

Issue 390

PS

May
1985

THE PREVENTIVE MAINTENANCE MONTHLY



Improving Your Tools
(See page 29)

PS THE PREVENTIVE MAINTENANCE MONTHLY

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

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

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Maintenance Excellence Awards

LIGHT UNIT WINNERS

- *Active MTOE 46th Trans Co, Camp Carroll, Korea (USAEIGHT)
- *Active TDA Miesau Army Depot, Miesau, Germany (USAREUR)
- Reserve MTOE 391st Engr Co, WS, Kalispell, MT (FORSCOM)
- National Guard 154th S&S Bn, Cape May, NJ (ARNG)

LIGHT UNIT RUNNERS-UP

- Active MTOE HHC, 197th Ord Bn, 59th Ord Bde, Muenchweiler, Germany (USAREUR)
- Active TDA 2d Bn, 1st Armor Tng Bde, Ft Knox, KY (TRADOC)
- Reserve MTOE 971st Med Co, Wichita, KS (FORSCOM)
- National Guard 1/175th FA Bde, OMS #7, Montevideo, MT (ARNG)

INTERMEDIATE UNIT WINNERS

- *Active MTOE Btry C, 1/22nd FA, Zirndorf, Germany (USAREUR)
- *Active TDA 270th Sig Co, 73rd Sig Bn, Pirmasens, Germany (USAISC)
- Reserve MTOE 1011th S&S Co, Independence, KS (FORSCOM)
- National Guard HHC, 164th Engr Gp (Combat) OMS #4, Bismarck, ND (ARNG)

INTERMEDIATE UNIT RUNNERS-UP

- Active MTOE 533rd Trans Co, 67th Maint Bn, Ft Benning, GA (FORSCOM)
- Active TDA Motor Trans Div, 29th Area Spt Gp, Kaiserslautern, Germany (USAREUR)
- Reserve MTOE 163rd Ord Co (Ammo, DS/GS/Conv), Santa Ana, CA (FORSCOM)
- National Guard 1/201st FA, OMS #4, Kingswood, WV (ARNG)

HEAVY UNIT WINNERS

- *Active MTOE 6/37th FA, Camp Essayons, Korea (USAEIGHT)
- *Active TDA U.S. Army Field Station, Berlin, Germany (INSCOM)
- Reserve MTOE Co D, 411th Engr Bn, Dydasco (USARS), Guam (WESTCOM)
- National Guard 743rd Maint Co, FWD/DS, Ft Lauderdale, FL (ARNG)

HEAVY UNIT RUNNERS-UP

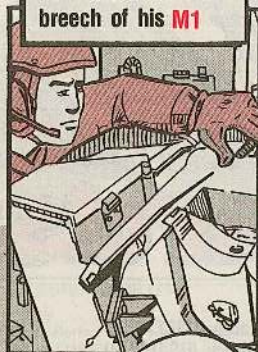
- Active MTOE 287th MP Co (Separate), Berlin, Germany (USAREUR)
- Active TDA Inf Tng Gp, Ft Benning, GA (TRADOC)
- Reserve MTOE HHC, 321st Engr Bn (Combat), Boise, ID (FORSCOM)
- National Guard 203rd Engr Bn, Neosho, MO (ARNG)

*Nominee for DOD Award.

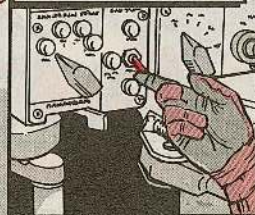
Safety



The loader reached over the coax ammo box bolted on the breech of his M1



At the same time the gunner moved the gun select switch from **COAX** to **MAIN GUN**, while he held onto his palm switch.



WHAM!

When the breech suddenly moved, the loader's head was pinned between the ammo ready box and the roof of the turret!



BOTH CREWMEN FORGOT TURRET SAFETY RULES. ONE PAID A HIGH PRICE. IF YOU REMEMBER THE RULES AND FOLLOW THEM, YOU WON'T HAVE TO PAY THE CONSEQUENCES!

Never put anything

above or below the moving parts of the gun.

Never reach or lean

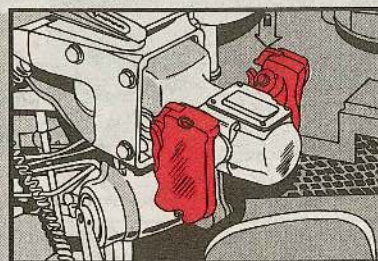
over the breech of any gun—for any reason—anytime during operations. If you're a mechanic working with the gun, be sure ALL unnecessary power is off and stays off. If possible, keep the turret and gun locked. On the M1, use the gun/turret drive switch. In the **MANUAL** position, sudden movement is prevented.

Truth or CONSEQUENCES



Tell everyone

around the gun what you're going to do before you touch any controls, and be sure the crew is safely positioned.



Never step on control handles

Fasten the gun

elevation lock on your M1 or put your gun in travel lock on M60-series tanks every time you leave the tank.

Read the TM'S!

Whether you're pulling maintenance or battling the OPFOR, follow your vehicle's TM's. Every step is designed with your safety in mind.

Never stow

or hook up equipment where it doesn't belong.

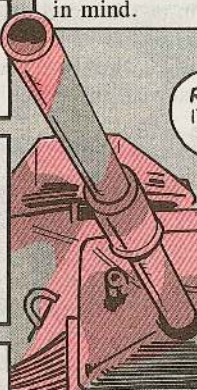
Use all safety equipment

such as shoulder, knee and toe guards. They're designed to protect you.

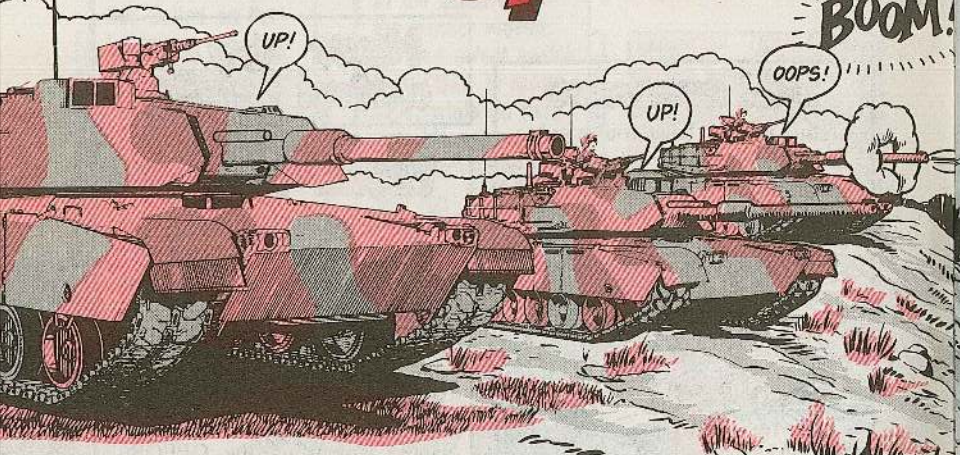
Never assume anything!

If you think a control panel or handle is malfunctioning, call your mech. Don't let anyone use the equipment until it's checked out.

RESPECT THE GUN!
IT CAN KILL WITHOUT FIRING A SHOT!



It's "Up" Before Firing



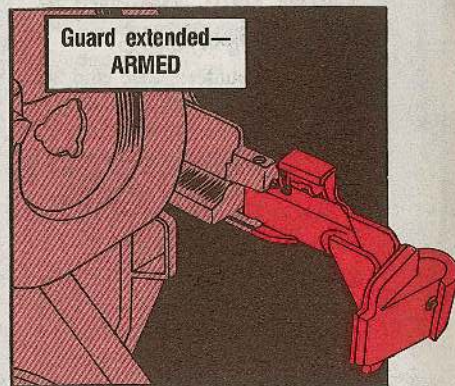
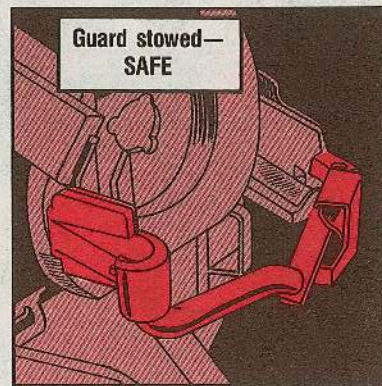
M1 gunners and commanders, never fire the main gun before the loader is out of the way. If you do, the loader can be clobbered by the spent case, the spent case ejection arm or the breech.

Here's what can happen:

The gun is armed by a switch mounted on the spent case ejection guard.

When the guard is stowed, the switch is open and the gun is safe. It can't be fired.

When the guard is extended, the switch is closed and the gun can be fired.



Firing



Who moves the ejection guard? The loader does. To do it, he must come real close to the breech. He's still close to the breech when the gun is armed.

He knows when it's armed by the light on his main gun status panel. But you don't know when any of this happens.

If you gunners or commanders are squeezing the trigger when the loader moves the guard and closes the arming switch, the gun may fire.

Get too trigger happy, then, and you could hurt your loader bad. Wait until you hear him yell, "Up." That means he's out of the way and prepared for you to fire.

Handle Handle With Care



The magnification selector on your primary sight is not as rugged as it looks.

A small, headless pin holds the selector in place. If you use too much force switching the selector, you can break the pin.

Just remember, a soft touch will do just fine when selecting 3X or 10X magnification. Anything more can leave you with half a sight.

...SO WHY IS EVERYONE SO HOT ABOUT THESE FLAT SPRINGS?..

WELL, I WOULD NOT WANT TO HAVE EVEN ONE OF THESE SHELLS BOUNCING AROUND IN HERE WITH ME!

Beware the Flat Spring!

A broken spring on your M1 tank's ammo rack could leave you breathless. Crews—listen to this: The only thing holding a 105-MM round in the rack is flat spring, NSN 5360-01-074-9029. If that spring lets go while the ammo door is open, you could get a round in your lap...on your head...or all over if it blows up.

For your safety, don't operate the M1 with the ammo doors open except when you loaders are doing your thing. Be extra careful anytime you open the doors, because a spring could break.

Eyeball the springs during your PMCS. If a spring is broken or damaged, DON'T USE IT. Report it on your DA 2404. When the problem is solved, you'll hear about it. For now, be careful!

Where's the Right Screw?

Dear Half-Mast,
I can't get the right size screw for the switch cap on my M60A3's cupola elevating screwjack. When I order the screw listed in the parts TM's, it's too large. Can you help?
CW2 W.R.

Dear Mr. W.R.,
You're right. The M60A3's parts TM's are wrong. The screw you want is NSN 5305-00-059-4550. AMCCOM says the updated TM's will correct the error.

Half-Mast

Watch Your Feet!

Drivers, be just as careful getting into your station from outside the hatch as you are from inside the turret.

While a moving turret can put the hurt on your body, your feet can put the hurt on your tank—as in NMC.

Keep your feet off the instrument and master control panels when coming



through the hatch. Only a few of those knobs can be replaced, and none of the switches can be repaired at organizational level. So your tank sits still until DS finds a replacement panel.

Just consider the panels off limits to anything other than your hands. If that means planting your dirty, muddy boots right in the middle of your seat, then do it.

The Light Fantastic

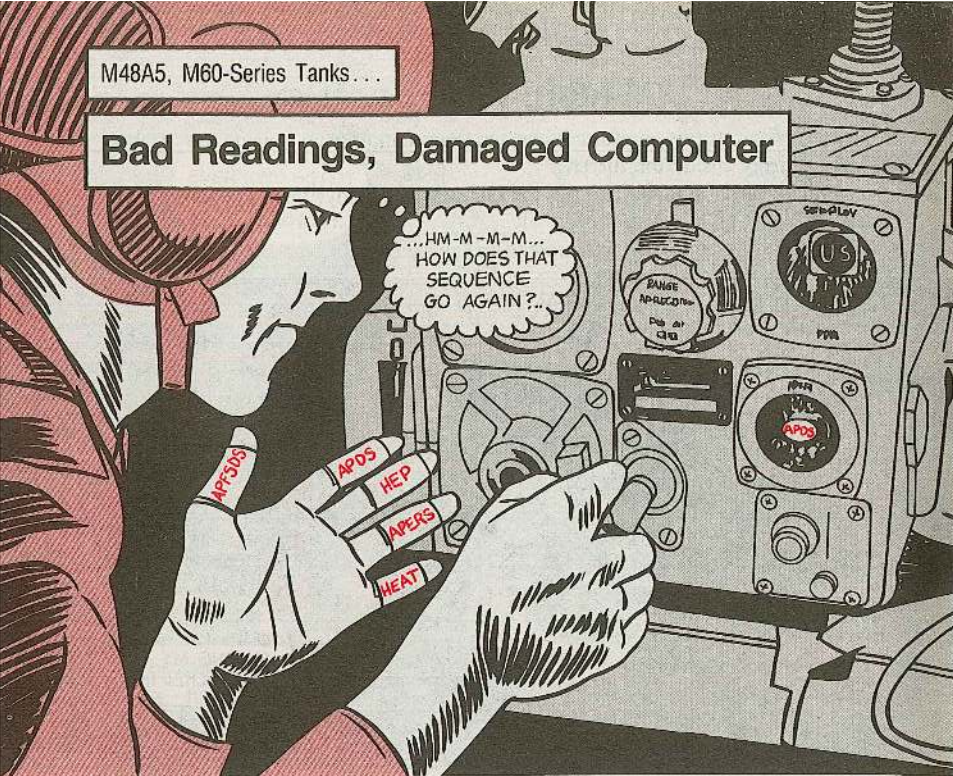


Don't get shook up if the hydraulic system malfunction light comes on during high-speed slewing. That's more or less normal.

When the maneuver is completed, the light goes off and the gunner's pressure gage returns to a normal reading (1,500 to 1,700 PSI).

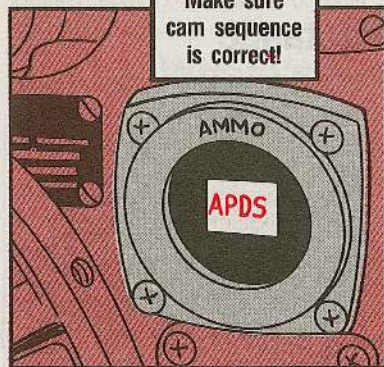
If the pressure stays down or the light doesn't go off, then troubleshoot. See Page 3-17 of TM 9-2350-255-10-3.

Bad Readings, Damaged Computer



Tank gunners and commanders, watch real close for the cam sequence on your M13A2 or M13A4 ballistics computer.

**Make sure
cam sequence
is correct!**



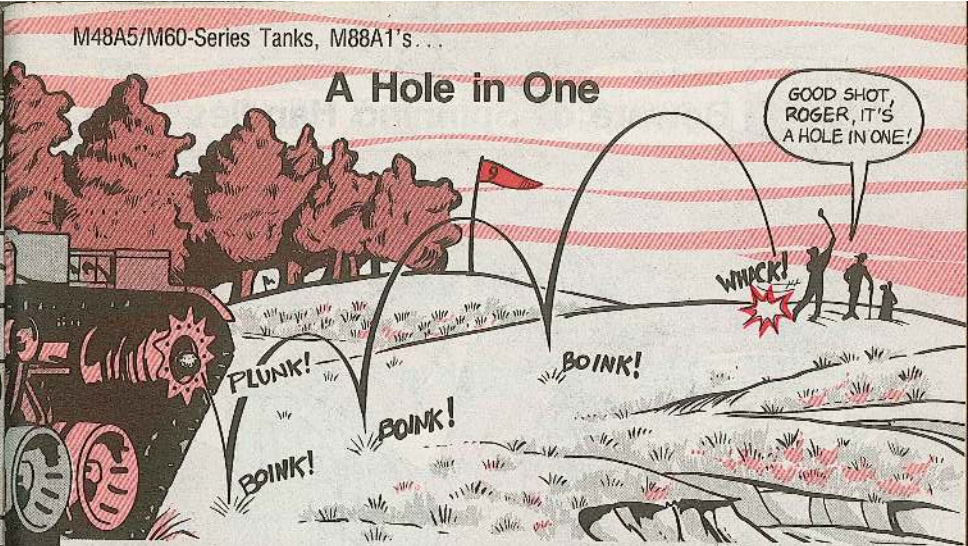
There's a set order to the ammo identifications that show up on the computer. Any cams out of sequence could cause wrong computer readings or damage to the computer itself.

Get your support on the job real quick if the cams aren't in this order:

- | | |
|----------------------|-----------------|
| 1st cam (handle out) | APFSDS-T (M735) |
| 2nd cam | APDS-T (M392) |
| 3rd cam | HEP-T (M393) |
| 4th cam | APERS-T (M494) |
| 5th cam (handle in) | HEAT-T (M456) |

Damage is very likely if the 1st and 5th cams are reversed in position in the computer. The cam follower binds toward the high end of the cam.

A Hole in One



Final drive hubs without cleanout slots will give you trouble, crews and mechs.

Mud, sand and other sticky stuff will build up between the track and the hub. Then your vehicle will throw a track.

There are some hubs, NSN 2530-00-736-4134, in use and in supply that don't have cleanout slots. If your tank or M88A1 recovery vehicle has one of these hubs, have it modified by DS.

They can get directions on how to make the slots from the local Logistic Assistance Office.

