

Issue 407

PS

October
1986

THE PREVENTIVE MAINTENANCE MONTHLY

HE'S NEVER STOPPED
GRIPING ABOUT TOOLS
... UNTIL NOW! HE
LOST HIS VOICE!

WHAT A WASTE OF
BREATH! MAYBE HE DOESN'T
KNOW ABOUT **TIPS**---
TOOL IMPROVEMENT
PROGRAM SUGGESTIONS!



See **TIPS**, Page 29

Maintenance Won't Wait!

One thing's sure—time doesn't stand still for anything or anybody.

While the hands on the clock circle surely and endlessly . . . and the pages flutter off the calendar with ceaseless regularity . . . you can't sit idly by and hope that your equipment will be ready to go when the whistle blows.

Your gear may have been ready yesterday . . . is it ready today?

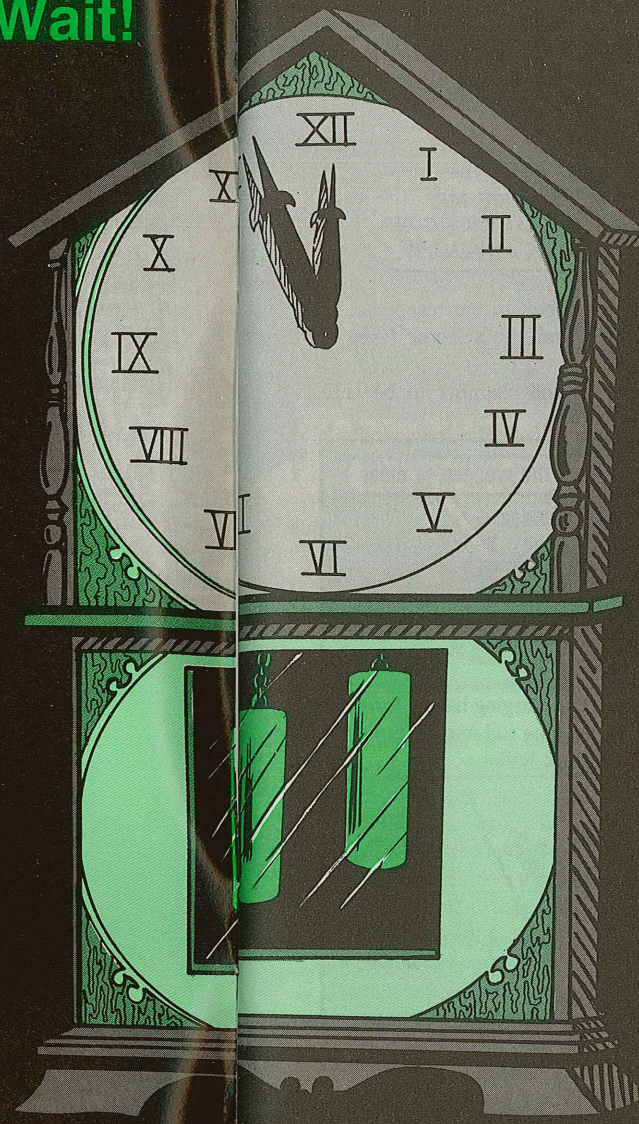
Will it be ready tomorrow?

Like the relentless passage of time, your maintenance must be constant and keep pace with time.

Whether it's your weapon, your ammo set, your vehicle, chopper, generator . . . it makes no never mind. Your equipment is designed to play an important part in your future—and you're betting your life on its ability to come through when the chips are down.

So don't do half-a-job . . . or put off today's inspection or PM until tomorrow. Someone may push the button tonight . . .

Tomorrow may be too late.




THE PREVENTIVE MAINTENANCE MONTHLY

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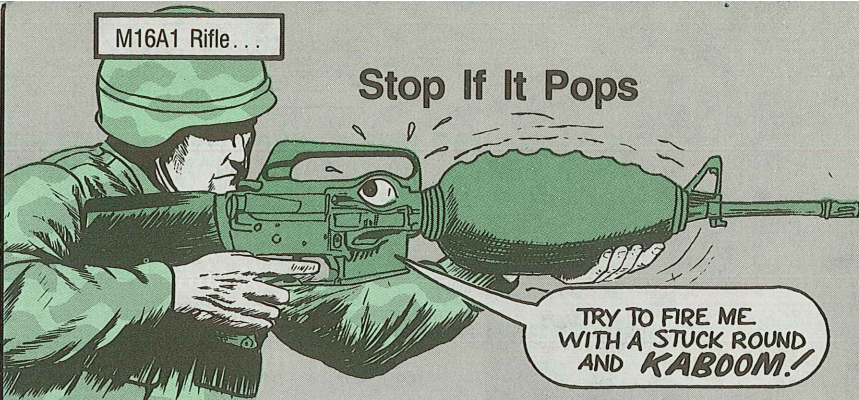
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PS wants your ideas and contributions, and is glad to answer your questions. Name and address are kept in confidence. Just write to:

MSG Half-Mast
 PS Magazine
 Lexington, KY
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Stop If It Pops



If you hear a loud pop while firing your M16A1...

Or recoil is sluggish...

STOP FIRING! DO NOT APPLY IMMEDIATE ACTION.

You could have a bullet stuck in the bore. If you attempt to fire, you risk a damaged rifle—and severe injury.

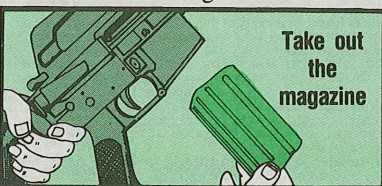
If you've been firing rapid fire, make sure the bolt carrier assembly is forward. Then, with the barrel pointed in a safe direction, wait 15 minutes for the barrel to cool. That's cook-off insurance.



Turn selector to **SAFE**

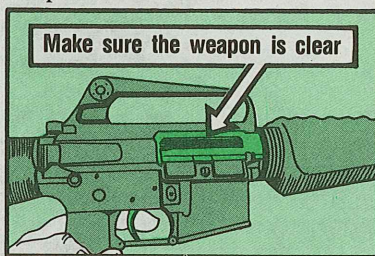
Once the barrel cools, check for a stuck round:

- Turn selector lever to SAFE.
- If weapon is not cocked, the lever cannot be pointed toward SAFE.
- Remove the magazine.



Take out the magazine

- Lock the bolt to the rear.
- Insure that the selector lever is on **SAFE**.
- Look in the chamber to be sure weapon is clear.



- Return the charging handle forward.
- Put a cleaning rod into the bore and feel for a stuck bullet.



Use a cleaning rod to check for a stuck bullet

If you find a stuck bullet, **DO NOT** try to remove it. Turn your rifle in to your armorer.

The word's on Page 2-32 of TM 9-1005-249-10 (Feb 85).

Wrong Help Hurts



Hold one, riflemen, before you try to do more than you're supposed to for your M16A1. You can damage your rifle.

Some soldiers try to help by disassembling the upper or lower receiver for better cleaning. If you push receiver pins out with the wrong tool, you enlarge the holes. The holes can't hold the pins. The receiver...and rifle...are ruined.

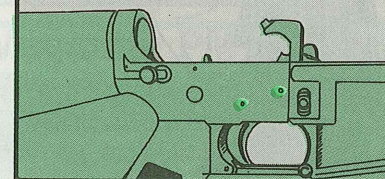
Others think they can clean better by removing the flash suppressor. The flash suppressor has special torque requirements. If you screw the suppressor on too tight, you strip the barrel threads...and you've ruined the barrel.

Many think cleaning a rifle with hot water will help. Not so! Water trapped in tight places corrodes parts like the bolt carrier key and forward assist spring.

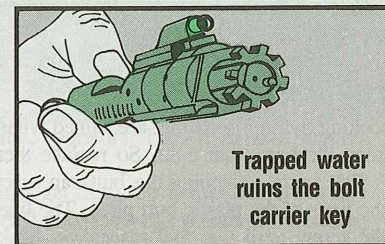
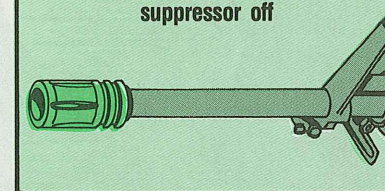
Clean everything like it says on Pages 3-26 thru 3-40 of TM 9-1005-249-10 (Feb 85). Then **stop!**

If the trigger assembly or flash suppressor needs special cleaning, tell your armorer.

Leave receiver pin holes alone



Never take the flash suppressor off



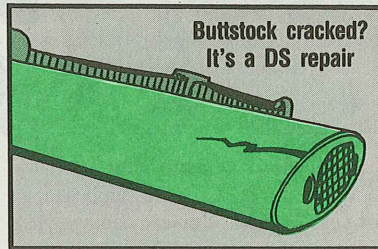
Trapped water ruins the bolt carrier key

No Ands or Buts About Buttstock

The Maintenance Allocation Chart (MAC) in TM 9-1005-249-24&P says you armorers install the M16A1 shoulder stock assembly. But the MAC also says DS installs and replaces the shoulder stock assembly.

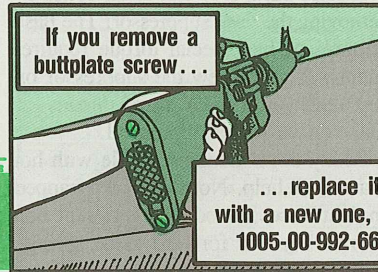
Confused?

Here's the scoop. You armorers can replace everything on the shoulder stock assembly...except the buttstock.



If the buttstock is cracked, turn the whole rifle in to DS. It's their job to repair it. You do not remove the shoulder stock assembly during PMCS—that's a change to TM 9-1005-249-24&P. You can take the assembly apart for repair.

Remember, the butt cap screw can be used only once. The screws have self-



locking nylon inserts that are ruined when you unscrew them. They no longer can keep the butt plate tight. So replace them.

Take care tightening the butt cap screw. Just one turn too many will damage the liner of the plastic butt plate. The liner helps hold the buttstock in place. Turn the screw until you feel resistance. Make one more quarter turn. Stop!

Bad Buffers Make Rifles Suffer

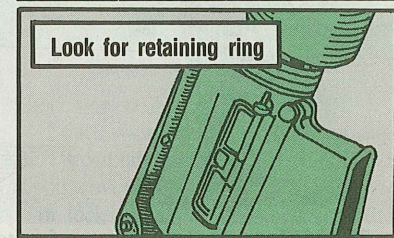
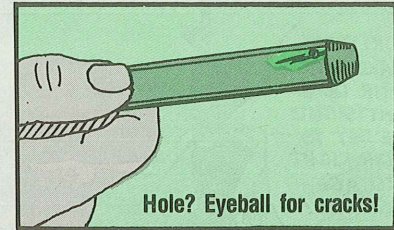
There are buffers with holes in the housing, buffers without holes...and buffers with a pin through the hole which protrudes equally on both sides.

Buffers with holes tend to crack between the hole and the end of the housing. If they're cracked, it can cause further damage to the buffer.

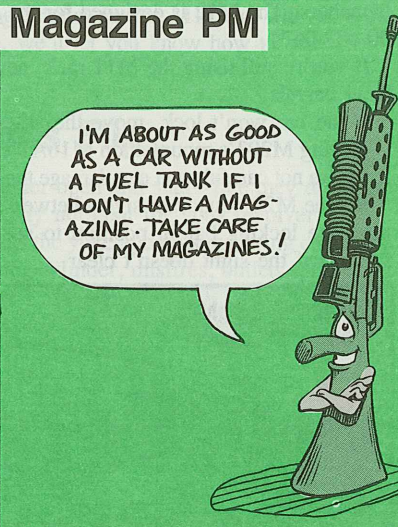
When you clean your rifle, eyeball the buffer. If it has a hole, check for cracks. If you find any, ask your armorer for a new buffer.

Make sure the retaining ring on the ejection port cover pin is present. If it's not, the ejection port cover pin will slide out.

Tell your armorer if the retaining ring on the ejection port cover pin is missing.



Subscribe to Magazine PM



Protect the magazines for your M16A1 rifle, operators. They're in short supply. Replacements could mean a long wait.

Help magazines last with PM. If magazines get dirty, clean and lube them like it says on Pages 3-24 through 3-27 of TM 9-1005-249-10. Whenever possible, keep them in their protective bags, NSN 1005-00-193-8306.

Rack 'em Right

OK, GUYS, MAKE SURE YOUR QUADRANT SIGHTS ARE SET TO THEIR RIGHT STORAGE POSITIONS!



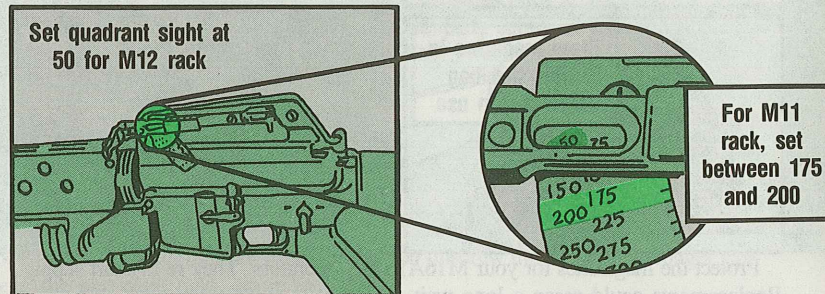
The M12 rack is the way to go for storing M16A1 rifles and M203 grenade launchers. The M12 is designed for the job. You can order it with NSN 1095-00-407-0674.

If you're still using the M11 rack, never force the locking bar in place. You bend barrels.

If the bar won't lock, move the rifles around until it does.

Storing M203's mounted on M16A1's in the M11 takes some experimenting. If you're not careful, you can damage the sightarm assembly with the locking bar.

Set the M203 quadrant sights between the 175- and 200-meter range. Gently push the locking bar in position to see if the sight clears the bar. Try other settings if the sight doesn't clear.



When storing M203's in the M12 rack, set the sights at 50 meters.

If a sight doesn't clear on either rack, store it separately after tagging it with its rifle serial number.

Unrack With Caution

A ROPE OR CHAIN WOULD'VE KEPT YOU OUT OF THIS MESS!



Armorer's, open the locking bar of the M12 rack with care when you're storing M231 submachine guns. The top-heavy M231's can fall out of the rack, damaging things like flash suppressors and ejection port covers.

A simple, temporary fix is to tie a rope or lock a chain around the top of the rack to keep the M231's in place.

AMCCOM is working on a mounting bracket for the M12 that will solve the problem. When the bracket's available, we'll let you know how to order it.

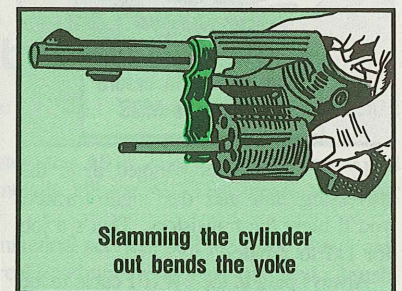
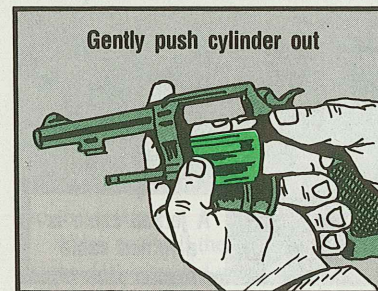
.38-cal Revolver...

Only Dips Flip

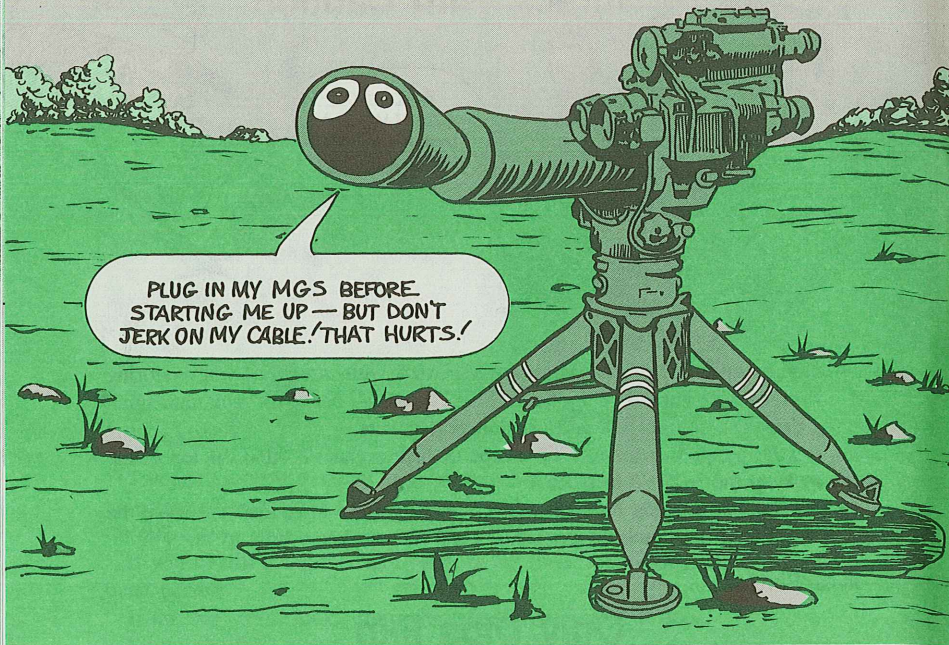
Flipping your .38-cal revolver's cylinder open and shut—like they do in the movies—may look cool, but it's definitely not cool for your revolver.

Slamming the cylinder in and out bends the yoke and puts the firing chambers out of alignment. That can cause a sticking cylinder, misfires, bullets splintering against the barrel wall...and maybe an explosion.

