

Issue 350

PS

January
1982

THE
PREVENTIVE
MAINTENANCE
MONTHLY

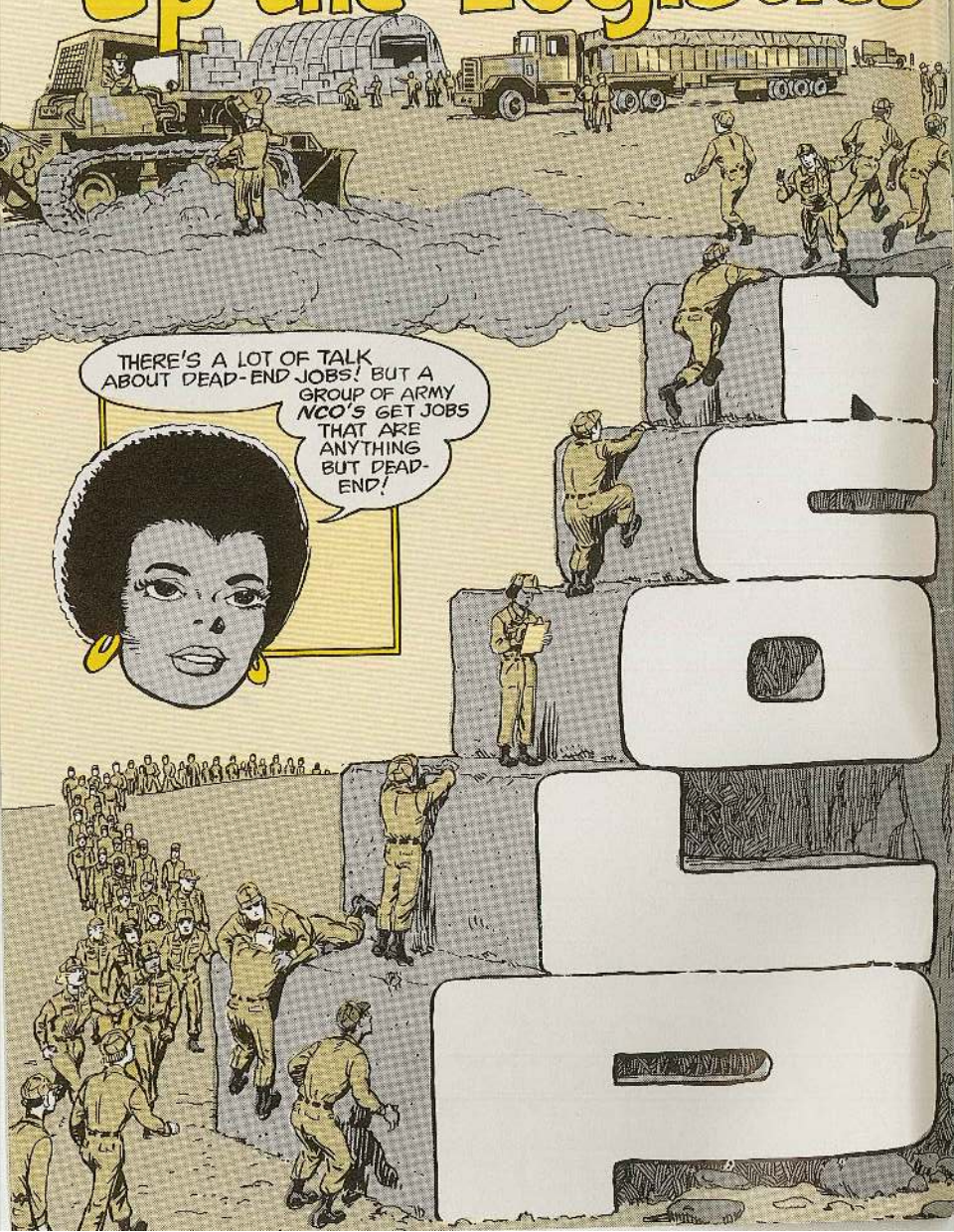
Read
this copy
and
pass it on!!



MURPHY
ANDERSON

1981 INDEX Pages 29—36

Up the Logistics Ladder



THERE'S A LOT OF TALK ABOUT DEAD-END JOBS! BUT A GROUP OF ARMY NCO'S GET JOBS THAT ARE ANYTHING BUT DEAD-END!

The Noncommissioned Officer Logistics Program (NCOLP) taps top active and reserve component NCO's for key logistics slots.

NCOLP slots cover the whole logistics system with a variety of supervisory, training and operations jobs.

You don't have to be a supply type, either! NCO's are needed from 27 MOS's, E6 through E9. They're really looking for you if your MOS is 32Z, 33S, 35P, 55G, 63H, 64Z, 71N or 76X, but others are needed, too.

Interested? Chapter 7 of AR 614-200, Enlisted Personnel, Selection, Training and Assignment System, tells you more about the program.

SEND YOUR APPLICATION TO...

USA MILPERCEN
ATTN: DAPC-EPM-L
2461 Eisenhower Avenue
Alexandria, VA 22331

If you have any questions—or want to talk to somebody already in the NCOLP—call MSG Robert Vega, AUTOVON 221-8007/8008.

PS THE PREVENTIVE MAINTENANCE MONTHLY

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

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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M16A1 Mess-Ups

HOW FAR DO I GO WITH MY RIFLE PM, CONNIE?

You can put your M16A1 rifle in the repair shop in a lot of ways. You can also keep it out of the shop many times with one little guideline:

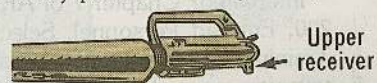
Do what you're supposed to do! Then, stop there!

AS FAR AS THE TM TELLS YOU!



Some

The TM has the word on how you clean and lube your rifle, how you field-strip it, etc. You disassemble just so many parts and then you stop.

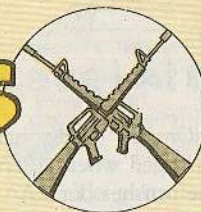


Do not take apart upper, lower receivers!

You do not disassemble the upper and lower receivers. That's support level. You should know that sentence by heart, it's been repeated so often.

Even so, rifles turn up at support for repair because somebody took too much off, lost parts, or put them back

Mess-Ups



LAST TIME HE FIELD-STRIPPED HIS WEAPON, CLEVIS COULDN'T GET IT BACK T'GETHER!

...AN' IT COST HIM A WEEK'S PAY!



F'rinstances

wrong. Expensive repairs mount up and some riflemen have to pay for fouling up.

Tearing the rifle down may look easy, but it takes skill, experience and adjustments to get parts back right. It also takes tools you don't have to get them off right.

Disassemble as the TM says...



...and stop!

The idea is, field-strip as far as you're allowed to. Quit there or you'll run the risk of screwing up and having to pay for the damage.

Cleaning

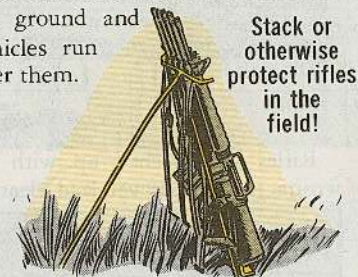
When you clean and lube your rifle, keep the parts where you can see them...within reach.



Count as far as you can on your fingers, toes, hairs on your head and then some, and you won't get close to the number of parts lost during cleaning.

Another peril: Barrels bend...by the hundreds!

Barrels bend when rifles are left on the ground and vehicles run over them.



They bend when the rifle is leaned inside a turret. The turret turns and the barrels are crushed.

They bend when they are leaned on the ramp of an APC. When the ramp is raised, it's bye-bye barrel.

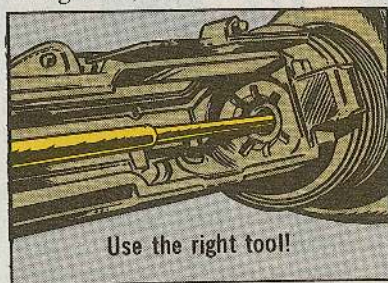
They are bent in other ways, neatly noted on work order forms.

The solution's simple: Pick a resting spot for your rifle carefully. That way, you won't have to buy one that shoots around corners (once!).

Use the Right Tools



Rifles get botched up with the wrong tools, like oversized cleaning



brushes. On record are .30-cal and 7.62-MM brushes jammed in M16A1 barrels.

They had to be removed by armorers and support maintenance.

On the other hand, barrels are damaged when riflemen try to force the brushes out.

Cleaning patches take the same trip. Oversized ones jam. Undersized ones don't clean. It's trouble either way.

There's no shortage of cleaning equipment. What you need is spelled

½ oz. CLP 9150-01-102-1473	Brush 1005-00-494-6602
	
	Chamber brush 1005-00-999-1435
Bore brush 1005-00-903-1296	
	Small arms cleaning rod M11E3 1005-00-089-3994
	
	
	

out in TM 9-1005-249-10. Read it and heed it!

Every soldier who uses the M16A1 needs a copy of TM 9-1005-249-10. Your unit's pubs clerk can make sure you get enough copies of the manual when it is printed new by filling in Block 135 of DA Form 12-40.

THE QUANTITY
SHOULD AT LEAST
EQUAL THE NUMBER
OF SOLDIERS WHO
USE THE RIFLE!



Some you know about, some you may not.

A dozen M16A1 rifle parts have been moved from direct support to organizational level maintenance and will be included in the revised TM 9-1005-249-24&P. SMR Codes are now PAOZZ.

GET THE LATEST
EXTRACTOR SPRING
WITH NSN 1005-00-
760-3768!



PART	NSN
Pin, ejection port cover	1005-00-978-1023
Ring, retaining	5365-00-999-0864
Cover, ejection port	1005-00-978-1022
Spring, helical (ejection port)	5360-00-978-1025
Screw, self-locking, butt plate	5305-00-463-3893
Swivel, sling, small	1005-00-403-0964
Plate, butt shoulder	1005-00-403-0963
Pin, straight, headless (latch pivot)	5315-00-463-3894
Hinge, access door	5340-00-463-3892
Door, assembly, storage	1005-00-403-0962
Spring, helical (sight detent)	5360-00-979-3931
Post, front sight	1005-00-979-3929

M16A1 Hammer Hang-Up



When the trigger mechanism's worn, your M16A1 rifle can fire more



...troubleshoot!!

than one round in the semiautomatic setting.

To prevent trouble before it starts, armorers should make all the troubleshooting functional checks on Page 26 (para 2-8c) of TM 9-1005-249-20.

If the rifle fails any of the checks, it should go to direct support for repair.

TOW Missile Systems...

How to CLAMP a CLAMP

Snags, jars, bumps and such can put the whammy on the coupling clamp used with pedestals and tripods on your TOW missile systems.

THANKS FOR TH' POOP ON THE NEW, IMPROVED CLAMP, CONNIE...

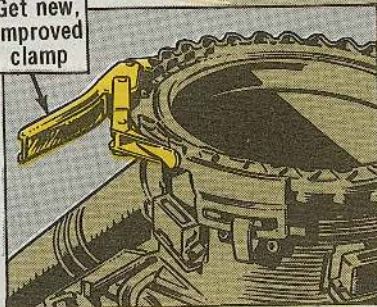
YEAH-- IT'S GREAT!
NO WAY IT'LL POP OPEN ACCIDENTALLY!

If the clamp comes loose...and it has, even when adjusted right...down comes the traversing unit (TU) and everything it supports, including the optical sight. Damage can be expensive.

So what to do? Fear not. You can get a new, improved clamp with NSN 5340-01-104-7700.

The new clamp has a mouse-trap type latch that keeps the handle from popping open accidentally.

Get new, improved clamp



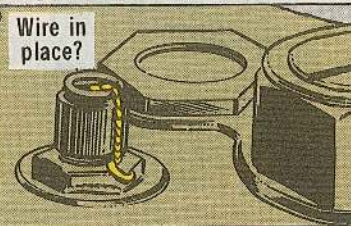
NOW, A WORD ABOUT A PRIME VICTIM OF LOOSE CLAMPS...

...YOUR TOW'S

Optical Sight

You've got it wired if the safety wire on the pneumatic valve at the rear of the optical sight is in place.

Wire in place?



If the wire's gone, the cap can slip...and the sight can be depressurized if the valve core is depressed.

If the valve's safety wire is missing or broken, contact your direct support unit to replace it. The sight on it may need repurging. If the humidity

Check humidity indicator



indicator is pink or white, your support should purge it and replace the desiccant at the next scheduled maintenance.