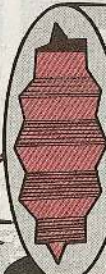
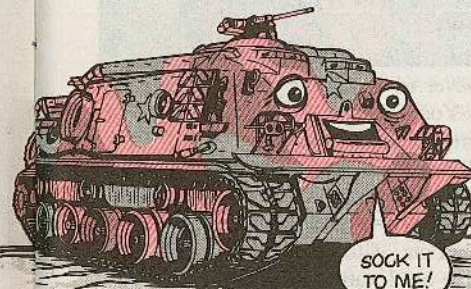


**Hub
without
cleanout
slots**



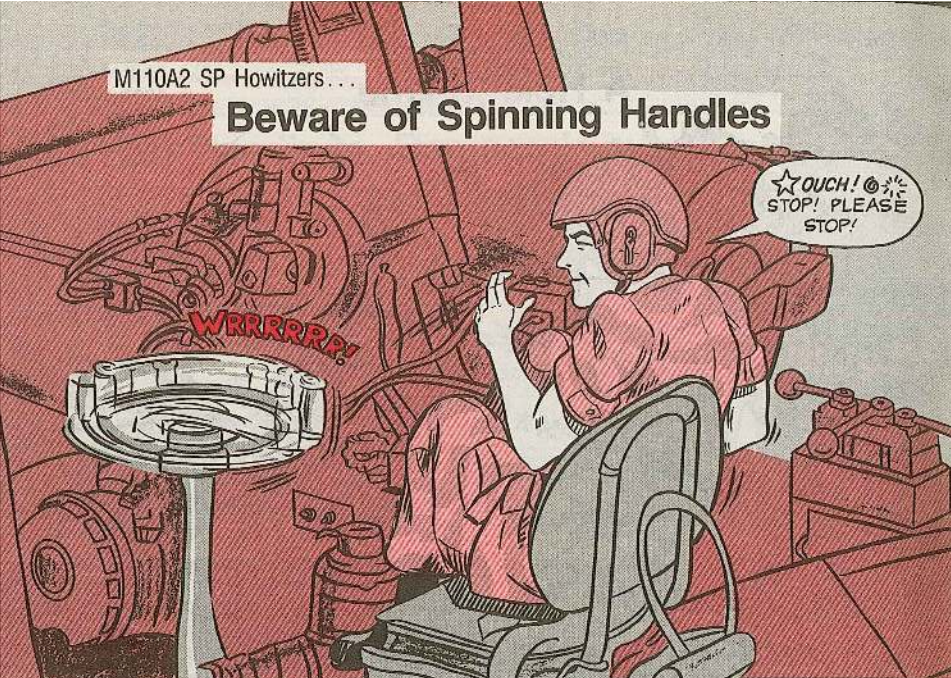
**Cleanout
slots**

Socket to M88A1



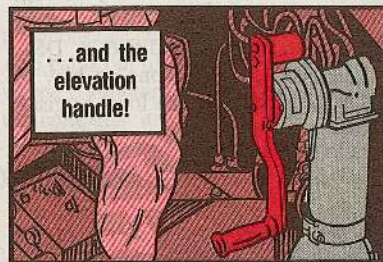
The correct NSN for the 1 5/16 opening, 12-pt, 3/4-in square drive socket in the M88A1 BII is 5120-00-232-5681. The NSN shown in TM 9-2350-256-10 as Item 3 on Page B-23 is wrong.

Beware of Spinning Handles



Crewmen, be real wary of the manual traversing and elevating handles on your howitzer, especially when you use power to traverse or elevate.

Those handles can make like whirling drumsticks and beat a painful tattoo on anything (or anybody) in the way.

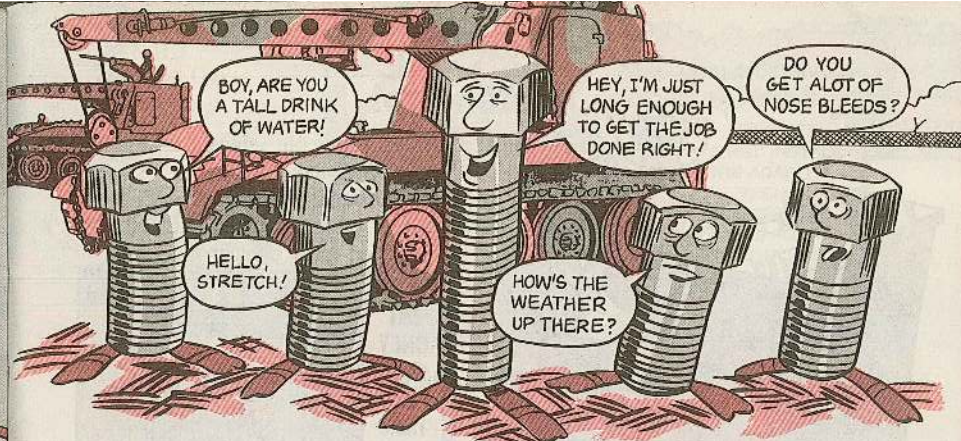


Your TM 9-2350-304-10 warns you never to elevate or traverse manually when the power systems are being used. You're also warned to stay clear of the handles during operation, in case there's a malfunction.

If someone plays with the manual handles while the gun is in travel lock, he may mess up the clutch that disengages the manual handles when power is applied.

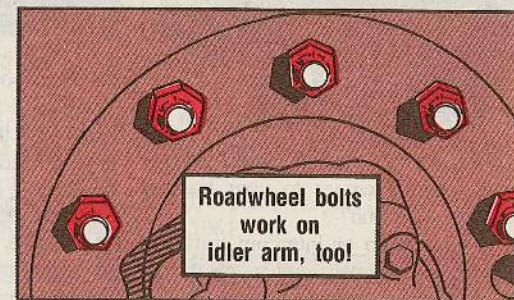
That means those handles will spin when power is applied. And fingers, hands, arms, elbows and knees don't come out of the fight in good shape.

Keep your distance when power traverse or elevation is used.



Longer Bolts for M110A2/M578

Having trouble keeping locknuts on the idler arm bolts on your M110A2 SP howitzers or M578 recovery vehicles? Could be the bolts are too short. Use ribbed shoulder bolts, NSN 5306-00-453-9333, instead. They're the same ones used on the roadwheels.



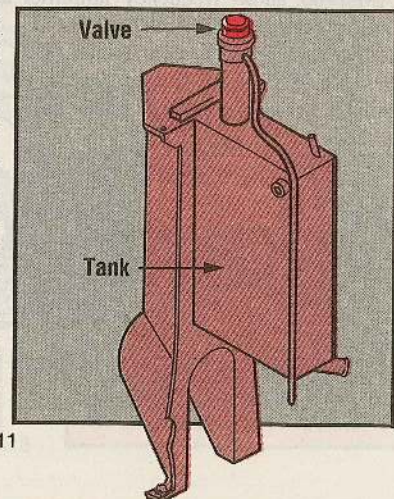
Reuse or Order New Valve

Make sure any new or rebuilt radiator surge tank you get has a pressure relief valve in place before you install it.

New tanks, NSN 2930-00-221-4805, come without the valve, NSN 2930-00-245-8164. Rebuilt tanks from your support unit may be missing the valve, also.

Either order a new valve or use a serviceable one from the old tank, but make sure the surge tank has a good one in place.

The tank and valve are Items 1 and 5 in Fig 29 of both TM 9-2350-238-20P (M578 recovery vehicle) and TM 9-2350-304-20P (M110A2 SP howitzer).



Listen Up!

HUH?

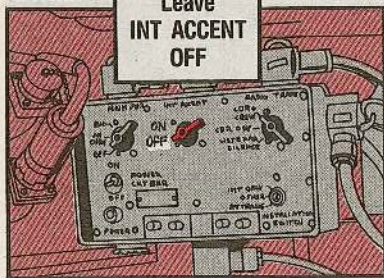


Are you a "Say it again, Sam" man when it comes to your tracked vehicle's commo?

If your radio or intercom traffic is not coming across loud 'n' clear, try these hearing aids:

■ For intercom traffic, flick the AM-1780 audio frequency amplifier Int Accent switch OFF. When it's ON, the intercom might seem louder, but it's not. The switch just drops radio volume. That makes radio traffic hard to hear.

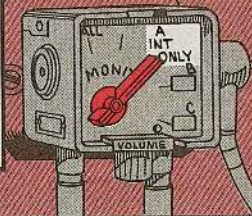
Leave
INT ACCENT
OFF



■ Keep intercom signals sharp by cutting out other noise.

For instance, set the intercom control box switch to INT ONLY if you don't need radio contact.

INT
ONLY
shuts
out
radio
traffic



Leave your CVC helmet's switch in the center position until you need to talk. You'll still be able to listen, but you won't have the distracting noise that gets in your headset when you key the mike by pushing the switch forward.

Leave helmet
switch in CENTER

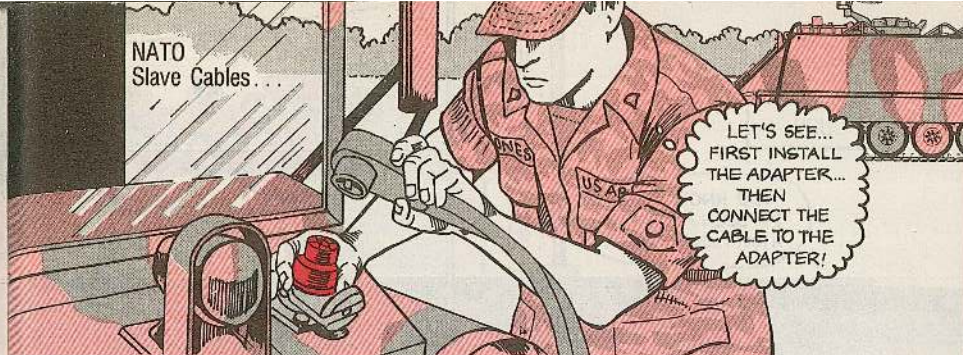


■ Make sure you get a good fit with your CVC helmet. That means getting the right size—small, medium or large.

Then, snug up the chin strap to keep the helmet seated. A good fit can also cut down the amount of outside noise that gets inside the CVC.

■ Keep contacts clean and dry. That helps keep static and buzzing from drowning out the good words you're supposed to hear.

NATO
Slave Cables...



Don't Be On the Short End

You can save yourself a bad burn from a short circuit by handling your NATO slave cable right.

Before you use it, make sure the master battery switches and all electrical/electronic switches in both the live and dead vehicle are in the OFF position.

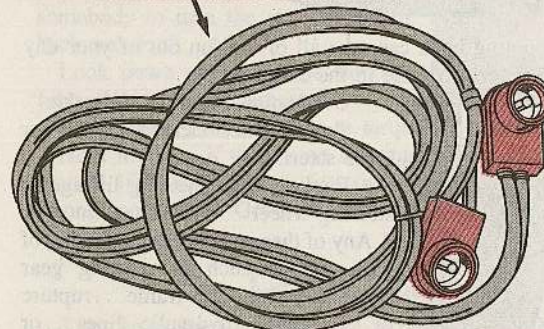
If you attempt to install the cable with the live vehicle's master battery switch in the ON position, arcing can occur. You can get burned. And, your cable will be damaged.

Also, keep your knees, elbows and big feet away from the cable while the engine is being cranked. Knock the cable loose during cranking and you'll burn the receptacle contacts.

If some part of the cable goes bad or is lost, replace the part instead of ordering the complete cable, NSN 2590-00-148-7961.

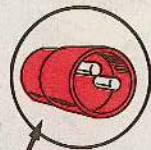
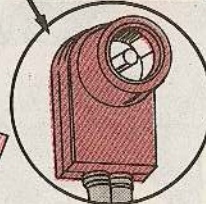
NSN 6150-01-022-6004 gets the
NATO slave cable with end connectors.

NSN 5935-00-258-9156 gets the
slave cable end connector.



NSN 2590-00-398-6527 gets the
20-ft cable without end connectors.

NSN 5935-00-322-8959 gets the
adapter-connector for each end
to fit the 2-hole receptacles.



CUCV...

YOU KNOW...
I'D BEEN NOTICING
A RATTLING SOUND!

...JERKING AND
BINDING, TOO!

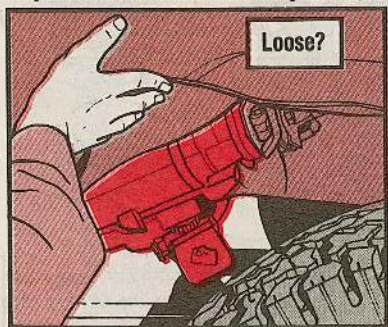
Tight is Right!

THEN WHY
DIDN'T YOU
REPORT IT?

Loose steering gear mounting bolts can take all of the fun out of your day if you fail to notice—and report—trouble in the early stages:

- Gear noise—rattle or “chuckle”
- Steering wheel kick-back—jerk—or loose steering
- Binding in the steering linkage or steering wheel

Any of these can be the beginning of real trouble, such as steering gear separation from the frame...rupture of connecting hydraulic lines...or loss of steering power assist...and maybe an accident as you try to control steering!

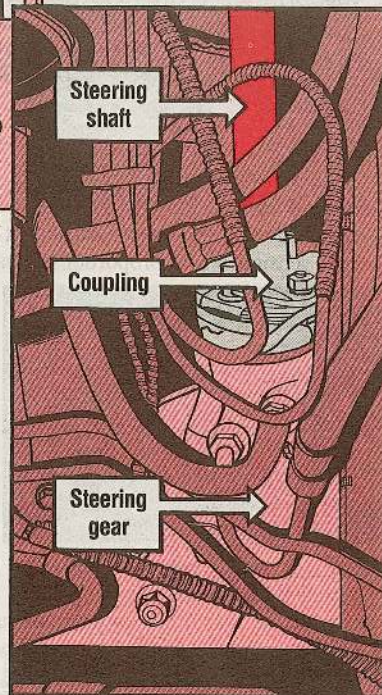


Play it safe. It takes only a minute or so to check for loose steering gear mounting before you move out. While the engine's warming up—transmission in PARK, parking brake ON—get somebody to turn the steering wheel back and forth.

Look down on top of the steering gear. Watch for movement.

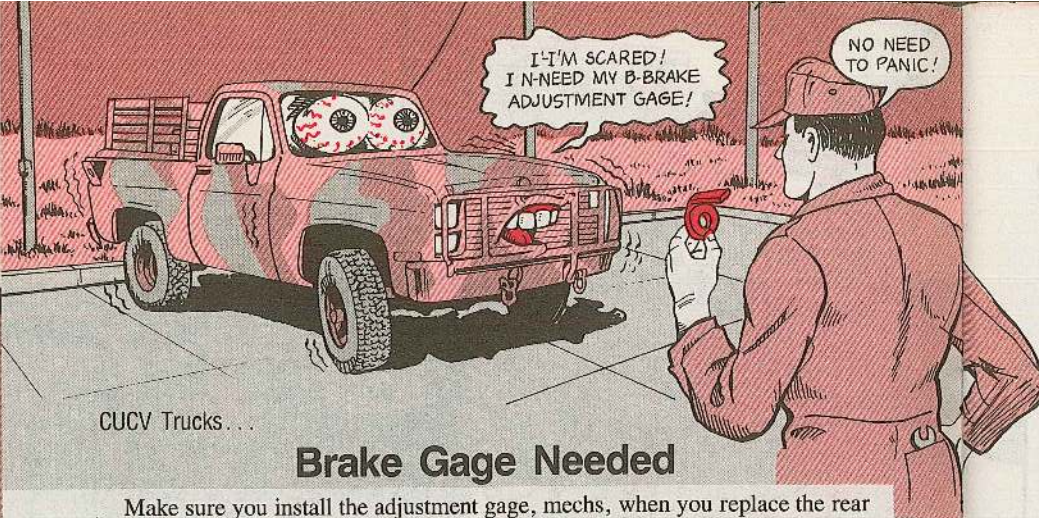
Loose? Get your mechanic to torque the mounting bolts to 80 lb-ft.

Hold it! Even if there's no steering gear movement, you're not out of the woods! If steering doesn't feel right, sound right or work right, something's wrong somewhere. Get it checked out—it's your neck!



CUCV Tire Chains

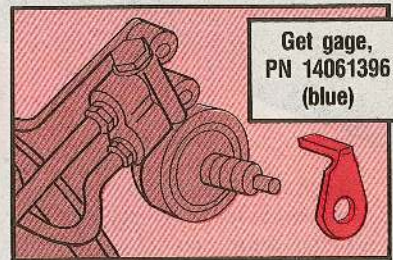
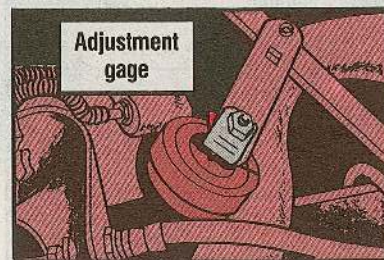
Tire chains for CUCV's come in two sizes. NSN 2540-01-185-8306 is for the M1009 truck's 15-in wheel tire chains. Chains for 16-in wheels on all other CUCV's come under NSN 2540-00-528-7360. You get a pair of chains with each of these NSN's.



CUCV Trucks...

Brake Gage Needed

Make sure you install the adjustment gage, mechs, when you replace the rear height sensing brake proportioning valve. This insures peak braking power



when carrying or towing a load. The gage is FSCM 11862 PN 14061396.

Install it like it says on Page 11-34 in TM 9-2320-289-20. But, make sure you raise the rear of the vehicle so that the rear axle hangs free.

This goes for all CUCV's except the M1009.

Prevent Floor Rust

CUCV floor rust is caused by water held in the floor mat's fiber backing. If your command OK's it, toss out the mat and backing. Follow TB 43-0001-39-4 (Jan 85) for rerouting wires and painting the floor.

If you can't toss 'em, solve the problem before it starts:

- Never hose out the inside of the truck.
- Look for leaks around the windshield, doors and firewall. Turn a hose on the outside of the truck and use a flashlight to check the inside. Get leaks fixed—under the warranty, if possible.

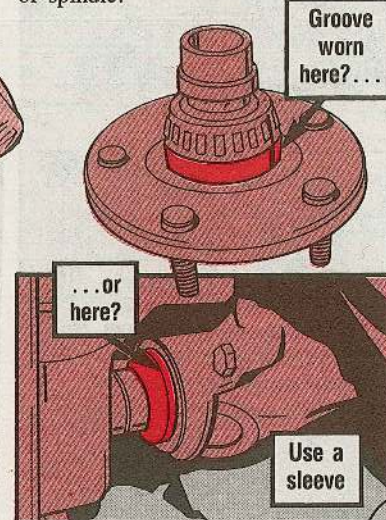
- Always check under the mats after a rain.

