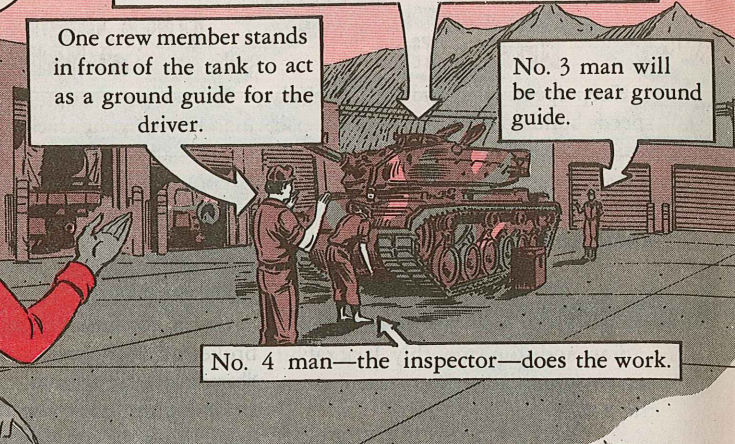
POSITION THE 4 MEN LIKE SO...

The driver starts the engine and warms it up.

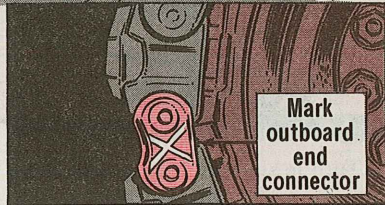
One crew member stands in front of the tank to act as a ground guide for the driver.

No. 3 man will be the rear ground guide.

No. 4 man—the inspector—does the work.



While the driver moves the tank backward, the inspector watches the track as it passes over the compensating idler. Check the right side first, then the left. If something's wrong, signal the front ground guide to have the driver stop the tank. Mark the outboard side of the end connector

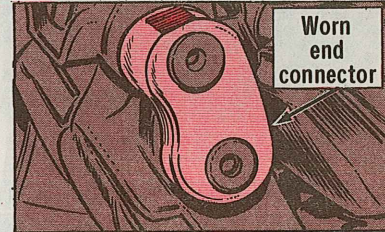


Mark outboard end connector

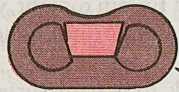
for later repair reference.

Keep an eye peeled for missing wedges and for wedges not seated right. Look for loose, broken, worn or missing end connectors.

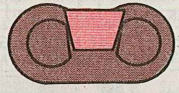
If the end connectors seem badly worn—rounded off on the ends—



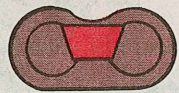
Worn end connector



Wedge seated wrong



Wedge seated right



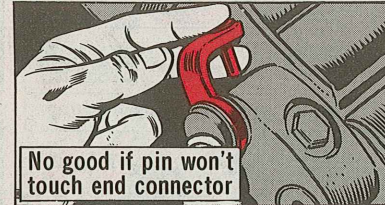
Check 2

FOR THIS CHECK YOU NEED THE FRONT GROUND GUIDE AND THE DRIVER IN THE SAME POSITIONS AS IN CHECK 1!



borrow your mechanic's end connector wear gage, NSN 4910-00-795-7960. (The gage is part of the special tools shown in the tank's-20P TM.)

Check the driven—trailing—end of the end connector. If the pin of the wear gage won't touch the end



No good if pin won't touch end connector

connector, that end connector is worn beyond acceptable limits. If half or more of the end connectors are worn on one end only, but within wear limits on the other end, the entire track must be reversed. This'll give you more mileage from track components, especially the end connectors.



Missing pads

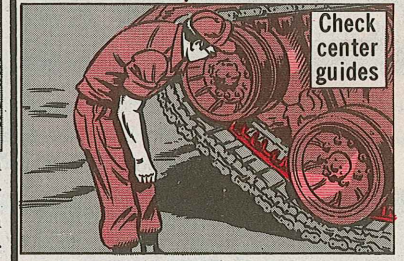
Look for missing or worn track pads. No need to replace pads for



Chunking's OK

chunking. Replace 'em only when the grouser begins to mark a paved road.

The No. 3 and 4 men each observe a front idler. They'll watch the center

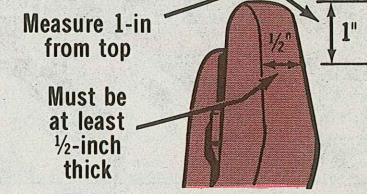


Check center guides

guides as they pass between the compensating idler and the No. 1 roadwheel while the driver moves the tank forward.

Look for missing, bent, broken, cracked, worn or loose center guides. If either inspector finds any, signal the ground guide to have the driver stop the tank. Mark the center guide and the outboard end connector for later repair reference.

When you're done, check the worn center guides again. Replace any guide



Measure 1-in from top

Must be at least 1/2-inch thick

worn to less than 1/2 inch thick (measured 1 inch from the top.)

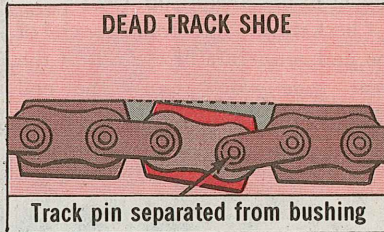


Check 3

The driver and the front ground guide keep their positions. The 2 inspectors move to the rear of the tank near the drive sprockets. They'll watch the track as it passes over the support rollers. Look for dead shoes as the driver moves the



Watch for dead shoes

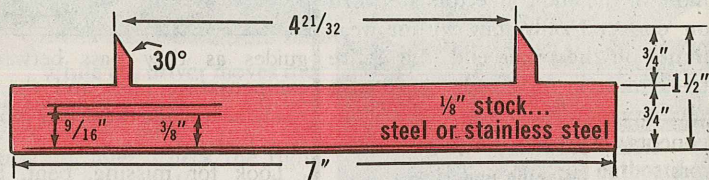


DEAD TRACK SHOE

Track pin separated from bushing

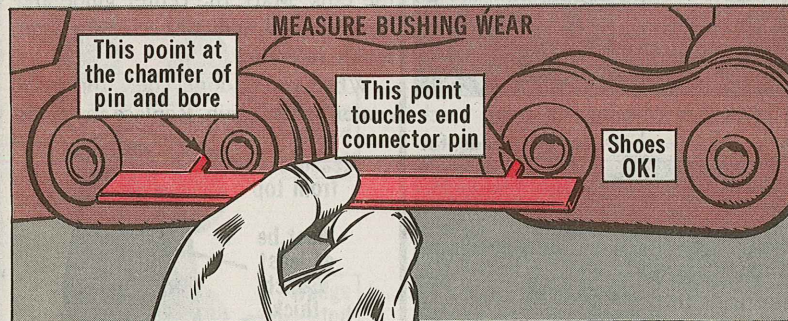
tank forward. A dead shoe rides cockeyed—one end or both ends lower than the shoes next to it. Dead shoes are caused by worn bushings or broken shoe pins.

If you find shoes that look bad but you're not sure, get the track bushing wear gage your mechanic made for you.



Scribe line on gage at $\frac{3}{8}$ " and $\frac{9}{16}$ " from bottom edge for string measurement

Put one point of the gage on the chamfer at the end of the pin in the suspect shoe and the other point on the other shoe pin. If the gage won't fit on the pin



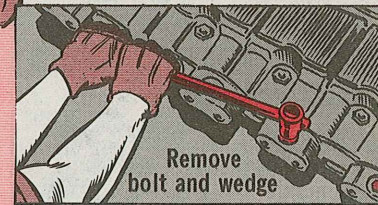
and stay inside the end connector pin bore, the bushings are shot. You need to replace the shoe.

Breaking Track and Repair

Move the tank until the bum part is between the compensating idler and the No. 1 roadwheel.

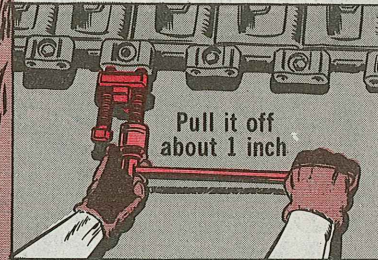
Loosen the locking screw on the track tension adjusting link. With the track link adjusting wrench, loosen track tension.

NOTE: You don't need to break—disconnect—the track to replace an end connector, but you must use the track fixtures. You don't have to loosen or remove the end connectors to replace just a center guide.



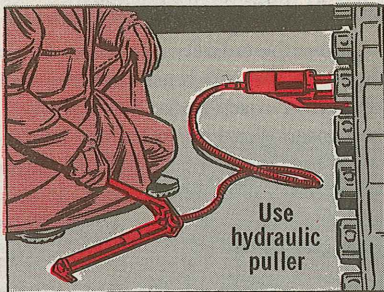
Remove bolt and wedge

Use the mechanical end connector puller, NSN 5120-01-040-9318. It's part of your tank's basic issue items. Pull off the end connector on each side about 1 inch. Don't pull them off completely! The center guide will be all that's holding the track together—and it might not hold.



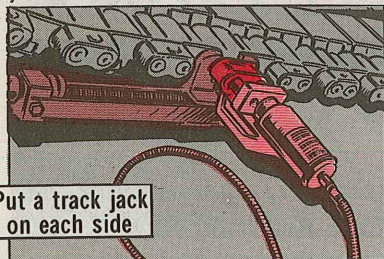
Pull it off about 1 inch

COMPLETE THE INSPECTION AND MARK THE DEFECTIVE PARTS BEFORE MAKING ANY REPAIRS!



Use hydraulic puller

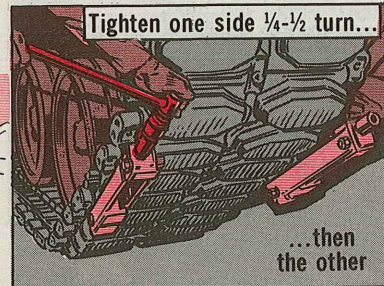
If you get a stubborn end connector, borrow your mechanic's hydraulic end connector puller, NSN 5120-01-052-5642. It's a special tool authorized in your tank's -20P TM.



Put a track jack on each side

Put one track fixture on each side of the track. Make sure the jaws are flush against the shoe. Tighten the fixtures until the jaws are firmly clamped on the track shoe pins.

Tighten each fixture alternately 1/4 to 1/2 turn until the end connectors can



Tighten one side 1/4-1/2 turn...

...then the other

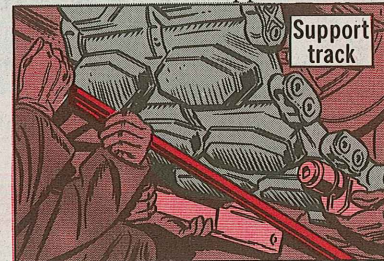
be removed. If you tighten one side too much, you put a lot of stress on the shoe pins. They'll bind in the end connector making it hard to get off.

Next you take off the center guide nut and the center guide.



Remove center guide nut and guide

Loosen the fixtures alternately until the track is loose. Support the track

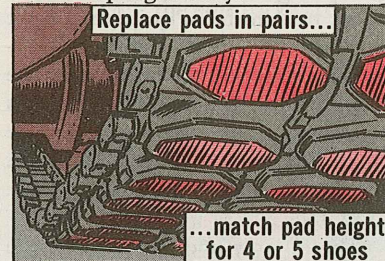


Support track

with the tanker's bar. Take off the fixtures and lower the track to the ground.

Track shoes come in sections of 8 shoes—and that's the way some crewman put 'em on. This wastes track. Replace only the defective shoes. And don't toss out good end connectors, wedges, pads or center guides. You can use 'em again.

When you replace track shoes, make sure the rubber pads on the 2 shoes on either side are about the same height. If they're not, the new pads'll get chewed up right away.



Replace pads in pairs...

...match pad height for 4 or 5 shoes

When you replace pads, always put them on in sets of 2...on the same shoe. Try to match the pads so you end up with about 4 or 5 shoes in a row with pads all about the same height. You may have to juggle some pads around to make it come out right. If you tankers take along some new pads and some used pads it'll help keep things evened out.

Track Drive Sprockets

Take a look at the outboard drive sprockets. If they have built-in wear

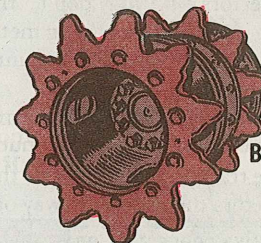


Check built-in wear indicators

indicators, see if the undercut is worn away. There are undercuts on 2 adjoining teeth. If an undercut is worn on one tooth, both drive sprockets on

that side of the tank have to be reversed. If the undercut is worn down on both teeth, both drive sprockets on that side have to be replaced.

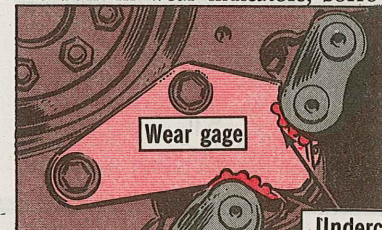
Always replace sprockets in pairs. And make sure both sprockets in the



Both sprockets the same thickness?

pair are the same thickness. (There are both 1 1/8-in and 1 3/8-in thick sprockets in supply.)

If your tank's sprockets don't have the built-in wear indicators, borrow



Wear gage

Undercuts

your mechanic's sprocket tooth wear gage, NSN 5120-00-563-7320. (It's a part of the special tools in the tank's -20P TM.) Set the gage on the sprocket's mounting bolts so the gage is over a tooth.

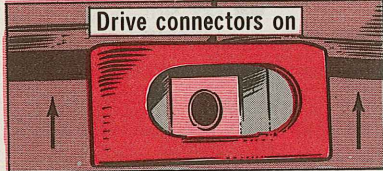
IF THE TOOTH IS WORN BELOW THE UNDERCUTS, REVERSE THE PAIR OR REPLACE THEM!

Getting It

Now you're ready to put the track back together. Use the tanker's bar and lift the track back into place. Put on the track fixtures. Tighten them alternately until you can put on the end connectors. If you don't, the fixture jaw can break and flying metal can injure you. Drive them on until they are against the fixtures.

Put the center guide back. Don't tighten it yet...just snug up the nut.

Take the track fixture off. Drive the end connectors the rest of the way on.

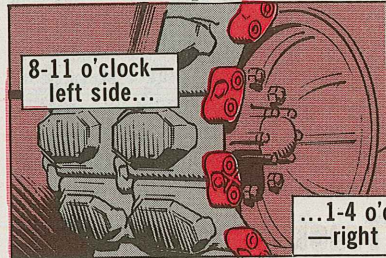


They may have to be moved in or out on the pins for the wedges to fit into the pins notches.

Put in the wedges and the bolts but don't tighten them down. Snug them up like you did the center guide nut.

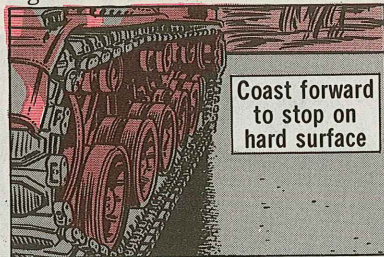
Some tankers tighten the end connectors and center guides at the point of replacement. **This's wrong!** The wedges won't seat. The track shoes have to be in exactly the right position—at a 16-degree angle—when you tighten the bolt. Otherwise the wedges will not fit into the notches cut in the pins. The wedges'll ride high. The bolts will loosen up right away and track failure starts right away, too.

There's only one place around the entire track where the shoe pins are at the right angle. That's from 8 to 11 o'clock on the compensating idler. The

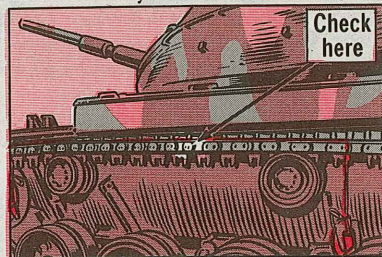


Track Tension

1 Move the tank forward on a hard, level surface and coast to a stop without applying the brakes or steering.



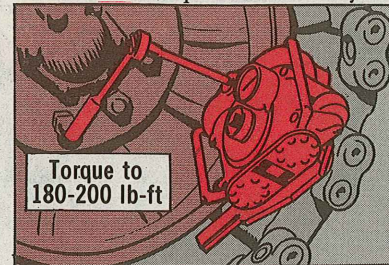
2 Place a string with weights over the end connectors at the No. 1 and No. 2 support rollers. The string has to extend beyond both rollers.



Together

problem is, you can only tighten the 8 and 9 o'clock inboard end connector wedge bolts. You can't get a wrench on the other 2.

Now move the tank backward until the shoe with the end connectors to be tightened is on the compensating idler. Get the torque wrench from your

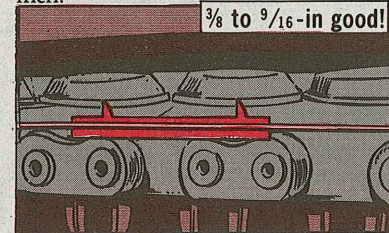


mechanic and torque the bolt to 180-200 lb-ft. Too much torque is as bad as too little. If you use too much torque, you can twist off a bolt and have to start again. If you use too little, the bolt'll loosen up right away.

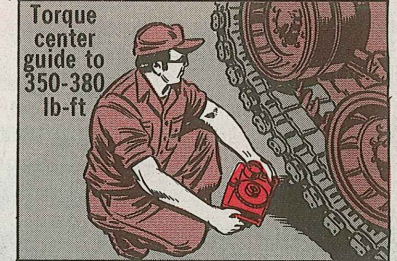
Move the tank forward until the center guide to be tightened is

Adjustment

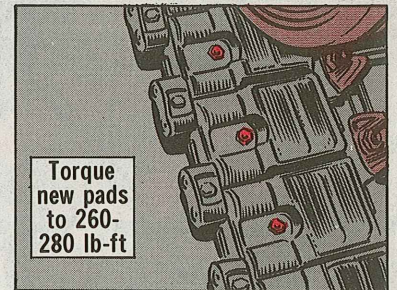
3 Measure the distance between the string and the end connector midway between the 2 support rollers. The measurement should be $\frac{3}{8}$ to $\frac{9}{16}$ inch.



between the No. 1 roadwheel and the



compensating idler. Torque the nut to 350-380 lb-ft.