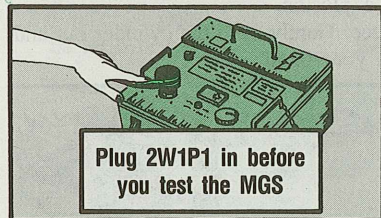
Load the right way: Push the thumbpiece. Gently push the cylinder out and cradle it in your left hand. Close it with your thumb.



Plug It In, But Don't Jerk It Out



Don't even think about flicking a switch on the TOW missile guidance set (MGS) until you've plugged in the 2W1P1 cable from the traversing unit with the day sight tracker mounted on it.

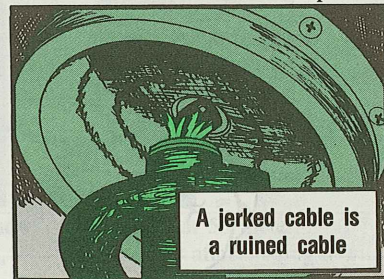


If the MGS's not plugged in to the traversing unit and day sight tracker, you'll blow the transistors. That's a job for DS to repair.

Always plug in the 2W1P1 cable to the

MGS **before** you do anything else. That goes for both the TOW and TOW 2.

Take it easy when you're pulling the 2W1P1 cable from the traversing unit through the tripod to the MGS. It doesn't take much yanking and jerking to rip the cable out of its base in the azimuth cavity. Then the whole cable has to be replaced.



Sealing Up Adapter Problems

Dear Editor,

The adapter on the TOW 2's 2W1P1 cable has a bad habit of coming off—or being taken off.

We've found a good way to stop that.

Screw the adapter tightly in place on the 2W1P1 connector. Wrap shrink tape, NSN 5970-00-955-9976, twice around the area where the adapter screws in the cable. Do not cover the adapter locking sleeve.

Use a heat gun or hair dryer to shrink the tape tight.

Wrap electrical tape several times over the shrink tape.

Your cable adapter is on to stay.

CW3 Richard Armstrong
Ft Bragg, NC



(Editor's note: Sounds like you've shrunk that problem down to size.)

M163A1 Vulcan...

Floored by Grease

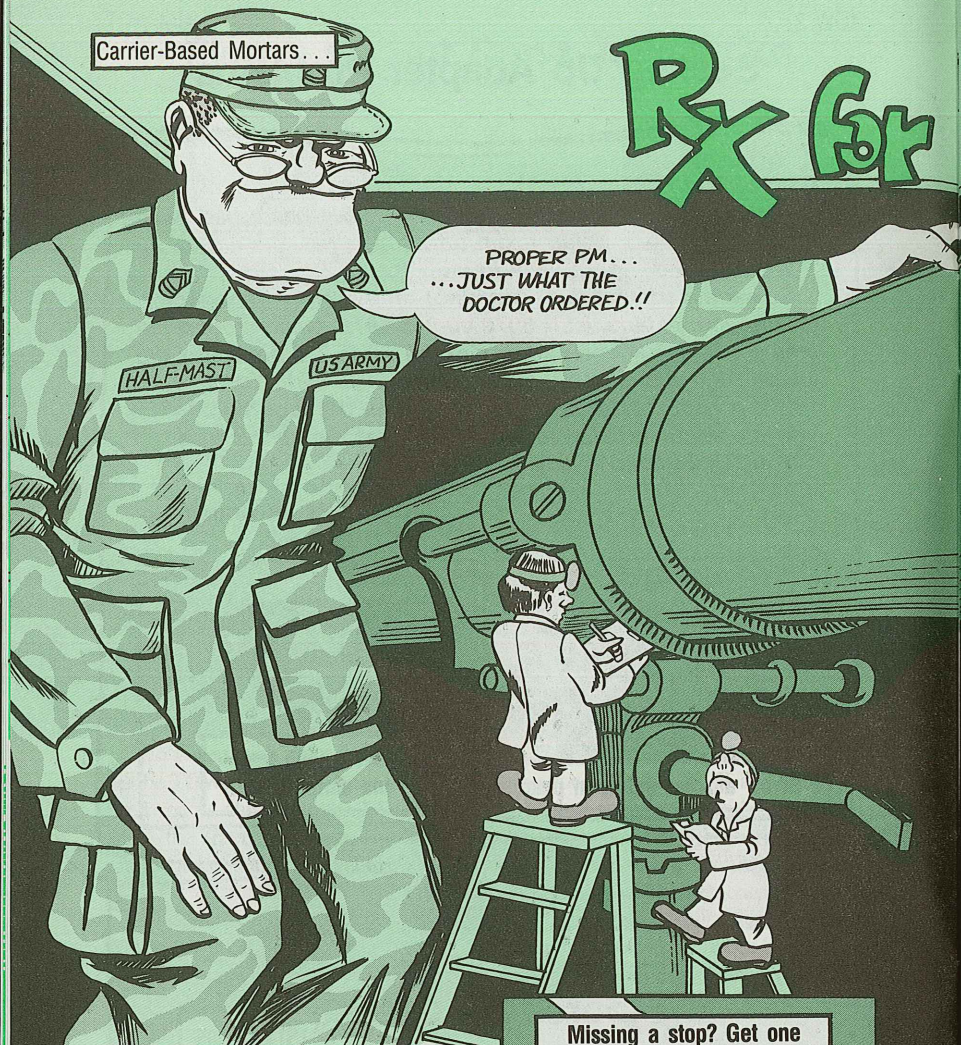
Out-of-sight out-of-mind can put the M163A1 Vulcan out of action when it comes to the A9 slipping cable.

Hidden under the Vulcan's floor plates, the A9 is easy to forget. Grease and dirt build up on the hull floor and eventually kill the A9. That means no power to the mount.

When you pull the engine during semiannual service, pull the floor plates, too. If the A9's covered with crud, clean it real good with soap and water and a brush. Clean the connectors, too.

Rx For Good Maintenance

PROPER PM...
...JUST WHAT THE
DOCTOR ORDERED!!



Here are a few PM tips that make good medicine for your carrier-based mortars:

- Eyeball the turntable for missing stops, pins and springs.
- Turntable stops keep the mortar from being traversed too far to the right or left. If they're missing, you could fire into the carrier roof—real messy.



Missing a stop? Get one
with NSN 1015-00-411-2568

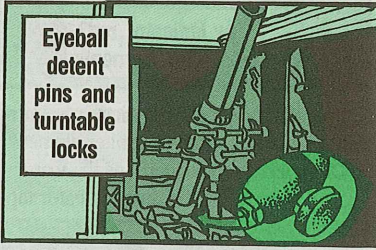
Worn or missing detent pins may cause the barrel to jump out of the bridge socket during firing. You don't need that action!

Make sure the turntable lock springs aren't weak or broken. The turntable must not rotate when the lock's engaged, but it needs to rotate smoothly when the lock's released.

- Make sure the shock absorbers and cannon tube screws are in place and are tight. Loose shocks and screws make a mortar shake like a volcano when it's fired. The damage caused to the barrel cap and locking pin sends the mortar to DS.

To check mortar shocks, pull the cannon down, then release it. If the tube comes up smoothly—no jerky motion—it's OK. Otherwise, get your DS unit to scope it out.

- Clean and lube the cannon tube, screws and shocks as called for in your LO. Don't use CLP on the shocks or for stored mortars, though. Use LAW for the shocks and PL-S for storage.



Eyeball
detent
pins and
turntable
locks



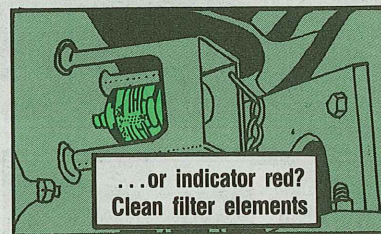
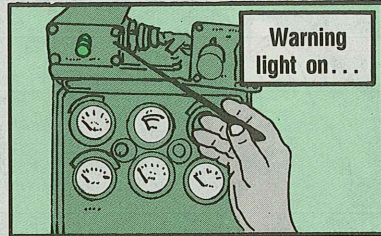
Make sure
screws
are tight!

New Air System Update

The improved air induction system on rebuilt M60A3's takes some getting used to.

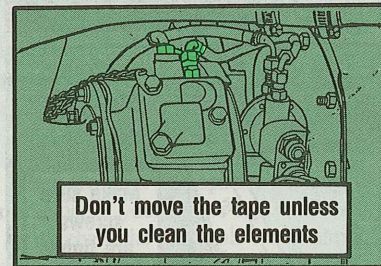
Here are a few tips that'll help you stay ahead of the downtime gremlins:

⚡ Pay attention, drivers, to the warning



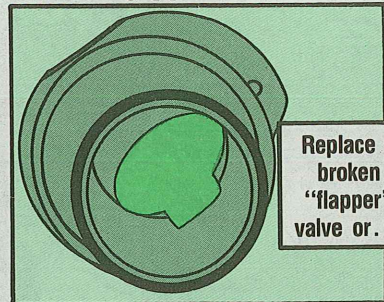
light and the restriction indicator to know when it's time to clean the filter elements.

Don't let anyone undermine the warning system by moving the dust indicator tape

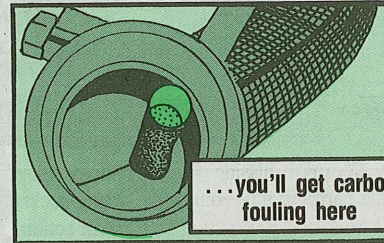


without cleaning the elements. You'll just have more problems down the road when it gets tougher for the engine to get the air it needs.

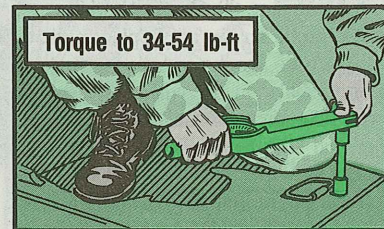
⚡ Mechs, the one-way "flapper" valve in the scavenge pipe can fail. It can either



break off its mount in one piece or break in half.



If the valve is broken, the scavenge pipe will carbon up at the exhaust end. Replace the valve with NSN 2990-01-156-6225, which is a beefed-up valve that won't break as easily.



⚡ Mechs, keep the bolt holes clean on the air cleaner boxes. You can prevent stripped bolt and hole threads by tightening the bolts only to 34-54 lb-ft and by drilling out the holes so dirt and stuff can't collect.

Give Flange Bolts Closer Look

Next time you've got a powerpack on the ground for service, take a look at the two transmission output flange mounting bolts.

The bolts are recessed into the flanges, behind the universal joints.

A loose bolt or oil stain means trouble's coming



Make sure the lockwire is still in place and holding... and that there are no oil leaks around the bolts.

Loose bolts or leaks mean trouble's on the way. Catch the early warning signs before damage occurs. Let your DS unit's contact team know. They can probably fix what's wrong on the spot. Then you won't lose any time now or later.

New Generator Needs Pigtail

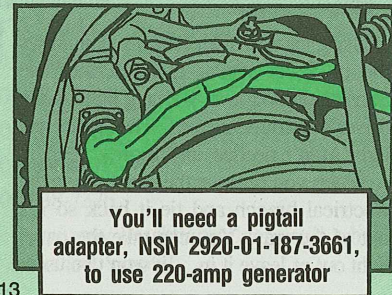


You MLRS mechs will be getting a 220-amp Teledyne generator, NSN 2920-01-107-9930, as a substitute for the 300-amp generator when it goes bad. The 300-amp jobbie just won't hold up.

You'll need to order a wiring harness adapter, NSN 2920-01-187-3661, to mate the new generator to the main wiring harness on vehicles with serial numbers 001 to 117.

Until a new 300-amp generator is available, you'll have to live with the 220-amp's lower output. That means longer recharging time and probably more fast idling to keep all systems up.

The adapter will not be needed when the 300-amp generator is available.



Lube Tube Cracked?

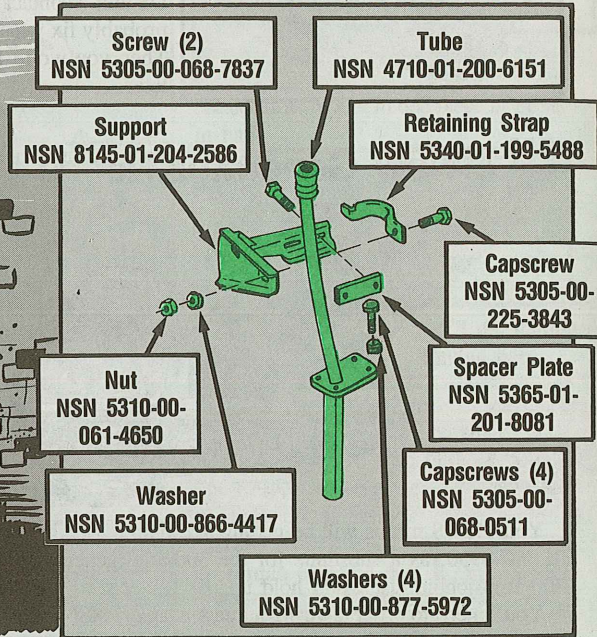


Is water showing up in your tank's transmission oil? You can tell by a milky color on the dipstick when you check the oil level, or by the report from your AOAP sample.

Could be the oil filler tube is cracked at the base, letting water seep into the transmission.

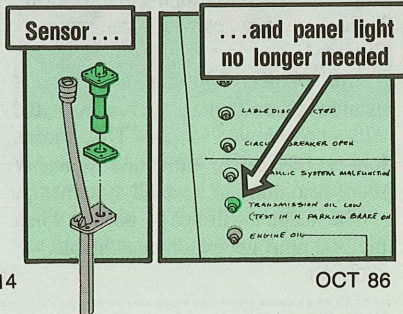
There's a replacement filler tube assembly available that won't crack as easily as the old one.

Here's what you need:



Using the new filler tube also eliminates the oil level sensor that operates the transmission oil level warning light on the driver's instrument panel. The sensor and light aren't needed any more.

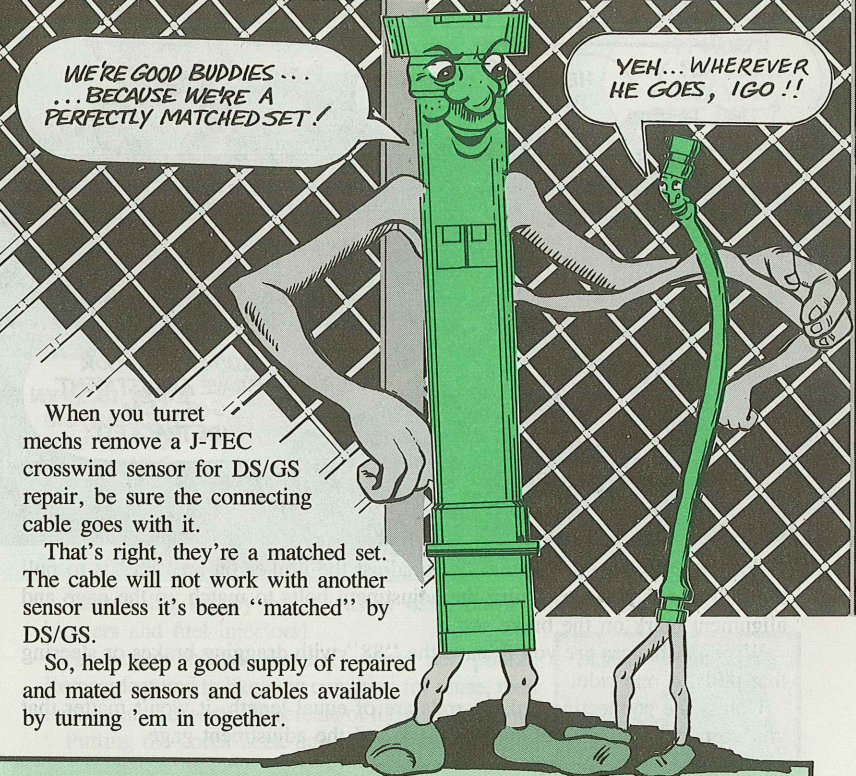
When you remove the sensor, cap the electrical branch and tie it back so it's out of the way. You can take the panel light out or leave it in... it won't be used.



Turn In Sensor Cable, Too

WE'RE GOOD BUDDIES...
... BECAUSE WE'RE A
PERFECTLY MATCHED SET!

YEH... WHEREVER
HE GOES, I GO !!



When you turret mechs remove a J-TEC crosswind sensor for DS/GS repair, be sure the connecting cable goes with it.

That's right, they're a matched set. The cable will not work with another sensor unless it's been "matched" by DS/GS.

So, help keep a good supply of repaired and mated sensors and cables available by turning 'em in together.

M1 Fuel Pumps Short!

If one of the two rear in-tank fuel pumps on your M1 tank goes out, you may not be able to get a replacement—but you can operate.