Finally, if the mat and backing gets wet, hang 'em out to dry.

M151-Series 1/4-Ton Trucks...

Get in the Wheel Seal Groove

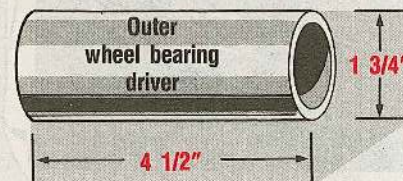
Wheel seals on some 1/4-ton trucks leak, no matter how many seals you replace. That's because a groove is worn in the sealing surface of the yoke or spindle.



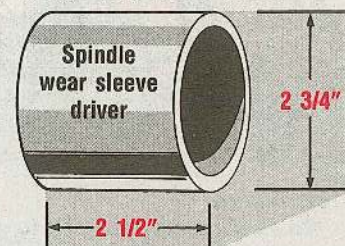
The seal can't fit snug—so it doesn't seal.

It's smarter and cheaper to use repair kit, NSN 2530-01-057-5717, than to replace spindles. And you need a set of steel drivers to seat the wear sleeves and outer wheel bearings.

Make the outer wheel bearing driver from 1 3/4-in ID tubing, NSN 4710-00-162-1022, 4 1/2 inches long.



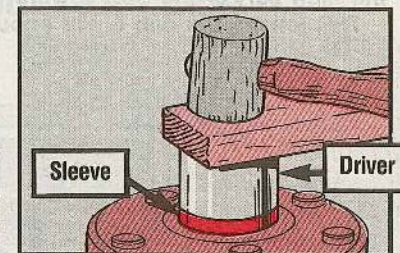
Use 2 1/2 inches of 2 3/4-in ID tubing, NSN 4710-00-162-0974, for the spindle wear sleeve driver.



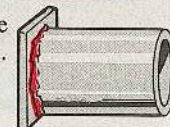
The yoke sleeve driver is 4 1/2 inches of 2 1/4-in ID tubing, NSN 4710-00-640-0287.



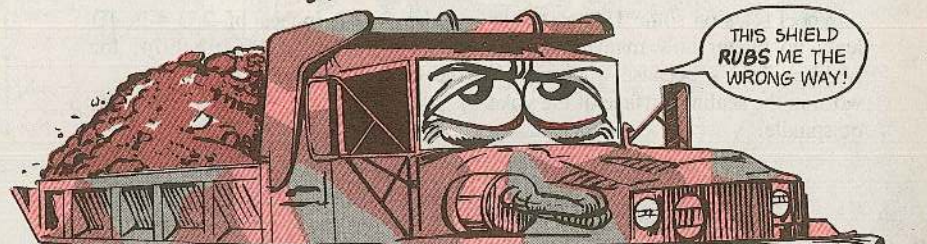
Install repair kit sleeves and seals as instructed on Pages 9-13 thru 9-15 of TM 9-2320-218-20-1-2. A 2x4 across the top keeps the edges of a driver from burring.



Or weld a heavy-gage steel plate to one end.



Ay, There's the Rub!



Dear Editor,

We've come up with a fix to stop wear and tear of the new cab cover on our dump truck.

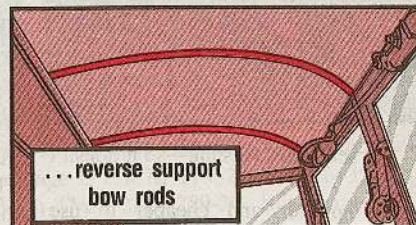
Like it says on the AMDF, we get cab cover assembly, NSN 2540-01-119-7792, as a replacement for the -20P listed cover, NSN 2540-00-737-2723. NSN 2540-01-155-0104 is for the cover alone.

However, when installed, the cover rubs against the truck's safety shield or cab protector and gets worn out.

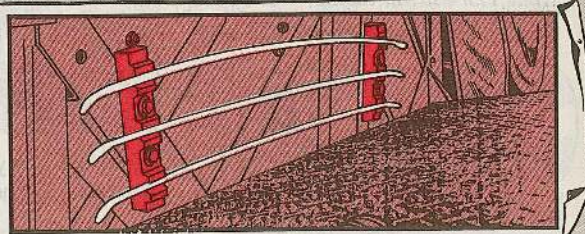
To eliminate this rubbing problem, we reversed the canvas support bow rods with the high part of the bow toward the front of the truck.

This lowers the cab cover enough so it doesn't touch the shield.

**MSG Robert Blair
KYARNG**

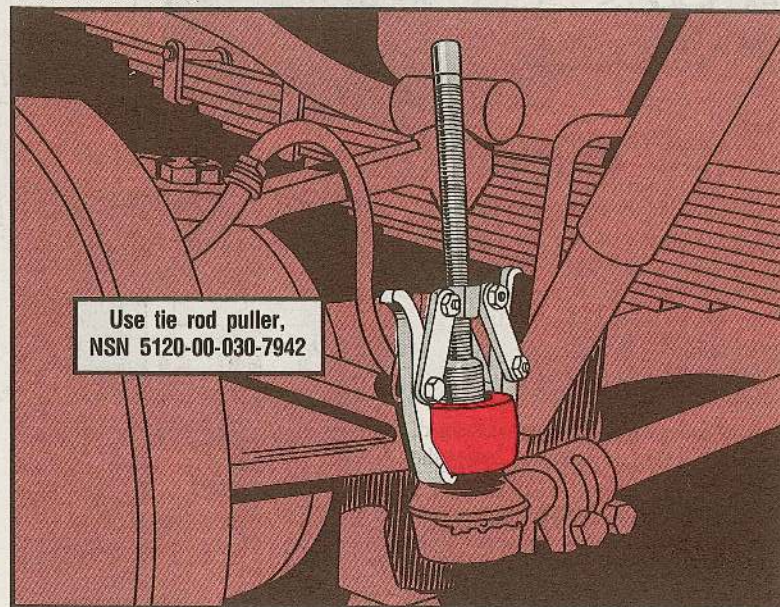


(EDITOR'S NOTE:
Looks like a winner!
Remember when you
take off the cab
cover, stow the bow
rods in the brackets
behind the passen-
ger seat.)



Push to Pull Tie-Rod Ends

Use Puller, NSN 5120-00-030-7942, to remove tie-rod ends. It's in your No. 1 Common shop set. On 2 1/2-ton trucks, it's simpler if you remove the front wheels first.



M939-Series Truck...

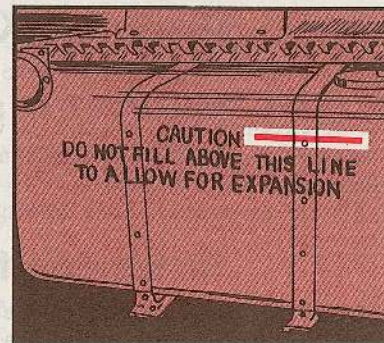
Fill It Up—But Not Quite

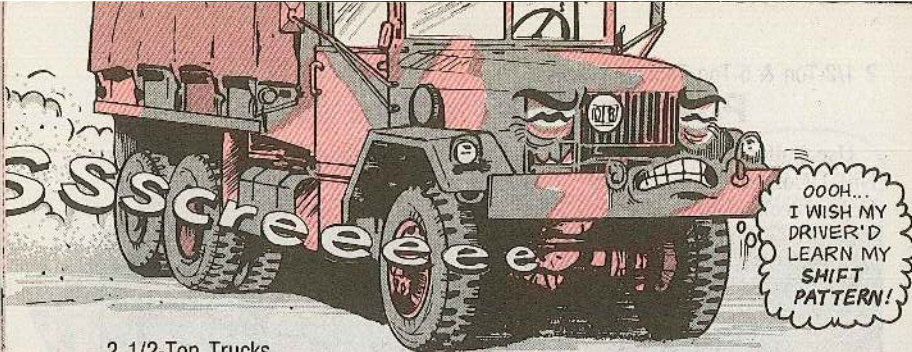
Never refuel your M939-series 5-ton truck above the full mark on the tank.

Extra fuel can be sucked into the fuel tank vent lines and on into the engine air intake system. This can cause engine runaway and damage your engine before you can shut it down.

Your fuel tank must be marked like it says on Pages 40-41 in TB 43-0209:

CAUTION:
**DO NOT FILL ABOVE THIS LINE
TO ALLOW FOR EXPANSION**





2 1/2-Ton Trucks...

ID Mixup Grinds Gears

Gasoline engine trucks and multifuel engine trucks do not have the same gear shift pattern. Each type of truck has its own gear shift instruction decal.

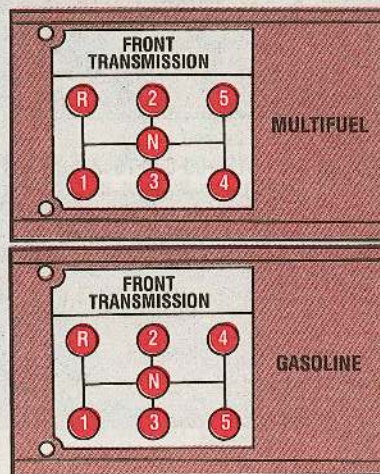
So what happens if your truck has the wrong decal?

Plenty...including transmission damage.

So if your gear shift plate is damaged, hard to read or missing, get the right one.

NSN 9905-00-852-1081 for the multifuel shows fifth gear in the upper right corner of the shift pattern.

NSN 9905-00-693-4178 for gasoline engine trucks has fifth gear in the lower right corner of the shift pattern.



Front-Mounted Winch...

Mission Is Key in PMCS

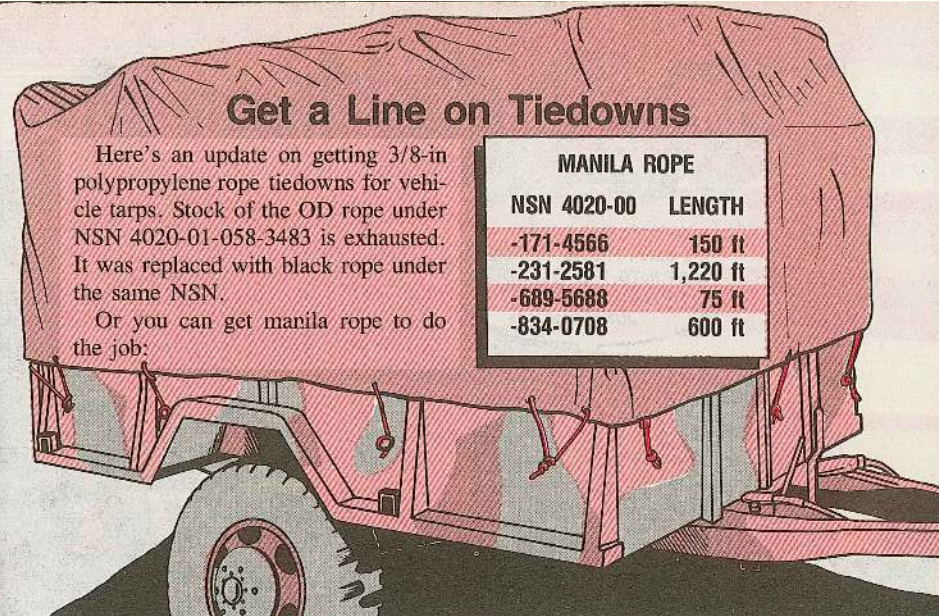
If your truck's -10 TM PMCS for the front-mounted winch does not give you the story like this, it's not up-to-date:

- A wrecker is NMC any time the winch is faulty.
- Other trucks are NMC for winch faults only if the mission at time of inspection requires winch operation.

The word went out in TACOM Msg DRSTA-MT 311200Z Nov 81.

2 1/2-Ton Nut Torque

Make that 100-150 lb-ft torque on the 2 1/2-ton truck's wheel bearing locknut -not 50 lb-ft as on Page 14-53 of TM 9-2320-209-20-3-2.



Get a Line on Tiedowns

Here's an update on getting 3/8-in polypropylene rope tiedowns for vehicle tarps. Stock of the OD rope under NSN 4020-01-058-3483 is exhausted. It was replaced with black rope under the same NSN.

Or you can get manila rope to do the job:

MANILA ROPE	
NSN 4020-00	LENGTH
-171-4566	150 ft
-231-2581	1,220 ft
-689-5688	75 ft
-834-0708	600 ft

M915/M939-Series Trucks...

Camouflage Patterns

Camouflage patterns for M915-series or M939-series trucks haven't been developed yet.

You can use the 5-ton truck 4-color patterns in TB 43-0209 for these vehicles, tho.

For the M939-series 5-ton trucks, match them to the patterns for the older 5-tonners.

The M915A1 comes painted with CARC. So use only CARC for touch-up.

Match your M915-series like so:

TRUCK	USE PATTERN FOR:
M915, M916, M920	M52A2 5-ton tractor
M917	M51 5-ton dump truck
M918	M49C tank truck
M919	M54 5-ton truck

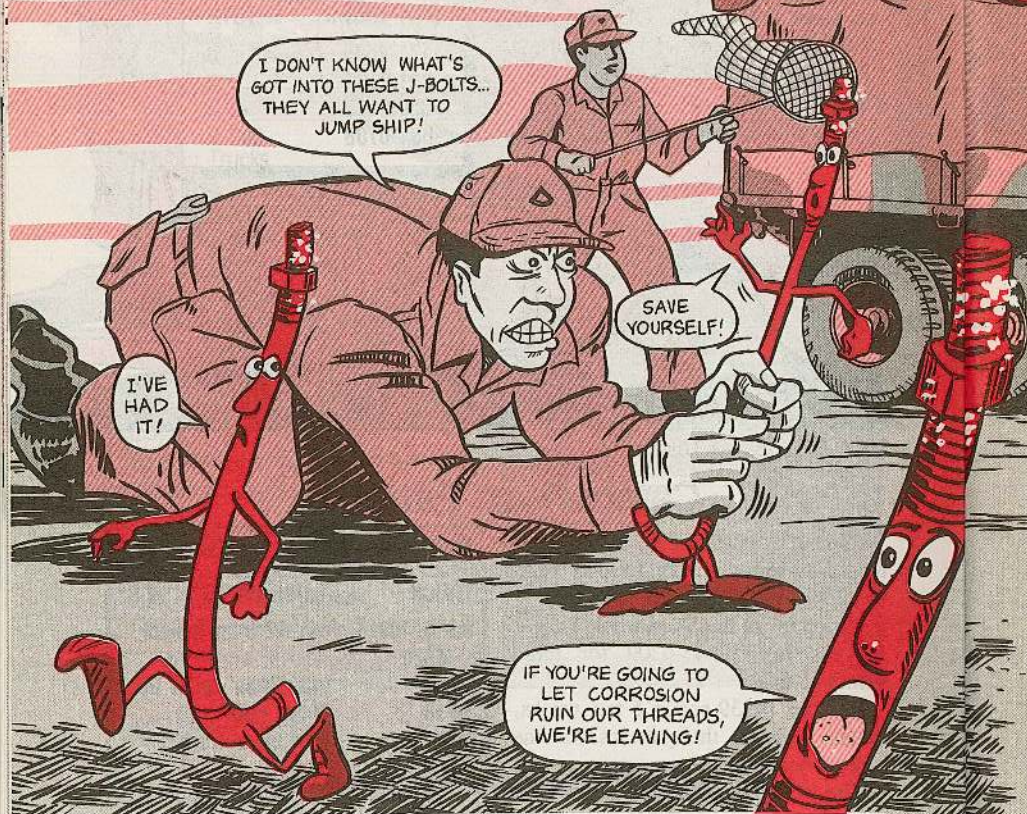
M915-Series Wiring Info

An article in TB 43-0001-39-3 (Oct 84) lists dozens of NSN's for wiring harness repair parts for M915-series trucks...plus NSN's for tools needed in repair...plus instructions for connector plug and receptacle repair.

M915-Series Fan Items

If you need Item 4 in Figure 23 of TM-9-2320-273-20P, order Actuator, fan clutch, NSN 2520-01-079-3326 (PN CA190).

Getting the Jump on J-Bolts



Your 2 1/2-ton or 5-ton truck doesn't need to sit on deadline waiting for battery holddown J-bolts—and it could be a long wait. J-bolt, NSN 5306-00-739-7754, for M44-series 2 1/2-ton trucks and M39/M809 5-ton trucks is hard to come by. So is J-bolt, NSN 5306-01-104-7306, for M939-series 5-ton trucks.

Until the supply system re-stocks these J-bolts, you might get by with what's available in your cannibalization point. Chances are, tho, that boneyard J-bolts are as bad as those that need replacing—threads chewed up by corrosion.

No sweat. Your support—or maybe even your own shop—can turn out J-bolts from bulk hardware about as fast as your PLL clerk could do the paperwork for ordering from the supply system.

Use an old J-bolt as a pattern for length and hook size.
Cut rod, NSN 9510-00-287-9397, to length needed.

Heat end of rod to cherry red with torch. Then...

...bend to hook shape in jig (two bolts or rods of same diameter clamped in vise).

Paint unthreaded part with epoxy
NSN 8010-00-959-4661.

Thread with 3/8-16NC die,
NSN 5136-00-189-3217,
in No. 2 Common Shop Set.

Grease threads both before and after installation to head off corrosion.

Lock washer
NSN 5310-00-959-4675

Nut
NSN 5310-00-732-0558

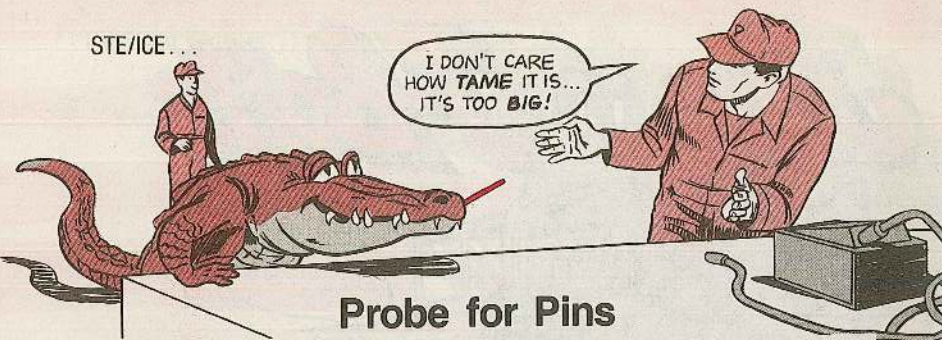
Why the big demand for battery holddown J-bolts? Because corrosion is allowed to destroy the threads—the weakest point in your battery holddown hardware. This is the same corrosion that eats up holddown brackets and battery boxes.

