

Issue 426

PSMay
1988**THE
PREVENTIVE
MAINTENANCE
MONTHLY**

HEY, DID
SMITTY WIN
THE
LOTTERY ?

NO, HIS *TOOL*
SUGGESTION
PAID OFF !

BE
BACK
AT 4,
JAMES!

Approved For
Public Release;
Distribution is
Unlimited

**Tool Improvement Program
Suggestions (See Page 27)**

PS

THE
PREVENTIVE
MAINTENANCE
MONTHLY

TB 43-PS-426, The Preventive Maintenance Monthly, is an official publication of the Department of the Army, providing information for all soldiers assigned to combat and combat support units and all soldiers with unit maintenance and supply duties. All information published has been reviewed and approved by the agency responsible for the equipment, publication or policy discussed. Application of the information is optional with the user.

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You are invited to send PS your ideas for improving maintenance procedures, questions on maintenance and supply problems, questions or comments on material published in PS. Just write to:

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The Preventive Maintenance Monthly
Lexington, KY 40511-5101

By Order of the Secretary of the Army:

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NCOLP Reflections



Ever since MSG Half-Mast received his Certificate of Membership in the Noncommissioned Officer Logistics Program (NCOLP) in March 1982, he's been looking for a few good people to join him.

You can join MSG Half-Mast on the NCOLP graduate list and be placed in a job that needs and challenges your know-how.

NCOLP can help change your image from that of an NCO in a dead-end job to an NCO with a challenging job which takes advantage of your logistics knowledge.

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If you're an active or reserve NCO who's technically sharp in 2 or more logistics areas, you could be accepted for NCOLP membership.

Interested? Take a look at Chapter 7 of AR 614-200, Selection of Enlisted Soldiers for Training and Assignment, in the Enlisted Ranks Personnel UPDATE.

The NCOLP wants top people from 32 MOS's—including a variety of maintenance, technical and supervisory logistics MOS's. All 32 MOS's are listed in Table 7-1 of AR 614-200.

If you meet the rigid requirements to be one of the Army's logistics experts, it's easy to be nominated. Your CO, Sergeant Major, NCOLP Monitor, NCOLP member, or United States Total Army Personnel Agency (USTAPA) can nominate you. If you have any questions—or want to talk to someone in the program—call SGM Michael J. Dwyer, AUTOVON 224-6727 or Commercial (202) 694-6727.

SEND YOUR
APPLICATION FOR
THE NCOLP TO...

USTAPA
ATTN: DAPC-EPM-L (NCOLP)
2461 Eisenhower Avenue
Alexandria, VA 22331-0454



MAY 88

1

Pin Release Too Quick?



So why do the quick-release pins in the steering and brake linkages demand your ever-loving attention?

Because if they get to feeling the least bit neglected, they can up and leave you at a critical time. Too quick!

Dirt and corrosion jam the retaining mechanism. Then the pin won't lock in place. So when you install it, the pin may not stay where you put it—and that's bad news if the pin falls loose when the tank's on the move.

Whenever you install a quick-release pin in the steering linkage or the parking or service brake linkage, make sure the spring-loaded balls are holding the pin firmly in place.

Just pull on the pin. If it comes out, clean it or replace it with a new pin. The steering pin, NSN 5340-00-904-4788, comes out most often and should be checked most often.

The other pins (NSN 5340-00-008-5826 for parking brakes and NSN 5340-00-904-6182 for service brakes) need to be checked, too.

Clamp Saves Oil Line Damage

Next time you mechs get a chance, eyeball the oil lines to and from the generator on your M1-series tanks—make sure there's a clamp to keep the lines from rubbing and pinching between the oil cooler mount bracket and the hull.

The rubbing and pinching can lead to leaks, and you know what oil in the hull does as a fire hazard!

One simple loop clamp, NSN 5340-00-088-1254, prevents the damage and oil leaks. But it doesn't always get reinstalled or replaced when it's missing or damaged. Make sure it's there.



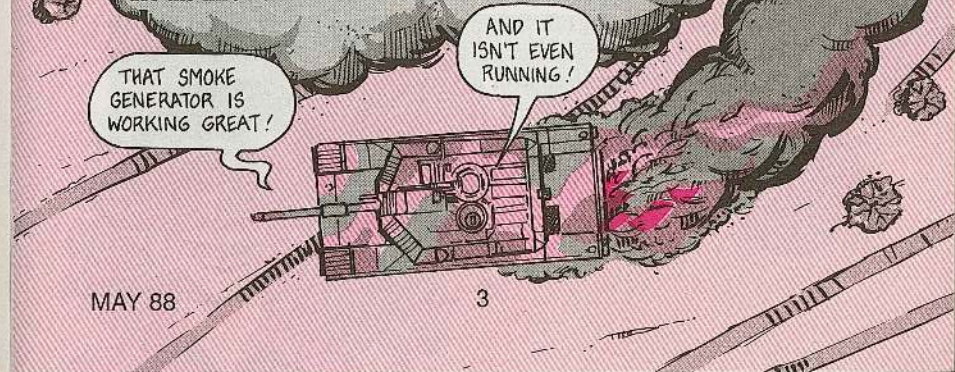
Prevent oil line damage. Use loop clamp, NSN 5340-00-088-1254

No Smoking With JP-8

In addition to JP-4 and MOGAS, do not use the on-board smoke generator when your tank is fueled with JP-8. Its flash point is so low you may cause a tank fire, instead of tank smoke.

It'll pay you to know what fuel is in your tank. DF-1 or -2 is what you need to make smoke.

A warning will be added to your -10 TM's, but you need to use the info now.



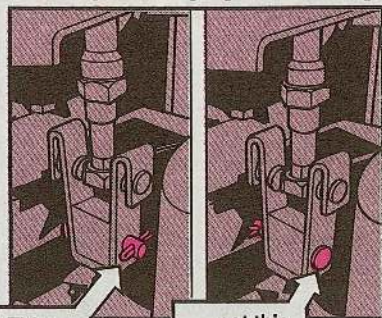
THAT SMOKE GENERATOR IS WORKING GREAT!

AND IT ISN'T EVEN RUNNING!

IGV Linkage Pin Reversed



Forget the bruised fingers and busted knuckles you've had to put up with when removing the straight pin and cotter pin on the inlet guide vane actuator linkage.



Instead of mounting the straight pin with the cotter pin end facing the compressor section, turn it around so you can get to the cotter pin first.

That way, every time you need to make an adjustment to the IGV linkage you won't lose skin removing the pins.

TM's 9-2350-255-20-1-3-1 and 9-2350-264-20-1-3-1 will be changed to show this new set up, but you can make removing the pin easier right now.

Don't Sweat Cannon Coating

Pay no never-mind to the glassy coating that remains on the bore of the 120-MM cannon after you've cleaned it.

It's not that you're doing something wrong—or that the TM cleaning info is short. You can't get the coating off. Solvents won't touch it and neither will a bore brush. The gray, red or black coating is too thin to harm anything or hide anything. You can still inspect the bore in spite of it.

So, pull an Alfred E. Neuman and smile. You don't have to worry about what you can't remove. Just keep the tube clean.



On Being Put in a Bind

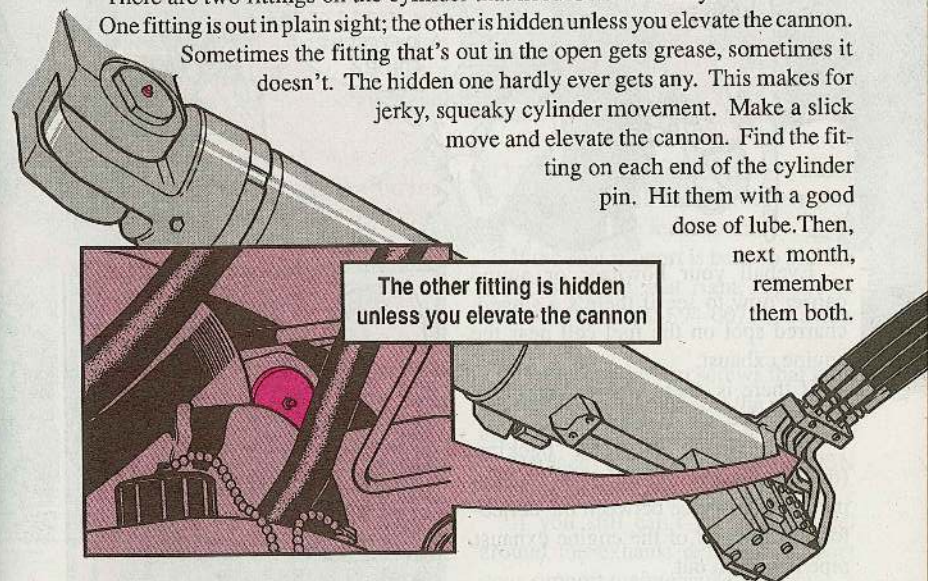
Grease is wonderful stuff when used—and used right. But when it's forgotten at the elevation cylinder lube fittings, the joints get in a bind.

There are two fittings on the cylinder that need GAA monthly.

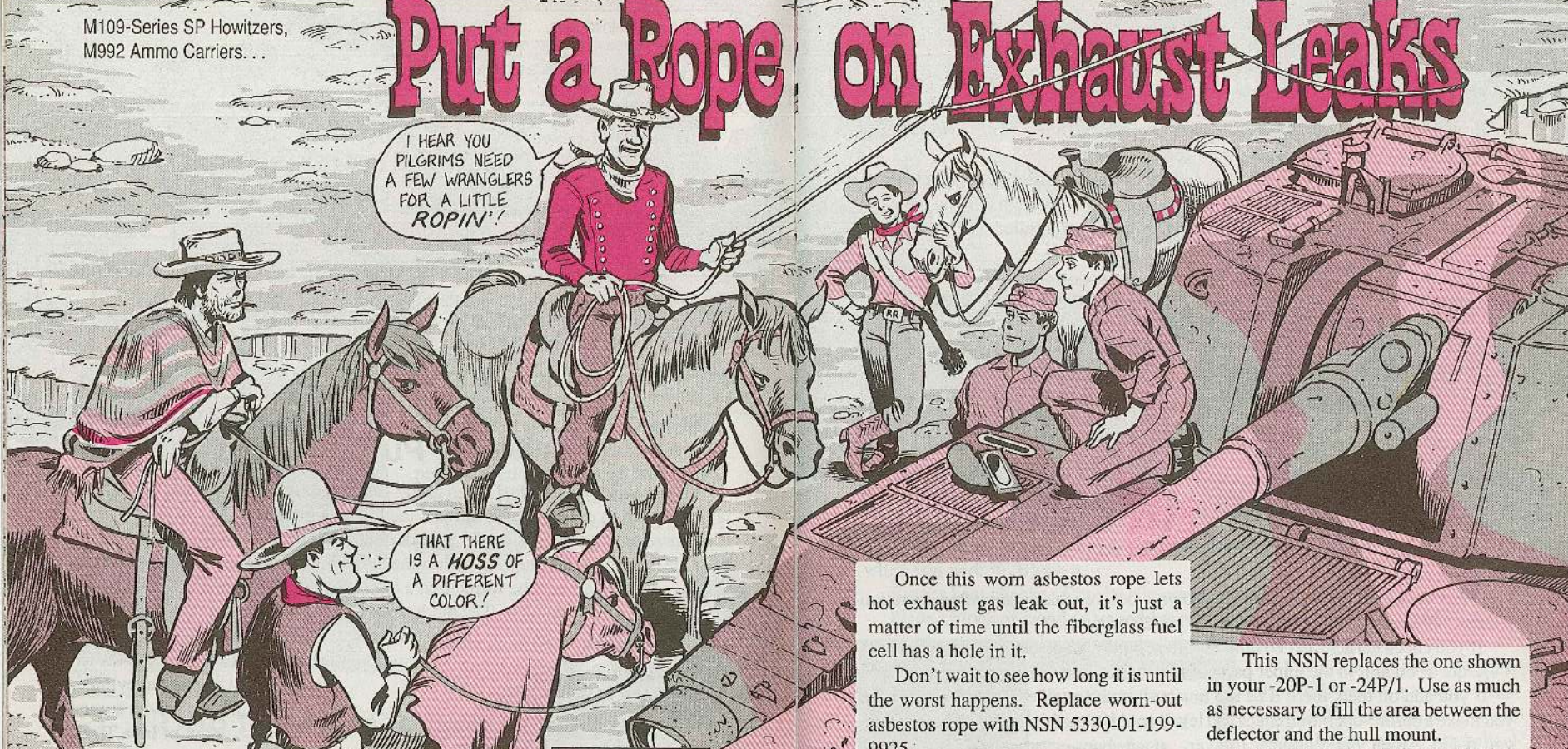
One fitting is out in plain sight; the other is hidden unless you elevate the cannon.