Before you turn in the torque wrench, torque all the new pads or the juggled pads to 260-280 lb-ft.

4 After you get the right tension, tighten the adjusting link locking screw.



Chaparral Insurance

OK, TEAM--
EASY DOES
IT!

RIGHT... IF WE
DON'T SEAT IT
RIGHT, IT WON'T
FIRE!

NOT T' MENTION
MESSING UP TH'
HANGERS, DETENT
AN' TH' CERAMIC
WASHER AROUND
TH' DETENT
PIN!

the hangers, break the detent and crack the ceramic washer around the pin.

Remember to cock the firing pin in the rail (retract it) before you put the

Retract
firing pin



Check for cocked pin (recessed)



When you load a live bird or training missile on the rail of your Chaparral missile system, slide it along the rail with just enough force to seat it over the detent pin.

You'll hear a click when it seats.

Doublecheck by eyeballing the alinement circle on the rail. The upper tip of the forward hanger cutout edge should be at the circle (see Fig 11b, Page 2-52 of TM 9-1425-586-10).

The point is, if the missile doesn't seat, it won't fire. Also, it'll mess up

bird on the rail. If you don't, you can damage the detent pin assembly.

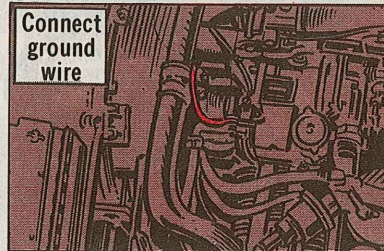
MPU Ground

If you've got to start the main power unit (MPU) as you repair it or check it out, be sure the ground wire to the magneto is connected.

That's a double caution if you've drained the oil from the MPU.

Reason: If you or someone else starts the MPU with the ground wire disconnected, you won't be able to stop it unless you connect the ground. It'll run till the fuel is exhausted...and if you drained the oil, kiss the MPU goodbye.

Connect
ground
wire



Batteries

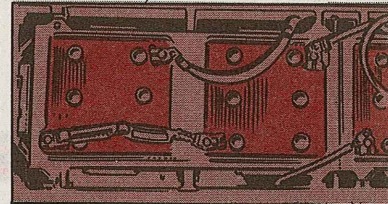
Batteries need servicing as spelled out in Chaps 2, 3 and 4 of TM 9-1425-586-10.

If you ignore battery service and don't do it before operations and weekly as the TM says, your batteries will go down. So will part of the system.

For best performance, batteries should be matched in specific gravity and voltage (Para 2-98, Page 2-148, TM 9-1450-585-20).

Charge your batteries with the MPU when they are in use (installed)...and keep them charged.

You can help do that by operating the system with the MPU whenever you can. Limit battery use to when you really need it.



Keep batteries serviced

TEC Lessons

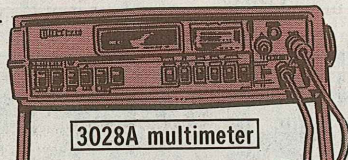
If you have a TEC (Training Extension Course) Lesson that you'd like your squad to see together, just open up the back of your Beseler Cue/See Projector and roll 'em.

YOU'LL GET
A PICTURE
BIG ENOUGH
FOR AT LEAST
10 PEOPLE
TO SEE!



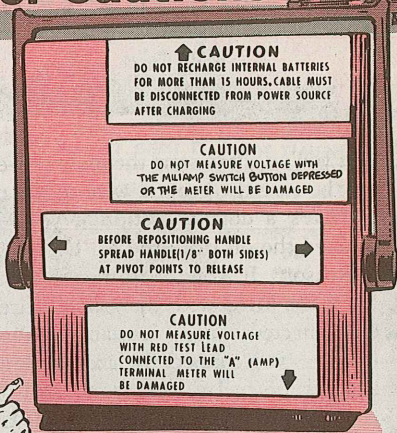
Vulcan Meter Cautions

Use your Ballantine Model 3028A multimeter on your M163A1 and M167A1 Vulcan systems with caution or you'll damage or burn the meter out.

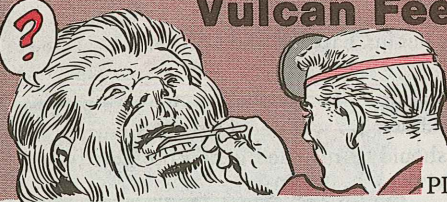


3028A multimeter

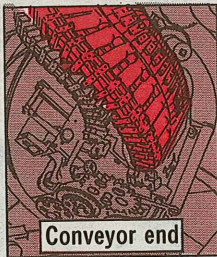
THE CAUTIONS ARE...



Vulcan Feed Chute



Couple of cautions if you're about to install or request a new conveyor end adapter for your M163A1 feed chute assembly:

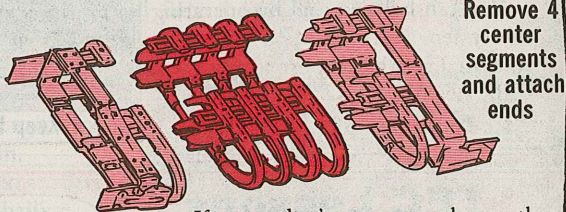


Conveyor end

First, the conveyor end installed in the 1976 PIP mod has 2 segments in it. New conveyor ends come with 6 segments.

SORRY, VULC... WE GOTTA REMOVE 4 SEGMENTS TO UPDATE YOUR FEED CHUTE ASSEMBLY!

Second, since you probably have the PIP chute, you must remove 4 segments in order to make it fit. So, remove 4 segments from the center of the conveyor end.



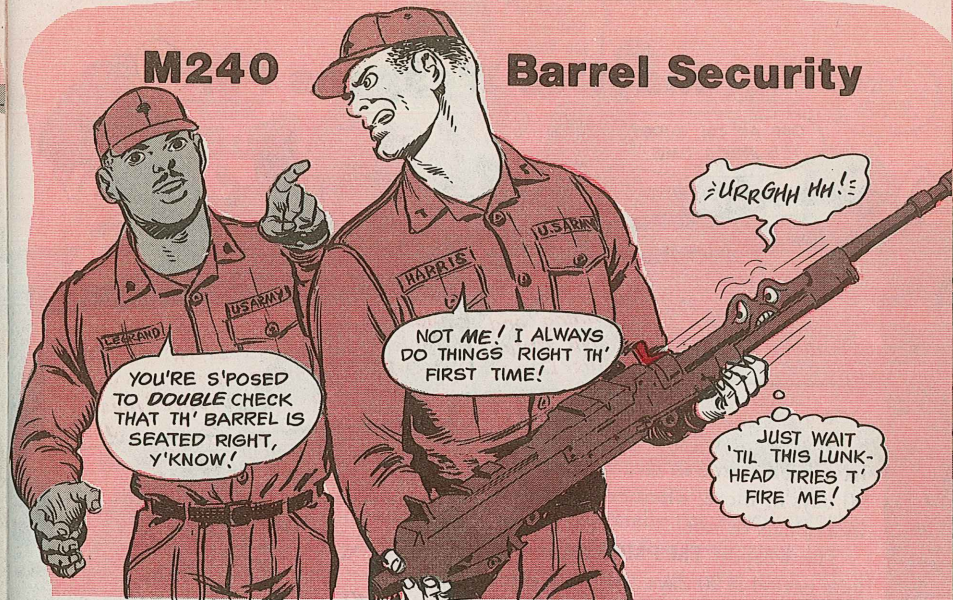
Remove 4 center segments and attach ends

If you don't remove them, the assembly will be too long...and cause jams.

Get the 6-segment end with NSN 1005-01-078-9776. Use the 4 segments you take out for replacements on other parts of the link.

M240

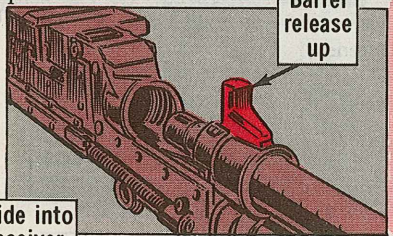
Barrel Security



When you install or replace a barrel in your M240 machine gun, doublecheck to make sure the barrel is seated and locked before you fire the weapon.

If the barrel's not secure, it'll come out when you fire, damage the barrel and strip the receiver threads. That could be an expensive waste.

With the barrel release sticking straight up, slide the barrel fully into the receiver. Push the barrel release counterclockwise to lock the barrel in place.



Barrel release up

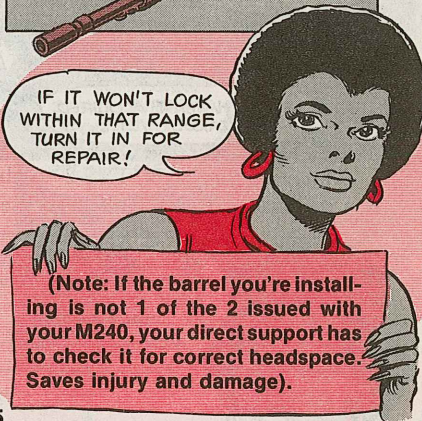
Slide into receiver

It should take 2 to 5 clicks of the release to lock the barrel. The change to 5 clicks will be a revised -23 TM.



Push barrel release counterclockwise to lock

IF IT WON'T LOCK WITHIN THAT RANGE, TURN IT IN FOR REPAIR!



Inactive Weapons PM ?

OFF AN' ON, BUDDY!
IT'S PMCS TIME!

Dear Half-Mast,
When it comes to cleaning and lubing, what situations give stored weapons an "inactive" status? Exam-

Dear J. M.,
"Inactive" weapons are those which have been stored in an arms room for 90 days or more, whether assigned to individuals or not.
The weapon TM PMCS clean-and-lube period is 90 days...or more often if rust is visible.

ple: The Inactive Weapons section of Table 2-3, page 11 of TM 9-1005-249-20. Inspection teams have varying ideas as to what "inactive" means.
J.M.

THIS APPLIES
TO THE M16/M4 AND
TO OTHER SMALL
ARMS!

Night Sight Tight?

HOW LOOSE IS TH' SIGHT, HARRY?

... BUT I GOT THE PLANET VENUS LINED UP!

WELL, I HAVEN'T ACQUIRED OUR TARGET YET...

Mounting an AN/TVS-2 night vision sight on your M2 machine gun is a real sweat if you don't have the fasteners.

IF YOUR ADAPTER ASSEMBLY NEEDS 'EM, ORDER THUMBSCREW NSN 5305-00-153-7914, AND WING NUT, NSN 5310-00-063-6716!

Thumb-screw

Wing nut

16

81-MM Mortar Rust Bust

WHEW... YOU'RE JUST IN TIME!

RATZ!

KILL-JOYS!

HERE WE ARE, OLD FRIEND... CLP AND ME!

Rust and corrosion wear out your 81-MM mortar components quick-like in humid, rainy, salt-air conditions. So, use a little PM to help bust the rust gang.

Rust doesn't get to painted parts much, but finished surfaces can rust out fast.

Bipod components get hurt the worst, especially the shock absorber, elevating crank and adjusting leg.

If you can't get the rust off by rubbing in lube, stop right there. Never try to remove the rust with steel wool or sandpaper or whatever. That'll take off the protective finish from the metal, maybe ruining the part.

Use CLP or PL medium to lube and preserve the mortar when the temperature is above 32° F. When it's below 32° F, use CLP or PL-S.

Bust rust here...

...and here!

IF RUST OR CORROSION STAYS, TURN THE BIPOD IN TO SUPPORT FOR REFINISHING!

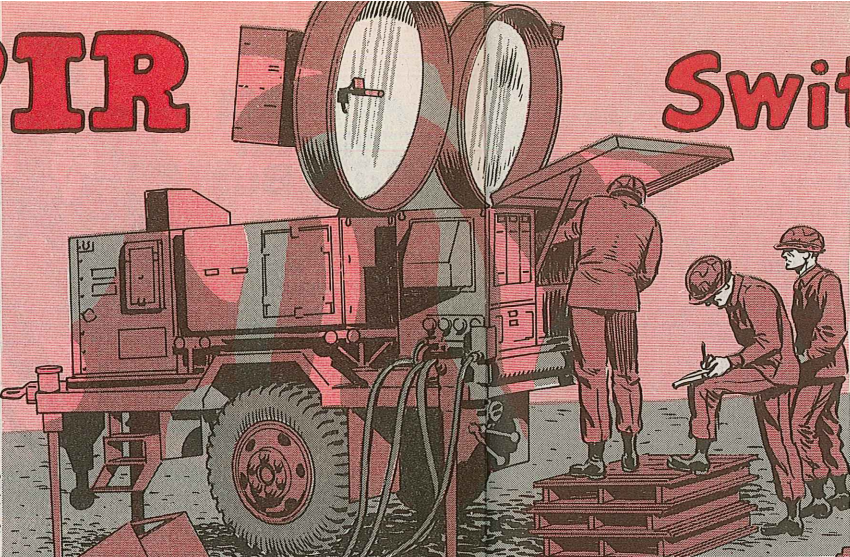
17

I-HAWK... IHIPIR

The battle short switch on your Improved HAWK AN/MPQ-46 IHIPIR set can throw your set from full radiate to off if the switch is installed upside down.

Since the switch overrides the electrical interlocks, flipping it from what you think is NORMAL to BATTLE SHORT ON would bring the radar down from full radiate to off. Not so good for the mission.

The switch is easy to put on wrong, but a quick check can set your mind at ease. Also, a quick fix can give you the right switch position indicator.



Switch Switch

Door Rod

Since it's out of sight, some troops put it out of mind. Namely, the door locking mechanism for the radar set group cover.

The mechanism, which is partly hidden in the cover, is supposed to be lubed monthly.

It isn't, so the locking rods bind, door handles break from being forced, and the door itself can't be locked.

It just takes a little lube and a little time to prevent. Nuf said?

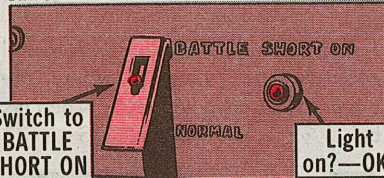
Coolant for Your IPAR

HERE'S WHAT TO DO...



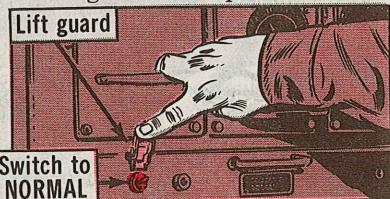
With set power on...

Flip the switch to BATTLE SHORT ON.



If the BATTLE SHORT ON light comes on, you're OK.

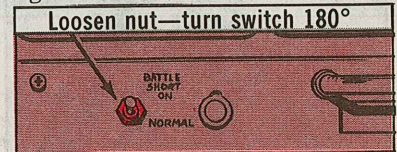
If the light doesn't come on, lift the switch guard and flip the switch to



NORMAL position. If the light comes on, somebody put the switch in upside down. Your switch is really in the BATTLE SHORT ON position, which is what triggers the light.

So what to do?

Back off the nut that secures the switch until it's loose enough to let you turn the switch a full 180 degrees (right-side up). Tighten the nut, and switch to BATTLE SHORT ON. If the light comes on, the switch is OK.



Don't attempt to change any wiring. If you run into problems, contact your support.

TYPE 2!

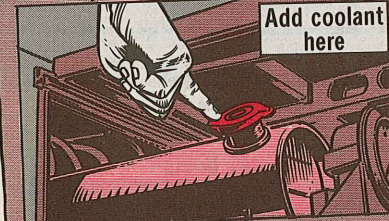


NO! I SAY TYPE 3!

HEY, SERGE -- WE NEED YOUR ADVICE!

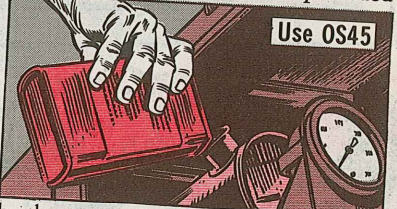
?

Dear Half-Mast,
The TM's are somewhat confusing on the correct coolant for our HAWK IPAR liquid coolers.



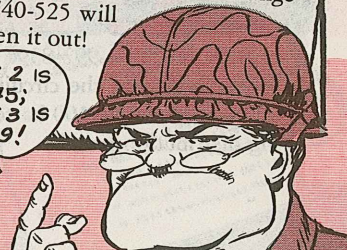
TM 9-1430-534-12-1 (Sep 72) says to service them with MIL-C-47220. Type 2, which is OS45 coolant. TM 740-525 (Sep 72) lists MIL-C-47220 as Type 3 or OS59. We've always used OS45. Which coolant is the right one?
SSG R. S.

Dear Sergeant R. S.,
Use OS45, NSN 9160-00-237-4777. The earlier MILSPEC was superseded



by the current MIL-C-47220. A change to TM 740-525 will straighten it out!

TYPE 2 IS OS45; TYPE 3 IS OS59!



Who Does What?

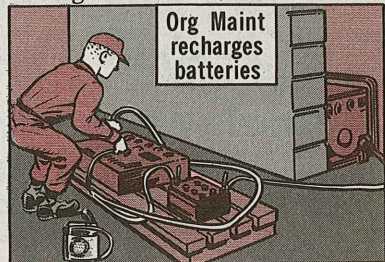
There's some confusion over Maintenance Allocation for lead-acid batteries. Some of the policy changed with the issue of TM 9-6140-200-14 and DA Pam 750-34—and then there was another switch after that.