There's no excuse for corrosion of metal parts around batteries. You mechanics prevent corrosion by keeping metal parts clean and painted. When operators report any sign of corrosion, you get it off with a wire brush and by washing with a soda-and-water mix. Then you slap on the paint.



The whole story on cleaning is in TM 9-6140-200-14, Page 3-7, Para 3-8b.

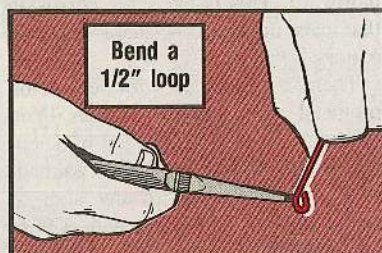
STE/ICE...



Probe for Pins

There's not much room to operate in when you're hooking up the STE/ICE W2 cable test probe to a connector pin in your vehicle's electrical circuit.

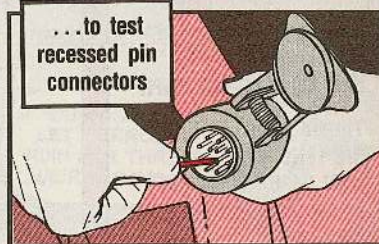
To pinpoint a test probe problem, make a pinpoint-like probe from a 2-in length of 1/8-in welding rod. Bend a 1/2-in loop in one end.



Grind down the end to make it easier to touch only one contact point at a time.

Tape the mid-section of the home-made probe to help guard against shorts. Leave the tip and loop ends clear of tape.

When you're testing in a recessed connector, grab the probe with the W2 alligator clip.



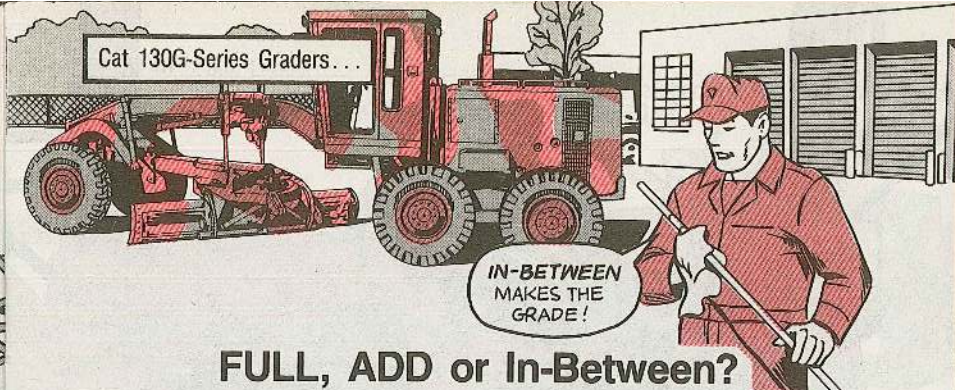
Shutoff Cock NSN Wrong

NSN 4820-01-035-7882 is the correct NSN for your Gama Goat's coolant heater shutoff cock. The stock number for Item 11 in Fig 187 and listed on Page 282 of TM 9-2320-242-20P is wrong.

Gama Goat Shroud NSN

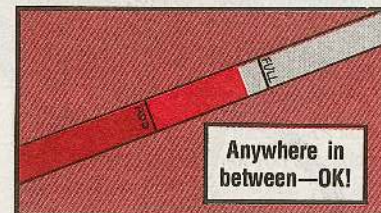
Get a radiator shroud for your Gama Goat with NSN 2930-01-029-8675. That's Item 5 in Fig 28 of TM 9-2320-242-20P.

Cat 130G-Series Graders...



FULL, ADD or In-Between?

A transmission, differential or hydraulic reservoir oil level that's between the ADD and FULL marks on your Caterpillar 130G-series grader is OK.



That's a change to the commercial manuals and the Supplemental Operat-

ing, Maintenance and Repair Parts Instructions (SOMARPI) that come with the grader.

Page 27 of Vol 1 of the commercial manual is wrong. The hydraulic reservoir, transmission and differential oil levels should all read between the ADD and FULL marks, not above FULL marks.

The same goes for Item 12 of the operator PMCS in the SOMARPI. Hydraulic reservoir oil level should be between the ADD and FULL marks.

These changes will make it easier to keep the oil levels in a safe range.

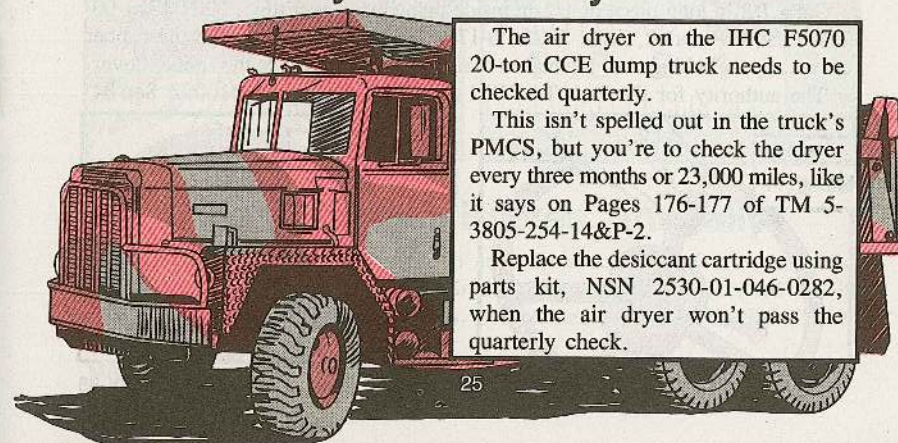
CCE 20-Ton Dump Trucks...

Dry Your Air Dryer

The air dryer on the IHC F5070 20-ton CCE dump truck needs to be checked quarterly.

This isn't spelled out in the truck's PMCS, but you're to check the dryer every three months or 23,000 miles, like it says on Pages 176-177 of TM 5-3805-254-14&P-2.

Replace the desiccant cartridge using parts kit, NSN 2530-01-046-0282, when the air dryer won't pass the quarterly check.



MW24C Scoop Loaders...

Horn button

Don't Touch That Button!

That button in the center of the steering wheel on your MW24C scoop loader is **not** the horn button!

That button releases the steering column so that it can be lowered to let your loader fit inside an aircraft.

If you hit the button during operation, the steering wheel drops down. If it drops all the way, it'll hang up on the windshield wiper motor. You won't be able to turn the wheel.

If you do hit the button during operation and the wheel drops, just pull the wheel back up and it'll lock back in place.

Here's a simple fix you mechanics can make that will keep people from hitting the button by accident:

Cut a 7/8-in long piece of 1/2-in inside diameter copper tube, NSN 4710-00-277-5529, or conduit, NSN 5975-00-178-1216. After you remove the rubber cover, slip the tubing over the button to shield it. Then replace the rubber cover.

The authority for the fix is TACOM Msg AMSTA-MVB 141000Z Sep 84.

...install tubing...

...replace cover

Remove cover...

MW24B Scoop Loader...

Brake Lining Telltale

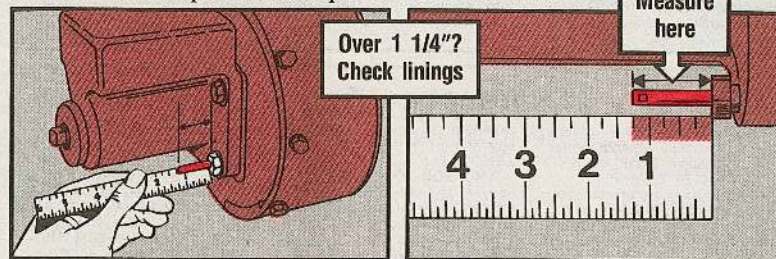
TAKE IT FROM ME, LADS...

...IF YOU WANT TO MAKE ANYTHING OF YOURSELVES, YOU GOTTA TELL YOUR MECH WHEN YOUR BRAKE SHOE LININGS ARE WORN OUT!

You organizational mechanics adjust the brakes on the MW24B scoop loader when the stroke indicator rod extends more than 1 1/4 inches from the air chamber.

But what do you do when you adjust the brakes and the rod still sticks out more than 1 1/4 inches?

That's the loader's way of telling you that the brake shoe linings are worn and need to be replaced. DS replaces the brake shoes.



Check Loader Brakes Annually

Your 645M scoop loader needs an annual inspection by DS to check the condition of the brake shoes and drums. This inspection is called for in Para 3-16 of TB 43-0001-41-5 (Apr 83). It's not mentioned in TM 5-3805-239-12, so make a note of it.

DUKES

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

TM 5-811-3 Mar Lightning and static electricity protection
 TM 5-3610-256-24P Sep 84 Diazo process, reproduction set
 TM 5-4520-251-14 Oct 84 400,000 BTU Duct-Type Heater
 TM 9-1345-210-23&P Dec 84 Mine, antitank: HE, M75 and M79
 TM 9-2350-252-10-1 Aug 84 M2/M3 Bradley
 TM 9-2350-252-10-HR Aug 84 M2/M3 Bradley
 TM 10-5410-225-13 Nov 84 MUST Inflatable shelter
 TM 11-5805-650-12 Jan TA-838

telephone set
 TM 55-1520-240-23P-1 Mar AVUM and AVIM RPSTL for CH-47D
 TM 55-1520-240-23P-2 Mar AVUM and AVIM RPSTL for CH-47D
 TM 55-1520-240-23P-3 Mar AVUM and AVIM RPSTL for CH-47D
 TB 43-0125 Mar Installation of communications-electronic equipment hookup of electrical cables to mobile generator sets on fielded equipment to meet electrical safety standards.
 TB 55-1520-228-20-33 Jan One time inspection of all OH-58A with MWQ 55-1520-228-30-24 installed
 TB 55-1520-242-20-11 Jan Installation of connecting links on UH-1C/H/M/V and EH-1H/X
 SC 4910-95-CL-A72-HR Dec 84

Organizational Maintenance No. 2 Common shop set
 SC 4910-95-CL-A74-HR Dec 84 Organizational Maintenance No. 1 Common shop set
 SC 5180-91-CL-S21-HR Jan TK-100/G Electronic tool kit
 SC 5420-97-CL-E56 Dec 84 MGB reinforcement set
 SC 5420-97-CL-E56-HR Dec 84 MGB reinforcement set
 FM 7-7(HTF) Mar The mechanized infantry platoon and squad (APC)
 FM 5-101 Jan Mobility
 FM 25-1 Feb Training
 FM 25-5 Nov 84 Training for mobilization and war
 FM 55-218 Nov 84 Air transport of 8-inch atomic projectile, M422 by helicopters and mission loads by CH-47
 SB 11-131 Mar Vehicular radio sets and authorized installation

SMART! Messages

Here are the latest SMART messages:

SMART Msg #47—Announces a change to TM-11-3895-203-15, Page 27, that lets crews replace the cotter pin on the handle of the RL-39 reeling machine, DALO-

PLR 111525Z Feb 85.
 SMART Msg #48—Provides information about glass replacement in tactical vehicles when the windshield can be disassembled into components, DALO-PLR

111526Z Feb 85.
 SMART Msg #49—Changes repair procedure for leaky hydraulic couplings in the UH-60A Black Hawk, DALO-PLR 201859Z Feb 85.

Maintenance Advisories

AMCCOM MA 85-9—Maintenance, Concept M24/25 series, CB, Protective Mask, AMSC-MAR-C 041745Z Mar 85.

AMC SOU—Operational, 5-ton M 939-series vehicles (safety hazard on exposed slave receptacle leads), AMCSF-E 271400Z Feb 85.

AMC SOU—Advisory, commercial non-tactical fuel tank trucks

(exhaust systems improperly shielded or routed), AMCSF-E 281530Z Feb 85.

AMC SOU—One-time inspection, Model 5060 40-ton Mounted Crane Crawler (mount load rating chart inside cab), AMCSF-E 281930Z Feb 85.

AMC SOU—Advisory, Jack Holder Assembly on Skid Platform (safety hazard during AN/

TSW-7A jacking procedure), AMCSF-E 271400Z Feb 85.

AMC SOU—Advisory, B-1 Maintenance Platform (report completion of modification), AMCSF-E 271400Z Feb 85, (AVSCOM Advisory, AMSAV-M 281200Z Jan 85).

AMC SOU—F1500M Huber Road Grader (missing locator pin in axle disconnect lever), AMCSF-E 281530Z Feb 85.

M151 Curtain Rod NSN

Use NSN 2540-01-073-7777 to get a side curtain support rod for your 1/4-ton truck. NSN 4010-00-484-3353, shown as Item 7 in Fig 129 of TM 9-2320-218-20P, gets only the ring and chain that goes on the rod.

PS

MORE OPERATION FEEDBACK

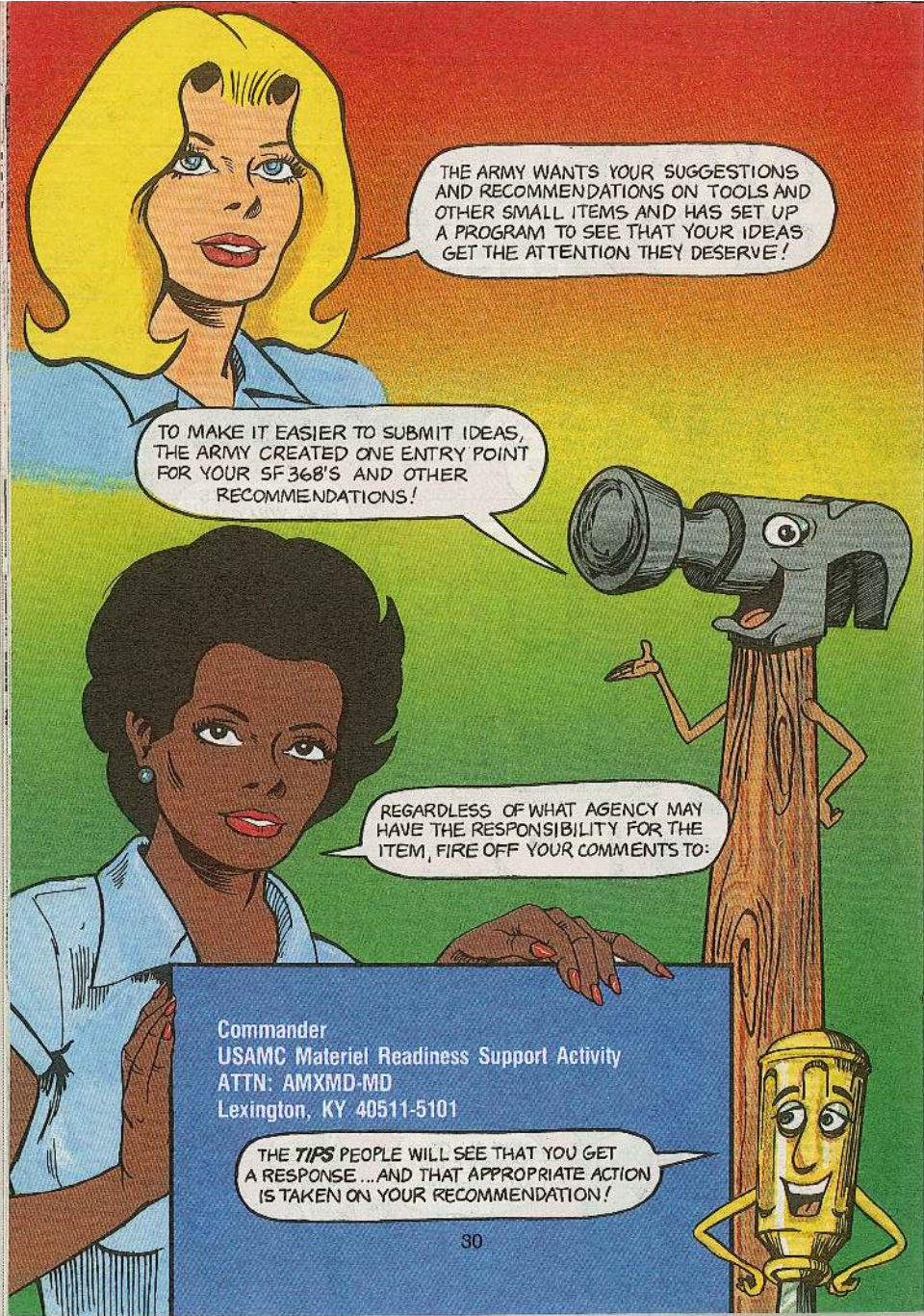
THE ARMY WANTS YOU TO HAVE THE BEST TOOLS POSSIBLE...

...AND HERE'S HOW YOU CAN HELP GET THEM!

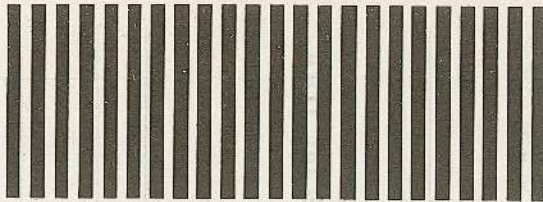
Tool Improvement Program Suggestions

WOW! WHAT A GOOD IDEA!

NOW ALL OF US TOOLS WILL MEASURE UP!