Sometimes the fitting that's out in the open gets grease, sometimes it doesn't. The hidden one hardly ever gets any. This makes for jerky, squeaky cylinder movement. Make a slick move and elevate the cannon. Find the fitting on each end of the cylinder pin. Hit them with a good dose of lube. Then,

next month, remember them both.



Put a Rope on Exhaust Leaks



Eyeball your howitzer or ammo carrier now to see if there's a singed, charred spot on the fuel cell near the engine exhaust.

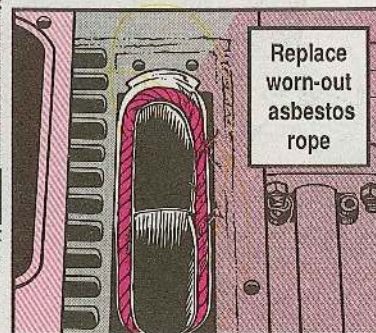
If there is, there's an exhaust leak that could lead to a fuel fire!

The exhaust deflector packing (that's asbestos rope, mechs) which plugs up the space between the deflector and the end of the engine exhaust pipe has worn out.



Once this worn asbestos rope lets hot exhaust gas leak out, it's just a matter of time until the fiberglass fuel cell has a hole in it.

Don't wait to see how long it is until the worst happens. Replace worn-out asbestos rope with NSN 5330-01-199-9925.



This NSN replaces the one shown in your -20P-1 or -24P-1. Use as much as necessary to fill the area between the deflector and the hull mount.

If the seal support is bent so that the deflector won't seat right, replace it. Use NSN 2990-00-894-0075 for a new one.

Make sure the cap screws that hold the deflector snug against the rope seal are not stripped or cross-threaded.

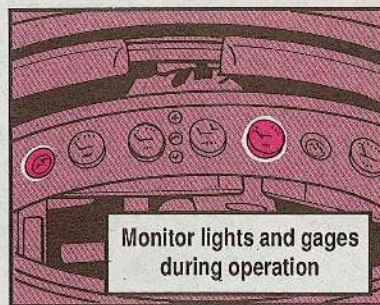
Replace bum screws with NSN 5305-00-269-3238.

If you still can't get a good seal around the exhaust deflector, contact your support maintenance. . . now.

Engine Oil Check Needs Timing

Just like Paul Masson will sell no wine before its time, you must make the engine oil level check only at its time—before operation.

Once you've checked the oil level before operation—like your vehicle's LO says—you let the gages and warning lights at the driver's station tell you when oil is needed. There is no during- or after-operation oil check called for in your LO's or TM's.



If you must—**really must**—check the oil level after operation, here's something you need to know:

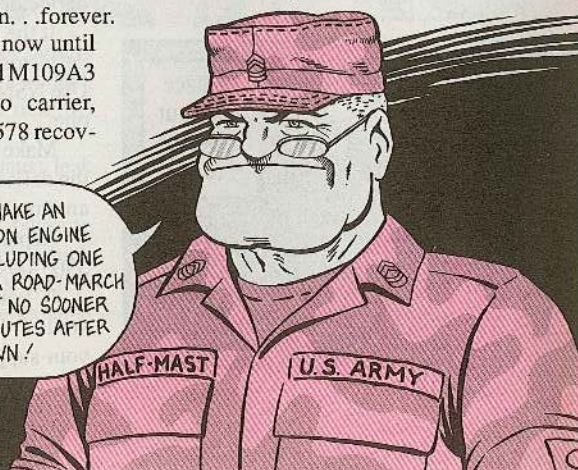
Wait at least 20 minutes after shutdown—before making any after-operation check. That's not 3 to 5, not 10, not 15, but 20 minutes.

If you check earlier than 20 minutes after shutdown, there could be as much as 3 1/2 qts of oil still in the upper parts of the engine.

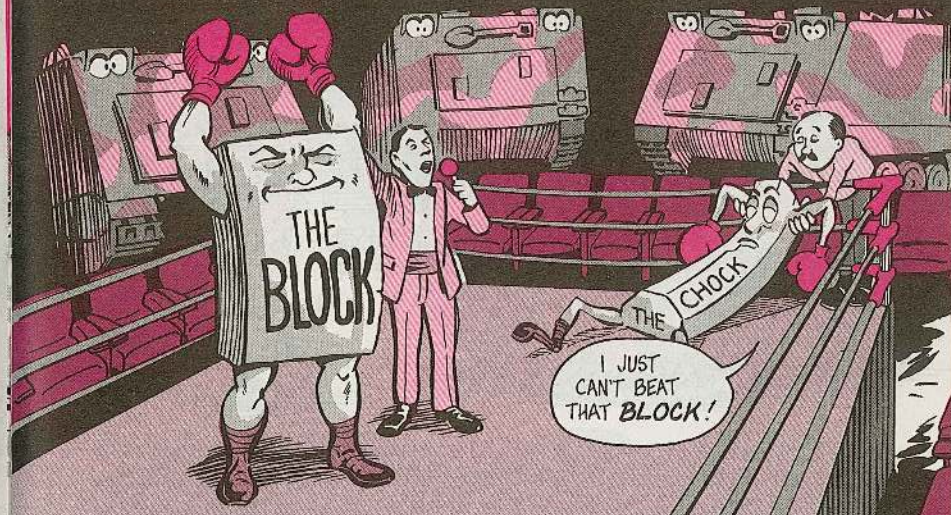
If you add oil then, there'd be too much oil in the engine. Then the next time you make a before-operation check, oil level would be too high. You'd drain... then you'd add... then you'd drain... forever.

So, put this in your head now until the TM's for the M109A2 and M109A3 SP howitzers, M992 ammo carrier, M110A2 SP howitzer and M578 recovery vehicle are changed:

IF YOU MUST MAKE AN AFTER-OPERATION ENGINE OIL CHECK, INCLUDING ONE MADE DURING A ROAD-MARCH HALT, MAKE IT NO SOONER THAN 20 MINUTES AFTER SHUTDOWN!



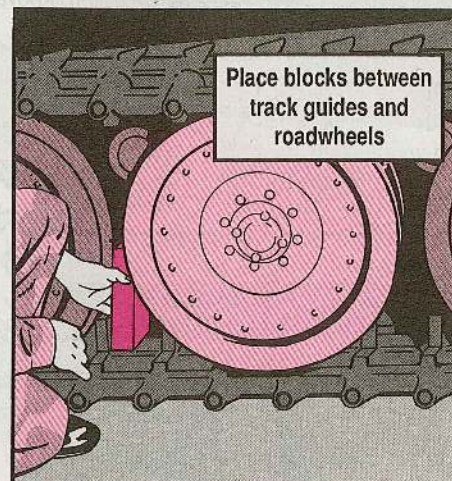
Make That Block Count



There's only one way to make sure your M113-series carrier doesn't move when you park it: Block it.

Blocks beat chocks. Chocks slip on irregular or wet or slick surfaces.

Place a block of wood or something similar between the track guides and two sets of roadwheels.

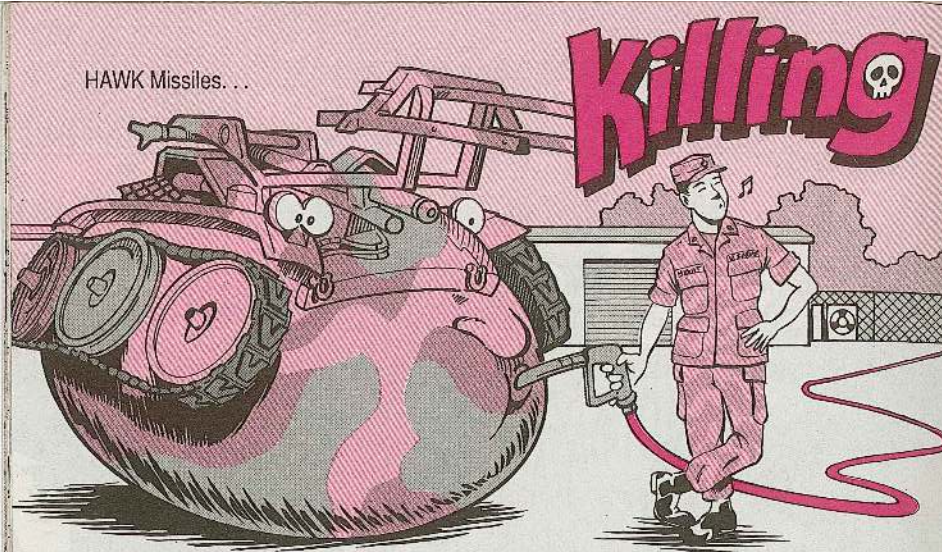


Make sure the block extends the full width of both roadwheels. The block must be as tall as the height of the roadwheel hub from the track surface.

TM 9-2350-277-10 (May 87) for the M113A3 personnel carrier has this info on Page 2-151. All you drivers of other M113-series carriers will see this info in updates to your TM's.

The blocks will keep your carrier from moving when you disconnect track or driveshaft U-joints, or if the brakes should fail after you park.

HAWK Missiles...

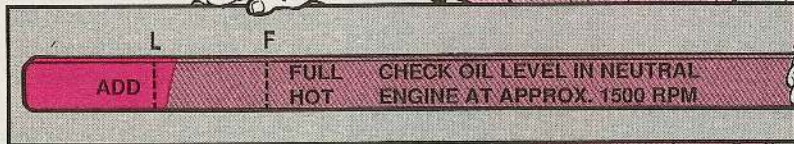


Some operators think the higher the transmission oil level in their loaders, the higher their HAWK's will fly. They think if a little oil's OK, a little more is better. Result: Their HAWK's sink, not soar. Overfilled transmissions blow seals... and transmissions overheat... and burn out.

AVOID OVERFILLING. CHECK THE FLUID LEVEL LIKE SO...

● Make sure the loader's parked on a level surface.

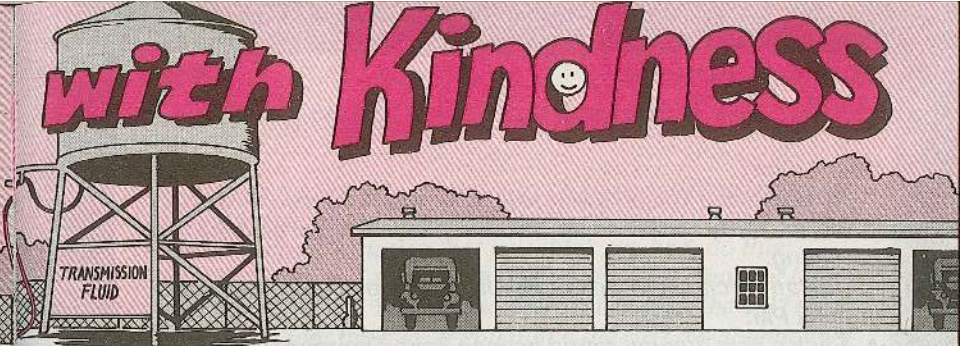
With the engine cold and off, pull the transmission dipstick. Fluid should be at or slightly above the L on the dipstick. That means it's safe to start the engine.



If the fluid's low, add enough to bring it to the L.

If it's at or above F, get your mech to drain some off.

Killing with Kindness



Now start the engine and bring it up to operating temperature. Pull the dipstick and check the level again. The level should be between L and F. If it's below L, add enough fluid to bring it to the L. If it's above F, get your mechanic to drain some off.

⚠ If you ever notice the transmission fluid foaming or bubbling, report it pronto. Foaming or bubbling usually means somebody's added too much transmission fluid.

M163A1/A2, M167A1/A2 Vulcan...

Keep Your Seal

You Vulcan crewmen know it's a good idea to tape components such as the radar receiver where their covers and cases meet. Tape gives components a better chance of sealing out water that can cause big-league electrical damage.

So keep a roll of tape in your toolbox when you go to the field. You'll need it if you have to break a seal to do something like fine-tune the radar receiver-transmitter. Without the tape, you've lost the seal.

NSN 8315-00-253-6293 gets you a roll of green tape for 25 cents.

Link Up to Link PM

Dear Editor,

After use, the Vulcan's ammo links get stretched out of shape, loose, and dirty. That causes the ammo to jam and it also throws off timing.

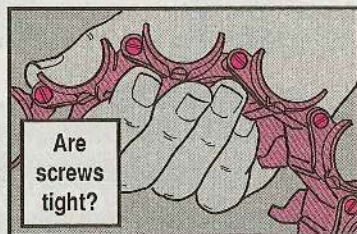
Vulcan mechanics can cut jamming time by doing the following link PM:

▲ Stick a new dummy round in each link. The round should fit snugly. If it's loose, replace the link.

▲ Feel the link screws for looseness by moving the links back and forth and side to side. If there's a lot of movement, tighten loose screws.