PS MORE

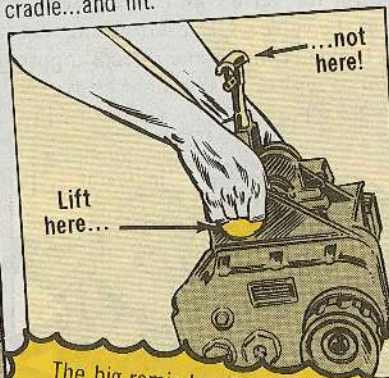
HERE ARE THE
2 SAFE WAYS TO
CARRY THE
SIGHT...

...AND HERE'RE SOME
OTHER TIPS TO KEEP
YOUR TOW SYSTEM
IN TOP SHAPE!

- Facing the side of the sight, cradle it in your arms and lift. Support it till it's locked in the TU or safe in its case.

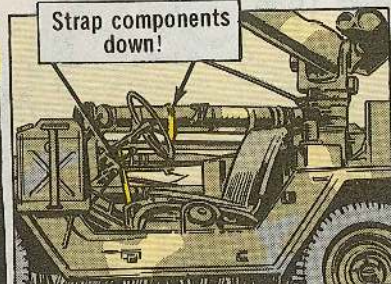


- Or, straddle it from above. Slip your hands through the holes in the sight cradle...and lift.



The big reminder: Do not lift the sight by the locking handle. The handle breaks.

- Secure system components during transit. Strap them down, use padding...never let them bounce.



Strap components down!

- Never store components such as the optical sight or missile guidance set on the floor of a vehicle like the M113A1 for a day or more. Humidity or rain will cause moisture damage.

- It's not necessary to store TOW batteries in a refrigerator (that's for dry cells). No matter where you store them, they have to be charged every 30 days. The refrigerator does not add to the shelf life.

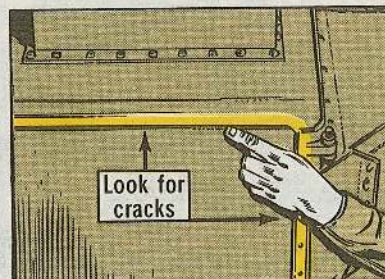
- If your night sight's mounted when you're in the field, keep the sight's carrying case over it while you're moving. That'll help prevent damage from trees and brush.

PS END

JUST FOR THAT
CRACK, I'M GONNA
LAMINATE YOU!

ICWAR Cracks

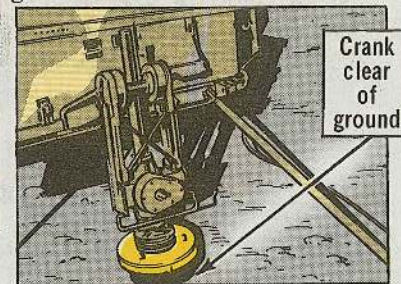
Give your Improved HAWK AN/MPQ-48 ICWAR radar set group cabinet an eyeballing for cracks next time you walk around it.



Pay close attention to the cabinet edges. Cracks there allow water to drip down into the printed circuits and other parts subject to rust and corrosion.

So, if you see cracks, grab your handy lamination kit and seal them.

Before you hook up a prime mover to the ICWAR for march order, lift the rear leveling jack until it clears the ground.



If you back the truck into the ICWAR for a hookup with the jack down, you can damage the jack.

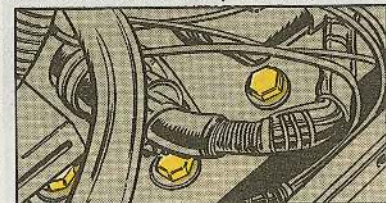
IHIPR Screws Loose?



Believe it! Those 8 cap screws which fasten your Improved HAWK IHIPR's head assembly to the torque tube work loose...even when they're safety-wired.

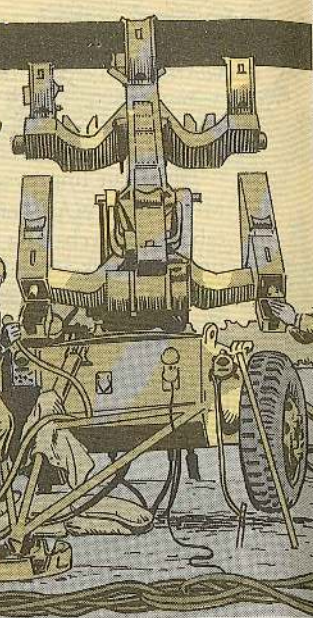
When they get loose, they can cause several mils of unwanted play in antenna azimuth.

You've gotta check for loose cap screws or improperly installed safety wire. If screws are loose or the wire's not tight, remove the wire. Torque the screws to 50 lb-ft. Re-secure them with safety wire.



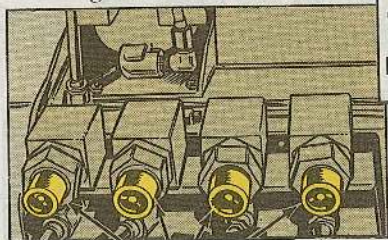
Check torque monthly

I-HAWK



IPAR Liquid Coolant

When you spot a leak in your AN/MPQ-50 IPAR coolant system quick disconnects, shut the system down first chance you get and check the quick-disconnect O-rings for wear or damage.

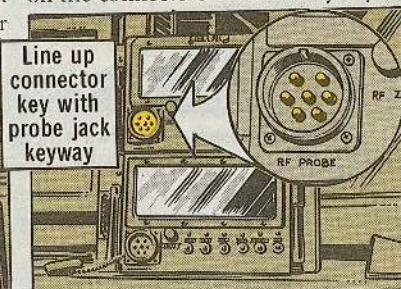


Quick disconnects

If the leak's at the connector, chances are the O-rings need replacing.

Multimeters

When you hook up your digital multimeter for testing I-HAWK components, be sure to line up the key on the connectors with the keyway on



the RF probe jack of the meter. Then, push in and screw the connector on.

If you try to force the connector on without first lining it up, you'll bend or break the pins in the jack.

Missilanea

I GOT A TOUGH PROBLEM HERE...

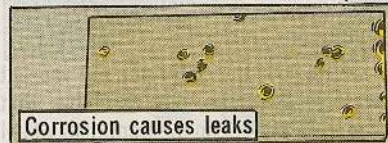
LET'S GET CONNIE'S ADVICE!



60-KW Fuel Tanks

If you see or smell diesel fuel leaking from your Improved HAWK 60-KW generator tanks and you can't find the leak, don't just shrug it off.

Ask your direct support platoon (DSP) to pull the tank and check it out. There may be corroded areas on the tank or leaks which need DSP repair.



Water condenses in the tank and causes corrosion. To prevent it, you can drain the tank of water each morning. Fill the tank with fuel at the end of each day's operation to eliminate air that can cause water to condense.

PMCS checks on the tank are in Tables 3-1 and 3-1.1, C6 to TM 5-6115-545-12.

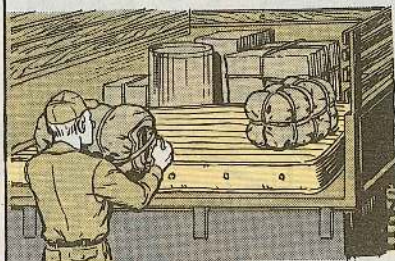
One other tip: Keep fuel cans closed when not in use. That prevents fuel contamination.

Hauling Radars

Hauling delicate electronic components, such as radar chassis, from your unit to your direct support platoon requires some planning.

You just don't dump it into the back of a truck or trailer and take off. That way you can turn a simple repair job into a major overhaul. Same goes when you're bringing the repaired chassis or component back to the unit.

The idea is to cushion it. You can wrap the parts and components in bubble pack NSN 8135-00-142-9016 (2-ft by 250-ft long). Use other



packing material on hand if you don't have bubble pack.

You can spread a couple' layers of bubble pack on the vehicle bed.

Or, you can wrap the gear and put several pieces in a box.

A LITTLE EFFORT AND A FEW CENTS' WORTH OF PACKING CAN PREVENT DAMAGE!

Tanks... Tool Makes

You mechs who know what kind of pain it is to remove the adjusting link pin should take heart.

There's a new tool and a changed procedure to make the chore a little easier. The -20 TM's for tanks don't tell you to remove the compensating idler wheel. Nor do they mention track adjuster link pin remover and replacer tool, NSN 5120-00-113-5265.

Taking the idler wheel off will get you closer to the job and the tool can save you time and work.

HERE'S
WHAT TO DO...

- Disconnect the track, remove the front fender and remove the idler wheel.
- Clean off both ends of the adjusting link.

Disconnect
track, remove
fender and
compensating
idler wheel...

...clean track
adjusting link!

- Remove the cotter pin, nut and flat washer from the pin assembly that connects the link to the front road-wheel arm.
- Remove the screw and lock washer that hold the pin assembly to the adjusting link.
- Remove the cotter pin, nut and flat washer from the pin that connects the link to the idler wheel support arm.
- Remove the screw and lock washer that hold the pin assembly to the support arm.

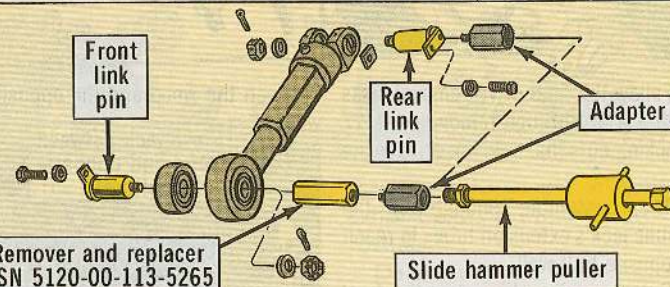
Be sure to get help to support the adjusting link in the next few steps. It can fall and hurt you.

It Easier

HEY, CONNIE...
CAN YOU SPARE A
SEC?

YEAH--
CAN YOU GIVE
US A DEMO?

- Pull the rear link pin out (Use adapter, mechanical puller, NSN 5120-01-017-5328, and puller, slide hammer, NSN 5120-00-557-3615).



If the rear link is installed with the threaded end toward the tank's outside, use the tools mentioned above plus the remover and replacer, NSN 5120-00-113-5265, to push the pin out.

- As someone helps to hold the adjusting link, use all 3 tools to push the front pin out.

Reverse the process to install the link, then put the idler wheel back on, then the fender and the track.

USE NEW
WASHERS AND
COTTER PINS, BUT
YOU SHOULD BE ABLE
TO USE THE OTHER
PARTS AGAIN!

Tanks...

Less Prying Needed

YER FINAL DRIVE HAS GOTTA COME OUT, BUDDY!

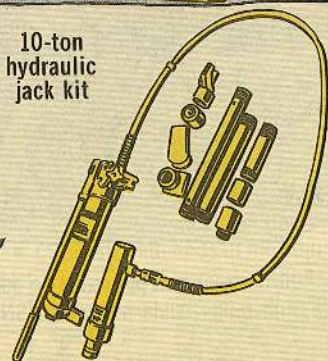
GULP! DIDN'T ANYBODY TELL YOU THAT YOU CAN USE TH' 10-TON HYDRAULIC JACK KIT!

There's a kit in your No. 2 Common shop set that can make removing a tank's final drive almost as easy as squeezing toothpaste from a tube.

Plus, it can reduce damage done to the seals by a tanker's bar.

USE THE 10-TON HYDRAULIC JACK KIT, NSN 5120-00-595-8388, THIS WAY...

10-ton hydraulic jack kit



- Follow the final drive removal tasks in your TM up through removing the 17 self-locking nuts that hold the drive to the hull.

- Then assemble enough of the hydraulic jack's extension tubes to reach the opposite hull wall.

- Put a wood section over the final drive mounting studs and place the jack

between the wood and the opposite hull wall.

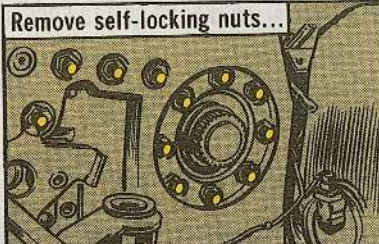
Place jack between wood and opposite hull wall



- Using 2 mechs, operate the jack and pry between the hull and the final drive casing.

THE FINAL DRIVE WILL SEPARATE SMOOTHLY AND YOU'LL BE LESS LIKELY TO RUIN ANY SEALS!

Remove self-locking nuts...



...and place wood section over mounting studs



Tank PMCS Confusion

The PMCS readiness reporting criteria for the main gun firing circuit test is confusing for some M60-series tanks and the M48A5.

HERE'S THE WORD FROM THE HEADSHED...