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED
STATES

**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

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

Return Address

(TAPE OR STAPLE 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:

FULL NAME:

ADDRESS:

AUTOVON/COMM PHONE #:

[illegible]

IDEA CONTROL NUMBER:

Some Tips on TIPS

Since different manufacturers may make a particular tool or item, it's very important that you make every effort to identify the manufacturer. Most items do have the manufacturer's name, code or part number. But even if you can't peg the manufacturer, send your comments anyway. If a number of reports come in on an item, the tool people will be able to identify the manufacturer.

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



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.



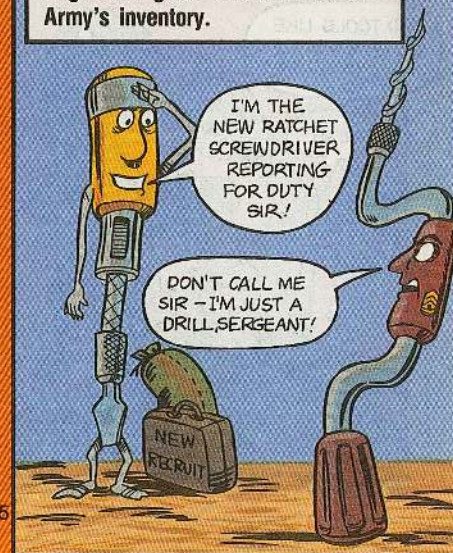
Report tools that should be **ADDED** to the system. If you know a tool that can do the job better, let the Army know, too.



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.



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



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

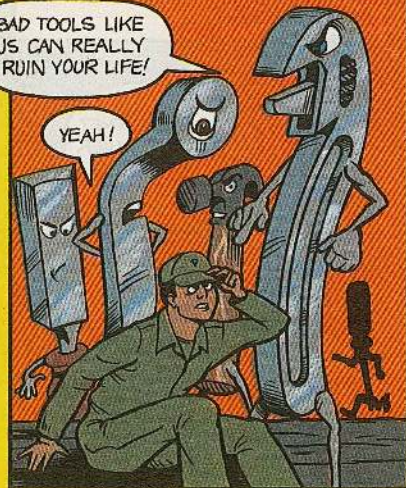


EUREKA!
MY AROUND
THE CORNER
SCREWDRIVER
ATTACHMENT
WORKS!

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!



OH-58 Main Rotor...

Thread Your Way Past Trunnion Damage

Dear Editor,

TM 55-1520-228-23-1 says to lockwire the T-handle work aid to the pitch horn trunnions when removing the main rotor assembly. But sometimes a trunnion gets damaged because it moves too much in spite of the lockwire. And the trunnion cost \$156 a shot.

I avoid that problem by threading about one half inch of the T-handle. Then I secure the T-handle inside the hub with nut, NSN 5310-00-167-1332, and washer, NSN 5310-00-167-0835. This keeps the handle in place better than the wire and we get no more busted trunnions.

SFC Jerry D. Lay
Ft Hood, TX

(Editor's note: Good idea.)



Aviation Messages

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

OV-1-85-1, SOF, Technical Msg, OV-1, RV-1 Series, one-time inspection of AC generators, TB 55-1520-217-20-6, 151530Z Jan 85.
UH-1-85-01, SOF, Technical Msg, Extension of time compliance to

SOF Msg UH-1-84-11, 042200Z Jan 85.
U-8-85-01, SOF, Technical Msg, U-8 Excalibur conversion, one-time inspection for suspected engine gage units and conformance to FAA airworthiness directive TB 55-1510-201-20-17, 141630Z Jan 85.

Call 1 EIR Phone:
AUTOVON 693-2066
(24 hours)

SOU-GEN-85-MEM-01, SOU, Technical Msg, Maintenance platform, mechanical adjustable stair and platform, Type B-1, NSN 1730-00-529-6235, 291200Z Jan 85.
MIM-T53-85-MEM-01, Installation of fuel control and/or governor on the T53-L-701A engine (OV-1D/RV-1D aircraft), 291820Z Jan 85.

Finger the Fitting

When a fuel boost pump light flashes in the Huey's cockpit, it signals trouble.

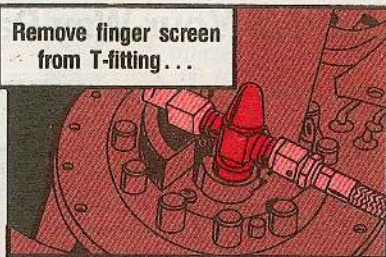
But you may be able to finger the problem—and solve it—without much ado.

Check the T-fitting, NSN 1560-00-836-9943, in the boost pump. Does it still have the mesh finger screen, PN 10997? If so, remove and discard the screen, like it says in Para 10-104 of TM 55-1520-210-23-2. Then check to see if the warning light goes out.

Of course, if the light still shines, continue troubleshooting.

That screen was designed to keep dirt out of the fuel system. But there are so many other trash traps in the system, the experts decided the little screen wasn't needed.

Remove finger screen from T-fitting...



...and make sure warning light goes out



Huey Hydraulics...

Head Off Hose Woes

Chafed or twisted hydraulic hoses and tubes have to be replaced... every time.

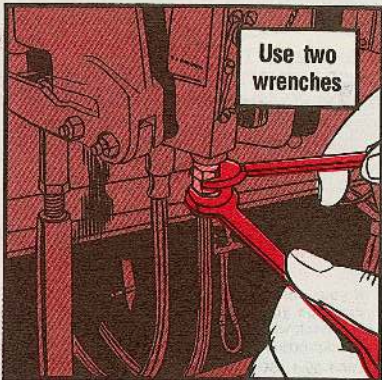
So save yourself extra work, Huey mechs, by paying better attention to those hydraulic lines.

Take, for example, the hoses that attach to the cyclic control irreversible valve. When removing or installing them, use two wrenches to tighten each hose. That will keep the hose from kinking, twisting or breaking internally.

Two wrenches will help you seat the fittings and avoid leaks when the lines are under pressure, too.

Last—but not least—that second wrench will hold the hose away from other hardware that could rub it the wrong way.

Use two wrenches



If you find a hose or tube that you can't keep from rubbing against something, spiral wrap it with tape, NSN 7510-00-923-0591.



UH-OH! THE GLIDESLOPE MARKER BEACON JUST WENT OUT!

WELL, LET'S SHOOT A MISSED AND TRY A GCA!

UH-1...

Mind the Marker Beacon Matchup

Does your Huey sport the R-1963/ARN glideslope/marker beacon radio receiver? If so, take care to mate it to the right control head.

A mismatch could cause real static in their relationship.

The R-1963/ARN, NSN 5826-01-015-1574, takes **only** the C-6873B/ARN-82 control head, NSN 5826-00-149-1399.

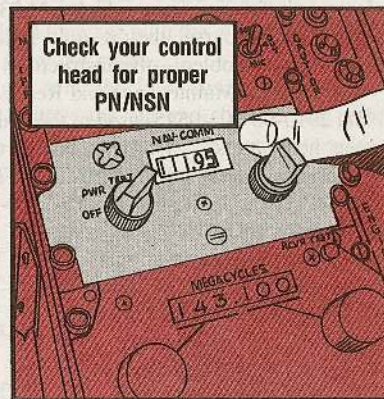
MWO 55-1520-210-30-45 gives AVIM folks the word. TM 11-5826-257-24 hasn't caught up, but the TM 11-1520-210 series of manuals show the correct configuration.

Don't try to use a C-6873/ARN-82 or C-6873A/ARN-82 with the R-1963/ARN. Those two units look just like the right control. They hook up the same, too.

But if you try to operate the setup, you'll kill the whole glideslope/marker beacon system.

So before installing a control for your bird's receiver, double-check the NSN or part number.

Check your control head for proper PN/NSN



AH-1 Series, UH-1 Series...

Code Error Is Costly Mistake

FIG NO	ITEM NO	SMR CODE	DESCRIPTION	TABLE ON CODE	UNIT
164	14	PA0ZZ	5365-00-205-9621 02FC125	0073a	EA 14
164	15	PA0ZZ	2910-00-803-9525 815C52	0073b	EA 10
154	154	PB0ZZ	00-758-3655 02h116-213	0073c	EA 4
164	158	PA0ZZ	373-7264 C2536	0073d	EA 1
164	16	PA0ZZ	3110-00-158 851C	0073e	EA 1
164	17	PA0ZZ	5330-00-102-0	0073f	EA 1
164	18	PA0ZZ	5330-00-102-0	0073g	EA 1
164	19	PA0ZZ	5330-00-102-0	0073h	EA 1
164	20	PC0ZZ	5330-00-102-0	0073i	EA 1
164	21	PA0ZZ	5330-00-102-0	0073j	EA 1
164	22	PA0ZZ	5330-00-102-0	0073k	EA 1
164	23	PC0ZZ	5330-00-102-0	0073l	EA 1
164	24	PA0ZZ	5330-00-102-0	0073m	EA 1
164	25	PA0ZZ	5330-00-102-0	0073n	EA 1
164	26	PA0ZZ	5330-00-102-0	0073o	EA 1
164	27	PA0ZZ	5330-00-102-0	0073p	EA 1
164	28	PA0ZZ	5330-00-102-0	0073q	EA 1
164	29	PC0ZZ	5330-00-102-0	0073r	EA 1
164	30	PC0ZZ	5330-00-102-0	0073s	EA 1
164	31	PC0ZZ	5330-00-102-0	0073t	EA 1
164	32	PC0ZZ	5330-00-102-0	0073u	EA 1
164	33	PC0ZZ	5330-00-102-0	0073v	EA 1
164	34	PC0ZZ	5330-00-102-0	0073w	EA 1
164	35	PC0ZZ	5330-00-102-0	0073x	EA 1
164	36	PC0ZZ	5330-00-102-0	0073y	EA 1
164	37	PC0ZZ	5330-00-102-0	0073z	EA 1
164	38	PC0ZZ	5330-00-102-0	0073aa	EA 1
164	39	PC0ZZ	5330-00-102-0	0073ab	EA 1
164	40	PC0ZZ	5330-00-102-0	0073ac	EA 1
164	41	PC0ZZ	5330-00-102-0	0073ad	EA 1
164	42	PC0ZZ	5330-00-102-0	0073ae	EA 1
164	43	PC0ZZ	5330-00-102-0	0073af	EA 1
164	44	PC0ZZ	5330-00-102-0	0073ag	EA 1
164	45	PC0ZZ	5330-00-102-0	0073ah	EA 1
164	46	PC0ZZ	5330-00-102-0	0073ai	EA 1
164	47	PC0ZZ	5330-00-102-0	0073aj	EA 1
164	48	PC0ZZ	5330-00-102-0	0073ak	EA 1
164	49	PC0ZZ	5330-00-102-0	0073al	EA 1
164	50	PC0ZZ	5330-00-102-0	0073am	EA 1
164	51	PC0ZZ	5330-00-102-0	0073an	EA 1
164	52	PC0ZZ	5330-00-102-0	0073ao	EA 1
164	53	PC0ZZ	5330-00-102-0	0073ap	EA 1
164	54	PC0ZZ	5330-00-102-0	0073aq	EA 1
164	55	PC0ZZ	5330-00-102-0	0073ar	EA 1
164	56	PC0ZZ	5330-00-102-0	0073as	EA 1
164	57	PC0ZZ	5330-00-102-0	0073at	EA 1
164	58	PC0ZZ	5330-00-102-0	0073au	EA 1
164	59	PC0ZZ	5330-00-102-0	0073av	EA 1
164	60	PC0ZZ	5330-00-102-0	0073aw	EA 1
164	61	PC0ZZ	5330-00-102-0	0073ax	EA 1
164	62	PC0ZZ	5330-00-102-0	0073ay	EA 1
164	63	PC0ZZ	5330-00-102-0	0073az	EA 1
164	64	PC0ZZ	5330-00-102-0	0073ba	EA 1
164	65	PC0ZZ	5330-00-102-0	0073bb	EA 1
164	66	PC0ZZ	5330-00-102-0	0073bc	EA 1
164	67	PC0ZZ	5330-00-102-0	0073bd	EA 1
164	68	PC0ZZ	5330-00-102-0	0073be	EA 1
164	69	PC0ZZ	5330-00-102-0	0073bf	EA 1
164	70	PC0ZZ	5330-00-102-0	0073bg	EA 1
164	71	PC0ZZ	5330-00-102-0	0073bh	EA 1
164	72	PC0ZZ	5330-00-102-0	0073bi	EA 1
164	73	PC0ZZ	5330-00-102-0	0073bj	EA 1
164	74	PC0ZZ	5330-00-102-0	0073bk	EA 1
164	75	PC0ZZ	5330-00-102-0	0073bl	EA 1
164	76	PC0ZZ	5330-00-102-0	0073bm	EA 1
164	77	PC0ZZ	5330-00-102-0	0073bn	EA 1
164	78	PC0ZZ	5330-00-102-0	0073bo	EA 1
164	79	PC0ZZ	5330-00-102-0	0073bp	EA 1
164	80	PC0ZZ	5330-00-102-0	0073bq	EA 1
164	81	PC0ZZ	5330-00-102-0	0073br	EA 1
164	82	PC0ZZ	5330-00-102-0	0073bs	EA 1
164	83	PC0ZZ	5330-00-102-0	0073bt	EA 1
164	84	PC0ZZ	5330-00-102-0	0073bu	EA 1
164	85	PC0ZZ	5330-00-102-0	0073bv	EA 1
164	86	PC0ZZ	5330-00-102-0	0073bw	EA 1
164	87	PC0ZZ	5330-00-102-0	0073bx	EA 1
164	88	PC0ZZ	5330-00-102-0	0073by	EA 1
164	89	PC0ZZ	5330-00-102-0	0073bz	EA 1
164	90	PC0ZZ	5330-00-102-0	0073ca	EA 1
164	91	PC0ZZ	5330-00-102-0	0073cb	EA 1
164	92	PC0ZZ	5330-00-102-0	0073cc	EA 1
164	93	PC0ZZ	5330-00-102-0	0073cd	EA 1
164	94	PC0ZZ	5330-00-102-0	0073ce	EA 1
164	95	PC0ZZ	5330-00-102-0	0073cf	EA 1
164	96	PC0ZZ	5330-00-102-0	0073cg	EA 1
164	97	PC0ZZ	5330-00-102-0	0073ch	EA 1
164	98	PC0ZZ	5330-00-102-0	0073ci	EA 1
164	99	PC0ZZ	5330-00-102-0	0073cj	EA 1
164	100	PC0ZZ	5330-00-102-0	0073ck	EA 1

THIS SHOULD READ
P-A-0-B-Z

...AND, AT 10 PER AIRCRAFT, THIS CAN SAVE YOU SOME MONEY!

You wouldn't pay \$39.95 to tune up your old jalopy if you could make it purr like a kitten by cleaning your spark plugs, would you?

Well, some Cobra and Huey mechs have been making the same mistakes with their internal transmission filter elements. They're turning their old filter elements in for new ones, which cost \$3.34, when the old ones could be cleaned and reused. 'Course, they're only following TM instructions.

That's the problem—the instructions are wrong!

The Source, Maintenance and Recoverability (SMR) code for filter element, NSN 2910-00-803-9525, used in the main transmission of AH-1 series and UH-1 series helicopters, is wrong in the parts manuals.

The filter's SMR code is PA0ZZ in TM 55-1520-210-23P-1 and TM 55-1520-236-23P-1, and PA000 in TM 55-1520-239-23P. In all three manuals, it should be listed as **PA0BZ**.

The maintenance code letter "B" in the fourth position of the SMR code is the key. It means that no repair is authorized, but the item may be **reconditioned** by adjusting, lubricating and cleaning at the user level.

So, clean and reuse those transmission oil filters, if possible. 'Course, if they're permanently damaged, replace 'em.

Cleaning procedures are found in Para 6-164 of TM 55-1520-236-23-1 and in Para 6-46 of TM 55-1520-210-23-1.

The parts manuals will be changed to reflect the correct SMR codes.



Black Hawk...

Don't Be a Seat Abuser

You've heard a lot about abuse lately, but have you heard the latest on troop seat abuse?

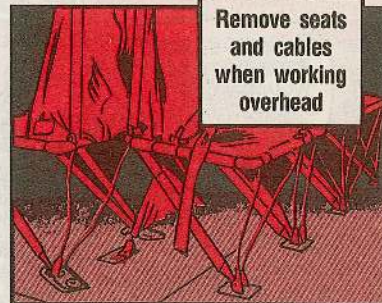
Black Hawk seats get stomped on when mechs pull overhead maintenance in the cabin area. To make room for the job, they disconnect some of the troop seats from their overhead attachments and leave 'em where they fall—on top of the lower diagonal cables.

That's when the stomping starts and the cables catch it!

Seats suffer, too, when the bottoms of a mechanic's boots covered with grease, oil, hydraulic fluid, dirt and grime come down on them.

To stop this kind of abuse, remove the seats and cables from the cabin

UH-1, AH-1...



area next time you do overhead maintenance. Task 23 of TM 55-1520-237-23-5 tells you how.

The extra effort may save you the embarrassment of explaining damaged cables and filthy seats and will save cable replacement costs.

Close Couplings Correctly

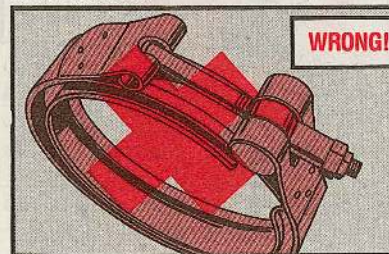
If the oil or fuel filter on your bird is held together with the old-style coupling, PN 100351, make sure you close the coupling right.

A wrong turn could break the bolt and send the filter flying.

Some mechanics think they have to remove the nut and slip the bolt under the coupling bar.

That's wrong! As the bolt is torqued to 50 lb-in, it pushes against the coupling. Pressure on the bolt can break it.