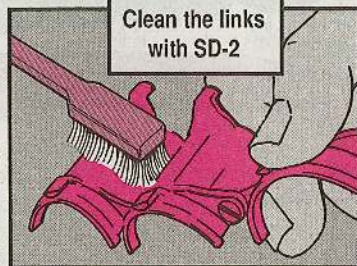


Does the round fit snug?



Are screws tight?

▲ Clean the links with SD-2 dry-cleaning solvent and an old small arms cleaning brush.



Clean the links with SD-2

WO1 Peter Lenzner
Ft Stewart, GA

(Editor's note: Sounds like you've linked up some good tips.)

Defusing Battery Problems

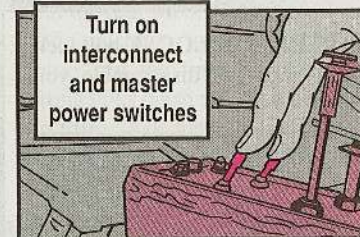
Dear Editor,

Most times mechs think they've got bad batteries when really a bad fuse is the culprit. Good batteries get replaced as a result.

Before you pull batteries that you think are bad, do this:

With the engine off, turn the master power and launcher interconnect switches ON. You should hear a click from the CB1 relay switch that's under the cab. If you don't, the CB1's 400-amp fuse is bad. Replace it.

If you hear a click, the batteries are discharged. Charge 'em. If



Turn on interconnect and master power switches



If you don't hear a click, check the CB1's

you can't recharge them, replace 'em. Make sure the replacement batteries are fully charged before you put them in. It will save a lot of work.



Use the optical tester to make sure the battery's fully charged

SGT Michael Angelo
SGT Jerry Merriweather
Ft Stewart, GA

(Editor's Note: Sounds like you've de-fused those battery problems. Thanks.)

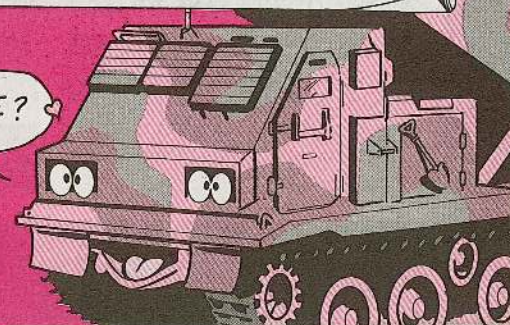


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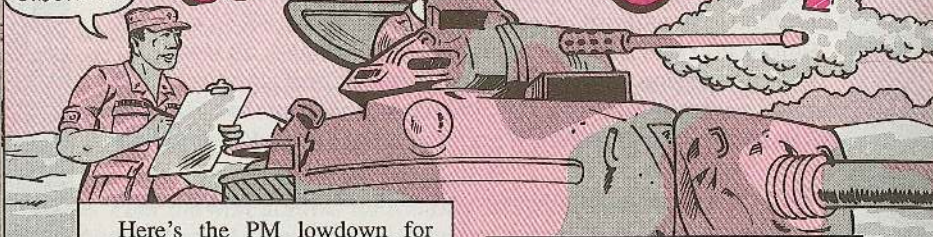


MAY 88



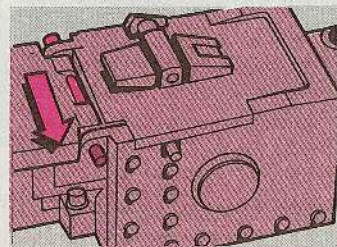
Straight Scoop for Straight Shooting

GOOD SHOOTING!



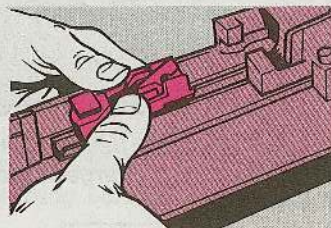
Here's the PM lowdown for keeping your M85 on target.

JUST ONE WAY to put the quick release pin for the cover in—from left to right.



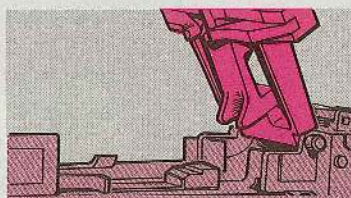
If you put the pin in wrong, you can't remove the pin and cover once the gun's mounted. Help the pin slide smoothly by keeping it lightly lubed.

FEEL FOR LOOSE bolt locks next time you disassemble your M85.

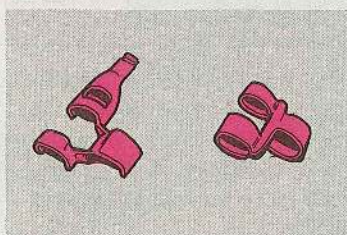


Worn locks cause firing problems. The locks should be snug, with only slight side movement. If you can pull them up or out, the cartridge retainer's broken or the locks are worn. Tell your armorer.

THE COVER STAYS UP when you're loading or unloading your M85. If it droops, tell your armorer. He needs to check the cover teeth for wear and the cover detent in the accelerator assembly for poor spring tension.



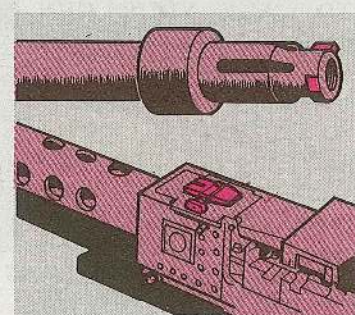
NOT ALL .50-CAL AMMO is right for your M85. Both the M2 and M85 machine guns use .50-cal ammo, but the links are different. Wrong links mean your machine gun can't fire. Ask specifically for M85 ammo. M85 links are open loop, M2 links are closed loop.



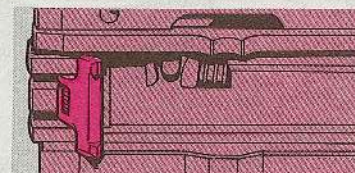
CHECK BARREL LOCKING LUGS like this:

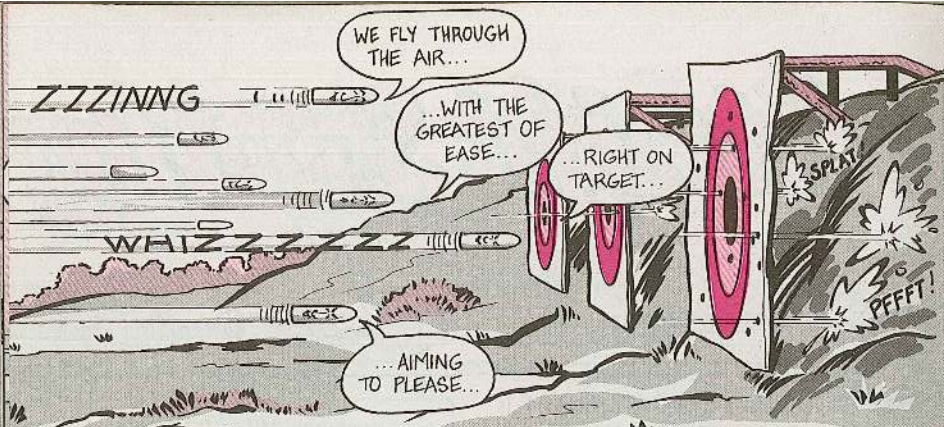
Insert the barrel and lock it in the receiver.

Try to turn the barrel. If it moves, your armorer needs to eyeball the barrel latch assembly for broken or missing parts or improper assembly. Also, tell your armorer about any chipped lugs you spot when the barrel's off.

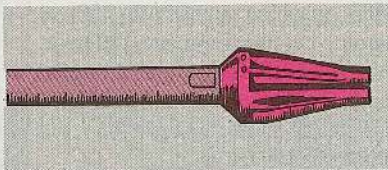


PUT ON THE FEED ASSEMBLY CAREFULLY—it's easy to get things wrong. A wrong-side feed pawl keeps your M85 from feeding and charging. The feed pawl should be on the same side you're feeding from.

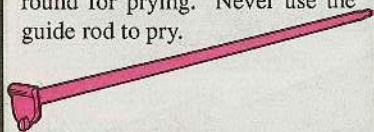




EYEBALL THE FLASH SUPPRESSOR for bent prongs. If even one prong is bent, it can deflect a round and send it off-course. If you spot a bent prong, tell your armorer.



TO TAKE YOUR GUN APART for cleaning, use a dummy round for prying. Never use the guide rod to pry.

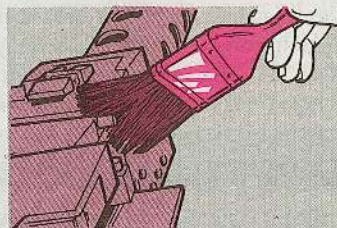


That bends the rod and deadlines the gun.

LIGHT LUBING IS JUST RIGHT. TOO MUCH LUBE ATTRACTS DIRT AND SAND...



USE THE BORE BRUSH to clean inside the barrel, not the outside of the gun. A bore brush wears off the surface and bronzes your M85. Instead, use a paint brush and rag to clean the outside.



...NO LUBE CAUSES BINDING AND WEARS OUT MOVING PARTS. FIELD STRIP, CLEAN AND **LIGHTLY** LUBE YOUR M85 AFTER EVERY FIRING!

Heavy Metal

Your 60-pound machine gun is easier to tote around than a greased pig—but not much. Its unexpected weight and elusive center of gravity have fooled many people. They're lucky to have escaped with their toes! The gun is still taking a beating from being dropped.

Here are two good ways to carry your M2.

The best way is with a buddy. After you remove the barrel, get him to lock his hands under the barrel support. You hold on with both hands under the receiver about five inches from its end.



The 2-man carry is best

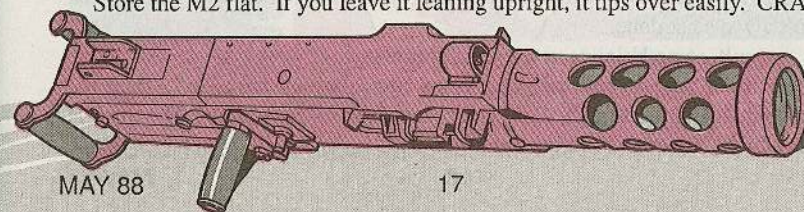
Then carry it where it needs to go. If you're all alone, hold the barrel support with your left palm out and the receiver with your right palm in. Press it against your upper legs for more support.



Place right hand like this...

...and left like this

Store the M2 flat. If you leave it leaning upright, it tips over easily. CRASH!





U-joints Need Lube Too

DID YOU LUBE
THE FRONT
U-JOINTS?

FRONT U-JOINTS?
UH, UH... NOT
THIS TIME!



Out of sight—out of mind. That's often the short, sad story of the front axle U-joints on the M939-Series 5-ton trucks.

Those front U-joints are hard to get to and easy to overlook during a lube job. LO 9-2320-272-12 says they need to be lubed every 6 months or 6,000 miles, but that doesn't always get done.

As a result, some U-joints never see a grease gun.

A few miles and several thousand spins later, they go bone-dry. Then the driver hears the U-joints a'knockin' and before long he's a'walkin'. The truck is NMC, and you mechs have a big repair job.



IT'S EASIER
TO LUBE 'EM
THAN REPLACE
'EM. HERE'S
HOW...

- Remove the front axle shaft like it says in Para 6-13a of TM 9-2320-272-20-1.

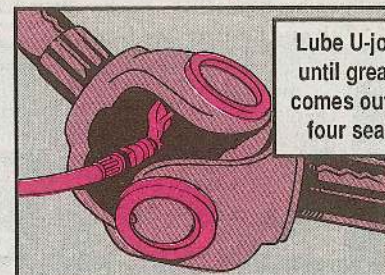
- Pump grease into the U-joint fittings—slow and easy. Work the U-joint all the way around while you pump. If grease fails to come out all four seals, you've got a blockage.

- Remove the grease fitting and see if it's clogged. If it's clear, the blockage is in the U-joint.

- Take the U-joint apart according to the instructions in the -20-1 TM, and clean out any caked grease, rust, or grit that's blocking the seals.

- Once the U-joint is clean, put it back together and grease. If grease still fails to come out all four seals, get a new U-joint.

- Put the axle back in and reinstall the steering knuckle like it says in Para 6-13e of the TM.



Lube U-joint
until grease
comes out all
four seals

M939 Fire Extinguisher Update



OUCH!
I'M NOT
GOING
TO FIT!

The fire extinguisher, listed in the AAL of TM 9-2320-272-10 is the wrong one for the job. It's too big to fit inside the M939/M939A1's cab.

Use NSN 4210-01-220-6376 to get a 5-lb extinguisher, bracket, hardware and installation instructions. Make a note until this info is added to the TM.

Switch Switch's Location

Installing the 2 1/2-ton truck's stoplight pressure switch in the wrong place leads to three big headaches—each worse than the last.

With one push on the brake pedal...