YOUR VEHICLE IS NOT READY/AVAILABLE IF ANY ONE OF THESE CONDITIONS EXIST!

- You cannot fire the main gun using at least one of the trigger switches.
- The firing circuit tester lamp does not go out when the trigger switch under testing is released.
- The emergency firing mechanism will not fire the main gun.

This applies to these TM's: TM 9-2350-253-10, TM 9-2350-257-10-1, TM 9-2350-215-10-1, TM 9-2350-260-10-1, and TM 9-2350-258-10.

Now you'll know if your tank's got a "go"!

Warning!

Clamp Must Be Replaced



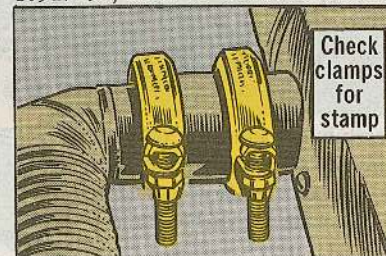
Check the personnel heater exhaust tube clamp on your M88-series recovery vehicle or M109-series howitzers.

All clamps stamped A.C. Ball P/N 19731, ordnance P/N 19207, 10917150, must be removed because

they work loose and let poisonous exhaust gases get into the crew compartment.

Do not use your personnel heater until you have installed Aeroquip clamp, NSN 4730-00-820-3079. It's stamped A56144P2-250 on the center tube and NH100086-200 on the end clamp. Order now.

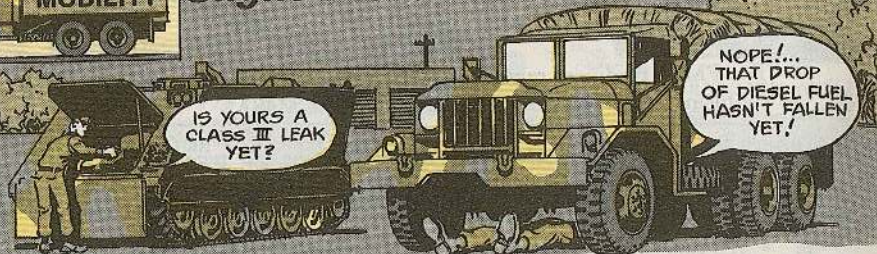
Until the Aeroquip clamps are installed, remove the igniters to all personnel heaters in M88's and M109's that have the A.C. Ball clamp so they cannot be used. This does not deadline the vehicle.



Check clamps for stamp



Slight Diesel Leak OK



A Class I or Class II fuel leak will not make your diesel engine-powered equipment "not mission capable" (not ready/available) under the equipment's

Interval	Item to be Inspected	Equipment is
S D A W M	Procedure: Check for and have repaired, filled, or adjusted as needed	not ready/available if:
	FUEL SYSTEM	
	a. Inspect fuel tank for leaks and broken supports.	Class III any fuel leakage.
	b. Check fuel lines and hoses for leaks and damage. Make sure all connections are secure.	Class III any fuel leakage.

"Any" is out...
"Class III" is in!

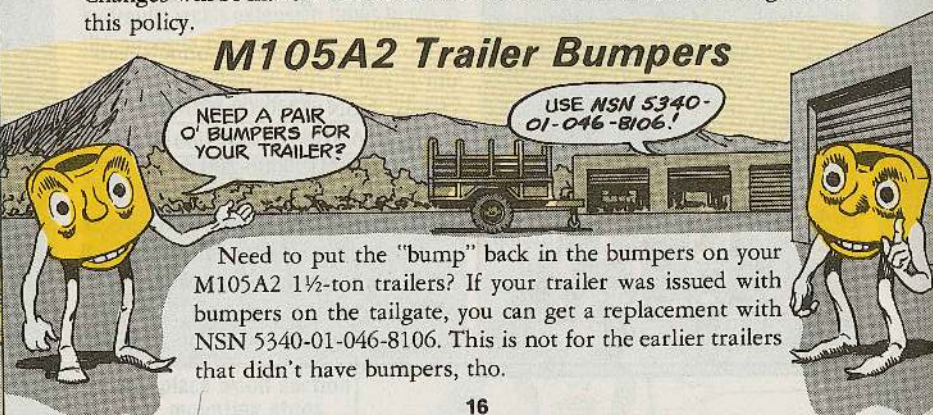
-10 TM PMCS. Also, a Class I or II diesel leak is not considered a deficiency under AR 385-55.

Only a Class III diesel fuel leak makes your equipment not mission capable. It also deadlines the equipment for a safety hazard.

Although TACOM Msg DRSTA-M 151300Z Jan 81 applies this switch only to "tactical wheeled vehicles", it applies to all diesel engine-powered equipment managed by the US Army Tank-Automotive Command.

DA Msg DAPE-HRS 031730Z Apr 81 sent the word to CONUS commands. Changes will be made in -10 TM PMCS tables and in AR 385-55 to agree with this policy.

M105A2 Trailer Bumpers



Need to put the "bump" back in the bumpers on your M105A2 1½-ton trailers? If your trailer was issued with bumpers on the tailgate, you can get a replacement with NSN 5340-01-046-8106. This is not for the earlier trailers that didn't have bumpers, tho.

M915-Series
Trucks...

Power Steering Fluid Checks

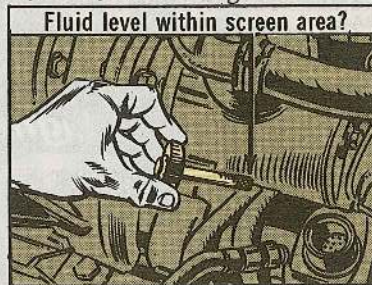


Hold one before you check the fluid level in the steering pump reservoir on your M915-series truck.

Table 2-1, Operator PMCS, in TM 9-2320-273-10 is wrong.

The straight poop is in LO 9-2320-273-12, Note 3, and also on the tag in the engine compartment. Check the fluid level with the fluid hot and the engine off—not with the engine running like it says in the TM.

When you pull the dipstick, if the level is over the screen, it's OK. If it's below the screen, add fluid to bring it to the FULL mark.



Defroster Fan

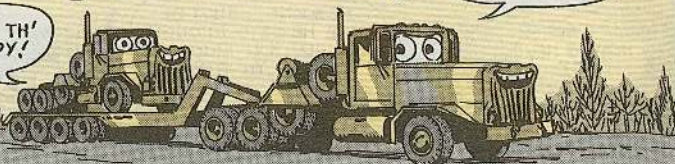


The defroster fan on the dash of your M915-series truck isn't listed in manuals. If you need one, tho, you can get it with NSN 2540-01-104-8948. You can get a kit that includes the nut, bracket, knob and switch assembly with NSN 2540-01-104-8949. If you just need the knob, order using NSN 5355-01-116-1129. Make a note for your TM 9-2320-273-20P.

Target: Safe Towing

MY PLEASURE!

HEY-- THANKS FER TH' LIFT, OL' BUDDY!



Hold it! Towing your M911 HET tractor truck can be dangerous. You've got no way to operate its brakes from the towing vehicle—not yet, anyway.

The headshed's working on a modification that'll let you hook up the towing vehicle's brake system to the towed vehicle's system. This'll give you the control you need for safe towing.

In the meantime, you'll have to haul your disabled M911 on a low-boy semitrailer.

And make sure you check out your travel route for limited overhead clearance. That M911 on a semitrailer sticks up mighty high!

The poop on the M911 towing hazard went out in TACOM Msg DRCPM-HT/DRSTA-CX 221300Z May 81.

TM-266-Series
1½-Ton Truck...

Lights Out?

IS THAT A MOTORCYCLE COMIN' UP TO TH' GATE?

NAH! AN M880!

MARSHALL'S GOT A SHORT IN HIS ELECTRICAL SYSTEM!

Check now—and maybe save yourself some trouble later.

If your M880-series truck's got the add-on 24-volt system for commo operations, you may be headed for a problem. The left side signal and side marker lights may fail when the wiring shorts out.

Take a look where the wires run down in front of the base plate holding that pair of batteries in the right front of your engine compartment. The wires may be squeezed in there and rub against metal. This'll wear thru

the insulation—and short out the wiring.

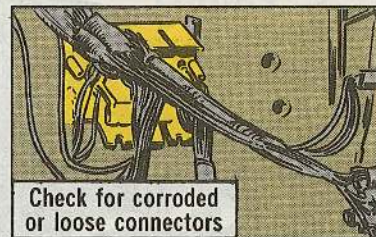
Give those wires some room. Wrap 'em with tape. Keep an eye on 'em. Head off trouble!



Wrap wires with tape!

Electrical Tip

Having problems with the electrical system in your M880-series 1½-ton truck that you can't track down? Trace the affected circuit to the bulkhead connectors at the firewall and check for corroded or loose connectors. If this is your problem, move the connector apart and together a few times to clean light corrosion. Use fine sandpaper or emery cloth for heavy



Check for corroded or loose connectors

corrosion. Replace damaged connectors, and reconnect them securely.



HMM... DOESN'T THIS CRATE HAVE SWAY ELIMINATORS?

DUNNO... BUT IT DOES HAVE LOOSE CONNECTORS!

WHERE CAN I GET THAT "EVERSEAL" TH' TM LISTS? NEED IT FOR THIS NEW DOOR GLASS!

Sway Eliminator

No, you won't find sway eliminators on all M880-series trucks. The poop in PS 343, Page 25, Anti-Sway Saves The Day, may give you a bum steer. One type of sway eliminator is on the M883, M884, M885 and M886 vehicles. Another type is on the M893 vehicle. Those're the only vehicles in the M880 fleet that have sway eliminators. Check the Usable-On Code for Fig 73A and Fig 73B items in your TM 9-2320-266-20P.

Door Glass Seal

Where do you get that "Everseal" mentioned in TM 9-2320-266-20, Page 2-81 Fig. 2-105 and Para 2-116, for door glass installation? You can't get it. Instead, you use tape, adhesive, rubber, NSN 9320-00-505-6615. If you don't need a whole 100-ft roll of this tape, try your support's automotive glass shop. It's in their vehicle glass repair/glass cutting tool kit.

"Boot" Dirt 'n' Grease

IT'S RTV SEALER FOR YOU GUYS!

WHEW! SAVED!

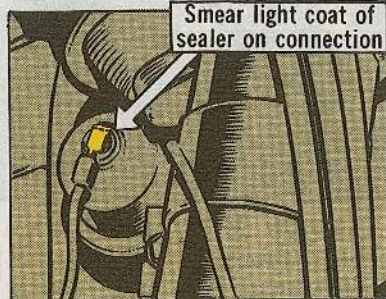
CHEE!

WHAT A DIRTY TRICK TO PLAY ON DIRT!

YEAH -- PUTS ME OUTTA BUSINESS, TOO!

Dear Editor,

A lot of electrical problems can be headed off by protecting connections with Room Temperature Vulcanizing silicone sealer.



(Ed Note—Great idea! It's like a rubber boot—maybe better, since the sealer sticks to the connection.)

MECHS EVERYWHERE SHOULD BE ABLE TO THINK OF A LOT OF OTHER APPLICATIONS!

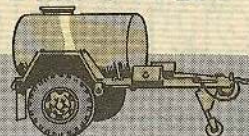
An example is the oil-pressure sending-unit connection on M880-series 1¼-ton trucks—discussed in PS 342, Pages 2-4.

After installing the clean wire connector on the clean sending unit connecting post, smear a light coat of RTV sealer, NSN 8030-00-874-5875, on the connection. Coat it completely—top, underneath, all around. This'll prevent dirt, grease, and moisture from getting into the connection. And it'll help keep the connection tight.

When there's a need to disconnect the hookup, you just peel off the rubber-like coating.

David L. Smith
Transportation School
Fort Eustis, VA

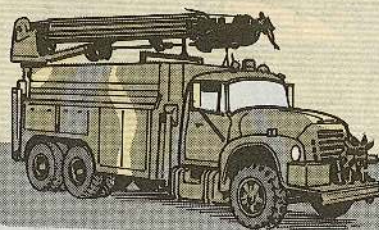
Water Trailer Brake NSN



TM 9-2330-267-14&P, Fig 5, Item 11 gives 2 PN's for the M149-series/M625 400-gal water trailer hydraulic wheel cylinders. Forget them! A single NSN will do the job. Get the wheel cylinders with NSN 2530-00-741-2065.