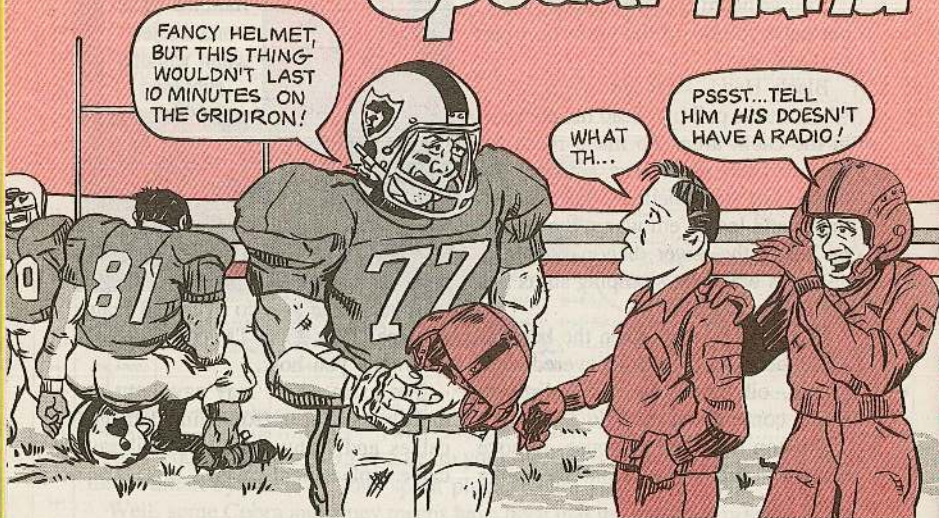
Do it right—turn the coupling bar around. Then put the bolt in and torque it to 50 lb-in.



If the bolt is tightened right, it won't come loose or break.

If you have the new clamp, NSN 5340-00-225-9053, you won't have a problem closing the coupling.

Special Handling Required



Some pro football jocks try to show how tough they are by slamming their helmets around! What it usually shows is just how tough the helmet is. Football helmets are designed to withstand hard knocks and other abuse.

The SPH-4 flight helmet, on the other hand, is a delicate piece of equipment that's designed to do more than protect your noggin.

But it can't do what it's made to do unless you take good care of it. That means:

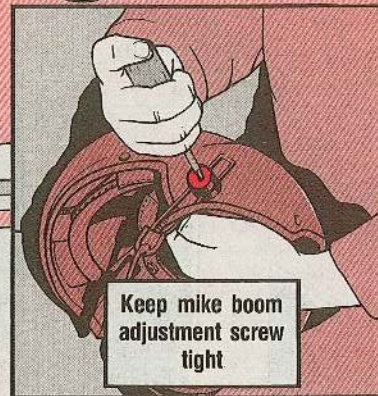


Carry the helmet in its protective bag



Never use the mike boom as a handle

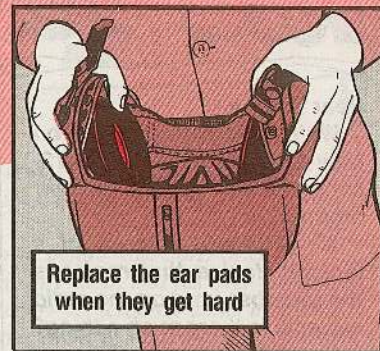
Special Handling Required



Keep mike boom adjustment screw tight

Take it easy when you set the helmet down

Never use the helmet as a seat.



Replace the ear pads when they get hard

Pull the routine before-operations checks spelled out in Table 3-1 of TM 10-8415-206-13.

If you find a crack in the shell, an adjustment screw that won't tighten, or something else you can't fix quick and easy, see your unit's ALSE technician.

Cold Climate Survival Kit

You aircraft types might have trouble packing the inner case of your cold climate survival kit, NSN 1680-00-973-1862. That's because the five candle containers and the first aid kit are larger than they used to be.

If that's the case, just move one can of rations from the inner case to the kit's outer pocket. That will leave enough room in the inner case to hold all the components.

The NSN for the larger candle container is the same as for the smaller one it's replacing—NSN 6260-00-840-5578.

NSN 6545-00-823-8165 for the smaller first aid kit is a terminal item on the AMDF. Get the larger kit with NSN 6545-01-094-8412.



Move 1 can of rations to outside pocket

Hold Your Radio — Securely

Dear Macon,

We're at loose ends here on how to keep our AN/VRC-12-series radios secure in their mounts.

We've heard rumors of a locking device that replaces the thumbscrews on the radio mounts. Is there such a thing?

If not, how can we be sure our radios will stay put?

SSG C.W.R.

AT LEAST
WE CAN
RADIO FOR
HELP!...

NOT
WITHOUT
AN
ANTENNA!

Dear Sergeant C.W.R.,

I know of no "store-bought" locking device. You'll have to make your own. That's no sweat, tho. There're several quick and easy ways to secure radios. I'll pass along two of them.

Be sure you have your CO's approval before you start, of course.

FIX NO. 1 takes three links of chain. Any chain that fits over the thumbscrews will do. It's quicker—and cheaper—to scrounge some used chain. If you can't, a 2-in link, 1/2-in diameter chain is NSN 4010-00-129-9396. It's OK'd by Appendix A of CTA 50-970.

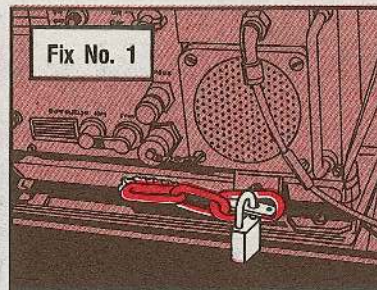
Weld the first link to the MT-1029 or -1898 mount. Weld it so the third link fits easily over one of the two thumbscrews.

You'll have to enlarge the hole in the thumbscrew or drill a new one. Then you'll be able to add the padlock that secures the radio.

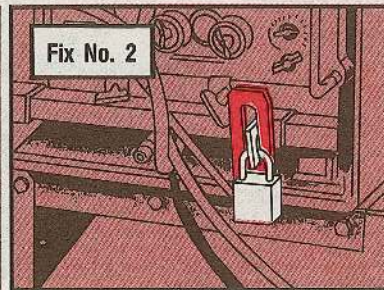
If you don't have a lock available, order a new one with NSN 5340-00-298-7153. It's OK'd by Appendix A of the CTA, too.

FIX NO. 2 uses a hasp in place of the chain. Hasps are usually available at your Self Service Supply Center or Quick Supply Store. Make sure the hasp's slot fits over the thumbscrew.

Fix No. 1



Fix No. 2



Weld it to the mounting, too, so that you can slip the hole in the long leaf over the thumbscrew. Add the padlock and you're done.

ONE LAST TIP: Secure your radios in garrison only. During an exercise—or the real thing—a lost key can make things very uncomfortable.

Macon

Tape Your T-983

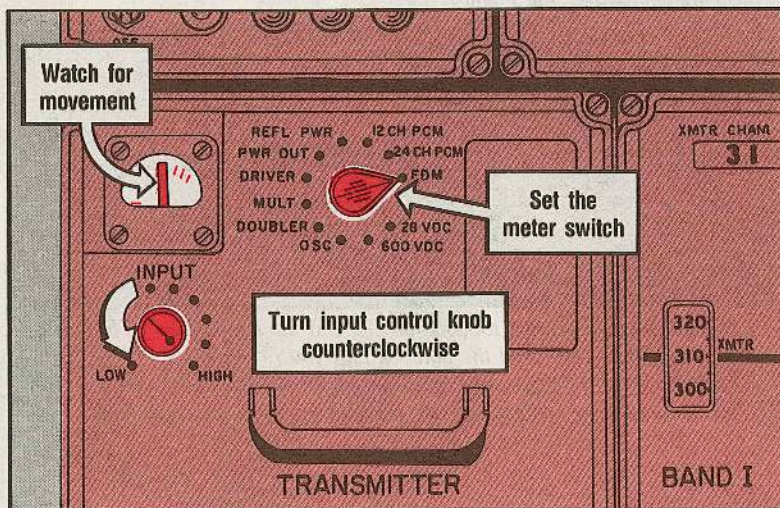
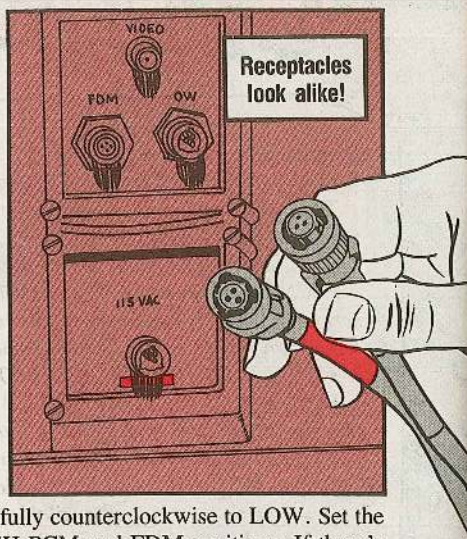
The cable receptacles on the back of your T-983 transmitter look the same, but they're not.

Forcing the CX-10762 power cable onto the OW (order wire) receptacle will zap your 5TR1A5 amplifier monitor panel.

Head off this revoltin' joltin' by putting a small piece of colored tape or a touch of paint near the 115 VAC receptacle. Put another on the cable. Then when you connect the cable, keep the colors together.

You can get a roll of tape for this job with NSN 7510-00-550-7126.

If you think a bad connection has already been made, make the right one and test for damage. With the radio on, turn the T-983's input control knob fully counterclockwise to LOW. Set the meter switch in the 12 CH PCM, 24 CH PCM and FDM positions. If there's a meter reading in any of these settings, the panel is damaged and your org shop has to replace it.



Hold Lugs Down

It takes a tight, right hookup between your power cable and the PP-4763 power supply to keep arcing and corrosion from knocking out your commo gear.

This big one-two PM punch will keep your AN/GRC-142 or -122 radio teletypewriter set running trouble free.

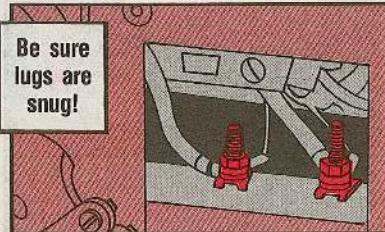
WATCH POLARITY. Slip the positive cable lug over the power supply's positive load terminal. Then match negative to negative.

Reverse the two and you'll blow something—an AN/GRC-106 radio, for instance.

Likewise, be sure you're making the internal power setting for 115 or 230 volts per Para 2-4 of TM 11-5820-765-12.

ONCE YOU'VE GOT the cables on the right terminals, be sure the lugs are snug. Coat the terminal—lightly—with silicone NSN 6850-00-880-7616. Then put the lugs under the terminal nuts. If the nuts are missing, replace them. Use NSN 5310-00-939-2653.

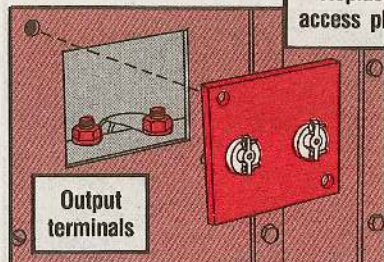
Be sure lugs are snug!



If you leave the lugs loose, you'll get arcing and corrosion. That'll blow the PP-4763's M2 output current meter.

Tight also means replacing the output terminal access plate and securing the cable clamps. That helps keep the lugs from working loose.

Replace access plate

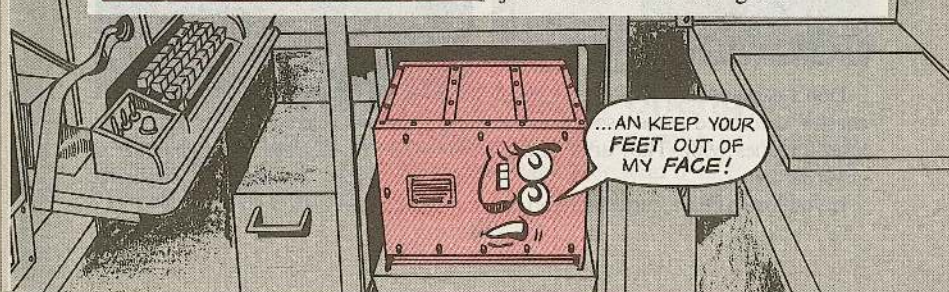


HOLD THAT KICK when hitting the power switch and circuit breaker. Use your finger and save some downtime.



It's tempting to use your foot, especially when the power supply's on the shelter floor. That swift kick will just KO the switch for good.

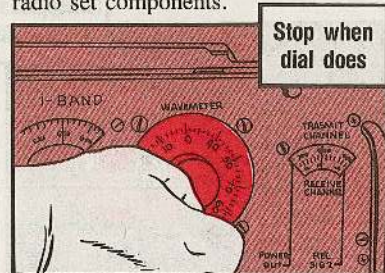
...AN KEEP YOUR FEET OUT OF MY FACE!



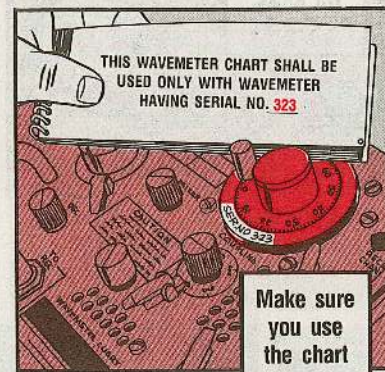
AN/GRC-50 Frequing Out?

Round 'n' round she goes, but when the wavemeter dial on your radio set stops, you should stop too.

If you crank it past the stop, you'll strip the dial's nylon gear or break the stop. Either way, you won't be able to set the right frequency or align your radio set components.



You'll also be off frequency if you lose the wavemeter chart that comes with each tuning head. If you break the string that holds the chart, make another.



Don't use another set's chart. Each chart is calibrated to be used with the head it comes with. They aren't interchangeable.

If you lose a chart, turn the radio in.

-50 Filter Facts

Protect your R-1331 or R-1148 receiver's 3A5FL1 filter. Keep its cap on.



Then, when you pull the receiver from the component case, keep it level. If the front of the receiver drops down, the filters can bang against the case.

Once it's out, don't set the receiver on its back. That can bend the filters too.

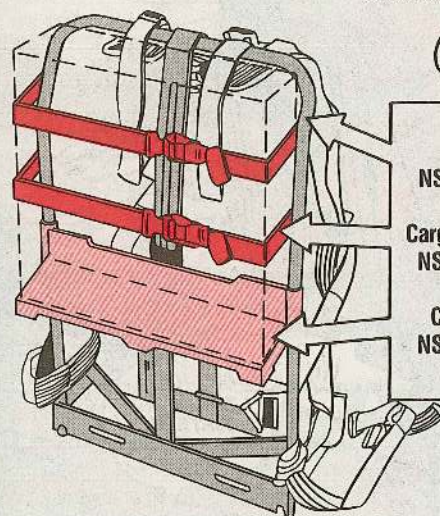
The other filters to worry about are the air types in the power supply, receiver and transmitter.



Clean and change them like TM 11-5820-461-12 says. Clogged filters let heat build, burning out sensitive components.

By the Piece

You have to order the components to make the ST-138 harness for your AN/PRC-77 and -25 radios. The harness in your TM is no longer stocked under one NSN.



HERE IS WHAT YOU NEED!

LC-2 Pack Frame
NSN 8465-01-073-8326

Cargo Tiedown Straps (2)
NSN 8465-00-001-6477

Cargo Support Shelf
NSN 8465-00-001-6476

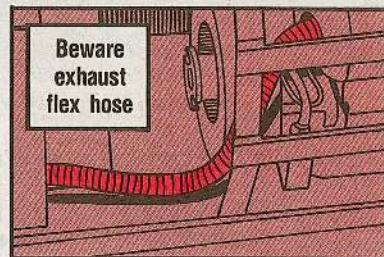
RL-207 Reeling Machine...

Crank With Care

If you have to crank up a hot RL-207, watch that exhaust flex hose!

When your engine is hot, the hose is hot. A careless pull on the cord and you get burned.

Wear gloves if you have them, but care is needed here, too. Clothes can get caught in that spinning crankshaft pulley.



AS-1729/VRC Element Change

Get the AS-1730/VRC antenna element for your AS-1729/VRC with NSN 5985-00-985-9022. The NSN shown on Page 5 for Item 5 in Fig 1 of TM 11-5985-262-24P is wrong.

Look Before You Launch



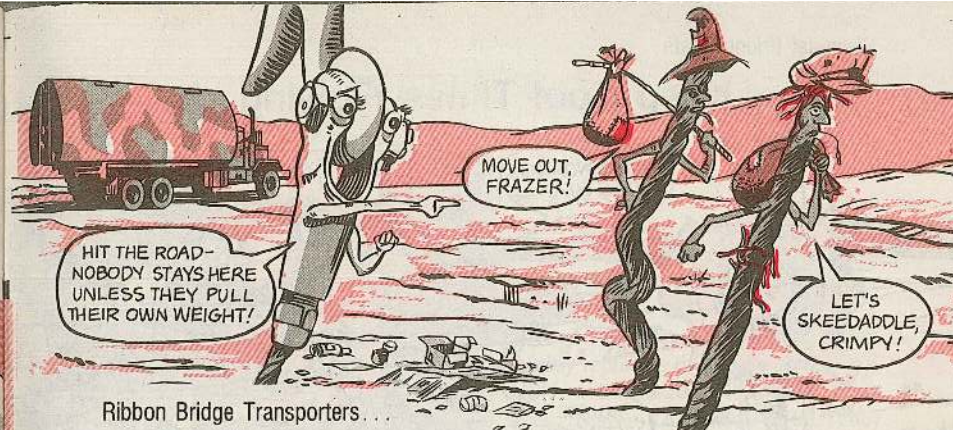
Launching your ribbon bridge bay when you don't know the water depth is asking for trouble.

If the water's too shallow, or if there're rocks lurking below, the bay is going to be damaged.

For a good free launch, you need at least 36 inches of water for the interior bay. A ramp bay needs water at least 44 inches deep—at the rear of the truck and for 50 feet or so behind the truck.

If the water's not that deep, make a controlled launch. That way, the bay is eased into the water. If you take it slo-o-o-w and easy, you can launch in as little as 17 inches of water.

Check out Para 2-8c(3) in TM 5-5420-209-12 for the nitty-gritty on making a controlled launch.