...the switch explodes...

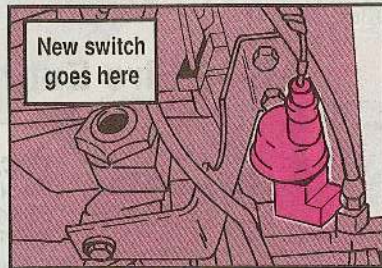
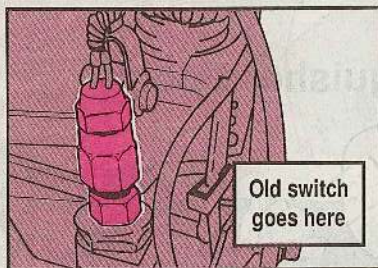
Boom

...hydraulic fluid pours out on the ground...

...the brakes fail.

It's no wonder there's confusion about where to install the pressure switch. The TM's wrong!

TM 9-2320-209-20-3-1 (May 81) shows the old switch installed on the end of the cylinder (the hydraulic side).



It should show the new pressure switch, NSN **5930-00-789-6192**, mounted on the side of the cylinder in the air line. The new switch shows up as Item 48 in Fig 122 of the -20P.

You can't install the new switch tho, unless you have stoplight parts kit, NSN **2530-01-105-5025**. It's not listed in the parts manual.

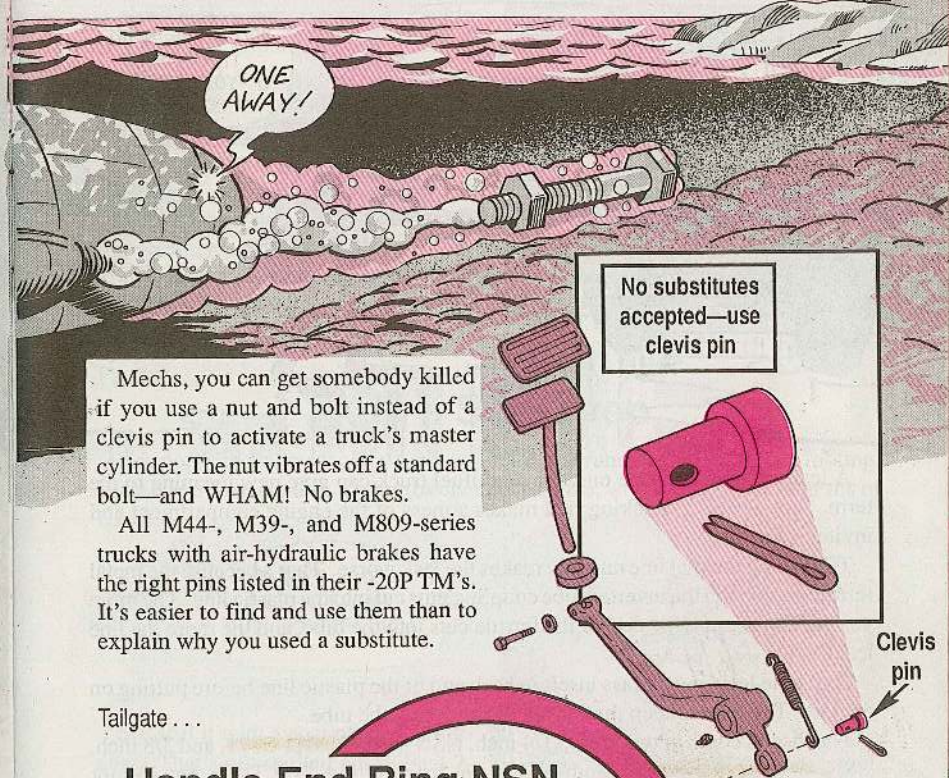
Watch it! The kit includes a 1/2-in elbow that doesn't fit all trucks. Some deuce-and-a-halves take a 3/8-in connector.

Find out which connector you need by measuring the tube shown as Item 12, Fig 122 of the -20P.

If you need a 3/8-in elbow, order NSN **4730-00-228-3302**.

Mounting instructions come with the kit.

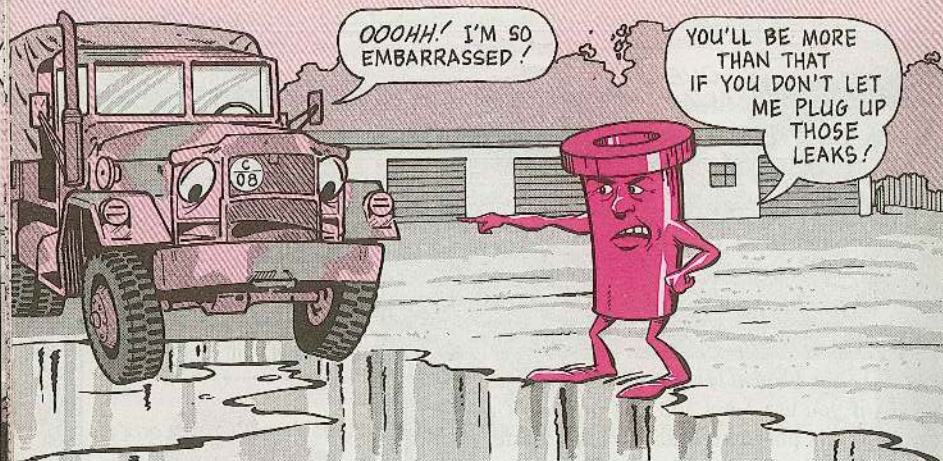
Clevis Pin Subs Can Sink You



Handle End Ring NSN

Mechs, now there's no need to spend \$10 to replace the tailgate handle assembly on the 2 1/2-ton truck when all you need is the end ring. Split connecting ring, NSN 5365-00-159-3981, works and costs only 18 cents.

Inserts Stop Fuel Line Leaks



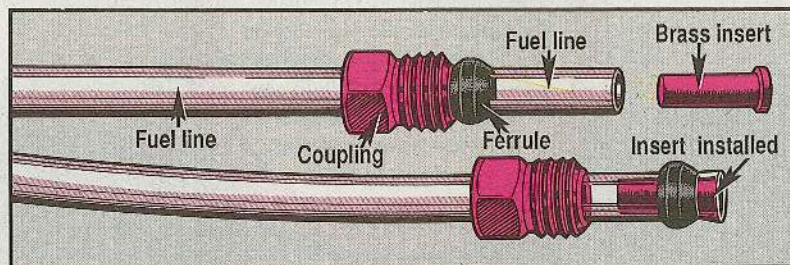
A leaky plastic fuel line on your multifuel truck can give new meaning to the term, "hot wheels." Leaking fuel makes a mess of the engine compartment and invites a fire.

Tightening the fuel line nut only makes the leak worse. That's because the metal ferrules used with the inverted tube coupling nuts cut into the plastic line. The more you tighten the nut, the deeper the ferrule cuts into the tube, and the more the line leaks.

To fix the leak, put a brass insert in each end of the plastic line before putting on the nut. The inserts keep the ferrule from cutting the tube.

The inserts come in two sizes, 1/4 inch, NSN 4730-01-041-5271, and 3/8 inch, NSN 4730-01-041-3822. Both NSN's are listed in the -20P TM's, but are not shown in the fuel line illustrations.

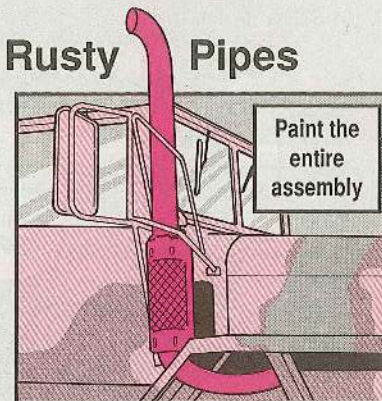
Here's how to use 'em:



Paint Prevents Rusty Pipes

Heat and weather form a double whammy on unpainted truck exhaust pipes. Rust sets in, and before you know it, you've got an exhaust leak, making your truck NMC.

You can stop rust on the pipe with a protective coating of heat resistant olive drab paint. It takes the heat, resists the weather and adds miles of life to your truck's exhaust system. NSN 8010-00-616-4009 gets a 1-gal bucket.



Painting...

Add a Sure Step

Use non-slip walkway compound on a fender or running board for sure footing. If used as a final coating, it absorbs chemical agents, which defeats the benefits of CARC.

CARC'S THE
LAST STEP IN
FULL PROTECTION!

So, seal it with a coat of CARC topcoat. That's not spelled out in Para 2-31f of TM 43-0139.

Unit-level maintenance can spot-paint fenders and such to add the skid prevention. NSN 5610-00-141-7838 gets a gallon of non-slip compound.

After it's dried hard—about 24 hours—paint over it with CARC topcoat to match the rest of the vehicle's paint.

Foot traffic will wear thru the CARC topcoat, so you'll have to add more topcoat when it wears away.



About Those L-O-N-G Legs



Some 3/4-ton trailers are running around with a rear support leg that's too long. The leg can't be locked in position to prevent tip-back.

That happens when a leg for an older M101 or M101A1 trailer or M116 or M116A1 chassis is installed on an M101A2 trailer or M116A2 chassis.

The -A2 models use different tires, so the rear end is lower. These models need a leg that's no more than 19 3/4 inches long when it's fully retracted.

If you have a leg that won't lock in place, replace it with one that will.

Get a leg for your M101A2's and M116A2's, NSN 2590-00-439-6288. It's the right length.

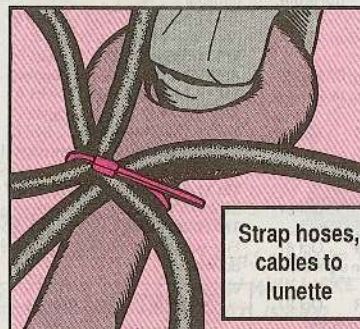
A longer leg, NSN 2590-00-420-8929, is for the older trailers

Protect the Cable

I'M HERE TO **HELP** YOU, NOT HURT YOU!

Dear Editor,

Tying trailer air hoses to the lunette is a good way to protect them, as you showed on Page 23 of PS 410. You can protect the intervehicular cable by fastening it to the lunette, too.



Strap hoses, cables to lunette

Plus, you can use the nylon ties to fasten the cable and hoses to the trailer's frame if the regular tiedown straps are missing.

SSG Henry A. Perez
Ft Leonard Wood, MO

(Editor's note: Thanks for the tips!)

Save Rustproofing

Never steam clean your vehicle if it's been rustproofed. Steam loosens the coating and may remove it completely.

If you use a combination steam cleaner (heated and cold pressure washer) be sure you're in the pressure mode. Never exceed 160°F or 500 PSI.

The best method for cleaning is high-pressure water and detergents. Never direct high-pressure water at electrical components, seals and carburetors.

Can't tell if your vehicle is rustproofed? Eyeball the wheel wells and underbody for a waxy, rubbery coating.

Check wheel well for rustproofing





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

TM 3-6665-316-12 Dec 87 M8A1 chemical agent automatic alarm
TM 5-4110-245-14 Sep 87 Model ERU-9E refrigeration unit
TM 5-4120-386-24P Oct 87 9,000 BTU/Hr air conditioner
TM 5-4120-387-24P Oct 87 6,000 BTU air conditioner
TM 5-4310-385-13 Sep 87 Operator's unit and DS C&H model 20-918 compressor

AUDIO-VISUAL STUFF

Available at battalion or Post Learning Center

Films, TV Tapes
TVT 6-156 BCS registration, part 1
TVT 6-16 The Firefinder systems - capabilities and training
TVT 9-121 SUSV
TVT 9-122 Snowmobile unit maintenance
TVT 6-15 BCS registrations, part 2
TVT-17-18 M1 engine premature failure prevention
TVT 9-133 M9 pistol, new equipment training, organization and intermediate
TVT 9-134 M9 pistol, new equipment training, operator maintenance and use
TVT 46-10 Corrosion - the silent enemy

TEC Lessons

101-113-7112-A AN/GRC-142 radio teletypewriter set
101-113-7166-A AN/GRA-39 radio set control group

TM 5-4520-254-12 May 87 Model H81 heater, duct-type, portable, 120,000 BTU/Hr
TM 5-4520-254-24P May 87 Heater, duct-type, portable, 120,000 BTU/Hr
TM 5-6430-218-13 Sep 87 DS 3,000-gallon tank
TM 5-5430-219-13 Aug 87 50,000-gallon collapsible fabric tank (NSN 5430-00-182-8181)
TM 9-1260-477-10-HR Sep 87 AN/TVO-2 (G/VLLD)
TM 9-2350-277-10-HR May 87 M113A3 carrier
TM 9-2350-311-20P-2 Oct 87 M109A2/A3 howitzer
TM 9-5855-253-10-HR Oct 87 AN/UAS-11 night vision sight set infrared
TM 9-5855-254-14-HR Oct 87 Battery PP-7382/TAS charger
TM 9-5855-286-14-HR Oct 87 TS-3784/TAS test set boresight collimator

TM 11-5805-772-24P Sep 87 SB-4303 (P)/G switchboard
TM 11-5815-602-24-1 Sep 87 AN/UGC-74B,C communications terminal
TM 11-5820-1022-23P Sep 87 AN/TRC-191 radio access unit
TM 11-5855-238-24P Oct 87 AN/PVS-5 (J) night vision goggles
TM 11-5855-262-24P Oct 87 AN/PVS-7 night vision goggles
TM 11-5895-1374-23P Sep 87 AN/TYO-35 (V), 1&2 system control center
TM 11-5895-1388-12&P Nov 87 BZ-277A/G data interface set
TM 11-7025-244-12&P Sep 87 Fire support team digital message device

SMART Message

SMART MSG #77—Notifies of a change to TM 9-1005-249-24&P on gaging the hammer and trigger pin holes on M16 rifles.