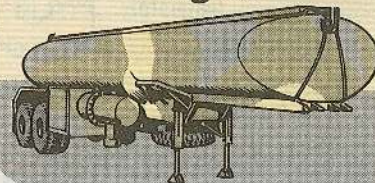
LEND AN EYEBALL TO THESE 5 ARTICLES, TRUCK TYPES ...

M876 Dacron Cable NSN



Use NSN 4020-01-070-9571 to get the 1-in diameter dacron cable for your telephone maintenance truck. Jot down the number until your TM's updated.

Fuel Tanker Gages



To get a fuel pressure gage for your M131-series fuel tanker, use NSN 6685-00-453-5884. Jot this number down; it's not in TM 9-2330-272-14.

Gama Goat Brake Tube

You won't get that V-shaped wheel brake cylinder tube if you order under the NSN for Item 21, Fig 95, and Item 14, Fig 96, TM 9-2320-242-20P. Instead, order under NSN 4710-00-081-0672. Make a note in your -20P. This tube'll fit better, anyway.



Wiring Harness

Forget NSN 2920-00-080-7149 if you're trying to get the wiring harness for the Gama Goat. To get Item 1, Fig 61, TM 9-2320-242-20P, you need parts kit, NSN 2590-01-103-8689. Kit includes harness, NSN 2590-01-078-0913, 3 additional lead cables, a tie-down strap and installation instructions.

TROOP
SUPPORT

0.5-
10-KW
GED
Generators...

Starting 'n' topping

Just by starting and stopping them right you can head off a lot of problems on small generators.

THESE TIPS ARE RIGHT ON THE MARK FOR ANY SMALL GENERATOR-- FROM DOD MODELS MEP-014A TO MEP-026A!

Pre-Start Procedures

1 Make sure the circuit breaker is in the OPEN or OFF position.

2 Set the fuel selector valve for the fuel source you're using—either TO TANK or TO AUX.

3 Match the output selector switch setting in the control box to your anticipated load.

4 Turn the voltage adjusting knob (rheostat) counterclockwise as far as it'll go.

5 Put the governor throttle control on START.

TIPS

Start-Up Steps

GENERATORS WITH MANUAL CHOKES—0.5-3-KW sets—follow these steps:

1 Adjust the choke till it's $\frac{3}{4}$ shut.

2 Set the RUN-OFF switch to RUN.

3 Give the starter rope one quick, steady pull.

If once wasn't enough, completely close the choke and pull again.

Once the engine's started, move the governor control to GOVERN or RUN, and back off on the choke about half way. Open the choke the rest of the way when the engine warms up.

Never over-choke, tho. Too much choke causes unburned fuel to dilute the oil in the crankcase. That means not enough lubrication and a cooked engine for your generator.

AUTOMATIC CHOKE MODELS use these start-up steps:

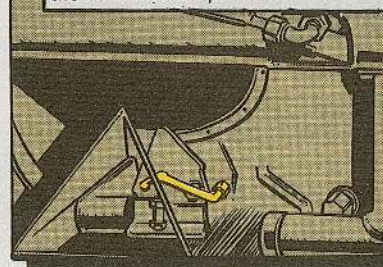
1 Place the REMOTE-LOCAL switch in the control box in the LOCAL position.



2 Set the NORMAL-EMERGENCY RUN-EMERGENCY STOP switch to NORMAL.



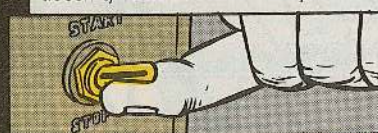
3 Adjust the oil pan baffle rod for the ambient temperature.



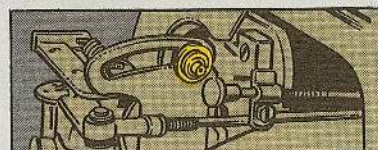
4 Match the air cleaner intake shutter setting to the existing temperature, too.



5 Push the START-STOP switch to START. (The oil pressure gage should move toward normal operating pressure when the engine starts. If it doesn't, shut the set down.)



Careful: Never hold the start switch on START for more than 15 seconds. Rest the motor a minute or more before you try to start the engine again.



After the engine starts, switch the governor control to GOVERN or RUN and bring the engine up to rated speed—3600 RPM for a DC generator; 60-Hz or 400-Hz for a set with freq meter. Let it warm up at no load for 3-5 minutes.

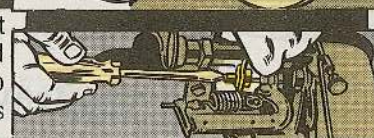
After warmup never run at less than rated speed. Never idle the engine longer than necessary to bring it up to rated speed during cold engine start-up. Lower speeds damage generator and engine components and do not cool air-cooled engines well.

Some Final Adjusting

1 Adjust the voltage rheostat for the output voltage you need.



2 Adjust the governor control—but only if it's needed to maintain rated Hertz. If the frequency (Hz) is too high, decrease governor RPM; if it's too low, increase the speed.



3 Switch the circuit breaker to ON (CLOSED), and you're ready to go.



Shutdown Steps

Just follow these steps to shut down:

1 Flip the circuit breaker to OFF or OPEN.



2 Turn the voltage rheostat all the way down (counterclockwise.)



3 Let the set run at rated speed for 3-5 minutes to cool down.

4 Shut down the engine. On generators up to 3-KW, place the RUN-OFF switch on OFF. Push the START-STOP switch to STOP on larger sets.



GIVE THE SET PLENTY OF TIME TO COOL OFF...

... THEN, COVER IT WITH A TARP TO PROTECT IT FROM THE ELEMENTS!

PS END

Precise Generators...

Leaky Hydraulic Actuators

Got a ring-around-the-collar—oil ring, that is, around the hydraulic actuator unit's collar on your 15-, 30-, or 60-KW generator sets?

Your support unit can stop the leak by adding one or more stainless steel spacers between the snap rings and flat washers on the hydraulic actuator.

Shims—spacers—are not in the supply system. Support gets 'em free from Cdr, TSARCOM, ATTN: DRSTS-MES, 4300 Goodfellow Blvd, St. Louis, MO 63120.

45-KW Pubs Update

The convenience receptacle circuit—Fig 3-10, TM 5-6115-274-12—takes a 250V fuse. The trouble light receptacle circuit and the power outlet receptacle circuits use 125V fuses.

Update the info for Item 42, Fig 73, TM 5-6115-274-20P like so: NSN 5920-00-011-7142; PN 311010, FSCM 75915 for a 10 AMP, 125V cartridge fuse.

100-KW Generator

To get the thermostatic switch and engine oil contactor for your DED generator set, NSN 6115-00-933-3498, TM 5-6115-428-20P, use NSN 2815-00-988-3811 (switch) and NSN 2815-00-213-8330 (contactor).

5-KW Magneto Fix Kit

If you have a sick magneto in your 5-KW's Mil Std 10-HP engine, chances are you can get a repair kit. If the engine has a WICO magneto, get the breaker point and condenser replacement kit with NSN 2920-00-781-4303. NSN 2920-00-856-7095 will get you the repair kit for the Fairbanks Morse model. Other magnetos found in Mil Std 10-HP engines have no repair kits.

Cover Numbers

No luck finding covers for the AC and DC control boxes on your 1.5-KW generator? Use NSN 6110-00-420-4318 for the AC box cover, Item 1, Fig. 5, TM 5-6115-323-24P. The DC control box cover is NSN 6110-00-116-2947 (Item 1, Fig 7).

3-HP Engine Priming Pump

Need the fuel priming pump shown in Fig 4-25.1, Page 4-32.1 of Change 1 to TM 5-2805-257-14? It's not listed in the -24P manual yet, but you can get it with NSN 4320-00-335-9260. Make a note of this number until the pump shows up in the parts manual.

P/U Fire Extinguishers

The fire extinguisher listed in your trailer-mounted generator power plant manual, TM 5-6115-365-15, has a mistake in its NSN. It should be NSN 4210-00-555-8837—not -8873—for the 2½-lb fire extinguisher. Jot the correct number down to save yourself some time.

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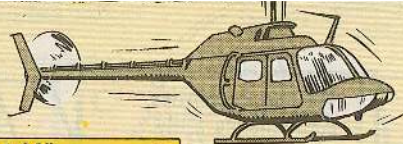
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AIR MOBILITY



1.04"
Easy Link
Adjustment
1.38"

Dear Editor,

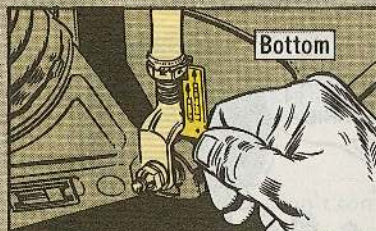
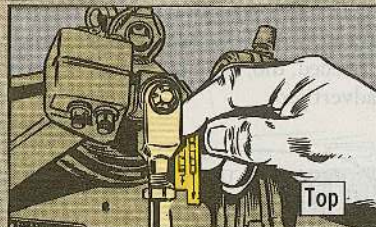
When adjusting the lower and upper main rotor pitch links of the OH-58, there is a lot of trial and error getting the proper thread engagement.

No more! Here's a work aid we made from 1/16-in steel stock. Two cut-outs of 1.04 inch (for bottom clevis) and 1.38 inch (for top clevis) are made in the tool. The notches give you the adjustment called for on Page 5-108 in TM 55-1520-228-23.

No more guessing around here, with this handy-dandy GO-NO-GO gage.

Ralph M. Pray
DIO, Fort Riley, KS

(Ed Note—Looks like a real time saver.)



Heed Warning

Getting ready to use the Tuxco Model AF-5 hydraulic fluid dispenser? Watch it bird mechs! Too much air pressure can be hazardous to your health. Stick with the maximum 50 PSI listed on the dispenser.

Never try to increase the dispenser's pressure capacity by altering the unit. If repairs are needed, make sure that proper replacement parts are used. Accept no substitutes.

These warnings are for real, soldier! Ignore them and you are dealing with a live bomb!

OH-58A Preventive Maintenance Daily...

Before pulling the PMD on your aircraft, let your fingers do the walking—thru the maintenance manual.

Sure, you crew chiefs follow the checklist. If you get down to the nitty-gritty of "why" complete inspections are needed, tho, any bird will perform as advertised.

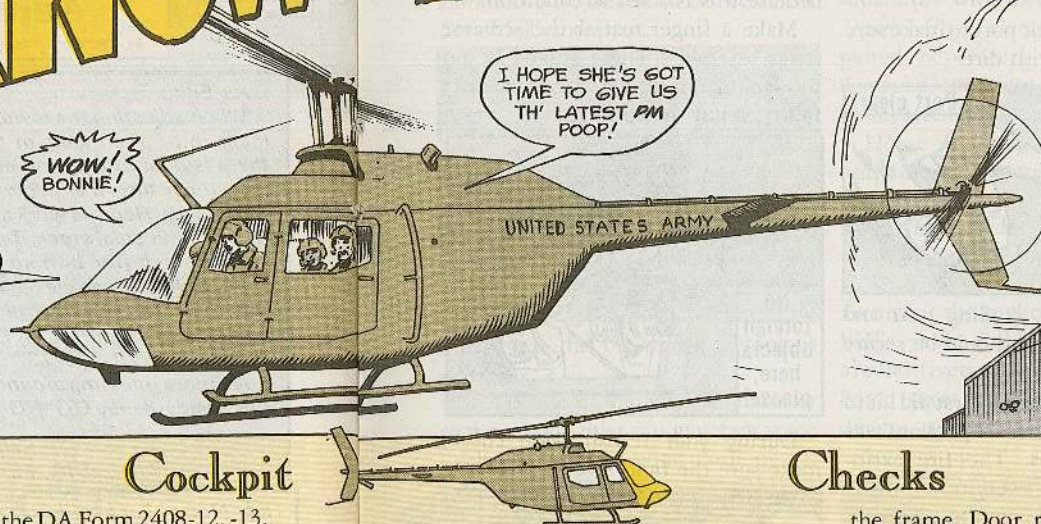
HERE ARE THE HIGHLIGHTS OF PULLING THE DAILY...

THEY'RE COMING IN, BONNIE!

HEY-- LOOK WHO'S HERE, JERRY!

WOW! BONNIE!

KNOW Your Bird!



Cockpit

eyeball the DA Form 2408-12, -13, -14 and -18. For example, you certainly want to know about any uncorrected faults listed on the -14. They may affect the mission at hand. Also, glance over the DD Form 1896 fuel card and DD Form 365F on weight and balance to make sure the info is current. AR 750-31 has the word on what pubs should be on board.