Para 2-5a of TB 43-0001-39-1 (Jan 86) tells how, but you'll need a substitute for the connector, NSN 5935-01-173-2873. Order one of these subs instead:

NSN 5935-01-176-8988

-01-081-0191

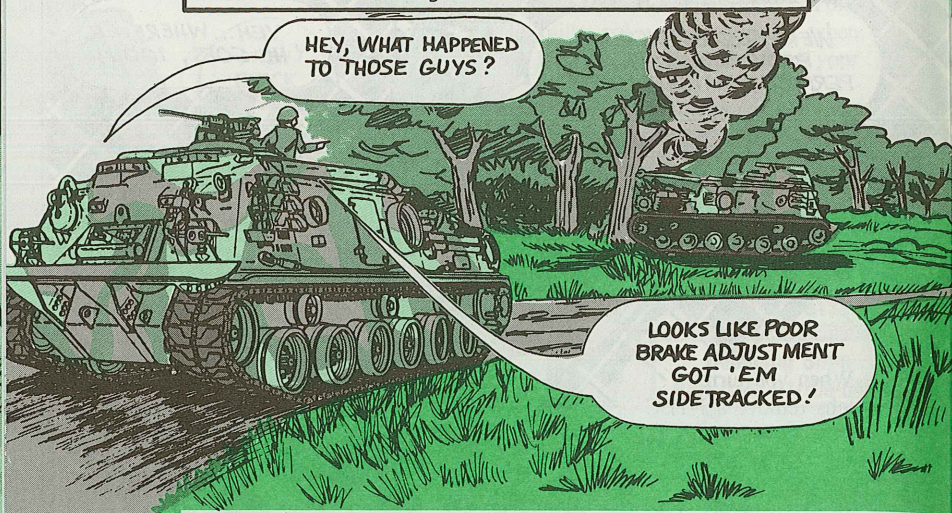
-01-167-9809

-01-104-9212

-00-938-7376

Turn in the faulty pump for rebuild, or you may be sitting mighty still when the second one goes out. Pumps are in real short supply!

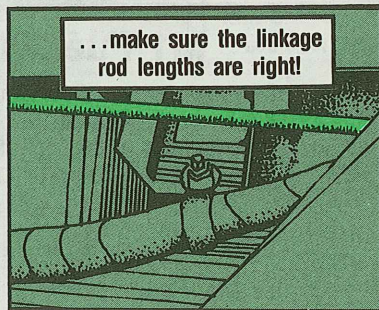
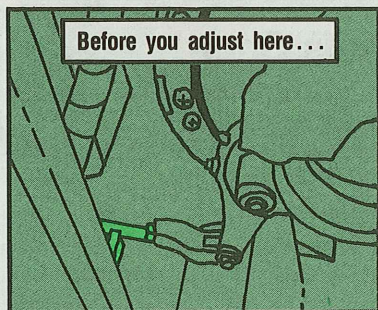
Cut Short by a Brake Shortcut



So you think all you have to do to adjust the brakes on an "88" is to pull the hull access plates and turn the adjustment bolts to match up the gage and alignment mark on the brake rod.

Wrong. Chances are you'll leave the "88" with dragging brakes or steering that pulls to one side.

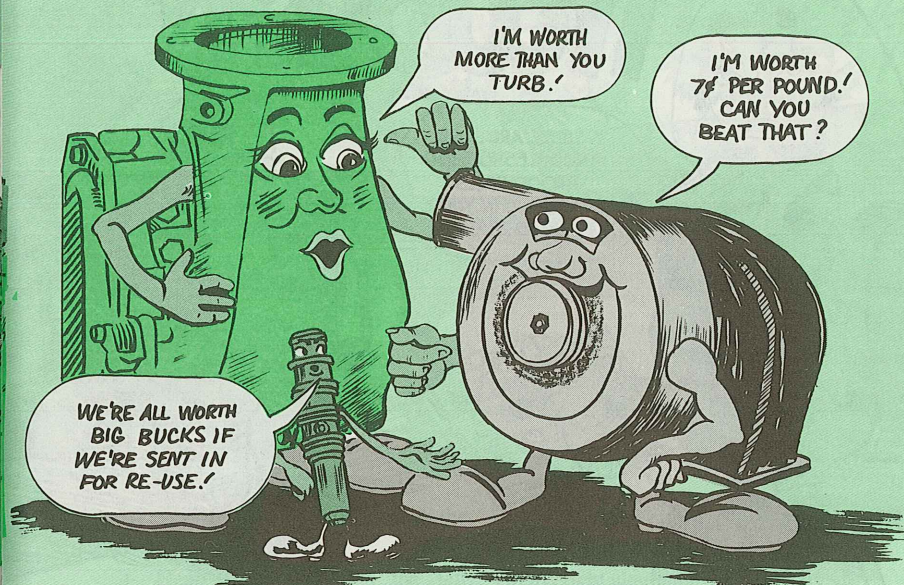
Unless the connecting linkage rods are of equal length, it won't matter that you've matched up the alignment mark and the adjustment gage.



You'll leave your vehicle short on safety, and that can wreck a vehicle and injure a crew.

Follow the caution on Page 2-287 of TM 9-2350-256-20. It specifically says to make sure that the linkage alignment is right **before** the brakes are adjusted.

Cores Worth Big \$\$\$



There's big money being wasted when outfits discard used turbochargers, blowers and fuel injectors!

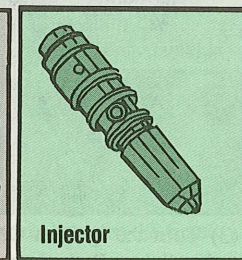
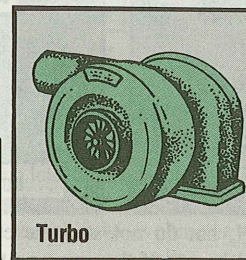
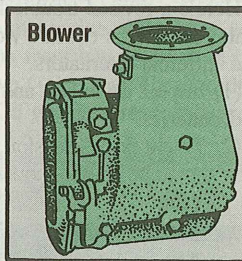
As scrap, they're worth 7 cents per pound. Remanufactured to like-new condition for reuse, their cores could be worth 30 percent of the new item cost.

Putting the cores back into the supply system is easy. Tag and identify each turbo, blower and injector by NSN and turn it in as a repairable item to your local Defense Reutilization and Marketing Regional Office.

Put millions of dollar's worth of cores back in the system!

For further information, call Bill Christy at AUTOVON 850-1796. Or write to:

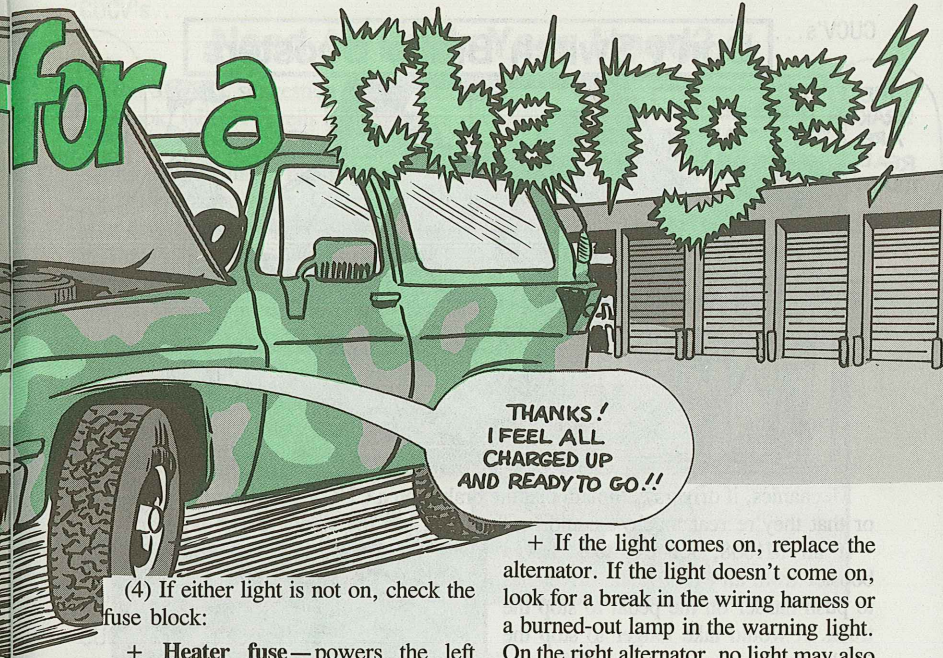
**Commander
DCSC-SV
P.O. Box 3990
Columbus, OH 43216-5000**



Troubleshoot for a



HERE ARE SOME TROUBLESHOOTING PROCEDURES NOT FOUND IN YOUR TM 9-2320-289-20



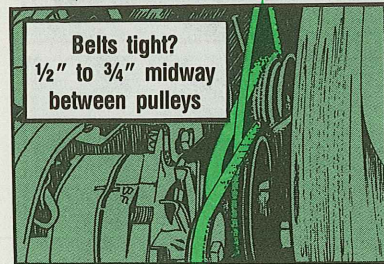
THANKS! I FEEL ALL CHARGED UP AND READY TO GO!!

Troubleshooting procedures in TM 9-2320-289-20 are incomplete for the charging system on CUCV's.

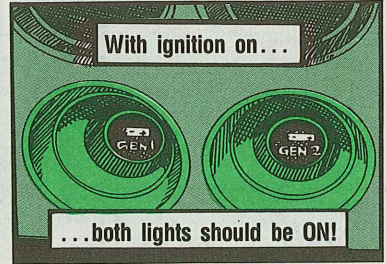
Here's a revised troubleshooting procedure for all CUCV's except the M1010 ambulance. This doesn't work on the M1010 because of the DUVAC regulator and different alternators.

(1) Inspect drive belt and check for loose wiring connections at the alternators and batteries.

(2) To check belt tension, press on the belt about halfway between the pulleys. You should be able to move the belt 1/2 to 3/4 inch. More than that? The belts could be slipping!



Belts tight?
1/2" to 3/4" midway between pulleys



With ignition on...

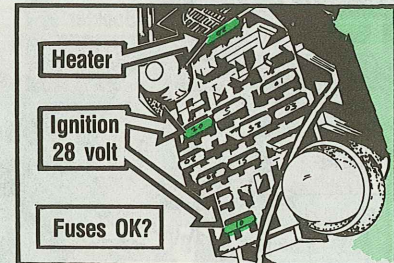
...both lights should be ON!

(3) Turn the ignition ON, but do not start the engine. Check the alternator warning lights. Both should be on. If they are, go to Step 5.

(4) If either light is not on, check the fuse block:

+ **Heater fuse**—powers the left alternator.

+ **Ignition fuse**—powers the right alternator.



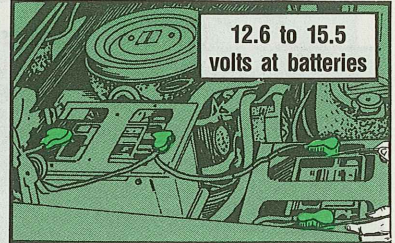
+ **28 V fuse**—this also powers the right alternator.

(5) If either light is still not on, then:

+ Disconnect the two-way connector at the alternator (left light for left alternator, right light for right alternator). Ground the brown wire to the chassis with a jumper wire.

+ If the light comes on, replace the alternator. If the light doesn't come on, look for a break in the wiring harness or a burned-out lamp in the warning light. On the right alternator, no light may also be caused by a defective number two alternator field current relay. Replace it.

(6) Start the engine. Connect a voltmeter to the front battery positive (+) and negative (-) posts. The left alternator is OK if you get a reading between 12.6 and 15.5 volts.



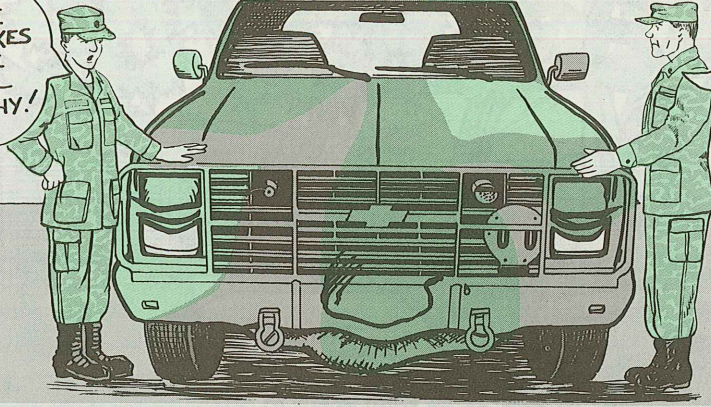
12.6 to 15.5 volts at batteries

(7) Connect the voltmeter to the rear battery's positive (+) and negative (-) posts. The right alternator is OK if the voltmeter reads between 12.6 and 15.5 volts.

CUCV's...

Don't Switch Brake Boosters

THE BRAKES ARE REAL TOUCHY!



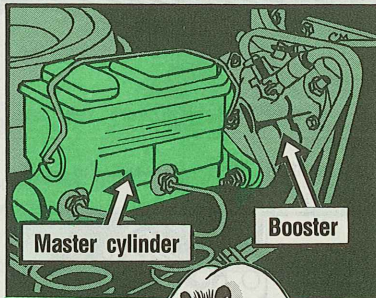
COULD BE HE'S GOT THE WRONG BOOSTER

Mechanics, if drivers complain that the brakes on a CUCV seem hard to push—or that they're real touchy—could be the truck has the wrong brake booster.

If an M1008, for example, has a booster from an M1009, the driver has to push harder on the pedal to stop the truck. It would take longer to stop the truck, too.

And driving an M1009 with an M1008's booster will decrease pedal effort and give you "touchy" brakes. One touch on the brakes and the driver goes thru the windshield.

There's a separate master cylinder matched to each booster, too.



HERE'S WHAT GOES WHERE!

Model		NSN 2530-01-
M1009	Brake booster (smaller size)	154-1294
	Master cylinder	192-9778
All others	Brake booster (larger size)	157-3005
	Master cylinder	156-7016

The M1009's booster comes complete with bracket and pedal rod, while the booster for all other models comes without those items.

CUCV's...

Need to Lock Your Hood?

This SMART suggestion by SP4 Bill R. Brook, APO NY, tells how to secure the hood on CUCV's. This makes it harder for "midnight requisitioners" to get batteries and such. Of course, get your commander's OK before you install it. Here's how:

- Get a piece of 1/4-in chain, NSN 4010-00-129-6049, 28 inches long.
- Remove the rear bolt from the safety latch.
- Put the bolt thru the link at one end of the chain and replace the bolt.
- Thread the chain thru the latch hole as you lower the hood.
- Secure the end of the chain to a hole in the bumper with lock, NSN 5340-00-158-3807.

That's all there is to it. No drilling!

CUCV/M880 Trucks...

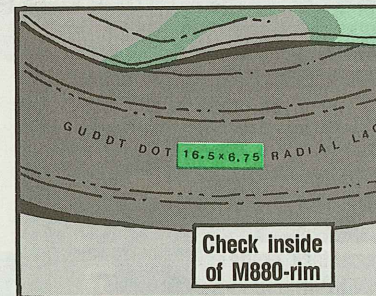
Nix Tire/Rim Mix

Never mix CUCV and M880 tires and rims!

plusive force to maim or even kill you.

Check tires and rims closely before matching them together.

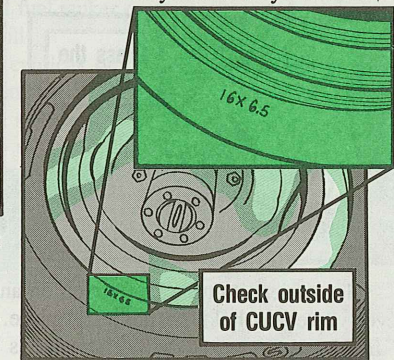
The 16-in CUCV and 16.5-in M880 tires are clearly marked by size. Rims



It's easy to do because they look a lot alike. But mixing 'em is dangerous.

Either tire can be mounted on either rim, but the beads won't seat properly against the rim flange.

When you inflate the tire—KAPOW!—the beads break away with enough ex-



are marked too—on the outside of CUCV rims and on the inside of M880 rims.

Transfer Shifting Blues?

Mechs, are you scratching your head bald trying to figure out why that 5-tonner's transfer case won't shift?

With the engine off and the air pressure down, it'll shift fine. But if you crank up the engine and try to shift, it's a no-go.

You've tried all the troubleshooting procedures in your TM, including the electrical test on Page 2-122 of TM 9-2320-272-20-1, but you can't find a clue. Could be the **electric switch** on the **transfer case shift lever's** not working. This switch actuates the air dump valve, which lets the transfer shift.

Check the switch like so:

- Get your **multimeter**. Set the dial for a safe setting—more than 24 volts.
- Connect the red probe (+) to the 586 lead of the transfer case switch. You'll find it underneath the cab, directly below the shift lever.

Connect the black probe (-) to ground.



- Get a friend to turn the ignition on and push the button on the transfer shift lever while you hold the probes in place.

If you get 24 volts, the linear valve is bad.

If you don't get voltage, you've got a bum switch or the wiring is bad. DS can replace the switch with NSN 5930-01-141-8414.

HEMTT Battery Checks

Dear Editor,

Checking the back batteries on a HEMTT for cracks, leaks and low electrolyte levels during a monthly PMCS is tough unless you pull the batteries out. The driver's not authorized to.

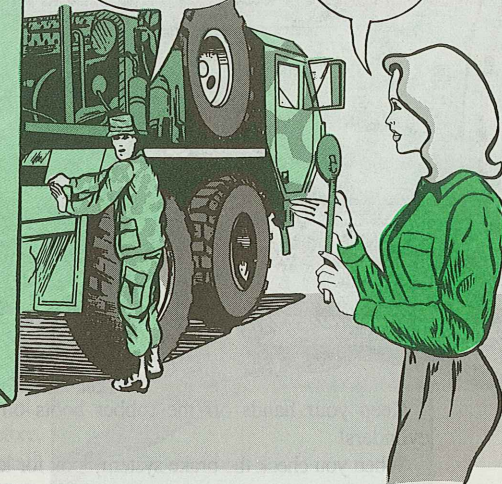
We found that drivers can use a hand mirror, NSN 5120-00-892-5709, to check the electrolyte level and to look over the batteries for corrosion or damage.