Maintenance & Safety-Of-Use Messages

CECOM SOU-MSG—Advisory. Identifies deficiency in TM 11-5805: 727-34-6 on Orderwire-Operator Access Unit OA-9096 and OA-9097/T-SC. AMSEL-SF-SEP 291500Z Jan 88.

CECOM SOU-MSG—Advisory. Operational. Deadlines lithium-sulfur dioxide (LI-SO2) BA-5590/U batteries made by SAFT America, Contract No. DAAB07-85-C-H322, AMSEL-SF-REE 161800Z Feb 88.

CECOM SOU-MSG—Advisory. Operational. Deadlines lithium-sulfur dioxide (LI-SO2) BA-5847/U batteries made by SAFT America, Contract No. DAAB07-84-D-H303, and TNR, Contract No. DAAB07-84-D-H300; BA-5598/U batteries made by Duracell, Contract No.

DAAB07-82-D-G036; and BA-5513/U batteries made by SAFT America, Contract No. DAAB07-85-D-H326. AMSEL-SF-REE 192000Z Feb 88.

TACOM SOU-MSG-88-6—Advisory. Operational. Reports a potential safety problem with under-the-hood fires on the Ambulance, Modular, 4x4 and 4x2, AMSTA-M 051430Z Feb 88.

TACOM SOU-MSG-88-5—One-time inspection on M200A1, M105A2 and M103A3 trailer tires, AMSTA-M 111805Z Feb 88.

Your Direct Support or Logistic Assistance Office (LAO) can provide you with more information.

TIPS

Tool Improvement Program Suggestions





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!



FIRE OFF YOUR COMMENTS TO:

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!



Return Address

DEPARTMENT OF THE ARMY

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

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

(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:

30

FULL NAME:

ADDRESS:**AUTOVON/COMM PHONE #:**[illegible]

IDEA CONTROL NUMBER.

***Mail this form FREE! Official Mail is authorized. SEND IT through your unit or mail room.**

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!



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
IDEAS FOR
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!



AIR MOBILITY

Toolboxes ...

Seats vs Floors

Seats are made for sitting.

Floors are made for standing and storing.

But it seems some of you bird mechs get that mixed up. They're putting toolboxes, spare parts and tools on crew and troop seats when they do maintenance. Seat covers get torn. Then they have to be patched or replaced.

Never use a seat as a workbench for your tools, toolboxes, repair parts, or anything else that could tear, rip or stain the covers.

Keep your tools, toolboxes, and repair parts off the seats and on the the floor. Period. No discussion. End of story.

IF YOU'D
STAY WHERE
YOU BELONG
THIS
WOULDN'T
HAPPEN!

RRRIP!



CAT 1 EIR Phone:
AUTOVON 693-2066
(24 HOURS)

Aviation Messages

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

UH-1-88-012, SOF, Maintenance Mandatory, UH-1, Inspection for non-conforming parts, 042000Z Jan 88.

AH-64-88-01, SOF, Technical, AH-64A, Inspection of strap assembly main rotor (strap pack), 152000Z Jan 88.

AH-1-88-01, SOF, Maintenance Mandatory, AH-1, Inspection and grease sampling of scissors and sleeve assembly, 222000Z Jan 88.

AH-1-88-02, SOF, Maintenance Mandatory, AH-1, Revised TB number for inspection and grease sampling of scissors and sleeve assembly, 261800Z Jan 88.

OH-6-88-01, SOF, Operational, OH-6A and OH-58A with T63-A-700 engine, Provisions for lifting of all flight and ground restrictions, 282100Z Jan 88.

all flight and ground restrictions, 282100Z Jan 88.

OH-58-88-01, SOF, Operational, OH-6A and OH-58A with T63-A-700 engine, Provisions for lifting of all flight and ground restrictions, 282100Z Jan 88.

CH-47-88-01, SOF, Technical, CH-47B and C, Inspection of forward and aft transmission, 271400Z Jan 88.

Fluorescent Penetrant Kit Bulb

If you need to replace the 100-watt mercury vapor bulb in your fluorescent penetrant kit, order one with NSN 6240-00-233-3680. The kit is part of your AVUM No. 2 tool set listed in SC 4920-99-CL-A92.

The Pitot Can Veto!



A false airspeed reading can really foul up your Black Hawk's automatic flight control system, especially the movement of the stabilator.

That's why you crew chiefs should make every effort to keep water and dirt out of the pitot tubes.



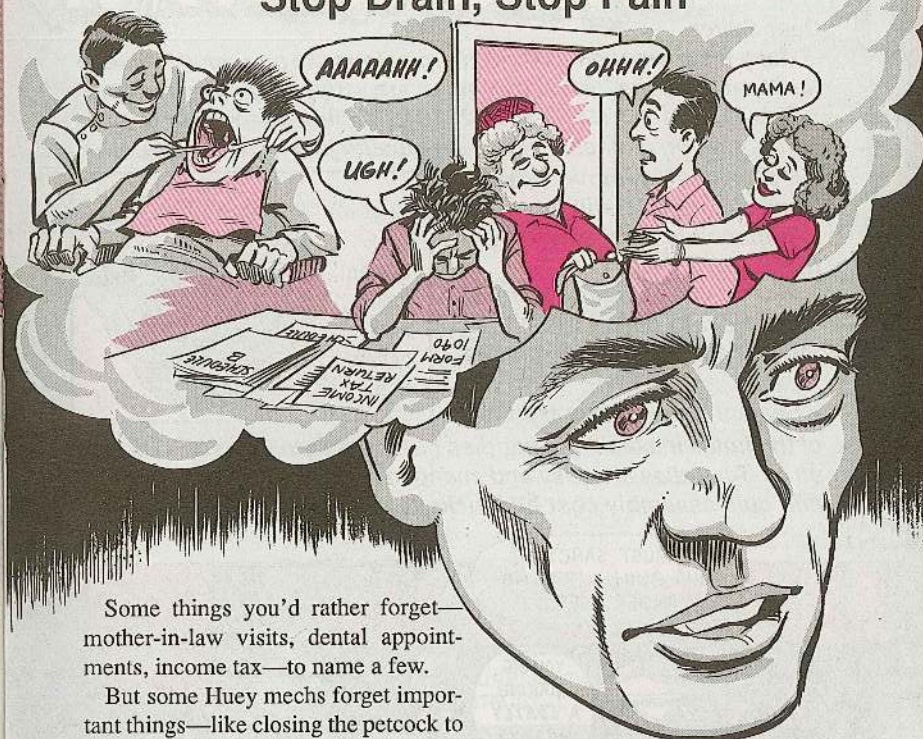
Slip on the pitot covers after the last flight of the day or any time your bird's parked outside for an extended period of time.

If you forget the covers and your bird sits outside during rain or snow, you need to drain the pitot and static lines before flying again.

The drain ports are located under the cockpit, beneath the pilot's and copilot's seats.

Before you put the caps back on the drain ports, coat 'em lightly with anti-seize compound, NSN 8030-00-597-5367. Then torque 'em to 40-60 lb-in.

Stop Drain, Stop Pain



Some things you'd rather forget—mother-in-law visits, dental appointments, income tax—to name a few.

But some Huey mechs forget important things—like closing the petcock to the engine oil cooler after they've drained the oil for a 900-hour change.

Oil bypasses the oil cooler until the oil gets hot, so the oversight won't show up 'til you do a runup, and then it's too late. You've got a big mess to clean up and an empty oil sump to refill.

And, if someone were to fly the bird with the petcock open, your problems will get a whole lot worse.

So be sure to close the valve when you're through draining the old oil. After you drain the last drop, close the valve.



The Quill(er) Memorandum

Dear Editor,

Many main input quills for transmissions are scrapped because the threads in the jack screw holes are stripped during removal.

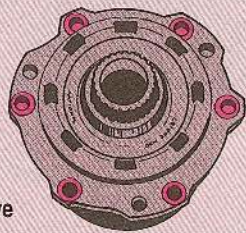
This is because TM 55-1520-236-23-1 tells you to use a sealing compound on quill case joints and inside jack screw holes.

It's easy to remove sealant from around the quill, but next to impossible to remove it from the screw holes.

You've got to use a knife or similar sharp object to remove the sealant. That damages the threads.

Sealant that you can't get out of the holes makes the T-handles hard to turn in the quill. Threads strip. T-handles are easy and cheap to make, but the quill housing and quill assembly cost big bucks to replace.

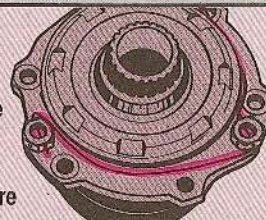
Sealant
inside
holes
is hard
to remove



To solve that problem, use plugs, NSN 5365-00-726-4161, and gaskets, NSN 5330-00-186-4945, to fill the jack screw holes instead of sealant.

Torque plugs to 30 lb-in and safety wire them in threes with .032-in lockwire.

Torque
plugs
and
lockwire



Use plugs and
gaskets
instead
of sealant



This saves a lot of man-hours for cleaning up and dollars for damaged quills.

SSG Rocky M. Waymon
Savannah, GA

(Editor's note: Thanks for the sound advice!)

WE MUST SANCTION
THIS QUILL, IT IS NO
LONGER USEFUL!

YOU'RE
MAKING
A COSTLY
MISTAKE!

38

MAY 88

HEY! UNHAND THAT
QUILL! IT'S STILL GOOD!

ACCORDING TO THE
QUILLER MEMORANDUM,
THIS DEVICE IS WORTH
A FORTUNE TO
INTERESTED PERSONS!

39

MAY 88

Assault with

Intent to Ground



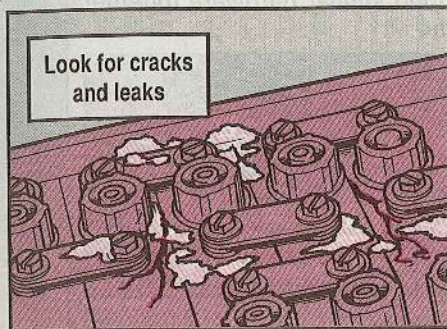
ELECTROLYTE LEAKAGE. Eyeball the tops of cells for cracks and tell-tale signs of leakage. Electrolyte spewed out of an over-filled or cracked

electrical leakage test spelled out in Para 4-9 of the battery pub.

If you find or suspect leakage for any reason other than loose filler caps, remove the battery and get it checked out.

CLOGGED VENT LINES. They ventilate the battery compartment during flight. Disconnect the vent hoses at the battery end and use low pressure air—no more than 5 PSI—to make sure they're clear.

Look for cracks and leaks



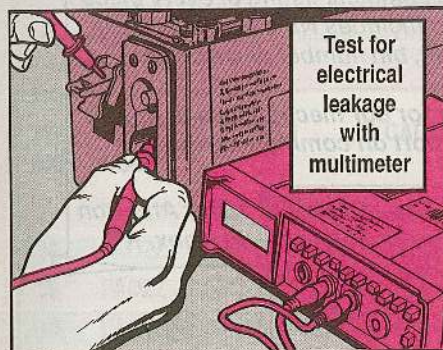
cell forms a white residue that can clog vents, short-circuit the battery and cause gassing and overheating.

Use the AN/PSM-45 multimeter in your AVUM No. 2 tool kit to make the

Vent lines open?



Test for electrical leakage with multimeter



VOLTAGE REGULATOR ADJUSTMENTS. Get your bird's electrician to adjust the voltage regulator seasonally. It should be done with a multimeter instead of the voltmeter in the bird's cockpit. If the regulator is set too high, the battery can overheat and lose electrolyte.

Remember, good battery maintenance won't keep you out of jail, but it will help keep your bird out of the maintenance hangar and in the air.

You can't be jailed for neglecting your bird's nickel-cadmium batteries, but you may wish you were in jail if your neglect breeds disaster.