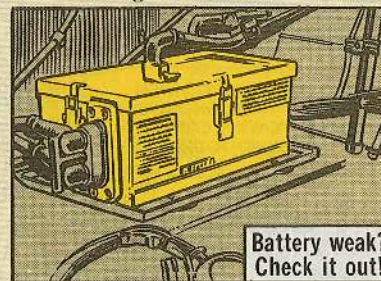
Start off on the right foot with an up-to-date checklist. Use TM 55-1520-228-PMD (Aug 80).

When you turn on the battery switch and get a low fuel reading—after you observe a full tank—hold one! Either you have a faulty gage or the battery is weak. Signal a tech inspector (TI) because it's important

Checks

the frame. Door repairs don't come cheap!

to determine the cause. A weak battery that delays ignition can give you a hot start that will damage the innards of the T-63 engine.



While making your interior checks, hang onto the door. High winds or rotor wash from other choppers will flex those babies backwards and crack

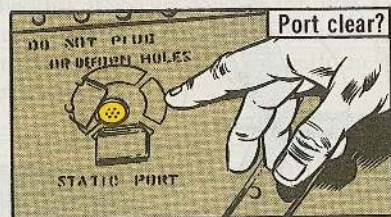


Eyeball the safety belts, making sure they're not left hanging in the slipstream to batter your bird's thin skin.

Cabin

If you're about to haul equipment or supplies, the cargo platform must be installed to protect the rear floor from punctures.

Observe the static port to make sure it's not plugged with dirt.

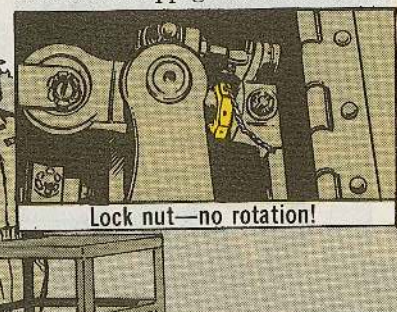


The crew door, landing gear and passenger seat belts should be secure and undamaged.

Inspect the tag on the first aid kit to make sure the last inspection was within 24 months. The fire extinguisher test is due every 6 months.

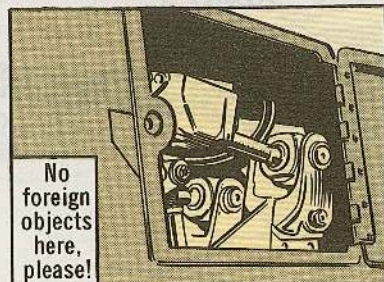
Focus on the hydraulic reservoir, servos and flight controls. There should be no leaks and the reservoir fluid level should be OK. The maintenance pub has the leakage limits.

Here's where you get a chance to use some preventive maintenance savvy, right out of the maintenance manual. Eyeball the hydraulic servo actuator. Any rotation of the lock nut in either direction, as indicated by non-alignment of the slippage marks on the lock

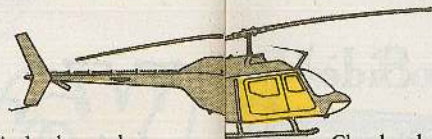
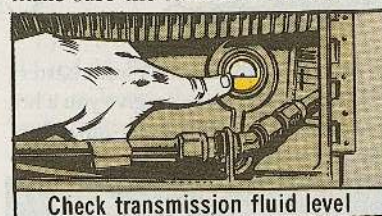


nut, means the servo cylinder has to be replaced. The bird can't be flown because this is a red X condition.

Make a finger test at the actuator cover assembly. There should be no foreign material that would restrict full travel of the controls.



During your transmission check, make sure the fluid level is OK.



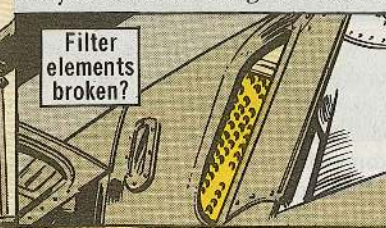
(Right Side)

Check the main drive shaft for grease leakage, discoloration, deterioration and clearance between the fire shield and shaft.



Be sure the oil cooler ducting is secure.

Inspection of the particle separator at the engine inlet can generate some lively discussions among mechanics. If



you spot damage to the particle separator, Para 4-46 in TM 55-1520-228-23 has the PM word. For example, separators with 25 or more damaged 2-piece filter elements must be repaired. Separators with 25 or more damaged one-piece elements have to be replaced.

Home in on the FM antenna. Use only finger pressure when checking it for attachment to the fuselage. Muscle power here leads to a loose antenna that'll keep your bird on the ground.

As you pull your Daily, glance around at the general condition of the bird's skin. A black, powdery ring around rivets means they're working. Some sheet metal repair is in order during scheduled maintenance, so write 'em up.



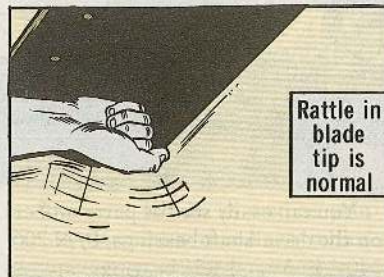
When you check the drain lines and vents on your trusty steed, never grab the battery drain line. A battery boil-



over could leave an acid deposit, giving you some "hot" fingers!

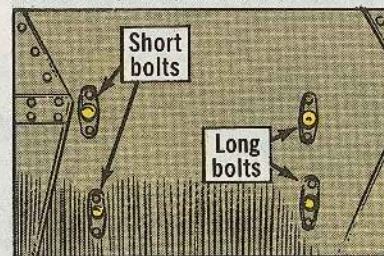
Tail Boom (Right Side) Cont.

When you inspect the main rotor blades, a rattle in the blade tip is normal. The noise is caused by movement of the tip weights.



When the screws or weights at the inboard part of the blade are loose, tho, you have a different situation. The screws are bonded in place during manufacture. You're not allowed to tighten them, so Para 5-86g in the maintenance pub says the blade has to be replaced.

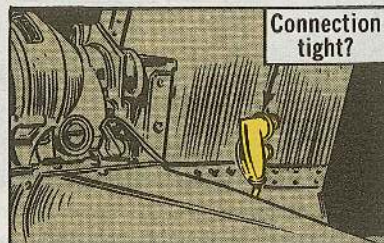
If your aircraft has the tail boom that has not been modified to use nuts and bolts for attachment of the vertical fin, only bolts and nut plates hold that baby. Two forward (long) bolts and 2 aft (short) bolts are used.



Have a look-see at the lower aft bolt because it could bottom out on the ballast weight, meaning the vertical fin is not secure. If that's the case, add

an additional thin washer next to the recess washer.

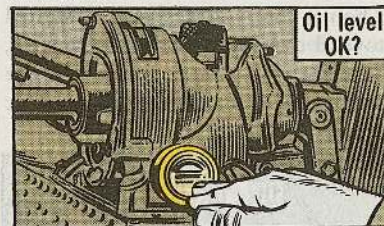
'Course, the antenna connections on the vertical fin also have to be tight.



If the tail skid is extremely loose, the bird may have had a hard landing. Give the tail boom the once-over for skin wrinkling, which might indicate structural damage.

When you check the tail-rotor gear box, moisture in the sight glass—due to condensation—is OK. If the oil has a "milky" appearance, tho, call for a TI.

By the way, if the gear-box filler-cap spring doesn't give you a snug fit, spread it. If the spring is sprung, tho, change it.



'Course, the gear box is magnesium while the tail boom is aluminum. You know what happens when dissimilar metals meet—corrosion! So you should spot a strip of protective tape between the two.

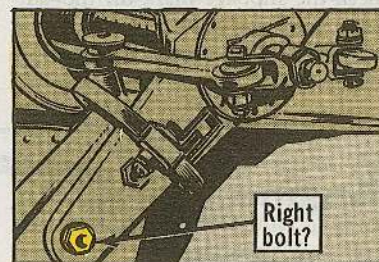
Tail Boom (Left Side)



You don't want metal-to-metal contact between the tail-rotor pitch horn and yoke, either. Take the cellophane from a pack of butts and insert one thickness between the 2 parts as your buddy gives you full left pedal. If the 0.001-in cellophane won't move freely, you don't have the 0.001-0.012-in required clearance.



When you look at the tail-rotor blades, be sure you have the correct bolts at the outboard blades attachment points. The Caution in Para 5-188d of TM 55-1520-228-23 says only



NAS 1306-31 thru -36 bolts are authorized. The NAS 676 titanium bolts originally used won't hold up with the current self-locking nuts...the bolt threads go to pot!

Inspect the blades for cracks.

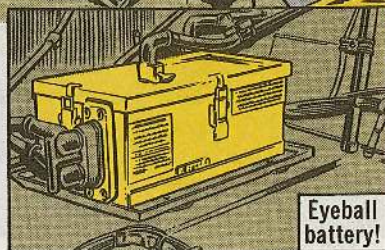
Give the left side of the tail boom the same eagle-eye treatment you used on the right side of your bird. Working rivets and chipped paint might not keep your bird on the ground but they should be written up for correction during scheduled maintenance.



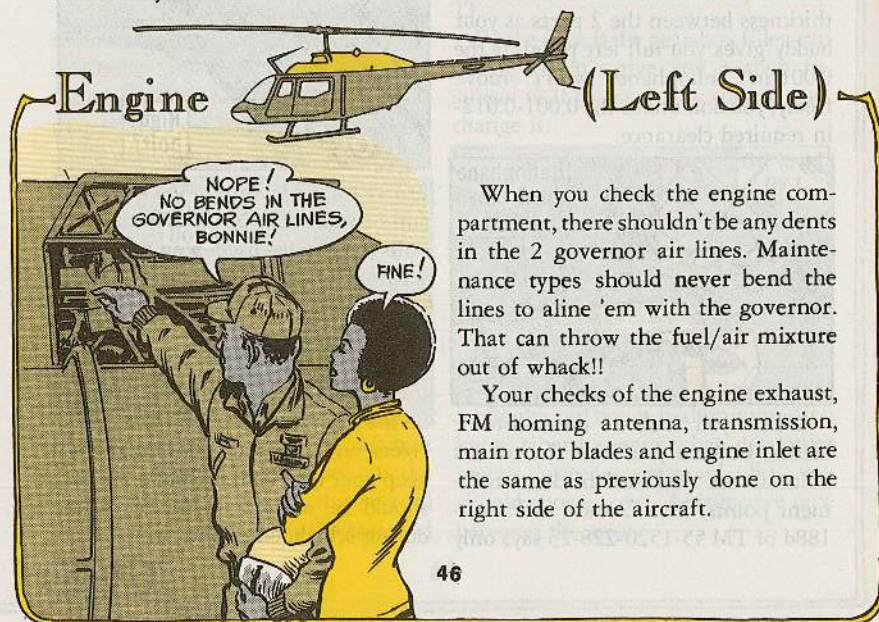
When you check the oil level in the sight gage, open up the oil tank compartment for a look-see. Plant your mitts on the oil cooler lines and blower for a security check.

When you open up the avionics compartment, use your flashlight to check the slippage mark on the tailboom attaching bolts.

Eyeball the battery for any overflow of electrolyte.

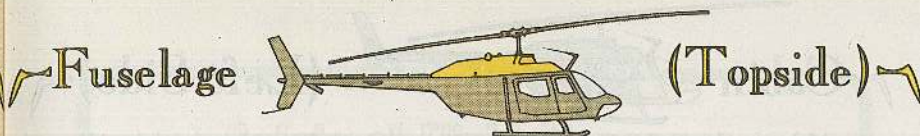


Never put any cargo in the avionics compartment...could short out the works!!



When you check the engine compartment, there shouldn't be any dents in the 2 governor air lines. Maintenance types should never bend the lines to align 'em with the governor. That can throw the fuel/air mixture out of whack!!

Your checks of the engine exhaust, FM homing antenna, transmission, main rotor blades and engine inlet are the same as previously done on the right side of the aircraft.



Be sure there is no FOD potential in the engine oil cooler exhaust, engine exhaust stacks and the transmission oil cooler exhaust.



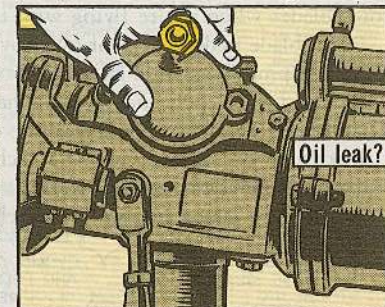
The filler cap on the hydraulic reservoir must have a nylon hinge pin...no metal allowed! The idea is—should the cap accidentally open—the flexible pin will prevent the cover from jamming the flight controls.