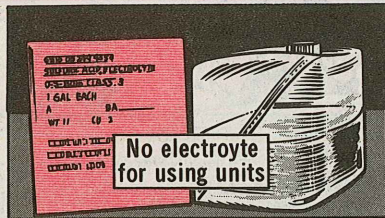
Organizational Maintenance does not activate new batteries.

Direct Support puts the electrolyte (battery acid) in new batteries and gives 'em their initial charge. This means you get a new battery already filled and charged. There's no authorization for using units to have electrolyte on hand.

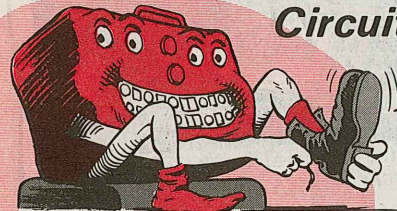
Organizational Maintenance does recharge batteries—both in the field



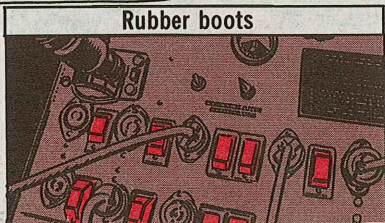
and in garrison, either in the equipment or out of the equipment. This word came in TARCOM Msg DRSTA-MCC 091122Z Nov 78—changing the policy set out in the TM and the DA Pam.



Circuit Breaker Boots



YEAH, MAN... WE 4D100'S WEAR BOOTS, TOO!



NSN 5925-00-992-8396 gets the rubber boots for the circuit breakers on your Model 4D100 battery charging distribution panel.

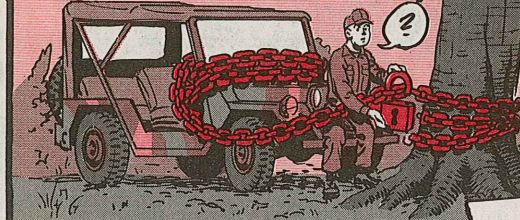
2-Year EIR Digests



You'll keep some of your EIR Digests for 2 years from now on. Instead of expiring 1 year after the date of issue, some TB 43-0001-series pubs have a life of 2 years, as pointed out on the front cover. There are nearly 2 dozen TB's in this series, usually issued quarterly and covering all kinds of Army equipment. Besides offering equipment improvements, they often give you advance info on your equipment TM's.

The TB Shows...

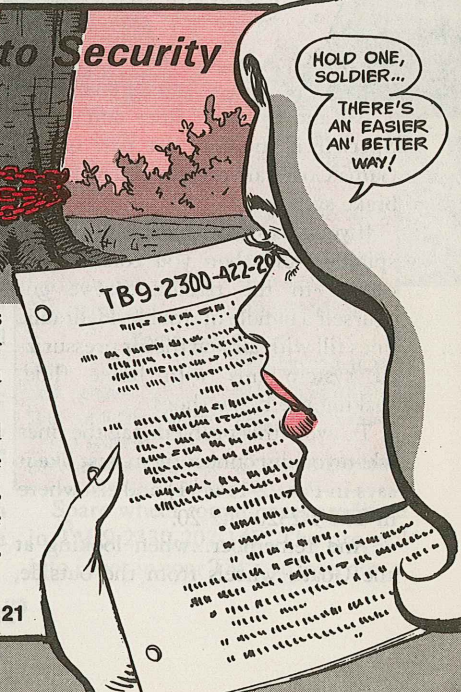
The Way to Security



HOLD ONE, SOLDIER... THERE'S AN EASIER AN' BETTER WAY!

Still hunting thru a half-dozen pubs to find the hardware to secure your truck? Stop wasting time...there's a better way.

The NSN's for everything you need are listed in TB 9-2300-422-20. The bolts and nuts, various size clamps, chains and padlocks needed to secure all wheeled vehicles are included, along with instructions.

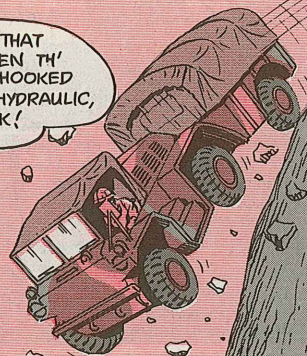


Mixed Lines Spell Trouble

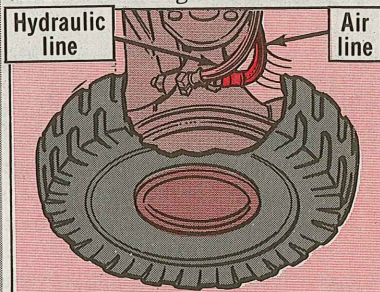
"GULP! THAT MUSTA BEEN TH' AIR LINE I HOOKED UP TO TH' HYDRAULIC, I THINK!"



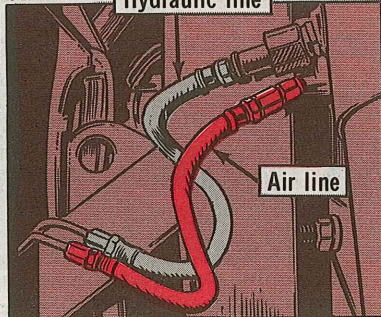
"OBVIOUSLY THEY FAILED TO COLOR CODE THEIR AIR AND HYDRAULIC LINES... TOO BAA-AAD!"



the hydraulic line is to your left and the air line to the right.



At the tractor-carrier disconnect point, the hydraulic line is above the air line.



Air and hydraulic lines don't mix! Specially if the lines are part of the Gama Goat's air-pressurized hydraulic brake system.

If you mix up the lines at the wheel spindles, or when you connect the carrier to the tractor, you've got yourself a bundle of trouble. Hydraulic lines fill with air and the air pressurized system fills with brake fluid, soaking the brake shoes.

To avoid this problem, tag the lines when you disconnect them, just like it says in Para 2-154a (1) and elsewhere in TM 9-2320-242-20.

And remember...when looking at the Goat's wheels from the outside,

Goat Wiper Arms

"YOUR WIPERS NEED ATTENTION, GAMMA, OL' BUDDY!"

"MAN, YOU KNOW IT!"



Old and new are mixed in the list of windshield wiper repair parts, Page 240, TM 9-2320-242-20P.

Arm, windshield wiper, NSN 2540-00-081-9518, is the push-on-type arm for old wiper motors.



Kit, windshield wiper, motor, universal, NSN 2540-00-122-8956, is the new motor. It takes the arm, nut and driver shown in Fig 156. To get that nut-mounted arm, order by NSN 2540-01-043-5380.

M101, M116 Trailers... Spare Tire Blues?

"WON'T FIT! ...WE'VE GOT TWO HOURS OF MOJAVE DRIVIN' BACK TO CAMP..."

"RUN IT PAST ME AGAIN WHY WE DON'T HAVE A SPARE, WILLYA?"

"MAKE UP A SPARE WITH..."



Got a flat tire on your 3/4-ton trailer? You're in trouble unless you're well prepared.

The spare from the trailer's prime mover, the M880-series 1/4-ton truck, will not fit the trailer. Nor will the truck's tools be of any help.

But your local command can authorize you to carry a spare and the right tools for your 3/4-ton trailer.

Item	NSN
Wheel, w/side ring assembly	2530-00-738-8452
Inner tube	2610-00-051-9266
Pneumatic tube liner	2640-00-208-7541
Valve core	2640-00-050-1229
Tire valve cap	2640-00-060-3550
Pneumatic tire	2610-00-540-4719

Tools You Need

Jack	5120-00-233-6829
Jack handle	5120-00-357-6106
Lug wrench (double head socket)	5120-00-293-2452
Bar (lug wrench handle)	5120-00-243-2419

Spare wheel components are listed in TM 9-2330-202-14P. The tire tool info is not in your TM's, so jot it down.

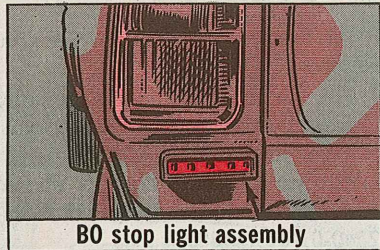
Let There Be (BO) Light

HEH
HEH

-- NOBODY CAN
SEE US, HUM?

GUESS NOT... BUT ARE YA
SURE NO LIGHTS ARE
BETTER THAN BO LIGHTS?

If you have the blackout lighting kit, NSN 2540-01-062-0838 on your M880-series truck, here're the repair parts you may need.



BO stop light assembly



BO headlight

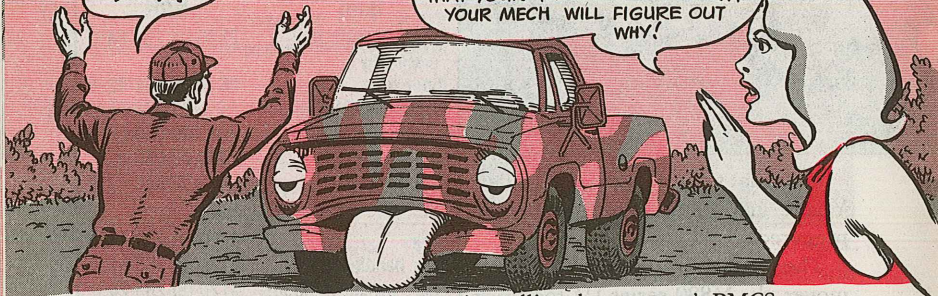
BO marker light assembly

For the BO headlight, use lamp (bulb), NSN 6240-00-617-0991. If you need the BO stop-tailight assembly, get it with NSN 6220-01-088-5915. Use NSN 6220-01-083-5401 to get the BO marker light assembly.

Battery PMCS Simpler

WHY? WHY?
WHY?

NOT TO WORRY! JUST REPORT
THAT YOUR TRUCK WON'T START!
YOUR MECH WILL FIGURE OUT
WHY!



Yours is not to reason why when you're pulling the operator's PMCS on your M880-series truck's maintenance-free battery.

If the battery won't crank over your engine, the "why" is your mechanic's problem.

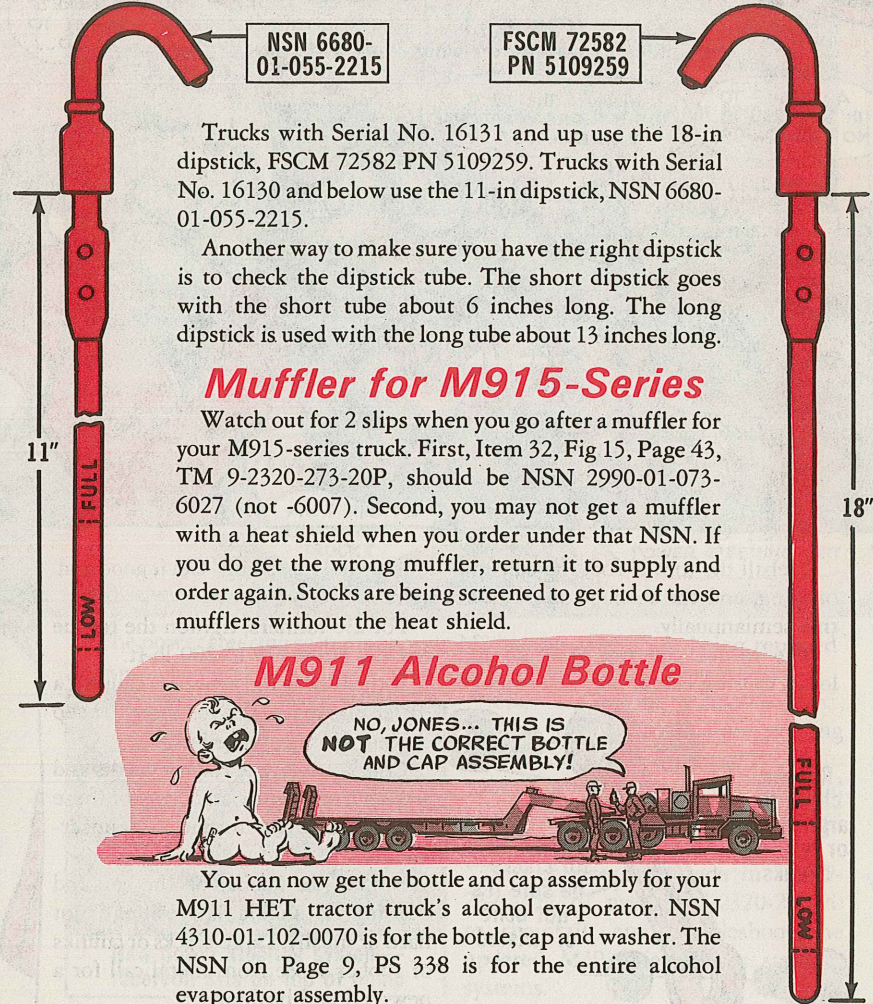
Item No. 5, Page 3-10, TM 9-2320-266-10, will be changed to take out battery charge indicator checking and reporting.

Long 'n' Short Dipsticks



You'll get a wrong engine oil level reading for your M911 tractor truck if you've got the wrong dipstick.

There are 2 different length dipsticks used on M911's. One is 11 inches long, the other 18.



Trucks with Serial No. 16131 and up use the 18-in dipstick, FSCM 72582 PN 5109259. Trucks with Serial No. 16130 and below use the 11-in dipstick, NSN 6680-01-055-2215.

Another way to make sure you have the right dipstick is to check the dipstick tube. The short dipstick goes with the short tube about 6 inches long. The long dipstick is used with the long tube about 13 inches long.

Muffler for M915-Series

Watch out for 2 slips when you go after a muffler for your M915-series truck. First, Item 32, Fig 15, Page 43, TM 9-2320-273-20P, should be NSN 2990-01-073-6027 (not -6007). Second, you may not get a muffler with a heat shield when you order under that NSN. If you do get the wrong muffler, return it to supply and order again. Stocks are being screened to get rid of those mufflers without the heat shield.

M911 Alcohol Bottle

NO, JONES... THIS IS
NOT THE CORRECT BOTTLE
AND CAP ASSEMBLY!



You can now get the bottle and cap assembly for your M911 HET tractor truck's alcohol evaporator. NSN 4310-01-102-0070 is for the bottle, cap and washer. The NSN on Page 9, PS 338 is for the entire alcohol evaporator assembly.

Torque Rod PM-

Replacement of torque rod assemblies or their components on 2½-ton trucks is a job for organizational maintenance, no matter what some TM's say.

ACCORDING TO TH' TM, THIS IS NO JOB FOR US!

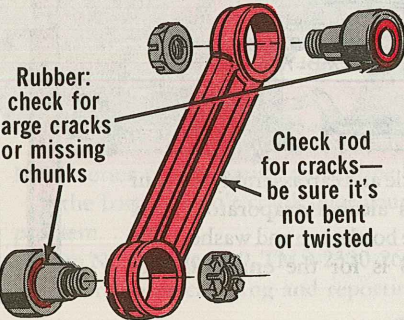
WRONG! THIS IS A JOB FOR ORGANIZATIONAL MAINTENANCE!

HERE'S WHAT TO DO...



Eyeball the torque rod, the ball and bushing, and the torque rod nut. Do this semiannually.

The torque rod nut is often too loose, causing excess play and damage



to the whole assembly. Get it good and tight.

For 2½-tonners, tighten the torque rod nut from 175 to 200 lb-ft.

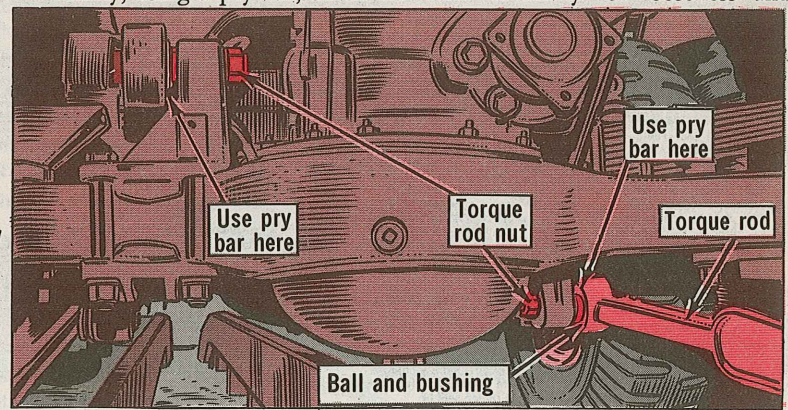
If the torque rod assembly calls for a cotter pin, make sure it's there to keep the nut from coming loose.

Check the torque rod for cracks and see if it's bent or twisted. Any of these faults make the torque rod unserviceable.

Eyeball the rubber on the ball and bushing. It should be resilient, not hard or mushy. Large cracks or chunks of rubber loose from metal call for a new ball and bushing.

Who? How? When?

Finally, using a pry bar, check the whole assembly for looseness and



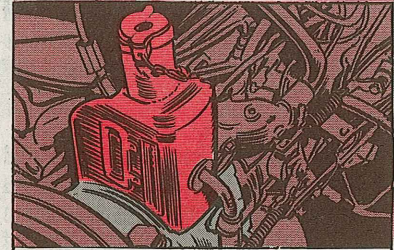
excess wear by putting stress on the torque rod in the bushing area. Any obvious play here and you need a new torque rod assembly.

TM-211-Series 5-Ton Truck... *Power Steering Switch*



CAN'T BE-- IT'S GOT AN M809-SERIES POWER STEERING UNIT!