When batteries are neglected, everybody and everything suffers—you, your bird, your unit, your flight crews, your support shop, Uncle Sam.

It might be simply a delay in the mission if the battery fails to start your bird's engine.

Or it could be much worse—an in-flight battery explosion.

Here's how to prevent those kind of unhappy experiences.

LOOSE FILLER CAPS. Tighten them carefully with vent plug wrench, NSN 5120-00-087-2969. Never use pliers. They crack or break plastic caps.

LOOSE TERMINAL SCREWS. Use torque wrench, NSN 5120-00-117-4832, and the right adapter to tighten them. Torque 8-32 screws to 20-25 lb-in and 10-32 screws to 35-50 lb-in.

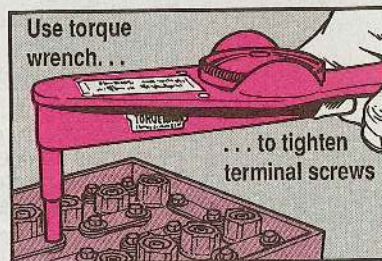
But be careful when you're tightening positive terminal screws and studs. If a wrench touches metal and causes a short circuit, you and your equipment could suffer.

Tighten caps with vent plug wrench



Use torque wrench...

...to tighten terminal screws



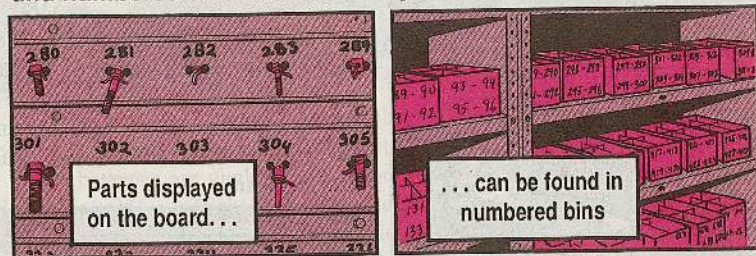
Board Solves Parts Puzzle

Dear Editor,

Some aviation units are always scrounging or substituting common hardware because they don't keep track of what's used and what's needed. Even when they've got the parts, they can't always find 'em.

We devised a system of replacing hardware that's almost fool-proof. We use it for our UH-1's and OH-58's, but it should work for any kind of aircraft.

We attached hardware used most often on our birds to a large, portable display board. We grouped similar hardware together and numbered them consecutively.



Parts displayed on the board...

... can be found in numbered bins

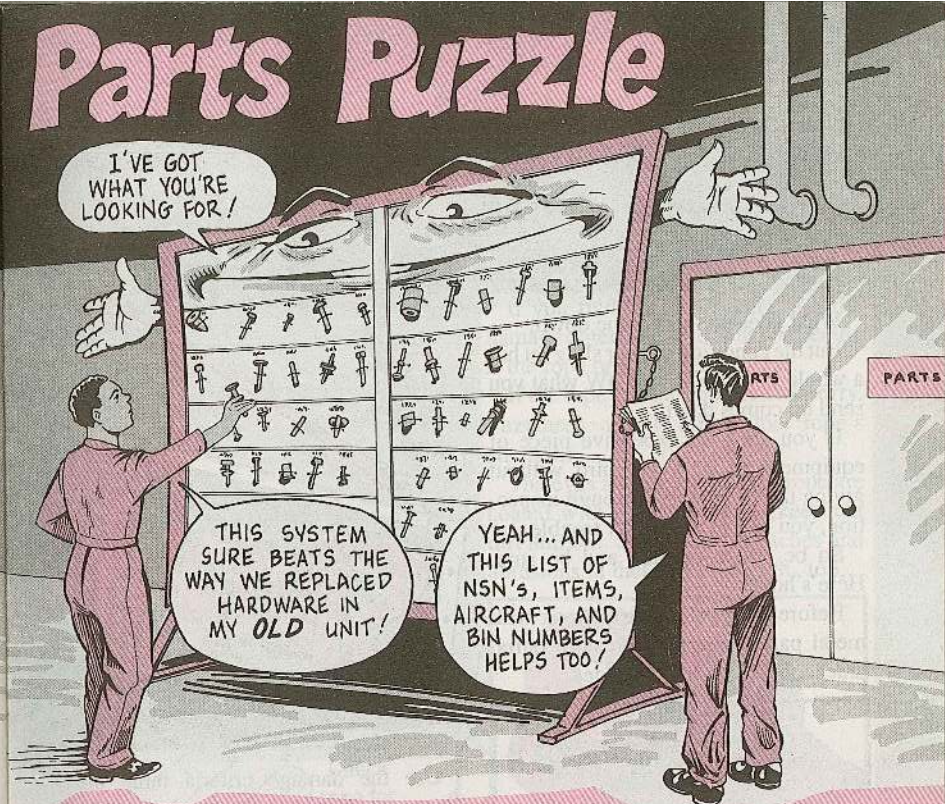
So, when a mech needs a bolt, nut, washer, clamp, or whatever, he simply goes to the board and finds an identical part. Then he goes to the parts bins, finds the bin number that corresponds to the hardware number and gets the part he needs. He signs for all hardware he removes from the bins so that our unit supply clerk can replenish our stocks periodically.

Tacked to the display board is a complete listing of every piece of hardware displayed. The listing includes NSN's, item descriptions, unit of issue, model of aircraft, bin number and a column for miscellaneous info.

This system is a big time-saver for our mechanics and supply clerks alike. We never come up short on common hardware.

(Editor's note: Some parts look alike, but they're not the same. Check your parts manual and the NSN to be certain you get the right replacement part. Also, be careful while putting parts in the bins that you don't mix them.)

Larry Atherton
Ft Knox, KY



OH-58...

Gas Producer NSN's

Some of the items you need to replace the gas producer control assembly in your Kiowa's power plant were added to TM 55-1520-228-23P by Change 7. (Oct 87). Here they are:

ITEM NO.	SMR CODE	NSN	CAGE	PART NUMBER	DESCRIPTION	QTY
37	PAOZZ	5310-00-208-6740	80205	NAS509-6	Nut, plain hexagon	1
38	PAOZZ	3040-00-457-8792	04638	11180027-3	Ball joint	1
39	PAOZZ	5315-00-234-1854	96906	MS29665-153	Pin, cotter	4
40	PAOZZ	5310-00-264-1240	88044	AN320C3	Nut, slotted hex	3

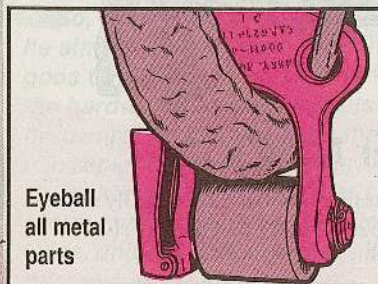
What goes up must come down.

But the condition of your sling set has a whole lot to do with HOW what you send up comes down.

If you sling an expensive piece of equipment under a big bird without giving the sling set a thorough inspection, you're just asking for trouble.

So be smart, be safe and be sure. Here's how:

Before using your sling set, look at all metal parts for rust, corrosion, burrs, cracks, bends and sharp edges.



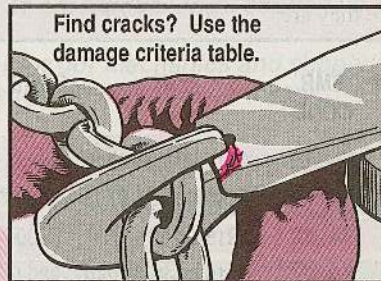
Eyeball
all metal
parts

Rub off corrosion and rust with a wire brush or emery cloth.

Smooth off burrs or sharp edges with a file.

Use the damage criteria table in Chapter 4 of FM 55-450-1 to determine if a damaged component must be replaced. Appendix A of the FM lists parts for the 10,000- and 25,000-lb slings.

Find cracks? Use the damage criteria table.



If you find cuts or fraying, use the damage criteria table to help you decide if the rope needs to be replaced.

If the rope is fuzzy, no need to worry. Fuzziness won't affect the rope's strength.

The eyes and cones on each rope are coated with polyurethane to keep out dirt and oil. Small cuts, scratches and abrasions in these areas are OK, too.



Small cuts are OK
on eyes and cone



Check
rope for
damage

Check the rope for cuts, fraying, dirt, oil and grease.

Remove dirt and oil with a mild detergent or hand soap. After washing, rinse thoroughly and air dry. Never wring water out of the web or dry the rope in the sun.

After you use your sling, look it over real good and clean it up for next time. Make sure it's dry and then put it in the aviator's kit bag that comes with the sling set.

Store it in a dry area away from any sunlight. That protects it from rust and corrosion as well as cuts and abrasions.

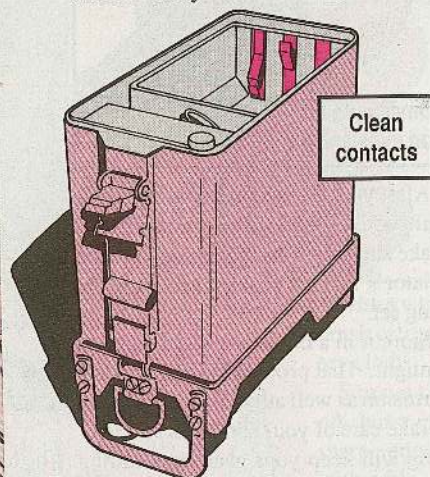
Take care of your sling sets and your sling will keep your gear from falling out of the sky.

Control Remote the PM Way

PM on your radio set control group keeps you in control of your commo gear even when you're miles away.

So before you put distance between you and your commo accessories, make sure the six BA-3030 batteries are good and making good contact in the C-2328 remote and C-2329 local control units.

Even when your remote units are idle, those batteries are not. They can leak and corrode your set.



Clean
contacts

If your commo's weak because of a bad battery, replace all the batteries at the same time.

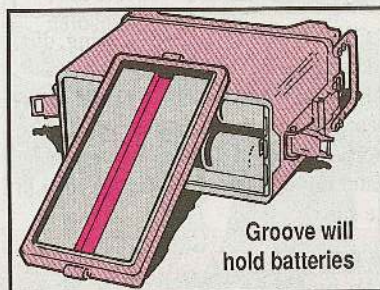
Since a battery's only good for about 24 hours, always carry six extra batteries for each of your remote units.

Eye the electrical contacts to make sure they're clean. If they have a dull finish, use a rubber eraser to make them shine and make good contact with the batteries.

If a contact's loose, get your unit repairman to glue it in place. A loose contact can keep you from getting the vocal message.

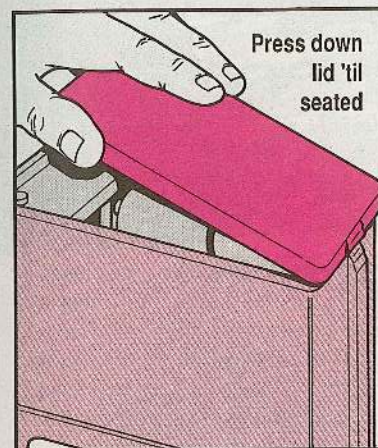
Snug up the batteries in the battery box to insure a strong signal. If the batteries move around too easily, slip a piece of cardboard between the box and the set's chassis.

Make sure a 5/8-in notch is cut out of the center of the cover's rubber pad to help hold the batteries in place.



Groove will
hold batteries

After installing the batteries, insure good contact when you close the lid. Lay the lid down flat on the batteries. Press the lid down until it's seated. Then fasten both latches at the same time.

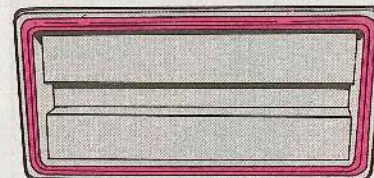


Press down
lid 'til
seated

Never wait until you need to communicate to find out if you have poor contact. If you feel the batteries shift, reseal them.

Take a look at the gasket in the cover to make sure it's there and not cracked.

Gasket cracked?
... missing?



If it's flattened or damaged, get it replaced. Otherwise, moisture will get into the battery box.

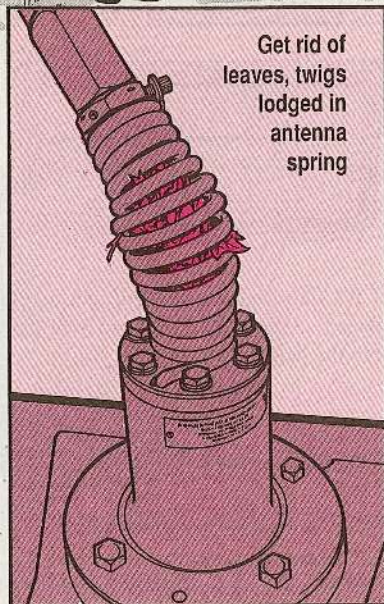
Radios, Telephones...

Use Connector Covers

Connector covers are not required, but they'll block moisture and dirt that can damage your commo gear.