Make a "feel" test on the transmission oil filler cap.

When you're checking the main rotor system, eyeball the pillow block

slippage marks. If you spot an oil leak between the pillow block and trunnion, the seal has to be replaced.



Look at the main rotor split cones while you're topside. They can be Murphied!

For proper blade balance, observe that the bolts and grips have the same serial number. That's the word in Para 5-87 of the maintenance pub.

Check the hydraulic servos and flight controls for security and operation. If the hydraulic filter pop-out button is extended, push that little rascal back and write it up in the log book. If the red button is extended on the next pre-flight, the filter element has to be cleaned and inspected for serviceability.

Focus on the torque tube. Make sure there are no bends or dents because a damaged tube will prevent freedom of movement. During installation, the tube has to be shimmed to provide a 0.003-0.020-in clearance between the bracket bearing and tube, according to Para 4-97 of the maintenance pub.



Cabin (Left Side)

Make the checks that are similar to the ones you performed on the right side of the bird.

Make sure the seat belts are looped thru the seat and back cushions, and secured with nylon cord safety ties. You don't want those babies sailing into the rotor blades when you're flying with the doors removed.

Rotor blade tiedowns, pitot tube covers, engine inlet and outlet covers—all loose equipment—should be secured.

Secure the seat belt and shoulder harness if the left seat is not to be used. That'll keep them from jamming the collective.

Plant your derriere in the seat and check the cyclic, collective and pedals for freedom of movement.

Be sure you take a fuel sample to check for contamination.



Up Front

"Clean" is the way the windshield should be in your chopper as you complete the items on the checklist.



Yessir-e-e-e, crew chiefs, it pays to "bone up" on the aircraft you inspect.



Safety-of-Flight Messages

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

AH-1-81-25 Maint Notice AH-1 collective hub assy bearing P/N 640-001-449-3 NSN 3110-00-133-6452 DRSTS-MEA 011300Z Sep 81
AH-1-81-26 Maint Notice Remove AH-1 main rotor head sand deflectors P/N 540-011-174-11 NSN 1615-00-118-7110 DRSTS-MEA 111300Z Sep 81
AH-1-81-27 Maint Notice Inspect AH-1

pitch link tube P/N 209-010-460-3 NSN 4710-00-454-8814 DRSTS-MEA 141420Z Sep 81
UH-1-81-10 Maint Notice RCS CSGLD-1860, Change in repair procedures for UH-1 landing gear skid shoes DRSTS-MEA 031430Z Sep 81
CH-54-81-06 Maint Notice CH-54 phased maintenance DRSTS-MEA 111320Z Sep 81
UH-60A-81-25 Technical RCS CSGLD-1860, One-time inspect UH-60A Black Hawk connector, electrical, P/N

MS3476L8-33S, TB 55-1520-237-20-23 (UH-60A-81-25) DRDAV-EEB 092000Z Sep 81
AH-1-81-28 Maint Notice Inspect fitting P/N 209-030-183-1, NSN 1660-00-929-0374 on AH-1 DRSTS-MEA 281230Z Sep 81
AH-1-81-29 Maint Notice Retorque generator/alternator V-band clamp on AH-1 DRSTS-MEA 281300Z Sep 81

Cat 1 EIR Phone: AUTOVON 693-2086 (24-hr)

Status Symbol Cross-up

The status symbols on the form on Page 37 of PS 346 got crossed up. However, the info in the story is good. So, go with the words, but ignore the form.

Is Your Cable Able?

Cobra types, check your AH-1S's environmental control cable, PN 47-733-191-27, for loose or missing clamps. It takes all 4 clamps to keep the control cable in place. A loose cable will chafe the cyclic control tube and cause binding.

New Packing

If you Huey types run out of O-ring packings—Item 42, Fig 186 and Item 6, Fig 190 in TM 55-1520-210-23P—when pulling tail rotor system PM, no sweat. Ask for the replacement packing with NSN 5330-00-846-1956.

New Ute Fuel Pump

If the electrical submerged fuel boost pump on your Ute goes bad, ask for an improved type with NSN 2915-01-081-0401. This goes for all Ute models, except the U21G and RU-21H, which still get the old pump, NSN 2915-00-178-1049.

For Balancing Act

If you need the balance arms for your Vibrex blade tracker, order kit, NSN 1615-01-079-6378. That'll get you both the spanwise and cordwise balance arms.

Reflection on Safety

Looking for the word on reflective markings for ground-handling and flight-line equipment? Check out Para 8-69 of TM 55-1500-204-25/1, General Aircraft Maintenance.

Keeping an Eye on 'Night Moves'

When your Pipsy's not perking, you might as well prepare for visitors—unfriendly ones, at that.

If you're one of those troops who'd rather know what's going on (or coming in) out there, tho, keep your radar sets in top shape with a little PM.

HEY
LOOK,
GUYS...

... IT'S CONNIE
AND MACON!

MAYBE YOU CAN
HELP US GET THIS
THING BACK ON
THE AIR!

SURE--BUT IT'S
UP TO YOU AND YOUR
PM TO KEEP IT ON
THE AIR!

BOY--THEY SURE
FOUND ALPHA COMPANY
WITH THEIR PM GUARD
DOWN!

YEAH, MAN!

THOSE TROOPS
THINK PM IS SOME
KINDA TELEVISION
PROGRAM!

Feedhorn Facts

You won't get good feedback from your radar if the feedhorn is bent. Keep it straight by not using it as a handle.



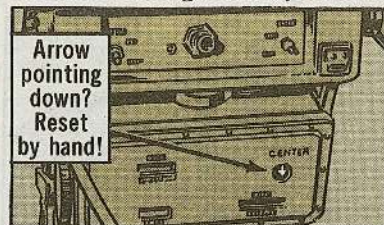
If yours already has an extra curve, turn it in. Do the same if the paint has chipped. Corrosion takes over when given this chance. Have support repaint it for you.

Carelessness will lay the feedhorn window low. If yours is kaput, turn it in. Don't be Mr. Fixit with plastic tape or such.

Paint and abrasives are no-no's on reflectors, too. The wrong paint fouls up their tracking ability. Support touches them up for you.

Heed the radiation warnings in your TM. What that radar sends out can fry your innards. Keep your visits in front of an operating set to a minimum.

If your antenna won't rotate when you flip the 4-way antenna control switch, eyeball the CENTER SCAN arrow. If it's straight down, you'll have



to reset it manually. Otherwise, the antenna won't move.

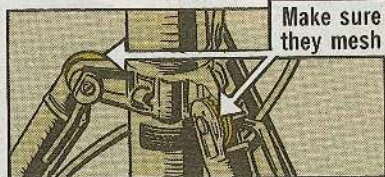
A Leg to Stand On

On the other end of your Pipsy-5, be sure you're on solid ground. Trying to anchor it on concrete or cement is too slippery. Set up on dirt or gravel if you can.

Before you do anything, tho, you unpack. As you do, go easy. Open the tripod legs slightly before removing the waveguide horn and telescope. There's not enough room to remove 'em otherwise.

Spread the legs easy. Too much muscle or spreading them too far can bust the rivets.

When you have the legs where you want 'em, make sure the column assembly and tripod leg gear teeth mesh. Mis-matched teeth chip or lose their grip. Rivets again can be a victim.



Fasten the collar wing screw finger tight. You can strip the threads if you use a wrench or pliers.

When the leg lock is snug, push the handle out of the way to keep it from getting bent or broken. Release the lock again before changing position, tho.

Now, drive in your ground pins...not all the way to the tripod foot. You can break the foot. Leave some room for easy extraction.

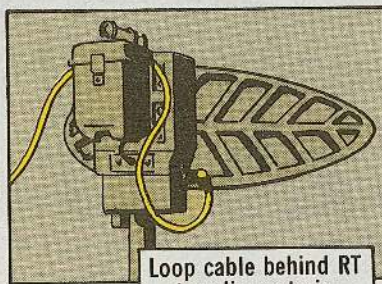
Since your PPS-5 is top-heavy, finish up by sandbagging the legs. A toppled set can KO the antenna assembly.

Cable Fables

Your remote cable needs care, too. Inserting the male plug straight prevents bent or damaged pins.

Taking some of the pressure off the connection will keep the set in business. Loop the cable behind the battery box as a quick and easy strain relief.

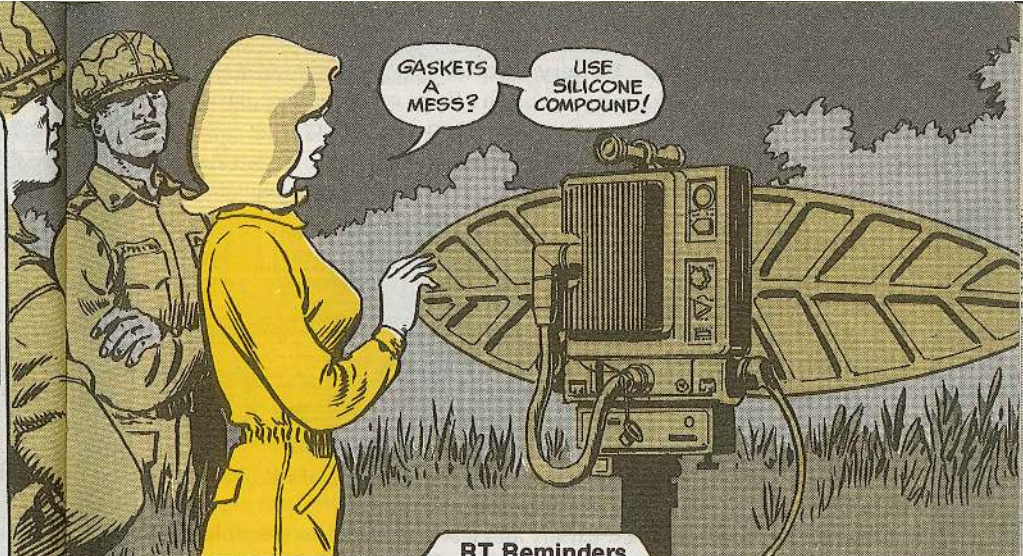
That CX-12004 cable has a natural coil. Forcing the roll against the natural bend might kink or break internal wiring.



A good way to rewind is to lay the cable on the ground. That way it falls into a natural coil.

Don't wrap it around your hand and elbow, tho. Kinks are forced out, but your cable suffers.

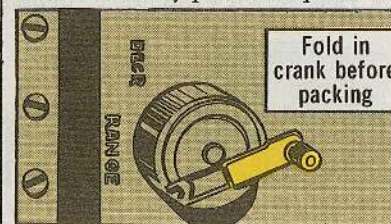
Finally, keep coils of cable out of harm's way during operation. Feet and gear can damage sensitive internal wires.



RT Reminders

Protect your radar's circuitry from dirt and moisture with a little silicone on exposed gasket surfaces, range crank shafts and the RT access door rubber. Silicone, NSN 6850-00-880-7616, will keep gaskets from cracking.

Never worry about greasing gears, tho. They're plated and need no lube. That would only pack 'em up or make the kind of mess support has to fix.



The range crank and other knobs and switches work loose. Tighten 'em and dab the screws with adhesive sealant, NSN 8030-00-081-2338. Check 'em regularly.

When you pack the set away, pack the crank in. Standing out makes it a candidate for damage.

When bringing your antenna back to its original position, be sure the AB-992 antenna drive is reading 000. Then secure the drive push lock. This prevents gear pin shearing, another support repair job.

Got the RT cover off? Watch the C609 capacitor in Block 600. The voltage doesn't bleed off. It carries some 600 volts to zap you.

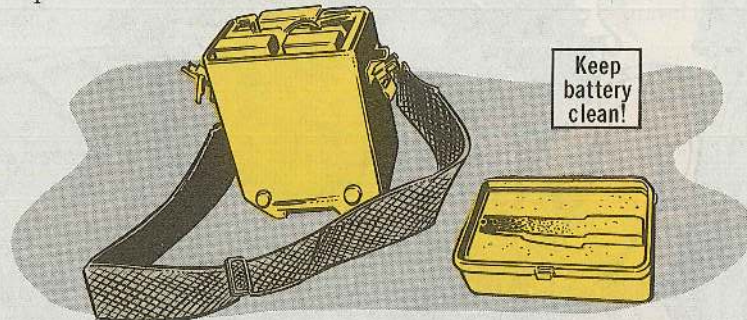
Another hot one is the TP2 test point. Keep fingers away.

Cavity power and tuning adjust knob threads can tighten up on you. But, keep vise grips and pliers away. A light dab of silicone will let the knobs move freely again.