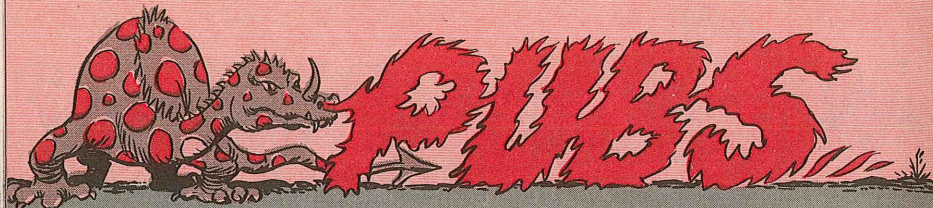
The power steering systems on your M39-series trucks are being replaced by power steering units that're standard on M809-series 5-ton trucks.



New power steering system—reservoir sits on top of pump

The work is done by direct support, which installs a power steering conversion kit. The change is easy to spot. The new system has the fluid reservoir attached on top of the power steering pump.

Till changes are made in TM 9-2320-211-20, use TM 9-2320-260-20 to maintain and troubleshoot the updated M39-series power steering systems.



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

TECHNICAL MANUALS

TM 3-261 Mar Handling, disposal of radioactive material
 TM 9-3005-274-24&P Dec M917 drum truck body
 TM 5-3895-345-14&P Jan Tamper, backfill, GED, Mod VR11
 TM 5-3895-353-14&P Apr Roller, vibratory, SP Mod SP-848
 C 4, TM 5-4930-229-12&P Dec FARE
 TM 5-5420-226-10 Feb M486 AVL/B
 C 7, TM 5-6115-465-12 Dec Generator set, DED, 30-KW
 C 2, TM 5-6115-585-12 Mar Gen DED, 10-KW
 TM 9-1340-418-24P Nov Ballistic aerial target sys
 TM 9-1410-375-20P Nov Guided missile MGM-31A
 C 2, TM 9-1425-470-24P Dec TOW
 C 1, TM 9-1425-484-10 Oct Dragon
 TM 9-1430-526-24P Feb Improved HAWK
 TM 9-1430-1535-12-4-3 Oct Improved HAWK
 TM 9-1440-470-24P Dec TOW
 C 1, TM 9-2320-209-20P Mar 2½-ton trucks
 TM 9-2350-215-10-1 Feb M60A1/M60A1 AOS tanks
 TM 9-2350-215-20-1-1 Jan M60A1, M60A1/AOS tanks
 TM 9-2350-215-20-1-2 Jan M60A1, M60A1/AOS tanks
 TM 9-2350-215-20-1-3 Jan M60A1/M60A1/AOS tanks

TM 9-2350-222-10-1 Jan M728 CEV
 TM 9-2350-222-20-1-4 Feb M728 combat engineer veh
 TM 9-2350-260-20-1-1 Feb M60 tank
 TM 9-2350-260-20-1-2 Feb M60 tank
 TM 9-2350-260-20-1-3 Feb M60 tank
 TM 9-4910-702-14&P Mar Veh wheel balancer, Mod 7500 and 5400 (Wheel Balancer Manufacturers Associated)
 TM 9-4995-587-24P Dec Chaparral
 C 1, TM 10-7300-200-12 Jan Stove, gasoline, 1, 2-burner, 5,500 BTU
 C 5, TM 11-1520-237-23-2 Mar Avionics fault isolation UH-60A
 TM 11-1520-237-23P Mar Avionics UH-60A helicopter system
 TM 11-4940-480-14-HR Apr AN/TSM-12A transportable electronic shop (OUO) TM 11-5810-280-12 Mar TSEC/KY-65 (OUO) TM 11-5810-281-20 Mar TSEC/KY-75
 TM 11-5965-279-13&P Feb M&K 896A/AIC headset-microphone
 C 1, TM 11-6130-384-14&P Apr PP-2926B/U battery charger
 TM 11-6865-208-10 Mar AN/PDR-27J, L, Q radac sets
 TM 11-7440-251-10-HR Apr AN/GSQ-122 battery display
 TM 11-7440-253-10-HR Apr AN/GSC-21 variable format message entry device
 C 3, TM 55-1500-220-PM Nov 80 AH-1S (Mod/Prod)
 C 2, TM 55-1520-209-23P-3 Jan CH-47A, CH-47B, CH-47C
 C 20, TM 55-1520-210-23-1 Apr UH-1D/H/V/EH-1H
 C 21, TM 55-1520-210-23-1 May UH-1D/H/V/EH-1H
 C 13, TM 55-1520-214-23 Jan OH-6A
 C 4, TM 55-1520-228-23-2 Apr OH-58A and OH-58C

C 6, TM 55-1520-228-PM Jan OH-58A/C
 C 7, TM 55-1520-237-23-2 Nov 80 General information manual UH-60A
 C 7, TM 55-1520-237-23-3 Mar Fault isolation UH-60A
 TM 55-1520-242-5 Jan Shipment of UH-1/EH-1
 TM 55-4920-390-13&P Dec 80 Strobex blade tracker (model 135M-9)
 TM 55-4920-425-13&P Jan Tester, gyro indicator, pitch and roll
 TM 38-750 May The Army Maintenance Management System (TAMMS)

MISCELLANEOUS

ML-A May Management data list (ML) (fiche)
 PAM 310-2 Mar Index of forms, labels (fiche)
 PAM 310-4 Jan Index of technical pubs (fiche)
 SB 708-41/42 Apr Fed supply code manufacturers (fiche)
 SC 5180-90-CL-N05 Jan Tool kit, master's
 SC 6680-90-CL-N01 Sep Sampling and gaging kit, petroleum
 TB 5-4200-200-10 Jan Hand portable fire extinguishers
 TB 9-1425-480-20 Nov Mounting instructions for GM 18-gal tracer case M213, kit, APC install Dragon
 TB 9-1425-550-10 Jan TSM-93 LCSS, Shillelagh, TOW, Lance, and Dragon supplementary eqpt
 TB 43-0106 Apr Aeronautical eqpt Army oil analysis program (AOAP)
 TB 43-0092-87 Apr Brake fluid, silicone (BFS) conversion procedures for tank-air oil eqpt
 TB 43-0216 Dec Safety and hazard warnings for op and maint of TACOM eqpt

M915-Series Trucks W/ESDC's

The initial fielding plan for the M915-series trucks showed 8J as the Weapon/Equipment System Designator Code (W/ESDC) for these vehicles. That code is no longer authorized for requisitions. Here're the new W/ESDC's for the M915 family:

Model	W/ESDC
M915	MZ
M916	PE
M917	MR
M918	7W
M919	PA
M920	PD

Make Local Check

Before you quiz Corpus Christi Army Depot at AUTOVON 861-2651/2652 on an aircraft component problem, talk it over with your AVIM unit and your TSARCOM field maintenance technicians. They may have the answer.

Order From Support

Some commercial equipment TM poop—TM 9-4940-525-14&P, for example—can lead you astray. When the pub tells you to go directly to the manufacturer for repair parts, forget it! If you need a repair part, submit a request to your supply support activity.

JOE'S DOPE

TOW/Dragon . . . TANK-BUSTING TWOSOME

Camp Stacey, 2100 hours...



BURP
 THAT WAS QUITE A SNACK, BARNEY!

YOU ARE TRULY AWESOME, SHERM! NOT ONLY DID YOU EAT TWO LARGE PIZZAS ALL BY YOURSELF, BUT...

...YOU ORDERED 'EM WITH TH' WORKS... AN' THEN YOU SMOTHERED 'EM BOTH WITH KIMCHI!

WELL...

I HADDA CELEBRATE! T'MORROW, I'M UP FOR QUALIFICATION AS A DRAGON GUNNER!

PHEWEE!
 WITH YOUR BREATH, YOU QUALIFY AS TH' DRAGON!

'SCUSE ME!

FUN-NEE!
 WELL, GOTTA HIT TH' SACK! MY SQUAD'S DUE ON THE RANGE AT 0630 HOURS!

MAYBE I'LL SEE YOU-- WE'RE FIRING MY TOW THERE T'MORROW!
 'NITE!

HOO-BOY! WHATTA **BURP**?
BURP YAWN: DAY THISSS HASS Zzz-Zz

HUH! WHAT ZZAT?

HISS-SSS-SSS-S
 TAP-TAP

SSSST... OVER HERE, PVT. SHERMAN!



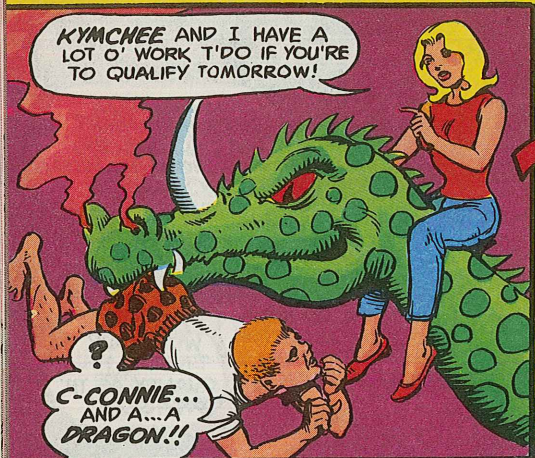
WHO'S THERE?...
GAAA-AAH!

COME ALONG NOW...



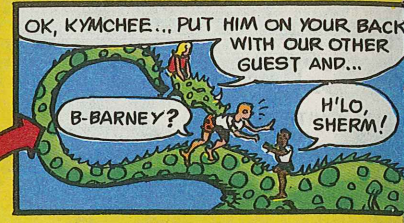
HALP!

... TIME'S A-WASTING!



KYMCHEE AND I HAVE A LOT O' WORK T'DO IF YOU'RE TO QUALIFY TOMORROW!

?
C-CONNIE... AND A... A DRAGON!!



OK, KYMCHEE... PUT HIM ON YOUR BACK WITH OUR OTHER GUEST AND...

B-BARNEY?

H'LO, SHERM!



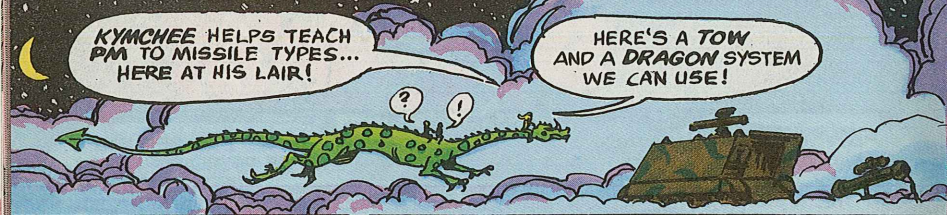
... LET'S GO!

WILL-IL-



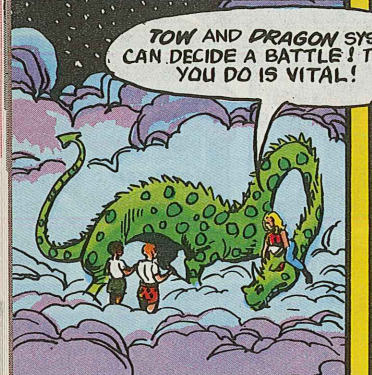
WH-WHERE'RE WE GOIN'?

WHY... TO THAT CLOUD OVER THERE!



KYMCHEE HELPS TEACH PM TO MISSILE TYPES... HERE AT HIS LAIR!

HERE'S A TOW AND A DRAGON SYSTEM WE CAN USE!



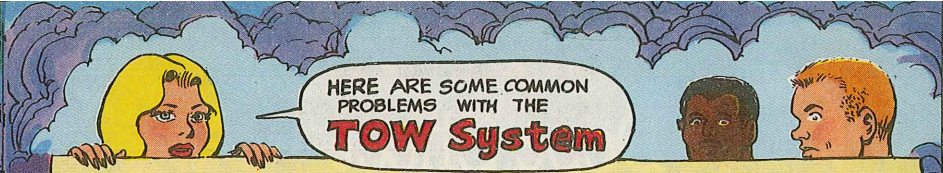
TOW AND DRAGON SYSTEMS CAN DECIDE A BATTLE! THE PM YOU DO IS VITAL!

THE SAME APPLIES TO TRAINERS! GOOD PM WILL KEEP THEM GOING AND GIVE CREWS AND OPERATORS THE TIME THEY NEED, HANDS ON, TO BE READY!



30

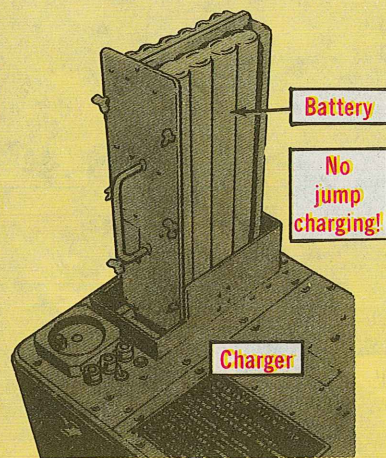
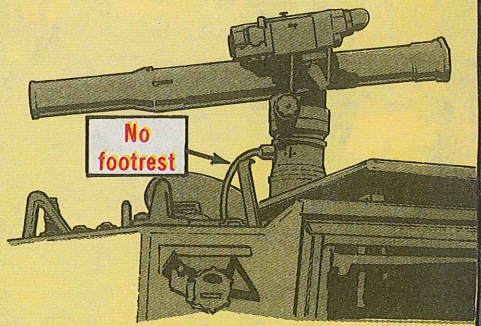
WHAT YOU DO ... AND DON'T DO -- WILL DECIDE!



HERE ARE SOME COMMON PROBLEMS WITH THE **TOW System**

The W2 cable used with M113A1-mounted TOW's provides power and guidance from the Missile Guidance Set (MGS) to the pedestal and other components.

It is not a footrest, hanger, stepladder, bootrest or whatever. The cable looks tough, but damaged wiring and broken connectors for the W2 have put a lot of systems down.



Charge TOW batteries by the TM. Do not jump charge (don't start a charge, pull the battery, and get it on CHARGE cycle). That'll cause the battery to take a short charge, damage it and shorten its life.

Instead, discharge the battery completely and then charge it fully. It could mean the mission.

Index plates on the optical sight and traversing unit (TU) should be paint-free.

If you get a replacement that's painted, turn it in!



HOW 'BOUT GIVING THESE TROOPS A COPY OF SGT. HALF-MAST'S POSTER, CONNIE?

SURE! IT SHOULD HELP!



31

A colorful illustration for an advertisement. In the foreground, a large, close-up portrait of a man with a green leaf hat and glasses looks towards the viewer. In the background, two soldiers in green uniforms are in a forest. One is kneeling and using a large telescope on a tripod, while the other stands nearby. A blue tank is visible in the distance. The scene is set in a lush, green forest with mountains in the background.

Joe's Dope Sheet

When armor comes after your hide
On missiles the battle will ride!
If PM's been proper
You've got a tank stopper,
And you'll make the enemy hide!

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.

DO YOU AND YOUR UNITS LIKE TO WASTE MISSILES?

NO WAY, CONNIE!



THEN...

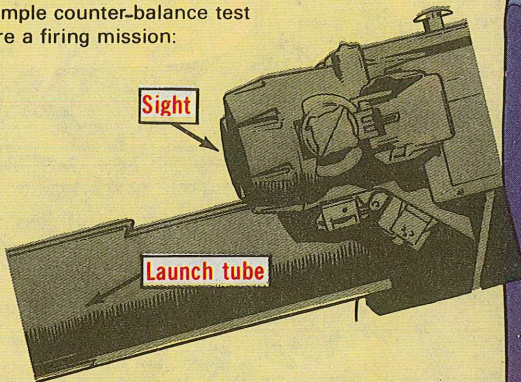
Make this simple counter-balance test before a firing mission:

Install the sight and launch tube (no missile or missile simulation round).

Release the TU elevation lock. The launch tube should not move.

If the tube drifts up or down, have your support check it out.

Sight

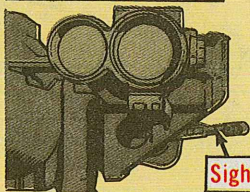


Last but not least on TOW, if your optical sight goes out, try another (known good) optical sight on your MGS.

Do not try the faulty sight on another MGS. You could burn out expensive A5 cards in the MGS.

If a substitute sight works OK on your MGS, replace the original. If it doesn't work, turn in the original sight and MGS to support.

If sight fails, try another on your MGS



Sight

GOOD TOW SHOW, CONNIE! NOW I'LL TAKE OVER! MY SPECIALTY IS THE

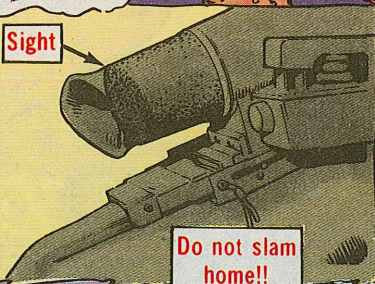
Dragon System

HUH! WHAT DOES HE KNOW ABOUT DRAGONS - ULP!?

It's common, the damage to mounts and even trackers on various Dragon configurations caused by slamming the tracker home.

No slamming or force is needed. Just slide the tracker home like your TM shows, be sure to look and see that it locks.

Sight



Do not slam home!!

MISFIRES WITH THE LAUNCH EFFECTS TRAINER (LET) ARE ROUTINE BUT IF YOU HAVE A SERIES OF THEM, DO THIS...

OOPS... s'cuse ME...

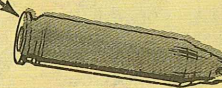


HEY! WATCHIT!

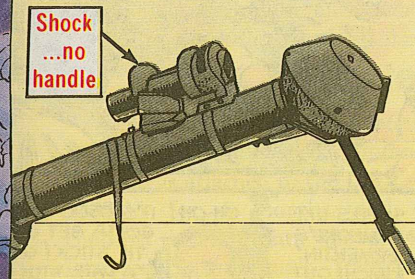
Check the primer

Check the primer on the NATO cartridge. If there is no firing pin dent, or just a shallow one, contact your direct support for a headspace check.

If there is a good dent and the cartridge didn't fire, contact your ammo supply point. You may have bad ammo.