Get the RT audio connector "dumbbell" covers with NSN 5340-00-973-1732. NSN 5970-00-869-6263 gets the field telephone binding post covers.

Beat Brush Rush in Spring



Get rid of leaves, twigs lodged in antenna spring

Your antenna matching unit takes a beating during rough rides through brush country. So when your radio's turned off, take a look at the base spring.

Leaves and twigs get jammed inside, where moisture will build up and damage the base.

Pull down on the antenna element to open up the spring.

Use a pencil or small stick to flick out the debris. Blow out small flakes with an air hose.

Never use a screwdriver or any metal probe. You'll damage the RF cable that runs up through the spring.



The Shell Game

Shells for your DH-132 combat vehicle crewman's helmet come in just 2 sizes—large and small/medium.

Get the large shell with NSN 8470-01-259-1694 and the small/medium with NSN 8470-01-259-1693.

If the molding comes loose around the shell, use adhesive, NSN 8040-00-165-8614, to put it back on.

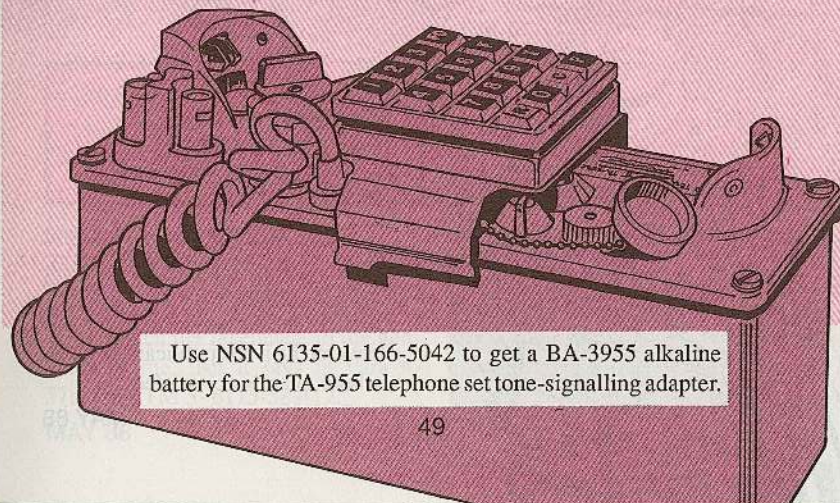
If the molding's damaged or missing, get a 36-in strip with NSN 9390-00-710-4355 and trim it to fit.

Para 5-6b of TM 10-8400-201-23 tells you how.

Loose, missing molding?
Repair or replace.



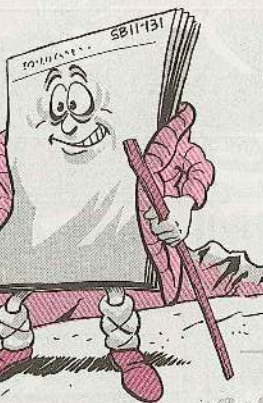
NSN for BA-3955 Battery



Use NSN 6135-01-166-5042 to get a BA-3955 alkaline battery for the TA-955 telephone set tone-signalling adapter.

Follow the Book Plan

FOLLOW ME...
I KNOW
THESE PARTS
LIKE THE
BACK
OF MY
HAND!



If you're replacing parts or making repairs on a radio installation kit in your vehicle, you'll need a book plan as a guide.

It shows where commo parts are located and the type of hardware used to fasten them down.

The book plan number is identified with its installation or accessory kit or harness in SB 11-131 (Nov 86).

5820-00-893-1323	PPL 1590	Mount, M1-1029	Ea	1
5820-00-893-1324	PPL 1591	Mount, M1-1898/VRC	Ea	1
5820-00-875-0532	SC-DL-48676	Support Bracket	Ea	1
5940-00-789-6904	SC-B-446130	Shield Assy (14 in)	Ea	1
	Book Plan Ref. No. 330	Installation Instructions for AN/VRC-12 in M151 Series	Ea	1

5820-00-450-6795	Installation Kit	MK-1224/VRC-49	M151A1,
PPL 4262			M151A2

	Book Plan Ref. No. 306	Installation Instructions for AN/VRC-49 in M151 Series	Ea	1
5820-00-930-3876	SC-D-446058	Antenna Mount Assy	Ea	2
5820-00-437-2353	SC-C-446180	Antenna Tip Assy	Ea	2
5820-00-856-9165	PPL 1843	Audio Support Kit	Ea	1
5991-00-15550	SM-D-415550	Cable Assy, Power, CX-4720/VRC	Ea	1

TO GET
A COPY,
WRITE
TO...

Commander
USACECOM
ATTN: AMSEL-RD-ESA-MV
Fort Monmouth, NJ 07703-5000

Before ordering a book plan, you might eye TM and TB 11-2300-series manuals to see if your radio-vehicle installation instructions are covered by a DA publication. If so, a book plan is not needed.

Kinky Cable Caper

SO, WATSON, WHAT'S ALL THIS "KINKY CABLE" BUSINESS? HAVE YOU FIGURED IT OUT YET?

SHORTER IS BETTER?

QUITE

... AND LASTS LONGER
THAN THE LONG ONES?

IN THE LONG
RUN, YES...

HOLMES,
I'M STILL
CONFUSED!

ELEMENTARY,
THE
SOLUTION
IS...



A too-long cable is OK for a short-term use. But for long-term use you need the right, shorter cable.

Seems some commo-types use a longer CX-4722 power or CG-1773B radio frequency cable than called for since it's the cable easiest to get at when they set up.

But all that excess cable gets in the way to trip up feet. This leads to bumped heads and broken cables.

You may have to use a longer cable for a short time. As soon as you can, though, replace it with the shorter cable called for.

NSN for NATO Receptacle

If you need the NATO slave receptacle on your 5-KW diesel generator, get it with NSN 6115-01-122-9566. Then, attach the receptacle to the generator frame, like it says in Para 4-57d(3) of TM 5-6115-584-12.



Hook up
NATO
receptacle



MHE 240.

SAFETY



Here's the word on putting a fire extinguisher and an M11 decon on the 50,000-lb MHE 240 rough terrain container handler.

Your CO decides if there's a need to mount a 5-lb dry chemical fire extinguisher or an M11 decon on the vehicles.

ITEM	NSN
Fire extinguisher	4210-00-775-0127
M11 decon	4230-00-720-1618
8 self-tapping screws,	5305-00-432-4251

IF YOUR
COMMANDER
OK'S IT,
YOU'LL
NEED...

Fire Extinguisher

Mount the fire extinguisher between the door frame and the dashboard extension, on the lower left front wall panel of the cab.

Use the mounting bracket as a guide to drill four 3/16-in holes in the cab's side wall.

Attach the bracket with the tapping screws.



The fire
extinguisher
mounts
between door
frame and
dashboard

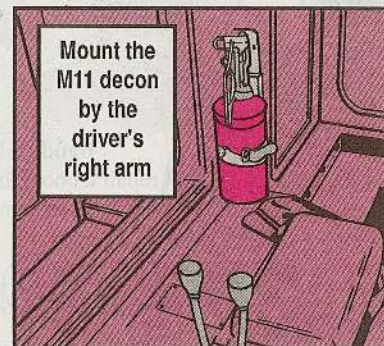
OPTIONS

M11 Decon

Mount the M11 decon in the corner of the cab wall, just right of the window. It can rest on the ledge below the latch.

Use the bracket as a guide to drill four mounting holes in the cab wall.

Attach the bracket with tapping screws.



Mount the
M11 decon
by the
driver's
right arm

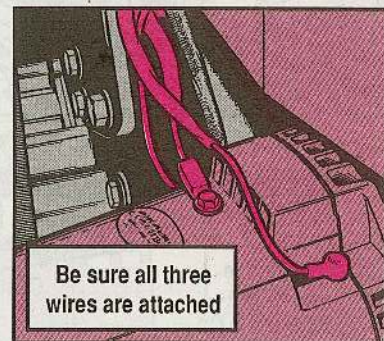
Caterpillar Equipment. . .

Charge Them Up!

Some Cat equipment—like 621B scrapers, 130G graders, D7G tractors and such—comes from the factory with the alternator disconnected.

When you get a new Cat, check the alternator. If you find the positive wire taped to the wiring harness, hook it to the positive terminal on the alternator.

The positive wire to the alternator is disconnected to protect the alternator in case the equipment is jump-started wrong while it's being shipped. If it's not reconnected, though, the alternator won't charge the batteries. Then you spend time troubleshooting to find the problem.



Be sure all three
wires are attached

Banish Bent Booms

LOOKS OK TO ME

WE'D BETTER MEASURE TO MAKE SURE

The last thing you need is a crane boom that won't take the load.

Bent lattice or chord angles or broken welds weaken the boom. It might fail under load.

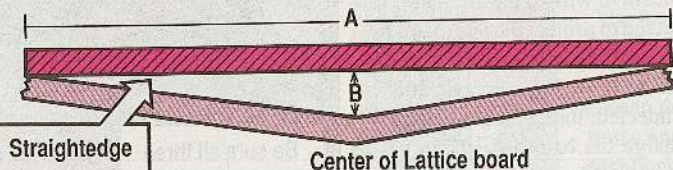
Eyeball your boom for any bends in the main angles or lacings. If you see any bends—or broken welds—don't use the boom! Report it ASAP!

Bends = No Boom

Mechanics, you can't repair a boom, but you can look it over for broken welds and measure to see if bends are bad enough to require boom replacement.

HERE'S HOW:

- ▼ Center the straightedge across the bend.
- ▼ Measure the gap between the straightedge and the lattice.
- ▼ Multiply the length of the straightedge by 0.025.
- ▼ Compare that amount with the gap you just measured. If the gap is smaller than the computed measurement, the bend is gradual and support can try to cold straighten it.



$$A \times 0.025 = C$$

If B is greater than C, the bend is not gradual

NEVER USE A BOOM IF IT HAS ANY BENDS! NOTIFY DIRECT SUPPORT FOR REPAIR OR CLASSIFICATION!

- ▼ Support cannot straighten a gradual bend.
- ▼ Any lacing has more than a gradual bend.
- ▼ More than one third of the lacings on one side have gradual bends.
- ▼ Any main angle is bent.
- ▼ Any weld is broken.
- ▼ Three adjacent lacings around the boom have gradual bends.

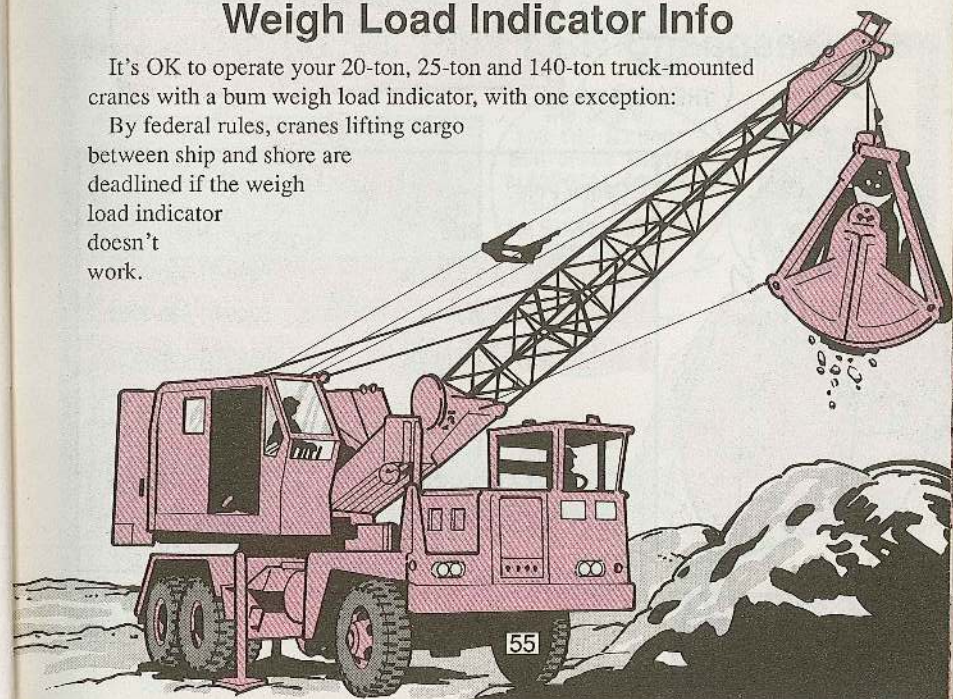
YOUR BOOM WILL GO TO DEPOT IF...

Cranes...

Weigh Load Indicator Info

It's OK to operate your 20-ton, 25-ton and 140-ton truck-mounted cranes with a bum weigh load indicator, with one exception:

By federal rules, cranes lifting cargo between ship and shore are deadlined if the weigh load indicator doesn't work.