Finally, be careful when aligning the antenna while it's moving. Keep hands away from the fast slew switch area and mounting/beveling assembly.

Battery Shorts

Protect your battery by keeping corrosion off the cable and receptacle. Use the caps that are available. Corrosion can zap an idle battery.



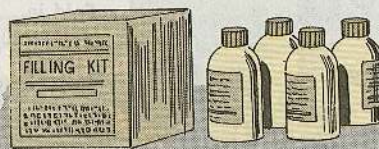
If you find corrosion, clean the hookups and then add a dab of silicone to head off the problem.

When you org folks put a new battery into service, respect the electrolyte. It's dangerous stuff. Wear the items called for in TM 11-6140-214-15 for your personal safety. Know how to get a medic's help fast if you or a buddy needs it.

Also, be sure clean flowing water is readily available to flush eyes and skin if you are accidentally splashed with electrolyte.

OK, you're safety equipped and you've got the kit the BB-622 comes with. You're ready to put life into your battery. Here are a few tips to keep things running smoothly.

If you lose some of the 4 bottles of electrolyte (which is just enough to fill one battery), you can't get another kit. You can get electrolyte solution, tho. Order NSN 6810-00-543-4041.

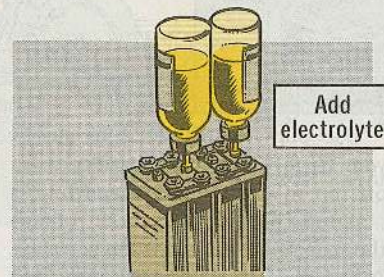
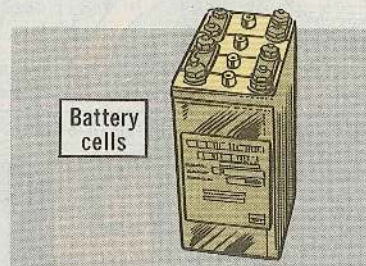


Keep electrolyte bottles closed until you're going to use 'em...even while preparing the battery. Prepare one bottle and cell at a time. Leave the others closed.

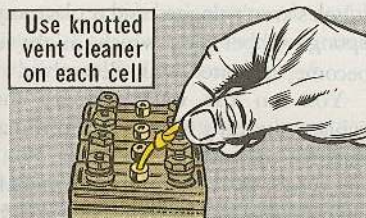
Fill It Up

Take the cap off one bottle, remove or puncture the seal and screw in the filler cap. Each bottle has enough solution for one cell.

Insert the tip of the filler cap into the cell vent hole and tighten it by twisting a quarter-turn clockwise.



Squeeze the bottle gently a few seconds at a time until it's empty. If liquid is repeatedly drawn back into the bottle, wait for the level in the cell to drop and try again. Keep the bottle in until all electrolyte is transferred.



When the cell's full, use the knotted vent cleaner. Shove it into the vent hole as far as it'll go. Repeat for each cell.

Tweezers and cotton will collect any liquid that landed on the battery top. You only get 2 filler caps, so don't toss 'em when you finish with the first cells. Keep them for filling the other cells.

When filled, let the battery stand for 48 hours to soak up the electrolyte.



YEAH --
I AM CHARGING
MY BB-622...

HOW'D
YA GUESS?

?

!

Charge!

Use only the PP-4127 to charge your battery. Keep the battery cover off, too, to watch for gassing or smoke.

A full charge'll take about 8 hours the first time, so note when you start. When the charger cuts off, reset it. If you're powered up, it'll cut off again within several minutes.

If the PP-4127 cuts out before 8 hours and continues to cut off after resetting, clean cell tops and terminals, be sure vent holes aren't clogged and replace any sponge rubber plug which might've become saturated with electrolyte.

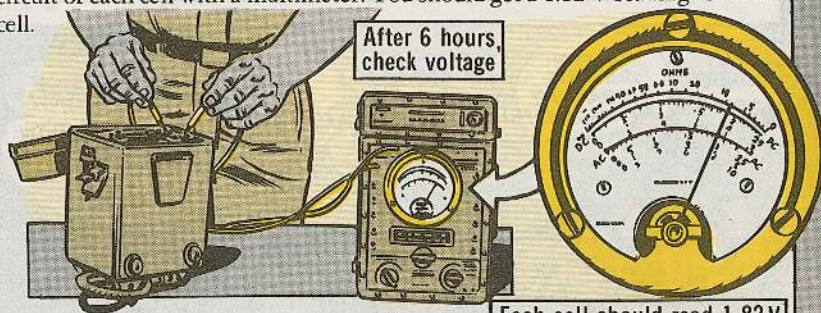
You can also wash and dry and replace the plug. Check top terminal nuts for tightness.



If the BB-622 still won't charge properly, turn it in. If charging on A models exceeds 16 hours, suspect a short. The B may take as much as 24 hours. Heavy gassing in any of the 4 cells with a charger operating clues you to a short. Again, turn it in.

The above tips apply to initial charging. It takes only 6 hours to recharge. If yours take more, turn 'em in.

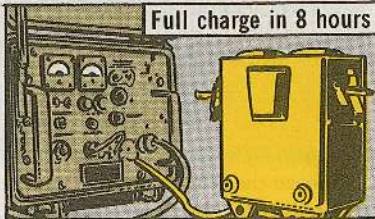
After a charge, let the battery stand for 6 to 12 hours and check the open circuit of each cell with a multimeter. You should get a 1.82 V reading for each cell.



56

Each cell should read 1.82 V

Full charge in 8 hours



Storage

Battery storage life is indefinite. If it can still put out 50 percent or more of its original capacity, it's OK.

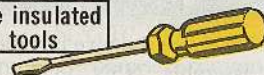
The best method is dry storage below 90 degrees. That should mean 5 years of shelf life. Storing 'em wet and charged kills a battery in less than a year. They lose 5 percent a month stored this way.

If already wet, store 'em discharged below 75°F. That gives you 18 months.

Final Tips

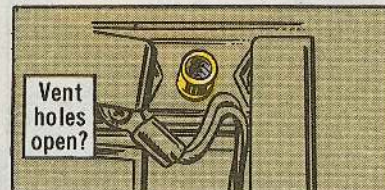
• Insulated tools are best for working around batteries because they

Use insulated tools

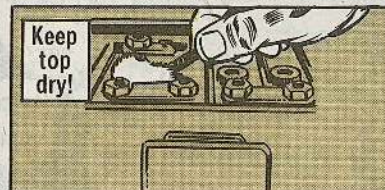


prevent accidental shorts. A double layer of tape will insulate your tools while working on your Pipsy-5.

• When the battery's in service, give the vent holes an occasional eyeballing to be sure they're open.

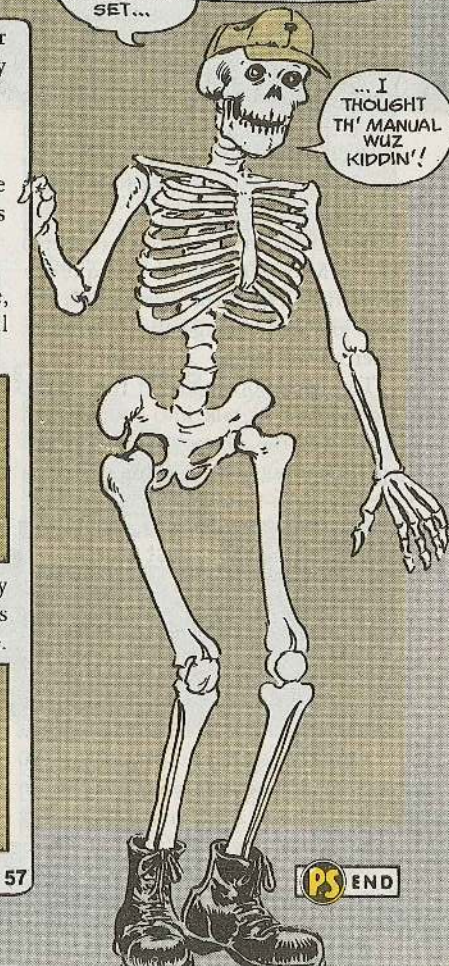


• Keep the battery top dry by sponging up excess moisture. That's probably electrolyte, tho, so use care.



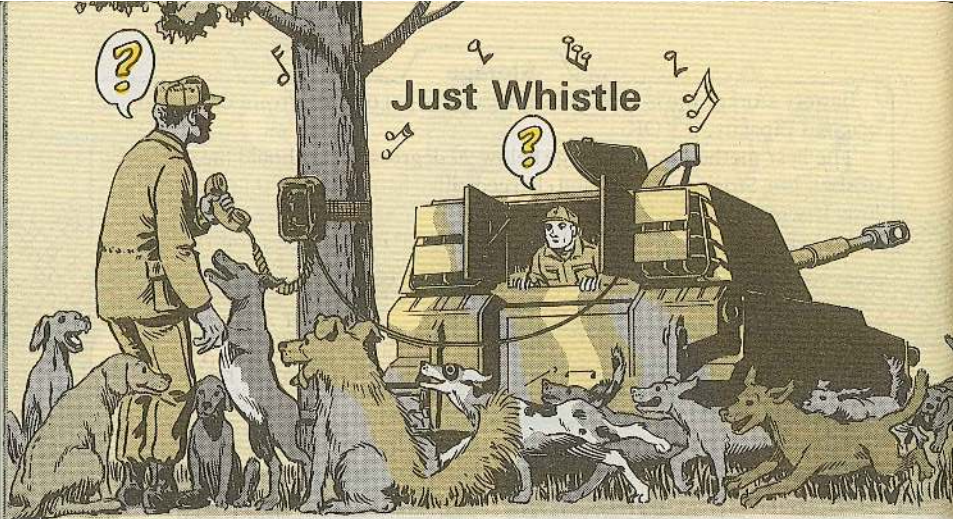
...AN' I GOT A FINAL
TIP FER YOU PIPSY TYPES...
IT AIN'T A GOOD IDEA T' SPEND
TOO MUCH TIME IN FRONT OF AN
OPERATING
SET...

...I
THOUGHT
TH' MANUAL
WUZ
KIDDIN'!



57

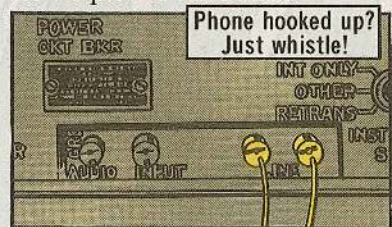
PS END



Getting somebody's attention with a TA-312 telephone is as easy as cranking the hand-ringing generator—usually.

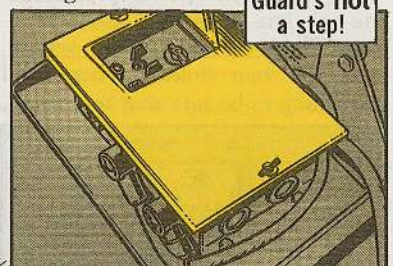
But not when your phone's tied in to an AM-1780 audio frequency amplifier. Then, the generator's 90-volt jolt will damage the amplifier's internal workings.

To signal somebody in this setup, just whistle or talk into your phone. And since the phone's circuit is held open continuously, you don't have to use the push-to-talk switch.



Another way to keep your AM-1780 on the job is to keep your feet off. On an M110 howitzer, for instance, the box is out in the open. But, it's not a step.

Not even when you've installed the guard assembly, NSN 5830-00-179-7736. The guard is there only to protect your amplifier from blast damage.



Tightening the electrical connector on your AN/GRC-103 radio set's T-983 transmitter is a sure commo killer.

The connector needs some play. That's why it comes with sleeve bushings for the screws. The bushings prevent you from overtightening the screws.

Some troops toss the bushings,

Keep It Loose

thinking-tight is always right for connectors. Not this time. One turn of the screw can put you off the air.