Shock...no handle



The aft shock absorber on the tracker is a constant victim of careless handling.

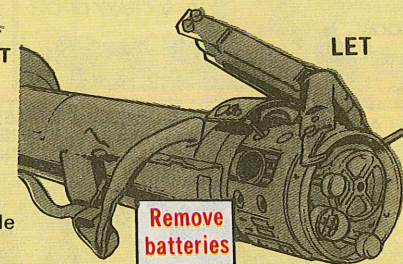
The shock is not a handle. It's not there to push or pull the tracker from or into its carrying case.

Worst of all, if you break the shock off, you put the tracker down.

Another all-the-time hazard is LET batteries. Take 'em out after use!

Batteries in the AN/TSQ-T1 monitoring set need a serious look before you charge them.

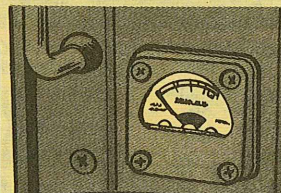
Overcharging damages them. Charging them too soon can shorten their lives or throw in a memory cycle which gives them a short charge.



LET

Remove batteries

Charge when meter's in low yellow.



Eyeball the ammeter on the monitoring set. If the needle is in the low yellow, charge. If not, use them. There's enough time left on them for just about any job.

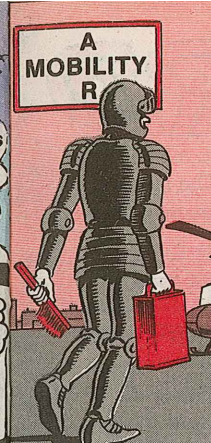
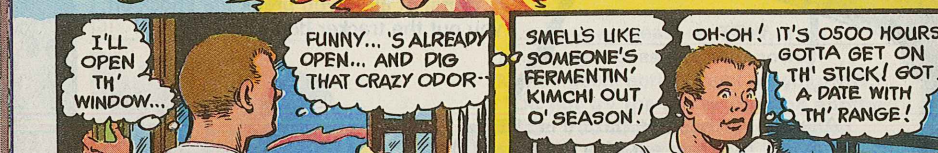
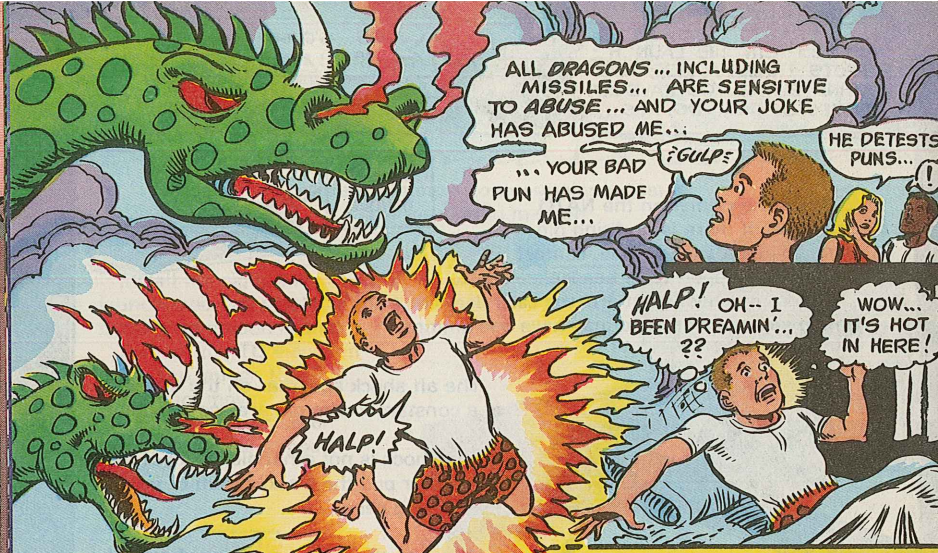
HEY, GREAT-- I'VE LEARNED HOW TO AVOID A TOWED TOW!

HA!... AND I HOW TO AVOID A DRAGGIN' DRAGON! HO HO!

DON'T GET SMART, PRIVATE!...



YES, KYMCHEE DOESN'T LIKE ETHNIC HUMOR!



Drycleaning Safety

When using drycleaning solvent P-D-680 to clean your equipment, be sure to wear solvent-resistant clothing and gloves, and a face shield or goggles. Avoid getting it on your skin or breathing the vapor. It's bad for your health.

If you get any on your skin, wash the area with soap and water as soon as possible.

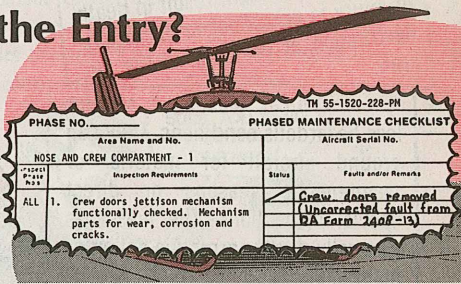
If you have to work in close quarters or in a poorly ventilated area, check with the medics. They'll make sure you use the right respirator, and show you how to use it. Not all respirators will protect you from the fumes.

Re-enter the Entry?

When you pull a phase inspection on your bird, the phased maintenance checklist is attached to the DA Form 2408-13 for 6 months, and the checklist is filed until the cycle is repeated. So, you don't "transcribe" entries from the -13 to the worksheet. You "re-enter" them.

When you correct any of the faults you re-entered, be sure you initial both the worksheet and the -13.

The latest version of TM 38-750 requires the statement, "re-entered in area (area number) for PI" when you pull a PI. You'll also need a statement on the worksheet indicating that the entry was an uncorrected fault from the -13.



DATE	TIME	FUEL NO.	NAME OF CREW/ENGINEER	STATION	PI	NO. OF PAGES
27 JUL 81	04:58A		R Morris	Ft. Boonesboro, KY		1
STATUS TODAY						
AIRCRAFT	SELECTED	OTHER	TIME TO DATE	PREVIOUS	LANDINGS	OTHER
1	X		1598:0	2	1600:0	
2			TOTAL	TODAY	44/8A	
3			2:00		6/0A	
			TOTAL TIME	TOTAL	50/8A	
			1600:0			
FUEL (ONLY IF CRJ)						
REV. ICE	GRADE	ADDED	TOTAL IN TANKS	OXYGEN (PSI)	ANTI-ICE FUEL (GAL)	BY
1	TP4	2.5	200	2347	0	5.6
2						
3						
4						
5						
6						
7						
FAULTS AND/OR REMARKS						
26 July 81 Pilot's canopy doors opened R. Re-entered in Area I For PI R. Morris						
27 July 81 Phase Inspection 2 due R. Morris						
ACTION TAKEN						
SIGNATURE						



The WORD

A Safety-of-Flight Message (SOF) is the Head Hangar's way to tell you, in the aircraft flying unit, about some action to take on your bird. The message may require a special inspection, advise you of a problem and fix—may even ground your bird! AR 95-18 is the "word" on SOF.

SAFETY-OF-FLIGHT MESSAGES COME IN THESE 4 DIFFERENT KINDS ...

• **Emergency Messages** will immediately ground a fleet or a portion of a fleet because of a hazardous condition that might result in death or injury to personnel, or damage or destruction of property or the aircraft.

• **Technical Messages** are for less hazardous conditions. They can ground aircraft for materiel or maintenance reasons or direct special inspections. The messages generally direct corrective action or maintenance.

• **Maintenance Notices** announce pending changes to publications, procedures, or maintenance procedures. They may stress or clarify a maintenance procedure already required.

• **Operational Messages** may ground or restrict aircraft usage until hazardous flight procedures, operating restrictions or operational policies are corrected.

Those involving maintenance and supply are sent out by the US Army Troop Support and Aviation Materiel Readiness Command (TSARCOM). The US Army Safety Center at Fort Rucker issues operational messages to correct operational hazards.

Maintenance Information notices are not Safety-of-Flight messages. They are sent to different addresses, and contain maintenance advice and suggestions.

Maintenance Advisory messages were also used to send out maintenance information. They were eliminated when AR 95-18 was revised.

...TO TAKE CERTAIN ACTIONS!

HERE'S SOME INFO ON OTHER MESSAGES...

From ABOVE

What Your Unit Does

Units are responsible for following the instructions in the Safety-of-Flight messages. Compliance requirements for units are spelled out in Para 7-f (1) of AR 95-18 and in the messages themselves.

Any SOF message travels thru normal message channels from TSARCOM or the US Army Safety Center, through the major commands, and down to the units. Upon receipt, the unit must acknowledge receipt to TSARCOM or to a designated organization.

The message tells your unit how to comply, a time period for compliance and a point of contact at TSARCOM or the Safety Center.

Within 5 working days of the initial message, your unit reports compliance or non-compliance. The report also lists the unit's equipment, results of the inspection, and the status of the equipment affected.

TSARCOM only knows what the units in the field report. If your unit doesn't send in the reports, the Head Hangar has to assume you didn't get the message and they send it again. So, make sure you send in the reports.

SO MAKE SURE YOU SEND IN THE REPORTS!

Compliance—A Must

Compliance is not something you get around to "when you get the time." The name, "Safety-of-Flight," tells it all. You never want someone flying in an unsafe aircraft.

The unit commander is responsible for compliance, with the quality control section insuring that the necessary inspections and checks are done.



Aviation Messages

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

- UH-60A-81-5 Safety of Flight (SOF) One-time inspect UH-60A Black Hawk gearbox assy, input module, P/N 70351-08001-043, NSN 1615-01-074-1219, TB 55-1520-237-20-13 DRDAV-EEB 151605Z Apr 81
- UH-60A-81-6 SOF Technical, PCS CSGLD-1860, One-time inspect UH-60A Black Hawk spindle assy, main rotor, P/N 70102-08100, Series, TB 55-1520-237-20-14 DRDAV-EEB 032005 Apr 81
- UH-60A-81-7 SOF Technical, RCS CSGLD-1860, One-time inspect UH-60A Black Hawk troop/cargo door/lower stop, P/N 70307-02727-124, TB 55-1520-237-20-17 DRDAV-EEB 062225Z Apr 81
- UH-60A-81-8 SOF Technical, RCS CSGLD-1860, One-time inspect UH-60A Black Hawk fan, axial P/N 70361-03005-103/-105, TB 55-1520-237-20-16 DRDAV-EEB 062303Z Apr 81

- UH-60A-81-9 SOF Supplement to Technical, RCS-CSGLD-1860, One-time inspect UH-60Z Black Hawk gearbox assy, input module, P/N 70351-08001-043, NSN 1615-01-074-1219, TB 55-1520-237-20-13 DRDAV-EEB 222119Z Apr 81
- UH-60A-81-10 SOF Maint Notice, RCS CSGLD-1860, UH-60A Black Hawk troop/cargo door track and track wear strips DRDAV-EEB 222119Z Apr 81
- UH-60A-81-11 SOF Maint Notice UH-60A Black Hawk engine gimbal mount elastomeric bond separation, accept/reject criteria DRDAV-EEB 222119Z Apr 81
- UH-60A-81-12 SOF Maint Notice advising maint personnel of CH-47 lubrication changes DRSTS-MEA 091430Z Apr 81
- UH-60A-81-13 SOF Maint Notice Jet assy bleed valve removal DRSTS-MEA 141920Z Apr 81
- UH-60A-81-14 SOF Maint Notice on the AH-1 tail rotor drive shaft bearings (AH-1-81-09) DRSTS-MEA 031830Z Apr 81
- UH-60A-81-15 SOF Maint Notice Inspect AH-1

- pitch link tube P/N 209-010-460-3, NSN 4710-00-454-8814 DRSTS-MEA 102030Z Apr 81
- AH-1-81-11 Maint Notice Inspect AH-1 pitch link tube P/N 209-010-460-3, NSN 4710-00-454-8814 DRSTS-MEA 151730Z Apr 81
- AH-1-81-12 Maint Notice Removal of main rotor blades P/N 540-011-5, NSN 1615-00-847-7461, P/N 540-011-250-1, NSN 1615-00-178-9690 from AH-1 DRSTS-MEA 231510Z Apr 81
- UH-1-81-05 SOF Maint Notice Addition in daily inspection req for UH-1D/H/V, EH-1H Kamatics drive shaft DRSTS-MEA 101745Z Apr 81
- General 81-04 Safety of Use (Urgent) One-time inspect RCS CSGLD-1860, inspect and replace retainer, split, rescue hoist assy NSN 1680-00-497-7491 DRSTS-MEA 231500Z Apr 81
- General 81-05 Tech Info, Expedite return of repairables, NSN's 6685-00-235-4593 and 6685-00-235-4594, probe assy thermocouple DRSTS-MEA 291815Z Apr 81



Getting the Word

All messages are numbered in a sequence for each type of aircraft. For example, UH-60A-81-1 would be the first UH-60A message for 1981. Sometimes, tho, messages may get sent out of sequence, or be canceled after the number is assigned.

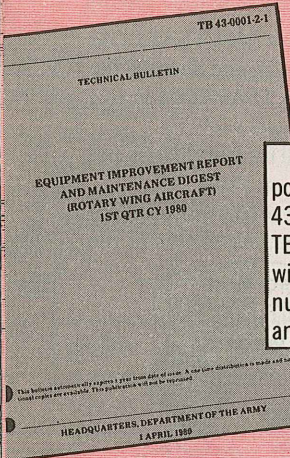
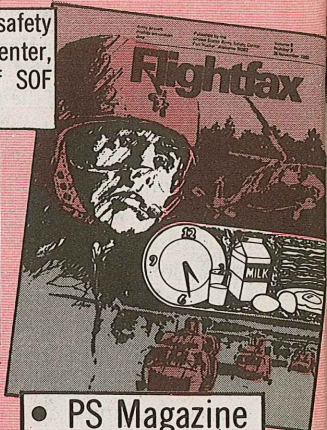
There are several ways to make sure you get all the messages. Lists are in:

• Flightfax, a monthly safety newsletter from the Safety Center, with a monthly summary of SOF messages released.

• Equipment Improvement Report and Maintenance Digests (TB 43-0001-1-series for fixed wing; and TB 43-0001-2-series for rotary wing), which give titles, message number and date, a brief summary and a point of contact.

• TSARCOM's yearly list of messages, which is sent as a TWX message.

• PS Magazine



If you come up short of a message, call TSARCOM at AUTOVON 693-3300 or commercial (314) 263-3300.

Keeping the Word

Units keep messages until they are canceled or superseded. The EIR Digest has a list of the currently active messages. File copies on clipboards for each kind of aircraft. This will give ready access to the right messages.

If a SOF directs a special inspection, write it up on the aircraft's DA Form 2408-13 and other appropriate forms as directed by the message and TM 38-750. Make the necessary entries on the 2408-13 to show aircraft status and message number and name. Write up modifications on the appropriate forms.

If You Find a Problem

A unit can be the beginning of a Safety-of-Flight message. If you find a hazardous condition or a material fault that might lead to injury or damage, tell TSARCOM—immediately! Call AUTOVON 693-2066. Follow up with a Quality Deficiency Report on a SF 368 like it says in Chap 12 of TM 38-750.

A Safety-of-Flight message is the Head Hangar's fastest way to get important messages to you, the aviation unit. Make sure you do your part and comply when you get one.

NEVER TAKE CHANCES WITH SAFETY!



Longer Pin Needed



ACCEPT NO SUBSTITUTE!

THANKS, CONNIE!

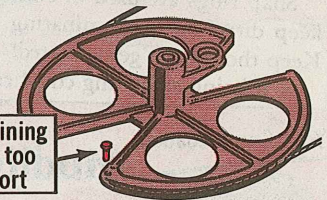


Comes the time for a tail rotor control cable replacement in your Huey, the cable retaining pin in the parts pub may be too short.

The use of pin, NSN 5315-00-811-1266—Item 1, Fig 362 in TM 55-1520-210-23P—won't let you install a cotter key if the depot installed an oversize bushing in the quadrant.

In that case, bird mechs, you want pin, NSN 5315-00-812-3757.

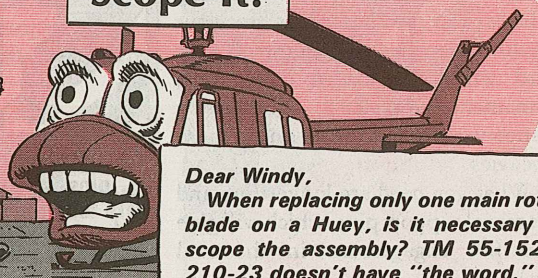
Retaining pin too short



Changing Blade?

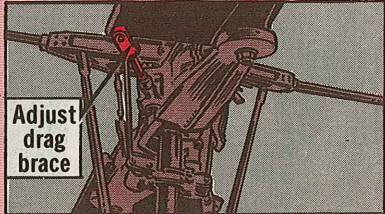
Scope It!

YEAH TH' BOOK SAYS YOU NEED SCOPING!



Dear Windy,
When replacing only one main rotor blade on a Huey, is it necessary to scope the assembly? TM 55-1520-210-23 doesn't have "the word."
SSG H. H.

Adjust drag brace



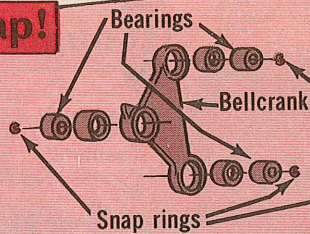
Dear Sergeant H. H.,
The scope fixture gives the best results. If you don't have one, tho, follow the note on page 5-49 of TM 55-1520-210-23. Set the length of each drag brace to 19.030 inches—equal within .002-in.

Windy

It's a Snap!

Dear Windy,
We often find the flat snap ring on an aircraft bearing partially popped out, and it's easy to snap it back in place. On a Huey bellcrank, tho, we found the snap ring missing. Are those rings really important? What's the aircraft status if one is missing?

SFC J. A. H.