1LT David A. Atcher
Ft Stewart, GA

(Editor's note: Good idea! That mirror is handy for seeing into tight places. It's authorized by Appendix A of CTA 50-970.)

HEY, CONNIE, I CAN'T SEE IN THE REAR CELLS TO CHECK THE ELECTROLYTE LEVEL!

TRY USING THIS HAND MIRROR!



M978 HEMTT Tanker . . .

Park for No-Spill

Any time you park your fully loaded fuel tanker on uneven ground, make sure the front of the vehicle's headed up-hill.

If you park it headed downhill, fuel can leak out of the vent valve in the front of the tank. The vent's there to prevent vapor buildup.

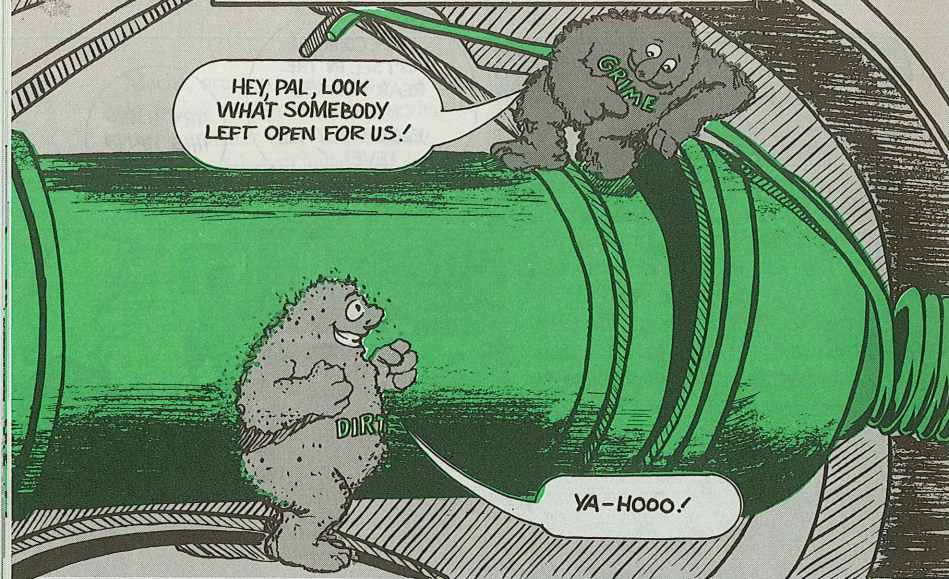
You won't lose much fuel, but any spilled fuel is bad.

So always keep the truck's nose up when the tank's full!



Leave Well Enough Alone!

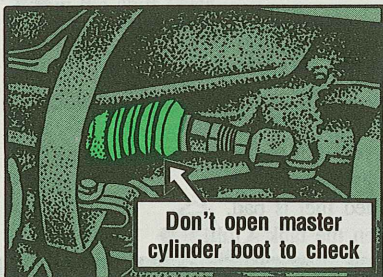
HEY, PAL, LOOK
WHAT SOMEBODY
LEFT OPEN FOR US!



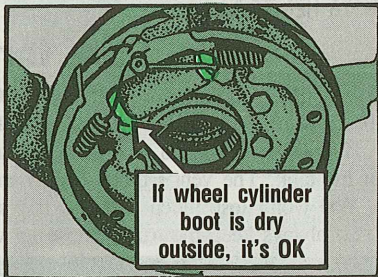
YA-HOOO!

Keep your hands off the rubber boots on brake master cylinders and wheel cylinders!

When you check the brake system, look for leaks from the seals on those cylinders.



Don't open master
cylinder boot to check



If wheel cylinder
boot is dry
outside, it's OK

Never pull the boots back to find a leaky seal. If the seal was bad, brake fluid would be dripping from the boot.

Pulling back the boot can cause a leak. It allows dirt or grit inside the boot.

Grit damages the seal and starts a leak. Dirt will get in if you don't get the boot seated just right.

The best way to find a fluid leak is to check the fluid level in the reservoir. If it's low, fill it. Check the level daily for a week. If it drops, you've got a leak. Check the system until you find it.

Compression Test Tip

A COMPRESSION TEST
CAN'T BE DONE
WITH A BAD HOSE!



Getting low readings when you use STE/ICE to run the Test 50 cylinder compression tests on your vehicle?

Chances are the problem is the compression test hose—Item 10 in the transducer kit—not STE/ICE itself.

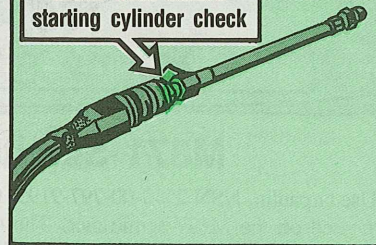
If the hose leaks, or if you didn't bleed it, readings may be lower than normal.

So make sure you bleed the hose before starting each cylinder test. Use the small valve on the hose.

Check to see that the hose is screwed into the cylinder and the transducer is tight enough to prevent leaks. Snug it down, then give it an extra ¼-turn.

If you still get low readings, try a different hose. If readings then come out close to normal, replace the old hose—it's a leaker.

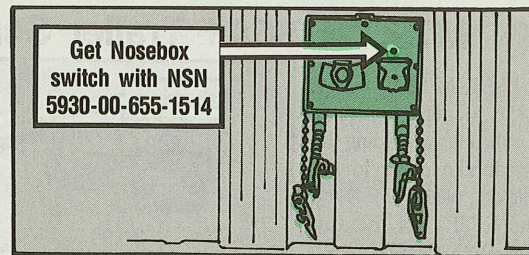
Bleed hose before
starting cylinder check



M872A1 Nosebox Switch

Get the electrical switch on the nosebox of your M872A1 semitrailer with NSN 5930-00-655-1514. The switch comes complete with the weather-proof boot. This switch will be added to TM 9-2330-359-14&P.

Get Nosebox
switch with NSN
5930-00-655-1514



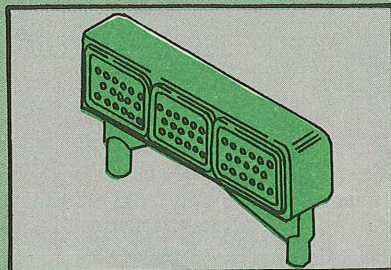
Filter NSN Correction

Dear Bonnie,

There's a goof in the new M911 TM 9-2320-270-20P. The NSN and PN for the air intake filter assembly shown as Item 18 in Fig 9 are wrong. NSN 2940-01-051-3109 and FSCM 21585 PN D51793-GR1 are the right ones. Please help us get the word to the field.

Myrtle Slaughter
TACOM, Warren, MI

YOU'VE
GOT
IT!



M871 Semitrailer Tarp

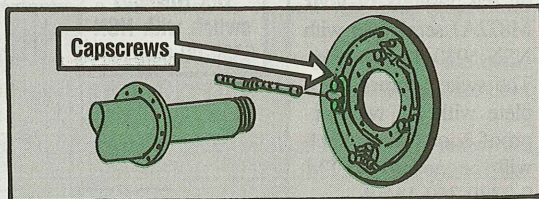
Use tarpaulin, NSN 2540-00-797-9195, for your M871 semitrailer. It's the same tarp used on the M127 semitrailer. The tarp will be added to the AAL in TM 9-2330-358-14&P. Use NSN 2540-01-138-3995 to get bows for the trailer.

M911 Spring Brake Chambers

Get the tandem axle spring brake chamber for the M911 C-HET with NSN 2530-01-108-6610. The chamber is not called out in TM 9-2320-270-20P.

M796/M796A1 Trailer Screw NSN

Use NSN 5306-01-043-1856 to get the screws for the clamp holding the handbrake cable to the backing plate in the 4-ton trailer. It's not listed in TM 9-2330-287-14&P.



Armor All Protector

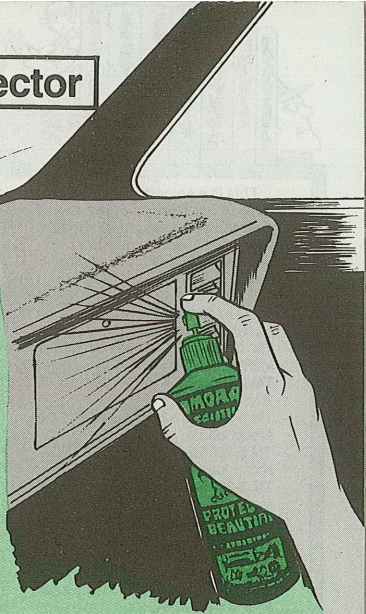
The Armor All listed on Page 21 of PS 398 gets 32 ounces of vinyl cleaner.

Use these NSN's to get Armor All protector:

Size	NSN 8030-01-	Price
4-oz spray bottle	220-1442*	1.00
8-oz bottle with sprayer	220-1441*	1.73
16-oz bottle with sprayer	103-2868	
32-oz bottle	220-1440*	5.40

Use Armor All on the inside of the vehicle only!

*These NSN's are not on the AMDF yet, so order them on a DD Form 1348-6 from G O—your local GSA region.



Fuel Tankers . . .

Tire Chains Are OK

The new word is, you can use tire chains on fuel tankers when you need more traction on ice or in snow. But take 'em off when you hit dry pavement.

Tire chains may or may not be listed in your -10 TM.

Here's what goes where:

Vehicle	Tire Size	Chain Assembly (pair)	Cross-Chains	Swivel Hooks
M49A2C, 2 1/2-ton cargo trucks	9.00×20	NSN 2540-00-933-9024	NSN 2540-00-933-6916	NSN 2540-00-937-0404
5-ton cargo trucks*	11.00×20	00-933-9022	00-933-6915	00-937-0404
5,000-gal tankers	11.00×20	00-933-9022	00-933-6915	00-937-0404
M978 HEMTT	16R×20	01-152-7813		
M559 GOER	18.00×33	01-079-3143	01-104-9022	01-079-3144

*Tire chains are not needed on M939A1 trucks.

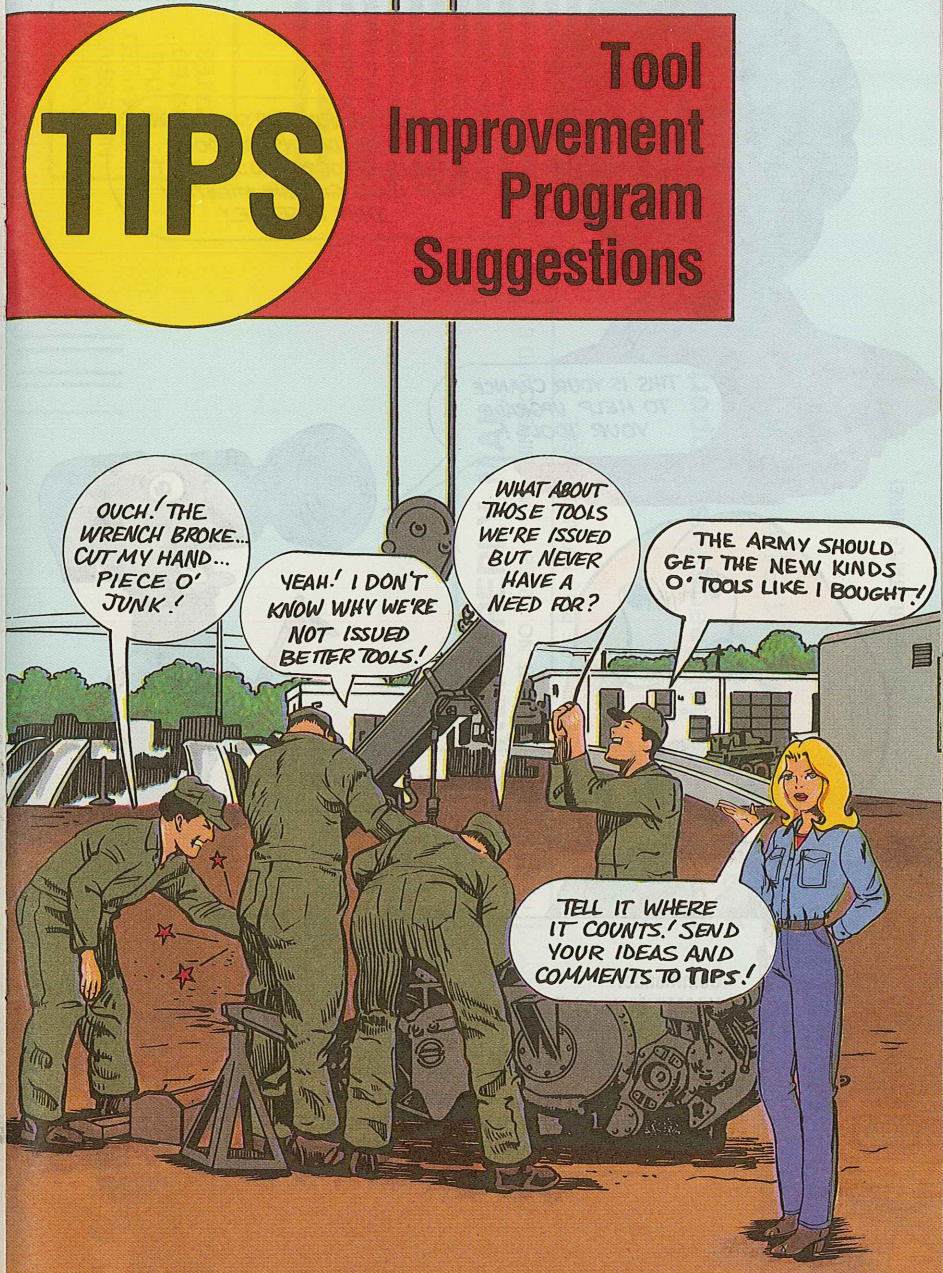
PUBS

This is a selected list of recent pubs of interest to organizational maintenance personnel. This list was made from a computer print-out provided by the Adjutant General.

TM 3-4240-309-20&P Jul Collective protection equipment, guardrail
 TM 3-6665-307-10 Sep 85 M256, M256A1 detector kit
 TM 5-3805-254-10-HR Jan F5070 20-ton dump truck
 TM 5-3805-257-20P May Clark 175B scoop loader
 TM 5-3805-262-10-HR Feb MW24C scoop loader
 TM 5-3805-262-14&P-1 Feb MW24C scoop loader
 TM 5-3805-262-14&P-2 Feb Case MW24C scoop loader
 TM 5-3810-293-20P Aug Hamischfeiger MT-250 25-ton crane
 TM 5-4110-241-23P Refrigerator, NSN 4110-01-166-3579, 4110-01-167-5320, 4110-01-166-3580
 TM 5-4120-383-14 May Air conditioner NSN 4120-01-164-7420
 TM 5-4220-210-12&P Apr Diver's chamber, NSN 4220-01-200-4797, 4220-00-540-2785
 TM 5-4310-380-13 Feb Compressor, NSN 4310-01-198-9365
 TM 5-4320-301-13&P Jan Water supply system, NSN 4320-01-168-1629
 TM 5-4320-302-14 Apr Centrifugal, water, pump unit
 TM 5-4320-303-10 Apr Water distribution, NSN 4320-01-122-3547, -168-0591, -168-0590
 TM 9-1005-286-10-HR Jun Gun, air defense artillery: towed 20MM, M167A1
 TM 9-1005-286-20P Jun M167A1 gun
 TM 9-1005-317-23&P Jan Pistol, semi-automatic, 9MM, M9
 TM 9-1010-230-10 May 85 Machine gun, 40MM, MK19 Mod 3
 TM 9-1095-205-10 Aug 84 M128 ground vehicle mine dispenser
 TM 9-1115-386-12-1 Apr M266 nuclear warhead section and M272 training nuclear warhead section
 TM 9-1265-209-10 Oct 84 MILES simulator system for Stinger
 TM 9-1410-387-24P Apr Guided missile, surface attack radar section, 11502328-019 Pershing II field artillery missile system
 TM 9-1425-422-24P-3 Jan Ground handling and support equipment for the guided missile, target: variable speed, MQM-107B/C and Models J-402-CA-700 and TRI 60-2074 turbojet engines, 13216040 and 13216140
 TM 9-1425-628-24P Nov 85 Air conditioning unit, HD-1053/GSG-11(V)

(11549979) (13093525) and generator set, diesel engine, PU-768/GSG-11(V)
 TM 9-1425-647-24P Jun MLRS launcher/loader module
 TM 9-1427-475-20 AH-64A helicopter, hellfire missile equipment and AH-64A helicopter hellfire missile launcher
 TM 9-1430-655-20-4-2 Jan 85 Display equipment maintenance expanded troubleshooting (logic diagram theory) (guided missile air defense system, AN/TSQ-73)
 TM 9-1430-655-24P-1 May Air defense command and control system, AN/TSQ-73
 TM 9-1450-396-14 Mar Ground handling equipment, guided missile system (Pershing II missile system)
 TM 10-3530-205-24P Jan Clothing repair shop
 TM 10-3835-219-14&P Feb Hoseline outfit, NSN 3835-00-892-5157
 TM 10-4510-206-24P Mar Portable bath unit
 TM 10-8340-224-13&P Feb Temper tents
 TM 10-8415-206-12&P May Helmet, flyers, protective, Model SPH-4
 TM 11-4940-482-10-HR Jan AN/MSM-108 shelter-mounted electronic shop
 TM 11-5820-863-23P-1 Feb AN/FRC-171(V)1, 2, 3, 4, 5 radio set
 TM 11-5820-863-23P-2 Jun AN/FRC-173(V)1 thru 12 radio set
 TM 11-5820-919-10-HR Jan AN/PRC-104A radio set
 TM 11-5820-923-10-HR Feb AN/GRC-213 radio set
 TM 11-5820-923-12 Feb AN/GRC-213 radio set
 TM 11-5820-924-10-HR Feb AN/GRC-193A radio set
 TM 11-5820-924-13 Feb AN/GRC-193A radio set
 TM 11-5985-366-24P-2 Jun OA-9053(V) 1 and 2/G pneumatic mast groups
 TB 43-0001-18-1 Apr EIR Digest (HAWK air defense guided missile system) and HAWK battery terminal equipment
 TB 43-0001-26-1 Apr EIR Digest TOW heavy antitank/assault weapon system
 TM 43-0003-20 May Demilitarization procedures for Lance field artillery guided missile system
 TM 55-1520-238-23P-1 Aug AVUM and AVIM repair parts and special tools list, AH-64A
 TM 55-1520-238-23P-2 Aug AVUM and AVIM RPSTL for AH-64A
 TM 55-1520-240-PPM Jun CH-47D Progressive phase maintenance inspection checklist