Ribbon Bridge Transporters...

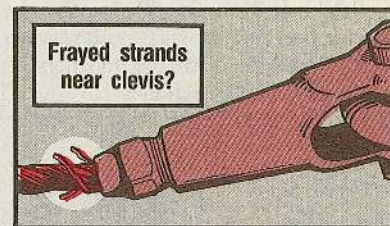
Stamp Out Bum Cables

A frayed or kinked rear winch cable on your M812A1 ribbon bridge transporter not only makes it NMC...it's also dangerous!

A damaged cable can snap during a launch or recovery. You—or your buddy—could be hurt by the flying cable. The boat or bay could be damaged when the cable breaks.

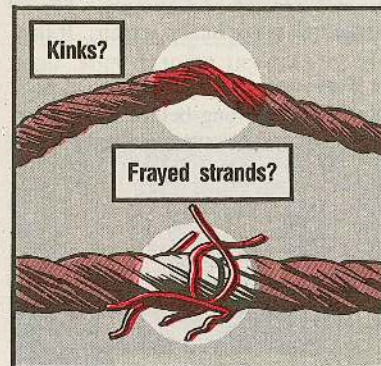
The cable is made up of 6 strands of 19 wires each. Replace the cable if it's kinked or if 12 or more wires are broken in the distance that it takes one strand to make a complete turn around the cable.

One common place for broken strands is around the clevis, so look extra close there.



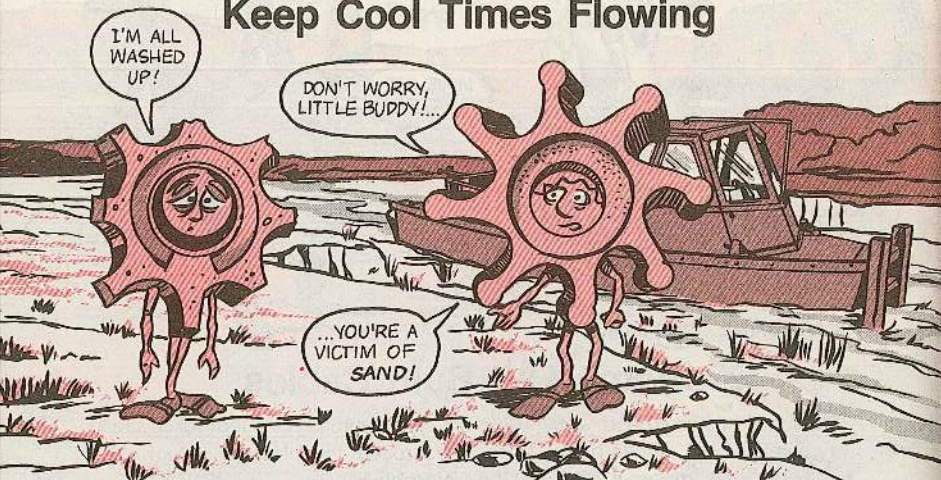
If the only damage is around the clevis, cut off the damaged cable.

You can reuse the clevis and tapered plug if they are OK. If the plug is damaged, get a new one with NSN 4030-00-001-9952.



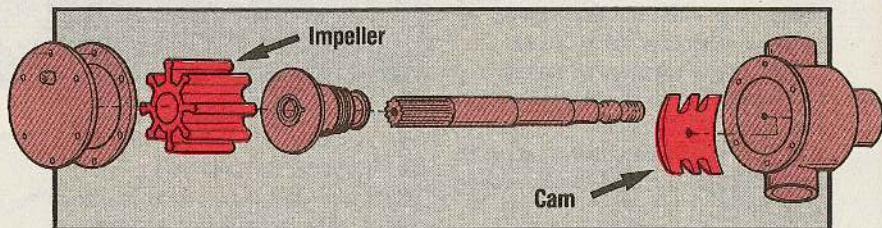
The plug is not on the AMDF. Order it on a DD Form 1348-6. The RIC is MPB and the price is \$2.78.

Keep Cool Times Flowing



Sand and trash can get thru the raw water intake screens on your twin-jet bridge boat and damage the raw water pumps.

Sand and grit wear the impellers or cams. Too much wear and the pumps can't move water like they have to. Then the engine overheats.

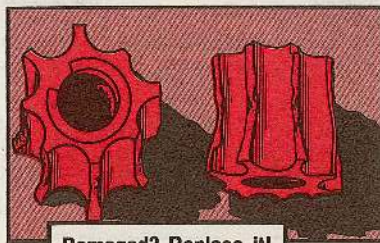


When engine temperature goes up, clean the raw water intake screens. If that doesn't do the job, get your mech on it.

When you operate in shallow water, or if the water's silty, more sand gets thru and parts wear faster. The pumps could be shot long before the 200-hr inspection called for in TM 5-1940-277-20. The TM is going to be changed.

You mechanics need to check them every 60 hours. A bad impeller or cam may need to be replaced.

If you mechs find a chewed-up impeller, check the heat exchanger for clogs. Bits of the impeller get caught there and cut down the flow of water.



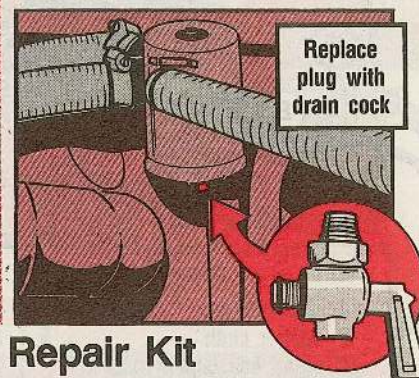
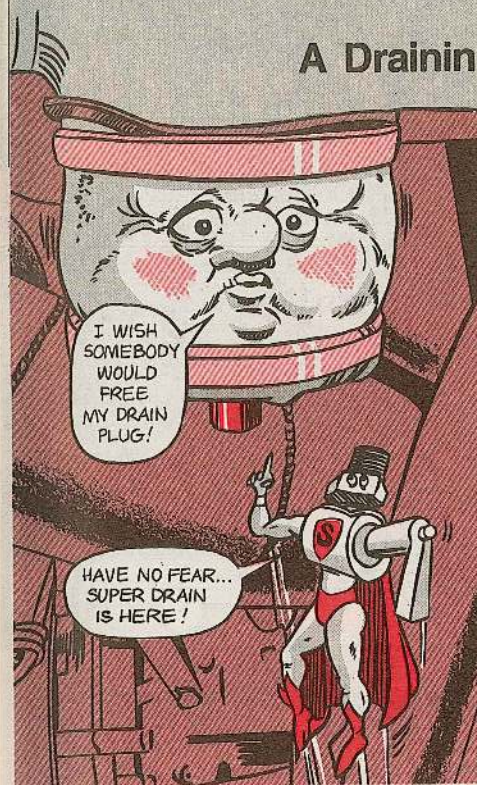
Damaged? Replace it!

A Draining Solution

You've got to drain your boat's engine breather trap when you pull the PMCS.

But sometimes the drain plug seizes and you run the risk of damaging the threads when you remove and replace the plug.

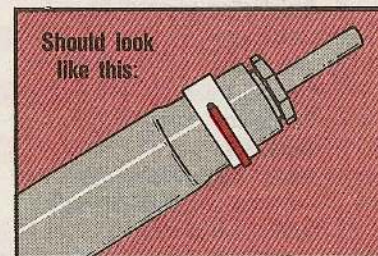
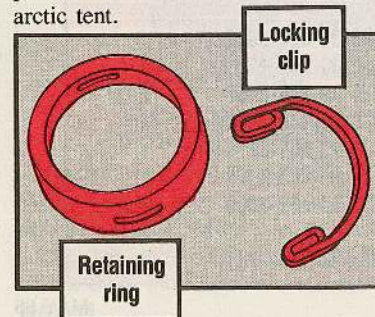
Your mech can make draining easier, tho, by replacing the plug with bushing, NSN 4730-00-202-6491, and drain cock, NSN 4820-00-555-9761. They are part of the brass fitting kit in the No. 1 Common shop set.



Tent Pole Repair Kit

Can't get your telescopic tent pole together for lack of one or both locking clips?

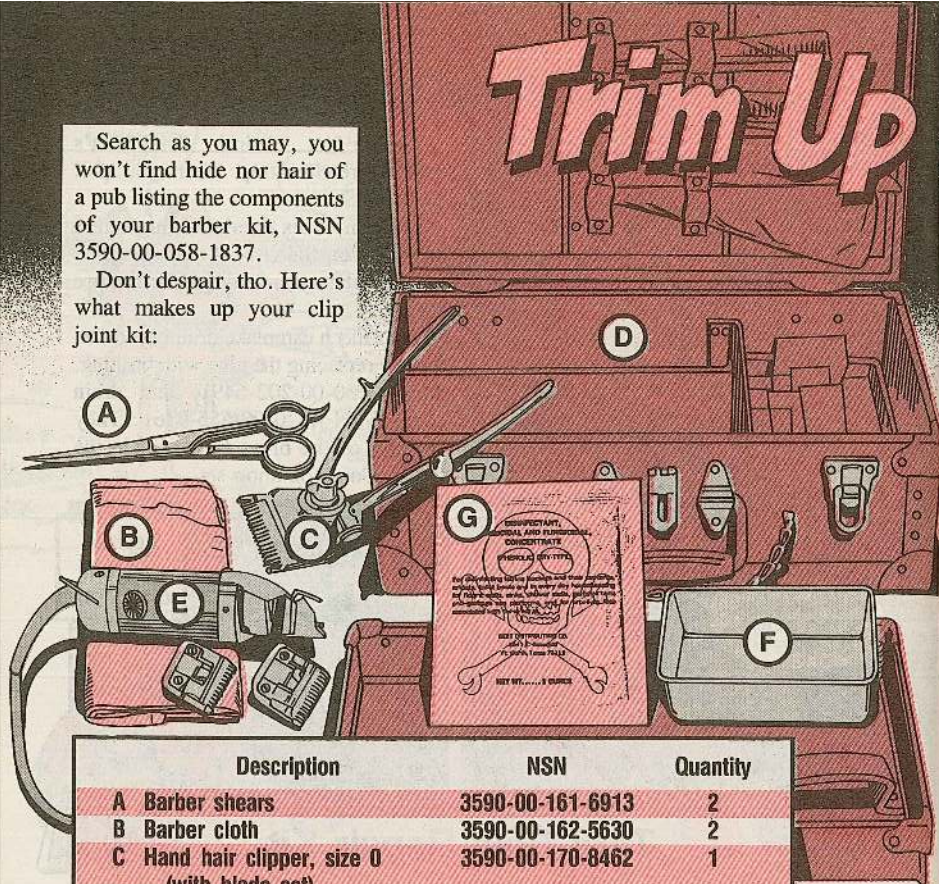
NSN 8340-01-176-6404 gets a new lock repair kit that contains both an upper and lower locking clip and two retaining rings. The kit is for the telescopic tent pole, NSN 8340-00-188-8413, on either the M1950 lightweight hex tent or the arctic tent.



Search as you may, you won't find hide nor hair of a pub listing the components of your barber kit, NSN 3590-00-058-1837.

Don't despair, tho. Here's what makes up your clip joint kit:

Trim Up



Description	NSN	Quantity
A Barber shears	3590-00-161-6913	2
B Barber cloth	3590-00-162-5630	2
C Hand hair clipper, size 0 (with blade set)	3590-00-170-8462	1
D Case	3590-00-240-2926	1
E Electric hair clipper with accessories: (accessories not available separately)	3590-00-892-4525	1
F Disinfecting tray	3590-00-926-3838	1
G Disinfectant	6840-00-753-4797	2
H Toilet soap	8520-00-129-0803	2
I Shaving cream	8520-00-285-4960	1
J Plastic soap box	8530-00-261-8275	1
K Safety razor	8530-00-290-2927	1
L Safety razor double edge blades, 5 blades per pack	8530-00-782-3009	8 packs
M Barber hair comb	8530-00-543-7727	2

Your Barber Kit



M11 Nitrogen Cylinder Rust

Do this: Eyeball the cap for rust. Look for FSCM 27742 marked on the cylinder.



If cap is rusted...



...or FSCM is 27742, turn it in!

Some nitrogen cylinders, NSN 4230-00-775-7541, issued for your M11 decons can leak before you use them, so they've got to be checked. Leaking makes them ineffective.

Any of those clues tells you you've got cylinders that can leak through their caps. NBC NCO's should turn them in as instructed by AMCCOM Msg AMSMC-MMN-C 011802Z Feb 85. AMCCOM Msg AMSMC-QAW-D 051900Z Oct 84 spells out exceptions.

The cylinders will be tested and returned to the supply system if they are OK.

A Rundown

Your hand impact wrench sets are handy for breaking loose stubborn bolts and such. What's not so handy, tho, is finding a missing item of the set!

The 3/4-in drive impact wrench, NSN 5120-00-961-9813, is a part of the No. 2 Common shop set.

The No. 2 Supplemental shop set has hand impact wrench set, NSN 5120-00-961-9815, which includes the 3/4-in set and a 1-in drive wrench set.

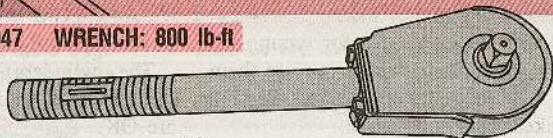
You'll find a partial listing of the components of these wrench sets in SC 4910-95-CL-A72 covering the No. 2 Common, and in SC 4940-95-CL-A08 covering the No. 2 Supplemental.

The other items are not even listed by part number—but the next revisions of SC 4940-95-CL-A08 and SC 4910-95-CL-A72 will list everything.

DON'T WRENCH
YOUR BACK ON
STUBBORN
BOLTS...

...HERE'S WHAT MAKES UP
THE 3/4-IN DRIVE WRENCH
SET, NSN 5120-00-961-9813!

NSN 5120-00-440-8047 WRENCH: 800 lb-ft



of Components

NSN/PN

Item

5130-00-449-6656 EXTENSION: 7 inch

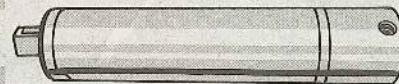
*FSCM 66640

PN 41-70781

EXTENSION: 10 inch

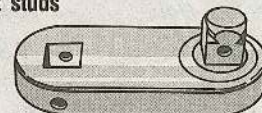
5130-00-449-6657 EXTENSION: 13 inch

5120-01-152-8281 SPECIAL EXTENSION: for turret studs



5120-01-151-1823 OFFSET LINK: 1 1/4-in long

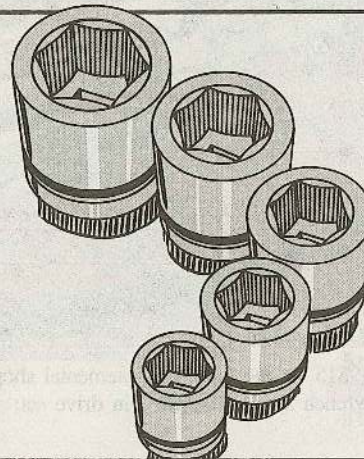
5120-01-151-1824 OFFSET LINK: 3 3/4-in long



SOCKET: Impact
(NSN)

SIZE
(inches)

5130-00-227-6701	3/4
5130-00-227-6676	13/16
5130-00-227-6677	7/8
5130-00-293-1411	15/16
5130-00-227-6679	1
5130-00-293-1412	1 1/16
5130-00-227-6681	1 1/8
5130-00-293-1413	1 3/16
5130-00-227-6683	1 1/4
5130-00-227-6684	1 5/16
5130-00-227-6685	1 3/8
5130-00-227-6686	1 7/16
5130-00-236-3979	1 1/2



NSN

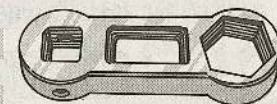
Item

5120-01-154-5137 WRENCH: Box end, 1 1/8-in hex

5120-01-151-1805 WRENCH: Box end, 1 1/4-in hex

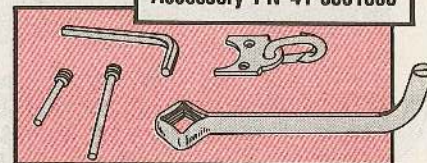
5120-01-154-5138 WRENCH: Box end, 1 7/16-in hex

5140-01-154-3030 BOX: Tool kit

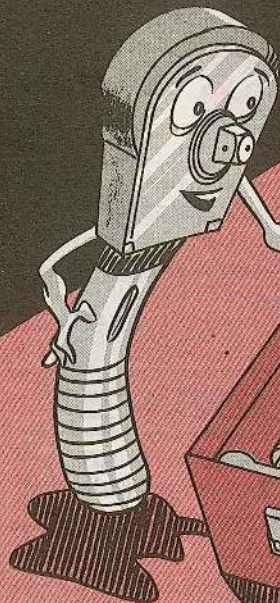


The accessory kit, *FSCM 66640 PN 41-0001000, includes a 5/16-in Allen wrench, NSN 5120-00-240-5274; 2 steel pins; a hanger; and speeder wrench.

Accessory PN 41-0001000



*Order on DD Form 1348-6 from RIC B14.

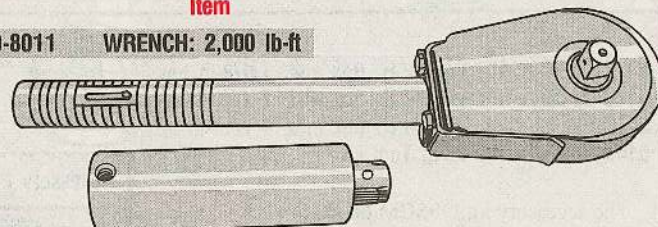


...AND HERE'S WHAT
MAKES UP WRENCH SET,
NSN 5120-00-961-9815!