Dear Sergeant J. A. H.,
Snap rings are used in bearings to keep dirt from contaminating them. Keep those little gems seated! A missing snap ring could cause a

bearing failure. You have a red X condition if one is missing. The bearing has to be inspected for serviceability.

A NEW BEARING,
OR EVEN A NEW
BELLCRANK MAY
BE NEEDED!



Your Cobra Loaded?

Modify the Wheels

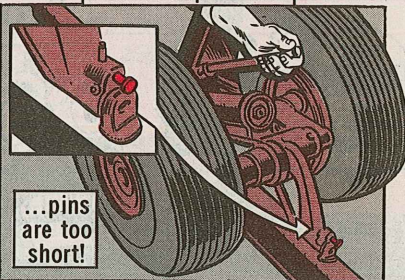
Totin' an AH-1S around the airfield on unmodified ground-handling wheels can be hazardous to your health. The wheels will jump off your bird when it's loaded down with armament subsystems. Same thing happens when jacking up one of those "heavies."

What you need are longer fore and aft wheel support pins, which will give you full engagement in the skid eyebolts.

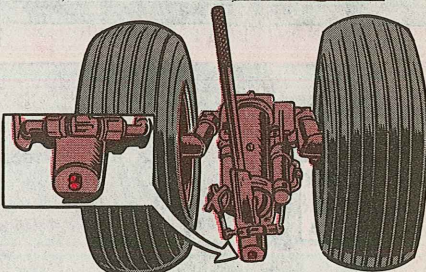
No new wheels are in the works. So, a minor mod has to be done in the field, with the assistance of support—if needed.

The details on how to make and install the pins are on pages 4-6 in TB 43-0001-2-2 (May 74). If you can't dig up a copy, write to PS Magazine and we'll send you the details.

Wheels slip off if...

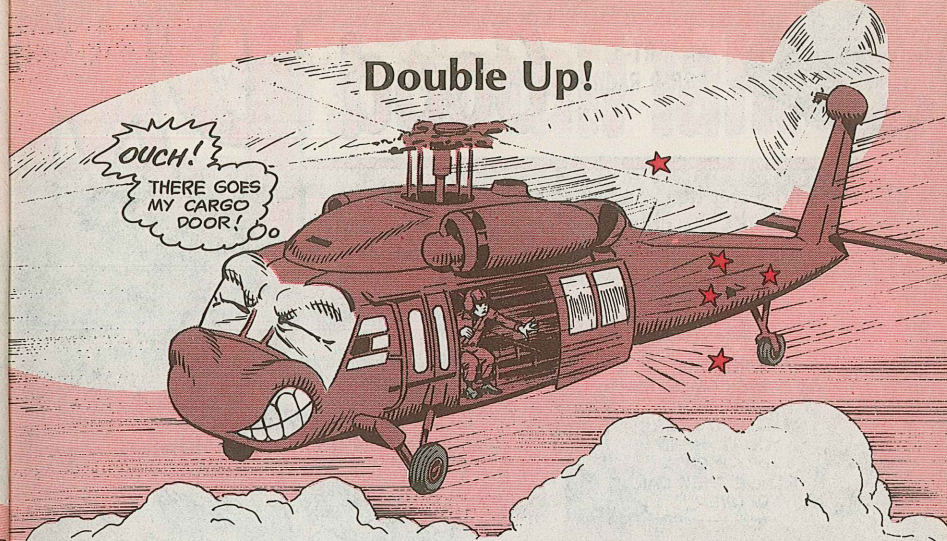


...pins are too short!



Get longer ones!

Double Up!



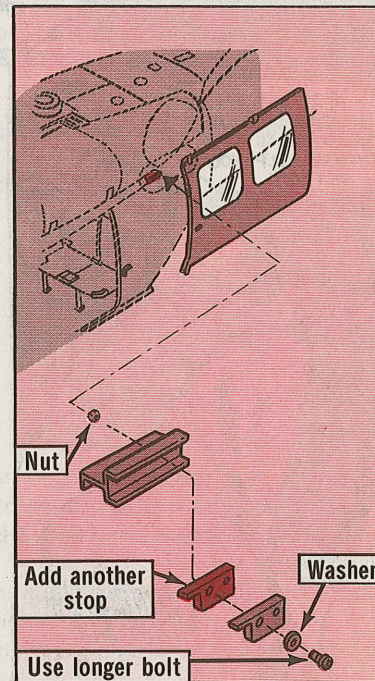
If you fly missions with the troop/cargo doors of the Black Hawk open, they may be forced back past the stops by the slipstream.

To keep them where they belong, double up the rear stops. Safety of Flight Msg UH-60A-80-41 authorizes it.

To make the fix, ask for aft right- and left-hand door stops, NSN 1560-01-095-7176 and NSN 1560-01-095-7177—plus 4 machine Bolts NSN 5306-00-156-2330. Your local Sikorsky rep has the parts.

When you get the parts, check out Task 7, Step 1 of TM 55-1520-237-23-5. Take the cover off the rear upper cargo door track and remove the 2 bolts holding the present stop. Save the washers and nuts.

Put a second stop next to the existing one, using the new bolts, washers and nuts. Do the same thing for the door on the other side.



Nut

Add another stop

Use longer bolt

Washer



AN/PRT-4,
PRR-9 Radios...

Good PM Delivers "Small Talk"

It's no secret that your squad radios are short-range operators. It's also no secret that bad PM will shorten that range or knock you off the air altogether.

WHEN THE TIME COMES TO USE THOSE LITTLE TALKERS, YOU'LL NEED EVERY INCH OF RANGE THEY CAN DELIVER!

HERE ARE A FEW MAINTENANCE AND OPERATIONAL TIPS THAT'LL HELP YOU GET IT!



Use your steel pot as part of your system. The set comes with clips to fasten it to the helmet, so use 'em. That hard hat helps improve your reception.



Clip to helmet only for better reception

Don't clip it over the helmet and helmet liner, tho. That'll stretch and break the clips.

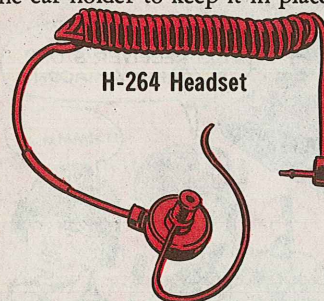
ROMEO II THIS IS JULIETT 12...WE HAVE A TARGET, OVER...

... BUT TELL 'EM TO BE PATIENT!*

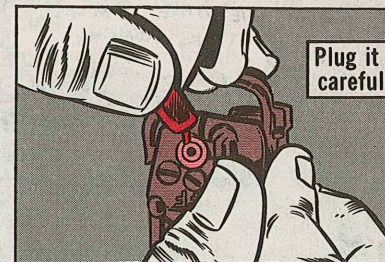
* Thanks to Bill Mauldin of "Willie and Joe" fame for the idea!

AN/PRR-9 Receiver

Using the H-264 headset will help you pick up traffic, too. Be sure yours has the ear holder to keep it in place.



H-264 Headset



Plug it in carefully

Plugging the headset into the receiver takes a steady hand. Jiggling or crooked alinement can damage the connector springs inside the set.

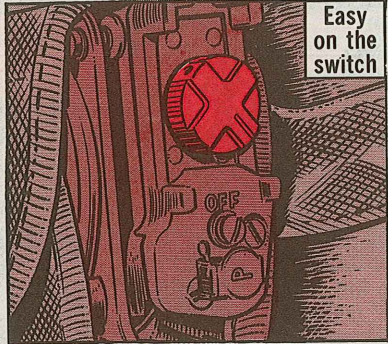
Some headsets require you to plug the cable into the earphone, too. If yours does, be sure they're mated snugly.

Remember that radio when you remove the helmet. Don't drop it or toss it. It won't hurt the steel a bit, but might KO the receiver.

Removing the radio takes a firm hand, too. Pull the whole radio, not just the horn.

Getting the word means keeping the horn transducer clean. Just remove it and tap it gently. Don't blow into it. That can destroy the membrane or send dirt deeper into the set.

Easy on the receiver control switch, too. Whether you're looking for more



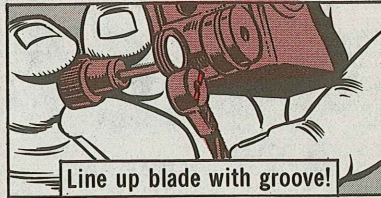
Easy on the switch

volume or trying to turn it off, be sensitive to resistance. That's telling

you the switch has gone as far as it can. Stop, or you'll break it.

If you don't get more volume by turning the knob, you probably need a new battery.

If you know the battery's good but still get no volume, have your repairman look at the horn. It can swell up and pinch off the sound.



Line up blade with groove!

Finally, make sure the AS-1998 antenna is anchored firmly. The blades on the base should mate firmly with the grooves on the set. If they don't, you get a wobbly or lost antenna.

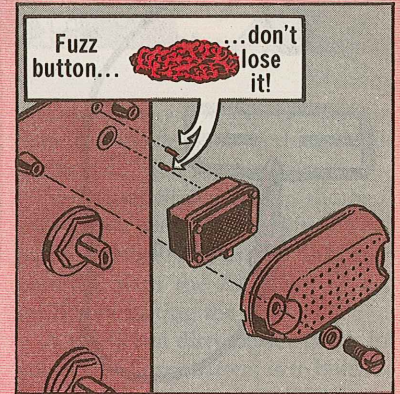
AN/PRT-4 Transmitter

Sending the word means proper use of the AS-1999 antenna.

Make the antenna work for you. The set is line-of-sight. What you see will get the best signal. Still, use the angles. Holding the set straight up and down gives good transmission in both directions. Letting it slip to the horizontal sends half your signal into the ground.

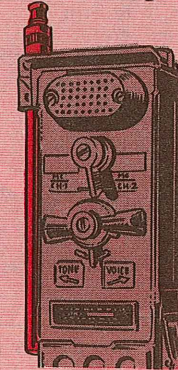
Letting the antenna hit your steel pot keeps the signal from going anywhere. The hard hat is a ground.

Mikes with thin contact pins need fuzz buttons to insure contact. If yours are missing, get 'em replaced. The NSN is 5965-00-933-3060. If contact is still marginal, have your repairman



Fuzz button... ..don't lose it!

Push up from bottom — then pull up from top



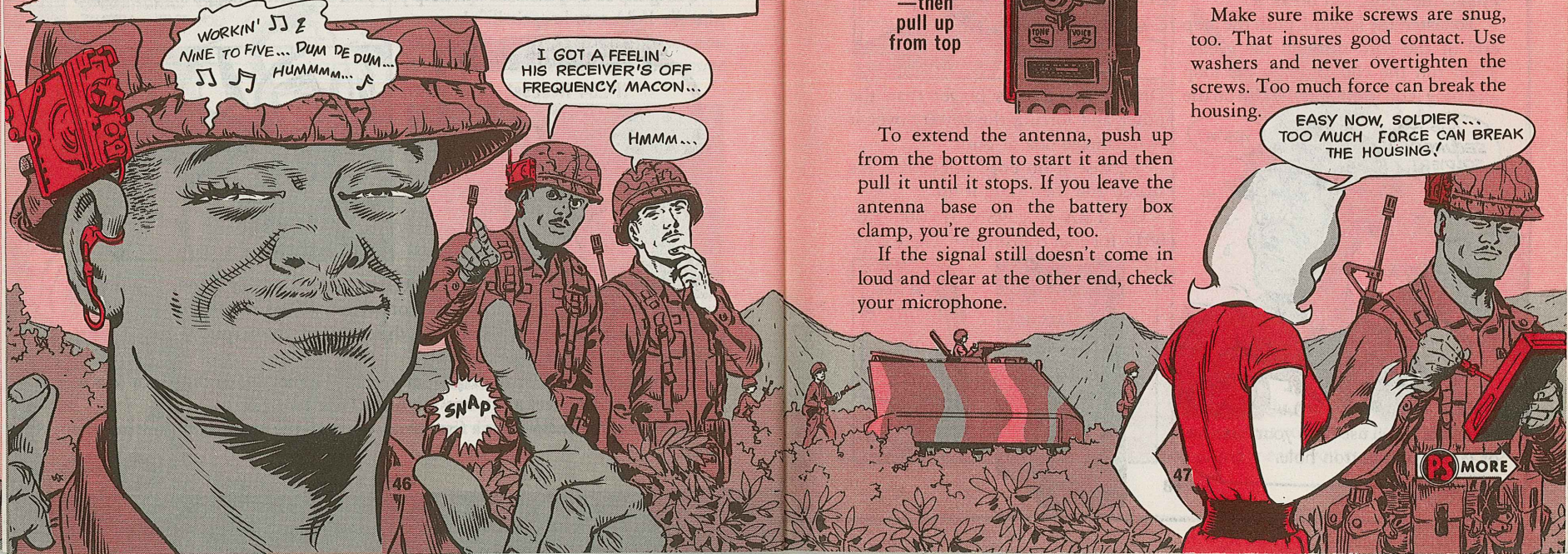
add a little solder to the element contacts.

Make sure mike screws are snug, too. That insures good contact. Use washers and never overtighten the screws. Too much force can break the housing.

ENOUGH NOW, SOLDIER... TOO MUCH FORCE CAN BREAK THE HOUSING!

To extend the antenna, push up from the bottom to start it and then pull it until it stops. If you leave the antenna base on the battery box clamp, you're grounded, too.

If the signal still doesn't come in loud and clear at the other end, check your microphone.



WORKIN' JJ & NINE TO FIVE... DUM DE DUM... HUMMMM... JJ JJ HUMMMM... JJ

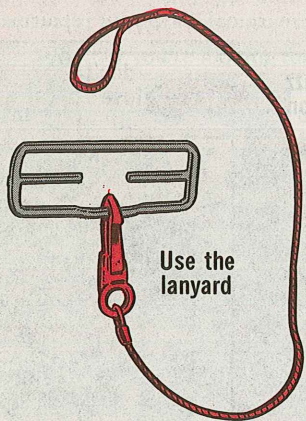
I GOT A FEELIN' HIS RECEIVER'S OFF FREQUENCY, MACON...

HMMM...

SNAP

Lanyards

To prevent either set from getting lost, fasten it to your gear with the lanyard provided.



Use the lanyard

Never hook the clip to the set's eyelet, tho. That can break it.

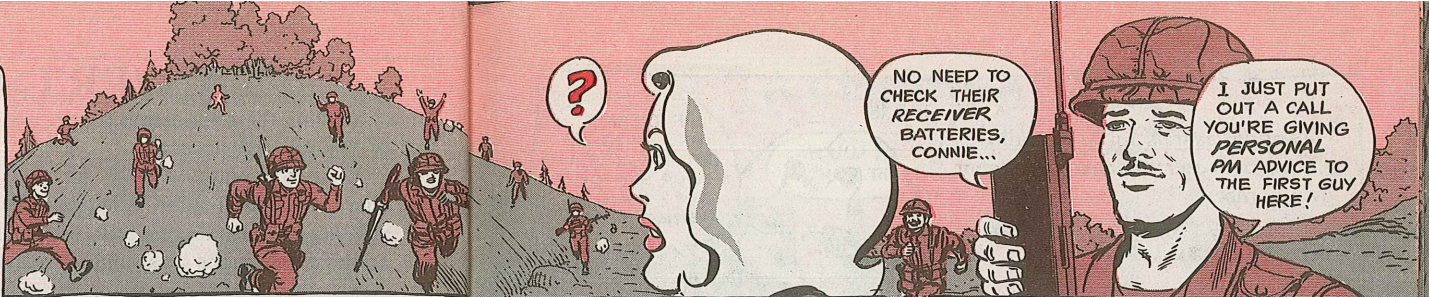
To fasten the lanyard, push the loop end of the cord through the eyelet. Then run the clip through the loop and snug it on itself. Put the clip on the

CLIP IT SECURELY, SOLDIER!

YES'M!



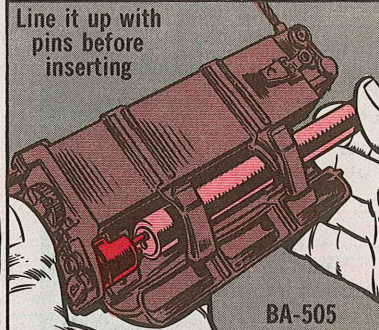
belt slide if you use it on your harness, or clip it to a button hole.



Batteries

There are only 2. A BA-505, NSN 6135-00-926-0844, powers the receiver. Be sure to line it up with the pins on the set before pushing it on.

Line it up with pins before inserting

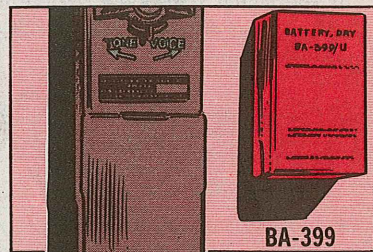


BA-505

One of the pins is bigger than the other and forcing the battery over it will damage one or both.

So, ease it on until you're sure it's mated and then snug it up.

Get a BA-399, NSN 6135-00-926-0845, for your transmitter. There are 4



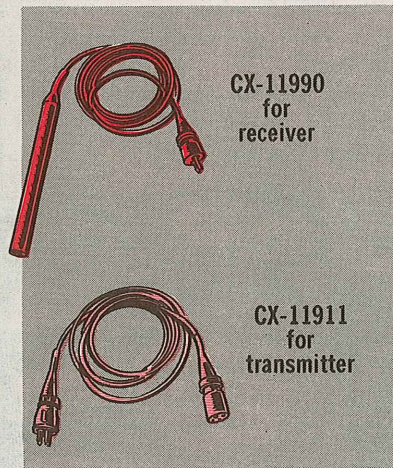
BA-399

mating contacts here. Too much force can crack or break the receptacle, so go easy.