TM 55-2350-272-14 Nov 85 M973 SUSV transportability guidance
 TM 55-2840-256-23 Jun AVUM and AVIM engine aircraft turboshaft
 TM 55-3805-248-14 Feb Cat 621B scraper, transportability guidance
 TM 55-4920-411-13&P Jun Temperature and speed simulator, H296A-1 unit, simulator, Pershing II missile system
 TB 55-1510-201-20/19 Jun One-time inspection wing attachment fittings, U-8
 TB 55-1520-214-20-48 Jun Maintenance mandatory recall of tail rotor blades, H-6
 TB 55-1520-237-20-77 Jun Replacement of UH-60A/EH-60A stabilator actuators
 TB 55-1520-241-20-38 Jun One-time and recurring inspection and correction of corrosion problem, CH-47A, B, C, D
 TB 55-1520-242-20-20 Jun SOF, Technical, UH-1 and EH-1, One-time inspection, nuts, rotor driveshaft
 TB 55-1520-242-20-21 May SOF, Technical Msg, One-time inspection of trunnion bearings and RCS CSGLD-1860 (R1) UH-1D/H/V and EH-1H helicopters
 TB 55-1520-244-20-11 Jun One-time inspection limited maintenance test flight and hydraulic systems check procedures for AH-1S
 TB 55-2840-229-20-1 Apr One-time inspection of the T53-L-13B turbine engines on all UH-1/EH-1 and AH-1G
 TB 55-2840-248-50-43 Jun One-time inspection of oil cooler assembly, T700-GE-7001-701 engine, UH-60A and AH-64A
 LO 9-1430-529-12 May Radar set AN/MPQ-51
 LO 9-2320-354-20 Jun HIAB Model 8109 heavy material handling crane M984 HEMTT's
 SC 3433-90-CL-NO1 Jul Torch outfit, cutting and welding
 SC 4940-95-CL-A08 Jun Tool set, vehicle full tracked: organizational maintenance, Supplemental No. 2
 SC 4940-95-CL-A08-HR Jun Tool set, vehicle full tracked: organizational maintenance, Supplemental No. 2
 SC 5180-90-CL-N10 Jun Engineer combat platoon pioneer tool kit
 SC 5180-90-CL-N10-HR Jun Engineer combat platoon pioneer tool kit
 FM 1-508-2 Jun Maintaining ALSE personal equipment
 FM 43-12 Apr Division maintenance operations
 FM 11-29 Aug Signal telecommunications battalion
 SF Form 368 Oct 85 Product quality deficiency report





THE ARMY WANTS YOUR SUGGESTIONS AND RECOMMENDATIONS ON TOOLS. TIPS IS A PROGRAM TO SEE THAT YOUR IDEAS GET THE ATTENTION THEY DESERVE!

THIS IS YOUR CHANCE TO HELP UPGRADE YOUR TOOLS!



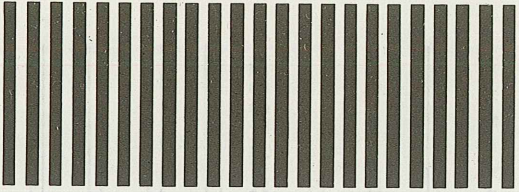
Commander
USAMC Materiel Readiness Support Activity
ATTN: AMXMD-MD
Lexington, KY 40511-5101

THE TIPS PEOPLE WILL SEE THAT YOU GET AN ANSWER... AND THAT APPROPRIATE ACTION IS TAKEN ON YOUR RECOMMENDATION!



FIRE OFF YOUR COMMENTS TO:

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED
STATES



Return Address

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 12062 WASHINGTON, D.C.

POSTAGE WILL BE PAID BY ADDRESSEE

Commander
USAMC Materiel Readiness Support Activity
ATTN: AMXMD-MD
Lexington, KY 40511-5101

(TAPE OR STAPLE HERE)

(USE OR REMOVE HERE)

TO TIPS:

(Please print)

DATE:

ITEM NOMENCLATURE:

NSN OR PART NUMBER:

MANUFACTURER:

PUBLICATIONS REFERENCE: SUPPLY CATALOG (OR TM NUMBER IF SPECIAL TOOL OR BASIC ISSUE ITEM):

TOOL PROBLEM/RECOMMENDATION/SUGGESTION:

OFFICER BUSINESS

NO STAMPS
NO LABELS
NO POSTAGE

FULL NAME:

ADDRESS:

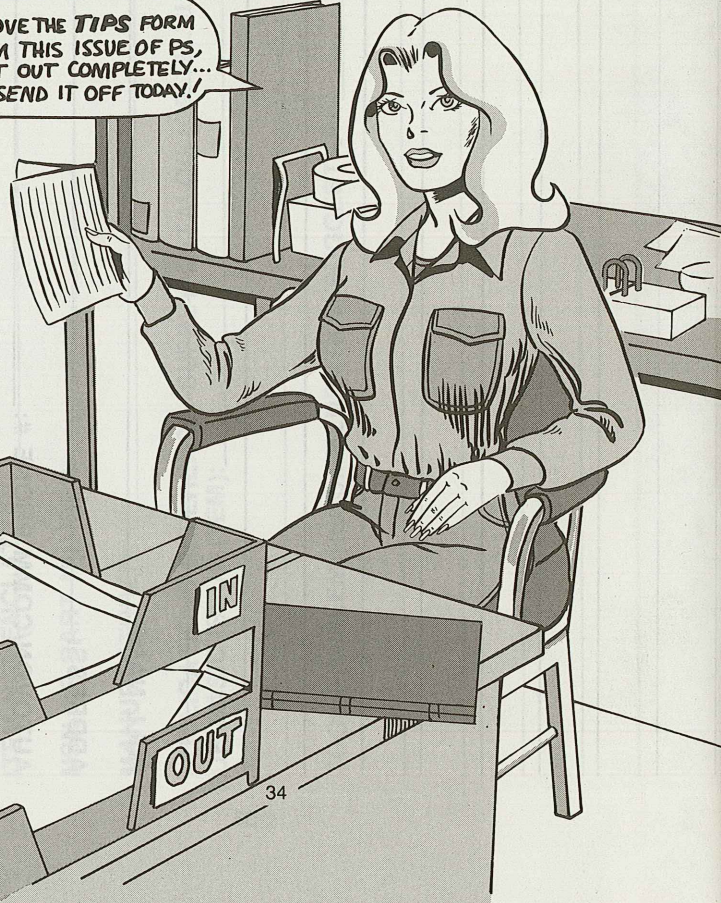
AUTOVON/COMM PHONE #:

IDEA CONTROL NUMBER

Tips on TIPS

Different manufacturers may make the same design tool, so it helps a lot if you identify the manufacturer. Most items do show the manufacturer's name, code or part number. But even if you can't peg the manufacturer, send your comments anyway. If several reports come in on an item, the tool people will be able to identify the manufacturer.

REMOVE THE TIPS FORM FROM THIS ISSUE OF PS, FILL IT OUT COMPLETELY... AND SEND IT OFF TODAY!



34



KEEP THESE TIPS IN MIND!

Report **BAD TOOLS**. If a tool breaks, fails to hold its calibration, quickly wears out or cannot take the rugged use it was intended to take... **REPORT IT** and a solution if you have one.



Report tools that should be **ADDED** to the system. If you know a tool that can do the job better, let the Army know, too.



35

Report tools that should be **DELETED** from the system because they are never used or fail to do the job they were intended to do.



Report **NEW** commercial tools that might be good additions to the Army's inventory.

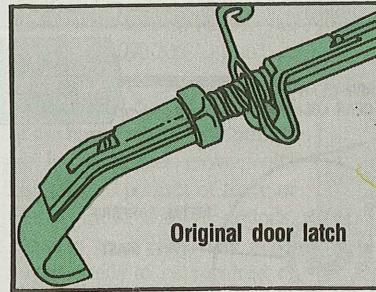


Avionics Compartment Door Latches

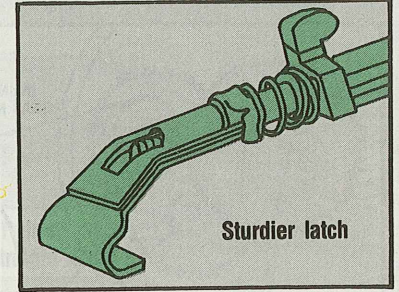
Door latches should be the least of your worries at 2,000 feet, crew chiefs. So check the latches that secure your bird's avionics compartment door frequently, like during every pre-flight inspection.

Many Black Hawks are still equipped with the original door latches that need special attention. Eyeball 'em closely for worn components. Latch the door in place and apply upward and outward pressure to see if the latch holds.

If you find a latch that looks and feels like it's outlived its usefulness, replace it right away with one of the sturdier latches, NSN 5340-01-154-8567.



Original door latch



Sturdier latch

Engine Fire Extinguisher NSN's



WHEN YOU NEED TO REPLACE YOUR BLACK HAWK'S ENGINE FIRE EXTINGUISHER, USE THESE NSN'S:

Container, Extinguishing Agent NSN 4210-01-225-3908

Cartridge, Fire Extinguisher NSN 1377-01-185-2622

You can't get both the container and the cartridge with one stock number like it said in AVSCOM Supply Letter A9-85.

Return all unserviceable fire extinguishers for overhaul.

Report tools that need **MODIFICATION** — Share your good MOD IDEAS with the Army.



EUREKA! MY AROUND THE CORNER SCREWDRIWER ATTACHMENT WORKS!

REPORTING YOUR IDEAS FOR MODIFICATIONS SAVES DUPLICATION OF EFFORT AND GIVES OTHERS THE BENEFIT OF YOUR WISDOM!



Don't feel powerless over bad tools.

BAD TOOLS LIKE US CAN REALLY RUIN YOUR LIFE!

YEAH!



TIPS puts the control in your hands!

I FEEL LIKE I'M IN GOOD HANDS NOW!

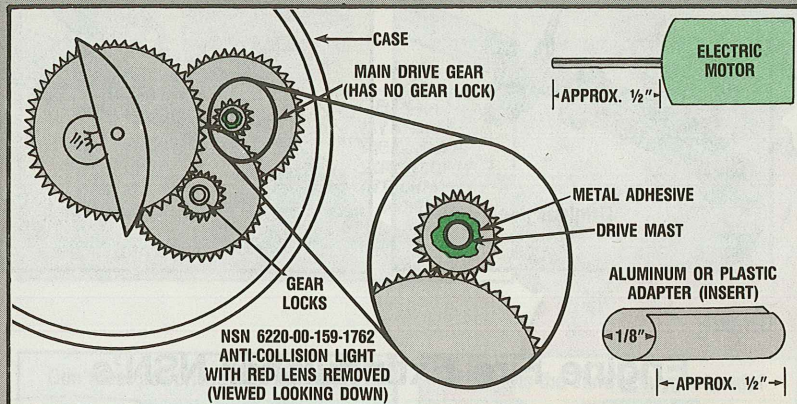


Anti-collision Light Fix

Dear Editor,

The main gear on our anti-collision lights, NSN 6220-00-159-1762, becomes unserviceable after 250-300 hours due to the drive gear loosening and slipping on the motor's shaft.

We found a way to extend the life of these lights. Insert an adapter (sleeve) made from aluminum or plastic into the center hole of the gear between the gear and motor shaft. The thickness of the stock depends on the gap worn between the electric motor drive mast and the inside diameter of the gear.



Form the material into a cylinder approximately 1/8 inch diameter and about 1/2 inch long. Insert it into the gear. It'll hold the gear in place and extend the life of the light.

SGT Alexander A. Tejada
APO New York 09146

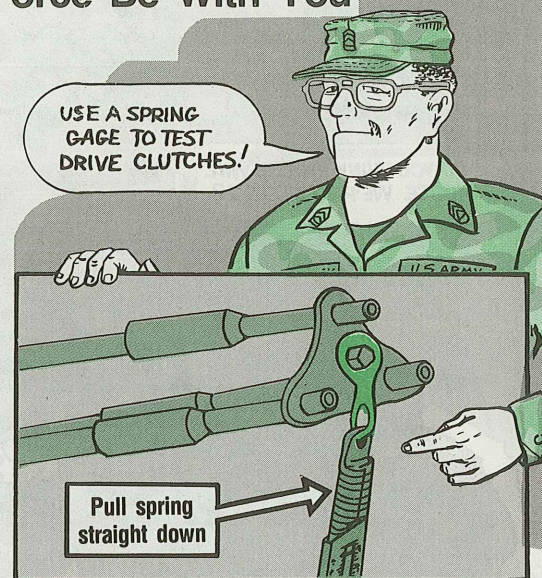
(Editor's note: Clean bonding surfaces with naphtha or denatured alcohol to remove grease and oil. A dab of metal adhesive, NSN 8040-00-944-7292, will hold the main gear on the mast if the gear hole is not badly worn. But take care not to get adhesive on the gears. Use the adapter sleeve only if the gear hole is badly worn. Bond the shim in place with a slow-cure adhesive, NSN 8040-01-163-3481. The adhesive cures in 8-10 hours at room temperature. The same anti-collision light is used on some other aircraft, including the Cobra and Mohawk.)

May the Force Be With You

When you Cobra armament mechs check your 20-MM cannon's elevation drive clutch, think force, not torque.

The barrel cluster of your cannon should **not** slip with 50 pounds of vertical force. It should slip with 75 pounds of vertical force. That's the word in the PMCS charts on Page 3-5 of new TM 9-1090-206-20-1 and -2.

Connect spring gage, NSN 6670-00-204-5831, to the end of the barrel cluster and pull. If the barrel cluster moves with less than 50 pounds of force or fails to move with 75 pounds, report it to AVIM. The drive clutch needs to be repaired or replaced.



AH-1S Series...

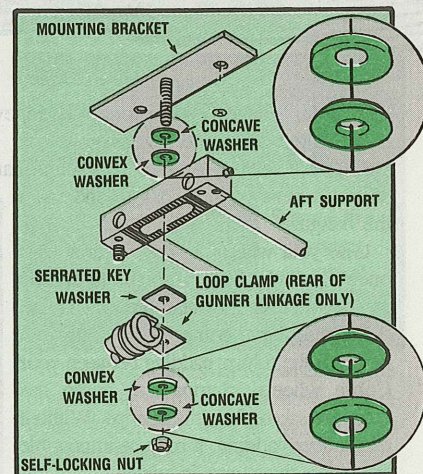
Washer Stackup (Con)vexing?

Cobra mechs, don't be confused by different washer stackups for the linkage assembly on the helmet sight system as shown in Figs B-4 and B-7 of TM 9-1270-212-14&P. Both figures are wrong!

If you install the washers backwards or out of sequence, you may not be able to boresight your system.

There's only one way to correctly install the convex and concave washers—like shown in Fig 5-3.

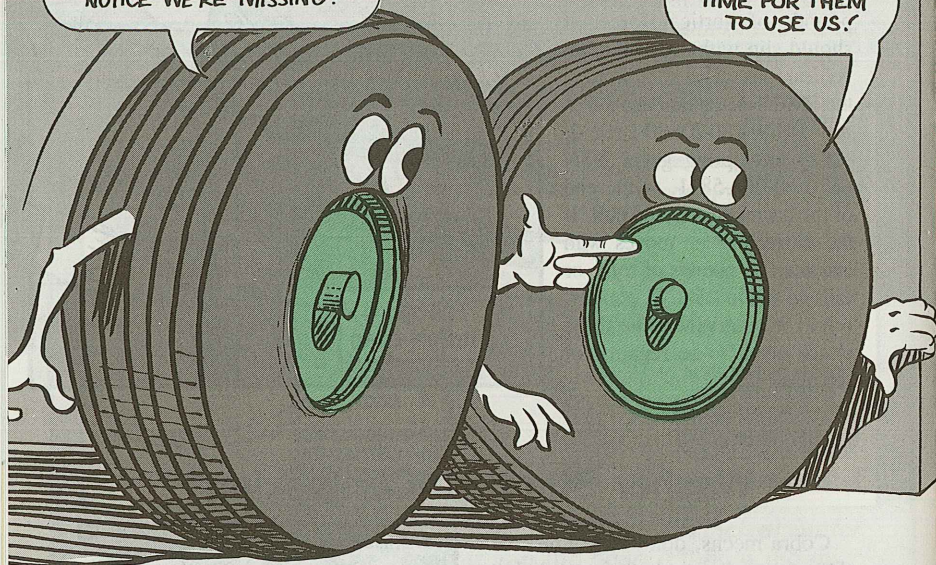
But don't believe everything you see in Fig 5-3. The loop clamp for the gunner's linkage assembly is not where it should be. Install it between the serrated key washer and the convex washer, like so:



PM Keeps Those

DO YOU THINK ANYONE WILL NOTICE WE'RE MISSING?