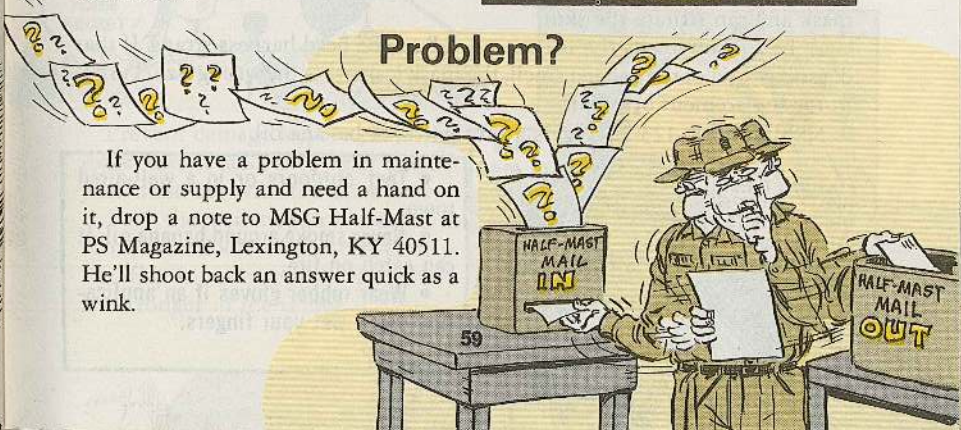
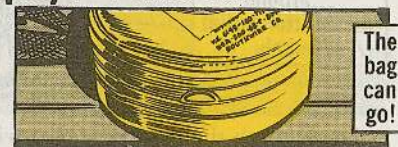
The receptacle for that transmitter is at the back of the radio case. You can't see if the connector and receptacle are mating properly. If you try to push them together, pins or connectors are the victims.



Never use force. The play built into the connector gives some leeway and makes the proper connection easier.

MX-306 Empty? Toss It!

When your MX-306 wire dispensers have dispensed their wire, the bags can be disposed of locally. The headshed doesn't need them for refill and reissue.



Protective Masks...

Make the "Banana" Check



If fitting protective masks or checking them for leaks drives you bananas, NBC types, try banana oil.

With the masked soldier sitting down, pass a cotton swab dabbed in banana oil 1 or 2 inches above the facepiece—along the edge where it makes contact with the face.

Test for fit and leaks around the eyelens, inlet valves and voicemitter-outlet valve assembly, also.

TEST FOR LEAKS...

...around eyelens...

...along edge...

...around voicemitter-outlet assembly...

...around inlet valves!

Never touch the mask or soldier with the banana oil 'cause it weakens the mask and can irritate the skin.

If the soldier smells the banana oil, adjust the head harness straps. If that doesn't get rid of the banana smell, the mask leaks or is the wrong size. Turn it in for replacement or repair.

NSN 6810-00-123-7047 gets a pint bottle of banana oil.

FOLLOW THESE SAFETY RULES WHEN YOU TEST THE MASK...

- Test outdoors or in a well-aired room.
- Never smoke around banana oil. It can catch on fire.
- Wear rubber gloves if an application could wet your fingers.

Customized Mask?

CUSTOMS

Take It with You



Has your protective mask been modified to fit your face? Be sure you take it with you if you transfer to another unit.

Since the modified mask fits only you, it goes with you when you go.

Tell your NBC specialist you have a modified mask. The NBC specialist will get with the folks at your property book office for a little paperwork shuffle.

They'll send you DA Form 3645, Organizational Clothing and Equipment, to sign. Then they'll drop the mask from their records with a DA Form 444, Inventory Adjustment Report, using DA Msg DAMO-FDP R 261727Z Jun 81 as the authority.

The modified mask biz is only temporary—until extra-small M17A1 protective masks and the new M30 protective masks are fielded.

When the new masks come out—or you no longer need your modified mask—turn it in to your NBC specialist. He'll turn it in to the direct support unit.

All Mask Carriers...

Open from Center

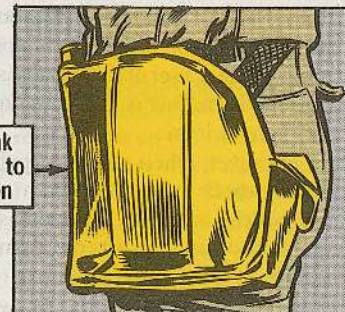


Never unsnap the snap fasteners one at a time. It slows you down. And you need all the speed you can muster in case of a chemical or biological attack.

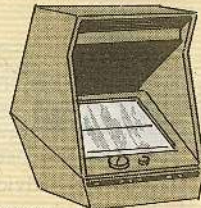
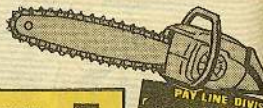
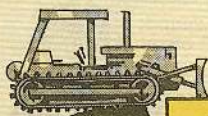
Prevent damage to your protective mask carrier and save time getting your mask out with the same move.

Yank the carrier open with one jerk from the middle of the carrier flap. The flap is made to open that way—it's stronger in the center.

Yank here to open



Here's How to Get 'Em



TO DO IT
RIGHT...

...YOU
NEED
THE
MANUALS!



You have half the battle won on maintenance downtime and repair part replacement costs when you use the right maintenance and parts manuals.

Here's how to get commercial equipment manuals.

Commercial Construction Equipment (CCE). Every CCE item is over-packed with 2 Operator, Service and Parts manuals, and some SOMARPI—Supplemental Operating Maintenance and Repair Parts Instructions. Never accept CCE items—brand new from DSU, or used from another unit—unless a set of these pubs is with the end item. Fact is, the pubs are part of the end item.

However, when you need pubs for CCE, check the DA Pam 310-4 microfiche to see if a manual has been published for it. If so, the Army has "authenticated" the manufacturer's commercial manual for Army use. About half of the CCE in the Army

have DA TM's. Order on DA Form 4569.

If you need a manufacturer's set of manuals or a replacement pub, request it like you would a repair part from DCSC, RIC S9C. Order only the number of pubs you need.

Use DD Form 1348-6, the pub number from the SOMARPI as the PN, and the manufacturer's FSCM.

But remember, if you're using a manufacturer's manual and an Army TM is published for your CCE, you are not automatically on distribution for it. You have to set up your pinpoint order on the 12-series DA Forms.

Hang onto your SOMARPI pub until an Army TM is printed because that's the only place you'll find the Maintenance Allocation Chart, ASL/PLL, BII, special tools, warranty info, PMCS, etc.

If you have any problems with CCE Pubs, write to Commander, US Army Tank-Automotive Command, ATTN: DRCPM-CEL, Warren, MI 48090.

When the Army TM is published for your CCE, the MAC will be in the organizational maintenance manual.

Commercial Off-the-Shelf Items. These include sewing machines, chain saws, microfiche readers, drills, grinding and welding machines, etc. Also, steam cleaners, jacks, typewriters and other office equipment. Again, check the DA Pam 310-4 fiche for an Army TM.

Draw a blank? Order operator's and parts pubs to support this equipment just like you request a repair part from your supply source. Order on DA Form 1348-6.



More on 310-4 (Fiche)

DA Pam 310-4, Index of Technical Publications, features some helpful new info. Section V offers a partial Line Item Number (LIN) to publication cross-reference. Section VI crosses some NSN's to publication. For Reserve and Army National Guard units—and outfits supporting them—DA Pam 310-4 lists pubs rescinded for Active Army only. If the pub you need isn't in the regular sections, check the rescinded list. Pubs rescinded for all Army units go on DA Pam 310-99, Obsolete Pubs/Forms.

500-Gal Drum Kits



To repair holes up to $\frac{3}{8}$ inch on your 500-gal collapsible fuel drum, use Type I repair Kit, NSN 8110-00-856-6244; for holes up to 6 inches, use Type II Kit, NSN 8110-00-856-6246. CTA 50-970 says you get a Type I Kit for every 3 drums in your unit.



It's Good Advice!



Advice. Who needs it, right? Wrong! Your supply support people often need your advice—advice code, that is.

Advice codes are 2-part codes that keep support from coming back to you with questions or a bounced request.

WHEN YOU HAVE AN UNUSUAL REQUEST, ALERT YOUR SUPPORT WITH AN ADVICE CODE!

HERE ARE SOME OF THE MOST COMMON ONES...

- 2A You cannot get the item through manufacture, local purchase, fabrication or cannibalization even though the SMR code in the parts pub says use those methods.
- 2B Only the item requested will do. You cannot use a substitute.
- 2F You know the item is obsolete—or an N phrase code shows up on the AMDF—but you still need it for equipment you have.
- 2L You need a large quantity of an item—maybe even more than you're OK'd for on your PLL. This code tells support that big number's no goof—you actually need that amount.
- 2T You **must** have the requested item by the required delivery date on the request or forget (cancel) it. You use this code when you have a hurry-up hot project going or your unit's due to ship out on a certain date.

Put advice codes in Block 22 of a DA Form 2765 or card columns 65-66 on the DD Form 1348-6.

You'll find more advice codes in AR 725-50, Appendix B of DA Pam 710-2-1 and FM 38-725-10, Logistic Codes for Unit/Organization.

Connie's Mini Minis

1982

CONNIE, I GOT A MAINTENANCE PROBLEM...

NOT ENOUGH DIAPERS!

?

FARE Ground Rod

Need a replacement for the special ground rod that's part of your forward area refueling equipment (FARE)? NSN 5975-01-050-5707 gets the one you need.

HOTLINE Expanded

The Tank HOTLINE now also covers missile guidance and control systems for LCSS, ground and air TOW, Dragon, Lance and Shillelagh. Dial AUTOVON 694-6582 any hour, any day.

Supply Pub Split

AR 710-2 did a 3-for-1 split! The AR now just has policy on using unit supply operations and retail stock record accounts—no more forms and how-to's. DA Pam 710-2-1, Using Unit Supply System Manual Procedures, gives you all the how's of operating at unit level. DA Pam 710-2-2, Supply Support Activity (SSA) Supply System Manual Procedures, gives SSA's the word.

'Course, if you're under a special automated supply system (like DLOGS and DS4), your user manuals are still good. Start using the new books on 1 Jan.

MX-6707 Ground

A 7-in strap to ground your MX-6707 matching unit is NSN 5995-00-192-9614. It's listed in TM 11-5985-262-20P.

Aircraft Status

A change in the May 81 TM 38-750 on aircraft status symbols escaped some people. Take a look at Para 10-3d. When you're starting a phased maintenance, PMI or PMP inspection before it is due, use a red diagonal—not a dash.

Get Second Opinion

Before deciding to ship a faulty T-53 or T-55 engine for overhaul, ask your aircraft field maintenance technician to have a look at it. He could recommend calling in a depot maintenance team to make on-site repairs—even to compressors with foreign object damage. TSARCOM Msg DRSTS-MEA (2) GEN 80-16 291610Z Oct 80, is still in effect with the details.

Helmet Liner Paint

Need paint for the fiberglass liner that goes inside your M1 helmet? Use NSN 8010-00-111-7937 for a gallon can and NSN 8010-00-111-8010 for 5 gallons. The paint works on CVC helmets, too.

M149A1 Trailer Tank Parts

Need parts for the tank body on your M149A1 400-gal water trailer? Fig 16 in TM 9-2330-267-14&P lists tank body parts for other models but leaves out the -A1 model. Items 3 thru 47 in Fig 16 apply to the M149A1 and should include 997 in the "Usable On" code.

★ U.S. GOVERNMENT PRINTING OFFICE: 1982-559-009/2

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

TB 43-0002-87

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN
BRAKE FLUID, SILICONE (BFS) CONVERSION PROCEDURES
FOR TANK-AUTOMOTIVE EQUIPMENT

Headquarters, Department of the Army, Washington, DC
20 April 1981

**IT'S
HERE!**

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

bulletin. If you have any comments, please use the following information to help you prepare your report. Mail your report to the following address: Department of the Army, ATTN: Technical Bulletin, 4000 ...

Purpose. This bulletin provides instructions for the conversion of hydraulic brake fluid systems from the current MIL-B-46176 to the new MIL-B-46176.

1. Purpose. This bulletin provides instructions for the conversion of hydraulic brake fluid systems from the current MIL-B-46176 to the new MIL-B-46176.

2. Scope. This bulletin applies to all tank and automotive equipment that uses hydraulic brake fluid.

3. References. MIL-B-46176, Hydraulic Brake Fluid, Silicone (BFS).

4. Distribution. This bulletin is available to all personnel who are responsible for the maintenance of tank and automotive equipment.

HBA
Brake Fluid, Silicone
MIL-B-46176
9150-01-102-9455
204V 301110 0102 9455
PLA 61 81 Lot GB 051006
204V 81-C-1093

WARNING: Do not get in contact with the eyes. Wash the eyes promptly with water for at least 15 minutes. Eye hazard is neither severe nor permanent.

NOTE: Decals are not available at the time of conversion to BFS. Use a suitable tag to label the equipment. Attach to master tag. Replace tag with a permanent tag when available.

Other Important Info In:

TACOM	Msg	DRSTA-M	011400Z	Jul 81
TACOM	Msg	DRSTA-M	141200Z	Aug 81
TACOM	Msg	DRSTA-M	171400Z	Sep 81