Supplement Your Set

Impact wrench set, NSN 5120-00-961-9815, in the No. 2 Supplemental shop set, gets you the complete 3/4-in drive wrench set...and this 1-in drive set:

NSN	Item
5120-00-440-8011	WRENCH: 2,000 lb-ft



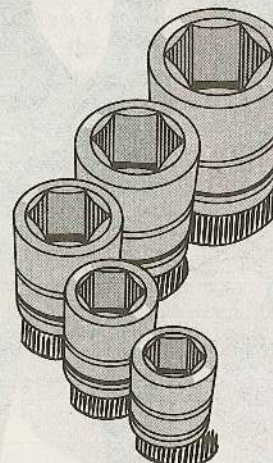
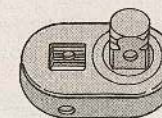
5130-00-449-6658	EXTENSION: 7 inch
5130-00-449-6659	EXTENSION: 13 inch
5120-01-164-7327	SPECIAL EXTENSION: for Budd wheels
5120-01-164-7328	EXTENSION: for Budd wheels
5120-01-164-1455	SPECIAL EXTENSION: for turret studs

NSN

5120-01-164-7329
5120-01-163-9689

ITEM

OFFSET LINK: 1 3/4-in long
OFFSET LINK: 4 1/4-in long



SOCKET: Impact (NSN)

SIZE (inches)

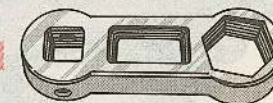
5130-00-684-0919	1 9/16
5130-00-221-8023	1 5/8
5130-00-221-8024	1 11/16
5130-00-684-0918	1 3/4
5130-00-221-8025	1 13/16
5130-00-235-5880	1 7/8
5130-00-684-0917	1 15/16
5130-00-235-5881	2
5130-01-166-6465	2 1/16
5130-01-166-6466	2 1/8
5130-00-293-1375	2 3/16
5130-00-293-1374	2 1/4
5130-01-167-6632	2 5/16
5130-00-293-1373	2 3/8
5130-01-166-6467	2 7/16
5120-01-170-3274	2 1/2

NSN

5120-01-170-3275
5120-01-163-9690
5140-01-163-9699

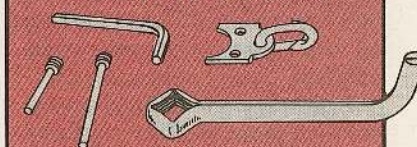
Item

WRENCH: Box end, 1 1/2-in hex
WRENCH: Box end, 2 1/4-in hex
BOX: Tool kit



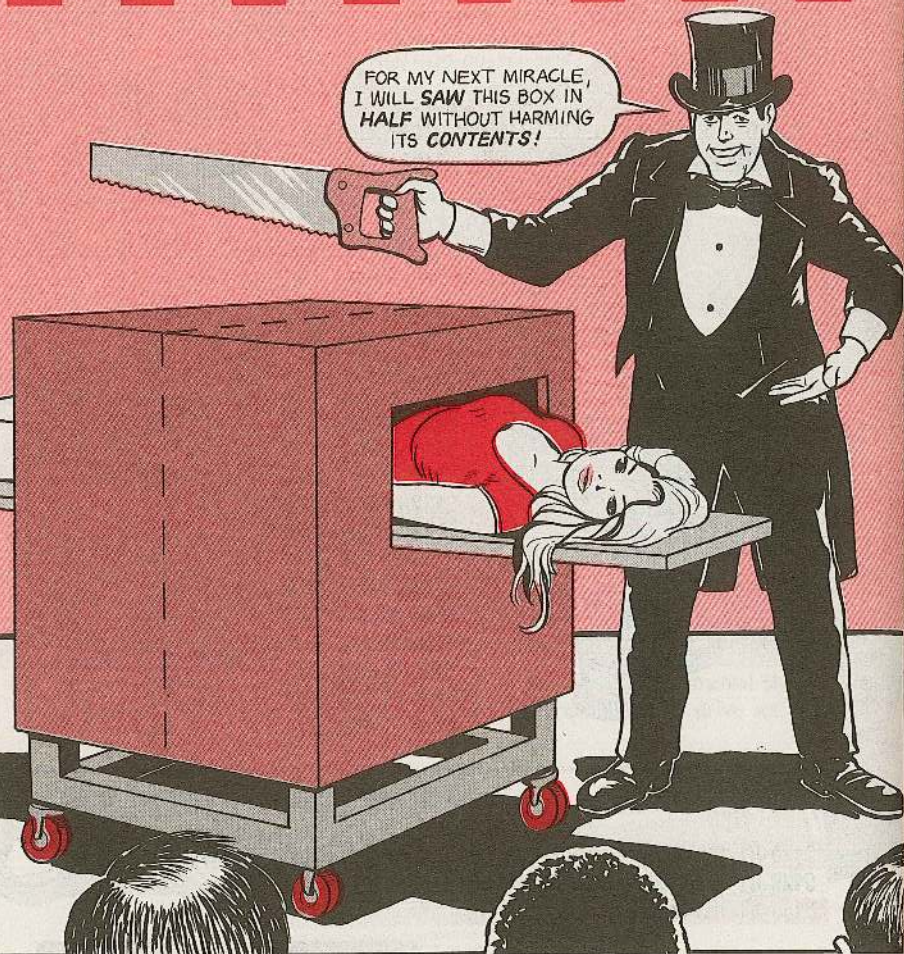
You also get an accessory kit, FSCM 66640 PN 41-0000900, containing a 3/8-in Allen wrench, NSN 5120-00-198-5390; 2 steel pins; a hanger; and a speeder wrench. Order kit on DD Form 1348-6 from RIC B14.

Accessory kit PN 41-0000900



Cut on the Dotted Line

FOR MY NEXT MIRACLE, I WILL **SAW** THIS BOX IN **HALF** WITHOUT HARMING ITS **CONTENTS**!



Opening a new encapsulated foam-in-place (FIP) pack can be more baffling than trying to open certain food containers. If you don't do it right, you end up with a damaged, or even useless container, not to mention frayed nerves or worse.

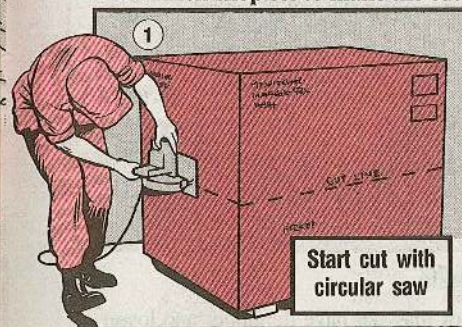
These packs are used to protect many items during handling and transportation or storage. They usually have fiberboard sides and tops, but some have foam tops.

The containers can be re-used, but some mechs ruin them when they open them.

To open a FIP pack, cut thru the fiberboard sides and the foam that completely surrounds the item.

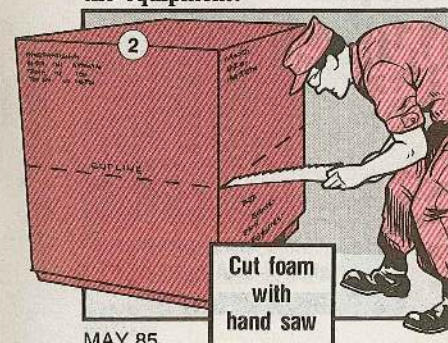
Here's how:

Use a circular saw if you have one to make a 3/4-in deep cut all the way around the fiberboard along the printed line. The cut must be level. If you don't have a circular saw, use the hand saw from the No. 1 or No. 2 Common shop set to make the cut.



Start cut with circular saw

Use the hand saw to cut thru the foam to the fiberboard sleeve around the equipment.



Cut foam with hand saw

Loosen the top half of the pack by using a prybar or steel angle on each end of the pack. When it's loose, lift it completely off.



Loosen top half of pack...



...and lift off

You can re-use the opened pack to store serviceable equipment inside a building, and to store and return unserviceable gear. If you broke off large pieces of foam during opening, don't re-use the pack for shipping.

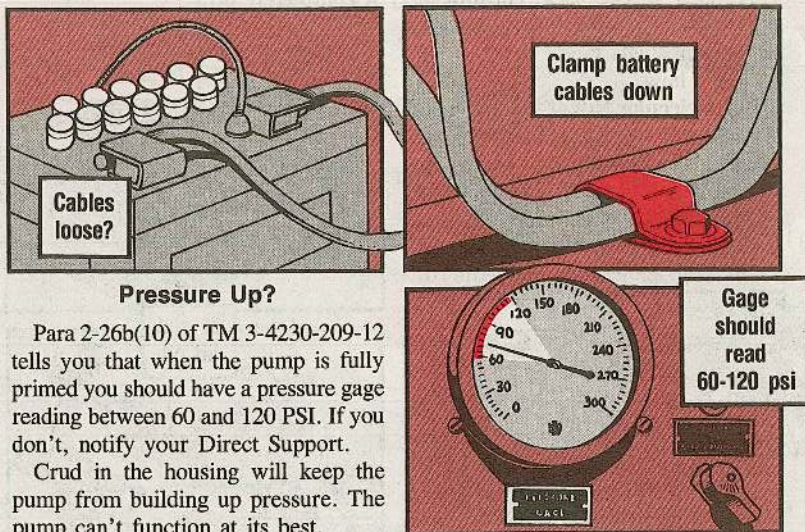
A detailed opening/re-using instruction booklet is available by writing to:

Director
USAMC Packaging, Storage and
Containerization Center
ATTN: SDSTO-TP-P (Foam Pack)
Tobyhanna, PA 18466-5097

Clamps & Clean-Ups

Battery cable clamps, a shot of grease and a clean-up can keep the pump unit of your M12A1 decon apparatus pumping right along, no sweat. Like so:

Loose battery cables can vibrate forward during operation and be burned by the muffler. To prevent damage, replace the clamps as shown in Fig 3-4 of TM 3-4230-209-12. Parts are shown as Items 1 and 3, Fig 5, in your -20P TM.



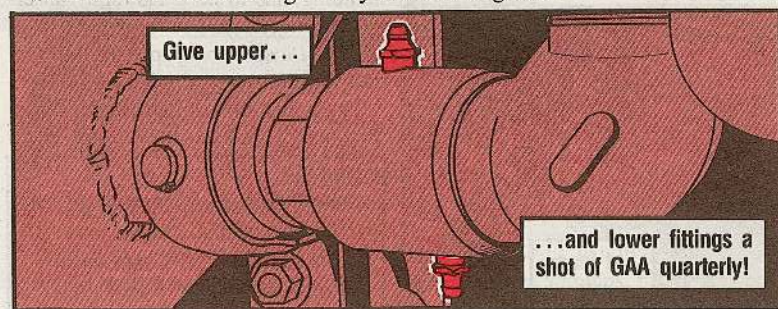
Para 2-26b(10) of TM 3-4230-209-12 tells you that when the pump is fully primed you should have a pressure gage reading between 60 and 120 PSI. If you don't, notify your Direct Support.

Crud in the housing will keep the pump from building up pressure. The pump can't function at its best.

Hose Reels

The hose reels on your pump unit may or may not have the upper and lower grease fittings shown in LO 3-4230-209-12. If they do, just give the fittings a shot of GAA quarterly.

Some reels have no fittings. They don't need grease.



Drain Your U-Pack

Dear Editor,

The drain lines in our MUST utility power plants slip off the pipe tee joining the lines. Then water runs inside the pack.

The lines slip over the tee and are clamped. The tee doesn't have much to hold the lines, and they work loose and come off.

To keep the lines on, we remove the tee and solder in 2-in pieces of 1/2-in copper tubing. We flare the ends of the tube a little using the flaring tool in the No. 1 Common shop set.

Then we push the lines on and tighten the clamps. No more slip-off's!

CW2 C.M. Richards, Ft Belvoir, VA



MUST Utility Packs...

Wrong Extinguisher Damages Pack

Using the wrong extinguisher on your MUST utility power plant could damage the pack more than the fire did.

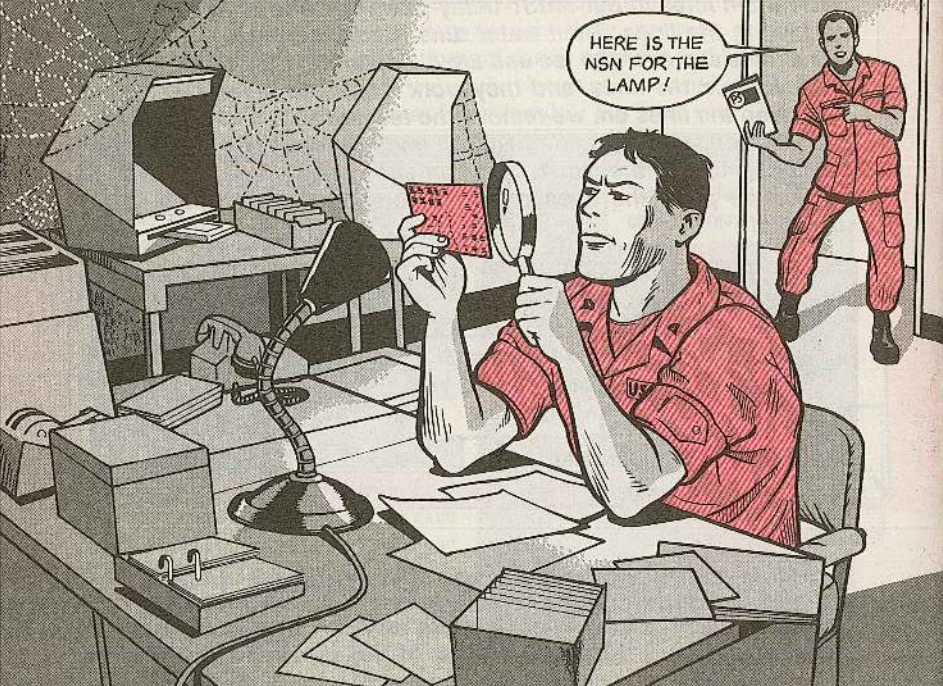
That's because the chemicals in a dry chemical fire extinguisher damage the electrical system and the turbine.

Make sure the extinguisher with your pack is a CF₃BR extinguisher, NSN 4210-00-555-8837. That's what's listed on Pg B-3 of TM 5-6115-590-12.

Get a charged replacement cylinder with NSN 4210-00-708-0031.

Forget the reference to dry chemical extinguishers in Paras 2-13 and 2-14 of the TM. That's wrong.

Supply Your Printer



Seems like every time you turn around there's another publication on microfiche. But if your viewer/printer's bulb is shot, or if you're out of paper or toner, it's tough to make a print.

Here are the supplies you need for some common viewer/printers.

VIEWER/PRINTER (NSN 6730-00-116-1620)	Canon 370T-D	Bell & Howell Spacemaster & ABR-610 Micro Design RP 550
LAMP	NSN 6240-00-409-8295	NSN 6240-00-409-8295
TONER	NSN 6850-01-135-3125 (six 1-qt bottles)	NSN 6850-01-011-4937 (1-qt bottle)
PAPER	NSN 6750-01-135-5599 (8 1/2x11 inches) (1,000 sheets per box)	NSN 7530-01-009-5862 (11-in wide roll)

Connie's ★ POST ★ SCRIPTS

OH, IT'S THE RIGHT
TOOL, ALL RIGHT...JUST
A LITTLE TOO MUCH
BACKSWING!



Howitzers Get Screwdriver

Screwdriver, NSN 5120-00-236-2140, has been added to the BIL for the M110A2 and M109-series SP howitzers. The 1/8-in, flat-tip screwdriver with pocket clip is needed to adjust the azimuth counter on M115 and M117/M117A2 pantels during boresighting.

Plastic Bag Caution

Using a plastic bag in the immersion heater (Page 49, PS 388) may have some drawbacks, as reported in the Troop Support Digest (Winter). While none of the problems surfaced when the Natick R&D Center tested the suggestion for PS, different bags could give different results. PS will keep you posted.

M1 Tank PM Update

"If it ain't broke, don't fix it" applies to elbow, NSN 4730-00-498-4732. It's part of the semiannual maintenance kit for M1 tanks. There's no need to replace the engine exhaust duct elbow every six months unless it's damaged. That's the word in an upcoming change to TM 9-2350-255-20-1-1.

End Connector Socket

Take care of those hard-to-loosen track end connector bolts on your M48A5 or M60-series tank or M88A1 recovery vehicle with a tougher socket. Impact socket, 15/16 inch, 3/4-in square drive, NSN 5130-00-293-1411, is now authorized for your vehicle's BIL. It replaces non-impact socket, NSN 5120-00-181-6813, which isn't up to the job. SMART Msg #42 has the scoop.

Hold Off On Tire Labels

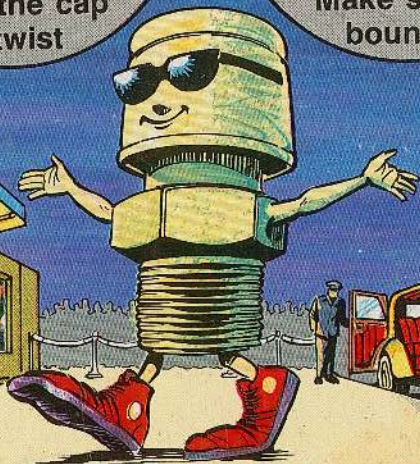
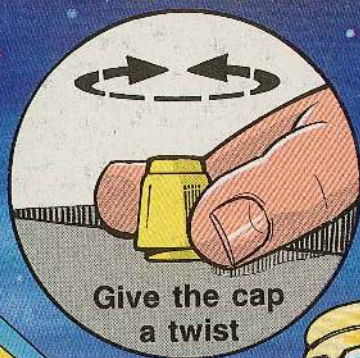
Hold one before you order those US GOVT labels mentioned on Page 26 of PS 386. The labels and kits are not available thru the supply system at this time.

Save M17-Series Clips

Remove and save end clips from salvage-bound M17-series protective mask head harnesses. Keep the clips in a container at your unit. The clips can be used to replace damaged ones on serviceable masks, like it says in TM 3-4240-279-20&P. Tap or squeeze them on with a hammer or pliers.

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

Give
Axle Housing Breathers
STAR
Treatment!



...Or Axle Seals
Will Leak!