Save Tent Pole Locking Pins

Dear Editor,

We kept losing the locking pins that keep the aluminum poles extended on our GP small tents. When wires or rivets broke, pins were lost.



We solved the problem by wrapping electrical straps, NSN 5975-00-570-9598, over the pin's wire and around the pole. That keeps the pins with the poles.

SSG Richard Janiszewski
Oak Creek, WI

(Editors note: Looks like you've wrapped up the problem. But if you've lost the pins, you won't find them in the tent TM 10-8340-211-23P.)

HERE
THEY ARE!

Center Pole

Size

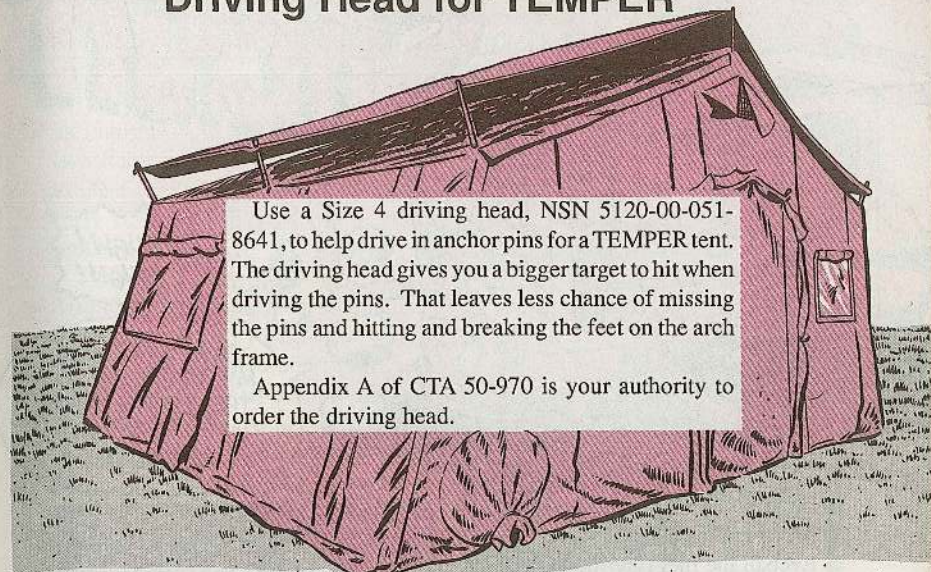
NSN

3/8 X 1 1/2 inches	8340-01-036-3781
3/8 X 2 inches	8340-01-036-3782
3/8 X 2 1/2 inches	8340-01-036-3783

Eave Pole

1/4 X 1 inches	8340-01-036-3779
1/4 X 1 1/2 inches	8340-01-036-3780

Driving Head for TEMPER



Space Heater...

Connector Plug NSN Changes

To power plug
NSN 5935-01-085-3291*

To room thermostat
NSN 5935-00-626-3102

To fuel pump
NSN 5935-01-239-8213

THE NSN'S
FOR THE 60,000
BTU SPACE HEATER
ELECTRICAL CONNECTOR
PLUGS IN FIG 1 OF
TM 5-4520-233-24P
ARE WRONG.

USE
THESE!

* Order
on a
DD Form
1348-6

Smokin'!

Away Problems

Mech's Job

The rubber preformed packing on the air pump is damaged by the compression helical spring, causing air leaks. Replace the packing with a flat washer, NSN 5310-00-058-3632. No more problem.

The engine hose (Item 15, Fig 6, TM 3-1040-276-23P) pops off the copper tube. Cure that by replacing it with a hose, NSN 4720-00-288-9195, and clamp, NSN 4730-00-908-3195—they're part of the old M3A3.

Make sure the pipe nipple (Item 18, Fig 4, TM 3-1040-276-23P) is steel, not brass. Soft nipples distort from the M3A4's heat and cause loss of engine pressure and poor fog oil pump performance. Brass is a golden color. DS replaces the nipple with a steel one.

Nuclear Soil Tester...

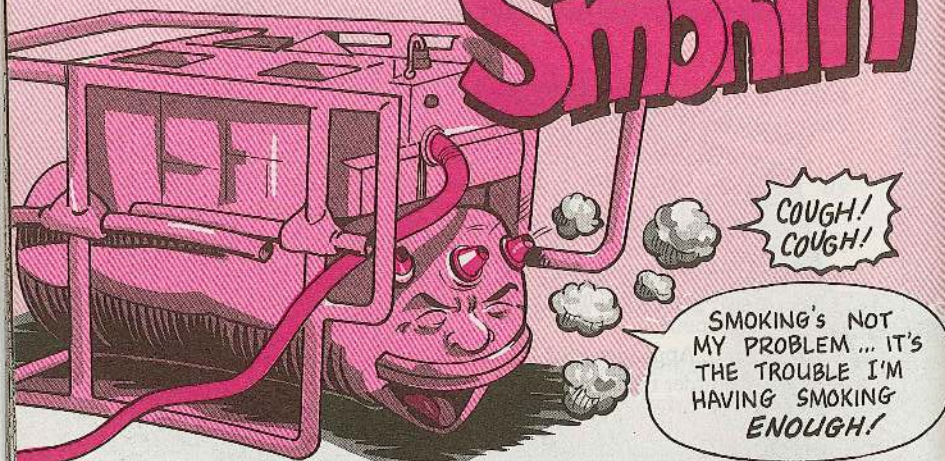
SEND THE WHOLE DANG THING!

If you have to send your Pacific Nuclear MC-1 density and moisture soil tester for repair, send everything. That includes the BII and TM 5-6635-386-12&P. Otherwise, it won't be fixed.

Put the tester's battery in the carrying case. If you don't, and it leaks, the acid eats into the unit's case and causes a radiation leak. Lock the handles before you ship the unit. That stops folks from opening the unit and being exposed to radiation. Tag the key with the unit's serial number and send the key separately by registered mail to the repair facility. Let them know you're sending the unit and tell them that you sent the key separately.

MAY 88

59

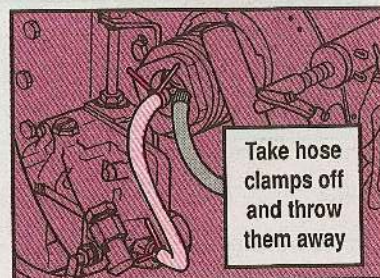


Light up on these tips to keep your M3A4 smoking away.

Eyeball the fuel filter bowl to make sure its bail's not crowded against the engine housing. Pressed against the housing, the bowl will press harder on one side of the gasket than on the other. This causes leaks. If you can see daylight between the bail and engine housing, the bail's OK. Your mechanic can adjust the filter bowl if the bail rubs on the engine.

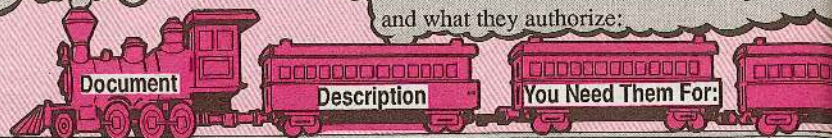
The two fuel hose clamps cut into the fuel hose and cause leaks. Get your mechanic to take the clamps off and throw them away. They're not needed.

Easy does it when you're turning the fuel line shutoff valve or drain cock or tightening any of the fuel line connections under the fuel tank. Pipe tees, for instance, are held onto the fuel tank only by solder. One good jar and you've got a leak.



The Engine of the Supply Train

To keep your supply requests from jumping track, hook 'em to the right engine. Hook your requests to an authorization document and the system will make sure your supplies reach their destination. Here's a table to show you the most common authorization documents, their description and what they authorize:



Modification Tables of Organization and Equipment (MTOE)	MTOE's change basic Tables of Organization and Equipment (TOE) to the needs of a specific unit.	End-Item request
Tables of Distribution and Allowances (TDA)	TDA's show the organizational structure, people and equipment authorized for a unit not under a TOE.	End-Item request
Common Tables of Allowances (CTA)	CTA's have items in common usage by individuals or units Army-wide	CTA 50-900—clothing and individual equipment requests CTA 50-909—field and garrison furnishings and equipment requests. CTA-50-970—expendable/durable items (except medical, Class V items and repair parts).
Technical Manuals (TM)	TM's give repair parts special tools and test equipment (except property book items).	Requesting parts, etc., for your end items that are authorized by MTOE, TDA or CTA.
Some Army Regulations (AR's) are authorization documents, such as: AR 700-84	AR 700-84 authorizes special clothing required and special measurement items, etc.	Requesting specially required clothing.
AR 840-10	AR 840-10 authorizes flags, guidons and plates	Ordering heraldic items.

You'll find these and more authorization documents in AR 310-34, Equipment Authorization and Usage Program.

WHAT DO YOU THINK OF MY NEW IDEA?

DON'T ASK ME... SEND IT TO TIPS!

Connie's
★ POST ★
★ S CRIPTS ★



CUCV Brake Caliper NSN

One more time. To get the left front brake caliper for a CUCV, use NSN 2530-01-147-6427. The number got scrambled on Page 3 of PS 424.

Need a GSA Catalog?

If you've had a tough time finding NSN's for paint, tools, chemicals or office equipment, you need to add a GSA catalog to your supply room library. To get on the GSA mailing list, request a publications mailing list application (GSA Form 457) from:

**General Services Administration
Centralized Mailing List Service (FCP)
P.O. Box 17077
819 Taylor Street
Fort Worth, TX 76102-0077**

Access Door NSN

The NSN for the master cylinder access door for M809-series, M44-series, and M39-series trucks is not listed in the TM's. You can get the access door assembly with NSN 2510-00-625-9613. Make a note until the TM's are updated.

M16 Rifle TM Change

Make this change to Item 6 on Page 2-11 in TM 9-1005-249-10 (Feb 85): "Equipment is NOT READY/AVAILABLE IF: Parts are missing or damaged to the point of being unserviceable." This will be added in the next update to the TM.

Take MRS Off PMCS for M1/IPM1

The armament headshed says there's no need to deadline your tank because of a bum or missing muzzle reference sensor (MRS). Until the TM is changed, use AMCCOM msg AMSMC-MAW 051500Z Jan 88.

D7G Oil Change

You can now change engine oil and the oil filter on the D7G tractors every 250 hours or quarterly, whichever comes first. That replaces the 250-hrs/monthly info on Page 1-3 of the D7G's Lubrication and Maintenance Instructions in Volume II of the CAT manual.

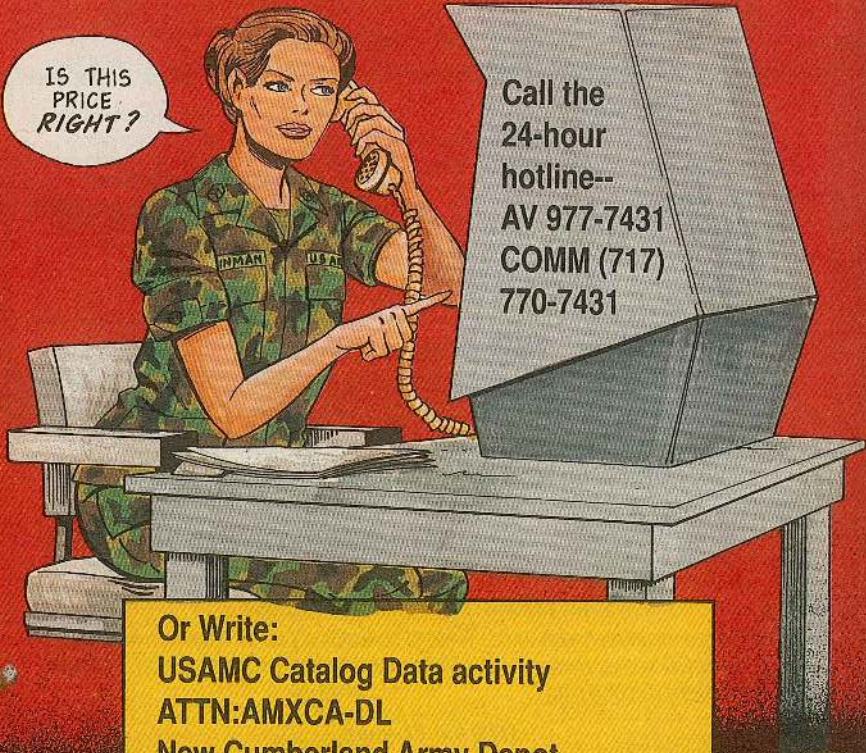
☆ U.S. GOVERNMENT PRINTING OFFICE: 1988 — 548-004/80006

Distribution: To be distributed in accordance with DA Form 12-34C-R, for TB-43-series.

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

Questionable Price?

Report It!



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RIGHT?

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COMM (717)
770-7431

Or Write:

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New Cumberland Army Depot

New Cumberland, PA 17070-5010

It could earn you bucks\$