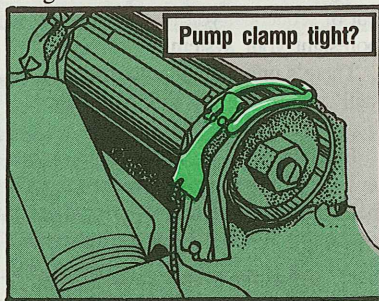
NOT 'TIL IT COMES TIME FOR THEM TO USE US!



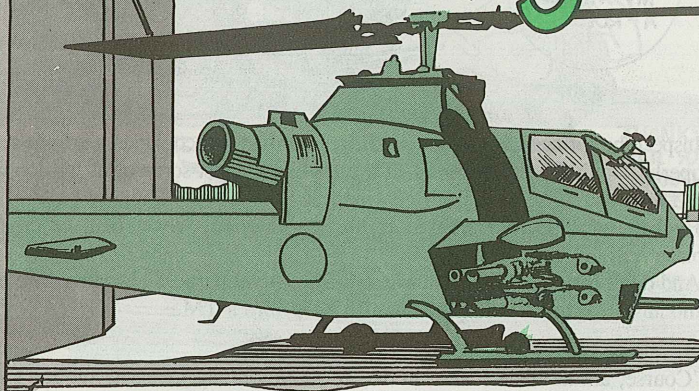
You don't have to re-invent the wheel every time you move your Huey or Cobra to the flight line, bird mechs.

Just take care of your bird's ground handling wheels in between moves and let them do most of the work to and from the hangar.

Give your wheels the once-over at least once a month. Start with the hydraulic pump. Make sure it's clamped down tight. If the nuts have come loose, snug 'em down. If the rubber padding between your Cobra wheels' clamps and pump has deteriorated, replace the clamps. Without that rubber padding, it may be impossible to secure the pump in place.



Wheels Rolling



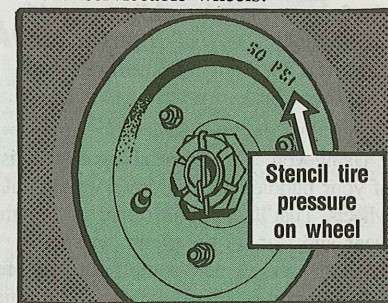
Next, make sure the tires are not cut or worn to the recapping point. If they are, replace 'em.

Be sure your tires are inflated properly, too. Inflate Huey tires to 50 PSI and Cobra tires to 75 PSI. If you try to move your bird with soft tires, a tire could work its way off the rim during a turn.



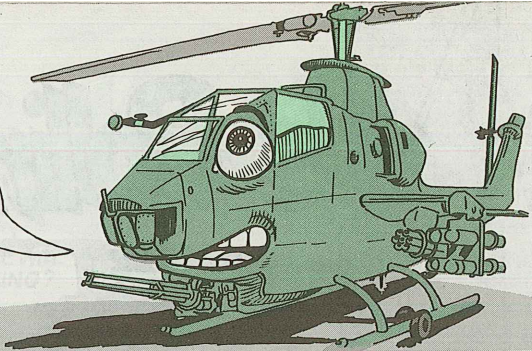
No Metal Stamps

Never use a metal stamp to mark your unit's wheels. It could lead to cracks and unserviceable wheels.



Check out the rest of the wheel assembly, starting with hydraulic hose connections. Make sure they're tight and not leaking. Replace wheel-mounting pins that are cracked, chipped, broken or bent.

PROPER PM
WILL KEEP
MY WHEELS
A-ROLLIN'!



Inspect the spring-loaded front pin for crud or rust that could keep it from seating properly. Don't forget the spring. If it feels like it's lost some of its tension when you finger-test it, replace it.

Eyeball your bird's eyebolts. If they're chipped, worn, bent or cracked, replace 'em.

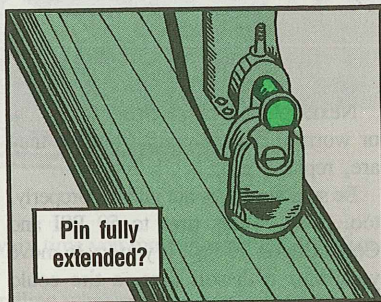
And don't forget to lube your wheels with general purpose aircraft grease every 6 months. Just follow the lube chart in your bird's TM.

Install 'em Right!

'Course, all the maintenance in the world won't help much if you don't know how to use your wheels. Some mechs don't. Some even install them backwards.

Remember spring forward, just like you do with your clocks when we go to Daylight Savings Time each Spring. The spring-loaded pin goes in the forward eyebolt, and the fixed pin goes into the rear eyebolt.

The main thing, tho, is to make sure the front support pin is fully engaged in the eyebolt. Use your fingers to make sure. If it's not fully engaged, you could get a mouthful of rubber and steel.



Take a Load Off

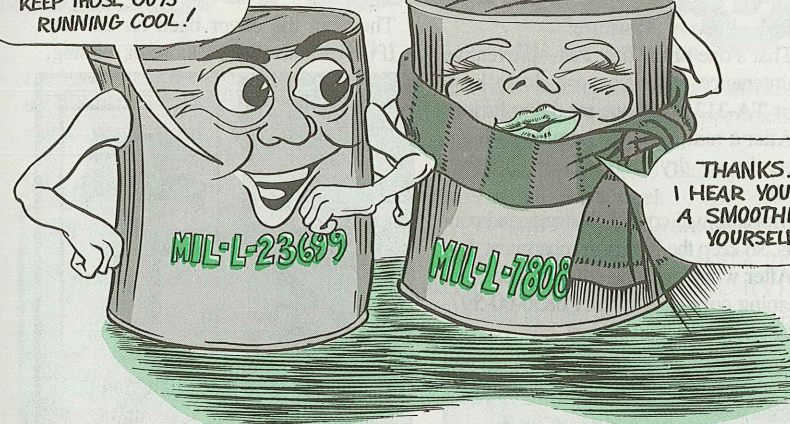
Using your ground handling wheels is never a one-man job, so get a couple of your buddies to push down on the tail boom before extending or lowering the wheels. That'll take some of the load off the wheel assemblies and save unnecessary wear and tear on the pump seals.

Always attach and pump both sets of wheels at the same time to keep from putting too much strain on one set at a time. 'Course, when you're lowering the wheels, the same principle applies—release the pressure on both pumps at the same time and do it s-l-o-w.

Remember, if you take care of your wheels between moves—going by the book when installing, removing them and using them—they'll always be there when you need them.

Lubricating Oil Mixup

HEY, BABY... YOU REALLY
KEEP THOSE GUYS
RUNNING COOL!



The info in Tasks 1-52, 1-53 and 1-54 of TM 55-1520-240-23-1 is misleading when it comes to servicing the engines, transmission and APU oil systems.

Use either lubricating oil, MIL-L-7808, NSN 9150-00-782-2627, or lubricating oil, MIL-L-23699, NSN 9150-00-985-7099, in your engines, transmissions and APU when the outside air temperature is above -25°F .

Use **only** lubricating oil, MIL-L-7808, when the temperature is below -25°F .

AVIATION MESSAGES

CAT 1 EIR Phone
AUTOVON 693-2066
(24 hours)

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

AH-1-86-04, SOF, Operational, One-time limited maintenance test flight and hydraulic system check procedure, 121330Z Jun 86.

OH-6-86-02, Emergency Message RCS (SGLD-1860, R-1) Immediate grounding of H-6 series aircraft and commercial variants, 130115Z Jun 86.

OH-6-86-03, Followup SOF, Immediate grounding of H-6 series aircraft and commercial variants, 140121Z Jun 86.

OH-6-86-04, One-time inventory check tail rotor blades, 140040Z Jun 86.

OH-6-86-05, Maintenance Mandatory, recall of certain serial numbered tail rotor blades, 170100Z Jun 86.

OH-6-86-06, Followup SOF, Emergency message RCS (CSGLD-1860, R1) immediate grounding of H-6 series aircraft and

commercial variants, 180253Z Jun 86.

CH-47-86-05, SOF, Maintenance Mandatory, Recurring inspection and correction of corrosion problems, 130100Z Jun 86.

CH-47-86-06, SOF Technical, One-Time inspection of longitudinal cyclic trim (LCT) actuator operation, 301800Z Jun 86.

UH-60A-86-10, SOF, Maintenance Mandatory, One-time staking of bearings on lever assembly, 130125Z Jun 86.

UH-60A-86-11, SOF, Maintenance Mandatory, Revision to requirements for reporting ungrounding of UH-60A/EH-60A, 161500Z Jun 86.

AH-64-86-11, SOF, One-time inspection, remote circuit breaker, relay K3, 121345Z Jun 86.

AH-64-86-12, Technical, Laser bore-sight safety update, 252000Z Jun 86.

MIM-AH-1-86-ME-02, Corrosion, 201700Z Jun 86.

MIM-UH-1-86-ME-03, Shimmy of collar

lever assembly, 091800Z Jun 86.

MIM-UH-1-86-ME-05, Component update, 091800Z Jun 86.

MIM-UH-1-86-ME-06, Incorrect torquing of nuts, 202000Z Jun 86.

MIM-OH-6-86-ME-02, Status of the ungrounding of H-6 series, 252330Z Jun 86.

MIM-OH-6-86-ME-04, Status of ungrounding of H-6 series, 272130Z Jun 86.

MIM-OH-58-86-ME-03 and MIM-OH-6-86-ME-03, Manual changes for T-63 engines, 031500Z Jun 86.

MIM-OH-58-86-ME-04, Tailrotor drive-shaft washer, 161500Z Jun 86.

MIM-UH-60A-86-ME-05, Gunner restraint buckle, 042145Z Jun 86.

MIM-UH-60A-86-ME-06, Stabilator incidents reporting, 171800Z Jun 86.

MIM-UH-60A-86-ME-07, Stabilator Bias Rigging, 201300Z Jun 86.

PM Keeps

PM—Prevent Moisture!

That's one of the best PM—preventive maintenance—jobs you can do to keep your TA-312 telephone set doing its job.

After a rain, or when humidity's high, wipe the set dry with a clean, lint-free cloth.

Moisture will corrode batteries and contacts, so keep the battery compartment dry.

After wiping out the compartment, use cleaning compound, NSN 6850-00-597-9765, to clean the battery box.



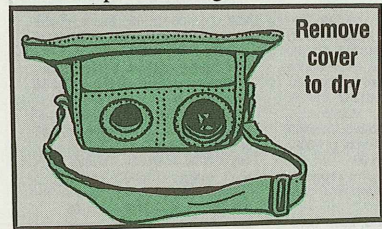
Clean contacts with burnisher

Use a burnisher, NSN 5120-00-255-4458, to clean the contacts. Appendix A of CTA 50-970 is the authority. Some tool kits, like the TE-50-B, already have burnishers.

During a rain, cover the TA-312 with a poncho or other protective cover.

Keep the set off the ground where puddles form.

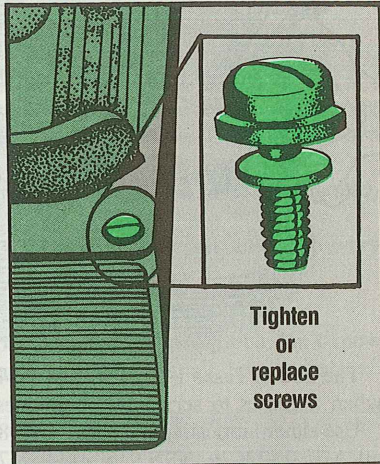
Leave the canvas cover on the telephone for added protection against moisture. If



Remove cover to dry

the cover gets wet, take it off to dry. Dry the telephone off with a towel or let it air dry.

Then put the cover back on the set. If the case screws are loose or missing,



Tighten or replace screws

tighten or replace them with new ones, NSN 5305-00-054-6670. Get packing, NSN 5330-00-448-1018, that goes with the screws, too.

Look at the U-79 cap. If the disk, which



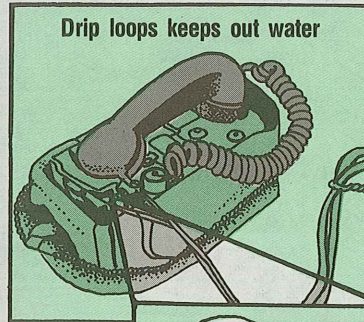
Use adhesive to hold disk

also stops moisture, is loose, seal it with adhesive, NSN 8040-00-270-8150.

Phone Calls Coming

Always put a drip loop in the WD-1 field wire before connecting the wire to the binding posts. This will keep dribbling water off the posts.

NSN 5970-00-869-6263 is for the rubber boots that help keep moisture off the posts.

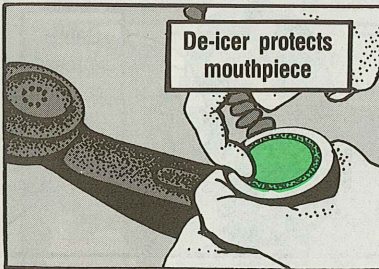


Drip loops keeps out water



Rubber boots keep moisture off posts

Use the de-icing screen, NSN 4130-00-392-7628, on the H-60 handset's



De-icer protects mouthpiece

microphone when humidity's high. It'll keep out moisture. The screen is in the handset's TM 11-5965-224-14P.

PM for Batteries

Get rid of leaking and bulging batteries. They'll mess up the battery compartment and silence your telephone.

Be sure to take out good batteries when the set is idle for a week or so.

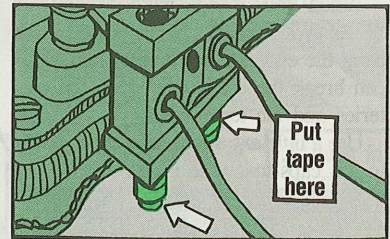
A Crank's Not Cranked

When you're using a TA-312 for intercom circuits of the AN/VIC-1(V), like it says in Para 4-5c of TM 11-5830-340-12, never turn the hand generator crank. It'll damage the AM-1780 audio frequency amplifier.

See Who's Calling

You in a snit trying to figure out which one of your many telephones is ringing?

Then use a U-184 connector adapter, NSN 5805-00-708-2203. See Page 12-11 of FM 24-20. The U-184 is part of the SB-993 switchboard, but works OK with a field telephone.



Put tape here

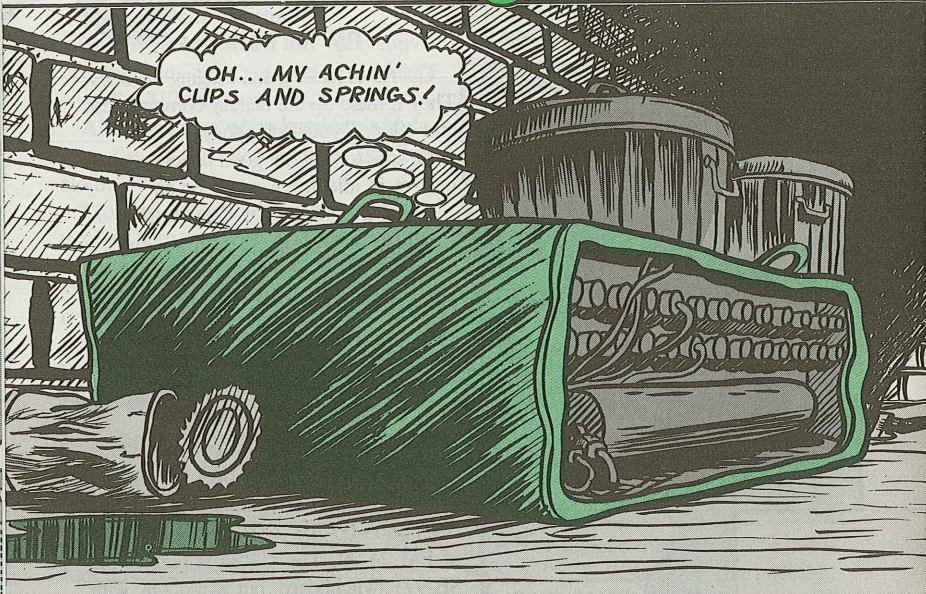
Before you install the adapter, cut about one inch of insulation off the WD-1 field wire. Run the wire through the adapter's neon light indicator to the TA-312's binding posts.

Remember to put tape on the male plugs of the U-184. Otherwise, you can get shocked.

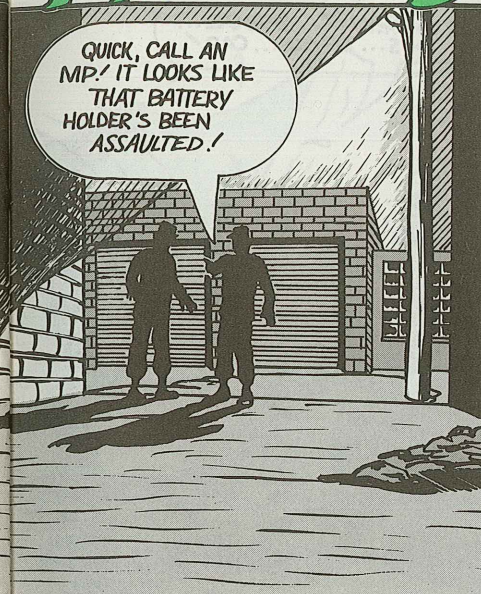
Case of the

Assaulted Battery Holder

OH... MY ACHIN' CLIPS AND SPRINGS!