In both cases, if you're not using the sets for a day or more, remove the batteries. That stops corrosion. And, if your batteries are swollen, leaking or otherwise kaput, replace 'em.

A couple of handy accessories will give your batteries extra life when the temps dip below freezing.

To keep operating, you need connecting cable CX-11991/PRT-4, NSN 5995-00-179-8257, and CX-11990/PRR-9, NSN 5995-00-179-8256.



CX-11990 for receiver

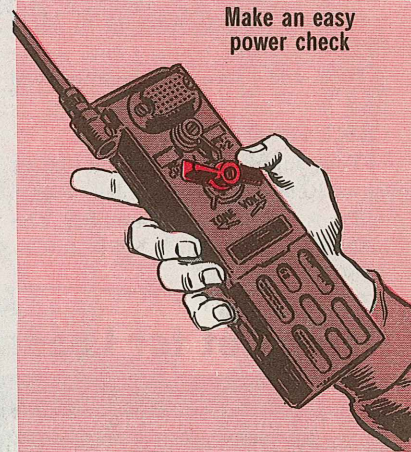
CX-11911 for transmitter

The cables allow you to keep the batteries inside your clothing while the sets do their work outside.

No matter what the temp, tho, be as sure as you can about the life left in a battery before you use it. Test your batteries with the AN/PSM-13 test set before hitting the field.

A quick and dirty power check for your transmitter battery is to hold the TONE/VOICE switch in TONE and listen.

Make an easy power check

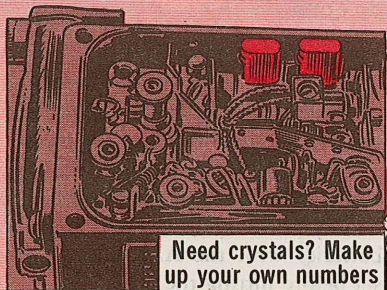


A steady whine, gurgle or unsteady tone clues you in to a good battery. No sound means you replace the BA-399.

Crystals

Getting crystals for your radios is simply a matter of making up your own number.

Like this: Start with the crystal number. It's a CR-81/U.



Defense Electronic Supply Center
ATTN: DESC-STG
Dayton, OH 45444
Or, call Autovon 850-5165/5746.

Choose the operating freqs you'll need. Say one will be 55.10 MHz. Now, since C8 to TM 11-5820-549-12 tells you to subtract 10.70 MHz from all freqs, you end up with 44.40 MHz (55.10 - 10.70).

Now, add 4 zero's. The number you give your supply support, then, is CR81U44.400000MHZ.

Your supply will go to the Master Cross Reference List (MCRL) Part 1 and cross reference that number. The NSN for that crystal is 5955-00-926-2688.

Be sure you install the crystals so they straddle the cord. That'll make removal easier next time.

Finally when alining the sets after a freq change, use only the alinement tool in the ID-1189 channel alinement indicator. Screwdrivers in the innards of a radio can cause all kinds of problems.

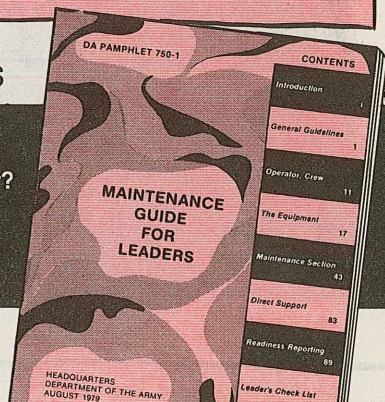
Same goes for the antenna loading coil and capacitors. Use only the proper alinement tool.

Pamphlet for Leaders

Are you a corporal, sergeant, warrant, lieutenant—or any officer? Then you need a copy of this pub!

ORDER COPIES TODAY!

50



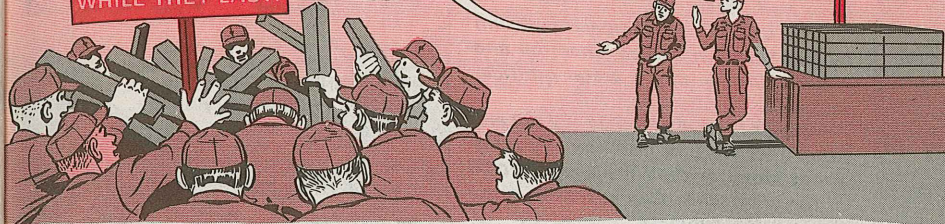
AT-271
ANTENNAS
NSN 5820-00-242-4967
SAVE \$21.00
WHILE THEY LAST!

A Cheaper AT-271

WOULD YA
LOOK AT THAT!

NOT TO WORRY! OURS
WILL MOVE SOON AS THAT
NSN IS EXHAUSTED!

AT-271
ANTENNAS
NSN 5985-00-646-2565



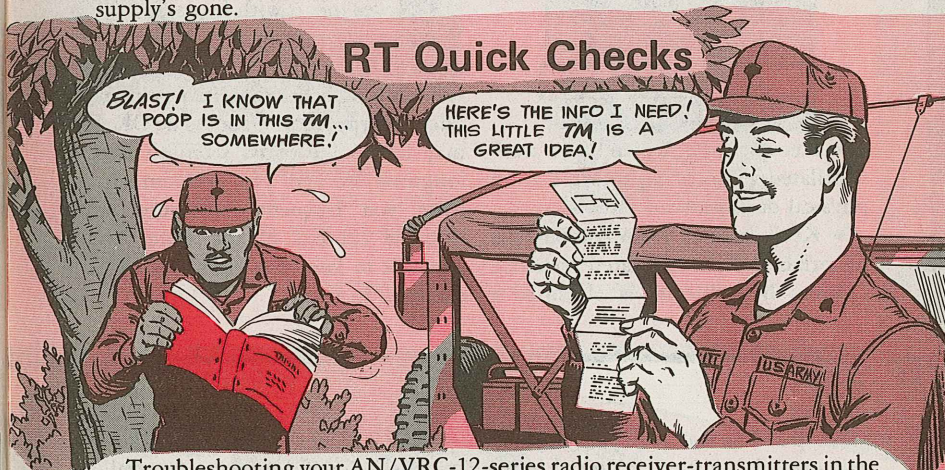
Ordering replacement AT-271 antennas for your backpack radios? Ask for NSN 5820-00-242-4967.

It'll cost you about \$21 less than another AT-271 (NSN 5985-00-646-2365) that's in the supply system and will do the same job in the field.

It's only a matter of time before the more expensive number is the only one available, tho.

So, take advantage of this price break and order the cheaper antenna until the supply's gone.

RT Quick Checks



Troubleshooting your AN/VRC-12-series radio receiver-transmitters in the field takes a great memory or a bulky TM, right?

Not any more. Now it takes TM 11-5820-401-10-4. Folded, it'll fit in your billfold or fatigue pocket. Unfolded, it puts operating and troubleshooting info at your fingertips.

If your unit doesn't have 'em yet, let your pubs clerk know.

51



WPU
Chemicals...

P M Storage Savvy

Dear Half-Mast,

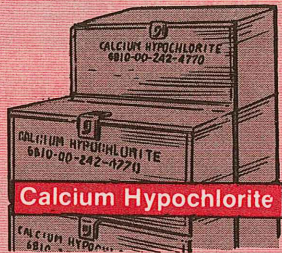
We use 3 chemicals—calcium hypochlorite, activated charcoal and ferric chloride—in our water purification unit.

Neither TM 5-4610-221-12 nor any other pub we can find has any poop about storage, shelf life and disposal of the chemicals. Can you shed some light on the subject?

SFC F. M. D.

SORRY, SARGE...
YOU WON'T FIND MUCH
INFO ABOUT YOUR
PROBLEM IN ARMY
PUBS...

... BUT THE NATIONAL FIRE
PREVENTION ASSOCIATION--
NFPA -- HAS SOME GOOD
GUIDELINES!



Calcium Hypochlorite

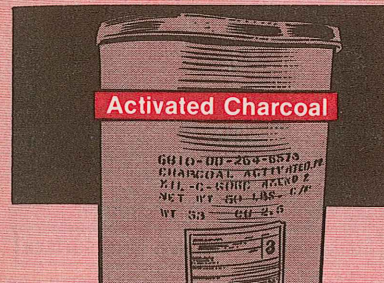
• Keep it cool, dry and in a well-ventilated place and protected from physical damage.

• Keep it away from combustible materials such as activated charcoal. Calcium hypochlorite is classified a

strong oxidizer by the Department of Transportation (DOT) that can quickly ignite charcoal.

• Never mix it with ferric chloride. You'll get a lot of heat...and chlorine gas.

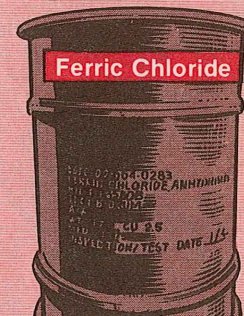
• As long as its container is intact, calcium hypochlorite should be OK. It may lose some of its strength after longtime storage. No problem, tho, since you frequently measure the chlorine content of the water and adjust it to keep the right dosage of chemical in it.



Activated Charcoal

• It's flammable: Under certain conditions, it reacts with air, and can ignite by itself.

• Keep it cool, dry and protected.



Ferric Chloride

• While this chemical is not a fire hazard, you should keep it dry and away from other chemicals.

Keep a close watch on your in-house supply of WPU chemicals. Try to keep just enough on hand to meet immediate mission requirements...specially during summer months.

All 3 chemicals have indefinite shelf life, but the fresher they are, the better your water purification program.

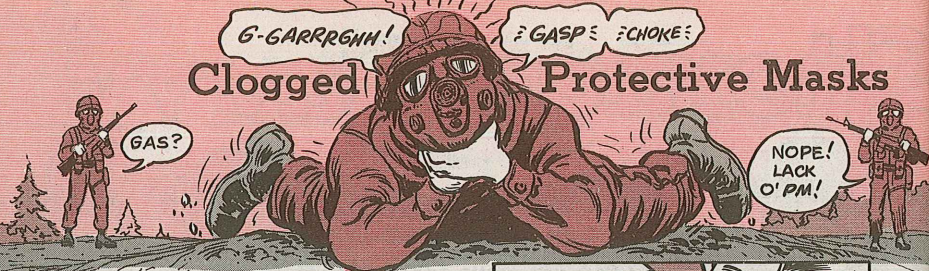
Never, like n-e-v-e-r, store or turn in your WPU set with broken or partial containers of these chemicals.

Disposal

FOR
INFORMATION ON
DISPOSING OF
CHEMICALS USED
IN WATER
PURIFICATION,
WRITE TO...

Commander
US Army Environmental Hygiene Agency
Aberdeen Proving Ground
ATTN: HSE-ES
Aberdeen Proving Ground, MD 21010

Clogged Protective Masks



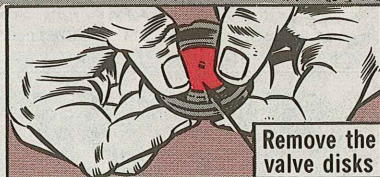
Dust and smoke clog your M17 or M17A1 protective mask. That makes it hard for you to breathe. So how do you unclog it?

Never just automatically change your mask's filter elements because of a breathing problem. They might be OK. Before you trash the filters, see if the inlet valves are clogged.

Valves clogged? Brush 'em clean

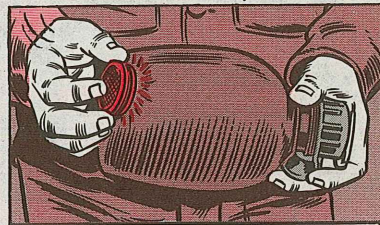


Brush the inlet valves with a bristled brush, like an M16A1 rifle tooth brush, (NSN 1005-00-494-6602). Never hit the inlet valves with a hard object to shake loose dust and dirt. That damages the sides of the inlet valve cap.



Remove the valve disks

Remove the valve disks. Hit the inside (disk side) against a medium hard flat surface, like your canteen.



Strike against medium hard surface

After you do that, brush away any gunk with your fingers.

That should make you breathe easier. If not, then check the filter elements. If they're clogged, change them.

Air Filters Gotta Breathe

Air filters, whatever they're on, must be cleaned or replaced regularly for best equipment performances. Do it, and hang up DA Poster 750-81 to nudge your brain along. A processed DA Form 4569 for Baltimore Pubs Center gets it.



Water Bag PM...

It's Your Bag



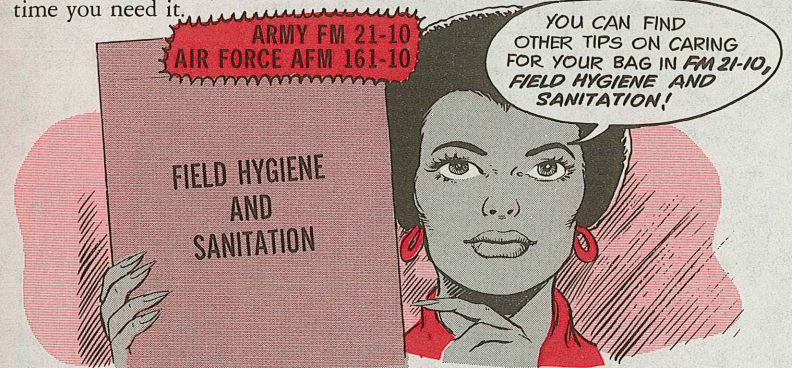
If you want your 36-gal water bag to do its job next time, you'd better store it right this time.

Before it's stored tho, it has to be clean. Scrub the insides with a chlorine water solution. Use one ampule—tube—of calcium hypochlorite, NSN 6810-00-266-6979, for each gallon of water. Rinse out the bag several times with potable water to get rid of any traces of cleaning solution.

Dry the bag completely...and it's ready for storage.

Fold the bag compactly and wrap it in kraft paper, NSN 8135-00-286-7318. Put the bundle in a box for protection. Use the original box, but if it's gone, any clean box will do.

Put the box away in a clean, dry place and your bag will be safe till the next time you need it.



WPU Poppet Valve NSN

NSN 4330-00-070-9475 gets a replacement poppet valve for the chemical solution feeder system on the 1500-GPH water purification units. Jot down this NSN for Item 20, Fig 36 in TM 5-4610-221-20P.

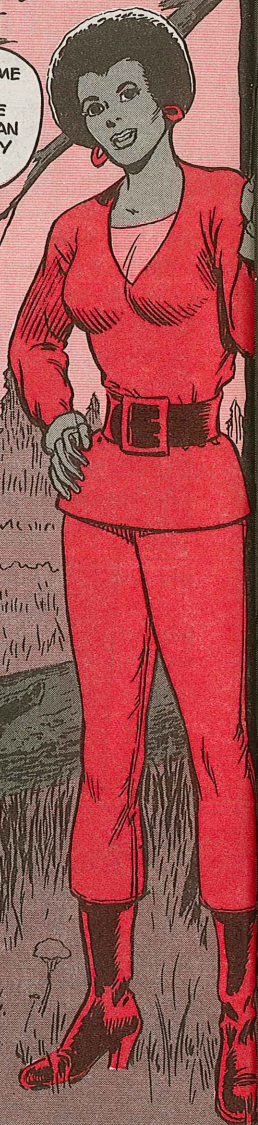
Poor PM Won't Cut It

Clearing trees and brush can be quite a job with a chain saw that can't chew through the tough stuff for you. That's why you need razor sharp PM to keep it in top shape.

You cut your best PM path when you follow the poop in the operator's manual.

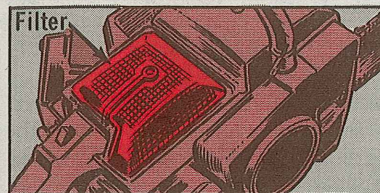
You can get replacement manuals from the manufacturer, or from Defense General Supply Center. Chain saw pubs are listed in DGSCM 4140.1, Index to Technical Manuals. Get it from Commander, DGSC, ATTN: DGSC-SDM, Richmond, VA 23297.

HERE'RE SOME PREVENTIVE MAINTENANCE STEPS YOU CAN USE FOR ANY CHAIN SAW...



Cleaning is critical when you consider all the dirt, oil and sawdust your chain saw kicks up when it's working. Some areas need special attention.

AIR FILTER—The air filter protects the engine from dust and dirt.



Clean it daily—more often when the manufacturer recommends it.

Use low-pressure air that's less than 30 PSI—to blow away loose dirt and wipe away any that remains on the chain saw.



Close the choke to keep dirt from getting into the carburetor when you remove the filter screen. Take the screen off and use light air pressure to get rid of most of the dirt. Soak the filter in a cleaning solvent like PD680 or wash in detergent and water. Let it dry completely. If it doesn't come clean, replace it.

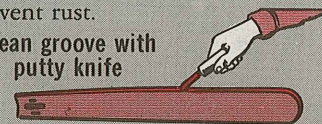
Never run the saw without an air filter. That's a sure way to ruin the engine.

Cleaning

BAR AND CHAIN—Dirt 'n' oil on the guide bar and chain keep your saw from cutting at its best. They also cause parts to wear out faster. Clean them whenever you finish using the saw.

Remove the bar and chain for cleaning. Take sap, dirt and oil off the chain by soaking it in a cleaning solvent. Remember to re-oil it to prevent rust.

Clean groove with putty knife



Use a piece of stiff wire or a putty knife to get sawdust and grime out of the chain groove. The oil holes also need to be cleaned out so that oil can get to the chain. Wipe the oil and dust from the sides of the bar, too.