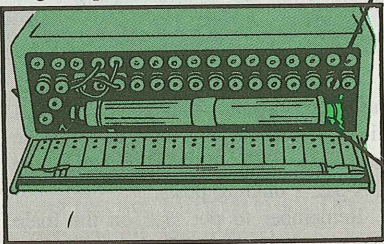


QUICK, CALL AN MP! IT LOOKS LIKE THAT BATTERY HOLDER'S BEEN ASSAULTED.!



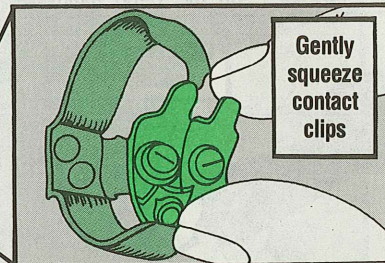
When you change batteries in your SB-22 switchboard's battery case, never bang the end caps to loosen them. This can break the contact between the batteries and the terminals.

Use a little extra muscle and tap gently to get caps and case apart.



Be gentle when you're putting that

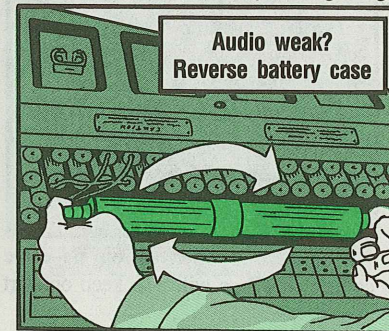
battery case in its contact clips, too. If you force it, you can break the clips. And make sure you put the battery box in straight or you'll bend the clips.



Give the springs a little squeeze if they spread apart. This'll give you better contact with the battery case terminals.

When contacts get dull, clean 'em with a treated cotton polishing cloth, NSN 7920-00-985-6849.

After the batteries have been in your switchboard a while and you're getting



weak audio or dimming lights, wait one before tossing out all four batteries and getting new ones. Just reverse the battery case.

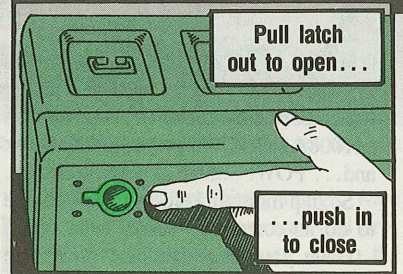
Two of those batteries power the switchboard, and two power the telephone. The telephone batteries may still be strong. If so, you've saved two BA-30's.

Another battery saver is to switch your headset OFF when you have a scheduled lull in traffic. Leaving it on uses up batteries and can KO the transmitter's carbon element.

Take out batteries when the switchboard's not in use. That'll halt corrosion.

Close Cover Latches

Take care with the recessed latches on the back cover of your switchboard.

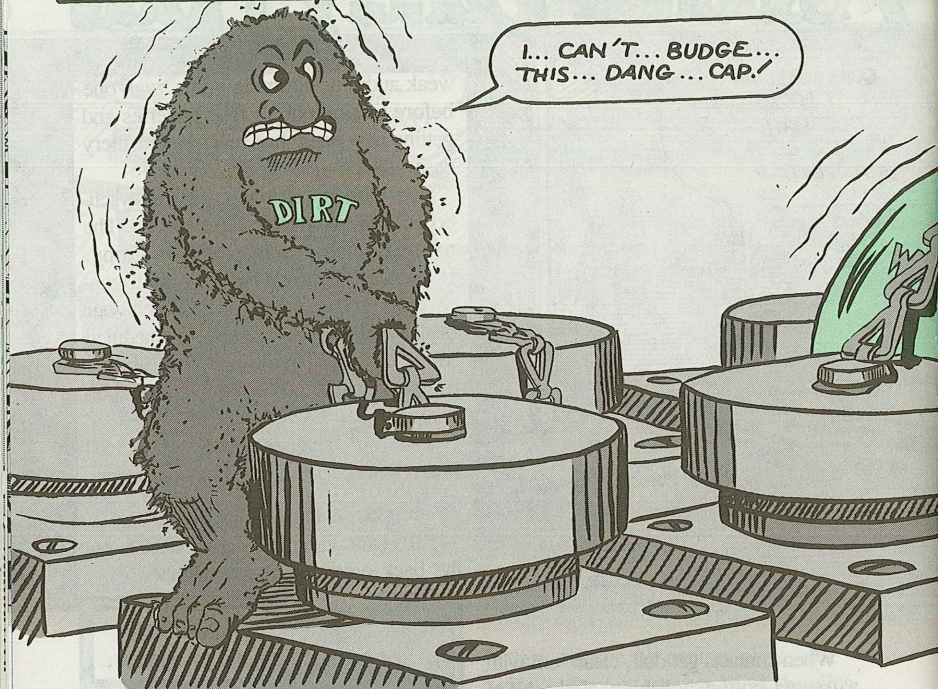


These can fail to catch properly and they'll stick out when you've closed the cover. This can break the latches when the SB is transported or loaded into a vehicle.

Put a drop of light oil on the latch spring to help the latches catch the way they should. Clean out dirt and dust from the recessed areas.

Keep
Moisture
Out...

Cover Connectors



Let corrosion make its way into an M1008A1 CUCV's power junction box and... POW! ...there go commo circuits.

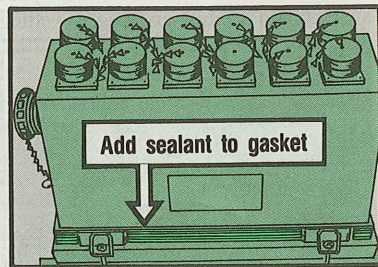
So, nip moisture before it gets a chance to do its corroding worst.

Have your organizational repairman add sealant, NSN 8040-00-843-0802, to the top seam around the sides of the junction box.

Also, get a 3/16-in hole drilled in each corner of the base plate. This will let out moisture caused by condensation. Info on this is in TB 43-0001-39-3 (Jul 86).

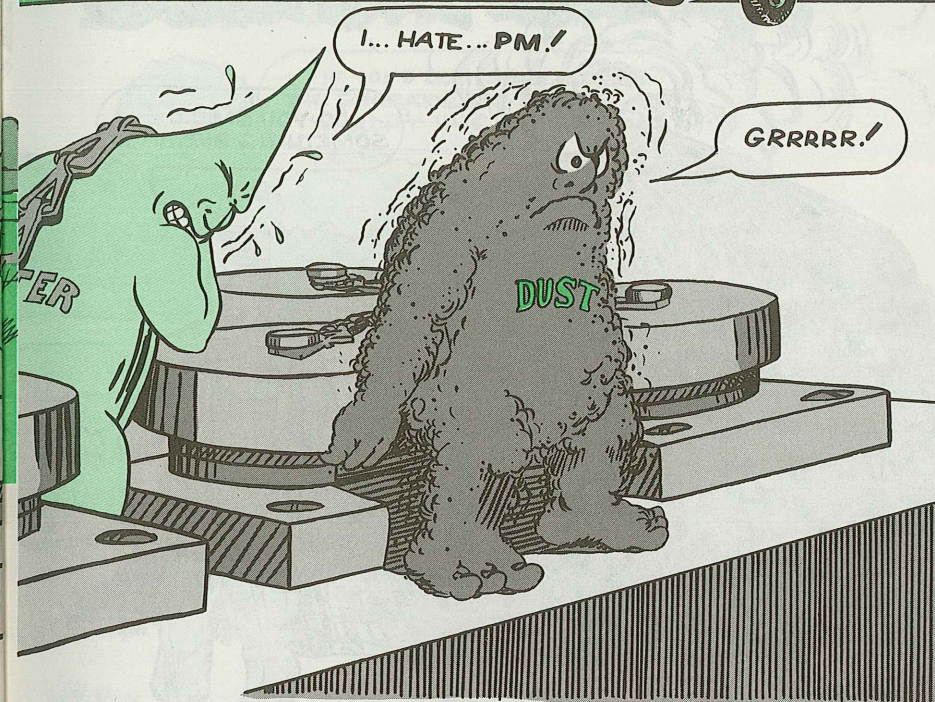
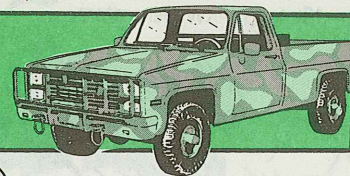
If the gasket, NSN 5330-01-037-7346, is cracked or missing, replace it.

You can block a lot of damp damage by keeping the caps on the J1 through



J12 connectors when there's no cable connected. Caps will also keep out dirt and dust.

With Caps



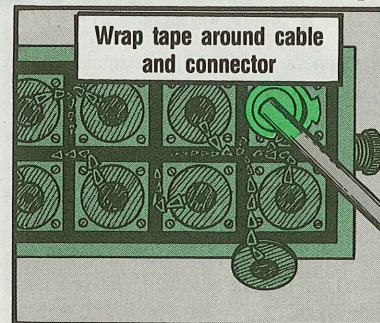
Eye the back of the connector where water can drain inside it and get into the junction box.

A few wraps of black electrical tape will seal out moisture. First, though, wipe the cable and connector clean and dry. Start the tape an inch or so up the cable.

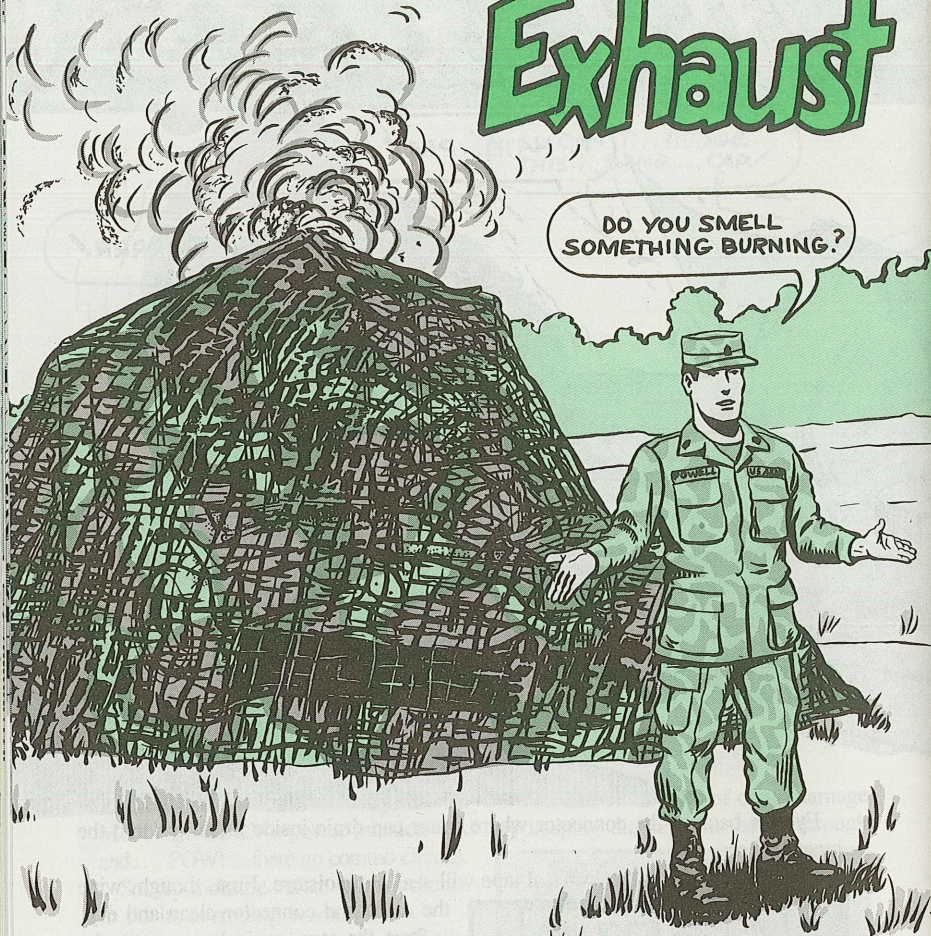
Wrap toward and over the end of the connector. This'll keep out water.

Whenever the junction box is idle, disconnect the power cable and put the cap on the receptacle.

Be sure to fasten the power cable connector to the dummy plug on the truck's sidewall. This'll protect the connector from big boots battering it.



Exhaust



“Caution—Keep screens away from all hot exhaust systems.”

This comes through loud and clear in Para 2-1a of TM 5-1080-200-10, the operator’s manual for camouflage screens.

Yet, some soldiers allow their trailer-mounted generators to damage the camouflage screen. The generator’s hot exhaust melts the screen—that’s bad enough!

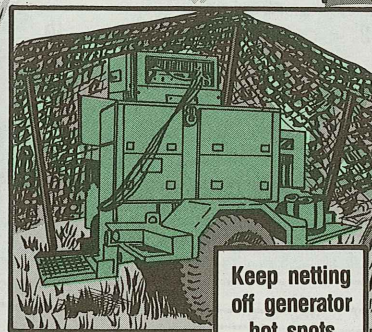
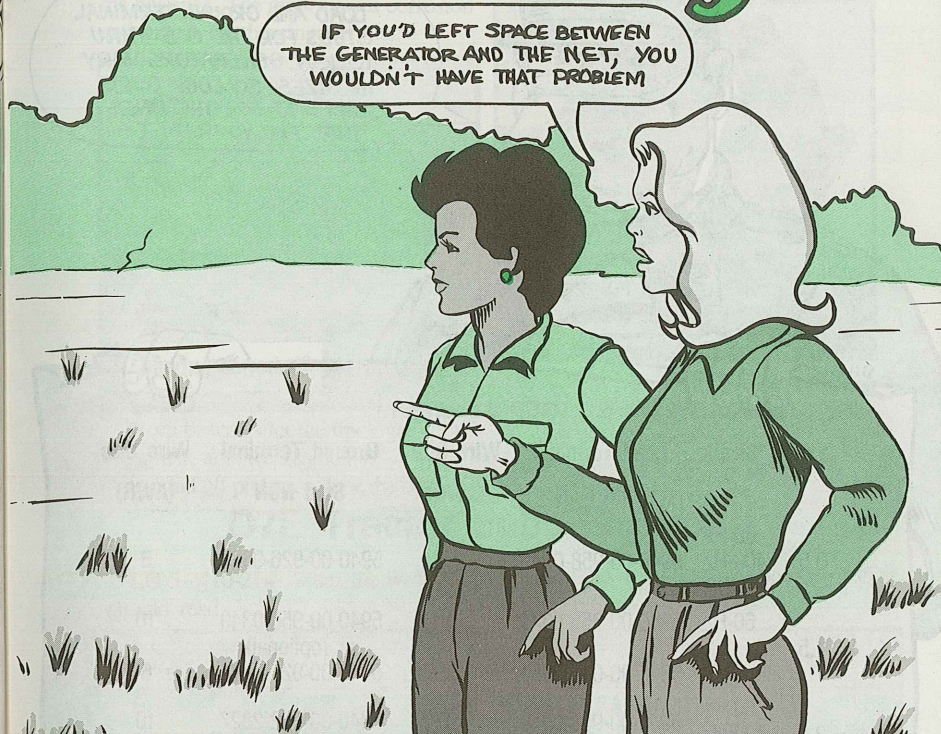
But then shreds of netting gang up on

the generator, clogging air intake ports. This overheats the generator!

Before starting the engine, make sure the netting is at least 2 feet above the exhaust and at least 2 feet from the sides of the trailer. This’ll keep the netting away from the generator’s exhaust even in a wind. Otherwise, if the net sags, wind can flop the screen against generator hot spots.

Burns Netting!

IF YOU’D LEFT SPACE BETWEEN THE GENERATOR AND THE NET, YOU WOULDN’T HAVE THAT PROBLEM



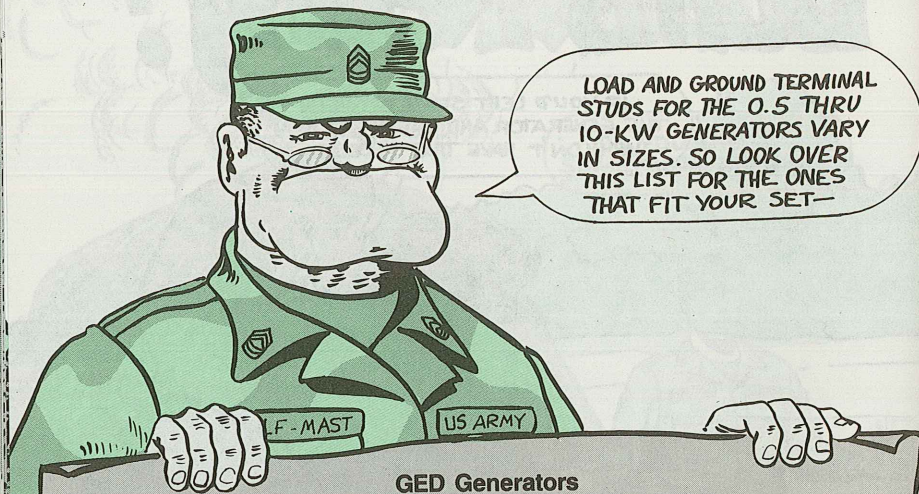
Leaving space between the generator and net will also give the engine breathing room.

To help keep the netting away from the gear, use more anchor posts in the area near the generator.

Also attach a net-spreading pole to the trailer to hold the netting away from the hot exhaust.

When you take down the netting, keep it away from the generator’s hot spots or wait until the generator cools.

Pick Your Terminal Studs



LOAD AND GROUND TERMINAL STUDS FOR THE 0.5 THRU 10-KW GENERATORS VARY IN SIZES. SO LOOK OVER THIS LIST FOR THE ONES THAT FIT YOUR SET—

GED Generators

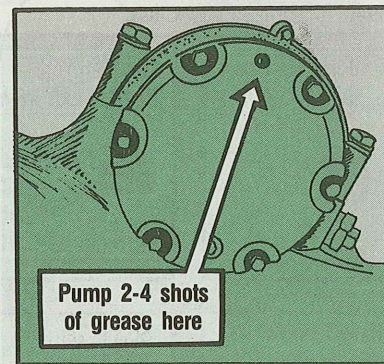
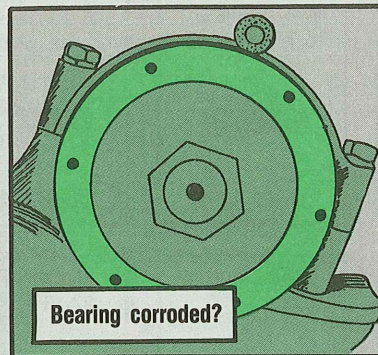
KW	Size	Load Terminal Stud NSN	Wire Size (AWG)	Ground Terminal Stud NSN	Wire Size (AWG)
0.5	60-Hz 400-Hz 28 VDC	5940-00-958-0349	10	5940-00-926-9827	6
1.5	60-Hz 28-VDC	5940-00-958-0349 5940-00-021-3321	10 6	5940-00-958-0349 5940-00-021-3321	10 6
3.0	60-Hz 400-Hz 28-VDC	5940-00-958-0349 5940-00-958-1214	10 2	5940-00-952-2827 5940-00-952-2827	10 10
5.0	60-Hz 400-Hz	5940-00-021-3321	6	5940-00-021-3321	6
10.0	60-Hz 400-Hz	5940-00-958-1214 5940-00-901-0287	2 2	5940-00-021-3321	6
5.0	60-Hz	5940-00-009-4763	2	5940-00-234-3383	6
10.0	60-Hz 400-Hz	5940-00-009-4763	2	5940-00-234-3383	6

Sprocket Bearing Lube

Working in mud can be murder on drive sprocket bearings!

Water and dirt get past the seals into the bearings. The gunk causes corrosion and grinds the bearings to bits.

every time you finish a mud or water operation. Pump in 2-4 shots with a hand grease gun.



Worn bearings let the track get out of alignment and wear quick.

To head off problems, lube the bearings

While you're at it, grease the track roller frame inner bearings. Pump grease in until clean grease comes out around the diagonal bearing cap assembly.

D7E Tractor Lube is Wrong

LO 5-2410-214-12 has the wrong lube for the final drives. Here's how the LO should read:













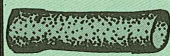



— KEY —					
EXPECTED TEMPERATURES					
LUBRICANTS	CAPACITY	Above +15°F (Above -9°C)	+40° to -15°F (+4° to -26°C)	+40° to -65°F (+4° to -54°C)	INTERVALS
GO - Lubricating Oil, Gear Multipurpose	GO 85W/140	GO 85W/140	GO 85W/140	GO 80W/90	
- Final Drives	36 qts. ea (34 L)				









This is the same lube called for in the D7F's LO, 5-2410-233-12.

NSN'S

for Components

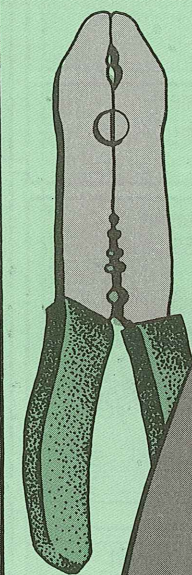
Need terminals, pins, receptacles, connectors, or tabs to restock your terminal kit, NSN 5940-00-450-5802? Get these items with these NSN's. All are in the 5940 Federal Supply Class:

<p>Ring Terminal AWG 12-10, Stud 1/4-in</p>  <p>5940-00-143-4777</p>	<p>Ring Terminal 16-14, Stud 3/8-in</p>  <p>00-143-4793</p>	<p>Hook Terminal 16-14, Stud 10</p>  <p>00-057-8216</p>	<p>Ring Terminal 22-16, Stud 10</p>  <p>00-143-4771</p>
<p>Ring Terminal 12-10, Stud 3/8-in</p>  <p>00-113-9826</p>	<p>Spade Terminal 16-14, Stud 10</p>  <p>00-552-2019</p>	<p>Bullet Terminal 16-14</p>  <p>00-177-4356</p>	<p>Terminal Pin 22-16</p>  <p>00-843-1473</p>
<p>Ring Terminal 12-10, Stud 10</p>  <p>00-143-4794</p>	<p>Ring Terminal 15-14, Stud 10</p>  <p>00-143-4780</p>	<p>Tab Receptacle 16-14</p>  <p>00-926-0085</p>	<p>Tab Receptacle 22-16</p>  <p>00-948-9686</p>
<p>Butt Connector 12-10</p>  <p>01-079-1936</p>	<p>Butt Connector 16-14</p>  <p>01-079-1375</p>	<p>Closed End Connector 22-14</p>  <p>00-636-5535</p>	<p>Butt Connector 22-16</p>  <p>00-665-7317</p>

<p>Disconnect Tab</p>  <p>00-481-9090</p>	<p>Flag Terminal</p>  <p>00-481-9089</p>
<p>Plug Terminal Straight 7MM</p>  <p>00-845-4106</p>	<p>Distributor Cap Terminal</p>  <p>00-360-7689</p>
<p>Bullet Receptacle</p>  <p>01-035-5085</p>	<p>Quick Disconnect Tab</p>  <p>00-843-1550</p>
<p>Blade Receptacle</p>  <p>00-998-6126</p>	<p>Quick Disconnect Receptacle</p>  <p>00-827-4284</p>

ALL WIRE
SIZES ARE
AWG.

Super Champ II
Crimping Tool, NSN
5120-01-143-9117





ALWAYS KEEP A
GOOD ASSORTMENT OF
SMALL PARTS IN YOUR SHOP.

BASIC



Absorbent compound, 25-lb bag
NSN 7930-01-145-5797

Chamois, leather
NSN 8330-00-965-1722

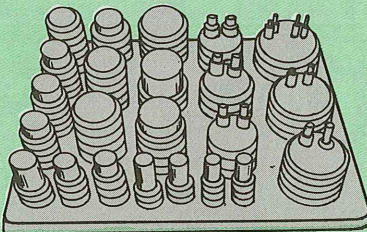
Cotter pin assortment
NSN 5315-00-598-5916



Nut assortment
NSN 5310-00-297-3751



O-ring assortment
NSN 5330-00-159-3130



Lock washer assortment
NSN 5310-00-209-2312



Flat washer assortment
NSN 5310-00-275-4290



Woodruff key assortment
NSN 5315-00-271-4251



Setscrew assortment
NSN 5305-00-275-4073

Electrical waterproof connectors
(for electrical tool kit in the No. 1 and
No. 2 Common shop sets). Authority:
SM 9-4-5935-501

NSN 5935-00-570

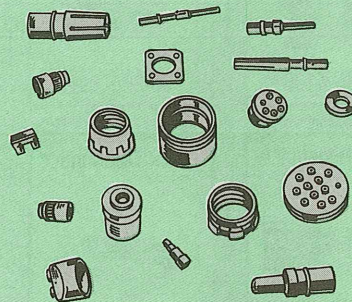
Item

1380

Bendix Kit

1060

Douglas Kit



Insulating varnish, electrical
NSN 5970-00-284-5448

**Gasket material, animal or plant
fiber, water, oil, grease resistant**

NSN 5330-00-	Thickness (inch)
467-3615	1/32
270-8470	1/16
233-5845	1/64



SHOP ITEMS



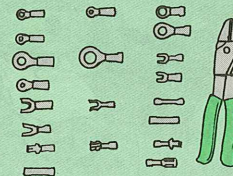
HERE'S A HANDY LIST OF ITEMS
THAT ARE OFTEN NEEDED:

Gasket, cork	
NSN 5330-00-	Thickness (inch)
233-5844	1/2
291-1685	1/32
171-9134	3/16

Gasket, shellac
NSN 8040-00-664-4134

Gasket sealing compound	
NSN 8030-00-	Type
247-2524	Hardening
656-1426	Nonhardening

Electrical terminal kit
NSN 5940-00-525-0907
(Commercial-type connectors)
Kit comes with crimping tool

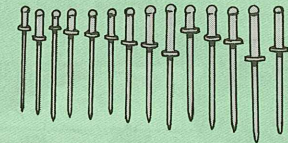


Heat shrinkable tubing (for electrical wire repairs)	
NSN 5970-00-	Inch diameter
812-2968	1/16
812-2969	1/8
815-1295	1/4
812-2967	1/2

OCT 86

Pop Rivets 1/8-in dia		
Grip Length	NSN 5320-	Quantity
1/16-1/8	00-510-7823	100
1/8-3/16	00-904-4136	1
3/16-1/4	01-015-6898	1
1/4-5/16	00-052-1972	1
5/16-3/8	00-903-8778	1
3/8-1/2	00-824-4760	1

3/16-in dia		
Grip Length	NSN 5320-00-	Quantity
1/16-1/8	408-6073	100
1/8-1/4	493-4101	100
1/4-3/8	409-6841	100
3/8-1/2	408-9928	100
1/2-9/16	753-3809	100



USE APPENDIX
A OF CTA 50-970
TO GET EXPENDABLE
CONSUMABLE "AS
REQUIRED" MAINTENANCE
SUPPLIES.



57

Conquering Problems with PM



NBC NCO'S, KEEP YOUR M11'S SPRAYING WITH THESE PM POINTERS. AFTER WASHING, MAKE SURE THE INSIDES OF THE CONTAINER AND HEAD ASSEMBLY ARE COMPLETELY DRY BEFORE REASSEMBLING. TRAPPED MOISTURE LEADS TO CORROSION. HEAVY CORROSION DEADLINES THE M11.

TM 3-4230-204-12&P says to blow dry the container and head assembly. If you don't have compressed air, let the M11 air dry. Hang the head from a hook and set the container upside down at a slight angle after removing its drain plug. Let both dry at least 24 hours.



Lumpy corrosion inhibitor won't fight rust. Lumps signal moisture contamination. Keep corrosion inhibitor dry, strong and smooth by sealing its can when not in use. Order a new 1-lb can of inhibitor with NSN 6850-00-368-5233.

While doing PMCS, watch for these faults:

- Missing packing inside the spray head where the nitrogen cylinder fits or around the spray head threads. Without it, the M11 leaks. Replace the small packing with NSN 5330-00-804-7767; the larger with NSN 5330-00-180-9903.



Checking for packing



Locking pin retainer pin on?

- Missing retaining ring on the handle locking pin. It comes loose and falls off. Then the handle locking pin will fall out. Replace the retainer ring with NSN 5365-00-282-1633.

- Lead disk on wrong side of safety seal. That can cause the safety seal wire to snap. It's also a gig. Always put the disk on same side as safety pin ring.



Pilferage seal on the same side as your locking pin ring?

M8 Alarm...

Refill Kits Really Bad?

The M229 refill kit, NSN 6665-00-859-2214, for the M8 alarm is in short supply. So make sure kits are unserviceable before you turn them in. You may not get new ones.

If a kit's air filter paddles are black, the kit can be used only for training... unless you upgrade the kit with new filter paddles, NSN 6665-01-071-0716. Two boxes of paddles upgrade one kit.

If a kit's paddles are gray, the kit is still good—regardless of the discard date on the box.



Paddle grey, OK! Paddle black, order new paddles

No Steel or Rubber!



NBC NCO's, check the buckles on your M17-series masks. Some masks were issued with steel buckles instead of brass. Steel buckles throw off sensitive equipment—like M2A2 aiming circles—that needs to be free of magnetic attractions.

To test, just pass a magnet over the mask's six buckles. If a buckle's steel, the magnet will pull. If it's brass, there's no pull.

Replace steel buckles with brass, NSN 4240-00-602-2207. The procedure's on Page 2-7, TM 3-4240-279-20&P.

AMCCOM Msg AMSMC-MAR-C 021655Z May 86 has the word. Also, get rid of rubber inlet valve or nose cup disks. You're supposed to use only silicone disks, NSN 4240-01-104-0965.

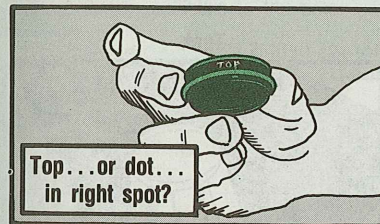
AMCCOM Msg AMSMC-MAR-C 091535Z May 86 is your authority. Rubber disks have a dull, non-glossy look. Silicone disks shine and range in color from black to almost transparent.

Never test disks by rolling or stretching them. You can damage them that way.



Dot on the Spot?

Make sure the white dot or the word TOP is where it's supposed to be on M17-series inlet valves.



With the dot or TOP at the top of the valve, the valve's louvers should be horizontal, sloping down and out.

Some valves are showing up that don't have the dot or TOP in the right spot.

If the dot or TOP is in the wrong place, paint over it with black paint. Put a dot in the right place with white paint.



Contain the Oil

WATCH THIS GUY SLIP ON THE MESS HE LET US MAKE!

YEI000W!!

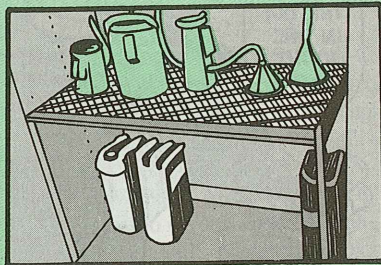
YEP, THEY DO IT EVERY TIME!!

Dear Editor,

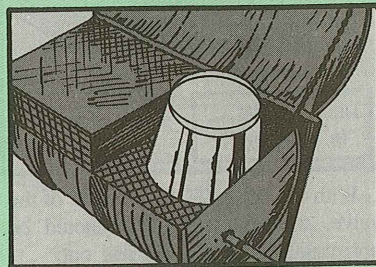
There's nothing worse than the mess left on floors and shelves by bulk oil dispensers, drain pans and funnels. The dripped oil is also a hazard and bad for the environment.

To solve this, I've made a drip tray for dispensers and funnels and a drip tank for drain pans. You need an old metal shelf, a 55-gal barrel, some expanded metal, a pair of hinges, some chain, pipe fittings and drain valves.

Tray

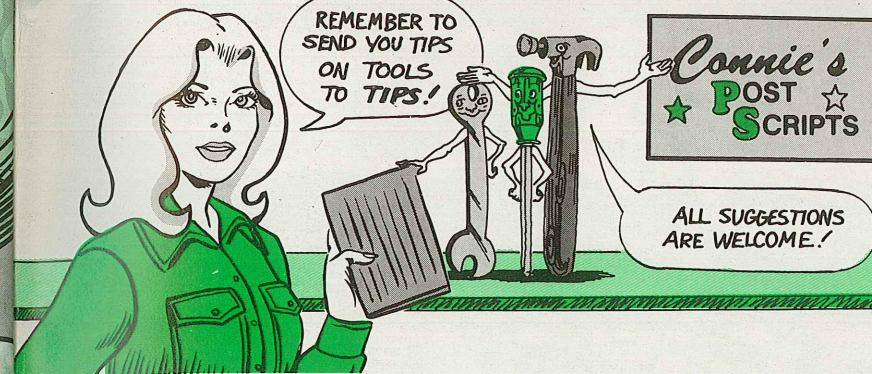


Tank



Roy Richter
AMSA #4 (G)
Houston, TX

(Editor's note—Thanks for the solution to a slippery problem.)



M939A1-Series Truck Tires & Wheels

Until TM 9-2320-272-20P is updated, remember this:

- Wheels and tires on Pages 491 and 507 are for M939-series trucks only.
- All M939A1-series trucks use wheels, NSN 2530-01-210-8837, and valve stems, NSN 4820-01-210-8821.
- The 14.00-R20 tires on M939A1's can be from either of two manufacturers. Match the beadlocks to the tires.

Goodyear tire NSN 2610-01-214-1344
Goodyear beadlock NSN 2530-01-211-8405

Michelin tire NSN 2610-01-213-5243
Michelin beadlock NSN 2530-01-211-8401

No Repair of Regulator

The 100-amp regulator, NSN 2920-00-900-7993, used in a lot of equipment, is no longer a repairable item.

Updated parts manuals will show the SMR Code changed from PAOFF to PAOZZ.

Switch Switch NSN

NSN 3040-00-789-7607 on Page 27 of PS 401 gets only the lever for the multifuel 2½-ton truck ignition switch. Use NSN 5930-00-699-9438 for the switch assembly.

Control Valve Handle NSN

You can get a new handle for the air suspension control valve on your M747 semitrailer with NSN 4820-01-211-8375. You'll also need a retaining screw, NSN 5305-00-954-3487 and lock washer, NSN 5310-00-194-9209.

Battery Brush NSN

Use NSN 5120-00-926-5175 to get the battery cleaning brush in the Additional Authorization List for the M548/M548A1 cargo carrier and M1015/M1015A1 electronic warefare systems carrier. The NSN on Page C-2 of TM 9-2350-247-10 is wrong and will be changed.

Save and Tracks and Pads

Keep speed slow 'n' steady



Smooth starts 'n' stops



Turn in Smooth,
Long curves