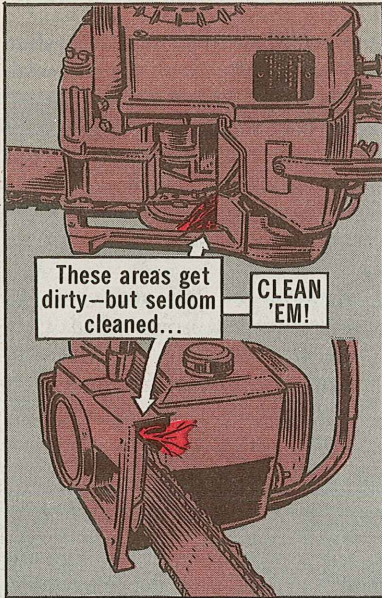
While you've got the bar off for cleaning, check it for bends or excessive wear in the chain groove. If you find either, replace the bar with a new one.

When you put the bar back on the saw, don't put it back the same way it came off. The edge that was up now goes down. That'll even out the wear and make the bar last longer.

NOT ALL BARS CAN BE REVERSED. MAKE SURE YOURS CAN BEFORE YOU SWITCH IT!

Other Cleaning Tips

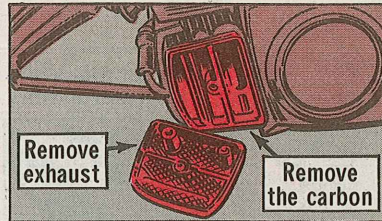
The openings in the fan housing, the cooling fins and the area around



the sprocket collect sticky, oily sawdust. A bottle brush or a toothbrush—frinstance, the one you use to clean your M16A1 rifle—helps you get to the hard-to-reach spots. You might have to remove the engine shroud to clean the area where the chain goes back into the saw.

DRAT-- NO WONDER IT KEEPS STALLING!

Carbon deposits build up in the exhaust stack. Take the exhaust off before you clean it to keep carbon particles from falling into the engine.



Use a blunt edged tool to remove the carbon, then wipe away the particles. Be careful not to damage engine parts.

Give the whole saw the once-over to make sure you didn't miss anything in your cleaning.

IT'S BETTER TO TAKE A LITTLE MORE TIME NOW THAN BE STUCK IN THE WOODS WITH A BUSTED SAW!

YEAH-- CARBON'S CLOGGED TH' EXHAUST!



Chain Maintenance

Maintaining chain tension is important. If the chain is too loose, it bogs down in the wood. If it's too tight, it'll bind on the bar.

Check the new chain's tension often because it'll tend to stretch the first few times you use it.

A worn sprocket or bar can do in a new chain. Check them both before you add the new chain.

A chain saw is no place to conserve oil. Keep giving the thumb oiler a workout while you're cutting. Never wait till the chain starts squeaking and chattering or the bar turns blue before you use it.

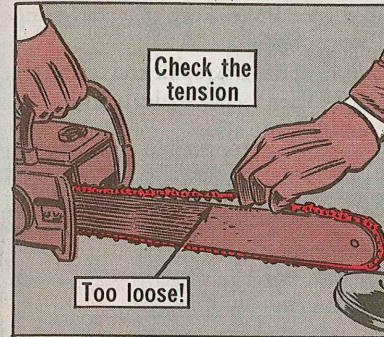
If you're sawing a big log, it helps to hit the oiler a time or two while you're cutting.

In winter try mixing a pint of kerosene—or less—with every quart of oil you use in the chain oil reservoir. It'll keep the oil flowing freely.

Never let the chain oil reservoir run out of oil. Add oil every time you refuel. Use non-detergent OE-30 oil NSN 9150-00-186-6681 (qt) for best results.

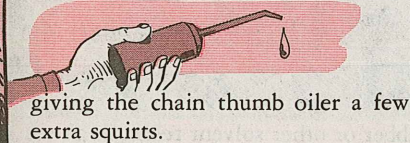


Check the tension by holding the bar upright and pulling the chain around by hand. Tighten it until it's



snug on the bar but still moves free and easy.

If the chain is new, wash it in solvent, then soak it in oil. Make sure the new chain stays wet with oil by



On saws with automatic oilers, add oil to the chain and bar by hand before you start. You've added enough when the chain throws a little oil when you accelerate the saw to operating speed.



Mix chain saw fuel in a container—not in the saw's tank. Most Army saws use a pint of oil for every 2 gallons of gas, but do what your saw's manufacturer recommends. A 30-weight oil NSN 9150-00-117-8791 (pt) designed for 2-cycle engines is best.

With Repair Kit... Don't Sweat the Wet!

EXCEPT FOR ONE EXCEPTION, WE'D BE THE NUMBER ONE WET-WEATHER PLATOON!

GULP! MY XXS SIZE GEAR IS ON ORDER, SARGE!

The wet-weather parka and trousers need good PM to keep that cold damp stuff on the outside and away from your warm body.

TM 10-8400-201-23 on clothing and equipment has the repair and care poop you need to heed for your wet-weather outfit. Para 19-7, C7, deals with your poncho, but use the info for other wet-weather gear also.

NSN 8405-00-198-3747 GETS A REPAIR KIT IN A CAN THAT CONTAINS ...

Adhesive, 1/2-pt can (2)
 Brush, throwaway (30)
 Nylon cloth, polyurethane coated, 5-yd x 6-in roll (1)
 Dropcloth, reuseable, polyethylene, sheet (1)
 Roller, wood, 1 1/2-in dia x 4-in lg (1)
 Instruction sheet (1)
 Talc bag (1)
 Cleaning solvent, toluene, pt (1)

Careful: Toluene is harmful. Use rubber or other solvent resistant gloves when cleaning with it. Keep it off your skin. Avoid breathing its vapors. Use it only in a well ventilated place.

For you mini-size troops there's an XXS size parka and trousers. Use NSN 8405-01-053-9202 for the parka; 8405-01-053-9400 for the trousers. Wearing the right size outfit cuts down wear, tear 'n' repair.

RT Forklifts... Transmission PM Service

LO's for the 6,000-lb and 10,000-lb RTFL's are a little short on details about servicing the torque converter/transmission.

HERE'S HOW TO PULL THE 500-HOUR SERVICE ...

- With the transmission oil warm or hot—not cold—and the vehicle on level ground, drain the transmission.

- Clean and replace the sump screen.

- Remove and clean the external transmission filter body. (Put in a new filter element before putting the filter back on.)

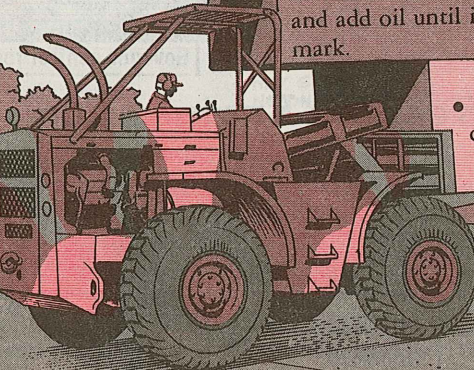
- Fill the transfer case to the FULL mark.

- Start the engine with transmission in neutral.

- Run the engine at fast idle until transmission oil reaches operating temperature.

- With engine still running, at idle or fast idle, remove the fill cap/plug and add oil until it reaches the FULL mark.

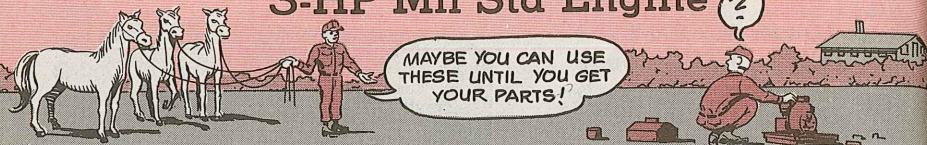
- Put the fill cap/plug in.



On all 6,000-lb RTFL's—and on 10,000 pounders with short-filler tubes—remove the cap/plug only when the engine is running. If the engine is not running, the oil drains from the converter back into the sump and you'll get an oil overflow if you remove the cap.

Repair Parts Kit...

3-HP Mil Std Engine ?

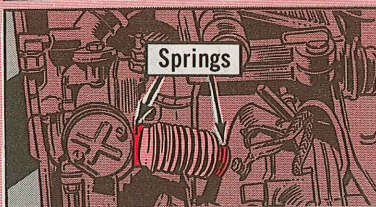


Here're the correct part numbers for the 3 components of the control rod housing kit, NSN 2805-00-929-3472, for your 3-HP Mil Std engines. The FSCM is 97403.

THESE BRING PAGE 2-6, TM 5-2805-257-24P UP-TO-DATE!



PN	Nomenclature
13215E3835	Retaining Spring
13215E3836	Retaining Spring
9786E64-1	Governor Control Rod Housing



Governor control rod housing

Keeping Engines Cool

Remember those decals you've seen on small engines—the kind that show Connie reminding you to keep the engine cool?

YOU CAN GET 'EM FOR YOUR RIGS! WRITE DIRECTLY TO...

Commander
USA Troop Support and Aviation
Materiel Readiness Command
ATTN: DRSTS-MMG (1)
4300 Goodfellow Blvd.
St. Louis, MO 63120

Just tell 'em how many you need for all your 1½ to 20-HP military standard engines.

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Keep This Engine Cool!



DO NOT INSTALL OR OPERATE IN LOCATION WHERE FREE FLOW OF AIR TO ENGINE IS OBSTRUCTED. DO NOT REMOVE ENGINE SHROUD WHILE OPERATING.

Ribbon Bridge Parts Poop

Here's some info for your Ribbon Bridge P-Manual. Best, A Concerned Friend

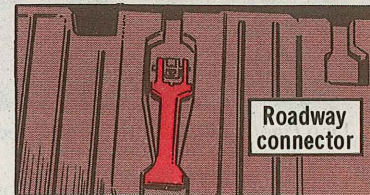


Unscramble a couple of numbers in your ribbon bridge P-manual, TM 5-5420-209-20P, like so: Use NSN 5340-00-630-3099, PN 13218E4163, FSCM 97403, to get the Snap-Tite plug, Item 5, Fig 83 and Item 7, Fig 86. Plugs are in

Snap-Tite plug



Roadway connector



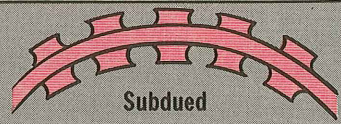
the supply system, but use the PN and exception data supply type request until the NSN makes the AMDF.

NSN 5420-00-507-7043 is for the roadway connector, Item 5, Fig 86.

No Shine Is Better



For the best care of you, your equipment and your tactical position, use only the subdued barbed tape concertina, NSN 5660-00-921-5516.



Subdued



Stainless steel

In tactical operations never use any other barbed tape such as stainless steel, NSN 5660-00-430-2804. They'll tell the enemy where you are. Use them non-tactically only.

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The Razor's Edge



Don't get caught with unmodified equipment when you get the word to move out.

Make sure all modification work orders pertaining to your equipment have been applied.

Get a copy of DA Pam 750-10, Index of Modification Work Orders, and go through it to see what MWO's are listed for your equipment.

Check the ones you found against your maintenance records. If you find any that have not been applied, fill out a DA Form 2407 Maintenance Request to tell your support unit that you need the MWO applied.

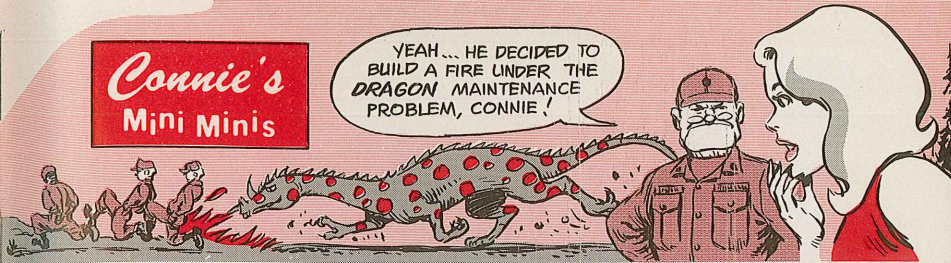
Take all copies of your DA Form 2407 to support. They'll tell you when the MWO's can be applied.

Check out Para 3-8 in TM 38-750 for the instructions you need to complete and dispose of DA 2407.

Support'll notify the headshd—through command channels—about any overdue but still current MWO's that you need to have applied.

MAINTENANCE REQUEST		PAGE NO.	NO. OF PAGES	REQUIREMENT CONTROL SYMBOL
For use of this form, see TM 38-750, the proponent agency is DCSLOG.		1	1	CSLOG-1047R1
SECTION I - EQUIPMENT DATA				
CONTROL NUMBER 039023	WORK ORDER NUMBER	WESOC FV	ORG PD 05	PD AUTHENTICATION CPT M. Roberts
<input type="checkbox"/> WORK REQUEST <input checked="" type="checkbox"/> MWO <input type="checkbox"/> WARRANTY CLAIM	1a. ORGANIZATION 305th Engr Bn	6. LOCATION APO New York 09630		c. UNIT IDENT CODE WKH37A
2. SERIAL NO. 1432	3. NGUN NOMENCLATURE Generator	4. LINE NO.	5. MODEL 60-KW	6. NATIONAL STOCK NUMBER 6115-00-118-1252
7. MAINTENANCE ACTIVITY 23d DS Co	8. LEVEL F	9. UTILIZATION CODE ON	10. HOURS YES	11. MILES B
14. FAILURE DETECTED DURING (Select one - use / or X)				
<input type="checkbox"/> Scheduled Maintenance <input type="checkbox"/> Test <input type="checkbox"/> Storage <input type="checkbox"/> Flight <input type="checkbox"/> Inoperative <input type="checkbox"/> Overheating <input type="checkbox"/> Out of Adjustment <input type="checkbox"/> Handling <input type="checkbox"/> Normal Op <input type="checkbox"/> Inspection <input type="checkbox"/> Other <input type="checkbox"/> Low Performance <input type="checkbox"/> Other				
16. DESCRIBE DEFICIENCIES OR SYMPTOMS ON THE BASIS OF COMPLETE CHECKOUT AND DIAGNOSTIC PROCEDURE IN EQUIPMENT TM (Do not prescribe repair) Apply MWO 5-6115-545-30-1				
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> Tell your support you need MWO applied! </div>				
16a. REMARKS				
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> DA Form 2407 Revised May 81 </div>				
SECTION II - WORK ACCOMPLISHED				
17a. REPAIR ORGANIZATION/ACTIVITY	c. UNIT IDENT CODE	18. TYPE ORGANIZATION/ACTIVITY AC COMPLETING WORK (Select one - use / or X)	19. AMS ACCOUNT CODE	

Connie's Mini Minis



TM 38-750 Change

The headshd says to make this change in your new TM 38-750:

On Page 4-2, mark out the ECC/LIN entries in column d and the note telling you how to make them. They're wrong. Para 4-2f (10) (d) has the right poop.

Take a Look!

Check your storage bins and shelves in aircraft tech supply. If you find any unserviceable-repairable parts collecting dust, turn 'em in. They're needed to keep the supply system going and your birds flying.

Compass Direction

Aircraft types should have compass, NSN 6605-00-151-5337, listed in TC 1-62 on life support equipment, in their SRU-21/P survival vest. A change to SC 8465-90-CL-P02 will remove the old compass, NSN 6605-00-515-5637.

Lighter Refill Info

The poop on page 37 of PS 337—about ordering lighter refills by the case for your SRU-21/P aircraft survival vests—still goes. Supply support should use the following new address, tho: Lifesaver Products Inc., 1512 11th St., Suite 205, Santa Monica, CA 90401.

TMDE On The Prowl

US Army Central TMDE Activity (USACTA), which troubleshoots Test, Measurement and Diagnostic Equipment, plans selected unit visits soon for a firsthand look at operating and maintenance snags. If your unit gets notified, note any problems and lay 'em on the TMDE types. If you've got urgent or recurring TMDE problems, contact USACTA, ATTN: DRXCT-TAF, Lexington, KY 40511.

M880 Tailgate Arm

Need a tailgate check arm for your M880-series truck? NSN 5340-01-007-1413 is right even tho it's incorrectly listed as "Bracket, shelf" on the AMDF.

M256 Detector Kit

Down to 4 sampler-detectors in your M256 chemical agent detector kit? Get a new kit, NSN 6665-01-016-8399.

5-Ton Air Hose

Never try to repair the air-compressor-to-airpak-assembly hose on your M809-series 5-ton truck. This is the hose listed on Page 42, C 2, TM 9-2320-260-20P, under NSN 4730-00-096-9630 (now on the AMDF as NSN 4720-00-096-9630). The hose is coded in the TM as non-repairable. Got a bad one? Get a new one! The word's in TACOM Msg DRSTA-M 151600Z May 81.

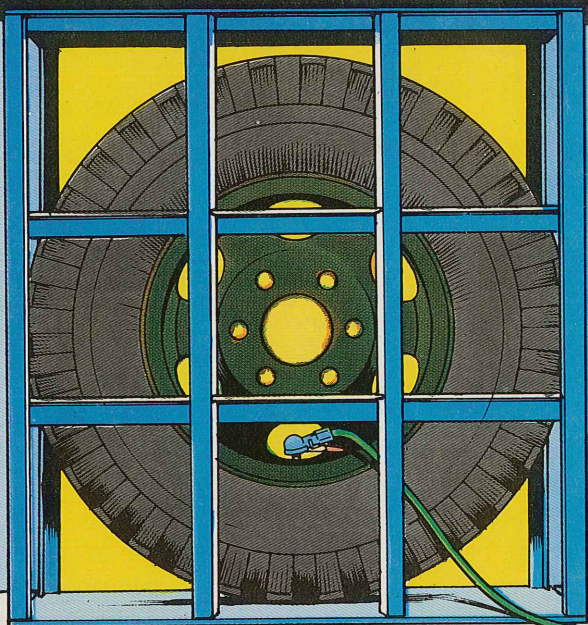
* U.S. GOVERNMENT PRINTING OFFICE: 1981-757-003/10

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

Wheel
Split
Rims

KILL!

**C
A
G
E**



**T
H
E**

KILLER!

See TM 9-2610-200-20